

**Planning Department**

Saco City Hall  
300 Main Street  
Saco, Maine 04072-1538



**Jason Garnham, City Planner**

[JGarnham@sacomaine.org](mailto:JGarnham@sacomaine.org)  
Phone: (207) 282-3487 ext.357

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City of Saco, ME  
Planning Board Agenda  
300 Main Street, City Hall Auditorium  
**Tuesday, May 17, 2022 - 5:30**

Workshop, 5:30 PM: Planning Board Meeting Procedures

Regular Meeting, immediately following conclusion of Workshop items

Call to order

Approval of 5/10/2021 minutes

**AGENDA:**

- 1. Blossom, LLC – Conditional Use Review** – for approval to change existing retail use to registered medical marijuana dispensary. 22 Industrial Park Road, Tax Map 69, Lot 7-3 in the Business Industrial Zoning District. **Public Hearing**
- 2. Amarjit Dhillon & Ajinder Kaur – Amendment to Previously Approved Site Plan** – for approval to enlarge the footprint of the proposed single family dwelling from 840 square feet to 914 square feet. 15 Oceanside Drive, Tax Map 11, Lot 116-1 **Public Hearing**
- 3. 1031 Portland Road, LLC / Haley Ward, Inc., Authorized Agent – Site Plan Review & Conditional Use Review** – for approval to construct a 317 unit self-storage facility in two phases. 1031 Portland Rd, Tax Map 64, Lot 6 in the Portland Road Zoning District. **Public Hearing**

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City of Saco, ME  
Planning Board Minutes  
300 Main Street, City Hall Auditorium  
**Tuesday, May 10, 2022 – 6:00 PM**

Workshop 6:05 start:

Cascade/ Portland Road car wash sketch plan- introduced by Austin Fagan, BH2M – proposed conditional use application for car wash. Formal Site Plan Application will be submitted at a later date.

Public notice requirements – Introduced by Jason Garnham, City Planner who outlined existing notification requirements within the Ordinance versus proposed updates.

Marijuana zoning survey update – Jason discussed online survey that was provided to the community, receiving over 400 responses. Majority of responses were positive with 70% in agreement and 90% agreed that adult use should be allowed in community. Fewer than 30% felt location of business was relevant. Draft Ordinance work to begin.

Regular Meeting called to order at 6:42 PM immediately following conclusion of Workshop items.

Call to order: In attendance for Planning Board members are Alyssa Bouthot, Chair, Matt Provencal, Vice Chair, Matt Dicianni, Jennifer Day, Joyce Leary Clark and Rob Biggs. Council representative: Jim Purdy. City Staff: Jason Garnham City Planner, Lisa Harmon Planning Coordinator, Dave Pendleton Deputy Saco Fire Chief.

Approval of minutes: 4/26/2021 Joyce Leary Clark moves to approve the minutes with one minor change on page 3 at the bottom: change word from conditions to findings. Jennifer Day seconds the motion, all vote unanimously to approve minutes as amended.

**AGENDA:**

**1. 201 North Street Condos/German Auto Property** Dissolution of Contract Zone of October 22, 2007. The applicant does not intend to maintain retail use, instead plans to develop the properties in a manner consistent with allowed uses within the zone. (Map 40 Lot 20, Map 40 Lot 21, Map 53 Lot 170) in the Medium Density Residential (MDR) zone. Public Hearing  
Item introduced by Jason Garnham, City Planner. Property was previously approved for repair and sales of autos under a Contract Zone for that use; Contract Zone definition



given. Applicant is looking to dissolve the Contract Zone for commercial sales, as they are proposing a residential use for the property.

Craig Burgess introduced himself from Sebago Technics, representing JW Group.

Joyce Leary Clark moves to open the public hearing, second by Matt Dicianni, all vote unanimously to open the public hearing.

Public Comment: *Kelley Archer*, 185 Bradley Street; *Bobby Hood*, 220 North Street;

Discussion: Right, title and interest expiration related to the Contract Zone. Craig Burgess addressed resubmission materials which show legal right, title and interest through June 30, 2022; he will forward those items, as it was not previously sent to the Planning Department therefore not provided to the Planning Board.

With no further public comment, Joyce Leary Clark moves to close the public hearing, second by Matt Dicianni, all vote unanimously to close the public hearing.

Leo Bourgeault of 19 Steeple Drive is one of the owners of German Auto and identified himself on the updated addendum provided by the Applicant.

Joyce Leary Clark moves to send a positive recommendation to Council to dissolve the contract zone covering identified parcels, Matt Provencal seconds, all vote unanimously to make a positive recommendation to City Council to dissolve the Contract Zone.

**2. 201 North Street Condos / German Auto Property Preliminary Subdivision Review** for Subdivision to create a 34-unit condominium development consisting of 17 duplexes. The subject properties combined measure approximately 4.2-acres with the proposed developed area being 3.7-acres. (Map 40 Lot 20, Map 40 Lot 21, Map 53 Lot 170) Medium Density Residential (MDR) zone. **Public Hearing**

Item introduced by Jason Garnham, City Planner. Applicant is proposing to subdivide parcels identified above for the purpose of creating 34 condominium units on a combined area of 4.2 acres with 3.7 acres being developed. Contract Zone for German Auto previously discussed. One waiver, 4.03i for hydrologic assessment, was requested. Additionally, staff find the application to be substantially complete and recommend the Board do so as well. This is for Preliminary Subdivision only and will be reviewed in greater detail in the future under a Site Plan Review and Final Subdivision Review.

Matt Provencal moves to grant the waiver requested for hydrological assessment, second by Rob Biggs, all vote unanimously to grant the requested waiver.

Joyce Leary Clark moves to find the application for Preliminary Subdivision complete, second by Jennifer Day; all vote unanimously to find the application for Preliminary Subdivision application to be complete.

Craig Burgess, Sebago Technics introduced the project. Road entrance identified as coming from Roebuck Street, which was determined by City Staff as a safer location for the curb cut. Additional visitor parking was added at recommendation of City Engineer Joseph Laverriere; dumpster locations identified and turning plan provided to identify

fire truck and emergency vehicle turnaround. Public water and sewer will service the entire property. Stormwater management being reviewed by City Staff and Maine DEP. Gas will not be extended into site. Neighborhood meeting was held in February, 2022 and comments were addressed for additional landscaping. Diane Morabito was consulted and recommended a traffic study which was concluded today and will be provided to Planning Board and the Planning Department. Wetland peer review showed no wetlands, though some were found by Sebago Technics in the northeast portion of land but with less than 4,300 square feet of affected area. Plans are vetted by Engineering. Waiting for lighting review which will be provided at Final Review.

Jennifer Day moves to open the public hearing, second by Matt Provencal, all vote unanimously to open the public hearing.

Public Comment: *Bob Hood*, 220 North Street; *Jeffrey Beaulieu*, 232 North Street; *Matthew Dufour*, 25 Roebuck Avenue.

Discussion: Time frame for construction, phasing development, fencing to be provided along North Street will be only a 4-foot white picket fence; those lots will face North Street with parking behind the house within the lot. All 6- foot fencing will also be white vinyl. Curb cut onto Roebuck Ave instead of North Street explained. Financial Capacity letter needs to be updated. Site walk discussed; determined it was not requested by the Board.

With no further public comment, Jennifer Day moves to close the public hearing. Second by Matt Dicianni, all vote unanimously to close the public hearing.

Updated fencing to be provided as well as photometrics. Reference to Noise Ordinance is made and will be confirmed for construction times. This will also be reviewed under Site Plan at a later date.

Jennifer Day moves to approve the Preliminary Subdivision Plan for 201 North Street per the Findings of Fact and Conditions of Approval dated May 10, 2022. Second by Joyce Leary Clark, all vote unanimously to approve the Preliminary Subdivision Application.

Adjourn at 8:11 PM

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**TO:** Planning Board  
**FROM:** Jason Garnham, City Planner  
**DATE:** Meeting of May 17, 2022  
**RE:** **DRAFT** Planning Board meeting procedures/ guidelines - Workshop

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During the May 10, 2022 Planning Board meeting, board members discussed **public notice requirements** and establishing **meeting procedural guidelines** for consideration or adoption by the board. Public notice requirements are specified in Saco's ordinances and will require research by staff and review by the board, public, and city council through the amendments process(es) to amend. However, procedural guidelines for organizing planning board meetings and informing the public may be considered more immediately. Based on materials published by the Maine Municipal Association and planning boards in similar jurisdictions, staff drafted the following for discussion:

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### Welcome to Saco's Planning Board public meeting.

The purpose of this meeting is for the Planning Board to review and make decisions on specific applications related to land use and development in Saco. Other City business requiring input from the board may also be discussed. Please be advised that these meetings are **audio recorded** in accordance with open meetings and public records laws. You have a right to hear everything that is said and see everything that is reviewed during this meeting. Please notify staff or the chair if you cannot see or hear.

### Public Hearings

The Planning Board is scheduled to hold public hearings during tonight's meeting. The purpose of these public hearings is for the Planning Board to gather evidence to inform their decisions. Planning board decisions are based on standards and criteria that are contained in Saco's Zoning, Site Plan Review, and Subdivision ordinances which were adopted by Saco's City Council. In each case, it is the applicant's burden to demonstrate compliance with applicable standards and criteria. City staff support the board by making sure the required application review and public notice procedures are followed and by reviewing details of the project that are relevant to their expertise. In many cases the applicant has revised plans in response to staff comments prior to review by the board.

### Hearing Procedure/ Outline

1. The chair will introduce each agenda item after **calling the meeting to order**
2. City staff summary
3. Presentation from applicant
4. Chair and board opens public hearing
5. Public comments heard
6. Board discussion
7. Public hearing closed
8. Board deliberation/ decision

### Public Comments

- Members of the public are invited to speak during public hearings. Speakers **have 5 minutes** to present comments or questions to the board. Speakers will be timed by the chair of the board.
- Speakers must clearly state their **name** and **address or affiliation**. Please speak directly into the microphone. Staff will gladly provide a microphone for individuals who for any reason cannot stand at the podium.
- It is up to the **chair/ board** to decide whether individuals may speak more than once.
- Comments are most helpful when they are related to specific characteristics of a proposal or specific standards or criteria that apply to the application.

#### Meeting Duration

No new business will be taken up by the board after **9:00 PM** **unless otherwise decided by the board/ chair**. Meetings will adjourn at **9:30 PM**. Any business unfinished at that time will be continued at the next regularly scheduled meeting.

You may request any of the records related to this meeting from City staff. You may also review the records or listen to the meeting audio recordings via the Planning Board's website at:  
[https://www.sacomaine.org/boards\\_and\\_committees/planning\\_board\\_agenda.php](https://www.sacomaine.org/boards_and_committees/planning_board_agenda.php)

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**TO:** Planning Board  
**FROM:** Jason Garnham, City Planner  
**DATE:** Meeting of April 19, 2022  
**RE:** 22 Industrial Park Rd – Dispensary Conditional Use  
Tax Map 69, Lot 7

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### Memorandum

#### I. Overview:

Blossom, LLC proposes to operate a registered dispensary (medical marijuana retail) business at an existing commercial building located at 22 Industrial Park Road (Map 69, Lot 7). No changes to the existing building or site are proposed. The site is in a B-I zoning district, where registered dispensaries are allowed via Conditional Use approval.

#### II. Application Completeness:

As evidenced by the checklist and materials provided by the applicant, Planning staff find this application to be substantially complete.

If the Planning Board agrees, then a suggested motion is: ***“I move to find this Conditional Use application complete.”***

#### Waivers:

The applicant requests waivers from the requirement to submit detailed landscaping and buffering plans (XIV4.E.7 & 14), street improvement plans (XIV4.E.11), and a hazardous materials list (XIV4.F.3). A soils conditions report (XIV4.E.13) was also not provided. Since the site is already developed and no changes to the building or site are proposed or required and no hazardous materials are proposed to be stored or utilized by the proposed dispensary operation, Planning staff find the requested waivers to be reasonable.

If the Planning Board agrees, then a suggested motion is: ***“I move to approve the requested waivers from the submission requirements of Section XIV4 of Saco’s Zoning Ordinance.”***

#### III. Public Hearing:

A public hearing is required for review of Conditional Use applications per Section XIV3.E.1 of Saco’s Zoning Ordinance. Notification of this hearing was posted at City Hall, published in the *Portland Press Herald*, and mailed to all property owners located within 200 feet of the subject property as required. A suggested motion is:

***“I move to open the public hearing.”***

After public comment is received and discussed, a suggested motion is: ***“I move to close (or continue) the public hearing.”***

**Discussion:**

Traffic: The applicant operates a similar dispensary in Biddeford and provided estimated vehicle trip counts of 70 per day (50 per weekday and 100 per weekend day) based on transactions per day at the Biddeford business. These vehicular trip generation estimates differ from those estimates provided by Diane Morabito, an independent traffic engineering consultant who reviewed this application on behalf of the City. Ms. Morabito acknowledged verbally that the ITE manual that was utilized in the assessment of this application does not distinguish between medical dispensaries and businesses which sell recreational “adult use” marijuana. Regardless, a full traffic analysis is not required based upon projected traffic volumes. The applicant provided responses to Ms. Morabito’s request for driveway sight distance information that demonstrate compliance with City standards.

**IV. Conclusion and Draft Motion:**

Based on review of the application, the findings of fact, and of any testimony provided during the public hearing, the Planning Board may approve the project as currently designed, propose additional conditions of approval, or request additional information for review at a future meeting. City staff find that, as conditioned, this proposal substantially complies with the standards for granting Conditional Use approval and therefore recommend approval of this application by the board.

If the Planning Board agrees, then a suggested motion is: ***“I move to approve the Conditional Use Application for the proposed registered dispensary at 22 Industrial Park Road, Map 69 Lot 7, with the conditions proposed by staff in this report.”***

Saco Planning Board  
Findings of Fact  
22 Industrial Park Rd, Registered Dispensary  
Conditional Use Review  
May 17, 2022

1. Applicant: Elizabeth Baldacci, Blossom, LLC. [Ebaldacci@blossomMJ.com](mailto:Ebaldacci@blossomMJ.com)
2. Property Owner: Linda Valentino, [linda@valentinodevelopment.com](mailto:linda@valentinodevelopment.com). A signed lease agreement for the proposed use of the property was provided with this application.
3. Proposed Use: operate a registered medical marijuana dispensary from an existing commercial building. No changes to the building or site are proposed. As described by the applicant, only the first floor of the building will be utilized for retail space and accessible to the public. The second floor will be utilized for processing and storage and will not be accessible to the public.
4. City review is based on the application and materials submitted to the Planning Department on March 2, 2022.
5. Property is identified as Tax Map 69, Lot 7, address 22 Industrial Park Road. The parcel is approximately 0.5 acre in area and is developed with a two-story 3,456 square foot (gross floor area) commercial building that was constructed in 1979. The site was previously used as an office and service building by Spectrum, a communications company.
6. The subject property is in a BI- Business-Industrial zoning district. Registered dispensaries are a C- Conditional Use in BI zoning districts per Table 3-3 of Saco’s Zoning Ordinance.

7. **Permits Required:** The proposed use is subject to a City of Saco license per Chapter 135-3 of Saco's City Code. Licensing for operating a registered dispensary and the associated inspections program is administered by the Office of Marijuana Policy in Maine's Department of Administrative and Financial Services.
8. The subject site was inspected by Code Enforcement Office and Fire Department staff on March 24, 2022 after receiving this application. No comments were received from either office.
9. An odor control plan and Wastewater Discharge Application for the proposed use were submitted by the applicant and reviewed by staff from Saco's Water Resource Recovery District, who verified that adequate water and sewer utilities are available to serve the proposed use.
10. The City Engineer advised that the subject site is located within the Goosefare Brook watershed. Goosefare Brook is an urban impaired stream. The applicant or property owner are encouraged to consider stormwater quality improvements on the site. The City of Saco administers a financial assistance program for implementing such improvements should the applicant or property owner consider such improvements in the future.
11. City staff makes the following findings, per Section XIV6 - Conditional Use Standards:

12. **Conditional Uses (Article XIV, Zoning): Standards for a CUP**

As noted above, registered marijuana dispensaries are Conditional Uses in BI zoning districts per Table 3-3 of Saco's zoning ordinance. Based on the information provided by the applicant, Planning staff present the following findings related to the Standards for a CUP of Section XIV6.A of Saco's Zoning Ordinance, which state that it is the applicant's burden to establish that the proposed use:

1. Meets the definition and specific requirements of this chapter.	No changes to the existing building or site are proposed. As described by the applicant, all State registration and permitting requirements for registered dispensaries are understood and will be complied with. The applicant operates similar businesses in nearby locations, demonstrating experience and competence in managing such requirements.
2. Will not impede vehicular and pedestrian circulation, or access for emergency responders, nor create hazards onsite or on adjacent streets. Lighting will not create hazards to motorists and is adequate for site safety.	<p>No changes to the existing site improvements or lighting are proposed. This application was reviewed by staff from Saco's Fire, Police, and Public Works departments. No issues were raised concerning potential issues with vehicular access, emergency response, or creation of hazards. Security and surveillance measures are proposed to minimize safety risks, as detailed by the applicant.</p> <p>The applicant proposes using existing lighting. A detailed lighting plan was not provided demonstrating temperature or brightness of existing or proposed fixtures. Condition 3 requires the applicant to install fixtures that meet City standards when new light bulbs or fixtures are installed at the site.</p>



3. Will provide adequate buffers and landscaping	No changes to existing setbacks or buffers are proposed. The property is adjacent to wetland areas and other developed commercial/ industrial properties. The proposed use is not anticipated to result in significant adverse aesthetic impacts on nearby areas.
4. Will not have a significant detrimental effect on abutting properties	Operation of the proposed business is not anticipated to significantly impact neighboring properties. Measures to minimize potential odor or security issues are detailed by the applicant and will minimize detrimental effects on abutting properties. Conditions 7 and 9 require the applicant to file the odor control plan with Saco's Code Enforcement Office upon building permit issuance. Monitoring of odor impacts is also required.
5. Will not have a significant detrimental effect on value of adjacent properties	The proposed development is not anticipated to have a significant detrimental effect on the value of adjacent properties.
6. Will not result in significant flood hazards	The site is not in a Flood hazard area.
7. Made adequate provisions for disposal of wastewater, groundwater, surface water, and solid waste	Existing wastewater facilities are adequate to serve the proposed business. No discharges to groundwater are proposed. No changes to surface water runoff or facilities are proposed. Solid waste will be stored in dumpster facilities and screened with solid fencing and landscaping.
8. Will not have an adverse impact on significant scenic vistas or wildlife habitat	No significant scenic vistas will be impacted by the proposed use. Nearby wetland and buffer areas will remain in their current configuration.
9. Will not cause safety hazards for pedestrians, cyclists, and operators of motor vehicles	The applicant proposes utilizing an existing commercial building. No changes to the site, driveway, sidewalks, or roadways are proposed. No additional safety hazards are anticipated from this proposal.

Saco Planning Board  
Conditions of Approval  
22 Industrial Park Rd, Registered Dispensary  
Conditional Use Review  
May 17, 2022

1. No deviations from the approved plans are permitted without prior approval from Saco's City Planner.
2. This approval remains valid provided occupancy of this approved use starts within twenty-four months. If occupancy is not commenced within this period, this conditional use approval shall be null and void. This deadline may be extended for one year by the Planning Board or City Planner upon a written request received before the date of expiration.
3. Any new or modified exterior lighting at the subject site shall conform to the performance standards of Section VI4 of Saco's Zoning Ordinance. Standards related to height,

brightness, illumination, and energy efficiency of light fixtures must be met. Approval of a lighting plan by City staff shall be obtained prior to installation or modification of exterior lighting at the subject property.

4. This review considers the application presented and the representations made to the WRRD in the conditional use application materials. If there are any proposed changes to the use, the applicant is required to return to the WRRD for review and approval.
5. All applicants are subject to WRRD impact fees. Impact fees shall be paid to the Code Enforcement Department upon building permit issuance. Current rate is \$31.23 per gallon.
6. Floor drains prohibited.
7. The applicant has agreed to execute a formal Odor Control Plan to be filed with the Code Enforcement Department and the Water Resource Recovery Department. A letter dated April 28, 2022 verifies the applicant's intention to comply with this condition. Before building permit issuance, the applicant agrees to execute the Odor Control Plan Agreement with the City of Saco, Maine.
8. All connections must be made in accordance with specifications of the Technical Design Construction Standards Manual (TDCSM), Chapter 176 and Chapter 186 of the City's Ordinances, and any other applicable City, state, or federal standards. The City Engineer may have additional comments regarding sewer connection technical specifications to which the applicant must adhere.
9. For uses that could emit an odor beyond the property line within the sewer system, the applicant shall be required to install appropriate pretreatment devices and submit an odor control plan to the satisfaction of the WRRD and Code Enforcement Department. The applicant shall be required to enter into monitoring agreement for odor control and may be required to complete additional studies and modifications to mitigate odor impacts.



## Conditional Use Application

Application # \_\_\_\_\_

Street Address of Proposed Project: 22 Industrial Park Road, Saco Tax Map & Lot: 069007003000

York County Registry of Deeds Book & Page Number: 9632/50 Zoning District: B-I

Applicant: Blossom, LLC

Applicant's Address: 5 Pine Lane, Cumberland Foreside, ME 04110

Applicant's Email & Phone #: ebaldacci@blossomMJ.com

Architect/Engineer's Name: Hoyle, Tanner & Associates / Andrew Sturgeon

Architect/Engineer's Email & Phone #: asturgeon@hoyletanner.com  
207-805-8248

Architect/Engineer's Address: 2 Pegasus St., Suite 2, Brunswick, ME 04011

Property Owner: Linda Valentino

Property Owner's Email & Phone #: linda@valentino-development.com  
207-205-0077

Property Owner's Address: 2 Sod Farm Lane, Saco, ME 04072

Area of Parcel: .5 acre Proposed Developed Area: 0 Proposed Height: 0

Description of Proposal: Existing structure. No proposed change in footprint. Proposed change of use to Registered Dispensary / medical marijuana use.

**Signature & Application Requirements:** Applications are due at least three weeks in advance of Planning Board meetings, but the Department encourages applicants to plan for five weeks before a Planning Board meeting. Staff will schedule your application for a Planning Board meeting once all reviews are complete and comments have been sufficiently addressed.

  
Signature of Owner/Applicant

2/15/22  
Date

## Conditional Use Checklist

### Section 230-901(B): Submission Requirements

Applicant	City staff	Submission Requirement
<input type="checkbox"/> 1	<input type="checkbox"/>	Site plans in 3 copies and 1 electronic, emailed, PDF copy, drawn to scale of not less than one inch equals 20 feet. The building plans shall show, at minimum, the first-floor plan and all elevations, with indication of the proposed construction material. The site plan shall include the following information:
<input checked="" type="checkbox"/> 2	<input type="checkbox"/>	A map of the site with reference to surrounding areas and existing street locations.
<input checked="" type="checkbox"/> 3	<input type="checkbox"/>	The name and address of the owner and conditional use permit applicant, together with the evidence of sufficient right, title or interest in the premises to permit the applicant to undertake the use for which conditional use permit approval has been requested.
<input checked="" type="checkbox"/> 4	<input type="checkbox"/>	The names and addresses of the owners of all properties within 200 feet of the property in question when the property is located in the R-3, Business (B) or MU Zones and within <u>600 feet</u> when the property in question is located in the Conservation Zone, any <u>industrial district</u> or the R-1, R-2 and R-4 Districts, as shown by the most recent tax records of all municipalities in which such properties lie.
<input checked="" type="checkbox"/> 5	<input type="checkbox"/>	A plan of the area showing lot line dimensions, applicable zone or zones, and the normal high-water mark, if applicable.
<input checked="" type="checkbox"/> 6	<input type="checkbox"/>	The location of all existing and proposed buildings and structures, streets, easements, driveways, entrances and exits on site and within 100 feet thereof
<input checked="" type="checkbox"/> 7	<input type="checkbox"/>	All setbacks from bodies of water and lot lines
<input checked="" type="checkbox"/> 8	<input type="checkbox"/>	All Existing physical features on the site and within 200 feet of the site, including streams, watercourses and existing woodlands. Soil conditions as reflected by a medium-intensity survey (such as wetlands, rock ledge, and areas of high water table) shall be shown, and the Planning & Development Department or Planning Board may require a high-intensity soils survey where necessary. The applicant shall provide, as part of the application, a narrative and sketch sufficient to describe trees and other vegetation located on the site. The Planning & Development Department or Planning Board may require mapping of trees proposed to be preserved as part of the site and landscaping plans presented for approval.
<input checked="" type="checkbox"/> 9	<input type="checkbox"/>	Topography showing existing and proposed contours at five-foot intervals for slopes averaging 5% or greater and at two-foot intervals for land of lesser slope. A reference benchmark shall be clearly designated. Where variations in the topography may affect the layout of buildings and roads, the Planning & Development Department or Planning Board may require that the topographic maps be based on an on-site survey.
<input checked="" type="checkbox"/> 10	<input type="checkbox"/>	Parking, loading and unloading areas shall be indicated with dimensions, traffic patterns, access aisles and curb radii.

<input checked="" type="checkbox"/> <del>NW</del> 11	<input type="checkbox"/>	Improvements such as roads, curbs, bumpers and sidewalks shall be indicated with cross sections, design details and dimensions.
<input checked="" type="checkbox"/> 12	<input type="checkbox"/>	The location and design of existing and proposed stormwater systems, sanitary waste disposal systems and potable water supply, and methods of solid waste storage and disposal.
<input checked="" type="checkbox"/> <del>NW</del> 13	<input type="checkbox"/>	A landscaping and buffering plan showing what will remain and what will be planted, indicating botanical and common names of plants and trees, dimensions, approximate time of planting and maintenance plans.
<input checked="" type="checkbox"/> 14	<input type="checkbox"/>	Lighting details indicating types of fixtures, location, radius and intensity of light.
<input checked="" type="checkbox"/> 15	<input type="checkbox"/>	The location, dimensions and details of signs.
<input checked="" type="checkbox"/> 16	<input type="checkbox"/>	The proposed use of all floor area.
<input checked="" type="checkbox"/> 17	<input type="checkbox"/>	A written description of the proposed operations in sufficient detail to indicate the degree to which the operation will create traffic congestion, noise, toxic or noxious matter, vibration, odor, heat, glare air pollution, waste and other objectionable effects, along with engineering and architectural plans for mitigating such effects.
<input checked="" type="checkbox"/> 18	<input type="checkbox"/>	The proposed number of shifts to be worked and the maximum number of employees of each shift.
<input checked="" type="checkbox"/> <del>NW</del> 19	<input type="checkbox"/>	A list of all hazardous material to be hauled, stored, used, generated or disposed of on the site, and any pertinent state or federal permits required.

For projects on the city's sewer, applicants are also required to complete the IWS form.

### Waiver Requests

If you are asking for a waiver, please indicate the type of waiver and the reason for the waiver request. The Board reviews the application and waiver requests uniquely to each project, so the request should clearly demonstrate the unique aspect of the project.

Waiver Request #1: Section- 13 : NO CHANGES TO SITE OR LANDSCAPING

Waiver Request #2: Section- 19 : NO HAZARDOUS MATERIALS  
- SEE ITEM 12 SOLID WASTE DISPOSAL PLAN

Waiver Request #3: Section- 11 : NO CHANGES TO ROAD, CURBS, ETC.

Waiver Request #4: Section- \_\_\_\_\_ : \_\_\_\_\_

Waiver Request #5: Section- \_\_\_\_\_ : \_\_\_\_\_



# Conditional Use Application, Checklist and Supporting Materials

## Section 230-901(B)

Blossom, LLC D/B/A Blossom Cannabis (Blossom) is seeking approval to operate a medical marijuana Registered Dispensary at 22 Industrial Park Road. The property was formerly occupied by Spectrum for the last 32 years. Linda Valentino is the landlord. Blossom has secured a long term lease for the property with an option to purchase.

### Submission Requirements:

**Item 1:** Included in this packet are three copies of the site plan and supporting materials. 1 electronic copy has also been submitted on a thumb drive and is included in this package.

The proposed project will require no modifications to the existing site or structure. Renovations will consist of bringing the building up to current code, adding a central fire alarm, a central burglar alarm, interior and exterior security cameras, upgrading interior doors to steel, building a vault and installing a DEA secure cage, installing a safe, building an ADA compliant bathroom and entrance ramp, removing one interior non-supporting wall, and cosmetic changes to the interior (paint, flooring), and exterior (paint, awning).

**Item 2:** Surrounding Area Map attached - Appendix 2

**Item 3: Name and Address of Owner, proof of possession**

Owner:  
Linda Valentino  
2 Sod Farm Lane  
Saco, ME 04072

Tenant:  
Blossom, LLC  
5 Pine Lane  
Cumberland Foreside, ME 04110

Lease attached -Appendix 3

**Item 4:** The property is located in the BI zone. Complete list of abutters within 600 feet of the property:

Abutters within 600 Feet of 22 Industrial Parkway

Property Address	Owner Name	Owner Address	City	State	Zip Code
1 Lehnner Road	MEL Realty, LLC	1 Lehnner Road	Saco	Maine	04072
15 Industrial Park Road	Visiting Nurses of Southern Maine	15 Industrial Park Road	Saco	Maine	04072
19 Industrial Park Road	Northern Ventures LLC	19 Industrial Park Road	Saco	Maine	04072
23 Industrial Park Road	Peoples Choice Credit Union	23 Industrial Park Road	Saco	Maine	04072
24 Industrial Park Road	Condo Main	24 Industrial Park Road	Saco	Maine	04072
26 Industrial Park Road	Central Maine Power Co. C/O Utility Shared Services Corp	One City Center	Portland	Maine	04101
28 Industrial Park Road	Prime Storage Saco, LLC C/O SLK Global Solutions America	2727 LBJ Freeway Suite 806	Dallas	Texas	75234
34 Industrial Park Road	City of Saco	300 Main Street	Saco	Maine	04072

Property detail pulled from City Tax Map is also attached - Appendix 4

**Item 5:** Area plan showing lot lines, applicable zones, and high-water mark.

22 Industrial Parkway is located in the BI Zone. Maps of property with lot line, and applicable zone are included in Appendix 5

**Item 6:** Existing conditions showing all buildings and structures, streets, easements, driveways entrances and exists within 100 feet of the property - Appendix 6

**Item 7:** Setbacks from bodies of water and lot lines - Appendix 7

**Item 8:** Existing Features on site and within 200 feet of site - Appendix 8

**Item 9:** Topo map from GIS - Appendix 9

**Item 10-** Parking and loading/unloading areas, traffic patterns schematic

There will be no changes to parking lot, entrance or exits. Traffic is likely to be less than the traffic generated with the previous use as a Spectrum regional service Center. Existing conditions for parking, entrance and exit - Appendix 10

**Item 11-** No changes to road, curbs, bumpers, etc.

**Item 12 -** Existing stormwater systems, sanitary waste disposal and potable water supply, methods of solid waste storage and disposal.

The site has existing functional stormwater systems, public sewer and public water supply. There will be no wastewater on site as there will not be any cultivation or manufacturing activities on site. Solid waste disposal will consist of small dumpster on site. The dumpster will be rented from and serviced by Casella.



## **Solid Waste and Waste Water Disposal Plan**

This Solid Waste and Waste Water Disposal Plan describes Blossoms processes for disposing of liquid and solid marijuana waste in compliance with the regulations including record keeping/tracking requirements, the process for rendering marijuana waste unusable and unrecognizable, and methods for storing marijuana waste prior to removal from the facility.

### Record Keeping

Blossom will maintain accurate and comprehensive records that account for and reconcile all waste activity related to the disposal of marijuana and marijuana products. Any marijuana waste transferred to a producer, processor, wholesale licensee or research certificate holder will be recorded in a transaction entered into an Inventory Tracking System in accordance with state and local regulations.

### Definitions

*Solid Marijuana Waste:* Any dried flowers and trim from mature marijuana plants.

*Non-Hazardous Waste:* Waste to include garbage, rubbish, refuse, special waste, or other discarded material, including solid, liquid semisolid, or contained gaseous material resulting from industrial, commercial, agricultural or other operations.

*Hazardous Waste:* Waste that exhibits a hazardous characteristic or is a listed waste. There are four criteria that define a characteristic waste. They are: 1. Ignitability 2. Corrosivity 3. Reactivity 4. Toxicity

### Employee Training

Employees will be trained on the Waste Disposal Plan within 30 days of being hired or before they are responsible for disposing of any marijuana waste, whichever comes first. The General Manager will be responsible for training employees in the Waste Management Plan and shall keep a record of all Waste Disposal Planning trainings for employees. Such records shall be maintained in accordance with Blossom's record retention policies.

### Tracking

All marijuana waste disposed of by Blossom will be recorded in an Inventory Tracking System, including the date and time of disposal, the employee or manager responsible, the reason for disposal (i.e., the type of waste), the lot, batch, or plant identifier (if applicable), the manner of disposal, and the quantity.

### Solid Marijuana Waste Storage and Disposal

In accordance with this Solid Waste and Waste Water Disposal Plan, Blossom shall ensure that all waste types, including marijuana waste, will be securely stored, handled, recorded, and disposed of in accordance with all applicable local and state laws and regulations.

All marijuana waste generated from normal retail activities including but not limited to adulteration or expiration, will be securely stored in the locked storage area inside the vault and under video surveillance. It will then be rendered unusable and disposed of in a manner that ensures that it cannot be reconstituted for any kind of use or benefit, as related to its psychoactive content, by an unauthorized individual or organization.

### Rendering Solid Marijuana Waste Unusable

All Solid Marijuana Waste shall be rendered unusable prior to leaving the licensed premises for disposal by grinding and incorporating the marijuana waste with other ground materials so the

resulting mixture is at least fifty percent non-marijuana waste by volume, including: (1) food waste; (2) yard waste; or (3) other wastes approved by the Department.

- All packaged marijuana products must be removed from their packaging and rendered unrecognizable and unusable prior to leaving the licensed premises for disposal.
- The process of rendering the Solid Marijuana Waste unusable shall occur with the limited access area of the licensed premise where surveillance cameras are permanently fixed and must occur entirely on camera.
- During the waste disposal process, the responsible employee shall input the following information into the Leaf Logix Inventory Tracking System
  - Plant, batch, or lot identifier of the marijuana to be disposed
  - Description of the marijuana waste being disposed of
  - Method of disposal
  - Confirmation that the marijuana was rendered unusable before disposal
  - Date of disposal

Blossom will establish a relationship with one or more vendors to pickup and properly dispose of Solid Marijuana Waste that has been rendered unusable.

- When moving material from the self-contained storage room for disposal, marijuana and marijuana by-product shall be moved only in receptacles with a cover or lid.
- Security cameras shall be installed to record activities in the area of the storage room as well the areas between the storage room and where said material is loaded onto vehicle(s) for disposal.
- The contracted waste management company will transport all marijuana waste from the cultivation site to a solid waste facility or landfill in compliance with local and state regulations.

#### General Prohibitions

- Blossom will strictly prohibit the placement, dumping, or disposal of trash, garbage, litter, or any other kind of waste on the property of another legal entity or any public place.
- Improper disposal of any type of waste by an employee is cause for termination, which will be clearly communicated during the training process regarding waste.

#### Liquid Marijuana Waste Storage and Disposal

All liquid marijuana waste shall be solidified through means of mixing it with soil or other absorbent material and shall be disposed of according to the procedures for solid marijuana waste.

#### Non-Hazardous Waste Management and Disposal Non-Hazardous Solid Waste

- Solid waste will be placed into recycling bins or trash bags within trash containers inside the facility.

- Solid wastes, including recyclables, will be stored in a manner such that they do not constitute a fire, health, or safety hazard or provide a food source or harbor for pests.
- Solid food wastes will be securely stored in covered or closed containers which are nonabsorbent, leak-proof, durable, easily cleanable, and designed for safe handling.
- During facility closing procedures, trash bags will be securely closed, and the recycling and trash bags will be transferred to secure outside waste for pick up.
- Blossom will ensure that solid wastes are collected at least once per week.
- Blossom will use a solid waste disposal vendor approved by state and/or local authorities and use the containers provided by the vendor.
- If recyclable material is not handled by the waste disposal vendor, arrangements will be made to have it transported to or picked up by a commercial recycler.

#### Non-Hazardous Liquid Waste

Non-hazardous liquid waste shall be disposed of in accordance with the City of Saco's Rules and Regulations.

#### Hazardous Waste Management and Disposal

As a general rule, Blossom's activities on site will not generate hazardous wastes. Employees shall, however, be trained to identify hazardous waste and all hazardous wastes shall be disposed of, in accordance with this plan and state and federal laws governing the discharge of hazardous waste.

- Incompatible wastes as determined by Safety Data Sheet (SDS) information will be stored in separate containers and separate storage areas.
- Lids will remain closed when not actively adding or removing waste from the container.
- Containers will be kept in good condition (e.g. free of dents, free of corrosion, no leaking, no bulging, etc.)
- Waste containers will be numbered and stored in a climate-controlled area, and will be labelled with the words "Flammable", "Toxic", "Corrosive" or "Reactive" and the word "Waste," along with a description of the contents, and EPA waste codes.
- A Chemical Waste Log will be filled out and forwarded to the Facilities Director for each waste container.
- If a waste container is to be reused or discarded, it will be triple- rinsed. Rinse water will be tested to ensure that none is discarded into the water system unless it meets regulations for direct disposal.
- Container storage areas will be inspected weekly. At a minimum, the inspection will cover leaks or staining from containers, general container condition, labeling, and management practices.

#### Hazardous Waste Safety

- Employees shall remain vigilant to unsafe practices and conditions on site and shall immediately report such practices and/or conditions to the manager.
- The manager must correct unsafe practices and or conditions promptly, or halt the operation until these can be corrected.

- Personal protective equipment will be inspected prior to use and worn as needed to avoid exposure. Gloves should be made of a material known to be resistant to permeation by the chemical in use.

#### Hazardous Waste Disposal

- Blossom will ensure that all hazardous waste generated at the facility will be transported and disposed of in accordance with local, state, and federal regulations.
- Hazardous waste will remain on-site for no more than 90 days before collection and transport for proper disposal.
- The Safety Data Sheet (SDS) will be consulted to determine best practices for the disposal of each waste.
- Blossom will make special handling, storage, transfer, and disposal arrangements for hazardous materials that comply with federal and state laws and regulations.
- When hazardous waste is sent to an off-site disposal facility, the Facility Director will document delivery with transportation manifests, as required by the Office of Marijuana Policy.

#### **Item 13 - No changes to landscaping**

#### **Item 14 - Lighting Detail**

Exterior lighting is existing. We do not propose any changes. We will reactivate existing parking light lots on CMP utility poles for added safety. Existing lighting condition - Appendix 14

The existing exterior lighting does not create hazards to motorists traveling on adjacent public streets and is adequate for the safety of occupants or users of the site and does not damage the value or diminish the usability of adjacent properties;

#### **Item 15 - Signs**

Proposed signage will be submitted to the Code Enforcement Department for permitting and will be compliance with Chapter § 230-707. Renderings of proposed signs - Appendix 15

#### **Item 16 - Proposed use of all floor area**

The proposed uses at the building are:

**1: Production Facility.** Production activities will be limited to trimming and packaging. There will be no cultivation or manufacturing performed on site. All production activities will take place on the second floor. The production team will enter the building on the side employee entrance, which is separated from the first floor area and is used to access the 2nd floor.

**2. Dispensary:** Dispensary activities will be limited to the front section of the first floor. No public access will be allowed in any other area. Any patient entering the dispensary must be a registered Maine patient or a Visiting Patient from an approved State.

The remaining areas will be utilized for operations and administrative support activities.

Visual representation of proposed use of all floor area - Appendix 16.



**Item 17** - A written description of the proposed operations and their impact on traffic, noise, toxic or noxious matter, vibration odor, heat, glare air pollution, waste and or other objectionable effects, and plans to mitigate those effects.

## **Traffic**

Blossom expects this use will generate far less traffic on site than the previous use as a regional service center for Spectrum. As a basis of comparison, our traffic patterns at the company's existing dispensary in Biddeford are as follows:

M-F 10-7pm - 50 cars per day /Avg. 5 cars per hour  
Sat-Sun 10-7pm 100 cars per day / Avg. 10 cars per hour

Assuming the location in Saco follows the same patterns and volume, the highest traffic days will be on the weekends when there is little to no commuter traffic on Industrial Park Road.

During the week, the dispensary will not be open during the morning rush hour. For the afternoon rush hour, there is a turning lane on Industrial Park Road which will mitigate back up for patients turning left upon entering or exiting the dispensary.

In addition, the addition of Exit 35 on the Maine Turnpike will significantly reduce traffic on the Industrial Park Road once completed.

## **Odor**

### Odor Mitigation Plan

#### Dispensary Area

All product will be pre-packaged and sealed in tamper proof, child resistant packaging. Pre-packaged marijuana flower, concentrates and edibles will be secured in glass display cases. All inventory not displayed in display cases will be stored within the limited access, secure DEA compliant cage on the premises. All marijuana and marijuana products on premises will be packaged in accordance with state law.

From time to time, a patient may request to smell a sample of marijuana flower or concentrate. When a flower or concentrate display jar is opened, cannabis odor will be released into the air. This smell will quickly dissipate after the jar is closed. Therefore, the odor level the dispensary space is low.

Blossom will use the below described procedural and engineer controls to mitigate odor in the dispensary area.

#### Procedural Activities

The following procedural activities will mitigate odors associated with marijuana and marijuana product:

- Blossom will only display and/or store marijuana or marijuana product that has been packaged in accordance with state law.
- Marijuana and marijuana products that are not displayed for sale will be stored in a vault (an enclosed area located within the limited access area of the premises with walls

consisting of steel- reinforced concrete and a concrete roof). The vault will have a single door that shall be closed and locked at all times, except when employees are restocking the vault or display cases.

- Display cases displaying marijuana and marijuana products shall be fully enclosed and shall be shut all times with the exception of an employee accessing marijuana or a marijuana product for a customer.
- Premises doors and windows shall be shut at all times.

#### Engineering Controls

- Each air intake on the retail premise shall be installed with a carbon filter and inline fan. This technology is the accepted and available industry- specific best control technologies designed to effectively mitigate odors within the dispensary environment.
- Blossom will utilize the VivoSun 6 Inch 440 CFM Inline Fan, 6 Inch Carbon Filter at air intake points to mitigate odors associated with storage and display of marijuana and marijuana products.
- In addition, Blossom will place Ona Gel within the vault area, where there will be high concentration of packaged product. Ona Gel is a widely accepted odor neutralizer in the cannabis industry.

#### Maintenance Plan

The Manager is responsible for checking the Carbon Filter and Inline Fan(s) once a month. The Manager shall be responsible for changing filters every 9 months, or more frequently if necessary. The Manager shall record the purchases of replacement filters, the date of performed maintenance, notification and response to equipment malfunctions on an odor control maintenance forms. Completed odor control maintenance forms shall be maintained in accordance with Blossom's record storage and retention policy.

All staff shall be trained on the importance of: keeping the vault and display case doors closed; ensuring doors and windows are closed; ensuring exhaust and filtration systems are running as required; and reporting concerns about the functioning of odor mitigation controls to the Manager.

This training shall be part of each employee's initial training and annual refresher training. The date of all trainings and the staff who participated in the training shall be recorded by the staff person conducting the training. Training records shall be maintained in accordance with Blossom Blossom s record storage and retention policy.

#### Complaint Response and Tracking

Blossom will designated the General Manager as the contact for receiving odor-related complaints. The General Manager will complete a complaint report for review by the Compliance Manager. Complaint reports shall be maintained in accordance with Blossom record storage and retention policy. The Chief Executive Officer shall respond to all odor-related complaints within 24 hours of receipt of the complaint. The Compliance Manager and other appropriate management shall consider amendments to Blossom's Ventilation and Filtration Plan that processes are sufficient to mitigate odors from all odor sources.

#### Visual Representation of Odor Mitigation Equipment to be used in Dispensary (Low Odor Area)

VivoSun 6 Inch 440 CFM Inline Fan, 6 Inch Carbon Filter



Ona Gel Odor Neutralizer



#### Production Area: Trim and packaging

Dried and Cured Harvested marijuana will be transported to the site directly from Blossom's cultivation facility for trimming and packaging. All laws will be followed regarding the transportation of medical marijuana.

During trimming, heavy odor will be released from dried cannabis. Trimming activity will occur Monday -Friday from 8am-4pm.

Trimmed cannabis flower will be transported to the packaging area for weighing and packaging. During the packaging process, heavy odor will be released from the dried cannabis until such time that product is packaged and sealed.

A. Blossom will utilize the following controls to mitigate odor in the trimming and packaging areas.

#### Standard Operating Procedures (SOP's):

All windows in the trim and production areas are to be closed at all times. All doors leading to exterior or down stairs will be upgrade to steel and closed and locked at all times.

#### Engineering Controls

Blossom will utilize industrial carbon filters and fans to mitigate odor in the production areas. This technology is the accepted and available industry-specific best control technologies designed to effectively mitigate odors for all odor sources. Systems

Blossom will use Active Air 12" Carbon Filter Fan Exhaust Kits throughout the trim and packaging spaces.



#### B. Maintenance Plan

The Production Manager is responsible for will be responsible for inspecting the filters on a regular basis per the manufacturers recommended maintenance plan. The Facilities Manger will be responsible for changing all filters consistent with the recommendations in the manufacturers recommended maintenance plan. The Production Manager shall record the purchases of replacement air filters, the date of performed maintenance, notification and response to equipment malfunctions on an odor control maintenance forms. Completed odor control maintenance forms shall be maintained on file in the compliance office on site.

#### C. Staff Training

All staff shall be trained on the administrative processes for mitigating odor. All staff shall be trained on the importance of closing doors and ensuring exhaust and filtration systems are running as required, and to report concerns about the functioning of odor mitigation controls to the Production Manager. The date of all trainings and the staff who participated in the training shall be recorded by the Production Manager. Training records shall be maintained on file in the compliance office on site.

#### D. Complaint Response and Tracking

Blossom has designated its Production Manager as the contact for receiving odor-related complaints coming from the Production Areas. The Production Manager will complete a complaint report for review by the Chief Executive Officer. Complaint reports shall be maintained in the compliance office on site. The Chief Executive Officer will respond to all odor-related complaints within 48 hours of receipt of the complaint.

Following every odor-related complaint, the Chief Compliance Officer and other appropriate management shall consider amendments to Blossom's Ventilation and Filtration Plan that processes are sufficient to mitigate odors from all odor sources.

Maintenance forms shall be maintained in accordance with Blossom's record storage and retention policy.

#### Visual Representation of Odor Mitigation Equipment to be used in Production Area

Active Air 12" Carbon Filter Fan Exhaust Kits



Other objectional effects: Blossom acknowledges that while public acceptance of cannabis is rapidly growing, some Saco residents may still find such operations objectionable. Blossom endeavors to operate a highly professional, clean, transparent and aesthetically pleasing production and dispensary operation in full compliance with local and state laws. We hope that in doing so, opinions will continue to transform toward open acceptance of medical cannabis as an alternative to traditional pharmaceuticals. Below are pictures of Blossom's current dispensary in Biddeford. The dispensary in Saco would have a similar look and feel.



Waste - see item 12

Other: The proposed use will not generate any noise, vibration, heat, glare, toxic or noxious matter.

**Item 18:** Number of shifts to be worked and the maximum number of employees of each shift.

Blossom will have 10 employees, with varying shifts throughout the week.

Production Team: 5 employees working five 8 hour shifts: M-F 8-4pm.

Monday	5 Employees 8-4
Tuesday	5 Employees 8-4
Wednesday	5 Employees 8-4
Thursday	5 Employees 8-4
Friday	5 Employees 8-4
Saturday	0 Employees
Sunday	0 Employees

Dispensary Team: 4 FT employees, 1 PT employee working 10 hour shifts.

Hours of operation: 7 days, 10am-7pm (Summer Hours may vary slightly, but will remain compliant with City approved operating hours of 8am-8pm)

Monday	2 Employees 9:30-7:30
Tuesday	2 Employees 9:30-7:30
Wednesday	2 Employees 9:30-7:30
Thursday	2 Employees 9:30-7:30
Friday	3 Employees 9:30-7:30
Saturday	3 Employees 9:30-7:30



Sunday

3 Employees 9:30-7:30

Item 19: **Waiver Requested** - No HAZMAT's

Item 20: **Security Plan** - Visual representation attached -Appendix 20

Blossom will comply with all security and cash handling regulations to ensure safety of the facility and staff. The following security and life safety equipment will be installed.

Central Fire System: Per request of Fire Department, a new, separate Central Fire System will be installed in the facility as follows: IPA-60 is an expandable analog/addressable releasing fire alarm system with a total system capacity of 60 points. The control panel utilizes the exclusive Potter protocol that includes a complete line of sensors and modules. Each SLC may be comprised of any combination of smoke sensor, heat detectors or modules and allows for a total of 50 ohms of impedance and may use any wire compliant with the National Electrical Code (NEC). (4) Pull Stations (1) Smoke Detector (8) Horn/Strobe Lights (8) Strobe Lights (1) Outdoor Strobe Light (1) Knox Box (1) Fire Cell Communicator

Central Fire System will be installed and monitored by American Security Alarms, Inc.

Central Burglar System: An XR150 / DMP Serial 3 Format supports 32 character user, zone and area names to decrease the time and limit dependence on automation literal tables for message interpretation. The system also includes 24 hour emergency police, medical and fire panic switches, siren speaker, contacts, passive infrared body heat detectors, and a cellular communicator with automatic weekly test for all alarms by zone.

The central monitored Burglar Alarm will also be installed with door sensors on each exterior door, select interior doors, and motion sensors throughout the building.

A panic button will be installed in the dispensary/patient care area.

Central Burglar System will be installed and monitored by American Security Alarms, Inc.

Security Cameras: A combination of directional and security interior and exterior cameras will be installed. Security footage will be stored for 45 days. Security cameras will be installed by Grady's Radio & Satellite TV. Monitoring will be on site and via mobile app.

Steel Doors: All points of entry to rooms where cannabis activities will occur will be upgraded to steel doors with automatic closure and lock systems. Doors will have both deadbolt and lock. Deadbolts will be secured when the building is locked at the end of the day.

Vault or DEA Cage: For storage of any cannabis product, a steel mesh vault room will be constructed or a DEA Cage will be installed. The doors will be secured with keypad entry.

Safe: A SentrySafe Front Loading Depository Safe DH-109E will be installed inside the DEA cage and bolted to the floor. Cash will be removed from the premises each day, at random times, by different partners following no particular pattern. Cash will be brought directly to the bank for deposit. No more than \$5,000 of cash will be kept on the premises at any time.



## 2. Surrounding Area with Streets





# 3. Lease

## LEASE AGREEMENT

THIS LEASE AGREEMENT ("**LEASE**") is entered into as of February 3, 2022, by and between LINDA VALENTINO, whose address is 2 Sod Farm Lane, Saco, ME 04072 ("**LANDLORD**") and BLOSSOM, LLC, a duly organized and existing limited liability company in the State of Maine, with a current mailing address 5 Pine Lane, Cumberland Foreside, ME 04110 ("**TENANT**"), whereby TENANT hereby leases from LANDLORD, and LANDLORD hereby leases to TENANT, the PREMISES described in Section 1 below.

1. **PREMISES:** In consideration of the mutual covenants contained herein, the LANDLORD hereby leases to the TENANT during the Term and subject to the terms and conditions herein contained, the property now known and numbered as 22 Industrial Park Road, Saco, Maine, consisting of approximately .5 acres, together with an approximately 3,400 square foot industrial building and paved parking area, all as more particularly described in Exhibit A attached hereto, (the "**Premises**"). The leased Premises are accepted in "**AS IS**" condition except as specifically set forth to the contrary in this Lease. TENANT acknowledges that (a) LANDLORD has made no representations, and TENANT is not relying on any representations, about the leased Premises, their suitability for any particular use and/or the physical condition thereof, and (b) that TENANT has conducted its own due diligence inquiries with respect to the leased Premises and is satisfied with the results thereof. The Building and the land on which it is located shall be referred to herein as the "**Premises**" or the "**Leased Premises**".

2. **INITIAL TERM:** The initial term of this Lease shall be two (2) years to commence on March 1, 2022 and to terminate on February 29, 2024. ("**Term**"). If the TENANT is unable to secure the requisite State and municipal license and approval to operate a Registered Medical Marijuana Dispensary on the Leased Premises before December 1, 2022, TENANT may, at TENANT'S option, terminate this lease as of December 31, 2022 by providing LANDLORD with written notification of its inability to secure the requisite licenses and election to terminate. Failure by TENANT to so notify LANDLORD shall be deemed a waiver of TENANT'S option to terminate.

3. **BASE RENT AND SECURITY DEPOSIT:** TENANT shall pay to LANDLORD rent as follows ("**Rent**"):

Mar. 1, 2022 to Feb. 29, 2024: \$45,600.00 annually at \$3,800.00 per month.

Base rent shall be paid without demand, setoff or deduction, to be paid before or on the first (1<sup>st</sup>) day of each month. Any monthly payment of base rent not received by the fifteenth (15<sup>th</sup>) day of any given month shall be assessed a late fee equal to four percent (4%). Any Rent, or any other sums payable by TENANT to LANDLORD under this Lease, that are more than five (5) days past due shall incur interest at a rate of ten percent (10%) per annum until fully paid.

Upon the execution of this Lease, TENANT shall pay to LANDLORD rent for March 2022 and an additional sum of \$7,600.00 as a security deposit and last month's rental.

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The Security Deposit shall be held as security for TENANT's performance of its obligations and covenants contained herein. LANDLORD is not obligated to hold the Security Deposit in any segregated fund and TENANT is not entitled to interest thereon. TENANT agrees that all or any portion of the Security Deposit may be applied by

LANDLORD to satisfy any obligation of TENANT hereunder not paid or performed when due, but that such application shall not cure TENANT's default. In the event of any default by TENANT, beyond applicable notice and cure periods, said Security Deposit or any part thereof may be used to pay any such payment or perform any obligations of TENANT, and TENANT shall within 10 days after demand replace the amount of the Security Deposit so used. LANDLORD shall, within thirty (30) days of the expiration or termination of this Lease, refund to TENANT the Security Deposit subject to TENANT's satisfactory compliance with its obligations hereunder. In the event that the LANDLORD sells, assigns, and/or otherwise transfers this Lease, the Security Deposit then held by the LANDLORD shall be transferred to any such assignee, accordingly.

4. **RENEWAL TERMS:** TENANT shall have the option to renew the Term of this Lease for one additional term of three (3) years (the "Renewal Term"), subject to all the terms and conditions of this Lease, excluding rent under paragraph 3, which shall be \$48,000.00 annually paid at \$4,000.00 per month for the entire Renewal Term. Following the Renewal Term, TENANT shall have the option to extend the agreement for an additional five (5) years ("Extended Term"), subject to all the terms and conditions of this Lease Agreement, excluding rent, which shall then be negotiated in good faith. TENANT shall only be entitled to renew this Lease for the Renewal Term or Extended Renewal Term if (i) TENANT notifies LANDLORD in writing that TENANT elects to renew the Term of this Lease for the additional Renewal Term, provided that such notice is at least six (6) months in advance of the end of the Term and no more than nine (9) months prior to the end of the Term and (ii) TENANT does not have any uncured Event of Default at the time of the request. In the event that TENANT fails to perform its obligations under this section, the option shall be deemed not to have been exercised.

5. **ADDITIONAL RENT:** During the entire term of this Lease, including the Renewal Term, TENANT shall be responsible, as additional rent, for the cost of real estate and other municipal taxes, property insurance, and non-capital building maintenance and repairs, municipal water and sewer charges, landscaping, snow plowing, HVAC and fire/sprinkler system inspections, and heat and electricity (the "NNN Expenses"). TENANT shall undertake to have all utility services and all maintenance and repair contracted services provided to the Leased Premises billed directly to TENANT. TENANT shall pay to LANDLORD as additional rent, the costs of all real estate or other municipal taxes and property and liability insurance premiums relative to the Leased Premises immediately upon presentment to TENANT by LANDLORD of a bill, invoice or premium notice relative to such costs.

6. **UTILITIES:** LANDLORD shall have no obligation to provide utilities or equipment other than the utilities and equipment within the Leased Premises as of the commencement date of this Lease. In the event TENANT requires additional utilities or equipment, the installation and maintenance thereof shall be TENANT's sole obligation, provided that such installation shall be subject to the written consent of LANDLORD.



7. **INDEPENDENT COVENANTS:** It is the intention of the parties hereto that the obligations of the TENANT hereunder shall be separate and independent covenants and agreements, that Rent and all other payments due hereunder shall continue to be payable in all events, and that the obligations of the TENANT hereunder shall continue unaffected by any circumstance, unless the requirement to pay or perform the same shall have been

terminated pursuant to an express provision of this Lease. TENANT acknowledges that the foregoing is a material inducement to the LANDLORD to enter into this Lease.

8. **PERMITTED USE:** TENANT shall use the PREMISES only for purposes of a duly licensed and approved by the State of Maine and City of Saco registered medical marijuana dispensary, inclusive of growing, processing and selling of marijuana only to the extent permitted by local and state law. TENANT shall not permit any other trade or occupation to be conducted on the PREMISES, or use made thereof, which will be unlawful, improper, noisy, offensive, or contrary to any local, state or federal law. Outside storage of any type of any items shall not be permitted without LANDLORD'S prior written consent. \* Insert "adult use marijuana and" EAB Lmv

9. **ALTERATIONS/ADDITIONS:** TENANT shall not make any installations, alterations or additions in, to or on the PREMISES without on each occasion obtaining the prior written consent of LANDLORD, and then only pursuant to plans and specifications approved by LANDLORD in advance in each instance, which consent and approval shall not be unreasonably withheld or delayed, except that as to any of the same outside the PREMISES, LANDLORD shall have the right to withhold or condition its consent for any reason or no reason, such being in LANDLORD's sole discretion. Any installations, alterations or additions undertaken by TENANT shall be done at its own expense and TENANT shall reimburse LANDLORD for any fees incurred for overhead and/or supervision of such installations, alterations or additions. At the time of consent, the parties shall determine, in writing, if such alteration(s) shall require removal at the end of the Term.

Notwithstanding anything to the contrary stated herein, the term "Alterations" shall not include the installation of shelves, movable partitions, TENANT's equipment and trade/office fixtures, and/or similar additions/improvements, which may be performed without damaging existing improvements or the structural integrity of the Premises or the Building, and LANDLORD's consent shall not be required for TENANT's installation of those items.

10. **INTERRUPTION OF SERVICES:** LANDLORD reserves the right to curtail, suspend, interrupt and/or stop the supply of water, sewage, electrical current, and other services, and to curtail, suspend, interrupt and/or stop use of entrances and/or lobbies serving access to the Building, or other portions of the PREMISES, without thereby incurring any liability to TENANT, when necessary by reason of accident or emergency; provided, however, that in each instance, LANDLORD shall use reasonable efforts to eliminate the cause thereof, to the extent LANDLORD has control over the same. Except in the case of emergency repairs, LANDLORD will give TENANT reasonable advance notice of any contemplated stoppage or curtailment and will use reasonable efforts to avoid unnecessary inconvenience to TENANT. LANDLORD does not warrant that any services

Initials: EAB Lmv



LANDLORD supplies will not be interrupted. Services may be interrupted because of accidents, repairs, alterations, improvements, or any reason beyond the reasonable control of LANDLORD. Any interruption shall not (i) be considered an eviction (actual or constructive) or disturbance of TENANT's use and possession of the PREMISES; (ii) make LANDLORD liable to TENANT for damages; (iii) abate Rent or any other payments required under this Lease; or (iv) relieve TENANT from performing TENANT's Lease obligations.

11. **INSURANCE:** TENANT shall not permit any use of, or store contents in, the PREMISES that will make voidable any insurance on the Property, Building or PREMISES. TENANT shall not violate, or conduct any activity that shall be contrary to, any law or ordinance established by the New England Fire Insurance Rating Association or any similar body. TENANT shall, on demand, reimburse LANDLORD all extra insurance premiums caused by TENANT's use of the PREMISES and immediately cease such use of the PREMISES.

12. **PREMISES CONDITION, MAINTENANCE, AND REPAIRS:** LANDLORD shall deliver the Premises in "AS IS" condition. TENANT agrees to maintain the PREMISES in good condition, reasonable wear and tear excepted, and acknowledges that the PREMISES are now in good order, and that all common areas in the Building are in compliance with applicable laws. TENANT shall not permit the PREMISES to be overloaded, damaged, stripped, or defaced, nor suffer any waste.

LANDLORD agrees, at her sole cost and expense, to maintain and to repair the roof, exterior walls and structure of the building on the Leased Premises, in the same condition as they are at the commencement of the Lease term or as it may be put in during the term of this Lease, excepting only reasonable wear and tear, damage by fire and other casualty, and any damage arising from the negligence or willful misconduct of TENANT or any of its employees, contractors, agents, customers or invitees.

13. **SIGNAGE:** LANDLORD and TENANT agree that TENANT may, at its sole cost and expense, install exterior mounted signage on the building as permitted by City building code regulations and applicable deed restrictions, if any, and no signage shall be permitted on the roof of the building. All signage shall be removed by TENANT, at its sole cost and expense, upon termination of this Lease. Any repairs necessary to fix any damages resulting from the installation, maintenance, and removal of signage shall be at TENANT's sole cost and expense.

14. **ASSIGNMENT AND SUBLETTING:** TENANT shall not assign, sublet or otherwise encumber the PREMISES, in whole or in part, without LANDLORD's prior written consent. Any attempted assignment or other transfer by the TENANT without the LANDLORD's consent shall, at the option of the LANDLORD, terminate this Lease, and in such event the TENANT shall remain liable for all rent due under this Lease and all damages suffered by the LANDLORD on account of such breach. It shall be a condition to the validity of any permitted assignment or other transfer hereunder that the TENANT originally named herein and any guarantor (to the extent provided in the Guaranty herein) shall (i) remain liable for all TENANT obligations hereunder, including without limitation, the payment of rent, (ii) the reimbursement of the LANDLORD for reasonable attorney's

Initials: FAB Lmv

fees, if any, incurred by the LANDLORD in connection with such assignment or other transfer, and (iii) pay to the LANDLORD or assign to the LANDLORD the right to collect (at the LANDLORD's option), the entire amount of rent or other consideration, either initially or over the term of the assignment or sublease, in excess of the rent and other charges due from the TENANT hereunder (or in case of sublease of part, in excess of such rent fairly allocable to the part) after adjustments to assure that all payments called for hereunder are appropriately taken into account.

**15. SUBORDINATION; ESTOPPEL CERTIFICATES:** This Lease shall be subject and subordinate to any and all mortgages, deeds of trust and other instruments, now or at any time hereafter, including liens on the Property and TENANT shall, when requested, promptly execute and deliver such written instrument as shall be necessary to show the subordination of this Lease to said mortgages, deeds of trust or other such instruments.

**16. LANDLORD'S ACCESS:** At reasonable times and with 24 hours notice (except in the case of an emergency, for which no notice is required) prior telephone, text, or email notification to the TENANT, LANDLORD and her agents may enter to view the PREMISES; remove placards and signs not approved and affixed as herein provided; make repairs and alterations as LANDLORD should elect to do; show the PREMISES to others; and, at any time with six (6) months before the expiration of the Term, affix to any suitable part of the PREMISES a notice for letting or selling the PREMISES or Property. TENANT shall not hinder nor disturb such notice posted by LANDLORD.

**17. TENANT'S LIABILITY INSURANCE:** With respect to the PREMISES TENANT shall maintain comprehensive casualty, property damage insurance, and public liability insurance in the aggregate amount of Two Million (\$2,000,000.00) Dollars in responsible companies qualified to do business in Maine and in good standing therein insuring LANDLORD as well as TENANT against injury to persons or damage to property as provided. TENANT shall deposit with LANDLORD certificates for such insurance at or prior to the commencement of the Term, and thereafter within thirty (30) days prior to the expiration of any such policies. All such insurance certificates shall provide that such policies shall not be cancelled without at least thirty (30) days prior to notice to each insured named therein. LANDLORD shall be named as an additional insured on the TENANT's liability policy and the TENANT shall furnish the LANDLORD a copy of the same and renewals of same at least 30 days prior to the expiration of any policy. Such policies shall be kept in force by the TENANT for the entire terms of the rental period.

In the event that TENANT does not provide the above insurance, LANDLORD shall have the option of purchasing the same and charging TENANT as additional Rent the cost of the policy plus twenty (20%) percent service fee and failure to pay the same shall be deemed an Event of Default.

**18. WAIVER OF SUBROGATION:** LANDLORD and TENANT hereby mutually agree that with respect to any loss that is covered by insurance then being carried by LANDLORD and TENANT, respectively, the party carrying such insurance and suffering such loss releases the other party of and from any and all claims with respect to such loss



and that their respective insurance companies shall have no right of subrogation against the other on account thereof.

**19. INDEMNIFICATION:** (a) Except to the extent arising from the gross negligence or willful misconduct of LANDLORD, TENANT shall indemnify, defend, save and hold harmless LANDLORD and her managers, employees, agents and contractors from and against all claims, losses, costs, damages, liability or expenses of whatever nature arising: (i) from any accident, injury or damage whatsoever to any person, or to the property of any person, occurring in or about the PREMISES (ii) from any accident, injury or damage whatsoever to any person, or to the property of any person, occurring outside of the PREMISES, where such accident, damage or injury results or is claimed to have resulted from any act or omission on the part of TENANT or its agents, employees, contractors, invitees or sublessees; or (iii) the use or occupancy of the PREMISES or of any business conducted therein or any thing or work whatsoever done or any condition created (other than by LANDLORD) in or about the PREMISES. The foregoing shall include indemnity against all losses, costs, damages, expenses and liabilities incurred in or in connection with any such claim or any proceeding brought thereon, and the defense thereof, including, without limitation, reasonable attorneys' fees and costs at both the trial and appellate levels. TENANT shall, upon notice from LANDLORD, defend such action or proceeding and at TENANT's expense employ counsel reasonably satisfactory to LANDLORD. The TENANT agrees that the LANDLORD shall not be responsible or liable for any loss or damage to any personal property belonging to the TENANT, its employees, contractors or invitees, unless such loss or damage is caused through the gross negligence or willful misconduct of the LANDLORD. The provisions of this Section shall survive termination or expiration of this Lease.

If a court of competent jurisdiction determines that any provision of this Section is unenforceable because of any applicable statute, ordinance, regulation, rule or decision of a court of competent jurisdiction, then this Section shall be modified and interpreted to impose the broadest duty upon TENANT, to the maximum extent permitted by applicable law, to defend, indemnify and hold LANDLORD harmless against the potential liabilities contained in this Section.

**20. LIMITATION OF LANDLORD'S LIABILITY:** The term "LANDLORD" as used in this Lease, so far as covenants or obligations to be performed by LANDLORD are concerned, shall be limited to mean and include only the owner or owners of the PREMISES at the time in question, and in the event of any transfer or transfers of title to the PREMISES, LANDLORD (and in case of any subsequent transfers or conveyances, the then grantor) shall be concurrently freed and relieved from, after the date of such transfer or conveyance and without any further instrument or agreement, of all liability related to the performance of any of LANDLORD's covenants or obligations. It is agreed that LANDLORD's covenants and obligations contained in this Lease shall be only binding on LANDLORD, her successors and assigns, only during and in respect of their respective successive periods of ownership of said leasehold interest or fee, as the case may be. TENANT, its successors and assigns, shall not assert nor seek to enforce any claims for breach of this Lease against any of LANDLORD's assets other than LANDLORD's interest in the PREMISES and in the rents, issues and profits thereof, and TENANT agrees to look solely to such interest for the satisfaction of any liability or claim against



LANDLORD under this Lease, it being specifically agreed that in no event whatsoever shall LANDLORD ever be personally liable for such liability.

**21. TENANT'S RISK:** TENANT agrees to use and occupy the PREMISES its own risk. LANDLORD shall not be liable to TENANT, its employees, agents, invitees or contractors for any damage, injury, loss, compensation, or claim (including, but not limited to, claims for the interruption of or loss to TENANT's business) based on, arising out of or resulting from any cause whatsoever, including, but not limited to, repairs to any portion of the PREMISES, any fire, robbery, theft, and/or any other crime or casualty, or of any other person or persons, or any leakage in any part or portion of the PREMISES or the Building, or from water, rain or snow that may leak into, or flow from any part of the PREMISES or the Building, or from drains, pipes or plumbing fixtures in the Building, unless due to the gross negligence or willful misconduct of LANDLORD. Any goods, property or personal effects stored or placed in or about the PREMISES shall be at the sole risk of TENANT, and neither LANDLORD nor its insurers shall in any manner be held responsible therefore. Notwithstanding the foregoing, LANDLORD shall not be released from liability for any injury, loss, damages or liability to the extent arising from any gross negligence or willful misconduct of LANDLORD, her servants, employees or agents acting within the scope of their authority on or about the PREMISES; provided, however, that in no event shall LANDLORD, her servants, employees or agents have any liability to TENANT based on any loss with respect to or interruption in the operation of TENANT's business.

**22. FIRE, CASUALTY/EMINENT DOMAIN:** Should a substantial portion of the PREMISES or Property be substantially damaged by fire or other casualty, or be taken by eminent domain (each, a "Casualty"), LANDLORD may elect to terminate this Lease. When such Casualty renders the PREMISES substantially unsuitable for their intended use, a just and proportionate abatement of Rent shall be made, and TENANT may elect to terminate this Lease if (i) LANDLORD fails to give written notice within thirty (30) days of intention to restore PREMISES, or (ii) LANDLORD fails to restore the PREMISES to a condition substantially suitable for their intended use within ninety (90) days of said Casualty. When such Casualty renders the PREMISES partially unsuitable for their intended use, LANDLORD shall use commercially reasonable efforts to immediately repair the PREMISES to their former condition and, during such period of repair, a just and proportionate abatement of Rent shall be made.

**23. DEFAULT AND BANKRUPTCY:** In the event that (a) TENANT fails to pay when due any installment of Rent, Additional Rent or other payment required under this Lease; or (b) TENANT fails to observe or perform any other covenants, agreements, or obligations contained in this Lease; or (c) TENANT is declared bankrupt or insolvent according to law, or (d) if any assignment be made of TENANT's property for the benefit of its creditors; or (e) TENANT abandons or vacates the PREMISES for more than 30 days (each an "Event of Default"), LANDLORD shall have the right to re-enter and take complete possession of the PREMISES, to declare the Lease terminated, and to remove TENANT's effects, without prejudice to any remedies that might be otherwise used for arrears of Rent or other default. TENANT shall indemnify LANDLORD against all loss of rent and other payments that LANDLORD may incur by reason of such termination during the remainder of the Term, including reasonable expenses of reletting, including altering

and preparing the PREMISES for new TENANT(s), brokers' commissions, fees for legal services and all other expenses. If TENANT's default in the observance of or performance

of any condition or covenant on TENANT's part under any Section of this Lease, LANDLORD, without being under any obligation to do so and without thereby waiving such default, may remedy such default for the account and at the expense of TENANT. If LANDLORD makes any expenditures or incurs any obligations for the payment of money in connection therewith or with the enforcement of any provisions in this Lease, including but not limited to, reasonable attorneys' fees in instituting, prosecuting or defending any action or proceeding, such sums paid or obligations insured, with interest at the rate of ten percent (10%) per annum and reasonable costs, shall be paid to LANDLORD by TENANT as additional Rent. LANDLORD is not required to terminate this tenancy after the occurrence of (a), (b), (c), (d) or (e) or other default by TENANT, and LANDLORD may pursue all legal remedies against TENANT, provided TENANT has not terminated this tenancy pursuant to this Lease.

In addition to the foregoing remedies and upon election of LANDLORD, TENANT shall pay to LANDLORD as damages, a sum equal to the remaining Rent due pursuant to this Lease for the remainder of the Lease Term. Any and all payments due to LANDLORD under this Lease, whether for Rent or otherwise, shall be made without deduction, reduction or offset of any kind.

Any and all rights and remedies which any party may have under this Lease, and at law and equity, shall be cumulative and shall not be deemed inconsistent with each other, and any two or more of all such rights and remedies may be exercised at the same time insofar as permitted by law. Without prejudice to any other rights or remedies available to LANDLORD herein or provided by law, LANDLORD may, upon default of TENANT, terminate the term of this Lease whether initial or renewed by written notice given to TENANT, said notice shall specify the date of termination and may, but need not, include such terms of performance of which by TENANT shall be deemed to cure any default.

**24. LANDLORD'S DEFAULT:** LANDLORD shall not be deemed to be in default in the performance of any of its obligations hereunder unless she shall fail to perform such obligations and such failure shall continue for a period of sixty (60) days, or such additional time as is reasonably required to correct any such default, after written notice has been given by TENANT to LANDLORD specifying the nature of LANDLORD's alleged default.

**25. HAZARDOUS WASTE:** TENANT shall not use any portion of the PREMISES for the use, generation, treatment, storage or disposal of "oil," "hazardous material," "hazardous waste," or "hazardous substances" (collectively, the "**Hazardous Materials**"), as such terms are defined under the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9601 *et seq.*, as amended, the Resource Conservation and Recovery Act of 1976, 42 U.S.C. §6901 *et seq.*, the Hazardous Materials Transportation Act, the Toxic Substances Control Act, the Clean Air Act and the Clean Water Act codified in the United States Code, as amended from time to time, or any similar State of Maine or local law, or in any regulations promulgated pursuant thereto, or in any other applicable law without the express prior written consent of LANDLORD. In the



event that any Hazardous Materials spill or leak in or around the PREMISES, TENANT shall immediately remove said Hazardous Materials in an approved manner and TENANT

shall indemnify, defend and hold harmless LANDLORD for any and all liability, including all costs, attorneys' fees and penalties incurred in the preparation of environmental studies, the preparation of remedial plans and implementation of clean up. TENANT represents that TENANT shall not store or use any materials or chemicals that are not permitted to be sold or used in the State of Maine.

26. **NOTICE:** Any notice from LANDLORD to TENANT relating to the PREMISES shall be deemed duly served if addressed to TENANT and mailed to: 22 Industrial Park Road, Saco, ME 04072. The date of mailing shall be deemed to be the date delivered. Any notice from TENANT to LANDLORD relating to the PREMISES shall be deemed duly served, if addressed to LANDLORD and mailed to: 2 Sod Farm Lane, Saco, ME 04072. The parties agree that notice may be provided by text or email from time to time.

27. **SURRENDER:** On or before 5 p.m. of the last day of the termination of the Lease, TENANT shall deliver to LANDLORD the all keys to the PREMISES and peaceably quit and surrender to LANDLORD the PREMISES in neat and clean condition and in good order, condition and repair, together with all alterations, additions and improvements which may have been made or installed in, on or to the PREMISES prior to or during the Term of this Lease (except as hereinafter provided), excepting only ordinary wear and use and damage by fire or other casualty for which, under other provisions of this Lease, TENANT has no responsibility to repair or restore. TENANT shall additionally remove all goods, equipment and effects from the PREMISES, including but not limited to all signs and lettering affixed or painted by TENANT, either inside or outside the PREMISES, and shall repair any damage caused as a result of such removal. In the event of TENANT's failure to remove any of TENANT's property from the PREMISES on or before 5 p.m. of the last day of the termination of the Lease, LANDLORD is hereby authorized, without liability for loss or damage thereto, at the sole risk of TENANT, and without notice to TENANT, to (1) remove and store any of the property at TENANT's expense; (2) retain such property under LANDLORD's control; (3) sell at public or private sale any or all of the property not so removed and keep any proceeds of such sale; and/or (4) destroy such property.

Any holding over by TENANT after the expiration of the Term of this Lease shall be treated as a daily tenancy at sufferance at a rate equal to one and one half (1.5) times the Rent then in effect (prorated on a daily basis). In all other respects, such holding over shall be on the terms and conditions set forth in this Lease as far as applicable

28. **BROKERAGE:** TENANT warrants and represents to LANDLORD that it has not dealt with any broker, finder or similar person concerning the leasing of the leased Premises. In the event of any brokerage claims against LANDLORD by any person making such a claim through TENANT, TENANT agrees to defend the same and indemnify LANDLORD against any such claim. LANDLORD warrants and represents to TENANT that it has not dealt with any broker, finder or similar person concerning the leasing of the leased Premises.



29. **NOTICE OF LEASE:** TENANT agrees that it will not record this Lease. Both parties shall, upon request of either party, execute and deliver a memorandum of this Lease in such recordable form as may be permitted by applicable statute. The cost of preparation and filing to be borne by the requesting party.

30. **ESTOPPEL CERTIFICATE:** Each party agrees that at any time within fifteen (15) days of the other party's written request, to execute, acknowledge, and deliver to the requesting party a written statement stating that the Lease has not been modified, is in full force and effect, that the requesting party is not in default of said terms, and that there exist no charges or set-offs against the requesting party.

31. **WAIVER:** The failure of either party to seek redress for violation of, or to insist upon the strict performance of any covenant or condition of this Lease shall not be deemed a waiver of such violation nor prevent a subsequent act, which would have originally constituted a violation, from having all the force and effect of an original violation. The receipt by LANDLORD of any payments by TENANT shall not be deemed to have been a waiver of such breach by LANDLORD unless such waiver is in writing and signed by LANDLORD. No consent or waiver, express or implied, by either party to or of any breach of any provision of the Lease shall be construed as a waiver or consent to or of any other breach of the same or any other agreement or duty.

32. **INABILITY TO PERFORM:** Except as otherwise expressly proved herein, LANDLORD's failure to perform any obligations under this Lease shall be deemed temporarily excused during such period if LANDLORD is unable to so perform by reason of unforeseeable weather conditions, acts of God, declared states of emergency, public health emergency or pandemic or epidemic (including, but not limited to, the COVID-19 pandemic), strikes or labor troubles, conditions of supply and demand, or any other similar cause whatsoever (including, but not limited to, governmental preemption in connection with a national emergency or by reason of any rule, order or regulation of any governmental agency or any department or subdivisions thereof not attributable to LANDLORD's actions or failure to act).

33. **QUIET ENJOYMENT:** LANDLORD agrees that upon TENANT's performance of the agreements and conditions contained herein, TENANT shall peaceably and quietly have, hold and enjoy the PREMISES during the Term without any manner of hindrance or molestation from LANDLORD or anyone claiming under LANDLORD

34. **PARTIAL INVALIDITY:** The invalidity of one or more of the provisions of this Lease shall not affect the remaining portions of this Lease; and, if any one or more of the provisions of this Lease should be declared invalid by final order, decree or judgment of a court of competent jurisdiction, this Lease shall be construed as if such invalid provision had not been included in this Lease.

35. **CHOICE OF LAW AND VENUE:** This Lease shall be governed exclusively by the provisions of the laws of the State of Maine as the same may from time to time exist.

36. **WAIVER OF JURY TRIAL:** LANDLORD and TENANT hereby each waive trial by jury in any action, proceeding or counterclaim brought by either against the other, on or in respect of any matter whatsoever arising out of or in any way connected with this Lease, the relationship of LANDLORD and TENANT or TENANT's use or occupancy of the PREMISES.

37. **PROVISIONS BINDING AND EXECUTION:** The covenants and agreements of this Lease shall, subject to the terms of this Lease to the contrary, be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns as the case may be and if there be more than one lessee, all signatories hereto shall be jointly and severally liable for the obligations hereunder. This Lease may be executed in one or more counterparts, all of which are identical, any one of which is to be deemed to be complete in itself any may be introduced in evidence or used for any purpose. The headnotes throughout this Lease are for convenience or reference only and shall in no way be held or deemed to define, limit, explain, describe, modify or add to the interpretation, construction or meaning of any provision of this Lease. A copy of this Lease shall have the same binding effect as the original.

38. **RIGHT OF FIRST REFUSAL:** LANDLORD hereby grants to the TENANT the exclusive right of first refusal to purchase the Premises upon the terms and conditions herein set forth. This right of first refusal to purchase may only be exercised by the TENANT within fifteen (15) days of receipt by the TENANT of a written notification from LANDLORD that LANDLORD intends to sell the Premises and LANDLORD is in receipt of an offer to purchase by a third party, a copy of which offer shall accompany said notification. In the event that TENANT elects to exercise this right of first refusal granted under the terms of this Lease TENANT shall provide LANDLORD with the aforesaid fifteen (15) days, a written offer to purchase, the terms of the purchase offer shall be identical to the bona fide offer to purchase received by the LANDLORD from any third party, except that the TENANT may have up to thirty (30) days to close. Upon TENANT's election to exercise this first refusal, LANDLORD and TENANT shall enter into a standard form purchase and sale agreement containing the terms as herein noted.

39. **OPTION TO PURCHASE:** During the <sup>EAB</sup> first 3 years of this lease <sup>Lmv</sup> if TENANT is not in default hereof, TENANT shall have the option to purchase the premises for the price of \$515,000.00 with no credit for any rental or other payments having been previously made. Notice of the exercise of the option must be provided in writing during the first 3 years of this Lease and the closing must incur within thirty (30) days of said notice.


EAB Lmv

40. **ENTIRE AGREEMENT:** This Lease and Exhibit A attached sets for the entire agreement between the parties hereto and cannot be modified or amended except in writing duly executed by both parties.

IN WITNESS WHEREOF, the parties hereunto set their hands and seal this 3 day of February, 2022.

Initials: EAB Lmv


**LANDLORD:**

  
Linda Valentino (Feb 3, 2022 19:01 EST)

By: Linda Valentino

Date: 2/3/22

**TENANT:**  
**BLOSSOM, LLC**

  
Elizabeth Baldacci (Feb 3, 2022 19:10 EST)

By: Elizabeth Baldacci

Its CEO

Hereunto Duly Authorized

Date: 2/3/22

Lmv

Initials: EAB

Lmv



# 4. Abutters 600 FT.

## Abutters within 600 Feet of 22 Industrial Parkway

Property Address	Owner Name	Owner Address	City	State	Zip Code
1 Lechner Road	MEL Realty, LLC	1 Lechner Road	Saco	Maine	04072
15 Industrial Park Road	Visiting Nurses of Southern Maine	15 Industrial Park Road	Saco	Maine	04072
19 Industrial Park Road	Northern Ventures LLC	19 Industrial Park Road	Saco	Maine	04072
23 Industrial Park Road	Peoples Choice Credit Union	23 Industrial Park Road	Saco	Maine	04072
24 Industrial Park Road	Condo Main	24 Industrial Park Road	Saco	Maine	04072
26 Industrial Park Road	Central Maine Power Co. C/O Utility Shared Services Corp	One City Center	Portland	Maine	04101
28 Industrial Park Road	Prime Storage Saco, LLC C/O SLK Global Solutions America	2727 LBJ Freeway Suite 806	Dallas	Texas	75234
34 Industrial Park Road	City of Saco	300 Main Street	Saco	Maine	04072









**1 LEHNER RD**

Map-Bk-Lot: 069005000000 Print Tax Map

Address: 1 LEHNER RD

Account Number: 5024

**Owner Information**

Owner: MEL REALTY LLC

Owner 2:

Address: 1 LEHNER RD

City/State/ZIP: SACO, ME, 04072

**Other Information**

GIS ID: 069005000000

Total Assessed Land: 435400

Total Assessed Improvements: 1539200

Land Occupancy Description: COMM LOT MDL-96

User Code: 3901

Detailed property information can be found on the Online Assessing Database. Please see the City of Saco Zoning Ordinance or turn on the zoning layer for zoning details. Google Maps/Street View is also

Basemaps

Spectrum

Industrial Park Road

PM Construction

19

Black Bear Signs

20m  
60ft

Map data © OpenStreetMap contributors, CC

Industrial Park Rd





Basemaps

15 INDUSTRIAL PARK RD

Map-Bk-Lot: 055003000000 Print Tax Map  
Address: 15 INDUSTRIAL PARK RD  
Account Number: 4170  
Owner Information  
Owner: VISITING NURSE OF SO ME  
Owner 2:  
Address: 15 INDUSTRIAL PARK RD  
City/State/ZIP: SACO,ME,04072-1804  
Other Information  
GIS ID: 055003000000  
Total Assessed Land: 79600  
Total Assessed Improvements: 1034600  
Land Occupancy Description: HEALTH TR MDL-94  
User Code: 950C  
Detailed property information can be found on the Online Assessing Database. Please see the City of Saco Zoning Ordinance or turn on the zoning layer for zoning details. Google Maps/Street View is also

Industrial Park Road

Ind

P

P



Map data © OpenStreetMap contributors, C





Spectrum

Industrial Park Road

People's  
Choice  
Credit  
Union

Industrial Park Road

Black Bee  
Signs

19

**19 INDUSTRIAL PARK RD**



**Map-Bk-Lot:** 055001000000 Print Tax Map  
**Address:** 19 INDUSTRIAL PARK RD  
**Account Number:** 4169

**Owner Information**

**Owner:** NORTHERN VENTURES LLC  
**Owner 2:**

**Address:** 19 INDUSTRIAL PARK RD  
**City/State/ZIP:** SACO,ME,04072

**Other Information**

**GIS ID:** 055001000000  
**Total Assessed Land:** 109500  
**Total Assessed Improvements:** 608500  
**Land Occupancy Description:** COMM BLDG  
MDL-94  
**User Code:** 3222

*Detailed property information can be found on the Online Assessing Database. Please see the City of Saco Zoning Ordinance or turn on the zoning layer for zoning details. Google Maps/Street View is also*

20m  
60ft







Spectrum

Industrial Park Road

P.M. Construction

19

Black Bear Signs

20m  
60ft

### 23 INDUSTRIAL PARK RD

Map-Bk-Lot: 055001001000 Print Tax Map

Address: 23 INDUSTRIAL PARK RD

Account Number: 102382

#### Owner Information

Owner: PEOPLES CHOICE CREDIT UNION

#### Owner 2:

Address: 23 INDUSTRIAL PARK ROAD

City/State/ZIP: SACO, ME, 04072

#### Other Information

GIS ID: 055001001000

Total Assessed Land: 110400

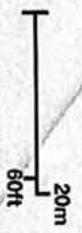
Total Assessed Improvements: 3595400

Land Occupancy Description: BANK BLDG

User Code: 3410

Detailed property information can be found on the Online Assessing Database. Please see the City of Saco Zoning Ordinance or turn on the zoning layer for zoning details. Google Maps/Street View is also available for many parcels





Basemaps

24 INDUSTRIAL PARK RD

Map-Bk-Lot: 069007000000 Print Tax Map

Address: 24 INDUSTRIAL PARK RD

Account Number: 5025

Owner Information

Owner: CONDO MAIN

Owner 2:

Address:

City/State/ZIP: "

Other Information

GIS ID: 069007000000

Total Assessed Land: 0

Total Assessed Improvements: 0

Land Occupancy Description: CONDO MAIN

User Code: 995

Detailed property information can be found on the

Online Assessing Database. Please see the City of

Saco Zoning Ordinance or turn on the zoning layer

for zoning details. Google Maps/Street View is also

available for many parcels

Spectrum

Industrial Park Road

Industrial Park Road

Map data © OpenStreetMap contributors, CC





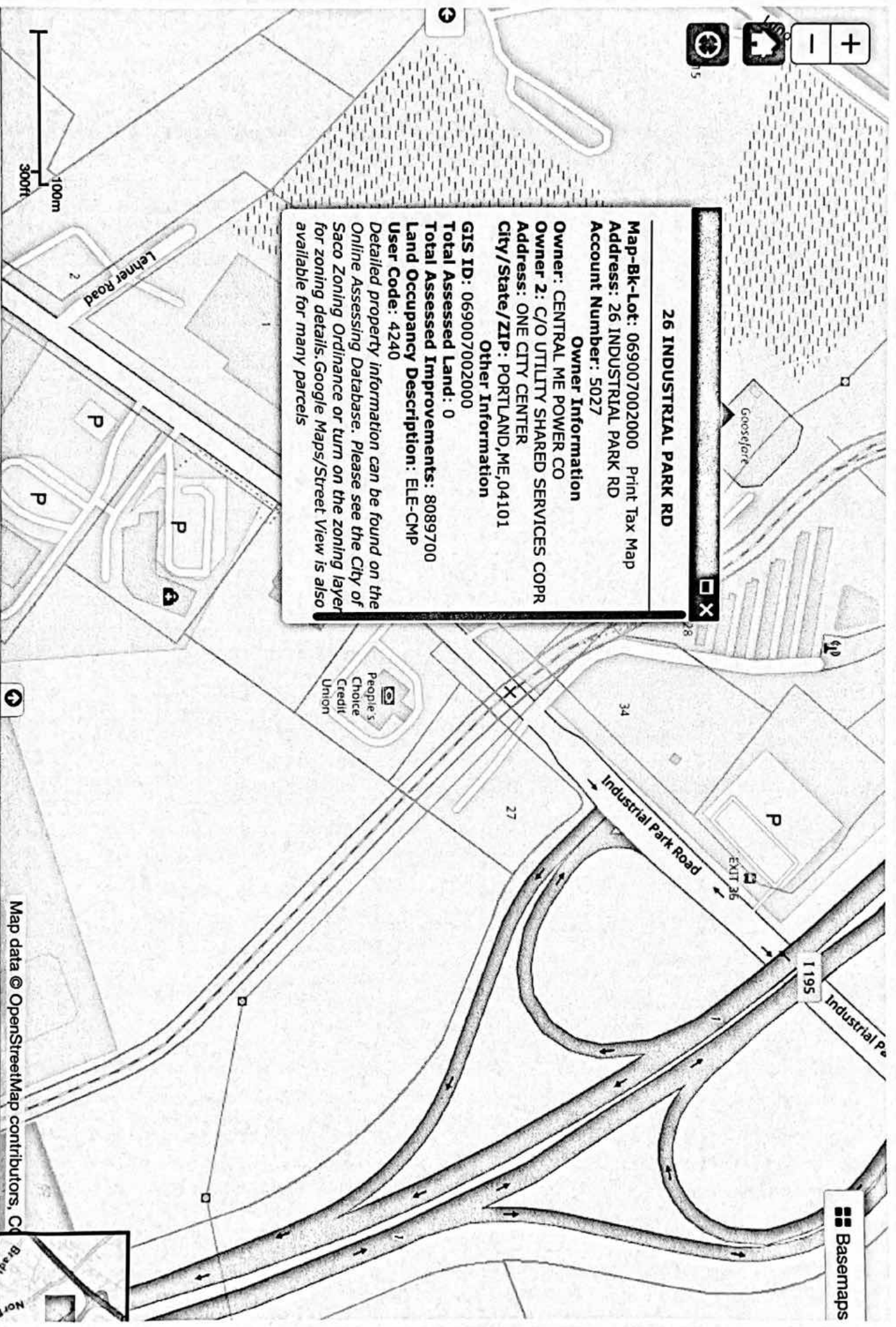
**26 INDUSTRIAL PARK RD**

Map-Bk-Lot: 069007002000 Print Tax Map  
Address: 26 INDUSTRIAL PARK RD  
Account Number: 5027

**Owner Information**  
Owner: CENTRAL ME POWER CO  
Owner 2: C/O UTILITY SHARED SERVICES COPR  
Address: ONE CITY CENTER  
City/State/ZIP: PORTLAND,ME,04101

**Other Information**  
GIS ID: 069007002000  
Total Assessed Land: 0  
Total Assessed Improvements: 8089700  
Land Occupancy Description: ELE-CMP  
User Code: 4240

Detailed property information can be found on the  
Online Assessing Database. Please see the City of  
Saco Zoning Ordinance or turn on the zoning layer  
for zoning details. Google Maps/Street View is also  
available for many parcels





28 INDUSTRIAL PARK RD

Map-Bk-Lot: 070006000000 Print Tax Map  
Address: 28 INDUSTRIAL PARK RD  
Account Number: 5042

Owner Information

Owner: PRIME STORAGE SACO LLC  
Owner 2: C/O SLK GLOBAL SOLUTIONS AMERICA  
Address: 2727 LBJ FREEWAY STE 806  
City/State/ZIP: DALLAS, TX, 75234

Other Information

GIS ID: 070006000000  
Total Assessed Land: 732700  
Total Assessed Improvements: 1237000  
Land Occupancy Description: TOWERS MDL-96  
User Code: 3940

Detailed property information can be found on the  
Online Assessing Database. Please see the City of  
Saco Zoning Ordinance or turn on the zoning layer  
for zoning details. Google Maps/Street View is also  
available for many parcels

Goosefare

EXIT 36

I 195

Industrial P

Lehner Road

100m  
300ft



34 INDUSTRIAL PARK RD

Map-Bk-Lot: 070003000000 Print Tax Map

Address: 34 INDUSTRIAL PARK RD

Account Number: 5040

Owner Information

Owner: CITY OF SACO

Owner 2:

Address: 300 MAIN ST

City/State/ZIP: SACO, ME, 04072

Other Information

GIS ID: 070003000000

Total Assessed Land: 79600

Total Assessed Improvements: 163500

Land Occupancy Description: MUNICIPAL MDL-96

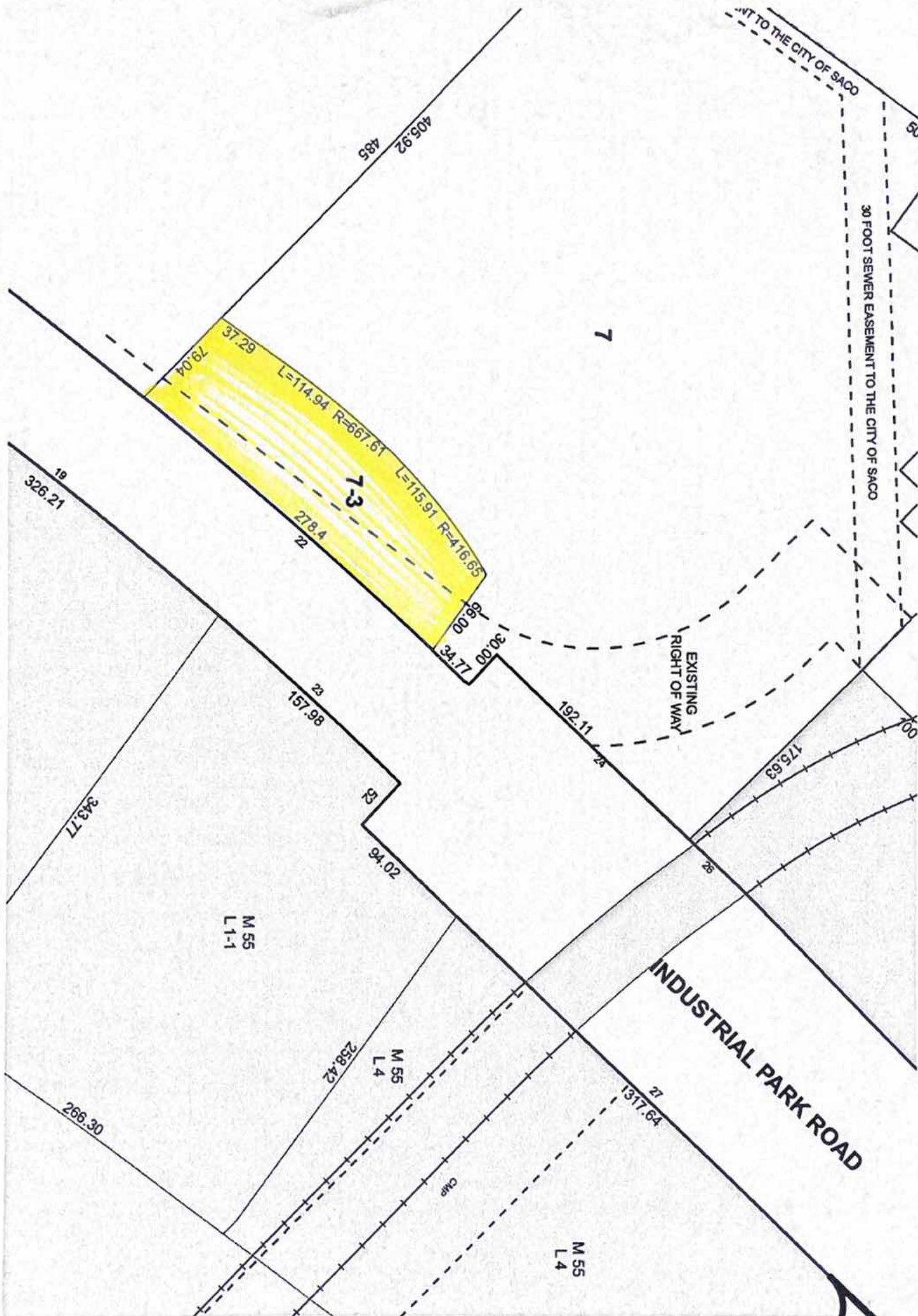
User Code: 9031

Detailed property information can be found on the Online Assessing Database. Please see the City of Saco Zoning Ordinance or turn on the zoning layer for zoning details. Google Maps/Street View is also

Industrial Park Road

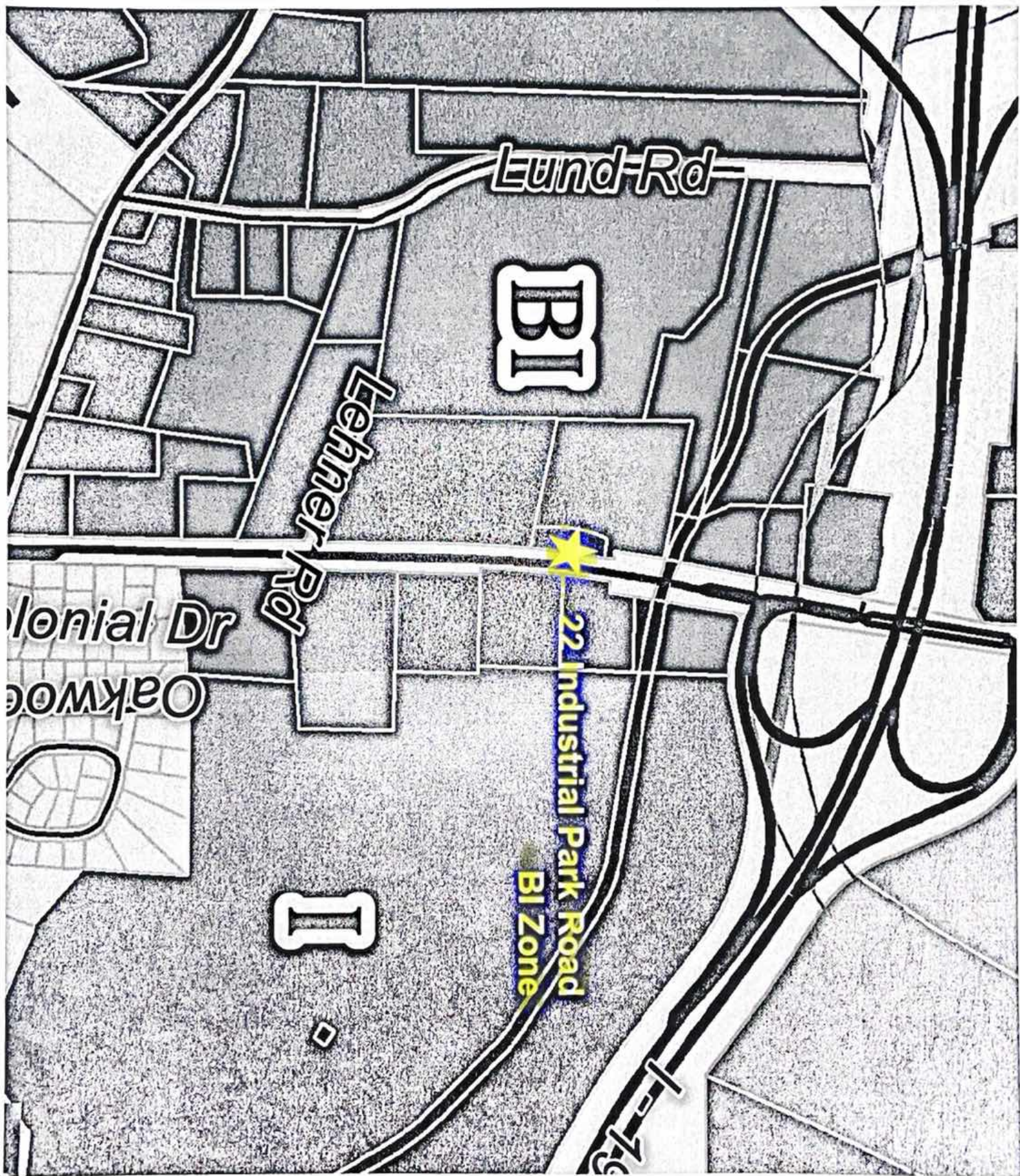
20m  
60ft

# 5. Lot Lines





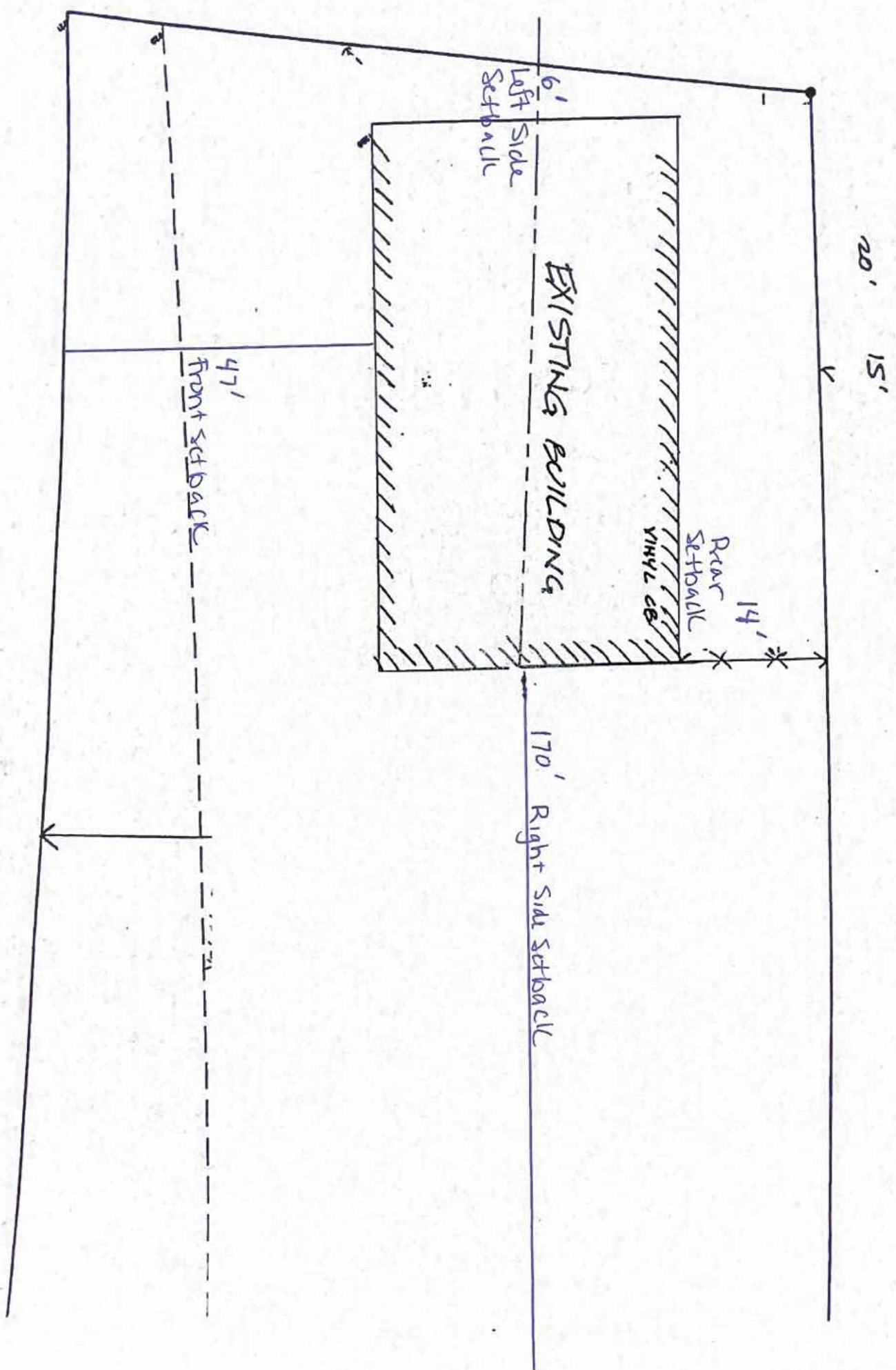
## 5. Applicable Zone - BI





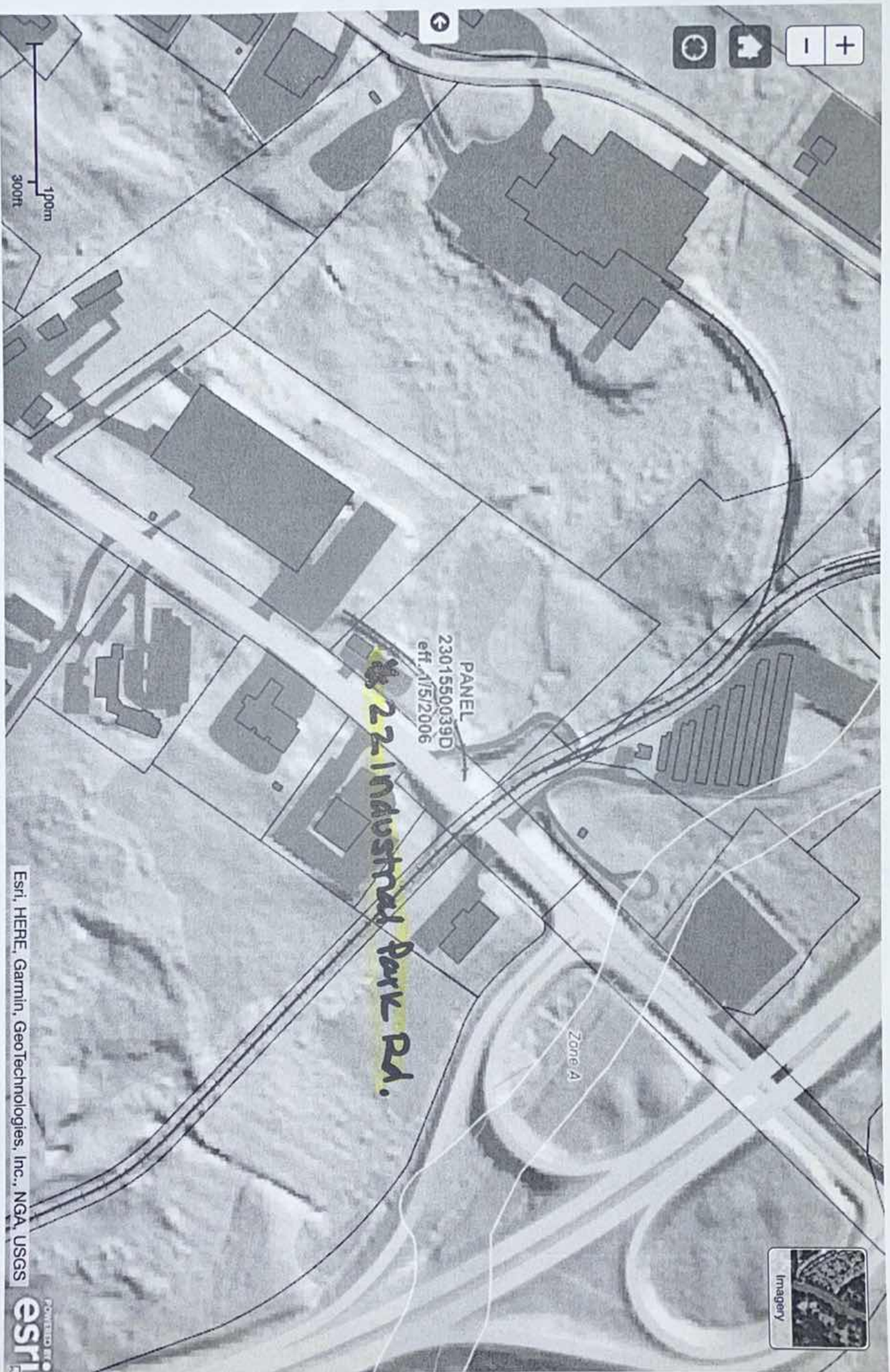


# 7. Setbacks



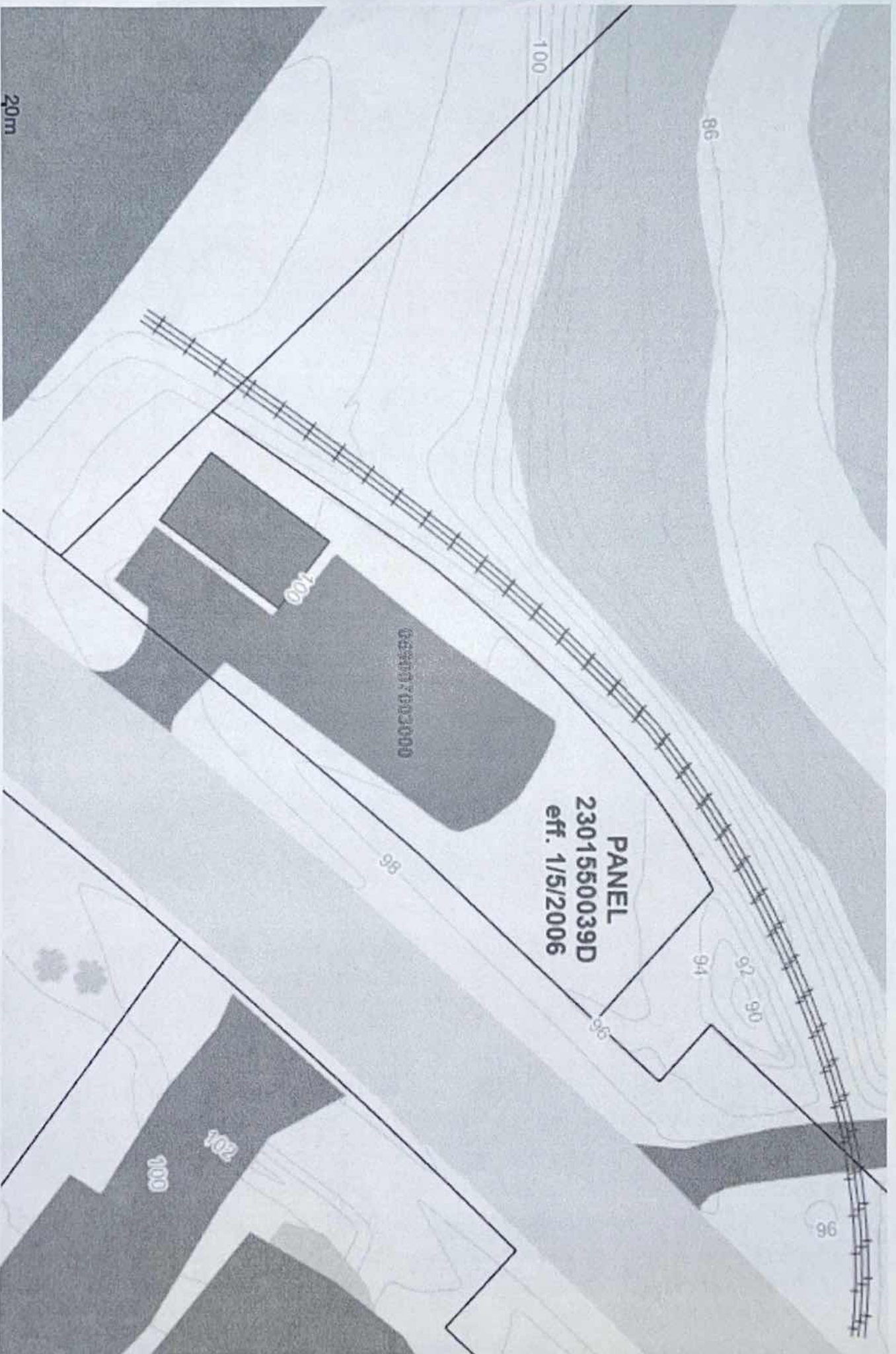


## 8. Existing Physical Features - Flood Zones



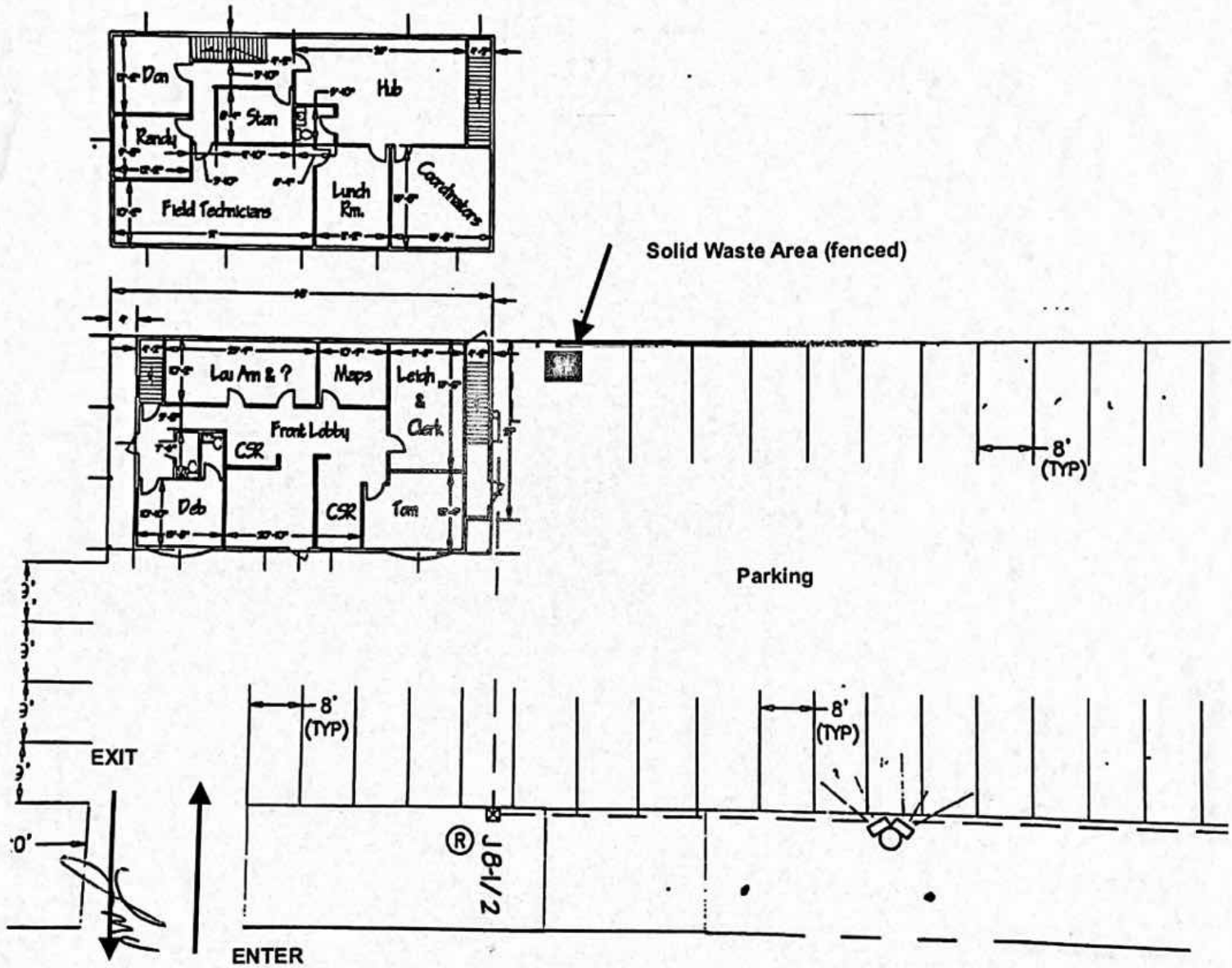


# a. Topography

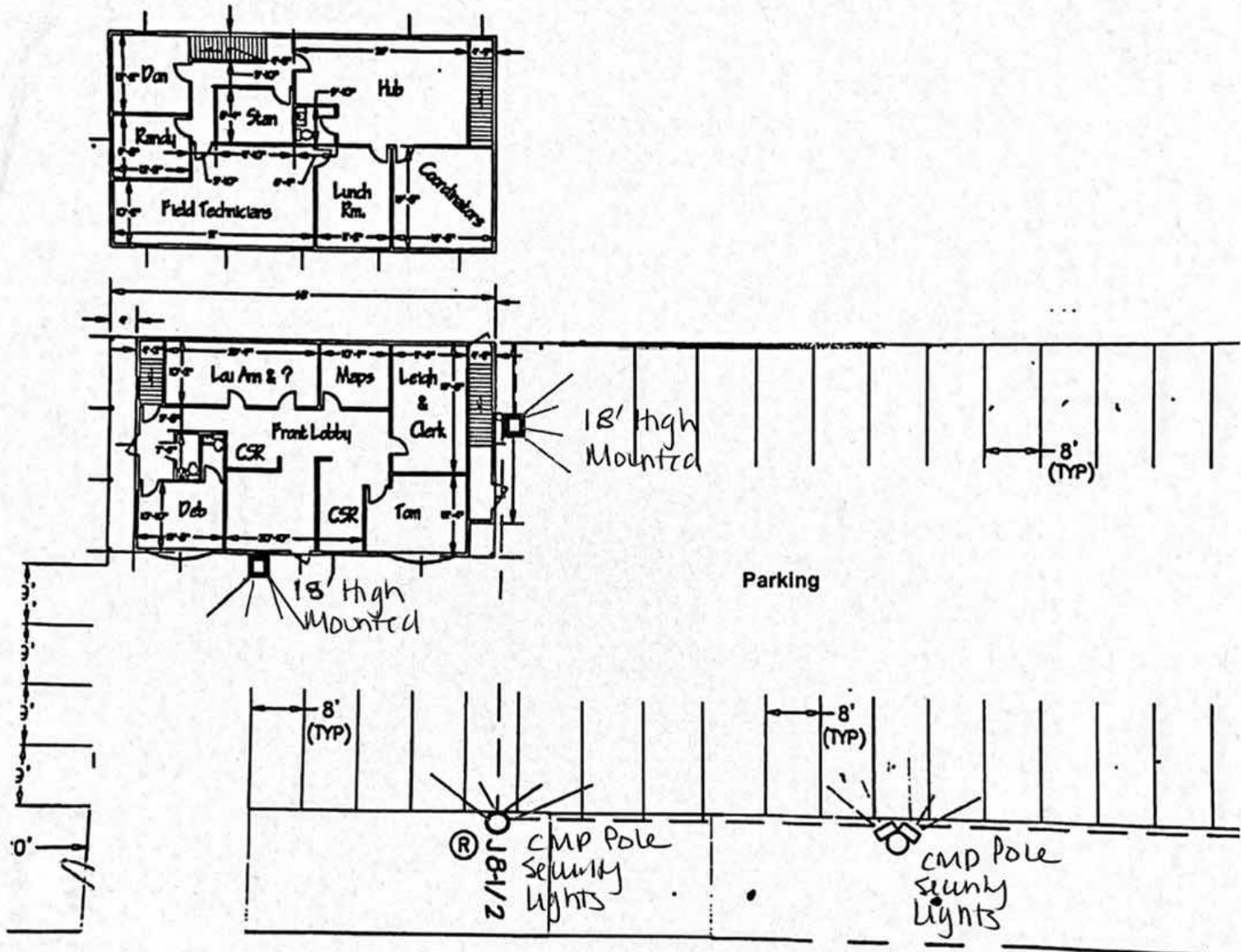




## 10. Existing Parking, Entrance, Exit



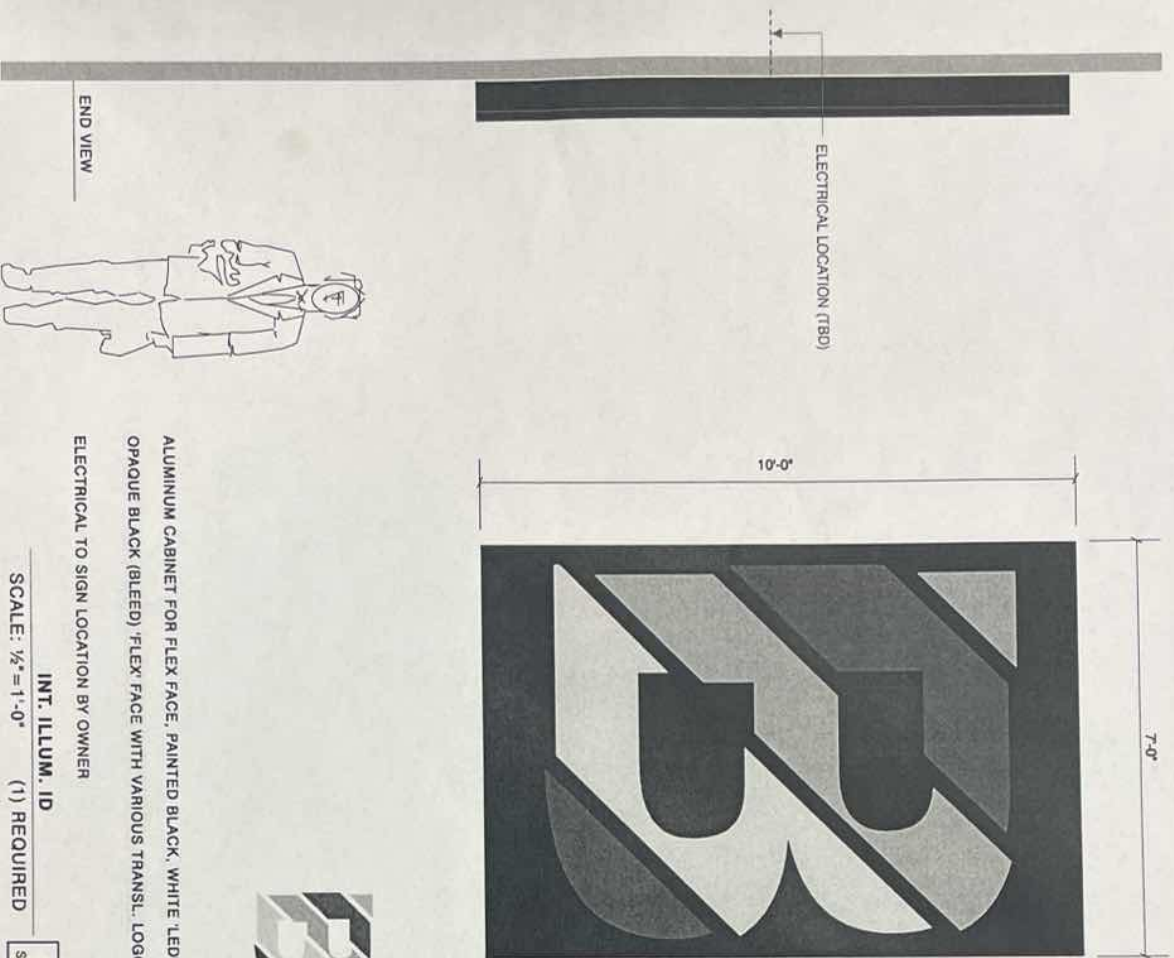
#### 14. Lighting Detail





# 15. Signs - Proposed Awning

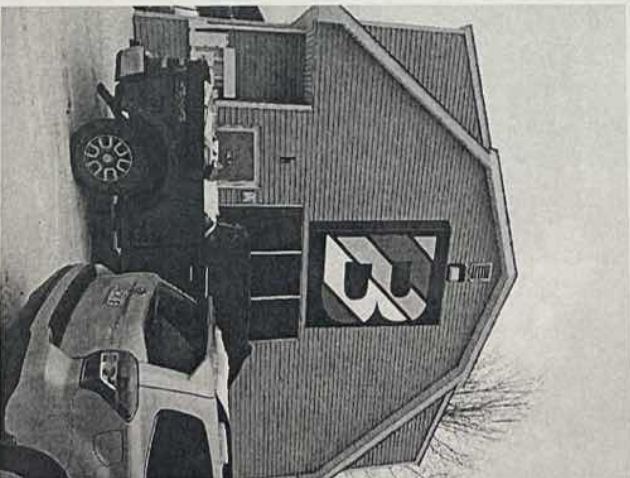




ALUMINUM CABINET FOR FLEX FACE, PAINTED BLACK, WHITE LED ILLUMINATION,  
 OPAQUE BLACK (BLEED) FLEX FACE WITH VARIOUS TRANSL. LOGO COLORS  
 ELECTRICAL TO SIGN LOCATION BY OWNER

INT. ILLUM. ID  
 SCALE: 1/2" = 1'-0" (1) REQUIRED

70  
 50 FT



Neokraft Signs, Inc.  
 647 Pleasant Street  
 Lewiston, Maine 04240  
 207.782.9654 | 800.339.2258  
 neokraft.com

## Custom Sign Fabrication

These plans are the exclusive property of Neokraft Signs, Inc. and are the result of the original work of its employees. They are submitted to Neokraft's client for the sole purpose of construction. Neokraft's client agrees to indemnify and hold Neokraft harmless from Neokraft's sign manufacturer according to these plans. Distribution or exhibition of these plans to anyone other than employees of said client, or use of these plans to construct a sign similar to the one shown on these plans, without the written consent of Neokraft, Inc., shall constitute a breach of contract. If such breach or construction occurs, Neokraft expects to be reimbursed \$15000 in compensation for time and effort entailed in creating these plans.

## PRESENTATION

**BLOSSOM CANNABIS**  
 @10539-2

ACCT ID: 012844  
 LOCATION: 22 INDUSTRIAL PARKWAY  
 SACO, MAINE  
 DRAWING NO.: 1 OF 1  
 DRAWN BY: BK REP: CB  
 DATE: 02.09.2022  
 QUOTE: @10539-2  
 GEN REF: 21/8605.1, 21/8605.2

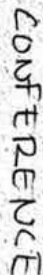


482

PERSON BUILDING  
SERVICES, INC.  
P.O. Box 365  
Gardner, ME 04345

32-2-13

10-11-01



DISPENSARY / PATIENT CARE

ADMIN

STORAGE

STORAGE UNDER STAIRS

FUTURE  
USE

УТИЛИТА

UP  
STAIRWAY

 $9 \div 4 \frac{3}{4}''$ 

9243

GATE

卷六

## CONFERENCE

1255  
Curt  
57 clm

2.11.12

FLOOR PLAN (MODIFICATIONS TO EXISTING)

SCALE:  $\frac{1}{4}'' = 1'-0''$

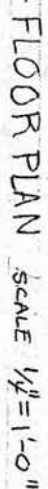
**CHRISTSON BUILDING  
SERVICES, INC.**  
P.O. Box 363  
Gardiner, ME 04845

BLOSSOM

571-6"

241-114

41 1/4"





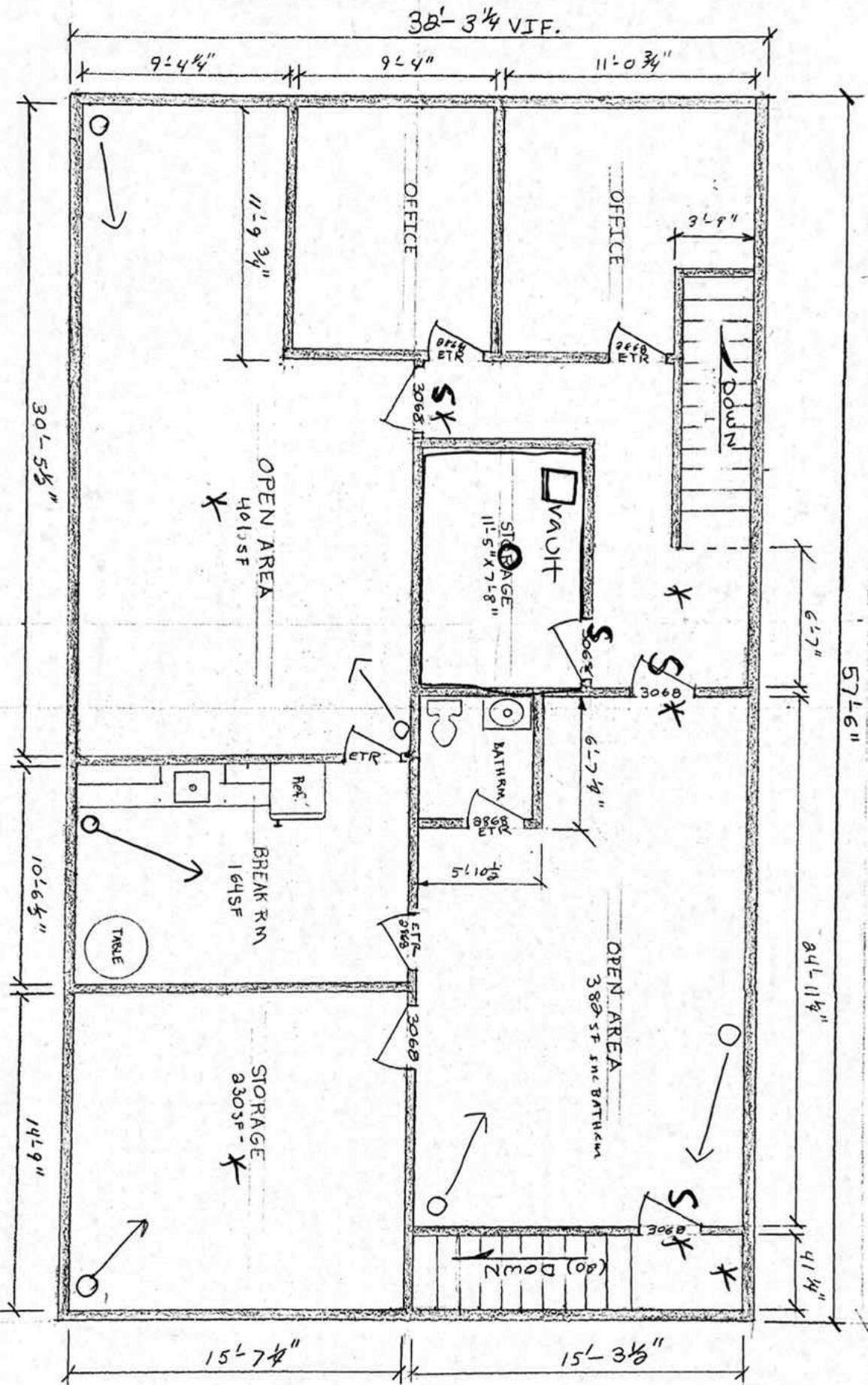
# 20. SECURITY PLAN - 2ND FLOOR

BLOSSOM

57'-6"

84'-11 1/4"

41'-1/4"



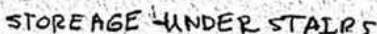
S = Upgrade to steel door FLOOR PLAN SCALE 1/4" = 1'-0"

O = Camera

\* = motion sensor / door sensor  
 □ = Steel mesh vault or DEA cage

PERSON BUILDING  
SERVICES, INC.  
P.O. Box 355  
Gardner, MA 04345

10-11



Panic Button ☒ Safe

☒ Safe



March 29, 2022

Mr. Jason Garnham, AICP  
City Planner  
Saco City Hall  
300 Main Street  
Saco, ME 04072-1538

## **RE: TRAFFIC REVIEW – 22 INDUSTRIAL PARK ROAD**

### **INTRODUCTION**

As requested, James W. Sewall Co. (Sewall) has reviewed potential traffic impact for the proposed building conversion to provide a marijuana dispensary at 22 Industrial Park Road. This building, based upon the plans provided in the Conditional Use Application, dated 2/15/22, provides two stories. The first floor of the building, which is 1,600 square feet in size based upon tax records, will provide for the marijuana dispensary and will be open to the public for marijuana sales. The second floor of the building, 1,728 S.F. in size, will be restricted to employee use and will contain office, trimming and shipping areas. The applicant has estimated that the site will generate 50 vehicles per day (100 one-way trips) or an average of 5 vehicles (10 one-way trips) per hour.

Based upon information provided by the city, Spectrum previously utilized this building for customer service, office space and associated storage. Customers could pay bills there and exchange or acquire new equipment. Customer service was located on the first floor. The second floor was used by Spectrum for office and storage space.

### **TRIP GENERATION ANALYSIS**

The number of trips generated by both the former Spectrum use and the proposed marijuana sales was estimated using the most recent Institute of Transportation Engineers (ITE) “Trip Generation, 11<sup>th</sup> Edition” report, since it is based upon the most current information and the largest database. The calculations for the former Spectrum use were performed utilizing land use code (LUC) 712 – Small Office on the basis of 3,328 square feet. The trips to be generated by the marijuana sales were estimated using LUC 882 – Marijuana Dispensary based on the 1,600 S.F. first floor. The second floor was also estimated using LUC 712 – Small Office on the basis of 1,728 S.F. The results are summarized in the following table:

<b>TRIP GENERATION (one-way trip-ends)</b>					
<u>Time Period</u>	<u>Former Spectrum</u>	<u>Proposed Dispensary</u>			<u>Change</u>
		<u>Sales</u>	<u>Office</u>	<u>Total</u>	
Weekday	48	338	26	364	+316
AM Peak Hour – Adjacent St.	6	17	3	20	+14
Entering	5	9	2	11	+6
Exiting	1	8	1	9	+8
PM Peak Hour – Adjacent St.	7	30	4	34	+27
Entering	2	15	1	16	+14
Exiting	5	15	3	18	+13
AM Peak Hour – Generator	9	27	5	32	+23
Entering	5	14	3	17	+12
Exiting	4	13	2	15	+11
PM Peak Hour – Generator	10	39	5	44	+34
Entering	4	19	2	21	+17
Exiting	6	20	3	23	+17
Saturday Peak Hour	2	46	1	47	+45
Entering	1	23	0	23	+22
Exiting	1	23	1	24	+23

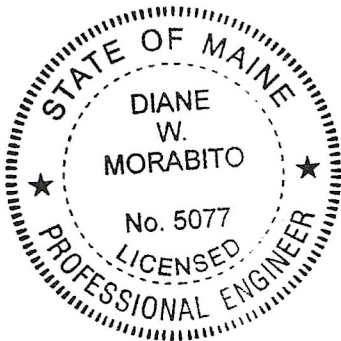
As seen above, the former Spectrum facility is estimated to have generated from 6 to 10 trips during weekday peak hours. ITE indicates that Spectrum would have generated 48 one-way trips on a daily basis. Based upon the customer service component provided by Spectrum, the ITE estimates are likely low. In contrast, the proposed marijuana sales use is expected to generate 364 daily trips, 44 PM peak hour trips and 47 Saturday peak hour trips. These trips are significantly greater than those estimated by the applicant. However, since daily trip generation will not exceed 400, a full traffic impact analysis is not required by the Saco Site Plan Ordinance.

It is recommended, given the projected peak hour trip levels, that safety be reviewed. Driveway sight distance information should be provided to confirm that it meets current safety standards and that there are no existing restrictions, such as brush or signage. The recommended sight distance for the

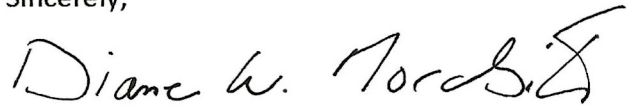


posted 40 mph speed limit is 445'. Additionally, in terms of safety I reviewed the MaineDOT Map Viewer for high crash locations (HCLs) within the vicinity of the site. There are no HCLs within the immediate vicinity (between North Street and the I-195 ramps) so no additional accident analysis is requested.

To summarize, the trips estimated by the ITE data are significantly higher than the estimates provided by the applicant. However, a full traffic impact analysis is not required based upon the projected daily volumes. Driveway sight distance information is requested to assure that it meets current safety standards and that no restrictions have occurred. As always, please don't hesitate to contact Sewall if you have any questions or concerns regarding my review findings or recommendations.



Sincerely,



A handwritten signature in black ink that reads "Diane W. Morabito".

Diane W. Morabito, P.E. PTOE  
Vice President Traffic Engineering

**From:** [Elizabeth Baldacci](#)  
**To:** [Jason Garnham](#)  
**Subject:** Re: Trip Generation Response - 22 Industrial Park  
**Date:** Tuesday, May 3, 2022 5:00:37 PM  
**Attachments:** [Screen Shot 2021-07-11 at 2.12.40 PM.png](#)

---

**[CAUTION: THIS EMAIL  
ORIGINATED FROM OUTSIDE  
THE CITY OF SACO DOMAIN]**

Jason,

Thanks for the opportunity to respond to the trip count estimates provided by Diane Morabido of Sewall. I respect Ms. Morabido's good faith analysis based on ITE data, however, I did provide my estimates based on real data from my current dispensary just a few miles away in Biddeford. Dispensary traffic can vary tremendously from state to state based on myriad regulatory and demographic factors. Maine, being a low population state with unlimited licenses, does not see the kind of traffic to dispensaries as a high population state that limits licenses, for example. Also, medical cannabis dispensaries generally experience less traffic than adult use, or "recreational" dispensaries, which are open to the public and do not require a patient to be registered with the state.

Blossom's current dispensary in Biddeford has averaged 70 transactions per day since opening last July. Weekends are busier than weekdays, averaging 110 transactions. Weekdays average 60 transactions. Because many patients often travel in vehicles together but must conduct separate transactions under Maine law, trip generation is much lower than transaction count.

With that, I believe my estimate of approximately 50 vehicles per day during the weekday, and 100 per week end day is a fair estimate of what we might also expect in Saco.

Lastly, I agree with Ms. Morabido's assessment that her estimate on the prior use as a Spectrum regional maintenance, technical and customer service center are likely low. Given just one ITE code for "office use" was considered, the estimate is unlikely to include the customer service center which was open to the public -and probably a significant traffic driver. The estimate also doesn't likely consider the many service trucks kept on site that were dispatched throughout the day.

Thanks, Jason, and please let me know if you need anything further on the question of trip generation.



Elizabeth Baldacci  
CEO  
207.756.9768



On Apr 6, 2022, at 1:04 PM, Jason Garnham <[jgarnham@sacomaine.org](mailto:jgarnham@sacomaine.org)> wrote:

Elizabeth,

Traffic review memo attached as promised.

As discussed, I've questioned the numbers & hope to receive a response from Ms. Morabito soon. In the meantime I encourage you to prepare a response to the trip count estimates and the recommended driveway sight distance analysis. Sight distance recommendations and requirements are listed in Saco's Technical Design and Construction Standards Manual. See page 7: [Microsoft Word - TCDSM Sent to Planning on 2-4-21 \(revize.com\)](#)

I am putting your application on the May 17 Planning Board meeting agenda as discussed.

Please let me know if you need anything else. Thanks,

-Jason

<image002.png>

**JASON GARNHAM**, AICP

*City Planner*

300 Main Street | Saco, ME 04072

t 207.282.3487 | [sacomaine.org](http://sacomaine.org)

Follow us: [Facebook](#) | [Twitter](#) | [Instagram](#)

---

**From:** Diane Morabito <[mordi@sewall.com](mailto:mordi@sewall.com)>

**Sent:** Tuesday, March 29, 2022 1:38 PM

**To:** Jason Garnham <[jgarnham@sacomaine.org](mailto:jgarnham@sacomaine.org)>

**Cc:** Joseph A. Laverriere <[JLaverriere@sacomaine.org](mailto:JLaverriere@sacomaine.org)>

**Subject:** RE: Request for service: 22 Industrial Park Rd, Saco

**[CAUTION: THIS EMAIL ORIGINATED FROM OUTSIDE THE CITY OF  
SACO DOMAIN]**

Hi Jason and Joe,

My review for 22 IPR is attached. As you will see, while I estimate significantly more trips than the applicant did, a traffic impact analysis is not required, based upon the

site plan review ordinance.

In terms of safety, there are no nearby HCLS. I do recommend that sight distance information be provided for the drive to assure that it meets current standards.

As always, let me know if you have any questions or concerns.

Diane

**Diane W. Morabito, PE, PTOE**

*Vice President Traffic Engineering*

**T:** +1. 207.817.5440 | **F:** +1. 207.827.3641 | **E:** [diane.morabito@sewall.com](mailto:diane.morabito@sewall.com)  
40 Forest Falls Avenue | Suite 2 | Yarmouth, Maine 04096 | [www.sewall.com](http://www.sewall.com)

<image001.png>

---

**From:** Jason Garnham <[jgarnham@sacomaine.org](mailto:jgarnham@sacomaine.org)>

**Sent:** Friday, March 25, 2022 8:57 AM

**To:** Diane Morabito <[mordi@sewall.com](mailto:mordi@sewall.com)>; David Twomey <[DTwomey@sacomaine.org](mailto:DTwomey@sacomaine.org)>; Don Fiske <[DFiske@sacomaine.org](mailto:DFiske@sacomaine.org)>; Rickey Haskell <[rhaskell@sacomaine.org](mailto:rhaskell@sacomaine.org)>

**Cc:** Joseph A. Laverriere <[JLaverriere@sacomaine.org](mailto:JLaverriere@sacomaine.org)>

**Subject:** RE: Request for service: 22 Industrial Park Rd, Saco

Diane,

Thanks for looking into this so quickly.

Your assumptions about the dispensary uses are correct. Upstairs = staff only, to be used for processing and packing etc.

I have no knowledge of the previous use. I'm looping Saco Code Enforcement staff on my reply in hopes they can shed some light on your question.

**Dave/ Don/ Rick:** do you know anything about Spectrum's use of the 22 Industrial Park Rd property that would help Ms. Morabito evaluate potential traffic impacts from the dispensary proposal that we are currently reviewing? I highlighted her question below. Any help will be greatly appreciated.

Sincerely,

-Jason

---

**From:** Diane Morabito <[mordi@sewall.com](mailto:mordi@sewall.com)>

**Sent:** Friday, March 25, 2022 7:47 AM

**To:** Jason Garnham <[jgarnham@sacomaine.org](mailto:jgarnham@sacomaine.org)>

**Cc:** Joseph A. Laverriere <[JLaverriere@sacomaine.org](mailto:JLaverriere@sacomaine.org)>

**Subject:** RE: Request for service: 22 Industrial Park Rd, Saco



**[CAUTION: THIS EMAIL ORIGINATED FROM OUTSIDE THE CITY OF  
SACO DOMAIN]**

Do we know how this facility will be used? I am assuming that the first floor will be used for the dispensary and that the second floor will be limited to staff? Is that correct? I have had other 2-story marijuana dispensaries that operated that way. If that is the case, I would look at the first floor as marijuana dispensary and as the second floor as office space. Make sense to you?

Was the former Spectrum use primarily office use? Was it open to public or used for just employee space?

Thanks,  
Diane

**Diane W. Morabito, PE, PTOE**

*Vice President Traffic Engineering*

**T:** +1. 207.817.5440 | **F:** +1. 207.827.3641 | **E:** [diane.morabito@sewall.com](mailto:diane.morabito@sewall.com)  
40 Forest Falls Avenue | Suite 2 | Yarmouth, Maine 04096 | [www.sewall.com](http://www.sewall.com)

<image001.png>

---

**From:** Jason Garnham <[jgarnham@sacomaine.org](mailto:jgarnham@sacomaine.org)>  
**Sent:** Thursday, March 24, 2022 11:45 AM  
**To:** Diane Morabito <[mordi@sewall.com](mailto:mordi@sewall.com)>  
**Cc:** Joseph A. Laverriere <[JLaverriere@sacomaine.org](mailto:JLaverriere@sacomaine.org)>  
**Subject:** Request for service: 22 Industrial Park Rd, Saco

Hi Diane,

We received a conditional use application for a proposed medical marijuana dispensary to operate at 22 Industrial Park Rd in Saco. The property is developed & no changes to the site are proposed.

The applicant provided vehicle counts from a similar business in Biddeford & assert that these numbers should comprise a reduction in traffic impacts from the preceding use of the property as a Spectrum regional service center. Joe L. suggested we ask you to have a look.

When you have a few moments, could you please have a look at the Traffic summary on page 10 of the attached document and let me know what you think? As always, I'd be glad to discuss via phone call or Teams meeting if appropriate.

Much appreciated,

-Jason

<image002.png>

**JASON GARNHAM**, AICP

*City Planner*

300 Main Street | Saco, ME 04072

**t** 207.282.3487 | [sacomaine.org](http://sacomaine.org)

**Follow us:** [Facebook](#) | [Twitter](#) | [Instagram](#)

<Saco22IPRTrafficImpactRevMemo.pdf>

April 29, 2022

Jason Grantham, City Planner  
City of Saco  
300 Main Street  
Saco, ME 04072

Dear Jason,

This letter is in response to the recommendation made by Diane Morabido of Sewall in her March 29 Traffic Review for 22 Industrial Parkway. In her letter, Ms. Morabido recommended proof of compliance with required driveway sight distances per Saco's Technical Design and Construction Standards Manual.

Per the standards set forth in both Ms. Morabido's letter and Saco's Technical Design and Construction Standards Manual, recommended site distance for 22 Industrial Park Road is 445' in both directions.

The travel way is located within an existing CMP easement that runs along the west side of Industrial Park Road. As a result, the view from the travel way is cleared of vegetation and there are no other view obstructions. There are two DOT signs located within 445' of the south facing sight distance, and one DOT sign to the north, however, the measurement to the bottom of all signs is at least 6', and the signs are several feet back from the curb, ensuring a clear view 445' in both directions from a 3.5' vertical.

Attached are pictures both the south and north sight distances at 445', measured 10' from the curb and 3.5' h. (Exhibit A).

---

#### CONTACT





I believe Exhibit A proves compliance with the required sight distance of 445' in both directions.

Thank you for the opportunity to respond to the traffic questions. Please let me know if you need anything further to complete your review.

Sincerely,

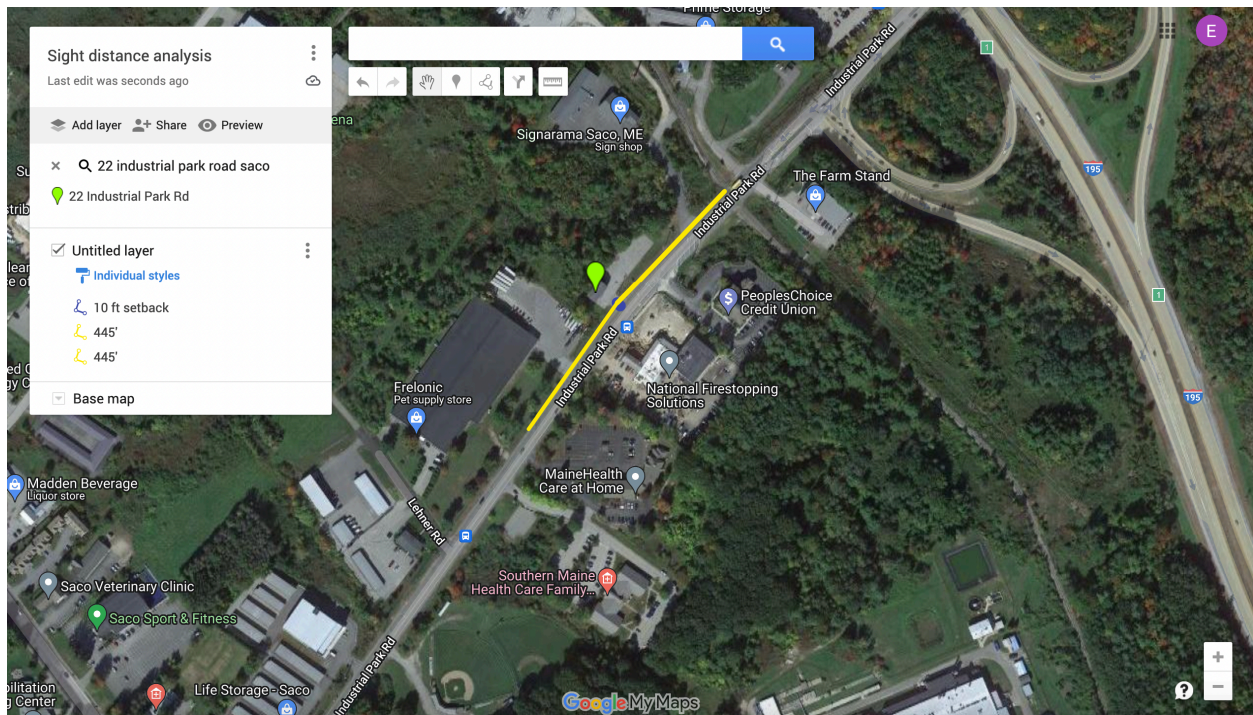
A handwritten signature in black ink, appearing to read "Elizabeth Baldacci", with a large, stylized flourish at the end.

Elizabeth Baldacci  
CEO

# Exhibit A

## Proof of Compliance with Sight Distance

Aerial view of site and 445' sight distance in both directions



View to South  
*Person standing at 445'*

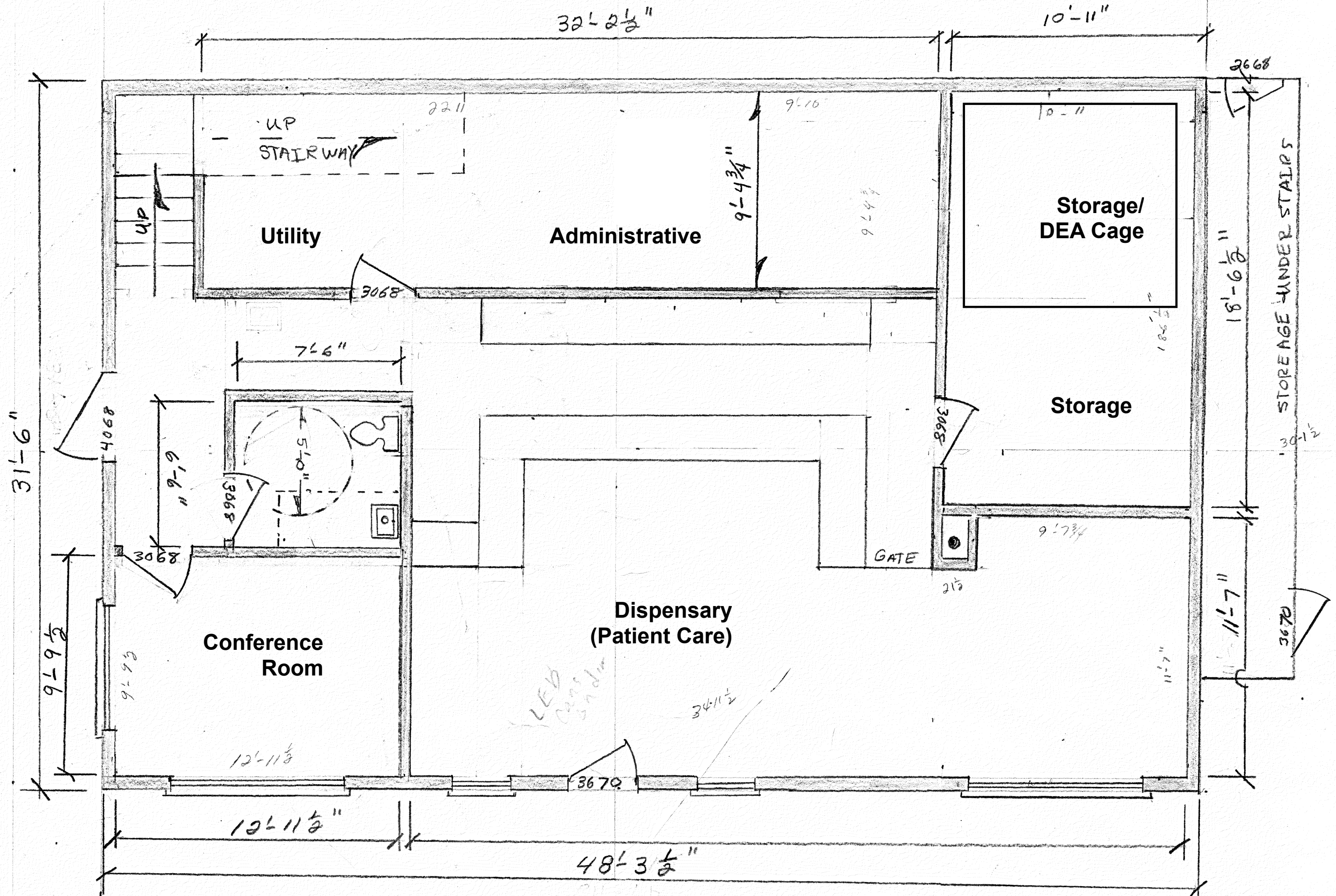




View to North  
*Person standing at 445'*



# BLOSSOM



FLOOR PLAN (MODIFICATIONS TO EXISTING)  
SCALE: 1/4" = 1'-0"



April 28, 2022

Emily Cole-Prescott  
Compliance Manager  
300 Main Street  
Saco, Me 04072

Dear Emily,

This letter confirms my commitment to adhere to Blossom's odor mitigation plan, which was submitted to the City on March 7th, 2022 as part of the Company's conditional use application.

Further, Blossom agrees to fund and implement any additional odor mitigation requirements deemed necessary by the City at any time in the future.

Thank you very much for your consideration of our application.

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Baldacci", with a stylized flourish at the end.

Elizabeth Baldacci  
CEO

---

CONTACT





## Initial Wastewater Discharge Application

Water Resource Recovery Department

300 Main Street, Saco, ME 04072

#207-282-3564 / [EPrescott@sacomaine.org](mailto:EPrescott@sacomaine.org)

Please complete this form if you plan to connect to or use any part of the City of Saco's sewer system. This form is used to help the WRRD understand potential impacts to the sewer system. The WRRD uses this form to assist businesses with any required pretreatment and retains the data for sewer infrastructure planning.

### Contact Information

Legal name of business or industry: Blossom, LLC

Physical Facility Address: 22 Industrial Park Rd.

Mailing Address: 5 Pine Lane, Cumberland Foreside, ME 04110

Facility Contact (Name, title, work email, work phone): Elizabeth Baldacci, CEO,  
ebaldacci@blossomLLC.com, 207-756-9768

### Use Details

Type of Business / Use / Operations:

For Multi-family Only: Anticipated number of housing units: \_\_\_\_\_

Pump Station Required? Circle One: Yes ☒ No ☐ Unsure (If multi-family proposal, stop here and skip to signature section).

Number of Employees: Floor 1 - 4  
Floor 2 - 6  
TOTAL: 10 Normal hours of operation: Floor 1 - M-Sun 10-7  
Floor 2 - M-F 8-4

Applicable industry classification codes (NAICS or SIC codes): \_\_\_\_\_

Hazardous or other types of chemicals stored or used at facility? Circle One: ☒ Yes ☐ No ☐ Unsure

### Operational Details

Do you use water for purposes other than sanitary (toilet, shower) use? Circle One: Yes ☒ No ☐ Unsure

Do you discharge process wastewater to the public sewer system? Circle One: Yes ☒ No ☐ Unsure

Does the facility have a grease trap or oil/water separator? Circle One: Yes ☒ No ☐ Unsure

Grease trap size: N/A

Location of grease trap within facility: N/A

Maintenance schedule: N/A

Hauler name: N/A

Destination of intercepted waste: N/A

Does the facility generate or receive any wastes? Circle One: ☒ Yes ☐ No ☐ Unsure

Material: Harvested cannabis

Amount (gallons or lbs./month): < 1 lb. see waste disposal plan  
in conditional use application  
Removal schedule: 2 x month  
Hauler name: Casella  
Describe storage method and location: Once rendered unusable per SOP,  
waste is deposited into dumpster

## Wastewater Details

*This section required only for light industrial, heavy industrial, processing facilities, and breweries/distilleries uses. If you do not know the answers to the below questions, please contact the Industrial Compliance Manager at the City of Saco Water Resource Recovery Department to discuss.*

Biochemical Oxygen Demand (BOD) in mg/L: NOT KNOWN  
Total Suspended Solids (TSS) in mg/L: NOT KNOWN  
pH: NOT KNOWN  
Fats, Oils and Grease (FOG) in mg/L: NOT KNOWN  
Arsenic concentration in mg/L: NOT KNOWN

Provide a list of all contaminants that may be in your wastewater. None

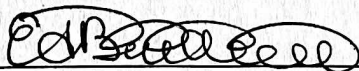
Will your process water have any kind of discoloration? Circle One: Yes ☒ No ☐ Unsure

Are you planning on treating your wastewater prior to discharge? Circle One: Yes ☒ No ☐ Unsure

Water and/or sewer account number(s), if applicable: 000000009927

For Light Industrial, Heavy Industrial, Brewery/Distillery, Food Processing & Restaurant Uses: Attach site plans, floor plans, mechanical and pumping plans and details to show all sewers, sewer connections, inspection manholes, sampling chambers, and appurtenances by size, location and elevation, if applicable. All sources of discharge should be numbered and identified as being process flow, sanitary flow, or combinations thereof, if applicable. N/A

Certification & Signature: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I understand per ARTICLE XV §176-74 of SACO CITY CODE that new, proposed dischargers shall file permit applications at least 90 days prior to connecting to the city's wastewater facilities. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Signature

CEO

Title

Elizabeth Baldacci

Printed Name

4/28/22

Date



**Water Resource Recovery  
Department (WRRD)**

Saco City Hall  
300 Main Street  
Saco, Maine 04072-1538



**Emily Cole-Prescott  
Compliance Manager**

[Eprescott@sacomaine.org](mailto:Eprescott@sacomaine.org)  
Phone: (207) 282-3564 x. 211

**To:** Planning Department & Elizabeth Baldacci (CEO, Blossom LLC)

**From:** Emily Cole-Prescott, WRRD Compliance Manager

**Date:** May 11, 2022

**Re:** 22 Industrial Park Road (Map 69 Lot 7-3)

---

The WRRD has been asked to review the application materials revised through April 28, 2022 for the Planning Board's review of a medical marijuana dispensary at 22 Industrial Park Road.

Summary: The proposal is to operate a medical marijuana registered dispensary with no exterior site modifications. The WRRD understands that this is a dry process, and there will not be water used in proposed packaging and trimming operations. As such, this review is limited to these activities. If the applicant plans any changes or modifications to this process, the applicant is required to contact the WRRD to review these proposed process revisions.

Capacity to Serve: Based on review of the proposed application and water billing information the applicant provided for the existing business operating in Biddeford, there is capacity to serve the site for up to 120 gallons per day (GPD) for this use.

**CONDITIONS:**

1. This review considers the application presented and the representations made to the WRRD in the conditional use application materials. If there are any proposed changes to the use, the applicant is required to return to the WRRD for review and approval.
2. All applicants are subject to WRRD impact fees. Impact fees shall be paid to the Code Enforcement Department upon building permit issuance. Current rate is \$31.23 per gallon.
3. Floor drains prohibited.
4. The applicant has agreed to execute a formal Odor Control Plan to be filed with the Code Enforcement Department and the Water Resource Recovery Department. A letter dated April 28, 2022 verifies the applicant's intention to comply with this condition. Before building permit issuance, the applicant agrees to execute the Odor Control Plan Agreement with the City of Saco, Maine.
5. All connections must be made in accordance with specifications of the Technical Design Construction Standards Manual (TDCSM), Chapter 176 and Chapter 186 of the City's Ordinances, and any other applicable City, state, or federal standards. The City Engineer may have additional comments regarding sewer connection technical specifications to which the applicant must adhere.
6. For uses that could emit an odor beyond the property line within the sewer system, the applicant shall be required to install appropriate pretreatment devices and submit an odor control plan to the satisfaction of the WRRD and Code Enforcement Department. The applicant shall be required to enter into monitoring agreement for odor control and may be required to complete additional studies and modifications to mitigate odor impacts.

Feel free to contact the Saco WRRD with any questions about this review. Thank you.



## Planning Department

Saco City Hall  
300 Main Street  
Saco, Maine 04072-1538



Jason Garnham, AICP

City Planner

[JGarnham@sacomaine.org](mailto:JGarnham@sacomaine.org)

Phone: (207) 282-3487 ext.357

---

**TO:** Planning Board  
**CC:** Amarjit Dhillon, Ajinder Kaur, Applicant  
**FROM:** Jason Garnham, City Planner  
**DATE:** April 19, 2022 Planning Board Meeting  
**RE:** **15 Oceanside Drive (Map 11 Lot 116-1):** Amendments to approved Site Plan

---

### I. Overview:

The applicant requests Planning Board approval for an enlargement of the building footprint of the residence proposed to be constructed at 15 Oceanside Drive. The Planning Board approved a Site Plan Review application to construct a detached residence on the property on October 16, 2018 and voted to extend the time period for which the site plan is valid to June 9, 2022 on October 19, 2021. The building footprint was originally proposed to be 840 square feet, was reduced to 800 square feet in October 2021, and is now proposed to be 914 square feet (46.87 feet long X 19.5 feet wide).

### II. Public Hearing:

A public hearing is required for this application. This public hearing has been noticed in the *Portland Press Herald* and abutter notices have been mailed to property owners within 600' of the subject property, in accordance with ordinance requirements.

A suggested motion is: ***"I move to open the public hearing."*** After comment is received, a motion is: ***"I move to close the public hearing."***

### III. Background/ Discussion:

#### A. Property History:

15 Oceanside Drive is the subject of a Contract Zone Agreement that was approved by Saco City Council on November 20, 2017 and amended on September 13, 2021. The Agreement re-instated the subject property as a separate buildable parcel after it was determined to have merged with the neighboring lot via provisions of Saco's Zoning ordinance. The 2021 amendment extended the validity period of the Agreement to June 9, 2022.

#### B. Zoning:

The subject property is 5,450 square feet in area and is located in a SR- Seaside Residential Zoning district. It is also within the RPOD Resource Protection Overlay District. Compliance with the dimensional standards for SR zoning districts of Table 4-1 of Saco's zoning ordinance is proposed as follows:

Standard	Requirement	Proposed
Minimum front setback	25 feet	38 feet
Minimum side & rear yard setback	15 feet	15 feet side yard setbacks 23 feet rear yard setback
Maximum lot coverage	30 percent	20 percent
Maximum building height	35 feet	35 feet

### C. Sewer:

This project was approved to be constructed with on-site septic facilities for treatment of wastewater. However, public sewer facilities are available to serve the site. The amended Contract Zone Agreement requires the applicant to connect to these facilities if feasible or demonstrate a good faith effort to do so prior to obtaining building permits. Saco Code Enforcement staff verified that connection to existing sewer facilities is feasible and is therefore **required** for this project. Design of sewer facilities will be reviewed during the building permit process for the/ any residence proposed to be constructed on the lot.

### D. Findings:

Except for “B”- Zoning, and “C” – Sewer, above, no changes to the findings that were approved in 2018 are proposed by City staff.

### E. Permits Required:

Site Plan Review by the Planning Board is not typically required for construction of single-family residences. Site Plan approval for this project was required by Saco City Council via Section II.h of the Contract Zone Agreement. The Planning Board approved this proposal on October 16, 2018 accordingly. The Planning Board subsequently approved an extension of the deadline for constructing the proposed residence on October 19, 2021.

Minor changes to the plans may be approved by Saco city staff per Section II.g of the Contract Zone Agreement. The applicant proposes to expand the building footprint to 914 square feet, 74 square feet larger than the 2018 approval and 114 square feet larger than the 2021 extension. This expansion comprises an approximately 6-foot extension of the western building wall toward the street, minimizing additional impact to the shoreline and complying with the applicable dimensional standards of Saco’s Zoning Ordinance. Wastewater from the proposed residence will be disposed of via a connection to existing public sewer facilities instead of an on-site septic system, reducing the overall grading and impervious surface impacts and further minimizing potential construction or groundwater impacts from this proposal.

Following site plan approval for the proposed change in building footprint, the applicant must obtain:

1. a **building permit** from Saco’s Code Enforcement office no later than June 9, 2022.
2. The applicant must also obtain approval for the revised building footprint from the **Maine Department of Environmental Protection** per the Sand Dune Permit already obtained for this project, and
3. a **Flood Elevation Certificate** from Saco’s Code Enforcement Office.

## IV. Conclusion:

Staff and the Planning Board reviewed a Site Plan Review Application to construct a residence on the subject property in 2018 and approved the application with Conditions. The current request is to enlarge the footprint of the residence to be constructed on the property. The proposed enlargement conforms with the standards of Saco’s Zoning Ordinance and is not anticipated to significantly impact the environment, public utilities, safety, traffic, or other elements of Saco’s Site Plan Review or Zoning Ordinances. City staff therefore **recommend approval of this request with no changes to the approved conditions, which are:**

1. In accordance with the signed Contract Zone Agreement, failure of the applicants or purchasers of the subject property to secure a building permit for the proposed single-family residence by **June 9, 2022** shall render this approval null and void. This deadline may not be extended.
2. In accordance with the signed Contract Zone Agreement, the Applicant is required to seek approval from the federal Environmental Protection Agency (EPA) to connect to public sewer facilities as part of this project. Evidence of undertaking a good faith effort to obtain such approval shall be provided to the City prior to submitting an application to the City to construct the proposed residence.
3. All work shall be in conformance with the approved plans.
4. No deviations from the approved plans are permitted without prior approval from the Planning Board for major changes, and from the City Planner for minor changes. The determination of major or minor shall be made by the City Planner.
5. Prior to constructing the proposed structure as proposed, the applicant shall be in receipt of all required permits from Saco's Code Enforcement Office.
6. Prior to the start of work, the applicant shall be in receipt of all permits that may be required from the Maine DEP or other state, federal, or regional agencies.
7. An elevation certificate shall be submitted to the Code Enforcement Office prior to issuance of a building permit.
8. In accordance with Section II.n of the Contract Zone Agreement, a public recreational easement "from the beach east up to the dune grass seawall" shall be provided by the applicant prior to the sale of Lot 116-1.
9. The project at completion shall include the replacement of any existing vegetation removed due to construction.

Motion:

If the Planning Board agrees, then a suggested motion is:

***"I move to approve the proposed amendment to the approved site plan for Lot 116-1 of Map 11, with the findings and conditions of the previous approvals to remain in effect."***





Site Plan Review Application  
Saco Planning Board Review

Application # \_\_\_\_\_

Street Address of Proposed Project: 15 OCEANSIDE DR Tax Map & Lot: MAP 11, LOT 116-1

Registry of Deeds Book & Page Number: 3788 PAGE 314 Zoning District: \_\_\_\_\_

Applicant: AMARJIT DHILLON, AJINDER KAUR

Applicant's Address: 2001 ARMY NAVY DR, ARLINGTON VA 22202

Applicant's Email & Phone #: adhillon5@yahoo.com 617-372-4914

Architect/Engineer's Name: DEBORAH FEINBRUG

Architect/Engineer's Email & Phone #: DEB@FEIN-DESIGNS.COM

Architect/Engineer's Address: 12 PRESTWICK DRIVE, HOPKINTON, MA 01748

Property Owner: AMARJIT DHILLON AND AJINDER KAUR

Property Owner's Email & Phone #: adhillon5@yahoo.com, 617-372-4914

Property Owner's Address: 2001 ARMY NAVY DR, ARLINGTON, VA 22202

Area of Parcel: 5450 Proposed Developed Area: 20% (914) Proposed Height: 35

Sq. Ft. of Each Proposed Structure: 914 Proposed # of Parking Spaces: 2

Amendment to Previously Approved Plan: ☒ Yes ☐ No

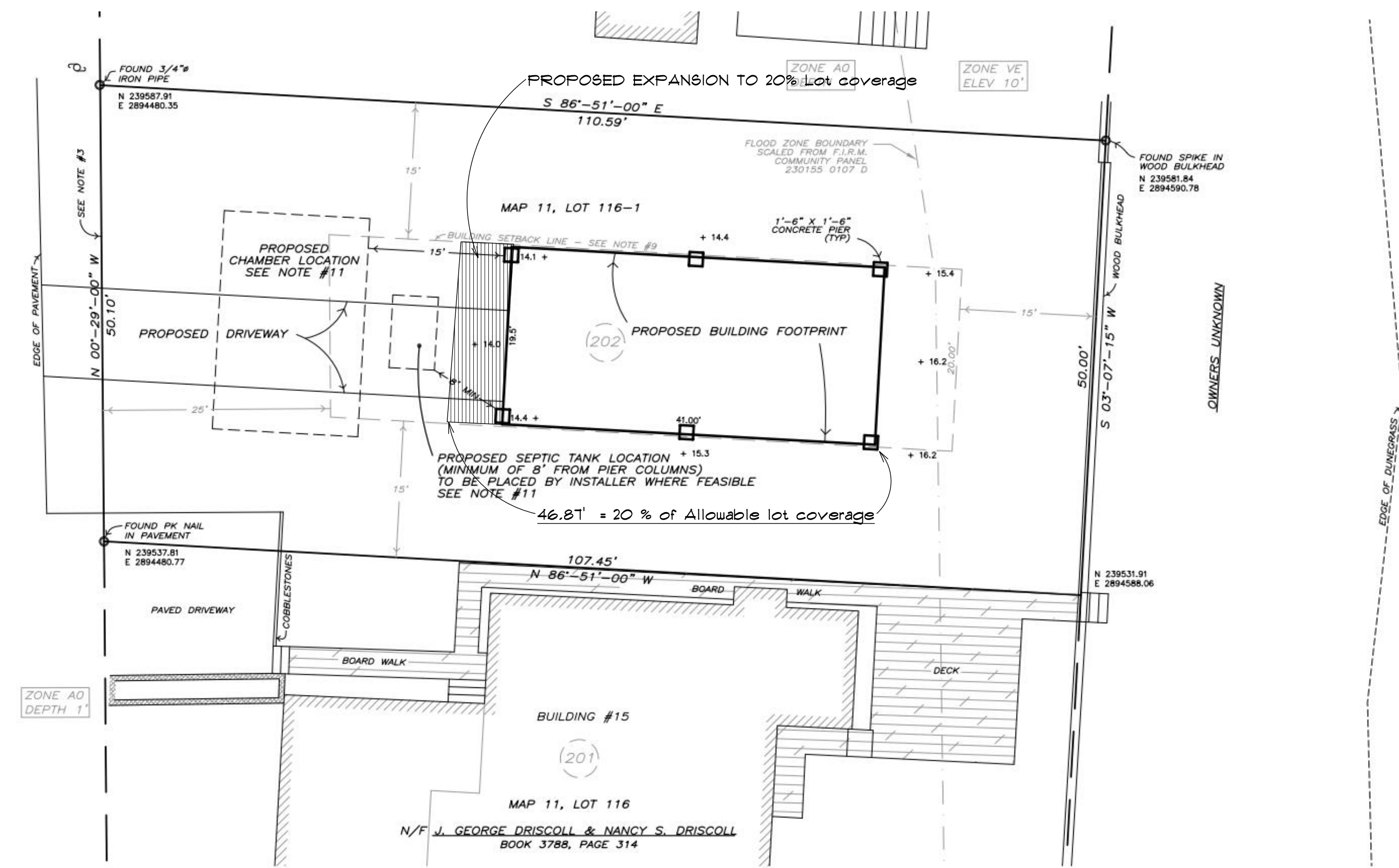
Description of Proposal: ADDING 5.87 FT IN LENGTH TO MAKE IT

20% ALLOWABLE COVERAGE

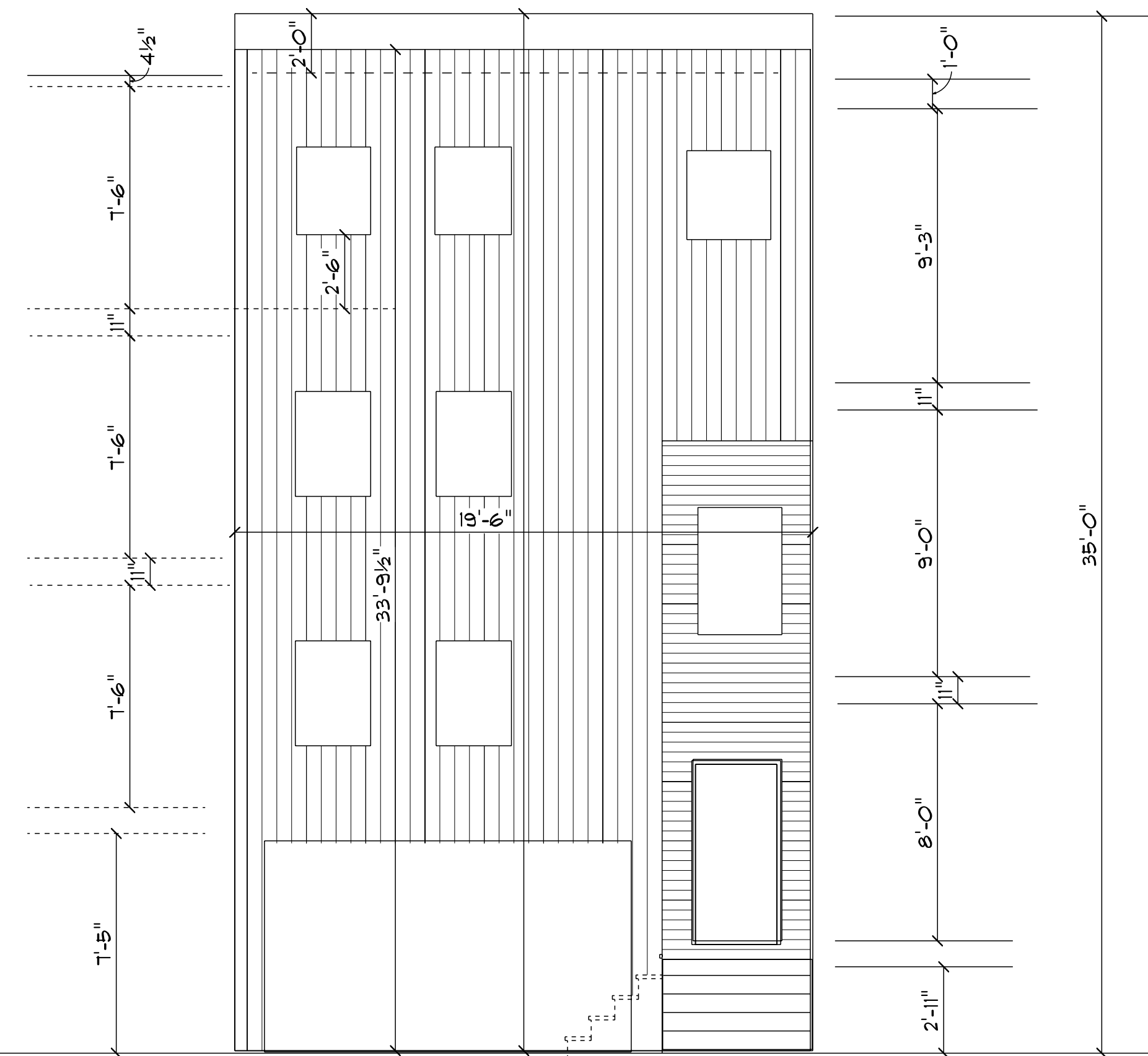
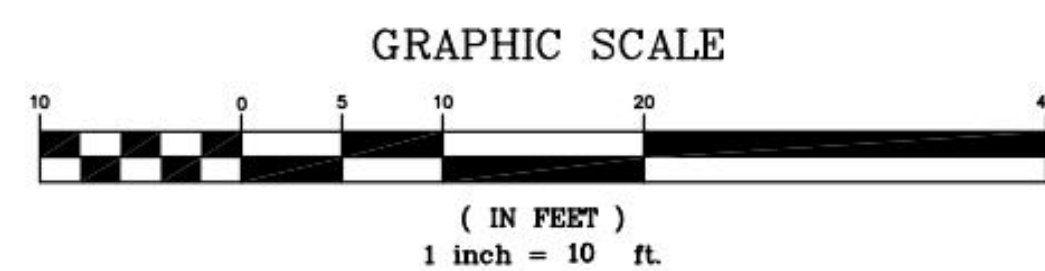
**Signature & Application Requirements:** Applications are due at least three weeks in advance of Planning Board meetings, but the Department encourages applicants to plan for five weeks before a Planning Board meeting. Staff will schedule your application for a Planning Board meeting once all reviews are complete and comments have been sufficiently addressed.

  
Signature of Owner/Applicant

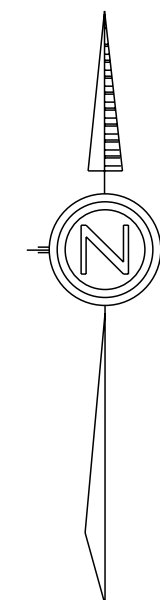
03/22/2022  
Date




SITE PLAN WITH PROPOSED MODIFICATIONS



STREETSIDE - EAST ELEVATION



Fein Designs ~ Fein-Brug, Inc. 17 BOTAIL CLUB LANE WEST BATH, ME 508-641-1771	DHILLION FAMILY #15 OCEANSIDE DR SACO, ME				PAGE: /
		SCALE: 1/4"	APPROVED:		
		DRAWN BY: DSFB	CHECKED BY:		
		DATE: 3/16/22			

**From:** [Tim Murphy](#)  
**To:** [Richard A Hull III](#); [Shepard Alan](#); [Bruce Read](#)  
**Cc:** [Jason Garnham](#)  
**Subject:** RE: Easement Deed  
**Date:** Friday, March 25, 2022 1:19:02 PM

---

[CAUTION: THIS EMAIL ORIGINATED FROM OUTSIDE THE CITY OF SACO DOMAIN]

Thanx Rick.

When the original comes back, can you send it over to my office.

Thanx.

Tim Murphy

Jason: This part of the Driscoll CZA (recreational easement) has been completed. TM

-----Original Message-----

From: Richard A Hull III <[rhull@woodedlaw.com](mailto:rhull@woodedlaw.com)>  
Sent: Friday, March 25, 2022 1:16 PM  
To: Shepard Alan <[alan@shepardandreadlaw.com](mailto:alan@shepardandreadlaw.com)>; Bruce Read <[bruce@shepardandreadlaw.com](mailto:bruce@shepardandreadlaw.com)>; Tim Murphy <[tmurphy@padzilla.com](mailto:tmurphy@padzilla.com)>  
Subject: Easement Deed

Guys:

I have attached a copy of the recorded easement deed from Nancy Driscoll to the City of Saco. I wanted to get this on record before the closing so it didn't inadvertently get recorded after the deed from Nancy to AJ and his wife went on record.

Rick

Richard A. Hull, III, Esq.  
Woodman, Edmands, Danylik, Smith & Jacques Alfred Street Office  
409 Alfred Street  
Biddeford, ME 04005  
207-282-7100  
207-282-4310  
[rhull@woodedlaw.com](mailto:rhull@woodedlaw.com)

NOTICE: This E-mail(including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521, is confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution or copying of this communication is strictly prohibited. Please reply to the sender that you have received the message in error, then delete it. Although the sender attempts to sweep all e-mail and attachments for viruses, it does not guarantee either are virus free, and accepts no liability for any damage sustained as a result of viruses. Wire and online banking fraud is on the rise. If you receive an email containing wire transfer instructions, always check with your closing agent immediately using a trusted phone number to verify the legitimacy of the instructions and information, prior to sending funds. Woodman, Edmands, Danylik, Austin, Smith & Jacques, P. A. 409 Alfred St, Biddeford, ME.

-----Original Message-----

From: [keith@hulllawoffices.com](mailto:keith@hulllawoffices.com) <[keith@hulllawoffices.com](mailto:keith@hulllawoffices.com)>  
Sent: Friday, March 25, 2022 1:09 PM



To: rick hull <rhull@hulllawoffices.com>  
Subject: Scanned from a Xerox Multifunction Printer

Please open the attached document. It was scanned and sent to you using a Xerox Multifunction Printer.

Attachment File Type: pdf, Multi-Page

Device Name: 59xx

For more information on Xerox products and solutions, please visit [https://urldefense.proofpoint.com/v2/url?u=http-3A\\_\\_www.hulllawoffices.com&d=DwIFbA&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A\\_Cdp gnVfiiMM&r=jhDSLROPeUVSE1qbwOMH2ZqkZNtF47EWe0vOWIxaEvg&m=q9RtNiyKc-jtTLhEz6rLJ0zQ2VioXSPZxiRcQvVQN NY&s=6LwQbP4QpaqcEwELxaYm3wz12UQ5Kv-oBBqmP\\_ytZIs&e=](https://urldefense.proofpoint.com/v2/url?u=https-3A__url.emailprotection.link_-3FbRsJPOTNNBMur2L-5Fswb5AcgVgoEMdA5gUDiim75Z5-2DafPp-5FP72VUFxqIwDRHPO7Ye4uHIKE3x8IqkZpZiPzQfPg-7E-7E&d=DwIFbA&c=euGZstcaTDllvimEN8b7jXrwqOf-v5A_Cdp gnVfiiMM&r=jhDSLROPeUVSE1qbwOMH2ZqkZNtF47EWe0vOWIxaEvg&m=q9RtNiyKc-jtTLhEz6rLJ0zQ2VioXSPZxiRcQvVQN NY&s=zrBz0YPZf-L-HzAKP16hQ-uSowdYpO1GR7cDycQA7S0&e=NOTICE: This E-mail(including attachments) is covered by the Electronic Communications Privacy Act, 18 U.S.C. 2510-2521, is confidential and may be legally privileged. If you are not the intended recipient, you are hereby notified that any retention, dissemination, distribution or copying of this communication is strictly prohibited. Please reply to the sender that you have received the message in error, then delete it. Although the sender attempts to sweep all e-mail and attachments for viruses, it does not guarantee either are virus free, and accepts no liability for any damage sustained as a result of viruses. Wire and online banking fraud is on the rise. If you receive an email containing wire transfer instructions, always check with your closing agent immediately using a trusted phone number to verify the legitimacy of the instructions and information, prior to sending funds. Hull Law Office, LLC 409 Alfred St, Biddeford, ME, <a href=)

**Planning and Development**

Saco City Hall  
300 Main Street  
Saco, Maine 04072-1538



**Jason Garnham AICP**

**City Planner**

[JGarnham@sacomaine.org](mailto:JGarnham@sacomaine.org)

Phone: (207) 282-3487 ext.357

October 21, 2021

Nancy Driscoll c/o Chuck Driscoll  
P.O. Box 416  
Littleton, MA 01460  
[cdriscoll@nashobacorp.com](mailto:cdriscoll@nashobacorp.com)

Re: Extension of Site Plan Review Approval  
15 Oceanside Drive: Tax Map 11, Lot 116-1

Dear Mr. and Mrs. Driscoll,

At its October 19, 2021 meeting, the Saco Planning Board held a public hearing to consider your request to extend the time period for which the Site Plan Approval for development of the above-referenced property remains valid. Along with City Council approval of a related Contract Zone Agreement in 2017, you obtained approval of a Site Plan Review Application for a proposal to construct a residence on your property from the Saco Planning Board on October 16, 2018. These approvals required you to begin construction of this project within 24 months of that date. However, due to unanticipated circumstances you were unable to begin construction during that time or obtain an extension from Saco's Planning Office and the approvals expired. A similar request to extend the validity period of the Contract Zone Agreement was approved by the Saco City Council on September 7, 2021. After concluding the hearing on October 19, 2021, Saco's Planning Board voted to **APPROVE** your request to extend the validity of your approved site plan to **June 9, 2022**, with the following **CONDITIONS**:

1. In accordance with the signed Contract Zone Agreement, failure of the applicants or purchasers of the subject property to secure a building permit for the proposed single-family residence by **June 9, 2022** shall render this approval null and void. **This deadline may not be extended.**
2. In accordance with the signed Contract Zone Agreement, the Applicant is required to seek approval from the federal Environmental Protection Agency (EPA) to connect to public sewer facilities as part of this project. Evidence of undertaking a good faith effort to obtain such approval shall be provided to the City prior to submitting an application to the City to construct the proposed residence.
3. All work shall be in conformance with the approved plans.
4. No deviations from the approved plans are permitted without prior approval from the Planning Board for major changes, and from the City Planner for minor changes. The determination of major or minor shall be made by the City Planner.
5. Prior to constructing the proposed structure as proposed, the applicant shall be in receipt of all required permits from Saco's Code Enforcement Office.

**Planning and Development**

Saco City Hall  
300 Main Street  
Saco, Maine 04072-1538



**Jason Garnham AICP**

**City Planner**

[JGarnham@sacomaine.org](mailto:JGarnham@sacomaine.org)

Phone: (207) 282-3487 ext.357

6. Prior to the start of work, the applicant shall be in receipt of all permits that may be required from the Maine DEP or other state, federal, or regional agencies.
7. An elevation certificate shall be submitted to the Code Enforcement Office prior to issuance of a building permit.
8. In accordance with Section II.n of the Contract Zone Agreement, a public recreational easement "from the beach east up to the dune grass seawall" shall be provided by the applicant prior to the sale of Lot 116-1.
9. The project at completion shall include the replacement of any existing vegetation removed due to construction.

Your request included minor changes to the site plan, including:

- Reducing the proposed building footprint from 20 feet by 42 feet to 19.5 feet by 41 feet;
- Revising the location of the septic tank (if permission to connect to public sewer facilities cannot be obtained); and
- Addition of a driveway, spot elevations, and a lot area coverage table to the site plan.

As authorized by Section 3.01(f)(i)(2) of Saco's Site Plan Review Ordinance, I determined these changes to be minor and the Planning Board agreed during the October 19, 2021 hearing. The amended site plan is also hereby approved and a signed copy is included with this letter.

Please be advised that the next steps for your project are: 1) request approval from the Environmental Protection Agency to connect to available sewer facilities; 2) record the public recreational easement of Condition 8, above, with the York County Registry of Deeds; and, 3) to submit a complete building permit application for the proposed residence to the Saco Code Enforcement Office. Please do not hesitate to contact our office with any questions related to this approval or next steps for completing your project.

Sincerely,

A handwritten signature in black ink, appearing to read "Jason Garnham". The signature is fluid and cursive, with a long horizontal stroke at the end.

Jason Garnham, AICP  
City Planner

Cc: Michael J. Coulombe, [dowcoul@gwi.net](mailto:dowcoul@gwi.net)  
David Twomey, Code Enforcement Director





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**PLANNING BOARD MEMORANDUM**

To: Saco Planning Board

From: Zach Mosher, City Planner

Re: Site Plan Review, Driscoll Contract Zone – 15 Oceanside Drive

Date: October 16, 2018

---

**I. PROPOSAL** – Dow and Coulombe, on behalf of applicant Nancy Driscoll, seeks site plan approval for a contract zone approved on November 20, 2017. The project is now subject to site plan review, the focus of which is the split of a residential parcel into two parcels, with the less-developed parcel proposed as the site of a new single-family dwelling.

Longer-serving Board members will recall that the primary purpose of the approved contract zone was to reconfigure the parcel identified as Tax Map 11, Lot 116 into two buildable parcels. The Driscoll's existing residence remains on Map 11, Lot 116. The remainder of the parcel is now identified as Map 11, Lot 116-1.

The existing Driscoll parcel (pre-contract zone) is 0.246 acre (10,743 s.f.), and as such is a conforming lot in terms of area in the R-1c district. It is also located in the Shoreland Overlay district. See the attached contract zone agreement for modifications to the lot and yard requirements that detail the area, frontage and width of each of the smaller lots resulting from the CZ-sanctioned lot split.

The proposal requires review by the Maine DEP, including a Natural Resources Protection Act (NRPA) Sand Dune permit. See attached letter from Mark Stebbins of the DEP, which also mentions the Permit By Rule application that was submitted by the applicant on July 6, 2018, for which permission was sought to remove an existing shed and patio from Lot 116-1. The Sand Dune permit has not yet been issued, and in the event that an eventual buyer may have their own ideas of an acceptable building design, the plan is for that eventual buyer to obtain the Dune permit. The draft Conditions of Approval address this requirement. The structure is required to meet current Shoreland Zoning regulations and floodplain regulations, as the proposed structure is currently located mostly in the AO, and partly within the VE flood zones.

## **II. DEPARTMENT REVIEW –**

**Police Department** – No comment.

**Fire Department** – No comment.

**Code Enforcement** – As Dick Lambert notes, the future buyers of Lot 116-1 will dictate the final design of the new dwelling. A 20' x 42' footprint is shown on the plan, but if the buyers prefer something different, they will be required to return to the Board for review.

**Engineering Department / Planning Department** – Planning wanted to make sure the applicant understand whether it was allowable to park cars above the proposed subsurface wastewater location.

**III. PLANNING BOARD ACTION-** The Planning Board is being asked to review the proposed **single-family dwelling at 15 Oceanside Drive** based in part on the contract zone approved between George and Nancy Driscoll and the City of Saco. The Planning Board should utilize the following criteria from Article 11, Site Plan review as part of its consideration:

### **Approval Criteria – Section 1106.**

- a) **General.** The proposed use will meet the specific requirements set forth in this chapter, other local ordinances, and will be in compliance with applicable state or federal laws.
- b) **Compatibility with neighboring buildings.** The bulk, location, and height of proposed buildings and structures shall be compatible with neighboring properties.
- c) **Natural features.** The building and other improvements shall be oriented with respect to the natural features of the site, preserve the natural landscape insofar as practical, and minimize grade changes.
- d) **Public safety.** The proposed use will provide adequate access to the site, and to the buildings on the site, for emergency vehicles at all times of the year and will not create fire safety hazards or other safety hazards.
- e) **Lighting.** The proposed exterior lighting will not create glare, or create hazards to motorists traveling on adjacent public streets, is adequate for the safety of occupants or users of the site, and will not damage the value and diminish the usability of adjacent properties.
- f) **Landscaping.** The provisions for buffers, screens and on-site landscaping will minimize the impact of detrimental features of the proposed use on neighboring property, shall define, soften, or screen the appearance of parking areas from public rights-of-way and abutting properties, and shall meet the specific requirements of §§ 230-708 and 230-807.

- g) Off-site impacts.** The proposed use will not have a significant detrimental effect on the use and peaceful enjoyment of abutting property as a result of noise, vibrations, fumes, odors, dust, or other cause and shall meet the standards of this chapter and other City ordinances regulating these impacts.
- h) Vehicle circulation and pedestrian access.** The provisions for vehicular loading and unloading and parking and for vehicular and pedestrian circulation on the site and onto adjacent public streets will not create hazardous and unsafe conditions and are designed in accordance with the standards of Article VII of this chapter.
- i) Flood hazards.** The design of the site will be in conformance with applicable flood hazard protection requirements.
- j) Wastewater.** Adequate provision has been made for disposal of wastewater.
- k) Solid waste.** Adequate provision has been made for the disposal of solid waste as required by state law and local ordinance, including provisions for recycling.
- l) Erosion controls.** Adequate provision has been made to control erosion or sedimentation, and the standards of § 230-806 shall be followed.
- m) Drainage.** Adequate provision has been made to manage stormwater runoff and other drainage problems on the site, and the plan conforms with § 230-805. If the post-development runoff rate exceeds the predevelopment runoff rate, on-site mitigation measures, such as detention basins or flow restrictors, shall be required, unless it is demonstrated that the increase has no adverse impact to the downstream conditions.
- n) Water supply.** The proposed water supply will meet the demands of the proposed use and the demands for fire protection purposes and will not cause a degradation of service in the area.
- o) Hazardous materials.** Adequate provision has been made for the transportation, storage and disposal of hazardous substances and materials, as defined by state and federal law and City ordinance.
- p) Wildlife, scenery, and unique and critical areas.** The proposed use will not have an adverse impact on significant scenic vistas or on significant wildlife habitats or identified unique and critical natural areas that could be avoided by reasonable modification of the plan.
- q) Traffic conditions.** The use will not cause unreasonable safety hazards on public roads and will not result in a decrease in level of service below LOS D at intersections. The Board may consider a lower level of service at unsignalized intersections, provided further physical improvements cannot be made to improve the level of service, and provided that warrants for



a traffic signal are not met, or signal installation is not desirable, and the Board finds that adequate provisions for safety can be attained through imposing conditions of approval such as restrictions including one-way driveways and/or prohibiting certain turning movements, construction of turning lanes, sidewalks, bicycle paths, or other improvements, payment of a traffic mitigation fee, or through a program of transportation demand management measures.

**r) Water quality.**

(1) Surface water. The proposed development will conform to the following standards:

(a) The project will not discharge any water pollutants which affect the state classification of any water body (38 M.R.S.A. § 363 et seq.[1]).

(b) The project will conform to the stormwater quality standards of § 230-805B.

(c) The project will not change water temperatures more than permitted by DEP Regulations 582-1 through 582-8.

(2) Groundwater. The proposed development will not increase any contaminant concentration in groundwater to more than 1/2 of the primary drinking water standards, nor shall it increase any contaminant concentration in groundwater to more than the secondary drinking water standards.

**s) Utilities.** The development shall not impose an unreasonable burden on sewers and storm drains, water lines or other public utilities.

**t) Special features of development.** Exposed storage areas, exposed machinery installation, service areas, truck loading areas, utility buildings and similar structures shall have sufficient setbacks and screening to provide an audio/visual buffer sufficient to minimize their adverse impact on other land uses within the development area and surrounding properties.

**u) Additional standards in shoreland areas.** For applications in the RP, SR, and SO Districts, the Planning Board shall find that the project:

(1) Will maintain safe and healthful conditions;

(2) Will not result in water pollution, erosion, or sedimentation to surface waters;

(3) Will adequately provide for the disposal of all wastewater;

(4) Will not have an adverse impact on spawning grounds, fish, aquatic life, bird or other wildlife habitat;

(5) Will conserve shore cover and visual, as well as actual, points of access to inland and coastal waters;

(6) Will protect archaeological and historic resources as in accordance with the Comprehensive Plan;

(7) Will not adversely affect existing commercial fishing or maritime activities in a Marine Business and Residential District;

(8) Will avoid problems associated with floodplain development and use;

(9) Is in conformance with the provisions of § 230-7A03, Land use standards; and

(10) If located in a structure, the structure is located in an approved subdivision and will not violate any other local ordinance or regulation or any state law which Saco is responsible for enforcing.

[Amended 4-3-2002]

**IV. WAIVERS** – The applicant is requesting several waivers in regards to site plan review as not applicable to this project due to its limited nature and scope. Specifically, the applicant is requesting waivers from the items in Sec. 230-1104: (4) (5) (6) (7) (9) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (22). Staff is supportive of these waiver requests as they are not applicable to this site plan review.

**V. STAFF RECOMMENDATION** –

- A. Staff recommends that the Board consider accepting the waivers, pursuant to Sec. 230-1105, that are not particularly applicable to this project in Sec. 230-1104 for the above referenced submission items.

**“Move that Board grant waiver for the following items in Sec. 230-1104: (4) (5) (6) (7) (9) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (22).”**

- B. Staff recommends APPROVAL of the site plan application for a proposed single-family dwelling at 15 Oceanside Drive with the finding that it meets the standards found in Article XI of the Saco Zoning Ordinance. A suggested motion:

**“Move to approve the request from applicant Nancy Driscoll for site plan review of a proposed single-family dwelling at 15 Oceanside Drive, subject to the Conditions of Approval below.”**

**VI. CONDITIONS -**

Should the Planning Board approve the application, the approval is subject to the following conditions.

- 1) All work shall be in conformance with the approved plans.
- 2) No deviations from the approved plans are permitted without prior approval from the Planning Board for major changes, and from the City Planner for minor changes. The determination of major or minor shall be made by the City Planner.
- 3) Final approval is subject to action taken by the Planning Board as outlined in Section 230-1106 of the Zoning Ordinance.
- 4) Prior to constructing the proposed structure as proposed, the applicant shall be in receipt of all required permits from the City's Code Enforcement Office.

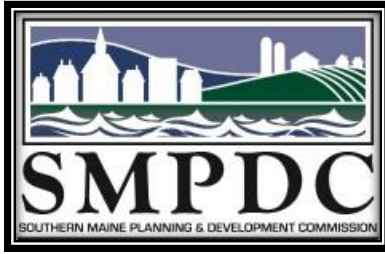
- 5) Prior to the start of work, the applicant shall be in receipt of all permits that may be required from the Maine DEP and/or other state, federal or regional agencies.
- 6) An elevation certificate shall be submitted to the Code Enforcement Office prior to issuance of a building permit.
- 7) In accordance with Section II.n of the contract zone agreement, a public recreational easement "from the beach east up to the dune grass seawall" shall be provided by applicant prior to the sale of Lot 116-1.
- 8) The project at completion shall include the replacement of any existing vegetation removed due to construction.



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**Zach Mosher**  
**City Planner**





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**TO:** Jason Garnham, Saco City Planner

**FROM:** David C.M. Galbraith, Municipal Planning Consultant  
Southern Maine Planning and Development Commission (SMPDC)

**DATE:** May 13, 2022

**RE:** **1031 Portland Road (Map 64 Lot 6): Site Plan & Conditional Use Review for Self-Storage Facility**

**Application Overview:**



The Applicant is seeking Site Plan & Conditional Use Review and Approval for Self-Storage Facility, proposed to be located at 1031 Portland Road (Map 64 Lot 6). The Application was submitted by Haley Ward Inc., on behalf of the property owner 1031 Portland Road LLC and was dated "February 2022". The subject property is 3.765 acres in area and is located at the northeast corner of Portland Road / Route 1 and Eastview Parkway, with the northern property line approximately 150 feet from the shared Saco / Scarborough municipal boundary. The site is located within the City's Portland Road (PR) Zoning District (formerly MU-4 district). The Applicant is proposing to construct six (6) new self-storage buildings in two (2) phases. Once fully constructed the buildings will contain 317 storage units. The buildings are situated in north / south orientation with the long buildings oriented towards US Route #1 (aka Portland Road). An overview of the proposed structures, beginning from Portland Road and moving east, is provided below:

**1031 Portland Road Self-Storage Facility**

A. Building # 1: 60' x 230'	(13,800 square feet) noted as "Future Construction"
B. Building # 2: 30' x 260'	(7,800 square feet)
C. Building # 3: 30' x 275'	(8,250 square feet)
D. Building # 4: 30' x 275'	(8,250 square feet)
E. Building # 5: 30' x 275'	(8,250 square feet)
F. Building # 6: 30' x 120'	(3,600 square feet) Note: Connected Building
G. <u>Building # 6: 30' x 25'</u>	<u>(750 square feet). Note: Connected Building</u>
Total Proposed Building Area:	50, 700 Square Feet

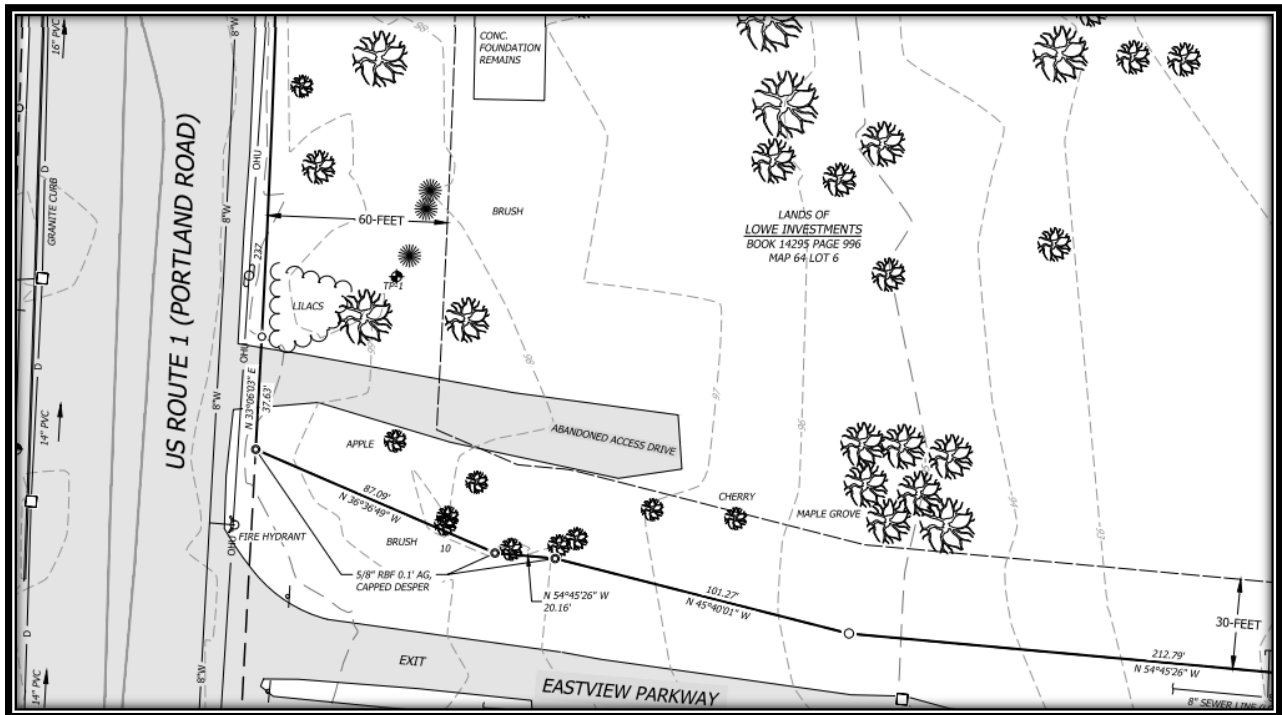
## SMPDC Review Memorandum One (1)

**Name / Location:** 1031 Portland Road (Tax Map 064 Lot 006)  
**Request:** Site Plan & Conditional Use Review for Self-Storage Facility  
**Date:** May 13, 2022

### Site Design Comments:

As outlined above, the subject property is 3.75 acres in area and located at the northeast corner of Portland Road / Route 1.

1. Site Entrance: The Applicant is proposing a single development entrance, located at the southern property line, on Eastview Parkway. The proposed site entrance is slightly offset, from the Ira Hyundi Inc. property's drive aisle, on the opposite side of Eastview Parkway. The City may want to consider requiring the proposed entrance to be aligned with the Hyundi driveway.
2. Building Placement / Orientation: As outlined above, the buildings have been placed in a north / south orientation with the narrower building elevations facing north / south and the long elevations facing Portland Road. The closest building, Building # 1 is 230' in length and the rear / back elevation faces Portland Road. Although shown as "Future Construction" the street view should be a key element of this project review and care should be taken to soften the proposed blank walls, particularly along roadways. This may be accomplished utilizing architectural elements (varying roof lines, false windows, building materials, etc.) in addition to a robust landscaping plan.
3. Building Elevations & Streetscape: Building elevation for the Application were provide on pages 297 and 198 of the application. The submitted plans were not full plan set sheet sizes, didn't include sheet names and details. The revised plans should include fully dimensioned elevations of each building façade and proposed materials. An elevation of the proposed "office" shall also be included.
4. Building Setbacks: The "Existing Conditions Plan" illustrates a 60' required setback from Portland Road and a 30' setback from Eastview Parkway. Sheet C001 "General Notes" illustrates the setback as being 40'. All plans shall have consistent / established setbacks on all revised plans.




## Setbacks “Existing Conditions Plan”

## SMPDC Review Memorandum One (1)

**Name / Location:** 1031 Portland Road (Tax Map 064 Lot 006)  
**Request:** Site Plan & Conditional Use Review for Self-Storage Facility  
**Date:** May 13, 2022

5. Site Data: The plans should be modified to include a Site Data Box which must include all required dimensional / setback standards, lot coverage, building height, and parking calculations as required in the Portland Road (PR) zoning district. This required data shall also show a comparison between the required standards and the proposed site specifications. The required dimensional standards are shown in Table 4-1 Dimensional Standards for All Zoning Districts” of the City’s Zoning Ordinance (Chapter 230).
6. Lot Coverage: The City’s Zoning Ordinance allows a *maximum* of lot coverage of 60% for all development proposals within the Portland Road (PR) zoning district. Revised plans shall include a breakdown of the square footage of the lot and square footage coverage calculations for each element of the plan. These numbers shall include building coverage, all impervious surfaces (parking roadways, sidewalks, parking areas, dumpster and utility pads, driveways, etc.), landscaped areas, etc. The City’s Zoning Ordinance (Chapter 230, Article XXI1- Definitions) defines lot coverage below:
- LOT COVERAGE: The percentage of the lot area covered or occupied by principal and accessory structures. In the Shoreland Zone, lot coverage shall also include all non-vegetated areas, e.g., driveways, patios, and pools. (Page # 208)*
7. Landscape Plan: The submitted site plan states “Existing vegetation / screening along Portland Road to remain, new trees will be planted as shown to supplement existing”. The application further states “proposed tree refer to landscaping planting schedule on sheet C001, TYP.”. Sheet C001 is noted as “General Notes”. The proposed landscaping schedule is shown below:

LANDSCAPING PLANTING SCHEDULE			
NAME	SIZE	TYPE	QUANTITY
 RED MAPLE (ACER RUBRUM)	2.5" CALIPER / 8' HEIGHT	TREE	9

The Applicant is proposing a total of nine (9) trees be planted on the entire site. The proposed landscaping is minimal and lacks design. I would strongly recommend that the City require a detailed Landscape Plan with considerable landscape materials (trees, buffering, shrubs, etc.) and visual interest be provided. This is on particular importance along roadways to provide visual screening of the rear and sides of the proposed buildings, security fencing etc.

8. Sidewalks: Sidewalks along the roadways have not been provided. I believe the City has a masterplan which includes sidewalks / connections along Portland Road. Should sidewalks be required as part of this development proposal? If so, they should be included on revised plans.
9. Emergency Services (E-911):
- A. Being a self-storage facility, where combustibles are being stored, and emergency access to the site should be reviewed and a signed letter of approval shall be provided by the Fire Chief.
  - B. The applicant should consult with the Saco Fire Department on the requirements and locations for on site fire hydrants, Knox box, annunciator panel, and external sprinkler riser connection.
  - C. The applicant should consult with the Saco Fire Department on the requirements for emergency vehicle access for and within the site.



## SMPDC Review Memorandum One (1)

**Name / Location:** 1031 Portland Road (Tax Map 064 Lot 006)  
**Request:** Site Plan & Conditional Use Review for Self-Storage Facility  
**Date:** May 13, 2022

10. Refuse and Recycling: Refuse and recycling areas / containers have not been provided on-site. The Application did include a letter from a waste hauler but with not dumpsters it isn't clear how the service will be provided.
- A. Dumpster Location: The location of all proposed refuse dumpsters and enclosures shall be illustrated on revised plans. These should be adequately landscaped and screened.
- B. Dumpster Enclosures: Revised plans shall illustrate the enclosure detail which shall correspond to site plans with the identical dimensions. Dumpsters shall be located on concrete pans and shall not be located in required setbacks. It should be noted that dumpsters are required to be covered and watertight to avoid any potential violation of the non-stormwater discharge ordinance in the City. A notation to this affect shall be added to the site plan. Covers shall remained at all times except when being actively filled or removed. In addition to compliance with the City's discharge ordinance closed containers will also reduce offending odors and prevent or reduce vermin / pest access.

### Conclusion:

The above comments should be addressed by the applicant. Of particular concern is the proposed street scape view of the property. Additional visual interest, buffering, screening along roadways should be provided. I would recommend having the Applicant provide streetscape views of the proposed development including all landscaping illustrated at the proposed install sizes.

Respectful submitted,

*David C.M. Galbraith*

David C.M. Galbraith  
Municipal Planning Consultant  
Southern Maine Planning and Development Commission (SMPDC)



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**Corporate Office**  
One Merchants Plaza  
Suite 701  
Bangor, ME 04401  
T: 207.989.4824  
F: 207.989.4881

**HALEYWARD.COM**

# SITE PLAN REVIEW & CONDITIONAL USE

TO THE CITY OF SACO

**FOR SACO SELF STORAGE**

Saco, Maine

**Applicant:**

**1031 PORTLAND ROAD, LLC**

ATTN: Steven Hanscom, PO Box 972, Scarborough, ME 04074

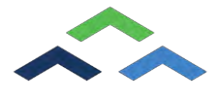


FEBRUARY 2022

JN: 12829.002

**Report Prepared By:**  
**Haley Ward**

One Merchants Plaza, Suite 701 | Bangor, Maine 04401



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## SITE PLAN REVIEW APPLICATION

*Site Plan and Conditional Use Application Forms*

*Tax Map*

*Zoning Map*

*Project Narrative*

*Agent Authorization*



Site Plan Review Application  
Saco Planning Board Review

Application # \_\_\_\_\_

Street Address of Proposed Project: \_\_\_\_\_ Tax Map & Lot: \_\_\_\_\_

Registry of Deeds Book & Page Number: \_\_\_\_\_ Zoning District: \_\_\_\_\_

Applicant: \_\_\_\_\_

Applicant's Address: \_\_\_\_\_

Applicant's Email & Phone #: \_\_\_\_\_

Architect/Engineer's Name: \_\_\_\_\_

Architect/Engineer's Email & Phone #: \_\_\_\_\_

Architect/Engineer's Address: \_\_\_\_\_

Property Owner: \_\_\_\_\_

Property Owner's Email & Phone #: \_\_\_\_\_

Property Owner's Address: \_\_\_\_\_

Area of Parcel: \_\_\_\_\_ Proposed Developed Area: \_\_\_\_\_ Proposed Height: \_\_\_\_\_

Sq. Ft. of Each Proposed Structure: \_\_\_\_\_ Proposed # of Parking Spaces: \_\_\_\_\_

Amendment to Previously Approved Plan: ☐ Yes ☐ No

Description of Proposal: \_\_\_\_\_

Signature & Application Requirements: Applications are due at least three weeks in advance of Planning Board meetings, but the Department encourages applicants to plan for five weeks before a Planning Board meeting. Staff will schedule your application for a Planning Board meeting once all reviews are complete and comments have been sufficiently addressed.

  
\_\_\_\_\_  
Signature of Owner/Applicant

02.14.2022  
\_\_\_\_\_  
Date

## Site Plan Review Checklist

### Section 230-1104: Submission Requirements

Applicant	City staff	Submission Requirement
<input type="checkbox"/>	<input type="checkbox"/>	A fully executed and signed copy of the application for site plan review
<input type="checkbox"/>	<input type="checkbox"/>	<p>Three copies of a site plan on paper not larger than 24 by 36 inches nor smaller than 11 by 17 inches, drawn at a scale sufficient to allow review of the items listed under the approval criteria herein, but at not more than 50 feet to the inch for that portion of the total tract of land being proposed for development.</p> <p>One electronic PDF copy of all applications materials shall be submitted via email: <a href="mailto:Planning@sacomaine.org">Planning@sacomaine.org</a>.</p> <p>The site plan shall show the following:</p>
<input type="checkbox"/>	<input type="checkbox"/>	owner's and applicant's name and address, names and addresses of consultants who aided in preparing the plan, if any, and the name and address of the person or company leasing the property, if applicable, and, in order to establish right, title and interest, a deed, an executed lease, option, or purchase and sale agreement;
<input type="checkbox"/>	<input type="checkbox"/>	names and addresses of all abutting property owners;
<input type="checkbox"/>	<input type="checkbox"/>	sketch map showing general location of the site within the city and north arrow;
<input type="checkbox"/>	<input type="checkbox"/>	boundaries of the property and of all contiguous property under the control of the owner or applicant regardless of whether all or part is being developed at this time;
<input type="checkbox"/>	<input type="checkbox"/>	zoning classification(s) of the property and the location of zoning district boundaries if the property is located in two or more zoning districts or abuts a different zone
<input type="checkbox"/>	<input type="checkbox"/>	the location and width of all building setbacks required by the Zoning Ordinance;
<input type="checkbox"/>	<input type="checkbox"/>	the location and delineation of site elements, including: all existing and proposed buildings (including dimensions where appropriate), driveways, sidewalks, parking spaces, loading areas, open spaces, large trees, wetlands preservation measures and protection measures, stormwater control facilities, dumpsters and recycling facilities, etc.
<input type="checkbox"/>	<input type="checkbox"/>	the location and widths of nearby streets.
<input type="checkbox"/>	<input type="checkbox"/>	The location and delineation of natural resource areas, historic features and archaeological features of the site including, but not limited to floodplains, wetlands, open drainage courses, sand and gravel aquifers, scenic areas, significant wildlife habitats, habitat areas for rare and endangered plants and animals, deer wintering areas, stands of trees, stone walls, graveyards, fences, unique natural areas, historically



		significant structures or features, archaeologically significant features, or other important Unusual Natural Areas and site features
<input type="checkbox"/>	<input type="checkbox"/>	Copies of existing and proposed easements, covenants, or deed restrictions
<input type="checkbox"/>	<input type="checkbox"/>	Copies of applicable local and state approvals and permits, provided however, that the Planning Board or in the case of minor site plans the City Planner, may approve site plans subject to the issuance of specified state licenses and permits in cases where it determines that it is not feasible for the applicant to obtain them at the time of site plan review
<input type="checkbox"/>	<input type="checkbox"/>	Names and addresses and tax map and lot numbers of all property owners within six hundred (600) feet of the applicant's property if it is located in the Conservation District, any industrial district, the Resource Protection District or the R-1, R-2, and R-4 districts, or within two hundred (200) feet when the applicant's property is located in the R-3 District or any business district
<input type="checkbox"/>	<input type="checkbox"/>	For site plans in which ten thousand (10,000) square feet of impervious surface will be created, a storm water drainage plan, prepared by a registered Maine Professional Engineer, showing:
<input type="checkbox"/>	<input type="checkbox"/>	the existing and proposed method of handling storm water run-off;
<input type="checkbox"/>	<input type="checkbox"/>	the direction of flow of the run-off through the use of arrows;
<input type="checkbox"/>	<input type="checkbox"/>	the location, elevation, and size of all catch basins, dry wells, drainage ditches, swales, retention basins, and storm sewer engineering calculations used to determine drainage requirements based upon the 2, 10, 25 and 50 year 24 hour storm event that show the predevelopment and post-development runoff rates. If the post-development runoff rate exceeds the predevelopment runoff rate on-site mitigation measures, such as detention basins or flow restrictors, shall be required unless a drainage plan prepared by a Maine registered engineer demonstrated that the increase has no adverse impact to the downstream conditions
<input type="checkbox"/>	<input type="checkbox"/>	Existing and proposed topography of the site at two (2) foot contour intervals, or such other interval as the Board may determine
<input type="checkbox"/>	<input type="checkbox"/>	A utility plan showing provisions for water supply and wastewater disposal including the size and location of all piping, holding tanks, leach fields, and showing the location and nature of all electrical, telephone and any other utility services to be installed on the site
<input type="checkbox"/>	<input type="checkbox"/>	A landscape plan, with a planting schedule keyed to the site plan and indicating the varieties and sizes of trees, shrubs and other plants to be planted on the site
<input type="checkbox"/>	<input type="checkbox"/>	A standard boundary survey by a registered land surveyor showing the location of all property lines. The Board may waive the requirement of a boundary survey when sufficient information is available to establish, on the ground, all property boundaries

<input type="checkbox"/>	<input type="checkbox"/>	The location, size and character of all signs
<input type="checkbox"/>	<input type="checkbox"/>	A waste disposal plan describing how all solid waste will be handled on site, how it will be removed from the site, the disposal facilities to which it will be transported, and, if the waste is of an unusual nature, information indicating that a suitable disposal facility will accept the waste. For businesses which use industrial chemicals and produce hazardous waste, the name, amount, and nature of all chemicals used, and the manner of disposal of all chemical, hazardous and industrial wastes
<input type="checkbox"/>	<input type="checkbox"/>	A medium intensity soils map of the site. The Board may require a high intensity soils map if issues of water quality, wetlands, or other natural constraints are noted
<input type="checkbox"/>	<input type="checkbox"/>	For projects which will create over ten thousand (10,000) square feet of impervious surface, a plan showing the methods of controlling erosion and sedimentation both during and after construction, including a written description of these methods and a schedule for implementing them in accordance with the requirements of the York County Soil and Water Conservation District
<input type="checkbox"/>	<input type="checkbox"/>	An estimate of the amount and type of traffic generated daily and at peak hours. For sites that generate more than four hundred (400) vehicle trips per day, a traffic impact analysis, prepared by a registered professional engineer with experience in traffic engineering and transportation, shall be submitted. The analysis shall show, at a minimum, existing traffic volumes, proposed traffic generation, proposed access, types of vehicles expected, effect on level of service within the study area, sight lines, and accident history in the study area. The report will recommend improvements both on site and off site to meet the requirements of this ordinance.
<input type="checkbox"/>	<input type="checkbox"/>	A hydrogeologic assessment may be required by the Board for projects in which groundwater quality is a concern. Such instances include, but are not limited to, sites: <ul style="list-style-type: none"> <li>A. Over a sand and gravel aquifer;</li> <li>B. Not served by public water or sewer;</li> <li>C. Where the depth to groundwater is less than 48 inches;</li> <li>D. In soils rated by the SCS Soil Survey as poor or very poor for subsurface septic systems;</li> <li>E. In coarse soils categorized as having “severe” limitations for septic systems;</li> <li>F. Where a septic system of over 2000 gallons per day is proposed</li> </ul>
<input type="checkbox"/>	<input type="checkbox"/>	When a hydrogeologic assessment is submitted, the assessment shall contain at least the following information: <ul style="list-style-type: none"> <li>A. A map showing the basic soil types;</li> <li>B. The depth to the water table at representative points throughout the lot;</li> <li>C. Drainage conditions throughout the project;</li> </ul>

		<p>D. Data on the existing ground water quality, from test wells in the project or from existing wells on neighboring properties;</p> <p>E. A map showing the location of any subsurface wastewater disposal systems and drinking water wells within the project and within 200 feet of the project boundaries;</p> <p>F. An analysis and evaluation of the effect of the project on ground water resources. In the case of residential developments, the evaluation shall, at a minimum, include a projection of post development nitrate – nitrogen concentrations at any wells within the project, at the project boundaries, and at a distance of one thousand (1,000) feet from potential contamination sources, whichever is a shorter distance. Projections of ground water quality shall be based on the assumption of drought conditions (assuming 60% of annual average precipitation).</p>
<input type="checkbox"/>	<input type="checkbox"/>	<p>If the project is subject to the stormwater quality standards of Section 805-2, a stormwater quality management plan that includes the following:</p> <p>A narrative describing how the site is oriented within the watershed, identifying downstream waterbodies including wetlands, and addressing the potential effects of site runoff. The narrative shall identify and discuss the stormwater treatment methods proposed to be used on the site.</p> <p>A plan showing relevant existing contours, proposed contours, existing and proposed sub-watersheds, proposed topographic features, and existing and proposed site features including buildings and other facilities, natural and manmade drainageways, streams, channels, culverts, catch basins, and stormwater treatment facilities. The plan shall include detail drawings of the stormwater Best Management Practices proposed to be used and the location of both structural and non-structural BMPs.</p> <p>Calculations demonstrating that the proposed stormwater treatment facilities will meet the standards of Section 805-2.</p> <p>A stormwater facilities management plan which sets forth the types and frequencies of proposed maintenance activities needed to maintain the efficiency of the stormwater treatment facilities and which identifies the party that will be responsible for carrying out each maintenance activity and for submitting the Annual Maintenance Report and the proposed institutional arrangements that will assure that all maintenance occurs as proposed.</p>



<input type="checkbox"/>	<input type="checkbox"/>	A lighting plan, prepared by a qualified lighting professional, showing at least the following at the same scale as the Site Plan:
<input type="checkbox"/>	<input type="checkbox"/>	<p>The location of all buildings, landscaping, parking areas, and proposed exterior lighting fixtures;</p> <p>Specifications for all proposed lighting fixtures including photometric data, designation as “cut-off” fixtures, Color Rendering Index (CRI) of all lamps (bulbs), and other descriptive information on the fixtures;</p> <p>The proposed mounting height of all exterior lighting fixtures;</p> <p>Analyses and illuminance level diagrams or photometric point by point diagrams on a twenty foot grid showing that the proposed installation conforms to the lighting level standards of this ordinance together with statistical summaries documenting the average illuminance, maximum illuminance, minimum illuminance, average to minimum uniformity ratio, and maximum to minimum uniformity ratio for each parking area, drive, canopy, and vehicle sales or storage area; and</p> <p>Drawings of all relevant building elevations showing the fixtures, the portions of the walls to be illuminated, the illuminance levels of the walls, and the aiming points for any remote light fixtures.</p>
<input type="checkbox"/>	<input type="checkbox"/>	Any proposed land use activity involving structural development or soil disturbance on or adjacent to sites listed on, or known by the City to be eligible to be listed on the National Register of Historic Places shall be submitted by the applicant to the Maine Historic Preservation Commission and the Saco Historical Preservation Commission (as appropriate) for review and comment prior to action being taken by the permitting authority. The permitting authority shall consider comments received from the Commissions prior to rendering a decision on the application
<input type="checkbox"/>	<input type="checkbox"/>	A design analysis demonstrating how the project conforms to the design standards of §230-729, including any district-specific additional requirements. This analysis must address each of the applicable design standards and allow the Planning Board to determine if each standard has been met. The analysis must provide information about the proposed development and the characteristics of neighboring properties and the adjacent neighborhood and an analysis demonstrating how the proposed development meets the standards. This analysis should include plans, building elevations, visual simulations, and a narrative as appropriate to document conformance with the standards.

**Design Review Submission Requirements**  
**Section 230-729**

<b>Applicant</b>	<b>City staff</b>	<b>Submission Requirement</b>
<input type="checkbox"/>	<input type="checkbox"/>	The plans shall include line drawings of all sides of the building or buildings

<input type="checkbox"/>	<input type="checkbox"/>	The proposed exterior construction materials shall be indicated, including but not limited to siding materials and roofing materials
<input type="checkbox"/>	<input type="checkbox"/>	Line drawings that demonstrate the style and design of windows and doors proposed for the building or buildings shall be submitted
<input type="checkbox"/>	<input type="checkbox"/>	The plans shall include line drawings of all proposed accessory structures, including but not limited to canopies, storage buildings, fenced enclosures, and maintenance buildings
<input type="checkbox"/>	<input type="checkbox"/>	If the applicant is or represents a corporate entity that operates businesses of a similar nature in locations beyond Saco, representative color photographs of existing structures identical or similar to that proposed in Saco shall be submitted

If property is located on sewer, please complete the IWS Form.

### Waiver Requests

If you are asking for a waiver, please indicate the type of waiver and the reason for the waiver request. The Board reviews the application and waiver requests uniquely to each project, so the request should clearly demonstrate the unique aspect of the project.

Waiver Request #1: Section 230-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #2: Section 230-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #3: Section 230-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #4: Section 230-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #5: Section 230-\_\_\_\_\_: \_\_\_\_\_



## Conditional Use Application

Application # \_\_\_\_\_

Street Address of Proposed Project: \_\_\_\_\_ Tax Map & Lot: \_\_\_\_\_

York County Registry of Deeds Book & Page Number: \_\_\_\_\_ Zoning District: \_\_\_\_\_

Applicant: \_\_\_\_\_

Applicant's Address: \_\_\_\_\_

Applicant's Email & Phone #: \_\_\_\_\_

Architect/Engineer's Name: \_\_\_\_\_

Architect/Engineer's Email & Phone #: \_\_\_\_\_

Architect/Engineer's Address: \_\_\_\_\_

Property Owner: \_\_\_\_\_

Property Owner's Email & Phone #: \_\_\_\_\_

Property Owner's Address: \_\_\_\_\_

Area of Parcel: \_\_\_\_\_ Proposed Developed Area: \_\_\_\_\_ Proposed Height: \_\_\_\_\_

Description of Proposal: \_\_\_\_\_

Signature & Application Requirements: Applications are due at least three weeks in advance of Planning Board meetings, but the Department encourages applicants to plan for five weeks before a Planning Board meeting. Staff will schedule your application for a Planning Board meeting once all reviews are complete and comments have been sufficiently addressed.

\_\_\_\_\_  
Signature of Owner/Applicant

02.14.2022

\_\_\_\_\_  
Date



## Conditional Use Checklist

### Section 230-901(B): Submission Requirements

Applicant	City staff	Submission Requirement
<input type="checkbox"/>	<input type="checkbox"/>	Site plans in 3 copies and 1 electronic, emailed, PDF copy, drawn to scale of not less than one inch equals 20 feet. The building plans shall show, at minimum, the first-floor plan and all elevations, with indication of the proposed construction material. The site plan shall include the following information:
<input type="checkbox"/>	<input type="checkbox"/>	A map of the site with reference to surrounding areas and existing street locations.
<input type="checkbox"/>	<input type="checkbox"/>	The name and address of the owner and conditional use permit applicant, together with the evidence of sufficient right, title or interest in the premises to permit the applicant to undertake the use for which conditional use permit approval has been requested.
<input type="checkbox"/>	<input type="checkbox"/>	The names and addresses of the owners of all properties within 200 feet of the property in question when the property is located in the R-3, Business (B) or MU Zones and within 600 feet when the property in question is located in the Conservation Zone, any industrial district or the R-1, R-2 and R-4 Districts, as shown by the most recent tax records of all municipalities in which such properties lie.
<input type="checkbox"/>	<input type="checkbox"/>	A plan of the area showing lot line dimensions, applicable zone or zones, and the normal high-water mark, if applicable.
<input type="checkbox"/>	<input type="checkbox"/>	The location of all existing and proposed buildings and structures, streets, easements, driveways, entrances and exits on site and within 100 feet thereof
<input type="checkbox"/>	<input type="checkbox"/>	All setbacks from bodies of water and lot lines
<input type="checkbox"/>	<input type="checkbox"/>	All Existing physical features on the site and within 200 feet of the site, including streams, watercourses and existing woodlands. Soil conditions as reflected by a medium-intensity survey (such as wetlands, rock ledge, and areas of high water table) shall be shown, and the Planning & Development Department or Planning Board may require a high-intensity soils survey where necessary. The applicant shall provide, as part of the application, a narrative and sketch sufficient to describe trees and other vegetation located on the site. The Planning & Development Department or Planning Board may require mapping of trees proposed to be preserved as part of the site and landscaping plans presented for approval.
<input type="checkbox"/>	<input type="checkbox"/>	Topography showing existing and proposed contours at five-foot intervals for slopes averaging 5% or greater and at two-foot intervals for land of lesser slope. A reference benchmark shall be clearly designated. Where variations in the topography may affect the layout of buildings and roads, the Planning & Development Department or Planning Board may require that the topographic maps be based on an on-site survey.
<input type="checkbox"/>	<input type="checkbox"/>	Parking, loading and unloading areas shall be indicated with dimensions, traffic patterns, access aisles and curb radii.

<input type="checkbox"/>	<input type="checkbox"/>	Improvements such as roads, curbs, bumpers and sidewalks shall be indicated with cross sections, design details and dimensions.
<input type="checkbox"/>	<input type="checkbox"/>	The location and design of existing and proposed stormwater systems, sanitary waste disposal systems and potable water supply, and methods of solid waste storage and disposal.
<input type="checkbox"/>	<input type="checkbox"/>	A landscaping and buffering plan showing what will remain and what will be planted, indicating botanical and common names of plants and trees, dimensions, approximate time of planting and maintenance plans.
<input type="checkbox"/>	<input type="checkbox"/>	Lighting details indicating types of fixtures, location, radius and intensity of light.
<input type="checkbox"/>	<input type="checkbox"/>	The location, dimensions and details of signs.
<input type="checkbox"/>	<input type="checkbox"/>	The proposed use of all floor area.
<input type="checkbox"/>	<input type="checkbox"/>	A written description of the proposed operations in sufficient detail to indicate the degree to which the operation will create traffic congestion, noise, toxic or noxious matter, vibration, odor, heat, glare air pollution, waste and other objectionable effects, along with engineering and architectural plans for mitigating such effects.
<input type="checkbox"/>	<input type="checkbox"/>	The proposed number of shifts to be worked and the maximum number of employees of each shift.
<input type="checkbox"/>	<input type="checkbox"/>	A list of all hazardous material to be hauled, stored, used, generated or disposed of on the site, and any pertinent state or federal permits required.

For projects on the city's sewer, applicants are also required to complete the IWS form.

### Waiver Requests

If you are asking for a waiver, please indicate the type of waiver and the reason for the waiver request. The Board reviews the application and waiver requests uniquely to each project, so the request should clearly demonstrate the unique aspect of the project.

Waiver Request #1: Section-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #2: Section-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #3: Section-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #4: Section-\_\_\_\_\_: \_\_\_\_\_

Waiver Request #5: Section-\_\_\_\_\_: \_\_\_\_\_



HALEY WARD.

ENGINEERING | ENVIRONMENTAL | SURVEYING

February 8, 2022

To Whom It May Concern:

Please be advised that Haley Ward, Inc. is hereby authorized to act on behalf of 1031 Portland Road, LLC regarding Local, State, and Federal permitting for our proposed self-storage site development project on Portland Road in Saco, Maine.

Steve Hanscom, Manager or Assignees

Printed Name and Title

Signature

2/9/2022

Date







1031 PORTLAND ROAD, LLC  
SACO SELF-STORAGE  
SACO, ME  
SITE PLAN REVIEW & CONDITIONAL USE APPLICATION

## ACTIVITY DESCRIPTION

The Applicant, 1031 Portland Road, LLC, proposes to develop an approximately 3-acre storage unit facility in Saco, Maine. The development is located off Portland Road (US Route 1,) just south of the Scarborough Town line. This project will be constructed in two phases, with a total of 317 storage units upon completion.

This development is considered a conditional use. The contents of this application meet the requirements of both the Site Plan Review and Conditional Use applications.

## SITE OVERVIEW

The project is located on an approximately 3.765-acre parcel fronting Portland Rd. (US Route 1) in Saco, Maine. The parcel is depicted on Tax Map 64, Lot 6. The parcel is undeveloped mostly consisting of open field with a small portion in the southwest corner being wooded. The zoning designation of the parcel is Portland Road, (PR) (previously Mixed-Use (MU-4.))

Please see below for narratives on how the proposed development meets the requirements of the Saco Site Plan Review Ordinance (Effective April 11, 2021,) as well as the applicable Zoning Ordinance sections.

## SITE PLAN REVIEW ORDINANCE ARTICLE IV – REQUIRED SUBMITTALS

### Section 4.01 Site Plan Review

(a) A fully executed and signed copy of the application.

See attached.

(b) Site Plan

See the drawing set attached in Appendix A.

(c) Paper copies and one (1) digital copy of the completed application and associated plans.

The required number of copies has been provided.

(d) Site plans

See the drawing set attached in Appendix A.



- (e) The site plans shall be stamped by all applicable professionals, e.g. engineer, architect, landscape architect.

See the drawing set attached in Appendix A.

- (f) If the applicant is or represents a corporate entity that operates businesses of a similar nature in locations beyond Saco, the applicant shall submit representative color photographs of existing structure(s) identical or similar to that proposed in Saco.

The Applicant does not have any similar developments.

- (g) The site plan shall be on paper not larger than twenty-four (24) inches by thirty-six (36) inches nor smaller than eleven (11) inches by seventeen (17) inches, drawn at a scale sufficient to readily review.

See the drawing set attached in Appendix A.

- (h) The site plan shall meet the standards specified above in \_\_\_\_\_.

See the drawing set attached in Appendix A.

- (i) The applicant shall submit copies of the deed, an executed lease, option, or purchase **and sale agreement as evidence of the applicant's right, title and interest** in the subject property.

See Appendix B for a copy of the property deed.

- (j) The applicant shall submit three (3) copies of the application, an Existing Conditions Plan, and a Proposed Development Plan. The City may require additional materials to assist with the review.

The required number of copies have been provided.

#### Section 4.02 Existing Conditions Plan

- (a) Name and address of the owner, applicant, consultants who aided in preparing the plan, and the person or company leasing the property, if applicable.

See the drawing set attached in Appendix A.

- (b) Names, addresses, and tax map and lot number of all abutting property owners:

See Appendix C for a copy of the Abutters List.

- (b) Locus map that shows the relationship of the proposal to nearby properties and to public access.



See Appendix D for a copy of the Location Map

- (c) Boundaries of the property and of all contiguous property under the control of the owner or applicant.

See the drawing set attached in Appendix A.

- (d) Zoning district boundaries, including overlay districts.

See the drawing set attached in Appendix A.

- (e) Location and widths of nearby streets.

See the drawing set attached in Appendix A.

- (f) Existing structures.

See the drawing set attached in Appendix A.

- (h) Resource areas including, but not limited to:

- (i) Floodplains

The project is not within a mapped flood zone, see the FEMA Flood Map in Appendix E.

- (ii) Wetlands

A desktop review was conducted of the National Wetlands Inventory online database; there are no mapped wetlands within the vicinity of the project area.

- (iii) Open drainage courses

There are no drainage courses within the project area.

- (iv) Sand and gravel aquifers

There are no sand and gravel aquifers within the project area, see the Aquifer Map in Appendix F.

- (v) Scenic areas

There are no scenic areas that will be impacted by this development.

- (vi) Significant wildlife habitats.

The Maine Department of Inland Fisheries and Wildlife was contacted to determine if this development would have any impacts on significant





wildlife habitats, as shown in Appendix G. Their response will be sent to the City upon receipt.

- (vii) Habitat areas for rare and endangered plants and animals

See Item (vi,) above.

- (viii) Deer wintering areas, as identified by MRSA Title 12, §10107

See Item (vi,) above.

- (ix) Stands of trees

See the drawing set attached in Appendix A for the locations of existing vegetation.

- (x) Stone walls

There are no existing stone walls in the development area.

- (xi) Graveyards

There are no existing graveyards in the development area.

- (xii) Fences

There are no existing fences in the development area.

- (xiii) Unique natural areas

The Maine Department of Inland Fisheries and Wildlife was contacted to determine if this development would have any impacts on significant wildlife habitats, as shown in Appendix G. Their response will be sent to the City upon receipt.

- (xiv) Historically significant structures or features

The Maine Historic Preservation Commission was contacted to determine if this development would have any impacts on historically significant structures or features, as shown in Appendix G. Their response will be sent to the City upon receipt.

- (xv) Archaeological resources

See Item (xv,) above.

- (xvi) Other unusual natural areas and site features

See Item (xv,) above.



- (i) A medium-intensity soils map of the site, which may be obtained from the Department. The Planning Board may require a high-intensity soils map if issues of water quality, wetlands, or other natural features are noted.

A copy of the USDA soils map for the development area has been provided in Appendix H.

- (j) Existing easements, restrictive covenants, and deed restrictions.

See the drawing set attached in Appendix A.

#### Section 4.03 Proposed Development Plan

- (a) A standard boundary survey by a licensed land surveyor showing the location of all property lines.

A copy of the survey has been included in Appendix A. We have requested a signed and sealed copy from the surveyor and will provide it to the city upon receipt.

- (g) The plan shall identify all abutters.

See the drawing set attached in Appendix A.

- (h) The location and width of all required structure setbacks.

See the drawing set attached in Appendix A.

- (d) The location and delineation of site elements.

See the drawing set attached in Appendix A.

- (e) Existing and proposed topography at two (2)-foot intervals, or such other interval as the Planning Board may require.

See the drawing set attached in Appendix A.

- (f) A utility plan showing provisions for water supply and wastewater disposal, including the size and location of all piping, holding tanks, and leach fields, and showing the location and specifications of all electrical, telephone and other utility services to be installed on the site. Completed Initial Wastewater Discharge Application, for those projects that propose connection to the City sewer system.

The proposed development will utilize the public water and electrical services located on Portland Road. The development has granted easement to the development on Map 64, Lot 7 by Diversa-Kerr Development which has proposed to connect to the existing sewer stub located on Eastview Parkway. The proposed development shall connect to the stub provided by Diversa-Kerr Development. The location and characteristics of these services are shown on the Proposed Site Plan. An Initial



Wastewater Discharge Application has been provided to the City.

- (g) A landscape plan, with a planting schedule keyed to the site plan and indicating the varieties and sizes of trees, shrubs, and other plants to be planted on the site, and a maintenance plan.

Proposed landscaping features have been shown on the Proposed Site Plan. A landscaping management plan has been provided in Appendix I. Because this site does not meet the criteria of the Saco Zoning Ordinance Sections VI7(A) or VI7(B), the landscaping for this development is not required to act as a screening device.

- (i) The location and dimensions of all signs.

See the drawing set attached in Appendix A.

- (i) A waste disposal plan describing how all solid waste will be handled on-site, how it will be removed from the site, the disposal facilities to which it will be transported, and, if the waste is of an unusual nature, confirmation that a suitable disposal facility will accept the waste. For businesses that use industrial chemicals and produce hazardous waste, the name, amount, and nature of all chemicals used, and the manner of disposal of such waste.

This development is expected to produce wood clearing waste, commercial office waste, and operational waste. After construction, there will be 1 employee in an office setting, with a shift schedule of Monday to Friday 9-5. Current plans call for hours of operation from 6 am to 10 pm for unit access.

It is estimated that approximately 30 tons of wood waste is generated per acre of vegetation clearing (Maine Wood Volume Study, 2018.) There will be approximately 1 acre of clearing required resulting in 30 tons of wood waste that will be sold or ground and used for erosion control for the development.

Post construction, the facility will generate an estimated 10.53 lbs/employee/day (<https://www2.calrecycle.ca.gov/wastecharacterization/general/rates>), for a total of approximately 73 lbs per week. A letter from Casella Waste Systems stating their capacity to accept the waste has been attached in Appendix G.

Any debris related to the clean out of storage units will be disposed of by the property owner.



- (j) Estimate of amount and type of traffic generated daily and at peak hours. For sites that generate more than 400 one-way vehicle trips per day, a traffic impact analysis, prepared by a licensed professional engineer with experience in traffic engineering and transportation, shall be submitted. Study area should extend, at a minimum, to intersections where traffic attributable to the site plan exceeds 35 vehicles in a lane in a peak hour. Analysis shall show, at a minimum: existing traffic volumes; proposed traffic generation; proposed access; vehicle types expected; effect on level of service within study area; sight lines; and accident history in the study area. The report will recommend improvements on site and off site.

The proposed development is expected to generate 57 vehicle trips per weekday and will have an AM peak hour of 7 trips, and a PM peak hour of 8 trips. These values were estimated using the ITE Trip Generation Manual, 11<sup>th</sup> Edition, Land Use Code 151 – Mini Warehouse Storage Units.

- (j) Stormwater Plan. The plan shall include comprehensive stormwater drainage provisions.

See Appendix J for the Stormwater Management plan, and Appendix K for the Erosion and Sedimentation Control Plan.

- (k) Hydrogeologic assessment.

No groundwater use or extraction is proposed. The development will use the City's public water supply, and all wastewater will be directed to the City's sanitary sewer system. The proposed development is not expected to impact groundwater. There are no mapped aquifers within the development area, as shown in the map provided in Appendix F.

- (m) A lighting plan, prepared by a qualified lighting professional

Please refer to the provided photometric plan and light fixture specifications in Appendix L.

- (n) Archaeological and historical sites.

The Maine Historic Preservation Commission was contacted to determine if this development would have any impacts on historically significant structures or features, as shown in Appendix G. Their response will be sent to the City upon receipt.

- (o) A design analysis that demonstrates conformity with the design standards specified in these regulations. The analysis shall address all applicable design standards and allow the Planning Board, or in the case of minor site plans, the City Planner, to determine if each standard has been met. The analysis must provide information about the proposed development, the characteristics of neighboring properties, the adjacent neighborhood, and how the proposed development meets the standards. The analysis should include plans, building elevations, visual simulations, and a narrative documenting conformance with the standards.





Please refer to the provided drawing set, narratives, and exhibits.

(p) Copies of existing and proposed easements, covenants, and deed restrictions.

These documents have been provided and are shown on the Proposed Site Plan.

(q) Copies of applicable local and state permits.

This development is required to obtain a Maine Department of Environmental Protection Stormwater permit. The application for this MDEP permit will be submitted in conjunction with the Site Plan Permit application, and a copy of the permit will be sent to the City upon receipt.

A Saco Conditional Use Permit will be obtained simultaneously with this Site Plan Application.

#### Section 4.04 Additional Submission Requirements for Certain Uses

This section does not apply.

#### ZONING ORDINANCE ARTICLE VI – GOOD NEIGHBOR PERFORMANCE STANDARDS

##### Dust, Fumes, Vapors, and Gasses

This development will not create any sources of dust, fumes, vapors, or gases.

##### Explosive Materials

This development will not use, store, or create explosive materials.

##### Exterior Lighting

Proposed exterior lighting will be in conformance with this section. Please refer to the provided photometric plan and light fixture specification in Appendix L.

##### Noise

There are no significant sources of noise proposed for this development.

##### Odors

There are no significant sources of odor proposed for this development.

##### Screening

Screening has been provided as required by this section. Screening devices are shown on the Proposed Site Plan.



### Sanitary Waste Disposal

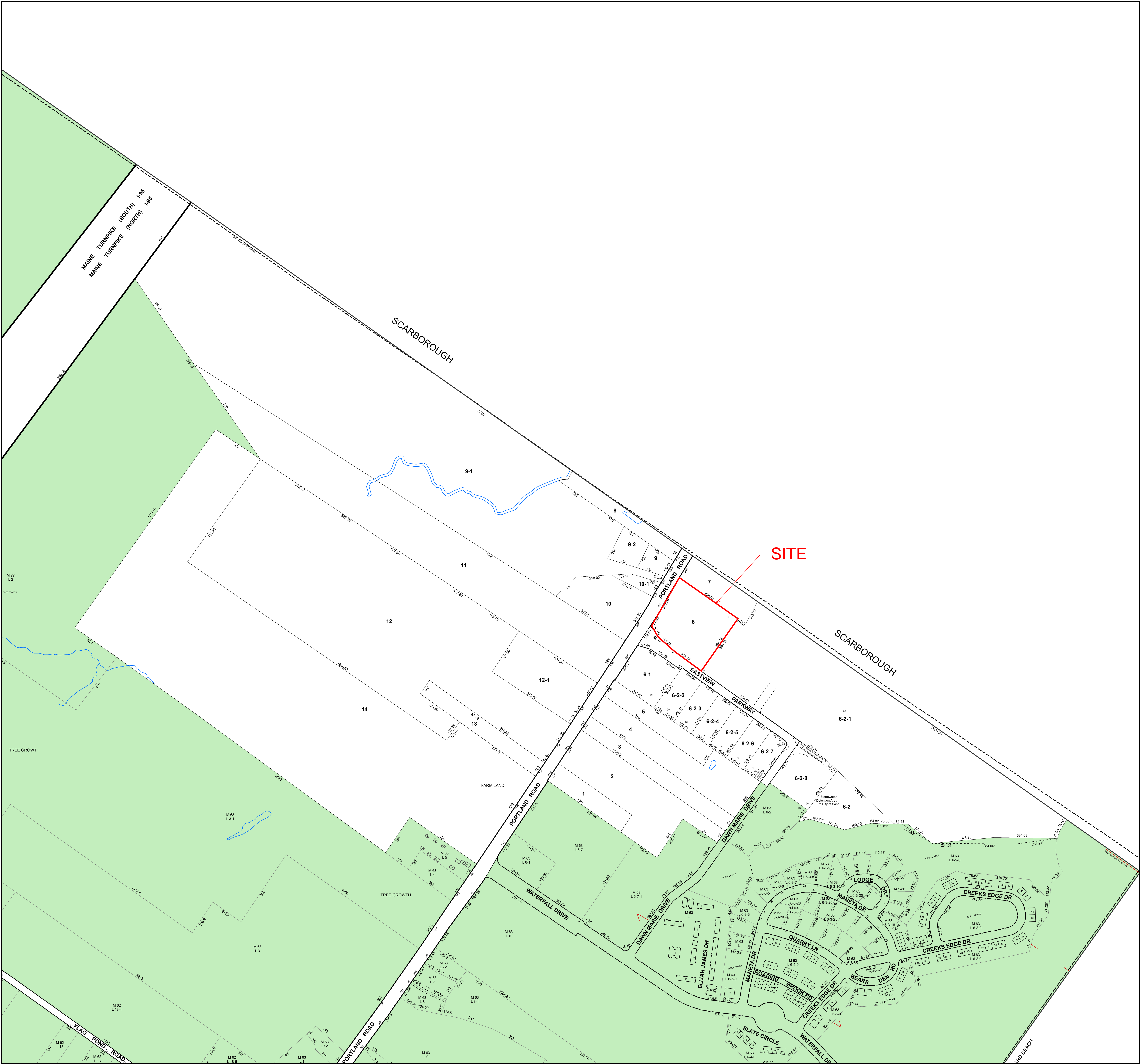
Wastewater generated by this site will be directed to the public system on Portland Road.

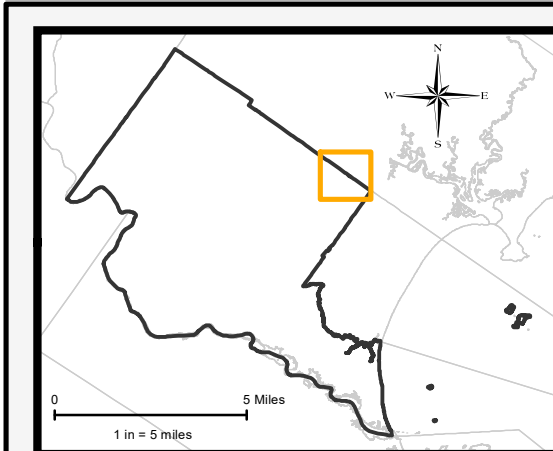
### Storage and Handling of Chemicals and Similar Materials

There are no storage facilities for liquid fuels, chemicals, industrial wastes, and potentially harmful materials proposed for this project.

### Water Quality

No harmful discharges will be generated by this development.

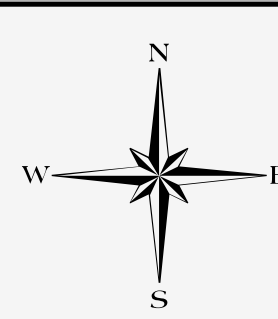




0 1 2 Miles

— Misc	— Hydro
— Condo	— Bordering Towns
- - - Easement/ROW	- - - Private ROW
— Hook	— Railway

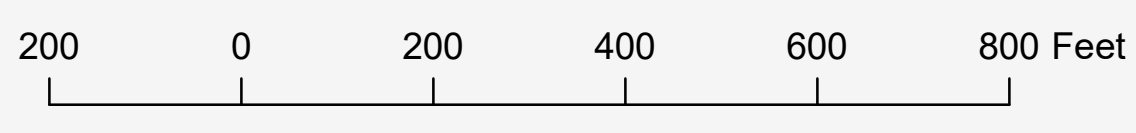
THIS MAP IS PREPARED FOR THE INVENTORY OF REAL PROPERTY WITHIN CITY OF SACO AND IS COMPILED FROM RECORDED DEEDS, PLATS, TAX MAPS, SURVEYS, PLANIMETRIC MAPS, AND OTHER PUBLIC RECORDS AND DATA. USERS OF THIS TAX MAP SHOULD BE AWARE THAT PRIMARY INFORMATION SOURCES SHOULD BE CONSULTED FOR VERIFICATION OF THE INFORMATION CONTAINED ON THIS MAP. THE CITY OF SACO ASSUMES NO LEGAL RESPONSIBILITY FOR THE INFORMATION CONTAINED HEREIN, BEYOND ITS USE IN THE CITY'S ASSESSMENT FUNCTION.



Map as of April 1, 2019

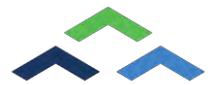
**CITY OF SACO**  
**YORK COUNTY, MAINE**

**Scale: 1 inch = 200'**



200 0 200 400 600 800 Feet

**Tax Map**  
**Number 64**



APPENDIX B  
PROPERTY DEED



## CONTRACT FOR THE SALE OF REAL ESTATE

Date: October 6, 2021

RECEIVED OF: Steve Hanscom or Assigns whose mailing address is, PO Box 972, Scarborough, Maine 04074, hereinafter called the Purchaser, the sum of [REDACTED] as earnest money deposit and in part payment of the purchase price of the following described real estate, situated in the municipality of Saco, County of York, State of Maine and located at 1031 Portland Road, Saco, Maine being all the property owned by the Seller at the above address, and described at said County's Registry of Deeds in Book 14295, Page 996 and further described as: a 3.75 +/- acre land parcel further described by the Town of Saco's Assessor Office as Map 64 Lot 6 upon the terms and conditions indicated below:

1. PERSONAL PROPERTY: The following items of personal property are included in this sale (if applicable): N/A.

2. PURCHASE PRICE: The TOTAL purchase price being [REDACTED] to be paid as follows: [REDACTED]

3. EARNEST MONEY/ACCEPTANCE: Coyne Webber Real Estate Associates, LLC shall hold said earnest money in a non-interest bearing account and act as Escrow Agent until closing; this offer shall be valid until October 11, 2021 at 5:00 PM; and, in the event of the Seller's non-acceptance, this earnest money shall be returned promptly to the Purchaser.

4. TITLE: That a deed, conveying the premises in fee simple with good and marketable title in accordance with Standards of Title adopted by the Maine Bar Association shall be delivered to Purchaser and this transaction shall be closed and Purchaser shall pay the Purchase Price as provided herein and execute all necessary papers for the completion of the purchase on or before December 22 2021. If Seller is unable to convey title to the premises in accordance with the provisions of this paragraph 5 below, then the Seller shall have a reasonable time period, not to exceed thirty (30) days from the time the Seller receives written notice of the defect, unless otherwise agreed to by both parties, to remedy the title, after which time, if such defect is not corrected so that there is merchantable title, the Purchaser may, within fifteen (15) days thereafter, at Purchaser's option, withdraw said earnest money and neither party shall have any further obligation hereunder, or Purchaser may, at Purchaser's option, close notwithstanding such uncured defects as may then exist. If the Purchaser does not withdraw the earnest money and declare the contract void within the period set forth above, the Purchaser shall have waived the right to object to title. The Seller hereby agrees to make a good-faith effort to cure any title defect during such period.

5. DEED: That the property shall be conveyed by a Maine Short Form Deeds Act insurable Warranty Deed, and shall be subject to all encumbrances (other than liens and mortgages), except covenants, conditions, easements and restrictions of record that materially and negatively impair the current use of the premises and usual public utilities servicing the premises and shall be subject to applicable land use and building laws and regulations.

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

7. LEASES/TENANT SECURITY DEPOSITS: Seller agrees to transfer at closing to Purchaser all Seller's rights under the current leases to the property and all security deposits held by Seller pursuant to said leases.

8. RISK OF LOSS: Until the transfer of title, the risk of loss or damage to said premises by fire or otherwise is assumed by the Seller unless otherwise agreed in writing. Said premises shall at closing be in substantially the same condition as at present, excepting reasonable use and wear. If the premises are materially damaged or destroyed prior to closing, Purchaser may either terminate this Agreement and be refunded the earnest money deposit, or close this transaction and accept the premises in their as-is condition together with an assignment of the Seller's right to any insurance proceeds relating thereto.

Seen and agreed to:

SCH  
Purchaser

[Signature]  
Seller



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

- a. Real Estate Taxes based on the municipality's tax year. Seller is responsible for any unpaid taxes for prior years.
- b. Fuel
- c. N/A
- d. Rents, estimated monthly common area maintenance charges, estimated monthly property tax payments, and all other additional rents received by Seller pursuant to leases of the property.
- e. Metered utilities, such as water and sewer, shall be paid by Seller through the date of closing.
- f. Purchaser and Seller shall each pay one-half of the transfer tax as required by the State of Maine.

10. INSPECTIONS: Purchaser is advised to seek information from professionals regarding any specific issue of concern. Purchaser acknowledges receipt of property disclosure form attached hereto. Neither Seller nor the Licensees identified below make any representations or warranties regarding the condition, permitted use or value of Seller's real or personal property. Purchaser's obligation to close under this Contract is conditioned upon Purchaser's satisfaction with its investigations of the property, which may without limitation include survey, environmental assessment, engineering studies, wetlands or soil studies, zoning compliance or feasibility, and code compliance, all within Sixty (60) days of Effective Date.

All investigations will be done by professionals chosen and paid for by Purchaser. If the result of any investigation is unsatisfactory to Purchaser in Purchaser's sole discretion, Purchaser may declare this Contract null and void by notifying Seller in writing within the specified number of days set forth above and the earnest money shall be returned to Purchaser. If Purchaser does not notify Seller that Purchaser's investigation(s) is unsatisfactory within the time period set forth above, this contingency is waived by Purchaser. In the absence of any investigation(s) mentioned above, Purchaser is relying completely upon Purchaser's own opinion as to the condition of the property. Purchaser agrees to repair any damage to the property caused by Purchaser's investigations, and Purchaser agrees to indemnify and hold Seller harmless for any claims, damages, losses or costs, including without limitation reasonable attorneys' fees incurred or suffered by Seller as a result of Purchaser's investigations of the property.

~~Purchaser will have the option to extend inspection contingency by an additional Sixty (60) days with written notice to the Seller. If this option is exercised, all other timelines in this contract will automatically adjust to allow for the added diligence timeframe.~~

11. FINANCING: This contract is subject to the Purchaser obtaining a commercial mortgage loan of 80% of the purchase price, at an interest rate not to exceed market rate per annum and amortized over a period of not less than 20 years.

- a. If Purchaser is unable to obtain a commitment for such mortgage loan on terms and conditions satisfactory to Purchaser in its sole discretion, Purchaser shall notify Seller in writing. If Purchaser fails to so notify Seller within Sixty (60) days of the effective date, then this financing condition shall be deemed to have been waived by Purchaser.
- b. The Purchaser is under a good-faith obligation to seek and accept financing on the above-described terms. The Purchaser acknowledges that a breach of this good-faith obligation to seek and accept financing on the above-described terms will be a breach of this Contract.

12. AGENCY DISCLOSURE: The Purchaser and Seller acknowledge that they have been informed that the Selling Licensee is acting as a Buyer's agent in this transaction and is representing the Purchaser and that the Listing Licensee is acting as a Seller's agent in this transaction and is representing the Seller.

13. MEDIATION: Any dispute or claim arising out of or relating to this Contract or the premises addressed in this Contract shall be submitted to mediation in accordance with the Maine Residential Real Estate Mediation Rules of the Maine Association of Dispute Resolution Professionals or its successor organization. This clause shall survive the closing of this transaction.

Purchaser

Seller

14. DEFAULT: If Purchaser fails to perform any of the terms of this Contract or is otherwise in default of any of its obligations, Seller shall have the option of either retaining the earnest money as full and complete liquidated damages or employing all available legal and equitable remedies. Should Seller elect to retain the earnest money, this Contract shall terminate and neither party shall be under any further obligation hereunder. In the event of an undisputed default by either party, the Escrow Agent may return the earnest money to Purchaser or Seller with written notice to both parties pursuant to Maine Real Estate regulations. If a dispute arises between Purchaser and Seller as to the existence of a default hereunder and said dispute is not resolved by the parties within thirty (30) days, Escrow Agent may elect to file an action in interpleader and deposit the earnest money in the court to resolve said dispute, or otherwise disburse the earnest money pursuant to Maine Real Estate Commission regulations. Purchaser and Seller, jointly and severally, shall indemnify Escrow Agent for all costs, losses, expenses, and damages, including reasonable attorneys' fees, incurred by Escrow Agent in connection with said action and/or in connection with any dispute relating to this Contract and/or Deposit.
15. PRIOR STATEMENTS: Any verbal presentations, statements and agreements are not valid unless contained herein. This Contract completely expresses the obligations of the parties. This is a Maine contract and shall be construed according to the laws of Maine.
16. HEIRS/ASSIGNS: This Contract is assignable ☒ Yes ☐ No. This Contract shall extend to and be obligatory upon heirs, personal representatives, successors, and assigns (if assignment is allowed by the terms of this Contract), of the respective parties.
17. COUNTERPARTS: This Contract may be signed on any number of identical counterparts, including telefacsimile copies, with the same binding effect as if the signatures were on one instrument. Original or telefacsimiled signatures are binding.
18. BINDING CONTRACT: This Contract is a binding contract when signed by both the Seller and the Purchaser and when that fact has been communicated to all parties or to their agents. The Effective Date of the Contract is noted below.
19. REVIEW OF LEASES AND INCOME AND EXPENSE INFORMATION: ~~The Seller shall provide the Purchaser with copies of all leases and income & expense information regarding the subject property within \_\_\_\_ (\_\_\_\_) days of the effective date of this contract. Purchaser(s) shall have \_\_\_\_ (\_\_\_\_) days from such delivery to review leases and income & expense information regarding the property. If the result of the review is unsatisfactory to the Purchaser, Purchaser may declare the Contract null and void by notifying the Seller in writing within the specified number of days set forth above, and any earnest money shall be returned to the Purchaser. If the Purchaser does not notify the Seller that the review is unsatisfactory within the time period set forth above, this contingency is waived by the Purchaser.~~
20. Seller and Purchaser acknowledge receipt of the Maine Real Estate Commission Disclosure of Agency Relationship Form (Form #3), *if the property is, or has a component of, one to four residential dwelling units.*
21. ADDENDA: This Contract has addenda containing additional terms and conditions: YES ☐ NO ☒ 10 5-4

Seen and agreed to:

SWH  
Purchaser

10  
Seller



22. EFFECTIVE DATE: This Contract is a binding contract when signed by both the Seller and Purchaser and when that fact has been communicated to all parties or to their agents. Seller or Transaction Broker is given permission by the parties to complete the Effective Date blank below with the date of the last signature of the parties, and that date shall be the Effective Date for purposes under this contract, and if that blank is not completed, then the Effective Date shall be the date of the last signature of the parties.

**A COPY OF THIS CONTRACT IS TO BE RECEIVED BY ALL PARTIES AND, BY SIGNATURE, RECEIPT OF A COPY IS HEREBY ACKNOWLEDGED. IF NOT FULLY UNDERSTOOD CONSULT AN ATTORNEY.**

Seller(s) acknowledges that the laws of the State of Maine provide that every buyer of real property located in Maine must withhold a withholding tax equal to 2 1/2% of the consideration unless the Seller(s) furnishes to the Buyer(s) a certificate by the Seller(s) stating, under penalty of perjury, that Seller(s) is/are a resident of Maine or the transfer is otherwise exempt from withholding.

  
Purchaser

10/17/2021  
Date

\_\_\_\_\_  
Name/Title

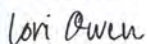
\_\_\_\_\_  
Soc. Sec. # or Tax I.D. #

~~The Seller accepts the offer and agrees to deliver the above-mentioned property at the price and upon the terms and conditions set forth above and agree to pay the Broker the commission for services herein according to the Listing Agreement or if there is no Listing Agreement the sum of: 5% obligation to pay said commission or sum shall survive the closing of this transaction. Seller agrees that Broker may apply any deposit(s) received in connection with the sale of the Property toward commissions due and payable under this Agreement. If the earnest money is forfeited by Purchaser, it shall be evenly distributed between the Licensees and the Seller, provided, however, that Broker's portion shall not exceed the full amount of the commission specified. In the event the Seller defaults on its obligations hereunder, Colliers International shall be entitled to costs of collection, including reasonable attorneys' fees.~~

Signed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

The Listing Licensee is Julie Willette of Coyne Webber Real Estate Associates, LLC  
The Selling Licensee is Michael Cobb II of Colliers International - Maine

DocuSigned by:



763FFCF03F624C8...

Seller

10/11/2021

Date

\_\_\_\_\_  
Name/Title

\_\_\_\_\_  
Soc. Sec. # or Tax I.D. #

Offer reviewed and refused on \_\_\_\_\_, \_\_\_\_\_, Seller





## APPENDIX C

### ABUTTERS LIST



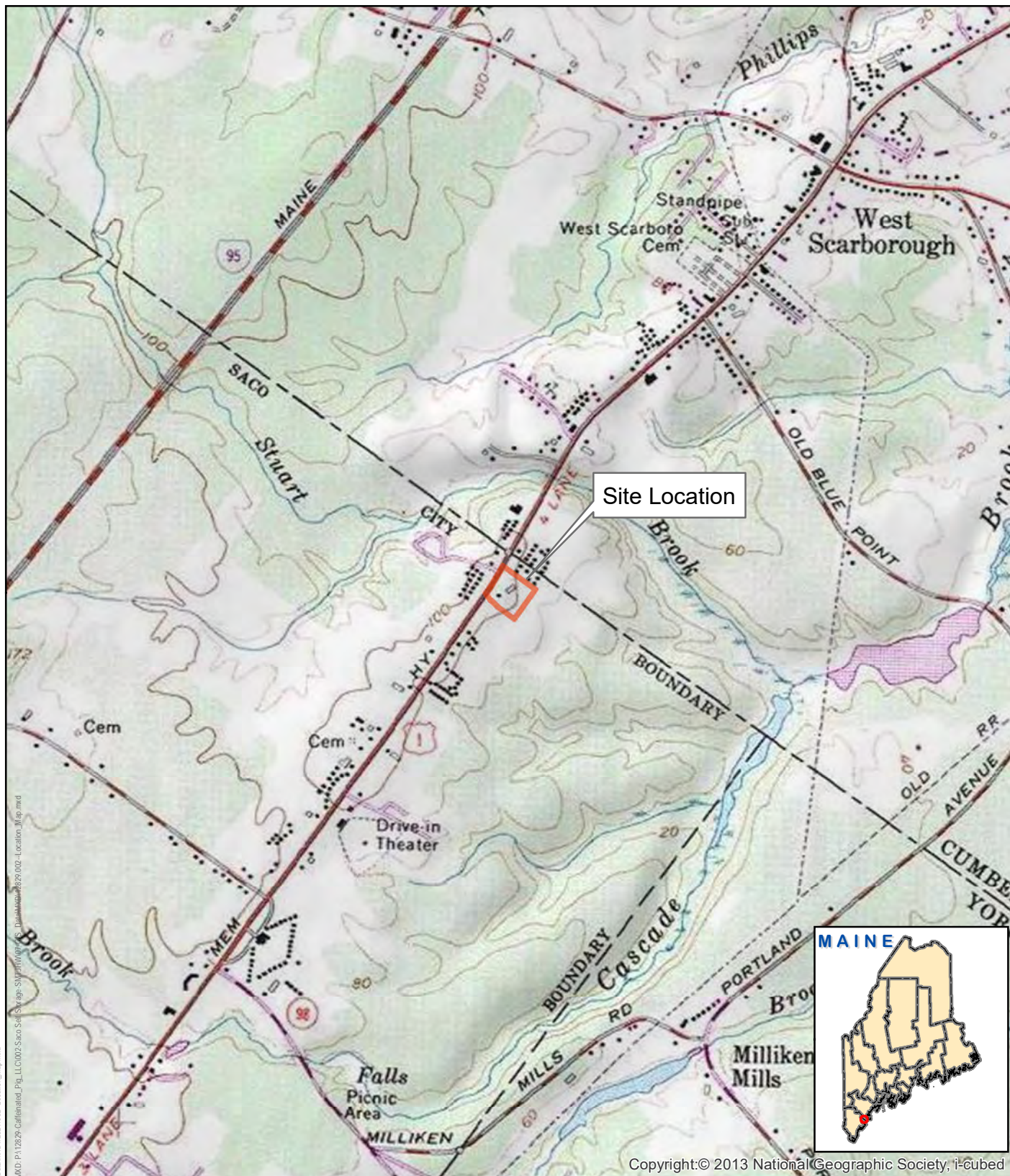
**1031 PORTLAND ROAD LLC  
SACO SELF STORAGE  
1031 PORTLAND ROAD, SACO, ME 04072**

**ABUTTER LIST AS OF 01/19/2022**

MAP	LOT	NAME / MAILING ADDRESS
64	006-001	IRA HYUNDAI INC C/O BIBEAU & COMPANY INC 340 FORE STREET PORTLAND, ME 04101
64	006-002	PARK NORTH DEVELOPMENT 1022 PORTLAND ROAD SACO, ME 04072
64	006-002-001	MAINE STATE OF DEPT OF DEFENSE C/O VETERANDS AND EMERGENCY MANAGEMENT 117 STATE HOUSE STATION AUGUSTA, ME 04333
64	006-002-002	PARK NORTH DEVELOPMENT 1022 PORTLAND ROAD SACO, ME 04072
64	006-002-003	PARK NORTH DEVELOPMENT 1022 PORTLAND ROAD SACO, ME 04072
64	007	KERR, JAMES 207 EAST GRAND AVE OLD ORCHARD BEACH, ME 04064
64	008	BERUBE, NORMAND O 1040 PORTLAND ROAD SACO, ME 04072
64	009	BERUBE, BRIAN 22B RIPPLE LANE BUXTON, ME 04093
64	009-001	COUNTRY VILLAGE INC 198 SACO AVE OLD ORCHARD BEACH, ME 04064
64	010	SOUTHERN MAINE STORAGE LLC 1030 PORTLAND ROAD SACO, ME 04072
64	010-001	WINSTEIN, KING H 198 SACO AVE OLD ORCHARD BEACH, ME 04064



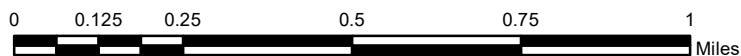
APPENDIX D  
LOCATION MAP



Copyright:© 2013 National Geographic Society, iCubed

#### MAP NOTES:

- 1: ADMINISTRATIVE BOUNDARIES  
COURTESY OF THE MAINE OFFICE  
OF GIS (MEGIS).
- 2: BASE MAP COURTESY OF ESRI.



1 Merchants Plaza, Suite 701  
Bangor, ME 04401  
207-989-4824

[WWW.HALEYWARD.COM](http://WWW.HALEYWARD.COM)

CLIENT	CAFFEINATED PIG, LLC	
PROJECT	SACO STORAGE FACILITY	
TITLE	LOCATION MAP	
DATE	1/21/2022	PROJECT No. 12829.002
DRAWN BY	bquimby	SCALE 1"=1,500'





APPENDIX E  
FEMA FLOOD MAP

# National Flood Hazard Layer FIRMette



70°24'22"W 43°33'40"N



## Legend

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

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



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

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

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **1/14/2022 at 11:28 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

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

0 250 500 1,000 1,500 2,000 Feet 1:6,000

70°23'44"W 43°33'13"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

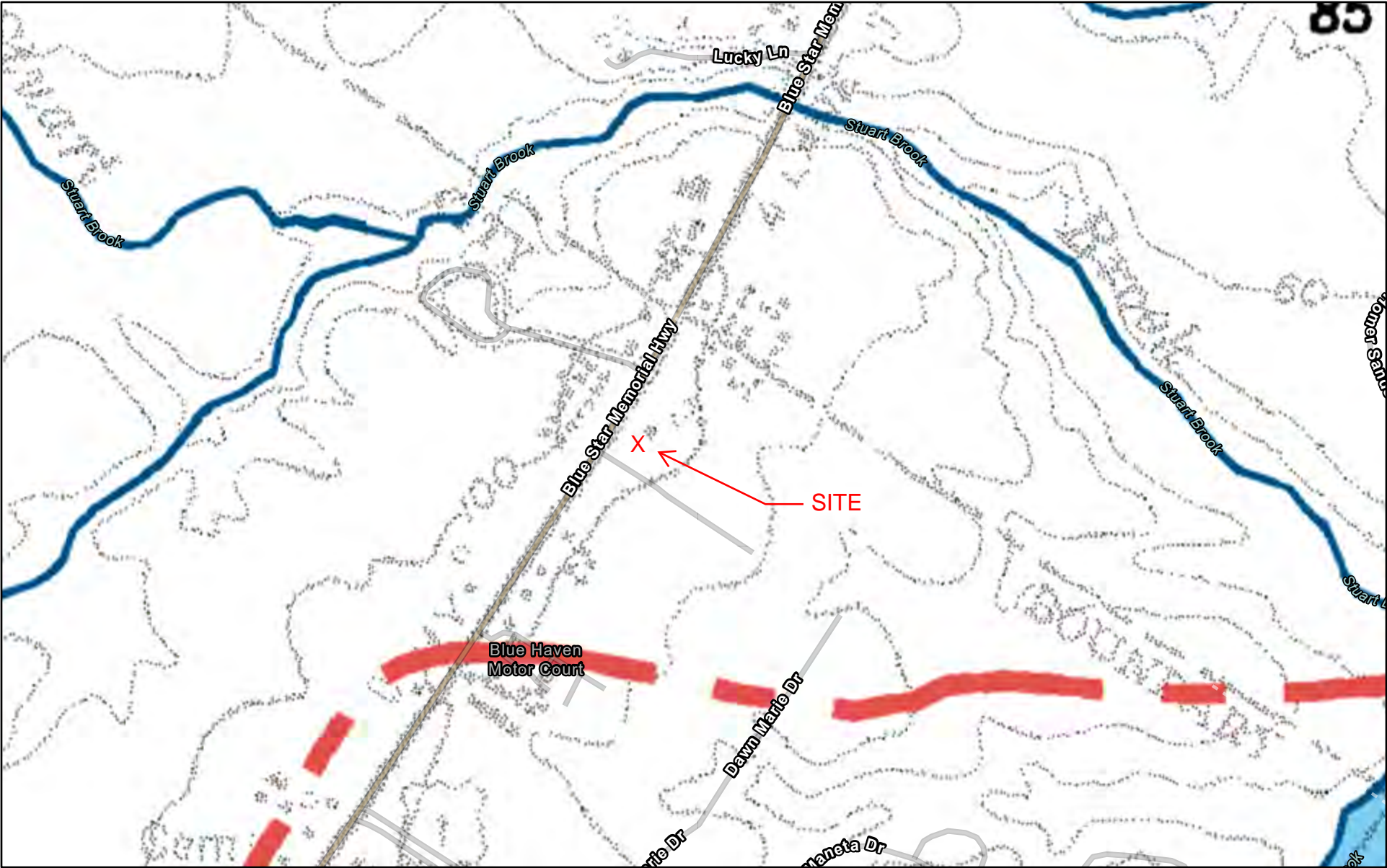


## APPENDIX F

### SAND AND GRAVEL AQUIFER MAP

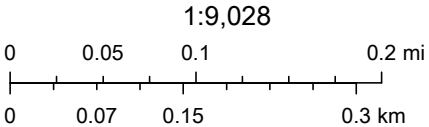


# Aquifers 24K



1/14/2022, 11:30:31 AM

Image  
Red: Band\_1  
Green: Band\_2



Maine Geological Survey, Esri Community Maps Contributors, ©





## APPENDIX G

### AGENCY CORRESPONDENCE

*MDIFW Correspondence*  
*MNAP Correspondence*  
*MHPC Correspondence*  
*Pine Tree Waste Correspondence*



**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY**  
177 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

**JANET T. MILLS**  
GOVERNOR

**AMANDA E. BEAL**  
COMMISSIONER

February 8, 2022

Drew Olehowski  
Haley Ward  
One Merchant's Plaza, Suite 701  
Bangor, ME 04401

Via email: [dolehowski@haleyward.com](mailto:dolehowski@haleyward.com)

Re: Rare and exemplary botanical features in proximity to: #12829.002, Caffeinated Pig Self Storage, Saco, Maine

Dear Mr. Olehowski:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received February 7, 2022 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Saco, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, there are no rare botanical features documented specifically within the project area. This lack of data may indicate minimal survey efforts rather than confirm the absence of rare botanical features. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

If a field survey of the project area is conducted, please refer to the enclosed supplemental information regarding rare and exemplary botanical features documented to occur in the vicinity of the project site. The list may include information on features that have been known to occur historically in the area as well as recently field-verified information. While historic records have not been documented in several years, they may persist in the area if suitable habitat exists. The enclosed list identifies features with potential to occur in the area, and it should be considered if you choose to conduct field surveys.

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

**MOLLY DOCHERTY, DIRECTOR**  
MAINE NATURAL AREAS PROGRAM  
BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-804490  
[WWW.MAINE.GOV/DACF/MNAP](http://WWW.MAINE.GOV/DACF/MNAP)

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$150.00 for two hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

*Lisa St. Hilaire*

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program  
207-287-8044 | [lisa.st.hilaire@maine.gov](mailto:lisa.st.hilaire@maine.gov)

**Rare and Exemplary Botanical Features within 4 miles of  
Project: #12829.002, Caffeinated Pig Self-Storage, Saco, Maine**

Common Name	State Status	State Rank	Global Rank	Date Last Observed	Occurrence Number	Habitat
Atlantic White Cedar						
	SC	S2	G4	2017-07-26	3	Forested wetland
Atlantic White Cedar Bog						
		S1	G3G4	2017-07-26	3	Forested wetland
Beach Plum						
	E	S1	G4	1933-06-20	7	Rocky coastal (non-forested, upland)
	E	S1	G4	1933-06-21	9	Rocky coastal (non-forested, upland)
	E	S1	G4	1933-05-19	10	Rocky coastal (non-forested, upland)
	E	S1	G4	1932-09	12	Rocky coastal (non-forested, upland)
	E	S1	G4	1903-07-31	17	Rocky coastal (non-forested, upland)
	E	S1	G4	1999-05-25	18	Rocky coastal (non-forested, upland)
Beach wormwood						
	SC	S1S2	G5T5	2010-11-09	5	
Butterfly Weed						
	PE	SX	G5	1986	1	Dry barrens (partly forested, upland)
Button Sedge						
	SC	S2	G5	2017-07-26	5	
Clothed Sedge						
	E	S1	G5	2006-06-07	7	Dry barrens (partly forested, upland)
	E	S1	G5	2006-06-16	8	Dry barrens (partly forested, upland)
Creeping Spike-moss						
	E	S2	G5	1989-08-14	2	Open wetland, not coastal nor rivershore (non-forested,
	E	S2	G5	1920-07-30	6	Open wetland, not coastal nor rivershore (non-forested,
	E	S2	G5	1924-08-21	8	Open wetland, not coastal nor rivershore (non-forested,
Dioecious Sedge						



Dioecious Sedge						
	SC	S3	G4G5	1936-07-14	7	Non-tidal rivershore (non-forested, seasonally wet),Open
Dwarf Glasswort						
	SC	S1	G5	1981-09-16	2	Tidal wetland (non-forested, wetland)
	SC	S1	G5	2006-06-21	4	Tidal wetland (non-forested, wetland)
Hollow Joe-pye Weed						
	SC	S2	G5?	1989-08-21	1	Open wetland, not coastal nor rivershore (non-forested,
	SC	S2	G5?	1989-08-14	2	Open wetland, not coastal nor rivershore (non-forested,
	SC	S2	G5?	1989-08-22	3	Open wetland, not coastal nor rivershore (non-forested,
	SC	S2	G5?	1989-08-14	4	Open wetland, not coastal nor rivershore (non-forested,
	SC	S2	G5?	2013-09-01	23	Open wetland, not coastal nor rivershore (non-forested,
Horned Pondweed						
	SC	S2	G5	1972-06-13	3	Tidal wetland (non-forested, wetland)
	SC	S2	G5	1907-08-18	10	Tidal wetland (non-forested, wetland)
Long's Bulrush						
	T	S2	G3	2017-07-26	10	Open wetland, not coastal nor rivershore (non-forested,
Long-spined Sandbur						
	PE	SH	G5	1984	1	Rocky coastal (non-forested, upland)
Marsh Bulrush						
	E	S1	G5	1923-09-21	1	Tidal wetland (non-forested, wetland)
Parker's Pipewort						
	SC	S3	G3	1924-08-20	8	Tidal wetland (non-forested, wetland)
Pitch Pine Bog						
		S2	G3G5	2006-06-21	3	Forested wetland,Coastal non-tidal wetland (non-
		S2	G3G5	2017-07-26	4	Forested wetland,Coastal non-tidal wetland (non-
Raised Level Bog Ecosystem						
		S4	GNR	2017-07-26	3	Forested wetland,Open wetland, not coastal nor
Salt-hay Saltmarsh						
		S3	G5	2010-10-14	12	Tidal wetland (non-forested, wetland)

Salt-hay Saltmarsh					
	S3	G5	2010-07-16	14	Tidal wetland (non-forested, wetland)
Saltmarsh False-foxglove					
SC	S3	G5	2008-07-02	1	Tidal wetland (non-forested, wetland)
SC	S3	G5	1982	12	Tidal wetland (non-forested, wetland)
Saltmarsh Sedge					
PE	SH	G4G5	1921-07-27	4	Tidal wetland (non-forested, wetland)
Smooth Winterberry Holly					
SC	S3	G5	1979	13	Forested wetland
SC	S3	G5	2018-09-15	24	Forested wetland
Stiff Gentian					
PE	SH	G5	1895-10-03	2	Open wetland, not coastal nor rivershore (non-forested,
Tidal Marsh Estuary Ecosystem					
	S3	GNR	2010-10-14	4	Tidal wetland (non-forested, wetland)
	S3	GNR	2010-07-16	6	Tidal wetland (non-forested, wetland)
Water-plantain Spearwort					
PE	SH	G4	1862-08	3	Open water (non-forested, wetland)

Date Exported: 2022-02-08 11:10

## Conservation Status Ranks

**State and Global Ranks:** This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
<b>S1</b> <b>G1</b>	<b>Critically Imperiled</b> – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
<b>S2</b> <b>G2</b>	<b>Imperiled</b> – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
<b>S3</b> <b>G3</b>	<b>Vulnerable</b> – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
<b>S4</b> <b>G4</b>	<b>Apparently Secure</b> – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
<b>S5</b> <b>G5</b>	<b>Secure</b> – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
<b>SX</b> <b>GX</b>	<b>Presumed Extinct</b> – Not located despite intensive searches and virtually no likelihood of rediscovery.
<b>SH</b> <b>GH</b>	<b>Possibly Extinct</b> – Known from only historical occurrences but still some hope of rediscovery.
<b>S#S#</b> <b>G#G#</b>	<b>Range Rank</b> – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
<b>SU</b> <b>GU</b>	<b>Unrankable</b> – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
<b>GNR</b> <b>SNR</b>	<b>Unranked</b> – Global or subnational conservation status not yet assessed.
<b>SNA</b> <b>GNA</b>	<b>Not Applicable</b> – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems).
Qualifier	Definition
<b>S#?</b> <b>G#?</b>	<b>Inexact Numeric Rank</b> – Denotes inexact numeric rank.
<b>Q</b>	<b>Questionable taxonomy that may reduce conservation priority</b> – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The “Q” modifier is only used at a global level.
<b>T#</b>	<b>Intraspecific Taxon (trinomial)</b> – The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

**State Status:** Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
<b>E</b>	<b>Endangered</b> – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
<b>T</b>	<b>Threatened</b> – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
<b>SC</b>	<b>Special Concern</b> – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
<b>PE</b>	<b>Potentially Extirpated</b> – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

**Element Occurrence (EO) Ranks:** Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
<b>A</b>	<b>Excellent</b> – Excellent estimated viability/ecological integrity.
<b>B</b>	<b>Good</b> – Good estimated viability/ecological integrity.
<b>C</b>	<b>Fair</b> – Fair estimated viability/ecological integrity.
<b>D</b>	<b>Poor</b> – Poor estimated viability/ecological integrity.
<b>E</b>	<b>Extant</b> – Verified extant, but viability/ecological integrity not assessed.
<b>H</b>	<b>Historical</b> – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
<b>X</b>	<b>Extirpated</b> – Documented loss of population/destruction of habitat.
<b>U</b>	<b>Unrankable</b> – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
<b>NR</b>	<b>Not Ranked</b> – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information  
<http://www.maine.gov/dacf/mnap>







# HALEY WARD

ENGINEERING | ENVIRONMENTAL | SURVEYING

FORMERLY:  CES INC

February 7, 2022

Maine Department of Inland Fisheries and Wildlife  
Attn: Mr. John Perry  
284 State Street  
Augusta, ME 04333-0041  
IFWEnvironmentalreview@maine.gov

Re: Caffeinated Pig, LLC | Self-Storage Facility | Saco, ME

Dear Mr. Perry:

Caffeinated Pig, LLC is currently preparing a Site Plan Review Application for the construction of an approximately 3-acre self-storage facility in Saco, Maine. The project site is to be located on a 3.75-acre property that is mostly wooded and undeveloped. The parcel is located east of Portland Road. The proposed project will include the storage units, an office, and parking/maneuvering areas.

Per permitting requirements, we are submitting this request to your office to determine if there are any potential impacts to fisheries or wildlife habitats located at the site or in the immediate surroundings. Any response can be forwarded to our office located at 1 Merchants Plaza, Suite 701, Bangor, ME 04401 or by email at [dolehowski@haleyward.com](mailto:dolehowski@haleyward.com).

Thank you for your assistance in this matter.

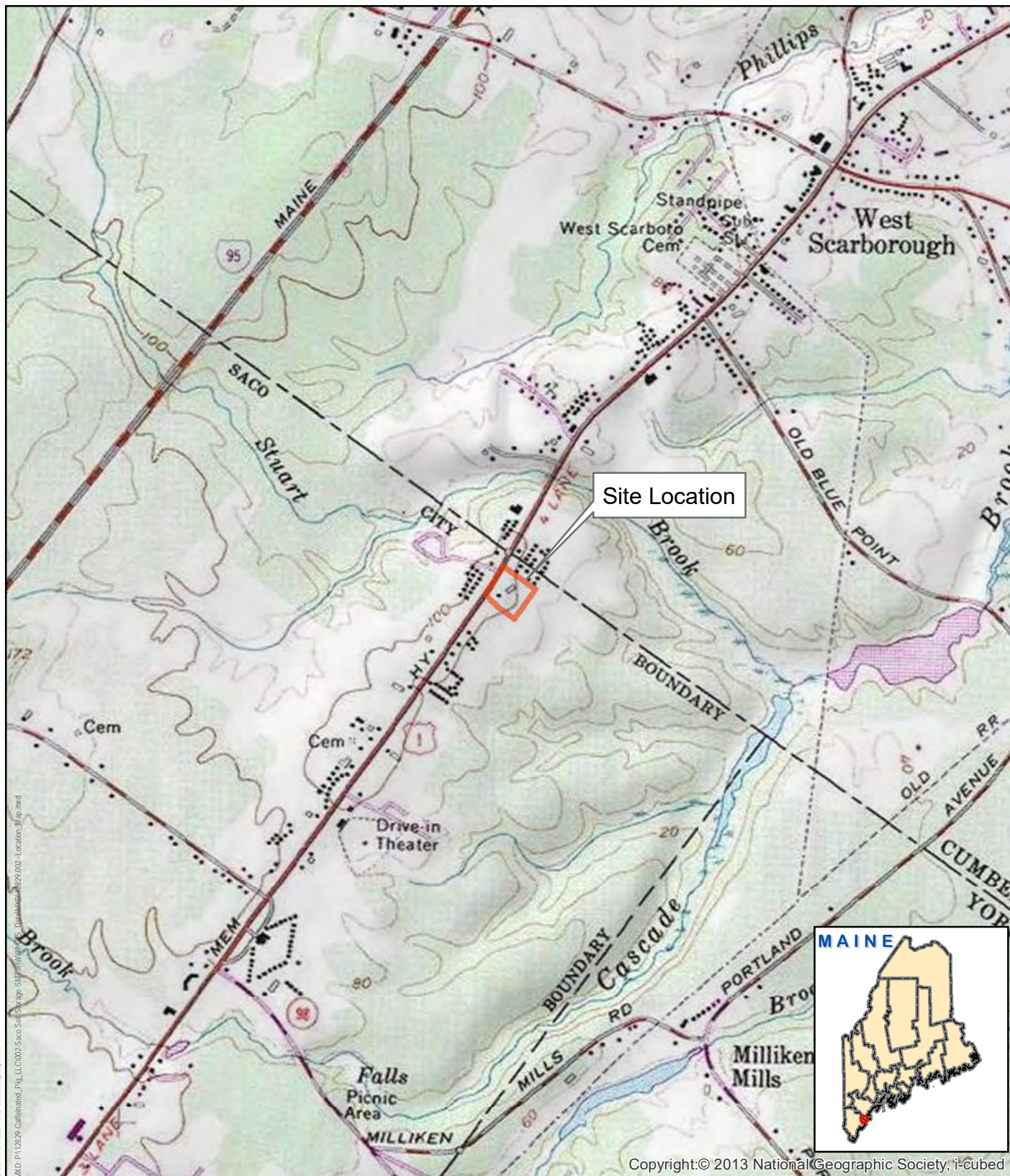
Sincerely,  
Haley Ward, Inc.



Drew Olehowski, P.E.  
Civil Engineer

DJO/cmg  
Enc.



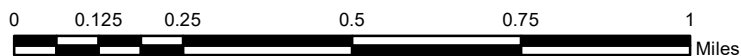


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#### MAP NOTES:

1: ADMINISTRATIVE BOUNDARIES  
COURTESY OF THE MAINE OFFICE  
OF GIS (MEGIS).

2: BASE MAP COURTESY OF ESRI.



1 Merchants Plaza, Suite 701  
Bangor, ME 04401  
207-989-4824

[WWW.HALEYWARD.COM](http://WWW.HALEYWARD.COM)

CLIENT CAFFEINATED PIG, LLC

PROJECT SACO STORAGE FACILITY

TITLE LOCATION MAP

DATE 1/21/2022 PROJECT No. 12829.002

DRAWN BY bqumby SCALE 1"=1,500'



# HALEY WARD

ENGINEERING | ENVIRONMENTAL | SURVEYING

FORMERLY:  
**CES** INC

February 7, 2022

Maine Historic Preservation Commission  
Attn: Ms. Megan Rideout  
55 Capitol Street  
65 State House Station  
Augusta, ME 04333-0065  
[Megan.M.Rideout@maine.gov](mailto:Megan.M.Rideout@maine.gov)

Re: Caffeinated Pig, LLC | Self-Storage Facility | Saco, ME

Dear Ms. Rideout:

Caffeinated Pig, LLC is currently preparing a Site Plan Review Application for the construction of an approximately 3-acre self-storage facility in Saco, Maine. The project site is to be located on a 3.75-acre property that is mostly wooded and undeveloped. The parcel is located east of Portland Road. The proposed project will include the storage units, an office, and parking/maneuvering areas.

Per permitting requirements, we are submitting this request to your office to determine if any historical sites of concern are located within the project area. A photolog has been provided showing existing structures within the vicinity of the project area. Any response can be forwarded to our office located at 1 Merchants Plaza, Suite 701, Bangor, ME 04401 or by email at [dolehowski@haleyward.com](mailto:dolehowski@haleyward.com).

Thank you for your assistance in this matter.

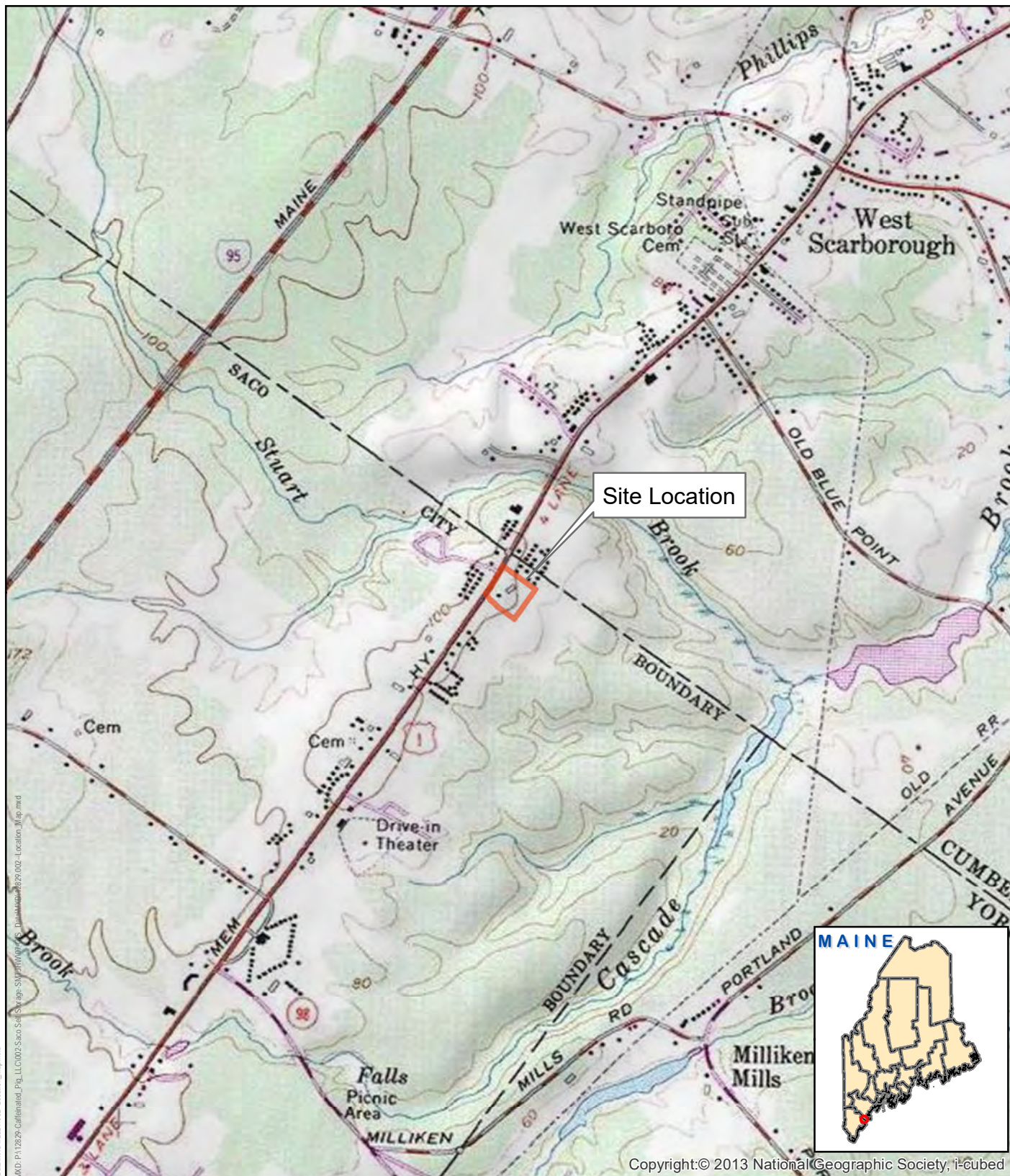
Sincerely,  
Haley Ward, Inc.

Drew Olehowski, P.E.  
Civil Engineer

DJO/cmg  
Enc.



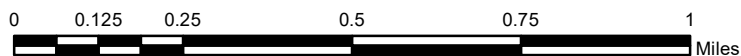




Copyright:© 2013 National Geographic Society, iCubed

#### MAP NOTES:

- 1: ADMINISTRATIVE BOUNDARIES  
COURTESY OF THE MAINE OFFICE  
OF GIS (MEGIS).
- 2: BASE MAP COURTESY OF ESRI.

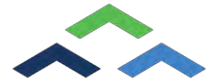


1 Merchants Plaza, Suite 701  
Bangor, ME 04401  
207-989-4824

[WWW.HALEYWARD.COM](http://WWW.HALEYWARD.COM)

CLIENT	CAFFEINATED PIG, LLC	
PROJECT	SACO STORAGE FACILITY	
TITLE	LOCATION MAP	
DATE	1/21/2022	PROJECT No. 12829.002
DRAWN BY	bquimby	SCALE 1"=1,500'

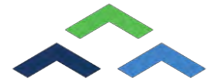




CAFFEINATED PIG, LLC  
SELF-STORAGE  
SACO, ME

Photo No. 1	
Photo Date: June 2019	
Site Location: Saco, ME	
Description: Existing Structure	
Photo By: Google Maps	

Photo No. 2	
Photo Date: June 2019	
Site Location: Saco, ME	
Description: Existing Structure	
Photo By: Google Maps	

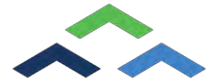


CAFFEINATED PIG, LLC  
SELF-STORAGE  
SACO, ME

Photo No. 3	
Photo Date: November 2015	
Site Location: Saco, ME	
Description: Existing Structure	
Photo By: Google Maps	

Photo No. 4	
Photo Date:	
Site Location: Saco, ME	
Description: Existing Structure	
Photo By: Google Maps	





CAFFEINATED PIG, LLC  
SELF-STORAGE  
SACO, ME

Photo No. 5	
Photo Date: June 2019	
Site Location: Saco, ME	
Description: Existing Structure	
Photo By: Google Maps	

Photo No. 6	
Photo Date: June 2019	
Site Location: Saco, ME	
Description: Existing Structure	
Photo By: Google Maps	



February 9, 2022

Haley Ward  
120 Main St  
Saco ME 04072  
Attn: Drew Olehowski

Re: Capabilities Statement –1031 Portland Road LLC, Saco, ME

Dear Mr. Olehowski,

This letter is to confirm that Casella Waste Services located in Scarborough, ME has the capabilities to pick up, truck, and dispose of all volumes of Construction and Demolition Debris generated by the proposed construction at the 1031 Portland Road LLC project, located in Saco, ME. These materials can be disposed of at the Juniper Ridge Secured Landfill Facility located in West Old Town, ME.

Casella Waste Services can transport all anticipated volumes of non-hazardous MSW (Municipal Solid Waste) to the Penobscot Energy Recovery Corporation facility located in Orrington, ME. (estimated 10 Pounds per Day) We are also prepared to handle all amounts of Wood products that may be generated from this development at Re-Energy located in Lewiston, ME, as well Universal Waste at North Coast Services in Hamden, ME, and Land Clearing Debris at Gary Pomeroy Logging in Hermon, ME.

This letter is not a quote for services. Rather it is a statement of capabilities. The sole purpose of this letter is to communicate the willingness and capabilities that Casella Waste Services has towards providing these services as requested.

Please feel free to contact me with any future requests. I can be reached at (207) 310-0509.

Sincerely,

*Adam Graham*

Adam Graham  
Accounts Manager  
Casella Waste Services





## APPENDIX H

### USDA MEDIUM INTENSITY SOILS MAP



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 **York County, Maine**



January 14, 2022

# Preface

---

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.

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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

## Custom Soil Resource Report

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

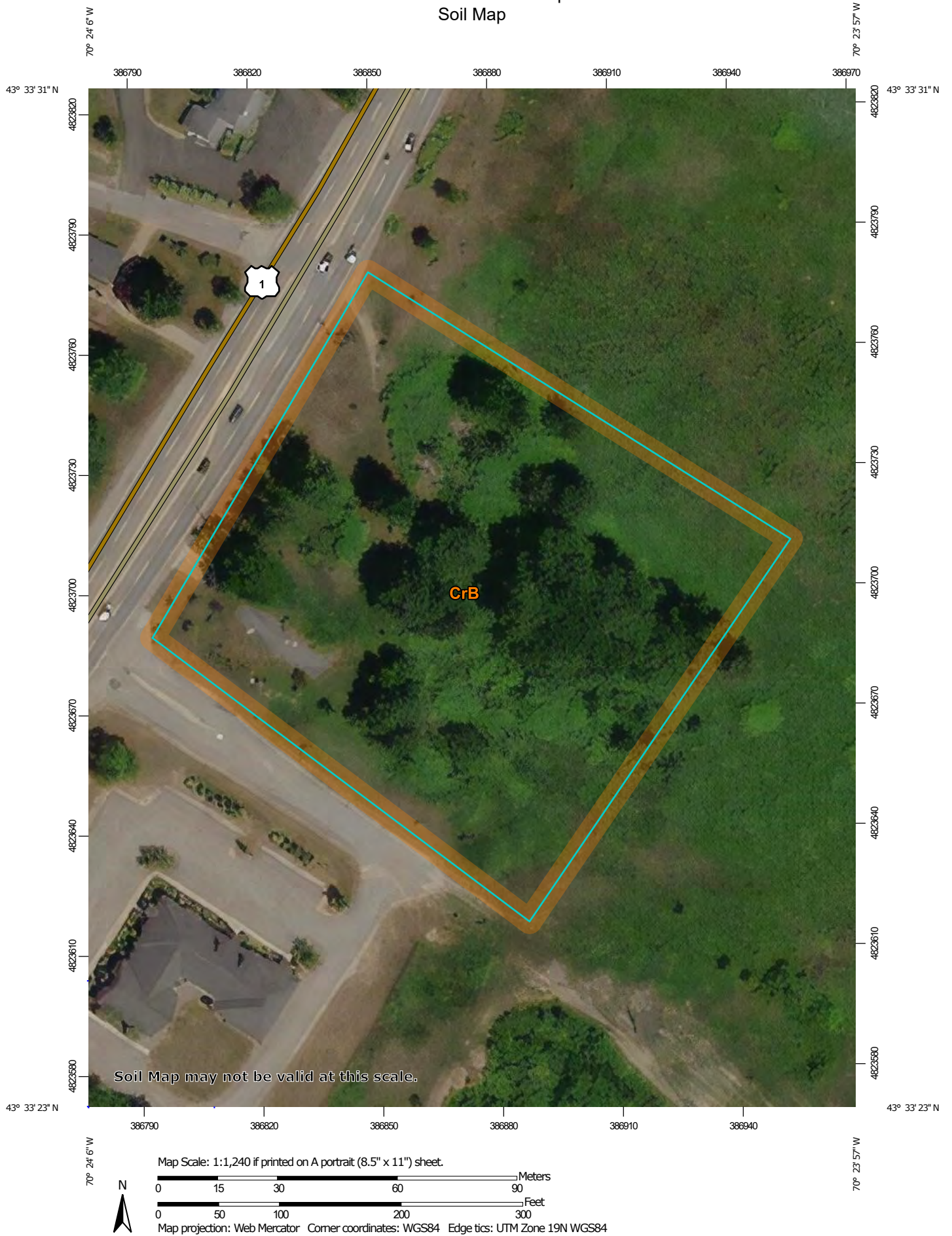


# Soil Map

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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.

# Custom Soil Resource Report Soil Map



# Custom Soil Resource Report

## 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 1:20,000.

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: York County, Maine  
Survey Area Data: Version 20, 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: Dec 31, 2009—Jul 2, 2019

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
CrB	Croghan loamy fine sand, 0 to 8 percent slopes, wooded	3.3	100.0%
<b>Totals for Area of Interest</b>		<b>3.3</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.



## Custom Soil Resource Report

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.

## York County, Maine

### CrB—Croghan loamy fine sand, 0 to 8 percent slopes, wooded

#### Map Unit Setting

*National map unit symbol:* 2wqp0

*Elevation:* 150 to 2,300 feet

*Mean annual precipitation:* 40 to 55 inches

*Mean annual air temperature:* 37 to 46 degrees F

*Frost-free period:* 90 to 135 days

*Farmland classification:* Farmland of statewide importance

#### Map Unit Composition

*Croghan and similar soils:* 85 percent

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

#### Description of Croghan

##### Setting

*Landform:* Marine terraces, outwash deltas

*Landform position (two-dimensional):* Backslope

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

*Down-slope shape:* Linear

*Across-slope shape:* Convex

*Parent material:* Sandy glaciofluvial deposits

##### Typical profile

*Oa - 0 to 4 inches:* highly decomposed plant material

*E - 4 to 6 inches:* loamy fine sand

*Bs - 6 to 17 inches:* loamy fine sand

*BC - 17 to 30 inches:* fine sand

*C - 30 to 65 inches:* 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 high to high  
(1.42 to 14.17 in/hr)

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

*Frequency of flooding:* None

*Frequency of ponding:* None

*Maximum salinity:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water supply, 0 to 60 inches:* Low (about 4.1 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 2w

*Hydrologic Soil Group:* A

*Hydric soil rating:* No

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

## Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2\\_054242](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242)

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. [http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2\\_053624](http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624)

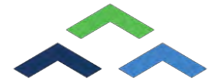
United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. [http://www.nrcs.usda.gov/Internet/FSE\\_DOCUMENTS/nrcs142p2\\_052290.pdf](http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf)





APPENDIX I

LANDSCAPING MANAGEMENT PLAN

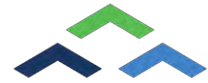


## LANDSCAPING MAINTENANCE PLAN

Post construction, 1031 Portland Road, LLC and its contractor(s) will be responsible for maintenance of the site and the landscaping features that provide aesthetic appeal and a visual buffer for the site.

A Landscaping Maintenance Plan is included in this section. Any questions regarding the design and maintenance of the Landscaping Maintenance Plan should be directed to:

- ◆ Ben Kaiman, E.I.  
Haley Ward, Inc.  
One Merchants Plaza, Suite 701  
Bangor, Maine 04401  
(207) 989-4824  
[bkaiman@haleyward.com](mailto:bkaiman@haleyward.com)

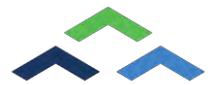


## LANDSCAPING MAINTENANCE PLAN

The requirements of the City of Saco Zoning Ordinance, Section VI7 have been adhered to for the development of this Maintenance Plan. General maintenance requirements are listed below.

### Inspection and Corrective Action

1. Lawn Areas: Inspections and maintenance of vegetated areas will be performed early in the growing season or after significant rainfall to identify any erosion problems. Areas where erosion is evident will be covered with an appropriate lining, or erosive flows will be diverted to an area able to handle the flows. Any bare areas or areas with sparse growth will be replanted. Grass will be mowed on a biweekly basis or as necessary to maintain aesthetic appeal.
2. Trees: Trees should be inspected on a regular basis to ensure they are providing adequate visual buffering and softening of the site. These inspections and maintenance activities shall include:
  - a. Pruning of branches to avoid encroachment onto abutting properties, only to the extent that the desired screening ability is maintained.
  - b. Removal of dead limbs or branches that may act as a safety hazard
  - c. Providing mulch and any other additives necessary for normal growth
  - d. Watering in abnormal drought conditions
  - e. Replacement of dead trees



APPENDIX L

LIGHTING TECHNICAL DATA

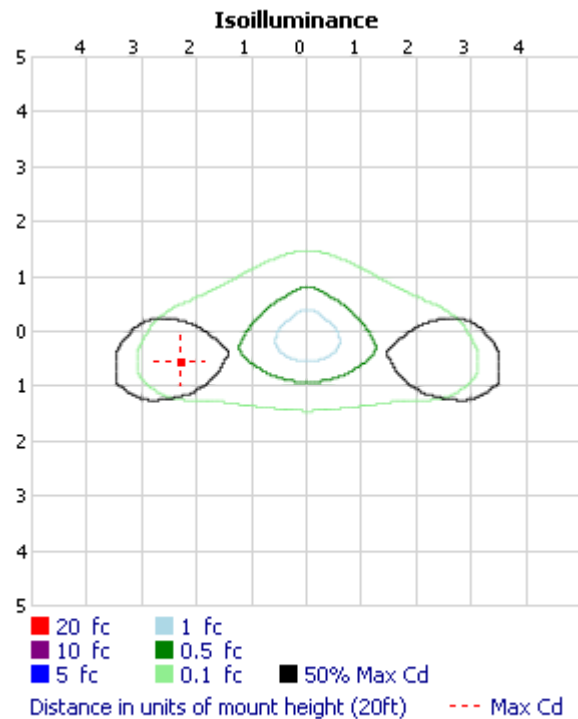
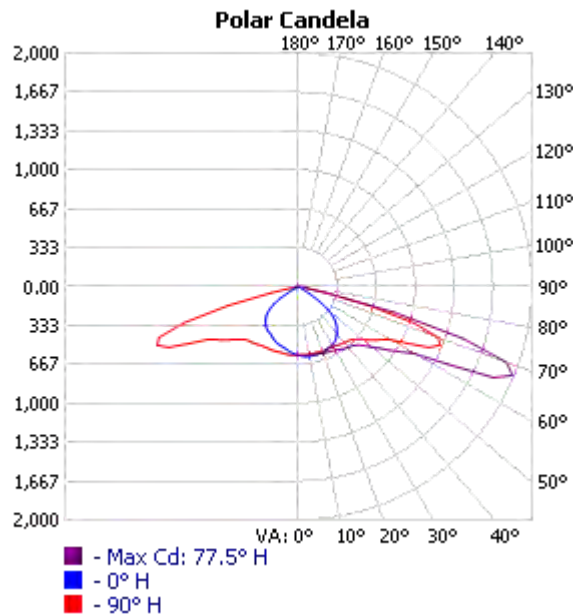


**OUTDOOR PHOTOMETRIC REPORT**

CATALOG: WSQ LED P1 SR2 40K MVOLT

Test #: ISF 37792P28  
 Test Lab: SCALED PHOTOMETRY  
 Test Date: 3/22/2018  
 Catalog: WSQ LED P1 SR2 40K MVOLT  
 Description: WSQ LED WITH P1-PERFORMANCE PACKAGE, 4000K, AND SR2 OPTIC TYPE  
 Series: WSQ-LED  
 Lamp: LED  
 Lamp Output: Total luminaire Lumens: 2250.8, **absolute photometry**  
 Ballast / Driver: LED DRIVER  
 Input Wattage: 19.56  
 Luminous Opening: Rectangle (L: 4.56", W: 5.04")  
 Max Cd: 1,985.2 at Horizontal: 77.5°, Vertical: 67.5°  
 Roadway Class: MEDIUM, TYPE II





\*Test based on absolute photometry where lamp lumens=lumens total.

\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

Visual Photometric Tool 1.2.46 copyright 2022, Acuity Brands Lighting.

This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.

 ISF 37792P28  
 VISUAL PHOTOMETRIC TOOL

PAGE 1 OF 4

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: WSQ LED P1 SR2 40K MVOLT



**Zonal Lumen Summary**

Zone	Lumens	% Luminaire
0-30	476.5	21.2%
0-40	816.5	36.3%
0-60	1,629.8	72.4%
60-90	621.1	27.6%
70-100	212.4	9.4%
90-120	0.000	0%
0-90	2,250.8	100%
90-180	0.000	0%
0-180	2,250.8	100%

**Lumens Per Zone**

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	55.9	2.5%	90-100	0.000	0%
10-20	162.4	7.2%	100-110	0.000	0%
20-30	258.2	11.5%	110-120	0.000	0%
30-40	340.0	15.1%	120-130	0.000	0%
40-50	397.8	17.7%	130-140	0.000	0%
50-60	415.4	18.5%	140-150	0.000	0%
60-70	408.7	18.2%	150-160	0.000	0%
70-80	198.9	8.8%	160-170	0.000	0%
80-90	13.5	0.6%	170-180	0.000	0%

**Roadway Summary**

<b>Distribution:</b>	TYPE II, MEDIUM	
Max Cd, 90 Deg Vert:	0.000	
Max Cd, 80 to <90 Deg:	79.0	
	Lumens	% Lamp
Downward Street Side:	1,346.2	59.8%
Downward House Side:	904.7	40.2%
Downward Total:	2,250.8	100%
Upward Street Side:	0.000	0%
Upward House Side:	0.000	0%
Upward Total:	0.000	0%
Total Lumens:	2,250.8	100%

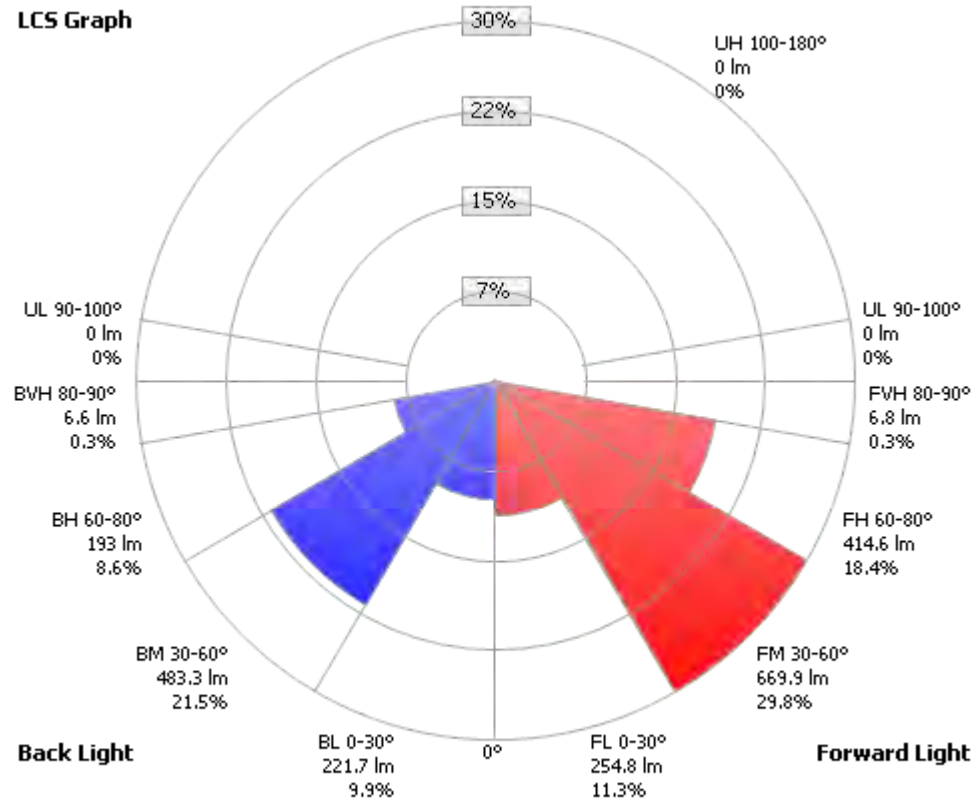
**LCS Table**

<b>BUG Rating</b>	<b>B1 - U0 - G1</b>	
<b>Forward Light</b>	Lumens	Lumens %
Low(0-30):	254.8	11.3%
Medium(30-60):	669.9	29.8%
High(60-80):	414.6	18.4%
Very High(80-90):	6.8	0.3%
<b>Back Light</b>		
Low(0-30):	221.7	9.9%
Medium(30-60):	483.3	21.5%
High(60-80):	193.0	8.6%
Very High(80-90):	6.6	0.3%
<b>Uplight</b>		
Low(90-100):	0.000	0%
High(100-180):	0.000	0%
<b>Trapped Light:</b>	0.000	0%

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: WSQ LED P1 SR2 40K MVOLT



**LCS Graph**



**Back Light**

**Forward Light**

Scale = Max LCS %

Trapped Light: 0 lm, 0%

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: WSQ LED P1 SR2 40K MVOLT



**Candela Table - Type C**

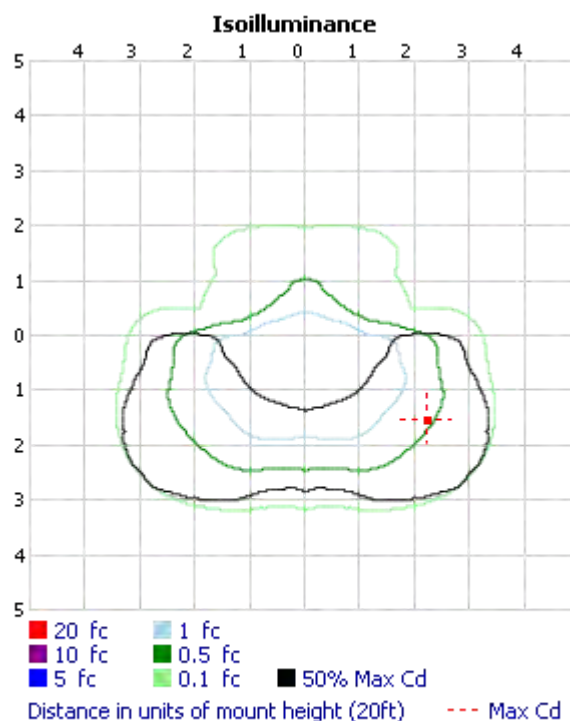
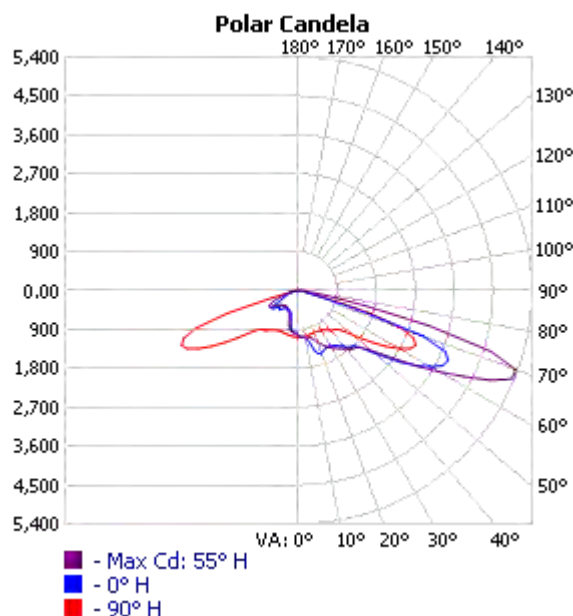
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15	602	601	606	607	612	610	603	598	588	584	566	550	538	533	531	531	530	534	533
20	597	596	603	611	619	619	616	610	594	588	555	532	513	506	506	511	515	520	521
25	586	585	596	609	624	630	628	621	600	589	548	518	495	484	477	485	491	497	499
30	575	575	586	604	625	639	642	634	606	593	542	510	484	463	448	452	465	472	474
35	555	557	571	597	621	647	662	656	623	606	539	498	468	439	423	421	445	457	460
40	511	519	541	578	614	651	685	681	646	622	536	484	445	411	396	392	417	434	436
45	456	473	506	550	602	658	699	710	675	643	535	471	420	381	362	357	378	397	400
50	372	391	441	511	584	675	762	803	751	700	549	460	390	342	319	312	327	345	348
55	215	238	307	415	539	679	857	954	880	800	578	440	343	291	261	246	249	258	260
60	42	58	104	226	420	648	938	1147	1049	909	566	399	286	211	161	133	116	116	112
65	22	22	25	43	197	536	1121	1798	1519	1229	584	334	185	100	53	38	34	33	33
70	18	17	18	23	38	224	1074	1811	1605	1275	510	193	61	27	20	19	19	19	20
75	15	15	17	19	24	41	528	860	753	628	291	43	26	19	14	13	13	14	18
80	9	8	11	17	19	17	79	79	78	74	71	24	14	12	10	9	8	8	13
85	4	3	4	8	15	11	10	17	14	19	34	11	7	5	4	4	3	3	8
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165	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**OUTDOOR PHOTOMETRIC REPORT**

CATALOG: CSXW LED 30C 700 40K T4M

Test #: 107188P51  
 Test Lab: SCALED PHOTOMETRY  
 Test Notes: SCALED FROM ABSOLUTE TEST: 107188P0  
 Test Date: 7/3/2013  
 Catalog: CSXW LED 30C 700 40K T4M  
 Description: CONTOUR SERIES LED WALL-MOUNT WITH 30 4000K LEDS  
 OPERATED AT 700mA AND PRECISION MOLDED ACRYLIC TYPE IV  
 LENS  
 Series: CSXW-LED  
 Lamp Catalog: NICHIA 219B  
 Lamp: LED  
 Lamp Output: Total luminaire Lumens: 7924.2, **absolute photometry \***  
 Ballast / Driver: ADVANCE MVOLT 1000A DRIVER  
 Input Wattage: 69  
 Luminous Opening: Rectangle (L: 5.52", W: 11.4")  
 Max Cd: 5,345.4 at Horizontal: 55°, Vertical: 70°  
 Roadway Class: MEDIUM, TYPE IV



\*Test based on absolute photometry where lamp lumens=lumens total.

\*Cutoff Classification and efficiency cannot be properly calculated for absolute photometry.

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This Photometric report has been generated using methods recommended by the IESNA. Calculations are based on Photometric data provided by the manufacturer, and the accuracy of this Photometric report is dependent on the accuracy of the data provided. End-user environment and application (including, but not limited to, voltage variation and dirt accumulation) can cause actual Photometric performance to differ from the performance calculated using the data provided by the manufacturer. This report is provided without warranty as to accuracy, completeness, reliability or otherwise. In no event will Acuity Brands Lighting be responsible for any loss resulting from any use of this report.



107188P51  
VISUAL PHOTOMETRIC TOOL

PAGE 1 OF 4

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: CSXW LED 30C 700 40K T4M

**Zonal Lumen Summary**

Zone	Lumens	% Luminaire
0-30	872.5	11%
0-40	1,537.1	19.4%
0-60	4,064.6	51.3%
60-90	3,859.7	48.7%
70-100	1,400.2	17.7%
90-120	0.000	0%
0-90	7,924.2	100%
90-180	0.000	0%
0-180	7,924.2	100%

**Lumens Per Zone**

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	99.7	1.3%	90-100	0.000	0%
10-20	299.6	3.8%	100-110	0.000	0%
20-30	473.2	6.0%	110-120	0.000	0%
30-40	664.6	8.4%	120-130	0.000	0%
40-50	935.0	11.8%	130-140	0.000	0%
50-60	1,592.5	20.1%	140-150	0.000	0%
60-70	2,459.5	31.0%	150-160	0.000	0%
70-80	1,250.6	15.8%	160-170	0.000	0%
80-90	149.6	1.9%	170-180	0.000	0%

**Roadway Summary**

<b>Distribution:</b>	TYPE IV, MEDIUM	
Max Cd, 90 Deg Vert:	0.000	
Max Cd, 80 to <90 Deg:	717.1	
	Lumens	% Lamp
Downward Street Side:	6,227.3	78.6%
Downward House Side:	1,696.7	21.4%
Downward Total:	7,924.0	100%
Upward Street Side:	0.000	0%
Upward House Side:	0.000	0%
Upward Total:	0.000	0%
Total Lumens:	7,924.0	100%

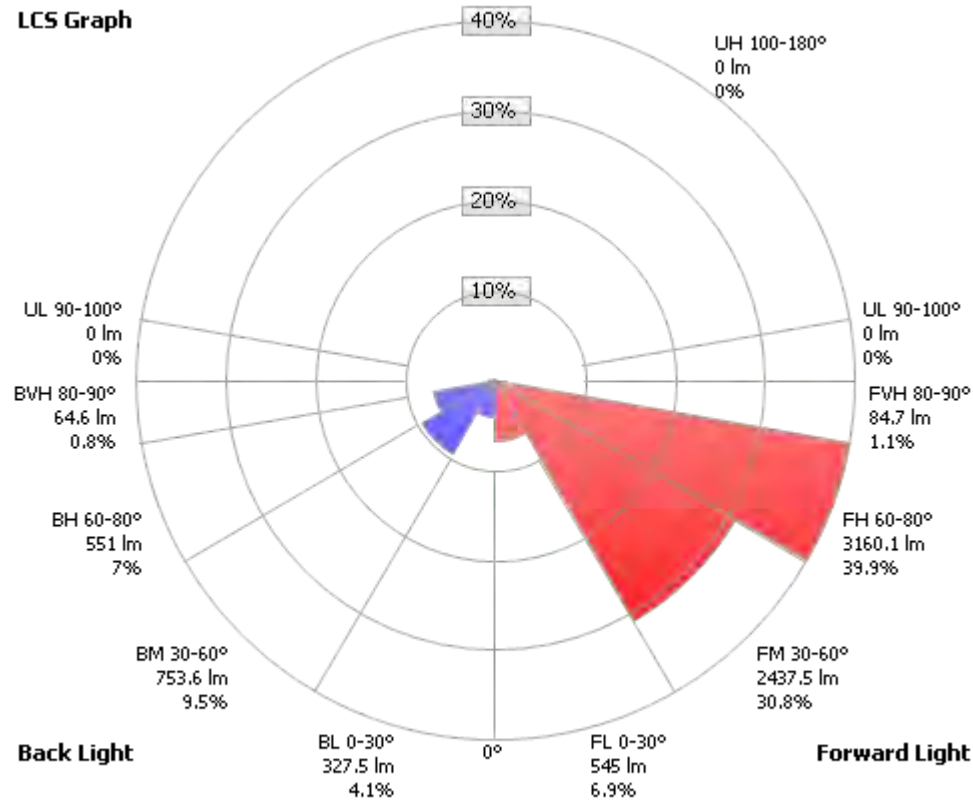
**LCS Table**

BUG Rating	B2 - U0 - G2	
Forward Light	Lumens	Lumens %
Low(0-30):	545.0	6.9%
Medium(30-60):	2,437.5	30.8%
High(60-80):	3,160.1	39.9%
Very High(80-90):	84.7	1.1%
Back Light		
Low(0-30):	327.5	4.1%
Medium(30-60):	753.6	9.5%
High(60-80):	551.0	7%
Very High(80-90):	64.6	0.8%
Uplight		
Low(90-100):	0.000	0%
High(100-180):	0.000	0%
Trapped Light:	0.2	0%

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: CSXW LED 30C 700 40K T4M



**LCS Graph**



**Back Light**

**Forward Light**

Scale = Max LCS %

Trapped Light: 0.2 lm, 0%

**OUTDOOR PHOTOMETRIC REPORT**  
 CATALOG: CSXW LED 30C 700 40K T4M

**Candela Table - Type C**

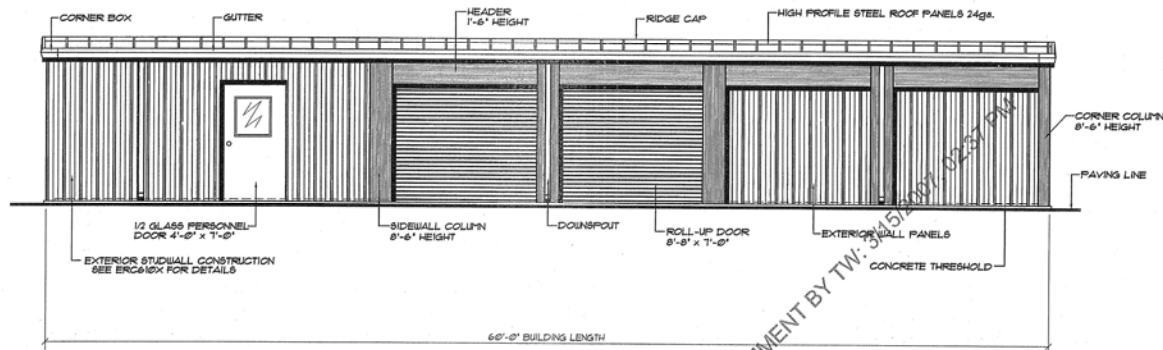
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35	1552	1566	1561	1568	1605	1632	1467	1217	1147	1112	888	659	529	487	472	472	486	498	500
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45	1799	1853	1855	1859	1867	1864	1761	1437	1322	1260	771	538	458	456	476	504	563	604	628
50	2206	2306	2277	2214	2156	2129	2081	1778	1659	1546	718	516	443	466	513	557	593	587	577
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60	3526	3761	4004	3921	3726	3743	3767	3318	3081	2681	493	471	433	593	754	783	721	664	604
65	3817	4179	4858	5025	4801	4895	4788	4000	3557	2987	422	431	447	661	706	588	465	402	382
70	3044	3394	4647	5217	5196	5345	5071	3856	3092	2519	389	393	471	582	484	379	342	321	304
75	379	464	1095	2273	3120	3116	2569	1468	767	635	376	417	465	443	324	275	237	217	200
80	148	164	216	302	521	683	667	476	264	204	314	400	379	270	205	169	141	125	113
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110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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175	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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## APPENDIX M

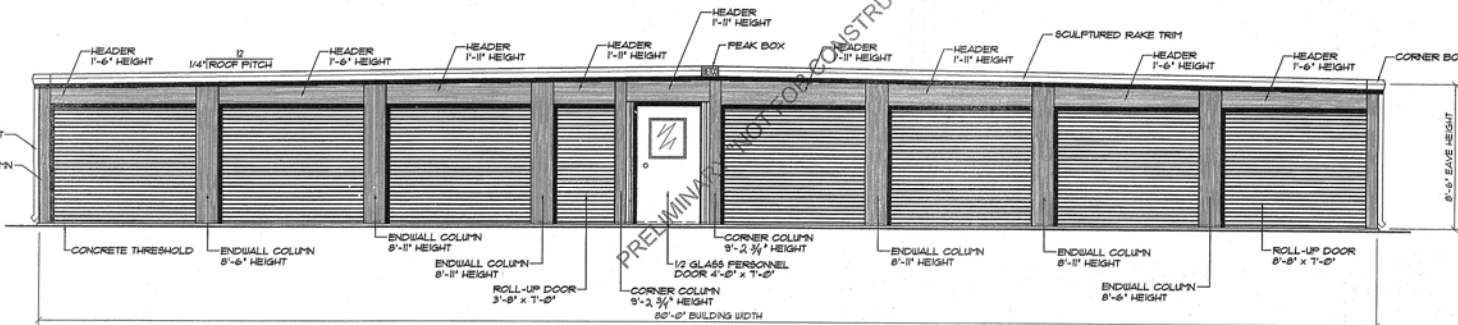
### BUILDING ELEVATIONS



**A SIDEWALL ELEVATION... BUILDING "1"**  
SCALE: 1/4" = 1'-0"

NOTE:  
DOWNSPOUTS LOCATIONS SHOWN FOR  
ELEVATION PURPOSE ONLY. REFER  
TO FLOOR PLAN SHEETS FOR LOCATIONS

FOR APPROVAL ONLY  
NOT FOR FIELD USE  
DATE: 3-22-07  
BY: M. J. [Signature]

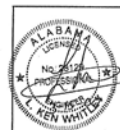


**B ENDWALL ELEVATION... BUILDING "1"**  
SCALE: 1/4" = 1'-0"

NOTE: ... SEE OWNER FOR  
BUILDING ORIENTATION ON SITE

**GENERAL NOTES:**

1. CONCRETE FOUNDATIONS AND FLOOR SLAB ARE TO BE SUPPLIED AND INSTALLED BY OTHERS. WEDGE ANCHORS FOR INTERIOR AND EXTERIOR FOOTINGS SUPPLIED AND INSTALLED BY BETCO.
2. EXTERIOR OPENINGS, NOT DESIGNATED AS DOOR LOCATIONS, TO BE COMPLETED USING EXTERIOR WALL PANELS FURNISHED BY BETCO.
3. USE DOW 791 SILICONE CAULK AND 1/2" WIDE BUTYL RUBBER TAPE SEALANT FOR INSTALLATION. USE DOW 799 SILICONE CAULK AT DOWNSPOUT TO GUTTER JOINT.
4. INTERIOR PARTITIONS PERPENDICULAR TO ROOF BEAM(S) MUST BE COMPLETED BEFORE ROOF PANELS ARE INSTALLED. USE PARTITION FRAMING TO PLUMB AND SECURE COLUMNS AND HEADER SECTIONS. CHECK BUILDING WIDTH AT TOP OF COLUMNS PER TO ROOF INSTALLATION.
5. POWDER DRIVEN FASTENERS BY BETCO.
6. DOORS SUPPLIED BY BETCO.
7. THOROUGHLY SWEEP ROOF PANELS FOLLOWING INSTALLATION TO REMOVE METAL DRILLINGS.
8. BUILDING ERECTION IS BY BETCO.
9. THIS DESIGN IS BASED ON USING ONLY METAL BUILDING COMPONENTS WHICH ARE PROPRIETARY TO BETCO. FURTHER THE PROFESSIONAL ENGINEER'S SEAL IS INVALID UNLESS ONLY BETCO METAL BUILDING COMPONENTS ARE UTILIZED.
10. METAL STUDS (IF APPLICABLE) MAY REQUIRE FIELD CUTTING DEPENDING UPON THE EAVE HEIGHT OF THE STRUCTURE.

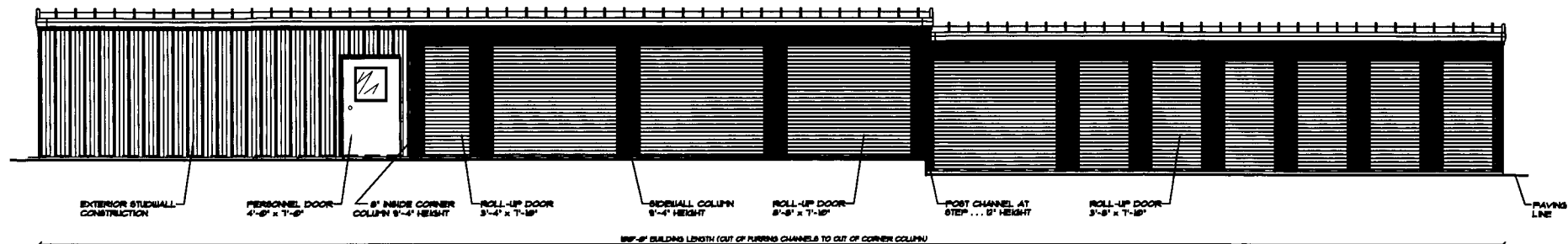


DATE:	2/8/07
DRAWN BY:	A. WHITLEY
SCALE:	AS NOTED
APPROVED BY:	
REVISIONS	DATE BY

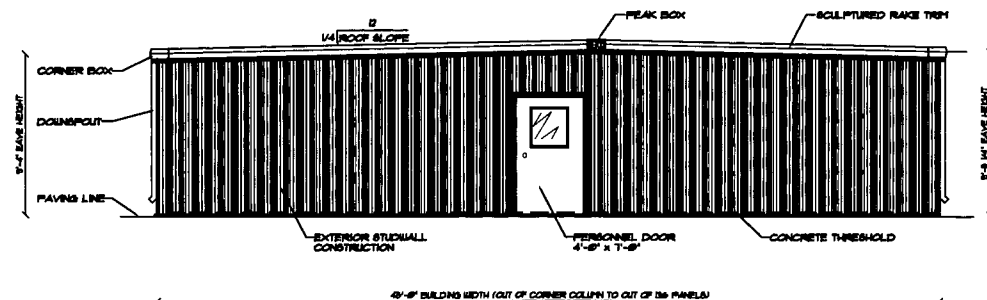
**BETCO, INC.**  
P.O. BOX 1650  
STATESVILLE, NC 28687  
(800)654-7813

PROJECT NAME:	MINI STORAGE
PROJECT ADDRESS:	
OWNER:	
SHEET TITLE:	ELEVATIONS & NOTES BUILDING "1"

RECEIVED MAY



**A** SIDEWALL ELEVATION ... BUILDING '2'  
 81 SCALE: 1/4" = 1'-0"



**B** ENDWALL ELEVATION ... BUILDING '2'  
 81 SCALE: 1/4" = 1'-0"



HALEY WARD®  
ENGINEERING | ENVIRONMENTAL | SURVEYING

## MEMO

**To:** City of Saco, ATTN: Jason Garnham, Planner

**From:** Ben Kaiman, El. Project Manager

**Re:** **Saco Self Storage – 1031 Portland Road**

**Date:** April 20, 2022

---

Haley Ward, Inc., (Haley Ward) has prepared this memo in response city comments of Saco Self Storage – 1031 Portland Road's Site Plan Review Application, performed by Jason Garnham, City of Saco, Planner. The review comment is provided, followed by our response in bold.

### General Comments

1. Since this project will disturb in excess of 1 acre, then it will be subject to the requirements of a Maine General Construction Permit (MGCP). The applicant is required to obtain said permit and comply with all requirements. In accordance with the MGCP, the erosion control requirements for this project need to include specific requirements for inspection frequency, maintaining weekly inspection records, etc. These written inspection logs need to be maintained onsite and available for viewing during site inspections.

***So noted, an MGCP has been applied for on February 21, 2022. A copy of the application has been included in our response package. The erosion control requirements including blank inspection logs were included in our original application package to the City.***

2. Is the applicant requesting any waivers?

***No waivers are being requested.***







3. Has the City's traffic peer review consultant reviewed the traffic analysis contained as part of the site plan application?

***Haley Ward has not submitted the traffic analysis to any entity/consultant other than the City of Saco as required in the City Code.***

4. The applicant should consult with the Saco Fire Department on the requirements and locations for emergency access (i.e. knox box), fire protection and requirements for emergency vehicle access throughout the site. Provide turning movement diagram for Fire Department emergency response apparatus throughout the site.

***So noted. The Knox box and vehicle access has been placed per the Fire Departments guidance provided during the pre-application meeting. A turning movement diagram has been provided, see response to comment 5.***

5. Provide turning movement diagrams for largest vehicle intending to access site on a regular basis or service vehicles.

***Turning movement diagrams have been provided for a 26' moving truck and for the standard Saco Fire department design truck.***

6. The applicant shall be required to perform routine inspection and maintenance of the stormwater facilities as outlined in the operations and maintenance manual previously developed specifically for the site. A copy of the annual inspection and maintenance report including inspection log(s) shall be submitted annually (by July 15<sup>th</sup> of each year) to the City Public Works Department.

***So noted.***

7. Submit information on "deed travel and utility easement" area along Eastview Parkway that is labeled on the plan. Does the applicant have rights to access this parcel via Eastview Parkway during construction? If so, then construction vehicle access directly onto Route 1 should be prohibited. Does the applicant have rights to connect to existing utilities within Eastview Parkway?

***The access and utility connection to Eastview parkway was provided at the direction of the City of Saco.***

8. MaineDOT is scheduled to repave Portland Road during 2023. The applicant will need to complete all utility work within the Portland Road right-of-way for before October 15, 2022.

***So noted.***



9. Offsite sidewalks need to be considered and discussed as part of the project. Typically, the City has required sidewalks along Portland Road frontages or payment into a sidewalk construction fee.

***This was discussed during the pre-application meeting, where staff indicated that a sidewalk would be required if there is currently a sidewalk near the site. There are currently no sidewalks in the vicinity of the site and the site to the north currently under development is not required to provide sidewalks, therefore they have not been included in the site layout. We understand that the City does ultimately want to connect Eastview Parkway to the planned sidewalk extensions but based on conversations with staff and the nature of the proposed development, a sidewalk along Portland road is unnecessary.***

#### Application Narrative Materials

1. Please confirm via field investigation that there are no wetlands present on the Project site.

***Based on field investigations, collected soil data, and publicly available wetland inventory maps, no wetlands are present on the project site.***

2. Stormwater Analysis

- a. The Stormwater Treatment System summary table on page 2 of the report does not match the calculations on the following pages nor do they agree with the land use areas contained in the post-development analysis for sub watersheds 1 through 6.

***So noted. We have revised the hydrology, storm water treatment summary table and calculations to ensure consistency. Please also note that the post-development watersheds have been amended based on the revised design.***

- b. The surficial soils information provided for the site indicates that the soils are HSG A; however, the stormwater analysis is based upon HSG C. Please revise and update the stormwater analysis accordingly. A detailed review of the current analysis has not been performed at this time and will be deferred until a corrected analysis is provided.

***A revised stormwater model has been provided that uses HSG A soils as the existing and proposed condition.***

- c. The existing land use should be modeled as field or meadow and not lawn as currently included in the model.

***A revised stormwater model has been provided that uses meadow cover types instead of lawn.***



- d. The watershed areas need to include all offsite areas that drain onto the site. As currently shown, the watershed boundaries terminate at the property line; however, portions of Portland Road drain onto the site and need to be included in the stormwater analysis.

***Revised stormwater analysis, plans, and narratives have been provided that include all offsite areas that drain onto the site.***

- e. Is the future building rooftop area included in the overall impervious area calculations for the sizing of the stormwater BMPs?

***Yes, the future building is included in the hydrology and the stormwater treatment calculations.***

- 3. The stormwater maintenance plan should be revised to include the requirement for filing annual reports with the City of Saco (Refer to General Comment 5 above).

***The stormwater management plan narrative has been updated with the required maintenance information. It is included in the documentation section of the maintenance plan.***

#### Plan Set

- 1. Sheet C002
  - a. Include provisions for construction oversight of the stormwater BMP.

***The provisions for construction oversight have been added to sheet C002.***

- 2. Existing Conditions Survey
  - a. Does the easement to the adjacent Walters parcel currently exist? If so, then it should be shown on the plan.

***An easement does not exist adjacent to the Walters parcel. The dashed line shown on the existing conditions survey appears to be a setback line.***

- b. This plan should be revised to depict extent of existing utilities along Eastview Parkway.

***The existing utilities along Eastview Parkway are shown on the sheet C103.***

- c. Provide information on the “deeded travel and utility easement” depicted on the plan. Whom is this easement granted to and what are details?



***HW Response: The aforementioned easement, which encompasses Eastview Parkway, as mentioned in the warranty deed listed in Book 14295, Page 996-999, describes the easement which lies over Eastview Parkway granting travel and utility access to the owner of the subject property upon which this application proposes to develop. I have attached the referenced deed for your reference.***

3. Sheet C101

- a. Are there any remnant items from the previous development of the site that need to be removed and properly abandoned or disposed of as part of the construction work? For example, onsite subsurface wastewater disposal field, underground septic tank, water service or water supply well, etc.?

***Any remnant items from the previous development shall be abandoned or disposed of per local, state & federal regulations. Please reference the demolition notes on C101.***

4. Sheet C102

- a. The summary of proposed areas of impervious and developed land areas associated with this project do not correspond with the stormwater analysis. Is the future building rooftop area included in the overall impervious area calculations for the sizing of the stormwater BMPs?

***The stormwater management plan narrative has been updated with the correct developed area quantities. The future building is included in the overall impervious area amount. Runoff from the northwest rear side of this building will be treated using a drip edge filter as shown on the revised plans.***

- b. The extent of roadway and sidewalk improvements along Eastview Parkway and Portland Road do not reflect final work to be completed as part of the Park North Development. The plans should be updated to reflect remaining roadway widening, curb and sidewalk work to be completed by others.

***So noted. The plans have been updated with the most current information available to us.***

- c. Is a project sign anticipated to be installed along Portland Road? If so, the location should be shown on the plan. The proposed sign along Eastview Parkway needs to be shifted outside of the right-of-way.

***Please reference note 4 on sheet C102 for clarification.***

- d. Is a dumpster planned to be located on the property? If so, the location should be shown on the plans. Visual screening and aesthetics of the





dumpster enclosures along Portland Road and Eastview Parkway should be detailed.

***A dumpster is not proposed on the site.***

- e. Is it the intent that the onsite Vehicle circulation pattern will be controlled with stripping to promote a counterclockwise pattern?

***There is no designated traffic pattern within the site. All paved areas on the site are wide enough for two lanes of traffic, and it is not expected that the site will ever be populated enough to cause any traffic issues.***

- f. A few areas of additional fencing appear to be required to secure the site (i.e. between office building and entry gate, and within footprint of future building during initial phase of construction).

***So noted. Fencing has been added where appropriate in order to secure the site.***

- g. Suggest alternatives to galvanized chain link fence for perimeter security fence. Perhaps black vinyl coated chain link fencing or other more aesthetically pleasing fence materials.

***Please reference revised C102 which specifies black vinyl coated chain link fence.***

- h. Plan note 4 should be revised to correctly identify Eastview Parkway as opposed to Route 2.

***So noted.***

- i. Has CMP reviewed and approved the proposed underground primary electrical plan and point of connection to the existing pole line?

***CMP coordination is under way at this time.***

- j. A note should be added to the plan set indicating that the Owner shall be required to inspect the stormwater management system on an annual basis, perform required annual maintenance, and submit an annual report to DPW by July 15<sup>th</sup> of each calendar year. In addition, the applicant is required to execute Form 1 within §XII of the Zoning Ordinance prior to the start of construction and Form 2 as part of the future annual reporting effort.

***A note has been added to the plan set.***

- k. Prohibit snow storage within the stormwater BMP systems.



**Boulders are currently shown on the site plan as a method of deterring snow storage within the BMP systems. A note has been added to the drawing indicating that snow is not to be stored in these areas.**

- I. What are the plans for siting mechanical or HVAC equipment? Will these be placed on concrete pads or mounted on the roof?

**At this time, it is planned that the equipment shall be located on the roof.**

5. Sheet C103

- a. Drainage swale grading along Eastview Parkway frontage should be maintained outside of the right-of-way.

**Per our discussion the grading shown is acceptable. We have imported the grading plans from Eastview parkway to ensure there are no conflicts.**

- b. Need to coordinate final grading with remaining grading to be performed as part of the final construction of Eastview Parkway.

**So noted. The latest grading plans available have been integrated into the plans.**

- c. Recommend locating security fence outside of drainage swale.

**The fence is outside of the drainage swale where possible.**

- d. Provide alternate grading plan for future building construction.

**Grading has been added to C103 to accommodate future building construction, along with additional notes clarifying the phasing plan and intent.**

- e. Proposed, grading at site entrance should be revised to accommodate sewer manhole being raised to adjacent pavement grade for future maintenance, etc.

**The grading has been revised and the manhole has been raised.**

- f. Provisions for control of floatable materials in the stormdrain collection system need to be included before discharging to the stormwater BMPs?

**The site is not anticipated to generate a high volume of floatable materials. As such, the shown catch basins act as a floatable trap and any floatables that make it to the GUSF's will be removed by hand during regular maintenance.**



- g. Provisions for sediment capture needs to be included before discharging to the stormwater BMPs in accordance with Chapter 500.

***Provisions for sediment capture have been provided. All proposed catch basins are designed with a 2' deep sump which provides nearly double the required sediment storage volume required in Chapter 500. In addition, a 6' wide grassed filter strip has been added to provide sediment protection in the areas that sheet flow to the GUSF's.***

- h. Provisions for emergency spillway needs to be incorporated into the design of the stormwater BMPs. In addition, the top of berm width appears minimal and certainly less than minimum width recommendations contained in Chapter 500.

***An emergency spillway has been added between GUSF A and Pond 1. Pond 1 completely retains the 50yr storm and therefore does not have an additional spillway. It is also the design intent that if a storm greater than the 50yr storm occurs, the entire length of pond 1 and both GUSF's will sheet flow off site. This will greatly reduce the velocity of any floodwaters leaving the site. With regards to the top of berm width; per Chapter 500, basins less than 6 foot in depth require a 4' wide berm. The specified ponds are 5' in depth and a 4' wide berm has been provided.***

- i. What are provisions for future maintenance access to the pond, outlet, etc?

***Access for maintenance is available from the parking area and also along the pavement abutting the stormwater treatment system.***

- j. Will the buildings have perimeter foundation drains? If so, where will these discharge?

***No. The area around the buildings is paved and therefore stormwater is not expected to infiltrate around the building foundations.***

- k. Curbing appears necessary along the northeasterly side of the site to effectively capture and direct runoff into catch basis P-02, P-04, P-06, and P-08.

***Agreed, it was the design intent to run asphalt curbing along the northwest edge of pavement to direct stormwater into the collection basins. The curb was left off in error and has now been added.***

- l. Provide clean out on all service laterals within 5' of the exit point from each building.



**The only building with a sewer connection is the office, this cleanout has been added to the drawing.**

- m. Provide invert of sewer lateral at exit point from each building.

**The only building with a sewer connection is the office, this invert has been added to the drawing.**

- n. Has the applicant discussed the proposed water connection work within Eastview Parkway with the Park North developer? Concern is for timing coordination of work by each developer.

**Water service shall be provided via the city main running along Portland Road. The applicant is aware of the construction timing regarding the DOT project proposed for Portland Road.**

- o. What are the plans for siting mechanical or HVAC equipment? Will these be placed on concrete pads or mounted on the roof?

**Repeat comment. Please see response to comment 4.I.**

- p. Perimeter erosion control measures should be provided along northeasterly side of site.

**Erosion controls have been added to this area as shown on the revised drawings.**

6. Sheet C104

- a. Are shields available for the exterior lighting in the event that glare issues are present after the lighting is energized?

**Shields are not available for the proposed fixtures but please keep in mind that all fixtures specified are standard down lit fixtures which are designed to eliminate upward glare and limit glare from horizontal directions. Please refer to the photometric plan and associated cut sheets in the submittal package.**

- b. Planning department will likely comment on the color of the LED fixtures proposed.

**So noted.**





7. Sheet C502

- a. Provide details for grass underdrain soil filter stormwater BMPs, including details for embankment construction, emergency spillway, underdrain layout, etc.

***These details have been added.***

- b. Provide details for outlet control structure, including control device for underdrain outlet from filter basins.

***These details have been added.***

- c. Provide sizing of level lip spreader.

***Sizing calculations have been added to the stormwater narrative.***

8. Sheet C701

- a. Watershed boundaries need to include offsite, upstream areas (i.e. Portland Road).

***Revised stormwater plans and narratives have been provided that include all associated runoff, including Portland Road.***

WARRANTY DEED

Doc# 2004073200  
Bk 14295 Pg 0996 - 0999  
Received York SS  
11/22/2004 12:19PM  
REGISTER OF DEEDS  
Debra L. Anderson

KNOW ALL MEN BY THESE PRESENTS, that **PRESTON PROPERTIES, LLC**, a Maine limited liability company with a mailing address of 1022 Portland Road, Saco, ME 04072 (referred to herein as “Grantor”), in consideration of One Dollar (1.00) and other valuable consideration paid by **HID’N PINES CAMPGROUND, INC.**, a Maine corporation with a mailing address of P. O. Box. 216, Old Orchard Beach, Maine 04064 (referred to herein as “Grantee”), does hereby grant unto the said Grantee, its successors and assigns forever, with **WARRANTY COVENANTS**, a certain lot or parcel of land located on the easterly side of the Portland Road, also known as U.S. Route No. 1, in the City of Saco, County of York and State of Maine bounded and described as follows:

A certain lot or parcel of land, with buildings thereon, located on the southeasterly side of the Portland Road, being U.S. Route No. 1, in the City of Saco, County of York and State of Maine, bounded and described as follows:

Beginning at a point in the southeasterly sideline of the Portland Road at other land of the within Grantor and the northerly corner of the easement described below;

Thence North 51°-28’-29” East, along the southeasterly sideline of the said Portland Road, thirty-seven and sixty-three hundredths (37.63) feet to an iron rod set;

Thence northeasterly, along the southeasterly sideline of the said Portland Road, three hundred twelve and seventy hundredths (312.70) feet by the arc of a curve to the left, having a radius of five thousand six hundred fifteen and thirty-four hundredths (5615.34) feet, to an iron rod set at land now or formerly of Cleve A. Worster and Susan J. Worster, the chord of said curve bears North 49°-52’-46” East a distance of three hundred twelve and sixty-six hundredths (312.66) feet;

Thence South 36°-35’-32” East, along said land now or formerly of Cleve A. Worster and Susan J. Worster, four hundred thirty-seven and fifty hundredths (437.50) feet to a point;

Thence South 53°-37’-00” West, along remaining land of the within Grantor, three hundred ninety-four and thirty-two hundredths (394.32) feet to a point at the easterly corner of the easement described below;

Thence North 36°-23’-00” West, along the easement described below, two hundred twelve and seventy-nine hundredths (212.79) feet to a point;

MAINE R.E. TRANSFER TAX PAID

Thence North 27°-17'-35" West, along the easement described below, one hundred one and twenty-seven hundredths (101.27) feet to a point;

Thence North 36°-23'-00" West, along the easement described below, twenty and sixteen hundredths (20.16) feet to a point;

Thence North 18°-14'-23" West, along the easement described below, eighty-seven and nine hundredths (87.09) feet to the point of beginning;

Said lot contains 3.747 acres.

***Also conveying*** to the said Grantee, an easement in common with Grantor, its successors and assigns, for access and for travel by vehicular and pedestrian traffic and for the installation of utilities, over and across the following described parcel:

Beginning at a point in the southeasterly sideline of the Portland Road at the westerly corner of the lot described above, said point also being at the point of beginning in the description set forth above;

Thence South 18°-14'-23" East, along the lot described above, eighty-seven and nine hundredths (87.09) feet to a point;

Thence South 36°-23'-00" East, along the lot described above, twenty and sixteen hundredths (20.16) feet to a point;

Thence South 27°-17'-35" East, along the lot described above, one hundred one and twenty-seven hundredths (101.27) feet to a point;

Thence South 36°-23'-00" East, along the lot described above, two hundred twelve and seventy-nine hundredths (212.79) feet to a point at the southerly corner of the lot described above;

Thence South 53°-37'-00" West, over remaining land of the within Grantor, seventy and no hundredths (70.00) feet to a point;

Thence North 36°-23'-00" West, over remaining land of the within Grantor, two hundred twelve and seventy-nine hundredths (212.79) feet to a point;

Thence North 38°-40'-26" West, over remaining land of the within Grantor, one hundred and eight hundredths (100.08) feet to a point;

Thence North 36°-23'-00" West, over remaining land of the within Grantor, twenty and sixteen hundredths (20.16) feet to a point;

Thence North 54°-31'-37" West, over remaining land of the within Grantor, eighty-one and forty-eight hundredths (81.48) feet to a point in the southeasterly sideline of the Portland Road;

Thence North 51°-28'-29" East, along the southeasterly sideline of the said Portland Road, one hundred forty-two and fifty-nine hundredths (142.59) feet to the point of beginning.

Iron rods described above as set are 5/8" diameter with caps inscribed W.A. Desper PLS 1279. Bearings above are based on an observation of magnetic north in April of 1998.

The lot and easement described above are a portion of the premises described in deeds to Preston Properties, LLC by Daniel Freund, Personal Representative of the Estate of Doris O. Boothby, dated December 24, 2003 and recorded at the York County Registry of Deeds in Book 13817 Page 172, from Stephen Boothby, Successor Trustee of Donald E. Boothby Irrevocable Trust, dated December 24, 2003 and recorded at the York County Registry of Deeds in Book 13817 Page 174 and from K. Aldene Walters, Personal Representative of the Estate of Frances L. Sylvester, dated December 24, 2003 and recorded at the York County Registry of Deeds in Book 13817 Page 176.

This conveyance is subject to the following restrictions, each of which shall constitute a covenant running with and benefiting Grantor's remaining land as described in the deeds referenced in the preceding paragraph and burdening the land and easement herein conveyed:

1. Vehicular and pedestrian access to the Property shall be exclusively over the easement conveyed herein. The property conveyed herein shall have no curb cut, driveway or other entrance directly onto Portland Road. Grantor, its successors and assigns may improve the easement area in such manner as it deems necessary for the benefit of adjoining land now or hereafter owned by Grantor, which land may be subdivided and sold to multiple users each having a right to use the easement area. Grantee, its successors and assigns, shall join in the conveyance of the easement area to the City of Saco in the event that the City agrees to assume ownership of the roadway in that area.
2. Grantee shall not erect any sign on the Property, other than signs affixed to any building on the Property until Grantee has received Grantor's written approval of the design, location and construction of any such sign that Grantee desires to erect, such approval not to be unreasonably withheld or delayed. Any sign to be erected on the Property conveyed herein shall be professionally prepared and maintained and Grantee shall comply with all applicable laws and shall obtain any and all necessary governmental



approvals to erect any and all such sign. Grantee shall not place or maintain any sign on the Property conveyed herein if the effect of the existence or location of such sign would limit the ability of the Grantor, its successors or assigns, to place or maintain a subdivision directory sign at the entrance to the easement area.

3. In order to insure architectural and site improvement consistency and continuity within the subdivision anticipated for Grantor's additional land, any Site Plans (including landscaping plans) and Building Plans for any improvements to be constructed by it on the Property conveyed herein shall, for a period of ten (10) years from the date hereof, be subject to prior review and written approval by the Grantor for consistency with the surrounding development and any applicable common covenants.

IN WITNESS THEREOF, Preston Properties, LLC has executed this Warranty Deed this 19<sup>th</sup> day of the month of November, 2004.

SIGNED, SEALED AND  
DELIVERED IN PRESENCE OF

**PRESTON PROPERTIES, LLC**

Timothy H. Norton  
WITNESS

By: R. Elliott Chamberlain  
R. Elliott Chamberlain  
Its Sole Member

STATE OF MAINE  
COUNTY OF CUMBERLAND

November 19, 2004

Then personally appeared the above named R. Elliott Chamberlain, Sole Member of Preston Properties, LLC and acknowledged the foregoing instrument to be his free act and deed in said capacity and the free act and deed of said company.

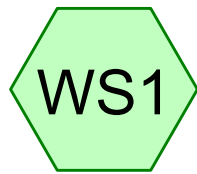
Before me,

Timothy H. Norton  
~~Notary Public~~ Attorney at Law  
Timothy H. Norton  
Printed Name

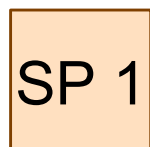
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DRUMMOND WOODSUM & MACMAHON  
245 COMMERCIAL STREET  
P.O. BOX 9791  
PORTLAND, ME 04104-5081

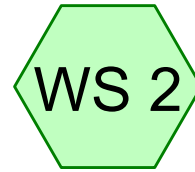
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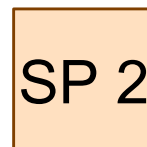
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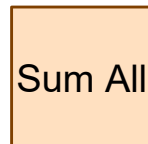
Summation Point



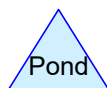
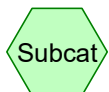
WS 2



Summation Point



Summation Point



Routing Diagram for Pre-development HydrologySSSRev

Prepared by HP Inc., Printed 4/4/2022

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**Pre-development HydrologySSSRev***Type III 24-hr 2-yr Rainfall=3.30"*

Prepared by HP Inc.

Printed 4/4/2022

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Page 2

Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 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

**SubcatchmentWS 2: WS 2**

Runoff Area=147,667 sf 9.85% Impervious Runoff Depth=0.00"  
Flow Length=515' Tc=5.3 min CN=37 Runoff=0.00 cfs 0.000 af

**SubcatchmentWS1: WS 1**

Runoff Area=46,212 sf 15.12% Impervious Runoff Depth=0.01"  
Flow Length=455' Tc=3.8 min CN=40 Runoff=0.00 cfs 0.001 af

**Reach SP 1: Summation Point**

Inflow=0.00 cfs 0.001 af  
Outflow=0.00 cfs 0.001 af

**Reach SP 2: Summation Point**

Inflow=0.00 cfs 0.000 af  
Outflow=0.00 cfs 0.000 af

**Reach Sum All: Summation Point**

Inflow=0.00 cfs 0.001 af  
Outflow=0.00 cfs 0.001 af

**Total Runoff Area = 4.451 ac Runoff Volume = 0.001 af Average Runoff Depth = 0.00"**  
**88.90% Pervious = 3.957 ac 11.10% Impervious = 0.494 ac**

**Summary for Subcatchment WS 2: WS 2**

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
*	14,544	98	Paved roads, HSG A
	133,123	30	Meadow, non-grazed, HSG A
	147,667	37	Weighted Average
	133,123		90.15% Pervious Area
	14,544		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	42	0.0200	1.17		<b>Sheet Flow, Road</b> Smooth surfaces n= 0.011 P2= 3.30"
0.6	58	0.0500	1.57		<b>Shallow Concentrated Flow, Meadow</b> Short Grass Pasture Kv= 7.0 fps
3.2	235	0.0300	1.21		<b>Shallow Concentrated Flow, Meadow</b> Short Grass Pasture Kv= 7.0 fps
0.9	180	0.0200	3.37	3.37	<b>Channel Flow,</b> Area= 1.0 sf Perim= 3.0' r= 0.33' n= 0.030 Earth, grassed & winding
5.3	515	Total			

**Summary for Subcatchment WS1: WS 1**

Runoff = 0.00 cfs @ 23.00 hrs, Volume= 0.001 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
*	6,985	98	Paved Road and Drive
	39,227	30	Meadow, non-grazed, HSG A
	46,212	40	Weighted Average
	39,227		84.88% Pervious Area
	6,985		15.12% Impervious Area



**Pre-development HydrologySSSRev**

Type III 24-hr 2-yr Rainfall=3.30"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	38	0.0200	1.15		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.3	32	0.0600	1.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	150	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.6	235	0.0300	6.55	13.09	<b>Channel Flow,</b> Area= 2.0 sf Perim= 3.0' r= 0.67' n= 0.030 Earth, grassed & winding
3.8	455	Total			

**Summary for Reach SP 1: Summation Point**

Inflow Area = 1.061 ac, 15.12% Impervious, Inflow Depth = 0.01" for 2-yr event  
 Inflow = 0.00 cfs @ 23.00 hrs, Volume= 0.001 af  
 Outflow = 0.00 cfs @ 23.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach SP 2: Summation Point**

Inflow Area = 3.390 ac, 9.85% Impervious, Inflow Depth = 0.00" for 2-yr event  
 Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach Sum All: Summation Point**

Inflow Area = 4.451 ac, 11.10% Impervious, Inflow Depth = 0.00" for 2-yr event  
 Inflow = 0.00 cfs @ 23.00 hrs, Volume= 0.001 af  
 Outflow = 0.00 cfs @ 23.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Pre-development HydrologySSSRev***Type III 24-hr 10 yr Rainfall=4.90"*

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 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

**SubcatchmentWS 2: WS 2**

Runoff Area=147,667 sf 9.85% Impervious Runoff Depth=0.12"  
Flow Length=515' Tc=5.3 min CN=37 Runoff=0.05 cfs 0.034 af

**SubcatchmentWS1: WS 1**

Runoff Area=46,212 sf 15.12% Impervious Runoff Depth=0.21"  
Flow Length=455' Tc=3.8 min CN=40 Runoff=0.05 cfs 0.019 af

**Reach SP 1: Summation Point**

Inflow=0.05 cfs 0.019 af  
Outflow=0.05 cfs 0.019 af

**Reach SP 2: Summation Point**

Inflow=0.05 cfs 0.034 af  
Outflow=0.05 cfs 0.034 af

**Reach Sum All: Summation Point**

Inflow=0.08 cfs 0.053 af  
Outflow=0.08 cfs 0.053 af

**Total Runoff Area = 4.451 ac Runoff Volume = 0.053 af Average Runoff Depth = 0.14"**  
**88.90% Pervious = 3.957 ac 11.10% Impervious = 0.494 ac**

**Summary for Subcatchment WS 2: WS 2**

Runoff = 0.05 cfs @ 14.70 hrs, Volume= 0.034 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 yr Rainfall=4.90"

	Area (sf)	CN	Description
*	14,544	98	Paved roads, HSG A
	133,123	30	Meadow, non-grazed, HSG A
	147,667	37	Weighted Average
	133,123		90.15% Pervious Area
	14,544		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	42	0.0200	1.17		<b>Sheet Flow, Road</b> Smooth surfaces n= 0.011 P2= 3.30"
0.6	58	0.0500	1.57		<b>Shallow Concentrated Flow, Meadow</b> Short Grass Pasture Kv= 7.0 fps
3.2	235	0.0300	1.21		<b>Shallow Concentrated Flow, Meadow</b> Short Grass Pasture Kv= 7.0 fps
0.9	180	0.0200	3.37	3.37	<b>Channel Flow,</b> Area= 1.0 sf Perim= 3.0' r= 0.33' n= 0.030 Earth, grassed & winding
5.3	515	Total			

**Summary for Subcatchment WS1: WS 1**

Runoff = 0.05 cfs @ 12.42 hrs, Volume= 0.019 af, Depth= 0.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 yr Rainfall=4.90"

	Area (sf)	CN	Description
*	6,985	98	Paved Road and Drive
	39,227	30	Meadow, non-grazed, HSG A
	46,212	40	Weighted Average
	39,227		84.88% Pervious Area
	6,985		15.12% Impervious Area

**Pre-development HydrologySSSRev**

Type III 24-hr 10 yr Rainfall=4.90"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	38	0.0200	1.15		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.3	32	0.0600	1.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	150	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.6	235	0.0300	6.55	13.09	<b>Channel Flow,</b> Area= 2.0 sf Perim= 3.0' r= 0.67' n= 0.030 Earth, grassed & winding
3.8	455	Total			

**Summary for Reach SP 1: Summation Point**

Inflow Area = 1.061 ac, 15.12% Impervious, Inflow Depth = 0.21" for 10 yr event  
 Inflow = 0.05 cfs @ 12.42 hrs, Volume= 0.019 af  
 Outflow = 0.05 cfs @ 12.42 hrs, Volume= 0.019 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach SP 2: Summation Point**

Inflow Area = 3.390 ac, 9.85% Impervious, Inflow Depth = 0.12" for 10 yr event  
 Inflow = 0.05 cfs @ 14.70 hrs, Volume= 0.034 af  
 Outflow = 0.05 cfs @ 14.70 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach Sum All: Summation Point**

Inflow Area = 4.451 ac, 11.10% Impervious, Inflow Depth = 0.14" for 10 yr event  
 Inflow = 0.08 cfs @ 14.51 hrs, Volume= 0.053 af  
 Outflow = 0.08 cfs @ 14.51 hrs, Volume= 0.053 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs



# Pre-development HydrologySSSRev

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Type III 24-hr 25-yr Rainfall=6.20"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 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

## SubcatchmentWS 2: WS 2

Runoff Area=147,667 sf 9.85% Impervious Runoff Depth=0.39"  
Flow Length=515' Tc=5.3 min CN=37 Runoff=0.47 cfs 0.111 af

## SubcatchmentWS1: WS 1

Runoff Area=46,212 sf 15.12% Impervious Runoff Depth=0.56"  
Flow Length=455' Tc=3.8 min CN=40 Runoff=0.27 cfs 0.050 af

## Reach SP 1: Summation Point

Inflow=0.27 cfs 0.050 af  
Outflow=0.27 cfs 0.050 af

## Reach SP 2: Summation Point

Inflow=0.47 cfs 0.111 af  
Outflow=0.47 cfs 0.111 af

## Reach Sum All: Summation Point

Inflow=0.73 cfs 0.161 af  
Outflow=0.73 cfs 0.161 af

**Total Runoff Area = 4.451 ac Runoff Volume = 0.161 af Average Runoff Depth = 0.43"**  
**88.90% Pervious = 3.957 ac 11.10% Impervious = 0.494 ac**

**Pre-development HydrologySSSRev**

Type III 24-hr 25-yr Rainfall=6.20"

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**Summary for Subcatchment WS 2: WS 2**

Runoff = 0.47 cfs @ 12.37 hrs, Volume= 0.111 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	14,544	98	Paved roads, HSG A
	133,123	30	Meadow, non-grazed, HSG A
	147,667	37	Weighted Average
	133,123		90.15% Pervious Area
	14,544		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	42	0.0200	1.17		<b>Sheet Flow, Road</b>
					Smooth surfaces n= 0.011 P2= 3.30"
0.6	58	0.0500	1.57		<b>Shallow Concentrated Flow, Meadow</b>
					Short Grass Pasture Kv= 7.0 fps
3.2	235	0.0300	1.21		<b>Shallow Concentrated Flow, Meadow</b>
					Short Grass Pasture Kv= 7.0 fps
0.9	180	0.0200	3.37	3.37	<b>Channel Flow,</b>
					Area= 1.0 sf Perim= 3.0' r= 0.33'
					n= 0.030 Earth, grassed & winding
5.3	515	Total			

**Summary for Subcatchment WS1: WS 1**

Runoff = 0.27 cfs @ 12.27 hrs, Volume= 0.050 af, Depth= 0.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	6,985	98	Paved Road and Drive
	39,227	30	Meadow, non-grazed, HSG A
	46,212	40	Weighted Average
	39,227		84.88% Pervious Area
	6,985		15.12% Impervious Area

**Pre-development HydrologySSSRev**

Type III 24-hr 25-yr Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	38	0.0200	1.15		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.3	32	0.0600	1.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	150	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.6	235	0.0300	6.55	13.09	<b>Channel Flow,</b> Area= 2.0 sf Perim= 3.0' r= 0.67' n= 0.030 Earth, grassed & winding
3.8	455	Total			

**Summary for Reach SP 1: Summation Point**

Inflow Area = 1.061 ac, 15.12% Impervious, Inflow Depth = 0.56" for 25-yr event  
 Inflow = 0.27 cfs @ 12.27 hrs, Volume= 0.050 af  
 Outflow = 0.27 cfs @ 12.27 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach SP 2: Summation Point**

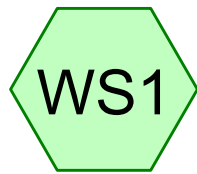
Inflow Area = 3.390 ac, 9.85% Impervious, Inflow Depth = 0.39" for 25-yr event  
 Inflow = 0.47 cfs @ 12.37 hrs, Volume= 0.111 af  
 Outflow = 0.47 cfs @ 12.37 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

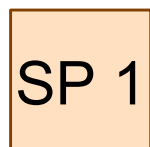
**Summary for Reach Sum All: Summation Point**

Inflow Area = 4.451 ac, 11.10% Impervious, Inflow Depth = 0.43" for 25-yr event  
 Inflow = 0.73 cfs @ 12.34 hrs, Volume= 0.161 af  
 Outflow = 0.73 cfs @ 12.34 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min

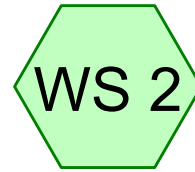
Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs



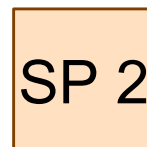
WS 1



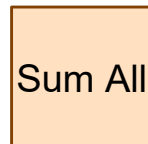
Summation Point



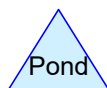
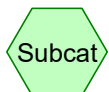
WS 2



Summation Point



Summation Point



Routing Diagram for Pre-development HydrologySSSRev

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**Pre-development HydrologySSSRev***Type III 24-hr 50-yr Rainfall=7.30"*

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 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

**SubcatchmentWS 2: WS 2**

Runoff Area=147,667 sf 9.85% Impervious Runoff Depth=0.72"  
Flow Length=515' Tc=5.3 min CN=37 Runoff=1.21 cfs 0.205 af

**SubcatchmentWS1: WS 1**

Runoff Area=46,212 sf 15.12% Impervious Runoff Depth=0.96"  
Flow Length=455' Tc=3.8 min CN=40 Runoff=0.76 cfs 0.085 af

**Reach SP 1: Summation Point**

Inflow=0.76 cfs 0.085 af  
Outflow=0.76 cfs 0.085 af

**Reach SP 2: Summation Point**

Inflow=1.21 cfs 0.205 af  
Outflow=1.21 cfs 0.205 af

**Reach Sum All: Summation Point**

Inflow=1.84 cfs 0.290 af  
Outflow=1.84 cfs 0.290 af

**Total Runoff Area = 4.451 ac Runoff Volume = 0.290 af Average Runoff Depth = 0.78"**  
**88.90% Pervious = 3.957 ac 11.10% Impervious = 0.494 ac**

**Summary for Subcatchment WS 2: WS 2**

Runoff = 1.21 cfs @ 12.15 hrs, Volume= 0.205 af, Depth= 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

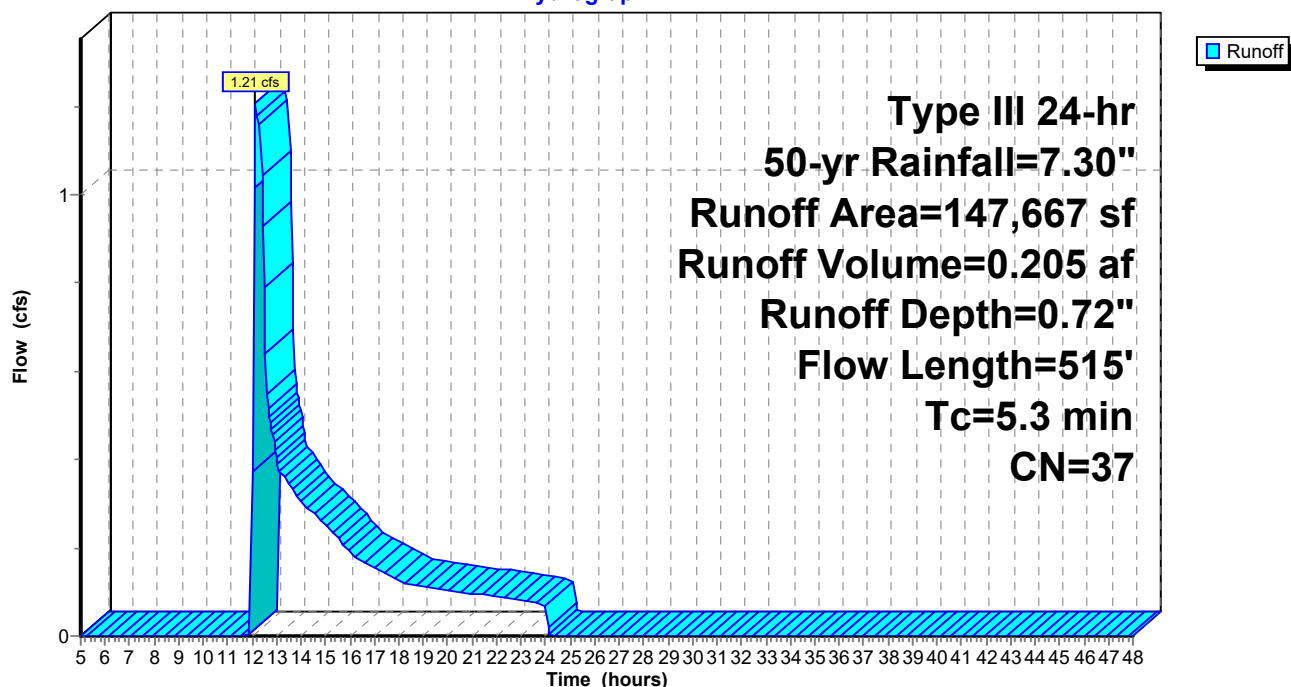
	Area (sf)	CN	Description
*	14,544	98	Paved roads, HSG A
	133,123	30	Meadow, non-grazed, HSG A
	147,667	37	Weighted Average
	133,123		90.15% Pervious Area
	14,544		9.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	42	0.0200	1.17		<b>Sheet Flow, Road</b> Smooth surfaces n= 0.011 P2= 3.30"
0.6	58	0.0500	1.57		<b>Shallow Concentrated Flow, Meadow</b> Short Grass Pasture Kv= 7.0 fps
3.2	235	0.0300	1.21		<b>Shallow Concentrated Flow, Meadow</b> Short Grass Pasture Kv= 7.0 fps
0.9	180	0.0200	3.37	3.37	<b>Channel Flow,</b> Area= 1.0 sf Perim= 3.0' r= 0.33' n= 0.030 Earth, grassed & winding
5.3	515	Total			

**Subcatchment WS 2: WS 2**

Hydrograph



**Pre-development HydrologySSSRev**

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Type III 24-hr 50-yr Rainfall=7.30"

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**Summary for Subcatchment WS1: WS 1**

Runoff = 0.76 cfs @ 12.10 hrs, Volume= 0.085 af, Depth= 0.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

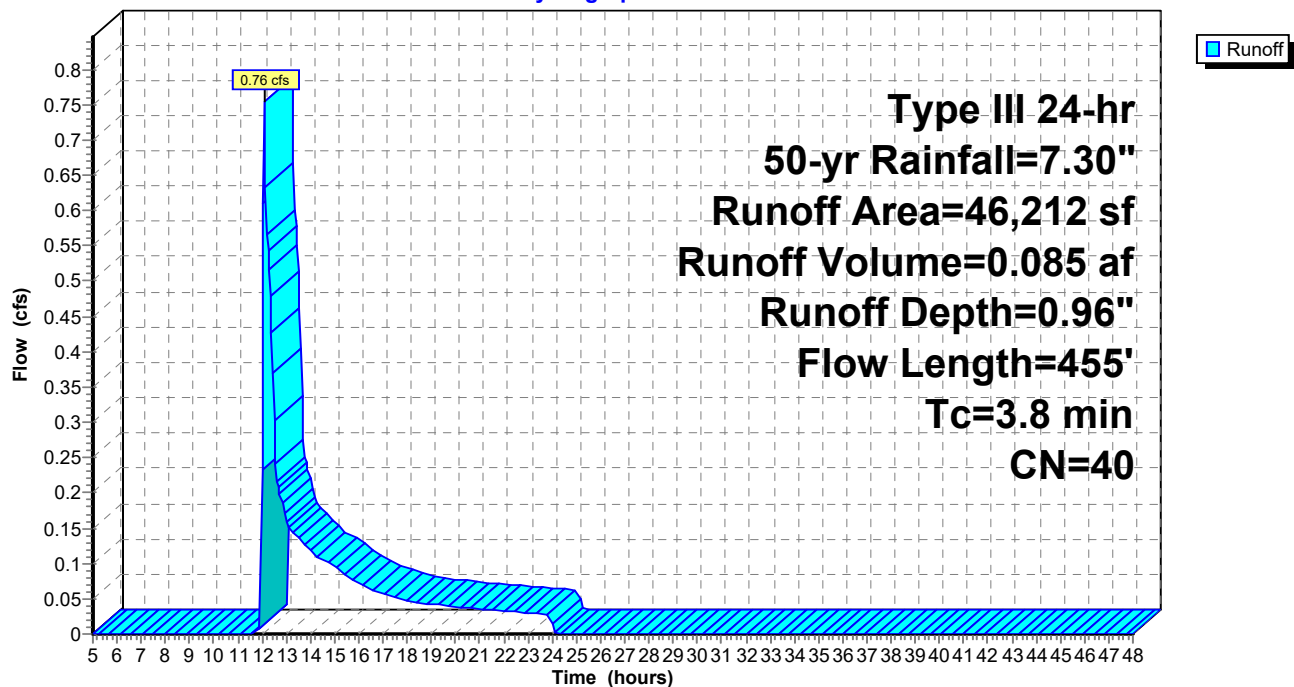
	Area (sf)	CN	Description
*	6,985	98	Paved Road and Drive
	39,227	30	Meadow, non-grazed, HSG A
	46,212	40	Weighted Average
	39,227		84.88% Pervious Area
	6,985		15.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	38	0.0200	1.15		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.3	32	0.0600	1.71		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
2.3	150	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.6	235	0.0300	6.55	13.09	<b>Channel Flow,</b> Area= 2.0 sf Perim= 3.0' r= 0.67' n= 0.030 Earth, grassed & winding
3.8	455	Total			

**Subcatchment WS1: WS 1**

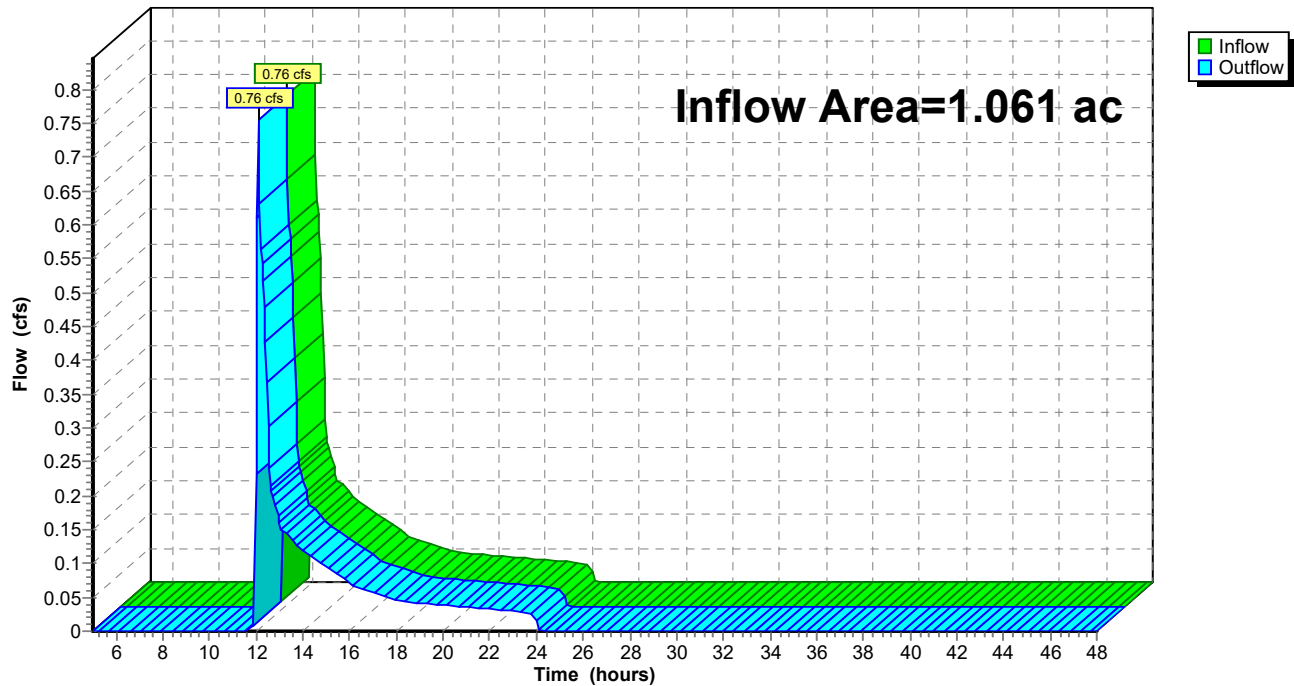
Hydrograph



**Summary for Reach SP 1: Summation Point**

Inflow Area = 1.061 ac, 15.12% Impervious, Inflow Depth = 0.96" for 50-yr event  
Inflow = 0.76 cfs @ 12.10 hrs, Volume= 0.085 af  
Outflow = 0.76 cfs @ 12.10 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

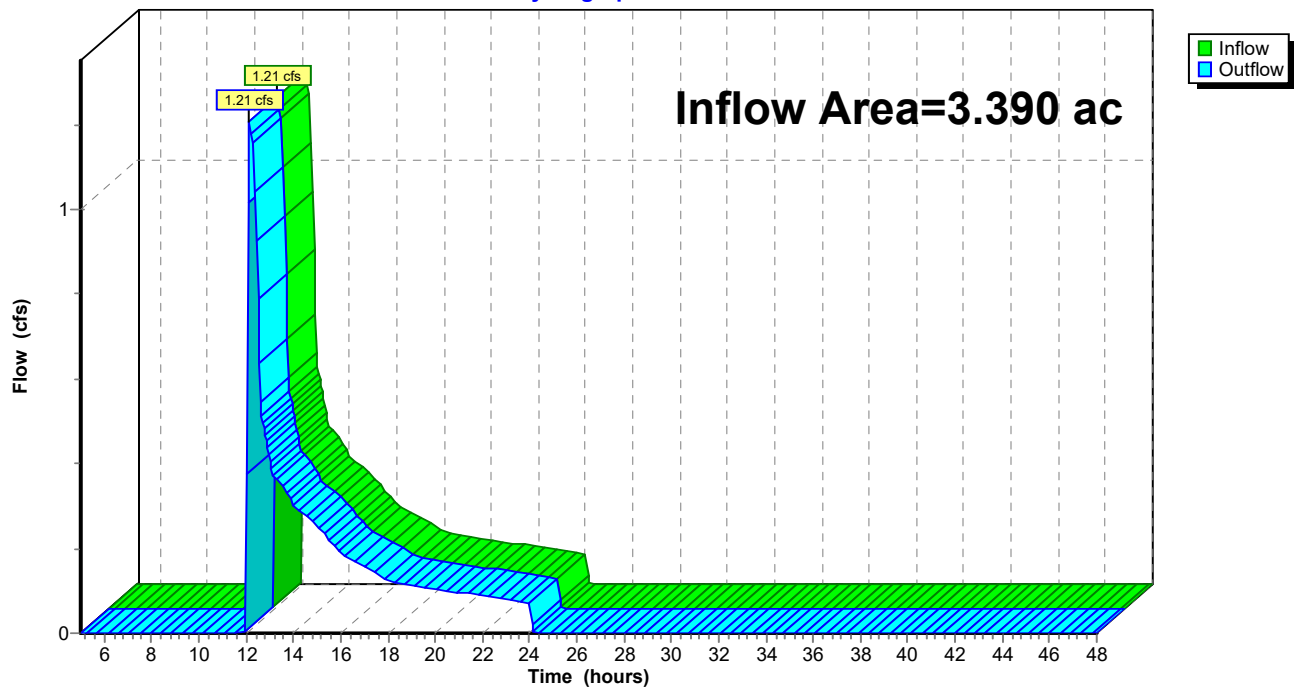
**Reach SP 1: Summation Point****Hydrograph**



**Summary for Reach SP 2: Summation Point**

Inflow Area = 3.390 ac, 9.85% Impervious, Inflow Depth = 0.72" for 50-yr event  
Inflow = 1.21 cfs @ 12.15 hrs, Volume= 0.205 af  
Outflow = 1.21 cfs @ 12.15 hrs, Volume= 0.205 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Reach SP 2: Summation Point****Hydrograph**

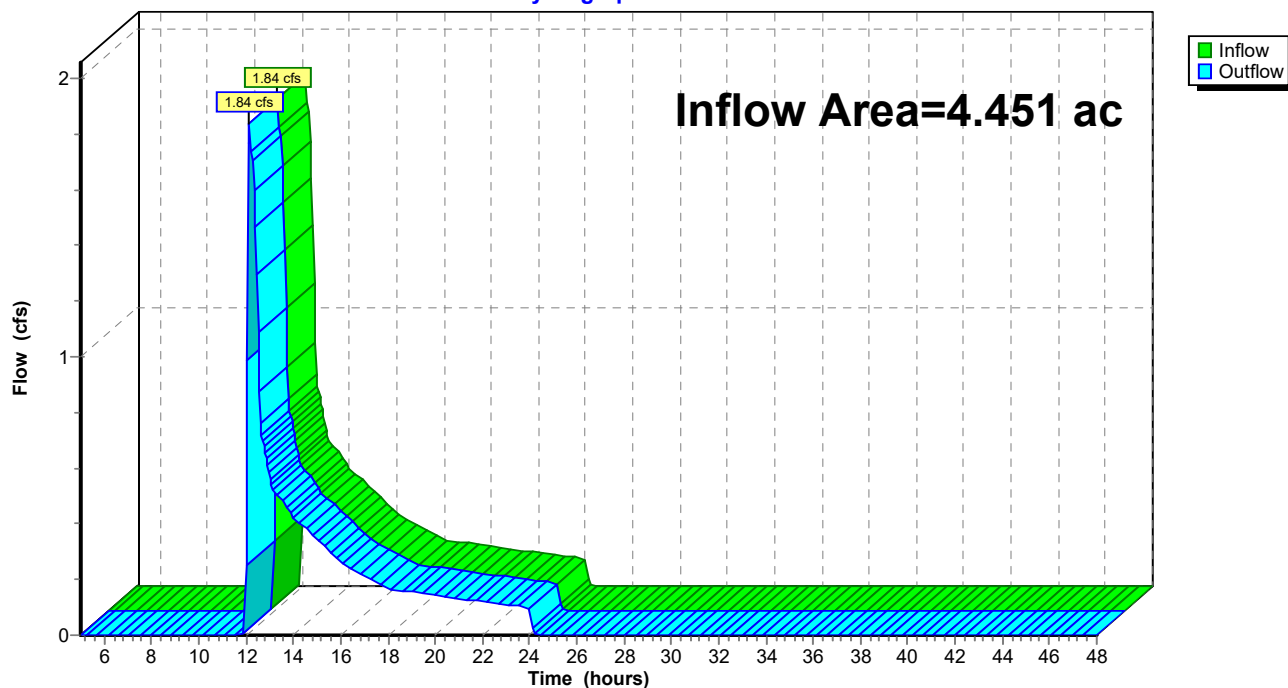
**Summary for Reach Sum All: Summation Point**

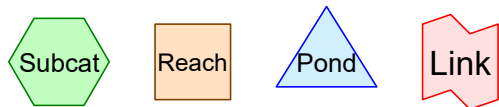
Inflow Area = 4.451 ac, 11.10% Impervious, Inflow Depth = 0.78" for 50-yr event  
Inflow = 1.84 cfs @ 12.15 hrs, Volume= 0.290 af  
Outflow = 1.84 cfs @ 12.15 hrs, Volume= 0.290 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Reach Sum All: Summation Point**

Hydrograph





**REVFinal(3RII) PostSaco StorageRev**

Type III 24-hr 2-yr Rainfall=3.30"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>SubcatchmentWS 1: WS 1</b>	Runoff Area=80,841 sf 49.99% Impervious Runoff Depth=0.61" Flow Length=380' Tc=2.4 min CN=64 Runoff=1.14 cfs 0.094 af
<b>SubcatchmentWS 2: WS 2</b>	Runoff Area=13,900 sf 100.00% Impervious Runoff Depth>3.01" Flow Length=122' Tc=1.6 min CN=98 Runoff=1.11 cfs 0.080 af
<b>SubcatchmentWS 2B: WS 2B</b>	Runoff Area=8,265 sf 82.76% Impervious Runoff Depth=1.55" Flow Length=30' Slope=0.4000 '/' Tc=0.1 min CN=81 Runoff=0.39 cfs 0.024 af
<b>SubcatchmentWS 3: WS 3</b>	Runoff Area=11,430 sf 100.00% Impervious Runoff Depth>3.01" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=0.96 cfs 0.066 af
<b>SubcatchmentWS 4: WS 4</b>	Runoff Area=11,746 sf 100.00% Impervious Runoff Depth>3.01" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=0.98 cfs 0.068 af
<b>SubcatchmentWS 5: WS 5</b>	Runoff Area=11,019 sf 100.00% Impervious Runoff Depth>3.01" Flow Length=50' Slope=0.0100 '/' Tc=0.9 min CN=98 Runoff=0.91 cfs 0.063 af
<b>SubcatchmentWS 6: WS 6</b>	Runoff Area=8,487 sf 32.39% Impervious Runoff Depth=0.20" Flow Length=30' Slope=0.0100 '/' Tc=0.6 min CN=52 Runoff=0.01 cfs 0.003 af
<b>SubcatchmentWS 7: WS 7</b>	Runoff Area=45,822 sf 26.18% Impervious Runoff Depth=0.00" Flow Length=430' Tc=2.3 min UI Adjusted CN=39 Runoff=0.00 cfs 0.000 af
<b>SubcatchmentWS 8: WS 7</b>	Runoff Area=7,509 sf 40.96% Impervious Runoff Depth=0.38" Flow Length=50' Slope=0.0700 '/' Tc=0.4 min CN=58 Runoff=0.05 cfs 0.005 af
<b>SubcatchmentWS7B: WS 7B</b>	Runoff Area=1,268 sf 82.81% Impervious Runoff Depth=1.55" Flow Length=30' Slope=0.0010 '/' Tc=1.5 min CN=81 Runoff=0.06 cfs 0.004 af
<b>Reach 1R: Reach 1</b>	Avg. Flow Depth=0.46' Max Vel=2.29 fps Inflow=1.14 cfs 0.094 af 18.0" Round Pipe n=0.013 L=270.0' S=0.0024 '/' Capacity=5.15 cfs Outflow=1.00 cfs 0.094 af
<b>Reach 2R: Reach 2</b>	Avg. Flow Depth=0.01' Max Vel=0.90 fps Inflow=0.00 cfs 0.000 af 12.0" Round Pipe n=0.013 L=40.0' S=0.0500 '/' Capacity=7.97 cfs Outflow=0.00 cfs 0.000 af
<b>Reach 4R: SUM 4</b>	Inflow=0.05 cfs 0.006 af Outflow=0.05 cfs 0.006 af
<b>Reach Sum 1: Sum A</b>	Inflow=0.00 cfs 0.000 af Outflow=0.00 cfs 0.000 af
<b>Reach Sum 2: Sum B</b>	Inflow=1.86 cfs 0.145 af Outflow=1.86 cfs 0.145 af
<b>Reach SUM 3: Sum Total</b>	Inflow=1.86 cfs 0.145 af Outflow=1.86 cfs 0.145 af

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Type III 24-hr 2-yr Rainfall=3.30"

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**Pond 1P: Overflow Detention Pond**Peak Elev=88.46' Storage=1,438 cf Inflow=1.86 cfs 0.145 af  
Discarded=0.60 cfs 0.145 af Primary=0.00 cfs 0.000 af Outflow=0.60 cfs 0.145 af**Pond CB 1: CB 2-1**Peak Elev=93.45' Inflow=1.11 cfs 0.080 af  
12.0" Round Culvert n=0.013 L=150.0' S=0.0040 ' Outflow=1.11 cfs 0.080 af**Pond CB 2: CB 2**Peak Elev=92.80' Inflow=1.11 cfs 0.080 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' Outflow=1.11 cfs 0.080 af**Pond CB 3: CB 3**Peak Elev=93.18' Inflow=0.96 cfs 0.066 af  
12.0" Round Culvert n=0.013 L=148.0' S=0.0040 ' Outflow=0.96 cfs 0.066 af**Pond CB 4: CB 4**Peak Elev=92.87' Inflow=2.05 cfs 0.146 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' Outflow=2.05 cfs 0.146 af**Pond CB 5: CB 5**Peak Elev=93.02' Inflow=0.98 cfs 0.068 af  
12.0" Round Culvert n=0.013 L=154.0' S=0.0040 ' Outflow=0.98 cfs 0.068 af**Pond CB 6: CB 6**Peak Elev=93.01' Inflow=3.03 cfs 0.213 af  
18.0" Round Culvert n=0.025 L=50.0' S=0.0040 ' Outflow=3.03 cfs 0.213 af**Pond CB 7: CB 7**Peak Elev=93.21' Inflow=0.91 cfs 0.063 af  
12.0" Round Culvert n=0.025 L=154.0' S=0.0050 ' Outflow=0.91 cfs 0.063 af**Pond CB 8: CB 8**Peak Elev=93.10' Inflow=3.94 cfs 0.277 af  
18.0" Round Culvert n=0.025 L=80.0' S=0.0040 ' Outflow=3.94 cfs 0.277 af**Pond GF A: GUSF A**Peak Elev=91.96' Storage=2,350 cf Inflow=1.00 cfs 0.094 af  
Discarded=0.05 cfs 0.094 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.094 af**Pond GF B: GUSF B**Peak Elev=92.91' Storage=6,016 cf Inflow=3.94 cfs 0.280 af  
Discarded=0.02 cfs 0.041 af Primary=1.86 cfs 0.145 af Outflow=1.87 cfs 0.186 af**Total Runoff Area = 4.598 ac Runoff Volume = 0.408 af Average Runoff Depth = 1.06"**  
**42.97% Pervious = 1.976 ac 57.03% Impervious = 2.622 ac**



### Summary for Subcatchment WS 1: WS 1

Runoff = 1.14 cfs @ 12.06 hrs, Volume= 0.094 af, Depth= 0.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
*	40,416	98	Paved, HSG A
	40,425	30	Meadow, non-grazed, HSG A
	80,841	64	Weighted Average
	40,425		50.01% Pervious Area
	40,416		49.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.22		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.4	200	0.0250	2.37		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
0.3	130	0.0300	7.39	29.57	<b>Channel Flow,</b> Area= 4.0 sf Perim= 5.0' r= 0.80' n= 0.030 Earth, grassed & winding
2.4	380	Total			

### Summary for Subcatchment WS 2: WS 2

Runoff = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
*	13,900	98	Paved and Roof, HSG A
	13,900		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	50	0.0400	1.60		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.9	60	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	12	0.0300	1.08		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.6	122	Total			

### Summary for Subcatchment WS 2B: WS 2B

Runoff = 0.39 cfs @ 12.01 hrs, Volume= 0.024 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
*	6,840	98	Paved and Roof, HSG A
*	1,425	1	Drip Edge Filter
	8,265	81	Weighted Average
	1,425		17.24% Pervious Area
	6,840		82.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.4000	3.64		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"

### Summary for Subcatchment WS 3: WS 3

Runoff = 0.96 cfs @ 12.00 hrs, Volume= 0.066 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
	11,430	98	Unconnected pavement, HSG A
	11,430		100.00% Impervious Area
	11,430		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

### Summary for Subcatchment WS 4: WS 4

Runoff = 0.98 cfs @ 12.00 hrs, Volume= 0.068 af, Depth> 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

	Area (sf)	CN	Description
	11,746	98	Unconnected pavement, HSG A
	11,746		100.00% Impervious Area
	11,746		100.00% Unconnected

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Type III 24-hr 2-yr Rainfall=3.30"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 5: WS 5**

Runoff = 0.91 cfs @ 12.01 hrs, Volume= 0.063 af, Depth&gt; 3.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

Area (sf)	CN	Description
11,019	98	Unconnected pavement, HSG A
11,019		100.00% Impervious Area
11,019		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 6: WS 6**

Runoff = 0.01 cfs @ 12.30 hrs, Volume= 0.003 af, Depth= 0.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

Area (sf)	CN	Description
2,749	98	Unconnected pavement, HSG A
5,738	30	Meadow, non-grazed, HSG A
8,487	52	Weighted Average
5,738		67.61% Pervious Area
2,749		32.39% Impervious Area
2,749		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	30	0.0100	0.83		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 7: WS 7**

Runoff = 0.00 cfs @ 23.95 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

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Type III 24-hr 2-yr Rainfall=3.30"

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Area (sf)	CN	Adj	Description
33,828	30		Meadow, non-grazed, HSG A
11,994	98		Unconnected pavement, HSG A
45,822	48	39	Weighted Average, UI Adjusted
33,828			73.82% Pervious Area
11,994			26.18% Impervious Area
11,994			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.1000	2.31		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"
0.8	50	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	330	0.0175	4.79	23.95	<b>Channel Flow,</b> Area= 5.0 sf Perim= 8.0' r= 0.63' n= 0.030 Earth, grassed & winding
2.3	430	Total			

**Summary for Subcatchment WS 8: WS 7**

Runoff = 0.05 cfs @ 12.06 hrs, Volume= 0.005 af, Depth= 0.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

Area (sf)	CN	Description
4,433	30	Brush, Good, HSG A
3,076	98	Paved parking, HSG A
7,509	58	Weighted Average
4,433		59.04% Pervious Area
3,076		40.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0700	2.01		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS7B: WS 7B**

Runoff = 0.06 cfs @ 12.03 hrs, Volume= 0.004 af, Depth= 1.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2-yr Rainfall=3.30"

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Type III 24-hr 2-yr Rainfall=3.30"

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	Area (sf)	CN	Description
*	1,050	98	Paved and Roof, HSG A
*	218	1	Drip Edge Filter
	1,268	81	Weighted Average
	218		17.19% Pervious Area
	1,050		82.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	30	0.0010	0.33		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"

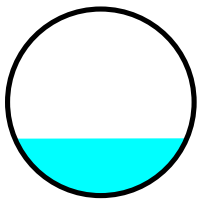
**Summary for Reach 1R: Reach 1**

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 0.61" for 2-yr event  
 Inflow = 1.14 cfs @ 12.06 hrs, Volume= 0.094 af  
 Outflow = 1.00 cfs @ 12.13 hrs, Volume= 0.094 af, Atten= 12%, Lag= 3.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 2.29 fps, Min. Travel Time= 2.0 min  
 Avg. Velocity= 0.94 fps, Avg. Travel Time= 4.8 min

Peak Storage= 124 cf @ 12.09 hrs  
 Average Depth at Peak Storage= 0.46'  
 Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.15 cfs

18.0" Round Pipe  
 n= 0.013 Corrugated PE, smooth interior  
 Length= 270.0' Slope= 0.0024 '  
 Inlet Invert= 91.90', Outlet Invert= 91.25'

**Summary for Reach 2R: Reach 2**

Inflow Area = 1.052 ac, 26.18% Impervious, Inflow Depth = 0.00" for 2-yr event  
 Inflow = 0.00 cfs @ 23.95 hrs, Volume= 0.000 af  
 Outflow = 0.00 cfs @ 23.95 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 0.90 fps, Min. Travel Time= 0.7 min  
 Avg. Velocity= 0.90 fps, Avg. Travel Time= 0.7 min

Peak Storage= 0 cf @ 23.95 hrs  
 Average Depth at Peak Storage= 0.01'  
 Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.97 cfs

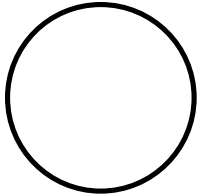


12.0" Round Pipe

n= 0.013 Corrugated PE, smooth interior

Length= 40.0' Slope= 0.0500 '/'

Inlet Invert= 91.90', Outlet Invert= 89.90'

**Summary for Reach 4R: SUM 4**

Inflow Area = 4.379 ac, 55.74% Impervious, Inflow Depth = 0.02" for 2-yr event  
Inflow = 0.05 cfs @ 12.06 hrs, Volume= 0.006 af  
Outflow = 0.05 cfs @ 12.06 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach Sum 1: Sum A**

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 0.00" for 2-yr event  
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af  
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach Sum 2: Sum B**

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth = 1.34" for 2-yr event  
Inflow = 1.86 cfs @ 12.13 hrs, Volume= 0.145 af  
Outflow = 1.86 cfs @ 12.13 hrs, Volume= 0.145 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach SUM 3: Sum Total**

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 0.55" for 2-yr event  
Inflow = 1.86 cfs @ 12.13 hrs, Volume= 0.145 af  
Outflow = 1.86 cfs @ 12.13 hrs, Volume= 0.145 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Summary for Pond 1P: Overflow Detention Pond

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 0.55" for 2-yr event  
 Inflow = 1.86 cfs @ 12.13 hrs, Volume= 0.145 af  
 Outflow = 0.60 cfs @ 12.10 hrs, Volume= 0.145 af, Atten= 68%, Lag= 0.0 min  
 Discarded = 0.60 cfs @ 12.10 hrs, Volume= 0.145 af  
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 88.46' @ 12.59 hrs Surf.Area= 3,202 sf Storage= 1,438 cf

Plug-Flow detention time= 17.5 min calculated for 0.145 af (100% of inflow)  
 Center-of-Mass det. time= 17.4 min ( 870.9 - 853.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	23,535 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
88.00	3,000	0	0
89.00	3,436	3,218	3,218
90.00	3,875	3,656	6,874
91.00	4,342	4,109	10,982
92.00	4,825	4,584	15,566
93.00	5,440	5,133	20,698
93.50	5,908	2,837	23,535

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>0.60 cfs Exfiltration at all elevations</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b>
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.60 cfs @ 12.10 hrs HW=88.09' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.60 cfs)

**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=88.00' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir( Controls 0.00 cfs)

### Summary for Pond CB 1: CB 2-1

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af  
 Outflow = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.45' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.77'	<b>12.0" Round Culvert</b>

L= 150.0' CPP, projecting, no headwall, Ke= 0.900  
 Inlet / Outlet Invert= 92.77' / 92.17' S= 0.0040 '/ Cc= 0.900  
 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.06 cfs @ 12.02 hrs HW=93.43' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.06 cfs @ 2.73 fps)

### Summary for Pond CB 2: CB 2

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af  
 Outflow = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.11 cfs @ 12.02 hrs, Volume= 0.080 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 92.80' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.17'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.17' / 91.97' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=1.06 cfs @ 12.02 hrs HW=92.79' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.06 cfs @ 2.57 fps)

### Summary for Pond CB 3: CB 3

Inflow Area = 0.262 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 0.96 cfs @ 12.00 hrs, Volume= 0.066 af  
 Outflow = 0.96 cfs @ 12.00 hrs, Volume= 0.066 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.96 cfs @ 12.00 hrs, Volume= 0.066 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 93.18' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.56'	<b>12.0" Round Culvert</b> L= 148.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.56' / 91.97' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=0.94 cfs @ 12.00 hrs HW=93.18' (Free Discharge)

↑**1=Culvert** (Barrel Controls 0.94 cfs @ 2.64 fps)

### Summary for Pond CB 4: CB 4

Inflow Area = 0.581 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 2.05 cfs @ 12.01 hrs, Volume= 0.146 af  
 Outflow = 2.05 cfs @ 12.01 hrs, Volume= 0.146 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.05 cfs @ 12.01 hrs, Volume= 0.146 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 92.87' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.97'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.97' / 91.77' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=1.97 cfs @ 12.01 hrs HW=92.85' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.97 cfs @ 3.00 fps)

### Summary for Pond CB 5: CB 5

Inflow Area = 0.270 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 0.98 cfs @ 12.00 hrs, Volume= 0.068 af  
 Outflow = 0.98 cfs @ 12.00 hrs, Volume= 0.068 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.98 cfs @ 12.00 hrs, Volume= 0.068 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.02' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.39'	<b>12.0" Round Culvert</b> L= 154.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.39' / 91.77' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=0.97 cfs @ 12.00 hrs HW=93.02' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 0.97 cfs @ 2.67 fps)

### Summary for Pond CB 6: CB 6

Inflow Area = 0.851 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 3.03 cfs @ 12.01 hrs, Volume= 0.213 af  
 Outflow = 3.03 cfs @ 12.01 hrs, Volume= 0.213 af, Atten= 0%, Lag= 0.0 min  
 Primary = 3.03 cfs @ 12.01 hrs, Volume= 0.213 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.01' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.77'	<b>18.0" Round Culvert</b> L= 50.0' CMP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 91.77' / 91.57' S= 0.0040 '/' Cc= 0.900  
 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=2.93 cfs @ 12.01 hrs HW=92.99' (Free Discharge)

↑**1=Culvert** (Barrel Controls 2.93 cfs @ 2.60 fps)

### Summary for Pond CB 7: CB 7

Inflow Area = 0.253 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 0.91 cfs @ 12.01 hrs, Volume= 0.063 af  
 Outflow = 0.91 cfs @ 12.01 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min  
 Primary = 0.91 cfs @ 12.01 hrs, Volume= 0.063 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.21' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.42'	<b>12.0" Round Culvert</b> L= 154.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.42' / 91.65' S= 0.0050 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

**Primary OutFlow** Max=0.87 cfs @ 12.01 hrs HW=93.19' (Free Discharge)

↑**1=Culvert** (Barrel Controls 0.87 cfs @ 1.86 fps)

### Summary for Pond CB 8: CB 8

Inflow Area = 1.104 ac, 100.00% Impervious, Inflow Depth > 3.01" for 2-yr event  
 Inflow = 3.94 cfs @ 12.01 hrs, Volume= 0.277 af  
 Outflow = 3.94 cfs @ 12.01 hrs, Volume= 0.277 af, Atten= 0%, Lag= 0.0 min  
 Primary = 3.94 cfs @ 12.01 hrs, Volume= 0.277 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.10' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.57'	<b>18.0" Round Culvert</b> L= 80.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.57' / 91.25' S= 0.0040 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=3.80 cfs @ 12.01 hrs HW=93.06' (Free Discharge)

↑**1=Culvert** (Barrel Controls 3.80 cfs @ 2.70 fps)

### Summary for Pond GF A: GUSF A

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 0.61" for 2-yr event  
 Inflow = 1.00 cfs @ 12.13 hrs, Volume= 0.094 af  
 Outflow = 0.05 cfs @ 18.03 hrs, Volume= 0.094 af, Atten= 95%, Lag= 354.4 min  
 Discarded = 0.05 cfs @ 18.03 hrs, Volume= 0.094 af  
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af



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Type III 24-hr 2-yr Rainfall=3.30"

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Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 91.96' @ 18.03 hrs Surf.Area= 3,280 sf Storage= 2,350 cf

Plug-Flow detention time= 585.6 min calculated for 0.094 af (100% of inflow)  
 Center-of-Mass det. time= 585.5 min ( 1,484.4 - 898.9 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,505 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	2,900	0	0
92.00	3,300	2,480	2,480
92.50	3,750	1,763	4,242
93.00	4,250	2,000	6,242
93.50	4,800	2,263	8,505

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b>
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.05 cfs @ 18.03 hrs HW=91.96' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=91.20' TW=89.75' (TW follows 1.45' below HW)

↑**2=Broad-Crested Rectangular Weir**( Controls 0.00 cfs)

**Summary for Pond GF B: GUSF B**

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth > 2.59" for 2-yr event  
 Inflow = 3.94 cfs @ 12.01 hrs, Volume= 0.280 af  
 Outflow = 1.87 cfs @ 12.13 hrs, Volume= 0.186 af, Atten= 52%, Lag= 7.1 min  
 Discarded = 0.02 cfs @ 12.13 hrs, Volume= 0.041 af  
 Primary = 1.86 cfs @ 12.13 hrs, Volume= 0.145 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 92.91' @ 12.13 hrs Surf.Area= 4,255 sf Storage= 6,016 cf

Plug-Flow detention time= 372.1 min calculated for 0.186 af (66% of inflow)  
 Center-of-Mass det. time= 276.6 min ( 1,040.6 - 763.9 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,735 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	3,000	0	0
92.00	3,400	2,560	2,560
92.50	3,850	1,813	4,372
93.00	4,350	2,050	6,422
93.50	4,900	2,313	8,735

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area above 91.20'</b> Excluded Surface area = 3,000 sf
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.02 cfs @ 12.13 hrs HW=92.90' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Primary OutFlow** Max=1.84 cfs @ 12.13 hrs HW=92.90' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 1.84 cfs @ 1.13 fps)

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Type III 24-hr 10-yr Rainfall=4.90"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>SubcatchmentWS 1: WS 1</b>	Runoff Area=80,841 sf 49.99% Impervious Runoff Depth=1.52" Flow Length=380' Tc=2.4 min CN=64 Runoff=3.43 cfs 0.234 af
<b>SubcatchmentWS 2: WS 2</b>	Runoff Area=13,900 sf 100.00% Impervious Runoff Depth>4.54" Flow Length=122' Tc=1.6 min CN=98 Runoff=1.66 cfs 0.121 af
<b>SubcatchmentWS 2B: WS 2B</b>	Runoff Area=8,265 sf 82.76% Impervious Runoff Depth=2.90" Flow Length=30' Slope=0.4000 '/' Tc=0.1 min CN=81 Runoff=0.74 cfs 0.046 af
<b>SubcatchmentWS 3: WS 3</b>	Runoff Area=11,430 sf 100.00% Impervious Runoff Depth>4.54" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=1.43 cfs 0.099 af
<b>SubcatchmentWS 4: WS 4</b>	Runoff Area=11,746 sf 100.00% Impervious Runoff Depth>4.54" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=1.47 cfs 0.102 af
<b>SubcatchmentWS 5: WS 5</b>	Runoff Area=11,019 sf 100.00% Impervious Runoff Depth>4.54" Flow Length=50' Slope=0.0100 '/' Tc=0.9 min CN=98 Runoff=1.36 cfs 0.096 af
<b>SubcatchmentWS 6: WS 6</b>	Runoff Area=8,487 sf 32.39% Impervious Runoff Depth=0.76" Flow Length=30' Slope=0.0100 '/' Tc=0.6 min CN=52 Runoff=0.14 cfs 0.012 af
<b>SubcatchmentWS 7: WS 7</b>	Runoff Area=45,822 sf 26.18% Impervious Runoff Depth=0.18" Flow Length=430' Tc=2.3 min UI Adjusted CN=39 Runoff=0.03 cfs 0.016 af
<b>SubcatchmentWS 8: WS 7</b>	Runoff Area=7,509 sf 40.96% Impervious Runoff Depth=1.11" Flow Length=50' Slope=0.0700 '/' Tc=0.4 min CN=58 Runoff=0.22 cfs 0.016 af
<b>SubcatchmentWS7B: WS 7B</b>	Runoff Area=1,268 sf 82.81% Impervious Runoff Depth=2.90" Flow Length=30' Slope=0.0010 '/' Tc=1.5 min CN=81 Runoff=0.11 cfs 0.007 af
<b>Reach 1R: Reach 1</b>	Avg. Flow Depth=0.86' Max Vel=3.07 fps Inflow=3.43 cfs 0.234 af 18.0" Round Pipe n=0.013 L=270.0' S=0.0024 '/' Capacity=5.15 cfs Outflow=3.10 cfs 0.234 af
<b>Reach 2R: Reach 2</b>	Avg. Flow Depth=0.04' Max Vel=2.46 fps Inflow=0.03 cfs 0.016 af 12.0" Round Pipe n=0.013 L=40.0' S=0.0500 '/' Capacity=7.97 cfs Outflow=0.03 cfs 0.016 af
<b>Reach 4R: SUM 4</b>	Inflow=0.22 cfs 0.032 af Outflow=0.22 cfs 0.032 af
<b>Reach Sum 1: Sum A</b>	Inflow=0.25 cfs 0.063 af Outflow=0.25 cfs 0.063 af
<b>Reach Sum 2: Sum B</b>	Inflow=4.80 cfs 0.293 af Outflow=4.80 cfs 0.293 af
<b>Reach SUM 3: Sum Total</b>	Inflow=4.80 cfs 0.356 af Outflow=4.80 cfs 0.356 af

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Type III 24-hr 10-yr Rainfall=4.90"

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**Pond 1P: Overflow Detention Pond**Peak Elev=89.57' Storage=5,252 cf Inflow=4.80 cfs 0.356 af  
Discarded=0.60 cfs 0.356 af Primary=0.00 cfs 0.000 af Outflow=0.60 cfs 0.356 af**Pond CB 1: CB 2-1**Peak Elev=93.65' Inflow=1.66 cfs 0.121 af  
12.0" Round Culvert n=0.013 L=150.0' S=0.0040 ' / ' Outflow=1.66 cfs 0.121 af**Pond CB 2: CB 2**Peak Elev=92.97' Inflow=1.66 cfs 0.121 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' / ' Outflow=1.66 cfs 0.121 af**Pond CB 3: CB 3**Peak Elev=93.36' Inflow=1.43 cfs 0.099 af  
12.0" Round Culvert n=0.013 L=148.0' S=0.0040 ' / ' Outflow=1.43 cfs 0.099 af**Pond CB 4: CB 4**Peak Elev=93.14' Inflow=3.07 cfs 0.220 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' / ' Outflow=3.07 cfs 0.220 af**Pond CB 5: CB 5**Peak Elev=93.20' Inflow=1.47 cfs 0.102 af  
12.0" Round Culvert n=0.013 L=154.0' S=0.0040 ' / ' Outflow=1.47 cfs 0.102 af**Pond CB 6: CB 6**Peak Elev=93.39' Inflow=4.53 cfs 0.322 af  
18.0" Round Culvert n=0.025 L=50.0' S=0.0040 ' / ' Outflow=4.53 cfs 0.322 af**Pond CB 7: CB 7**Peak Elev=93.46' Inflow=1.36 cfs 0.096 af  
12.0" Round Culvert n=0.025 L=154.0' S=0.0050 ' / ' Outflow=1.36 cfs 0.096 af**Pond CB 8: CB 8**Peak Elev=94.02' Inflow=5.89 cfs 0.418 af  
18.0" Round Culvert n=0.025 L=80.0' S=0.0040 ' / ' Outflow=5.89 cfs 0.418 af**Pond GF A: GUSF A**Peak Elev=92.75' Storage=5,223 cf Inflow=3.10 cfs 0.234 af  
Discarded=0.06 cfs 0.151 af Primary=0.25 cfs 0.063 af Outflow=0.30 cfs 0.213 af**Pond GF B: GUSF B**Peak Elev=93.08' Storage=6,779 cf Inflow=6.02 cfs 0.430 af  
Discarded=0.02 cfs 0.043 af Primary=4.80 cfs 0.293 af Outflow=4.82 cfs 0.336 af**Total Runoff Area = 4.598 ac Runoff Volume = 0.749 af Average Runoff Depth = 1.95"**  
**42.97% Pervious = 1.976 ac 57.03% Impervious = 2.622 ac**

### Summary for Subcatchment WS 1: WS 1

Runoff = 3.43 cfs @ 12.05 hrs, Volume= 0.234 af, Depth= 1.52"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	40,416	98	Paved, HSG A
	40,425	30	Meadow, non-grazed, HSG A
	80,841	64	Weighted Average
	40,425		50.01% Pervious Area
	40,416		49.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.22		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.4	200	0.0250	2.37		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
0.3	130	0.0300	7.39	29.57	<b>Channel Flow,</b> Area= 4.0 sf Perim= 5.0' r= 0.80' n= 0.030 Earth, grassed & winding
2.4	380	Total			

### Summary for Subcatchment WS 2: WS 2

Runoff = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af, Depth> 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	13,900	98	Paved and Roof, HSG A
	13,900		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	50	0.0400	1.60		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.9	60	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	12	0.0300	1.08		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.6	122	Total			



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**Summary for Subcatchment WS 2B: WS 2B**

Runoff = 0.74 cfs @ 12.00 hrs, Volume= 0.046 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	6,840	98	Paved and Roof, HSG A
*	1,425	1	Drip Edge Filter
	8,265	81	Weighted Average
	1,425		17.24% Pervious Area
	6,840		82.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.4000	3.64		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 3: WS 3**

Runoff = 1.43 cfs @ 12.00 hrs, Volume= 0.099 af, Depth&gt; 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	11,430	98	Unconnected pavement, HSG A
	11,430		100.00% Impervious Area
	11,430		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 4: WS 4**

Runoff = 1.47 cfs @ 12.00 hrs, Volume= 0.102 af, Depth&gt; 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	11,746	98	Unconnected pavement, HSG A
	11,746		100.00% Impervious Area
	11,746		100.00% Unconnected

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 5: WS 5**

Runoff = 1.36 cfs @ 12.01 hrs, Volume= 0.096 af, Depth&gt; 4.54"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

Area (sf)	CN	Description
11,019	98	Unconnected pavement, HSG A
11,019		100.00% Impervious Area
11,019		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 6: WS 6**

Runoff = 0.14 cfs @ 12.04 hrs, Volume= 0.012 af, Depth= 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

Area (sf)	CN	Description
2,749	98	Unconnected pavement, HSG A
5,738	30	Meadow, non-grazed, HSG A
8,487	52	Weighted Average
5,738		67.61% Pervious Area
2,749		32.39% Impervious Area
2,749		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	30	0.0100	0.83		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 7: WS 7**

Runoff = 0.03 cfs @ 12.44 hrs, Volume= 0.016 af, Depth= 0.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

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Type III 24-hr 10-yr Rainfall=4.90"

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Area (sf)	CN	Adj	Description
33,828	30		Meadow, non-grazed, HSG A
11,994	98		Unconnected pavement, HSG A
45,822	48	39	Weighted Average, UI Adjusted
33,828			73.82% Pervious Area
11,994			26.18% Impervious Area
11,994			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.1000	2.31		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"
0.8	50	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	330	0.0175	4.79	23.95	<b>Channel Flow,</b> Area= 5.0 sf Perim= 8.0' r= 0.63' n= 0.030 Earth, grassed & winding
2.3	430	Total			

**Summary for Subcatchment WS 8: WS 7**

Runoff = 0.22 cfs @ 12.02 hrs, Volume= 0.016 af, Depth= 1.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

Area (sf)	CN	Description
4,433	30	Brush, Good, HSG A
3,076	98	Paved parking, HSG A
7,509	58	Weighted Average
4,433		59.04% Pervious Area
3,076		40.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0700	2.01		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS7B: WS 7B**

Runoff = 0.11 cfs @ 12.03 hrs, Volume= 0.007 af, Depth= 2.90"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10-yr Rainfall=4.90"

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Type III 24-hr 10-yr Rainfall=4.90"

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	Area (sf)	CN	Description
*	1,050	98	Paved and Roof, HSG A
*	218	1	Drip Edge Filter
	1,268	81	Weighted Average
	218		17.19% Pervious Area
	1,050		82.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	30	0.0010	0.33		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"

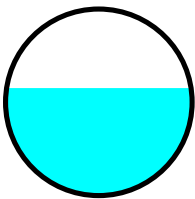
**Summary for Reach 1R: Reach 1**

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 1.52" for 10-yr event  
 Inflow = 3.43 cfs @ 12.05 hrs, Volume= 0.234 af  
 Outflow = 3.10 cfs @ 12.10 hrs, Volume= 0.234 af, Atten= 10%, Lag= 2.9 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 3.07 fps, Min. Travel Time= 1.5 min  
 Avg. Velocity= 1.16 fps, Avg. Travel Time= 3.9 min

Peak Storage= 285 cf @ 12.07 hrs  
 Average Depth at Peak Storage= 0.86'  
 Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.15 cfs

18.0" Round Pipe  
 n= 0.013 Corrugated PE, smooth interior  
 Length= 270.0' Slope= 0.0024 '  
 Inlet Invert= 91.90', Outlet Invert= 91.25'

**Summary for Reach 2R: Reach 2**

Inflow Area = 1.052 ac, 26.18% Impervious, Inflow Depth = 0.18" for 10-yr event  
 Inflow = 0.03 cfs @ 12.44 hrs, Volume= 0.016 af  
 Outflow = 0.03 cfs @ 12.45 hrs, Volume= 0.016 af, Atten= 0%, Lag= 0.6 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 2.46 fps, Min. Travel Time= 0.3 min  
 Avg. Velocity= 1.98 fps, Avg. Travel Time= 0.3 min

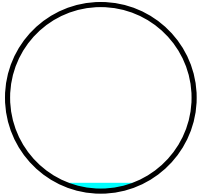
Peak Storage= 1 cf @ 12.44 hrs  
 Average Depth at Peak Storage= 0.04'  
 Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.97 cfs

12.0" Round Pipe

n= 0.013 Corrugated PE, smooth interior

Length= 40.0' Slope= 0.0500 '/'

Inlet Invert= 91.90', Outlet Invert= 89.90'

**Summary for Reach 4R: SUM 4**

Inflow Area = 4.379 ac, 55.74% Impervious, Inflow Depth = 0.09" for 10-yr event  
Inflow = 0.22 cfs @ 12.02 hrs, Volume= 0.032 af  
Outflow = 0.22 cfs @ 12.02 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach Sum 1: Sum A**

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 0.40" for 10-yr event  
Inflow = 0.25 cfs @ 13.62 hrs, Volume= 0.063 af  
Outflow = 0.25 cfs @ 13.62 hrs, Volume= 0.063 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach Sum 2: Sum B**

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth = 2.71" for 10-yr event  
Inflow = 4.80 cfs @ 12.06 hrs, Volume= 0.293 af  
Outflow = 4.80 cfs @ 12.06 hrs, Volume= 0.293 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

**Summary for Reach SUM 3: Sum Total**

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 1.35" for 10-yr event  
Inflow = 4.80 cfs @ 12.06 hrs, Volume= 0.356 af  
Outflow = 4.80 cfs @ 12.06 hrs, Volume= 0.356 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs



### Summary for Pond 1P: Overflow Detention Pond

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 1.35" for 10-yr event  
 Inflow = 4.80 cfs @ 12.06 hrs, Volume= 0.356 af  
 Outflow = 0.60 cfs @ 11.85 hrs, Volume= 0.356 af, Atten= 88%, Lag= 0.0 min  
 Discarded = 0.60 cfs @ 11.85 hrs, Volume= 0.356 af  
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 89.57' @ 12.81 hrs Surf.Area= 3,687 sf Storage= 5,252 cf

Plug-Flow detention time= 87.1 min calculated for 0.355 af (100% of inflow)  
 Center-of-Mass det. time= 87.1 min ( 936.0 - 848.9 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	23,535 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
88.00	3,000	0	0
89.00	3,436	3,218	3,218
90.00	3,875	3,656	6,874
91.00	4,342	4,109	10,982
92.00	4,825	4,584	15,566
93.00	5,440	5,133	20,698
93.50	5,908	2,837	23,535

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>0.60 cfs Exfiltration at all elevations</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.60 cfs @ 11.85 hrs HW=88.06' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.60 cfs)

**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=88.00' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir ( Controls 0.00 cfs)

### Summary for Pond CB 1: CB 2-1

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
 Inflow = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af  
 Outflow = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.65' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.77'	<b>12.0" Round Culvert</b>

L= 150.0' CPP, projecting, no headwall, Ke= 0.900  
 Inlet / Outlet Invert= 92.77' / 92.17' S= 0.0040 '/' Cc= 0.900  
 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.59 cfs @ 12.02 hrs HW=93.62' (Free Discharge)

↑1=Culvert (Barrel Controls 1.59 cfs @ 3.00 fps)

### Summary for Pond CB 2: CB 2

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
 Inflow = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af  
 Outflow = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.66 cfs @ 12.02 hrs, Volume= 0.121 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 92.97' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.17'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.17' / 91.97' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=1.59 cfs @ 12.02 hrs HW=92.95' (Free Discharge)

↑1=Culvert (Barrel Controls 1.59 cfs @ 2.84 fps)

### Summary for Pond CB 3: CB 3

Inflow Area = 0.262 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
 Inflow = 1.43 cfs @ 12.00 hrs, Volume= 0.099 af  
 Outflow = 1.43 cfs @ 12.00 hrs, Volume= 0.099 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.43 cfs @ 12.00 hrs, Volume= 0.099 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 93.36' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.56'	<b>12.0" Round Culvert</b> L= 148.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.56' / 91.97' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.40 cfs @ 12.00 hrs HW=93.35' (Free Discharge)

↑1=Culvert (Barrel Controls 1.40 cfs @ 2.91 fps)

### Summary for Pond CB 4: CB 4

Inflow Area = 0.581 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
 Inflow = 3.07 cfs @ 12.01 hrs, Volume= 0.220 af  
 Outflow = 3.07 cfs @ 12.01 hrs, Volume= 0.220 af, Atten= 0%, Lag= 0.0 min  
 Primary = 3.07 cfs @ 12.01 hrs, Volume= 0.220 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.14' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.97'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.97' / 91.77' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=2.95 cfs @ 12.01 hrs HW=93.10' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 2.95 cfs @ 3.31 fps)

### Summary for Pond CB 5: CB 5

Inflow Area = 0.270 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
 Inflow = 1.47 cfs @ 12.00 hrs, Volume= 0.102 af  
 Outflow = 1.47 cfs @ 12.00 hrs, Volume= 0.102 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.47 cfs @ 12.00 hrs, Volume= 0.102 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.20' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.39'	<b>12.0" Round Culvert</b> L= 154.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.39' / 91.77' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.44 cfs @ 12.00 hrs HW=93.19' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.44 cfs @ 2.94 fps)

### Summary for Pond CB 6: CB 6

Inflow Area = 0.851 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
 Inflow = 4.53 cfs @ 12.01 hrs, Volume= 0.322 af  
 Outflow = 4.53 cfs @ 12.01 hrs, Volume= 0.322 af, Atten= 0%, Lag= 0.0 min  
 Primary = 4.53 cfs @ 12.01 hrs, Volume= 0.322 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.39' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.77'	<b>18.0" Round Culvert</b> L= 50.0' CMP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 91.77' / 91.57' S= 0.0040 '/ Cc= 0.900  
n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=4.38 cfs @ 12.01 hrs HW=93.35' (Free Discharge)

↑**1=Culvert** (Barrel Controls 4.38 cfs @ 2.92 fps)

### Summary for Pond CB 7: CB 7

Inflow Area = 0.253 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
Inflow = 1.36 cfs @ 12.01 hrs, Volume= 0.096 af  
Outflow = 1.36 cfs @ 12.01 hrs, Volume= 0.096 af, Atten= 0%, Lag= 0.0 min  
Primary = 1.36 cfs @ 12.01 hrs, Volume= 0.096 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Peak Elev= 93.46' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.42'	<b>12.0" Round Culvert</b> L= 154.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.42' / 91.65' S= 0.0050 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.31 cfs @ 12.01 hrs HW=93.43' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.31 cfs @ 2.04 fps)

### Summary for Pond CB 8: CB 8

Inflow Area = 1.104 ac, 100.00% Impervious, Inflow Depth > 4.54" for 10-yr event  
Inflow = 5.89 cfs @ 12.01 hrs, Volume= 0.418 af  
Outflow = 5.89 cfs @ 12.01 hrs, Volume= 0.418 af, Atten= 0%, Lag= 0.0 min  
Primary = 5.89 cfs @ 12.01 hrs, Volume= 0.418 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Peak Elev= 94.02' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.57'	<b>18.0" Round Culvert</b> L= 80.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.57' / 91.25' S= 0.0040 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=5.69 cfs @ 12.01 hrs HW=93.93' (Free Discharge)

↑**1=Culvert** (Barrel Controls 5.69 cfs @ 3.22 fps)

### Summary for Pond GF A: GUSF A

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 1.52" for 10-yr event  
Inflow = 3.10 cfs @ 12.10 hrs, Volume= 0.234 af  
Outflow = 0.30 cfs @ 13.62 hrs, Volume= 0.213 af, Atten= 90%, Lag= 91.5 min  
Discarded = 0.06 cfs @ 13.62 hrs, Volume= 0.151 af  
Primary = 0.25 cfs @ 13.62 hrs, Volume= 0.063 af

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Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 92.75' @ 13.62 hrs Surf.Area= 4,003 sf Storage= 5,223 cf

Plug-Flow detention time= 679.0 min calculated for 0.213 af (91% of inflow)  
 Center-of-Mass det. time= 634.3 min ( 1,500.1 - 865.8 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,505 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	2,900	0	0
92.00	3,300	2,480	2,480
92.50	3,750	1,763	4,242
93.00	4,250	2,000	6,242
93.50	4,800	2,263	8,505

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b>
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.06 cfs @ 13.62 hrs HW=92.75' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.06 cfs)

**Primary OutFlow** Max=0.24 cfs @ 13.62 hrs HW=92.75' TW=91.30' (TW follows 1.45' below HW)

↑**2=Broad-Crested Rectangular Weir**(Weir Controls 0.24 cfs @ 0.57 fps)

**Summary for Pond GF B: GUSF B**

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth > 3.97" for 10-yr event  
 Inflow = 6.02 cfs @ 12.01 hrs, Volume= 0.430 af  
 Outflow = 4.82 cfs @ 12.06 hrs, Volume= 0.336 af, Atten= 20%, Lag= 3.1 min  
 Discarded = 0.02 cfs @ 12.06 hrs, Volume= 0.043 af  
 Primary = 4.80 cfs @ 12.06 hrs, Volume= 0.293 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.08' @ 12.06 hrs Surf.Area= 4,439 sf Storage= 6,779 cf

Plug-Flow detention time= 253.4 min calculated for 0.336 af (78% of inflow)  
 Center-of-Mass det. time= 173.3 min ( 935.7 - 762.4 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,735 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)



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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	3,000	0	0
92.00	3,400	2,560	2,560
92.50	3,850	1,813	4,372
93.00	4,350	2,050	6,422
93.50	4,900	2,313	8,735

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area above 91.20'</b> Excluded Surface area = 3,000 sf
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.02 cfs @ 12.06 hrs HW=93.07' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Primary OutFlow** Max=4.68 cfs @ 12.06 hrs HW=93.07' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 4.68 cfs @ 1.56 fps)

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>SubcatchmentWS 1: WS 1</b>	Runoff Area=80,841 sf 49.99% Impervious Runoff Depth=2.41" Flow Length=380' Tc=2.4 min CN=64 Runoff=5.64 cfs 0.372 af
<b>SubcatchmentWS 2: WS 2</b>	Runoff Area=13,900 sf 100.00% Impervious Runoff Depth>5.78" Flow Length=122' Tc=1.6 min CN=98 Runoff=2.11 cfs 0.154 af
<b>SubcatchmentWS 2B: WS 2B</b>	Runoff Area=8,265 sf 82.76% Impervious Runoff Depth=4.07" Flow Length=30' Slope=0.4000 '/' Tc=0.1 min CN=81 Runoff=1.03 cfs 0.064 af
<b>SubcatchmentWS 3: WS 3</b>	Runoff Area=11,430 sf 100.00% Impervious Runoff Depth>5.78" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=1.82 cfs 0.126 af
<b>SubcatchmentWS 4: WS 4</b>	Runoff Area=11,746 sf 100.00% Impervious Runoff Depth>5.78" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=1.87 cfs 0.130 af
<b>SubcatchmentWS 5: WS 5</b>	Runoff Area=11,019 sf 100.00% Impervious Runoff Depth>5.78" Flow Length=50' Slope=0.0100 '/' Tc=0.9 min CN=98 Runoff=1.72 cfs 0.122 af
<b>SubcatchmentWS 6: WS 6</b>	Runoff Area=8,487 sf 32.39% Impervious Runoff Depth=1.40" Flow Length=30' Slope=0.0100 '/' Tc=0.6 min CN=52 Runoff=0.31 cfs 0.023 af
<b>SubcatchmentWS 7: WS 7</b>	Runoff Area=45,822 sf 26.18% Impervious Runoff Depth=0.50" Flow Length=430' Tc=2.3 min UI Adjusted CN=39 Runoff=0.23 cfs 0.044 af
<b>SubcatchmentWS 8: WS 7</b>	Runoff Area=7,509 sf 40.96% Impervious Runoff Depth=1.88" Flow Length=50' Slope=0.0700 '/' Tc=0.4 min CN=58 Runoff=0.40 cfs 0.027 af
<b>SubcatchmentWS7B: WS 7B</b>	Runoff Area=1,268 sf 82.81% Impervious Runoff Depth=4.07" Flow Length=30' Slope=0.0010 '/' Tc=1.5 min CN=81 Runoff=0.15 cfs 0.010 af
<b>Reach 1R: Reach 1</b>	Avg. Flow Depth=1.27' Max Vel=3.32 fps Inflow=5.64 cfs 0.372 af 18.0" Round Pipe n=0.013 L=270.0' S=0.0024 '/' Capacity=5.15 cfs Outflow=5.10 cfs 0.372 af
<b>Reach 2R: Reach 2</b>	Avg. Flow Depth=0.12' Max Vel=4.48 fps Inflow=0.23 cfs 0.044 af 12.0" Round Pipe n=0.013 L=40.0' S=0.0500 '/' Capacity=7.97 cfs Outflow=0.23 cfs 0.044 af
<b>Reach 4R: SUM 4</b>	Inflow=0.43 cfs 0.071 af Outflow=0.43 cfs 0.071 af
<b>Reach Sum 1: Sum A</b>	Inflow=1.81 cfs 0.196 af Outflow=1.81 cfs 0.196 af
<b>Reach Sum 2: Sum B</b>	Inflow=6.41 cfs 0.417 af Outflow=6.41 cfs 0.417 af
<b>Reach SUM 3: Sum Total</b>	Inflow=6.41 cfs 0.613 af Outflow=6.41 cfs 0.613 af

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**Pond 1P: Overflow Detention Pond**Peak Elev=91.41' Storage=12,788 cf Inflow=6.41 cfs 0.613 af  
Discarded=0.60 cfs 0.613 af Primary=0.00 cfs 0.000 af Outflow=0.60 cfs 0.613 af**Pond CB 1: CB 2-1**Peak Elev=93.82' Inflow=2.11 cfs 0.154 af  
12.0" Round Culvert n=0.013 L=150.0' S=0.0040 ' Outflow=2.11 cfs 0.154 af**Pond CB 2: CB 2**Peak Elev=93.09' Inflow=2.11 cfs 0.154 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' Outflow=2.11 cfs 0.154 af**Pond CB 3: CB 3**Peak Elev=93.50' Inflow=1.82 cfs 0.126 af  
12.0" Round Culvert n=0.013 L=148.0' S=0.0040 ' Outflow=1.82 cfs 0.126 af**Pond CB 4: CB 4**Peak Elev=93.36' Inflow=3.89 cfs 0.280 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' Outflow=3.89 cfs 0.280 af**Pond CB 5: CB 5**Peak Elev=93.34' Inflow=1.87 cfs 0.130 af  
12.0" Round Culvert n=0.013 L=154.0' S=0.0040 ' Outflow=1.87 cfs 0.130 af**Pond CB 6: CB 6**Peak Elev=93.93' Inflow=5.75 cfs 0.410 af  
18.0" Round Culvert n=0.025 L=50.0' S=0.0040 ' Outflow=5.75 cfs 0.410 af**Pond CB 7: CB 7**Peak Elev=94.10' Inflow=1.72 cfs 0.122 af  
12.0" Round Culvert n=0.025 L=154.0' S=0.0050 ' Outflow=1.72 cfs 0.122 af**Pond CB 8: CB 8**Peak Elev=94.77' Inflow=7.47 cfs 0.532 af  
18.0" Round Culvert n=0.025 L=80.0' S=0.0040 ' Outflow=7.47 cfs 0.532 af**Pond GF A: GUSF A**Peak Elev=92.90' Storage=5,833 cf Inflow=5.10 cfs 0.372 af  
Discarded=0.06 cfs 0.154 af Primary=1.81 cfs 0.196 af Outflow=1.87 cfs 0.351 af**Pond GF B: GUSF B**Peak Elev=93.16' Storage=7,117 cf Inflow=7.77 cfs 0.554 af  
Discarded=0.02 cfs 0.043 af Primary=6.41 cfs 0.417 af Outflow=6.43 cfs 0.460 af**Total Runoff Area = 4.598 ac Runoff Volume = 1.072 af Average Runoff Depth = 2.80"**  
**42.97% Pervious = 1.976 ac 57.03% Impervious = 2.622 ac**

### Summary for Subcatchment WS 1: WS 1

Runoff = 5.64 cfs @ 12.05 hrs, Volume= 0.372 af, Depth= 2.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	40,416	98	Paved, HSG A
	40,425	30	Meadow, non-grazed, HSG A
	80,841	64	Weighted Average
	40,425		50.01% Pervious Area
	40,416		49.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.22		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.4	200	0.0250	2.37		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
0.3	130	0.0300	7.39	29.57	<b>Channel Flow,</b> Area= 4.0 sf Perim= 5.0' r= 0.80' n= 0.030 Earth, grassed & winding
2.4	380	Total			

### Summary for Subcatchment WS 2: WS 2

Runoff = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af, Depth> 5.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	13,900	98	Paved and Roof, HSG A
	13,900		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	50	0.0400	1.60		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.9	60	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	12	0.0300	1.08		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.6	122	Total			

### Summary for Subcatchment WS 2B: WS 2B

Runoff = 1.03 cfs @ 12.00 hrs, Volume= 0.064 af, Depth= 4.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
*	6,840	98	Paved and Roof, HSG A
*	1,425	1	Drip Edge Filter
	8,265	81	Weighted Average
	1,425		17.24% Pervious Area
	6,840		82.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.4000	3.64		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"

### Summary for Subcatchment WS 3: WS 3

Runoff = 1.82 cfs @ 12.00 hrs, Volume= 0.126 af, Depth> 5.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	11,430	98	Unconnected pavement, HSG A
	11,430		100.00% Impervious Area
	11,430		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

### Summary for Subcatchment WS 4: WS 4

Runoff = 1.87 cfs @ 12.00 hrs, Volume= 0.130 af, Depth> 5.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

	Area (sf)	CN	Description
	11,746	98	Unconnected pavement, HSG A
	11,746		100.00% Impervious Area
	11,746		100.00% Unconnected



**REVFinal(3RII) PostSaco StorageRev**

Type III 24-hr 25-yr Rainfall=6.20"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 5: WS 5**

Runoff = 1.72 cfs @ 12.01 hrs, Volume= 0.122 af, Depth&gt; 5.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

Area (sf)	CN	Description
11,019	98	Unconnected pavement, HSG A
11,019		100.00% Impervious Area
11,019		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 6: WS 6**

Runoff = 0.31 cfs @ 12.02 hrs, Volume= 0.023 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

Area (sf)	CN	Description
2,749	98	Unconnected pavement, HSG A
5,738	30	Meadow, non-grazed, HSG A
8,487	52	Weighted Average
5,738		67.61% Pervious Area
2,749		32.39% Impervious Area
2,749		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	30	0.0100	0.83		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS 7: WS 7**

Runoff = 0.23 cfs @ 12.27 hrs, Volume= 0.044 af, Depth= 0.50"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

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Type III 24-hr 25-yr Rainfall=6.20"

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Area (sf)	CN	Adj	Description
33,828	30		Meadow, non-grazed, HSG A
11,994	98		Unconnected pavement, HSG A
45,822	48	39	Weighted Average, UI Adjusted
33,828			73.82% Pervious Area
11,994			26.18% Impervious Area
11,994			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.1000	2.31		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"
0.8	50	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	330	0.0175	4.79	23.95	<b>Channel Flow,</b> Area= 5.0 sf Perim= 8.0' r= 0.63' n= 0.030 Earth, grassed & winding
2.3	430	Total			

**Summary for Subcatchment WS 8: WS 7**

Runoff = 0.40 cfs @ 12.02 hrs, Volume= 0.027 af, Depth= 1.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

Area (sf)	CN	Description
4,433	30	Brush, Good, HSG A
3,076	98	Paved parking, HSG A
7,509	58	Weighted Average
4,433		59.04% Pervious Area
3,076		40.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0700	2.01		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Summary for Subcatchment WS7B: WS 7B**

Runoff = 0.15 cfs @ 12.03 hrs, Volume= 0.010 af, Depth= 4.07"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 25-yr Rainfall=6.20"

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Type III 24-hr 25-yr Rainfall=6.20"

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	Area (sf)	CN	Description
*	1,050	98	Paved and Roof, HSG A
*	218	1	Drip Edge Filter
	1,268	81	Weighted Average
	218		17.19% Pervious Area
	1,050		82.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	30	0.0010	0.33		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"

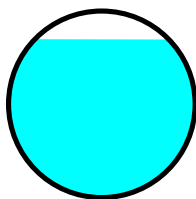
**Summary for Reach 1R: Reach 1**

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 2.41" for 25-yr event  
 Inflow = 5.64 cfs @ 12.05 hrs, Volume= 0.372 af  
 Outflow = 5.10 cfs @ 12.09 hrs, Volume= 0.372 af, Atten= 10%, Lag= 2.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 3.32 fps, Min. Travel Time= 1.4 min  
 Avg. Velocity= 1.29 fps, Avg. Travel Time= 3.5 min

Peak Storage= 433 cf @ 12.07 hrs  
 Average Depth at Peak Storage= 1.27'  
 Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.15 cfs

18.0" Round Pipe  
 n= 0.013 Corrugated PE, smooth interior  
 Length= 270.0' Slope= 0.0024 '  
 Inlet Invert= 91.90', Outlet Invert= 91.25'

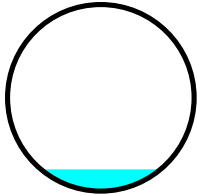
**Summary for Reach 2R: Reach 2**

Inflow Area = 1.052 ac, 26.18% Impervious, Inflow Depth = 0.50" for 25-yr event  
 Inflow = 0.23 cfs @ 12.27 hrs, Volume= 0.044 af  
 Outflow = 0.23 cfs @ 12.27 hrs, Volume= 0.044 af, Atten= 0%, Lag= 0.1 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 4.48 fps, Min. Travel Time= 0.1 min  
 Avg. Velocity= 2.59 fps, Avg. Travel Time= 0.3 min

Peak Storage= 2 cf @ 12.27 hrs  
 Average Depth at Peak Storage= 0.12'  
 Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.97 cfs

12.0" Round Pipe  
n= 0.013 Corrugated PE, smooth interior  
Length= 40.0' Slope= 0.0500 '/'  
Inlet Invert= 91.90', Outlet Invert= 89.90'



### Summary for Reach 4R: SUM 4

Inflow Area = 4.379 ac, 55.74% Impervious, Inflow Depth = 0.20" for 25-yr event  
Inflow = 0.43 cfs @ 12.07 hrs, Volume= 0.071 af  
Outflow = 0.43 cfs @ 12.07 hrs, Volume= 0.071 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Summary for Reach Sum 1: Sum A

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 1.27" for 25-yr event  
Inflow = 1.81 cfs @ 12.40 hrs, Volume= 0.196 af  
Outflow = 1.81 cfs @ 12.40 hrs, Volume= 0.196 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Summary for Reach Sum 2: Sum B

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth = 3.85" for 25-yr event  
Inflow = 6.41 cfs @ 12.06 hrs, Volume= 0.417 af  
Outflow = 6.41 cfs @ 12.06 hrs, Volume= 0.417 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Summary for Reach SUM 3: Sum Total

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 2.33" for 25-yr event  
Inflow = 6.41 cfs @ 12.06 hrs, Volume= 0.613 af  
Outflow = 6.41 cfs @ 12.06 hrs, Volume= 0.613 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Summary for Pond 1P: Overflow Detention Pond

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 2.33" for 25-yr event  
 Inflow = 6.41 cfs @ 12.06 hrs, Volume= 0.613 af  
 Outflow = 0.60 cfs @ 11.65 hrs, Volume= 0.613 af, Atten= 91%, Lag= 0.0 min  
 Discarded = 0.60 cfs @ 11.65 hrs, Volume= 0.613 af  
 Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 91.41' @ 14.61 hrs Surf.Area= 4,538 sf Storage= 12,788 cf

Plug-Flow detention time= 221.9 min calculated for 0.612 af (100% of inflow)  
 Center-of-Mass det. time= 221.6 min ( 1,061.4 - 839.8 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	23,535 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
88.00	3,000	0	0
89.00	3,436	3,218	3,218
90.00	3,875	3,656	6,874
91.00	4,342	4,109	10,982
92.00	4,825	4,584	15,566
93.00	5,440	5,133	20,698
93.50	5,908	2,837	23,535

Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>0.60 cfs Exfiltration at all elevations</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.60 cfs @ 11.65 hrs HW=88.07' (Free Discharge)  
 ↑1=**Exfiltration** (Exfiltration Controls 0.60 cfs)

**Primary OutFlow** Max=0.00 cfs @ 5.00 hrs HW=88.00' (Free Discharge)  
 ↑2=**Broad-Crested Rectangular Weir**( Controls 0.00 cfs)

### Summary for Pond CB 1: CB 2-1

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
 Inflow = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af  
 Outflow = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.82' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.77'	<b>12.0" Round Culvert</b>



L= 150.0' CPP, projecting, no headwall, Ke= 0.900  
 Inlet / Outlet Invert= 92.77' / 92.17' S= 0.0040 '/ Cc= 0.900  
 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=2.02 cfs @ 12.02 hrs HW=93.78' (Free Discharge)

↑**1=Culvert** (Barrel Controls 2.02 cfs @ 3.15 fps)

### Summary for Pond CB 2: CB 2

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
 Inflow = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af  
 Outflow = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.11 cfs @ 12.02 hrs, Volume= 0.154 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 93.09' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.17'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.17' / 91.97' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=2.02 cfs @ 12.02 hrs HW=93.06' (Free Discharge)

↑**1=Culvert** (Barrel Controls 2.02 cfs @ 3.01 fps)

### Summary for Pond CB 3: CB 3

Inflow Area = 0.262 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
 Inflow = 1.82 cfs @ 12.00 hrs, Volume= 0.126 af  
 Outflow = 1.82 cfs @ 12.00 hrs, Volume= 0.126 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.82 cfs @ 12.00 hrs, Volume= 0.126 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 93.50' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.56'	<b>12.0" Round Culvert</b> L= 148.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.56' / 91.97' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.78 cfs @ 12.00 hrs HW=93.48' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.78 cfs @ 3.07 fps)

### Summary for Pond CB 4: CB 4

Inflow Area = 0.581 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
 Inflow = 3.89 cfs @ 12.01 hrs, Volume= 0.280 af  
 Outflow = 3.89 cfs @ 12.01 hrs, Volume= 0.280 af, Atten= 0%, Lag= 0.0 min  
 Primary = 3.89 cfs @ 12.01 hrs, Volume= 0.280 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.36' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.97'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.97' / 91.77' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=3.74 cfs @ 12.01 hrs HW=93.32' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 3.74 cfs @ 3.52 fps)

### Summary for Pond CB 5: CB 5

Inflow Area = 0.270 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
 Inflow = 1.87 cfs @ 12.00 hrs, Volume= 0.130 af  
 Outflow = 1.87 cfs @ 12.00 hrs, Volume= 0.130 af, Atten= 0%, Lag= 0.0 min  
 Primary = 1.87 cfs @ 12.00 hrs, Volume= 0.130 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.34' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.39'	<b>12.0" Round Culvert</b> L= 154.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.39' / 91.77' S= 0.0040 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.83 cfs @ 12.00 hrs HW=93.33' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.83 cfs @ 3.10 fps)

### Summary for Pond CB 6: CB 6

Inflow Area = 0.851 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
 Inflow = 5.75 cfs @ 12.01 hrs, Volume= 0.410 af  
 Outflow = 5.75 cfs @ 12.01 hrs, Volume= 0.410 af, Atten= 0%, Lag= 0.0 min  
 Primary = 5.75 cfs @ 12.01 hrs, Volume= 0.410 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.93' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.77'	<b>18.0" Round Culvert</b> L= 50.0' CMP, projecting, no headwall, Ke= 0.900

Inlet / Outlet Invert= 91.77' / 91.57' S= 0.0040 '/' Cc= 0.900  
n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=5.43 cfs @ 12.01 hrs HW=93.84' (Free Discharge)

↑**1=Culvert** (Barrel Controls 5.43 cfs @ 3.07 fps)

### Summary for Pond CB 7: CB 7

Inflow Area = 0.253 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
Inflow = 1.72 cfs @ 12.01 hrs, Volume= 0.122 af  
Outflow = 1.72 cfs @ 12.01 hrs, Volume= 0.122 af, Atten= 0%, Lag= 0.0 min  
Primary = 1.72 cfs @ 12.01 hrs, Volume= 0.122 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Peak Elev= 94.10' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.42'	<b>12.0" Round Culvert</b> L= 154.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.42' / 91.65' S= 0.0050 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.64 cfs @ 12.01 hrs HW=93.98' (Free Discharge)

↑**1=Culvert** (Barrel Controls 1.64 cfs @ 2.08 fps)

### Summary for Pond CB 8: CB 8

Inflow Area = 1.104 ac, 100.00% Impervious, Inflow Depth > 5.78" for 25-yr event  
Inflow = 7.47 cfs @ 12.01 hrs, Volume= 0.532 af  
Outflow = 7.47 cfs @ 12.01 hrs, Volume= 0.532 af, Atten= 0%, Lag= 0.0 min  
Primary = 7.47 cfs @ 12.01 hrs, Volume= 0.532 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Peak Elev= 94.77' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.57'	<b>18.0" Round Culvert</b> L= 80.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.57' / 91.25' S= 0.0040 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=7.22 cfs @ 12.01 hrs HW=94.64' (Free Discharge)

↑**1=Culvert** (Barrel Controls 7.22 cfs @ 4.08 fps)

### Summary for Pond GF A: GUSF A

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 2.41" for 25-yr event  
Inflow = 5.10 cfs @ 12.09 hrs, Volume= 0.372 af  
Outflow = 1.87 cfs @ 12.40 hrs, Volume= 0.351 af, Atten= 63%, Lag= 18.6 min  
Discarded = 0.06 cfs @ 12.40 hrs, Volume= 0.154 af  
Primary = 1.81 cfs @ 12.40 hrs, Volume= 0.196 af

**REVFinal(3RII) PostSaco StorageRev**

Type III 24-hr 25-yr Rainfall=6.20"

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Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 92.90' @ 12.40 hrs Surf.Area= 4,152 sf Storage= 5,833 cf

Plug-Flow detention time= 423.7 min calculated for 0.350 af (94% of inflow)  
 Center-of-Mass det. time= 394.2 min ( 1,245.4 - 851.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,505 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	2,900	0	0
92.00	3,300	2,480	2,480
92.50	3,750	1,763	4,242
93.00	4,250	2,000	6,242
93.50	4,800	2,263	8,505

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b>
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.06 cfs @ 12.40 hrs HW=92.90' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.06 cfs)

**Primary OutFlow** Max=1.81 cfs @ 12.40 hrs HW=92.90' TW=91.45' (TW follows 1.45' below HW)

↑**2=Broad-Crested Rectangular Weir**(Weir Controls 1.81 cfs @ 1.12 fps)

**Summary for Pond GF B: GUSF B**

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth > 5.12" for 25-yr event  
 Inflow = 7.77 cfs @ 12.01 hrs, Volume= 0.554 af  
 Outflow = 6.43 cfs @ 12.06 hrs, Volume= 0.460 af, Atten= 17%, Lag= 2.9 min  
 Discarded = 0.02 cfs @ 12.06 hrs, Volume= 0.043 af  
 Primary = 6.41 cfs @ 12.06 hrs, Volume= 0.417 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.16' @ 12.06 hrs Surf.Area= 4,522 sf Storage= 7,117 cf

Plug-Flow detention time= 206.6 min calculated for 0.460 af (83% of inflow)  
 Center-of-Mass det. time= 136.9 min ( 899.0 - 762.0 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,735 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

**REVFinal(3RII) PostSaco StorageRev**

Type III 24-hr 25-yr Rainfall=6.20"

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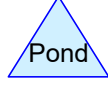
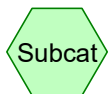
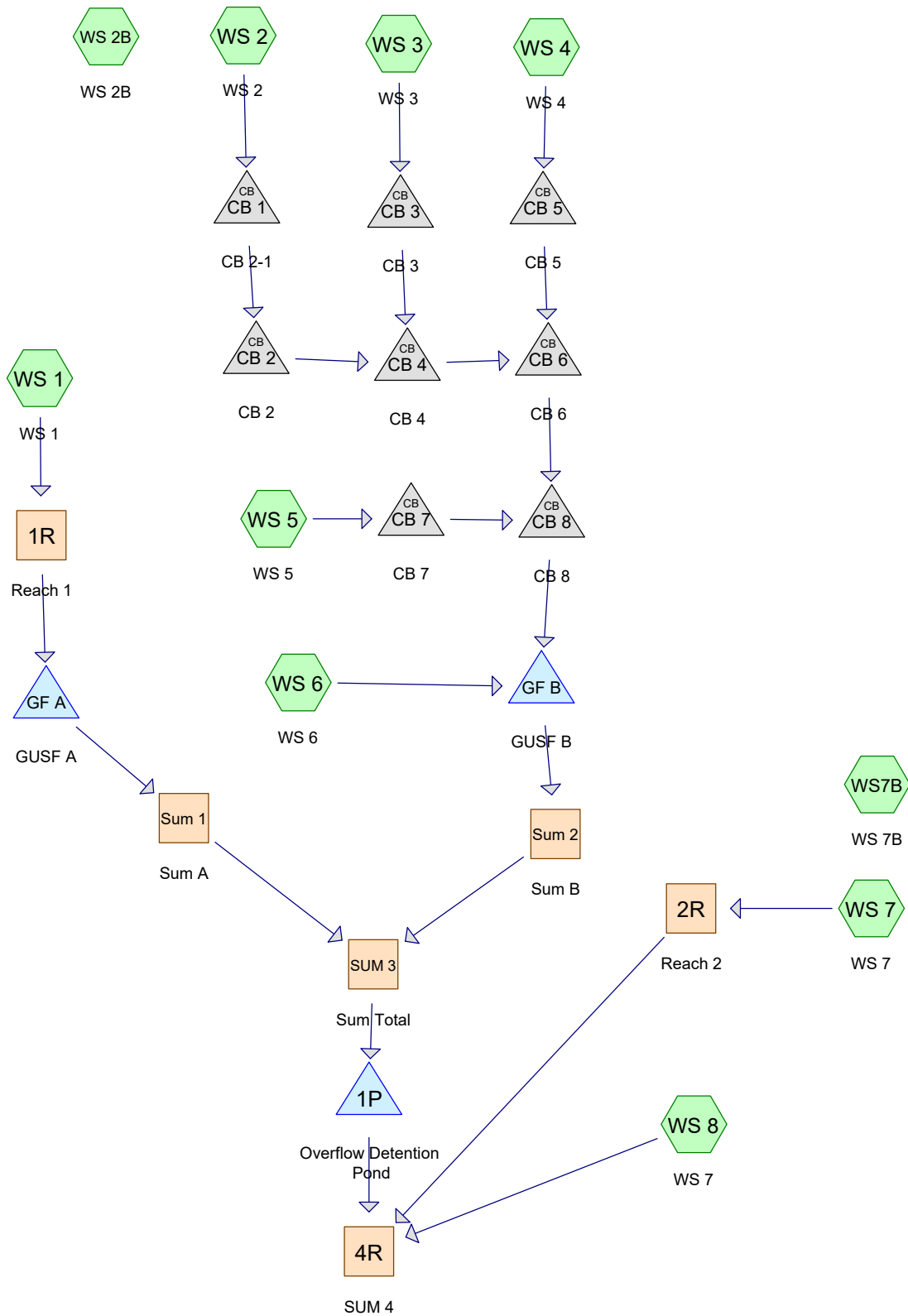
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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	3,000	0	0
92.00	3,400	2,560	2,560
92.50	3,850	1,813	4,372
93.00	4,350	2,050	6,422
93.50	4,900	2,313	8,735

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area above 91.20'</b> Excluded Surface area = 3,000 sf
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.02 cfs @ 12.06 hrs HW=93.15' (Free Discharge)↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)**Primary OutFlow** Max=6.28 cfs @ 12.06 hrs HW=93.15' (Free Discharge)↑**2=Broad-Crested Rectangular Weir** (Weir Controls 6.28 cfs @ 1.74 fps)





# Routing Diagram for REVFinal(3RII) PostSaco StorageRev

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**REVFinal(3RII) PostSaco StorageRev**

Type III 24-hr 50-yr Rainfall=7.30"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

<b>SubcatchmentWS 1: WS 1</b>	Runoff Area=80,841 sf 49.99% Impervious Runoff Depth=3.23" Flow Length=380' Tc=2.4 min CN=64 Runoff=7.67 cfs 0.500 af
<b>SubcatchmentWS 2: WS 2</b>	Runoff Area=13,900 sf 100.00% Impervious Runoff Depth>6.82" Flow Length=122' Tc=1.6 min CN=98 Runoff=2.48 cfs 0.181 af
<b>SubcatchmentWS 2B: WS 2B</b>	Runoff Area=8,265 sf 82.76% Impervious Runoff Depth=5.08" Flow Length=30' Slope=0.4000 '/' Tc=0.1 min CN=81 Runoff=1.28 cfs 0.080 af
<b>SubcatchmentWS 3: WS 3</b>	Runoff Area=11,430 sf 100.00% Impervious Runoff Depth>6.82" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=2.14 cfs 0.149 af
<b>SubcatchmentWS 4: WS 4</b>	Runoff Area=11,746 sf 100.00% Impervious Runoff Depth>6.82" Flow Length=50' Slope=0.0900 '/' Tc=0.4 min CN=98 Runoff=2.20 cfs 0.153 af
<b>SubcatchmentWS 5: WS 5</b>	Runoff Area=11,019 sf 100.00% Impervious Runoff Depth>6.82" Flow Length=50' Slope=0.0100 '/' Tc=0.9 min CN=98 Runoff=2.03 cfs 0.144 af
<b>SubcatchmentWS 6: WS 6</b>	Runoff Area=8,487 sf 32.39% Impervious Runoff Depth=2.03" Flow Length=30' Slope=0.0100 '/' Tc=0.6 min CN=52 Runoff=0.48 cfs 0.033 af
<b>SubcatchmentWS 7: WS 7</b>	Runoff Area=45,822 sf 26.18% Impervious Runoff Depth=0.88" Flow Length=430' Tc=2.3 min UI Adjusted CN=39 Runoff=0.63 cfs 0.077 af
<b>SubcatchmentWS 8: WS 7</b>	Runoff Area=7,509 sf 40.96% Impervious Runoff Depth=2.62" Flow Length=50' Slope=0.0700 '/' Tc=0.4 min CN=58 Runoff=0.58 cfs 0.038 af
<b>SubcatchmentWS7B: WS 7B</b>	Runoff Area=1,268 sf 82.81% Impervious Runoff Depth=5.08" Flow Length=30' Slope=0.0010 '/' Tc=1.5 min CN=81 Runoff=0.19 cfs 0.012 af
<b>Reach 1R: Reach 1</b>	Avg. Flow Depth=1.50' Max Vel=3.32 fps Inflow=7.67 cfs 0.500 af 18.0" Round Pipe n=0.013 L=270.0' S=0.0024 '/' Capacity=5.15 cfs Outflow=5.37 cfs 0.500 af
<b>Reach 2R: Reach 2</b>	Avg. Flow Depth=0.19' Max Vel=6.05 fps Inflow=0.63 cfs 0.077 af 12.0" Round Pipe n=0.013 L=40.0' S=0.0500 '/' Capacity=7.97 cfs Outflow=0.63 cfs 0.077 af
<b>Reach 4R: SUM 4</b>	Inflow=1.10 cfs 0.136 af Outflow=1.10 cfs 0.136 af
<b>Reach Sum 1: Sum A</b>	Inflow=4.45 cfs 0.321 af Outflow=4.45 cfs 0.321 af
<b>Reach Sum 2: Sum B</b>	Inflow=7.78 cfs 0.522 af Outflow=7.78 cfs 0.522 af
<b>Reach SUM 3: Sum Total</b>	Inflow=8.13 cfs 0.844 af Outflow=8.13 cfs 0.844 af

**REVFinal(3RII) PostSaco StorageRev**

Type III 24-hr 50-yr Rainfall=7.30"

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**Pond 1P: Overflow Detention Pond**Peak Elev=92.75' Storage=19,355 cf Inflow=8.13 cfs 0.844 af  
Discarded=0.60 cfs 0.822 af Primary=0.24 cfs 0.022 af Outflow=0.84 cfs 0.844 af**Pond CB 1: CB 2-1**Peak Elev=94.01' Inflow=2.48 cfs 0.181 af  
12.0" Round Culvert n=0.013 L=150.0' S=0.0040 ' / ' Outflow=2.48 cfs 0.181 af**Pond CB 2: CB 2**Peak Elev=93.19' Inflow=2.48 cfs 0.181 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' / ' Outflow=2.48 cfs 0.181 af**Pond CB 3: CB 3**Peak Elev=93.63' Inflow=2.14 cfs 0.149 af  
12.0" Round Culvert n=0.013 L=148.0' S=0.0040 ' / ' Outflow=2.14 cfs 0.149 af**Pond CB 4: CB 4**Peak Elev=93.68' Inflow=4.59 cfs 0.331 af  
15.0" Round Culvert n=0.013 L=50.0' S=0.0040 ' / ' Outflow=4.59 cfs 0.331 af**Pond CB 5: CB 5**Peak Elev=93.48' Inflow=2.20 cfs 0.153 af  
12.0" Round Culvert n=0.013 L=154.0' S=0.0040 ' / ' Outflow=2.20 cfs 0.153 af**Pond CB 6: CB 6**Peak Elev=94.29' Inflow=6.78 cfs 0.484 af  
18.0" Round Culvert n=0.025 L=50.0' S=0.0040 ' / ' Outflow=6.78 cfs 0.484 af**Pond CB 7: CB 7**Peak Elev=94.70' Inflow=2.03 cfs 0.144 af  
12.0" Round Culvert n=0.025 L=154.0' S=0.0050 ' / ' Outflow=2.03 cfs 0.144 af**Pond CB 8: CB 8**Peak Elev=95.55' Inflow=8.81 cfs 0.628 af  
18.0" Round Culvert n=0.025 L=80.0' S=0.0040 ' / ' Outflow=8.81 cfs 0.628 af**Pond GF A: GUSF A**Peak Elev=93.06' Storage=6,512 cf Inflow=5.37 cfs 0.500 af  
Discarded=0.06 cfs 0.157 af Primary=4.45 cfs 0.321 af Outflow=4.51 cfs 0.478 af**Pond GF B: GUSF B**Peak Elev=93.21' Storage=7,378 cf Inflow=9.28 cfs 0.661 af  
Discarded=0.02 cfs 0.044 af Primary=7.78 cfs 0.522 af Outflow=7.80 cfs 0.566 af**Total Runoff Area = 4.598 ac Runoff Volume = 1.368 af Average Runoff Depth = 3.57"**  
**42.97% Pervious = 1.976 ac 57.03% Impervious = 2.622 ac**

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Type III 24-hr 50-yr Rainfall=7.30"

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**Summary for Subcatchment WS 1: WS 1**

Runoff = 7.67 cfs @ 12.05 hrs, Volume= 0.500 af, Depth= 3.23"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

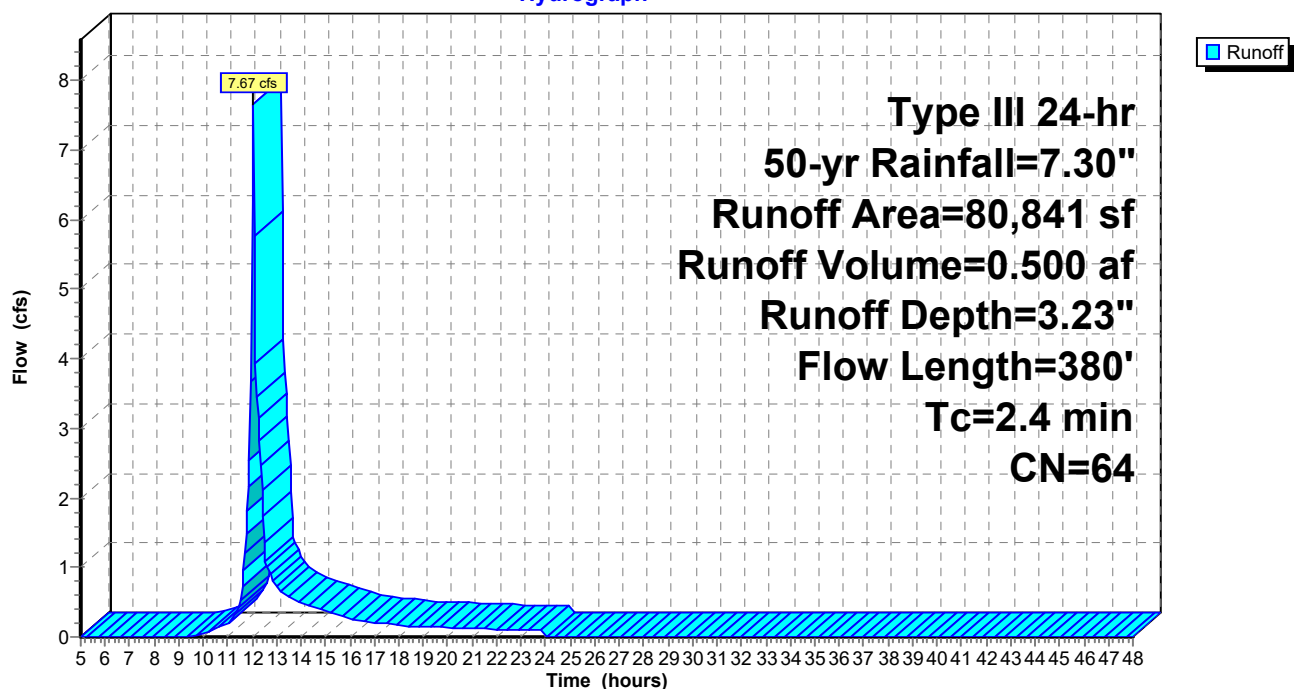
	Area (sf)	CN	Description
*	40,416	98	Paved, HSG A
	40,425	30	Meadow, non-grazed, HSG A
	80,841	64	Weighted Average
	40,425		50.01% Pervious Area
	40,416		49.99% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.22		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.4	200	0.0250	2.37		<b>Shallow Concentrated Flow,</b> Grassed Waterway Kv= 15.0 fps
0.3	130	0.0300	7.39	29.57	<b>Channel Flow,</b> Area= 4.0 sf Perim= 5.0' r= 0.80' n= 0.030 Earth, grassed & winding
2.4	380	Total			

**Subcatchment WS 1: WS 1**

Hydrograph



**REVFinal(3RII) PostSaco StorageRev**

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Type III 24-hr 50-yr Rainfall=7.30"

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**Summary for Subcatchment WS 2: WS 2**

Runoff = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af, Depth&gt; 6.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

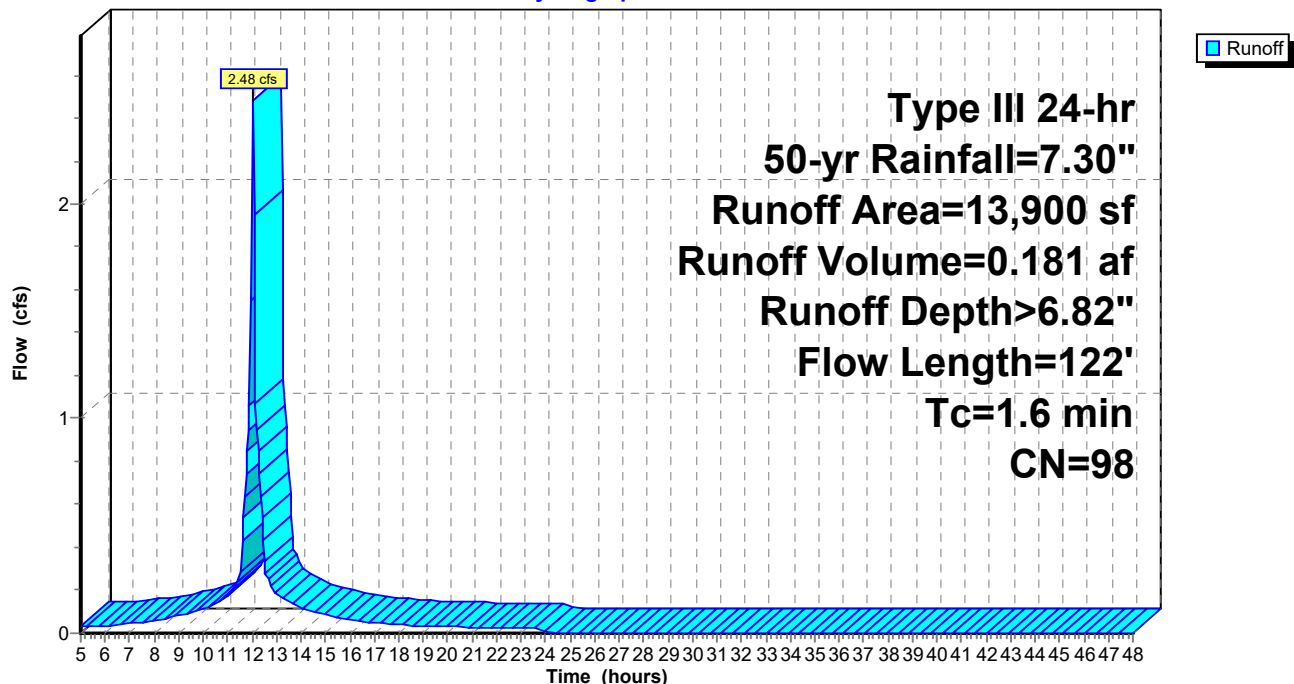
Area (sf)	CN	Description
* 13,900	98	Paved and Roof, HSG A
13,900		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.5	50	0.0400	1.60		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
0.9	60	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
0.2	12	0.0300	1.08		<b>Sheet Flow,</b> Smooth surfaces n= 0.011 P2= 3.30"
1.6	122	Total			

**Subcatchment WS 2: WS 2**

Hydrograph





### Summary for Subcatchment WS 2B: WS 2B

Runoff = 1.28 cfs @ 12.00 hrs, Volume= 0.080 af, Depth= 5.08"

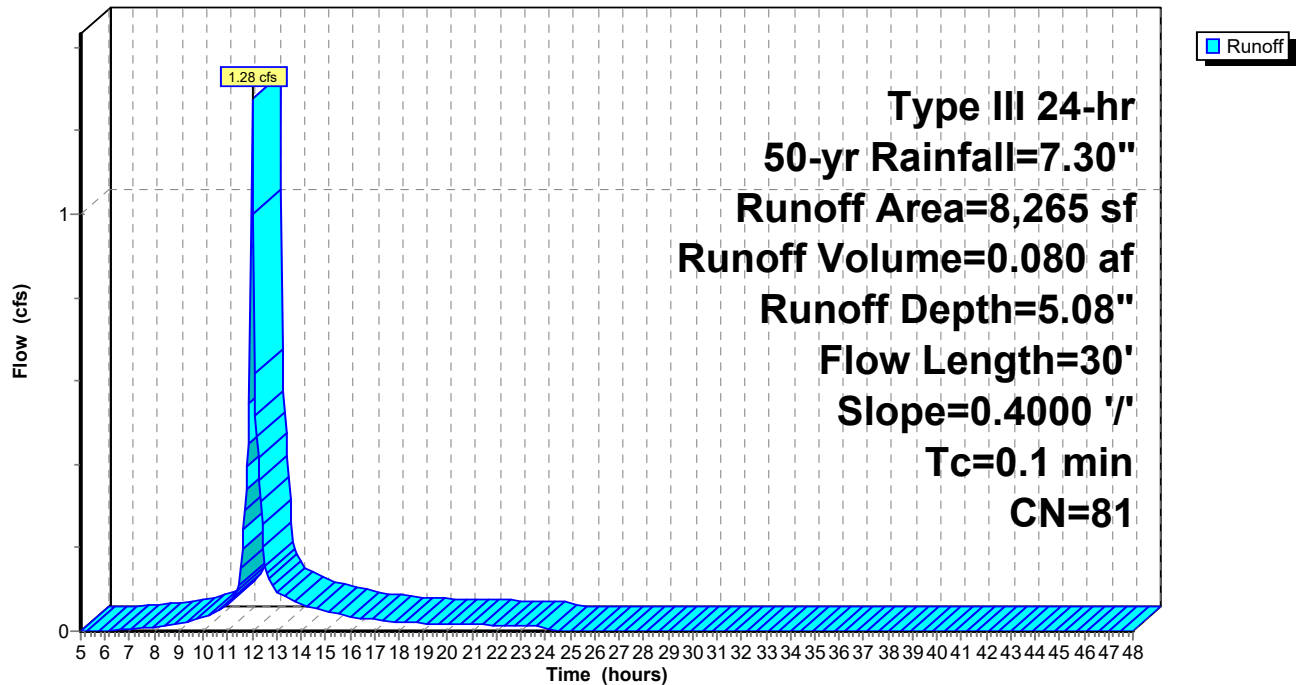
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

	Area (sf)	CN	Description
*	6,840	98	Paved and Roof, HSG A
*	1,425	1	Drip Edge Filter
	8,265	81	Weighted Average
	1,425		17.24% Pervious Area
	6,840		82.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	30	0.4000	3.64		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.30"

### Subcatchment WS 2B: WS 2B

Hydrograph



### Summary for Subcatchment WS 3: WS 3

Runoff = 2.14 cfs @ 12.00 hrs, Volume= 0.149 af, Depth> 6.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

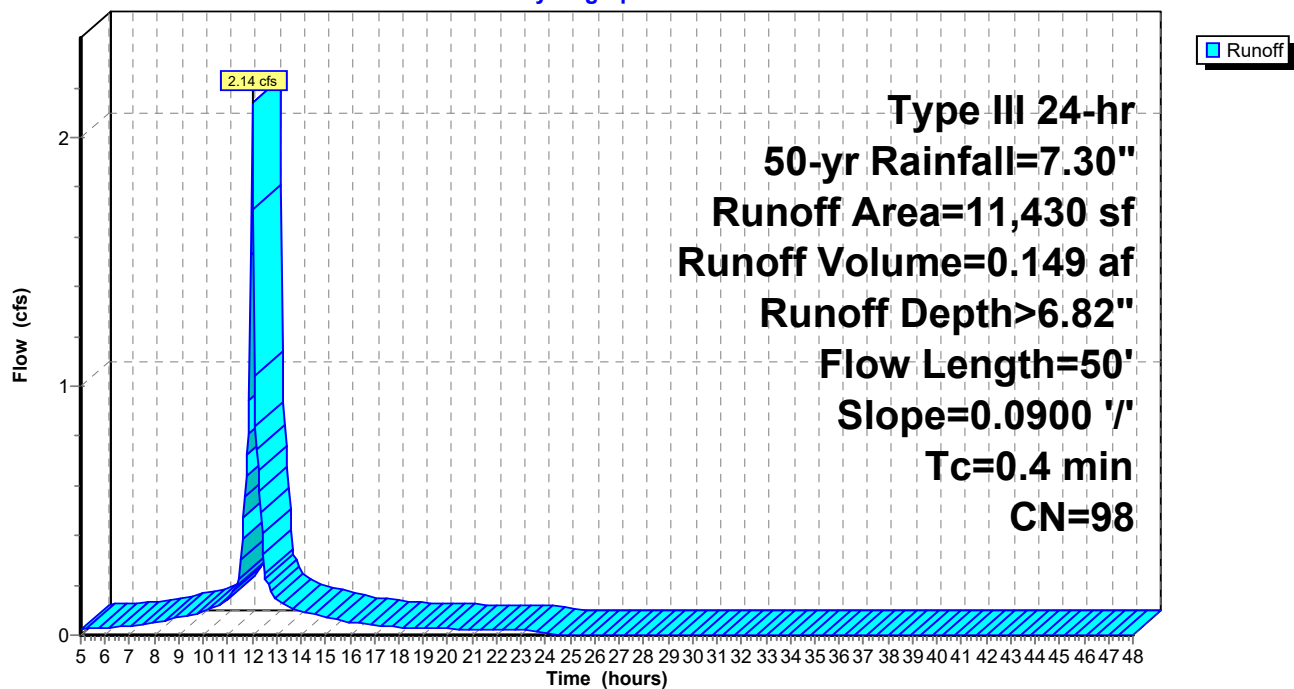
Area (sf)	CN	Description
11,430	98	Unconnected pavement, HSG A
11,430		100.00% Impervious Area
11,430		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		Sheet Flow, SF6A-1
Smooth surfaces n= 0.011 P2= 3.30"					

### Subcatchment WS 3: WS 3

Hydrograph



### Summary for Subcatchment WS 4: WS 4

Runoff = 2.20 cfs @ 12.00 hrs, Volume= 0.153 af, Depth> 6.82"

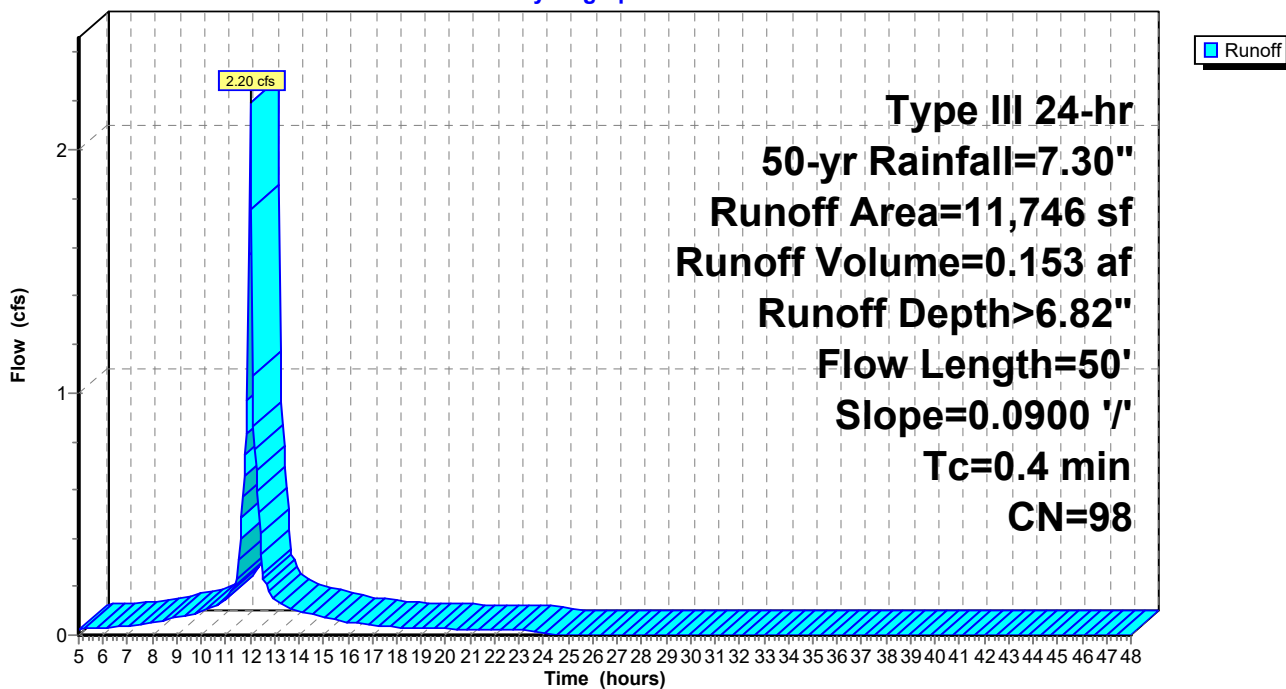
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

Area (sf)	CN	Description
11,746	98	Unconnected pavement, HSG A
11,746		100.00% Impervious Area
11,746		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0900	2.22		Sheet Flow, SF6A-1
Smooth surfaces n= 0.011 P2= 3.30"					

### Subcatchment WS 4: WS 4

Hydrograph



### Summary for Subcatchment WS 5: WS 5

Runoff = 2.03 cfs @ 12.01 hrs, Volume= 0.144 af, Depth> 6.82"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

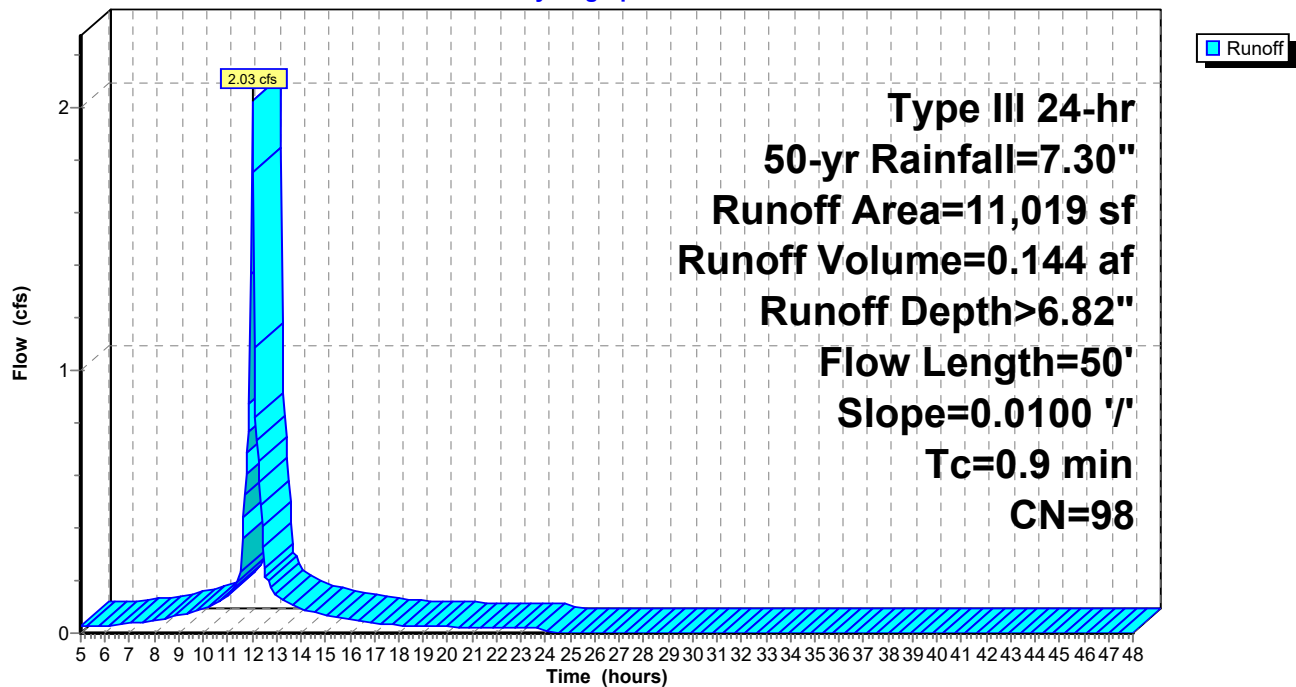
Area (sf)	CN	Description
11,019	98	Unconnected pavement, HSG A
11,019		100.00% Impervious Area
11,019		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.9	50	0.0100	0.92		Sheet Flow, SF6A-1
Smooth surfaces n= 0.011 P2= 3.30"					

### Subcatchment WS 5: WS 5

Hydrograph



### Summary for Subcatchment WS 6: WS 6

Runoff = 0.48 cfs @ 12.02 hrs, Volume= 0.033 af, Depth= 2.03"

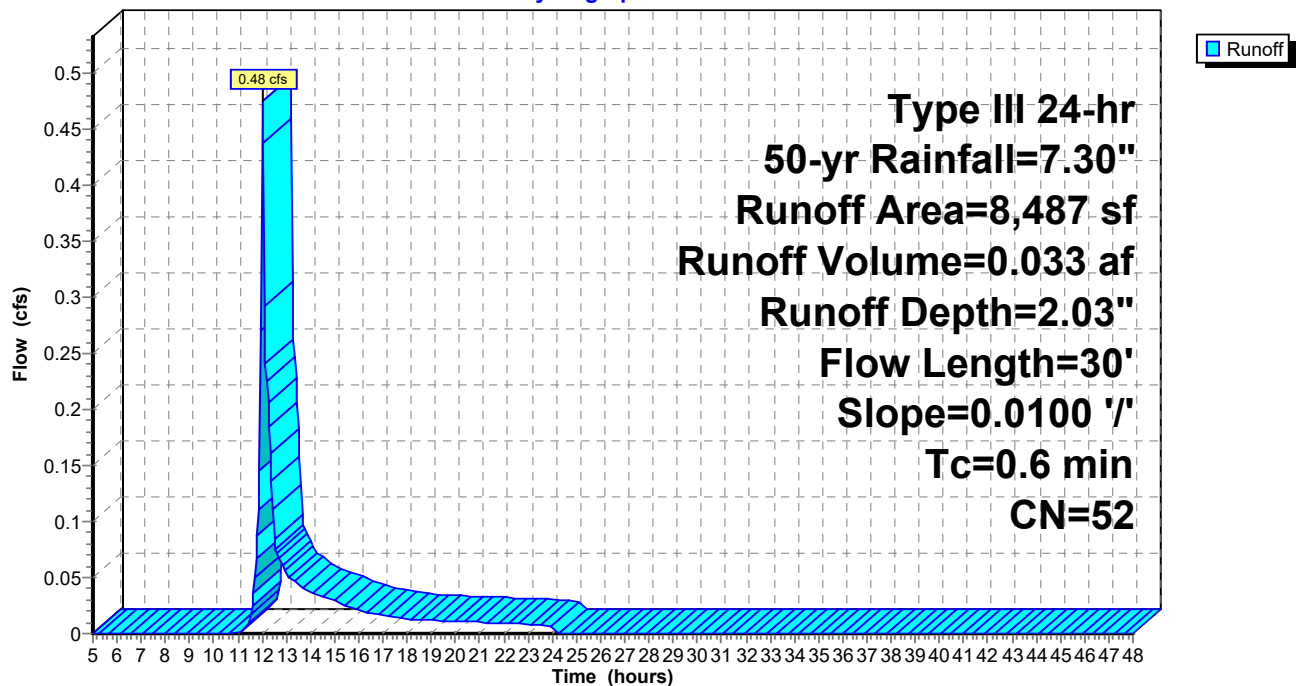
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

Area (sf)	CN	Description
2,749	98	Unconnected pavement, HSG A
5,738	30	Meadow, non-grazed, HSG A
8,487	52	Weighted Average
5,738		67.61% Pervious Area
2,749		32.39% Impervious Area
2,749		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	30	0.0100	0.83		Sheet Flow, SF6A-1
Smooth surfaces n= 0.011 P2= 3.30"					

### Subcatchment WS 6: WS 6

Hydrograph





### Summary for Subcatchment WS 7: WS 7

Runoff = 0.63 cfs @ 12.08 hrs, Volume= 0.077 af, Depth= 0.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

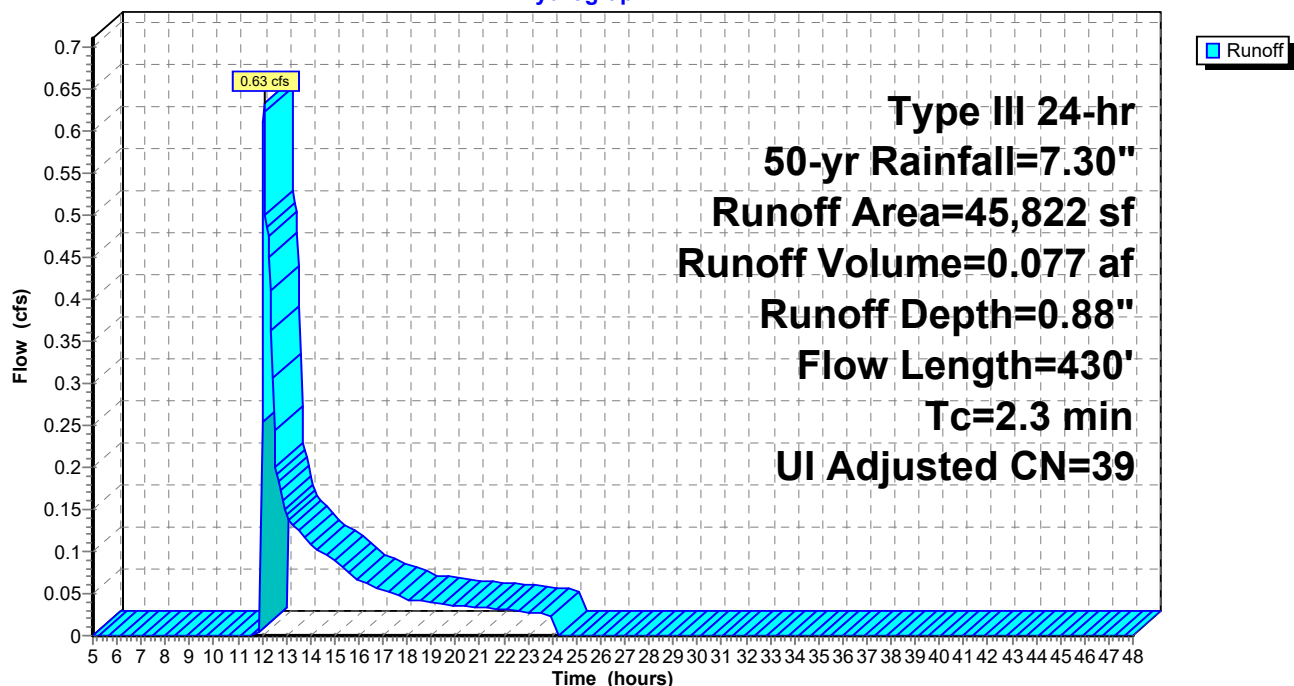
Area (sf)	CN	Adj	Description
33,828	30		Meadow, non-grazed, HSG A
11,994	98		Unconnected pavement, HSG A
45,822	48	39	Weighted Average, UI Adjusted
33,828			73.82% Pervious Area
11,994			26.18% Impervious Area
11,994			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.1000	2.31		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"
0.8	50	0.0250	1.11		<b>Shallow Concentrated Flow,</b> Short Grass Pasture Kv= 7.0 fps
1.1	330	0.0175	4.79	23.95	<b>Channel Flow,</b> Area= 5.0 sf Perim= 8.0' r= 0.63' n= 0.030 Earth, grassed & winding
2.3	430	Total			

### Subcatchment WS 7: WS 7

Hydrograph



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Type III 24-hr 50-yr Rainfall=7.30"

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**Summary for Subcatchment WS 8: WS 7**

Runoff = 0.58 cfs @ 12.01 hrs, Volume= 0.038 af, Depth= 2.62"

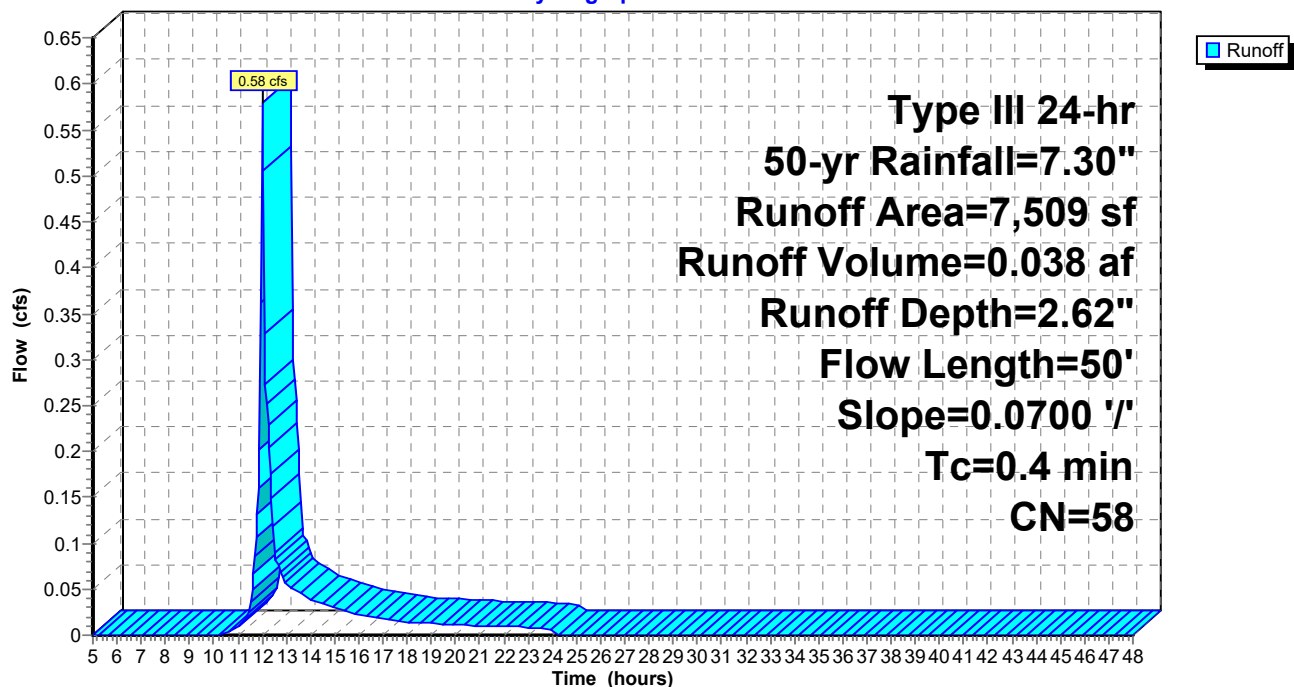
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

Area (sf)	CN	Description
4,433	30	Brush, Good, HSG A
3,076	98	Paved parking, HSG A
7,509	58	Weighted Average
4,433		59.04% Pervious Area
3,076		40.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	50	0.0700	2.01		<b>Sheet Flow, SF6A-1</b> Smooth surfaces n= 0.011 P2= 3.30"

**Subcatchment WS 8: WS 7**

Hydrograph



### Summary for Subcatchment WS7B: WS 7B

Runoff = 0.19 cfs @ 12.03 hrs, Volume= 0.012 af, Depth= 5.08"

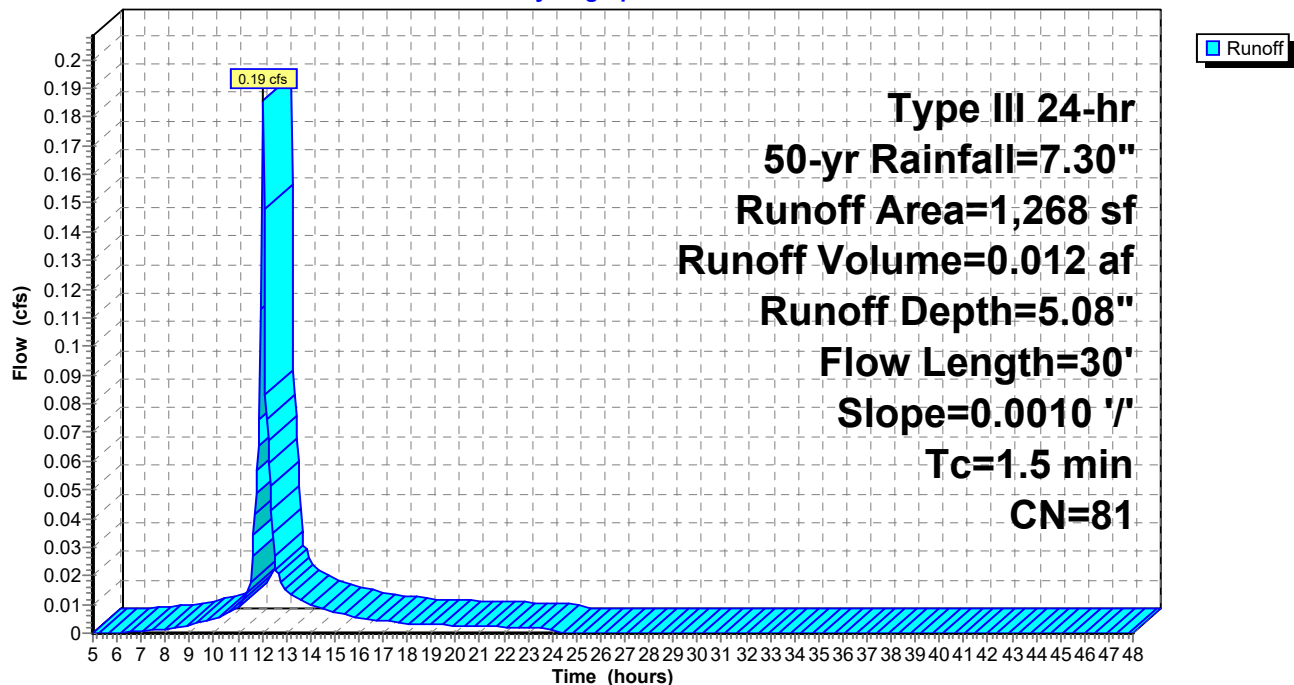
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
Type III 24-hr 50-yr Rainfall=7.30"

	Area (sf)	CN	Description
*	1,050	98	Paved and Roof, HSG A
*	218	1	Drip Edge Filter
	1,268	81	Weighted Average
	218		17.19% Pervious Area
	1,050		82.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	30	0.0010	0.33		Sheet Flow, Smooth surfaces n= 0.011 P2= 3.30"

### Subcatchment WS7B: WS 7B

Hydrograph



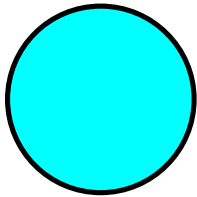
### Summary for Reach 1R: Reach 1

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 3.23" for 50-yr event  
 Inflow = 7.67 cfs @ 12.05 hrs, Volume= 0.500 af  
 Outflow = 5.37 cfs @ 12.19 hrs, Volume= 0.500 af, Atten= 30%, Lag= 8.7 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 3.32 fps, Min. Travel Time= 1.4 min  
 Avg. Velocity= 1.37 fps, Avg. Travel Time= 3.3 min

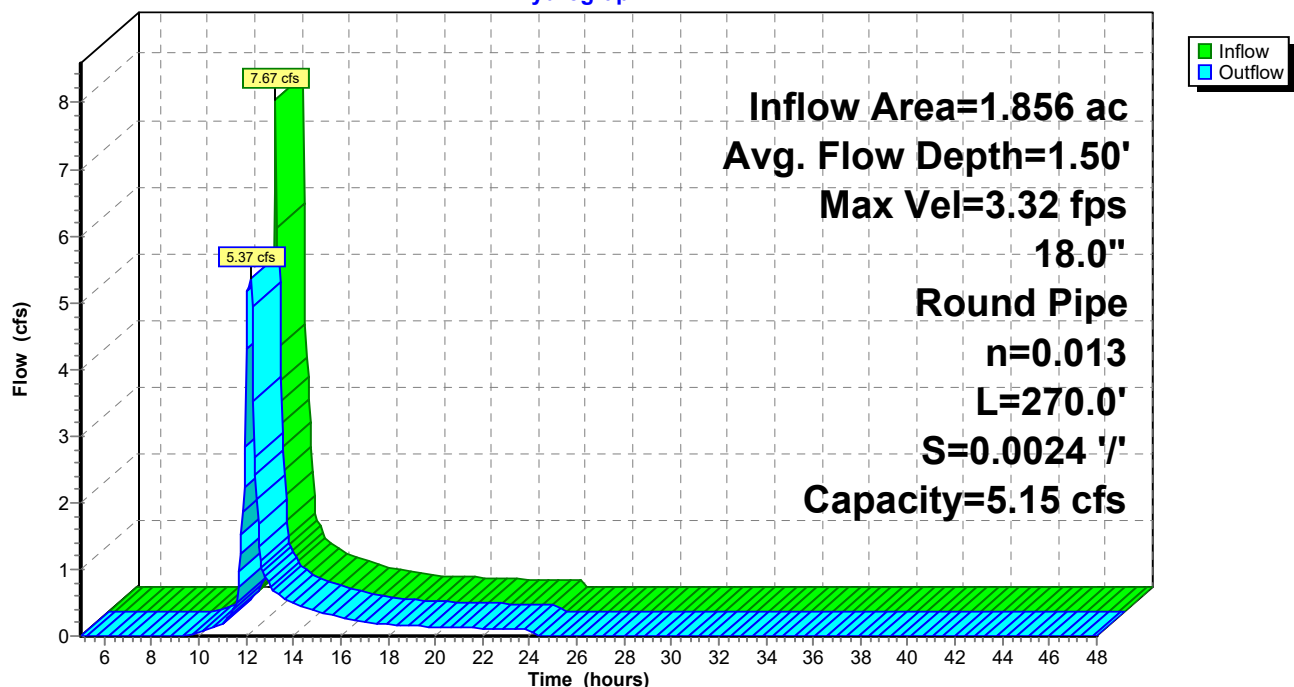
Peak Storage= 477 cf @ 12.05 hrs  
 Average Depth at Peak Storage= 1.50'  
 Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 5.15 cfs

18.0" Round Pipe  
 n= 0.013 Corrugated PE, smooth interior  
 Length= 270.0' Slope= 0.0024 '/'  
 Inlet Invert= 91.90', Outlet Invert= 91.25'



### Reach 1R: Reach 1

#### Hydrograph



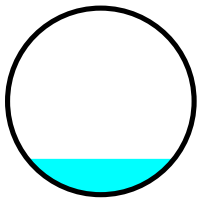
## Summary for Reach 2R: Reach 2

Inflow Area = 1.052 ac, 26.18% Impervious, Inflow Depth = 0.88" for 50-yr event  
 Inflow = 0.63 cfs @ 12.08 hrs, Volume= 0.077 af  
 Outflow = 0.63 cfs @ 12.09 hrs, Volume= 0.077 af, Atten= 0%, Lag= 0.4 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Max. Velocity= 6.05 fps, Min. Travel Time= 0.1 min  
 Avg. Velocity = 2.99 fps, Avg. Travel Time= 0.2 min

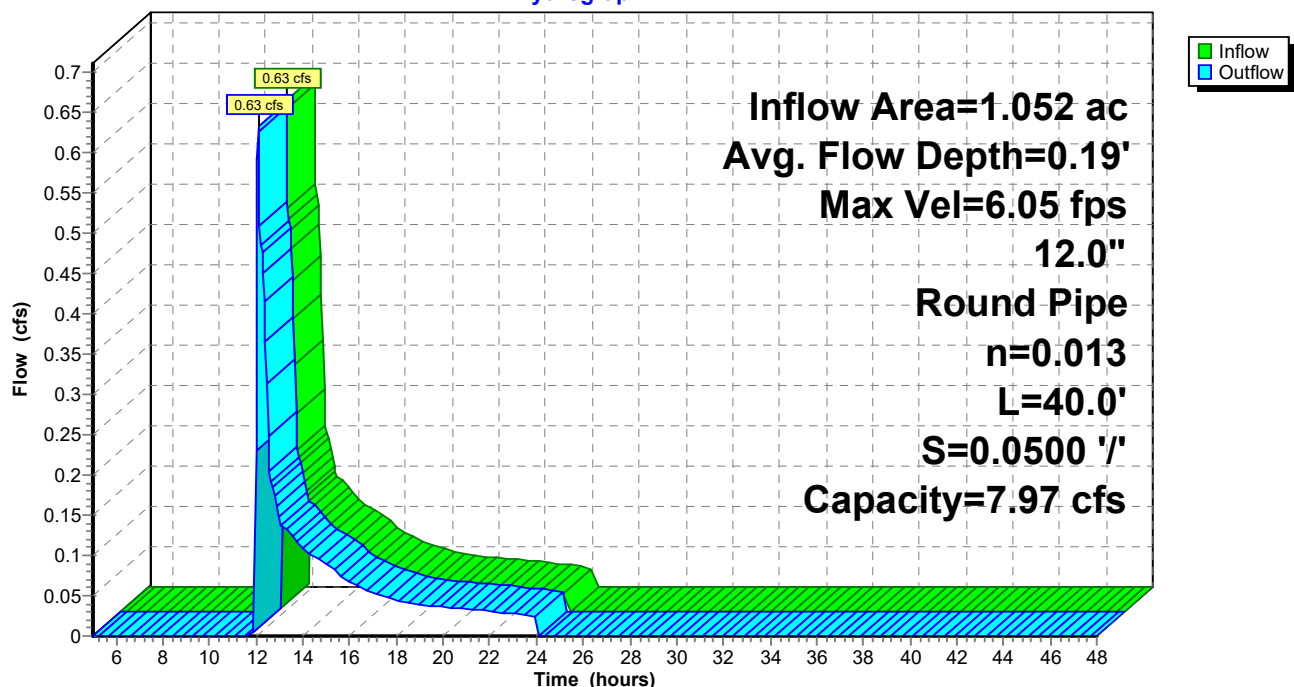
Peak Storage= 4 cf @ 12.08 hrs  
 Average Depth at Peak Storage= 0.19'  
 Bank-Full Depth= 1.00' Flow Area= 0.8 sf, Capacity= 7.97 cfs

12.0" Round Pipe  
 n= 0.013 Corrugated PE, smooth interior  
 Length= 40.0' Slope= 0.0500 '/  
 Inlet Invert= 91.90', Outlet Invert= 89.90'



## Reach 2R: Reach 2

### Hydrograph





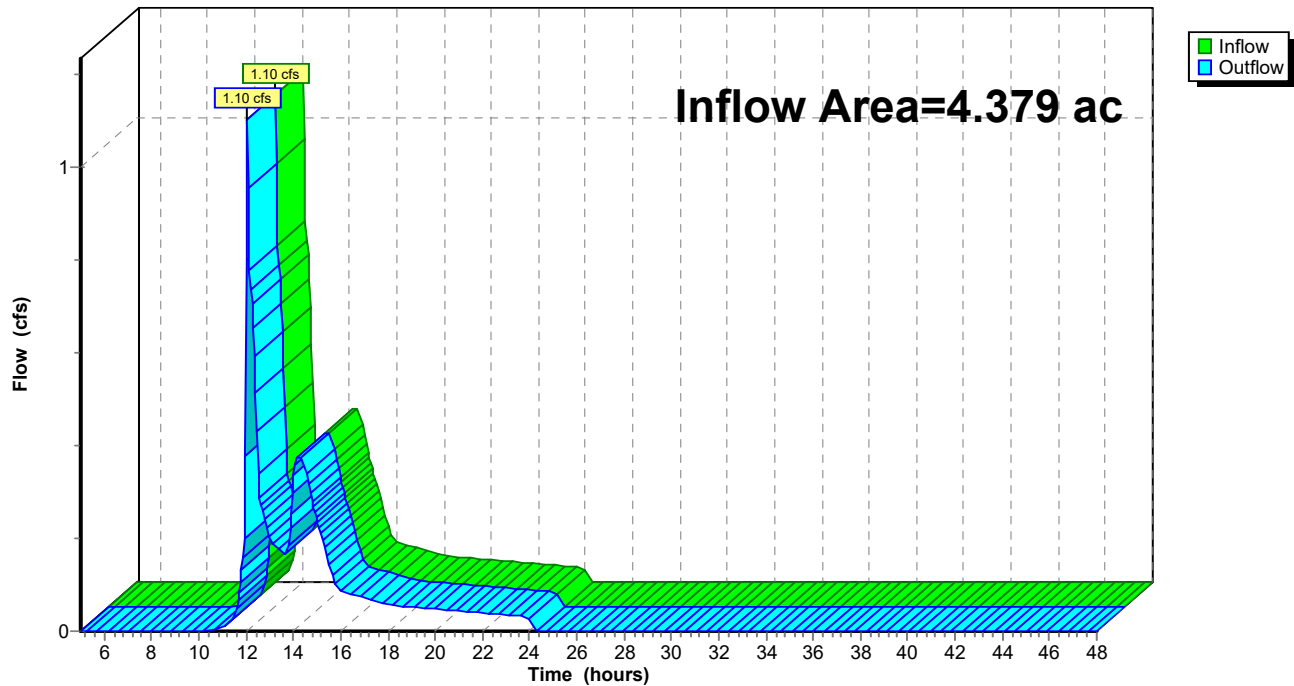
### Summary for Reach 4R: SUM 4

Inflow Area = 4.379 ac, 55.74% Impervious, Inflow Depth = 0.37" for 50-yr event  
 Inflow = 1.10 cfs @ 12.06 hrs, Volume= 0.136 af  
 Outflow = 1.10 cfs @ 12.06 hrs, Volume= 0.136 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Reach 4R: SUM 4

#### Hydrograph



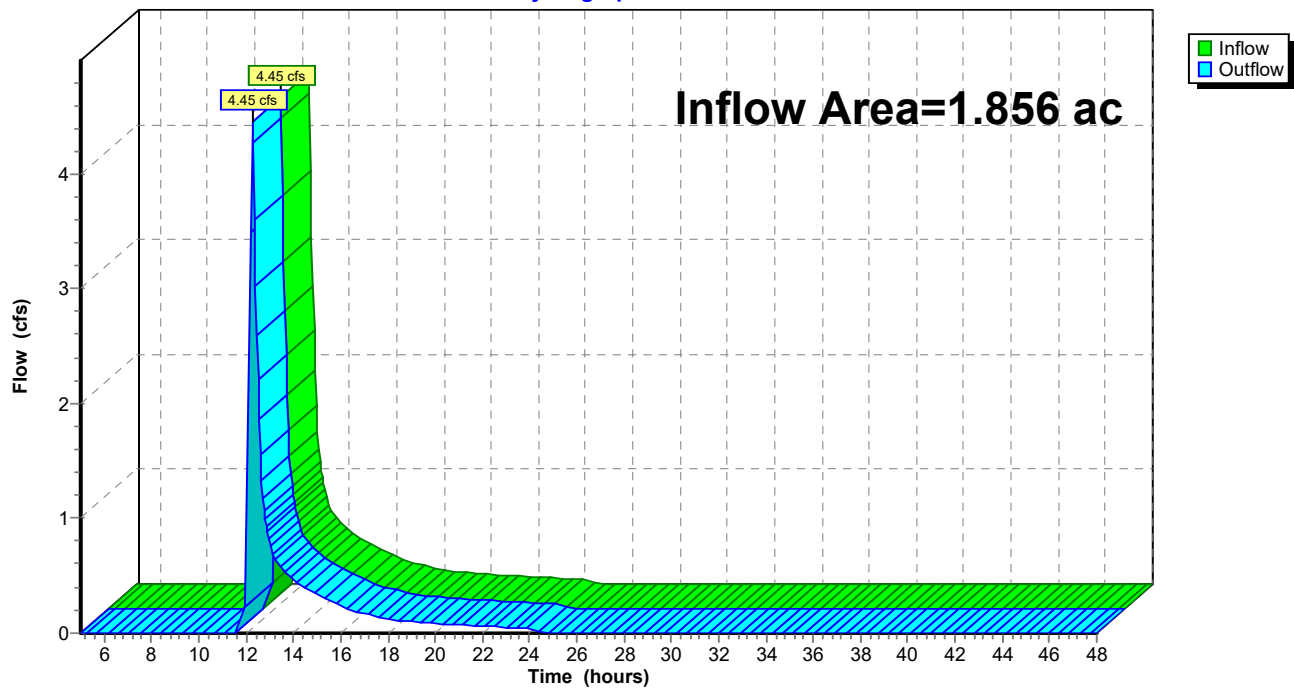
### Summary for Reach Sum 1: Sum A

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 2.08" for 50-yr event  
 Inflow = 4.45 cfs @ 12.27 hrs, Volume= 0.321 af  
 Outflow = 4.45 cfs @ 12.27 hrs, Volume= 0.321 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Reach Sum 1: Sum A

Hydrograph



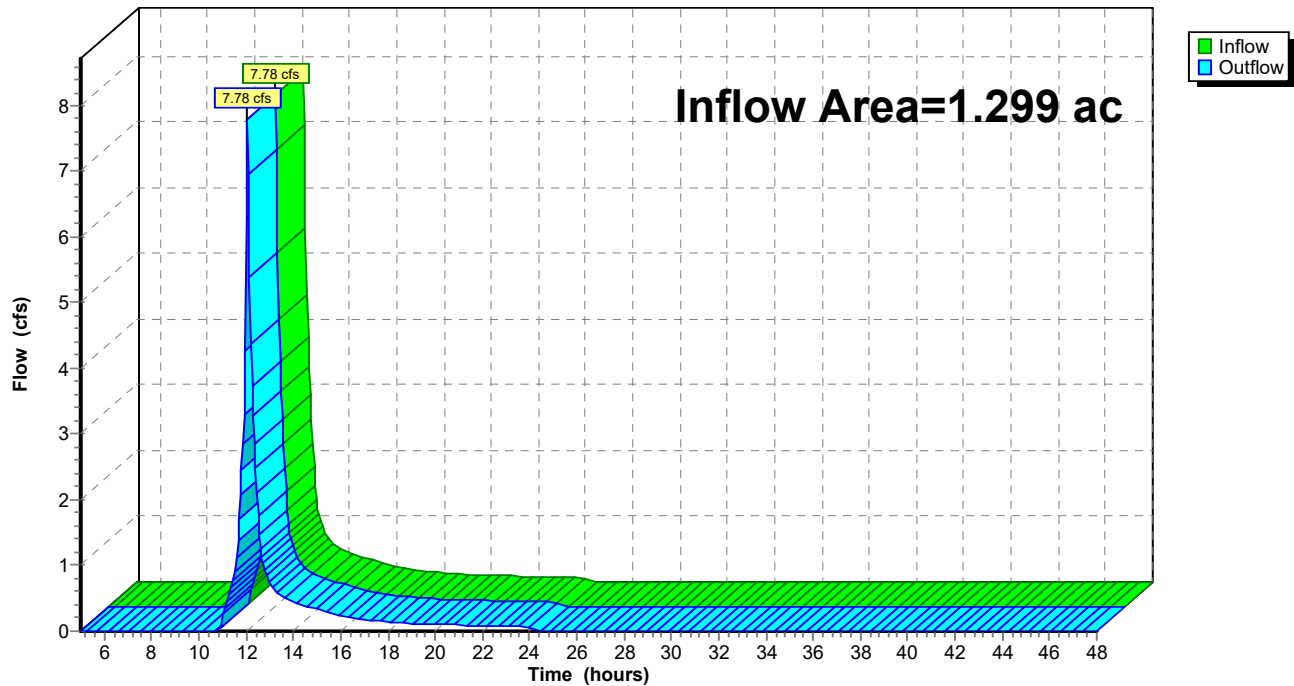
### Summary for Reach Sum 2: Sum B

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth = 4.83" for 50-yr event  
 Inflow = 7.78 cfs @ 12.06 hrs, Volume= 0.522 af  
 Outflow = 7.78 cfs @ 12.06 hrs, Volume= 0.522 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Reach Sum 2: Sum B

Hydrograph



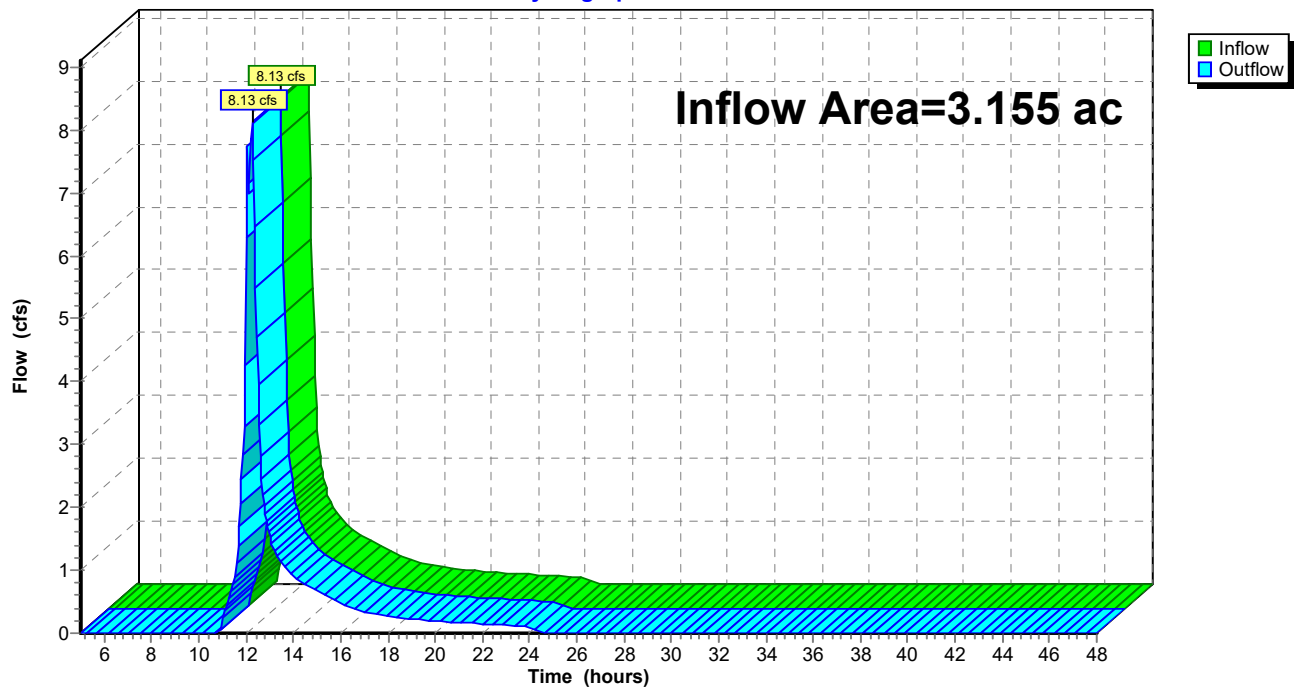
### Summary for Reach SUM 3: Sum Total

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 3.21" for 50-yr event  
 Inflow = 8.13 cfs @ 12.24 hrs, Volume= 0.844 af  
 Outflow = 8.13 cfs @ 12.24 hrs, Volume= 0.844 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

### Reach SUM 3: Sum Total

Hydrograph



### Summary for Pond 1P: Overflow Detention Pond

Inflow Area = 3.155 ac, 66.41% Impervious, Inflow Depth = 3.21" for 50-yr event  
 Inflow = 8.13 cfs @ 12.24 hrs, Volume= 0.844 af  
 Outflow = 0.84 cfs @ 14.22 hrs, Volume= 0.844 af, Atten= 90%, Lag= 118.7 min  
 Discarded = 0.60 cfs @ 11.35 hrs, Volume= 0.822 af  
 Primary = 0.24 cfs @ 14.22 hrs, Volume= 0.022 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 92.75' @ 14.22 hrs Surf.Area= 5,286 sf Storage= 19,355 cf

Plug-Flow detention time= 325.1 min calculated for 0.843 af (100% of inflow)  
 Center-of-Mass det. time= 325.0 min ( 1,158.5 - 833.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	88.00'	23,535 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
88.00	3,000	0	0
89.00	3,436	3,218	3,218
90.00	3,875	3,656	6,874
91.00	4,342	4,109	10,982
92.00	4,825	4,584	15,566
93.00	5,440	5,133	20,698
93.50	5,908	2,837	23,535

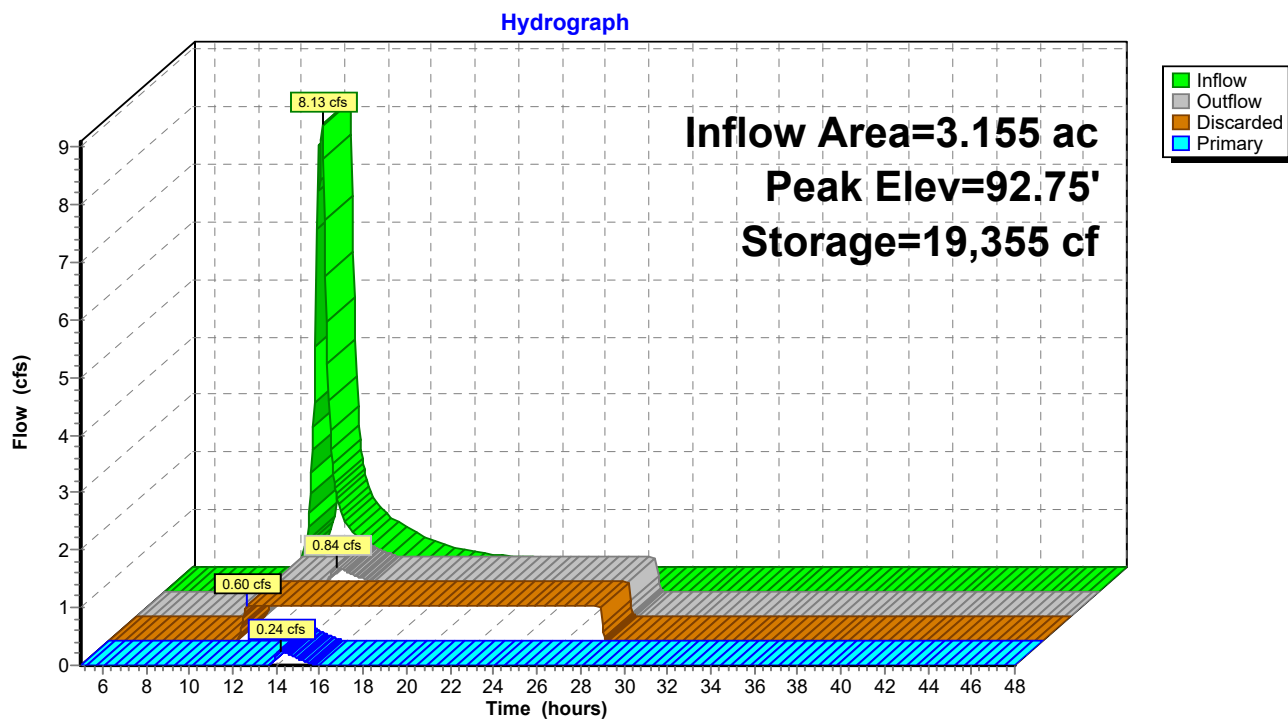
Device	Routing	Invert	Outlet Devices
#1	Discarded	88.00'	<b>0.60 cfs Exfiltration at all elevations</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.60 cfs @ 11.35 hrs HW=88.06' (Free Discharge)  
 ↑1=Exfiltration (Exfiltration Controls 0.60 cfs)

**Primary OutFlow** Max=0.22 cfs @ 14.22 hrs HW=92.75' (Free Discharge)  
 ↑2=Broad-Crested Rectangular Weir (Weir Controls 0.22 cfs @ 0.55 fps)



# Pond 1P: Overflow Detention Pond



### Summary for Pond CB 1: CB 2-1

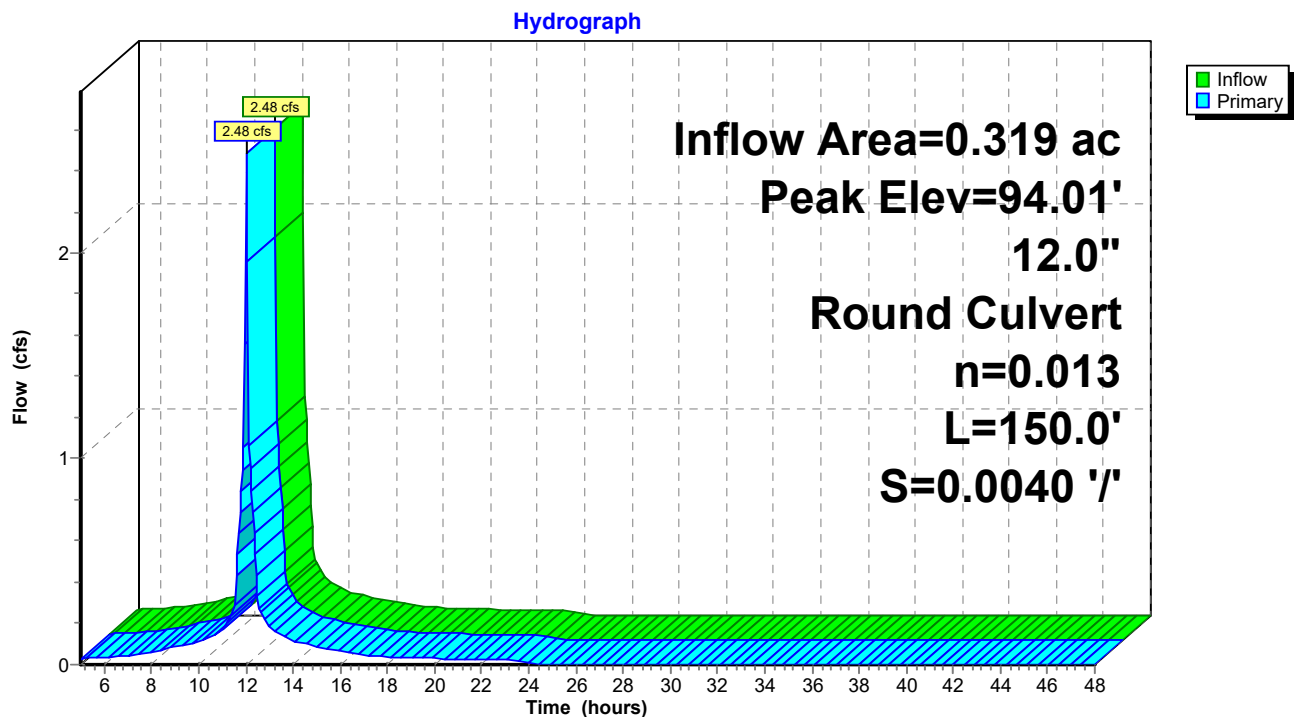
Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af  
 Outflow = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 94.01' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.77'	<b>12.0" Round Culvert</b> L= 150.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.77' / 92.17' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=2.38 cfs @ 12.02 hrs HW=93.96' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 2.38 cfs @ 3.21 fps)

### Pond CB 1: CB 2-1



### Summary for Pond CB 2: CB 2

Inflow Area = 0.319 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af  
 Outflow = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.48 cfs @ 12.02 hrs, Volume= 0.181 af

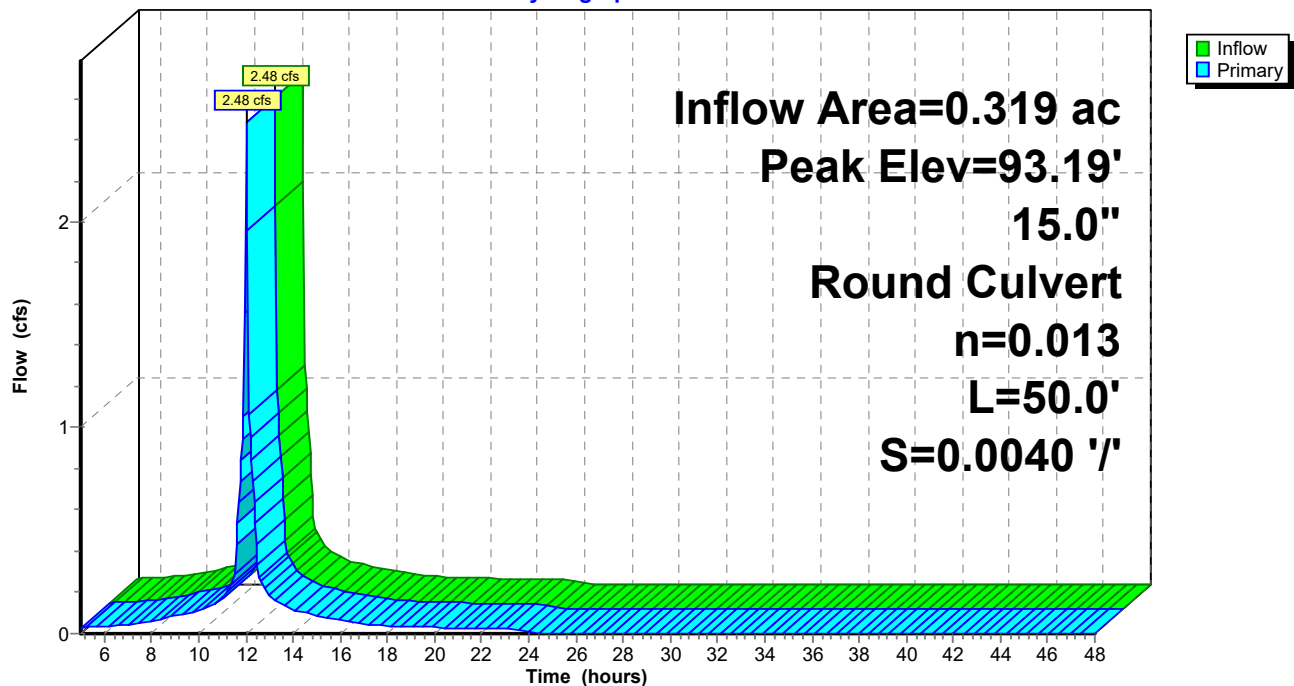
Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.19' @ 12.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.17'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.17' / 91.97' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=2.38 cfs @ 12.02 hrs HW=93.16' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 2.38 cfs @ 3.14 fps)

### Pond CB 2: CB 2

Hydrograph



### Summary for Pond CB 3: CB 3

Inflow Area = 0.262 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 2.14 cfs @ 12.00 hrs, Volume= 0.149 af  
 Outflow = 2.14 cfs @ 12.00 hrs, Volume= 0.149 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.14 cfs @ 12.00 hrs, Volume= 0.149 af

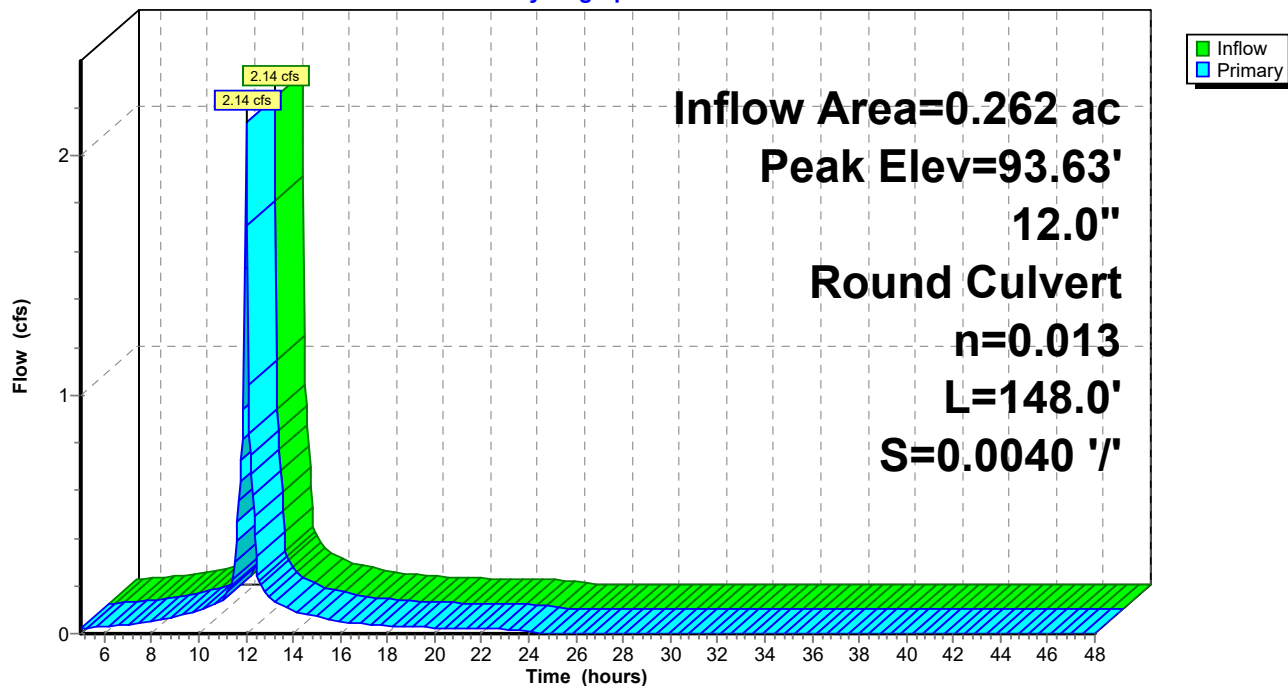
Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.63' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.56'	<b>12.0" Round Culvert</b> L= 148.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.56' / 91.97' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=2.10 cfs @ 12.00 hrs HW=93.61' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 2.10 cfs @ 3.17 fps)

### Pond CB 3: CB 3

Hydrograph



### Summary for Pond CB 4: CB 4

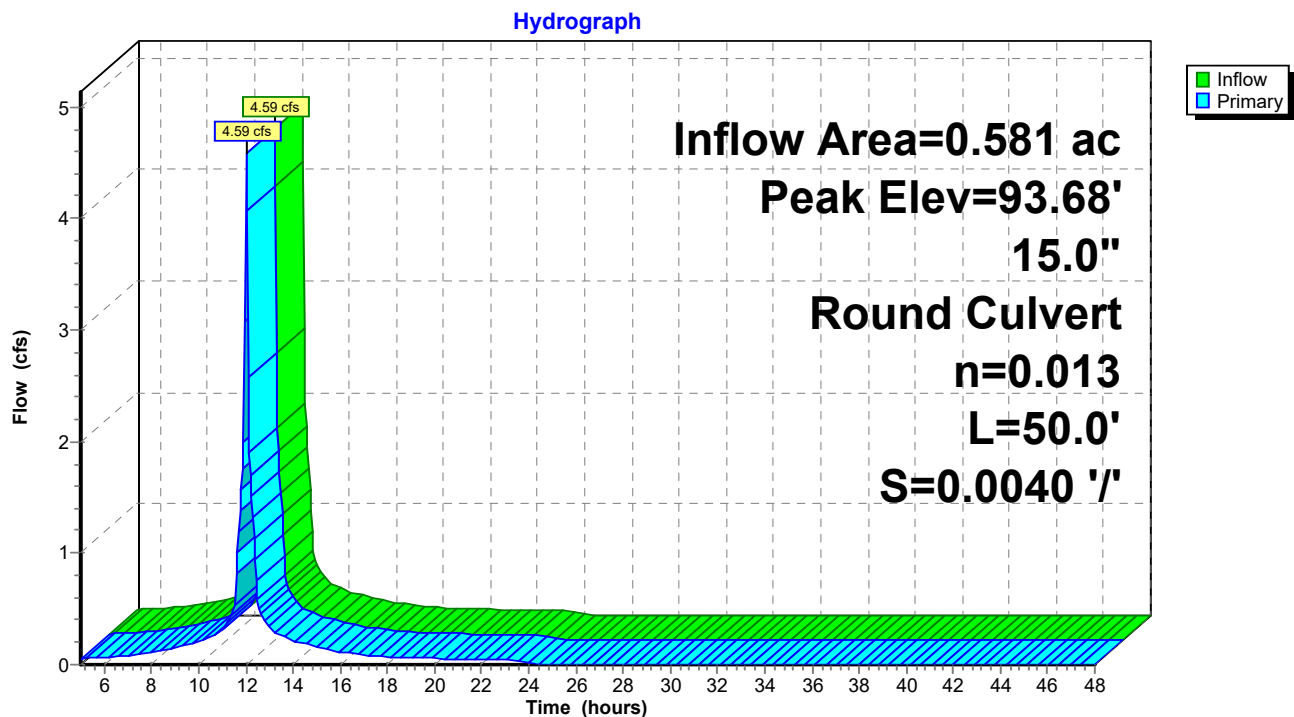
Inflow Area = 0.581 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 4.59 cfs @ 12.01 hrs, Volume= 0.331 af  
 Outflow = 4.59 cfs @ 12.01 hrs, Volume= 0.331 af, Atten= 0%, Lag= 0.0 min  
 Primary = 4.59 cfs @ 12.01 hrs, Volume= 0.331 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.68' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.97'	<b>15.0" Round Culvert</b> L= 50.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.97' / 91.77' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

**Primary OutFlow** Max=4.46 cfs @ 12.01 hrs HW=93.60' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 4.46 cfs @ 3.65 fps)

### Pond CB 4: CB 4





### Summary for Pond CB 5: CB 5

Inflow Area = 0.270 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 2.20 cfs @ 12.00 hrs, Volume= 0.153 af  
 Outflow = 2.20 cfs @ 12.00 hrs, Volume= 0.153 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.20 cfs @ 12.00 hrs, Volume= 0.153 af

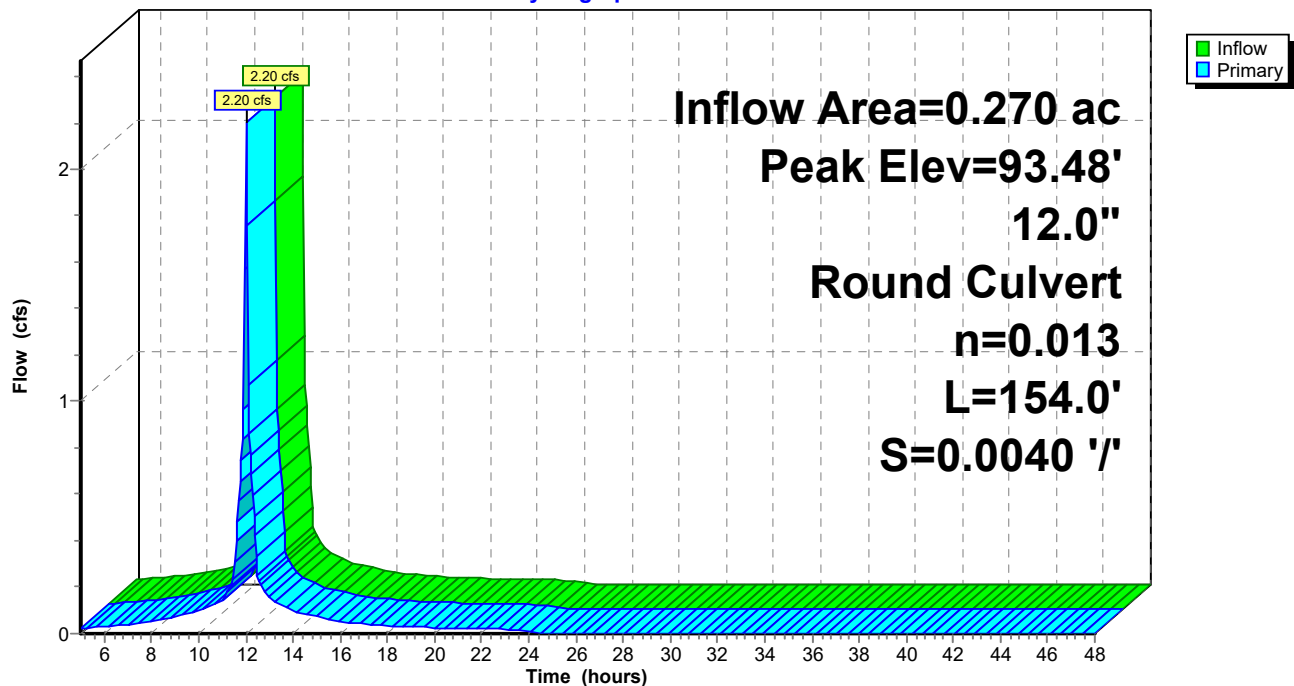
Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.48' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.39'	<b>12.0" Round Culvert</b> L= 154.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.39' / 91.77' S= 0.0040 '/ Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=2.16 cfs @ 12.00 hrs HW=93.46' (Free Discharge)  
 1=Culvert (Barrel Controls 2.16 cfs @ 3.19 fps)

### Pond CB 5: CB 5

Hydrograph



### Summary for Pond CB 6: CB 6

Inflow Area = 0.851 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 6.78 cfs @ 12.01 hrs, Volume= 0.484 af  
 Outflow = 6.78 cfs @ 12.01 hrs, Volume= 0.484 af, Atten= 0%, Lag= 0.0 min  
 Primary = 6.78 cfs @ 12.01 hrs, Volume= 0.484 af

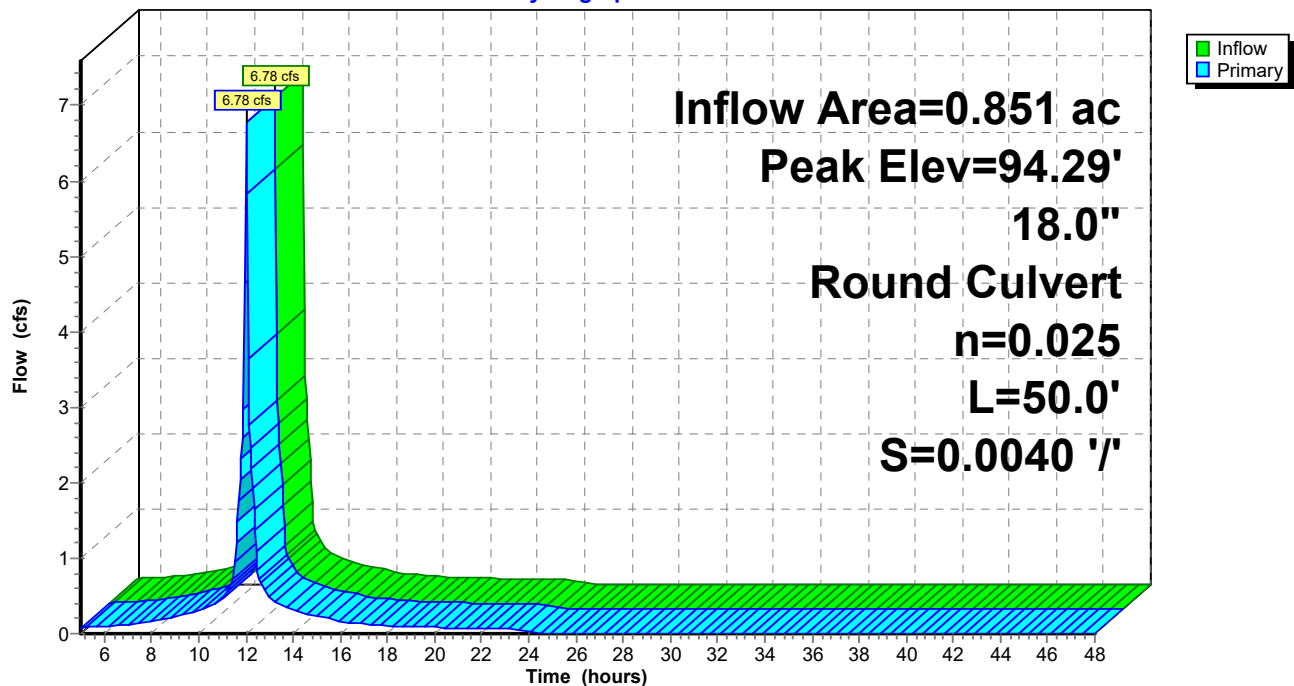
Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 94.29' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.77'	<b>18.0" Round Culvert</b> L= 50.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.77' / 91.57' S= 0.0040 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=6.55 cfs @ 12.01 hrs HW=94.20' (Free Discharge)  
 1=Culvert (Barrel Controls 6.55 cfs @ 3.71 fps)

### Pond CB 6: CB 6

Hydrograph



### Summary for Pond CB 7: CB 7

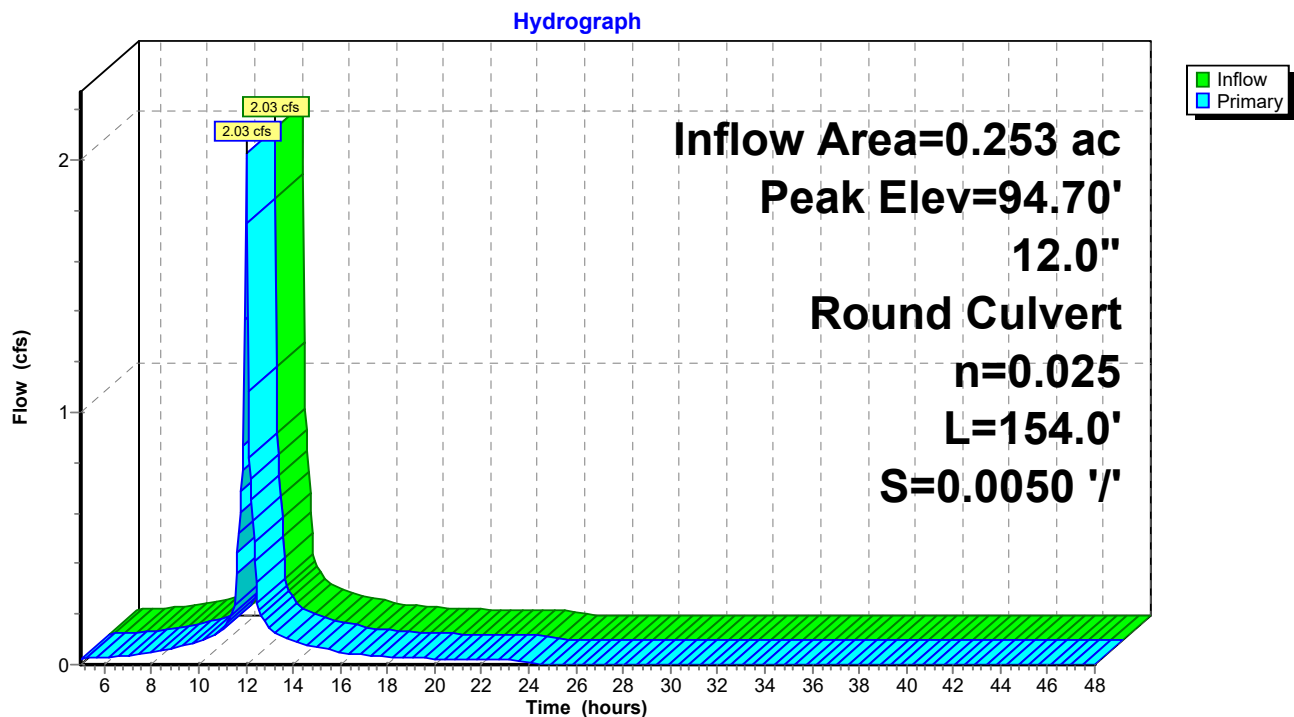
Inflow Area = 0.253 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 2.03 cfs @ 12.01 hrs, Volume= 0.144 af  
 Outflow = 2.03 cfs @ 12.01 hrs, Volume= 0.144 af, Atten= 0%, Lag= 0.0 min  
 Primary = 2.03 cfs @ 12.01 hrs, Volume= 0.144 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 94.70' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	92.42'	<b>12.0" Round Culvert</b> L= 154.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 92.42' / 91.65' S= 0.0050 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf

**Primary OutFlow** Max=1.96 cfs @ 12.01 hrs HW=94.56' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 1.96 cfs @ 2.49 fps)

### Pond CB 7: CB 7



### Summary for Pond CB 8: CB 8

Inflow Area = 1.104 ac, 100.00% Impervious, Inflow Depth > 6.82" for 50-yr event  
 Inflow = 8.81 cfs @ 12.01 hrs, Volume= 0.628 af  
 Outflow = 8.81 cfs @ 12.01 hrs, Volume= 0.628 af, Atten= 0%, Lag= 0.0 min  
 Primary = 8.81 cfs @ 12.01 hrs, Volume= 0.628 af

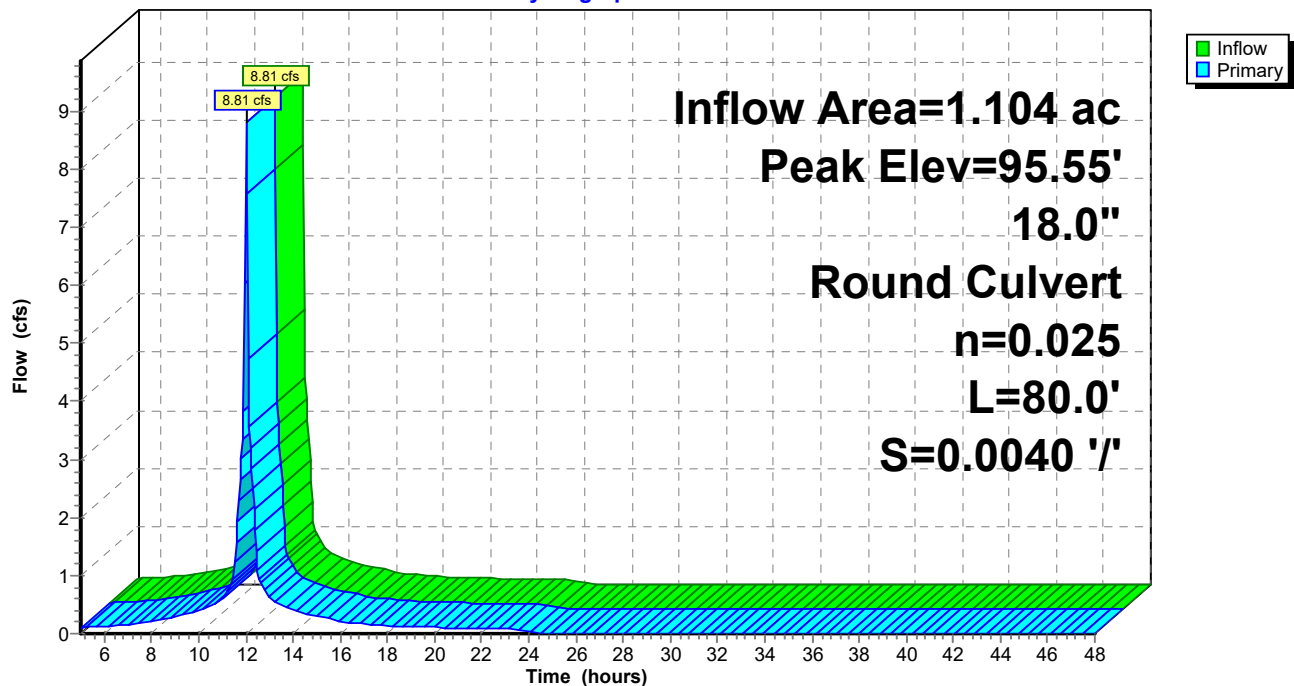
Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 95.55' @ 12.01 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	91.57'	<b>18.0" Round Culvert</b> L= 80.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 91.57' / 91.25' S= 0.0040 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

**Primary OutFlow** Max=8.51 cfs @ 12.01 hrs HW=95.38' (Free Discharge)  
 ↑1=Culvert (Barrel Controls 8.51 cfs @ 4.82 fps)

### Pond CB 8: CB 8

Hydrograph



### Summary for Pond GF A: GUSF A

Inflow Area = 1.856 ac, 49.99% Impervious, Inflow Depth = 3.23" for 50-yr event  
 Inflow = 5.37 cfs @ 12.19 hrs, Volume= 0.500 af  
 Outflow = 4.51 cfs @ 12.27 hrs, Volume= 0.478 af, Atten= 16%, Lag= 4.7 min  
 Discarded = 0.06 cfs @ 12.27 hrs, Volume= 0.157 af  
 Primary = 4.45 cfs @ 12.27 hrs, Volume= 0.321 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.06' @ 12.27 hrs Surf.Area= 4,319 sf Storage= 6,512 cf

Plug-Flow detention time= 315.6 min calculated for 0.477 af (95% of inflow)  
 Center-of-Mass det. time= 292.9 min ( 1,135.5 - 842.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,505 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	2,900	0	0
92.00	3,300	2,480	2,480
92.50	3,750	1,763	4,242
93.00	4,250	2,000	6,242
93.50	4,800	2,263	8,505

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area</b>
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b>
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

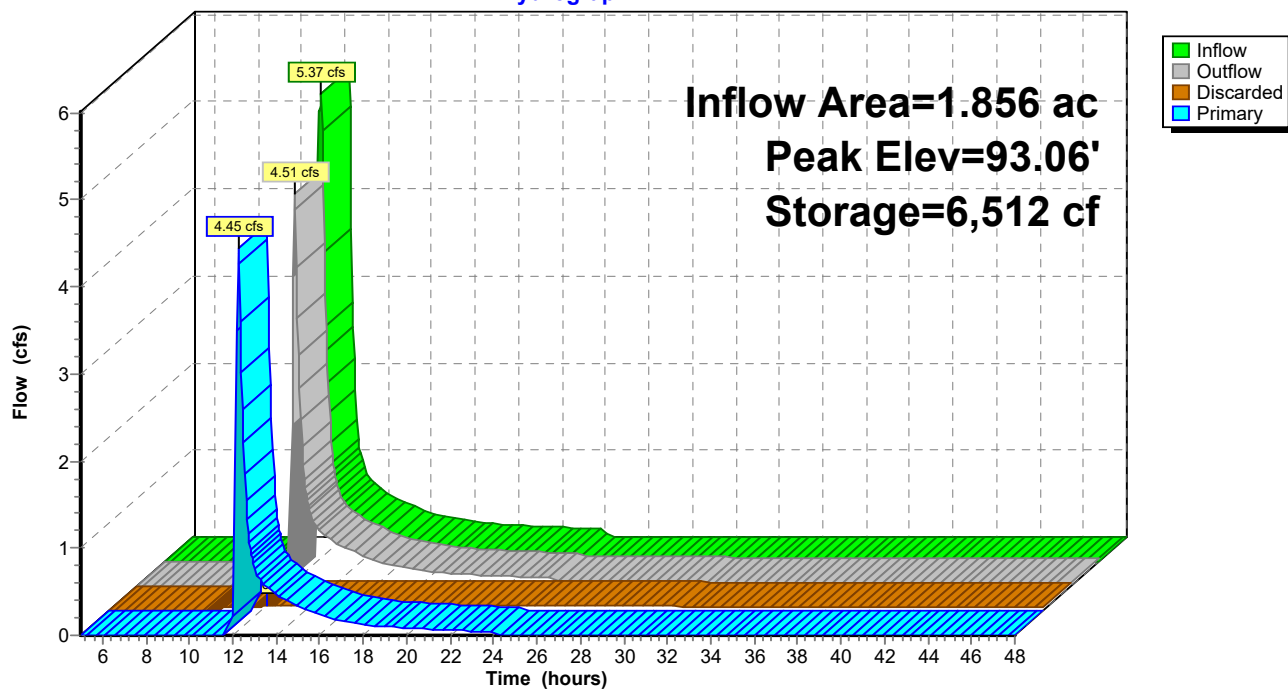
**Discarded OutFlow** Max=0.06 cfs @ 12.27 hrs HW=93.06' (Free Discharge)  
 ↑ **1=Exfiltration** (Exfiltration Controls 0.06 cfs)

**Primary OutFlow** Max=4.33 cfs @ 12.27 hrs HW=93.06' TW=91.61' (TW follows 1.45' below HW)  
 ↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 4.33 cfs @ 1.52 fps)



# Pond GF A: GUSF A

## Hydrograph



### Summary for Pond GF B: GUSF B

Inflow Area = 1.299 ac, 89.86% Impervious, Inflow Depth > 6.10" for 50-yr event  
 Inflow = 9.28 cfs @ 12.01 hrs, Volume= 0.661 af  
 Outflow = 7.80 cfs @ 12.06 hrs, Volume= 0.566 af, Atten= 16%, Lag= 2.8 min  
 Discarded = 0.02 cfs @ 12.06 hrs, Volume= 0.044 af  
 Primary = 7.78 cfs @ 12.06 hrs, Volume= 0.522 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs  
 Peak Elev= 93.21' @ 12.06 hrs Surf.Area= 4,585 sf Storage= 7,378 cf

Plug-Flow detention time= 180.1 min calculated for 0.566 af (86% of inflow)  
 Center-of-Mass det. time= 117.4 min ( 879.2 - 761.8 )

Volume	Invert	Avail.Storage	Storage Description
#1	91.20'	8,735 cf	<b>Custom Stage Data (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
91.20	3,000	0	0
92.00	3,400	2,560	2,560
92.50	3,850	1,813	4,372
93.00	4,350	2,050	6,422
93.50	4,900	2,313	8,735

Device	Routing	Invert	Outlet Devices
#1	Discarded	91.20'	<b>0.598 in/hr Exfiltration over Surface area above 91.20'</b> Excluded Surface area = 3,000 sf
#2	Primary	92.70'	<b>8.0' long x 10.0' breadth Broad-Crested Rectangular Weir</b> Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

**Discarded OutFlow** Max=0.02 cfs @ 12.06 hrs HW=93.21' (Free Discharge)

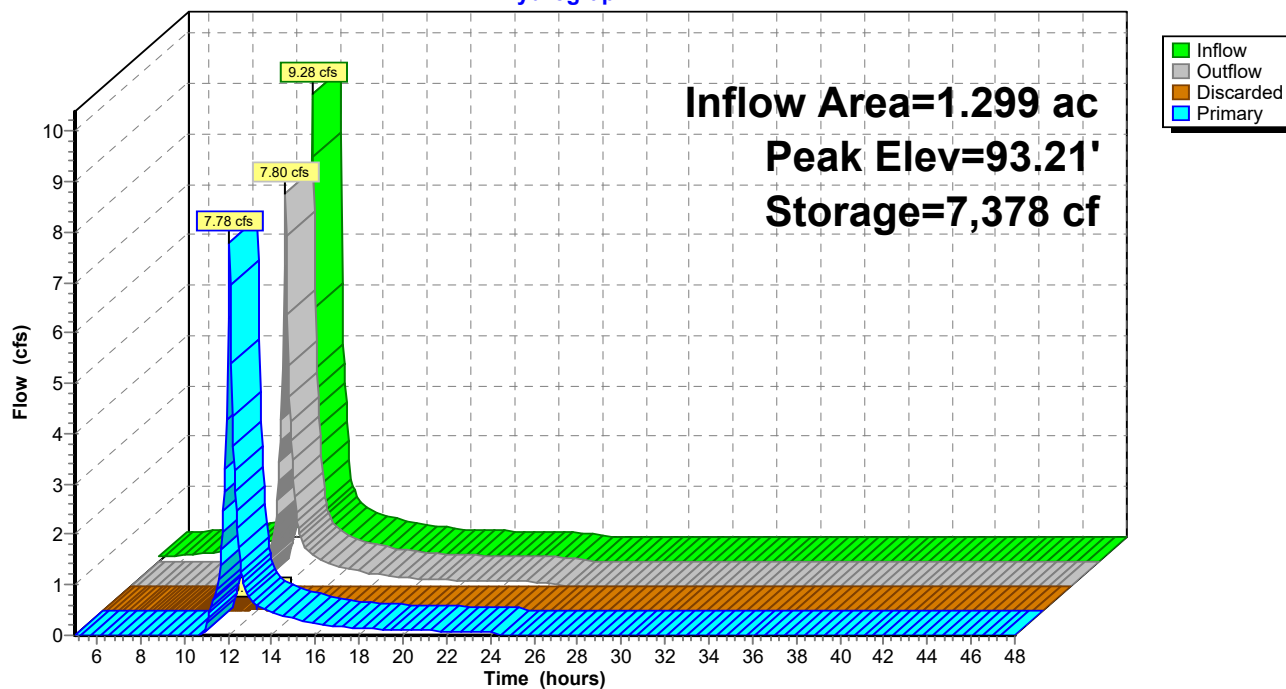
↑**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

**Primary OutFlow** Max=7.63 cfs @ 12.06 hrs HW=93.21' (Free Discharge)

↑**2=Broad-Crested Rectangular Weir**(Weir Controls 7.63 cfs @ 1.88 fps)

# Pond GF B: GUSF B

## Hydrograph





## STORMWATER MANAGEMENT

### A. Narrative

The intent of this Stormwater Management Plan is to comply with the requirements of the City of Saco's Land Use and Site Plan Review Ordinances, and the Maine Department of Environmental Protection's Chapter 500 standards. Because this project will create more than 10,000 square feet of new impervious area, it is required to comply with Article IV, Section 4.03 (k) of the Site Plan Review Ordinance, and Article XII of the Zoning Ordinance.

This Site Plan Review Permit Application is for development of a self-storage facility off Portland Road in Saco, ME. The existing parcel is 3.765 acres and consists entirely of undeveloped fields and a small, wooded area. The project proposes to develop 312 storage units and associated driveway and maneuvering areas, which will result in 97,286 SF (2.233 acres) of new impervious area. The total development area is 164,016 SF (3.765 acres.)

Erosion control measures will be in place prior to the start of any construction. Temporary and permanent measures will be installed in accordance with the **Erosion and Sedimentation Control Plan** section of this application. Upon completion of the construction and stabilization of all disturbed areas, the temporary erosion control measures will be removed.



## STORMWATER QUALITY CONTROL NARRATIVE

The development has been described above. The total net impervious area created by the expansion is approximately 97,286 SF (2.233 acres). The total development area is 164,016 SF (3.765 acres.) As a result, this project is required to adhere to the Maine Department of Environmental Protection's Chapter 500 General Standards and is required to treat 95% of the impervious area and 80% of the developed area from the site portion of the project.

It is noted that that Section XII5,C of the Zoning Ordinance specifies that the project "shall provide for the treatment of 0.5 inch of runoff from 90% of the new or redeveloped impervious area and 0.2 inch of runoff from 75% of the new or redeveloped non-impervious surface area," however, the MDEP General Standard, listed above, will be followed because it is the stricter of the two.

To treat stormwater associated with the impervious areas, 1031 Portland Road, LLC is proposing the use of two grassed underdrain soil filters to meet stormwater quality and quantity standards. The locations of the BMPs are shown on the Proposed Site Plan.

The following table summarizes the impervious and developed area created by the project, as well as the treatment structure, area treated, and relationship with the total developed and impervious areas for the project.

### Project Site Area

PROJECT AREA	IMPERVIOUS AREA	DEVELOPED AREA
Site Area	97,286 SF	164,016 SF

### Stormwater Treatment Systems (Site Areas)

TREATMENT AREA	SITE AREA TREATED	
	IMPERVIOUS	DEVELOPED
Grassed Underdrain Soil Filter A	35,006 SF	58,844 SF
Grassed Underdrain Soil Filter B	50,539 SF	68,003 SF
Dripline Filter 2B	6,900 SF	6,900 SF
Dripline Filter 7B	1,050 SF	1,050 SF
<b>TOTAL</b>	<b>93,495 SF</b>	<b>134,797 SF</b>
<b>PERCENT OF SITE AREA TREATED</b>	<b>96.10 %</b>	<b>82.19 %</b>





## STORMWATER BMPS DESCRIPTIONS AND SIZING CALCULATIONS

A description of the treatment type is as follows:

### 1. Grassed Underdrained Soil Filter A

#### Description:

The proposed soil filter will treat stormwater runoff from the western half of the site. This filter is located on Type A, upland soils and will outlet into natural drainage pathways. The filter will include a geotextile separation liner to prevent infiltration.

#### Calculations:

This filter was sized using Chapter 7.1 of the MDEP Stormwater BMP Technical Design Manual, Volume III.

#### Required Filter Area:

$$\begin{aligned} & 5\% \text{ (imperious area)} + 2\% \text{ (landscaped area)} \\ & = 0.05(35,006 \text{ SF}) + 0.02 (23,838 \text{ SF}) \\ & = 2,227 \text{ SF (Proposed filter is 2,900SF)} \end{aligned}$$

#### Required Treatment Volume:

$$\begin{aligned} & 1\text{-inch} * (\text{impervious area}) + 0.4\text{-inches} * (\text{Landscaped Area}) \\ & = (1/12 * 35,006 \text{ SF}) + (0.4/12 * 23,838 \text{ SF}) \\ & = 3,711.77 \text{ CF (Proposed filter has 5,402 CF @ 18-inches of impoundment depth)} \end{aligned}$$

#### Drain time

$$\Delta t = \frac{A_F}{3600 \cdot A_o} \sqrt{\frac{2H}{G}}$$

Where  $\Delta t$  = Drain time (hrs),

$A_F$  = Filter Area (sf) = 2,900 sf,

$A_o$  = Area of the 2" ball valve opening (sf) = 0.01 sf (50% open)

$H$  = Storage Height (ft) = 4.0 ft (1.50 ft CPV, 2.0 ft soil filter)

and  $G$  = Acceleration due to gravity (32.2 ft/s<sup>2</sup>).

$$\Delta t = \frac{2900}{3600 \cdot 0.01} \sqrt{\frac{2 \cdot 4.0}{32.2}} = 34 \text{ hours}$$

### 2. Grassed Underdrained Soil Filter B

#### Description:

The proposed soil filter will treat stormwater runoff from the eastern half of the site. This filter is located on Type A, upland soils and will outlet into natural drainage pathways. The filter will include a geotextile separation liner to prevent infiltration.



### Calculations:

This filter was sized using Chapter 7.1 of the MDEP Stormwater BMP Technical Design Manual, Volume III.

#### Required Filter Area:

$$\begin{aligned} & 5\% \text{ (imperious area)} + 2\% \text{ (landscaped area)} \\ & = 0.05(50,539 \text{ SF}) + 0.02 (17,464 \text{ SF}) \\ & = 2,876 \text{ SF (Proposed filter is 3,000 SF)} \end{aligned}$$

#### Required Treatment Volume:

$$\begin{aligned} & 1\text{-inch} * (\text{imperious area}) + 0.4\text{-inches} * (\text{Landscaped Area}) \\ & = (1/12 * 50,539 \text{ SF}) + (0.4/12 * 17,464 \text{ SF}) \\ & = 4,794 \text{ CF (Proposed filter is 5,192 CF @ 18-inches of impoundment depth)} \end{aligned}$$

#### Drain time

$$\Delta t = \frac{A_F}{3600 \cdot A_o} \sqrt{\frac{2H}{G}}$$

Where  $\Delta t$  = Drain time (hrs),

$A_F$  = Filter Area (sf) = 3,000 sf,

$A_o$  = Area of the 2" ball valve opening (sf) = 0.01 sf (50% open)

$H$  = Storage Height (ft) = 4.0 ft (1.50 ft CPV, 2.0 ft soil filter)

and  $G$  = Acceleration due to gravity (32.2 ft/s<sup>2</sup>).

$$\Delta t = \frac{3000}{3600 \cdot 0.01} \sqrt{\frac{2 \cdot 4.0}{32.2}} = 35 \text{ hours}$$

### 3. Roof Dripline Filters

**Filter 2B:** Width of 12" thick dripline filter needed = Roof width (30ft) \*(1/12ft)  
(storm amount to be treated) \*(1/0.40) (available porosity) = 6.25 ft

**Filter 7B:** Width of 12" thick dripline filter needed = Roof width (15ft) \*(1/12ft)  
(storm amount to be treated) \*(1/0.40) (available porosity) = 3.125 ft



## STORMWATER QUANTITY CONTROL NARRATIVE

As mentioned above, this development is required to adhere to the City of Saco's Site Plan Review ordinance, which includes requirements for stormwater quantity control. To meet this standard, HydroCAD calculations were performed to compare pre-development and post-development conditions. Curve numbers and peak runoff flows were calculated using HydroCAD.

The site drains to the east to Cascade Brook. The site is undeveloped consisting mostly of open fields with the remainder being partially wooded. Eight sub-watershed boundaries were used to model the proposed development, with one summation point identified at the site boundary, as shown on the enclosed Pre-Development Hydrology Plan. The summation point was used to compare runoff from pre-development to post-development conditions. Stormwater flows were modeled for 2-year, 10-year, 25, and 50-year storm events.

Based on results of the HydroCAD model, it is expected that peak stormwater runoff from the site will decrease in post-development conditions. A comparison of the watershed areas in both Pre- and Post-Development is organized in the table below. The two roof sections that are directed to roof dripline filters are considered to infiltrate in the post-development hydrology model.

		2-YEAR (CFS)	10-YEAR (CFS)	25-YEAR (CFS)	50-YEAR (CFS)
Summation Point 1	Pre	0.00	0.08	0.73	1.84
	Post	0.00	0.22	0.43	1.10



## **EROSION AND SEDIMENTATION CONTROL**

The proposed construction will require the implementation of temporary and permanent erosion control measures. These measures will be implemented in accordance with the Maine Erosion and Sediment Control Best Management Practices (BMPs) Manual, prior to removal of any on-site vegetation or disturbance of any on-site soil. The general erosion and sediment control specifications and details, as provided within this section, are intended to describe measures to be used by contractors working on the site to maintain compliance with the standards established in the BMPs.

The proposed location and use of erosion control measures on-site are shown plans within the Permitting Plan Set. There are no known existing erosion control concerns with the site. Implementation of proper erosion control measures will be required by site contractors to confine sediment and debris within the limit of soil disturbance. Proper use and maintenance of erosion control measures, described in Appendix B, provide protection against off-site transport of sediment and discharge of sediment to undisturbed areas of the development.



## EROSION AND SEDIMENTATION CONTROL PLAN

**1. Pollution Prevention:** The proposed project includes the construction of self-storage facility development in Saco, Maine. The development will include approximately 317 units and an office building. All disturbed areas outside of the buildings and parking/maneuvering areas, will be stabilized with vegetation or riprap. Proposed down-gradient vegetated areas will be protected with the use of silt fence or additional control devices if necessary, during construction.

**2. Sediment Barriers:** Prior to construction, sediment barriers will be installed downgradient of all disturbed areas. Sediment barriers will include silt fence, erosion control mix berms, hay bales or additional measures which may become necessary.

Sediment barriers will also be installed adjacent to any significant natural drainage channel, not otherwise protected. All installed sediment barriers will be maintained until disturbed areas are permanently stabilized.

**3. Temporary Stabilization:** Disturbed areas, which have lost natural vegetation cover, and will not be worked for more than seven days, will be temporarily stabilized. Areas within 75 feet of a wetland or waterbody will be stabilized within 48 hours of the initial disturbance or prior to any significant storm event, whichever comes first.

Temporary stabilization will include mulch or other non-erodible material such as erosion control mesh mats. In some instances, temporary stabilization may include temporary mulch and seeding, based on the time until the area will be worked or permanently stabilized.

**4. Removal of Temporary Sediment Control Measures:** After permanent stabilization of disturbed areas has been completed, temporary measures, such as silt fence, will be removed within 30 days. Any accumulated sediments will be removed, and any disturbed areas permanently stabilized.

**5. Permanent Stabilization:** Once proposed construction is completed all disturbed areas, not otherwise permanently stabilized, will be permanently stabilized with vegetation, seeding, or permanent mulch.

Vegetation plantings and seeding will include species which are suitable for the light, soil, and moisture conditions of the area. Seeded areas will be protected with temporary mulch or erosion control blankets.



Concentrated flows will not be allowed on newly seeded areas until an adequate catch of vegetation is established. It may be necessary to reseed and mulch again if germination is sparse, plant coverage is spotty, or topsoil erosion is evident. For seeded areas, permanent stabilization means a 90% cover of healthy plants with no evidence of washing or riling of the topsoil.

Other permanent measures associated with the project include the following:

- A. **Permanent Mulch:** Permanent mulching means total coverage of exposed area with an approved mulch material. Erosion control mix may be used as mulch for permanent stabilization according to the approved application rates and limitations.
- B. **Permanent Riprap:** Permanent riprap means that slopes and ditches stabilized with riprap have an appropriate backing of well-graded gravel or approved geotextile to prevent soil movement from behind the riprap. Properly sized angular stones will be utilized.
- C. **Permanent Ditches, Channels, and Swales:** Permanent stabilization means the channel is stabilized with a 90% cover of healthy vegetation or with a well-graded riprap lining. There must be no evidence of slumping of the channel lining, undercutting of the channel banks, or downcutting of the channel.

**6. Winter Construction:** Overwinter construction is anticipated as part of this project. During winter construction additional provisions will be made to protect disturbed areas from runoff. Winter construction includes the time between November 1 and April 15, and during winter construction, the contractor shall meet the requirements of Section 3 – Overwinter Construction of the Maine Erosion and Sedimentation Control BMP Manual (October 2016).

**7. Stormwater Channels:** Ditches, swales, and open stormwater channels are planned as part of this project. They will be stabilized with either vegetation or rip rap depending on the situation to prevent soil erosion.

**8. Roads:** Proposed accessway areas will be graded to collect water ditch and swale systems to the respective treatment devise before being discharged to the on-site unnamed stream or the Penobscot River.

**9. Culverts:** Culverts utilized in this project will be protected on both ends and are sized to convey the 24-hour, 25-year storm event.





**10. Parking Areas:** The proposed project includes parking areas graded to sheet runoff to the adjacent vegetated areas.

**11. Additional Requirements:** No additional requirements are proposed at this time.

## **INSPECTION AND MAINTENANCE**

During and post construction, 1031 Portland Road, LLC and its contractor(s) will be responsible for maintenance of the site and the devices that provide treatment for the stormwater from the site.

A Pre- and Post-Construction Maintenance Plan for the stormwater management system is included in this section. Any questions regarding the design and maintenance of the Stormwater Management and Erosion and Sedimentation Control Systems should be directed to:

- ◆ Ben Kaiman, E.I.  
Haley Ward, Inc.  
One Merchants Plaza, Suite 701  
Bangor, Maine 04401  
(207) 989-4824  
[bkaiman@haleyward.com](mailto:bkaiman@haleyward.com)



## MAINTENANCE PLAN OF STORMWATER MANAGEMENT SYSTEM

The Maine Department of Environmental Protection's (MDEP) Stormwater Management for Maine: Best Management Practices latest edition and the MDEP's Chapter 500: Stormwater Management were used as guidelines in the development of this Maintenance Plan. General maintenance requirements are listed below.

### A. DURING CONSTRUCTION

The general contractor will be responsible for the inspection and maintenance of all stormwater management system components during construction.

**Inspection:** Inspection of disturbed and impervious areas, erosion control measures, materials storage areas that are exposed to precipitation, and locations where vehicles enter or exit the site will be performed at least once a week as well as before and after a storm event, and prior to completing permanent stabilization measures. Inspections shall be conducted by a person with knowledge of erosion and stormwater control, including the standards and conditions in the permit.

**Maintenance:** All erosion control measures will be kept in effective operating condition until areas are permanently stabilized. If BMPs need to be maintained or modified, additional BMPs are necessary, or other corrective action is needed, implementation will be completed within 7 calendar days and prior to any rainfall event.

**Documentation:** A log shall be kept summarizing the inspections and any corrective action taken. A copy of the log is provided at the end of this section, and is titled, Construction Inspection Log.

### B. POST-CONSTRUCTION

The Owner will be responsible for the inspection and maintenance of all stormwater management system components associated with the proposed project. A list of corrective actions titled Inspection and Maintenance Plan for Stormwater Management Structures (BMPs) is provided at the end of this section.

#### Inspection and Corrective Action

- 1. Vegetated Areas:** Inspections and maintenance of vegetated areas will be performed early in the growing season or after significant rainfall to identify any erosion problems. Areas where erosion is evident will be covered with an appropriate



lining, or erosive flows will be diverted to an area able to handle the flows. Any bare areas or areas with sparse growth will be replanted.

- 2. Ditches, Swales, and Culverts:** Inspections and maintenance of ditches, culverts, and swales will be performed in the Spring, late Fall, and after rain events greater than 1-inch in depth to remove any obstructions to flow, to remove any accumulated sediments within the structures, and to repair any erosion of channel linings, check dams, inlet protection, or outlet protection. Vegetated ditches and swales must be mowed no more than twice per year and cut no less than 6-inch in height.
- 3. Grassed Under drained Soil Filters:** Maintenance of the Grassed Underdrained Soil Filters built for the treatment of stormwater will at a minimum include the items listed below.
  - **Maintenance Agreement:** A legal entity should be established with responsibility for inspecting and maintaining any underdrained filter. The legal agreement establishing the entity should list specific maintenance responsibilities (including timetables) and provide for the funding to cover long-term inspection and maintenance.
  - **Drainage:** The filter should within 24 to 48 hours following a one-inch storm or greater. If the system drains too fast, an orifice may need to be added on the underdrain outlet or may need to be modified if already present.
  - **Sediment Removal:** Sediment and plant debris should be removed from the pretreatment structure at least annually.
  - **Mowing:** If mowing is desired, only hand-held string trimmers or push-mowers are allowed on the filter (no tractor) and the grass bed should be mowed no more than 2 times per growing season to maintain grass heights of no less than 6 inches.
  - **Fertilization:** Fertilization of the underdrained filter area should be avoided unless absolutely necessary to establish vegetation.
  - **Harvesting and Weeding:** Harvesting and pruning of excessive growth should be done occasionally. Weeding to control unwanted or invasive plants may also be necessary.
  - **Grass cover:** 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.



- Soil Filter Replacement: 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.

## **C. DOCUMENTATION**

- 1.) A log shall be kept summarizing the inspections, maintenance, and any corrective action taken. A copy of the log is provided at the end of this section, and is titled, BMP Inspection Log.
- 2.) Annual Reports as required by The City of Saco shall be filed.



## APPENDIX C

### HOUSEKEEPING

1. **Spill Prevention** - During construction, controls will be used to prevent pollutants from being discharged from materials on site, including storage practices to minimize exposure of the materials to stormwater, and appropriate spill prevention, containment, and response planning and implementation.
2. **Groundwater Protection**- During construction, liquid petroleum products and other hazardous materials with the potential to contaminate groundwater will not be stored or handled in areas of the site draining to an infiltration area. Dikes, berms, sumps, and other forms of secondary containment that prevent discharge to groundwater may be used to isolate portions of the site for the purposes of storage and handling of these materials.
3. **Fugitive Sediment and Dust** - Actions must be taken to ensure that activities do not result in noticeable erosion of soils or fugitive dust emissions during or after construction. Oil will not be used for dust control. Water will be used for dust control during construction. Operations during wet months that cause mud to be tracked off the site onto public roads will provide sweeping of the road areas at least once per week and prior to significant storm events.
4. **Debris and Other Materials** - Litter, construction debris, and chemicals exposed to stormwater will be prevented from becoming a pollutant source.
5. **Trench or Foundation De-Watering** - If de-watering is necessary, the collected water will be removed from the ponded area and spread through natural wooded buffers or discharged into a construction sedimentation basin. The water will not be allowed to flow over disturbed areas to the site.
6. **Non-Stormwater Discharges** – Identify and prevent contamination by non-stormwater discharges.
7. **Additional Requirements** – Additional requirements may be applied on a site-specific basis.



## 1031 PORTLAND ROAD, LLC, SACO, MAINE CONSTRUCTION INSPECTION LOG

INSPECTION DATE	INSPECTOR (NAME AND QUALIFICATIONS)	MAJOR OBSERVATIONS	WORK PERFORMED

### Notes

- 1) Major Observations include the operation and maintenance of erosion and sedimentation controls, materials storage areas, and vehicle access points to the parcel. Major Observations must include BMPs that need maintenance, BMPs that failed to operate as designed or proved inadequate for a particular location, and locations(s) where additional BMPs are needed. For each BMP requiring maintenance, BMP needing replacement, and location needing additional BMPs, note in the log the corrective action taken and when it was taken.
- 2) Work Performed will include a description of the corrective action taken, the date the corrective action was taken, and the name and qualifications of the person taking the corrective actions
- 3) The log must be made accessible to MDEP staff and a copy must be provided upon request.
- 4) The permittee shall retain a copy of the log for a period of at least three years from the completion of permanent stabilization.





## 1031 PORTLAND ROAD, LLC, SACO, MAINE BMP INSPECTION LOG

DATE	INSPECTOR (NAME AND QUALIFICATIONS)	ID NUMBER	BMP STRUCTURE	WORK PERFORMED	COMMENTS

### **Notes**

- 1) If a maintenance task requires the clean-out of any sediments or debris, indicate where the sediment and debris was disposed after removal.
- 2) BMP structures shall be numbered sequentially and located on attached site map.
- 3) The log must be made accessible to MDEP staff and a copy must be provided upon request.
- 4) The permittee shall retain a copy of the log for a period of at least five years from the completion of permanent stabilization.



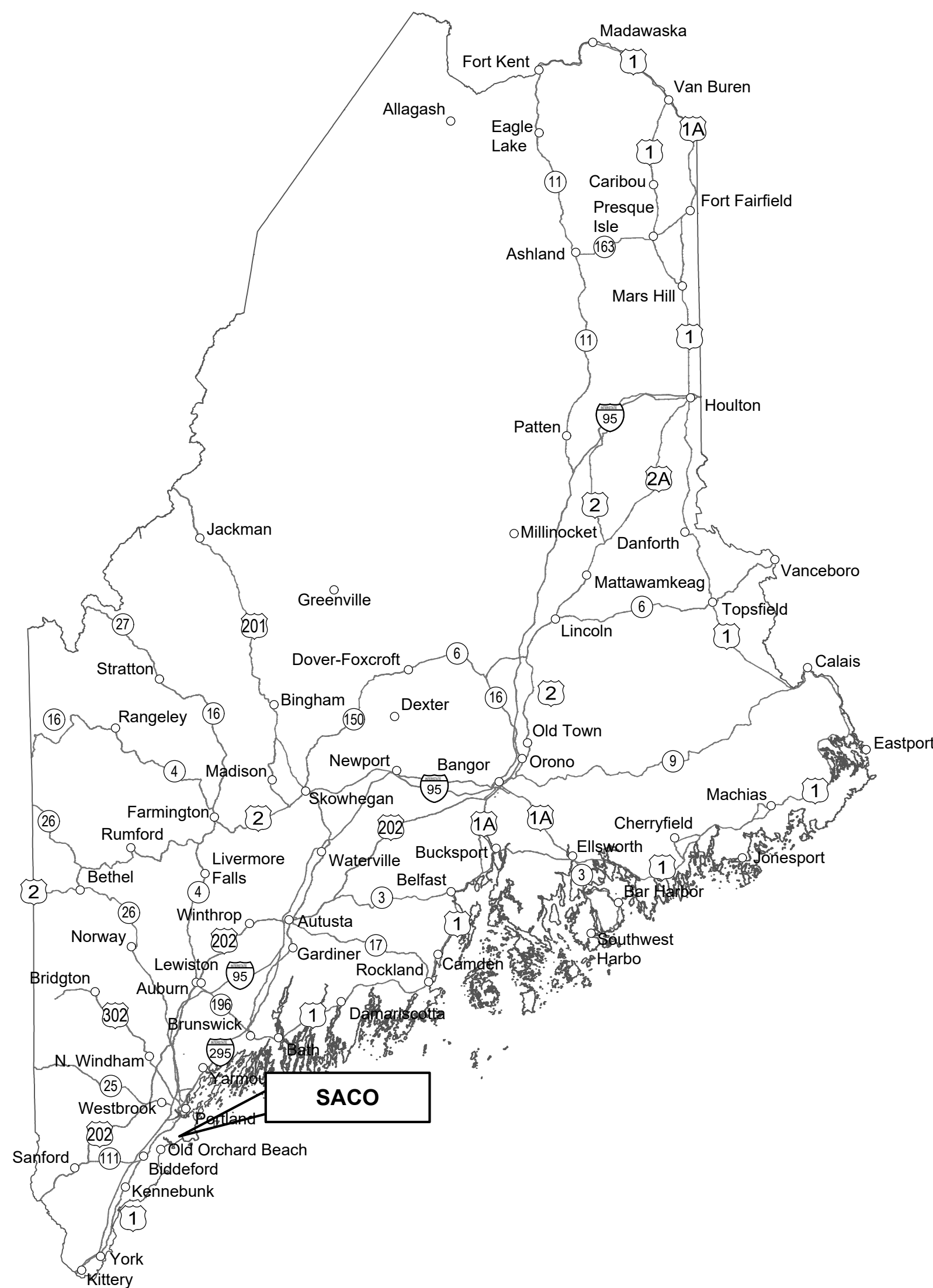
INSPECTION AND MAINTENANCE PLAN FOR STORMWATER MANAGEMENT STRUCTURES (BMPS)		
	INSPECTION SCHEDULE	CORRECTIVE ACTIONS
<b>VEGETATED AREAS</b>	Annually early spring and after heavy rains	Inspect all slopes and embankments and replant areas of bare soil or with sparse growth
		Armor rill erosion areas with riprap or divert the runoff to a stable area
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Mow vegetation as specified for the area
<b>DITCHES, SWALES AND OPEN STORMWATER CHANNELS</b>	Annually spring and late fall and after heavy rains	Remove obstructions, sediments or debris from ditches, swales and other open channels
		Repair any erosion of the ditch lining
		Mow vegetated ditches
		Remove woody vegetation growing through riprap
		Repair any slumping side slopes
<b>CULVERTS</b>	Spring and late fall and after heavy rains	Repair riprap where underlying filter fabric or gravel is showing or if stones have dislodged
		Remove accumulated sediments and debris at the inlet, outlet, or within the conduit
		Remove any obstruction to flow
<b>CATCH BASINS</b>	Annually in the spring	Repair any erosion damage at the culvert's inlet and outlet
		Remove sediments and debris from the bottom of the basin and inlet grates
<b>ROADWAYS AND PARKING AREAS</b>	Annually in the spring or as needed	Remove floating debris and oils (using oil absorptive pads) from any trap
		Clear and remove accumulated winter sand in parking lots and along roadways
		Sweep pavement to remove sediment
		Grade road shoulders and remove accumulated winter sand
		Grade gravel roads and gravel shoulders
		Clean-out the sediment within water bars or open-top culverts
<b>RESOURCE AND TREATMENT BUFFERS</b>	Annually in the spring	Ensure that stormwater runoff is not impeded by false ditches of sediment in the shoulder
		Inspect buffers for evidence of erosion, concentrated flow, or encroachment by development
		Manage the buffer's vegetation with the requirements in any deed restrictions
		Repair any sign of erosion within a buffer
		Inspect and repair down-slope of all spreaders and turn-outs for erosion
		Install more level spreaders, or ditch turn-outs if needed for a better distribution of flow
<b>WET PONDS AND DETENTION BASINS</b>	Annually in fall and after heavy rains	Clean-out any accumulation of sediment within the spreader bays or turnout pools
		Mow non-wooded buffers no shorter than six inches and less than three times per year
		Inspect the embankments for settlement, slope erosion, piping, and slumping
		Mow the embankment to control woody vegetation
		Inspect the outlet structure for broken seals, obstructed orifices, and plugged trash racks
		Remove and dispose of sediments and debris within the control structure
<b>FILTRATION AND INFILTRATION BASINS</b>	Annually in the spring and late fall	Repair any damage to trash racks or debris guards
		Replace any dislodged stone in riprap spillways
		Remove and dispose of accumulated sediments within the impoundment and forebay
		Clean the basin of debris, sediment and hydrocarbons
		Provide for the removal and disposal of accumulated sediments within the basin
<b>PROPRIETARY DEVICES</b>	Annually in the spring and late fall	Renew the basin media if it fails to drain within 72 hours after a one inch rainfall event
		Till, seed and mulch the basin if vegetation is sparse
<b>OTHER PRACTICES</b>	As specified by manufacturer	Repair riprap where underlying filter fabric or gravel is showing or where stones have dislodged
		Contract with a third-party for inspection and maintenance
<b>OTHER PRACTICES</b>	As specified for devices	Follow the manufacturer's plan for cleaning of devices
		Contact the department for appropriate inspection and maintenance requirements for other drainage control and runoff treatment measures.

\*NOTE: This is a general list of stormwater BMPs. Not all BMPs are applicable for a given site.

# SACO SELF STORAGE

## 1031 PORTLAND ROAD, SACO, MAINE

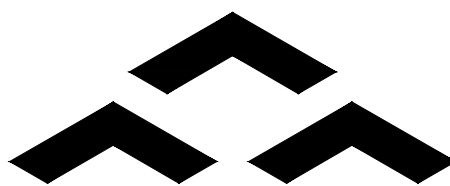
PREPARED FOR  
**1031 PORTLAND ROAD, LLC**



ISSUED FOR PLANNING BOARD REVIEW

**FEBRUARY 11, 2022**

REVISED  
APRIL 20, 2022



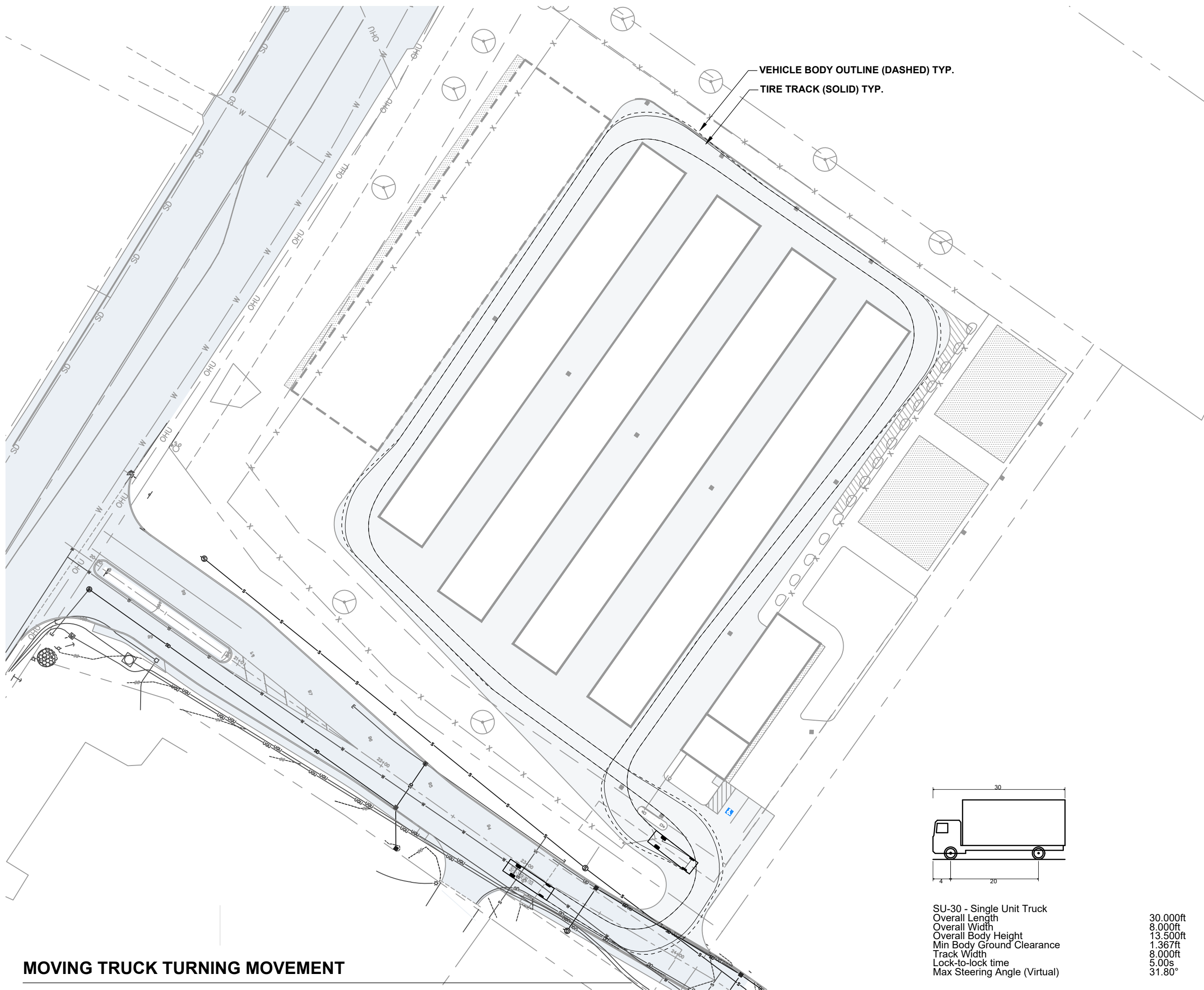
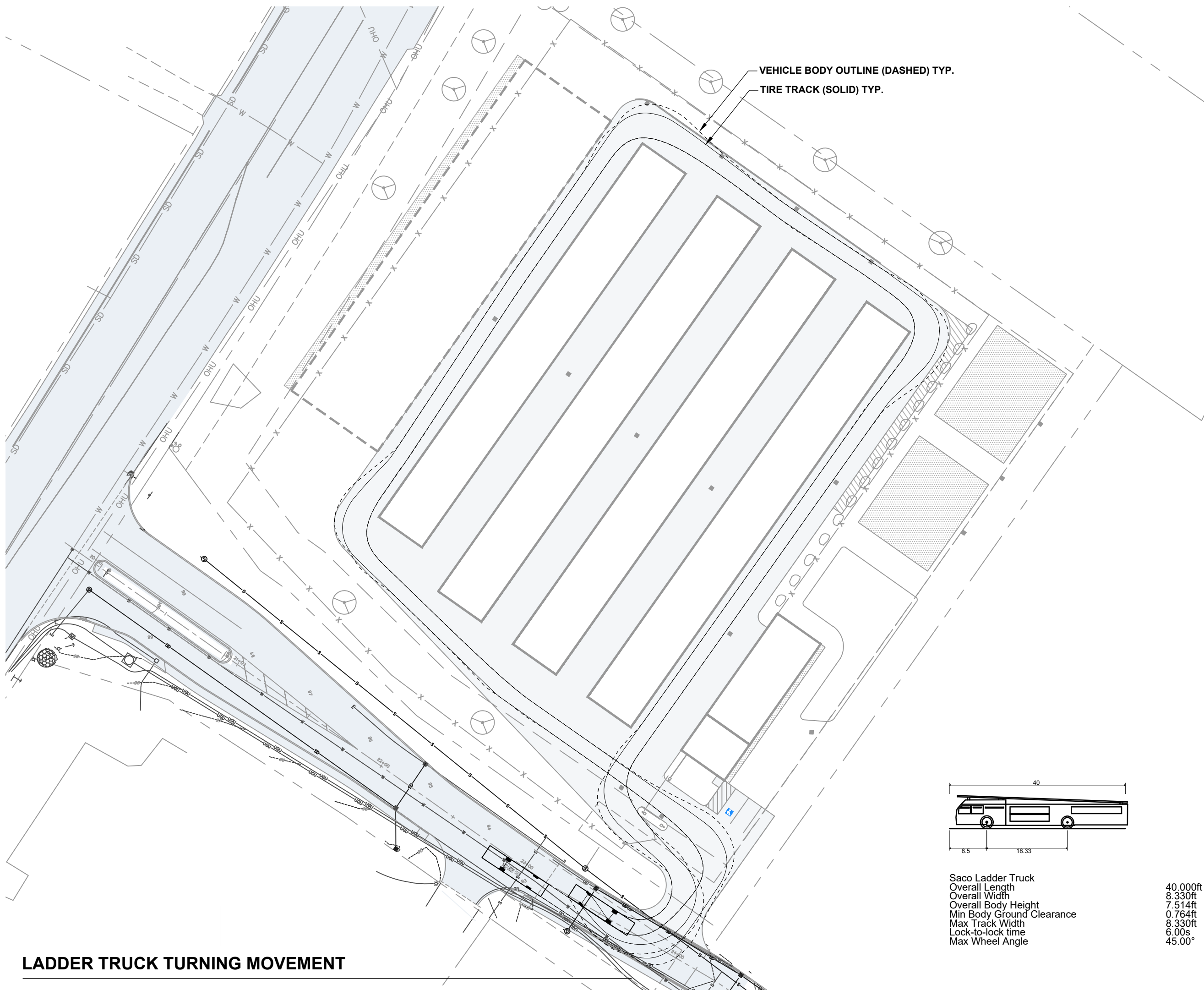
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### INDEX OF DRAWINGS

C001	GENERAL NOTES
C002	EROSION CONTROL NOTES & DETAILS
N/A	EXISTING CONDITIONS PLAN
C101	DEMOLITION SITE PLAN
C102	PROPOSED SITE LAYOUT & UTILITY PLAN
C103	PROPOSED SITE GRADING & DRAINAGE PLAN
C104	PHOTOMETRIC PLAN & LIGHTING SCHEDULE
C501	SITE DETAILS
C502	SITE DETAILS
C701	PRE-DEVELOPMENT HYDROLOGY PLAN
C702	POST DEVELOPMENT HYDROLOGY PLAN
C703	STORMWATER TREATMENT PLAN



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## GENERAL NOTES

- THE UTILITY LOCATIONS SHOWN ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION BY THE CONTRACTOR.
- TEMPORARY BENCH MARKS (TBM'S) ARE GENERALLY HYDRANT VALVE NUTS OR SPIKES DRIVEN INTO THE BASE OF POWER POLES.
- PROPERLY PROTECT AND DO NOT DISTURB PROPERTY IRONS AND MONUMENTS. IF DISTURBED, THE PROPERTY MONUMENT WILL BE RESET AT THE CONTRACTOR'S EXPENSE, BY A REGISTERED LAND SURVEYOR APPROVED BY THE ENGINEER.
- CONTRACTOR SHALL PERFORM ALL CONSTRUCTION ACTIVITIES WITHIN THE CONFINES OF SUBJECT PROPERTY. ANY CONSTRUCTION ACTIVITY, MATERIAL STORAGE ETC., TAKING PLACE ON PRIVATE PROPERTY SHALL BE WITH THE EXPRESS WRITTEN PERMISSION OF THE OWNER.
- IF UNEXPECTED HAZARDOUS WASTE OR MATERIALS CONTAINING HAZARDOUS WASTE ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY CEASE WORK AND CONTACT THE OWNER, ENGINEER, CONTRACTING OFFICER, AND DEP. WHEN A DEP APPROVED ACTION PLAN IS DETERMINED, WORK SHALL CONTINUE, AND ALL HAZARDOUS WASTE AND MATERIALS CONTAINING HAZARDOUS WASTE SHALL BE DISPOSED OF IN COMPLIANCE WITH THE APPROVED ACTION PLAN AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS.
- THE CONTRACTOR SHALL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS AS REQUIRED TO PERFORM THE WORK AS INDICATED ON THE DRAWINGS AND IN THE SPECIFICATIONS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPLICABLE FEDERAL, STATE AND LOCAL CODES.
- THE WORK SHALL INCORPORATE EROSION CONTROL MEASURES WHICH ARE COMPLIANT WITH THE LATEST VERSION OF "MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES".
- THE LOCATION, TYPE AND SIZE OF EXISTING PIPES, DUCTS, CONDUITS AND OTHER UNDERGROUND STRUCTURES SHOWN ON THE DRAWINGS ARE NOT WARRANTED TO BE EXACT NOR IS IT WARRANTED THAT ALL UNDERGROUND STRUCTURES ARE SHOWN. CONTRACTOR SHALL FIELD VERIFY ALL UTILITY LOCATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION WITH THE CITY, UTILITY COMPANIES, DIG SAFE, EMERGENCY SERVICES AND MAINE DEPARTMENT OF TRANSPORTATION (MDOT) WHERE APPLICABLE. CONTRACTOR SHALL NOTIFY ALL UTILITIES PRIOR TO COMMENCING WORK TO ALLOW SUFFICIENT TIME TO LOCATE AND MARK THE LOCATION OF ALL BURIED UTILITIES. CONTRACTOR SHALL ALSO CONTACT "DIG SAFE", TELEPHONE NO 800-225-4977. REPAIR OF ANY DAMAGED UTILITY WILL BE INCIDENTAL TO THIS PROJECT.
- WHEN APPLICABLE, CONTRACTOR SHALL MAINTAIN TRAFFIC IN A SAFE MANNER, IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION, AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO MAINTAIN CONTINUOUS TRAFFIC FLOW DURING CONSTRUCTION.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT EQUIPMENT FLUIDS FROM REACHING ANY WATER COURSE. ANY INADVERTENT FLUID DISCHARGES SHALL BE IMMEDIATELY CLEANED FROM THE WATERS USING WHATEVER MEANS NECESSARY, AS DETERMINED BY THE ENGINEER.
- RESTORE ALL AREA DISTURBED BY CONTRACTOR'S OPERATIONS TO ORIGINAL CONDITION (GRAVEL, PAVEMENT, GRASS, ETC.) UNLESS NOTED OTHERWISE ON PLANS. RESTORATION OF GRAVEL, ROAD AND DRIVEWAY SURFACES AND LAWNS DAMAGED BY CONTRACTOR SHALL BE INCIDENTAL TO THE PROJECT.
- RESTRICT ACCESS TO SITE THROUGH THE USE OF APPROPRIATE SIGNAGE, GATES, BARRIERS, FENCES, ETC. SITE SHALL BE LEFT WITH APPROPRIATE SAFETY MEASURES IN PLACE DURING NON-WORKING HOURS. NO TRENCH SHALL BE LEFT OPEN DURING NON-WORKING HOURS. SITE SAFETY IS THE RESPONSIBILITY OF CONTRACTOR, DURING BOTH WORKING AND NON-WORKING HOURS.
- CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS. PERMIT APPLICATIONS SHALL BE SUBMITTED WITH ADEQUATE TIME SO AS NOT TO DELAY CONSTRUCTION.
- ALL FINISH SURFACES SHALL BE INSTALLED TO PROMOTE POSITIVE DRAINAGE. IN NO WAY SHALL THE NEW FINISH SURFACES AND CATCH BASINS CREATE DRAINAGE PROBLEMS THAT DID NOT EXIST PRIOR TO CONSTRUCTION.
- STATIONS AND OFFSETS FOR MANHOLES, CATCH BASINS, AND OTHER STRUCTURES ARE SHOWN TO THE CENTER OF EACH.
- HOURS FOR THE PROJECT WILL BE MONDAY THROUGH FRIDAY, FROM 7:00 AM TO 7:00 PM, UNLESS OTHERWISE AUTHORIZED BY THE OWNER.
- THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER IN WRITING OF ANY CONDITION OR OCCURRENCE THAT REPRESENTS A CHANGE IN PROJECT SCOPE. VERBAL NOTIFICATION IS REQUIRED PRIOR TO PROCEEDING WITH THE WORK OF THE PROJECT AND WRITTEN NOTIFICATION MUST BE PROVIDED. REQUESTS FOR FEE ADJUSTMENTS WILL NOT BE CONSIDERED UNLESS PROPER NOTICE IS GIVEN.
- THE CONTRACTOR SHALL SUPERVISE AND INSPECT THE WORK OF THIS PROJECT IN AN EFFICIENT AND COMPETENT MANNER. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES USED TO COMPLETE THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE WORK IS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. A REPRESENTATIVE OF THE GENERAL CONTRACTOR SHALL BE PRESENT DURING ALL PHASES OF THE WORK.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING TOPOGRAPHY AND EXISTING CONDITIONS PRIOR TO CONSTRUCTION.
- LAYOUT OF THE PROJECT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE APPROVED BY THE ENGINEER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL GRADE AND LAYOUT CONTROL. LAYOUT SHOULD BE PERFORMED WITH SURVEY EQUIPMENT AND OVERSEEN BY A LICENSED SURVEYOR. A CAD FILE WILL BE AVAILABLE TO THE CONTRACTOR.
- CONTRACTOR SHALL BE REQUIRED TO PROVIDE DUST CONTROL FOR PROJECT WHICH CAN INCLUDE, BUT IS NOT LIMITED TO, WATER AND CALCIUM CHLORIDE. COST IS INCIDENTAL TO THE PROJECT.
- ALL MATERIALS SCHEDULED FOR REMOVAL SHALL BE DISPOSED OF IN A LEGAL MANNER BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. THE OWNER HAS THE FIRST RIGHT AND REFUSAL FOR ANY DEMOLITION MATERIALS.
- DISPOSAL OF SURPLUS SOIL MATERIAL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SURPLUS MATERIAL SHALL NOT BE DISPOSED OF ON THE PROJECT SITE. DISPOSAL SHALL BE AT WASTE AREAS WHICH ARE LICENSED TO ACCEPT SUCH MATERIALS. UNLESS THE MATERIAL IS ACCEPTABLE FOR USE AS FILL IN OTHER AREAS OF THE PROJECT, THE OWNER HAS THE FIRST RIGHT AND REFUSAL FOR ANY SURPLUS SOIL MATERIALS.

## SURVEY NOTES:

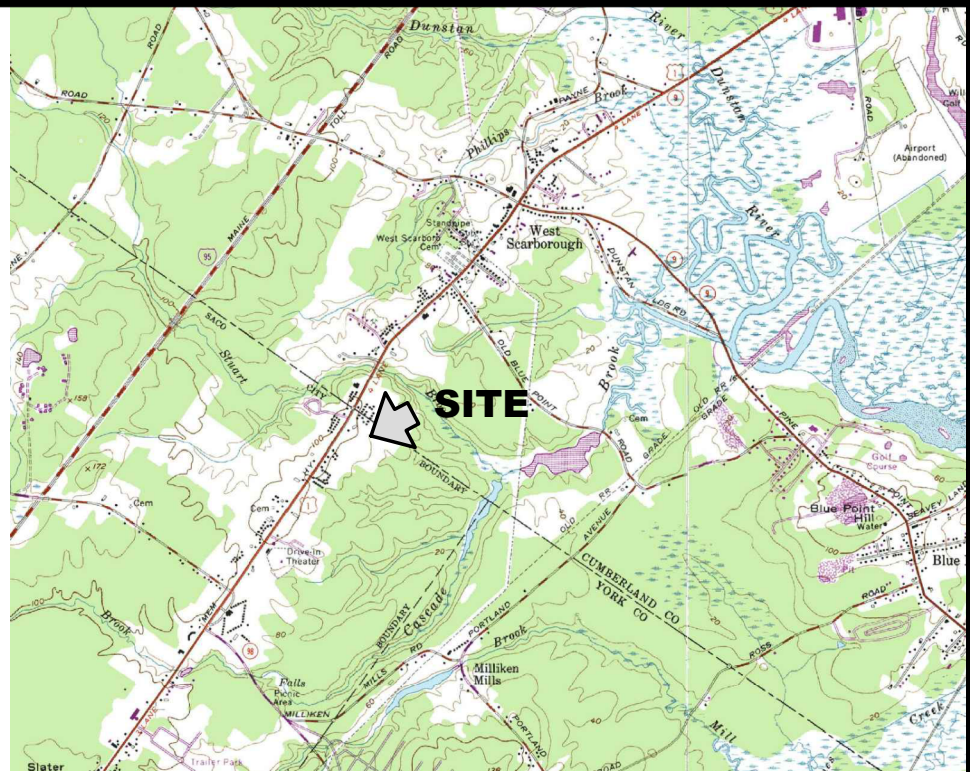
- THE DIRECTION OF LINES AND UNDERLYING COORDINATE SYSTEM IS BASED UPON THE MAINE STATE PLANE COORDINATE SYSTEM, WEST ZONE, US FOOT, NAD 83 DATUM.
- ELEVATIONS REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

## SOURCE:

- BASE SURVEY PLAN PROVIDED IN DIGITAL FORMAT FROM HORIZONS ENGINEERING, INC. ON DECEMBER 14, 2021. FILE NAME: ACAD-S-21080\_Base-7.dwg.

## ABBREVIATIONS

@	AT	MAX.	MAXIMUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	MDOT	MAINE DEPT. OF TRANSPORTATION
APPROX:±	APPROXIMATELY	MH	MANHOLE
		MIN	MINIMUM
BLDG	BUILDING	N	NORTHING
CL	CENTERLINE	NE	NORTHEAST
CB	CATCH BASIN	N.T.S.	NOT TO SCALE
		NWT	NON WOVEN GEOTEXTILE
CLR	CLEAR	OD	OUTSIDE DIAMETER
CMP	CORRUGATED METAL PIPE	O.C.	ON CENTER
CO	CLEANOUT	OH	OVERHEAD
CPE	CORRUGATED POLYETHYLENE	OZ	OUNCES
		PERF	PERFORATED
DI	DUCTILE IRON		
DIA.	DIAMETER	PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
E	EASTING	PVC	POLYVINYL CHLORIDE
EL	ELEVATION	PL	PROPERTY LINE
EFM	EXISTING FORCE MAIN	POH	PROPOSED OVERHEAD ELECTRIC
EPS	EXTRUDED POLYSTYRENE	PUGE	PROPOSED UNDERGROUND ELECTRIC
FM	FORCEMAIN	R	RADIUS
GAL	GALLON	S	SLOPE
GALV	GALVANIZED	SCL	STORMWATER COLLECTION LINE
		SCS	STORMWATER COLLECTION SYSTEM
GPH	GALLONS PER HOUR	SDR	STANDARD DIMENSION RATIO
GPM	GALLONS PER MINUTE	SE	SOUTHEAST
		SHT	SHEET
HDPE	HIGH DENSITY POLYETHYLENE	SO	SQUARE
HP	HORSEPOWER	SS	STAINLESS STEEL
		SY	SQUARE YARD
ID	INSIDE DIAMETER		
IN.	INCHES	TBM	TEMPORARY BENCH MARK
INT.	INTERSECTION	TOC	TOP OF CONCRETE
INV.	INVERT	TYP	TYPICAL



LOCATION MAP: USGS QUADRANGLE: OLD ORCHARD BEACH  
SCALE: 1"=400'  
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## LEGEND:

DESCRIPTION	EXISTING	PROPOSED
BENCHMARK		
SURVEY STATION		
MANHOLE		
UTILITY POLE		
SIGN		
CATCH BASIN		
HYDRANT		
WATER VALVE		
PROPERTY LINE		NA
EDGE OF GRAVEL		
EDGE OF PAVEMENT		
CENTERLINE		
MAJOR FOOT CONTOUR		100
MINOR FOOT CONTOUR		98
WATERLINE		W
STORM DRAIN		SD
SANITARY SEWER		SS
OVERHEAD UTILITIES		OHU
UNDERGROUND UTILITIES		UGU
SEDIMENT CONTROL BARRIER		SF
CHAIN LINK FENCE		X
PAVED SURFACE		
RIP RAP	NA	
TREE LINE		

## LANDSCAPING PLANTING SCHEDULE

NAME	SIZE	TYPE	QUANTITY
RED MAPLE (ACER RUBRUM)	2.5" CALIPER / 8' HEIGHT	TREE	9

2	2022.04.20	REVISED PER PLANNING BOARD COMMENTS	BLQ	BJK
1	2022.04.04	REVISED PER MDEP COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
PLANNING BOARD REVIEW NOT FOR CONSTRUCTION				
 ENGINEERING   ENVIRONMENTAL   SURVEYING One Merchants Plaza, Suite 701 Bangor, Maine 04401 207.989.4824 WWW.HALEYWARD.COM				
PROJECT 1031 PORTLAND ROAD, LLC SACO SELF STORAGE 1031 PORTLAND ROAD, SACO MAINE				
TITLE GENERAL NOTES				
DATE 2022.02.11		SCALE N.T.S.		
DRAWN BY BLQ		DESIGNED BY BLQ		CHECKED BY BK
PROJECT No. 12829.002		DRAWING No. C001		
REV. 2				



FILE LOCATION: P:\12823-CAFFENATE-1\F01-12823-CAFFENATE-1\_P01-12823-CAFFENATE-1.DWG, DWG12823-1002-C-NOTES.DWG, 2022.04.10, 3:57 PM

EROSION AND SEDIMENTATION CONTROL NOTES

- EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES (BMP'S) SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OR SOIL DISTURBANCE ACTIVITIES. BMP'S SHALL COMPLY WITH THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION RULES AND REGULATIONS AND MAINE EROSION AND SEDIMENT CONTROL PRACTICES FIELD GUIDE FOR CONTRACTORS. [HTTPS://WWW.MAINE.GOV/DEPLAND/EROSION/ESC/BMPS/ESC\\_BMP\\_FIELD.PDF](https://www.maine.gov/depland/erosion/esc/bmps/esc_bmp_field.pdf)
- ALL SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL BEST MANAGEMENT PRACTICES (BMP'S), PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY, MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, LATEST EDITION.
- ALL SEDIMENT BARRIERS AND EROSION CONTROL MEASURES SHALL BE INSTALLED BEFORE THE START OF CONSTRUCTION AS NOTED IN THE WRITTEN EROSION AND SEDIMENT CONTROL PLAN.
- EROSION CONTROL MEASURES WITHIN 50 FEET OF PROTECTED NATURAL RESOURCES SHALL HAVE A DOUBLE PERIMETER EROSION CONTROL AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.
- OPEN AREAS THAT ARE STRIPPED OR GRADED SHALL BE LIMITED TO ONE ACRE OR NO LARGER THAN CAN BE MULCHED IN ONE DAY.
- SEDIMENT BARRIERS SHALL BE PLACED DOWNGRAIENT OF ALL STOCKPILES. STORMWATER RUNOFF SHOULD BE PREVENTED FROM RUNNING INTO STOCKPILES.
- MINIMUM EROSION CONTROL MEASURES WILL NEED TO BE IMPLEMENTED AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN ALL COMPONENTS OF THE EROSION CONTROL PLAN UNTIL THE SITE IS FULLY STABILIZED. HOWEVER, BASED ON SITE AND WEATHER CONDITIONS DURING CONSTRUCTION, ADDITIONAL EROSION CONTROL MEASURES MAY NEED TO BE IMPLEMENTED. ALL AREAS OF INSTABILITY AND EROSION MUST BE REPAIRED IMMEDIATELY DURING CONSTRUCTION AND NEED TO BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED OR VEGETATION IS ESTABLISHED. A CONSTRUCTION LOG MUST BE MAINTAINED FOR THE EROSION AND SEDIMENTATION CONTROL INSPECTIONS AND MAINTENANCE
- MINIMIZE DISTURBED AREA AND PROTECT NATURAL DOWNGRAIENT BUFFER AREAS TO THE EXTENT PRACTICABLE. CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE SOIL EROSION.
- WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY PROTECTED NATURAL RESOURCE. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED, AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.
- PRIOR TO CONSTRUCTION, PROPERLY INSTALL SEDIMENT BARRIERS AT THE DOWN GRADIENT EDGE OF ANY AREA TO BE DISTURBED AND ADJACENT TO ANY DRAINAGE CHANNELS WITHIN THE DISTURBED AREA. SEDIMENT BARRIERS SHOULD BE INSTALLED DOWNGRAIENT OF SOIL OR SEDIMENT STOCKPILES AND STORMWATER PREVENTED FROM RUNNING ONTO THE STOCKPILE. MAINTAIN THE SEDIMENT BARRIERS BY REMOVING ACCUMULATED SEDIMENT, OR REMOVING AND REPLACING THE BARRIER, UNTIL THE DISTURBED AREA IS PERMANENTLY STABILIZED. WHERE A DISCHARGE TO A STORM DRAIN INLET OCCURS, IF THE STORM DRAIN CARRIES WATER DIRECTLY TO A SURFACE WATER AND YOU HAVE AUTHORITY TO ACCESS THE STORM DRAIN INLET, YOU MUST INSTALL AND MAINTAIN PROTECTION MEASURES THAT REMOVE SEDIMENT FROM THE DISCHARGE.
- PRIOR TO CONSTRUCTION, PROPERLY INSTALL A STABILIZED CONSTRUCTION ENTRANCE (SCE) AT ALL POINTS OF EGRESS FROM THE SITE. THE SCE IS A STABILIZED PAD OF AGGREGATE, UNDERLAIN BY A GEOTEXTILE FILTER FABRIC, USED TO PREVENT TRAFFIC FROM TRACKING MATERIAL AWAY FROM THE SITE ONTO PUBLIC ROWS. MAINTAIN THE SCE UNTIL ALL DISTURBED AREAS ARE STABILIZED.
- INSTALL SILT FENCES OR SEDIMENT BARRIERS ALONG CONTOUR DIVIDING FLAT AND STEEP SLOPES, AREAS WITH DIFFERENT DISTURBANCE SCHEDULES, AROUND TEMPORARY STOCKPILES OR IN OTHER UNSPECIFIED POSSIBLE CIRCUMSTANCES SHOULD BE CONSIDERED BY THE CONTRACTOR. THE INTENT OF SUCH INTERIOR SILT FENCES IS TO LIMIT SEDIMENT TRANSPORT WITHIN THE SITE TOWARD THE PROTECTED RESOURCES.
- SILT FENCE AND SEDIMENT BARRIERS WILL BE INSPECTED, REPLACED AND/OR REPAIRED IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL (0.5 INCH OR GREATER) OR SNOW MELT OR LOSS OF SERVICEABILITY DUE TO SEDIMENT ACCUMULATION. AT A MINIMUM, ALL EROSION CONTROL DEVICES WILL BE OBSERVED WEEKLY.
- EROSION CONTROL MIX BERMS SHALL CONSIST OF A MIX OF SHREDDED WOOD FRAGMENTS AND GRIT THAT MUST BE WELL GRADED WITH AN ORGANIC CONTENT THAT IS BETWEEN 50 AND 100% OF WEIGHT. MINERAL PORTION OF THE MIX SHOULD BE NATURALLY INCLUDED IN THE PRODUCT WITH NO ROCKS GRATER THAN 4-INCHES OR LARGE AMOUNTS OF FINES (SILTS AND CLAYS). MIX SHOULD BE FREE OF REFUSE OR MATERIAL TOXIC TO PLANT GROWTH.
- EROSION CONTROL MIX SHALL BE USED ON SLOPES 3:1 OR SHALLOWER, SLOPES BETWEEN 3:1 AND 2:1 SHALL HAVE EROSION CONTROL BLANKET. SLOPES BETWEEN 2:1 AND 1.5:1 SHALL HAVE RIP RAP, SLOPES GREATER THAN 1.5:1 ARE PROHIBITED.
- HAYBALES MAY BE INSTALLED IN ADDITION TO SILT FENCE OR USED AROUND CATCH BASINS TO PROVIDE ADDITIONAL SEDIMENT CAPTURE AND CONTROL.
- EROSION CONTROL BLANKETS INTENDED FOR TEMPORARY SLOPE OR CHANNEL STABILIZATION SIMILAR TO NORTH AMERICAN GREEN ERONET BIODEGRADABLE EROSION CONTROL BLANKET OR SIMILAR.
- DURING THE CONSTRUCTION PHASE, INTERCEPTED SEDIMENT WILL BE RETURNED TO CONSTRUCTION SITE.
- SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL AREAS UPSLOPE ARE STABILIZED BY A SUITABLE GROWTH OF GRASS, ONCE A SUITABLE GROWTH OF GRASS HAS BEEN OBTAINED, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED BY THE CONTRACTOR, ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THEY ARE REMOVED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, SEEDED, AND MULCHED IMMEDIATELY.
- A SUITABLE BINDER SUCH AS TERRTACK WILL BE USED ON THE HAY MULCH FOR WIND CONTROL.
- IF FINAL SEEDING OF DISTURBED AREAS IS NOT COMPLETED BY SEPTEMBER 15TH OF THE YEAR OF CONSTRUCTION, THEN ON THAT DATE THESE AREAS WILL BE GRADED AND SEEDED WITH WINTER RYE AT THE RATE OF 112 POUNDS PER ACRE OR 3 POUNDS PER 1000 SQUARE FEET. THE RYE SEEDING WILL BE PRECEDED BY AN APPLICATION OF 3 TONS OF LIME AND 800 LBS. OF 10-20-20 FERTILIZER OR ITS EQUIVALENT. MULCH WILL BE APPLIED AT A RATE OF 90 POUNDS PER 1000 SQUARE FEET.
- IF THE RYE SEEDING CANNOT BE COMPLETED BY OCTOBER 1ST OR IF THE RYE DOES NOT MAKE ADEQUATE GROWTH BY DECEMBER 1ST, THEN ON THOSE DATES, HAY MULCH WILL BE APPLIED AT 150 POUNDS PER 1000 SQUARE FEET.
- ALL CATCH BASINS ARE TO BE PROTECTED BY STRAW BALE OR SILT FENCE IN ACCORDANCE WITH SECTION B-3 STORM DRAIN INLET PROTECTION OF THE MAINE BMP HANDBOOK. SURROUNDING AREAS CAN BE EXCAVATED OR LEFT LOW AS A SEDIMENT TRAP. CURB INLETS SHALL BE PROTECTED BY GUTTERGATORS, OR APPROVED EQUIVALENT.
- CONTRACTOR TO PROVIDE SEDIMENT SACKS IN ALL EXISTING BASINS PRIOR TO CONSTRUCTION.
- WITHIN 7 DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES IN AN AREA THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS, STABILIZE ANY EXPOSED SOIL WITH MULCH, OR OTHER NON-ERODIBLE COVER. STABILIZE AREAS WITHIN 75 FEET OF A WETLAND OR WATER BODY WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.
- REMOVE ANY TEMPORARY CONTROL MEASURES, SUCH AS SILT FENCE, WITHIN 30 DAYS AFTER PERMANENT STABILIZATION IS ATTAINED. REMOVE ANY ACCUMULATED SEDIMENTS AND STABILIZE.
- PERMEANT STABILIZATION: IF THE AREA WILL NOT BE WORKED FOR MORE THAN ONE YEAR OR HAS BEEN BROUGHT TO FINAL GRADE, THEN PERMANENTLY STABILIZE THE AREA WITHIN 7 DAYS BY PLANTING VEGETATION, SEEDING, SOD, OR THROUGH THE USE OF PERMANENT RIP-RAP OR RIP-RAP OVER ROAD SUB-BASE. IF USING VEGETATION FOR STABILIZATION, SELECT THE PROPER VEGETATION FOR THE LIGHT, MOISTURE, AND SOIL CONDITIONS; AMEND AREAS OF DISTURBED SUBSOILS WITH TOPSOIL, COMPOST, OR FERTILIZERS; PROTECT SEEDED AREAS WITH MULCH OR, IF NECESSARY, EROSION CONTROL BLANKETS; AND SCHEDULE SODDING, PLANTING, AND SEEDING SO TO AVOID DIE-OFF FROM SUMMER DROUGHT AND FALL FROSTS. NEWLY SEEDED OR SODDED AREAS MUST BE PROTECTED FROM VEHICLE TRAFFIC, EXCESSIVE PEDESTRIAN TRAFFIC, AND CONCENTRATED RUNOFF UNTIL THE VEGETATION IS WELL-ESTABLISHED WITH 90% COVER BY HEALTHY VEGETATION. IF NECESSARY, AREAS MUST BE REWORKED AND RE-STABILIZED IF GERMINATION IS SPARSE, PLANT COVERAGE IS SPOTTY, OR TOPSOIL EROSION IS EVIDENT. ONE OR MORE OF THE FOLLOWING MAY APPLY TO A PARTICULAR SITE.
  - SEEDED AREAS: FOR SEEDED AREAS, PERMANENT STABILIZATION MEANS A 90% COVER OF THE DISTURBED AREA WITH MATURE, HEALTHY PLANTS WITH NO EVIDENCE OF WASHING OR RILLING OF THE TOPSOIL.
  - SODDED AREAS: FOR SODDED AREAS, PERMANENT STABILIZATION MEANS THE COMPLETE BINDING OF THE SOD ROOTS INTO THE UNDERLYING SOIL WITH NO SLUMPING OF THE SOD OR DIE-OFF.
  - PERMANENT MULCH: FOR MULCHED AREAS, PERMANENT MULCHING MEANS TOTAL COVERAGE OF THE EXPOSED AREA WITH AN APPROVED MULCH MATERIAL. EROSION CONTROL MIX MAY BE USED AS MULCH FOR PERMANENT STABILIZATION ACCORDING TO THE APPROVED APPLICATION RATES AND LIMITATIONS.
  - RIP-RAP: FOR AREAS STABILIZED WITH RIP-RAP, PERMANENT STABILIZATION MEANS THAT SLOPES STABILIZED WITH RIP-RAP HAVE AN APPROPRIATE BACKING OF A WELL-GRADED GRAVEL OR APPROVED GEOTEXTILE TO PREVENT SOIL MOVEMENT FROM BEHIND THE RIP-RAP. STONE MUST BE SIZED APPROPRIATELY. IT IS RECOMMENDED THAT ANGULAR STONE BE USED.
  - PAVED AREAS: FOR PAVED AREAS, PERMANENT STABILIZATION MEANS THE PLACEMENT OF THE COMPACTED GRAVEL SUBBASE IS COMPLETED, PROVIDED IT IS FREE OF FINE MATERIALS THAT MAY RUNOFF WITH A RAIN EVENT
  - DITCHES, CHANNELS, AND SWALES: FOR OPEN CHANNELS, PERMANENT STABILIZATION MEANS THE CHANNEL IS STABILIZED WITH A 90% COVER OF HEALTHY VEGETATION, WITH A WELL-GRADED RIP-RAP LINING, TURF REINFORCEMENT MAT, OR WITH ANOTHER NON-EROSIVE LINING SUCH AS CONCRETE OR ASPHALT PAVEMENT. THERE MUST BE NO EVIDENCE OF SLUMPING OF THE CHANNEL LINING, UNDERCUTTING OF THE CHANNEL BANKS, OR DOWN-CUTTING OF THE CHANNEL.
- ALL DISTURBED AREAS WILL BE SEEDED WITH 2.5 LBS. RED FESCUE AND 0.5 LBS. RYE GRASS PER 1,000 SQUARE FEET AND MULCHED AT A RATE OF 90 LBS. PER 1,000 SQUARE FEET OR EQUIVALENT APPLICATION OF SEED AND MULCH.
- IF PERMANENT BMP LOCATIONS ARE TO BE USED AS SEDIMENT TRAPS THEN THE AREAS OF THE AREAS OF THE BMP'S SHALL BE RESTORED AS NEEDED TO PREPARE FOR LONG TERM USE, SUCH AS BY REMOVAL OF SEDIMENT, REGRADING ELEVATIONS, INSTALLING UNDERDRAINS (WHERE APPROPRIATE) AND STABILIZING THE AREA.
- WINTER CONSTRUCTION IS CONSTRUCTION ACTIVITY PERFORMED DURING THE PERIOD FROM NOVEMBER 1 THROUGH APRIL 15. IF DISTURBED AREAS ARE NOT STABILIZED WITH PERMANENT MEASURES BY NOVEMBER 1 OR NEW SOIL DISTURBANCE OCCURS AFTER NOVEMBER 1, BUT BEFORE APRIL 15, THEN THESE AREAS MUST BE PROTECTED AND RUNOFF FROM THEM MUST BE CONTROLLED BY ADDITIONAL MEASURES AND RESTRICTIONS.
  - SITE STABILIZATION: FOR WINTER STABILIZATION, HAY MULCH IS APPLIED AT TWICE THE STANDARD TEMPORARY STABILIZATION RATE. AT THE END OF EACH CONSTRUCTION DAY, AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE STABILIZED. MULCH MAY NOT BE SPREAD ON TOP OF SNOW.
  - DITCH: ALL VEGETATED DITCH LINES THAT HAVE NOT BEEN STABILIZED BY NOVEMBER 1, OR WILL BE WORKED DURING THE WINTER CONSTRUCTION PERIOD, MUST BE STABILIZED WITH AN APPROPRIATE STONE LINING BACKED BY AN APPROPRIATE GRAVEL BED OR GEOTEXTILE UNLESS SPECIFICALLY RELEASED FROM THIS STANDARD BY THE DEPARTMENT.
  - SLOPES: MULCH NETTING MUST BE USED TO ANCHOR MULCH ON ALL SLOPES GREATER THAN 8% UNLESS EROSION CONTROL BLANKETS OR EROSION CONTROL MIX IS BEING USED ON THESE SLOPES.
- STORMWATER CHANNELS: DITCHES, SWALES, AND OTHER OPEN STORMWATER CHANNELS MUST BE DESIGNED, CONSTRUCTED, AND STABILIZED USING MEASURES THAT ACHIEVE LONG-TERM EROSION CONTROL. DITCHES, SWALES AND OTHER OPEN STORMWATER CHANNELS MUST BE SIZED TO HANDLE, AT A MINIMUM, THE EXPECTED VOLUME RUN-OFF. EACH CHANNEL SHOULD BE CONSTRUCTED IN SECTIONS SO THAT THE SECTIONS DRAINING, SEPARATE, AND INSTALLATION OF THE PERMANENT LINING CAN BE COMPLETED THE SAME DAY. IF A CHANNEL'S FINAL GRADING OR LINING INSTALLATION MUST BE DELAYED, THEN DIVERSION BERMS MUST BE USED TO DIVERT STORMWATER AWAY FROM THE CHANNEL. PROPERLY-SPACED CHECK DAMS MUST BE INSTALLED IN THE CHANNEL TO SLOW THE WATER VELOCITY, AND A TEMPORARY LINING INSTALLED ALONG THE CHANNEL TO PREVENT SCOURING.
  - THE CHANNEL SHOULD RECEIVE ADEQUATE ROUTINE MAINTENANCE TO MAINTAIN CAPACITY AND PREVENT OR CORRECT ANY EROSION OF THE CHANNEL'S BOTTOM OR SIDE SLOPES.
  - WHEN THE WATERSHED DRAINING TO A DITCH OR SWALE IS LESS THAN 1 ACRE OF TOTAL DRAINAGE AND LESS THAN ¼ ACRE OF IMPERVIOUS AREA, DIVERSION OF RUNOFF TO ADJACENT WOODED OR OTHERWISE VEGETATED BUFFER AREAS IS ENCOURAGED WHERE THE OPPORTUNITY EXISTS.
- SEDIMENT BASINS: SEDIMENT BASINS MUST BE DESIGNED TO PROVIDE STORAGE FOR EITHER THE CALCULATED RUNOFF FROM A 2-YEAR, 24-HOUR STORM OR PROVIDE FOR 3,600 CUBIC FEET OF CAPACITY PER ACRE DRAINING TO THE BASIN. OUTLET STRUCTURES MUST DISCHARGE WATER FROM THE SURFACE OF THE BASIN WHENEVER POSSIBLE. EROSION CONTROLS AND VELOCITY DISSIPATION DEVICES MUST BE USED IF THE DISCHARGING WATERS ARE LIKELY TO CREATE EROSION. ACCUMULATED SEDIMENT MUST BE REMOVED AS NEEDED FROM THE BASIN TO MAINTAIN AT LEAST ½ OF THE DESIGN CAPACITY OF THE BASIN.

THE USE OF CATIONIC TREATMENT CHEMICALS, SUCH AS POLYMERS, FLOCCULANTS, OR OTHER CHEMICALS THAT CONTAIN AN OVERALL POSITIVE CHARGE DESIGNED TO REDUCE TURBIDITY IN STORMWATER MUST RECEIVE PRIOR APPROVAL FROM THE DEPARTMENT. WHEN REQUESTING APPROVAL TO USE CATIONIC TREATMENT CHEMICALS, YOU MUST DESCRIBE APPROPRIATE CONTROLS AND IMPLEMENTATION PROCEDURES TO ENSURE THE USE WILL NOT LEAD TO A VIOLATION OF WATER QUALITY STANDARDS. IN ADDITION, YOU MUST SPECIFY THE TYPE(S) OF SOIL LIKELY TO BE TREATED ON THE SITE, CHEMICALS TO BE USED AND HOW THEY ARE TO BE APPLIED AND IN WHAT QUANTITY, ANY MANUFACTURER'S RECOMMENDATIONS, AND ANY TRAINING HAD BY PERSONNEL WHO WILL HANDLE AND APPLY THE CHEMICALS.
- CULVERTS: CULVERTS MUST BE SIZED TO AVOID UNINTENDED FLOODING OF UPSTREAM AREAS OR FREQUENT OVERTOPPING OF ROADWAYS. CULVERT INLETS MUST BE PROTECTED WITH APPROPRIATE MATERIALS FOR THE EXPECTED ENTRANCE VELOCITY, AND PROTECTION MUST EXTEND AT LEAST AS HIGH AS THE EXPECTED MAXIMUM ELEVATION OF THE WATER. CULVERT OUTLET DESIGN MUST INCORPORATE MEASURES, SUCH AS APRONS, TO PREVENT SCOUR OF THE STREAM CHANNEL. OUTLET PROTECTION MEASURES MUST BE DESIGNED TO STAY WITHIN THE CHANNEL LIMITS. THE DESIGN MUST TAKE ACCOUNT OF TAILWATER DEPTH.
- PARKING AREAS: PARKING AREAS MUST BE CONSTRUCTED TO ENSURE RUNOFF IS DELIVERED TO ADJACENT SWALES. CATCH BASINS, CURB GUTTERS, OR BUFFER AREAS WITHOUT ERODING AREAS DOWNSLOPE. THE PARKING AREA'S SUBBASE COMPACTION AND GRADING MUST BE DONE TO ENSURE RUNOFF IS EVENLY DISTRIBUTED TO ADJACENT BUFFERS OR SIDE SLOPES. CATCH BASINS MUST BE LOCATED AND SET TO PROVIDE ENOUGH STORAGE DEPTH AT THE INLET TO ALLOW INFLOW OF PEAK RUNOFF RATES WITHOUT BY-PASS OF RUNOFF TO OTHER AREAS.
- ADDITIONAL REQUIREMENTS MAY BE APPLIED ON A SITE-SPECIFIC BASIS.

INSPECTION AND MAINTENANCE

THE FOLLOWING STANDARDS MUST BE MET DURING CONSTRUCTION:

- INSPECT DISTURBED AND IMPERVIOUS AREAS, EROSION CONTROL MEASURES, MATERIALS STORAGE AREAS THAT ARE EXPOSED TO PRECIPITATION, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE. INSPECT THESE AREAS AT LEAST ONCE A WEEK AS WELL AS BEFORE AND WITHIN 24 HOURS AFTER A STORM EVENT (0.5" OR MORE IN A CONSECUTIVE 24-HOUR PERIOD), AND PRIOR TO COMPLETING PERMANENT STABILIZATION MEASURES. A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT THE INSPECTIONS.
- IF BEST MANAGEMENT PRACTICES (BMP'S) NEED TO BE REPAIRED, THE REPAIR WORK SHOULD BE INITIATED UPON DISCOVERY OF THE PROBLEM BUT NO LATER THAN THE END OF THE NEXT WORKDAY. IF ADDITIONAL BMP'S OR SIGNIFICANT REPAIR OF BMP'S ARE NECESSARY, IMPLEMENTATION MUST BE COMPLETED WITHIN 7 CALENDAR DAYS AND PRIOR TO ANY STORM EVENT (0.5" OR MORE IN A CONSECUTIVE 24-HOUR PERIOD). ALL MEASURES MUST BE MAINTAINED IN EFFECTIVE OPERATING CONDITION UNTIL AREAS ARE PERMANENTLY STABILIZED.
- KEEP A LOG (REPORT) SUMMARIZING THE INSPECTIONS AND ANY CORRECTIVE ACTION TAKEN. THE LOG MUST INCLUDE THE NAME(S) AND QUALIFICATIONS OF THE PERSON MAKING THE INSPECTIONS, THE DATE(S) OF THE INSPECTIONS, AND MAJOR OBSERVATIONS ABOUT THE OPERATION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS, MATERIALS STORAGE AREAS, AND VEHICLES ACCESS POINTS TO THE PARCEL. MAJOR OBSERVATIONS MUST INCLUDE BMP'S THAT NEED MAINTENANCE, BMP'S THAT FAILED TO OPERATE AS DESIGNED OR PROVED INADEQUATE FOR A PARTICULAR LOCATION, AND LOCATION(S) WHERE ADDITIONAL BMP'S ARE NEEDED. FOR EACH BMP REQUIRING MAINTENANCE, BMP NEEDING REPLACEMENT, AND LOCATION NEEDING ADDITIONAL BMP'S, NOTE IN THE LOG THE CORRECTIVE ACTION TAKEN AND WHEN IT WAS TAKEN.

HOUSEKEEPING

- SPILL PREVENTION: CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER, WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.
- GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA. AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL, DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA, OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA, IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.
- FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEEP IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.
- DEBRIS AND OTHER MATERIALS. MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.
- EXCAVATION DE-WATERING: EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE. LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.
- AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES ARE:
  - DISCHARGES FROM 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);
  - 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));
  - 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). SPECIFICALLY, THE DEPARTMENT'S 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.

STANDARD DESIGN NOTES ON FILTER BASINS

SOIL FILTER MEDIA

- THE SOIL FILTER MATERIAL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES. NO OTHER MATERIAL OR SUBSTANCE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVE A HINDRENCE TO THE PLANTING OR MAINTENANCE OPERATION CAN BE MIXED WITH THE FILTER.
- GRADATION TESTS AND PERMEABILITY TESTING OF THE SOIL FILTER MATERIAL SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE ENGINEER FOR REVIEW BEFORE PLACEMENT AND COMPACTION.
- THE MIXTURE SHALL CONTAIN BY VOLUME THE FOLLOWING:
  - 50% OF SANDY SOIL - MEDOT #703.01 WILL NOT CONTAIN SUFFICIENT FINE AND TOPSOIL/LOAM WILL HAVE TO COMPENSATE THE DEFICIENCY
  - 20% OF LOAMY TOPSOIL
  - 30% OF SUPERHUMUS OR EQUIVALENT COMPOSTED WOODY FIBERS AND FINE SHREDDED BARK
- THE BLENDED SOIL FILTER MIXTURE OF BARK MULCH, SAND AND LOAM SHALL HAVE 8% TO 12% PASSING THE #200 SIEVE. THE MIXTURE SHALL HAVE A CLAY CONTENT OF LESS THAN 2%. THE TESTING OF ALL MATERIALS SHALL BE PERFORMED BY A QUALIFIED LABORATORY AND SUBMITTED TO THE ENGINEER FOR REVIEW.
- SOIL FILTER MEDIA MIXTURE SHALL HAVE A PERMEABILITY OF 2.4 IN/HR TO 4 IN/HR AFTER COMPACTION BETWEEN 90 AND 92% STANDARD PROCTOR (ASTM D698).

UNDERDRAIN BEDDING

- THE UNDERDRAIN BEDDING MATERIAL (12 INCHES MINIMUM) SHALL BE CLEAN GRAVEL MEETING THE GRADATION MEDOT SPECIFICATION 703.22 UNDERDRAIN TYPE C GRADATION MEDOT SPECIFICATIONS 703.22 UNDERDRAIN TYPE B.

TRANSITION LAYER

- THE TRANSITION LAYER (6 INCH MINIMUM) SHALL MEET THE GRADATION MEDOT SPECIFICATION 703.22 UNDERDRAIN TYPE B. THE SAND SHALL HAVE LESS THAN 5% FINES PASSING THE #200 SIEVE.

TESTING AND SUBMITTALS

THE CONTRACTOR SHALL IDENTIFY THE LOCATION OF THE SOURCE OF EACH COMPONENT OF THE FILTER MEDIA. ALL TESTING RESULTS OF FIELD AND LABORATORY TESTING SHALL BE SUBMITTED TO THE PROJECT ENGINEER FOR CONFIRMATION.

- SUBMIT SAMPLES OF EACH TYPE OF MATERIAL TO BE BLENDED FOR THE MIXED FILTER MEDIA AND SAMPLES OF THE UNDERDRAIN BEDDING MATERIAL. SAMPLES MUST BE A COMPOSITE OF THREE DIFFERENT LOCATIONS (GRABS) FROM THE STOCKPILE OR PIT FACE. SAMPLE SIZE REQUIRED WILL BE DETERMINED BY THE TESTING LABORATORY.
- PERFORM A SIEVE ANALYSIS CONFORMING TO ATSM C136 (STANDARD TEST METHOD FOR SIEVE ANALYSIS OF FINE AND COARSE AGGREGATES: 1998a) ON EACH TYPE OF THE SAMPLE MATERIAL. THE RESULTING SOIL FILTER MEDIA MIXTURE MUST HAVE 8% TO 12% BY WEIGHT PASSING THE #200 SIEVE, A CLAY CONTENT OF LESS THAN 2%(DETERMINED HYDROMETER GRAIN SIZE ANALYSIS) AND HAVE 10% DRY WEIGHT OF ORGANIC MATTER.
- PERFORM A PERMEABILITY TEST ON TEH SOIL FILTER MEDIA MIXTURE CONFORMING TO ASTM D2435 WITH THE MIXTURE COMPACTED TO 90-92% OF MAXIMUM DRY DENSITY BASED ON ASTM D698.

CONSTRUCTION

- CONTRIBUTING DRAINAGE AREAS SHALL BE STABILIZED PRIOR TO INSTALLATION OF THE SOIL FILTER MEDIA MIXTURE AND UNDERDRAIN. STABILIZED IS DEFINED AS PAVED IN A PARKING AREA OR ROADWAY, AND 90% GRASS CATCH IF IN A VEGETATED AREA. UNSTABILIZED AREAS WILL CAUSE PREMATURE FAILURE OF THE FILTER.
- THE AREA OF THE BASIN MAY BE EXCAVATED IN PREPARATION OF THE INSTALLATION OF THE UNDERDRAIN AND CAN BE USED FOR A SEDIMENT TRAP FROM THE SITE. AFTER EXCAVATION OF THE BASIN, THE OUTLET STRUCTURE AND PIPING SYSTEM MUST BE INSTALLED AT THE APPROPRIATE ELEVATION AND PROTECTED WITH A SEDIMENT BARRIER. IF THE BASIN IS TO BE USED AS A SEDIMENT TRAP, THE SIDES OF THE EMBANKMENTS MUST BE MULCHED AND MAINTAINED TO PREVENT EROSION.
- FILTER SOIL MEDIA AND UNDERDRAIN BEDDING MATERIAL SHALL BE COMPACTED TO BETWEEN 90 AND 92% STANDARD PROCTOR.
- PERFORATED UNDERDRAIN PIPE SHALL BE 6" SCHEDULE 40, SDR 35 PVC PIPE OR EQUIVALENT SPACED 8 FEET ON CENTER MAXIMUM STRUCTURE JOINTS SHALL BE SEALED SO THAT THEY ARE WATERTIGHT.
- OUTFLOW OF THE FILTER BASIN UNDERDRAIN SHALL BE CONTROLLED BY A 2" PLASTIC BALL VALVE (TYPE 346) WITH A BALL VALVE HANDLE EXTENSION (TYPE 615). A THREE-PIECE VALVE BOX SHALL BE INSTALLED OVER THE VALVE. UPON COMPLETION OF THE INSTALLATION OF THE SOIL FILTER MEDIA AND THE ESTABLISHMENT OF 90% CATCH OF GRASS OVER THE FILTER MEDIA, THE CONTRACTOR SHALL FLOOD THE VEGETATED BASIN TO THE DESIGN ELEVATION WITH CLEAN WATER AND ADJUST THE VALVE TO OBTAIN A 24 HOUR TO 32 HOUR RELEASE TIME.

MAINTENANCE

- DURING THE FIRST YEAR, THE BASIN WILL BE INSPECTED SEMI-ANNUALLY AND FOLLOWING MAJOR STORM EVENTS.
- DEBRIS AND SEDIMENT BUILDUP SHALL BE REMOVED FROM THE FOREBAY AND BASIN AS NEEDED. MOWING OF GRASSED BASIN CAN OCCUR SEMI-ANNUALLY TO A HEIGHT OF NO LESS THAN 6 INCHES.
- ANY BARE AREA OR EROSION RILLS SHALL BE REPAIRED WITH NEW FILTER MEDIA OR SANDY LOAM, SEEDED AND MULCHED OR SODDED.
- MAINTAINING GOOD GRASS COVER WILL MINIMIZE CLOGGING WITH FINE SEDIMENTS AND IF PONDING EXCEEDS 48 HOURS, THE TOP OF THE FILTER BED MUST BE ROTOTILLED TO REESTABLISH THE SOIL'S FILTRATION CAPACITY.
- IN BIORETENTION CELLS, RAKING AND REPLACING THE DEGRADED MULCH BETWEEN PLANTS WILL BE NECESSARY ON AN ANNUAL BASIS. PLANTS THAT ARE NOT ESTABLISHED WITH NEED TO BE REPLACED.
- THE PROPERTY OWNER SHALL BE REQUIRED TO INSPECT THE STORMWATER MANAGEMENT SYSTEM ON AN ANNUAL BASIS, PERFORM REQUIRED ANNUAL MAINTENANCE, AND SUBMIT AN ANNUAL REPORT TO DPW BY JULY 15TH OF EACH CALENDAR YEAR.

CONSTRUCTION OVERSIGHT

INSPECTION OF THE FILTER BASIN MUST BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY THE DESIGN ENGINEER WITH REQUIRED REPORTING TO THE CITY OF SACO. ALL MATERIAL INTENDED FOR THE FILTER BASIN MUST BE APPROVED BY THE DESIGN ENGINEER AFTER TESTS BY A CERTIFIED LABORATORY SHOW THAT THE MATERIAL CONFORMS TO ALL DEP SPECIFICATIONS. AT A MINIMUM, INSPECTIONS WILL OCCUR:

- AFTER THE PRELIMINARY CONSTRUCTION OF THE FILTER GRADES AND ONCE THE UNDERDRAIN PIPES ARE INSTALLED (NOT BACKFILLED);
- AFTER THE DRAINAGE LAYER IS CONSTRUCTED AND PRIOR TO THE INSTALLATION OF THE SOIL FILTER MEDIA;
- AFTER THE SOIL FILTER MEDIA HAS BEEN INSTALLED, SEEDED AND MULCHED; AND
- AFTER ONE YEAR, TO INSPECT VEGETATION AND MAKE CORRECTIONS

2	2022.04.20	REVISED PER PLANNING BOARD COMMENTS	BLQ	BJK
1	2022.01.11	REVISED PER CLIENT COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
PLANNING BOARD REVIEW NOT FOR CONSTRUCTION				
<div><div>HALEY WARD ENGINEERING   ENVIRONMENTAL   SURVEYING One Merchants Plaza, Suite 701 Bangor, Maine 04401 207.989.4824</div></div>				
PROJECT  1031 PORTLAND ROAD, LLC  SACO SELF STORAGE 1031 PORTLAND ROAD, SACO MAINE				
TITLE  EROSION CONTROL NOTES & DETAILS				
		DATE 2022.02.11	SCALE N.T.S.	
DRAWN BY BLQ		DESIGNED BY BLQ	CHECKED BY BK	
PROJECT No. 12829.002				
DRAWING No.		C002		2



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GENERAL NOTES:

1. REFERENCE DEED:
- WARRANTY DEED FROM PRESTON PROPERTIES TO HID'N PINES CAMPGROUND, INC. DATED NOVEMBER 19, 2004 AND RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS BOOK 14298 PAGE 996.
2. REFERENCE PLAN:
- STATE OF MAINE DEPARTMENT OF TRANSPORTATION RIGHT OF WAY MAP STATE HIGHWAY "1" FEDERAL AID PROJECT NO. STP-6615(00)X, DATED JANUARY, 1999, DOT FILE 16-375.
3. THIS PLAN IS BASED ON A FIELD SURVEY COMPLETED IN SEPTEMBER - OCTOBER, 2018, OCTOBER 2019 AND APRIL 2021 BY HORIZONS ENGINEERING, INC. USING A SOKKIA GRX-1 GNSS SYSTEM AND LEICA 1200 SERIES ROBOTIC STATION.
4. THIS SURVEY IS ORIENTATED TO THE MAINE STATE PLANE COORDINATE SYSTEM (GRID NORTH), NAD 83, AND NORTH AMERICAN VERTICAL DATUM OF 1988.
5. UTILITY LOCATIONS ARE BASED ON ABOVE-GROUND STRUCTURES AND MARKOUTS (WATER SYSTEM). THE SURVEYOR MAKES NO GUARANTEE AS TO THE LOCATION OF UNDERGROUND UTILITIES AS SHOWN HEREON, OR THAT ADDITIONAL UNDERGROUND UTILITIES MAY OR MAY NOT EXIST. THE CONTRACTOR SHALL CONTACT DIG SAFE AND THE APPROPRIATE AUTHORITIES PRIOR TO ANY CONSTRUCTION IN ORDER TO VERIFY EXISTING CONDITIONS AND UTILITY LOCATIONS.



horizons  
Engineering

NEWPORT VT • LITTLETON NH • NEW LONDON NH  
POMFRET VT • KENNEBUNK ME • CONWAY NH

HOME SMART DEVELOPMENT  
EASTVIEW VILLAGE  
  
US ROUTE 1  
SACO, YORK COUNTY, MAINE  
MAP 64 LOT 6  
  
EXISTING CONDITIONS PLAN

NO.	DATE	REVISION DESCRIPTION	ENG	DWG

DATE:  
MAY 2021

PROJECT #:  
S-21080

SURV'D BY:  
JDN

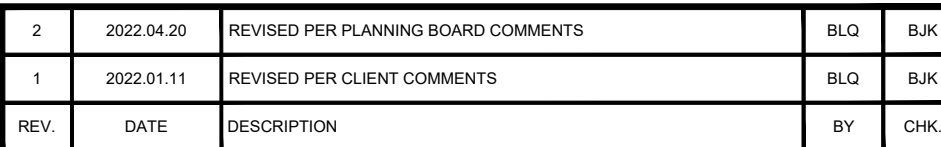
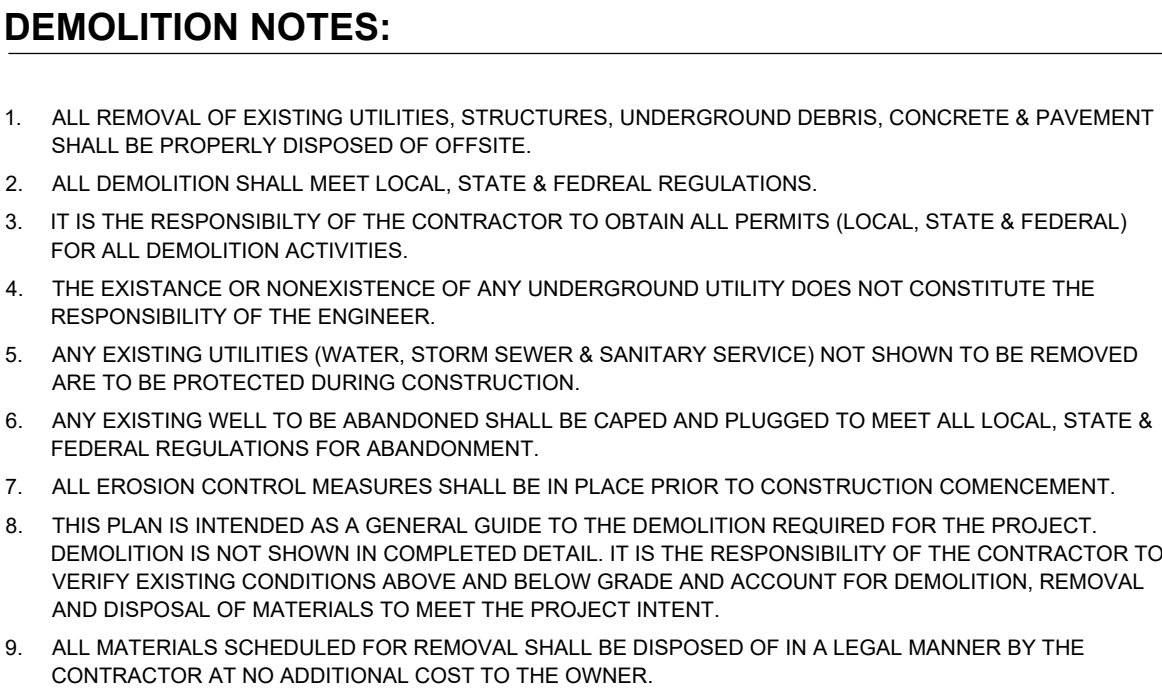
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AJN

ARCHIVE #:  
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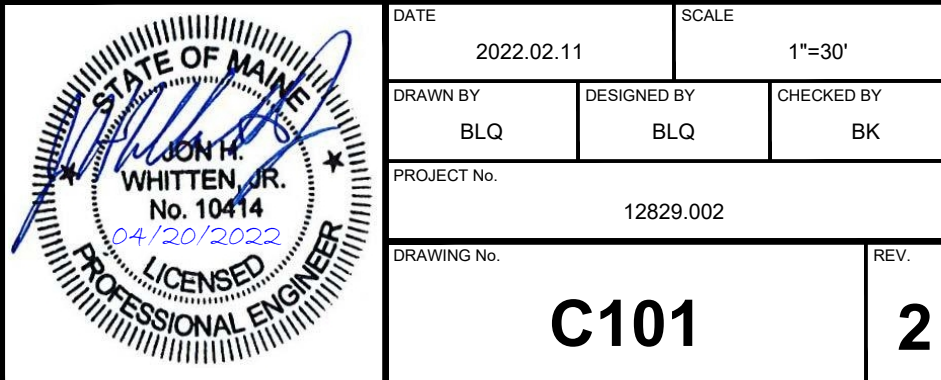
SHEET 1 OF 2





**HALEY WARD**  
ENGINEERING | ENVIRONMENTAL | SURVEYING  
One Merchants Plaza, Suite 701  
Bangor, Maine 04401  
207.989.4824

## DEMOLITION SITE PLAN

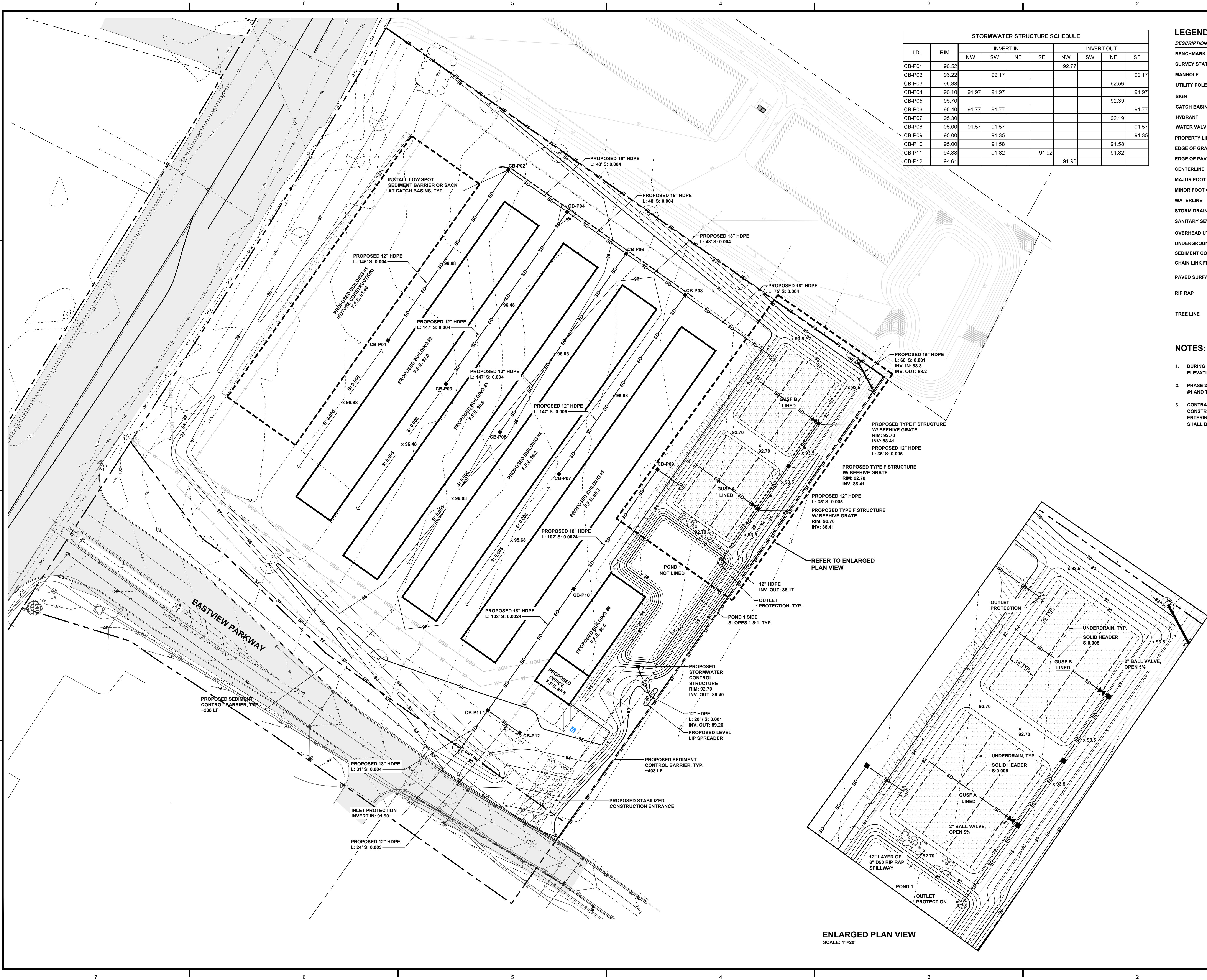








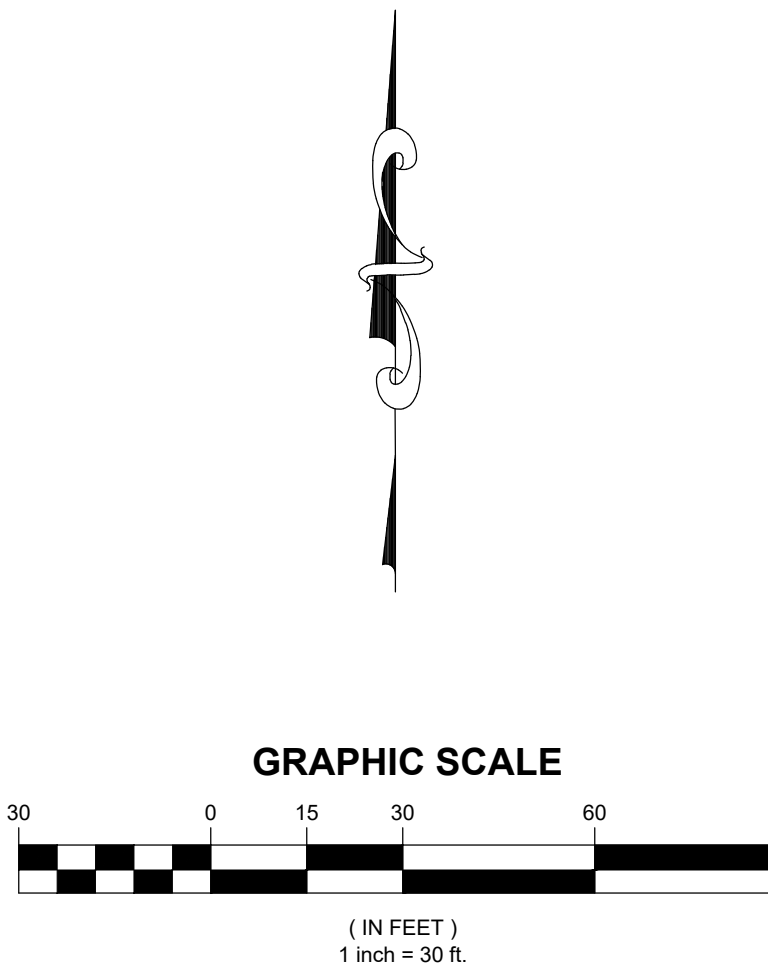
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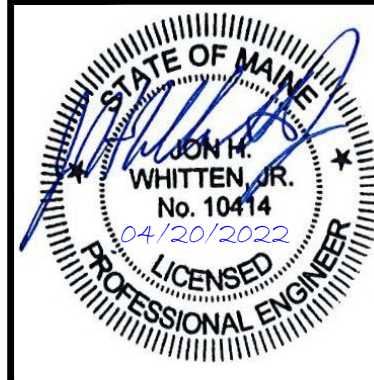
STORMWATER STRUCTURE SCHEDULE									
I.D.	RIM	INVERT IN				INVERT OUT			
		NW	SW	NE	SE	NW	SW	NE	SE
CB-P01	96.52					92.77			92.17
CB-P02	96.22		92.17						92.17
CB-P03	95.83							92.56	
CB-P04	96.10	91.97	91.97						91.97
CB-P05	95.70							92.39	
CB-P06	95.40	91.77	91.77						91.77
CB-P07	95.30							92.19	
CB-P08	95.00	91.57	91.57						91.57
CB-P09	95.00				91.35				91.35
CB-P10	95.00				91.58			91.58	
CB-P11	94.88		91.82		91.92			91.82	
CB-P12	94.61					91.90			

LEGEND:		
DESCRIPTION	EXISTING	PROPOSED
BENCHMARK		
SURVEY STATION		
MANHOLE		
UTILITY POLE		
SIGN		
CATCH BASIN		
HYDRANT		
WATER VALVE		
PROPERTY LINE		NA
EDGE OF GRAVEL		
EDGE OF PAVEMENT		
CENTERLINE		
MAJOR FOOT CONTOUR		
MINOR FOOT CONTOUR		
WATERLINE		
STORM DRAIN		
SANITARY SEWER		
OVERHEAD UTILITIES		
UNDERGROUND UTILITIES		
SEDIMENT CONTROL BARRIER	NA	
CHAIN LINK FENCE	NA	
PAVED SURFACE		
RIP RAP	NA	
TREE LINE		

- NOTES:
- DURING PHASE I CONSTRUCTION, BUILDING #1 FOOTPRINT SHALL BE GRADED TO ELEVATION 97.4. LOAMED, SEEDED AND MULCHED.
  - PHASE 2 CONSTRUCTION SHALL BE CONFINED WITHIN THE FOOTPRINT OF BUILDING #1 AND THE ASSOCIATED DRIP EDGE FILTER SHOWN.
  - CONTRACTOR SHALL COORDINATE GRADING WITH FUTURE PROPOSED GRADING AND CONSTRUCTION ALONG EASTVIEW PARKWAY TO AVOID STORMWATER RUNOFF ENTERING THE ROW AND TO PRESERVE THE INTENT OF DESIGN. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.



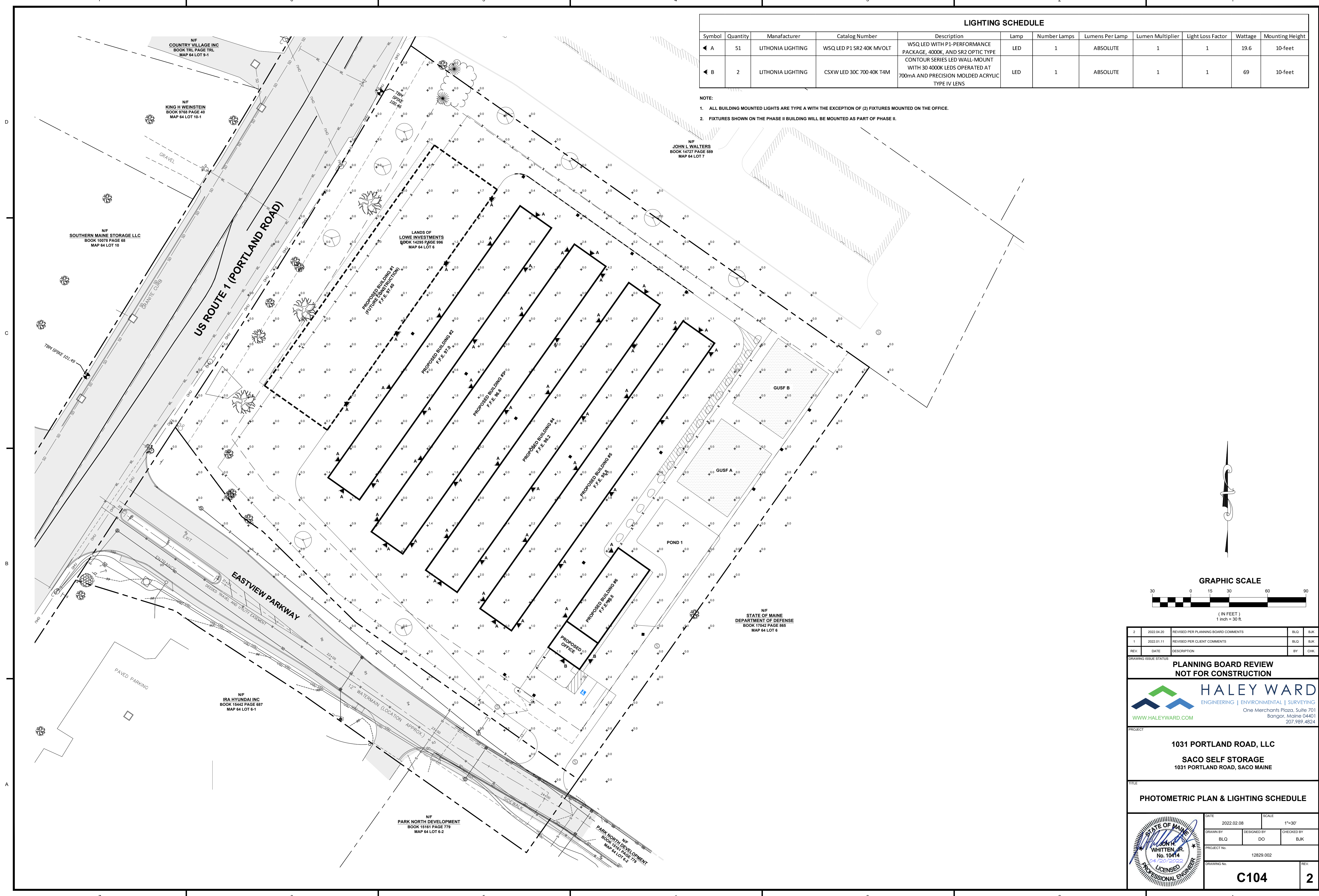
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1	2022.04.04	REVISED PER MDEP REVIEW COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
PLANNING BOARD REVIEW NOT FOR CONSTRUCTION				
<div><div>HALEY WARD ENGINEERING   ENVIRONMENTAL   SURVEYING One Merchants Plaza, Suite 701 Bangor, Maine 04401 207.989.4824 WWW.HALEYWARD.COM</div></div>				
PROJECT				
1031 PORTLAND ROAD, LLC  SACO SELF STORAGE 1031 PORTLAND ROAD, SACO MAINE				
TITLE				
PROPOSED GRADING & DRAINAGE PLAN				
DATE			SCALE	
2022.02.08			1"=30'	
DRAWN BY		DESIGNED BY	CHECKED BY	
BLQ		DSB	BK	
PROJECT No.			12829.002	
DRAWING No.			REV	
C103			2	



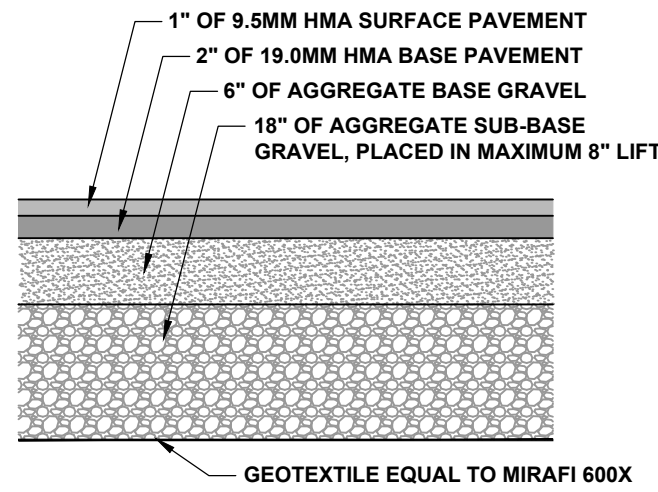
ENLARGED PLAN VIEW  
SCALE: 1"=20'



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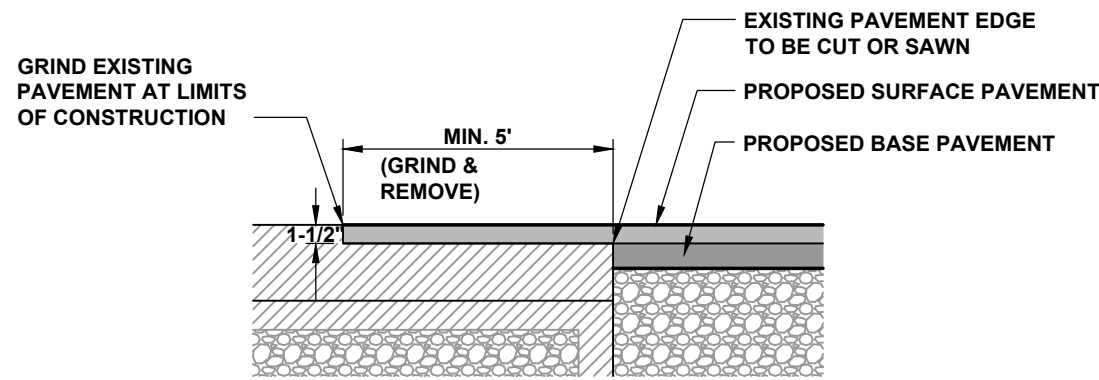






PAVEMENT BUILDUP DETAIL

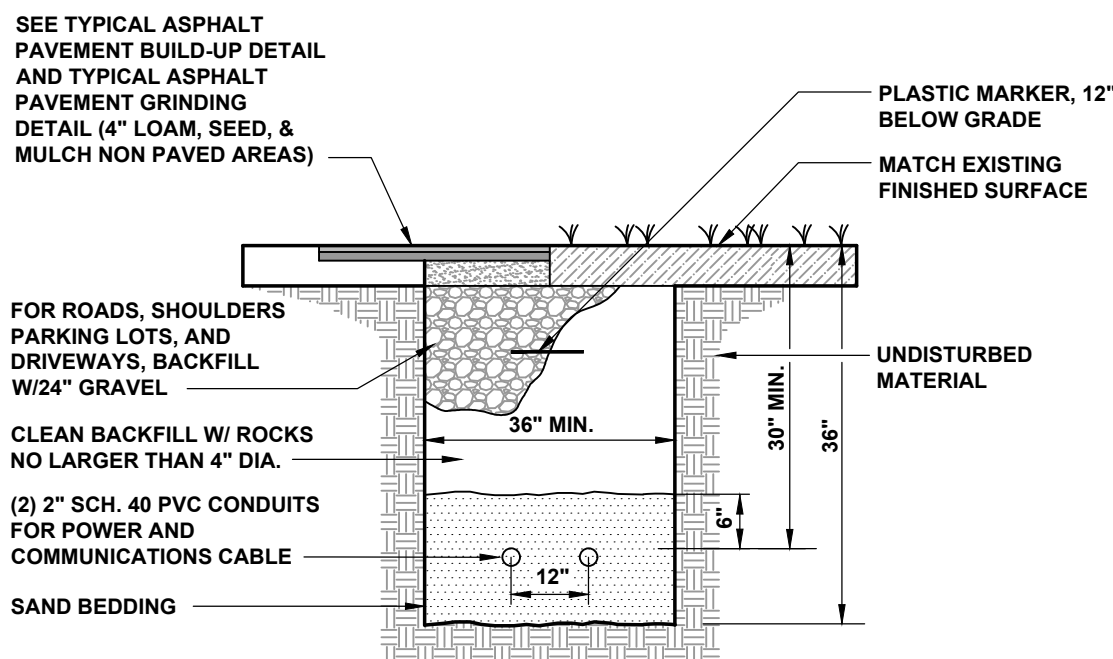
N.T.S.



- NOTES:
1. EXTEND NEW SURFACE PAVEMENT ACROSS BUTT JOINT IN BASE COURSE.
  2. PROVIDE TACK COAT ON ALL SURFACES OF EXISTING PAVEMENT TO BE COVERED.

TYPICAL ASPHALT PAVEMENT GRINDING DETAIL

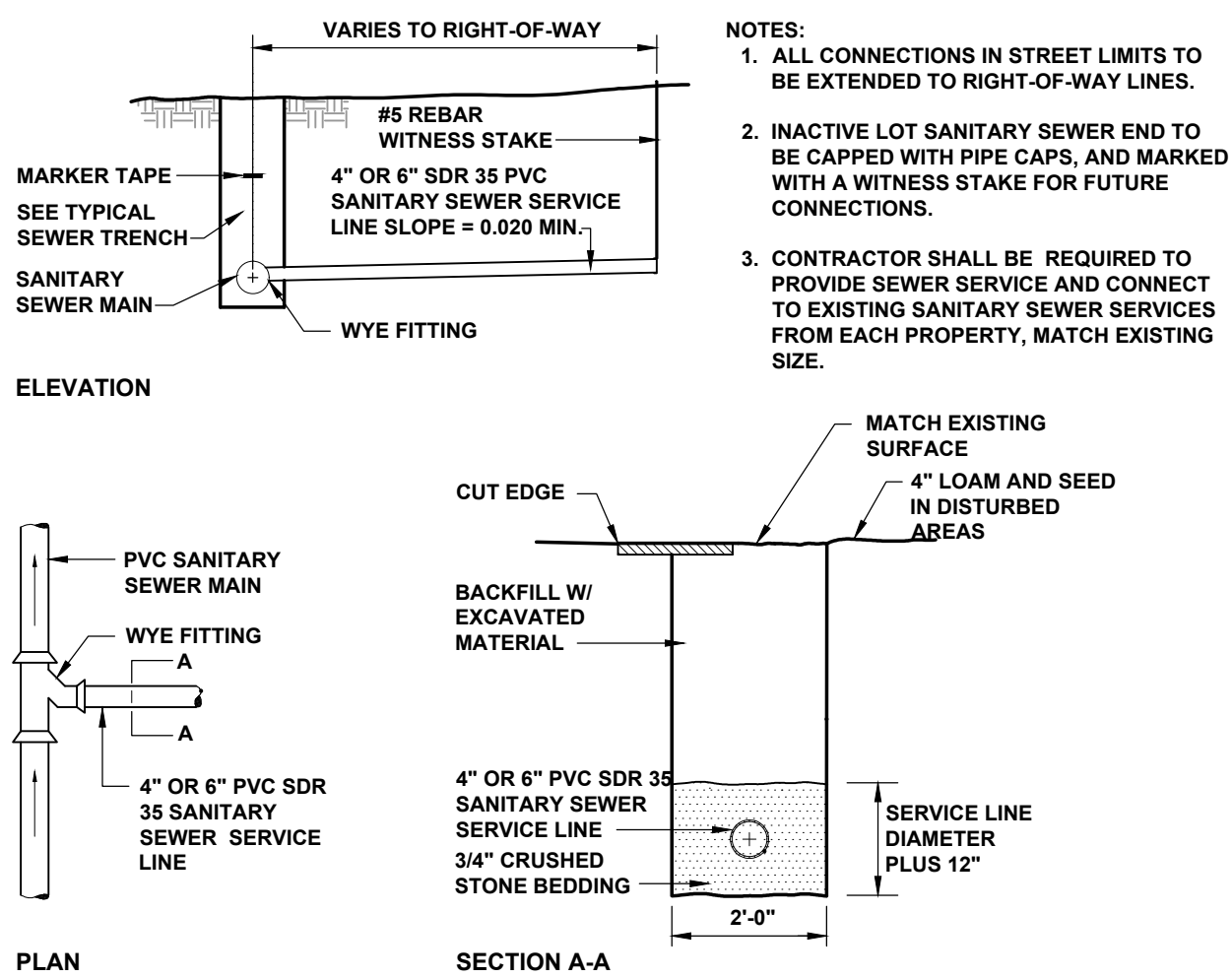
N.T.S.



- NOTES:
1. SIZE, NUMBER, MATERIAL, AND ARRANGEMENT OF CONDUIT SHALL BE COORDINATED WITH INDIVIDUAL UTILITIES.
  2. ALL ELECTRICAL CONDUIT AND STRUCTURES SHALL BE WATER TIGHT.
  3. CONDUITS SHALL EXCLUSIVELY SERVE EITHER POWER OR COMMUNICATIONS.

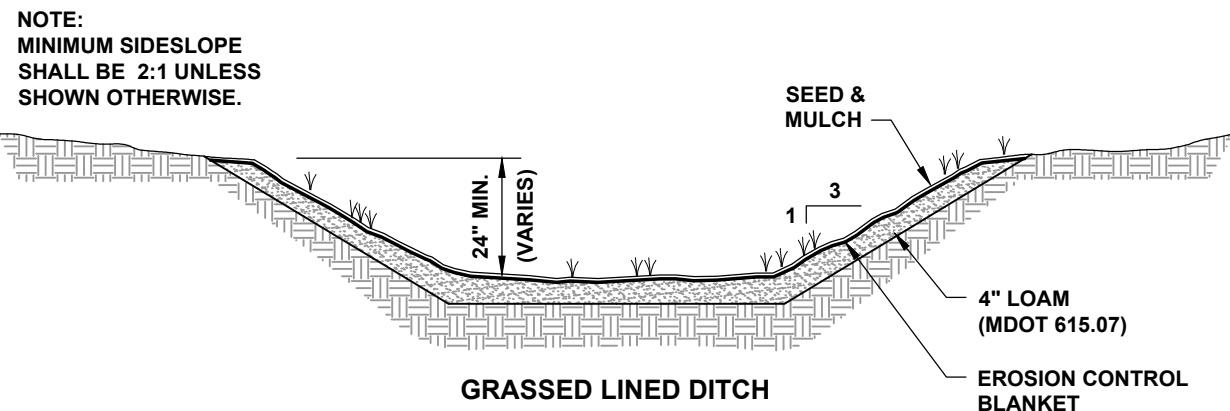
TYPICAL UNDERGROUND UTILITY TRENCH DETAIL

N.T.S.



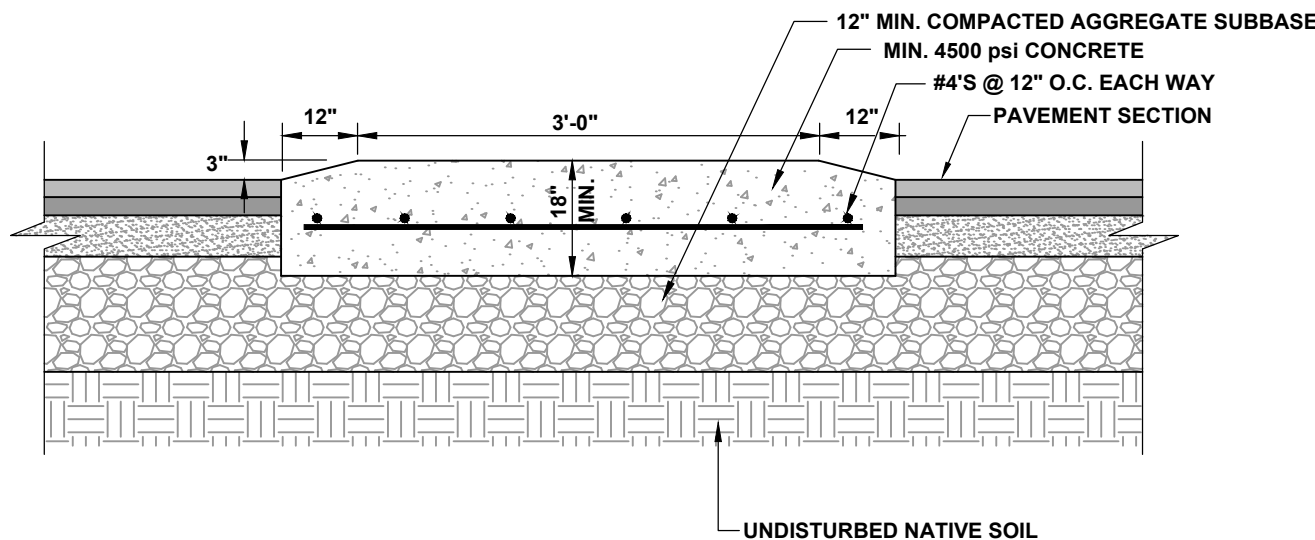
TYPICAL SANITARY SEWER SERVICE DETAIL

N.T.S.



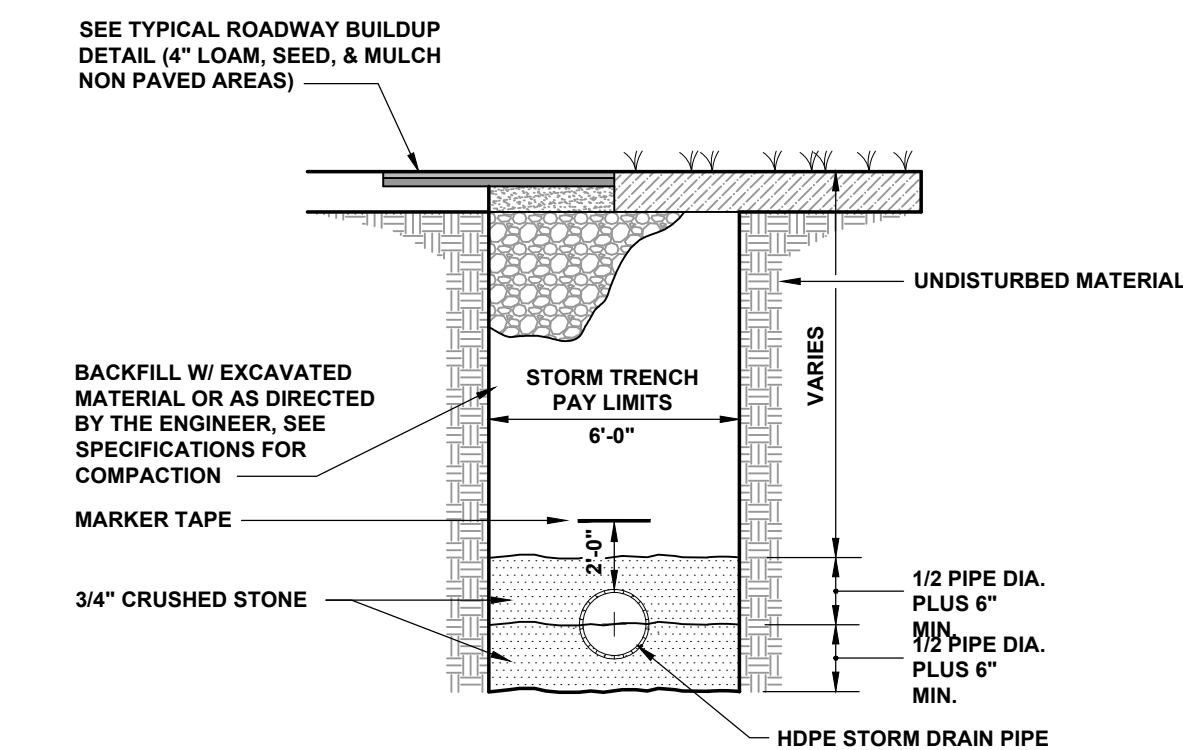
TYPICAL DITCH DETAILS

N.T.S.



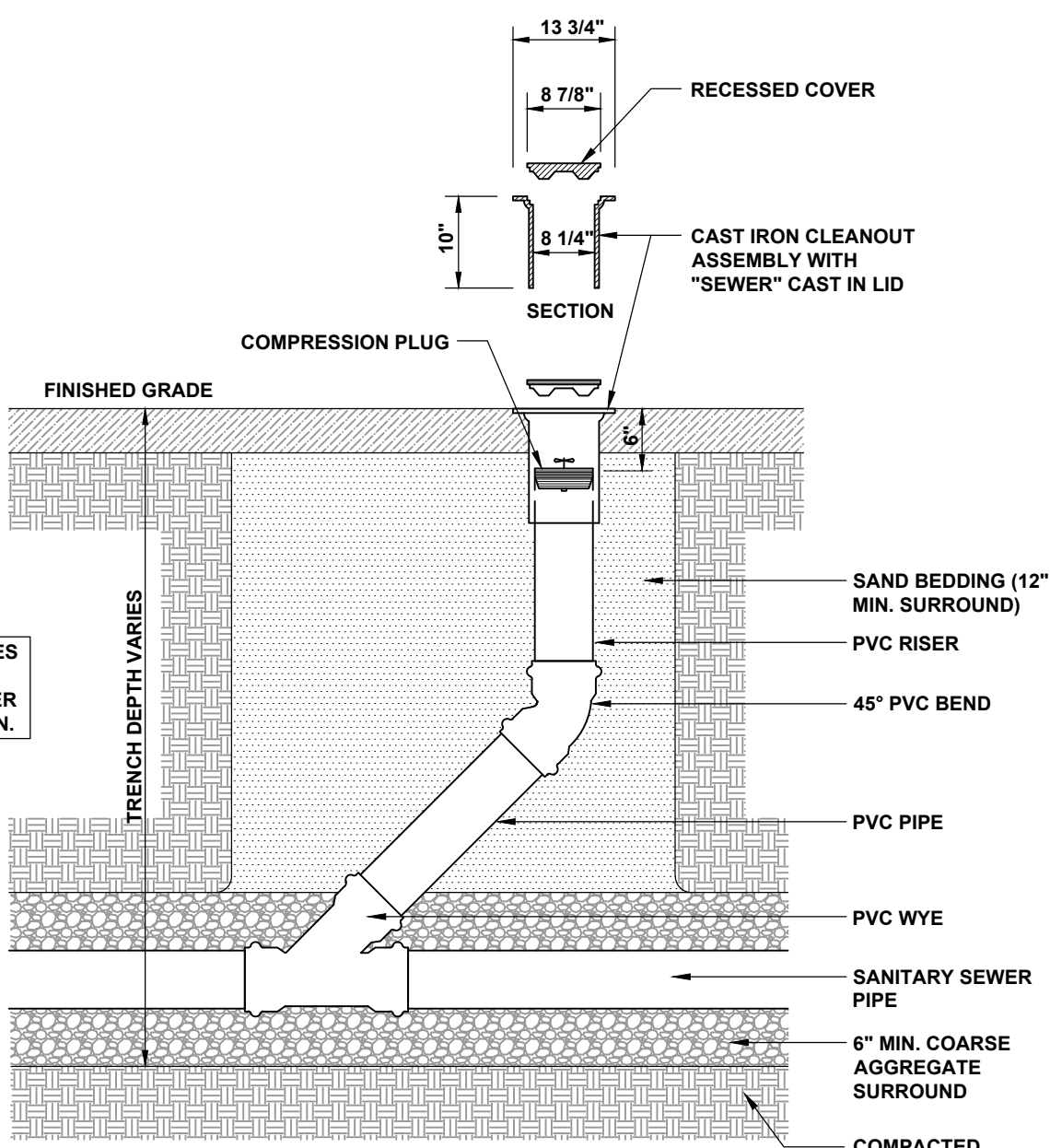
RAISED MOUNTABLE CONCRETE ISLAND DETAIL

N.T.S.



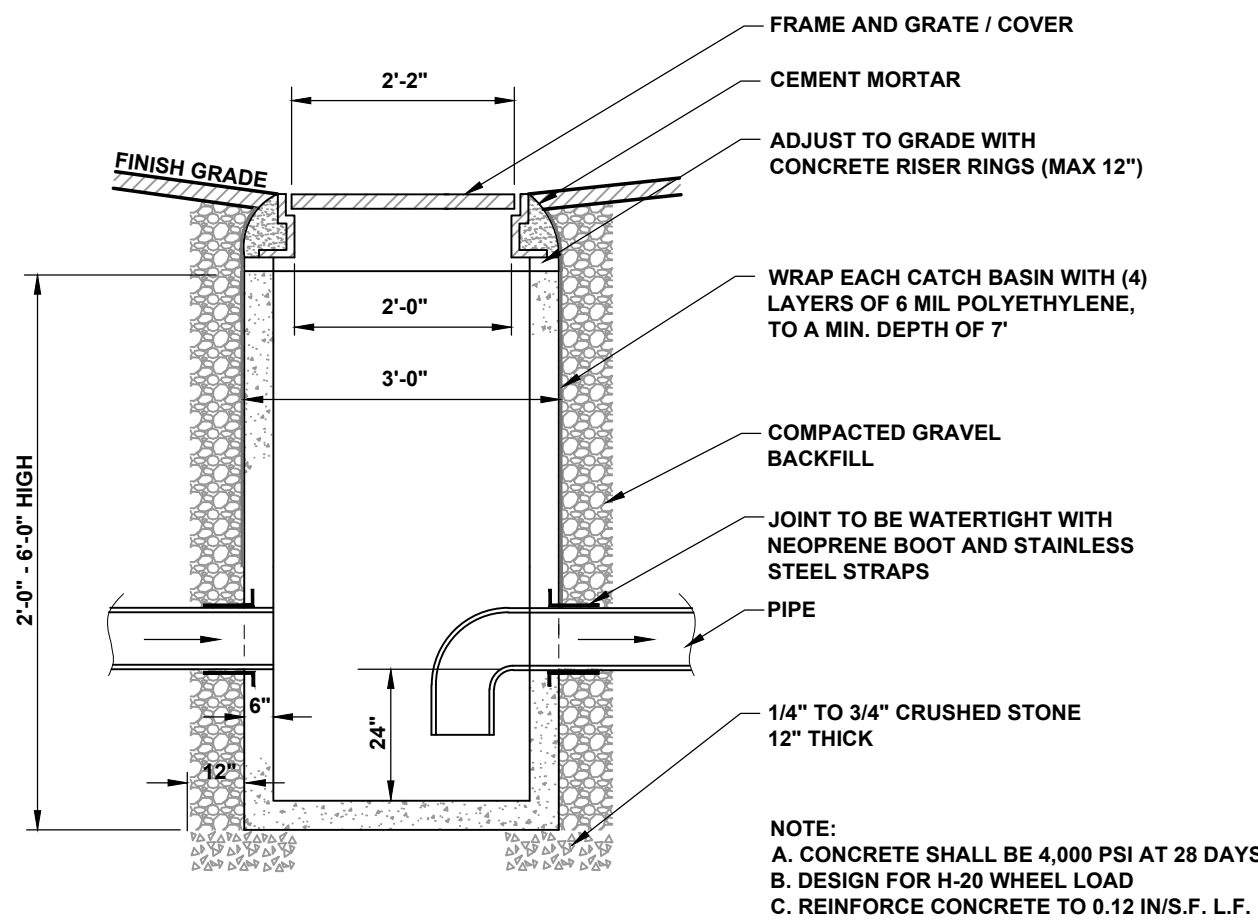
TYPICAL STORM DRAIN TRENCH DETAIL

N.T.S.



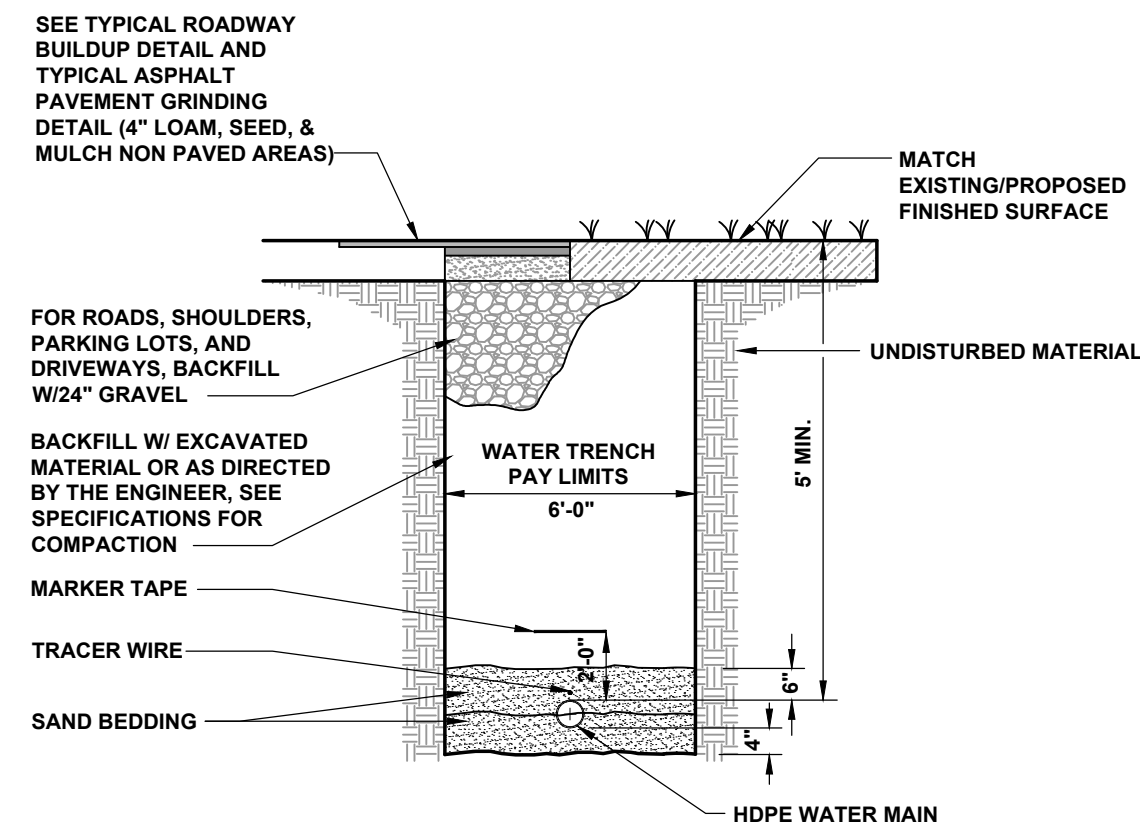
SANITARY SEWER CLEANOUT DETAIL

N.T.S.



TYPICAL TYPE 'F' CATCH BASIN DETAIL

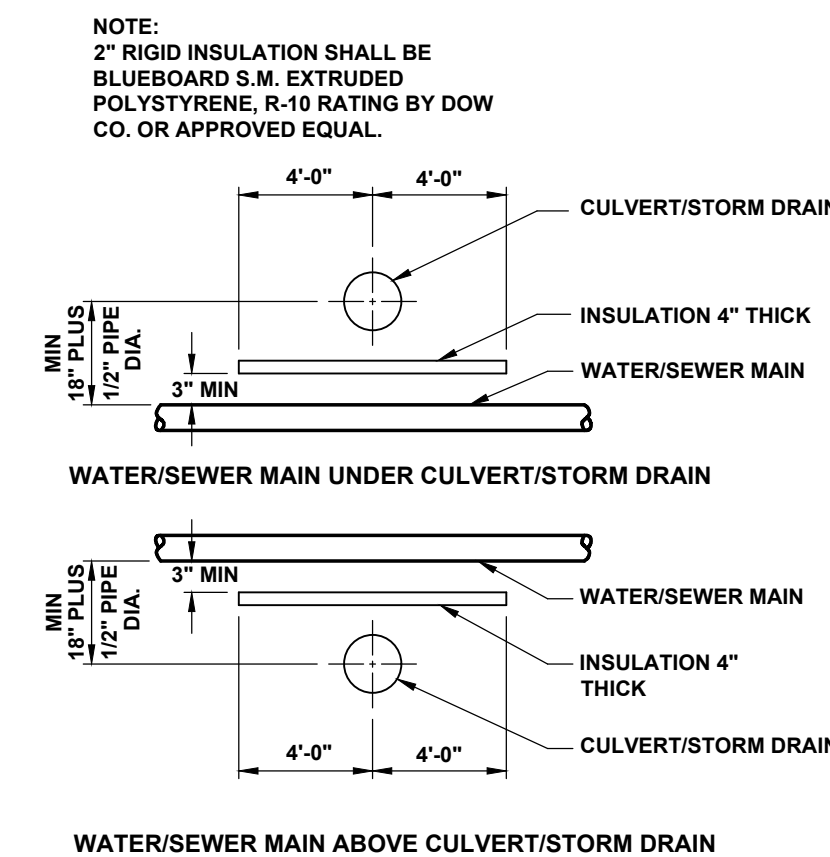
N.T.S.



- NOTE:
1. MATCH EXISTING SURFACE FINISH, EXCEPT WHERE NOTED. IN LAWN AREAS INSTALL 4" OF LOAM AND SEED AND MULCH.

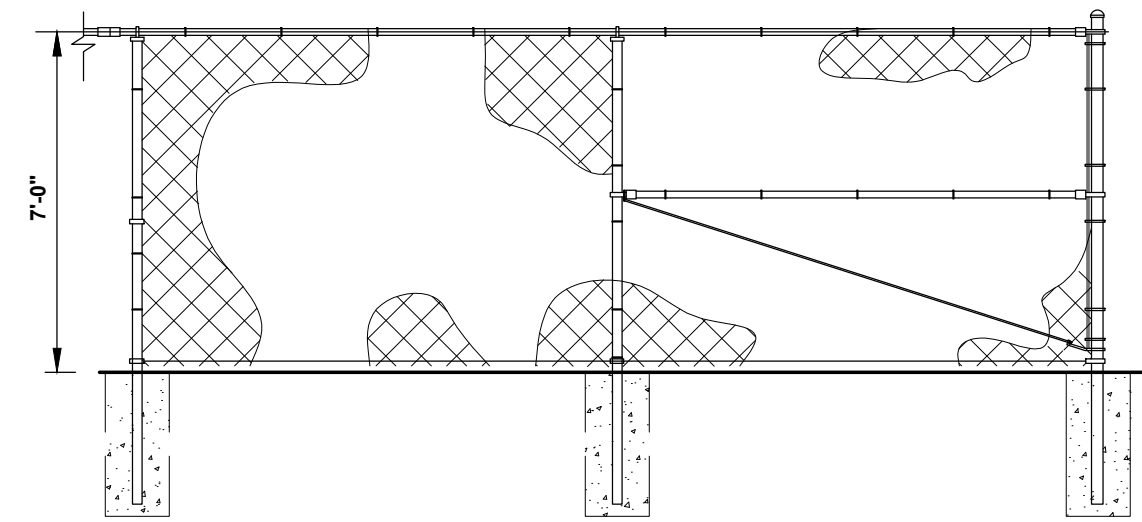
TYPICAL TRENCH DETAIL - HDPE WATER MAIN

N.T.S.



TYPICAL PIPE CROSSING INSULATION DETAIL

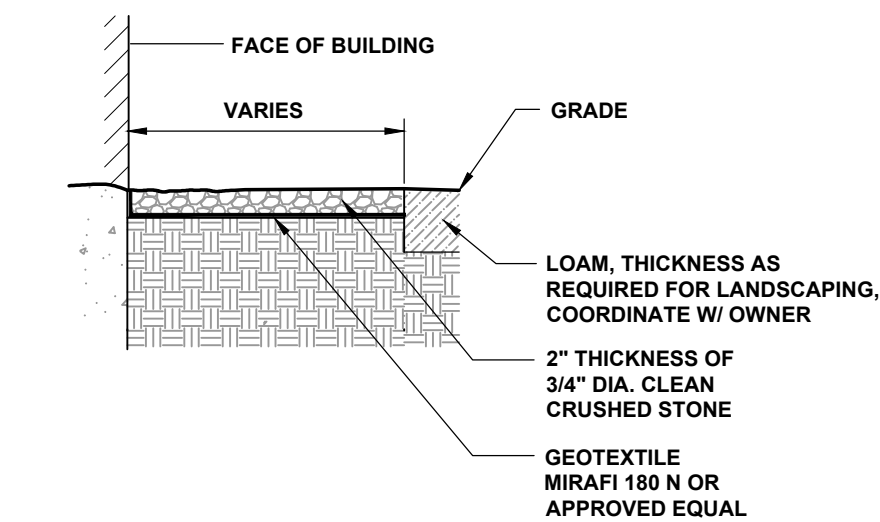
N.T.S.



- NOTES:
1. THE FENCE SHALL MEET OR EXCEED THE CHAIN LINK FENCE MANUFACTURER INSTITUTE (CLFMI) GUIDELINES AND RELATED FEDERAL SPECIFICATIONS FOR SECURITY CHAIN LINK FENCE MATERIALS AND INSTALLATION.
  2. ALL FENCE MATERIAL AND COMPONENTS SHALL BE GALVANIZED, UNLESS OTHERWISE NOTED.
  3. THIS DETAIL NOT APPLICABLE FOR PRIVACY FENCE OR FENCE WITH SLATS.
  4. ADJUSTABLE TRUSS ROD AND BRACE RAIL AT CORNER OR END POSTS ONLY, IF REQUIRED PER MANUFACTURER RECOMMENDATION.

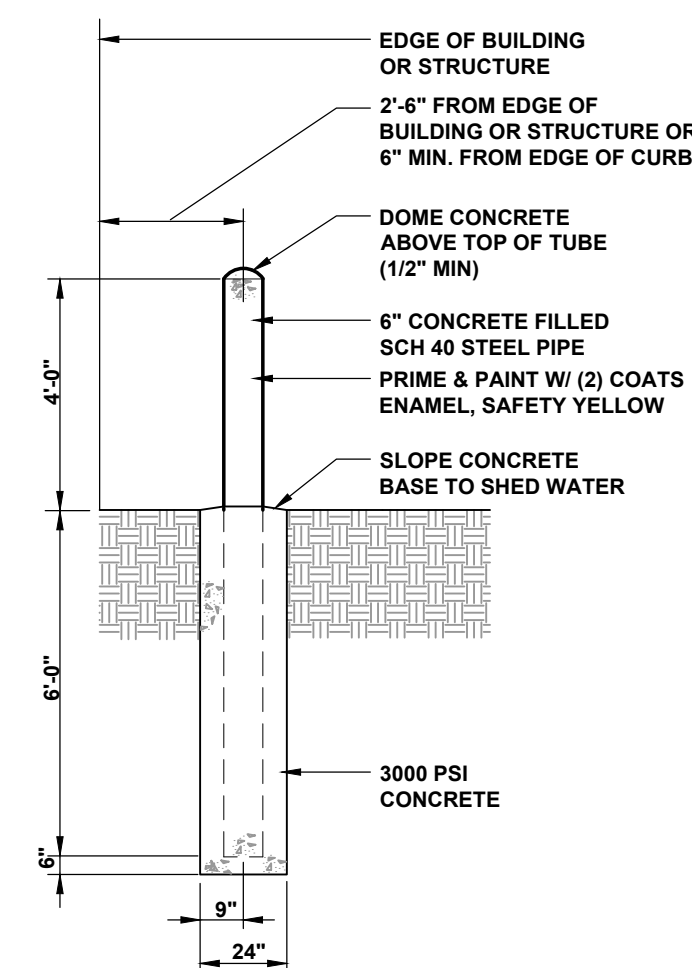
CHAIN LINK FENCE DETAIL

N.T.S.



ROOF DRIPLINE DETAIL

N.T.S.

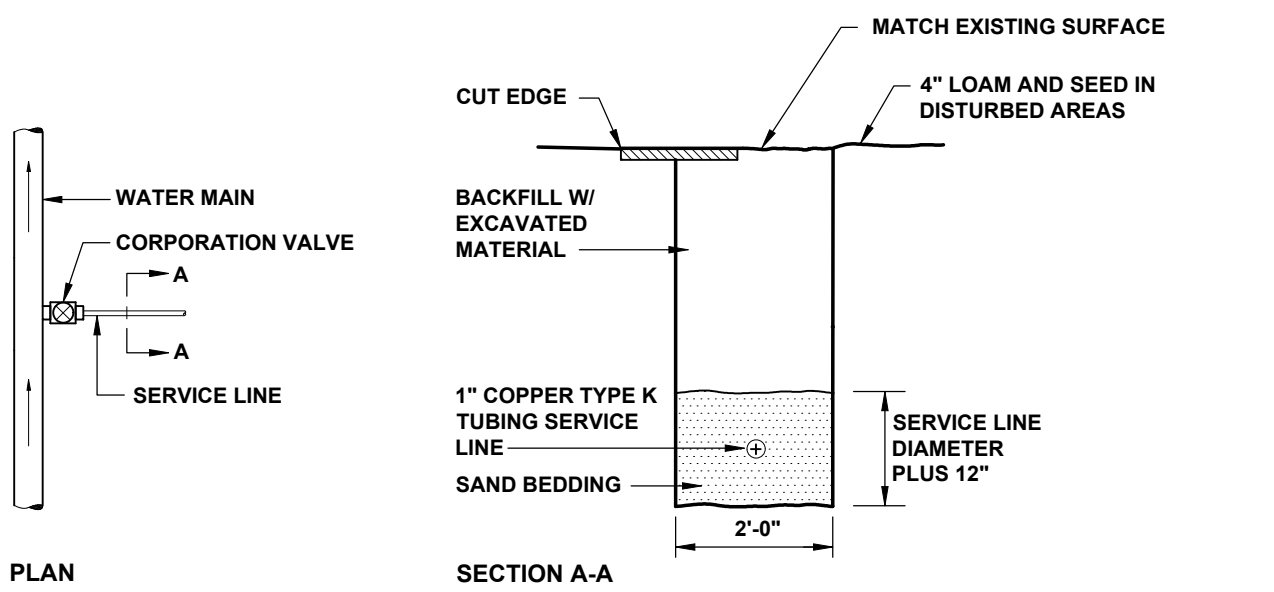
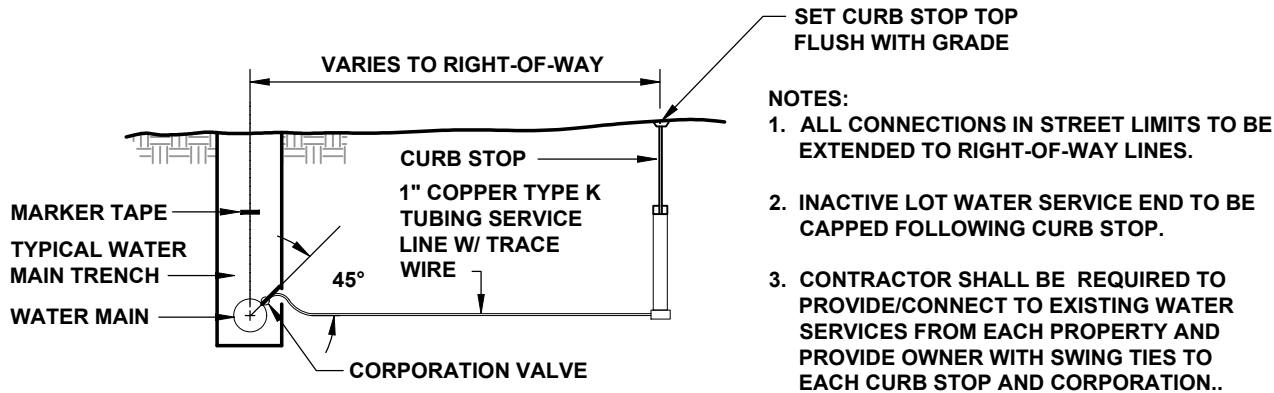


STEEL BOLLARD DETAIL

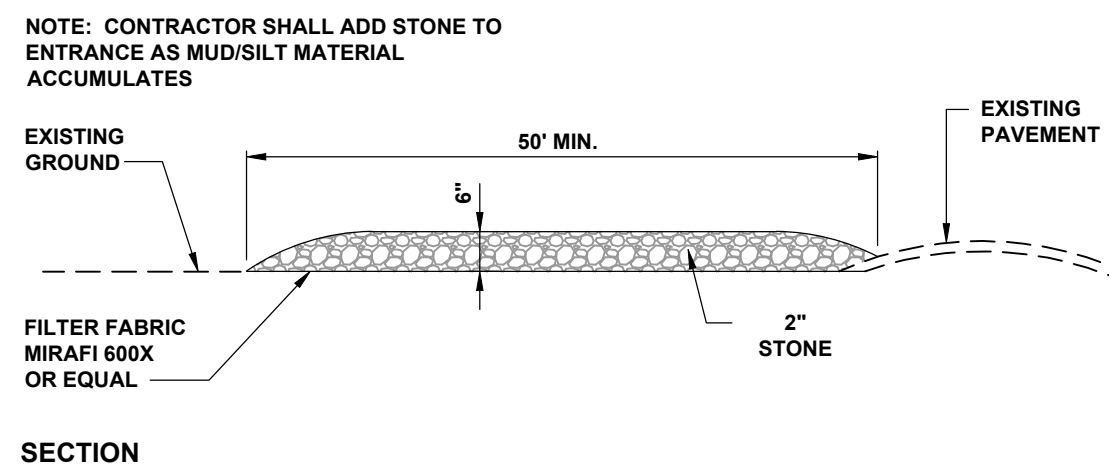
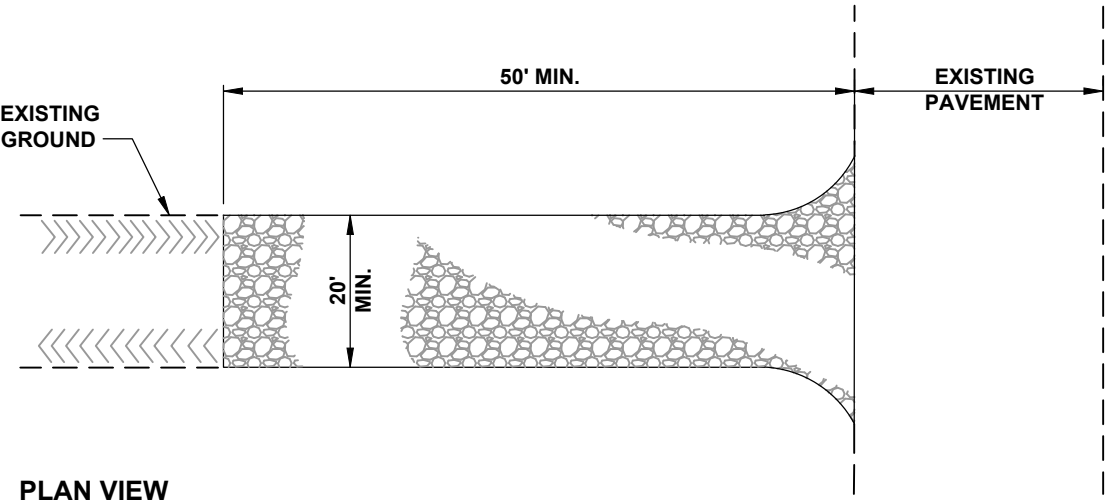
N.T.S.

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1	2022.01.11	REVISED PER CLIENT COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
PLANNING BOARD REVIEW NOT FOR CONSTRUCTION				
 One Merchants Plaza, Suite 701 Bangor, Maine 04401 207.989.4824				
PROJECT 1031 PORTLAND ROAD, LLC SELF STORAGE DEVELOPMENT 1031 PORTLAND ROAD, SACO MAINE				
TITLE DETAILS				
DATE 2022.02.11		SCALE N.T.S.		
DRAWN BY BLQ	DESIGNED BY BLQ	CHECKED BY BK		
PROJECT No. 12829.002		DRAWING No. C501		
DATE OF WORK 04/20/2022		REV. 2		

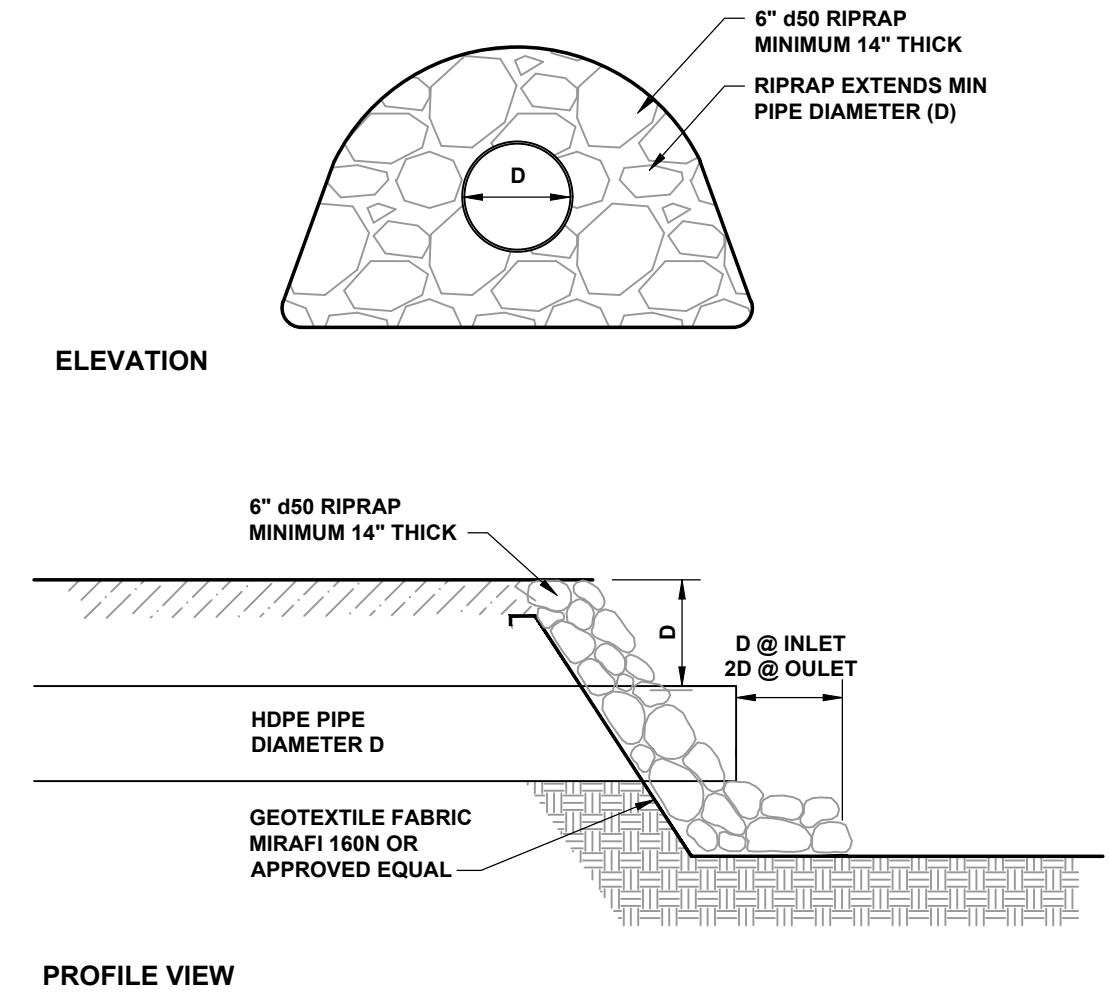




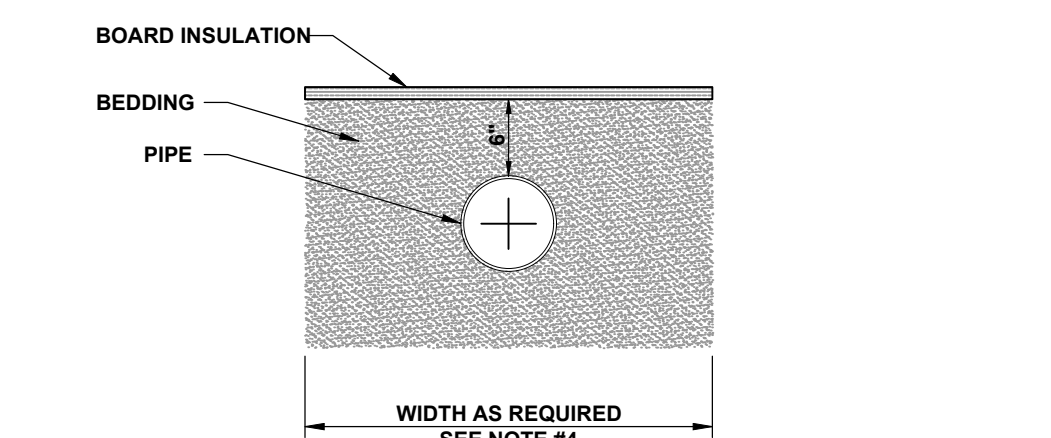
TYPICAL WATER SERVICE DETAIL  
N.T.S.



TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.

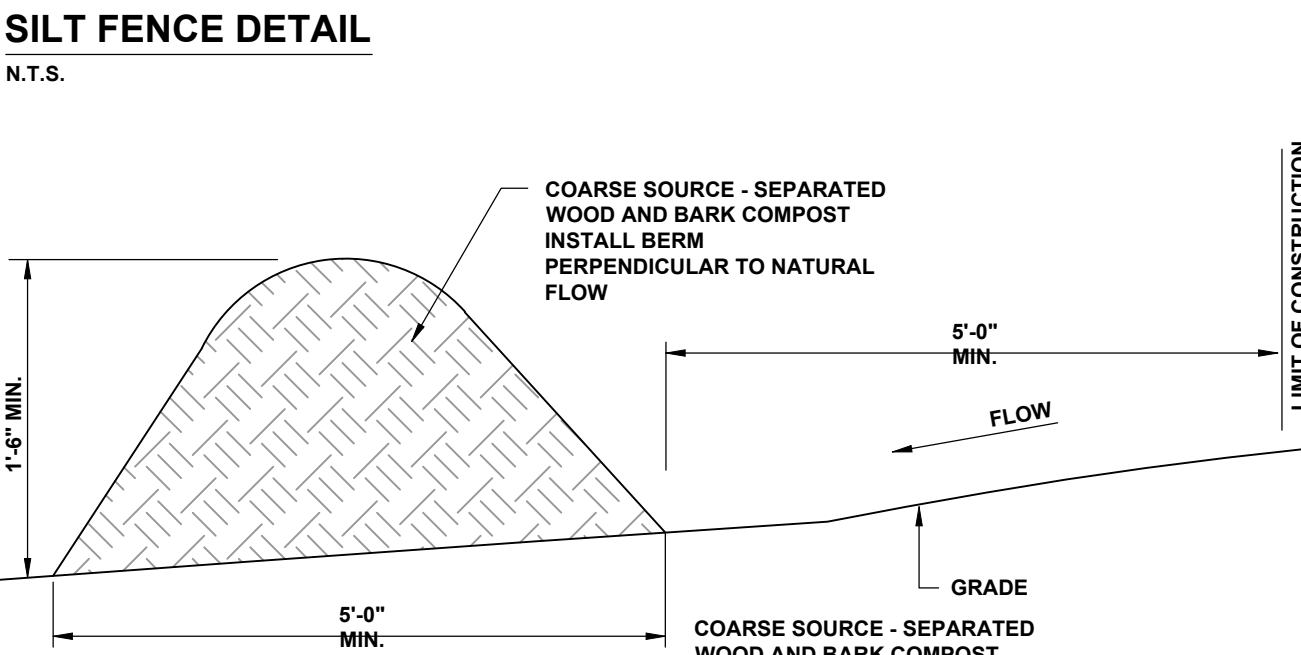
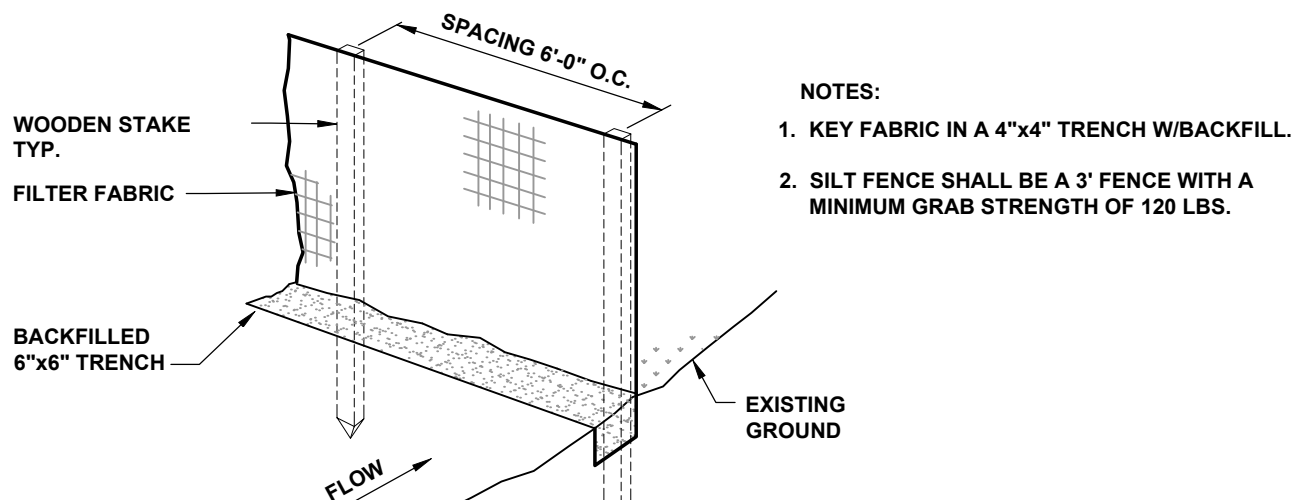


TYPICAL INLET/OUTLET PROTECTION DETAIL  
N.T.S.

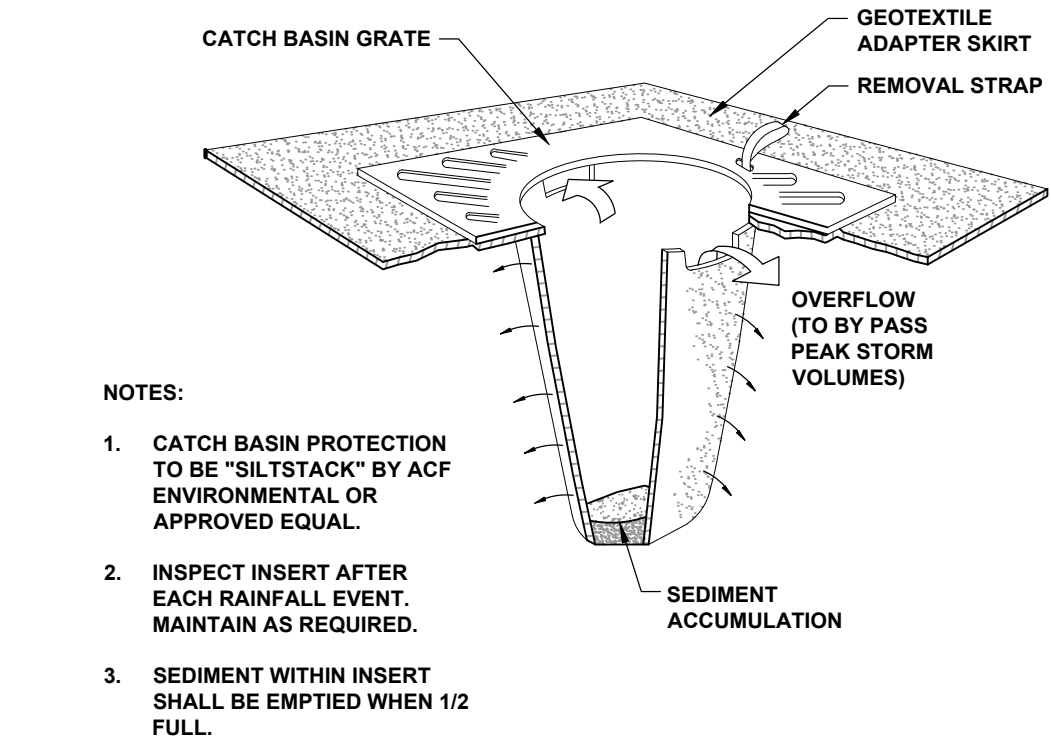


- NOTES:
1. WATER AND SEWER PIPING SHALL BE INSULATED WITH 2" RIGID INSULATION BLUE BOARD BY DOW CO. SM. EXTRUDED POLYSTYRENE, (OR APPROVED EQUAL) TO BE USED IF EARTHEN COVER IS LESS THAN 5'-0".
  2. CONTRACTOR MAY HAVE TO SUPPLY MORE THAN ONE LAYER OF BLUE BOARD INSULATION, IN AREAS THAT HAVE MINIMAL EARTHEN COVER TO MAINTAIN THE INSULATION VALUE OF 5'-0" COVER. 2" BLUE BOARD INSULATION HAS THE INSULATION VALUE OF APPROXIMATELY 1'-6" OF EARTHEN COVER. INSULATE PIPE TO EQUAL 5'-0" OF COVER.
  3. MAINTAIN A MINIMUM OF 12" OF EARTHEN COVER OVER INSULATION AS A MECHANICAL PROTECTION. LOAM AND SEED AS NECESSARY TO PREVENT EROSION.
  4. INSULATION TO BE 2 FEET WIDE FOR PIPES LESS THAN 6 INCHES IN DIAMETER AND 4 FEET WIDE FOR PIPES 6 INCHES IN DIAMETER AND LARGER, OR AS DIRECTED BY THE ENGINEER.
  5. CENTER INSULATION OVER PIPES.
  6. WHERE EARTHEN COVER IS LESS THAN 3'-0" INSULATE TRENCH WALLS TO BOTTOM OF TRENCH.

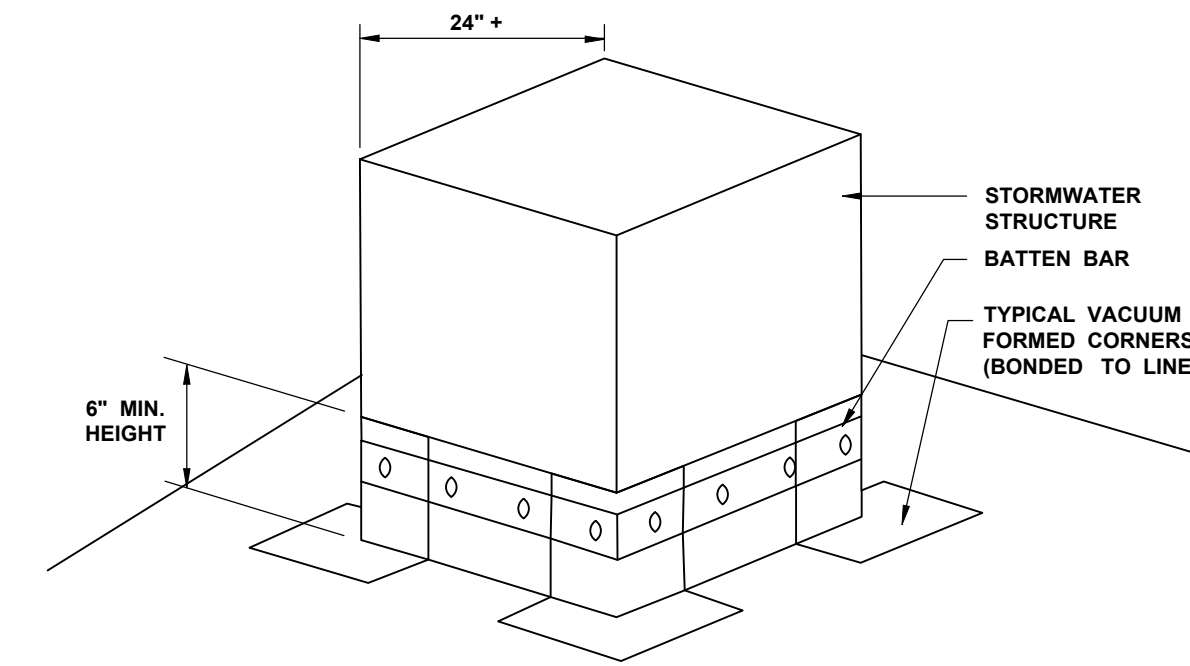
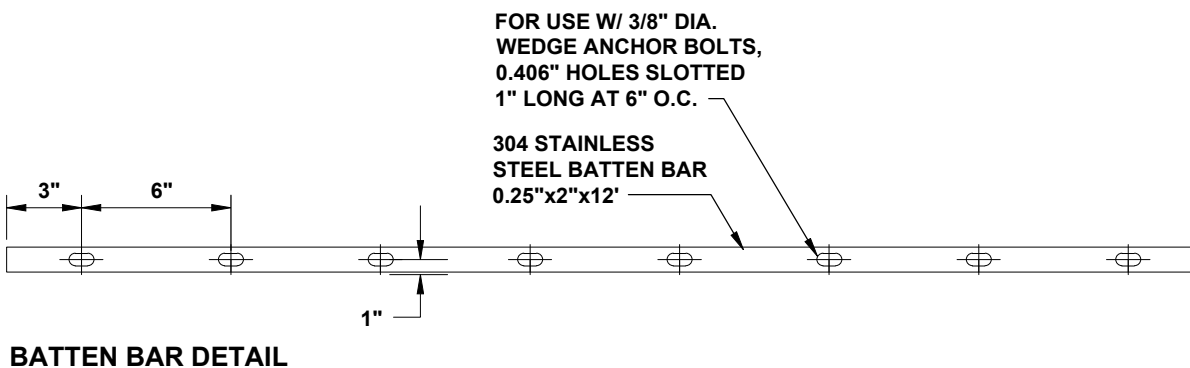
TYPICAL TRENCH PIPE INSULATION DETAIL  
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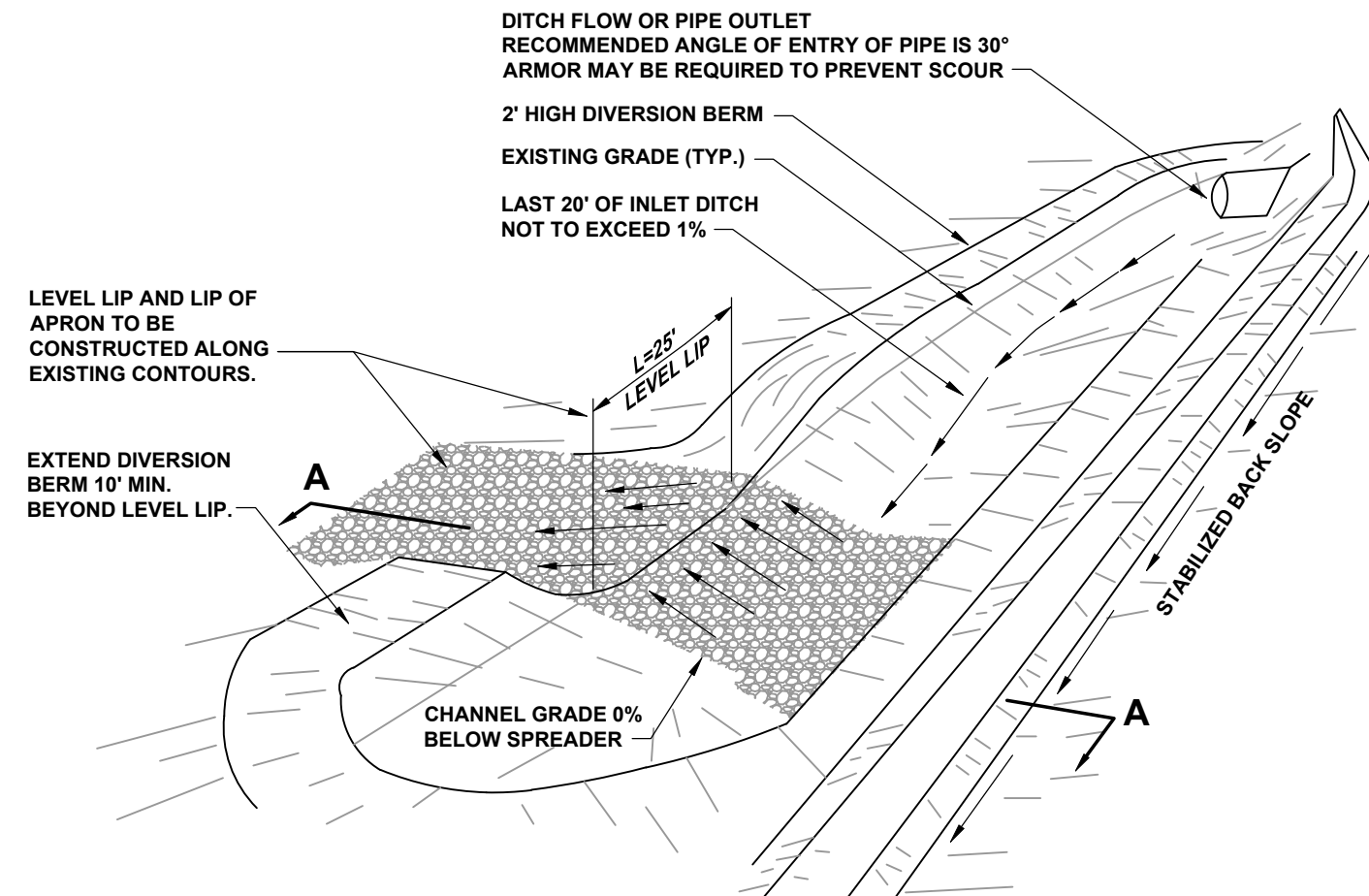
TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.



TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.

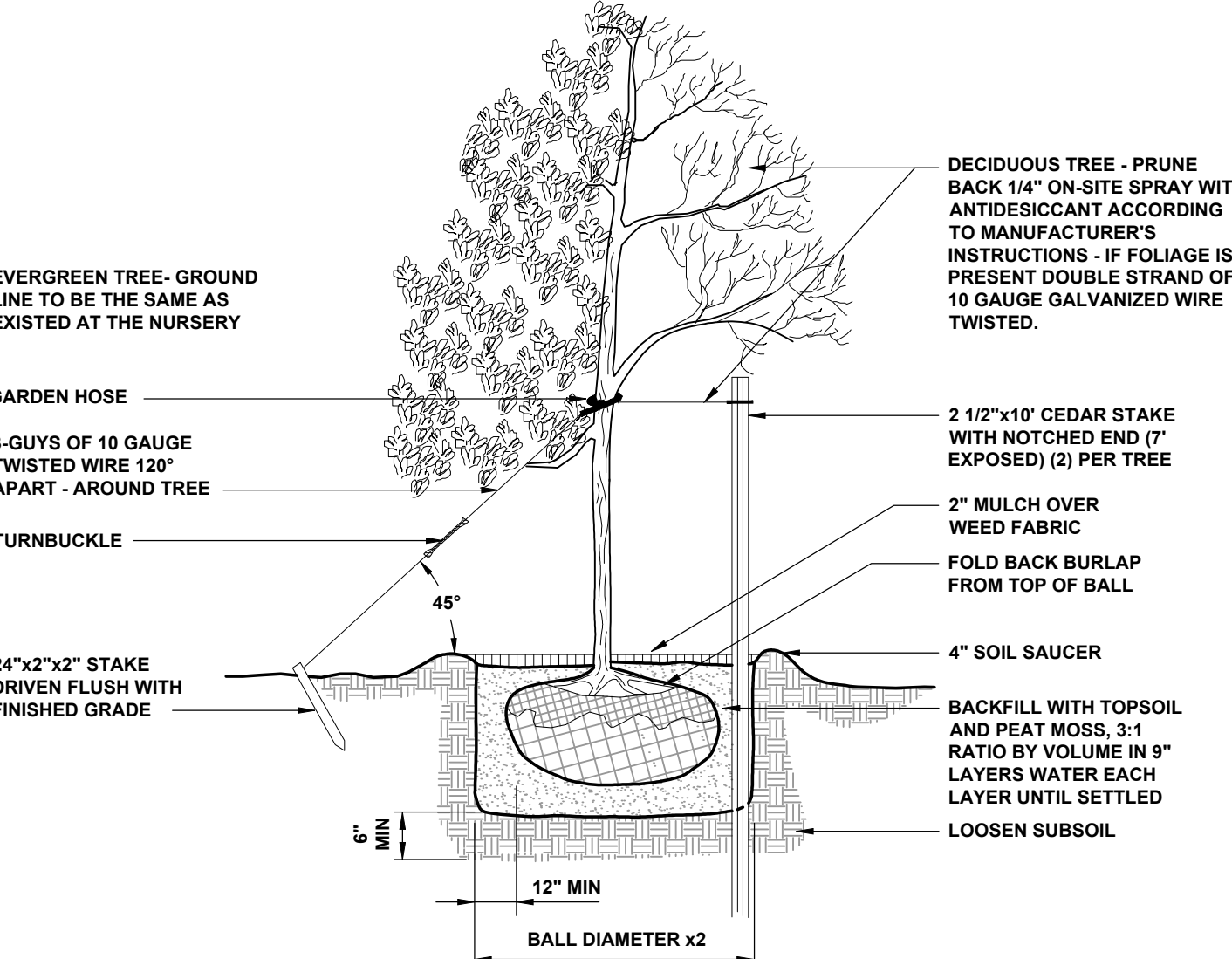


TYPICAL TRENCH PIPE INSULATION DETAIL  
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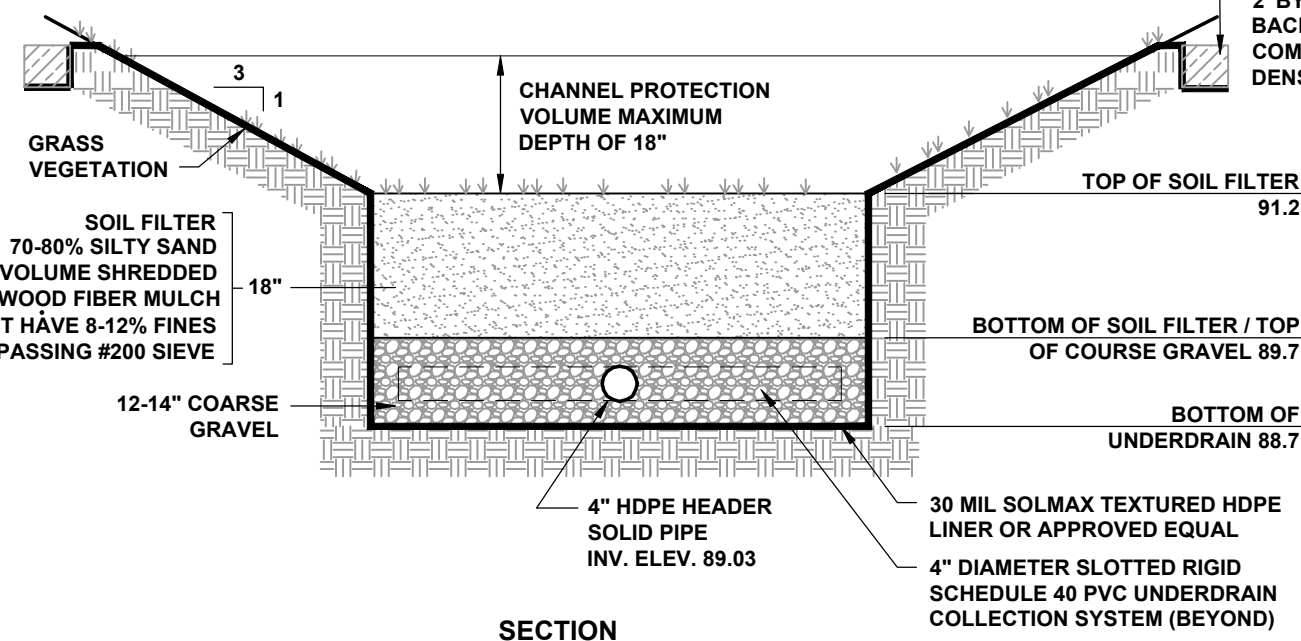
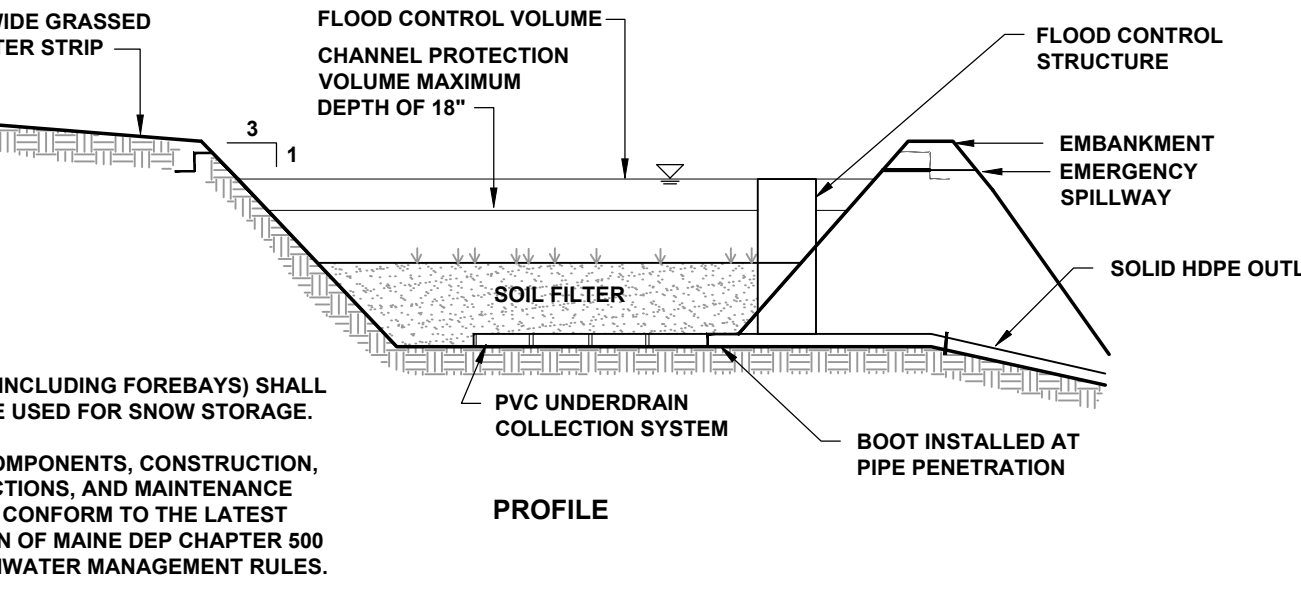
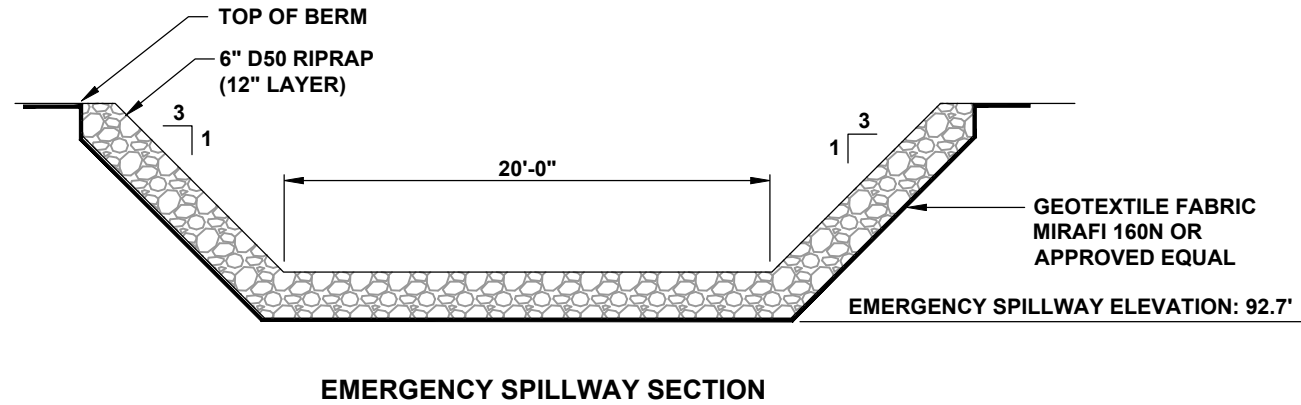


- NOTES:
1. SPREADERS SHALL BE INSTALLED WITH A LEVEL INSTRUMENT. CONSTRUCT LEVEL UP TO 0% GRADE TO ENSURE UNIFORM SHEET FLOW. LEVEL SPREADER SHALL BE CONSTRUCTED ON UNDISTURBED SOIL (NOT FILL).
  2. SELECT GEOTEXTILE FABRIC BASED ON UNDISTURBED SOILS (SANDS, SILTS, CLAYS, ETC.)
  3. PLACE 6" LAYER OF UNIFORMLY GRADED STONE 2" TO 3" IN DIA. RAKE TO FORM SMOOTH UNIFORM SURFACE. DO NOT FILL VOIDS IN STONE.
  4. THE INLET DITCH SHALL NOT EXCEED A 1% GRADE FOR AT LEAST 20 FEET BEFORE ENTERING THE SPREADER.
  5. STORM RUN-OFF CONVERTED TO SHEET FLOW ACROSS OUTLET APRON SHALL FLOW ONTO STABILIZED AREAS. RUN-OFF SHALL NOT BE RECONCENTRATED IMMEDIATELY BELOW THE POINT OF DISCHARGE.
  6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED.
  7. CONSTRUCTION OF LEVEL UP SPREADER SHALL BE FROM UPHILL SIDE ONLY. LEVEL UP & AREA BELOW SPREADER SHALL BE AT EXISTING GRADES & UNDISTURBED BY EARTHWORK OR EQUIPMENT.
  8. CONSTRUCT SPREADER WITH LIP AT EXISTING ELEVATION AS SPECIFIED.
  9. DOWNGRADIANT RECEIVING AREA MUST BE NATURALLY WELL VEGETATED.
  10. DISCHARGE NOT PERMITTED WITHIN 25' OF A STREAM OR WETLAND. CONSULT DEP IF STRUCTURE MUST BE WITHIN 75' OF STREAM OR WATER BODY.

TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.

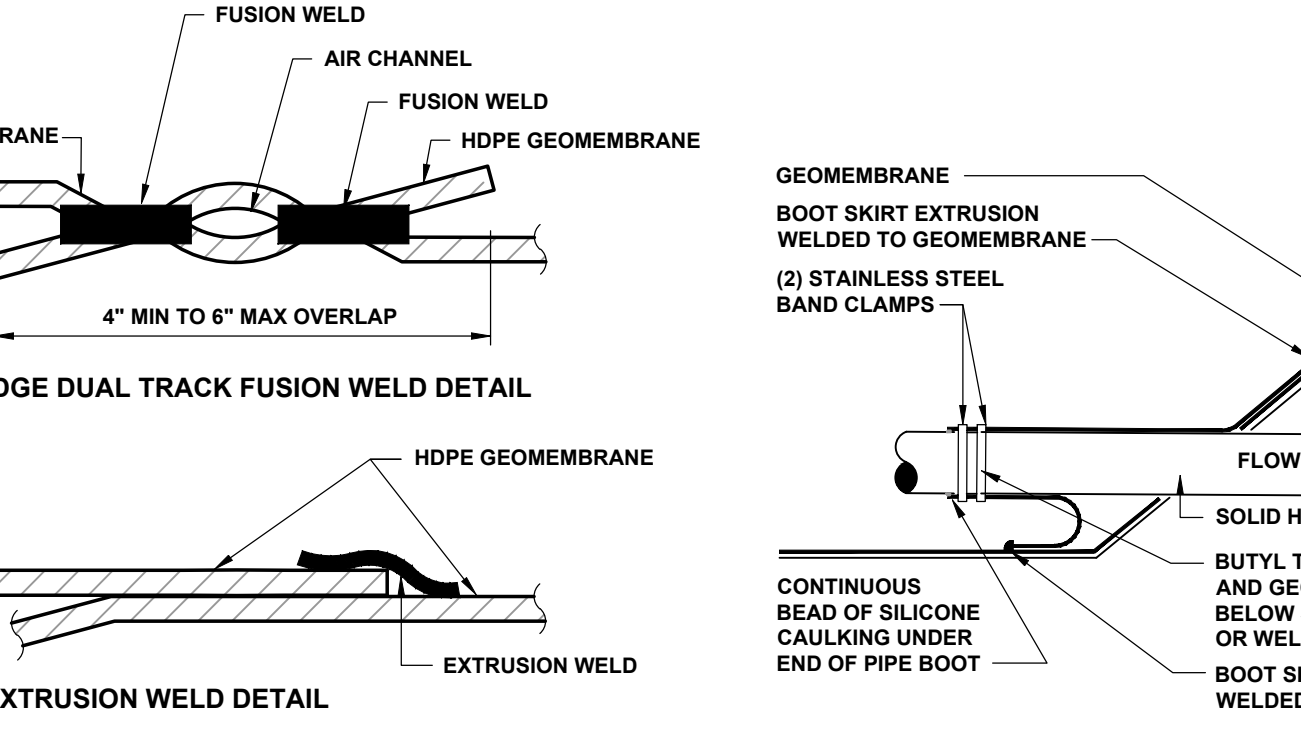


TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.



USF NO.	EXISTING ELEVATION (+/-) (FT)	PROPOSED TOP OF SOIL FILTER (FT)	PROPOSED BOTTOM OF SOIL FILTER (FT)	PROPOSED BOTTOM OF COARSE GRAVEL (FT)	PROPOSED ELEVATION OF PIPE BED (FT)	PROPOSED BOTTOM OF COARSE GRAVEL (FT)	OVERFLOW OUTLET STRUCTURE RM ELEVATION (FT)	TOP OF BERM (FT)	TREATMENT AREA REQ'D/PROVIDED (SF)	TOTAL STORAGE VOLUME @25 YR STORM (CF)
A	88.0	92.7	74.5	73	72.25	72	89.7	93.5	2876/3000	5128
B	90.0	92.7	74.5	73	72.25	72	89.7	93.5	2227/2800	2824
Flood	90.5	92.7	78.5	NA	NA	NA	89.7	93.5	NA	1815

TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.



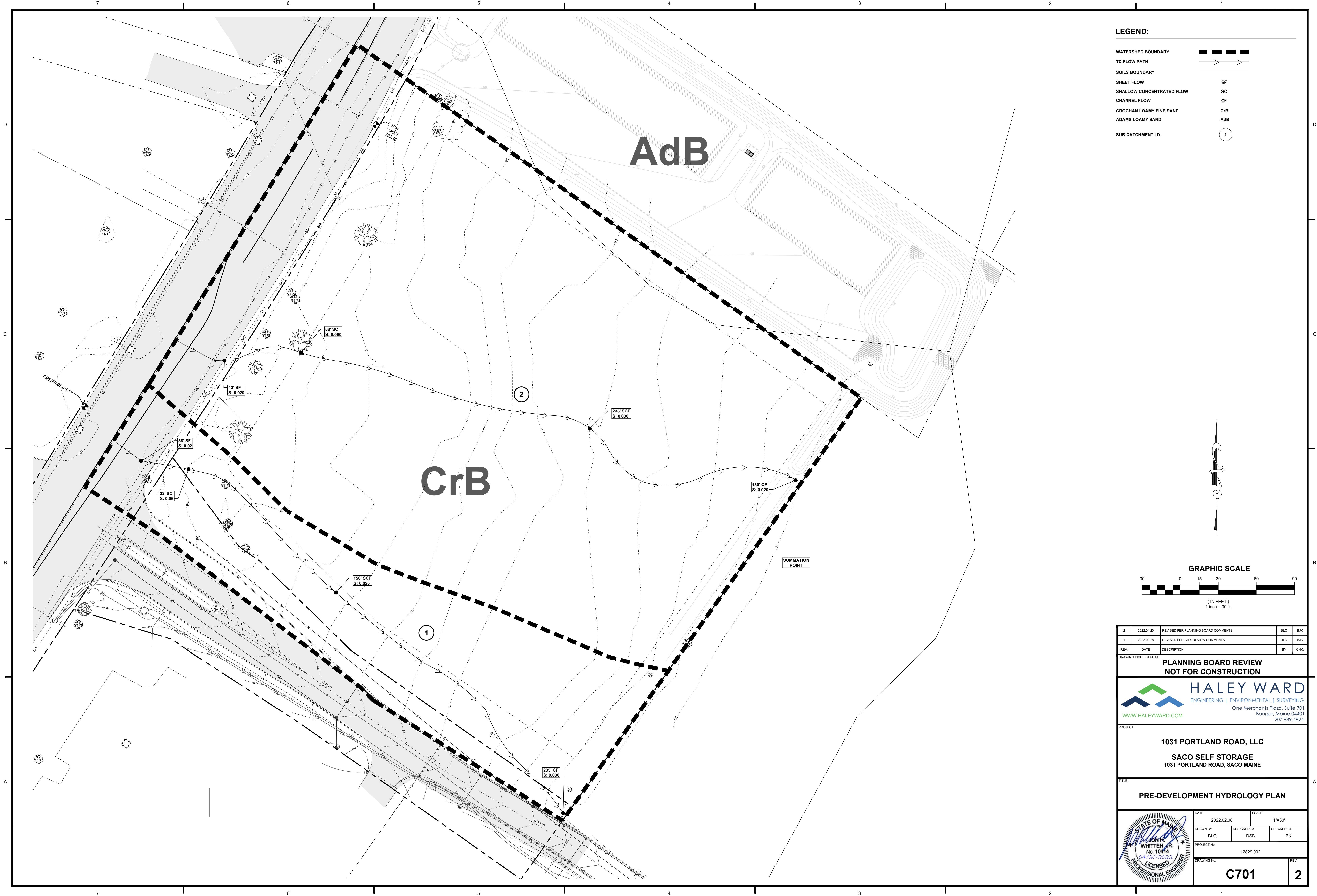
TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.

TYPICAL TRENCH PIPE INSULATION DETAIL  
N.T.S.

2	2022.04.20	REVISED PER PLANNING BOARD COMMENTS	BLQ	BJK
1	2022.01.11	REVISED PER CLIENT COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.
DRAWING ISSUE STATUS				
PLANNING BOARD REVIEW NOT FOR CONSTRUCTION				
 One Merchants Plaza, Suite 701 Bangor, Maine 04401 207.989.4824				
PROJECT 1031 PORTLAND ROAD, LLC SELF STORAGE DEVELOPMENT 1031 PORTLAND ROAD, SACO MAINE				
TITLE DETAILS				
DATE 2022.02.11		SCALE N.T.S.		
DRAWN BY BLQ		DESIGNED BY BLQ		CHECKED BY BK
PROJECT No. 12829.002		DRAWING No. C502		
REVISION 2				

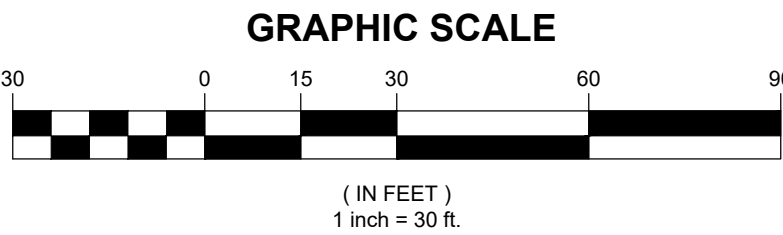


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LEGEND:

WATERSHED BOUNDARY	
TC FLOW PATH	
SOILS BOUNDARY	
SHEET FLOW	SF
SHALLOW CONCENTRATED FLOW	SC
CHANNEL FLOW	CF
CROGHAN LOAMY FINE SAND	CrB
ADAMS LOAMY SAND	AdB
SUB-CATCHMENT I.D.	



2	2022.04.20	REVISED PER PLANNING BOARD COMMENTS	BLQ	BJK
1	2022.03.28	REVISED PER CITY REVIEW COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.

DRAWING ISSUE STATUS

**PLANNING BOARD REVIEW**  
**NOT FOR CONSTRUCTION**



PROJECT

**1031 PORTLAND ROAD, LLC**  
**SACO SELF STORAGE**  
**1031 PORTLAND ROAD, SACO MAINE**

TITLE

**PRE-DEVELOPMENT HYDROLOGY PLAN**

	DATE	2022.02.08	SCALE	1"=30'
	DRAWN BY	BLQ	DESIGNED BY	DSB
	CHECKED BY	BK	PROJECT No.	12829.002
	DRAWING No.	<b>C701</b>	REV.	<b>2</b>





2	2022.04.20	REVISED PER PLANNING BOARD COMMENTS	BLQ	BJK
1	2022.01.11	REVISED PER CLIENT COMMENTS	BLQ	BJK
REV.	DATE	DESCRIPTION	BY	CHK.

## PLANNING BOARD REVIEW

**PLANNING BOARD REVIEW  
NOT FOR CONSTRUCTION**



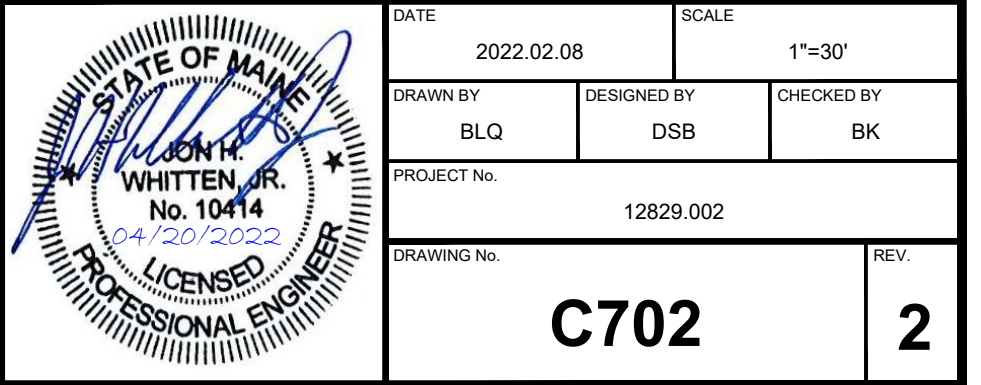
PROJECT

**1031 PORTLAND ROAD, LLC**

**SACO SELF STORAGE**

**1031 PORTLAND ROAD, SACO MAINE**

TITLE
<b>POST DEVELOPMENT HYDROLOGY PLAN</b>





FILE LOCATION: P:\12825\CAFFEINATED\_P03\_L10003\SACO SELF STORAGE\SATJHMG-CAD\_DRAWINGS\CONV\DSGN\_DIV\05112020\002-TREATMENT.DWG, 2022.04.19, 4:27 PM









**Water Resource Recovery  
Department (WRRD)**

Saco City Hall  
300 Main Street  
Saco, Maine 04072-1538



**Emily Cole-Prescott  
Compliance Manager**

[Eprescott@sacomaine.org](mailto:Eprescott@sacomaine.org)  
Phone: (207) 282-3564 x. 211

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**To:** Planning Department & Ben Kaiman, Project Manager (Haley Ward)  
**From:** Emily Cole-Prescott, WRRD Compliance Manager  
**Date:** May 11, 2022  
**Re:** 1031 Portland Road (Map 64 Lot 6): Site Plan & Conditional Use Review for Self-Storage Facility

---

The WRRD has been asked to review the April 26, 2022 site plan and conditional use response to application comments.

**Summary:** The project consists of six self-storage buildings with the following square footages:

- Proposed Building #1 (Future Construction): 13,800 square feet
- Proposed Building #2: 7,800 square feet – climate controlled/no sewer connection
- Proposed Building #3: 8,250 square feet – climate controlled/no sewer connection
- Proposed Building #4: 8,250 square feet – climate controlled/no sewer connection
- Proposed Building #5: 8,250 square feet – climate controlled/no sewer connection
- Proposed Building #6: 2,850 square feet – connected to sewer with one office space

**Capacity to Serve:** Based on review of the site and the fact that sewer connection is only proposed for the 2,850 square foot building, there is capacity to serve the site for up to 112 gallons per day (GPD). This capacity to serve considers only the use of the site, only this proposal as presented with representations made by the applicant, and is not valid for any other use. A condition is included below.

**CONDITIONS:**

1. This review considers the application presented and the representations made to the WRRD that the site will remain in one ownership for self-storage purposes only. If there are any proposed changes to the use on site, or if there are anticipated additional future owners of individual units, the applicant is required to return to the WRRD for review of capacity to serve this property.
2. Only proposed building #6 will be connected to the sewer system. There is a private sewer connection that runs along the rear of this site and is shared with the neighboring Diversa-Kerr development. Please note that this sewer line is to remain private, and the WRRD requests that terms of the maintenance of this private sewer line be provided, reviewed and approved to the satisfaction of the WRRD, before building permit issuance.
3. We thank the applicant for including the utility easement along Portland Road to benefit the City of Saco. We recommend a condition to finalize and execute the terms of this easement before construction starts.
4. Applicant is subject to WRRD impact fees for this proposed development. Impact fees shall be paid to the Code Enforcement Department upon building permit issuance. Current rate is \$31.23 per gallon.

5. Floor drains prohibited for all buildings and structures.
6. All connections must be made in accordance with specifications of the Technical Design Construction Standards Manual (TDCSM), Chapter 176 and Chapter 186 of the City's Ordinances, and any other applicable City, state, or federal standards. The City Engineer may have additional comments regarding sewer connection technical specifications to which the applicant must adhere.

Feel free to contact the Saco WRRD with any questions about this review. Thank you.





## CITY OF SACO, MAINE

Saco Public Works Department  
15 Phillips Spring Road  
Saco, Maine 04072

Joseph A. Laverriere, P.E. – City Engineer  
Telephone: (207) 284-6641  
Email: [jlaverriere@sacomaine.org](mailto:jlaverriere@sacomaine.org)

---

### MEMORANDUM

TO: Jason Garnham, Planner  
DATE: April 26, 2022  
RE: **Saco Self Storage – 1031 Portland Road**  
**Tax Map 64, Lot 6**

---

The Department of Public Works (DPW) has reviewed the revised site plan application materials for the above referenced project prepared by Haley Ward Engineers, dated April 20, 2022. The following comments and recommendations have been prepared based upon our review:

1. Comment to Planning Department – Has the City’s traffic peer review consultant reviewed the traffic analysis contained as part of the site plan application?
2. Are there any plans for screening rooftop mounted mechanical or HVAC equipment?

As part of any subsequent site plan approval, we recommend the following conditions be included:

1. MaineDOT is scheduled to repave Portland Road during 2023. The applicant shall complete all utility work within the Portland Road right-of-way for before October 15, 2022.
2. The applicant shall perform routine inspection and maintenance of the stormwater facilities as outlined in the operations and maintenance manual development specifically for the site. A copy of the annual inspection and maintenance report including inspection log(s) shall be submitted annually (by July 15th of each year) to the City Public Works Department.
3. Prior to the start of construction, the applicant shall be required to execute Form 1 contained in Article XII of the zoning ordinance and provide a recorded copy to the City.
4. The design engineer shall be required to inspect the construction and stabilization of the soil filter basin to be constructed on the site in accordance with the requirements contained in Chapter 7 of the MDEP’s Volume III Stormwater BMP Technical Design Manual. Inspections shall be performed as detailed in the Construction Oversight requirements contained in Section 7.1. Additionally, the contractor shall identify the location of the source of each component of the filter media and perform all testing and submittals as listed in the Testing and Submittals contained in Section 7.1.
5. As part of the project’s as-built certification for the project, the applicant shall provide a Stormwater Basin As-Built Certification. Prior to the issuance of a Certificate of

Occupancy, the Applicant shall submit evidence in the form of a letter with as-built survey plan prepared and stamped by a Professional Engineer who either prepared the Post-Construction Stormwater Management Plan and its associated Facilities or supervised the Plan and Facilities construction and implementation. The letter or plan shall certify that the Stormwater Management Facilities have been installed in accordance with the approved Post-Construction Stormwater Management Plan and that they will function as intended on said Plan. The as-built survey plan shall be performed for all post-construction stormwater facilities to document general conformance with the approved plan.

We look forward to discussing this project further and would be happy to clarify any of our comments made within this review memo.

May 13, 2022

Mr. Jason Garnham, AICP  
City Planner  
Saco City Hall  
300 Main Street  
Saco, ME 04072-1538

## **RE: TRAFFIC IMPACT REVIEW – 1031 PORTLAND ROAD STORAGE**

Dear Jason,

As requested, James W. Sewall Co. (Sewall) has reviewed traffic impact for the proposed self-storage facility at 1031 Portland Road. I reviewed the traffic information presented in “Site Plan Review & Conditional Use” application, prepared by Haley Ward and dated 2/14/2022. Additionally, the proposed site layout & utility plan, also prepared by Haley Ward and dated 2/11/22 was reviewed. My review comments are summarized below:

1. **Trip Generation.** Trip generation was obtained utilizing the most recent Institute of Transportation Engineers (ITE) “Trip Generation, 11<sup>th</sup> Edition”. It appears Haley Ward prepared the trip estimates solely on the basis of the 312 proposed storage units, although I was not able to duplicate their peak hour estimates exactly (7 AM and 8 PM).

Sewall also examined trip generation based upon the proposed 81,000 square feet of space. The data on the square footage basis was developed from a larger number of studies and therefore would be considered more reliable and/or accurate. The results on the basis of 81,000 S.F. result in 118 daily one-way trips, 15 AM peak hour trips and 15 PM peak hour trips. Since daily trips will be less than 400, a traffic impact analysis is not required by the ordinance.

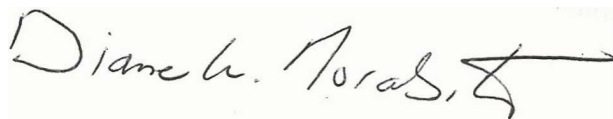
2. **Accident Data.** Sewall reviewed MaineDOT’s Map Viewer and there are no high crash locations within the immediate vicinity of the site. The intersection of Flag Pond Road and Portland Road is a high crash location, but it is understood that this intersection is scheduled to be signalized. This project is not expected to result in many turns onto or off Flag Pond Road so this project’s impact should be minimal on this intersection.

3. **Drive Sight Distance.** Access is proposed to be provided via Eastview Parkway. I do not see any sight distance information in the application or on the plan. It should be confirmed that there is adequate sight distance from the proposed site drive, and also from the Route 1 intersection of Eastview Parkway, to meet City standards.
4. **Turning Vehicle Design.** It is expected that a fair number of trucks will visit this facility. What was the assumed design vehicle? It should be confirmed that this design vehicle can enter and exit the site without crossing centerline on Eastview Parkway.

To summarize, given projected daily and peak hour volumes, a Traffic Impact Analysis is not required by the ordinance. Sight distance and design vehicle information are requested.

As always, please don't hesitate to contact me if you have any questions or concerns regarding my preliminary review findings.

Sincerely,



Diane W. Morabito, P.E. PTOE  
Vice President Traffic Engineering

