CITY OF DOVER

PLANNING TECHNICAL REVIEW COMMITTEE –AGENDA

Meeting Type:	Regular Meeting
Meeting Location:	Council Conference Room, City Hall, 288 Central Ave, Dover NH 03820
Meeting Date:	**Thursday, April 24, 2025**
Meeting Time:	**10:30 AM**

1. Site Plan for Mechanic Street Realty Trust, Assessor's Map 24, Lot 101, zoned CBD-G, located at 9 11 Mechanic Street. (Proposal is to construct an 8,750 s.f., five (5) story mixed-use structure, with commercial space on the first floor, and a parking lot with nine (9) spaces.) (SITE-2025-0003)

PLAN SNAPSHOT REPORT SITE-2025-0003
FOR CITY OF DOVER, N.H.

Plan Type:	Site Plan - Major	**Project:**		**App Date:**	04/03/2025
Work Class:	New Construction	**District:**	None	**Exp Date:**	06/07/2025
Status:	In Review	**Square Feet:**	0.00	**Completed:**	NOT COMPLETED
Valuation:	$0.00	**Assigned To:**	Blonigen, Rachel	**Approval Expire Date:**	

Description: Construct 5 story mixed use building with commercial and 1 living unit on the first floor and 2 units on each of the 4 upper floors.

Parcel:	24101-000000 Main	**Address:**	9-11 Mechanic St Dover, NH Main	**Zone:**	CBD-G(Central Business District - Genera

Owner	Engineer	Applicant
Benjamin Lagere 23A Middle Street Newburyport, MA 01950	Benjamin Osgood 130 Main Street Suite 202 Suite 202 salem, NH 03079 Home: (978) 435-1324 Business: (978) 208-1768 Mobile: (978) 435-1224	Benjamin Lagere 23A Middle Street Newburyport, MA 01950

Plan Custom Fields

Total	0	Total2	0	Total3	4939
Total4	0	Total5	9645	Total6	9
Total7	0	Total8	9645	Total9	1696
Street Classification Type	Municipal	Net Change in # Parking Spaces (+/-)	7	Water Service	Municipal
Recording Number		Sewer Service	Municipal	Total Acres (GIS)	0.16
Deed Book	5230	Total SQFT	6969.6	Deed Page	281
Deed Date		Proposed Property Use	Mixed use commercial/residential	Area of Parcel to be Developed (SQFT)	7169
Number of Parking Spaces Existing	2	Number of Parking Spaces Proposed	9	Number of Employees Total	3
Number of Employees in Max Shift	3	Distance to City Water	20	Distance to City Sewer	18
Type of Building to be Built	mixed use commercial residential.	Estimated Construction Value	3000000.00	Refuse Removal	Private
Is there an existing Conservation Easement?	No	Existing Conservation Easement Details		TotalImpactFeeSDTOD	0.00
TotalImpactFeeTHTOD	0.00	TotalImpactFee23FTOD	0.00	TotalImpactFeeA4TOD	0.00
TotalImpactFeeMHTOD	0.00	TotalImpactFeeADUTOD	0.00	TotalImpactFeeAONRTOD	0.00
TotalImpactFeeAR55TOD	0.00	TotalImpactFeeAR62TOD	0.00	Sub Total Residential	0.00
TotalImpactFeeRIRCTOD	0.00	TotalImpactFeeOCSTOD	0.00	TotalImpactFeeITWCTOD	0.00
TotalImpactFeeNHALTOD	0.00	TotalImpactFeeOIUTOD	0.00	TotalImpactFeeAFAOTOD	0.00
Sub Total Non-Residential	0.00	Total of Impact Fees to be Assessed	0.00		

Attachment File Name	Added On	Added By	Attachment Group	Notes
Signature_Benjamin_Osgood_4/3/2025.jpg	04/03/2025 15:27	Osgood, Benjamin		Uploaded via CSS

Invoice No.	Fee	Fee Amount	Amount Paid
INV-2025011865	Planning General Application Fee	$200.00	$0.00

		Total for Invoice INV-2025011865	$200.00	$0.00
NOT INVOICED	Planning Impervious Paved Area Fee		$345.73	$0.00
	Planning Residential Fee		$900.00	$0.00
	Planning Non-Residential – Addition		$964.50	$0.00
		Total for Invoice NOT INVOICED	$2,210.23	$0.00
		Grand Total for Plan	**$2,410.23**	**$0.00**

Workflow Step / Action Name	Action Type	Start Date	End Date
Review v.1		04/04/2025 14:31	
Confirm application complete v.1	Generic Action		04/04/2025 14:32
Technical Review Committee Meeting Agenda v.1	Task	04/04/2025 14:31	
Land Use Plan Technical Review v.1	Receive Submittal		
Technical Review Committee Meeting v.1	Hold Meeting		
Planning Board v.1			
Planning Board Agenda v.1	Task		
Invoice for Notices v.1	Task		
Send Notices v.1	Task		
Planner Creates Staff Recommendations v.1	Plan Activity		
Distribute Planning Board Materials v.1	Task		
Planning Board Hearing v.1	Hold Hearing		
Planning Board Decision v.1	Plan Activity		
NOD Sent to Applicant v.1	Create Report		
Final Plan v.1			
Land Use Plan Stamped and Signed v.1	Generic Action		
Recording v.1	Task		
Document Archival v.1	Generic Action		
Internal Notification of Plan Completion v.1	Generic Action		
Building Official Notifies Address v.1	Generic Action		
Pre-Con Meeting v.1	Hold Meeting		
Create/Link to Records v.1			
Create / Link to Permit - Building Major v.1	Create Sub Permit		
Create / Link to Permit - Site Work, Construction v.1	Create Sub Permit		

City of Dover, New Hampshire
SITE REVIEW APPLICATION

[Revision Date: July 1, 2021]

Office Use Only	Project #: _____	Date Received: _____
	Amount Paid: _____	Time Received: _____

APPLICANT AND OWNER INFORMATION

Name of Applicant: BENJAMIN T. LeGARE, TRUSTEE MECHANIC STREET REALTY TRUST Telephone # 603-490-5085

Address of Applicant: 23A MIDDLE STREET, NEWBURYPORT MA 01950

E-Mail Address: BENJAMIN.LAGARE@GMAIL.COM

Name of Property Owner (*if different from applicant*): SAME Telephone #_____

Address of Property Owner: SAME

PROPERTY INFORMATION

Address of Property: 9-11 MECHANIC STREET, DOVER NH

Assessor's Map # 24 Lot(s) # 101

Zoning District(s) CBD SUBDISTRICT G Overlay District(s) _____

Size of Parcel: 7169 sq. ft. 0.16 ac. Property Deed: Book 5230 Page: 281

Existing Use of Property: MULTI FAMILY RESIDENTIAL

SITE PLAN INFORMATION

Describe Proposed Use: 5 STORY MIXED USE WITH Commercial on First FLOOR

Area of Parcel to be Developed: 7169 sq. ft.

If Multi-family Residential: Number of Units 9 & Buildings Proposed 1

If lodging: Number of Units _____ & number of Buildings _____

Number of Parking Spaces: Existing 2 Proposed 9

Highway Access (check where applicable): X City Street ____ State Highway

Number of Employees Total: _____ In Maximum Shift: _____

Disposition of Parcel:

Building Footprint 1,696 sq. ft.

Total Building Area 9,645 sq. ft.

Paved Area 3,277 sq. ft.

Building Setbacks:

Front Yard 5 ft.

Rear Yard 69.55 ft.

Side Yard: Right 1.51 ft. Left 0.82 ft.

City Water? X Yes ___ No How far is city water from the property? _____

City Sewer? X Yes ___ No How far is city sewer from the property? _____

TRANSFER OF DEVELOPMENT RIGHTS INFORMATION

Type of TRANSFER OF DEVELOPMENT RIGHT REQUEST (Check All That Apply):

□ Residential □ Residential (reduced size) □ Industrial | □ Purchase □ Land Preservation

Relief sought (Check All That Apply):

□ Lot Size □ Frontage □ Setback □ 30' Buffer □ Increase by _____ units

Describe Proposed Use or Activity that requires TDR; describe any impacts and document mitigation:

_____

_____

_____

BUILDING INFORMATION

Type of Building to be Built: MIXED USE COMMERCIAL ON FLOOR 1 RESIDENTIAL ABOVE

Height of Building: 5 STORY Finished Floor Elevation: 67.25'

Number of Seats (where applicable) N/A

Estimated value of construction: _____ Refuse removal: Public/Private (circle one)

WAIVER REQUESTS

Site Review Regulations section(s) to be waived: _____

Justification for waiver request(s) (*attach additional sheets as needed*):

_____

_____

_____

_____

_____

_____

_____

SURVEYOR INFORMATION

Name of Surveyor and Company (Licensed in N.H.) Timothy J Winings RANGER Engineering

Address 130 MAIN ST. SALEM, NH Telephone #: 978-208-1762

Professional License #: NH-682 E-mail address: MyTJWSURVEY@Gmail.com

ENGINEER INFORMATION

Name of Engineer and Company (Licensed in N.H.) Benjamin C Osgood, JR
RANGER ENGINEERING GROUP INC.

Address 130 MAIN STREET SALEM NH Telephone #: 978-435-1324

Professional License #: NH.12080 E-mail address: BOSGOOD@RangerEng.com

ARCHITECT INFORMATION

Name of Architect and Company (Licensed in N.H.) N/A

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

LANDSCAPE ARCHITECT INFORMATION

Name of Landscape Architect and Company (Licensed in N.H.) N/A

Address _____ Telephone #: _____

Professional License #: _____ E-mail address: _____

SOIL SCIENTIST INFORMATION

Name of Soil Scientist and Company (Licensed in N.H.) JOHN P HAYES III

Address 7 LIMESTONE WAY, NORTH HAMPTON, NH 03862 Telephone #: 603-205-4396

Professional License #: NH 087 E-mail address: _____

CONSERVATION EASEMENT HOLDER N/A

Name of Easement Holder: _____ Telephone #_____

Address Easement Holder: _____

SIGNATURES

I/We hereby submit this application to the City of Dover Planning Board and attest that to the best of my knowledge all of the information on this application form and in the accompanying application materials and documentation is true and accurate. Furthermore, I/we submit that the existing conditions sheet of the plan represents the lot in question, and that no alteration of the site shall take place during Planning Board review up to and including the pre-construction meeting. As applicant or as agent, I attest that I am duly authorized to act in this capacity.

Signature of Property Owner: _____ Date: 4-3-25

Signature of Applicant (*if different from owner*): _____ Date: _____

Signature of Agent: _____ Date: _____

AUTHORIZATION TO ENTER SUBJECT PROPERTY

I, and my successors, hereby authorize members of the Dover Planning Board, Planning Department and other pertinent City Departments and boards to enter my property for the purpose of evaluating this application, including performing inspections during the application phase, post-approval phase, construction phase and occupancy phase. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 4-3-25

AUTHORIZATION TO COMPLETE THE PROJECT ON SUBJECT PROPERTY

I, and my successors, hereby the City of Dover or its assigns to enter my property for the purpose of completing the site work as required by the approved plan should the letter or credit or other surety be called. It is understood that these individuals must use all reasonable care, courtesy, and diligence when on the property.

Signature of Property Owner: _____ Date: 4-3-25

Signature of Applicant (*if different from owner*): _____ Date: _____

CERTIFICATION OF FEES

I, and my successors, hereby certify that I understand that the City of Dover collects impact fees, utility investment fees and inspection fees for projects developed in Dover. Said fees must be paid before a Certificate of Occupancy can be obtained for a structure, unless a different payment schedule is agreed to by the applicant and the City prior to approvals being issued by the Dover Planning Board. Additionally, should the property be in "Current Use" it will be subject to the Land Use Change Tax.

Signature of Property Owner: _____ Date: 4-3-25

Signature of Applicant (*if different from owner*): _____ Date: _____

PLANNING BOARD FEE SCHEDULE/INVOICE

(Revised July 24, 2023)

Below are the fees associated with plan review and are subject to a nonrefundable application fee to cover administrative expenses. Please complete the information below and provide payment with your application submittal. **Plan review fees shall be paid prior to technical review committee (TRC) being scheduled.** For plans not requiring TRC review, **fees are due 21 days prior** to the Planning Board meeting. Staff will coordinate abutter/notice fees, which will be invoiced and must be paid 28 hours before the Planning Board meeting for an application to be heard. Fees shall be paid by cash or check made payable to "City of Dover".

A. Plan Review Fees

1. Application fee for the following (SELECT ALL THAT APPLY):

- ☐ SUBDIVISION Application fee $200.00 + $150.00 x # _____ new lots created = $_____
- ☐ LOT LINE ADJUSTMENT Application fee $200.00 + $100.00 X # ___ of lots involved = $_____
- ☐ TRANSFER OF DEVELOPMENT RIGHTS Application fee $200.00 = $_____
- ☐ SITE REVIEW – RESIDENTIAL Application fee $200.00+ $100.00 x # __ per dwelling unit =$_____
- ☒ SITE REVIEW – NON-RESIDENTIAL Application fee $200.00 + (not to exceed $10,000)
  - ☒ New construction $.15 sq. ft. x # 9,645 sq. ft.= 1446.75 $ 1646.75
  - o Additions (new floor space) $.10 per sq. ft. x # _____sq. ft.= $_____
- ☐ MOTEL/HOTEL $35.00 x # ___ per lodging unit= $_____
- ☐ CHANGE OF USE Application fee $200.00 + (not to exceed $5,000)
  - o Existing floor spaces $.10 per sq. ft. x # _____ sq. ft. = $_____
- ☐ CONDITIONAL USE PERMIT Application fee $200.00 x # _____ per Application = $_____
- ☐ GRAVEL PIT/ EXCAVATIONS
  - o Application fee $50.00= $_____
  - o Permit fee $75.00= $_____
- ☐ EXTENSIONS/AMENDMENTS/WAIVERS FOR AN APPROVED PLAN Application fee $200.00 = $_____
- ☐ REQUEST FOR REZONING Application fee $200.00 = $_____
- ☐ DRIVEWAY WAIVER Application fee $200.00 = $_____
- ☒ **TOTAL IMPERVIOUS PAVED AREA** (for new development, roadways or additions to existing parking lots, (not to exceed $10,000)) Application fee of $200.00 is N/A if it is part of a Site Review or Subdivision Plan. $200.00 + $.07 per sq. ft. x # 4939 sq. ft. = $ 346

SUBTOTAL PLAN REVIEW FEE = $ 1992.75

AND

B. Abutter Notification/Mailing Labels - this office will create and print the abutter list and provide labels in triplicate for each abutter. The applicant/owner will review the list for accuracy and provide to us the engineer, architect, licensed land surveyor (LLS), licensed landscape architect (LLA) and/or soil scientist whose professional seal appears on the plan with names and addresses for notices.

- ☐ Applicant & Owner, engineer, architect, LLS, LLA and/or soil scientist
  - o Certified letters fee # _____ of x $10.00= $_____
- ☐ Certified letters fee: # of abutters _____ X $10.00= $_____
- ☐ First Class Mail fee (for individual owner of units within a condominium or other collective form of ownership): # of abutters _____ X $1.00= $_____
- ☐ Creating/Printing Abutter Labels in triplicate per sheet _____ x $10.00= $_____

C. Foster's newspaper public notice fee $120.00 x # 1 applications = $ 120 -

SUBTOTAL = $_____

TOTAL INVOICE AMOUNT = $_____

PLAN REVIEW FEE COLLECTED/PAID = $ _____

BALANCE DUE = $ _____

The amount due must be paid 28 hours prior to the Planning Board Meeting, to be heard.

CITY OF DOVER SITE REVIEW
LIST OF ABUTTERS

Pursuant to RSA 676:4, the State Law of New Hampshire, the City of Dover is required to notify the applicant, abutters (including holders of conservation easements), and any professional whose seal is on the plan, of the public hearing by certified mail, return receipt requested. Staff will provide the abutter information, while the applicant must provide accurate contact information for the owner, applicant and professional agents representing the project.

Owner:

TAX MAP	LOT #	PROPERTY OWNER	MAILING ADDRESS

Applicant (if different from owner):

APPLICANT NAME	APPLICANT COMPANY	MAILING ADDRESS

Surveyor and/or Engineer/Professional Agent:

NAME	COMPANY	MAILING ADDRESS

Conservation Easement Holder:

TAX MAP	LOT #	NAME OF EASEMENT HOLDER	MAILING ADDRESS

RANGER ENGINEERING GROUP, INC.
130 Main Street Suite 202
Salem, NH 03079
Tel: 978-208-1762
www.rangereng.com

April 3, 2025

Erin Bassegio- City Planner
City of Dover NH Planning and Community Development
288 Central Ave
Dover, NH 03820

RE: Site Plan Review
9-11 Mechanic Street

Dear Ms. Bassagio,

Attached to this letter you will find the following documents being submitted for the property located at 9-11 Mechanic Street, Dover, NH.

- Six(6) copies of plans entitled "Site Plan 9-11 Mechanic Street, Assessor's Map 24 Lot 101 Dover, NH 03820, Date: April 3, 2025"
- One(1) Copy of Stormwater Management Report
- Six(6) copies of the architectural renderings
- Six(6) copies of the Neighborhood Site Plan
- Site Review Application
- Waiver List
- Completed Site Plan Review Submission Checklist
- Check for the review fee

These documents are being submitted for TRC review prior to being placed on the planning board agenda.

Sincerely,

Benjamin C. Osgood Jr PE
President

City of Dover, New Hampshire
SITE PLAN REVIEW SUBMISSION CHECKLIST

[Revision Date: June 4, 2019]

This site plan review checklist, as required by Chapter 153-6-B(2), should be completed by the applicant. It is intended to assist the applicant in the planning process of preparing a Site Plan Review application for Planning Board action. The size of the project will determine the types of information required for review, therefore, a **pre-application conference** with the Planning Department to determine the list of items that must be completed is strongly encouraged.

The first step would be to appear before the Technical Review Committee, to apply, eight (8) folded copies of the site plan with scale of not less than 1"=50' or 1" =100' for larger site plans, need to be provided, along with payment of plan review fees.

Two weeks prior to Planning Board, three (3) full size and twelve (12) half size (11x17), folded, copies of the plan set and materials, including response to TRC comments, will be due. Abutter/Notice Fees will be invoiced and need to be paid 28 hours prior to the Planning Board meeting.

The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan Review Regulations for full details.

APPLICANT: _MECHANIC STREET REALTY TRUST_____ File Number: _____

PROJECT TITLE: _9-11 MECHANIC STREET_____

PROPERTY LOCATION: _9-11 MECHANIC STREET Tax Map: _24_ Lot: __101__

	Where/How Provided	Reviewed
1. Completed and signed Application form	Attached	
2. Plan Review Fees are provided	check attached	
3. Electronic copy of the engineered/surveyed plan layout	PDF files provided by email	
4. Electronic copy of supplementary materials and application	PDF files provided by email	
5. Traffic Impact Assessment and Analysis (Standard or Advanced)	Memo attached	
6. Waiver requests to the Site Plan Review Regulations, with written justification	Cover letter attached	
7. Conditional Use Permit applications	N/A	
8. A colored rendering of the streetscape that will be created along the existing public right-of-way	Colored rendering attached	
9. A colored architectural plan showing all sides of buildings	Colored rendering attached	
10. Folded copies of site plan w/scale of not less than 1"=50' or 1"=100' for larger site plans, for TRC. Plans shall contain the following items as appropriate:	Plans attached	
Location map at appropriate scale	Sheet 1 of plan set	
Proposed Project name and title and Planning File #	Sheet 1 of plan set. File # to be added	
Date, north arrow and scale	Provided on all plan sheets	
Names of all abutting property owners	Sheet 2 of plan set	
Name and address of owners and/or applicants	Title block all sheets	
Signature & stamp of NH licensed land surveyor and/or engineer	stamp on all sheets	
Zoning District boundaries, including any special or overlay districts	Note 8 sheet 2	
Location of Conservation District areas	N/A	
Location, names and widths of existing and proposed streets, including pavement widths, grades, curbs and crosswalks	Sheet 2	
Location and widths of existing & proposed easements & right of ways	Sheet 2	
Location and width of existing and proposed access/egress ways	Sheet 2	

	Explain How Provided	Reviewed
Depict pedestrian walkways and accessible access	Sidewalks on sheet 2	
Existing and proposed property lines with dimensions and bearings tied into Dover's Geographic Information System coordinate system	Sheet 2	
Existing and proposed topographic information at two foot intervals	Sheet 5 Grading and Drainage	
Existing and proposed buildings and structure locations	Sheet 4 Layout and Material Plan	
Minimum building setbacks or build to lines on all lots	Note 8 sheet 2	
Location and size of existing and proposed electric, telephone, gas cable and other underground utilities	Sheet 6 Utility Plan	
Existing and proposed water lines and fire hydrants, including materials and capacity needed	Sheet 6 Utility Plan	
Location and materials of sanitary sewage facilities within project site and projected additional peak hour sewer load	Sheet 6 utility plan	
Existing and proposed stormwater lines and facilities	Sheet 5 Grading and Drainage	
Lighting plan depicting all existing and proposed exterior light fixtures and a lighting level analysis for parking lots	Sheet 7 Landscape and lighting Photometric to be provided	
Location of Flood Hazard Zone	N/A	
Location of all bodies of water and watercourses	N/A	
Location of wetlands and buffers	N/A	
Neighborhood plan with aerial underlay showing how project relates to abutting uses within the plan set		
Existing natural features and/or significant vegetation on property	Sheet 2 shows none	
Depict existing contours up to 100 ft. beyond project limits	Sheet 2 up to existing abutting structures	
Landscape plan depicting existing and proposed landscaping, prepared by a licensed Professional Landscape Architect	Sheet 7 Landscape and Lighting Requesting Waiver of RLA	
Location of parking layout delineating spaces and arrangement; note addressing maximum required spaces	Sheet 4 Layout and material Plan Note 19	
Location, material and size of existing and proposed pavement area	Sheet 4 Layout and Material Plan	
Location of proposed fire lanes	N/A	
Specify finished floor elevations of buildings	Sheet 5 Grading and Drainage	
Location of solid waste disposal facilities (dumpster, pad and screening, etc.), including required screening	Sheet 4 layout and Materials	
Depict all service, storage, loading bays and utility areas	N/A	
All applicable Dover Common Site Plan notes	Plan set	
11. Additional Information if appropriate		
Stormwater Management Plan depicting the existing & proposed storm drainage system and engineered drainage analysis	Sheet 5, Sheet 11 and stormwater report	
Stormwater Management System Operation and Maintenance Plan	Stormwater Report	
Letter to Serve from Public and Private Utilities	Will be provided	
Erosion and Sedimentation Control Plan	Sheet 10 Erosion and Sediment Control	
Landscape Operation and Maintenance Plan	Sheet 7 Landscape and Lighting	
Proposed restrictive covenants or homeowners association documents	N/A Rental Units	
Dates and permit numbers of all required state and federal permits	N/A	
If wetland buffer, indicate placards locations, as applicable	N/A	
Depict test boring locations, groundwater elevations and soil profiles and/or soils types call-outs	To be provided	
Location of proposed drive-in facilities	N/A	
Provide additional exhibits/technical data determined appropriate by the Planning Board or its staff as required	TBD	

REVIEWED BY: _____ DATE_____ TRC DATE_____

9-11 Mechanic Street
Waiver List

149-13A(12): Allow a waiver of this provision requiring a Landscape Architect to sign the Landscape Plan.

Justification: The landscape area is small and dominated by a bioretention facility. Plantings have been taken from plantings recommended in the Stormwater manual with the addition of some screening plants.

149-13A(15) and (17): Allow color renderings prepared by a designer other than a registered architect.

Justification: One of the project owners is a designer that prepares renderings for building projects on a regular basis. Once the site plan is approved a professional architect will prepare plans for submittal with the building permit application.

149-13A(20): Allow a waiver of this provision due to the small traffic generations for the project.

Justification: The project will generate minor additional traffic trips to the neighborhood as outlined below.

Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, land use 221, multifamily housing (mid-rise), 9 dwelling units:

- weekday daily, 41 vehicle-trips (total of in and out)
- weekday AM-street-peak hour, 3 (1 in and 2 out)
- weekday PM-street-peak hour, 4 (3 in and 1 out)
- Saturday daily, 41 (total of in and out)
- Saturday site-peak hour, 4 (2 in and 2 out)

Generally, ITE guidelines recommend a traffic study when vehicle trips reach 100 trips in the peak hour.

9-11 Mechanic Street
Waiver List

149-13A(12): Allow a waiver of this provision requiring a Landscape Architect to sign the Landscape Plan.

Justification: The landscape area is small and dominated by a bioretention facility. Plantings have been taken from plantings recommended in the Stormwater manual with the addition of some screening plants.

149-13A(15) and (17): Allow color renderings prepared by a designer other than a registered architect.

Justification: One of the project owners is a designer that prepares renderings for building projects on a regular basis. Once the site plan is approved a professional architect will prepare plans for submittal with the building permit application.

149-13A(20): Allow a waiver of this provision due to the small traffic generations for the project.

Justification: The project will generate minor additional traffic trips to the neighborhood as outlined below.

Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11th Edition, land use 221, multifamily housing (mid-rise), 9 dwelling units:

- weekday daily, 41 vehicle-trips (total of in and out)
- weekday AM-street-peak hour, 3 (1 in and 2 out)
- weekday PM-street-peak hour, 4 (3 in and 1 out)
- Saturday daily, 41 (total of in and out)
- Saturday site-peak hour, 4 (2 in and 2 out)

Generally, ITE guidelines recommend a traffic study when vehicle trips reach 100 trips in the peak hour.

RANGER ENGINEERING GROUP, INC.
130 Main St Suite 202
Salem, NH 03079
Tel: 978-208-1762
www.rangereng.com

STORMWATER MANAGEMENT REPORT

9-11 Mechanic Street Dover, NH 03820

ASSESSORS MAP 24 PARCEL 101

April 3, 2025

Submitted to:

City of Dover, NH
288 Central Ave.
Dover, NH 03820

Prepared for:

Mechanic St Realty Trust
23A Middle St
Newburyport, MA 01950

Prepared by:

Ranger Engineering Group, Inc.
130 Main St. Suite 202
Salem, NH 03079
978-208-1762

Benjamin C. Osgood, Jr PE
Director of Engineering

I Cover
II Table of Contents
III Introduction
IV Existing Conditions
V Proposed Conditions
VI Stormwater Design
VII Site Parameters
- Wetland Resource Areas
- Flood Zone Classification
- Estimated Habitat for Rare Wildlife and are Species
- Soil Classification
- Subsurface Investigation

VIII Drainage Analysis
- Methodology
- Existing Watershed
- Proposed Watershed

IX Summary of Peak Discharge Rates
X Stormwater Standards and Water Quality Protection
- Construction Phase Sediment Control
- Post Construction Water Quality Protection
- Peak Rate Attenuation
- Groundwater Recharge
- Additional Requirements

XI Stormwater Pollution Prevention Plans and Maintenance
- Construction Period Erosion and Sedimentation Control Plan
- Long-Term Pollution Prevention
- Stormwater Management System Post-Development Inspection and Maintenance log
- Winter Snow and Ice Maintenance

Appendix
- HydroCAD Calculations
- Bioretention area Hydrograph
- Extreme Precipitation Table
- SSSNNE Kstat Values

Maps
- USGS Locus Map
- SCS Soils Map
- FEMA (FIRM)
- CS 9201 Pre-Development Drainage Map
- CS 9301 Post-Development Drainage Map

III. INTRODUCTION

In accordance with City of Dover Stormwater Management requirements and the New Hampshire Stormwater Manual, Ranger Engineering Group (Ranger) has prepared a comprehensive Stormwater Management Plan for submittal to the Town of Dover, NH Planning Board on behalf of 9-11 Mechanic Street Realty Trust in support of an *Application for a Site Plan Review* for the proposed development of a 5 story 9,645 square foot mixed use retail/residential building at 9-11 Mechanic Street, Dover, NH.

The proposed site improvements include construction of a 5-story mixed use building with 8 - 2 bedroom apartment units on the upper 4 floors, and commercial space and one studio apartment on the first floor. Proposed site improvements include new sidewalks and front entry walkways, 9 new parking spaces, landscaping, and stormwater controls.

The proposed Stormwater Management System (SMS) incorporates structural and non-structural BMPs to provide stormwater peak flow mitigation, quality treatment, infiltration, and conveyance. The SMS includes roof drains, drain manholes, underground piping, a bioretention area, and a long term Operation and Maintenance Plan.

IV. EXISTING CONDITIONS

The project site consists of an existing lot with a duplex dwelling and one outbuilding also used as a dwelling (Assessors Map 24 Lot 102) fronting on Mechanic Street in Dover, New Hampshire (see Dwg. CS0201). The site abuts a mixed-use commercial/residential property on the north (left side), a multifamily development on the east (rear) and a duplex dwelling on the south (right side). A public sidewalk is located within the roadway right of way along the frontage of the property.

The lot has 0.16 Acres of Land. The existing duplex dwelling sits approximately 12' back from the street line with a driveway on the left side of the dwelling to gain access to the rear of the property. The property also has the right to use the existing driveway located on the adjacent lot to the south (right side) for access to the back. The 2-story outbuilding is in the north corner of the property. The front 30 feet of the property along with some of the existing roof slopes towards the road. The remaining portion of the lot slopes to the rear toward the abutting multifamily development.

The property is serviced by municipal sewer and water. Local utility companies supply electric, telephone, fiber, and cable services.

V. PROPOSED CONDITIONS

The Applicant proposes constructing a 5-story mixed use commercial/residential building with 2 commercial units and one residential unit on the first floor and 2 additional residential units on the upper 4 floors. Access will be through the existing driveway easement on the adjacent lot to the right side of the proposed building to a paved parking lot in the rear with 9 parking spaces.

Stormwater will be collected through roof drain piping and a catch basin to be piped to the municipal drain system located within Mechanic Street. The system will reduce runoff flowing to the abutting property in the rear and infiltration will be used to reduce the runoff volume.

The proposed development will be serviced by municipal water, sewer, underground electric, gas, cable TV, and telephone.

VI. STORMWATER DESIGN

This project has an area of disturbance of approximately 8000 square feet and creates less than 2000 square feet of new impervious area and is therefore subject only to the Minimum Protections and Management Standards outlined in the Dover Site Review Regulations.

The proposed stormwater system is designed to improve the drainage patterns in the developed conditions versus the pre-development conditions. Peak rates of flow will be mitigated onsite to the maximum extent practicable to minimize or eliminate impacts to downstream areas. The majority of stormwater presently flows off site to the east down a steep embankment which ends at a retaining wall for a multifamily development. In the post development condition, the stormwater is directed through a pipe system to the municipal drainage system.

Sheet Flow

Stormwater flow from the paved parking area is designed to sheet flow to the rear of the property to a small landscape area that will contain a Bioretention area.

Closed Drainage Systems

The proposed closed drainage system consists of roof drain piping and a catch basin inlet and piping that conveys stormwater runoff from the roof and paved parking area to a new manhole which will be installed over an existing municipal drain pipe that is located within Mechanic Street. The catch basin is located adjacent to the bioretention area and will capture

Bioretention Area

Runoff from the new paved surfaces will be directed to a bioretention area. The bioretention area has been designed to hold and treat a volume of water to provide the required stormwater treatment and infiltration, and provide volume reduction and detention of stormwater so that post development runoff volume from the entire site will be lower than in the pre developed condition. The peak rate of runoff will be slightly higher in the 10 and 50 year storms, but will remain the same in the 2 and 10 year storms. Stormwater will be rerouted from the back of the lot to the front which will result in a much improved runoff situation at the rear of the property where presently it flows down a steep embankment towards a retaining wall on the property below.

Overflow from the bioretention area will be captured through an outlet structure with a grated opening in the top of the structure and an 8” outlet pipe that connects to the municipal drainage system in front of the property. The 8” culvert has the capacity to convey the overflow in all storms.

VII. SITE PARAMETERS

Wetland Resource Areas
There are no wetland resource areas on the property.

Flood Zone Classification
According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for Strafford County, New Hampshire, Community Panel 33017C0330E, effective date September 30, 2015, the site is located within Zone X which is above the 100 year flood plain.

Estimated Habitat for Rare Wildlife and Rare Species
This property is not in a location that would contain habitat for rare wildlife and rare species

Soil Classification
According to the Soil Survey of Stratford County, New Hampshire, prepared by the US Department of Agriculture, Soil Conservation Service, underlying soils located within the site consist primarily of Suffield Silt Loam. Soil testing has not been performed as of the date of this report.

Table 1
Hydrologic Soil Group Ratings

Map Unit Symbol	Map Unit Name	Rating
SfC	Suffield Silt Loam, 8 – 15% slopes	C/D
SfD	Suffield Silt Loam, 15 – 35% slopes	C/D

The on-site soils consist of series, described by NRCS, as follows:

> **Suffield Silt Loam:** The Suffield series consists of very deep, well drained soils formed in lacustrine or marine sediments. They are mainly on gently sloping to very steep dissected plains. They typically have silt loam A and B horizons over a silty clay 2C horizon. Permeability is moderate in the solum and slow or very slow in the substratum.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.
Per the soil survey, the general characteristics of the four (4) hydrologic soil groups are as follows:

> Group A – Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.
>
> Group B – Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C – Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D – Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a clay pan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Subsurface Investigation

Test pit investigations have not been completed at this time due to the frozen conditions. This design is based upon the soil conservation service mapping and infiltration rates have been based upon the requirements of ENV-WQ 1504.14©

The Infiltration rate referenced in the Society of Soil Scientists of Northern New England Ksat Values for NH Soils is between 0.6 and 2 inches per hour. This is for the upper layer of soil to depths of approximately 40 inches. The lower layers of soil are considered impervious with negligent infiltration rates. A conservative infiltration rate of 0.5 was used.

The bioretention area is very close to the existing surface of the ground and most likely in fill considering the topography of the land, keeping the bottom of the filter layer above the permeable layer and the water table. For this reason the infiltration estimate for the upper layer of soil was used.

VIII. DRAINAGE ANALYSIS

Methodology

The comparative hydrologic analysis of pre-development conditions to post-development conditions was performed using the Soil Conservation Service, Technical Release 20 (TR-20).
The 2, 10, 25 and 50-year storm events were modeled for a 24-hour, Type II storm using HydroCAD version 10.00. HydroCAD calculations for pre-and post-development conditions are include in the Appendices.

The following rainfall amounts were utilized for each design storm event.

2-year Frequency Storm:	3.15 inches per 24-hours
10-year Frequency Storm:	4.75 inches per 24-hours
25-year Frequency Storm:	6.01 inches per 24-hours
50-year Frequency Storm:	7.18 inches per 24-hours

Existing Watershed

The existing property is located on the north side of mechanic street and is a 7,169 sf property with a duplex house, detached living unit, and paved driveways. The house sits close to the street and runoff from the roof and front yard areas flow to the street drainage system. Runoff from the rear portion of the property flows towards the back of the property. The existing catchment areas and drainage runoff flow patterns associated with the site are illustrated on the attached Pre-Development Watershed Plan (Dwg. CS9201). The drainage patterns will be maintained under post-development conditions.

For the purposes of the hydrologic analyses, the existing site has been delineated into two (2) existing catchment areas which flow to two (2) design points:

- Design Point #1 (DP1) – Flow to street drainage
- Design Point #2 (DP2) – Flow to rear of property

The drainage is primarily sheet flow and is shown on the Pre-Development Watershed Plan (Dwg. CS9301) and can be described as follows

Catchment E1
Catchment EX1 includes roof runoff and the areas at the front of the property. The area is mainly impervious area.

Catchment E1
Catchment EX1 includes roof runoff, paved areas, and some grass areas that flow to the rear of the property.

Proposed Watershed
The proposed development will include sheet flow and a closed drainage system which will collect and convey stormwater runoff to the municipal drainage system located at the front of the property. Post-Development Watershed Plan (Dwg. CS9301) and can be described as follows

Catchment P1
Catchment P1 includes flow from the roof and developed areas at the front of the site Runoff from this catchment flows through sheet flow or the roof drain system to the municipal drain system. DP1

Catchment P2
Catchment P2 includes flow from the parking areas and grass areas on the rear portion of the site. This flow travels through the bioretention system which overflows to a pipe which is routed to the municipal drain system. DP1

IX. SUMMARY OF PEAK DISCHARGE RATES

The estimation of flow rates and volumes were calculated utilizing *HydroCad* stormwater modeling software. The methodology is SCS TR-20, Type II, 24-hour rainfalls (1, 2, 10, 50, & 100-year frequency storm events). Supporting calculations are included in the Appendix.

FLOW RATE TABLES

Point of Analysis	**Storm**	**Pre-Development Rate** (CFS)	**Post-Development Rate** (CFS)
DP #1 (Flow To Street)	2-year	0.20	0.56
	10-year	0.33	0.97
	25-year	0.42	1.25
	50-year	0.52	1.62

Point of Analysis	**Storm**	**Pre-Development Rate** (CFS)	**Post-Development Rate** (CFS)
DP #2 (Flow To Rear)	2-year	0.36	0.00
	10-year	0.62	0.00
	25-year	0.83	0.00
	50-year	1.02	0.00

Point of Analysis	Storm	Pre-Development Rate (CFS)	Post-Development Rate (CFS)
OVERALL	2-year	0.56	0.56
	10-year	0.95	0.97
	25-year	1.25	1.25
	50-year	1.53	1.62

FLOW VOLUME TABLES

Point of Analysis	Storm	Pre-Development Rate (CF)	Post-Development Rate (CFS)
OVERALL	2-year	1,216	1,047
	10-year	2,109	1,962
	25-year	2,832	2,694
	50-year	3,511	3,380

X. STORMWATER STANDARDS AND WATER QUALITY PROTECTION

Based upon the size of this project it is subject to the Minimum Protections and Management Standards under the site review regulations. The project size does not require an AOT permit, nor does it require a notice under the EPA General Permit. Compliance with the requirements can be documented as follows:

Construction Phase Sediment Control
A detailed sedimentation and erosion control plan has been included as part of the plan set. Erosion and sediment control methods will include the use of perimeter controls consisting of silt fence or mulch waddles which will be installed prior to any work being performed. A construction entrance will be installed to prevent vehicle tracking and all slopes will be stabilized with loam and seed or erosion control blankets.

Once the site has been graded to sub grade the drainage system will be protected with inlet protection devices. Erosion control devices will be used as needed to prevent sediment laden runoff from traveling off site. The maximum open area allowed is greater than the work area proposed for this project.

Post Construction Water Quality Protection
There will be no new untreated outfalls proposed as part of this project; the stormwater management system is designed to provide the required minimal level of water quality treatment for all new discharges.

Stormwater is treated by directing flow from the parking lot runoff to a bioretention area located at the rear of the property. This area provides some runoff control and treatment of stormwater.

The required water quality volume can be calculated with the following equation.
WQV = (P)(Rv)(A) where P = 1” of rainfall, Rv is a unitless coefficient calculated as 0.5 + 0.9(I), where I is the percent impervious area draining to the site, and A is the total area

draining to the treatment practice. Since all of the parking lot impervious area drains to one buried treatment structure all of the treatment is accomplished in the one structure.

The water quality volume calculation is as follows.
Rv= 0.5+.9(I) AND I = 0.7 SO Rv = 0.68

WQV = 1”/12” x (0.68) x 5,027 sf = 286 cubic feet.

The subsurface bioretention area has a volume of 286 cubic feet below the lowest outlet which exceeds the required infiltration volume to provide treatment of the water quality volume.

Peak Rate Attenuation

There will be an slight increase to the impervious area as a result of this project. The drainage collection and conveyance system has been designed to direct stormwater in a manner that will provide the maximum benefit to abutting properties by eliminating runoff onto abutting properties and directing it to the municipal drainage system. Pre and post-development watershed analyses of the drainage systems were performed for the 2, 10, 25, and 50-year storms. A summary of peak discharge rates for the pre and post development conditions is presented above and the full Hydrocad printouts are included in the Appendix to this report. The results of the analysis indicate that post-development peak discharge rates will not increase from the pre-development peak discharge rates for the overall project with the exception of a .02 CFS increase in the 10 year storm and a .09 CFS increase in the 50 year storm.

Although the peak rate of runoff increases slightly in 2 storms, the volume of runoff decreases in every storm.

Groundwater Recharge

The bioretention area is designed to provide groundwater recharge and the total 286 cubic feet of stormwater will be infiltrated in each storm. The hydrograph table for the bioretention area is included in this report and demonstrates that the bioretention area will drain in 47.5 hours.

Additional requirements

- There are no surface waters, ponds, rivers, streams or wetlands located within proximity to this project, so the buffer zones have not been violated.

- Low impact development strategies, with the exception of the Bioretention area, have not been implemented in this development. The project is located on a very small lot in a densely developed area which does not allow reductions in parking areas, etc. The project does reduce the overall volume of runoff from the site by providing infiltration in the bioretention area.

- Stormwater management devices will be installed and maintained per the requirements in the NH Stormwater Management Manual Volume 2.

- There will be no storage of chemicals, industrial waste, and/or storage tanks on this property.

- Salt and other deicing materials will not be stored on site. Snow storage is limited and would be stored where it can drain to the bioretention area or removed from the site.

- The use of sodium chloride-based materials will be used sparingly if at all. Alternate ice melting materials will be used if available.

- Parking surfaces have been minimized and an existing public parking lot will be utilized for some of the required resident parking.

- Stormwater from all paved surfaces has been directed to the bioretention system. The roof of the new building is not routed to the bioretention system, however, the volume of untreated runoff from impervious surfaces has been greatly reduced.

XI. STORMWATER POLLUTION PREVENTION PLANS AND MAINTENANCE

Construction Period Erosion and Sedimentation Control Plan:

The BMP's associated with the construction phase this project will be owned by the Applicant's Contractor, which will be responsible for inspection, operation, and maintenance. A more detailed SWPPP – per NPDES Phase 2 requirements – is to be kept on site, along with inspection logs. All details and plans required are included in the Site Plan set attached herewith.

1. The contractor is to install and maintain drainage facilities as shown on site plan prepared by Ranger Engineering Group. (Ranger), dated April 3, 2025.

2. Any dewatering requires coverage under the NPDES construction site dewatering general permit.

3. The contractor must install erosion control measures as shown on the plans and in the details prior to starting any other work on the site. Erosion control must be installed at every inlet structure (existing and proposed) and maintained for the duration of the project.

4. Erosion controls as shown on plans shall be inspected, repaired and/or maintained by the contractor daily and within 12 hours of each storm event.

5. Sediment deposits shall be removed when they reach a depth of 1/4 to 1/2 the height of the silt fence or sediment sock.

6. Sediment shall be contained within the construction site, away from drainage structures. Sediment reaching the public way shall be removed by street sweeping and not by flushing.

7. Stabilize slopes steeper than 3:1 (horizontal to vertical) with seed, secured geotextile fabric, or rock rip-rap as required to prevent erosion during construction.

8. Clean out catch basins, drain manholes and storm drain pipes after completion of construction.

9. Loam and seed all disturbed areas. Permanent seeding shall occur in the spring from late march through may and in late summer or early fall between August and October.

10. Dust shall be controlled at the site with mechanical water spraying as necessary and during extended dry periods.

11. Upon establishment of permanent vegetation over disturbed areas, remove and dispose of silt fence or wattles and stakes.

12. It is the responsibility of the contractor to maintain and supplement the specified sedimentation controls as necessary to prevent sedimentation of off-site areas and/or any regulated resource areas. Failure by the contractor to control erosion, pollution and/or siltation shall be cause for the owner to employ outside assistance or to use his own means to provide the necessary corrective measure. The cost of such assistance plus project engineering costs will be the contractor's responsibility.

13. In addition to those locations shown on this plan and on the grading and drainage plans, erosion controls shall be installed at the following locations: toe of slope of embankment construction, toe of temporary earthwork stockpiles. Stockpile side slopes shall not exceed 2:1.

14. Erosion and sedimentation control shall be in compliance with New Hampshire Stormwater Manual

Long Term Pollution Prevention Plan

The owner/applicant is to be responsible for maintenance of all drainage structures in the project, including drain pipes. The owner shall place a deed restriction on the property outlining the requirements for stormwater system maintenance at the development.

Regular maintenance is to include the following:

1. Stormwater pipes shall be inspected for sediment buildup on a quarterly basis and cleaned as required.
2. The Bioretention Area shall be inspected to verify proper filtration and condition of filter surface. Existing trash and debris shall be removed and the surface media replaced as required to maintain infiltration.
3. All graded slopes and lawn areas shall be inspected every spring for erosion. Upon discovery of any failure (ie. erosion, sloughing, rutting), loam and seed shall be put in place and nurtured.
4. Pavement surfaces shall be swept clean at least once per year, preferably in the spring just after snow melt. Sediment, sand, and debris shall be removed and disposed of in accordance with New Hampshire regulations.

STORMWATER MANAGEMENT SYSTEM
Post-Development Inspection & Maintenance Log

BMP/System Component	Maintenance Required & Frequency	Date of Inspection	Inspection Inspector	Cleaning/Repair Needed (list items/comments)	Date of Cleaning/ Repair	Cleaning/ Repair Performed by
Pavement Sweeping	• Swept clean as required (i.e. visual noticeable build-up). A minimum of once per year, preferably just after snow melt.					
Drain Pipes	• Inspect annually for the evidence of structural damage, silt accumulation and improper function. • Clean pipes when sediment occupies more than 20% of pipe diameter.					
Bioretention Area	• Inspect Monthly for trash and debris • Clean silt accumulations annually and refresh mulch.					
Bioretention Area Continued	• Trim shrubs and grass as required and replace dead or dying plants Annually					

WINTER SNOW AND ICE MAINTINANCE

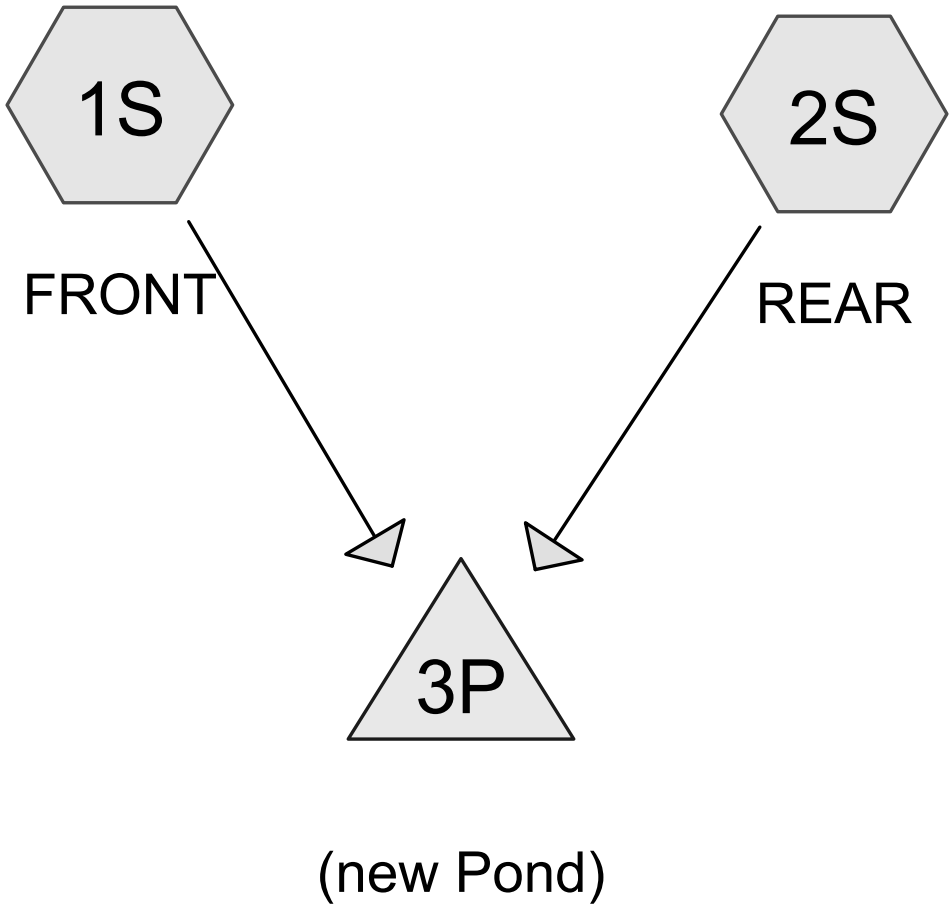
1. Winter snow and ice maintenance shall be performed by a certified Snow Pro Salt Applicator.
2. A de-icing log shall be maintained for all de-icing activities on the property. A sample de-icing log is attached.
3. De-icing should follow the best management practices for storage and application of de-icing chemicals as outlined in the attached publications.

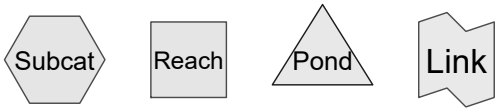
All inspection and maintenance log shall be kept in a logbook located at the facility and shall be provided to the New Hampshire DES upon request.

APPENDICES

HYDROCAD CALCULATIONS
STAGE STORAGE TABLES
PRECIPITATION FREQUENCY MAPS

PRE-DEVELOPMENT DRAINAGE





Routing Diagram for 9-11 MECHANIC - PRE
Prepared by {enter your company name here}, Printed 4/3/2025
HydroCAD® 10.10-7b s/n 02248 © 2022 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 YEAR	Type II 24-hr		Default	24.00	1	3.15	2
2	10 YEAR	Type II 24-hr		Default	24.00	1	4.75	2
3	25 YEAR	Type II 24-hr		Default	24.00	1	6.01	2
4	50 YEAR	Type II 24-hr		Default	24.00	1	7.18	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
2,632	74	>75% Grass cover, Good, HSG C (1S, 2S)
1,963	98	Paved parking, HSG C (1S, 2S)
2,574	98	Roofs, HSG C (1S, 2S)
7,169	**89**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
7,169	HSG C	1S, 2S
0	HSG D	
0	Other	
7,169		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
0	0	2,632	0	0	2,632	>75% Grass cover, Good	
0	0	1,963	0	0	1,963	Paved parking	
0	0	2,574	0	0	2,574	Roofs	
0	**0**	**7,169**	**0**	**0**	**7,169**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FRONT Runoff Area=2,362 sf 69.48% Impervious Runoff Depth>2.21"
Tc=6.0 min CN=91 Runoff=0.20 cfs 435 cf

Subcatchment 2S: REAR Runoff Area=4,807 sf 60.25% Impervious Runoff Depth>1.95"
Tc=6.0 min CN=88 Runoff=0.36 cfs 781 cf

Pond 3P: (new Pond) Inflow=0.56 cfs 1,216 cf
Primary=0.56 cfs 1,216 cf

Total Runoff Area = 7,169 sf Runoff Volume = 1,216 cf Average Runoff Depth = 2.04"
36.71% Pervious = 2,632 sf 63.29% Impervious = 4,537 sf

Summary for Subcatchment 1S: FRONT

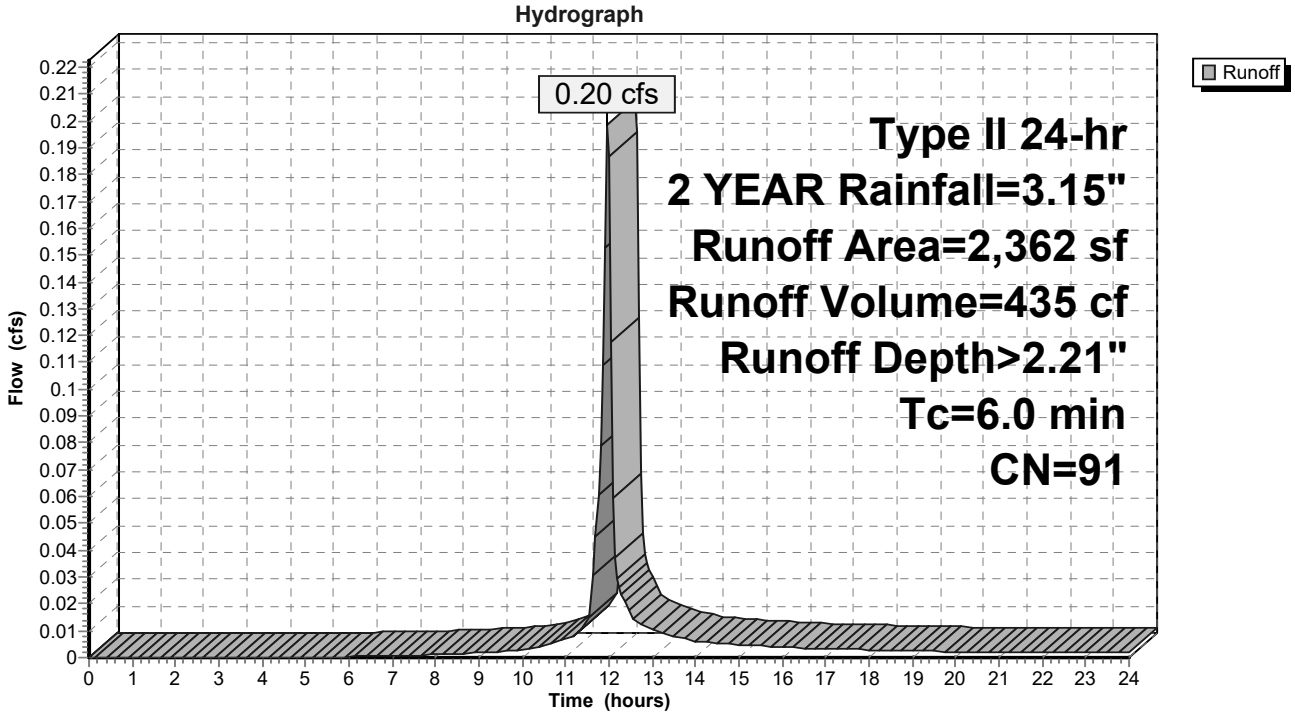
Runoff = 0.20 cfs @ 11.97 hrs, Volume= 435 cf, Depth> 2.21"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.15"

Area (sf)	CN	Description
1,024	98	Roofs, HSG C
617	98	Paved parking, HSG C
721	74	>75% Grass cover, Good, HSG C
2,362	91	Weighted Average
721		30.52% Pervious Area
1,641		69.48% Impervious Area

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

Subcatchment 1S: FRONT



Summary for Subcatchment 2S: REAR

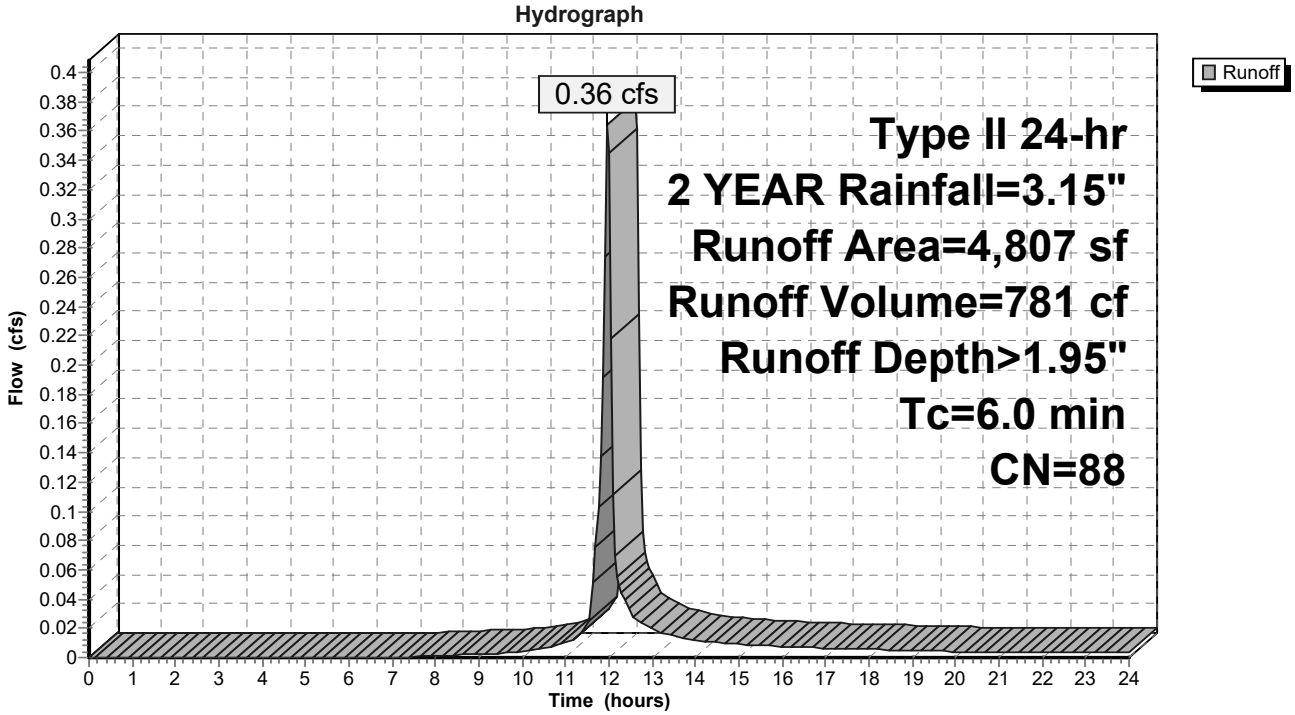
Runoff = 0.36 cfs @ 11.97 hrs, Volume= 781 cf, Depth> 1.95"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.15"

Area (sf)	CN	Description
1,550	98	Roofs, HSG C
1,346	98	Paved parking, HSG C
1,911	74	>75% Grass cover, Good, HSG C
4,807	88	Weighted Average
1,911		39.75% Pervious Area
2,896		60.25% Impervious Area

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

Subcatchment 2S: REAR

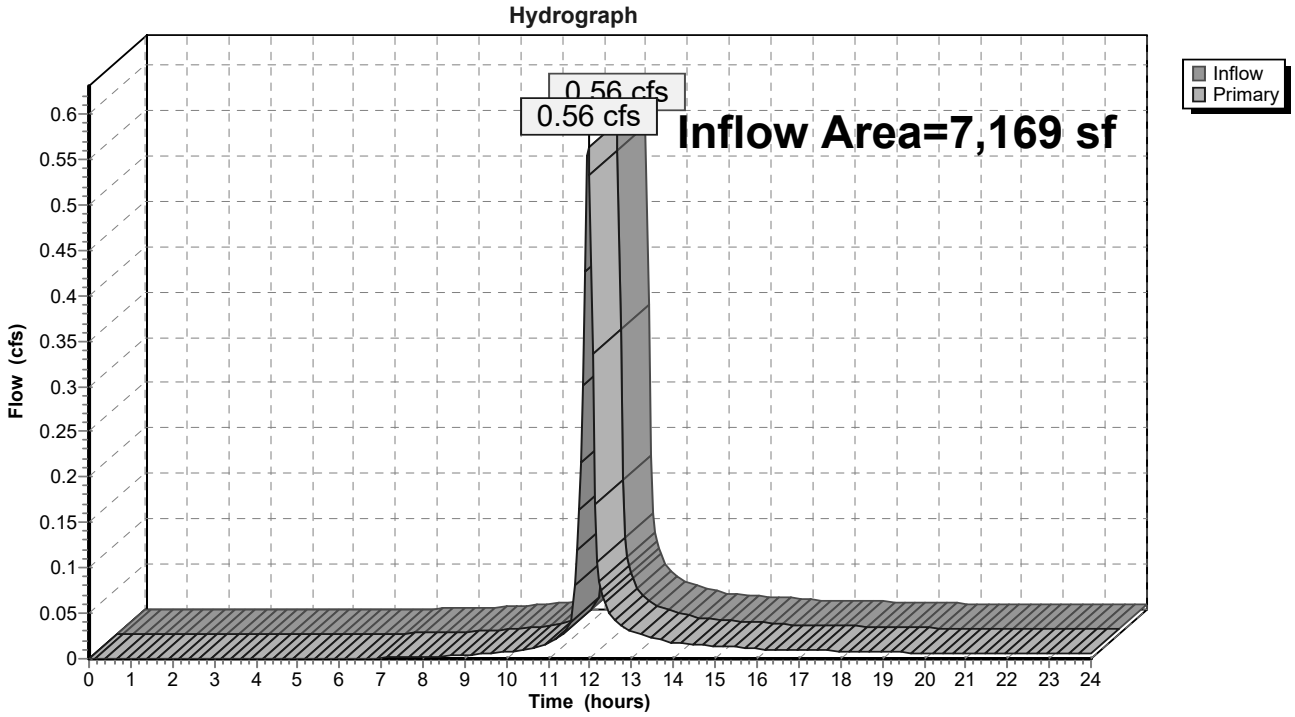


Summary for Pond 3P: (new Pond)

Inflow Area = 7,169 sf, 63.29% Impervious, Inflow Depth > 2.04" for 2 YEAR event
Inflow = 0.56 cfs @ 11.97 hrs, Volume= 1,216 cf
Primary = 0.56 cfs @ 11.97 hrs, Volume= 1,216 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 3P: (new Pond)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FRONT Runoff Area=2,362 sf 69.48% Impervious Runoff Depth>3.74"
Tc=6.0 min CN=91 Runoff=0.33 cfs 735 cf

Subcatchment 2S: REAR Runoff Area=4,807 sf 60.25% Impervious Runoff Depth>3.43"
Tc=6.0 min CN=88 Runoff=0.62 cfs 1,373 cf

Pond 3P: (new Pond) Inflow=0.95 cfs 2,109 cf
Primary=0.95 cfs 2,109 cf

Total Runoff Area = 7,169 sf Runoff Volume = 2,109 cf Average Runoff Depth = 3.53"
36.71% Pervious = 2,632 sf 63.29% Impervious = 4,537 sf

Summary for Subcatchment 1S: FRONT

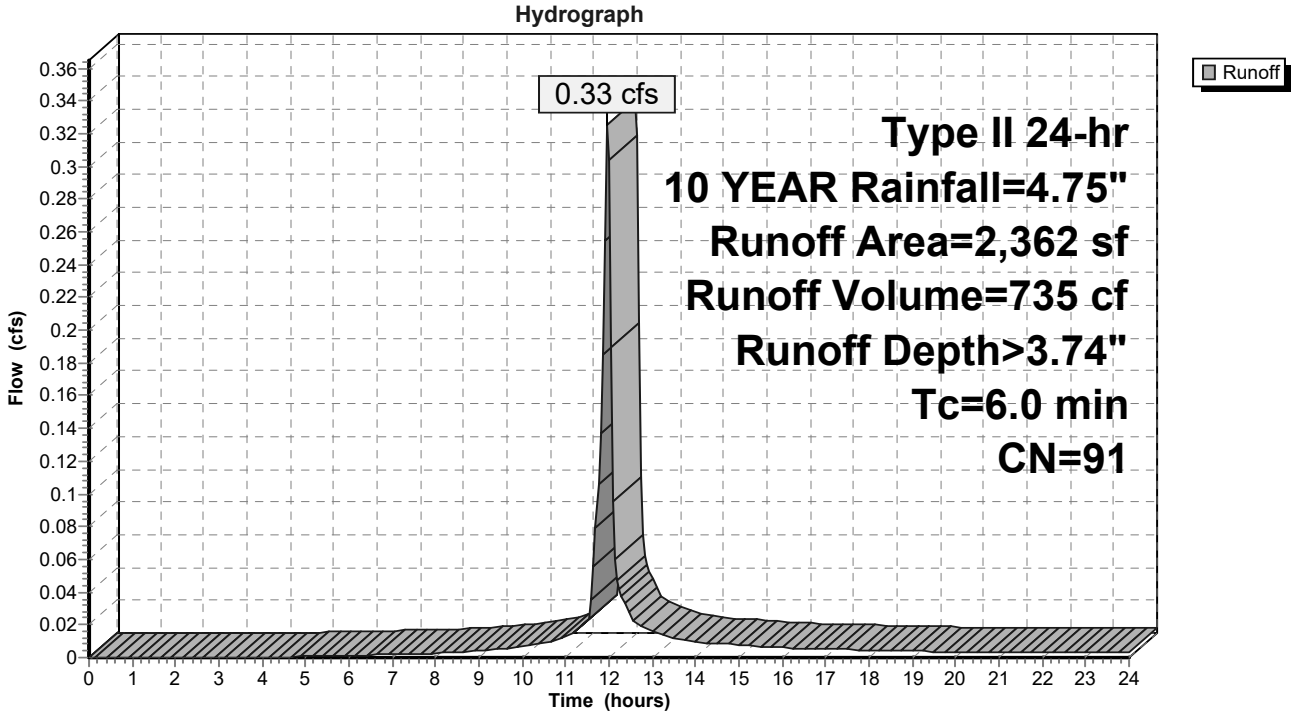
Runoff = 0.33 cfs @ 11.96 hrs, Volume= 735 cf, Depth> 3.74"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=4.75"

Area (sf)	CN	Description
1,024	98	Roofs, HSG C
617	98	Paved parking, HSG C
721	74	>75% Grass cover, Good, HSG C
2,362	91	Weighted Average
721		30.52% Pervious Area
1,641		69.48% Impervious Area

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

Subcatchment 1S: FRONT



Summary for Subcatchment 2S: REAR

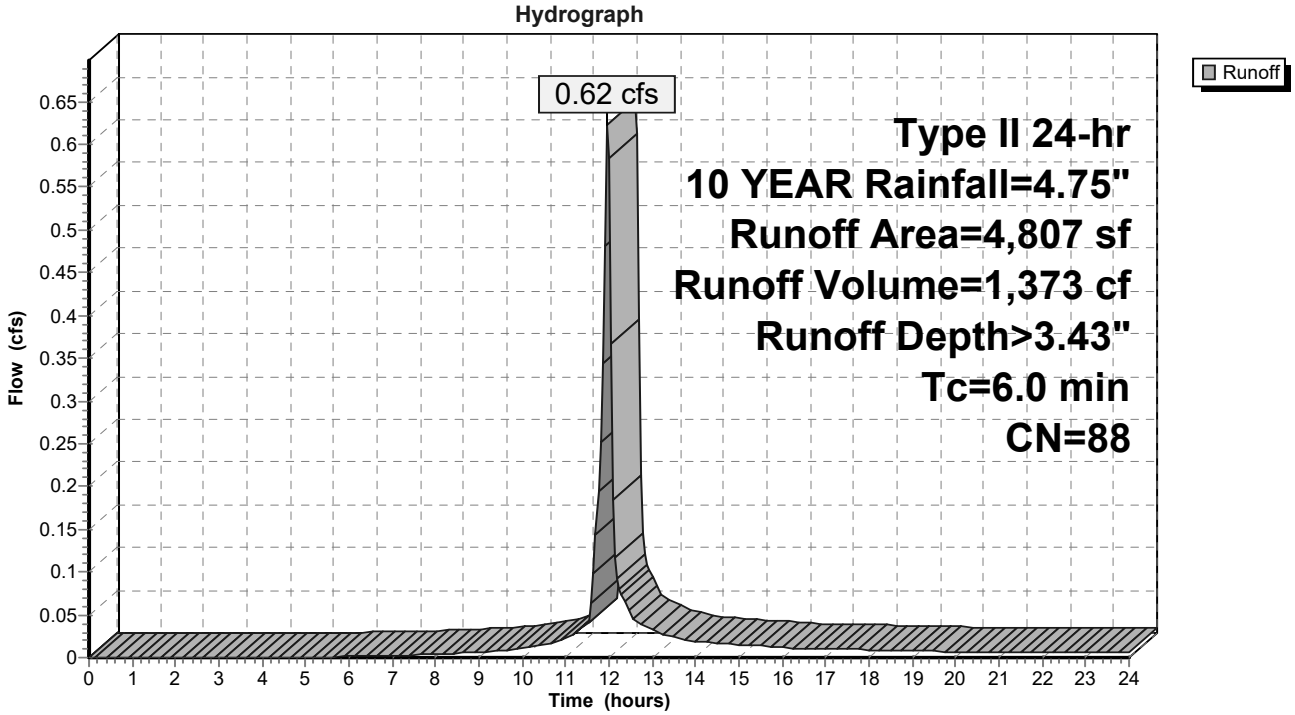
Runoff = 0.62 cfs @ 11.97 hrs, Volume= 1,373 cf, Depth> 3.43"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=4.75"

Area (sf)	CN	Description
1,550	98	Roofs, HSG C
1,346	98	Paved parking, HSG C
1,911	74	>75% Grass cover, Good, HSG C
4,807	88	Weighted Average
1,911		39.75% Pervious Area
2,896		60.25% Impervious Area

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

Subcatchment 2S: REAR

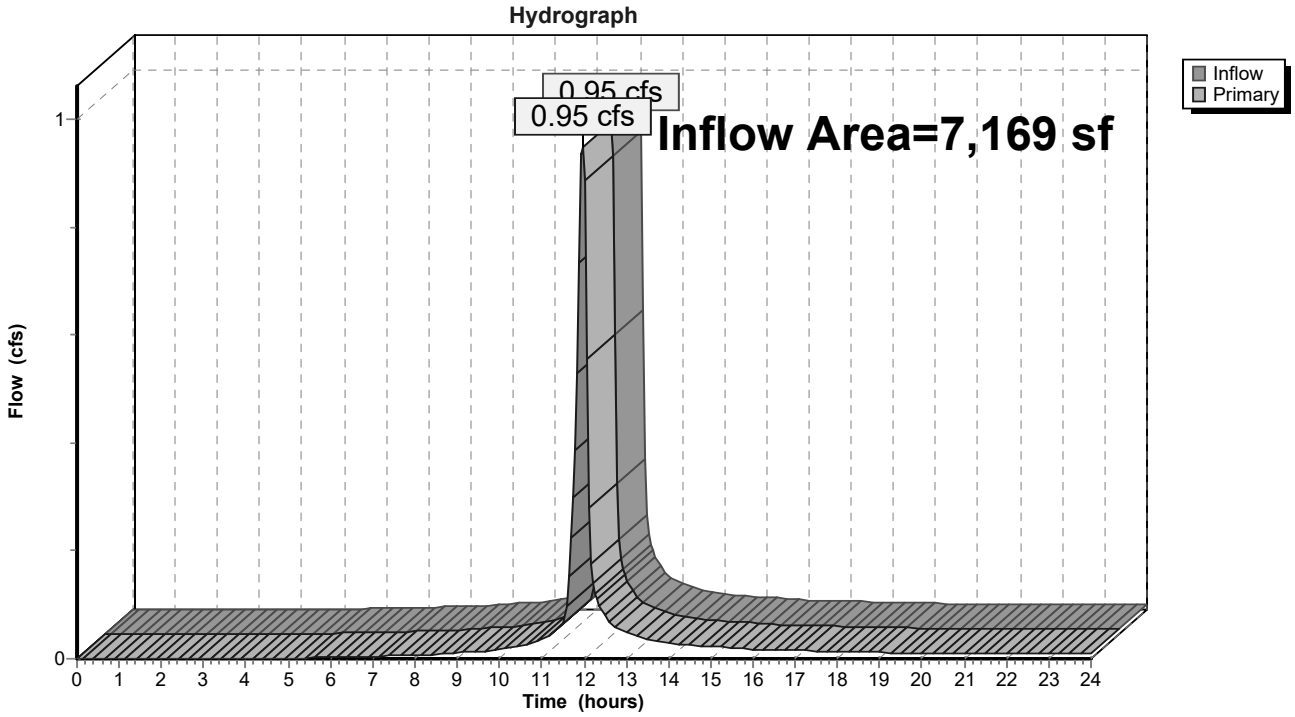


Summary for Pond 3P: (new Pond)

Inflow Area = 7,169 sf, 63.29% Impervious, Inflow Depth > 3.53" for 10 YEAR event
Inflow = 0.95 cfs @ 11.97 hrs, Volume= 2,109 cf
Primary = 0.95 cfs @ 11.97 hrs, Volume= 2,109 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 3P: (new Pond)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FRONT Runoff Area=2,362 sf 69.48% Impervious Runoff Depth>4.96"
Tc=6.0 min CN=91 Runoff=0.42 cfs 977 cf

Subcatchment 2S: REAR Runoff Area=4,807 sf 60.25% Impervious Runoff Depth>4.63"
Tc=6.0 min CN=88 Runoff=0.83 cfs 1,855 cf

Pond 3P: (new Pond) Inflow=1.25 cfs 2,832 cf
Primary=1.25 cfs 2,832 cf

Total Runoff Area = 7,169 sf Runoff Volume = 2,832 cf Average Runoff Depth = 4.74"
36.71% Pervious = 2,632 sf 63.29% Impervious = 4,537 sf

Summary for Subcatchment 1S: FRONT

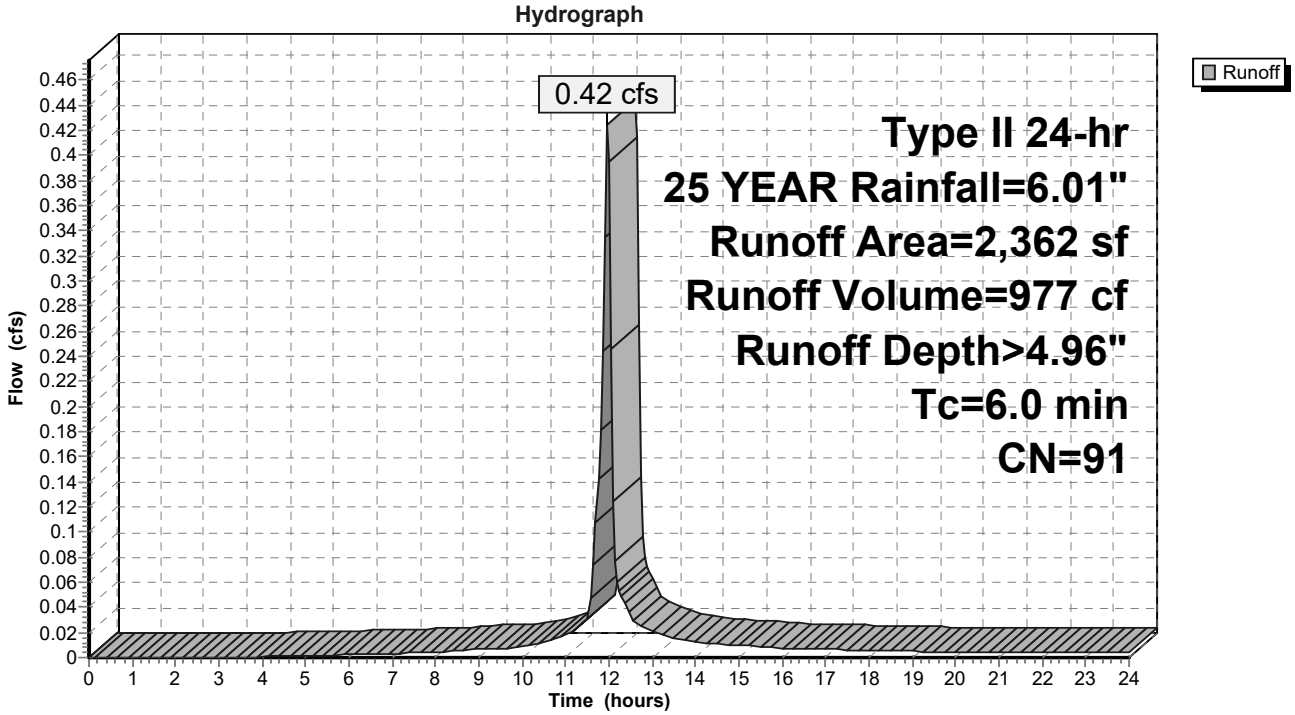
Runoff = 0.42 cfs @ 11.96 hrs, Volume= 977 cf, Depth> 4.96"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YEAR Rainfall=6.01"

Area (sf)	CN	Description
1,024	98	Roofs, HSG C
617	98	Paved parking, HSG C
721	74	>75% Grass cover, Good, HSG C
2,362	91	Weighted Average
721		30.52% Pervious Area
1,641		69.48% Impervious Area

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

Subcatchment 1S: FRONT



Summary for Subcatchment 2S: REAR

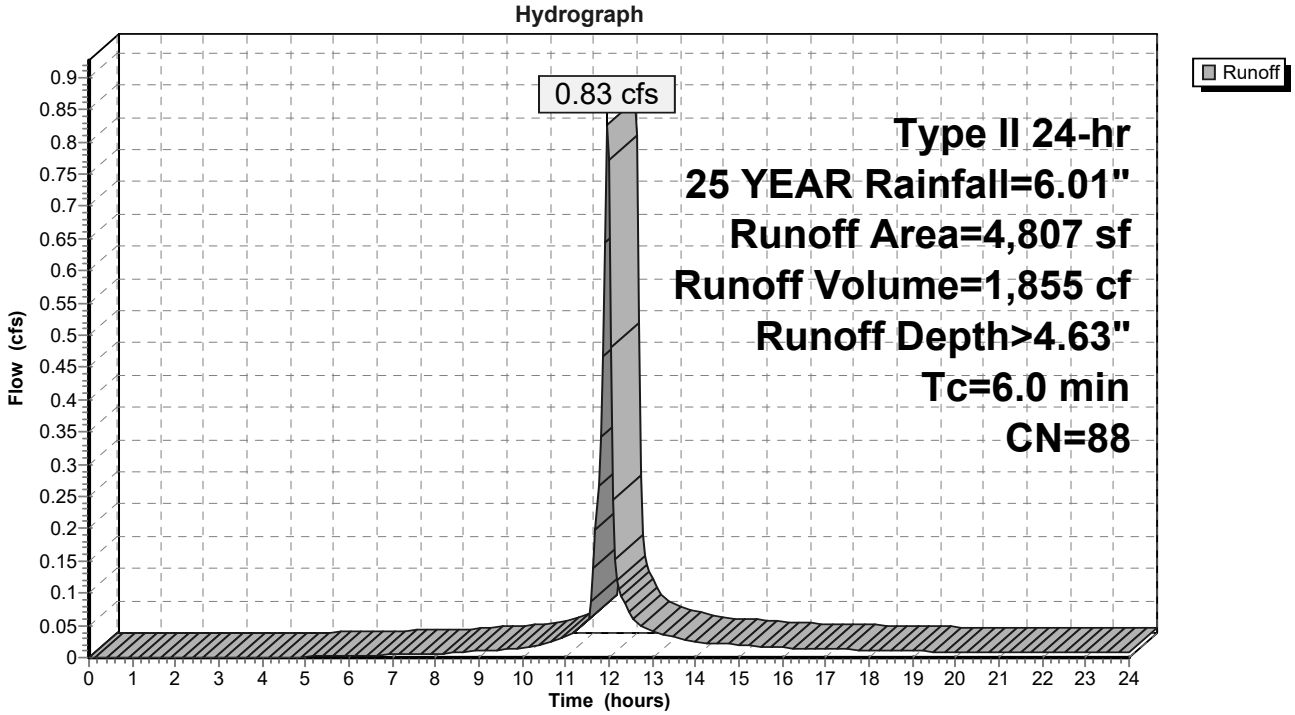
Runoff = 0.83 cfs @ 11.96 hrs, Volume= 1,855 cf, Depth> 4.63"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YEAR Rainfall=6.01"

Area (sf)	CN	Description
1,550	98	Roofs, HSG C
1,346	98	Paved parking, HSG C
1,911	74	>75% Grass cover, Good, HSG C
4,807	88	Weighted Average
1,911		39.75% Pervious Area
2,896		60.25% Impervious Area

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

Subcatchment 2S: REAR

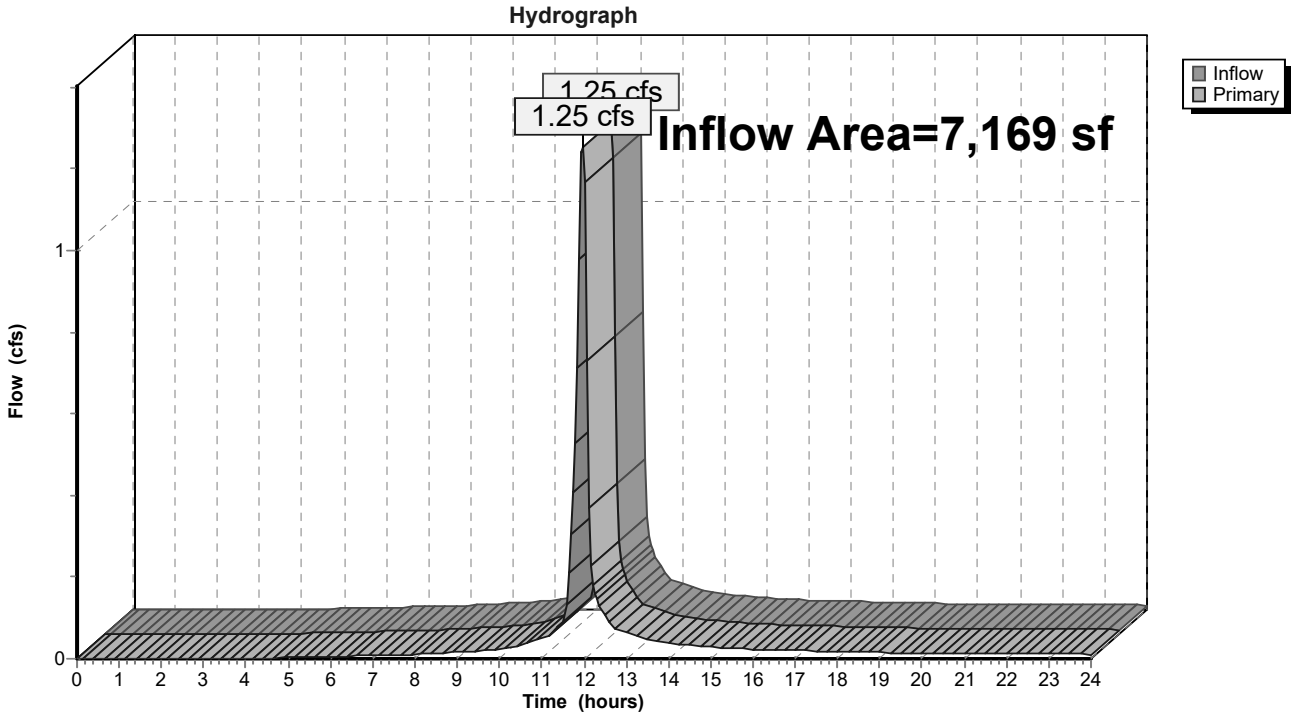


Summary for Pond 3P: (new Pond)

Inflow Area = 7,169 sf, 63.29% Impervious, Inflow Depth > 4.74" for 25 YEAR event
Inflow = 1.25 cfs @ 11.96 hrs, Volume= 2,832 cf
Primary = 1.25 cfs @ 11.96 hrs, Volume= 2,832 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 3P: (new Pond)



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: FRONT Runoff Area=2,362 sf 69.48% Impervious Runoff Depth>6.11"
Tc=6.0 min CN=91 Runoff=0.52 cfs 1,203 cf

Subcatchment 2S: REAR Runoff Area=4,807 sf 60.25% Impervious Runoff Depth>5.76"
Tc=6.0 min CN=88 Runoff=1.02 cfs 2,309 cf

Pond 3P: (new Pond) Inflow=1.53 cfs 3,511 cf
Primary=1.53 cfs 3,511 cf

Total Runoff Area = 7,169 sf Runoff Volume = 3,511 cf Average Runoff Depth = 5.88"
36.71% Pervious = 2,632 sf 63.29% Impervious = 4,537 sf

Summary for Subcatchment 1S: FRONT

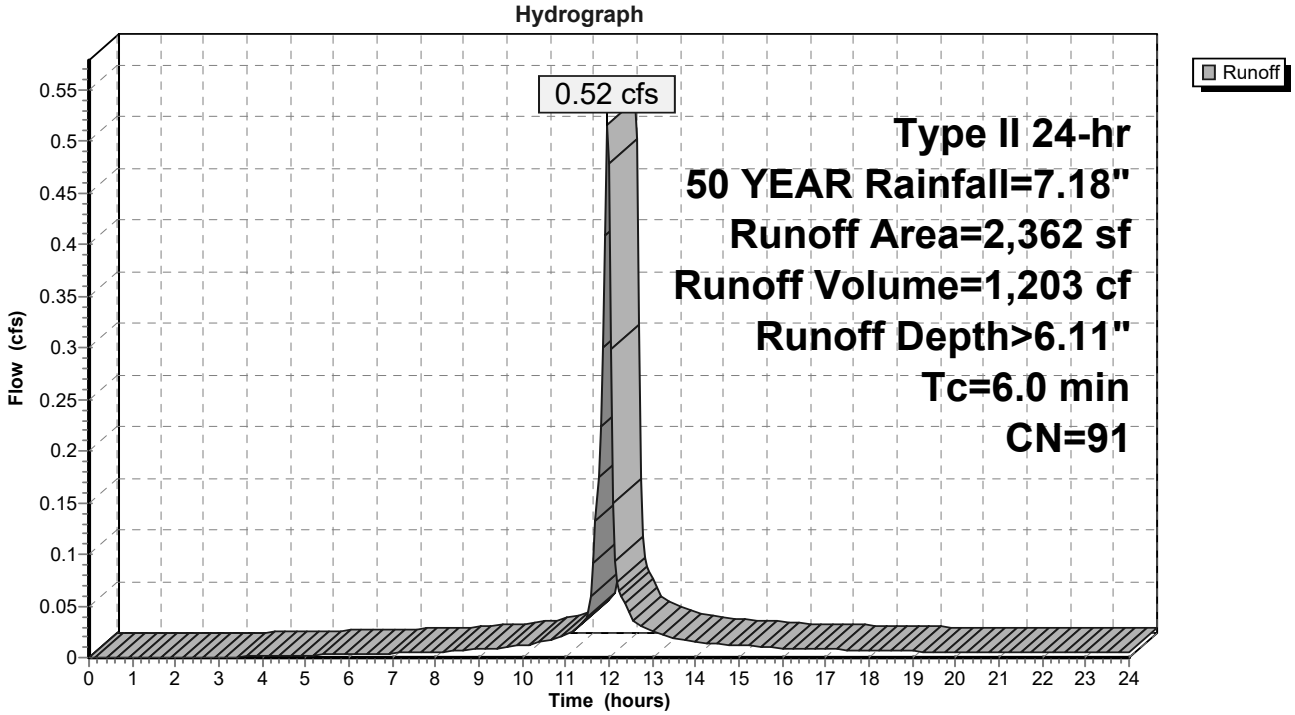
Runoff = 0.52 cfs @ 11.96 hrs, Volume= 1,203 cf, Depth> 6.11"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 YEAR Rainfall=7.18"

Area (sf)	CN	Description
1,024	98	Roofs, HSG C
617	98	Paved parking, HSG C
721	74	>75% Grass cover, Good, HSG C
2,362	91	Weighted Average
721		30.52% Pervious Area
1,641		69.48% Impervious Area

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

Subcatchment 1S: FRONT



Summary for Subcatchment 2S: REAR

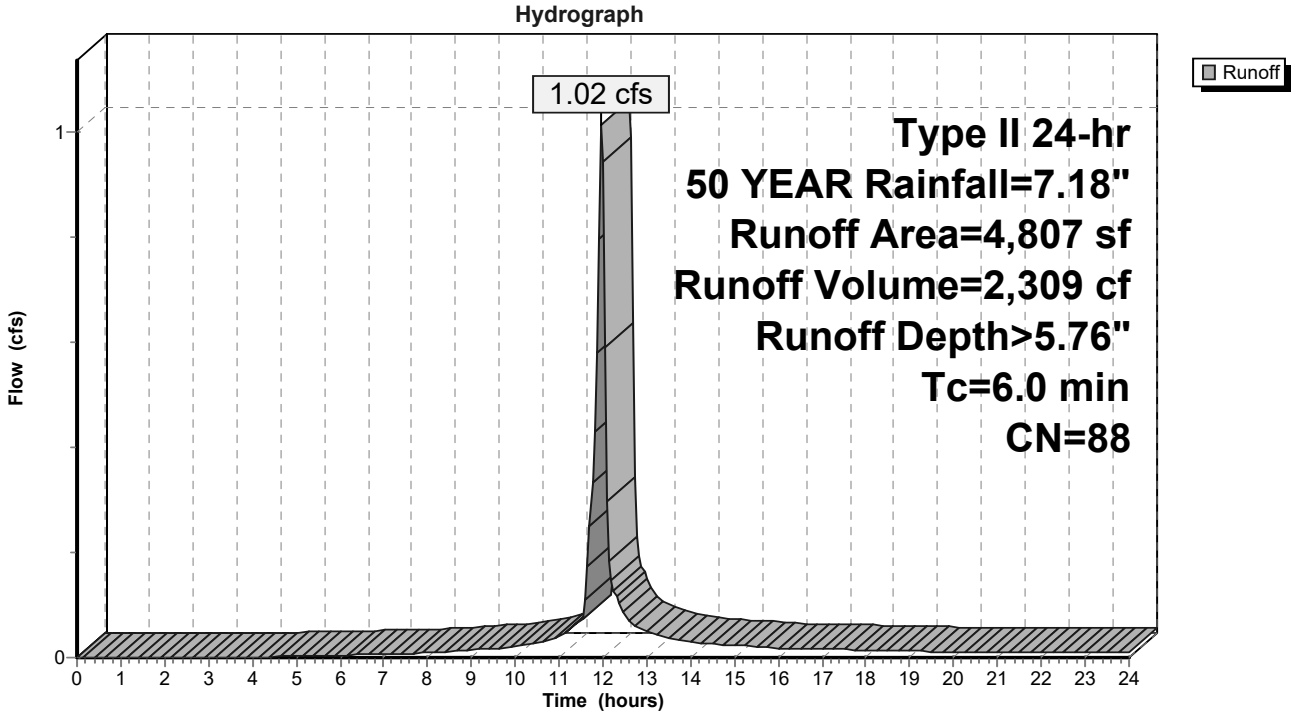
Runoff = 1.02 cfs @ 11.96 hrs, Volume= 2,309 cf, Depth> 5.76"
Routed to Pond 3P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 YEAR Rainfall=7.18"

Area (sf)	CN	Description
1,550	98	Roofs, HSG C
1,346	98	Paved parking, HSG C
1,911	74	>75% Grass cover, Good, HSG C
4,807	88	Weighted Average
1,911		39.75% Pervious Area
2,896		60.25% Impervious Area

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

Subcatchment 2S: REAR

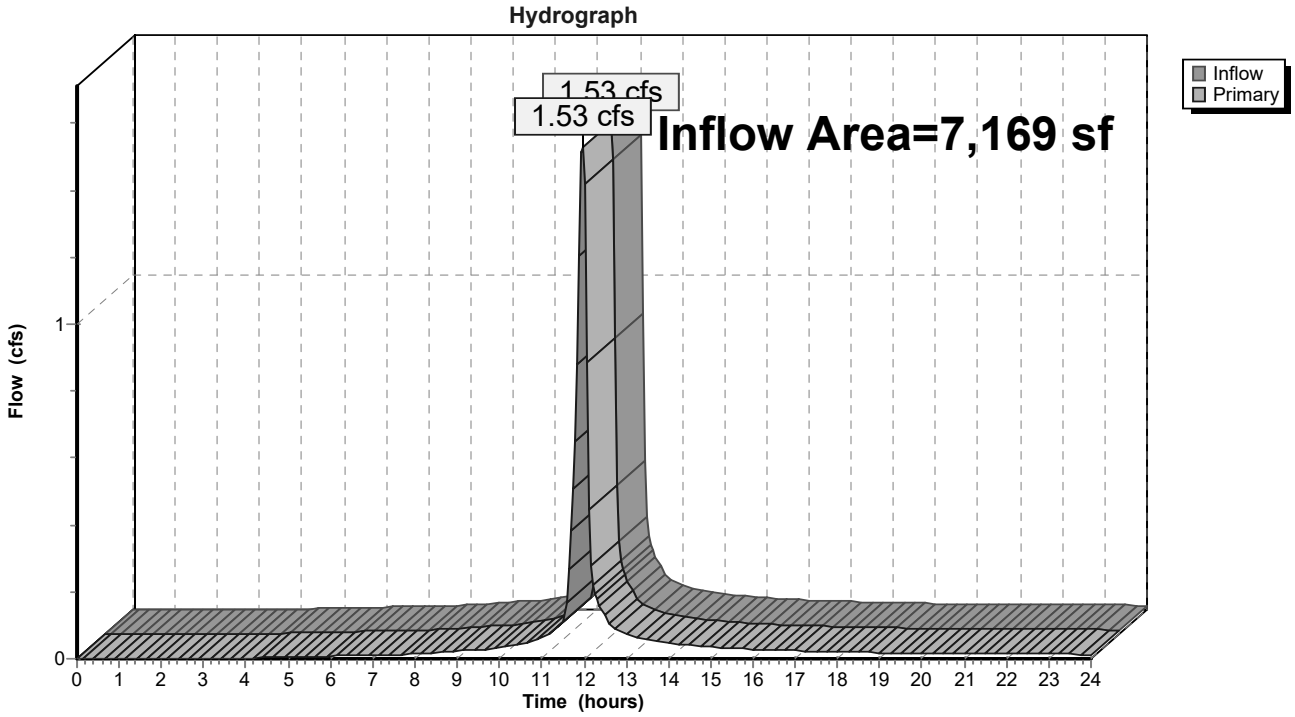


Summary for Pond 3P: (new Pond)

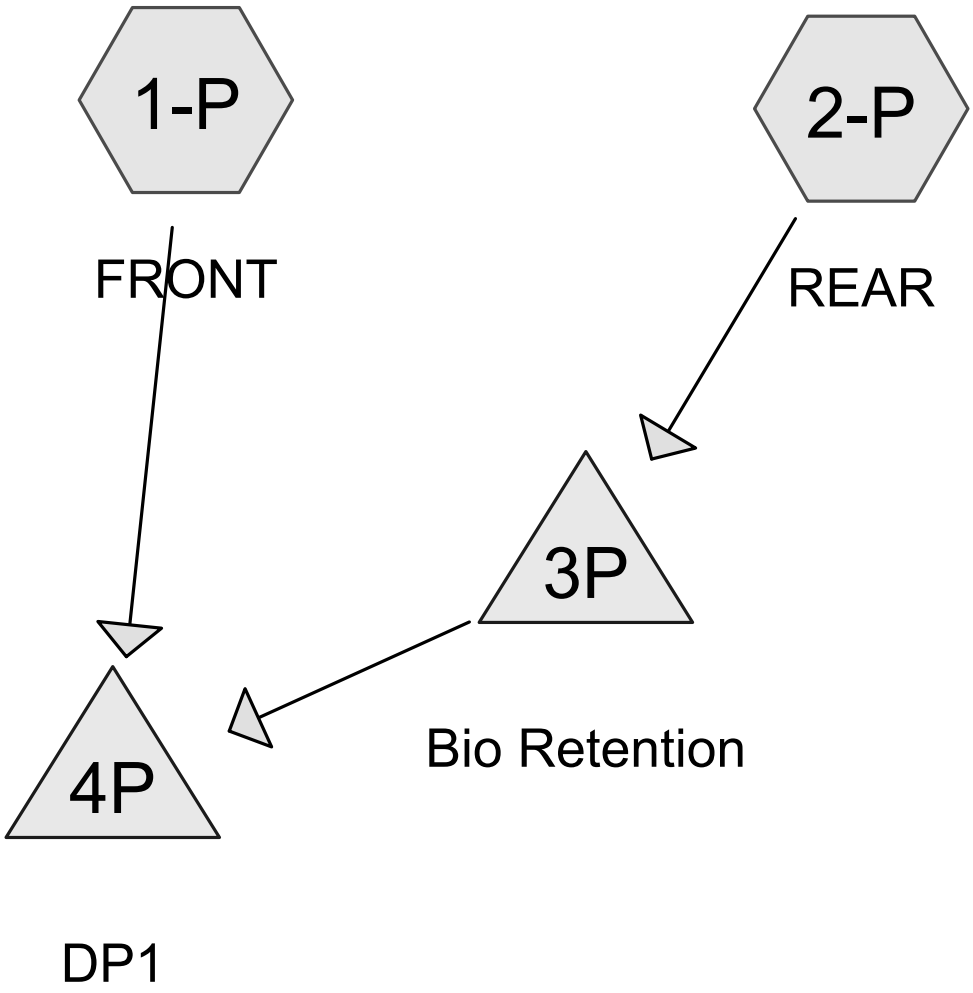
Inflow Area = 7,169 sf, 63.29% Impervious, Inflow Depth > 5.88" for 50 YEAR event
Inflow = 1.53 cfs @ 11.96 hrs, Volume= 3,511 cf
Primary = 1.53 cfs @ 11.96 hrs, Volume= 3,511 cf, Atten= 0%, Lag= 0.0 min

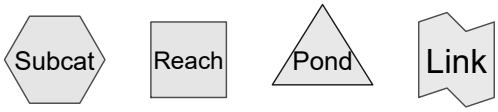
Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 3P: (new Pond)



POST-DEVELOPMENT DRAINAGE





Routing Diagram for 9-11 MECHANIC - POST
Prepared by {enter your company name here}, Printed 4/3/2025
HydroCAD® 10.10-7b s/n 02248 © 2022 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "9-11 MECHANIC - PRE.hcp"

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 YEAR	Type II 24-hr		Default	24.00	1	3.15	2
2	10 YEAR	Type II 24-hr		Default	24.00	1	4.75	2
3	25 YEAR	Type II 24-hr		Default	24.00	1	6.01	2
4	50 YEAR	Type II 24-hr		Default	24.00	1	7.18	2

Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
1,743	74	>75% Grass cover, Good, HSG C (1-P, 2-P)
3,521	98	Paved parking, HSG C (2-P)
1,740	98	Roofs, HSG C (1-P)
165	98	Walk, HSG C (1-P)
7,169	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
7,169	HSG C	1-P, 2-P
0	HSG D	
0	Other	
7,169		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover	Sub Num
0	0	1,743	0	0	1,743	>75% Grass cover, Good	
0	0	3,521	0	0	3,521	Paved parking	
0	0	1,740	0	0	1,740	Roofs	
0	0	165	0	0	165	Walk	
0	**0**	**7,169**	**0**	**0**	**7,169**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1-P: FRONT Runoff Area=2,142 sf 88.94% Impervious Runoff Depth>2.59"
Tc=6.0 min CN=95 Runoff=0.20 cfs 463 cf

Subcatchment 2-P: REAR Runoff Area=5,027 sf 70.04% Impervious Runoff Depth>2.21"
Tc=6.0 min CN=91 Runoff=0.42 cfs 925 cf

Pond 3P: Bio Retention Peak Elev=64.83' Storage=342 cf Inflow=0.42 cfs 925 cf
Discarded=0.00 cfs 252 cf Primary=0.33 cfs 396 cf Outflow=0.33 cfs 648 cf

Pond 4P: DP1 Inflow=0.51 cfs 859 cf
Primary=0.51 cfs 859 cf

Total Runoff Area = 7,169 sf Runoff Volume = 1,388 cf Average Runoff Depth = 2.32"
24.31% Pervious = 1,743 sf 75.69% Impervious = 5,426 sf

Summary for Subcatchment 1-P: FRONT

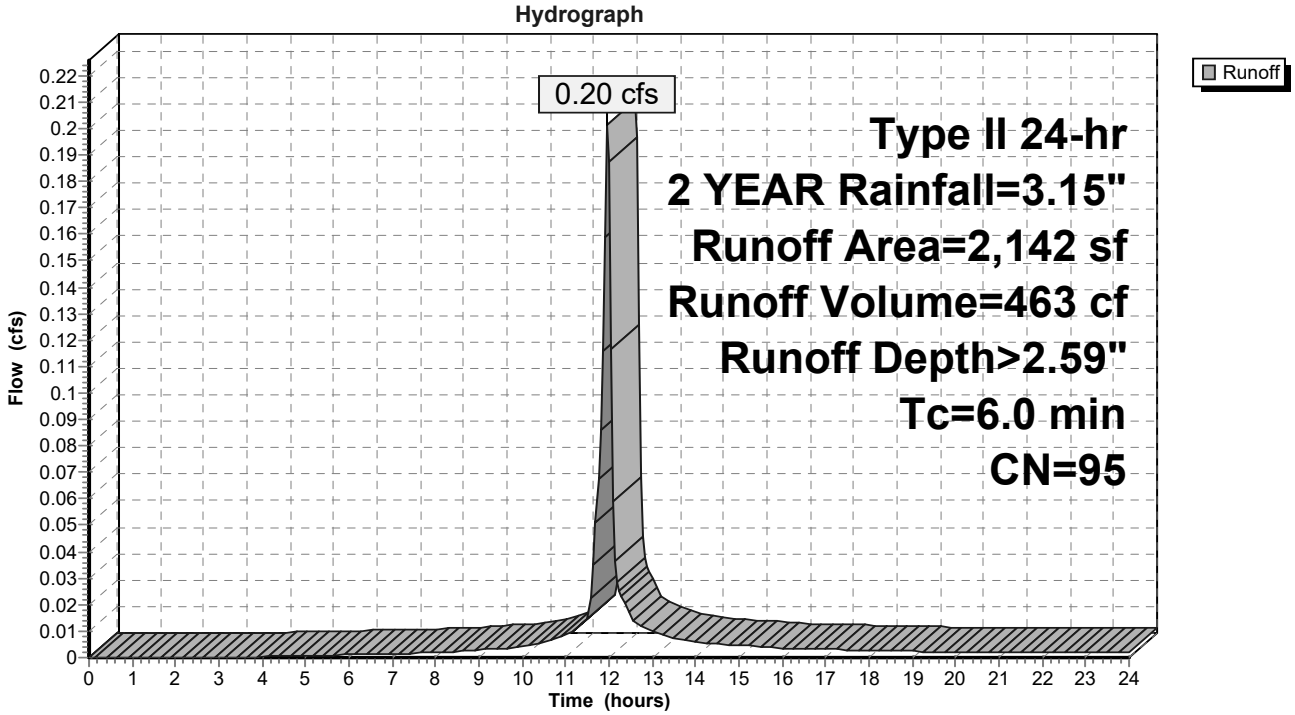
Runoff = 0.20 cfs @ 11.96 hrs, Volume= 463 cf, Depth> 2.59"
Routed to Pond 4P : DP1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.15"

	Area (sf)	CN	Description
	1,740	98	Roofs, HSG C
*	165	98	Walk, HSG C
	237	74	>75% Grass cover, Good, HSG C
	2,142	95	Weighted Average
	237		11.06% Pervious Area
	1,905		88.94% Impervious Area

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

Subcatchment 1-P: FRONT



Summary for Subcatchment 2-P: REAR

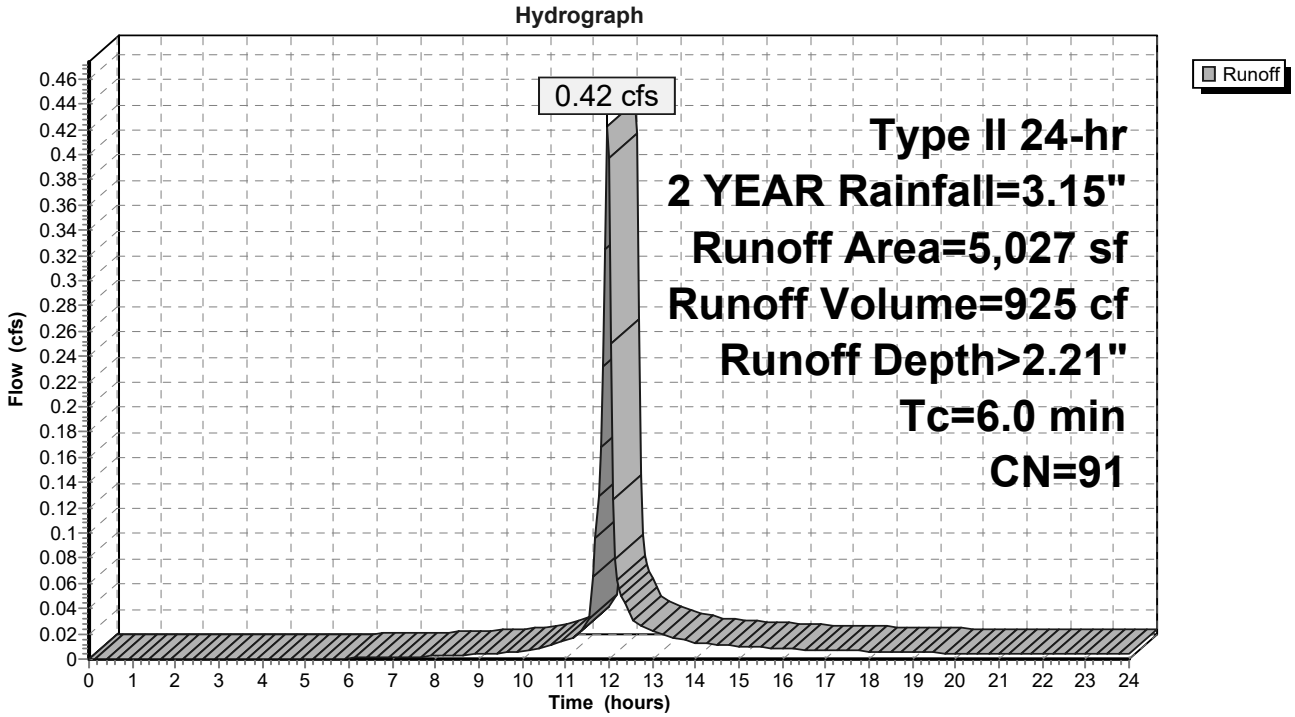
Runoff = 0.42 cfs @ 11.97 hrs, Volume= 925 cf, Depth> 2.21"
Routed to Pond 3P : Bio Retention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2 YEAR Rainfall=3.15"

Area (sf)	CN	Description
3,521	98	Paved parking, HSG C
1,506	74	>75% Grass cover, Good, HSG C
5,027	91	Weighted Average
1,506		29.96% Pervious Area
3,521		70.04% Impervious Area

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

Subcatchment 2-P: REAR



Summary for Pond 3P: Bio Retention

Inflow Area = 5,027 sf, 70.04% Impervious, Inflow Depth > 2.21" for 2 YEAR event
Inflow = 0.42 cfs @ 11.97 hrs, Volume= 925 cf
Outflow = 0.33 cfs @ 12.03 hrs, Volume= 648 cf, Atten= 21%, Lag= 3.7 min
Discarded = 0.00 cfs @ 12.03 hrs, Volume= 252 cf
Primary = 0.33 cfs @ 12.03 hrs, Volume= 396 cf
Routed to Pond 4P : DP1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 64.83' @ 12.03 hrs Surf.Area= 424 sf Storage= 342 cf
Flood Elev= 64.00' Surf.Area= 235 sf Storage= 49 cf

Plug-Flow detention time= 155.5 min calculated for 647 cf (70% of inflow)
Center-of-Mass det. time= 59.6 min (858.9 - 799.3)

Volume	Invert	Avail.Storage	Storage Description
#1	63.75'	414 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

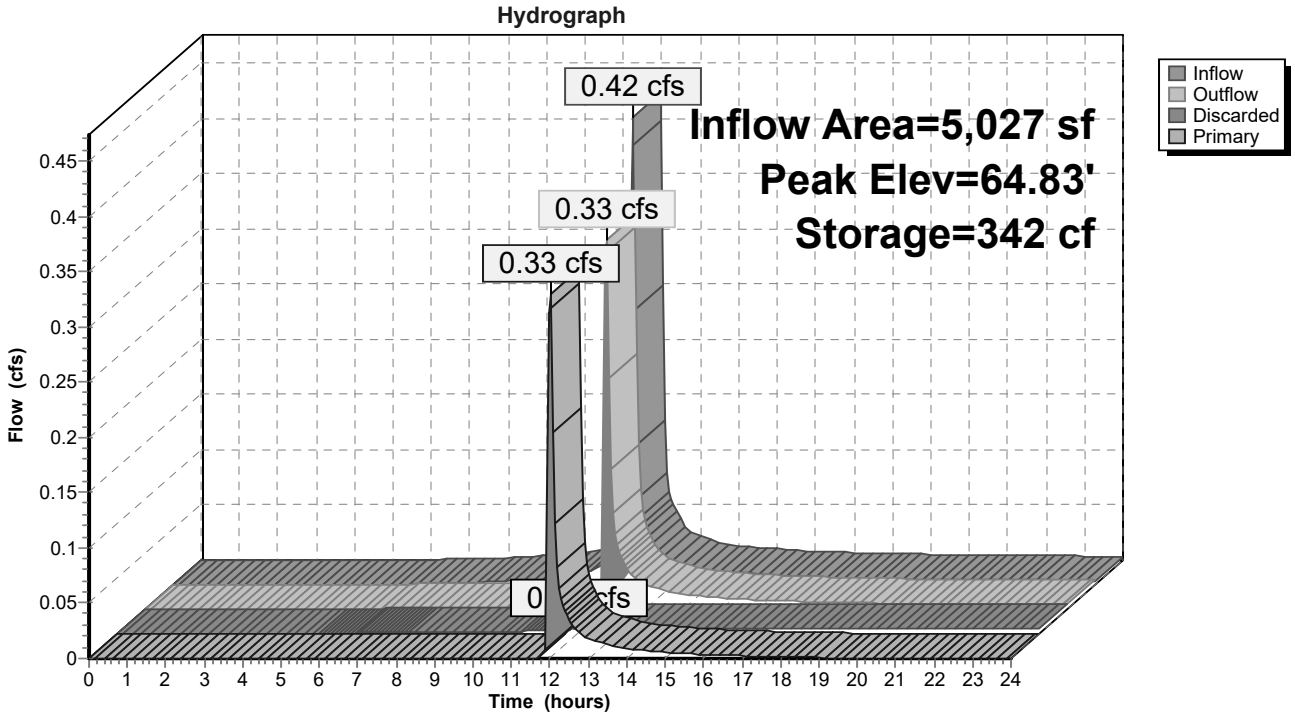
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.75	161	0	0	161
64.00	235	49	49	236
64.50	397	156	205	401
65.00	438	209	414	456

Device	Routing	Invert	Outlet Devices
#1	Primary	61.00'	**8.0" Round Culvert** L= 122.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.00' / 59.77' S= 0.0101 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	64.70'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	63.75'	**0.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.03 hrs HW=64.83' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.32 cfs @ 12.03 hrs HW=64.83' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.32 cfs of 2.53 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 0.32 cfs @ 1.17 fps)

Pond 3P: Bio Retention

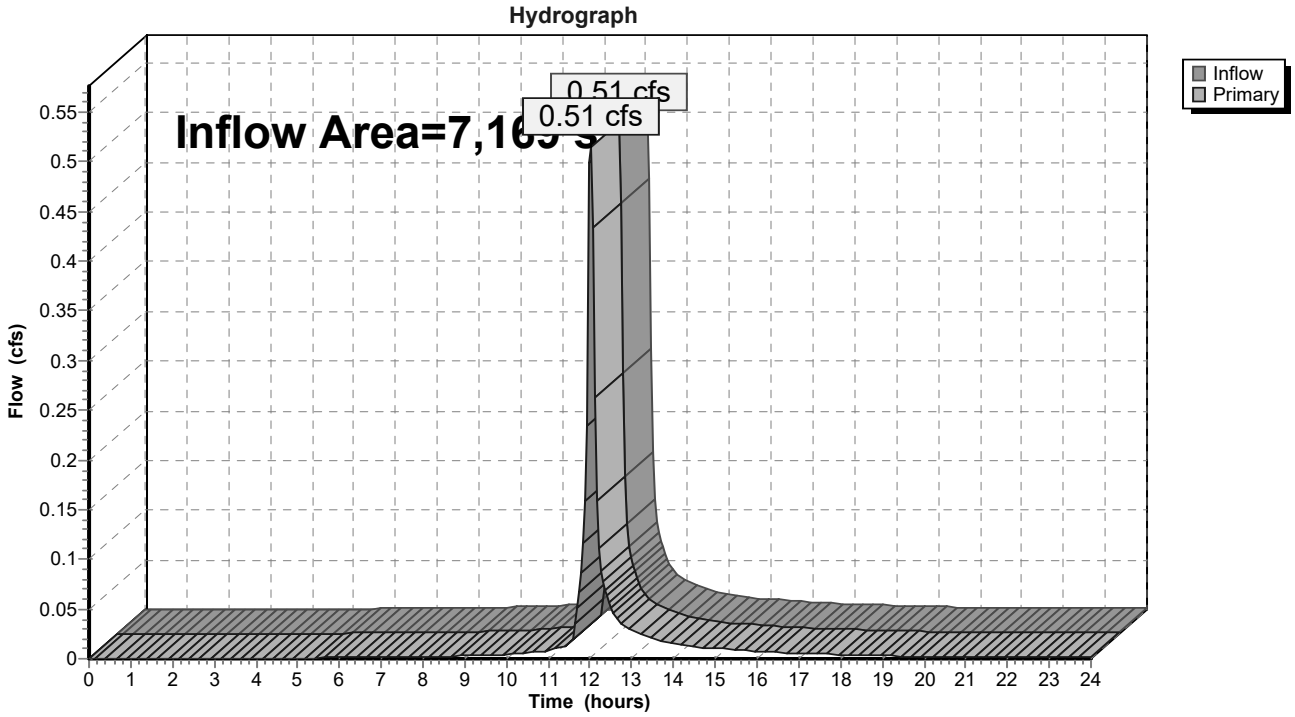


Summary for Pond 4P: DP1

Inflow Area = 7,169 sf, 75.69% Impervious, Inflow Depth > 1.44" for 2 YEAR event
Inflow = 0.51 cfs @ 12.02 hrs, Volume= 859 cf
Primary = 0.51 cfs @ 12.02 hrs, Volume= 859 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 4P: DP1



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1-P: FRONT Runoff Area=2,142 sf 88.94% Impervious Runoff Depth>4.17"
Tc=6.0 min CN=95 Runoff=0.31 cfs 744 cf

Subcatchment 2-P: REAR Runoff Area=5,027 sf 70.04% Impervious Runoff Depth>3.74"
Tc=6.0 min CN=91 Runoff=0.69 cfs 1,565 cf

Pond 3P: Bio Retention Peak Elev=64.91' Storage=376 cf Inflow=0.69 cfs 1,565 cf
Discarded=0.00 cfs 277 cf Primary=0.66 cfs 1,000 cf Outflow=0.67 cfs 1,277 cf

Pond 4P: DP1 Inflow=0.97 cfs 1,744 cf
Primary=0.97 cfs 1,744 cf

Total Runoff Area = 7,169 sf Runoff Volume = 2,309 cf Average Runoff Depth = 3.87"
24.31% Pervious = 1,743 sf 75.69% Impervious = 5,426 sf

Summary for Subcatchment 1-P: FRONT

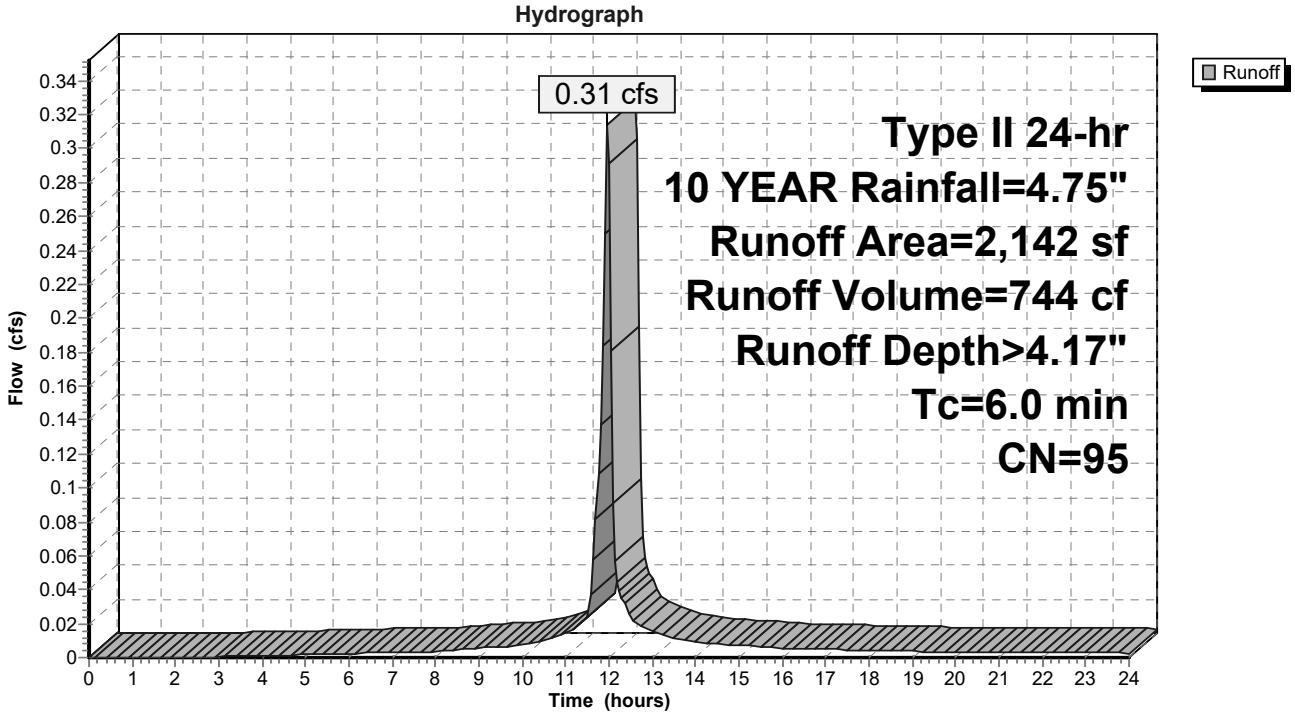
Runoff = 0.31 cfs @ 11.96 hrs, Volume= 744 cf, Depth> 4.17"
Routed to Pond 4P : DP1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=4.75"

	Area (sf)	CN	Description
	1,740	98	Roofs, HSG C
*	165	98	Walk, HSG C
	237	74	>75% Grass cover, Good, HSG C
	2,142	95	Weighted Average
	237		11.06% Pervious Area
	1,905		88.94% Impervious Area

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

Subcatchment 1-P: FRONT



Summary for Subcatchment 2-P: REAR

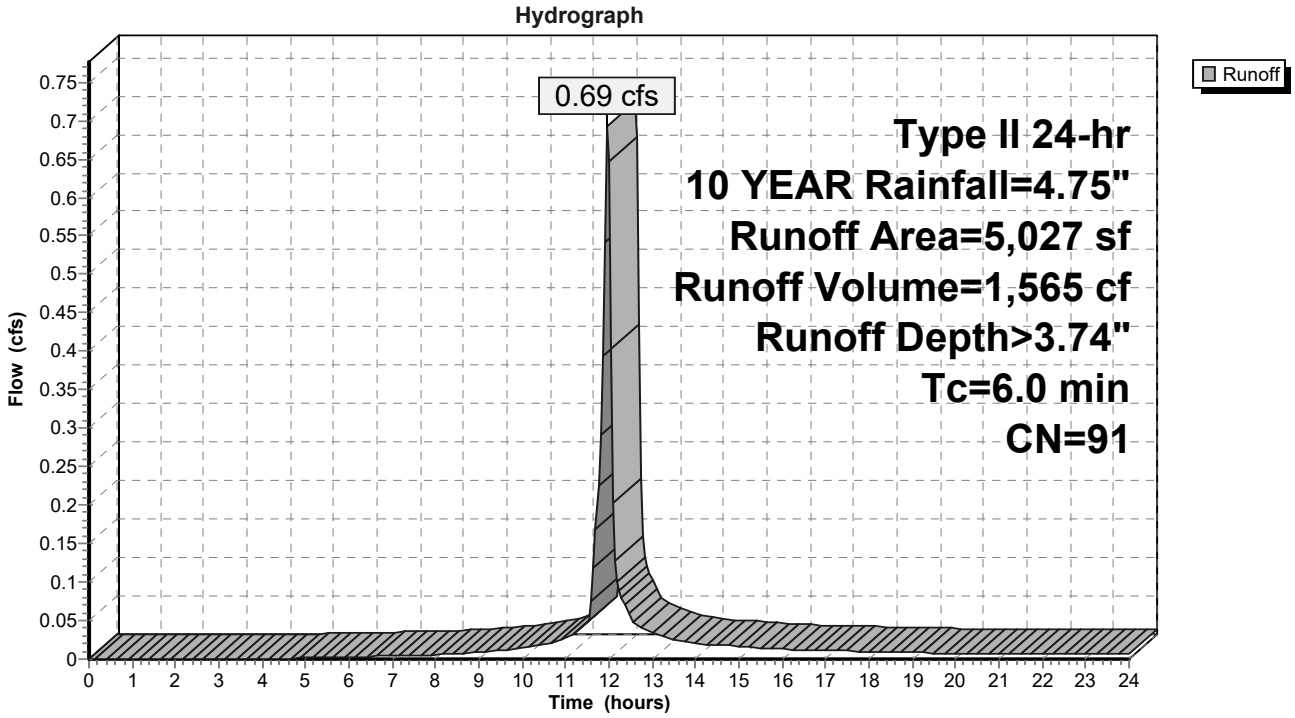
Runoff = 0.69 cfs @ 11.96 hrs, Volume= 1,565 cf, Depth> 3.74"
Routed to Pond 3P : Bio Retention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10 YEAR Rainfall=4.75"

Area (sf)	CN	Description
3,521	98	Paved parking, HSG C
1,506	74	>75% Grass cover, Good, HSG C
5,027	91	Weighted Average
1,506		29.96% Pervious Area
3,521		70.04% Impervious Area

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

Subcatchment 2-P: REAR



Summary for Pond 3P: Bio Retention

Inflow Area = 5,027 sf, 70.04% Impervious, Inflow Depth > 3.74" for 10 YEAR event
Inflow = 0.69 cfs @ 11.96 hrs, Volume= 1,565 cf
Outflow = 0.67 cfs @ 11.99 hrs, Volume= 1,277 cf, Atten= 3%, Lag= 1.5 min
Discarded = 0.00 cfs @ 11.99 hrs, Volume= 277 cf
Primary = 0.66 cfs @ 11.99 hrs, Volume= 1,000 cf
Routed to Pond 4P : DP1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 64.91' @ 11.99 hrs Surf.Area= 431 sf Storage= 376 cf
Flood Elev= 64.00' Surf.Area= 235 sf Storage= 49 cf

Plug-Flow detention time= 110.4 min calculated for 1,275 cf (81% of inflow)
Center-of-Mass det. time= 35.2 min (819.9 - 784.7)

Volume	Invert	Avail.Storage	Storage Description
#1	63.75'	414 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

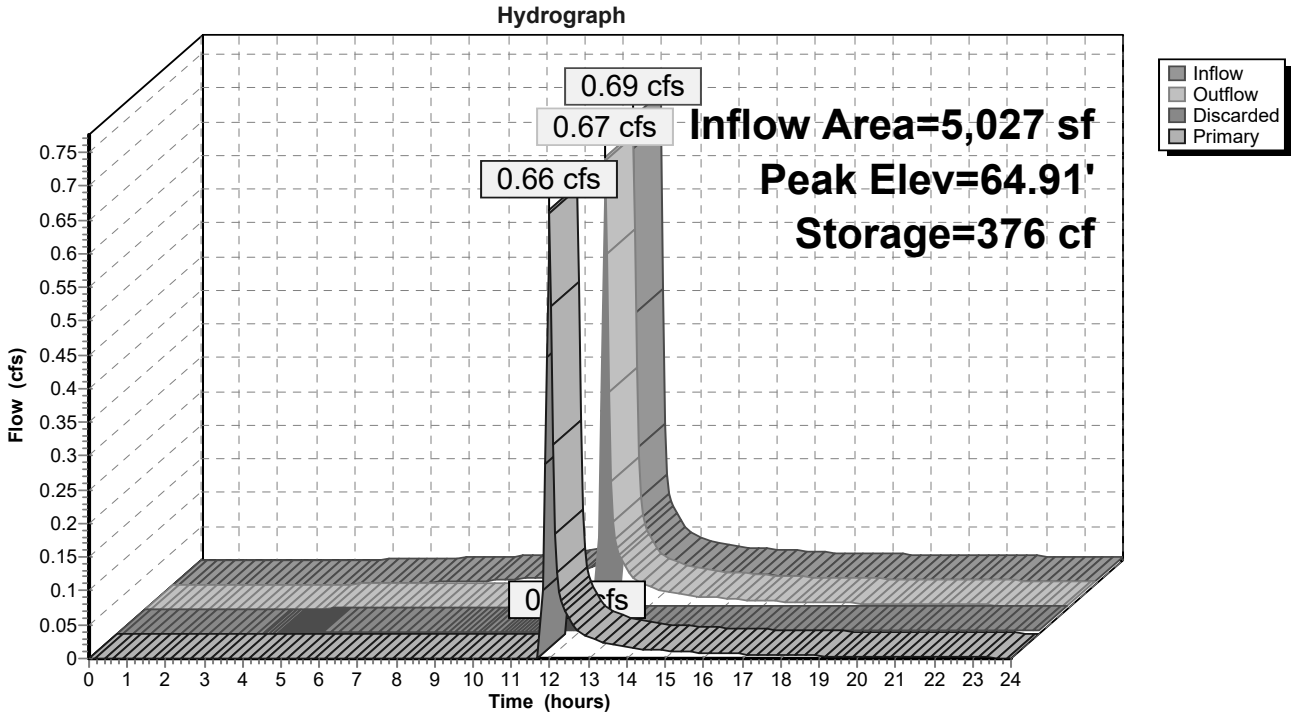
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.75	161	0	0	161
64.00	235	49	49	236
64.50	397	156	205	401
65.00	438	209	414	456

Device	Routing	Invert	Outlet Devices
#1	Primary	61.00'	**8.0" Round Culvert** L= 122.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.00' / 59.77' S= 0.0101 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	64.70'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	63.75'	**0.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 11.99 hrs HW=64.91' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.65 cfs @ 11.99 hrs HW=64.91' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.65 cfs of 2.55 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 0.65 cfs @ 1.49 fps)

Pond 3P: Bio Retention

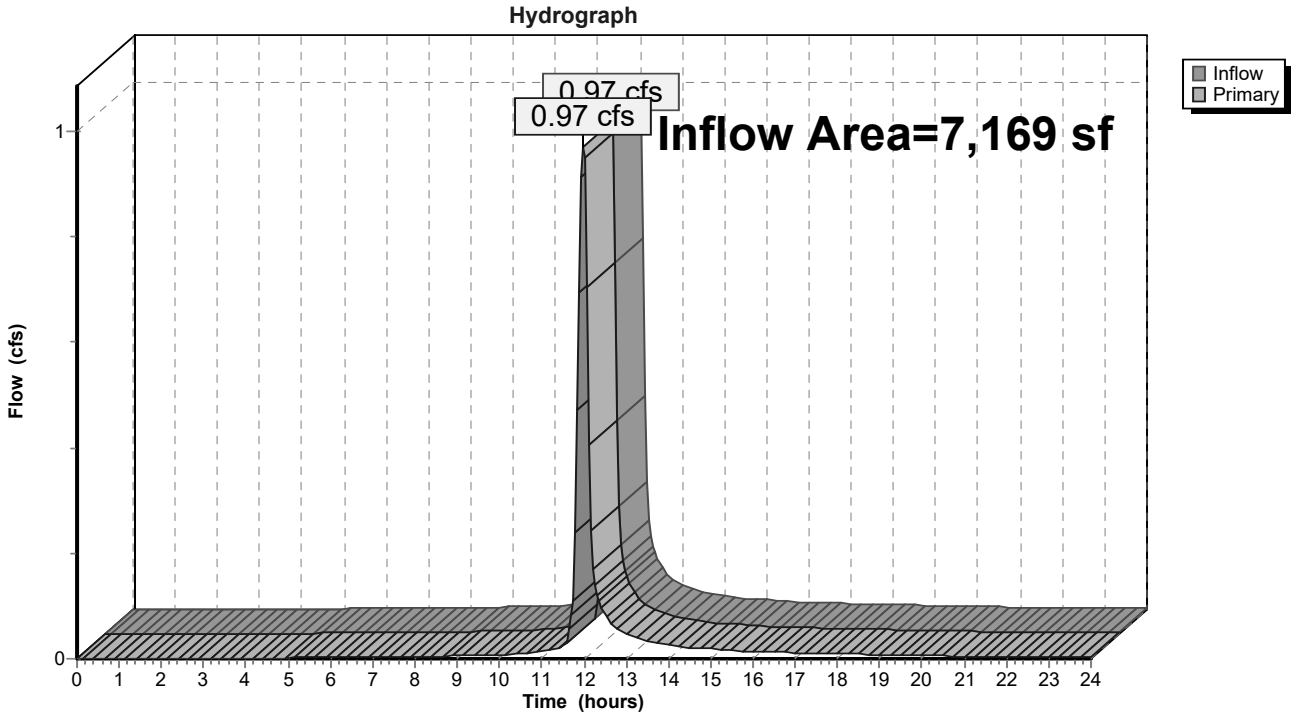


Summary for Pond 4P: DP1

Inflow Area = 7,169 sf, 75.69% Impervious, Inflow Depth > 2.92" for 10 YEAR event
Inflow = 0.97 cfs @ 11.98 hrs, Volume= 1,744 cf
Primary = 0.97 cfs @ 11.98 hrs, Volume= 1,744 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 4P: DP1



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1-P: FRONT Runoff Area=2,142 sf 88.94% Impervious Runoff Depth>5.42"
Tc=6.0 min CN=95 Runoff=0.40 cfs 967 cf

Subcatchment 2-P: REAR Runoff Area=5,027 sf 70.04% Impervious Runoff Depth>4.96"
Tc=6.0 min CN=91 Runoff=0.90 cfs 2,079 cf

Pond 3P: Bio Retention Peak Elev=64.96' Storage=395 cf Inflow=0.90 cfs 2,079 cf
Discarded=0.01 cfs 294 cf Primary=0.86 cfs 1,496 cf Outflow=0.86 cfs 1,790 cf

Pond 4P: DP1 Inflow=1.25 cfs 2,463 cf
Primary=1.25 cfs 2,463 cf

Total Runoff Area = 7,169 sf Runoff Volume = 3,046 cf Average Runoff Depth = 5.10"
24.31% Pervious = 1,743 sf 75.69% Impervious = 5,426 sf

Summary for Subcatchment 1-P: FRONT

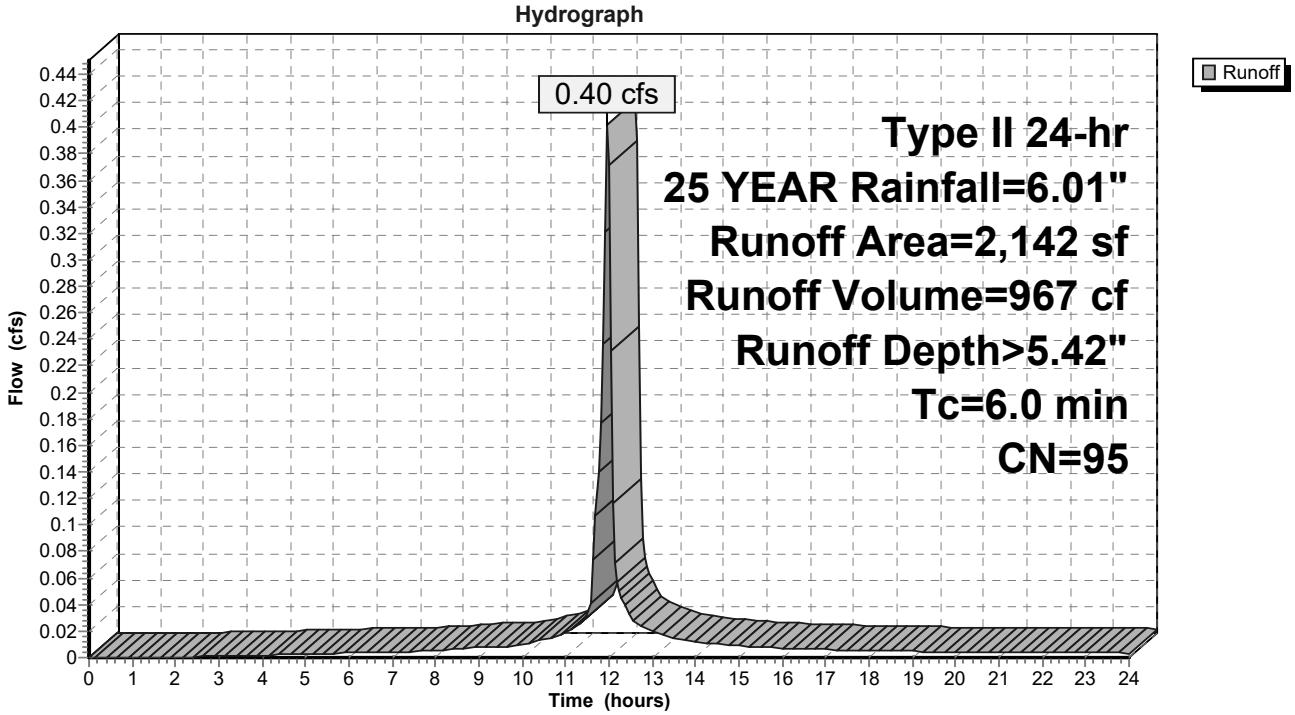
Runoff = 0.40 cfs @ 11.96 hrs, Volume= 967 cf, Depth> 5.42"
Routed to Pond 4P : DP1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YEAR Rainfall=6.01"

	Area (sf)	CN	Description
	1,740	98	Roofs, HSG C
*	165	98	Walk, HSG C
	237	74	>75% Grass cover, Good, HSG C
	2,142	95	Weighted Average
	237		11.06% Pervious Area
	1,905		88.94% Impervious Area

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

Subcatchment 1-P: FRONT



Summary for Subcatchment 2-P: REAR

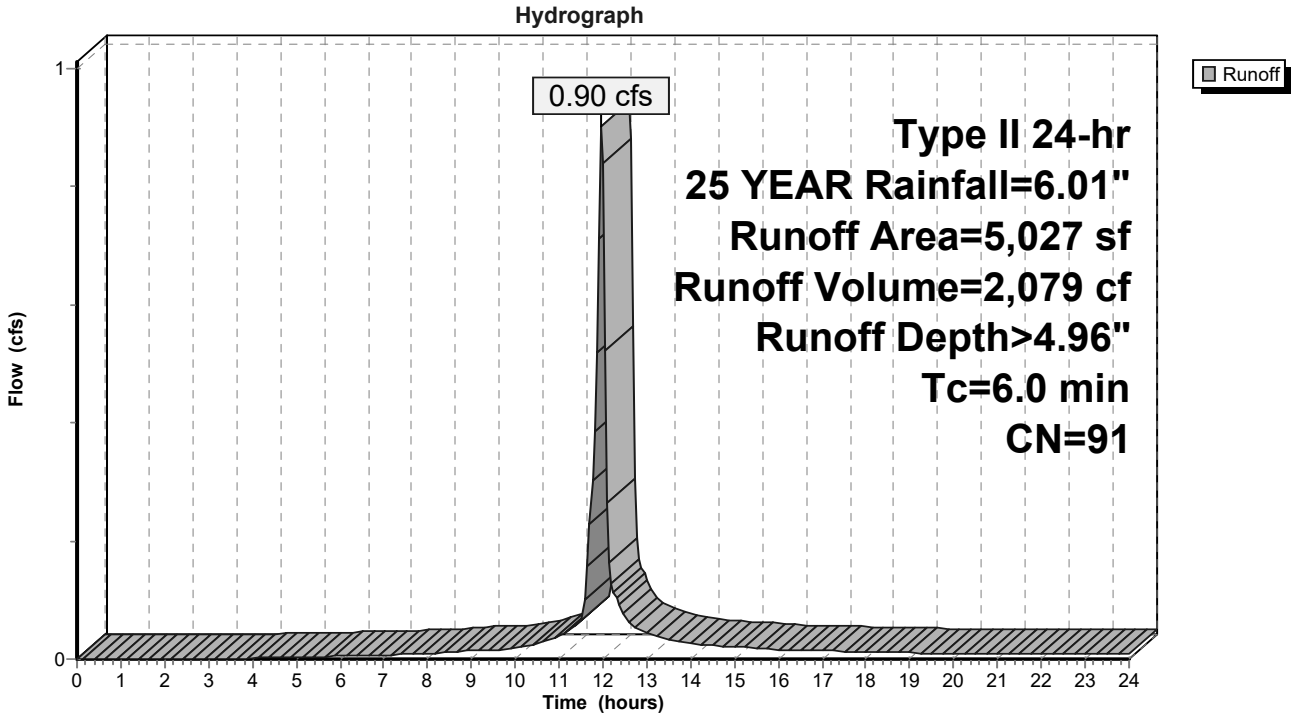
Runoff = 0.90 cfs @ 11.96 hrs, Volume= 2,079 cf, Depth> 4.96"
Routed to Pond 3P : Bio Retention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25 YEAR Rainfall=6.01"

Area (sf)	CN	Description
3,521	98	Paved parking, HSG C
1,506	74	>75% Grass cover, Good, HSG C
5,027	91	Weighted Average
1,506		29.96% Pervious Area
3,521		70.04% Impervious Area

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

Subcatchment 2-P: REAR



Summary for Pond 3P: Bio Retention

Inflow Area = 5,027 sf, 70.04% Impervious, Inflow Depth > 4.96" for 25 YEAR event
Inflow = 0.90 cfs @ 11.96 hrs, Volume= 2,079 cf
Outflow = 0.86 cfs @ 11.99 hrs, Volume= 1,790 cf, Atten= 5%, Lag= 1.4 min
Discarded = 0.01 cfs @ 11.99 hrs, Volume= 294 cf
Primary = 0.86 cfs @ 11.99 hrs, Volume= 1,496 cf
Routed to Pond 4P : DP1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 64.96' @ 11.99 hrs Surf.Area= 434 sf Storage= 395 cf
Flood Elev= 64.00' Surf.Area= 235 sf Storage= 49 cf

Plug-Flow detention time= 96.5 min calculated for 1,790 cf (86% of inflow)
Center-of-Mass det. time= 32.3 min (809.3 - 777.0)

Volume	Invert	Avail.Storage	Storage Description
#1	63.75'	414 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

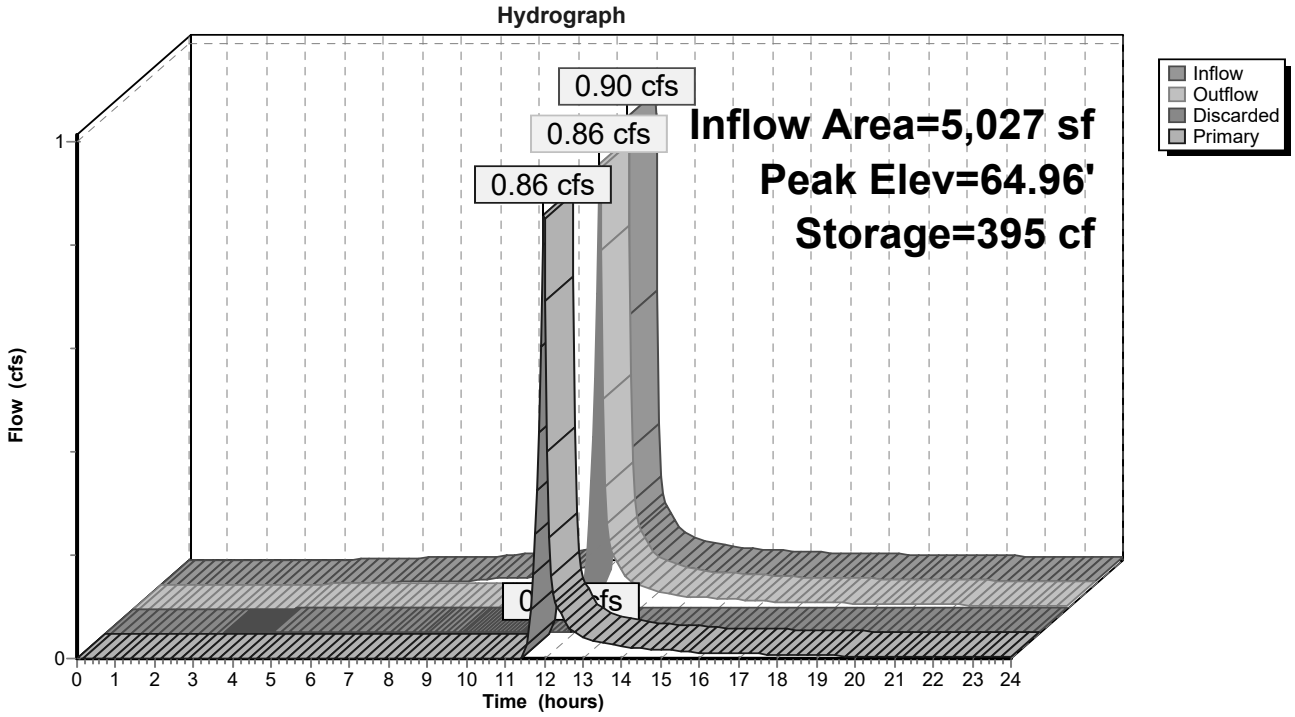
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.75	161	0	0	161
64.00	235	49	49	236
64.50	397	156	205	401
65.00	438	209	414	456

Device	Routing	Invert	Outlet Devices
#1	Primary	61.00'	**8.0" Round Culvert** L= 122.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.00' / 59.77' S= 0.0101 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	64.70'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	63.75'	**0.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 11.99 hrs HW=64.95' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.84 cfs @ 11.99 hrs HW=64.95' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.84 cfs of 2.56 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 0.84 cfs @ 2.41 fps)

Pond 3P: Bio Retention

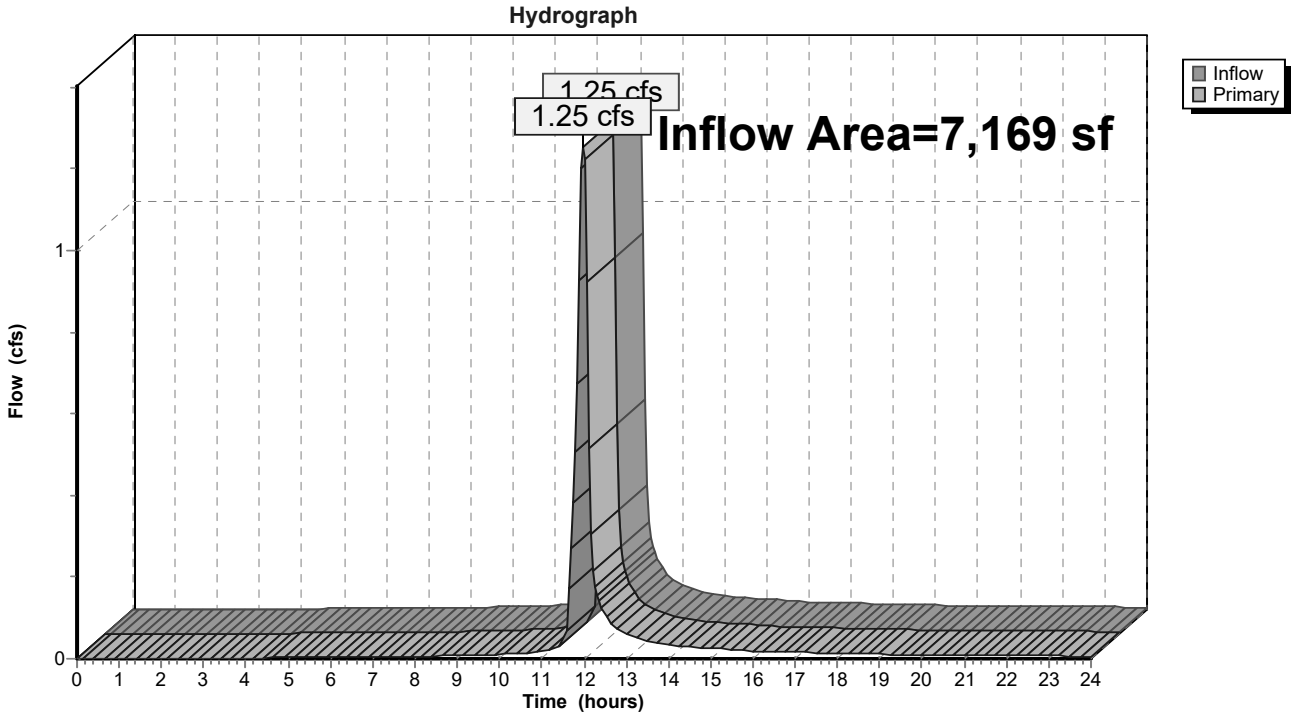


Summary for Pond 4P: DP1

Inflow Area = 7,169 sf, 75.69% Impervious, Inflow Depth > 4.12" for 25 YEAR event
Inflow = 1.25 cfs @ 11.98 hrs, Volume= 2,463 cf
Primary = 1.25 cfs @ 11.98 hrs, Volume= 2,463 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 4P: DP1



Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1-P: FRONT Runoff Area=2,142 sf 88.94% Impervious Runoff Depth>6.58"
Tc=6.0 min CN=95 Runoff=0.48 cfs 1,174 cf

Subcatchment 2-P: REAR Runoff Area=5,027 sf 70.04% Impervious Runoff Depth>6.11"
Tc=6.0 min CN=91 Runoff=1.10 cfs 2,560 cf

Pond 3P: Bio Retention Peak Elev=65.16' Storage=414 cf Inflow=1.10 cfs 2,560 cf
Discarded=0.01 cfs 307 cf Primary=1.14 cfs 1,964 cf Outflow=1.15 cfs 2,270 cf

Pond 4P: DP1 Inflow=1.61 cfs 3,138 cf
Primary=1.61 cfs 3,138 cf

Total Runoff Area = 7,169 sf Runoff Volume = 3,734 cf Average Runoff Depth = 6.25"
24.31% Pervious = 1,743 sf 75.69% Impervious = 5,426 sf

Summary for Subcatchment 1-P: FRONT

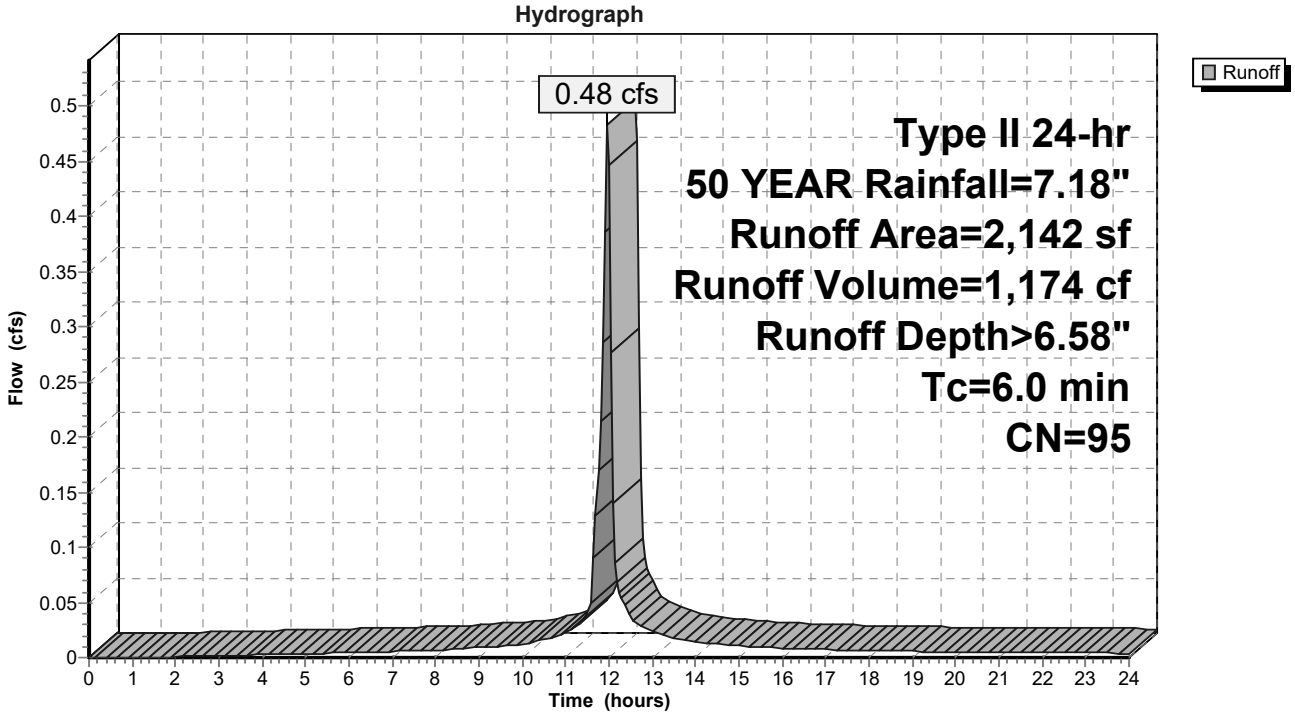
Runoff = 0.48 cfs @ 11.96 hrs, Volume= 1,174 cf, Depth> 6.58"
Routed to Pond 4P : DP1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 YEAR Rainfall=7.18"

	Area (sf)	CN	Description
	1,740	98	Roofs, HSG C
*	165	98	Walk, HSG C
	237	74	>75% Grass cover, Good, HSG C
	2,142	95	Weighted Average
	237		11.06% Pervious Area
	1,905		88.94% Impervious Area

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

Subcatchment 1-P: FRONT



Summary for Subcatchment 2-P: REAR

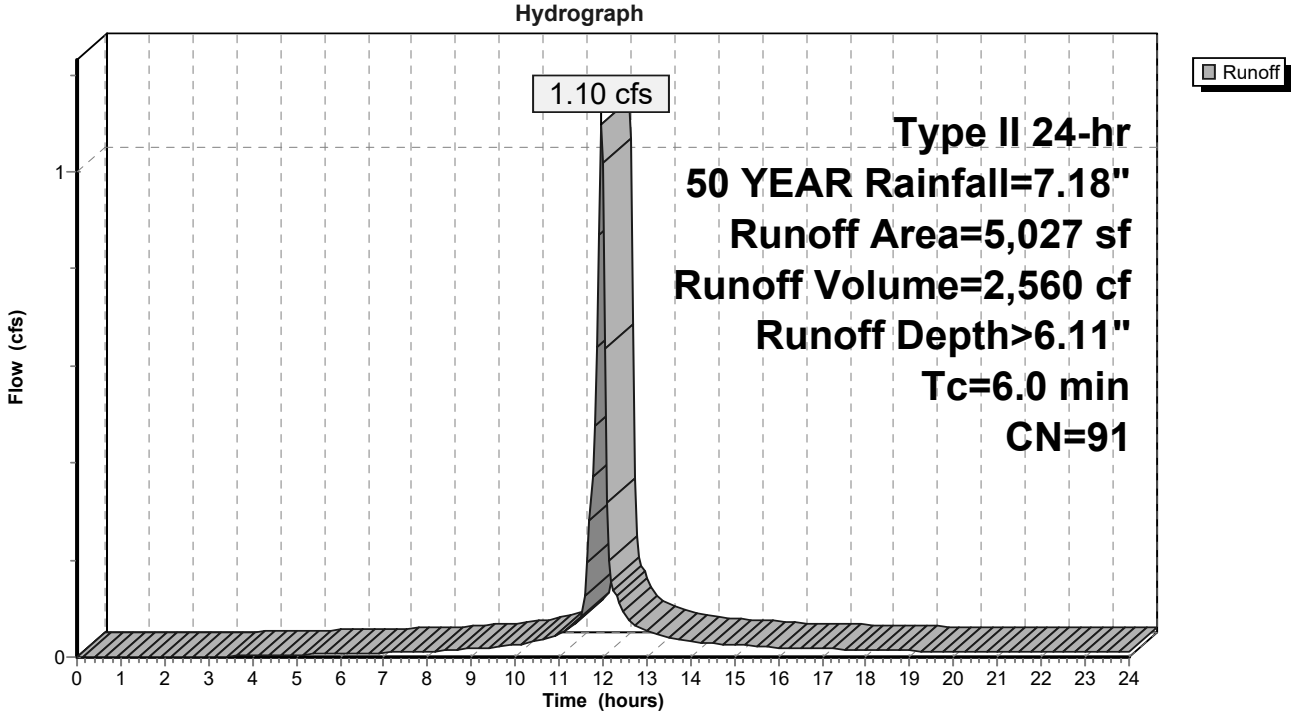
Runoff = 1.10 cfs @ 11.96 hrs, Volume= 2,560 cf, Depth> 6.11"
Routed to Pond 3P : Bio Retention

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 50 YEAR Rainfall=7.18"

Area (sf)	CN	Description
3,521	98	Paved parking, HSG C
1,506	74	>75% Grass cover, Good, HSG C
5,027	91	Weighted Average
1,506		29.96% Pervious Area
3,521		70.04% Impervious Area

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

Subcatchment 2-P: REAR



Summary for Pond 3P: Bio Retention

Inflow Area = 5,027 sf, 70.04% Impervious, Inflow Depth > 6.11" for 50 YEAR event
Inflow = 1.10 cfs @ 11.96 hrs, Volume= 2,560 cf
Outflow = 1.15 cfs @ 12.00 hrs, Volume= 2,270 cf, Atten= 0%, Lag= 1.9 min
Discarded = 0.01 cfs @ 11.98 hrs, Volume= 307 cf
Primary = 1.14 cfs @ 12.00 hrs, Volume= 1,964 cf
Routed to Pond 4P : DP1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 65.16' @ 12.00 hrs Surf.Area= 438 sf Storage= 414 cf
Flood Elev= 64.00' Surf.Area= 235 sf Storage= 49 cf

Plug-Flow detention time= 87.1 min calculated for 2,270 cf (89% of inflow)
Center-of-Mass det. time= 31.1 min (802.7 - 771.6)

Volume	Invert	Avail.Storage	Storage Description
#1	63.75'	414 cf	**Custom Stage Data (Conic)** Listed below (Recalc)

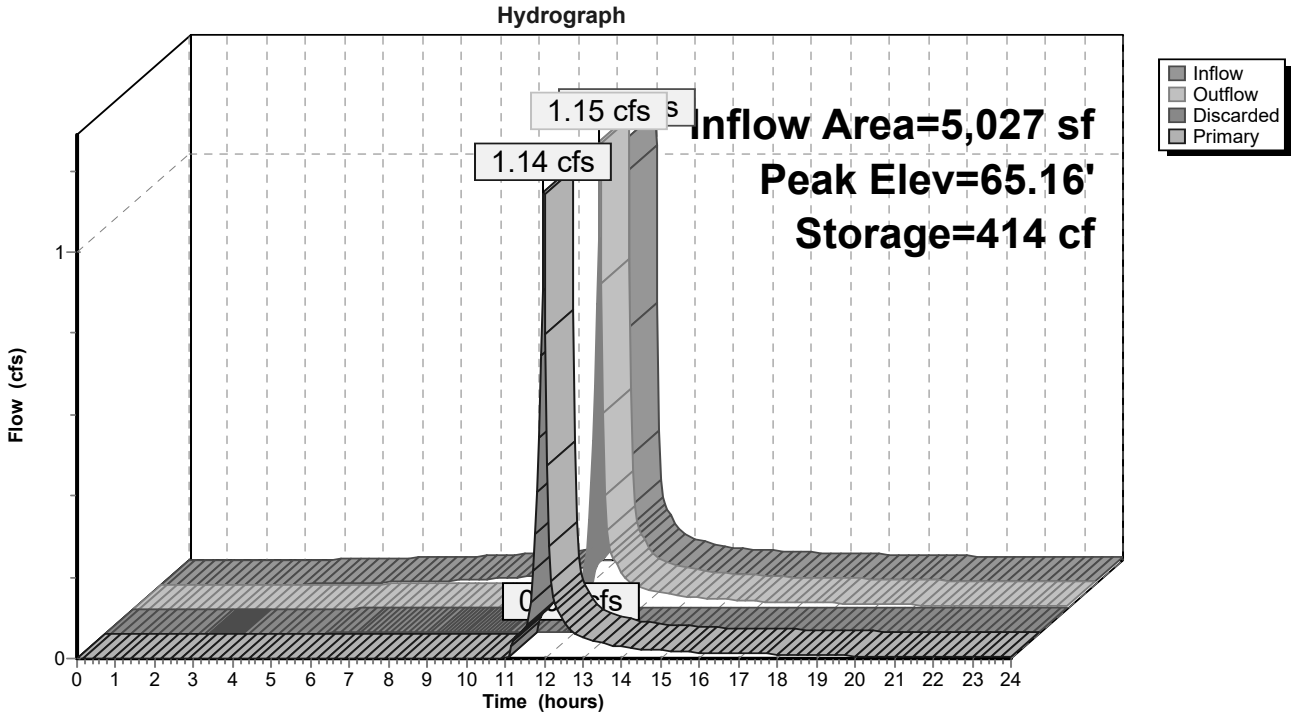
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
63.75	161	0	0	161
64.00	235	49	49	236
64.50	397	156	205	401
65.00	438	209	414	456

Device	Routing	Invert	Outlet Devices
#1	Primary	61.00'	**8.0" Round Culvert** L= 122.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 61.00' / 59.77' S= 0.0101 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.35 sf
#2	Device 1	64.70'	**8.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Discarded	63.75'	**0.500 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.01 cfs @ 11.98 hrs HW=65.10' (Free Discharge)
└─**3=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=1.12 cfs @ 12.00 hrs HW=65.15' TW=0.00' (Dynamic Tailwater)
└─**1=Culvert** (Passes 1.12 cfs of 2.62 cfs potential flow)
└─**2=Orifice/Grate** (Orifice Controls 1.12 cfs @ 3.22 fps)

Pond 3P: Bio Retention

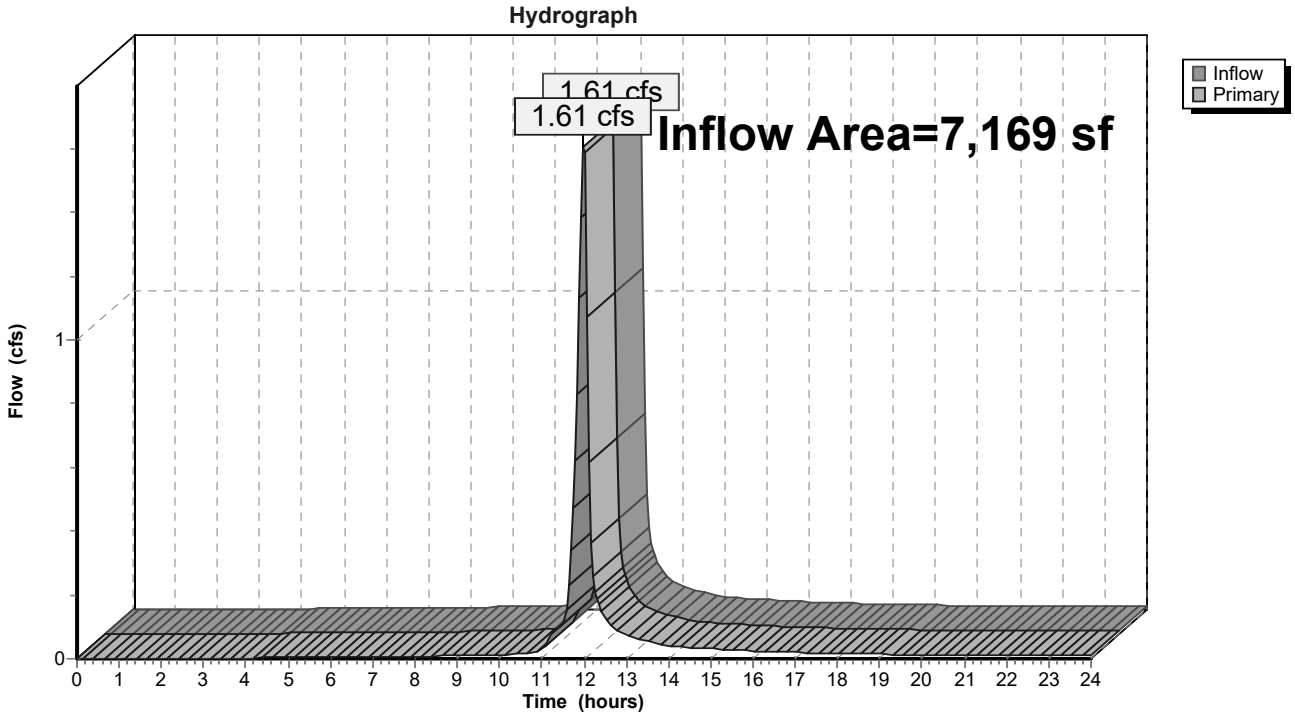


Summary for Pond 4P: DP1

Inflow Area = 7,169 sf, 75.69% Impervious, Inflow Depth > 5.25" for 50 YEAR event
Inflow = 1.61 cfs @ 11.99 hrs, Volume= 3,138 cf
Primary = 1.61 cfs @ 11.99 hrs, Volume= 3,138 cf, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Pond 4P: DP1



Hydrograph for Pond 3P: Biio Retention

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	63.75	0.00	0.00	0.00
2.50	0.00	0	63.75	0.00	0.00	0.00
5.00	0.00	0	63.75	0.00	0.00	0.00
7.50	0.00	11	63.81	0.00	0.00	0.00
10.00	**0.01**	**64**	**64.06**	**0.00**	**0.00**	**0.00**
12.50	**0.06**	**304**	**64.74**	**0.06**	**0.00**	**0.06**
15.00	0.02	292	64.71	0.02	0.00	0.01
17.50	0.01	290	64.71	0.01	0.00	0.01
20.00	0.01	289	64.71	0.01	0.00	0.00
22.50	0.01	288	64.70	0.01	0.00	0.00
25.00	0.00	272	64.67	0.00	0.00	0.00
27.50	0.00	230	64.56	0.00	0.00	0.00
30.00	0.00	189	64.46	0.00	0.00	0.00
32.50	0.00	151	64.35	0.00	0.00	0.00
35.00	0.00	117	64.25	0.00	0.00	0.00
37.50	0.00	86	64.14	0.00	0.00	0.00
40.00	0.00	59	64.04	0.00	0.00	0.00
42.50	0.00	35	63.94	0.00	0.00	0.00
45.00	0.00	14	63.83	0.00	0.00	0.00
47.50	0.00	0	63.75	0.00	0.00	0.00
50.00	0.00	0	63.75	0.00	0.00	0.00
52.50	0.00	0	63.75	0.00	0.00	0.00
55.00	0.00	0	63.75	0.00	0.00	0.00
57.50	0.00	0	63.75	0.00	0.00	0.00
60.00	0.00	0	63.75	0.00	0.00	0.00
62.50	0.00	0	63.75	0.00	0.00	0.00
65.00	0.00	0	63.75	0.00	0.00	0.00
67.50	0.00	0	63.75	0.00	0.00	0.00
70.00	0.00	0	63.75	0.00	0.00	0.00

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Metadata for Point

Smoothing	Yes
State	New Hampshire
Location	New Hampshire, United States
Latitude	43.198 degrees North
Longitude	70.871 degrees West
Elevation	10 feet
Date/Time	Wed Feb 05 2025 13:41:52 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2da
1yr	0.26	0.40	0.50	0.65	0.81	1.03	**1yr**	0.70	0.98	1.20	1.54	2.00	2.60	2.87	**1yr**	2.31	2.7
2yr	0.32	0.49	0.61	0.81	1.01	1.29	**2yr**	0.88	1.17	1.50	1.92	2.45	3.15	3.51	**2yr**	2.79	3.3
5yr	0.37	0.57	0.72	0.96	1.23	1.58	**5yr**	1.06	1.44	1.85	2.39	3.08	3.98	4.50	**5yr**	3.53	4.3
10yr	0.40	0.64	0.80	1.09	1.42	1.85	**10yr**	1.23	1.69	2.18	2.83	3.66	4.75	5.43	**10yr**	4.21	5.2
25yr	0.46	0.74	0.94	1.30	1.72	2.27	**25yr**	1.49	2.09	2.70	3.53	4.61	6.01	6.96	**25yr**	5.32	6.7
50yr	0.52	0.83	1.06	1.49	2.00	2.67	**50yr**	1.73	2.46	3.18	4.19	5.49	7.18	8.41	**50yr**	6.35	8.0
100yr	0.58	0.94	1.21	1.71	2.33	3.13	**100yr**	2.01	2.89	3.75	4.96	6.53	8.58	10.16	**100yr**	7.59	9.7
200yr	0.64	1.05	1.36	1.96	2.71	3.68	**200yr**	2.34	3.40	4.44	5.90	7.80	10.26	12.28	**200yr**	9.08	11.8
500yr	0.76	1.25	1.63	2.36	3.31	4.55	**500yr**	2.86	4.22	5.51	7.38	9.82	12.99	15.78	**500yr**	11.50	15.1

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2da
1yr	0.24	0.37	0.45	0.60	0.74	0.90	**1yr**	0.64	0.88	0.92	1.26	1.58	2.14	2.45	**1yr**	1.90	2.3

Soil Series	legend number	Ksat low - B in/hr	Ksat high - B in/hr	Ksat low - C in/hr	Ksat high - C in/hr	Hyd. Grp.	Group	Land Form	Temp.	Soil Textures	Spodosol ?	Other
Suffield	536	0.6	2.0	0.00	0.2	C	3	Sandy/loamy over silt/clay	mesic	silty over clayey	no	deep to clay C
Sunapee	168	0.6	2.0	0.60	6.0	B	3	Loose till, loamy textures	frigid	loamy	yes	
Sunapee var	269	0.6	2.0	0.60	6.0	B	3	Loose till, loamy textures	frigid	loamy	yes	frigid dystrudept
Suncook	2	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	mesic	sandy	no	occasionally flooded
Suncook	402	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	mesic	sandy	no	frequent flooding
Sunday	102	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	frigid	sandy	no	occasionally flooded
Sunday	202	6.0	20.0	6.00	20.0	A	1	Flood Plain (Bottomland)	frigid	sandy	no	frequently flooded
Surplus	669	0.6	2.0	0.00	0.6	C	3	Firm, platy, loamy till	cryic	loamy	yes	mwd, sandy loam in Cd
Sutton	68	0.6	6.0	0.60	6.0	B	3	Loose till, loamy textures	mesic	loamy	no	
Swanton	438	2.0	6.0	0.00	0.2	C	5	Sandy/loamy over silt/clay	frigid	co. loamy over clayey	no	
Telos	123	0.6	2.0	0.02	0.2	C	3	Firm, platy, silty till, schist & phyllite	frigid	loamy	yes	channery silt loam in Cd
Thorndike	84	0.6	2.0	0.60	2.0	C/D	4	Friable till, silty, schist & phyllite	frigid	loamy-skeletal	yes	less than 20 in. deep
Timakwa	393			6.00	100.0	D	6	Organic Materials - Freshwater	mesic	sandy or sandy-skeletal	no	organic over sand
Tunbridge	99	0.6	6.0	0.60	6.0	C	4	Loose till, bedrock	frigid	loamy	yes	20 to 40 in. deep
Unadilla	30	0.6	2.0	2.00	20.0	B	2	Terraces and glacial lake plains	mesic	silty	no	silty over gravelly
Vassalboro	150					D	6	Organic Materials - Freshwater	frigid	peat	no	deep organic
Walpole	546	2.0	6.0	6.00	20.0	C	5	Outwash and Stream Terraces	mesic	sandy	no	
Wareham	34	6.0	20.0	6.00	20.0	C	5	Outwash and Stream Terraces	mesic	sandy	no	
Warwick	210	2.0	6.0	20.00	100.0	A	1	Outwash and Stream Terraces	mesic	loamy-skeletal	no	loamy over slate gravel
Waskish	195					D	6	Organic Materials - Freshwater	frigid	peat	no	deep organic
Waumbeck	58	2.0	20.0	6.00	20.0	B	3	Loose till, sandy textures	frigid	sandy-skeletal	yes	very cobbly loamy sand
Westbrook	597			0.00	2.0	D	6	Tidal Flat	mesic	loamy	no	organic over loam
Whitman	49	0.0	0.2	0.00	0.2	D	6	Firm, platy, loamy till	mesic	loamy	no	mucky loam
Windsor	26	6.0	20.0	6.00	20.0	A	1	Outwash and Stream Terraces	mesic	sandy	no	
Winnecook	88	0.6	2.0	0.60	2.0	C	4	Friable till, silty, schist & phyllite	frigid	loamy-skeletal	yes	20 to 40 in. deep
Winooski	9	0.6	6.0	0.60	6.0	B		Flood Plain (Bottom Land)	mesic	silty over loamy	no	
Winooski	103	0.6	6.0	0.60	6.0	B	3	Flood Plain (Bottom Land)	mesic	silty	no	very fine sandy loam
Wonsqueak	995			0.20	2.0	D	6	Organic Materials - Freshwater	frigid	loamy	no	organic over loam
Woodbridge	29	0.6	2.0	0.00	0.6	C	3	Firm, platy, loamy till	mesic	loamy	no	sandy loam in Cd
Woodstock	93	2.0	6.0	2.00	6.0	C/D	4	Loose till, bedrock	frigid	loamy	no	less than 20 in. deep

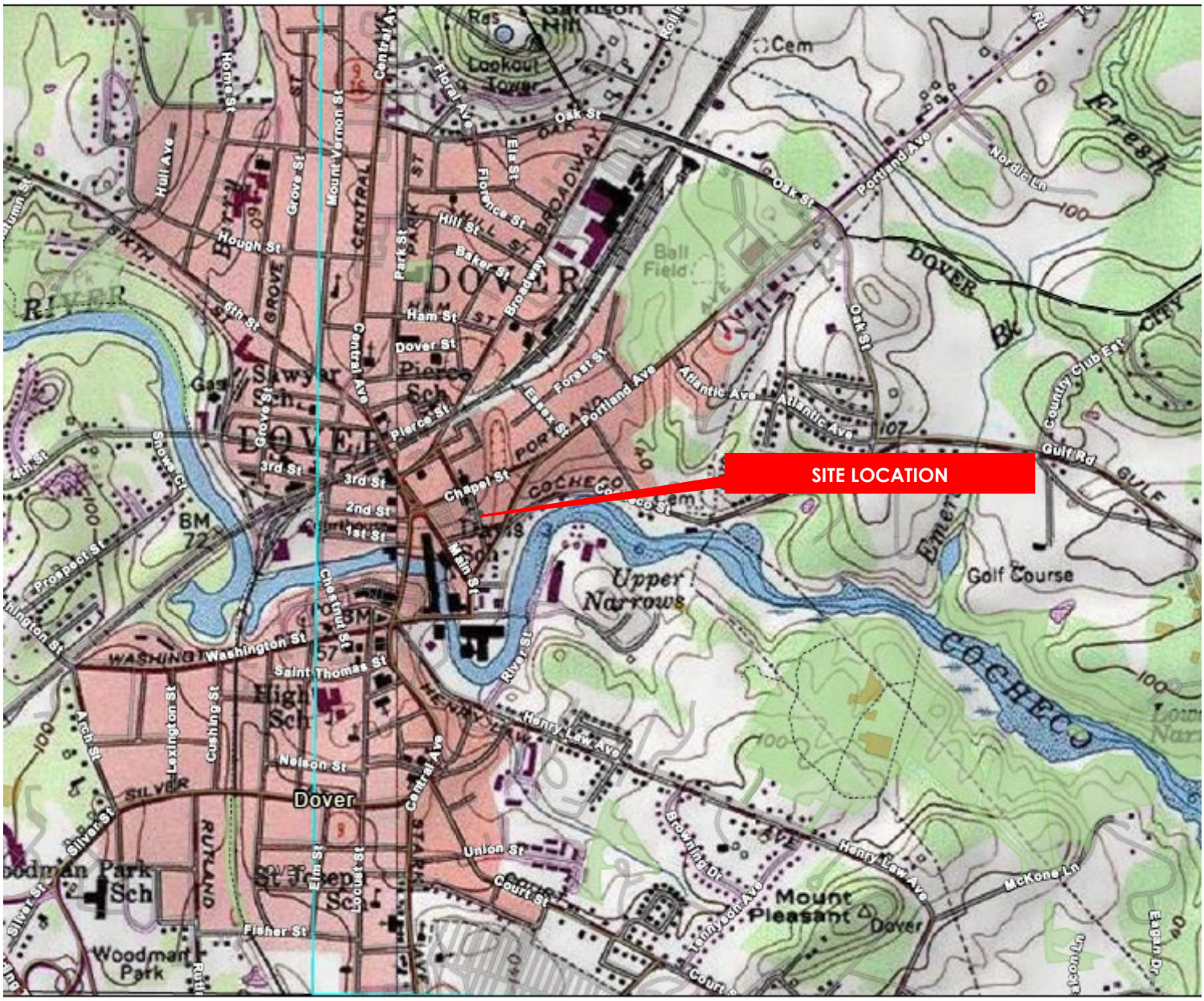
no longer recognized

organic materials

MAPS

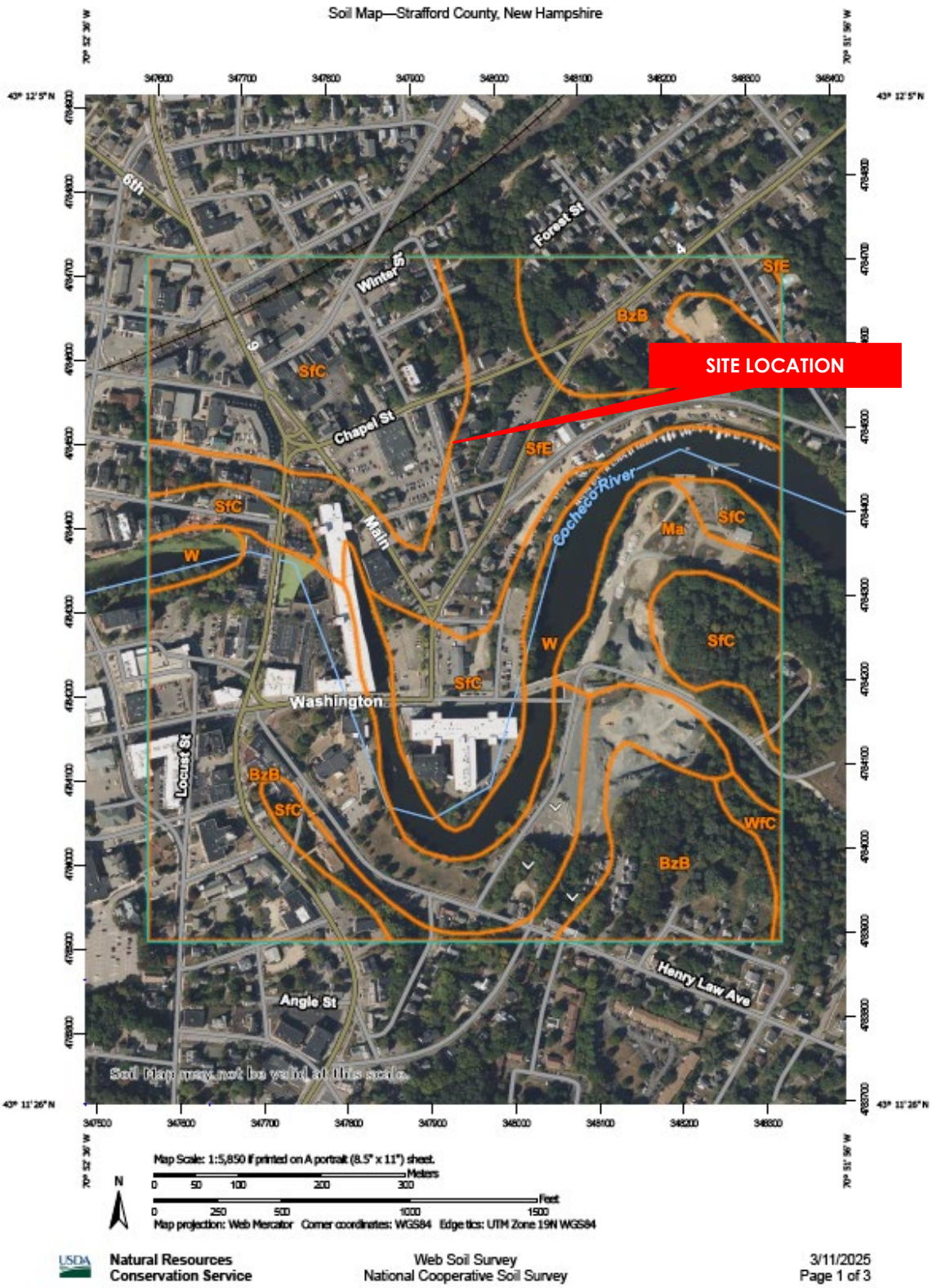
USGS LOCUS
SCS SOILS
FEMA
CS 9201 PRE-DEVELOPMENT DRAINAGE
CS 9301 POST DEVELOPMENT DRAINAGE

NH Topo Maps



Source: Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Executive Office of Environmental Affairs; USGS Topographic Quadrangle Images

USGS MAP
9-11 MECHANIC ST DOVER, NH
MAP 24 LOT 101



Source: USDA Natural Resources Conservation Service

SOILS MAP
9-11 Mechanic Street Dover, NH 03820
Map 24 Lot 101

Approximate location based on user input and does not represent an authoritative property location

Selected FloodMap Boundary

Digital Data Available

No Digital Data Available

Unmapped

Area of Minimal Flood Hazard Zone X

Effective LOMRs

Area of Undetermined Flood Hazard Zone D

Otherwise Protected Area

Coastal Barrier Resource System Area

SPECIAL FLOOD HAZARD AREAS

Without Base Flood Elevation (BFE) Zone A, V, A99

With BFE or Depth

Regulatory Floodway Zone AE, AO, AH, VE, AR

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 FEATURES

20.2 Cross Sections

17.5 Water Surface

Coastal Transe

Base Flood Ele

Limit of Study

Jurisdiction Bo

Coastal Transe

Profile Baselin

Hydrographic I

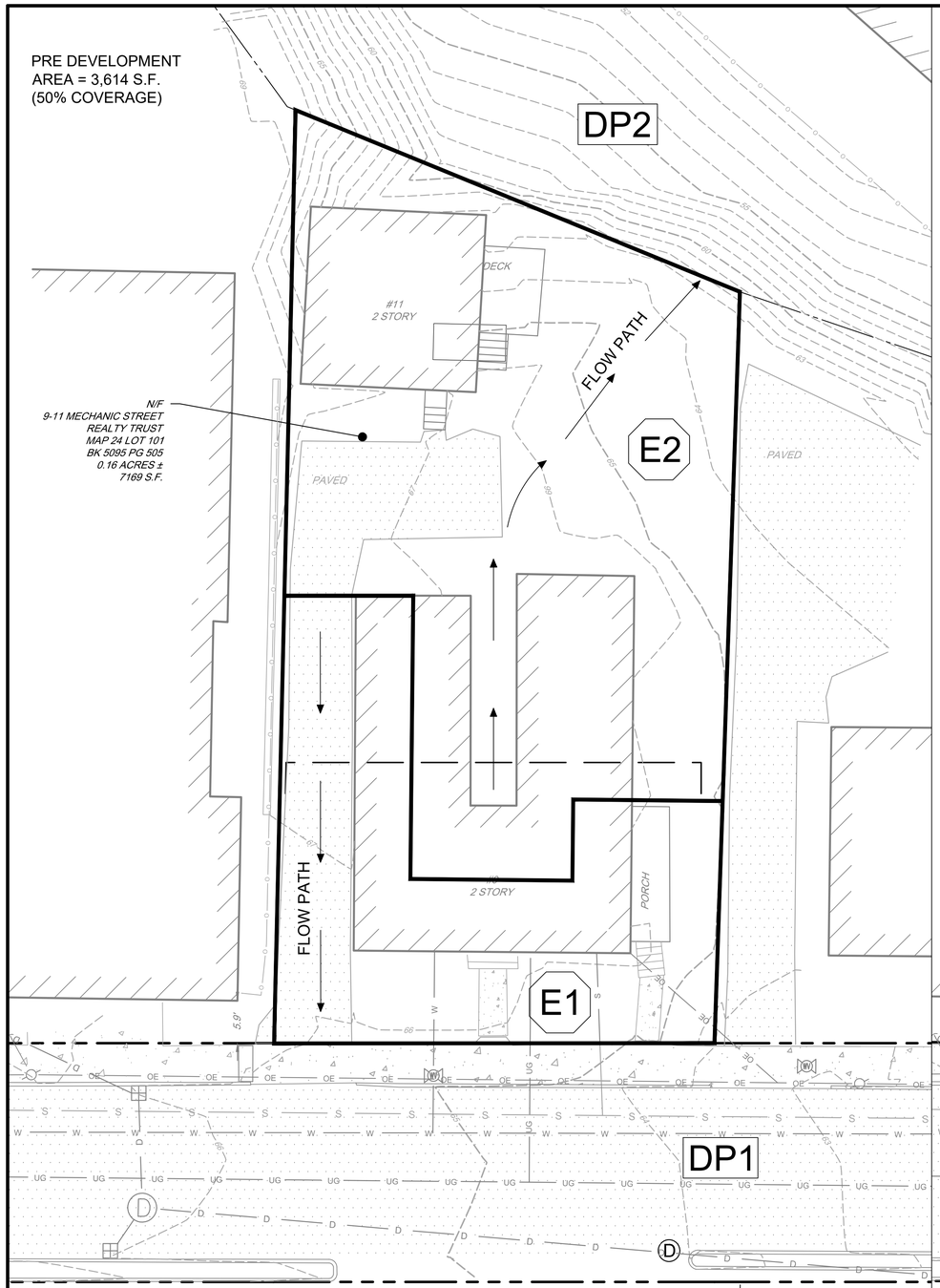
GENERAL STRUCTURES

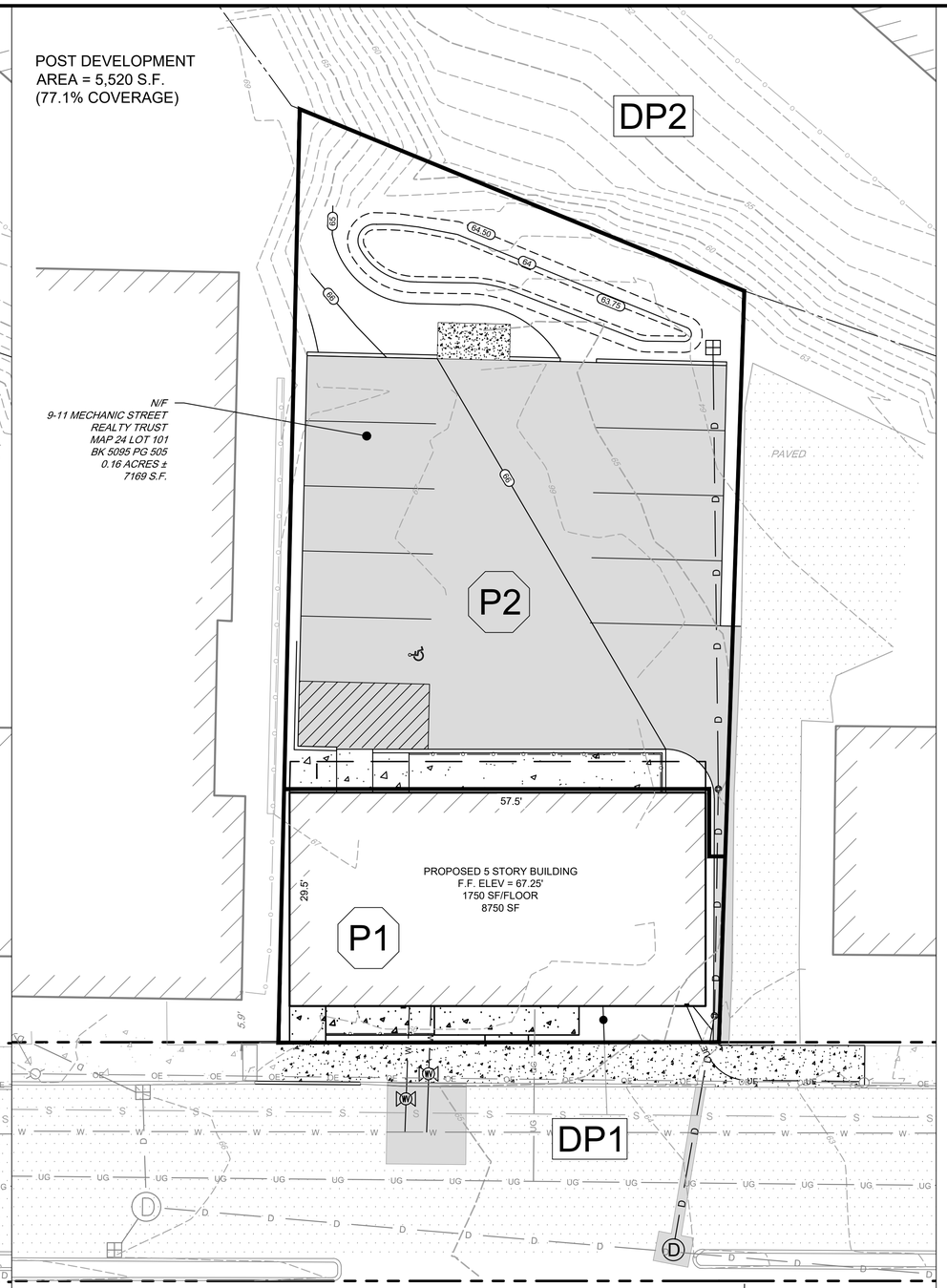
Channel, Culve

Levee, Dike, or

Source: Official Website of the Department of Homeland Security FEMA

FEMA MAP
9-11 MECHANIC ST DOVER, NH
Map 24 Lot 101





POND AREAS	
ELEVATION	SQ.FT
64.5	398
64	235
63.75	161.4

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

PRE & POST DEVELOPMENT DRAINAGE PLAN
CS9201

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12260
LICENSED
PROFESSIONAL ENGINEER

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE:	SCALE:	SHEET 11 OF 11
2025-04-03	1" = 10'	

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SITE PLAN

9-11 MECHANIC STREET

ASSESSOR'S MAP 24 LOT 101

DOVER, NH 03820

DATE: APRIL 3, 2025

PREPARED FOR:

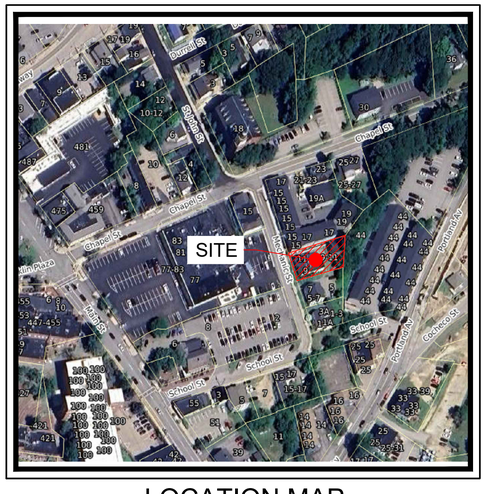
MECHANIC STREET REALTY TRUST

23A MIDDLE STREET

NEWBURYPORT, MA 01950

INDEX OF DRAWINGS

SHEET NO.	DWG NO.	DRAWING TITLE
1.	CS0001	COVER SHEET
2.	CS0201	EXISTING CONDITIONS PLAN
3.	CS0501	DEMOLITION PLAN
4.	CS1001	LAYOUT AND MATERIALS
5.	CS1501	GRADING & DRAINAGE PLAN
6.	CS1601	UTILITY PLAN
7.	CS1701	LANDSCAPE AND LIGHTING PLAN
8.	CS6001	SITE DETAILS
9.	CS6011	DRAINAGE DETAILS
10.	CS7001	EROSION CONTROL PLAN AND DETAILS
11.	CS9201	PRE & POST DEVELOPMENT DRAINAGE PLAN



LOCATION MAP
N.T.S.

PREPARED BY:

RANGER ENGINEERING GROUP, INC

Ranger Engineering Group, Inc.

130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12050
LICENSED
PROFESSIONAL ENGINEER
4/3/25

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,
ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

COVER SHEET
CS0001

Ranger Engineering Group, Inc.

130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: | SHEET 1 OF 11

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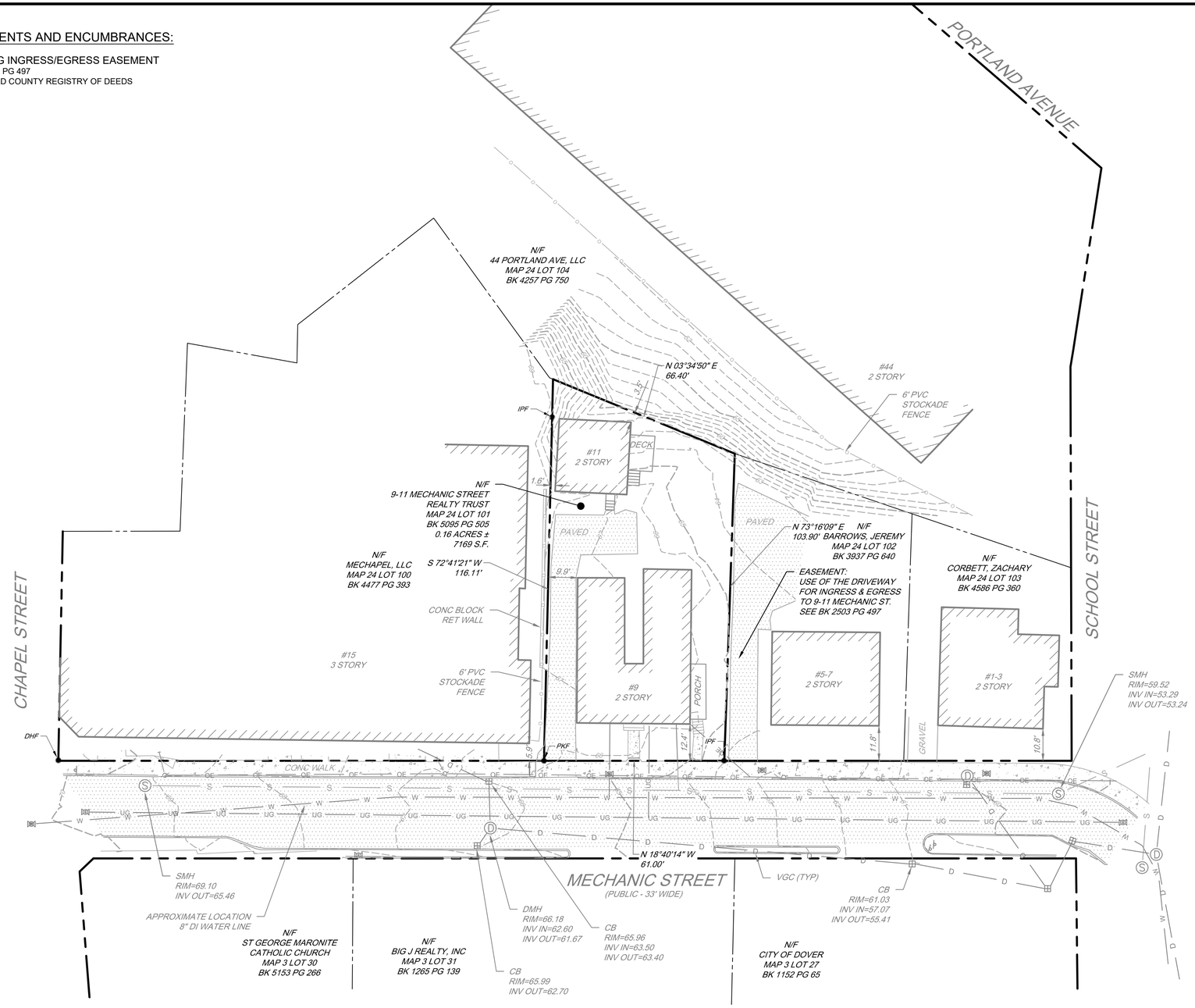
EASEMENTS AND ENCUMBRANCES:

EXISTING INGRESS/EGRESS EASEMENT
BOOK 2503 PG 497
STRAFFORD COUNTY REGISTRY OF DEEDS



LEGEND

EXISTING

	BUILDING
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	WOOD FENCE
	CONCRETE
	BIT. CONC. PAVEMENT
	SIGN
50	CONTOUR
W W	WATER LINE DOMESTIC
S S	SANITARY SEWER
D D	STORM SEWER
OE OE	OVERHEAD ELECTRIC
UG UG	UNDERGROUND GAS
	UTILITY POLE
S	SANITARY MANHOLE
D	STORM DRAIN MANHOLE
	STORM DRAIN INLET
	FIRE HYDRANT
	WATER VALVE
	GAS VALVE

NOTES:

1. THE INTENT OF THIS PLAN IS TO REDEVELOP THE LOT IN DOVER NH KNOWN AS 9-11 MECHANIC STREET
2. OWNERS OF RECORD ARE: 9-11 MECHANIC STREET
   REALTY TRUST , BEN LEGARE, TRUSTEE
   NEWBURYPORT, MA 01950

   _____
   AUTHORIZED SIGNATURE
3. THE PARCEL IS SHOWN AS LOT NO. 101, MAP 24 OF THE CITY OF DOVER TAX ASSESSOR'S MAPS
4. THE SUBJECT PARCEL CONTAINS 0.16 ACRES OR 7169 SQ. FT. AREA OF LAND
5. TITLE REFERENCE FOR THE PROJECT PARCEL IS THE STRAFFORD COUNTY REGISTRY OF DEEDS, BOOK NO. 5095 PAGE NO. 505
6. REFERENCE PLANS: BOOK NO. 108 PAGE NO. 3 STRAFFORD COUNTY REGISTRY OF DEEDS

   "LAND OF JASON, JAMES III, & KEVIN WOOD & JOLEEN FERNALD FOR CHANGING PLACES, LLC. MECHANIC AND CHAPEL STREETS, DOVER NH. TAX MAP 24, LOTS 98, 99, 100."
   FILED AT THE DOVER NH ENGINEERING DEPARTMENT
7. THE USE OF DRIVEWAY EASEMENT IS REFERENCED IN A DEED AT BOOK 2503 PG 497.
8. CURRENT ZONING DIMENSIONAL AND DENSITY REQUIREMENTS IN EFFECT ARE AS FOLLOWS:

	REQUIRED:	PROVIDED:
a.	ZONING DISTRICT CBD SUB-DISTRICT G	ZONING DISTRICT CBD SUB-DISTRICT G
b.	MINIMUM LOT SIZE: N/A	LOT SIZE: 0.16 ACRES
c.	MINIMUM LOT FRONTAGE: N/A	LOT FRONTAGE: 61.00'
d.	MINIMUM YARD SETBACKS/BUILD-TO-LINES:	
	FRONT: 10' +/- 5'	FRONT: 5'
	SIDE: 0' MIN - 24' MAX	SIDE: 0.8'
	REAR: 10' MIN	REAR: 66.75'
	ABUT-A-STREET: N/A	ABUT-A-STREET: N/A
e.	MINIMUM LOT COVERAGE: 75%	LOT COVERAGE:70%
f.	MAXIMUM BLDG. HEIGHT: 5 STORIES	BLDG. HEIGHT: 5 STORIES

9. VARIANCES OR SPECIAL EXCEPTIONS GRANTED BY THE ZONING BOARD OF ADJUSTMENT OR CONDITIONAL USE PERMITS GRANTED BY THE PLANNING BOARD, INCLUDING CASE#, DATE, AND ANY CONDITIONS
10. PROPERTY LINE INFORMATION HAS BEEN OBTAINED FROM A SURVEY PERFORMED BY RANGER ENGINEERING GROUP, INC. ON 12/16-17/2024 WITH AN ERROR NOT GREATER THAN 1 IN 10,000.
11. SUBJECT PARCEL IS NOT LOCATED WITHIN A FEDERALLY DESIGNATED FLOOD HAZARD AREA (COMMUNITY PANEL #33017C0330E, EFFECTIVE DATE: SEPTEMBER 30, 2015).
12. THERE ARE NO WETLANDS LOCATED ON THIS PROPERTY.
13. TOPOGRAPHIC SURVEY PERFORMED BY RANGER ENGINEERING GROUP, INC. ON 12/16-17/2024.
14. ELEVATIONS ARE BASED ON U.S.G.S. NVD 1988 DATUM.
15. AS-BUILT PLANS OF THE CONSTRUCTION SHALL BE SUBMITTED ON PAPER AND IN DIGITAL FORMAT AUTOCAD DWG, AUTOCAD DXF OR ESRI FORMAT TO THE CITY OF DOVER ENGINEER'S OFFICE UPON COMPLETION OF PROJECT.

NAD 83
NORTH

0 20' 40'
GRAPHIC SCALE 1" = 20'

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12060
LICENSED
PROFESSIONAL ENGINEER
7/2/25

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

EXISTING CONDITIONS PLAN
CS0201

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: 1" = 20' | SHEET 2 OF 11

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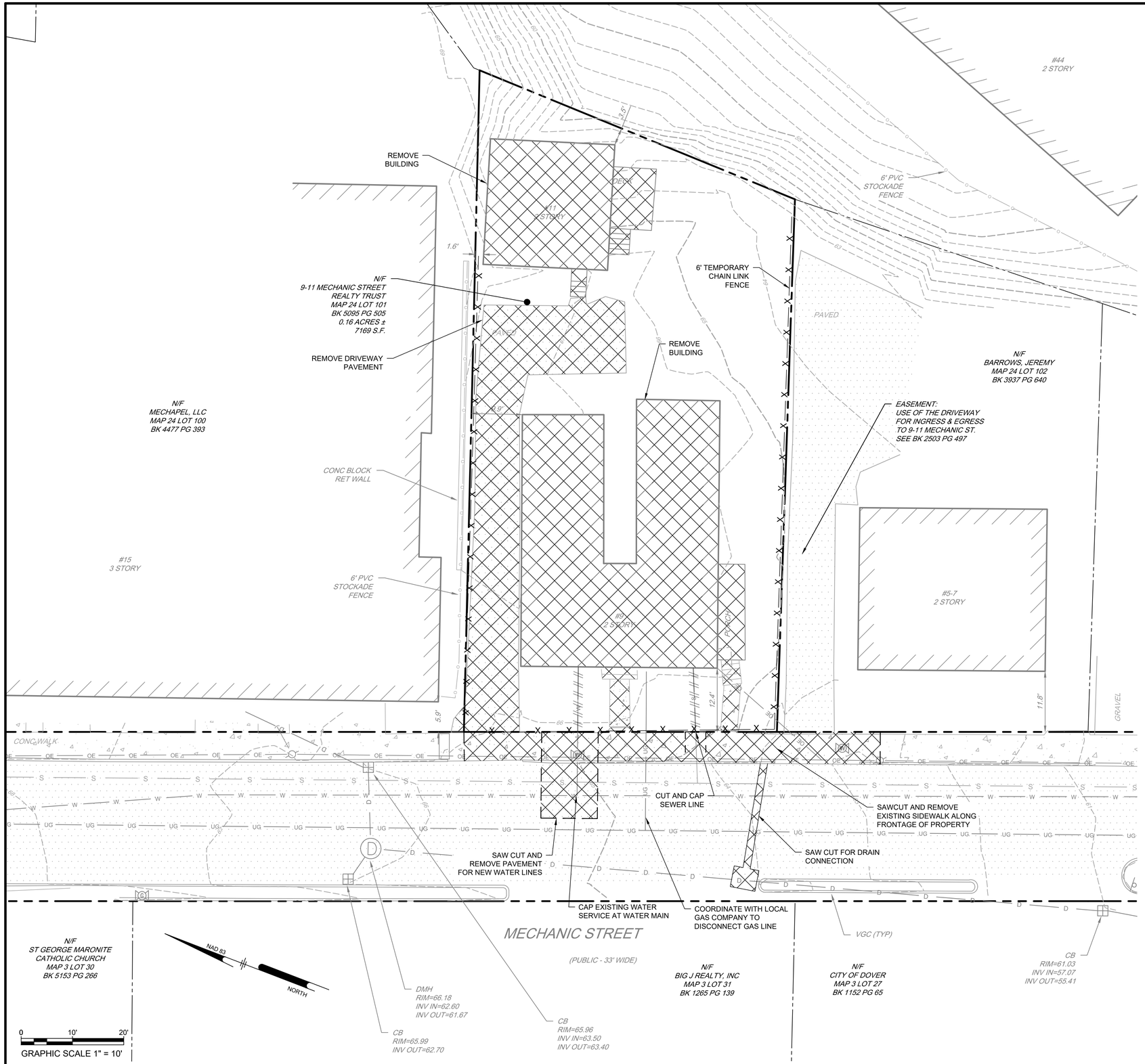
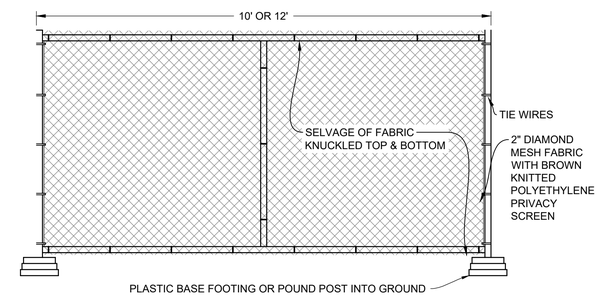


LEGEND

DEMOLITION AREA

DEMOLITION NOTES:

1. STRUCTURE SHALL BE INSPECTED TO DETERMINE IF THERE IS ASBESTOS OR ANY OTHER HAZARDOUS MATERIAL PRESENT IN THE STRUCTURES. ANY HAZARDOUS MATERIAL SHALL BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR AND DISPOSED OF AT A LICENSED DISPOSAL FACILITY.
2. STRUCTURES SHALL BE INSPECTED FOR THE PRESENCE OF RODENTS WHICH SHALL BE REMOVED PRIOR TO DEMOLITION ACTIVITIES.
3. UTILITIES SHALL BE TURNED OFF, DISCONNECTED OR CUT AND CAPPED PRIOR TO DEMOLITION.
4. TEMPORARY CHAIN LINK FENCE SHALL BE INSTALLED PRIOR TO DEMOLITION.
5. WASTE MATERIALS SHALL BE DEPOSITED IN COVERED CONTAINERS AND REMOVED TO BE DISPOSED OF AT A LICENSED DISPOSAL FACILITY.



NOTE:

1. GATES AND HARDWARE TO BE AS PER MANUFACTURER'S SPECIFICATION. SUBMIT MANUFACTURER'S LITERATURE FOR APPROVAL.

1 6' TEMPORARY CHAIN LINK FENCE
NOT TO SCALE

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

DEMOLITION PLAN
CS0501

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12050
LICENSED
PROFESSIONAL ENGINEER
7/2/25

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: 1" = 10' | SHEET 3 OF 11

PLOTTED: 4/3/2025 12:36 PM, BY: Bakinghoyt PLOTSTYLE: — PROJECT STATUS: —
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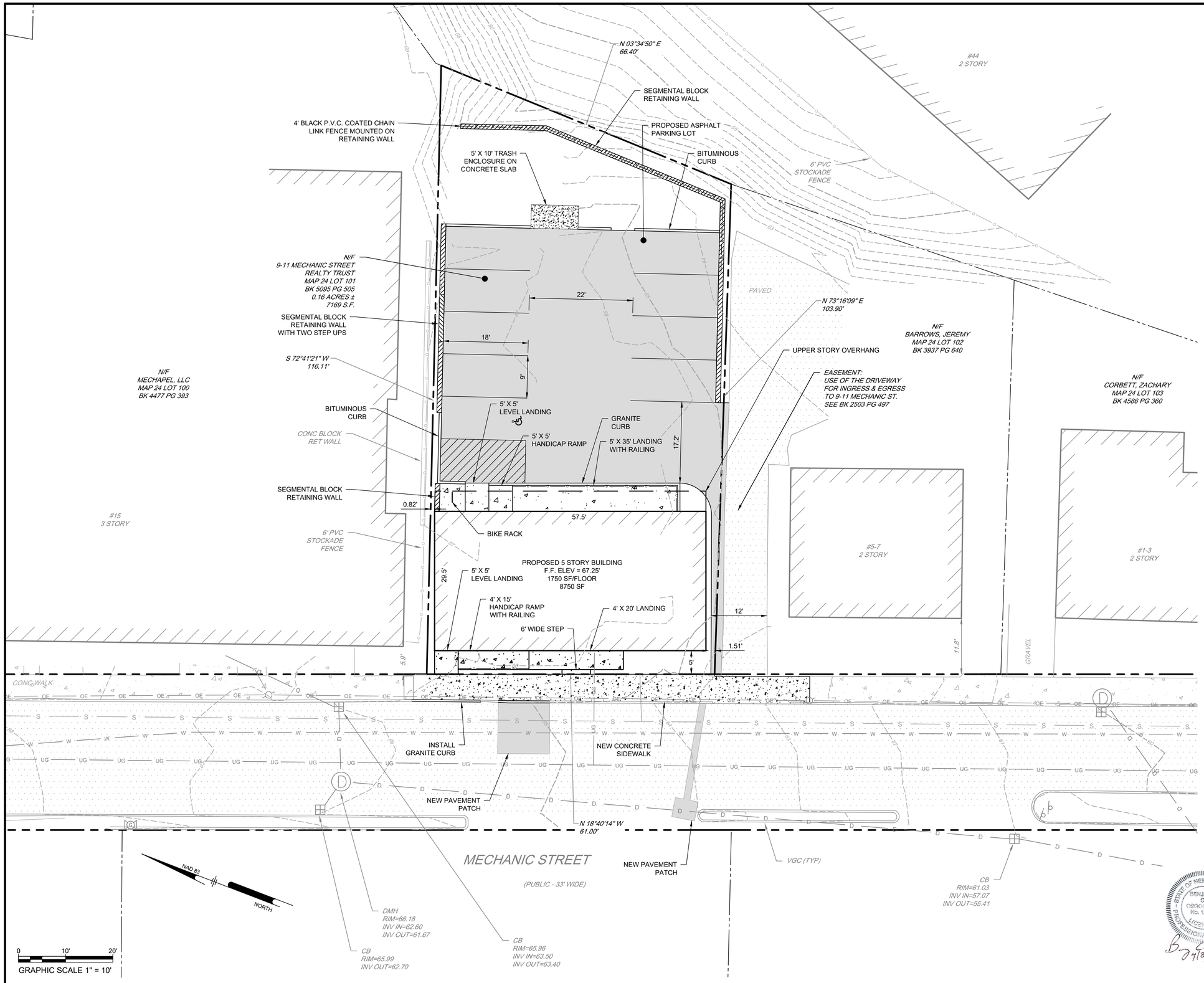

NOTES:

1. THE INSTALLATION OF ELECTRIC POWER, CABLE TELEVISION AND TELEPHONE LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE FOR WHICH DEVELOPMENT IS PROPOSED.
2. THE SUBJECT PARCEL IS SERVED BY MUNICIPAL WATER AND SEWER.
3. ALL CONSTRUCTION SHALL CONFORM WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND WITH THE CITY OF DOVER COMMUNITY SERVICES REGULATIONS AND STANDARD SPECIFICATION FOR CONSTRUCTION. THE MORE STRINGENT SPECIFICATION SHALL APPLY.
4. ALL EROSION CONTROL NOTES SHALL INCLUDE PROVISIONS FOR CONSTRUCTION SEQUENCING, TEMPORARY EROSION CONTROL MEASURES, AND PERMANENT STANDARDS SUCH AS LOAM SPREAD RATE FOR DISTURBED AREAS, RATES OF LIME, TYPE AND RATES OF FERTILIZER, AND SEED AND MULCH MIXTURE WITH RATES OF APPLICATION.
5. THE LIMITS OF CONSTRUCTION DISTURBANCE THAT ARE LOCATED IN OR WITHIN THE 50 FT. OF CONSERVATION AND WETLAND DISTRICTS SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR ANY EARTH DISTURBING ACTIVITY OCCURS.
6. ALL TREATMENT SWALES TO BE CONSTRUCTED SHALL HAVE SOD BOTTOMS.
7. A LETTER OF CREDIT FOR THE COST OF REVEGETATING ALL DISTURBED AREAS ON THE SITE SHALL BE SUBMITTED, AND THE APPROVED CONSTRUCTION SIGN INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITY OCCURRING.
8. A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE CITY ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
9. SITE CONSTRUCTION HOURS SHALL BE LIMITED TO MONDAY-FRIDAY 7 AM - 6 PM, SATURDAY AND SUNDAY 9 AM - 4 PM. HOURS OF CONSTRUCTION MUST BE DOCUMENTED ON A SITE CONSTRUCTION SIGN ALONG WITH THE CONTACT INFORMATION FOR THE GENERAL CONTRACTOR. SAID SIGNAGE MUST BE LOCATED AND APPROVED BY THE CITY ENGINEER OR PLANNING DIRECTOR.
10. BUILDING ADDRESSES (INCLUDING APT/UNIT NUMBERS IF APPLICABLE) SHALL BE ASSIGNED BY THE BUILDING OFFICIAL AT THE TIME OF ISSUANCE OF A BUILDING PERMIT.
11. THE PROPOSED USE FOR THE SITE IS 90% RESIDENTIAL, 10% COMMERCIAL.
12. NO FEDERAL/STATE PERMITS HAVE BEEN ISSUED FOR THE SUBJECT PROPERTY AND NONE ARE REQUIRED.
13. COMMERCIAL VEHICLE ROUTE DURING CONSTRUCTION SHALL CONFORM TO DOVER CITY CODE OR BE COORDINATED WITH THE COMMUNITY SERVICES DIRECTOR.
14. ANY RETAINING WALL TALLER THAN FOUR FEET REQUIRES ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
15. ANY FENCE TALLER THAN SEVEN FEET REQUIRES THE ISSUANCE OF A BUILDING PERMIT FROM INSPECTION SERVICES.
16. APPLICANT SHALL COMPLETE LAND USE DEVELOPMENT TRACKING FORM, MOST RECENTLY REVISED VERSION, UTILIZING THE ONLINE POLLUTION TRACKING AND ACCOUNTING PILOT PROJECT (PTAPP) PORTAL.
17. THE OWNER OF RECORD SHALL RECORD AT THE REGISTRY OF DEEDS DOCUMENTATION SUFFICIENT TO PROVIDE NOTICE TO ALL PERSONS/ENTITIES THAT MAY ACQUIRE ANY PROPERTY SUBJECT TO THE REQUIREMENTS AND RESPONSIBILITIES DESCRIBED IN THE APPROVED STORMWATER MANAGEMENT PLAN. THE NOTICE SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS FOR RECORDING CONTAINED IN RSA 477 & 478. THE NOTICE NEED NOT SET FORTH THE REQUIREMENTS AT LENGTH, SO LONG AS IT IS SUFFICIENT TO PROVIDE NOTICE TO PROSPECTIVE PURCHASERS TO THE REQUIREMENTS FOR MAINTENANCE AND REPORTING.
18. FIRE DEPARTMENT ACCESS ROADS SHALL BE INSTALLED AND MAINTAINED TO SUPPORT THE IMPOSED LOADS OF FIRE APPARATUS IN ALL WEATHER CONDITIONS AT ALL TIMES.
19. (9 UNITS X 1.25 PER UNIT) + (9 UNITS * 0.4 VISITOR SPACES PER UNIT) + 4 SPACES FOR 1200 S.F. OF COMMERCIAL SPACE = 19 SPACES REQUIRED AND 9 SPACES PROVIDED.
20. EXTERIOR LIGHTING SHALL BE CUT-OFF TYPE FIXTURES PER CHAPTER 153-14-E AND SHALL PROVIDE LIGHTING DIRECTED ON-SITE ONLY.

DATE	NO.	REVISIONS	BY

SITE PLAN

9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

LAYOUT & MATERIALS
CS1001

Ranger Engineering Group, Inc.

130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12060
LICENSED
PROFESSIONAL ENGINEER

DATE:	SCALE:	SHEET 4 OF 11
2025-04-03	1" = 10'	

PROJECT STATUS: —
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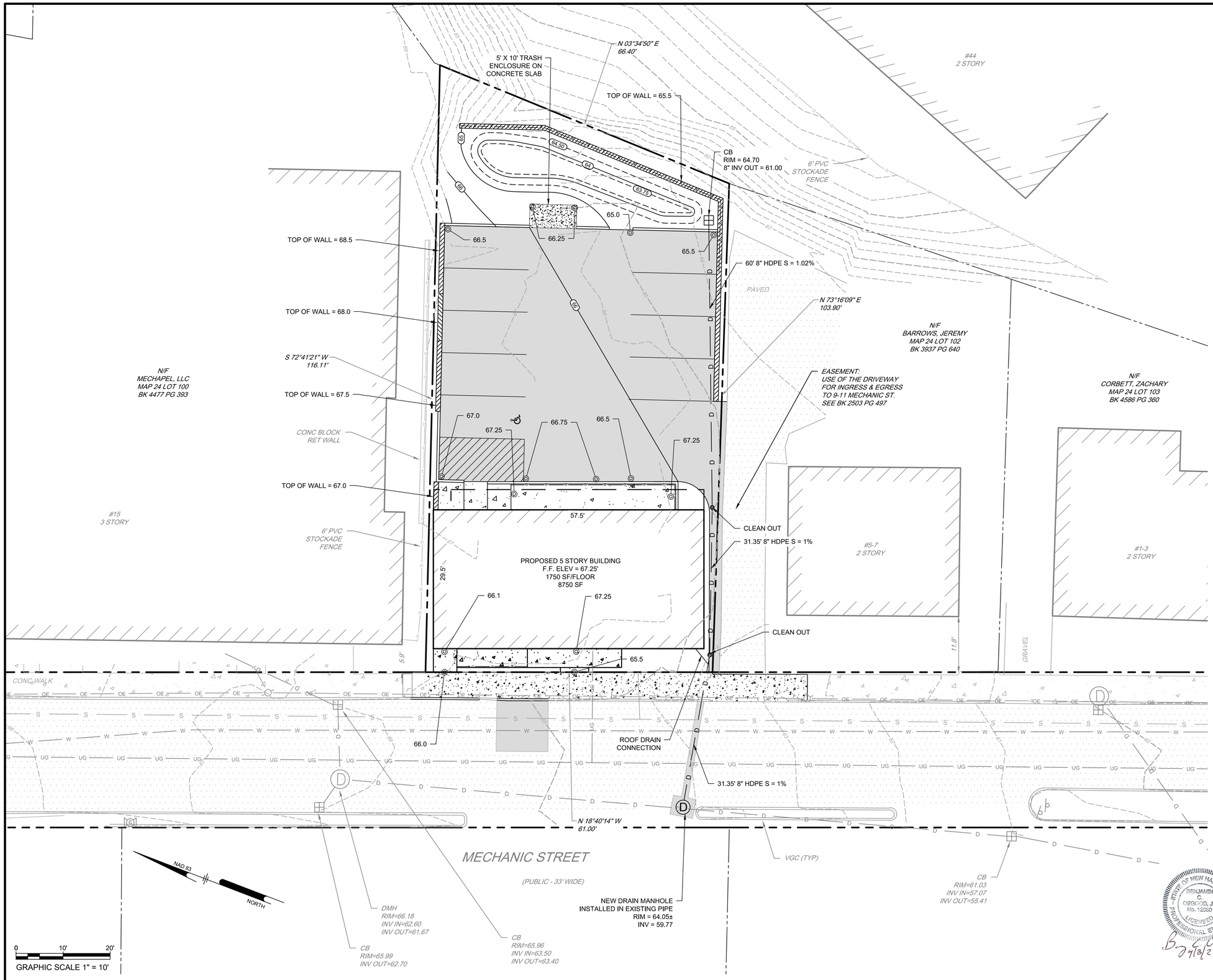


LEGEND

EXISTING		PROPOSED
	BUILDING	
	PROPERTY LINE	
	RIGHT-OF-WAY LINE	
	ADJACENT PROPERTY LINE	
	WOOD FENCE	
	CONCRETE	
	BIT. CONC. PAVEMENT	
	SIGN	
50	CONTOUR	100
W W	WATER LINE DOMESTIC	W W
S S	SANITARY SEWER	
D D	STORM SEWER	D D
OE OE	ELECTRIC LINE	UE UE
UG UG	UNDERGROUND GAS	
	UTILITY POLE	
S	SANITARY MANHOLE	
D	STORM DRAIN MANHOLE	D
	STORM DRAIN INLET	
	STORM DRAIN CLEANOUT	
	FIRE HYDRANT	
	WATER VALVE	
	GAS VALVE	

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

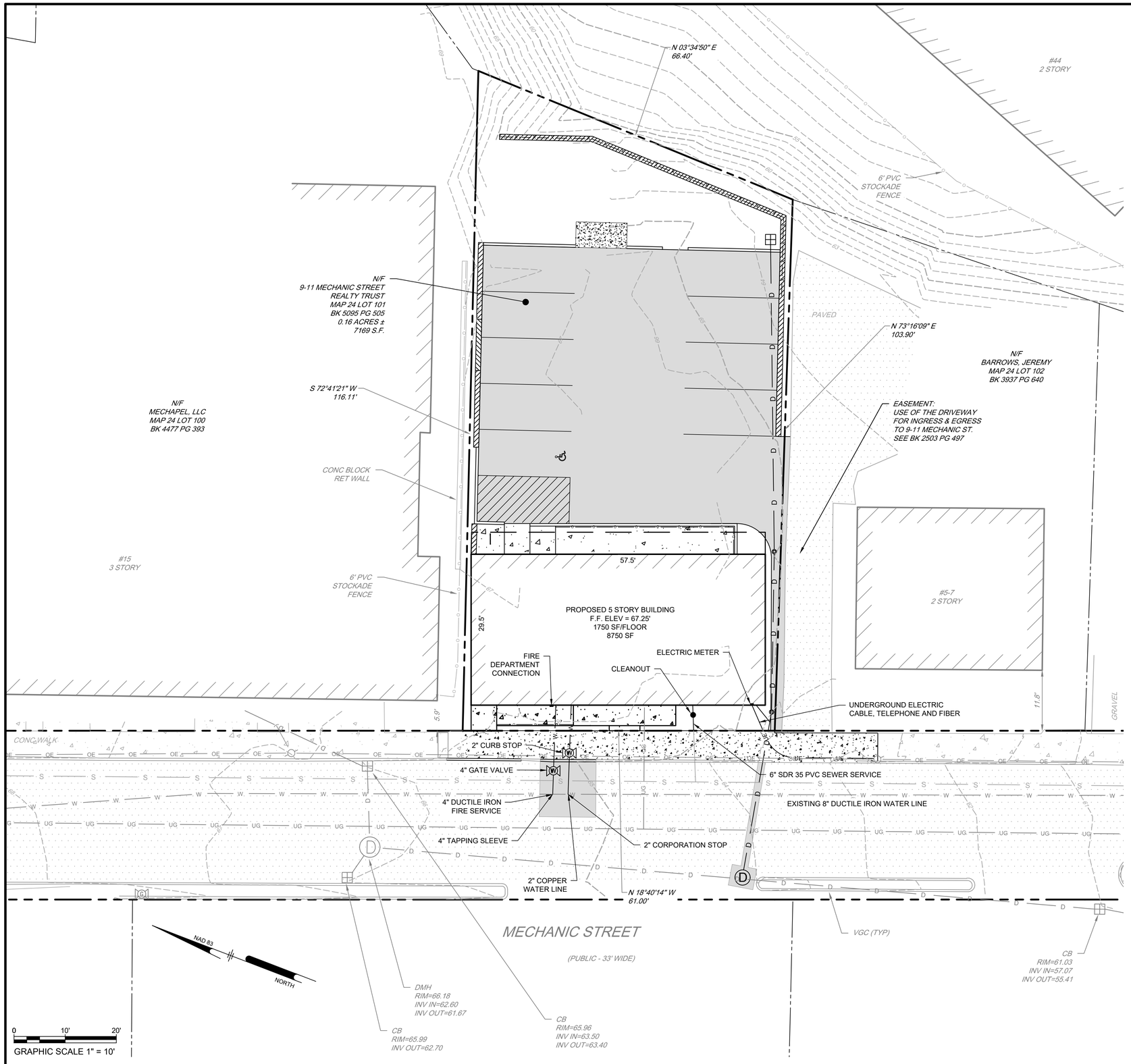
GRADING & DRAINAGE PLAN
CS1501

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12060
LICENSED PROFESSIONAL ENGINEER
5/7/25

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: 1" = 10' | SHEET 5 OF 11

PROJECT STATUS: — PLOTSTYLE: — PLOTTED: 4/3/2025 5:19 PM, BY: Bianghinghui
C:\Users\Bianghinghui\OneDrive - Hidrovance Private Limited\01 Input\2025\week 14 (31-4th apr\S250403\24-402\9-11 MECHANIC STREET\DESIGN\PUBLISH\S_CS1501.dwg



NOTES:

1. A SECURITY SYSTEM SHALL BE INSTALLED AS REQUIRED BY CHAPTER 45, ARTICLE I, SECTION 45-2 OF THE CODE OF THE CITY OF DOVER.
2. APPROVED BACKFLOW PREVENTERS SHALL BE PROVIDED FOR BOTH FIRE AND DOMESTIC WATER LINES.
3. THE PROPOSED STRUCTURE SHALL BE SERVED BY A SPRINKLER SYSTEM AS REQUIRED BY CHAPTER 81 - 30 OF THE CODE OF THE CITY OF DOVER AND THE ADOPTED STATE OF NH BUILDING AND FIRE CODES.
4. SPRINKLER CONNECTIONS MUST BE FLUSHED IN ACCORDANCE WITH NFPA 24 AND A CONTRACTOR'S MATERIAL AND TEST CERTIFICATE FOR UNDERGROUND PIPING FORM MUST BE COMPLETED AND APPROVED BY INSPECTION SERVICES PRIOR TO CONNECTION O F THE BACKFLOW DEVICE.
5. FIRE DEPARTMENT CONNECTION SHALL BE LOCATED ON THE STREET SIDE OF THE BUILDING PER NFPA 13. ACCESS TO THE FDC SHALL MAINTAIN A CLEAR AND UNOBSTRUCTED PATH AT ALL TIMES.
6. THE SITE LAYOUT IS DESIGNED IN COMPLIANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS. THE PROPOSED STRUCTURE WILL ALSO BE DESIGNED IN ACCORDANCE WITH APPLICABLE ACCESSIBILITY REGULATIONS (I.E. IBC, ANSI-117.1) AND NH RSA 155-A:5.
7. THE PURPOSE OF THIS PLAN IS TO DEMONSTRATE THE OVERVIEW OF PUBLIC UTILITIES WITHIN THE SITE PLAN.
8. UNDERGROUND UTILITY LOCATIONS ARE BASED UPON BEST AVAILABLE EVIDENCE AND ARE NOT FIELD VERIFIED. LOCATING AND PROTECTING ANY ABOVE AND BELOW GROUND UTILITIES IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY UTILITY CONFLICTS SHOULD BE REPORTED IMMEDIATELY TO THE DESIGN ENGINEER.
9. THE CONTRACTOR SHALL CALL AND COORDINATE WITH DIGSAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO COMMENCING ANY EXCAVATION ON PUBLIC OR PRIVATE PROPERTY.
10. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED .TO MAINTAIN STABLE, DEWATERED SUBGRADES, TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE, PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING. STRUCTURAL FILL MEETING THE ENGINEERS SPECIFIC RECOMMENDED CRITERIA.
11. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER (NOT ALLOWED IN CITY R.O.W.), EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY OF OPERATION. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
12. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION. VOIDS BETWEEN STONES AND CLUMPS OF MATERIAL SHALL BE FILLED WITH FINE MATERIALS.
13. FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES AND DOVER DPW.
14. CONTRACTOR TO CONTACT DOVER DPW A MINIMUM OF TWO WEEKS PRIOR TO ANY CONSTRUCTION TO COORDINATE ALL WORK CONCERNING THE INSTALLATION OF ANY PROPOSED WATER LINE IMPROVEMENTS.
15. ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL CONFORM TO CITY OF DOVER STANDARDS. ALL HIGHWAY CONSTRUCTION WILL MEET THE CITY OF DOVER STANDARDS AS MODIFIED BY WAIVER REQUEST AT THE PLANNING BOARD.
16. CONTRACTOR SHALL COORDINATE ALL ELECTRICAL INSTALLATIONS WITH EVERSOURCE AT (800) 662-7764.ALL ELECTRIC CONDUIT INSTALLATION SHALL BE INSPECTED BY EVERSOURCE PRIOR TO BACKFILL. A 48 HOUR MINIMUM NOTICE IS REQUIRED.
17. ALL SEWER INSTALLATIONS SHALL CONFORM TD THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS.
18. CONTRACTOR SHALL COORDINATE ALL TELECOMMUNICATIONS INSTALLATIONS WITH FAIRPOINT COMMUNICATIONS AT (603) 427-5525.
19. CONTRACTOR SHALL COORDINATE ALL CABLE INSTALLATIONS WITH COMCAST.
20. ALL SEWER MANHOLE RIMS & COVERS ARE TO BE PAMREX.
21. ALL WATER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED BLUE. ALL SEWER SERVICES ARE TO BE WITNESSED WITH A 2"X4" PAINTED YELLOW, IF STUBBED PRIOR TO BUILDING CONSTRUCTION.
22. ALL WATER SHUT OFF VALVES LOCATED WITHIN PAVED AREAS ARE TO BE PLACED IN GATE BOXES.
23. GAS LINES AND METER LOCATIONS ARE TO BE COORDINATED 'MTH UNITIL AND THE CITY OF DOVER BUILDING DEPARTMENT.
24. ALL SEWER INSTALLATIONS SHALL CONFORM TO THE REQUIREMENTS OF NHDES & DOVER DPW SEWER DIVISION STANDARDS, ALL PVC SEWER PIPE IS TO CONFORM WITH ENV-WQ 704.0S(c)(e).

SEWER FLOW CALCULATIONS

RESIDENTIAL FLOW
8 TWO BEDROOM UNITS@ 150 GPD/BEDROOM = 2400 GALLONS
1 ONE BEDROOM UNIT @ 150 GPD/BEDROOM = 150 GALLONS

COMMERCIAL FLOW
4 EMPLOYEES @10 GPD/EMPLOYEE = 40 GALLONS

TOTAL DAILY FLOW = 2,590 GALLONS PER DAY

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

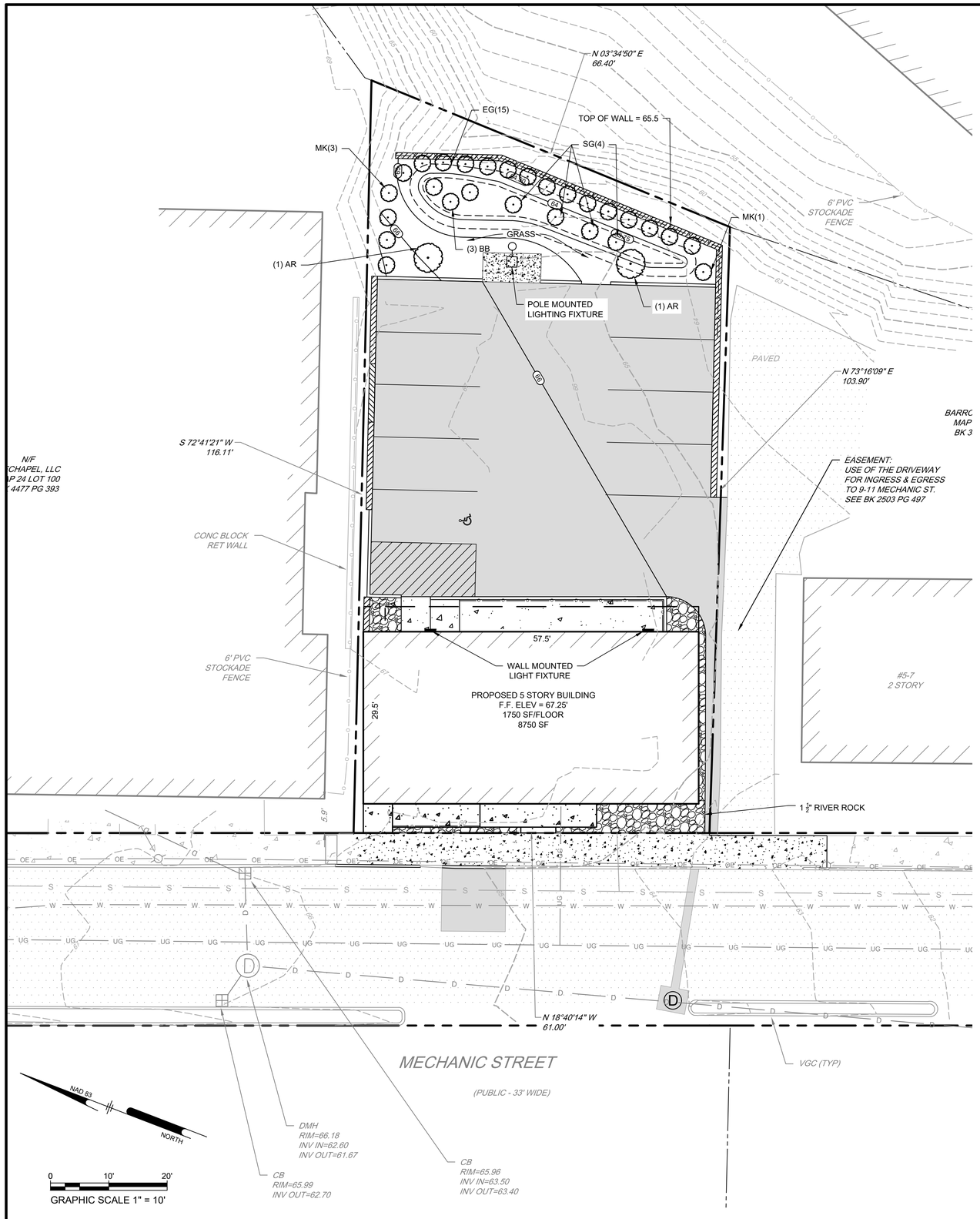
UTILITY PLAN
CS1601

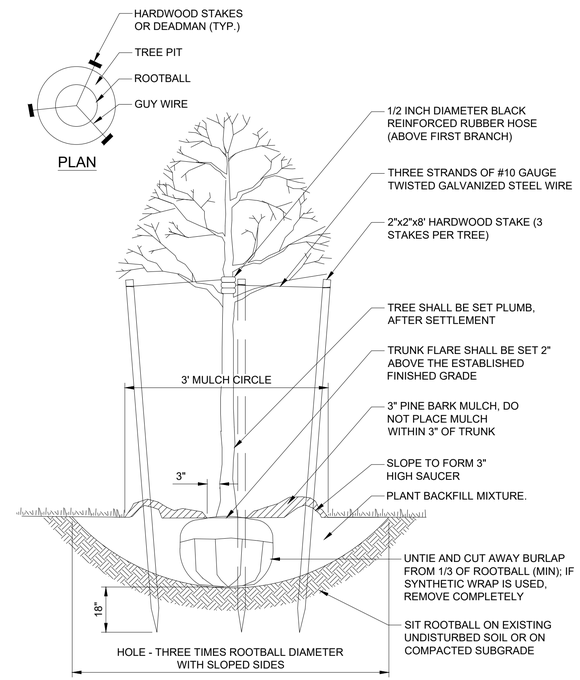
STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12050
LICENSED
PROFESSIONAL ENGINEER
7/2/25

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

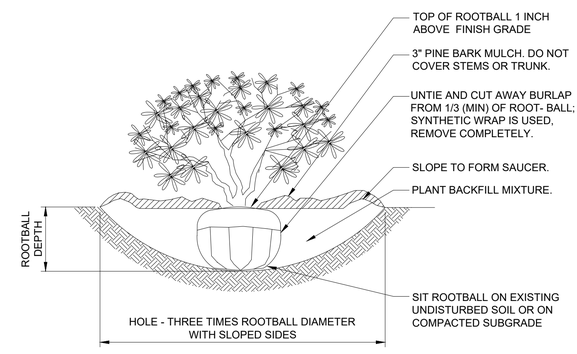
DATE: 2025-04-03 | SCALE: 1" = 10' | SHEET 6 OF 11

PROJECT STATUS: — PLOTTED: 4/2/2025 5:43 PM, BY: Bsiengheglow PLOTSTYLE: — C:\Users\Bsiengheglow\OneDrive - Melbourne Private Limited\01 Input\2025\week 14 (31-4th apr)\20240324-402-9-11 MECHANIC STREET\DESIGN\PUBLISH\S_CS1601.dwg





1 TREE PLANTING DETAIL
NOT TO SCALE



NOTES:

1. LOOSEN ROOTS AT THE OUTER EDGE OF ROOTBALL OF CONTAINER GROWN SHRUBS.

2 SHRUB PLANTING DETAIL
NOT TO SCALE

LEGEND

TREE
RIVER ROCK
LIGHT POLE
WALL MOUNTED LIGHT FIXTURE

PLANT SCHEDULE

EVERGREEN TREE:

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
EG	15	THUJA OCCIDENTALIS	EMERALD GREEN ARBORVITAE	5-6' HT

DECIDUOUS TREE:

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
AR	2	ACER RUBRUM 'AUTUMN BLAZI	AUTUMN BLAZE MAPLE	3" CAL.

SHRUBS

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
MK	5	SYRINGA PATULA	MISS KIM LILAC	2.5'-3' B&B.
BB	3	MYRICA PENNSYLVANICA	BAYBERRY	2 GALLON

GRASS

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
SG	4	PANICUM VERGATUM	SWITCH GRASS	1 GALLON.

PLANTING AND MAINTENANCE NOTES:

1. CONTRACTOR TO PROVIDE HEALTHY VIGOROUS PLANTING MATERIAL PURCHASED FROM REPUTABLE NURSERY STOCK PROVIDERS.
2. LOCATION OF PLANTS SHALL BE APPROVED BY OWNERS REPRESENTATIVE PRIOR TO PLANT INSTALLATION. WASTE MATERIALS GENERATED SHALL BE REMOVED AND DISPOSED OF PROPERLY.
3. CONTRACTOR SHALL GUARANTEE PLANTINGS FOR A PERIOD OF ONE YEAR AND REPLACE ANY DEAD OR UNHEALTHY PLANTS AS DETERMINED BY OWNERS REPRESENTATIVE. REPLACEMENTS SHALL BE OF THE SAME VARIETY AND SIZE OF THE ORIGINAL PLANTS AND SHALL BE INSTALLED BY CONTRACTOR.
4. CONTRACTOR SHALL PROVIDE THE REQUIRED TEMPORARY IRRIGATION TO KEEP PLANTS HEALTHY AND VIGOROUS.

LONG TERM MAINTENANCE

ONGOING LONG TERM MAINTENANCE OF LANDSCAPE MATERIAL IS REQUIRED AND CONSISTS OF THE FOLLOWING.

1. INSPECT AND REMOVE TRASH FROM LANDSCAPE AREAS AND BIORETENTION AREA MONTHLY.
2. MOW LAWN AREA EVERY WEEK TO TWO WEEKS DEPENDING UPON WEATHER CONDITIONS.
3. INSPECT TREES AND SHRUBS AND REPLACE ANY THAT ARE DEAD OR DYING ANNUALLY.
4. REMOVE ANY DEAD OR DAMAGED VEGETATION ANNUALLY.
5. TRIM AND SHAPE SHRUBS AS REQUIRED ANNUALLY.
6. FERTILIZE TREES AND SHRUBS ANNUALLY.
7. CLEAN DEBRIS AND SEDIMENT AND REPLENISH MULCH IN BIORETENTION AREA ANNUALLY

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12280
LICENSED
PROFESSIONAL ENGINEER
3/13/25

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

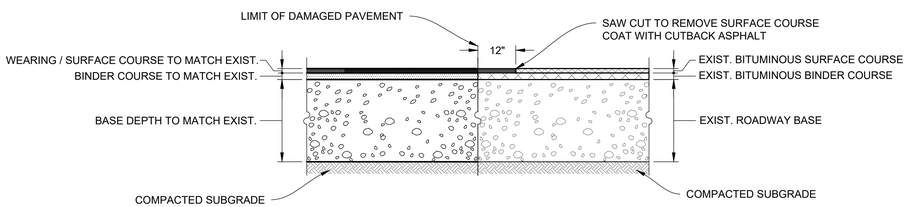
APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

LANDSCAPE AND LIGHTING PLAN
CS1701

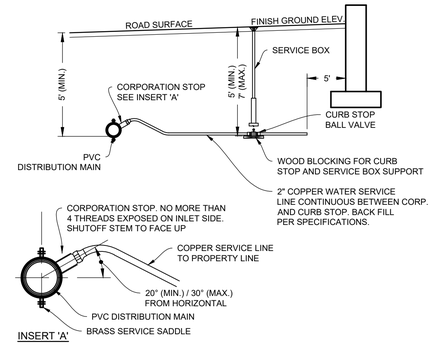
Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: 1" = 10' | SHEET 7 OF 11

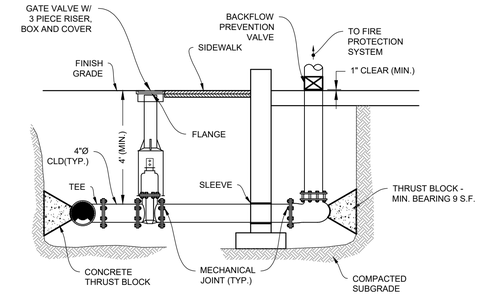
Z:\K\PROJECTS\MECHANIC STREET REALTY TRUST\24-402 9-11 MECHANIC ST DOVER NH\INDOV\NICE CORRESPONDENCE\2025-04-03 - 24-402 9-11 MECHANIC STREET 250403\24-402-9-11 MECHANIC STREET DESIGN\PUBLISH_CS1701.dwg PLOTTED: 4/3/2025 10:32 AM, BY: Civil PC PLOTSTYLE: — PROJECT STATUS: —



1 BIT. CONC. PAVEMENT REPAIR DETAIL
NOT TO SCALE



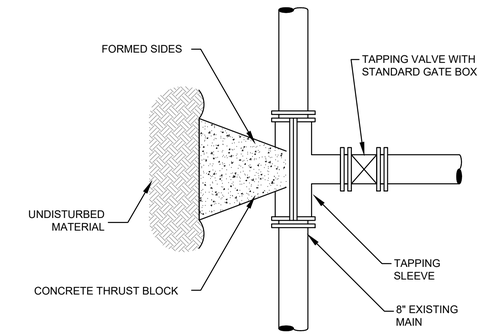
2 WATER SERVICE INSTALLATION
NOT TO SCALE



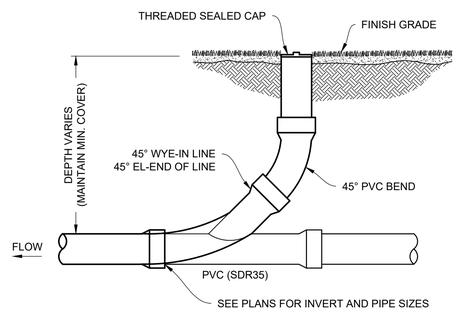
NOTES:

1. VALVE SHALL BE CAPABLE OF SUPERVISION THROUGH BUILDING ALARM SYSTEM.

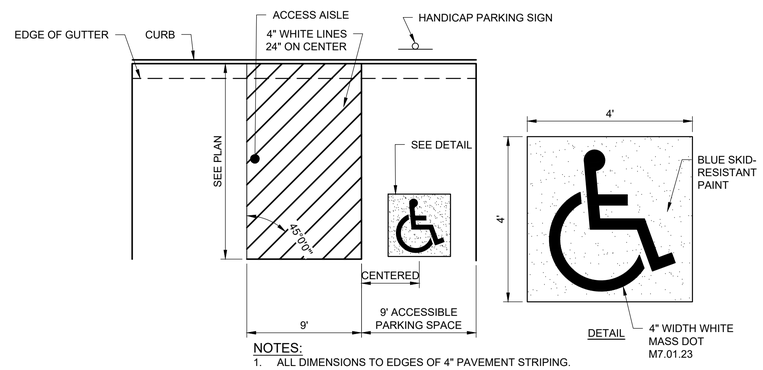
3 FIRE LINE DETAIL
NOT TO SCALE



4 TAPPING SLEEVE AND VALVE CONNECTION
NOT TO SCALE



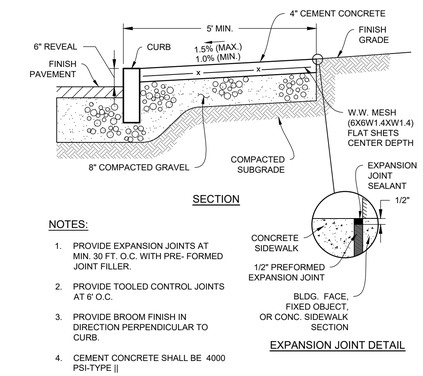
5 CLEANOUT DETAIL - LANDSCAPED AREA
NOT TO SCALE



NOTES:

1. ALL DIMENSIONS TO EDGES OF 4" PAVEMENT STRIPING.
2. ALL STRIPING SHALL BE 4" WIDE SOLID WHITE PAVEMENT MARKINGS UNLESS OTHERWISE NOTED. MASS DOT M7.01.23 FAST DRYING WHITE WATER-BORNE TRAFFIC PAINT.
3. 8' STALL WIDTH REFERS TO 8' CLEAR BETWEEN INSIDE EDGES OF PAVEMENT MARKINGS.

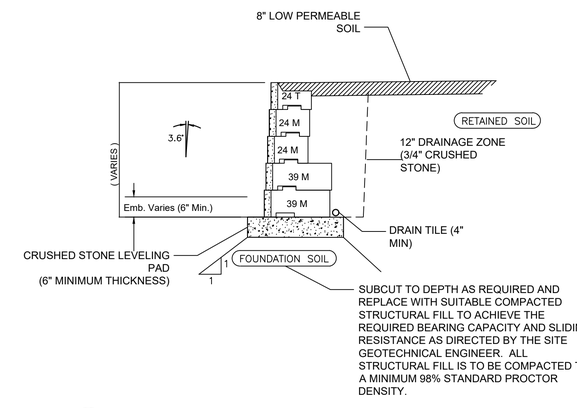
6 ACCESSIBLE PARKING SPACE
NOT TO SCALE



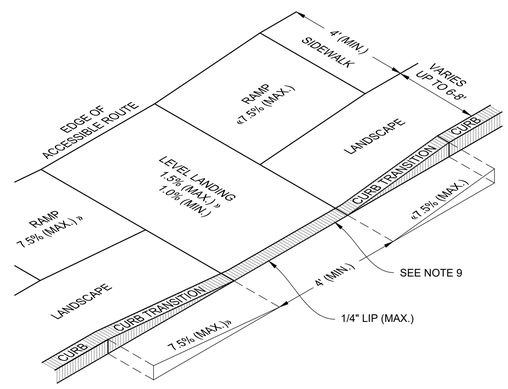
NOTES:

1. PROVIDE EXPANSION JOINTS AT MIN. 30 FT. O.C. WITH PRE- FORMED JOINT FILLER.
2. PROVIDE TOOLED CONTROL JOINTS AT 6' O.C.
3. PROVIDE BROOM FINISH IN DIRECTION PERPENDICULAR TO CURB.
4. CEMENT CONCRETE SHALL BE 4000 PSI-TYPE ||

7 CONCRETE SIDEWALK
NOT TO SCALE



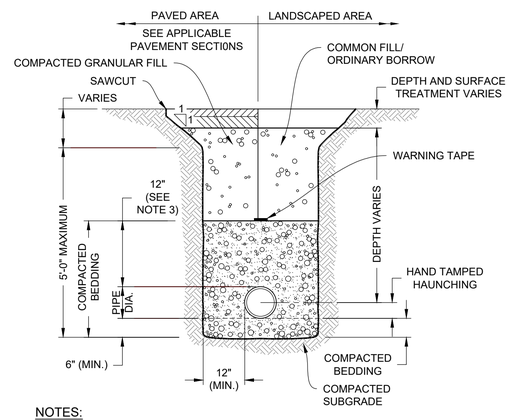
8 RETAINING WALL
NOT TO SCALE



NOTES:

1. THE MAXIMUM ALLOWABLE SIDEWALK AND RAMP CROSS SLOPES SHALL BE 1.5% (1% MIN).
2. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE 5%.
3. THE MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE CURB RAMPS SHALL BE 7.5%.
4. A MINIMUM OF 3 FEET CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.)
5. CURB TREATMENT VARIES, SEE PLAN FOR CURB TYPE.
6. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
7. SEE TYPICAL SIDEWALK SECTION FOR RAMP CONSTRUCTION.
8. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5'x5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FEET.
9. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY, EXCEPT WHERE VERTICAL CURBING IS INDICATED ON THE DRAWINGS TO BE INSTALLED AND SET FLUSH.

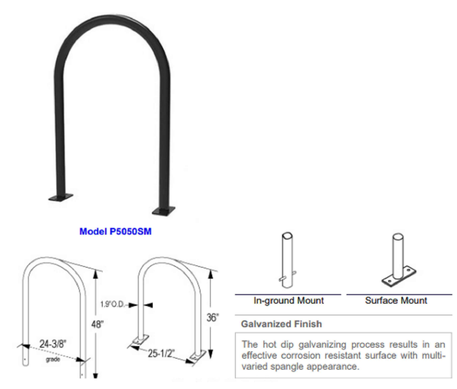
9 ACCESSIBLE CURB RAMP (ACR) - TYPE 'I'
NOT TO SCALE



NOTES:

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.
3. FOR HDPE PIPE, DIMENSION IS 24 INCHES.

10 UTILITY TRENCH
NOT TO SCALE



11 BIKE RACK
NOT TO SCALE

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

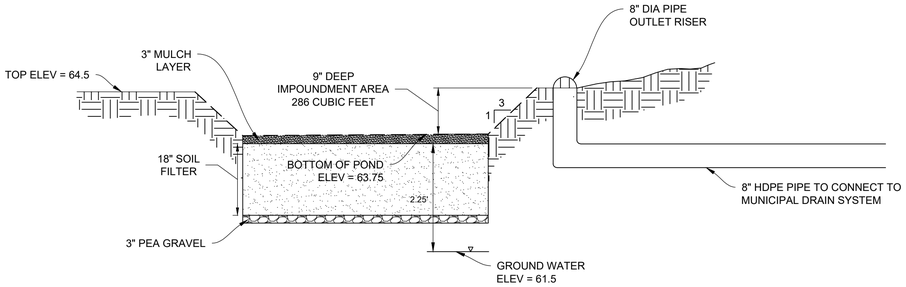
APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

SITE DETAILS
CS6001

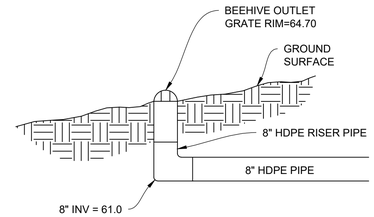
Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: | SHEET 8 OF 11

C:\Users\bianghing\ov\OneDrive - Indovance Private Limited\01 ftcp\02252\week 14 (31-4th apr)\252040\252440-2-4-11 MECHANIC STREET\DESIGN\PUB\SHP\8_CS6001.dwg PLOTTED: 4/3/2025 5:23 PM, BY: Bianghingdvi PLOTSTYLE: — PROJECT STATUS: —



1 POND DETAILS
NOT TO SCALE



2 OUTLET DETAIL
NOT TO SCALE

TABLE 4-4. BIORETENTION FILTER MEDIA			
COMPONENT MATERIAL	PERCENT OF MIXTURE BY VOLUME	GRADATION OF MATERIAL	
		SIEVE NO.	PERCENT BY WEIGHT PASSING STANDARD SIEVE
FILTER MEDIA OPTION A			
ASTM C-33 CONCRETE SAND	50 TO 55		
LOAMY SAND TOPSOIL, WITH FINES AS INDICATED	20 TO 30	200	15 TO 25
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
FILTER MEDIA OPTION B			
MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH, WITH FINES AS INDICATED	20 TO 30	200	< 5
LOAMY COARSE SAND	70 TO 80	10	85 TO 100
		20	70 TO 100
		60	15 TO 40
		200	8 TO 15

CONSTRUCTION PERIOD EROSION AND SEDIMENTATION CONTROL PLAN:

THE BMP'S ASSOCIATED WITH THE CONSTRUCTION PHASE THIS PROJECT WILL BE OWNED BY THE APPLICANT'S CONTRACTOR, WHICH WILL BE RESPONSIBLE FOR INSPECTION, OPERATION, AND MAINTENANCE.

1. THE CONTRACTOR IS TO INSTALL AND MAINTAIN DRAINAGE FACILITIES AS SHOWN ON SITE PLAN PREPARED BY RANGER ENGINEERING GROUP. (RANGER), DATED APRIL 3, 2025.
2. ANY DEWATERING REQUIRES COVERAGE UNDER THE NPDES CONSTRUCTION SITE DEWATERING GENERAL PERMIT.
3. THE CONTRACTOR MUST INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE PLANS AND IN THE DETAILS PRIOR TO STARTING ANY OTHER WORK ON THE SITE. EROSION CONTROL MUST BE INSTALLED AT EVERY INLET STRUCTURE (EXISTING AND PROPOSED) AND MAINTAINED FOR THE DURATION OF THE PROJECT.
4. EROSION CONTROLS AS SHOWN ON PLANS SHALL BE INSPECTED, REPAIRED AND/OR MAINTAINED BY THE CONTRACTOR DAILY AND WITHIN 12 HOURS OF EACH STORM EVENT.
5. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY REACH A DEPTH OF 1/4 TO 1/2 THE HEIGHT OF THE SILT FENCE OR SEDIMENT SOCK.
6. SEDIMENT SHALL BE CONTAINED WITHIN THE CONSTRUCTION SITE, AWAY FROM DRAINAGE STRUCTURES. SEDIMENT REACHING THE PUBLIC WAY SHALL BE REMOVED BY STREET SWEEPING AND NOT BY FLUSHING.
7. STABILIZE SLOPES STEEPER THAN 3:1 (HORIZONTAL TO VERTICAL) WITH SEED, SECURED GEOTEXTILE FABRIC, OR ROCK RIP-RAP AS REQUIRED TO PREVENT EROSION DURING CONSTRUCTION.
8. CLEAN OUT CATCH BASINS, DRAIN MANHOLES AND STORM DRAIN PIPES AFTER COMPLETION OF CONSTRUCTION.
9. LOAM AND SEED ALL DISTURBED AREAS. PERMANENT SEEDING SHALL OCCUR IN THE SPRING FROM LATE MARCH THROUGH MAY AND IN LATE SUMMER OR EARLY FALL BETWEEN AUGUST AND OCTOBER.
10. DUST SHALL BE CONTROLLED AT THE SITE WITH MECHANICAL WATER SPRAYING AS NECESSARY AND DURING EXTENDED DRY PERIODS.
11. UPON ESTABLISHMENT OF PERMANENT VEGETATION OVER DISTURBED AREAS, REMOVE AND DISPOSE OF SILT FENCE OR WATTLES AND STAKES.
12. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN AND SUPPLEMENT THE SPECIFIED SEDIMENTATION CONTROLS AS NECESSARY TO PREVENT SEDIMENTATION OF OFF-SITE AREAS AND/OR ANY REGULATED RESOURCE AREAS. FAILURE BY THE CONTRACTOR TO CONTROL EROSION, POLLUTION AND/OR SILTATION SHALL BE CAUSE FOR THE OWNER TO EMPLOY OUTSIDE ASSISTANCE OR TO USE HIS OWN MEANS TO PROVIDE THE NECESSARY CORRECTIVE MEASURE. THE COST OF SUCH ASSISTANCE PLUS PROJECT ENGINEERING COSTS WILL BE THE CONTRACTOR'S RESPONSIBILITY.
13. IN ADDITION TO THOSE LOCATIONS SHOWN ON THIS PLAN AND ON THE GRADING AND DRAINAGE PLANS, EROSION CONTROLS SHALL BE INSTALLED AT THE FOLLOWING LOCATIONS: TOE OF SLOPE OF EMBANKMENT CONSTRUCTION, TOE OF TEMPORARY EARTHWORK STOCKPILES. STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
14. EROSION AND SEDIMENTATION CONTROL SHALL BE IN COMPLIANCE WITH NEW HAMPSHIRE STORMWATER MANUAL.

POST CONSTRUCTION STORMWATER INSPECTIONS

THE OWNER/APPLICANT IS TO BE RESPONSIBLE FOR MAINTENANCE OF ALL DRAINAGE STRUCTURES IN THE PROJECT, INCLUDING DRAIN PIPES. THE OWNER SHALL PLACE A DEED RESTRICTION ON THE PROPERTY OUTLINING THE REQUIREMENTS FOR STORMWATER SYSTEM MAINTENANCE AT THE DEVELOPMENT.

1. STORMWATER PIPES SHALL BE INSPECTED FOR SEDIMENT BUILDUP ON A QUARTERLY BASIS AND CLEANED AS REQUIRED.
2. THE BIORETENTION AREA SHALL BE INSPECTED TO VERIFY PROPER FILTRATION AND CONDITION OF FILTER SURFACE. EXISTING TRASH AND DEBRIS SHALL BE REMOVED AND THE SURFACE MEDIA REPLACED AS REQUIRED TO MAINTAIN INFILTRATION.
3. ALL GRADED SLOPES AND LAWN AREAS SHALL BE INSPECTED EVERY SPRING FOR EROSION. UPON DISCOVERY OF ANY FAILURE (IE. EROSION, SLOUGHING, RUTTING), LOAM AND SEED SHALL BE PUT IN PLACE AND NURTURED.
4. PAVEMENT SURFACES SHALL BE SWEPT CLEAN AT LEAST ONCE PER YEAR, PREFERABLY IN THE SPRING JUST AFTER SNOW MELT. SEDIMENT, SAND, AND DEBRIS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH NEW HAMPSHIRE REGULATIONS.

WINTER SNOW AND ICE MAINTENANCE

1. WINTER SNOW AND ICE MAINTENANCE SHALL BE PERFORMED BY A CERTIFIED SNOW PRO SALT APPLICATOR.
2. A DE-ICING LOG SHALL BE MAINTAINED FOR ALL DE-ICING ACTIVITIES ON THE PROPERTY.
3. DE-ICING SHOULD FOLLOW THE BEST MANAGEMENT PRACTICES FOR STORAGE AND APPLICATION OF DE-ICING CHEMICALS AS OUTLINED IN THE ATTACHED PUBLICATIONS.

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12260
LICENSED
PROFESSIONAL ENGINEER
9/9/25

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

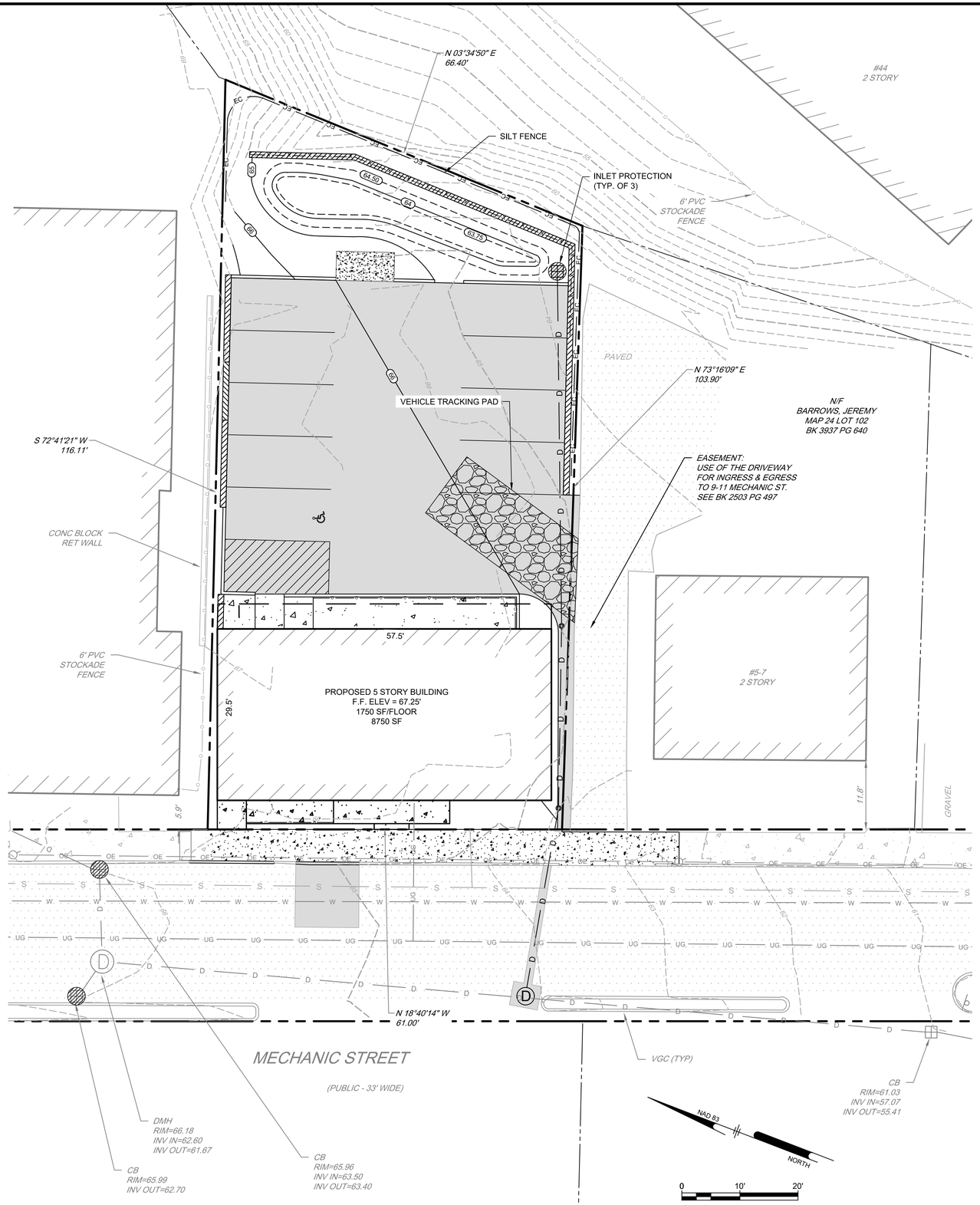
APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

DRAINAGE DETAILS
CS6011

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03
SCALE:
SHEET 9 OF 11

Z:\K\PROJECTS\MECHANIC STREET REALTY TRUST\24-402 9-11 MECHANIC ST DOVER NH\INDOV\ANCE CORRESPONDENCE\2025-04-03 - 24-402-9-11 MECHANIC STREET 25040324402-9-11 MECHANIC STREETTDESIGN\PUBLISHING_CS6011.dwg PLOTTED: 4/3/2025 10:28 AM BY: Civil PC PLOTSTYLE: — PROJECT STATUS: —



EROSION CONTROL NOTES

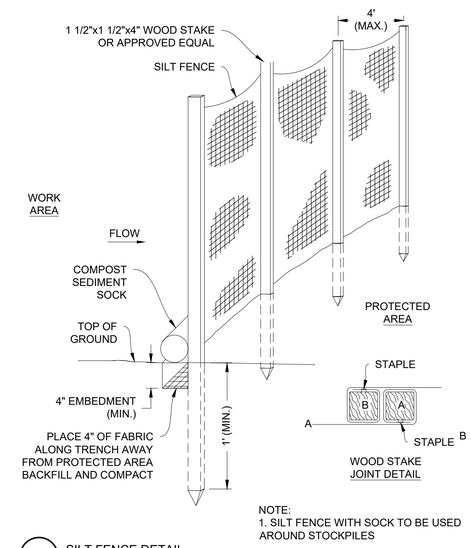
1. APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY SOIL LAND DISTURBANCE AND MUST BE REVIEWED AND APPROVED BY THE COMMUNITY SERVICES DEPARTMENT.
2. STRIPPING OF VEGETATION SHALL BE DONE IN A MANNER THAT MINIMIZES SOIL EROSION.
3. THE AREA OF LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM AND BE LIMITED TO AN AREA ONLY LARGE ENOUGH TO ACCOMMODATE CONSTRUCTION ACTIVITIES FOR A PARTICULAR CONSTRUCTION PHASE.
4. OFF-SITE SURFACE WATER AND RUNOFF FROM UNDISTURBED AREAS SHALL BE DIVERTED AWAY FROM DISTURBED AREAS WHERE FEASIBLE, OR MEASURES TO CONVEY STORMWATER THROUGH THE PROJECT AREA WITHOUT CAUSING EROSION OF SEDIMENT MUST BE INCLUDED. INTEGRITY OF DOWNSTREAM DRAINAGE SYSTEMS SHALL BE MAINTAINED.
5. DISTURBED SOIL AREAS SHALL BE EITHER TEMPORARILY OR PERMANENTLY STABILIZED. IN AREAS WHERE FINAL GRADING HAS NOT OCCURRED, TEMPORARY STABILIZATION MEASURES SHOULD BE IN PLACE WITHIN NO MORE THAN 14 CALENDAR DAYS. PERMANENT STABILIZATION SHOULD BE IN PLACE WITHIN THREE CALENDAR DAYS FOLLOWING COMPLETION OF FINAL GRADING OF EXPOSED SOIL AREAS.
6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN FUNCTIONING CONDITION UNTIL FINAL SITE STABILIZATION IS ACCOMPLISHED. CONTRACTOR SHOULD INSPECT THE EROSION AND SEDIMENT CONTROL DEVICES ON A WEEKLY BASIS AND WITHIN 2 DAYS OF A RAIN EVENT OF ½" OR MORE AND REPAIR ANY SECTIONS THAT ARE DAMAGED. A REPORT OF THE INSPECTION AND A LOG OF REPAIRS SHALL BE MAINTAINED ON SITE.
7. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL DEVICES WHEN IT REACHES A DEPTH OF 1/2 THE HEIGHT OF THE CONTROL OR 6" IN DEPTH.
8. ADDITIONAL TEMPORARY STABILIZATION FOR THE WINTER SEASON CONSISTENT WITH NHDES GUIDELINES SHALL BE IN PLACE FOR DISTURBED AREAS THAT ARE NOT PERMANENTLY STABILIZED BY OCTOBER 1, OR AT THE DISCRETION OF THE COMMUNITY SERVICES DEPARTMENT.
9. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 CALENDAR DAYS UNLESS CONDITIONS DICTATE OTHERWISE.

LEGEND

SILT FENCE — EC — EC —

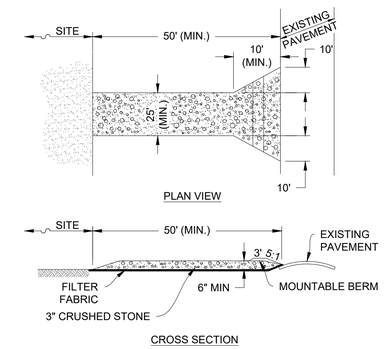
INLET PROTECTION

VEHICLE TRACKING PAD



NOTE:
1. SILT FENCE WITH SOCK TO BE USED AROUND STOCKPILES

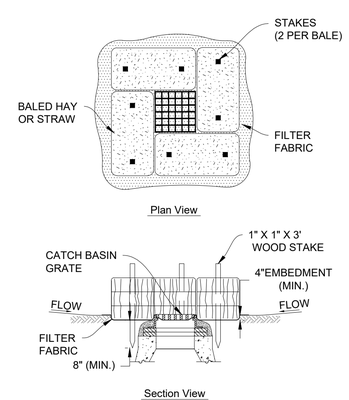
1 SILT FENCE DETAIL
NOT TO SCALE



NOTES:

1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. BERM SHALL BE PERMITTED. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

3 CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE



NOTES:

1. ENCLOSE STRUCTURE WITH HAYBALES IMMEDIATELY AFTER CATCH BASIN CONSTRUCTION. MAINTAIN UNTIL PAVING BINDER COURSE IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.
2. IF GRATE IS AGAINST EXISTING CURB THEN HAY BALES ARE TO BE PLACED AROUND THREE SIDES OF GRATE ONLY.
3. GRATE TO BE PLACED OVER FILTER FABRIC.
4. BALES SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS. REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

2 DRAIN INLET PROTECTION
NOT TO SCALE

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12080
LICENSED
PROFESSIONAL ENGINEER
4/3/25

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

EROSION AND SEDIMENT CONTROL
CS7001

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE: 2025-04-03 | SCALE: 1" = 10' | SHEET 10 OF 11

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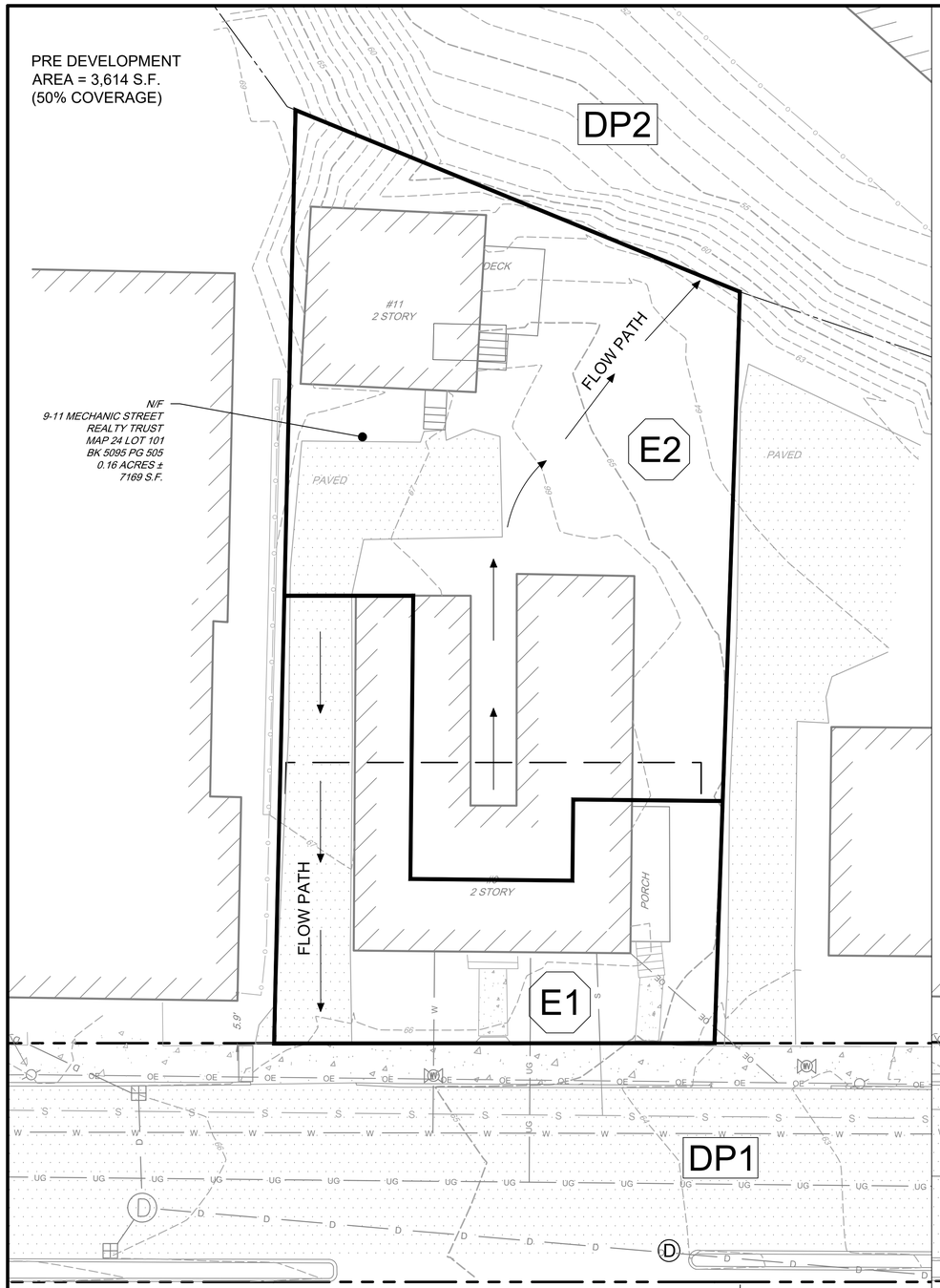

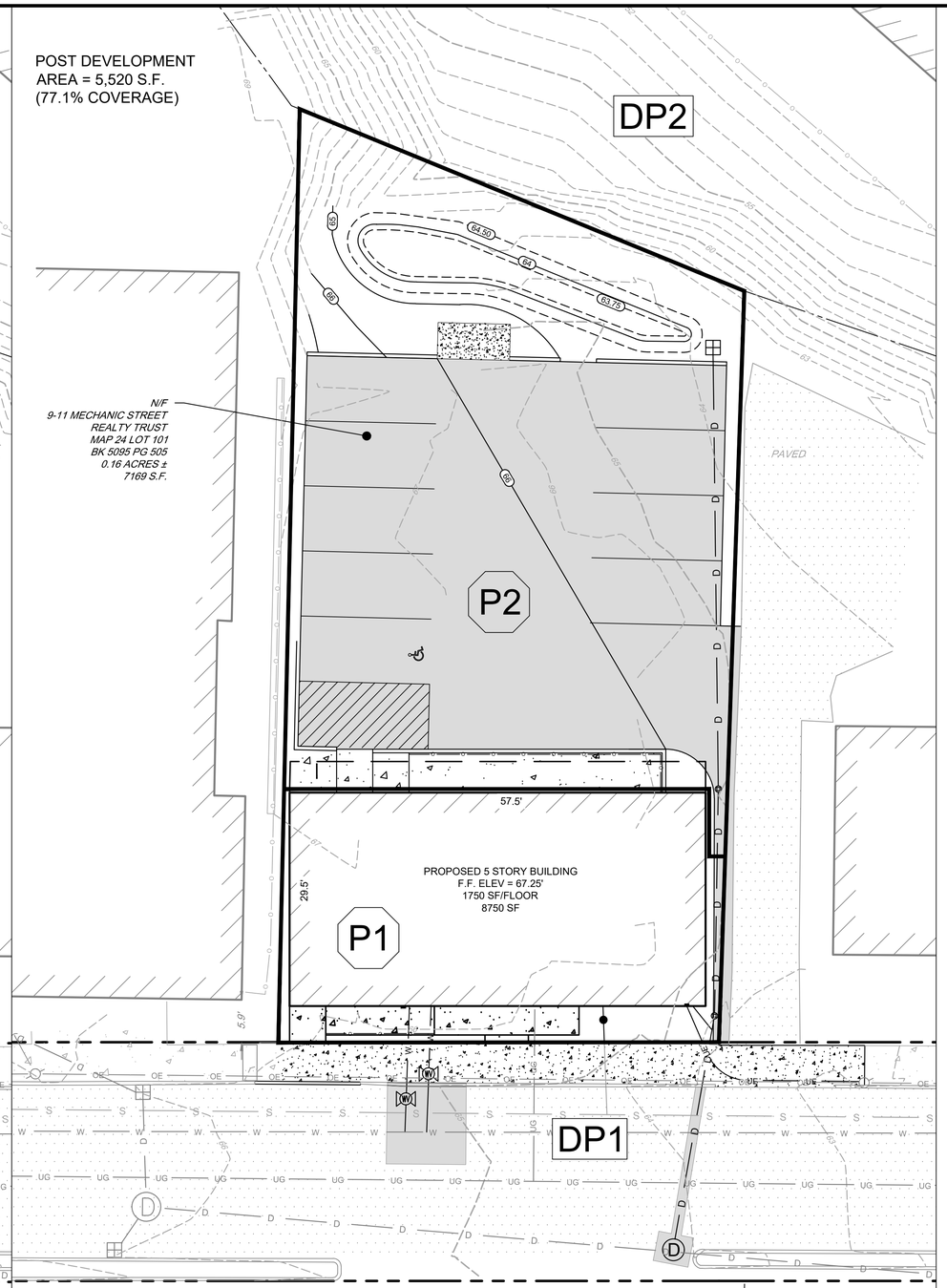

POND AREAS	
ELEVATION	SQ.FT
64.5	398
64	235
63.75	161.4

DATE	NO.	REVISIONS	BY

SITE PLAN
9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

PRE & POST DEVELOPMENT DRAINAGE PLAN
CS9201

STATE OF NEW HAMPSHIRE
BENJAMIN C. OSGOOD, JR
No. 12260
LICENSED
PROFESSIONAL ENGINEER

Ranger Engineering Group, Inc.
130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE:	SCALE:	SHEET 11 OF 11
2025-04-03	1" = 10'	

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DATE	NO.	REVISIONS	BY

SITE PLAN

9-11 MECHANIC STREET, DOVER NH,

ASSESSOR'S MAP 24 LOT 101
DOVER PLANNING FILE #

APPLICANT/ OWNER: MECHANIC STREET REALTY TRUST, BENJAMIN T. LEGARE, TRUSTEE
23A MIDDLE ST, NEWBURYPORT MA 01950

NEIGHBORHOOD PLAN

Ranger Engineering Group, Inc.

130 Main Street. Suite 202
Salem NH, 03079
Tel: 978-208-1762
rangereng.com

DATE:	SCALE:	SHEET 4 OF 11
2025-04-03	1" = 10'	

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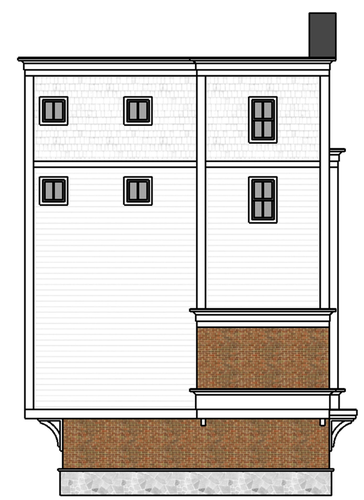
Street Rendering - NTS

Front Elevation

Right Elevation



Left Elevation

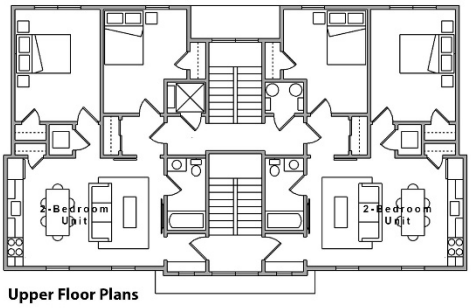
Rear Elevation

9-11 Mechanic Street, Dover NH

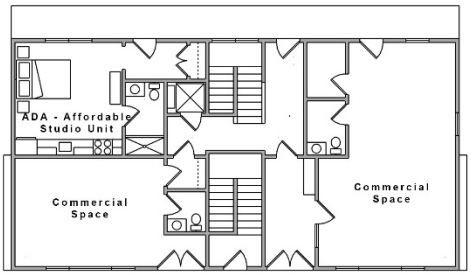
Scale: 1/8" = 1'-0"

March 20, 2025

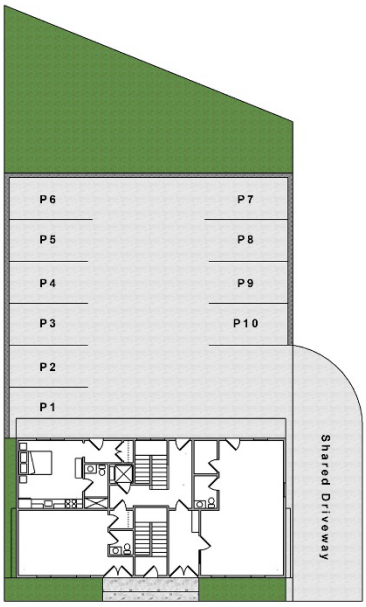
9-11 Mechanic Street, Dover, NH



Upper Floor Plans



First Floor Plan



Site Plan