T-BONES RESTAURANT SITE PLAN & CONDITIONAL USE PERMIT

SP# 01-25 & CUP# 01-25

STAFF REPORT

March 26, 2025

SITE: 256 Lowell Road, Map 228/Lot 007-000

ZONING: Business (B)

PURPOSE OF PLAN: to propose the development of a 9,500+/- square-foot restaurant and other associated site improvements which will impact approximately 15,500 square-feet of wetland buffer.

PLAN UNDER REVIEW:

T-Bones at Lowell Road Non-Residential Site Plan, SP# 01-25 & CUP# 01-25, Map 228 Lot 007, 256 Lowell Road, Hudson, NH; prepared by: Meridian Land Services, Inc., 31 Old Nashua Road, Amherst, NH 03031; prepared for: Lowell RD, LLC., 124 Bedford Center Road, Bedford, NH 03110; consisting of 23 sheets and general notes 1-20 on Sheet GN-1; dated January 21, 2025, revised March 12, 2025.

ATTACHMENTS:

1. Site Plan & CUP Applications with associated waiver request, received January 21, 2025– Attachment "**A**".
2. Project Narrative – Attachment "**B**"
3. Department Review Comments – Attachment "**C**."
4. Wetland Description and Recommendations, prepared by Meridian Land Services – Attachment "**D**."
5. Alteration of Terrain Permit Acceptance Letter dated March 5, 2025 – Attachment "**E**".
6. Peer Review Response Letter, prepared by Meridian Land Services, dated March 12, 2025 – Attachment "**F**".
7. Revised Stormwater Management Report, prepared by Meridian Land Services, Inc., dated March 4, 2025 – Attachment "**G**". (Digital Only)
8. Inspection & Maintenance Manual, Prepared by Meridian Land Services, Inc., dated March 4, 2025 – Attachment "**H**". (Digital Only)
9. Conservation Commission Recommendation of CUP Application, Dated March 10, 2025 –Attachment "**I**".
10. Fire & Delivery Truck Turning Exhibits, revised March 12, 2025 – Attachment "**J**".
11. Driveway Design Exhibit, revised March 12, 2025 – Attachment "**K**".
12. Buffer Disturbance Exhibit dated February 26, 2025 – Attachment "**L**".
13. Site Plan dated October 2, 2024, Revised January 7, 2025.

APPLICATION TRACKING:

- January 21, 2025 – Site plan & CUP applications received.
- February 10, 2025 – Public Hearing before ConCom
- February 12, 2025 – Site Walk conducted by ConCom
- February 26, 2025 – Site Plan accepted, Public Hearing continued to March 26, 2025.
- March 10, 2025 – 2nd Public Hearing ConCom.
- March 26, 2025 – Public Hearing scheduled.

WAIVERS REQUESTED:

§275-8.7.D – Landscaping Requirements.
§275-8.C(6)(b). – Dimensional Requirements

COMMENTS & RECOMMENDATIONS:

BACKGROUND

The site is approximately 6.4 acres and is located in the Business zone. The site was previously occupied by a single-family residence which was razed over two decades ago. The site is served by Town water and sewer. No section of the property falls within FEMA designated flood zones. The site contains wetlands along the southern half of the property and gently slopes up towards the eastern edge of the property within the primary buildable area. The site currently has no curb cuts and is proposed to be serviced by an easement granting driveway access to Walmart Boulevard and by right-in/right-out access from Lowell Road. The applicant is seeking one waiver, for which additional information may be found below.

DEPARTMENT COMMENTS

Multiple departments opted to provide comments on the revised site plan and CUP applications, which may be found below

Fire has provided the following comment:

1. *The proposed site plan needs to show a second fire hydrant added near the entrance to the site.*

Engineering has provided the following comment:

1. *I don't see the response for the engineering comments.*

Full Comments can be found in **Attachment "C."**

WAIVER REQUESTED

As noted above, the Applicant is seeking two waivers:

1. Waiver for Landscaping Requirements, **§275-8.7.D–Landscaping Requirements,** to allow for a total of 99 shrubs where 374 would elsewise be required. The Applicant states that 99 shrubs provide adequate screening, due to the wetlands and natural woods that are being preserved on the southern and eastern portions of the property.

2. Waiver for Loading Space Dimensions, **§275-8.C(6)(b). – Dimensional Requirements**, to allow for a reduced size loading space of 18.4' x 44.2,' where elsewise a 60'x12' space would be required. The applicant states that this size is based on their Concord location and is only used outside of business hours.

STORMWATER MANAGEMENT REPORT

As part of the application, a Stormwater Management Report revised March 4, 2025 has been supplied (Attachment "**G**"). This report concludes that no adverse downstream impacts shall occur, and that peak flow rates shall remain the same or diminish in many cases. While alterations have been made to the report to account for the new disturbed areas and changes to the drainage, this report may be subject to further changes pending alterations to the drainage design in line with Engineering and peer review comments.

CONSERVATION COMMISSION

The Conservation Commission first heard this CUP application on February 10, 2025, followed by a site walk on February 12, 2025. During the course of discussion with the Conservation Commission, the total disturbed areas has grown due to the inclusion of a slip-lane on Lowell road as requested during the review process. After discussion with the applicant and revisions to the design, the Conservation Commission moved to recommend approval of the revised design (Attachment "**I**"), with the following recommended stipulations:

1. *During Construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.*
2. *Construction and restoration shall comply with: BEST MANAGEMENT PRACTICES TO CONTROL NON-POINT SOURCE POLLUTION: A GUIDE FOR CITIZENS AND TOWN OFFICIALS (NH Department of Environmental Services – Current Issue)*
3. *It is recommended that the applicant create and implement a wetland buffer restoration plan for the disturbed buffer as part of site plan approval. The details and implementation of said Restoration Plan to be added to the General Notes and Legend found on sheet 2 of 23 of the plan set.*
4. *It is recommended to have the applicant install approved "Do not cut/Do Not Disturb town conservation markers along the conservation districts boundaries. Furthermore, Post and Rail fence sections could be erected and maintained to aid in delineating the wetland buffer boundary as is typical on other excepted residential developments. If this recommendation is accepted by the Planning Board details of the Do Not Cut/ Do Not Disturb Markers and Post and Rail Fencing shall be added to the General Notes and Legend found on sheet 2 of 23 of the plan set.*
5. *It is recommended that the applicant shall not store any snow on the detention basin during winter operations, to minimize salt pollution.*

The recommended stipulations have been included with the draft motion of approval.

STAFF COMMENTS

The applicant needs to address peer review and department comments as well as any potential comments from the Planning Board and public. The application does not have any other outstanding issues that are known at this time.

The project has been heard by the Conservation Commission on February 10, 2025, for which a site walk was then conducted February 12, 2025. Several design critiques and requested changes were noted related to the drainage pond located on site within the wetland buffer. The revised submissions are pursuant to those changes.

RECOMMENDATIONS

Staff recommend deliberation and consideration of the site plan and waiver requests, alongside any revisions to be made. Staff recommend determination of any other studies the board feels will be required to render a decision.

DRAFT MOTIONS:

MOTION TO APPROVE CONDITIONAL USE PERMIT

I move to approve the T-Bones Restaurant Conditional Use Permit Application for the Site Plan: T-Bones at Lowell Road Non-Residential Site Plan, CUP# 01-25, Map 228 / Lot 007, 256 Lowell Road, Hudson, New Hampshire; prepared by: Meridian Land Services, Inc., 31 Old Nashua Road, Amherst, NH 03031; prepared for: Lowell RD, LLC., 124 Bedford Center Road, Bedford, NH 03110; consisting of 23 sheets and general notes 1-20 on Sheet GN-1; dated October 2, 2024, revised January 7, 2025; subject to, and revised per, the following stipulations:

1. All stipulations of approval shall be incorporated into the Site Plan Development Agreement, which shall be recorded at the HCRD, together with the Plan.
2. Prior to the Planning Board endorsement of the Plan, it shall be subject to final administrative review by the Interim Town Planner, Town Engineer, and Town Counsel.
3. The CUP is contingent upon proof of a valid Alteration of Terrain (AOT) Permit issued by New Hampshire Department of Environmental Services (NHDES).

Stipulations recommended for approval by the Conservation Commission:

1. During Construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.
2. Construction and restoration shall comply with: BEST MANAGEMENT PRACTICES TO CONTROL NON-POINT SOURCE POLLUTION: A GUIDE FOR CITIZENS AND TOWN OFFICIALS (NH Department of Environmental Services – Current Issue)
3. It is recommended that the applicant create and implement a wetland buffer restoration plan for the disturbed buffer as part of site plan approval. The details and implementation of said

Restoration Plan to be added to the General Notes and Legend found on sheet 2 of 23 of the plan set.

4. It is recommended to have the applicant install approved "Do not cut/Do Not Disturb town conservation markers along the conservation districts boundaries. Furthermore, Post and Rail fence sections could be erected and maintained to aid in delineating the wetland buffer boundary as is typical on other excepted residential developments. If this recommendation is accepted by the Planning Board details of the Do Not Cut/ Do Not Disturb Markers and Post and Rail Fencing shall be added to the General Notes and Legend found on sheet 2 of 23 of the plan set.
5. It is recommended that the applicant shall not store any snow on the detention basin during winter operations, to minimize salt pollution.

Motion by: _____Second: _____Carried/Failed: _____

TO GRANT A WAIVER:

I move to grant a waiver **§275-8.7(D)–Landscaping Requirements**, to allow for 99 shrubs where 374 would be required, based on the Board's discussion, the testimony of the Applicant's representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____Second: _____Carried/Failed: _____

I move to grant a waiver **§275-8.C(6)(b).–Dimensional Requirements**, to allow for a reduced space loading zone of no less than 18'x 44', based on the Board's discussion, the testimony of the Applicant's representative, and in accordance with the language included in the submitted Waiver Request Form for said waiver.

Motion by: _____Second: _____Carried/Failed: _____

TO CONTINUE SITE PLAN APPLICATION:

I move to continue the T-Bones Restaurant Site Plan Application: SP# 01-25, Map 228 / Lot 007, 256 Lowell Road, Hudson, NH, to date certain_____

Motion by: _____Second: _____Carried/Failed: _____

I move to continue the T-Bones Restaurant Conditional Use Permit Application: CUP# 01-25, Map 228 / Lot 007, 256 Lowell Road, Hudson, NH, to date certain_____

Motion by: _____Second: _____Carried/Failed: _____

TO APPROVE SITE PLAN APPLICATION:

I move to approve the T-Bones Restaurant Site Plan Application: T-Bones at Lowell Road Non-Residential Site Plan, SP# 01-25, Map 228 / Lot 007, 256 Lowell Road, Hudson, New Hampshire; prepared by: Meridian Land Services, Inc., 31 Old Nashua Road, Amherst, NH 03031; prepared for: Lowell RD, LLC., 124 Bedford Center Road, Bedford, NH 03110; consisting of 23 sheets and general notes 1-20 on Sheet GN-1; dated October 2, 2024, revised January 7, 2025; and:

That the Planning Board finds that this application complies with the Zoning Ordinance, and with the Land Use Regulations with consideration of the waivers granted and for the reasons set forth in the written submissions, together with the testimony and factual representations made by the applicant during the public hearing;

Subject to, and revised per, the following stipulations:

1. All stipulations of approval shall be incorporated into the Development Agreement, which shall be recorded at the HCRD, together with the Plan.
2. All improvements shown on the Plan, including all Notes, shall be completed in their entirety and at the expense of the applicant or the applicant's assigns.
3. Prior to the issuance of a final certificate of occupancy, an L.L.S. Certified "As-Built" site plan shall be provided to the Town of Hudson Land Use Department, confirming that the site conforms to the Planning Board approved Site Plan.
4. Prior to the Planning Board endorsement of the Plan, it shall be subject to final administrative review by Town Planner and Town Engineer.
5. A cost allocation procedure (CAP) amount of $80,465.00 shall be paid prior to the issuance of a Certificate of Occupancy for the lot improvements to be made.
6. Prior to application for a building permit, the Applicant shall schedule a pre-construction meeting with the Town Engineer.
7. The onsite drainage system shall be constructed and maintained in compliance with NHDES requirements for such systems.
8. Construction activities involving the subject lot shall be limited to the hours between 7:00 A.M. and 7:00 P.M., Monday through Saturday. No exterior construction activities shall be allowed on Sundays.
9. Hours of refuse removal shall be exclusive to the hours between 7:00 A.M. and 7:00 P.M., Monday through Friday only.

Motion by: _____Second: _____Carried/Failed: _____

SITE PLAN APPLICATION

Date of Application: 1/21/25 Tax Map #: 228 Lot #: 7

Site Address: 256 LOWELL RD, Hudson NH

Name of Project: T-Bones @Lowell Rd

Zoning District: B - Business General SP#: _____
(For Town Use Only)

Z.B.A. Action: _____

PROPERTY OWNER:	DEVELOPER:
Name: 256 LOWELL ROAD, LLC	Lowell RD, LLC
Address: 9 OLD DERRY RD.,	124 Bedford Center Road SB,
Address: HUDSON, NH 03051	Bedford, NH 03110
Telephone #	
Email:	

PROJECT ENGINEER:	SURVEYOR:
Name: Sam Foisie, P.E., Meridian Land Services, Inc	Chris Hickey, LLS, Keach-Nordstom Associates,inc.
Address: 31 Old Nashua RD	10 Commerce Park North, Suite 3
Address: Amherst, NH 03055	Bedford, NH 03110
Telephone # 603-673-1441	(603) 627-2881
Email: SRFoisie@meridianlandservices.com	chickey@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of the plan is to show the sirte improvemetns to construct a t-bones restuarant

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

Department:

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___Fire: ___ DPW: ___ Consultant: ___

SITE DATA SHEET

PLAN NAME: T-Bones @Lowell Rd

PLAN TYPE: SITE PLAN

LEGAL DESCRIPTION: MAP 228 LOT 7

DATE: 1/21/25

Location by Street:	256 LOWELL RD
Zoning:	B-Business
Proposed Land Use:	Restaurant
Existing Use:	Vacant
Surrounding Land Use(s):	Big Box Retaila nd Single family residential
Number of Lots Occupied:	1
Existing Area Covered by Building:	0
Existing Buildings to be removed:	N/A
Proposed Area Covered by Building:	8,500 sf +/-
Open Space Proposed:	67%
Open Space Required:	
Total Area:	S.F.: 280,025 Acres: 6.429
Area in Wetland:	45,578 sf Area Steep Slopes: 0
Required Lot Size:	30,000 SF
Existing Frontage:	769LF +/-
Required Frontage:	150 LF

Building Setbacks:	Required*	Proposed
Front:	50	50
Side:	15	15
Rear:	15	15

SITE DATA SHEET
(Continued)

Flood Zone Reference: Zone X, found on flood panel 33011C0656D

Width of Driveways: 24'

Number of Curb Cuts: 1 on RT 3 and on connecting to Walmart driveway

Proposed Parking Spaces: 169

Required Parking Spaces: 127

Basis of Required Parking (Use): 1 space per 75 sf

Dates/Case #/Description/Stipulations of ZBA, Conservation Commission, NH Wetlands Board Actions:
(Attach stipulations on separate sheet)

Waiver Requests

Town Code Reference:	*Regulation Description:*
See attached	

(For Town Use Only)

Data Sheets Checked By: _____ Date: _____

SITE PLAN APPLICATION AUTHORIZATION

I hereby apply for *Site Plan* Review and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Site Plan* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: _____ Date: 1-20-2025

Print Name of Owner: Marco Plante

- If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: _____ Date: 1/20/2025

Print Name of Developer: William Greene

- The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

SCHEDULE OF FEES

A. REVIEW FEES:

1. Site Plan Use	Project Size/Fee	
Multi-Family	$105.00/unit for 3-50 units $78.50/unit for each additional unit over 50	$_____
Commercial/Semi Public/Civic or Recreational	$157.00/1,000 sq. ft. for first 100,000 sq.ft. (bldg. area): $78.50/1,000 sq.ft. thereafter.	$_____
Industrial	$150.00/1,000 sq.ft for first 100,000 sq.ft. (bldg. area); $78.50/1,000 sq.ft thereafter.	$_____
No Buildings	$30.00 per 1,000 sq.ft. of proposed developed area	$_____

CONSULTANT REVIEW FEE: (Separate Check)

Total _____ acres @ $600.00 per acre, or $1,250.00, whichever is greater. $_____

This is an estimate for cost of consultant review. The fee is expected to cover the amount. A complex project may require additional funds. A simple project may result in a refund.

LEGAL FEE:

The applicant shall be charged attorney costs billed to the Town for the Town's attorney review of any application plan set documents.

B. POSTAGE:

_____ Direct Abutters Applicant, Professionals, etc. as required by RSA 676:4.1.d @$5.58 **(or Current Certified Mail Rate)** $_____

_____ Indirect Abutters (property owners within 200 feet) @$0.73 **(or Current First Class Rate)** $_____

C. TAX MAP UPDATING FEE: (FLAT FEE) $ 275.00

TOTAL $ See attached

SCHEDULE OF FEES
(Continued)

(For Town Use)			
AMOUNT RECEIVED: $_____		DATE RECEIVED:	_____
RECEIPT NO.:	_____	RECEIVED BY:	_____

NOTE: fees below apply only upon plan approval, not collected at time of application.

D. RECORDING:

*****The applicant shall be responsible for the recording of the approved plan, and all documents as required by an approval, at the Hillsborough County Registry of Deeds (HCRD), located at 19 Temple Street, Nashua, NH 03061. Additional fees associated with recording can be found at HCRD.*****

E. COST ALLOCATION PROCEDURE AMOUNT CONTRIBUTION AND OTHER IMPACT FEE PAYMENTS:

To be determined by the Planning Board at time of plan approval and shall be paid by the applicant at the time of submittal of the Certificate of Occupancy Permit requests.

*****The applicant shall be responsible for all fees incurred by the town for processing and review of the applicant's application, plan and related materials.*****

TOWN OF HUDSON
SITE PLAN REVIEW CHECKLIST

This checklist is intended to help the applicant and staff to ensure application completeness. Please refer to the regulations on the exact language of each requirement.

Key: Y=Yes P =Pending W=Waiver Request

Relevant Regulations:
§ 276-11.1 General Plan Requirements
§§ 275-8 – 275-9 Site Plan Requirements

	Y	P	W		Notes
1.	☑	☐	☐	- A list of the names and addresses of the owner(s) of the property, the applicant(s), and all abutters as indicated in the office of the Town Assessor records not more than five (5) days prior to the day of filing **[§ 276-11.1.A.]**	
2	☑	☐	☐	- Sets of plans and copies as indicated on application.	
3.	☑	☐	☐	- Scale no smaller than 50 feet to the inch (1" = 50') **[§ 276-11.1.B.(2)]**	
4.	☑	☐	☐	- Title block in the lower right-hand corner of the plan, containing: **[§ 276-11.1.B.(3)]**	
5.	☑	☐	☐	- Title, including the term "site plan" or "subdivision plan"	
6.	☑	☐	☐	- The name for whom the plan was prepared	
7.	☑	☐	☐	- Preparer of the plan	
8.	☑	☐	☐	- The scale(s) of the plan	
9.	☑	☐	☐	- Date of the plan	
10.	☑	☐	☐	- Appropriate revision block	
11.	☑	☐	☐	- Approval block (2"x6") located on the lower left corner of each sheet, with the required language and signature line **[§ 276-11.1.B.(4) & § 289-27.A]**	
12.	☐	☑	☐	- Owner's printed name and address and signature **[§ 276-11.1.B.(6)]**	
13.	☑	☐	☐	- Name and address of all abutting property owners **[§ 276-11.1.B.(7)]**	
14.	☑	☐	☐	- A locus plan at one inch equals 1,000 feet (1" = 1,000') **[§ 276-11.1.B.(8)]**	

(Continue next page)

15. ☑ ☐ ☐ - Boundary of the entire parcel held in single ownership with boundary dimensions and bearings **[§ 276-11.1.B.(9)]**

16. ☑ ☐ ☐ - Error of closure shown and certified by a licensed land surveyor

17. ☑ ☐ ☐ - North point arrow

18. ☑ ☐ ☐ - Zoning classification note of the tract and location of the zoning district boundaries if the property is located in two or more zoning district **[§ 276-11.1.B.(10)]**

19. ☑ ☐ ☐ - The location of all buildings within 50 feet of the tract **[§ 276-11.1.B.(15)]**

20. ☑ ☐ ☐ - The location of roadways, driveways, travel areas or parking areas within 200 feet of the tract, in accordance with **§ 276-11.1.B.(16)**

21. ☑ ☐ ☐ - Existing topography at two-foot contour intervals of that portion of the tract being proposed for development from a topographic survey and contours on the remainder of the tract from a reliable plan source **[§ 276-11.1.B.(17)]**

22. ☑ ☐ ☐ - Proposed topography at two-foot contour intervals **[§ 276-11.1.B.(18)]**

23. ☑ ☐ ☐ - A note identifying the Tax Map and Lot Number of the tract **[§ 276-11.1.B.(19)]**

24. ☑ ☐ ☐ - The location of all existing buildings (including size and height), driveways, sidewalks, parking spaces, loading area, open spaces, large trees, open drainage courses, signs, exterior lighting, service areas, easements landscaping and other pertinent items. **[§ 276-11.1.B.(20)]**

25. ☑ ☐ ☐ - The location of all proposed construction, buildings, structures, pavement, etc. **[§ 276-11.1.B.(21)]**

26. ☑ ☐ ☐ - A green area shown between the right-of-way line and any pavement, gravel or structure meeting the required minimum width **[§ 276-11.1.B.(22)]**

29. ☐ ☐ ☑ - Note any pertinent highway projects. **[§ 276-11.1.B.(23)]**

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TOWN OF HUDSON
SITE PLAN REVIEW CHECKLIST

This checklist is intended to help the applicant and staff to ensure application completeness. Please refer to the regulations on the exact language of each requirement.

Key: Y=Yes P =Pending W=Waiver Request NA=Not Applicable (please explain)

	Y	P	W	NA		Notes
30.	☑	☐	☐		- The location of all building setback lines as required by Chapter 334, Zoning, and setback lines as required by **§ 276-11.1.B.(12)**.	
31.	☑	☐	☐		- The location size and character of all signs or a note* stating "All signs are subject to approval by the Hudson Zoning Administrator prior to installation thereof." [**§ 276-11.1.B.(13)**] *The discrepancy on the note language is correct – reference to the Planning Board in the regulations is outdated.	
32.	☑	☐	☐		- The location, detail and character of all exterior lighting or a note stating: "There will be no exterior lighting." [**§ 276-11.1.B.(14)**]	
33.	☑	☐	☐	☐	- Required open space, including the calculation showing the requirement is met [**§ 276-11.1.B.(24)**]	
34.	☑	☐	☐	☐	- Parking space calculation showing and a statement stating the required parking spaces are provided [**§ 275-8.C.(2) & (3)**]	
35.	☑	☐	☐	☐	- Required dimensions for parking space [**§ 275-8.C.(4)]**	
36.	☑	☐	☐	☐	- Required dimensions for aisle/access drive [**§ 275-8.C.(5)]**	
37.	☑	☐	☐	☐	- Required off-street loading spaces [**§ 275-8.C.(6)]**	
38.	☐	☐	☑	☐	- Required landscaping for the parking lot, including calculation shown the planting requirement is met [**§ 275-8.C.(7)]**	
39.	☑	☐	☐	☐	- Required screening for visual separation of incompatible uses [**§ 275-8.C.(8)]**	
40.	☑	☐	☐	☐	- Handicap accessibility provided in accordance with the latest ADA Regulations [**§ 275-8.C.(11)]**	
41.	☑	☐	☐	☐	- Stormwater Management Plan [**§ 275-9.A]**	
42.	☑	☐	☐	☐	- Traffic Study, if required [**§ 275-9.B]**	
43.	☐	☐	☐	☑	- Noise Study, if required [**§ 275-9.C]**	

(Continue next page)

TOWN OF HUDSON
SITE PLAN REVIEW CHECKLIST

This checklist is intended to help the applicant and staff to ensure application completeness. Please refer to the regulations on the exact language of each requirement.

Key: Y=Yes P =Pending W=Waiver Request NA=Not Applicable (please explain)

	Y	***P***	***W***	***NA***		***Notes***
44.	☐	☐	☐	☑	- Fiscal Impact Study, if required [**§ 275-9.D]**	
45.	☐	☐	☐	☑	- Utility Study [**§ 275-9.E]**	
46.	☑	☐	☐	☐	- Copies of any proposed or existing easements, covenants, deed restrictions or any other similar document pertinent to the Site Plan [**§ 275-9.F]**	
47.	☑	☐	☐	☐	- A copy of all applicable Town, state, county or federal approvals or applications [**§ 275-9.G]**	
48.	☐	☐	☐	☑	- Environmental Impact Study, if required [**§ 275-9.I]**	

(End of checklist)

WAIVER REQUEST FORM

Name of Subdivision/Site Plan: T-Bones @ Lowell Rd

Street Address: 256 Lowell Rd

I Sam Foisie, P.E., Meridian Land Services, Inc hereby request that the Planning Board waive the requirements of item 275-8.7.D of the Hudson Land Use Regulations in reference to a plan presented by am Foisie, P.E., Meridian Land Services, Inc _____ (name of surveyor and engineer) dated January 21, 2025 for property tax map(s) 228 and lot(s) 7 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Land Use Regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

Section 275-8.7.D stated "One shrub per 200 square feet of paved area shall be planted or 1.6 shrubs per every parking space."

This would require 374 shrubs, where 99 are propsoed. Based on the site design this number of shrubs are not needed to addequetly buffer/screen the site. There is alos not

enough room to appropriatly fit 374 shrubs.

Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use Regulations: (if additional space is needed please attach the appropriate documentation hereto):

While the number of shrubs is less than what is required, the site is well screened and buffers. It also has vast natural buffers that

are preserved by the wetlands, wetland buffer, and 100' residential buffer.

Signed:

_____

Applicant or Authorized Agent

WAIVER REQUEST FORM

Name of Subdivision/Site Plan: T-Bones @ Lowell Rd

Street Address: 256 Lowell Rd

I Sam Foisie, P.E., Meridian Land Services, Inc hereby request that the Planning Board waive the requirements of item HR 275-8.C.(6)(b). of the Hudson Land Use Regulations in reference to a plan presented by Sam Foisie, P.E., Meridian Land Services, Inc _____ (name of surveyor and engineer) dated March 11, 2025 for property tax map(s) 228 and lot(s) 7 in the Town of Hudson, NH.

As the aforementioned applicant, I, herein, acknowledge that this waiver is requested in accordance with the provisions set forth in RSA 674:36, II (n), i.e., without the Planning Board granting said waiver, it would pose an unnecessary hardship upon me (the applicant), and the granting of this waiver would not be contrary to the spirit and intent of the Land Use Regulations.

Hardship reason(s) for granting this waiver (if additional space is needed please attach the appropriate documentation hereto):

HR 275-8.C(6)(b) Dimensions. Each off-street loading space shall be at least 12 feet in width and at least 60 feet in length, exclusive of aisle and maneuvering spaces, and shall have vertical clearance of at least 14 feet. However, when it is demonstrated that a particular loading space will be used by shorter trucks, the minimum length may be reduced to 35 feet.

The concrete pad is locked at the rear of building is reserved for deliveries. For the site plan to install a loading spaces for deliveries, that does not utilizes the drive isle would effect how the site functions during operational hours.

Reason(s) for granting this waiver, relative to not being contrary to the spirit and intent of the Land Use Regulations: (if additional space is needed please attach the appropriate documentation hereto):

T-bones is modeling this store and site off their Concord location that utilizes the same loading area. This loading area functions without issue, due to deliveries occurring outside of business hours. After discussion at the 2/26/25 PB meeting it was determined that his is acceptable with the addition of pavement markings identifying this area as a loading zone.

Signed:

_____

Applicant or Authorized Agent

CONDITIONAL USE PERMIT APPLICATION

Date of Application: 1/21/25 Tax Map #: 228 Lot #: 7

Site Address: 256 LOWELL RD, Hudson NH

Name of Project: T-Bones @ Lowell Rd

Zoning District: B-Business General CUP#: _____
(For Town Use Only)

Z.B.A. Action: _____

PROPERTY OWNER:	DEVELOPER:
Name: 256 LOWELL ROAD, LLC	Lowell RD, LLC
Address: 9 OLD DERRY RD.,	124 Bedford Center Road SB,
Address: HUDSON, NH 03051	Bedford, NH 03110
Telephone #	
Email:	
PROJECT ENGINEER or SURVEYOR:	**CERTIFIED WETLANDS SCIENTIST:**
Name: Sam Foisie, P.E., Meridian Land Services, Inc	Chris Hickey, LLS, Keach-Nordstom Associates,inc.
Address: 31 Old Nashua RD	10 Commerce Park North, Suite 3
Address: Amherst, NH 03055	Bedford, NH 03110
Telephone # 603-673-1441	(603) 627-2881
Email: SRFoisie@meridianlandservices.com	chickey@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of the plan is to show the sirte improvemetns to construct a t-bones restuarant

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

_____ I have no comments _____ I have comments (attach to form)

_____ Title: _____ Date: _____
(Initials)

Department:

Zoning: ___ Engineering: ___ Assessor: ___ Police: ___Fire: ___ DPW: ___ Consultant: ___

SITE DATA SHEET

PLAN NAME: T-Bones @Lowell Rd

PLAN TYPE: (Site Plan, Subdivision, or other) Site Plan

LEGAL DESCRIPTION: MAP 228 LOT 7

DATE: 1/21/25

Location by Street: 256 LOWELL RD

Zoning: B-Business

Proposed Land Use: Restaurant

Existing Use: Vacant

Total Site Area: S.F.: 280,025 Acres: 6.429

Total Wetland Area (SF): 45,578 sf

Permanent Wetland Impact Area (SF): 0

Permanent Wetland Buffer Impact Area (SF): 20,650 sf

Temporary Wetland Impact Area (SF): 0

Temporary Wetland Buffer Impact Area (SF): 3,925 sf

Flood Zone Reference: Zone X, found on flood panel 33011C0656D

Proposed Mitigation:

Minimzation of buffer impact, temparay impacts as needed, and removal of invasve species within remaining wetlands and buffer

(For Town Use Only)

Data Sheets Checked By: _____ Date: _____

CONDITIONAL USE PERMIT APPLICATION AUTHORIZATION

I hereby apply for *Conditional Use Permit* and acknowledge I will comply with all of the Ordinances of the Town of Hudson, New Hampshire State Laws, as well as any stipulations of the Planning Board, in development and construction of this project. I understand that if any of the items listed under the *Conditional Use Permit* specifications or application form are incomplete, the application will be considered rejected.

Pursuant to RSA 674:1-IV, the owner(s) by the filing of this application as indicated above, hereby given permission for any member of the Hudson Planning Board, the Hudson Conservation Commission, the Town Planner, the Town Engineer, and such agents or employees of the Town or other persons as the Planning Board may authorize, to enter upon the property which is the subject of this application at all reasonable times for the purpose of such examinations, surveys, tests and inspections as may be appropriate. The owner(s) release(s) any claim to or right he/she (they) may now or hereafter possess against any of the above individuals as a result of any examinations, surveys, tests and/or inspections conducted on his/her (their) property in connection with this applications.

Signature of Owner: _____ Date: 1-20-2025

Print Name of Owner: Marco Planta

- If other than an individual, indicate name of organization and its principal owner, partners, or corporate officers.

Signature of Developer: _____ Date: 1/20/2025

Print Name of Developer: William Greene

- The developer/individual in charge must have control over all project work and be available to the Code Enforcement Officer/Building Inspector during the construction phase of the project. The individual in charge of the project must notify the Code Enforcement Officer/Building Inspector within two (2) working days of any change.

SCHEDULE OF FEES

(Fee covers both Conservation Commission & Planning Board)

A. REVIEW FEES:

1. Conditional Use Permit
   $100 Flat Fee $ 100.00

LEGAL FEE:

The applicant shall be charged attorney costs billed to the Town for the Town's attorney review of any application plan set documents.

B. POSTAGE:

_____ Direct Abutters Applicant, Professionals, etc. as required by RSA 676:4.1.d @$5.58 **(or Current Certified Mail Rate)** $_____

_____ Indirect Abutters (property owners within 200 feet) @$0.73 **(or Current First Class Rate)** $_____

TOTAL $ See Attached

(For Town Use)			
AMOUNT RECEIVED: $_____		DATE RECEIVED:	_____
RECEIPT NO.:	_____	RECEIVED BY:	_____

WETLAND CONDITIONAL USE PERMIT CHECKLIST

Yes	No	NA	QUESTIONS/INFORMATION NEEDED	HCC Comments
NARRATIVE REPORT				
			Existing Conditions	
○	○	✓	Has a DES Dredge and Fill Permit been issued for any part of this site? If yes, provide number, date, and description.	
○	○	✓	Is there evidence of altered wetlands or surface waters on site?	
○	✓	○	All prime and other wetlands in the vicinity, plus any wetlands/watersheds past the immediate vicinity affected by this project	
✓	○	○	• Description of each wetland and associated values	
✓	○	○	Wetland mapping results – Including the flagging date and technique plus the name, company and qualifications of the wetland scientist	
✓	○	○	Was property surveyed? If yes, the date of survey. (Please attach the survey plan)	
			National Wetland Inventory	
✓	○	○	• Vegetative cover types	
○	✓	○	• Existence of vernal pools and associated habitat	
○	✓	○	• Unique geological and cultural features	
✓	○	○	• NH Natural Heritage inventory – For list of rare and endangered species, contact the NH Division of Forests and Lands (603)271-3623	
○	✓	○	• Wildlife and fauna species, including estimated number and locations (large projects)	
✓	○	○	• Public or private wells located within the vicinity	
○	✓	○	• Monitoring well(s) located on site	
✓	○	○	• Current land use and zoning district	
✓	○	○	Photos of existing area (please use color photos)	
			Proposed Project Description	
✓	○	○	Entire project and associated activities	
✓	○	○	Time table of project and anticipated phasing	
✓	○	○	Land use	
✓	○	○	Grading plan	
			Impact to Wetlands and/or Buffers	
○	○	✓	• Depending on size and proposed impacts, a report from a biologist may be appropriate	
✓	○	○	Removing, filling, dredging, or altering (Area square ft. and locations)	
✓	○	○	Intercepting or diverging of ground or surface water (Locations and size)	
✓	○	○	• Change in run-off characteristics	
✓	○	○	Delineation of drainage area contributing to each discharge point	

Yes	No	NA	Questions/Information Needed	HCC COMMENTS
✓	○	○	Estimated water quality characteristics of runoff at each point of discharge for both pre- and post-development	
✓	○	○	Erosion control practices	
✓	○	○	• If using rip-rap, attach documentation explaining why other erosion control methods are not feasible	
✓	○	○	• How storm water runoff will be handled	
○	○	✓	If backyards or lots include a buffer area, buffer restriction wording shall be included in each deed (A physical marker may be requested to designate buffer boundaries at site)	
			Mitigation	
✓	○	○	Square footage of mitigation – wetland and upland areas	
○	✓	○	Wetland or upland plants identified to replace any losses	
○	✓	○	• Restoration plan for planting and vegetation	
○	✓	○	Conservation easements, including location and aesthetic, wildlife and vegetative values	
○	✓	○	• If easement is on or added to the site(s), a copy of the legal document shall be given to the HCC (HCC conservation easement markers may also be required along the easement)	

CONCEPTUAL SITE PLAN/DRAWING

✓	○	○	Locus map depicting project site and vicinity within approximately ½ mile and also on a larger scale	
○	✓	○	All prime and other wetlands in the vicinity	
✓	○	○	Wetland(s) impacted (identified as prime or other) and the wetland boundaries with 50', buffer areas highlighted in color	
✓	○	○	Assessor's sheet(s), lot(s), and property account number(s)	
✓	○	○	Existing and proposed structures	
✓	○	○	Square footage listed for temporary and permanent impact	
✓	○	○	Erosion control plan (Suggested: Biodegradable silt fences so area won't be disturbed again and no hay to avoid invasive species)	
✓	○	○	Topographical map with contours	
✓	○	○	Storm water treatment swales and basins highlighted in color if in buffer area	
✓	✓	○	Conservation and utility easements	
✓	○	○	Grading plan	
✓	○	○	Culvert, arch, bridge - sizes, material, etc.	
✓	○	○	Vegetative cover types	
○	○	✓	Vernal pools	
✓	○	○	Existing and proposed stone walls, tree lines, and unusually large, rare or beautiful trees, and other notable site features	

MERIDIAN
LAND SERVICES, INC.
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www.MeridianLandServices.com
CIVIL ENGINEERING | LAND SURVEYING | PERMITTING | SOIL & WETLAND MAPPING | SEPTIC DESIGN | ENVIRONMENTAL

January 21st, 2025

Re: T-Bones @ Lowell Rd
256 Lowell Rd
Lot 228-7
Hudson, NH

Conditional Use Permit Application: Wetland Conservation Overlay District – Checklist Questions

1. Will the increased discharge cause erosion and channelization?

   No, the stormwater management system controls the stormwater to meet predevelopment rates.

2. Is there potential for off-site flooding?

   No, the stormwater management system controls the stormwater to meet predevelopment rates. It also slowly releases the runoff over a longer period of time and infiltrates the groundwater recharge volume (GRV).

3. Does the decreased infiltration in the drainage area cause vegetation stress due to reduced or increased ground water or surface water discharge into wetland?

   No, the stormwater management system is an infiltration basin. This basin infiltrated the required GRV to mitigate for the increased impervious area.

4. Will the nutrients in the runoff increase eutrophication potential in downstream water bodies?

   No, the stormwater management system has been designed to comply with nutrient removal requirements established within the town of Hudson's stormwater regulations.

5. Do you own any adjacent parcels or easements for roadways across adjacent parcels which could be used for access to avoid a wetland crossing?

   No wetland crossings are proposed. The site has been designed to minimize the disturbance to the wetland buffer areas as much as reasonably possible.

6. Does a wetland crossing occur where it will result in the least amount of alteration to a wetland?

   N/A - The site has been designed to minimize the disturbance to the wetland buffer areas as much as reasonably possible.

7. Is preservation of upland areas adjacent to the impacted wetland a priority?

   Yes, The majority of the disturbances to the wetland buffer area are for stormwater management, to protect the wetlands, and access to the property to provide safe access into the property and circulation through the site.

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8. Can using an alternative crossing design such as a bridge, retaining wall, etc. decrease the width or area of wetland alteration?

   N/A

9. Does a proposed road crossing of a wetland exceed the minimum width acceptable to the Planning Board and can this be negotiated downwards?

   N/A

10. Have you established that no reasonable alternative access from a public way to an upland is possible?

    Yes. See responses above.

11. Can the parking lot spaces be decreased?

    No. T-Bones is a very successful restaurant. The parking spaces are proposed are to meet the business' demands. This also provides safe circulation to avoid customers waiting in the access isles for parking spaces to become available.

12. Is the roadway designed in such a way that does not restrict the flow of water?

    Yes.

13. Is additional information needed to assess water quality impacts due to runoff?

    No.

14. Is there an increase in other pollutants (e.g., heavy metals, turbidity, coli form) from streets and parking lots?

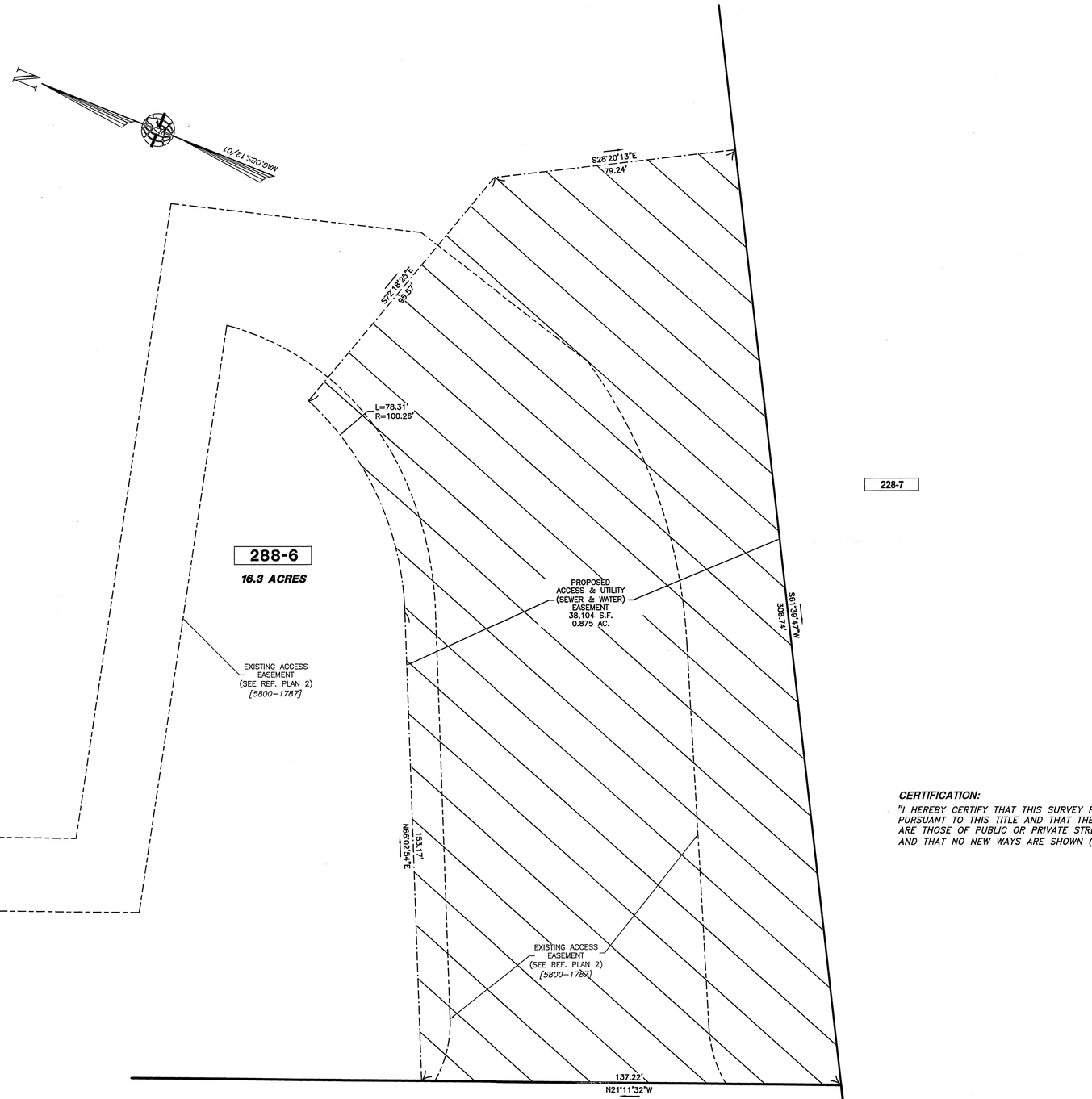
    No, the stormwater management system mitigates increases in pollutants.

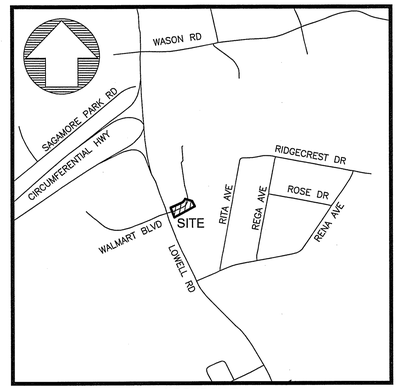
15. Is there a need to restrict or prohibit the use of pesticides and fertilizers?

    No.

16. Is there a need to restrict the use of roadway salting?

    No.





LOCUS MAP:
SCALE: 1"=1,000'±

REFERENCE PLANS:

1. *"SITE PLAN – WAL–MART STORES, INC. – HUDSON, NH" – MAP 7 – LOT 43, SCALE: 1"=50, DATED 1/10/92, REVISED THROUGH 9/16/92 BY HOLDEN ENGINEERING & SURVEY, INC., HCDR PLAN #26014.*
2. *"TAX MAP 7 LOT 43–3 – 250 LOWELL RD., HUDSON, N.H.– MONROE MUFFLER/BRAKE – PROPOSED ACCESS EASEMENT PLAN – SCALE: 1"=40', DATED 10/14/96, BY JONES & BEACH ENGINEERS, INC., HCRD PLAN #28490.*

NOTES:

1. *THE PURPOSE OF THIS PLAN IS TO DEFINE AN ACCESS AND UTILIY EASEMENT ON TAX MAP 228 LOT 6 FOR THE BENEFIT OF MAP 228 LOT 7, AS SHOWN.*
2. *OWNER OF RECORD OF TAX MAP 228 LOT 6: WAL–MART STORES, INC. C/O WAL–MART PROPERTY TAX DEPT., P.O. BOX 8050 MS 0555 BENTONVILLE, AR 72716–8050 5354 PG. 1153, BK. 5354 PG. 1154 AND BK. 5800 PG. 1780.*
3. *REFERENCING THE ZONING MAP OF THE TOWN OF HUDSON, MAP 228 LOT 6 IS LOCATED WITHIN THE BUSINESS (B).*
4. *THE EXISTING AREA OF TAX MAP 3D–1 LOT 4 IS 11.4 ACRES (494,391 S.F.).*
5. *THE EXISTING CONDITIONS DEPICTION WAS OBTAINED FROM VARIOUS SOURCES AND IS TO BE CONSIDERED APPROXIMATE. NO GUARANTEE IS MADE TO THE ACCURACY OF THIS INFORMATION. DATA SOURCES INCLUDE BUT ARE NOT LIMITED TO:*

CERTIFICATION:

"I HEREBY CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS OR WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN (RSA 676:18 iii & 672:14)."

GRAPHIC SCALE
20' 10' 0 20' 40' 60'

REV.	DATE	DESCRIPTION	C/O	DR	CK
D	--	--	--	--	--
C	--	--	--	--	--
B	--	--	--	--	--
A	8-27-24	UPDATE CERT & ANNO	SRF	RAH	SRF

LOWELL ROAD, aka NH RTE. 3A

PROPOSED ACCESS AND UTILITY (SEWER & WATER) EASEMENT PLAN ON TAX MAP 288 LOT 6 FOR THE BENEFIT OF TAX MAP 288 LOT 7
LAND OF
WAL-MART STORES, INC.
PREPARED FOR
HUDSON T-BONES
254 LOWELL ROAD
HUDSON, NEW HAMPSHIRE

SCALE: 1" = 20' AUGUST 26, 2024

MERIDIAN
LAND SERVICES, INC.
ENGINEERING | SURVEYING | PERMITTING
SOIL & WETLAND MAPPING | SEPTIC DESIGN
31 OLD NASHUA ROAD, AMHERST, NH 03031 TEL. 603-673-1441
MERIDIANLANDSERVICES.COM FAX 603-673-1584

FILE:12542D00A.dwg	PROJECT NO. 12542.00	SHEET NO. 1 OF 1

Plotted: 8/27/2024 10:39 AM By: RAH
H:\MLS\12542\0_Drawings\SURV\12542D00A.dwg

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CIVIL ENGINEERING | LAND SURVEYING | PERMITTING | SOIL & WETLAND MAPPING | SEPTIC DESIGN | ENVIRONMENTAL

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www.MeridianLandServices.com

LIST OF ABUTTERS

Tax Map 228 Lot 7
Lowell Road
Hudson, NH

January 13th, 2025
#12542-00

(Indirect Abutters)

Map 228 Lot 3
COLLEY-MCCOY MANAGEMENT CO LLC
P.O. BOX 6300
AMHERST, NH 03031-6300

Map 228 Lot 16
MAGLIO, FRANCESCO A. III
14 RITA AVENUE
HUDSON, NH 03051

Map 228 Lot 52
DEXTER, KAREN
DIAZ, JILL
268A LOWELL RD.
HUDSON, NH 03051

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LIST OF ABUTTERS

Tax Map 228 Lot 7
Lowell Road
Hudson, NH

January 13th, 2025
#12542-00

MERIDIAN LAND SERVICES, INC.
PO BOX 118
MILFORD, NH 03055
ATTN: SAM FOISIE

LOWELL RD, LLC
ATTN: BILL GREINER
124 BEDFORD CENTER ROAD
BEDFORD, NH 03110

Map 228 Lots 7 & 8
256 LOWELL ROAD, LLC
9 OLD DERRY RD.
HUDSON, NH 03051

Map 228 Lot 6
WAL-MART STORES, INC. #1785
C/O WAL-MART PROP TAX DEPT.
PO BOX 8050 MS 0555
BENTONVILLE, AR 72716-8050

Map 234 Lot 35
267 LOWELL ROAD, LLC
C/O CHESTNUT REALTY MGMT, LLC
PO BOX 15228
SPRINGFIELD, MA 01115-5228

Map 228 Lot 1
261 LOWELL ROAD LLC
41 PARK AVE.
ARLINGTON, MA 02476

Map 228 Lot 2
ANTON, CHARLES A., TR.
ANTON`S REALTY TRUST II
500 CLARK RD.
TEWKSBURY, MA 01876

Map 228 Lot 4
SAM`S RE BUSINESS TRUST
C/O WAL-MART PROP TAX DEPT.
PO BOX 8050 MS 0555
BENTONVILLE, AR 72716-8050

Map 228 Lot 9
REED, NICOLE J.
0 RITA AVE.
HUDSON, NH 03051

Map 228 Lot 10
DALPHOND, SUSAN M.
2 RITA AVE.
HUDSON, NH 03051

Map 228 Lot 11
GOYETTE, COLIN E.
GOYETTE, BARBARA E.
4 RITA AVENUE
HUDSON, NH 03051

Map 228 Lot 12
CAOUETTE, MANDY
6 RITA AVENUE
HUDSON, NH 03051

Map 228 Lot 13
BELLVILLE, ROBERT M.
BELLVILLE, ELLEN C.
8 RITA AVENUE
HUDSON, NH 03051

Map 228 Lot 14
CIMINO, ALANDRIA
10 RITA AVENUE
HUDSON, NH 03051

Map 228 Lot 15
GORBY, ERIC
COLLINS, KAREN
12 RITA AVENUE
HUDSON, NH 03051

Keach-Nordstrom Associates, Inc.
10 Commerce Park North
Suite 3
Bedford, NH 03110

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T-Bones @ Lowell Rd
256 Lowell Rd
Lot 228-7
Hudson, NH

Planning Board Application - Fee Calculation

Site Plan

Description	Fee Calculation		Units	Amount
Commercial/Semi Public/Civic or Recreational	$ 157.00	$157.00/1,000 sq. ft. for first 100,000 sq.ft. (bldg. area): $78.50/1,000 sq.ft. thereafter.	9500	$ 1,491.50
Notice to Direct Abutters	$ 5.58	per Owner, applicant & consultants	16	$ 89.28
Notice to Indirect Abutters	$ 0.73	per Owner, applicant & consultants	3	$ 2.19
Tax map Update fee	$ 275.00	Flat fee	1	$ 275.00
			Subtotal	**$ 1,857.97**

WETLAND CONSERVATION OVERLAY DISTRICT Conditional Use Permits (CUP)

Description	Fee Calculation		Units	Amount
Base Fee	$ 100.00	Per Application	1	$ 100.00
Notice to Direct Abutters		**NOTICES INCLUDED FOR SITE PLAN FEE**		$ -
Notice to Indirect Abutters		**NOTICES INCLUDED FOR SITE PLAN FEE**		$ -
			Subtotal	**$ 100.00**

Total Permitting Fees Made Payable to the Town of Hudson =	**$ 1,957.97**

CONSULTANT REVIEW FEE:	$ 600.00	$600 per acre or $1,250 whichever is greater	3	**$ 1,800.00**
Made Payable to the town of Hudson				

NOTES

1

1/15/2025

Attachment "B"

Re: T-Bones @ Lowell Rd **January 21, 2025**
256 Lowell Rd
Lot 228-7
Hudson, NH

Site Plan Application
Conditional Use Permit Application: Wetland Conservation Overlay District

Project Narrative

I) INTRODUCTION

The applicant, Lowell Rd., LLC, has requested to be heard at the Hudson Planning Board for a revie w od a Site Plan at Lot 228-7. The project involves constructing a 9,500 +/- square-foot restaurant and other associated site improvements.

II) EXISTING USE

The property is currently vacant with a variety of ground covers and tree foliage.

III) SUBDIVISION

No changes to the property boundary are proposed under this application.

IV) STORMWATER MANAGEMENT

The proposed disturbance being above 100,000 sf will trigger a NHDES Alteration of Terrian stormwater permit; therefore, the site's stormwater has been designed to Env-Wq 1500: Alteration of Terrain and the stormwater ordinance outlined in Chapter 290 of the Town of Hudson Part 1: Administrative Legislation. The proposed plan has one area that will treat the stormwater via an infiltration basin prior to discharging to the onsite wetlands.

V) SITE ACCESS AND PARKING

The site is proposed to be accessed from the existing signalized access to Walmart. The location of this connection has been dictated by Walmart. Walmart has preliminarily approved the site's connection to their access and an easement plan has been created. Upon approval of this project the easement plan and associated easement will be executed. There is an additional right-in/right-out driveway proposed connecting directly to Lowell Road. This driveway is a requirement of agreements made with Walmart to take presser off the Walmart driveway. The location of this connection was dictated by connecting to Lowell Road beyond the taper for the existing right turn lane. Both of these connections will require updating the Walmart NHDOT driveway permit and a new NHDOT driveway permit.

The parking lot will be configured to provide 170 +/- paved parking spaces with 6 ADA spaces. This is above the 126 required spaces. T-Bones is a successful restaurant that typically requires more parking than the average restaurant. The additional parking is to make sure the business is not limited by parking. The excess parking allows for a safer site and better circulation by not having visitors wait for parking spaces.

VI) WETLANDS AND WETLAND BUFFER

The approximately 15,500 sf of wetland buffer proposed to be impacted. These impacts are mostly related for the construction the stormwater management area and the right-in/right-out driveway. Both of these site features are unavoidable. Stormwater runoff travels downhill, and wetlands are located in the lowest portion of the property. The only place to locate the stormwater is partially within the buffer. As stated before, the Right-in/Right-Out

driveway connects to the Lowell Road beyond the taper of the turn lane. This is the least amount of buffer disturbance while providing a safe connection point. To minimize the overall impact to the buffer, the back side of the slopes of the drainage ponds are proposed to be planted with a conservation seed mix and un maintained. This will reestablish about 5,250 sf +/- of buffer area, therefore the permanent buffer impact will be 10,250 sf +/-.

There are no impacts to wetlands.

VII) UTILTIES

The lot is proposed to be served by municipal water, sewer, and gas.

VIII) LANDSCAPING

The landscaping has been proposed to meet the town's requirements as reasonably as possible. A waiver has been requested to allow for a reduction in required shrubs.

IX) SITE LIGHTING

The site lighting is a code compliant lighting plan.

CONDITIONAL USE PERMIT APPLICATION

Date of Application: 1/21/25 Tax Map #: 228 Lot #: 7

Site Address: 256 LOWELL RD, Hudson NH

Name of Project: T-Bones @ Lowell Rd

Zoning District: B-Business General CUP#: _____ (For Town Use Only)

Z.B.A. Action: _____

PROPERTY OWNER:	DEVELOPER:
Name: 256 LOWELL ROAD, LLC	Lowell RD, LLC
Address: 9 OLD DERRY RD.,	124 Bedford Center Road SB,
Address: HUDSON, NH 03051	Bedford, NH 03110
Telephone # _____	
Email: _____	
PROJECT ENGINEER or SURVEYOR:	**CERTIFIED WETLANDS SCIENTIST:**
Name: Sam Foisie, P.E., Meridian Land Services, Inc	Chris Hickey, LLS, Keach-Nordstom Associates,Inc.
Address: 31 Old Nashua RD	10 Commerce Park North, Suite 3
Address: Amherst, NH 03055	Bedford, NH 03110
Telephone # 603-673-1441	(603) 627-2881
Email: SRFoisie@meridianlandservices.com	chickey@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of the plan is to show the sirte improvemetns to construct a t-bones restuarant

(For Town Use Only)

Routing Date: 3/17/25 Deadline Date: _____ Meeting Date: _____

✓ I have no comments _____ I have comments (attach to form)

EJS Title: Town Engineer Date: 3/18/25
(Initials)

Department:

Zoning: ___ Engineering: ✓ Assessor: ___ Police: ___ Fire: ___ DPW: ___ Consultant: ___

CONDITIONAL USE PERMIT APPLICATION

Date of Application: 1/21/25 Tax Map #: 228 Lot #: 7

Site Address: 256 LOWELL RD, Hudson NH

Name of Project: T-Bones @ Lowell Rd

Zoning District: B-Business General CUP#: _____ (For Town Use Only)

Z.B.A. Action: _____

PROPERTY OWNER:	DEVELOPER:
Name: 256 LOWELL ROAD, LLC	Lowell RD, LLC
Address: 9 OLD DERRY RD.,	124 Bedford Center Road SB,
Address: HUDSON, NH 03051	Bedford, NH 03110
Telephone # _____	_____
Email: _____	_____
PROJECT ENGINEER or SURVEYOR:	**CERTIFIED WETLANDS SCIENTIST:**
Name: Sam Foisie, P.E., Meridian Land Services, Inc	Chris Hickey, LLS, Keach-Nordstom Associates,inc.
Address: 31 Old Nashua RD	10 Commerce Park North, Suite 3
Address: Amherst, NH 03055	Bedford, NH 03110
Telephone # 603-673-1441	(603) 627-2881
Email: SRFoisie@meridianlandservices.com	chickey@keachnordstrom.com

PURPOSE OF PLAN:

The purpose of the plan is to show the sirte improvemetns to construct a t-bones restuarant

(For Town Use Only)

Routing Date: _____ Deadline Date: _____ Meeting Date: _____

X I have no comments _____ I have comments (attach to form)

CJS Title: Zoning Administrator Date: 3-17-25
(Initials)

Department:

Zoning: X Engineering: ___ Assessor: ___ Police: ___ Fire: ___ DPW: ___ Consultant: ___

Attachment "C"

TOWN OF HUDSON

FIRE DEPARTMENT

INSPECTIONAL SERVICES DIVISION

12 SCHOOL STREET, HUDSON, NEW HAMPSHIRE 03051

Emergency 911
Business 603-886-6005
Fax 603-594-1142

Scott Tice
Chief of Department

TO: Acting Town Planner

FR: David Hebert
Fire Marshal

DT: March 17, 2025

RE: 256 Lowell Road

The proposed site plan needs to show a second fire hydrant added near the entrance to the site

David Hebert
Fire Marshal

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RE: Hudson T-Bones @ Lowell Road

256 Lowell Rd
Lot 228-7
Hudson, NH

Hi Sam,

I delineated the wetlands on the Lowell Road piece this past summer. The wetland are classified as a Palustrine Forested Wetland with season wetness/pond or saturation. The overstory was dominated by red maples with some highbush blueberry and dogwoods comprising the understory. There was little ground coverage of forbs/graminoids. Most lay people would recognize this as a red maple swamp not dissimilar from others in the area. The hydrology of the site is resultant of surface water flows. The test pit investigations we conducted in the surrounding uplands do not indicate that the inundation observed during delineation was derived from groundwater expressing itself aka a discharge area. Lowell Road effectively acts as a berm creating a surface water impoundment the surface flow from upgradient lands is likely the contributor to wetland formation. As such, the wetland area does act as a recharge area and primary filter from potential pollutants as well as litter and other surface debris…which was also evident and abundant in the wetland area. As this area acts as essentially a recharge basin, I would try to avoid it if at all possible in the design. Should you need to fill portions of the wetland area, I would consider incorporating some compensatory storage area immediately adjacent to the wetland. The upland vegetated buffer for the wetland area only really exists on the north and western portions of the wetland as the wetland is immediately adjacent to Lowell Road on one side and backs up to residential use on the other. I observed that most of the abutters in the residential development largely have lawn up to the limits of the property line with a few large diameter trees. The intact buffer is heavily comprised of Tartarian honeysuckle and oriental bittersweet. There is also evidence of burning bush and autumn olive. While some of these species have wildlife value for nesting and forage habitat native plantings or speciation would provide a larger benefit to a wider array of native wildlife. I should also mention that disturbance to the buffer would have minimal impact to the primary function of the wetland so long as my recommendation above is adhered to. In other words, the benefits of wildlife habitat by invasive/non-native species has little influence over the capacity of the wetland to treat and recharge offsite surface water. Should the buffer need to be impacted I would encourage the specification of dense plantings of all vegetative strata (i.e. groundcover/grasses, shrubs and small trees, large tree species) so that there could be a net improvement to site integrity.

Let me know if you have any questions. Happy to consult on native plantings if/when needed.

Spencer C. Tate, CWS/CSS
Principal/Treasurer
Meridian Land Services, Inc.

Attachment "E"

The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner

NOTICE OF ACCEPTANCE OF PERMIT APPLICATION
LAND RESOURCES MANAGEMENT
ALTERATION OF TERRAIN BUREAU

March 5, 2025

HUDSON MUNICIPAL CLERK
12 SCHOOL ST
HUDSON NH 03051

Re: Alteration of Terrain (AoT) Bureau Permit Application (RSA 485-A:17); NHDES File Number: 250305-036
Project Name: T-Bones at Lowell Road
Subject Property: Tax Map# 228, Lot# 7

Dear Sir or Madam:

Pursuant to RSA 541-A:39, please be advised that the New Hampshire Department of Environmental Services (NHDES) AoT Bureau accepted an application on March 5, 2025 for the permit program and subject property referenced above. The application requests a permit to disturb approximately 154,475.00 square feet of earth at the subject property.

Pursuant to Env-Wq 1503.05 (f), the applicant is required to provide a copy of the application and plans to the municipality. If you have not received the required information, please contact the agent: **MERIDIAN LAN SERVICES INC. C/O SAMUEL R. FOISIE, PO BOX 118, MILFORD NH 03055**.

If you wish to comment on the application, please submit your comments by **March 19, 2025**. All comments should reference the NHDES file number, and mailed to the following address: **NHDES ALTERATION OF TERRAIN BUREAU, PO BOX 95, CONCORD NH 03302-0095**.

Please provide a copy of this notice to all interested departments, boards and commissions. Also note that under current state law and regulations, NHDES is not authorized to consider local zoning and regulatory issues pertaining to a project; these must be addressed at the local level.

If you have any questions, please contact the NHDES Alteration of Terrain Bureau at (603) 271-3568.

Sincerely,

Alteration of Terrain Bureau
Land Resources Management

cc: William Greiner, Lowell Road, LLC
Samuel R. Foisie, Meridian Land Services, Inc.

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Ben Witham-Gradert
Associate Planner
Town of Hudson Planning Department
12 School Street
Hudson, NH 03051
Phone: 603-886-6008
Email: bgradert@hudsonnh.gov

March 12th, 2025

Re: T-Bones @ Lowell Rd
256 Lowell Rd, Lot 228-7, Hudson, NH

Site Plan Application
Conditional Use Permit Application: Wetland Conservation Overlay District

Third party Engineering Review Response Letter #1

In response to the Town of Hudson Planning Board Review dated February 10, 2025, provided by Fuss & O'Neill the following responses are provided.

1. Site Plan Review Codes (HR 275)

   a. Hudson Regulation (HR) 275-6.C & T.(1)(b) The applicant has not proposed adding any sidewalks to the site. There will be a sidewalk along Lowell Road extending north from the Walmart driveway as part of off-site improvements for the Target Distribution Center project. The applicant should coordinate with the Town for a potential sidewalk connection for the site on the south side of the Walmart driveway along Lowell Road.

   Sidewalk has been added along frontage of the entire property to represent the off-site improvements for the Target Distribution Center project. The plan set shows a connection to this roadside sidewalk and the restaurant, as well as the adjustments of the side walk for the deceleration lane associated with the Lowell road driveway. The sidewalk is proposed to be 5-feet wide pavement with vertical granite curb.

   b. HR 275-6.I. The scope of this review does not include the adequacy of any fire protection provisions for the site. The applicant has shown a proposed four-inch water line with a fire service connection to the building. We also note that an existing hydrant is located at the northwest corner of the site.

   Acknowledged.

   c. HR 275-6.T. The applicant is proposing limited off-site improvements that include utility connections and driveway installations. We note a majority of the off-site improvements will be on the Walmart property. The applicant has provided an Access & Utility Easement Plan for this work.

   Acknowledged.

   d. HR 275-8.C.(2)(a) and Zoning Ordinance (ZO) 334-15.A. The applicant has provided parking calculations on the plan set which show that 127 parking spaces are required for the restaurant use. The applicant has

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proposed 169 spaces which they note is due to the popularity of the restaurant chain and the number of expected users.

Acknowledged.

e. HR 275-8.C.(6)(b). The applicant has shown a concrete pad at the back of the building that may be for loading, although it is not labelled as such. If this is a loading space it does not meet the Hudson regulation requirements.

T-bones is modeling this store and site off their Concord location that utilizes the same loading area. This loading area functions without issue, due to deliveries occurring outside of business hours. After discussion at the planning board meeting dated 2/26/2025, it was determined that the loading space specified would suffice with the addition of pavement markings stating, "LOADING ZONE". See sheet SP-4.

f. HR 275-9.C.(11). The applicant has provided seven handicap accessible parking spaces for the site which exceeds the minimum requirement. The applicant should revise the Handicap Parking detail to match the space length and width shown on the plan.

Acknowledged. Handicap dimensions listed in the detail are minimum dimensions and are noted as such. The dimensions proposed on plan are larger than the minimum dimensions. Dimensions of these spaces have been added to plan. See sheet SP-4.

g. HR 275-9.F. The applicant provided a copy of the proposed easement plan. No existing or proposed deeds were provided as part of the package received for review. No easements are shown on the Existing Conditions plan or the proposed plans.

Acknowledged. Proposed deeds will be provided prior to final signed approval. We expect the planning board to add a condition of approval that the subject executed access & utility easement be provided prior to the final plan signature.

2. Administrative Review Codes (HR 276)

a. HR 276-11.1.B.(6). The applicant should add the owner's signature to the plan set for the final approval copy.

Acknowledged, space for signature is provided on cover and signature will be provided for final approval.

b. HR 276-11.1.B.(12)(c). The applicant has shown and met the 100-foot setback required on the east side of the site where there are abutting residential uses.

Acknowledged.

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c. HR 276-11.1.B.(16). The applicant has not provided locations of driveways and parking areas within 200 feet of the site.

An exhibit has been provided showing the referenced information.

d. HR 276-11.1.B.(24). The applicant should provide the open space calculation on the plan. We note the proposed open space number says TBD.

Open space calculation has been calculated to be 58% and has been updated on plan. See sheet SP-3.

3. Driveway Review Codes (HR 275-6.B/Chapter 193)

a. HR 193.10.E. The applicant should show the sight line on the profile of the Sight Distance Plan sheet to show sight distance is adequate.

Sight line has been shown on Sight Distance Plan & Profile Sheet. See sheet SD-1.

b. HR 193.10.G. We note that the applicant has proposed two driveways for the site, one that connects to the existing Wal-Mart driveway and one right turn in & right turn out only driveway on Lowell Road. The applicant should review the need for a waiver from the Regulation that .

Per Planning Board hearing on February 26, 2025 it was determined that the driveway entering Walmart Boulevard is not to be considered a driveway as it does not access a public Right-of -Way.

c. HR 193.10.I. We note that the shared driveway with Walmart is not allowed by the Regulation unless approved by the Planning Board.

Acknowledged.

d. The geometry of the proposed Lowell Road driveway does not allow fire truck access without crossing over the proposed median. The applicant should coordinate with the Hudson Fire Department for fire truck routing to the site.

Meridian is on the process of coordinating with the fire department.

4. Traffic (HR 275-9.B)

a. Traffic review comments will be forwarded under separate cover.

Acknowledged.

5. Utility Design/Conflicts

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a. HR 275-9.E & 276-13. The applicant has provided the Town of Hudson's standard water and sewer crossing detail on sheet D-3 with 18" separation between the utilities. We note the proposed sewer main is shown on the sewer profile crossing under the existing water main within the Wal-Mart driveway with less than six inches of clearance between the utilities. The applicant should call out the requirements of Sewer Note #6 from sheet GN-1 on the sewer plan at this location.

Add callout on plan referencing Sewer Note 6 on GN-1 to sheet.

b. Hudson Engineering Technical Guidelines Typical Details (ETGTD) Section 720.8.3 and Detail S-6. The applicant should provide a sewer cleanout on the plan at the property line as required. The plans do include a sewer cleanout detail.

6" sewer cleanout has been added to the plan as well as the sewer plan & profile. See sheets SP-5 & P-1.

c. ETGTD Section 720.8.5. The applicant should note on the plans that floor drains, roof drains, sump pumps, or any other non-sanitary sewerage drain cannot be connected to the building's sewer service connection.

Note has been added as utility note #1. See sheet SP-5.

d. ETGTD Details S-1, S-2 & S-3. The applicant has included the Town of Hudson's Sewer Manhole, Standard Manhole – part A, and Internal Drop SMH details in the plans. The plans show a direct connection to the existing sewer main and not a connection through a manhole.

Sewer manhole and internal drop detail have been removed.

e. HR 275-9.E & 267-13. The applicant has not included a detail for the proposed grease trap within the plans.

The sizing of the grease trap is still being determined. A detail for grease trap will be provided upon the completion of the sizing.

f. HR 275-9.E & 276-13. The applicant should review with the Town to confirm the availability of sufficient water flow to accommodate the site.

Acknowledged.

g. HR 275-9.E and 276-13. We have the following comments on water details that are shown on sheet D-3.

i. The applicant has included a detail for 1"-2" Service and Valve Box Installation but the proposed water service connection to the site is 4".

1-2" service and valve box detail has been removed from details.

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ii. The applicant has included the Town of Hudson Fire Service Installation with Standard Foundations detail (W-22) but has labelled this as 'Detail Name'.

Detail title name has been added.

iii. The applicant has included a Water Hydrant Installation detail but has not shown any hydrant installation location.

Hydrant has been added to plans in parking island adjacent to the southwest corner of the building.

iv. None of the details have a detail number or plan reference number in their title blocks.

Detail number and plan reference number have been added to individual title blocks.

h. The applicant should review the Water and Sewer Utility Plan & Profile sheet titles. We note that Sewer Utility Plan sheet P-2 shows the water plan and profile and the Water Utility Plan sheet P-3 shows the sewer plan and profile.

Sheet titles have been reconciled. See sheets P-1, P-2 & P-3.

i. The applicant should include notes on the plans regarding proposed required hours and traffic accommodations for utility installations that impact the driveway into Walmart and coordination with Walmart for that work.

Acknowledged, communication with Walmart has already taken place as part of the site plan process.

6. Drainage Design/Stormwater Management (HR 275-9.A./Chapter 290)

a. HR 275-6.F. and 290-5.A.(4). The applicant should provide calculations for groundwater recharge (GRV).

GRV calculations have been provided.

b. HR 275-9.A.(1). and 290-5.A.(4). The applicant should provide percolation rate data for the test pits. We also note that the test pit data for Test Pits 1-4 is very blurry on the plan.

Percolation test was not performed with the test pits. Book values were used for sizing of the drainage system. Amoozemeter perc test will be performed in the coming week to confirm assumptions.

c. HR 290-5.A.(1). and 290-5.A.(3). The applicant should provide language in the Drainage Analysis Report, stating how low impact development (LID) strategies for stormwater runoff were evaluated for this project.

Acknowledged. The drainage system was designed to be as low impact as possible by utilizing the natural slope of the site and locating the stormwater basins in a natural location.

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d. HR 275-5.A.(9). The applicant should provide BMP worksheets including separation from ESHWT.

NHDES BMP sheet has been provided.

e. HR 275-5.A.(10). Detail Sheet D-5 illustrates a rip rap scour hole detail that does not coincide with the proposed forebays designed. Applicant should review and update the design or detail accordingly.

Forebays and Riprap aprons are designed in accordance with NHDES BMP requirements and have been updated as such.

f. HR 275-5.A.(11). The applicant should add spot grades or contour elevations for the berm of the forebays, as well as dimensions of the berm width.

Contour elevations have been added to the plan in the locations of the berm. See sheet SP-6.

g. HR 275-5.A.(11). The applicant should provide more information on the use of 1' of separation from ESHWT in the surface infiltration and ensure this meets BMP design criteria per Env-Wq 1500. We note that typically NHDES requires a minimum of 3' separation when infiltration is proposed as treatment.

The bottom of the infiltration basin utilizes a separation of 3' to the ESHWT. See detail #2 on sheet D-6.

h. HR 275-5.A.(11). The applicant should provide top of berm elevations upon the Stormwater Management Pond Detail on Plan Sheet D-6.

Top of berm elevation has been added to the detail sheet.

i. HR 275-5.A.(11). The applicant should update the Outlet Control Structure Detail on Plan Sheet D-6 with the appropriate designed elevations and update the notes relative to NH Fish & Game requests.

Outlet Control Structure detail has been updated.

j. HR 275-5.A.(12). The applicant should provide an I&M manual for general site maintenance as well as project specific BMPs.

Inspection & Maintenance manual has been provided.

k. HR 275-5.A.(1).b. The applicant should provide support material or calculations showing the required 80% TSS and 50% TP pollutant removals.

Per NH Stormwater Manual Infiltration Basins provide 90% TSS and 65% TP reduction.

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l. HR 275-6.A.(8). The applicant should ensure the plans note a pre-construction meeting is required with the Town Engineer.

Note has been added to GN-1 under Town of Hudson Notes as note 1.

m. HR 275-7.A.(6). The applicant should provide information as to how the stormwater system is designed to account for frozen ground conditions.

See stormwater report for modeling of 50 year storm during a frozen ground condition.

n. HR 275-8.A.(4). and (5). The applicant should ensure a note is upon the plan set, stating the requirement to coordinate the need for a Bond or Escrow with the Town Engineer.

Note has been added to GN-1 under Town of Hudson Notes as note 2.

o. HR 275-10.A. The applicant should keep the Town informed of all communication with NHDES in relation to the required Alteration of Terrain Permit being requested to ensure NHDES comments/requirements do not alter the drainage design/calculations. Including but not limited to drainage design, detailed soil classification, erosion control, etc.

Acknowledged, the applicant shall keep the town informed of communications with NHDES in relation to the required Alteration of Terrain permit.

p. HR 275-10.B. The applicant should ensure the required SWPPP note is upon the plan set.

As part of the EPA NOI a SWPPP is required. This is identified as permit #7 on the cover sheet.

q. The plans include a Roof Drain detail to connect the rain leaders to underground piping. The connection of that underground piping to the site drainage system is not shown in the plans.

Meridian is in the process of coordinating with the architect. The roof drains have several manholes to connect to depending on what the architect indicates.

r. The plans include a Standard Drainage Manhole detail but not is proposed upon the plans.

Drainage manhole has been removed from Sheet D-5.

s. The plans do not include a detail for the proposed yard drain YD-1.

Yard drain detail has been added to sheet D-5.

t. The applicant should label the outlet control structure (OCS-1) on the drainage plan.

Label for OCS-1 has been added to the drainage plan.

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u. The applicant will be required to comply with all provisions of the Town of Hudson's MS4 permit, including but not limited to annual reporting requirements, construction site stormwater runoff control, and record keeping requirements. The applicant has noted that the project has been designed to meet MS4 requirements.

Acknowledged.

v. Please note that this review was carried out in accordance with applicable regulations and standards in place in New Hampshire at this time. Note that conditions at the site, including average weather conditions, patterns and trends, and design storm characteristics, may change in the future. In addition, future changes in federal, state or local laws, rules or regulations, or in generally accepted scientific or industry information concerning environmental, atmospheric and geotechnical conditions and developments may affect the information and conclusions set forth in this review. In no way shall Fuss & O'Neill be liable for any of these changed conditions that may impact this review, regardless of the source of or reason for such changed conditions. Other than as described herein, no other investigation or analysis has been requested by the Client or performed by Fuss & O'Neill in preparing this review.

Acknowledged.

7. Zoning (ZO 334)

a. ZO 334-14. In the zoning notes on sheet Sp-3 the applicant has noted the building height maximum as 50 feet, and the height of the proposed building as less than 50 feet (<50 ft). The maximum height allowed by the ordinance for the project site is 38 feet. The applicant should update the note.

Note has been updated to reference 38 feet where 50 feet was previously referenced. See sheet SP-3.

b. ZO 334-17 & 334-21. The subject parcel is located within the Business (B) zoning district and the applicant has noted this on the plans. The proposed restaurant use is allowed within the district.

Acknowledged.

c. ZO 334-35. The applicant has noted that a Conditional Use Permit is required for the Wetlands Buffer impacts of a driveway and stormwater treatment.

Acknowledged.

d. ZO 334-58. The applicant has shown a proposed freestanding sign location on the plans but has not included any size or detail information for that sign other than minimum and maximum requirements.

Acknowledged.

e. ZO 334-83 and HR 218-4.E. The applicant has noted that the site is not located within a Food Hazard Area.

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Acknowledged.

8. Erosion Control/Wetland Impacts

   a. The applicant should note that the Town of Hudson reserves the right to require any additional erosion control measures as needed.

      Note 2 has been added to sheet SP-2.

9. Landscaping (HR 275-8.C.(7) & 276-11.1.B.(20)) and Lighting (HR 276-11.1.B.(14))

   a. HR 275-8.C.(7).(a) (b) & (c). The applicant should provide landscaping calculations on the plan showing that these requirements are met.

      Landscaping calculations have been added to the landscaping plan. See sheet LS-1.

   b. HR 275-8.C.(d). The applicant has noted on the plan that a waiver has been requested for this requirement.

      Acknowledged.

   c. HR 275-8.C.(8). The applicant has proposed to leave 100 feet of existing vegetation between the site and the abutting residential properties to the east.

      Acknowledged.

   d. HR 276-11.1.B.(14). The applicant has provided a lighting plan. The applicant should add lighting types and mounting heights to the plan.

      Lighting details have been added to sheet D-2.

   e. The applicant should review the landscaping plans against the lighting plans as several light pole locations appear to directly conflict with tree plantings.

      Landscaping has been moved, updated lighting is in the process of being updated.

   f. The applicant should note the hours of operation for the site and the relationship of those hours to the site lighting.

      Hours of operation and their relationship to lighting have been added See sheet LT-1.

10. State and Local Permits (HR 275-9.G.)

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a. HR 275-9.G. The applicant has listed the required permits and their status on the plan set.

Acknowledged.

b. HR 275-9.G. The applicant should provide copies of any applicable Town, State or Federal approvals or permits.

Acknowledged.

c. Additional local and state permitting may be required.

Acknowledged, additional permits to be provided to town as applicable.

11. Other

a. The applicant should revise the name of Sheet 11 to match the Plan Index.

Title of Sheet 11 has been revised to match the plan index.

b. The applicant has not included a retaining wall detail within the plans.

Uwall by CSI Concrete Systems, Inc. has been added to sheet D-2.

c. ETGTD Section 565.1.1. The applicant is reminded of Town of Hudson requirements for the importing of off-site fill materials for use in constructing this project. We could not locate a note regarding this requirement on the plans, and it is recommended that these requirements be stated for the Contractors attention.

See Layout and Materials Note 8: "Contractor shall follow Town of Hudson requirements for imported materials."

d. The applicant included a Pedestrian Crossing detail on sheet D-2 of the plans, but has not shown any locations where this is proposed.

Pedestrian crossing has been added to site plan. Detail to remain.

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Mailing: PO Box 118, Milford, NH 03055
Phone: 603-673-1441 * Fax 603-673-1584
www.MeridianLandServices.com

If there are any questions or concerns, please do not hesitate to contact Meridian Land Services, Inc.

Sincerely,

Samuel R. Foisie, P.E.
Project Manager
Meridian Land Services, Inc.
srfoisie@MeridianLandServices.com
(603) 673-1441

Project No.: 12542.00
Cc: Bill Greiner and Tom Boucher with attachments

Attachment "G"

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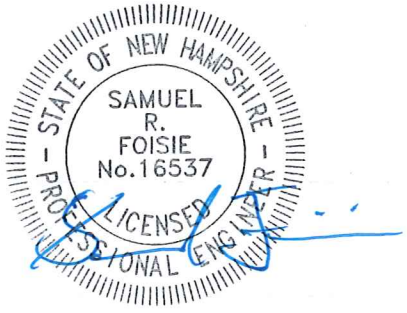
PROJECT STORMWATER MANAGEMENT REPORT

LOWELL ROAD, LLC

256 Lowell Road
Tax Map 228 Lot 7
Hudson, New Hampshire 03051

Prepared for:
Lowell Road, LLC
124 Bedford Center Road
Bedford, New Hampshire 03110

Owner of Record:
256 Lowell Road, LLC
9 Old Derry Road
Hudson, New Hampshire 03051



March 4, 2025

Prepared by: Noah C. Greene, EIT
Reviewed by: Samuel R. Foisie, PE

MLS Project No. 12542.00

Attachment "G"

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Storm Water Management Report
T-Bones at Lowell Road
Map 228 Lot 7
256 Lowell Road
Hudson, New Hampshire 03051

I. Introduction

These drainage calculations have been prepared in support of the above referenced development project located on tax parcel 228-7 in Hudson, New Hampshire. The development proposes an approximate 9,500 square foot (SF) building to be used as a restaurant with approximately 74,900 SF of parking area. Associated site improvements include sidewalk adjacent to Lowell Road, turning lane for Lowell Road access, stormwater mitigation, utility connections and landscaping.

II. Site Description

The subject parcel is located on the eastern side of Lowell Road between Walmart Boulevard and Rena Avenue. The site exists as a vacant lot with majority of the site being wooded. The existing site topography generally slopes from Northeast to Southwest towards the wetland located in the south portion of the property.

Soils onsite were mapped in accordance with the site-specific soil mapping standards as required by the NHDES Alteration of Terrain regulations and are identified as Windsor Loamy Sand (HSG A), Deerfield Loamy Sand (HSG B), Deerfield Variant Fine Sand (HSG C), and Wareham Fine Sand (HSG D) per the included Site-Specific Soil Report. Offsite soils are shown per the USDA NRCS Websoil Survey and are identified as Deefield Loamy Fine Sand (HSG A), Montauk Fine Loamy Sand (HSG C), Ridgebury Fine Sandy Loam (HSG D), and Windsor Loam Sand (HSG A).

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III. Drainage Design

To meet the requirements of the Town of Hudson and the NHDES Alteration of Terrain Bureau, stormwater generated from the proposed development is conveyed to a single infiltration pond located in the southern portion of the site. Stormwater runoff is conveyed to the pond via a combination of sheet flow and closed drainage. The infiltration basin utilizes a sediment forebay for pretreatment. The site was analyzed for the 2-, 10-, 25- and 50-year storm events. The pond utilizes an outlet control riser structure to attenuate peak flows and a riprap spillway to discharge larger storms. The basin was designed to be as low impact as possible by utilizing the natural slope of the site and location the stormwater basins in a natural location.

One (1) observation point has been modeled to compare the peak flows from pre-development and post-development located at the wetland edge at the south portion of the property. The results of the analysis are denoted in the “Summary” section of this report.

IV. Methodology

The quantity of runoff and the conveyance of that flow through the site are determined using the software package HydroCAD 10.20-6a by HydroCAD Software Solutions, LLC. HydroCAD is a computer aided design program for modeling storm water hydrology based on the Soil Conservation Service (SCS) TR-55 method combined with standard hydraulics calculations.

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V. Summary

The proposed drainage design effectively mitigates runoff during the analyzed storm events. Runoff from the proposed development is effectively collected, treated, recharged and discharged. The peak volume of stormwater generated is reduced and in accordance with the NHDES AoT groundwater recharge requirements. Summary tables comparing pre- and post-development peak runoff rates and volumes are shown below.

Table 1: Peak Rate of Stormwater Discharge Summary

Location	Q2 (CFS)			Q10 (CFS)			Q25 (CFS)			Q50 (CFS)		
	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ	Pre	Post	Δ
OP1	1.19	0.37	-0.82	5.20	1.57	-3.63	9.77	8.75	-1.02	14.71	12.94	-1.77

Table 2: Peak Volume of Stormwater Discharge Summary

Location	V2 (AF)		
	Pre	Post	Δ
OP1	0.228	0.049	-0.179

Attachment "G"

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Attachment "G"

Extreme Precipitation Tables

Northeast Regional Climate Center

Attachment "G"

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	42.725 degrees North
Longitude	71.422 degrees West
Elevation	50 feet
Date/Time	Wed Dec 04 2024 08:28:39 GMT-0500 (Eastern Standard Time)

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.27	0.42	0.52	0.69	0.86	1.08	**1yr**	0.74	1.02	1.25	1.57	1.97	2.49	2.73	**1yr**	2.20	2.63	3.06	3.75	4.37	**1yr**
2yr	0.33	0.51	0.64	0.84	1.06	1.33	**2yr**	0.91	1.22	1.54	1.92	2.39	2.98	3.30	**2yr**	2.63	3.18	3.69	4.41	5.01	**2yr**
5yr	0.39	0.61	0.77	1.03	1.32	1.68	**5yr**	1.14	1.53	1.94	2.43	3.02	3.76	4.20	**5yr**	3.32	4.04	4.67	5.55	6.27	**5yr**
10yr	0.44	0.70	0.88	1.20	1.56	2.00	**10yr**	1.35	1.81	2.33	2.91	3.62	4.48	5.04	**10yr**	3.97	4.84	5.59	6.59	7.43	**10yr**
25yr	0.53	0.84	1.07	1.47	1.95	2.52	**25yr**	1.68	2.26	2.94	3.69	4.60	5.67	6.41	**25yr**	5.02	6.17	7.08	8.29	9.29	**25yr**
50yr	0.59	0.95	1.22	1.71	2.31	3.02	**50yr**	1.99	2.68	3.53	4.44	5.51	6.77	7.70	**50yr**	5.99	7.41	8.48	9.86	11.02	**50yr**
100yr	0.68	1.10	1.42	2.01	2.74	3.59	**100yr**	2.36	3.17	4.22	5.31	6.59	8.10	9.25	**100yr**	7.17	8.90	10.16	11.74	13.07	**100yr**
200yr	0.78	1.27	1.64	2.35	3.25	4.29	**200yr**	2.81	3.76	5.05	6.37	7.90	9.68	11.12	**200yr**	8.57	10.70	12.17	13.98	15.50	**200yr**
500yr	0.93	1.54	2.00	2.91	4.08	5.43	**500yr**	3.52	4.72	6.41	8.09	10.03	12.27	14.20	**500yr**	10.86	13.65	15.47	17.61	19.44	**500yr**

Lower Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.23	0.35	0.43	0.57	0.70	0.80	**1yr**	0.61	0.79	1.07	1.33	1.68	2.31	2.56	**1yr**	2.04	2.47	2.73	3.02	3.84	**1yr**
2yr	0.32	0.49	0.60	0.81	1.00	1.21	**2yr**	0.87	1.18	1.38	1.80	2.31	2.92	3.23	**2yr**	2.58	3.10	3.60	4.31	4.91	**2yr**
5yr	0.36	0.56	0.69	0.95	1.21	1.43	**5yr**	1.04	1.39	1.63	2.12	2.71	3.53	3.93	**5yr**	3.12	3.78	4.33	5.19	5.89	**5yr**
10yr	0.40	0.61	0.76	1.06	1.37	1.61	**10yr**	1.18	1.58	1.83	2.40	3.06	4.07	4.56	**10yr**	3.61	4.39	4.98	5.96	6.75	**10yr**
25yr	0.45	0.69	0.86	1.22	1.61	1.88	**25yr**	1.39	1.84	2.14	2.82	3.56	4.93	5.58	**25yr**	4.37	5.36	6.00	7.16	8.09	**25yr**
50yr	0.49	0.75	0.93	1.34	1.80	2.14	**50yr**	1.56	2.09	2.42	3.21	4.01	5.71	6.50	**50yr**	5.05	6.25	6.92	8.23	9.26	**50yr**
100yr	0.54	0.81	1.02	1.47	2.02	2.42	**100yr**	1.74	2.36	2.73	3.49	4.51	6.57	7.61	**100yr**	5.82	7.32	7.97	9.46	10.59	**100yr**
200yr	0.59	0.89	1.13	1.64	2.28	2.74	**200yr**	1.97	2.68	3.07	3.94	5.12	7.62	8.91	**200yr**	6.74	8.56	9.20	10.88	12.13	**200yr**
500yr	0.67	1.00	1.29	1.87	2.66	3.24	**500yr**	2.30	3.17	3.60	4.63	6.05	9.26	11.02	**500yr**	8.19	10.60	11.11	13.09	14.51	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.31	0.48	0.58	0.78	0.96	1.13	**1yr**	0.83	1.10	1.28	1.67	2.11	2.64	2.90	**1yr**	2.34	2.78	3.40	4.18	4.78	**1yr**
2yr	0.35	0.55	0.67	0.91	1.12	1.32	**2yr**	0.97	1.29	1.50	1.94	2.49	3.06	3.40	**2yr**	2.71	3.27	3.79	4.53	5.16	**2yr**
5yr	0.44	0.67	0.84	1.15	1.46	1.68	**5yr**	1.26	1.64	1.91	2.45	3.07	4.03	4.53	**5yr**	3.56	4.35	5.01	5.93	6.67	**5yr**
10yr	0.53	0.81	1.00	1.40	1.81	2.05	**10yr**	1.56	2.01	2.33	2.93	3.65	4.98	5.62	**10yr**	4.40	5.40	6.20	7.28	8.12	**10yr**
25yr	0.68	1.03	1.28	1.83	2.41	2.67	**25yr**	2.08	2.61	3.02	3.72	4.56	6.58	7.47	**25yr**	5.82	7.19	8.22	9.56	10.59	**25yr**
50yr	0.82	1.25	1.55	2.23	3.01	3.26	**50yr**	2.59	3.19	3.68	4.46	5.41	8.12	9.28	**50yr**	7.19	8.93	10.17	11.74	12.93	**50yr**
100yr	1.00	1.51	1.89	2.73	3.75	3.98	**100yr**	3.23	3.90	4.49	5.55	6.42	10.10	11.51	**100yr**	8.93	11.07	12.60	14.45	15.82	**100yr**
200yr	1.21	1.83	2.32	3.35	4.68	4.87	**200yr**	4.03	4.76	5.46	6.68	7.61	12.49	14.28	**200yr**	11.05	13.73	15.61	17.79	19.36	**200yr**
500yr	1.58	2.36	3.03	4.40	6.26	6.32	**500yr**	5.40	6.18	7.11	8.56	9.54	16.55	18.94	**500yr**	14.64	18.22	20.74	23.42	25.28	**500yr**

Powered by ACIS Northeast Regional Climate Center

Attachment "G"

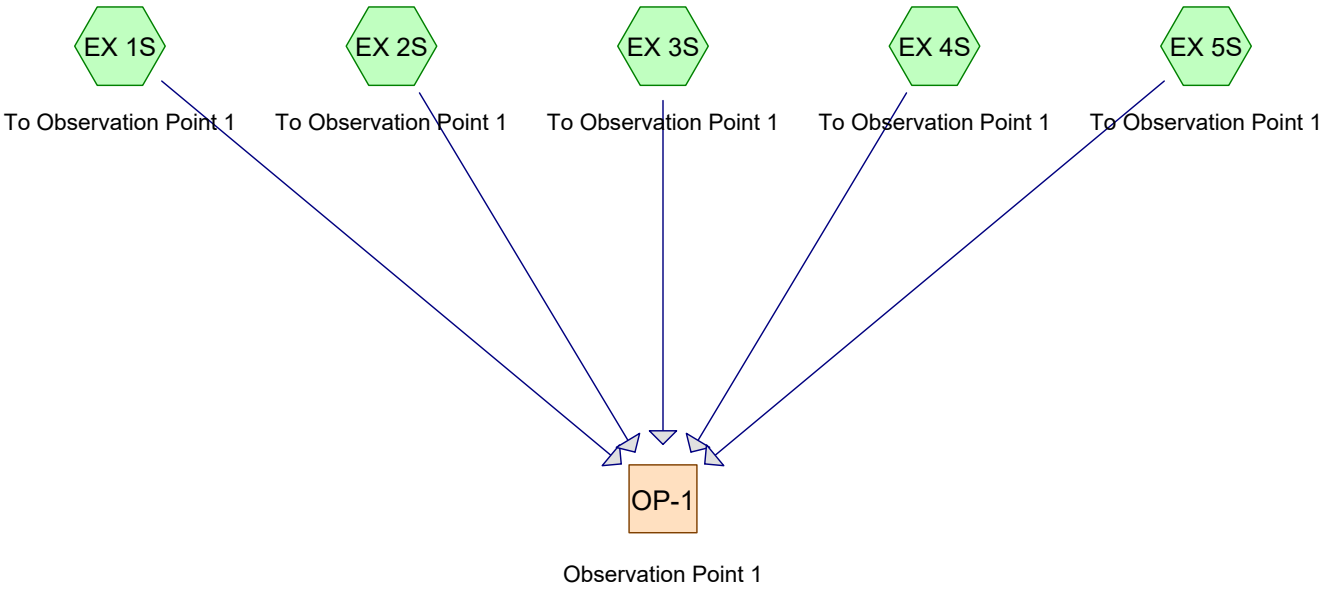
Section 1.1: Existing Conditions

Routing Diagram

Area and Soils Listings

2-, 10-, 25- and 50-year Storm Nodes

Attachment "G"



Subcat Reach Pond Link

Routing Diagram for 12542EX00A
Prepared by Meridian Land Services Inc, Printed 3/3/2025
HydroCAD® 10.20-6a s/n 00595 © 2024 HydroCAD Software Solutions LLC

Attachment "G"

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.530	39	>75% Grass cover, Good HSG A (EX 1S, EX 3S, EX 4S, EX 5S)
0.037	61	>75% Grass cover, Good HSG B (EX 4S, EX 5S)
1.081	74	>75% Grass cover, Good HSG C (EX 1S)
0.035	98	Paved parking HSG A (EX 1S, EX 4S, EX 5S)
0.004	98	Paved parking HSG B (EX 1S, EX 4S)
0.157	98	Paved parking HSG C (EX 1S)
0.183	98	Roofs HSG C (EX 1S)
2.356	30	Woods, Good HSG A (EX 1S, EX 2S, EX 3S, EX 4S, EX 5S)
2.639	55	Woods, Good HSG B (EX 1S, EX 2S, EX 3S, EX 4S, EX 5S)
2.945	70	Woods, Good HSG C (EX 1S, EX 2S, EX 3S, EX 4S)
0.062	77	Woods, Good HSG D (EX 1S, EX 3S)
10.029	**57**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.921	HSG A	EX 1S, EX 2S, EX 3S, EX 4S, EX 5S
2.680	HSG B	EX 1S, EX 2S, EX 3S, EX 4S, EX 5S
4.366	HSG C	EX 1S, EX 2S, EX 3S, EX 4S
0.062	HSG D	EX 1S, EX 3S
0.000	Other	
10.029		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 EX 1S: To Observation Runoff Area=283,283 sf 5.36% Impervious Runoff Depth=0.39"
Flow Length=1,499' Slope=0.0816 '/' Tc=25.3 min CN=62 Runoff=1.18 cfs 0.212 af

Subcatchment EX 2S: To Observation Point Runoff Area=34,624 sf 0.00% Impervious Runoff Depth=0.11"
Flow Length=343' Slope=0.0538 '/' Tc=12.7 min CN=51 Runoff=0.01 cfs 0.007 af

Subcatchment EX 3S: To Observation Point Runoff Area=45,090 sf 0.00% Impervious Runoff Depth=0.09"
Flow Length=347' Slope=0.0568 '/' Tc=12.7 min CN=50 Runoff=0.01 cfs 0.008 af

Subcatchment EX 4S: To Observation Point Runoff Area=54,593 sf 0.85% Impervious Runoff Depth=0.02"
Flow Length=604' Slope=0.1111 '/' Tc=16.1 min CN=45 Runoff=0.00 cfs 0.002 af

Subcatchment EX 5S: To Observation Point Runoff Area=19,266 sf 4.50% Impervious Runoff Depth=0.00"
Flow Length=346' Slope=0.1594 '/' Tc=9.9 min CN=40 Runoff=0.00 cfs 0.000 af

Reach OP-1: Observation Point 1 Inflow=1.19 cfs 0.228 af
Outflow=1.19 cfs 0.228 af

Total Runoff Area = 10.029 ac Runoff Volume = 0.228 af Average Runoff Depth = 0.27"
96.22% Pervious = 9.650 ac 3.78% Impervious = 0.379 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 EX 1S: To Observation Runoff Area=283,283 sf 5.36% Impervious Runoff Depth=1.13"
Flow Length=1,499' Slope=0.0816 '/' Tc=25.3 min CN=62 Runoff=4.65 cfs 0.612 af

Subcatchment EX 2S: To Observation Point Runoff Area=34,624 sf 0.00% Impervious Runoff Depth=0.54"
Flow Length=343' Slope=0.0538 '/' Tc=12.7 min CN=51 Runoff=0.22 cfs 0.036 af

Subcatchment EX 3S: To Observation Point Runoff Area=45,090 sf 0.00% Impervious Runoff Depth=0.49"
Flow Length=347' Slope=0.0568 '/' Tc=12.7 min CN=50 Runoff=0.25 cfs 0.043 af

Subcatchment EX 4S: To Observation Point Runoff Area=54,593 sf 0.85% Impervious Runoff Depth=0.29"
Flow Length=604' Slope=0.1111 '/' Tc=16.1 min CN=45 Runoff=0.11 cfs 0.030 af

Subcatchment EX 5S: To Observation Point Runoff Area=19,266 sf 4.50% Impervious Runoff Depth=0.13"
Flow Length=346' Slope=0.1594 '/' Tc=9.9 min CN=40 Runoff=0.01 cfs 0.005 af

Reach OP-1: Observation Point 1 Inflow=5.20 cfs 0.725 af
Outflow=5.20 cfs 0.725 af

Total Runoff Area = 10.029 ac Runoff Volume = 0.725 af Average Runoff Depth = 0.87"
96.22% Pervious = 9.650 ac 3.78% Impervious = 0.379 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 EX 1S: To Observation Runoff Area=283,283 sf 5.36% Impervious Runoff Depth=1.87"
Flow Length=1,499' Slope=0.0816 '/' Tc=25.3 min CN=62 Runoff=8.22 cfs 1.012 af

Subcatchment EX 2S: To Observation Point Runoff Area=34,624 sf 0.00% Impervious Runoff Depth=1.05"
Flow Length=343' Slope=0.0538 '/' Tc=12.7 min CN=51 Runoff=0.60 cfs 0.070 af

Subcatchment EX 3S: To Observation Point Runoff Area=45,090 sf 0.00% Impervious Runoff Depth=0.99"
Flow Length=347' Slope=0.0568 '/' Tc=12.7 min CN=50 Runoff=0.71 cfs 0.085 af

Subcatchment EX 4S: To Observation Point Runoff Area=54,593 sf 0.85% Impervious Runoff Depth=0.67"
Flow Length=604' Slope=0.1111 '/' Tc=16.1 min CN=45 Runoff=0.42 cfs 0.070 af

Subcatchment EX 5S: To Observation Point Runoff Area=19,266 sf 4.50% Impervious Runoff Depth=0.40"
Flow Length=346' Slope=0.1594 '/' Tc=9.9 min CN=40 Runoff=0.07 cfs 0.015 af

Reach OP-1: Observation Point 1 Inflow=9.77 cfs 1.252 af
Outflow=9.77 cfs 1.252 af

Total Runoff Area = 10.029 ac Runoff Volume = 1.252 af Average Runoff Depth = 1.50"
96.22% Pervious = 9.650 ac 3.78% Impervious = 0.379 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 EX 1S: To Observation Runoff Area=283,283 sf 5.36% Impervious Runoff Depth=2.63"
Flow Length=1,499' Slope=0.0816 '/' Tc=25.3 min CN=62 Runoff=11.91 cfs 1.427 af

Subcatchment EX 2S: To Observation Point Runoff Area=34,624 sf 0.00% Impervious Runoff Depth=1.63"
Flow Length=343' Slope=0.0538 '/' Tc=12.7 min CN=51 Runoff=1.05 cfs 0.108 af

Subcatchment EX 3S: To Observation Point Runoff Area=45,090 sf 0.00% Impervious Runoff Depth=1.54"
Flow Length=347' Slope=0.0568 '/' Tc=12.7 min CN=50 Runoff=1.27 cfs 0.133 af

Subcatchment EX 4S: To Observation Point Runoff Area=54,593 sf 0.85% Impervious Runoff Depth=1.13"
Flow Length=604' Slope=0.1111 '/' Tc=16.1 min CN=45 Runoff=0.88 cfs 0.118 af

Subcatchment EX 5S: To Observation Point Runoff Area=19,266 sf 4.50% Impervious Runoff Depth=0.76"
Flow Length=346' Slope=0.1594 '/' Tc=9.9 min CN=40 Runoff=0.17 cfs 0.028 af

Reach OP-1: Observation Point 1 Inflow=14.71 cfs 1.814 af
Outflow=14.71 cfs 1.814 af

Total Runoff Area = 10.029 ac Runoff Volume = 1.814 af Average Runoff Depth = 2.17"
96.22% Pervious = 9.650 ac 3.78% Impervious = 0.379 ac

Section 1.2: Existing Conditions

25-year Storm Full Summary

Attachment "G"

Summary for Subcatchment EX 1S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

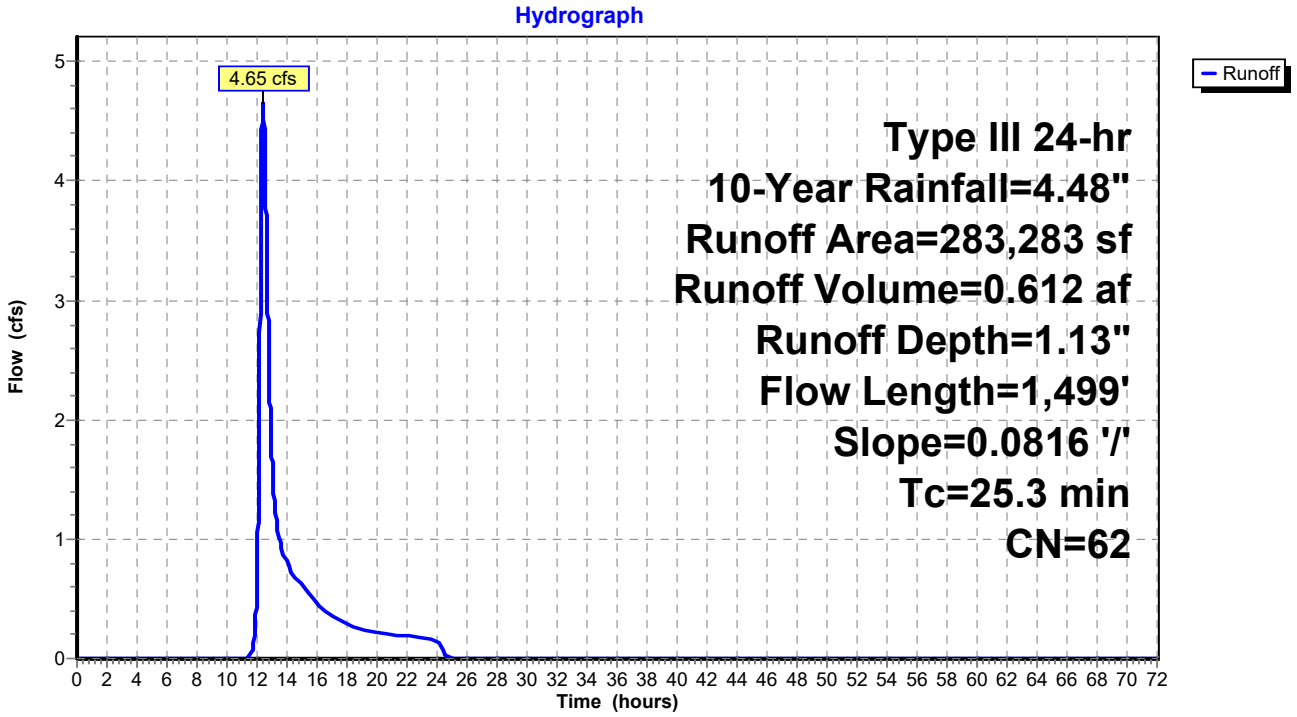
Runoff = 4.65 cfs @ 12.40 hrs, Volume= 0.612 af, Depth= 1.13"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
93	98	Paved parking HSG B
71,856	55	Woods, Good HSG B
2,587	77	Woods, Good HSG D
45,912	30	Woods, Good HSG A
97,399	70	Woods, Good HSG C
7,988	98	Roofs HSG C
6,831	98	Paved parking HSG C
279	98	Paved parking HSG A
3,256	39	>75% Grass cover, Good HSG A
47,082	74	>75% Grass cover, Good HSG C
283,283	62	Weighted Average
268,092		94.64% Pervious Area
15,191		5.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.3	1,499	0.0816	0.99		**Lag/CN Method,**

Subcatchment EX 1S: To Observation Point 1



Summary for Subcatchment EX 2S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

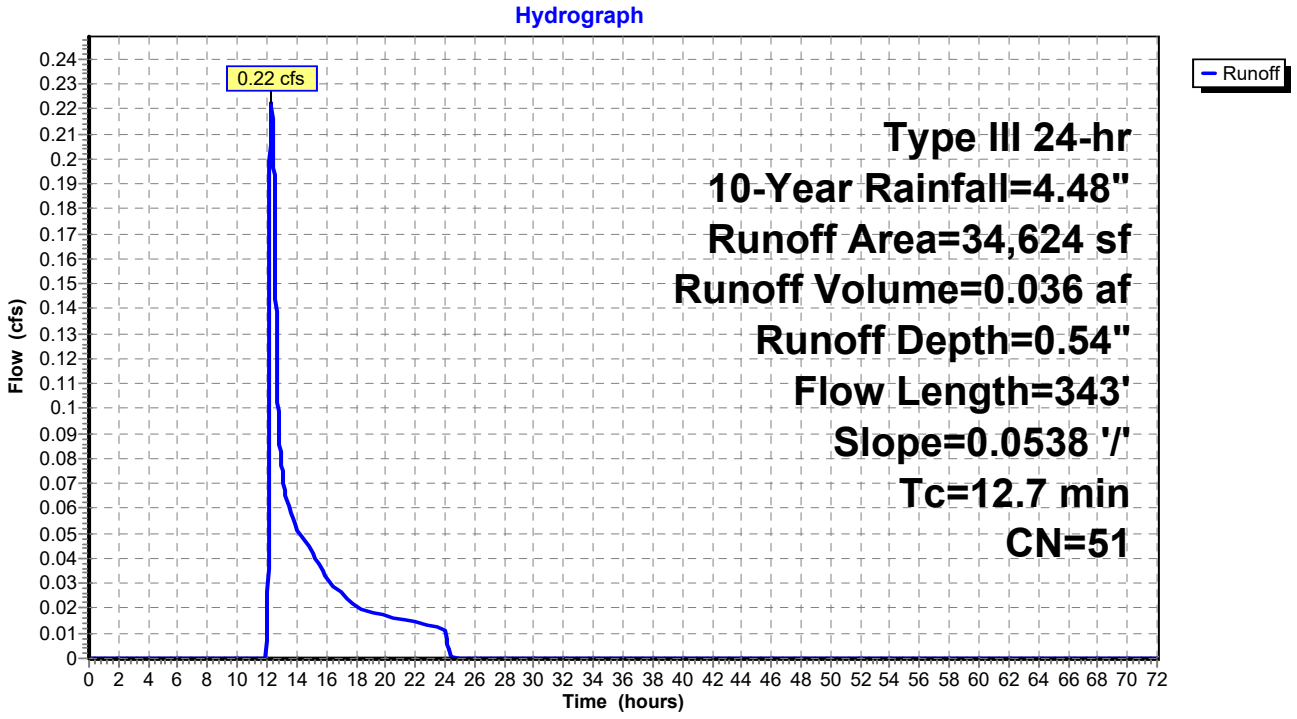
Runoff = 0.22 cfs @ 12.29 hrs, Volume= 0.036 af, Depth= 0.54"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
9,574	70	Woods, Good HSG C
13,119	55	Woods, Good HSG B
11,931	30	Woods, Good HSG A
34,624	51	Weighted Average
34,624		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	343	0.0538	0.45		**Lag/CN Method,**

Subcatchment EX 2S: To Observation Point 1



Summary for Subcatchment EX 3S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

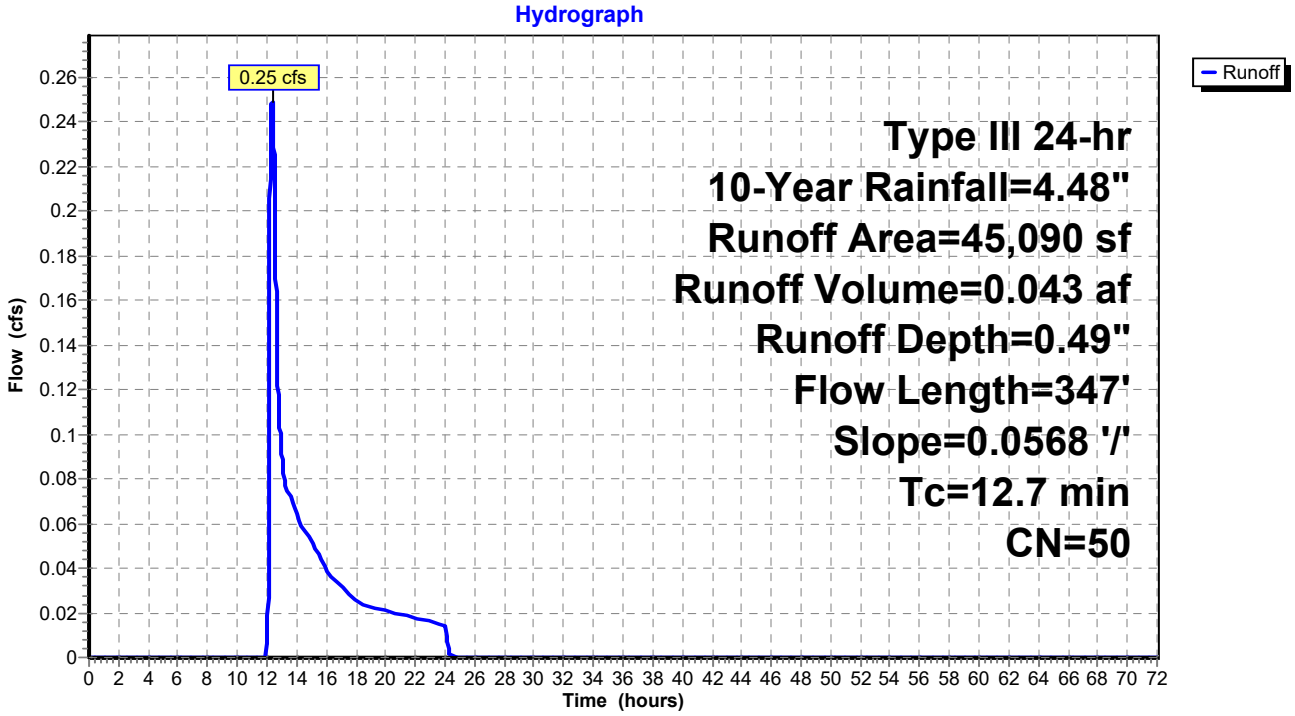
Runoff = 0.25 cfs @ 12.35 hrs, Volume= 0.043 af, Depth= 0.49"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
14,512	70	Woods, Good HSG C
9,258	55	Woods, Good HSG B
106	77	Woods, Good HSG D
11,699	30	Woods, Good HSG A
9,515	39	>75% Grass cover, Good HSG A
45,090	50	Weighted Average
45,090		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	347	0.0568	0.45		**Lag/CN Method,**

Subcatchment EX 3S: To Observation Point 1



Summary for Subcatchment EX 4S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

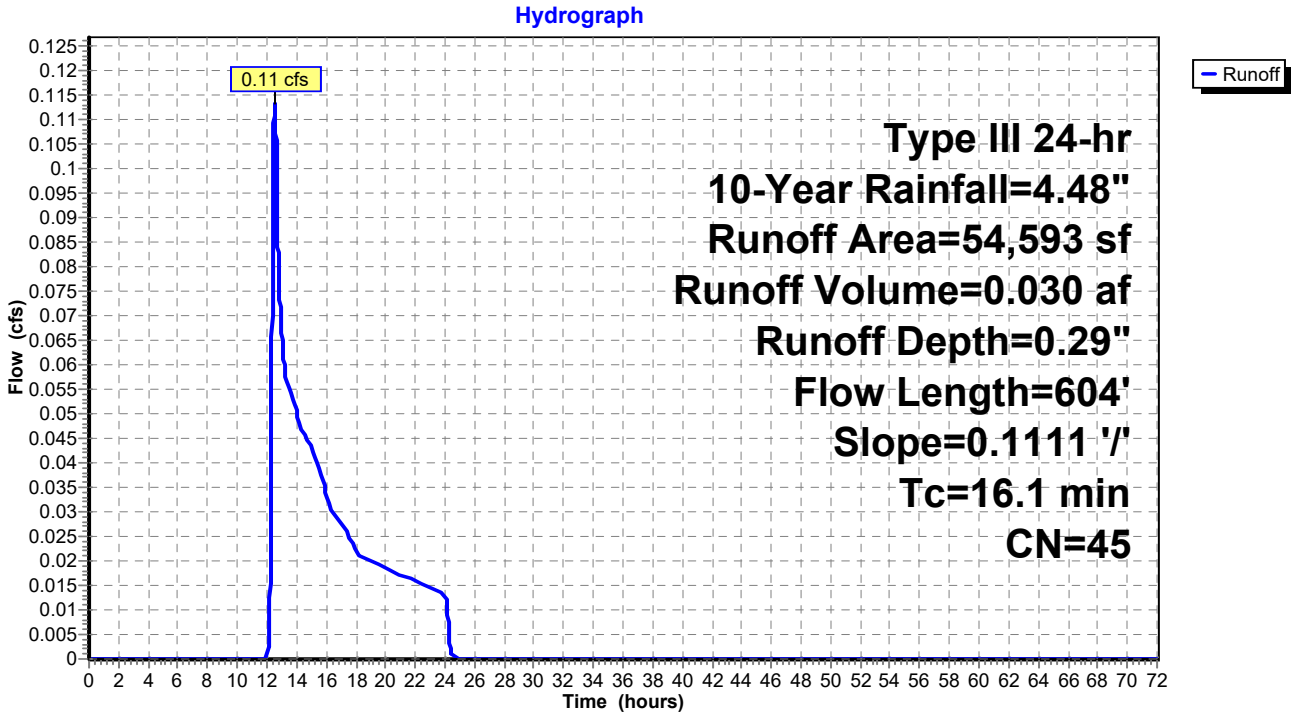
Runoff = 0.11 cfs @ 12.53 hrs, Volume= 0.030 af, Depth= 0.29"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
96	98	Paved parking HSG B
18,802	55	Woods, Good HSG B
6,799	70	Woods, Good HSG C
24,674	30	Woods, Good HSG A
366	98	Paved parking HSG A
2,430	39	>75% Grass cover, Good HSG A
1,426	61	>75% Grass cover, Good HSG B
54,593	45	Weighted Average
54,131		99.15% Pervious Area
462		0.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.1	604	0.1111	0.62		**Lag/CN Method,**

Subcatchment EX 4S: To Observation Point 1



Summary for Subcatchment EX 5S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

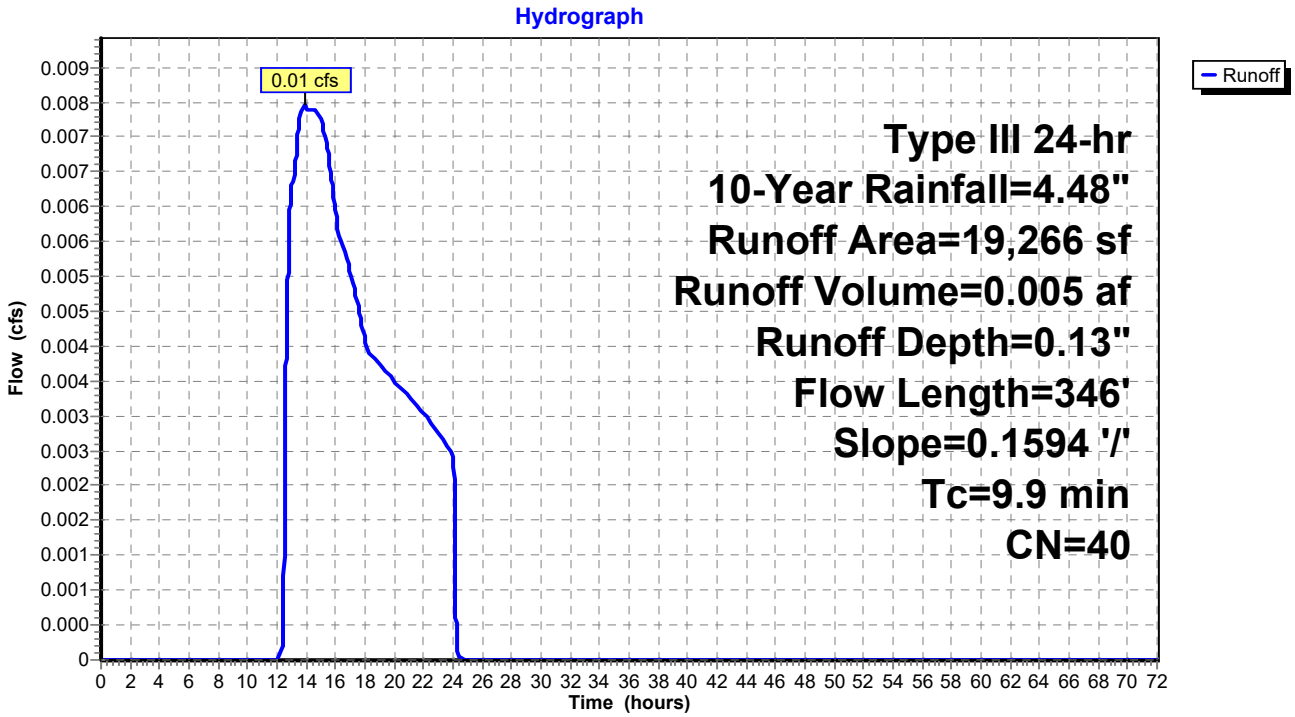
Runoff = 0.01 cfs @ 13.85 hrs, Volume= 0.005 af, Depth= 0.13"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
1,921	55	Woods, Good HSG B
8,427	30	Woods, Good HSG A
867	98	Paved parking HSG A
7,872	39	>75% Grass cover, Good HSG A
179	61	>75% Grass cover, Good HSG B
19,266	40	Weighted Average
18,399		95.50% Pervious Area
867		4.50% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.9	346	0.1594	0.58		**Lag/CN Method,**

Subcatchment EX 5S: To Observation Point 1



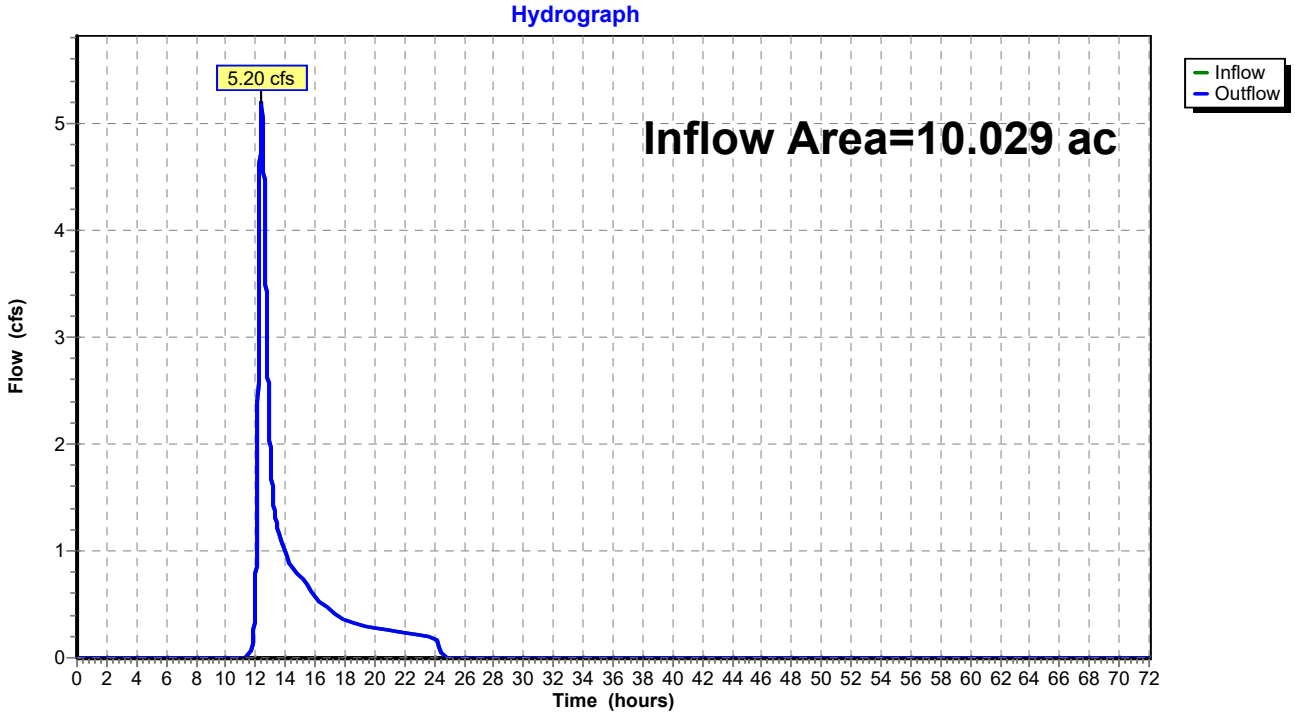
Summary for Reach OP-1: Observation Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 10.029 ac, 3.78% Impervious, Inflow Depth = 0.87" for 10-Year event
Inflow = 5.20 cfs @ 12.40 hrs, Volume= 0.725 af
Outflow = 5.20 cfs @ 12.40 hrs, Volume= 0.725 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach OP-1: Observation Point 1



Attachment "G"

Section 2.1: Developed Conditions

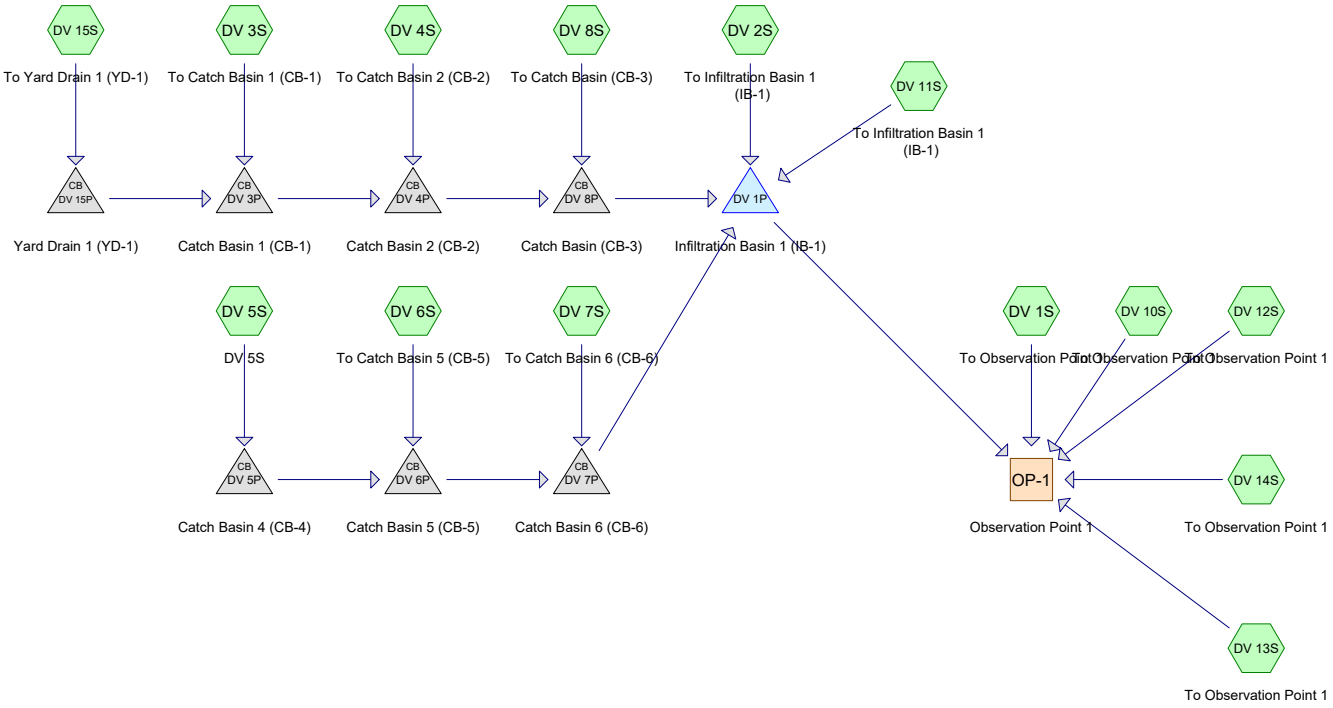
Routing Diagram

Area and Soils Listings

2-, 10-, 25- and 50-year Storm Nodes

Attachment "G"

Attachment "G"



Subcat Reach Pond Link

Routing Diagram for 12542DV00A
Prepared by Meridian Land Services Inc, Printed 3/3/2025
HydroCAD® 10.20-6a s/n 00595 © 2024 HydroCAD Software Solutions LLC

Attachment "G"

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.740	39	>75% Grass cover, Good HSG A (DV 10S, DV 12S, DV 13S, DV 14S, DV 1S, DV 2S, DV 3S, DV 4S, DV 5S, DV 6S, DV 8S)
0.746	61	>75% Grass cover, Good HSG B (DV 10S, DV 12S, DV 13S, DV 15S, DV 1S, DV 2S, DV 3S, DV 4S, DV 5S, DV 6S, DV 7S, DV 8S)
1.249	74	>75% Grass cover, Good HSG C (DV 10S, DV 14S, DV 1S, DV 2S, DV 3S, DV 4S, DV 7S, DV 8S)
0.735	98	Paved parking HSG A (DV 10S, DV 12S, DV 13S, DV 14S, DV 1S, DV 3S, DV 4S, DV 5S, DV 6S, DV 8S)
1.031	98	Paved parking HSG B (DV 10S, DV 15S, DV 2S, DV 3S, DV 4S, DV 5S, DV 6S, DV 7S, DV 8S)
0.282	98	Paved parking HSG C (DV 10S, DV 14S, DV 1S, DV 2S, DV 3S, DV 4S, DV 7S, DV 8S)
0.031	98	Roofs HSG A (DV 11S, DV 5S, DV 6S)
0.124	98	Roofs HSG B (DV 11S, DV 5S)
0.228	98	Roofs HSG C (DV 11S, DV 4S)
1.415	30	Woods, Good HSG A (DV 12S, DV 15S, DV 1S, DV 2S, DV 3S, DV 4S)
0.779	55	Woods, Good HSG B (DV 15S, DV 1S, DV 2S, DV 3S, DV 4S)
2.607	70	Woods, Good HSG C (DV 15S, DV 1S, DV 3S, DV 4S)
0.062	77	Woods, Good HSG D (DV 1S, DV 4S)
10.029	**68**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.921	HSG A	DV 10S, DV 11S, DV 12S, DV 13S, DV 14S, DV 15S, DV 1S, DV 2S, DV 3S, DV 4S, DV 5S, DV 6S, DV 8S
2.680	HSG B	DV 10S, DV 11S, DV 12S, DV 13S, DV 15S, DV 1S, DV 2S, DV 3S, DV 4S, DV 5S, DV 6S, DV 7S, DV 8S
4.366	HSG C	DV 10S, DV 11S, DV 14S, DV 15S, DV 1S, DV 2S, DV 3S, DV 4S, DV 7S, DV 8S
0.062	HSG D	DV 1S, DV 4S
0.000	Other	
10.029		**TOTAL AREA**

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 DV 10S: To Observation Runoff Area=11,879 sf 12.41% Impervious Runoff Depth=0.33"
Flow Length=165' Slope=0.2083 '/' Tc=6.0 min CN=60 Runoff=0.05 cfs 0.007 af

Subcatchment DV 11S: To Infiltration Runoff Area=8,052 sf 100.00% Impervious Runoff Depth=2.75"
Tc=0.0 min CN=98 Runoff=0.65 cfs 0.042 af

Subcatchment DV 12S: To Observation Runoff Area=17,590 sf 8.32% Impervious Runoff Depth=0.03"
Flow Length=346' Slope=0.1651 '/' Tc=8.3 min CN=46 Runoff=0.00 cfs 0.001 af

Subcatchment DV 13S: To Observation Point Runoff Area=8,456 sf 8.98% Impervious Runoff Depth=0.04"
Flow Length=129' Slope=0.2144 '/' Tc=6.0 min CN=47 Runoff=0.00 cfs 0.001 af

Subcatchment DV 14S: To Observation Runoff Area=5,791 sf 39.68% Impervious Runoff Depth=0.75"
Slope=0.1757 '/' Tc=0.0 min CN=71 Runoff=0.13 cfs 0.008 af

Subcatchment DV 15S: To Yard Drain 1 Runoff Area=31,981 sf 0.02% Impervious Runoff Depth=0.07"
Slope=0.1326 '/' Tc=0.0 min CN=49 Runoff=0.01 cfs 0.004 af

Subcatchment DV 1S: To Observation Runoff Area=42,629 sf 14.19% Impervious Runoff Depth=0.39"
Flow Length=294' Slope=0.0903 '/' Tc=6.5 min CN=62 Runoff=0.26 cfs 0.032 af

Subcatchment DV 2S: To Infiltration Basin 1 Runoff Area=32,491 sf 4.39% Impervious Runoff Depth=0.07"
Flow Length=202' Slope=0.1082 '/' Tc=6.1 min CN=49 Runoff=0.01 cfs 0.004 af

Subcatchment DV 3S: To Catch Basin 1 Runoff Area=26,649 sf 73.14% Impervious Runoff Depth=1.57"
Flow Length=295' Slope=0.0667 '/' Tc=6.0 min CN=85 Runoff=1.13 cfs 0.080 af

Subcatchment DV 4S: To Catch Basin 2 Runoff Area=201,332 sf 10.34% Impervious Runoff Depth=0.62"
Flow Length=1,253' Slope=0.0892 '/' Tc=17.9 min CN=68 Runoff=1.91 cfs 0.237 af

Subcatchment DV 5S: DV 5S Runoff Area=15,232 sf 79.91% Impervious Runoff Depth=1.80"
Slope=0.4185 '/' Tc=0.0 min CN=88 Runoff=0.90 cfs 0.052 af

Subcatchment DV 6S: To Catch Basin 5 Runoff Area=9,945 sf 91.66% Impervious Runoff Depth=2.33"
Slope=0.6348 '/' Tc=0.0 min CN=94 Runoff=0.73 cfs 0.044 af

Subcatchment DV 7S: To Catch Basin 6 Runoff Area=6,258 sf 83.41% Impervious Runoff Depth=2.23"
Slope=0.0399 '/' Tc=0.0 min CN=93 Runoff=0.45 cfs 0.027 af

Subcatchment DV 8S: To Catch Basin Runoff Area=18,559 sf 94.49% Impervious Runoff Depth=2.43"
Flow Length=142' Slope=0.0337 '/' Tc=6.0 min CN=95 Runoff=1.15 cfs 0.086 af

Reach OP-1: Observation Point 1 Inflow=0.37 cfs 0.049 af
Outflow=0.37 cfs 0.049 af

Pond DV 15P: Yard Drain 1 (YD-1) Peak Elev=165.34' Inflow=0.01 cfs 0.004 af
15.0" Round Culvert n=0.013 L=93.9' S=0.0101 '/' Outflow=0.01 cfs 0.004 af

Pond DV 1P: Infiltration Basin 1 (IB-1) Peak Elev=163.78' Storage=10,870 cf Inflow=4.49 cfs 0.578 af
Discarded=0.48 cfs 0.578 af Primary=0.00 cfs 0.000 af Outflow=0.48 cfs 0.578 af

Pond DV 3P: Catch Basin 1 (CB-1) Peak Elev=164.88' Inflow=1.13 cfs 0.084 af
15.0" Round Culvert n=0.013 L=160.0' S=0.0050 '/' Outflow=1.13 cfs 0.084 af

Pond DV 4P: Catch Basin 2 (CB-2) Peak Elev=164.33' Inflow=2.44 cfs 0.322 af
15.0" Round Culvert n=0.013 L=123.0' S=0.0053 '/' Outflow=2.44 cfs 0.322 af

Pond DV 5P: Catch Basin 4 (CB-4) Peak Elev=165.14' Inflow=0.90 cfs 0.052 af
15.0" Round Culvert n=0.013 L=167.0' S=0.0051 '/' Outflow=0.90 cfs 0.052 af

Pond DV 6P: Catch Basin 5 (CB-5) Peak Elev=164.39' Inflow=1.64 cfs 0.097 af
15.0" Round Culvert n=0.013 L=132.0' S=0.0053 '/' Outflow=1.64 cfs 0.097 af

Pond DV 7P: Catch Basin 6 (CB-6) Peak Elev=163.78' Inflow=2.08 cfs 0.124 af
15.0" Round Culvert n=0.013 L=65.0' S=0.0054 '/' Outflow=2.08 cfs 0.124 af

Pond DV 8P: Catch Basin (CB-3) Peak Elev=163.78' Inflow=3.08 cfs 0.408 af
15.0" Round Culvert n=0.013 L=17.6' S=0.0057 '/' Outflow=3.08 cfs 0.408 af

Total Runoff Area = 10.029 ac Runoff Volume = 0.628 af Average Runoff Depth = 0.75"
75.76% Pervious = 7.598 ac 24.24% Impervious = 2.431 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 DV 10S: To Observation Runoff Area=11,879 sf 12.41% Impervious Runoff Depth=1.01"
Flow Length=165' Slope=0.2083 '/' Tc=6.0 min CN=60 Runoff=0.27 cfs 0.023 af

Subcatchment DV 11S: To Infiltration Runoff Area=8,052 sf 100.00% Impervious Runoff Depth=4.24"
Tc=0.0 min CN=98 Runoff=0.99 cfs 0.065 af

Subcatchment DV 12S: To Observation Runoff Area=17,590 sf 8.32% Impervious Runoff Depth=0.33"
Flow Length=346' Slope=0.1651 '/' Tc=8.3 min CN=46 Runoff=0.05 cfs 0.011 af

Subcatchment DV 13S: To Observation Point Runoff Area=8,456 sf 8.98% Impervious Runoff Depth=0.37"
Flow Length=129' Slope=0.2144 '/' Tc=6.0 min CN=47 Runoff=0.03 cfs 0.006 af

Subcatchment DV 14S: To Observation Runoff Area=5,791 sf 39.68% Impervious Runoff Depth=1.73"
Slope=0.1757 '/' Tc=0.0 min CN=71 Runoff=0.32 cfs 0.019 af

Subcatchment DV 15S: To Yard Drain 1 Runoff Area=31,981 sf 0.02% Impervious Runoff Depth=0.45"
Slope=0.1326 '/' Tc=0.0 min CN=49 Runoff=0.20 cfs 0.027 af

Subcatchment DV 1S: To Observation Runoff Area=42,629 sf 14.19% Impervious Runoff Depth=1.13"
Flow Length=294' Slope=0.0903 '/' Tc=6.5 min CN=62 Runoff=1.13 cfs 0.092 af

Subcatchment DV 2S: To Infiltration Basin 1 Runoff Area=32,491 sf 4.39% Impervious Runoff Depth=0.45"
Flow Length=202' Slope=0.1082 '/' Tc=6.1 min CN=49 Runoff=0.16 cfs 0.028 af

Subcatchment DV 3S: To Catch Basin 1 Runoff Area=26,649 sf 73.14% Impervious Runoff Depth=2.89"
Flow Length=295' Slope=0.0667 '/' Tc=6.0 min CN=85 Runoff=2.06 cfs 0.147 af

Subcatchment DV 4S: To Catch Basin 2 Runoff Area=201,332 sf 10.34% Impervious Runoff Depth=1.52"
Flow Length=1,253' Slope=0.0892 '/' Tc=17.9 min CN=68 Runoff=5.51 cfs 0.585 af

Subcatchment DV 5S: DV 5S Runoff Area=15,232 sf 79.91% Impervious Runoff Depth=3.18"
Slope=0.4185 '/' Tc=0.0 min CN=88 Runoff=1.57 cfs 0.093 af

Subcatchment DV 6S: To Catch Basin 5 Runoff Area=9,945 sf 91.66% Impervious Runoff Depth=3.80"
Slope=0.6348 '/' Tc=0.0 min CN=94 Runoff=1.16 cfs 0.072 af

Subcatchment DV 7S: To Catch Basin 6 Runoff Area=6,258 sf 83.41% Impervious Runoff Depth=3.69"
Slope=0.0399 '/' Tc=0.0 min CN=93 Runoff=0.72 cfs 0.044 af

Subcatchment DV 8S: To Catch Basin Runoff Area=18,559 sf 94.49% Impervious Runoff Depth=3.90"
Flow Length=142' Slope=0.0337 '/' Tc=6.0 min CN=95 Runoff=1.80 cfs 0.139 af

Reach OP-1: Observation Point 1 Inflow=1.57 cfs 0.198 af
Outflow=1.57 cfs 0.198 af

Pond DV 15P: Yard Drain 1 (YD-1) Peak Elev=167.72' Inflow=0.20 cfs 0.027 af
15.0" Round Culvert n=0.013 L=93.9' S=0.0101 '/' Outflow=0.20 cfs 0.027 af

Pond DV 1P: Infiltration Basin 1 (IB-1) Peak Elev=164.79' Storage=19,571 cf Inflow=9.20 cfs 1.201 af
Discarded=1.92 cfs 1.154 af Primary=0.74 cfs 0.047 af Outflow=2.66 cfs 1.201 af

Pond DV 3P: Catch Basin 1 (CB-1) Peak Elev=167.72' Inflow=2.23 cfs 0.175 af
15.0" Round Culvert n=0.013 L=160.0' S=0.0050 '/' Outflow=2.23 cfs 0.175 af

Pond DV 4P: Catch Basin 2 (CB-2) Peak Elev=167.66' Inflow=6.64 cfs 0.760 af
15.0" Round Culvert n=0.013 L=123.0' S=0.0053 '/' Outflow=6.64 cfs 0.760 af

Pond DV 5P: Catch Basin 4 (CB-4) Peak Elev=165.37' Inflow=1.57 cfs 0.093 af
15.0" Round Culvert n=0.013 L=167.0' S=0.0051 '/' Outflow=1.57 cfs 0.093 af

Pond DV 6P: Catch Basin 5 (CB-5) Peak Elev=164.79' Inflow=2.73 cfs 0.165 af
15.0" Round Culvert n=0.013 L=132.0' S=0.0053 '/' Outflow=2.73 cfs 0.165 af

Pond DV 7P: Catch Basin 6 (CB-6) Peak Elev=164.79' Inflow=3.45 cfs 0.209 af
15.0" Round Culvert n=0.013 L=65.0' S=0.0054 '/' Outflow=3.45 cfs 0.209 af

Pond DV 8P: Catch Basin (CB-3) Peak Elev=165.70' Inflow=7.52 cfs 0.899 af
15.0" Round Culvert n=0.013 L=17.6' S=0.0057 '/' Outflow=7.52 cfs 0.899 af

Total Runoff Area = 10.029 ac Runoff Volume = 1.352 af Average Runoff Depth = 1.62"
75.76% Pervious = 7.598 ac 24.24% Impervious = 2.431 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 DV 10S: To Observation Runoff Area=11,879 sf 12.41% Impervious Runoff Depth=1.71"
Flow Length=165' Slope=0.2083 '/' Tc=6.0 min CN=60 Runoff=0.51 cfs 0.039 af

Subcatchment DV 11S: To Infiltration Runoff Area=8,052 sf 100.00% Impervious Runoff Depth=5.43"
Tc=0.0 min CN=98 Runoff=1.25 cfs 0.084 af

Subcatchment DV 12S: To Observation Runoff Area=17,590 sf 8.32% Impervious Runoff Depth=0.73"
Flow Length=346' Slope=0.1651 '/' Tc=8.3 min CN=46 Runoff=0.18 cfs 0.025 af

Subcatchment DV 13S: To Observation Point Runoff Area=8,456 sf 8.98% Impervious Runoff Depth=0.79"
Flow Length=129' Slope=0.2144 '/' Tc=6.0 min CN=47 Runoff=0.11 cfs 0.013 af

Subcatchment DV 14S: To Observation Runoff Area=5,791 sf 39.68% Impervious Runoff Depth=2.64"
Slope=0.1757 '/' Tc=0.0 min CN=71 Runoff=0.50 cfs 0.029 af

Subcatchment DV 15S: To Yard Drain 1 Runoff Area=31,981 sf 0.02% Impervious Runoff Depth=0.92"
Slope=0.1326 '/' Tc=0.0 min CN=49 Runoff=0.67 cfs 0.056 af

Subcatchment DV 1S: To Observation Runoff Area=42,629 sf 14.19% Impervious Runoff Depth=1.87"
Flow Length=294' Slope=0.0903 '/' Tc=6.5 min CN=62 Runoff=2.00 cfs 0.152 af

Subcatchment DV 2S: To Infiltration Basin 1 Runoff Area=32,491 sf 4.39% Impervious Runoff Depth=0.92"
Flow Length=202' Slope=0.1082 '/' Tc=6.1 min CN=49 Runoff=0.57 cfs 0.057 af

Subcatchment DV 3S: To Catch Basin 1 Runoff Area=26,649 sf 73.14% Impervious Runoff Depth=3.99"
Flow Length=295' Slope=0.0667 '/' Tc=6.0 min CN=85 Runoff=2.82 cfs 0.204 af

Subcatchment DV 4S: To Catch Basin 2 Runoff Area=201,332 sf 10.34% Impervious Runoff Depth=2.37"
Flow Length=1,253' Slope=0.0892 '/' Tc=17.9 min CN=68 Runoff=8.88 cfs 0.913 af

Subcatchment DV 5S: DV 5S Runoff Area=15,232 sf 79.91% Impervious Runoff Depth=4.31"
Slope=0.4185 '/' Tc=0.0 min CN=88 Runoff=2.09 cfs 0.126 af

Subcatchment DV 6S: To Catch Basin 5 Runoff Area=9,945 sf 91.66% Impervious Runoff Depth=4.97"
Slope=0.6348 '/' Tc=0.0 min CN=94 Runoff=1.50 cfs 0.095 af

Subcatchment DV 7S: To Catch Basin 6 Runoff Area=6,258 sf 83.41% Impervious Runoff Depth=4.86"
Slope=0.0399 '/' Tc=0.0 min CN=93 Runoff=0.93 cfs 0.058 af

Subcatchment DV 8S: To Catch Basin Runoff Area=18,559 sf 94.49% Impervious Runoff Depth=5.08"
Flow Length=142' Slope=0.0337 '/' Tc=6.0 min CN=95 Runoff=2.31 cfs 0.181 af

Reach OP-1: Observation Point 1 Inflow=8.75 cfs 0.631 af
Outflow=8.75 cfs 0.631 af

Pond DV 15P: Yard Drain 1 (YD-1) Peak Elev=173.97' Inflow=0.67 cfs 0.056 af
15.0" Round Culvert n=0.013 L=93.9' S=0.0101 '/' Outflow=0.67 cfs 0.056 af

Pond DV 1P: Infiltration Basin 1 (IB-1) Peak Elev=165.27' Storage=24,235 cf Inflow=14.03 cfs 1.772 af
Discarded=2.02 cfs 1.399 af Primary=7.50 cfs 0.373 af Outflow=9.52 cfs 1.772 af

Pond DV 3P: Catch Basin 1 (CB-1) Peak Elev=173.97' Inflow=3.31 cfs 0.260 af
15.0" Round Culvert n=0.013 L=160.0' S=0.0050 '/' Outflow=3.31 cfs 0.260 af

Pond DV 4P: Catch Basin 2 (CB-2) Peak Elev=173.82' Inflow=10.59 cfs 1.173 af
15.0" Round Culvert n=0.013 L=123.0' S=0.0053 '/' Outflow=10.59 cfs 1.173 af

Pond DV 5P: Catch Basin 4 (CB-4) Peak Elev=165.56' Inflow=2.09 cfs 0.126 af
15.0" Round Culvert n=0.013 L=167.0' S=0.0051 '/' Outflow=2.09 cfs 0.126 af

Pond DV 6P: Catch Basin 5 (CB-5) Peak Elev=165.30' Inflow=3.59 cfs 0.220 af
15.0" Round Culvert n=0.013 L=132.0' S=0.0053 '/' Outflow=3.59 cfs 0.220 af

Pond DV 7P: Catch Basin 6 (CB-6) Peak Elev=165.28' Inflow=4.52 cfs 0.278 af
15.0" Round Culvert n=0.013 L=65.0' S=0.0054 '/' Outflow=4.52 cfs 0.278 af

Pond DV 8P: Catch Basin (CB-3) Peak Elev=168.78' Inflow=11.72 cfs 1.353 af
15.0" Round Culvert n=0.013 L=17.6' S=0.0057 '/' Outflow=11.72 cfs 1.353 af

Total Runoff Area = 10.029 ac Runoff Volume = 2.030 af Average Runoff Depth = 2.43"
75.76% Pervious = 7.598 ac 24.24% Impervious = 2.431 ac

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 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 DV 10S: To Observation Runoff Area=11,879 sf 12.41% Impervious Runoff Depth=2.44"
Flow Length=165' Slope=0.2083 '/' Tc=6.0 min CN=60 Runoff=0.75 cfs 0.055 af

Subcatchment DV 11S: To Infiltration Runoff Area=8,052 sf 100.00% Impervious Runoff Depth=6.53"
Tc=0.0 min CN=98 Runoff=1.50 cfs 0.101 af

Subcatchment DV 12S: To Observation Runoff Area=17,590 sf 8.32% Impervious Runoff Depth=1.21"
Flow Length=346' Slope=0.1651 '/' Tc=8.3 min CN=46 Runoff=0.40 cfs 0.041 af

Subcatchment DV 13S: To Observation Point Runoff Area=8,456 sf 8.98% Impervious Runoff Depth=1.29"
Flow Length=129' Slope=0.2144 '/' Tc=6.0 min CN=47 Runoff=0.23 cfs 0.021 af

Subcatchment DV 14S: To Observation Runoff Area=5,791 sf 39.68% Impervious Runoff Depth=3.53"
Slope=0.1757 '/' Tc=0.0 min CN=71 Runoff=0.67 cfs 0.039 af

Subcatchment DV 15S: To Yard Drain 1 Runoff Area=31,981 sf 0.02% Impervious Runoff Depth=1.46"
Slope=0.1326 '/' Tc=0.0 min CN=49 Runoff=1.26 cfs 0.089 af

Subcatchment DV 1S: To Observation Runoff Area=42,629 sf 14.19% Impervious Runoff Depth=2.63"
Flow Length=294' Slope=0.0903 '/' Tc=6.5 min CN=62 Runoff=2.90 cfs 0.215 af

Subcatchment DV 2S: To Infiltration Basin 1 Runoff Area=32,491 sf 4.39% Impervious Runoff Depth=1.46"
Flow Length=202' Slope=0.1082 '/' Tc=6.1 min CN=49 Runoff=1.06 cfs 0.091 af

Subcatchment DV 3S: To Catch Basin 1 Runoff Area=26,649 sf 73.14% Impervious Runoff Depth=5.03"
Flow Length=295' Slope=0.0667 '/' Tc=6.0 min CN=85 Runoff=3.52 cfs 0.257 af

Subcatchment DV 4S: To Catch Basin 2 Runoff Area=201,332 sf 10.34% Impervious Runoff Depth=3.23"
Flow Length=1,253' Slope=0.0892 '/' Tc=17.9 min CN=68 Runoff=12.24 cfs 1.242 af

Subcatchment DV 5S: DV 5S Runoff Area=15,232 sf 79.91% Impervious Runoff Depth=5.37"
Slope=0.4185 '/' Tc=0.0 min CN=88 Runoff=2.58 cfs 0.156 af

Subcatchment DV 6S: To Catch Basin 5 Runoff Area=9,945 sf 91.66% Impervious Runoff Depth=6.06"
Slope=0.6348 '/' Tc=0.0 min CN=94 Runoff=1.81 cfs 0.115 af

Subcatchment DV 7S: To Catch Basin 6 Runoff Area=6,258 sf 83.41% Impervious Runoff Depth=5.94"
Slope=0.0399 '/' Tc=0.0 min CN=93 Runoff=1.13 cfs 0.071 af

Subcatchment DV 8S: To Catch Basin Runoff Area=18,559 sf 94.49% Impervious Runoff Depth=6.18"
Flow Length=142' Slope=0.0337 '/' Tc=6.0 min CN=95 Runoff=2.78 cfs 0.219 af

Reach OP-1: Observation Point 1 Inflow=12.94 cfs 1.131 af
Outflow=12.94 cfs 1.131 af

Pond DV 15P: Yard Drain 1 (YD-1) Peak Elev=182.38' Inflow=1.26 cfs 0.089 af
15.0" Round Culvert n=0.013 L=93.9' S=0.0101 '/' Outflow=1.26 cfs 0.089 af

Pond DV 1P: Infiltration Basin 1 (IB-1) Peak Elev=165.67' Storage=28,465 cf Inflow=18.88 cfs 2.341 af
Discarded=2.11 cfs 1.581 af Primary=10.81 cfs 0.760 af Outflow=12.93 cfs 2.341 af

Pond DV 3P: Catch Basin 1 (CB-1) Peak Elev=182.36' Inflow=4.38 cfs 0.346 af
15.0" Round Culvert n=0.013 L=160.0' S=0.0050 '/' Outflow=4.38 cfs 0.346 af

Pond DV 4P: Catch Basin 2 (CB-2) Peak Elev=182.09' Inflow=14.52 cfs 1.588 af
15.0" Round Culvert n=0.013 L=123.0' S=0.0053 '/' Outflow=14.52 cfs 1.588 af

Pond DV 5P: Catch Basin 4 (CB-4) Peak Elev=166.34' Inflow=2.58 cfs 0.156 af
15.0" Round Culvert n=0.013 L=167.0' S=0.0051 '/' Outflow=2.58 cfs 0.156 af

Pond DV 6P: Catch Basin 5 (CB-5) Peak Elev=166.03' Inflow=4.38 cfs 0.272 af
15.0" Round Culvert n=0.013 L=132.0' S=0.0053 '/' Outflow=4.38 cfs 0.272 af

Pond DV 7P: Catch Basin 6 (CB-6) Peak Elev=165.70' Inflow=5.51 cfs 0.343 af
15.0" Round Culvert n=0.013 L=65.0' S=0.0054 '/' Outflow=5.51 cfs 0.343 af

Pond DV 8P: Catch Basin (CB-3) Peak Elev=172.62' Inflow=15.88 cfs 1.807 af
15.0" Round Culvert n=0.013 L=17.6' S=0.0057 '/' Outflow=15.88 cfs 1.807 af

Total Runoff Area = 10.029 ac Runoff Volume = 2.712 af Average Runoff Depth = 3.25"
75.76% Pervious = 7.598 ac 24.24% Impervious = 2.431 ac

Section 2.2: Developed Conditions

25-year Storm Full Summary

Attachment "G"

Summary for Subcatchment DV 10S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

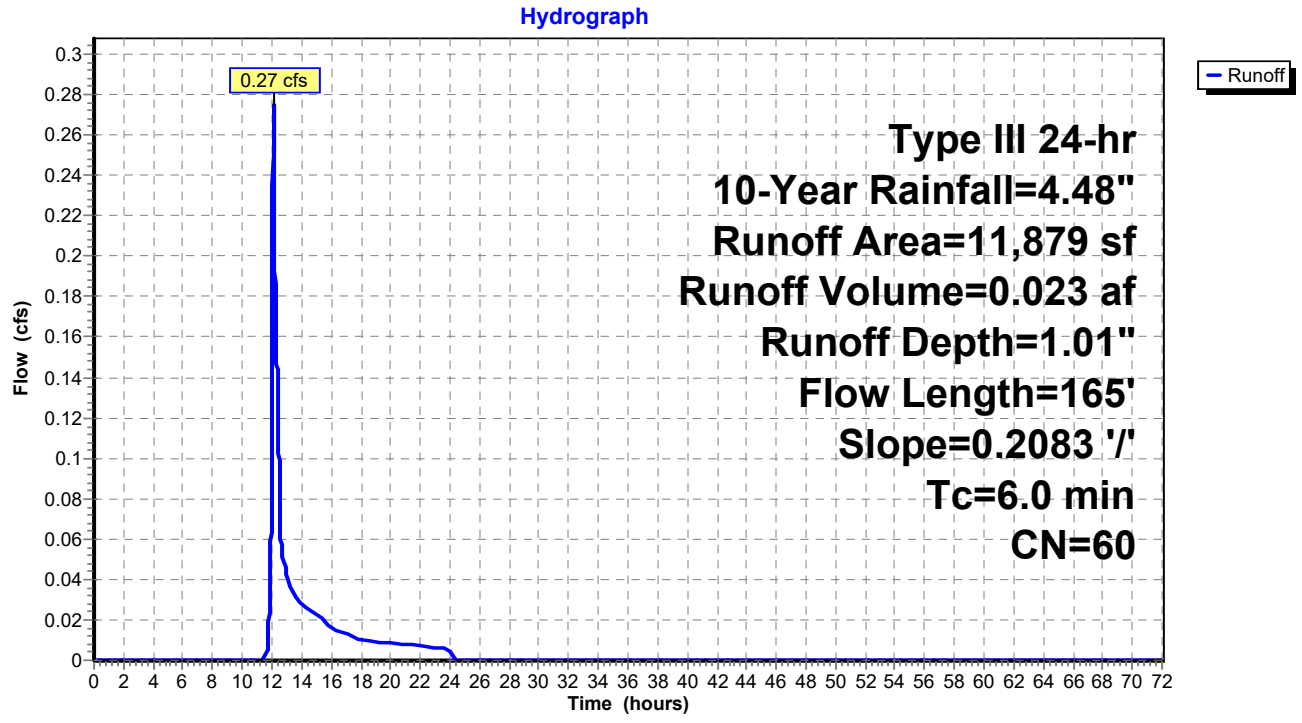
Runoff = 0.27 cfs @ 12.10 hrs, Volume= 0.023 af, Depth= 1.01"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
172	98	Paved parking HSG C
856	98	Paved parking HSG A
446	98	Paved parking HSG B
3,469	39	>75% Grass cover, Good HSG A
6,371	61	>75% Grass cover, Good HSG B
565	74	>75% Grass cover, Good HSG C
11,879	60	Weighted Average
10,405		87.59% Pervious Area
1,474		12.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.9	165	0.2083	0.96		**Lag/CN Method,**
2.9	165	Total, Increased to minimum Tc = 6.0 min			

Subcatchment DV 10S: To Observation Point 1



Summary for Subcatchment DV 11S: To Infiltration Basin 1 (IB-1)

CarlsonPlanXYPos|0.0000|0.0000|

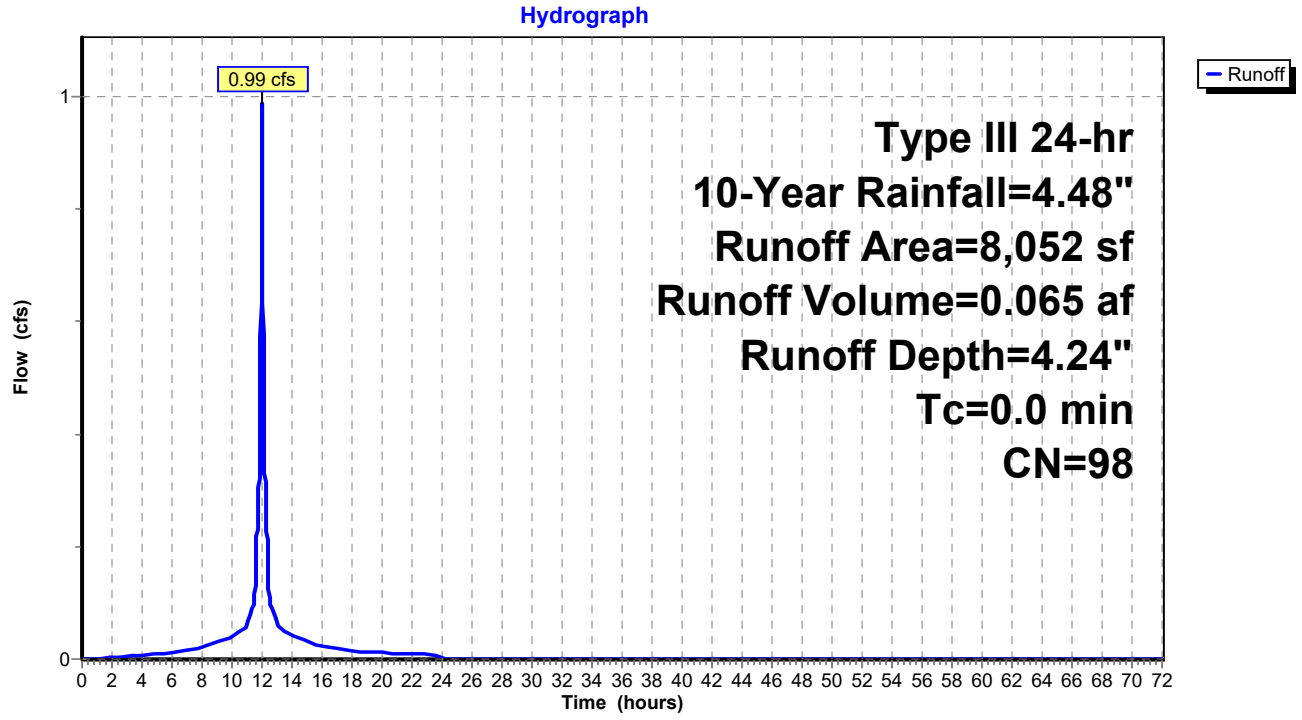
[46] Hint: Tc=0 (Instant runoff peak depends on dt)

Runoff = 0.99 cfs @ 12.00 hrs, Volume= 0.065 af, Depth= 4.24"
Routed to Pond DV 1P : Infiltration Basin 1 (IB-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
783	98	Roofs HSG A
5,323	98	Roofs HSG B
1,946	98	Roofs HSG C
8,052	98	Weighted Average
8,052		100.00% Impervious Area

Subcatchment DV 11S: To Infiltration Basin 1 (IB-1)



Summary for Subcatchment DV 12S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

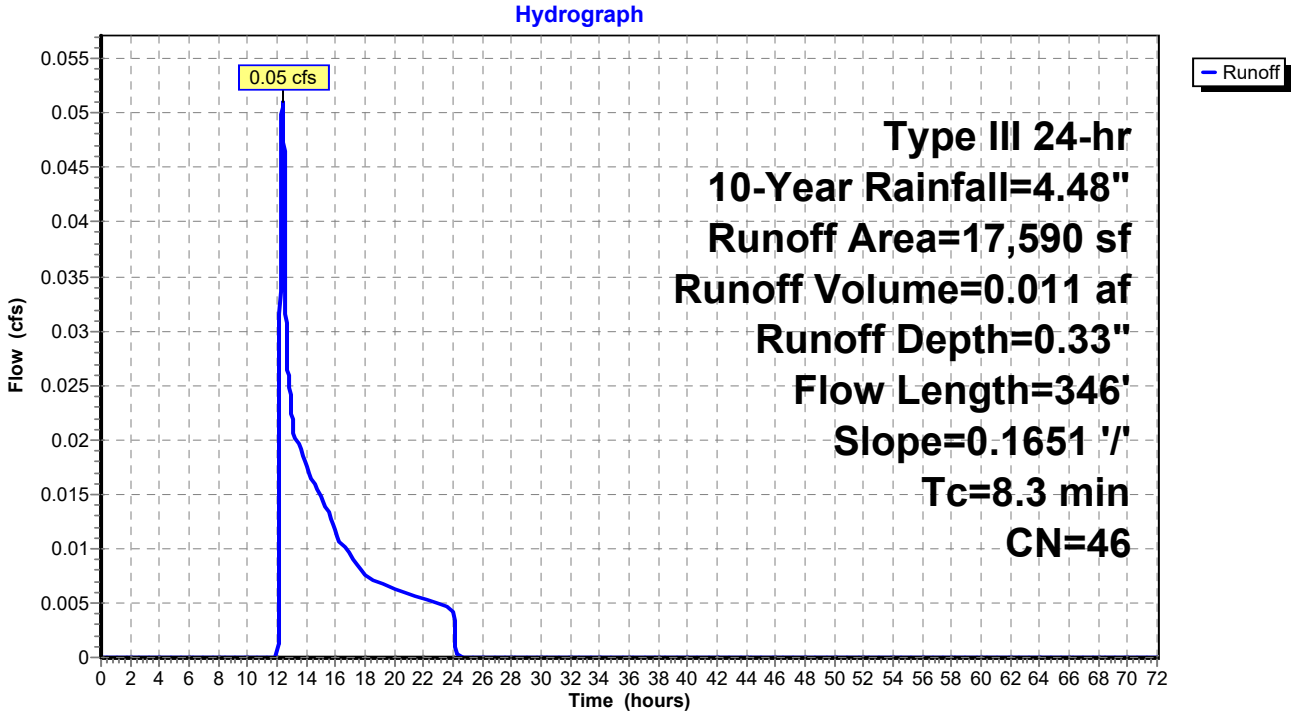
Runoff = 0.05 cfs @ 12.38 hrs, Volume= 0.011 af, Depth= 0.33"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
2,223	30	Woods, Good HSG A
1,464	98	Paved parking HSG A
11,509	39	>75% Grass cover, Good HSG A
2,394	61	>75% Grass cover, Good HSG B
17,590	46	Weighted Average
16,126		91.68% Pervious Area
1,464		8.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.3	346	0.1651	0.70		**Lag/CN Method,**

Subcatchment DV 12S: To Observation Point 1



Summary for Subcatchment DV 13S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

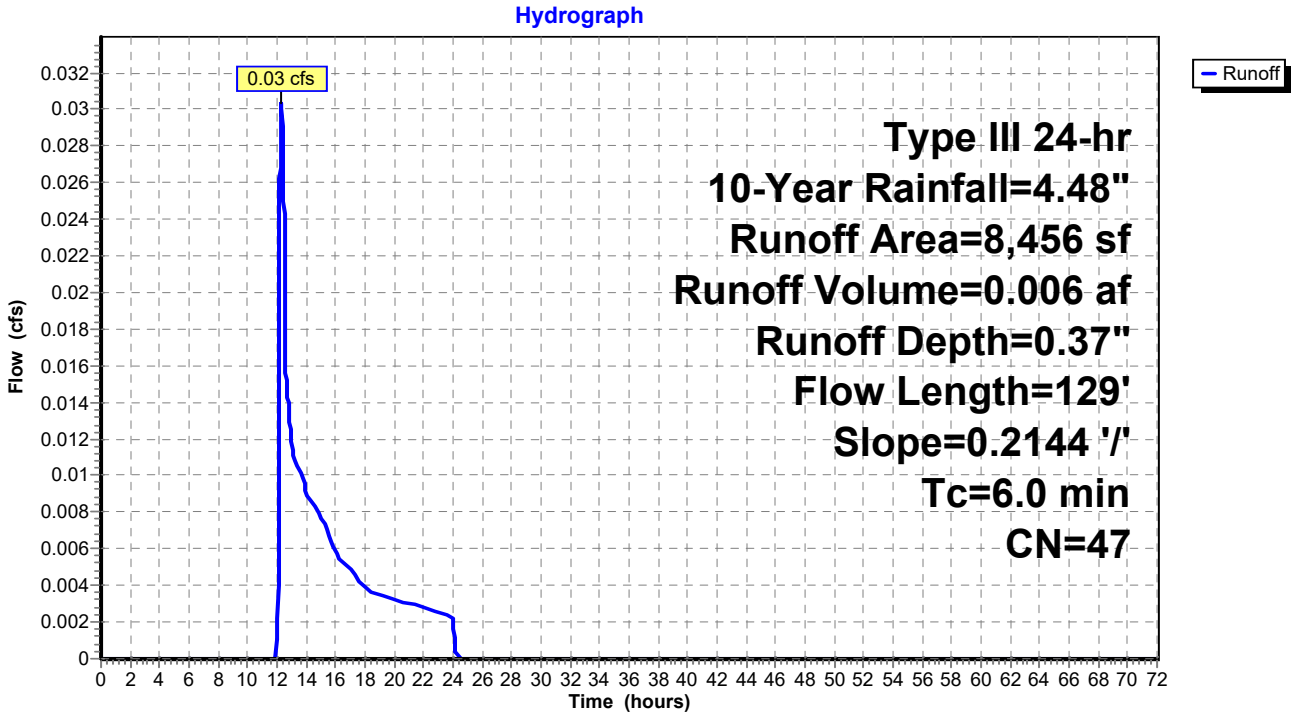
Runoff = 0.03 cfs @ 12.32 hrs, Volume= 0.006 af, Depth= 0.37"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
759	98	Paved parking HSG A
6,697	39	>75% Grass cover, Good HSG A
1,000	61	>75% Grass cover, Good HSG B
8,456	47	Weighted Average
7,697		91.02% Pervious Area
759		8.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.2	129	0.2144	0.67		**Lag/CN Method,**
3.2	129	Total, Increased to minimum Tc = 6.0 min			

Subcatchment DV 13S: To Observation Point 1



Summary for Subcatchment DV 14S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

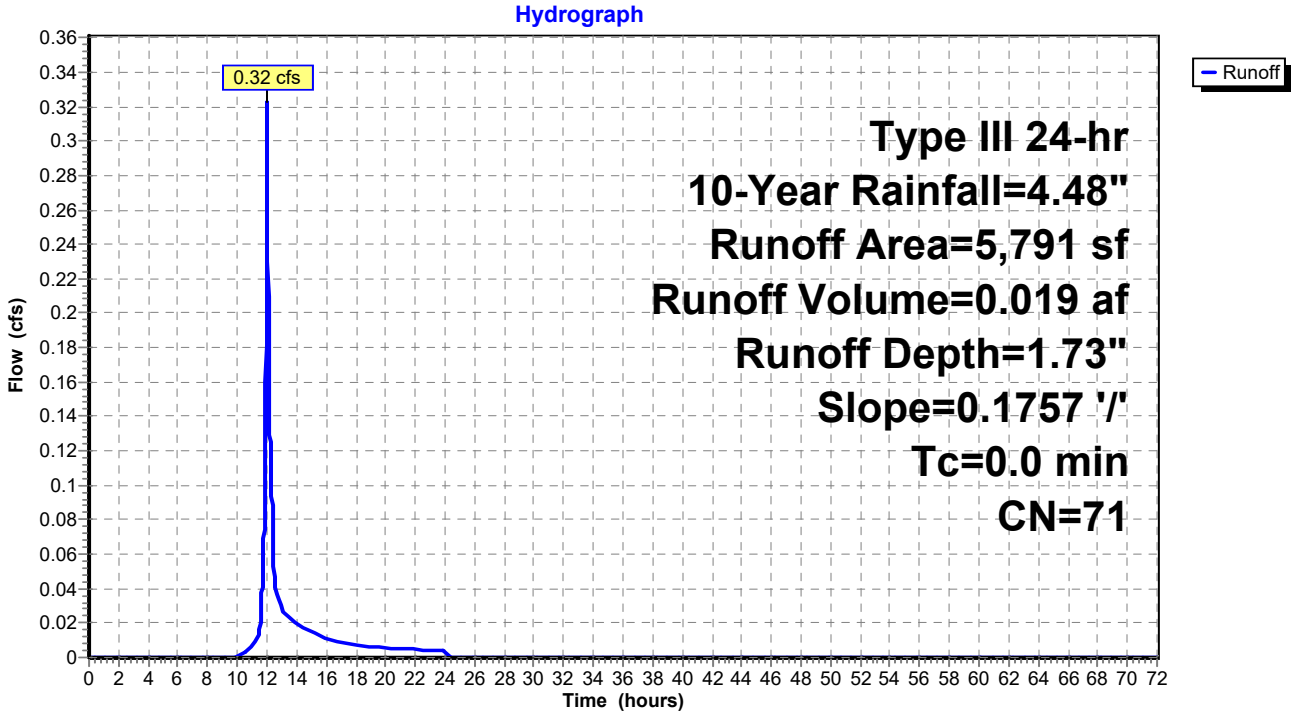
Runoff = 0.32 cfs @ 12.00 hrs, Volume= 0.019 af, Depth= 1.73"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
888	98	Paved parking HSG A
1,410	98	Paved parking HSG C
2,071	39	>75% Grass cover, Good HSG A
1,422	74	>75% Grass cover, Good HSG C
5,791	71	Weighted Average
3,493		60.32% Pervious Area
2,298		39.68% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0		0.1757			**Lag/CN Method,**

Subcatchment DV 14S: To Observation Point 1



Summary for Subcatchment DV 15S: To Yard Drain 1 (YD-1)

CarlsonPlanXYPos|0.0000|0.0000|

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

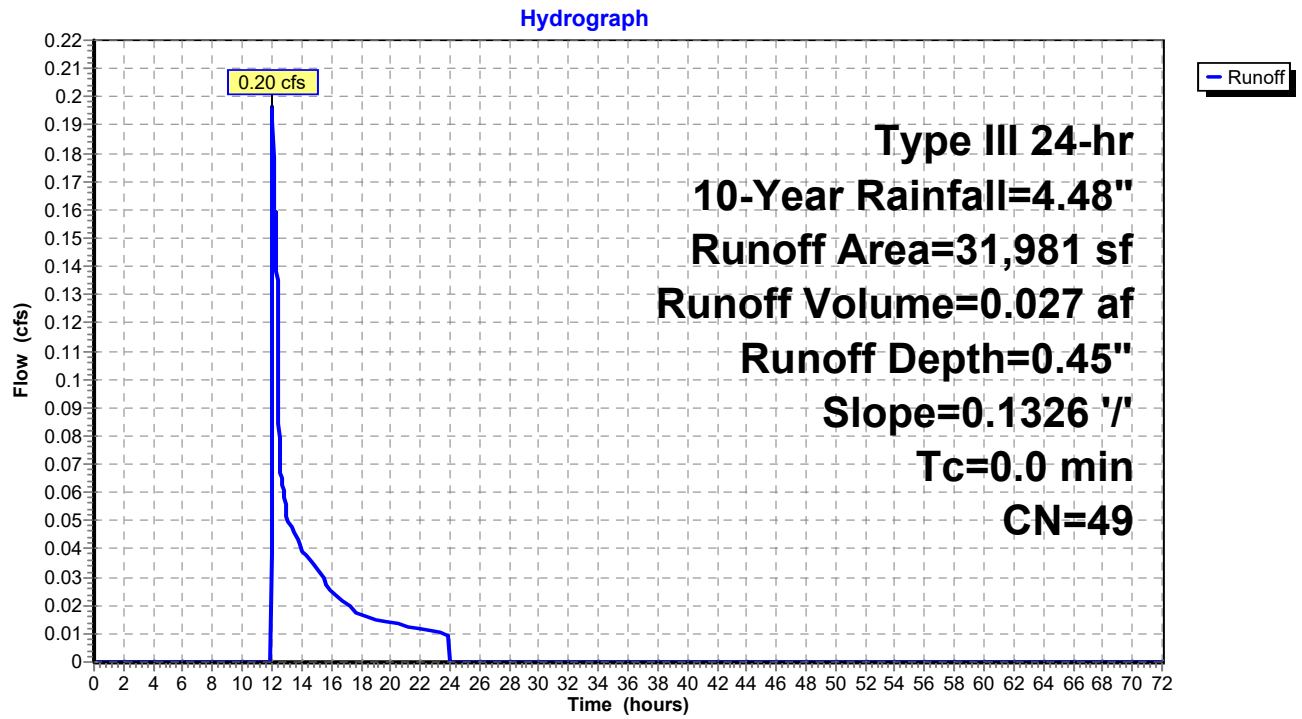
Runoff = 0.20 cfs @ 12.05 hrs, Volume= 0.027 af, Depth= 0.45"
Routed to Pond DV 15P : Yard Drain 1 (YD-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
12,051	30	Woods, Good HSG A
6,722	70	Woods, Good HSG C
10,024	55	Woods, Good HSG B
7	98	Paved parking HSG B
3,177	61	>75% Grass cover, Good HSG B
31,981	49	Weighted Average
31,974		99.98% Pervious Area
7		0.02% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0		0.1326			**Lag/CN Method,**

Subcatchment DV 15S: To Yard Drain 1 (YD-1)



Summary for Subcatchment DV 1S: To Observation Point 1

CarlsonPlanXYPos|0.0000|0.0000|

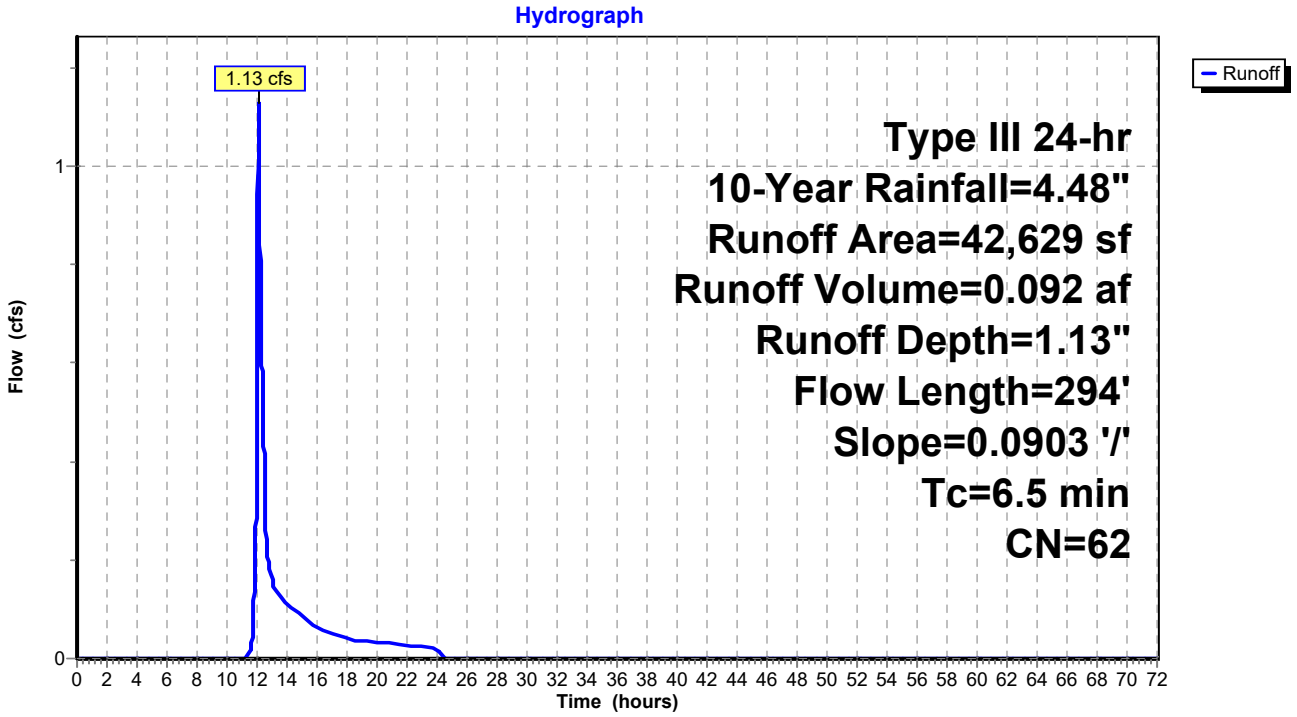
Runoff = 1.13 cfs @ 12.11 hrs, Volume= 0.092 af, Depth= 1.13"
Routed to Reach OP-1 : Observation Point 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
4,615	55	Woods, Good HSG B
15,214	70	Woods, Good HSG C
106	77	Woods, Good HSG D
9,712	30	Woods, Good HSG A
4,349	98	Paved parking HSG A
1,700	98	Paved parking HSG C
2,501	39	>75% Grass cover, Good HSG A
995	61	>75% Grass cover, Good HSG B
3,437	74	>75% Grass cover, Good HSG C
42,629	62	Weighted Average
36,580		85.81% Pervious Area
6,049		14.19% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.5	294	0.0903	0.75		**Lag/CN Method,**

Subcatchment DV 1S: To Observation Point 1



Summary for Subcatchment DV 2S: To Infiltration Basin 1 (IB-1)

CarlsonPlanXYPos|0.0000|0.0000|

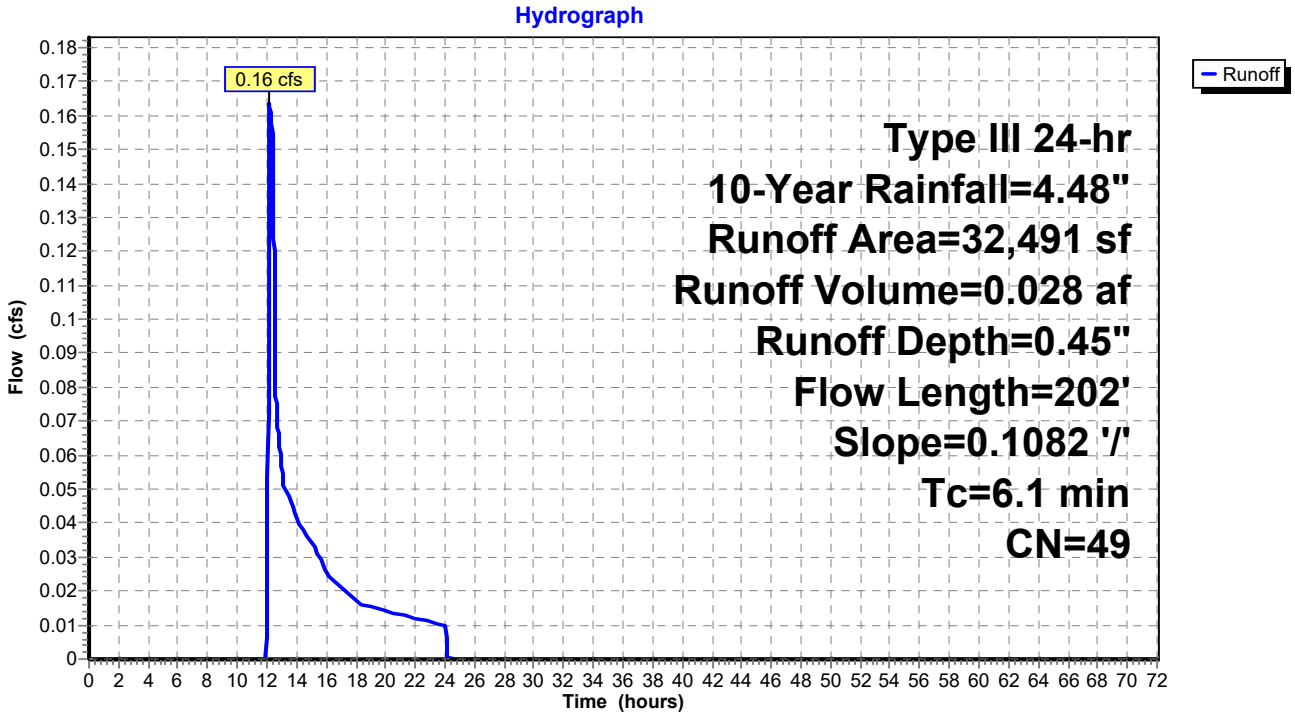
Runoff = 0.16 cfs @ 12.16 hrs, Volume= 0.028 af, Depth= 0.45"
Routed to Pond DV 1P : Infiltration Basin 1 (IB-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
66	98	Paved parking HSG C
3,115	55	Woods, Good HSG B
11,876	30	Woods, Good HSG A
1,359	98	Paved parking HSG B
2,365	39	>75% Grass cover, Good HSG A
12,784	61	>75% Grass cover, Good HSG B
926	74	>75% Grass cover, Good HSG C
32,491	49	Weighted Average
31,066		95.61% Pervious Area
1,425		4.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.1	202	0.1082	0.55		**Lag/CN Method,**

Subcatchment DV 2S: To Infiltration Basin 1 (IB-1)



Summary for Subcatchment DV 3S: To Catch Basin 1 (CB-1)

CarlsonPlanXYPos|0.0000|0.0000|

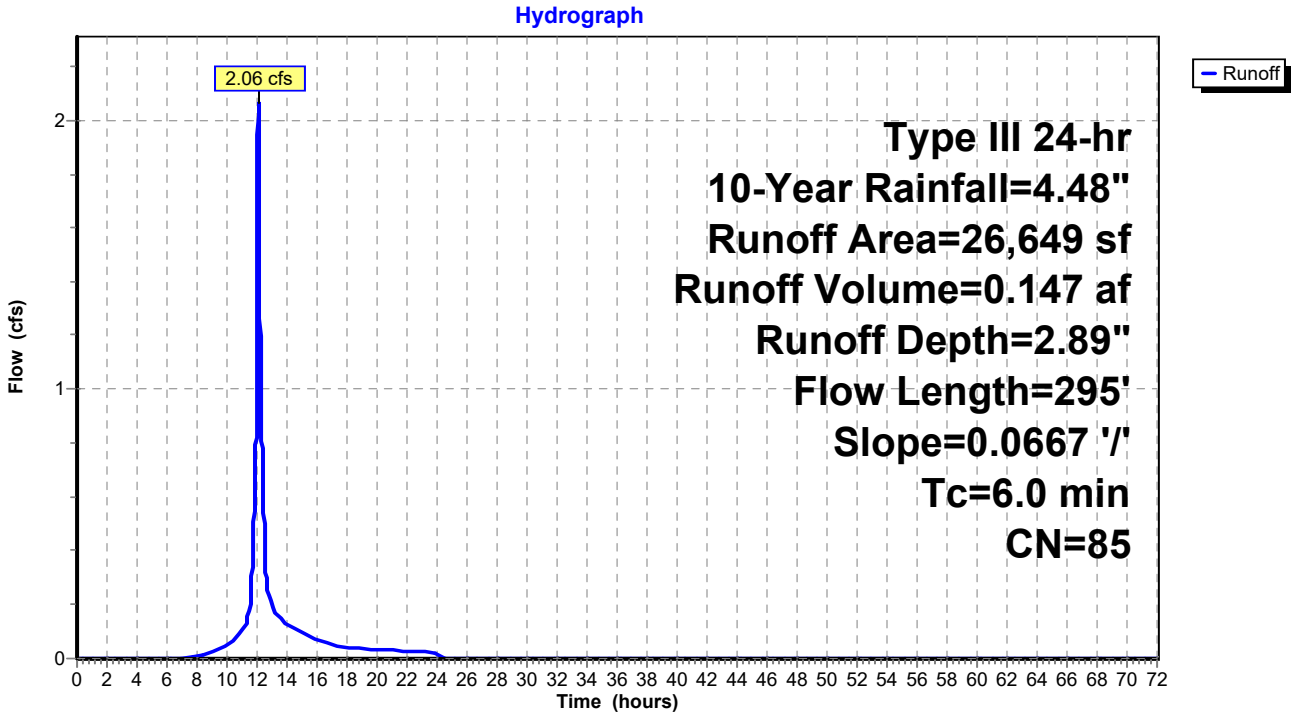
Runoff = 2.06 cfs @ 12.09 hrs, Volume= 0.147 af, Depth= 2.89"
Routed to Pond DV 3P : Catch Basin 1 (CB-1)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
2,514	30	Woods, Good HSG A
68	70	Woods, Good HSG C
1,182	55	Woods, Good HSG B
216	98	Paved parking HSG C
550	98	Paved parking HSG A
18,726	98	Paved parking HSG B
330	39	>75% Grass cover, Good HSG A
2,564	61	>75% Grass cover, Good HSG B
499	74	>75% Grass cover, Good HSG C
26,649	85	Weighted Average
7,157		26.86% Pervious Area
19,492		73.14% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	295	0.0667	1.25		**Lag/CN Method,**
3.9	295	Total, Increased to minimum Tc = 6.0 min			

Subcatchment DV 3S: To Catch Basin 1 (CB-1)



Summary for Subcatchment DV 4S: To Catch Basin 2 (CB-2)

CarlsonPlanXYPos|0.0000|0.0000|

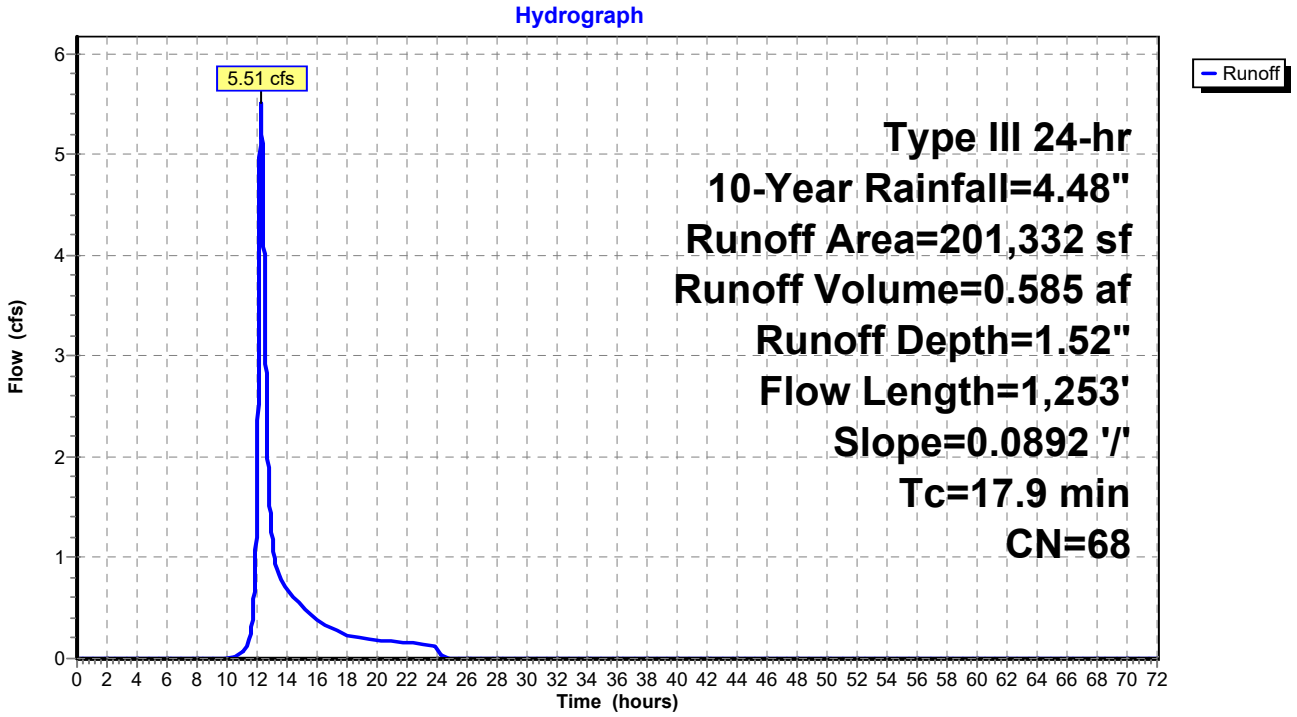
Runoff = 5.51 cfs @ 12.27 hrs, Volume= 0.585 af, Depth= 1.52"
Routed to Pond DV 4P : Catch Basin 2 (CB-2)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
386	98	Paved parking HSG B
14,996	55	Woods, Good HSG B
2,587	77	Woods, Good HSG D
91,562	70	Woods, Good HSG C
23,267	30	Woods, Good HSG A
5,620	98	Paved parking HSG A
7,988	98	Roofs HSG C
6,831	98	Paved parking HSG C
482	39	>75% Grass cover, Good HSG A
531	61	>75% Grass cover, Good HSG B
47,082	74	>75% Grass cover, Good HSG C
201,332	68	Weighted Average
180,507		89.66% Pervious Area
20,825		10.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	1,253	0.0892	1.16		**Lag/CN Method,**

Subcatchment DV 4S: To Catch Basin 2 (CB-2)



Summary for Subcatchment DV 5S: DV 5S

CarlsonPlanXYPos|0.0000|0.0000|

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

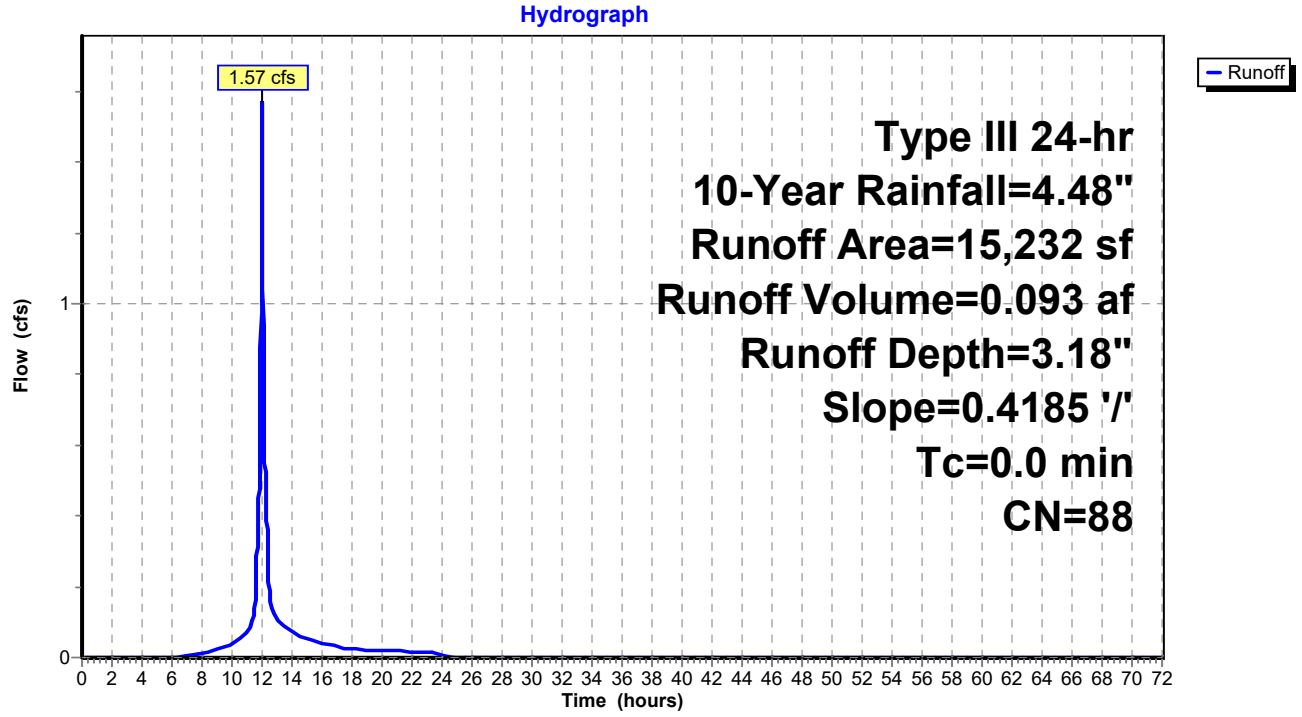
Runoff = 1.57 cfs @ 12.00 hrs, Volume= 0.093 af, Depth= 3.18"
Routed to Pond DV 5P : Catch Basin 4 (CB-4)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
95	98	Roofs HSG B
5,754	98	Paved parking HSG B
5,787	98	Paved parking HSG A
536	98	Roofs HSG A
1,786	39	>75% Grass cover, Good HSG A
1,274	61	>75% Grass cover, Good HSG B
15,232	88	Weighted Average
3,060		20.09% Pervious Area
12,172		79.91% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0		0.4185			**Lag/CN Method,**

Subcatchment DV 5S: DV 5S



Summary for Subcatchment DV 6S: To Catch Basin 5 (CB-5)

CarlsonPlanXYPos|0.0000|0.0000|

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

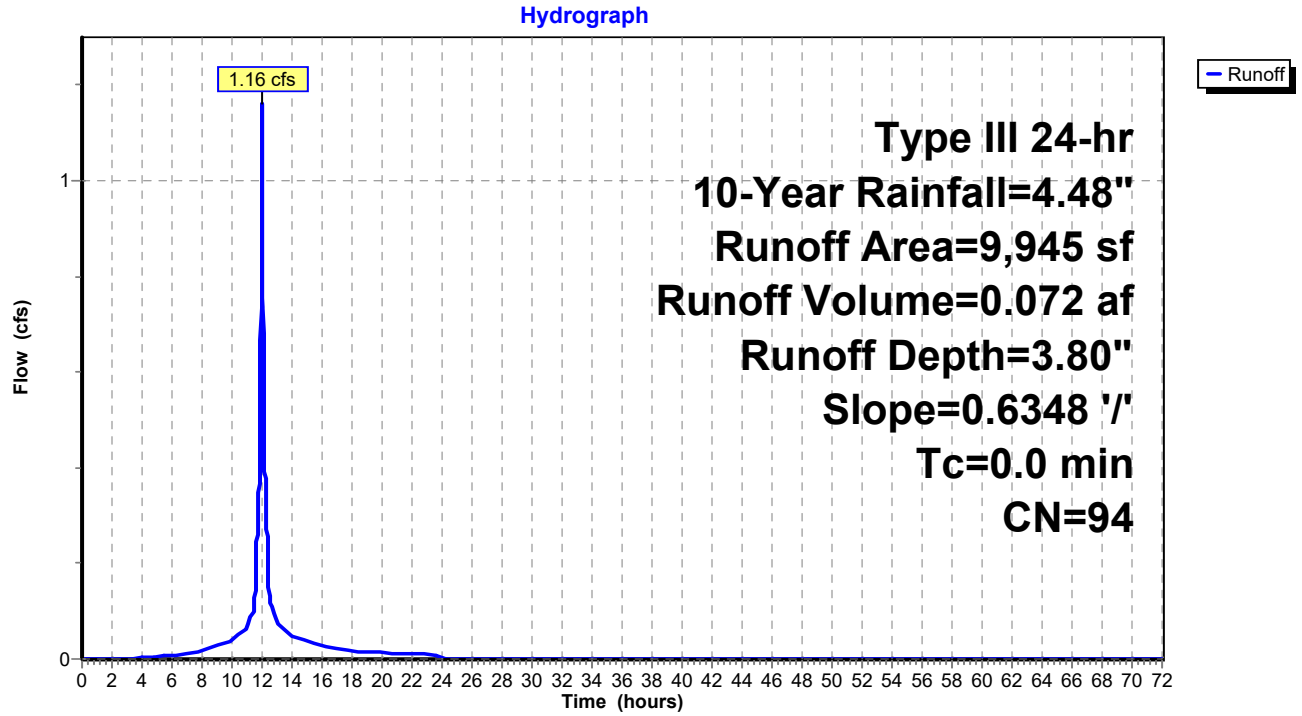
Runoff = 1.16 cfs @ 12.00 hrs, Volume= 0.072 af, Depth= 3.80"
Routed to Pond DV 6P : Catch Basin 5 (CB-5)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
1,102	98	Paved parking HSG B
7,977	98	Paved parking HSG A
37	98	Roofs HSG A
525	39	>75% Grass cover, Good HSG A
304	61	>75% Grass cover, Good HSG B
9,945	94	Weighted Average
829		8.34% Pervious Area
9,116		91.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0		0.6348			**Lag/CN Method,**

Subcatchment DV 6S: To Catch Basin 5 (CB-5)



Summary for Subcatchment DV 7S: To Catch Basin 6 (CB-6)

CarlsonPlanXYPos|0.0000|0.0000|

[46] Hint: Tc=0 (Instant runoff peak depends on dt)

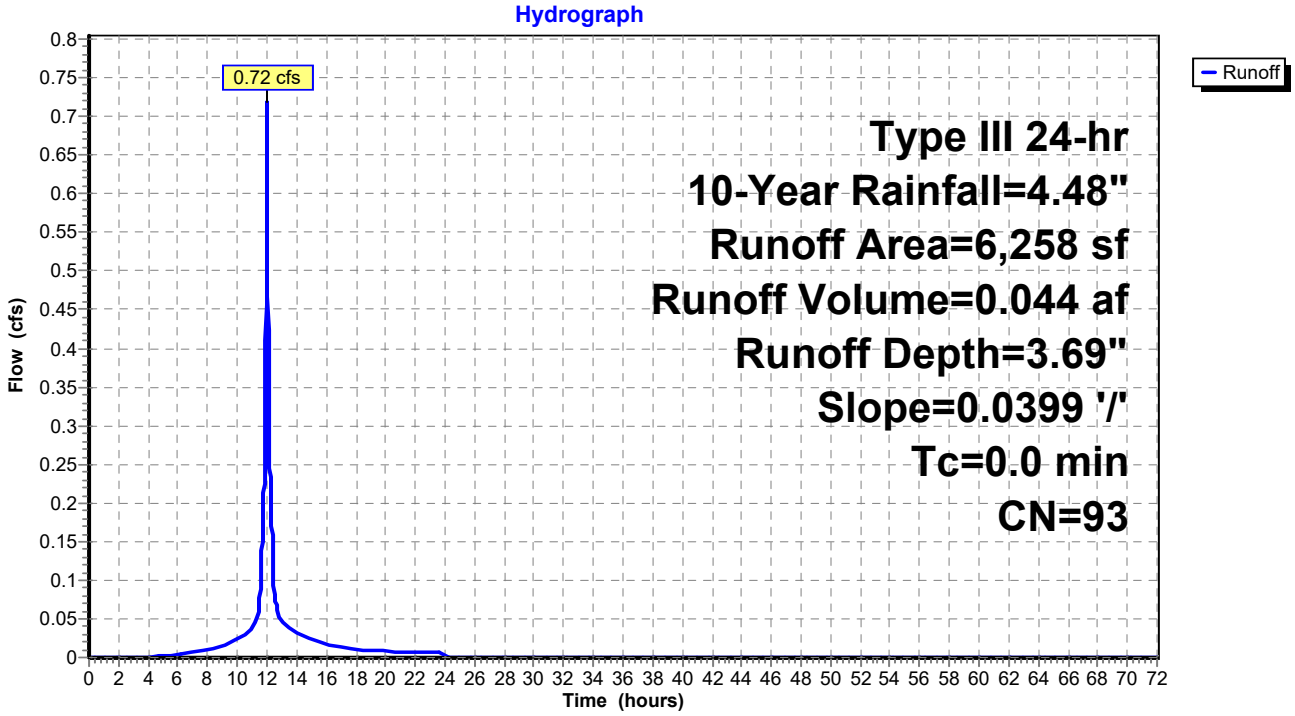
Runoff = 0.72 cfs @ 12.00 hrs, Volume= 0.044 af, Depth= 3.69"
Routed to Pond DV 7P : Catch Basin 6 (CB-6)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
5,057	98	Paved parking HSG B
163	98	Paved parking HSG C
672	61	>75% Grass cover, Good HSG B
366	74	>75% Grass cover, Good HSG C
6,258	93	Weighted Average
1,038		16.59% Pervious Area
5,220		83.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.0		0.0399			**Lag/CN Method,**

Subcatchment DV 7S: To Catch Basin 6 (CB-6)



Summary for Subcatchment DV 8S: To Catch Basin (CB-3)

CarlsonPlanXYPos|0.0000|0.0000|

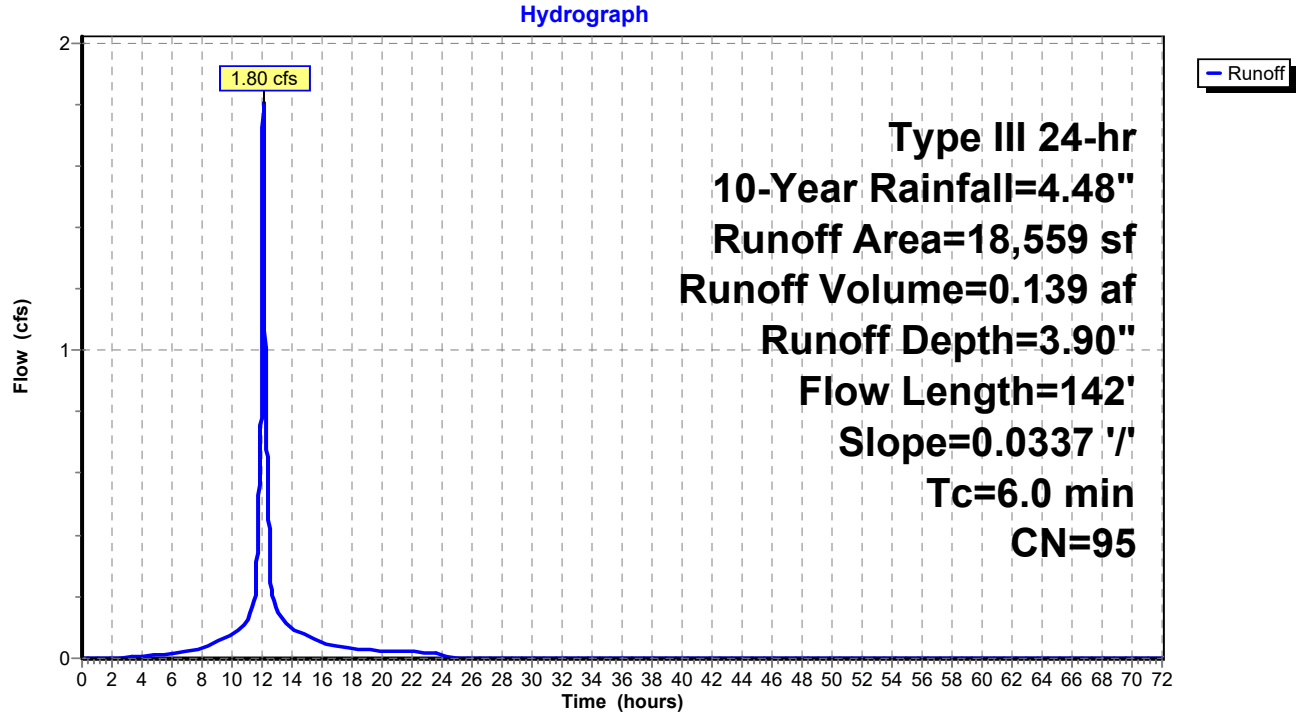
Runoff = 1.80 cfs @ 12.08 hrs, Volume= 0.139 af, Depth= 3.90"
Routed to Pond DV 8P : Catch Basin (CB-3)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Rainfall=4.48"

Area (sf)	CN	Description
12,058	98	Paved parking HSG B
3,770	98	Paved parking HSG A
1,708	98	Paved parking HSG C
488	39	>75% Grass cover, Good HSG A
411	61	>75% Grass cover, Good HSG B
124	74	>75% Grass cover, Good HSG C
18,559	95	Weighted Average
1,023		5.51% Pervious Area
17,536		94.49% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	142	0.0337	1.17		**Lag/CN Method,**
2.0	142	Total, Increased to minimum Tc = 6.0 min			

Subcatchment DV 8S: To Catch Basin (CB-3)



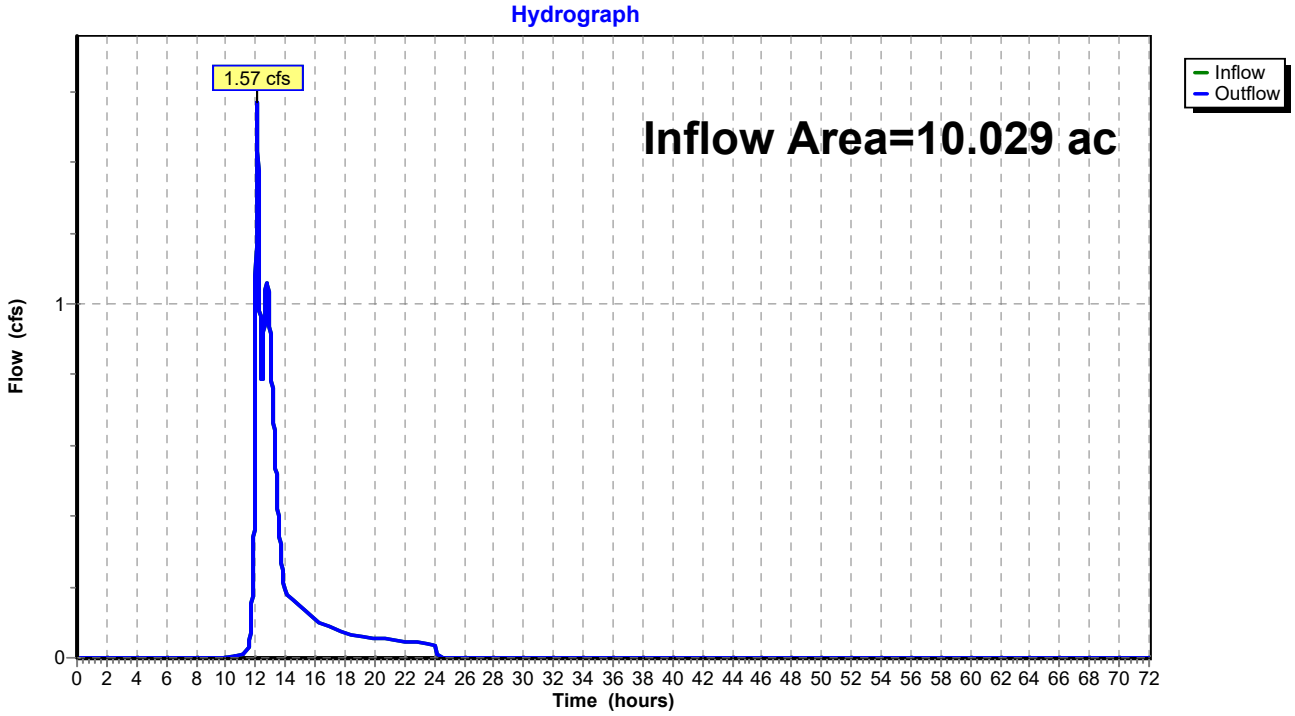
Summary for Reach OP-1: Observation Point 1

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 10.029 ac, 24.24% Impervious, Inflow Depth = 0.24" for 10-Year event
Inflow = 1.57 cfs @ 12.11 hrs, Volume= 0.198 af
Outflow = 1.57 cfs @ 12.11 hrs, Volume= 0.198 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach OP-1: Observation Point 1



Summary for Pond DV 15P: Yard Drain 1 (YD-1)

[57] Hint: Peaked at 167.72' (Flood elevation advised)

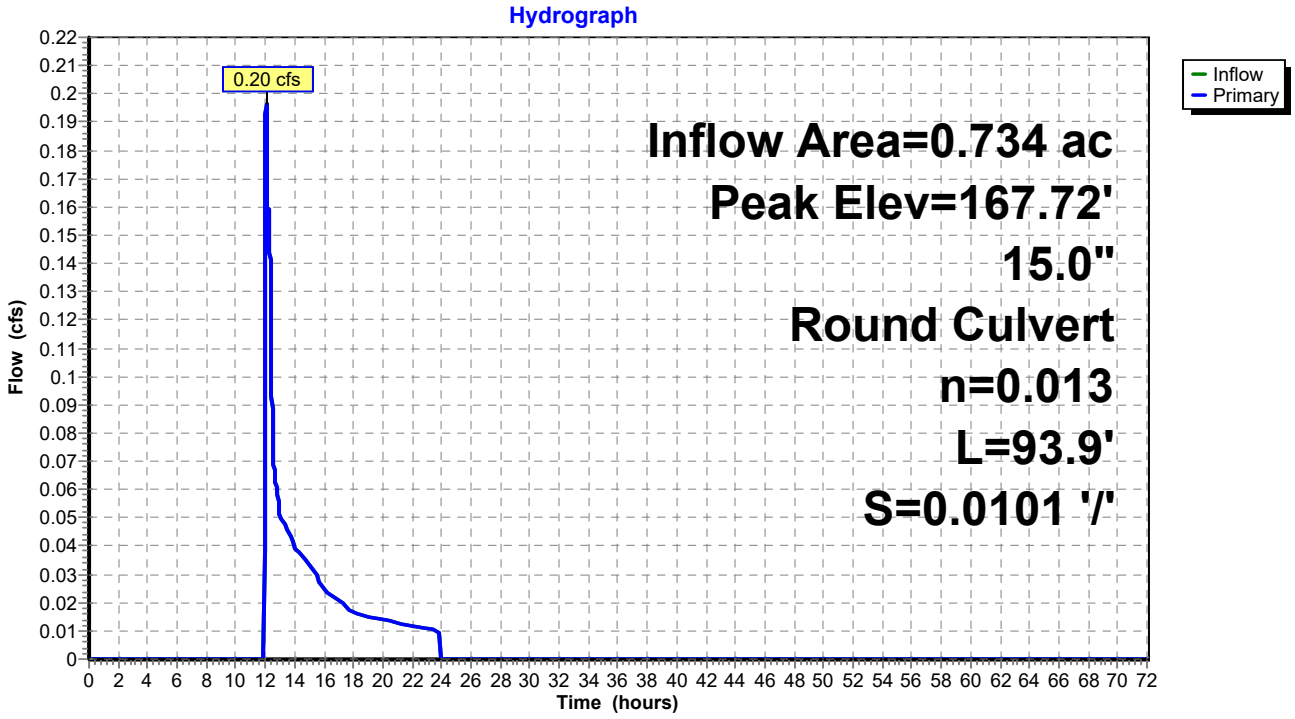
Inflow Area = 0.734 ac, 0.02% Impervious, Inflow Depth = 0.45" for 10-Year event
Inflow = 0.20 cfs @ 12.05 hrs, Volume= 0.027 af
Outflow = 0.20 cfs @ 12.05 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 12.05 hrs, Volume= 0.027 af
Routed to Pond DV 3P : Catch Basin 1 (CB-1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 167.72' @ 12.28 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	165.30'	**15.0" Round Culvert** L= 93.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 165.30' / 164.35' S= 0.0101 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=0.16 cfs @ 12.05 hrs HW=165.57' TW=165.37' (Dynamic Tailwater)
1=Culvert (Outlet Controls 0.16 cfs @ 1.20 fps)

Pond DV 15P: Yard Drain 1 (YD-1)



Summary for Pond DV 1P: Infiltration Basin 1 (IB-1)

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=27)
[80] Warning: Exceeded Pond DV 7P by 0.61' @ 24.01 hrs (1.24 cfs 0.048 af)
[80] Warning: Exceeded Pond DV 8P by 0.75' @ 24.59 hrs (1.65 cfs 0.069 af)

Inflow Area = 8.046 ac, 26.77% Impervious, Inflow Depth = 1.79" for 10-Year event
Inflow = 9.20 cfs @ 12.07 hrs, Volume= 1.201 af
Outflow = 2.66 cfs @ 12.78 hrs, Volume= 1.201 af, Atten= 71%, Lag= 42.5 min
Discarded = 1.92 cfs @ 12.78 hrs, Volume= 1.154 af
Primary = 0.74 cfs @ 12.78 hrs, Volume= 0.047 af
Routed to Reach OP-1 : Observation Point 1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 164.79' @ 12.78 hrs Surf.Area= 12,752 sf Storage= 19,571 cf

Plug-Flow detention time= 207.4 min calculated for 1.201 af (100% of inflow)
Center-of-Mass det. time= 207.4 min (1,040.1 - 832.7)

Volume	Invert	Avail.Storage	Storage Description
#1	162.00'	977 cf	**Sediment Forebay (Irregular)** Listed below (Recalc) -Impervious
#2	162.00'	6,414 cf	**Sediment Forebay (Irregular)** Listed below (Recalc) -Impervious
#3	162.00'	5,217 cf	**Pond Bottom (Irregular)** Listed below (Recalc)
#4	164.00'	19,423 cf	**Pond Storage Above Forebay (Irregular)** Listed below (Recalc)
		32,030 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
162.00	272	67.5	0	0	272
164.00	744	102.9	977	977	781

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
162.00	2,578	221.5	0	0	2,578
164.00	3,880	257.5	6,414	6,414	4,031

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
162.00	1,923	255.4	0	0	1,923
164.00	3,360	288.9	5,217	5,217	3,473

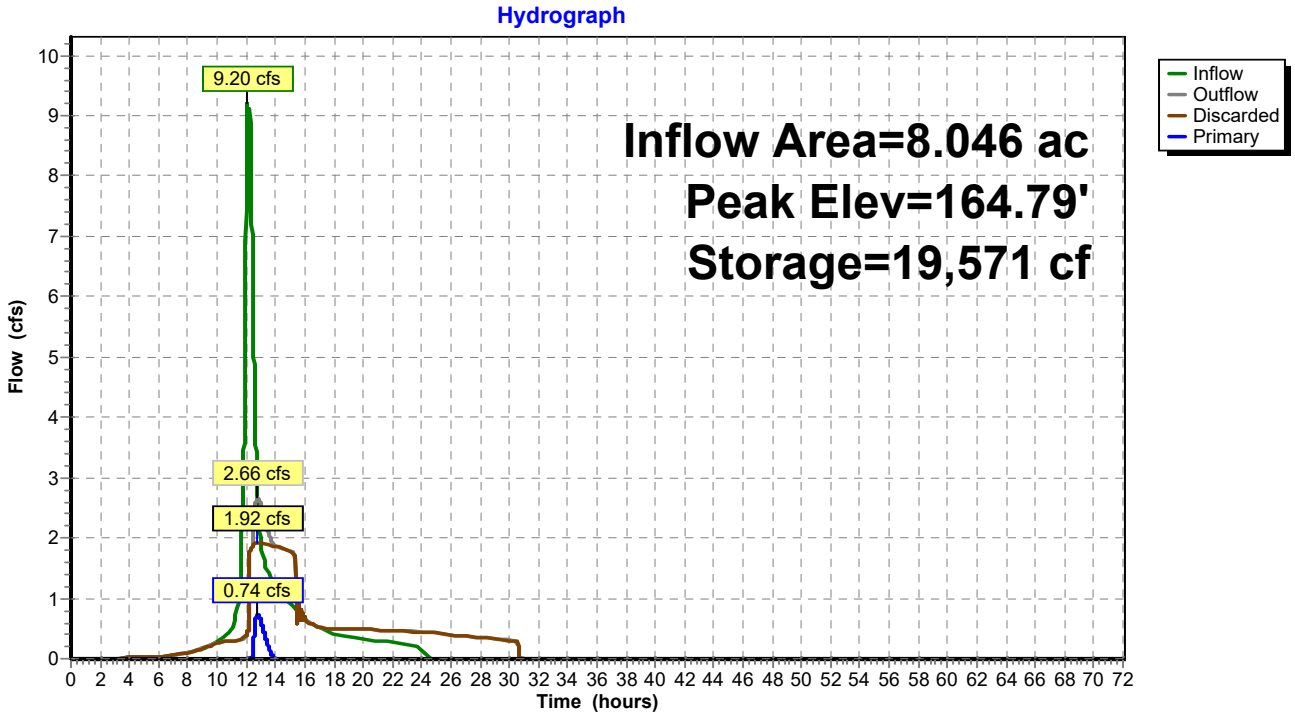
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
164.00	8,318	457.3	0	0	8,318
166.00	11,175	495.0	19,423	19,423	11,330

Device	Routing	Invert	Outlet Devices
#1	Primary	165.60'	**10.0' long x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64
#2	Discarded	162.00'	**6.500 in/hr Exfiltration Deerfield Loamy Sand (13 in/hr) over Surface area** Phase-In= 0.01'
#3	Device 4	165.00'	**48.0" Horiz. Outlet Control Structure 48" Grate** C= 0.600 Limited to weir flow at low heads
#4	Primary	162.00'	**15.0" Round Culvert** L= 20.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 162.00' / 161.80' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#5	Device 4	164.50'	**18.0" W x 4.0" H Vert. 18" x 4" Orifice** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=1.92 cfs @ 12.78 hrs HW=164.79' (Free Discharge)
└**2=Exfiltration Deerfield Loamy Sand (13 in/hr)**(Exfiltration Controls 1.92 cfs)

Primary OutFlow Max=0.74 cfs @ 12.78 hrs HW=164.79' TW=0.00' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)
└**4=Culvert** (Passes 0.74 cfs of 8.69 cfs potential flow)
└**3=Outlet Control Structure 48" Grate** (Controls 0.00 cfs)
└**5=18" x 4" Orifice** (Orifice Controls 0.74 cfs @ 1.72 fps)

Pond DV 1P: Infiltration Basin 1 (IB-1)



Summary for Pond DV 3P: Catch Basin 1 (CB-1)

[57] Hint: Peaked at 167.72' (Flood elevation advised)
[80] Warning: Exceeded Pond DV 15P by 0.18' @ 12.11 hrs (1.46 cfs 0.022 af)

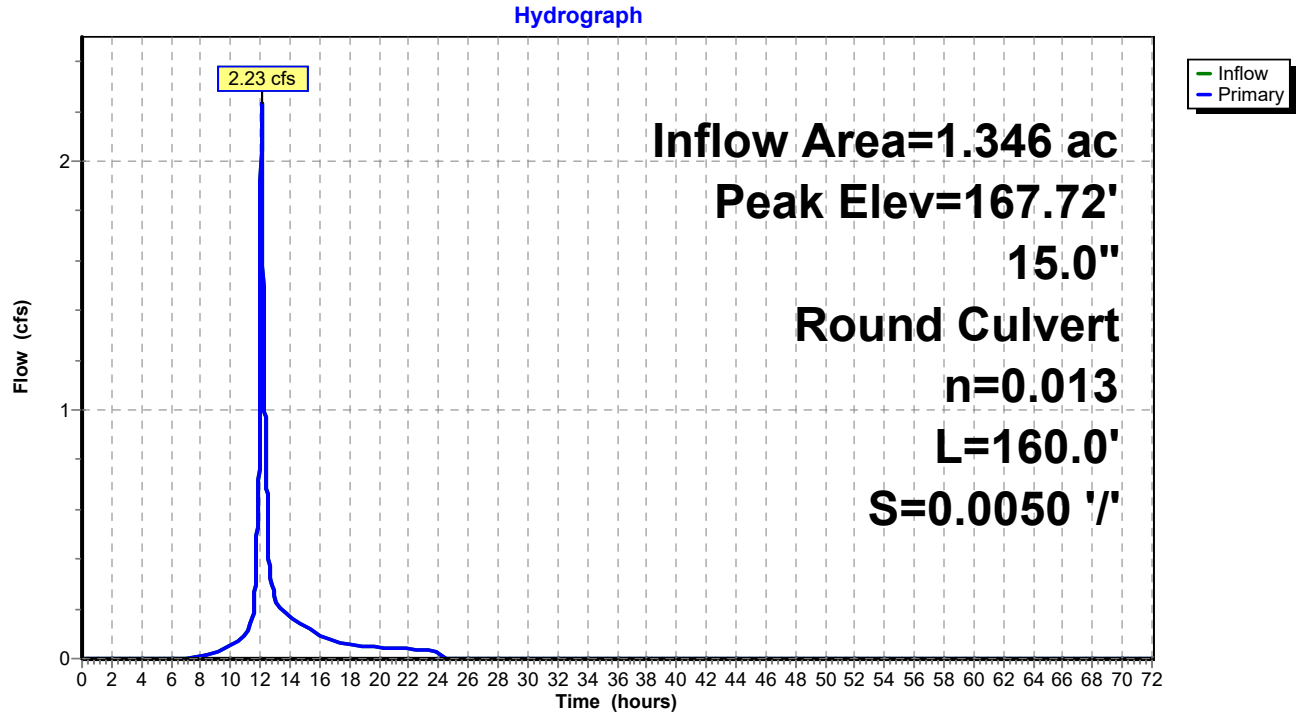
Inflow Area = 1.346 ac, 33.26% Impervious, Inflow Depth = 1.56" for 10-Year event
Inflow = 2.23 cfs @ 12.08 hrs, Volume= 0.175 af
Outflow = 2.23 cfs @ 12.08 hrs, Volume= 0.175 af, Atten= 0%, Lag= 0.0 min
Primary = 2.23 cfs @ 12.08 hrs, Volume= 0.175 af
Routed to Pond DV 4P : Catch Basin 2 (CB-2)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 167.72' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	164.25'	**15.0" Round Culvert** L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 164.25' / 163.45' S= 0.0050 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.30 cfs @ 12.08 hrs HW=165.83' TW=165.74' (Dynamic Tailwater)
↑—**1=Culvert** (Outlet Controls 1.30 cfs @ 1.08 fps)

Pond DV 3P: Catch Basin 1 (CB-1)



Summary for Pond DV 4P: Catch Basin 2 (CB-2)

[57] Hint: Peaked at 167.66' (Flood elevation advised)

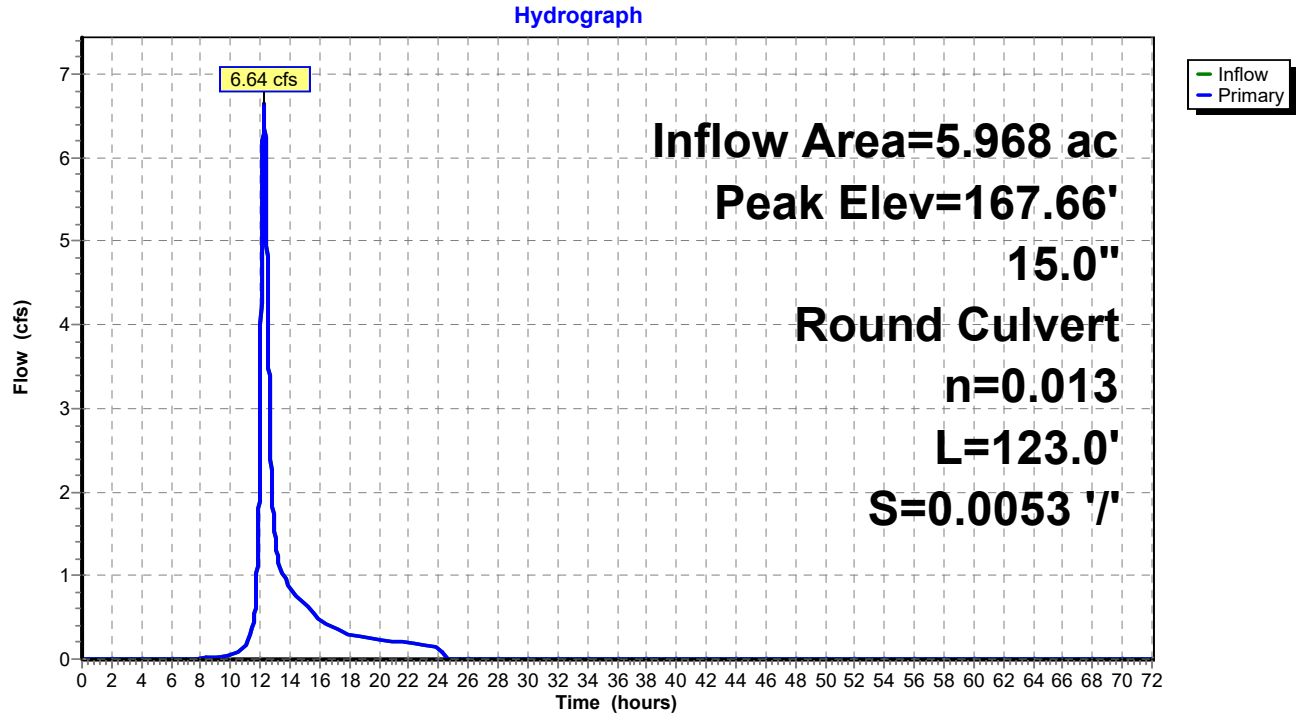
Inflow Area = 5.968 ac, 15.51% Impervious, Inflow Depth = 1.53" for 10-Year event
Inflow = 6.64 cfs @ 12.25 hrs, Volume= 0.760 af
Outflow = 6.64 cfs @ 12.25 hrs, Volume= 0.760 af, Atten= 0%, Lag= 0.0 min
Primary = 6.64 cfs @ 12.25 hrs, Volume= 0.760 af
Routed to Pond DV 8P : Catch Basin (CB-3)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 167.66' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	163.35'	**15.0" Round Culvert** L= 123.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 163.35' / 162.70' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=6.61 cfs @ 12.25 hrs HW=167.63' TW=165.67' (Dynamic Tailwater)
1=Culvert (Outlet Controls 6.61 cfs @ 5.38 fps)

Pond DV 4P: Catch Basin 2 (CB-2)



Summary for Pond DV 5P: Catch Basin 4 (CB-4)

[57] Hint: Peaked at 165.37' (Flood elevation advised)

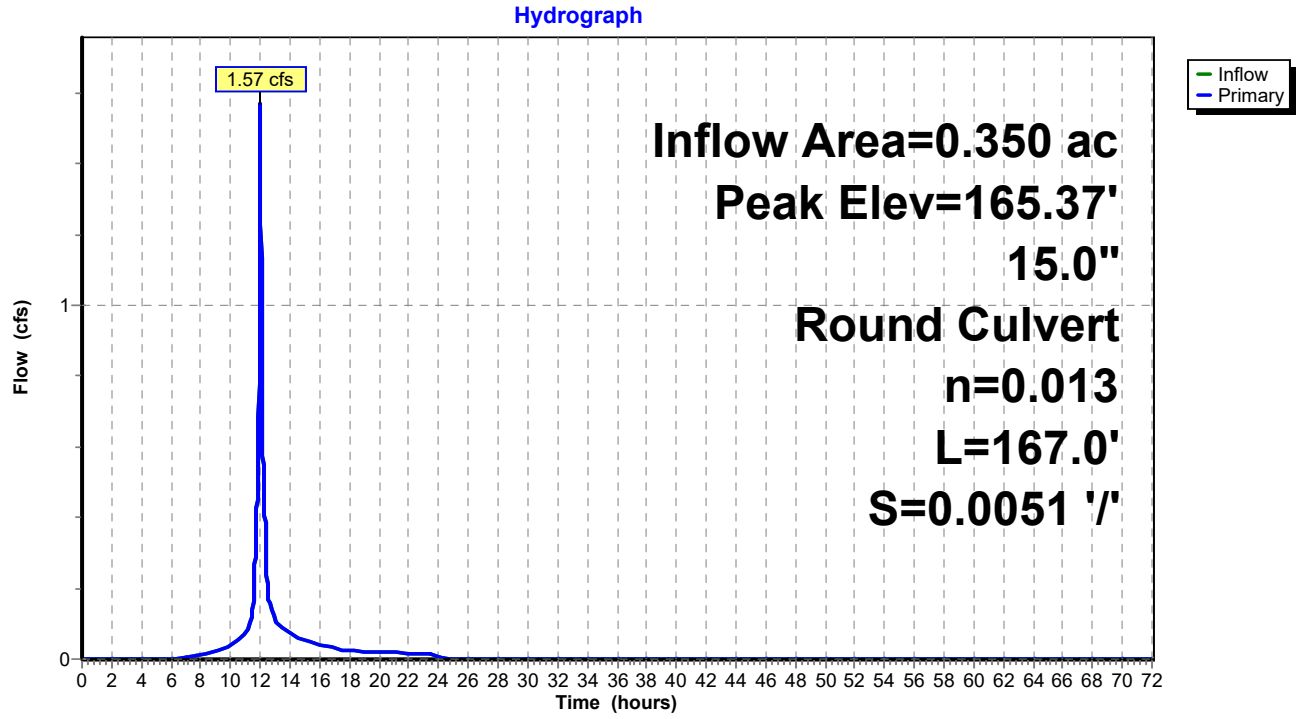
Inflow Area = 0.350 ac, 79.91% Impervious, Inflow Depth = 3.18" for 10-Year event
Inflow = 1.57 cfs @ 12.00 hrs, Volume= 0.093 af
Outflow = 1.57 cfs @ 12.00 hrs, Volume= 0.093 af, Atten= 0%, Lag= 0.0 min
Primary = 1.57 cfs @ 12.00 hrs, Volume= 0.093 af
Routed to Pond DV 6P : Catch Basin 5 (CB-5)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 165.37' @ 12.00 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	164.60'	**15.0" Round Culvert** L= 167.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 164.60' / 163.75' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=1.52 cfs @ 12.00 hrs HW=165.36' TW=164.69' (Dynamic Tailwater)
1=Culvert (Outlet Controls 1.52 cfs @ 2.77 fps)

Pond DV 5P: Catch Basin 4 (CB-4)



Summary for Pond DV 6P: Catch Basin 5 (CB-5)

[57] Hint: Peaked at 164.79' (Flood elevation advised)

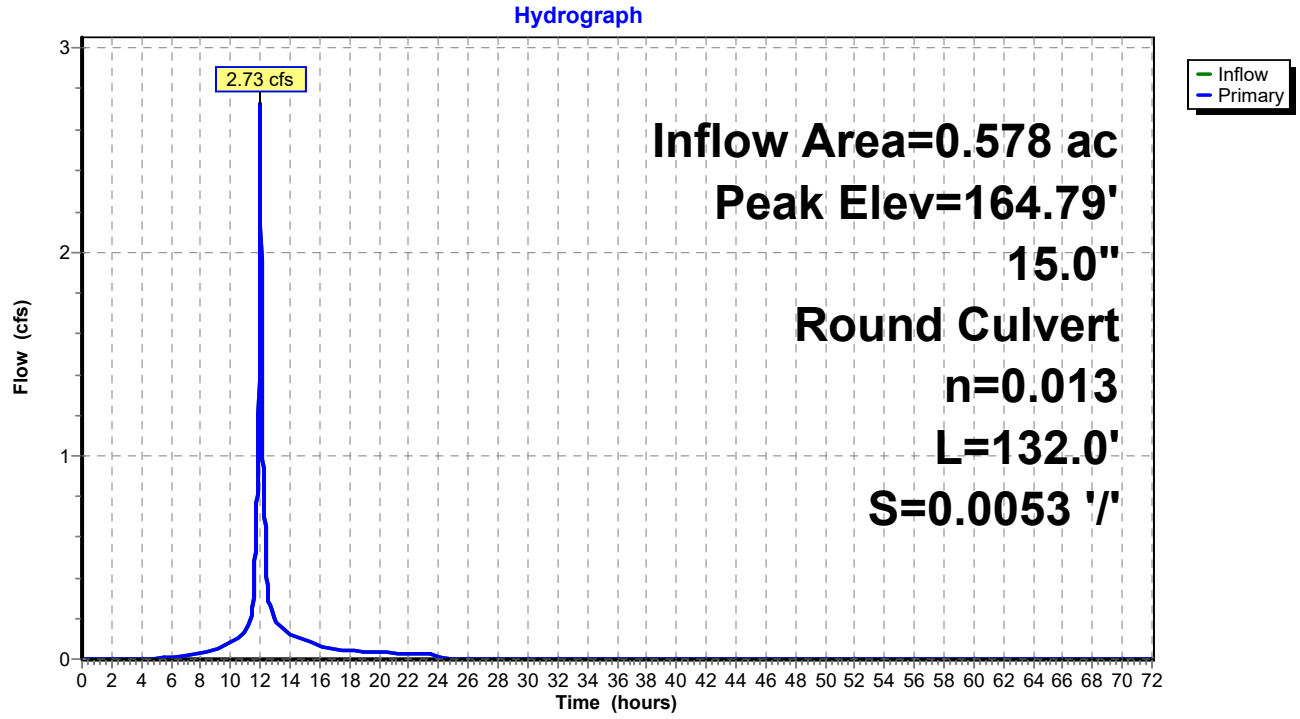
Inflow Area = 0.578 ac, 84.55% Impervious, Inflow Depth = 3.42" for 10-Year event
Inflow = 2.73 cfs @ 12.00 hrs, Volume= 0.165 af
Outflow = 2.73 cfs @ 12.00 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min
Primary = 2.73 cfs @ 12.00 hrs, Volume= 0.165 af
Routed to Pond DV 7P : Catch Basin 6 (CB-6)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 164.79' @ 12.79 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	163.65'	**15.0" Round Culvert** L= 132.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 163.65' / 162.95' S= 0.0053 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=2.65 cfs @ 12.00 hrs HW=164.69' TW=163.98' (Dynamic Tailwater)
1=Culvert (Outlet Controls 2.65 cfs @ 3.31 fps)

Pond DV 6P: Catch Basin 5 (CB-5)



Summary for Pond DV 7P: Catch Basin 6 (CB-6)

[57] Hint: Peaked at 164.79' (Flood elevation advised)

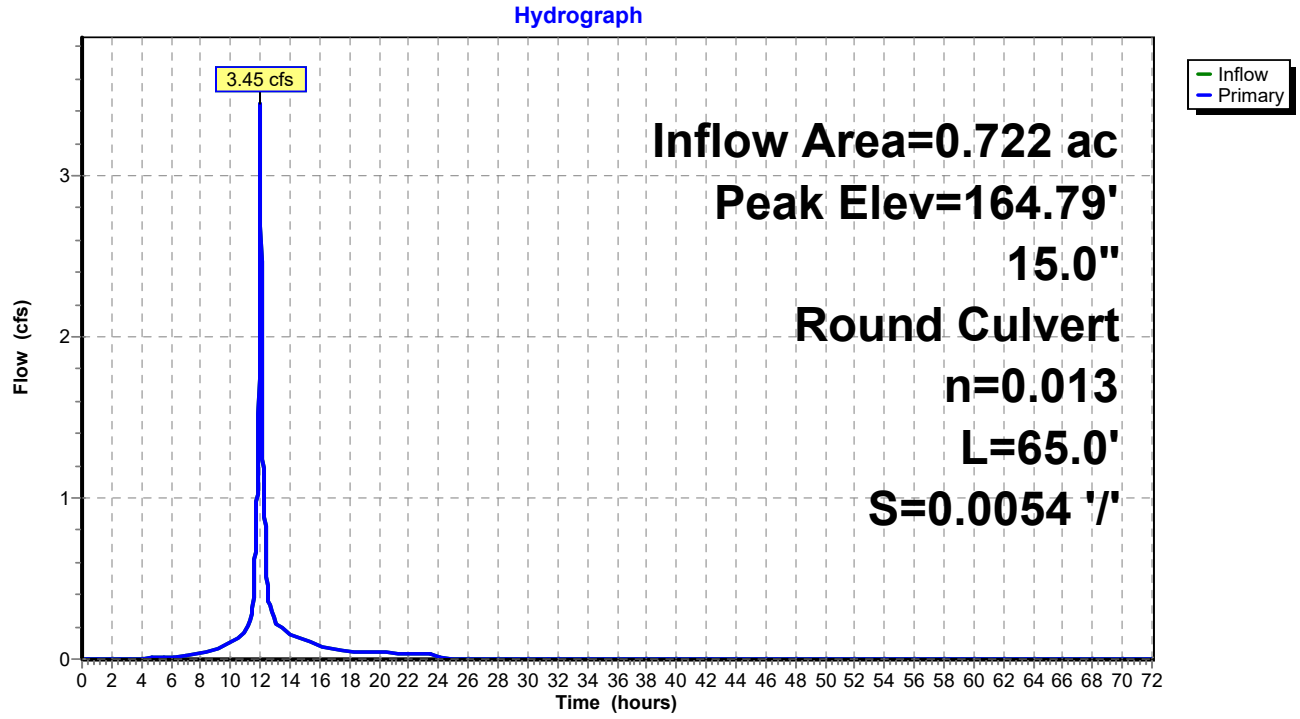
Inflow Area = 0.722 ac, 84.33% Impervious, Inflow Depth = 3.47" for 10-Year event
Inflow = 3.45 cfs @ 12.00 hrs, Volume= 0.209 af
Outflow = 3.45 cfs @ 12.00 hrs, Volume= 0.209 af, Atten= 0%, Lag= 0.0 min
Primary = 3.45 cfs @ 12.00 hrs, Volume= 0.209 af
Routed to Pond DV 1P : Infiltration Basin 1 (IB-1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 164.79' @ 12.79 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	162.85'	**15.0" Round Culvert** L= 65.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 162.85' / 162.50' S= 0.0054 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=3.44 cfs @ 12.00 hrs HW=163.98' TW=163.07' (Dynamic Tailwater)
1=Culvert (Barrel Controls 3.44 cfs @ 3.87 fps)

Pond DV 7P: Catch Basin 6 (CB-6)



Summary for Pond DV 8P: Catch Basin (CB-3)

[57] Hint: Peaked at 165.70' (Flood elevation advised)

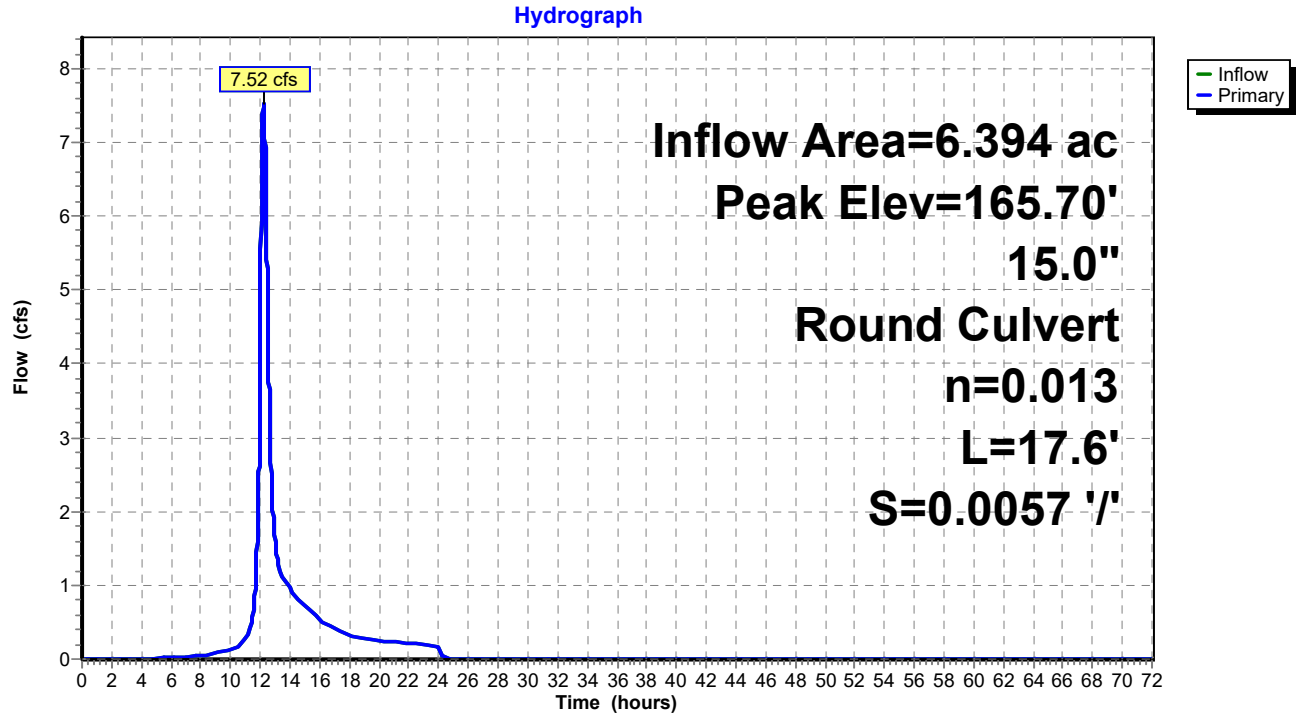
Inflow Area = 6.394 ac, 20.77% Impervious, Inflow Depth = 1.69" for 10-Year event
Inflow = 7.52 cfs @ 12.23 hrs, Volume= 0.899 af
Outflow = 7.52 cfs @ 12.23 hrs, Volume= 0.899 af, Atten= 0%, Lag= 0.0 min
Primary = 7.52 cfs @ 12.23 hrs, Volume= 0.899 af
Routed to Pond DV 1P : Infiltration Basin 1 (IB-1)

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
Peak Elev= 165.70' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	162.60'	**15.0" Round Culvert** L= 17.6' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 162.60' / 162.50' S= 0.0057 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf

Primary OutFlow Max=7.44 cfs @ 12.23 hrs HW=165.63' TW=164.04' (Dynamic Tailwater)
1=Culvert (Inlet Controls 7.44 cfs @ 6.06 fps)

Pond DV 8P: Catch Basin (CB-3)



Attachment "G"

Section 3.1: Drainage Area Plans

Existing Conditions – Drainage Area Plan (See attached)

Developed Conditions – Drainage Area Plan (See attached)

Developed Conditions – Drainage Area Plan (See attached)

Existing Conditions – Hydrologic Soil Plan (See attached)

Developed Conditions – Hydrologic Soil Plan (See attached)

Attachment "G"

LEGEND: EXISTING CONDITIONS

EX 1R	REACH
EX 1S	SUBCATCHMENT
EX 1P	POND
OP-1	OBSERVATION POINT
	SUB-CATCHMENT DELINEATION
	Tc – TIME OF CONCENTRATION PATH
	EXISTING 2' CONTOUR INTERVAL
	EXISTING 10' CONTOUR INTERVAL
	NRCS SOIL DELINEATION
	SITE SPECIFIC SOIL DELINEATION
	EXISTING TREELINE
28C	SOILS LABEL

NRCS SOIL LEGEND:

DeA	DEERFIELD LOAMY FINE SAND	HSG A
MoB	MONTAUK FINE SANDY LOAM	HSG C
RbA	RIDGEBURY FINE SANDY LOAM	HSG D
WdB	WINDSOR LOAMY SAND	HSG A

SOURCE: USDA NRCS WEB SOIL SURVEY

SITE SPECIFIC SOIL LEGEND:

26	WINDSOR LOAMY SAND	HSG A
313	DEERFIELD LOAMY SAND	HSG B
915	DEERFIELD VARIANT FINE SAND	HSG C
315	WAREHAM FINE SAND	HSG D

SOURCE: SITE SPECIFIC SOIL MAPPING REPORT

GRAPHIC SCALE

80 40 0 80 160 240

MERIDIAN
LAND SERVICES, INC.
ENGINEERING | SURVEYING | PERMITTING
SOIL & WETLAND MAPPING | SEPTIC DESIGN
31 OLD NASHUA ROAD, AMHERST, NH 03031 TEL: 603-673-1441
MERIDIANLANDSERVICES.COM | FAX: 603-673-1654

REV.	DATE	DESCRIPTION	DR	CK
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NCG	SRT
B	---	---	---	---
C	---	---	---	---
D	---	---	---	---
E	---	---	---	---
F	---	---	---	---
G	---	---	---	---
H	---	---	---	---
I	---	---	---	---

T-BONES AT LOWELL ROAD

EXISTING DRAINAGE PLAN

JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE

SCALE: 1" = 80'

DRN-EX1
SHEET

FILE: 12542DRN00A.dwg
PROJECT 12542.00
SHEET NO. 1 OF 2

Plotted: 3/3/2025 3:14 PM By: NCG
H:\MLS\12542\0_Drawings\ENG\12542DRN00A.dwg

LEGEND: DEVELOPED CONDITIONS

DV 1R	REACH
DV 1S	SUBCATCHMENT
DV 1P	POND
OP-1	OBSERVATION POINT
	SUB-CATCHMENT DELINEATION
	Tc - TIME OF CONCENTRATION PATH
	EXISTING 2' CONTOUR INTERVAL
	EXISTING 10' CONTOUR INTERVAL
	PROPOSED 2'/10' CONTOUR INTERVAL
	NRCS SOIL DELINEATION
	SITE SPECIFIC SOIL DELINEATION
	EXISTING TREELINE
	PROPOSED TREELINE
26C	SOILS LABEL

NRCS SOIL LEGEND:

DeA	DEERFIELD LOAMY FINE SAND	HSG A
MoB	MONTAUK FINE SANDY LOAM	HSG C
RbA	RIDGEBURY FINE SANDY LOAM	HSG D
WdB	WINDSOR LOAMY SAND	HSG A

SOURCE: USDA NRCS WEB SOIL SURVEY

SITE SPECIFIC SOIL LEGEND:

26	WINDSOR LOAMY SAND	HSG A
313	DEERFIELD LOAMY SAND	HSG B
915	DEERFIELD VARIANT FINE SAND	HSG C
315	WAREHAM FINE SAND	HSG D

SOURCE: SITE SPECIFIC SOIL MAPPING REPORT

GRAPHIC SCALE
80 40 0 80 160 240

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MERIDIANLANDSERVICES.COM | FAX 603-673-1454

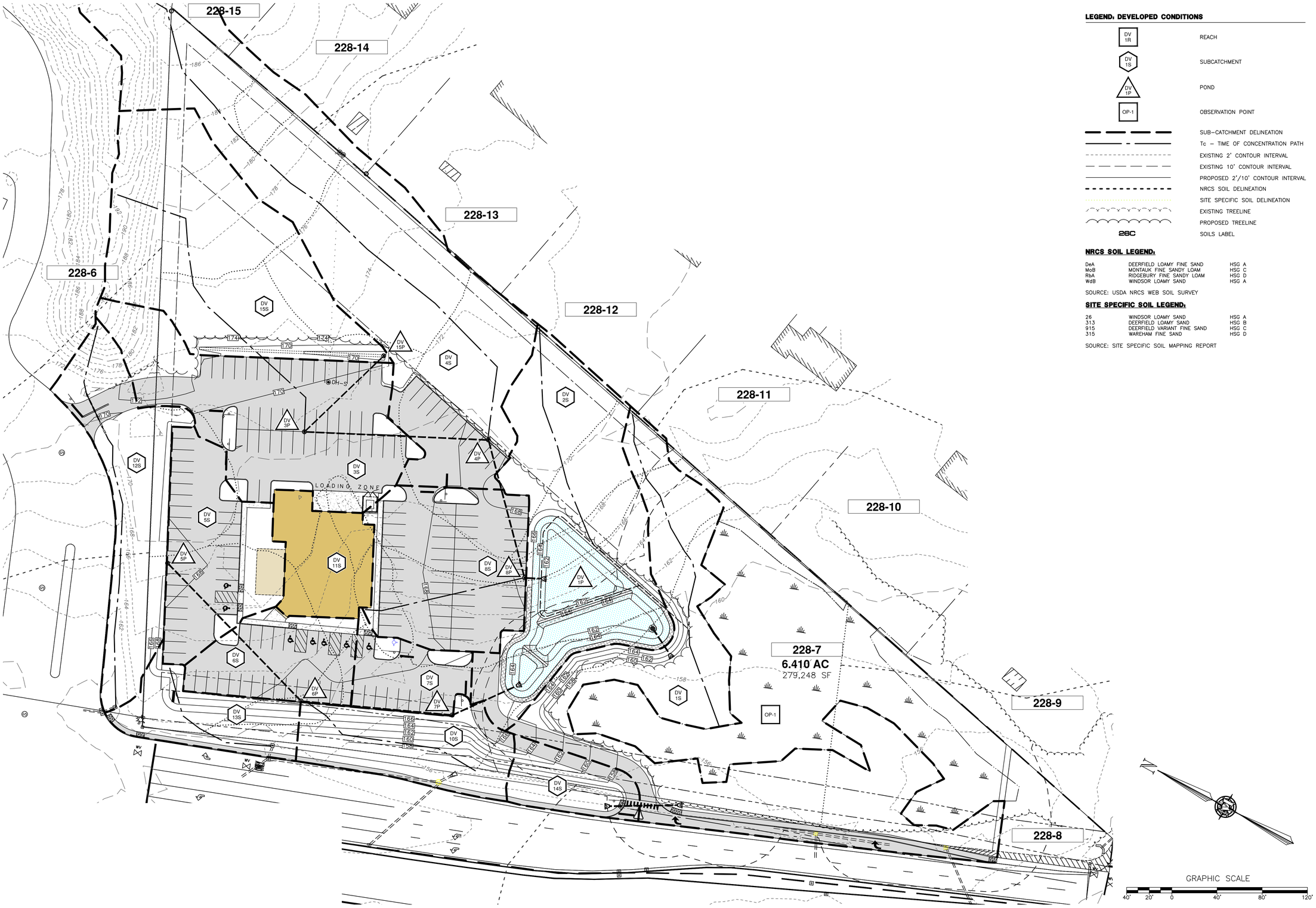
REV.	DATE	DESCRIPTION	DR	CK
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NCG	SRF
B		---	---	---
C		---	---	---
D		---	---	---
E		---	---	---
F		---	---	---
G		---	---	---
H		---	---	---
I		---	---	---

T-BONES AT LOWELL ROAD
DEVELOPED DRAINAGE PLAN
JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE
SCALE: 1" = 60'

DRN-DV1
SHEET
FILE: 12542DRN00A.dwg
PROJECT 12542.00
SHEET NO. 2 OF 3

Plotted: 3/3/2025 3:14 PM By: NCG
H:\MLS\12542\0_Drawings\ENG\12542DRN00A.dwg



LEGEND: DEVELOPED CONDITIONS

DV 1R	REACH
DV 1S	SUBCATCHMENT
DV 1P	POND
OP-1	OBSERVATION POINT
	SUB-CATCHMENT DELINEATION
	Tc – TIME OF CONCENTRATION PATH
	EXISTING 2' CONTOUR INTERVAL
	EXISTING 10' CONTOUR INTERVAL
	PROPOSED 2'/10' CONTOUR INTERVAL
	NRCS SOIL DELINEATION
	SITE SPECIFIC SOIL DELINEATION
	EXISTING TREELINE
	PROPOSED TREELINE
26C	SOILS LABEL

NRCS SOIL LEGEND:

DeA	DEERFIELD LOAMY FINE SAND	HSG A
MoB	MONTAUK FINE SANDY LOAM	HSG C
RbA	RIDGEBURY FINE SANDY LOAM	HSG D
WdB	WINDSOR LOAMY SAND	HSG A

SOURCE: USDA NRCS WEB SOIL SURVEY

SITE SPECIFIC SOIL LEGEND:

26	WINDSOR LOAMY SAND	HSG A
31.3	DEERFIELD LOAMY SAND	HSG B
915	DEERFIELD VARIANT FINE SAND	HSG C
315	WAREHAM FINE SAND	HSG D

SOURCE: SITE SPECIFIC SOIL MAPPING REPORT

MERIDIAN
LAND SERVICES, INC.
ENGINEERING | SURVEYING | PERMITTING
SOIL & WETLAND MAPPING | SEPTIC DESIGN
31 OLD NASHUA ROAD, AMHERST, NH 03031 TEL 603-673-1441
MERIDIANLANDSERVICES.COM | FAX 603-673-1454

REV:	DATE	DESCRIPTION	DR	CK
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NCG	SRT
B				
C				
D				
E				
F				
G				
H				
I				

T-BONES AT LOWELL ROAD
DEVELOPED DRAINAGE PLAN
JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE
SCALE: 1" = 40'

DRN-DV2
SHEET
FILE: 12542DRN00A.dwg
PROJECT 12542.00
SHEET NO. 3 OF 3

Plotted: 3/3/2025 3:14 PM By: NCG
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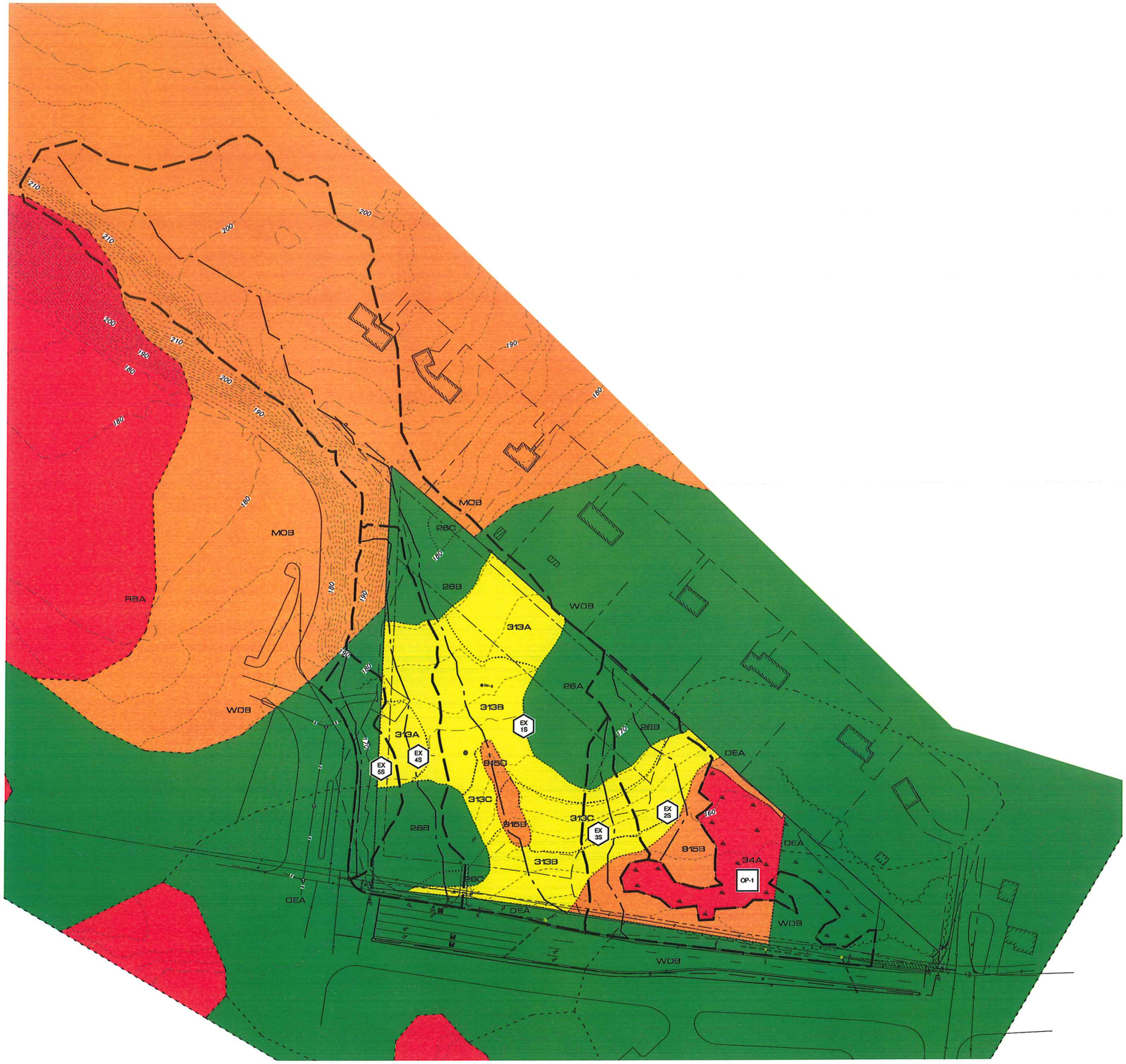
Attachment "G"



LEGEND: EXISTING CONDITIONS

EX 1R	REACH
EX 1S	SUBCATCHMENT
EX 1P	POND
OP-1	OBSERVATION POINT
	SUB-CATCHMENT DELINEATION
	Tc – TIME OF CONCENTRATION PATH
	EXISTING 2' CONTOUR INTERVAL
	EXISTING 10' CONTOUR INTERVAL
	NRCS SOIL DELINEATION
	SITE SPECIFIC SOIL DELINEATION
	EXISTING TREELINE
26C	SOILS LABEL

NRCS SOIL LEGEND:

DeA	DEERFIELD LOAMY FINE SAND	HSG A
MoB	MONTAUK FINE SANDY LOAM	HSG C
RbA	RIDGEBURY FINE SANDY LOAM	HSG D
WdB	WINDSOR LOAMY SAND	HSG A

SOURCE: USDA NRCS WEB SOIL SURVEY

SITE SPECIFIC SOIL LEGEND:

26	WINDSOR LOAMY SAND	HSG A
313	DEERFIELD LOAMY SAND	HSG B
915	DEERFIELD VARIANT FINE SAND	HSG C
315	WAREHAM FINE SAND	HSG D

SOURCE: SITE SPECIFIC SOIL MAPPING REPORT

HYDROLOGIC SOIL GROUP COLOR CODE

A B C D

WATER

N

GRAPHIC SCALE

80 40 0 80 160 240

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SOIL & WETLAND MAPPING | SEPTIC DESIGN
31 OLD NASHUA ROAD, AMHERST, NH 03031 603-673-1441
MERIDIANLANDSERVICES.COM FAX 603-673-1358

REV.	DATE	DESCRIPTION	DR	CK
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NGO	SRF
B	---	---	---	---
C	---	---	---	---
D	---	---	---	---
E	---	---	---	---
F	---	---	---	---
G	---	---	---	---
H	---	---	---	---
I	---	---	---	---

T-BONES AT LOWELL ROAD

EXISTING HYDROLOGIC SOIL GROUP PLAN

JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE

SCALE: 1" = 80'

HSG-EX
SHEET

FILE: 12542DRN00A.dwg
PROJECT 12542.00
SHEET NO. 1 OF 2

H:\MLS\12542\0_Drawings\ENG\12542DRN00A.dwg

Attachment "G"

Attachment "G"

LEGEND: DEVELOPED CONDITIONS

DV 1R	REACH
DV 1S	SUBCATCHMENT
DV 1P	POND
OP-1	OBSERVATION POINT
	SUB-CATCHMENT DELINEATION
	Tc – TIME OF CONCENTRATION PATH
	EXISTING 2' CONTOUR INTERVAL
	EXISTING 10' CONTOUR INTERVAL
	PROPOSED 2'/10' CONTOUR INTERVAL
	NRCS SOIL DELINEATION
	SITE SPECIFIC SOIL DELINEATION
	EXISTING TREELINE
	PROPOSED TREELINE
28C	SOILS LABEL

NRCS SOIL LEGEND:

DeA	DEERFIELD LOAMY FINE SAND	HSG A
MoB	MONTAUK FINE SANDY LOAM	HSG C
RbA	RIDGEBURY FINE SANDY LOAM	HSG D
WdB	WINDSOR LOAMY SAND	HSG A

SOURCE: USDA NRCS WEB SOIL SURVEY

SITE SPECIFIC SOIL LEGEND:

26	WINDSOR LOAMY SAND	HSG A
313	DEERFIELD LOAMY SAND	HSG B
915	DEERFIELD VARIANT FINE SAND	HSG C
315	WAREHAM FINE SAND	HSG D

SOURCE: SITE SPECIFIC SOIL MAPPING REPORT

HYDROLOGIC SOIL GROUP COLOR CODE

A B C D

WATER

GRAPHIC SCALE

80 40 0 80 160 240

MERIDIAN LAND SERVICES, INC.
ENGINEERING, SURVEYING, PERMITTING
SOIL & WETLAND SCIENTISTS, LEED DESIGN
31 OLD NASHUA ROAD, AMHERST, NH 03031 TEL. 603-673-1441
MERIDIANLANDSERVICES.COM FAX 603-673-1584

REV.	DATE	DESCRIPTION	DR	CK
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NCS	SRF
B	---	---	---	---
C	---	---	---	---
D	---	---	---	---
E	---	---	---	---
F	---	---	---	---
G	---	---	---	---
H	---	---	---	---
I	---	---	---	---

T-BONES AT LOWELL ROAD

DEVELOPED HYDROLOGIC SOIL GROUP PLAN

JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE

SCALE: 1" = 60'

HSG-DV
SHEET

FILE: 12542DRN00A.dwg
PROJECT 12542.00
SHEET NO. 2 OF 2

H:\MLS\12542\0_Drawings\ENG\12542DRN00A.dwg

Attachment "G"

Attachment "H"

T-Bones at Lowell Road

256 Lowell Road
Tax Map 228 Lot 7
Hudson, New Hampshire
Storm Water Management System
Inspection and Maintenance Manual
March 4, 2025

Introduction:

The operation and maintenance of a storm water management system and its individual components is as critical to system performance as the design. Without proper maintenance, best management practices (BMPs) are likely to become functionally impaired or to fail, providing reduced or no treatment of storm water. Proper operation and maintenance will ensure that the storm water system and individual BMPs will remain effective at removing pollutants as designed and meeting New Hampshire's water quality objectives. Proper maintenance will:

- Maintain the volume of storm water treated over the long term;
- Sustain the pollutant removal efficiency of the BMP;
- Reduce the risk of re-suspending sediment and other pollutants captured by the BMP;
- Prevent structural deterioration of the BMP and minimize the need for expensive repairs;
- Decrease the potential for failure of the BMP.

The NH Department of Environmental Services Alteration of Terrain (AoT) regulations (Env-Wq 1500) require the long-term maintenance of storm water practices and stipulate the establishment of a mechanism to provide for ongoing inspections and maintenance.

Facilities Information:

Owner of Record: 256 Lowell Road, LLC
9 Old Derry Road
Hudson, New Hampshire 03051

Applicant: Lowell Road, LLC
124 Bedford Center SB
Bedford, New Hampshire 03110

Report Information:

- Every effort has been made to provide a comprehensive operation and maintenance plan for this project. All measures and guidelines presented within this plan are the minimum efforts required to achieve the intent of the erosion and sedimentation control program and minimize off site impacts.
- Should any omissions or inconsistencies arise in the plan, the owner, and governing officials are expected to use reasonable and experienced judgment in the field relative to evaluation and implementing measures based on the intent of this plan.
- This manual does not preclude any requirements for additional controls identified in the approved plan set or support documents or any other appropriate techniques to limit erosion and sedimentation of the site.
- Any measures deemed necessary by the town planning board, conservation commission, zoning board, or the town's representative shall become part of this inspection and maintenance plan.
- **T-Bones at Lowell Road** will be responsible for implementing the required reporting, inspection, and maintenance activities identified in this Inspection and Maintenance (I&M) manual.
- **T-Bones at Lowell Road** shall maintain all record keeping required by the I&M manual. Any transfer of responsibility for I&M activities or transfer in ownership shall be documented to the DES in writing.
- Inspection and maintenance reports shall be completed after each inspection. Copies of the report forms to be completed by the inspector are attached at the end of this manual, including:
    - Inspection checklist to be used during each inspection;
    - Inspection and maintenance logs to document each inspection and maintenance activity;
    - Photographs are to be provided of each BMP;
- A plan showing the locations of all the storm water practices described in the I&M manual is attached at the end of this manual.
- **Inspection and maintenance records must be provided to DES upon request.**

Storm water management systems present at T-Bones at Lowell Road

Description:

The proposed stormwater management includes but may not be limited to deep sump catch basins, conveyance swales, surface infiltration basins and rip rap scour holes.

Maintenance:

1. Regular inspection and routine maintenance are necessary to ensure that the storm water management system continues to control and treat runoff.
2. Structural components of the site's drainage system must be inspected and maintained on an annual basis (minimum).
3. The outlets of the storm water management system must be inspected bi-annually.
4. All outfalls shall be cleaned of all siltation and debris at the completion of the construction process when the site has been stabilized with loam, seed, and landscaping.
5. Any evidence of erosion, structural damage to the outlet, or other damage must be reported to the appropriate on-site representative and repaired as soon as possible.
6. Any sediment and/or trash should be removed from the outlet structures and pipes cleaned of all silt.
7. Subsurface pipe detention systems must be inspected and maintained on an annual basis (minimum).

Deep Sump Catch Basin

Description:

A deep sump catch basin consists of a manhole-type structure with an inlet grate, an outlet pipe connected to the piped drainage system, and a sump with a depth several times the diameter of the outlet pipe. The sump's purpose is to capture coarse sediments and debris from the runoff intercepted by the structure. The outlet pipe can be fitted with a "hood" consisting of a cast metal or formed plastic fitting, designed to prevent floating materials from exiting the structure.

Maintenance:

1. Catch basins may require frequent maintenance. Depending on location, this may require several cleanings of the sumps each year. At a minimum, it is recommended that catch basins be inspected at least twice annually, once following snow-melt and once following leaf drop and cleaned as indicated by inspection.
2. Sediment should be removed when it approaches half the sump depth.
3. If floating hydrocarbons are observed during an inspection, the material should be removed immediately by skimming, absorbent materials, or other method and disposed in conformance with applicable state and federal regulations.
4. Cleaning may require Vacuum-truck instead of "clam-shell" to avoid damage to hood.
5. Damaged hoods should be replaced when noted by inspection.

Inspection Checklist and Maintenance Report
Deep Sump Catch Basin

Deep Sump Catch Basin: _____

Date: _____

Performed By: _____ Signature _____

Inspection Checklist		
Presence of trash or debris at inlet grates	❑ Yes	❒ No
Presence of sediment around inlet grate	❑ Yes	❒ No
Presence of trash or debris at outlet hood	❑ Yes	❒ No
Presence of sediment around outlet hood	❑ Yes	❒ No
Accumulate sediment less than half of sump depth	❑ Yes	❒ No
Drains within 72 hours of rainfall	❑ Yes	❒ No

Maintenance Performed

Conveyance Swales

Description:

Conveyance swales are stabilized channels designed to convey runoff at non-erosive velocities. They may be stabilized using vegetation, riprap, or a combination, or with an alternative lining designed to accommodate design flows while protecting the integrity of the sides and bottom of the channel. Conveyance channels may provide incidental water quality benefits but are not specifically designed to provide treatment. Conveyance swales are not considered a Treatment or Pretreatment Practice under the AoT regulations, unless they are also designed to meet the requirements of an acceptable Treatment/Pretreatment Practice as described elsewhere in this Chapter.

Maintenance:

1. Grassed channels should be inspected periodically (at least annually) for sediment accumulation, erosion, and condition of surface lining (vegetation or riprap).
2. Repairs, including stone or vegetation replacement, should be made based on this inspection.
3. Remove sediment and debris annually, or more frequently as warranted by inspection.
4. Mow vegetated channels based on frequency specified by design. Mowing at least once per year is required to control establishment of woody vegetation. It is recommended to cut grass no shorter than 4 inches.

Inspection Checklist and Maintenance Report
Conveyance Swales

Practice Location: _____

Date: _____

Performed By: _____ Signature _____

Inspection Checklist		
Presence of erosion or vegetation loss	❑ Yes	❒ No
Presence of accumulated sediment	❑ Yes	❒ No
Presence of trash or debris	❑ Yes	❒ No

Maintenance Performed

Surface Infiltration Basin

Description:

Infiltration basins are impoundments designed to temporarily store runoff, allowing all or a portion of the water to infiltrate into the ground. An infiltration basin is designed to completely drain between storm events. An infiltration basin is specifically designed to retain and infiltrate the entire Water Quality Volume. Some infiltration basins may infiltrate additional volumes during larger storm events, but many will be designed to release stormwater exceeding the water quality volume from the larger storms. In a properly sited and designed infiltration basin, water quality treatment is provided by runoff pollutants binding to soil particles beneath the basin as water percolates into the subsurface. Biological and chemical processes occurring in the soil also contribute to the breakdown of pollutants. Infiltrated water is used by plants to support growth or it is recharged to the underlying groundwater.

As with all impoundment BMPs, surface infiltration basins should be designed with an outlet structure to pass peak flows during a range of storm events, as well as with an emergency spillway to pass peak flows around the embankment during extreme storm events that exceed the combined infiltration capacity and outlet structure capacity of the facility.

Maintenance:

1. Removal of debris from inlet and outlet structures
2. Removal of accumulated sediment
3. Inspection and repair of outlet structures and appurtenances
4. Inspection of infiltration components at least twice annually, and following any rainfall event exceeding 2.5 inches in a 24 hour period, with maintenance or rehabilitation conducted as warranted by such inspection.
5. Inspection of pretreatment measures at least twice annually, and removal of accumulated sediment as warranted by inspection, but no less than once annually.
6. Periodic mowing of embankments
7. Removal of woody vegetation from embankments
8. Inspection and repair of embankments and spillways
9. If an infiltration system does not drain within 72-hours following a rainfall event, then a qualified professional should assess the condition of the facility to determine measures required to restore infiltration function, including but not limited to removal of accumulated sediments or reconstruction of the infiltration trench.

Inspection Checklist and Maintenance Report
Surface Infiltration Basin

Practice Location: _____

Date: _____

Performed By: _____ Signature _____

Inspection Checklist		
Presence of woody vegetation on embankments	❑ Yes	❒ No
Presence of trash or debris	❑ Yes	❒ No
Presence of accumulated sediment	❑ Yes	❒ No
Structural damage at inlet or outlet	❑ Yes	❒ No
Drains with 72 hours of rainfall	❑ Yes	❒ No

Maintenance Performed

Outlet Protection - Riprap Scour Hole

Description:

Erosion control stone at storm water discharge conduits reduce the velocity of concentrated storm water flows to prevent scour and minimize the potential for downstream erosion.

Maintenance:

1. Inspect the outlet protection annually for damage and deterioration. Repair damages immediately.
2. Remove debris from apron area.

Inspection Checklist and Maintenance Report
Riprap Scour Hole

Apron Location: _____

Date: _____

Performed By: _____ Signature _____

Inspection Checklist		
Stone evenly distributed	❑ Yes	❒ No
Presence of accumulated sediment	❑ Yes	❒ No
Presence of trash or debris	❑ Yes	❒ No

Maintenance Performed

Invasive Species Information:

Description:

With respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem.

Maintenance:

1. Remove invasive plant species from the storm water management practices by pulling, either by hand for small plants or by hand shovel for shrubs and bushes.
2. Refer to the following fact sheet prepared by the University of New Hampshire Cooperative Extension entitled Methods for Disposing Non-Native Invasive Plants for recommended methods to dispose of invasive plant species.

UNIVERSITY of NEW HAMPSHIRE COOPERATIVE EXTENSION

Methods for Disposing Non-Native Invasive Plants

Prepared by the Invasives Species Outreach Group, volunteers interested in helping people control invasive plants. Assistance provided by the Piscataquog Land Conservancy and the NH Invasives Species Committee. Edited by Karen Bennett, Extension Forestry Professor and Specialist.

Tatarian honeysuckle
Lonicera tatarica
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions.* Vol. 3: 282.

Non-native invasive plants crowd out natives in natural and managed landscapes. They cost taxpayers billions of dollars each year from lost agricultural and forest crops, decreased biodiversity, impacts to natural resources and the environment, and the cost to control and eradicate them.

Invasive plants grow well even in less than desirable conditions such as sandy soils along roadsides, shaded wooded areas, and in wetlands. In ideal conditions, they grow and spread even faster. There are many ways to remove these non-native invasives, but once removed, care is needed to dispose the removed plant material so the plants don't grow where disposed.

Knowing how a particular plant reproduces helps determine the appropriate disposal method. Most are spread by seed and are dispersed by wind, water, animals, or people. Some reproduce by vegetative means from pieces of stems or roots forming new plants. Others spread through both seed and vegetative means.

Because movement and disposal of viable plant parts is restricted (see NH Regulations), viable invasive parts can't be brought to most transfer stations in the state. Check with your transfer station to see if there is an approved, designated area for invasives disposal. This fact sheet gives recommendations for rendering plant parts non-viable.

Control of invasives is beyond the scope of this fact sheet. For information about control visit www.nhinvasives.org or contact your UNH Cooperative Extension office.

New Hampshire Regulations

Prohibited invasive species shall only be disposed of in a manner that renders them nonliving and nonviable. (Agr. 3802.04)

No person shall collect, transport, import, export, move, buy, sell, distribute, propagate or transplant any living and viable portion of any plant species, which includes all of their cultivars and varieties, listed in Table 3800.1 of the New Hampshire prohibited invasive species list. (Agr 3802.01)

How and When to Dispose of Invasives?

To prevent seed from spreading remove invasive plants before seeds are set (produced). Some plants continue to grow, flower and set seed even after pulling or cutting. Seeds can remain viable in the ground for many years. If the plant has flowers or seeds, place the flowers and seeds in a heavy plastic bag "head first" at the weeding site and transport to the disposal site. The following are general descriptions of disposal methods. See the chart for recommendations by species.

Burning: Large woody branches and trunks can be used as firewood or burned in piles. For outside burning, a written fire permit from the local forest fire warden is required unless the ground is covered in snow. Brush larger than 5 inches in diameter can't be burned. Invasive plants with easily airborne seeds like black swallow-wort with mature seed pods (indicated by their brown color) shouldn't be burned as the seeds may disperse by the hot air created by the fire.

Japanese knotweed
Polygonum cuspidatum
USDA-NRCS PLANTS Database / Britton, N.L., and A. Brown. 1913. *An illustrated flora of the northern United States, Canada and the British Possessions*. Vol. 1: 676.

Bagging (solarization): Use this technique with softer-tissue plants. Use heavy black or clear plastic bags (contractor grade), making sure that no parts of the plants poke through. Allow the bags to sit in the sun for several weeks and on dark pavement for the best effect.

Tarping and Drying: Pile material on a sheet of plastic and cover with a tarp, fastening the tarp to the ground and monitoring it for escapes. Let it dry for several weeks.

Chipping: Use this method for woody plants that don't reproduce vegetatively.

Burying: This is risky, but can be done with watchful diligence. Lay thick plastic in a deep pit before placing the cut up plant material in the hole. Place the material away from the edge of the plastic before covering it with more heavy plastic. Eliminate as much air as possible and toss in soil to weight down the material in the pit. Note that the top of the buried material should be at least three feet underground. Japanese knotweed should be at least 5 feet underground!

Drowning: Fill a large barrel with water and place soft-tissue plants in the water. Check after a few weeks and look for rotted plant material (roots, stems, leaves, flowers). Well-rotted plant material may be composted. A word of caution- seeds may still be viable after using this method. Do this before seeds are set. This method isn't used often. Be prepared for an awful stink!

Composting: Invasive plants can take root in compost. Don't compost any invasives unless you know there is no viable (living) plant material left. Use one of the above techniques (bagging, tarping, drying, chipping, or drowning) to render the plants non-viable before composting. Closely examine the plant before composting and avoid composting seeds.

Finally, *be diligent* looking for seedlings for *years* in areas where removal and disposal took place.

Suggested Disposal Methods for Non-Native Invasive Plants

This table provides information concerning the disposal of removed invasive plant material. If the infestation is treated with herbicide and left in place, these guidelines don't apply. Don't bring invasives to a local transfer station, unless there is a designated area for their disposal, or they have been rendered non-viable. This listing includes wetland and upland plants from the New Hampshire Prohibited Invasive Species List. The disposal of aquatic plants isn't addressed.

Plant Name	Method of Reproducing	Time of Year To Dispose	Methods of Disposal
Woody Plants*	**Fruit/Seeds**		
Norway Maple *(Acer platanoides)* European Barberry *(Berberis vulgaris)* Japanese Barberry *(Berberis thunbergii)* Autumn Olive *(Elaeagnus umbellata)* Burning Bush *(Euonymus alatus)*		Prior to fruit/seed ripening	Seedlings and small plants. ▪ Pull or cut and leave on site with roots up. No special care needed. Larger plants ▪ Use as firewood. ▪ Make a brush pile. ▪ Chip. ▪ Burn.
Morrow's Honeysuckle *(Lonicera morrowii)* Tatarian Honeysuckle *(Lonicera tatarica)* Showy Bush Honeysuckle *(Lonicera x bella)* Common Buckthorn *(Rhamnus cathartica)* Glossy Buckthorn *(Frangula alnus)*		After fruit/seed is ripe	Don't remove from site. ▪ Burn. ▪ Make a covered brush pile. ▪ Chip once all fruit has dropped from branches. ▪ Leave resulting chips on site and monitor.
Woody Plants*	**Fruits/Seeds/Plant Fragments**		
Oriental Bittersweet *(Celastrus orbiculatus)* Multiflora Rose *(Rosa multiflora)*		Prior to fruit/seed ripening	Seedlings and small plants. ▪ Pull or cut and leave on site with roots up. No special care needed. Larger plants ▪ Make a brush pile. ▪ Burn.
		After fruit/seed is ripe	Don't remove from site. ▪ Burn. ▪ Make a covered brush pile. ▪ Chip – only after material has fully dried (1 year) and all fruit has dropped from branches. Leave resulting chips on site and monitor.

Plant Name	Method of Reproducing	Time of Year To Dispose	Methods of Disposal
Non-woody plants	**Fruits/Seeds**		
Garlic Mustard *(Alliaria petiolata)* Spotted Knapweed *(Centaurea maculosa)* ▪ Sap of related knapweed can cause skin irritation and tumors. Wear gloves when handling. Black Swallow-wort *(Cynanchum nigrum)* ▪ May cause skin rash. Wear gloves and long sleeves when handling. Pale swallow-wort *(Cynanchum rossicum)* Giant Hogweed *(Heracleum mantegazzianum)* ▪ Can cause major skin rash. Wear gloves and long sleeves when handling. Dame's Rocket *(Hesperis matronalis)* Perennial Pepperweed *(Lepidium latifolium)* Purple loosestrife *(Lythrum salicaria)* Japanese Stilt Grass *(Microstegium vimineum)* Mile-a-Minute Weed *(Polygonum perfoliatum)*		Prior to flowering	Depends on scale of infestation Small infestation: ▪ Remove and scatter Large infestation: ▪ Remove and pile. (You can pile on or cover with plastic sheeting) ▪ Monitor. Remove any re-sprouting material
		During and following flowering	Do nothing until the following year; Or Remove flowering heads and bag and let rot. Small infestation: ▪ Remove and scatter remaining material Large infestation: ▪ Remove and pile remaining material. (You can pile on or cover with plastic sheeting) ▪ Monitor. Remove any re-sprouting material
Non-woody plants *	**Fruits/seeds/plant parts**		
Common Reed (*Phragmites australis*) Japanese Knotweed *(Polygonum cuspidatum)* Bohemian Knotweed *(Polygonum x bohemicum)*	Primary means of spread in these species is by plant parts. Although all care should be given to preventing the dispersal of seed during control activities, the presence of seed doesn't materially influence disposal activities.		Small infestation: ▪ Bag all plant material and let rot. ▪ Never pile and use resulting material as compost. ▪ Burn Large infestation: ▪ Remove material to unsuitable habitat (dry, hot sunny or dry shaded location) and scatter or pile. • Monitor and remove any sprouting material. • Pile, let dry, and burn.

October, 2009

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TOWN OF HUDSON

Conservation Commission

Carl Murphy, Chairman Dave Morin, Selectmen Liaison

12 School Street • Hudson, New Hampshire 03051 • Tel: 603-886-6008 • Fax: 603-816-1291

Motion to Recommend Conditional Use Application Approval

Date: March 10, 2025

Application: T-Bones Restaurant
256 Lowell Road
Map 228, Lot 7

Description of work to be performed: The proposed project entails constructing a 9,500 +/- square-foot restaurant and other associated site improvements. As presented the applicant is proposing a permanent wetland buffer impact of approximately 15,500 square feet. These impacts are mostly related for the construction the stormwater management area and the right-in/right-out driveway. Both of these site features are unavoidable. To minimize the overall impact to the buffer, the back side of the slopes of the drainage ponds are proposed to be planted with a conservation seed mix and un maintained. This will reestablish about 5,250 sf +/- of buffer area, therefore the permanent buffer impact will be 10,250 sf +/-.

In brief, on February 12, 2025 members of the Hudson Conservation Commission along with applicant representatives visited the property listed above to review the proposed areas where wetland buffer areas would be impacted. It was noted during the site walk that the proposed construction area is currently undisturbed area and the topography of the land varies in elevation. As this project will create a significant amount of impervious surfaces and after site review it is the opinion of the Conservation Commission that careful consideration should be given to minimize and or restoring the wetland buffer areas to aid in stormwater filtration, infiltration and to enhance the ground recharge rates to minimize flooding which would be a potential concern during extended rain events.

Members Present during the site walk: Carl Murphy, Ken Dickinson, Christopher Cameron, and Linda Krisciunas. John Walter visited the site separately

Applicant Representatives present: Sam Foisie--with Meridian Land Services, Inc

Conservation Members Stepping Down: None

Alternates Seated:

Commission member Ken Dickinson moved to <u>Recommend</u> approval of the Conditional Use Application filed on behalf 256 Lowell Road, LLC (T- Bones Restaurant) for the purpose of constructing stormwater infiltration basins to meet storm water treatment

requirements and access to the site through right in and right out, which will permanently impact 20,648 **square feet of wetland buffer at the property located at 256 Lowell Road , Map 228 , Lot 7with the following stipulations as noted below.**

1. During Construction and restoration erosion control barriers shall be installed and maintained to the satisfaction of the Town Engineer.

2. Construction and restoration shall comply with : BEST MANAGEMENT PRACTICES TO CONTROL NON-POINT SOURCE POLLUTION: A GUIDE FOR CITIZENS AND TOWN OFFICIALS (NH Department of Environmental Services – Current Issue)

3. It is recommended that the applicant create and implement a wetland buffer restoration plan for the disturbed buffer as part of site plan approval. The details and implementation of said Restoration Plan to be added to the General Notes and Legend found on sheet 2 of 23 of the plan set.

4. It is recommended to have the applicant install approved "Do not cut/Do Not Disturb town conservation markers along the conservation districts boundaries. Furthermore, Post and Rail fence sections could be erected and maintained to aid in delineating the wetland buffer boundary as is typical on other excepted residential developments. If this recommendation is accepted by the Planning Board details of the Do Not Cut/ Do Not Disturb Markers and Post and Rail Fencing shall be added to the General Notes and Legend found on sheet 2 of 23 of the plan set.

5. It is recommended that the applicant shall not store any snow on the detention basin during winter operations, to minimize salt pollution.

Second By: Commission member John Walter

Vote: Favorable: 5 Unfavorable: 0 Abstaining: 0

Dissention Reason(s): (see below) **n/a**

Carl Murphy

Carl Murphy, Chairman

Attachment "J"

228-15

228-14

228-13

228-12

228-11

228-10

228-9

228-8

228-6

228-7
6.410 AC
279,248 SF

15'

BUILDING SETBACK LINE (TYP.)

RESIDENTIAL - TWO (R2)
BUSINESS DISTRICT (B)

100' RES BUFFER

75'

50'

LOADING ZONE

LANDSCAPE BUFFER

EXISTING UTILITY EASEMENT

Pumper Fire Truck
NCHRP REPORT 659 2010 (US)

GRAPHIC SCALE
40' 20' 0 40' 80' 120'

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEAR FROM DATE OF APPROVAL.

APPROVED BY THE HUDSON, NH PLANNING BOARD
DATE OF MEETING:_____
_____SIGNATURE DATE:_____
_____SIGNATURE DATE:_____

SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF THE PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

MERIDIAN
LAND SERVICES, INC.
ENGINEERING | SURVEYING | PERMITTING
SOIL & WETLAND MAPPING | SEPTIC DESIGN
31 OLD NASHUA ROAD, AMHERST, NH 03031 TEL 603-673-1441
MERIDIANLANDSERVICES.COM | FAX 603-673-1454

REV.	DATE	DESCRIPTION	DR	CK
A	3/14/25	STAFF & THIRD PARTY REVIEW SUBMITTAL	NCG	SRF
B	3/12/25	ALTERATION OF TERRAIN SUBMITTAL	NCG	SRF

T-BONES AT LOWELL ROAD
FIRE TRUCK TURNING MOVEMENT EXHIBIT
JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE
SCALE: 1" = 40'

TM-1
SHEET

12542100B – exhibit.dwg
PROJECT 12542.00
SHEET NO. 1 OF 1

Plotted: 3/12/2025 11:57 AM By: NCG
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228-15

228-14

228-13

228-12

228-11

228-10

228-9

228-8

228-6

228-7
6.410 AC
279,248 SF

15'

BUILDING SETBACK LINE (TYP.)

RESIDENTIAL - TWO (R2)
BUSINESS DISTRICT (B)

100' RES BUFFER

15'

75'

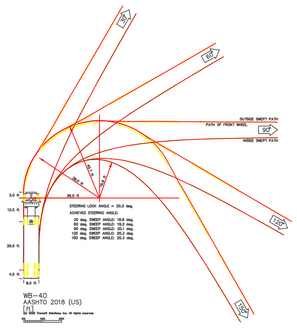
50'

LANDSCAPE BUFFER

EXISTING UTILITY EASEMENT

LOADING ZONE

GRAPHIC SCALE
40' 20' 0 40' 80' 120'



PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEAR FROM DATE OF APPROVAL.	**APPROVED BY THE HUDSON, NH PLANNING BOARD** **DATE OF MEETING:_____** **_____ SIGNATURE DATE:_____** **_____ SIGNATURE DATE:_____** SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF THE PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

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MERIDIANLANDSERVICES.COM | FAX 603-673-1454

REV.	DATE	DESCRIPTION	DR	CK
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NCG	SRF
B	3/12/25	STAFF & THIRD PARTY REVIEW	NCG	SRF
C	--/--/--	---	---	---
D	--/--/--	---	---	---
E	--/--/--	---	---	---
F	--/--/--	---	---	---
G	--/--/--	---	---	---
H	--/--/--	---	---	---
I	--/--/--	---	---	---

T-BONES AT LOWELL ROAD
DELIVERY TRUCK TURNING MOVEMENT EXHIBIT
JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE
SCALE: 1" = 40'

TM-2
SHEET

12542108 – exhibit.dwg
PROJECT 12542.00
SHEET NO. 1 OF 1

Plotted: 3/12/2025 12:21 PM By: NCG
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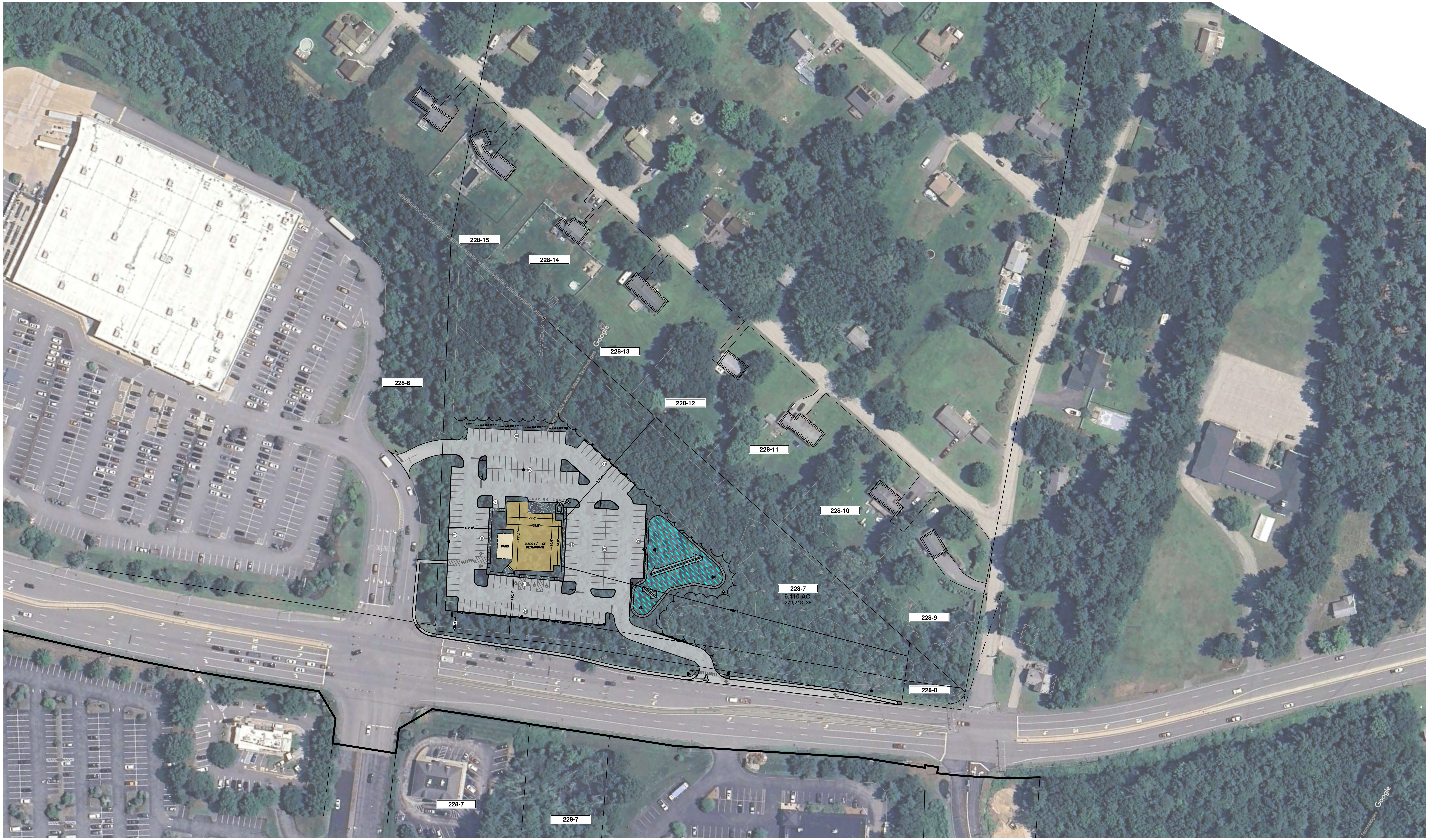
Attachment "K"



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MERIDIANLANDSERVICES.COM FAX 603-673-1584

REV.	DATE	DESCRIPTION	DR	CK
I	--	--	--	--
H	--	--	--	--
G	--	--	--	--
F	--	--	--	--
E	--	--	--	--
D	--	--	--	--
C	--	--	--	--
B	3/12/25	STAFF & THIRD PARTY REVIEW	NCG	SRF
A	3/4/25	ALTERATION OF TERRAIN SUBMITTAL	NCG	SRF

T-BONES AT LOWELL ROAD

DRIVEWAY LOCATION EXHIBIT

JANUARY 21, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE

SCALE: 1" = 80'

GRAPHIC SCALE
80 40 0 80 160 240

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEAR FROM DATE OF APPROVAL.	**APPROVED BY THE HUDSON, NH PLANNING BOARD** **DATE OF MEETING:**__________ __________ **SIGNATURE DATE:**______ __________ **SIGNATURE DATE:**______ SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF THE PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.

EX-1
SHEET

FILE: 12542I00B – exhibit.dwg
PROJECT 12542.00
SHEET NO. 1 OF 1

Plotted: 3/12/2025 11:57 AM By: NCG
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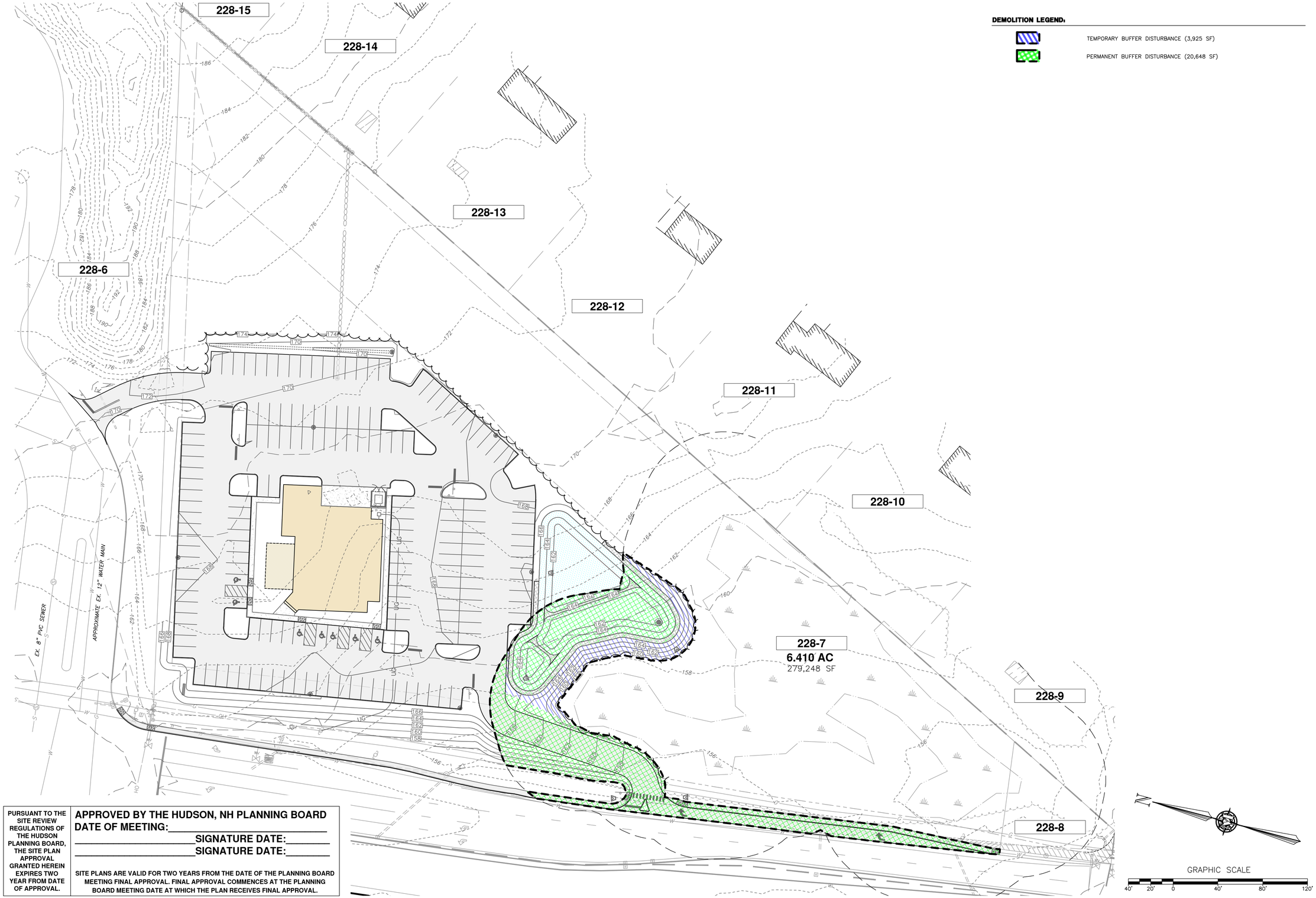

DEMOLITION LEGEND:

- TEMPORARY BUFFER DISTURBANCE (3,925 SF)
- PERMANENT BUFFER DISTURBANCE (20,648 SF)

PURSUANT TO THE SITE REVIEW REGULATIONS OF THE HUDSON PLANNING BOARD, THE SITE PLAN APPROVAL GRANTED HEREIN EXPIRES TWO YEAR FROM DATE OF APPROVAL.	**APPROVED BY THE HUDSON, NH PLANNING BOARD** **DATE OF MEETING:_____** **_____ SIGNATURE DATE:_____** **_____ SIGNATURE DATE:_____** **SITE PLANS ARE VALID FOR TWO YEARS FROM THE DATE OF THE PLANNING BOARD MEETING FINAL APPROVAL. FINAL APPROVAL COMMENCES AT THE PLANNING BOARD MEETING DATE AT WHICH THE PLAN RECEIVES FINAL APPROVAL.**

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REV.	DATE	DESCRIPTION	DR	CK
A	---	---	---	---
B	---	---	---	---
C	---	---	---	---
D	---	---	---	---
E	---	---	---	---
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G	---	---	---	---
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I	---	---	---	---

T-BONES AT LOWELL ROAD
WETLAND BUFFER DISTURBANCE EXHIBIT
FEBRUARY 26, 2025

LOWELL ROAD, LLC
256 LOWELL ROAD
MAP 228 LOT 7
HUDSON, NEW HAMPSHIRE
SCALE: 1" = 40'

EX-1
SHEET

FILE: 12542EX00A.dwg
PROJECT 12542.00
SHEET NO. 1 OF 1

Plotted: 3/10/2025 4:34 PM By: NCG
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