ALTUS ENGINEERING

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

March 23, 2026

Peter Stith, Planning Manager
City of Portsmouth Municipal Complex
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: Application for Technical Advisory Committee Review
Assessor's Map 236, Lot 74
86 Farm Lane
Altus Project No. 5719

Dear Peter,

On March 3, 2026, Altus Engineering, LLC (Altus) presented an application for a three-lot residential subdivision to the Technical Advisory Committee (TAC). Tac completed a thorough review of the documents and voted to continue the application to the April 7th meeting.

TAC requested modest changes to the overall design which we believe have satisfactorily addressed with this submission. In summary, the following has been modifed.

- A portion of the roadway alignment has shifted approximately 5-feet towards proposed lot 2 to improve the centerline alignment.
- "Formerly" has been removed from the plans when referencing Longmeadow Lane.
- Lot areas have been checked and updated on the subdivision plan.
- Access easement note regarding the extension of Longmeadow Lane has been revised to clarify sunsetting.
- Water line configuration for the hydrant has been revised per DPW comments.
- Hazardous waste note has been added to the plans regarding the existing sanitary sewer pipe.
- The proposed water service sizes have been changed to 1" diameter.
- Signs have been revised as requested.

The application requires two waivers from the Subdivision Regulations and one from the Site Plan Review Regulations.

There are no wetlands on the lot or within 100-feet of the site.

Enclosed please find the following for consideration at the April 7th Technical Advisory Committee meeting:

Application Plan Package including:

- Letters of Authorization
- Viewpoint application (filed on-line only)
- Subdivision Application Checklist
- Site Plan Review Application Checklist
- Green Statement
- Waiver requests
- Zoning Board of Adjustment Notice of Decision
- Drainage Study
- Stormwater Inspection and Maintenance Manual
- Subdivision Plans and Details

As always, Altus looks forward to working with City staff. Please feel free to call or email me directly should you have any questions or need any additional information in advance of the meeting.

Sincerely,

ALTUS ENGINEERING, LLC

Enclosures

eCopy: Jeanette McMaster
Brett Berger

wde/5719.00 cvr ltr.docx

Letter of Authorization

Flipping Bergers LLC and Brett Berger, hereby authorize Altus Engineering, LLC to represent us as the Applicant in all matters concerning engineering and related permitting for Assessors Map 236, Lot 74 located at 86 Farm Lane in Portsmouth, New Hampshire. This authorization shall include representation at public hearings and other project-related meetings in addition to any signatures required for Federal, State and Municipal permit applications.

Signature	Brett Berger Print Name	2/10/26 Date
Witness	Print Name	Date

Letter_of_Authorization_Jeanette_MacDonald_v2

Final Audit Report 2026-02-11

Created:	2026-02-11
By:	Brett Berger (brett@flippinbergers.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAXK_MtchkaepdF1uGj67REO-kdRt0GR4x

"Letter_of_Authorization_Jeanette_MacDonald_v2" History

Document created by Brett Berger (brett@flippinbergers.com)
2026-02-11 - 5:25:30 PM GMT

Document emailed to Jeannette McMaster (jemac86@gmail.com) for signature
2026-02-11 - 5:25:33 PM GMT

Email viewed by Jeannette McMaster (jemac86@gmail.com)
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Signer Jeannette McMaster (jemac86@gmail.com) entered name at signing as Jeannette McMaster(MacDonald)
2026-02-11 - 5:59:41 PM GMT

Document e-signed by Jeannette McMaster(MacDonald) (jemac86@gmail.com)
Signature Date: 2026-02-11 - 5:59:43 PM GMT - Time Source: server

Agreement completed.
2026-02-11 - 5:59:43 PM GMT

Letter of Authorization: 86 Farm Lane

I, Jeannette McMaster (MacDonald), as the owner of the property located at 86 Farm Lane, Portsmouth, NH (assessors Map 236, Lot 74), hereby grant limited authorization to Brett Berger/Flippin Bergers LLC, to communicate and appear before the Technical Advisory Committee, Planning Board, and other municipal or regulatory bodies for purposes related to any application, engineering, subdivision review, and project discussion concerning the Property.

Such authorization includes the ability to present plans, respond to questions, and coordinate with Altus Engineering, LLC and other consultants involved in the subdivision process.

Name: Jeannette McMaster (MacDonald)

Signature: Jeannette McMaster(MacDonald)
Jeannette McMaster(MacDonald) (Feb 11, 2026 12:59:43 EST)

Date: 02/11/2026

City of Portsmouth, New Hampshire

Subdivision Application Checklist

This subdivision application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all subdivision review requirements. Please refer to the Subdivision review regulations for full details.

Applicant Responsibilities (Section III.C): Applicable fees are due upon application submittal along with required number of copies of the Preliminary or final plat and supporting documents and studies. Please consult with Planning staff for submittal requirements.

Owner: Jeanette McDonald AKA Jeanette McMaster Date Submitted: 2-13-26

Applicant: Flipping Bergers LLC

Phone Number: 9142994438 E-mail: brett@flippingbergers.com

Site Address 1: 86 Farm Lane Map: 236 Lot: 74

Site Address 2: _____ Map: _____ Lot: 74

Application Requirements			
☑	**Required Items for Submittal**	**Item Location (e.g. Page or Plan Sheet/Note #)**	**Waiver Requested**
✔	Completed Application form. **(III.C.2-3)**	in Submission package, filed on line	N/A
✔	All application documents, plans, supporting documentation and other materials provided in digital Portable Document Format (PDF) on compact disc, DVD or flash drive. **(III.C.4)**	Submission package, filed on line	N/A

Requirements for Preliminary/Final Plat				
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Required for Preliminary / Final Plat**	**Waiver Requested**
✔	Name and address of record owner, any option holders, descriptive name of subdivision, engineer and/or surveyor or name of person who prepared the plat. **(Section IV.1/V.1)**	Cover sheet, title block all sheets	☑ Preliminary Plat ☑ Final Plat	N/A

Requirements for Preliminary/Final Plat				
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Required for Preliminary / Final Plat**	**Waiver Requested**
✔	**Preliminary Plat** Names and addresses of all adjoining property owners. **(Section IV.2)** **Final Plat** Names and addresses of all abutting property owners, locations of buildings within one hundred (100) feet of the parcel, and any new house numbers within the subdivision. **(Section V.2)**	Existing conditions survey and Subdivision plan	☑ Preliminary Plat ☑ Final Plat	N/A
✔	North point, date, and bar scale. **(Section IV.3/V3)**	Required on all Plan Sheets	☑ Preliminary Plat ☑ Final Plat	N/A
✔	Zoning classification and minimum yard dimensions required. **(Section IV.4/V.4)**	Existing conditions survey and Subdivision plan	☑ Preliminary Plat ☑ Final Plat	N/A
✔	**Preliminary Plat** Scale (not to be smaller than one hundred (100) feet = 1 inch) and location map (at a scale of 1" = 1000'). **(Section IV.5)** **Final Plat** Scale (not to be smaller than 1"=100'), Location map (at a scale of 1"=1,000') showing the property being subdivided and its relation to the surrounding area within a radius of 2,000 feet. Said location map shall delineate all streets and other major physical features that my either affect or be affected by the proposed development. **(Section V.5)**	Existing conditions survey and Subdivision plan	☑ Preliminary Plat ☑ Final Plat	N/A
✔	Location and approximate dimensions of all existing and proposed property lines including the entire area proposed to be subdivided, the areas of proposed lots, and any adjacent parcels in the same ownership. **(Section IV.6)**	Existing conditions survey and Subdivision plan	☑ Preliminary Plat ☑ Final Plat	
✔	Dimensions and areas of all lots and any and all property to be dedicated or reserved for schools, parks, playgrounds, or other public purpose. Dimensions shall include radii and length of all arcs and calculated bearing for all straight lines. **(Section V.6/ IV.7)**	Existing conditions survey and Subdivision plan	☑ Preliminary Plat ☑ Final Plat	N/A
✔	Location, names, and present widths of all adjacent streets, with a designation as to whether public or private and approximate location of existing utilities to be used. Curbs and sidewalks shall be shown. **(Section IV.8/V.7)**	Existing conditions survey and Subdivision plan	☑ Preliminary Plat ☑ Final Plat	

Requirements for Preliminary/Final Plat				
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Required for Preliminary / Final Plat**	**Waiver Requested**
✔	Location of significant physical features, including bodies of water, watercourses, wetlands, railroads, important vegetation, stone walls and soils types that my influence the design of the subdivision. **(Section IV.9/V.8)**	Existing conditions survey plan	☑ Preliminary Plat ☑ Final Plat	
✔	**Preliminary Plat** Proposed locations, widths and other dimensions of all new streets and utilities, including water mains, storm and sanitary sewer mains, catch basins and culverts, street lights, fire hydrants, sewerage pump stations, etc. **(Section IV.10)** **Final Plat** Proposed locations and profiles of all proposed streets and utilities, including water mains, storm and sanitary sewer mains, catchbasins and culverts, together with typical cross sections. Profiles shall be drawn to a horizontal scale of 1"=50' and a vertical scale of 1"=5', showing existing centerline grade, existing left and right sideline grades, and proposed centerline grade. **(Section V.9)**	Subdivision plan, Roadway Plan Utilities Plan Grading, Drainage & Erosion Control Plan	☑ Preliminary Plat ☑ Final Plat	
✔	When required by the Board, the plat shall be accompanied by profiles of proposed street grades, including extensions for a reasonable distance beyond the subject land; also grades and sizes of proposed utilities. **(Section IV.10)**	Roadway Plan Grading, Drainage & Erosion Control Plan	☑ Preliminary Plat ☑ Final Plat	
✔	Base flood elevation (BFE) for subdivisions involving greater than five (5) acres or fifty (50) lots. **(Section IV.11)**	NA - Subdivision plan	☑ Preliminary Plat ☑ Final Plat	
✔	For subdivisions of five (5) lots or more, or at the discretion of the Board otherwise, the preliminary plat shall show contours at intervals no greater than two (2) feet. Contours shall be shown in dotted lines for existing natural surface and in solid lines for proposed final grade, together with the final grade elevations shown in figures at all lot corners. If existing grades are not to be changed, then the contours in these areas shall be solid lines. **(Section IV.12/ V.12)**	NA - Existing Conditions Plan Grading, Drainage & Erosion Control Plan	☑ Preliminary Plat ☑ Final Plat	

Requirements for Preliminary/Final Plat				
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Required for Preliminary / Final Plat**	**Waiver Requested**
✔	Dates and permit numbers of all necessary permits from governmental agencies from which approval is required by Federal or State law. **(Section V.10)**	Cover Sheet	☐ Preliminary Plat ☑ Final Plat	
✔	For subdivisions involving greater than five (5) acres or fifty (50) lots, the final plat shall show hazard zones and shall include elevation data for flood hazard zones. **(Section V.11)**	NA	☐ Preliminary Plat ☑ Final Plat	
✔	Location of all permanent monuments. **(Section V.12)**	Subdivision Plan	☐ Preliminary Plat ☑ Final Plat	

General Requirements[1]			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☑	**1. Basic Requirements: (VI.1)** a. Conformity to Official Plan or Map b. Hazards c. Relation to Topography d. Planned Unit Development	Subdivision Plan a. meets with zoning relief b.no in a hazard zone c. Grading plan d. NA	
☐	**2. Lots: (VI.2)** a. Lot Arrangement b. Lot sizes c. Commercial and Industrial Lots	a. conforming to neighborhood subdivision plan b. variance granted	
☐	**3. Streets: (VI.3)** a. Relation to adjoining Street System b. Street Rights-of-Way c. Access d. Parallel Service Roads e. Street Intersection Angles f. Merging Streets g. Street Deflections and Vertical Alignment h. Marginal Access Streets i. Cul-de-Sacs j. Rounding Street Corners k. Street Name Signs l. Street Names m. Block Lengths n. Block Widths o. Grade of Streets p. Grass Strips	a. new road is within an existing ROW b. ROW is existing and meets 50-foot requirement c. no reserve strips proposed d. NA e. existing ROW is nearly perpendicular f. no new ROW proposed g.NA h. NA i. NA - turnaround proposed - waiver requested j. 25' radius - complies k. Roadway plan	
☑	**4. Curbing: (VI.4)**	Complies	
☑	**5. Driveways: (VI.5)**	NA	
☑	**6. Drainage Improvements: (VI.6)**	Grad., Drain. & Erosion Control Plan	
☑	**7. Municipal Water Service: (VI.7)**	Utilities Plan	
☑	**8. Municipal Sewer Service: (VI.8)**	only house services required	
☑	**9. Installation of Utilities: (VI.9)** a. All Districts b. Indicator Tape	Detail sheets	
☑	**10. On-Site Water Supply: (VI.10)**	NA	
☑	**11. On-Site Sewage Disposal Systems: (VI.11)**	NA	
☑	**12. Open Space: (VI.12)** a. Natural Features b. Buffer Strips c. Parks d. Tree Planting	NA	
☑	**13. Flood Hazard Areas: (VI.13)** a. Permits b. Minimization of Flood Damage c. Elevation and Flood-Proofing Records d. Alteration of Watercourses	NA - not in a flood hazard zone	
☑	**14. Erosion and Sedimentation Control (VI.14)**	Grad., Drain. & Erosion Control Plan	

☑	Required Items for Submittal	Item Location (e.g. Page/line or Plan Sheet/Note #)	Waiver Requested
✔ ✔ ✔	**15. Easements (VI.15)** a. Utilities b. Drainage	Subdivision plan	
✔	**16. Monuments: (VI.16)**	Subdivision plan	
✔	**17. Benchmarks: (VI.17)**	Existing conditions plan	
✔	**18. House Numbers (VI.18)**	to be provided	

Design Standards			
	Required Items for Submittal	**Indicate compliance and/or provide explanation as to alternative design**	**Waiver Requested**
✔	**1. Streets have been designed according to the design standards required under Section (VII.1).** a. Clearing b. Excavation c. Rough Grade and Preparation of Sub-Grade d. Base Course e. Street Paving f. Side Slopes g. Approval Specifications h. Curbing i. Sidewalks j. Inspection and Methods	Conforms	
✔	**2. Storm water Sewers and Other Drainage Appurtenances have been designed according to the design standards required under Section (VII.2).** a. Design b. Standards of Construction	Conforms	
✔	**3. Sanitary Sewers have been designed according to the design standards required under Section (VII.3).** a. Design b. Lift Stations c. Materials d. Construction Standards	infrastructure in place. House services proposed	
✔	**4. Water Mains and Fire Hydrants have been designed according to the design standards required under Section (VII.4).** a. Connections to Lots b. Design and Construction c. Materials d. Notification Prior to Construction	Per discussion with DPW Conforms	

Applicant's/Representative's Signature: Eric D. Weinrieb PE **Date:** 2-13-26

[1] See City of Portsmouth, NH Subdivision Rules and Regulations for details.

City of Portsmouth, New Hampshire

Site Plan Application Checklist

This site plan application checklist is a tool designed to assist the applicant in the planning process and for preparing the application for Planning Board review. The checklist is required to be completed and uploaded to the Site Plan application in the City's online permitting system. A pre-application conference with a member of the planning department is strongly encouraged as additional project information may be required depending on the size and scope. The applicant is cautioned that this checklist is only a guide and is not intended to be a complete list of all site plan review requirements. Please refer to the Site Plan review regulations for full details.

Applicant Responsibilities (Section 2.5.2): Applicable fees are due upon application submittal along with required attachments. The application shall be complete as submitted and provide adequate information for evaluation of the proposed site development. Waiver requests must be submitted in writing with appropriate justification.

Name of Applicant: Flipping Berger's LLC Date Submitted: 3-23-26

Application # (in City's online permitting): LU-26-16

Site Address: 86 Farm Lane Map: 236 Lot: 74

Application Requirements			
☑	**Required Items for Submittal**	**Item Location (e.g. Page or Plan Sheet/Note #)**	**Waiver Requested**
☒	Complete application form submitted via the City's web-based permitting program (2.5.2.1**(2.5.2.3A)**	Completed	N/A
☒	All application documents, plans, supporting documentation and other materials uploaded to the application form in viewpoint in digital Portable Document Format (PDF). One hard copy of all plans and materials shall be submitted to the Planning Department by the published deadline. **(2.5.2.8)**	Completed	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	Statement that lists and describes "green" building components and systems. **(2.5.3.1B)**	Submittal materials	
☒	Existing and proposed gross floor area and dimensions of all buildings and statement of uses and floor area for each floor. **(2.5.3.1C)**	Potential building envelopes on site plan	N/A
☒	Tax map and lot number, and current zoning of all parcels under Site Plan Review. **(2.5.3.1D)**	Cover sheet and title block of all sheets	N/A

Site Plan Review Application Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	Owner's name, address, telephone number, and signature. Name, address, and telephone number of applicant if different from owner. **(2.5.3.1E)**	Letter of Authorization in submittal package, cover sheet	N/A
☒	Names and addresses (including Tax Map and Lot number and zoning districts) of all direct abutting property owners (including properties located across abutting streets) and holders of existing conservation, preservation or agricultural preservation restrictions affecting the subject property. **(2.5.3.1F)**	Existing Conditions Survey, sheet V-1	N/A
☒	Names, addresses and telephone numbers of all professionals involved in the site plan design. **(2.5.3.1G)**	Cover Sheet	N/A
☒	List of reference plans. **(2.5.3.1H)**	Existing Conditions Plan, subdivision & Easement Plan	N/A
☒	List of names and contact information of all public or private utilities servicing the site. **(2.5.3.1I)**	Utilities Plan, Sheet C-6	N/A

Site Plan Specifications			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	Full size plans shall not be larger than 22 inches by 34 inches with match lines as required, unless approved by the Planning Director.. **(2.5.4.1A)**	Required on all plan sheets	N/A
☒	Scale: Not less than 1 inch = 60 feet and a graphic bar scale shall be included on all plans. **(2.5.4.1B)**	Required on all plan sheets	N/A
☒	GIS data should be referenced to the coordinate system New Hampshire State Plane, NAD83 (1996), with units in feet. **(2.5.4.1C)**	Note 5 existing conditions plan	N/A
☒	Plans shall be drawn to scale and stamped by a NH licensed civil engineer. **(2.5.4.1D)**	Required on all plan sheets	N/A
☒	Wetlands shall be delineated by a NH certified wetlands scientist and so stamped. **(2.5.4.1E)**	N/A	N/A
☒	Title (name of development project), north point, scale, legend. **(2.5.4.2A)**	All plan sheets	N/A
☒	Date plans first submitted, date and explanation of revisions. **(2.5.4.2B)**	Title block all plan sheets	N/A
☒	Individual plan sheet title that clearly describes the information that is displayed. **(2.5.4.2C)**	Required on all plan sheets	N/A
☒	Source and date of data displayed on the plan. **(2.5.4.2D)**	Existing Conditions and Subdivision plan	N/A

Site Plan Specifications – Required Exhibits and Data			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	**1. Existing Conditions: (2.5.4.3A)** • Surveyed plan of site showing existing natural and built features; • Existing building footprints and gross floor area; • Existing parking areas and number of parking spaces provided; • Zoning district boundaries; • Existing, required, and proposed dimensional zoning requirements including building and open space coverage, yards and/or setbacks, and dwelling units per acre; • Existing impervious and disturbed areas; • Limits and type of existing vegetation; • Wetland delineation, wetland function and value assessment (including vernal pools); • SFHA, 100-year flood elevation line and BFE data, as required.	Sheets V-1 & V-2 Sheet C-1 N/A - ex. house sheet C-1 Sheet C-1, Subdivision notes Sheet C-1, Subdivision notes Sheet C-1, Lot areas & coverage summary NA Sheet V-1, note 7	
☒	**2. Buildings and Structures: (2.5.4.3B)** • Plan view: Use, size, dimensions, footings, overhangs, 1st fl. elevation; • Elevations: Height, massing, placement, materials, lighting, façade treatments; • Total Floor Area; • Number of Usable Floors; • Gross floor area by floor and use.	Conceptual site Plan, Sheet C-2 shows potential home locations. Elevations, height, massing, materials, lighting and arch. details have not been determined. Gross floor area has not been determined.	
☒	**3. Access and Circulation: (2.5.4.3C)** • Location/width of access ways within site; • Location of curbing, right of ways, edge of pavement and sidewalks; • Location, type, size and design of traffic signing (pavement markings); • Names/layout of existing abutting streets; • Driveway curb cuts for abutting prop. and public roads; • If subdivision; Names of all roads, right of way lines and easements noted; • AASHTO truck turning templates, description of minimum vehicle allowed being a WB-50 (unless otherwise approved by TAC).	Conceptual Site Plan, sheet C-2, Roadway Plan, Sheet C-4 Fire truck turning templates on Vehicular Access Plan, sheet 1 of 1	
☒	**4. Parking and Loading: (2.5.4.3D)** • Location of off street parking/loading areas, landscaped areas/buffers; • Parking Calculations (# required and the # provided).	NA - residential subdivision. all lot development will occur on individual house lots	
☒	**5. Water Infrastructure: (2.5.4.3E)** • Size, type and location of water mains, shut-offs, hydrants & Engineering data; • Location of wells and monitoring wells (include protective radii).	Sheet C-6, utilities Plan	
☒	**6. Sewer Infrastructure: (2.5.4.3F)** • Size, type and location of sanitary sewage facilities & Engineering data, including any onsite temporary facilities during construction period.	Sheet C-6, Utilities Plan	

☒	**7. Utilities: (2.5.4.3G)** • The size, type and location of all above & below ground utilities; • Size type and location of generator pads, transformers and other fixtures.	Sheet C-6, Utilities Plan	
☒	**8. Solid Waste Facilities: (2.5.4.3H)**	NA, individual single family homes	
	• The size, type and location of solid waste facilities.		
☒	**9. Storm water Management: (2.5.4.3I)** • The location, elevation and layout of all storm-water drainage. • The location of onsite snow storage areas and/or proposed off-site snow removal provisions. • Location and containment measures for any salt storage facilities • Location of proposed temporary and permanent material storage locations and distance from wetlands, water bodies, and stormwater structures.	Sheet C-5, Grading, Drainage & Erosion Control Plan No salt storage to occur on site temporary stockpile areas shown on Sheet C-3 - Demolition & Site Preparation Plan	
☒	**10. Outdoor Lighting: (2.5.4.3J)** • Type and placement of all lighting (exterior of building, parking lot and any other areas of the site) and photometric plan.	Single Family homes on individual lots. No street lighting proposed. Modest residential lighting will be associated with lot development	
☒	**11.** Indicate where dark sky friendly lighting measures have been implemented. **(10.1)**	NA - no lighting is proposed	
☒	**12. Landscaping: (2.5.4.3K)** • Identify all undisturbed area, existing vegetation and that which is to be retained; • Location of any irrigation system and water source.	Limits of site work activities are depicted on the Demolition & Site Preparation Plan, Sheet C-3. No irrigation is proposed.	
☒	**13. Contours and Elevation: (2.5.4.3L)** • Existing/Proposed contours (2 foot minimum) and finished grade elevations.	Existing contours are shown on Sheets V-1 and V-2. Proposed grading on Sheet C-5 Grading, Drainage & Erosion Control Plan	
☒	**14. Open Space: (2.5.4.3M)** • Type, extent and location of all existing/proposed open space.	NA - no public open space is proposed	
☒	**15. All easements, deed restrictions and non-public rights of ways. (2.5.4.3N)**	sheet C-1, Subdivision & Easement Plan	
☒	**16. Character/Civic District (All following information shall be included): (2.5.4.3P)** • Applicable Building Height (10.5A21.20 & 10.5A43.30); • Applicable Special Requirements (10.5A21.30); • Proposed building form/type (10.5A43); • Proposed community space (10.5A46).	NA	
☒	**17. Special Flood Hazard Areas (2.5.4.3Q)** • The proposed development is consistent with the need to minimize flood damage; • All public utilities and facilities are located and construction to minimize or eliminate flood damage; • Adequate drainage is provided so as to reduce exposure to flood hazards.	Site is not in a flood hazard zone as noted on sheet V-1, note 7.	

Other Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	Traffic Impact Study or Trip Generation Report, as required. **(3.2.1-2)**	2 new lots proposed, trip generation report not warranted	
☒	Indicate where Low Impact Development Design practices have been incorporated. **(7.1)**	Green statement, submittal documents	
☒	Indicate whether the proposed development is located in a wellhead protection or aquifer protection area. Such determination shall be approved by the Director of the Dept. of Public Works. **(7.3.1)**	Development is not within a wellhead protection or aquifer protection zone	
☒	Stormwater Management and Erosion Control Plan. **(7.4)**	Sheet C-5, Design information, Sheet D-1, erosion control notes	
☒	Inspection and Maintenance Plan **(7.6.5)**	Submittal documents	

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	All local approvals, permits, easements and licenses required, including but not limited to: • Waivers; • Driveway permits; • Special exceptions; • Variances granted; • Easements; • Licenses. **(2.5.3.2A)**	Waivers submitted Driveway permits not required Special Exception not required Variances granted 5-27-25, noted on C-1 Easements shown on Sheet C-1 Licenses not required	
☒	Exhibits, data, reports or studies that may have been required as part of the approval process, including but not limited to: • Calculations relating to stormwater runoff; • Information on composition and quantity of water demand and wastewater generated; • Information on air, water or land pollutants to be discharged, including standards, quantity, treatment and/or controls; • Estimates of traffic generation and counts pre- and post-construction; • Estimates of noise generation; • A Stormwater Management and Erosion Control Plan; • Endangered species and archaeological / historical studies; • Wetland and water body (coastal and inland) delineations; • Environmental impact studies. **(2.5.3.2B)**	Stormwater computations provided in submittal documents air, water, and land pollutants - NA Traffic generation - 2 new homes proposed. NA Residential development - noise. NA Stormwater managment and Erosion control plan provided in narrative, C-4 and Erosion control detail sheet Wetlands NA	
☒	A document from each of the required private utility service providers indicating approval of the proposed site plan and indicating an ability to provide all required private utilities to the site. **(2.5.3.2D)**	Discussions with Eversource - pending	

Final Site Plan Approval Required Information			
☑	**Required Items for Submittal**	**Item Location (e.g. Page/line or Plan Sheet/Note #)**	**Waiver Requested**
☒	A list of any required state and federal permit applications required for the project and the status of same. **(2.5.3.2E)**	No State or Federal permits required	
☒	A note shall be provided on the Site Plan stating: "All conditions on this Plan shall remain in effect in perpetuity pursuant to the requirements of the Site Plan Review Regulations." **(2.5.4.2E)**	Note added to both the Subdivision and Site Plan	N/A
☒	For site plans that involve land designated as "Special Flood Hazard Areas" (SFHA) by the National Flood Insurance Program (NFIP) confirmation that all necessary permits have been received from those governmental agencies from which approval is required by Federal or State law, including Section 404 of the Federal Water Pollution Control Act Amendments of 1972, 33 U.S.C. 1334. **(2.5.4.2F)**	NA - not in a flood hazard zone	
☒	Plan sheets submitted for recording shall include the following notes: a. "This Site Plan shall be recorded in the Rockingham County Registry of Deeds." b. "All improvements shown on this Site Plan shall be constructed and maintained in accordance with the Plan by the property owner and all future property owners. No changes shall be made to this Site Plan without the express approval of the Portsmouth Planning Director." **(2.13.3)**	NA - site plan is conceptual in nature. Waiver requested Note B added to the subdivision plan	N/A

Applicant's Signature: Eric D. Weinrieb PE **Date:** 3-18-26

ALTUS ENGINEERING

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

"Green" Statement
3 Lot Residential Subdivision
Assessor's Map 236, Lot 74
86 Farm Lane
Altus Project 5719
March 2026

Pursuant to Section 2.5.3.1(a) of the Site Plan Review Regulations, Altus Engineering, LLC respectfully submits the following list of the project's "green" components for the construction of a new three lot residential subdivision off Longmeadow Lane.

- The project is infill in a suburban area. The additional density in a developed landscape that does impact wetlands or wetland buffer is a green site design approach.
- The proposed roadway serving only two homes will be reduced in width to minimize impervious surfaces, reducing the heat island.
- Rain garden/bioretention basins will mitigate any runoff impacts and will provide treatment and promote groundwater recharge.
- The new homes will be code compliant building with components that will meet or exceed all applicable energy codes.

wde/5719 green statment

ALTUS ENGINEERING

Civil
Site Planning
Environmental
Engineering

133 Court Street
Portsmouth, NH
03801-4413

REVISED
WAIVER REQUESTS

March 23, 2026

Re: Assessor's Map 236, Lot 74
86 Farm Lane
Altus Project No. 5719

On behalf of Flipping Bergers, LLC, Applicant and Jeanette McMaster, Owner, Altus Engineering, LLC respectfully requests the following waivers from the City of Portsmouth Subdivision Rules and Regulations.

Section VI GENERAL REQUIREMENTS

3. Streets
I. Cul-de-Sacs

Requirement:
Cul-de-sacs shall be provided at the closed end with a drive-around roadway having a minimum radius for the outside curbs of at least fifty (50) feet, and a street property line radius of sixty (60) feet. The maximum length of a cul-de-sac shall generally be five hundred (500) feet unless otherwise approved by the Board. The Planning Board may require the dedication of an easement of twenty (20) feet in width from the cul-de sac to the next adjoining street to provide for utilities. No water lines serving the street shall be dead ended, where feasible.

Provided: Hammer head provided in lieu of a cul-de-sac

Requirement: From Exhibit Residential Street Minimum Standards (32-foot paved surface with a 5-foot wide sidewalk

Provided: 22-feet of pavement along roadway.

Both waivers are interconnected. The development will service only two single family homes, generating very little traffic, approximately 19 vehicle trips per day on a weekday. A 22-foot-wide roadway can adequately support the expected traffic. A hammer head turnaround has been provided to allow emergency vehicles to safely turnaround and exit the development. The site is unique as the new roadway is within an existing right-of-way. The roadway has been shifted to avoid disturbance to the abutting property that is utilizing a portion of the City right-of-way. The right-of-way extends to the north into a private development. It is doubtful that the roadway will ever be extended as a continuous road. A fire truck turning template plan is included in the application package that supports the narrower widths proposed. No parking signs along the road are proposed to ensure that vehicles do not block the roadway preventing

emergency vehicle access. Each lot will have ample space for a garage and visitor parking for small gatherings at each home.

Narrower roadways reduce the carbon footprint on the development, reduce stormwater runoff and pollutant loading and reduces the heat island effect on stormwater.

Servicing only 2 single family homes, constructing a sidewalk is necessary to protect pedestrians. Farm Lane and the entire neighborhood does not have a sidewalk system.

At the direction of Public Works, the water line provided to the development will be only 4-inches diameter to avoid stagnation of the potable water and is terminated at the end of the road.

Altus Engineering, LLC also respectfully requests the following waivers from the City of Portsmouth Site Plan review Regulations.

Section 2.13 Recording of Site Plans

Requirement:

1. An approved site plan shall be signed by the Planning Board Chairperson (or designee) and shall be recorded at the Rockingham County Registry of Deeds (RCRD). Site Plans are not valid until recorded at the Registry of Deeds.

Provided: Conceptual Site Plan.

Conceptual Site Plan demonstrates how the two new house lots will be constructed. The intent of subdivision approval is to create two new building lots. The people who purchase the lots and build the homes are not yet identified. The subdivision plans depict the buildable area and identify the maximum lot and building coverage. The concept plan shows a possible development scenario. It does not and should not commit the developer or the further homeowner to a specific house configuration or size. All relevant requirements are included on the recording subdivision and easement plan.

Respectfully submitted by,

ALTUS ENGINEERING, LLC

wde/5719 waiver.docx

CITY OF PORTSMOUTH
Planning & Sustainability Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801
(603) 610-7216

ZONING BOARD OF ADJUSTMENT

May 29, 2025

Jeannette MacDonald
86 Farm Lane
Portsmouth, New Hampshire 03801

RE: **Board of Adjustment Request for property located at 86 Farm Lane, Portsmouth NH 03801 (LU-25-67)**

Dear Property Owner:

The Zoning Board of Adjustment, at its regularly scheduled meeting of **May 27, 2025**, considered your application for the property located at 86 Farm Lane whereas relief is needed to subdivide the existing property into 3 separate lots. The proposed parent lot requires the following: 1) Variance from Section 10.521 to allow a) 28-foot rear yard setback where 30 feet is required; and b) 23-foot secondary front yard where 30 feet is required. Proposed lot 1 requires the following: 2) Variance from Section 10.521 to allow a) 10,664 s.f. of lot area where 15,000 s.f. is required; b) 10,664 s.f. of lot area per dwelling unit where 15,000 s.f. is required; and c) 75 feet of continuous street frontage where 100 feet is required. Proposed lot 2 requires the following: 3) Variance from Section 10.521 to allow a) 11,250 s.f. of lot area where 15,000 s.f. is required; b) 11,250 s.f. of lot area per dwelling unit where 15,000 s.f. is required; and c) 75 feet of continuous street frontage where 100 feet is required. Said property is shown on Assessor Map 236 Lot 74 and lies within the Single Residence B (SRB) District. As a result of said consideration, the Board voted to **grant** the request as presented with the following **conditions:**

1) The approval shall be contingent upon the Planning Board approval of the subdivision and City Council acceptance of fee simple ownership of the new right-of-area proposed; and

2) The subdivision layout may change as a result of TAC and Planning Board reviews if it does not increase the zoning relief required.

The Board's decision may be appealed up to thirty (30) days after the vote. Any action taken by the applicant pursuant to the Board's decision during this appeal period shall be at the applicant's risk. Please contact the Planning & SustainabilityDepartment for more details about the appeals process.

Approvals may also be required from other City Commissions or Boards. Once all required approvals have been received, applicant is responsible for applying for and securing a building permit from the Inspection Department prior to starting any project work.

This approval shall expire unless a building permit is issued within a period of two (2) years from the date granted unless an extension is granted in accordance with Section 10.236 of the Zoning Ordinance.

The Findings of Fact associated with this decision are available: attached here or as an attachment in the Viewpoint project record associated with this application and on the Zoning Board of Adjustment Meeting website:

https://www.cityofportsmouth.com/planportsmouth/zoning-board-adjustment/zoning-board-adjustment-archived-meetings-and-material

The minutes and audio recording of this meeting are available by contacting the Planning & Sustainability Department.

Very truly yours,

Phyllis Eldridge, Chair of the Zoning Board of Adjustment

cc: Shanti Wolph, Chief Building Inspector

Rosann Maurice-Lentz, City Assessor
Derek Durbin, Attorney, Durbin Law Offices PLLC

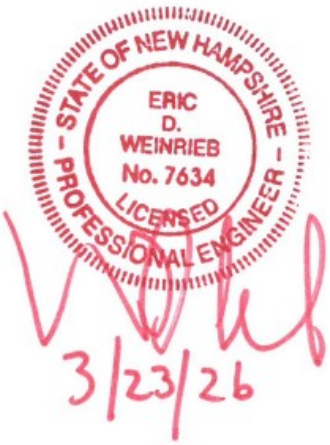
DRAINAGE ANALYSIS

FOR

86 FARM LANE SUBDIVISION

86 Farm Lane
Portsmouth, NH 03801

February 13, 2026
Revised March 23, 2026



Prepared For:
Flipping Berger's, LLC
71 Bracket Road
Portsmouth, NH 03801

Prepared By:
Altus Engineering, LLC
133 Court Street
Portsmouth, NH 03801
Phone: (603) 433-2335

ALTUS ENGINEERING

Altus Project 5719

Table of Contents

ALTUS ENGINEERING

Section 1

Narrative

ALTUS ENGINEERING

PROJECT DESCRIPTION

Flipping Berger's, LLC is proposing to construct a new subdivision behind an existing single-family residence at 86 Farm Lane in Portsmouth. The ±0.914-acre parcel is identified as Tax Map 236, Lot 74 and is located in the Single Residence B zone. The lot is located on Farm Lane between the Spaulding Turnpike and Woodbury Avenue and hosts a two-story residential home, pool, deck and patio.

The proposal includes the construction of a new 265'-long and 22'-wide public roadway and two new lots. The existing single-family residence is to remain. The existing pool, deck and patio will be removed to allow for the area behind the existing house to be subdivided. The new roadway will be located on City owned property currently identified as *Longmeadow Lane;* which is a paper street. Additional improvements to the site also include new water, electric and stormwater infrastructure.

Stormwater infrastructure will consist of one infiltration pond, one bioretention cell, one drain manhole and one deep sump catch basin. The infiltration pond and bioretention cell are utilizing infiltration to treat stormwater and control flows and each also includes a yard drain to be connected into the City's drainage system to handle flows during large storms. Additionally, the bioretention cell includes a perforated underdrain to collect stormwater after it has been treated. All stormwater runoff from new impervious surfaces will be directed to the infiltration pond, bioretention cell or deep sump catch basin. The proposed buildings will also utilize a stone drip edge to capture runoff from the roof. This proposed stormwater management system will provide adequate stormwater treatment and will meet or reduce peak flows leaving the site for each point of analysis except for at the City owned drainage system analysis point (POA #4), more information is provided under the Post-Development section of this report.

Site Soils

The United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) web soil survey indicates that soil on this parcel is a mix of Udorthents, Smooth (299) and Urban Land – Canton (799). The Urban Land – Canton is certified as Hydraulic Soil Group A (HSG-A). Udorthents, Smooth, do not have a HSG provided by the NRCS, due to the lack of information regarding this soil type it has been assumed that this soil type is consistent with surrounding soil types and thus is modeled as HSG-A.

Two test pits were completed on the property for the design of the stormwater infrastructure. The test pits logged for the stormwater infrastructure design consisted of dark brown grass matt ranging from 0" to 9" below existing grade, a mix of red/brown loam and sand ranging from 9" to 33", and red/brown clayey loam ranging from 33" to 60". No ledge was observed in either of them. Groundwater was observed between 40" and 50" below existing grade and estimated seasonal high-water table was observed between 24" and 43" below existing grade.

Pre-Development (Existing Conditions)

The property is bounded by other residential properties to the northeast, Longmeadow Lane paper street to the southwest, woods to the northwest, and Farm Lane to south-southeast. Of the ±0.914-acre parcel, less than a half-acre has been disturbed by the existing building, pool, patio, deck and associated pavement; the remainder of the lot is a mix of lawn and some woods. There is no stormwater infrastructure currently located on the property or on Farm Lane.

Longmeadow Lane is a 50'-wide paper street is located between 86 & 88 Farm Lane; it extends approx. 800' to the northwest toward the intersection with Woodlawn Circle and Hillcrest Drive. The paper street has been partially developed by abutting residents near Farm Lane, consisting of a grave driveway, fencing, landscaping, a portion of a shed and a portion of driveway. Development of the paper street ends approx. 200' from Farm Lane and transitions into undeveloped woodland. There is an existing drain manhole located within the paper street right-of-way approx. 425' from Farm Lane. There is also an existing sewer system located within the right-of-way that is active.

The existing site hydrology is characterized by three sub-catchments as delineated on the accompanying "Pre-Development Watershed and Soils Plan". Site runoff was analyzed at three Point of Analysis (POA). The analysis area for the site expands beyond the limits of the existing lot and City paper street based on contours obtained by James Verra & Associates, Inc. from the Existing Conditions Plan and from contours provided by City of Portsmouth GIS showing off lot flows contributing to POA's on this site.

POA #1 is located in the southern corner of the analysis area near the intersection of Farm Lane and Clover Lane. The catchment that contributes to POA #1 consists of half of the existing house, the front yard of the existing house, part of Farm Lane and some areas of the adjacent properties. POA #2 is located along the northwest boundary of the analysis area along the 88 Farm Lane property line. The catchment that contributes to POA #2 consists a small portion of the side yard of the existing house and portion of the City's paper street. POA #3 is located in the northwest corner of the existing lot shared with the paper street at a large depression located on the property line that appears to be storing and infiltrating stormwater runoff. This existing natural depression in the land is modeled as Pond #3 in the pre-analysis. The catchment that contributes to POA #3 consists of half of the existing house, the entire backyard including the pool/patio area, a portion of the City's paper street, and the yards/roofs of abutting properties to the northeast that are fronted on Meadow Road. POA #4 is located at the City owned drain manhole located in the paper street right-of-way, no flows from the existing site discharge to the City drainage system.

Post-Development (Proposed Conditions)

The post-development conditions were analyzed at the same discharge points as the pre-development conditions. The post-development watersheds are delineated on the accompanying "Post-Development Watershed and Soils Plan". Modifications to the delineated areas and associated ground cover were made to sub-catchments to account for the improvements to the property.

The purpose of this project is to subdivide the existing lot at 86 Farm Lane into three lots and install a new road for the two newly created lots behind the existing home. The existing home is to remain and access is provided by Farm Lane. This project includes the design of the new road but does not include design for the development of the two new lots. Stormwater management areas will be installed on both of the new lots to control stormwater flows from the new lots and road. A drainage easement will granted to the City for maintenance of the stormwater infrastructure.

Impervious areas for the three lots was estimated/assumed to properly size the stormwater infrastructure. The impervious area for Lot 1, which includes the existing home, patio and driveway, is estimated to be 5,685 S.F.

For the two undeveloped lots, conceptual homes and driveways are shown. Conceptual house footprints were determined by sizing the home close to the maximum allowable building footprint (20%) for the lot. Both homes are assumed to have a footprint of 2,000 S.F. which is less than 20% for each lot. Conceptual driveways are designed to meet City of Portsmouth driveway standards and provide access to the conceptual homes.

Based on these assumptions, if the impervious area for any of the lots exceeds the impervious area assumed than an individual stormwater management plan for the lot will be required. Total impervious area assumed for Lot 2 is 2,710 S.F. and for Lot 3 it is 3,220 S.F.

As shown on the attached Post-Development Watershed and Soils Plan, the site was divided into five post-development sub-catchment areas. The catchment (1) that contributes to POA #1 in the pre-development conditions was reduced in size and remains the only catchment contributing to this POA. The catchment (2) that contributes to POA #2 in the pre-development conditions was reduced in size and remains the only catchment contributing to this POA.

The catchment (3) that contributes to POA #3 in the pre-development conditions was reduced in size and remains the only catchment contributing to this POA. This catchment includes the existing natural depression identified in the pre-development conditions that is POA #3. The natural depression will be expanded within the limits of the existing lot and yard drain connected

to the City's drainage system will be installed. No changes to the natural depression shall occur on abutting property. Furthermore, **Table 2** below shows the difference in water elevation in the natural depression from pre to post conditions. This table demonstrates that the water level in the depression will not be adversely affected in post-development conditions.

In the pre-development conditions, no existing flows from the lot are contributing to POA #4, however, post-development conditions redirect a considerable amount of the analysis area to this POA. Catchments 4.1 and 4.2 contribute directly to POA #4 in post-development conditions; these catchments include the majority of the proposed roadway, the bioretention cell and deep sump catch basin. POA #3 indirectly contributes to POA #4 as well, through the utilization of the yard drain to be installed in the natural depression and connected into the closed drainage system discharging to the City's drain manhole (POA #4). No flows from POA #3 are expected to discharge to the City's drainage system up to the 25-year storm. The yard drain is being utilized as an emergency backup to protect abutting properties. Stormwater treatment is being achieved through the use of an infiltration pond, bioretention cell and deep sump catch basins. Stone drip edges may be installed around the homes for Lots 2 and 3 to provide additional stormwater management and treatment but are not required as part of the designed stormwater management.

Site topography, existing features, proposed site improvements, proposed grading, drainage and erosion control measures are shown on the accompanying plan set. Recommended erosion control measures are based upon the latest edition of the "*New Hampshire Stormwater Manual* prepared by NHDES and Comprehensive Environmental, Inc. as amended.

CALCULATION METHODS

The drainage study was completed using the USDA SCS TR-20 Method within the HydroCAD Stormwater Modeling System. Reservoir routing was performed with the Dynamic Storage Indication method with automated calculation of tailwater conditions. A Type III 24-hour rainfall distribution was utilized in analyzing the data for the 2, 10, & 25 - 24-hour storm events using rainfall data provided by the Northeast Regional Climate Center (NRCC). As the project site lies within a Coastal and Great Bay Community identified by NHDES Alteration of Terrain, all rainfall amounts were increased by 15% to account for potential future increases in rainfall due to climate change. A time span of 0 to 48 hours was analyzed at 0.01-hour increments.

Disclaimer

Altus Engineering notes that stormwater modeling is limited in its capacity to precisely predict peak rates of runoff and flood elevations. Results should not be considered to represent actual storm events due to the number of variables and assumptions involved in the modeling effort. Surface roughness coefficients (n), entrance loss coefficients (ke), velocity factors (kv) and times of concentration (Tc) are based on subjective field observations and engineering judgment using available data. For design purposes, curve numbers (Cn) describe the average conditions. However, curve numbers will vary from storm to storm depending on the antecedent runoff conditions (ARC) including saturation and frozen ground. Also, higher water elevations than predicted by modeling could occur if drainage channels, closed drain systems or culverts are not maintained and/or become blocked by debris before and/or during a storm event as this will impact flow capacity of the structures. Structures should be re-evaluated if future changes occur within relevant drainage areas in order to assess any required design modifications.

Drainage Analysis

A complete summary of the drainage model is included in the appendix of this report. **Table 1** below compares pre- and post-development peak rates at the Points of Analysis identified on the plans for the 2, 10 & 25-year storm events. **Table 2** below compares the water elevation in the existing natural depression from pre- to post-development conditions for the 2, 10 & 25-year storm events.

Table 1 - Stormwater Modeling Summary
Peak Q (cfs) for Type III 24-Hour Storm Events

	2-Year Storm (3.06-inch)	10-Year Storm (5.59-inch)	25-Year Storm (7.08-inch)
POA 1			
PRE	0.17	0.93	1.49
POST	0.02	0.07	0.11
CHANGE	-0.15	-0.86	-1.38
POA 2			
PRE	0.00	0.05	0.18
POST	0.00	0.02	0.08
CHANGE	0.00	-0.03	-0.10
POA 3			
PRE	0.00	0.00	0.00
POST	0.00	0.00	0.00
CHANGE	0.00	0.00	0.00
POA 4			
PRE	0.00	0.00	0.00
POST	0.18	1.86	3.44
CHANGE	0.18	1.86	3.44

As the above **Table 1** demonstrates, the proposed peak rates of runoff at all points of analysis will match or be decreased from the existing conditions for POA's #1, 2 & 3. POA #4 will have an increased peak rate of runoff as no runoff contributed to this area in the pre-development conditions. The City drainage system that is receiving the flow at POA #4 is a culvert that is located perpendicular to the paper street and connects a low-lying area on the northeast side of the paper street to the southwest side of the street. Based on the City's GIS layers, this drainage system appears to collect several other upstream catchments, consisting of both closed and open drainage systems. Altus Engineering believes that the City drainage system can handled the minor increase in flow rate at POA #4.

Table 2 – Stormwater Elevation Comparison
Natural Depression Water Elevation for Type III 24-Hour Storm Events

Storm Size	Pre-Development Peak Elevation (ft)	Post-Development Peak Elevation (ft)	Change in Elevation (ft)
2-Year	38.04	38.00	-0.04
10-Year	39.00	38.48	-0.52
25-Year	39.69	38.96	-0.73

Table 2 above demonstrates that the water elevation in the modified natural depression will not be adversely affected by the proposed improvements and that water levels will remain close to or less than pre-development conditions.

CONCLUSION

This proposed development of the property located at 86 Farm Lane in Portsmouth, New Hampshire will not have adverse effect on abutting properties and infrastructure as a result of stormwater runoff or siltation. Additionally, runoff from impervious surfaces will be treated using the infiltration pond, bioretention cell and deep sump catch basin to improve the quality of runoff leaving the site. Appropriate steps will be taken to properly mitigate erosion and sedimentation through the use of temporary and permanent Best Management Practices for sediment and erosion control.

Section 2

Aerial Photo and USGS Map

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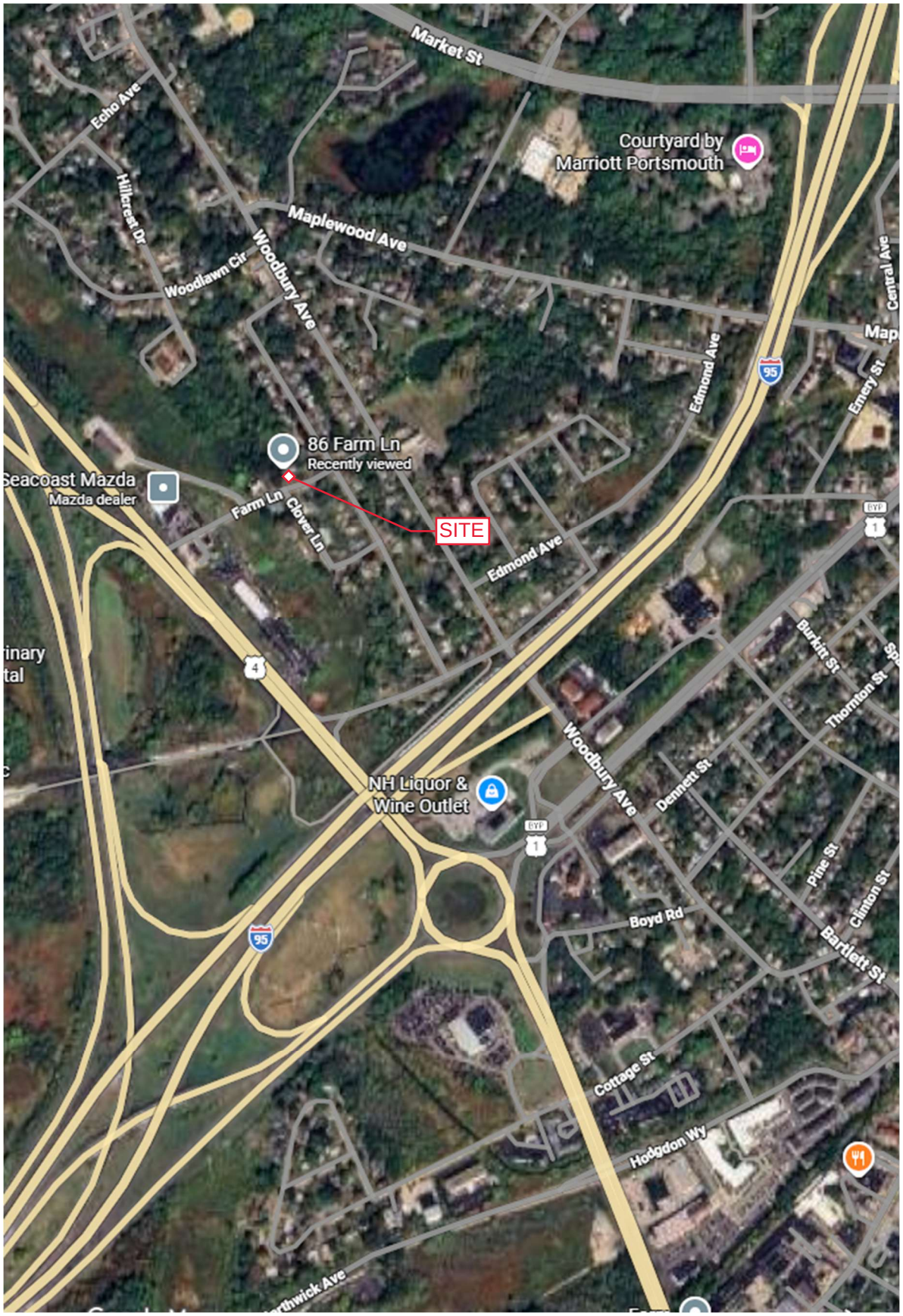
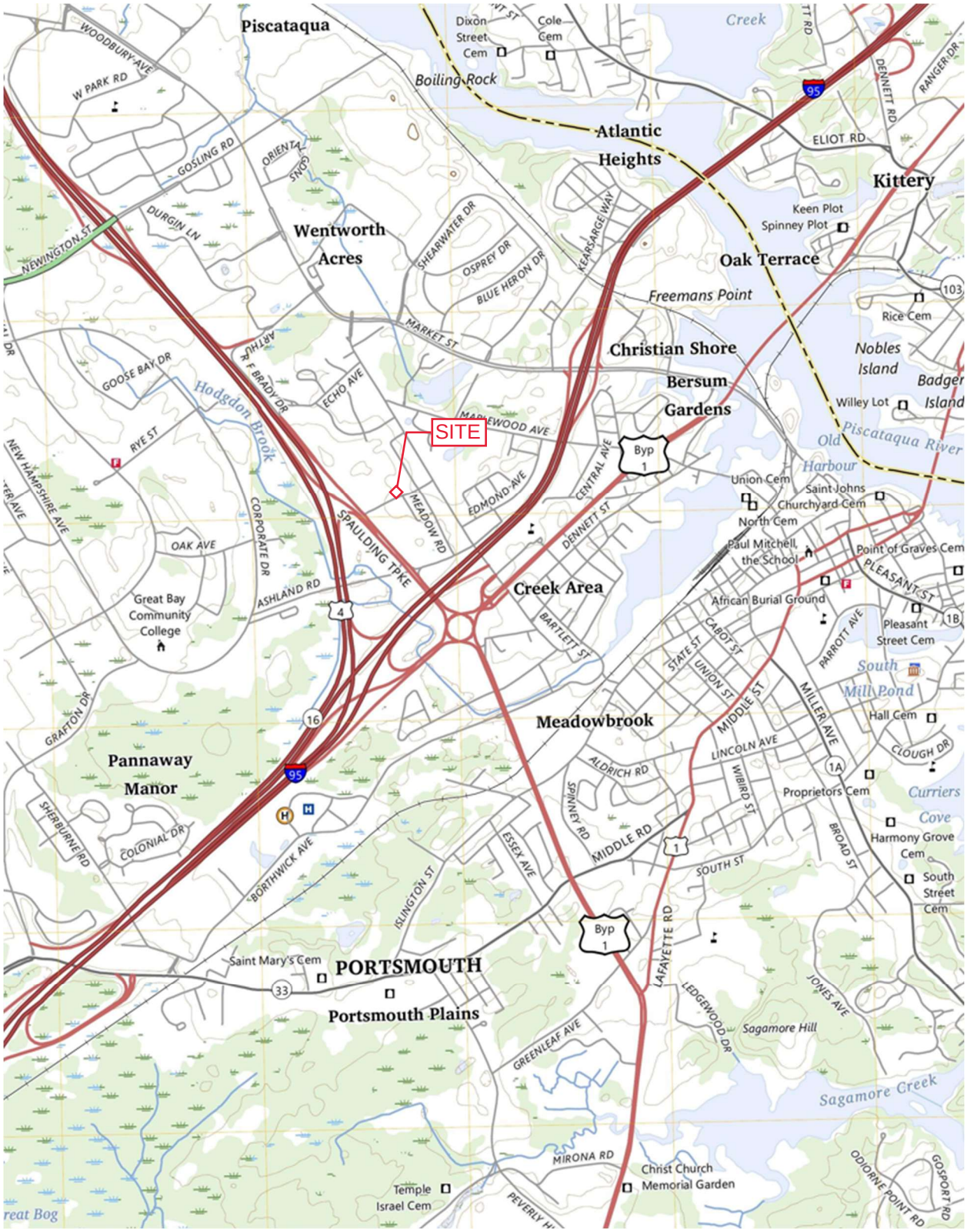

Market St
Echo Ave
Hillcrest Dr
Woodlawn Cir
Woodbury Ave
Maplewood Ave
Courtyard by
Marriott Portsmouth
Edmond Ave
Central Ave
Emery St
95
86 Farm Ln
Recently viewed
Seacoast Mazda
Mazda dealer
Farm Ln
Clover Ln
SITE
Edmond Ave
BYP
1
4
Burkitt St
Thornton St
Woodbury Ave
NH Liquor &
Wine Outlet
Dennett St
Pine St
Clinton St
Boyd Rd
Bartlett St
Cottage St
Hodgdon Wy


SITE
Piscataqua
Dixon Street Cem
Cole Cem
Creek
Boiling Rock
Atlantic Heights
Kittery
Keen Plot
Spinney Plot
Oak Terrace
Freemans Point
Rice Cem
Wentworth Acres
Christian Shore
Bersum Gardens
Nobles Island
Badger Island
Willey Lot
Old Piscataqua River
Harbour
Union Cem
Saint Johns Churchyard Cem
North Cem
Paul Mitchell the School
Point of Graves Cem
African Burial Ground
Pleasant Street Cem
Creek Area
Great Bay Community College
Meadowbrook
South Mill Pond
Hall Cem
Proprietors Cem
Curriers Cove
Harmony Grove Cem
South Street Cem
Pannaway Manor
PORTSMOUTH
Portsmouth Plains
Saint Mary's Cem
Sagamore Hill
Sagamore Creek
Christ Church Memorial Garden
Temple Israel Cem
Great Bog
Hodgdon Brook
WOODBURY AVE
W PARK RD
GOSLING RD
ORIENTAL SHORES
DURGIN LN
NEWINGTON ST
SHEARWATER DR
OSPREY DR
BLUE HERON DR
KEARSARGE WAY
MARKET ST
ARTHUR F BRADY DR
GOOSE BAY DR
ECHO AVE
RYE ST
MAPLEWOOD AVE
EDMOND AVE
MEADOW RD
CENTRAL AVE
DENNETT ST
BARTLETT ST
SPAULDING TPKE
CORPORATE DR
OAK AVE
ASHLAND RD
NEW HAMPSHIRE AVE
GRAFTON DR
SHERBURNE RD
COLONIAL DR
BORTHWICK AVE
ISLINGTON ST
ESSEX AVE
ALDRICH RD
SPINNEY RD
MIDDLE RD
SOUTH ST
LAFAYETTE RD
LEDGEWOOD DR
JONES AVE
GREENLEAF AVE
MIRONA RD
PEVERLY HILL RD
ODIORNE POINT RD
GOSPORT RD
ELIOT RD
DENNETT RD
RANGER DR
PLEASANT ST
CABOT ST
STATE ST
UNION ST
MIDDLE ST
MILLER AVE
LINCOLN AVE
WIBIRD ST
BROAD ST
PARROTT AVE
CLOUGH DR
Byp 1
95
16
4
33
103
1A
1B

Section 3

Drainage Calculations

Pre-Development:
2-Year, 24-Hour Summary
10-Year, 24-Hour Complete
25-Year, 24-Hour Summary

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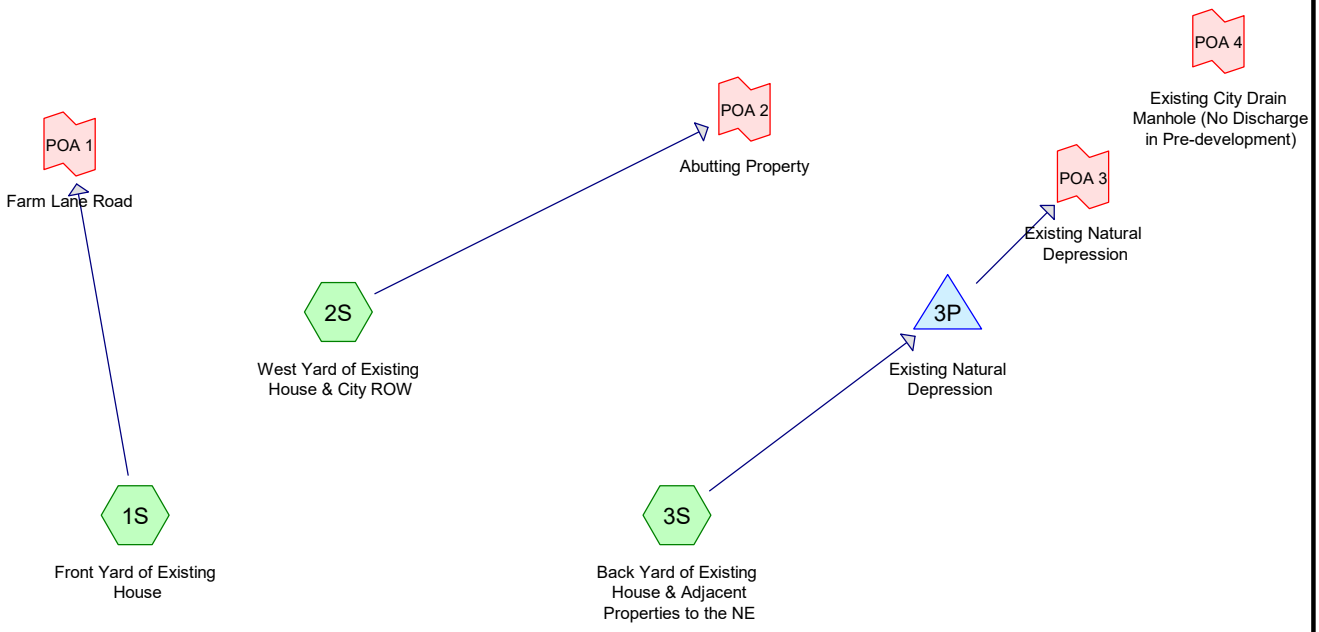


Subcat Reach Pond Link

Routing Diagram for 5719-PRE
Prepared by Altus Engineering, Printed 2/10/2026

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Front Yard of Existing Runoff Area=18,227 sf 43.70% Impervious Runoff Depth=0.50"
Flow Length=296' Tc=6.0 min CN=64 Runoff=0.17 cfs 0.017 af

Subcatchment 2S: West Yard of Existing Runoff Area=10,114 sf 11.00% Impervious Runoff Depth=0.01"
Flow Length=215' Tc=6.0 min CN=42 Runoff=0.00 cfs 0.000 af

Subcatchment 3S: Back Yard of Existing Runoff Area=69,276 sf 11.36% Impervious Runoff Depth=0.01"
Flow Length=407' Tc=6.0 min CN=43 Runoff=0.00 cfs 0.002 af

Pond 3P: Existing Natural Depression Peak Elev=38.04' Storage=19 cf Inflow=0.00 cfs 0.002 af
Outflow=0.00 cfs 0.002 af

Link POA 1: Farm Lane Road Inflow=0.17 cfs 0.017 af
Primary=0.17 cfs 0.017 af

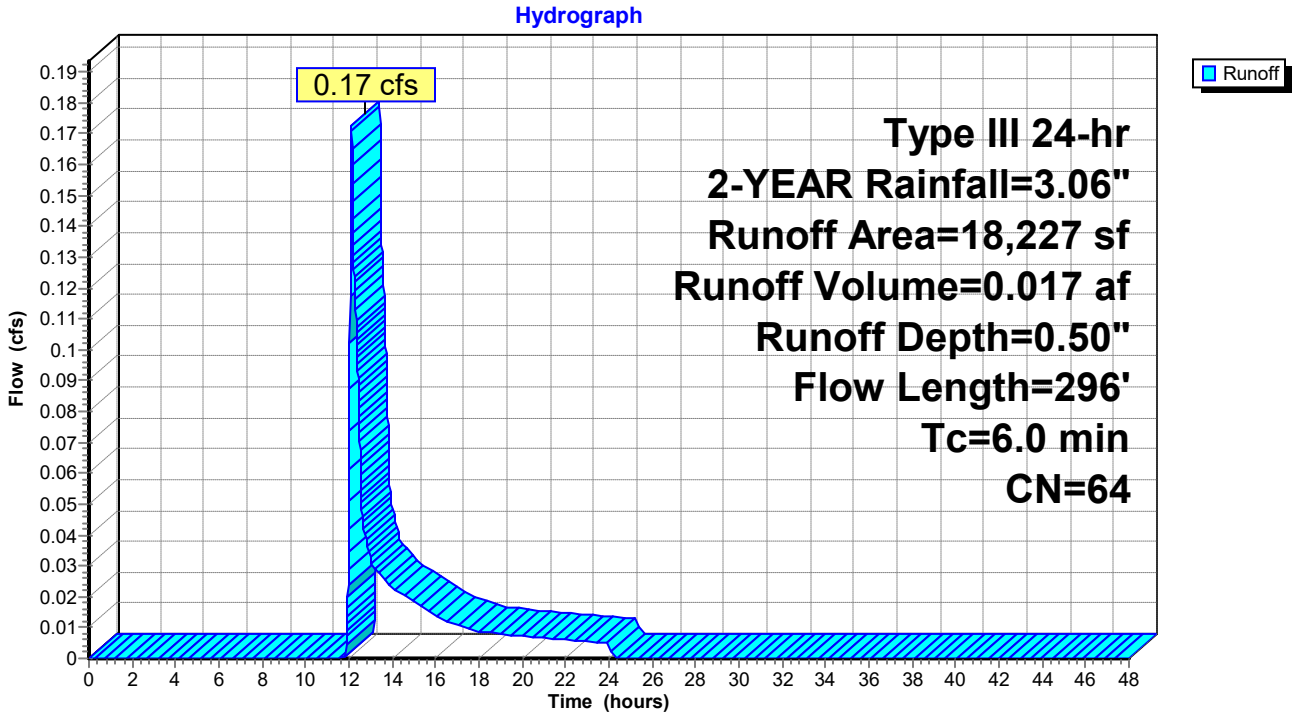
Link POA 2: Abutting Property Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link POA 3: Existing Natural Depression Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

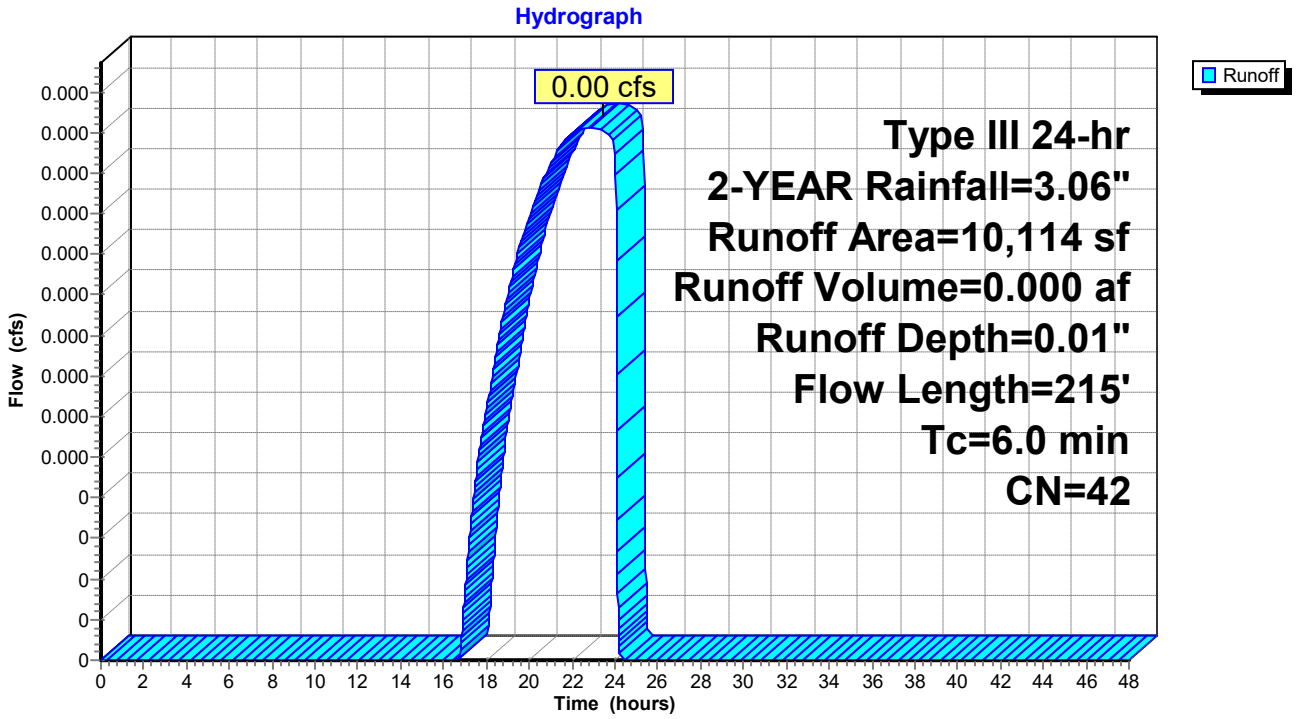
Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.241 ac Runoff Volume = 0.019 af Average Runoff Depth = 0.10"
82.64% Pervious = 1.852 ac 17.36% Impervious = 0.389 ac

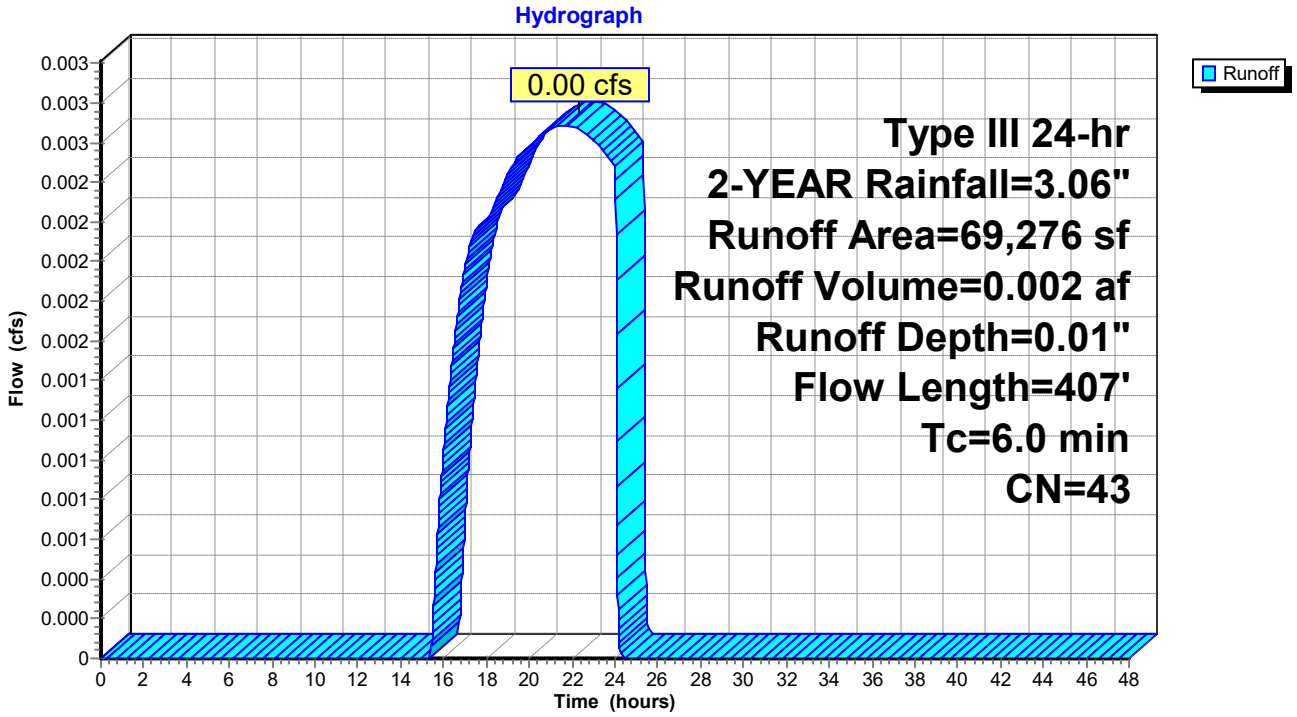
Subcatchment 1S: Front Yard of Existing House



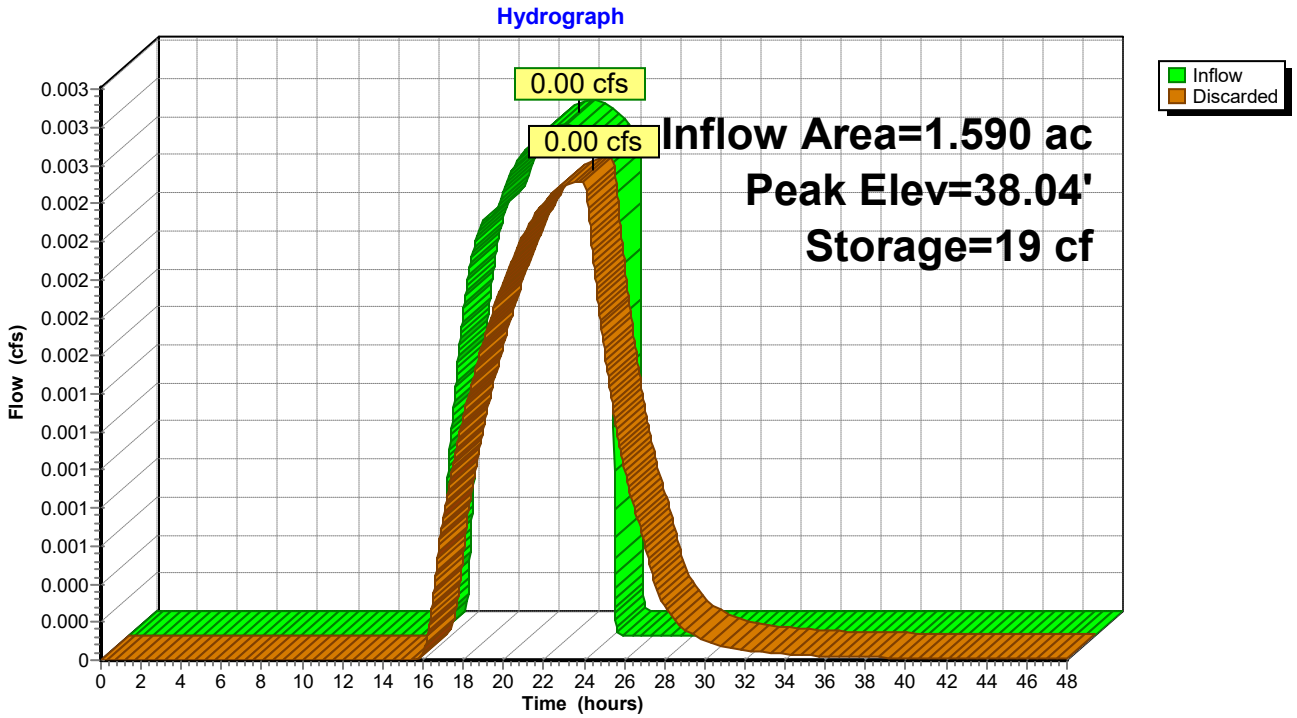
Subcatchment 2S: West Yard of Existing House & City ROW



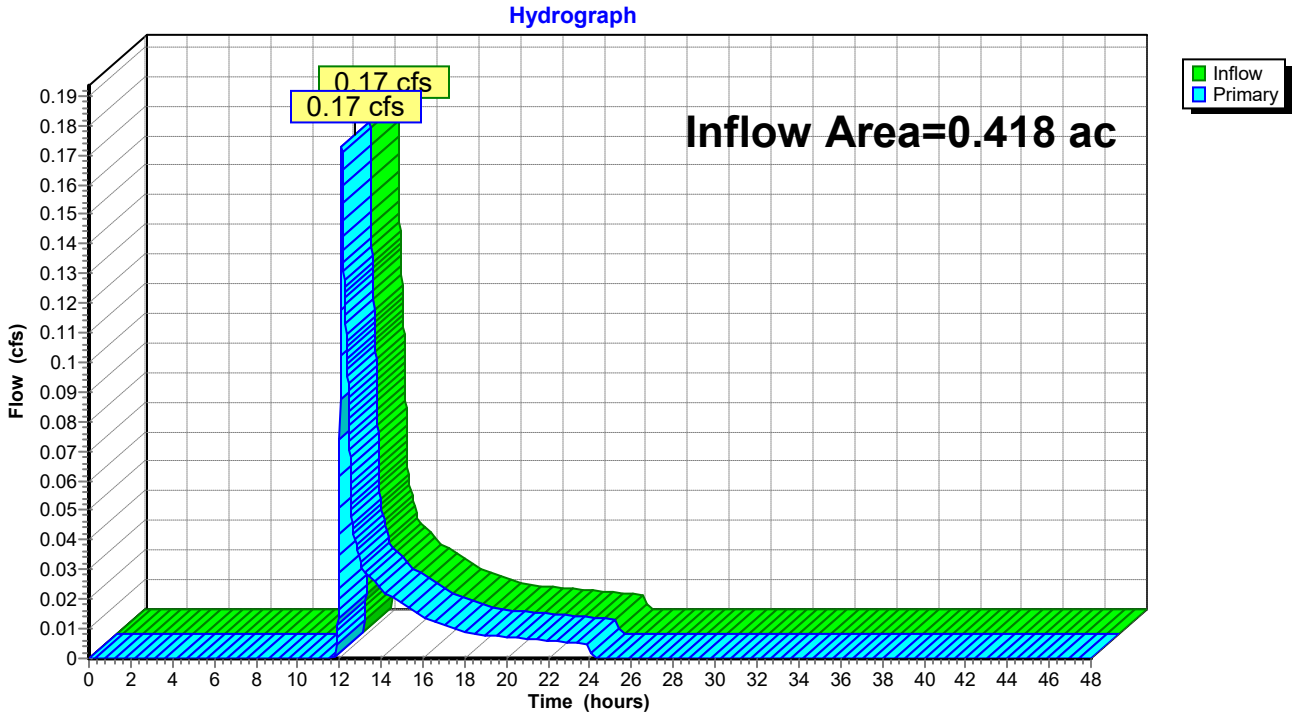
Subcatchment 3S: Back Yard of Existing House & Adjacent Properties to the NE



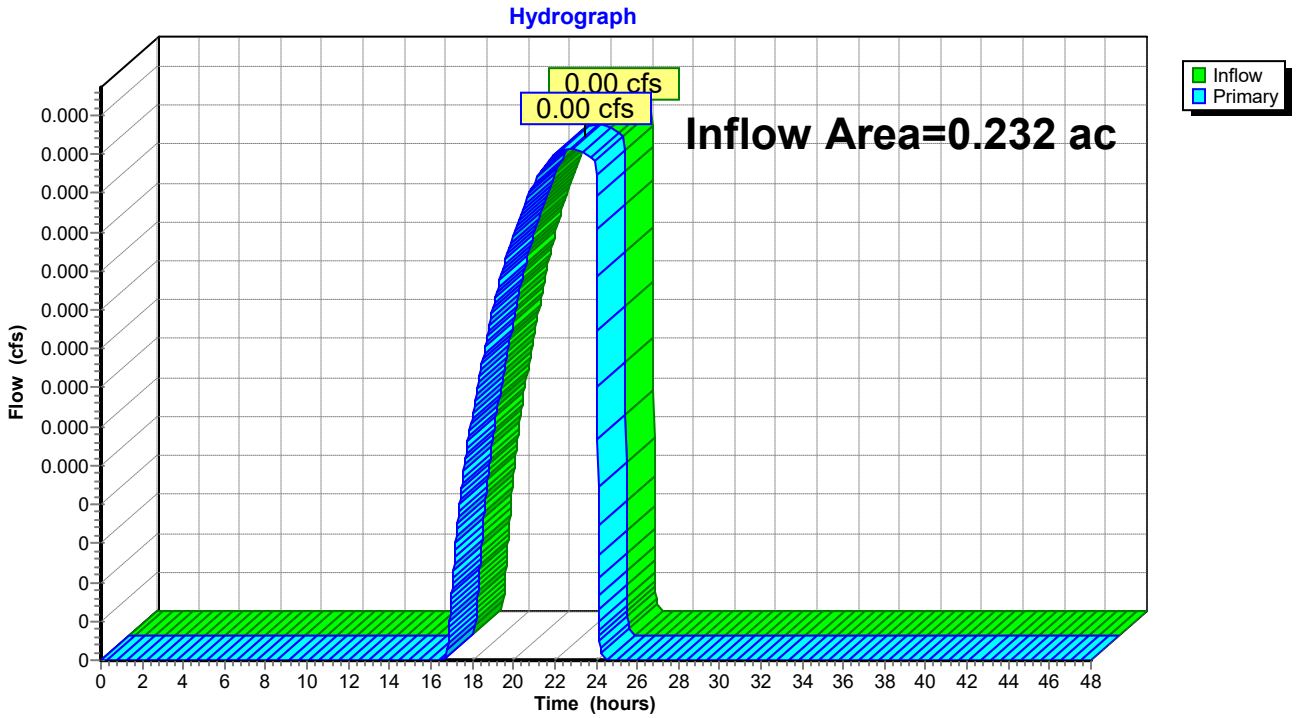
Pond 3P: Existing Natural Depression



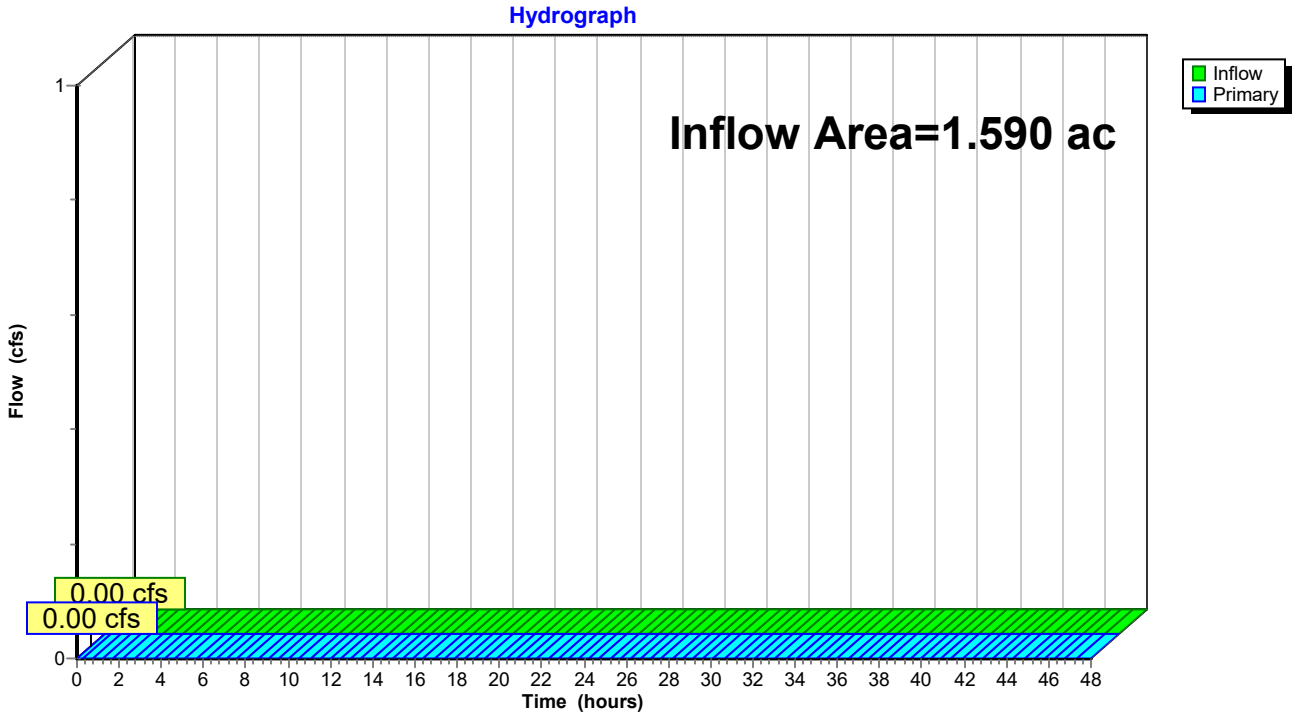
Link POA 1: Farm Lane Road



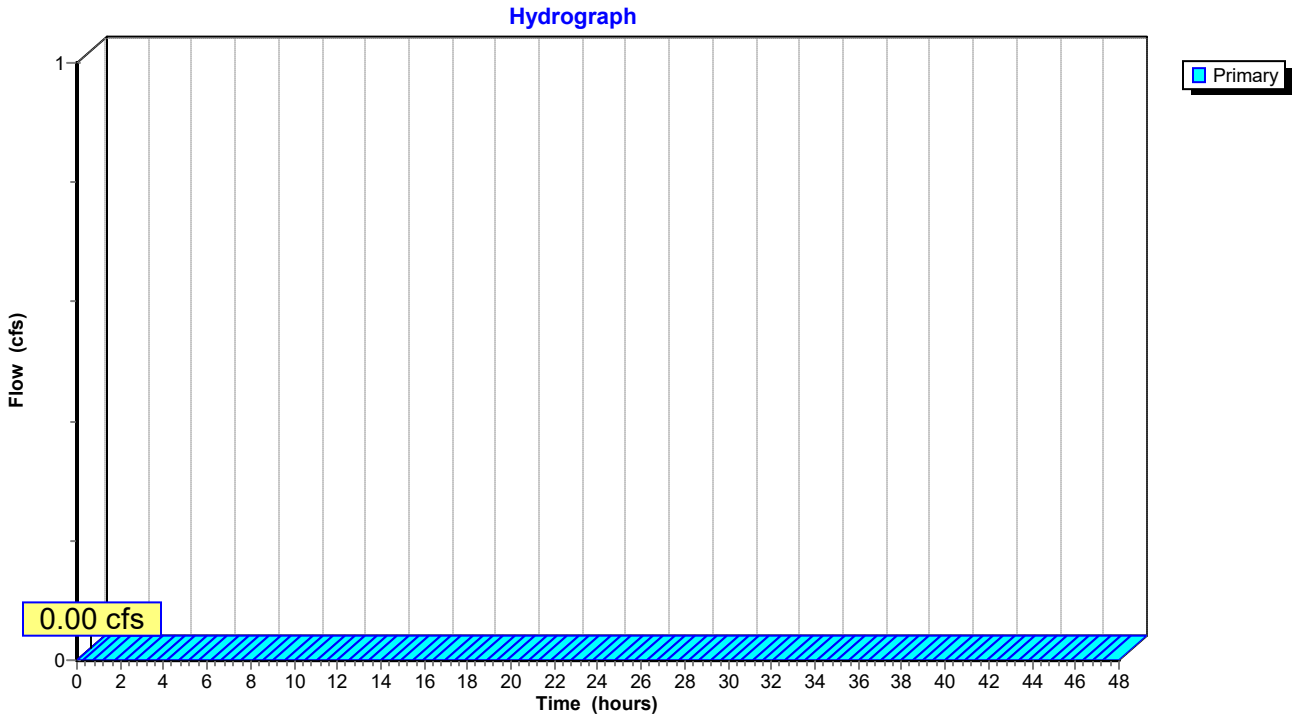
Link POA 2: Abutting Property

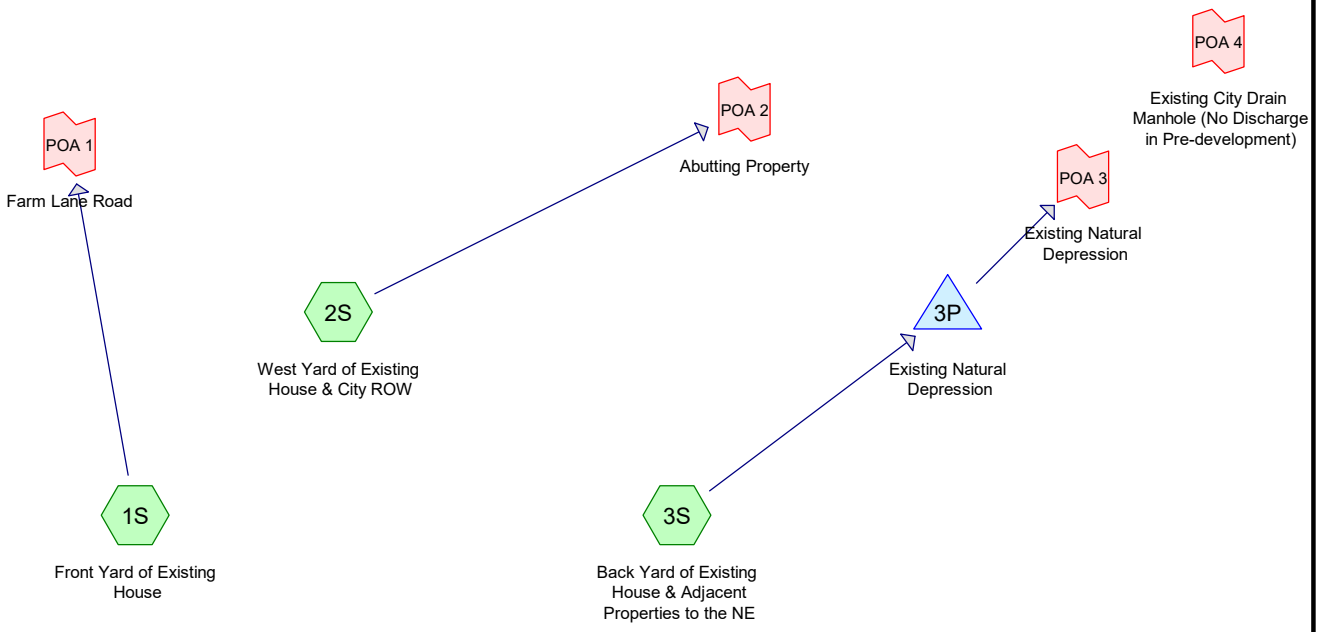


Link POA 3: Existing Natural Depression



Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)





Subcat Reach Pond Link

Routing Diagram for 5719-PRE
Prepared by Altus Engineering, Printed 2/10/2026

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.201	39	>75% Grass cover, Good, HSG A (1S, 2S, 3S)
0.253	98	Paved parking, HSG A (1S, 2S, 3S)
0.136	98	Roofs, HSG A (1S, 2S, 3S)
0.651	30	Woods, Good, HSG A (1S, 2S, 3S)
2.241	**47**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.241	HSG A	1S, 2S, 3S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.241		**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Front Yard of Existing Runoff Area=18,227 sf 43.70% Impervious Runoff Depth=1.98"
Flow Length=296' Tc=6.0 min CN=64 Runoff=0.93 cfs 0.069 af

Subcatchment 2S: West Yard of Existing Runoff Area=10,114 sf 11.00% Impervious Runoff Depth=0.48"
Flow Length=215' Tc=6.0 min CN=42 Runoff=0.05 cfs 0.009 af

Subcatchment 3S: Back Yard of Existing Runoff Area=69,276 sf 11.36% Impervious Runoff Depth=0.53"
Flow Length=407' Tc=6.0 min CN=43 Runoff=0.40 cfs 0.071 af

Pond 3P: Existing Natural Depression Peak Elev=39.00' Storage=913 cf Inflow=0.40 cfs 0.071 af
Outflow=0.09 cfs 0.071 af

Link POA 1: Farm Lane Road Inflow=0.93 cfs 0.069 af
Primary=0.93 cfs 0.069 af

Link POA 2: Abutting Property Inflow=0.05 cfs 0.009 af
Primary=0.05 cfs 0.009 af

Link POA 3: Existing Natural Depression Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.241 ac Runoff Volume = 0.149 af Average Runoff Depth = 0.80"
82.64% Pervious = 1.852 ac 17.36% Impervious = 0.389 ac

Summary for Subcatchment 1S: Front Yard of Existing House

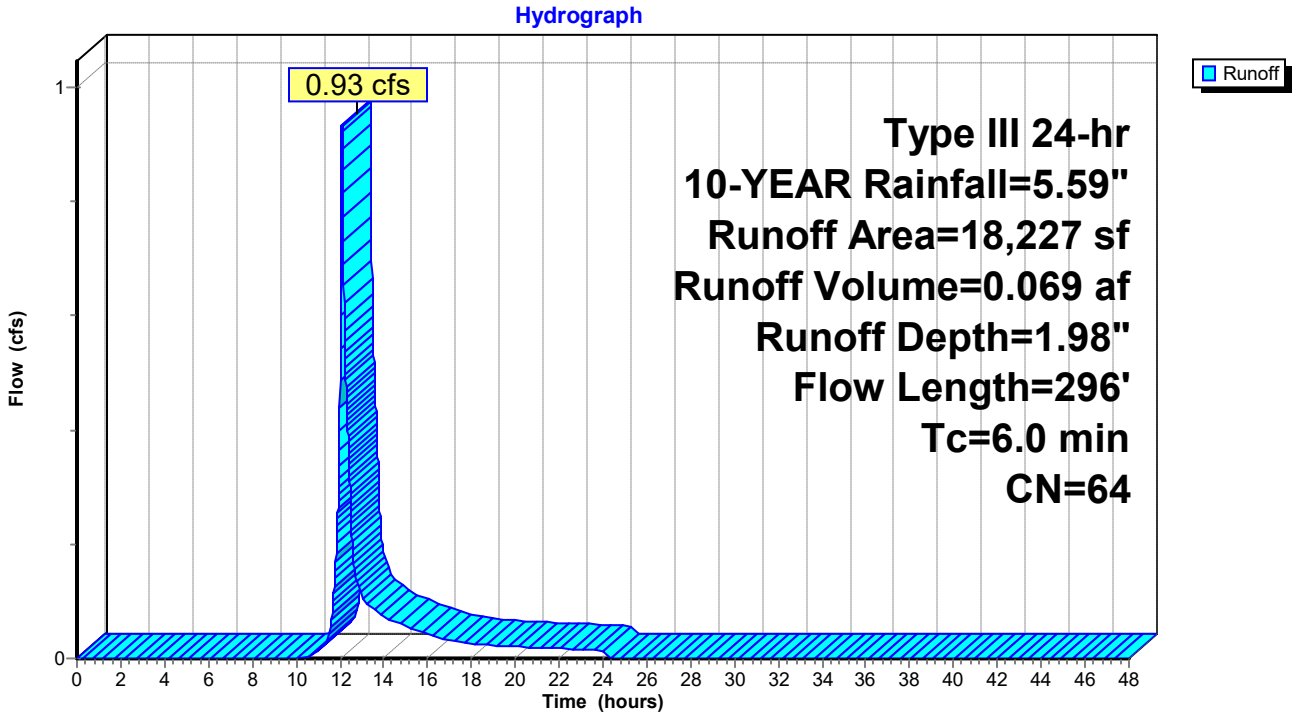
Runoff = 0.93 cfs @ 12.09 hrs, Volume= 0.069 af, Depth= 1.98"
Routed to Link POA 1 : Farm Lane Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
1,635	98	Roofs, HSG A
6,330	98	Paved parking, HSG A
8,838	39	>75% Grass cover, Good, HSG A
1,424	30	Woods, Good, HSG A
18,227	64	Weighted Average
10,262		56.30% Pervious Area
7,965		43.70% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	13	0.5000	3.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.06"
0.4	62	0.1130	2.35		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.2	15	0.1000	1.58		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.3	30	0.0580	1.69		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.5	110	0.0340	3.74		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	25	0.0200	0.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	12	0.0210	2.33		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.2	21	0.0600	1.71		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	8	0.0130	2.31		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.3	296	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: Front Yard of Existing House



Summary for Subcatchment 2S: West Yard of Existing House & City ROW

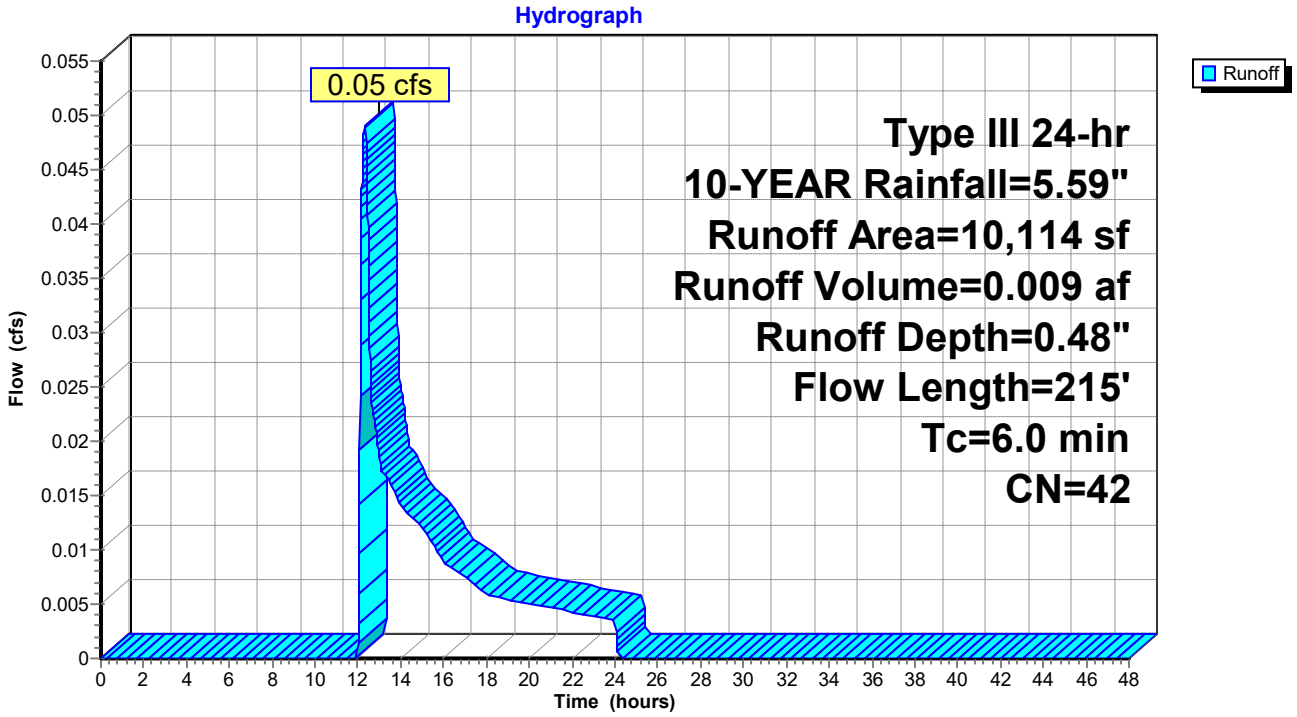
Runoff = 0.05 cfs @ 12.31 hrs, Volume= 0.009 af, Depth= 0.48"
Routed to Link POA 2 : Abutting Property

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
184	98	Roofs, HSG A
929	98	Paved parking, HSG A
5,516	39	>75% Grass cover, Good, HSG A
3,485	30	Woods, Good, HSG A
10,114	42	Weighted Average
9,001		89.00% Pervious Area
1,113		11.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	13	0.5000	3.24		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.06"
0.5	56	0.0850	2.04		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	12	0.0420	3.30		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	12	0.0420	1.43		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	11	0.0680	1.30		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.8	100	0.0880	2.08		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	11	0.1590	1.99		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
1.8	215	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 2S: West Yard of Existing House & City ROW



Summary for Subcatchment 3S: Back Yard of Existing House & Adjacent Properties to the NE

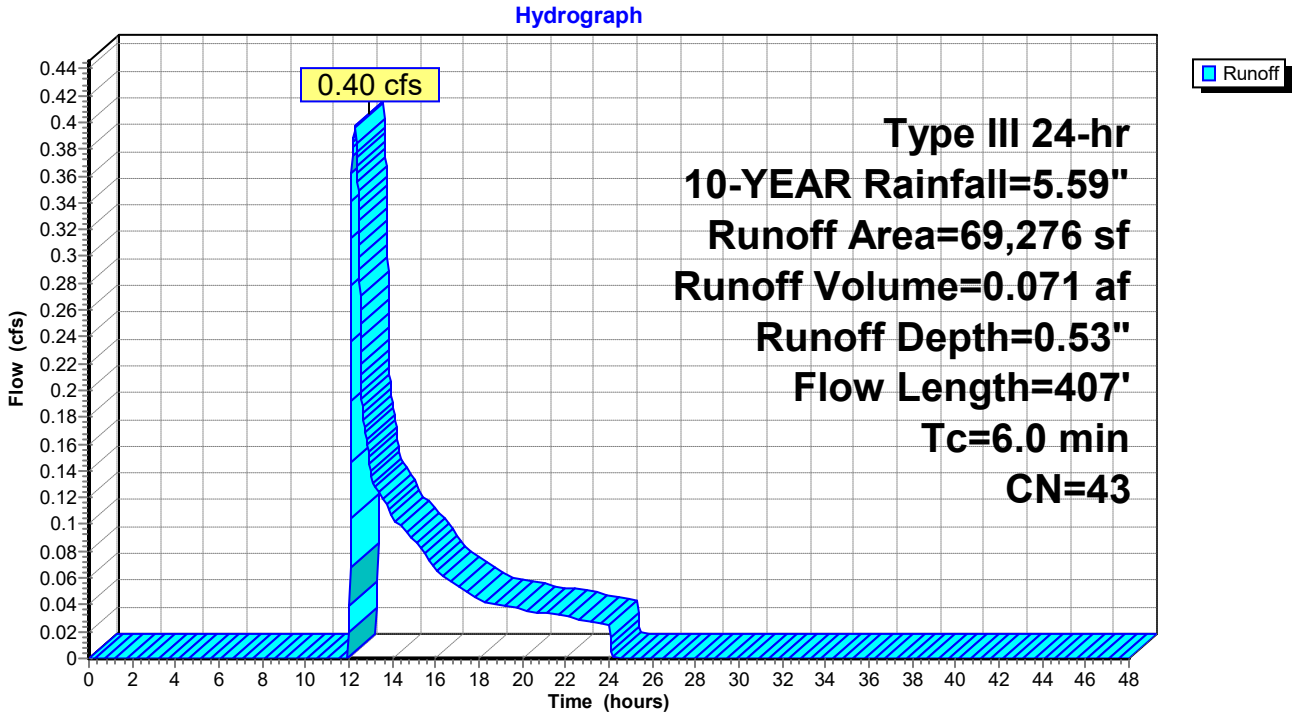
Runoff = 0.40 cfs @ 12.29 hrs, Volume= 0.071 af, Depth= 0.53"
Routed to Pond 3P : Existing Natural Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
4,095	98	Roofs, HSG A
3,772	98	Paved parking, HSG A
37,970	39	>75% Grass cover, Good, HSG A
23,439	30	Woods, Good, HSG A
69,276	43	Weighted Average
61,409		88.64% Pervious Area
7,867		11.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	10	0.5000	3.08		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.06"
0.5	63	0.0990	2.20		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.5	42	0.0650	1.27		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	50	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.8	48	0.0420	1.02		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.2	30	0.1170	2.39		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.0	108	0.0670	1.81		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.9	56	0.0450	1.06		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
4.4	407	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 3S: Back Yard of Existing House & Adjacent Properties to the NE



Summary for Pond 3P: Existing Natural Depression

Inflow Area = 1.590 ac, 11.36% Impervious, Inflow Depth = 0.53" for 10-YEAR event
Inflow = 0.40 cfs @ 12.29 hrs, Volume= 0.071 af
Outflow = 0.09 cfs @ 15.09 hrs, Volume= 0.071 af, Atten= 78%, Lag= 168.2 min
Discarded = 0.09 cfs @ 15.09 hrs, Volume= 0.071 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 39.00' @ 15.09 hrs Surf.Area= 1,452 sf Storage= 913 cf

Plug-Flow detention time= 163.4 min calculated for 0.071 af (100% of inflow)
Center-of-Mass det. time= 163.3 min (1,104.0 - 940.8)

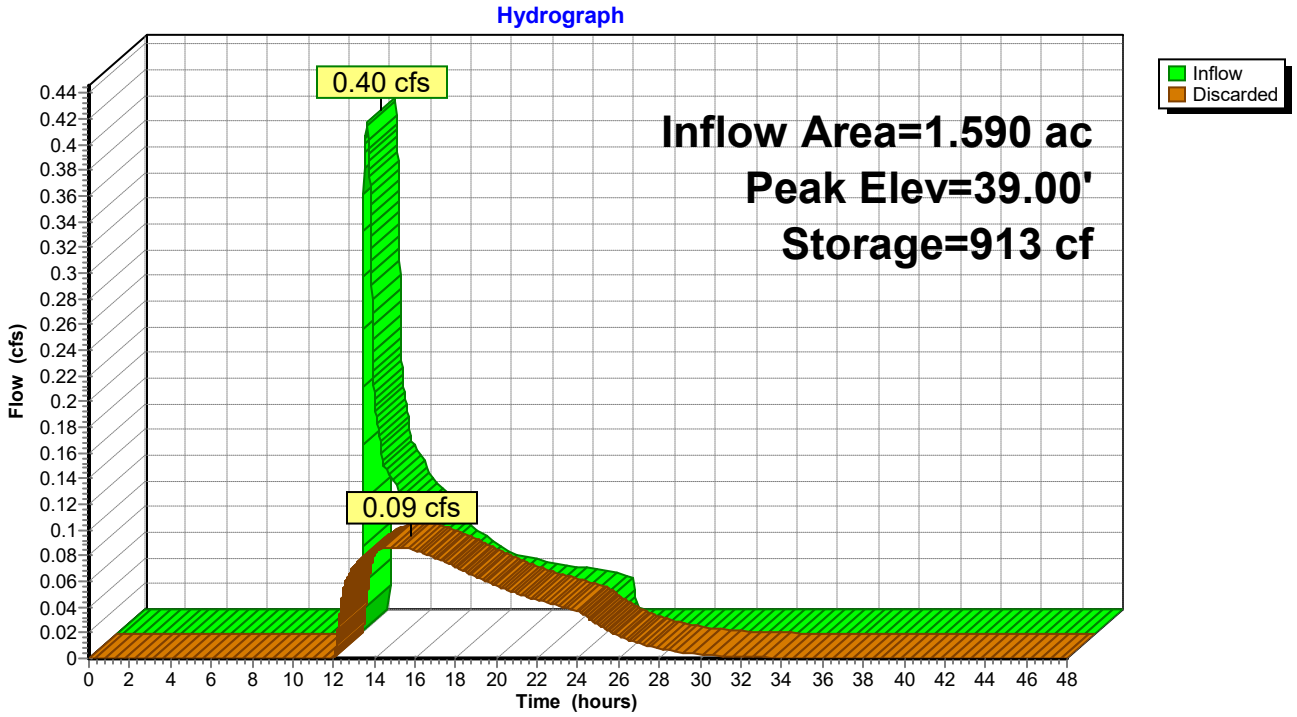
Volume	Invert	Avail.Storage	Storage Description
#1	38.00'	3,129 cf	**Existing Natural Depression (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
38.00	461	0	0	461
39.00	1,447	908	908	1,453
40.00	3,097	2,220	3,129	3,111

Device	Routing	Invert	Outlet Devices
#1	Discarded	38.00'	**3.750 in/hr Exfiltration over Wetted area above 38.00'** Excluded Wetted area = 461 sf Phase-In= 0.01'

Discarded OutFlow Max=0.09 cfs @ 15.09 hrs HW=39.00' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.09 cfs)

Pond 3P: Existing Natural Depression

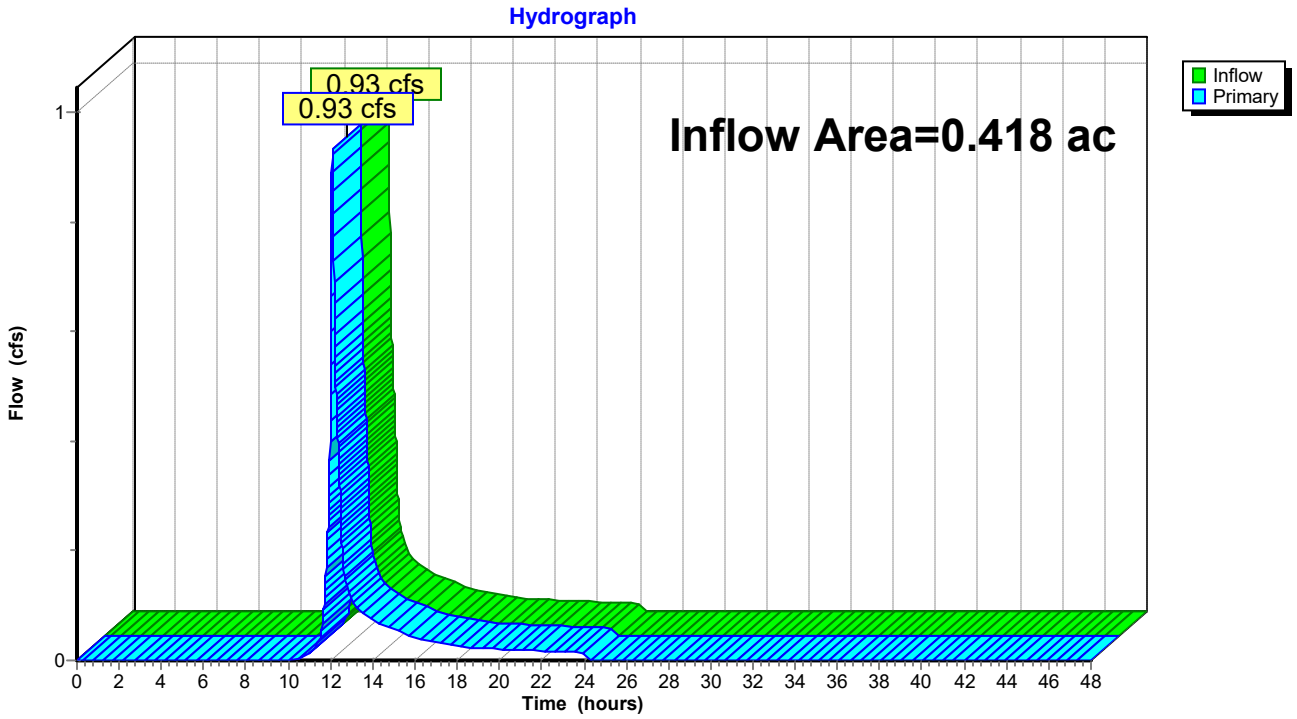


Summary for Link POA 1: Farm Lane Road

Inflow Area = 0.418 ac, 43.70% Impervious, Inflow Depth = 1.98" for 10-YEAR event
Inflow = 0.93 cfs @ 12.09 hrs, Volume= 0.069 af
Primary = 0.93 cfs @ 12.09 hrs, Volume= 0.069 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 1: Farm Lane Road

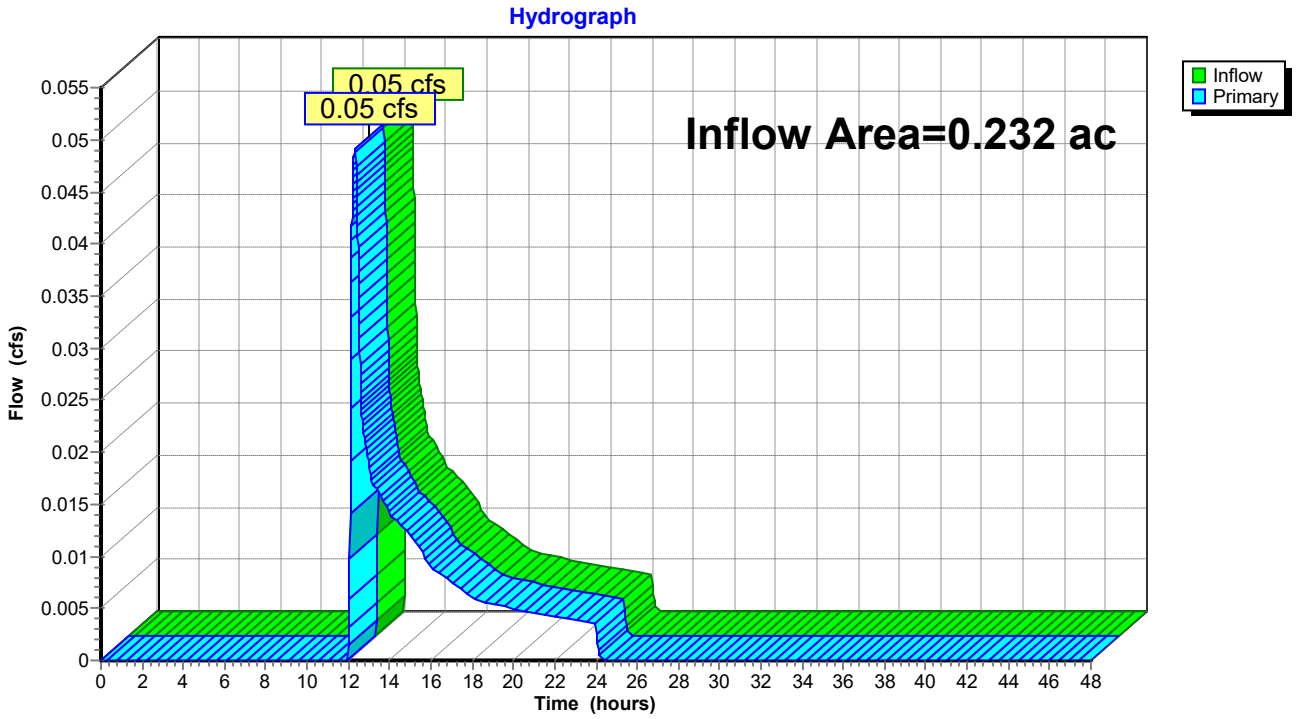


Summary for Link POA 2: Abutting Property

Inflow Area = 0.232 ac, 11.00% Impervious, Inflow Depth = 0.48" for 10-YEAR event
Inflow = 0.05 cfs @ 12.31 hrs, Volume= 0.009 af
Primary = 0.05 cfs @ 12.31 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 2: Abutting Property

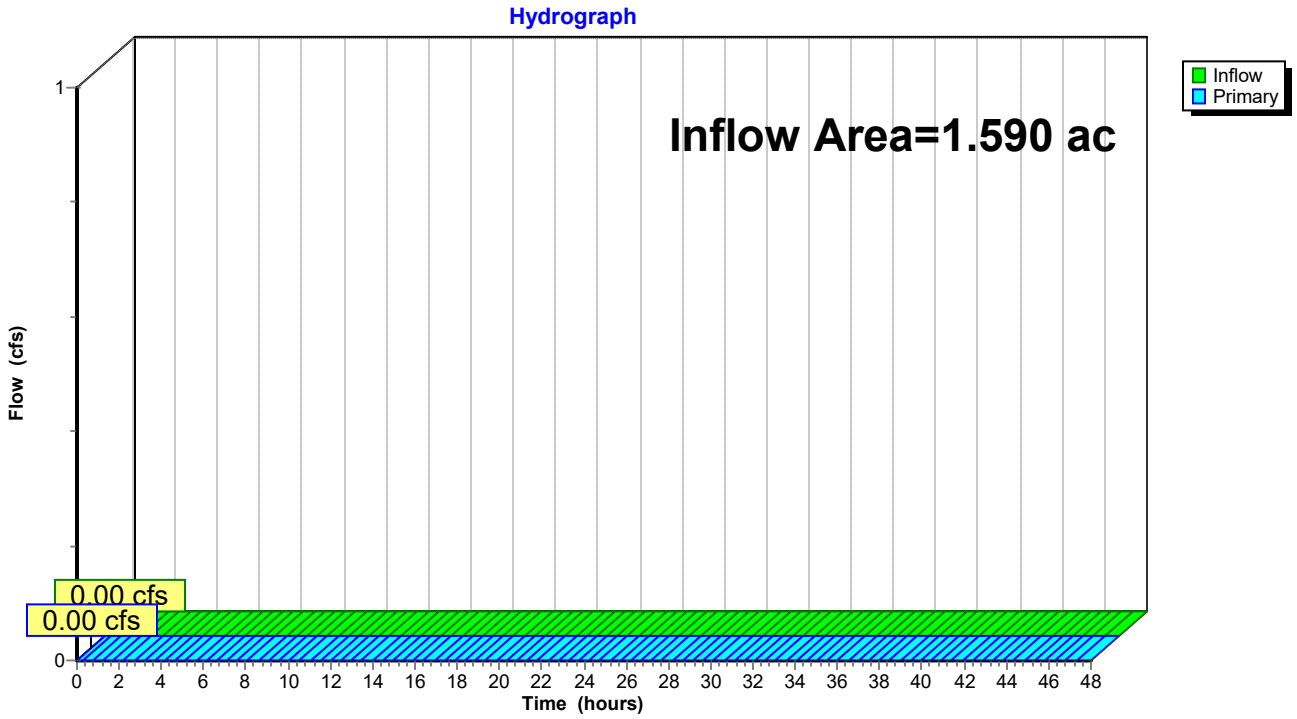


Summary for Link POA 3: Existing Natural Depression

Inflow Area = 1.590 ac, 11.36% Impervious, Inflow Depth = 0.00" for 10-YEAR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 3: Existing Natural Depression

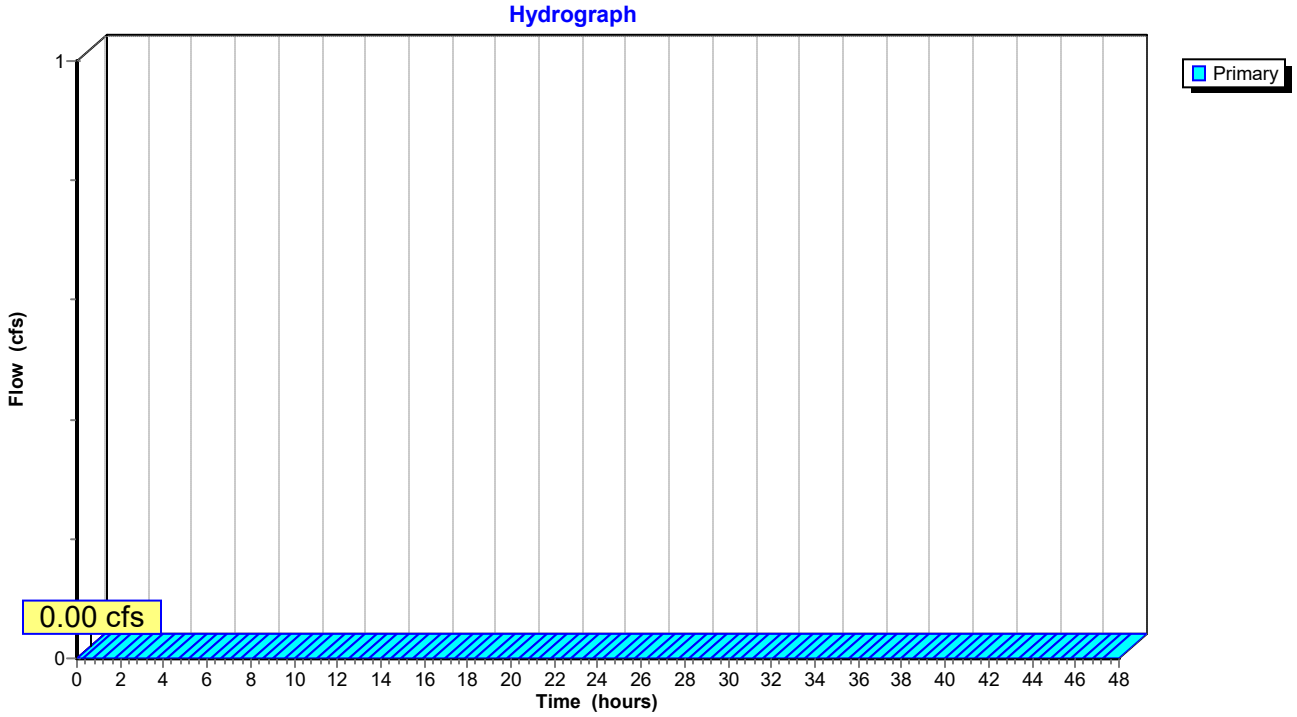


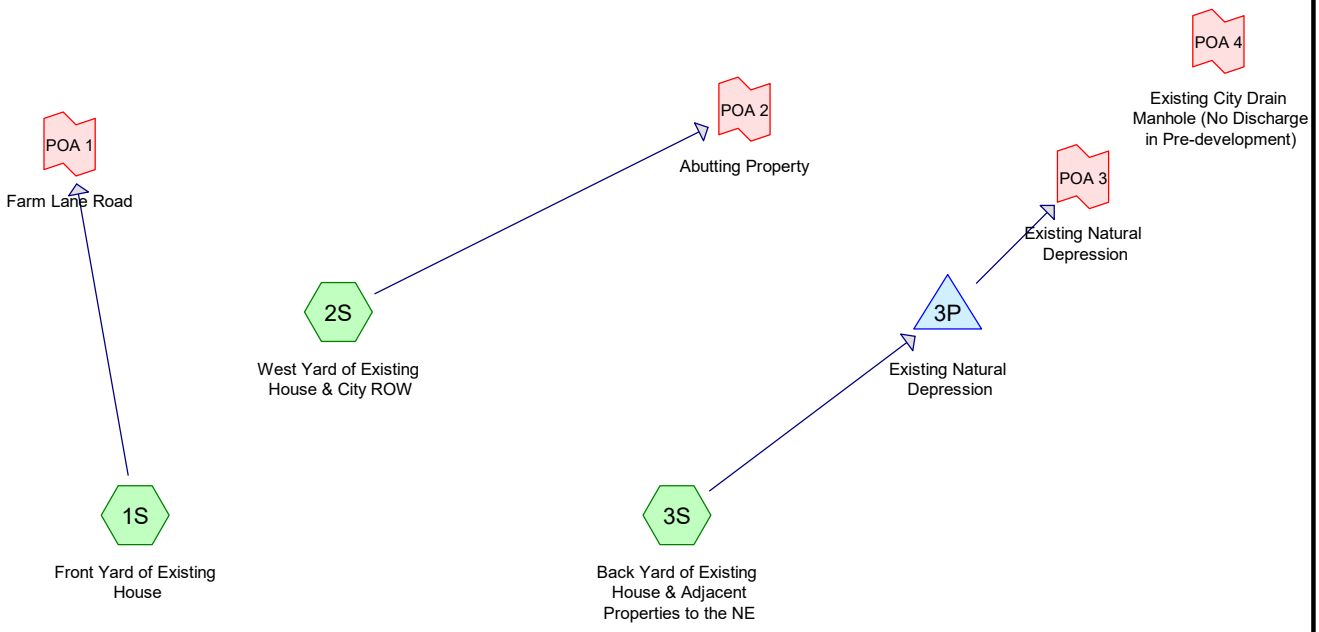
Summary for Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)





Subcat Reach Pond Link

Routing Diagram for 5719-PRE
Prepared by Altus Engineering, Printed 2/10/2026

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Front Yard of Existing Runoff Area=18,227 sf 43.70% Impervious Runoff Depth=3.06"
Flow Length=296' Tc=6.0 min CN=64 Runoff=1.49 cfs 0.107 af

Subcatchment 2S: West Yard of Existing Runoff Area=10,114 sf 11.00% Impervious Runoff Depth=1.03"
Flow Length=215' Tc=6.0 min CN=42 Runoff=0.18 cfs 0.020 af

Subcatchment 3S: Back Yard of Existing Runoff Area=69,276 sf 11.36% Impervious Runoff Depth=1.11"
Flow Length=407' Tc=6.0 min CN=43 Runoff=1.43 cfs 0.147 af

Pond 3P: Existing Natural Depression Peak Elev=39.69' Storage=2,257 cf Inflow=1.43 cfs 0.147 af
Outflow=0.18 cfs 0.147 af

Link POA 1: Farm Lane Road Inflow=1.49 cfs 0.107 af
Primary=1.49 cfs 0.107 af

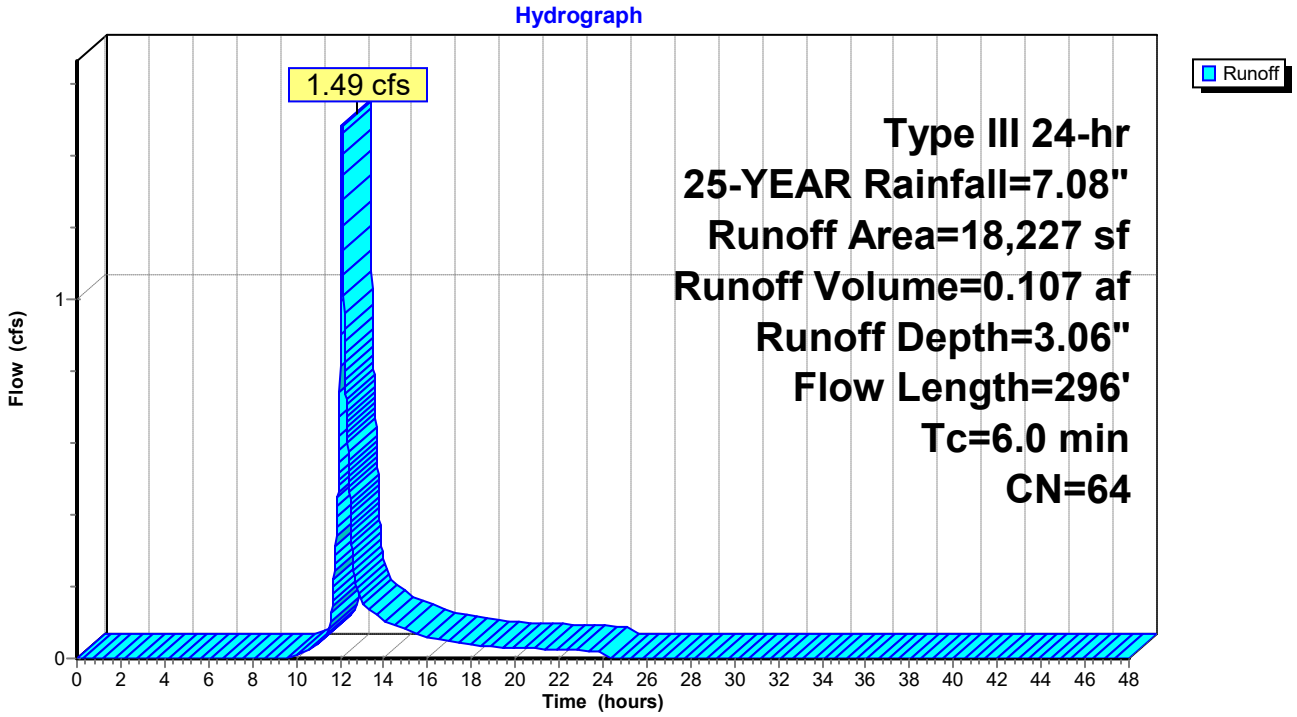
Link POA 2: Abutting Property Inflow=0.18 cfs 0.020 af
Primary=0.18 cfs 0.020 af

Link POA 3: Existing Natural Depression Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

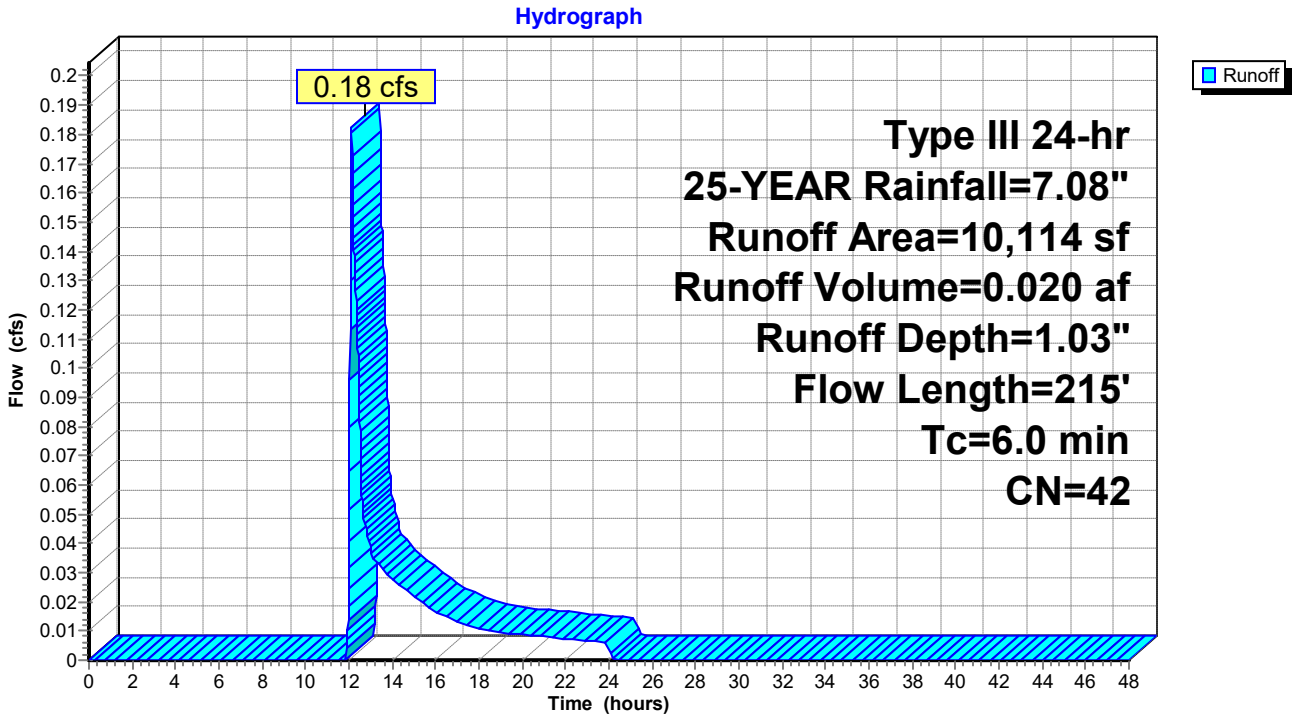
Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.241 ac Runoff Volume = 0.274 af Average Runoff Depth = 1.47"
82.64% Pervious = 1.852 ac 17.36% Impervious = 0.389 ac

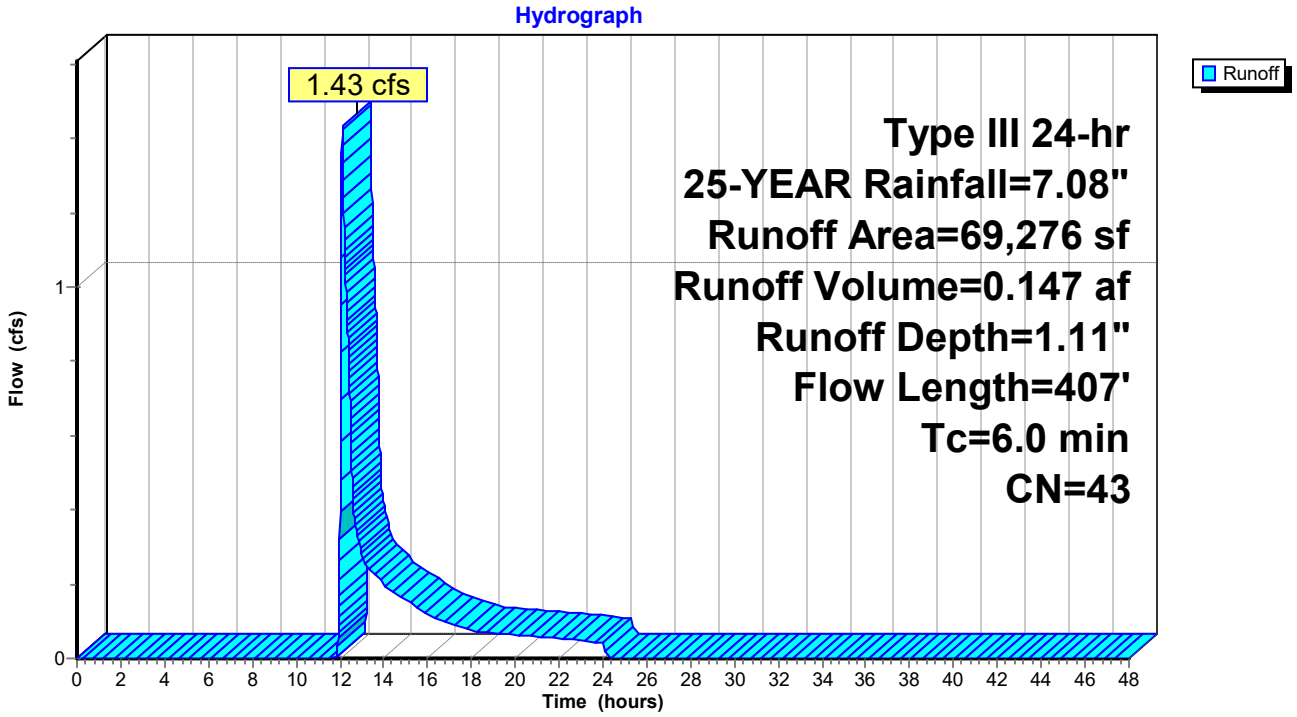
Subcatchment 1S: Front Yard of Existing House



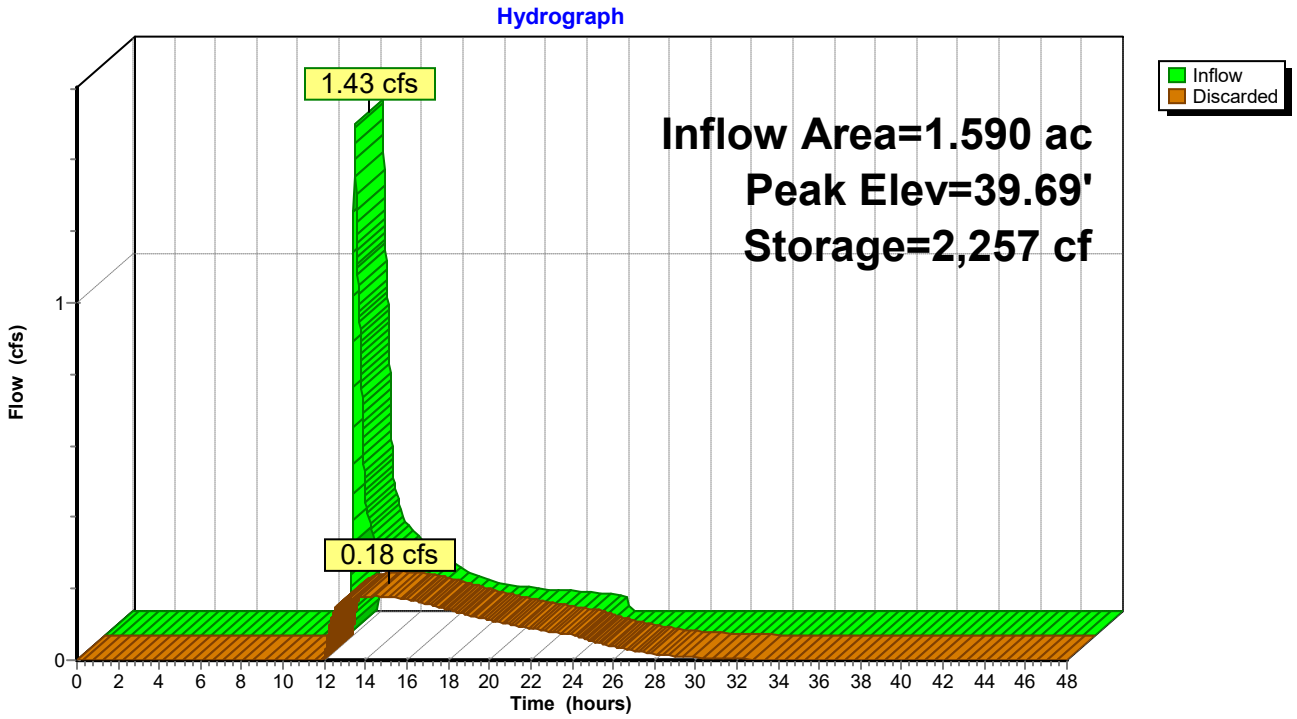
Subcatchment 2S: West Yard of Existing House & City ROW



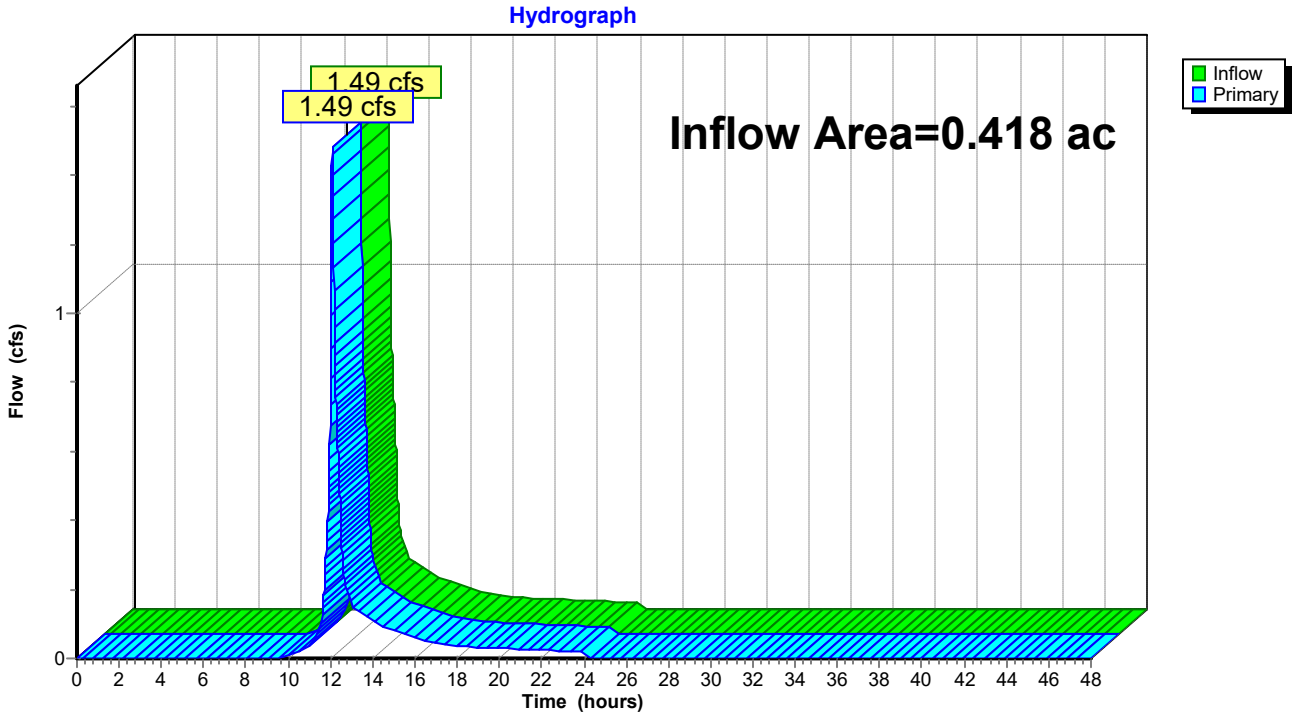
Subcatchment 3S: Back Yard of Existing House & Adjacent Properties to the NE



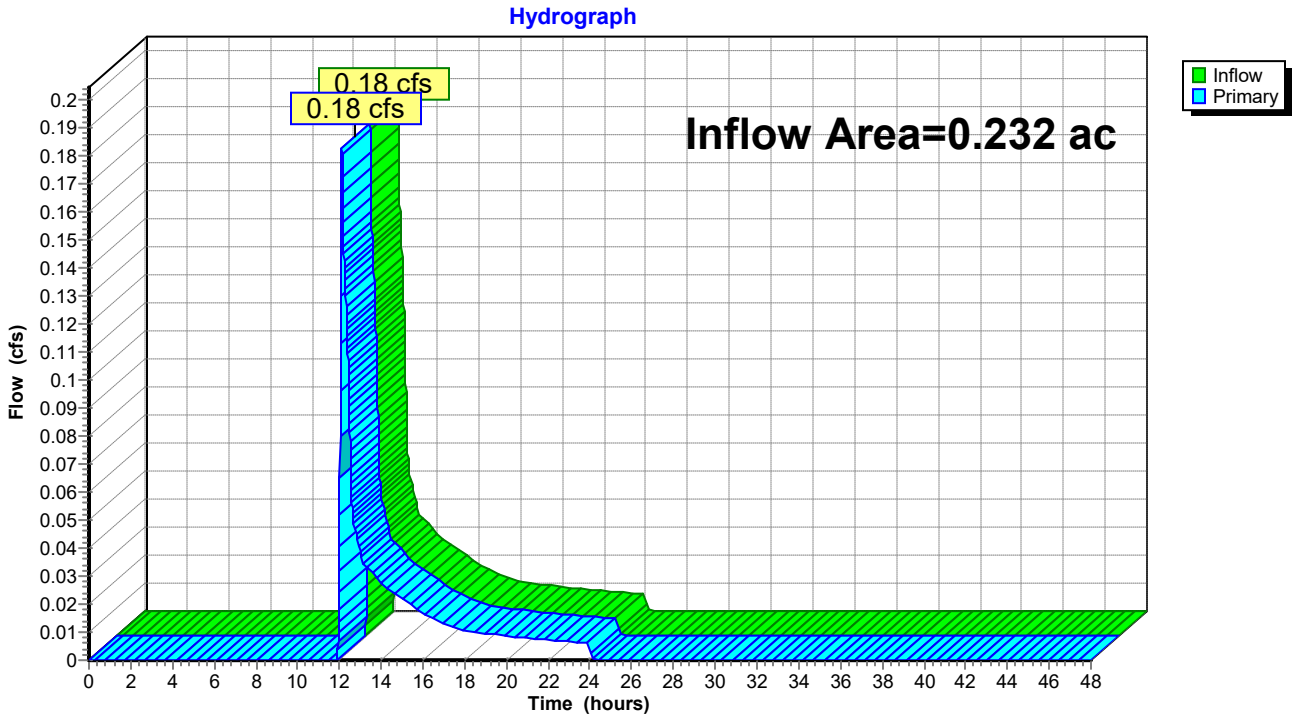
Pond 3P: Existing Natural Depression



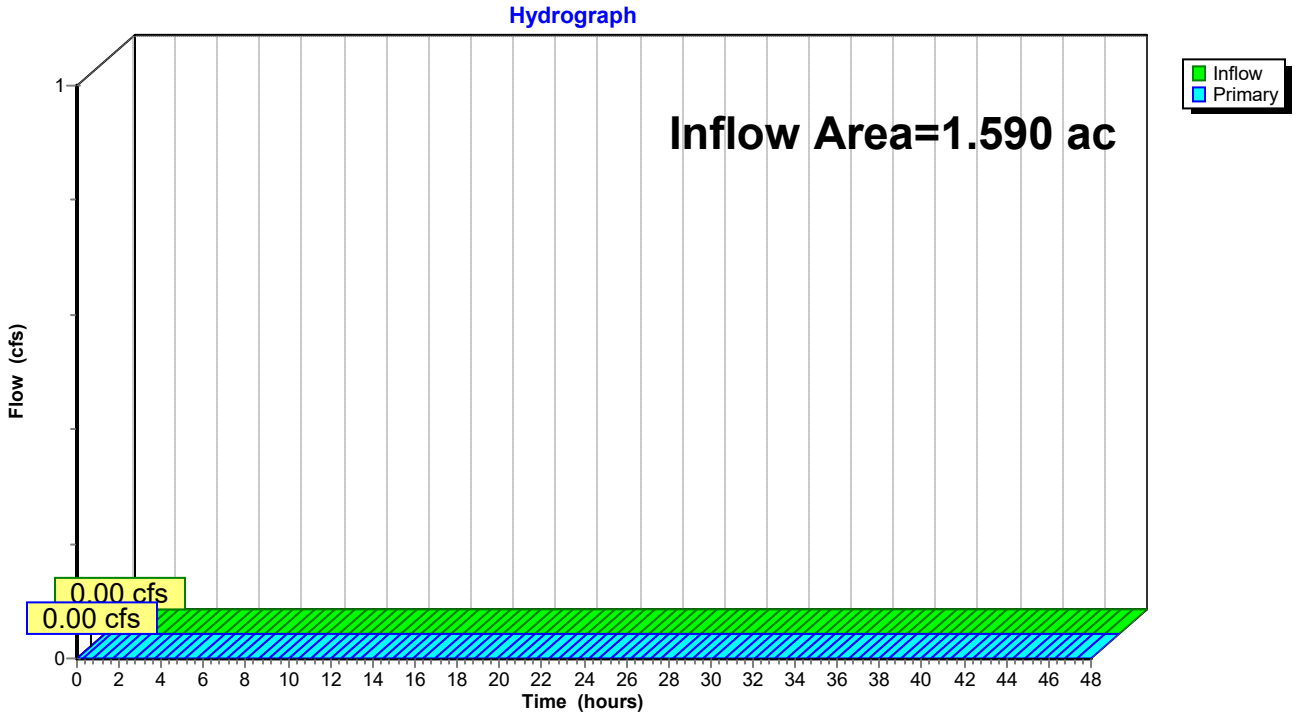
Link POA 1: Farm Lane Road



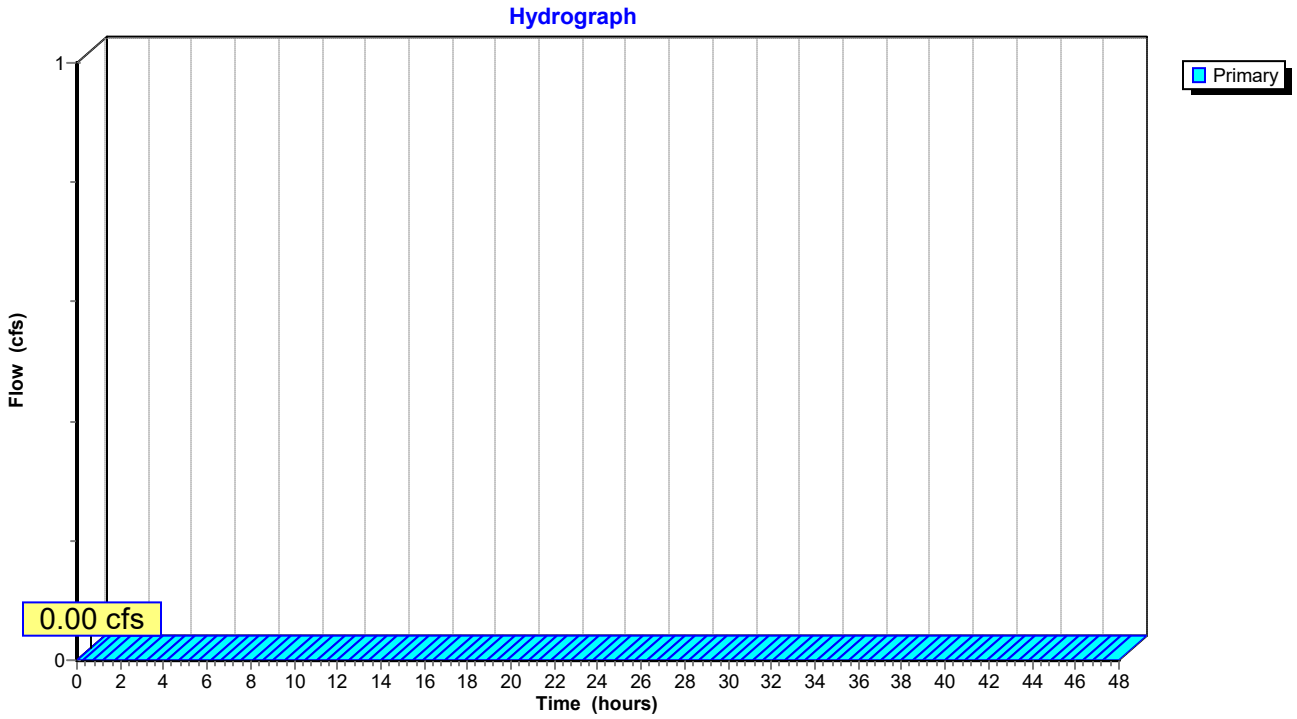
Link POA 2: Abutting Property



Link POA 3: Existing Natural Depression



Link POA 4: Existing City Drain Manhole (No Discharge in Pre-development)



Section 4

Drainage Calculations

Post-Development:
2-Year, 24-Hour Summary
10-Year, 24-Hour Complete
25-Year, 24-Hour Summary

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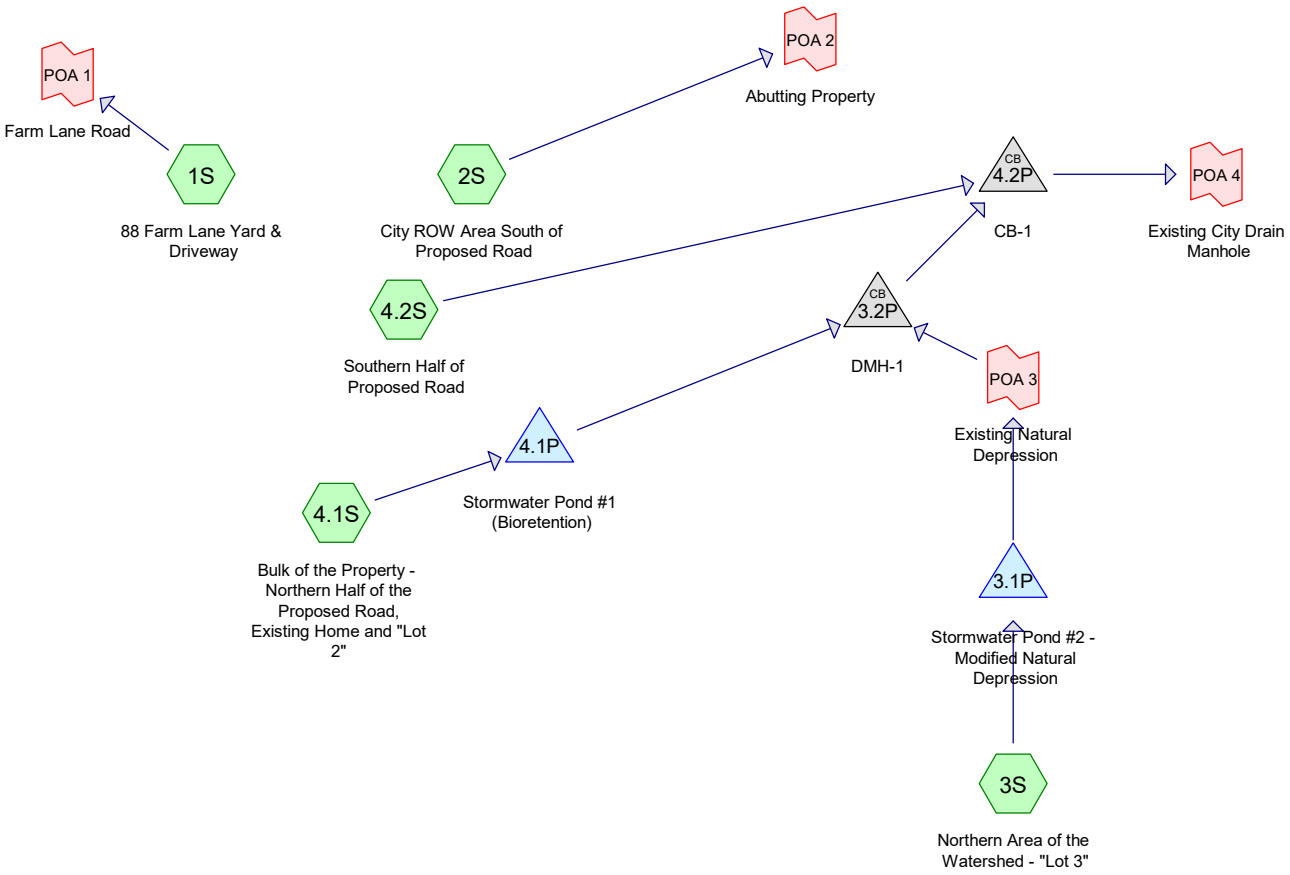


Subcat Reach Pond Link

Routing Diagram for 5719-POST
Prepared by Altus Engineering, Printed 3/23/2026

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: 88 Farm Lane Yard & Runoff Area=1,046 sf 57.07% Impervious Runoff Depth=0.80"
Flow Length=25' Tc=6.0 min CN=71 Runoff=0.02 cfs 0.002 af

Subcatchment 2S: City ROW Area South of Runoff Area=5,093 sf 6.11% Impervious Runoff Depth=0.00"
Flow Length=136' Tc=6.4 min CN=41 Runoff=0.00 cfs 0.000 af

Subcatchment 3S: Northern Area of the Runoff Area=31,903 sf 14.85% Impervious Runoff Depth=0.02"
Flow Length=251' Tc=6.0 min CN=44 Runoff=0.00 cfs 0.001 af

Subcatchment 4.1S: Bulk of the Property - Runoff Area=55,097 sf 29.76% Impervious Runoff Depth=0.21"
Flow Length=370' Tc=6.0 min CN=55 Runoff=0.10 cfs 0.022 af

Subcatchment 4.2S: Southern Half of Runoff Area=4,478 sf 74.39% Impervious Runoff Depth=1.50"
Flow Length=283' Tc=6.0 min CN=83 Runoff=0.18 cfs 0.013 af

Pond 3.1P: Stormwater Pond #2 - Modified Peak Elev=38.00' Storage=34 cf Inflow=0.00 cfs 0.001 af
Discarded=0.00 cfs 0.002 af Primary=0.00 cfs 0.000 af Outflow=0.00 cfs 0.002 af

Pond 3.2P: DMH-1 Peak Elev=34.79' Inflow=0.03 cfs 0.022 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0063 '/' Outflow=0.03 cfs 0.022 af

Pond 4.1P: Stormwater Pond #1 (Bioretention) Peak Elev=41.51' Storage=439 cf Inflow=0.10 cfs 0.022 af
Outflow=0.03 cfs 0.022 af

Pond 4.2P: CB-1 Peak Elev=34.63' Inflow=0.18 cfs 0.035 af
12.0" Round Culvert n=0.012 L=160.0' S=0.0050 '/' Outflow=0.18 cfs 0.035 af

Link POA 1: Farm Lane Road Inflow=0.02 cfs 0.002 af
Primary=0.02 cfs 0.002 af

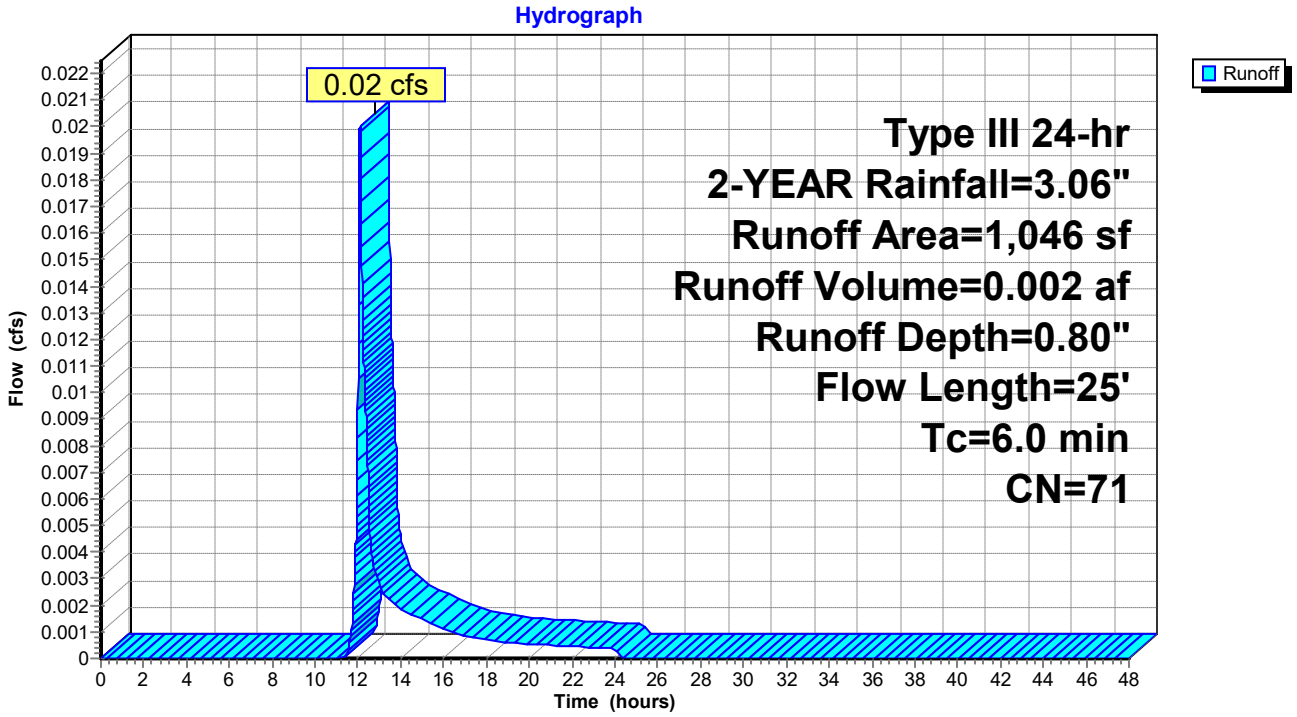
Link POA 2: Abutting Property Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link POA 3: Existing Natural Depression Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

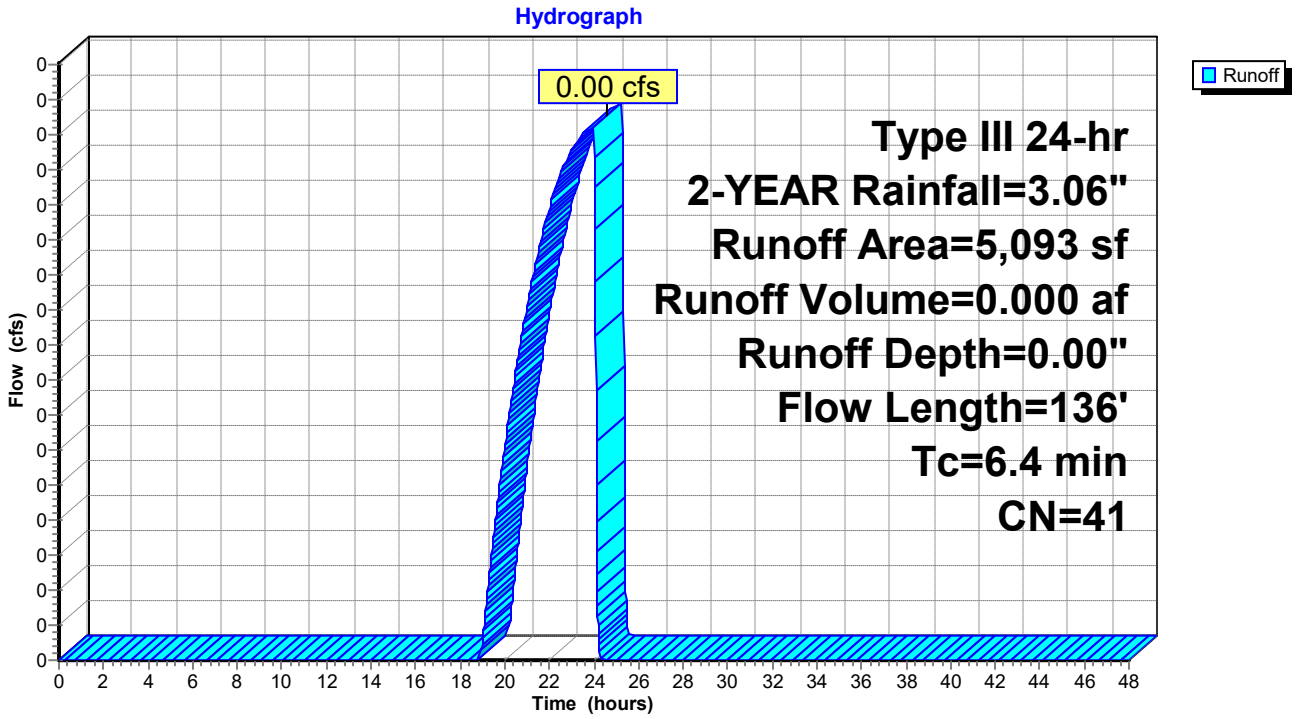
Link POA 4: Existing City Drain Manhole Inflow=0.18 cfs 0.035 af
Primary=0.18 cfs 0.035 af

Total Runoff Area = 2.241 ac Runoff Volume = 0.038 af Average Runoff Depth = 0.20"
74.01% Pervious = 1.658 ac 25.99% Impervious = 0.583 ac

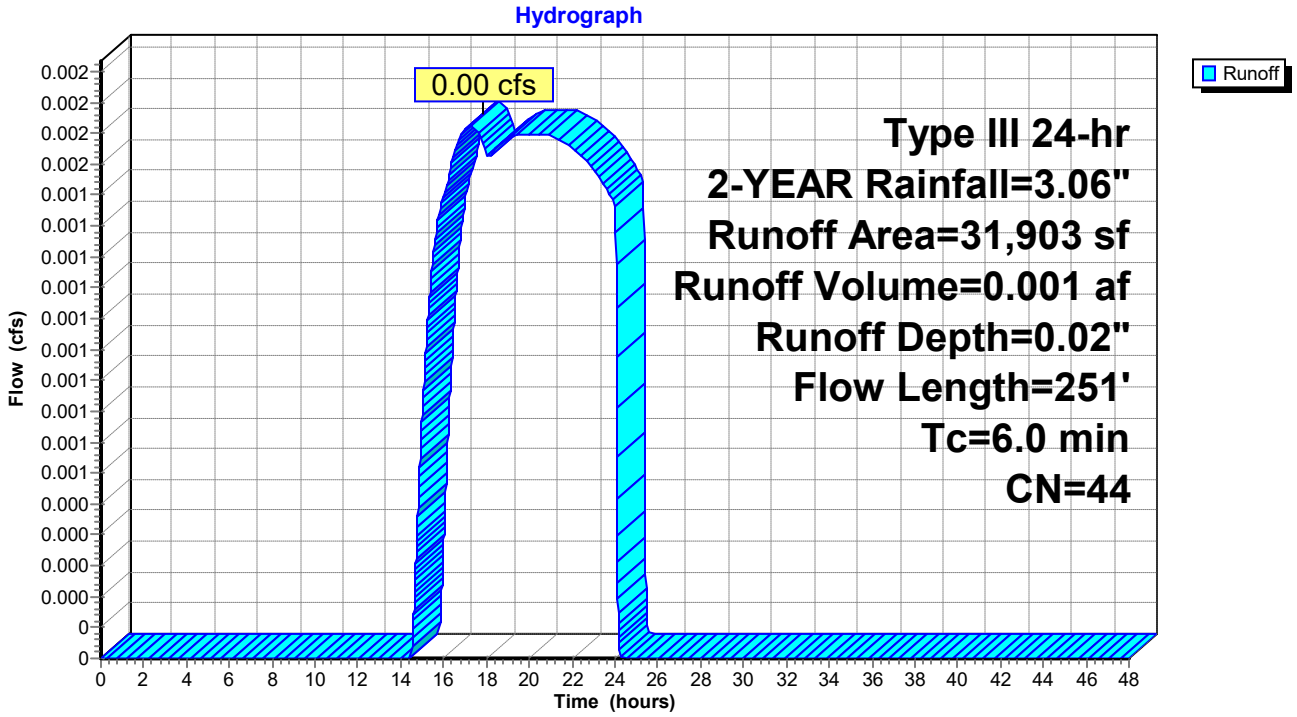
Subcatchment 1S: 88 Farm Lane Yard & Driveway



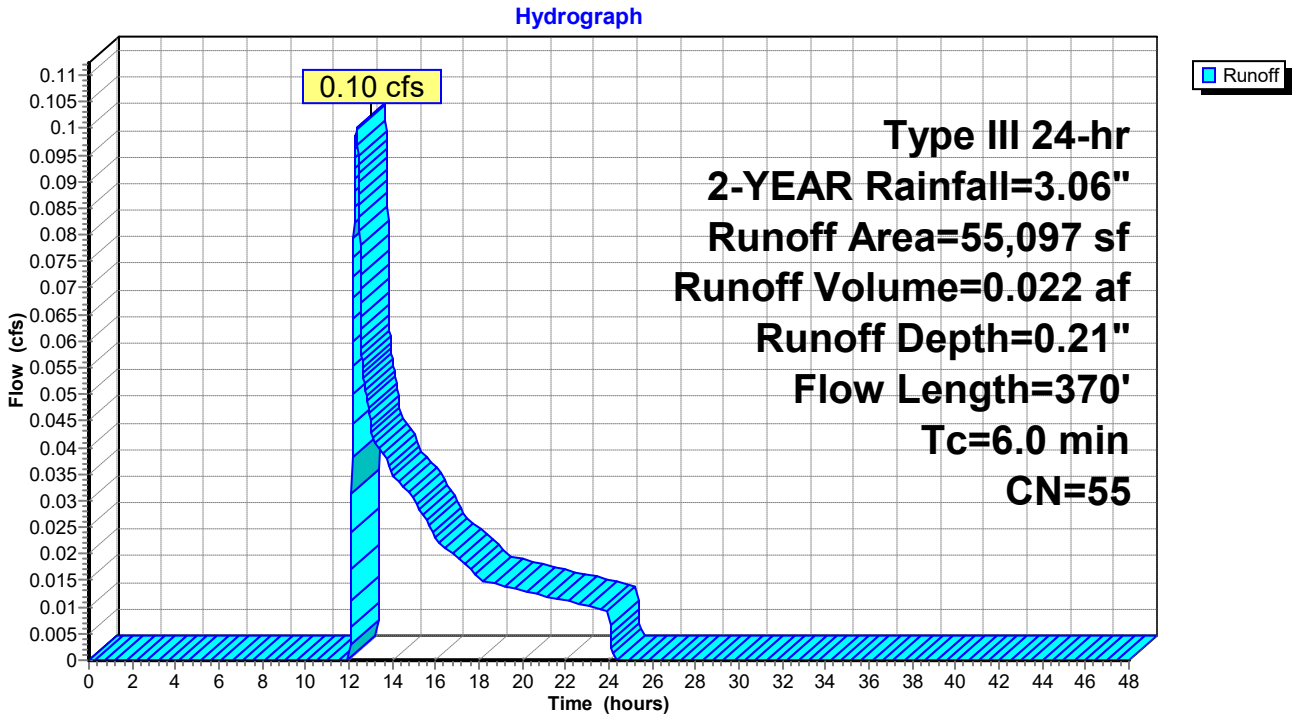
Subcatchment 2S: City ROW Area South of Proposed Road



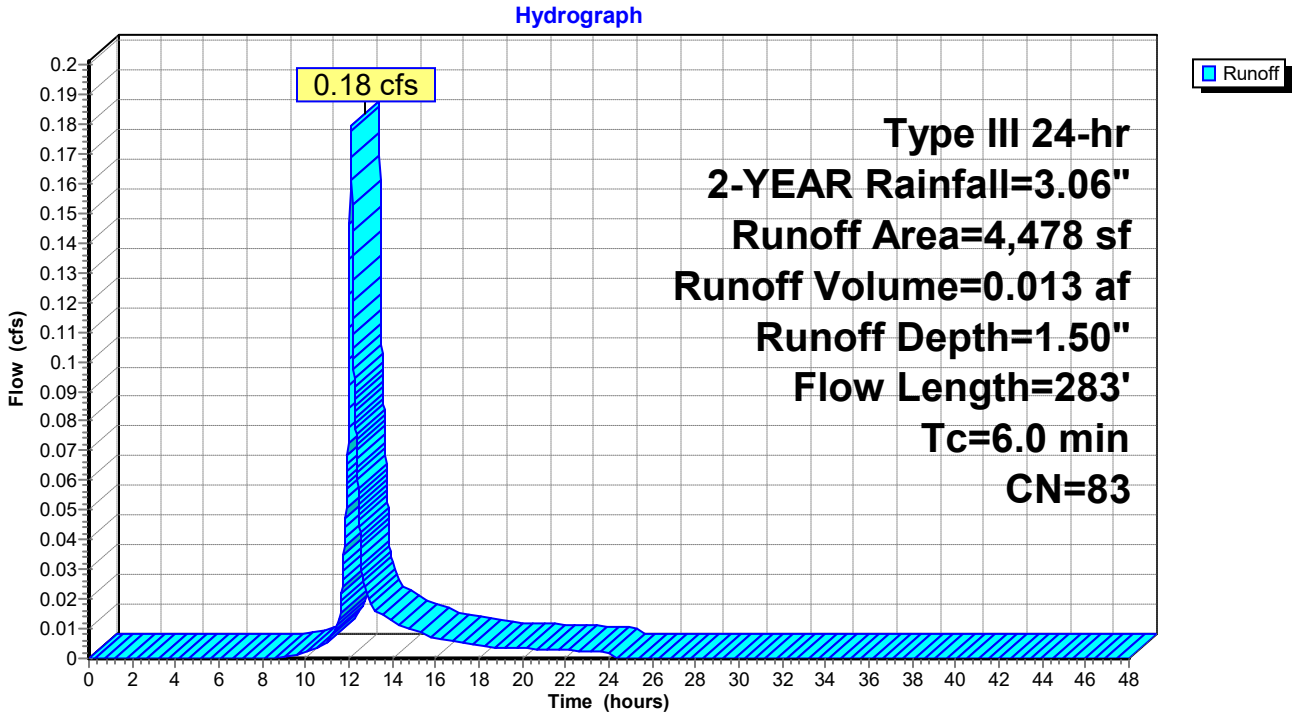
Subcatchment 3S: Northern Area of the Watershed - "Lot 3"



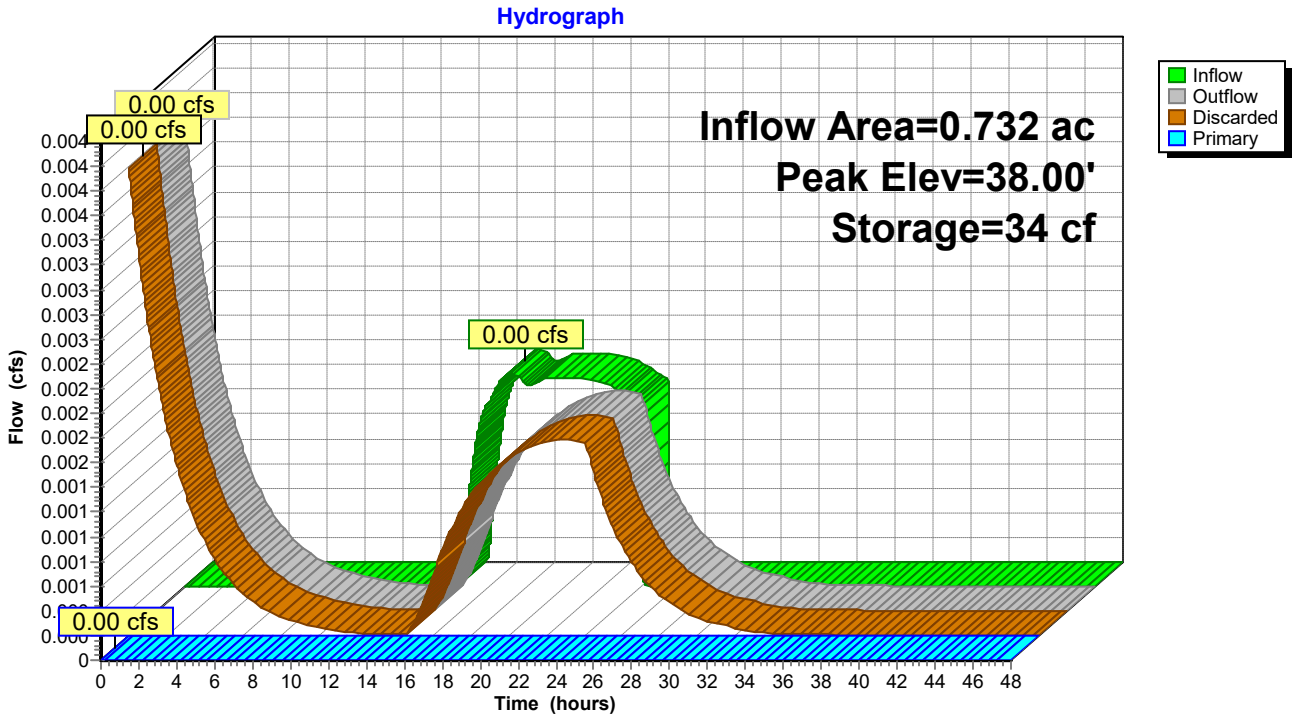
Subcatchment 4.1S: Bulk of the Property - Northern Half of the Proposed Road, Existing Home and "Lot 2"



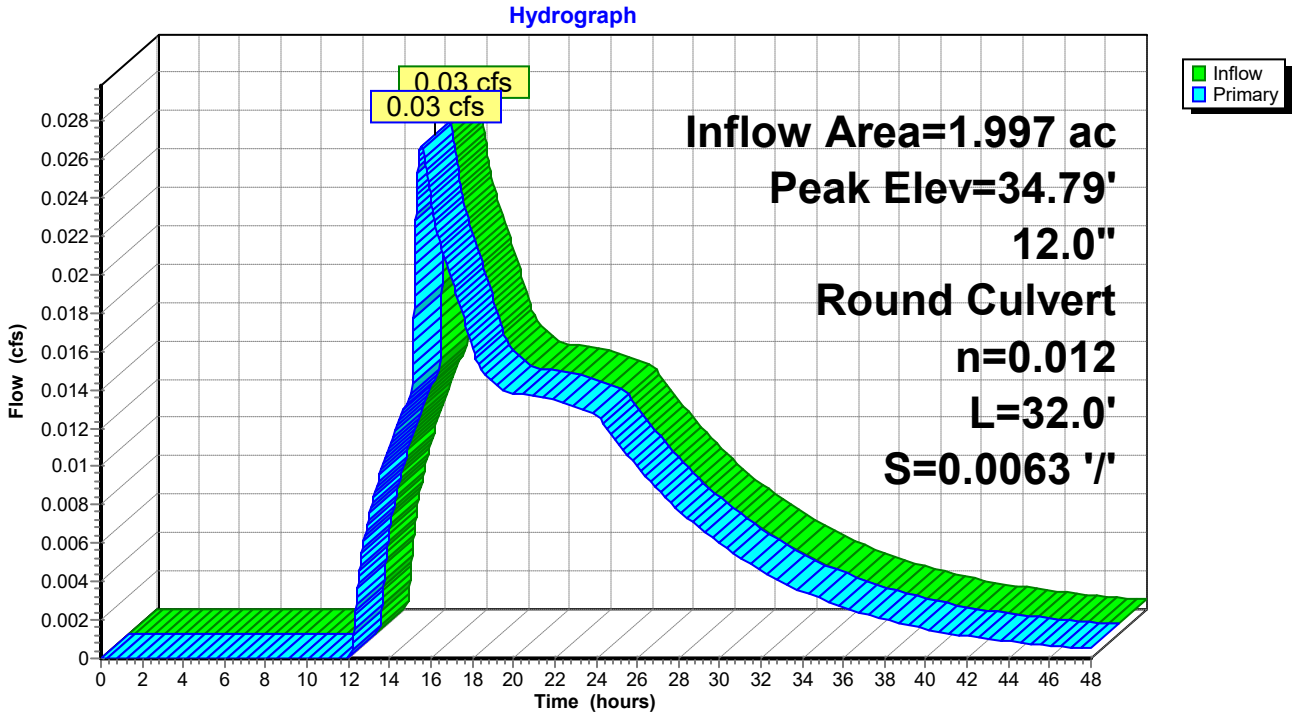
Subcatchment 4.2S: Southern Half of Proposed Road



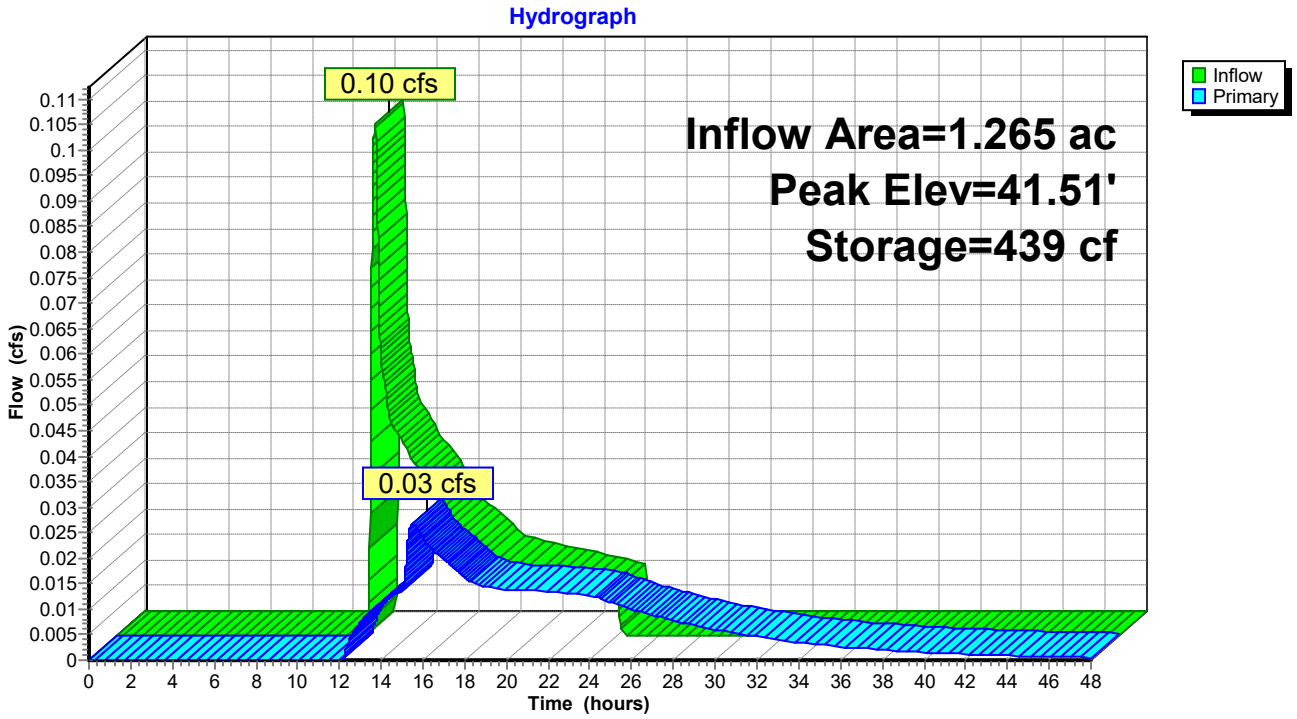
Pond 3.1P: Stormwater Pond #2 - Modified Natural Depression



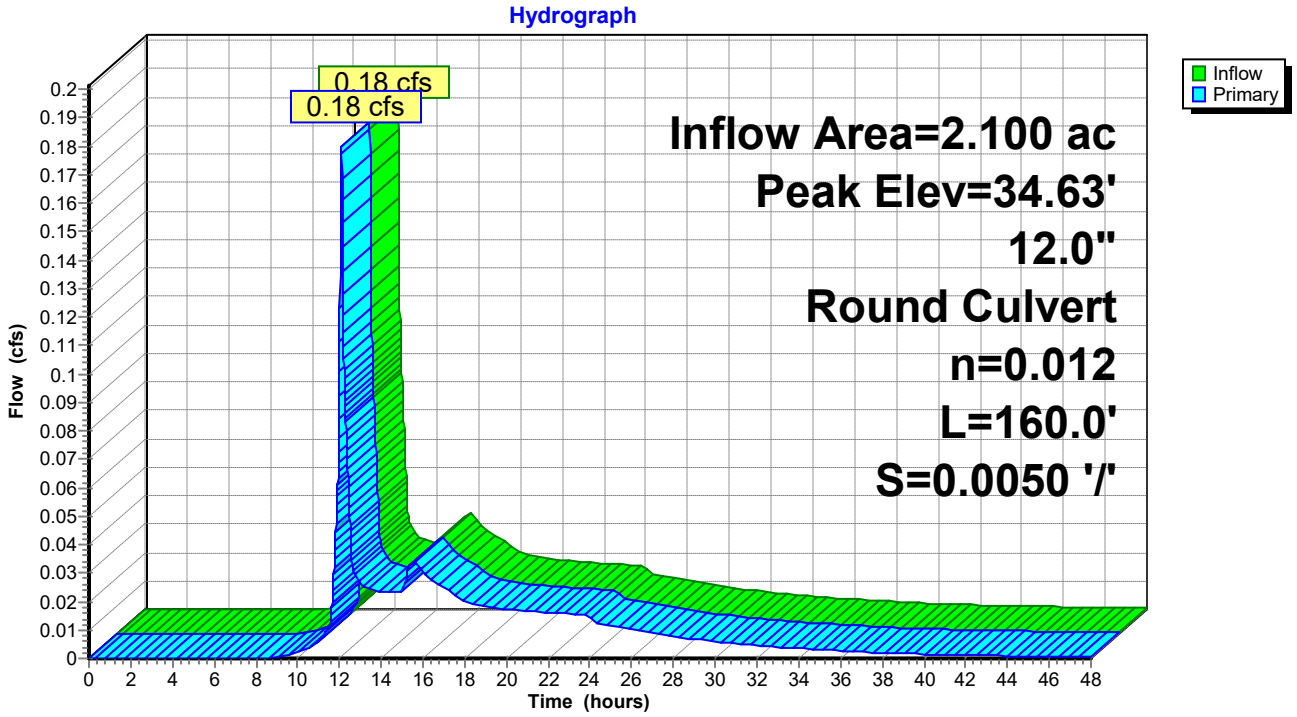
Pond 3.2P: DMH-1



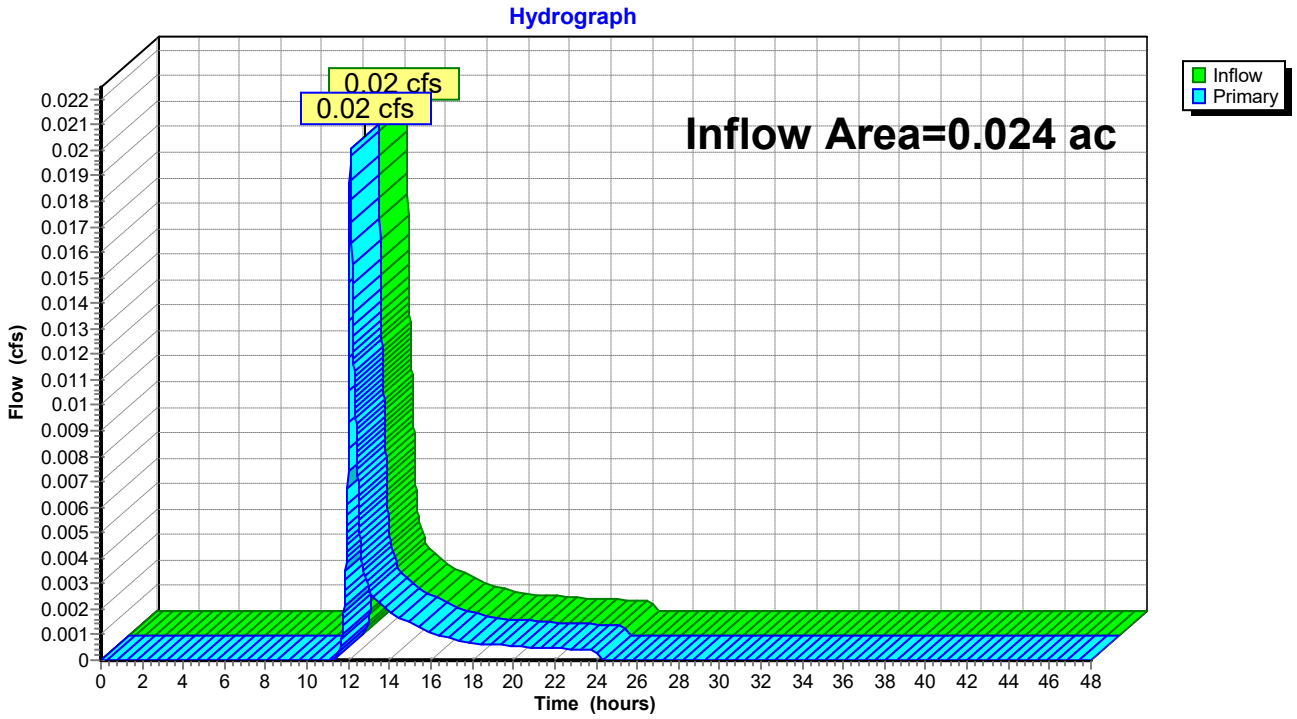
Pond 4.1P: Stormwater Pond #1 (Bioretention)



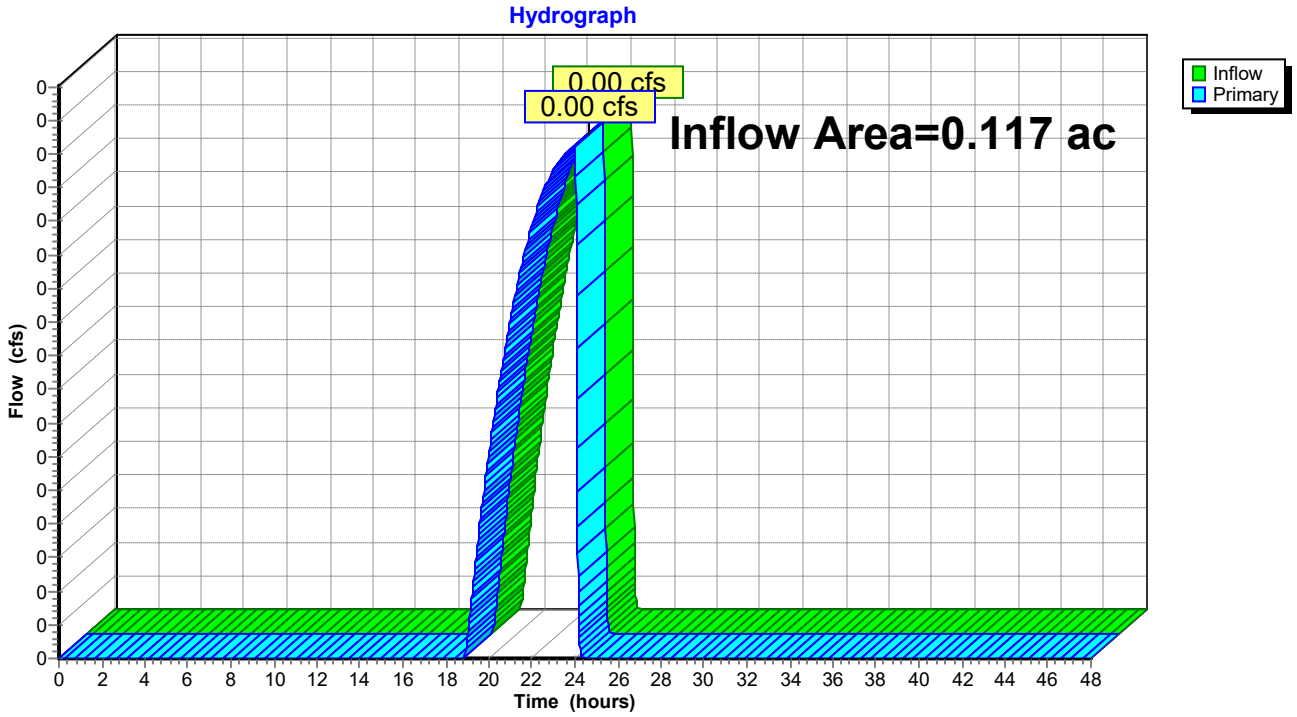
Pond 4.2P: CB-1



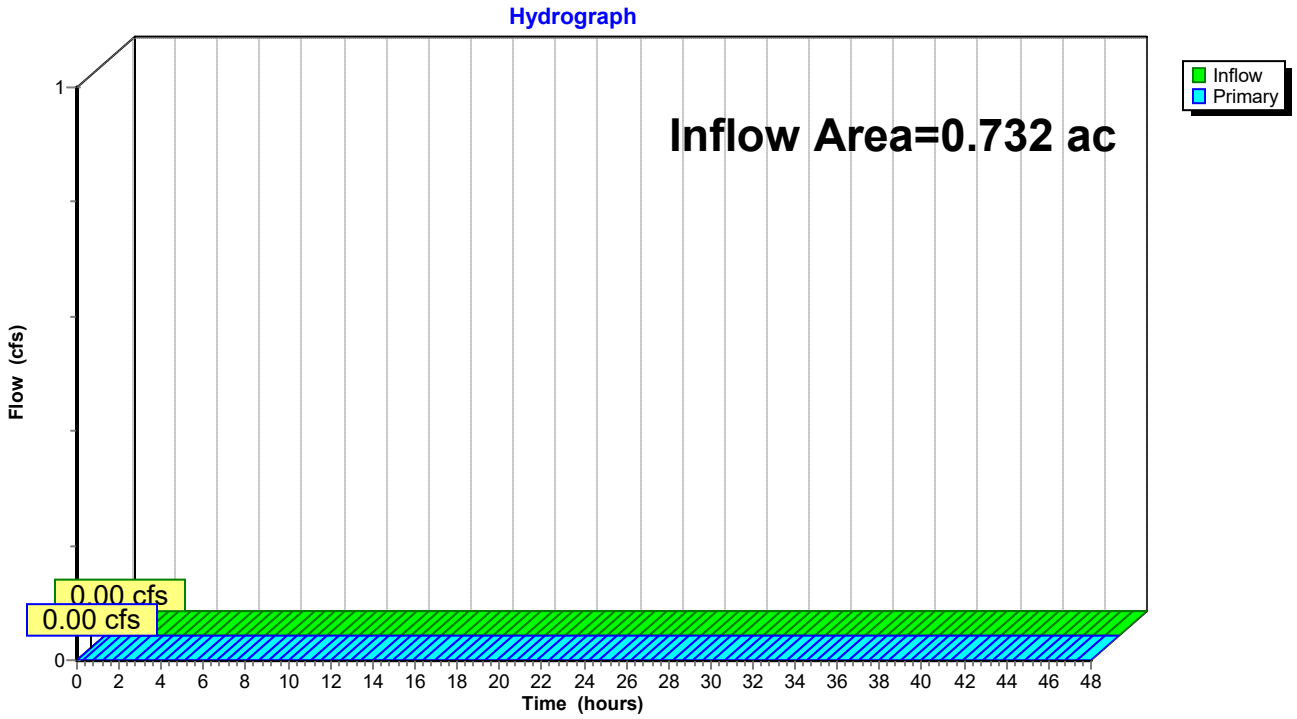
Link POA 1: Farm Lane Road



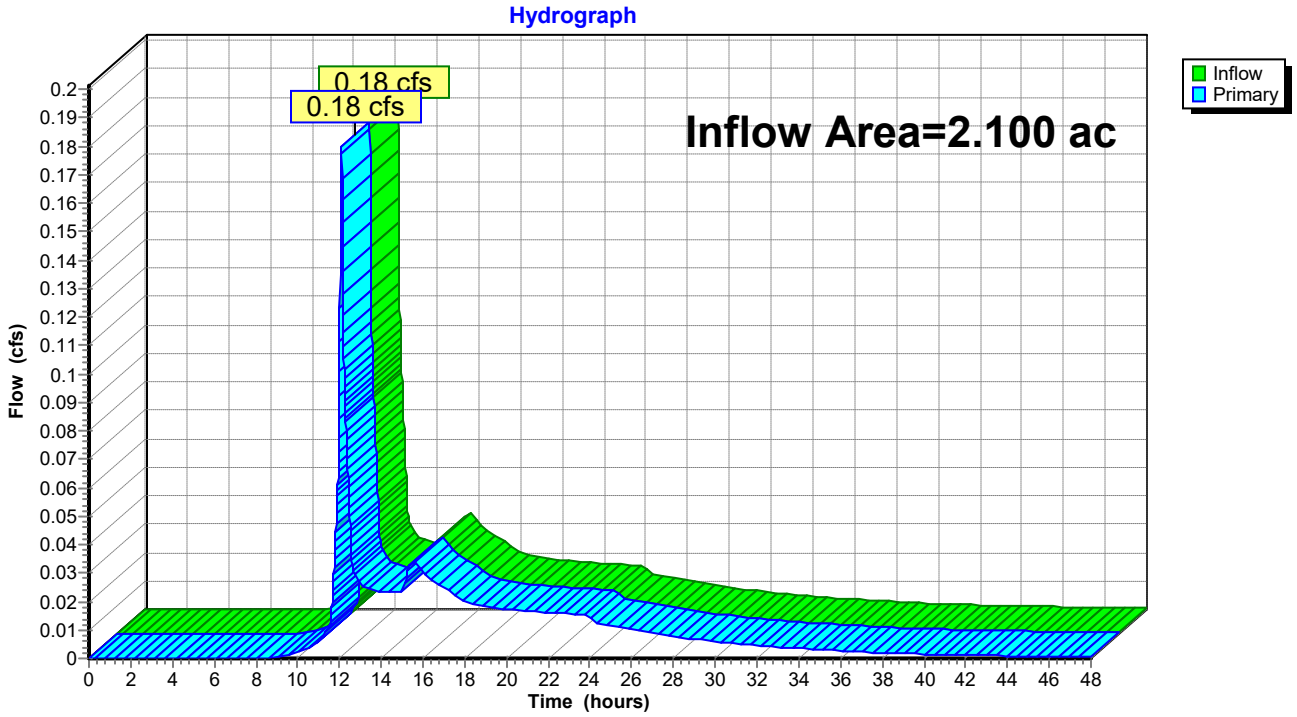
Link POA 2: Abutting Property

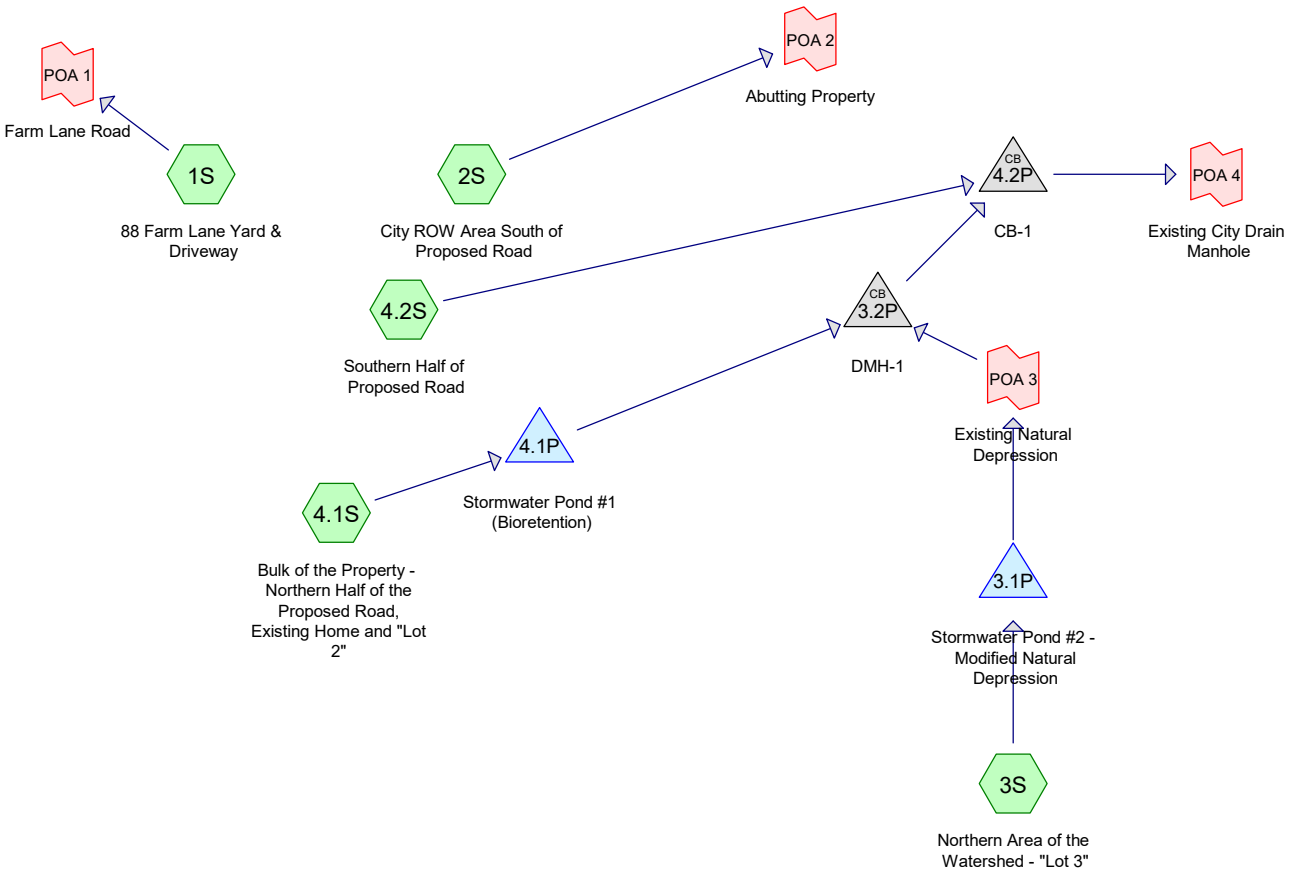


Link POA 3: Existing Natural Depression



Link POA 4: Existing City Drain Manhole





Subcat Reach Pond Link

Routing Diagram for 5719-POST
Prepared by Altus Engineering, Printed 3/23/2026

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.163	39	>75% Grass cover, Good, HSG A (1S, 2S, 3S, 4.1S, 4.2S)
0.355	98	Paved parking, HSG A (1S, 2S, 3S, 4.1S, 4.2S)
0.228	98	Roofs, HSG A (2S, 3S, 4.1S)
0.495	30	Woods, Good, HSG A (1S, 2S, 3S, 4.1S)
2.241	**52**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.241	HSG A	1S, 2S, 3S, 4.1S, 4.2S
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.241		**TOTAL AREA**

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: 88 Farm Lane Yard & Runoff Area=1,046 sf 57.07% Impervious Runoff Depth=2.57"
Flow Length=25' Tc=6.0 min CN=71 Runoff=0.07 cfs 0.005 af

Subcatchment 2S: City ROW Area South of Runoff Area=5,093 sf 6.11% Impervious Runoff Depth=0.43"
Flow Length=136' Tc=6.4 min CN=41 Runoff=0.02 cfs 0.004 af

Subcatchment 3S: Northern Area of the Runoff Area=31,903 sf 14.85% Impervious Runoff Depth=0.59"
Flow Length=251' Tc=6.0 min CN=44 Runoff=0.23 cfs 0.036 af

Subcatchment 4.1S: Bulk of the Property - Runoff Area=55,097 sf 29.76% Impervious Runoff Depth=1.29"
Flow Length=370' Tc=6.0 min CN=55 Runoff=1.64 cfs 0.136 af

Subcatchment 4.2S: Southern Half of Runoff Area=4,478 sf 74.39% Impervious Runoff Depth=3.71"
Flow Length=283' Tc=6.0 min CN=83 Runoff=0.44 cfs 0.032 af

Pond 3.1P: Stormwater Pond #2 - Modified Peak Elev=38.48' Storage=767 cf Inflow=0.23 cfs 0.036 af
Discarded=0.02 cfs 0.037 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.037 af

Pond 3.2P: DMH-1 Peak Elev=35.53' Inflow=1.49 cfs 0.135 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0063 '/' Outflow=1.49 cfs 0.135 af

Pond 4.1P: Stormwater Pond #1 (Bioretention) Peak Elev=41.74' Storage=653 cf Inflow=1.64 cfs 0.136 af
Outflow=1.49 cfs 0.135 af

Pond 4.2P: CB-1 Peak Elev=35.24' Inflow=1.86 cfs 0.167 af
12.0" Round Culvert n=0.012 L=160.0' S=0.0050 '/' Outflow=1.86 cfs 0.167 af

Link POA 1: Farm Lane Road Inflow=0.07 cfs 0.005 af
Primary=0.07 cfs 0.005 af

Link POA 2: Abutting Property Inflow=0.02 cfs 0.004 af
Primary=0.02 cfs 0.004 af

Link POA 3: Existing Natural Depression Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link POA 4: Existing City Drain Manhole Inflow=1.86 cfs 0.167 af
Primary=1.86 cfs 0.167 af

Total Runoff Area = 2.241 ac Runoff Volume = 0.213 af Average Runoff Depth = 1.14"
74.01% Pervious = 1.658 ac 25.99% Impervious = 0.583 ac

Summary for Subcatchment 1S: 88 Farm Lane Yard & Driveway

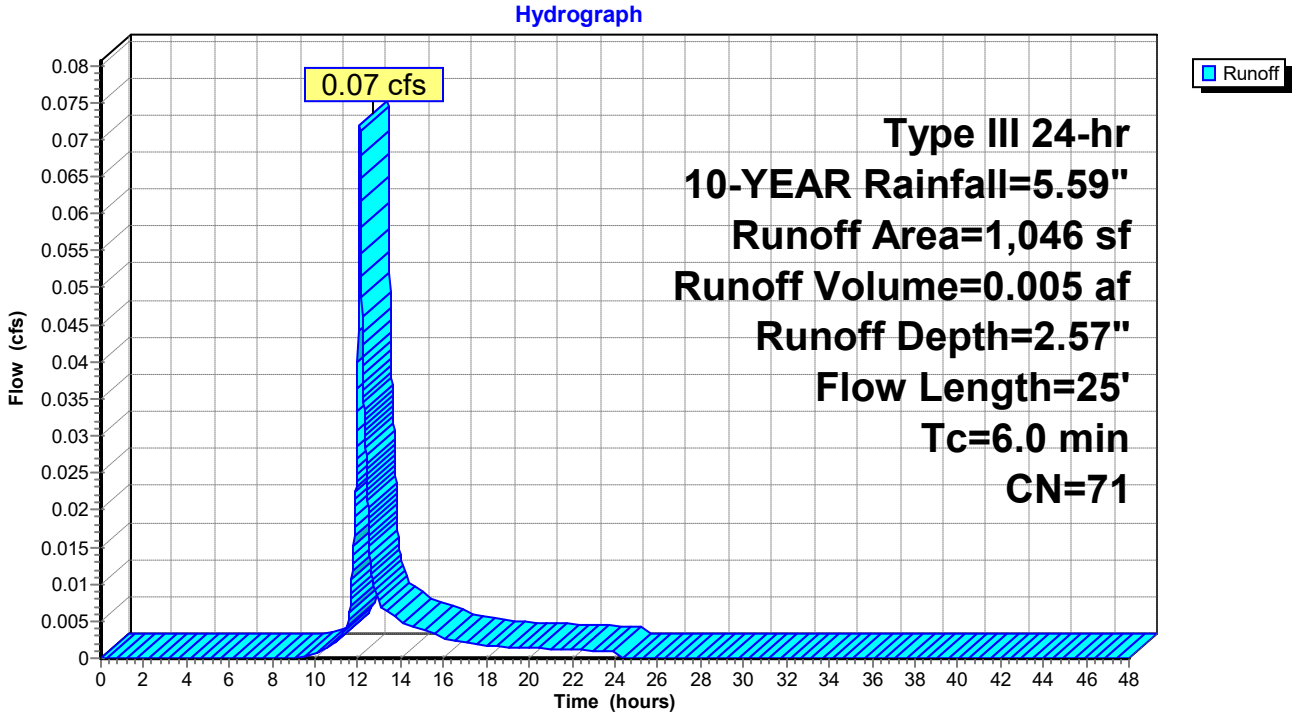
Runoff = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Depth= 2.57"
Routed to Link POA 1 : Farm Lane Road

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
0	98	Roofs, HSG A
597	98	Paved parking, HSG A
274	39	>75% Grass cover, Good, HSG A
175	30	Woods, Good, HSG A
1,046	71	Weighted Average
449		42.93% Pervious Area
597		57.07% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	14	0.0710	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.06"
0.1	11	0.0680	1.41		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.06"
2.8	25	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 1S: 88 Farm Lane Yard & Driveway



Summary for Subcatchment 2S: City ROW Area South of Proposed Road

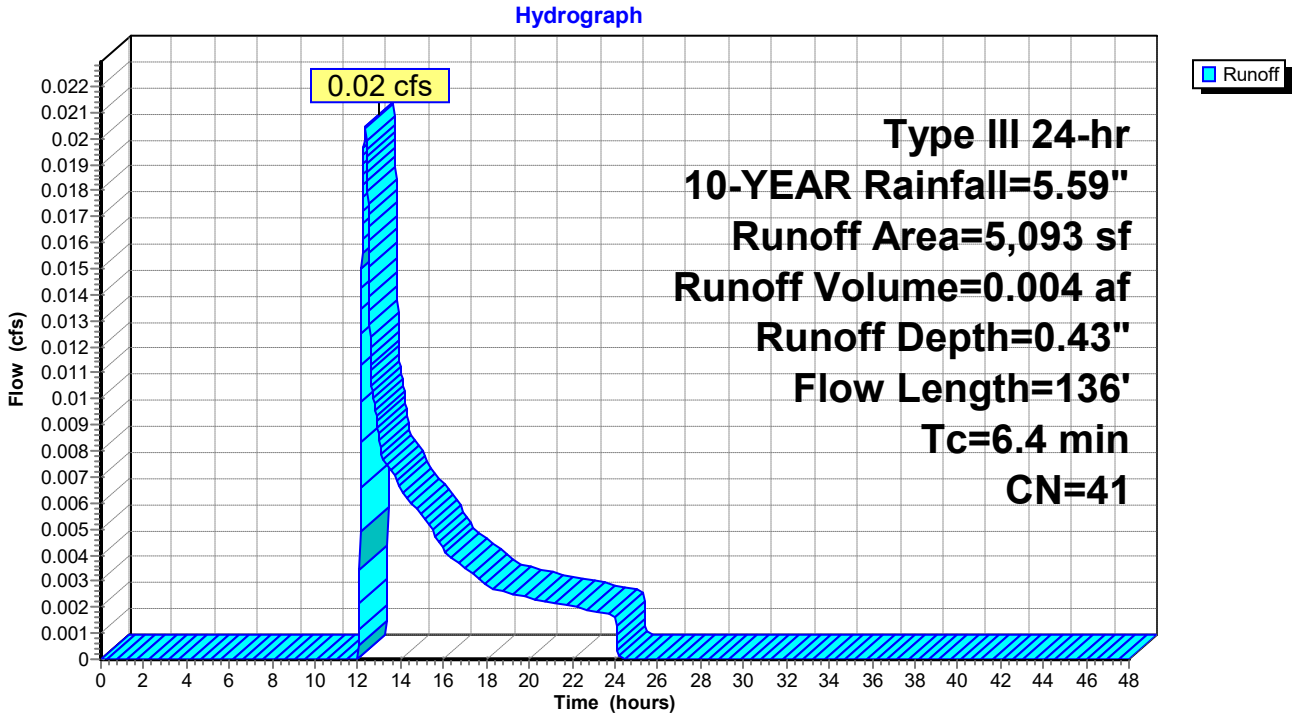
Runoff = 0.02 cfs @ 12.34 hrs, Volume= 0.004 af, Depth= 0.43"
Routed to Link POA 2 : Abutting Property

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
53	98	Roofs, HSG A
258	98	Paved parking, HSG A
4,029	39	>75% Grass cover, Good, HSG A
753	30	Woods, Good, HSG A
5,093	41	Weighted Average
4,782		93.89% Pervious Area
311		6.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	25	0.0400	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.06"
0.8	100	0.0880	2.08		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.1	11	0.1590	1.99		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
6.4	136	Total			

Subcatchment 2S: City ROW Area South of Proposed Road



Summary for Subcatchment 3S: Northern Area of the Watershed - "Lot 3"

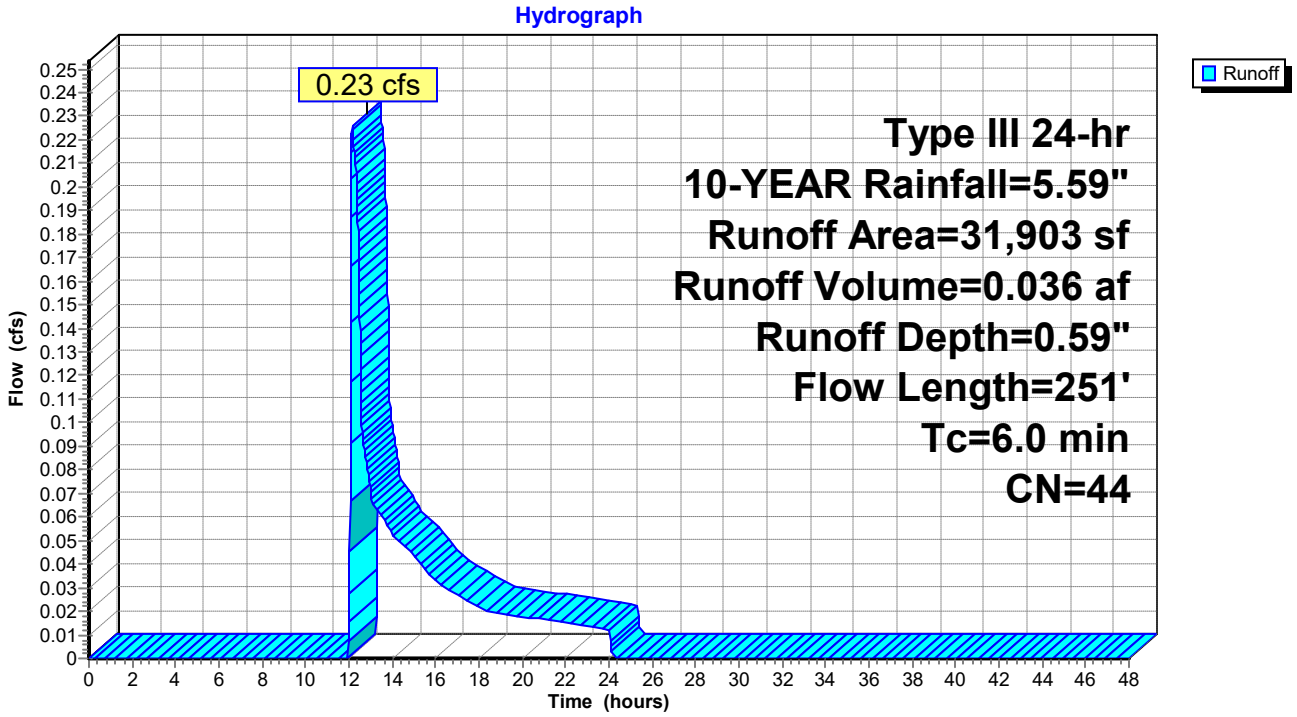
Runoff = 0.23 cfs @ 12.15 hrs, Volume= 0.036 af, Depth= 0.59"
Routed to Pond 3.1P : Stormwater Pond #2 - Modified Natural Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
3,001	98	Roofs, HSG A
1,736	98	Paved parking, HSG A
14,393	39	>75% Grass cover, Good, HSG A
12,773	30	Woods, Good, HSG A
31,903	44	Weighted Average
27,166		85.15% Pervious Area
4,737		14.85% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.3	23	0.1740	0.29		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.06"
0.6	73	0.0750	1.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	32	0.1330	1.82		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.6	60	0.0630	1.76		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.0	63	0.0440	1.05		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
3.8	251	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 3S: Northern Area of the Watershed - "Lot 3"



ary for Subcatchment 4.1S: Bulk of the Property - Northern Half of the Proposed Road, Existing Home and

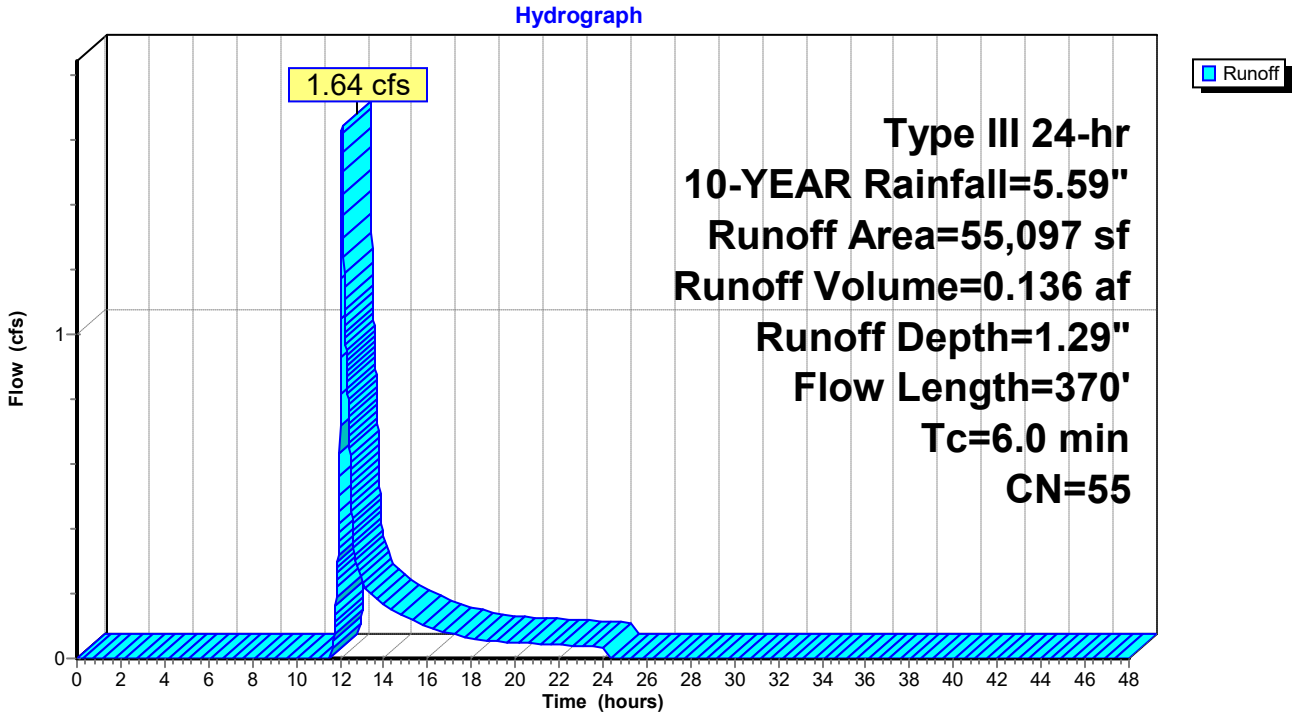
Runoff = 1.64 cfs @ 12.10 hrs, Volume= 0.136 af, Depth= 1.29"
Routed to Pond 4.1P : Stormwater Pond #1 (Bioretention)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
6,858	98	Roofs, HSG A
9,541	98	Paved parking, HSG A
30,832	39	>75% Grass cover, Good, HSG A
7,866	30	Woods, Good, HSG A
55,097	55	Weighted Average
38,698		70.24% Pervious Area
16,399		29.76% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.1	10	0.5000	3.08		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.06"
0.5	63	0.0990	2.20		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.5	42	0.0650	1.27		**Shallow Concentrated Flow,** Woodland Kv= 5.0 fps
0.4	50	0.0800	1.98		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	25	0.0400	1.40		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.4	36	0.0560	1.66		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
0.3	31	0.0810	1.99		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.1	113	0.0580	1.69		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
3.6	370	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 4.1S: Bulk of the Property - Northern Half of the Proposed Road, Existing Home and "Lot 2"



Summary for Subcatchment 4.2S: Southern Half of Proposed Road

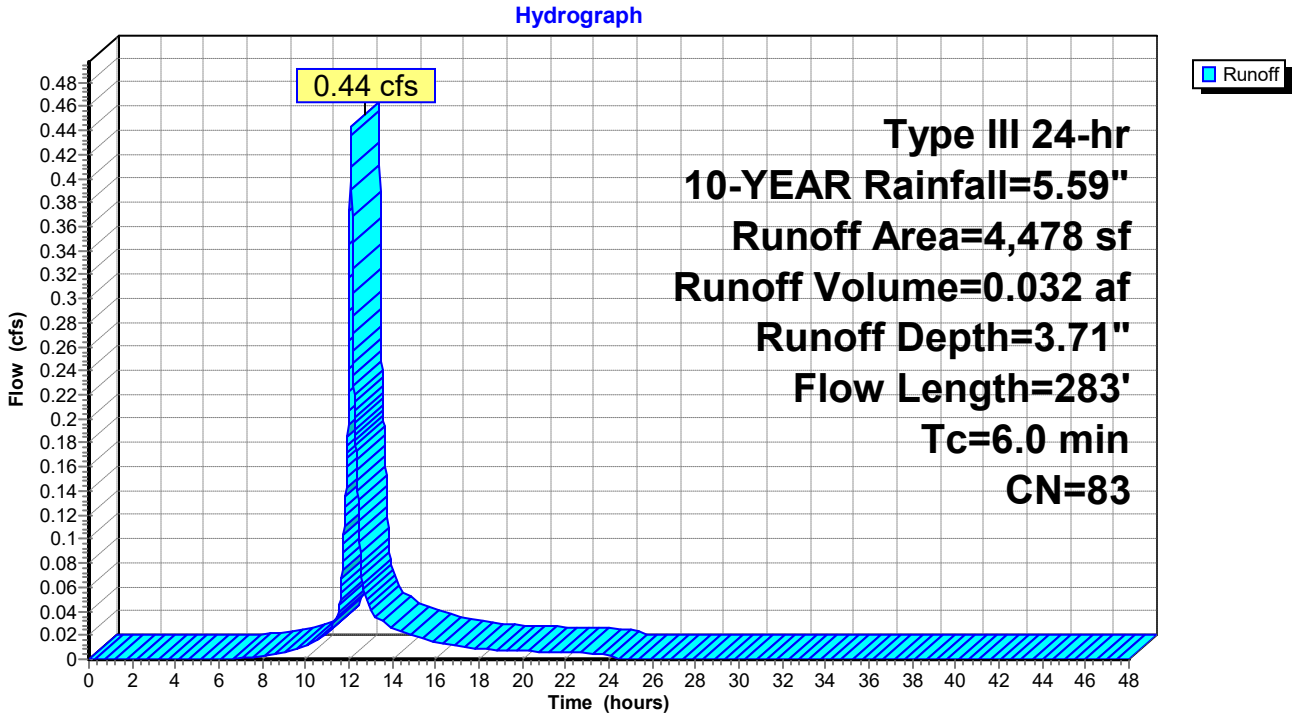
Runoff = 0.44 cfs @ 12.09 hrs, Volume= 0.032 af, Depth= 3.71"
Routed to Pond 4.2P : CB-1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-YEAR Rainfall=5.59"

Area (sf)	CN	Description
0	98	Roofs, HSG A
3,331	98	Paved parking, HSG A
1,147	39	>75% Grass cover, Good, HSG A
0	30	Woods, Good, HSG A
4,478	83	Weighted Average
1,147		25.61% Pervious Area
3,331		74.39% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.4	33	0.0300	1.27		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.06"
0.6	163	0.0490	4.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	87	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.5	283	Total, Increased to minimum Tc = 6.0 min			

Subcatchment 4.2S: Southern Half of Proposed Road



Summary for Pond 3.1P: Stormwater Pond #2 - Modified Natural Depression

Inflow Area = 0.732 ac, 14.85% Impervious, Inflow Depth = 0.59" for 10-YEAR event
Inflow = 0.23 cfs @ 12.15 hrs, Volume= 0.036 af
Outflow = 0.02 cfs @ 17.45 hrs, Volume= 0.037 af, Atten= 89%, Lag= 317.9 min
Discarded = 0.02 cfs @ 17.45 hrs, Volume= 0.037 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Link POA 3 : Existing Natural Depression

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Starting Elev= 38.00' Surf.Area= 1,364 sf Storage= 34 cf
Peak Elev= 38.48' @ 17.45 hrs Surf.Area= 1,716 sf Storage= 767 cf (733 cf above start)
Flood Elev= 41.00' Surf.Area= 4,608 sf Storage= 8,345 cf (8,311 cf above start)

Plug-Flow detention time= 464.5 min calculated for 0.036 af (100% of inflow)
Center-of-Mass det. time= 437.2 min (1,371.0 - 933.8)

Volume	Invert	Avail.Storage	Storage Description
#1	37.50'	8,345 cf	**Modified Existing Depression (Conic)** Listed below (Recalc)

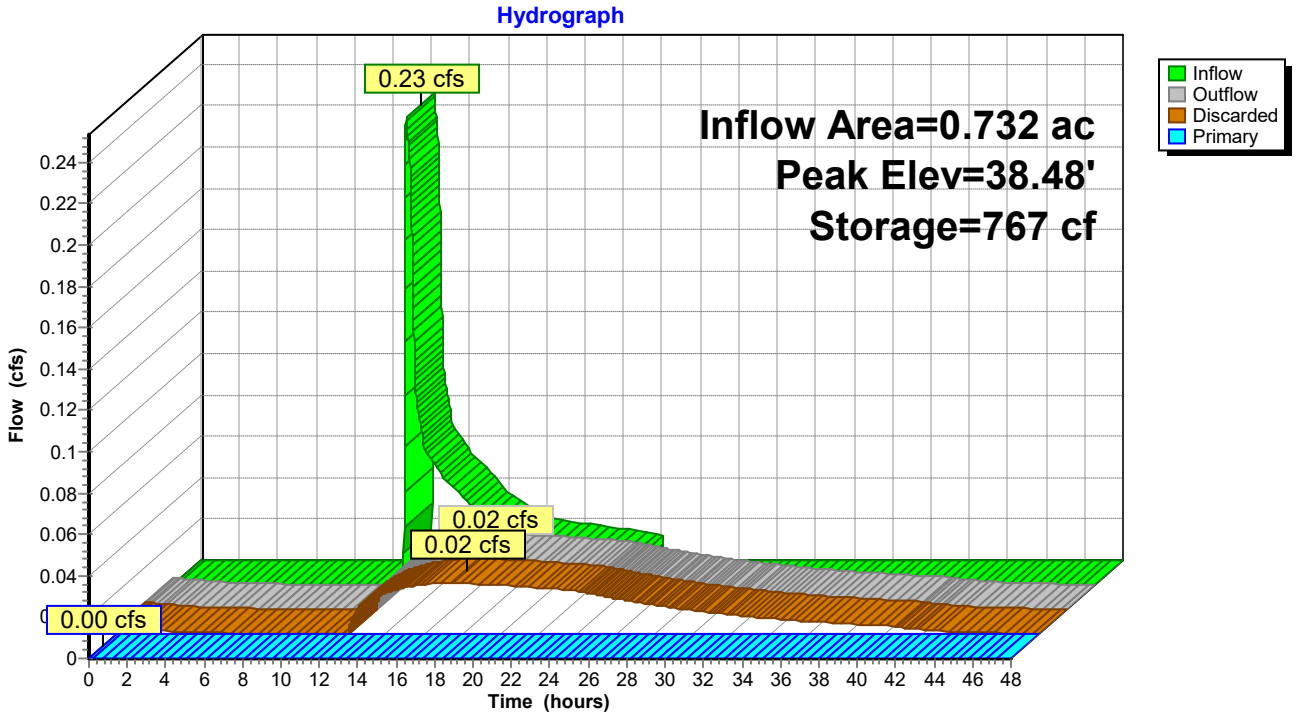
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
37.50	1,364	0.0	0	0	1,364
38.00	1,364	5.0	34	34	1,429
39.00	2,148	100.0	1,741	1,775	2,227
40.00	3,230	100.0	2,671	4,446	3,325
41.00	4,608	100.0	3,899	8,345	4,720

Device	Routing	Invert	Outlet Devices
#1	Discarded	37.50'	**2.500 in/hr Exfiltration through Media to Ground over Wetted area above 37.50'** Excluded Wetted area = 1,364 sf Phase-In= 0.01'
#2	Primary	37.50'	**12.0" Round Outlet to DMH-1 (Culvert)** L= 9.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 37.50' / 37.40' S= 0.0111 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#3	Device 2	39.50'	**15.0" Horiz. 15" Yard Drain Rim (Orifice)** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 17.45 hrs HW=38.48' (Free Discharge)
└**1=Exfiltration through Media to Ground** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=38.00' TW=0.00' (Dynamic Tailwater)
└**2=Outlet to DMH-1 (Culvert)** (Passes 0.00 cfs of 0.76 cfs potential flow)
└**3=15" Yard Drain Rim (Orifice)** (Controls 0.00 cfs)

Pond 3.1P: Stormwater Pond #2 - Modified Natural Depression



Summary for Pond 3.2P: DMH-1

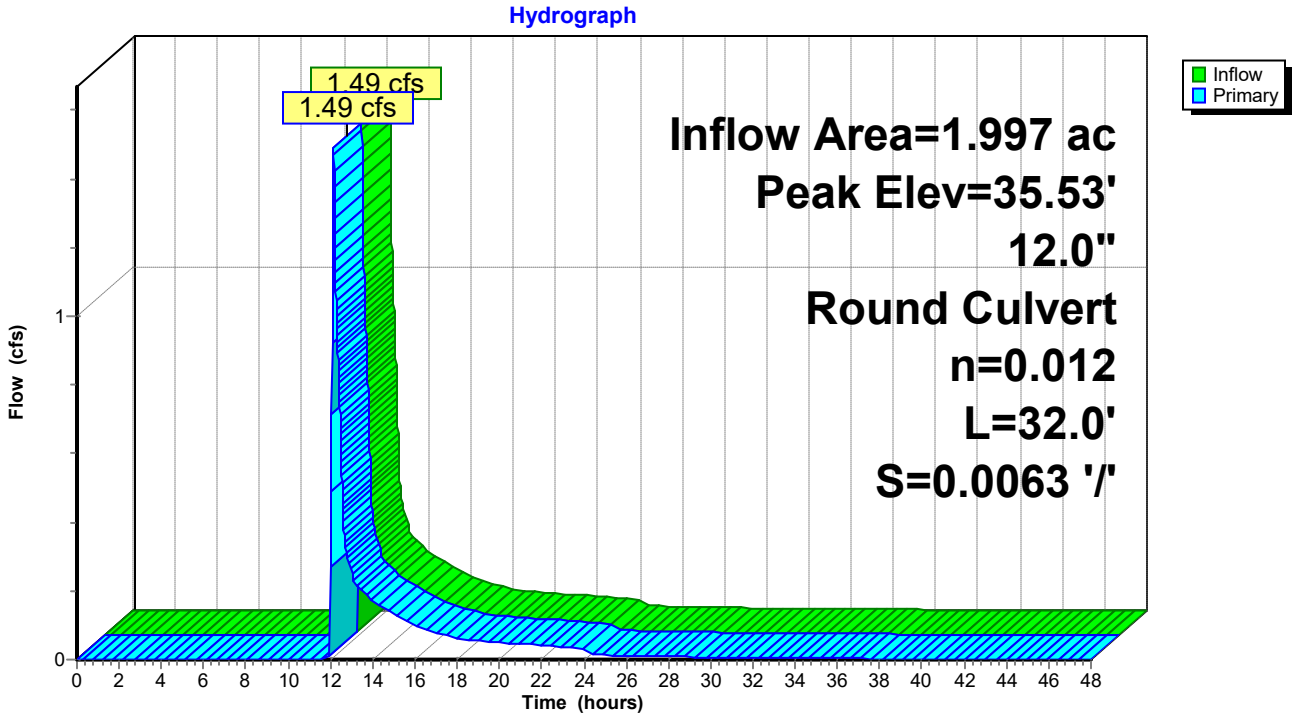
Inflow Area = 1.997 ac, 24.29% Impervious, Inflow Depth > 0.81" for 10-YEAR event
Inflow = 1.49 cfs @ 12.14 hrs, Volume= 0.135 af
Outflow = 1.49 cfs @ 12.14 hrs, Volume= 0.135 af, Atten= 0%, Lag= 0.0 min
Primary = 1.49 cfs @ 12.14 hrs, Volume= 0.135 af
Routed to Pond 4.2P : CB-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 35.53' @ 12.14 hrs
Flood Elev= 42.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	34.70'	**12.0" Round Outlet to CB (Culvert)** L= 32.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 34.70' / 34.50' S= 0.0063 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.49 cfs @ 12.14 hrs HW=35.53' TW=35.24' (Dynamic Tailwater)
1=Outlet to CB (Culvert) (Outlet Controls 1.49 cfs @ 2.90 fps)

Pond 3.2P: DMH-1



Summary for Pond 4.1P: Stormwater Pond #1 (Bioretention)

Inflow Area = 1.265 ac, 29.76% Impervious, Inflow Depth = 1.29" for 10-YEAR event
Inflow = 1.64 cfs @ 12.10 hrs, Volume= 0.136 af
Outflow = 1.49 cfs @ 12.14 hrs, Volume= 0.135 af, Atten= 9%, Lag= 2.4 min
Primary = 1.49 cfs @ 12.14 hrs, Volume= 0.135 af
Routed to Pond 3.2P : DMH-1

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Starting Elev= 41.00' Surf.Area= 650 sf Storage= 49 cf
Peak Elev= 41.74' @ 12.14 hrs Surf.Area= 1,007 sf Storage= 653 cf (605 cf above start)
Flood Elev= 42.00' Surf.Area= 1,154 sf Storage= 939 cf (890 cf above start)

Plug-Flow detention time= 82.3 min calculated for 0.134 af (99% of inflow)
Center-of-Mass det. time= 74.7 min (957.4 - 882.7)

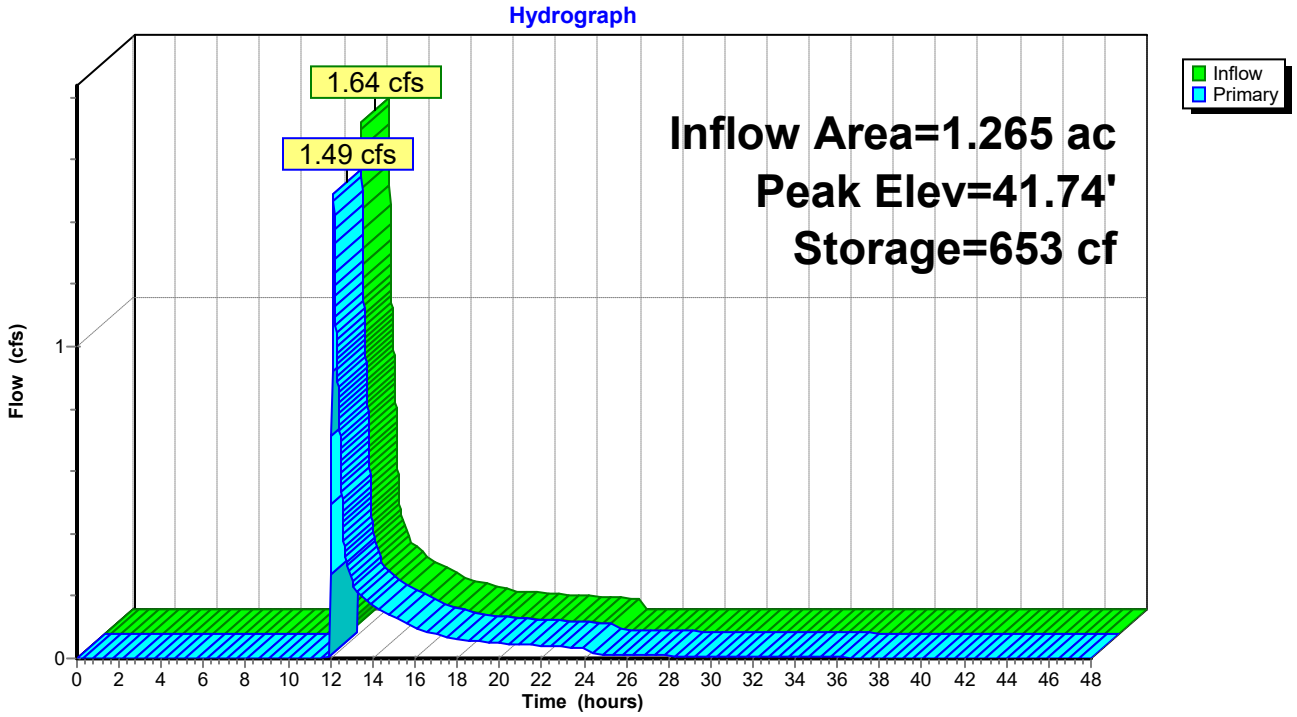
Volume	Invert	Avail.Storage	Storage Description
#1	39.50'	939 cf	**Bioretention Cell (Conic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
39.50	650	0.0	0	0	650
41.00	650	5.0	49	49	786
42.00	1,154	100.0	890	939	1,300

Device	Routing	Invert	Outlet Devices
#1	Primary	38.00'	**12.0" Round Outlet to DMH (Culvert)** L= 50.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 38.00' / 37.70' S= 0.0060 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf
#2	Device 1	38.30'	**6.0" Vert. Underdrain (Orifice)** C= 0.600 Limited to weir flow at low heads
#3	Device 2	41.00'	**2.500 in/hr Exfiltration through Media over Wetted area above 41.00'** Excluded Wetted area = 786 sf Phase-In= 0.01'
#4	Device 1	41.50'	**15.0" Horiz. 15" Yard Drain Rim (Orifice)** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.49 cfs @ 12.14 hrs HW=41.74' TW=35.53' (Dynamic Tailwater)
- **1=Outlet to DMH (Culvert)** (Passes 1.49 cfs of 6.52 cfs potential flow)
- **2=Underdrain (Orifice)** (Passes 0.02 cfs of 1.69 cfs potential flow)
  - **3=Exfiltration through Media** (Exfiltration Controls 0.02 cfs)
- **4=15" Yard Drain Rim (Orifice)** (Weir Controls 1.47 cfs @ 1.59 fps)

Pond 4.1P: Stormwater Pond #1 (Bioretention)



Summary for Pond 4.2P: CB-1

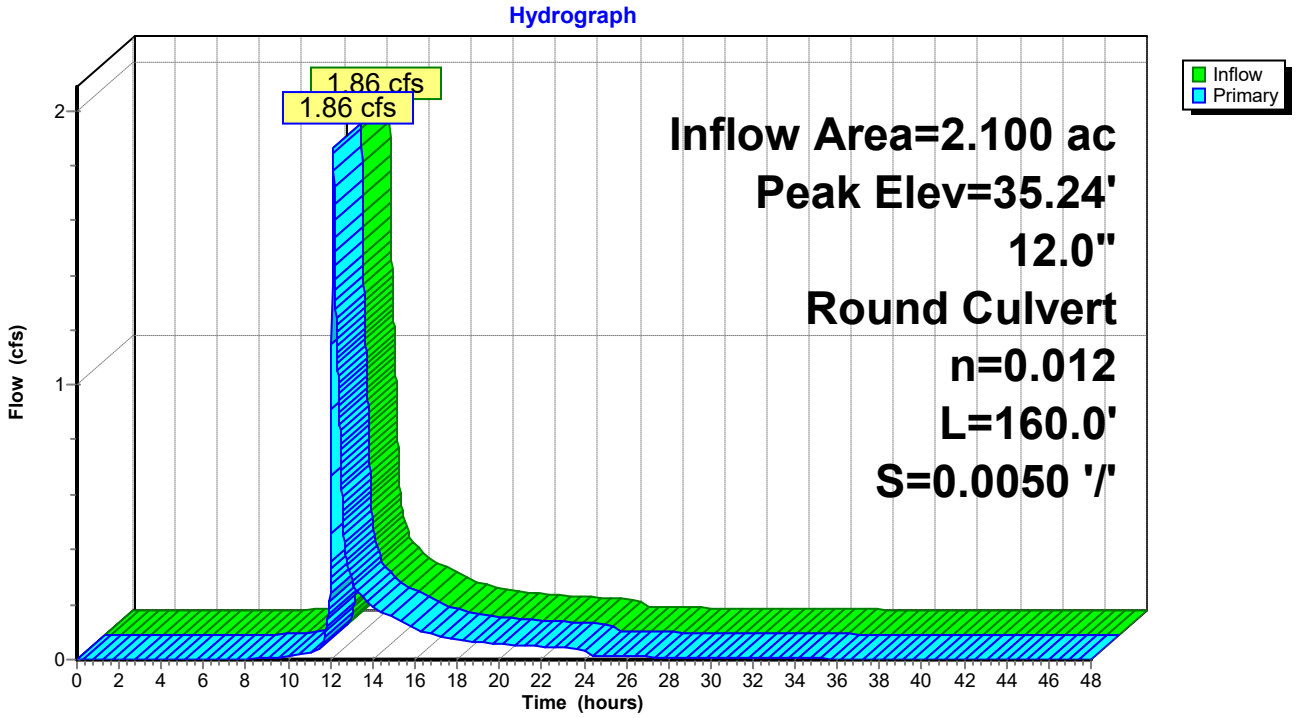
Inflow Area = 2.100 ac, 26.75% Impervious, Inflow Depth > 0.96" for 10-YEAR event
Inflow = 1.86 cfs @ 12.13 hrs, Volume= 0.167 af
Outflow = 1.86 cfs @ 12.13 hrs, Volume= 0.167 af, Atten= 0%, Lag= 0.0 min
Primary = 1.86 cfs @ 12.13 hrs, Volume= 0.167 af
Routed to Link POA 4 : Existing City Drain Manhole

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs / 2
Peak Elev= 35.24' @ 12.13 hrs
Flood Elev= 41.75'

Device	Routing	Invert	Outlet Devices
#1	Primary	34.40'	**12.0" Round Outlet Pipe to City DMH (Culvert)** L= 160.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 34.40' / 33.60' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.79 sf

Primary OutFlow Max=1.86 cfs @ 12.13 hrs HW=35.24' TW=0.00' (Dynamic Tailwater)
1=Outlet Pipe to City DMH (Culvert) (Barrel Controls 1.86 cfs @ 3.57 fps)

Pond 4.2P: CB-1

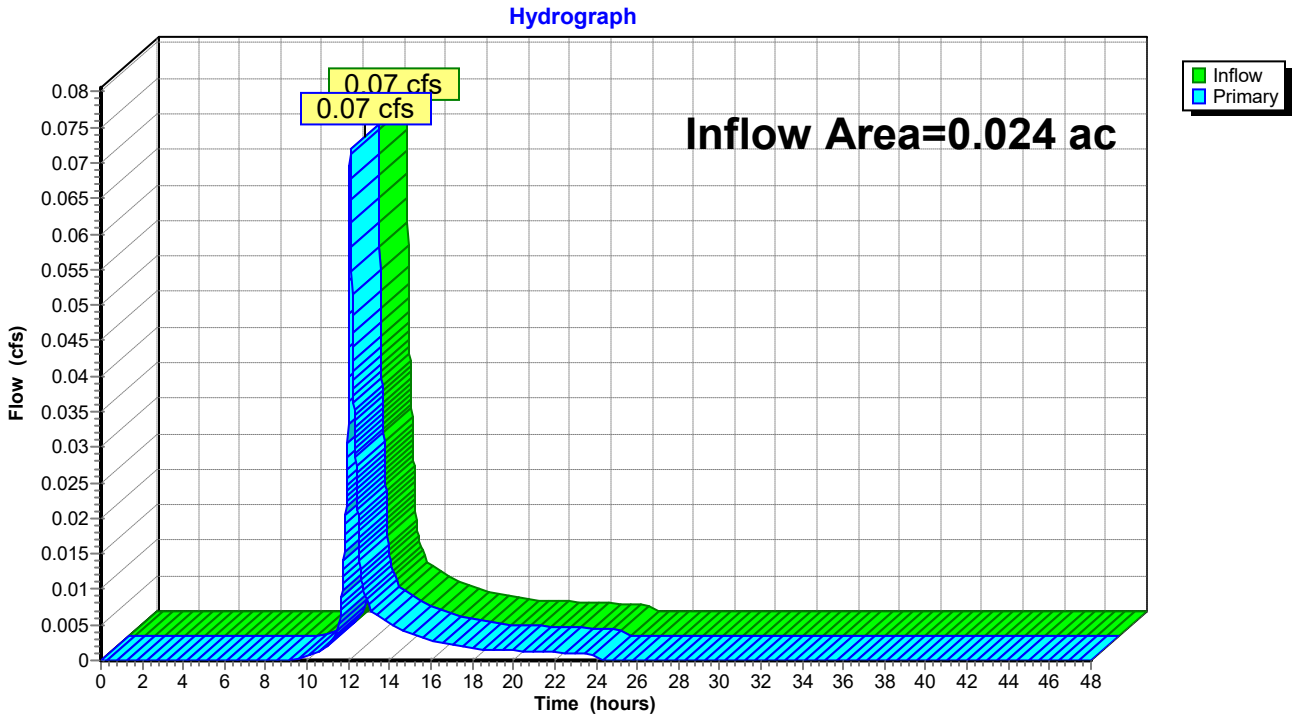


Summary for Link POA 1: Farm Lane Road

Inflow Area = 0.024 ac, 57.07% Impervious, Inflow Depth = 2.57" for 10-YEAR event
Inflow = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af
Primary = 0.07 cfs @ 12.09 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 1: Farm Lane Road

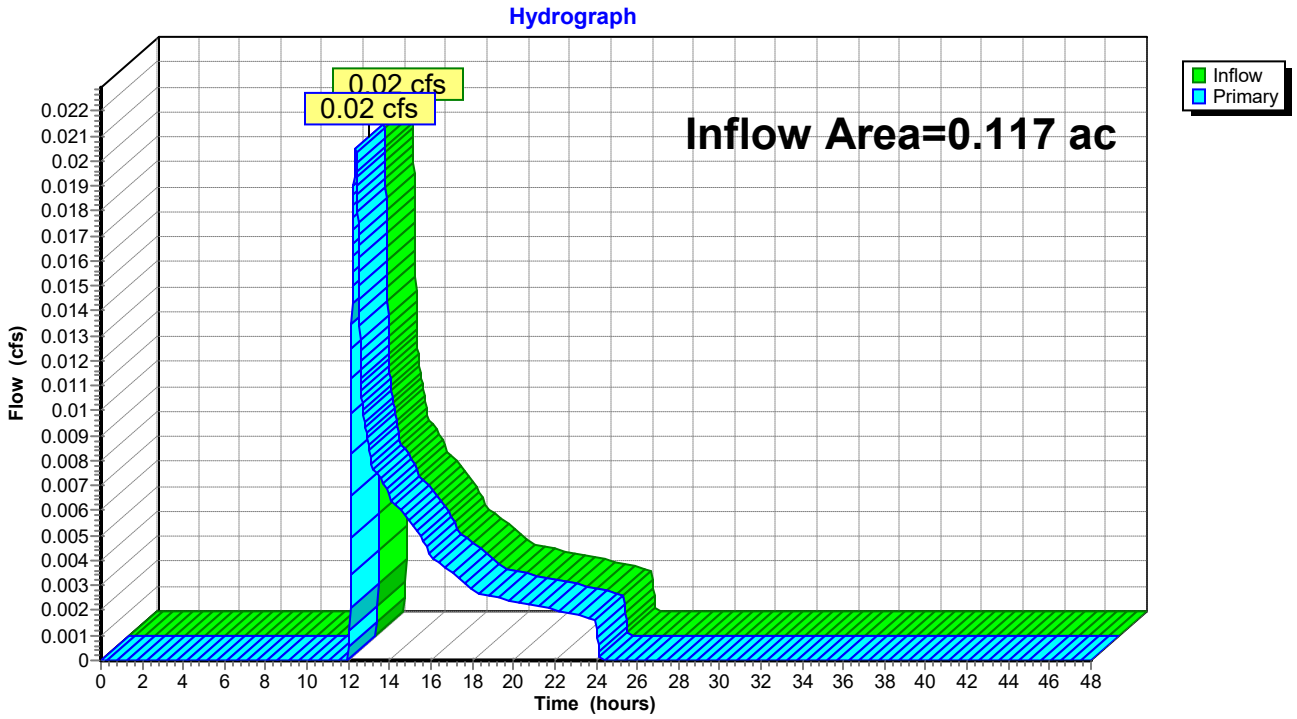


Summary for Link POA 2: Abutting Property

Inflow Area = 0.117 ac, 6.11% Impervious, Inflow Depth = 0.43" for 10-YEAR event
Inflow = 0.02 cfs @ 12.34 hrs, Volume= 0.004 af
Primary = 0.02 cfs @ 12.34 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 2: Abutting Property

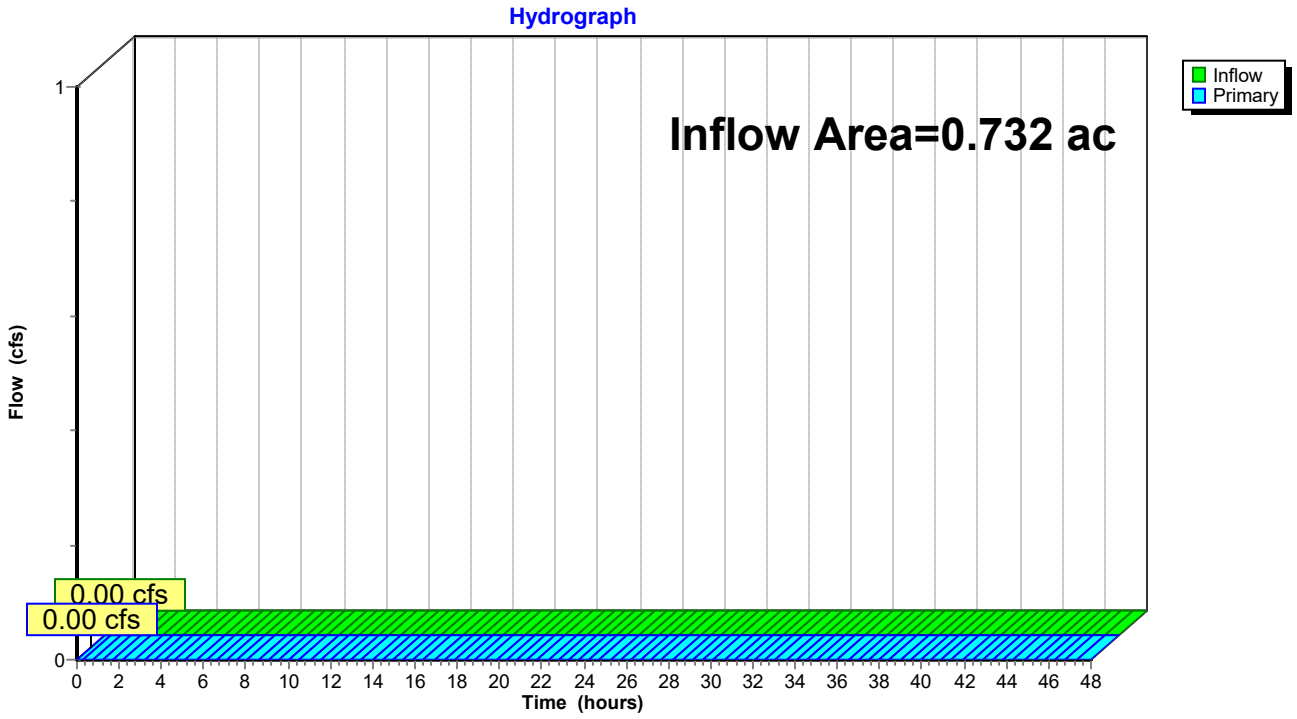


Summary for Link POA 3: Existing Natural Depression

Inflow Area = 0.732 ac, 14.85% Impervious, Inflow Depth = 0.00" for 10-YEAR event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 3.2P : DMH-1

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 3: Existing Natural Depression

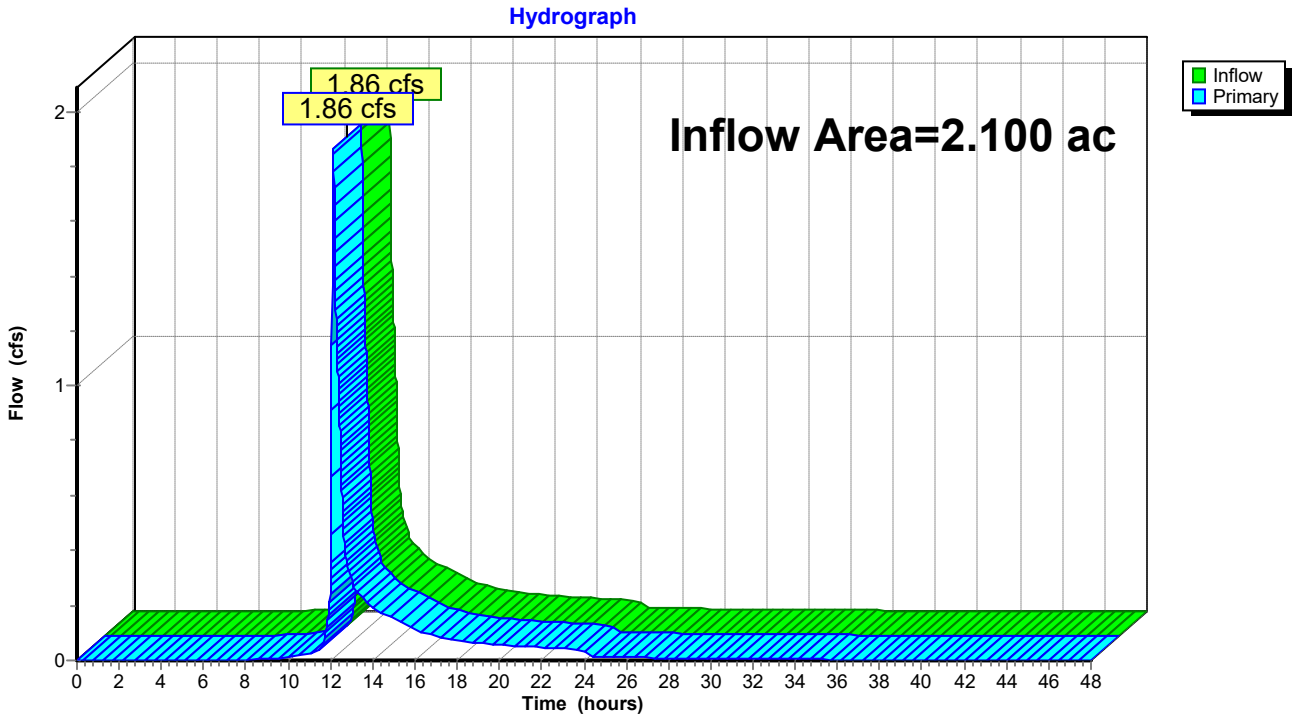


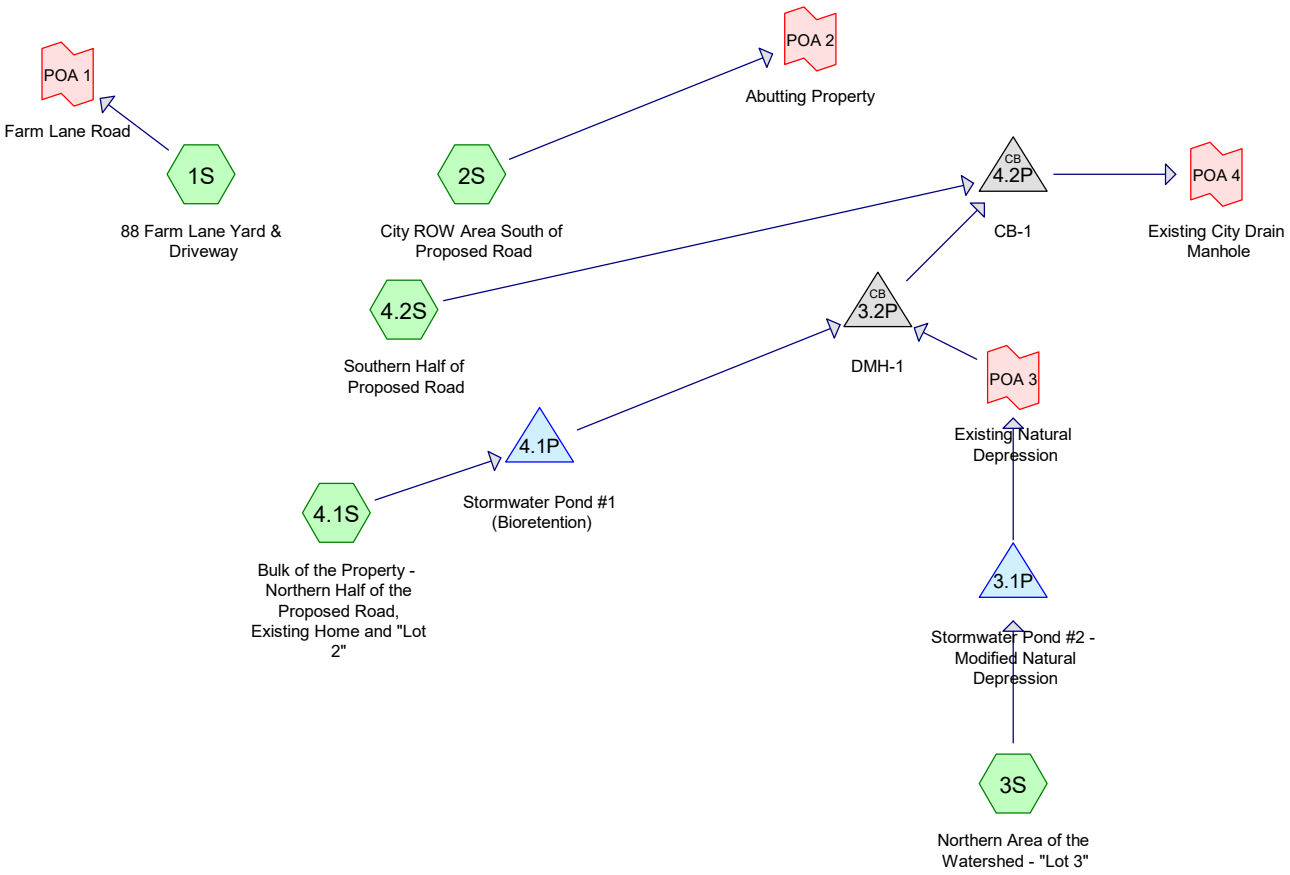
Summary for Link POA 4: Existing City Drain Manhole

Inflow Area = 2.100 ac, 26.75% Impervious, Inflow Depth > 0.96" for 10-YEAR event
Inflow = 1.86 cfs @ 12.13 hrs, Volume= 0.167 af
Primary = 1.86 cfs @ 12.13 hrs, Volume= 0.167 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs

Link POA 4: Existing City Drain Manhole





Subcat Reach Pond Link

Routing Diagram for 5719-POST
Prepared by Altus Engineering, Printed 3/23/2026

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points x 2
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: 88 Farm Lane Yard & Runoff Area=1,046 sf 57.07% Impervious Runoff Depth=3.79"
Flow Length=25' Tc=6.0 min CN=71 Runoff=0.11 cfs 0.008 af

Subcatchment 2S: City ROW Area South of Runoff Area=5,093 sf 6.11% Impervious Runoff Depth=0.95"
Flow Length=136' Tc=6.4 min CN=41 Runoff=0.08 cfs 0.009 af

Subcatchment 3S: Northern Area of the Runoff Area=31,903 sf 14.85% Impervious Runoff Depth=1.19"
Flow Length=251' Tc=6.0 min CN=44 Runoff=0.75 cfs 0.073 af

Subcatchment 4.1S: Bulk of the Property - Runoff Area=55,097 sf 29.76% Impervious Runoff Depth=2.17"
Flow Length=370' Tc=6.0 min CN=55 Runoff=3.02 cfs 0.229 af

Subcatchment 4.2S: Southern Half of Runoff Area=4,478 sf 74.39% Impervious Runoff Depth=5.10"
Flow Length=283' Tc=6.0 min CN=83 Runoff=0.60 cfs 0.044 af

Pond 3.1P: Stormwater Pond #2 - Modified Peak Elev=38.96' Storage=1,682 cf Inflow=0.75 cfs 0.073 af
Discarded=0.05 cfs 0.073 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.073 af

Pond 3.2P: DMH-1 Peak Elev=36.90' Inflow=2.89 cfs 0.229 af
12.0" Round Culvert n=0.012 L=32.0' S=0.0063 '/' Outflow=2.89 cfs 0.229 af

Pond 4.1P: Stormwater Pond #1 (Bioretention) Peak Elev=41.87' Storage=791 cf Inflow=3.02 cfs 0.229 af
Outflow=2.89 cfs 0.229 af

Pond 4.2P: CB-1 Peak Elev=36.32' Inflow=3.44 cfs 0.273 af
12.0" Round Culvert n=0.012 L=160.0' S=0.0050 '/' Outflow=3.44 cfs 0.273 af

Link POA 1: Farm Lane Road Inflow=0.11 cfs 0.008 af
Primary=0.11 cfs 0.008 af

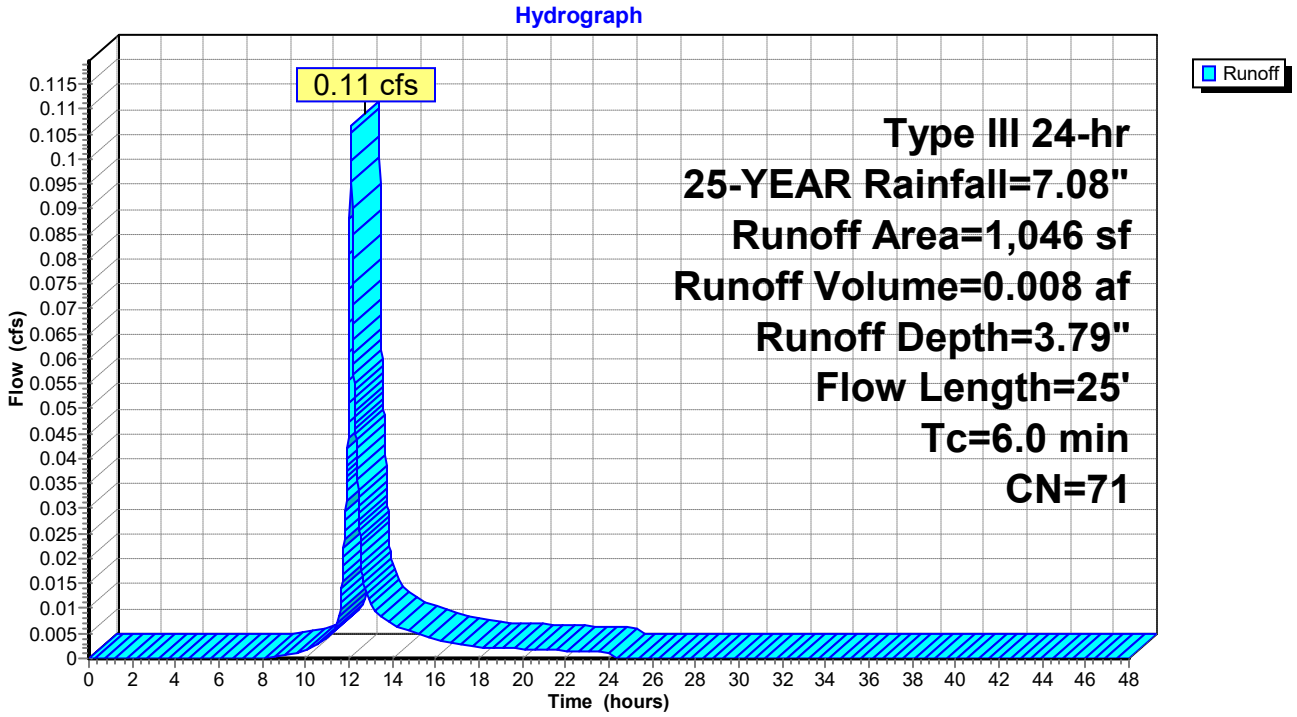
Link POA 2: Abutting Property Inflow=0.08 cfs 0.009 af
Primary=0.08 cfs 0.009 af

Link POA 3: Existing Natural Depression Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

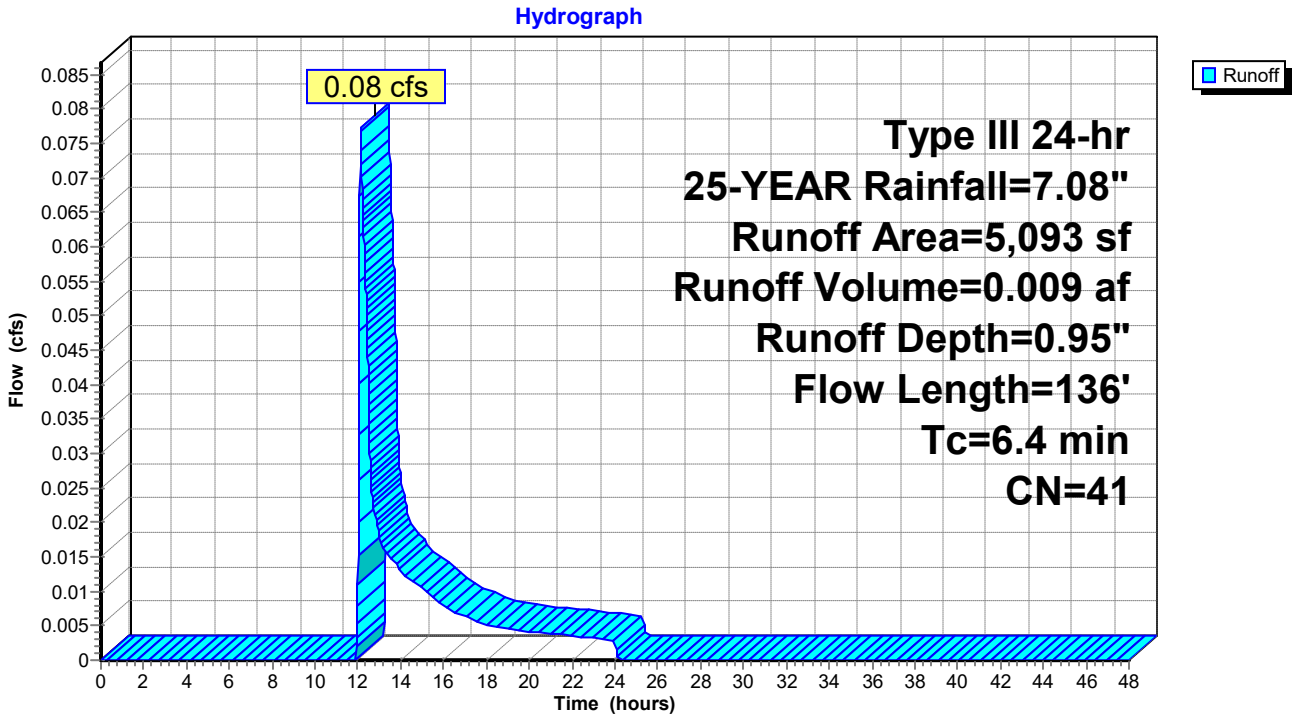
Link POA 4: Existing City Drain Manhole Inflow=3.44 cfs 0.273 af
Primary=3.44 cfs 0.273 af

Total Runoff Area = 2.241 ac Runoff Volume = 0.362 af Average Runoff Depth = 1.94"
74.01% Pervious = 1.658 ac 25.99% Impervious = 0.583 ac

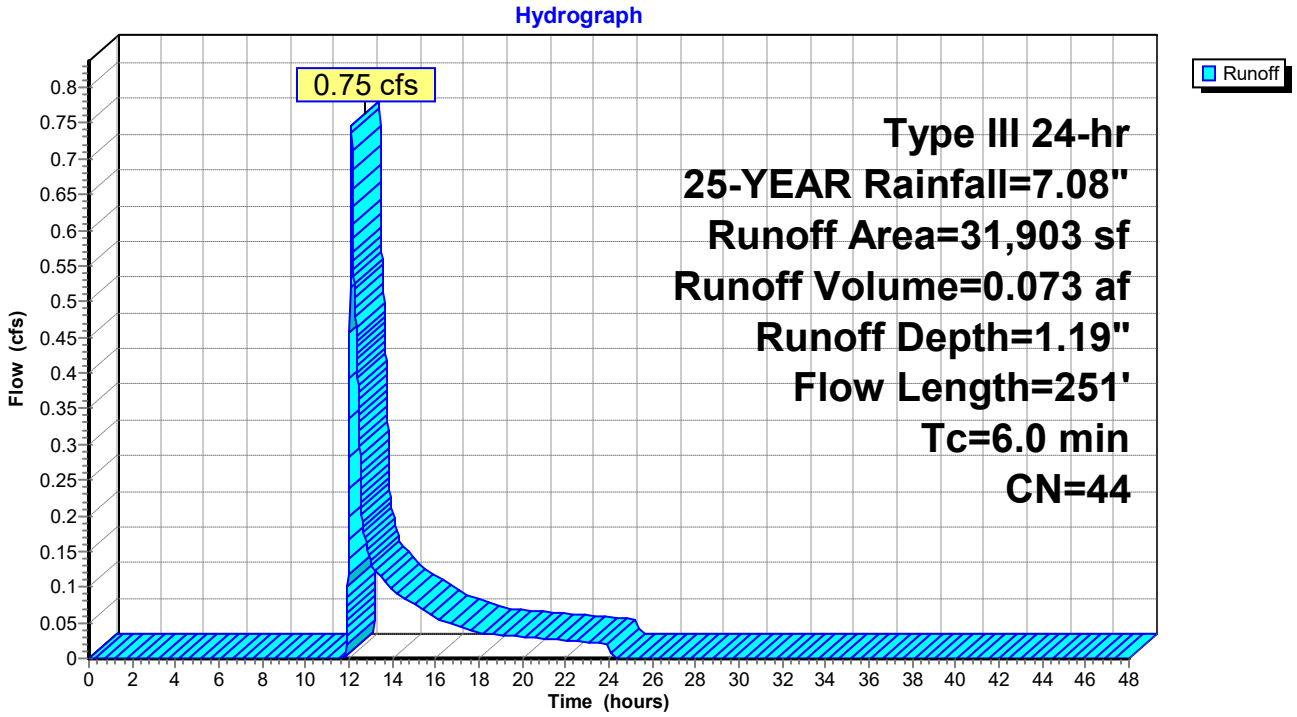
Subcatchment 1S: 88 Farm Lane Yard & Driveway



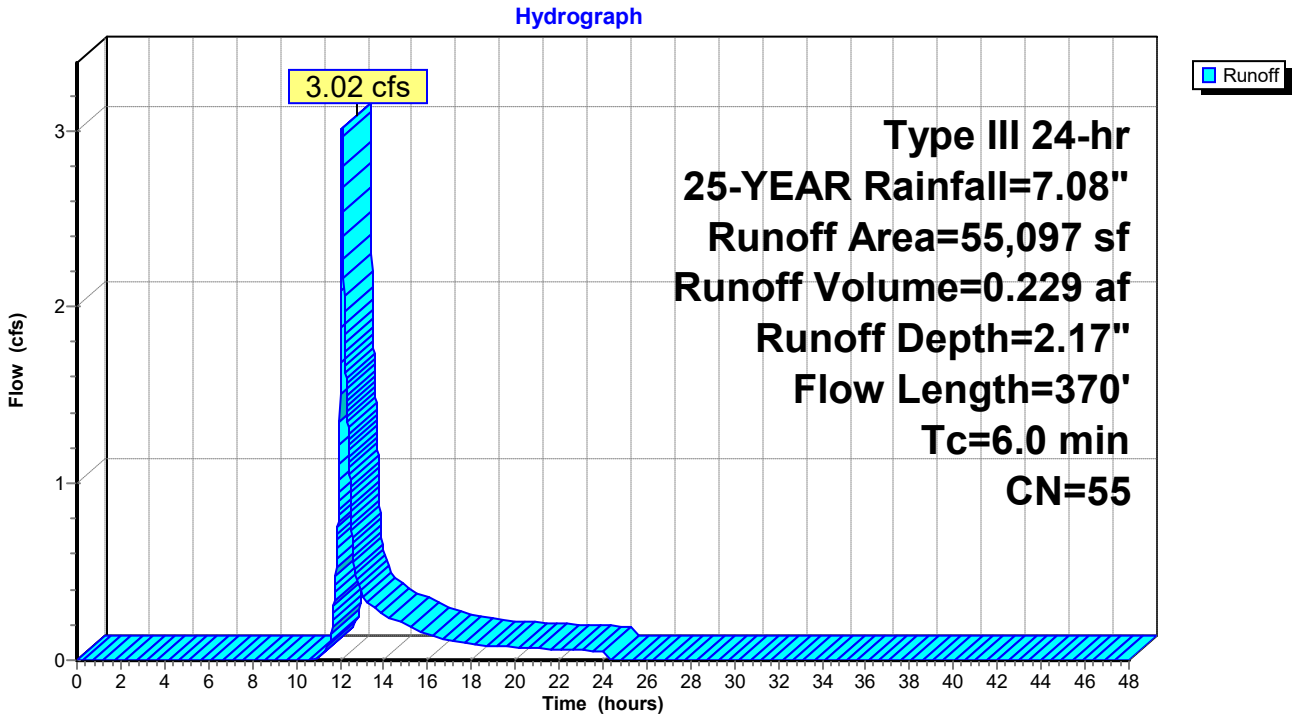
Subcatchment 2S: City ROW Area South of Proposed Road



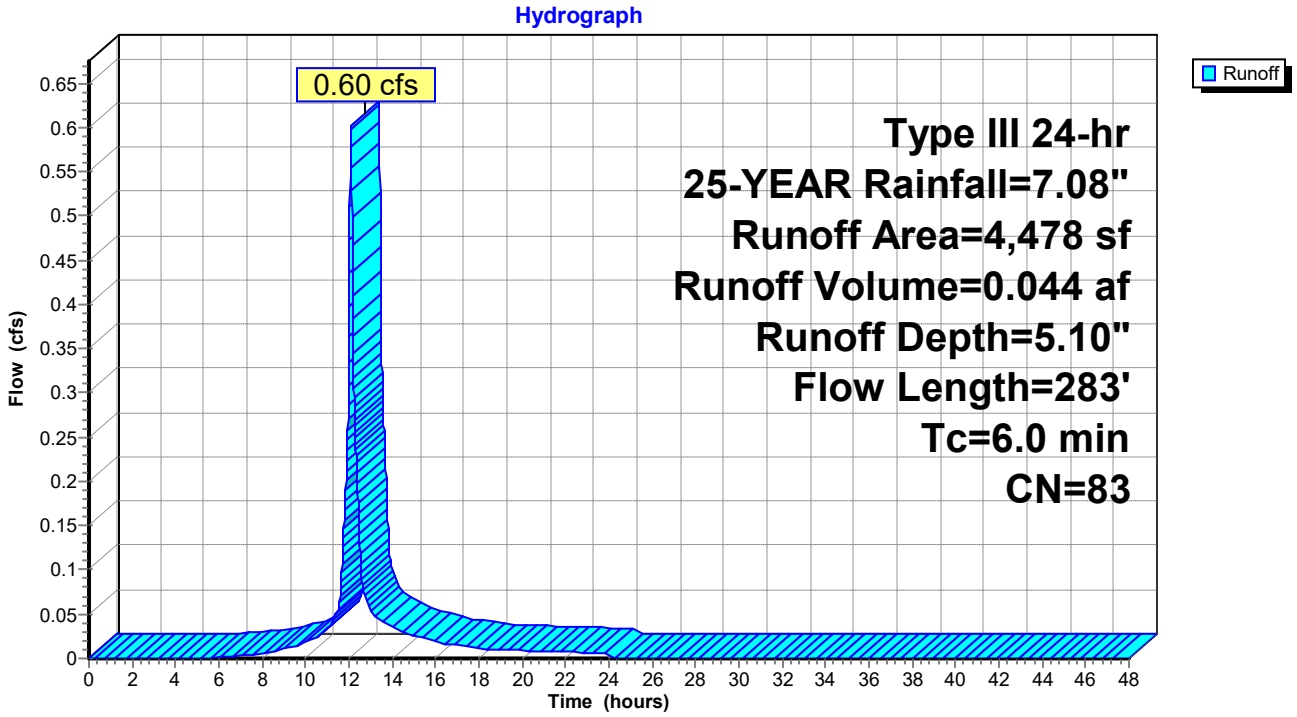
Subcatchment 3S: Northern Area of the Watershed - "Lot 3"



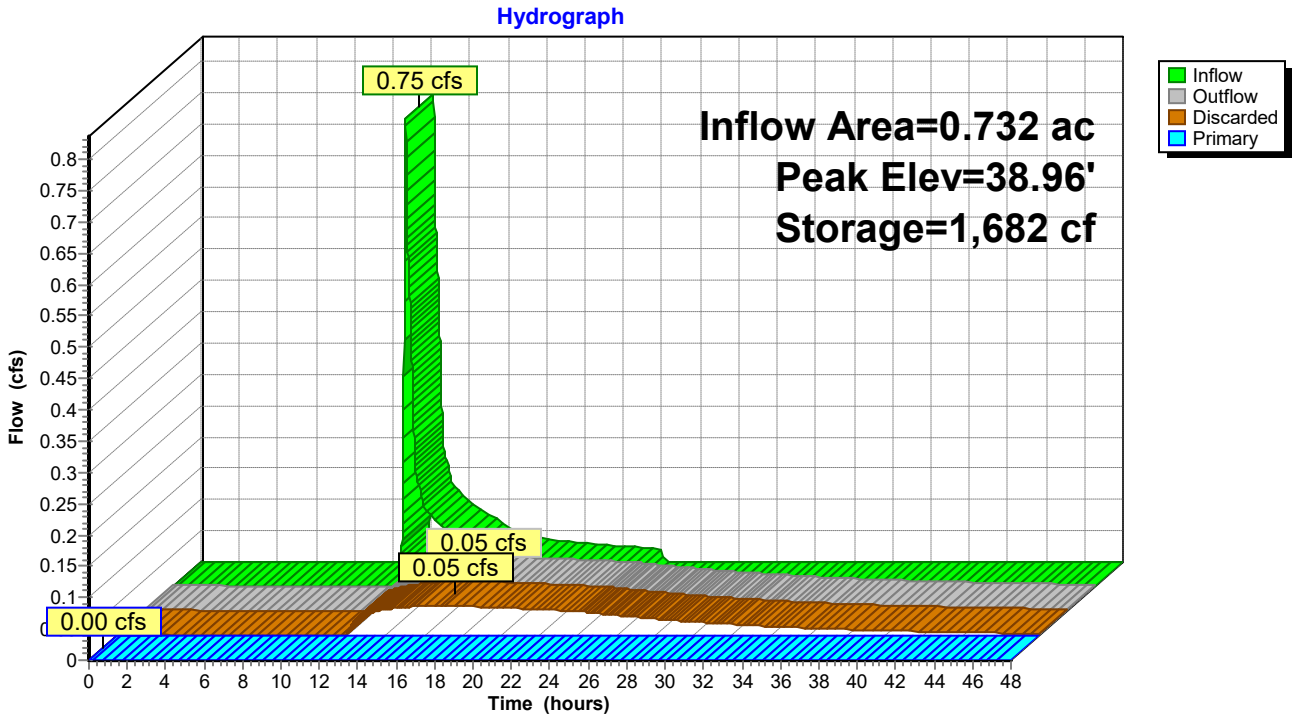
Subcatchment 4.1S: Bulk of the Property - Northern Half of the Proposed Road, Existing Home and "Lot 2"



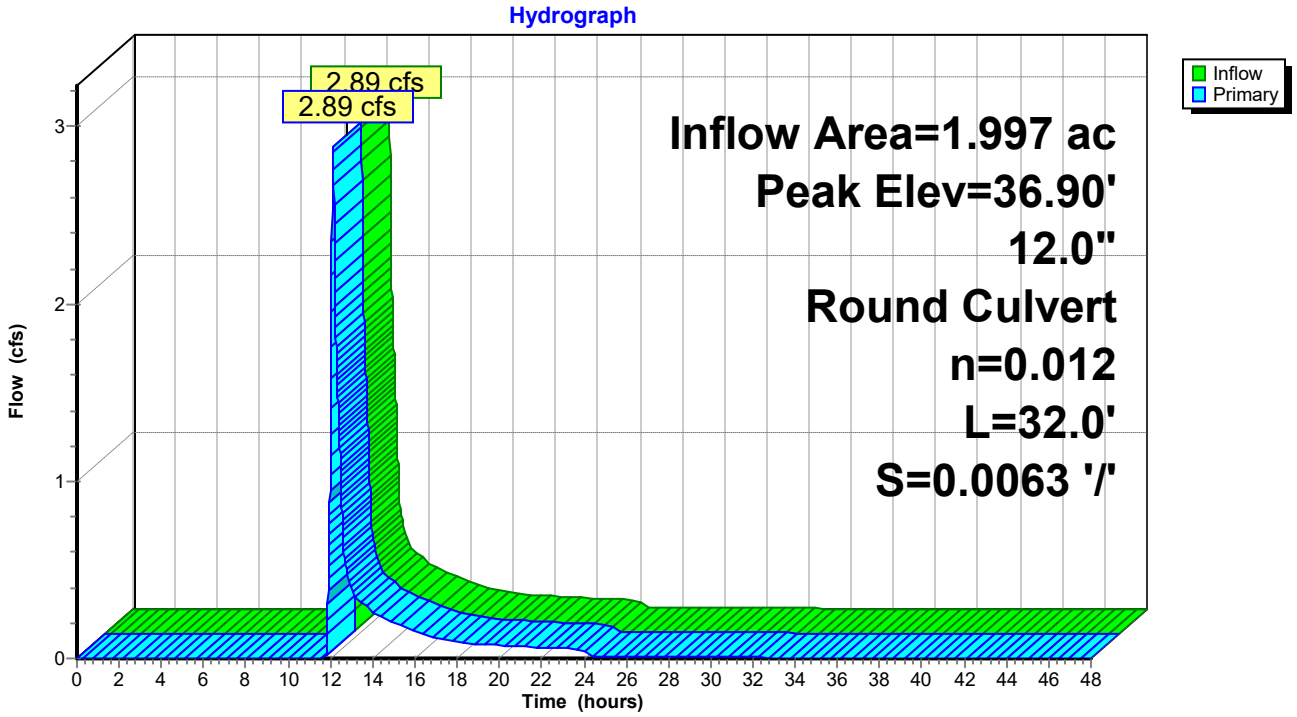
Subcatchment 4.2S: Southern Half of Proposed Road



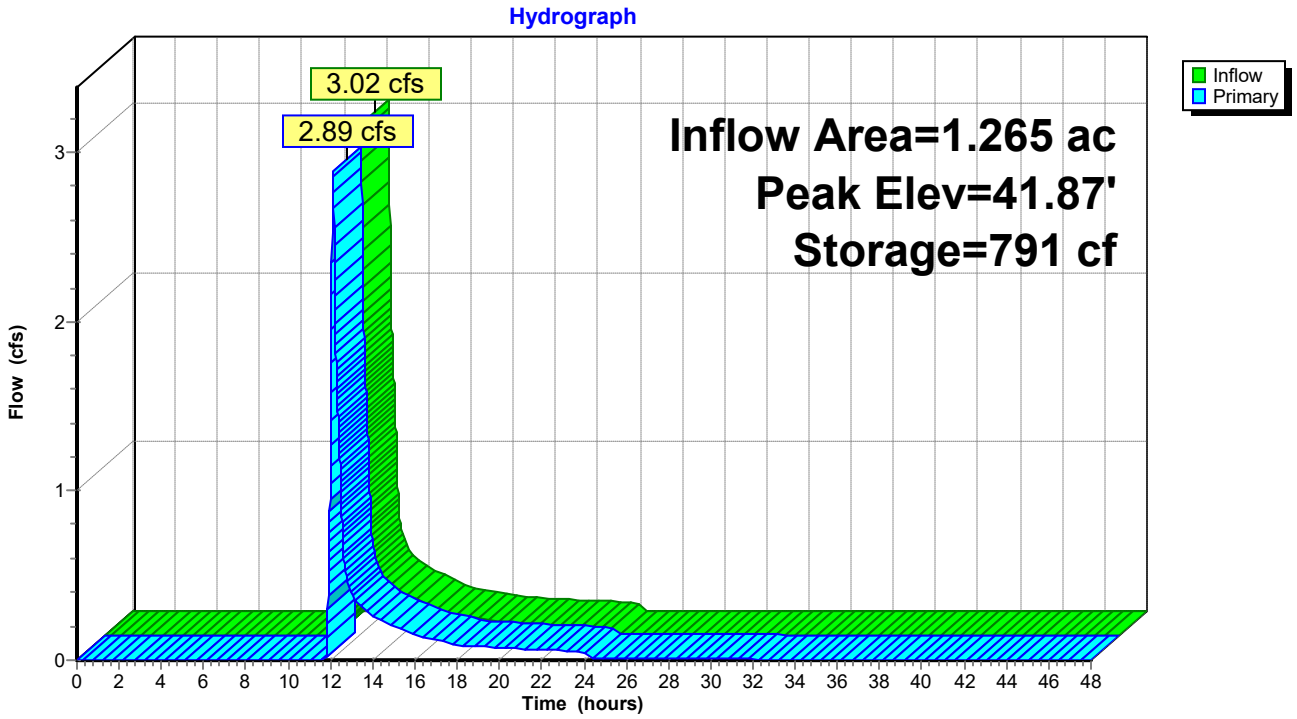
Pond 3.1P: Stormwater Pond #2 - Modified Natural Depression



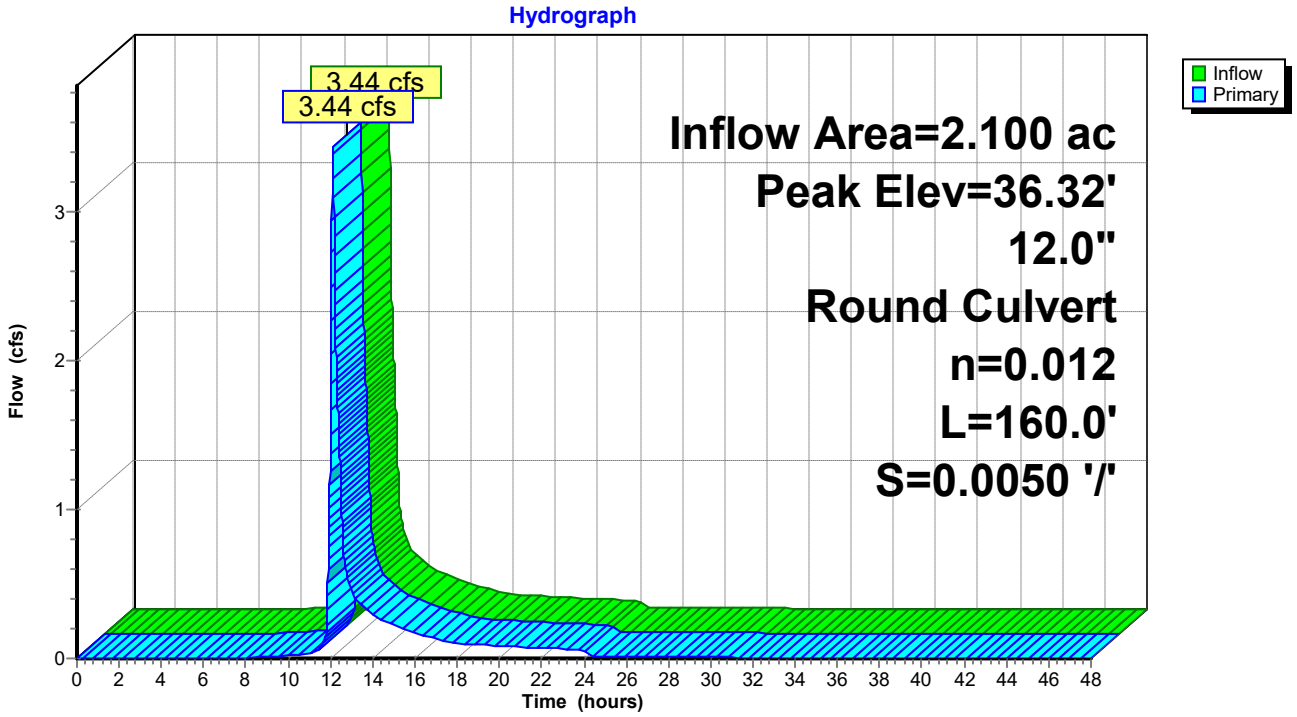
Pond 3.2P: DMH-1



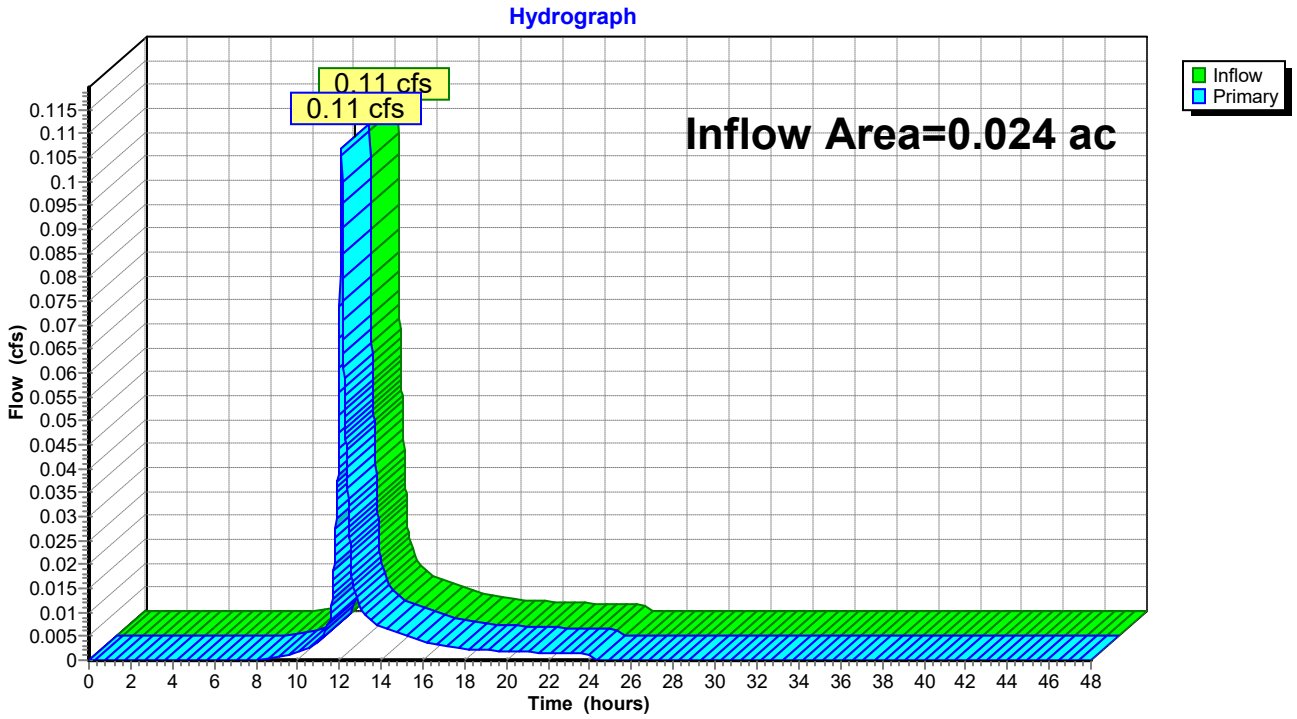
Pond 4.1P: Stormwater Pond #1 (Bioretention)



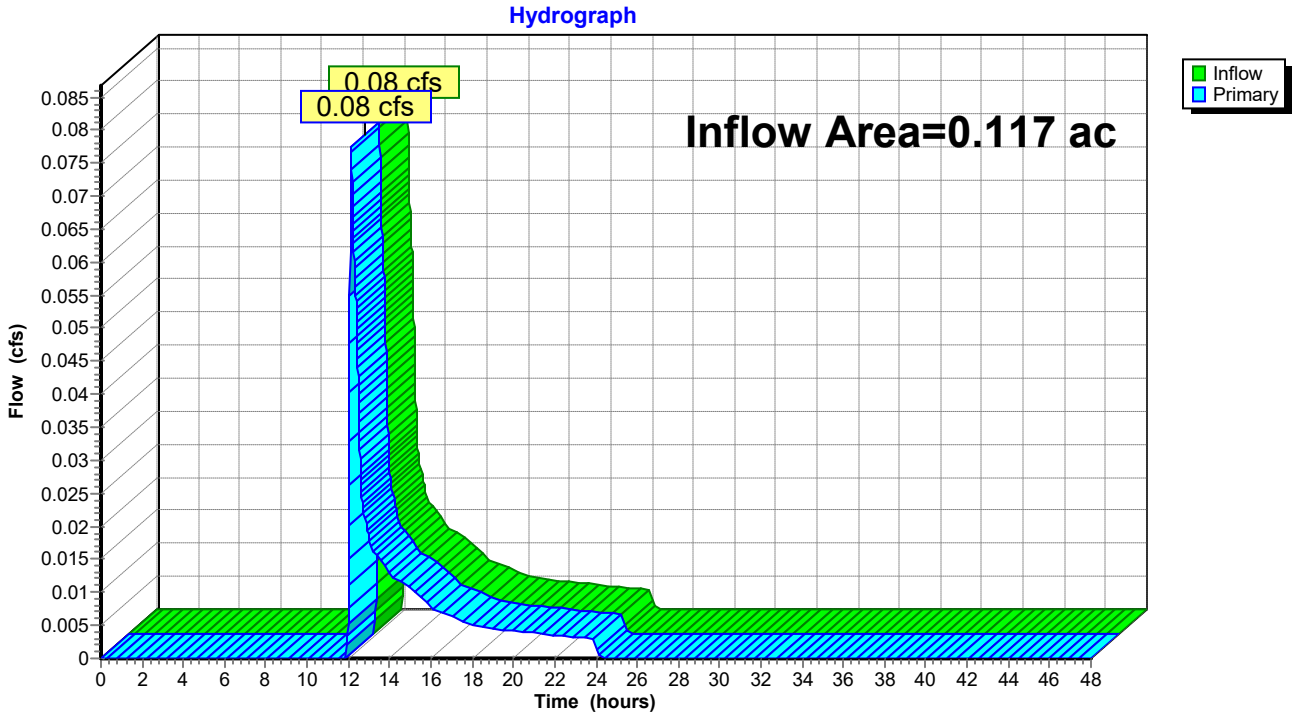
Pond 4.2P: CB-1



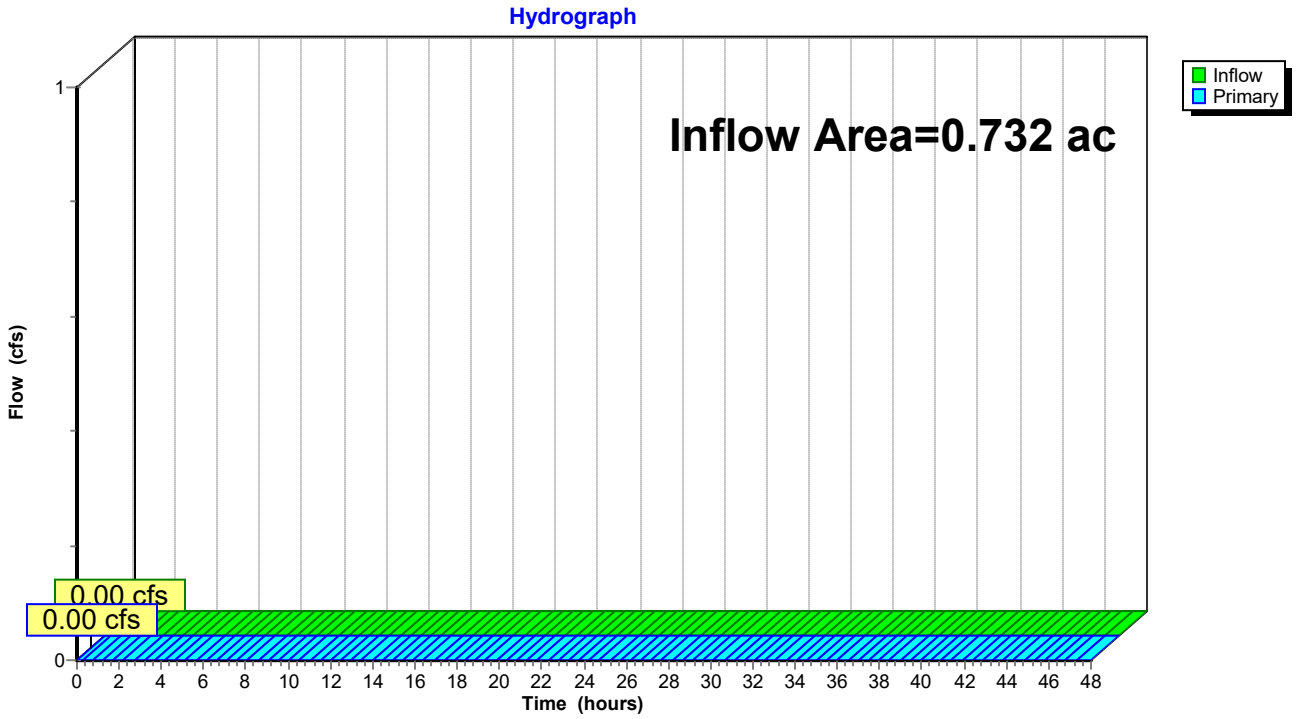
Link POA 1: Farm Lane Road



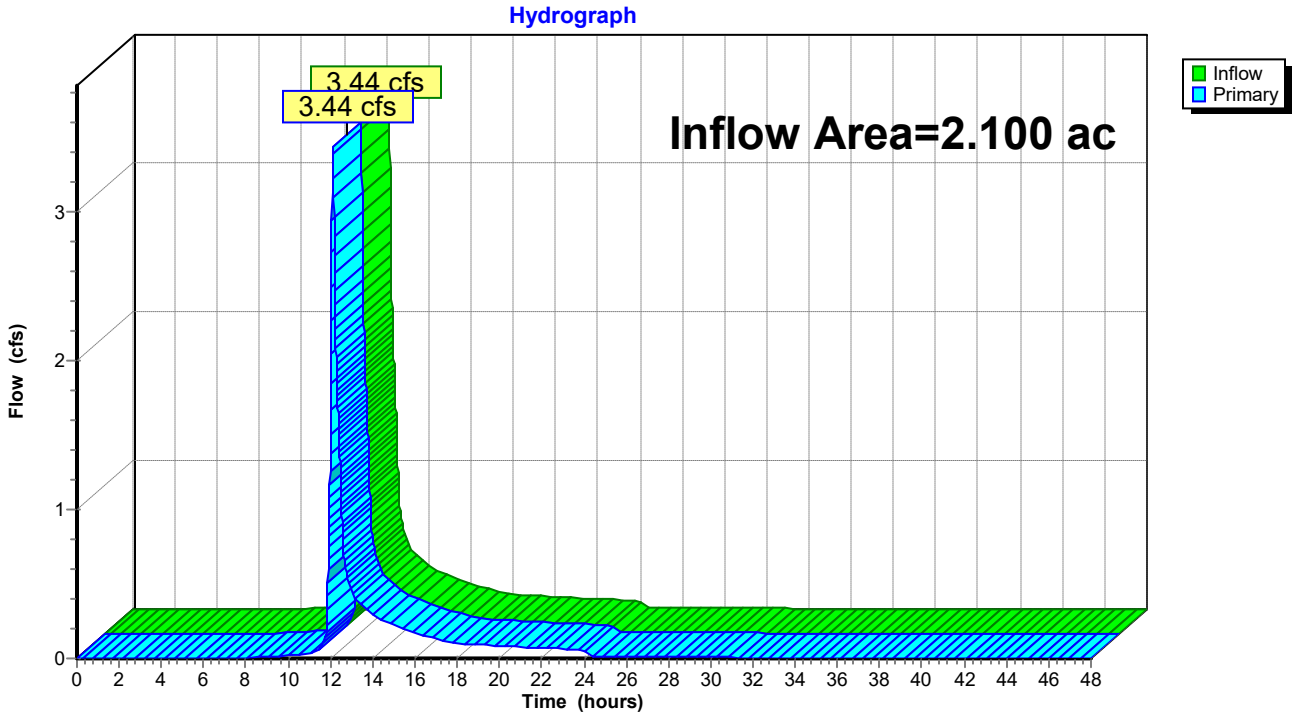
Link POA 2: Abutting Property



Link POA 3: Existing Natural Depression



Link POA 4: Existing City Drain Manhole



Section 5

Precipitation Table

ALTUS ENGINEERING

Extreme Precipitation Tables

Northeast Regional Climate Center

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

Metadata for Point	
Smoothing	Yes
State	
Location	
Latitude	43.079 degrees North
Longitude	70.784 degrees West
Elevation	10 feet
Date/Time	Wed Jan 21 2026 13:34:59 GMT-0500 (Eastern Standard Time)

PRECIPITATION ESTIMATES INCREASED BY 15% FOR COSTAL COMMUNITY

2- YEAR: 2.66 * 1.15 = 3.06
10 - YEAR: 4.86 * 1.15 = 5.59
25 - YEAR: 6.16 * 1.15 = 7.08
50 - YEAR: 7.38 * 1.15 = 8.49

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.26	0.40	0.50	0.65	0.81	1.04	**1yr**	0.70	0.98	1.21	1.56	2.03	2.66	2.91	**1yr**	2.35	2.80	3.21	3.93	4.54	**1yr**
2yr	0.32	0.50	0.62	0.81	1.02	1.30	**2yr**	0.88	1.18	1.51	1.94	2.48	3.20	3.56	**2yr**	2.84	3.42	3.93	4.67	5.31	**2yr**
5yr	0.37	0.58	0.73	0.97	1.24	1.60	**5yr**	1.07	1.46	1.88	2.42	3.13	4.06	4.57	**5yr**	3.59	4.39	5.03	5.92	6.69	**5yr**
10yr	0.41	0.65	0.82	1.11	1.44	1.88	**10yr**	1.25	1.72	2.22	2.88	3.74	4.86	5.52	**10yr**	4.30	5.31	6.06	7.09	7.96	**10yr**
25yr	0.48	0.76	0.96	1.33	1.76	2.32	**25yr**	1.52	2.13	2.76	3.61	4.72	6.16	7.08	**25yr**	5.45	6.81	7.77	9.00	10.03	**25yr**
50yr	0.53	0.85	1.09	1.53	2.06	2.74	**50yr**	1.77	2.51	3.27	4.30	5.64	7.38	8.56	**50yr**	6.53	8.24	9.38	10.78	11.96	**50yr**
100yr	0.60	0.97	1.25	1.76	2.40	3.22	**100yr**	2.07	2.96	3.86	5.11	6.73	8.84	10.36	**100yr**	7.82	9.96	11.33	12.93	14.26	**100yr**
200yr	0.67	1.09	1.41	2.03	2.80	3.80	**200yr**	2.41	3.49	4.58	6.09	8.05	10.59	12.52	**200yr**	9.37	12.04	13.69	15.50	17.00	**200yr**
500yr	0.79	1.30	1.69	2.46	3.44	4.72	**500yr**	2.97	4.35	5.71	7.65	10.18	13.46	16.11	**500yr**	11.91	15.49	17.58	19.72	21.47	**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	0.36	0.44	0.59	0.73	0.89	**1yr**	0.63	0.87	0.92	1.32	1.67	2.22	2.50	**1yr**	1.96	2.41	2.85	3.16	3.87	**1yr**
2yr	0.31	0.49	0.60	0.81	1.00	1.19	**2yr**	0.86	1.16	1.37	1.82	2.34	3.05	3.45	**2yr**	2.70	3.32	3.81	4.54	5.06	**2yr**
5yr	0.35	0.54	0.67	0.92	1.17	1.40	**5yr**	1.01	1.37	1.61	2.12	2.74	3.78	4.19	**5yr**	3.35	4.03	4.71	5.53	6.23	**5yr**
10yr	0.38	0.59	0.73	1.02	1.32	1.60	**10yr**	1.14	1.56	1.81	2.40	3.07	4.37	4.86	**10yr**	3.87	4.68	5.43	6.41	7.19	**10yr**
25yr	0.44	0.67	0.83	1.18	1.56	1.90	**25yr**	1.35	1.86	2.10	2.77	3.55	4.68	5.90	**25yr**	4.14	5.67	6.64	7.79	8.68	**25yr**
50yr	0.48	0.73	0.91	1.31	1.76	2.17	**50yr**	1.52	2.12	2.35	3.09	3.96	5.28	6.82	**50yr**	4.67	6.56	7.73	9.04	10.02	**50yr**
100yr	0.54	0.81	1.01	1.46	2.01	2.47	**100yr**	1.73	2.42	2.63	3.44	4.38	5.93	7.88	**100yr**	5.25	7.57	8.99	10.51	11.56	**100yr**
200yr	0.59	0.89	1.13	1.63	2.28	2.82	**200yr**	1.97	2.75	2.93	3.82	4.84	6.63	9.10	**200yr**	5.87	8.75	10.45	12.22	13.36	**200yr**
500yr	0.69	1.02	1.31	1.91	2.71	3.37	**500yr**	2.34	3.29	3.41	4.37	5.53	7.70	11.00	**500yr**	6.81	10.58	12.75	14.95	16.16	**500yr**

Upper Confidence Limits

	5min	10min	15min	30min	60min	120min		1hr	2hr	3hr	6hr	12hr	24hr	48hr		1day	2day	4day	7day	10day	
1yr	0.28	0.44	0.54	0.72	0.89	1.08	**1yr**	0.76	1.06	1.26	1.74	2.21	2.99	3.14	**1yr**	2.65	3.02	3.58	4.37	5.04	**1yr**
2yr	0.33	0.52	0.64	0.86	1.06	1.26	**2yr**	0.92	1.24	1.48	1.96	2.51	3.42	3.69	**2yr**	3.03	3.55	4.07	4.82	5.63	**2yr**
5yr	0.40	0.61	0.76	1.05	1.33	1.61	**5yr**	1.15	1.58	1.88	2.53	3.24	4.33	4.94	**5yr**	3.83	4.75	5.36	6.35	7.13	**5yr**
10yr	0.47	0.72	0.89	1.24	1.60	1.97	**10yr**	1.38	1.92	2.27	3.10	3.94	5.33	6.17	**10yr**	4.72	5.93	6.77	7.81	8.72	**10yr**
25yr	0.57	0.87	1.08	1.54	2.03	2.55	**25yr**	1.75	2.50	2.94	4.06	5.12	7.80	8.29	**25yr**	6.90	7.97	9.07	10.29	11.36	**25yr**
50yr	0.66	1.01	1.26	1.81	2.44	3.10	**50yr**	2.10	3.04	3.58	4.97	6.27	9.77	10.39	**50yr**	8.65	9.99	11.33	12.66	13.90	**50yr**
100yr	0.78	1.18	1.48	2.14	2.93	3.77	**100yr**	2.53	3.69	4.35	6.12	7.69	12.24	13.01	**100yr**	10.83	12.51	14.15	15.61	17.02	**100yr**
200yr	0.91	1.37	1.74	2.52	3.51	4.60	**200yr**	3.03	4.50	5.30	7.53	9.42	15.36	16.31	**200yr**	13.59	15.69	17.69	19.23	20.83	**200yr**
500yr	1.13	1.68	2.16	3.14	4.47	5.97	**500yr**	3.85	5.83	6.88	9.94	12.37	20.77	22.01	**500yr**	18.38	21.16	23.77	25.35	27.24	**500yr**

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Section 6

NRCS Soils Report

ALTUS
ENGINEERING

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Rockingham County, New Hampshire

January 8, 2026

Preface

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

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

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

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

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

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

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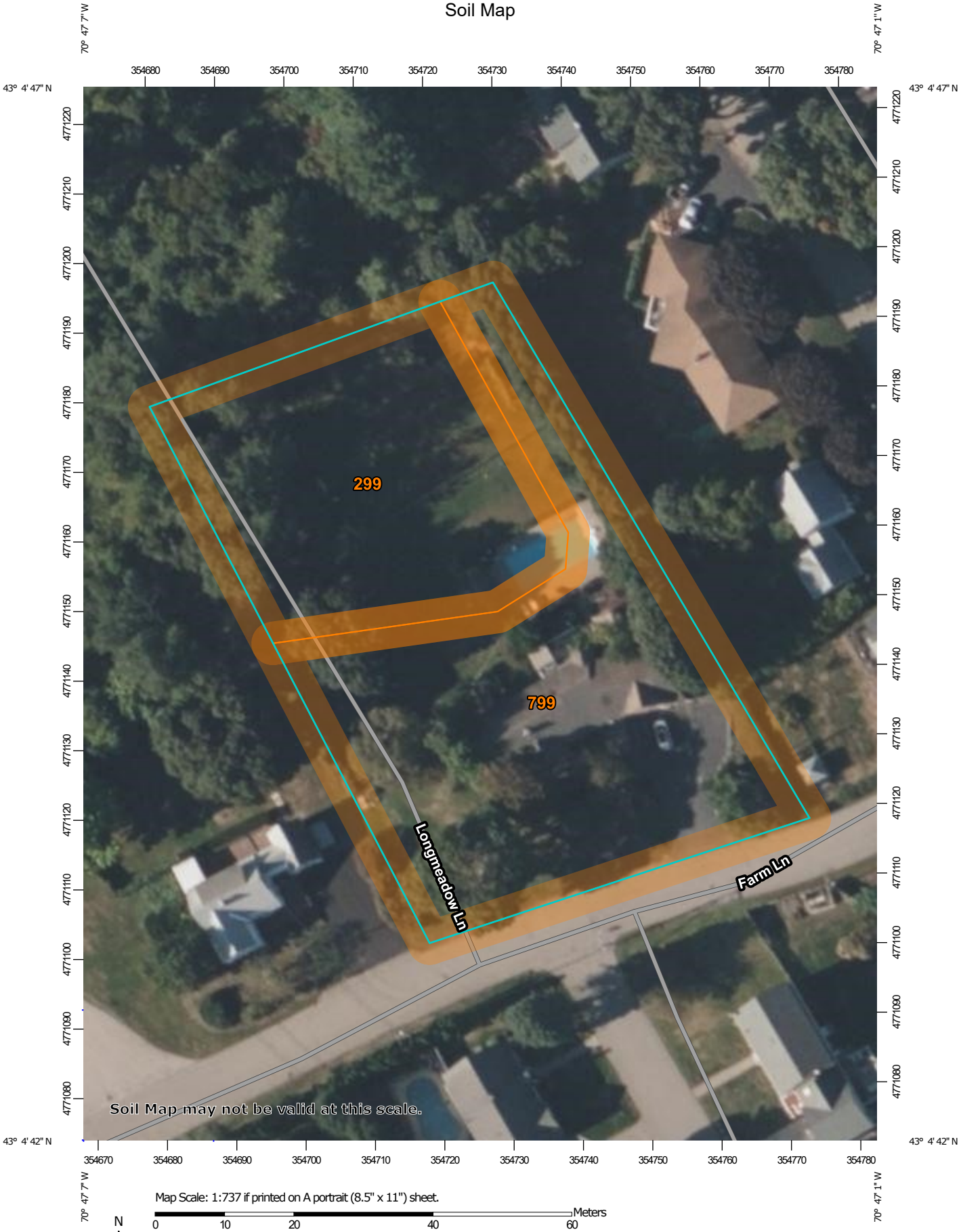
Contents

Soil Map

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

Custom Soil Resource Report
Soil Map



Map Scale: 1:737 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 10 20 40 60

Feet: 0 35 70 140 210

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

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

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

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

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

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

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

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

Soil Survey Area: Rockingham County, New Hampshire
Survey Area Data: Version 28, Sep 9, 2025

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

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
299	Udorthents, smoothed	0.5	39.4%
799	Urban land-Canton complex, 3 to 15 percent slopes	0.7	60.6%
Totals for Area of Interest		**1.2**	**100.0%**

Map Unit Descriptions

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

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

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

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

onsite investigation is needed to define and locate the soils and miscellaneous areas.

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

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

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

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

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

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

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

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

Rockingham County, New Hampshire

299—Udorthents, smoothed

Map Unit Setting

National map unit symbol: 9cmt
Elevation: 0 to 840 feet
Mean annual precipitation: 44 to 49 inches
Mean annual air temperature: 48 degrees F
Frost-free period: 155 to 165 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Properties and qualities

Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

799—Urban land-Canton complex, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: 9cq0
Elevation: 0 to 1,000 feet
Mean annual precipitation: 42 to 46 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 120 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 55 percent
Canton and similar soils: 20 percent
Minor components: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Canton

Setting

Parent material: Till

Typical profile

H1 - 0 to 5 inches: gravelly fine sandy loam
H2 - 5 to 21 inches: gravelly fine sandy loam
H3 - 21 to 60 inches: loamy sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 5.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: A
Ecological site: F144AY034CT - Well Drained Till Uplands
Hydric soil rating: No

Minor Components

Udorthents

Percent of map unit: 5 percent
Hydric soil rating: No

Squamscott and scitico

Percent of map unit: 4 percent
Landform: Marine terraces
Hydric soil rating: Yes

Boxford and eldridge

Percent of map unit: 4 percent
Hydric soil rating: No

Walpole

Percent of map unit: 4 percent
Landform: Depressions
Hydric soil rating: Yes

Scituate and newfields

Percent of map unit: 4 percent
Hydric soil rating: No

Chatfield

Percent of map unit: 4 percent
Hydric soil rating: No

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Section 7

Stormwater Operations & Maintenance Plan Inspection Form Stormwater Management Plan

ALTUS ENGINEERING

STORMWATER INSPECTION AND MAINTENANCE MANUAL

86 Farm Lane Subdivision
Tax Map 236, Lot 74

OWNER:
Flipping Berger's, LLC.
71 Bracket Road
Portsmouth, NH 03801

Proper inspection, maintenance, and repair are key elements in maintaining a successful stormwater management program on a developed property. Routine inspections ensure permit compliance and reduce the potential for deterioration of infrastructure or reduced water quality. The following responsible parties shall be in charge of managing the stormwater facilities:

RESPONSIBLE PARTIES:

Owner:	*Jeanette MacDonald*		*-*
	Name	*Company*	*Phone*
Inspection:	*Flipping Berger's, LLC*		*(914) 299-4438*
	Name	*Company*	*Phone*
Maintenance:	*Flipping Berger's, LLC*		*(603) 299-4438*
	Name	*Company*	*Phone*

NOTES:

Photographs of each stormwater BMP are to be taken at each inspection and submitted with the annual inspection reports.

Inspection and maintenance responsibilities shall transfer to any future property owner(s).

This manual shall be updated as needed to reflect any changes related to any transfer of ownership and/or any delegation of inspection and maintenance responsibilities to another entity

ALTUS ENGINEERING

STORMWATER PONDS/CELLS (AKA RAINGARDENS) BIORETENTION & INFILTRATION

Function – Bioretention and infiltration ponds provide treatment to runoff prior to directing it to stormwater systems by filtering sediment and suspended solids, trapping them in the bottom of the garden and in the filter media itself. Additional treatment is provided by the native water-tolerant vegetation which removes nutrients and other pollutants through bio-uptake. Stormwater detention and infiltration can also be provided as the filtering process slows runoff, decreases the peak rate of discharge and promotes groundwater recharge.

Bioretention and infiltration ponds shall be managed (Per AGR 3800 and RSA 430:53) to: prevent and control the spread of invasive plant, insect, and fungal species; minimize the adverse environmental and economic effects invasive species cause to agriculture, forests, wetlands, wildlife, and other natural resources of the state; and protect the public from potential health problems attributed to certain invasive species.

Maintenance

- Inspect annually and after significant rainfall events.
- If a raingarden does not completely drain within 72-hours following a rainfall event, then a qualified professional shall be retained to assess the condition of the facility to determine measures required to restore its filtration and/or infiltration function(s), including but not limited to removal of accumulated sediments and/or replacement or reconstruction of the filter media. Filter media shall be replaced with material matching the specification on the design drawings or the NHDES Stormwater Manual.
- Replace any riprap dislodged from spillways, inlets and outlets.
- Remove any obstructions, litter and accumulated sediment or debris as warranted but no less than once a year.
- Mowing of any grassed area in or adjacent to a raingarden, including its berm, shall be performed at least twice per year (when areas are not inundated) to keep the vegetation in vigorous condition. The cut grass shall be removed to prevent the decaying organic litter from clogging the filter media or choking other vegetation.
- Select vegetation should be maintained in healthy condition. This may include pruning, removal and replacement of dead or diseased vegetation.
- Remove any invasive species, Per AGR 3800 and RSA 430:53.
- Remove any hard wood growth from raingardens.

DRAINAGE PIPES

Function – Drainage pipes convey stormwater away from buildings, walkways, and parking areas and to surface waters or closed drainage systems.

Maintenance

- Drainage pipes shall be inspected semi-annually, or more often as needed, for accumulation of debris and structural integrity. Leaves and other debris shall be removed from the inlet and outlet to insure the functionality of drainage structures. Debris shall be disposed of on site where it will not concentrate back at the drainage structures or at a solid waste disposal facility.

DEEP SUMP CATCH BASINS

Function – Catch basins collect stormwater, primarily from paved surfaces and roofs. Stormwater from paved areas often contains sediment and contaminants. Catch basin sumps serve to trap sediment, trace metals, nutrients and debris. Hooded catch basins trap hydrocarbons and floating debris.

Maintenance

- Remove leaves and debris from structure grates on an as-needed basis.
- Sumps shall be inspected and cleaned annually and any removed sediment and debris shall be disposed of at a solid waste disposal facility.

RIP RAP OUTLETS, SWALES AND BUFFERS

Function – Rip rap outlets slow the velocity of runoff, minimizing erosion and maximizing the treatment capabilities of associated buffers. Vegetated buffers, either forested or meadow, slow runoff which promotes and reduces peak rates of runoff. The reduced velocities and the presence of vegetation encourage the filtration of sediment and the limited bio-uptake of nutrients.

Maintenance

- Inspect riprap and buffers at least annually for signs of erosion, sediment buildup, or vegetation loss.
- If a meadow buffer, provide periodic mowing as needed to maintain a healthy stand of herbaceous vegetation.
- If a forested buffer, then the buffer should be maintained in an undisturbed condition, unless erosion occurs.
- If erosion of the buffer (forested or meadow) occurs, eroded areas should be repaired and replanted with vegetation similar to the remaining buffer. Corrective action should include eliminating the source of the erosion problem and may require retrofit or reconstruction of the level spreader.
- Remove debris and accumulated sediment and dispose of properly.

VEGETATIVE SWALES

Function – Vegetative swales filter sediment from stormwater, promote infiltration, and the uptake of contaminates. They are designed to treat runoff and dispose of it safely into the natural drainage system.

Maintenance

- Timely maintenance is important to keep a swale in good working condition. Mowing of grassed swales shall be monthly to keep the vegetation in vigorous condition. The cut vegetation shall be removed to prevent the decaying organic litter from adding pollutants to the discharge from the swale.
- Fertilizing shall be bi-annual or as recommended from soil testing.
- Inspect swales following significant rainfall events.
- Woody vegetation shall not be allowed to become established in the swales or rock riprap outlet protection and if present shall be removed.
- Accumulated debris disrupts flow and leads to clogging and erosion. Remove debris and litter as necessary.
- Inspect for eroded areas. Determine cause of erosion and correct deficiency as required. Monitor repaired areas.

LANDSCAPED AREAS - FERTILIZER MANAGEMENT

Function – Fertilizer management involves controlling the rate, timing and method of fertilizer application so that the nutrients are taken up by the plants thereby reducing the chance of polluting the surface and ground waters. Fertilizer management can be effective in reducing the amounts of phosphorus and nitrogen in runoff from landscaped areas, particularly lawns.

Maintenance

- Have the soil tested by your landscaper or local Soil Conservation Service for nutrient requirements and follow the recommendations.
- Do not apply fertilizer to frozen ground.
- Clean up any fertilizer spills.
- Do not allow fertilizer to be broadcast into water bodies.
- When fertilizing a lawn, water thoroughly, but do not create a situation where water runs off the surface of the lawn.

LANDSCAPED AREAS - LITTER CONTROL

Function – Landscaped areas tend to filter debris and contaminates that may block drainage systems and pollute the surface and ground waters.

Maintenance

- Litter Control and lawn maintenance involves removing litter such as trash, leaves, lawn clippings, pet waste, oil and chemicals from streets, parking lots, and lawns before materials are transported into surface waters.
- Litter control shall be implemented as part of the grounds maintenance program.

CONTROL OF INVASIVE PLANTS

Function – Invasive plants are introduced, alien, or non-native plants, which have been moved by people from their native habitat to a new area. Some exotic plants are imported for human use such as landscaping, erosion control, or food crops. They also can arrive as "hitchhikers" among shipments of other plants, seeds, packing materials, or fresh produce. Some exotic plants become invasive and cause harm by:

- becoming weedy and overgrown;
- killing established shade trees;
- obstructing pipes and drainage systems;
- forming dense beds in water;
- lowering water levels in lakes, streams, and wetlands;
- destroying natural communities;
- promoting erosion on stream banks and hillsides; and
- resisting control except by hazardous chemical.

Maintenance

During maintenance activities, check for the presence of invasive plants and remove in a safe manner as described in the attached “Methods for Disposing Non-Native Invasive Plants” prepared by the UNH Cooperative Extension.

GENERAL CLEAN UP

- Upon completion of the project, the contractor shall remove all temporary stormwater structures (i.e., temporary stone check dams, silt fence, temporary diversion swales, catch basin inlet filter, etc.). Any sediment deposits remaining in place after the silt fence or filter barrier is no longer required shall be dressed to conform to the existing grade, prepared, and seeded. Remove any sediment in catch basins and clean drainpipes that may have accumulated during construction.
- Once in operation, all paved areas of the site should be swept at least once annually at the end of winter/early spring prior to significant spring rains.

APPPENDIX

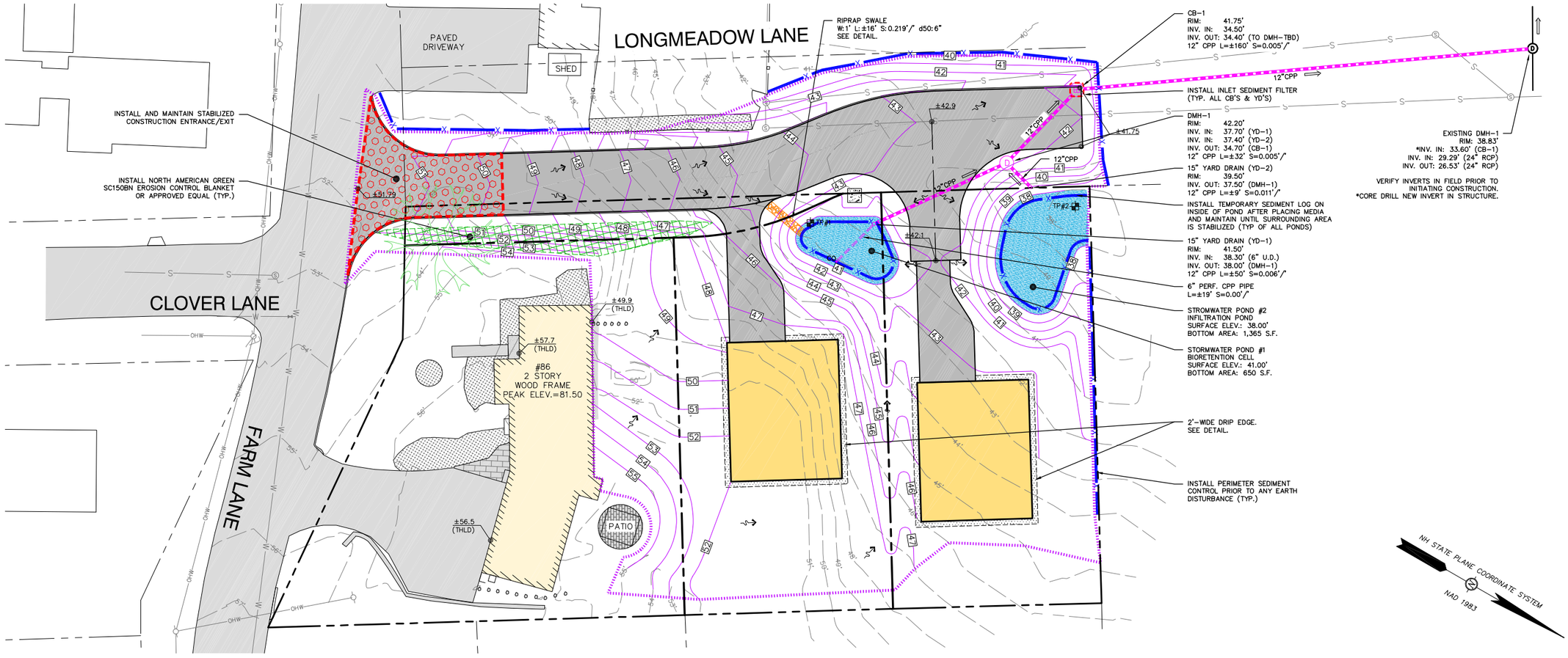
A. Stormwater System Operations and Maintenance Report
B. Stormwater Management Plan

STORM WATER SYSTEM OPERATION AND MAINTENANCE REPORT

General Information			
Project Name			
Owner			
Inspector's Name(s)			
Inspector's Contact Information			
Date of Inspection		**Start Time:**	**End Time:**
Type of Inspection: ☐ Annual Report ☐ Post-storm event ☐ Due to a discharge of significant amounts of sediment			
Notes:			

General Site Questions and Discharges of Significant Amounts of Sediment			
Subject		**Status**	**Notes**
A discharge of significant amounts of sediment may be indicated by (but is not limited to) observations of the following. Note whether any are observed during this inspection:			*Notes/ Action taken:*
1	Do the current site conditions reflect the attached site plan?	❑Yes ❑No	
2	Is the site permanently stabilized, temporary erosion and sediment controls are removed, and stormwater discharges from construction activity are eliminated?	❑Yes ❑No	
3	Is there evidence of the discharge of significant amounts of sediment to surface waters, or conveyance systems leading to surface waters?	❑Yes ❑No	

Permit Coverage and Plans				
#	**BMP/Facility**	**Inspected**	**Corrective Action Needed and Notes**	**Date Corrected**
	Bioretention Cell/ Infiltration Pond	❑Yes ❑No		
	Drainage Pipes	❑Yes ❑No		
	Deep Sump Catch Basins	❑Yes ❑No		
	Riprap Outlets, Swales and Buffers	❑Yes ❑No		
	Vegetative Swales	❑Yes ❑No		
	Site Vegetation & Landscaping	❑Yes ❑No		



GRADING & DRAINAGE NOTES

1. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
2. CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
3. A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE MUNICIPAL ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
4. ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBMS) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
5. PRIOR TO CONSTRUCTION, FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING UTILITIES SCHEDULED TO REMAIN. PRESERVE AND PROTECT UTILITIES TO BE RETAINED.
6. THE LIMITS OF CONSTRUCTION DISTURBANCE SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY TREE CLEARING, STUMPING, GRUBBING OR EARTH MOVING OCCURS. WHERE CONSTRUCTION IS TO TAKE PLACE WITHIN 50' OF A PROPERTY LINE, THE PROPERTY LINE SHALL BE STAKED AT 50' MINIMUM INTERVALS.
7. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
8. IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
9. DEWATERING ACTIVITIES, IF REQUIRED, SHALL BE DONE IN ACCORDANCE WITH EPA AND NHDES REGULATIONS AND GUIDELINES.
10. DRAINAGE PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE (CPP), TYPE ADS N-12 OR HANCOR H1-Q, OR PVC SDR 35 WHERE SPECIFIED. ALL STORMWATER PIPING REDUCERS, WYES AND TEES SHALL BE CONCENTRIC UNLESS OTHERWISE NOTED.
11. 2" RIGID INSULATION SHALL BE INSTALLED OVER DRAIN PIPES WHERE COVER IS < 2'.
12. ALL CATCH BASIN, MANHOLE AND OTHER DRAINAGE RIMS SHALL BE SET FLUSH WITH OR NO LESS THAN 0.1' BELOW FINISH GRADE. ANY RIM ABOVE SURROUNDING FINISH GRADE SHALL NOT BE ACCEPTED UNLESS OTHERWISE SPECIFIED. ALL DRAINAGE STRUCTURES WITHIN PAVED AREAS SHALL BE H-20 LOADING RATED.
13. IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. SYMBOLS MAY NOT BE INDICATIVE OF THE CENTER OF A STRUCTURE, PARTICULARLY WHEN SHOWN ADJACENT TO A CURB LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
14. CONTRACTOR SHALL PROTECT ALL RAINGARDENS FROM CONSTRUCTION STORMWATER RUNOFF. TEMPORARY SEDIMENT BASINS SHALL BE INSTALLED DURING CONSTRUCTION. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
15. ALL SPOT GRADES ARE AT FINISH GRADE AND BOTTOM OF CURB WHERE APPLICABLE. ADJUST GRADING AT EMERGENCY BUILDING EXITS AS NECESSARY TO ENSURE CODE COMPLIANCE. COORDINATE WITH ARCHITECT IF RAILINGS ARE REQUIRED.
16. UNLESS OTHERWISE NOTED, THE CONTRACTOR MAY CONNECT BUILDING AND RETAINING WALL FOUNDATION DRAINS TO THE NEAREST DRAINAGE STRUCTURE PROVIDED A MINIMUM 1% SLOPE CAN BE MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FOUNDATION DRAINS WITH THE BUILDING AND WALL PLANS.
17. UPON COMPLETION OF CONSTRUCTION, ALL DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT.
18. NO SNOW SHALL BE STORED IN ANY STORMWATER POND OR ANY OTHER STORMWATER BMP.
19. SEE SHEET C-3 FOR LEGEND.

EROSION & SEDIMENT CONTROL NOTES

1. AREA OF DISTURBANCE = ±36,000 S.F. NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED, INCLUDING LOT DEVELOPMENT.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH BY THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES.
3. TEMPORARY INLET PROTECTION MEASURES SHALL BE INSTALLED AT ALL CULVERT ENTRANCES AND IN ALL CATCH BASINS WITHIN 100' OF THE PROJECT SITE WHEN SITE WORK WITHIN CONTRIBUTING AREAS IS ACTIVE OR SAID AREAS HAVE NOT BEEN STABILIZED.
4. ALL EROSION CONTROL BLANKETS AND FASTENERS SHALL BE BIDEGRADEABLE.
5. ALL EROSION CONTROL BLANKETS SHALL BE BY NORTH AMERICAN GREEN OR EQUAL AS APPROVED IN WRITING BY THE ENGINEER.
6. ALL SWALES WITH SLOPES OF 5% OR GREATER SHALL BE STABILIZED WITH RIPRAP PER THE DETAILS. ALL OTHER SWALES SHALL BE STABILIZED WITH NORTH AMERICAN GREEN SC150BN EROSION CONTROL BLANKET.
7. THE STORMWATER PONDS SHOWN IN THIS PLAN SET SHALL BE CONSTRUCTED BEFORE EARTHWORK COMMENCES ON THE REMAINDER OF THE SITE. THE CONTRACTOR MAY USE THE POND AS A SEDIMENTATION POND UNTIL THE SITE IS STABILIZED. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. SILT SOXX SHALL BE INSTALLED AROUND THE PERIMETER OF THE STORMWATER BASINS.
8. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM; WITH THE EXCEPTION OF DETENTION PONDS SHOULD A SEDIMENTATION POND BE REQUIRED.
9. TEMPORARY SEDIMENT LOG (SILTSOXX OR EQUAL APPROVED BY THE ENGINEER) SHALL BE INSTALLED AROUND THE INLETS OFF ALL CULVERTS AND THE BOTTOM PERIMETERS OF ALL STORMWATER PONDS. THESE MEASURES ARE TO REMAIN IN PLACE UNTIL ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS.
11. MATERIAL STOCKPILE & CONCRETE WASHOUT LOCATIONS SHOWN ARE CONCEPTUAL. THE CONTRACTOR MAY LOCATE STOCKPILES OR WASHOUT WHERE NECESSARY PROVIDED THAT PERIMETER SEDIMENT CONTROLS ARE PROPERLY INSTALLED.
12. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE SIX (6") INCHES OF LOAM, LIMESTONE, FERTILIZER, SEED, AND HAY MULCH OR EROSION CONTROL BLANKET USING APPROPRIATE SOIL STABILIZATION TECHNIQUES. SEE DETAILS FOR ADDITIONAL INFORMATION.
13. UPON COMPLETION OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED BY THE REMOVAL SMOOTHED AND REVEGETATED.
14. SEE DEMOLITION & SITE PREPARATION PLAN AND DETAIL SHEETS FOR ADDITIONAL SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.

TEST PIT LOGS

EVALUATED BY ERIC D. WEINRIEB (PERMIT #809) ON JANUARY 14, 2026
WITNESSED BY DAVID DESFOSSES (TEST PIT 1 ONLY)

TEST PIT 1
0-9" 7.5 YR 3/3 – DARK BROWN GRASS MATT AND FINE SANDY LOAM, FRIABLE, GRANULAR
9-24" 7.5 YR 3/4 – DARK BROWN FINE SANDY LOAM, FRIABLE, GRANULAR
24-60" 5 YR 4/3 – REDDISH BROWN CLAYEY LOAM FIRM, MASSIVE WITH PROMINENT MOTTLES THROUGHOUT
60" STOPPED

ESTIMATED SEASONAL HIGH WATER TABLE – 24"
ROOTS – OOC TO 40"
OBSERVED WATER – 40"
LEDGE – NONE

TEST PIT 2
0-8" 10 YR 2/2 – VERY DARK BROWN GRASS MATT AND FINE LOAMY SAND, FRIABLE, GRANULAR
8-17" 5 YR 3/3 – DARK REDDISH BROWN LOAMY SAND, SINGLE GRAIN, LOOSE
17-33" 5 YR 6/4 – LIGHT REDDISH BROWN FINE SAND, SINGLE GRAIN, LOOSE
33-55" 5 YR 4/3 REDDISH BROWN CLAYEY LOAM, FIRM, MASSIVE WITH PROMINENT MOTTLES STARTING AT 43"
55" STOPPED

ESTIMATED SEASONAL HIGH WATER TABLE – 43"
ROOTS – NOT DOCUMENTED
OBSERVED WATER – 50"
LEDGE – NONE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
GRADING, DRAINAGE & EROSION CONTROL PLAN

SHEET NUMBER:
C-5

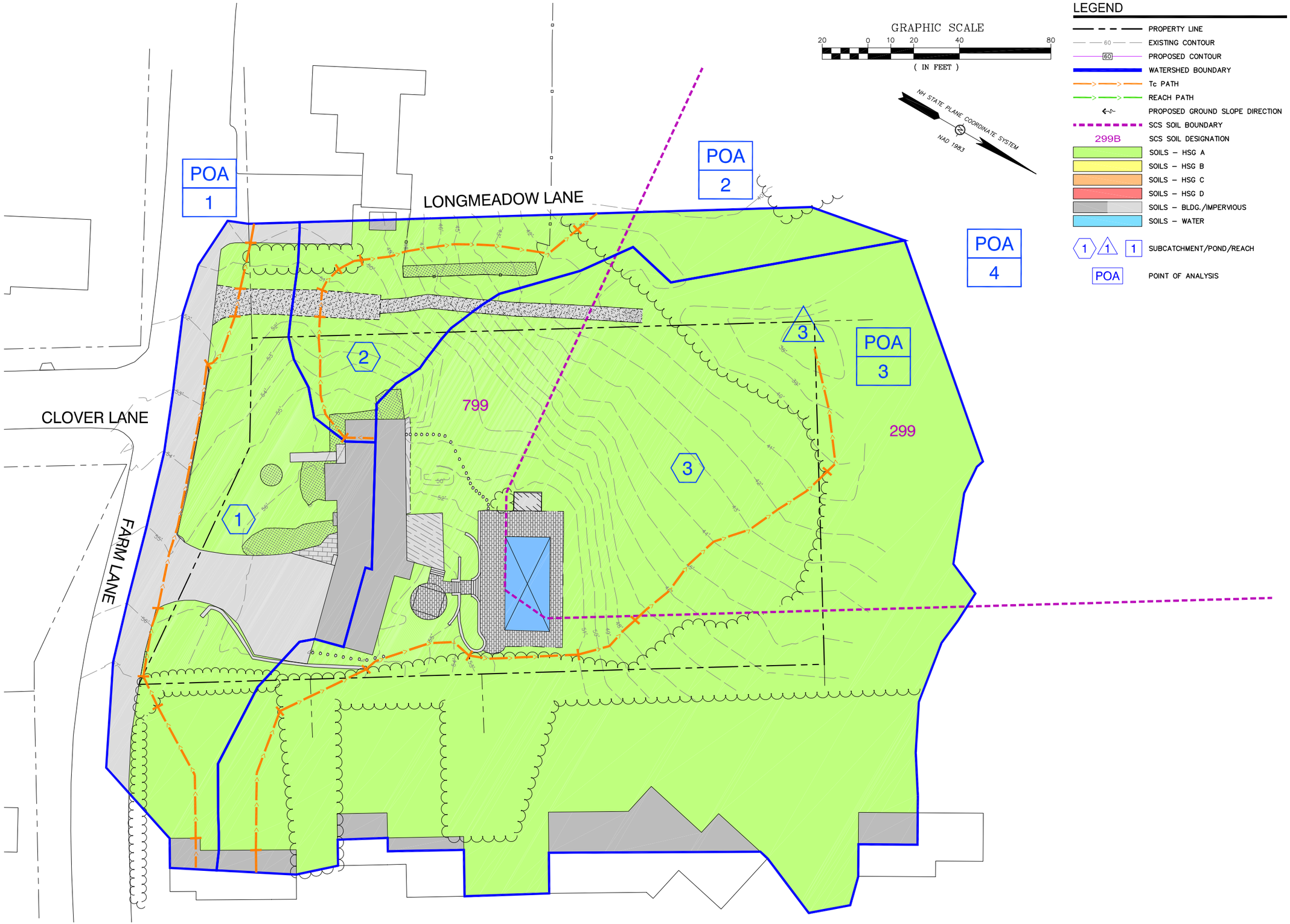
P5719

Section 8

Watershed Plans

Pre-Development Watershed and Soils Plan
Post-Development Watershed and Soils Plan

ALTUS
ENGINEERING



ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

ERIC D. WEINREB No. 7634 LICENSED PROFESSIONAL ENGINEER – STATE OF NEW HAMPSHIRE
2/13/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
FEBRUARY 13, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

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86 FARM LANE
PORTSMOUTH, NH 03801

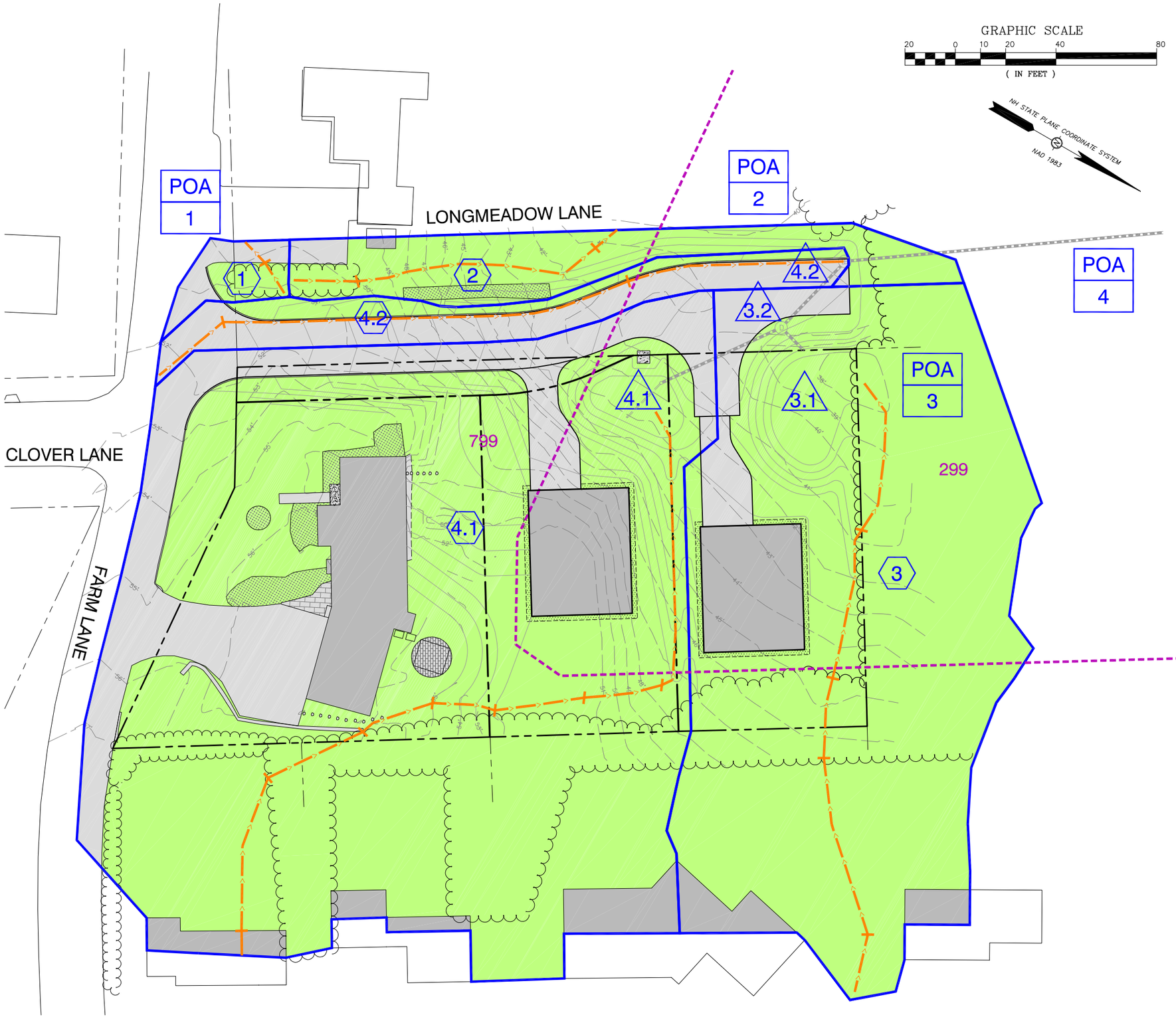
APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
PRE-DEVELOPMENT WATERSHED & SOILS PLAN

SHEET NUMBER:
WS-1

P5719



ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

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22" x 34" - 1" = 20'
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86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
POST-DEVELOPMENT WATERSHED & SOILS PLAN

SHEET NUMBER:
WS-2

P5719

THIS DRAWING SET HAS NOT BEEN
RELEASED FOR CONSTRUCTION

RESIDENTIAL SUBDIVISION

86 FARM LANE
PORTSMOUTH, NEW HAMPSHIRE

Assessor's Parcel 236, Lot 74

ISSUED FOR TAC

Plan Issue Date:

February 13, 2026
Revised March 23, 2026

Owner:

JEANETTE MACDONALD
86 Farm Lane
Portsmouth, NH 03801

Applicant:

FLIPPING BERGER'S, LLC
71 Brackett Road
Portsmouth, NH 03801
(914) 299-4438

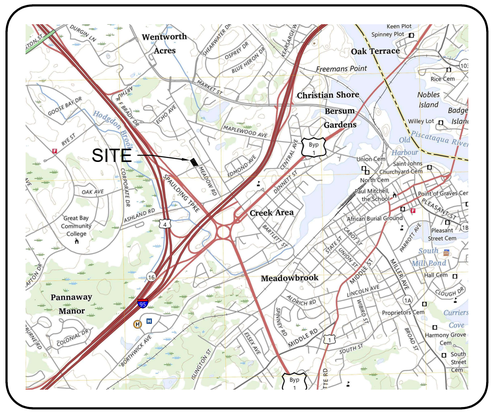
Civil Engineer:

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

Surveyor:

JVA JAMES VERRA & ASSOCIATES, INC.
100 GRIFFIN ROAD, UNIT C,
PORTSMOUTH, N.H., 03801-7876
603-436-3557

JOB NO: 25-2073



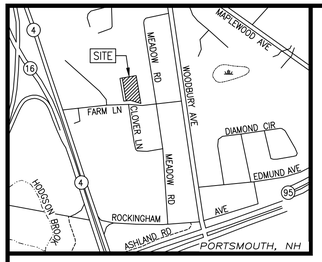
LOCUS NOT TO SCALE

Sheet Index

Title	Sheet No.:	Rev.	Date
Existing Conditions Plan	V-1	1	03/16/26
Existing Conditions Plan	V-2	1	03/16/26
Subdivision & Easement Plan	C-1	1	03/23/26
Conceptual Site Plan	C-2	1	03/23/26
Demolition & Site Preparation Plan	C-3	1	03/23/26
Roadway Plan	C-4	1	03/23/26
Grading, Drainage & Erosion Control Plan	C-5	1	03/23/26
Utilities Plan	C-6	1	03/23/26
Erosion Control Notes & Details	D-1	0	02/13/26
Detail Sheet	D-2	0	02/13/26
Detail Sheet	D-3	0	02/13/26
Detail Sheet	D-4	1	02/13/26
Detail Sheet	D-5	1	03/23/26
Detail Sheet	D-6	0	02/13/26
Vehicular Access Plan	1 of 1	1	03/23/26

Permit Summary	Submitted	Received
Portsmouth Subdivision Approval	02/13/26	–
Portsmouth Site Plan Review Approval	03/23/26	

P5719



LOCUS
(N.T.S.)

ABUTTERS

236-73
NE MARINE AND INDUSTRIAL, INC
200 SPAULDING TURNPIKE
PORTSMOUTH, NH 03801
2342/0694

236-68
SATYAJIT HEERALAL
404 CENTRE ST.
BOSTON, MA 02130
6348/2377

236-67
PETER & LIANNE M. VELEZ
141 MEADOW ROAD
PORTSMOUTH, NH 03801
3777/0273

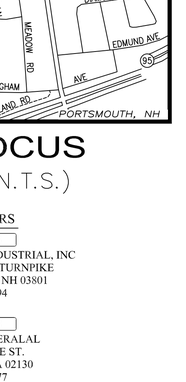
236-66
JONATHAN A. JACKSON
159 MEADOW ROAD
PORTSMOUTH, NH 03801
4125/2573

236-47
KINNALY FAMILTY TRUST OF 2012
EDWARD G. & KAREN KINNALY,
TRUSTEES
PO BOX 834
NEW CASTLE, NH 03854
6344/2213

236-40
WILLIAM J. CHARLAND &
JUDITH M. PINKHAM
45 CLOVER LANE
PORTSMOUTH, NH 03801
5662/2989

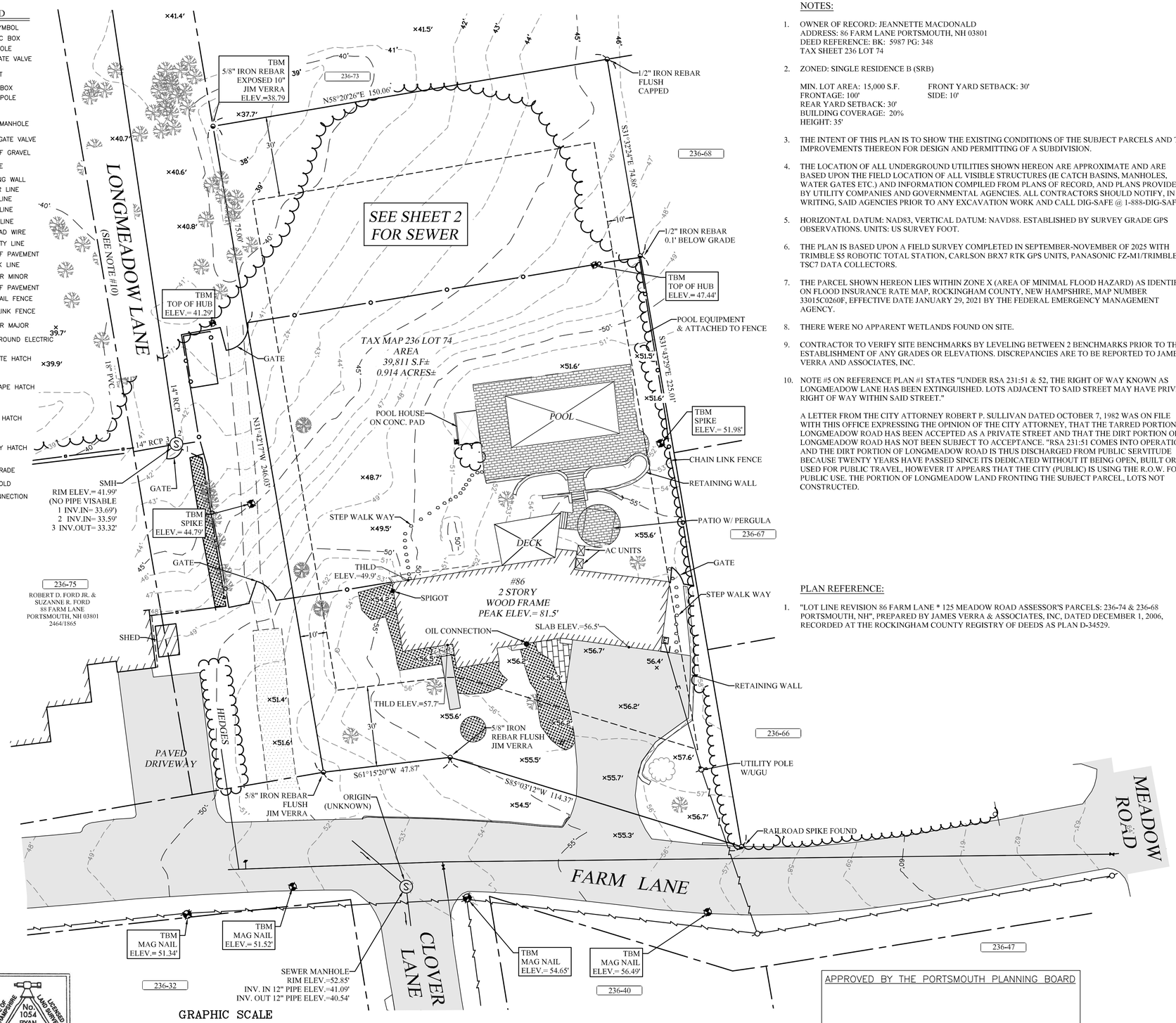
236-32
DENNIS HOSKIN
JEANNE HOSKIN
50 CLOVER LANE
PORTSMOUTH, NH 03801
5394/1195

236-75
ROBERT D. FORD JR. &
SUZANNE R. FORD
88 FARM LANE
PORTSMOUTH, NH 03801
2464/1865



LEGEND

TREE SYMBOL
ELECTRIC BOX
LIGHT POLE
WATERGATE VALVE
HYDRANT
UTILITY BOX
UTILITY POLE
SIGN
SEWER MANHOLE
WATER GATE VALVE
EDGE OF GRAVEL
TREELINE
RETAINING WALL
ABUTTER LINE
W WATER LINE
S SEWER LINE
SHRUB LINE
OVERHEAD WIRE
PROPERTY LINE
EDGE OF PAVEMENT
SETBACK LINE
CONTOUR MINOR
EDGE OF PAVEMENT
SPLIT RAIL FENCE
CHAIN LINK FENCE
CONTOUR MAJOR
E UNDERGROUND ELECTRIC
CONCRETE HATCH
LANDSCAPE HATCH
GRAVEL HATCH
WALKWAY HATCH
52.1' X SPOT GRADE
THLD THRESHOLD
OIL CONNECTION



NOTES:

1. OWNER OF RECORD: JEANNETTE MACDONALD
   ADDRESS: 86 FARM LANE PORTSMOUTH, NH 03801
   DEED REFERENCE: BK: 5987 PG: 348
   TAX SHEET 236 LOT 74
2. ZONED: SINGLE RESIDENCE B (SRB)

   MIN. LOT AREA: 15,000 S.F. — FRONT YARD SETBACK: 30'
   FRONTAGE: 100' — SIDE: 10'
   REAR YARD SETBACK: 30'
   BUILDING COVERAGE: 20%
   HEIGHT: 35'
3. THE INTENT OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS OF THE SUBJECT PARCELS AND THE IMPROVEMENTS THEREON FOR DESIGN AND PERMITTING OF A SUBDIVISION.
4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS OF RECORD, AND PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.
5. HORIZONTAL DATUM: NAD83, VERTICAL DATUM: NAVD88. ESTABLISHED BY SURVEY GRADE GPS OBSERVATIONS. UNITS: US SURVEY FOOT.
6. THE PLAN IS BASED UPON A FIELD SURVEY COMPLETED IN SEPTEMBER-NOVEMBER OF 2025 WITH TRIMBLE S5 ROBOTIC TOTAL STATION, CARLSON BRX7 RTK GPS UNITS, PANASONIC FZ-M1/TRIMBLE TSC7 DATA COLLECTORS.
7. THE PARCEL SHOWN HEREON LIES WITHIN ZONE X (AREA OF MINIMAL FLOOD HAZARD) AS IDENTIFIED ON FLOOD INSURANCE RATE MAP, ROCKINGHAM COUNTY, NEW HAMPSHIRE, MAP NUMBER 33015C0260F, EFFECTIVE DATE JANUARY 29, 2021 BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY.
8. THERE WERE NO APPARENT WETLANDS FOUND ON SITE.
9. CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE ESTABLISHMENT OF ANY GRADES OR ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOCIATES, INC.
10. NOTE #5 ON REFERENCE PLAN #1 STATES "UNDER RSA 231:51 & 52, THE RIGHT OF WAY KNOWN AS LONGMEADOW LANE HAS BEEN EXTINGUISHED. LOTS ADJACENT TO SAID STREET MAY HAVE PRIVATE RIGHT OF WAY WITHIN SAID STREET."

    A LETTER FROM THE CITY ATTORNEY ROBERT P. SULLIVAN DATED OCTOBER 7, 1982 WAS ON FILE WITH THIS OFFICE EXPRESSING THE OPINION OF THE CITY ATTORNEY, THAT THE TARRED PORTION OF LONGMEADOW ROAD HAS BEEN ACCEPTED AS A PRIVATE STREET AND THAT THE DIRT PORTION OF LONGMEADOW ROAD HAS NOT BEEN SUBJECT TO ACCEPTANCE. "RSA 231:51 COMES INTO OPERATION AND THE DIRT PORTION OF LONGMEADOW ROAD IS THUS DISCHARGED FROM PUBLIC SERVITUDE BECAUSE TWENTY YEARS HAVE PASSED SINCE ITS DEDICATED WITHOUT IT BEING OPEN, BUILT OR USED FOR PUBLIC TRAVEL, HOWEVER IT APPEARS THAT THE CITY (PUBLIC) IS USING THE R.O.W. FOR PUBLIC USE. THE PORTION OF LONGMEADOW LAND FRONTING THE SUBJECT PARCEL, LOTS NOT CONSTRUCTED.

PLAN REFERENCE:

1. "LOT LINE REVISION 86 FARM LANE * 125 MEADOW ROAD ASSESSOR'S PARCELS: 236-74 & 236-68 PORTSMOUTH, NH", PREPARED BY JAMES VERRA & ASSOCIATES, INC, DATED DECEMBER 1, 2006, RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS AS PLAN D-34529.

SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

LICENSED LAND SURVEYOR — DATE: 3/18/26

STATE OF NEW HAMPSHIRE — LICENSED LAND SURVEYOR — NO. 10541 — RYAN M. FOWLER — SIGNATURE

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN — DATE

SURVEYOR:
JVA
JAMES VERRA & ASSOCIATES, INC.
100 GRIFFIN ROAD, UNIT C,
PORTSMOUTH, N.H., 03801-7876
603-436-3557

JOB NO: 25-2073

ENGINEER:
ALTUS ENGINEERING
133 Court Street — Portsmouth, NH 03801
(603) 433-2335 — www.altus-eng.com

ISSUED FOR: SUBMISSION

ISSUE DATE: 2/10/26

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	PER TAC COMMENTS	CWW	3/16/26

DRAWN BY: CWW
APPROVED BY: RMF
DRAWING FILE: 25-2037_EX-CON.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

APPLICANT:
BRETT BERGER
71 BRACKET ROAD
PORTSMOUTH, NH 03801

OWNER:
JEANNETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

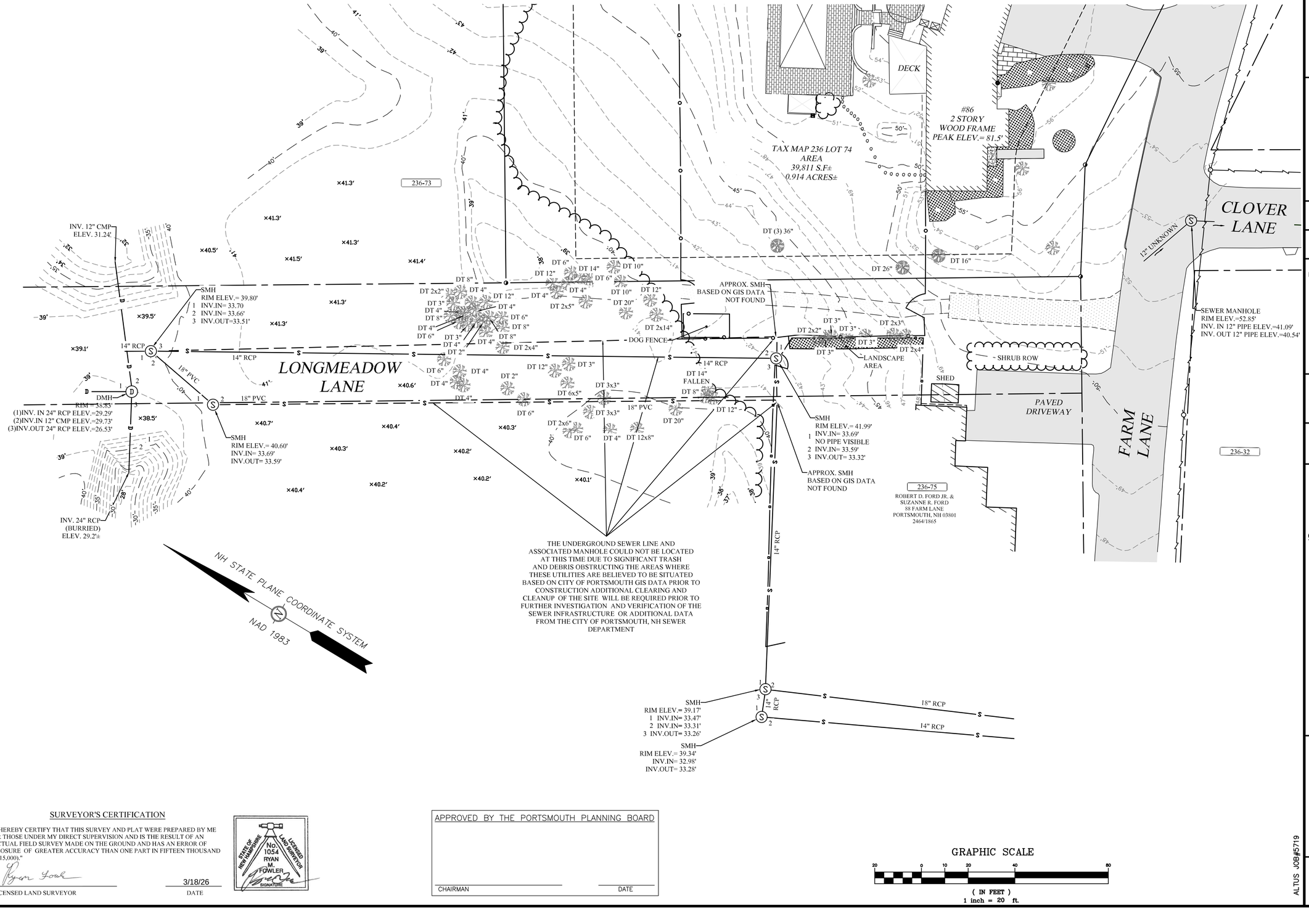
PROJECT:
86
FARM LANE
PORTSMOUTH, NEW HAMPSHIRE
TAX MAP 236 LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
EXISTING CONDITIONS PLAN

SHEET NUMBER:
V-1

ALTUS JOB#5719

J:\2025 PROJECTS\25-2037 ALTUS MCMASTER 86 FARM LN PORTSMOUTH NH_DWG\25-2073_EX.dwg 2026-03-18



SURVEYOR'S CERTIFICATION

"I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN FIFTEEN THOUSAND (1:15,000)."

Ryan Fowler

LICENSED LAND SURVEYOR — 3/18/26 DATE

STATE OF NEW HAMPSHIRE — No. 1054 — RYAN M. FOWLER — LICENSED LAND SURVEYOR — SIGNATURE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN — DATE

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft.

J:\2025 PROJECTS\25-2037 ALTUS MCMASTER 86 FARM LN PORTSMOUTH NH_DWG\25-2073_EX.dwg 2026-03-18

ALTUS JOB#5719

SURVEYOR:
JVA
JAMES VERRA & ASSOCIATES, INC.
100 GRIFFIN ROAD, UNIT C,
PORTSMOUTH, N.H., 03801-7876
603-436-3557

JOB NO: 25-2073

ENGINEER:
ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

ISSUED FOR: SUBMISSION

ISSUE DATE: 2/10/26

REVISIONS

NO.	DESCRIPTION	BY	DATE
1	PER TAC COMMENTS	CWW	3/16/26

DRAWN BY: CWW
APPROVED BY: RMF
DRAWING FILE: 25-2037_EX-CON.DWG

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

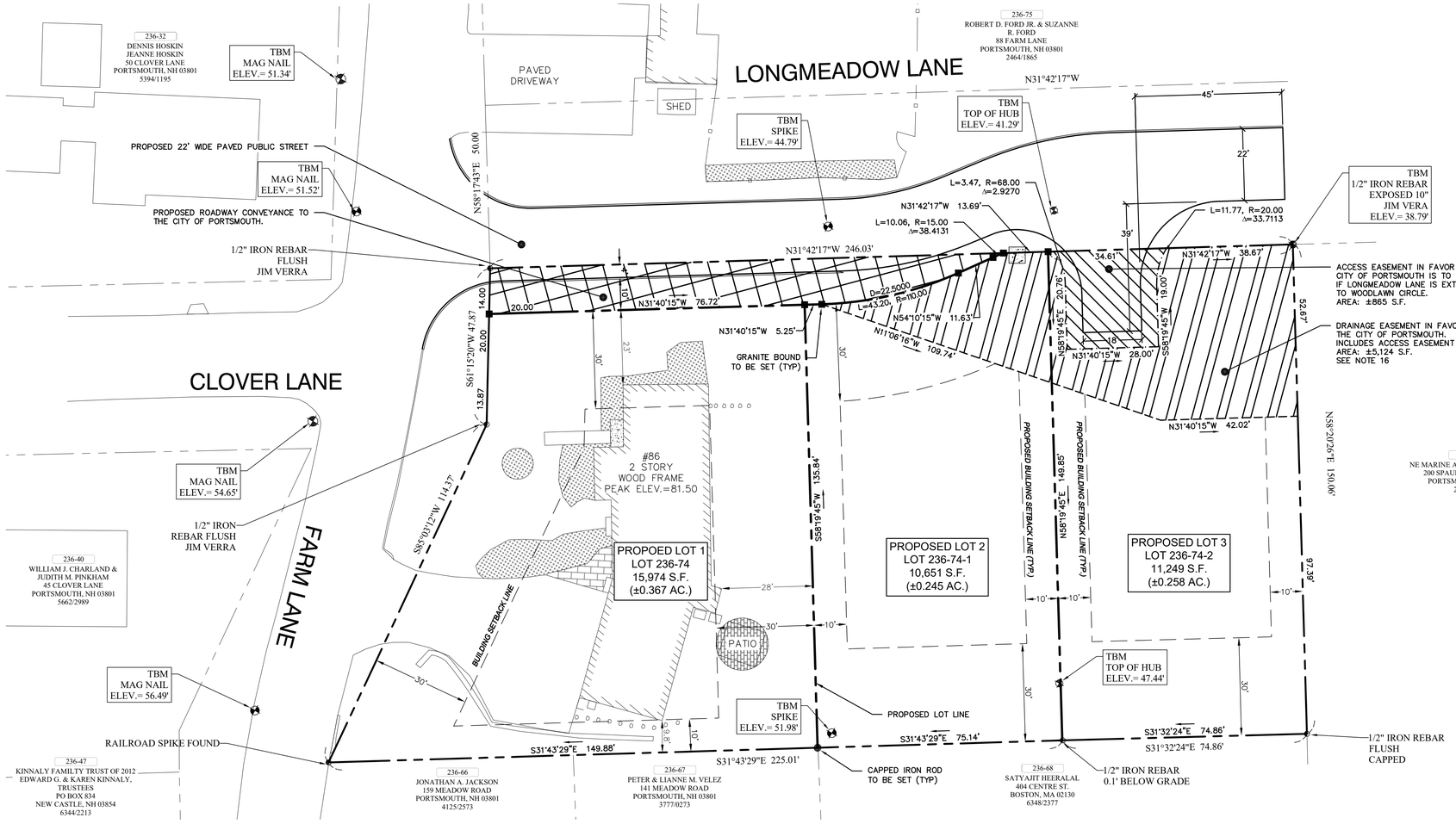
APPLICANT:
BRETT BERGER
71 BRACKET ROAD
PORTSMOUTH, NH 03801

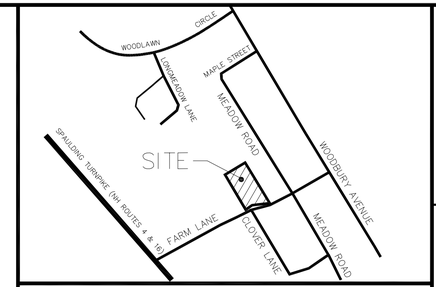
OWNER:
JEANNETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

PROJECT:
86
FARM LANE
PORTSMOUTH, NEW HAMPSHIRE
TAX MAP 236 LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
EXISTING CONDITIONS PLAN

SHEET NUMBER:
V-2





LOCUS
NOT TO SCALE

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

SUBDIVISION NOTES

1. DESIGN INTENT – THIS PLAN IS INTENDED TO DEPICT A THREE LOT RESIDENTIAL SUBDIVISION SERVICED WITH MUNICIPAL SEWER & WATER ON A NEW PUBLIC ROAD.
2. THE BASE PLAN USED HERE WAS DEVELOPED FROM THE 86 FARM LANE EXISTING CONDITIONS PLANS (V–1 & V–2), DATED 11/11/25, PROVIDED BY JAMES VERRA & ASSOCIATES, INC.
3. ZONE: SRB (SINGLE RESIDENCE B)
4. DIMENSIONAL REQUIREMENTS:

LOT AREA:	15,000 S.F.
FRONTAGE:	100'
LOT DEPTH:	100'
FRONT YARD:	30'
SIDE YARD:	10'
REAR YARD:	30'
BUILDING HEIGHT:	35' (MAX. w/SLOPED ROOF)
BUILDING COVERAGE:	20% MAX.
OPEN SPACE:	40% MIN.
WETLAND BUFFER:	NONE (WETLAND LESS THAN 10,000 S.F.)

5. PARKING REQUIREMENTS: NR (NO REQUIREMENT)
6. PARCEL IS NOT IN A FLOOD HAZARD ZONE PER FLOOD INSURANCE RATE MAP (FIRM), ROCKINGHAM COUNTY, NEW HAMPSHIRE, DATED JANUARY 29, 2021.
7. WAIVERS REQUESTED:
   - 7.1. SECTION IV: ROADWAY WIDTH – 32–FEET IS REQUIRED, 22–FEET IS PROVIDED.
   - 7.2. SECTION VI.3.i: CUL–DE–SAC REQUIRED, TURN AROUND PROVIDED.
   - 7.3. SECTION 2.13: RECORDING OF SITE PLAN, SITE PLAN IS CONCEPTUAL AND NOT TO BE RECORDED BUT SUBDIVISION PLAN IS TO BE RECORDED.
8. AREA OF DISTURBANCE LESS THAN 43,560 S.F., COVERAGE UNDER EPA NPDES PHASE II CONSTRUCTION GENERAL PERMIT IS NOT REQUIRED.
9. NO NEW RESIDENTIAL USES SHALL BE PERMITTED WITHIN THE CITY'S RIGHT–OF–WAY WHICH SHALL BE RESERVED EXCLUSIVELY FOR A ROADWAY AND ASSOCIATED INFRASTRUCTURE.
10. SEE THE ENTIRE SET OF PLANS RELATED TO THIS SUBDIVISION ON FILE WITH THE CITY OF PORTSMOUTH PLANNING DEPARTMENT.
11. SNOW SHALL BE STORED AT THE EDGE OF THE ROAD OR REMOVED OFF SITE TO AN APPROVED LOCATION IF REQUIRED TO MAINTAIN SAFE ACCESS.
12. THIS PLAN SHALL BE RECORDED AT THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
13. ALL CONDITIONS ON THIS PLAN SET SHOULD REMAIN IN EFFECT IN PERPETUITY.
14. ALL IMPROVEMENT SHOWN ON THIS SITE PLAN (SUBDIVISION PLAN) SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN (SUBDIVISION PLAN) WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
15. PERMANENT STREET ADDRESS SIGNS SHALL BE PLACED IN A HIGHLY VISIBLE LOCATED AT THE END OF EACH DRIVEWAY.
16. HOMEOWNERS SHALL BE RESPONSIBLE FOR MAINTAINING THE DRAINAGE EASEMENT AREAS ON THEIR RESPECTIVE LOTS. EASEMENT TO THE CITY IS FOR USAGE RIGHTS FOR ANY RUNOFF FROM THE NEW ROADWAY.

VARIANCES GRANTED BY ZBA ON MAY 27, 2025:

LOT 236–74:
SECTION 10.521:
- A. TO ALLOW 28–FOOT REAR YARD SETBACK WHERE 30–FEET IS REQUIRED.
- B. TO ALLOW 23–FOOT SECONDARY FRONT YARD WHERE 30–FEET IS REQUIRED.

LOT 236–74–1:
SECTION 10.521:
- C. TO ALLOW 10,664 S.F. OF LOT AREA WHERE 15,000 S.F. IS REQUIRED.
- D. TO ALLOW 10,664 S.F. OF LOT AREA PER DWELLING UNIT WHERE 15,000 S.F. IS REQUIRED.
- E. TO ALLOW 75–FEET OF CONTIUOUS STREET FRONTAGE WHERE 100–FEET IS REQUIRED.

LOT 236–74–2:
SECTION 10.521:
- C. TO ALLOW 11,250 S.F. OF LOT AREA WHERE 15,000 S.F. IS REQUIRED.
- D. TO ALLOW 11,250 S.F. OF LOT AREA PER DWELLING UNIT WHERE 15,000 S.F. IS REQUIRED.
- E. TO ALLOW 75–FEET OF CONTIUOUS STREET FRONTAGE WHERE 100–FEET IS REQUIRED.

LOT AREAS & COVERAGES SUMMARY

EXISTING LOT AREA:

LOT 236–74: 39,811 S.F.

EXISTING LOT TO BE SUBDIVIDED INTO THREE LOTS.

PROPOSED LOT AREAS:

LOT 236–74:	15,974 S.F.
LOT 236–74–1:	10,651 S.F.
LOT 236–74–2:	11,249 S.F.
NEW CITY RIGHT–OF–WAY:	1,937 S.F.
TOTAL:	39,811 S.F.

BUILDING COVERAGE:

LOT 236–74:

EXISTING:	±2,960 S.F. / 39,811 S.F. = ±7.4%
PROPOSED:	±2,960 S.F. / 15,974 S.F. = ±18.5%

PROPOSED BUILDING SIZE UNKNOWN FOR LOTS 236–74–1 & 236–74–2; LOTS WILL HAVE EQUAL TO OR LESS THAN 20% BUILDING COVERAGE.

LOT 236–74–1 MAXIMUM BUILDING FOOTPRINT: 2,130 S.F.
LOT 236–74–2 MAXIMUM BUILDING FOOTPRINT: 2,248 S.F.

OPEN SPACE:

LOT 236–74 IMPERVIOUS AREAS:	EXISTING	PROPOSED
HOUSE	±2,960 S.F.	±2,960 S.F.
DRIVEWAY	±2,120 S.F.	±2,120 S.F.
WALKWAYS	±250 S.F.	±250 S.F.
PATIO	±210 S.F.	±210 S.F.
RETAINING WALL & GRAVELS	±210 S.F.	±210 S.F.
DECK	±380 S.F.	±0 S.F.
POOL AREA & HARDSCAPE	±2,525 S.F.	±0 S.F.
TOTAL	±8,655 S.F.	±5,750 S.F.

LOT 236–74:
EXISTING OPEN SPACE: (39,811 S.F. – 8,655 S.F.) / 39,811 S.F. = (±78.3%)
PROPOSED OPEN SPACE: (15,974 S.F. – 5,750 S.F.) / 15,974 S.F. = (±64.0%)

PURPOSE OF PLAN:

THE PURPOSE OF THIS PLAN IS TO SHOW THE CONDITIONS OF APPROVAL FOR THE SUBDIVISION AND THE SITE PLAN REVIEW THAT ARE REQUIRED TO BE RECORDED BY THE CITY OF PORTSMOUTH AS PART OF THEIR APPROVAL OF THE DEVELOPMENT. THESE CONDITIONS WILL RUN WITH THE NEW LOTS IN PERPETUITY.

SURVEYOR OF RECORD DATE

PLAN REFERENCES:
1. "LOT LINE REVISION, 86 FARM LANE & 125 MEADOW ROAD, ASSESSOR'S PARCELS: 236–74 & 236–68, PORTSMOUTH, NEW HAMPSHIRE, OWNERS: JEANETTE MACDONALD & WILLIAM A. & CHRIS A. LACEY," LAST REVISED JANUARY 17, 2007 AND PREPARED BY JAMES VERRA AND ASSOC., INC. RCRD PLAN #D–34529.
2. "LAND IN PORTSMOUTH, N.H. PAUL C. & ORVILLE BADGER TO SAMUEL A. & LUCILLE E. MCMASTER" DATED NOVEMBER 1951, AND PREPARED BY JOHN W. DURGIN C.E. NOT RECORDED, AND ON FILE AT JAMES VERRA AND ASSOC., INC. FN:2107 PN: L–25.
3. "PLAN OF LOTS, PORTSMOUTH, N.H. FOR PAUL C. & ORVILLE C. BADGER" FILED MAY 24, 1954 AND PREPARED BY JOHN W. DURGIN CIVIL ENGINEERS. RCRD PLAN #02160.

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER
3/23/26

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

JVA JAMES VERRA & ASSOCIATES, INC.
100 GRIFFIN ROAD, UNIT C,
PORTSMOUTH, N.H., 03801–7876
603–436–3557

JOB NO: 25–2073

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719–SITE.dwg

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

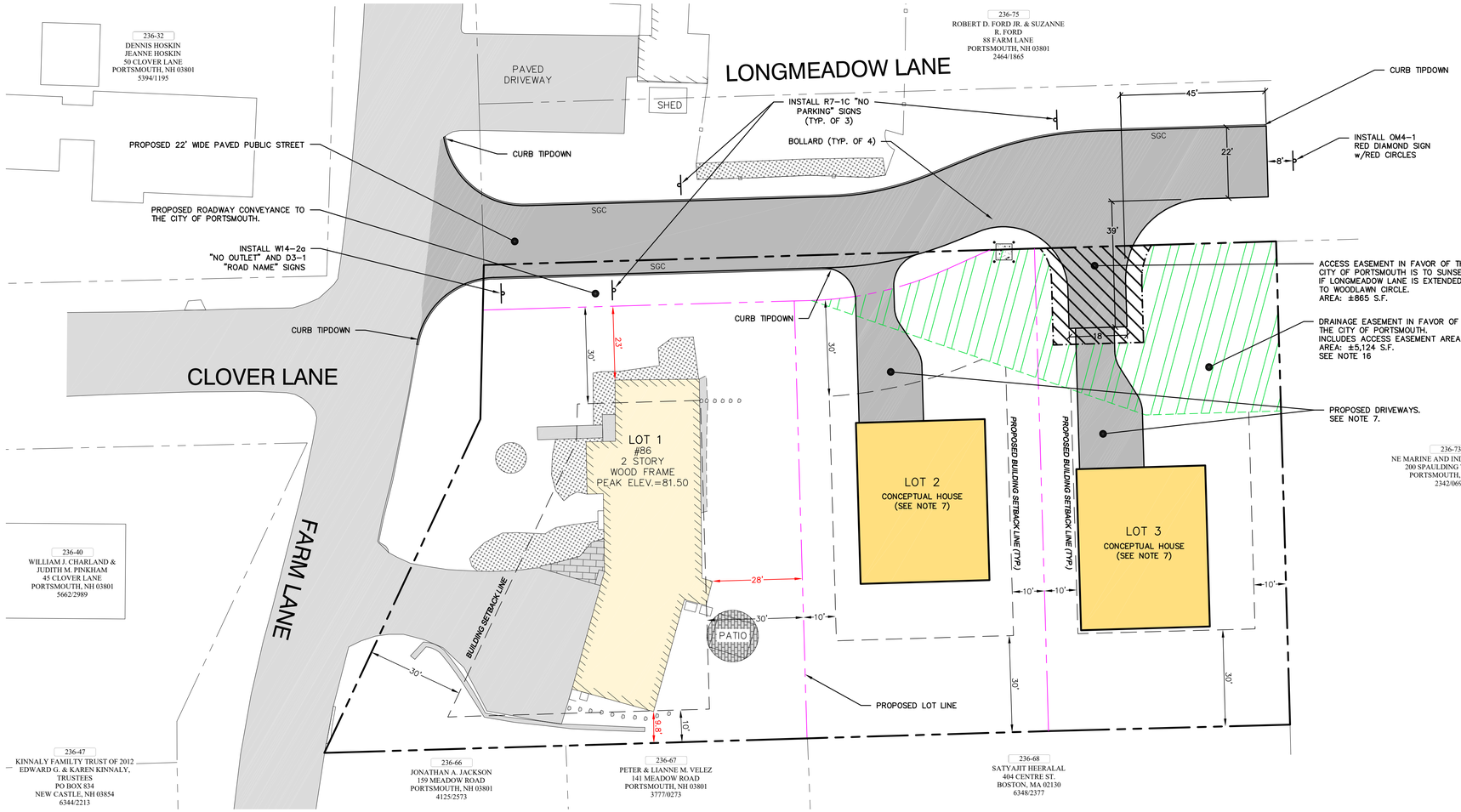
APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

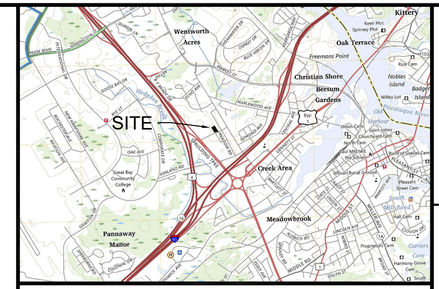
PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
SUBDIVISION & EASEMENT PLAN

SHEET NUMBER:
C-1

P5719





LOCUS
NOT TO SCALE

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

CONCEPTUAL SITE PLAN NOTES

1. DESIGN INTENT – THIS PLAN IS INTENDED TO DEPICT A THREE LOT RESIDENTIAL SUBDIVISION SERVICED WITH MUNICIPAL SEWER & WATER ON A NEW PUBLIC ROAD.
2. APPROXIMATE LOT AREA: 39,811 S.F. (±0.914 AC.)
3. ZONE: SRB (SINGLE RESIDENCE B)
4. DIMENSIONAL REQUIREMENTS:

		EXISTING	LOT 1	LOT 2	LOT 3
LOT AREA:	±15,000 S.F.	39,811 S.F.	15,974 S.F.	10,651 S.F.	11,249 S.F.
FRONTAGE:	100'	±162'	±245'	77.25'	75.0'
LOT DEPTH:	100'	±248'	±98'	±136'	±150'
FRONT YARD:	30'	±34'	±34'	>30'	>30'
SIDE YARD:	10'	±37'L/±9.8'R	±23'L/±9.8'R	>10'	>10'
REAR YARD:	30'	±178'	±28'	>30'	>30'
BUILDING HEIGHT:	35' (MAX.–SLOPED ROOF)	±25'	±25'	<35'	<35'
BUILDING COVERAGE:	20% MAX.	±7.4%	±18.5%	±18.8%	±17.8%
OPEN SPACE:	40% MIN.	±78.2%	±64.0%	±74.7%	±71.5%
WETLAND BUFFER:	NO WETLANDS IDENTIFIED				

5. NO WETLANDS WERE IDENTIFIED WITHIN THE LIMITS OF THE PROJECT AREA, BASED ON THE CITY OF PORTSMOUTH GIS.
6. PARCEL IS NOT IN A FLOOD HAZARD ZONE PER FLOOD INSURANCE RATE MAP (FIRM), ROCKINGHAM COUNTY, NEW HAMPSHIRE, DATED JANUARY 29, 2021.
7. DEVELOPMENT OF LOTS 2 & 3 IS FOR ILLUSTRATIVE PURPOSES ONLY. PROPOSED HOUSES AND DRIVEWAYS SHOWN ON THIS PLAN SET ARE CONCEPTUAL. FINAL BUILDING FOOTPRINTS, ELEVATIONS AND LOCATIONS MAY DIFFER. LOTS SHALL BE GRADED AS SPECIFIED IN THESE PLANS TO DRAIN AS INTENDED.
8. IF IMPERVIOUS ON LOT EXCEEDS THE AREA PROVIDED BELOW, AN INDIVIDUAL STORMWATER MANAGEMENT PLAN FOR THE LOT WILL BE REQUIRED:
   - 8.1. LOT 1: ±5,685 S.F.
   - 8.2. LOT 2: ±2,710 S.F.
   - 8.3. LOT 3: ±3,220 S.F.
9. PERMANENT STREET ADDRESS SIGNS SHALL BE PLACED IN A HIGHLY VISIBLE LOCATION AT THE END OF EACH DRIVEWAY.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

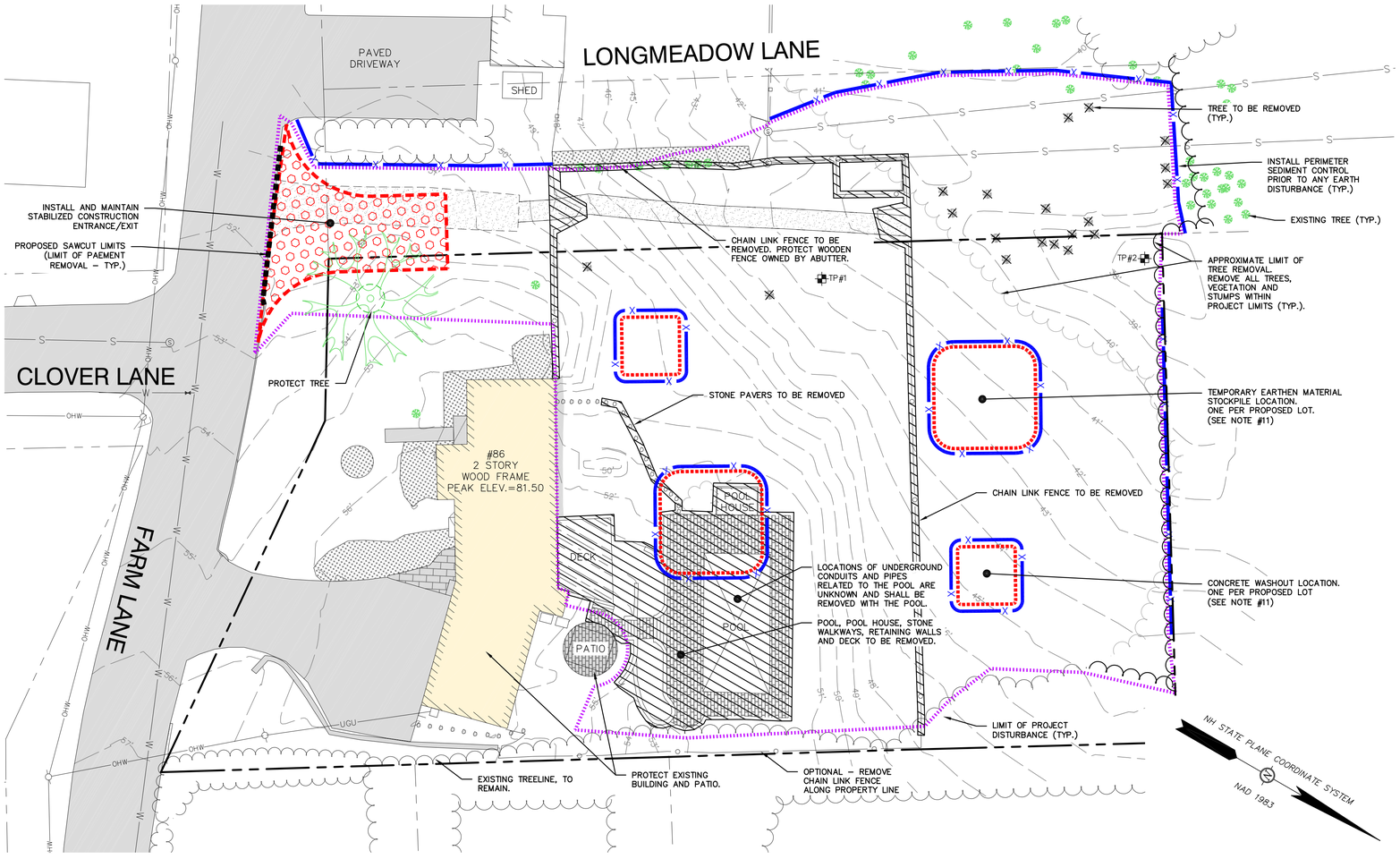
TITLE:
CONCEPTUAL SITE PLAN

SHEET NUMBER:
C-2

P5719

LEGEND

- EXISTING PROPERTY LINE
- PROPOSED PROPERTY LINE
- BUILDING SETBACK
- EASEMENT – CITY OF PORTSMOUTH
- 68 EXISTING CONTOUR
- 68 PROPOSED CONTOUR/INTERMEDIATE CONTOUR
- 72.00 EXISTING SPOT GRADE
- 72.00 PROPOSED SPOT GRADE
- VGC SGC EXISTING/PROPOSED BUILDING
- VGC SGC EXISTING PAVEMENT/CURB
- VGC SGC PROP. PAVEMENT/VERTICAL OR SLOPED GRANITE CURB
- EXISTING/PROPOSED PAVEMENT
- (44) [226] PARKING COUNT PER ROW/FOR TOTAL SITE
- EXISTING/PROPOSED GRAVEL
- EXISTING/PROPOSED CONCRETE
- EXISTING/PROPOSED STOCKADE FENCE
- EXISTING/PROPOSED CHAINLINK FENCE
- EXISTING TREE DRIP LINE
- PROPOSED TREE CLEARING LIMIT
- PROPOSED SAWCUT
- X X SILTFENCE/SEDIMENT BARRIER/CONST. FENCE
- STABILIZED CONSTRUCTION EXIT
- PROPOSED LIMIT OF DISTURBANCE
- OHW UGU EXIST. OVERHEAD/UNDERGROUND UTILITIES/POLE
- OHW PROPOSED OVERHEAD UTILITIES/UTILITY POLE
- UGE&T PROPOSED UNDERGROUND ELECTRIC & COMMUNICATION
- W EXISTING WATERLINE
- PW PROPOSED WATERLINE/GATE VALVE/REDUCER
- PROPOSED THRUST BLOCK/WATER SHUT-OFF/HYDRANT
- S EXISTING SEWER PIPE/MANHOLE
- S PROPOSED SEWER PIPE/MANHOLE/CLEANOUT
- D EXISTING DRAINAGE PIPE)/CB/DCB/DMH/FES
- D PROPOSED DRAINAGE HARD PIPE/CB/DCB/DMH/FES
- PROPOSED YARD DRAIN/OUTLET STRUCTURE
- PROPOSED CATCH BASIN INLET PROTECTION
- CPP FES HDWL CORRUGATED PLASTIC PIPE/FLARED END SECTION/HEADWALL
- PROPOSED GROUND SLOPE/STONE CHECK DAM
- PROPOSED RIPRAP
- PROPOSED BIORETENTION CELL
- PROPOSED STONE DRIPEDGE
- PROPOSED EROSION CONTROL BLANKET
- TEMPORARY BENCH MARK
- TP# TESTPIT
- EXISTING TREE



DEMOLITION & SITE PREPARATION NOTES

1. THIS PLAN IS INTENDED TO PROVIDE MINIMUM GUIDELINES FOR THE DEMOLITION OF EXISTING SITE FEATURES. UNLESS OTHERWISE NOTED TO REMAIN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL BUILDINGS, PAVEMENT, CONCRETE, CURBING, SIGNS, POLES, UTILITIES, FENCES, VEGETATION AND OTHER EXISTING FEATURES AS NECESSARY TO FULLY CONSTRUCT THE PROJECT.
2. ALL MATERIALS SCHEDULED FOR DEMOLITION REMOVAL ON PRIVATE PROPERTY SHALL BECOME PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED.
3. CITY DEMOLITION PERMIT REQUIRED PRIOR TO ANY DEMOLITION ACTIVITIES. CONTRACTOR IS NOTIFIED THAT THIS PERMIT PROCESS MAY REQUIRE A 30-DAY LEAD TIME.
4. LIMITS OF TREE CLEARING & TREES TO REMAIN SHALL BE CLEARLY MARKED PRIOR TO COMMENCING SITE WORK.
5. NO BURNING SHALL BE PERMITTED PER LOCAL REGULATIONS.
6. PERIMETER SEDIMENT CONTROLS SHALL BE INSTALLED AFTER TREE CLEARING OPERATIONS HAVE CEASED AND BEFORE ANY STUMPING, GRUBBING OR OTHER EARTH DISTURBANCE.
7. GRIND STUMPS AND REUSE GRINDINGS FOR EROSION CONTROL WHERE POSSIBLE OR TRUCK OFFSITE. NO STUMPS SHALL BE BURIED ON THE SITE OR LEFT AT ANY DEPTH BELOW ROADWAY OR PARKING LOT SURFACES.
8. NO EARTHWORK SHALL COMMENCE UNTIL ALL APPROPRIATE SEDIMENT AND EROSION CONTROL MEASURES HAVE BEEN INSTALLED. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE PROPERLY MAINTAINED IN GOOD WORKING ORDER FOR THE DURATION OF CONSTRUCTION AND THE SITE IS STABILIZED.
9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH BY NEW HAMPSHIRE DEPARTMENT ENVIRONMENTAL SERVICES.
10. SHOULD GROUNDWATER BE ENCOUNTERED DURING EXCAVATION, APPROPRIATE BEST MANAGEMENT PRACTICES SHALL BE EMPLOYED TO ENSURE SEDIMENT LADEN WATER IS NOT DISCHARGED INTO THE CITY DRAINAGE SYSTEM, ABUTTING PROPERTIES, WETLANDS OR RIVERS. A DISCHARGE PERMIT SHALL BE OBTAINED PRIOR TO DISCHARGING GROUNDWATER TO THE CITY DRAINAGE SYSTEM.
11. MATERIAL STOCKPILE & CONCRETE WASHOUT LOCATIONS SHOWN ARE CONCEPTUAL. THE CONTRACTOR MAY LOCATE STOCKPILES OR WASHOUT WHERE NECESSARY PROVIDED THAT PERIMETER SEDIMENT CONTROLS ARE PROPERLY INSTALLED.
12. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT EROSION AND PREVENT SEDIMENT, DUST, AND OTHER MATERIALS FROM LEAVING THE SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO THE PROACTIVE MANAGEMENT OF STOCKPILES, MATERIALS PROCESSING ACTIVITIES VEHICULAR TRAFFIC, THE EXCAVATION AND PLACEMENT OF EARTH MATERIALS, SPRAYING WATER, SWEEPING PAVED SURFACES, PROVIDING TEMPORARY VEGETATION, AND/OR MULCHING EXPOSED AREAS AND STOCKPILES. THE CONTRACTOR SHALL ENSURE PERMANENT SOIL STABILIZATION.
13. ALL MATERIAL SCHEDULED TO BE REMOVED SHALL BE LEGALLY DISPOSED OF IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS AND CODES.
14. IF HAZARDOUS MATERIALS ARE ENCOUNTERED DURING DEMOLITION AND CONSTRUCTION ACTIVITIES, THEY SHALL BE ABATED IN STRICT ACCORDANCE WITH ALL APPLICABLE STATE AND LOCAL REGULATIONS.
15. CONTRACTOR SHALL PRESERVE AND PROTECT ALL EXISTING UTILITIES SCHEDULED TO REMAIN. WHERE SPECIFIED TO REMAIN, MANHOLE RIMS, CATCH BASIN GRATES, VALVE COVERS, HANDHOLES, ETC. SHALL BE ADJUSTED TO FINISH GRADE UNLESS OTHERWISE SPECIFIED.
16. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (I.E. CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TIMELY NOTIFICATION OF ALL PARTIES, CORPORATIONS, COMPANIES, INDIVIDUALS AND STATE AND LOCAL AUTHORITIES OWNING AND/OR HAVING JURISDICTION OVER ANY UTILITIES RUNNING TO, THROUGH OR ACROSS AREAS TO BE DISTURBED BY DEMOLITION AND/OR CONSTRUCTION ACTIVITIES WHETHER OR NOT SAID UTILITIES ARE SUBJECT TO DEMOLITION, RELOCATION, MODIFICATION AND/OR CONSTRUCTION.
18. AT NO TIME SHALL ANY UTILITY SERVICE OR VEHICULAR ACCESS TO ADJOINING PROPERTIES BE COMPLETELY INTERRUPTED UNLESS A FULL SHUTDOWN IS COORDINATED WITH ALL AFFECTED PARTIES AND UTILITY PROVIDER(S).
19. ALL UTILITY DISCONNECTIONS, DEMOLITIONS AND RELOCATIONS SHALL BE COORDINATED BETWEEN THE CONTRACTOR, ALL APPROPRIATE UTILITY COMPANIES, PORTSMOUTH DPW AND ABUTTING PROPERTY OWNERS. UNLESS OTHERWISE SPECIFIED, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELATED EXCAVATION, TRENCHING AND BACKFILLING.
20. CONTRACTOR SHALL SAFELY SECURE THE SITE AND WORK LIMITS DURING NON-WORK HOURS.
21. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN AND DETAIL SHEETS FOR ADDITIONAL NOTES ON TEMPORARY AND PERMANENT EROSION CONTROL MEASURES.
22. SEE THIS SHEET FOR LEGEND.
23. SEE SHEET C-6 FOR TEST PIT INFORMATION.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE – ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER – 3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

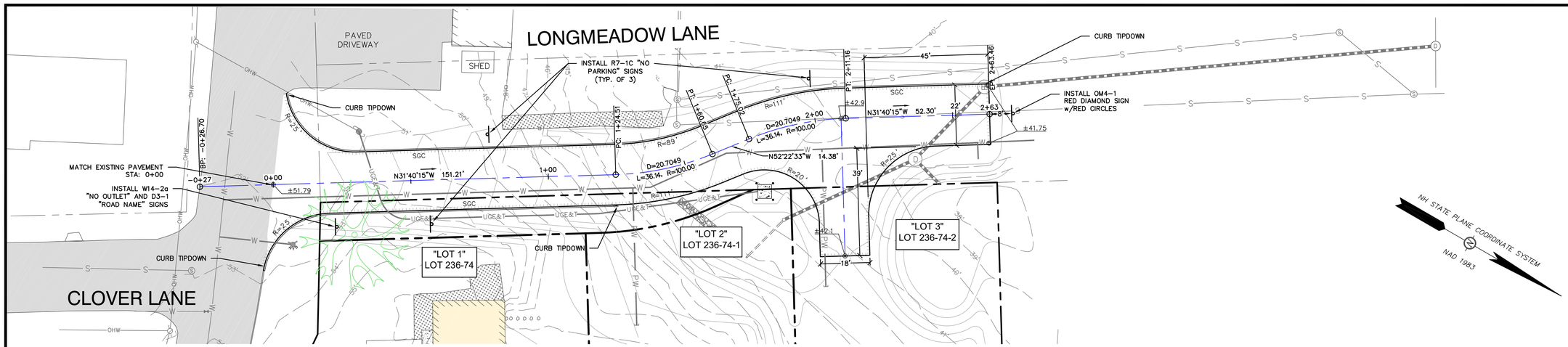
APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

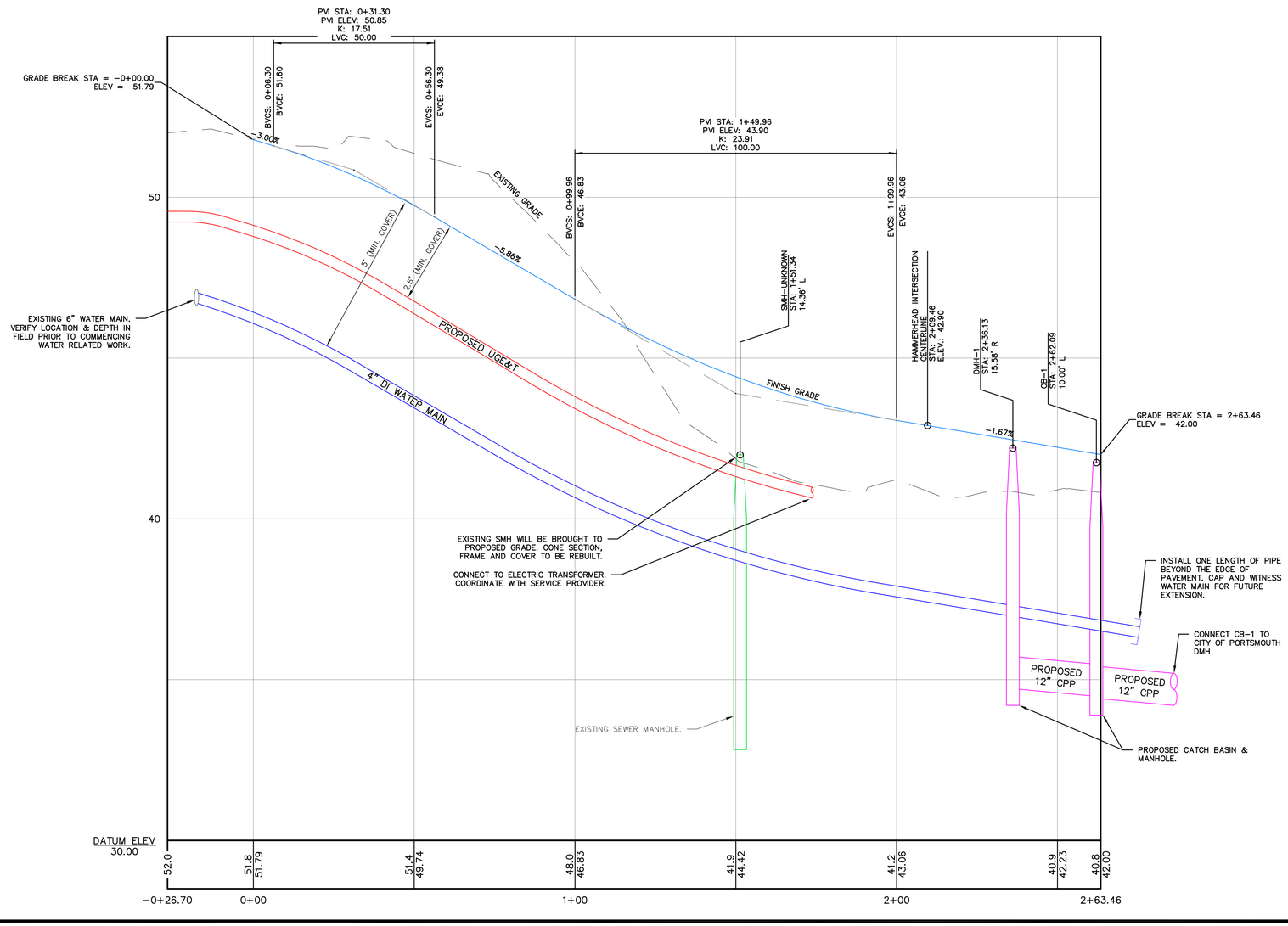
PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
DEMOLITION & SITE PREPARATION PLAN

SHEET NUMBER:
C-3

P5719





ROADWAY NOTES

1. SEE SHEET C-3 FOR LEGEND.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE
(IN FEET)
1 inch = 20 feet Horiz.
1 inch = 2 feet Vert.

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
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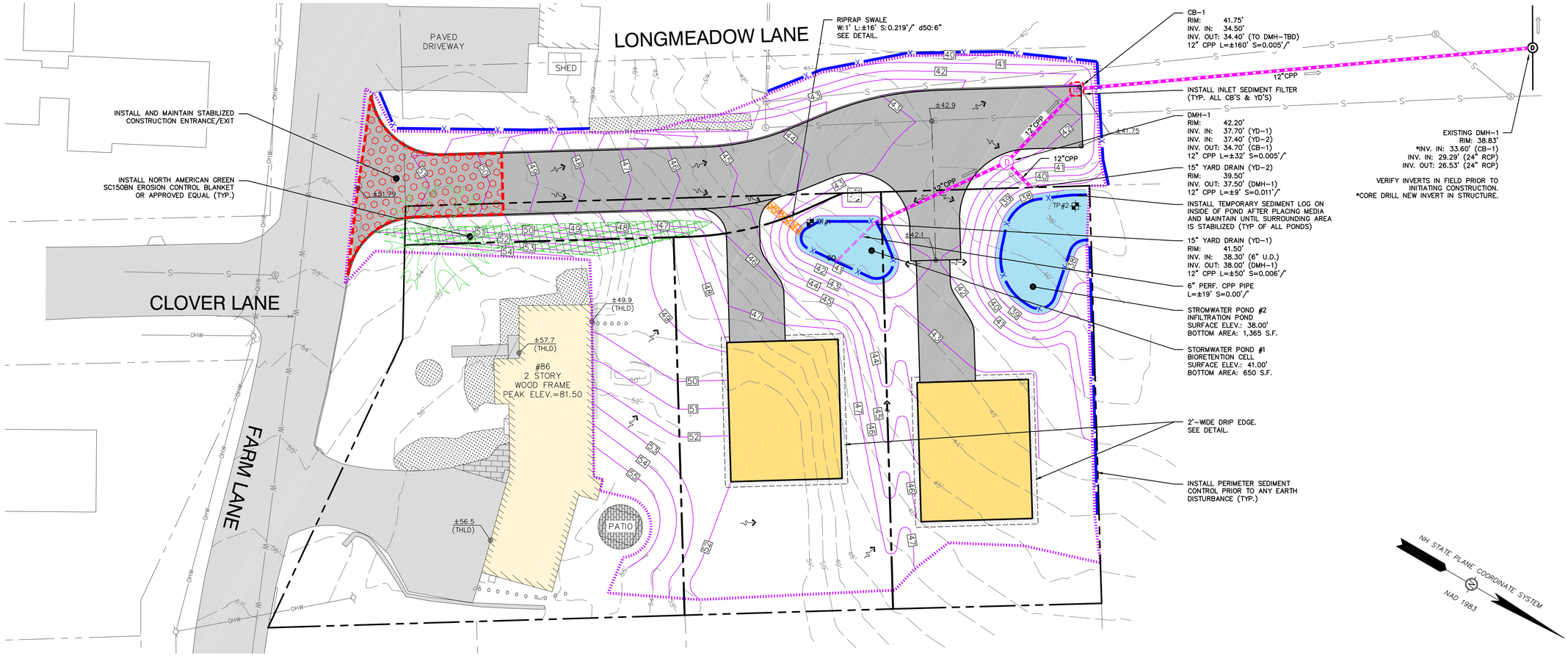
PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
ROADWAY PLAN

SHEET NUMBER:
C-4

P5719



GRADING & DRAINAGE NOTES

1. DO NOT BEGIN CONSTRUCTION UNTIL ALL STATE AND LOCAL PERMITS HAVE BEEN APPLIED FOR AND RECEIVED.
2. CONTRACTOR SHALL OBTAIN A "DIGSAFE" NUMBER AT LEAST 72 HOURS PRIOR TO COMMENCING CONSTRUCTION.
3. A PRE-CONSTRUCTION CONFERENCE WITH THE DEVELOPER, THE DESIGN ENGINEER, THE EARTHWORK CONTRACTOR AND THE MUNICIPAL ENGINEER SHALL OCCUR PRIOR TO ANY EARTH DISTURBING ACTIVITY.
4. ALL BENCHMARKS AND TOPOGRAPHY SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO INITIATING CONSTRUCTION. UNLESS OTHERWISE AGREED IN WRITING, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING TEMPORARY BENCHMARKS (TBMS) AND PERFORMING ALL CONSTRUCTION SURVEY LAYOUT.
5. PRIOR TO CONSTRUCTION, FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING UTILITIES SCHEDULED TO REMAIN. PRESERVE AND PROTECT UTILITIES TO BE RETAINED.
6. THE LIMITS OF CONSTRUCTION DISTURBANCE SHALL BE STAKED, FLAGGED AND CLEARLY IDENTIFIED PRIOR TO ANY TREE CLEARING, STUMPING, GRUBBING OR EARTH MOVING OCCURS. WHERE CONSTRUCTION IS TO TAKE PLACE WITHIN 50' OF A PROPERTY LINE, THE PROPERTY LINE SHALL BE STAKED AT 50' MINIMUM INTERVALS.
7. PROTECTION OF SUBGRADE: THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN STABLE, DEWATERED SUBGRADES FOR FOUNDATIONS, PAVEMENT AREAS, UTILITY TRENCHES, AND OTHER AREAS DURING CONSTRUCTION. SUBGRADE DISTURBANCE MAY BE INFLUENCED BY EXCAVATION METHODS, MOISTURE, PRECIPITATION, GROUNDWATER CONTROL, AND CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PREVENT SUBGRADE DISTURBANCE. SUCH PRECAUTIONS MAY INCLUDE DIVERTING STORMWATER RUNOFF AWAY FROM CONSTRUCTION AREAS, REDUCING TRAFFIC IN SENSITIVE AREAS, AND MAINTAINING AN EFFECTIVE DEWATERING PROGRAM. SOILS EXHIBITING HEAVING OR INSTABILITY SHALL BE OVER EXCAVATED TO MORE COMPETENT BEARING SOIL AND REPLACED WITH FREE DRAINING STRUCTURAL FILL. IF THE EARTHWORK IS PERFORMED DURING FREEZING WEATHER, EXPOSED SUBGRADES ARE SUSCEPTIBLE TO FROST. NO FILL OR UTILITIES SHALL BE PLACED ON FROZEN GROUND. THIS WILL LIKELY REQUIRE REMOVAL OF A FROZEN SOIL CRUST AT THE COMMENCEMENT OF EACH DAY'S OPERATIONS. THE FINAL SUBGRADE ELEVATION WOULD ALSO REQUIRE AN APPROPRIATE DEGREE OF INSULATION AGAINST FREEZING.
8. IF SUITABLE, EXCAVATED MATERIALS SHALL BE PLACED AS FILL WITHIN UPLAND AREAS ONLY AND SHALL NOT BE PLACED WITHIN WETLANDS. PLACEMENT OF BORROW MATERIALS SHALL BE PERFORMED IN A MANNER THAT PREVENTS LONG TERM DIFFERENTIAL SETTLEMENT. EXCESSIVELY WET MATERIALS SHALL BE STOCKPILED AND ALLOWED TO DRAIN BEFORE PLACEMENT. FROZEN MATERIAL SHALL NOT BE USED FOR CONSTRUCTION.
9. DEWATERING ACTIVITIES, IF REQUIRED, SHALL BE DONE IN ACCORDANCE WITH EPA AND NHDES REGULATIONS AND GUIDELINES.
10. DRAINAGE PIPE SHALL BE CORRUGATED POLYETHYLENE PIPE (CPP), TYPE ADS N-12 OR HANCOR H1-Q, OR PVC SDR 35 WHERE SPECIFIED. ALL STORMWATER PIPING REDUCERS, WYES AND TEES SHALL BE CONCENTRIC UNLESS OTHERWISE NOTED.
11. 2" RIGID INSULATION SHALL BE INSTALLED OVER DRAIN PIPES WHERE COVER IS < 2'.
12. ALL CATCH BASIN, MANHOLE AND OTHER DRAINAGE RIMS SHALL BE SET FLUSH WITH OR NO LESS THAN 0.1' BELOW FINISH GRADE. ANY RIM ABOVE SURROUNDING FINISH GRADE SHALL NOT BE ACCEPTED UNLESS OTHERWISE SPECIFIED. ALL DRAINAGE STRUCTURES WITHIN PAVED AREAS SHALL BE H-20 LOADING RATED.
13. IN ORDER TO PROVIDE VISUAL CLARITY ON THE PLANS, DRAINAGE AND OTHER UTILITY STRUCTURES MAY NOT BE DRAWN TO SCALE. SYMBOLS MAY NOT BE INDICATIVE OF THE CENTER OF A STRUCTURE, PARTICULARLY WHEN SHOWN ADJACENT TO A CURB LINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER SIZING AND LOCATION OF ALL STRUCTURES AND IS DIRECTED TO RESOLVE ANY POTENTIAL DISCREPANCY WITH THE ENGINEER PRIOR TO CONSTRUCTION.
14. CONTRACTOR SHALL PROTECT ALL RAINGARDENS FROM CONSTRUCTION STORMWATER RUNOFF. TEMPORARY SEDIMENT BASINS SHALL BE INSTALLED DURING CONSTRUCTION. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM.
15. ALL SPOT GRADES ARE AT FINISH GRADE AND BOTTOM OF CURB WHERE APPLICABLE. ADJUST GRADING AT EMERGENCY BUILDING EXITS AS NECESSARY TO ENSURE CODE COMPLIANCE. COORDINATE WITH ARCHITECT IF RAILINGS ARE REQUIRED.
16. UNLESS OTHERWISE NOTED, THE CONTRACTOR MAY CONNECT BUILDING AND RETAINING WALL FOUNDATION DRAINS TO THE NEAREST DRAINAGE STRUCTURE PROVIDED A MINIMUM 1% SLOPE CAN BE MAINTAINED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL FOUNDATION DRAINS WITH THE BUILDING AND WALL PLANS.
17. UPON COMPLETION OF CONSTRUCTION, ALL DRAINAGE INFRASTRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND SEDIMENT.
18. NO SNOW SHALL BE STORED IN ANY STORMWATER POND OR ANY OTHER STORMWATER BMP.
19. SEE SHEET C-3 FOR LEGEND.

EROSION & SEDIMENT CONTROL NOTES

1. AREA OF DISTURBANCE = ±36,000 S.F. NHDES ALTERATION OF TERRAIN PERMIT NOT REQUIRED, INCLUDING LOT DEVELOPMENT.
2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DESIGN STANDARDS AND SPECIFICATIONS SET FORTH BY THE NH DEPARTMENT OF ENVIRONMENTAL SERVICES.
3. TEMPORARY INLET PROTECTION MEASURES SHALL BE INSTALLED AT ALL CULVERT ENTRANCES AND IN ALL CATCH BASINS WITHIN 100' OF THE PROJECT SITE WHEN SITE WORK WITHIN CONTRIBUTING AREAS IS ACTIVE OR SAID AREAS HAVE NOT BEEN STABILIZED.
4. ALL EROSION CONTROL BLANKETS AND FASTENERS SHALL BE BIDEGRADEABLE.
5. ALL EROSION CONTROL BLANKETS SHALL BE BY NORTH AMERICAN GREEN OR EQUAL AS APPROVED IN WRITING BY THE ENGINEER.
6. ALL SWALES WITH SLOPES OF 5% OR GREATER SHALL BE STABILIZED WITH RIPRAP PER THE DETAILS. ALL OTHER SWALES SHALL BE STABILIZED WITH NORTH AMERICAN GREEN SC150BN EROSION CONTROL BLANKET.
7. THE STORMWATER PONDS SHOWN IN THIS PLAN SET SHALL BE CONSTRUCTED BEFORE EARTHWORK COMMENCES ON THE REMAINDER OF THE SITE. THE CONTRACTOR MAY USE THE POND AS A SEDIMENTATION POND UNTIL THE SITE IS STABILIZED. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM. SILT SOXX SHALL BE INSTALLED AROUND THE PERIMETER OF THE STORMWATER BASINS.
8. ALL SWALES, STORMWATER PONDS AND THEIR CONTRIBUTING AREAS SHALL BE STABILIZED PRIOR TO DIRECTING RUNOFF TO THEM; WITH THE EXCEPTION OF DETENTION PONDS SHOULD A SEDIMENTATION POND BE REQUIRED.
9. TEMPORARY SEDIMENT LOG (SILTSOXX OR EQUAL APPROVED BY THE ENGINEER) SHALL BE INSTALLED AROUND THE INLETS OFF ALL CULVERTS AND THE BOTTOM PERIMETERS OF ALL STORMWATER PONDS. THESE MEASURES ARE TO REMAIN IN PLACE UNTIL ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
10. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED AFTER FINAL SITE STABILIZATION. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED WITHIN 30 DAYS.
11. MATERIAL STOCKPILE & CONCRETE WASHOUT LOCATIONS SHOWN ARE CONCEPTUAL. THE CONTRACTOR MAY LOCATE STOCKPILES OR WASHOUT WHERE NECESSARY PROVIDED THAT PERIMETER SEDIMENT CONTROLS ARE PROPERLY INSTALLED.
12. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE SIX (6") INCHES OF LOAM, LIMESTONE, FERTILIZER, SEED, AND HAY MULCH OR EROSION CONTROL BLANKET USING APPROPRIATE SOIL STABILIZATION TECHNIQUES. SEE DETAILS FOR ADDITIONAL INFORMATION.
13. UPON COMPLETION OF CONSTRUCTION, ALL TEMPORARY EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AND ANY AREAS DISTURBED BY THE REMOVAL SMOOTHED AND REVEGETATED.
14. SEE DEMOLITION & SITE PREPARATION PLAN AND DETAIL SHEETS FOR ADDITIONAL SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.

TEST PIT LOGS

EVALUATED BY ERIC D. WEINRIEB (PERMIT #809) ON JANUARY 14, 2026
WITNESSED BY DAVID DESFOSSES (TEST PIT 1 ONLY)

TEST PIT 1
0-9" 7.5 YR 3/3 – DARK BROWN GRASS MATT AND FINE SANDY LOAM, FRIABLE, GRANULAR
9-24" 7.5 YR 3/4 – DARK BROWN FINE SANDY LOAM, FRIABLE, GRANULAR
24-60" 5 YR 4/3 – REDDISH BROWN CLAYEY LOAM FIRM, MASSIVE WITH PROMINENT MOTTLES THROUGHOUT
60" STOPPED

ESTIMATED SEASONAL HIGH WATER TABLE – 24"
ROOTS – OOC TO 40"
OBSERVED WATER – 40"
LEDGE – NONE

TEST PIT 2
0-8" 10 YR 2/2 – VERY DARK BROWN GRASS MATT AND FINE LOAMY SAND, FRIABLE, GRANULAR
8-17" 5 YR 3/3 – DARK REDDISH BROWN LOAMY SAND, SINGLE GRAIN, LOOSE
17-33" 5 YR 6/4 – LIGHT REDDISH BROWN FINE SAND, SINGLE GRAIN, LOOSE
33-55" 5 YR 4/3 REDDISH BROWN CLAYEY LOAM, FIRM, MASSIVE WITH PROMINENT MOTTLES STARTING AT 43"
55" STOPPED

ESTIMATED SEASONAL HIGH WATER TABLE – 43"
ROOTS – NOT DOCUMENTED
OBSERVED WATER – 50"
LEDGE – NONE

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE
20 0 10 20 40 80
(IN FEET)

ALTUS ENGINEERING
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STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

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NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
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APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

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86 FARM LANE
PORTSMOUTH, NH 03801

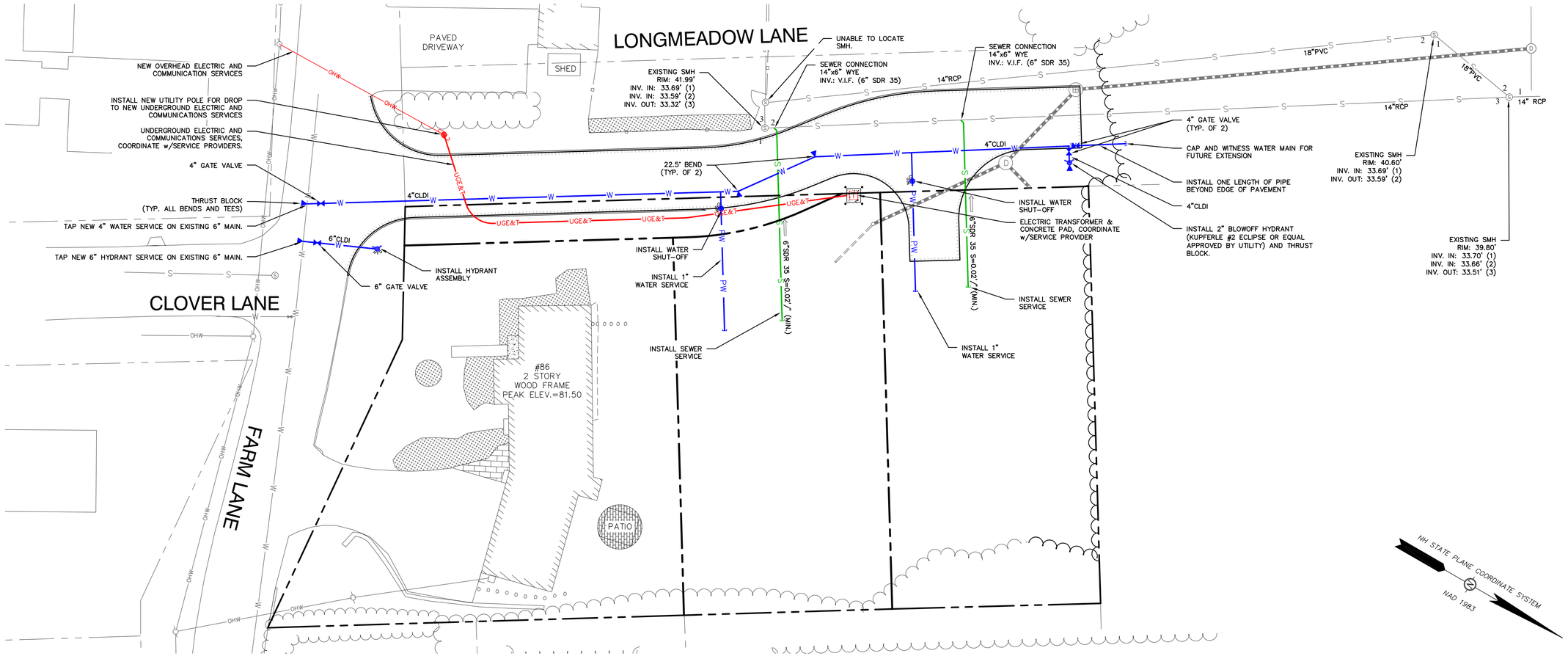
APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
GRADING, DRAINAGE & EROSION CONTROL PLAN

SHEET NUMBER:
C-5

P5719



UTILITY NOTES

1. THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (I.E. CATCH BASINS, MANHOLES, WATER GATES, ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY PROVIDERS AND GOVERNMENTAL AGENCIES. AS SUCH, THEY ARE NOT INCLUSIVE AS OTHER UTILITIES AND UNDERGROUND STRUCTURES THAT ARE NOT SHOWN ON THE PLANS MAY EXIST. THE ENGINEER, SURVEYOR AND OWNER ACCEPT NO RESPONSIBILITY FOR POTENTIAL INACCURACIES IN THE PLAN AND/OR UNFORESEEN CONDITIONS. THE CONTRACTOR SHALL NOTIFY, IN WRITING, SAID AGENCIES, UTILITY PROVIDERS, LOCAL DPW AND OWNER'S AUTHORIZED REPRESENTATIVE AND CALL DIG SAFE AT 1 (800) DIG-SAFE AT LEAST SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATION WORK.
2. PRIOR TO CONSTRUCTION, IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND FIELD VERIFY JUNCTIONS, LOCATIONS AND ELEVATIONS/INVERTS OF ALL EXISTING AND PROPOSED STORMWATER, WASTEWATER AND UTILITY LINES. CONFLICTS SHALL BE ANTICIPATED AND ALL EXISTING LINES TO BE RETAINED SHALL BE PROTECTED. ANY DAMAGE DONE TO EXISTING UTILITIES SHALL BE REPAIRED AND, IF NECESSARY, EXISTING UTILITIES SHALL BE RELOCATED AT NO EXTRA COST TO THE OWNER. ALL CONFLICTS SHALL BE RESOLVED WITH THE INVOLVEMENT OF THE ENGINEER, LOCAL DPW AND APPROPRIATE UTILITIES.
3. WATER: PORTSMOUTH DPW WATER DIVISION, DOUG SPARKS, (603) 427-1409.
4. SEWER: PORTSMOUTH DPW SEWER DIVISION, DOUG SPARKS, (603) 427-1409.
5. TELECOMMUNICATIONS: CONSOLIDATED, JOE CONSIDINE, (603) 427-5525.
6. CABLE: COMCAST, MIKE COLLINS, (603) 679-5695, EXT. 1037.
7. ELECTRICAL: EVERSOURCE, JOSHUA LAHAIE, (603) 332-7551.
8. GAS: UNITIL, DAVID BEAULIEU, (603) 294-5144
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF ALL BONDS AND PAYMENT OF ALL TAP, TIE-IN AND CONNECTION FEES.
10. THE APPLICANT SHALL AGREE TO PAY FOR THE SERVICES OF A THIRD-PARTY OVERSIGHT ENGINEER, TO BE SELECTED BY THE CITY, TO MONITOR THE INSTALLATION OF UTILITIES INCLUDING SEWER, WATER AND DRAINAGE.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL ROAD/LANE CLOSURES OR OTHER TRAFFIC INTERRUPTIONS THE CITY OF PORTSMOUTH POLICE DEPARTMENT AND/OR DPW AT LEAST TWO WEEKS PRIOR TO COMMENCING RELATED CONSTRUCTION.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRENCHING, BEDDING, BACKFILL & COMPACTION FOR ALL UTILITY TRENCHING IN ADDITION TO ALL CONDUIT INSTALLATION AND COORDINATION OF ALL REQUIRED INSPECTIONS.
13. ALL CONSTRUCTION SHALL MEET THE MINIMUM CONSTRUCTION STANDARDS OF THE CITY OF PORTSMOUTH AND NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LASTEST EDITION. THE MORE STRINGENT SPECIFICATION SHALL GOVERN.
14. ALL TRENCHING, PIPE LAYING AND BACKFILLING SHALL CONFORM TO FEDERAL, OSHA, AND LOCAL REGULATIONS.
15. FINAL UTILITY LOCATIONS TO BE COORDINATED BETWEEN THE OWNER, CONTRACTOR, DPW AND APPROPRIATE UTILITY COMPANIES.
16. ALL WATER MAIN AND SERVICE INSTALLATIONS SHALL BE CONSTRUCTED AND TESTED PER PORTSMOUTH DPW STANDARDS AND SPECIFICATIONS. ALL OTHER UTILITIES SHALL BE TO THE STANDARDS AND SPECIFICATIONS OF THE RESPECTIVE UTILITY PROVIDERS.
17. PER PORTSMOUTH DPW SPECIFICATIONS, ALL NEW DUCTILE IRON WATERLINE SHALL BE WRAPPED WITH A WATER TIGHTPOLYETHYLENE WRAPPING FOR THEIR FULL LENGTH, ALL DOMESTIC WATER SERVICES SHALL BE PROVIDED WITH BACKFLOW PREVENTERS AND ALL JOINTS SHALL HAVE THREE (3) WEDGES PER JOINT.
18. WATER AND SANITARY SEWER LINES SHALL BE LOCATED AT LEAST 10' HORIZONTALLY FROM EACH OTHER. WHERE CROSSING, 18" MINIMUM VERTICAL CLEARANCE SHALL BE PROVIDED WITH WATER INSTALLED OVER SEWER.
19. ALL MEANS, METHODS, MATERIALS AND INSTALLATION OF NEW SEWER LATERALS SHALL BE APPROVED AND WITNESSED BY PORTSMOUTH DPW PRIOR TO BACKFILLING. SEWER LATERALS MAY BE CONSTRUCTED IN THE SAME TRENCH PROVIDED THAT A MINIMUM SEPARATION OF 3' IS MAINTAINED AND THE LINES ARE LOCATED ON THEIR RESPECTIVE LOTS IN THEIR ENTIRETY.
20. WHERE WATER LINES CROSS, RUN ADJACENT TO OR ARE WITHIN 5' OF STORM DRAINAGE PIPES OR STRUCTURES, 2"-THICK CLOSED CELL RIGID BOARD INSULATION SHALL BE INSTALLED FOR FROST PROTECTION.
21. THE CONTRACTOR SHALL PROVIDE DPW WITH DETAILS OF TEMPORARY & PERMANENT GROUNDWATER DEWATERING DESIGN IF NECESSARY.
22. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL HANDHOLES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS IN ORDER TO RENDER THE FULL INSTALLATION OF COMPLETE AND OPERATIONAL UTILITY AND DRAINAGE SYSTEMS.
23. UNLESS OTHERWISE DETERMINED BY THE UTILITY PROVIDER, ALL ELECTRICAL TRANSFORMERS AND SWITCHES SHALL REMAIN THE PROPERTY OF THE UTILITY.
24. THE INSTALLATION OF ELECTRIC POWER AND COMMUNICATIONS LINES SHALL BE UNDERGROUND THROUGHOUT THE SITE, COORDINATE WITH UTILITY PROVIDER.
25. THE CONTRACTOR SHALL CONFIRM ALL UTILITY LINE AND CONDUIT SIZES WITH THE MEP PLANS AND SERVICE PROVIDERS PRIOR TO INSTALLATION. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
26. DETECTABLE WARNING TAPE SHALL BE PLACED OVER THE ENTIRE LENGTH OF ALL BURIED UTILITIES. COLORS SHALL MATCH THE RESPECTIVE UTILITY PROVIDERS.
27. SANITARY SEWERS WILL BE CONNECTED TO THE EXISTING 14" AC PIPE. ABESTOS CONCRETE PIPE A HAZARDOUS WASTE. CONTRACTOR SHALL TAKE ALL APPROPRIATE PRECAUTIONS TO ENSURE THAT CONTAMINENTS ARE NOT RELEASED TO THE ENVIRONMENT.
28. SEE SHEET C-3 FOR LEGEND.

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)

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71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
UTILITIES PLAN

SHEET NUMBER:
C-6

P5719

PROJECT NAME AND LOCATION

Owner:

JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

Applicant:

FLIPPING BERGER'S, LLC
71 BRACKETT ROAD
PORTSMOUTH, NH 03801

DESCRIPTION

The project consists of the development of two residential properties on Farm Lane. The existing single-family home at 86 Farm Lane is to remain. The proposed buildings will be modern single family homes. Stormwater will be managed and treated with stormwater ponds. Site improvements include underground utilities, landscaping and associated site improvements.

DISTURBED AREA

The total area to be disturbed on the parcels and for the roadway, lot development, drainage, and utility construction is approximately ±36,000 S.F. The combined disturbed area DOES NOT exceed 43,560 SF (1 acre), thus a SWPPP will NOT be required for compliance with the USEPA-NPDES Construction General Permit. All local requirements for stormwater and erosion control during construction are still required.

NPDES CONSTRUCTION GENERAL PERMIT

Not required for this project.

SEQUENCE OF MAJOR ACTIVITIES

1. Hold a pre-construction meeting with City & stake holders.
2. Install temporary erosion control measures, including drain inlet protection, silt fences, and stabilized construction exit/entrance.
3. Remove existing pool, pool house, deck, stone staircases, retaining walls, and chain link fence.
4. Clear and Grub vegetated areas per plan; Strip and stockpile loam. Stockpiles shall be temporarily stabilized with hay bales, mulch and surrounded by a hay bale or silt fence barrier until material is removed and final grading is complete. Remove debris. Remove pavement and structures intended to be removed within the initial work limits.
5. Construct utility infrastructure. Rough grade lot to prepare for site development. Stabilize swales and stormwater managment systems prior to directing flow to them.
6. Construct roadway infrastrucutre and foundations.
7. Loam and see remaining disturbed areas in roadway.
8. Construct buildings.
9. When all construction activity is complete and site is stabilized, remove all silt fences and temporary structures and sediment that has been trapped by these devices.

NAME OF RECEIVING WATER

The site drainage discharges into an unnamed wetland that eventually discharges to Hodgeson Brook.

TEMPORARY EROSION & SEDIMENT CONTROL AND STABILIZATION PRACTICES

All work shall be in accordance with state and local permits. Work shall conform to the practices described in the "New Hampshire Stormwater Manual", dated February 2025. As indicated in the sequence of Major Activities, the silt fences shall be installed prior to commencing any clearing or grading of the site. Structural controls shall be installed concurrently with the applicable activity. Once construction activity ceases permanently in an area, silt fences and any earth/dikes will be removed once permanent measures are established.

During construction, runoff will be diverted around the site with stabilized channels where possible. Sheet runoff from the site shall be filtered through hay bale barriers, stone check dams, and silt fences. All storm drain inlets shall be provided with hay bale filters or stone check dams. Stone rip rap shall be provided at the outlets of drain pipes and culverts where shown on the drawings.

Stabilize all ditches, swales, stormwater ponds, level spreaders and their contributing areas prior to directing flow to them.

Temporary and permanent vegetation and mulching is an integral component of the erosion and sedimentation control plan. All areas shall be inspected and maintained until vegetative cover is established. These control measures are essential to erosion prevention and also reduce costly rework of graded and shaped areas.

Temporary vegetation shall be maintained in these areas until permanent seeding is applied. Additionally, erosion and sediment control measures shall be maintained until permanent vegetation is established.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES

A. GENERAL

These are general inspection and maintenance practices that shall be used to implement the plan:

1. The smallest practical portion of the site shall be denuded at one time, but in no case shall it exceed 5 acres at one time.
2. All control measures shall be inspected at least once each week and following any storm event of 0.25 inches or greater.
3. All measures shall be maintained in good working order; if a repair is necessary, it will be initiated within 24 hours.
4. Built-up sediment shall be removed from silt fence or other barriers when it has reached one-third the height of the fence or bale, or when "bulges" occur.
5. All diversion dikes shall be inspected and any breaches promptly repaired.
6. Temporary seeding and planting shall be inspected for bare spots, washouts, and unhealthy growth.
7. The owner's authorized engineer shall inspect the site on a periodic basis to review compliance with the Plans.
8. All roadways and parking lots shall be stabilized within 72 hours of achieving finished grade.
9. All cut and fill slopes shall be seeded/loamed within 72 hours of achieving finished grade.
10. An area shall be considered stable if one of the following has occurred:
    a. Base coarse gravels have been installed in areas to be paved;
    b. A minimum of 85% vegetated growth as been established;
    c. A minimum of 3 inches of non-erosive material such as stone of riprap has been installed;

    – or –

    d. Erosion control blankets have been properly installed.
11. The length of time of exposure of area disturbed during construction shall not exceed 45 days.

B. MULCHING

Mulch shall be used on highly erodible soils, on critically eroding areas, on areas where conservation of moisture will facilitate plant establishment, and where shown on the plans.

1. Timing – In order for mulch to be effective, it must be in place prior to major storm events. There are two (2) types of standards which shall be used to assure this:
    a. Apply mulch prior to any storm event. This is applicable when working within 100 feet of wetlands. It will be necessary to closely monitor weather predictions, usually by contacting the National Weather Service in Concord, to have adequate warning of significant storms.
    b. Required Mulching within a specified time period. The time period can range from 21 to 28 days of inactivity on a area, the length of time varying with site conditions. Professional judgment shall be used to evaluate the interaction of site conditions (soil erodibility, season of year, extent of disturbance, proximity to sensitive resources, etc.) and the potential impact of erosion on adjacent areas to choose an appropriate time restriction.

INSTALLATION, MAINTENANCE AND INSPECTION PROCEDURES FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES (CON'T)

2. Guidelines for Winter Mulch Application –

Type	Rate per 1,000 s.f.	Use and Comments
Hay or Straw	70 to 90 lbs.	Must be dry and free from mold. May be used with plantings.
Wood Chips or Bark Mulch	460 to 920 lbs.	Used mostly with trees and shrub plantings.
Jute and Fibrous Matting (Erosion Blanket	As per manufacturer Specifications	Used in slope areas, water courses and other Control areas.
Crushed Stone 1/4" to 1-1/2" dia.	Spread more than 1/2" thick	Effective in controlling wind and water erosion.
Erosion Control Mix	2" thick (min)	* The organic matter content is between 80 and 100%, dry weight basis. * Particle size by weight is 100% passing a 6"screen and a minimum of 70 %, maximum of 85%, passing a 0.75" screen. * The organic portion needs to be fibrous and elongated. * Large portions of silts, clays or fine sands are not acceptable in the mix. * Soluble salts content is less than 4.0 mmhos/cm. * The pH should fall between 5.0 and 8.0.

3. Maintenance – All mulches must be inspected periodically, in particular after rainstorms, to check for rill erosion. If less than 90% of the soil surface is covered by mulch, additional mulch shall be immediately applied.

C. TEMPORARY GRASS COVER

1. Seedbed Preparation –
   Apply fertilizer at the rate of 600 pounds per acre of 10–10–10. Apply limestone (equivalent to 50 percent calcium plus magnesium oxide) at a rate of three (3) tons per acre.
2. Seeding –
   a. Utilize annual rye grass at a rate of 40 lbs/acre.
   b. Where the soil has been compacted by construction operations, loosen soil to a depth of two (2) inches before applying fertilizer, lime and seed.
   c. Apply seed uniformly by hand, cyclone seeder, or hydroseeder (slurry including seed and fertilizer). Hydroseedings, which include mulch, may be left on soil surface. Seeding rates must be increased 10% when hydroseeding.
3. Maintenance –
   Temporary seedings shall be periodically inspected. At a minimum, 95% of the soil surface should be covered by vegetation. If any evidence of erosion or sedimentation is apparent, repairs shall be made and other temporary measures used in the interim (mulch, filter barriers, check dams, etc.).

D. FILTERS

1. Tubular Sediment Barrier
   a. See detail.
   b. Install per manufacturer's requirements.
2. Silt Fence (if used)
   a. Synthetic filter fabric shall be a pervious sheet of propylene, nylon, polyester or ethylene yarn and shall be certified by the manufacturer or supplier as conforming to the following requirements:

Physical Property	Test	Requirements
Filtering Efficiency	VTM-51	75% minimum
Tensile Strength at 20% Maximum Elongation*	VTM-52	Extra Strength 50 lb/lin in (min) Standard Strength 30 lb/lin in (min)
Flow Rate	VTM-51	0.3 gal/sf/min (min)

   * Requirements reduced by 50 percent after six (6) months of installation.

   Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizer to provide a minimum of six (6) months of expected usable construction life at a temperature range of 0 degrees F to 120° F.

   b. Posts shall be spaced a maximum of ten (10) feet apart at the barrier location or as recommended by the manufacturer and driven securely into the ground (minimum of 16 inches).

   c. A trench shall be excavated approximately six (6) inches wide and eight (8) inches deep along the line of posts and upslope from the barrier.

   d. When standard strength filter fabric is used, a wire mesh support fence shall be fastened securely to the upslope side of the posts using heavy duty wire staples at least one (1) inch long, tie wires or hog rings. The wire shall extend no more than 36 inches above the original ground surfaces.

   e. The "standard strength" filter fabric shall be stapled or wired to the fence, and eight (8) inches of the fabric shall be extended into the trench. The fabric shall not extend more than 36 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

   f. When extra strength filter fabric and closer post spacing are used, the wire mesh support fence may be eliminated. In such a case, the filter fabric is stapled or wired directly to the posts with all other provisions of item (g) applying.

   g. The trench shall be backfilled and the soil compacted over the filter fabric.

   h. Silt fences shall be removed when they have served their useful purpose but not before the upslope areas has been permanently stabilized.
3. Sequence of Installation –
   Sediment barriers shall be installed prior to any soil disturbance of the contributing upslope drainage area.
4. Maintenance –
   a. Silt fence barriers shall be inspected immediately after each rainfall and at least daily during prolonged rainfall. They shall be repaired if there are any signs of erosion or sedimentation below them. Any required repairs shall be made immediately. If there are signs of undercutting at the center or the edges, or impounding of large volumes of water, the sediment barriers shall be replaced with a temporary stone check dam.
   b. Should the fabric on a silt fence or filter barrier decompose or become ineffective prior to the end of the expected usable life and the barrier still is necessary, the fabric shall be replaced promptly.
   c. Sediment deposits must be removed when deposits reach approximately one-third (1/3) the height of the barrier.
   d. Any sediment deposits remaining in place after the silt fence or other barrier is no longer required shall be removed. The area shall be prepared and seeded.
   e. Additional stone may have to be added to the construction entrance, rock barrier and riprap lined swales, etc., periodically to maintain proper function of the erosion control structure.

E. PERMANENT SEEDING –

1. Bedding – stones larger than 1½", trash, roots, and other debris that will interfere with seeding and future maintenance of the area should be removed. Where feasible, the soil should be tilled to a depth of 5" to prepare a seedbed and mix fertilizer into the soil.
2. Fertilizer – lime and fertilizer should be applied evenly over the area prior to or at the time of seeding and incorporated into the soil. Kinds and amounts of lime and fertilizer should be based on an evaluation of soil tests. When a soil test is not available, the following minimum amounts should be applied:

   Agricultural Limestone @ 100 lbs. per 1,000 s.f.
   10–20–20 fertilizer @ 12 lbs. per 1,000 s.f.
3. Seed Mixture (See Landscape Drawings for additional information):
   3.1. Lawn seed mix shall be a fresh, clean new seed crop. The Contractor shall furnish a dealer's guaranteed statement of the composition of the mixture and the percentage of purity and germination of each variety.
   3.2. Seed mixture shall consist of
      a. 1/3 Kentucky blue,
      b. 1/3 perennial rye, and
      c. 1/3 fine fescue.
   3.1. Turf type tall fescue is unacceptable.
4. Sodding – sodding is done where it is desirable to rapidly establish cover on a disturbed area. Sodding an area may be substituted for permanent seeding procedures anywhere on site. Bed preparation, fertilizing, and placement of sod shall be performed according to the S.C.S. Handbook. Sodding is recommended for steep sloped areas, areas immediately adjacent to sensitive water courses, easily erodible soils (fine sand/silt), etc.

WINTER CONSTRUCTION NOTES

1. All proposed vegetated areas which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized by seeding and installing erosion control blankets on slopes greater than 3:1, and elsewhere seeding and placing 3 to 4 tons of mulch per acre, secured with anchored netting. The installation of erosion control blankets or mulch and netting shall not occur over accumulated snow or on frozen ground and shall be completed in advance of thaw or spring melt events;
2. All ditches or swales which do not exhibit a minimum of 85% vegetative growth by October 15th, or which are disturbed after October 15th, shall be stabilized temporarily with stone or erosion control blankets appropriate for the design flow conditions; and
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.

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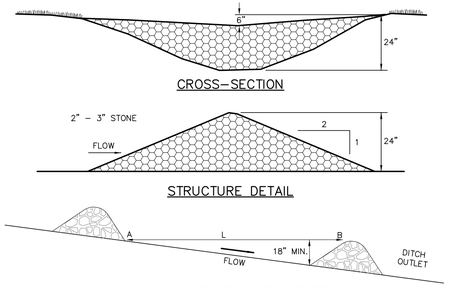
3. After November 15th, incomplete road or parking surfaces where work has stopped for the winter season shall be protected with a minimum of 3 inches of crushed gravel per NHDOT Item 304.3.

Long Term Inspection & Maintenance Schedule

	Spring	Fall or Yearly	After Major Storm	Every 2-5 Years
Vegetated Areas				
Inspect all slopes and embankments	x		x	
Replant bare areas or areas with sparse growth	x		x	
Armor areas with rill erosion with an appropriate lining or divert the erosive flows to on-site areas able to withstand concentrated flows.	x		x	
Stormwater Channels				
Inspect ditches, swales and other open stormwater channels	x	x	x	
Remove any obstructions and accumulated sediments or debris	x	x		
Control vegetated growth and woody vegetation		x		
Repair any erosion of the ditch lining		x		
Mow vegetated ditches		x		
Remove woody vegetation growing through riprap		x		
Repair any slumping side slopes		x		
Replace riprap where underlying filter fabric or underdrain gravel is exposed or where stones have been dislodged		x		
Culverts				
Remove accumulated sediments and debris at inlet, outlet and within the conduit	x	x	x	
Repair any erosion damage at the culvert's inlet and outlet	x	x	x	
Remove woody vegetation growing through riprap		x		
Roadways and Parking Surfaces				
Remove accumulated winter sand along roadways	x			
Sweep pavement to remove sediment	x			
Grade road shoulders and remove excess sand either manually or by a front-end loader	x			
Grade gravel roads and gravel shoulders	x			
Clean out sediment contained in water bars or open-top culverts	x			
Ensure that stormwater is not impeded by accumulations of material or false ditches in the roadway shoulder	x			
Runoff Infiltration Facilities				
Remove dead vegetation and any accumulated sediment (normally at the entrance to the garden) to allow for new growth	x			
Weed; add additional hardwood mulch to suppress weeds	x	x		
Mow turf three (3) times a growing season				
Aerate area with deep tines, if water ponds on the surface for more than 24 hours during the first year or for a length of 72 hours		x		
Vegetative Swale				
Mow grass swales monthly				
Inspect swale following significant rainfall event	x	x	x	
Control vegetated growth and woody vegetation	x	x		
Repair any erosion of the ditch	x	x		
Remove debris and liter as necessary				

NOTE:
ALL FACILITIES SHOULD BE INSPECTED ON AN ANNUAL BASIS AT A MINIMUM. IN ADDITION, ALL FACILITIES SHOULD BE INSPECTED AFTER A SIGNIFICANT PRECIPITATION EVENT TO ENSURE THE FACILITY IS DRAINING APPROPRIATELY AND TO IDENTIFY ANY DAMAGE THAT OCCURRED AS A RESULT OF THE INCREASED RUNOFF. FOR THE PURPOSE OF THIS STORMWATER MANAGEMENT PROGRAM, A SIGNIFICANT RAINFALL EVENT IS CONSIDERED AN EVENT OF THREE (3) INCHES IN A 24-HOUR PERIOD OR 0.25 INCHES IN A ONE-HOUR PERIOD. IT IS ANTICIPATED THAT A SHORT, INTENSE EVENT IS LIKELY TO HAVE A HIGHER POTENTIAL OF EROSION FOR THIS SITE THAN A LONGER, HIGH VOLUME EVENT.



SPACING BETWEEN STRUCTURES

1. L = DISTANCE SUCH THAT POINTS A AND B ARE OF EQUAL ELEVATION
2. CHECK DAM SHALL BE CONSTRUCTED OF 2" TO 3" STONE WITH COMPLETE COVERAGE OF DITCH OR SWALE TO INSURE THAT THE CENTER OF THE STRUCTURE IS LOWER THAN THE EDGES.

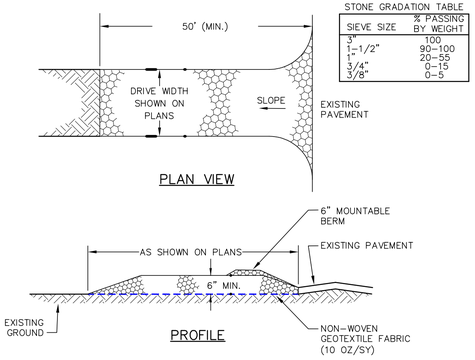
MAINTENANCE

TEMPORARY GRADE STABILIZATION STRUCTURES SHOULD BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED STORMS. ANY NECESSARY REPAIRS SHOULD BE MADE IMMEDIATELY. PARTICULAR ATTENTION SHOULD BE GIVEN TO END RUN AND EROSION AT THE DOWNSTREAM TOE OF THE STRUCTURE. WHEN THE STRUCTURES ARE REMOVED, THE DISTURBED PORTION SHOULD BE BROUGHT TO THE EXISTING CHANNEL GRADE AND THE AREAS PREPARED, SEEDED, AND MULCHED. WHILE THIS PRACTICE IS NOT INTENDED TO BE USED PRIMARILY FOR SEDIMENT TRAPPING, SOME SEDIMENT WILL ACCUMULATE BEHIND THE STRUCTURES. SEDIMENT SHALL BE REMOVED FROM BEHIND THE STRUCTURES WHEN IT HAS ACCUMULATED TO ONE HALF OF THE ORIGINAL HEIGHT OF THE STRUCTURE.

CONSTRUCTION SPECIFICATIONS

1. *STRUCTURES SHALL BE INSTALLED ACCORDING TO THE DIMENSIONS SHOWN ON THE PLANS AT THE APPROPRIATE SPACING.*
2. *CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER SO THAT EROSION AND AIR AND WATER POLLUTION WILL BE MINIMIZED.*
3. *SEEDING, FERTILIZING, AND MULCHING SHALL CONFORM TO THE RECOMMENDATIONS IN THE APPROPRIATE VEGETATIVE BMP.*
4. *STRUCTURES SHALL BE REMOVED FROM THE CHANNEL WHEN THEIR USEFUL LIFE HAS BEEN COMPLETED.*

TEMPORARY EROSION CONTROL CHECK DAM — NOT TO SCALE



STONE GRADATION TABLE

SIEVE SIZE	% PASSING BY WEIGHT
3"	100
1-1/2"	90–100
1"	20–55
3/4"	0–15
3/8"	0–5

CONSTRUCTION SPECIFICATIONS

1. STONE SIZE – NHDOT STANDARD STONE SIZE #4 – SECTION 703 OF NHDOT STANDARD.
2. LENGTH – DETAILED ON PLANS (50 FOOT MINIMUM) OR AS SHOWN ON PLANS.
3. THICKNESS – SIX (6) INCHES (MINIMUM).
4. WIDTH – FULL DRIVE WIDTH UNLESS OTHERWISE SPECIFIED.
5. FILTER FABRIC – MIRAFI 600X OR EQUAL APPROVED BY ENGINEER.
6. SURFACE WATER CONTROL – ALL SURFACE WATER THAT IS FLOWING TO OR DIVERTED TOWARD THE CONSTRUCTION ENTRANCE SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A BERM WITH 5:1 SLOPES THAT CAN BE CROSSED BY VEHICLES MAY BE SUBSTITUTED FOR THE PIPE.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. STABILIZED CONSTRUCTION EXITS SHALL BE INSTALLED AT ALL ENTRANCES TO PUBLIC RIGHTS-OF-WAY, AT LOCATIONS SHOWN ON THE PLANS, AND/OR WHERE AS DIRECTED BY THE ENGINEER.

STABILIZED CONSTRUCTION EXIT — NOT TO SCALE

P5719

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINREB
No. 7634
LICENSED
PROFESSIONAL ENGINEER
2/13/26

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
FEBRUARY 13, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26

DRAWN BY: RLH/PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-DETAILS.DWG

SCALE:
22" x 34" - NOT TO SCALE
11" x 17" - NOT TO SCALE

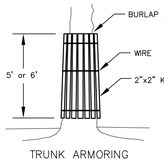
OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKETT ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
EROSION CONTROL NOTES & DETAILS

SHEET NUMBER:
D-1

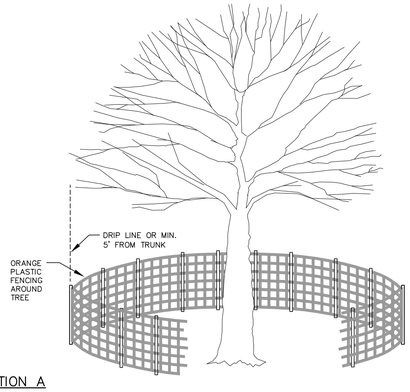


OPTION B

NOTE:
IF SOIL BECOMES COMPATCED OVER THE ROOT ZONE OF ANY TREE, THE GROUND SHOULD BE AERATED BY PUNCHING SMALL HOLES IN IT WITH SUITABLE AERATING EQUIPMENT.

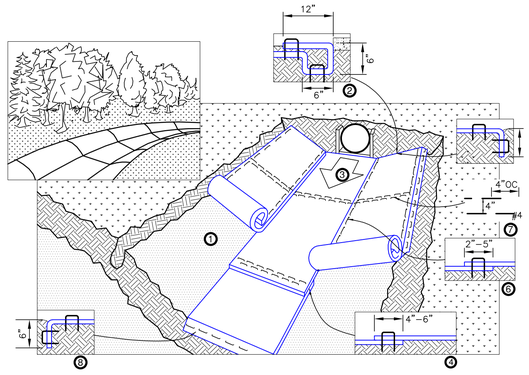
ANY DAMAGE TO THE CROWN, TRUNK OR ROOT SYSTEM OF ANY TREE RETAINED ON SITE SHOULD BE REPAIRED IMMEDIATELY. CONSULT A FORESTER OR TREE SPECIALIST FOR MORE SERIOUS DAMAGE OF TREES.

CONTRACTOR TO USE OPTION A OR B WHERE SUITABLE AND/OR AS DIRECTED BY THE ENGINEER.



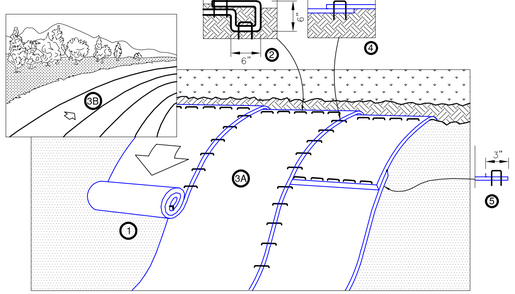
OPTION A

TREE PROTECTION DETAILS NOT TO SCALE



NOTES

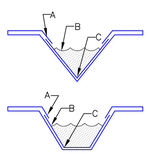
1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW IN BOTTOM OF CHANNEL. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. PLACE CONSECUTIVE BLANKETS END OVER END (SHINGLE STYLE) WITH A 4"-6" OVERLAP. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. ADJACENT BLANKETS MUST BE OVERLAPPED APPROXIMATELY 2"-5" (DEPENDING ON BLANKET TYPE) AND STAPLED. TO INSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE BLANKET BEING OVERLAPPED.
7. IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A DOUBLE ROW OF STAPLES STAGGERED 4" APART AND 4" ON CENTER OVER ENTIRE WIDTH OF THE CHANNEL.
8. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN A 6" DEEP BY 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.



NOTES

1. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP BY 6" WIDE TRENCH WITH APPROXIMATELY 12" OF BLANKET EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE BLANKET WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF BLANKET BACK OVER SEED AND COMPACTED SOIL. SECURE BLANKET OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE BLANKET.
3. ROLL THE BLANKETS (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. BLANKETS WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL BLANKETS MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON BLANKET TYPE. TO ENSURE PROPER SEAM ALIGNMENT, PLACE THE EDGE OF THE OVERLAPPING BLANKET (BLANKET BEING INSTALLED ON TOP) EVEN WITH THE COLORED SEAM STITCH ON THE PREVIOUSLY INSTALLED BLANKET.
5. CONSECUTIVE BLANKETS SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE BLANKET WIDTH. NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE BLANKETS.

EROSION CONTROL BLANKET - SLOPE NOT TO SCALE



CRITICAL POINTS:

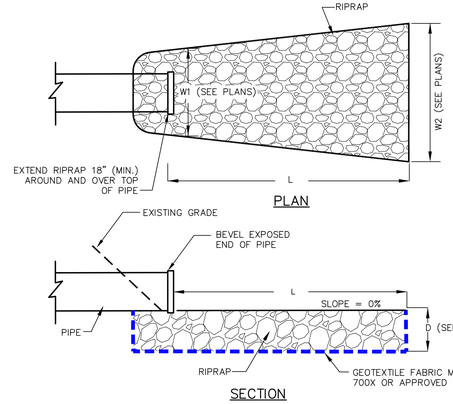
A. OVERLAPS AND SEAMS
B. PROJECTED WATER LINE
C. CHANNEL BOTTOM/SIDE SLOPE VERTICES

NOTES:

* HORIZONTAL STAPLE SPACING SHOULD BE ALTERED IF NECESSARY TO ALLOW STAPLES TO SECURE THE CRITICAL POINTS ALONG THE CHANNEL SURFACE.

** IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY ANCHOR THE BLANKETS.

EROSION CONTROL BLANKET - SWALE NOT TO SCALE



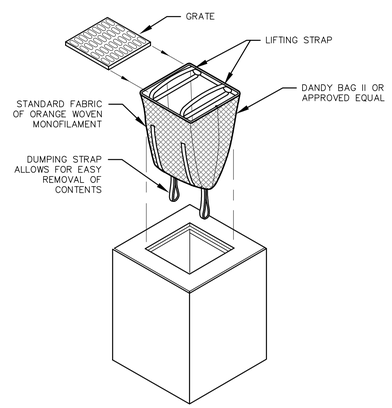
MAINTENANCE

THE OUTLET PROTECTION SHOULD BE CHECKED AT LEAST ANNUALLY AND AFTER EVERY MAJOR STORM. IF THE RIPRAP HAS BEEN DISPLACED, UNDERMINED OR DAMAGED, IT SHOULD BE REPAIRED IMMEDIATELY. THE CHANNEL IMMEDIATELY BELOW THE OUTLET SHOULD BE CHECKED TO SEE THAT EROSION IS NOT OCCURRING. THE DOWNSTREAM CHANNEL SHOULD BE KEPT CLEAR OF OBSTRUCTIONS SUCH AS FALLEN TREES, DEBRIS, AND SEDIMENT THAT COULD CHANGE FLOW PATTERNS AND/OR TAILWATER DEPTHS ON THE PIPES. REPAIRS MUST BE CARRIED OUT IMMEDIATELY TO AVOID ADDITIONAL DAMAGE TO THE OUTLET PROTECTION APRON.

CONSTRUCTION SPECIFICATIONS

1. THE SUBGRADE FOR THE FILTER MATERIAL, GEOTEXTILE FABRIC, AND RIPRAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK OR GRAVEL USED FOR FILTER OR RIPRAP SHALL CONFORM TO THE SPECIFIED GRADATION.
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIPRAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.
5. BEVEL EXPOSED END OF PIPE FLUSH WITH GRADE.

RIPRAP OUTLET PROTECTION NOT TO SCALE



INSTALLATION AND MAINTENANCE:

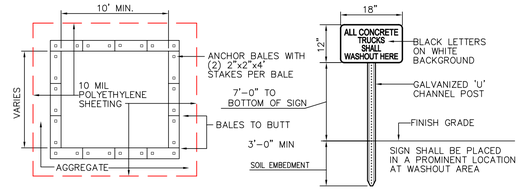
INSTALLATION: REMOVE THE GRATE FROM CATCH BASIN. IF USING OPTIONAL OIL ABSORBENTS; PLACE ABSORBENT PILLOW IN UNIT. STAND GRATE ON END. MOVE THE TOP LIFTING STRAPS OUT OF THE WAY AND PLACE THE GRATE INTO CATCH BASIN INSERT SO THE GRATE IS BELOW THE TOP STRAPS AND ABOVE THE LOWER STRAPS. HOLDING THE LIFTING DEVICES, INSERT THE GRATE INTO THE INLET.

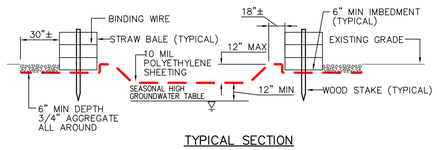
MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM VICINITY OF THE UNIT AFTER EACH STORM EVENT. AFTER EACH STORM EVENT AND AT REGULAR INTERVALS, LOOK INTO THE CATCH BASIN INSERT. IF THE CONTAINMENT AREA IS MORE THAN 1/3 FULL OF SEDIMENT, THE UNIT MUST BE EMPTIED. TO EMPTY THE UNIT, LIFT THE UNIT OUT OF THE INLET USING THE LIFTING STRAPS AND REMOVE THE GRATE. IF USING OPTIONAL ABSORBENTS; REPLACE ABSORBENT WHEN NEAR SATURATION.

UNACCEPTABLE INLET PROTECTION METHOD:

A SIMPLE SHEET OF GEOTEXTILE UNDER THE GRATE IS NOT ACCEPTABLE.

STORM DRAIN INLET PROTECTION NOT TO SCALE



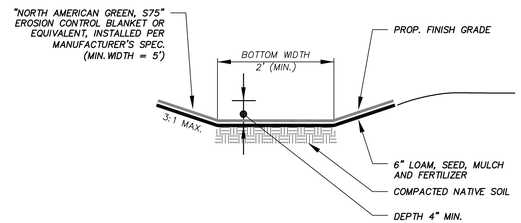


TYPICAL SECTION

NOTES

1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT NOT TO SCALE



NOTES:

1. THE FOUNDATION AREA OF THE WATERWAY SHALL BE CLEARED AND GRUBBED OF ALL TREES, BRUSH, STUMPS, AND OTHER OBJECTIONABLE MATERIAL. MATERIALS REMOVED SHALL BE DISPOSED OF SO THEY WILL NOT INTERFERE WITH THE CONSTRUCTION OR PROPER FUNCTIONING OF THE WATERWAY.
2. THE WATERWAY SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE DESIGN CRITERIA. THE WATERWAY SHALL BE FREE OF IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. EARTH FILLS REQUIRED TO MEET SUBGRADE REQUIREMENTS BECAUSE OF OVER EXCAVATION OR TOPOGRAPHY SHALL BE COMPACTED TO THE SAME DENSITY AS THE SURROUNDING SOIL TO PREVENT UNEQUAL SETTLEMENT THAT COULD CAUSE DAMAGE TO THE COMPLETED WATERWAY. EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE WATERWAY.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER AS TO MINIMIZE EROSION AND AIR AND WATER POLLUTION. ALL APPROPRIATE STATE AND LOCAL LAWS AND REGULATIONS SHALL BE COMPLIED WITH FOR INSTALLATION.
5. VEGETATION SHALL BE ESTABLISHED IN THE SWALE OR AN EROSION CONTROL MATTING INSTALLED PRIOR TO ALLOWING STORMWATER RUNOFF TO FLOW THROUGH THE SWALE.
6. MAINTENANCE OF THE VEGETATION IN THE GRASSED WATERWAY IS EXTREMELY IMPORTANT IN ORDER TO PREVENT RILLING, EROSION, AND FAILURE OF THE WATERWAY. MOWING SHALL BE DONE FREQUENTLY ENOUGH TO CONTROL ENCROACHMENT OF WEEDS AND WOODY VEGETATION AND TO KEEP THE GRASSES IN A VIGOROUS CONDITION. THE VEGETATION SHALL NOT BE MOWED TOO CLOSELY SO AS TO REDUCE THE EROSION RESISTANCE IN THE WATERWAY.
7. THE WATERWAY SHOULD BE INSPECTED PERIODICALLY AND AFTER ANY STORM GREATER THAN 0.5" OF RAINFALL IN 24 HOURS TO DETERMINE THE CONDITION OF THE WATERWAY. RILLS AND DAMAGED AREAS SHOULD BE PROMPTLY REPAIRED AND REVEGETATED AS NECESSARY TO PREVENT FURTHER DETERIORATION.
8. APPLY LIME AND FERTILIZER AS NEEDED TO MAINTAIN VIGOROUS GROWTH.

GRASSED SWALE NOT TO SCALE

P5719

ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

ERIC D. WEINREB No. 7634 LICENSED PROFESSIONAL ENGINEER STATE OF NEW HAMPSHIRE
2/13/26

NOT FOR CONSTRUCTION

ISSUED FOR:
PRELIMINARY REVIEW

ISSUE DATE:
FEBRUARY 13, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26

DRAWN BY: RLH/PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-DETAILS.DWG

SCALE:
22" x 34" - NOT TO SCALE
11" x 17" - NOT TO SCALE

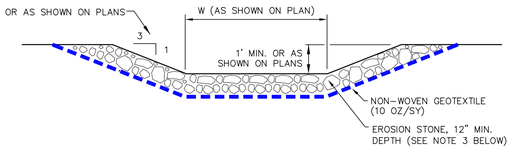
OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
DETAIL SHEET

SHEET NUMBER:
D-2

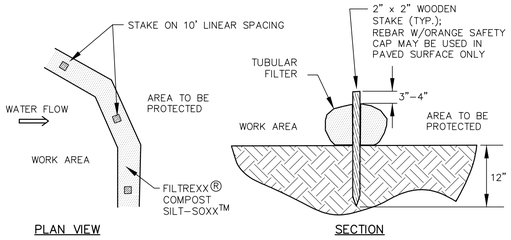


NOTES

1. CONSTRUCT RIP RAP LINED SWALE TO THE WIDTHS AND LENGTHS SHOWN ON THE PLAN.
2. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIPRAP SHALL BE PREPARED TO LINES AND GRADES SHOWN ON THE PLANS.
3. EROSION STONE USED FOR THE RIP RAP LINED SWALE SHALL MEET THE GRADATION SHOWN ON THE PLANS.
4. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE EROSION STONE. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 18 INCHES.
5. THE EROSION STONE MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

RIPRAP SWALE

NOT TO SCALE

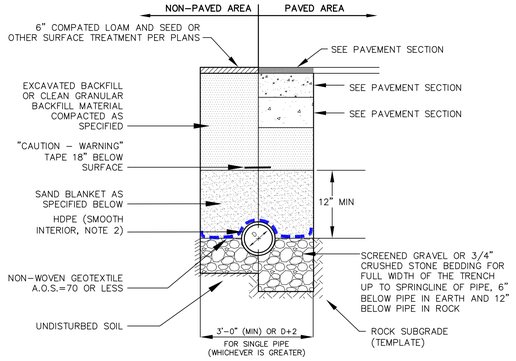


NOTES:

1. SILTSOXX OR APPROVED EQUAL SHALL BE USED FOR TUBULAR SEDIMENT BARRIERS.
2. ALL MATERIAL TO MEET MANUFACTURER'S SPECIFICATIONS.
3. COMPOST/SOIL/ROCK/SEED FILL MATERIAL SHALL BE ADJUSTED AS NECESSARY TO MEET THE REQUIREMENTS OF THE SPECIFIC APPLICATION.
4. ALL SEDIMENT TRAPPED BY BARRIER SHALL BE DISPOSED OF PROPERLY.

TUBULAR SEDIMENT BARRIER DETAIL

NOT TO SCALE



NOTES

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

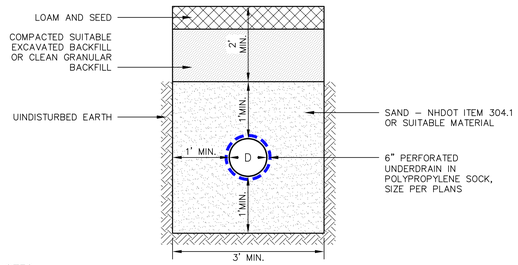
SAND BLANKET/BARRIER	
SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

SCREENED GRAVEL OR CRUSHED STONE BEDDING*	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 – 10
# 8	0 – 5

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

DRAINAGE TRENCH

NOT TO SCALE

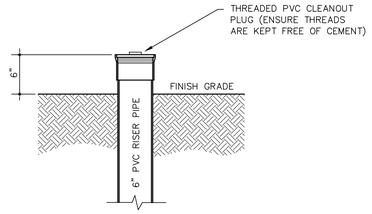


NOTES:

1. ALL MATERIALS ARE TO BE COMPACTED TO 95% OF ASTM D-1557.

BIO. CELL UNDERDRAIN TRENCH

NOT TO SCALE

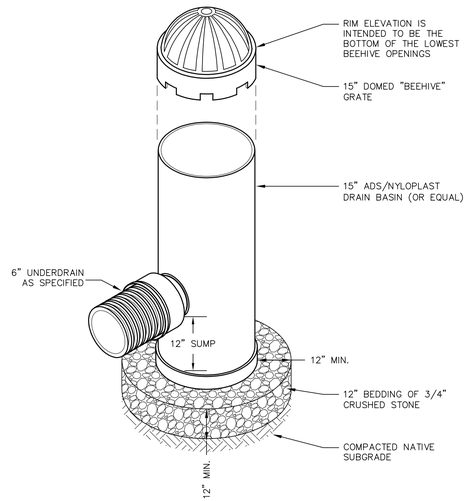


NOTES

1. THIS DETAIL IS INTENDED FOR USE WITH BIORETENTION POND UNDERDRAINS ONLY. SEE OTHER DETAILS FOR CLEANOUTS IN OTHER AREAS.
2. CLEANOUT LOCATIONS ARE MARKED "CO" ON STORMWATER MANAGEMENT PLANS.
3. CLEANOUTS MAY NOT BE SET TO FINISH GRADE WITHOUT APPROVAL FROM THE ENGINEER.

BIORETENTION U.D. CLEANOUT ("CO")

NOT TO SCALE

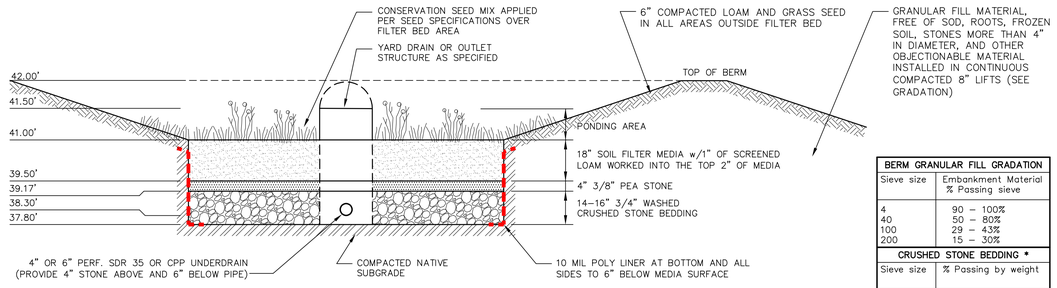


NOTES:

1. FRAMES AND GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN AND DETAILS.
3. DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE, N-12HP AND PVC SEWER.
4. INLINE DRAIN TO BE PVC DIAMETER AS SPECIFIED AND AS MANUFACTURED BY ADS OR APPROVED EQUAL.
5. THE CONTRACTOR SHALL INSTALL THE DRAIN BASIN PER THE MANUFACTURER'S RECOMMENDATIONS AND AS SHOWN ON THE DRAWINGS.
6. INLET AND OUTLET GEOMETRY MAY NOT BE SYMMETRICAL. ALL INLETS AND OUTLET LOCATIONS SHALL CONFORM TO THE LINES AND ANGLES SHOWN ON THE PLANS.

YARD DRAIN ("YD")

NOT TO SCALE



BERM GRANULAR FILL GRADATION	
Sieve size	Embankment Material % Passing sieve
4	90 – 100%
40	50 – 80%
100	29 – 43%
200	15 – 30%
CRUSHED STONE BEDDING *	
Sieve size	% Passing by weight
1"	100%
3/4"	90 – 100%
3/8'	20 – 55%
#4	0 – 10%
#8	0 – 5%

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 NHDOT STANDARD SPECIFICATIONS

FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 – 55%		
Loamy sand topsoil, with fines as indicated	20 – 30%	200	15 to 25%
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 – 30%	200	< 5%
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 – 30%	200	< 5%
Loamy coarse sand	70 – 80%	10	85 – 100%
		20	70 – 100%
		60	15 – 40%
		200	8 – 15%

NOTES

1. WHEN CONTRACTOR EXCAVATES BIORETENTION POND AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.
3. DO NOT PLACE BIORETENTION POND INTO SERVICE UNTIL ITS SIDE SLOPES AND CONTRIBUTING AREAS HAVE BEEN STABILIZED.
4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE BIORETENTION POND DURING ANY STAGE OF CONSTRUCTION.
5. DO NOT TRAFFIC EXPOSED SURFACES OF BIORETENTION POND WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.
6. POND BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STORMWATER POND BERM DETAIL.

MAINTENANCE REQUIREMENTS

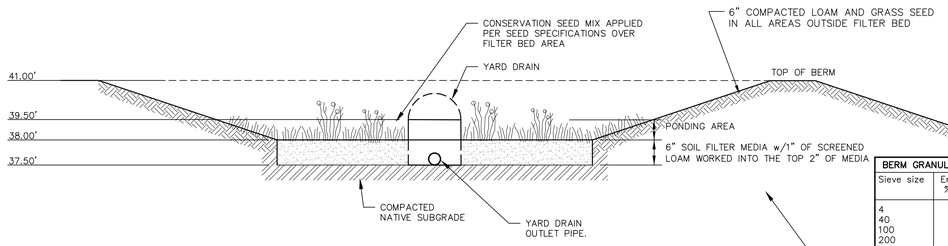
- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION 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 FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, WEED WHACKING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES. BERM AREAS ARE TO BE MOWED TWICE ANNUALLY.

DESIGN REFERENCES

- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, FEBRUARY 2025 AS AMENDED.

BIORETENTION CELL (STORMWATER POND #1)

NOT TO SCALE



BERM GRANULAR FILL GRADATION	
Sieve size	Embankment Material % Passing sieve
4	90 – 100%
40	50 – 80%
100	29 – 43%
200	15 – 30%
CRUSHED STONE BEDDING *	
Sieve size	% Passing by weight
1"	100%
3/4"	90 – 100%
3/8'	20 – 55%
#4	0 – 10%
#8	0 – 5%

* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 NHDOT STANDARD SPECIFICATIONS

FILTER MEDIA MIXTURES			
Component Material	Percent of Mixture by Volume	Gradation of material	
		Sieve No.	Percent by Weight Passing Standard Sieve
Filter Media Option A			
ASTM C-33 concrete sand	50 – 55%		
Loamy sand topsoil, with fines as indicated	20 – 30%	200	15 to 25%
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 – 30%	200	< 5%
Filter Media Option B			
Moderately fine shredded bark or wood fiber mulch, with fines as indicated	20 – 30%	200	< 5%
Loamy coarse sand	70 – 80%	10	85 – 100%
		20	70 – 100%
		60	15 – 40%
		200	8 – 15%

NOTES

1. WHEN CONTRACTOR EXCAVATES BIORETENTION POND AREA TO SUBGRADE, DESIGN ENGINEER SHALL PERFORM SUBSURFACE EVALUATION PRIOR TO THE PLACEMENT OF ANY SELECT MATERIAL OR OTHER BACKFILL.
2. SOIL FILTER MEDIA SHALL EITHER OPTION A OR OPTION B AT CONTRACTOR'S DISCRETION.
3. DO NOT PLACE BIORETENTION POND INTO SERVICE UNTIL ITS SIDE SLOPES AND CONTRIBUTING AREAS HAVE BEEN STABILIZED.
4. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES TO THE BIORETENTION POND DURING ANY STAGE OF CONSTRUCTION.
5. DO NOT TRAFFIC EXPOSED SURFACES OF BIORETENTION POND WITH CONSTRUCTION EQUIPMENT. IF FEASIBLE, PERFORM EXCAVATION ACTIVITIES WITH EQUIPMENT POSITIONED OUTSIDE THE LIMITS OF THE BASIN.
6. POND BERMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STORMWATER POND BERM DETAIL.

MAINTENANCE REQUIREMENTS

- SYSTEMS SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND FOLLOWING ANY RAINFALL EXCEEDING 2.5 INCHES IN A 24-HOUR PERIOD, WITH MAINTENANCE OR REHABILITATION CONDUCTED AS A WARRANTED BY SUCH INSPECTION.
- PRETREATMENT MEASURES SHOULD BE INSPECTED AT LEAST TWICE ANNUALLY, AND CLEANED OF ACCUMULATED SEDIMENT AS WARRANTED BY INSPECTION, BUT NO LESS THAN ONCE ANNUALLY.
- AT LEAST ONCE ANNUALLY, SYSTEM SHOULD BE INSPECTED FOR DRAWDOWN TIME. IF BIORETENTION 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 FILTRATION FUNCTION OR INFILTRATION FUNCTION (AS APPLICABLE), INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER MEDIA.
- VEGETATION SHOULD BE INSPECTED AT LEAST ANNUALLY, AND MAINTAINED IN HEALTHY CONDITION, INCLUDING, WEED WHACKING, REMOVAL, AND REPLACEMENT OF DEAD OR DISEASED VEGETATION, AND REMOVAL OF INVASIVE SPECIES. BERM AREAS ARE TO BE MOWED TWICE ANNUALLY.

DESIGN REFERENCES

- UNH STORMWATER CENTER
- EPA (1999A)
- NEW HAMPSHIRE STORMWATER MANAGEMENT MANUAL, FEBRUARY 2025 AS AMENDED.

INFILTRATION POND (STORMWATER POND #2)

NOT TO SCALE

P5719

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ERIC D. WEINREB No. 7634 LICENSED PROFESSIONAL ENGINEER - STATE OF NEW HAMPSHIRE
2/13/26

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ISSUE DATE:
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0	INITIAL SUBMISSION	PMJ	02/13/26

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APPROVED BY: EDW
DRAWING FILE: 5719-DETAILS.DWG

SCALE:
22" x 34" - NOT TO SCALE
11" x 17" - NOT TO SCALE

OWNER:
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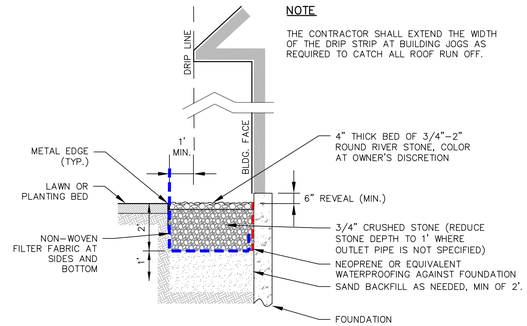
86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

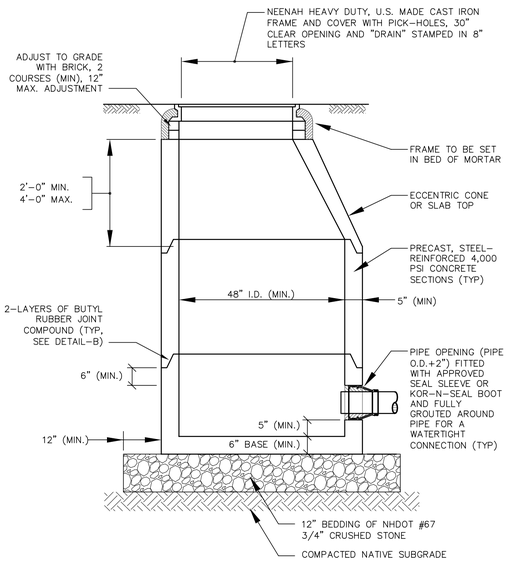
TITLE:
DETAIL SHEET

SHEET NUMBER:
D-3



STONE DRIP EDGE

NOT TO SCALE

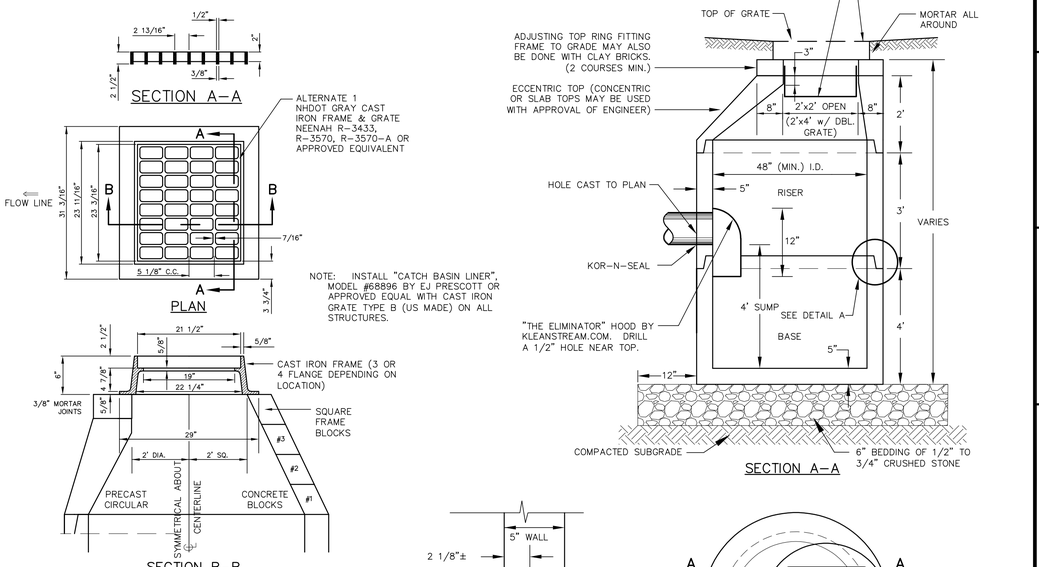


NOTES

1. ALL SECTIONS SHALL BE CONCRETE CLASS AA (4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. ALL MANHOLE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. USE H-20 LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4 FT OF GRADE.
7. NO MANHOLE STEPS.

DRAIN MANHOLE ("DMH")

NOT TO SCALE



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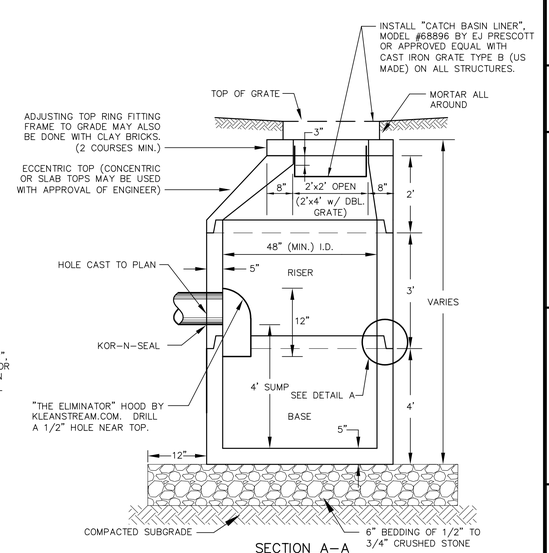
3. THE TONGUE OR GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. USE H20 LOADING SLAB TOP SECTION IN LIEU OF ECCENTRIC TOP WHERE PIPE INVERT IS WITHIN 4' OF FINISH GRADE.
7. FRAME AND GRATE DIMENSIONS ARE TYPICAL BUT MAY VARY BASED ON PRODUCT SELECTED OR EQUIVALENT APPROVED BY THE ENGINEER.

DEEP SUMP CATCH BASIN

NOT TO SCALE



ALTUS ENGINEERING
133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE ERIC D. WEINRIEB No. 7634 LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR: PRELIMINARY REVIEW

ISSUE DATE: MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: RLH/PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-DETAILS.DWG

SCALE:
22" x 34" - NOT TO SCALE
11" x 17" - NOT TO SCALE

OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

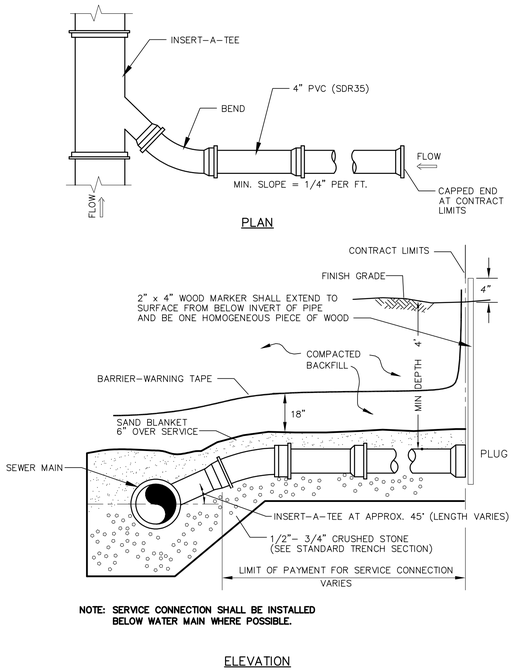
APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
DETAIL SHEET

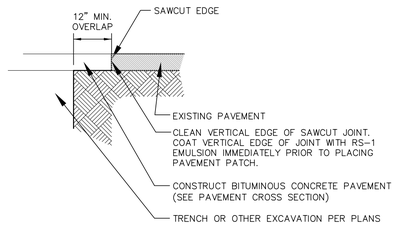
SHEET NUMBER:
D-4

P5719



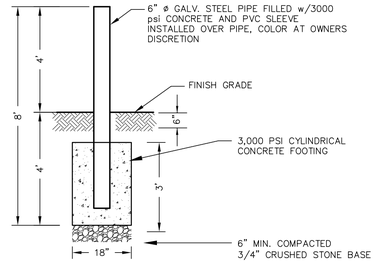
SEWER SERVICE CONNECTION

NOT TO SCALE



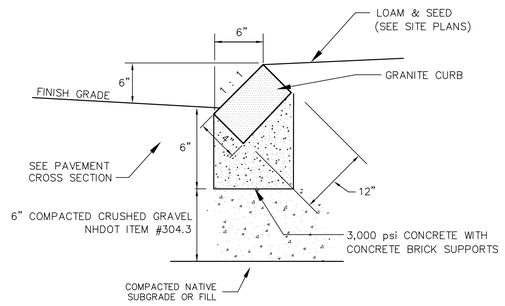
TYPICAL PAVEMENT SAWCUT

NOT TO SCALE



BOLLARD

NOT TO SCALE



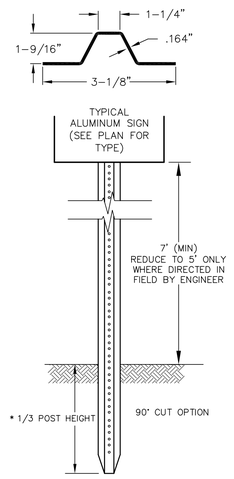
NOTES

1. SEE SITE PLAN FOR LIMITS OF CURBING
2. ADJOINING STONES OF STRAIGHT CURB LAID ON CURVES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 18"
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 8'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART

RADIUS FOR STONES WITH SQUARE JOINTS	MAXIMUM LENGTH
16'-28'	1'-6"
29'-41'	2'
42'-55'	3'
56'-68'	4'
69'-82'	5'
83'-96'	6'
97'-110'	7'
OVER 110'	8'

SLOPED GRANITE CURB

NOT TO SCALE

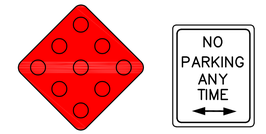


LENGTH: AS REQUIRED

WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)

HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH

STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070 – 1080)

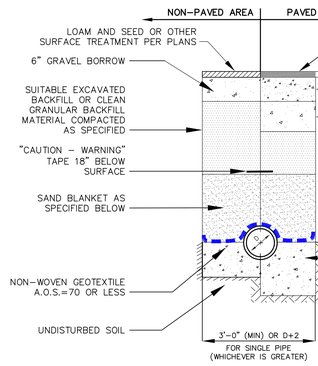


NOTES

1. ALL SIGNS SHALL MEET THE REQUIREMENTS OF AND BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. WHEN PLACED PERPENDICULAR TO A TRAVELLED WAY OR SIDEWALK, SIGN EDGE SHALL BE NO CLOSER THAN 2' TO THE EDGE OF PAVEMENT. GREATER MINIMUM DISTANCE MAY BE REQUIRED IN CERTAIN LOCATIONS.

SIGN DETAILS

NOT TO SCALE



NOTES

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. INSULATE GRAVITY SEWER AND FORCEMAINS WHERE THERE IS LESS THAN 5'-0" OF COVER WITH 2" THICK CLOSED CELL RIGID BOARD INSULATION, 18" ON EACH SIDE OF PIPE.
3. MAINTAIN 12" MINIMUM HORIZONTAL SEPARATION AND WIDEN TRENCH ACCORDINGLY IF MULTIPLE PIPES ARE IN TRENCH.

SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

SCREENED GRAVEL OR CRUSHED STONE BEDDING*

SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	20 – 55
# 4	0 – 10
# 8	0 – 5

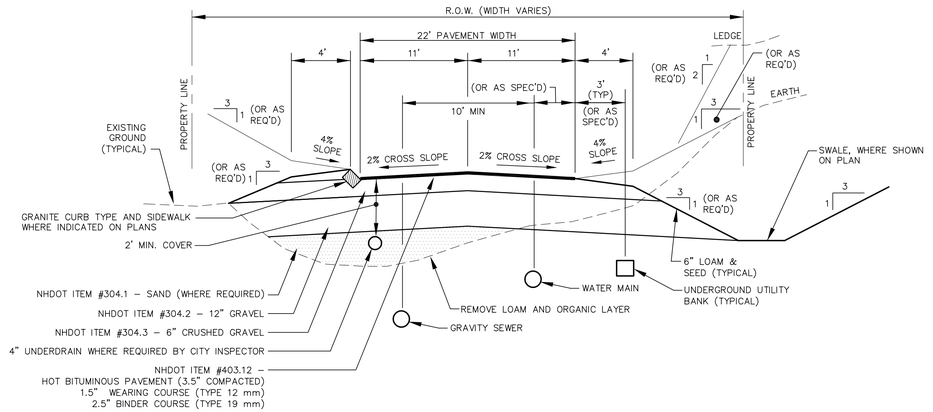
* EQUIVALENT TO STANDARD STONE SIZE #67 – SECTION 703 OF NHDOT STANDARD SPECIFICATIONS

SEWER TRENCH

NOT TO SCALE

STANDARD TRENCH NOTES

1. ORDERED EXCAVATION OF UNSUITABLE MATERIAL BELOW GRADE: BACKFILL AS STATED IN THE TECHNICAL SPECIFICATIONS OR AS SHOWN ON THE DRAWING.
2. BEDDING: SCREENED GRAVEL AND/OR CRUSHED STONE FREE FROM CLAY, LOAM, ORGANIC MATTER AND MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. WHERE ORDERED BY THE ENGINEER TO STABILIZE THE BASE, SCREENED GRAVEL OR CRUSHED STONE 1-1/2 INCH TO 1/2 INCH SHALL BE USED.
3. SAND BLANKET: CLEAN SAND FREE FROM ORGANIC MATTER MEETING THE GRADATION SHOWN IN THE TRENCH DETAIL. BLANKET MAY BE REPLACED WITH BEDDING MATERIAL FOR CAST-IRON, DUCTILE IRON, AND REINFORCED CONCRETE PIPE PROVIDED THAT NO STONE LARGER THAN 2" IS IN CONTACT WITH THE PIPE AND THE GEOTEXTILE IS RELOCATED ACCORDINGLY.
4. SUITABLE MATERIAL: IN ROADS, ROAD SHOULDERS, WALKWAYS AND TRAVELED WAYS, SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING THE COURSE OF CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT, OR CLAY, ALL EXCAVATED LEDGE MATERIAL, ALL ROCKS OVER 6 INCHES IN LARGEST DIMENSION, AND ANY MATERIAL WHICH, AS DETERMINED BY THE ENGINEER, WILL NOT PROVIDE SUFFICIENT SUPPORT OR MAINTAIN THE COMPLETED CONSTRUCTION IN A STABLE CONDITION. IN CROSS COUNTRY CONSTRUCTION, SUITABLE MATERIAL SHALL BE AS DESCRIBED ABOVE, EXCEPT THAT THE ENGINEER MAY PERMIT THE USE OF TOP SOIL, LOAM, MUCK, OR PEAT ONLY IF SATISFIED THAT THE COMPLETED CONSTRUCTION WILL BE ENTIRELY STABLE AND PROVIDED THAT EASY ACCESS TO THE SEWER FOR MAINTENANCE AND POSSIBLE RECONSTRUCTION WILL BE PRESERVED.
5. BASE COURSE AND PAVEMENT SHALL MEET THE REQUIREMENTS OF THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION'S LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES – DIVISIONS 300 AND 400 RESPECTIVELY.
6. W = MAXIMUM ALLOWABLE TRENCH WIDTH TO A PLANE 12 INCHES ABOVE THE PIPE. FOR PIPES 15 INCHES NOMINAL DIAMETER OR LESS, W SHALL BE NO MORE THAN 36 INCHES. FOR PIPES GREATER THAN 15 INCHES IN NOMINAL DIAMETER, W SHALL BE 24 INCHES PLUS PIPE OUTSIDE DIAMETER (O.D.) ALSO, W SHALL BE THE PAYMENT WIDTH FOR LEDGE EXCAVATION AND FOR ORDERED EXCAVATION BELOW GRADE.
7. FOR CROSS COUNTRY CONSTRUCTION, BACKFILL, FILL AND/OR LOAM SHALL BE MOUNDED TO A HEIGHT OF 6 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
8. CONCRETE FOR ENCASEMENT SHALL CONFORM TO THE NEW HAMPSHIRE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS STANDARD SPECIFICATION REQUIREMENTS FOR CLASS A (3000#) CONCRETE AS FOLLOWS:
   CEMENT: 6.0 BAGS PER CUBIC YARD
   WATER: 5.75 GALLONS PER BAG
   CEMENT MAXIMUM SIZE OF AGGREGATE: 1 INCH
   CONCRETE ENCASEMENT IS NOT ALLOWED FOR PVC PIPE.
9. CONCRETE FULL ENCASEMENT: IF FULL ENCASEMENT IS UTILIZED, DEPTH OF CONCRETE BELOW PIPE SHALL BE 1/4 I.D. (4" MINIMUM). BLOCK SUPPORT SHALL BE SOLID CONCRETE BLOCKS.
10. NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES DESIGN STANDARDS REQUIRE TEN FEET (10') SEPARATION BETWEEN WATER AND SEWER. REFER TO TOWN'S STANDARD SPECIFICATIONS FOR METHODS OF PROTECTION IN AREAS THAT CANNOT MEET THESE REQUIREMENTS.
11. THE CONTRACTOR SHALL INSTALL TRENCH DAMS IN ACCORDANCE WITH NHDES REGULATIONS.
12. ALL GRAVITY SEWER INSTALLATIONS SHALL BE TESTED IN ACCORDANCE WITH NHDES ENV-WQ 704.06.



NOTES

1. EACH GRAVEL BASE COURSE TO BE CONSTRUCTED AT THE PAVEMENT CROSS SLOPE.
2. REMOVE LEDGE 18" BELOW LOWEST WORK BEING INSTALLED.
3. REMOVE ALL LOAM, CLAY, MUCK, ORGANIC, YIELDING OR OTHERWISE UNSTABLE MATERIAL TO A MINIMUM OF 24" BELOW FINISH GRADE. ADDITIONAL DEPTH MAY BE REQUIRED BY THE GEOTECHNICAL REPORT (IF AVAILABLE) OR THE ENGINEER. SUCH ADDITIONAL REMOVAL SHALL REQUIRE THE PLACEMENT OF COMPACTED SAND OR GRAVEL BORROW APPROVED BY THE ENGINEER TO THE BOTTOM OF SUBGRADE.
4. THE OVER-EXCAVATION OF UNSUITABLE MATERIAL BEYOND THAT SPECIFIED ABOVE, THE INSTALLATION OF UNDERDRAINAGE, AND/OR THE INSTALLATION OF GEOTEXTILE FABRIC SHALL BE PROVIDED UPON DETERMINATION OF THE ENGINEER.
5. FILL BELOW PAVEMENT SUBGRADE SHALL BE SAND OR GRANULAR BORROW COMPACTED PER DOT REQUIREMENTS.
6. SITEWORK CONTRACTOR SHALL COORDINATE GEOTECHNICAL ENGINEERING INSPECTIONS PRIOR TO PLACING GRAVELS.
7. SUBGRADE SHALL BE FREE OF VOIDS THAT ALLOW MOVEMENT AND/OR SETTLEMENT OF MATERIALS.
8. SUBGRADE SHALL BE ROLLED WITH A MINIMUM OF SIX PASSES OF A 10-TON VIBRATORY COMPACTOR OPERATING AT PEAK RATED FREQUENCY OR BY OTHER MEANS APPROVED BY THE ENGINEER.
9. SUBGRADE SHALL BE PROOF-ROLLED WITH A FULLY LOADED DUMP TRUCK PRIOR TO PLACEMENT OF SELECT GRAVELS. PROOF-ROLLING SHALL BE WITNESSED AND APPROVED BY THE ENGINEER.
10. BITUMINOUS PAVEMENT SHALL BE COMPACTED TO 90 TO 97 PERCENT OF ITS THEORETICAL MAXIMUM DENSITY AS DETERMINED BY ASTM D-2041. THE BASE AND SUBBASE MATERIALS SHOULD BE COMPACTED TO AT LEAST 95 PERCENT OF THEIR MAXIMUM DRY DENSITIES AS DETERMINED BY ASTM D-1557. COMPACTION TESTING SHALL BE PERFORMED BY A GEOTECHNICAL ENGINEER FOR ALL MATERIAL COURSES AND THE RESULTS APPROVED BY THE ENGINEER PRIOR TO PLACING THE SUBSEQUENT COURSE.
11. TACK COAT SHALL BE APPLIED BETWEEN SUCCESSIVE LIFTS OF ASPHALT PAVEMENT.

TYPICAL ROADWAY CROSS SECTION

NOT TO SCALE

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TAX MAP 236, LOT 74
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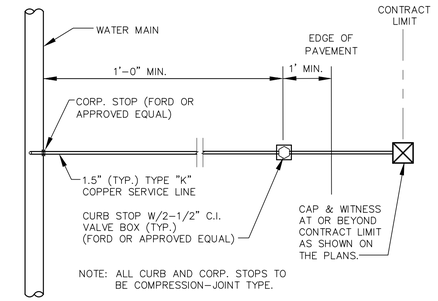
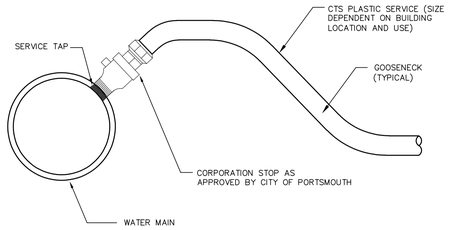
PORTSMOUTH, NH 03801

TITLE:
DETAIL SHEET

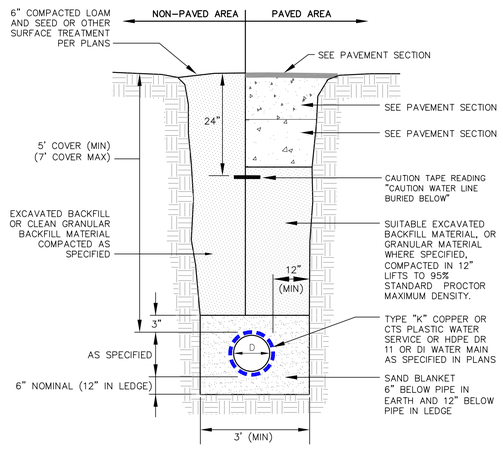
SHEET NUMBER:
D-5



NOTE: ALL MATERIALS AND SPECIFICATIONS SHALL CONFORM TO CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS AND REQUIREMENTS. VERIFY PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.



WATER SERVICE CONNECTION NOT TO SCALE



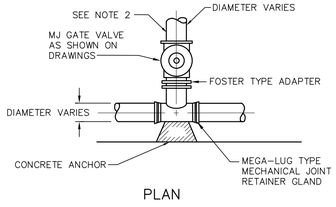
SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. BACKFILL MATERIAL BELOW PAVED OR CONCRETE AREAS, BEDDING MATERIAL, AND SAND BLANKET SHALL BE COMPACTED TO NOT LESS THAN 95% OF AASHTO T 99, METHOD C. SUITABLE BACKFILL MATERIAL BELOW LOAM AREAS SHALL BE COMPACTED TO NOT LESS THAN 90% OF AASHTO T 99, METHOD C.
2. ALL TRENCHING AND BACKFILL SHALL CONFORM WITH THE STANDARDS OF EXETER DPW.

WATER MAIN TRENCH NOT TO SCALE

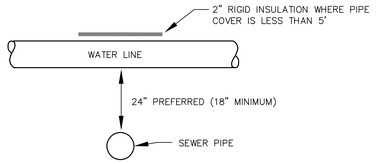


PLAN

NOTES:

1. GATE VALVES SHALL OPEN RIGHT, PER CITY STANDARDS.
2. BRANCH PIPING SHALL BE MECHANICALLY RESTRAINED AS NOTED UNDER THRUST BLOCK DETAIL REQUIREMENTS.

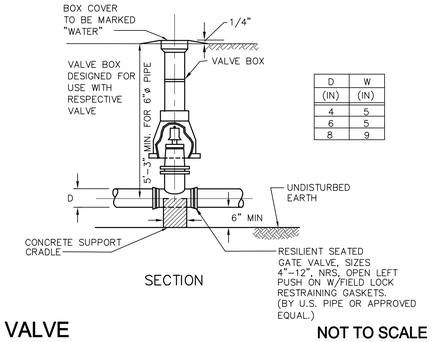
TEE & GATE VALVE ASSEMBLY NOT TO SCALE



NOTES

1. A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN WATER AND SEWER MAINS. A MINIMUM VERTICAL DISTANCE WITH WATER ABOVE SEWER SHALL BE MAINTAINED.
2. SEWER PIPE JOINTS SHALL BE LOCATED A MINIMUM OF 6 FEET HORIZONTALLY FROM WATER MAIN.
3. IF THE REQUIRED CONFIGURATION CANNOT BE MET, THE SEWER MAIN SHALL BE CONSTRUCTED TO MEET THE NHDES REQUIREMENTS FOR FORCE MAIN CONSTRUCTION.

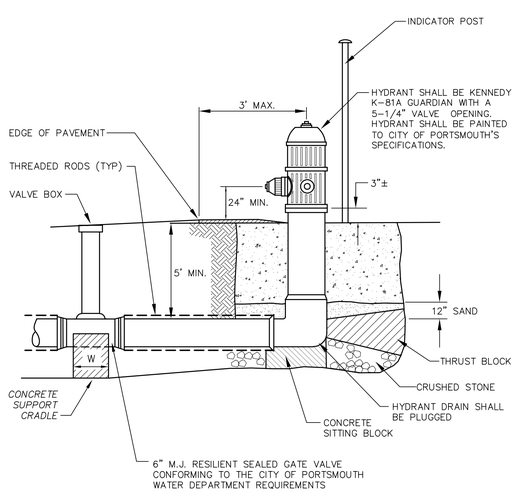
WATER MAIN / SEWER CROSSING NOT TO SCALE



D (IN)	W (IN)
4	5
6	5
8	9

SECTION

WATER VALVE NOT TO SCALE

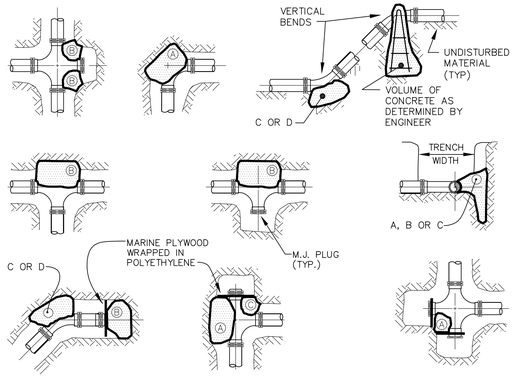


D (IN)	W (IN)
4	5
6	5
8	9

NOTES

1. HYDRANT INSTALLATION AND OPERATION TO CONFORM TO REGULATIONS OF THE CITY OF PORTSMOUTH WATER & FIRE DEPARTMENTS.
2. GATE VALVES & HYDRANTS TO OPEN RIGHT (CLOCKWISE).

FIRE HYDRANT NOT TO SCALE

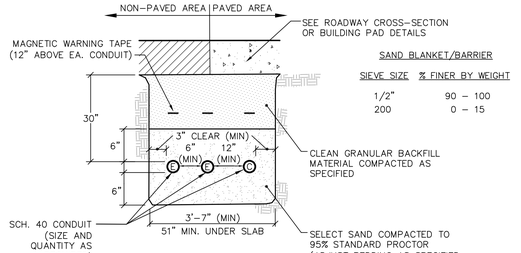


TEST PRESSURE = 150 psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL					
	REACTION TYPE	PIPE SIZE				
		4"	6"	8"	10"	12"
	A 90°	0.89	2.19	3.82	11.14	17.24
	B 180°	0.65	1.55	2.78	8.38	12.00
	C 45°	0.48	1.19	2.12	6.02	9.32
	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38

NOTES

1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL.
2. NO JOINTS SHALL BE COVERED WITH CONCRETE. POLYETHYLENE (6 MIL) SHALL BE PLACED AROUND FITTINGS PRIOR TO CONCRETE PLACEMENT.
3. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
4. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
5. PRECAST THRUST BLOCKS MAY BE SUBSTITUTED WITH THE APPROVAL OF THE ENGINEER AND LOCAL WATER DEPARTMENT.

THRUST BLOCKING NOT TO SCALE



SAND BLANKET/BARRIER

SIEVE SIZE	% FINER BY WEIGHT
1/2"	90 – 100
200	0 – 15

NOTES

1. ALL CONDUIT IS TO BE SCHEDULE 40 PVC, ELECTRICAL GRADE, GRAY IN COLOR AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. A 10-FOOT HORIZONTAL SECTION OF RIGID GALVANIZED STEEL CONDUIT WILL BE REQUIRED AT EACH SWEEP, UNLESS IN THE OPINION OF THE SERVICE PROVIDER DESIGNER, THE SWEEP-PVC JOINT IS NOT SUBJECT TO FAILURE DURING PULLING OF THE CABLE. ALL JOINTS ARE TO BE WATERTIGHT.
2. ALL 90 DEGREE SWEEPS WILL BE MADE WITH RIGID GALVANIZED STEEL WITH A MINIMUM RADIUS OF 36 INCHES FOR PRIMARY CABLES AND 24 INCHES FOR SECONDARY CABLES.
3. BACKFILL MAY BE MADE WITH EXCAVATED MATERIAL OR COMPARABLE, UNLESS MATERIAL IS DEEMED UNSUITABLE BY SERVICE PROVIDER. BACKFILL SHALL BE FREE OF FROZEN LUMPS, ROCKS, DEBRIS, AND RUBBISH. ORGANIC MATERIAL SHALL NOT BE USED AS BACKFILL. BACKFILL SHALL BE IN 6-INCH LAYERS AND THOROUGHLY COMPACTED.
4. A SUITABLE PULLING STRING, CAPABLE OF 300 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE SERVICE PROVIDER IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT. A MINIMUM OF TWENTY-FOUR (24") INCHES OF ROPE SLACK SHALL REMAIN AT THE END OF EACH DUCT. PULL ROPE SHALL BE INSTALLED IN ALL CONDUIT FOR FUTURE PULLS. PULL ROPE SHALL BE NYLON ROPE HAVING A MINIMUM TENSILE STRENGTH OF THREE HUNDRED (300#) LBS.
5. SERVICE PROVIDER SHALL BE GIVEN THE OPPORTUNITY TO INSPECT ALL CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD SERVICE PROVIDER BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. TYPICAL CONDUIT SIZES ARE 3-INCH FOR SINGLE PHASE PRIMARY AND SECONDARY VOLTAGE CABLES, 4-INCH FOR THREE PHASE SECONDARY, AND 5-INCH FOR THREE PHASE PRIMARY. HOWEVER, SERVICE PROVIDERS MAY REQUIRE DIFFERENT NUMBERS, TYPES AND SIZES OF CONDUIT THAN THOSE SHOWN HERE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDUIT SIZES, TYPES AND NUMBERS WITH EACH SERVICE PROVIDER PRIOR TO ORDERING THEM.
7. ROUTING OF CONDUIT, LOCATION OF MANHOLES, TRANSFORMERS, CABINETS, HANDHOLES, ETC., SHALL BE DETERMINED BY SERVICE PROVIDER DESIGN PERSONNEL. THE CONTRACTOR SHALL COORDINATE WITH ALL SERVICE PROVIDERS PRIOR TO THE INSTALLATION OF ANY CONDUIT.
8. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE. WHERE REQUIRED BY UTILITY PROVIDER, CONDUIT SHALL BE SUPPORTED IN PLACE USING PIPE STANCHIONS PLACED EVERY FIVE (5') FEET ALONG THE CONDUIT RUN.
9. UNDER A BUILDING SLAB THE CONDUIT SHALL BE ENCASED IN 8" OF CONCRETE ON ALL SIDES.
10. ALL CONDUIT TERMINATIONS SHALL BE CAPPED TO PREVENT DEBRIS FROM ENTERING CONDUIT.

ELECTRIC / COMMUNICATION TRENCH NOT TO SCALE

P5719

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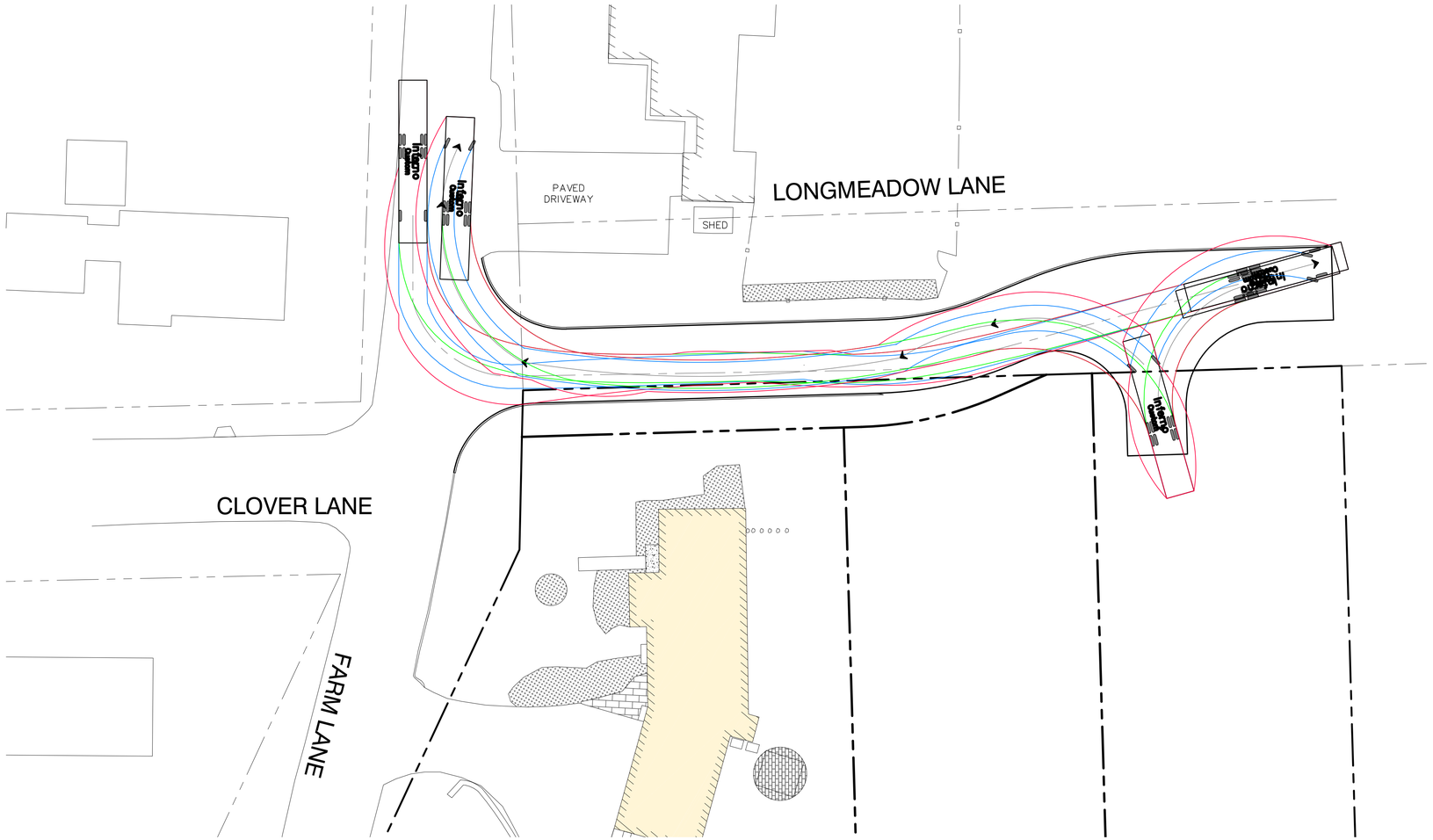
SHEET NUMBER:
D-6

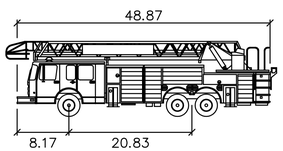


DESIGN VEHICLE PROFILE

FRONT TRACK

REAR TRACK

VEHICLE BODY/OVERHANG



Inferno Aerial

	feet
Width	: 8.50
Track	: 8.50
Lock to Lock Time	: 6.0
Steering Angle	: 41.0

TURNING MOVEMENT NOTES

1. THE GRAPHIC VEHICLE PROFILE SHOULD NOT BE CONSIDERED A COMPLETELY ACCURATE VISUAL DEPICTION OF THE DESIGN VEHICLE AND IS ONLY INTENDED TO CONVEY A GENERIC REPRESENTATION OF ITS GENERAL APPEARANCE.
2. THE INFERNO AERIAL WAS SELECTED AS THE DESIGN VEHICLE DUE TO IT MEETING THE DIMENSIONS OF THE LARGEST VEHICLE EXPECTED TO ACCESS THE PROJECT SITE. THIS IS INTENDED TO DEMONSTRATE THAT THE PROJECT AS DESIGNED SHOULD BE ABLE TO ADEQUATELY ACCOMMODATE ANY VEHICLE UP TO AND INCLUDING THIS DESIGN VEHICLE.
3. TURNING MOTIONS SHOWN WERE GENERATED USING AUTOTURN SOFTWARE BY TRANSOFT SOLUTIONS, INC.

NH STATE PLANE COORDINATE SYSTEM
NAD 1983

APPROVED BY THE PORTSMOUTH PLANNING BOARD

CHAIRMAN *DATE*

GRAPHIC SCALE

20 10 20 40 80

(IN FEET)

ALTUS ENGINEERING

133 Court Street Portsmouth, NH 03801
(603) 433-2335 www.altus-eng.com

STATE OF NEW HAMPSHIRE
ERIC D. WEINRIEB
No. 7634
LICENSED PROFESSIONAL ENGINEER
3/23/26

NOT FOR CONSTRUCTION

ISSUED FOR:
TECHNICAL ADVISORY COMMITTEE

ISSUE DATE:
MARCH 23, 2026

REVISIONS

NO.	DESCRIPTION	BY	DATE
0	INITIAL SUBMISSION	PMJ	02/13/26
1	PER TAC COMMENTS	PMJ	03/23/26

DRAWN BY: PMJ
APPROVED BY: EDW
DRAWING FILE: 5719-SITE.dwg

SCALE:
22" x 34" - 1" = 20'
11" x 17" - 1" = 40'

OWNER:
JEANETTE MACDONALD
86 FARM LANE
PORTSMOUTH, NH 03801

APPLICANT:
FLIPPING BERGER'S, LLC
71 BRACKET ROAD
PORTSMOUTH, NH 03801

PROJECT:
86 FARM LANE SUBDIVISION
TAX MAP 236, LOT 74
86 FARM LANE
PORTSMOUTH, NH 03801

TITLE:
VEHICULAR ACCESS PLAN

SHEET NUMBER:
1 OF 1

P5719