



October 7, 2022

Inland Wetland Commission
Town of Monroe
7 Fan Hill Road
Monroe, CT 06468
(203) 452-2809

**RE: Inland Wetland Permit Application
125 Garder Road
Monroe, Connecticut 06468
Project Number: 22104001**

Dear Commission Members,

On behalf of the Applicant, 125 Garder Road LLC, please find enclosed an application for an Inland Wetland Permit for the proposed excavation/filling activities located at 125 Garder Road in Monroe, Connecticut. The project entails earthwork, drainage & erosion control measures, including the construction of a stormwater quality basin, to prepare the site for future development. At the completion of the project, the entire limit of disturbance will be seeded to provide stabilization and erosion control.

The on-site wetland areas have been delineated and flagged by JMM Wetland Consulting Services, LLC and a report has been included as part of this submission. Please review the attached items and requisite fees provided herein. If you have any comments or questions, please provide them at your earliest convenience. We look forward to working with you on this application.

Respectfully,

Solli Engineering, LLC

A handwritten signature in blue ink that reads 'Rob Pryor'.

Rob Pryor, P.E.
Director of Engineering

Enclosures: Inland Wetland Permit Application
100' Abutters Mailing Addresses
Engineering Memorandum
Wetlands Report Prepared by JMM Wetlands LLC
CT DEEP Reporting Form
Bond Estimate Form
(2) Alternative Site Plans
(3) 24" x 36" Civil Plan Set
(7) 18" x 24" Civil Plan Set
(2) Alternative Site Plans

X:\SE Files\Project Data\2022\22104001 - 125 Garder Road - Monroe, CT\Office Data\Correspondence\125 Garder Road - EFP Cover Letter (2022-10-07).docx

**501 Main Street, Suite 2A
Monroe, CT 06468
Office: (203) 880-5455**

www.SolliEngineering.com

**11 Vanderbilt Avenue, Suite 240
Norwood, MA 02062
Office: (781) 352-8491**

TOWN OF MONROE
APPLICATION FOR PERMIT
INLAND WETLANDS COMMISSION
7 Fan Hill Road, Monroe, CT 06468
Tel. (203)452-2809

FOR OFFICE USE ONLY:

Application Number _____
File Number: _____
Submittal Date: _____
Application Fee Collected _____
Public Hearing Fee Collected _____
Date of Receipt: _____
Extensions (cumulative ≤ 65 days) _____

Public Hearing Start: _____ End: _____
Hearing: Start: _____ End: _____
Deliberation: Start: _____ End: _____
Approval Date: _____ Denial Date: _____
270 Days Up: _____
Permit Expiration: _____

As the applicant, it is your responsibility to provide the information the Commission needs in order to process your application and make a fair determination of the issues. If you fail to supply the information it may result in delay, a denial of your application or both. We recommend that you read the Inland Wetlands and Watercourses Regulations and that you request a meeting with the Land Use Department prior to submitting your application. There is no charge to the applicant for this meeting.

SECTION A: Information about the property

1. Location of the Property:

Street Address: 125 Garder Road, Monroe CT 06468

Assessor's Map Number: 094

Parcel Number: 002

2. Where is the property deed found in the Monroe Land Records?

Volume: 2076

Page: 0168

3. Is the property located within a public water supply watershed?

☐ No

☒ Yes (If " Yes, " the Applicant must send a copy of this application **BY CERTIFIED MAIL ON OR BEFORE THE DATE OF THE APPLICATION** to the Aquarion Water Company of Connecticut, 714 Black Rock Road, Easton, CT 06612, and the Commissioner of Public Health, 410 Capitol Avenue, Hartford, CT 06106; See Regulations Section 8.3).

4. Is the property located within 500 feet of a town boundary?

☒ No

☐ Yes (If " Yes ", the applicant must notify the Inland Wetland Agency of the adjacent municipality by certified mail and submit the receipt with this application).

5. Is the property subject to an existing conservation easement?

☒ No

☐ Yes (If " Yes ", the applicant must notify the party holding such restriction by certified mail no later than sixty days prior to the filing of this permit application, or submit a letter from the party holding the restriction verifying that the application is in compliance with the terms of the restriction; see Regulations Section 7.9c & 7.9d).

6. Is there a flood plain located on the property?

☐ No

☒ Yes (If " Yes ", indicate elevation and location of flood plain on the submission plan).

7. Please attach a list of the names and mailing addresses of all landowners within 100 feet of the property.

SECTION B: Information about the applicant

8. Applicant's name and contact information:

Name: 125 GARDER RD LLC

Address: 63 LESLIE LN, FAIRFIELD, CT 06824

Telephone: _____

Fax: _____

Email: _____

9. What is the Applicant's interest in the property?

☒ Owner

☐ Option to purchase

☐ Other _____

Applicant's representative's name and contact information:

Name: Kevin Solli, P.E.
 Business Name: Solli Engineering, LLC
 Business Address: 501 Main Street #2a, Monroe, CT 06468
 Telephone: 203-880-5455 Fax: 203-880-5455 Email: kevin@sollic.com

10. Engineer's name and contact information:

Name: Kevin Solli, P.E.
 Business Name: Solli Engineering, LLC
 Business Address: 501 Main Street #2a, Monroe, CT 06468
 Telephone: 203-880-5455 Fax: 203-880-5455 Email: kevin@sollic.com

11. Owner's name and contact information:

Name: 125 GARDER RD LLC
 Address: 63 LESLIE LN, FAIRFIELD, CT 06824
 Telephone: _____ Fax: _____ Email: jgrassojr@grassoconstruction.com
 Owner's signature _____ (granting permission for submission of
 application by the applicant)

***Please note the following:**

If the applicant is not the current owner, this application must include the owner's signature or a written, witnessed consent to submit this application, signed and dated by the owner. Only the applicant and the agent listed on this application will receive copies of official action and correspondence.

SECTION C: Information about the proposed activity

(Please attach additional sheets if necessary)

12. Select one or more of the following types of Application requested:

- ☒ Regulated Activity ☐ Including Site Remediation
☐ Subdivision Report/Referral ☐ Map Amendment
☐ Renewal/Extension of Issued Permit Number _____ ☐ Regulation Amendment

13. Describe the proposed activity covered by this application:

The proposed activity includes excavation and fill placement activities in order to lower the site elevation in preparation of future development.

14. List all activities which take place in regulated areas, including the upland review areas:

The activities which will take place in regulated areas include earthwork and related site work activities in order to lower the site elevation in preparation of future development, as well as the construction of a stormwater quality basin.

15. List the total acreage of the following:

Overall project site: 9.453 Acres
 Wetlands on the property: 2.563 Acres
 Upland review areas on the property: 1.524 Acres

16. List the total area of the regulated areas to be altered:

Wetlands: 0.00 acres; 0.00 sq. ft.
 Upland review areas (within 100 feet of a wetland or 150 feet of a watercourse): 0.66 acres; 28,563 sq. ft.

Total Regulated area to be altered (a + b above) for determination of fee: 0.66 acres; 28,563 sq. ft.

17. What alternatives to the proposed regulated activity did you consider? Why did you choose the activity proposed in this application as opposed to the alternatives considered? (See Regulations Section 7.5f)

Other alternative excavation and filling plans were considered, although the current design was chosen to limit the regulated area and overall site disturbance, reduce the amount of required Planning & Zoning waivers, maintain a significant buffer between the limit of work and edge of wetlands, limit any potential impact to the onsite wetlands, and maintain the 50' front yard landscape buffer.

18. List all measures of Low Impact Design/Development that have been incorporated into this application in order to minimize impact to wetlands.

The Low Impact Design/Development measures incorporated into this application include the limiting land disturbance, diversion berms with stone check dams, and temporary sediment traps. LID measures will be included in any future development reflective of the Potential Development Plan.

Please see the Engineering Report included as part of this application for more information.

SECTION D: Determination of Application Fee

(See Regulations Section 19)

19. Select type of Application Fee (choose one):

- | | |
|-----------------------------------------------------------------------------|----------|
| <input type="checkbox"/> Residential Use = \$300.00 | _____ |
| <input checked="" type="checkbox"/> Commercial Use = \$500.00 | \$500.00 |
| <input type="checkbox"/> Regulation Amendment = \$500.00 | _____ |
| <input type="checkbox"/> Map Amendment = \$150.00 | _____ |
| <input type="checkbox"/> Permit Modification = \$100.00 | _____ |
| <input type="checkbox"/> Renewal/Extension of Issue Permit = \$100.00 | _____ |

20. Select the following additional fees that apply for regulated areas proposed to be disturbed:

Square Feet of Disturbed Area:

- | | |
|-------------------------------------------------------------------------------------------------|----------|
| <input type="checkbox"/> Less than 1,000 square feet = \$50.00 | _____ |
| <input type="checkbox"/> 1,000 to 5,000 square feet = \$100.00 | _____ |
| <input checked="" type="checkbox"/> More than 5,000 square feet = \$100.00 (base amount) | \$100.00 |
| (Plus \$5.00 for every additional 5,000 square feet rounded up) | |
| Disturbed Area (Line 17c) (-) 5,000 sq.ft. (÷) 5,000 sq.ft. (x) \$5.00 per sq.ft. rounded up... | \$25.00 |

21. Department of Environmental Protection State Surcharge	\$60.00
-------------------------------------------------------------------------	----------------

22. TOTAL APPLICATION FEE:	\$685.00
-----------------------------------------	-----------------

***** Please note the Application Fees/State Fee must be payable to the Town of Monroe. Applicants paying with a personal check must include their driver's license number and telephone number on the check.**

SECTION E: Required support documents

(See Regulations Section 7)

Please indicate (check box) that the following documents have been included with the application:

23. Submit ten (10) copies of the following:

- ☒ Completed Inland Wetlands Application.
- ☒ A description of all filling and/or excavation activities within regulated areas (include estimates of quantity).
- ☒ A Soils Report by a Soil Scientist (include a sketch of flagged wetland areas within said report).
- ☒ A minimum of two alternative plans/sketches that were considered prior to choosing the proposed plans.
- ☐ A report from the Monroe Health Department. N/A
- ☒ A Wetlands Assessment Report.
- ☒ An area plan showing all abutting properties and applicable downstream drainage systems.

24. Submit seven (7) reduced copies of the following (all plans must be folded):

- ☒ Reduced copies, **18' x 24'**, of the site plan showing existing and proposed conditions in relation to the wetlands, watercourses and upland review areas. Please include a location map, delineate the 100-foot wetland setback (upland review area) and/or the 150-foot watercourse setback (upland review area) in red, and incorporate an area plan showing all abutting properties and applicable downstream drainage systems. All plans must have a bar scale.

25. Submit three (3) copies of the following (all plans must be folded):

- ✓ Full size copies of the site plan, **24' x 36'**, showing existing and proposed conditions in relation to the wetlands, watercourses and upland review areas. Please include a location map, delineate the 100-foot wetland setback (upland review area) and/or the 150-foot watercourse setback (upland review area) in red, and incorporate an area plan showing all abutting properties and applicable downstream drainage systems. All plans must have a bar scale.

26. Submit two (2) copies of the following:

- ✓ Drainage calculations, if applicable.

27. Submit one (1) copy of the following:

- ✓ A list of the names and mailing addresses of all abutting property owners.
- ✓ A completed **D.E.E.P** report form (available at the Inland Wetlands Office or on the Town Website at www.monroect.org/Town Hall Departments/Inland Wetlands/Applications & Forms).
- ✓ Verification in writing that all wetlands have been flagged and the property address/location is adequately delineated and/or marked at the property.
- ✓ A completed bond form listing all wetlands related work and protective measures for same (available at the Inland Wetlands Office or on the Town Website at www.monroect.org/Town Hall Departments/Inland Wetlands/Applications & Forms).

PLEASE INCLUDE TEN (10) COPIES OF ANY FUTURE SUPPORTING DOCUMENTATION SUBMITTED TO THE COMMISSION (Plans: 3 Full Size copies - 24' x 36', and 7 Reduced Size copies - 18' x 24'). Plans prepared by engineers, surveyors and architects must be signed and sealed. The Commission may request additional copies of the application or supporting documents at any time.

Title of original submission plan (include author and date) "Excavation/Filling Permit Application" - Prepared by Solli Engineering, LLC - Dated October 1, 2022

The undersigned applicant hereby consents for the owner, in the case where the applicant is not the owner, to necessary and proper access to the above mentioned property by the Inland Wetlands Commissioners, the Inland Wetlands Agent and other appropriate Town staff and/or authorized Town Consultants, at reasonable times, both before and after any permit has been granted or denied by the Commission, for the purpose of evaluating the application, monitoring compliance or correcting any violation of the Inland Wetlands and Watercourses Regulations brought about through actions or inactions of the applicant or permittee.

The undersigned warrants the truth of all statements contained herein and in all supporting documents according to the best of the applicant's knowledge and belief.

The undersigned applicant understands and agrees that the Commission may request additional information and it is the applicant's responsibility to provide this information in a timely fashion and to the Commission's satisfaction. If the information provided is incomplete or inaccurate, in the opinion of the Commission, the Commission may deny the application or request an extension to be granted by the Applicant in order to act within the legal time limits.

Type or Print the Name of the Applicant: _____

Joseph L. Grassi

Signature of Applicant: _____

[Signature]

JMM WETLAND CONSULTING SERVICES, LLC

23 Horseshoe Ridge Road
Newtown, CT 06482
Phone: 203-364-0345

REPORT DATE: June 2, 2022
PAGE 1 OF 3

ON-SITE SOIL INVESTIGATION REPORT

PROJECT NAME & SITE LOCATION:

Project Site
125 Garder Road
Monroe, Connecticut

JMM Job No.: 22-3102-MNR-4

Field Investigation Date(s): 6/1/2022

Field Investigation Method(s):

- ☒ Spade and Auger
☐ Backhoe Test Pits
☐ Other: _____

REPORT PREPARED FOR:

Mr. Robert Pryor, P.E., L.S.
Solli Engineering
501 Main Street, Suite 2A
Monroe, CT 06468

Field Conditions:

Weather: Sunny, 60's
Soil Moisture: Moist
Snow Depth: N/A
Frost Depth: N/A

Purpose of Investigation:

- ☒ Wetland Delineation/Flagging in Field
☐ Wetland Mapping on Sketch Plan or Topographic Plan
☐ High Intensity Soil Mapping by Soil Scientist
☒ Medium Intensity Soil Mapping from USDA-NRCS Web Soil Survey Maps
☐ Other: _____

Base Map Source: USDA-NRCS Web Soil Survey (attached)

Wetland Boundary Marker Series: JMM-1 to JMM-29

General Site Description/Comments: The site is located west of Garder Road, in Monroe, CT. The site is comprised of an existing soil/rock mining operation, gravel drives, a shed, and forested upland and wetland areas (see Figure 1, attached). The soil types were found to be disturbed throughout the active mining areas and a mix of undisturbed and disturbed soils within the forested areas. The undisturbed soils are derived from glacial till (i.e., unstratified sand, silt, and rock) deposits. The undisturbed upland soils are comprised of the well-drained Canton-Charlton (62) soil series complex and the moderately well drained Sutton (50) soil series. The disturbed upland soils were mapped as the Udorthents (308) mapping unit. The undisturbed wetland soils were identified as the poorly to very poorly drained Ridgebury, Leicester, and Whitman (3) soil series complex. The regulated area associated with the site consists of a seasonally saturated/flooded wooded swamp with a full tree canopy and dense understory located along the western portion of the overall site (JMM-#-series). Typical vegetation observed within the regulated area included such species as red maple, yellow birch, spicebush, ironwood, sweet pepperbush, witch hazel, sedges including tussock, cinnamon fern, sensitive fern, and poison ivy, to name a few.

ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)

PROJECT NAME & SITE LOCATION: Project Site
125 Garder Road, Monroe, CT

SOIL MAP UNITS**Wetland Soils**

Ridgebury fine sandy loam (3). This soil series consists of deep, poorly and somewhat poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level to moderately steep soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically these soils have a black sandy loam surface layer 6 inches thick. The mottled subsoil from 6 to 16 inches is olive gray sandy loam. The mottled substratum from 16 to 60 inches is a light olive brown and olive, very firm and brittle gravelly sandy loam

Leicester fine sandy loam (3). This series, which is some Connecticut counties is found only in complex with the Ridgebury and Whitman series, consists of deep, poorly drained loamy soils formed in friable glacial till on uplands. They are nearly level to gently sloping soils in drainage ways and low-lying positions on till covered uplands. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of black fine sandy loam 6 inches thick. The subsoil from 6 to 23 inches is grayish brown, mottled fine sandy loam. The substratum from 26 to 60 inches or more is dark yellowish brown, mottled, friable, gravelly fine sandy loam.

Whitman fine sandy loam (3). This series, which is some Connecticut counties is only mapped in complex with the Ridgebury and Leicester series, consists of deep, very poorly drained soils formed in a coarse-loamy mantle underlain by firm, compact glacial till on uplands. They are nearly level and gently sloping soils on till plains, low ridges and drumloidal landforms. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically these soils have a black fine sandy loam surface layer 8 inches thick. The mottled subsoil from 8 to 15 inches is gray sandy loam. The mottled substratum from 15 to 60 inches is firm, olive gray to gray dense glacial till.

Upland Soils

Canton stony fine sandy loam (62). This series consists of deep, well drained soils formed in a coarse-loamy mantle underlain by sandy glacial till on uplands. They are nearly level to very steep soils on till plains and hills. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of very dark grayish brown fine sandy loam 2 inches thick. The subsoil from 2 to 23 inches is yellowish brown fine sandy loam, gravelly fine sandy loam and gravelly sandy loam. The substratum from 23 to 60 inches is pale brown gravelly loamy sand.

Charlton very stony fine sandy loam (62). This series consists of very deep, well drained coarse-loamy soils formed in friable, glacial till on uplands. They are nearly level to very steep soils on till plains and hills. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. In tilled areas, these soils have a surface layer of dark brown fine sandy loam 8 inches thick. The subsoil from 8 to 26 inches is yellowish brown fine sandy loam and sandy loam. The substratum from 26 to 60 inches or more is grayish brown gravelly fine sandy loam.

ON-SITE SOIL INVESTIGATION REPORT (CONTINUED)

PROJECT NAME & SITE LOCATION: Project Site
125 Garder Road, Monroe, CT

SOIL MAP UNITS

Sutton stony fine sandy loam (50). This series consists of deep, moderately well drained loamy soils formed in friable, glacial till on uplands. They are nearly level to steeply sloping soils on till plains, low ridges and hills, being typically located on lower slopes and in slight depressions. The soils formed in acid glacial till derived mainly from schist, gneiss or granite. Typically, these soils have a surface layer of dark brown fine sandy loam 8 inches thick. The subsoil from 8 to 28 inches is yellowish brown, mottled fine sandy loam and sandy loam. The substratum from 28 to 60 inches or more is light olive brown fine sandy loam.

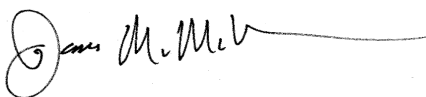
Udorthents (308). This soil mapping unit consists of well drained to moderately well drained soils that have been altered by cutting, filling, or grading. The areas either have had two feet or more of the upper part of the original soil removed or have more than two feet of fill material on top of the original soil. *Udorthents* or Made Land soils can be found on any soil parent material but are typically fluvial on glacial till plains and outwash plains and stream terraces.

Any accompanying soil logs and soil maps, and the on-site soil investigation narrative are in accordance with the taxonomic classification of the National Cooperative Soil Survey of the USDA Natural Resource Conservation Service, and with the Connecticut Soil Legend (DEP Bulletin No.5, 1983). Jurisdictional wetland boundaries were delineated pursuant to the Connecticut General Statutes (CGS Sections 22a-36 to 22a-45), as amended. The site investigation was conducted and/or reviewed by the undersigned Registered Soil Scientist(s) [registered with the Society of Soil Scientists of Southern New England (SSSSNE) in accordance with the standards of the Federal Office of Personnel Management].

All wetland boundary lines established by the undersigned Soil Scientist are subject to change until officially adopted by, local, state, and federal regulatory agencies.

Respectfully submitted,

JMM WETLAND CONSULTING SERVICES, LLC



James M. McManus, MS, CPSS
Certified Professional Soil Scientist
Field Investigator/Reviewer



FIGURE 1: 125 Garder Road



Legend

- Parcels
- Streetname
- Roadways
 - Local
 - Collector
 - Minor Collector
 - Minor Arterial
 - Major Collector
 - PA Other
 - PA Other Expwy
 - PA Interstate

567.8 0 283.90 567.8 Feet

WGS_1984_Web_Mercator_Auxiliary_Sphere
Created by Greater Bridgeport Regional Council

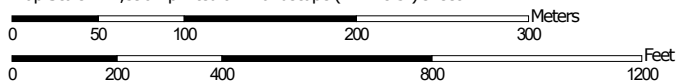
This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.
THIS MAP IS NOT TO BE USED FOR NAVIGATION

Soil Map—State of Connecticut
(125 Garder Road, Monroe, CT)



Soil Map may not be valid at this scale.

Map Scale: 1:4,390 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources
Conservation Service

Web Soil Survey
National Cooperative Soil Survey

5/24/2022
Page 1 of 3

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 1:12,000.

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: State of Connecticut

Survey Area Data: Version 21, Sep 7, 2021

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

Date(s) aerial images were photographed: Oct 5, 2018—Nov 4, 2018

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
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	13.4	16.1%
4	Leicester fine sandy loam	0.0	0.0%
12	Raypol silt loam	1.2	1.4%
17	Timakwa and Natchaug soils, 0 to 2 percent slopes	0.8	1.0%
51B	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	1.8	2.2%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	1.6	1.9%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	0.0	0.0%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	15.3	18.5%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	19.6	23.6%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	4.2	5.0%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	21.7	26.2%
75C	Hollis-Chatfield-Rock outcrop complex, 3 to 15 percent slopes	3.3	4.0%
102	Pootatuck fine sandy loam	0.1	0.1%
Totals for Area of Interest		82.9	100.0%

STATEWIDE INLAND WETLANDS & WATERCOURSES ACTIVITY REPORTING FORM

Pursuant to section 22a-39(m) of the General Statutes of Connecticut and section 22a-39-14 of the Regulations of Connecticut State Agencies, inland wetlands agencies must complete the Statewide Inland Wetlands & Watercourses Activity Reporting Form for **each** action taken by such agency.

This form may be made part of a municipality's inland wetlands application package. If the municipality chooses to do this, it is recommended that a copy of the Town and Quadrangle Index of Connecticut and a copy of the municipality's subregional drainage basin map be included in the package.

Please remember, the inland wetlands agency is responsible for ensuring that the information provided is **accurate** and that it reflects the **final** action of the agency. Incomplete or incomprehensible forms will be mailed back to the agency. Instructions for completing the form are located on the following pages.

The inland wetlands agency shall mail completed forms for actions taken during a calendar month no later than the 15th day of the following month to the Department of Energy and Environmental Protection (DEEP). Do **not** mail this cover page or the instruction pages. Please mail **only** the **completed** reporting form to:

DEEP Land & Water Resources Division
Inland Wetlands Management Program
79 Elm Street, 3rd Floor
Hartford, CT 06106

Questions may be directed to the DEEP's Inland Wetlands Management Program at (860) 424-3019.

INSTRUCTIONS FOR COMPLETING

THE STATEWIDE INLAND WETLANDS & WATERCOURSES ACTIVITY REPORTING FORM

Use a separate form to report EACH action taken by the Agency. Complete this electronic fill-in form as described below. If completing by hand please print and use the [pdf version](#). Do NOT submit a reporting form for withdrawn actions.

PART I: Must Be Completed By The Inland Wetlands Agency

1. Choose the year and month the Inland Wetlands Agency took the action being reported. If multiple actions were taken regarding the same project or activity then multiple forms need to be completed.
2. Choose ONE code letter to describe the final action or decision taken by the Inland Wetlands Agency. Do NOT submit a reporting form for withdrawn actions. Do NOT enter multiple code letters (for example, if the same project or activity had both a permit issued and enforcement action, submit two forms for the two separate actions).
 - A** = A Permit Granted by the Inland Wetlands Agency (not including map amendments, see code D below)
 - B** = Any Permit Denied by the Inland Wetlands Agency
 - C** = A Permit Renewed or Amended by the Inland Wetlands Agency
 - D** = A Map Amendment to the Official Town Wetlands Map - or -
An Approved/Permitted Wetland or Watercourse Boundary Amendment to a Project Site Map
 - E** = An Enforcement Action: Permit Revocation, Citation, Notice of Violation, Order, Court Injunction, or Court Fines
 - F** = A Jurisdictional Ruling by the Inland Wetlands Agency (activities "permitted as of right" or activities considered non-regulated)
 - G** = An Agent Approval pursuant to CGS 22a-42a(c)(2)
 - H** = An Appeal of Agent Approval Pursuant to 22a-42a(c)(2)
3. Check "yes" if a public hearing was held in regards to the action taken; otherwise check "no".
4. Enter the name of the Inland Wetlands Agency official verifying that the information provided on this form is accurate and that it reflects the FINAL action of the agency.

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant - If Part II is completed by the applicant, the applicant MUST return the form to the Inland Wetlands Agency. The Inland Wetlands Agency MUST ensure that the information provided is accurate and that it reflects the FINAL action of the Agency.

5. Enter the name of the municipality for which the Inland Wetlands Agency has jurisdiction and in which the action/project/activity is occurring.

Check "yes" if the action/project/activity crosses municipal boundaries and enter the name(s) of the other municipality(ies) where indicated. Check "no" if it does not cross municipal boundaries.

6. Enter the USGS Quad Map name or number (1 through 115) as found on the CT Town and Quadrangle Index Map (the directory to all USGS Quad Maps) that contains the location of the action/project/activity. USGS Quad Map information is available at: <https://portal.ct.gov/-/media/deep/gis/resources/IndexNamedQuadTownpdf.pdf>

ALSO enter the four-digit identification number of the corresponding Subregional Drainage Basin in which the action/project/activity is located. If located in more than one subregional drainage basin, enter the number of the basin in which the majority of the action/project/activity is located. Town subregional drainage basin maps can be found at UConn CLEAR's website: http://clear.uconn.edu/data/map_set/index.htm (no roads depicted) or at CTECO: http://www.cteco.uconn.edu/map_catalog.asp (depicts roads, choose town and a natural drainage basin map).

7. Enter the name of the individual applying for, petitioning, or receiving the action.
8. Enter the name and address or location of the action/project/activity. Check if the action/project/activity is TEMPORARY or PERMANENT in nature. Also provide a brief DESCRIPTION of the action/project/activity. It is always best to provide as much information as possible (for example, don't state "forestry," provide details such as "20 acre forest harvest, permit required for stream crossing.")

9. Carefully review the list below and enter ONLY ONE code letter which best characterizes the action/project/activity. All state agency projects must code "N."

A = Residential Improvement by Homeowner	I = Storm Water / Flood Control
B = New Residential Development for Single Family Units	J = Erosion / Sedimentation Control
C = New Residential Development for Multi-Family / Condos	K = Recreation / Boating / Navigation
D = Commercial / Industrial Uses	L = Routine Maintenance
E = Municipal Project	M = Map Amendment
F = Utility Company Project	N = State Agency Project
G = Agriculture, Forestry or Conservation	P = Other (this code includes the approval of concept, subdivision or similar plans with no-on-the-ground work)
H = Wetland Restoration, Enhancement, Creation	

10. Enter between one and four code numbers to best characterize the action/project/activity being reported. Enter "NA" if this form is being completed for the action of map amendment. You MUST provide code 12 if the activity is located in an established upland review area. You MUST provide code 14 if the activity is located beyond the established upland review area or no established upland review area exists.

1 = Filling	8 = Underground Utilities Only (no other activities)
2 = Excavation	9 = Roadway / Driveway Construction (including related culverts)
3 = Land Clearing / Grubbing (no other activity)	10 = Drainage Improvements
4 = Stream Channelization	11 = Pond, Lake Dredging / Dam Construction
5 = Stream Stabilization (includes lakeshore stabilization)	12 = Activity in an Established Upland Review Area
6 = Stream Clearance (removal of debris only)	14 = Activity in Upland
7 = Culverting (not for roadways)	

Examples: Jurisdictional ruling allowing construction of a parking lot in an upland where the municipality does not have an established upland review area must use code 14, other possible codes are 2 and 10. Permitted construction of a free standing garage (residential improvement by homeowner) partially in an established upland review area with the remainder in the upland must use code 12 and 14, other possible codes are 1 and 2.

11. Leave blank for TEMPORARY alterations but please indicate action/project/activity is temporary under question #8 on the form. For PERMANENT alterations, enter in acres the area of wetland soils or watercourses altered. Include areas that are permanently altered, or are proposed to be, for all agency permits, denials, amendments, renewals, jurisdictional rulings, and enforcement actions. For those activities that involve filling or dredging of lakes, ponds or similar open water bodies enter the acres filled or dredged under "open water body." For those activities that involve directly altering a linear reach of a brook, river, lakeshore or similar linear watercourse, enter the total linear feet altered under "stream." Remember, these figures represent only the acreage altered, not the total acreage of wetlands or watercourses on the site. You MUST provide all information in ACRES (or linear feet as indicated) including those areas less than one acre. To convert from square feet to acres, divide square feet by the number 43,560. If this report is being completed for an agency jurisdictional ruling and detailed information is not available, provide an estimate. Enter zero if there is no alteration.
12. Enter in acres the area of upland altered as a result of an ACTIVITY REGULATED BY the inland wetlands agency, or as a result of an AGENT APPROVAL pursuant to CGS section 22a-42a(c)(2). Leave blank for TEMPORARY alterations but please indicate action/project/activity is temporary under question #8 on the form. Include areas that are permanently altered, or proposed to be permanently altered, for all agent approvals, agency permits, denials, amendments, renewals, jurisdictional rulings, and enforcement actions. You MUST provide all information in ACRES including those areas less than one acre. See directions above (#11) for conversion factor. If this report is being completed for an agent approval or an agency jurisdictional ruling and detailed information is not available, provide an estimate. Enter zero if there is no alteration.
13. Enter the acres that are, or are proposed to be, restored, enhanced or created for all agency permits, denials, amendments, renewals, jurisdictional rulings and enforcement actions. NOTE restored or enhanced applies to previously existing wetlands or watercourses. Created applies to a non-wetland or non-watercourse area which is converted into wetlands or watercourses. For created - question #10 must provide 12 and/or 14 as an answer, and question #12 must also be answered. You MUST provide all information in ACRES including those areas less than one acre. See directions above (#11) for conversion factor. Enter zero if there is no restoration, enhancement or creation.

PART III: To Be Completed By The DEEP - Please leave this area blank. Incomplete or incomprehensible forms will be mailed back to the municipal inland wetlands agency.



Statewide Inland Wetlands & Watercourses Activity Reporting Form

Please complete and mail this form in accordance with the instructions.
If completing by hand - please print and use the [pdf version](#).
Incomplete or incomprehensible forms will be mailed back to the municipal inland wetlands agency.

PART I: Must Be Completed By The Inland Wetlands Agency

1. DATE ACTION WAS TAKEN: year: [Click Here for Year](#) month: [Click Here for Month](#)
2. CHOOSE ACTION TAKEN (see instructions for code): [Click Here to Choose a Code](#)
3. WAS A PUBLIC HEARING HELD (check one)? yes ☐ no ☐
4. NAME OF AGENCY OFFICIAL VERIFYING AND COMPLETING THIS FORM:
(type name) _____ (signature) _____

PART II: To Be Completed By The Inland Wetlands Agency Or The Applicant

5. TOWN IN WHICH THE ACTIVITY IS OCCURRING (type name): Monroe, Connecticut
does this project cross municipal boundaries (check one)? yes ☐ no ☒
if yes, list the other town(s) in which the activity is occurring (type name(s)): _____, _____
6. LOCATION (click on hyperlinks for information): [USGS quad map name](#): Long Hill or [quad number](#): 93
[subregional drainage basin number](#): 7105
7. NAME OF APPLICANT, VIOLATOR OR PETITIONER (type name): 125 Garder Road, LLC
8. NAME & ADDRESS OF ACTIVITY / PROJECT SITE (type information): 125 Garder Road, Monroe, Connecticut
briefly describe the action/project/activity (check and type information): temporary ☐ permanent ☒ description: _____
Excavation and filling activities and preparation of stormwater areas for future site development.
9. ACTIVITY PURPOSE CODE (see instructions for code): D
10. ACTIVITY TYPE CODE(S) (see instructions for codes): 1, 2, 10, 14
11. WETLAND / WATERCOURSE AREA ALTERED (see instructions for explanation, type acres or linear feet as indicated):
wetlands: 0.00 acres open water body: 0.00 acres stream: 0 linear feet
12. UPLAND AREA ALTERED (type acres as indicated): 0.66 acres
13. AREA OF WETLANDS / WATERCOURSES RESTORED, ENHANCED OR CREATED (type acres as indicated): 0.00 acres

DATE RECEIVED:

PART III: To Be Completed By The DEEP

DATE RETURNED TO DEEP:

FORM COMPLETED: YES NO

FORM CORRECTED / COMPLETED: YES NO

TOWN OF MONROE

Issued: 10-9-07

BOND ESTIMATE FORM (Private Site Development)

☐ PLANNING & ZONING COMMISSION
MEETING DATE _____

APPLICANT: 125 Garder Road LLC
ENGINEER: Solli Engineering, LLC
TEL.: 203-880-5455

*APPLICATION NO: _____
*FILE NO: _____
DATE: October 1, 2022

PROJECT NAME: Excavation & Fill Permit Application (Inland Wetlands)

PROJECT LOCATION: 125 Garder Road, Monroe, CT

*BOND RECOMMENDATION

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	COST	Comments by Town Engr.	
						Unit Price*	Cost*
1.	Sedimentation and Erosion Control Measures	L.S.	1	\$1,000	\$1,000		
2.	Silt Fence or Hay Bales	L.F.	927	\$3.00	\$2,781		
3.	Topsoil, Seed, Fertilizing, and Mulching (entire disturbed area)	S.F.	28,563	\$0.20	\$5,713		
4.	Landscaping (extent to provide for restoration and aesthetic considerations)	L.S.	1	\$2,500	\$2,500		
5.	Grading (for site restoration that will provide safe and stable conditions)	L.S.	1	\$1,500	\$1,500		
6.	Other						
	(+) 10% for Contingencies				\$1,350		
* To be filled in by the Town				Total Cost =	\$14,844	*	

Submitted by: Chris Pawlowski

Approved by: _____

Total costs as determined by the Town Engineer represent adjusted values assuming a Municipal bid arrangement with inflation, noting that the terms of the bond may be in effect for up to 10 or more years (statutory time allowance for performance of requirements).



Properties within 100 feet of 125 Garder Road

142 Garder Rd
Wolen Aaron +
Davidowski Kelly
142 Garder Rd
Monroe, CT 06468
095/003/00

147 Garder Rd
State Of Connecticut
79 Elm St
Hartford, CT 06106
105/001/03

116 Garder Rd
Monroe Of Town (Open Space)
7 Fan Hill Rd
Monroe, CT 06468
095/005/00

155 Garder Rd
Aquarion Water Co Of Connecticut
% Tax Dept
600 Lindley St
Bridgeport, CT 06606
105/001/00

134 Garder Rd
Ramos Marcia +
Pineda Wilson
134 Garder Rd
Monroe, CT 06468
095/004/00

**501 Main Street, Suite 2A
Monroe, CT 06468
Office: (203) 880-5455**

www.SolliEngineering.com

**11 Vanderbilt Avenue, Suite 240
Norwood, MA 02062
Office: (781) 352-8491**

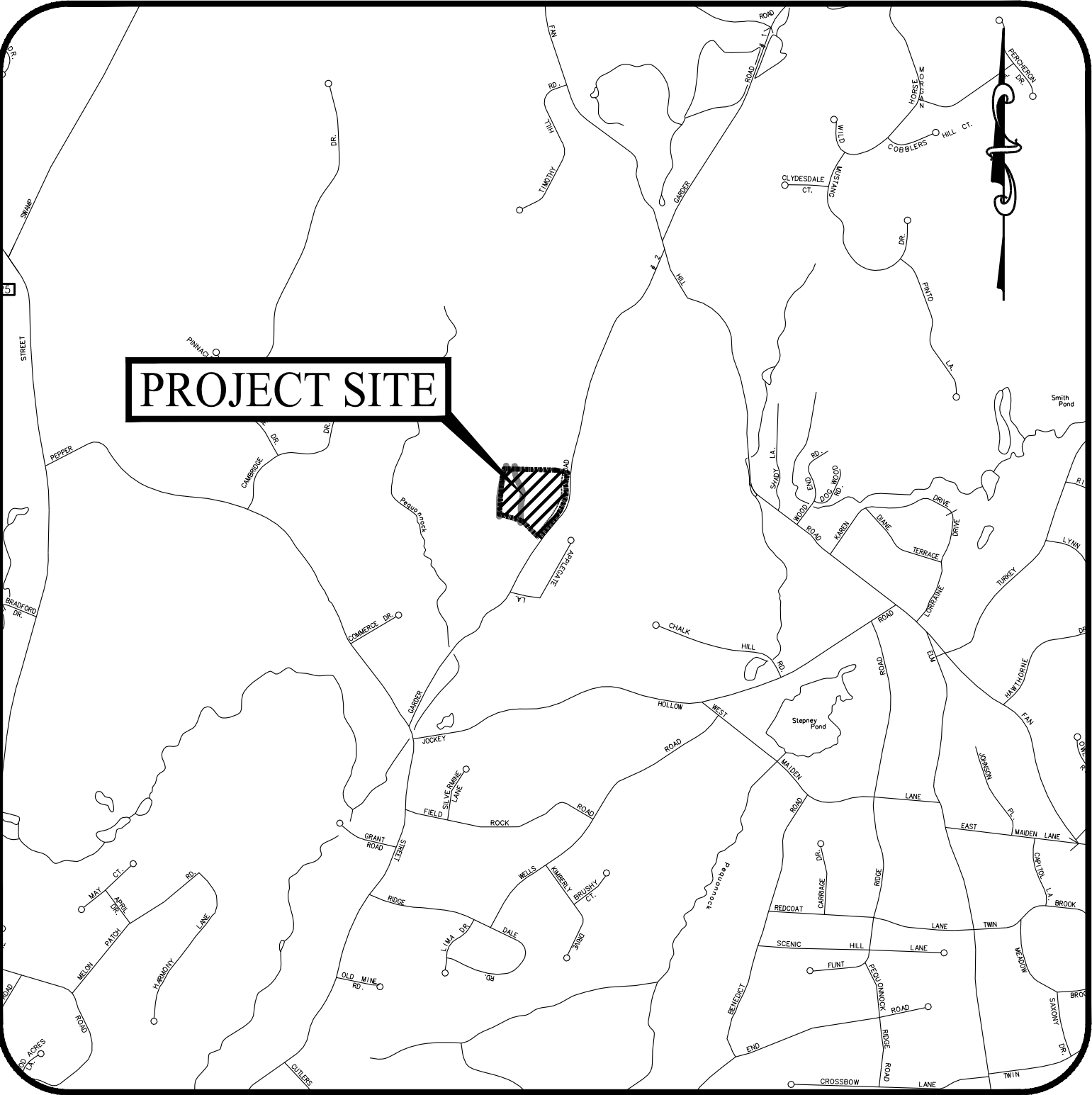


USGS MAP

SCALE: 1" = 1,500'

EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT 06468



LOCATION MAP

SCALE: 1" = 1,500'

PREPARED FOR:

125 GARDER ROAD LLC

63 LESLIE LANE
FAIRFIELD, CONNECTICUT 06824

PREPARED BY:



501 MAIN STREET, MONROE, CONNECTICUT 06468

PROPERTY INFORMATION

ADDRESS: 125 GARDER ROAD, MONROE, CT 06468
MAP-BLOCK-LOT: 095-002-00

OWNER/APPLICANT

125 GARDER ROAD LLC
63 LESLIE LANE
FAIRFIELD, CT 06824

SITE/LANDSCAPE ARCHITECT

MARY BLACKBURN, P.L.A.,
LICENSE CT NO. 1499
SOLLI ENGINEERING, LLC
501 MAIN STREET
MONROE, CONNECTICUT 06468
(203) 880-5455

SITE/CIVIL ENGINEER

KEVIN SOLLI, P.E., CPESC, LEED AP BD+C
LICENSE NO. 25759
SOLLI ENGINEERING, LLC
501 MAIN STREET
MONROE, CONNECTICUT 06468
(203) 880-5455

SOIL SCIENTIST

JAMES M. MCMANUS, MS, CPSS
JMM WETLAND CONSULTING SERVICES, LLC
23 HORSESHOE RIDGE ROAD
NEWTOWN, CONNECTICUT 06482
(203) 364-0345

SURVEYOR OF RECORD

BRYAN NESTERIAK, PE, LS
LICENSE NO. 23556
ACCURATE LAND SURVEYING
15 RESEARCH DR.
WOODBIDGE, CONNECTICUT 06483
(203) 881-8145

DRAWING LIST

CIVIL PLAN SET

SHEET #	SHEET NAME	PLAN DATE	LATEST REVISION
0.00	COVER SHEET	10/01/22	N/A
1 of 1	PROPERTY SURVEY	08/01/22	N/A
1.40	SITE AREA MAP	10/01/22	N/A
2.21	GRADING & DRAINAGE PLAN	10/01/22	N/A
2.31	PHASED SOIL EROSION & SEDIMENT CONTROL PLAN	10/01/22	N/A
2.61	RECLAMATION PLAN	10/01/22	N/A
2.80	CROSS SECTIONS LOCATION PLAN	10/01/22	N/A
2.81	CROSS-SECTIONS (A-A TO G-G)	10/01/22	N/A
2.82	CROSS-SECTIONS (H-H TO K-K)	10/01/22	N/A
3.01	DETAIL SHEET	10/01/22	N/A

(INCLUDED AS PART OF PLANNING AND ZONING APPLICATION ONLY)

SHEET #	SHEET NAME	PLAN DATE	LATEST REVISION
PDP	POTENTIAL DEVELOPMENT PLAN	10/01/22	N/A

Rev. #: Date Description

Project:
**EXCAVATION/FILLING
PERMIT APPLICATION**
125 GARDER ROAD
MONROE, CONNECTICUT

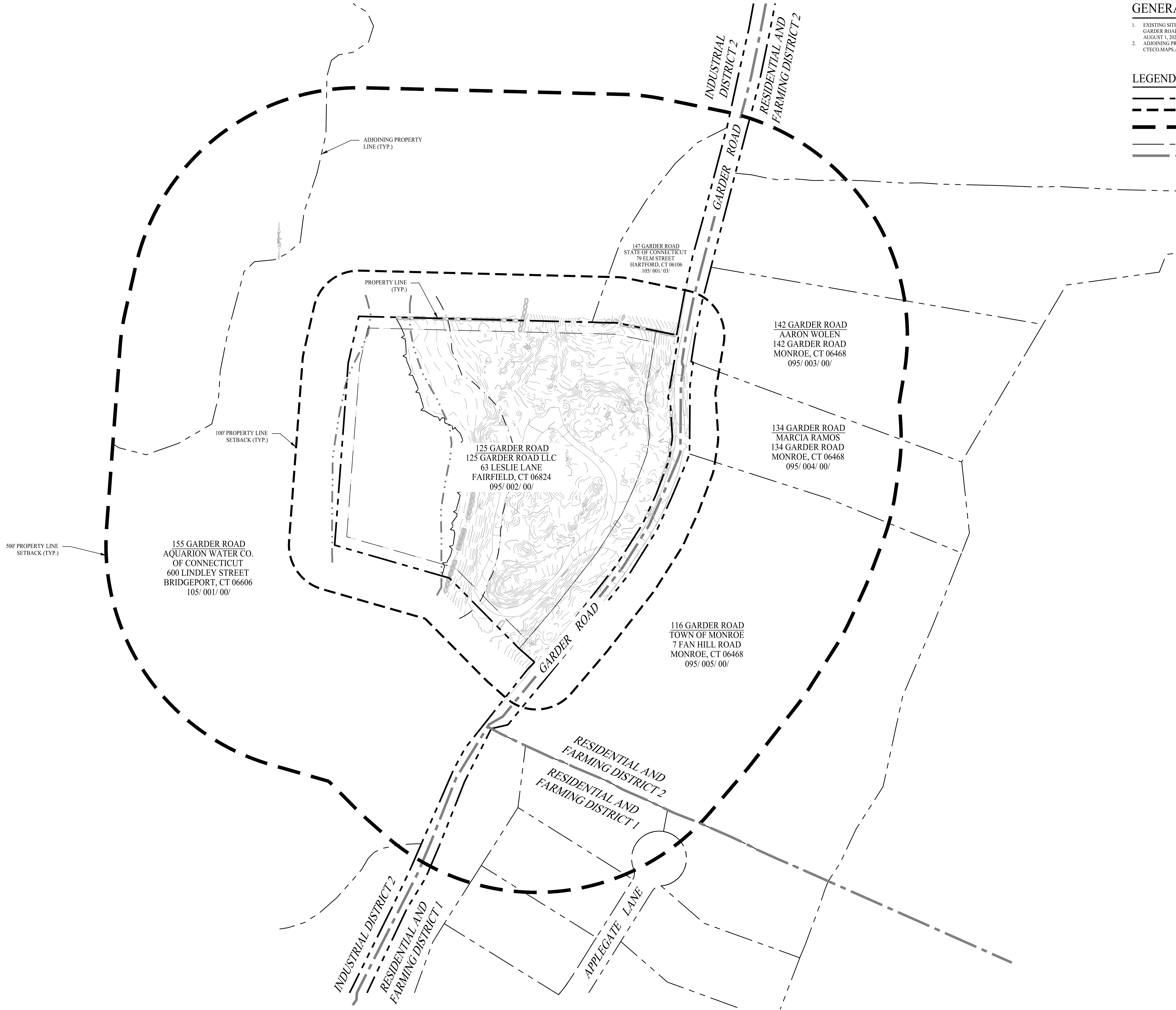
Sheet Title:

COVER
SHEET

Sheet #:

0.00

Oct 07, 2022 - 11:08am nmarzulo
X:\SE Files\Project Data\2022\22104001 - 125 Garder Road - Monroe, CT\Cadd Data\Excavation Fill Permit\22104001 - 1.40.dwg



GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022, SCALE: 1" = 40', PREPARED BY ACCURATE LAND SURVEYING, LLC.
- ADJOINING PROPERTY LINES AND RIGHT-OF-WAY LINES WERE TAKEN FROM CTeco.MAPS.ARCGIS.COM/APPS/WEBAPPVIEWER AND ARE CONSIDERED TO BE APPROXIMATE.

LEGEND

	PROPERTY LINE
	LIMIT OF 100' RADIUS FROM PROPERTY
	LIMIT OF 500' RADIUS FROM PROPERTY
	ADJOINING LOT LINE
	ZONE LINE

Rev. #: Date Description

Graphic Scale:



501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

Drawn By: CMH

Checked By: RPP

Approved By: KMS

Project #: 22104001

Plan Date: 10/01/22

Scale: 1" = 100'

Kevin Solli, P.E.
CT 25759

Project:
**EXCAVATION/FILLING
PERMIT APPLICATION**
125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:

**SITE AREA
MAP**

Sheet #:

1.40

TEST PIT OBSERVATIONS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON SEPTEMBER 2, 2022. TEST PIT OBSERVATIONS WERE WITNESSED BY MONROE HEALTH DEPARTMENT.

TEST PIT 1
0'-9" TOPSOIL/FOREST LITTER
0'-38" TAN BROWN SILTY LOAM, MODERATELY COMPACT
38"-96" TAN GRAY COMPACT MOTTLED SILTY LOAM
NO GW, NO LEDGE/REFUSAL, NO WATER, ROOTS TO 29", MOTTLING/REDOX @ 38"

TEST PIT 2
0'-16" MISCELLANEOUS FILL, COMPACT
16"-108" FRACTURED ROCK (NON-TYPICAL LEDGE) WITH TAN GRAY FINE SAND
NO GW, RESTRICTIVE/LEDGE @ 16"

TEST PIT 3
0'-4" TOPSOIL/FOREST LITTER
4"-35" TAN BROWN SILTY LOAM WITH STONES & COBBLES
35"-47" TAN GRAY SANDY SILT WITH STONES & COBBLES
NO GW, LEDGE/REFUSAL @ 47", ROOTS TO 35", NO MOTTLING/REDOX

TEST PIT 4
0'-6" TOPSOIL/FOREST LITTER
6"-29" TAN BROWN SILTY LOAM WITH STONES & COBBLES
29"-53" TAN GRAY SANDY SILT WITH STONES & COBBLES
NO GW, LEDGE/REFUSAL @ 53", ROOTS TO 29", MOTTLING/REDOX @ 29"

TEST PIT 5
0'-4" TOPSOIL/FOREST LITTER
4"-29" TAN BROWN SILTY LOAM WITH STONES & COBBLES
29"-90" TAN GRAY SANDY SILT & FRACTURED ROCK (NON-TYPICAL LEDGE)
NO GW, LEDGE/REFUSAL @ 29" (UPHILL SIDE OF TP) AND @ 53" (CENTER OF TEST PIT), ROOTS TO 48", NO MOTTLING/REDOX

TEST PIT 6
0'-4" TOPSOIL/FOREST LITTER
4"-29" TAN BROWN SILTY LOAM WITH STONES & COBBLES
29"-96" TAN GRAY SANDY SILT WITH STONES & COBBLES
NO GW, NO LEDGE/REFUSAL, ROOTS TO 41", NO MOTTLING/REDOX

PERCOLATION TEST PIT DATA

PERCOLATION TESTS WERE PERFORMED ON SEPT 2, 2022 BY SOLLI ENGINEERING, LLC.

PERCOLATION TEST: PT-7
DIAMETER OF PIT: 16"
DEPTH OF PIT: 10"
HOLE PRESOAKED PRIOR TO TEST

ELAPSED TIME (MIN.)	READING (IN.)
0	3
3	6 1/4
6	8 1/4
9	11 1/4
12	12 1/2
15	13
18	13 1/2
21	14 1/2
24	14 1/2
27	15 1/4
30	16

PERCOLATION RATE: 1" 6 MIN. OR 10" HR.

LEGEND

	PROPERTY LINE
	ADJOINING LOT LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	CONTOUR LABEL
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	GRADE TO DRAIN
	SWALE
	TYPE "CL" CATCH BASIN
	FLARE END SECTION
	RIP RAP
	PROPOSED CRUSHING LOCATION

ABBREVIATIONS

&	AND
@	AT
BR	BOTTOM OF ROCK
DIA	DIAMETER
ELEV	ELEVATION
GLD	GRADE TO DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
INV	INVERT
LOD	LIMIT OF DISTURBANCE
LF	LINEAR FEET
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TF	TOP OF FRAME
TR	TOP OF ROCK
W	WITH

SIGN LEGEND

A		
TRUCKS ENTERING		
SIZES (IN)	CONN DOT #	SUPPORTS
36"	41-4622	1

SELECT FILL REQUIREMENTS (SEPTIC PREPARATION)

- SELECT FILL MATERIAL AND SELECT BACKFILL MATERIAL, PLACED WITHIN AND ADJACENT TO PROPOSED LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND AND GRAVEL, FREE OF ORGANIC MATTER AND FOREIGN SUBSTANCES. THE FILL MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS OTHERWISE APPROVED BY A PROFESSIONAL ENGINEER FOR USE WITHIN THE LEACHING AREA:
 - THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN (3) INCHES.
 - UP TO 45% OF THE DRY WEIGHT OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE (THIS IS THE GRAVEL PORTION OF THE SAMPLE).
 - THE MATERIAL THAT PASSES THE #4 SIEVE IS THEN REWEIGHED AND THE SIEVE ANALYSIS STARTED.
 - THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CRITERIA:

SIEVE SIZE	PERCENT PASSING	PERCENT PASSING
	WET SIEVE	DRY SIEVE
#4	100	100
#10	70-100	70-100
#40	10-50	10-50
#100	0-20	0-5
#200	0-5	0-2.5

- PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.
- THE RESPONSIBILITY FOR THE PREPARATION OF A LEACHING AREA UTILIZING "SELECT MATERIAL" IS THAT OF THE LICENSED INSTALLER.
- THE INSTALLER SHALL TAKE THE NECESSARY STEPS TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVERCOMPACTION AND SILTATION ONCE EXPOSED.
- SELECT FILL SHALL BE PLACED BY A LICENSED INSTALLER.
- ANY TOPSOIL WITHIN SEPTIC AREA IS TO BE REMOVED AND REPLACED WITH SELECT FILL.
- FILL SHALL BE PLACED ON THE PERIMETER OF THE TRENCH AREA AND SPREAD WITH A SMALL CRAWLER, TRACTOR OR OTHER APPROVED MACHINERY.

CONSTRUCTION SEQUENCE

- INSTALL STABILIZED CONSTRUCTION ENTRANCE EXIT.
- INSTALL SILT FENCE(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).
- PREPARE TEMPORARY PARKING AND STORAGE AREAS.
- HALT ALL ACTIVITIES AND CONTACT THE ENGINEER OF RECORD TO PERFORM INSPECTION AND CERTIFICATION OF BEST MANAGEMENT PRACTICES (BMPs). GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT THE STORM WATER PRE-CONSTRUCTION MEETING WITH THE ENGINEER, AGENCIES AND GROUND-DISTURBING CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.
- CONSTRUCT AND STABILIZE SEDIMENT TRAPS WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS).
- BEGIN CLEARING AND GRUBBING THE SITE.
- INSTALL THE CONSTRUCTION TRAILER (WITH SUPPORT UTILITIES: ELECTRIC, WATER, ETC.)
- INSTALL ADDITIONAL EROSION CONTROLS AS WORK PROGRESSES, TOPSOIL AND SEED SLOPES WHICH HAVE ACHIEVED FINAL SITE GRADING.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- THROUGHOUT CONSTRUCTION, REMOVE SEDIMENT FROM BEHIND SILT FENCES, MULCH BERMS AND OTHER EROSION CONTROL DEVICES, AND FORM SEDIMENT TRAPS AS REQUIRED. REMOVAL SHALL BE ON A PERIODIC BASIS (EVERY SIGNIFICANT RAINFALL OF 0.10 INCH OR GREATER). INSPECTION OF EROSION CONTROL MEASURES SHALL BE ON A WEEKLY BASIS AND AFTER EACH RAINFALL OF 0.50 INCHES OR GREATER. SEDIMENT COLLECTED SHALL BE DEPOSITED AND SPREAD EVENLY UPLAND ON SLOPES DURING CONSTRUCTION.
- THROUGHOUT THE CONSTRUCTION SEQUENCE, PERIODIC INSPECTIONS SHALL BE INCORPORATED DURING THE PROCESSING OF THIS EXCAVATION AND FILL PERMIT AT SPECIFIC MILESTONES PER TOWN STAFF DIRECTION, AND AT LEAST MONTHLY INSPECTIONS.
- CONDUCT FINE GRADING.
- FERTILIZE SEED AND MULCH. SEED MIXTURE TO BE INSTALLED DURING THE SPRING OR FALL SEASON ONLY. USE EROSION CONTROL BLANKETS AS REQUIRED OR ORDERED FOR SLOPES GREATER THAN 3:1 AND AS SHOWN ON LANDSCAPE PLANS OR EROSION CONTROL PLANS. FOR TEMPORARY STABILIZATION BEYOND SEEDING DATES USE ANNUAL RYE AT 40 LBS/1,000 S.F. FERTILIZE WITH 10-10-10 AT 1.0 LBS. OF NITROGEN PER 1,000 S.F. AND LIME AT 100 LBS/1,000 S.F. (MAX.).
- UPON DIRECTION OF THE TOWN OF MONROE AGENT (AFTER THEIR FINAL INSPECTIONS HAVE BEEN PERFORMED AND CERTIFICATES OF COMPLETION FOR INLAND WETLANDS AND EXCAVATION/FILLING HAVE BEEN ISSUED), EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED FOLLOWING STABILIZATION OF THE SITE.

VOLUME SUMMARY

AREA	AREA OF DISTURBANCE	CUT (CY)	FILL (CY)	NET (CY)
REGULATED AREA	28,563 SF (0.66 AC)	9,810	482	9,328 (CUT)
BALANCE OF SITE	183,766 SF (4.21 AC)	99,352	168	99,184 (CUT)
TOTAL	212,329 SF (4.87 AC)	109,162	650	108,512 (CUT)

GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022; SCALE: 1" = 40'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
- THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
- CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE TOWN OF MONROE PRIOR TO THE START OF WORK ON THE SITE. NO CONSTRUCTION ACTIVITY, STORAGE OF VEHICLES, EQUIPMENT AND MATERIALS IS TO OCCUR BEYOND THE APPROVED LOD.
- ALL DISTURBANCE INCURRED TO TOWN PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF MONROE.
- REFER TO SHEET 3.01 FOR CONSTRUCTION AND EROSION CONTROL MEASURE DETAILS.
- NO OPERATIONS SHALL BE UNDERTAKEN ON THE SITE EXCEPT BETWEEN THE HOURS OF 8:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY, EXCEPT WITH APPROVAL OF THE COMMISSION. THERE SHALL BE NO BLASTING ON THE SITE. NO ACTIVITY OF ANY TYPE SHALL BE CONDUCTED ON ANY LEGAL HOLIDAY DECLARED BY THE GOVERNMENT OF THE STATE OF CONNECTICUT OR THE UNITED STATES. TRUCK TRAFFIC IS LIMITED TO BETWEEN 9:00 AM AND 4:00 PM DAILY.
- THE PERMITTEE SHALL PROVIDE ENGINEERING PROGRESS REPORTS PREPARED BY A CONNECTICUT STATE LICENSED CIVIL ENGINEER ON A QUARTERLY BASIS. ADDITIONALLY, THE COMMISSION MAY AT ANY TIME DURING THE PERMIT DURATION REQUIRE AN ENGINEERING PROGRESS REPORT FROM THE PERMITTEE, TO BE MADE BY A LICENSED CIVIL ENGINEER. IF SUCH REPORT IS NOT RECEIVED BY THE COMMISSION WITHIN THIRTY (30) DAYS FROM THE DATE OF SUCH REQUEST, THE COMMISSION MAY ENGAGE A PROFESSIONAL ENGINEER OR LAND SURVEYOR TO DETERMINE COMPLIANCE WITH THE TERMS OF THIS REGULATION AND ALL EXPENSES IN CONNECTION THEREWITH SHALL BE PAID BY THE PERMITTEE.
- THE TOP LAYER OF TOPSOIL FOR A DEPTH OF SIX INCHES SHALL BE SET ASIDE ON THE PREMISES AND SHALL BE RE-SPREAD IN ACCORDANCE WITH THE APPROVED CONTOUR LINES WITHIN THIRTY (30) DAYS FOLLOWING THE EXPIRATION OR REVOCATION OF THE PERMIT OR COMPLETION OF THE WORK, WHICHEVER OCCURS EARLIER.
- PROPER MEASURES (INCLUDING THE USE OF WATER SPRAY) AND APPROPRIATE NOISE DAMPENING MEASURES (EQUIPMENT MUFFLERS, ETC) SHALL BE TAKEN TO MINIMIZE THE NUISANCE OF NOISE AND FLYING DUST OR ROCK AND LIGHTING.
- UPON COMPLETION OF THE SITE FILLING/EXCAVATION ACTIVITIES, THE FINAL CONDITION OF THE REMAINING SITE ACCESS IS TO BE IN THE FORM OF THE ANTI-TRACKING PAD AND THE FRONTAGE CONDITIONS ARE TO BE AS SPECIFIED ON THE RECLAMATION PLAN (SHEET 2.61).
- ALL FILL MATERIAL BROUGHT TO THE SITE SHALL CONFORM TO THE CT DEEP STANDARDS FOR "CLEAN FILL".
- THERE SHALL BE NO SIGNS PERMITTED (EXCEPT CUSTOMARY TRAFFIC CONTROL, SAFETY, AND NO TRESPASSING SIGNS AS MAY BE AUTHORIZED BY THE PLANNING AND ZONING ADMINISTRATOR).

PLANNING & ZONING WAIVERS REQUIRED

- \$64.9 P - NO SORTING, GRADING, CRUSHING OR OTHER MACHINERY FOR TREATMENT OR PROCESSING OF MATERIAL BEING REMOVED OR DEPOSITED SHALL BE ERRECTED, MAINTAINED OR OPERATED ON THE PREMISES FOR WHICH A PERMIT MAY BE GRANTED, EXCEPT IN AN INDUSTRIAL DISTRICT OR IN ALL OTHER DISTRICTS WHERE CONTROLLED ROCK CRUSHING, SCREENING AND PROCESSING MAY BE PERMITTED BY THE COMMISSION ON A LIMITED SHORT DURATION BASIS AS PART OF SITE DEVELOPMENT AND CONSTRUCTION PREPARATION, PROVIDED:
 - SUCH CONTROLLED ACTIVITIES WILL REDUCE CONSTRUCTION TRAFFIC BY USE OF MATERIALS ONSITE.
 - USE OF MATERIALS WILL NOT INVOLVE MINING OR EXCAVATION OF MORE THAN NECESSARY TO ACHIEVE SITE PREPARATION OF AN APPROVED PROJECT.ALL PERMITTED SUCH ACTIVITIES REGARDLESS OF PERMITTED LOCATION SHALL NOT INCLUDE, PERMIT OR INVOLVE MATERIALS FROM OFFSITE LOCATIONS. APPROPRIATE PRECAUTIONS, SAFEGUARDS AND IMPACT ABATEMENT MEASURES TO ADDRESS NOISE, DUST, AND OTHER RELATED IMPACTS FROM SUCH ACTIVITIES SHALL BE IDENTIFIED AND APPROPRIATE PLANS PROPOSED FOR REVIEW AND APPROVAL BY THE COMMISSION. NO SUCH ACTIVITIES SHALL BE PERMITTED TO OCCUR WITHIN FIVE-HUNDRED (500) FEET OF ANY RESIDENTIAL DISTRICT OR RESIDENTIAL USE.

Rev. #:	Date	Description



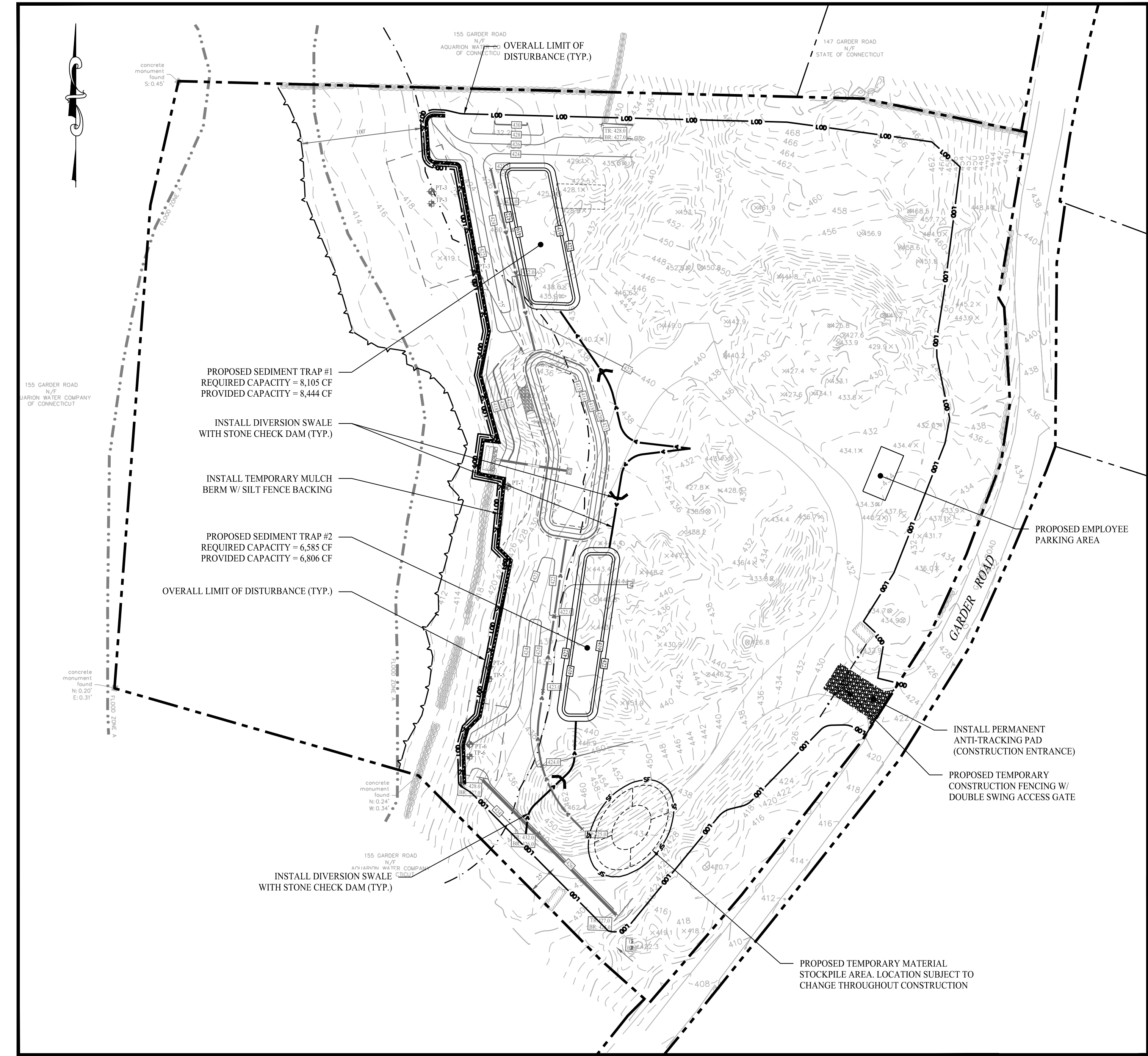
Drawn By:	MDM	Kevin Solli, P.E. CT 25759
Checked By:	RPP	
Approved By:	KMS	
Project #:	22104001	
Plan Date:	10/01/22	
Scale:	1" = 40'	

EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

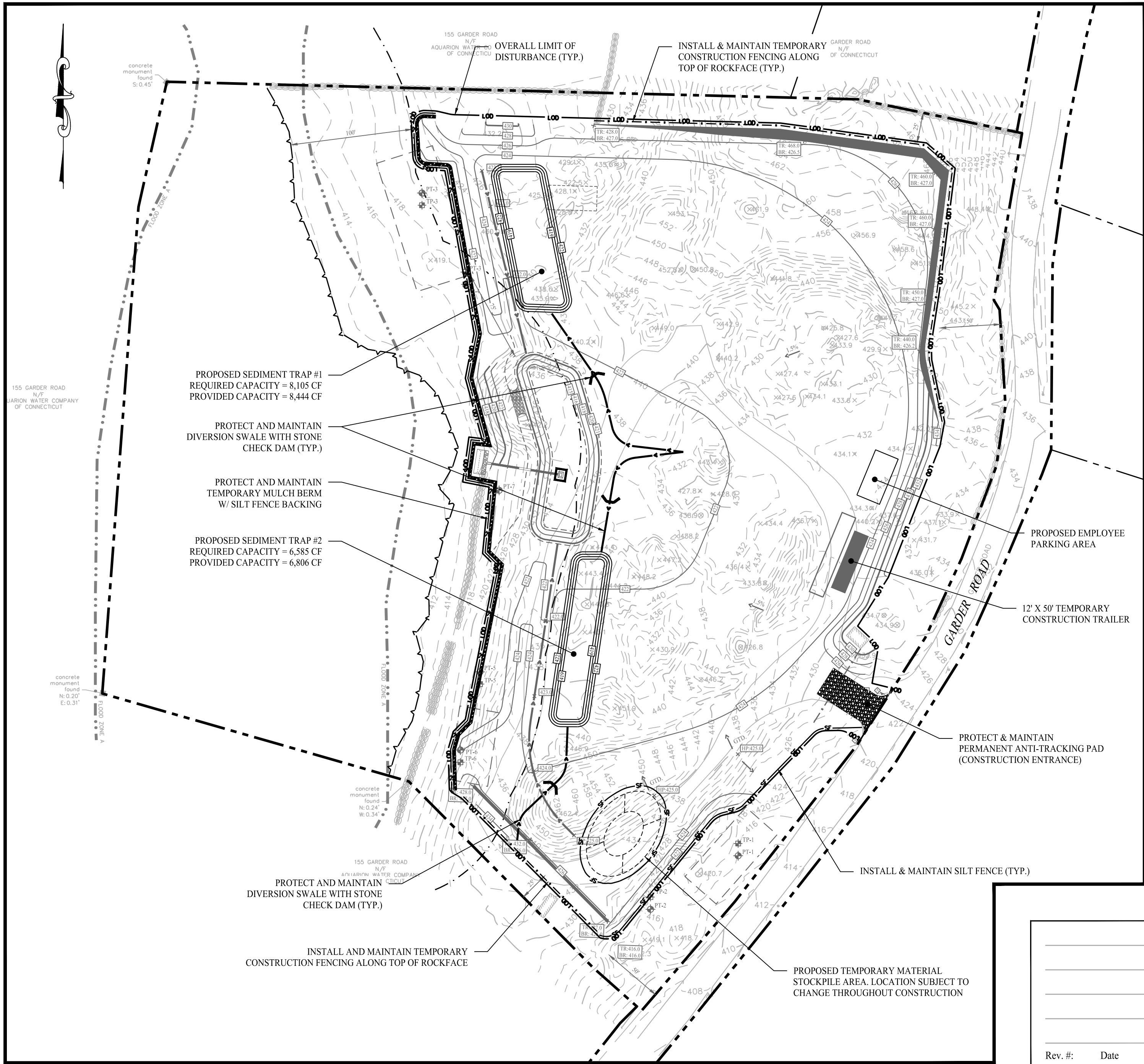
Sheet Title:	Sheet #:
GRADING & DRAINAGE PLAN	2.21

Oct 07, 2022 - 11:08am mmarzolo
X:\SE Files\Project Data\2022\22104001 - 125 Garder Road - Monroe, CT\Add Data\Excavation Fill Permit\22104001 - 2.31.dwg



PHASE I SOIL EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 60'



PHASE II SOIL EROSION & SEDIMENT CONTROL PLAN

SCALE: 1" = 60'

GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC; DATED: AUGUST 1, 2022; SCALE: 1" = 40'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
- REFER TO SHEET 2.21 - GRADING & DRAINAGE PLAN FOR MORE INFORMATION.

SEDIMENT TRAP CALCULATIONS

SEDIMENT TRAP #1:
CONTRIBUTING DRAINAGE AREA = 2.24+ ACRES
2.24 AC X 134 CY/AC = 300.16 CY
300.16 CY X 27 CF/CY = 8,105 CF
SEDIMENT TRAP #1 STORAGE CAPACITY = 12,425 + CF

SEDIMENT TRAP #2:
CONTRIBUTING DRAINAGE AREA = 1.82+ ACRES
1.82 AC X 134 CY/AC = 243.88 CY
243.88 CY X 27 CF/CY = 6,585 CF
SEDIMENT TRAP #1 STORAGE CAPACITY = 8,457 + CF

LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJOINING LOT LINE
	SILT FENCE PROTECTION
	MULCH BERM
	CONSTRUCTION FENCE
	LIMIT OF DISTURBANCE
	DIVERSION SWALE/BERM
	TEMPORARY SEDIMENT TRAP / BASIN
	SILT SACK INLET PROTECTION
	STONE CHECK DAM
	MATERIAL STOCKPILE AREA
	CONSTRUCTION ENTRANCE

CONSTRUCTION SCHEDULE

THE ANTICIPATED STARTING DATE FOR CONSTRUCTION IS FALL 2022, WITH COMPLETION ANTICIPATED BY FALL 2027. APPROPRIATE EROSION CONTROL MEASURES AS DESCRIBED HEREIN, SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF ALL SITE CLEARING OR CONSTRUCTION ACTIVITY. SCHEDULE WORK TO MINIMIZE THE LENGTH OF TIME THAT BARE SOIL WILL BE EXPOSED.

PHASE 1

PHASE 1 WILL CONSIST OF THE INSTALLATION OF SILT FENCE/TEMPORARY MULCH BERM, AND OTHER SOIL EROSION AND SEDIMENT CONTROL MEASURES THROUGHOUT THE SITE. EROSION CONTROLS ALONG THE LIMITS OF WORK, INCLUDING BUT NOT LIMITED TO, CONSTRUCTION ENTRANCE, SILT FENCE AND MULCH BERMS, ARE TO REMAIN AND BE MAINTAINED THROUGHOUT ALL PHASES. PHASE 1 WILL ALSO INCLUDE THE CONSTRUCTION OF THE WATER QUALITY BASIN, THE CONSTRUCTION OF THE TWO SEDIMENT TRAPS, AS WELL AS THE BEGINNING OF THE EXCAVATION AND FILL OPERATION ON-SITE. CONSTRUCTION EQUIPMENT WILL BE STAGED IN THE EQUIPMENT STAGING AREA DEFINED ON THIS PLAN SHEET.

PHASE 2

ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED AS NECESSARY. CONSTRUCTION EQUIPMENT WILL CONTINUE TO BE STAGED IN THE EQUIPMENT STAGING AREA AS SHOWN ON THIS PLAN SHEET. INCLUDED IN PHASE 2 ARE THE CONTINUATION OF THE EXCAVATION AND FILL OPERATIONS UNTIL PROJECT COMPLETION AND THE CONSTRUCTION AND MAINTENANCE OF THE NECESSARY SOIL EROSION AND SEDIMENT CONTROL MEASURES. FOLLOWING COMPLETION, THE SITE IS TO BE SEEDED AND ESTABLISHED AS DESCRIBED ON SHEET 2.61 OF THIS PLAN SET. AT THE COMPLETION OF CONSTRUCTION, THE OUTLET CONTROL STRUCTURE WITHIN THE WATER QUALITY BASIN IS TO BE CLEANED OF ANY SEDIMENT AND DEBRIS, AND ANY ACCUMULATED SEDIMENT WITHIN THE BASIN SHALL BE REMOVED. THE CONSTRUCTION TRAILER WILL ALSO BE INSTALLED DURING PHASE 2.

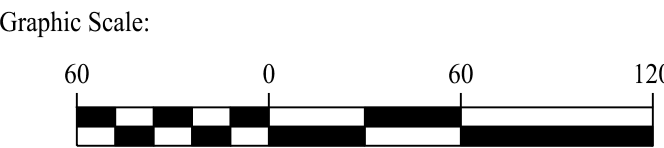
EROSION CONTROL AND SEDIMENT CONTROL NOTES

- PRIOR TO THE START OF CONSTRUCTION, A PRECONSTRUCTION MEETING WITH THE ENGINEER AND THE TOWN OF MONROE LAND USE STAFF IS REQUIRED.
- ACTUAL LOCATIONS AND APPLICATIONS OF EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION BASED ON THE EROSION AND SEDIMENT CONTROL STRATEGY. THE STRATEGY WILL REQUIRE THE CONTRACTOR TO PROVIDE APPROPRIATE CONTROLS SUCH AS STRUCTURAL PRACTICES, MAINTENANCE, AND STABILIZATION PRACTICES ALONG WITH THE PROPER DISCHARGE OR DEWATERING WASTEWATERS.
- LIMITS OF DISTURBANCE SHALL BE FLAGGED IN THE FIELD BY A LICENSED SURVEYOR AND VERIFIED PRIOR TO INITIATION OF CONSTRUCTION.
- EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED PRIOR TO ANY FILLING. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATIONS OF THE STATE OF CT DEEP "2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" HANDBOOK AND 2004 CONNECTICUT STORMWATER QUALITY MANUAL. CONTROL DEVICES CONTINGENT ON INSPECTION APPROVAL BY THE TOWN OF MONROE LAND USE STAFF.
- ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED, FUNCTIONING, AND INSPECTED BY THE TOWN OF MONROE LAND USE STAFF PRIOR TO ANY SITE DISTURBANCE. ADDITIONAL MEASURES MAY BE REQUIRED DURING THE COURSE OF CONSTRUCTION AND SHALL BE IMPLEMENTED AS NEEDED. ALL SEDIMENT AND EROSION CONTROL MEASURES ARE TO BE INSPECTED PRIOR TO A HEAVY RAIN, IMMEDIATELY AFTER AND AT LEAST DAILY DURING PROLONGED RAIN EVENTS, ANY AND ALL DEFICIENCIES MUST BE CORRECTED WITHIN 24 HOURS OF DISCOVERY.
- ALL GRADED AREAS WITH SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL SHALL BE STABILIZED WITH JUTE NETTING.
- LAND GRADING:
 - AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED AND STRIPPED OF UNSUITABLE MATERIAL.
 - ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION SLIPPAGE, SETTLEMENT, SUBSIDENCE, OR OTHER RELATED PROBLEMS.
 - MATERIAL SHALL BE FREE OF BRUSH, RUBBISH, ROCKS LOGS, STUMPS, BUILDING DEBRIS AND OTHER UNSUITABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- WHEN ALL GRADED AREAS ARE PERMANENTLY STABILIZED, REMOVE ALL EROSION AND SEDIMENT CONTROLS. REMOVE TRAPPED SEDIMENT. AFTER ALL REMOVAL, INSPECTION TO BE PERFORMED BY TOWN OF MONROE LAND USE STAFF.
- IT SHALL BE THE RESPONSIBILITY OF THE SITE DEVELOPMENT CONTRACTOR TO ENSURE PROPER IMPLEMENTATION OF THE SOIL EROSION AND SEDIMENT

- CONTROLS AS SHOWN ON THIS PLAN; AND SHALL INCLUDE BUT NOT BE LIMITED TO INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES OF SUCH REQUIREMENTS AND NOTIFICATIONS OF ANY TRANSFER OF THIS RESPONSIBILITY TO OTHER PARTIES. CONTRACTOR: STUART RUDKIN, CONTACT NUMBER: (203) 505-1376.
- ANY DISTRIBUTION AREA AND PILES PLANNED TO BE LEFT MORE THAN 14 DAYS WILL HAVE TO BE SEEDED OR MULCHED IMMEDIATELY.
- WHEN ALL SURFACES ARE PERMANENTLY STABILIZED, ANY REMAINING SEDIMENT AND EROSION CONTROL DEVICES SHALL BE REMOVED AND ALL TRAPPED SEDIMENT SHALL BE REMOVED. ALL CATCH BASIN SUMPS SHALL BE CLEANED.
- CONSTRUCTION ACTIVITIES AT THE PROJECT SITE WILL RESULT IN EMISSIONS OF FUGITIVE DUST TO THE ATMOSPHERE. THE QUANTITY OF FUGITIVE DUST GENERATED WILL BE CONTROLLED BUT IS DEPENDENT UPON WEATHER CONDITIONS. FUGITIVE DUST PARTICLES HAVE A GREATER PROPENSITY TO BECOME AIRBORNE DURING DRY AND BREEZY METEOROLOGICAL CONDITIONS. CONSTRUCTION ACTIVITIES AT THE SITE WHICH WILL RESULT IN PILES AND CONSTRUCTION TRAFFIC. THE CONTRACTOR WILL IMPLEMENT THE FOLLOWING REASONABLE PRECAUTIONS DURING CONSTRUCTION TO MINIMIZE THE GENERATION OF FUGITIVE DUST.
- USE WATER FOR DUST CONTROL OF ACTIVE CONSTRUCTION AREAS, ACTIVE UNPAVED ROADS, AND OTHER SURFACES WHICH CAN FIVE RISE TO AIRBORNE DUST. A TYPICAL PRACTICE TO BE FOLLOWED DURING SITE GRADING WILL BE TO FOLLOW THE EARTH MOVING EQUIPMENT WITH A WATER TRUCK TO IMMEDIATELY WET THE NEW DISTURBED AREA.
- APPLY SEED FOR A VEGETATIVE COVER ON STORAGE PILES, ESPECIALLY THOSE THAT WILL REMAIN DORMANT FOR AN EXTENDED PERIOD.
- THE CONTRACTOR MUST CLEANSWEEP DAILY ALL ON-SITE PAVED ROADS AND THAT PORTION OF ANY SURROUNDING ROADS WHICH ARE USED BY CONSTRUCTION TRAFFIC, FOR THE DURATION OF THE PROJECT.
- INSTITUTE A MAXIMUM ON SITE SPEED LIMIT OF 10 MILES PER HOUR.
- THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL DURING THE CONSTRUCTION PROCESS. THE CONSTRUCTION MANAGER SHALL INSPECT THE SITE TO ASSURE DUST IS ADEQUATELY CONTROLLED. IF THE CONSTRUCTION MANAGER OR OWNERS REPRESENTATIVE FEELS DUST CONTROL MEASURES ARE NOT ADEQUATE THE CONTRACT SHALL BE REQUIRED TO INCREASE THESE MEASURES AS DIRECTED BY THE CONSTRUCTION MANAGER.
- ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH THE TOWN OF MONROE ZONING REGULATIONS.
- A STORMWATER MANAGEMENT SYSTEM MAINTENANCE SCHEDULE SHALL BE IMPLEMENTED AND OFFICIALLY RECORDED BY THE INDIVIDUAL IDENTIFIED IN NOTE 8 ABOVE. THE SCHEDULE SHALL INCLUDE AS A MINIMUM:
 - ALL ELEMENTS OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE

- INSPECTED WEEKLY, AND AFTER ANY STORM EVENT GENERATING MORE THAN 0.5 INCHES OF RAIN.
- A WEEKLY INSPECTION OF THE SITE SHALL BE CONDUCTED FOR SURFACE DEBRIS.
- A MONTHLY INSPECTION OF ALL STORMWATER STRUCTURES AND OUTFALLS SHALL BE CONDUCTED FOR FLOATING OR SURFACE DEBRIS SEDIMENT.
- STRUCTURES AND OUTFALLS SHALL BE CLEANED OF SEDIMENT AND DEBRIS AT LEAST ONCE A YEAR DURING THE MONTH OF APRIL AND AT OTHER TIMES AS NECESSARY TO PREVENT THE DISCHARGE OF POLLUTANTS FROM STRUCTURES OR OUTFALLS.
- ALL DRIVES SHALL BE SWEEP CLEAN OF SAND, LITTER AND OTHER POSSIBLE POLLUTANTS AT LEAST TWICE A YEAR, ONCE BETWEEN NOVEMBER 14 AND DECEMBER 15 AND ONCE DURING THE MONTH OF APRIL AND AT OTHER TIMES AS DIRECTED BY THE TOWN OF MONROE.
- A STOCKPILE OF SEDIMENT AND EROSION CONTROLS SHALL BE KEPT ON SITE AT ALL TIMES. THIS WILL CONSIST OF AT LEAST 24 HAY BALES, UNDER COVER, EXTRA STONE FOR THE ANTI-TRACKING APRON, AT LEAST 100 FEET OF SILT FENCE AND 100 SQUARE YARDS OF NON-WOVEN FILTER FABRIC. ADDITIONAL MEASURES MAY BE REQUIRED BY THE SITE MONITOR OR THE TOWN OF MONROE. THESE MEASURES ARE TO BE INSTALLED BY THE REQUEST DATE.
- REPLACE CONSTRUCTION ENTRANCE WHEN THE CAPACITY OF THE APRON HAS REACHED THE 50% VOLUME.
- SEDIMENT REMOVED UNTIL SITE IS STABILIZED. CLEAN OUTLET CONTROL STRUCTURES AS NECESSARY AND REMOVE ACCUMULATED SEDIMENT FROM BOTTOM OF BASIN. BLOCK END OF STORM SEWERS IN EXPOSED TRENCHES WITH BOARDS AND SANDBAGS AT THE END OF EACH WORKING DAY WHEN RAIN IS EXPECTED.

Rev. #: Date Description



Drawn By: NCM
Checked By: RPP
Approved By: KMS
Project #: 22104001
Plan Date: 10/01/22
Scale: 1" = 60'

Kevin Solli, P.E.
CT 25759

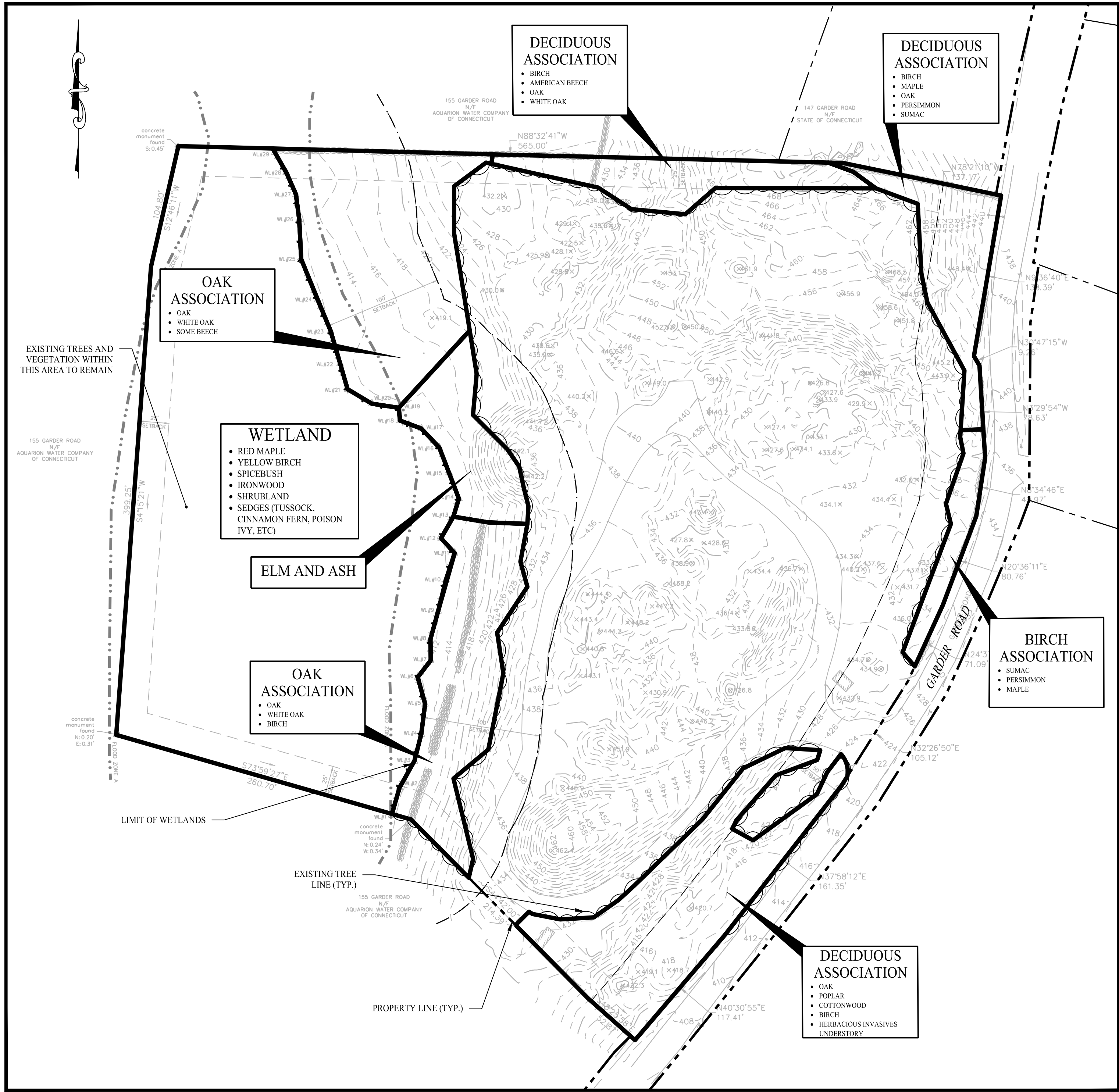
EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:
PHASED
SOIL EROSION &
SEDIMENT
CONTROL PLAN

Sheet #:

2.31



PRE-VEGETATION MAP

SCALE: 1" = 60'

GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD, MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022; SCALE: 1"=40'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
- REFER TO SAID PLAN FOR ALL DIMENSIONS, BEARINGS OR ANGLES OF PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAYS.
- THE AREAS OF EXISTING VEGETATION HAVE BEEN FIELD VERIFIED BY A LICENSED LANDSCAPE ARCHITECT ON 05/27/21.
- SPECIES DEPICTED ON PRE-VEGETATION MAP INDICATE MAJOR PLANT ASSOCIATIONS AND ARE NOT INTENDED TO REPRESENT A DETAILED INVENTORY OF THE SITE'S PLANT MATERIAL.
- A SITE RESTORATION PLAN MUST BE IMPLEMENTED IN THE EVENT FUTURE DEVELOPMENT OF THE SITE DOES NOT MATERIALIZE WITHIN TWO (2) YEARS OF THE COMPLETION OF EXCAVATION.
- INVASIVE WOODY VEGETATION SHALL BE REMOVED PER THE CONNECTICUT INVASIVE PLANT WORKING GROUP'S GUIDELINES.

LAWN SEED MIX

- PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 1" DIAMETER.
- THE FOLLOWING SEED MIX SHALL BE SOWN AT THE RATES AS DEPICTED:

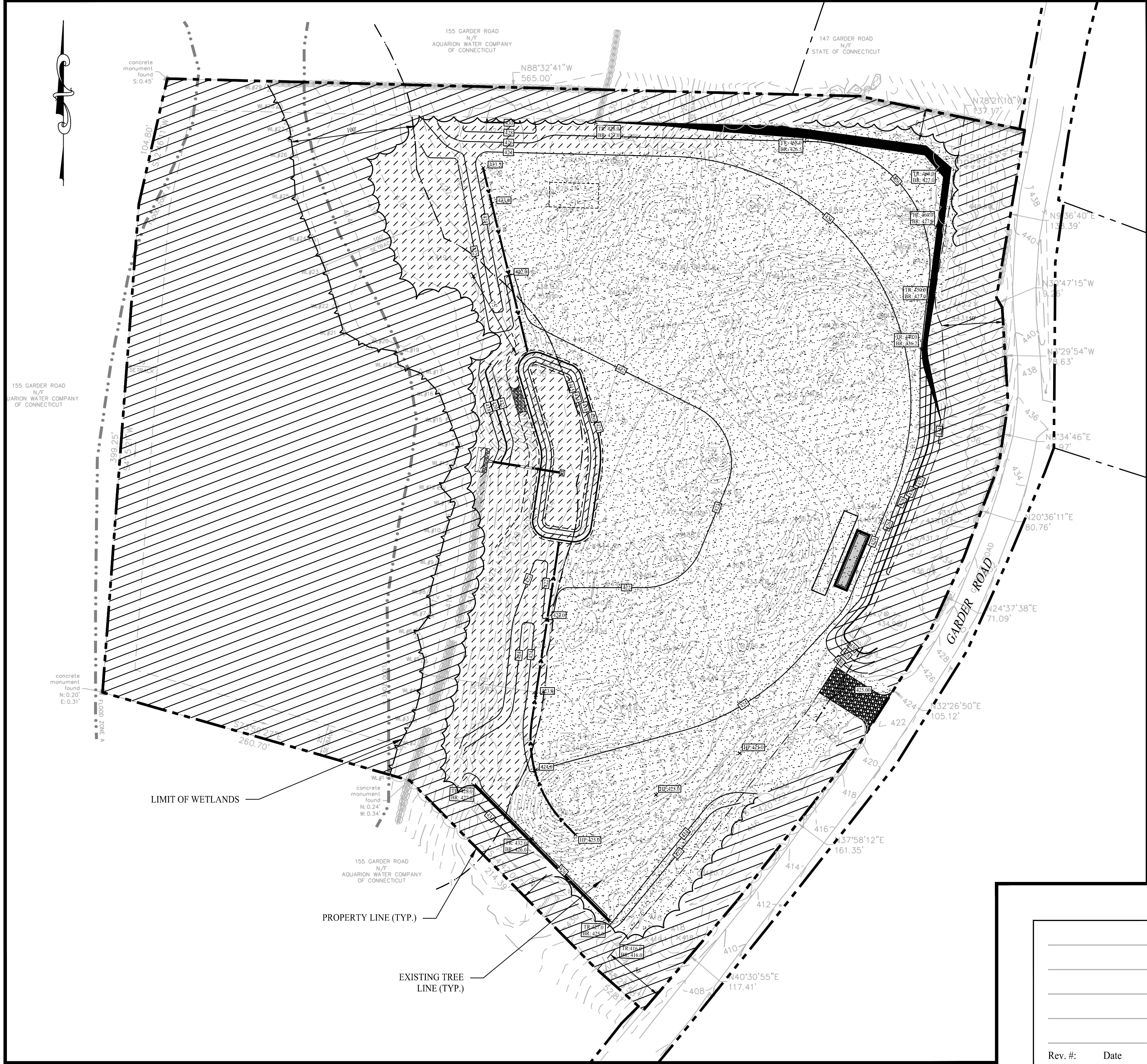
CREeping RED FESCUE	1 LB. / 1,000 SF
PERENNIAL RYEGRASS	3 LBS. / 1,000 SF
KENTUCKY BLUEGRASS	1 LB. / 1,000 SF
- SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS / ACRE OR 90 LBS. / 1,000 SF.
- SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:

SPRING: APRIL 1 - MAY 31
FALL: AUGUST 16 - OCTOBER 31
- GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED.
- ALL DISTURBED AREAS TO BE STABILIZED WITH SEED MIX AS SPECIFIED.

NEW ENGLAND CONSERVATION WILDLIFE MIX

- PRODUCED BY NEW ENGLAND WETLAND PLANTS, INC.; WWW.NEWP.COM; 820 WEST STREET, AMHERST, MA 01002; (413) 548-8000.
- PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 1" DIAMETER.
- THE SEED MIX SHALL BE APPLIED AT A RATE OF 1 LB. / 1,750 SQUARE FEET.
- SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS / ACRE OR 90 LBS. / 1,000 SF.
- SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:

SPRING: APRIL 1 - MAY 31
FALL: AUGUST 16 - OCTOBER 31
- GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED.
- ALL DISTURBED AREAS TO BE STABILIZED WITH SEED MIX AS SPECIFIED.



POST-VEGETATION MAP

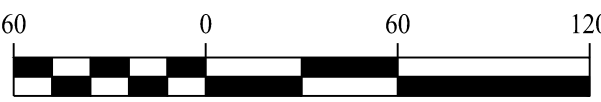
SCALE: 1" = 60'

LEGEND

	PROPERTY LINE
	ADJOINING LOT LINE
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	MAJOR CONTOURS
	MINOR CONTOURS
	EXISTING TREE LINE
	PROPOSED TREE LINE
	PREVIOUSLY DELINEATED WETLANDS
	WETLAND LINE
	LIMIT OF 100' UPLAND REVIEW AREA
	SEEDED LAWN AREA
	CONSTRUCTION ENTRANCE
	NEW ENGLAND CONSERVATION WILDLIFE MIX
	EXISTING WOODED AREA TO REMAIN

Rev. #:	Date	Description
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Graphic Scale:



501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

Drawn By: NCM

Checked By: RPP

Approved By: KMS

Project #: 22104001

Plan Date: 10/01/22

Scale: 1" = 60'

Mary Blackburn, P.L.A.
CT 1499

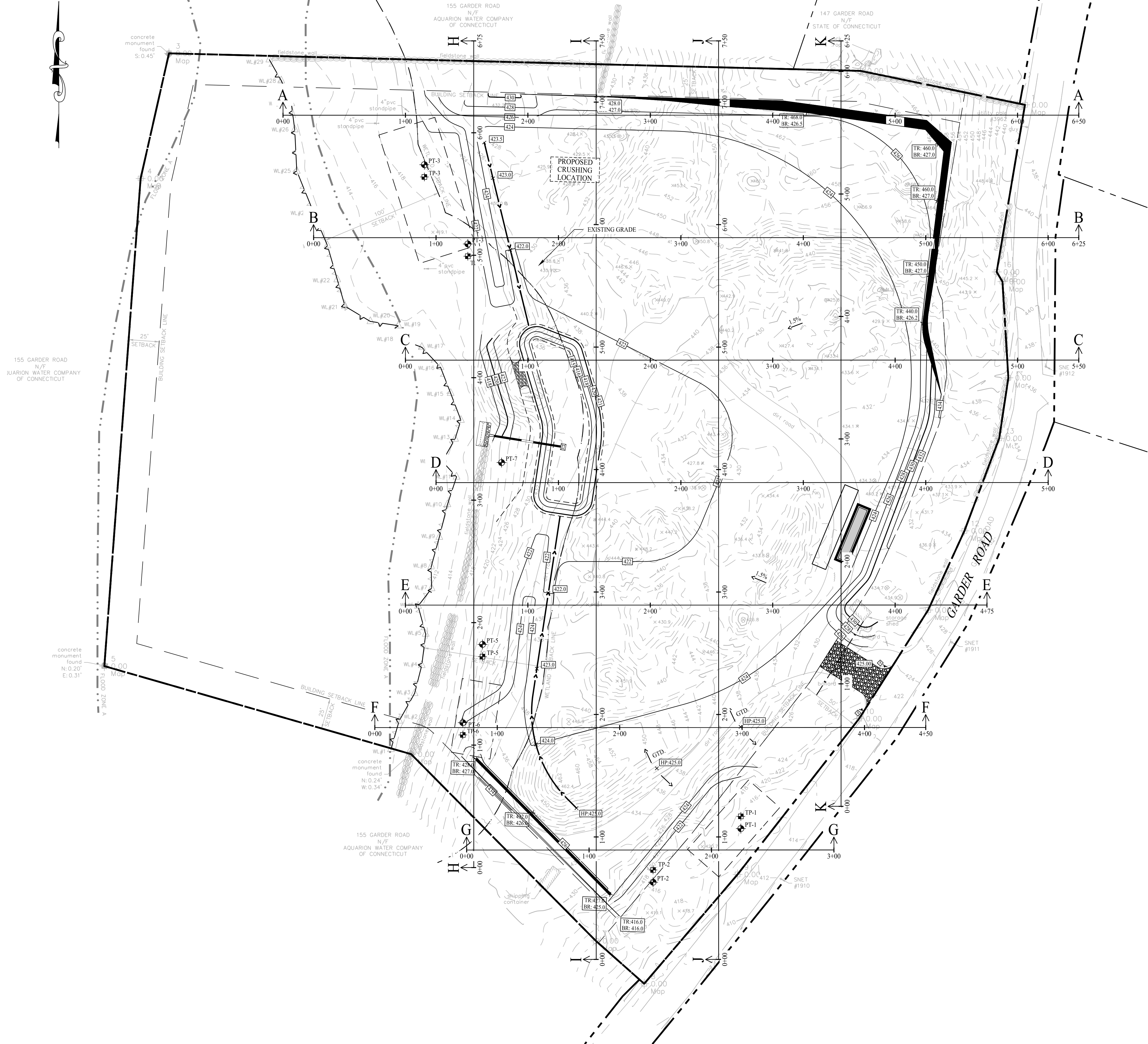
EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:
RECLAMATION
PLAN

Sheet #:

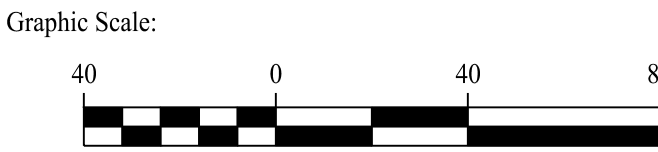
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GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022; SCALE: 1" = 40'; PREPARED BY ACCURATE LAND SURVEYING, LLC. REFER TO SAID PLAN FOR ALL DIMENSIONS, BEARINGS OR ANGLES OF PROPERTY LINES, EASEMENTS AND RIGHTS-OF-WAY.
- THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES AND ISSUANCE OF A DUTY AUTHORIZED CERTIFICATE OF ZONING COMPLIANCE FROM THE TOWN OF MONROE.

Rev. #:	Date	Description
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501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

Drawn By: CMH

Checked By: RPP

Approved By: KMS

Project #: 22104001

Plan Date: 10/01/22

Scale: 1" = 40'

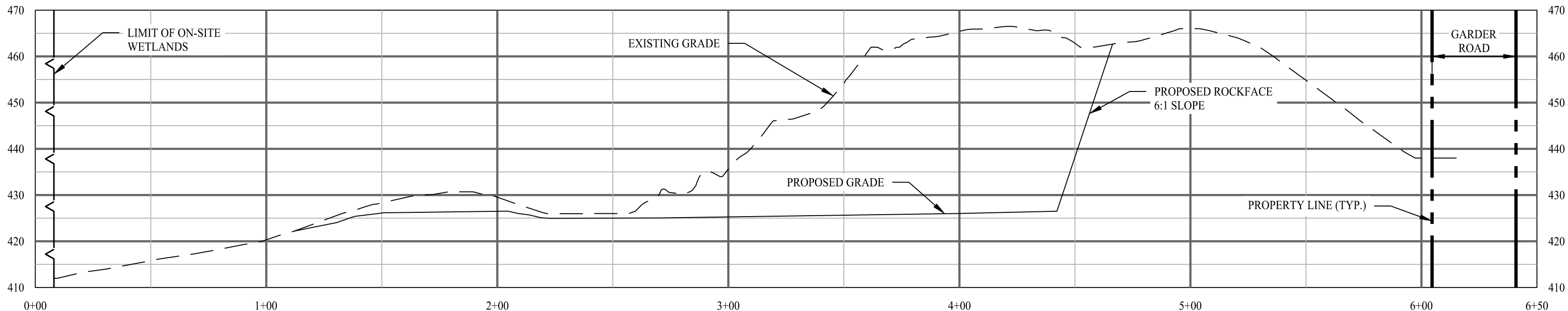
Kevin Solli, P.E.
CT 25759

Project:
**EXCAVATION/FILLING
PERMIT APPLICATION**
125 GARDER ROAD
MONROE, CONNECTICUT

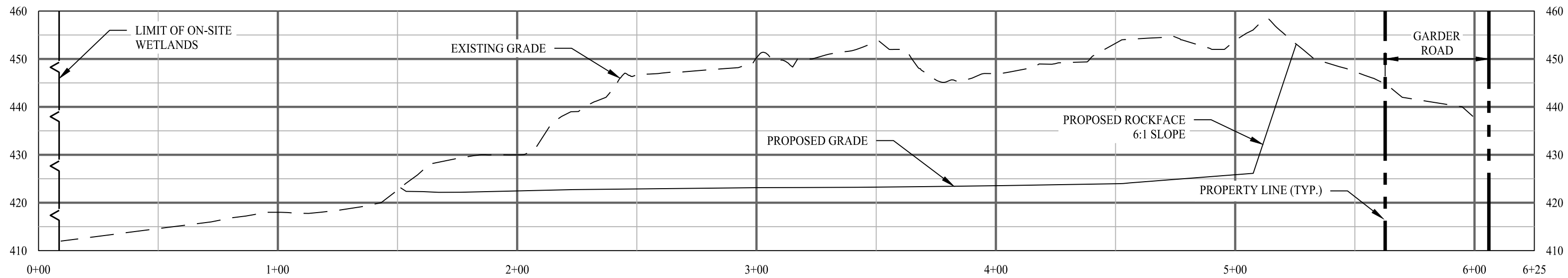
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**CROSS
SECTIONS
LOCATION
PLAN**

Sheet #:

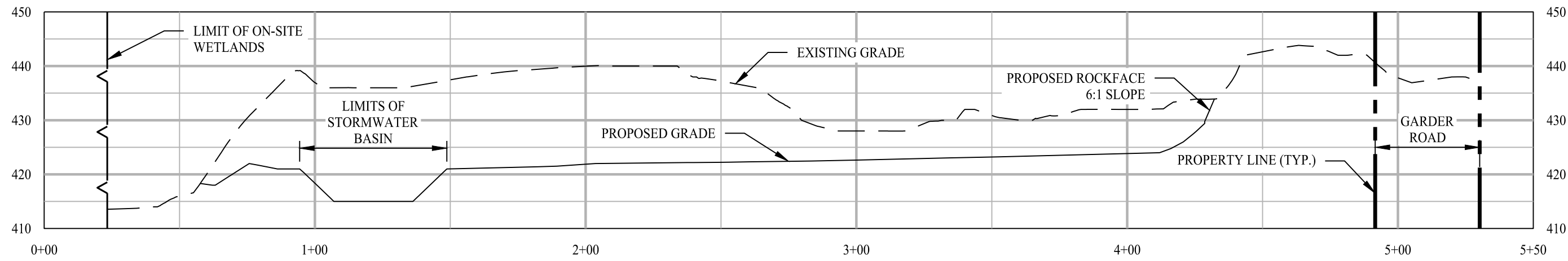
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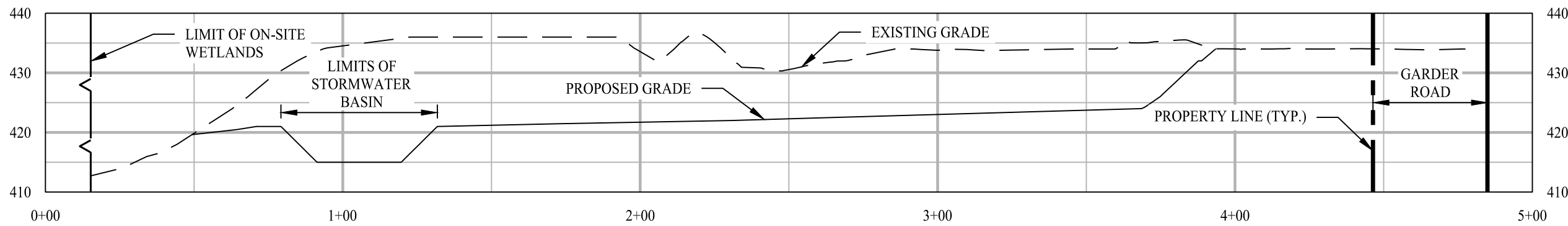
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V:1" = 20'



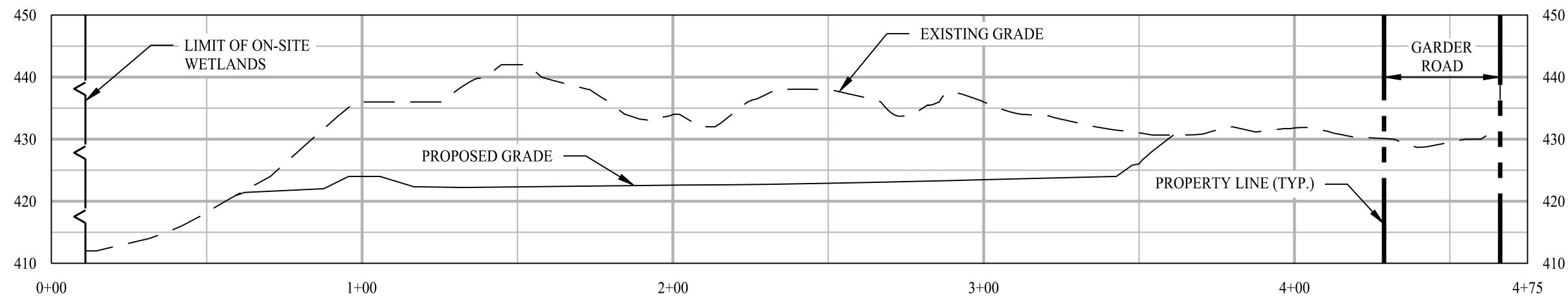
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SCALE: H:1" = 40'
V:1" = 20'



SECTION C-C
SCALE: H:1" = 40'
V:1" = 20'



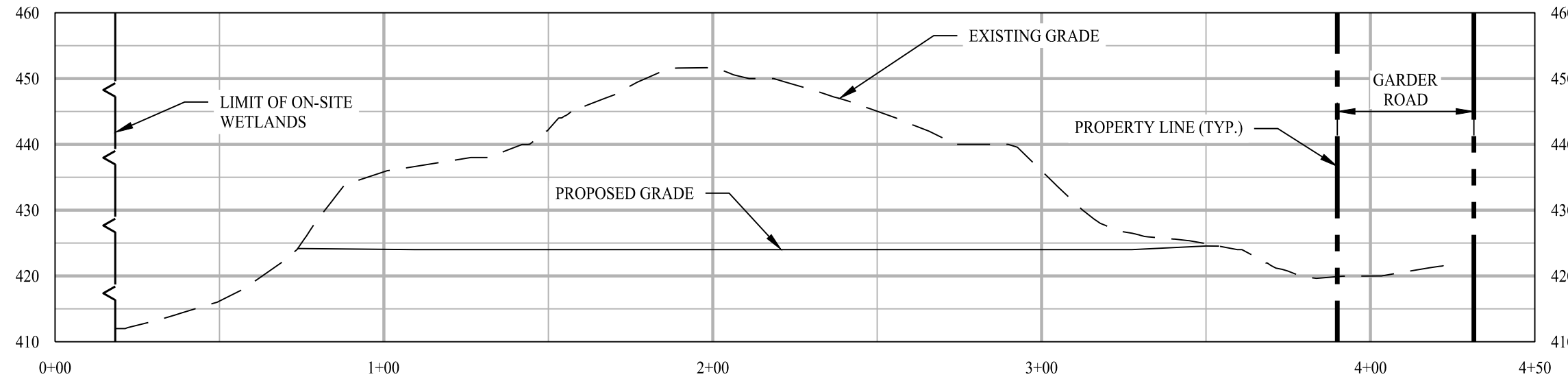
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SCALE: H:1" = 40'
V:1" = 20'



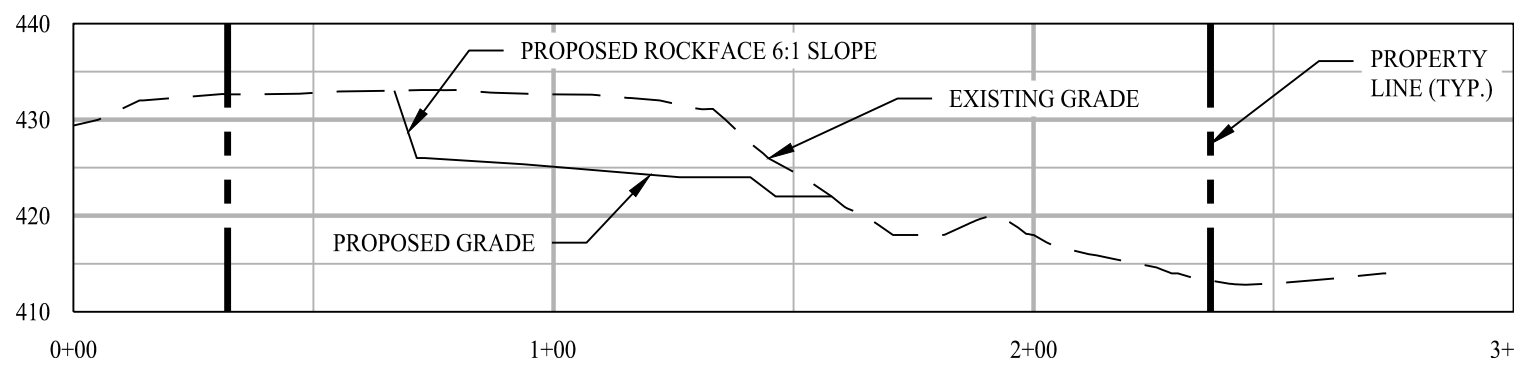
SECTION E-E
SCALE: H:1" = 40'
V:1" = 20'

GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022; SCALE: 1" = 40'; PREPARED BY ACCURATE LAND SURVEYING, LLC. REFER TO SAID PLAN FOR ALL DIMENSIONS, BEARINGS OR ANGLES OF PROPERTY LINES, EASEMENTS AND RIGHTS-OF-WAY.
- THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES AND ISSUANCE OF A DUTY AUTHORIZED CERTIFICATE OF ZONING COMPLIANCE FROM THE TOWN OF MONROE.



SECTION F-F
SCALE: H:1" = 40'
V:1" = 20'



SECTION G-G
SCALE: H:1" = 40'
V:1" = 20'

Rev. #:	Date	Description
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Graphic Scale:



501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

Drawn By: CMH

Checked By: RPP

Approved By: KMS

Project #: 22104001

Plan Date: 10/01/22

Scale: 1" = 40'

Kevin Solli, P.E.
CT 25759

Project:
**EXCAVATION/FILLING
PERMIT APPLICATION**
125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:

**CROSS
SECTIONS
(A-A TO G-G)**

Sheet #:

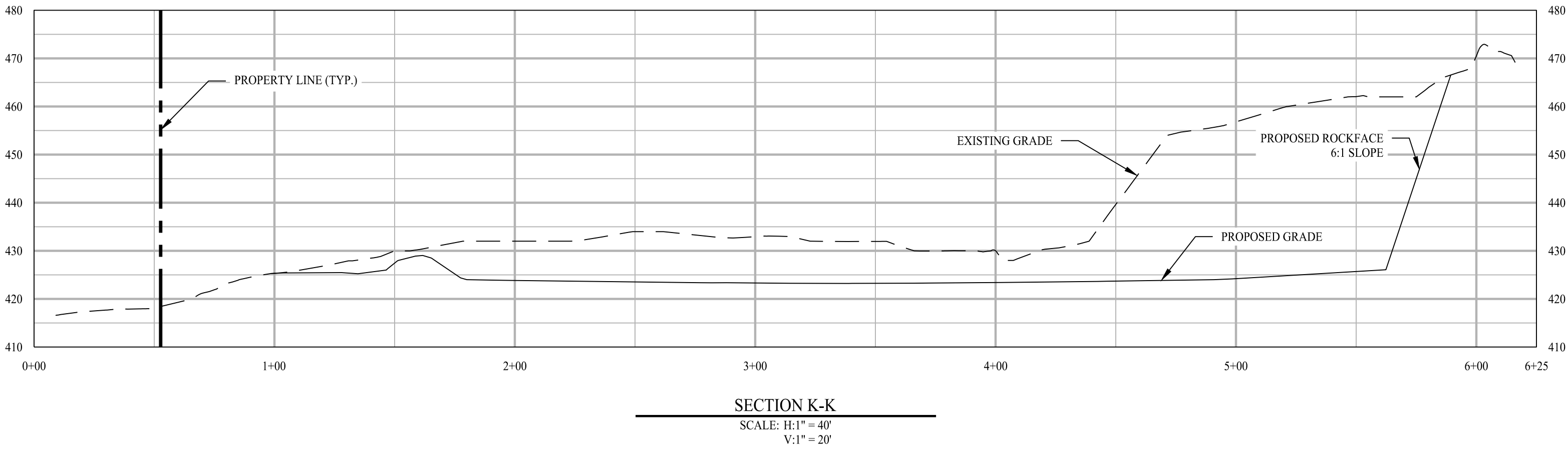
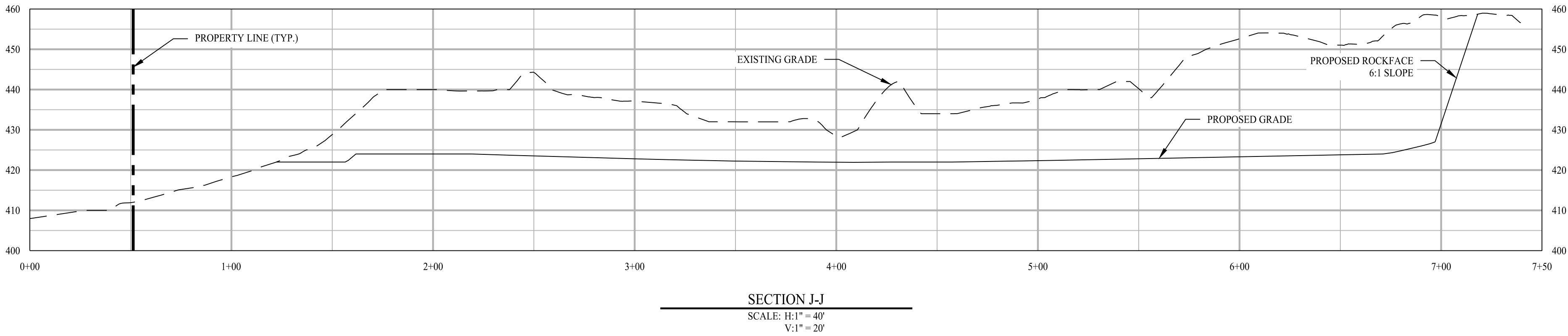
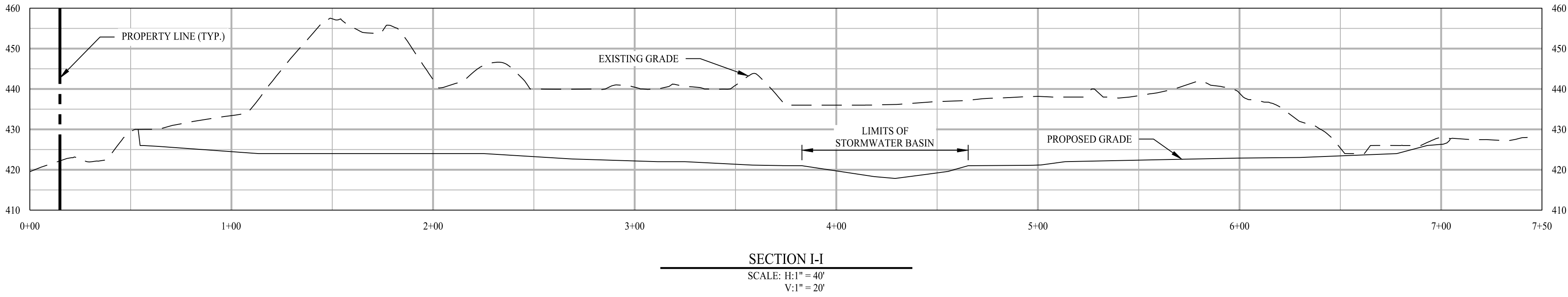
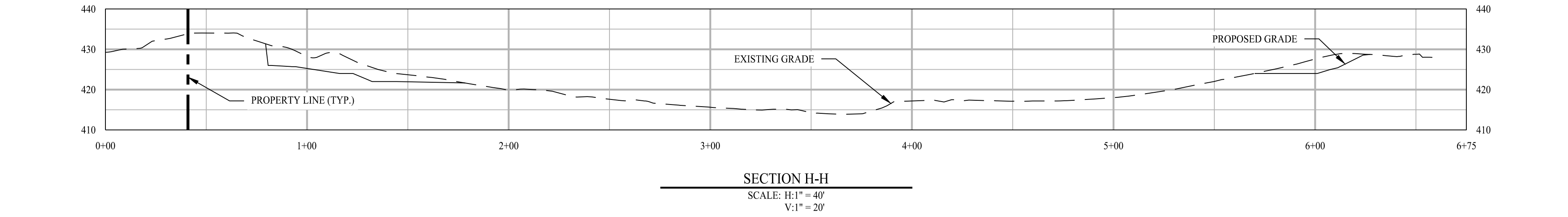
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- GENERAL NOTES
1.

EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022; SCALE: 1" = 40'; PREPARED BY ACCURATE LAND SURVEYING, LLC. REFER TO SAID PLAN FOR ALL DIMENSIONS, BEARINGS OR ANGLES OF PROPERTY LINES, EASEMENTS AND RIGHTS-OF-WAY.
2.

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Rev. #:

Date

Description

Graphic Scale:

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Drawn By:CMH

Checked By:RPP

Approved By:KMS

Project #:22104001

Plan Date:10/01/22

Scale:1" = 40'

Kevin Solli, P.E.

CT 25759

Project:

EXCAVATION/FILLING
PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

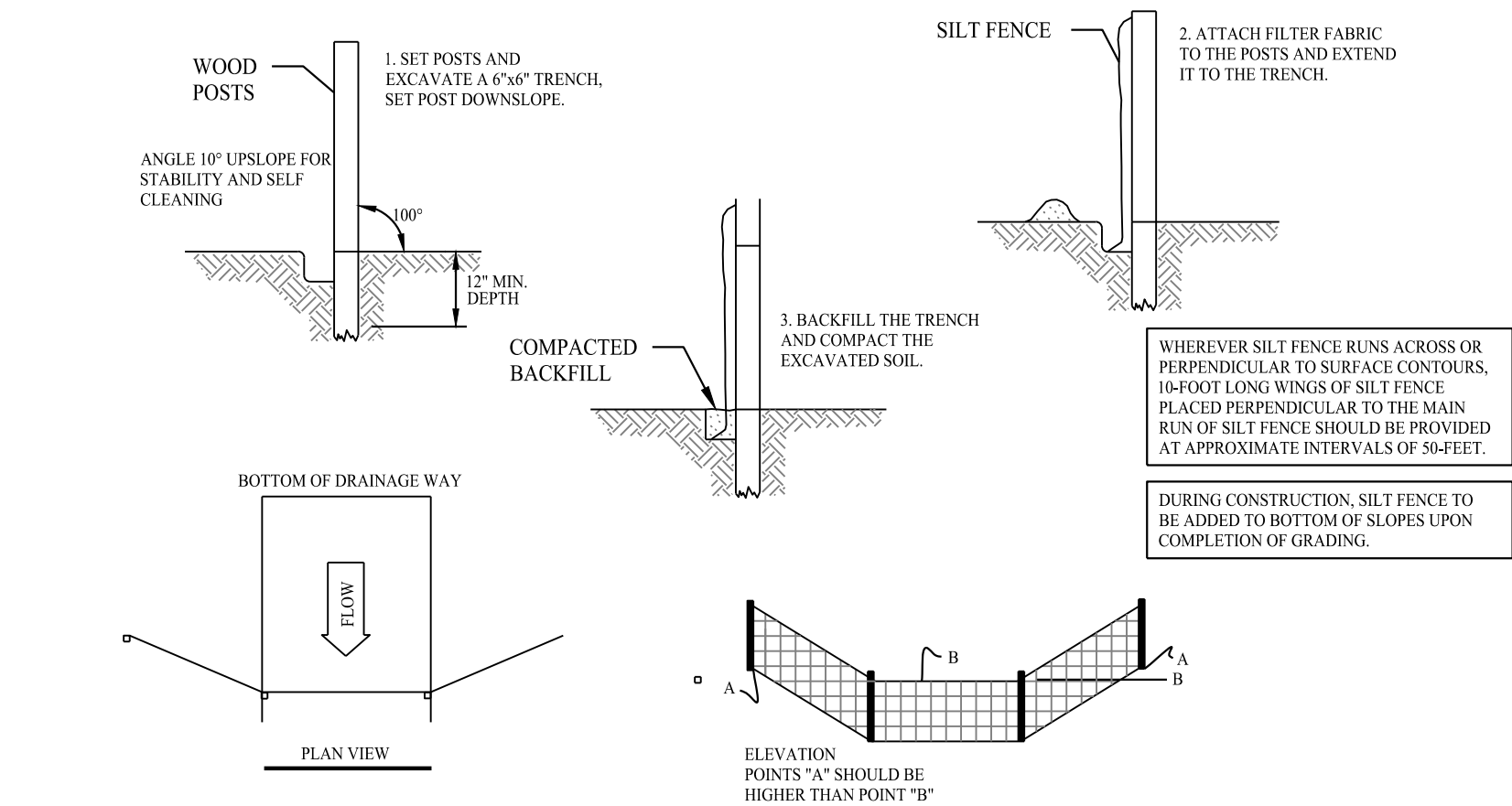
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CROSS
SECTIONS
(H-H TO K-K)

Sheet #:

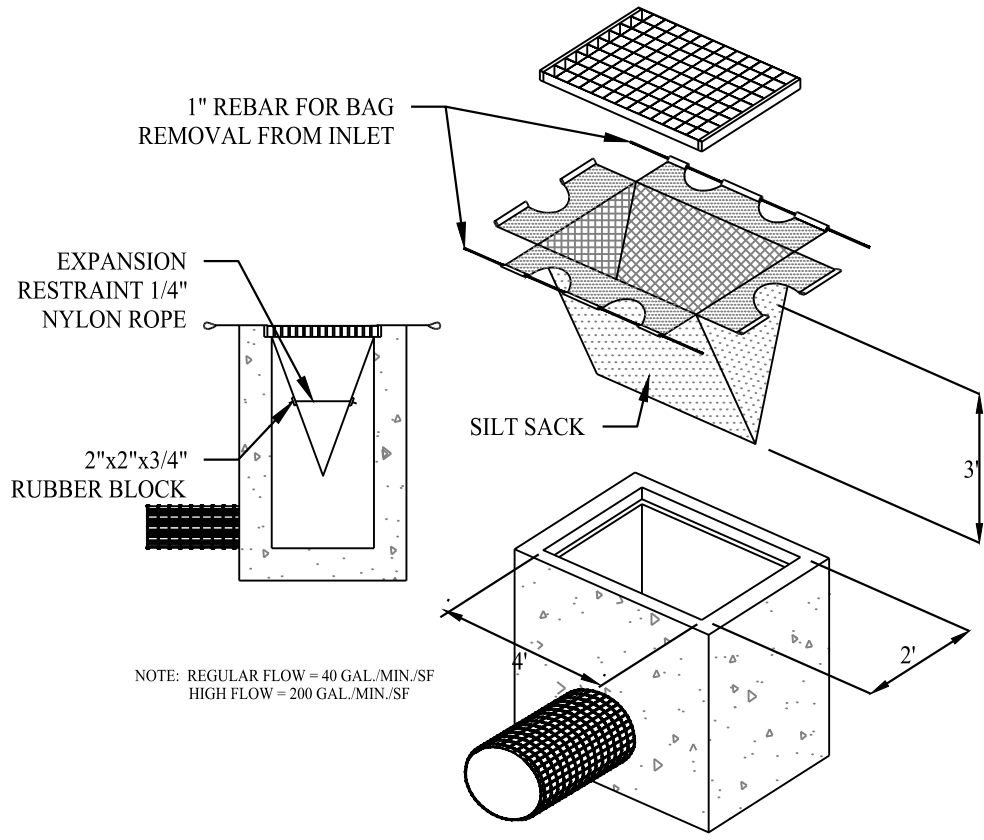
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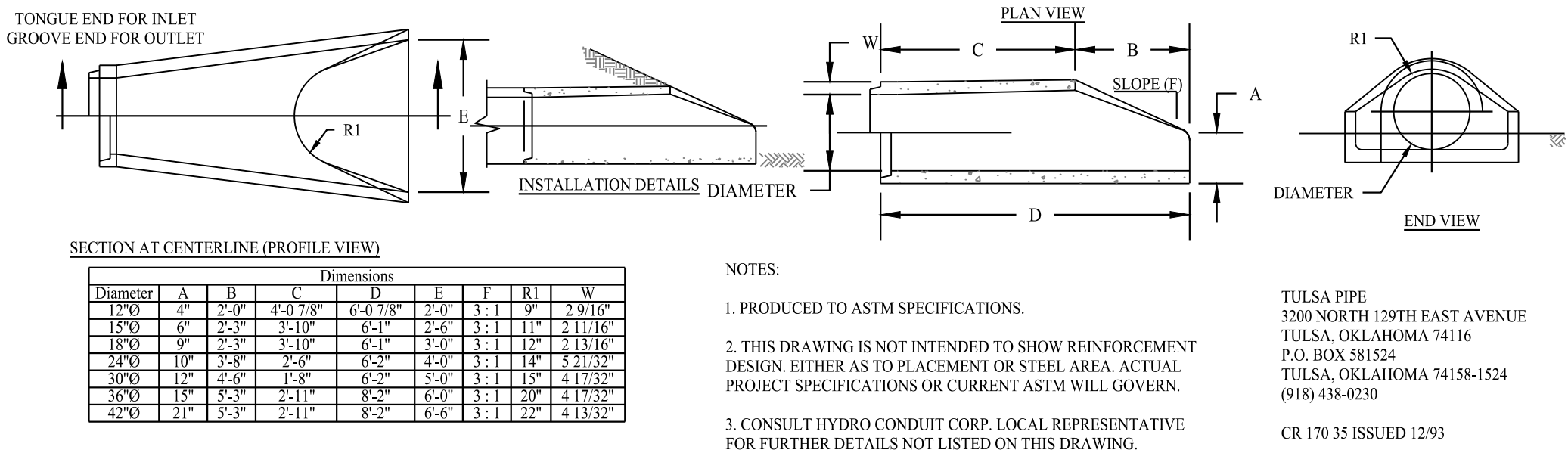
SILT FENCE PROTECTION DETAIL

SCALE: NTS



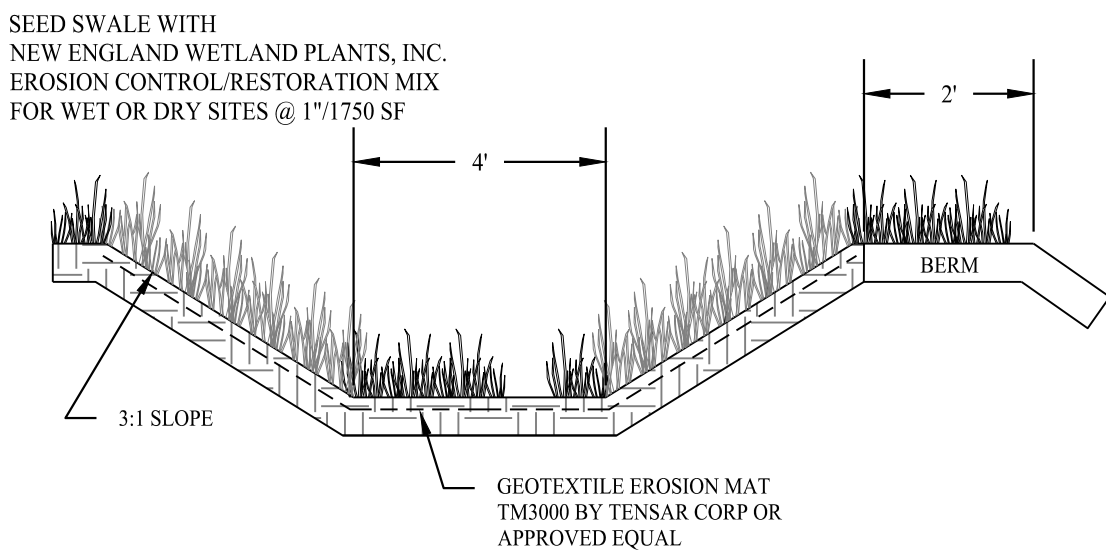
SILT SACK DETAIL

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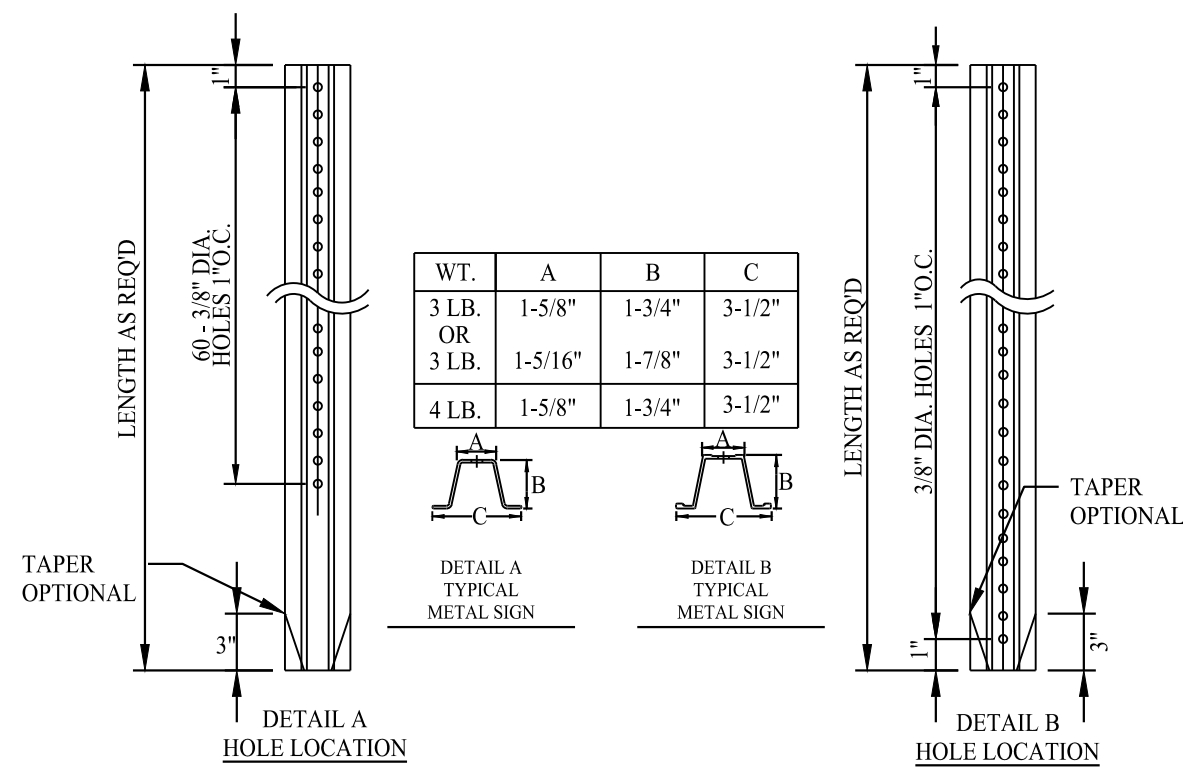
FLARED END SECTION DETAILS
(WITH PRECAST STD. BASE AND CUSTOMER SPECIFIED OPENINGS)
FLAT TOP ECCENTRIC (CONCENTRIC ALSO AVAILABLE)

SCALE: NTS



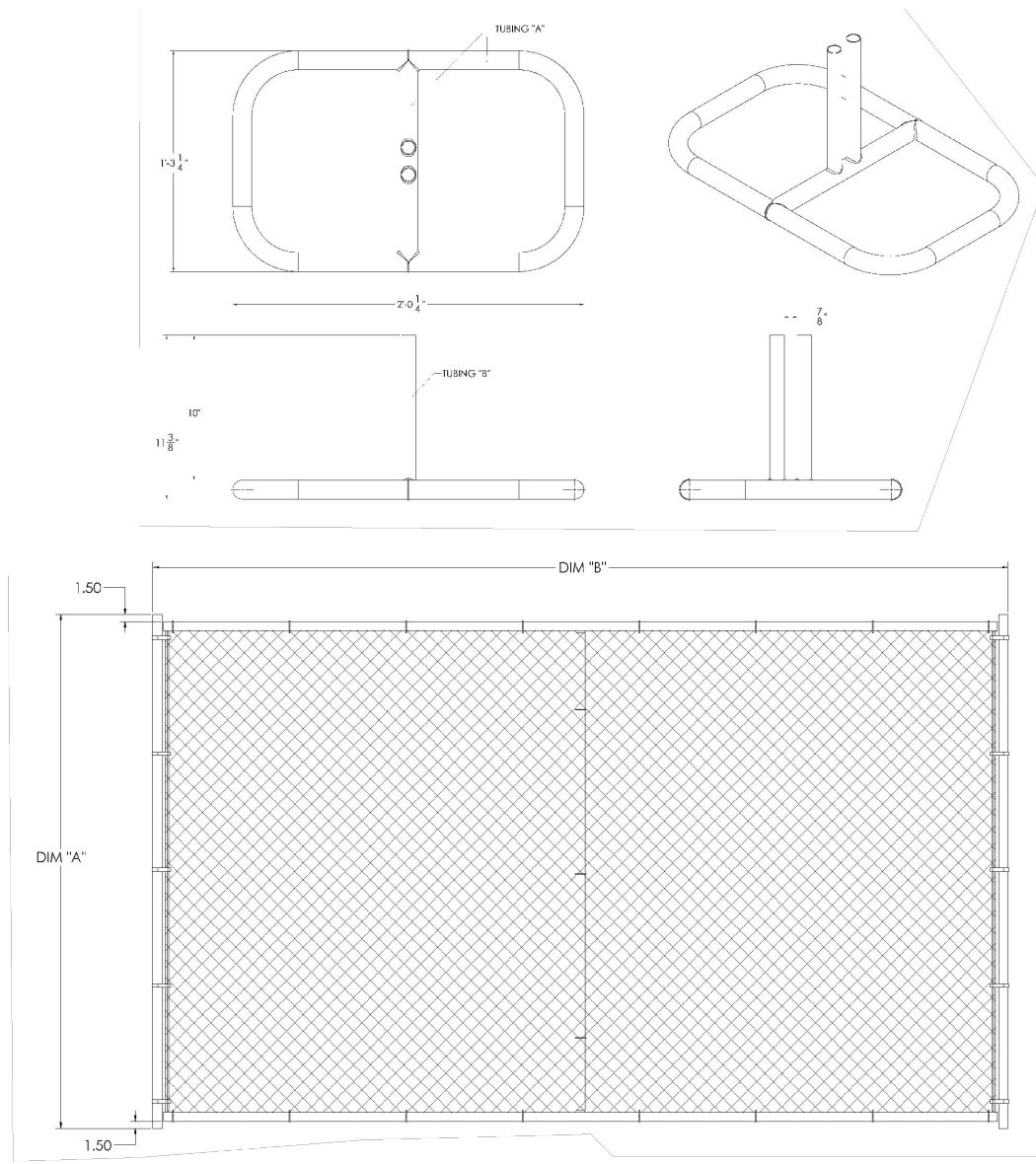
GRASS DIVERSION SWALE

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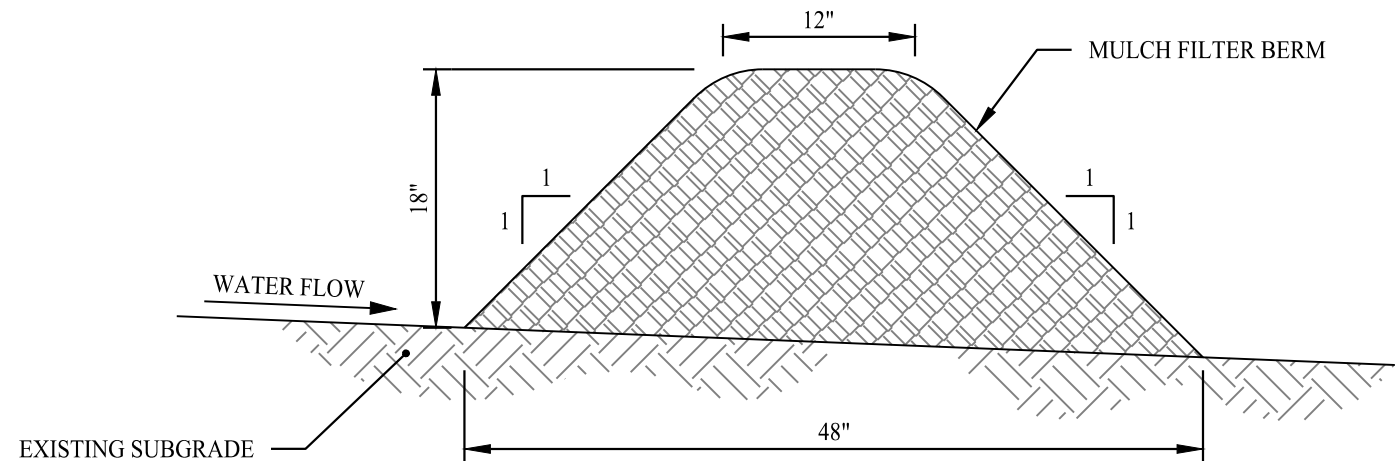
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SCALE: NTS



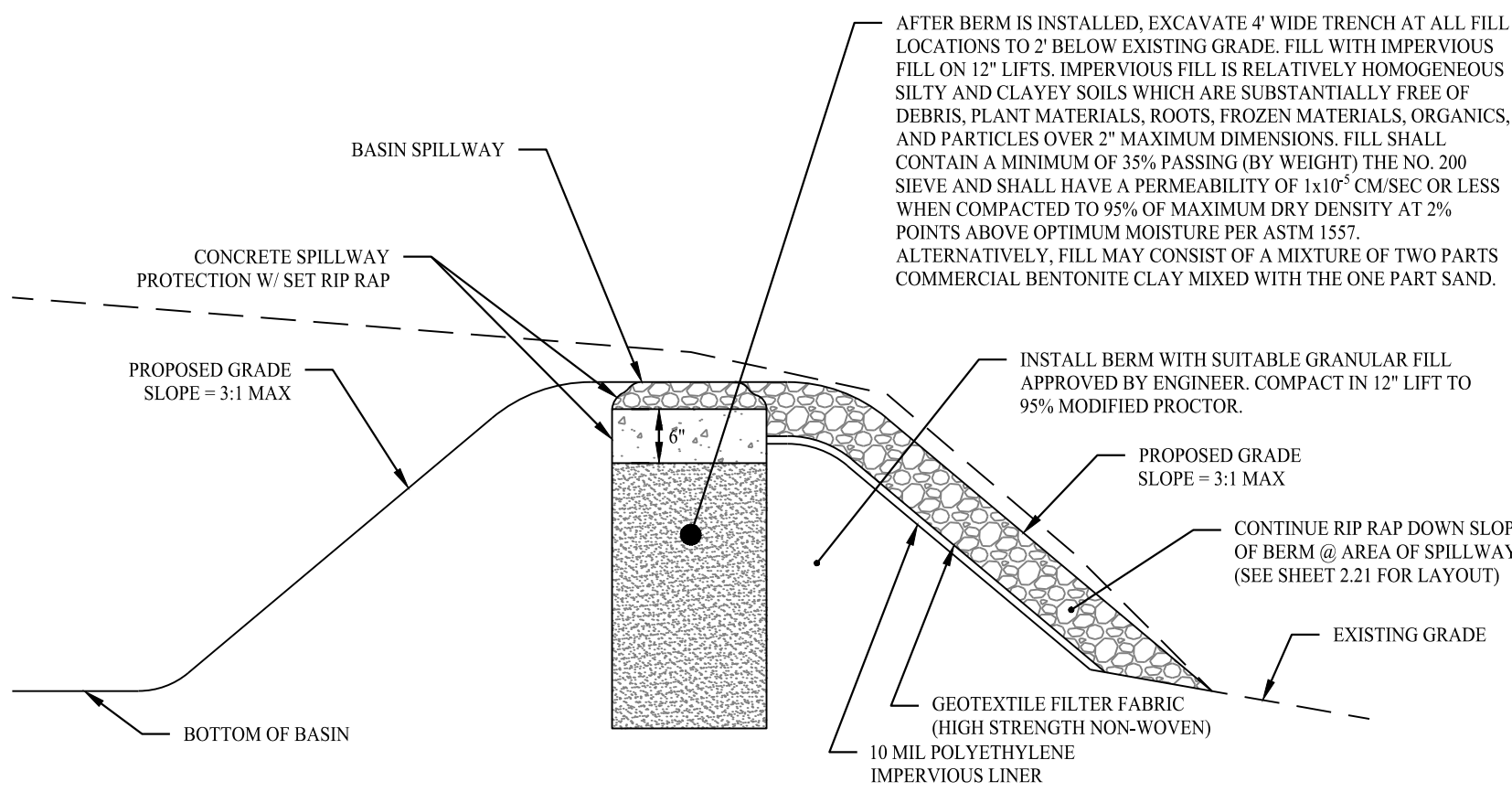
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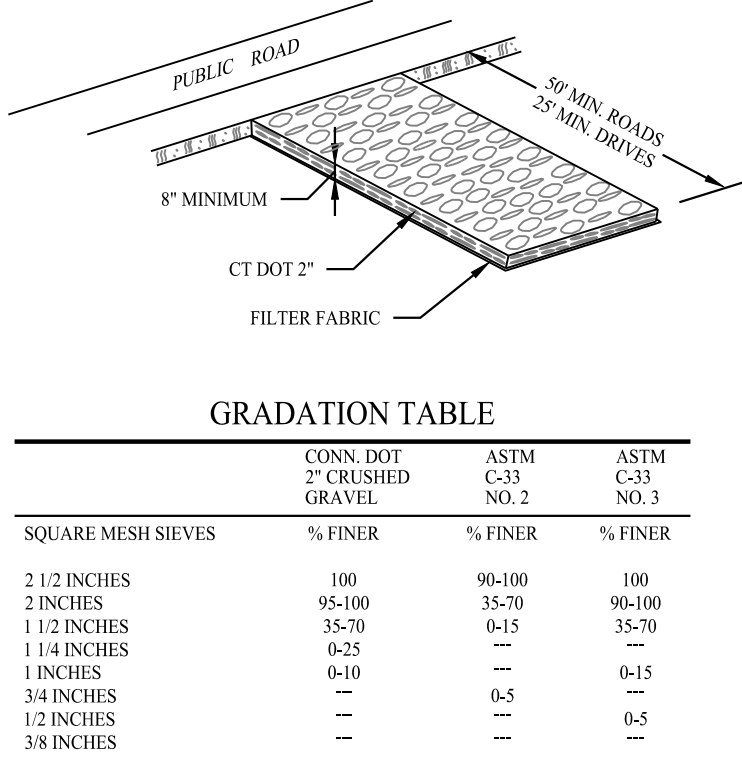
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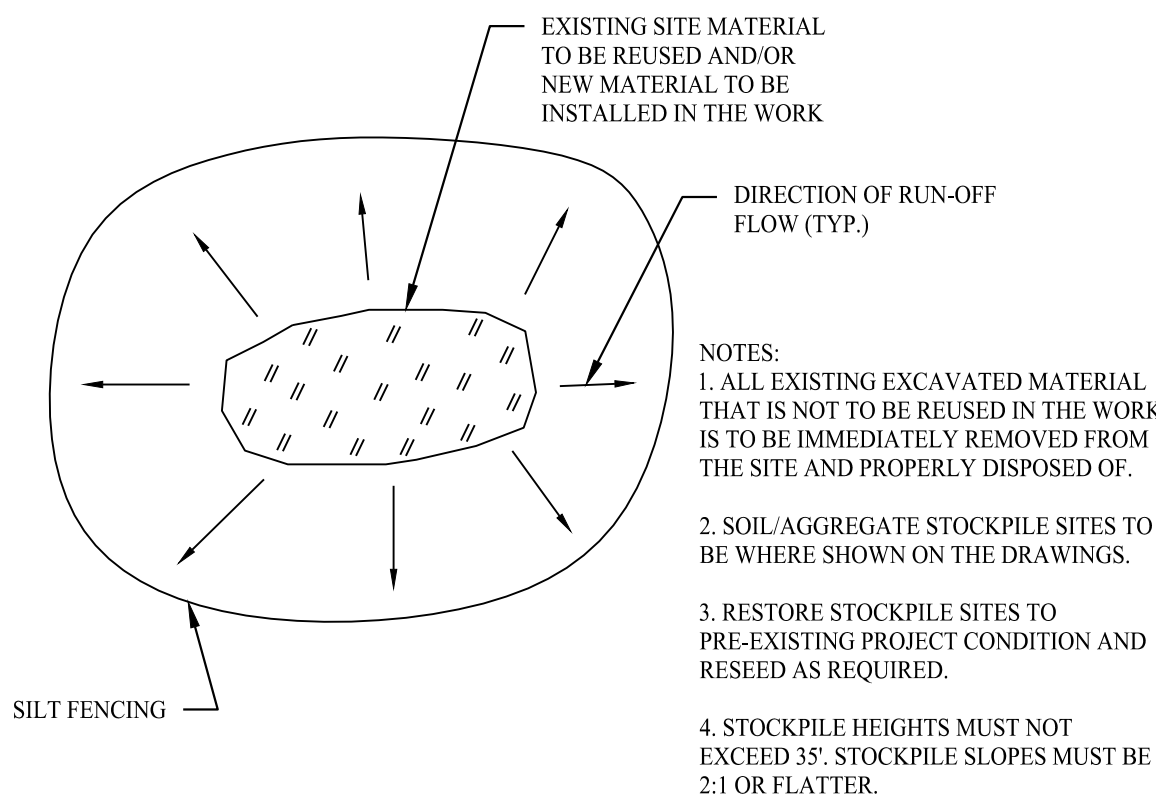
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SCALE: NTS



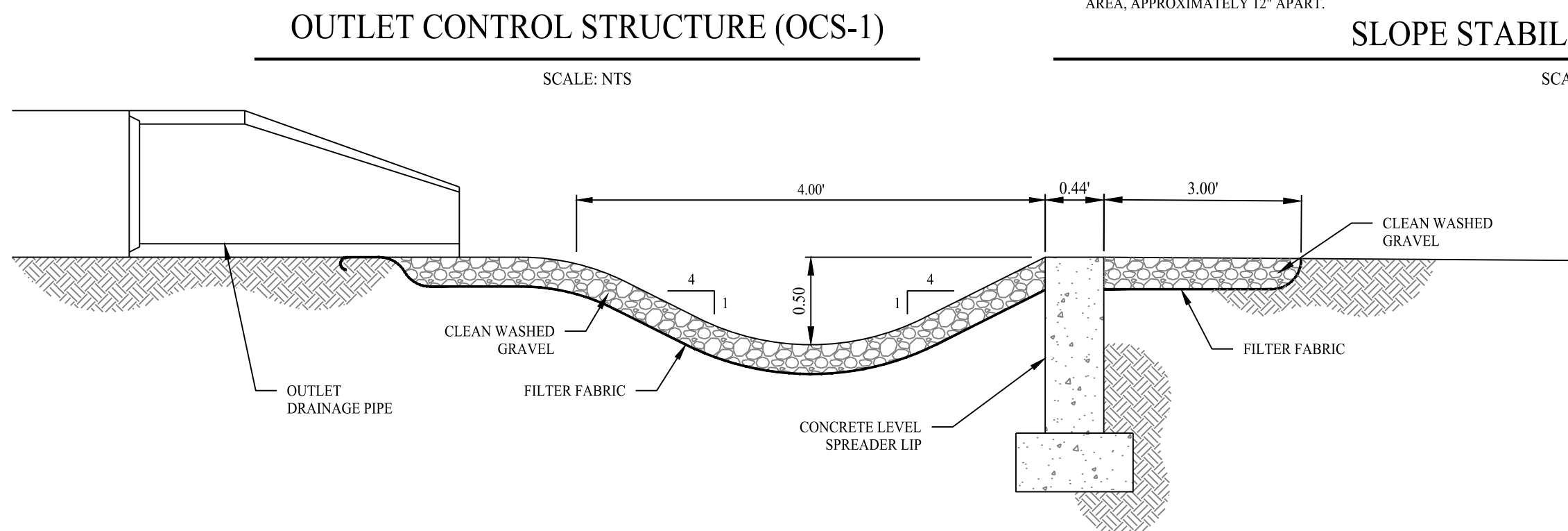
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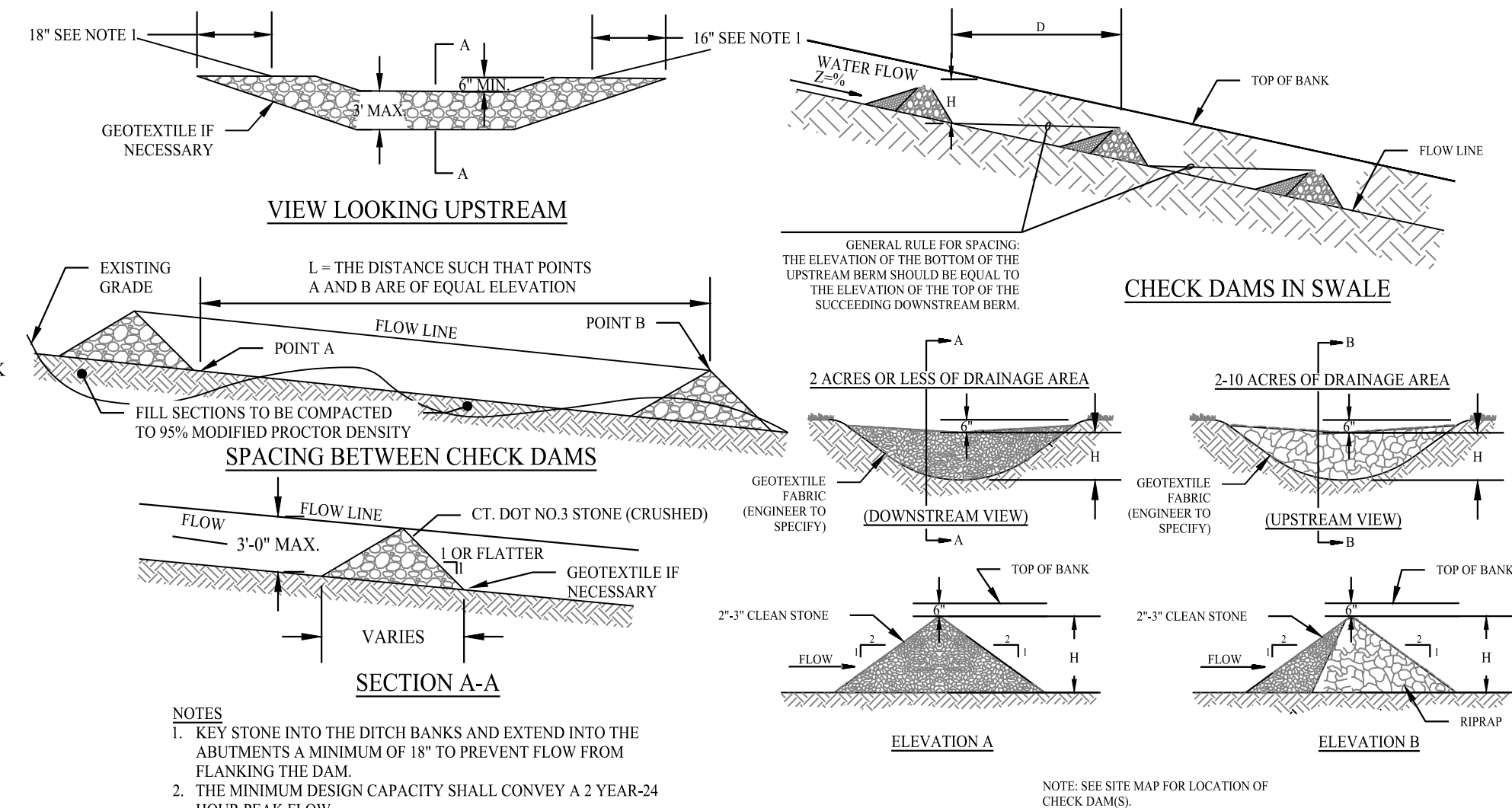
STOCKPILE AREA DETAIL

SCALE: NTS



LEVEL SPREADER DETAIL

SCALE: NTS



STONE CHECK DAM DETAIL

SCALE: NTS

Rev. #:	Date	Description

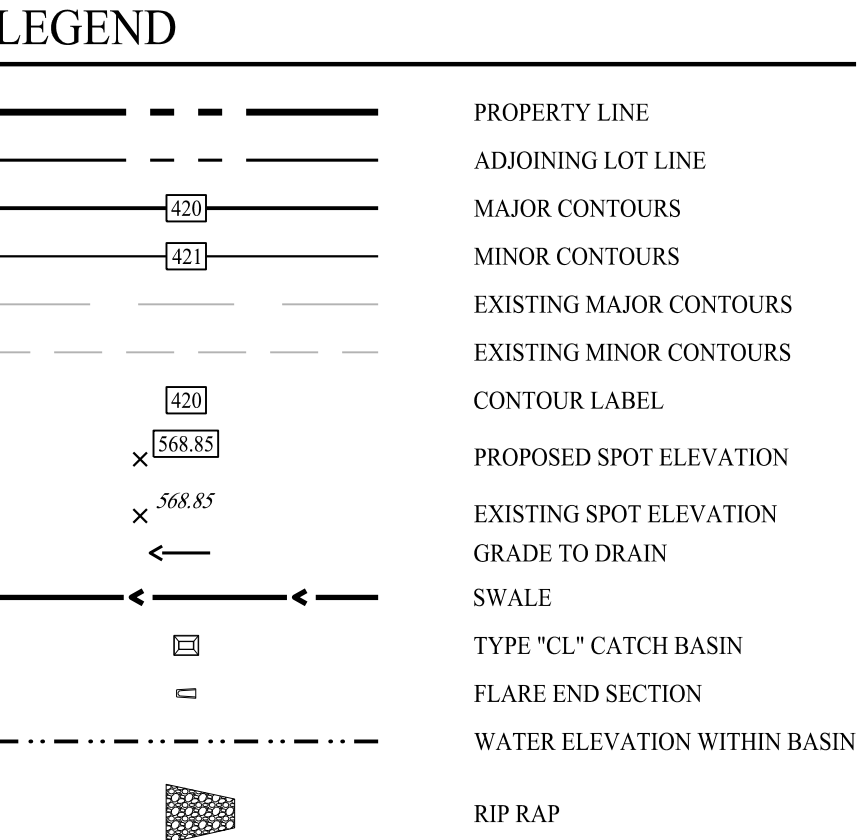
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11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

Drawn By:	NCM	Kevin Solli, P.E. CT 25759
Checked By:	RPP	
Approved By:	KMS	
Project #:	22104001	
Plan Date:	10/01/22	
Scale:	NTS	

EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
DETAIL SHEET	3.01



EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDNER ROAD MONROE, CONNECTICUT" PREPARED FOR 125 GARDNER ROAD LLC, DATED: AUGUST 1, 2002, SCALE: 1"=60'.

THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS.

A. SPALLS SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE TOWN OF MONROE PRIOR TO THE START OF WORK ON THE SITE NO CONSTRUCTION ACTIVITY, STORAGE OF EQUIPLIES, EQUIPMENT AND MATERIALS IS TO OCCUR BEYOND THE APPROVED LOD.

B. EXISTING EROSION SHALL BE REPAIRED TO THE SATISFACTION OF THE TOWN OF MONROE. IT SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF MONROE.

C. PERMIT TO SHEET 3.01 FOR CONSTRUCTION AND EROSION CONTROL MEASURE DETAILS.

D. WORK SHALL BE COMPLETED WITHIN 90 DAYS FROM THE DATE OF PERMIT. FROM 8:00 AM AND 5:00 PM DAILY THROUGH FRIDAY, EXCEPT WITH APPROVAL OF THE COMMISSION, THERE SHALL BE NO BLASTING ON THE SITE. NO ACTIVITY OF ANY TYPE SHALL BE CONDUCTED ON ANY LEGAL HOLDING DECLARED BY THE GOVERNMENT OF THE STATE OF CONNECTICUT OR THE UNITED STATES OF AMERICA THAT IS SUBJECT TO THIS PERMIT.

E. THE PERMITTEE SHALL PROVIDE ENGINEERING PROGRESS REPORTS PREPARED BY A CONNECTICUT STATE LICENSED CIVIL ENGINEER ON A QUARTERLY BASIS. ADDITIONALLY, THE COMMISSION MAY AT ANY TIME REQUEST AN INSPECTION OF THE PROJECT BY A REGISTERED PROFESSIONAL ENGINEER. THE PERMITTEE, TO BE MADE BY A LICENSED CIVIL ENGINEER, IF SUCH REPORT IS NOT RECEIVED BY THE COMMISSION WITHIN THIRTY (30) DAYS FROM THE DATE OF SUCH REQUEST, THE COMMISSION MAY TAKE SUCH ENFORCEMENT ACTIONS AS IT DEEMES APPROPRIATE TO ENSURE COMPLIANCE WITH THE TERMS OF THIS REGULATION AND ALL EXPENSES IN CONNECTION THEREWITH SHALL BE PAID BY THE PERMITTEE.

F. THE TOP LAYER OF TOPSOIL FORTY DEPTH OF SIX INCHES SHALL BE SET ASIDE ON THE PREMISES AND SOIL SHALL BE SPREAD IN ACCORDANCE WITH THE APPROVED CONTROLS LINES WITHIN THIRTY (30) DAYS FOLLOWING THE EXPIRATION OR REVOCATION OF THE PERMIT OR COMPLETION OF THE WORK, WHICHEVER OCCURS EARLIER.

G. PRECAUTIONS SHALL BE TAKEN TO PREVENT THE USE OF WATER SPRAY) AND APPROPRIATE NOISE DAMPENING MEASURES (EQUIPMENT MUFFERS, ETC) SHALL BE TAKEN TO MINIMIZE THE NUISANCE OF NOISE AND FLYING DUST OR ROCK AND LIGHTING.

H. UPON COMPLETION OF THE SITE FILLING/EXCAVATION ACTIVITIES, THE FINAL CONDITION OF THE RECLAIMING AREA SHALL BE IN THE FORM OF THE ANTI-TRACKING PAD AND THE FRONTAGE CONDITIONS ARE TO BE AS SPECIFIED ON THE RECLAMATION PLAN (SHEET 2.6).

I. ALL FILL MATERIAL BROUGHT TO THE SITE SHALL CONFORM TO THE CT DEEP STANDARDS FOR FILL MATERIAL.

J. THERE SHALL BE NO SIGNS PERMITTED (EXCEPT CUSTOMARY TRAFFIC CONTROL, SAFETY, AND NO Trespassing Signs) AS MAY BE AUTHORIZED BY THE PLANNING AND ZONING ADMINISTRATOR.)

§ 64-6.9. NO CHANGE IN CONTOUR SHALL BE MADE WITHIN TWENTY-FIVE (25) FEET OF ANY PROPERTY LINE.

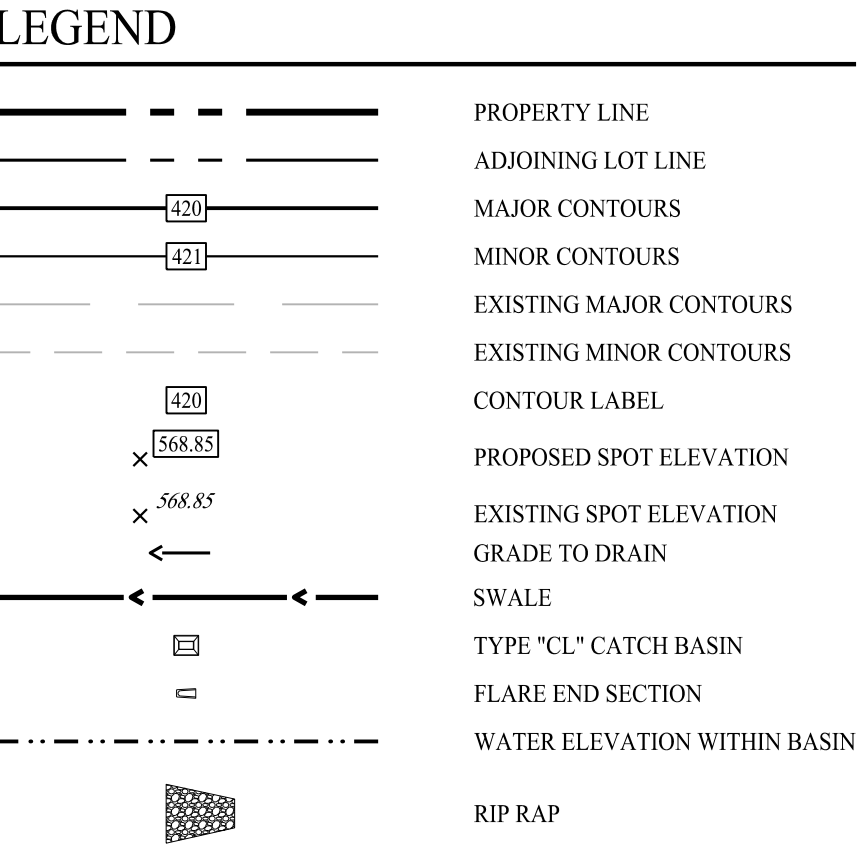
§ 64-6.9.D. NO ARTIFICIAL SLOPE GREATER THAN FOURTEEN DEGREES (14) TO THE HORIZONTAL, OR MAXIMUM FOUR FEET HORIZONTAL TO ONE FOOT VERTICAL, SHALL BE CREATED WITHIN FIFTY FEET OF ANY PROPERTY LINE.

§ 64-6.9.E. NO ARTIFICIAL SLOPE GREATER THAN FOURTEEN DEGREES (14) TO THE HORIZONTAL, SHALL BE CREATED WITHIN FIFTY FEET OF ANY STREET LINE.

§ 64-6.9.F. NO SORTING, GRADING, CRUSHING OR OTHER MACHINERY FOR TREATMENT OR PROCESSING OF MATERIALS BEING REDUCED TO PARTICLES SHALL BE CONSTRUCTED, MAINTAINED OR OPERATED ON THE PREMISES FOR WHICH A PERMIT MAY BE GRANTED, EXCEPT IN AN INDUSTRIAL DISTRICT OR IN ALL OTHER DISTRICTS WHERE CONTROLLED ROCK CRUSHING, SCREENING AND PROCESSING MAY BE PERMITTED BY THE COMMISSION ON A LIMITED SUBSTITUTION BASIS AS PART OF SITE DESIGN, CONSTRUCTION AND DEMOLITION ACTIVITIES, PROVIDED:

- (1) SUCH CONTROLLED ACTIVITIES WILL REDUCE CONSTRUCTION TRAFFIC BY USE OF MATERIALS ONSITE.
- (2) SUCH CONTROLLED ACTIVITIES WILL NOT INVOLVE MINING OR EXCAVATION OF MORE THAN NECESSARY TO ACHIEVE SITE PREPARATION OF AN APPROVED PROJECT.

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§ 64-6.9. NO CHANGE IN CONTOUR SHALL BE MADE WITHIN TWENTY-FIVE (25) FEET OF ANY PROPERTY LINE.

§ 64-6.9-D. NO ARTIFICIAL SLOPE GREATER THAN FOURTEEN DEGREES (14) TO THE HORIZONTAL, OR MAXIMUM FOUR FEET HORIZONTAL TO ONE FOOT VERTICAL, SHALL BE CREATED WITHIN FIFTY FEET OF ANY PROPERTY LINE.

§ 64-6.9-E. NO ARTIFICIAL SLOPE GREATER THAN FOURTEEN DEGREES (14) TO THE HORIZONTAL, SHALL BE CREATED WITHIN FIFTY FEET OF ANY STREET LINE.

§ 64-6.9-F. NO SORTING, GRADING, CRUSHING OR OTHER MACHINERY FOR TREATMENT OR PROCESSING OF MATERIALS BEING REDUCED TO FINE PARTICLES, OR EXTRACTED, MAINTAINED OR OPERATED ON THE PREMISES FOR WHICH A PERMIT MAY BE GRANTED, EXCEPT IN AN INDUSTRIAL DISTRICT OR IN ALL OTHER DISTRICTS WHERE CONTROLLED ROCK CRUSHING, SCREENING AND PROCESSING MAY BE PERMITTED BY THE COMMISSION ON A LIMITED SUBSTITUTION BASIS AS PART OF SITE DESIGN, CONSTRUCTION AND DEMOLITION ACTIVITIES, SHALL BE PERMITTED.

(1) SUCH CONTROLLED ACTIVITIES WILL REDUCE CONSTRUCTION TRAFFIC BY USE OF MATERIALS ONSITE.

(2) SUCH CONTROLLED ACTIVITIES WILL NOT INVOLVE MINING OR EXCAVATION OF MORE THAN NECESSARY TO ACHIEVE SITE PREPARATION OF AN APPROVED PROJECT.

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ENGINEERING MEMORANDUM

To: Town of Monroe, Application Review Team

From: Kevin Solli, P.E. / Solli Engineering
Robert Pryor, P.E. / Solli Engineering
Chris Pawlowski, EIT / Solli Engineering

Subject: Excavation / Filling Permit Application
125 Garder Road, Monroe, Connecticut 06468

Date: October 7, 2022

CC: Joe Grasso / 125 Garder Road, LLC

Solli Engineering, LLC has prepared this Memorandum to provide an analysis of the earthwork, zoning compliance, grading design, soil erosion control measures and stormwater management associated with the proposed excavation/filling activity located at 125 Garder Road in Monroe, Connecticut. The design is in compliance with applicable Town of Monroe regulations as well as other applicable state and federal requirements. The following summarizes the proposed project activities.

Property Description:

The project site is located at 125 Garder Road in Monroe, Connecticut with a total site area of 9.453 acres. The site is bound by Garder Road to the east and undeveloped land to the north, west and south. The property is owned by 125 Garder Road LLC and zoned Industrial District 2 (I-2). See Figure 1, Site Location Map, for a depiction of the project location.

The project site was visited by a certified soil scientist from JMM Wetland Consulting Services, LLC on June 1, 2022. JMM Wetland Consulting Services, LLC, determined that one inland wetland system was identified and delineated. The system, which is located in the western portion of the project site, is a wooded swamp. See the On-Site Soil Investigation Report, prepared by JMM Wetland Consulting Services, LLC for additional detail on the site wetlands assessment.

Property History:

The property was previously operated as an excavation/mining operation for several years under prior ownership. The prior operation cleared and disturbed a large area in the center of the site, with existing vegetation remaining along the edge of the existing wetlands and property borders.

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www.SolliEngineering.com

Project Narrative:

The project proposes to excavate and export onsite material to establish a future building elevation pad at an elevation of 422 feet to support future site development. The project site can be accessed off Garder Road, which will serve as the main site entrance.

The soil erosion and sediment control measures proposed for the proposed site activity have been designed in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. The soil erosion and sediment control measures proposed as part of this project include mulch berms, geotextile silt fences, stone check dams, temporary diversion swales, construction entrances, dust control measures and sediment traps. At the beginning of construction, two sediment traps and one water quality basin will be constructed along the western limit of disturbance. The two sediment traps are proposed in low-lying areas and have been sized to provide a minimum storage as required per the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. See plan Sheet 2.21, Grading & Drainage Plan and the Phased Soil Erosion and Sediment Control Plan (Sheet 2.31) for more detail on the soil erosion and sediment control measures.

At the completion of the export operation, the entire limit of disturbance will be seeded to provide stabilization and erosion control as well as provide improved curve numbers and time of concentrations compared to that of existing conditions, decreasing peak flows. At the completion of the project, the sediment will be removed from the sediment traps and the water quality basin will be seeded and maintained to provide additional storm water detention until future potential development commences. A progress reporting form has also been prepared for the project and can be found in Appendix C.

Drainage Analysis:

The stormwater management plan and design for 125 Garder Road is intended to be in compliance with the 2004 Connecticut Stormwater Quality Manual, while taking prevailing site conditions and practical considerations into account.

Stormwater runoff analysis, for both existing and proposed conditions, was performed using the software package Hydraflow Hydrograph Extension. This software uses computer implementation of the SCS-TR-55 methodology to compute volumes and rates of runoff. The watershed area, rainfall depths and intensity, curve number and time of concentration are factors that influence the computed results and are shown in the Hydrology Report in Appendix B.

Rainfall depths were taken from NOAA's National Weather Service Atlas 14, Point Precipitation Frequency Estimates and were used for calculating the volumes and rates of runoff for this project. The depths are listed in Table 1 below:

Table 1: Rainfall Data

Return Period	24-hr Rainfall Depth (in)
2-year	3.59
5-year	4.68
10-year	5.58
25-year	6.82
50-year	7.74
100-year	8.73

Hydraflow Hydrographs Extension automatically computes the rainfall intensity from its own IDF curves when the rainfall intensity data is provided. Table 2 shows the data that was used to generate the IDF curves. This information was taken from the NOAA's National Weather Service Atlas 14, Point Precipitation Frequency Estimates.

Table 2: IDF Table

Intermediate Intensity Values (in/hr)				
Return Period	5-Minute	15-Minute	30-Minute	60-Minute
2-year	5.12	2.84	1.97	1.26
5-year	6.34	3.52	2.44	1.56
10-year	7.34	4.08	2.82	1.80
25-year	8.74	4.85	3.36	2.14
50-year	9.78	5.43	3.76	2.40
100-year	10.90	6.04	4.18	2.67

Existing Hydrology:

According to NRCS Soil Survey Geographic database for the State of Connecticut, the majority of the site is comprised of Canton and Charlton soils with 0 to 35 percent slopes. These soils have a hydrologic soil group rating of B. See Figure 3, Soil Survey Map, in Appendix A for more detail regarding soil boundaries.

Approximately 6.89 acres were analyzed for stormwater management purposes. Based on existing drainage patterns, the 6.89-acre area was split into two existing drainage areas, labeled Existing Drainage Area 1 (EDA-1) and Existing Drainage Area 2 (EDA-2). The approximate location and delineation of this drainage area can be seen on Sheet DA-1, Drainage Area Map, found in Appendix B.

EDA-1 has a contributing area of approximately 3.21 acres. This area encompasses the central portion of the site reaching all the way west until the edge of the existing wetlands. The runoff from EDA-1 flows west, overland, into the existing wetlands onsite.

EDA-2 has a contributing area of approximately 3.68 acres. This area encompasses eastern portion of the site. The runoff from EDA-2 flows east, overland, offsite towards Garder Road

Characteristics of these drainage areas are summarized in Table 3.

Table 3: Existing Drainage Area Characteristics

Drainage Area	Area (Acres)	Curve Number (CN)	Time of Concentration (Minutes)
EDA-1	3.21	79	15.7
EDA-2	3.68	76	13.1

Existing peak flows and volumes of runoff for all analyzed storm-events are summarized in Table 3. Calculations for the existing hydrology can be found in Appendix B.

Table 4: Existing Peak Flows

Drainage Area	Peak Flow (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
EDA-1	4.519	7.051	9.23	12.29	14.58	17.05
EDA-2	5.022	8.122	10.85	14.72	17.64	20.81

Proposed Hydrology:

The proposed grading of the excavation/fill activity consists of drainage areas that are of similar patterns to existing contributing areas, within the 6.89 acres analyzed. Based on the proposed drainage patterns, the 6.89-acre area was divided into three (3) contributing drainage areas, labeled Proposed Drainage Area 1A (PDA-1A), Proposed Drainage Area 1B (PDA-1B) and Proposed Drainage Area 2 (PDA-2). The approximate location and delineation of these drainage areas can be seen on Sheet DA-1, Drainage Area Map, found in Appendix B.

PDA-1A has a contributing area of approximately 1.37 acres. This encompasses the portion of the site directly to the east of the wetlands. The runoff from PDA-1A flows west, overland, into the existing wetlands. The majority of PDA-1A will remain wooded in the proposed condition.

PDA-1B has a contributing area of approximately 4.37 acres. This area is comprised of central portion of the property and consists of open space and grass lined swales. Runoff from PDA-1B will travel west, overland, before entering the proposed swales and discharging into the stormwater quality basin. The area is to be seeded and established in the finished condition.

PDA-2 has a contributing area of approximately 1.15 acres. This area is comprised of the eastern portion of the site and consists of open space and woods. Runoff from PDA-2 will travel overland before discharging offsite towards Garder Road. Outside of the existing woodlands, the area is to be seeded and established in the finished condition.

Characteristics of these drainage areas are summarized in Table 5. A map depicting proposed drainage areas can be found in Appendix B.

Table 5: Proposed Drainage Area Characteristics

Drainage Area	Area (Acres)	Curve Number (CN)	Time of Concentration (Minutes)
PDA-1A	1.37	74	7.1
PDA-1B	4.37	65	21.9
PDA-2	1.15	58	11.2

Proposed peak flows and volumes for all analyzed storms are summarized in Table 6. Calculations for the proposed hydrology can be found in Appendix B.

Table 6: Proposed Peak Flows

Drainage Area	Peak Flow (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
PDA-1A	1.823	3.045	4.120	5.660	6.826	8.095
PDA-1B	2.33	4.608	6.747	9.979	12.51	15.31
PDA-2	0.352	0.932	1.528	2.449	3.188	4.024
PDA-1*	1.823	3.045	4.120	5.66	8.201	13.71

*PDA-1 Consists of the contributing drainage areas PDA-1A & PDA-1B

In an effort to improve the quality of the stormwater discharged from the site, the project will retain the water quality volume within the proposed Stormwater Quality Basin (Pond 1B). Pond 1B will also provide additional storage for future development plans while as reducing the peak rate of runoff during the proposed excavation and filling activities. The basin is designed to provide a total storage capacity of approximately 23,844 cubic feet at a peak elevation of 419.54 during the 100-year storm to maximize the amount of detention on the site, with a required water quality volume of 826 cubic feet, and a provided stormwater quality volume of 8,997 cubic feet. With a top elevation of 421.00 for the proposed basin and a peak elevation of 419.54 during the 100-year storm, the basin provides a minimum of 1' of freeboard. Stormwater is discharged from the water quality basin via an outlet control structure (OCS-1). The outlet control structure is a Connecticut State Highway Department, "C-L" top, standard catch basin configuration in which the top of frame acts as a weir. The outlet control structure features an 8" orifice with an invert of 417.00 and discharges through an 18" HDPE pipe to a level spreader. For more details on the configuration and drainage features of the proposed Stormwater Quality Basin (Pond 1B) and OCS-1, see Sheet 2.21, Grading & Drainage Plan.

The proposed Stormwater Quality Basin (Pond 1B) is designed to attenuate the overall peak discharge rate for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events; so that the overall proposed peak flow is less than the overall existing peak flow. The SCS TR-55 methodology was used to compute the peak discharge rates. Refer to Appendix B for calculations of the existing and proposed hydrology. The existing discharge rates and the proposed peak discharge rates, associated with the filling activities, are summarized in the table below (proposed rates are depicted in bold).

Table 7: Peak Flows Comparison

Drainage Area	Peak Flow (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
EDA-1	4.519	7.051	9.23	12.29	14.58	17.05
PDA-1*	1.823	3.045	4.120	5.66	8.201	13.71
EDA-2	5.022	8.122	10.85	14.72	17.64	20.81
PDA-2	0.352	0.932	1.528	2.449	3.188	4.024

*PDA-1 Consists of the contributing drainage areas PDA-1A & PDA-1B

In addition to the water quality volume provided in the stormwater quality basin, there are also two grass-lined swales proposed as a water quality measure. Both swales are proposed up-gradient of Stormwater Quality Basin (Pond 1B). The swales both feature a 2' depth with a longitudinal slope of 2%.

Post-Construction Site Maintenance:

The property owner shall maintain its property at 125 Garder Road, Monroe, Connecticut in accordance with this site maintenance plan, as follows, to maintain the aesthetic quality and cleanliness of the site:

- There are to be no construction activities within the wetland areas, those areas will remain undisturbed as required.
- Garder Road shall be checked for potential perimeter erosion, trash, spillage, and pavement conditions during these inspections.
- The sediment traps shall be inspected bi-annually in May and November and cleaned of excessive sediment and debris.
- Maintain each construction entrance anti-tracking pads with silt fence along the edge of the pads.

Earthwork Analysis:

The proposed excavation and filling project will have slopes that range from approximately 1.5 percent within the excavation area to 30-40 percent around the perimeter the site. Elevations will range from a high of approximately 470 feet, in the northern portion of the site, to a low of approximate 414 feet along the edge of the existing wetlands along the western property edge. The project was designed in order to lower the grades of the site to be closer to the elevations along Garder Road in order to support future site development. There will be a proposed filling of 650 CY, and a cut of 109,162 CY, resulting in a net export of 108,512 CY. The majority of the excavation/ filling activities are to take place outside of the regulated area. Within the regulated area, there will be a proposed filling of 482 CY, and a cut of 9,810 CY, resulting in a net export of 9,328 CY. No fill is to be placed within the floodplain. See the Cut/Fill Analysis Plan, Figure 6, for additional details.

Supporting Documents:

Appendix A:

Figures

Site Location Map (Figure 1)
FEMA Flood Map (Figure 2)
Soil Survey Map (Figure 3)
Regulated Area Map (Figure 4)
Slope Area Map (Figure 5)
Cut/Fill Exhibit (Figure 6)

Appendix B:

Hydrology

Drainage Area Map (DA-1)
NOAA Atlas Precipitation Data
Watershed Model Schematic
Hydraflow Stormwater Analysis
Hydraflow Return Period Recap Report
Hydraflow Summary Reports
Hydraflow Stormwater Pond Report
Curve Number Calculations
Time of Concentration Calculations
Water Quality Volume Calculations

Appendix C:

Inspection Reports & Test Logs

Excavation/Fill Permit Progress Report Form
Test Pit Logs
Percolation Test Logs

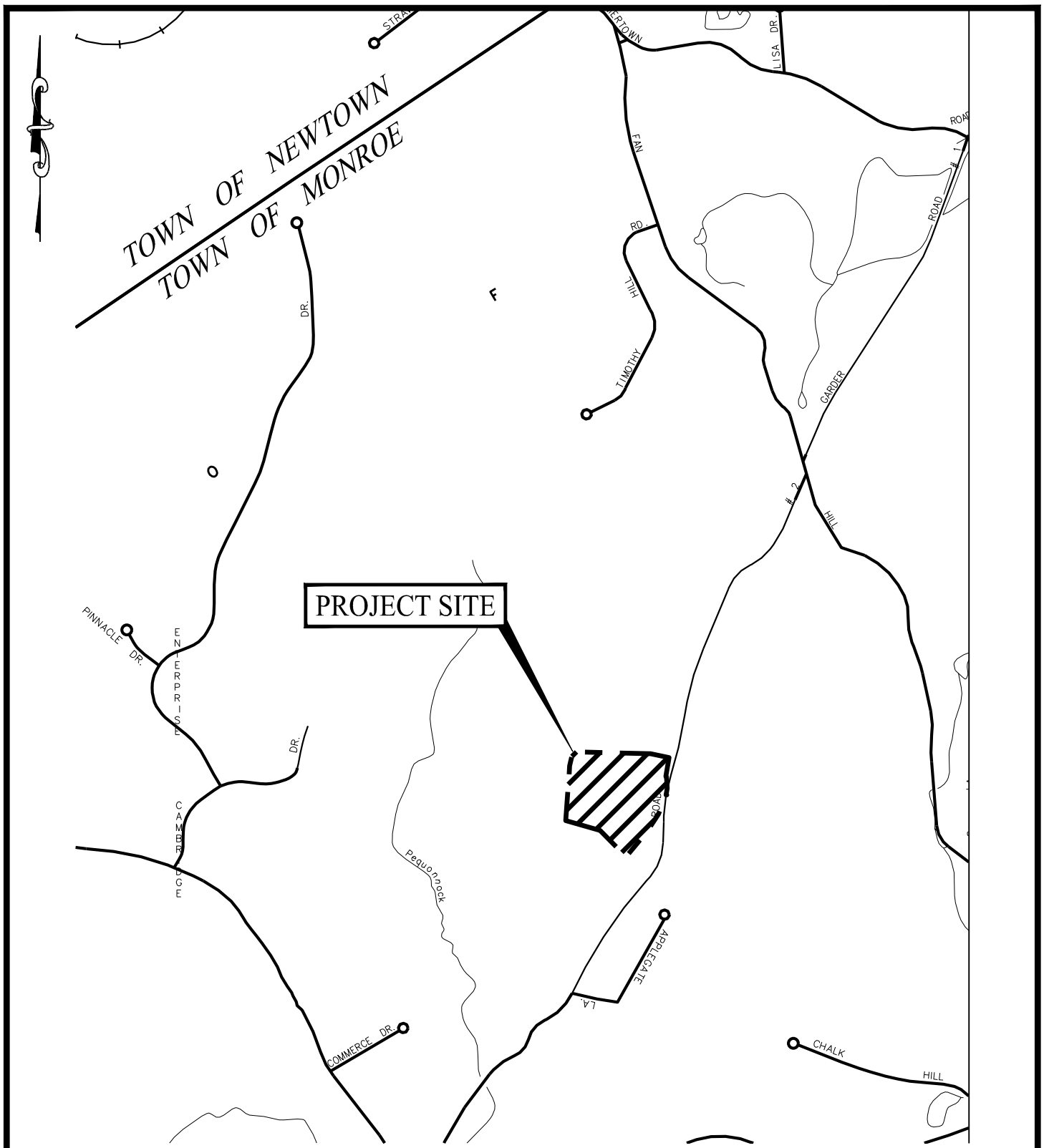
Appendix D:

Plans

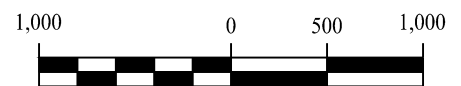
Grading & Drainage Plan (Sheet 2.21)
Phased Soil Erosion & Sediment Control Plan (Sheet 2.31)
Reclamation Plan (Sheet 2.61)

APPENDIX A
FIGURES

Site Location Map (Figure 1)
FEMA Flood Map (Figure 2)
Soil Survey Map (Figure 3)
Regulated Area Map (Figure 4)
Slope Area Map (Figure 5)
Cut/Fill Exhibit (Figure 6)



NOTE: BASE MAP INFORMATION TAKEN
FROM CTDOT TRU MAP NUMBERS 084 & 096.



SOLLI
ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 F: (203) 880-9695

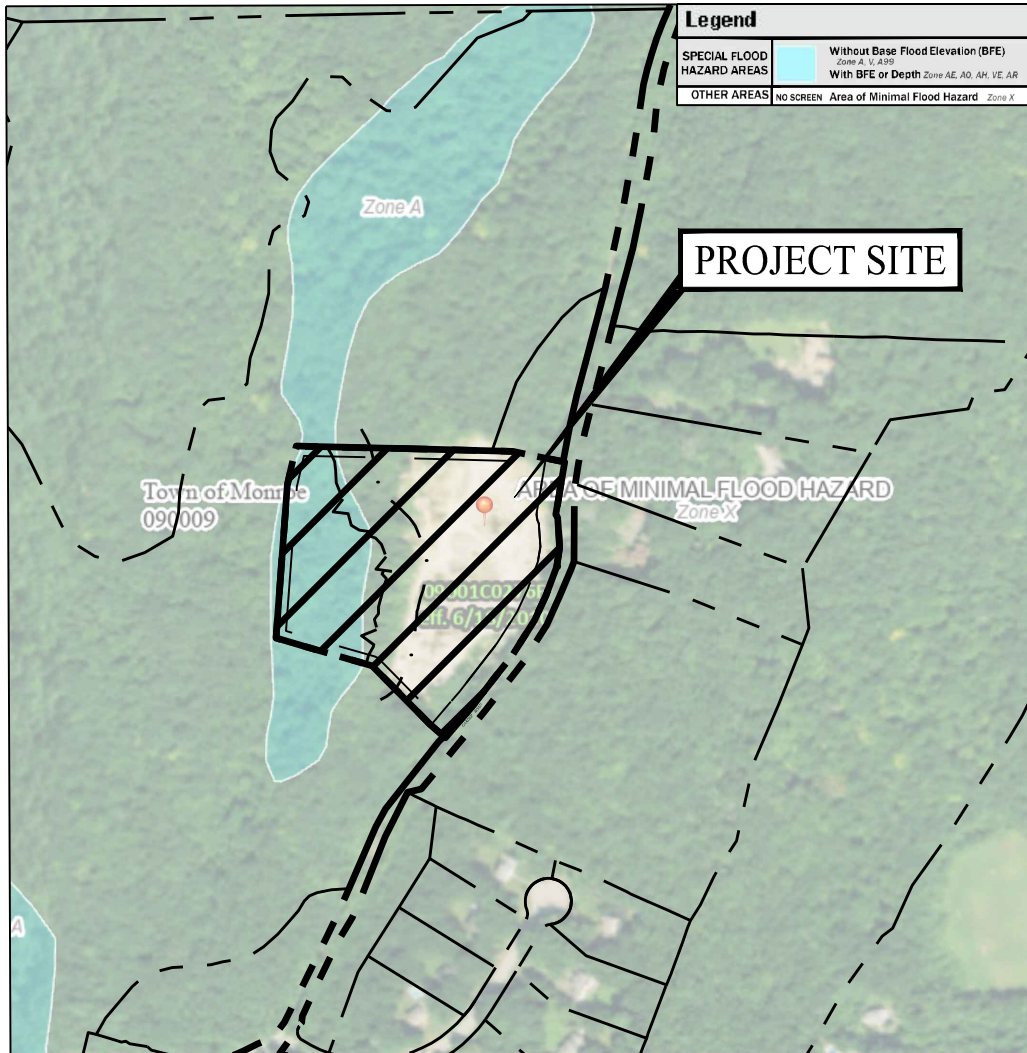
SITE LOCATION MAP
125 GARDER ROAD
MONROE, CONNECTICUT

Project #: 22104001

Plan Date: 08/02/22

Scale: 1" = 1,000'

Figure: 1



NOTE: BASE MAP INFORMATION TAKEN
FROM MSC.FEMA.GOV, AREA NUMBER
09001C0276F



SOLLI
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501 Main Street, Monroe, CT 06468
T: (203) 880-5455 F: (203) 880-9695

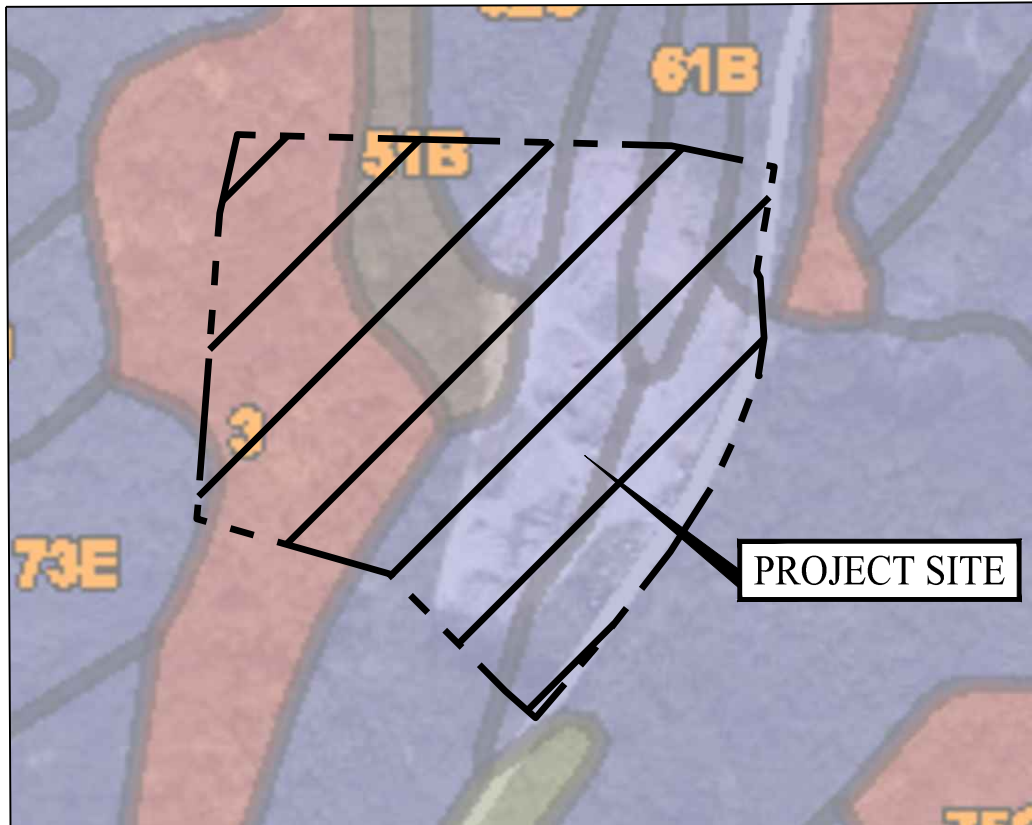
FEMA FLOOD MAP
125 GARDER ROAD
MONROE, CONNECTICUT

Project #: 22104001

Plan Date: 08/02/22

Scale: 1" = 500'

Figure: 2



Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	2.7	16.7%
51B	Sutton fine sandy loam, 0 to 8 percent slopes, very stony	B/D	1.4	8.6%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	B	0.9	5.4%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	1.2	7.2%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	B	4.8	28.9%
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	B	5.5	33.3%
Totals for Area of Interest			16.5	100.0%

NOTE: BASE MAP INFORMATION TAKEN
FROM NATURAL RESOURCES
CONSERVATION SERVICE, URL:
[HTTP://WEBSOILSURVEY.NRCS.USDA.GOV](http://websoilsurvey.nrcs.usda.gov)
DATE OF IMAGE: AUGUST 31, 2022.



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SOIL SURVEY MAP
125 GARDER ROAD
MONROE, CONNECTICUT

Project #: 22104001

Plan Date: 08/02/22

Scale: 1" = 250'

Figure: 2

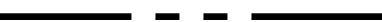


GENERAL NOTES

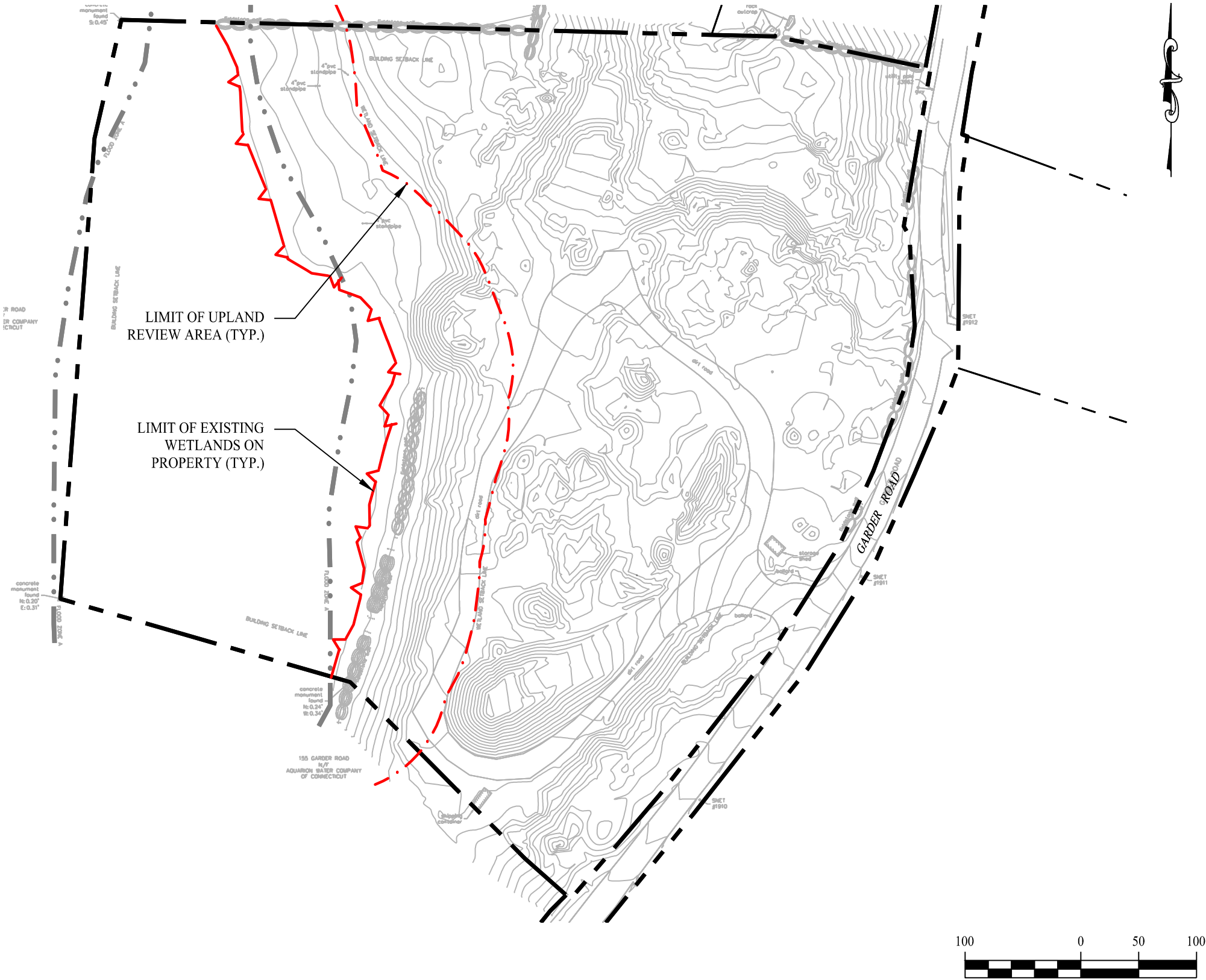
- 1. WETLANDS WERE DELINEATED AND FLAGGED BY JMM WETLAND CONSULTING SERVICES, LLC, ON JUNE 1, 2022.

WETLAND AREA TABLE

AREA	ACRES
PROPERTY AREA	9.45±
WETLANDS ON PROPERTY	2.56±
UPLAND REVIEW AREA ON PROPERTY	1.52±
WETLANDS TO BE ALTERED	0.00±
UPLAND REVIEW AREA TO BE ALTERED	0.66±
TOTAL REGULATED AREA TO BE ALTERED	0.66±

LEGEND

	PROPERTY LINE
	LIMIT OF WETLANDS
	LIMIT OF UPLAND REVIEW AREA



_____	_____	_____
_____	_____	_____
_____	_____	_____
Rev. #:	Date	Description

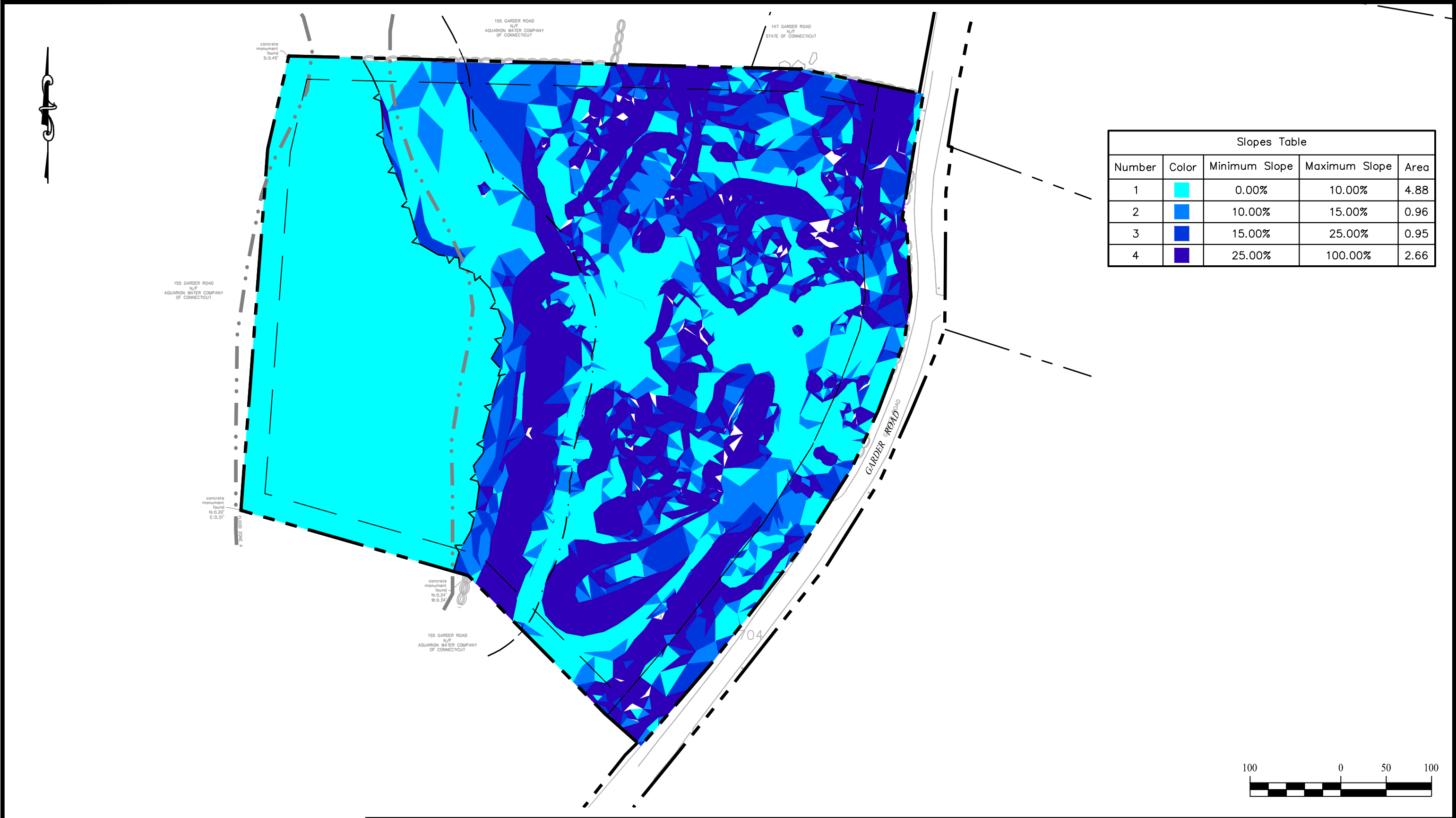
SOLLI
ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 | F: (203) 880-9695

Drawn By:	MFJ
Checked By:	KMS
Project #:	22104001
Plan Date:	08/02/22
Scale:	1" = 100'

Project:
PROPOSED DEVELOPMENT
125 GARDER ROAD
MONROE, CONNECTICUT


Sheet Title:
REGULATED AREA

SHEET #:
FIG-4



Slopes Table				
Number	Color	Minimum Slope	Maximum Slope	Area
1		0.00%	10.00%	4.88
2		10.00%	15.00%	0.96
3		15.00%	25.00%	0.95
4		25.00%	100.00%	2.66

_____	_____	_____
_____	_____	_____
_____	_____	_____
Rev. #:	Date	Description



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Checked By:	KMS
Project #:	22104001
Plan Date:	08/03/22
Scale:	1" = 100'

Project:

PROPOSED DEVELOPMENT

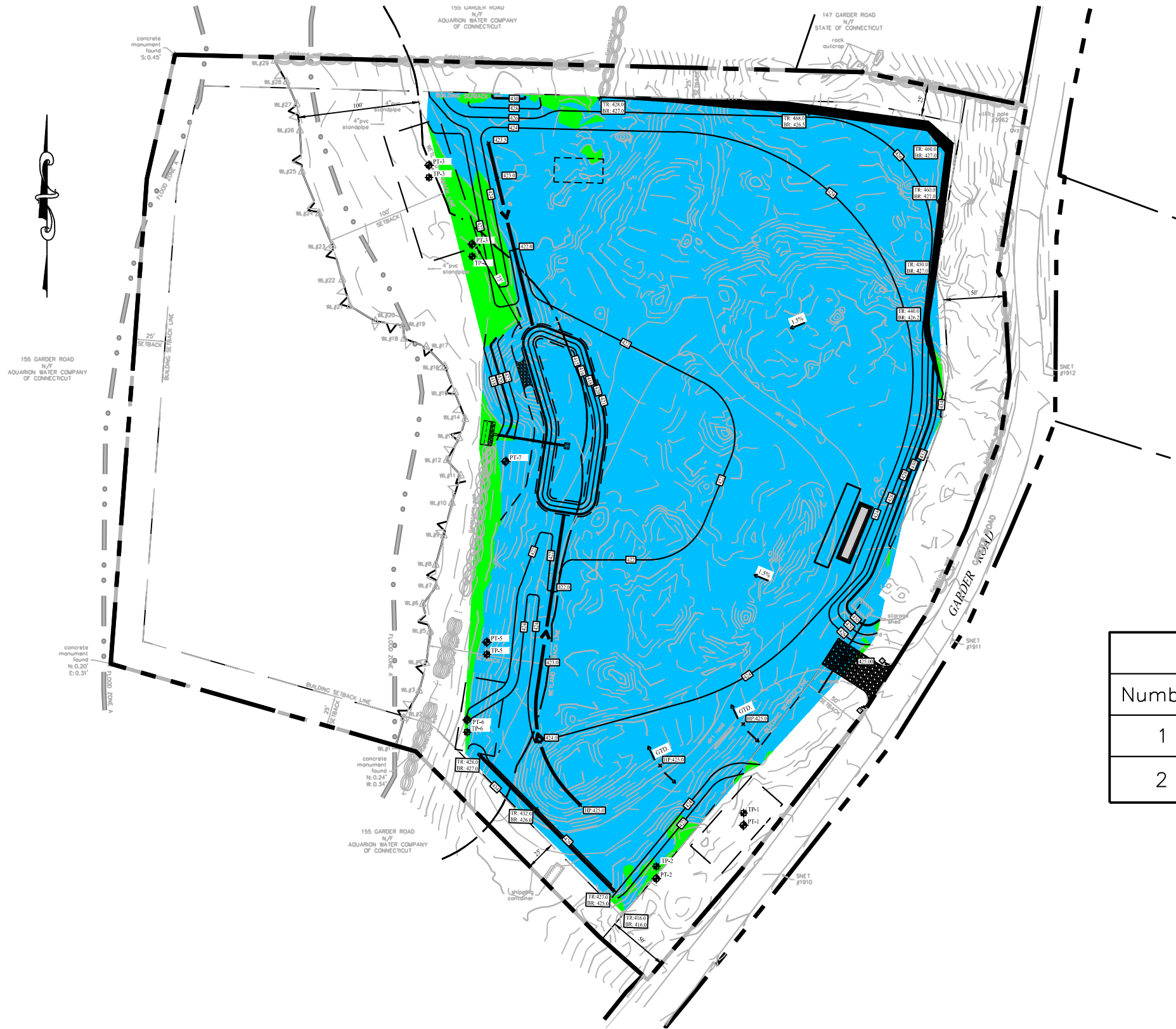
125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:

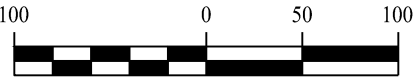
SLOPE AREA MAP

SHEET #:

FIG-5



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-43.062	0.000	■
2	0.000	7.856	■



Rev. #:	Date	Description



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Drawn By:	CJP
Checked By:	KMS
Project #:	22104001
Plan Date:	10/01/22
Scale:	1" = 100'

Project:

PROPOSED DEVELOPMENT

125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:

CUT/FILL EXHIBIT

SHEET #:

FIG. 6

APPENDIX B
HYDROLOGY

Drainage Area Map (DA-1)
NOAA Atlas Precipitation Data
Watershed Model Schematic
Hydraflow Stormwater Analysis
Hydraflow Return Period Recap Report
Hydraflow Summary Reports
Hydraflow Stormwater Pond Report
Curve Number Calculations
Time of Concentration Calculations
Water Quality Calculations



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aeriels](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.365 (0.278-0.469)	0.427 (0.324-0.549)	0.528 (0.400-0.681)	0.612 (0.462-0.794)	0.728 (0.534-0.974)	0.815 (0.587-1.11)	0.906 (0.636-1.27)	1.01 (0.674-1.43)	1.15 (0.745-1.68)	1.27 (0.803-1.89)
10-min	0.517 (0.393-0.664)	0.605 (0.460-0.778)	0.748 (0.567-0.966)	0.867 (0.654-1.12)	1.03 (0.756-1.38)	1.16 (0.831-1.57)	1.28 (0.901-1.80)	1.43 (0.956-2.03)	1.63 (1.05-2.38)	1.80 (1.14-2.67)
15-min	0.608 (0.463-0.782)	0.711 (0.541-0.915)	0.880 (0.667-1.14)	1.02 (0.769-1.32)	1.21 (0.889-1.62)	1.36 (0.977-1.85)	1.51 (1.06-2.12)	1.68 (1.12-2.39)	1.92 (1.24-2.81)	2.11 (1.34-3.14)
30-min	0.844 (0.642-1.09)	0.986 (0.750-1.27)	1.22 (0.924-1.57)	1.41 (1.07-1.83)	1.68 (1.23-2.24)	1.88 (1.35-2.55)	2.09 (1.46-2.91)	2.31 (1.55-3.28)	2.61 (1.69-3.82)	2.85 (1.81-4.24)
60-min	1.08 (0.822-1.39)	1.26 (0.959-1.62)	1.56 (1.18-2.01)	1.80 (1.36-2.34)	2.14 (1.57-2.86)	2.40 (1.72-3.25)	2.67 (1.86-3.70)	2.94 (1.97-4.18)	3.31 (2.14-4.83)	3.59 (2.27-5.33)
2-hr	1.40 (1.07-1.79)	1.64 (1.25-2.10)	2.04 (1.55-2.61)	2.36 (1.79-3.04)	2.81 (2.07-3.74)	3.15 (2.28-4.26)	3.51 (2.47-4.88)	3.90 (2.62-5.52)	4.47 (2.90-6.49)	4.92 (3.13-7.27)
3-hr	1.61 (1.24-2.05)	1.90 (1.46-2.42)	2.37 (1.81-3.03)	2.76 (2.10-3.54)	3.29 (2.44-4.37)	3.69 (2.69-4.99)	4.12 (2.92-5.73)	4.61 (3.10-6.49)	5.32 (3.45-7.69)	5.90 (3.76-8.68)
6-hr	2.03 (1.57-2.56)	2.42 (1.87-3.05)	3.05 (2.35-3.86)	3.57 (2.73-4.54)	4.29 (3.20-5.67)	4.83 (3.54-6.49)	5.40 (3.86-7.50)	6.08 (4.11-8.51)	7.09 (4.62-10.2)	7.94 (5.06-11.6)
12-hr	2.49 (1.94-3.12)	3.01 (2.34-3.78)	3.85 (2.98-4.85)	4.55 (3.51-5.75)	5.51 (4.13-7.24)	6.23 (4.59-8.33)	7.00 (5.03-9.67)	7.91 (5.36-11.0)	9.28 (6.07-13.3)	10.4 (6.68-15.1)
24-hr	2.93 (2.29-3.65)	3.59 (2.81-4.48)	4.68 (3.65-5.85)	5.58 (4.33-7.01)	6.82 (5.15-8.91)	7.74 (5.74-10.3)	8.73 (6.33-12.0)	9.94 (6.76-13.7)	11.8 (7.73-16.7)	13.4 (8.58-19.3)
2-day	3.32 (2.62-4.11)	4.13 (3.25-5.12)	5.46 (4.28-6.78)	6.56 (5.12-8.19)	8.08 (6.14-10.5)	9.19 (6.88-12.2)	10.4 (7.64-14.4)	12.0 (8.16-16.4)	14.4 (9.47-20.3)	16.5 (10.6-23.6)
3-day	3.62 (2.86-4.46)	4.51 (3.56-5.56)	5.96 (4.70-7.38)	7.17 (5.61-8.91)	8.83 (6.74-11.5)	10.0 (7.54-13.3)	11.4 (8.38-15.7)	13.1 (8.96-17.9)	15.8 (10.4-22.2)	18.2 (11.7-25.9)
4-day	3.89 (3.09-4.79)	4.83 (3.83-5.95)	6.37 (5.03-7.86)	7.65 (6.00-9.48)	9.40 (7.19-12.2)	10.7 (8.04-14.1)	12.1 (8.92-16.6)	13.9 (9.53-19.0)	16.7 (11.1-23.5)	19.2 (12.4-27.3)
7-day	4.67 (3.72-5.71)	5.70 (4.54-6.98)	7.39 (5.87-9.07)	8.80 (6.94-10.8)	10.7 (8.23-13.8)	12.2 (9.15-15.9)	13.7 (10.1-18.6)	15.6 (10.7-21.2)	18.6 (12.3-25.9)	21.1 (13.7-29.8)
10-day	5.43 (4.34-6.62)	6.52 (5.21-7.95)	8.30 (6.61-10.2)	9.78 (7.74-12.0)	11.8 (9.08-15.1)	13.3 (10.0-17.3)	15.0 (11.0-20.1)	16.9 (11.7-22.8)	19.8 (13.2-27.5)	22.3 (14.5-31.4)
20-day	7.75 (6.24-9.38)	8.95 (7.19-10.8)	10.9 (8.73-13.2)	12.5 (9.97-15.3)	14.7 (11.4-18.6)	16.4 (12.4-21.0)	18.2 (13.3-23.9)	20.1 (13.9-26.9)	22.8 (15.2-31.4)	25.0 (16.3-35.0)
30-day	9.67 (7.81-11.6)	10.9 (8.82-13.2)	13.0 (10.4-15.7)	14.7 (11.7-17.8)	17.0 (13.2-21.3)	18.8 (14.2-23.9)	20.7 (15.1-26.9)	22.5 (15.7-30.1)	25.1 (16.8-34.4)	27.1 (17.6-37.7)
45-day	12.0 (9.75-14.4)	13.3 (10.8-16.0)	15.5 (12.5-18.7)	17.3 (13.9-20.9)	19.8 (15.3-24.6)	21.7 (16.4-27.4)	23.6 (17.2-30.4)	25.5 (17.8-33.8)	27.9 (18.7-38.1)	29.7 (19.4-41.2)
60-day	14.0 (11.3-16.7)	15.3 (12.5-18.4)	17.6 (14.3-21.1)	19.5 (15.7-23.5)	22.1 (17.1-27.3)	24.1 (18.3-30.2)	26.1 (19.0-33.4)	28.0 (19.6-37.0)	30.3 (20.4-41.2)	32.0 (20.9-44.2)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

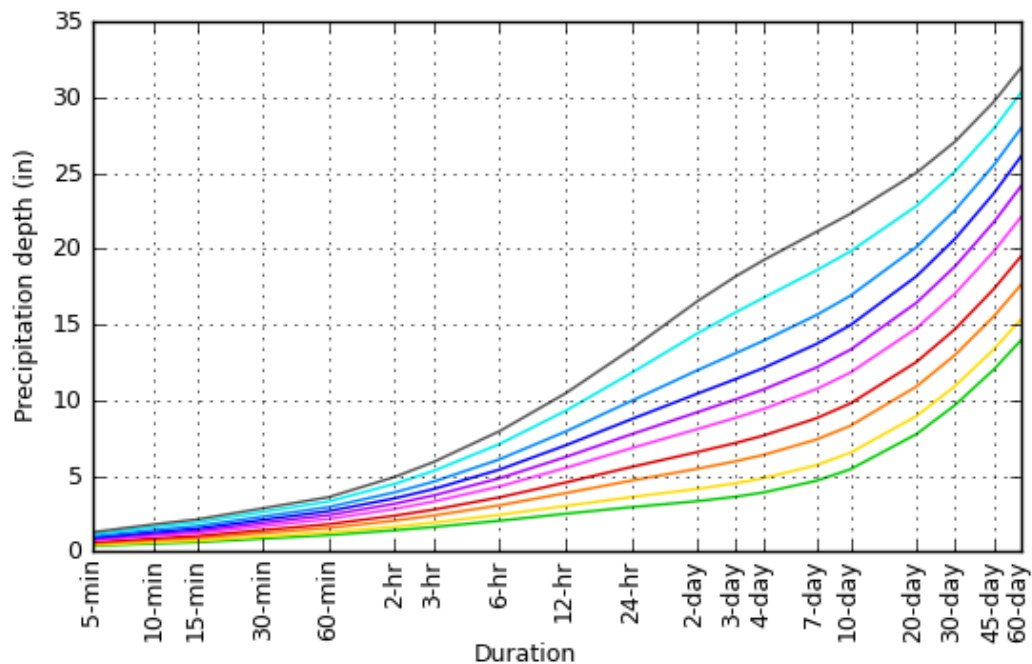
Please refer to NOAA Atlas 14 document for more information.

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PF graphical

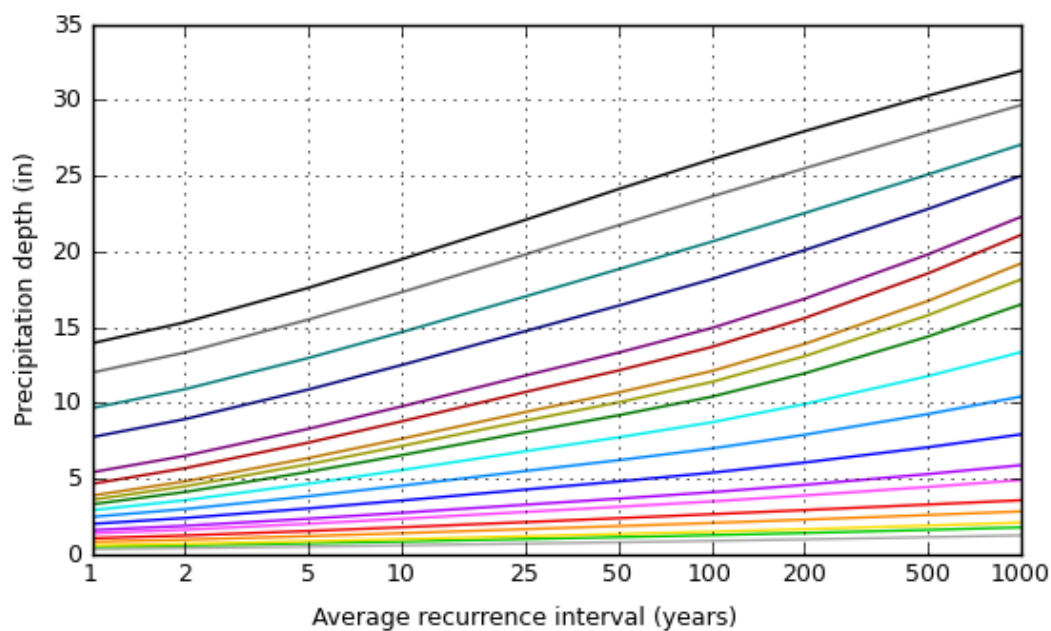
PDS-based depth-duration-frequency (DDF) curves

Latitude: 41.3480°, Longitude: -73.2398°



Average recurrence interval (years)

- 1
- 2
- 5
- 10
- 25
- 50
- 100
- 200
- 500
- 1000



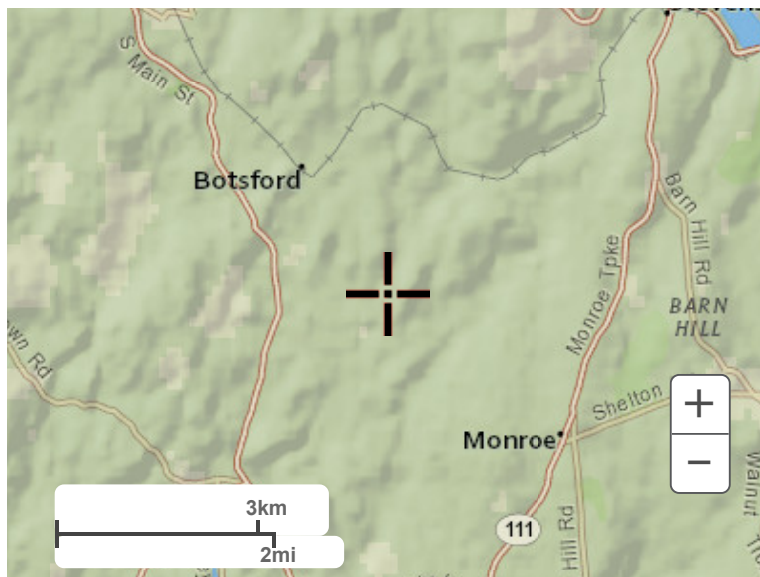
Duration

- 5-min
- 10-min
- 15-min
- 30-min
- 60-min
- 2-hr
- 3-hr
- 6-hr
- 12-hr
- 24-hr
- 2-day
- 3-day
- 4-day
- 7-day
- 10-day
- 20-day
- 30-day
- 45-day
- 60-day

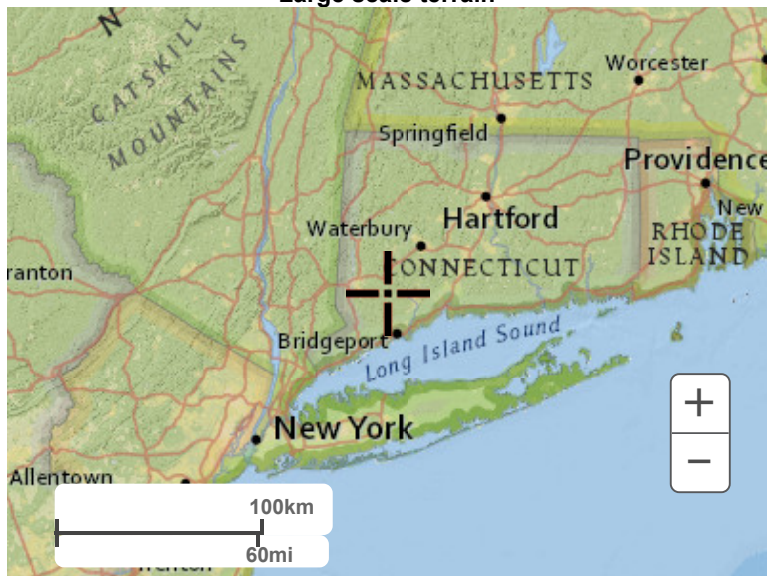
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Maps & aerials

Small scale terrain



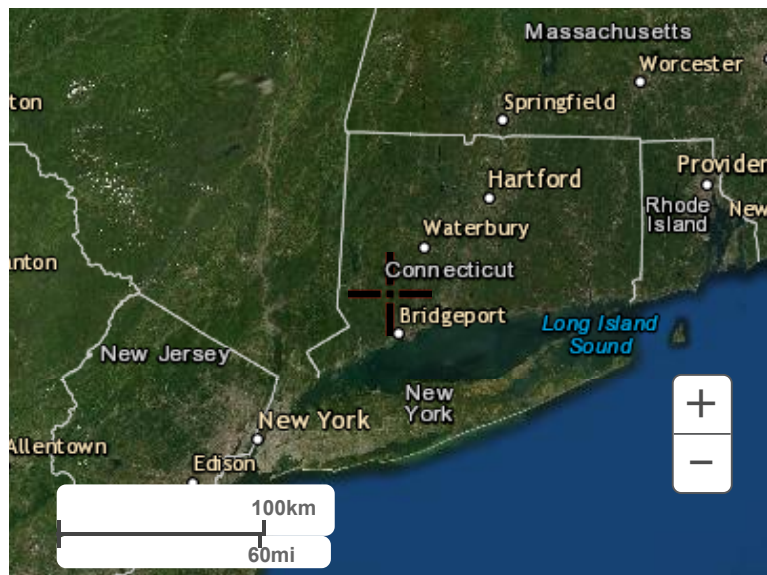
Large scale terrain



Large scale map



Large scale aerial



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Silver Spring, MD 20910
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POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerals](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	4.38 (3.34-5.63)	5.12 (3.89-6.59)	6.34 (4.80-8.17)	7.34 (5.54-9.53)	8.74 (6.41-11.7)	9.78 (7.04-13.3)	10.9 (7.63-15.2)	12.1 (8.09-17.2)	13.8 (8.94-20.2)	15.2 (9.64-22.6)
10-min	3.10 (2.36-3.98)	3.63 (2.76-4.67)	4.49 (3.40-5.80)	5.20 (3.92-6.74)	6.19 (4.54-8.28)	6.93 (4.99-9.43)	7.70 (5.41-10.8)	8.56 (5.74-12.2)	9.79 (6.32-14.3)	10.8 (6.82-16.0)
15-min	2.43 (1.85-3.13)	2.84 (2.16-3.66)	3.52 (2.67-4.54)	4.08 (3.08-5.28)	4.85 (3.56-6.50)	5.43 (3.91-7.39)	6.04 (4.24-8.46)	6.72 (4.49-9.56)	7.68 (4.96-11.2)	8.46 (5.35-12.6)
30-min	1.69 (1.28-2.17)	1.97 (1.50-2.54)	2.44 (1.85-3.14)	2.82 (2.13-3.66)	3.36 (2.46-4.48)	3.76 (2.70-5.10)	4.18 (2.92-5.82)	4.62 (3.09-6.57)	5.22 (3.38-7.64)	5.70 (3.61-8.47)
60-min	1.08 (0.822-1.39)	1.26 (0.959-1.62)	1.56 (1.18-2.01)	1.80 (1.36-2.34)	2.14 (1.57-2.86)	2.40 (1.72-3.25)	2.67 (1.86-3.70)	2.94 (1.97-4.18)	3.31 (2.14-4.83)	3.59 (2.27-5.33)
2-hr	0.700 (0.536-0.894)	0.820 (0.628-1.05)	1.02 (0.776-1.30)	1.18 (0.896-1.52)	1.41 (1.04-1.87)	1.58 (1.14-2.13)	1.75 (1.24-2.44)	1.95 (1.31-2.76)	2.23 (1.45-3.24)	2.46 (1.56-3.63)
3-hr	0.537 (0.413-0.684)	0.633 (0.486-0.806)	0.789 (0.604-1.01)	0.918 (0.699-1.18)	1.10 (0.812-1.46)	1.23 (0.894-1.66)	1.37 (0.973-1.91)	1.53 (1.03-2.16)	1.77 (1.15-2.56)	1.97 (1.25-2.89)
6-hr	0.339 (0.262-0.428)	0.403 (0.311-0.510)	0.509 (0.392-0.645)	0.596 (0.457-0.759)	0.717 (0.534-0.946)	0.806 (0.590-1.08)	0.902 (0.645-1.25)	1.01 (0.686-1.42)	1.18 (0.772-1.70)	1.33 (0.846-1.94)
12-hr	0.207 (0.161-0.259)	0.249 (0.194-0.313)	0.320 (0.248-0.402)	0.378 (0.291-0.477)	0.458 (0.343-0.601)	0.517 (0.381-0.691)	0.581 (0.418-0.803)	0.657 (0.445-0.913)	0.770 (0.503-1.10)	0.866 (0.554-1.26)
24-hr	0.122 (0.095-0.152)	0.150 (0.117-0.187)	0.195 (0.152-0.244)	0.232 (0.180-0.292)	0.284 (0.214-0.371)	0.322 (0.239-0.429)	0.364 (0.264-0.502)	0.414 (0.282-0.573)	0.491 (0.322-0.697)	0.557 (0.357-0.803)
2-day	0.069 (0.054-0.086)	0.086 (0.068-0.107)	0.114 (0.089-0.141)	0.137 (0.107-0.171)	0.168 (0.128-0.219)	0.191 (0.143-0.254)	0.217 (0.159-0.299)	0.249 (0.170-0.342)	0.300 (0.197-0.423)	0.344 (0.222-0.493)
3-day	0.050 (0.040-0.062)	0.063 (0.049-0.077)	0.083 (0.065-0.102)	0.100 (0.078-0.124)	0.123 (0.094-0.159)	0.140 (0.105-0.185)	0.158 (0.116-0.218)	0.182 (0.124-0.249)	0.219 (0.145-0.308)	0.252 (0.163-0.360)
4-day	0.041 (0.032-0.050)	0.050 (0.040-0.062)	0.066 (0.052-0.082)	0.080 (0.063-0.099)	0.098 (0.075-0.127)	0.111 (0.084-0.147)	0.126 (0.093-0.173)	0.145 (0.099-0.198)	0.174 (0.115-0.244)	0.200 (0.129-0.285)
7-day	0.028 (0.022-0.034)	0.034 (0.027-0.042)	0.044 (0.035-0.054)	0.052 (0.041-0.065)	0.064 (0.049-0.082)	0.072 (0.054-0.095)	0.082 (0.060-0.111)	0.093 (0.064-0.126)	0.110 (0.073-0.154)	0.126 (0.081-0.178)
10-day	0.023 (0.018-0.028)	0.027 (0.022-0.033)	0.035 (0.028-0.042)	0.041 (0.032-0.050)	0.049 (0.038-0.063)	0.056 (0.042-0.072)	0.062 (0.046-0.084)	0.070 (0.049-0.095)	0.083 (0.055-0.115)	0.093 (0.060-0.131)
20-day	0.016 (0.013-0.020)	0.019 (0.015-0.023)	0.023 (0.018-0.028)	0.026 (0.021-0.032)	0.031 (0.024-0.039)	0.034 (0.026-0.044)	0.038 (0.028-0.050)	0.042 (0.029-0.056)	0.048 (0.032-0.065)	0.052 (0.034-0.073)
30-day	0.013 (0.011-0.016)	0.015 (0.012-0.018)	0.018 (0.014-0.022)	0.020 (0.016-0.025)	0.024 (0.018-0.030)	0.026 (0.020-0.033)	0.029 (0.021-0.037)	0.031 (0.022-0.042)	0.035 (0.023-0.048)	0.038 (0.024-0.052)
45-day	0.011 (0.009-0.013)	0.012 (0.010-0.015)	0.014 (0.012-0.017)	0.016 (0.013-0.019)	0.018 (0.014-0.023)	0.020 (0.015-0.025)	0.022 (0.016-0.028)	0.024 (0.017-0.031)	0.026 (0.017-0.035)	0.027 (0.018-0.038)
60-day	0.010 (0.008-0.012)	0.011 (0.009-0.013)	0.012 (0.010-0.015)	0.014 (0.011-0.016)	0.015 (0.012-0.019)	0.017 (0.013-0.021)	0.018 (0.013-0.023)	0.019 (0.014-0.026)	0.021 (0.014-0.029)	0.022 (0.015-0.031)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

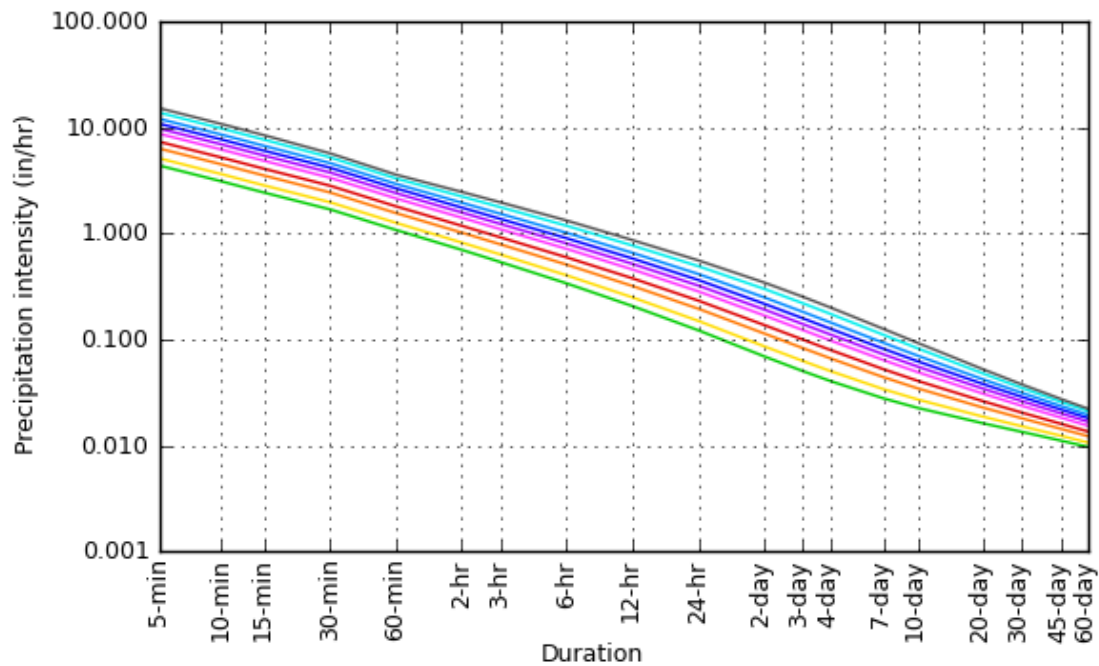
Please refer to NOAA Atlas 14 document for more information.

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PF graphical

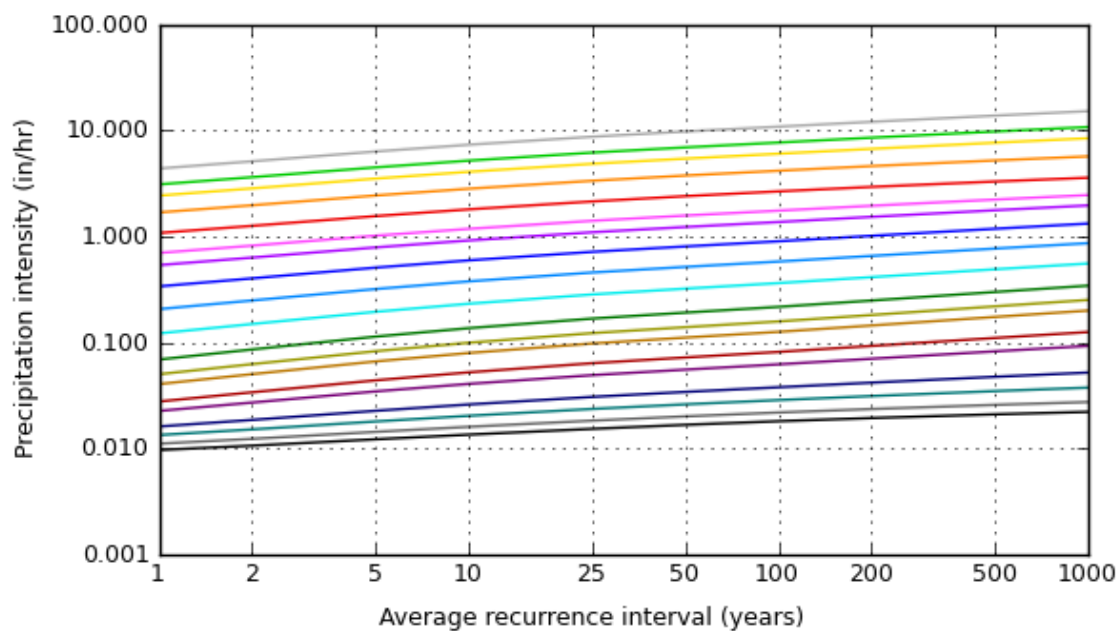
PDS-based intensity-duration-frequency (IDF) curves

Latitude: 41.3480°, Longitude: -73.2398°



Average recurrence interval (years)

- 1
- 2
- 5
- 10
- 25
- 50
- 100
- 200
- 500
- 1000



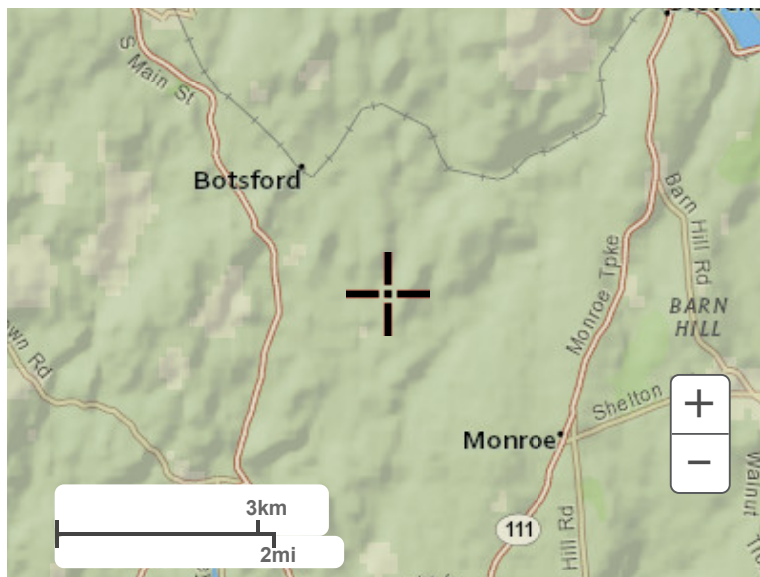
Duration

- 5-min
- 10-min
- 15-min
- 30-min
- 60-min
- 2-hr
- 3-hr
- 6-hr
- 12-hr
- 24-hr
- 2-day
- 3-day
- 4-day
- 7-day
- 10-day
- 20-day
- 30-day
- 45-day
- 60-day

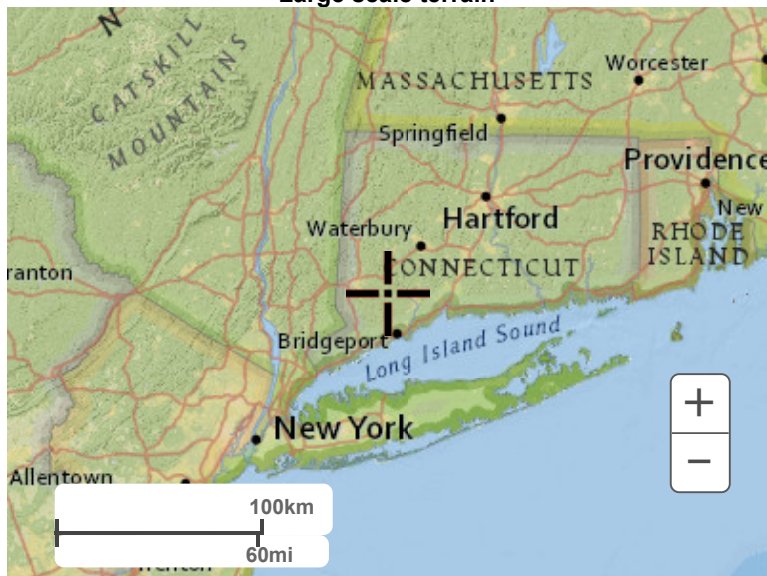
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Maps & aerials

Small scale terrain



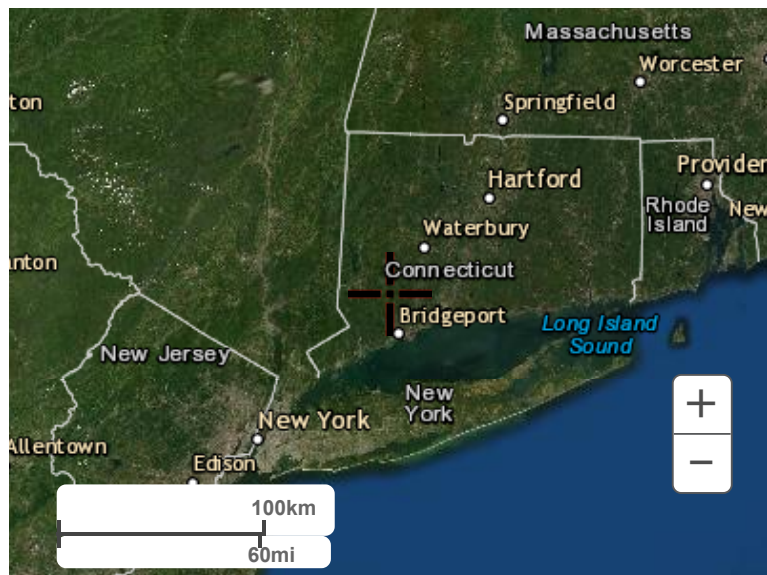
Large scale terrain



Large scale map



Large scale aerial



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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

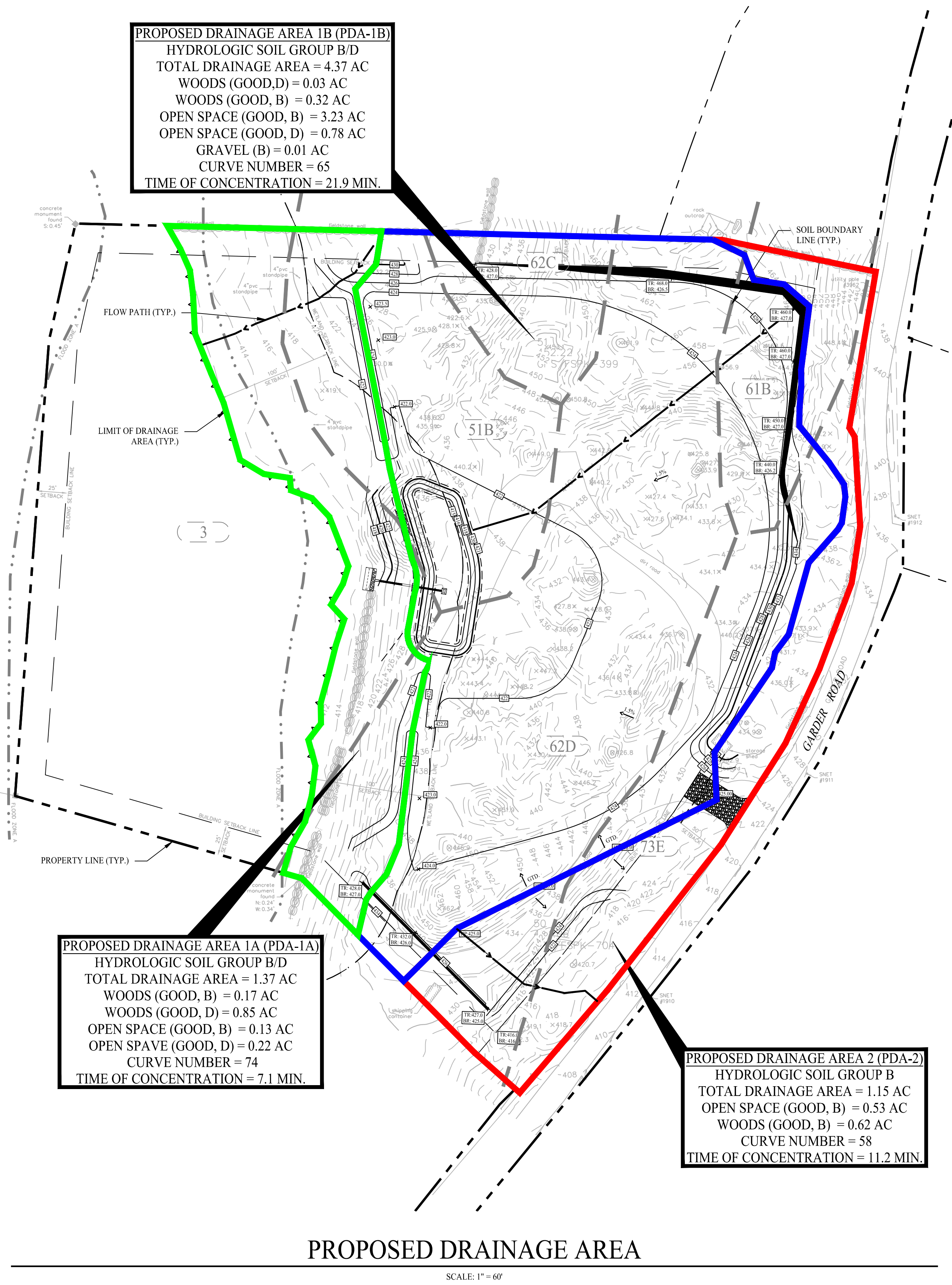
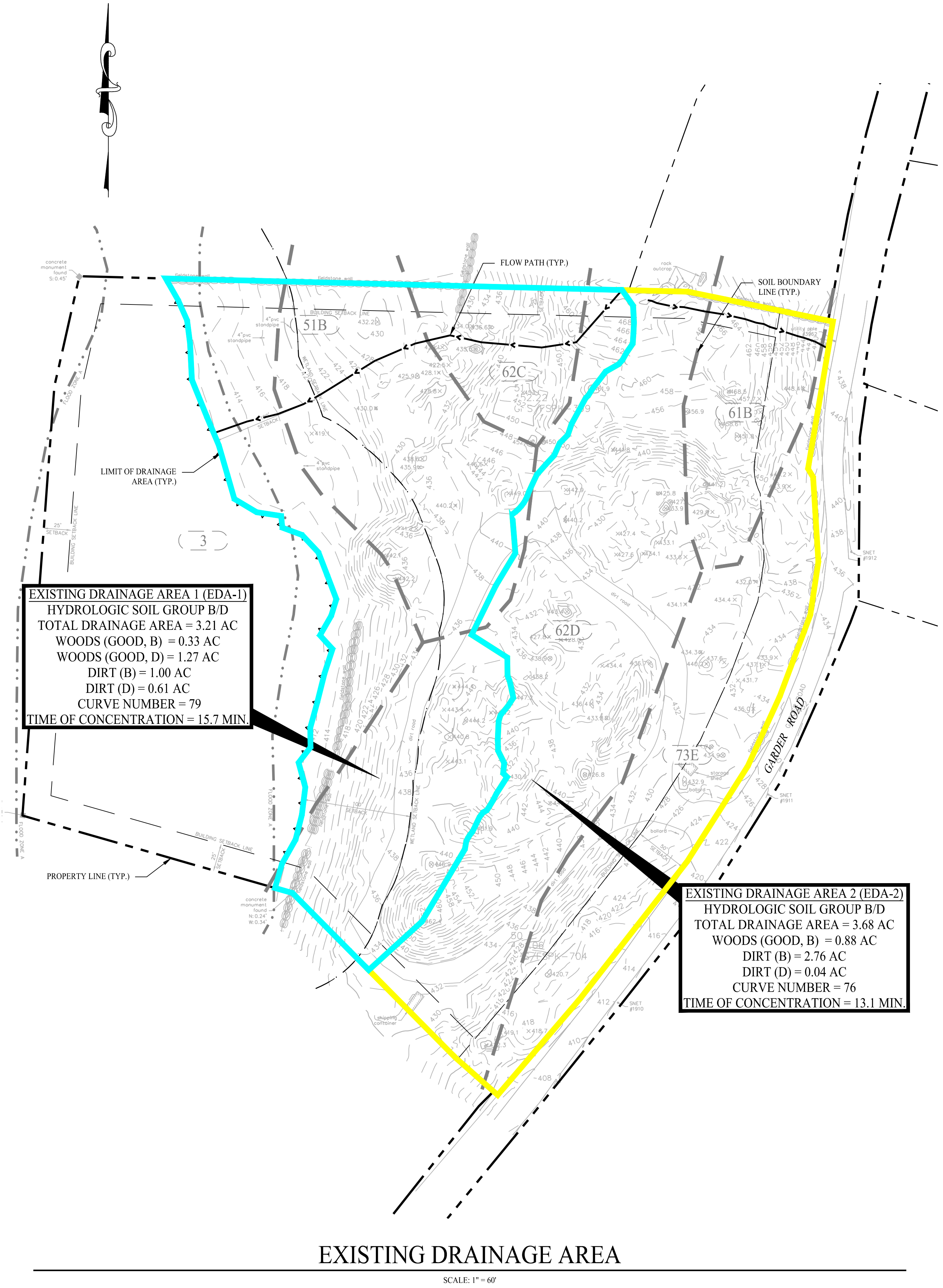
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GENERAL NOTES

1. THE STORMWATER MANAGEMENT PLAN AND DESIGN IS INTENDED TO BE IN COMPLIANCE WITH THE 2000 CONNECTICUT DEPARTMENT OF TRANSPORTATION (CTDOT) DRAINAGE MANUAL AND THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL.
2. STORMWATER RUNOFF ANALYSIS WAS CALCULATED USING THE SCS TR-55 METHODOLOGY.

LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJOINING LOT LINE
	LIMIT OF DRAINAGE AREA
	FLOW PATH
	SOIL TYPE BOUNDARY
	SOIL TYPE



Rev. #:	Date	Description
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SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

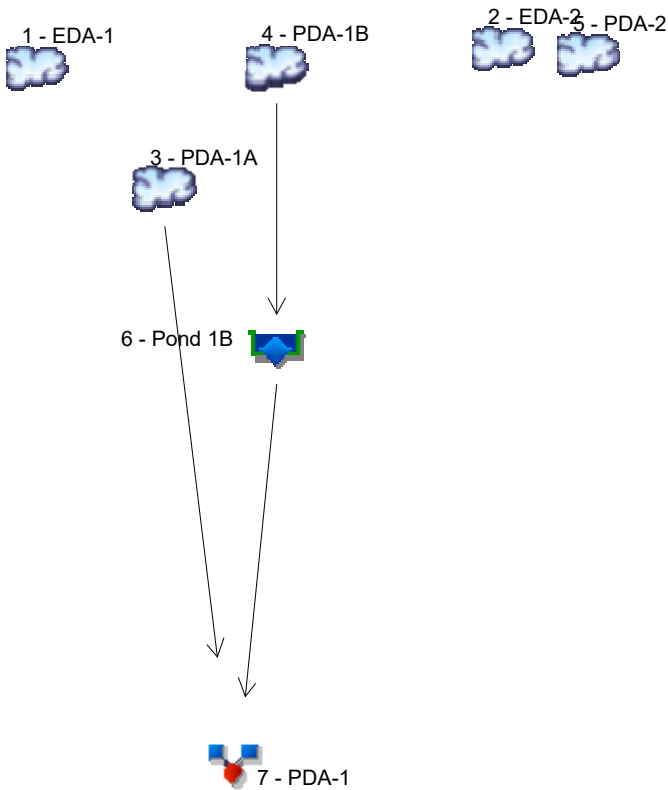
Drawn By:	MDM	Kevin Solli, P.E. CT 25759
Checked By:	RPP	
Approved By:	KMS	
Project #:	22104001	
Plan Date:	10/01/22	
Scale:	1" = 60'	

EXCAVATION/FILLING PERMIT APPLICATION
125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
DRAINAGE AREA MAP	DA-1

Watershed Model Schematic

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022



Legend

Hyd.	Origin	Description
1	SCS Runoff	EDA-1
2	SCS Runoff	EDA-2
3	SCS Runoff	PDA-1A
4	SCS Runoff	PDA-1B
5	SCS Runoff	PDA-2
6	Reservoir	Pond 1B
7	Combine	PDA-1

Hydrograph Return Period Recap

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Inflow hyd(s)	Peak Outflow (cfs)								Hydrograph Description
			1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr	
1	SCS Runoff	-----	-----	4.519	-----	7.051	9.230	12.29	14.58	17.05	EDA-1
2	SCS Runoff	-----	-----	5.022	-----	8.122	10.85	14.72	17.64	20.81	EDA-2
3	SCS Runoff	-----	-----	1.823	-----	3.045	4.120	5.660	6.826	8.095	PDA-1A
4	SCS Runoff	-----	-----	2.330	-----	4.608	6.747	9.979	12.51	15.31	PDA-1B
5	SCS Runoff	-----	-----	0.352	-----	0.932	1.528	2.449	3.188	4.024	PDA-2
6	Reservoir	4	-----	0.000	-----	0.563	1.397	2.291	6.822	11.28	Pond 1B
7	Combine	3, 6	-----	1.823	-----	3.045	4.120	5.660	8.201	13.71	PDA-1
Proj. file: 125 garder Hydraflow.gpw										Wednesday, 10 / 5 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	4.519	2	732	18,589	-----	-----	-----	EDA-1
2	SCS Runoff	5.022	2	730	19,713	-----	-----	-----	EDA-2
3	SCS Runoff	1.823	2	726	6,477	-----	-----	-----	PDA-1A
4	SCS Runoff	2.330	2	740	12,912	-----	-----	-----	PDA-1B
5	SCS Runoff	0.352	2	734	2,104	-----	-----	-----	PDA-2
6	Reservoir	0.000	2	972	0	4	416.89	8,425	Pond 1B
7	Combine	1.823	2	726	6,477	3, 6	-----	-----	PDA-1
125 garder Hydraflow.gpw					Return Period: 2 Year			Wednesday, 10 / 5 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	7.051	2	730	28,724	-----	-----	-----	EDA-1
2	SCS Runoff	8.122	2	728	31,331	-----	-----	-----	EDA-2
3	SCS Runoff	3.045	2	726	10,502	-----	-----	-----	PDA-1A
4	SCS Runoff	4.608	2	738	23,322	-----	-----	-----	PDA-1B
5	SCS Runoff	0.932	2	730	4,293	-----	-----	-----	PDA-2
6	Reservoir	0.563	2	830	8,913	4	417.44	11,219	Pond 1B
7	Combine	3.045	2	726	19,415	3, 6	-----	-----	PDA-1
125 garder Hydraflow.gpw					Return Period: 5 Year			Wednesday, 10 / 5 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	9.230	2	730	37,571	-----	-----	-----	EDA-1
2	SCS Runoff	10.85	2	728	41,613	-----	-----	-----	EDA-2
3	SCS Runoff	4.120	2	726	14,099	-----	-----	-----	PDA-1A
4	SCS Runoff	6.747	2	736	33,113	-----	-----	-----	PDA-1B
5	SCS Runoff	1.528	2	730	6,462	-----	-----	-----	PDA-2
6	Reservoir	1.397	2	778	18,304	4	418.03	14,156	Pond 1B
7	Combine	4.120	2	726	32,403	3, 6	-----	-----	PDA-1
125 garder Hydraflow.gpw					Return Period: 10 Year			Wednesday, 10 / 5 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	12.29	2	730	50,215	-----	-----	-----	EDA-1
2	SCS Runoff	14.72	2	728	56,447	-----	-----	-----	EDA-2
3	SCS Runoff	5.660	2	726	19,323	-----	-----	-----	PDA-1A
4	SCS Runoff	9.979	2	736	47,858	-----	-----	-----	PDA-1B
5	SCS Runoff	2.449	2	730	9,849	-----	-----	-----	PDA-2
6	Reservoir	2.291	2	772	32,506	4	419.01	20,477	Pond 1B
7	Combine	5.660	2	726	51,829	3, 6	-----	-----	PDA-1
125 garder Hydraflow.gpw					Return Period: 25 Year			Wednesday, 10 / 5 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	14.58	2	730	59,830	-----	-----	-----	EDA-1
2	SCS Runoff	17.64	2	728	67,803	-----	-----	-----	EDA-2
3	SCS Runoff	6.826	2	726	23,343	-----	-----	-----	PDA-1A
4	SCS Runoff	12.51	2	736	59,500	-----	-----	-----	PDA-1B
5	SCS Runoff	3.188	2	730	12,592	-----	-----	-----	PDA-2
6	Reservoir	6.822	2	756	43,867	4	419.32	22,467	Pond 1B
7	Combine	8.201	2	754	67,210	3, 6	-----	-----	PDA-1
125 garder Hydraflow.gpw					Return Period: 50 Year			Wednesday, 10 / 5 / 2022	

Hydrograph Summary Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

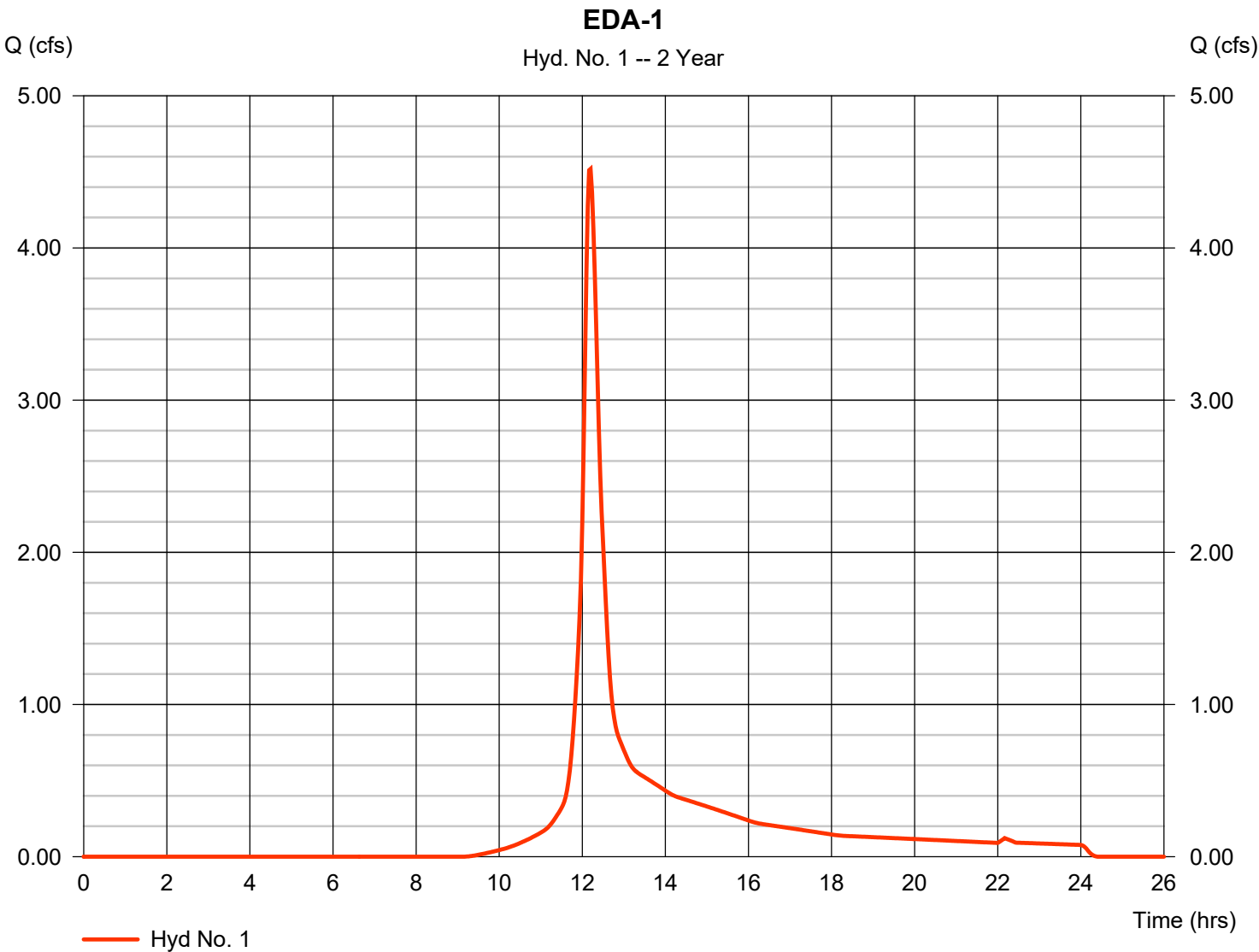
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	17.05	2	730	70,336	-----	-----	-----	EDA-1
2	SCS Runoff	20.81	2	728	80,264	-----	-----	-----	EDA-2
3	SCS Runoff	8.095	2	726	27,767	-----	-----	-----	PDA-1A
4	SCS Runoff	15.31	2	736	72,535	-----	-----	-----	PDA-1B
5	SCS Runoff	4.024	2	730	15,717	-----	-----	-----	PDA-2
6	Reservoir	11.28	2	750	56,625	4	419.54	23,844	Pond 1B
7	Combine	13.71	2	748	84,392	3, 6	-----	-----	PDA-1
125 garder Hydraflow.gpw					Return Period: 100 Year			Wednesday, 10 / 5 / 2022	

Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 4.519 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.20 hrs
Time interval	= 2 min	Hyd. volume	= 18,589 cuft
Drainage area	= 3.210 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.70 min
Total precip.	= 3.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

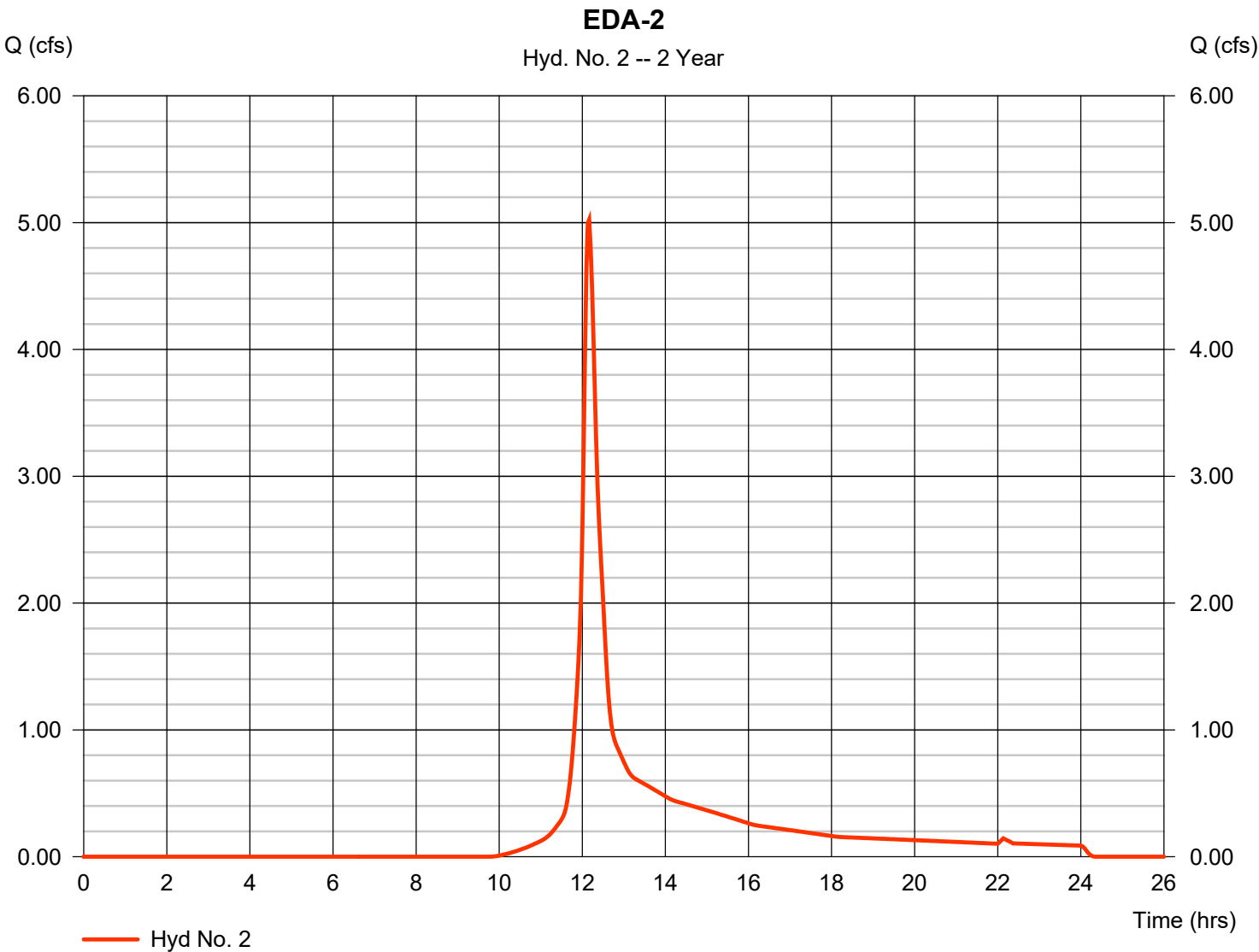


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 5.022 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 19,713 cuft
Drainage area	= 3.680 ac	Curve number	= 76
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.10 min
Total precip.	= 3.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

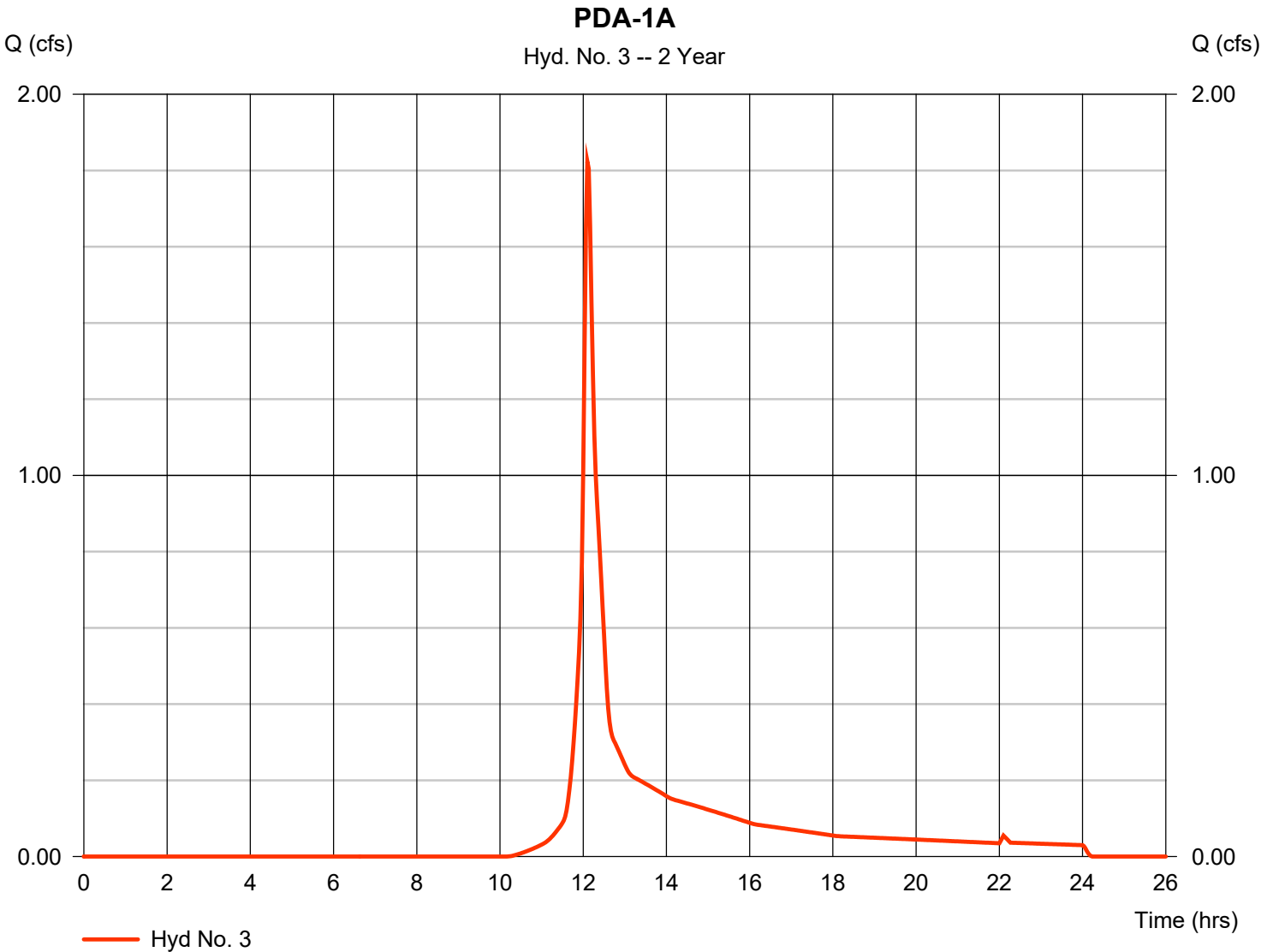


Hydrograph Report

Hyd. No. 3

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.823 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 6,477 cuft
Drainage area	= 1.370 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.10 min
Total precip.	= 3.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

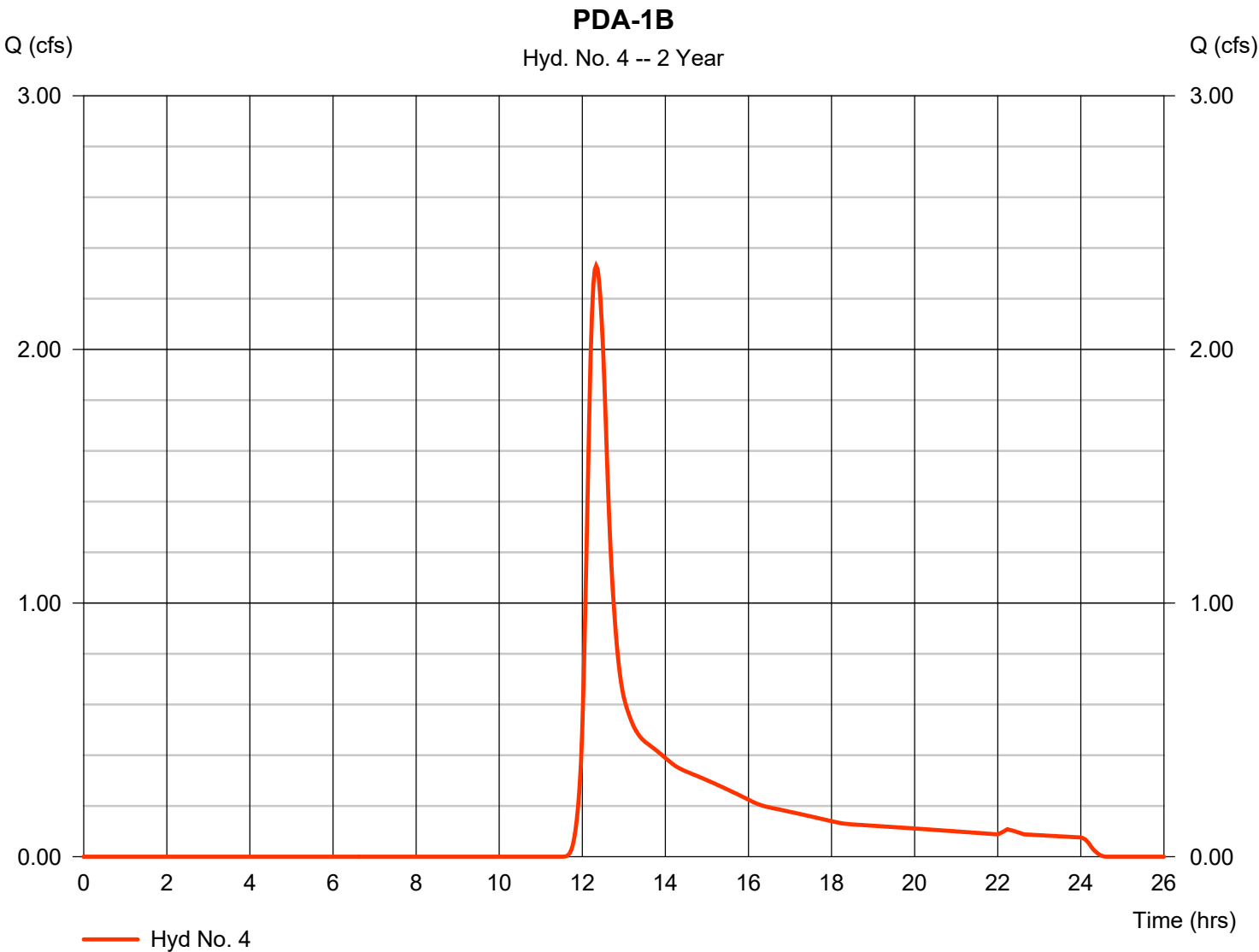


Hydrograph Report

Hyd. No. 4

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 2.330 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.33 hrs
Time interval	= 2 min	Hyd. volume	= 12,912 cuft
Drainage area	= 4.370 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 21.90 min
Total precip.	= 3.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

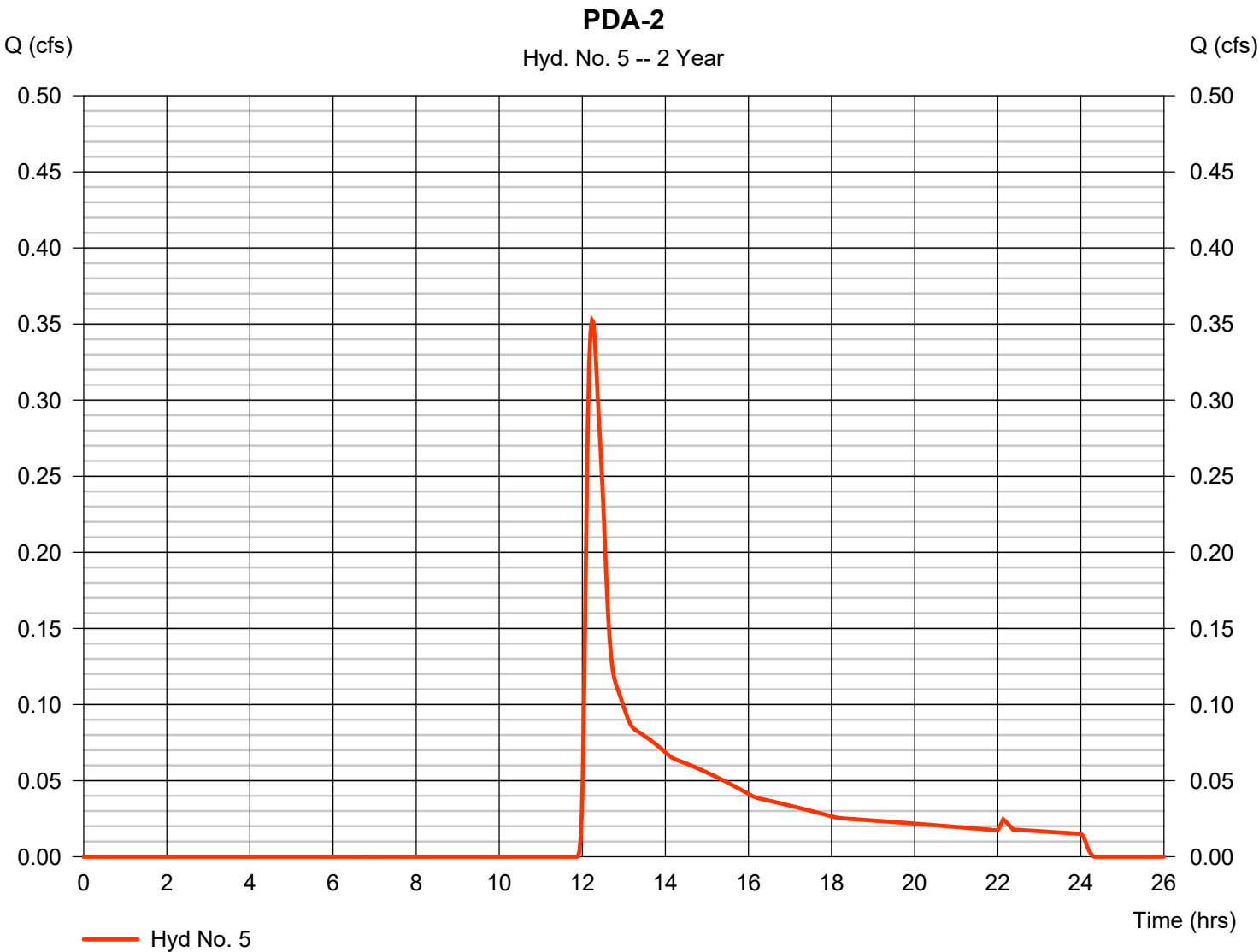


Hydrograph Report

Hyd. No. 5

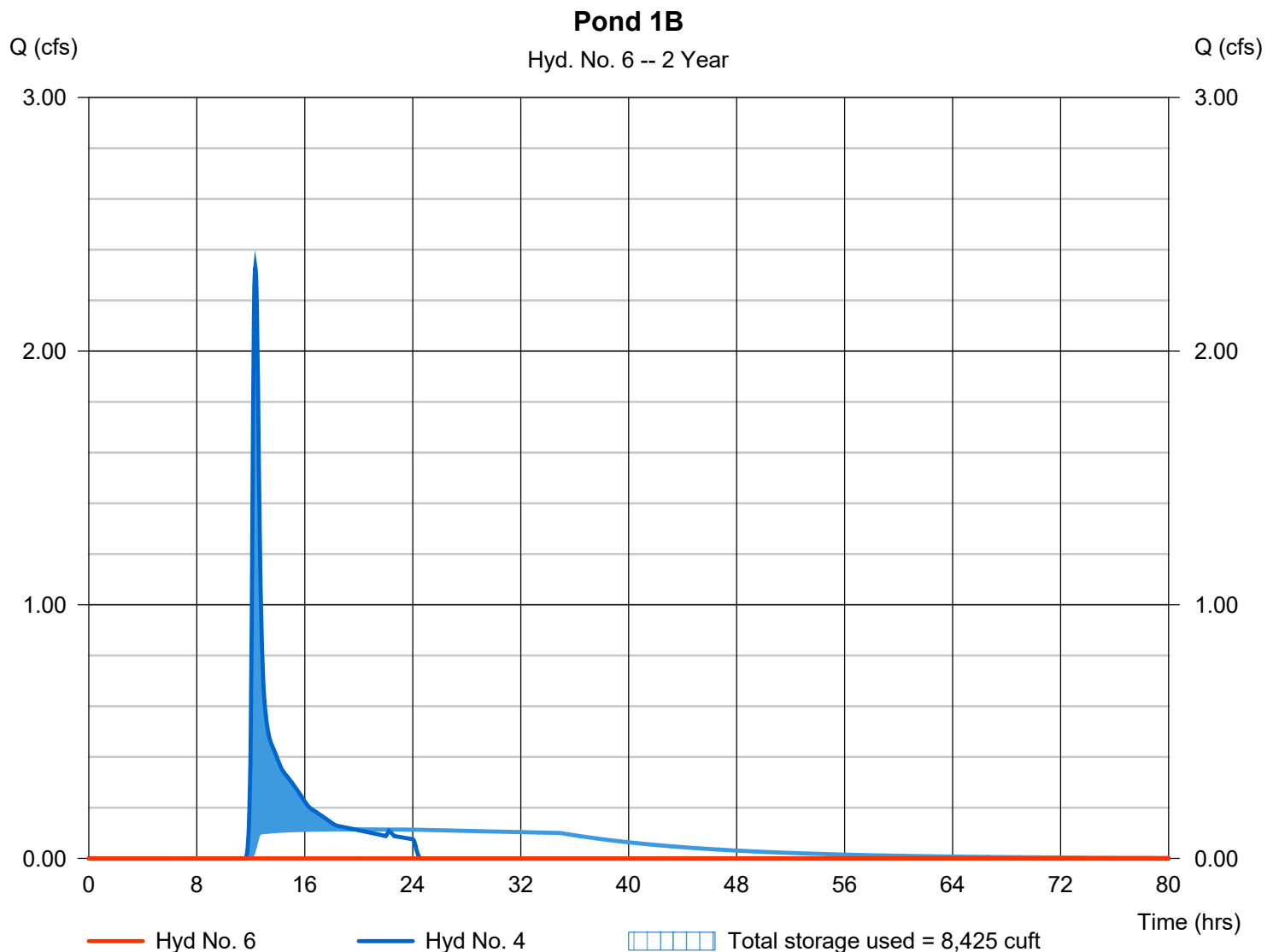
PDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.352 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.23 hrs
Time interval	= 2 min	Hyd. volume	= 2,104 cuft
Drainage area	= 1.150 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 11.20 min
Total precip.	= 3.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Wednesday, 10 / 5 / 2022

Peak discharge	= 0.000 cfs
Time to peak	= 16.20 hrs
Hyd. volume	= 0 cuft
Max. Elevation	= 416.89 ft
Max. Storage	= 8,425 cuft

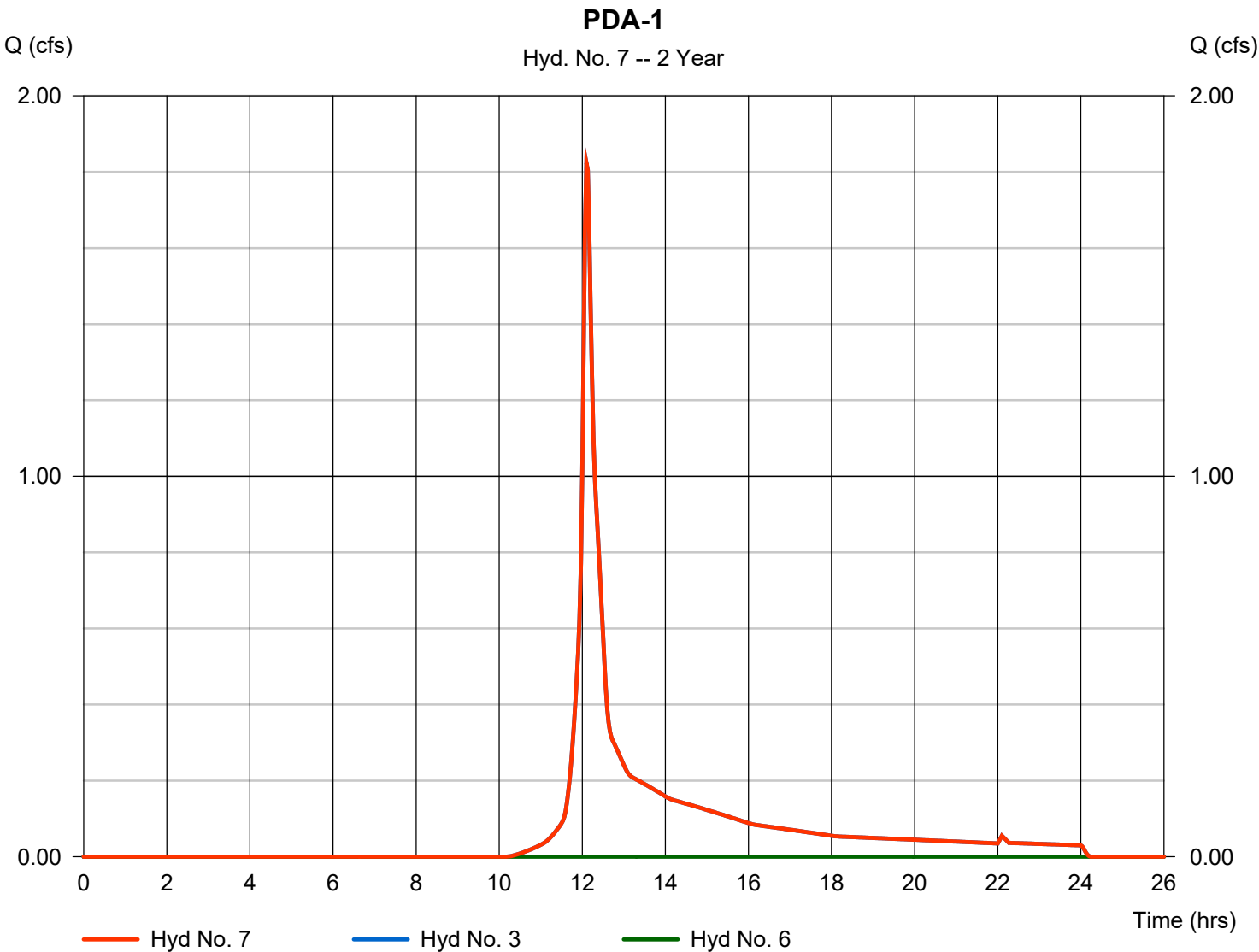


Hydrograph Report

Hyd. No. 7

PDA-1

Hydrograph type	= Combine	Peak discharge	= 1.823 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 6,477 cuft
Inflow hyds.	= 3, 6	Contrib. drain. area	= 1.370 ac

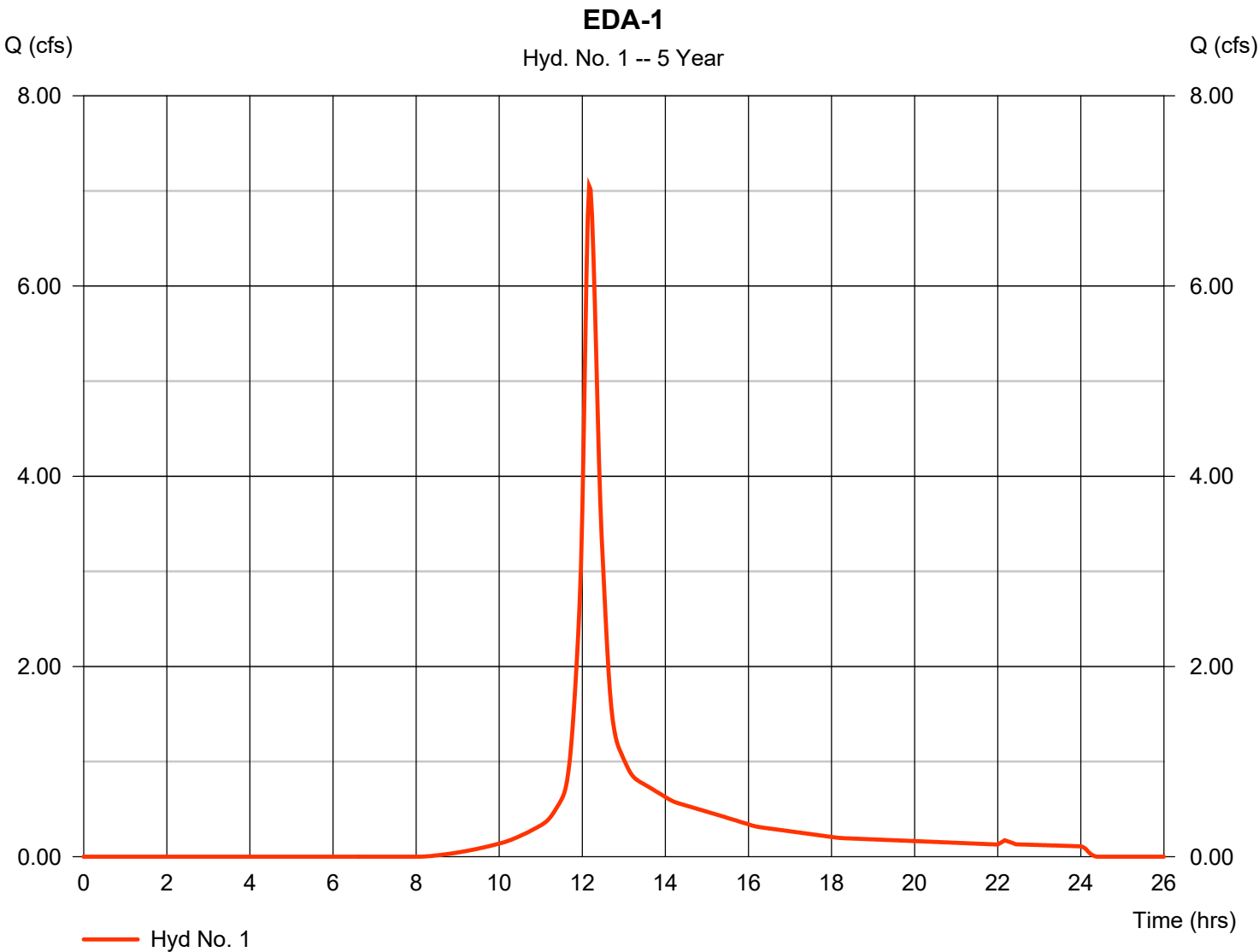


Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	=	SCS Runoff	Peak discharge	=	7.051 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	28,724 cuft
Drainage area	=	3.210 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	15.70 min
Total precip.	=	4.68 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

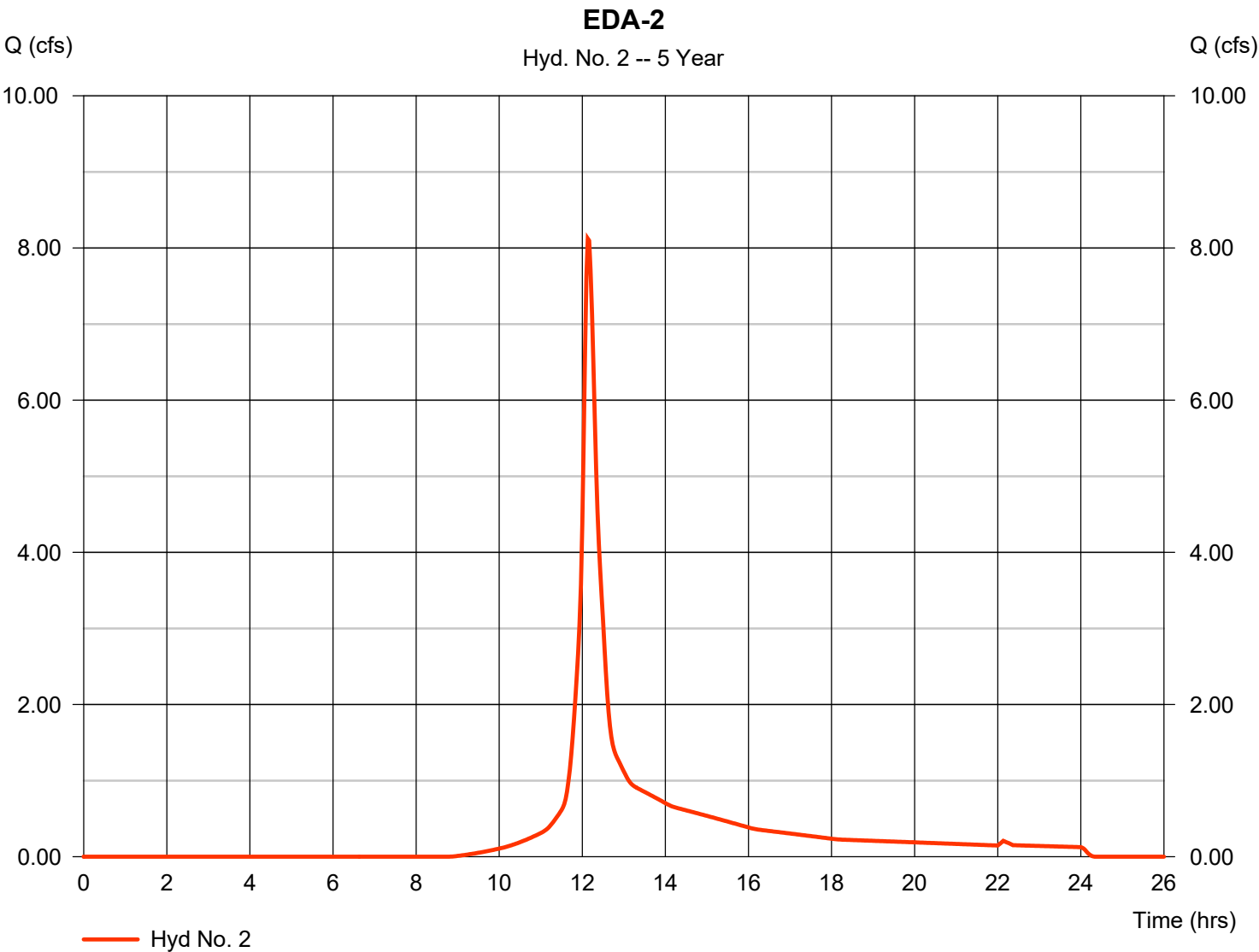


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 8.122 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.13 hrs
Time interval	= 2 min	Hyd. volume	= 31,331 cuft
Drainage area	= 3.680 ac	Curve number	= 76
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.10 min
Total precip.	= 4.68 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

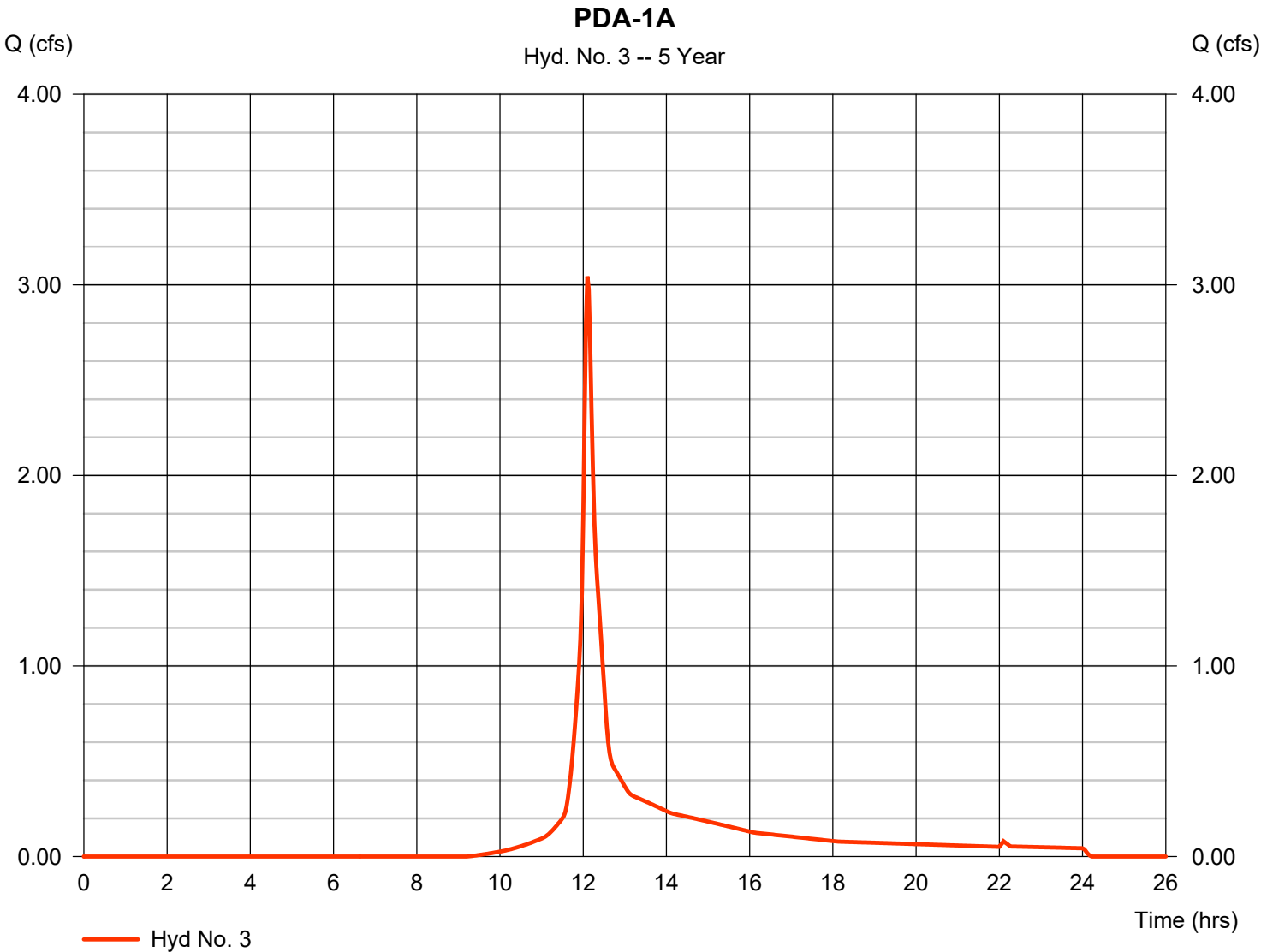


Hydrograph Report

Hyd. No. 3

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 3.045 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 10,502 cuft
Drainage area	= 1.370 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.10 min
Total precip.	= 4.68 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

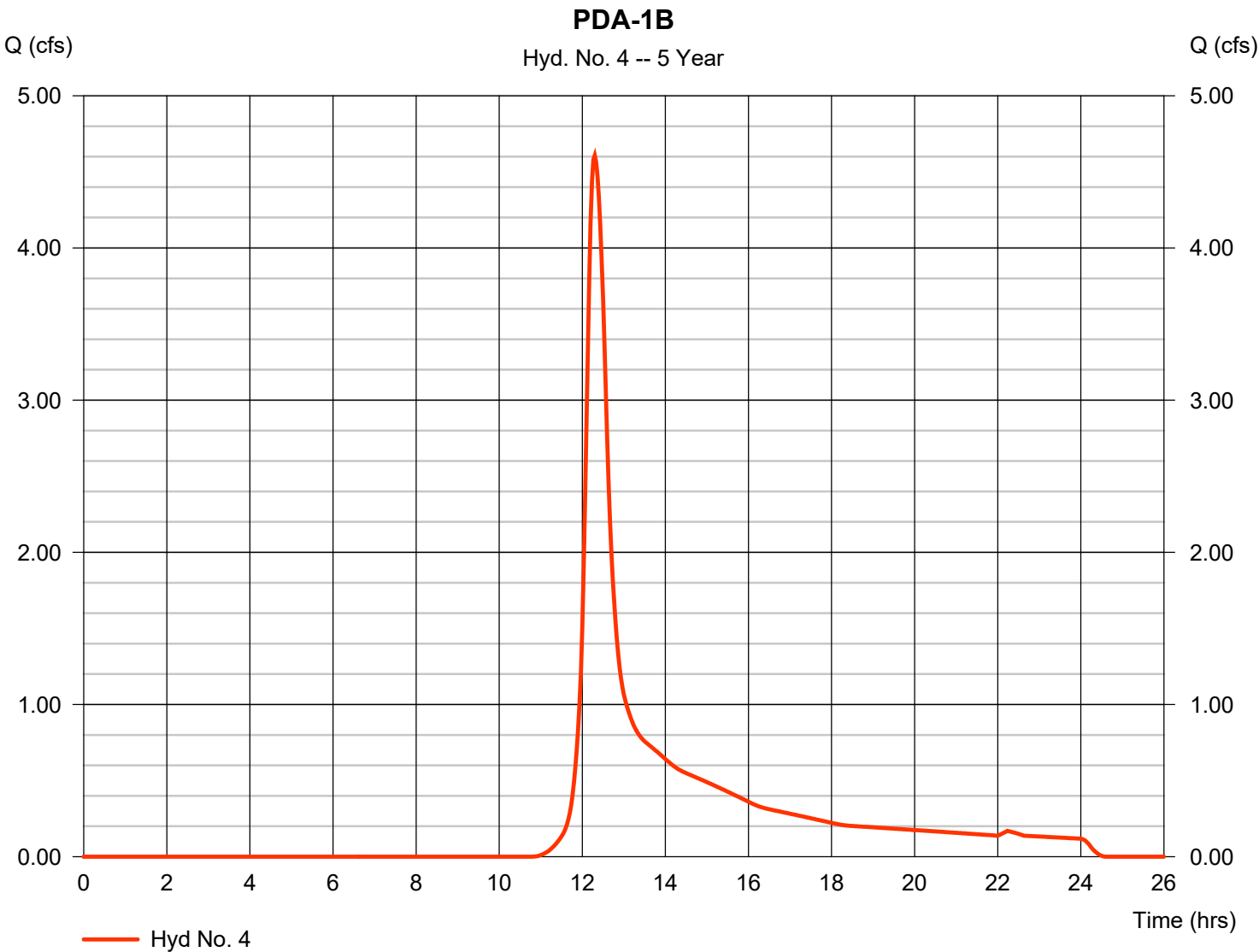


Hydrograph Report

Hyd. No. 4

PDA-1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	4.608 cfs
Storm frequency	=	5 yrs	Time to peak	=	12.30 hrs
Time interval	=	2 min	Hyd. volume	=	23,322 cuft
Drainage area	=	4.370 ac	Curve number	=	65
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	21.90 min
Total precip.	=	4.68 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

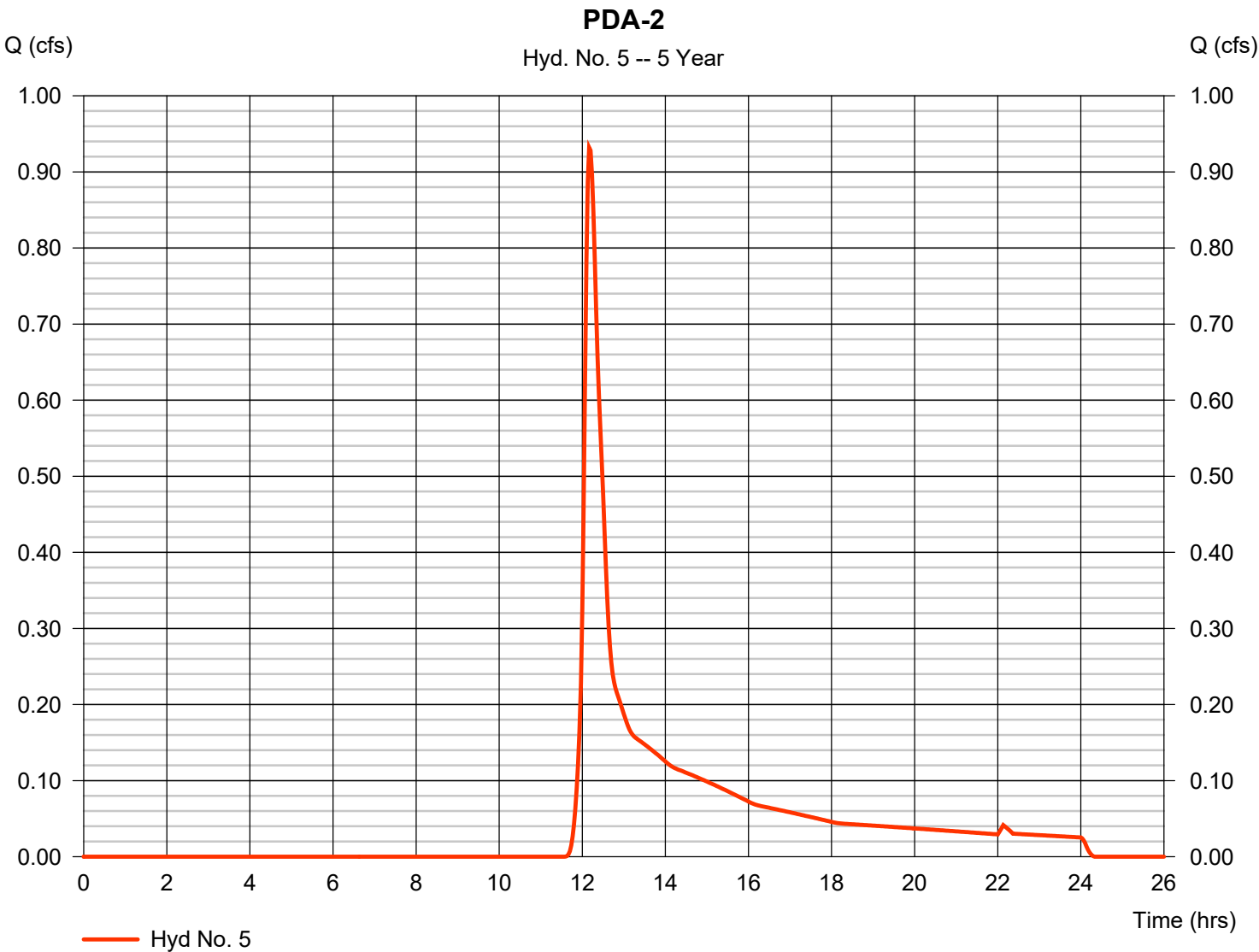


Hydrograph Report

Hyd. No. 5

PDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 0.932 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 4,293 cuft
Drainage area	= 1.150 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 11.20 min
Total precip.	= 4.68 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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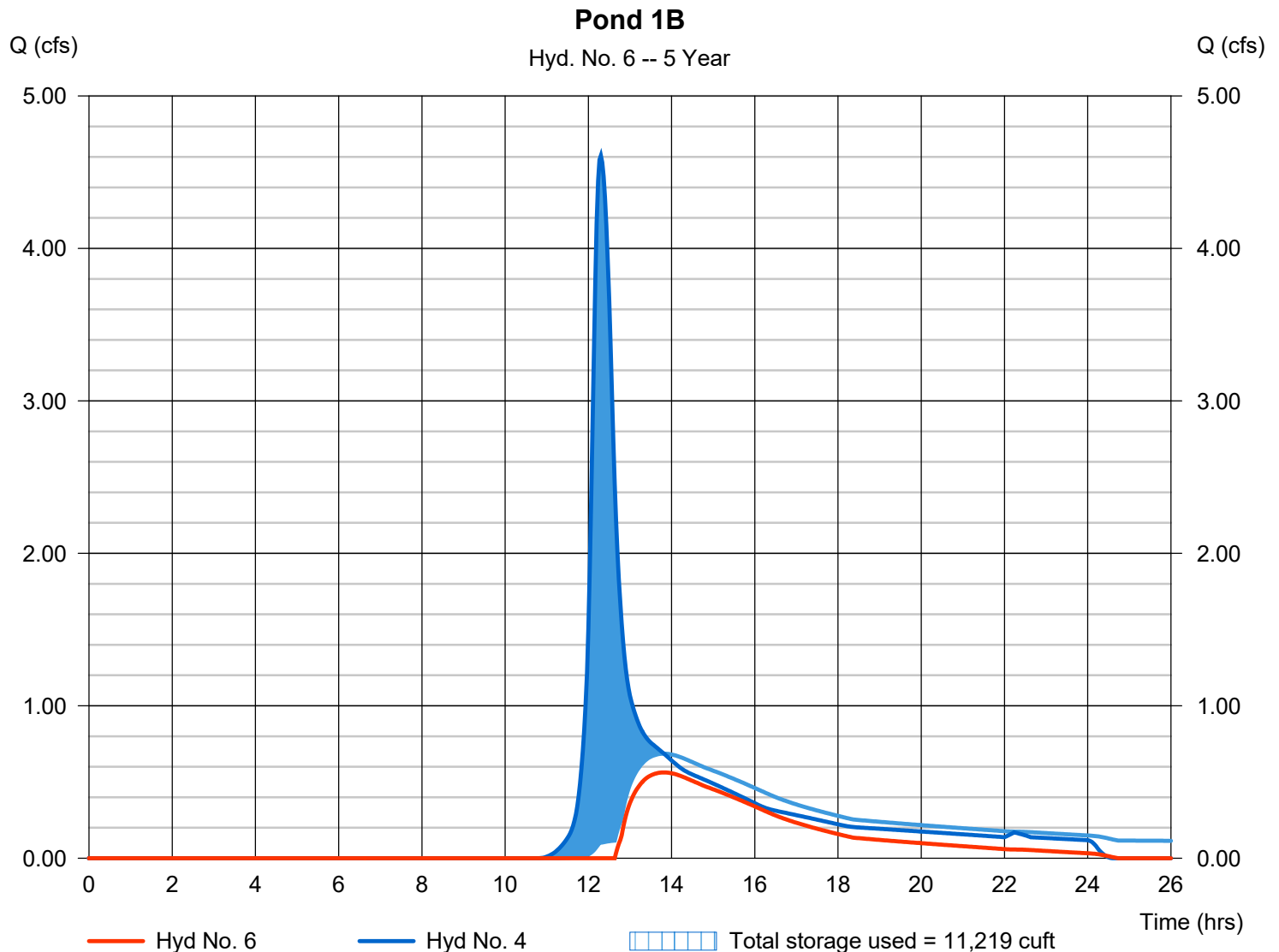
Hyd. No. 6

Pond 1B

Hydrograph type = Reservoir
Storm frequency = 5 yrs
Time interval = 2 min
Inflow hyd. No. = 4 - PDA-1B
Reservoir name = Pond 1

Peak discharge = 0.563 cfs
Time to peak = 13.83 hrs
Hyd. volume = 8,913 cuft
Max. Elevation = 417.44 ft
Max. Storage = 11,219 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

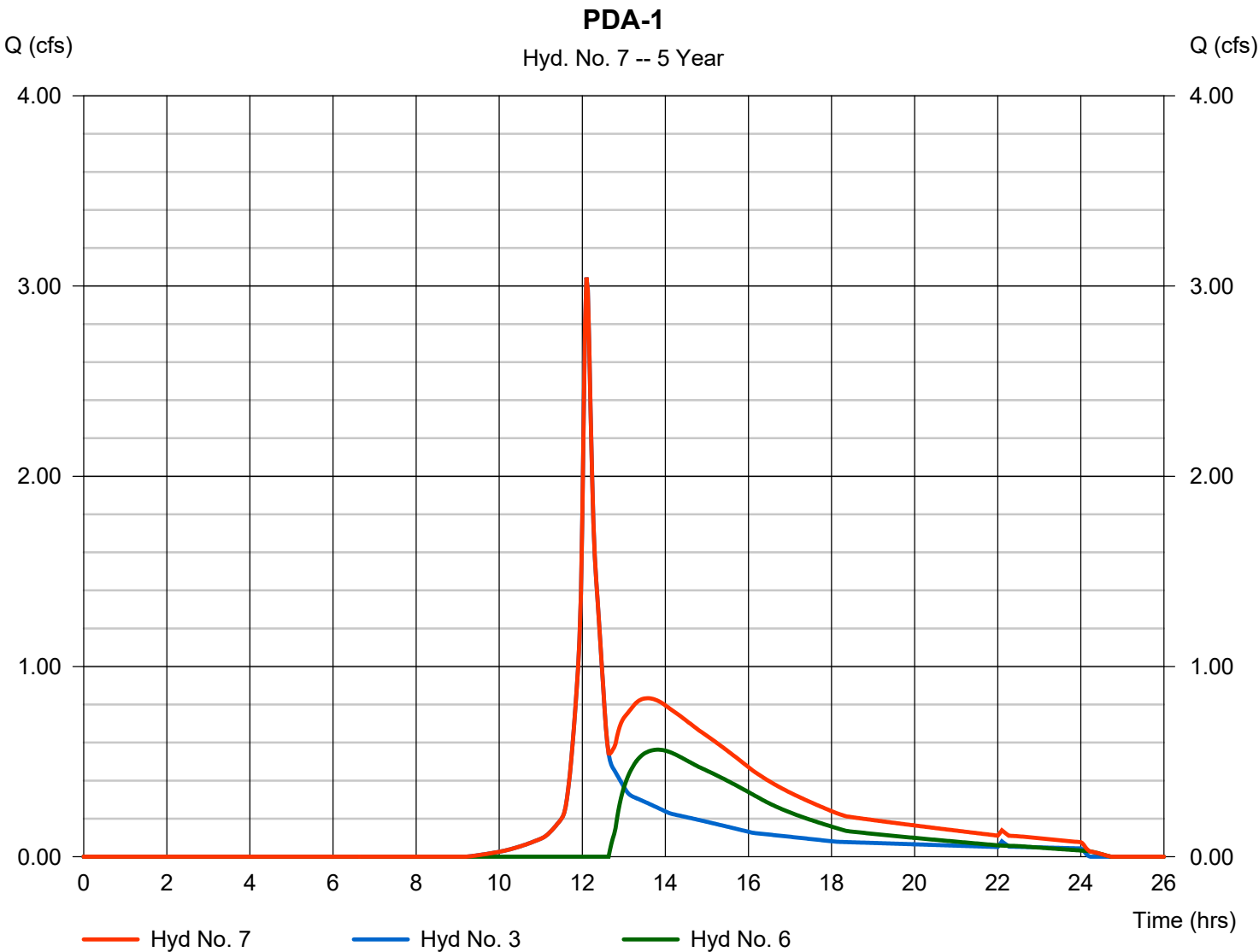


Hydrograph Report

Hyd. No. 7

PDA-1

Hydrograph type	= Combine	Peak discharge	= 3.045 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 19,415 cuft
Inflow hyds.	= 3, 6	Contrib. drain. area	= 1.370 ac

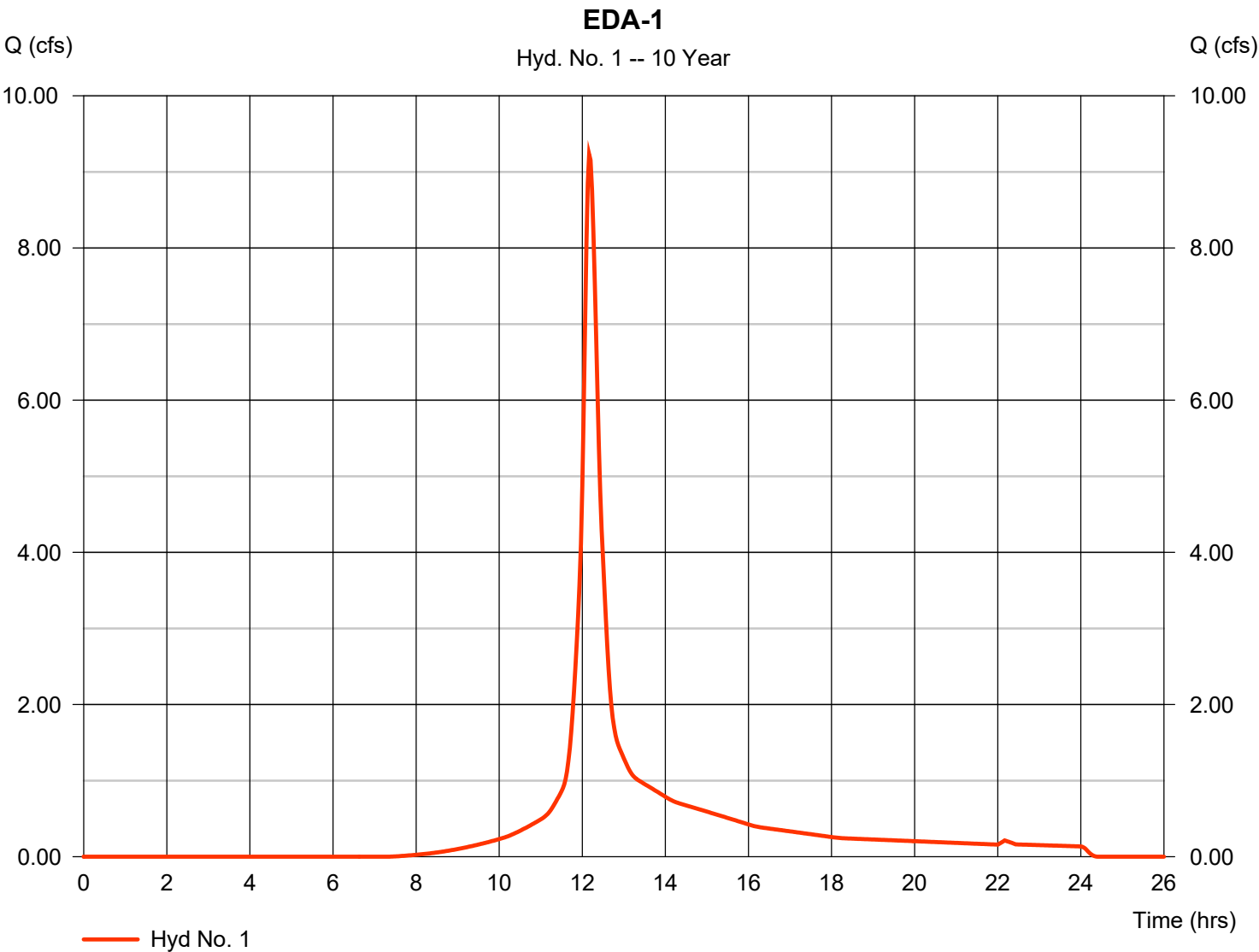


Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	=	SCS Runoff	Peak discharge	=	9.230 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	37,571 cuft
Drainage area	=	3.210 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	15.70 min
Total precip.	=	5.58 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

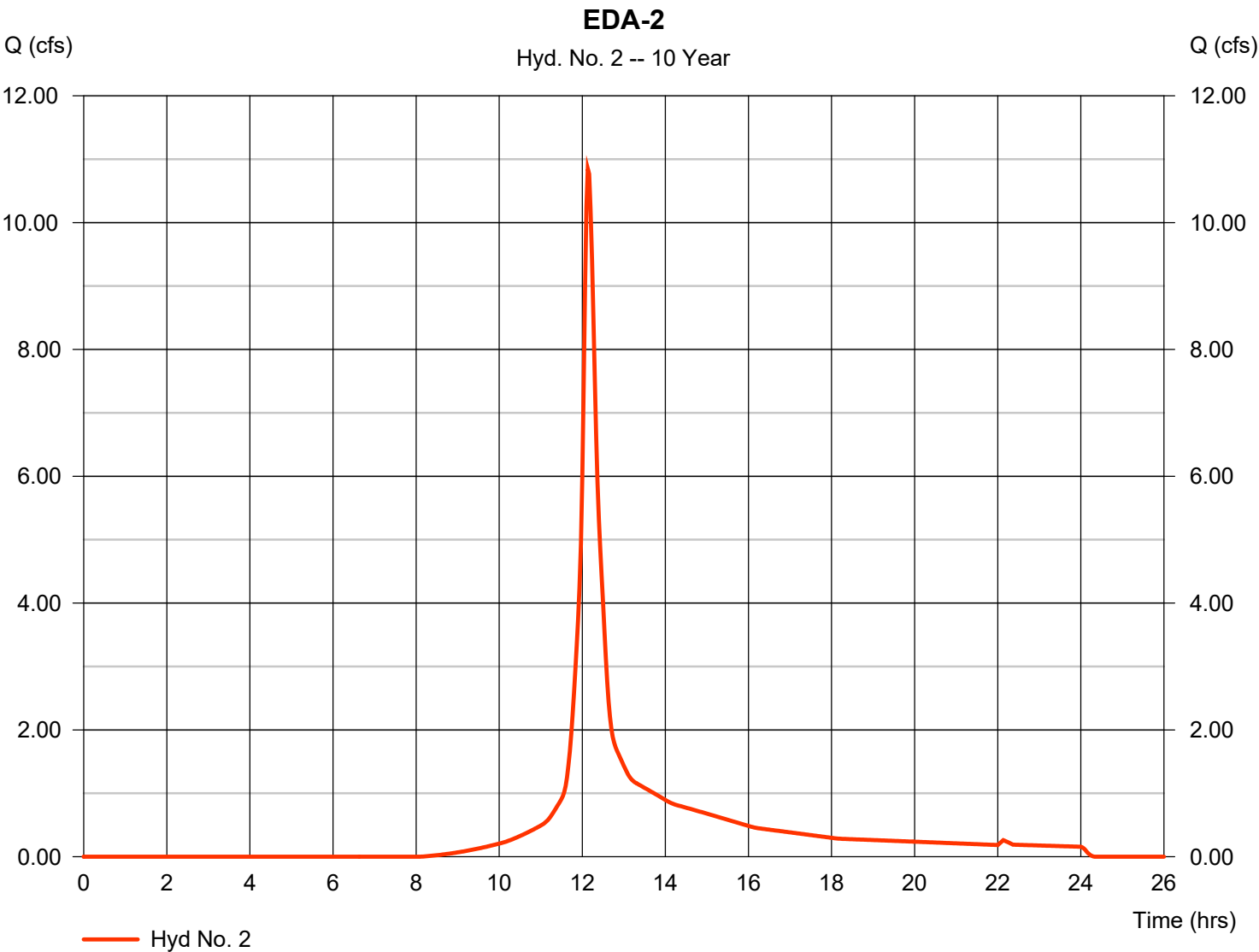


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.85 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	41,613 cuft
Drainage area	=	3.680 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	13.10 min
Total precip.	=	5.58 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

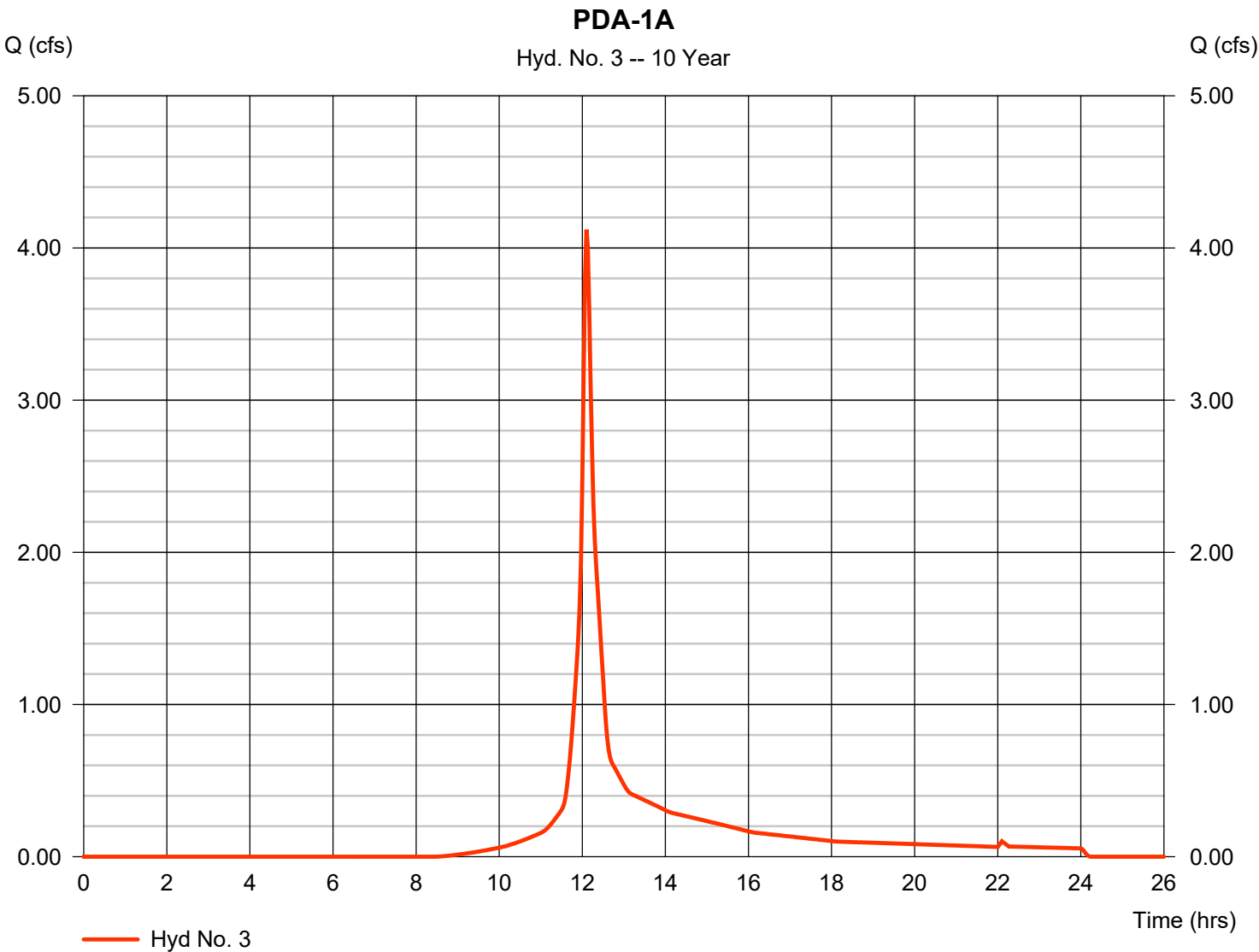


Hydrograph Report

Hyd. No. 3

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 4.120 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 14,099 cuft
Drainage area	= 1.370 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.10 min
Total precip.	= 5.58 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

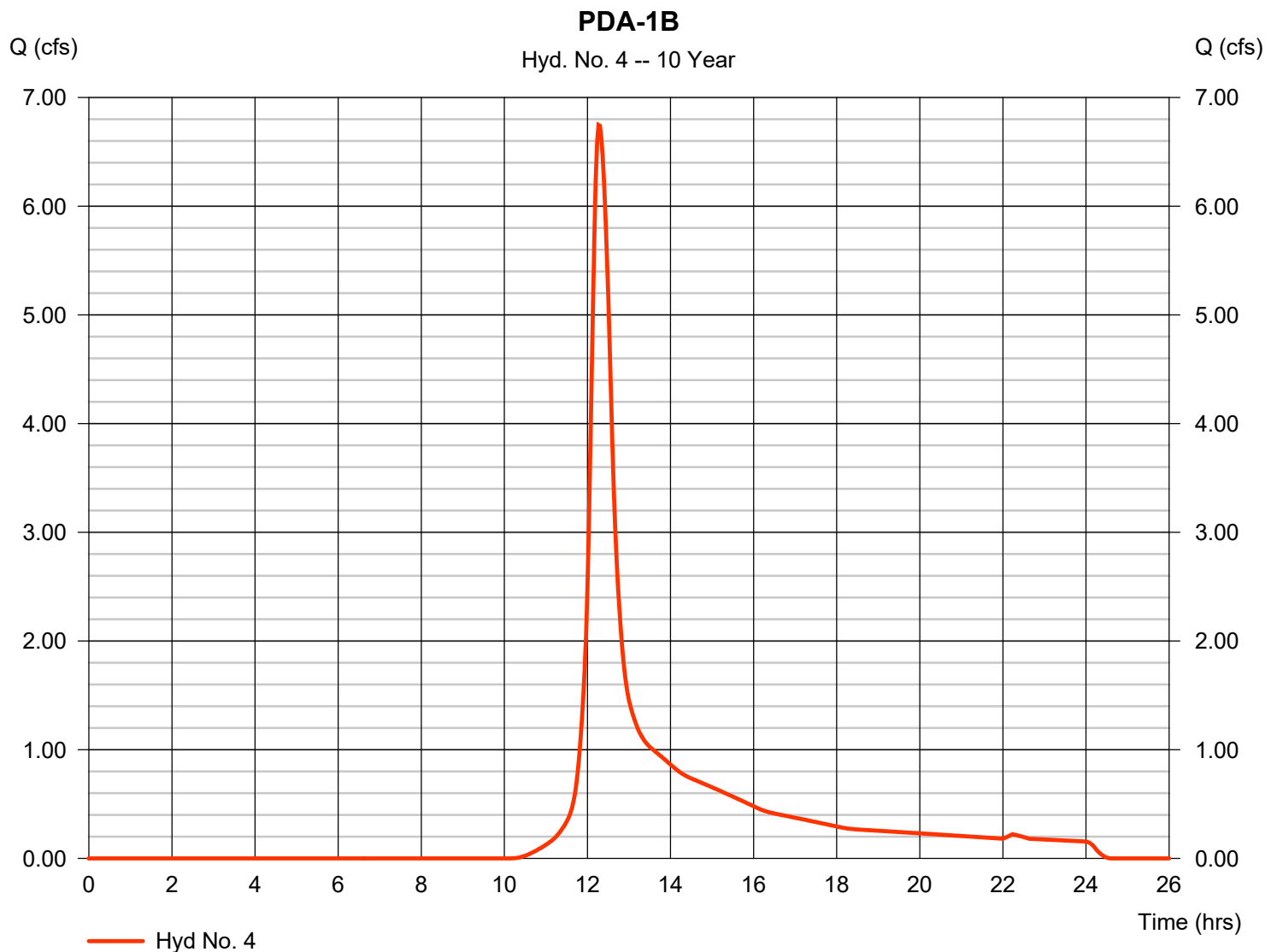
Wednesday, 10 / 5 / 2022

Hyd. No. 4

PDA-1B

Hydrograph type = SCS Runoff
Storm frequency = 10 yrs
Time interval = 2 min
Drainage area = 4.370 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 5.58 in
Storm duration = 24 hrs

Peak discharge = 6.747 cfs
Time to peak = 12.27 hrs
Hyd. volume = 33,113 cuft
Curve number = 65
Hydraulic length = 0 ft
Time of conc. (Tc) = 21.90 min
Distribution = Type III
Shape factor = 484

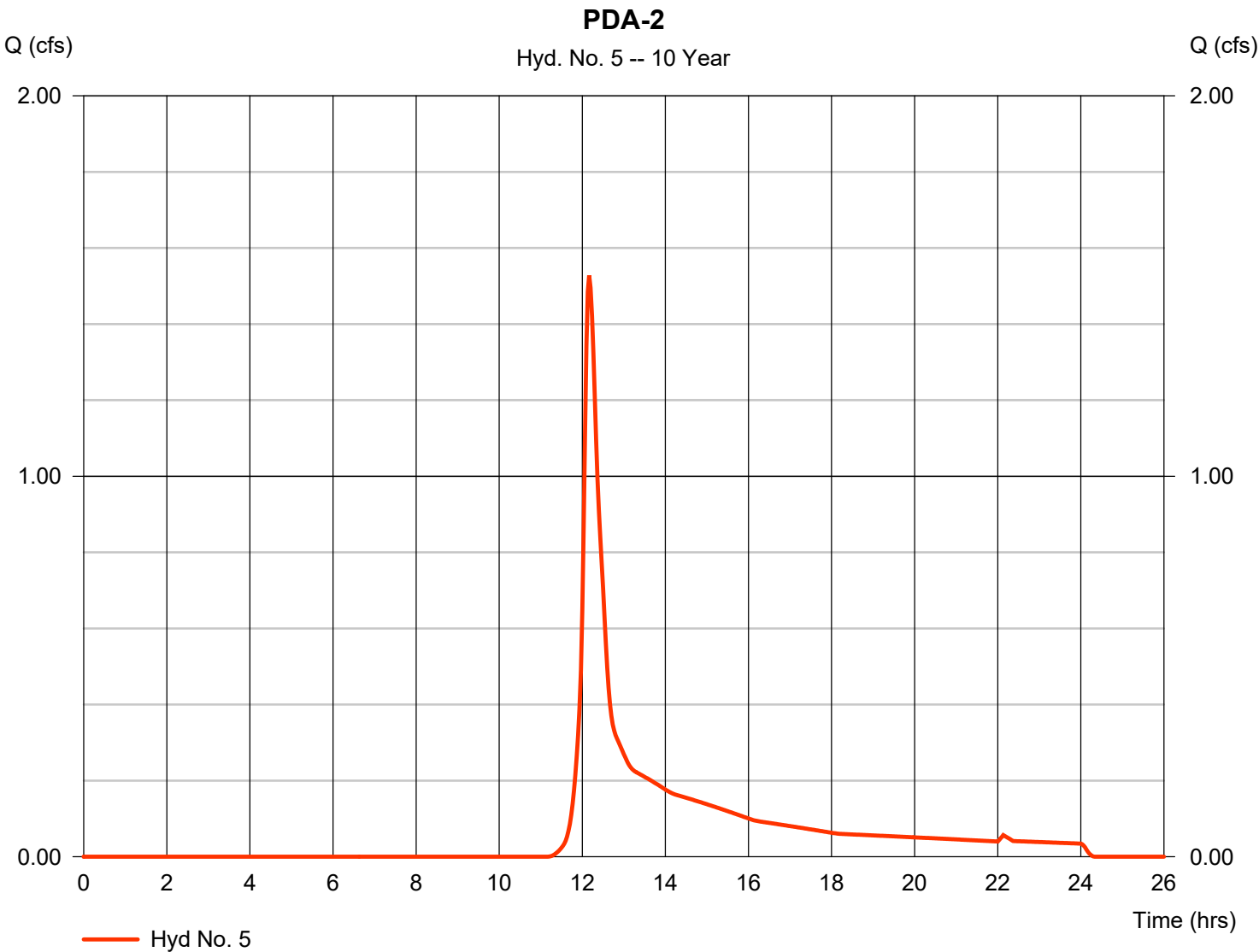


Hydrograph Report

Hyd. No. 5

PDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.528 cfs
Storm frequency	=	10 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	6,462 cuft
Drainage area	=	1.150 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.20 min
Total precip.	=	5.58 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

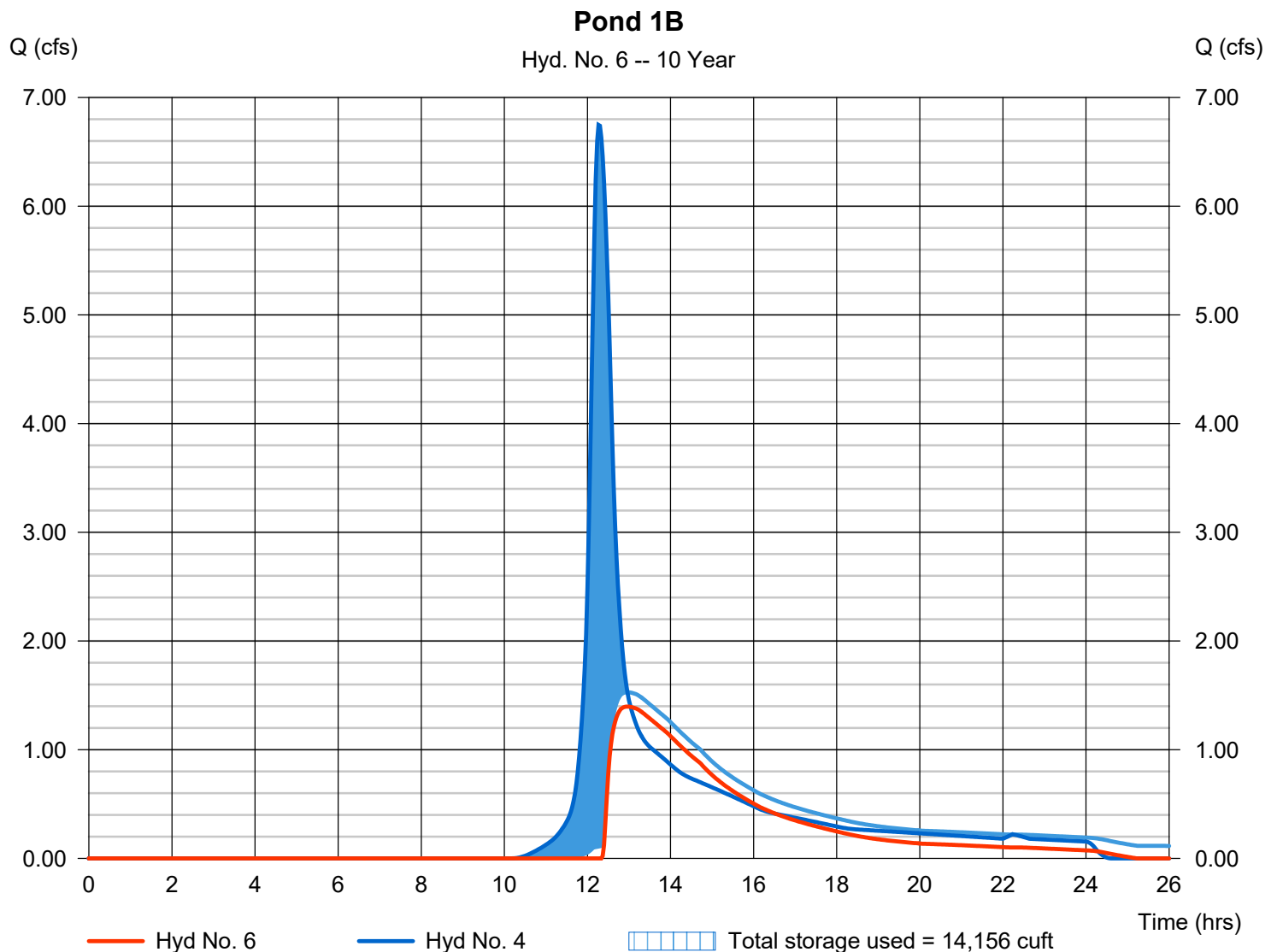
Wednesday, 10 / 5 / 2022

Hyd. No. 6

Pond 1B

Hydrograph type	= Reservoir	Peak discharge	= 1.397 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.97 hrs
Time interval	= 2 min	Hyd. volume	= 18,304 cuft
Inflow hyd. No.	= 4 - PDA-1B	Max. Elevation	= 418.03 ft
Reservoir name	= Pond 1	Max. Storage	= 14,156 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

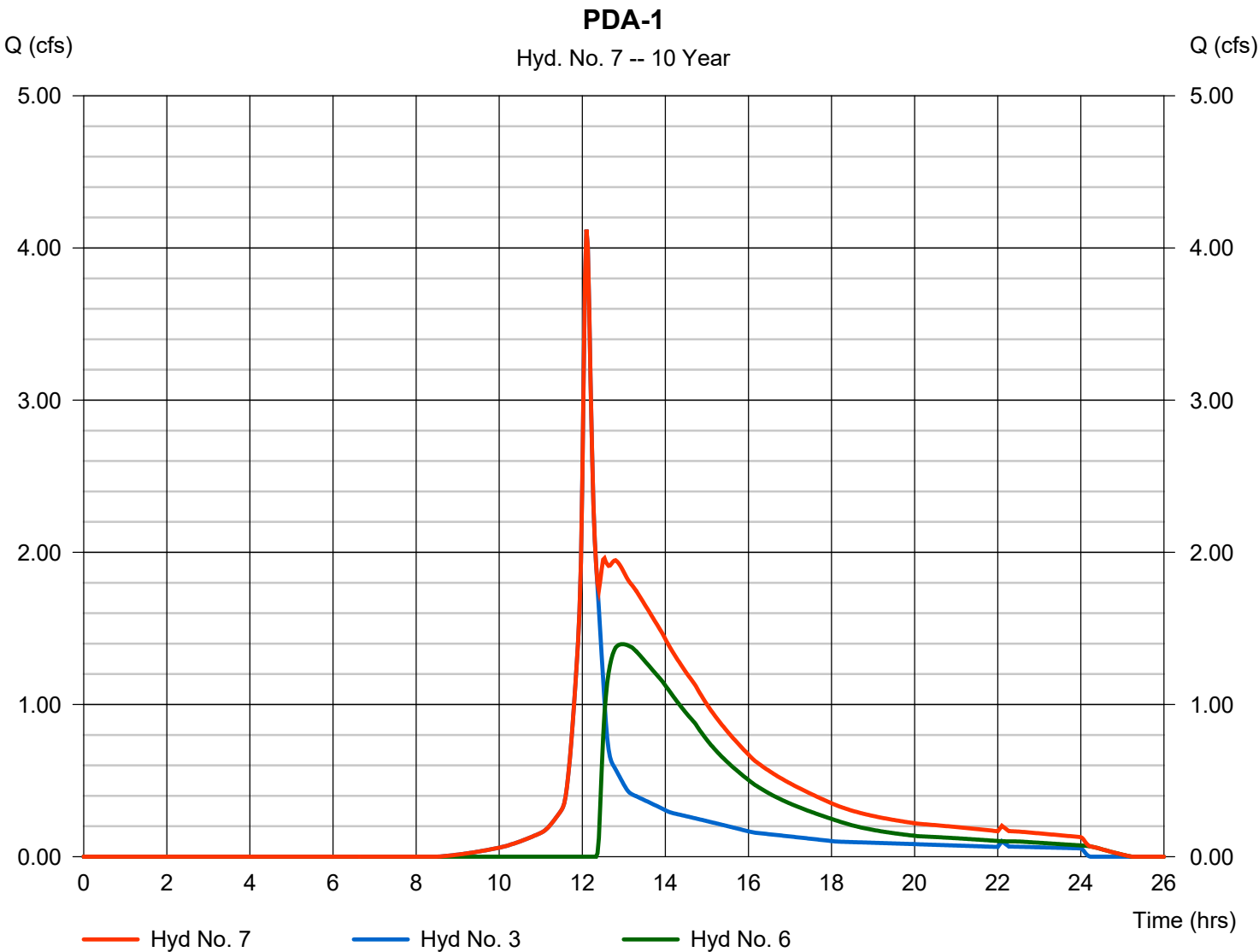


Hydrograph Report

Hyd. No. 7

PDA-1

Hydrograph type	= Combine	Peak discharge	= 4.120 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 32,403 cuft
Inflow hyds.	= 3, 6	Contrib. drain. area	= 1.370 ac

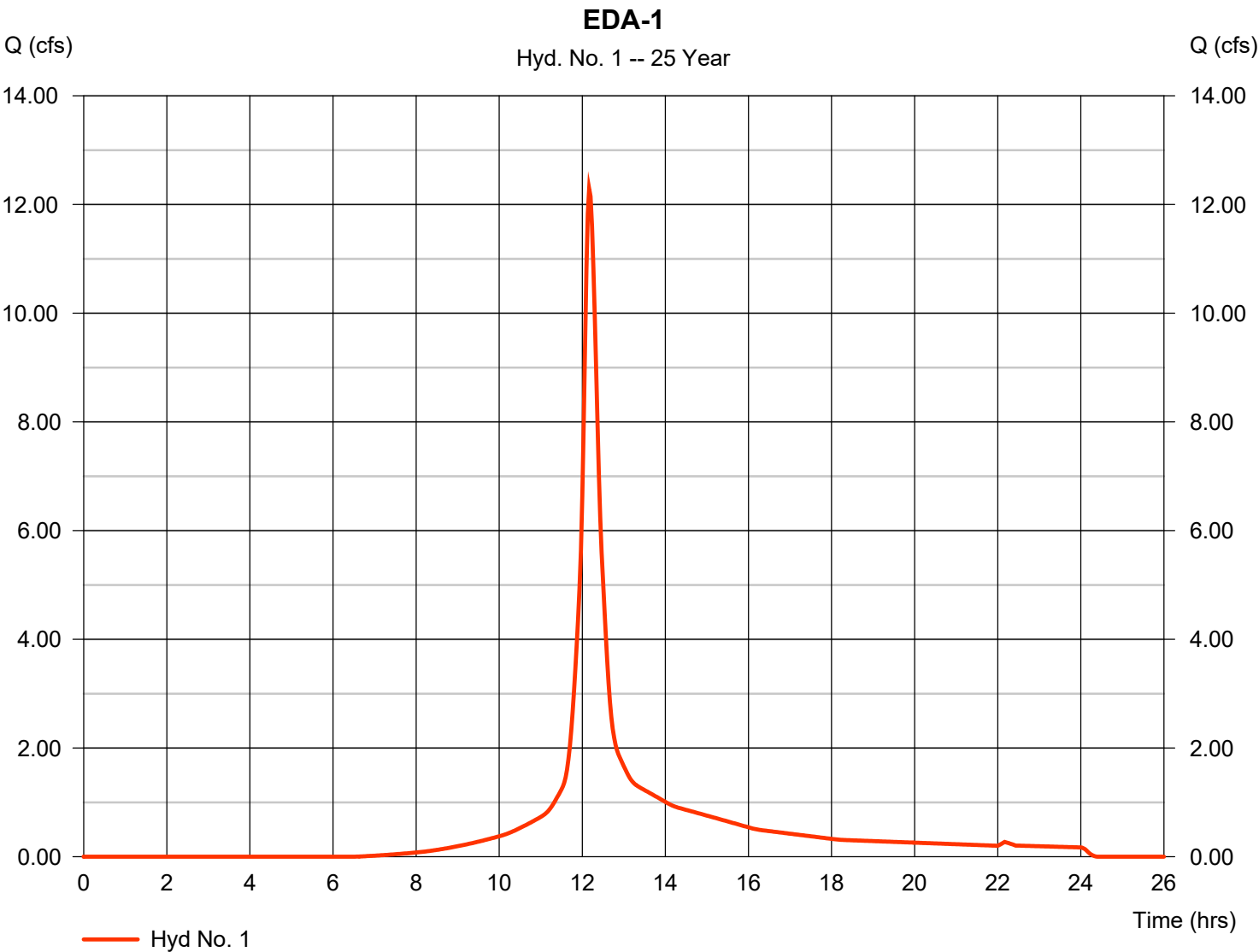


Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 12.29 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 50,215 cuft
Drainage area	= 3.210 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.70 min
Total precip.	= 6.82 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

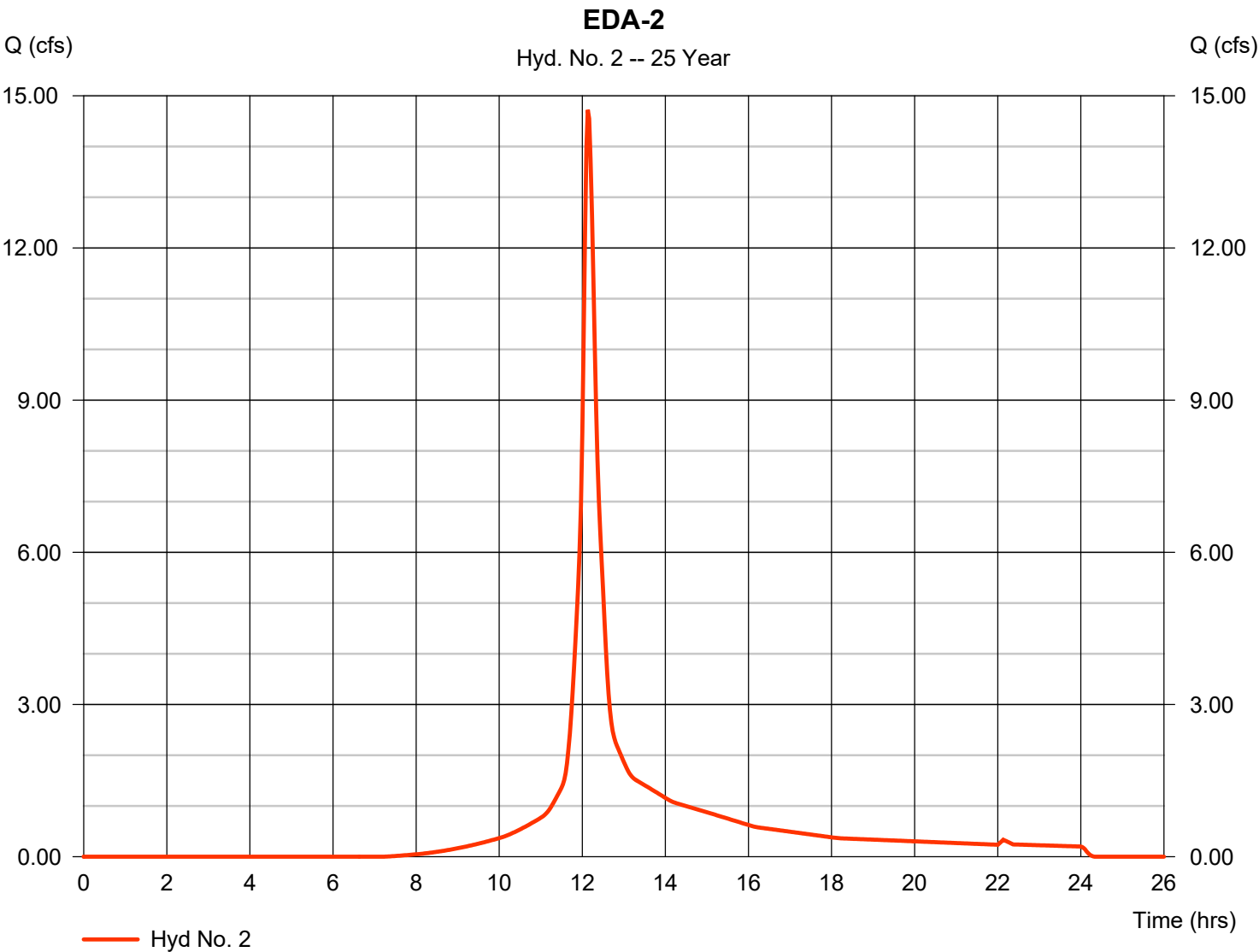


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	14.72 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	56,447 cuft
Drainage area	=	3.680 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	13.10 min
Total precip.	=	6.82 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

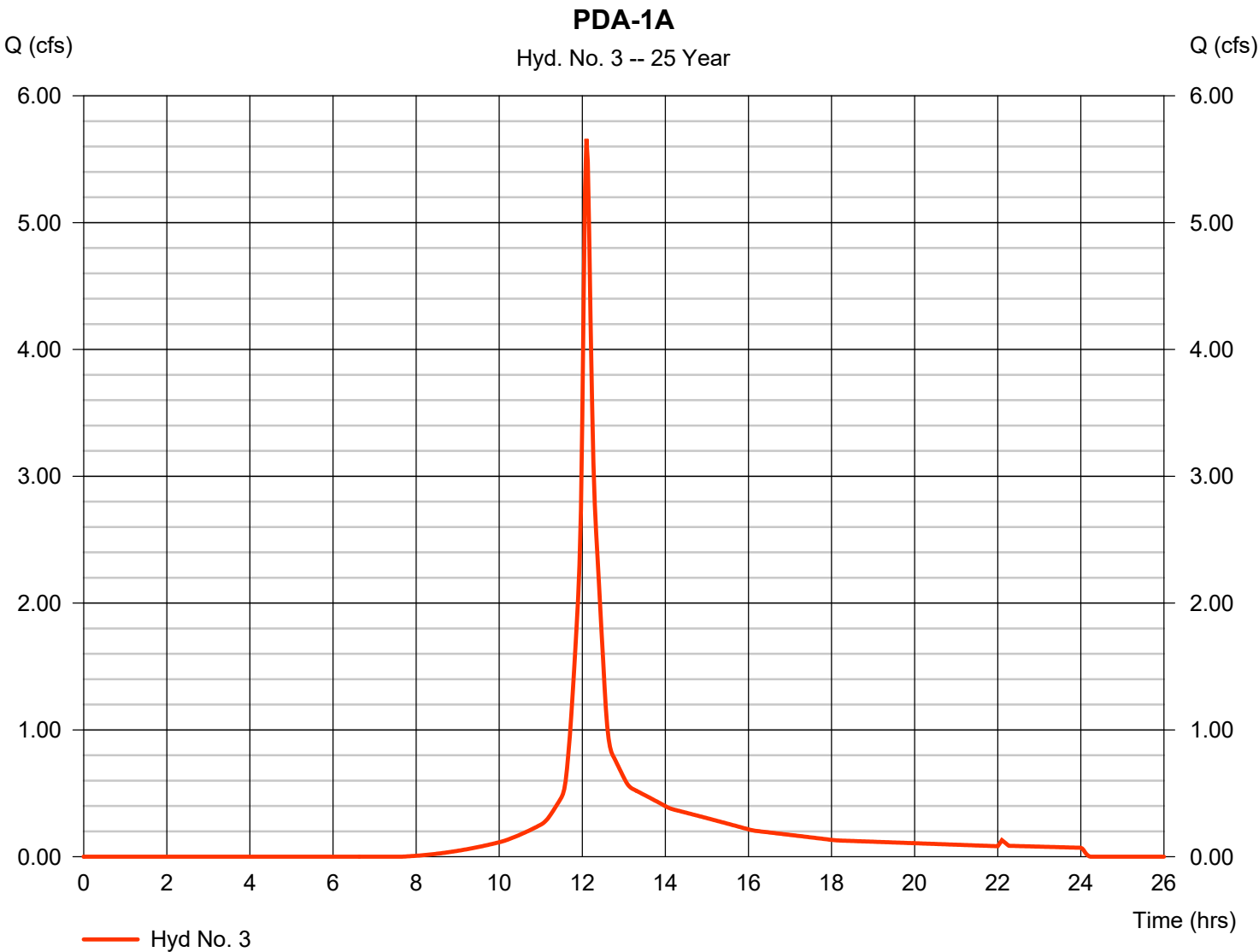


Hydrograph Report

Hyd. No. 3

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 5.660 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 19,323 cuft
Drainage area	= 1.370 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.10 min
Total precip.	= 6.82 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

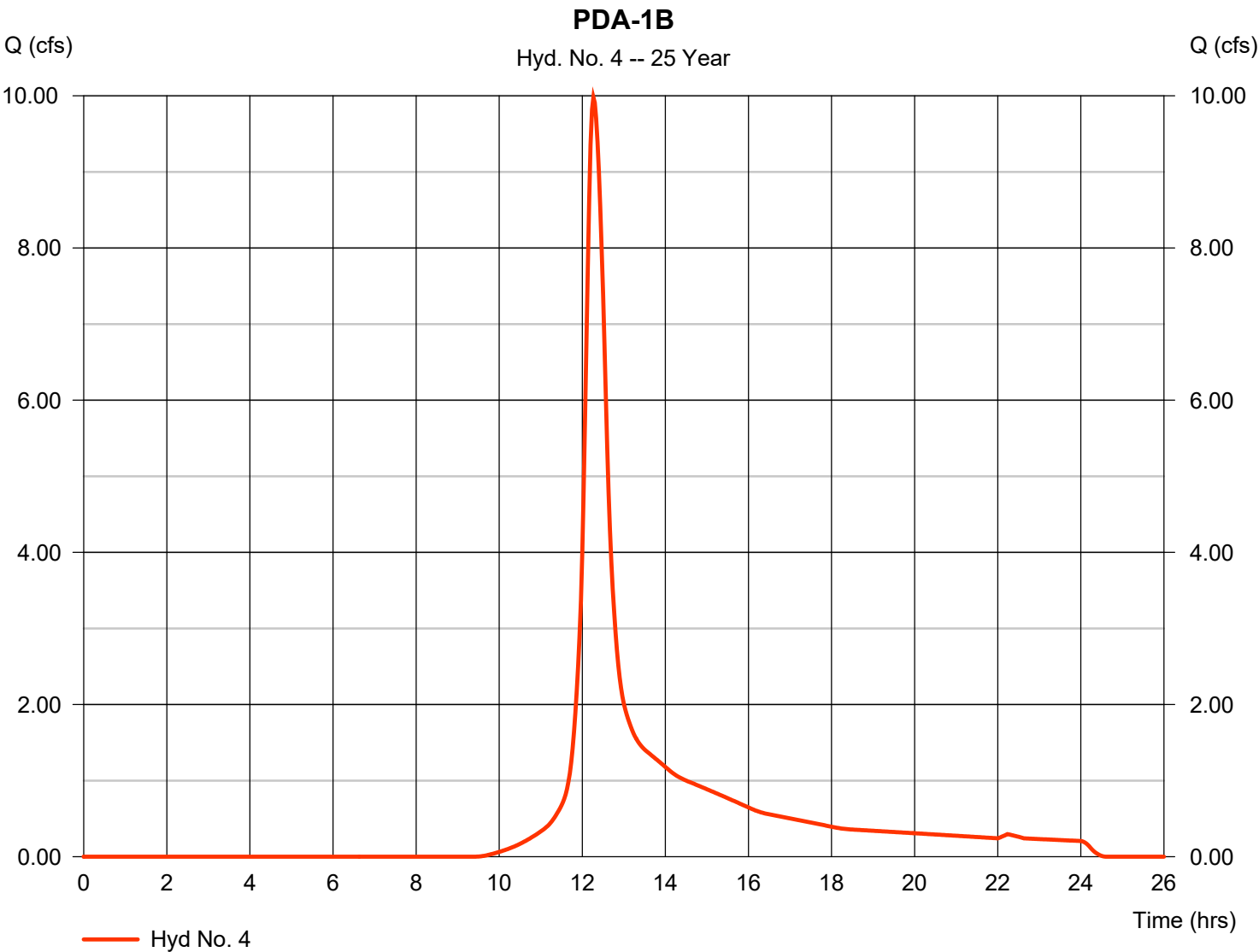


Hydrograph Report

Hyd. No. 4

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 9.979 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 47,858 cuft
Drainage area	= 4.370 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 21.90 min
Total precip.	= 6.82 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

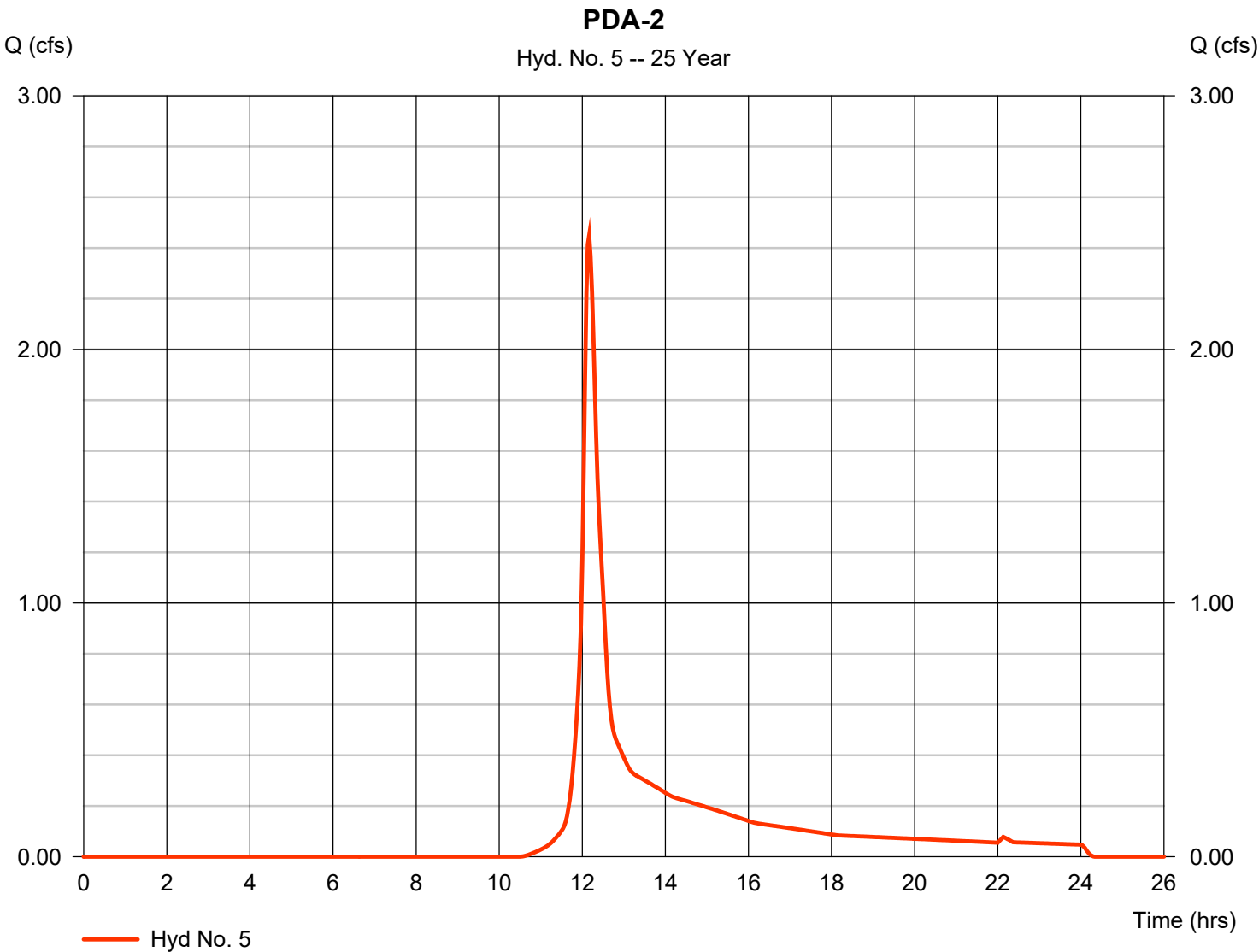


Hydrograph Report

Hyd. No. 5

PDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.449 cfs
Storm frequency	=	25 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	9,849 cuft
Drainage area	=	1.150 ac	Curve number	=	58
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	11.20 min
Total precip.	=	6.82 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

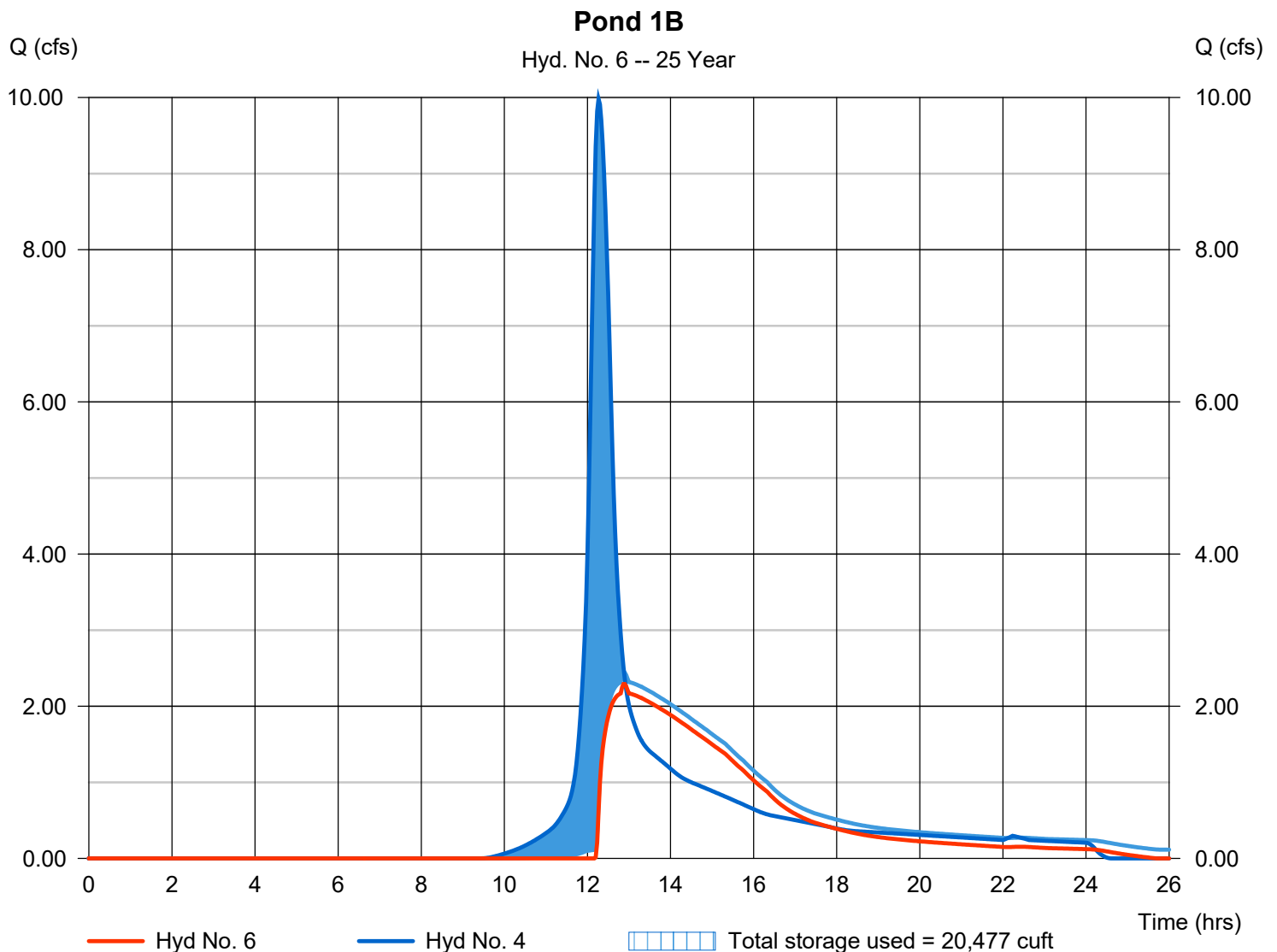
Wednesday, 10 / 5 / 2022

Hyd. No. 6

Pond 1B

Hydrograph type	= Reservoir	Peak discharge	= 2.291 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.87 hrs
Time interval	= 2 min	Hyd. volume	= 32,506 cuft
Inflow hyd. No.	= 4 - PDA-1B	Max. Elevation	= 419.01 ft
Reservoir name	= Pond 1	Max. Storage	= 20,477 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

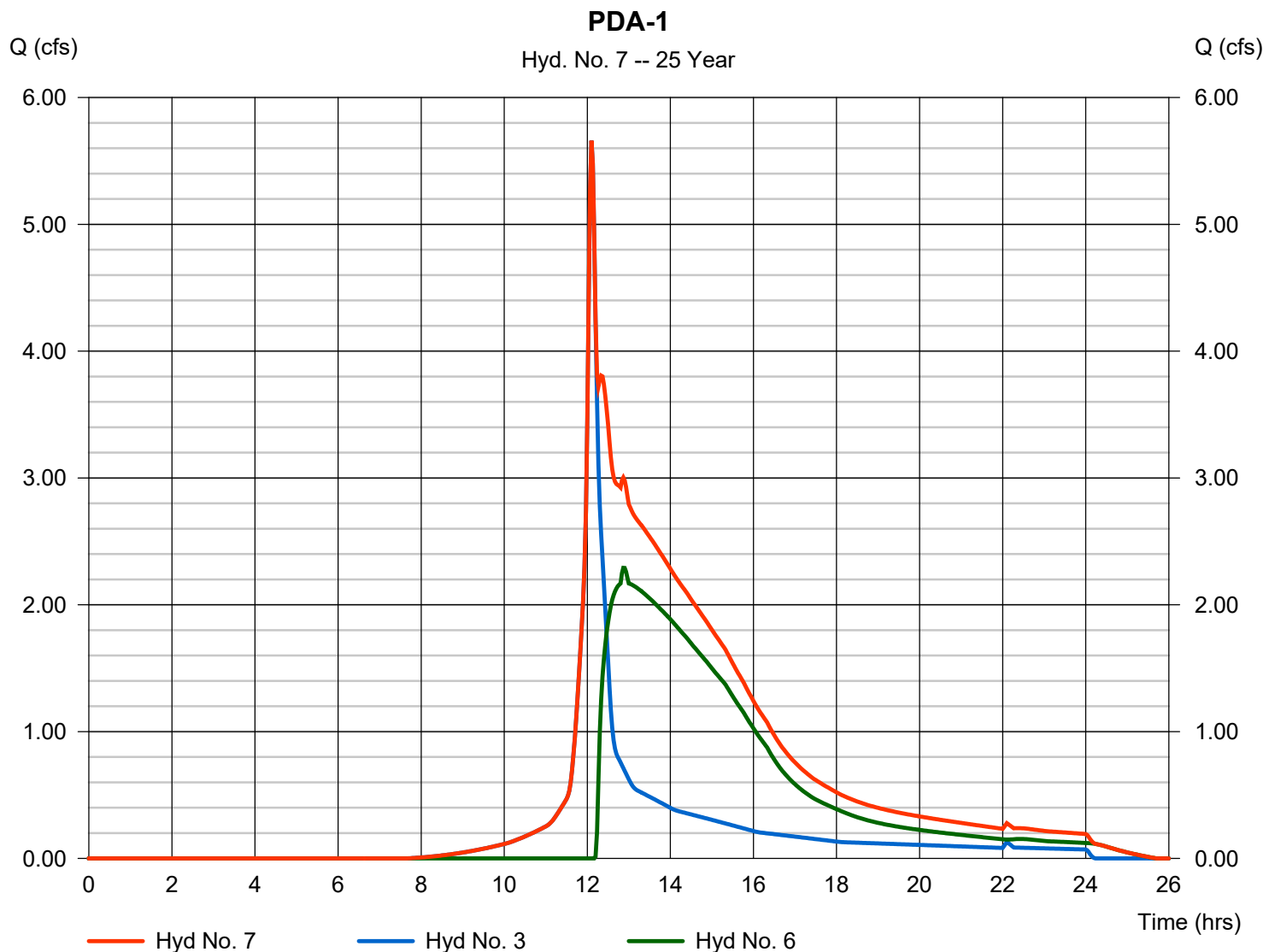
Wednesday, 10 / 5 / 2022

Hyd. No. 7

PDA-1

Hydrograph type = Combine
Storm frequency = 25 yrs
Time interval = 2 min
Inflow hyds. = 3, 6

Peak discharge = 5.660 cfs
Time to peak = 12.10 hrs
Hyd. volume = 51,829 cuft
Contrib. drain. area = 1.370 ac

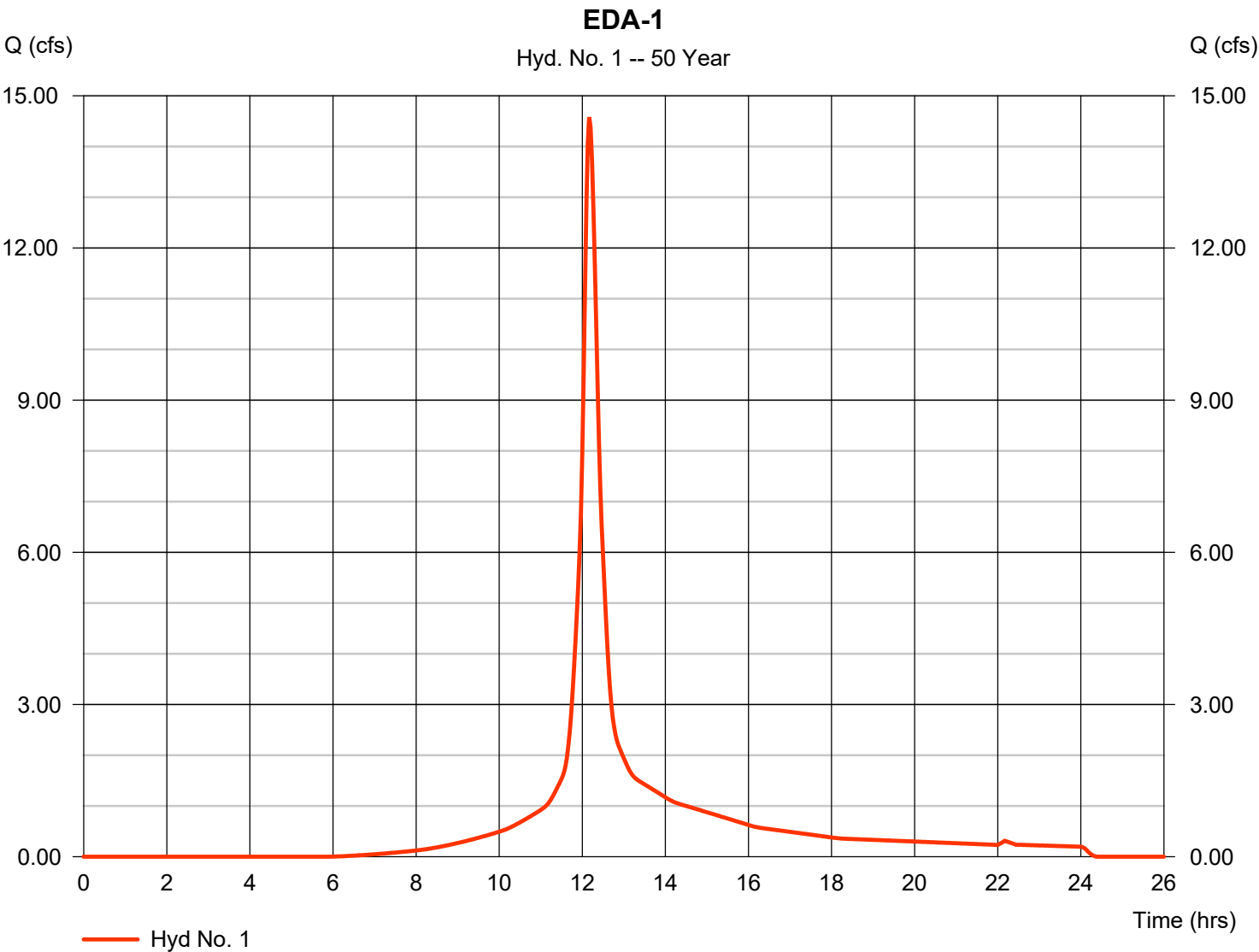


Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 14.58 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 59,830 cuft
Drainage area	= 3.210 ac	Curve number	= 79
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 15.70 min
Total precip.	= 7.74 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

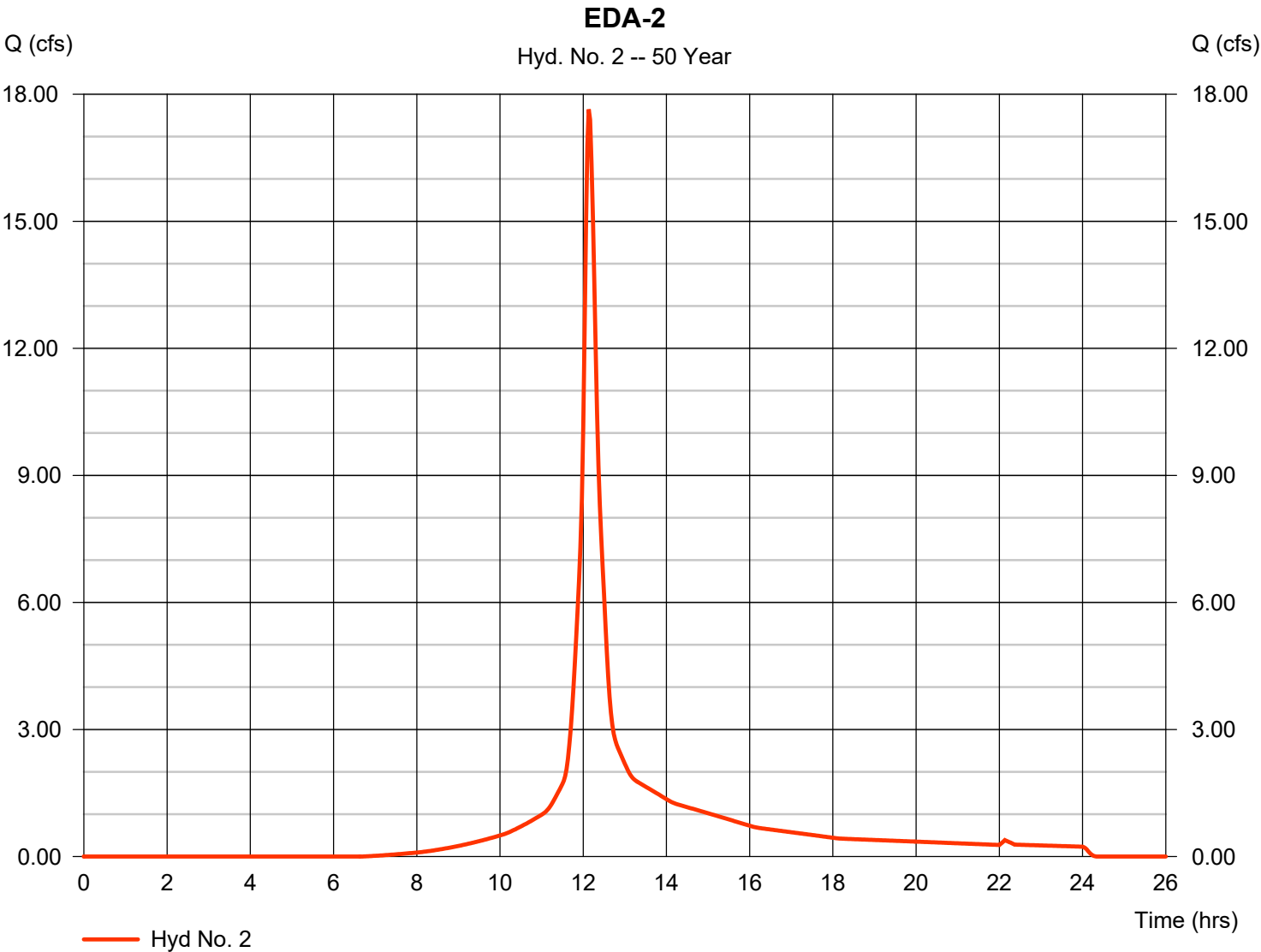


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.64 cfs
Storm frequency	=	50 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	67,803 cuft
Drainage area	=	3.680 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	13.10 min
Total precip.	=	7.74 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

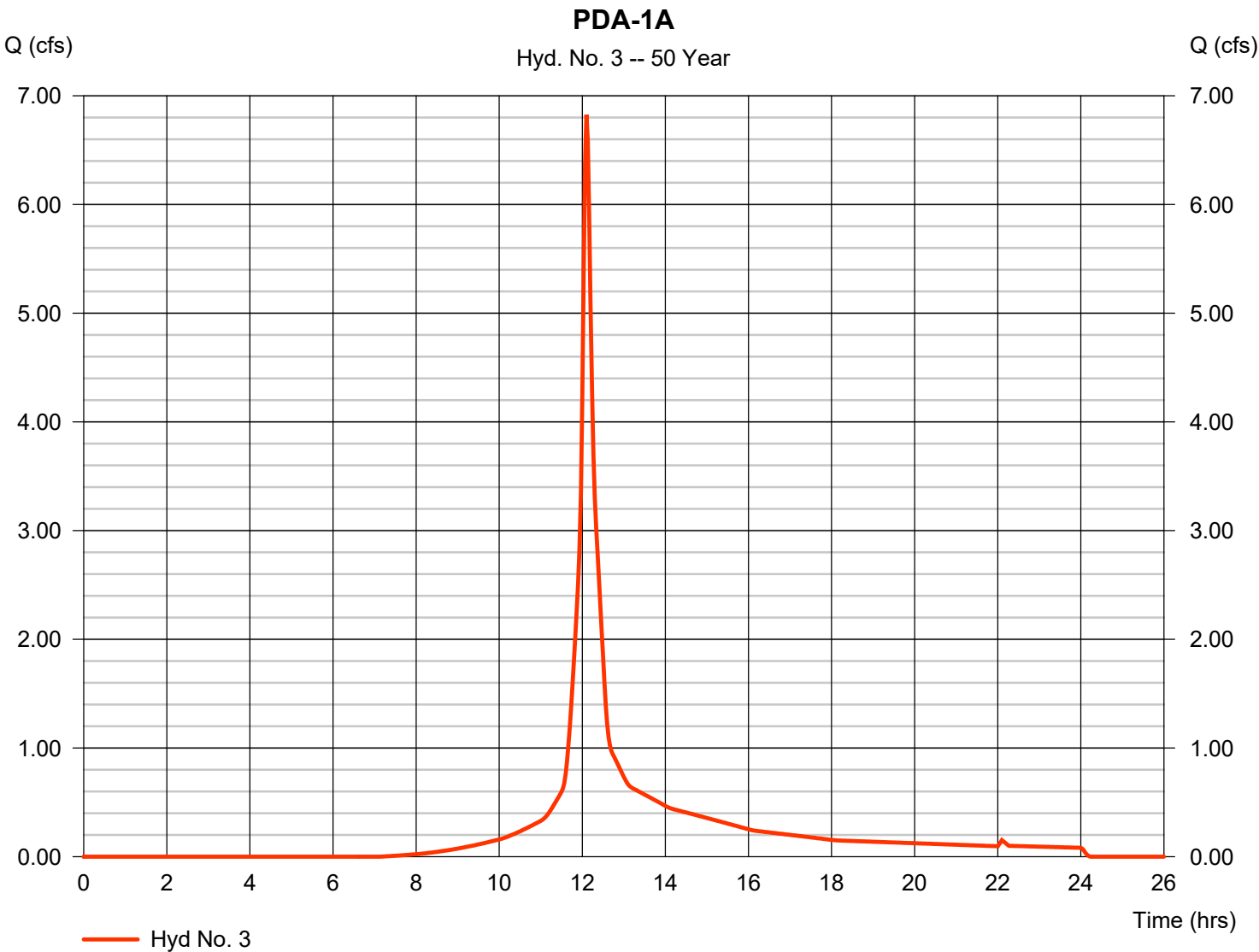


Hydrograph Report

Hyd. No. 3

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 6.826 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.10 hrs
Time interval	= 2 min	Hyd. volume	= 23,343 cuft
Drainage area	= 1.370 ac	Curve number	= 74
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.10 min
Total precip.	= 7.74 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

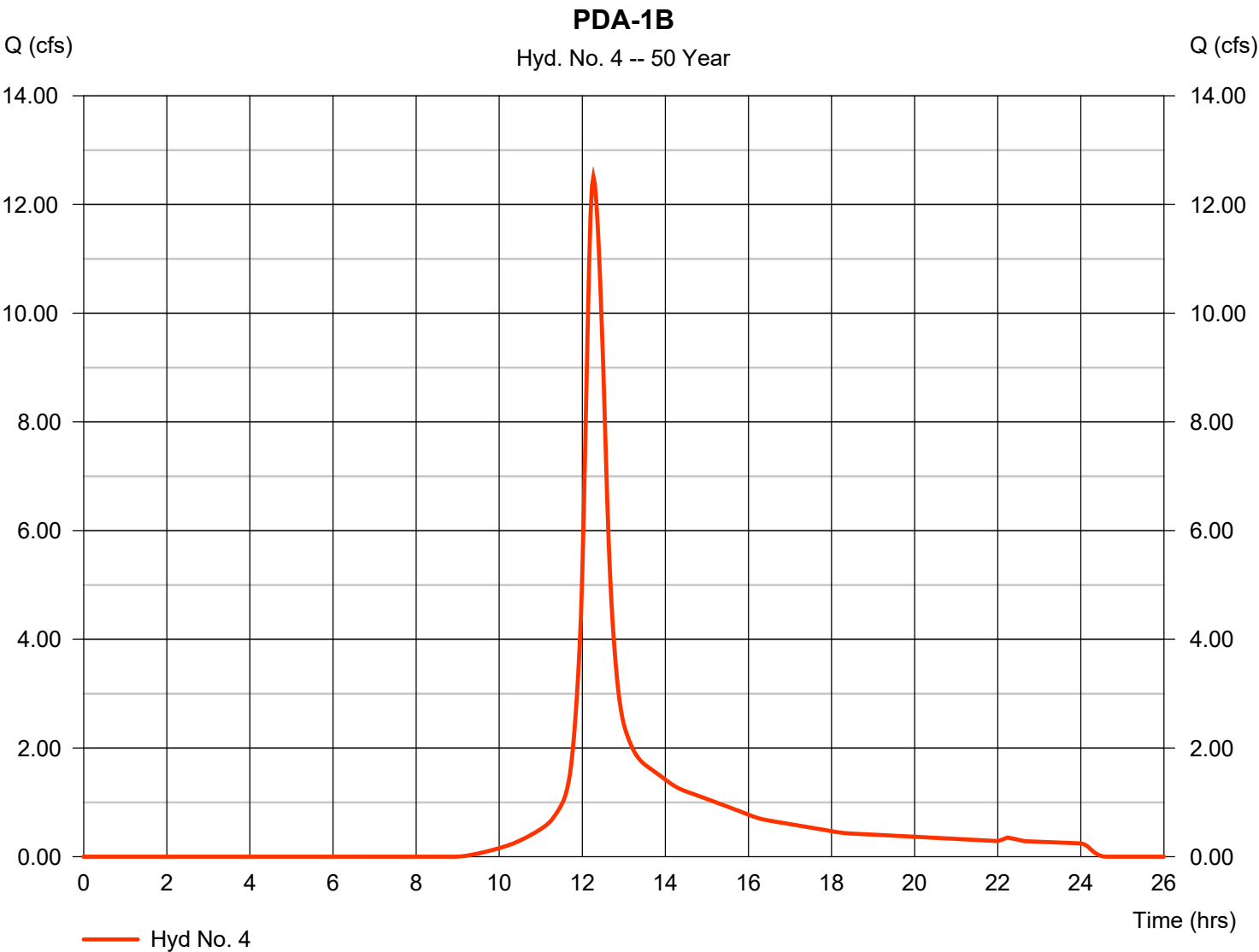


Hydrograph Report

Hyd. No. 4

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 12.51 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.27 hrs
Time interval	= 2 min	Hyd. volume	= 59,500 cuft
Drainage area	= 4.370 ac	Curve number	= 65
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 21.90 min
Total precip.	= 7.74 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

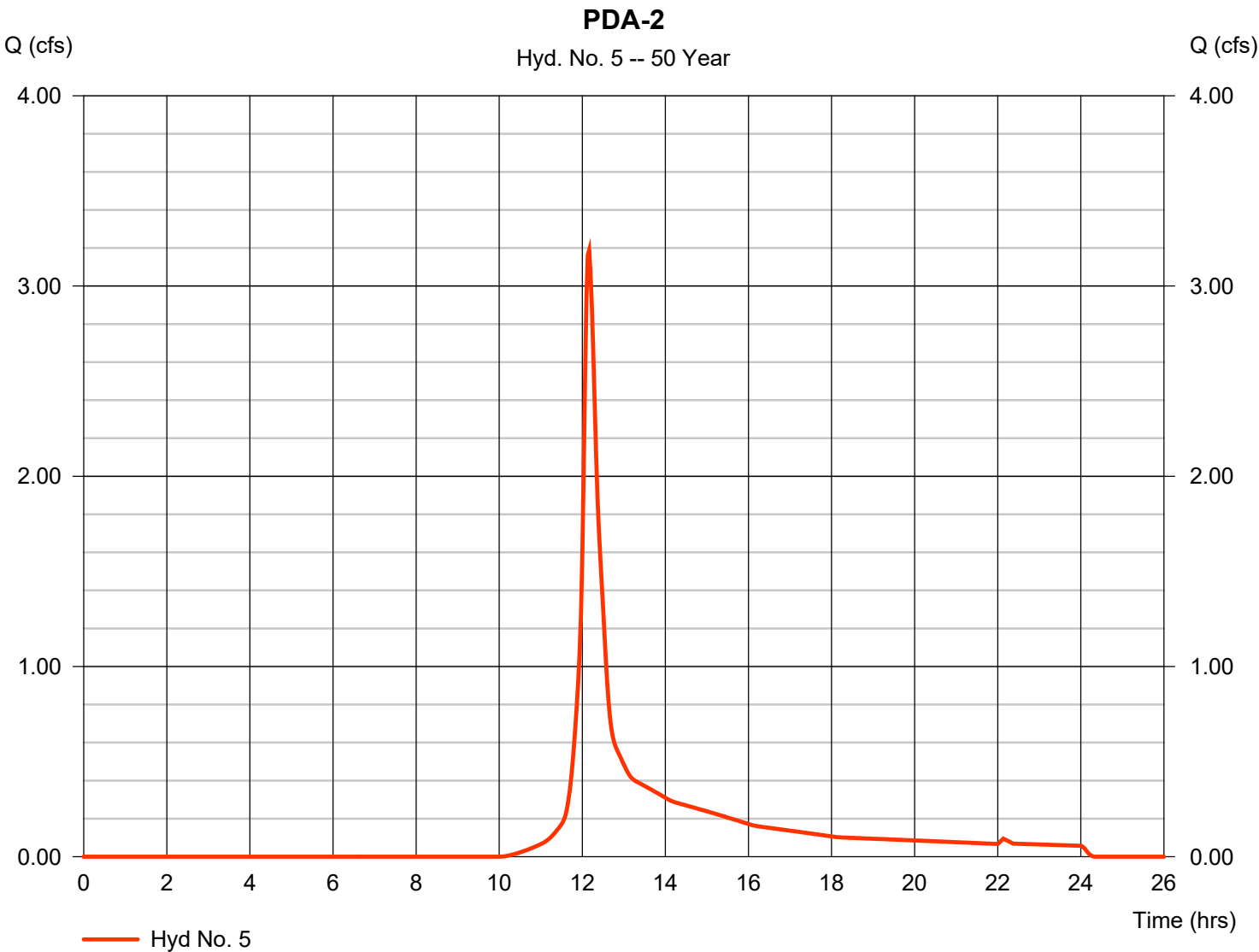


Hydrograph Report

Hyd. No. 5

PDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 3.188 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 12,592 cuft
Drainage area	= 1.150 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 11.20 min
Total precip.	= 7.74 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

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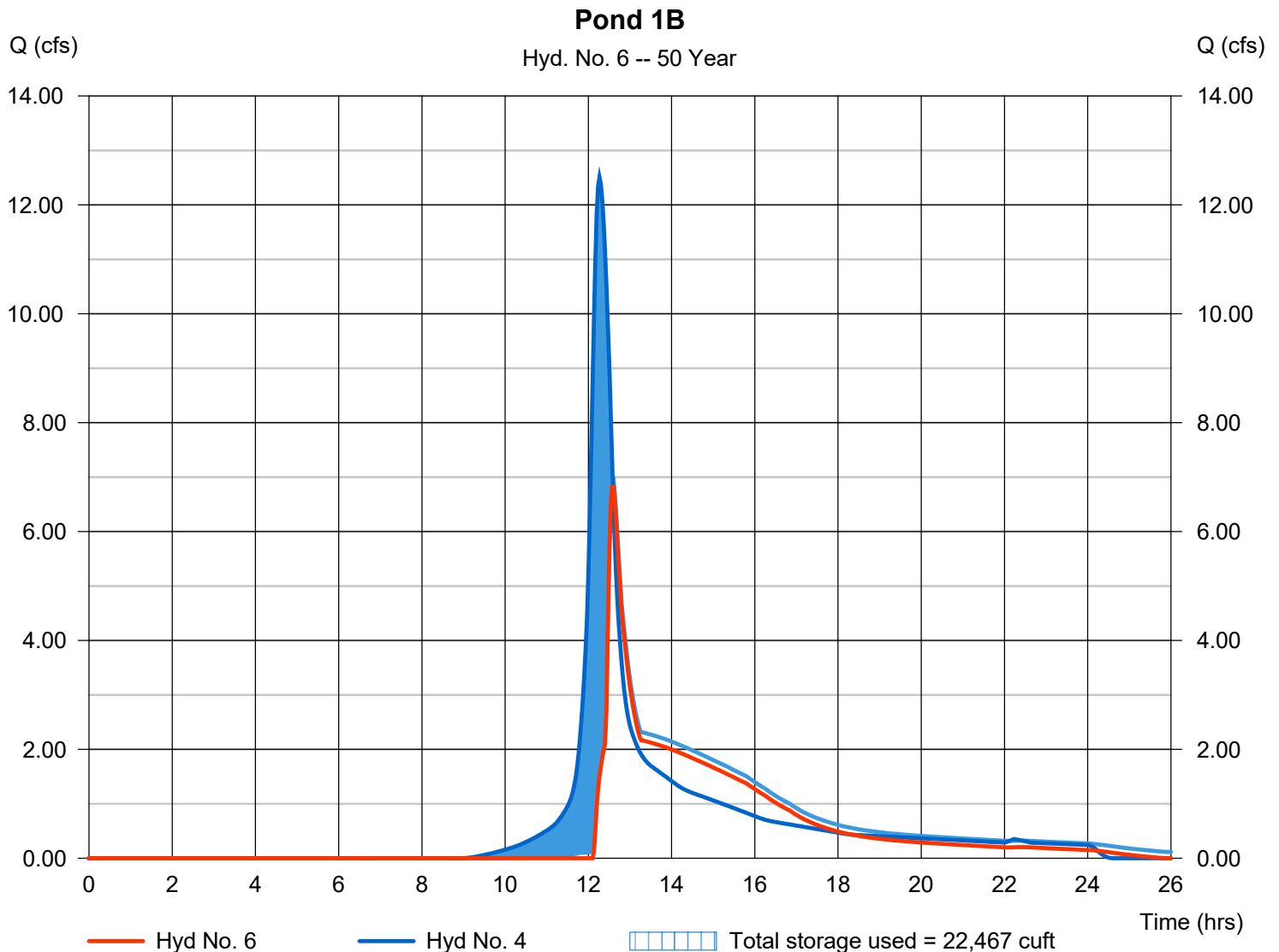
Hyd. No. 6

Pond 1B

Hydrograph type = Reservoir
Storm frequency = 50 yrs
Time interval = 2 min
Inflow hyd. No. = 4 - PDA-1B
Reservoir name = Pond 1

Peak discharge = 6.822 cfs
Time to peak = 12.60 hrs
Hyd. volume = 43,867 cuft
Max. Elevation = 419.32 ft
Max. Storage = 22,467 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

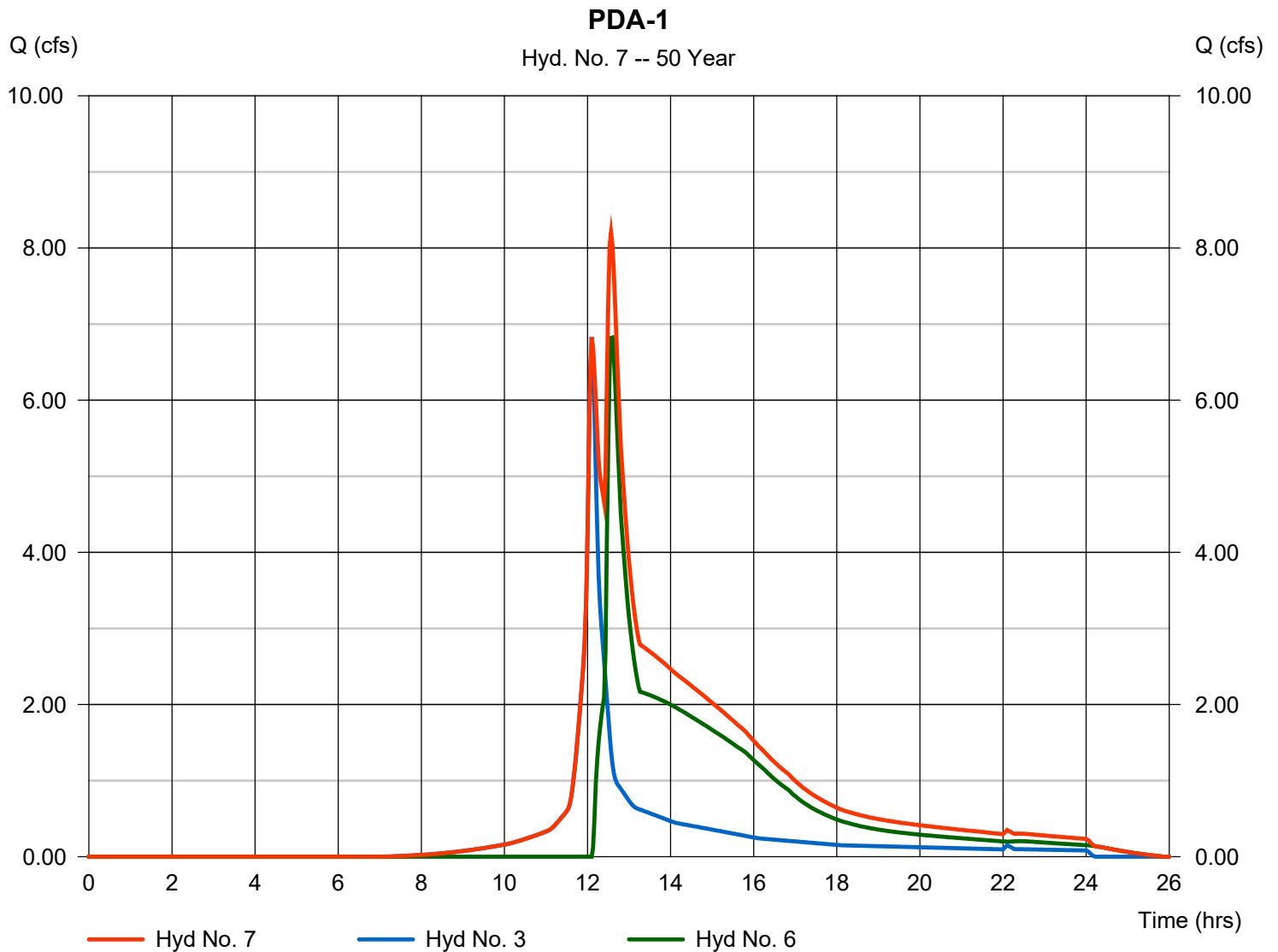
Wednesday, 10 / 5 / 2022

Hyd. No. 7

PDA-1

Hydrograph type = Combine
Storm frequency = 50 yrs
Time interval = 2 min
Inflow hyds. = 3, 6

Peak discharge = 8.201 cfs
Time to peak = 12.57 hrs
Hyd. volume = 67,210 cuft
Contrib. drain. area = 1.370 ac

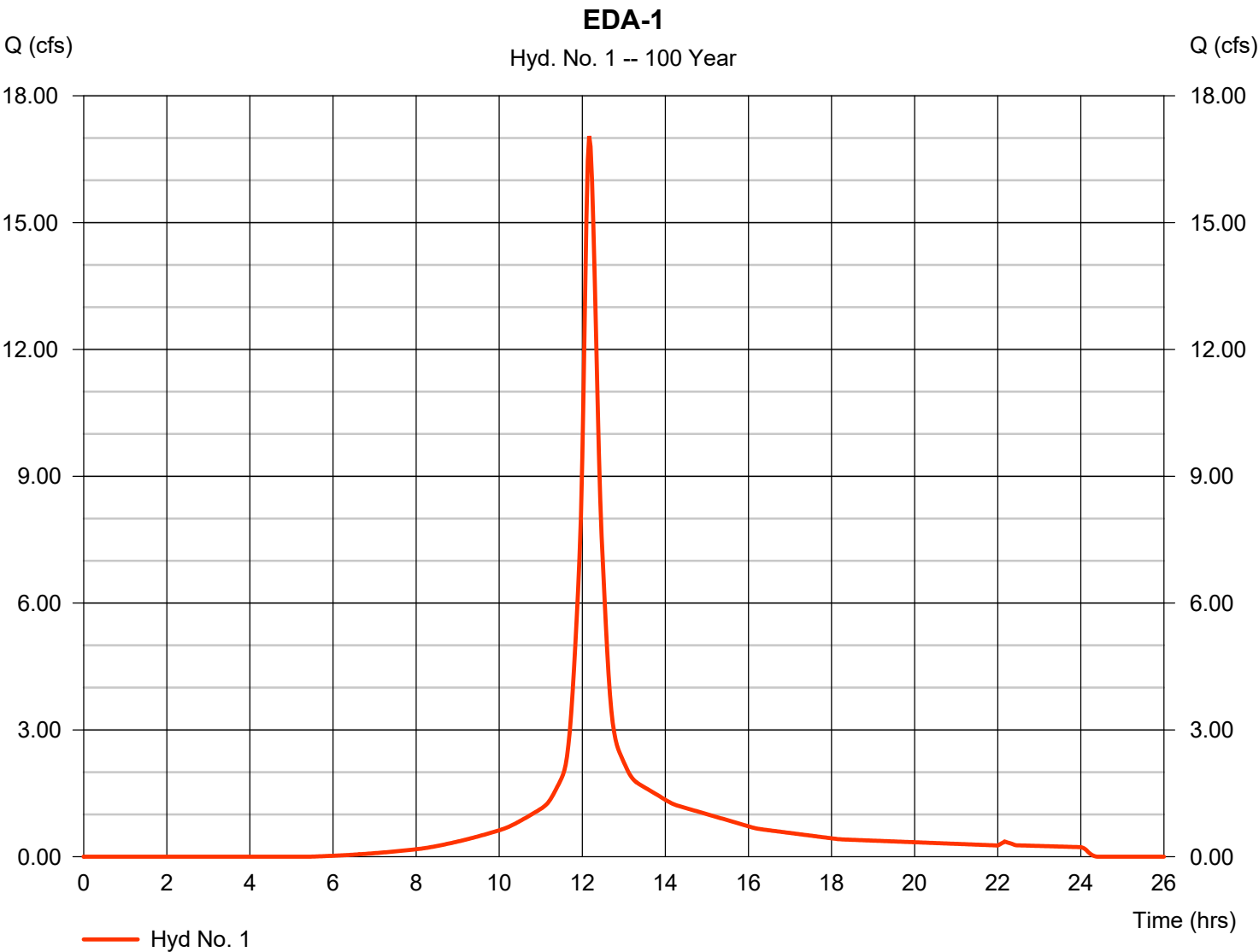


Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	=	SCS Runoff	Peak discharge	=	17.05 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.17 hrs
Time interval	=	2 min	Hyd. volume	=	70,336 cuft
Drainage area	=	3.210 ac	Curve number	=	79
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	15.70 min
Total precip.	=	8.73 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

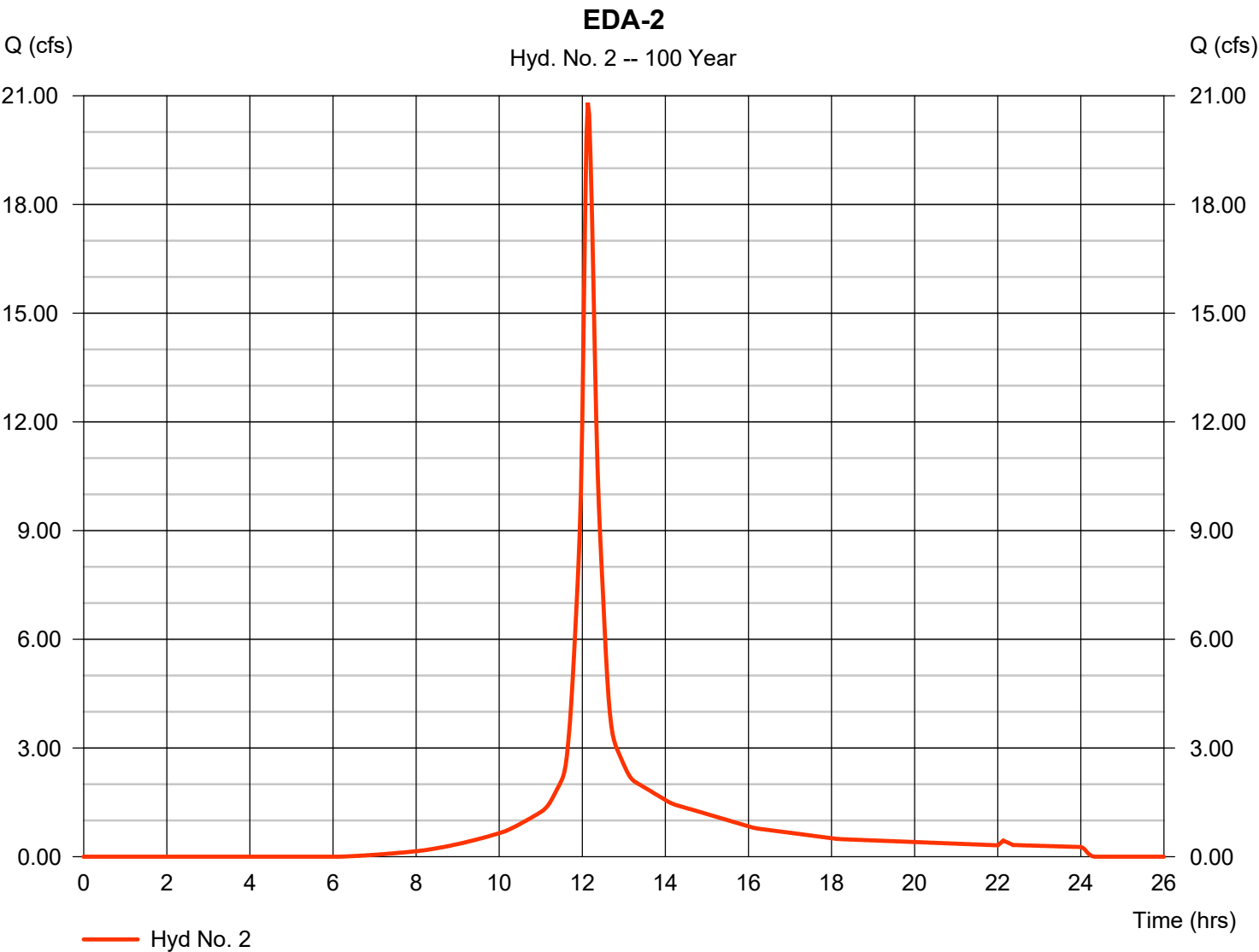


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	20.81 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.13 hrs
Time interval	=	2 min	Hyd. volume	=	80,264 cuft
Drainage area	=	3.680 ac	Curve number	=	76
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	13.10 min
Total precip.	=	8.73 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484

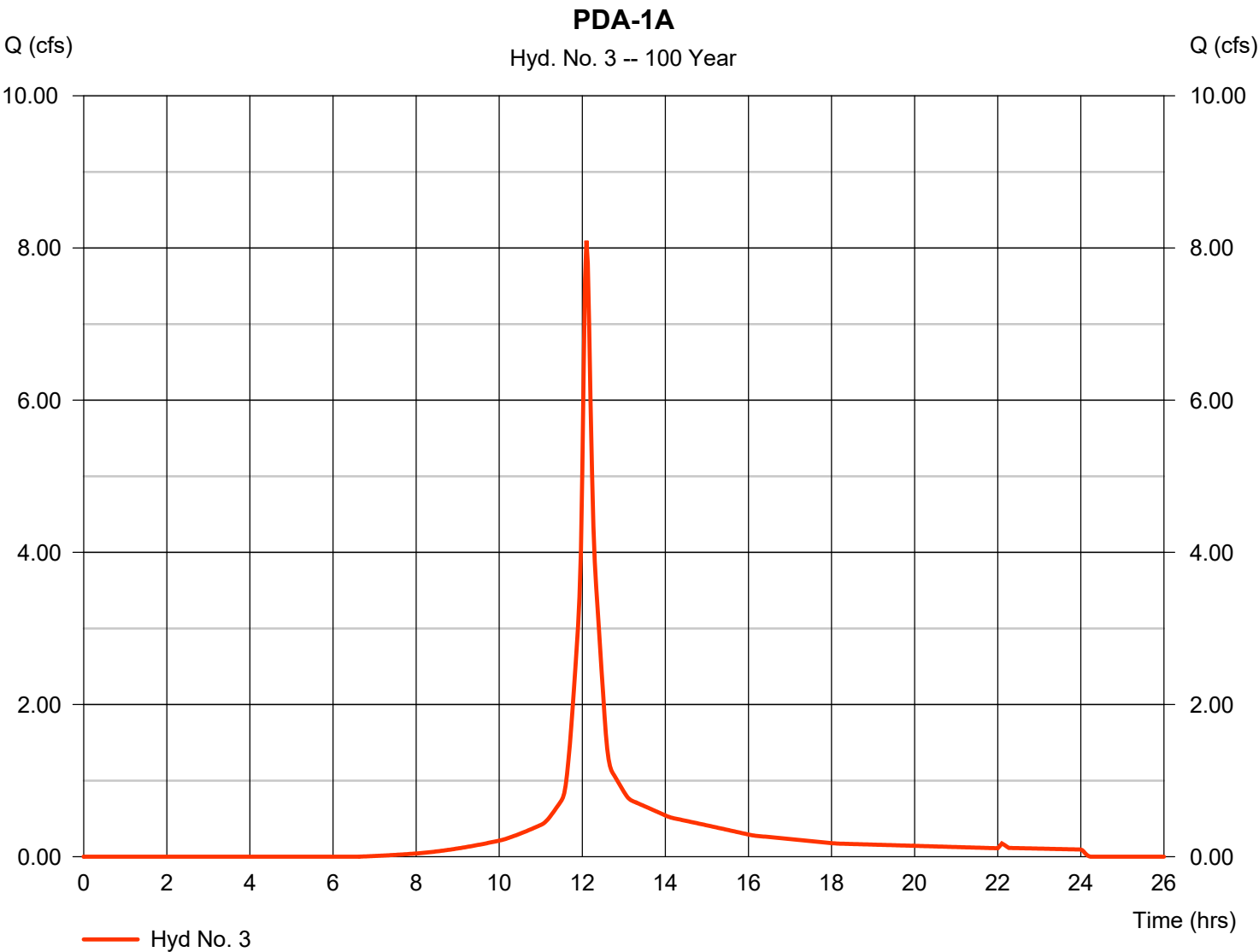


Hydrograph Report

Hyd. No. 3

PDA-1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.095 cfs
Storm frequency	=	100 yrs	Time to peak	=	12.10 hrs
Time interval	=	2 min	Hyd. volume	=	27,767 cuft
Drainage area	=	1.370 ac	Curve number	=	74
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	7.10 min
Total precip.	=	8.73 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

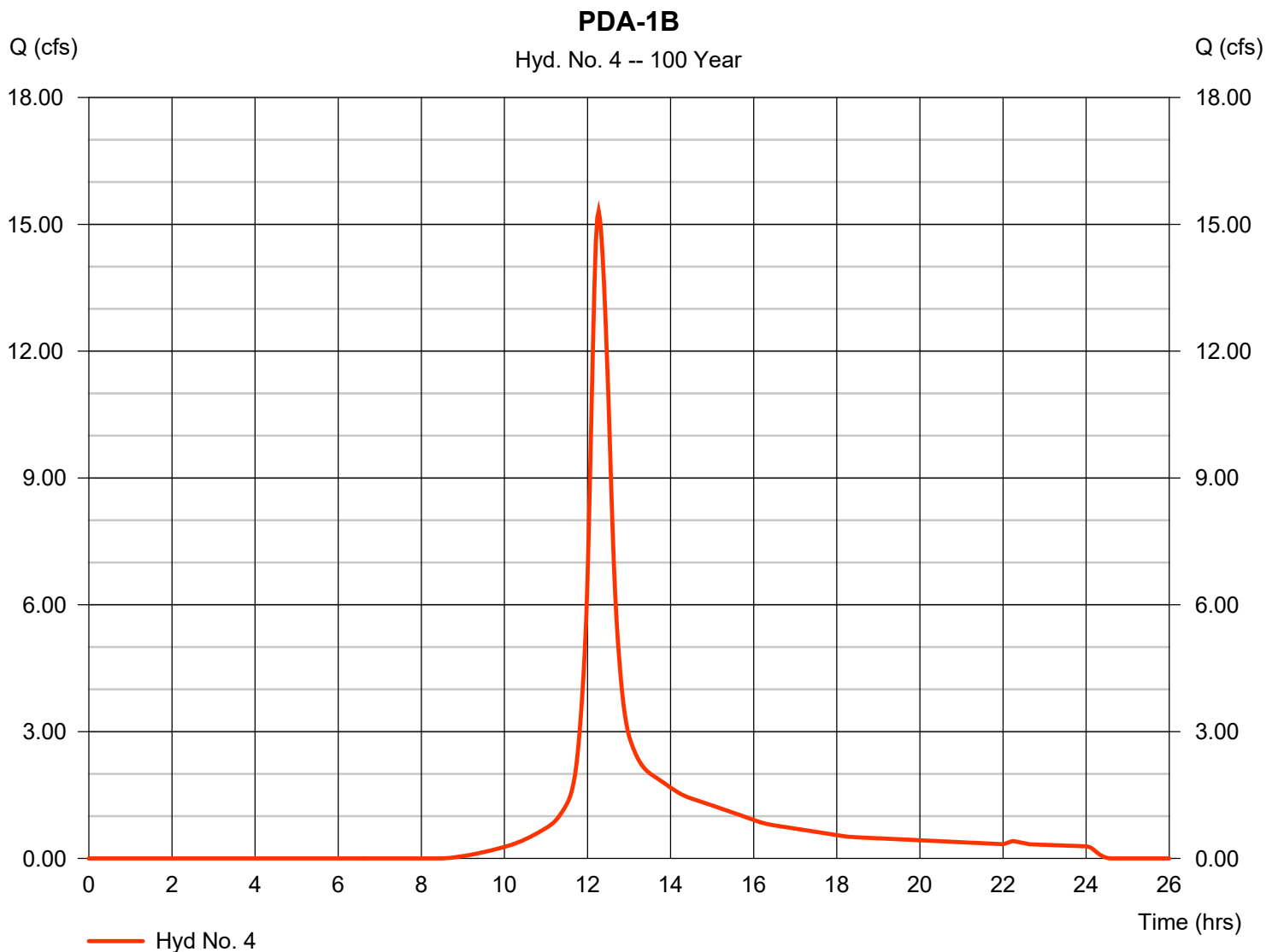
Wednesday, 10 / 5 / 2022

Hyd. No. 4

PDA-1B

Hydrograph type = SCS Runoff
Storm frequency = 100 yrs
Time interval = 2 min
Drainage area = 4.370 ac
Basin Slope = 0.0 %
Tc method = User
Total precip. = 8.73 in
Storm duration = 24 hrs

Peak discharge = 15.31 cfs
Time to peak = 12.27 hrs
Hyd. volume = 72,535 cuft
Curve number = 65
Hydraulic length = 0 ft
Time of conc. (Tc) = 21.90 min
Distribution = Type III
Shape factor = 484

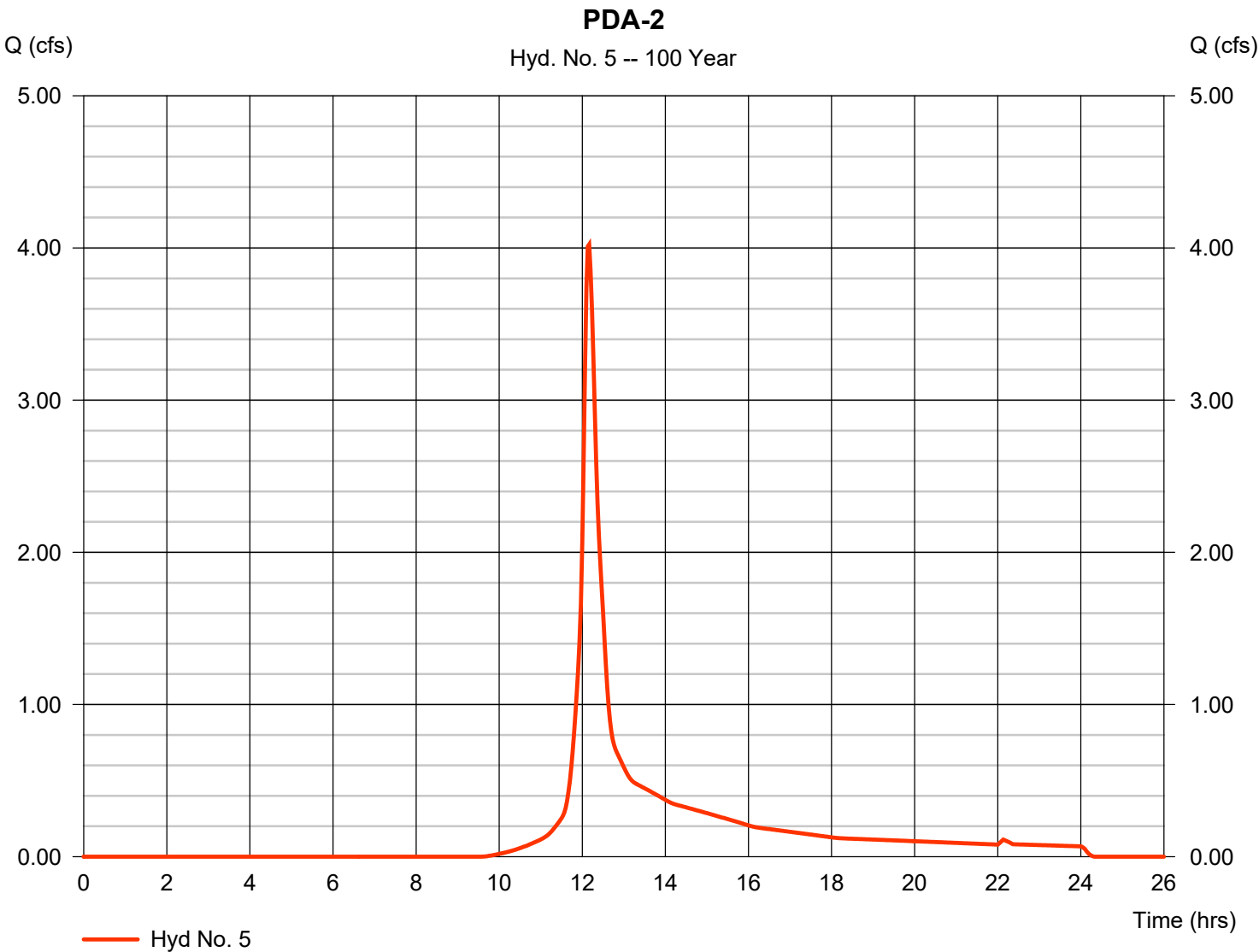


Hydrograph Report

Hyd. No. 5

PDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 4.024 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 15,717 cuft
Drainage area	= 1.150 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 11.20 min
Total precip.	= 8.73 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



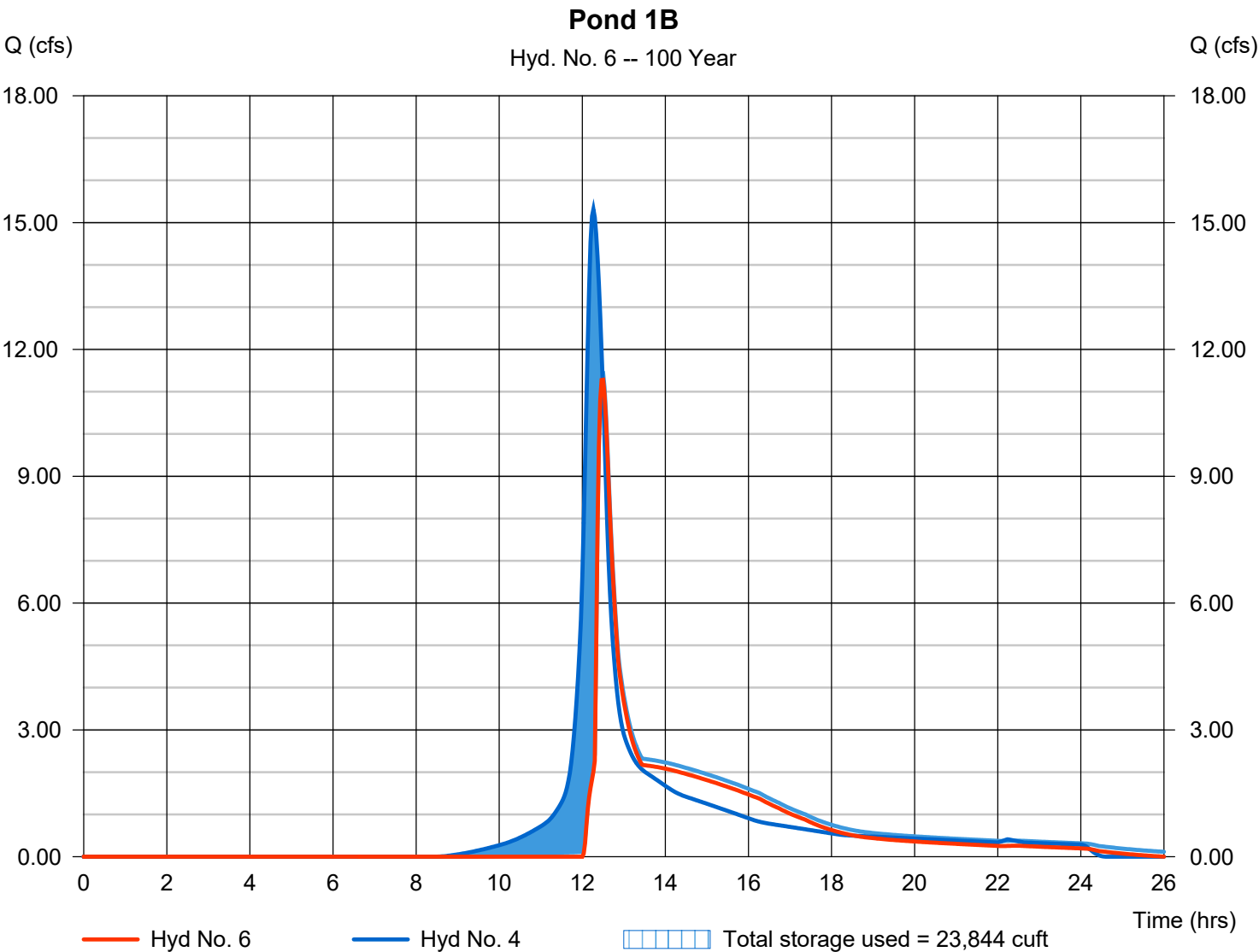
Hydrograph Report

Hyd. No. 6

Pond 1B

Hydrograph type	= Reservoir	Peak discharge	= 11.28 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.50 hrs
Time interval	= 2 min	Hyd. volume	= 56,625 cuft
Inflow hyd. No.	= 4 - PDA-1B	Max. Elevation	= 419.54 ft
Reservoir name	= Pond 1	Max. Storage	= 23,844 cuft

Storage Indication method used. Exfiltration extracted from Outflow.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

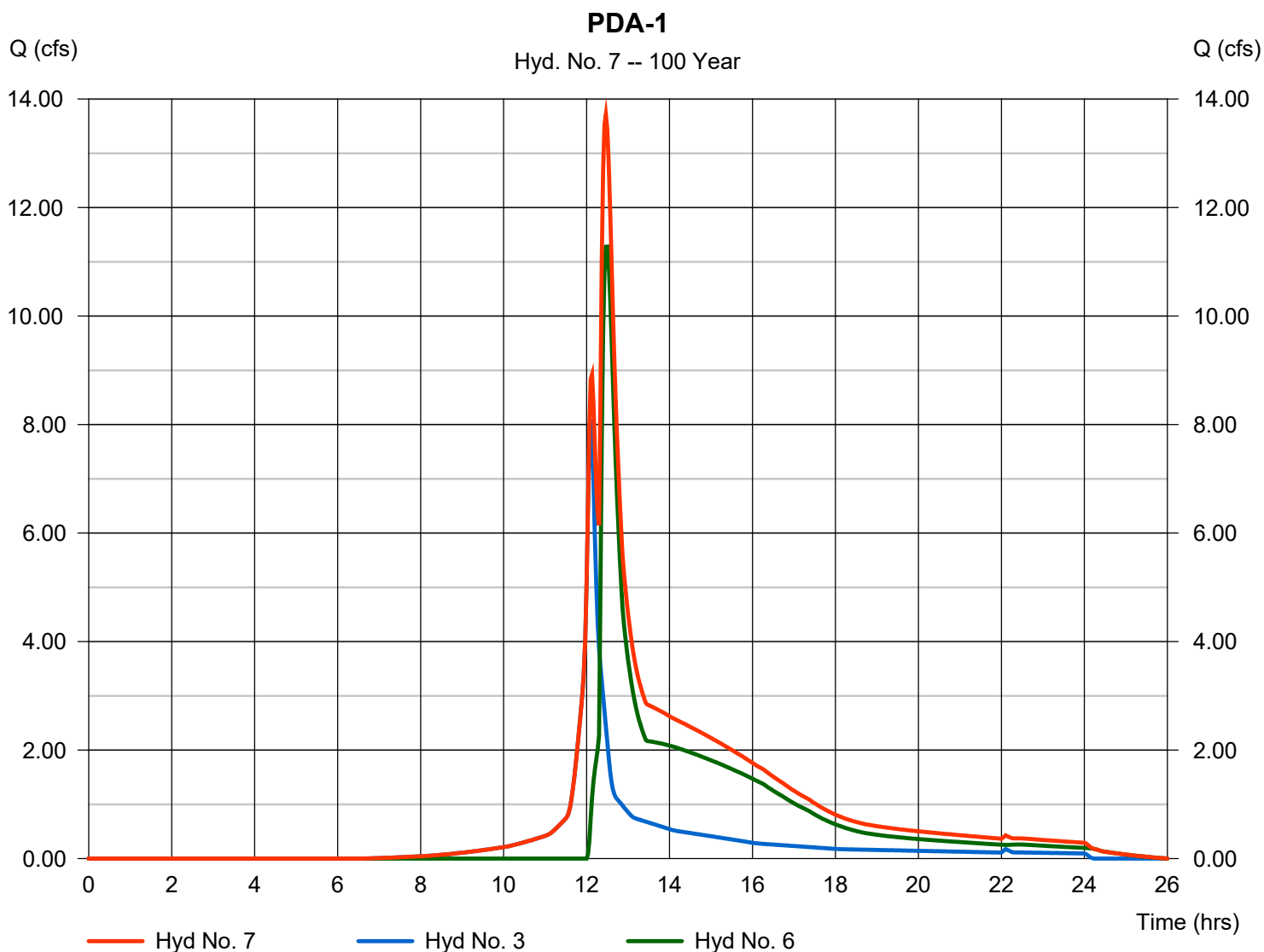
Wednesday, 10 / 5 / 2022

Hyd. No. 7

PDA-1

Hydrograph type = Combine
Storm frequency = 100 yrs
Time interval = 2 min
Inflow hyds. = 3, 6

Peak discharge = 13.71 cfs
Time to peak = 12.47 hrs
Hyd. volume = 84,392 cuft
Contrib. drain. area = 1.370 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 10 / 5 / 2022

Hyd. No. 6

Pond 1B

Hydrograph type	= Reservoir	Peak discharge	= 11.28 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.50 hrs
Time interval	= 2 min	Hyd. volume	= 56,625 cuft
Inflow hyd. No.	= 4 - PDA-1B	Reservoir name	= Pond 1
Max. Elevation	= 419.54 ft	Max. Storage	= 23,844 cuft

Storage Indication method used. Exfiltration extracted from Outflow.

Hydrograph Discharge Table

(Printed values >= 1.00% of Qp. Print interval = 5)

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
12.17	13.49	418.05	1.423	1.417	----	----	----	----	----	----	0.133	1.417
12.33	14.73	419.22	4.848	2.286	----	----	2.550	----	----	----	0.153	4.835
12.50	10.97	419.54 <<	11.28	1.607	----	----	9.673	----	----	----	0.158	11.28
12.67	6.261	419.39	8.085	2.189	----	----	5.894	----	----	----	0.155	8.084
12.83	3.925	419.23	5.074	2.279	----	----	2.783	----	----	----	0.153	5.062
13.00	2.900	419.13	3.678	2.252	----	----	1.417	----	----	----	0.151	3.669
13.17	2.455	419.06	2.880	2.208	----	----	0.667	----	----	----	0.150	2.876
13.33	2.175	419.02	2.383	2.181	----	----	0.201	----	----	----	0.149	2.382
13.50	2.013	418.99	2.163	2.163	----	----	0.000	----	----	----	0.149	2.163
13.67	1.901	418.96	2.142	2.142	----	----	0.000	----	----	----	0.148	2.142
13.83	1.790	418.92	2.115	2.115	----	----	0.000	----	----	----	0.147	2.115
14.00	1.677	418.87	2.082	2.082	----	----	0.000	----	----	----	0.147	2.082
14.17	1.568	418.82	2.045	2.045	----	----	0.000	----	----	----	0.146	2.045
14.33	1.481	418.75	2.005	2.003	----	----	----	----	----	----	0.145	2.003
14.50	1.417	418.69	1.962	1.957	----	----	----	----	----	----	0.144	1.957
14.67	1.362	418.63	1.919	1.911	----	----	----	----	----	----	0.143	1.911
14.83	1.308	418.56	1.877	1.862	----	----	----	----	----	----	0.141	1.862
15.00	1.252	418.50	1.836	1.811	----	----	----	----	----	----	0.140	1.811
15.17	1.196	418.43	1.794	1.760	----	----	----	----	----	----	0.139	1.760
15.33	1.140	418.37	1.743	1.706	----	----	----	----	----	----	0.138	1.706

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
15.50	1.083	418.30	1.684	1.650	----	----	----	----	----	----	0.137	1.650
15.67	1.026	418.23	1.624	1.593	----	----	----	----	----	----	0.136	1.593
15.83	0.968	418.17	1.558	1.534	----	----	----	----	----	----	0.135	1.534
16.00	0.910	418.10	1.486	1.471	----	----	----	----	----	----	0.134	1.471
16.17	0.854	418.04	1.414	1.409	----	----	----	----	----	----	0.133	1.409
16.33	0.811	417.97	1.338	1.336	----	----	----	----	----	----	0.131	1.336
16.50	0.781	417.89	1.257	1.252	----	----	----	----	----	----	0.130	1.252
16.67	0.755	417.82	1.184	1.174	----	----	----	----	----	----	0.129	1.174
16.83	0.730	417.76	1.105	1.095	----	----	----	----	----	----	0.128	1.095
17.00	0.705	417.70	1.027	1.019	----	----	----	----	----	----	0.127	1.019
17.17	0.679	417.65	0.958	0.950	----	----	----	----	----	----	0.126	0.950
17.33	0.654	417.61	0.895	0.888	----	----	----	----	----	----	0.126	0.888
17.50	0.628	417.57	0.821	0.813	----	----	----	----	----	----	0.125	0.813
17.67	0.603	417.53	0.754	0.743	----	----	----	----	----	----	0.124	0.743
17.83	0.577	417.50	0.695	0.684	----	----	----	----	----	----	0.124	0.684
18.00	0.551	417.48	0.644	0.631	----	----	----	----	----	----	0.124	0.631
18.17	0.527	417.46	0.599	0.584	----	----	----	----	----	----	0.123	0.584
18.33	0.509	417.44	0.559	0.543	----	----	----	----	----	----	0.123	0.543
18.50	0.498	417.42	0.525	0.508	----	----	----	----	----	----	0.123	0.508
18.67	0.491	417.40	0.496	0.479	----	----	----	----	----	----	0.122	0.479
18.83	0.483	417.39	0.474	0.457	----	----	----	----	----	----	0.122	0.457
19.00	0.476	417.38	0.455	0.439	----	----	----	----	----	----	0.122	0.439
19.17	0.468	417.37	0.438	0.422	----	----	----	----	----	----	0.122	0.422
19.33	0.460	417.36	0.423	0.408	----	----	----	----	----	----	0.122	0.408
19.50	0.453	417.35	0.409	0.394	----	----	----	----	----	----	0.122	0.394
19.67	0.445	417.35	0.397	0.382	----	----	----	----	----	----	0.122	0.382
19.83	0.437	417.34	0.385	0.371	----	----	----	----	----	----	0.121	0.371
20.00	0.430	417.33	0.374	0.360	----	----	----	----	----	----	0.121	0.360

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
20.17	0.422	417.33	0.363	0.350	----	----	----	----	----	----	0.121	0.350
20.33	0.414	417.32	0.353	0.340	----	----	----	----	----	----	0.121	0.340
20.50	0.406	417.32	0.344	0.331	----	----	----	----	----	----	0.121	0.331
20.67	0.399	417.31	0.334	0.322	----	----	----	----	----	----	0.121	0.322
20.83	0.391	417.31	0.325	0.313	----	----	----	----	----	----	0.121	0.313
21.00	0.383	417.30	0.317	0.304	----	----	----	----	----	----	0.121	0.304
21.17	0.375	417.30	0.308	0.296	----	----	----	----	----	----	0.121	0.296
21.33	0.367	417.29	0.299	0.287	----	----	----	----	----	----	0.121	0.287
21.50	0.359	417.29	0.291	0.279	----	----	----	----	----	----	0.121	0.279
21.67	0.352	417.28	0.283	0.271	----	----	----	----	----	----	0.120	0.271
21.83	0.344	417.28	0.274	0.263	----	----	----	----	----	----	0.120	0.263
22.00	0.336	417.27	0.266	0.255	----	----	----	----	----	----	0.120	0.255
22.17	0.388	417.27	0.264	0.253	----	----	----	----	----	----	0.120	0.253
22.33	0.395	417.27	0.269	0.258	----	----	----	----	----	----	0.120	0.258
22.50	0.363	417.27	0.269	0.258	----	----	----	----	----	----	0.120	0.258
22.67	0.333	417.27	0.263	0.252	----	----	----	----	----	----	0.120	0.252
22.83	0.327	417.26	0.255	0.244	----	----	----	----	----	----	0.120	0.244
23.00	0.321	417.26	0.247	0.237	----	----	----	----	----	----	0.120	0.237
23.17	0.316	417.26	0.240	0.230	----	----	----	----	----	----	0.120	0.230
23.33	0.310	417.25	0.233	0.223	----	----	----	----	----	----	0.120	0.223
23.50	0.304	417.25	0.226	0.216	----	----	----	----	----	----	0.120	0.216
23.67	0.298	417.24	0.219	0.210	----	----	----	----	----	----	0.120	0.210
23.83	0.292	417.24	0.213	0.203	----	----	----	----	----	----	0.120	0.203
24.00	0.286	417.24	0.206	0.197	----	----	----	----	----	----	0.120	0.197
24.17	0.218	417.23	0.195	0.186	----	----	----	----	----	----	0.120	0.186
24.33	0.088	417.21	0.166	0.158	----	----	----	----	----	----	0.119	0.158
24.50	0.015	417.19	0.134	0.127	----	----	----	----	----	----	0.119	0.127

...End

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022

Wednesday, 10 / 5 / 2022

Pond No. 1 - Pond 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 415.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	415.00	3,682	0	0
1.00	416.00	4,328	4,000	4,000
3.00	418.00	5,697	9,993	13,993
5.00	420.00	7,165	12,833	26,826
6.00	421.00	7,937	7,547	34,373

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	8.00	0.00	0.00
Span (in)	= 18.00	8.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 416.00	417.00	0.00	0.00
Length (ft)	= 55.00	0.67	0.00	0.00
Slope (%)	= 1.80	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 7.33	20.00	0.00	0.00
Crest El. (ft)	= 419.00	420.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 1.000 (by Contour)			
TW Elev. (ft)	= 0.00			

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	415.00	0.00	0.00	---	---	0.00	0.00	---	---	0.000	---	0.000
0.10	400	415.10	0.00	0.00	---	---	0.00	0.00	---	---	0.010	---	0.010
0.20	800	415.20	0.00	0.00	---	---	0.00	0.00	---	---	0.020	---	0.020
0.30	1,200	415.30	0.00	0.00	---	---	0.00	0.00	---	---	0.030	---	0.030
0.40	1,600	415.40	0.00	0.00	---	---	0.00	0.00	---	---	0.040	---	0.040
0.50	2,000	415.50	0.00	0.00	---	---	0.00	0.00	---	---	0.050	---	0.050
0.60	2,400	415.60	0.00	0.00	---	---	0.00	0.00	---	---	0.060	---	0.060
0.70	2,800	415.70	0.00	0.00	---	---	0.00	0.00	---	---	0.070	---	0.070
0.80	3,200	415.80	0.00	0.00	---	---	0.00	0.00	---	---	0.080	---	0.080
0.90	3,600	415.90	0.00	0.00	---	---	0.00	0.00	---	---	0.090	---	0.090
1.00	4,000	416.00	0.00	0.00	---	---	0.00	0.00	---	---	0.100	---	0.100
1.20	5,000	416.20	0.00	0.00	---	---	0.00	0.00	---	---	0.103	---	0.103
1.40	5,999	416.40	0.00	0.00	---	---	0.00	0.00	---	---	0.107	---	0.107
1.60	6,998	416.60	0.00	0.00	---	---	0.00	0.00	---	---	0.110	---	0.110
1.80	7,997	416.80	0.00	0.00	---	---	0.00	0.00	---	---	0.113	---	0.113
2.00	8,997	417.00	0.00 ic	0.00 ic	---	---	0.00	0.00	---	---	0.116	---	0.116
2.20	9,996	417.20	0.14 ic	0.14 ic	---	---	0.00	0.00	---	---	0.119	---	0.254
2.40	10,995	417.40	0.49 ic	0.47 ic	---	---	0.00	0.00	---	---	0.122	---	0.595
2.60	11,994	417.60	0.88 ic	0.88 ic	---	---	0.00	0.00	---	---	0.126	---	1.001
2.80	12,994	417.80	1.16 ic	1.15 ic	---	---	0.00	0.00	---	---	0.129	---	1.277
3.00	13,993	418.00	1.37 ic	1.37 ic	---	---	0.00	0.00	---	---	0.132	---	1.504
3.20	15,276	418.20	1.59 ic	1.56 ic	---	---	0.00	0.00	---	---	0.135	---	1.700
3.40	16,559	418.40	1.77 ic	1.74 ic	---	---	0.00	0.00	---	---	0.139	---	1.874
3.60	17,843	418.60	1.90 ic	1.89 ic	---	---	0.00	0.00	---	---	0.142	---	2.033
3.80	19,126	418.80	2.04 ic	2.04 ic	---	---	0.00	0.00	---	---	0.145	---	2.181
4.00	20,409	419.00	2.17 ic	2.17 ic	---	---	0.00	0.00	---	---	0.149	---	2.319
4.20	21,693	419.20	4.50 ic	2.30 ic	---	---	2.18	0.00	---	---	0.152	---	4.633
4.40	22,976	419.40	8.36 ic	2.18 ic	---	---	6.18	0.00	---	---	0.156	---	8.514
4.60	24,259	419.60	12.68 ic	1.33 ic	---	---	11.35	0.00	---	---	0.159	---	12.84
4.80	25,542	419.80	14.14 ic	0.90 ic	---	---	13.24 s	0.00	---	---	0.162	---	14.30
5.00	26,826	420.00	14.93 ic	0.70 ic	---	---	14.23 s	0.00	---	---	0.166	---	15.09
5.10	27,580	420.10	15.25 ic	0.62 ic	---	---	14.62 s	1.64	---	---	0.168	---	17.06
5.20	28,335	420.20	15.54 ic	0.57 ic	---	---	14.97 s	4.65	---	---	0.169	---	20.36
5.30	29,090	420.30	15.82 ic	0.52 ic	---	---	15.30 s	8.54	---	---	0.171	---	24.53
5.40	29,844	420.40	16.08 ic	0.47 ic	---	---	15.60 s	13.15	---	---	0.173	---	29.40
5.50	30,599	420.50	16.32 ic	0.44 ic	---	---	15.88 s	18.38	---	---	0.175	---	34.88
5.60	31,354	420.60	16.56 ic	0.41 ic	---	---	16.15 s	24.17	---	---	0.177	---	40.90
5.70	32,109	420.70	16.80 ic	0.38 ic	---	---	16.41 s	30.46	---	---	0.178	---	47.42

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Pond 1

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
5.80	32,863	420.80	17.03 ic	0.36 ic	---	---	16.66 s	37.21	---	---	0.180	---	54.41
5.90	33,618	420.90	17.25 ic	0.34 ic	---	---	16.91 s	44.40	---	---	0.182	---	61.83
6.00	34,373	421.00	17.46 ic	0.32 ic	---	---	17.13 s	52.00	---	---	0.184	---	69.63

...End

Project Excavation & Fill PermitBy MDMDate 08/26/22Location 125 Garder Road, Monroe, CTChecked CJPDate 08/26/22Bold one: Existing ProposedExisting Drainage Area 1 (EDA-1)

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ¹			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	Woods (Good)	55			0.33	18.15
D	Woods (Good)	77			1.27	97.79
B	Dirt	82			1.00	82.00
D	Dirt	89			0.61	54.29
Totals =					3.21	252.23

¹ Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{252.23}{3.21} = 78.58$$

Use CN =

79

22104001-CN

Project Excavation & Fill PermitBy MDMDate 08/26/22Location 125 Garder Road, Monroe, CTChecked CJPDate 08/26/22Bold one: Existing ProposedExisting Drainage Area 2 (EDA-2)

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ¹			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	Woods (Good)	55			0.88	48.40
B'	Dirt	82			2.76	226.32
D	Dirt	82			0.04	3.28
Totals =					3.68	278.00

¹ Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{278.00}{3.68} = 75.54$$

Use CN =

76

22104001-CN

Project Excavation & Fill PermitBy MDMDate 08/30/22Location 125 Garder Road, Monroe, CTChecked CJPDate 08/30/22

Bold one: Existing Proposed

Proposed Drainage Area 1A (PDA-1A)1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ¹			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	Woods (Good)	55			0.17	9.35
D	Woods (Good)	77			0.85	65.45
B	Open Space (Good)	61			0.13	7.93
D	Open Space (Good)	80			0.22	17.60
Totals =					1.37	100.33

¹ Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{100.33}{1.37} = 73.23$$

Use CN =

74

22104001-CN

Project Excavation & Fill PermitBy MDMDate 08/30/22Location 125 Garder Road, Monroe, CTChecked CJPDate 08/30/22

Bold one: Existing Proposed

Proposed Drainage Area 1B (PDA-1B)1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ¹			Area <input checked="" type="checkbox"/> acres <input type="checkbox"/> mi ² <input type="checkbox"/> %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	Open Space (Good)	61			3.23	197.03
D	Open Space (Good)	80			0.78	62.40
B	Woods (Good)	55			0.32	17.60
D	Woods (Good)	77			0.03	2.31
B	Gravel	85			0.01	0.85
Totals =					4.37	280.19

¹ Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{280.19}{4.37} = 64.12$$

Use CN =

65

22104001-CN

Project Excavation & Fill PermitBy MDMDate 08/30/22Location 125 Garder Road, Monroe, CTChecked CJPDate 08/30/22

Bold one: Existing Proposed

Proposed Drainage Area 2 (PDA-2)1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN ¹			Area <div><div><div>X</div><div></div><div></div></div>acres mi² %</div>	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	Open Space (Good)	61			0.53	32.33
B	Woods (Good)	55			0.62	34.10
Totals =					1.15	66.43

¹ Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{66.43}{1.15} = 57.77 \quad \text{Use CN} =$$

58

22104001-CN

Project	<u>Excavation and Fill Permit</u>	By	<u>MDM</u>	Date	<u>08/26/22</u>
Location	<u>125 Garder Road, Monroe, CT</u>	Checked	<u>RPP</u>	Date	<u>08/26/22</u>
Bold One:	Present	Developed			
Bold One:	T_c	T_t	through subarea		

Existing Drainage Area 1 (EDA-1)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (table 3-1)
3. Flow Length, L (total L ≤ 300 ft)
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Segment ID

AB	
Woods (Light Underbrush)	
0.40	
ft 216.2	
in 3.59	
ft/ft 0.20	
hr 0.248	+ = 0.248

Compute T_t

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)
11. $T_t = \frac{L}{3600 V}$

Segment ID

BC	
Unpaved	
ft 204.1	
ft/ft 0.069	
ft/s 4.24	
hr 0.013	+ = 0.013

Compute T_t

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r $r = \frac{a}{p_w}$
15. Channel slope, s
16. Manning's roughness coeff., n
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
18. Flow length, L
19. $T_t = \frac{L}{3600 V}$

Segment ID

ft ²	
ft	
ft	
ft/ft	
ft/s	
ft	
hr	+ =

Compute r

Compute V

Compute T_t

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

Hours	= 0.261
Minutes	= 15.67

Project	Excavation and Fill Permit	By	MDM	Date	08/26/22
Location	125 Garder Road, Monroe, CT	Checked	RPP	Date	08/26/22
Bold One:	Present Developed				
Bold One:	T_c	T_t	through subarea		

Existing Drainage Area 2 (EDA-2)

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (table 3-1)
3. Flow Length, L (total L ≤ 300 ft)
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Segment ID

AB	
Woods (Light Underbrush)	
0.40	
174.5	
3.59	
0.18	
0.218	+ = 0.218

Compute T_t

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)
11. $T_t = \frac{L}{3600 V}$

Segment ID

	+ =

Compute T_t

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r $r = \frac{a}{p_w}$
15. Channel slope, s
16. Manning's roughness coeff., n
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
18. Flow length, L
19. $T_t = \frac{L}{3600 V}$

Segment ID

	+ = 0.000

Compute r

Compute V

Compute T_t

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

Hours	= 0.218
Minutes	= 13.06

Project	<u>Excavation and Fill Permit</u>	By	<u>MDM</u>	Date	<u>08/30/22</u>
Location	<u>125 Garder Road, Monroe, CT</u>	Checked	<u>RPP</u>	Date	<u>08/30/22</u>
Bold One:	Present Developed				
Bold One:	T _c T_t through subarea	Proposed Drainage Area 1 (PDA-1A)			

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (table 3-1)
3. Flow Length, L (total L ≤ 300 ft)
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Segment ID

AB					
Woods (Light Underbrush)					
0.40					
63.1	ft				
3.59	in				
0.13	ft/ft				
0.112	hr	+		=	0.112

Compute T_t

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)
11. $T_t = \frac{L}{3600 V}$

Segment ID

BC					
Unpaved					
116.9	ft				
0.086	ft/ft				
4.73	ft/s				
0.007	hr	+		=	0.007

Compute T_t

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r $r = \frac{a}{p_w}$
15. Channel slope, s
16. Manning's roughness coeff., n
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
18. Flow length, L
19. $T_t = \frac{L}{3600 V}$
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

Segment ID

	ft ²				
	ft				
	ft				
	ft				
	ft/ft				
	ft/s				
	ft				
	hr	+		=	
					0.118
					7.11

Hours

Minutes

Project	<u>Excavation and Fill Permit</u>	By	<u>MDM</u>	Date	<u>08/30/22</u>
Location	<u>125 Garder Road, Monroe, CT</u>	Checked	<u>RPP</u>	Date	<u>08/30/22</u>
Bold One:	Present Developed				
Bold One:	T _c T _t through subarea	Proposed Drainage Area 1B (PDA-1B)			

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c Only)

1. Surface description (table 3-1)
2. Manning's roughness coeff., n (table 3-1)
3. Flow Length, L (total L ≤ 300 ft)
4. Two-yr 24-hr rainfall, P₂
5. Land slope, s
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$

Segment ID

AB	BC
Dense Grasses	Dense Grasses
0.24	0.24
93.2	56.8
3.59	3.59
0.03	0.02
0.176	0.160

Compute T_t

ft

in

ft/ft

hr

0.336

Shallow concentrated flow

7. Surface description (paved or unpaved)
8. Flow length, L
9. Watercourse slope, s
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)
11. $T_t = \frac{L}{3600 V}$

Segment ID

CD
Unpaved
196.2
0.013
1.84
0.030

Compute T_t

ft

ft/ft

ft/s

hr

0.030

Channel flow

12. Cross sectional flow area, a
13. Wetted perimeter, p_w
14. Hydraulic radius, r $r = \frac{a}{p_w}$
15. Channel slope, s
16. Manning's roughness coeff., n
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$
18. Flow length, L
19. $T_t = \frac{L}{3600 V}$

Segment ID

Compute r

ft²

ft

ft

ft/ft

ft/s

ft

hr

Compute T_t

0.366

21.94

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)

Hours

Minutes

Minutes	=	11.16
---------	---	-------

WATER QUALITY VOLUME (WQV) COMPUTATIONS FOR PDA-1B

Project: Excavation/Fill Permit
Location: 125 garder Road, Monroe, CT
Date: 10/01/22

Water Quality Volume Calculations:

$$WQV = \frac{(1'')(R)(A)}{12}$$

Where:
WQV = water quality volume (ac-ft)
R = volumetric runoff coefficient = 0.05+0.009(I)
I = percent impervious cover (see below)
A = site area in acres

$$I = \frac{A_{IMP}}{A_{TOT}} \times 100$$

Where:
I = percent impervious cover
A_{IMP} = area of impervious cover
A_{TOT} = total area of watershed

Watershed Description:

PDA-1B

Area of impervious coverage, A_{IMP}

0.01 Acres

Total area of watershed, A_{TOT}

4.37 Acres

Percent impervious cover, I

0.23 %

Volumetric runoff coefficient, R

0.05

Water Quality Volume, WQV

0.019 ac-ft 826 cf

Water Quality Flow Calculations:

WQf = (qu)(A)(Q)
WQf = Peak Discharge for water quality event (cfs)
qu = unit peak discharge (cfs/mi²/in)
A = drainage area (square miles)
Q = runoff volume (WQv/A) (watershed inches)

$$CN = 1000 / [10 + 5 \cdot P + 10 \cdot Q - 10 \cdot (Q^2 + 1.25 \cdot Q \cdot P)^{1/2}]$$

Chapter 7 of 2004 Connecticut
Stormwater Quality Manual

P= 1 inches

Q= 0.052 inches

WQv = 0.019 acre-ft

Total Drainage Area = 4.37 acre

CN = 65

$$Ia = 200/CN^{-2}$$

Ia = 1.077

Compute Ia/P

P= 1 inches

Ia / P = 1.08

Tc= 21.9 min
0.365 hr

Exhibit 4-III

Tc= 0.365

Ia / P = 1.08

q_u = 100

$$WQf = (qu)(A)(Q)$$

qu = 100 csm/in

A = 0.007 mi² (acre/640)

Q = 0.052 inches

WQf = 0.04 cfs

APPENDIX C
INSPECTIONS

Excavation/Fill Permit Progress Report Form

Test Pit Logs

Percolation Test Logs



Title: 125 Garder Road Fill Permit
Location: 125 Garder, Monroe, Connecticut
Permit: EFP XXXX-XX

IL #: XX
Project #: 22104001
Field Date: XX/XX/XXX

FILL PERMIT PROGRESS REPORT			
Name(s) of Individual(s) performing inspection:		AM	PM
Name of Inspecting Engineer/Position		Weather:	XXXX
		Temperature:	H: XX°F L: XX°F
Time of Inspection:		Precipitation since last inspection:	
Start: XX	P.M.	Fill amount imported since last inspection:	
End: XX	P.M.	Fill amount imported to date:	
Work Completed			
Unanticipated Field Work/Delays			
Condition of Site Access and Control Measures			
Condition of Soil Erosion and Sedimentation Control Measures			
Condition of Drainage Control Measures & Corrective or Added Measures			
Additional Inspection Required:	YES	NO	If Yes, Date: XX/XX/XX
Inspector(s) Signature(s):			

Proposed Redevelopment

125 Garder Road - Monroe, CT

TP-1

Project # 22104001

September 2, 2022

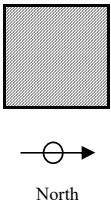

TEST PIT FIELD LOG

PERSONNEL PRESENT	EXCAVATION EQUIPMENT			
Rob Pryor - Solli Engineering	Contractor	Grasso Construction	Assumed Ground Surface El. _____	
	Operator	_____	Datum _____	
	Make	_____ Model _____	Temperature _____	
	Bucket Capacity	_____ Reach _____	Weather _____ Sunny	

Depth	Soil Description	Excav. Effort	Cobble and Boulder Data	Remark No.
0" - 9"	Top Soil			
9" - 38"	Tan Brown Silty Loam, Moderately Compact			
38" - 96"	Tan Gray Compact Mottled Silty Loam			

REMARKS:

- 1.) No Ground Water
- 2.) No Ledge Refusal
- 3.) No Water
- 4.) Roots to 29"
- 5.) Mottling/Redox @ 38"

TEST PIT PLAN	LEGEND			
	COBBLES AND BOULDERS	PROPORTIONS USED (QUANTITATIVE TERMS)	QUALITATIVE TERMS	EXCAVATION EFFORT
	Size Range Letter Classification Designation 3" - 12" Cobble (C) 12" - 24" Small (S) 24" - 36" Medium (M) 36" and Larger Large (L)	TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	OCCASIONAL FEW FREQUENT NUMEROUS	E - Easy M - Moderate D - Difficult  Observed Depth to Groundwater

Proposed Redevelopment

125 Garder Road - Monroe, CT

TP-2

Project # 22104001

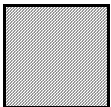


September 2, 2022

TEST PIT FIELD LOG

PERSONNEL PRESENT		EXCAVATION EQUIPMENT			
Rob Pryor - Solli Engineering		Contractor	Grasso Construction	Assumed Ground Surface El. _____	
		Operator	_____	Datum _____	
		Make	_____ Model _____	Temperature _____	
		Bucket Capacity	_____ Reach _____	Weather _____ Sunny	
Depth	Soil Description		Excav. Effort	Cobble and Boulder Data	Remark No.
0" - 16"	Miscellaneous Fill, Compact				
16" - 108"	Fractured Rock (Non-Typical Ledge) with Tan Gray Fine Sand				

REMARKS:

- 1.) No Ground Water
2) Restrictive/Ledge @ 16"

TEST PIT PLAN		LEGEND				
  North		COBBLES AND BOULDERS		PROPORTIONS USED (QUANTITATIVE TERMS)	QUALITATIVE TERMS	EXCAVATION EFFORT
		Size Range Letter Classification Designation 3" - 12" Cobble (C) 12" - 24" Small (S) 24" - 36" Medium (M) 36" and Larger Large (L)	TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	OCCASIONAL FEW FREQUENT NUMEROUS	E - Easy M - Moderate D - Difficult  Observed Depth to Groundwater	

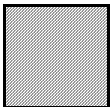


TEST PIT FIELD LOG

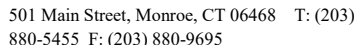
PERSONNEL PRESENT	EXCAVATION EQUIPMENT	
Rob Pryor - Solli Engineering	Contractor <u>Grasso Construction</u>	Assumed Ground Surface El. _____
	Operator _____	Datum _____
	Make _____ Model _____	Temperature _____
	Bucket Capacity _____ Reach _____	Weather <u>Sunny</u>

Depth	Soil Description	Excav. Effort	Cobble and Boulder Data	Remark No.
0" - 4"	Topsoil / Forest Litter			
4"-35"	Tan Brown Silty Loam with Stones & Cobbles			
35"-47"	Tan Gray Sandy Silt with Stones & Cobble			

REMARKS:

- 1.) No Ground Water
- 2) Ledge/Refusal @ 47" (Restrictive @ 47")
- 3) Roots to 35"
- 4) No Mottling/Redox

TEST PIT PLAN	LEGEND			
  North	COBBLES AND BOULDERS	PROPORTIONS USED (QUANTITATIVE TERMS)	QUALITATIVE TERMS	EXCAVATION EFFORT
	Size Range Letter Classification Designation 3" - 12" Cobble (C) 12" - 24" Small (S) 24" - 36" Medium (M) 36" and Larger Large (L)	TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	OCCASIONAL FEW FREQUENT NUMEROUS	E - Easy M - Moderate D - Difficult  Observed Depth to Groundwater



125 Garder Road - Monroe, CT

September 2, 2022

EXCAVATION EQUIPMENT

Sunny

Remark	No.
--------	-----

Tan Gray Sandy Silt with Stones & Cobbles

- 1.) No Ground Water
- 2) Ledge/Refusal @ 53"
- 3) Roots to 29"
- 4) Mottling/Redox @ 29" (Restrictive Layer)

EXCAVATION EFFORT



36" and Larger Large (L)

AND 35-50%

NUMEROUS

D - Difficult

Observed Depth to
Groundwater

Proposed Redevelopment

125 Garder Road - Monroe, CT

TP-5

Project # 22104001

September 2, 2022

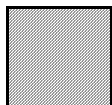


TEST PIT FIELD LOG

PERSONNEL PRESENT	EXCAVATION EQUIPMENT			
Rob Pryor - Solli Engineering	Contractor	Grasso Construction	Assumed Ground Surface El. _____	
	Operator	_____	Datum _____	
	Make	_____ Model _____	Temperature _____	
	Bucket Capacity	_____ Reach _____	Weather _____ Sunny	

Depth	Soil Description	Excav. Effort	Cobble and Boulder Data	Remark No.
0" - 4"	Topsoil / Forest Litter			
4"-29"	Tan Brown Silty Loam with Stones & Cobbles			
29"-90"	Tan Gray Sandy Silt & Fractured Rock (Non-Typical Ledge)			

REMARKS:

- 1.) No Ground Water
- 2) Ledge/Refusal @ 29" (Uphill Side of Test Pit) & @53" (Center of Test Pit)
- 3) Roots to 48"
- 4) No Mottling/Redox

TEST PIT PLAN			LEGEND				
<div></div> <div></div> <div>North</div>	COBBLES AND BOULDERS		PROPORTIONS USED (QUANTITATIVE TERMS)		QUALITATIVE TERMS	EXCAVATION EFFORT	
	Size Range	Letter				E - Easy	
	Classification	Designation	TRACE (TR)	0-10%	OCCASIONAL	M - Moderate	
	3" - 12"	Cobble (C)	LITTLE (LI)	10-20%	FEW	D - Difficult	
	12" - 24	Small (S)	SOME (SO)	20-35%	FREQUENT		
	24" - 36"	Medium (M)	AND	35-50%	NUMEROUS		Observed Depth to
	36" and Larger	Large (L)					Groundwater

Proposed Redevelopment

125 Garder Road - Monroe, CT

TP-6

Project # 22104001

September 2, 2022

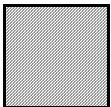


TEST PIT FIELD LOG

PERSONNEL PRESENT	EXCAVATION EQUIPMENT			
Rob Pryor - Solli Engineering	Contractor	Grasso Construction	Assumed Ground Surface El. _____	
	Operator	_____	Datum _____	
	Make	_____ Model _____	Temperature _____	
	Bucket Capacity	_____ Reach _____	Weather _____ Sunny	

Depth	Soil Description	Excav. Effort	Cobble and Boulder Data	Remark No.
0" - 4"	Topsoil / Forest Litter			
4"-29"	Tan Brown Silty Loam with Stones & Cobbles			
29"-96"	Tan Gray Sandy Silt with Stones & Cobbles			

REMARKS:

- 1.) No Ground Water
- 2) No Ledge/Refusal
- 3) Roots to 41"
- 4) No Mottling/Redox

TEST PIT PLAN	LEGEND			
  North	COBBLES AND BOULDERS	PROPORTIONS USED (QUANTITATIVE TERMS)	QUALITATIVE TERMS	EXCAVATION EFFORT
	Size Range Letter Classification Designation 3" - 12" Cobble (C) 12" - 24" Small (S) 24" - 36" Medium (M) 36" and Larger Large (L)	TRACE (TR) 0-10% LITTLE (LI) 10-20% SOME (SO) 20-35% AND 35-50%	OCCASIONAL FEW FREQUENT NUMEROUS	E - Easy M - Moderate D - Difficult  Observed Depth to Groundwater

PERC TEST FIELD LOG

Solli Engineering					
Chris P. Brian Palma	Contractor			Assumed Ground Surface El. _____	
	Operator			Datum _____	
	Make	Model	Temperature		_____
	Bucket Capacity	Reach	Weather		Clear

Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
	Bottom of perc hole below grade = 18" Bottom of perc hole below shelf = 17" Diameter of perc hole = 10" Measured From Pre-soak 8:35 AM			
11:00 AM		1 3/4		
11:05 AM		5	4 3/4	
11:10 AM		7 1/4	2 1/4	
11:15 AM		8 1/2	1 1/4	
11:20 AM		9 1/2	1	
11:25 AM		10 1/4	3/4	
11:30 AM		10 3/4	1/2	
11:35 AM		11	1/4	
11:40 AM		11 1/2	1/4	
11:45 AM		11 3/4	1/4	
11:50 AM		12	1/4	
11:55 AM		12 1/4	1/4	
12:00 PM		12 1/2	1/4	
12:05 PM		12 3/4	1/4	
12:10		13	1/4	
REMARKS:		Uniform Rate	0.25 Inch / 5 Min	

1 Inch / 10.1 - 20.0 Min Rate



501 Main Street, Monroe, CT 06468 T:
(203) 880-5455 F: (203) 800-9695

Proposed Development

125 Garder Road - Monroe, CT

PT-2

Project # 22104001

September 2, 2022

PERC TEST FIELD LOG

Solli Engineering		
Chris P.	Contractor	Assumed Ground Surface El.
Brian Palma	Operator	Datum
	Make	Model
	Bucket Capacity	Reach
		Temperature
		Weather

Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
4:00 PM	Bottom of perc hole below grade = 16" Bottom of perc hole below shelf = 14" Diameter of perc hole = 10" Measured From Pre-soak 4:00pm			
9:54 AM		1 1/4		
9:57 AM		3	1 3/4	
10:00 AM		3 3/4	3/4	
10:03 AM		4 1/2	1/2	
10:06 AM		5	1/2	
10:09 AM		5 1/2	1/2	
10:12 AM		6	1/2	
10:15 AM		6 1/2	1/2	
10:18 AM		7	1/4	
10:21 AM		7 1/4	1/4	
10:24 AM		7 1/2	1/4	
10:27 AM		7 3/4	1/2	
10:30 AM		8 1/4	1/2	
10:33 AM		8 3/4	1/4	
10:36 AM		9	1/4	
10:39 AM		9 1/4	1/4	
10:42 AM		9 1/2	1/4	
10:45 AM		9 3/4	1/4	
10:48 AM		10	1/4	
10:51 AM		10 1/4	1/4	
10:54 AM		10 1/2	1/4	
10:57 AM		10 3/4	1/4	
11:00 AM		11	1/4	
11:03 AM		11 1/4	1/4	
REMARKS:		Uniform Rate	1/4	Inch / 3 Min

1 Inch / 10.1 - 20 Min Rate

PERC TEST FIELD LOG

Solli Engineering				
Chris P. Brian Palma	Contractor	_____	Assumed Ground Surface El. _____	
	Operator	_____	Datum _____	
	Make	_____ Model _____	Temperature _____	
	Bucket Capacity	_____ Reach _____	Weather _____	

Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
	Bottom of perc hole below grade = 19" Bottom of perc hole below shelf = 17" Diameter of perc hole = 10" Measured From Pre-soak 3:08 PM			
9:24 AM		2 1/2		
9:27 AM		10 1/2	8	
9:30 AM		13 1/4	2 3/4	
9:33 AM		14 1/2	1 1/4	
9:36 AM		15 1/4	3/4	
9:39 AM		16	3/4	
9:42 AM		17	1	
REMARKS:		Uniform Rate	3/4 Inch / 3 Min	

1 Inch < 10.1 Min Rate

PERC TEST FIELD LOG

Solli Engineering					
Chris P. Brian Palma	Contractor			Assumed Ground Surface El. _____	
	Operator			Datum _____	
	Make	Model			Temperature _____
	Bucket Capacity	Reach			Weather _____

Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
	Bottom of perc hole below grade = 17" Bottom of perc hole below shelf = 16" Diameter of perc hole = 10" Measured From Pre-soak 2:45 PM			
9:22 AM		5 3/4		
9:25 AM		9 1/4	3 1/2	
9:28 AM		11	1 3/4	
9:31 AM		12 1/2	1 1/2	
9:34 AM		13 1/4	3/4	
9:37 AM		13 3/4	1/2	
9:40 AM		16	2 1/4	
REMARKS:		Uniform Rate	1/2 Inch / 3 Min	

1 Inch < 10.1 Min Rate



501 Main Street, Monroe, CT 06468
(203) 880-5455 F: (203) 800-9695

T:

Proposed Development

125 Garder Road - Monroe, CT

PT-5

Project # 22104001

September 2, 2022

PERC TEST FIELD LOG

Solli Engineering						
Chris P. Brian Palma	Contractor			Assumed Ground Surface El.		
	Operator			Datum		
	Make	Model			Temperature	
	Bucket Capacity	Reach			Weather	

Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
	Bottom of perc hole below grade = 17" Bottom of perc hole below shelf = 16" Diameter of perc hole = 10" Measured From Pre-soak 2:17 PM			
8:17 AM		5		
8:20 AM		8 1/4	3 1/4	
8:23 AM		9 3/4	1 1/2	
8:26 AM		10 1/4	1/2	
8:29 AM		11	3/4	
8:32 AM		11 3/4	3/4	
8:35 AM		12 3/4	1	
8:38 AM		13	3/4	
8:41 AM		14	1	
REMARKS:		Uniform Rate	1/2 Inch / 3 Min	
1 Inch < 10.1 Min Rate				



501 Main Street, Monroe, CT 06468 T:
(203) 880-5455 F: (203) 800-9695

Proposed Development
125 Garder Road - Monroe, CT

PT-6
Project # 22104001
September 2, 2022

PERC TEST FIELD LOG				
Solli Engineering				
Chris P. Brian Palma		Contractor _____ Operator _____ Make _____ Model _____ Bucket Capacity _____ Reach _____	Assumed Ground Surface El. _____ Datum _____ Temperature _____ Weather _____	
Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
	Bottom of perc hole below grade = 16" Bottom of perc hole below shelf = 15.5" Diameter of perc hole = 10" Measured From Pre-soak 2:00 PM			
8:20 AM		1 1/2		
8:23 AM		3 1/2	2	
8:26 AM		4 3/4	1 1/4	
8:29 AM		5 1/2	3/4	
8:32 AM		6 1/4	3/4	
8:35 AM		7	3/4	
8:38 AM		7 3/4	3/4	
8:41 AM		8 1/4	1/2	
8:44 AM		8 3/4	1/2	
8:47 AM		9	1/4	
8:50 AM		9 1/4	1/4	
8:53 AM		9 1/2	1/4	
8:56 AM		9 3/4	1/4	
8:59 AM		10	1/4	
9:02 AM		10 1/4	1/4	
9:05 AM		10 3/4	1/2	
9:08 AM		11 1/4	1/2	
9:11 AM		11 1/2	1/4	
9:14 AM		12	1/2	
REMARKS: 1 Inch / 10.1 - 20.0 Min Rate		Uniform Rate	1/4 Inch / 3 Min	

PERC TEST FIELD LOG

Solli Engineering				
Chris P. Brian Palma	Contractor			Assumed Ground Surface El.
	Operator			Datum
	Make	Model	Temperature	
	Bucket Capacity	Reach	Weather	

Time	Description	Water Elevation (Inches)	Elevation Difference (Inches)	Remark No.
	Bottom of perc hole below grade = 17" Bottom of perc hole below shelf = 16" Diameter of perc hole = 10" Measured From Pre-soak 8:15 AM			
11:08 AM				
11:11 AM		3		
11:14 AM		6 1/4	3 1/4	
11:17 AM		8 1/2	2 1/4	
11:20 AM		10	1 1/2	
11:23 AM		11 1/4	1 1/4	
11:26 AM		12 1/4	1	
11:29 AM		13	3/4	
11:32 AM		13 3/4	3/4	
11:35 AM		14 1/4	1/2	
11:38 AM		14 3/4	1/2	
11:41 AM		15 1/4	1/2	
		16	3/4	
REMARKS:		Uniform Rate	1/2 Inch / 3 Min	
1 Inch < 10.1 Min Rate				

APPENDIX D
PLANS

Grading & Drainage Plan (Sheet 2.21)

Phased Soil Erosion & Sediment Control Plan (2.31)

Reclamation Plan (Sheet 2.61)

TEST PIT OBSERVATIONS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON SEPTEMBER 2, 2022. TEST PIT OBSERVATIONS WERE WITNESSED BY MONROE HEALTH DEPARTMENT.

TEST PIT 1
0'-9" TOPSOIL/FOREST LITTER
9'-38" TAN BROWN SILTY LOAM, MODERATELY COMPACT
38'-96" TAN GRAY COMPACT MOTTLED SILTY LOAM
NO GW, NO LEDGE/REFUSAL, NO WATER, ROOTS TO 29', MOTTILING/REDOX @ 38"

TEST PIT 2
0'-16" MISCELLANEOUS FILL, COMPACT
16'-108" FRACTURED ROCK (NON-TYPICAL LEDGE) WITH TAN GRAY FINE SAND
NO GW, RESTRICTIVE/LEDGE @ 16"

TEST PIT 3
0'-4" TOPSOIL/FOREST LITTER
4'-35" TAN BROWN SILTY LOAM WITH STONES & COBBLES
35'-47" TAN GRAY SANDY SILT WITH STONES & COBBLES
NO GW, LEDGE/REFUSAL @ 47', ROOTS TO 35', NO MOTTILING/REDOX

TEST PIT 4
0'-6" TOPSOIL/FOREST LITTER
6'-29" TAN BROWN SILTY LOAM WITH STONES & COBBLES
29'-53" TAN GRAY SANDY SILT WITH STONES & COBBLES
NO GW, LEDGE/REFUSAL @ 53', ROOTS TO 29', MOTTILING/REDOX @ 29"

TEST PIT 5
0'-4" TOPSOIL/FOREST LITTER
4'-29" TAN BROWN SILTY LOAM WITH STONES & COBBLES
29'-90" TAN GRAY SANDY SILT & FRACTURED ROCK (NON-TYPICAL LEDGE)
NO GW, LEDGE/REFUSAL @ 29" (UPHILL SIDE OF TP) AND @ 53" (CENTER OF TEST PIT), ROOTS TO 48", NO MOTTILING/REDOX

TEST PIT 6
0'-4" TOPSOIL/FOREST LITTER
4'-29" TAN BROWN SILTY LOAM WITH STONES & COBBLES
29'-96" TAN GRAY SANDY SILT WITH STONES & COBBLES
NO GW, NO LEDGE/REFUSAL, ROOTS TO 41", NO MOTTILING/REDOX

PERCOLATION TEST PIT DATA

PERCOLATION TESTS WERE PERFORMED ON SEPT 2, 2022 BY SOLLI ENGINEERING, LLC.

PERCOLATION TEST: PT-7
DIAMETER OF PIT: 16"
DEPTH OF PIT: 16"
HOLE PRESOAKED PRIOR TO TEST

ELAPSED TIME (MIN.)	READING (IN.)
0	3
3	6 1/4
6	8 1/4
9	11 1/4
12	12 1/2
15	13
18	13 1/2
21	14 1/4
24	14 1/2
27	15 1/4
30	16

PERCOLATION RATE: 1" 6 MIN. OR 10" HR.

LEGEND

	PROPERTY LINE
	ADJOINING LOT LINE
	MAJOR CONTOURS
	MINOR CONTOURS
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	CONTOUR LABEL
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	GRADE TO DRAIN
	SWALE
	TYPE "CL" CATCH BASIN
	FLARE END SECTION
	RIP RAP
	PROPOSED CRUSHING LOCATION

ABBREVIATIONS

&	AND
@	AT
BR	BOTTOM OF ROCK
DIA	DIAMETER
ELEV	ELEVATION
GTD	GRADE TO DRAIN
HDPE	HIGH DENSITY POLYETHYLENE
HP	HIGH POINT
INV	INVERT
LOD	LIMIT OF DISTURBANCE
LF	LINEAR FEET
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TF	TOP OF FRAME
TR	TOP OF ROCK
W/	WITH

SIGN LEGEND

A		
TRUCKS ENTERING		
SIZES (IN)	CONN DOT #	SUPPORTS
36"	41-4622	1

SELECT FILL REQUIREMENTS (SEPTIC PREPARATION)

- SELECT FILL MATERIAL AND SELECT BACKFILL MATERIAL, PLACED WITHIN AND ADJACENT TO PROPOSED LEACHING AREAS SHALL BE COMPOSED OF CLEAN SAND AND GRAVEL, FREE OF ORGANIC MATTER AND FOREIGN SUBSTANCES. THE FILL MATERIAL SHALL MEET THE FOLLOWING REQUIREMENTS UNLESS OTHERWISE APPROVED BY A PROFESSIONAL ENGINEER FOR USE WITHIN THE LEACHING AREA:
 - THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN (3) INCHES.
 - UP TO 45% OF THE DRY WEIGHT OF THE REPRESENTATIVE SAMPLE MAY BE RETAINED ON THE #4 SIEVE (THIS IS THE GRAVEL PORTION OF THE SAMPLE).
 - THE MATERIAL THAT PASSES THE #4 SIEVE IS THEN REWEIGHED AND THE SIEVE ANALYSIS STARTED.
 - THE REMAINING SAMPLE SHALL MEET THE FOLLOWING GRADATION CRITERIA:

SIEVE SIZE	PERCENT PASSING	PERCENT PASSING
	WET SIEVE	DRY SIEVE
#4	100	100
#10	70-100	70-100
#40	10-50	10-50
#100	0-20	0-5
#200	0-5	0-2.5

- PERCENT PASSING THE #40 SIEVE CAN BE INCREASED TO NO GREATER THAN 75% IF THE PERCENT PASSING THE #100 SIEVE DOES NOT EXCEED 10% AND THE #200 SIEVE DOES NOT EXCEED 5%.
- THE RESPONSIBILITY FOR THE PREPARATION OF A LEACHING AREA UTILIZING "SELECT MATERIAL" IS THAT OF THE LICENSED INSTALLER.
- THE INSTALLER SHALL TAKE THE NECESSARY STEPS TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOILS FROM OVERCOMPACTION AND SILTATION ONCE EXPOSED.
- SELECT FILL SHALL BE PLACED BY A LICENSED INSTALLER.
- ANY TOPSOIL WITHIN SEPTIC AREA IS TO BE REMOVED AND REPLACED WITH SELECT FILL.
- FILL SHALL BE PLACED ON THE PERIMETER OF THE TRENCH AREA AND SPREAD WITH A SMALL CRAWLER, TRACTOR OR OTHER APPROVED MACHINERY.

CONSTRUCTION SEQUENCE

- INSTALL STABILIZED CONSTRUCTION ENTRANCE EXIT.
- INSTALL SILT FENCE(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).
- PREPARE TEMPORARY PARKING AND STORAGE AREAS.
- HALT ALL ACTIVITIES AND CONTACT THE ENGINEER OF RECORD TO PERFORM INSPECTION AND CERTIFICATION OF BEST MANAGEMENT PRACTICES (BMPs). GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT THE STORM WATER PRE-CONSTRUCTION MEETING WITH THE ENGINEER, AGENCIES AND GROUND-DISTURBING CONTRACTOR BEFORE PROCEEDING WITH CONSTRUCTION.
- CONSTRUCT AND STABILIZE SEDIMENT TRAPS WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS).
- BEGIN CLEARING AND GRUBBING THE SITE.
- INSTALL THE CONSTRUCTION TRAILER (WITH SUPPORT UTILITIES: ELECTRIC, WATER, ETC.)
- INSTALL ADDITIONAL EROSION CONTROLS AS WORK PROGRESSES, TOPSOIL AND SEED SLOPES WHICH HAVE ACHIEVED FINAL SITE GRADING.
- IMMEDIATELY UPON DISCOVERING UNFORESEEN CIRCUMSTANCES POSING THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION, THE OPERATOR SHALL IMPLEMENT APPROPRIATE BEST MANAGEMENT PRACTICES TO ELIMINATE THE POTENTIAL FOR ACCELERATED EROSION AND/OR SEDIMENT POLLUTION.
- THROUGHOUT CONSTRUCTION, REMOVE SEDIMENT FROM BEHIND SILT FENCES, MULCH BERMS AND OTHER EROSION CONTROL DEVICES, AND FORM SEDIMENT TRAPS AS REQUIRED. REMOVAL SHALL BE ON A PERIODIC BASIS (EVERY SIGNIFICANT RAINFALL OF 0.10 INCH OR GREATER). INSPECTION OF EROSION CONTROL MEASURES SHALL BE ON A WEEKLY BASIS AND AFTER EACH RAINFALL OF 0.50 INCHES OR GREATER. SEDIMENT COLLECTED SHALL BE DEPOSITED AND SPREAD EVENLY UPLAND ON SLOPES DURING CONSTRUCTION.
- THROUGHOUT THE CONSTRUCTION SEQUENCE, PERIODIC INSPECTIONS SHALL BE INCORPORATED DURING THE PROCESSING OF THIS EXCAVATION AND FILL PERMIT AT SPECIFIC MILESTONES PER TOWN STAFF DIRECTION, AND AT LEAST MONTHLY INSPECTIONS.
- CONDUCT FINE GRADING.
- FERTILIZE SEED AND MULCH. SEED MIXTURE TO BE INSTALLED DURING THE SPRING OR FALL SEASON ONLY. USE EROSION CONTROL BLANKETS AS REQUIRED OR ORDERED FOR SLOPES GREATER THAN 3:1 AND AS SHOWN ON LANDSCAPE PLANS OR EROSION CONTROL PLANS. FOR TEMPORARY STABILIZATION BEFORE SEEDING DATES USE ANNUAL RYE AT 40 LBS/1,000 S.F. FERTILIZE WITH 10-10-10 AT 1.0 LBS. OF NITROGEN PER 1,000 S.F. AND LIME AT 100 LBS/1,000 S.F. (MAX.).
- UPON DIRECTION OF THE TOWN OF MONROE AGENT (AFTER THEIR FINAL INSPECTIONS HAVE BEEN PERFORMED AND CERTIFICATES OF COMPLETION FOR INLAND WETLANDS AND EXCAVATION/FILLING HAVE BEEN ISSUED), EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED FOLLOWING STABILIZATION OF THE SITE.

VOLUME SUMMARY

AREA	AREA OF DISTURBANCE	CUT (CY)	FILL (CY)	NET (CY)
REGULATED AREA	28,563 SF (0.66 AC)	9,810	482	9,328 (CUT)
BALANCE OF SITE	183,766 SF (4.21 AC)	99,352	168	99,184 (CUT)
TOTAL	212,329 SF (4.87 AC)	109,162	650	108,512 (CUT)

GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD MONROE, CONNECTICUT" PREPARED BY 125 GARDER ROAD LLC, DATED: AUGUST 1, 2022, SCALE: 1" = 40'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
- THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS.
- TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
- CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE TOWN OF MONROE PRIOR TO THE START OF WORK ON THE SITE. NO CONSTRUCTION ACTIVITY, STORAGE OF VEHICLES, EQUIPMENT AND MATERIALS IS TO OCCUR BEYOND THE APPROVED LOD.
- ALL DISTURBANCE INCURRED TO TOWN PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF MONROE.
- REFER TO SHEET 3.01 FOR CONSTRUCTION AND EROSION CONTROL MEASURE DETAILS.
- NO OPERATIONS SHALL BE UNDERTAKEN ON THE SITE EXCEPT BETWEEN THE HOURS OF 8:00 AM AND 5:00 PM MONDAY THROUGH FRIDAY, EXCEPT WITH APPROVAL OF THE COMMISSION. THERE SHALL BE NO BLASTING ON THE SITE. NO ACTIVITY OF ANY TYPE SHALL BE CONDUCTED ON ANY LEGAL HOLIDAY DECLARED BY THE GOVERNMENT OF THE STATE OF CONNECTICUT OR THE UNITED STATES. TRUCK TRAFFIC IS LIMITED TO BETWEEN 9:00 AM AND 4:00 PM DAILY.
- THE PERMITTEE SHALL PROVIDE ENGINEERING PROGRESS REPORTS PREPARED BY A CONNECTICUT STATE LICENSED CIVIL ENGINEER ON A QUARTERLY BASIS. ADDITIONALLY, THE COMMISSION MAY AT ANY TIME DURING THE PERMIT DURATION REQUIRE AN ENGINEERING PROGRESS REPORT FROM THE PERMITTEE, TO BE MADE BY A LICENSED CIVIL ENGINEER. IF SUCH REPORT IS NOT RECEIVED BY THE COMMISSION WITHIN THIRTY (30) DAYS FROM THE DATE OF SUCH REQUEST, THE COMMISSION MAY ENGAGE A PROFESSIONAL ENGINEER OR LAND SURVEYOR TO DETERMINE COMPLIANCE WITH THE TERMS OF THIS REGULATION AND ALL EXPENSES IN CONNECTION THEREWITH SHALL BE PAID BY THE PERMITTEE.
- THE TOP LAYER OF TOPSOIL FOR A DEPTH OF SIX INCHES SHALL BE SET ASIDE ON THE PREMISES AND SHALL BE RE-SPREAD IN ACCORDANCE WITH THE APPROVED CONTOUR LINES WITHIN THIRTY (30) DAYS FOLLOWING THE EXPIRATION OR REVOCATION OF THE PERMIT OR COMPLETION OF THE WORK, WHICHEVER OCCURS EARLIER.
- PROPER MEASURES (INCLUDING THE USE OF WATER SPRAY) AND APPROPRIATE NOISE DAMPENING MEASURES (EQUIPMENT MUFFLERS, ETC) SHALL BE TAKEN TO MINIMIZE THE NUISANCE OF NOISE AND FLYING DUST OR ROCK AND LIGHTING.
- UPON COMPLETION OF THE SITE FILLING/EXCAVATION ACTIVITIES, THE FINAL CONDITION OF THE REMAINING SITE ACCESS IS TO BE IN THE FORM OF THE ANTI-TRACKING PAD AND THE FRONTAGE CONDITIONS ARE TO BE AS SPECIFIED ON THE RECLAMATION PLAN (SHEET 2.61).
- ALL FILL MATERIAL BROUGHT TO THE SITE SHALL CONFORM TO THE CT DEEP STANDARDS FOR "CLEAN FILL".
- THERE SHALL BE NO SIGNS PERMITTED (EXCEPT CUSTOMARY TRAFFIC CONTROL, SAFETY, AND NO TRESPASSING SIGNS AS MAY BE AUTHORIZED BY THE PLANNING AND ZONING ADMINISTRATOR).

PLANNING & ZONING WAIVERS REQUIRED

- §64-9P - NO SORTING, GRADING, CRUSHING OR OTHER MACHINERY FOR TREATMENT OR PROCESSING OF MATERIAL BEING REMOVED OR DEPOSITED SHALL BE ERECTED, MAINTAINED OR OPERATED ON THE PREMISES FOR WHICH A PERMIT MAY BE GRANTED, EXCEPT IN AN INDUSTRIAL DISTRICT OR IN ALL OTHER DISTRICTS WHERE CONTROLLED ROCK CRUSHING, SCREENING AND PROCESSING MAY BE PERMITTED BY THE COMMISSION ON A LIMITED SHORT DURATION BASIS AS PART OF SITE DEVELOPMENT AND CONSTRUCTION PREPARATION, PROVIDED:
 - SUCH CONTROLLED ACTIVITIES WILL REDUCE CONSTRUCTION TRAFFIC BY USE OF MATERIALS ONSITE.
 - SUCH CONTROLLED ACTIVITIES WILL NOT INVOLVE MINING OR EXCAVATION OF MORE THAN NECESSARY TO ACHIEVE SITE PREPARATION OF AN APPROVED PROJECT.ALL PERMITTED SUCH ACTIVITIES REGARDLESS OF PERMITTED LOCATION SHALL NOT INCLUDE, PERMIT OR INVOLVE MATERIALS FROM OFFSITE LOCATIONS. APPROPRIATE PRECAUTIONS, SAFEGUARDS AND IMPACT ABATEMENT MEASURES TO ADDRESS NOISE, DUST, AND OTHER RELATED IMPACTS FROM SUCH ACTIVITIES SHALL BE IDENTIFIED AND APPROPRIATE PLANS PROPOSED FOR REVIEW AND APPROVAL BY THE COMMISSION. NO SUCH ACTIVITIES SHALL BE PERMITTED TO OCCUR WITHIN FIVE-HUNDRED (500) FEET OF ANY RESIDENTIAL DISTRICT OR RESIDENTIAL USE.

Rev. #:	Date	Description

Graphic Scale:



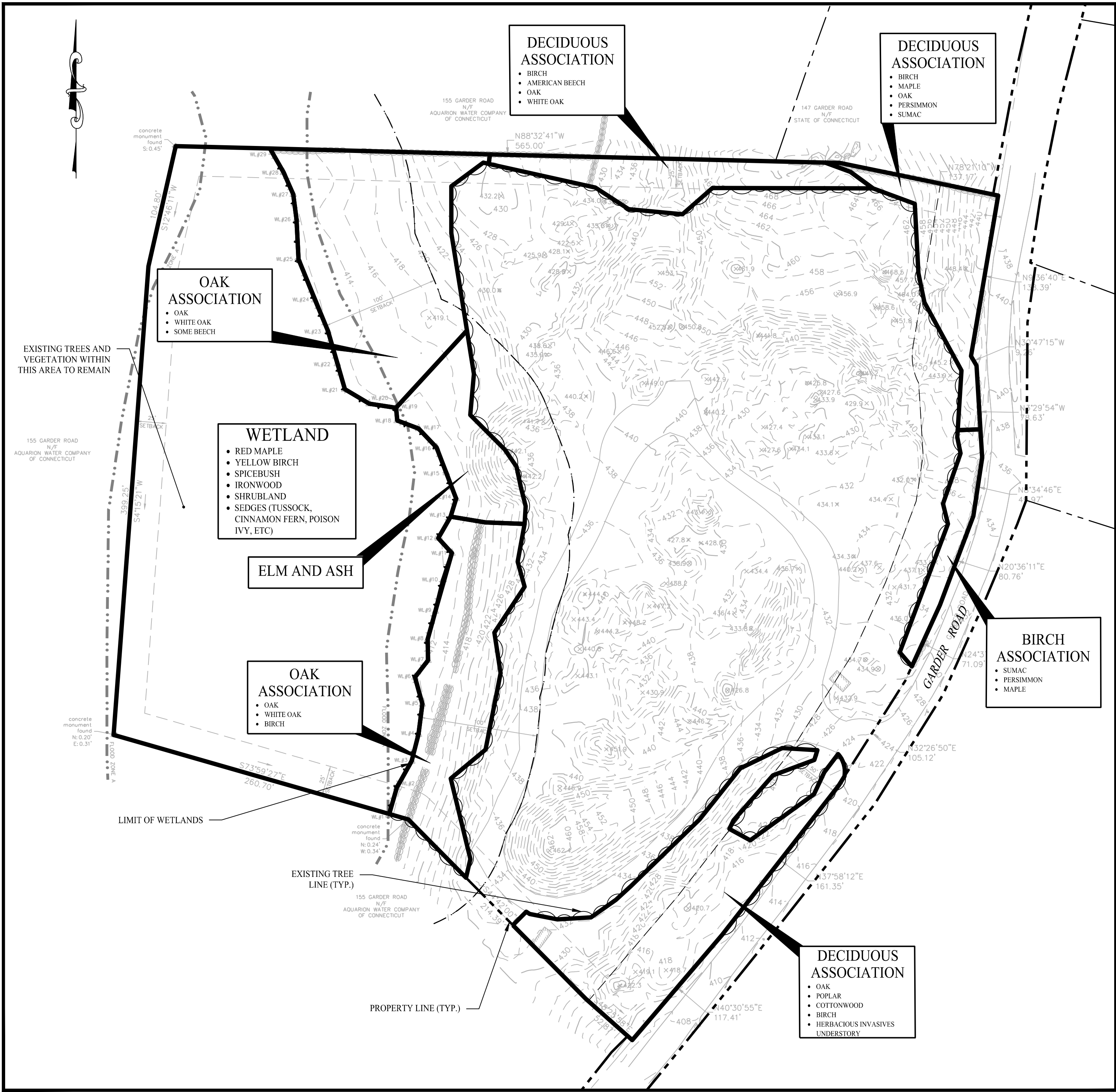
Drawn By:	MDM	Kevin Solli, P.E. CT 25759
Checked By:	RPP	
Approved By:	KMS	
Project #:	22104001	
Plan Date:	10/01/22	
Scale:	1" = 40'	

EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
GRADING & DRAINAGE PLAN	2.21





PRE-VEGETATION MAP

SCALE: 1" = 60'

GENERAL NOTES

- EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 125 GARDER ROAD, MONROE, CONNECTICUT" PREPARED FOR 125 GARDER ROAD LLC; DATED: AUGUST 1, 2022; SCALE: 1"=40'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
- REFER TO SAID PLAN FOR ALL DIMENSIONS, BEARINGS OR ANGLES OF PROPERTY LINES, EASEMENTS AND RIGHT-OF-WAYS.
- THE AREAS OF EXISTING VEGETATION HAVE BEEN FIELD VERIFIED BY A LICENSED LANDSCAPE ARCHITECT ON 05/27/21.
- SPECIES DEPICTED ON PRE-VEGETATION MAP INDICATE MAJOR PLANT ASSOCIATIONS AND ARE NOT INTENDED TO REPRESENT A DETAILED INVENTORY OF THE SITE'S PLANT MATERIAL.
- A SITE RESTORATION PLAN MUST BE IMPLEMENTED IN THE EVENT FUTURE DEVELOPMENT OF THE SITE DOES NOT MATERIALIZE WITHIN TWO (2) YEARS OF THE COMPLETION OF EXCAVATION.
- INVASIVE WOODY VEGETATION SHALL BE REMOVED PER THE CONNECTICUT INVASIVE PLANT WORKING GROUP'S GUIDELINES.

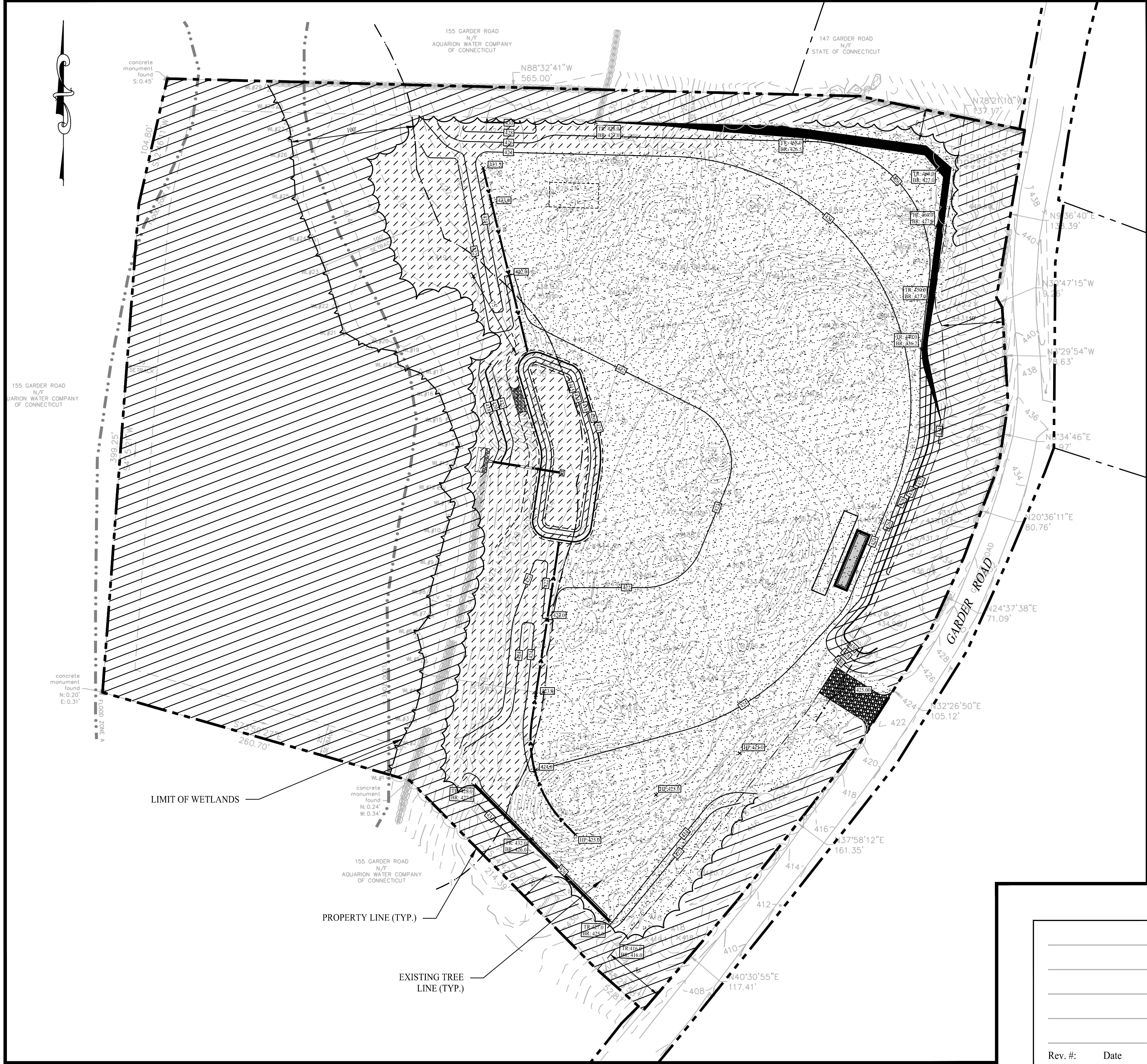
LAWN SEED MIX

- PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 1" DIAMETER.
- THE FOLLOWING SEED MIX SHALL BE SOWN AT THE RATES AS DEPICTED:

CREeping RED FESCUE	1 LB. / 1,000 SF
PERENNIAL RYEGRASS	3 LBS. / 1,000 SF
KENTUCKY BLUEGRASS	1 LB. / 1,000 SF
- SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS / ACRE OR 90 LBS. / 1,000 SF.
- SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:
SPRING: APRIL 1 - MAY 31
FALL: AUGUST 16 - OCTOBER 31
- GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED.
- ALL DISTURBED AREAS TO BE STABILIZED WITH SEED MIX AS SPECIFIED.

NEW ENGLAND CONSERVATION WILDLIFE MIX

- PRODUCED BY NEW ENGLAND WETLAND PLANTS, INC.; WWW.NEWP.COM; 820 WEST STREET, AMHERST, MA 01002; (413) 548-8000.
- PRIOR TO SEEDING, AREA IS TO BE TOPSOILED, FINE GRADED, AND RAKED OF ALL DEBRIS LARGER THAN 1" DIAMETER.
- THE SEED MIX SHALL BE APPLIED AT A RATE OF 1 LB. / 1,750 SQUARE FEET.
- SEED MIX SHALL BE MULCHED WITH SALT HAY OR UNROTTED SMALL GRAIN STRAW AT A RATE OF 2 TONS / ACRE OR 90 LBS. / 1,000 SF.
- SEEDING DATES FOR THIS MIXTURE SHALL BE AS FOLLOWS:
SPRING: APRIL 1 - MAY 31
FALL: AUGUST 16 - OCTOBER 31
- GERMINATION RATES WILL VARY AS TO TIME OF YEAR FOR SOWING. CONTRACTOR TO IRRIGATE SEEDED AREA UNTIL AN ACCEPTABLE STAND OF COVER IS ESTABLISHED.
- ALL DISTURBED AREAS TO BE STABILIZED WITH SEED MIX AS SPECIFIED.



POST-VEGETATION MAP

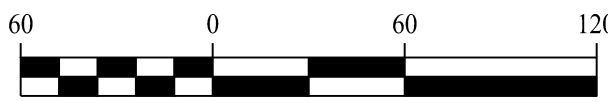
SCALE: 1" = 60'

LEGEND

	PROPERTY LINE
	ADJOINING LOT LINE
	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	MAJOR CONTOURS
	MINOR CONTOURS
	EXISTING TREE LINE
	PROPOSED TREE LINE
	PREVIOUSLY DELINEATED WETLANDS
	WETLAND LINE
	LIMIT OF 100' UPLAND REVIEW AREA
	SEEDED LAWN AREA
	CONSTRUCTION ENTRANCE
	NEW ENGLAND CONSERVATION WILDLIFE MIX
	EXISTING WOODED AREA TO REMAIN

Rev. #:	Date	Description
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Graphic Scale:



501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
11 Vanderbilt Ave, Norwood, MA 02062 T: (781) 352-8491 F: (203) 880-9695

Drawn By:	NCM	Mary Blackburn, P.L.A. CT 1499
Checked By:	RPP	
Approved By:	KMS	
Project #:	22104001	
Plan Date:	10/01/22	
Scale:	1" = 60'	

EXCAVATION/FILLING PERMIT APPLICATION

125 GARDER ROAD
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
RECLAMATION PLAN	2.61