January 26, 2023

Planning & Zoning Commission
Town of Monroe
7 Fan Hill Road
Monroe, CT 06468

RE: Special Exception Permit Application
127 Main Street
Monroe, Connecticut 06468
Project Number: 1910801

Dear Commission Members,

On behalf of the Applicant, Pond View LLC, please find enclosed a Special Exception Permit Application for the proposed site development and associated activity located at 127 Main Street, Monroe, CT. The project proposes the construction of seven (7) multi-story apartment buildings, clubhouse, four (4) garages, maintenance building and associated site improvements including grading & drainage, landscaping, and utility work. Each residential building will be equipped with ADA accessible amenities, including elevators. The project will also include the required amount of ADA accessible parking spaces and parking stalls designated for EV charging.

Please review the attached items 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

Robert Pryor

Rob Pryor, P.E.
Director of Engineering

Enclosures:
Special Exception Permit Application
100' Abutters Mailing Addresses
Project Narrative
Engineering Report
Civil Plan Set
Conservation Easement Letter
Bond Estimate Form

CC:
Richard Schultz, Town Planner
Gregory Kamedulski

SPECIAL EXCEPTION PERMIT APPLICATION

TOWN OF MONROE
PLANNING & ZONING DEPARTMENT
7 Fan Hill Road, Monroe, CT 06468
Tel. (203) 452-2812

FOR OFFICE USE:
SEP – ________________
File Number – ______________

Project Name: Pond View Development

Street Address: 127 Main Street, Monroe, CT

Zoning District(s): Special Development District #1

Assessor Map #: 012 **Lot #**: 9 **Acreage**: 19.667 **Deed: Volume #** 917 **Page #** 175

Brief Description: The project proposes the construction of seven (7) multi-story apartment buildings, a clubhouse, and associated site improvements.

(Also attach Project Narrative as required in the Zoning Regulations)

- ***TAKE NOTE: It is the applicant's responsibility to provide all the information the Commission will need in order to process the application and make a fair determination of the issues. If an applicant fails to supply timely or sufficient information, it may result in delay, denial of the application, or both. Applicants are highly recommended to be represented by qualified representatives and to consult the Town of Monroe Plan of Conservation and Development, as well as the detailed application requirements and standards set forth in the Town of Monroe Subdivision, Zoning and Inland Wetlands Regulations.***

  - **Pre-Submission Conference** – Contact the Planning and Zoning Administrator (203-452-2812) to schedule one or more preliminary pre-submission conferences with staff (***this is highly recommended***).

  - **Formal Application Submission** – Provide **eleven (11) paper application sets** (***plans folded and materials collated into individual sets***) **and one (1) pdf CD** including the following materials: (a) signed application form; (b) supporting application narrative; (c) supporting investigative and impact analyses reports; (d) 100-foot abutters list; and (e) complete set of Site Plans. The application submission will be reviewed by the **Commission** and the Town's **Application Review Team (ART)** consisting of Department Staff from Planning and Zoning, Engineering, Wetlands, Fire Marshal, Police (traffic authority), Health and Building.

  - **Sealed and Certified Plans** – All required A-2 and T-2 Surveys, Site Plans, Architectural Plans and supporting analyses Reports as prepared by consultant engineers, surveyors, landscape architects, architects, etc. must be current and include an original seal and live signature certification.

  - **Project Timeline** – Following official receipt of an application, a **Project Timeline** listing milestone dates and actions to be followed during the review will be emailed to the applicant's Primary Project Contact.

  - **ARB** – For new or modified commercial, industrial and multifamily residential buildings and structures, a separate application to the Monroe Architecture Review Board (ARB) may also be required. **Application to ARB includes completion of an ARB specific separate application form and plan copies**.

Application No. ________________________ **File No.** ___________________

APPLICATION FEE

Special Exception Permit Base Fee.. $ 675.00
Connecticut State Surcharge.. $ 60.00

Payable to the Town of Monroe **TOTAL APPLICATION FEE:** **$ 735.00***

Include driver's license number and telephone number on fees paid with a personal check.

APPLICATION INFORMATION

1. **What is the origin of the subject property (i.e., when and how was the current lot created?):**

   List recorded survey or maps of lot origin (survey, subdivision, resubdivision, lot line adjustments)

   Please refer to the recorded map number 1244 in the Town of Monroe Clerk's office for more information.

2. **Supporting Maps and Project Narrative:** **Refer to Zoning Regulations Article 8**

   Attach all required Maps, Reports and Project Narratives as required by the Zoning Regulations.

APPLICANT PRIMARY PROJECT CONTACT

3. **Primary Contact Name:** Kevin Solli, P.E.
   Business Address: 501 Main Street, Suite 2A, Monroe, CT 06468
   Phone: 203-880-5455 Email: Kevin@SolliLLC.com

   The applicant's Primary Project Contact will be sent all correspondence (primarily via email) during the course of the project review and is responsible for distributing to the other applicant representatives.

PROJECT TEAM INFORMATION

4. **Owner's Name:** POND VIEW LLC, Sabrina Keillor, Member
   Address: 6754 Paseo Castille, Sarasota Florida
   Phone: 203-305-0667 Email: sabrina05keillor@gmail.com

5. **Applicant's name:** POND VIEW LLC, Sabrina Keillor, Member
   Address: 6754 Paseo Castille, Sarasota Florida
   Phone: 203-305-0667 Email: sabrina05keillor@gmail.com
   Property interest: ☑ Owner ☐ Contract Vendee ☐ Tenant ☐ Other

6. **Application Professionals**

	Name	Phone/Cell	Email
Attorney:			
Surveyor:	Bryan Nesteriak P.E. LS	203-881-8145	bn@bbengrs.com
Engineer:	Kevin Solli, P.E.	203-880-5455	Kevin@Sollillc.com
Landscape Architect:	Mary Blackburn	203-880-5455	Mary@Sollillc.com
Architect:	Martin Architecture & Lessard Design, Inc	631-613-6555 & 571-830-1816	
Other:	Stanley Gniazdowski, CRE, LLIM Realty Concepts, INC.	203-453-1117 x 101	Stang@RealtyConcepts.net

Application No. ____________ **File No.** ____________

7. **Is the property located within a floodplain?** ☑ No ☐ Yes ☐ 100-year ☐ 500-Year

Proposed structures or grading in floodplain? ☑ No ☐ Yes **Contact Flood Plain Administrator 203-452-2812.**

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

   ☑ No ☐ Yes **Abutting town(s):** ______________________________

9. **Is the property subject to an existing conservation or preservation deed restriction?**

   ☐ No
   ☑ Yes **Provide a notarized statement pursuant to CGS §47-42d:**
   - **The proposed application involves only interior building alterations; OR**
   - **Written notice of such application has been sent by certified mail, return receipt requested, not later than sixty (60) days prior to the filing of the application to the party holding the conservation or preservation restriction; OR**
   - **In lieu of notice, provide a letter from the holder or holder's authorized agent, verifying that the application is in compliance with the terms of the restriction.**

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

    ☑ No
    ☐ Yes Name of watershed: ______________________________

    NOTE: Per CGS §8-3i, within seven (7) days of an application submission, the applicant is required to NOTIFY the Aquarion Water Company of Connecticut, 714 Black Rock Road, Easton, CT 06612, and the Connecticut Commissioner of Public Health, 410 Capitol Avenue, Hartford, CT 06106; and provide evidence documenting same to the Planning and Zoning Department. For sample notification letters see link below:

    http://www.monroect.org/filestorage/467/469/976/1027/Notification_to_Aquarion_%26_DPH_PZC.pdf

11. **Are there inland wetlands, watercourses, lakes or ponds or other water related resources on or within 100 feet of the property; and/or is there a named watercourse within 150 feet of the property?**

    Attach Soil Scientist inspection report/verification and delineation report and survey map.

    ☐ No ☑ Yes Area of property regulated 5.173 (ac) 26 (% of property)
    Contact the Inland Wetlands Department 203-452-2809 prior to proceeding with this application.

12. **Previous or Current Wetland Permits or Violations for Property (list Wetland File #s and dates):**

    IWC-2017-07R File #1109

13. **Is or will the property/project be a major traffic generator (>100,000 SF of building or > 200 vehicles)?**

    ☐ No ☑ Yes **Provide a copy of STC Certificate (if existing) or new Certificate of Determination.**
    OSTA permit will be persued as part of this application.

14. **Does the application involve a "change of use" of an existing building or facility?**

    ☑ No ☐ Yes From ____________________ to ____________________

15. **Are new or expanded septic disposal systems proposed?** ☐ No ☑ Yes **Attach plans and flow confirmation.**

    ☑ Subject to Monroe Health Department Approval ☑ Subject to State Health Department Approval
    Application No. ____________________ **File No.** ____________________

16. **Is public water service available at this property?**

☐ No ☐ Will use existing private well ☐ Will use new private well ☑ Will extend water main
☑ Yes ☐ Will use existing connection ☑ Will upgrade connection ☐ Not planning connection

Nearest Public Water Main: Street Location Main Street, Route 25 Distance: 15 (ft)

17. Describe topographic conditions and assess to what extent slopes 15% and greater may limit development potential or which otherwise require specialized engineering to support future development?

4.16 ac (25% and greater) 2.34 ac (25-15%) 1.69 ac (10-15%) 8.78 ac (0-10%) **Attach a separate narrative with a Slopes Map showing the location and acreage of sloped areas:**

18. Will Storm Water Detention and/or Retention be needed for this proposal?

☐ No **Provide reasons - attach additional sheets as necessary:**

☑ Yes **Provide list of provisions - attach stormwater report or additional sheets as necessary:**
Three (3) stormwater basins are proposed in addition to an underground detention system. See Engineering Report for more information.

19. Have Storm Water Quality Control measures been included in this proposal?

☐ No **Provide reasons - attach additional sheets as necessary:**

☑ Yes **Provide list of measures - attach stormwater report or additional sheets as necessary:**
Water quality units upgradient of stormwater basins, level spreaders and more.
See Engineering Report for more information.

20. Have Low Impact Development (LID) measures been considered as additional features for this proposal?

☐ No **Provide reasons – attach stormwater report or additional sheets as necessary:**

☑ Yes **Provide list of LID measures - attach stormwater report or additional sheets as necessary:**
Vegatative buffers, stormwater basins, limited structures, and overland flow. See plan and Engineering Report for more information.

21. Have any Zoning Board of Appeals variances been granted related to the property?

☑ No ☐ Yes **List variances obtained with respective ZBA File # and date of approval:**

22. Are any waivers of the Zoning Regulations application requirements requested?

☑ No ☐ Yes **Attach a separate written request and rational in support thereto.**

Application No. ____________ **File No.** ____________

I(we) hereby certify that I(we) make this application as or on behalf of and with the full authority of the owner(s) of the property or premises and am aware of and understand the Zoning, Subdivision and Inland Wetlands Regulations pertinent to the application and affirm that the statements and information provided are accurate and true. Further, all the undersigned hereby authorizes the Town of Monroe and its agents, to access the premises for the purpose of application investigation, site review, inspection of improvements or construction, and enforcement of the Town's Regulations and Ordinances, and the General Statutes of the State of Connecticut, as may be applicable.

All the undersigned warrant the truth of all statements contained herein and in all supporting documents according to the best of their knowledge and belief. Further, all the undersigned understand and agree that the Planning and Zoning Commission and/or its Staff/Consultants may request additional information and it is the applicant's/owner's responsibility to provide this information in a timely fashion and to the Commission's satisfaction. If the information provided is incomplete or inaccurate, the Commission may deny the application or request an extension to be granted by the applicant/owner in order to act within applicable legal time limits.

This agreement shall be binding on all heirs, executors, administrators, successors and assigns of all undersigned.

APPLICANT(S) – (Both Applicant and Owner Notarized Signatures are Required)

Pond View LLC
Gregory KAMEDULSKI

Applicant Name Printed	Authorized Signature	Date 1/27/23
Additional Applicant (Provide additional sheets as needed)	**Authorized Signature**	**Date**

Subscribed and sworn to by Gregory Kamedulski *on this day of* 1/27, *20*23, *before me:*

Notary Public, Justice of the Peace, Commissioner of the Superior Court

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Please note the following: This application must include the owner's signature and notarization or a written, notarized consent to submit this application, signed and dated by the owner.

OWNER(S) – (Both Applicant and Owner Notarized Signatures are Required)

Owner Business Name

Pond View LLC
Gregory KAMEDULSKI

Authorized Member Name Printed	Authorized Signature	Date 1/27/23

Subscribed and sworn to by Greg Kamedulski *on this day of* 1/27, *20*23, *before me:*

Notary Public, Justice of the Peace, Commissioner of the Superior Court

Property Owners within 100 feet of
127 Main Street, Monroe, CT
Project # 1910801

Owner Address	Lot & Address
Ronald P & Joy E. Reho P.O. Box 295 Monroe, CT 06468-1637	012 014 00 122 Main St Monroe, CT 06468
So Main St Newtown Asso LLC. c/o Joseph Voll 6527 Main St Trumbull, CT 06611	012 013 00 126 Main St Monroe, CT 06468
Mary Elizabeth Fulco + Samantha E Fulco 51 Crescent Pl Monroe, CT 06468-1608	012 004 00 51 Crescent Pl Monroe, CT 06468
Brent A Reilly 11 Judd Rd Monroe, CT 06468-1523	012 010 00 15 Judd Rd Monroe, CT 06468
118 Main St Associates LLC 2620 Nichols Ave Stratford, CT 06614	012 015 00 118 Main St Monroe, CT 06468
Monroe Partnership 134 Main St Monroe, CT 06468	012 012 00 134 Main St Monroe, CT 06468
Robert & Maureen Wicklund 53 Crescent Pl Monroe, CT 06468-1608	012 005 00 53 Crescent Pl Monroe, CT 06468
Anthony R + Tara E Croce 34 Little Fox Ln Monroe, CT 06468-1607	011 027 00 34 Little Fox Ln Monroe, CT 06468
Antoinette Voll 17 Colonial Dr Monroe, CT 06468	012 006 00 57 Crescent Pl Monroe, CT 06468
Sarah Webster 21 Judd Rd Monroe, CT 06468	018 001 00 21 Judd Rd Monroe, CT 06468
Main St Monroe Realty LLC Mehta Rajiv – MGR 480 Boston Post Rd Orange CT 06477	012 009 02 135 Main Street Monroe, CT 06468
Three Corners LLC Nicola Fiore 25 Arrowhead Dr Monroe, CT 06468	012 011 00 140 Main St Monroe, CT 06468
John & Nanci Kalas Tidewater Group 705 Bruce Ave Clearwater Beach, FL 33767	012 008 00 115 Main St Monroe, CT 06468

State of Connecticut 79 Elm St Hartford, CT 06106-5127	018 002 02 29 Judd Rd Monroe, CT 06468
Aquarion Water Co. Of Connecticut Tax Dept. 600 Lindley St Bridgeport, CT 06606	018 002 00 91 Judd Rd Monroe, CT 06468

PROJECT NARRATIVE:
PROPOSED SITE DEVELOPMENT
127 Main Street – Monroe, Connecticut

This Inland Wetlands Permit Application is for the proposed site development activities located at 127 Main Street, Monroe, Connecticut (Site). The Site consist of approximately 19.67 acres and is owned by Pond View LLC. The subject site is zoned Business District 1 (B-1) and has received various approvals from the Monroe Planning & Zoning and Inland Wetlands Commission over the past several years. The apartment building layout concept was previously approved as a Special Development District (SDD) application by the Planning & Zoning Application in 2022. The following summarizes the project and the proposed sitework anticipated within the regulated area.

Current Application:

The current application put forth before the commission includes the construction of seven (7) multi-story apartment buildings, a club house, garages, and associated site improvements such as access driveways, drive aisles, parking areas, grading and drainage improvements, utility infrastructure, recreational areas, and landscaping improvements.

The site is currently accessed via Main Street, with an unpaved drive extending into the property. There is an existing scale house and truck scale currently located on the property that will be removed as part of the project. There are two wetland areas on the site, located down gradient to the north and northeastern portion of the property. The wetlands of 127 Main Street were originally flagged on September 22, 2021, by William Kenny Associates LLC. The locations of all wetland flags are shown on the Site Layout Plans submitted as part of this application. The property contains an existing conservation easement along the northern property line, adjacent to the existing wetlands to the north. The proposed development associated with this application intends to maintain this area in its natural state and will not propose any site work or improvements within said easement.

The project proposes seven (7), 11,955 square-foot apartment buildings with 28 units each. In addition to the residential units the project also proposes the construction of three (3) twelve-bay garages, (1) one six-bay garage, a 1,068 square-foot maintenance building and 8,144 square-foot clubhouse with outdoor amenity space.

The project proposes on-site septic systems for each apartment building, maintenance building and clubhouse, and a water loop around the development to provide public water via the existing water main on Main Street. Power and telecommunication will be distributed via connections into existing utilities running along Main Street.

CONSERVATION EASEMENT LETTER

Previously submitted as part of the Inland Wetland Permit Application

January 9, 2023

Office of the First Selectman
Ken Kellogg, First Selectman
Town of Monroe
7 Fan Hill Road
Monroe, CT 06468
(203) 452-2821

RE: Conservation Easement Acknowledgement Request
127 Main Street
Monroe, Connecticut 06468
Project Number: 1910801

Dear First Selectman Kellogg:

On behalf of the owner of 127 Main Street, Monroe, we respectfully request acknowledgement that there are no adverse impacts to the existing conservation easement as a result of our application. The proposed activities include the construction of seven multi-story apartment buildings, a club house, maintenance building, garages, and associated site improvements, which include grading & drainage, erosion control, landscaping, and utility work. A conservation easement in favor of the Town is located on the property. We are asking the Town to review proposed plans and determine proposed activities will not violate the terms of the easement. The information regarding the easement is dated July 24, 2004 and is located in Volume 1563 at page 210 of the Monroe Land Records.

The proposed layout and grading plans have been included to assist with the review, as well as a survey of the property that indicates the easement's location. As part of the project, all appropriate soil erosion and sedimentation control measures will be provided to ensure the protection of local wetlands and the environment (refer to the Soils Erosion & Sediment Control Plans submitted with the application).

Please let us know if you have any questions regarding the waivers requested. We look forward to working with you in the processing of this application.

Respectfully,

Solli Engineering, LLC

Kevin Solli, P.E.
Principal

CC: Richard Schultz (Town Planner)

Enclosures: Property Survey
Site Plan
Grading Plan

X:\SE Files\Project Data\2019\1910801 - Pondview - 127 Main Street, Monroe, CT\Office Data\Applications\Conservation Easement\2023-01-09 Conservation Easement Letter.docx

Issued: 10-9-07

TOWN OF MONROE

BOND ESTIMATE FORM (Private Site Development)

☐ PLANNING & ZONING COMMISSION
MEETING DATE__________________

APPLICANT: Pondview LLC
ENGINEER: Solli Engineering, LLC
TEL.: 203-880-5455

*APPLICATION NO: ______________
*FILE NO: ______________
DATE: January 26, 2023

PROJECT NAME: Special Exception Permit Application

PROJECT LOCATION: 127 Main Street, 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	$1,500	$1,500		
2.	Silt Fence or Hay Bales	L.F.	800	$3.00	$2,400		
3.	Topsoil, Seed, Fertilizing, and Mulching (entire disturbed area)	S.F.	633,407	$0.20	$126,681		
4.	Landscaping (extent to provide for restoration and aesthetic considerations)	L.S.	1	$5,000	$5,000		
5.	Grading (for site restoration that will provide safe and stable conditions)	L.S.	1	$5,000	$5,000		
6.	Other						
	(+) 10% for Contingencies				$14,058		
	* To be filled in by the Town			Total Cost =	$154,639	*	

Submitted by: Brian Palma

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).

ENGINEERING REPORT

For The Proposed:

Proposed Site Development & Restoration

Located At:
127 Main Street
Monroe, Connecticut 06468

Prepared On:
January 9, 2023
Revised On:
January 26, 2023

Prepared By:

SOLLI ENGINEERING

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

Prepared For:

Pond View LLC

Kevin Solli, P.E.
CT 25759

TABLE OF CONTENTS

LIST OF TABLES & CALCULATIONS

APPENDICES

INTRODUCTION

Solli Engineering (Solli) has prepared this engineering report (Report) to provide an analysis of the stormwater management system, utility infrastructure, subsurface conditions, and soil erosion and sediment control measures associated with the development of a multi-complex residence located at 127 Main Street, Monroe, Connecticut. The design has been completed in compliance with all applicable Town of Monroe codes and regulations, the 2004 Connecticut Stormwater Quality Manual, the Connecticut Department of Transportation 2000 Drainage Manual, and the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as well as all other applicable state and federal requirements and regulations.

EXISTING CONDITIONS

PROJECT SITE

SITE LOCATION

The project site (Site) is located at 127 Main Street in Monroe, Connecticut, within the Business District 1 (B-1) zoning district. The overall site totals approximately 19.67 acres and is bound by Main Street and a retail development to the east, a residential neighborhood to the west and south, and retail developments to the north. The site is currently accessed from Main Street via a paved driveway that shares access with the existing Dunkin Donuts coffee shop to the north of the drive. Refer to Figure 1 in Appendix A for more information regarding site location.

SITE CHARACTERISTICS

The site is currently undeveloped but has been disturbed throughout the years with earthwork operations and excavation. Moving operations are currently proceeding on site in accordance with previously obtained approvals. The site is comprised mainly of exposed soils, material piles, low-lying catchment areas and haul roads. According to the USDA Natural Resource Conservation Service's soil survey database the Site is comprised of

Prior to any mining operations the Site consisted of undeveloped woodland areas with and areas of clearing throughout. The Site had hilly features with a high elevation of 424 feet at the center of the property to a low elevation of 330 feet at the site drive located south of the Dunkin Donuts building. This terrain was altered between 2015-2017 when approvals to excavate the area were granted by the Town of Monroe.

REGULATED AREAS

WETLAND & UPLAND REVIEW AREAS

The site consists of approximately 2.41 acres of wetland area and approximately 2.76 acres of upland review area (See Appendix A, Figure 4, Regulated Area Map). There are two wetland bodies located on the Site. The larger of the wetlands is located along the northern property line, just west of the Sites access, and the second wetland area is located just south of the Site access drive, adjacent to the Route 25. The two wetlands are indirectly connected via a 36" RCP culvert pipe, approximately 103 linear feet in length, that runs under the current haul road.

The property does have a conservation easement separating the wetlands to the north to the rest of the property. This easement was agreed upon between the Town and prior owner of the property as a condition of past approvals. The proposed site work for the residential complex will be outside the limits of said easement to preserve the natural habitat within the easement's buffers.

FEMA FLOOD PLAIN

According to FEMA Flood Insurance Rate Map, Map Number 09001C0267F the project site is not within a special flood hazard area subject to inundation by the 1% annual chance flood (100-year flood), also known as the base flood (See Appendix A, Figure 2, FEMA Flood Map).

PUBLIC DRINKING WATER SUPPLY WATERSHED AREA

According to a map titled "Public Water Drinking Source Protection Areas; Monroe, CT," provided by the Town of Monroe, the site is not located within a Public Drinking Water Supply Watershed Area (See Appendix A, Figure 5, Public Water Supply Watershed Map).

NATURAL DIVERSITY DATA BASE

Based on mapping produced by the Connecticut Department of Energy and Environmental Protection (CTDEEP) the Site is not located within vicinity of identified critical habitat or state and federally listed species. For more information regarding the Site location regarding the protected habitat areas refer to Appendix A, Figure 6 – Natural Diversity Data Base Map.

PROPOSED CONDITIONS

PROJECT DESCRIPTION

The project proposes to construct seven (7) 28-unit, multi-story apartment buildings, with associated drives, parking areas, sidewalks, utility infrastructure, and drainage features. The proposed operations will also include an 8,144± square foot clubhouse with associated putting green, hammocks, pool, recreational/amenities area, as well as a 1,068± square-foot maintenance building.

SITE ACCESS / EGRESS

The project will maintain the existing site drive located south of the Dunkin Donuts building, approximately 375 feet south of the intersection of Main Street (Route 25) and Judd Road. The project will reconstruct portions of said drive to accommodate the access further into the Site. The project's site drive will meander into the property, past the existing culvert connecting the wetlands, to a turning circle, or round-a-bout, that will facilitate vehicular traffic throughout the proposed development. The site drive is 32 feet wide and will provide an access and egress lane, both at 16 feet wide. The turning circle has a raised, internal island that is approximately 16 feet in diameter. The island will consist of a perimeter walk surrounding pavers and a center landscaped island. The turning circle's drives are 24 feet wide, allowing for two-way circulation throughout.

PARKING & CIRCULATION

The project proposes to construct seven (7) 28-unit residential buildings as part of the Pond View complex. To accommodate this development the project proposes 376 standard parking spaces and 16 ADA accessible parking spaces, for a total of 392 parking spaces, which satisfies the requirements set forth by the Town of Monroe Zoning Regulations. The ADA accessible parking spaces have been designed in accordance with the US Access Board Accessibility Standards providing the required stall width and length and required striping. Should a future need exist, an additional 53 deferred parking spaces may be added at a future date as shown on the Site Plan. The majority of these parking spaces will be external to any buildings or stall cover. The project proposes four (4) garage buildings situated throughout the development; three of these structures will accommodate twelve (12) parking bays, and the fourth garage will accommodate six (6). All parking areas will be adjacent to a 24-foot wide, two-way drive aisle that will provide circulation throughout the development. Refer the Site Layout Plans included in the permitting plan set that submitted in conjunction with this Report.

The project was designed to accommodate pedestrian traffic throughout with a consideration of safety and proper circulation. The development is equipped with concrete sidewalks adjacent to all parking areas that direct pedestrian traffic safely to all buildings and facility amenities. A sidewalk is proposed along the Site's main access/egress to allow for habitants safely access Main Street and adjacent commerce. All sidewalks will be approximate 6 feet wide and will consist of curb ramps in the appropriate areas throughout the development. Refer the Site Layout Plans included in the permitting plan set that submitted in conjunction with this Report.

The project has also been designed to accommodate public transportation. The project proposes a bus stop located east of the club house, just south of the turning circle. This bus stop area contains a canopied bench area and a segregated lane for the bus to pull into, to avoid any vehicular conflicts during times of pick-up and drop off. Refer the Site Layout Plans included in the permitting plan set that submitted in conjunction with this Report.

LANDSCAPING DESIGN

A comprehensive landscape plan has been included within the permitting set that was submitted in conjunction with this Report. The proposed landscaping improvements include a variety of native species containing trees, shrubs, ground cover and seed mixes. The landscaping plan has been designed to provide an inviting warmth along the entrance to the development and surrounding the clubhouse. Each building has been proposed with an extensive vegetative buffer surrounding each foundation. The species of shrubs and trees have been chosen to provide a visually aesthetic view for residents and visitors.

Appropriate seed mixes have been proposed within perimeter disturbed areas, steep slopes and stormwater management basins. These seed mixes will provide a non-manicured look in such areas. All other areas directly adjacent to curbs and not scheduled for mulch beds will be seeded to lawn and utilized during the winter months for additional snow storage.

For more information pertaining to the landscaping for the Site refer to the Landscape Plan (Sheet 2.61) within the Permitting Plan Set, submitted in conjunction with this Report.

STORMWATER MANAGEMENT

The proposed development of the Site will add approximately 295,300± square feet of impervious area compared to that of existing conditions. To accommodate the increase in impervious area the project will propose a comprehensive stormwater management system in the form of drainage pipes, structures, surface and subsurface detention systems, and water quality features. The proposed stormwater conveyance system consists of a series of proposed catch basins with 2-foot sumps, drainage manholes, yard drains, and water quality units that will effectively treat the stormwater runoff prior to discharging into the surface and subsurface detention systems. The existing and proposed hydraulic system has been analyzed for the 25-year storm event in accordance with the Connecticut Department of Transportation 2000 Drainage Manual. The detentions systems have been designed for the 100-year storm event in accordance with the Town's requirements. For more information regarding the proposed stormwater management system refer to the *Stormwater Management & Soil Erosion Control* section of this Report.

SITE UTILITIES

<u>WATER</u>

The proposed residential complex will require domestic and fire service to each residential building, maintenance building and clubhouse. The project proposes an 12-inch fire loop around the Site that will have direct connection to the existing water main within Main Street. The loop will travel up the proposed site drive as one pipe then diverge at the turning circle to form the loop. Each building will have a domestic line and fire line that will tee off from the loop with associated meters, fittings, and gate valves. The project proposes several hydrants throughout the Site, located in areas that are easily accessible, spaced adequately as to provide protection to each building and surrounding areas. Each hydrant will tee off the main loop with a 6-inch lateral and gate valve.

For more information pertaining to the proposed utility layout refer to the Site Utility Plans within the Permitting Plan Set submitted in conjunction with this Report.

SANITARY

The project proposes a comprehensive subsurface sewage disposal system for each proposed residential building. Each system consists of a series of pipes, septic tanks, distributions boxes, and leaching areas. The leaching areas are located to the northwest corner of the Site and to the eastern portion of the Site, just south of the proposed site drive. For more information pertaining to the proposed subsurface sewage disposal system refer to the Subsurface Sewage Disposal Design section of this and the Site Utility Plans within the Permitting Plan Set submitted in conjunction with this Report.

ELECTRIC / CABLE / TELECOMMUNICATIONS

The project proposes an extensive electrical system throughout the Site services each residential building, maintenance building, garage, clubhouse, and development amenities such as site lighting and recreational areas associated with the clubhouse. The primary service will come off Main Street and travel up the site drive and diverge at the turning circle to service each building. Each residential building and clubhouse will have its own transformer that will provide secondary service to said buildings. The garage space and maintenance building will also utilize these transformers. The project proposes electric heat in lieu of gas; no gas service was proposed as part of this project.

The Project proposes cable and telecommunications to be fed underground from the same existing utility pole located along Main Street. The cable and telecommunications conduit will tie into each building in the general location of the electrical meter. At this point of design, it is assumed that cable and telecommunications can be fed off the identified utility pole. Prior to construction, detailed conduit plans will be designed in accordance with utility providers standards and requirements following approvals from the Town of Monroe.

For more information pertaining to the proposed utility layout refer to the Site Utility Plans within the Permitting Plan Set, submitted in conjunction with this Report.

SUBSURFACE SEWAGE DISPOSAL DESIGN

The subsurface sewage disposal systems proposed industrial facilities was designed in accordance with the technical standards established in the "Connecticut Public Health Code; On-site Sewage Disposal Regulations, and Technical Standards for Subsurface Sewage Disposal Systems" published by the Commissioner of Public Health, dated January 2018.

SOIL CHARACTERISTICS

According to the NRCS Soil Survey Geographic database for the State of Connecticut, the site is split into four soil groups; Ridgebury, Leicester and Whitman soils, Sutton fine sandy loam soils, Charlton-Chatfield complex and Canton and Charlton fine sandy loam soils. The project area lies entirely within the Canton and Charlton fine sandy loam area.

Canton and Charlton soils are comprised of approximately 10 to 35 percent of stones and boulders over the surface and have slopes ranging from 3 to 35 percent. Typically, the Charlton soils have a surface layer of very dark grayish brown fine sandy loam about 3 inches thick. The subsoil is dark yellowish brown, yellowish-brown, and light olive brown fine sandy loam 19 inches thick. The substratum is olive gray and light olive gray gravelly loamy sand to a depth of 60 inches or more. Typically, the Charlton soils have a surface layer of very dark brown fine sandy loam about 2 inches thick. The subsoil is 25 inches thick. The upper 15 inches is dark yellowish brown fine sandy loam, and the lower 10 inches is yellowish brown gravelly sandy loam. The sub stratum is light brownish gray gravelly sandy loam to a depth of 60 inches or more. The soil is well drained with intermittent areas of exposed bedrock.

EXISTING SITE CONDITIONS

Multiple site investigations have been performed on the project site. Each site investigation has a series of test pits as shown on the utility plans (See Sheets 2.50-2.58). Series 100 test pits represent the earliest test pits conducted on the property, while the latest test pits are represented by series 700. The results of these test pits can be found in Appendix B. Two general areas of the site, the northwest and northeast corners, have been identified as suitable areas for subsurface disposal systems. These areas have greater than 5' depth to ledge within existing soils, and a deep groundwater table as demonstrated by the test pit logs.

LEACHING SYSTEM DESIGN

The required effective leaching area (ELA) was determined for the proposed primary and reserve leaching areas to serve the proposed apartment buildings and clubhouse. Each apartment building features the same number of units (28) and bedrooms (45). Each apartment building septic system has been designed with the same parameters and leaching field products. Per the Connecticut Public Health Code, a 45 bedroom apartment building requires 6,750 gallons of design flow per day (GPD). With a percolation rate of 1.0-10.0 min/inch, the Effective Leaching Area is calculated to be approximately 7,425 square feet (SF) per apartment building system. Minimum Leaching System Spread (MLSS) was not calculated as the depth to the restrictive layer was determined to be greater than 60" in all test pits throughout the proposed septic area.

The proposed subsurface sewage disposal system for each proposed apartment building includes an H-20 load rated 8,000 gallon septic tank, an H-20 load rated 4,000 gallon septic tank and a dosing chamber, in series. The leaching fields for each building consist of 284 linear feet of Green Leach Filter GLF 36-72 for the primary leaching system and 284 linear feet of Geomatrix GST 36-62 for the reserve leaching system. Both the primary and reserve leching systems provide an ELA of 26.2 SF/LF, yielding 7,440 SF of leaching area, meeting the required 7,425 SF minimum.

The subsurface sewage disposal system for the clubhouse and pool house were designed based of existing water usage data from a similar project within the area. The required design flow for the clubhouse and pool house will be 1,350 gallons of design flow per day (GPD). Multiplying by a factor of safety by 1.5, this generates 2,025 GPD. With a percolation rate of 1.0-10.0 min/inch, and an application factor of 1.5, the Effective Leaching Area is calculated to be approximately 1,350 feet (SF). Minimum Leaching System Spread (MLSS) was not calculated as the depth to the restrictive layer was determined to be greater than 60" in all test pits throughout the proposed septic area.

The proposed subsurface sewage disposal system for the club house and pool house building includes an H-20 load rated 2,500-gallon septic tank. The leaching fields for each building consist of 52 linear feet of Green Leach Filter GLF 36-72 for the primary leaching system and 52 linear feet of Green Leach Filter GLF 36-72 for the reserve leaching system. Both the primary and reserve leching systems provide an ELA of 26.2 SF/LF, yielding 1,362 SF of leaching area, meeting the required 1,350 SF minimum.

STORMWATER MANAGEMENT & SOIL EROSION CONTROL

As the Town of Monroe Zoning Regulations do not provide stormwater guidelines, the stormwater management plan and design for the proposed industrial facility is intended to be in compliance with portions of the Town of Monroe Subdivision of Land Regulations Article III, Section 111-302, the 2004 Connecticut Stormwater Quality Manual and the CTDOT 2000 Drainage Manual, while taking prevailing site conditions and practical considerations into account. The soil erosion and sediment control measures proposed as part of the construction phase of the project will be in compliance with the 2002 Connecticut Guidelines for Soil Erosion & Sediment Control while taking prevailing site conditions and practicable consideration into account.

METHODOLOGY

Stormwater runoff analysis, for both existing and proposed conditions, was performed using the software package Civil 3D 2017 Hydraflow Hydrograph Extension. This software uses a 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. The computed results were analyzed using a type III rainfall distribution (40% of total rainfall in the maximum one-hour).

Rainfall depths for this property were used for calculating the volumes and rates of runoff for this project. The depths were taken from the NOAA Atlas 14 documents (Latitude: 41.3017º, Longitude: -73.2552º) and are listed in Table 1 below.

Table 1: Rainfall Data

Return Period	24-hr Rainfall Depth (in)
2-year	3.56
5-year	4.62
10-year	5.51
25-year	6.72
50-year	7.62
100-year	8.59

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 from the NOAA Atlas 14 documents (Latitude: 41.3017º, Longitude: -73.2552º) and are listed in Table 2 below.

Table 2: IDF Table

Intensity Duration Values (in/hr)				
Return Period	**5-Minute**	**15-Minute**	**30-Minute**	**60-Minute**
2-year	5.09	2.83	1.97	1.26
5-year	6.30	3.50	2.44	1.56
10-year	7.30	4.06	2.82	1.81
25-year	8.69	4.83	3.36	2.15
50-year	9.73	5.41	3.77	2.41
100-year	10.8	6.02	4.18	2.68

SCS uses the runoff curve number (CN) method to estimate runoff from storm rainfall. The major factors that determine CN are the watershed's soil and cover conditions, cover type, treatment and hydrologic condition. The higher percentage of impervious cover within a watershed will result in a higher curve number. A composite curve number was calculated for each analyzed watershed. Refer to Appendix C for the calculations used in determining the existing and proposed curve numbers, for the individual drainage areas.

The time of concentration is the time it takes for runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed. The time of concentration is calculated by adding the travel times of sheet flow, shallow concentrated flow and open channel flow, or some combination of these depending of the watershed and its features. Refer to Appendix C for the calculations used in determining the existing and proposed time of concentrations, for the individual drainage areas.

HYDROLOGY

EXISTING CONDITIONS

The project was designed taking the former conditions of the property into consideration; prior to any excavation. The property was heavily wooded with areas of clearing throughout. The property consisted of hilly terrain with a rang in slopes and elevations. In its former condition the Site had a high elevation of approximately 424 feet, and a low elevation of 330 feet. With a slope range of 1 percent to 50 percent. There is also a rockface located along the southern property line with elevations ranging form 368 to 424 feet.

According to the NRCS Soil Survey Geographic database for the State of Connecticut, the majority of the site in which the project is proposed is comprised of Canton and Charlton fine sandy loams and Sutton fine sandy loam. This soil type has a hydrologic soil group rating of B. A breakdown of all the soils, located within the property limits, as well as the NRCS Soil Survey Map for the site can be found in Appendix A, Figure 3.

Approximately 22.34 acres of area was analyzed for stormwater management purposes; this includes off-site drainage area that drains on to the Site. This portion of the site evaluated contains the contributing areas directly impacted by the development. Based on existing drainage patterns, the 22.34-acre area was divided into three (3) contributing drainage areas, labeled Existing Drainage Area 1 (EDA-1), Existing Drainage Area 2 (EDA-2), and Existing Drainage Area 3 (EDA-3). The approximate location and delineation of these drainage areas can be seen on Sheet EDA-1, Existing Drainage Area Map, found in Appendix D.

Existing Drainage Area 1 (EDA-1) has a contributing area of approximately 13.34 acres. The majority of runoff from EDA-1 flows northwest, overland, into the existing wetland located along the northern property line. This runoff associated with this wetlands travels east under an existing pipe culvert that connects to another on-site wetlands that collects the area associated with Existing Drainage Area 2 (EDA-2).

EDA-2 has a contributing area of approximately 5.19 acres. This area includes the existing wetlands, located south of the Dunkin Donuts, and associate upland, as well as portion of the Dunkin Donuts property. The majority of the runoff in the former site conditions travels northeast, overland, into the existing wetland. The remaining runoff comes from the Dunkin Donut parcel and get collected via catch basins and piped to the wetlands. This low-lying area outlets the runoff into a drainage pipe that traverses Route 25 and continues east within the Town’s drainage system.

Existing Drainage Area 3 (EDA-3) has a contributing area of approximately 3.81 acres. This area encompasses the northeastern portion of the Site. Runoff from EDA-3 travels east, overland, into the neighboring properties to the east. Runoff from this area traverses these adjacent properties until they are collected by the Town’s drainage system along Main Street.

Stormwater runoff associated with all analyzed areas (EDA-1, EDA-2, & EDA-3) travels east and eventually makes it way into the existing stormwater conveyance system that is located within Main Street.

Characteristics of these drainage areas are summarized in Table 3. A map depicting existing drainage areas and their characteristics, titled "Existing Drainage Area Map (EDA-1)", can be found in Appendix D of this Report.

Table 3: Existing Drainage Area Characteristics

Drainage Area	Area (Acres)	Curve Number (CN)	Time of Concentration (Minutes)
EDA-1	13.34	59	20.2
EDA-2	5.19	72	10.1
EDA-3	3.81	58	18.2

Existing peak flows for all analyzed storm-events are summarized in Table 4. Calculations for the existing hydrology can be found in Appendix C.

Table 4: Existing Peak Flows

Drainage Area	Peak Discharge Rate of Runoff (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
EDA-1	3.956	9.568	15.36	24.28	31.45	39.61
EDA-2	5.804	9.903	13.64	18.97	23.04	27.50
EDA-3	1.012	2.584	4.235	6.792	8.864	11.22
Overall EDA	9.236	20.26	31.03	47.13	59.90	74.30

PROPOSED CONDITIONS

The project was designed with a comprehensive stormwater management plan that consists of a series of collection pipes and structures, surface and subsurface detention, and water quality units. The proposed development consists of drainage areas that are of similar patterns to existing contributing areas, within the 22.47± acres analyzed, with slight modifications to accommodate the proposed stormwater conveyance system. Based on the proposed drainage patterns, the 22.47-acre area was divided into seven (7) contributing drainage areas, labeled Proposed Drainage Area 1a (PDA-1a), Proposed Drainage Area 1b (PDA-1b), Proposed Drainage Area 1c (PDA-1c), Proposed Drainage Area 2a (PDA-2a), Proposed Drainage Area 2b (PDA-2b), Proposed Drainage Area 3a (PDA-3a), Proposed Drainage Area 3b (PDA-3b), Proposed Drainage Area 3c (PDA-3c). The approximate location and delineation of these drainage areas can be seen on Sheet EDA-1, Existing Drainage Area Map, found in Appendix D of this Report.

PDA-1a has a contributing area of approximately 5.7 acres. The majority of runoff from PDA-1a flows north, overland, along the top of the rock wall to the west and into the existing wetlands to the north of the property.

PDA-1b has a contributing area of approximately 7.46 acres. This area consists of the majority of the proposed hardscape associated with Buildings #1 through #4 and the clubhouse. Runoff from PDA-1b is collected via catch basins and piped to the proposed Stormwater Basin #1 located at the north of the property just west of the site drive. The surface detention system is approximately eight (8) feet deep and has a storage capacity of approximately 66,800± cubic feet below the emergency spillway. The surface detention system was designed to attenuate the peak discharge rates for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. The system includes an outlet control structure in the form of a concrete riser with grate top, mid-flow orifice and low-flow orifice. The low-flow and mid-flow orifices will be protected with trash rack grates around the openings to prevent typical trash and debris associated with stormwater runoff from being discharged with the stormwater runoff. The detention basin was also designed with an emergency spillway to accommodate the higher storm events. For more detail regarding the surface detention system please refer to Grading & Drainage Plans and Detail Sheets in the Permitting Plan Set that was submitted in conjunction with this Report. For more information regarding the sizing and capacity of the detention system please refer to Appendix C of this Report.

PDA-1c has a contributing area of approximately 2.46 acres. This area is associated with the proposed development of Building #6 and the garage bay located to the west of the maintenance building, and associated parking and site drives. Runoff from PDA-1c is collected via catch basins and piped to the proposed Underground Detention System located west of Building #7. The subsurface detention system is comprised of 168 concrete chambers that are five (5) feet in height and the system provides approximately 50,545± cubic feet of storage capacity. The underground detention system was designed to attenuate the peak discharge rates for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. The system includes an outlet control structure in the form of a 24-inch pipe riser with open orifice top and a mid-flow orifice and low-flow orifice within the side of the riser. For more detail regarding the surface detention system please refer to Grading & Drainage Plans and Detail Sheets in the Permitting Plan Set that was submitted in conjunction with this Report. For more information regarding the sizing and capacity of the detention system please refer to Appendix C of this Report.

PDA-2a has a contributing area of approximately 2.30 acres. This area consists of the existing wetlands, located south of the site drive, and upland area that will remain undeveloped and modified by lawn area and other landscaping. The majority of runoff from PDA-2a flows east, overland, into the existing wetland and eventually outlets into the existing conveyance system within Main Street.

PDA-2b has a contributing area of approximately 2.00 acres. This area consists of the site drive, proposed surface detention system adjacent to Main Street, and the existing Dunkin Donuts site. The majority of runoff from PDA-2b flows south, eventually collecting in existing catch basins and conveyed to the proposed Stormwater Basin #2 located at the site drive / Main Street intersection. The surface detention basin collects and attenuates the runoff prior to discharging into the existing wetlands. The surface detention system is approximately five (5) feet deep and has a storage capacity of approximately 4,275± cubic feet. The surface detention system was designed to attenuate the peak discharge rates for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. The system includes an outlet control structure in the form of a concrete riser with grate top and low-flow orifice. The low-flow orifice will be protected with a trash rack grate around the opening to prevent typical trash and debris associated with stormwater runoff from being discharged with the stormwater runoff. The detention basin was also designed with an emergency spillway to accommodate the higher storm events. For more detail regarding the surface detention system please refer to Grading & Drainage Plans and Detail Sheets in the Permitting Plan Set that was submitted in conjunction with this Report. For more information regarding the sizing and capacity of the detention system please refer to Appendix C of this Report.

PDA-3a has a contributing area of approximately 0.09 acres. This area is a small piece of land that will remain untouched by the proposed development. Runoff from PDA-3a will follow its existing conditions pattern and flow east, overland, into the neighboring property.

PDA-3b has a contributing area of approximately 1.95 acres. This area is comprised of a proposed surface detention system, the 6-bay garage and Buildings #5 and #7, with associated paved and landscaped areas. The majority of runoff from PDA-3b is collected via catch basins and conveyed through piping to the proposed Stormwater Basin #3 located directly south of Building #7. The basin collects and attenuates the runoff before discharging via a level spreader at the eastern property line. The surface detention system is approximately eight (8) feet deep and has a storage capacity of approximately 13,500± cubic feet. The surface detention system was designed to attenuate the peak discharge rates for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. The system includes an outlet control structure in the form of a concrete riser with grate top and low-flow orifice. The low-flow orifice will be protected with a trash rack grate around the opening to prevent typical trash and debris associated with stormwater runoff from being discharged with the stormwater runoff. The detention basin was also designed with an emergency spillway to accommodate the higher storm events. For more detail regarding the surface detention system please refer to Grading & Drainage Plans and Detail Sheets in the Permitting Plan Set that was submitted in conjunction with this Report. For more information regarding the sizing and capacity of the detention system please refer to Appendix C of this Report.

PDA-3c has a contributing area of approximately 0.39 acres. This area is a small piece of land that will remain generally untouched by the proposed development; excluding the installation of the discharge pipe and level spreader associated with PDA-3b's detention system. Runoff from PDA-3a will follow its existing conditions pattern and flow east, overland, into the neighboring property.

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

Table 5: Proposed Drainage Area Characteristics

Drainage Area	Area (Acres)	Curve Number (CN)	Time of Concentration (Minutes)
PDA-1a	5.70	63	22.2
PDA-1b	7.46	81	19.1
PDA-1c	2.46	87	14.9
PDA-2a	2.30	69	20.7
PDA-2b	2.00	84	6.0
PDA-3a	0.09	58	7.9
PDA-3b	1.95	78	14.7
PDA-3c	0.39	58	13.8

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

Table 6: Proposed Peak Flows

Drainage Area	Peak Discharge Rate of Runoff (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
PDA-1a	2.447	5.090	7.675	11.55	14.62	18.06
PDA-1b (Basin 1)	1.323	4.839	7.348	9.818	12.26	20.64
PDA-1c (UG System)	0.467	0.560	0.963	2.106	2.797	3.400
Overall PDA-1	3.727	8.791	14.03	21.15	26.32	37.93
PDA-2a	1.665	2.998	4.234	6.029	7.420	8.951
PDA-2b (Basin 2)	3.845	6.819	8.725	10.13	11.26	14.25
Overall PDA-2	5.096	8.820	11.62	15.13	17.41	21.18
PDA-3a	0.029	0.079	0.131	0.210	0.274	0.347
PDA-3b (Basin 3)	0.785	0.989	1.121	3.725	6.143	8.548
PDA-3c	0.110	0.286	0.471	0.756	0.986	1.248
Overall PDA-3	0.870	1.204	1.507	4.256	7.011	9.791
Overall PDA	8.335	14.44	22.42	34.48	45.67	58.73

HYDROLOGIC CONCLUSIONS

The proposed development will result in an increase of 6.78 acres of impervious area in the form of buildings, drives, pavement, sidewalks, patio, and recreational areas. The increase in impervious area will result in an increase in stormwater volume and rate of runoff from that of existing conditions. The project was designed with four (4) detention systems, three (3) surface basins and one (1) subsurface system, to collect an attenuate the runoff to maintain and/or decrease the overall rate of runoff leaving the Site. With these stormwater management measures, the development will result in decreased peak discharge rates of runoff, in all storm events, compared to that of existing conditions. Refer to Table 7: Peak Discharge Rate of Runoff Comparison Table for more information.

Table 7: Peak Discharge Rate of Runoff Comparison Table

Peak Discharge Rate of Runoff (cfs)			
Storm Event	Total Drainage Areas		Percent Reduction in Peak Discharge Rate of Runoff
	EDA	PDA	
2-Year	9.236	8.335	9.76%
5-Year	20.26	14.44	28.73%
10-Year	31.03	22.42	27.75%
25-Year	47.13	34.48	26.84%
50-Year	59.90	45.67	23.76%
100-Year	74.30	58.73	20.96%

For more information regarding the hydrological analysis refer to Appendix C of this Report.

HYDRAULICS

EXISTING CONDITIONS

The property in its former condition was heavily wooded and undeveloped and did not have a stormwater system that conveyed runoff off the property; runoff sheet flowed overland into the low-lying areas around the property. As previously mentioned, the two existing wetlands onsite are interconnected with an existing 36-inch RCP culvert; this existing infrastructure is the only hydraulic measure that the property is improved with. The proposed development consists of a comprehensive stormwater conveyance system that includes a series of catch basins, pipes, surface and subsurface detention systems, and water quality structures. Stormwater associated with the project will be collected via catch basins (both curb and curbless models) with 2-foot sumps and conveyed through a series of piping that divert the runoff into a water quality unit just upgradient of the proposed detention systems. These systems discharge into adjacent on-site wetlands and adjacent properties.

PROPOSED CONDITIONS

The proposed conveyance system was designed for the 100-year storm event using the AutoCAD Hydraflow Hydrographs Storm Sewer design software. A layout of the proposed conveyance system was modeled into the program and information of this system’s components was added to the programs design templates; information such as structure inverts, frame elevations, pipe lengths, pipe slopes and pipe diameters. The total areas, pervious and impervious areas, time of concentration, and runoff coefficients, for each subcatchment area was also calculated and implemented into the program. The proposed conveyance system was adequately designed to convey stormwater runoff without a surcharge condition. For more information regarding the design of the system, hydraulic reporting, and model profiles please refer to Appendix C of this Report.

WATER QUALITY

In an effort to improve the quality of stormwater discharge associated with the proposed site improvements, the project has been designed with catch basins with 2-foot-deep sumps and water quality units upgradient of each detention system. The water quality unit uses swirl concentration and continuous deflective separation to screen, separate and trap trash, debris, sediment, and oil and grease from stormwater runoff. The unit will capture and retain 100% of floatables; effectively removing sediment. The unit has been designed to remove more than 80% of the average annual post-construction load of TSS from the stormwater runoff prior to entering the stormwater basin and the existing basin. The hydrodynamic separator has been sized to treat the Water Quality Flow (WQF) of the drainage area.

SOIL EROSION & SEDIMENT CONTROL

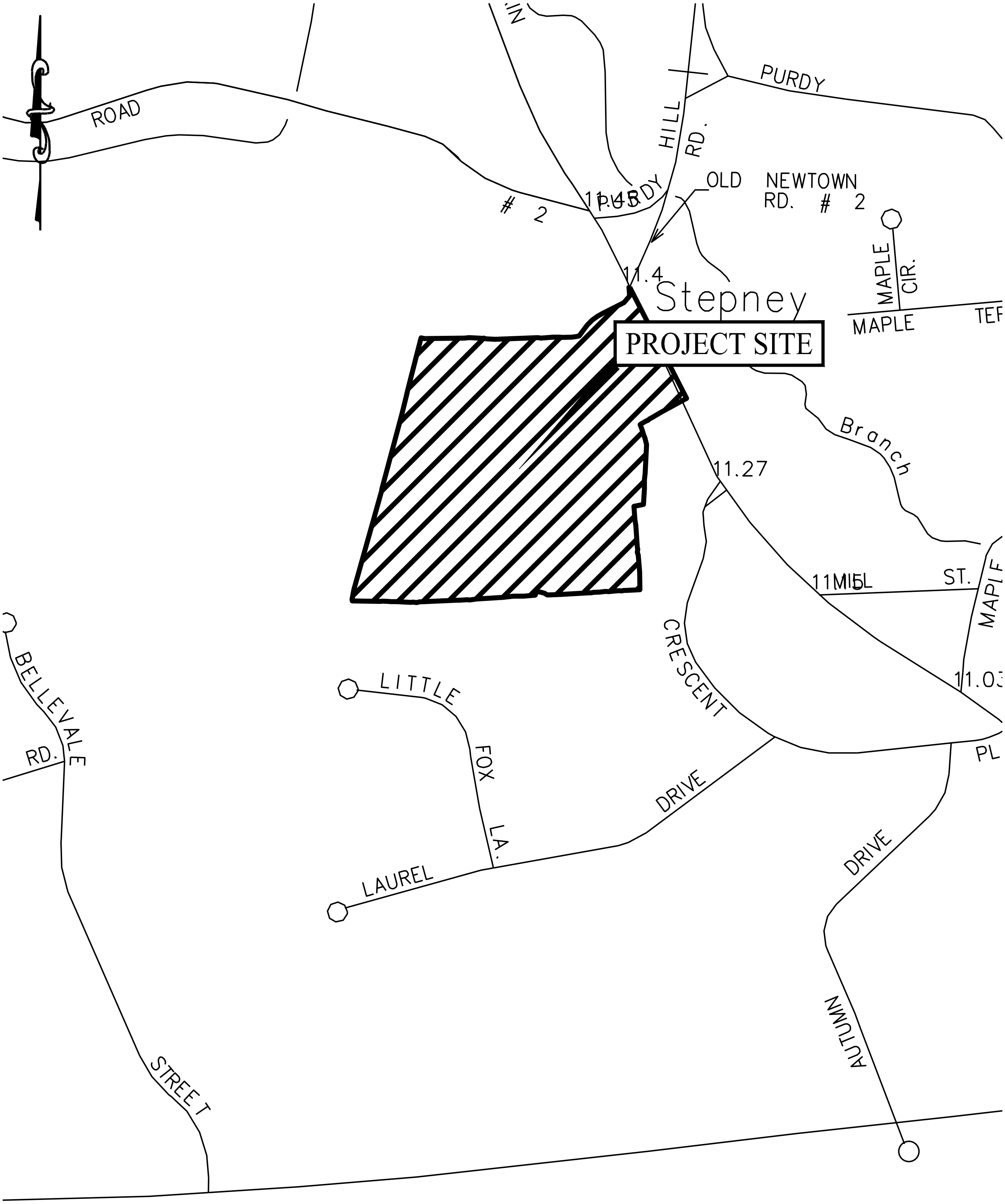
The proposed plans for soil erosion and sediment control prepared for this project have been developed in accordance with the Town of Monroe Zoning Regulations, Article XIX, effective date October 1, 1997, as well as the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, prepared by the Connecticut Council on Soil and Water Conservation in cooperation with the Connecticut Department of Environmental Protection.

The soil erosion and sediment control measures that will be proposed as part of this project include geotextile silt fences, temporary sediment traps, temporary diversion swales, construction entrance, dust control measures, riprap stabilization, and inlet protection for existing and proposed drainage features. The project will also incorporate geotextile silt fence with berm mulch backing along to the existing wetlands to further protect the wetlands from sediment or erosion that could occur during construction.

The temporary sediment traps will be excavated to detain sediment-laden runoff from contributing drainage areas located with the project’s limits of disturbance. The sediment traps are proposed in the low-lying areas of each contributing drainage area and have been sized to provide a minimum storage volume of 134 cubic yards per acre of drainage area, per 2002 Connecticut Guidelines for Soil Erosion and Sediment Control.

For more detail regarding layout and design of the soil erosion and sediment control measures implemented as part of this project refer to the Soil Erosion & Sediment Control Plans and the Soil Erosion & Sediment Control Notes & Details included in the Permitting Plan Set that was submitted in conjunction with this Report.

APPENDIX A
FIGURES



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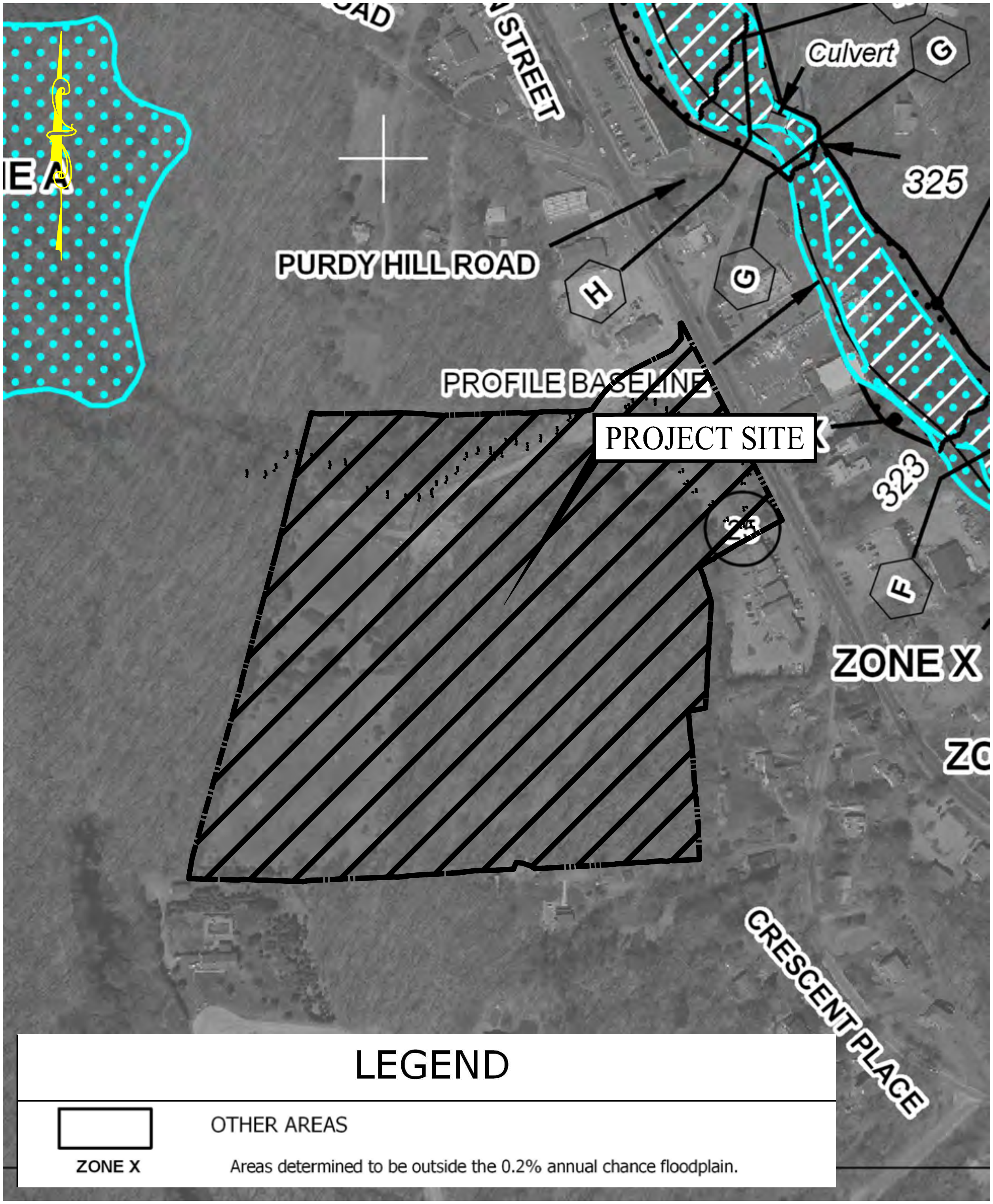
SITE LOCATION MAP

127 MAIN STREET
MONROE, CT

Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 500'
Figure:	1



NOTE: BASE MAP INFORMATION TAKEN FROM MSC.FEMA.GOV, AREA NUMBER 09001C0267F

300 0 150 300

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FEMA FLOOD MAP

127 MAIN STREET
MONROE, CT

Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 300'
Figure:	2

Map unit symbol	Map unit name	Rating
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D
4	Leicester fine sandy loam	B/D
50B	Sutton fine sandy loam, 3 to 8 percent slopes	B/D
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	B
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	B
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	B

Map unit symbol	Map unit name	Rating
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	B
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	B
73E	Charlton-Chatfield complex, 15 to 45 percent slopes, very rocky	B

NOTE: BASE MAP INFORMATION TAKEN FROM THE NATURAL RESOURCES CONSERVATION SERVICE, URL: HTTP://WEBSOILSURVEY.NRCS.USDA.GOV
DATE OF IMAGE: FEBURARY 03, 2022.

300 0 150 300

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SOIL SURVEY MAP

127 MAIN STREET
MONROE, CONNECTICUT

Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 300'
Figure:	3

GENERAL NOTES

1. WETLANDS WERE DELINEATED AND FLAGGED BY WILLIAM KENNY ASSOCIATES, LLC ON SEPTEMBER 22, 2021.

WETLAND AREA TABLE

AREA	ACRES
PROPERTY AREA	19.67±
WETLANDS ON PROPERTY	2.41±
UPLAND REVIEW AREA ON PROPERTY	2.76±
WETLANDS TO BE ALTERED	0.00±
UPLAND REVIEW AREA TO BE ALTERED	1.90±
TOTAL REGULATED AREA TO BE ALTERED	1.90±

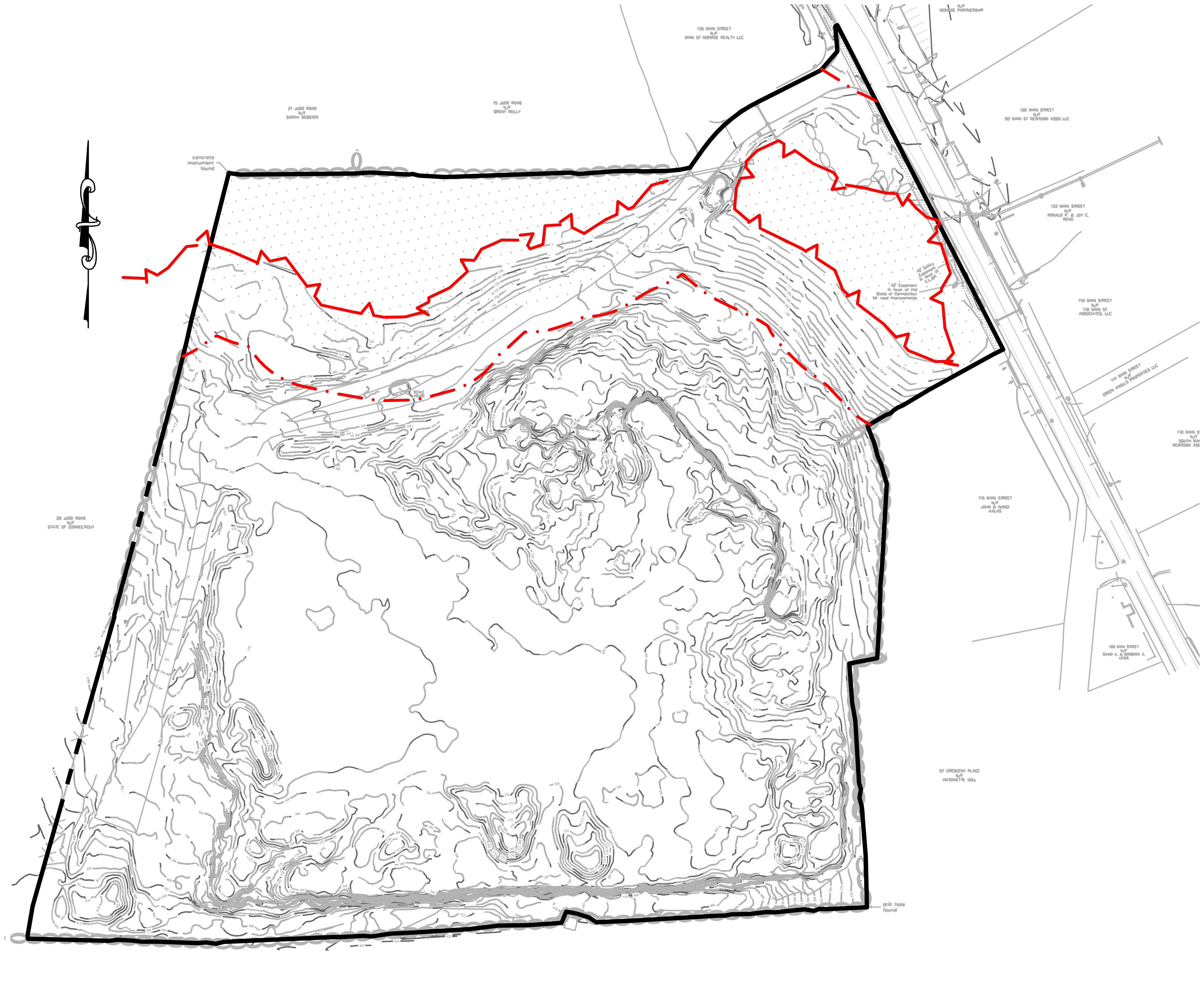
LEGEND

PROPERTY LINE

ADJOINING PROPERTY LINE

LIMIT OF WETLANDS

LIMIT OF UPLAND REVIEW AREA



300 0 150 300

Rev. #: Date Description

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

Drawn By:	MDM
Checked By:	KMS
Project #:	1910803
Plan Date:	01/09/23
Scale:	1" = 150'

Project:

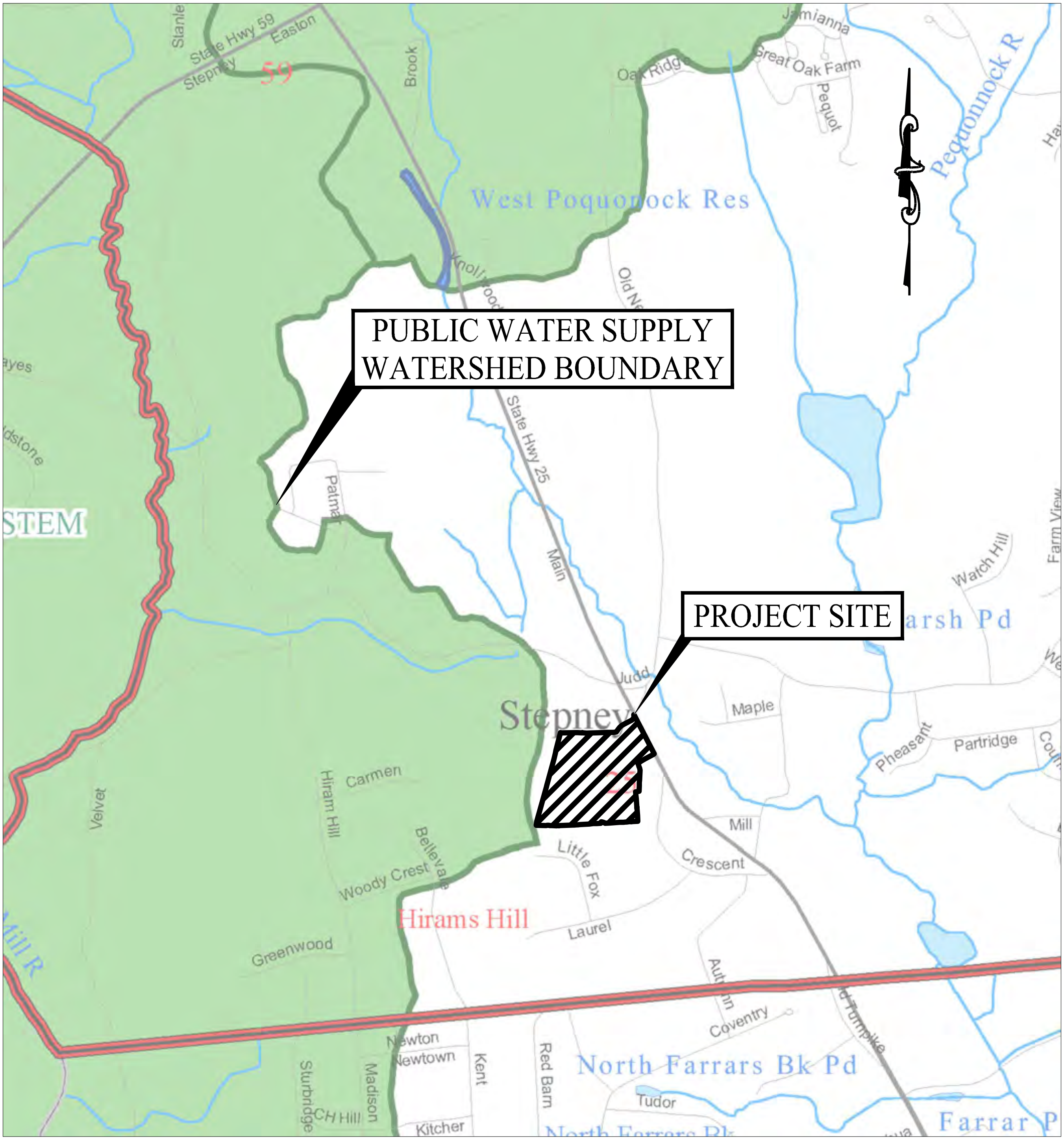
PROPOSED DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:

REGULATED AREA

SHEET #:

FIG-4



NOTE: WATERSHED INFORMATION TAKEN FROM A MAP ENTITLED "PUBLIC WATER DRINKING SOURCE PROTECTION AREAS; MONROE, CT," PROVIDED BY THE TOWN OF MONROE.

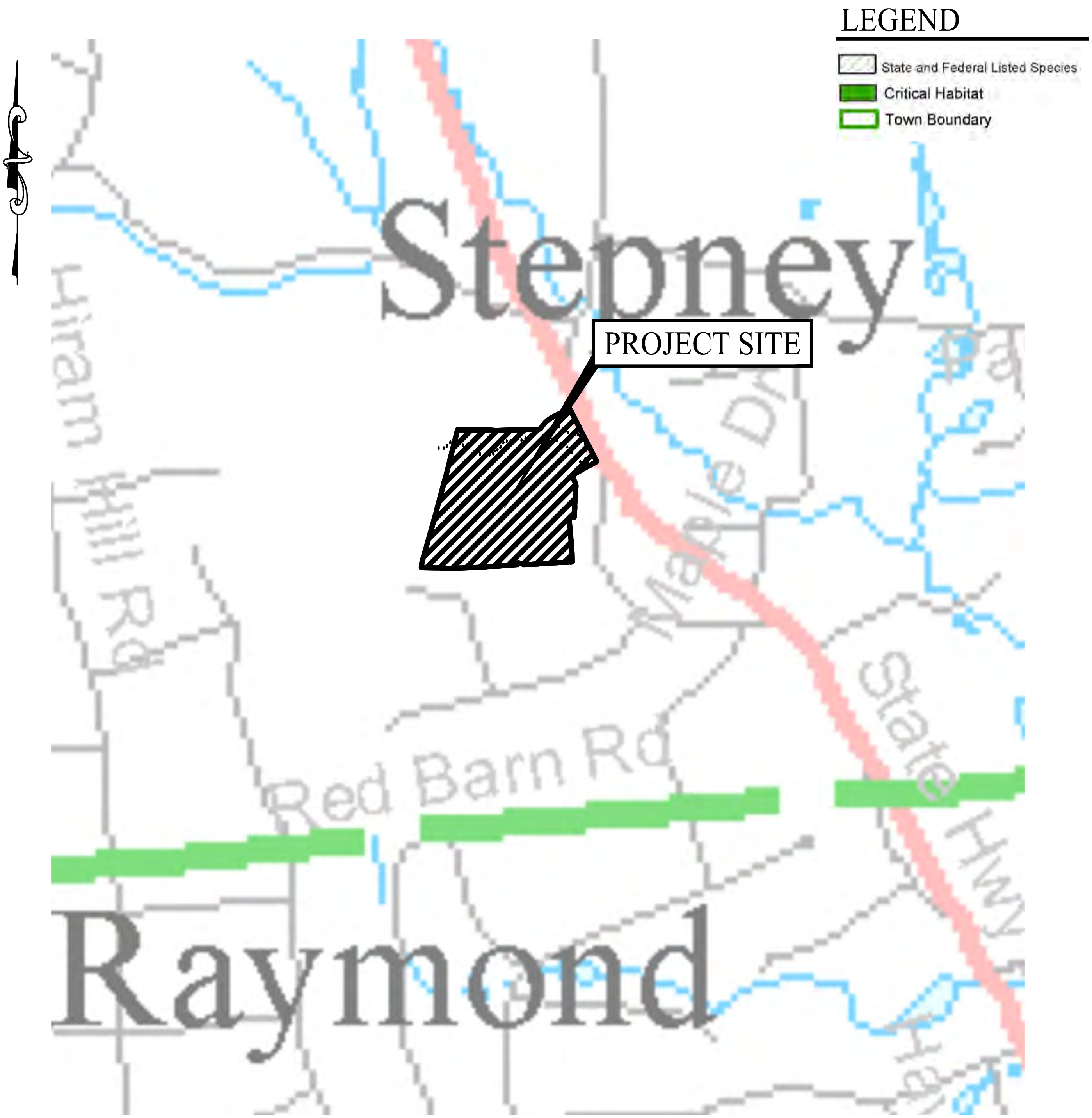
1,500 0 750 1,500

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

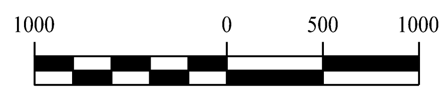
PUBLIC WATERSHED SUPPLY MAP

127 MAIN STREET
MONROE, CT

Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 1,500'
Figure:	5



NOTE: BASE MAP INFORMATION TAKEN FROM CT DEEP NATURAL DIVERSITY DATA BASE AREAS, MONROE, CT FEBRUARY 2022 (MAP ND085.PDF)
URL:HTTPS://PORTAL.CT.GOV/DEEP/ENDANGERED-SPECIES/NATURAL-DIVERSITY-DATA-BASE-MAP

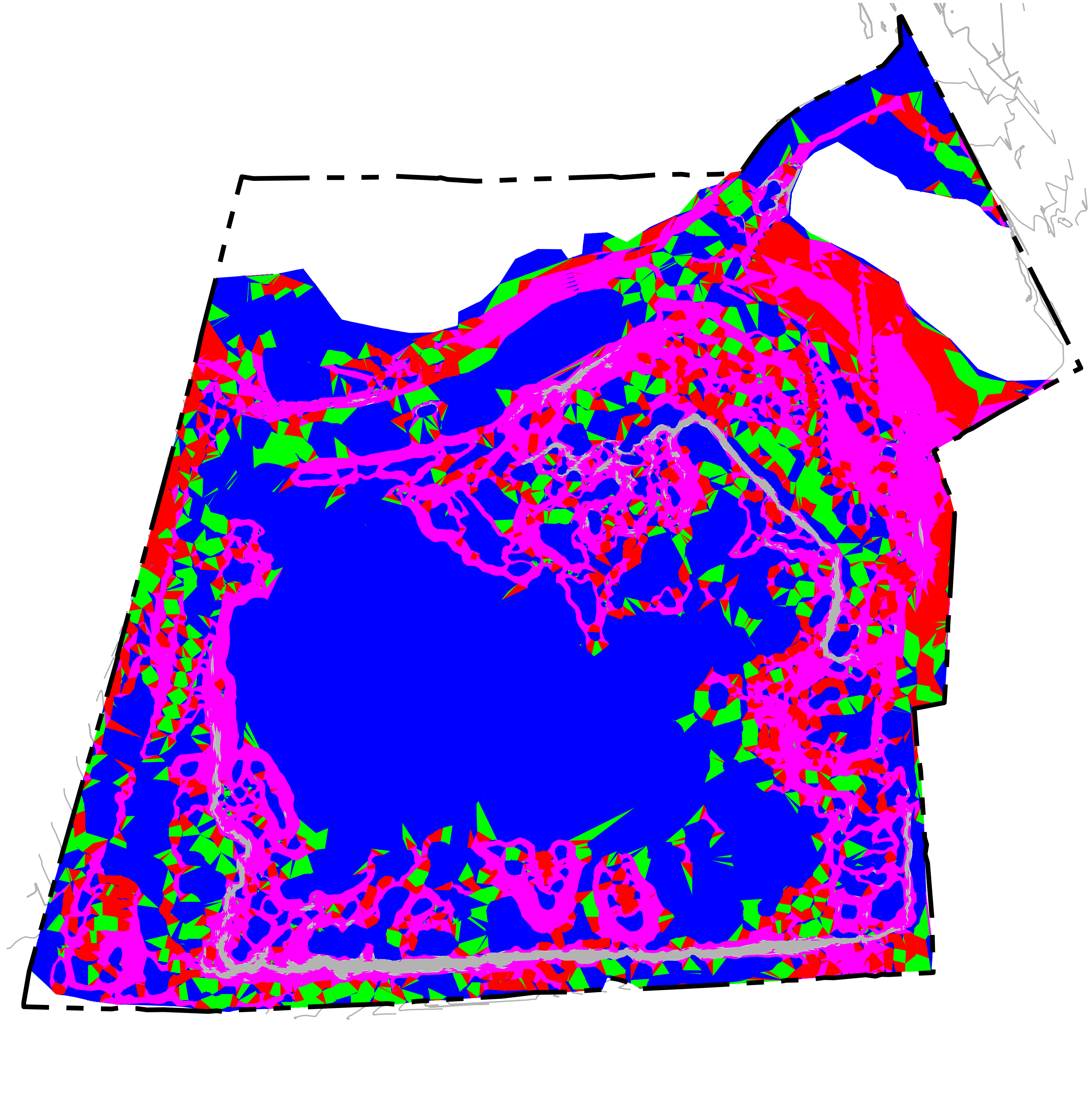


SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 F: (203) 880-9695

NATURAL DIVERSITY MAP

127 MAIN STREET
MONROE, CT

Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 1000'
Figure:	6



Slopes Table		
Color	Minimum Slope	Maximum Slope
Blue	0%	10%
Green	10%	15%
Red	15%	25%
Magenta	25%	100%

Rev. #:	Date	Description

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

Drawn By:	BCP
Checked By:	KMS
Project #:	1910803
Plan Date:	01/09/23
Scale:	1" = 150'

Project:
PROPOSED DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
SLOPE AREA MAP

SHEET #:
FIG.7

APPENDIX B
SUPPORTING DOCUMENTS

Property Card
Soil Log & Test Pit Observations

127 MAIN ST

Location	127 MAIN ST	**Map/Lot**	012/ 009/ 0B/ /
Acct#	01200903	**Owner**	POND VIEW LLC
Assessment	$922,500	**Appraisal**	$1,317,900
PID	16248	**Building Count**	1
Survey	3014	**Affordable**	

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$1,317,900	$1,317,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$922,500	$922,500

Owner of Record

Owner	POND VIEW LLC	**Sale Price**	$0
Co-Owner	C/O SABRINA KEILLOR	**Certificate**	1
Address	6754 PASEO CASTILLE SARASOTA, FL 34238	**Book & Page**	0917/0175
		Sale Date	10/17/2000
		Instrument	

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
POND VIEW LLC	$0	1	0917/0175		10/17/2000

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0

Building Attributes	
Field	**Description**
Style:	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces	
Cndtn	
Wdstv Flues	
Basement Gar.	
Num Park	
Fireplaces	
Attic	
Basement	
In Law Apt	
Fndtn Cndtn	
Basement	

Building Photo

(https://images.vgsi.com/photos/MonroeCTPhotos//\00\01\35\46.jpg)

Building Layout

(https://images.vgsi.com/photos/MonroeCTPhotos//Sketches/16248_1624

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Parcel Information

Use Code	390
Description	Devel Land
Deeded Acres	19.94

Land

Land Use

Use Code	390
Description	Devel Land
Zone	B1 RF
Neighborhood	
Alt Land Approved	No
Category	

Land Line Valuation

Size (Acres)	19.94
Appraised Value	$1,317,900

Outbuildings

Outbuildings	Legend
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$1,317,900	$1,317,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2019	$0	$922,500	$922,500

2.51:

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11-12, 1997.

<u>TEST PIT 212</u>

0"-6"	TOPSOIL
6"-24"	LIGHT BROWN FINE SANDY LOAM
24"-40"	GREY COURSE SAND
40"-96"	GREY M-C SAND

NO LEDGE
WATER @ 90" (APPROXIMATE ELEVATION 352.50)

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 13, 2019. SOIL TESTS WERE WITNESSED BY MATTHEW BRATTOLI, RS, TOWN OF MONROE HEALTH DEPARTMENT. TESTS WERE CONDUCTED TO IDENTIFY DEPTH TO LEDGE.

<u>TEST PIT 604N</u>
LEDGE @ 7' (APPROXIMATE ELEVATION 354.00)

2.52:
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11-12, 1997.

<u>TEST PIT 206</u>

0"-10"	TOPSOIL
10"-32"	LIGHT BROWN FINE SANDY LOAM
32"-110"	GREY MED SAND

NO LEDGE
NO WATER

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 12, 2018. SOIL TESTS WERE WITNESSED BY RICH JACKSON, RS, TOWN OF MONROE HEALTH DEPARTMENT.

<u>TEST PIT 506</u>

0"-6"	DARK BROWN TOPSOIL
6"-18"	YELLOWISH BROWN FINE SANDY LOAM
18"-80"	OLIVE BROWN FINE TO MEDIUM SAND

WATER @ 66" (APPROXIMATE ELEVATION: 364.50)

2.53:
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

<u>TEST PIT 109</u>

0"-6"	TOPSOIL
6"-18"	BROWN F-M SAND, TR SILT
18"-48"	GREY M-C SAND
48"-99"	GREY M-C SAND & GRAVEL, LI SMALL STONES, TR SILT

NO LEDGE/DRY/NO MOTTLING

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11, 1997.

<u>TEST PIT 205</u>

0"-9"	TOPSOIL
9"-24"	BROWN FINE SANDY LOAM
24"-66"	GREY MED SAND, SO 1" STONE
66"-108"	GREY M-C SAND & GRAVEL

NO LEDGE
NO WATER

2.54:
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

<u>TEST PIT 204</u>

0"-9"	TOPSOIL
9"-48"	GRAY BROWN VERY FINE SANDY LOAM W/ STONES
48"-64"	GREY FIRM FINE SAND W/ GRAVEL
64"-90"	MED SAND & GRAVEL, SO LOOSE SILT

NO LEDGE
WATER @ 80" (APPROXIMATE ELEVATION: 359.33)

<u>TEST PIT 207</u>

0"-12"	TOPSOIL
12"-30"	LIGHT BROWN FINE SANDY LOAM
32"-95"	GREY FIRM F-M SAND & GRAVEL

NO LEDGE
WATER @ 80" (APPROXIMATE ELEVATION: 351.83)

<u>TEST PIT 213</u>

0"-6"	TOPSOIL
6"-24"	LIGHT BROWN FINE SANDY LOAM
24"-40"	GREY FINE SAND
40"-100"	GREY F-M SAND

NO LEDGE
WATER @ 88" (APPROXIMATE ELEVATION: 346.17)

2.55:
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

<u>TEST PIT 102</u>

0"-5"	TOPSOIL
5"-28"	BROWN F-M SAND & SILT
28"-99"	GREY M-C SAND & GRAVEL, LI COBBLES, TR SILT

NO LEDGE/DRY/NO MOTTLING

<u>TEST PIT 103</u>

0"-7"	TOPSOIL
7"-32"	BROWN F-M SAND & SILT
32"-64"	GREY/TAN M-C SAND & GRAVEL, LI STONES, TR SILT

LEDGE @ 64" (APPROXIMATE ELEVATION = 352.67)
DRY/NO MOTTLING

2.56:

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11, 1997.

<u>TEST PIT 203</u>

0"-10" TOPSOIL
10"-24" BROWN LOAMY SAND & GRAVEL
24"-84" BROWN M-C SAND W/ COBBLES
NO LEDGE
WATER @ 72 +/-" (APPROXIMATE ELEVATION: 348.50)

<u>TEST PIT 211</u>

0"-9" TOPSOIL
9"-26" LIGHT BROWN FINE SANDY LOAM
26"-100" GREY M-C SAND
NO LEDGE
NO WATER

2.57:
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

<u>TEST PIT 101</u>

0"-5"	TOPSOIL
5"-28"	BROWN F-M SAND & SILT
28"-99"	GREY M-C SAND & GRAVEL, LI COBBLES, TR SILT

NO LEDGE/DRY/NO MOTTLING

<u>TEST PIT 105</u>

0"-7"	TOPSOIL
7"-36"	BROWN F-M SAND & SILT
36"-70"	GREY FINE SAND, TR SILT
70"-90"	GREY M-C SAND & GRAVEL

NO LEDGE
WATER @ 70" (APPROXIMATE ELEVATION = 328.92)
NO MOTTLING

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 12, 2018. SOIL TESTS WERE WITNESSED BY RICH JACKSON, RS, TOWN OF MONROE HEALTH DEPARTMENT.

<u>TEST PIT 509</u>

0"-12"	DARK BROWN TOPSOIL
12"-30"	YELLOWISH BROWN FINE SANDY LOAM
30"-81"	OLIVE BROWN FINE SANDY LOAM

2.58:
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

<u>TEST PIT 102</u>

0"-5"	TOPSOIL
5"-28"	BROWN F-M SAND & SILT
28"-99"	GREY M-C SAND & GRAVEL, LI COBBLES, TR SILT

NO LEDGE/DRY/NO MOTTLING

<u>TEST PIT 103</u>

0"-7"	TOPSOIL
7"-32"	BROWN F-M SAND & SILT
32"-64"	GREY/TAN M-C SAND & GRAVEL, LI STONES, TR SILT

LEDGE @ 64" (APPROXIMATE ELEVATION = 352.67)
DRY/NO MOTTLING

APPENDIX C
STORMWATER CALCULATIONS

Hydrology Calculations (2-, 5-, 10-, 25-, 50-, 100-year storm event)

NOAA Atlas Precipitation Data

Watershed Model Schematic

Hydraflow Reporting – Existing & Proposed Conditions

Curve Number & ToC Calculations – Existing & Proposed Conditions

Storm Sewer Calculations (100-year storm event)

Existing & Proposed Storm Sewer System – Schematic, DOT Reporting, Profiles

Runoff Coefficient & ToC Calculations – Existing & Proposed Conditions

Best Management Practices

WQS TSS Removal Calculations

Water Quality Flow Calculations

Hydrology Calculations (2-, 5-, 10-, 25-, 50-, 100-year storm events)

NOAA Atlas Precipitation Data

Watershed Model Schematic

Hydraflow Reporting – Existing & Proposed Conditions

Curve Number & ToC Calculations – Existing & Proposed Conditions

NOAA Atlas 14, Volume 10, Version 3
Location name: Monroe, Connecticut, USA*
Latitude: 41.3017°, Longitude: -73.2552°
Elevation: 401.38 ft**
* source: ESRI Maps
** source: USGS

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_&_aerials

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	**0.363** (0.277-0.465)	**0.424** (0.324-0.545)	**0.525** (0.399-0.675)	**0.608** (0.461-0.786)	**0.724** (0.532-0.967)	**0.811** (0.586-1.10)	**0.902** (0.633-1.26)	**1.00** (0.671-1.42)	**1.14** (0.739-1.67)	**1.26** (0.796-1.86)
10-min	**0.514** (0.392-0.659)	**0.601** (0.459-0.772)	**0.744** (0.566-0.957)	**0.863** (0.653-1.11)	**1.03** (0.754-1.37)	**1.15** (0.829-1.56)	**1.28** (0.897-1.78)	**1.42** (0.951-2.01)	**1.62** (1.05-2.36)	**1.78** (1.13-2.64)
15-min	**0.605** (0.462-0.775)	**0.707** (0.540-0.908)	**0.875** (0.665-1.12)	**1.01** (0.768-1.31)	**1.21** (0.887-1.61)	**1.35** (0.976-1.83)	**1.50** (1.06-2.10)	**1.67** (1.12-2.37)	**1.91** (1.23-2.78)	**2.10** (1.33-3.10)
30-min	**0.841** (0.642-1.08)	**0.984** (0.750-1.26)	**1.22** (0.926-1.57)	**1.41** (1.07-1.82)	**1.68** (1.23-2.24)	**1.88** (1.36-2.55)	**2.09** (1.46-2.90)	**2.31** (1.55-3.27)	**2.61** (1.69-3.80)	**2.85** (1.80-4.21)
60-min	**1.08** (0.822-1.38)	**1.26** (0.961-1.62)	**1.56** (1.19-2.01)	**1.81** (1.37-2.34)	**2.15** (1.58-2.86)	**2.41** (1.73-3.26)	**2.68** (1.87-3.70)	**2.95** (1.98-4.18)	**3.32** (2.15-4.83)	**3.60** (2.28-5.33)
2-hr	**1.39** (1.07-1.78)	**1.64** (1.26-2.09)	**2.04** (1.56-2.61)	**2.38** (1.81-3.05)	**2.84** (2.10-3.76)	**3.19** (2.31-4.29)	**3.55** (2.50-4.91)	**3.95** (2.66-5.56)	**4.50** (2.92-6.52)	**4.95** (3.14-7.28)
3-hr	**1.61** (1.24-2.04)	**1.90** (1.46-2.41)	**2.38** (1.83-3.03)	**2.78** (2.12-3.55)	**3.32** (2.47-4.39)	**3.74** (2.72-5.02)	**4.17** (2.96-5.77)	**4.66** (3.14-6.54)	**5.36** (3.48-7.72)	**5.93** (3.77-8.69)
6-hr	**2.02** (1.57-2.54)	**2.41** (1.87-3.04)	**3.05** (2.36-3.85)	**3.58** (2.75-4.54)	**4.31** (3.22-5.67)	**4.85** (3.56-6.50)	**5.43** (3.88-7.50)	**6.10** (4.13-8.51)	**7.09** (4.62-10.2)	**7.91** (5.05-11.5)
12-hr	**2.48** (1.94-3.11)	**2.99** (2.33-3.75)	**3.83** (2.98-4.81)	**4.52** (3.50-5.70)	**5.48** (4.12-7.17)	**6.19** (4.57-8.25)	**6.95** (5.00-9.56)	**7.85** (5.33-10.9)	**9.17** (6.00-13.1)	**10.3** (6.58-14.9)
24-hr	**2.91** (2.28-3.62)	**3.56** (2.79-4.43)	**4.62** (3.62-5.77)	**5.51** (4.28-6.90)	**6.72** (5.08-8.75)	**7.62** (5.66-10.1)	**8.59** (6.24-11.8)	**9.77** (6.65-13.4)	**11.6** (7.58-16.3)	**13.1** (8.39-18.8)
2-day	**3.28** (2.59-4.05)	**4.07** (3.22-5.03)	**5.37** (4.22-6.65)	**6.45** (5.04-8.02)	**7.93** (6.04-10.3)	**9.01** (6.75-11.9)	**10.2** (7.49-14.0)	**11.7** (8.00-16.0)	**14.1** (9.25-19.8)	**16.1** (10.4-23.0)
3-day	**3.57** (2.83-4.39)	**4.43** (3.52-5.46)	**5.85** (4.62-7.23)	**7.03** (5.52-8.71)	**8.65** (6.62-11.2)	**9.84** (7.40-13.0)	**11.2** (8.21-15.3)	**12.8** (8.77-17.5)	**15.4** (10.2-21.6)	**17.7** (11.4-25.1)
4-day	**3.84** (3.05-4.71)	**4.75** (3.78-5.84)	**6.25** (4.95-7.69)	**7.50** (5.90-9.26)	**9.21** (7.06-11.9)	**10.5** (7.88-13.8)	**11.8** (8.73-16.2)	**13.6** (9.32-18.5)	**16.3** (10.8-22.8)	**18.7** (12.1-26.5)
7-day	**4.60** (3.68-5.62)	**5.61** (4.48-6.84)	**7.24** (5.77-8.87)	**8.60** (6.81-10.6)	**10.5** (8.05-13.4)	**11.9** (8.95-15.4)	**13.4** (9.84-18.0)	**15.2** (10.5-20.5)	**18.0** (11.9-25.0)	**20.5** (13.2-28.8)
10-day	**5.35** (4.30-6.51)	**6.41** (5.14-7.79)	**8.13** (6.49-9.91)	**9.56** (7.59-11.7)	**11.5** (8.88-14.6)	**13.0** (9.81-16.8)	**14.6** (10.7-19.5)	**16.4** (11.3-22.1)	**19.2** (12.8-26.6)	**21.6** (14.0-30.3)
20-day	**7.62** (6.15-9.19)	**8.78** (7.08-10.6)	**10.7** (8.58-12.9)	**12.2** (9.78-14.9)	**14.4** (11.1-18.1)	**16.0** (12.1-20.4)	**17.7** (13.0-23.2)	**19.6** (13.6-26.2)	**22.2** (14.8-30.5)	**24.3** (15.8-33.9)
30-day	**9.48** (7.69-11.4)	**10.7** (8.67-12.9)	**12.7** (10.3-15.3)	**14.4** (11.5-17.4)	**16.7** (12.9-20.8)	**18.4** (13.9-23.3)	**20.2** (14.8-26.2)	**22.1** (15.4-29.3)	**24.6** (16.4-33.5)	**26.5** (17.3-36.7)
45-day	**11.8** (9.58-14.1)	**13.1** (10.6-15.7)	**15.2** (12.3-18.3)	**17.0** (13.7-20.5)	**19.4** (15.1-24.1)	**21.3** (16.1-26.8)	**23.2** (16.9-29.8)	**25.0** (17.5-33.1)	**27.4** (18.4-37.2)	**29.2** (19.0-40.3)
60-day	**13.7** (11.1-16.3)	**15.0** (12.3-18.0)	**17.3** (14.0-20.7)	**19.1** (15.4-23.0)	**21.7** (16.9-26.7)	**23.7** (18.0-29.6)	**25.6** (18.7-32.7)	**27.5** (19.3-36.2)	**29.8** (20.1-40.4)	**31.5** (20.6-43.4)

[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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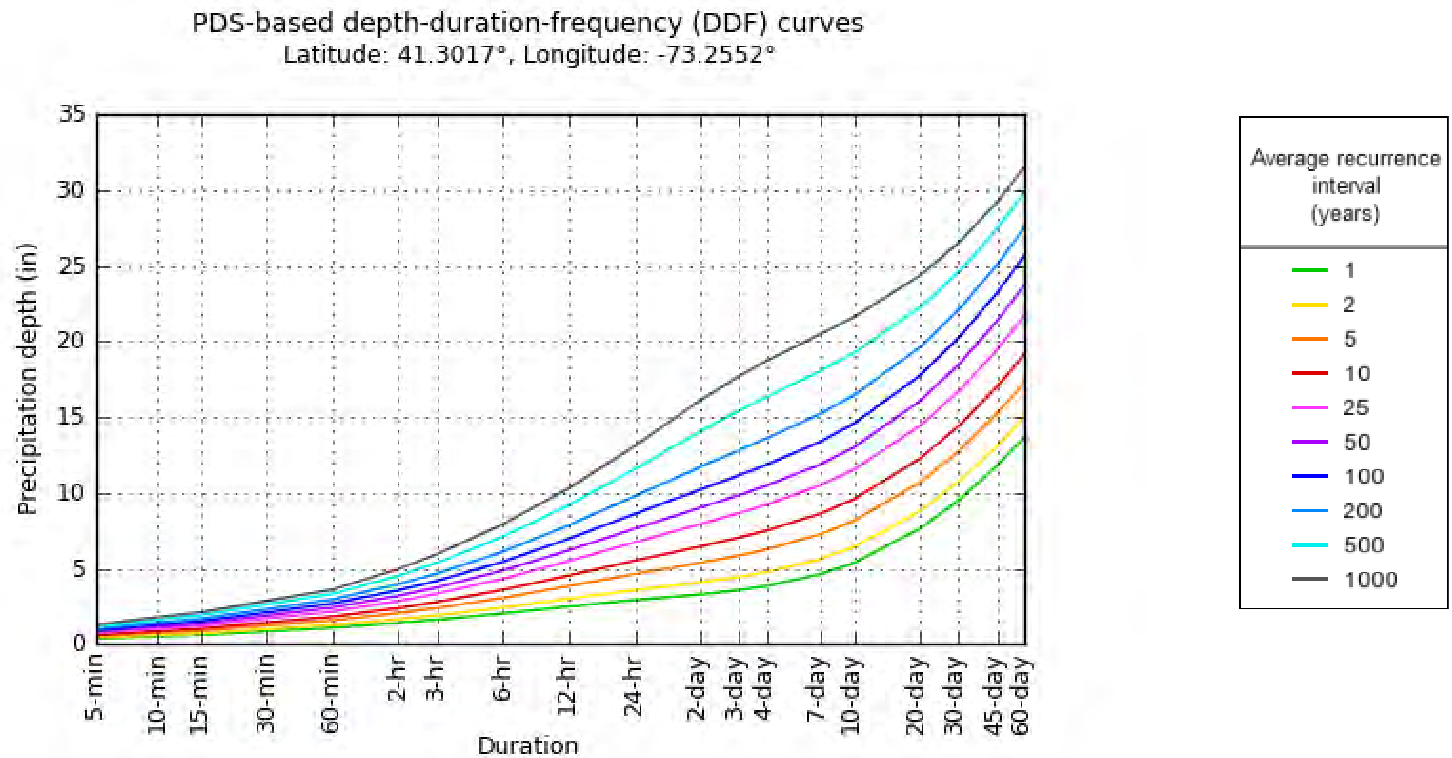
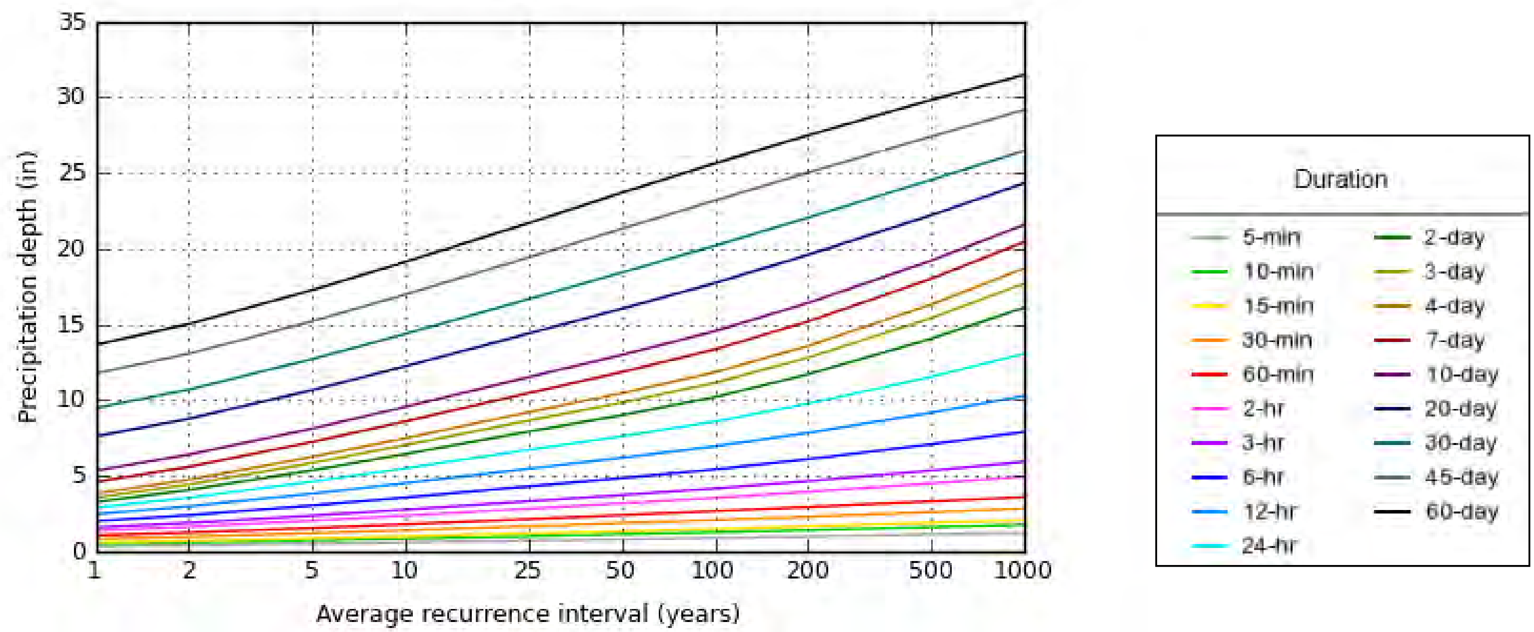
PF graphical





NOAA Atlas 14, Volume 10, Version 3 Created (GMT): Thu Feb 3 19:30:09 2022

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Maps & aerials

Small scale terrain

NOAA Atlas 14, Volume 10, Version 3
Location name: Monroe, Connecticut, USA*
Latitude: 41.3017°, Longitude: -73.2552°
Elevation: 401.38 ft**
* source: ESRI Maps
** source: USGS

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_&_aerials

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	**4.36** (3.32-5.58)	**5.09** (3.89-6.54)	**6.30** (4.79-8.10)	**7.30** (5.53-9.43)	**8.69** (6.38-11.6)	**9.73** (7.03-13.2)	**10.8** (7.60-15.1)	**12.0** (8.05-17.1)	**13.7** (8.87-20.0)	**15.1** (9.55-22.3)
10-min	**3.08** (2.35-3.95)	**3.61** (2.75-4.63)	**4.46** (3.40-5.74)	**5.18** (3.92-6.68)	**6.16** (4.52-8.21)	**6.90** (4.97-9.35)	**7.67** (5.38-10.7)	**8.52** (5.71-12.1)	**9.71** (6.28-14.2)	**10.7** (6.76-15.8)
15-min	**2.42** (1.85-3.10)	**2.83** (2.16-3.63)	**3.50** (2.66-4.50)	**4.06** (3.07-5.24)	**4.83** (3.55-6.44)	**5.41** (3.90-7.33)	**6.02** (4.22-8.38)	**6.68** (4.48-9.48)	**7.62** (4.93-11.1)	**8.38** (5.30-12.4)
30-min	**1.68** (1.28-2.16)	**1.97** (1.50-2.52)	**2.44** (1.85-3.13)	**2.82** (2.14-3.65)	**3.36** (2.46-4.47)	**3.77** (2.71-5.09)	**4.18** (2.92-5.80)	**4.62** (3.10-6.55)	**5.22** (3.38-7.60)	**5.69** (3.60-8.43)
60-min	**1.08** (0.822-1.38)	**1.26** (0.961-1.62)	**1.56** (1.19-2.01)	**1.81** (1.37-2.34)	**2.15** (1.58-2.86)	**2.41** (1.73-3.26)	**2.68** (1.87-3.70)	**2.95** (1.98-4.18)	**3.32** (2.15-4.83)	**3.60** (2.28-5.33)
2-hr	**0.696** (0.535-0.888)	**0.820** (0.630-1.05)	**1.02** (0.782-1.31)	**1.19** (0.904-1.53)	**1.42** (1.05-1.88)	**1.59** (1.16-2.15)	**1.78** (1.25-2.46)	**1.97** (1.33-2.78)	**2.25** (1.46-3.26)	**2.48** (1.57-3.64)
3-hr	**0.535** (0.412-0.678)	**0.632** (0.487-0.803)	**0.792** (0.608-1.01)	**0.924** (0.706-1.18)	**1.11** (0.821-1.46)	**1.24** (0.906-1.67)	**1.39** (0.984-1.92)	**1.55** (1.05-2.18)	**1.78** (1.16-2.57)	**1.98** (1.26-2.89)
6-hr	**0.337** (0.262-0.425)	**0.402** (0.312-0.508)	**0.509** (0.393-0.644)	**0.598** (0.459-0.759)	**0.719** (0.537-0.947)	**0.810** (0.594-1.09)	**0.907** (0.648-1.25)	**1.02** (0.689-1.42)	**1.18** (0.772-1.70)	**1.32** (0.843-1.92)
12-hr	**0.206** (0.161-0.258)	**0.248** (0.194-0.311)	**0.318** (0.247-0.399)	**0.375** (0.290-0.473)	**0.455** (0.342-0.595)	**0.514** (0.379-0.684)	**0.577** (0.415-0.793)	**0.651** (0.442-0.902)	**0.761** (0.498-1.08)	**0.854** (0.546-1.23)
24-hr	**0.121** (0.095-0.151)	**0.148** (0.116-0.185)	**0.193** (0.151-0.240)	**0.229** (0.178-0.287)	**0.280** (0.212-0.365)	**0.317** (0.236-0.421)	**0.358** (0.260-0.491)	**0.407** (0.277-0.560)	**0.481** (0.316-0.681)	**0.545** (0.350-0.782)
2-day	**0.068** (0.054-0.084)	**0.085** (0.067-0.105)	**0.112** (0.088-0.139)	**0.134** (0.105-0.167)	**0.165** (0.126-0.214)	**0.188** (0.141-0.249)	**0.213** (0.156-0.292)	**0.244** (0.167-0.334)	**0.293** (0.193-0.412)	**0.336** (0.216-0.479)
3-day	**0.050** (0.039-0.061)	**0.062** (0.049-0.076)	**0.081** (0.064-0.100)	**0.098** (0.077-0.121)	**0.120** (0.092-0.155)	**0.137** (0.103-0.180)	**0.155** (0.114-0.212)	**0.178** (0.122-0.243)	**0.214** (0.141-0.300)	**0.246** (0.159-0.349)
4-day	**0.040** (0.032-0.049)	**0.050** (0.039-0.061)	**0.065** (0.052-0.080)	**0.078** (0.061-0.096)	**0.096** (0.074-0.124)	**0.109** (0.082-0.143)	**0.123** (0.091-0.168)	**0.142** (0.097-0.192)	**0.170** (0.112-0.237)	**0.195** (0.126-0.276)
7-day	**0.027** (0.022-0.033)	**0.033** (0.027-0.041)	**0.043** (0.034-0.053)	**0.051** (0.041-0.063)	**0.062** (0.048-0.080)	**0.071** (0.053-0.092)	**0.080** (0.059-0.107)	**0.090** (0.062-0.122)	**0.107** (0.071-0.149)	**0.122** (0.079-0.171)
10-day	**0.022** (0.018-0.027)	**0.027** (0.021-0.032)	**0.034** (0.027-0.041)	**0.040** (0.032-0.049)	**0.048** (0.037-0.061)	**0.054** (0.041-0.070)	**0.061** (0.045-0.081)	**0.068** (0.047-0.092)	**0.080** (0.053-0.111)	**0.090** (0.058-0.126)
20-day	**0.016** (0.013-0.019)	**0.018** (0.015-0.022)	**0.022** (0.018-0.027)	**0.026** (0.020-0.031)	**0.030** (0.023-0.038)	**0.033** (0.025-0.043)	**0.037** (0.027-0.048)	**0.041** (0.028-0.054)	**0.046** (0.031-0.063)	**0.051** (0.033-0.071)
30-day	**0.013** (0.011-0.016)	**0.015** (0.012-0.018)	**0.018** (0.014-0.021)	**0.020** (0.016-0.024)	**0.023** (0.018-0.029)	**0.026** (0.019-0.032)	**0.028** (0.020-0.036)	**0.031** (0.021-0.041)	**0.034** (0.023-0.046)	**0.037** (0.024-0.051)
45-day	**0.011** (0.009-0.013)	**0.012** (0.010-0.015)	**0.014** (0.011-0.017)	**0.016** (0.013-0.019)	**0.018** (0.014-0.022)	**0.020** (0.015-0.025)	**0.021** (0.016-0.028)	**0.023** (0.016-0.031)	**0.025** (0.017-0.034)	**0.027** (0.018-0.037)
60-day	**0.009** (0.008-0.011)	**0.010** (0.009-0.012)	**0.012** (0.010-0.014)	**0.013** (0.011-0.016)	**0.015** (0.012-0.019)	**0.016** (0.012-0.021)	**0.018** (0.013-0.023)	**0.019** (0.013-0.025)	**0.021** (0.014-0.028)	**0.022** (0.014-0.030)

[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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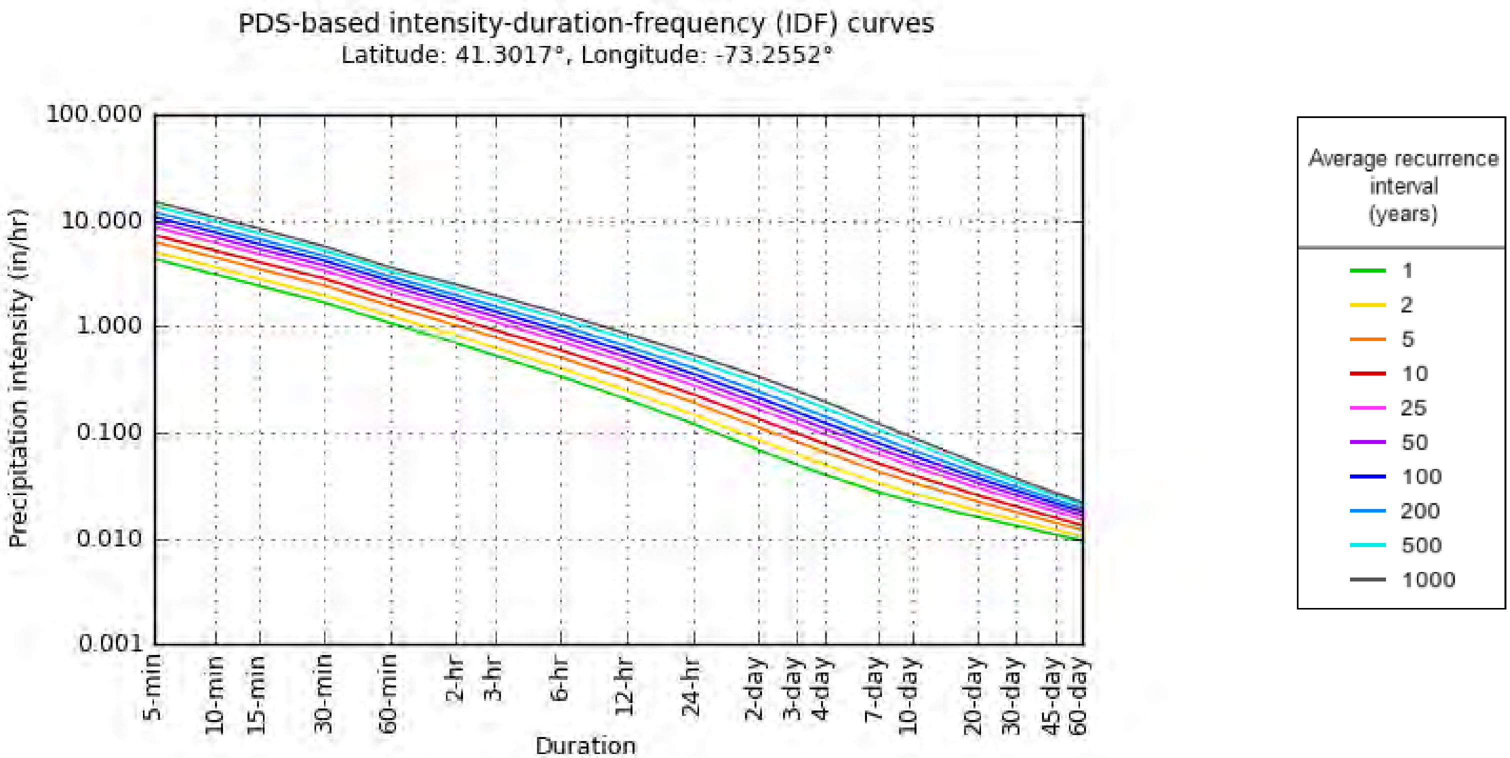
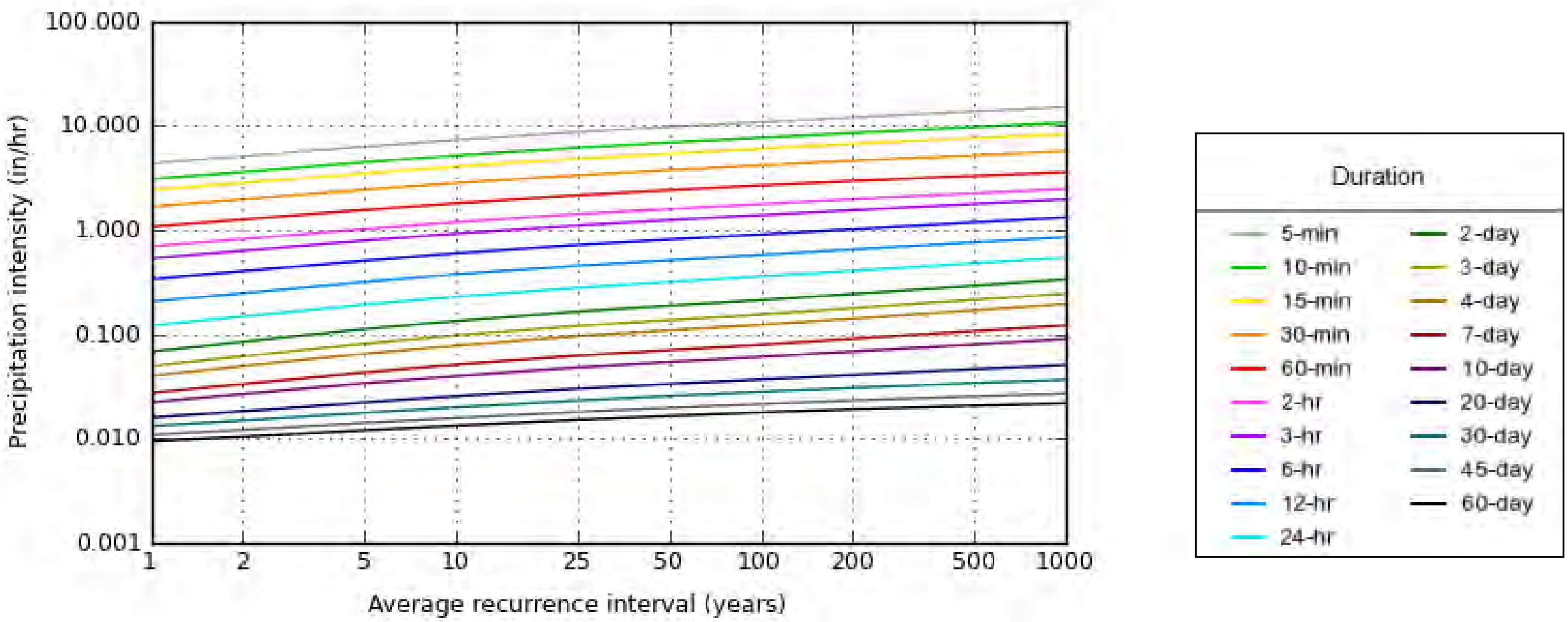
PF graphical





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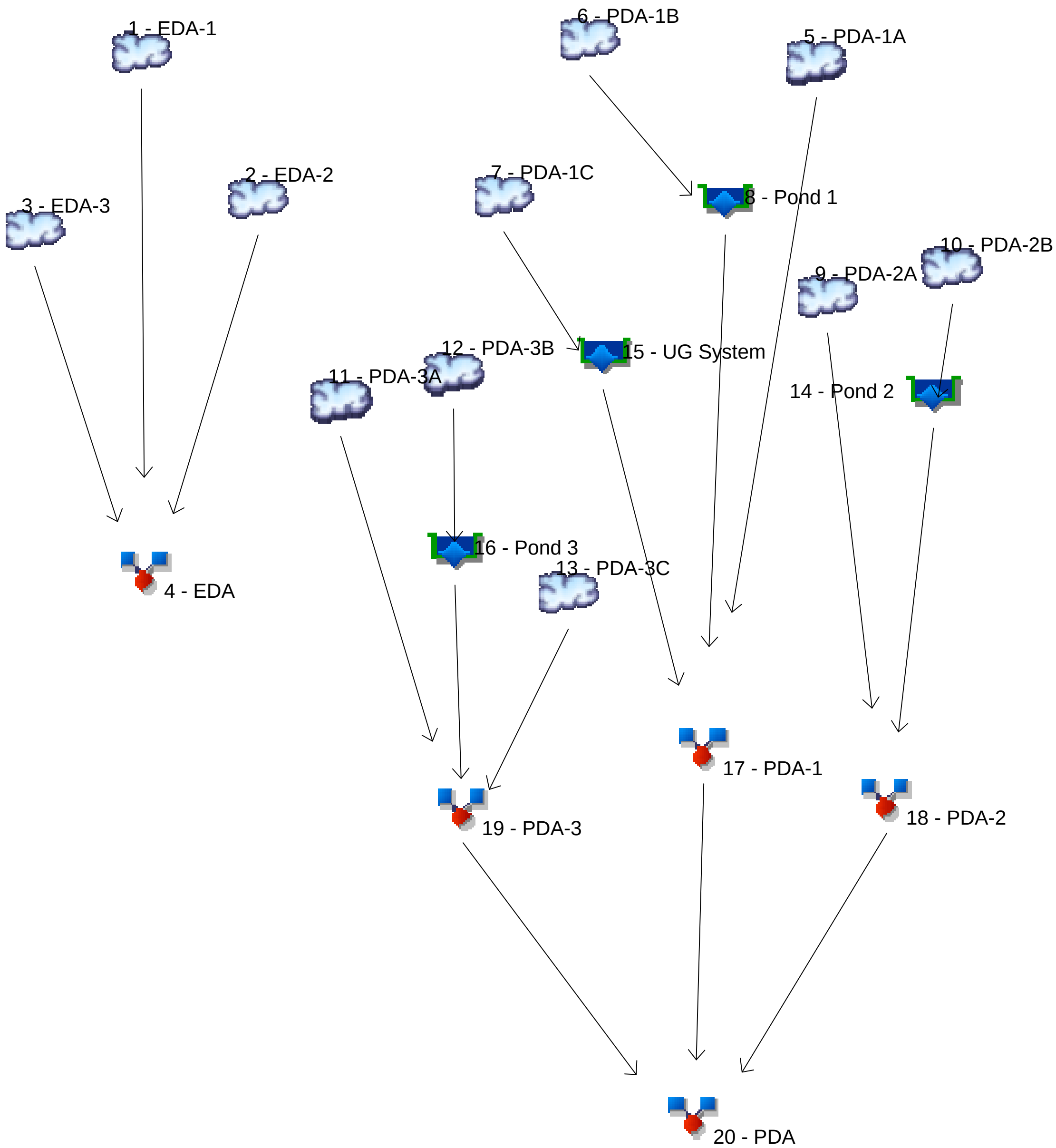
Maps & aerials

Small scale terrain

Watershed Model Schematic

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



Project: Hydrology.gpw	Monday, 01 / 9 / 2023

Hydrograph Return Period Recap

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	------	-------	3.956	-------	9.568	15.36	24.28	31.45	39.61	EDA-1
2	SCS Runoff	------	-------	5.804	-------	9.903	13.64	18.97	23.04	27.50	EDA-2
3	SCS Runoff	------	-------	1.012	-------	2.584	4.235	6.792	8.864	11.22	EDA-3
4	Combine	1, 2, 3	-------	9.236	-------	20.26	31.03	47.13	59.90	74.30	EDA
5	SCS Runoff	------	-------	2.447	-------	5.090	7.675	11.55	14.62	18.06	PDA-1A
6	SCS Runoff	------	-------	10.75	-------	16.28	21.06	27.67	32.61	37.94	PDA-1B
7	SCS Runoff	------	-------	5.041	-------	7.168	8.959	11.39	13.19	15.12	PDA-1C
8	Reservoir	6	-------	1.323	-------	4.839	7.348	9.818	12.26	20.64	Pond 1
9	SCS Runoff	------	-------	1.665	-------	2.998	4.234	6.029	7.420	8.951	PDA-2A
10	SCS Runoff	------	-------	4.829	-------	7.058	8.954	11.56	13.49	15.57	PDA-2B
11	SCS Runoff	------	-------	0.029	-------	0.079	0.131	0.210	0.274	0.347	PDA-3A
12	SCS Runoff	------	-------	2.728	-------	4.280	5.645	7.543	8.971	10.52	PDA-3B
13	SCS Runoff	------	-------	0.110	-------	0.286	0.471	0.756	0.986	1.248	PDA-3C
14	Reservoir	10	-------	3.845	-------	6.819	8.725	10.13	11.26	14.25	Pond 2
15	Reservoir	7	-------	0.467	-------	0.560	0.963	2.106	2.797	3.400	UG System
16	Reservoir	12	-------	0.785	-------	0.989	1.121	3.725	6.143	8.548	Pond 3
17	Combine	5, 8, 15,	-------	3.727	-------	8.791	14.03	21.15	26.32	37.93	PDA-1
18	Combine	9, 14,	-------	5.096	-------	8.820	11.62	15.13	17.41	21.18	PDA-2
19	Combine	11, 13, 16,	-------	0.870	-------	1.204	1.507	4.256	7.011	9.791	PDA-3
20	Combine	17, 18, 19	-------	8.335	-------	14.44	22.42	34.48	45.67	58.73	PDA

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	3.956	1	742	25,008	------	------	------	EDA-1
2	SCS Runoff	5.804	1	729	22,251	------	------	------	EDA-2
3	SCS Runoff	1.012	1	741	6,519	------	------	------	EDA-3
4	Combine	9.236	1	733	53,777	1, 2, 3	------	------	EDA
5	SCS Runoff	2.447	1	742	14,129	------	------	------	PDA-1A
6	SCS Runoff	10.75	1	734	47,586	------	------	------	PDA-1B
7	SCS Runoff	5.041	1	730	19,971	------	------	------	PDA-1C
8	Reservoir	1.323	1	810	47,575	6	353.74	23,523	Pond 1
9	SCS Runoff	1.665	1	737	8,346	------	------	------	PDA-2A
10	SCS Runoff	4.829	1	725	14,883	------	------	------	PDA-2B
11	SCS Runoff	0.029	1	728	152	------	------	------	PDA-3A
12	SCS Runoff	2.728	1	731	10,923	------	------	------	PDA-3B
13	SCS Runoff	0.110	1	737	675	------	------	------	PDA-3C
14	Reservoir	3.845	1	728	14,881	10	334.26	2,980	Pond 2
15	Reservoir	0.467	1	819	17,825	7	359.40	10,872	UG System
16	Reservoir	0.785	1	757	10,916	12	363.79	3,535	Pond 3
17	Combine	3.727	1	743	79,529	5, 8, 15,	------	------	PDA-1
18	Combine	5.096	1	729	23,227	9, 14,	------	------	PDA-2
19	Combine	0.870	1	748	11,743	11, 13, 16,	------	------	PDA-3
20	Combine	8.335	1	731	114,499	17, 18, 19	------	------	PDA

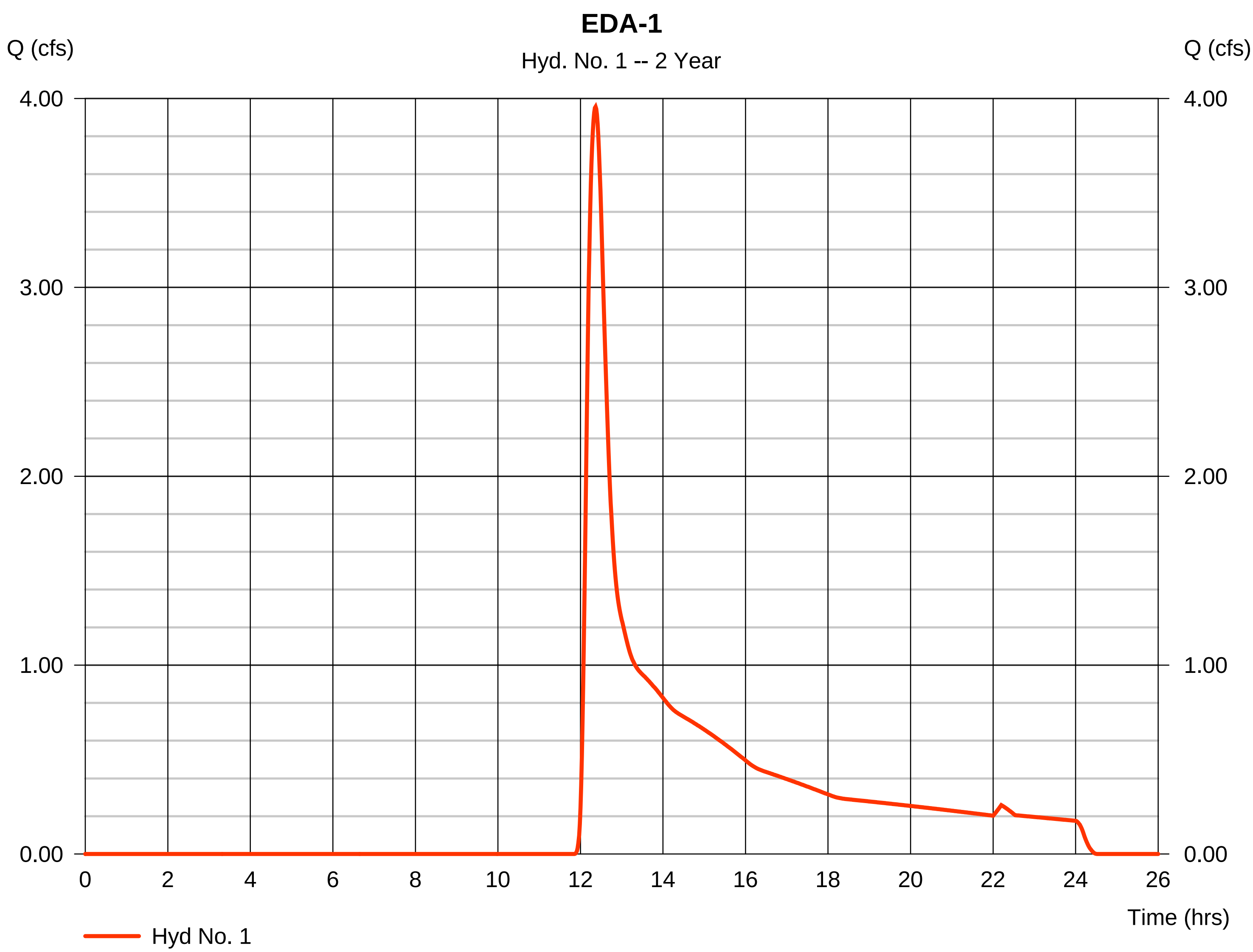
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 3.956 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.37 hrs
Time interval	= 1 min	Hyd. volume	= 25,008 cuft
Drainage area	= 13.340 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.20 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



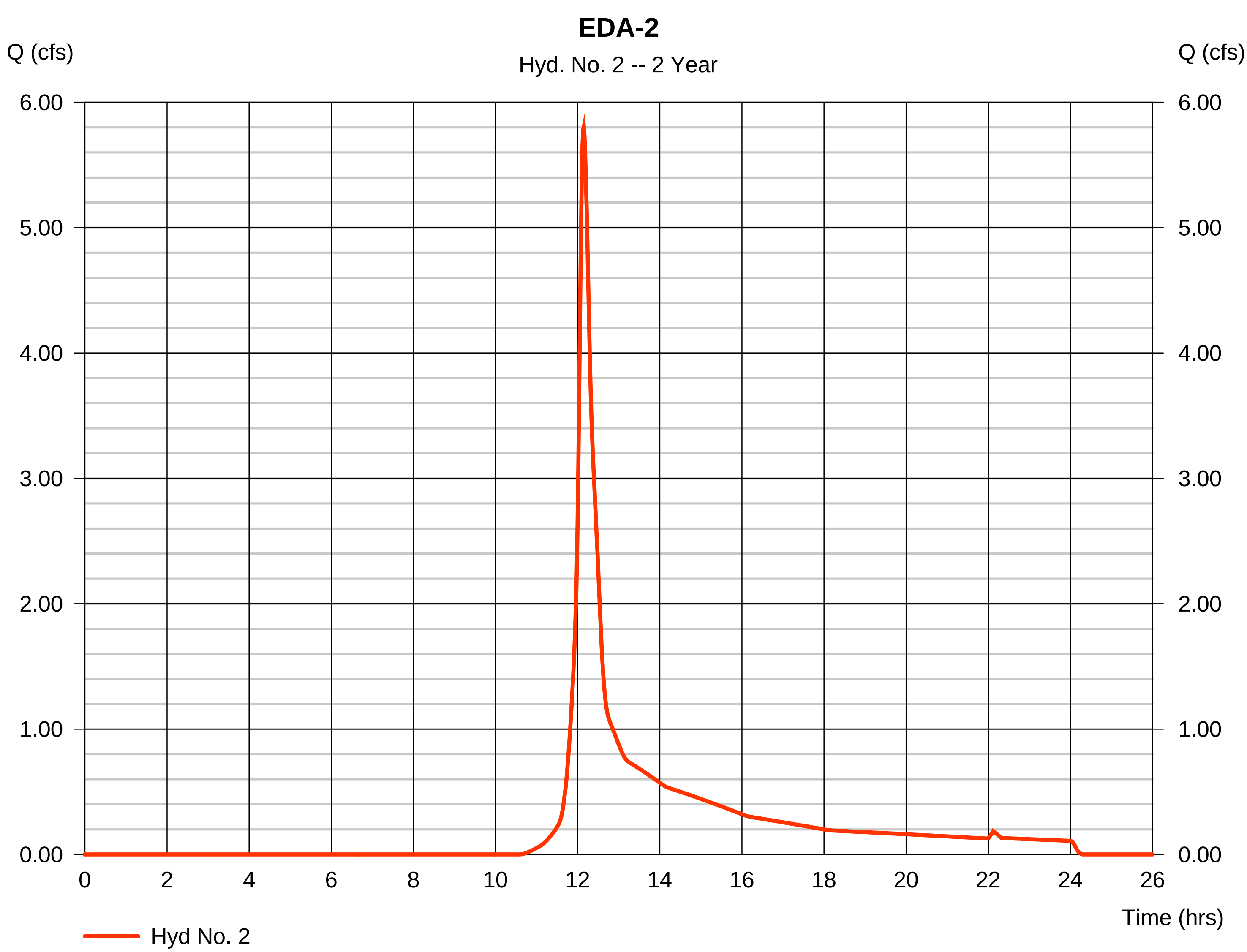
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 5.804 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.15 hrs
Time interval	= 1 min	Hyd. volume	= 22,251 cuft
Drainage area	= 5.190 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.10 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



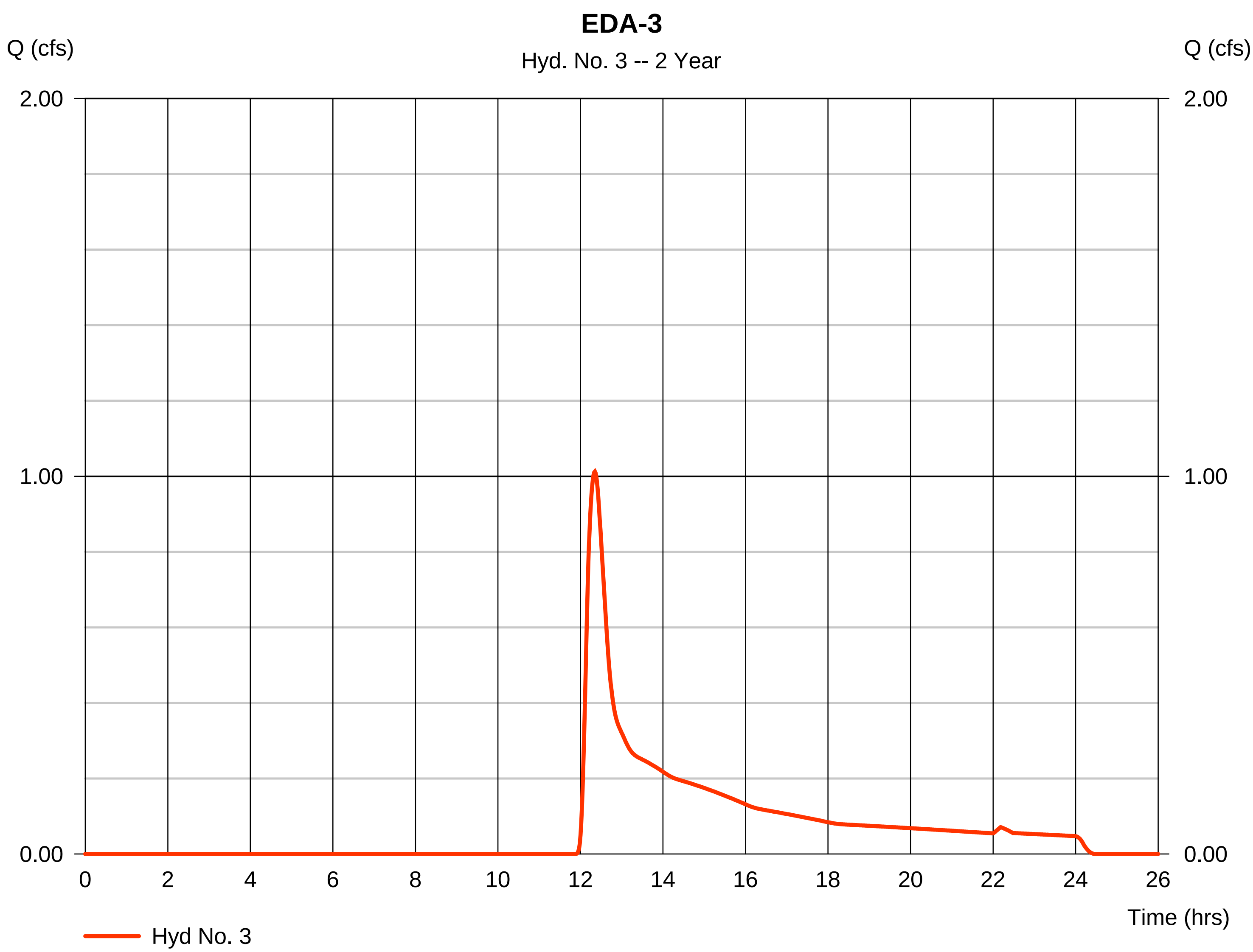
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 3

EDA-3

Hydrograph type	= SCS Runoff	Peak discharge	= 1.012 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.35 hrs
Time interval	= 1 min	Hyd. volume	= 6,519 cuft
Drainage area	= 3.810 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.20 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

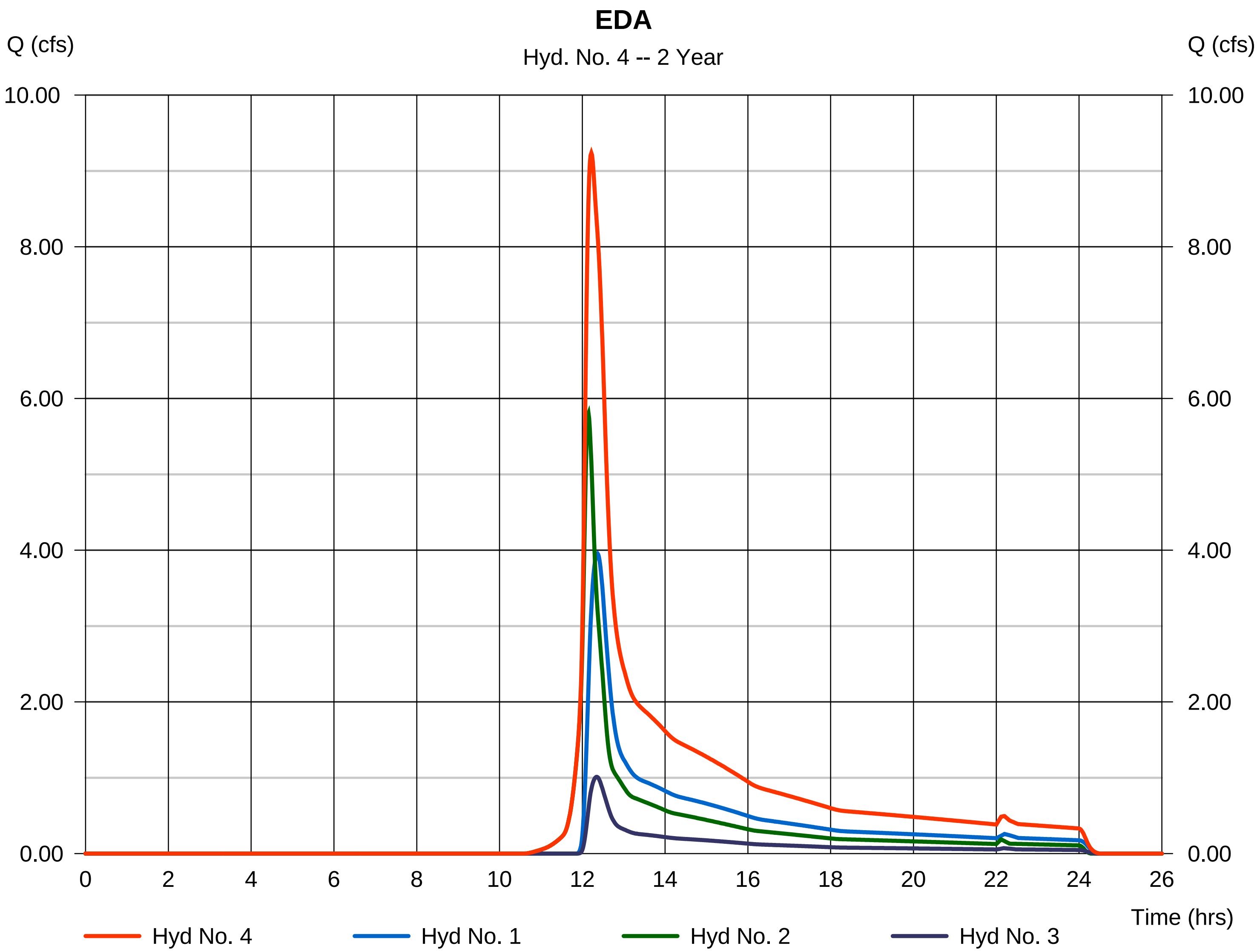


Hydrograph Report

Hyd. No. 4

EDA

Hydrograph type	= Combine	Peak discharge	= 9.236 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 53,777 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 22.340 ac



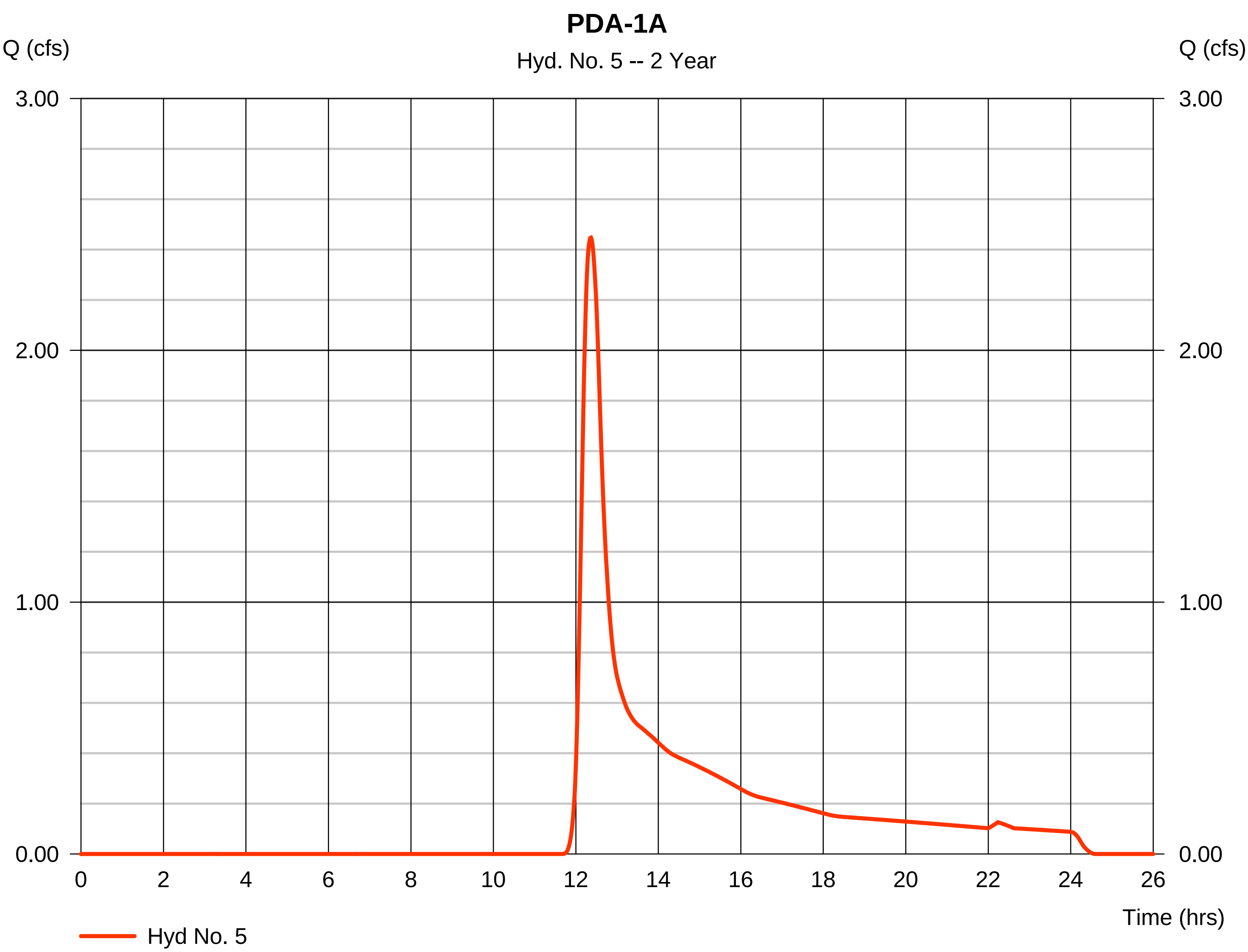
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 5

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.447 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.37 hrs
Time interval	= 1 min	Hyd. volume	= 14,129 cuft
Drainage area	= 5.700 ac	Curve number	= 63
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.20 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

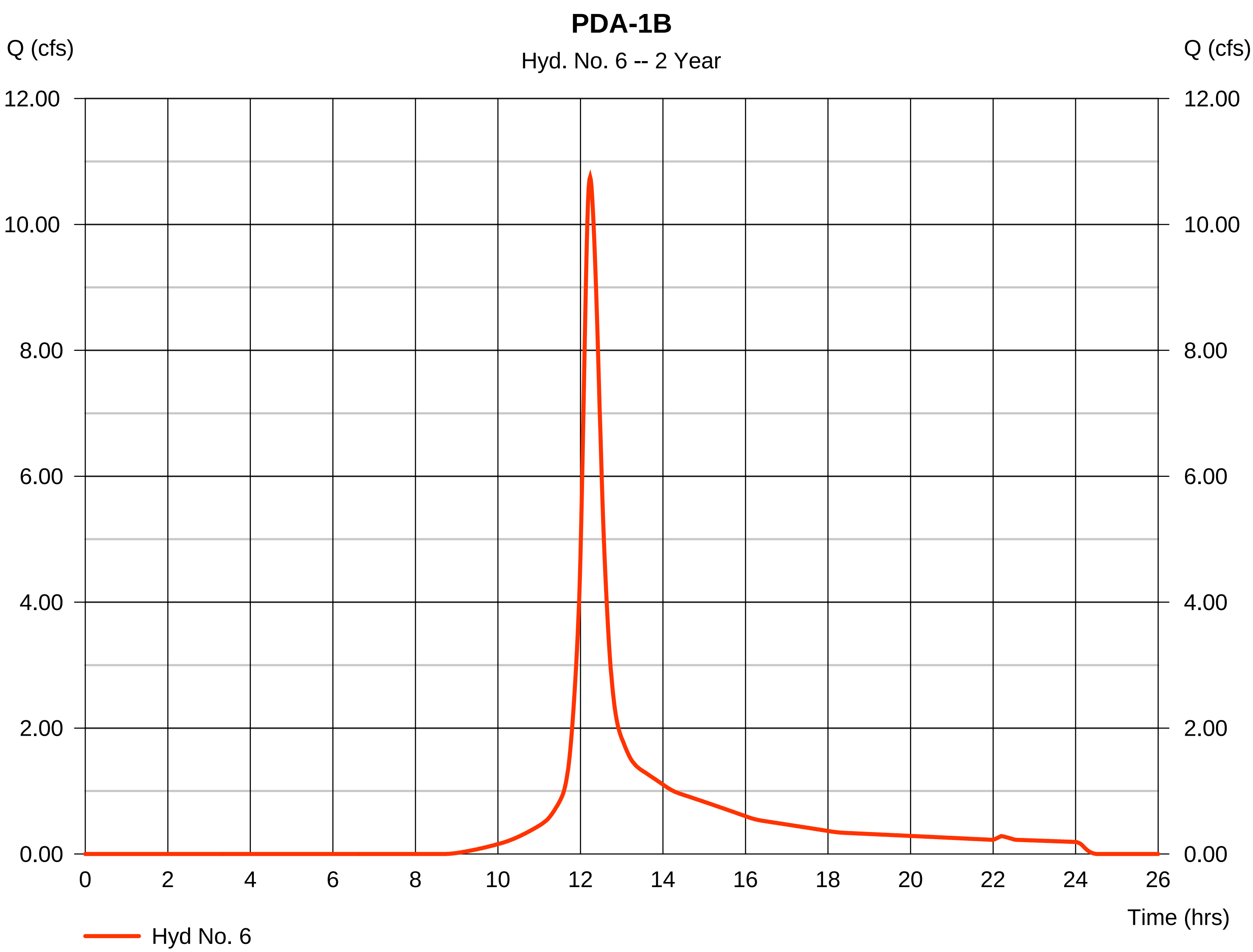


Hydrograph Report

Hyd. No. 6

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 10.75 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.23 hrs
Time interval	= 1 min	Hyd. volume	= 47,586 cuft
Drainage area	= 7.460 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.10 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

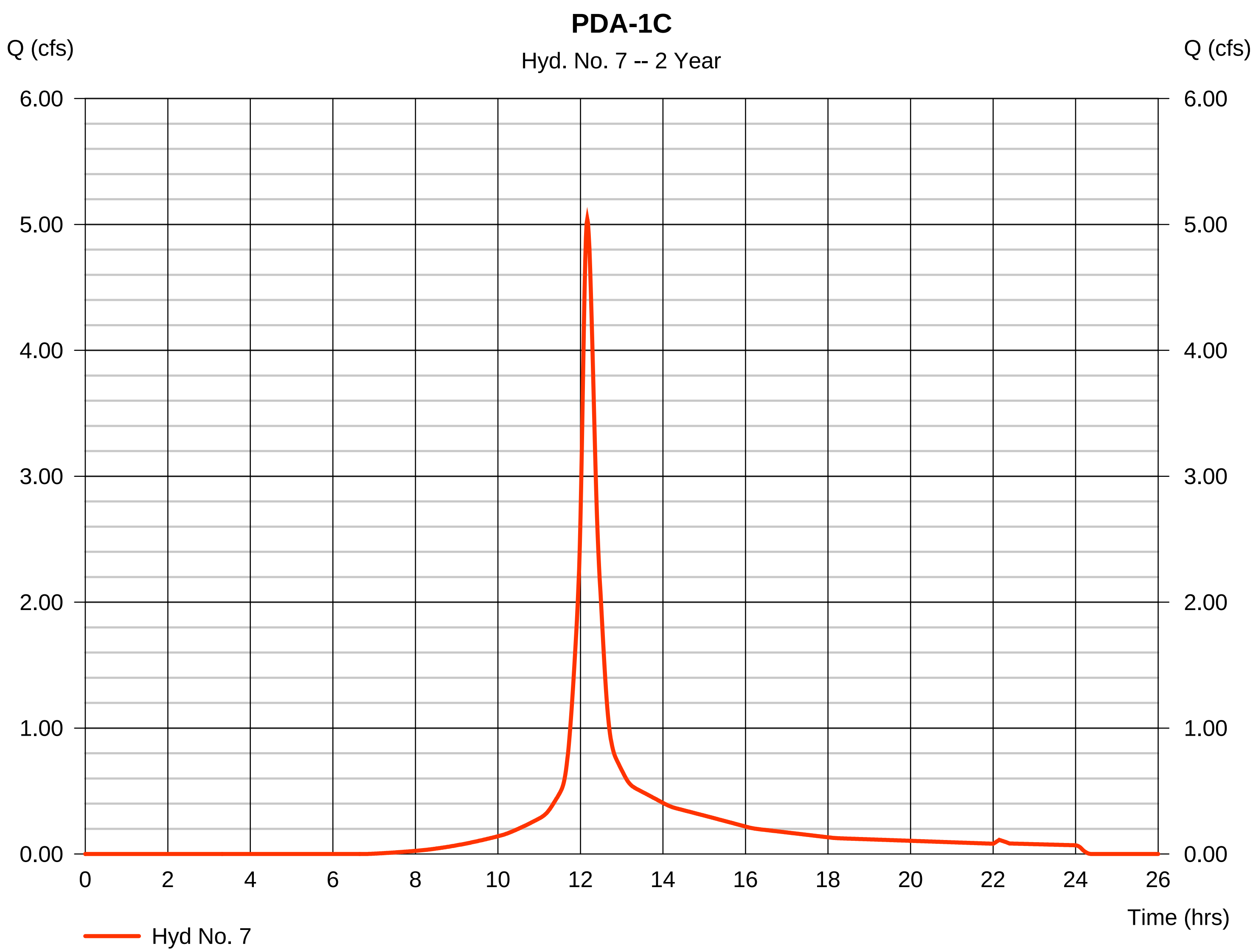


Hydrograph Report

Hyd. No. 7

PDA-1C

Hydrograph type	= SCS Runoff	Peak discharge	= 5.041 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 19,971 cuft
Drainage area	= 2.460 ac	Curve number	= 87
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.90 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

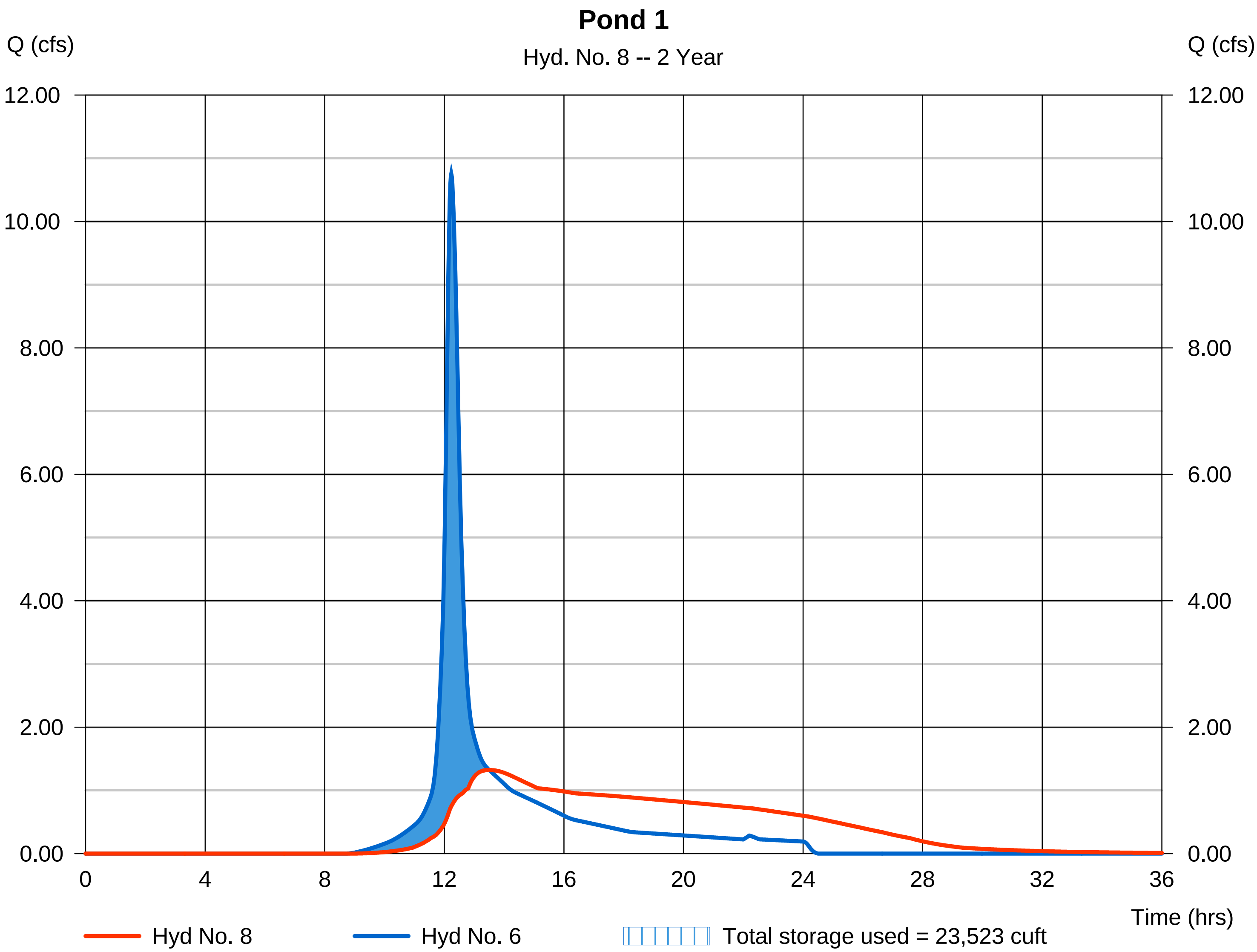
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 1.323 cfs
Storm frequency	= 2 yrs	Time to peak	= 13.50 hrs
Time interval	= 1 min	Hyd. volume	= 47,575 cuft
Inflow hyd. No.	= 6 - PDA-1B	Max. Elevation	= 353.74 ft
Reservoir name	= Basin 1	Max. Storage	= 23,523 cuft

Storage Indication method used.



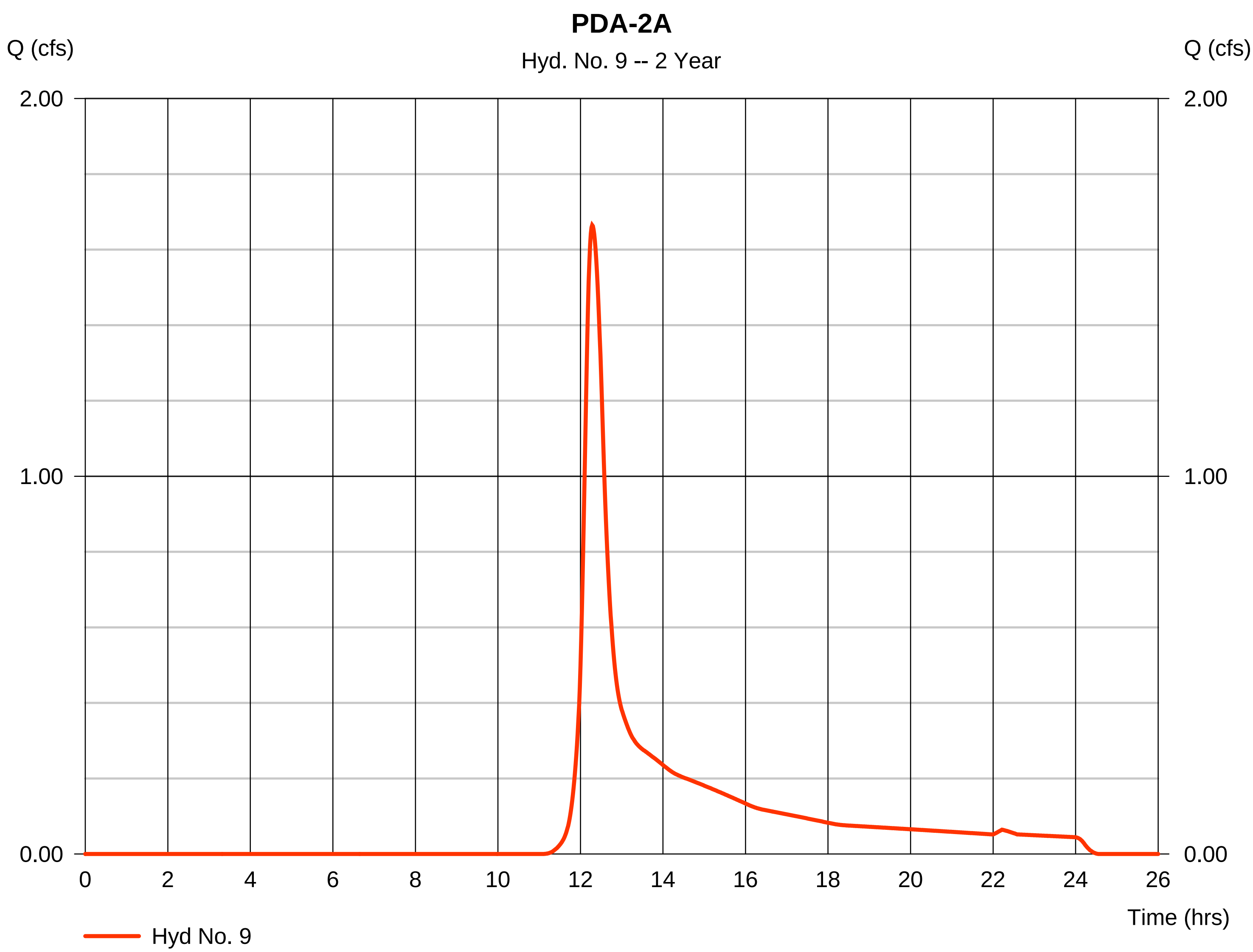
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 9

PDA-2A

Hydrograph type	= SCS Runoff	Peak discharge	= 1.665 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 8,346 cuft
Drainage area	= 2.300 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.70 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

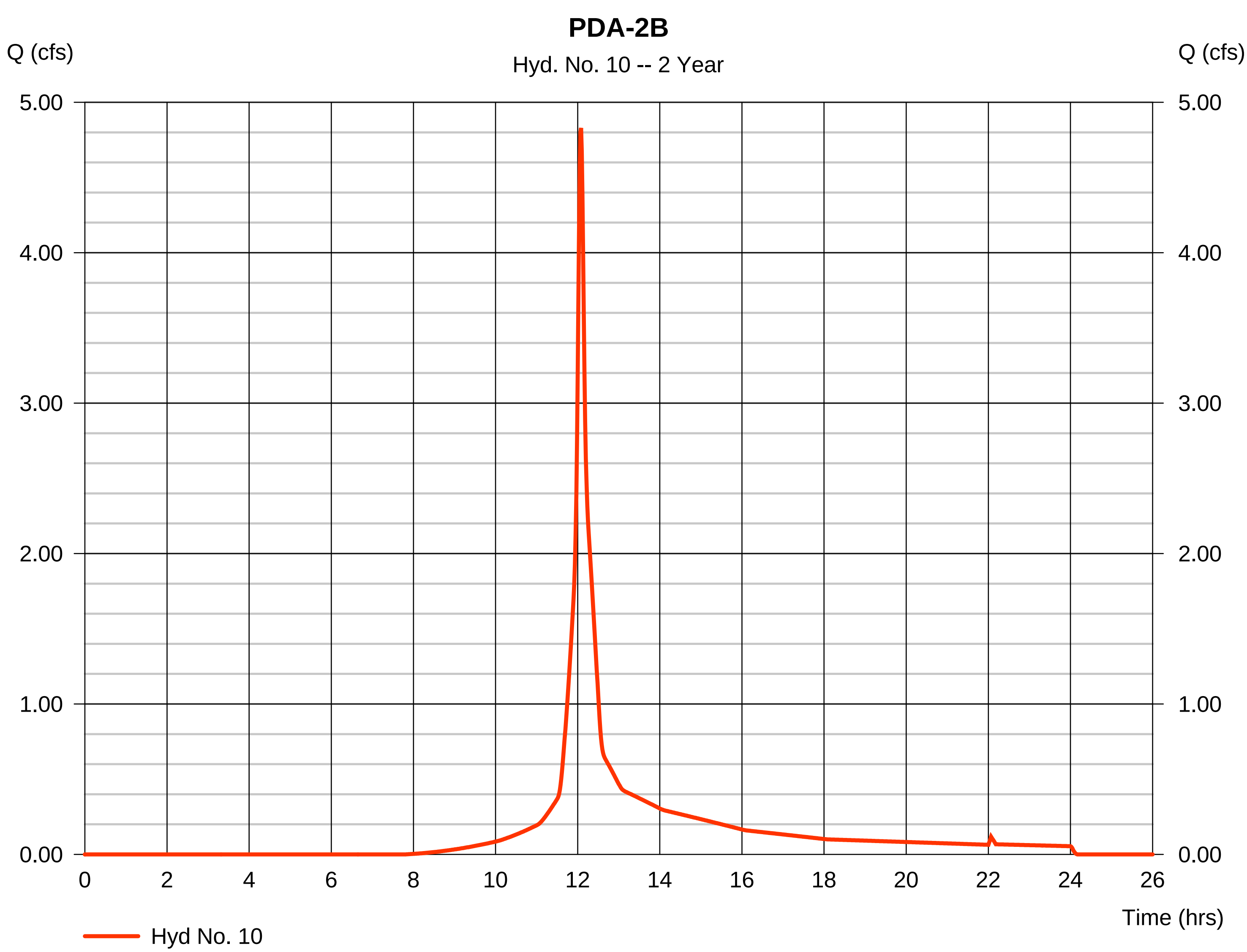


Hydrograph Report

Hyd. No. 10

PDA-2B

Hydrograph type	= SCS Runoff	Peak discharge	= 4.829 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.08 hrs
Time interval	= 1 min	Hyd. volume	= 14,883 cuft
Drainage area	= 2.000 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

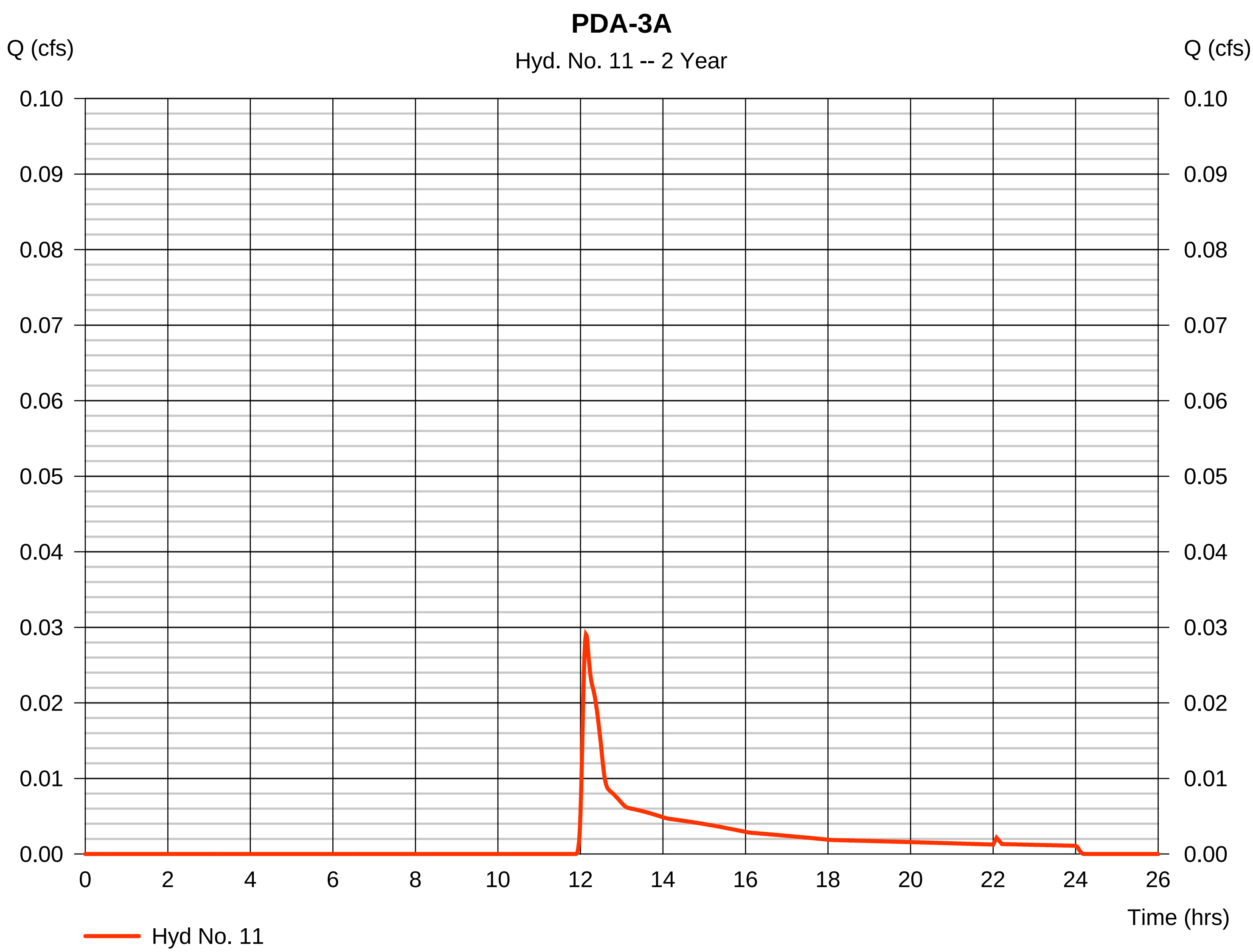


Hydrograph Report

Hyd. No. 11

PDA-3A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.029 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 152 cuft
Drainage area	= 0.090 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.90 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



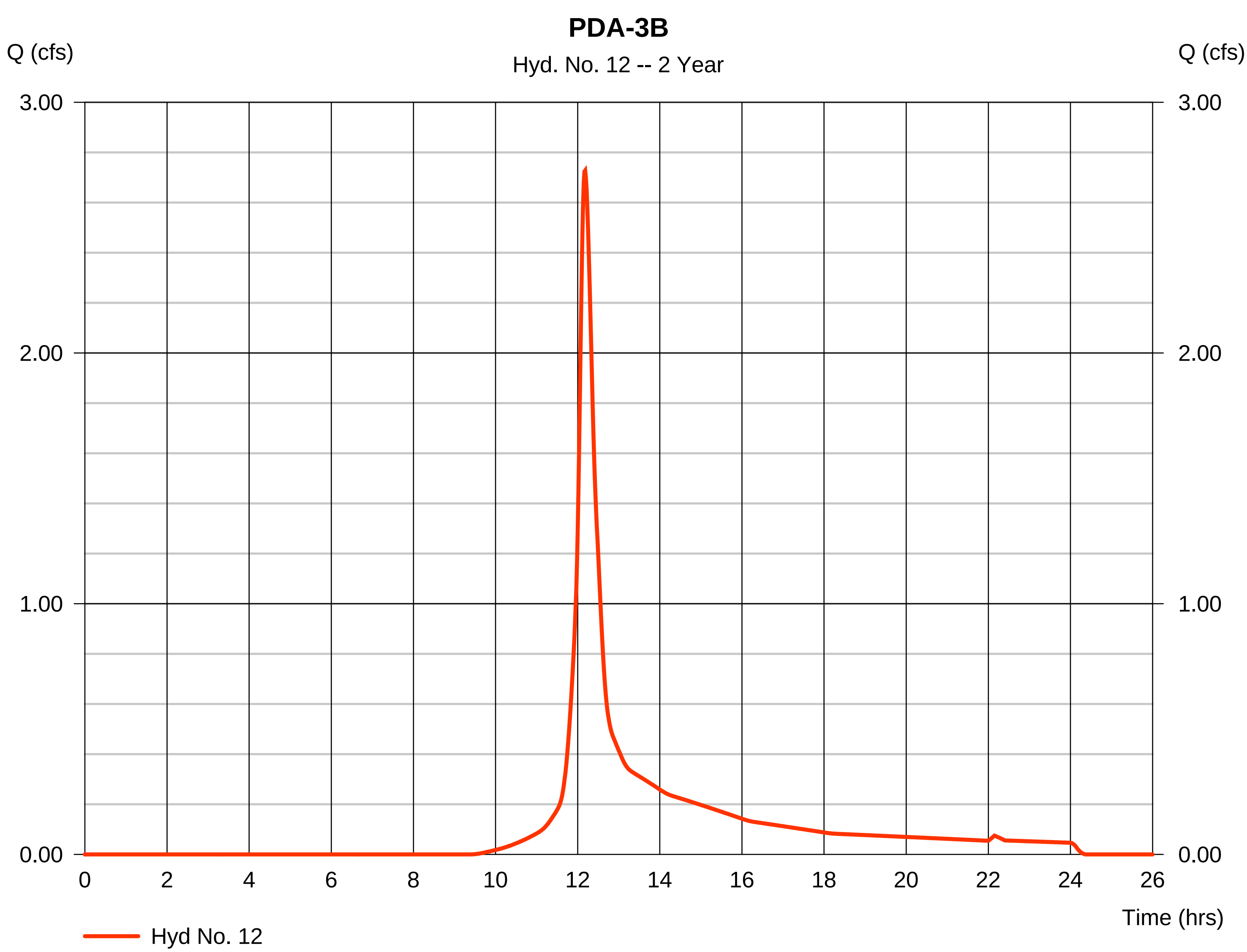
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 12

PDA-3B

Hydrograph type	= SCS Runoff	Peak discharge	= 2.728 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 10,923 cuft
Drainage area	= 1.950 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.70 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

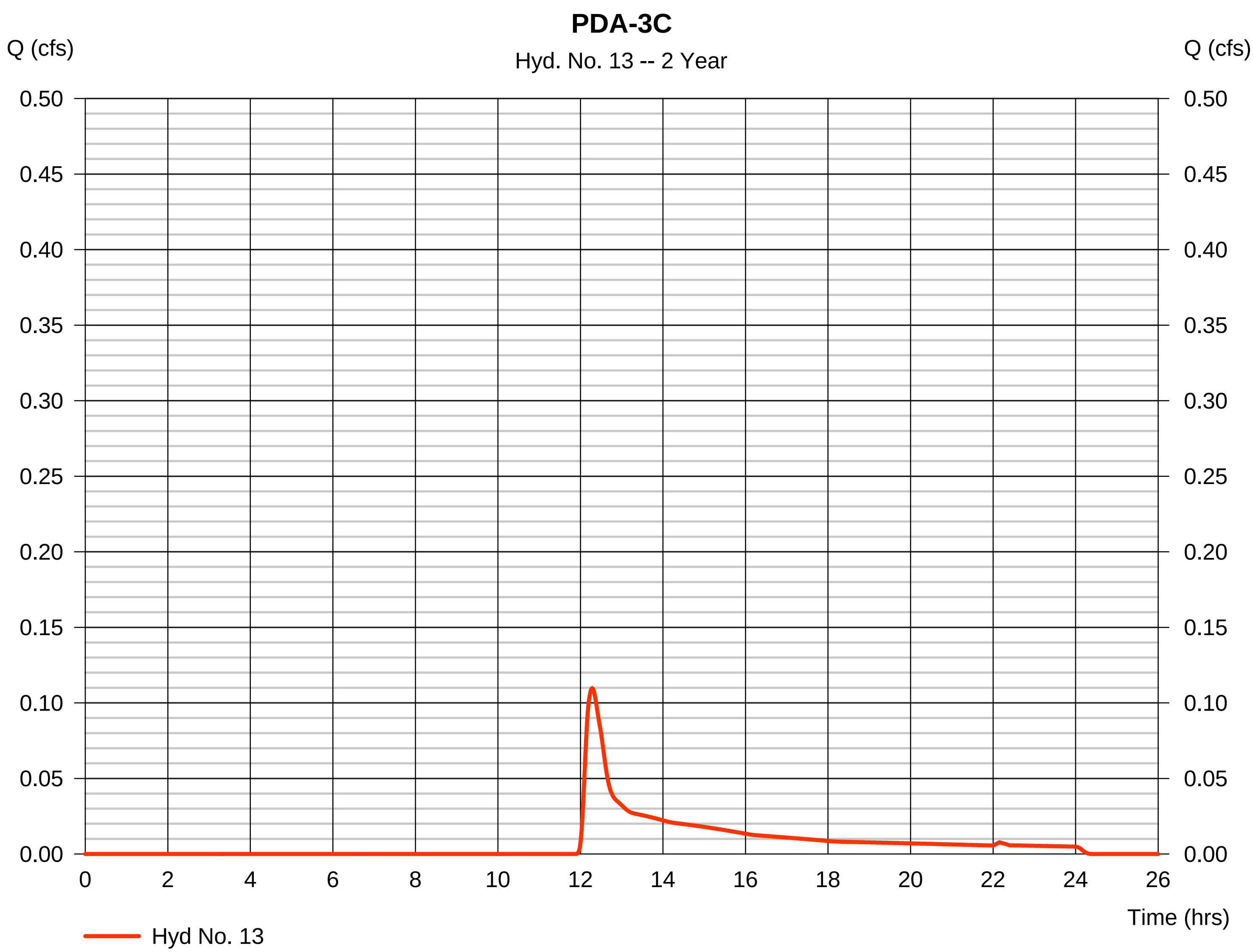


Hydrograph Report

Hyd. No. 13

PDA-3C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.110 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 675 cuft
Drainage area	= 0.390 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.80 min
Total precip.	= 3.56 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

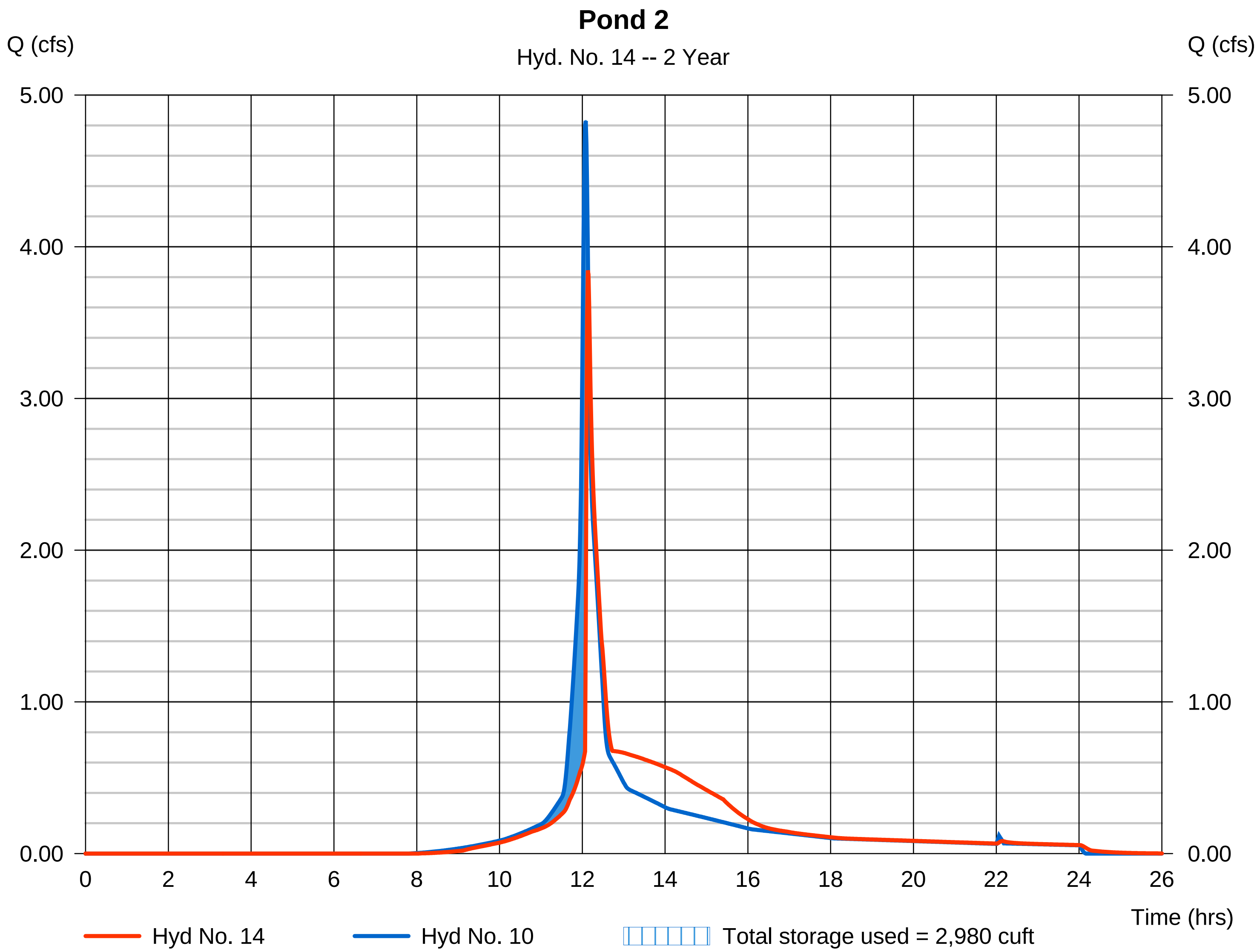
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 3.845 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 14,881 cuft
Inflow hyd. No.	= 10 - PDA-2B	Max. Elevation	= 334.26 ft
Reservoir name	= Basin 2	Max. Storage	= 2,980 cuft

Storage Indication method used.



Hydrograph Report

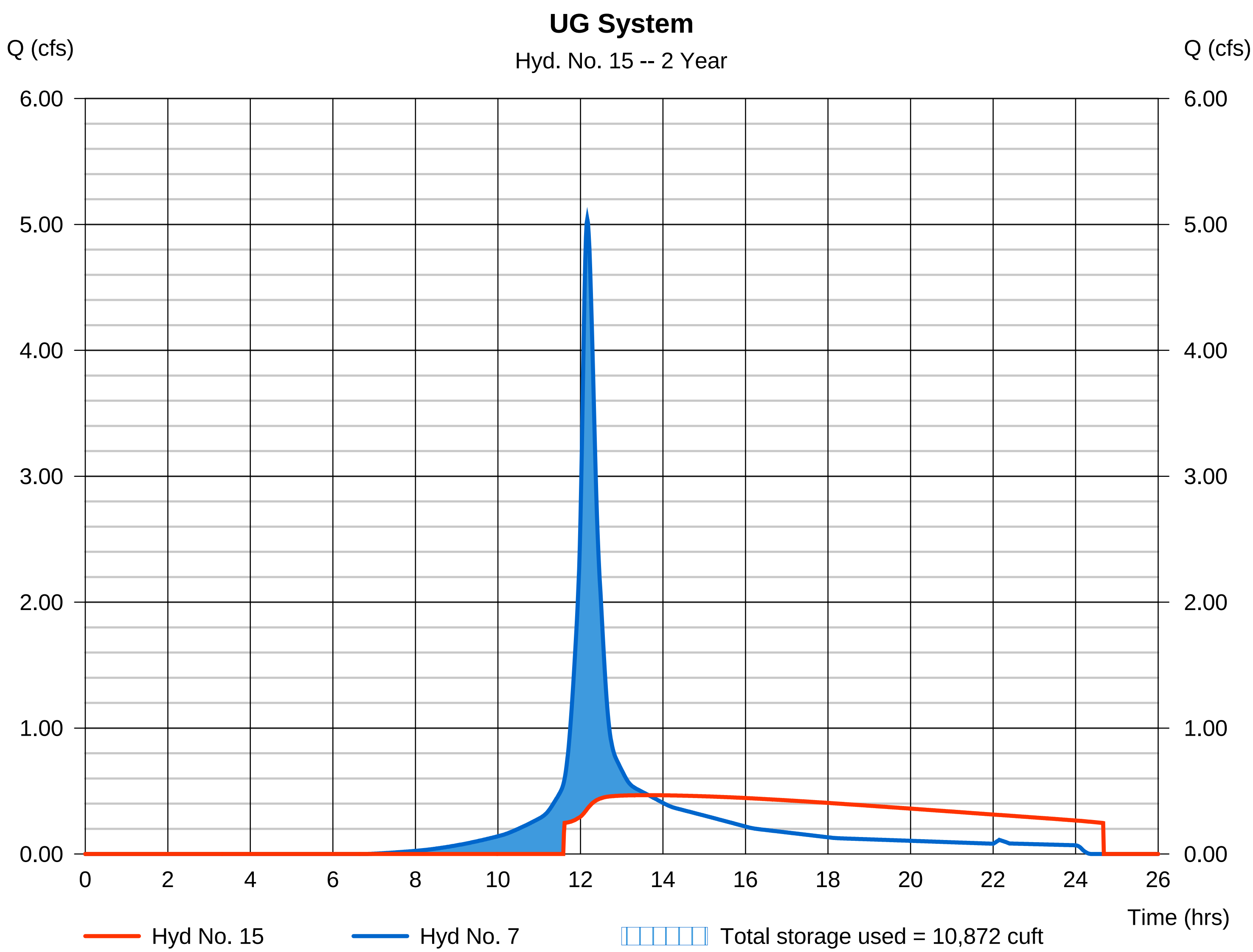
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 0.467 cfs
Storm frequency	= 2 yrs	Time to peak	= 13.65 hrs
Time interval	= 1 min	Hyd. volume	= 17,825 cuft
Inflow hyd. No.	= 7 - PDA-1C	Max. Elevation	= 359.40 ft
Reservoir name	= Undergroud Detention	Max. Storage	= 10,872 cuft

Storage Indication method used.



Hydrograph Report

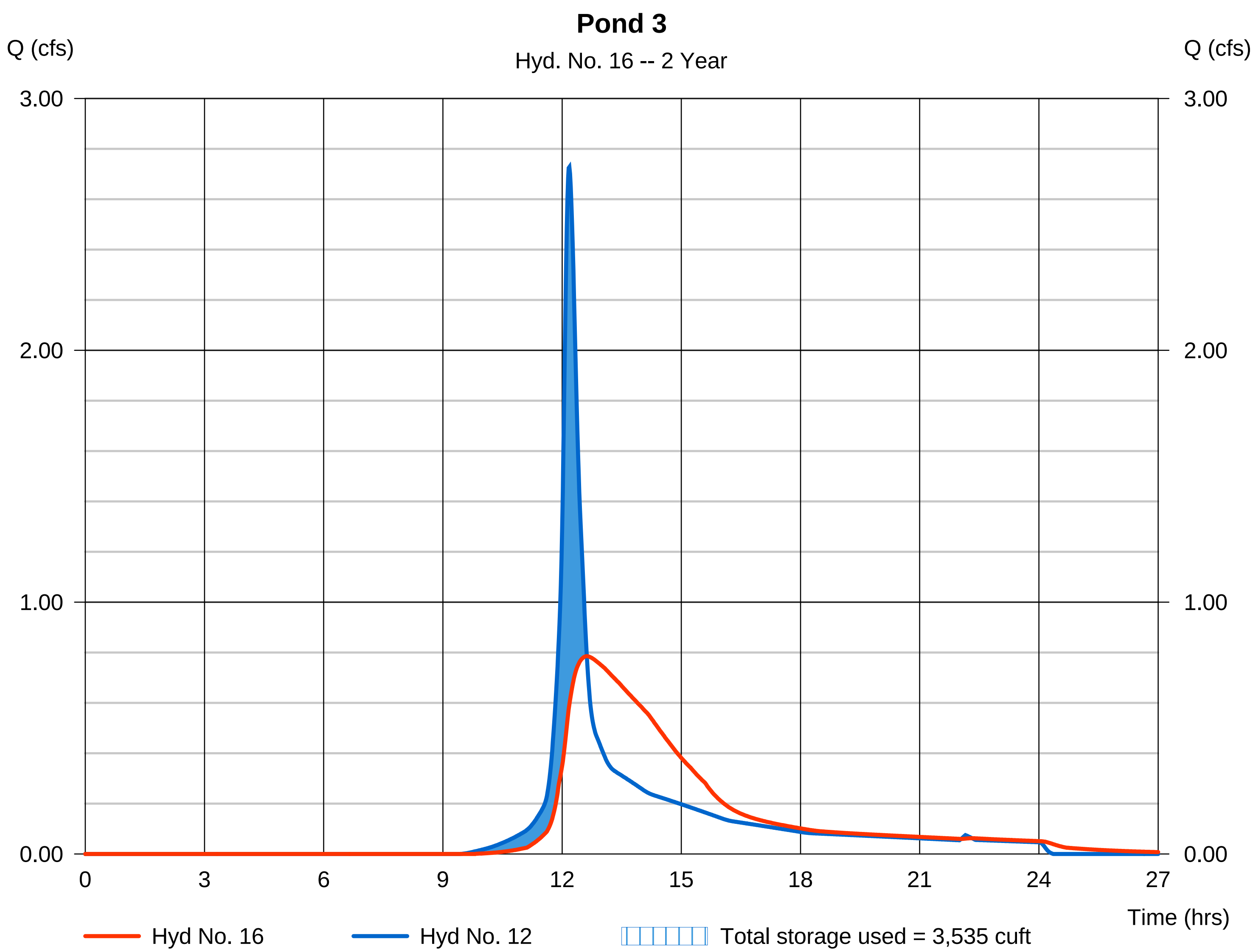
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 0.785 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.62 hrs
Time interval	= 1 min	Hyd. volume	= 10,916 cuft
Inflow hyd. No.	= 12 - PDA-3B	Max. Elevation	= 363.79 ft
Reservoir name	= Basin 3	Max. Storage	= 3,535 cuft

Storage Indication method used.



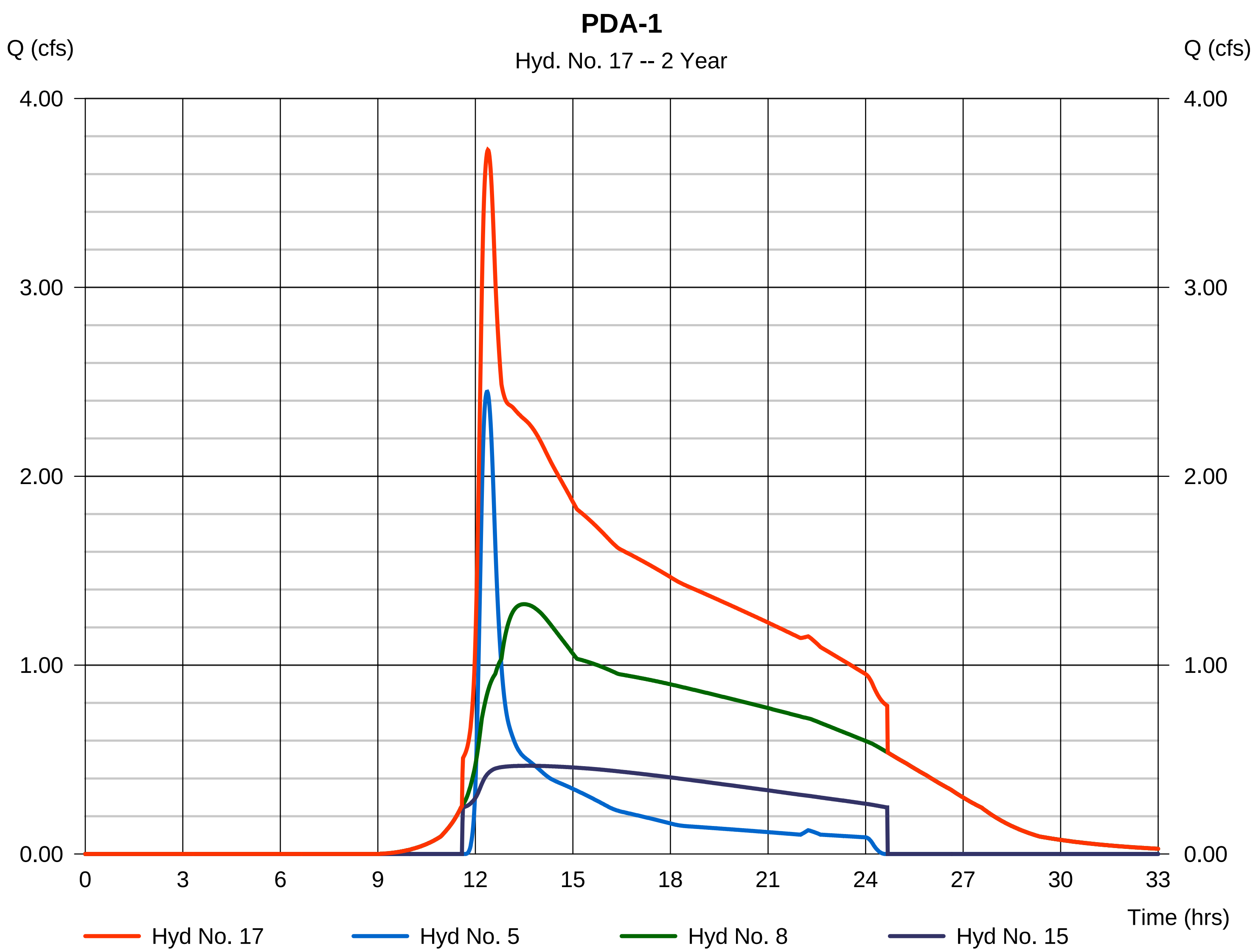
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 17

PDA-1

Hydrograph type	= Combine	Peak discharge	= 3.727 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.38 hrs
Time interval	= 1 min	Hyd. volume	= 79,529 cuft
Inflow hyds.	= 5, 8, 15	Contrib. drain. area	= 5.700 ac



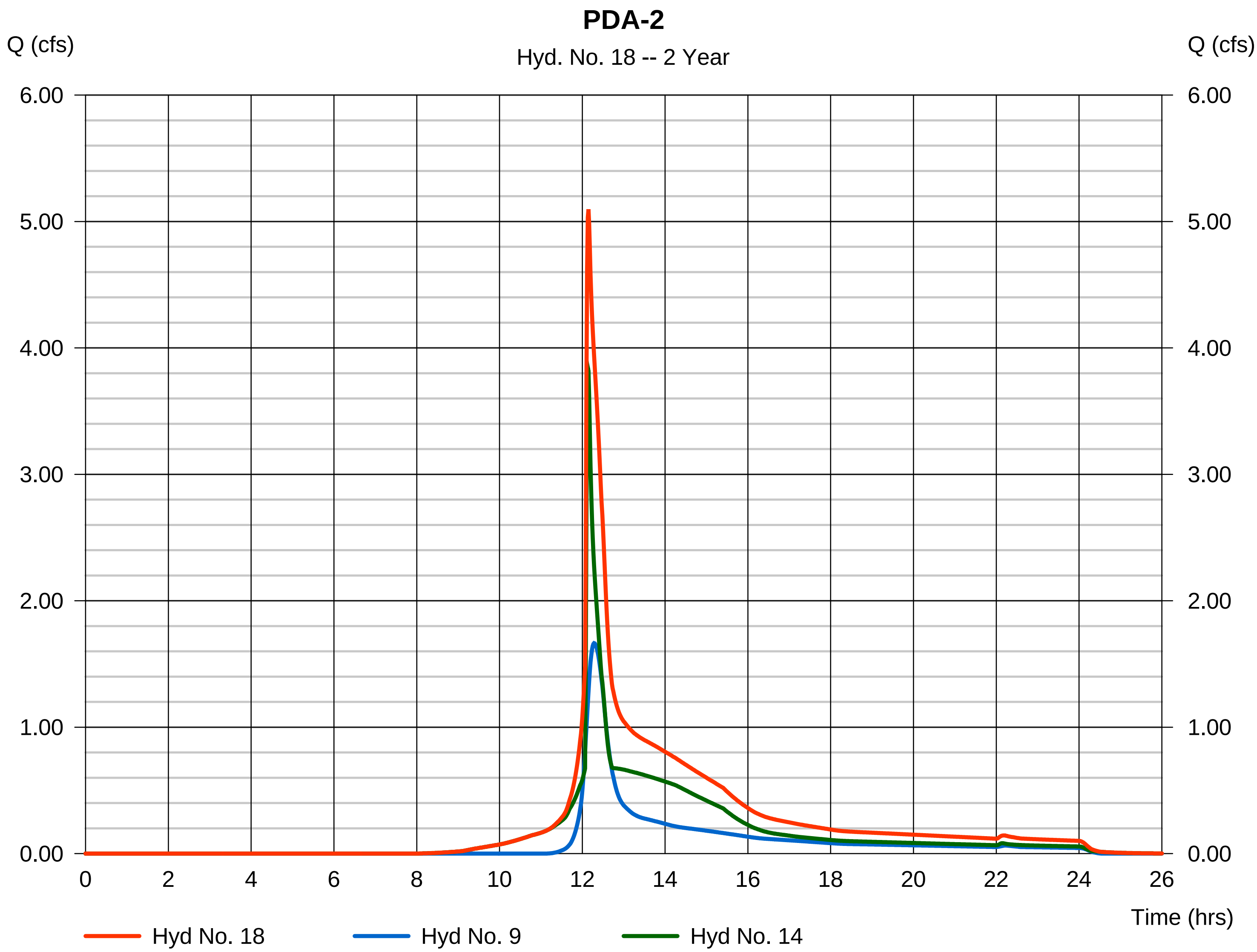
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 18

PDA-2

Hydrograph type	= Combine	Peak discharge	= 5.096 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.15 hrs
Time interval	= 1 min	Hyd. volume	= 23,227 cuft
Inflow hyds.	= 9, 14	Contrib. drain. area	= 2.300 ac



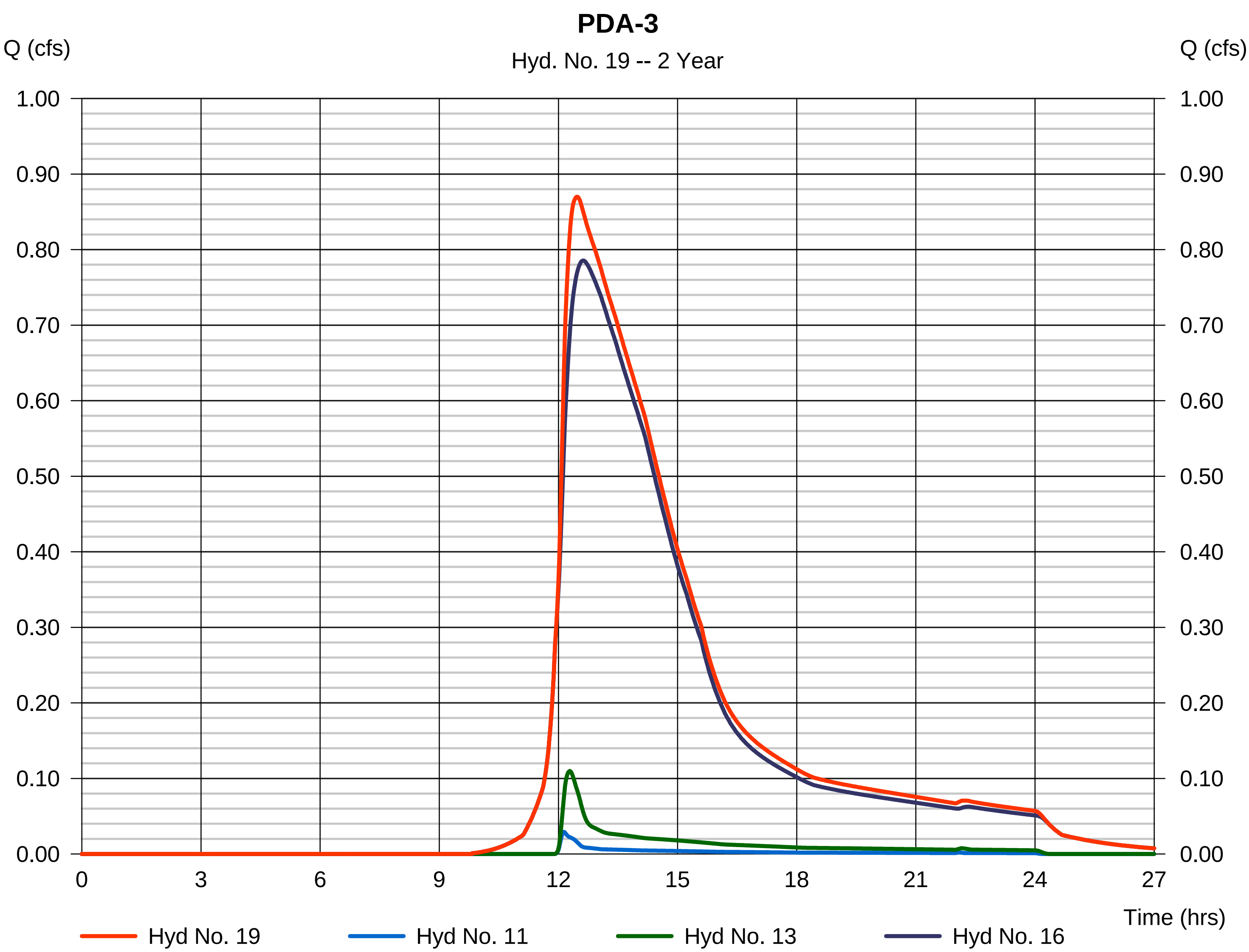
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 0.870 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.47 hrs
Time interval	= 1 min	Hyd. volume	= 11,743 cuft
Inflow hyds.	= 11, 13, 16	Contrib. drain. area	= 0.480 ac



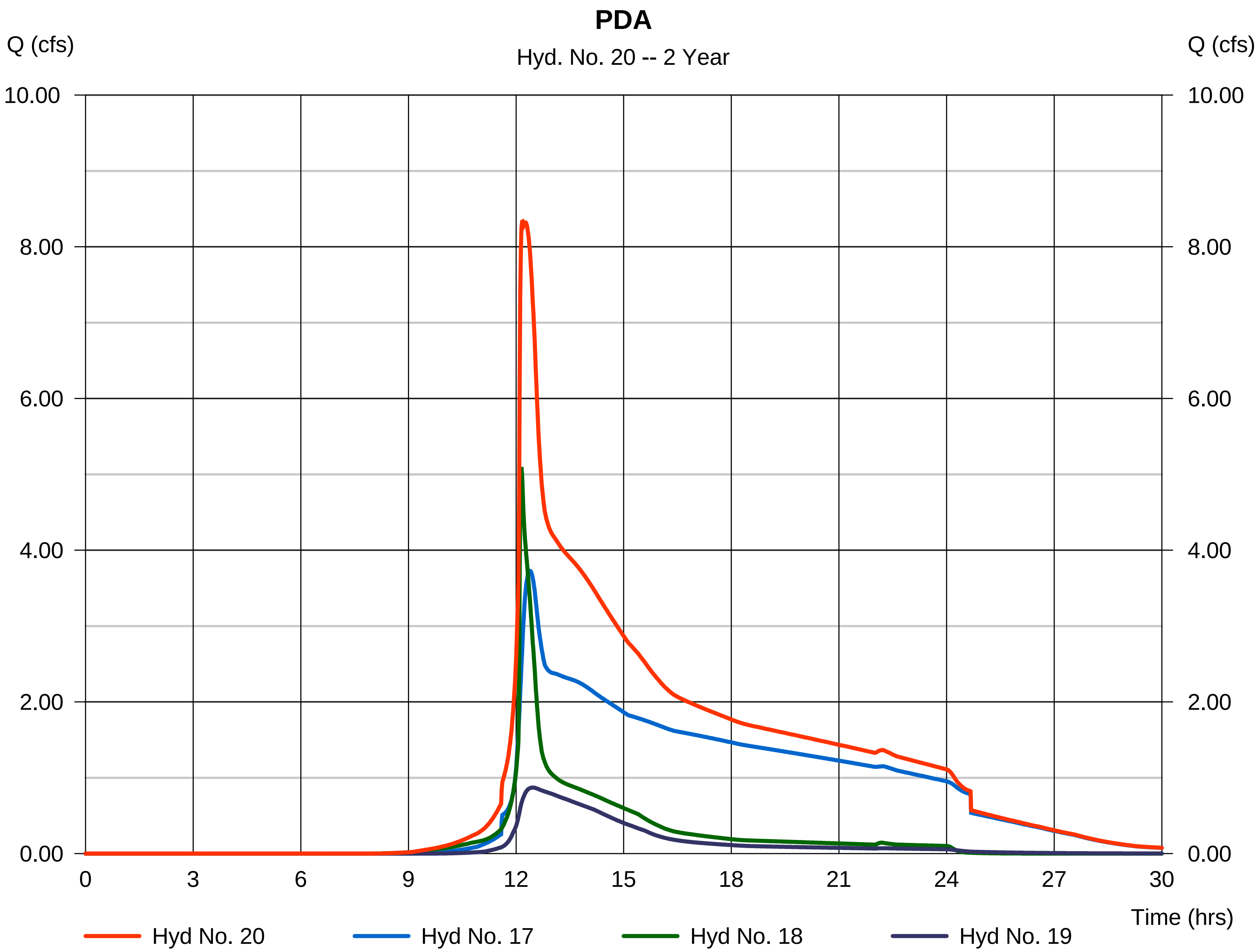
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 20

PDA

Hydrograph type	= Combine	Peak discharge	= 8.335 cfs
Storm frequency	= 2 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 114,499 cuft
Inflow hyds.	= 17, 18, 19	Contrib. drain. area	= 0.000 ac



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	9.568	1	737	49,636	------	------	------	EDA-1
2	SCS Runoff	9.903	1	728	36,617	------	------	------	EDA-2
3	SCS Runoff	2.584	1	736	13,209	------	------	------	EDA-3
4	Combine	20.26	1	732	99,462	1, 2, 3	------	------	EDA
5	SCS Runoff	5.090	1	738	26,123	------	------	------	PDA-1A
6	SCS Runoff	16.28	1	734	71,819	------	------	------	PDA-1B
7	SCS Runoff	7.168	1	730	28,672	------	------	------	PDA-1C
8	Reservoir	4.839	1	761	71,808	6	354.53	31,161	Pond 1
9	SCS Runoff	2.998	1	736	14,212	------	------	------	PDA-2A
10	SCS Runoff	7.058	1	725	21,898	------	------	------	PDA-2B
11	SCS Runoff	0.079	1	727	308	------	------	------	PDA-3A
12	SCS Runoff	4.280	1	730	16,934	------	------	------	PDA-3B
13	SCS Runoff	0.286	1	733	1,368	------	------	------	PDA-3C
14	Reservoir	6.819	1	726	21,896	10	334.41	3,237	Pond 2
15	Reservoir	0.560	1	838	26,528	7	359.95	16,144	UG System
16	Reservoir	0.989	1	760	16,927	12	364.67	6,045	Pond 3
17	Combine	8.791	1	750	124,460	5, 8, 15,	------	------	PDA-1
18	Combine	8.820	1	727	36,107	9, 14,	------	------	PDA-2
19	Combine	1.204	1	739	18,602	11, 13, 16,	------	------	PDA-3
20	Combine	14.44	1	744	179,169	17, 18, 19	------	------	PDA

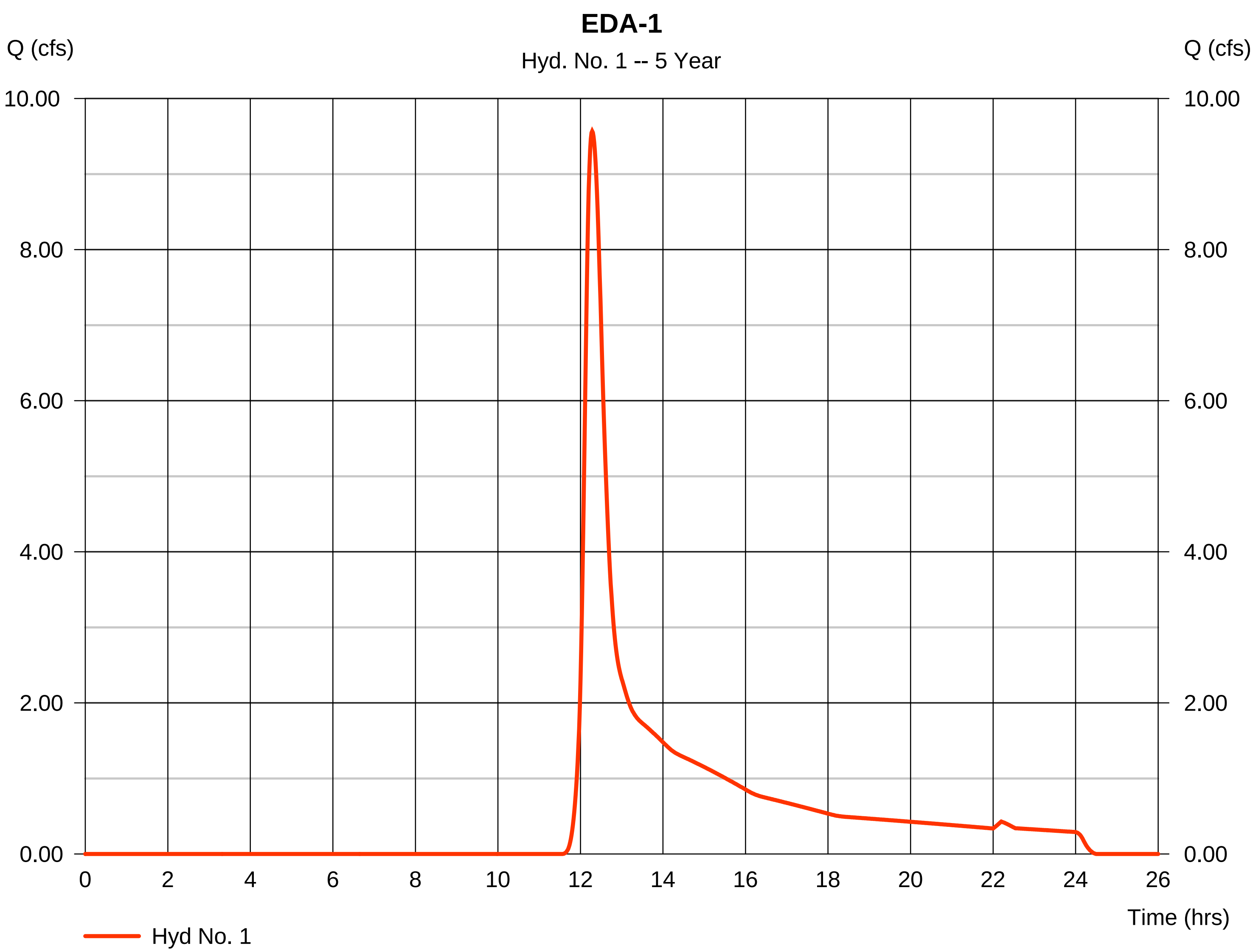
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 9.568 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 49,636 cuft
Drainage area	= 13.340 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.20 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



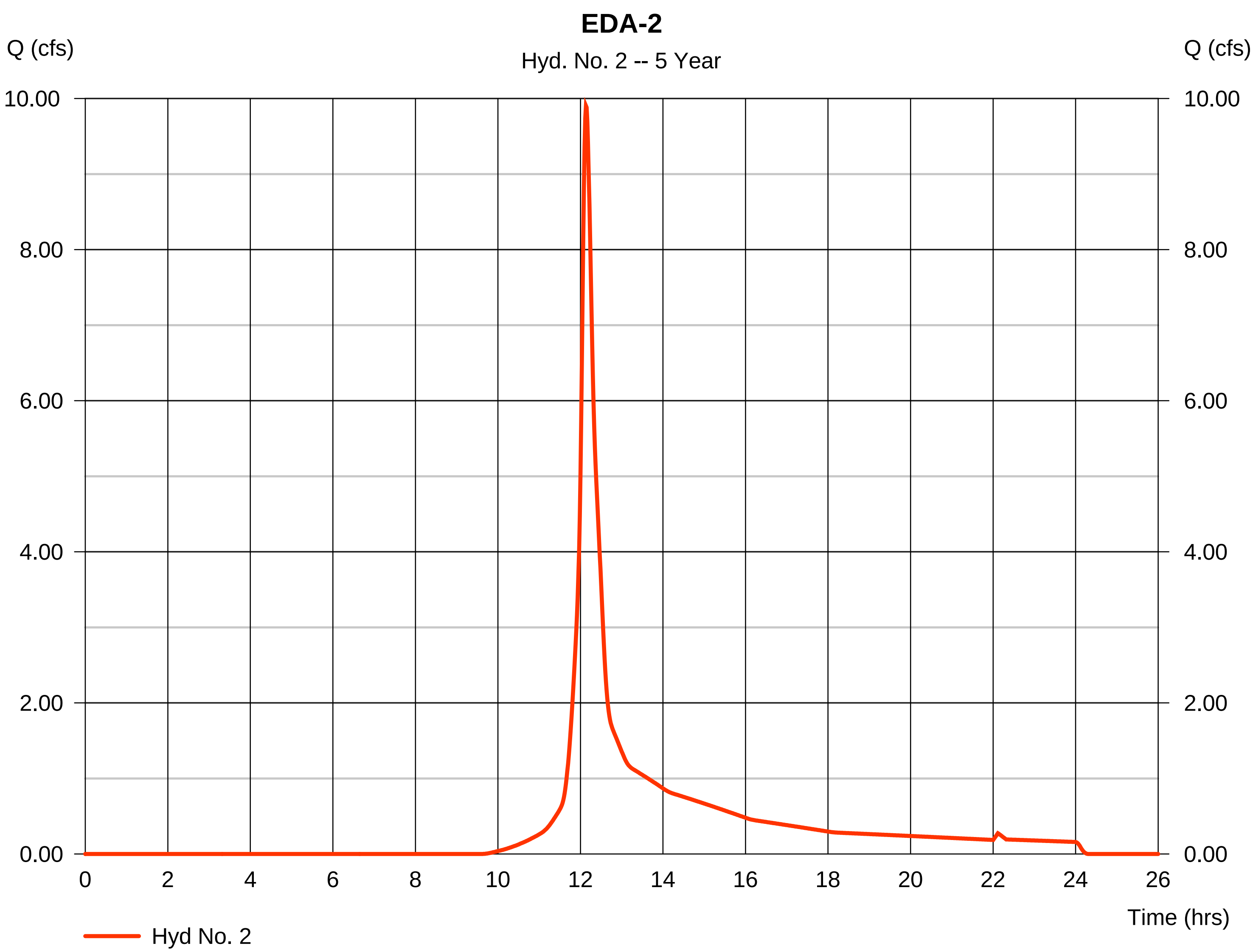
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 9.903 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 36,617 cuft
Drainage area	= 5.190 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.10 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

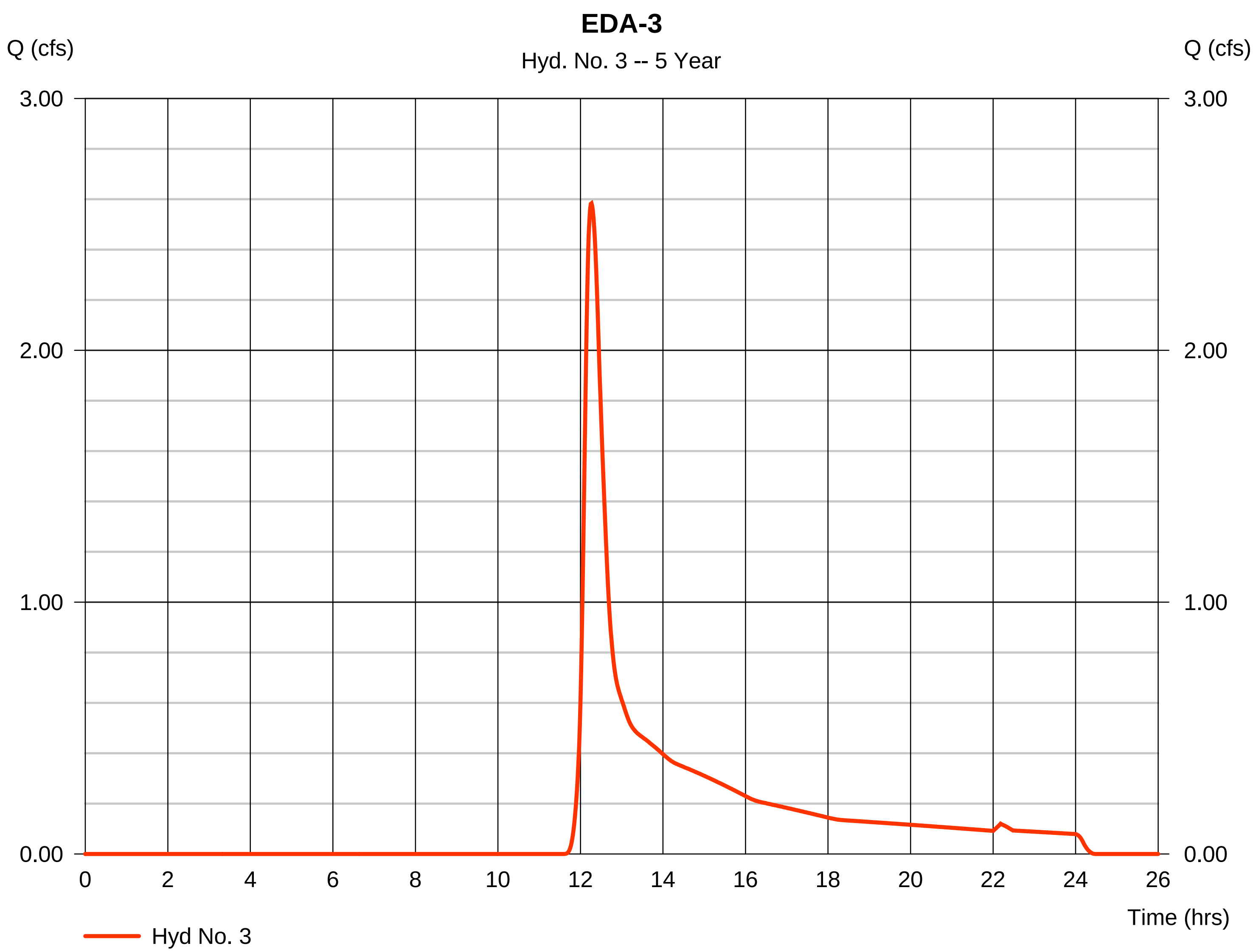


Hydrograph Report

Hyd. No. 3

EDA-3

Hydrograph type	= SCS Runoff	Peak discharge	= 2.584 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 13,209 cuft
Drainage area	= 3.810 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.20 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

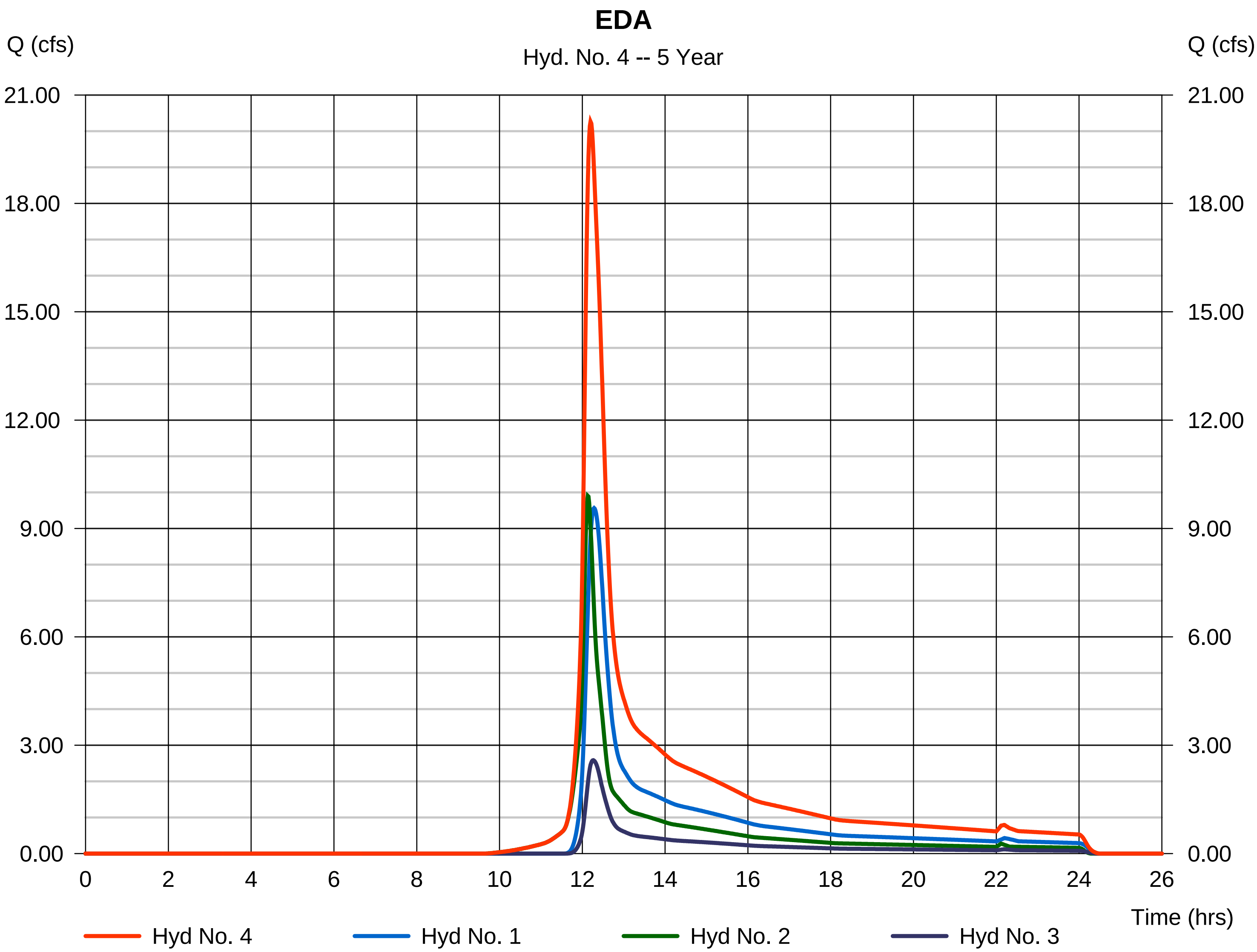


Hydrograph Report

Hyd. No. 4

EDA

Hydrograph type	= Combine	Peak discharge	= 20.26 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.20 hrs
Time interval	= 1 min	Hyd. volume	= 99,462 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 22.340 ac



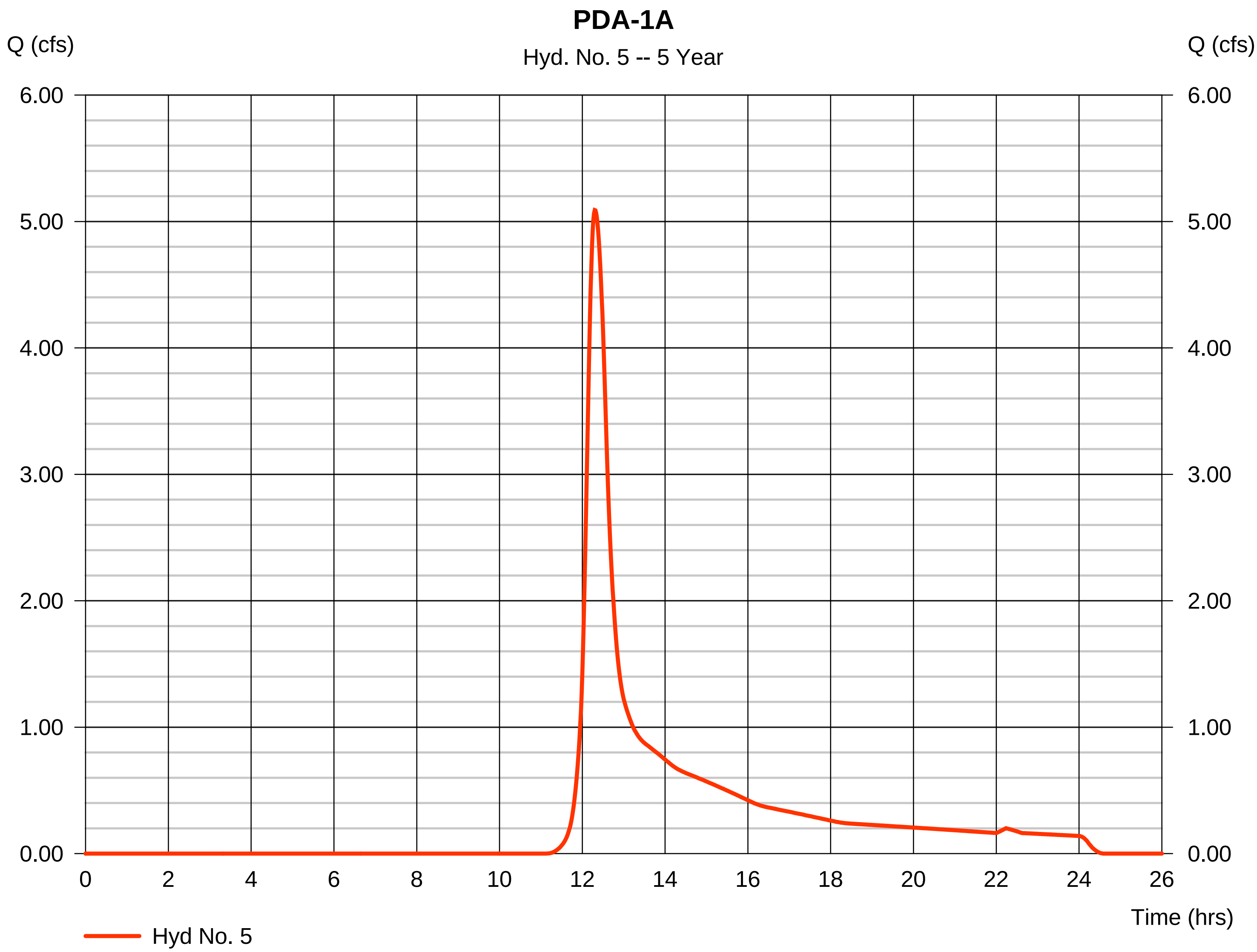
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 5

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 5.090 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.30 hrs
Time interval	= 1 min	Hyd. volume	= 26,123 cuft
Drainage area	= 5.700 ac	Curve number	= 63
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.20 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



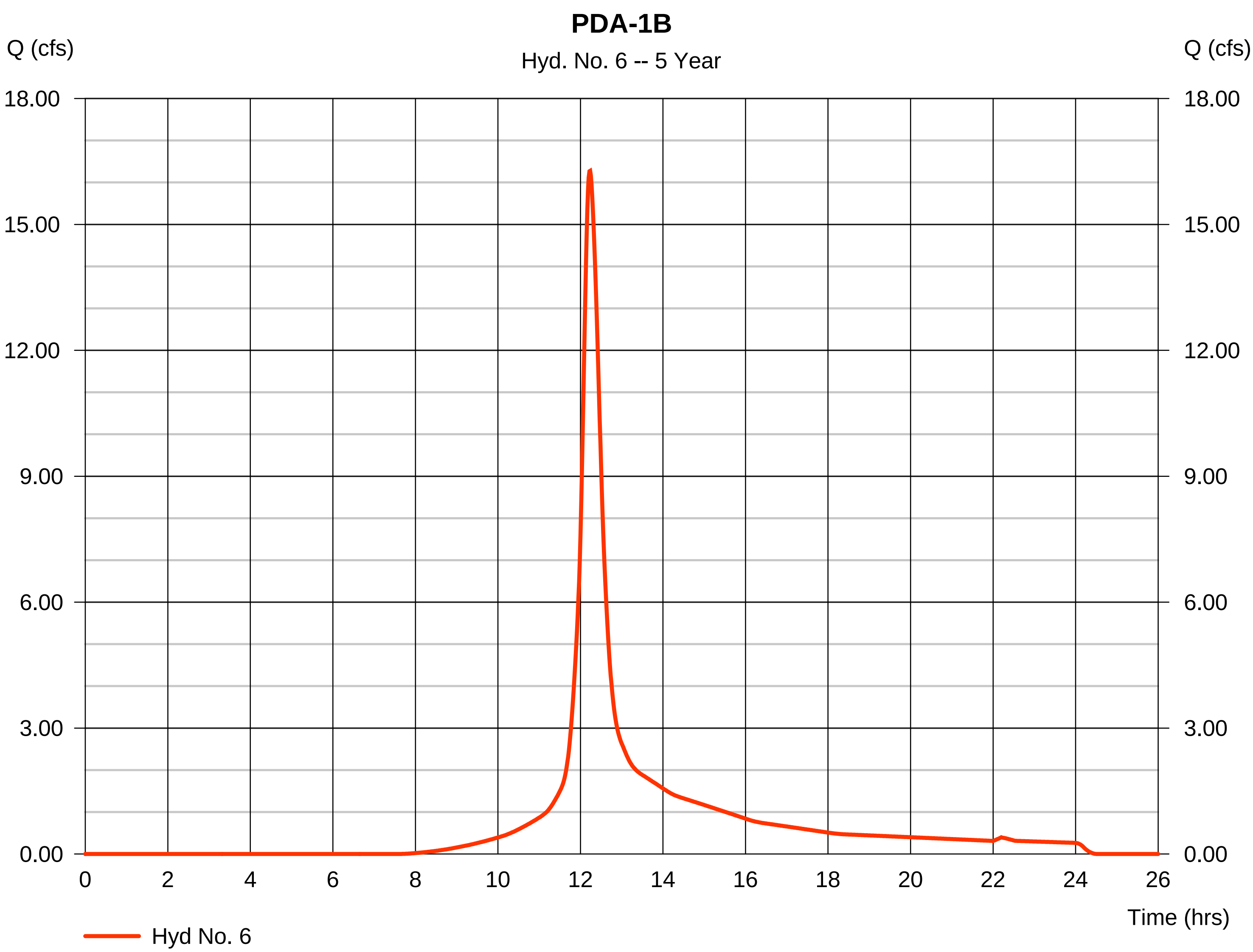
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 6

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 16.28 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.23 hrs
Time interval	= 1 min	Hyd. volume	= 71,819 cuft
Drainage area	= 7.460 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.10 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

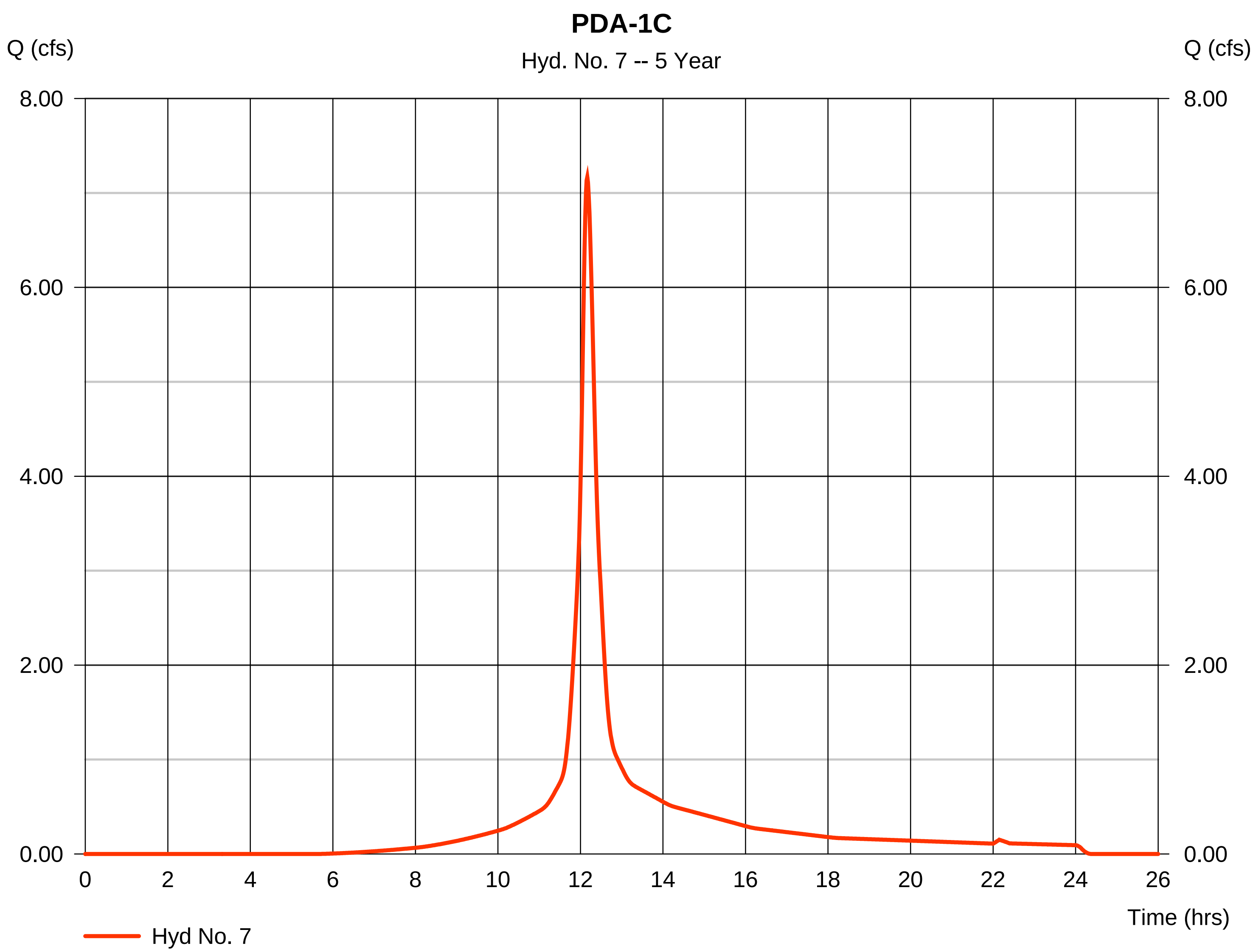


Hydrograph Report

Hyd. No. 7

PDA-1C

Hydrograph type	= SCS Runoff	Peak discharge	= 7.168 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 28,672 cuft
Drainage area	= 2.460 ac	Curve number	= 87
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.90 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

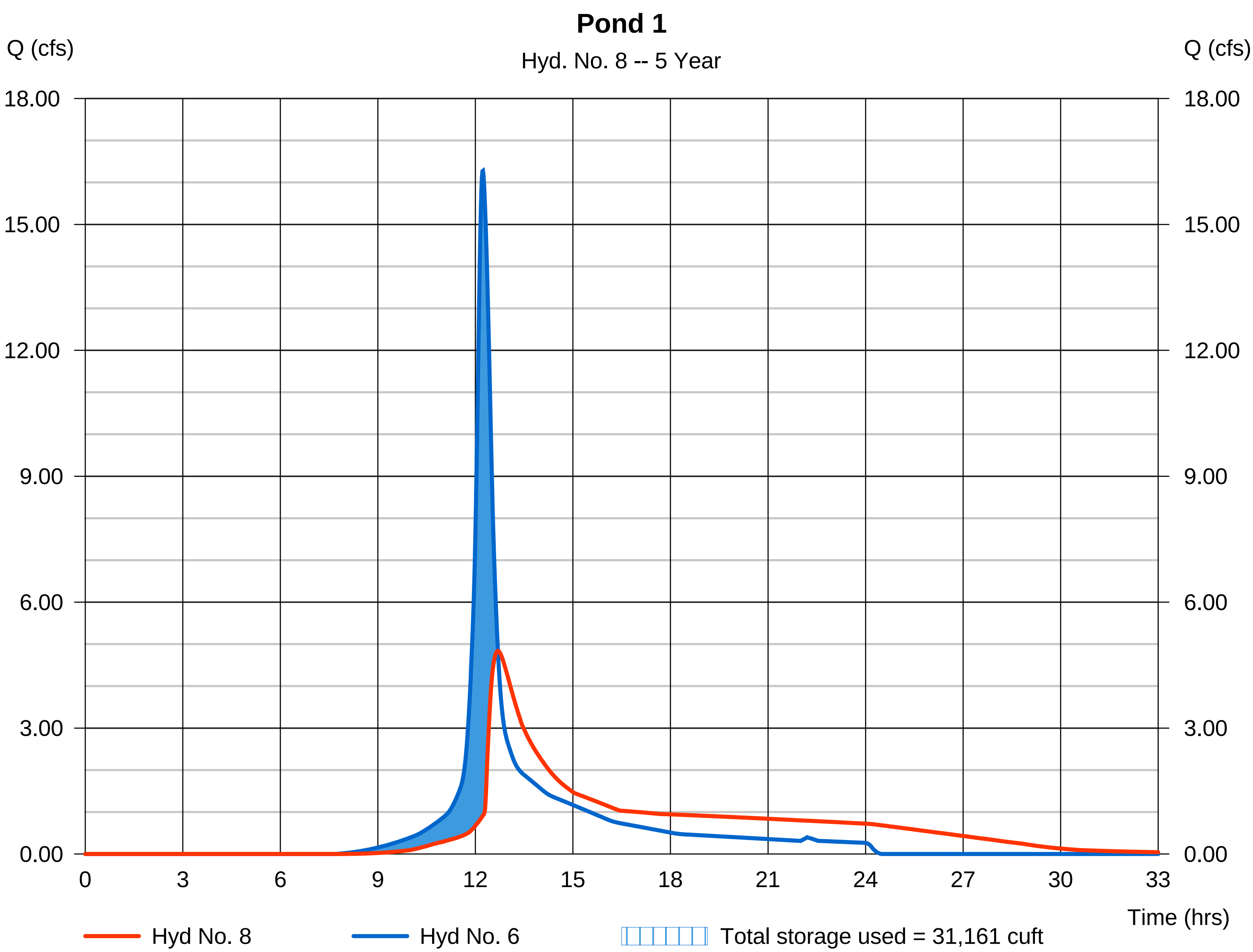
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 4.839 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.68 hrs
Time interval	= 1 min	Hyd. volume	= 71,808 cuft
Inflow hyd. No.	= 6 - PDA-1B	Max. Elevation	= 354.53 ft
Reservoir name	= Basin 1	Max. Storage	= 31,161 cuft

Storage Indication method used.



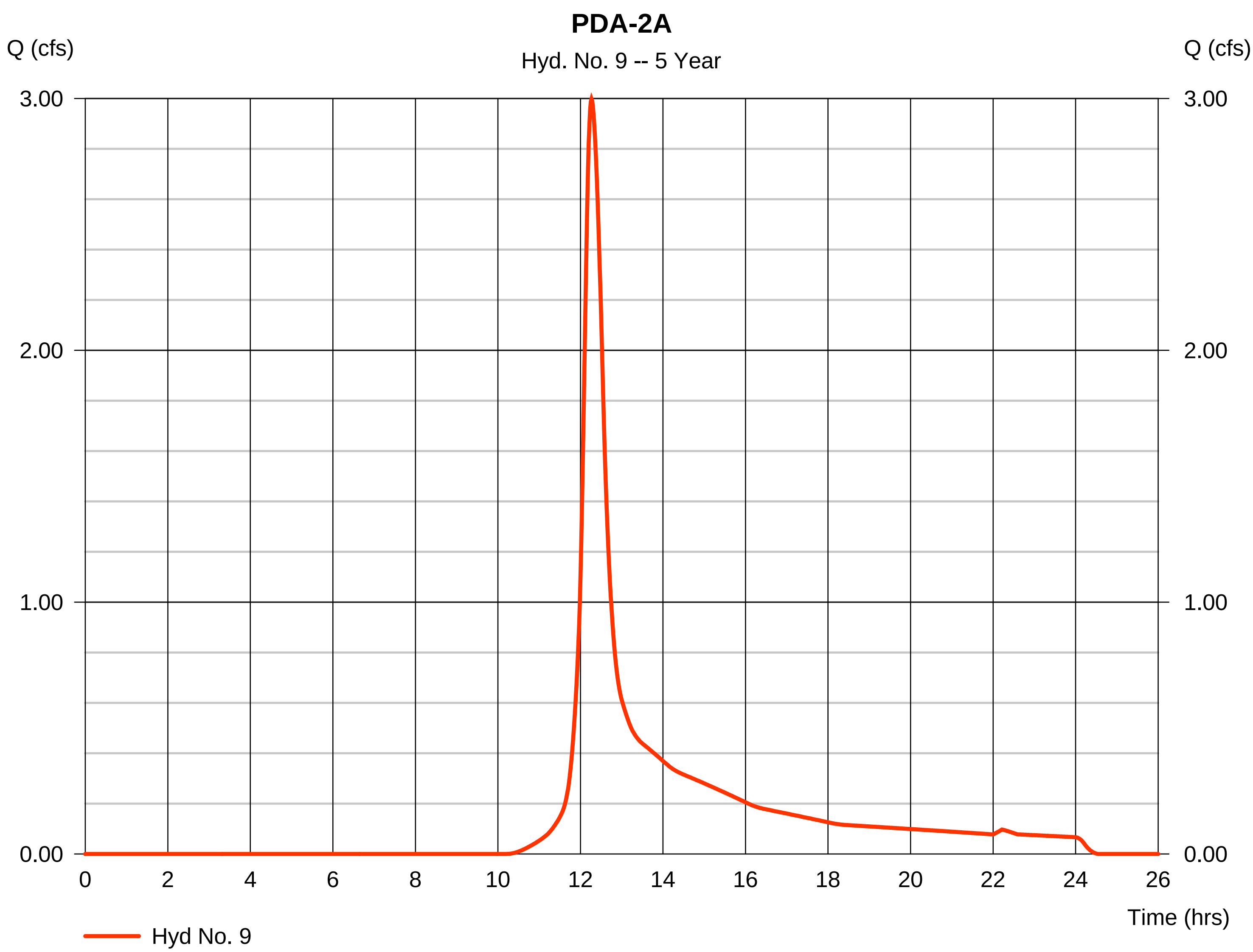
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 9

PDA-2A

Hydrograph type	= SCS Runoff	Peak discharge	= 2.998 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 14,212 cuft
Drainage area	= 2.300 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.70 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



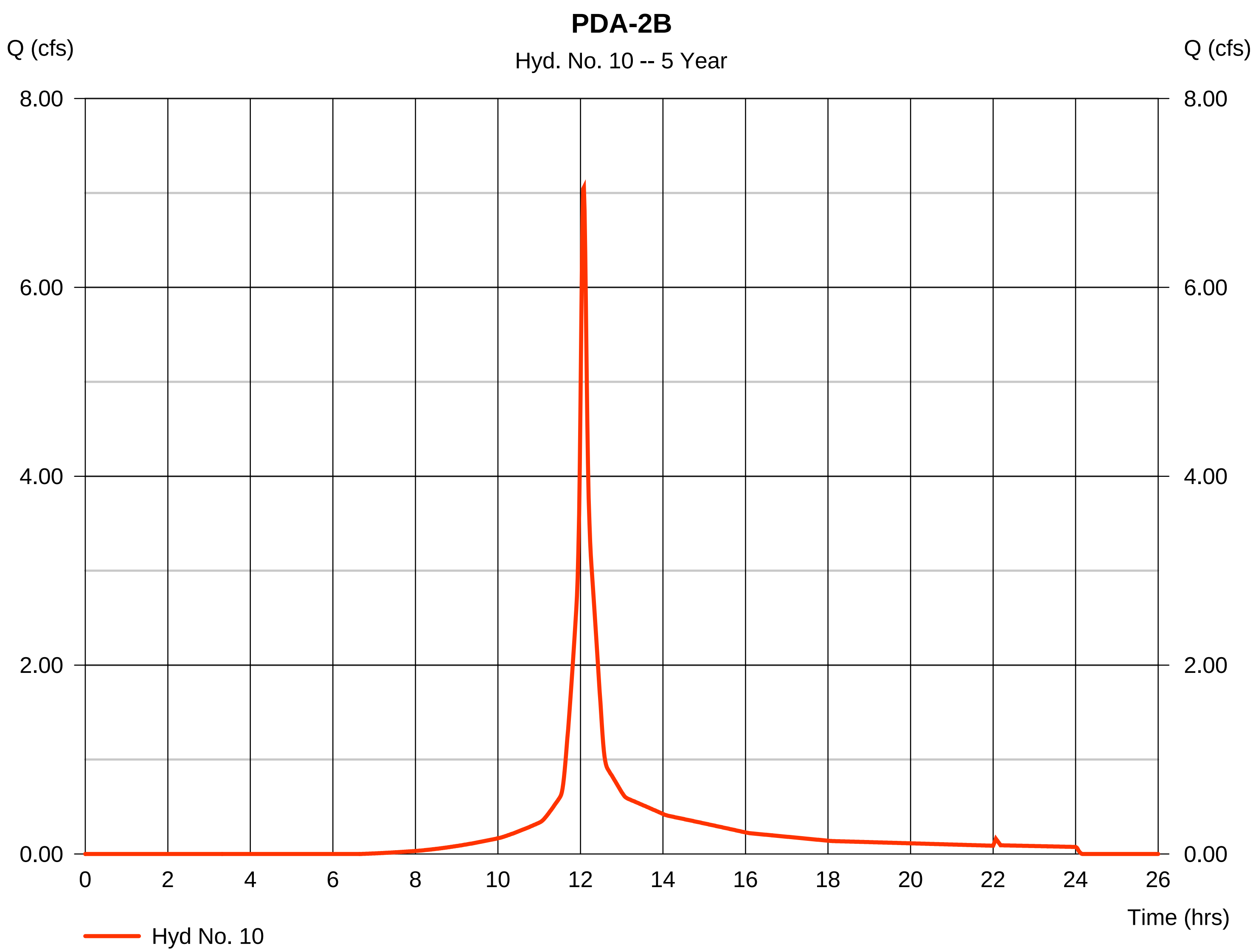
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 10

PDA-2B

Hydrograph type	= SCS Runoff	Peak discharge	= 7.058 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.08 hrs
Time interval	= 1 min	Hyd. volume	= 21,898 cuft
Drainage area	= 2.000 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



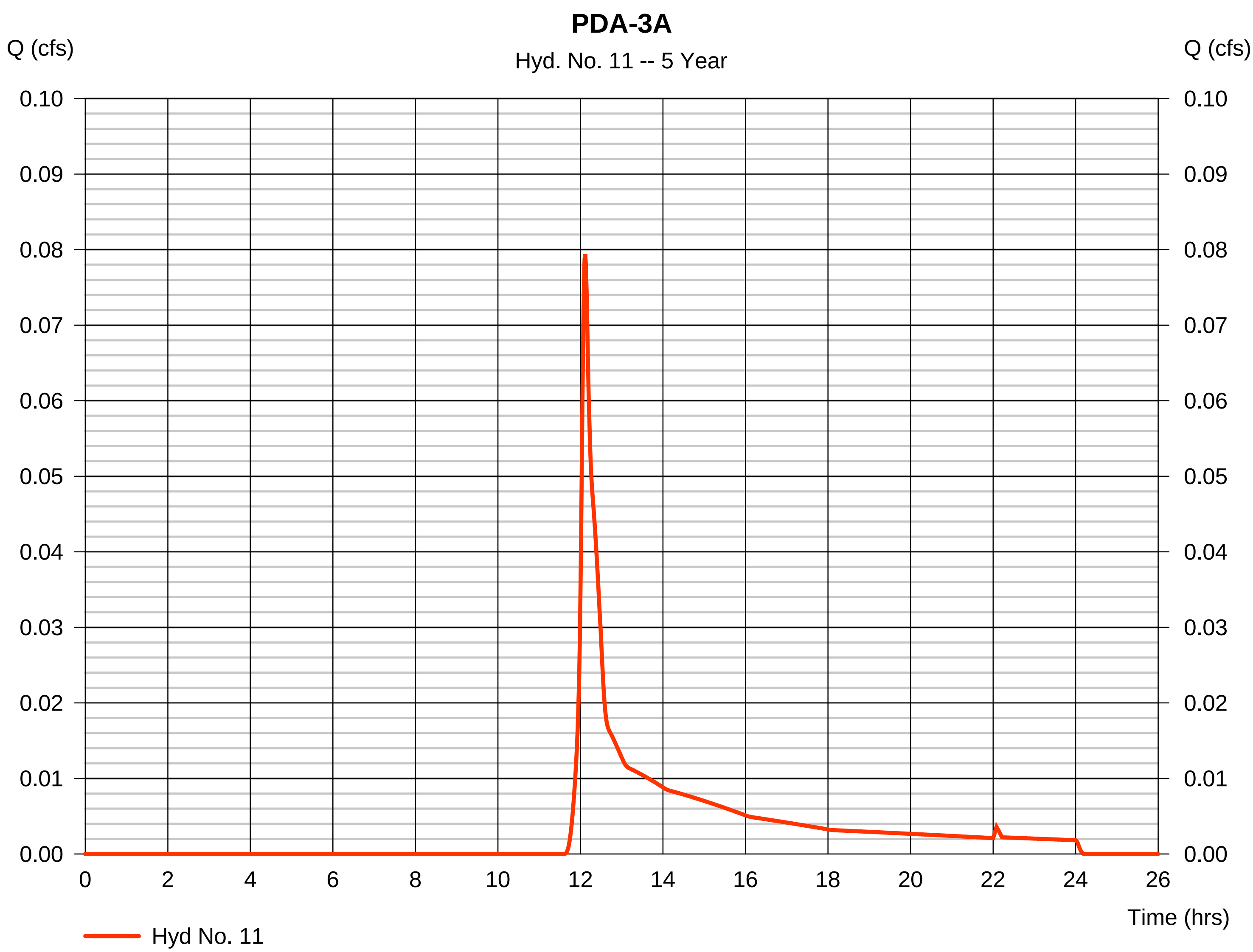
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 11

PDA-3A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.079 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.12 hrs
Time interval	= 1 min	Hyd. volume	= 308 cuft
Drainage area	= 0.090 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.90 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



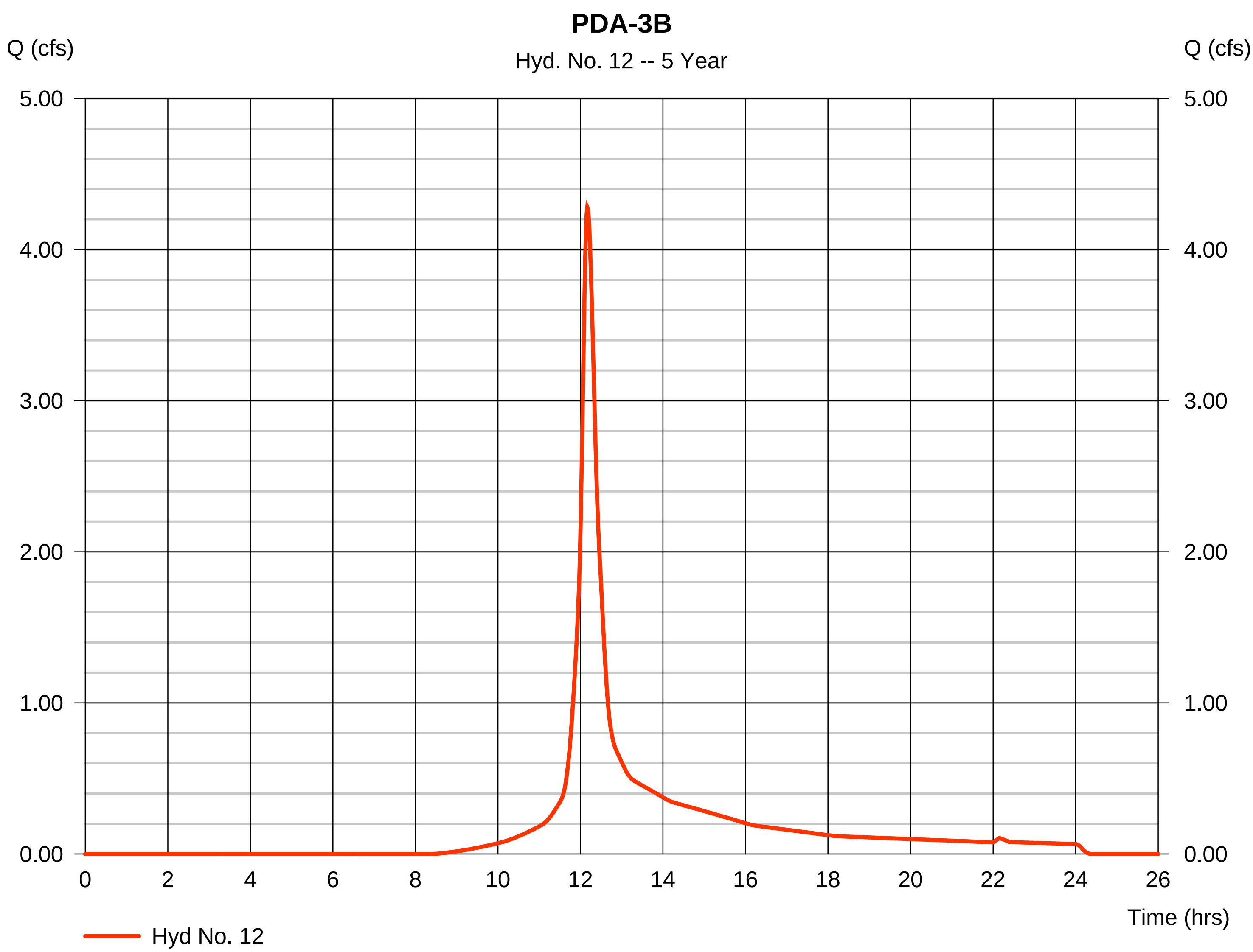
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 12

PDA-3B

Hydrograph type	= SCS Runoff	Peak discharge	= 4.280 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 16,934 cuft
Drainage area	= 1.950 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.70 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



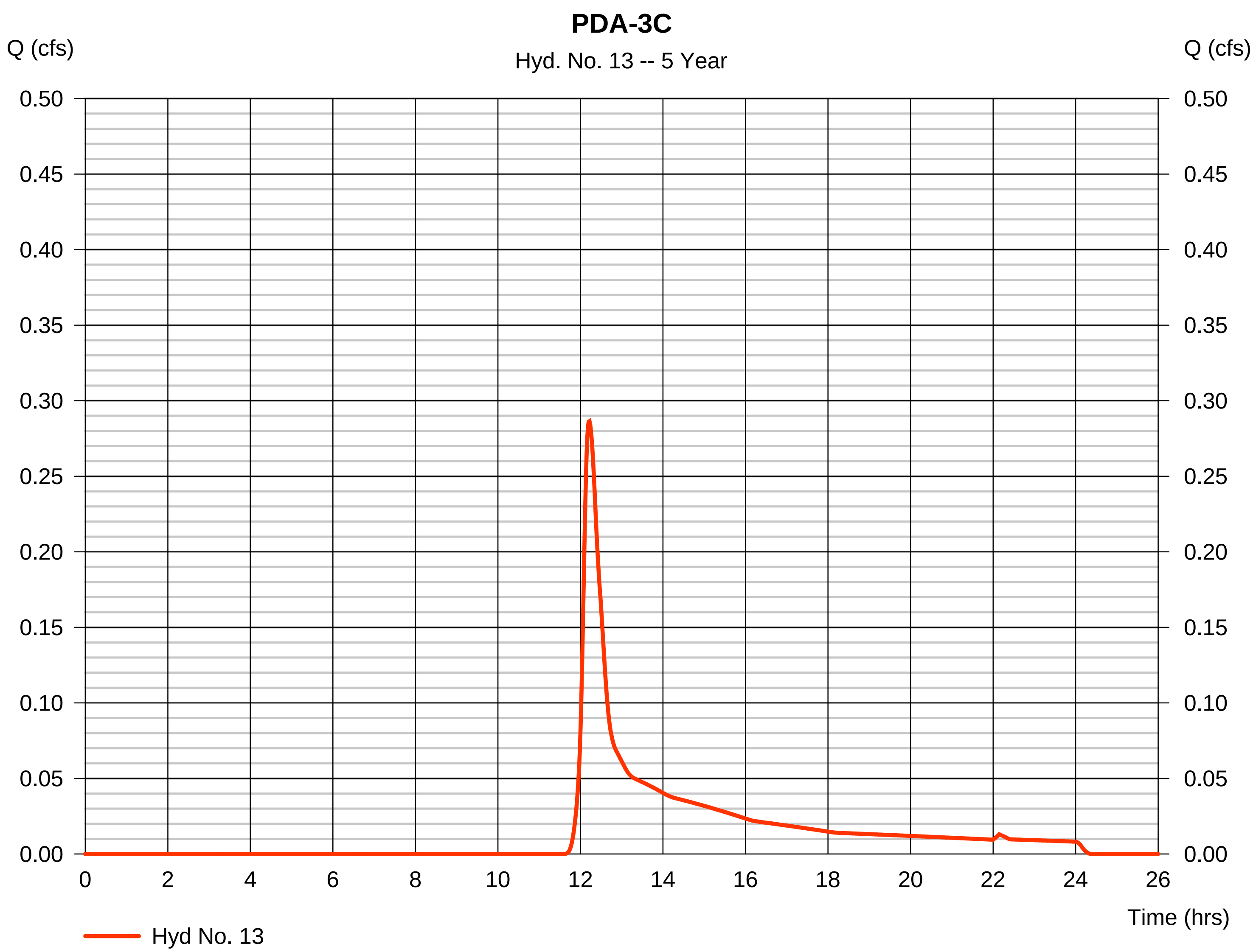
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 13

PDA-3C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.286 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 1,368 cuft
Drainage area	= 0.390 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.80 min
Total precip.	= 4.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

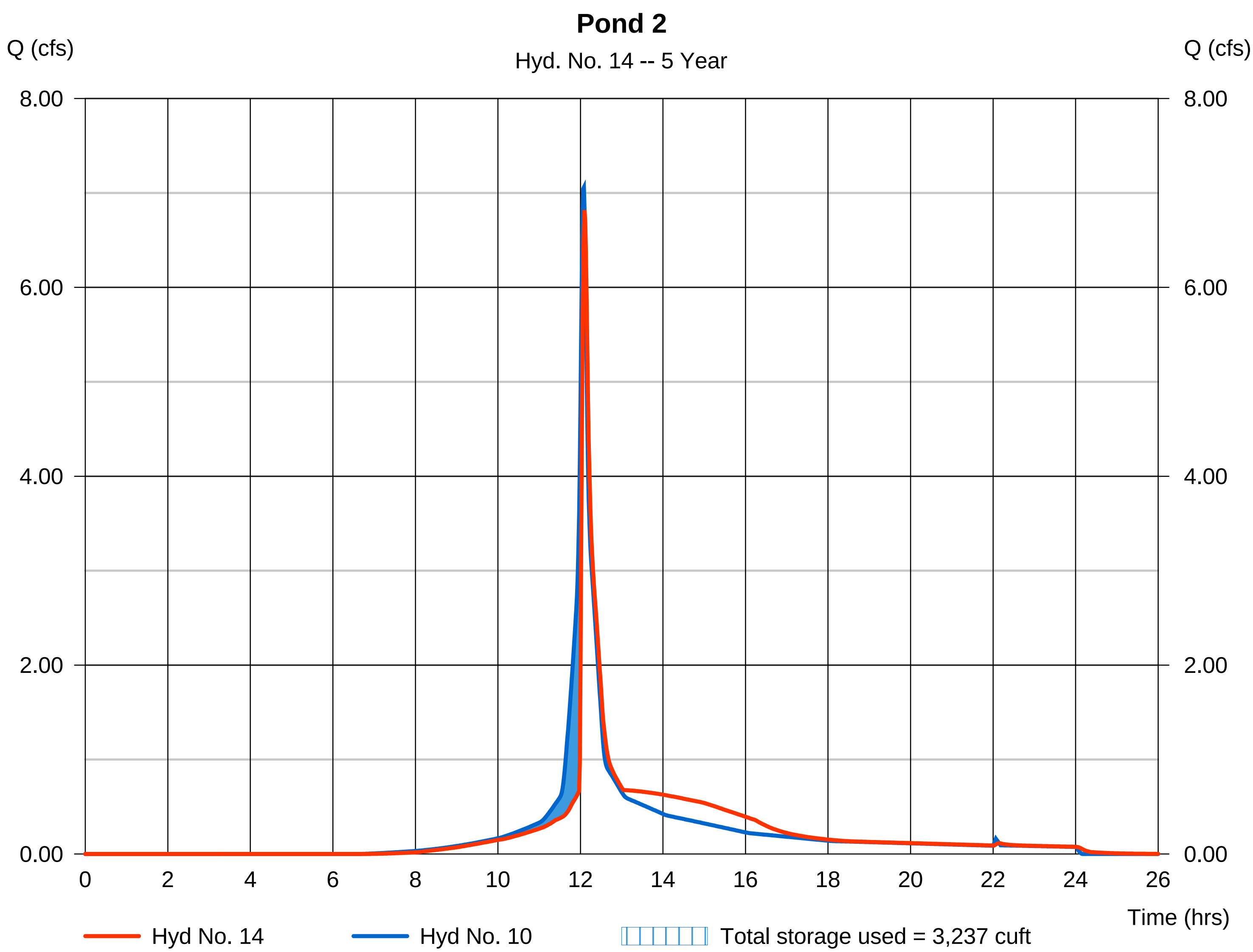
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 6.819 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 21,896 cuft
Inflow hyd. No.	= 10 - PDA-2B	Max. Elevation	= 334.41 ft
Reservoir name	= Basin 2	Max. Storage	= 3,237 cuft

Storage Indication method used.



Hydrograph Report

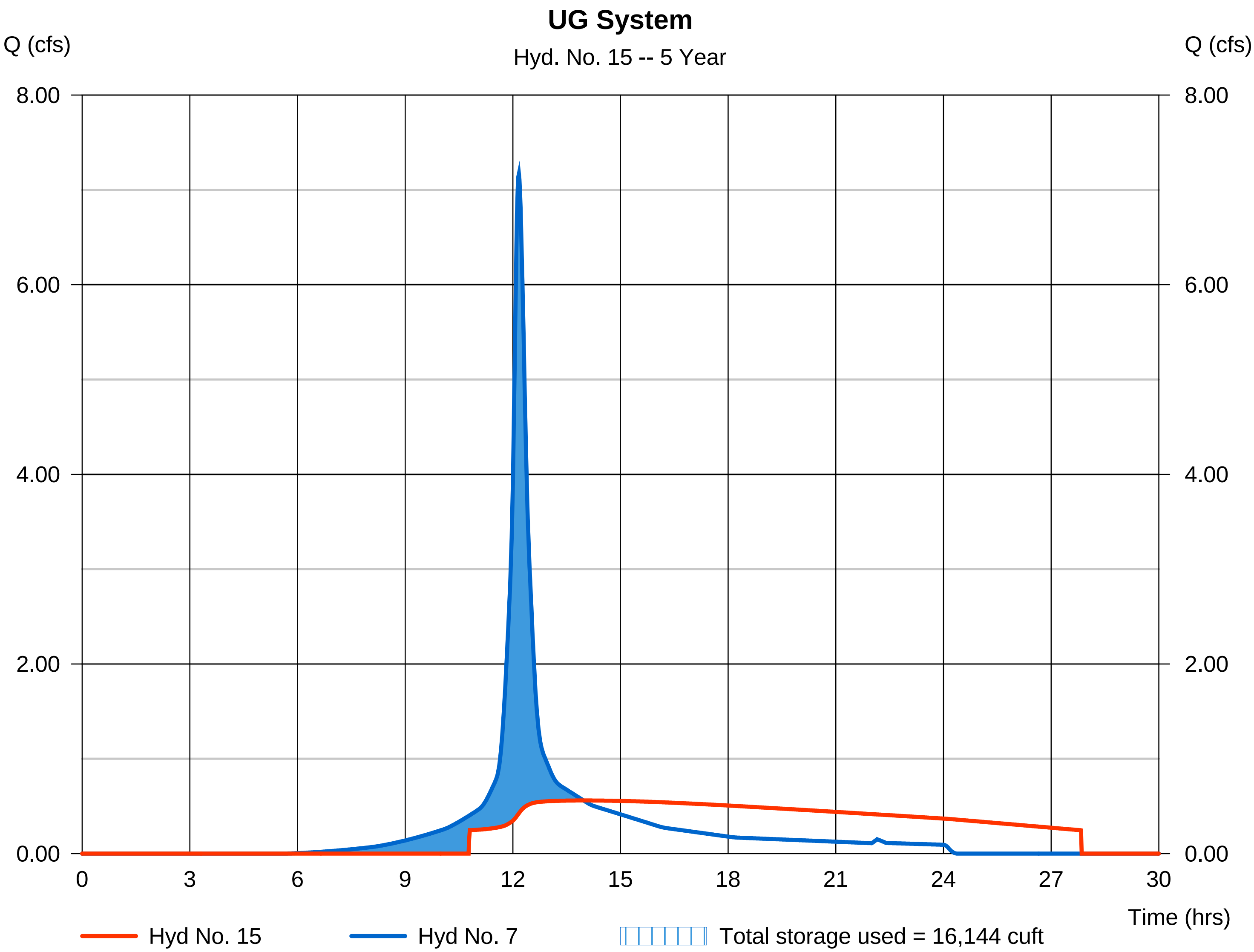
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 0.560 cfs
Storm frequency	= 5 yrs	Time to peak	= 13.97 hrs
Time interval	= 1 min	Hyd. volume	= 26,528 cuft
Inflow hyd. No.	= 7 - PDA-1C	Max. Elevation	= 359.95 ft
Reservoir name	= Undergroud Detention	Max. Storage	= 16,144 cuft

Storage Indication method used.



Hydrograph Report

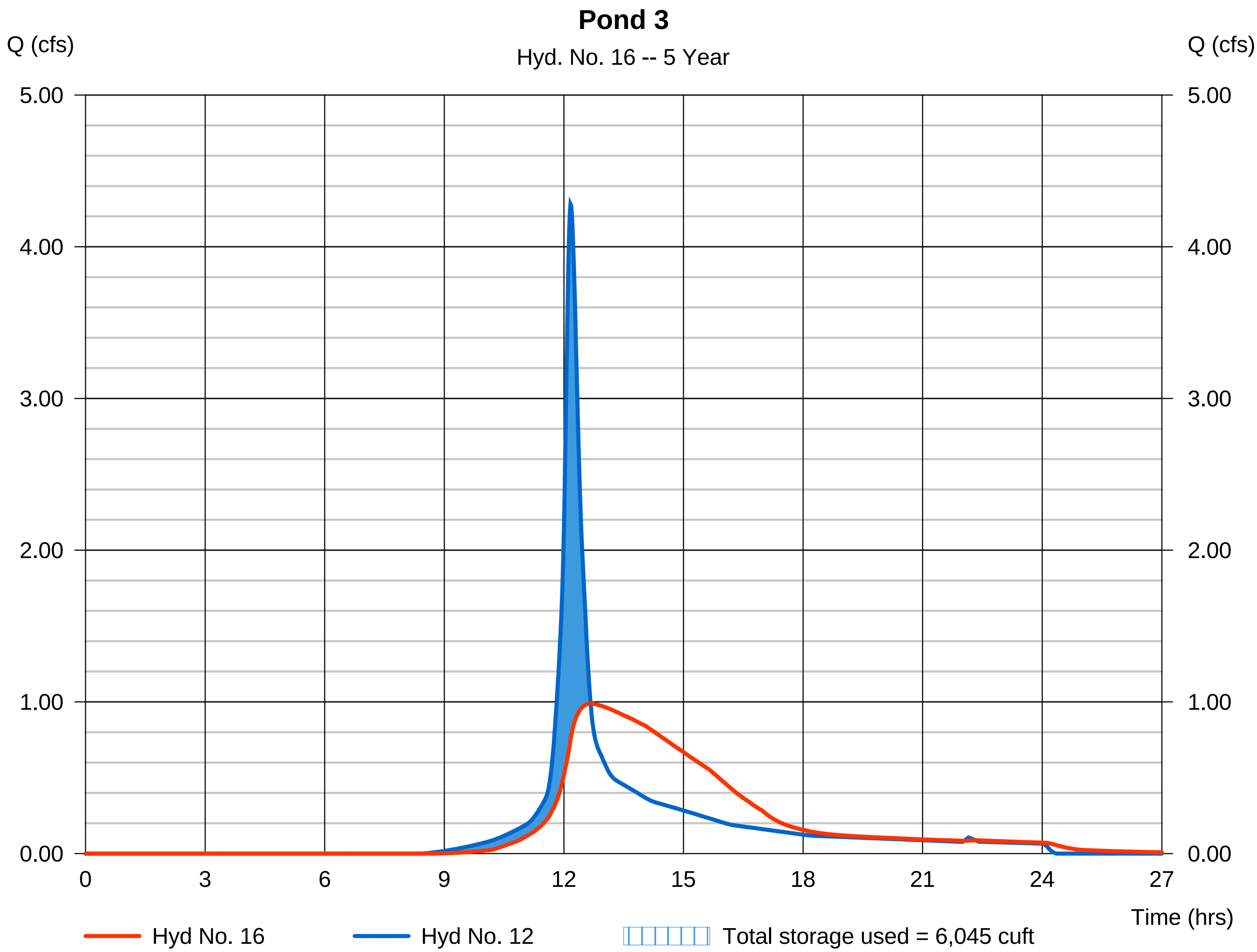
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 0.989 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.67 hrs
Time interval	= 1 min	Hyd. volume	= 16,927 cuft
Inflow hyd. No.	= 12 - PDA-3B	Max. Elevation	= 364.67 ft
Reservoir name	= Basin 3	Max. Storage	= 6,045 cuft

Storage Indication method used.

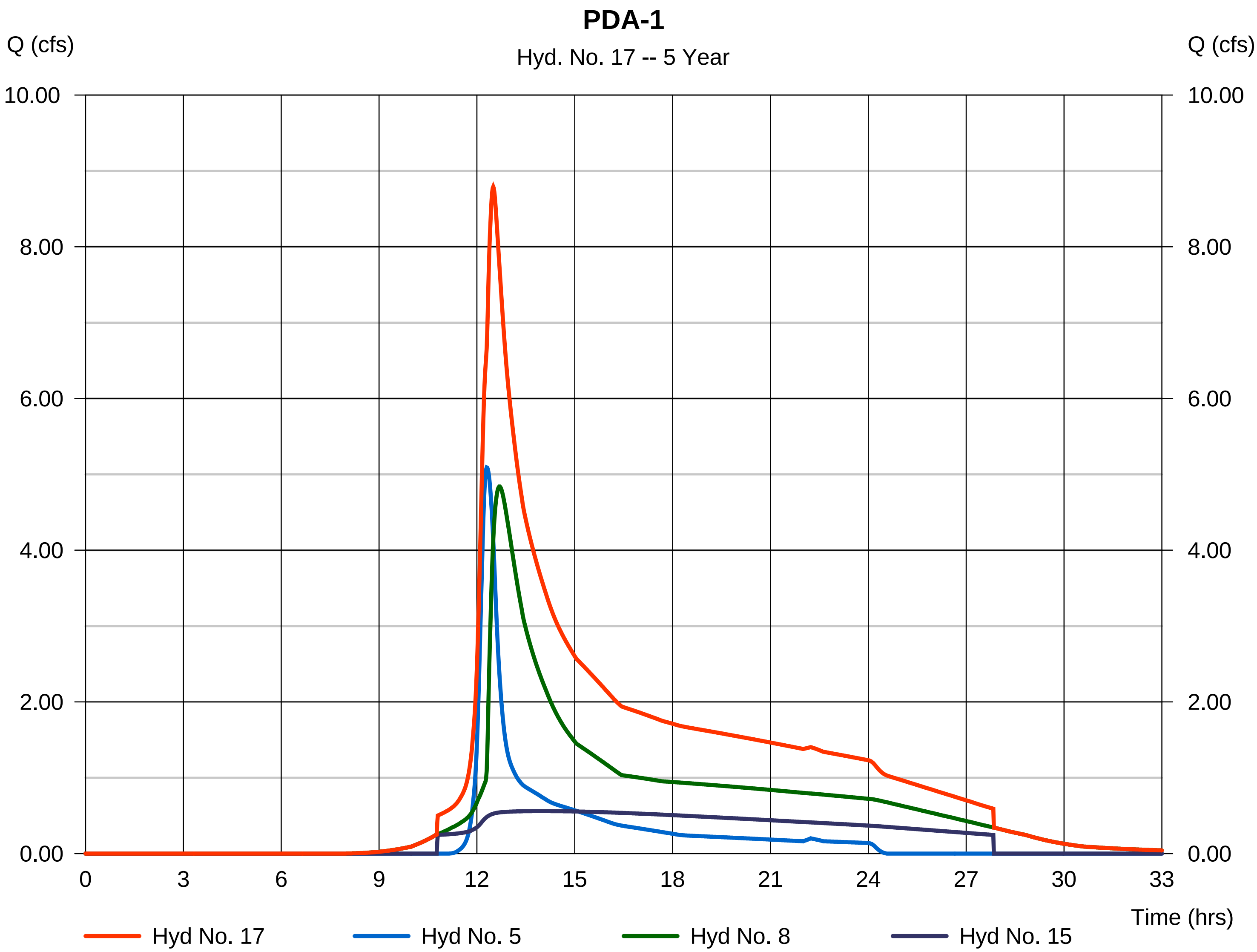


Hydrograph Report

Hyd. No. 17

PDA-1

Hydrograph type	= Combine	Peak discharge	= 8.791 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.50 hrs
Time interval	= 1 min	Hyd. volume	= 124,460 cuft
Inflow hyds.	= 5, 8, 15	Contrib. drain. area	= 5.700 ac



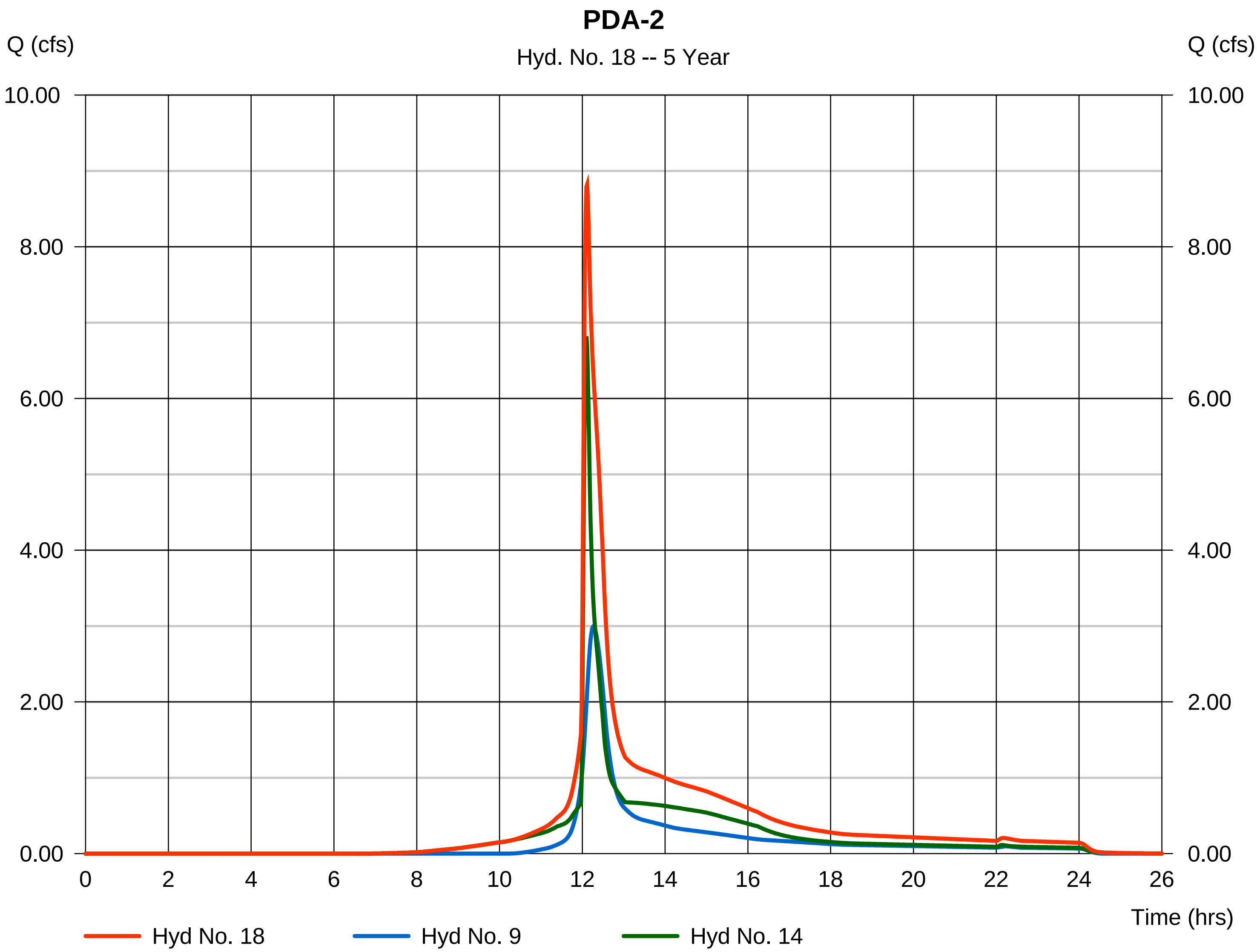
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 18

PDA-2

Hydrograph type	= Combine	Peak discharge	= 8.820 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.12 hrs
Time interval	= 1 min	Hyd. volume	= 36,107 cuft
Inflow hyds.	= 9, 14	Contrib. drain. area	= 2.300 ac

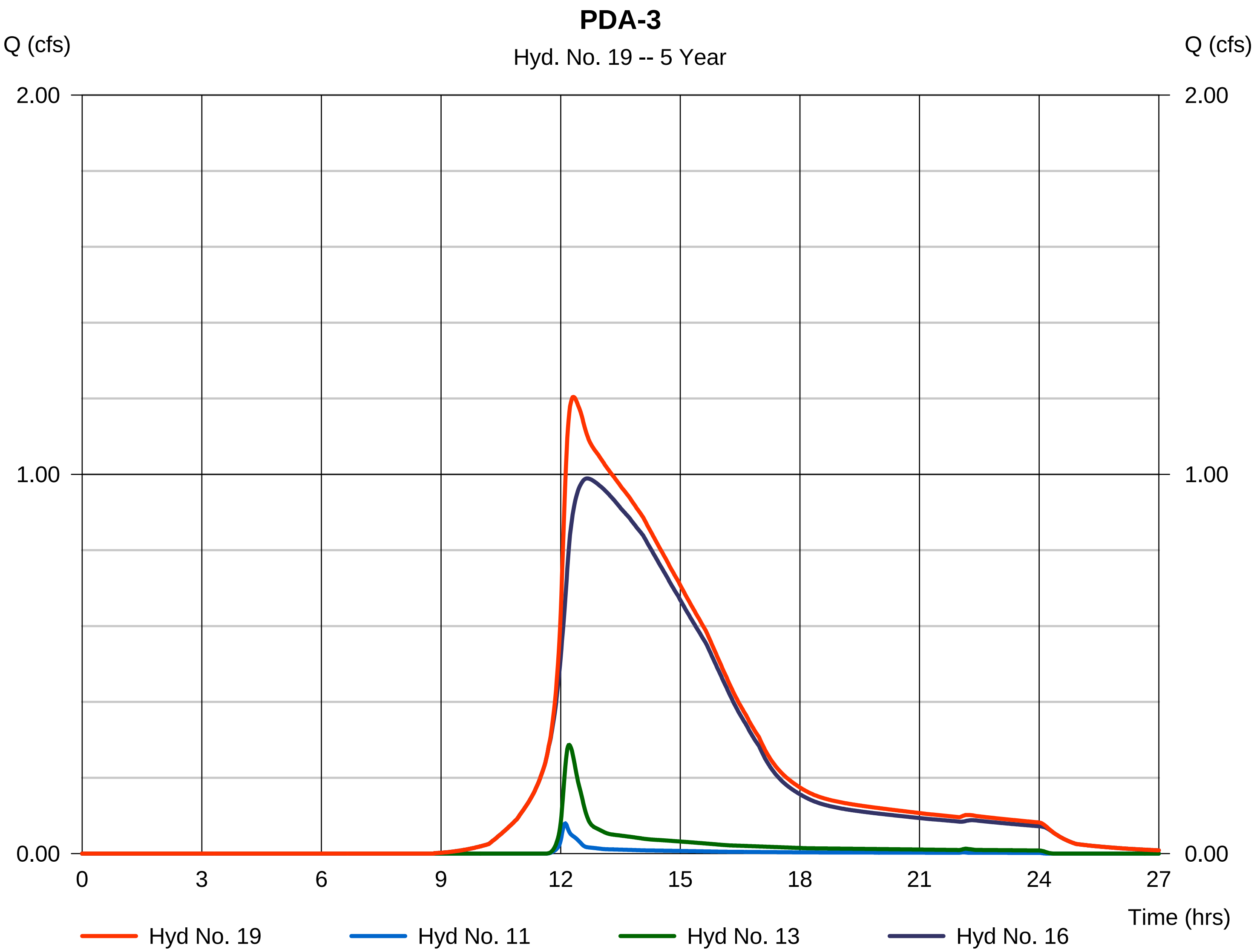


Hydrograph Report

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 1.204 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.32 hrs
Time interval	= 1 min	Hyd. volume	= 18,602 cuft
Inflow hyds.	= 11, 13, 16	Contrib. drain. area	= 0.480 ac



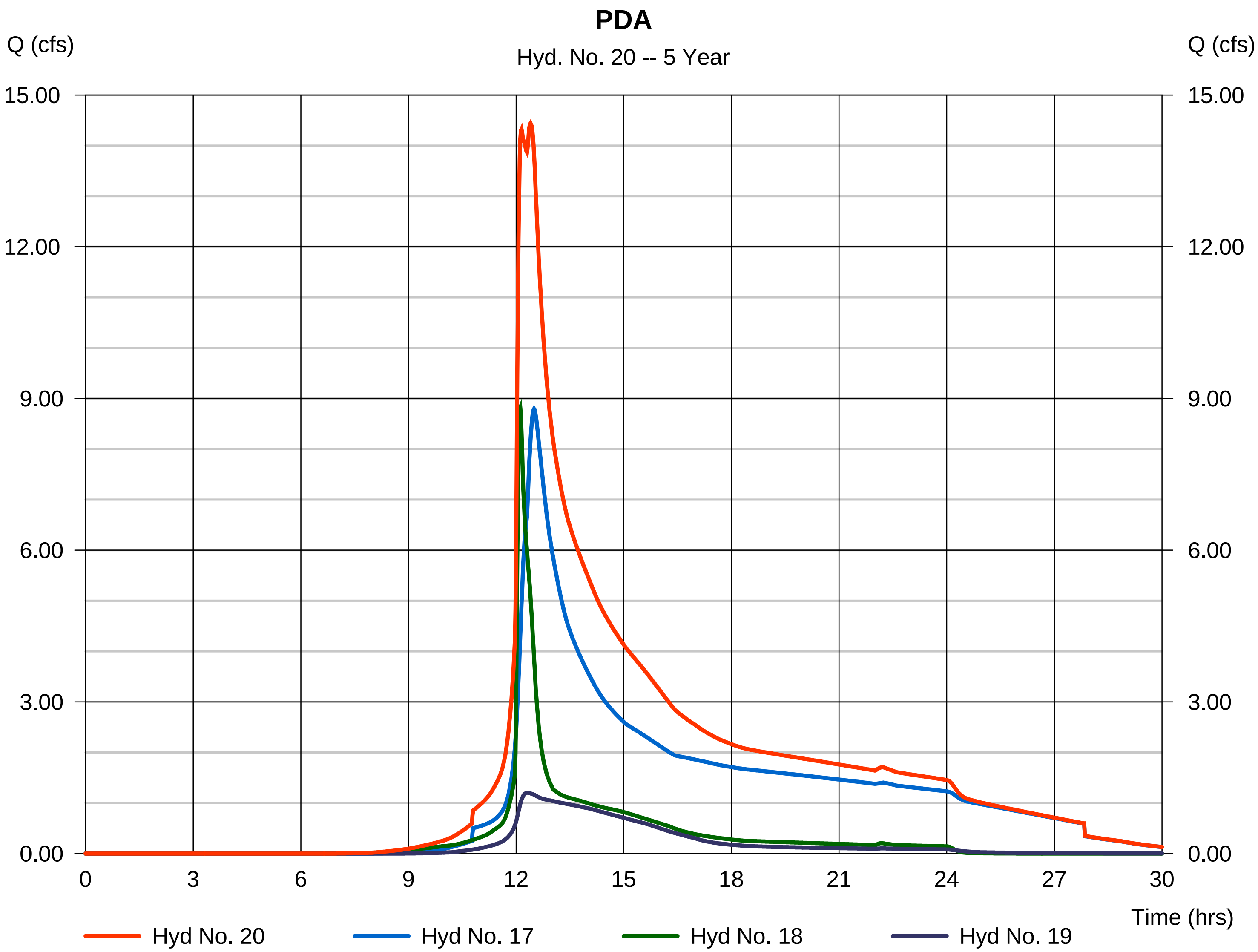
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 20

PDA

Hydrograph type	= Combine	Peak discharge	= 14.44 cfs
Storm frequency	= 5 yrs	Time to peak	= 12.40 hrs
Time interval	= 1 min	Hyd. volume	= 179,169 cuft
Inflow hyds.	= 17, 18, 19	Contrib. drain. area	= 0.000 ac



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	15.36	1	736	74,263	------	------	------	EDA-1
2	SCS Runoff	13.64	1	728	49,811	------	------	------	EDA-2
3	SCS Runoff	4.235	1	734	19,957	------	------	------	EDA-3
4	Combine	31.03	1	732	144,031	1, 2, 3	------	------	EDA
5	SCS Runoff	7.675	1	737	37,756	------	------	------	PDA-1A
6	SCS Runoff	21.06	1	733	93,157	------	------	------	PDA-1B
7	SCS Runoff	8.959	1	730	36,165	------	------	------	PDA-1C
8	Reservoir	7.348	1	758	93,146	6	355.21	38,411	Pond 1
9	SCS Runoff	4.234	1	736	19,689	------	------	------	PDA-2A
10	SCS Runoff	8.954	1	724	28,002	------	------	------	PDA-2B
11	SCS Runoff	0.131	1	726	465	------	------	------	PDA-3A
12	SCS Runoff	5.645	1	730	22,295	------	------	------	PDA-3B
13	SCS Runoff	0.471	1	732	2,066	------	------	------	PDA-3C
14	Reservoir	8.725	1	726	27,999	10	334.49	3,384	Pond 2
15	Reservoir	0.963	1	789	34,018	7	360.31	19,646	UG System
16	Reservoir	1.121	1	763	22,288	12	365.34	8,422	Pond 3
17	Combine	14.03	1	746	164,920	5, 8, 15,	------	------	PDA-1
18	Combine	11.62	1	726	47,688	9, 14,	------	------	PDA-2
19	Combine	1.507	1	736	24,820	11, 13, 16,	------	------	PDA-3
20	Combine	22.42	1	740	237,428	17, 18, 19	------	------	PDA

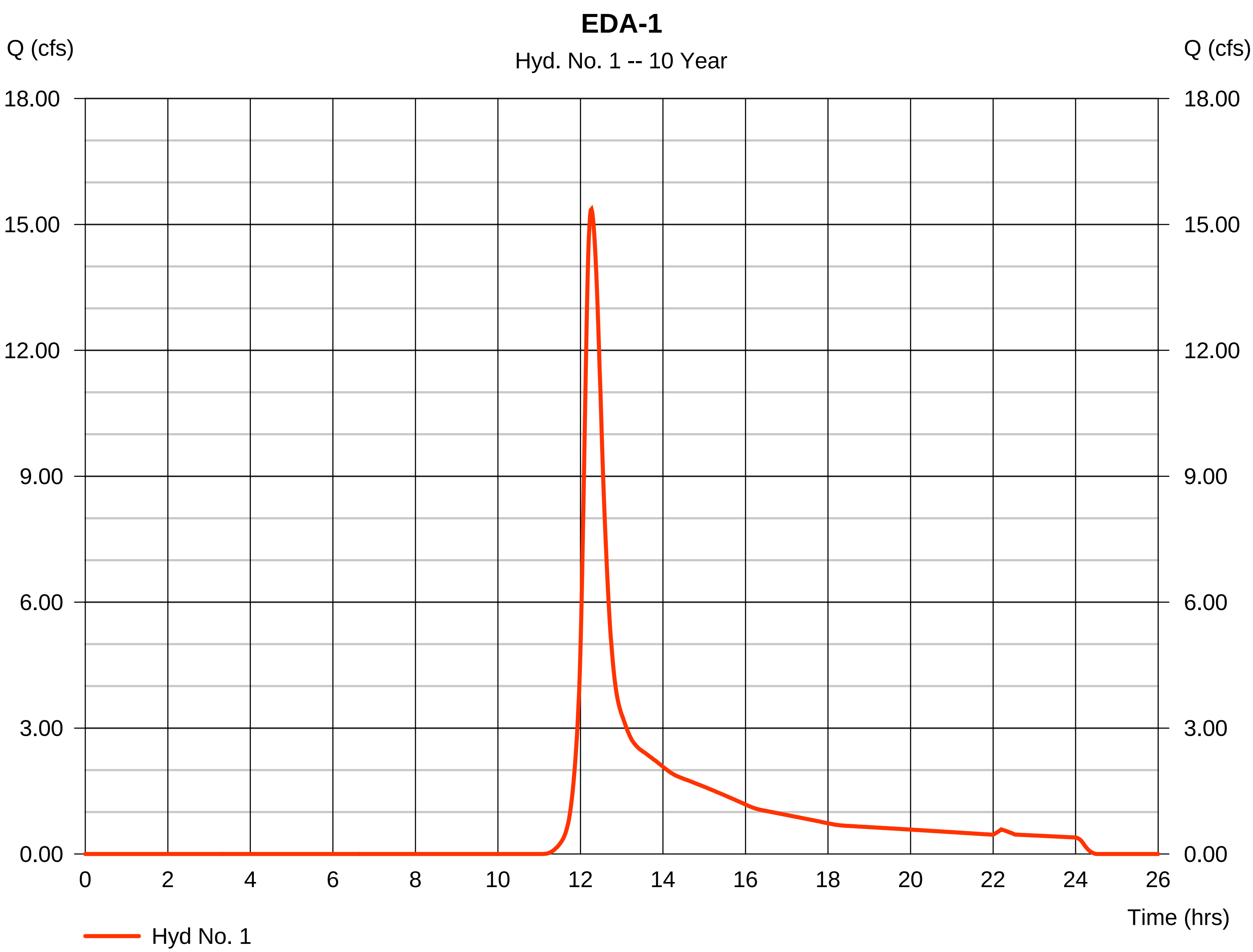
Hydrology.gpw	Return Period: 10 Year	Monday, 01 / 9 / 2023

Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 15.36 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 74,263 cuft
Drainage area	= 13.340 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.20 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



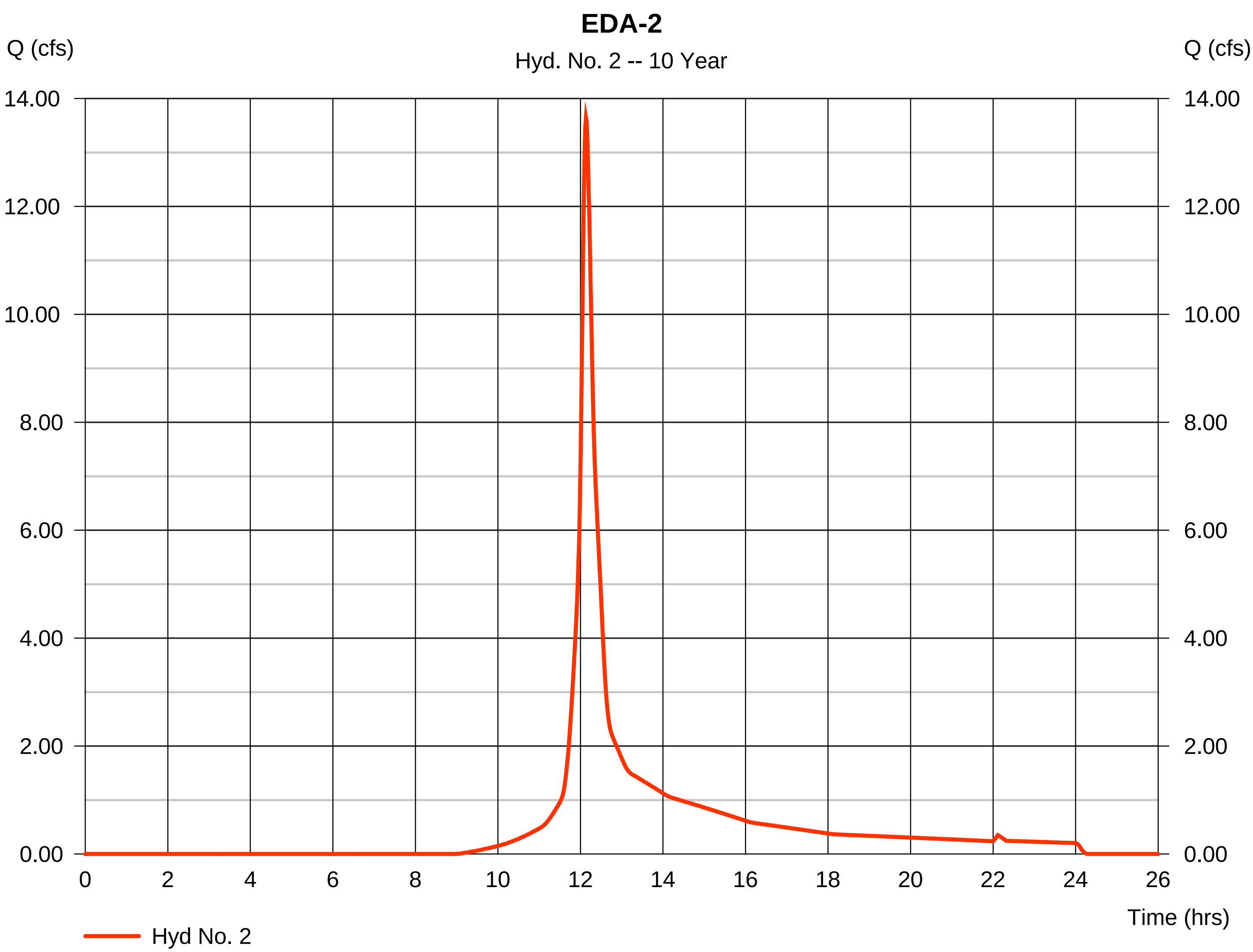
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 13.64 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 49,811 cuft
Drainage area	= 5.190 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.10 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



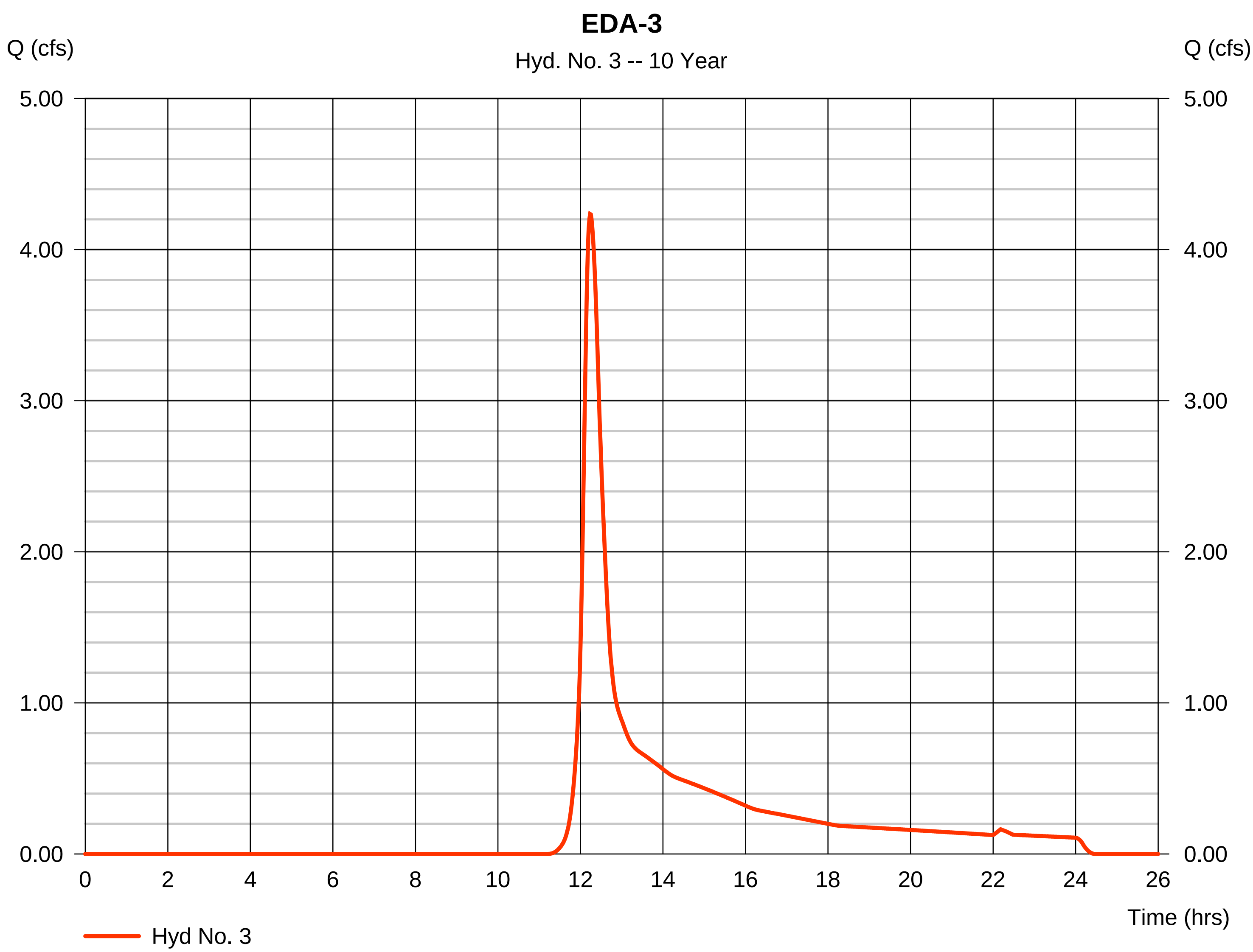
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 3

EDA-3

Hydrograph type	= SCS Runoff	Peak discharge	= 4.235 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.23 hrs
Time interval	= 1 min	Hyd. volume	= 19,957 cuft
Drainage area	= 3.810 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.20 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



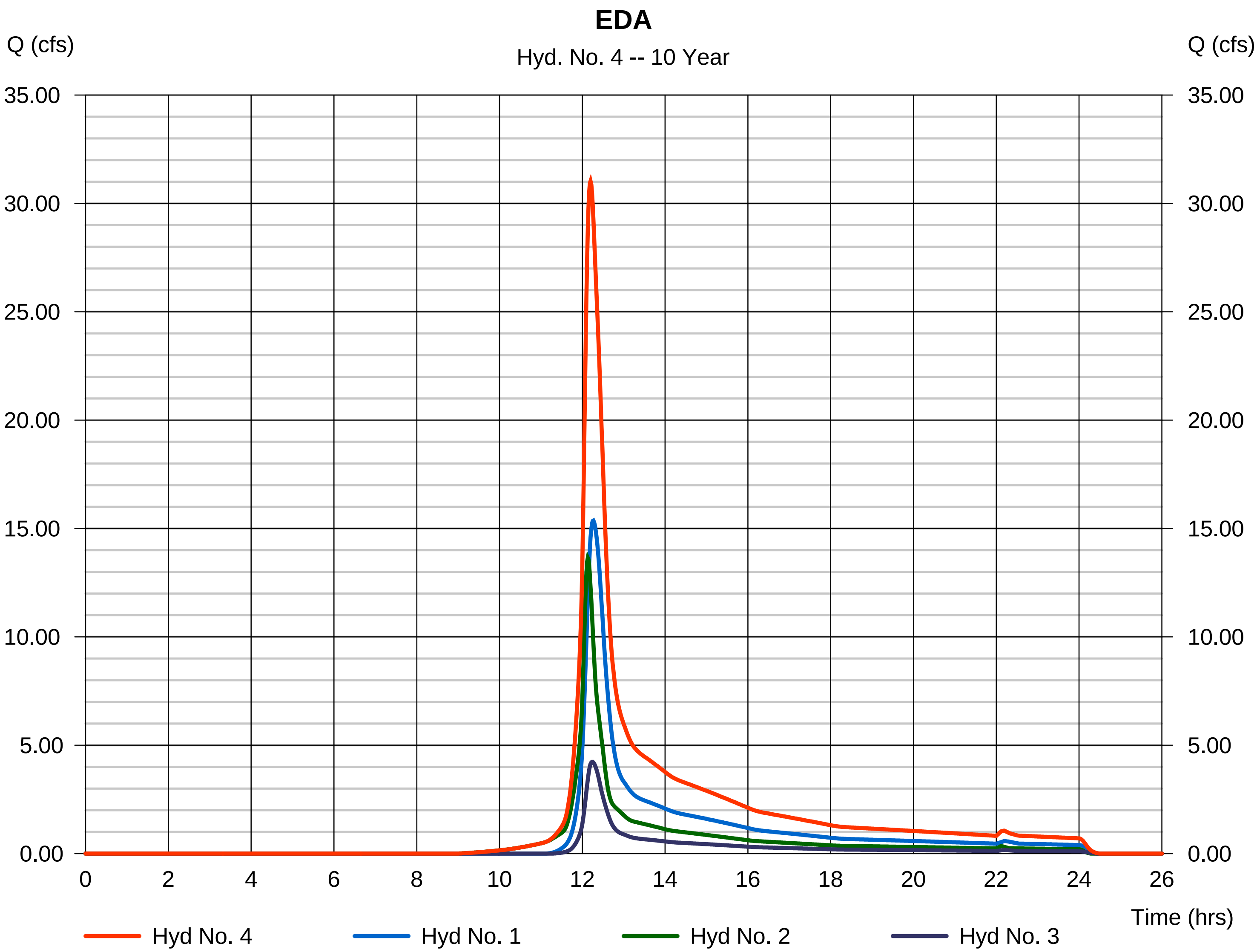
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 4

EDA

Hydrograph type	= Combine	Peak discharge	= 31.03 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.20 hrs
Time interval	= 1 min	Hyd. volume	= 144,031 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 22.340 ac



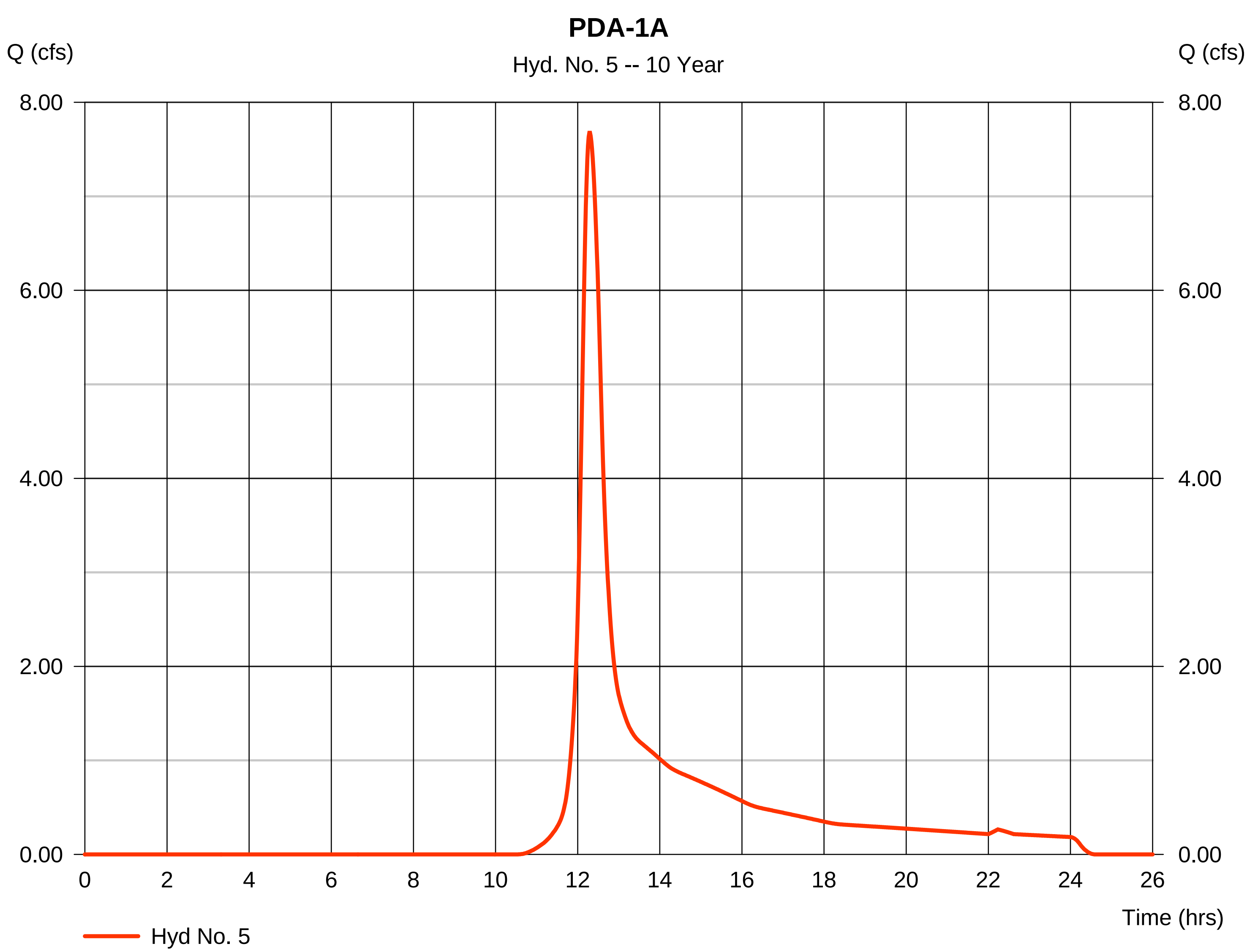
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 5

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 7.675 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 37,756 cuft
Drainage area	= 5.700 ac	Curve number	= 63
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.20 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



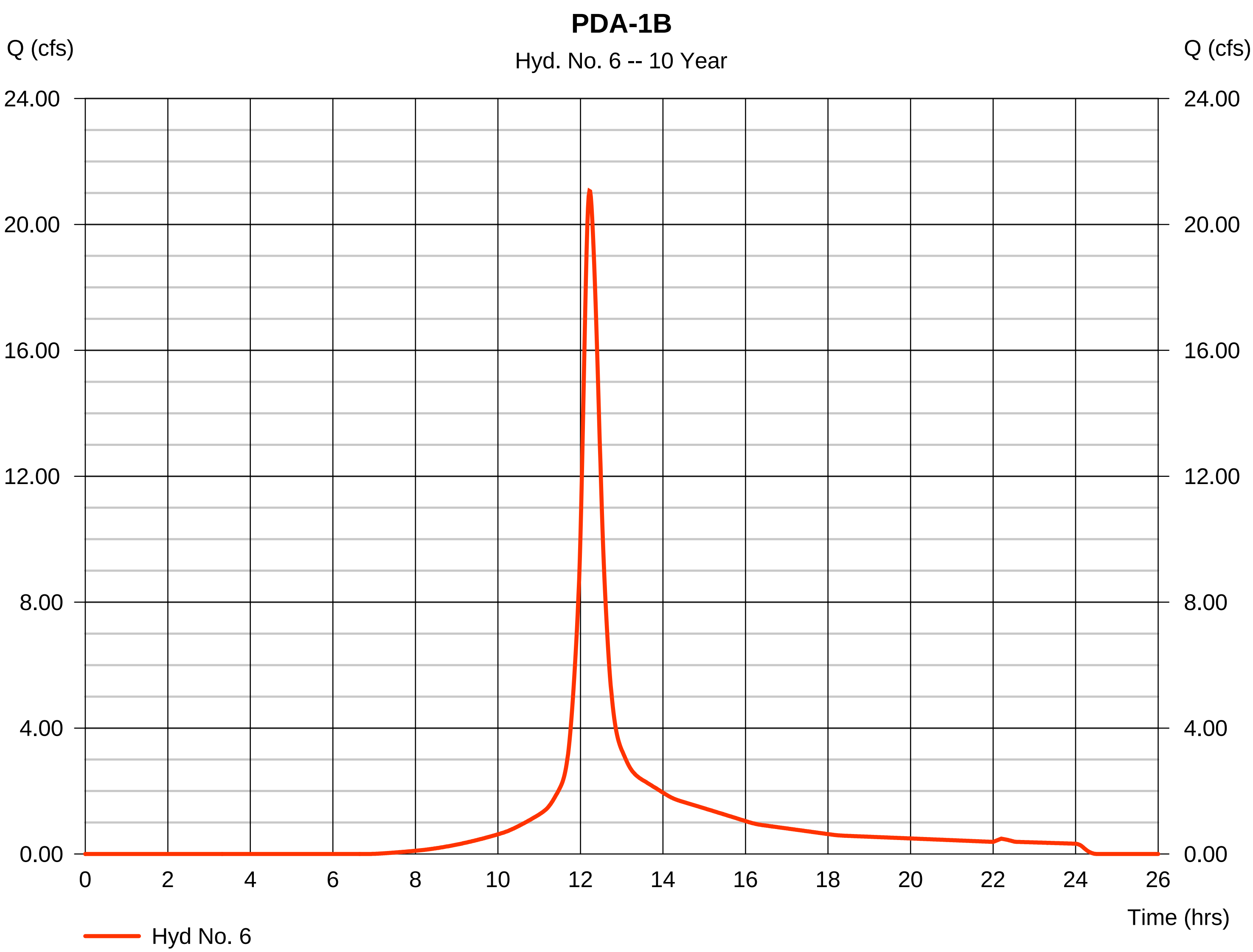
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 6

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 21.06 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 93,157 cuft
Drainage area	= 7.460 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.10 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



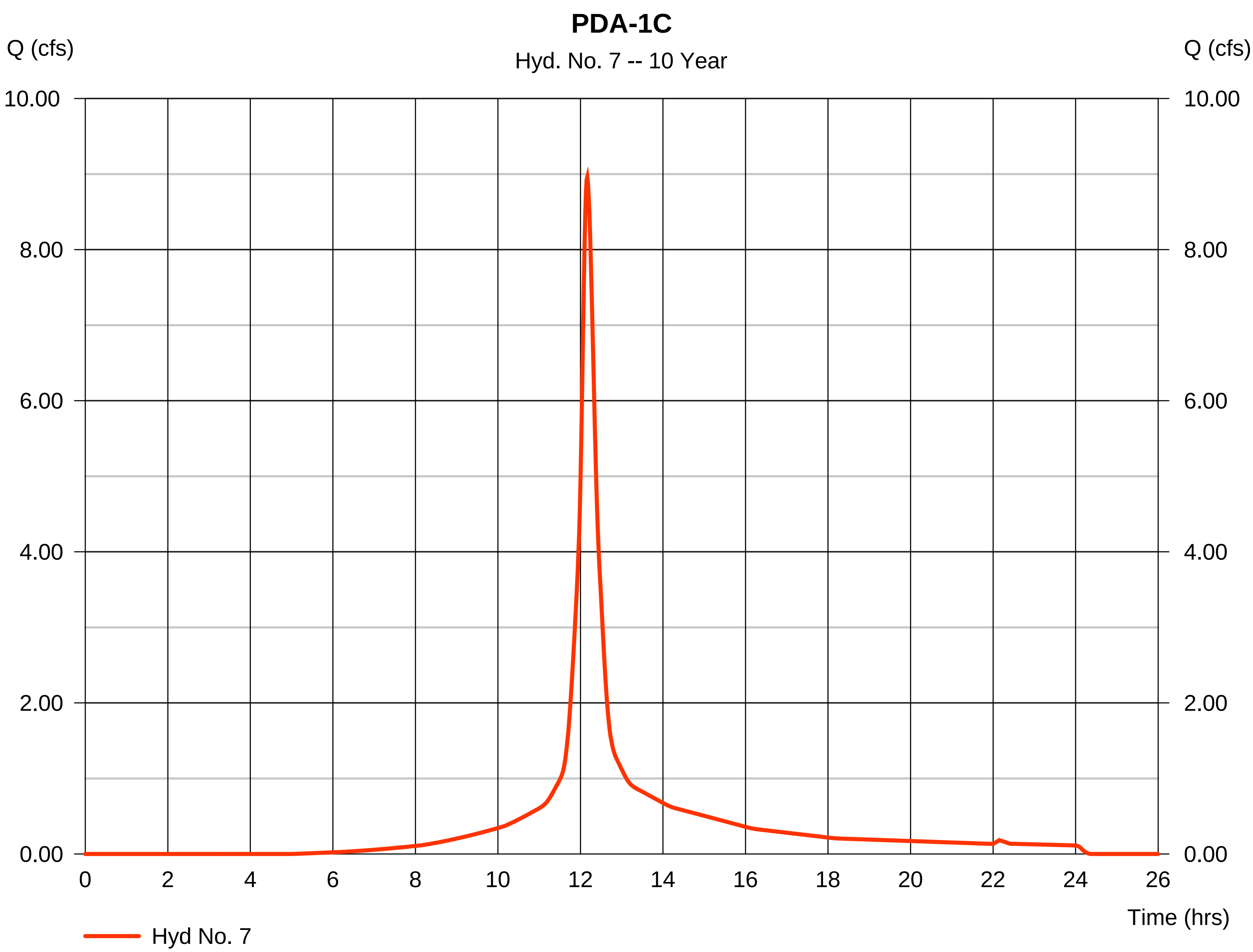
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 7

PDA-1C

Hydrograph type	= SCS Runoff	Peak discharge	= 8.959 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 36,165 cuft
Drainage area	= 2.460 ac	Curve number	= 87
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.90 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

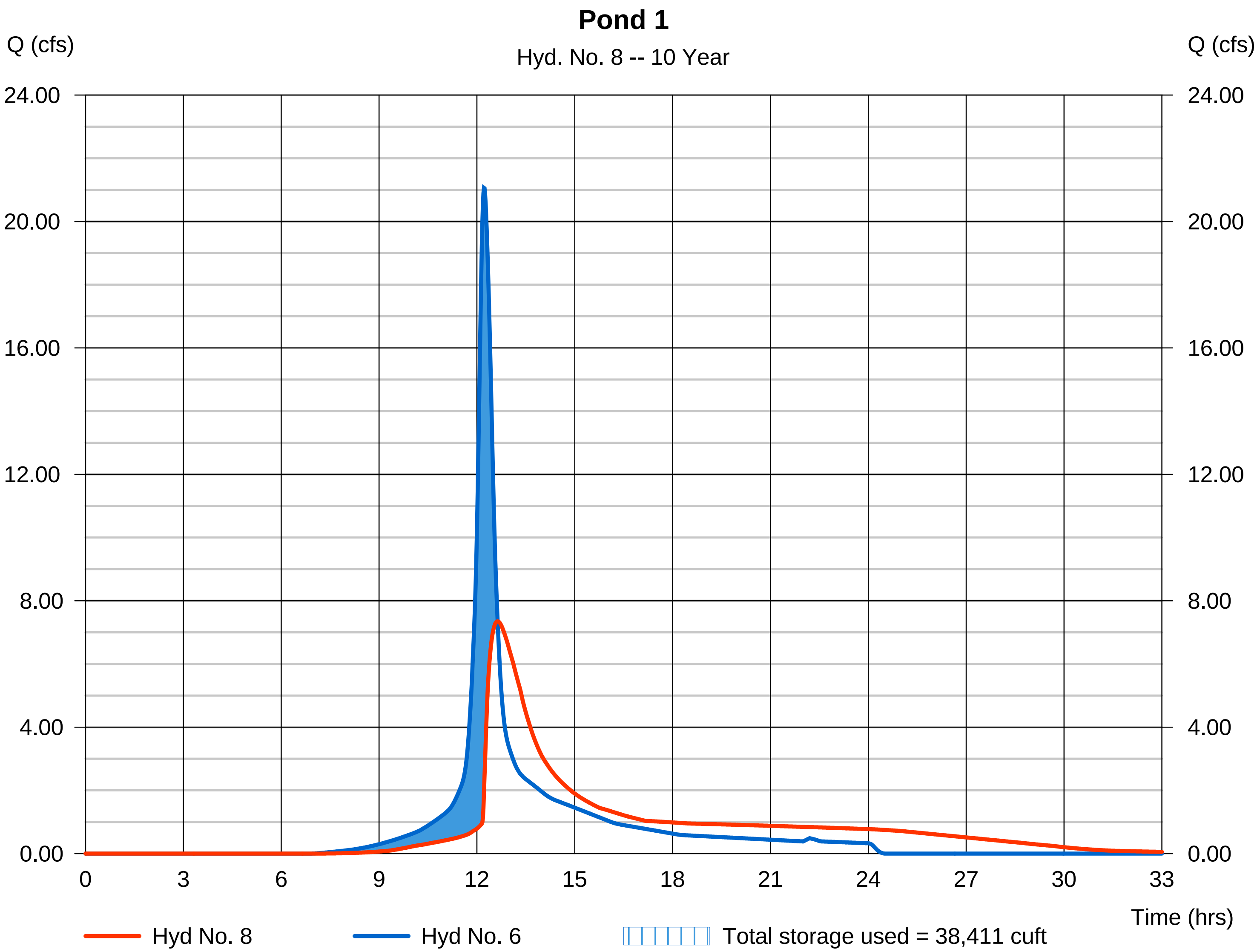
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 7.348 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.63 hrs
Time interval	= 1 min	Hyd. volume	= 93,146 cuft
Inflow hyd. No.	= 6 - PDA-1B	Max. Elevation	= 355.21 ft
Reservoir name	= Basin 1	Max. Storage	= 38,411 cuft

Storage Indication method used.

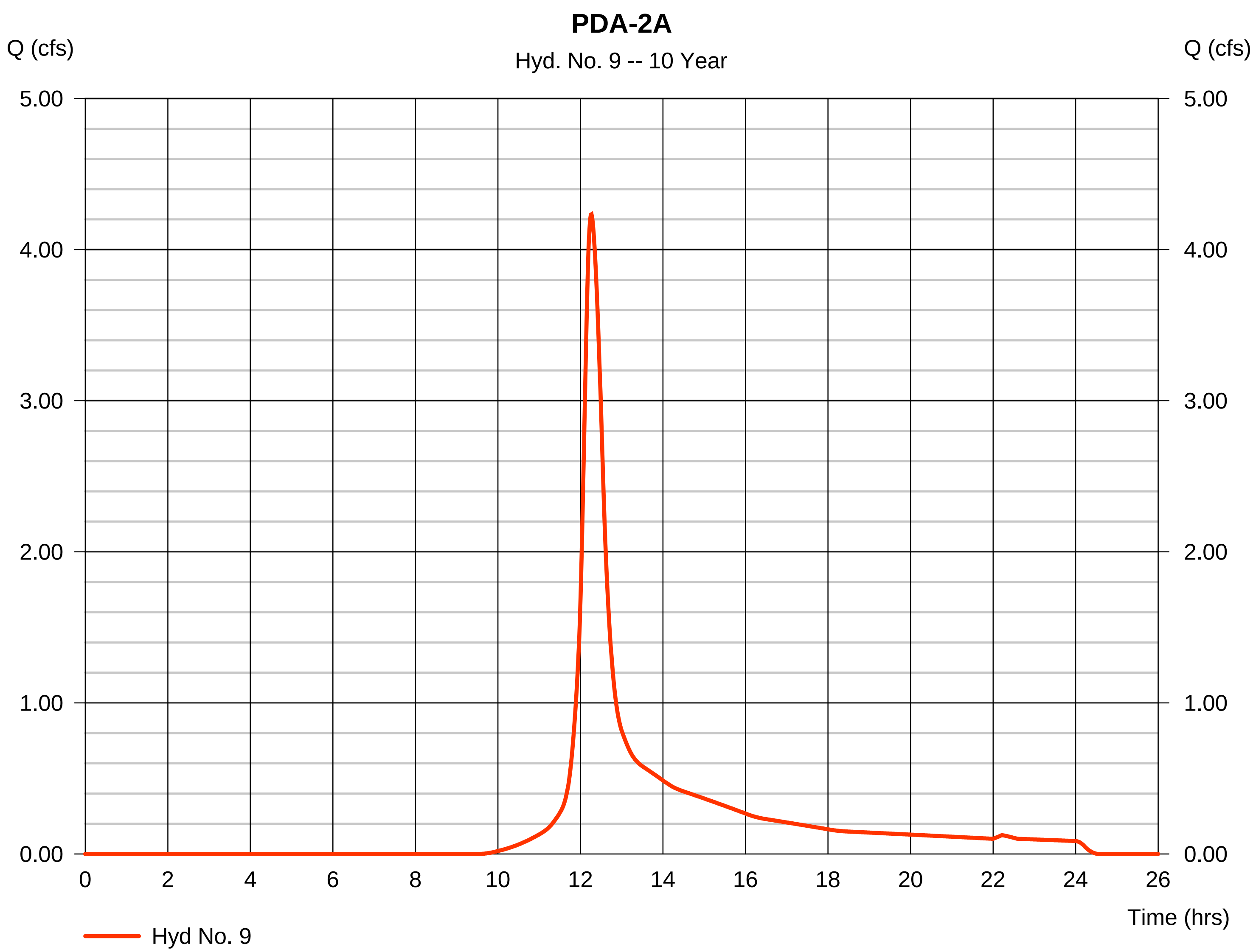


Hydrograph Report

Hyd. No. 9

PDA-2A

Hydrograph type	= SCS Runoff	Peak discharge	= 4.234 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 19,689 cuft
Drainage area	= 2.300 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.70 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



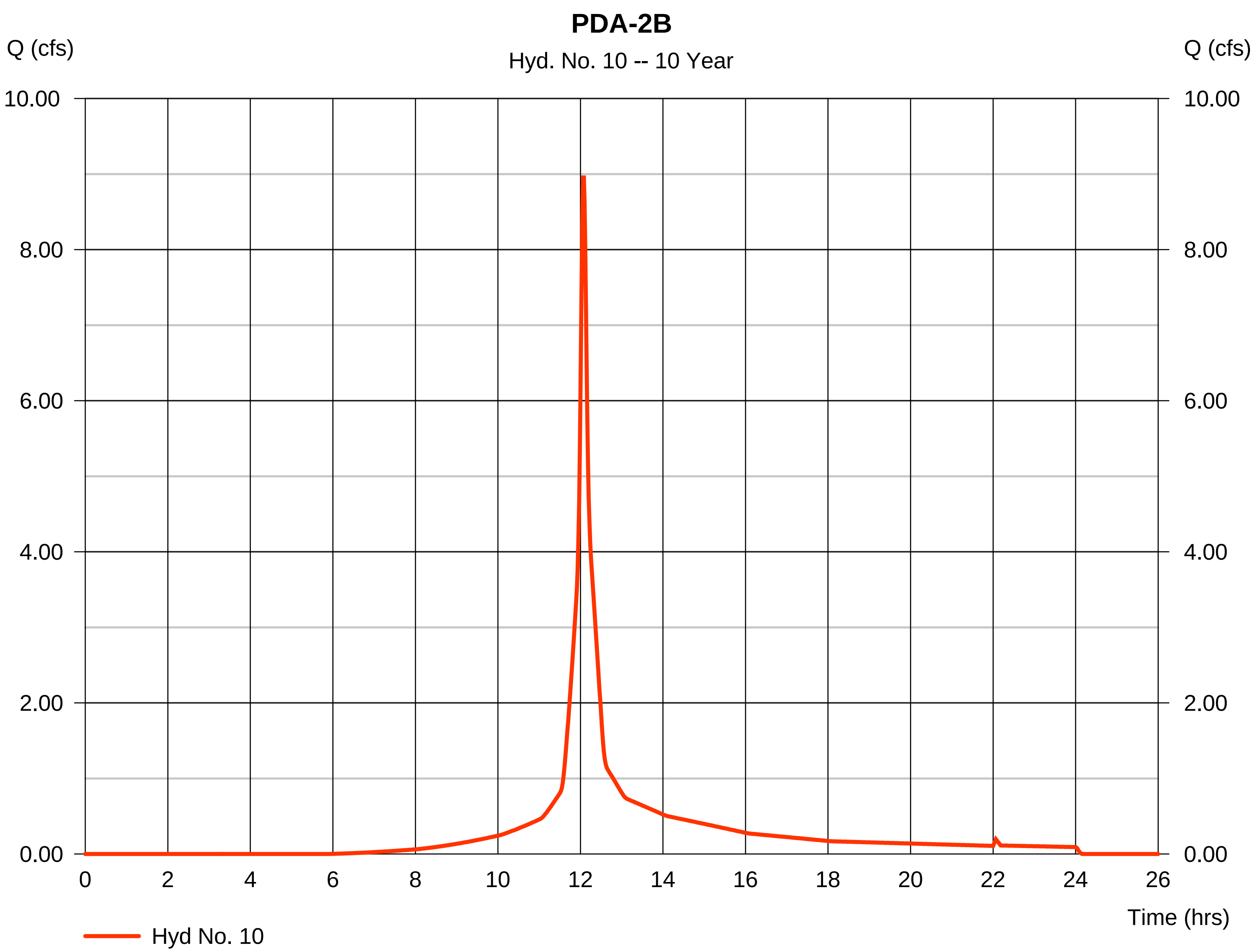
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 10

PDA-2B

Hydrograph type	= SCS Runoff	Peak discharge	= 8.954 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 28,002 cuft
Drainage area	= 2.000 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

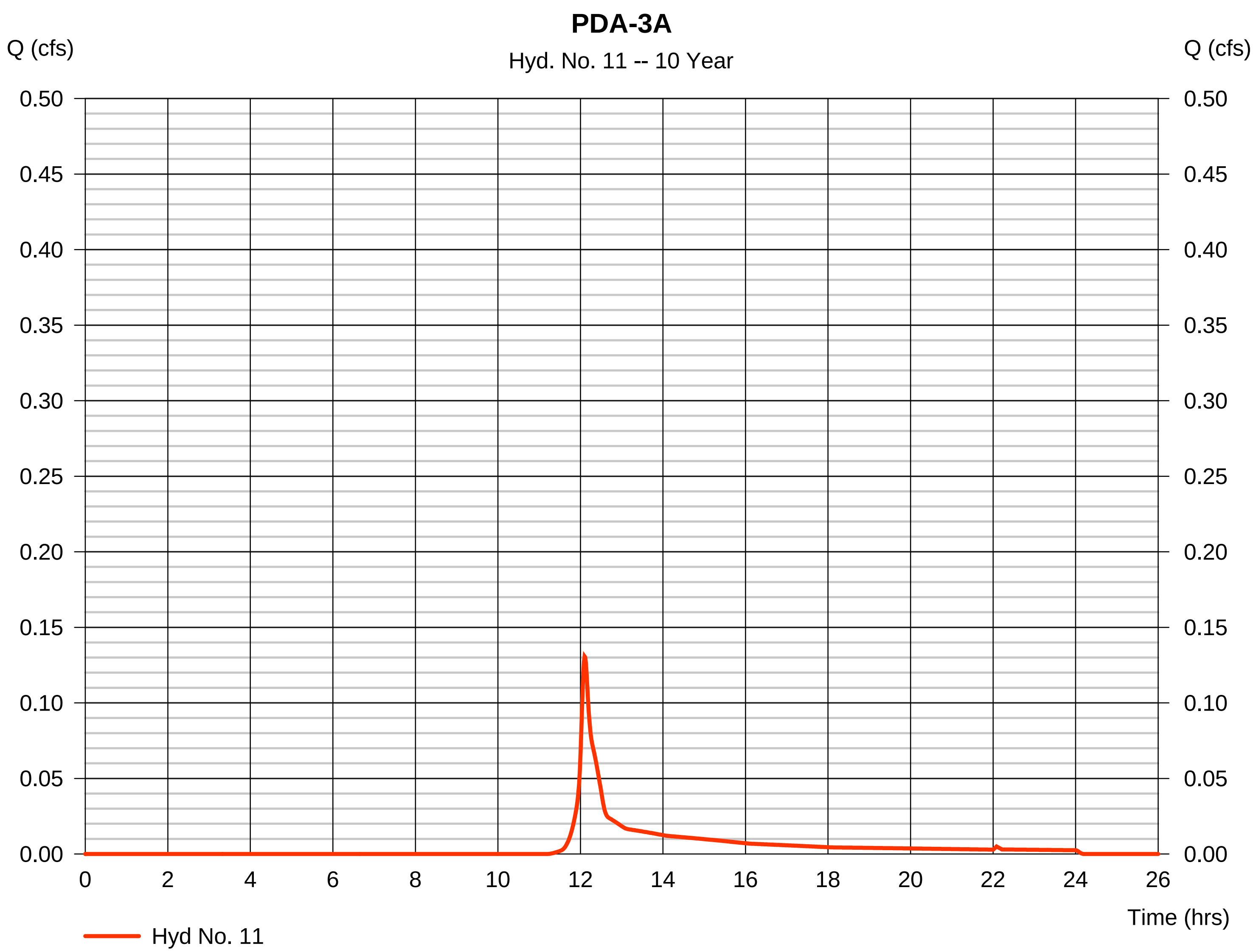


Hydrograph Report

Hyd. No. 11

PDA-3A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.131 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 465 cuft
Drainage area	= 0.090 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.90 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

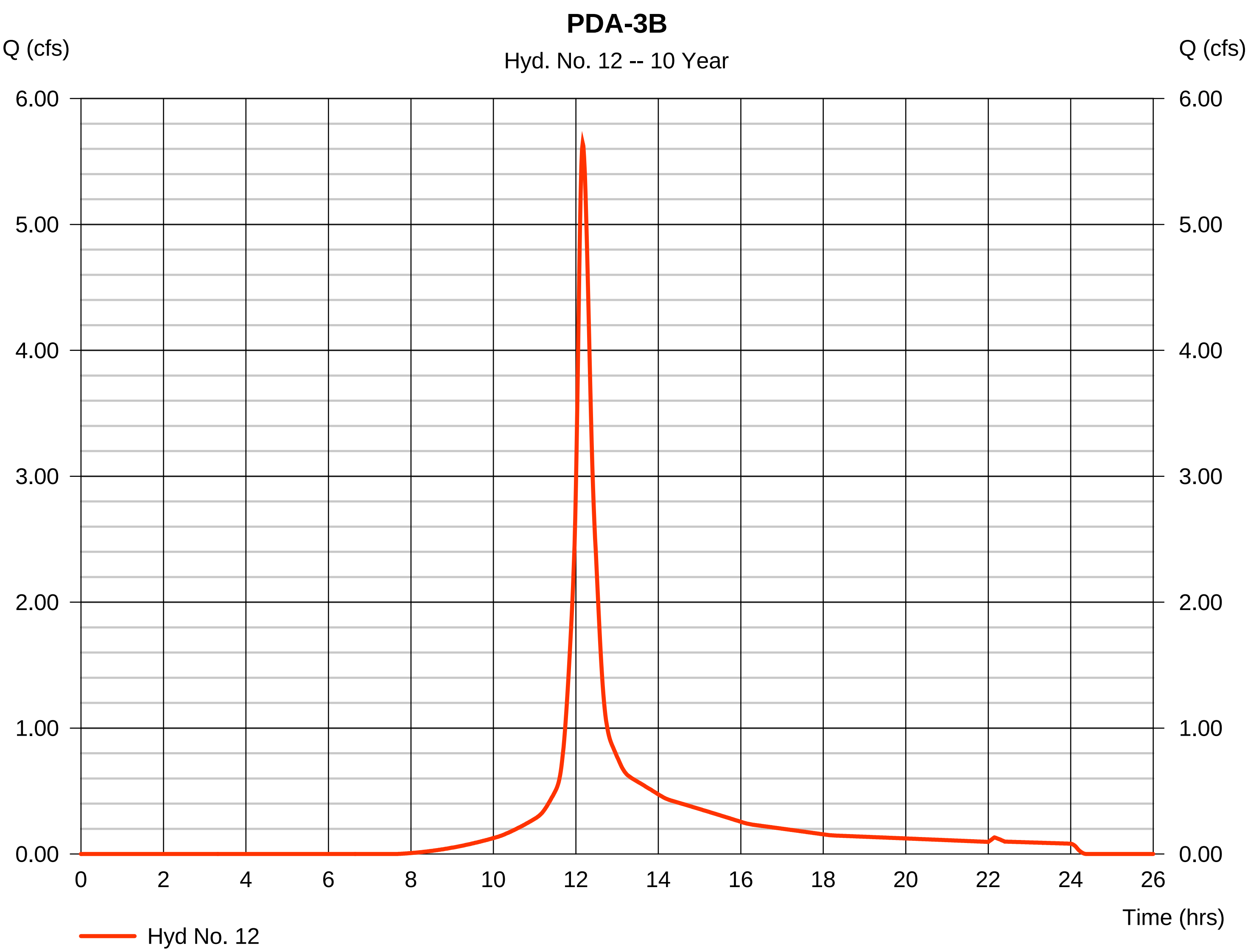


Hydrograph Report

Hyd. No. 12

PDA-3B

Hydrograph type	= SCS Runoff	Peak discharge	= 5.645 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 22,295 cuft
Drainage area	= 1.950 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.70 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



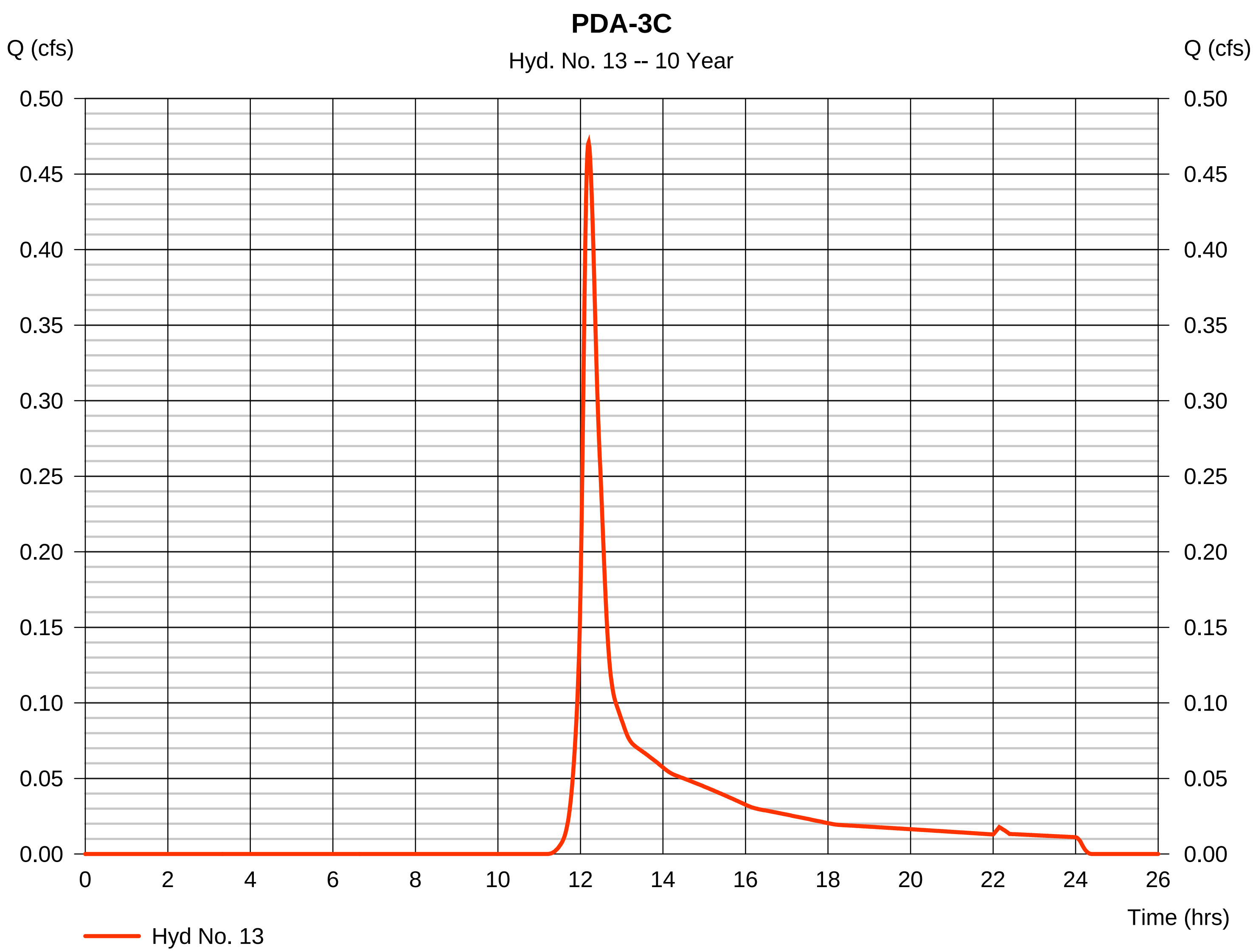
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 13

PDA-3C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.471 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.20 hrs
Time interval	= 1 min	Hyd. volume	= 2,066 cuft
Drainage area	= 0.390 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.80 min
Total precip.	= 5.51 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

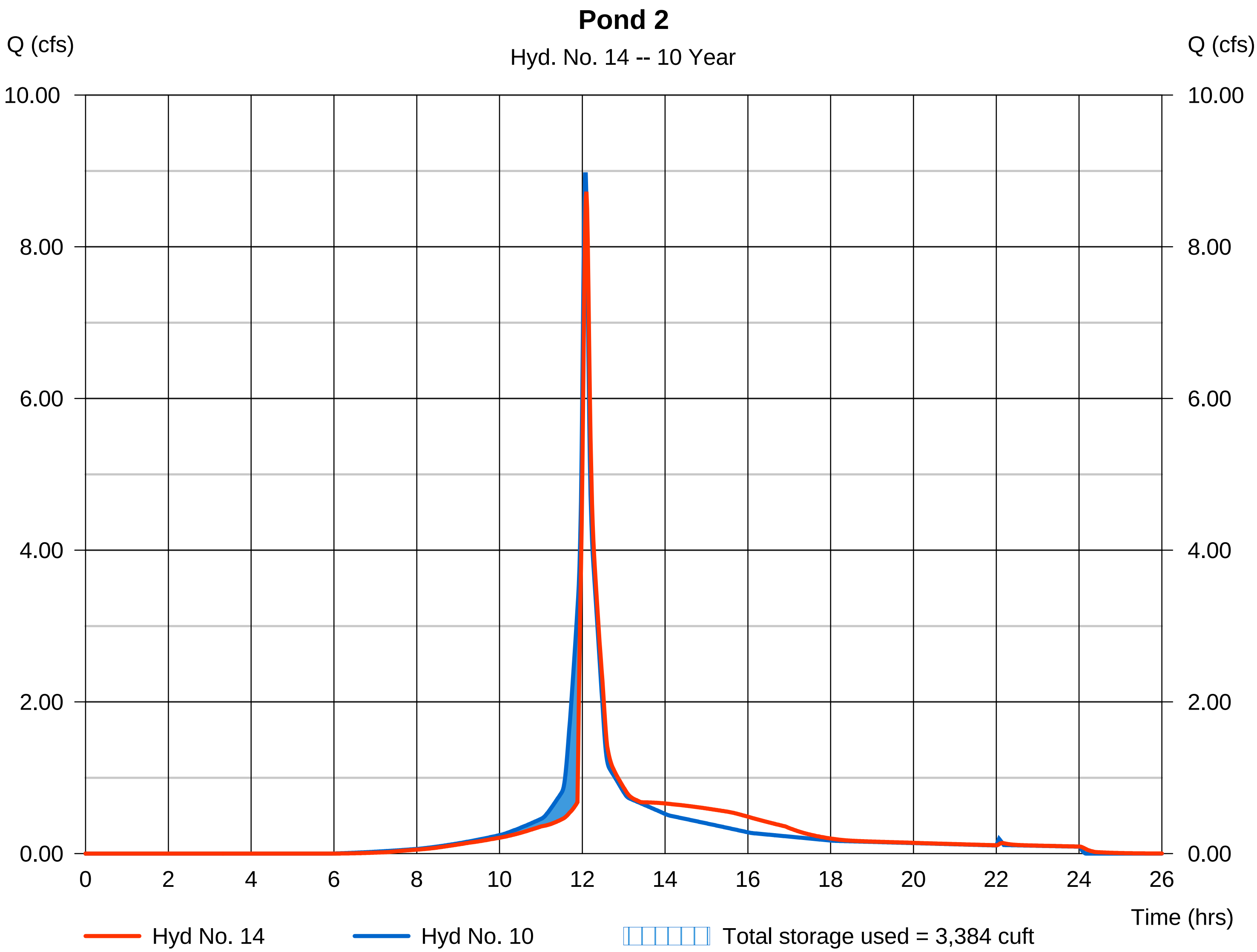
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 8.725 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 27,999 cuft
Inflow hyd. No.	= 10 - PDA-2B	Max. Elevation	= 334.49 ft
Reservoir name	= Basin 2	Max. Storage	= 3,384 cuft

Storage Indication method used.



Hydrograph Report

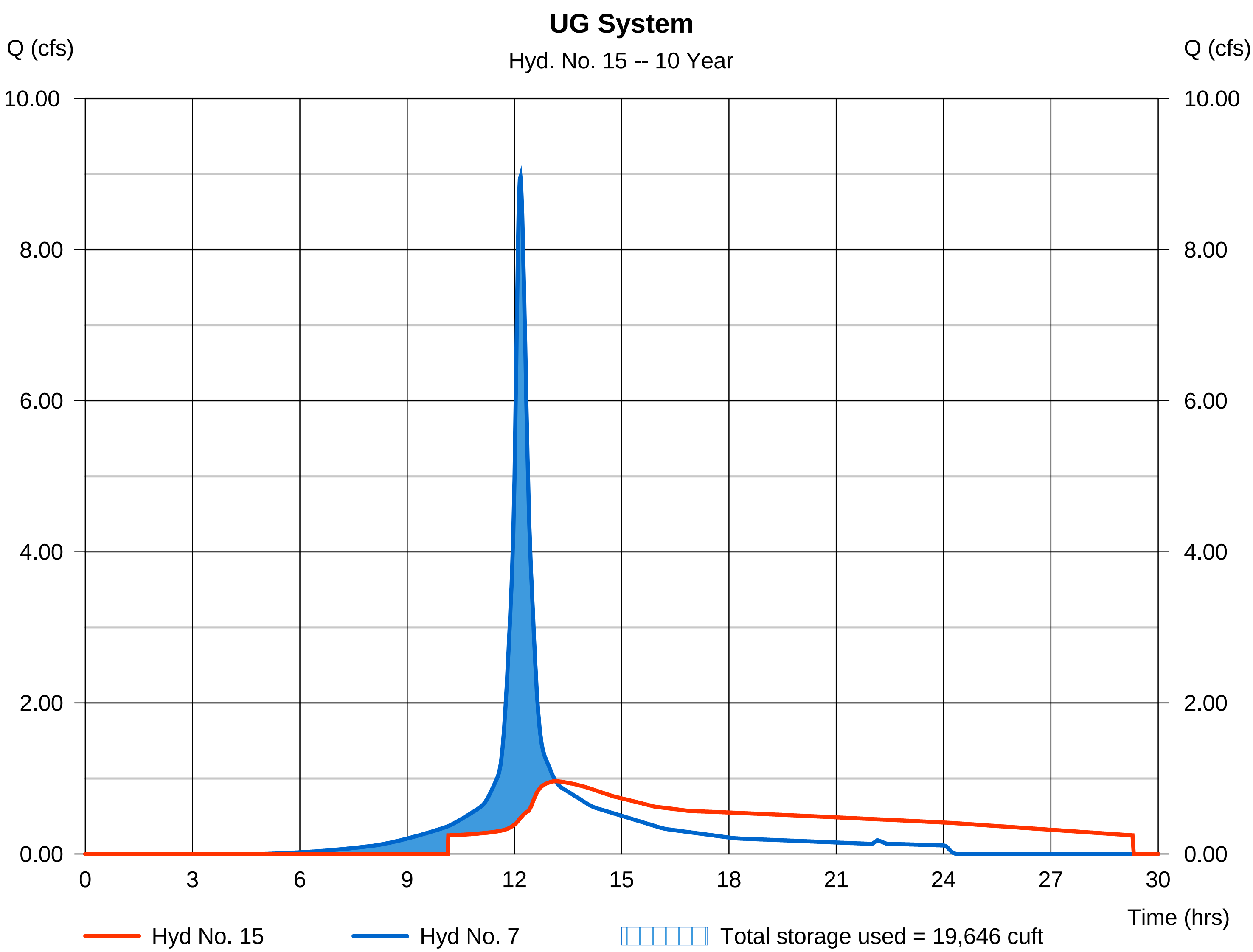
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 0.963 cfs
Storm frequency	= 10 yrs	Time to peak	= 13.15 hrs
Time interval	= 1 min	Hyd. volume	= 34,018 cuft
Inflow hyd. No.	= 7 - PDA-1C	Max. Elevation	= 360.31 ft
Reservoir name	= Undergroud Detention	Max. Storage	= 19,646 cuft

Storage Indication method used.



Hydrograph Report

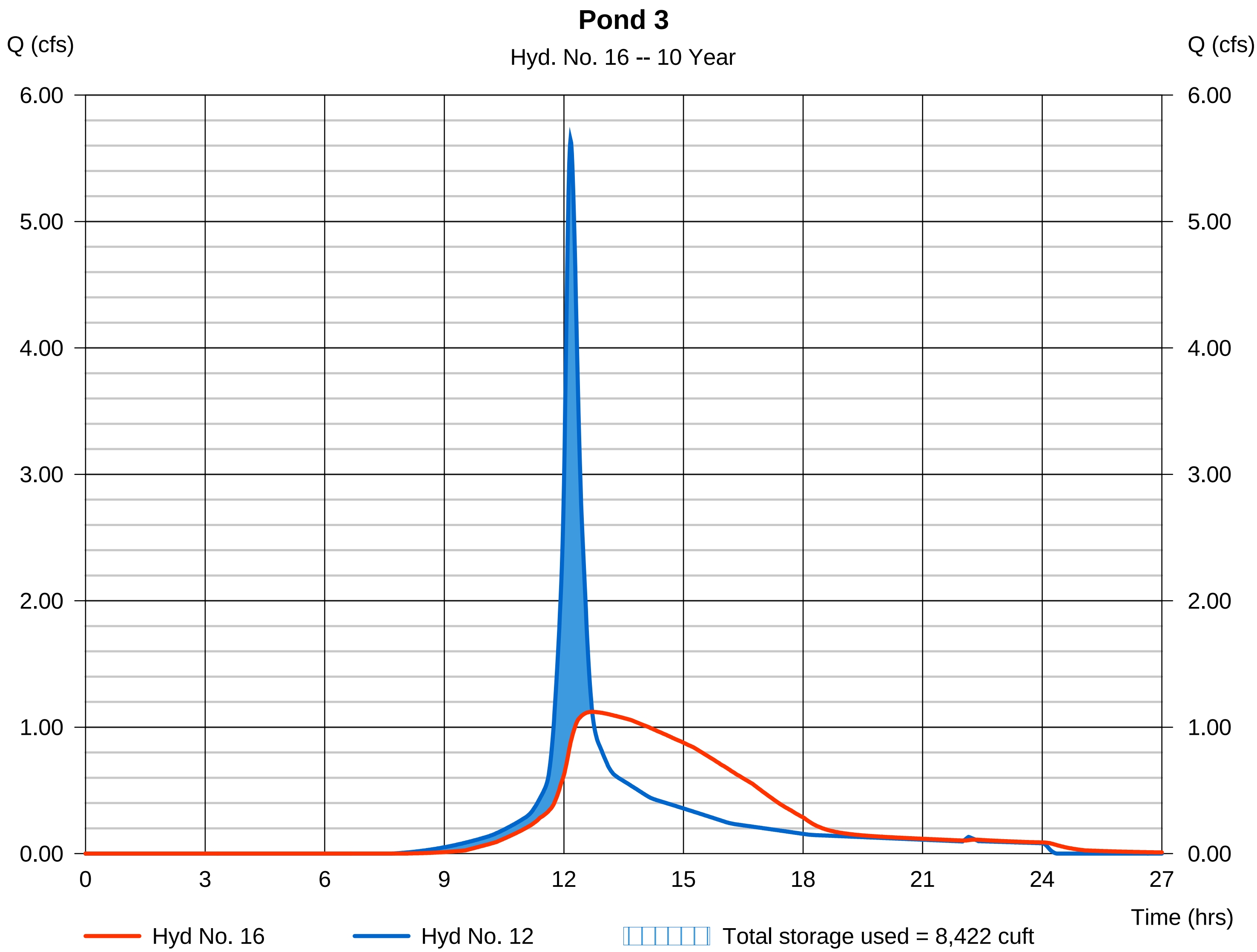
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 1.121 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.72 hrs
Time interval	= 1 min	Hyd. volume	= 22,288 cuft
Inflow hyd. No.	= 12 - PDA-3B	Max. Elevation	= 365.34 ft
Reservoir name	= Basin 3	Max. Storage	= 8,422 cuft

Storage Indication method used.



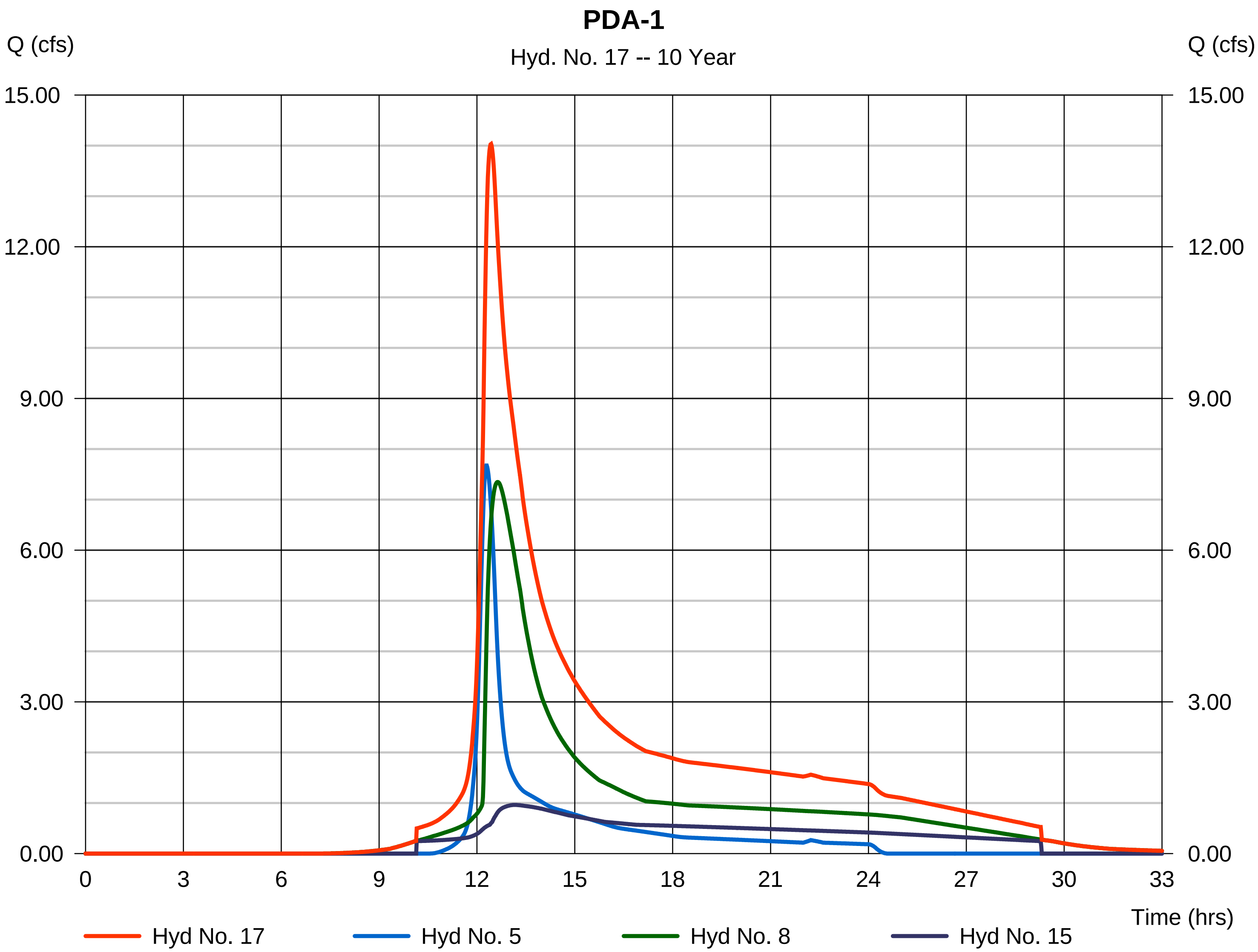
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 17

PDA-1

Hydrograph type	= Combine	Peak discharge	= 14.03 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.43 hrs
Time interval	= 1 min	Hyd. volume	= 164,920 cuft
Inflow hyds.	= 5, 8, 15	Contrib. drain. area	= 5.700 ac



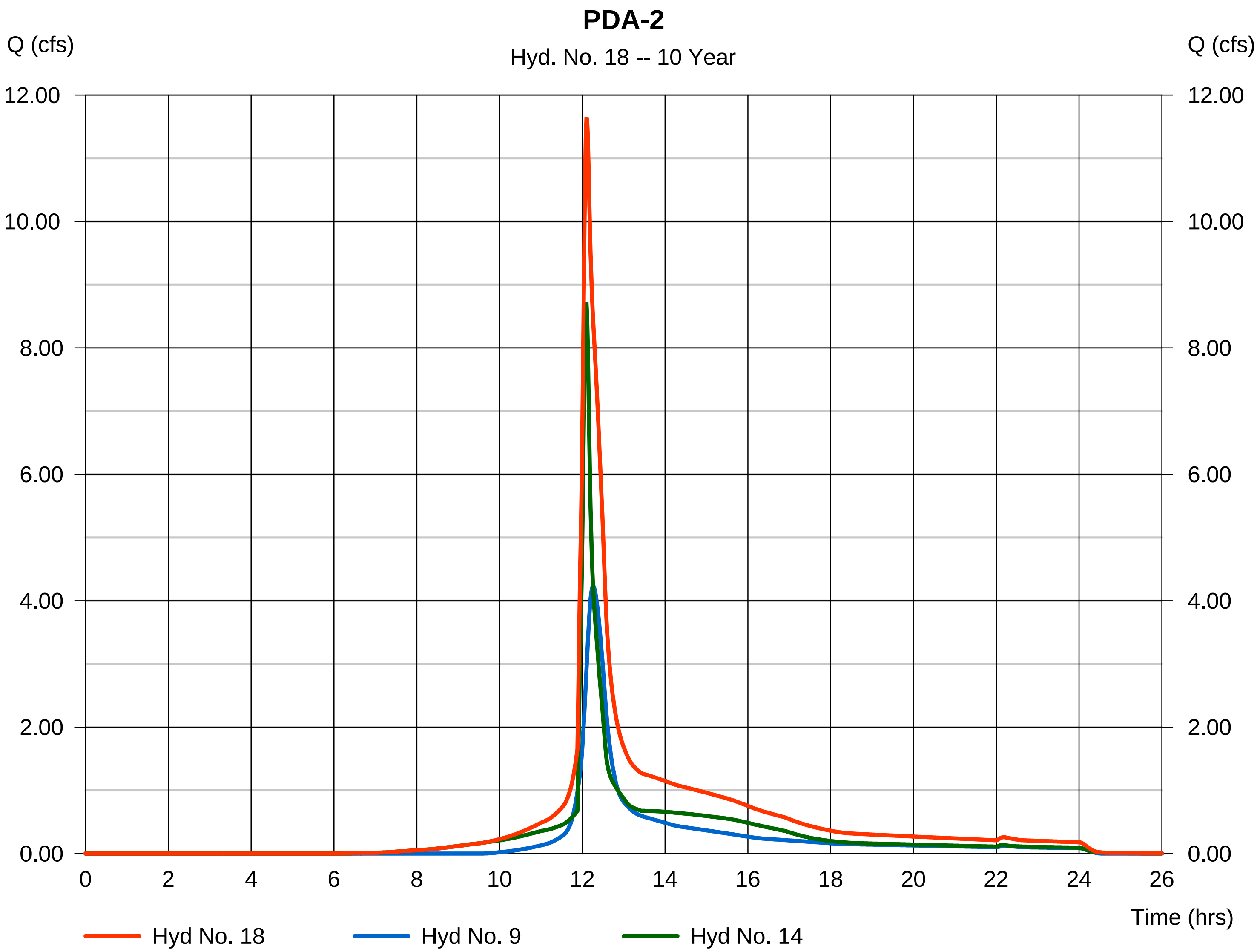
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 18

PDA-2

Hydrograph type	= Combine	Peak discharge	= 11.62 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 47,688 cuft
Inflow hyds.	= 9, 14	Contrib. drain. area	= 2.300 ac

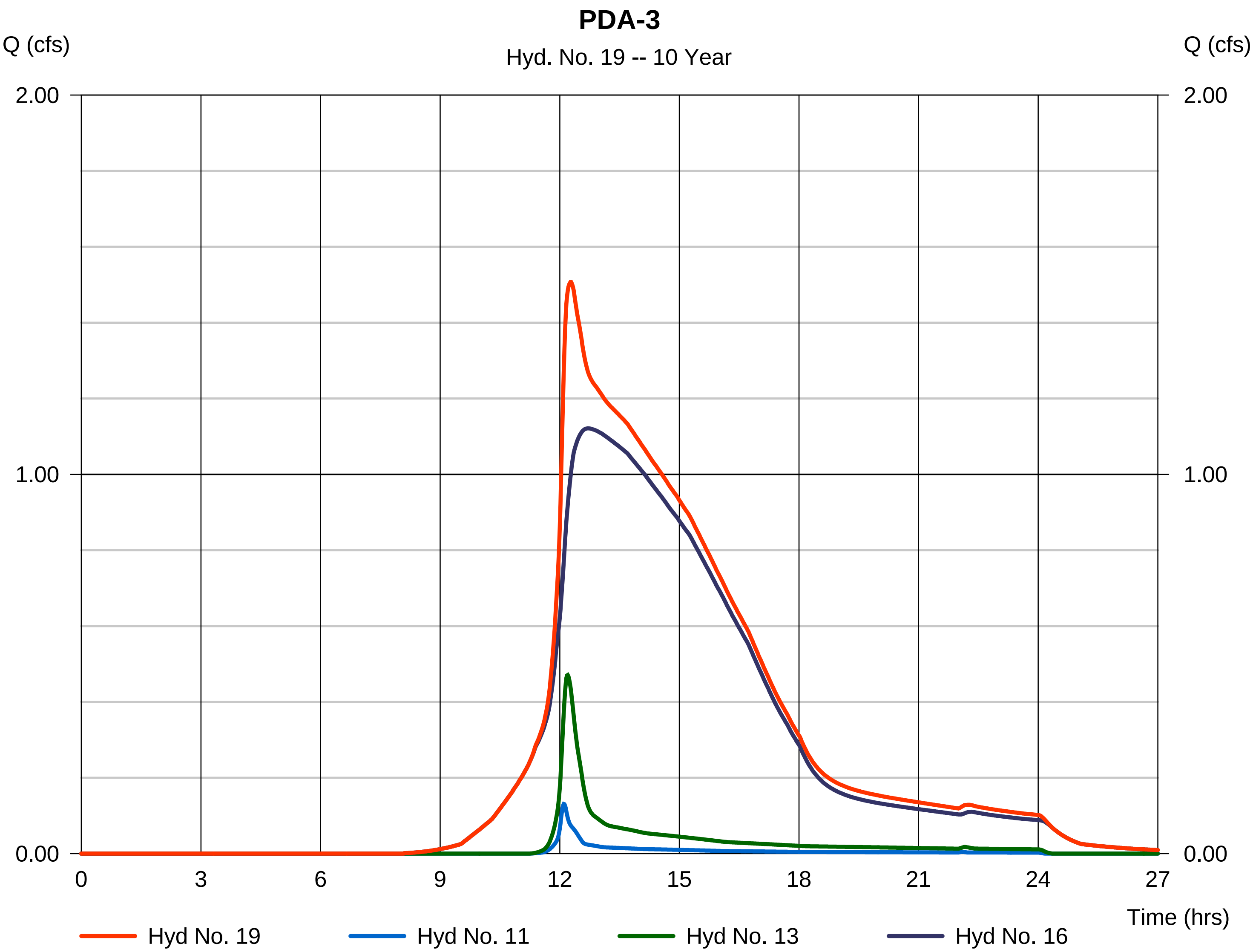


Hydrograph Report

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 1.507 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 24,820 cuft
Inflow hyds.	= 11, 13, 16	Contrib. drain. area	= 0.480 ac

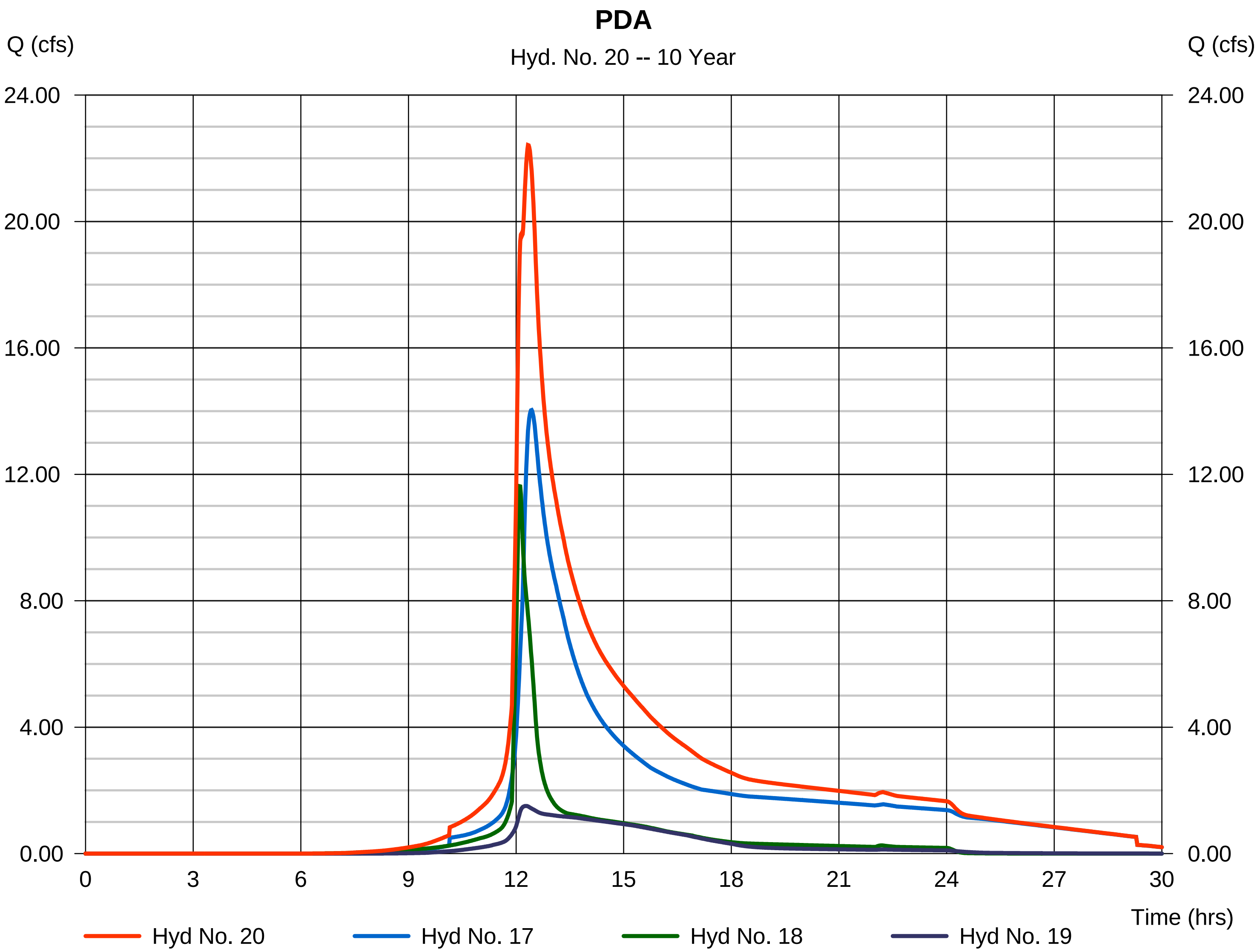


Hydrograph Report

Hyd. No. 20

PDA

Hydrograph type	= Combine	Peak discharge	= 22.42 cfs
Storm frequency	= 10 yrs	Time to peak	= 12.33 hrs
Time interval	= 1 min	Hyd. volume	= 237,428 cuft
Inflow hyds.	= 17, 18, 19	Contrib. drain. area	= 0.000 ac



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	24.28	1	735	112,039	------	------	------	EDA-1
2	SCS Runoff	18.97	1	728	68,874	------	------	------	EDA-2
3	SCS Runoff	6.792	1	734	30,367	------	------	------	EDA-3
4	Combine	47.13	1	732	211,281	1, 2, 3	------	------	EDA
5	SCS Runoff	11.55	1	737	55,226	------	------	------	PDA-1A
6	SCS Runoff	27.67	1	733	123,084	------	------	------	PDA-1B
7	SCS Runoff	11.39	1	730	46,515	------	------	------	PDA-1C
8	Reservoir	9.818	1	757	123,073	6	356.21	49,718	Pond 1
9	SCS Runoff	6.029	1	735	27,696	------	------	------	PDA-2A
10	SCS Runoff	11.56	1	724	36,494	------	------	------	PDA-2B
11	SCS Runoff	0.210	1	726	707	------	------	------	PDA-3A
12	SCS Runoff	7.543	1	730	29,883	------	------	------	PDA-3B
13	SCS Runoff	0.756	1	731	3,144	------	------	------	PDA-3C
14	Reservoir	10.13	1	727	36,492	10	334.74	3,816	Pond 2
15	Reservoir	2.106	1	762	44,368	7	360.72	23,599	UG System
16	Reservoir	3.725	1	745	29,876	12	365.72	9,954	Pond 3
17	Combine	21.15	1	744	222,667	5, 8, 15,	------	------	PDA-1
18	Combine	15.13	1	730	64,188	9, 14,	------	------	PDA-2
19	Combine	4.256	1	745	33,728	11, 13, 16,	------	------	PDA-3
20	Combine	34.48	1	742	320,582	17, 18, 19	------	------	PDA

Hydrology.gpw	Return Period: 25 Year	Monday, 01 / 9 / 2023

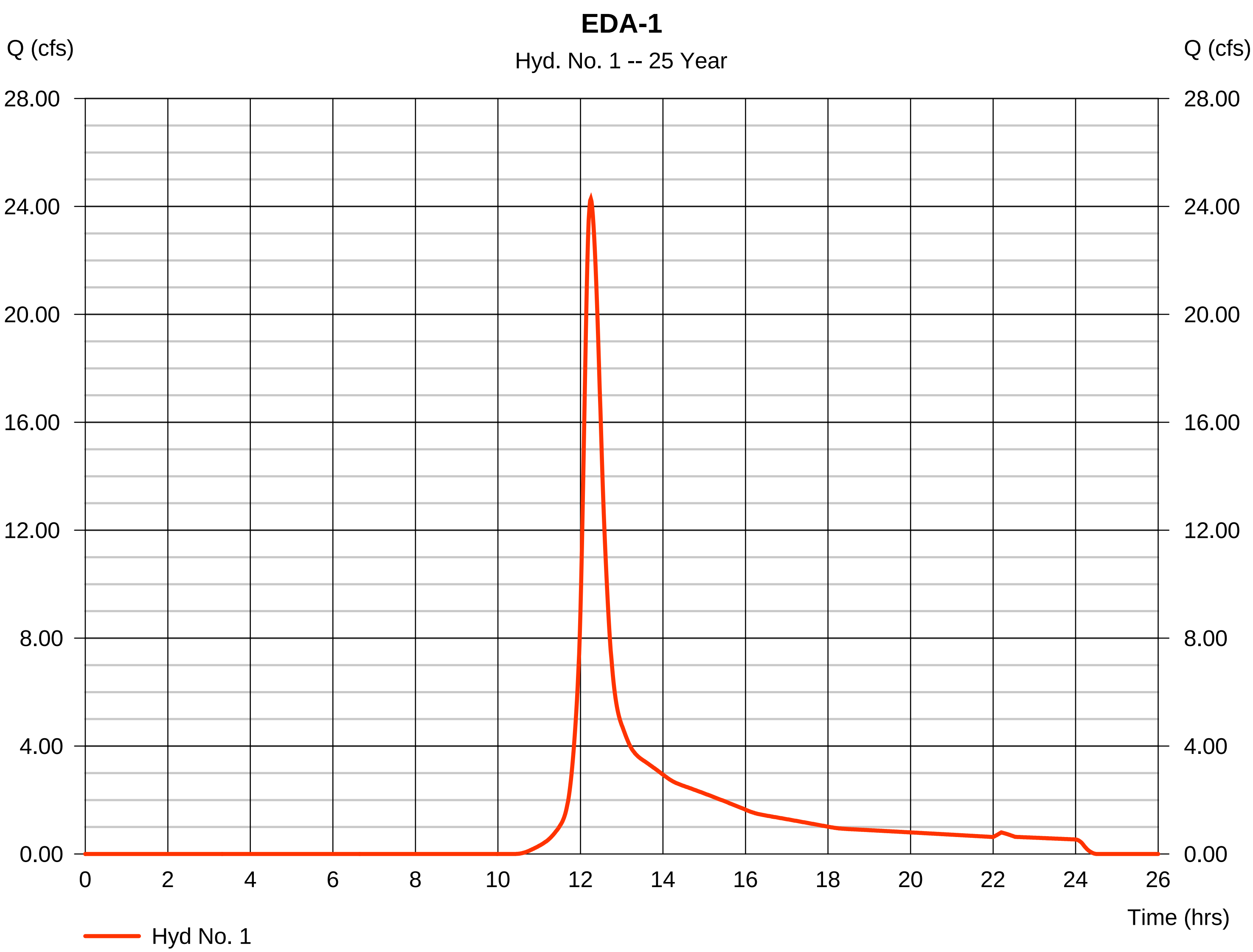
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 24.28 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.25 hrs
Time interval	= 1 min	Hyd. volume	= 112,039 cuft
Drainage area	= 13.340 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.20 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



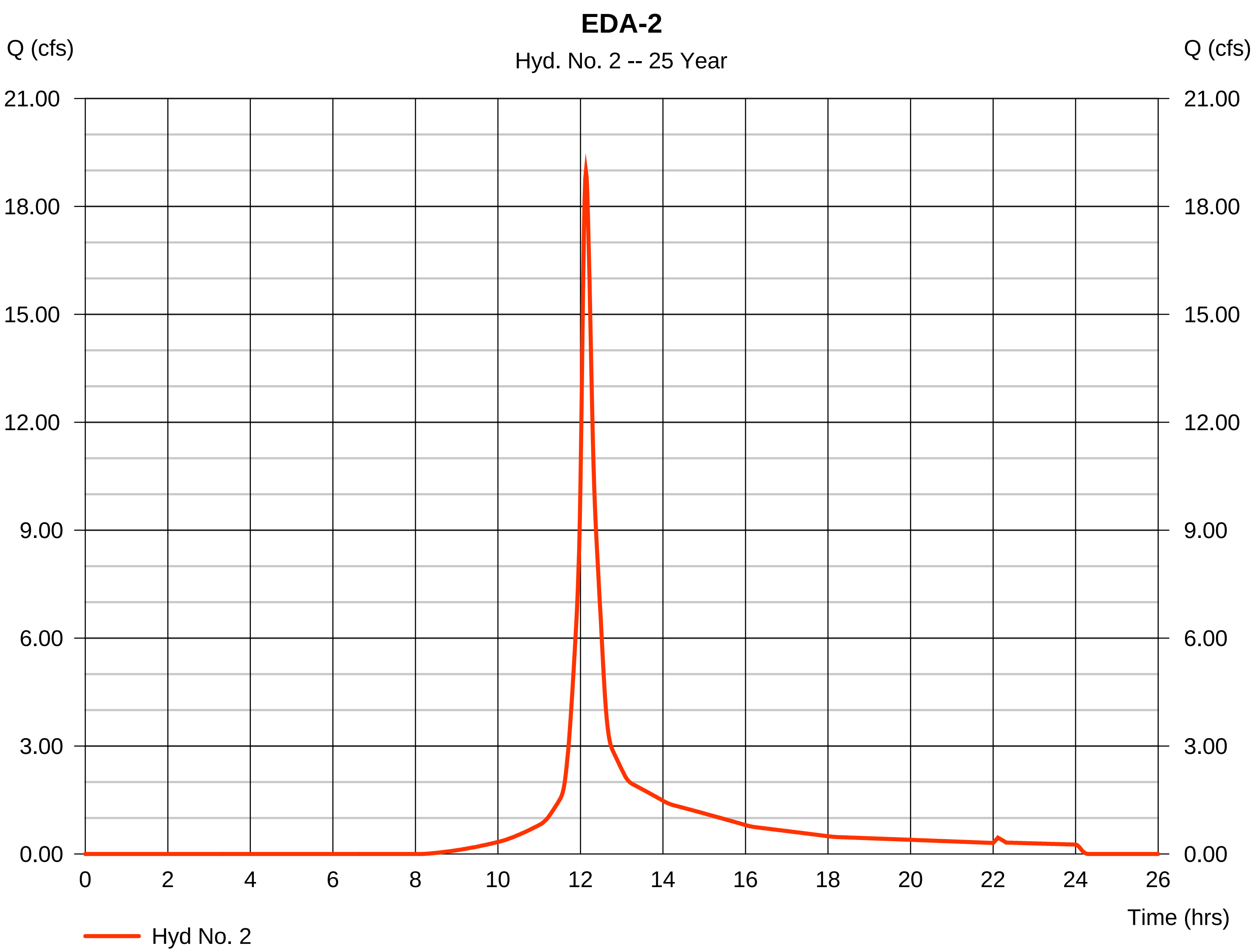
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 18.97 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 68,874 cuft
Drainage area	= 5.190 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.10 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



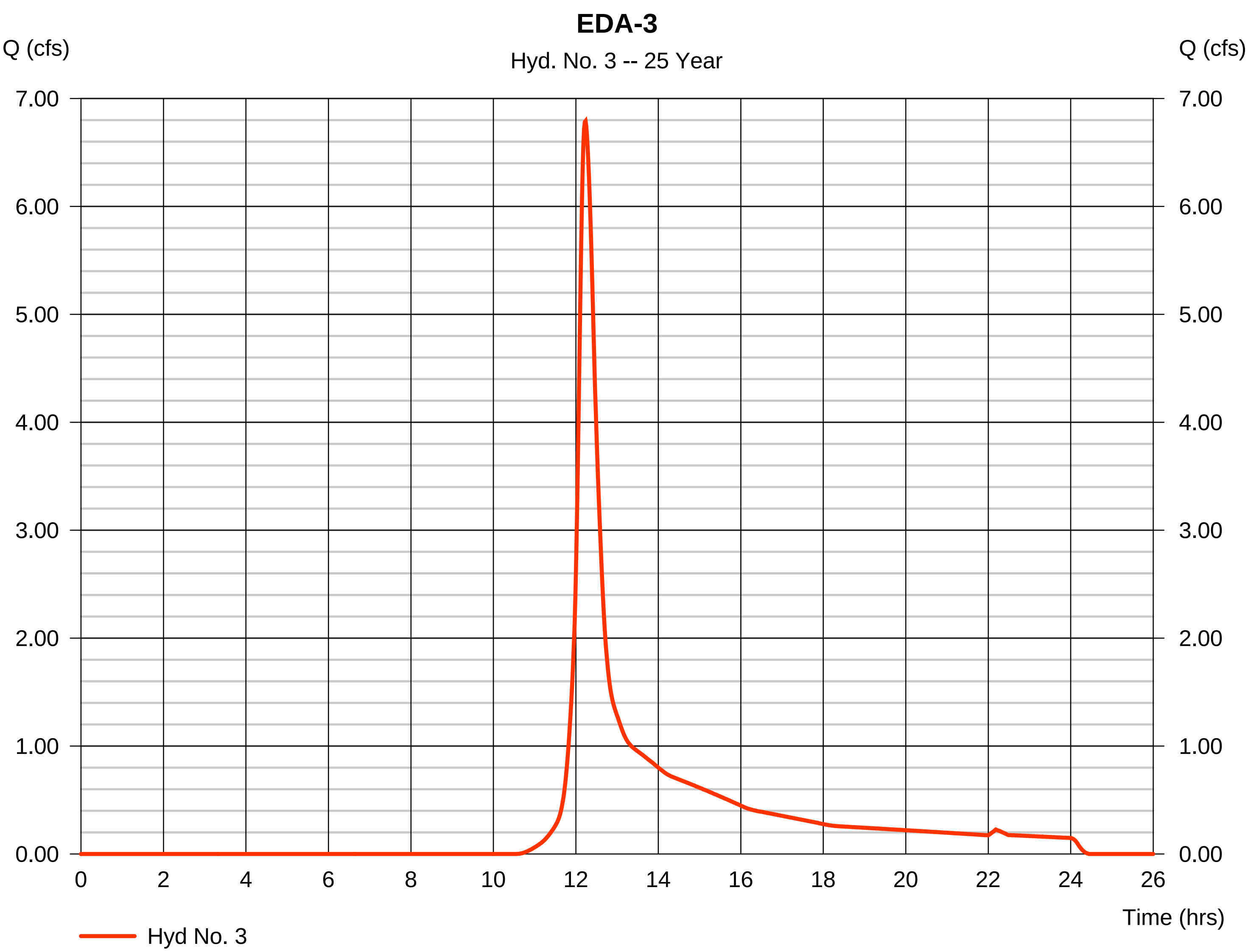
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 3

EDA-3

Hydrograph type	= SCS Runoff	Peak discharge	= 6.792 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.23 hrs
Time interval	= 1 min	Hyd. volume	= 30,367 cuft
Drainage area	= 3.810 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.20 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



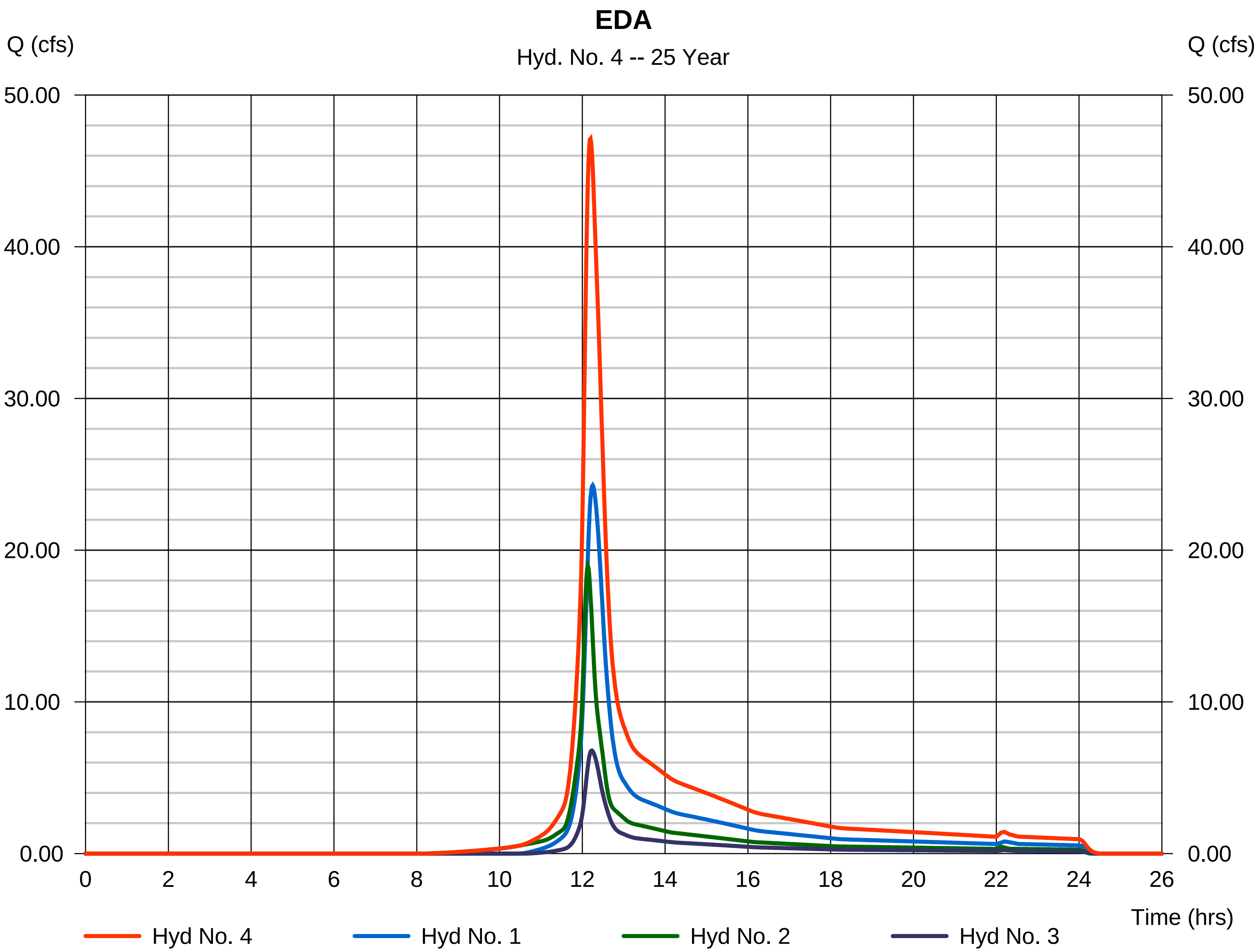
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 4

EDA

Hydrograph type	= Combine	Peak discharge	= 47.13 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.20 hrs
Time interval	= 1 min	Hyd. volume	= 211,281 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 22.340 ac



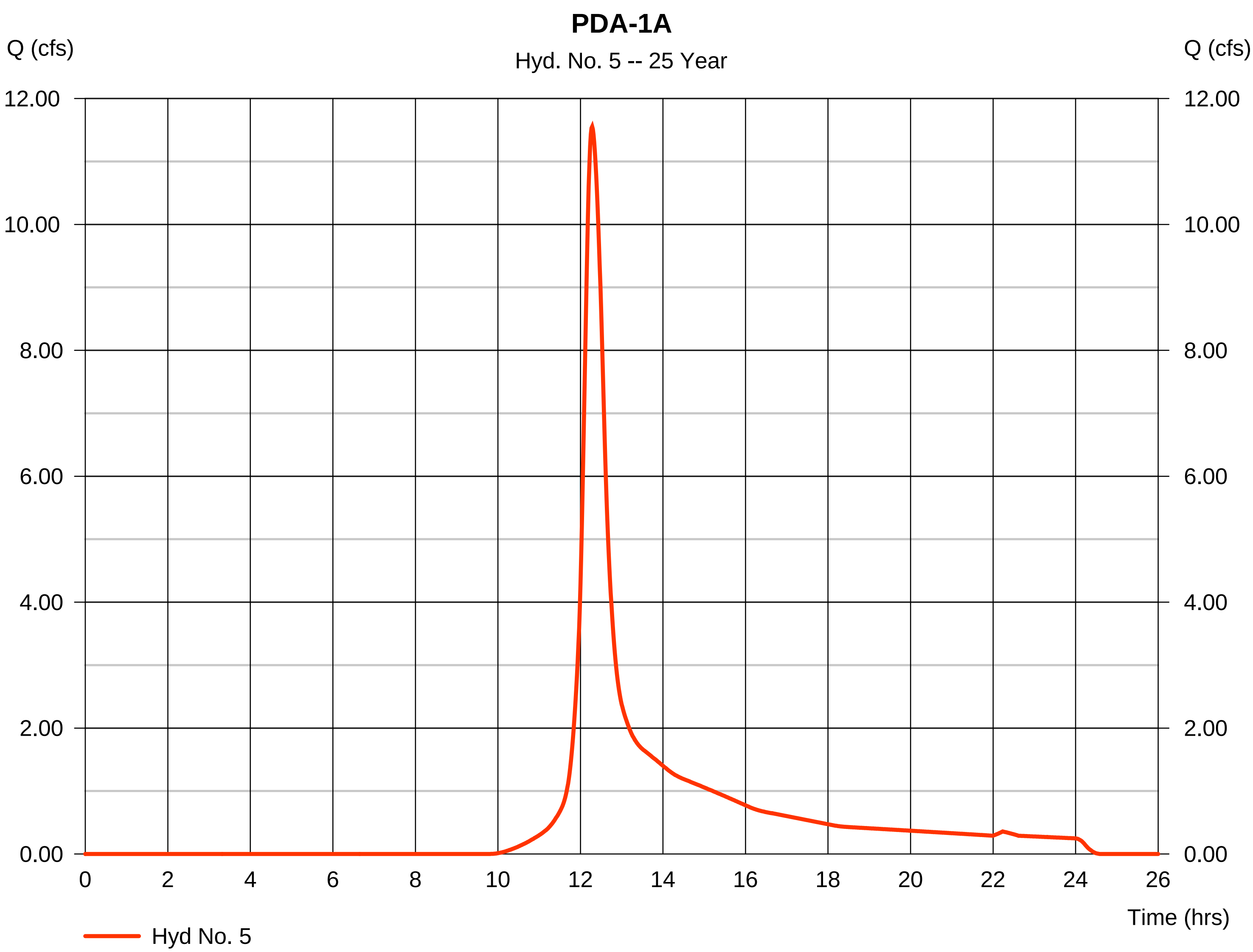
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 5

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 11.55 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 55,226 cuft
Drainage area	= 5.700 ac	Curve number	= 63
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.20 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



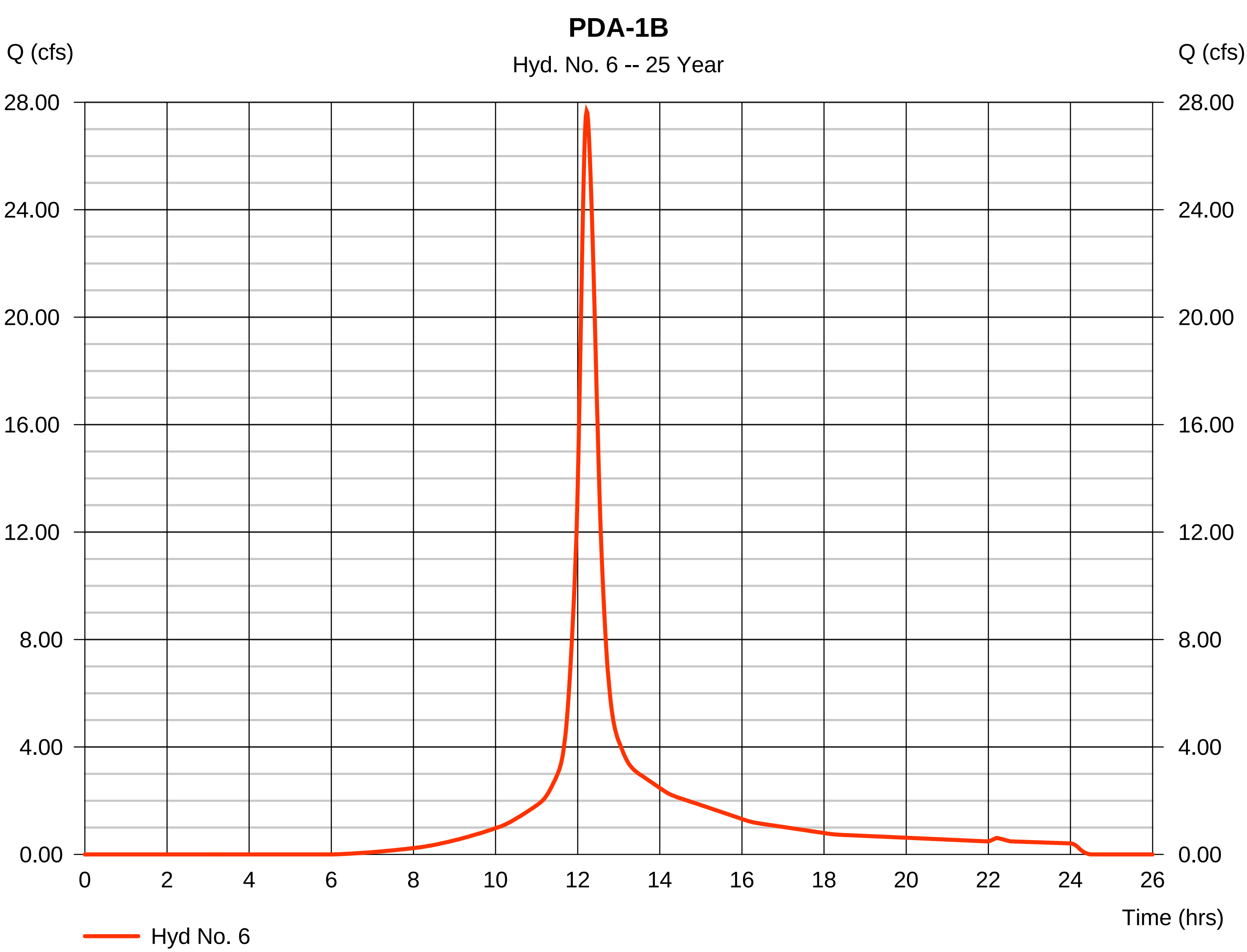
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 6

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 27.67 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 123,084 cuft
Drainage area	= 7.460 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.10 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



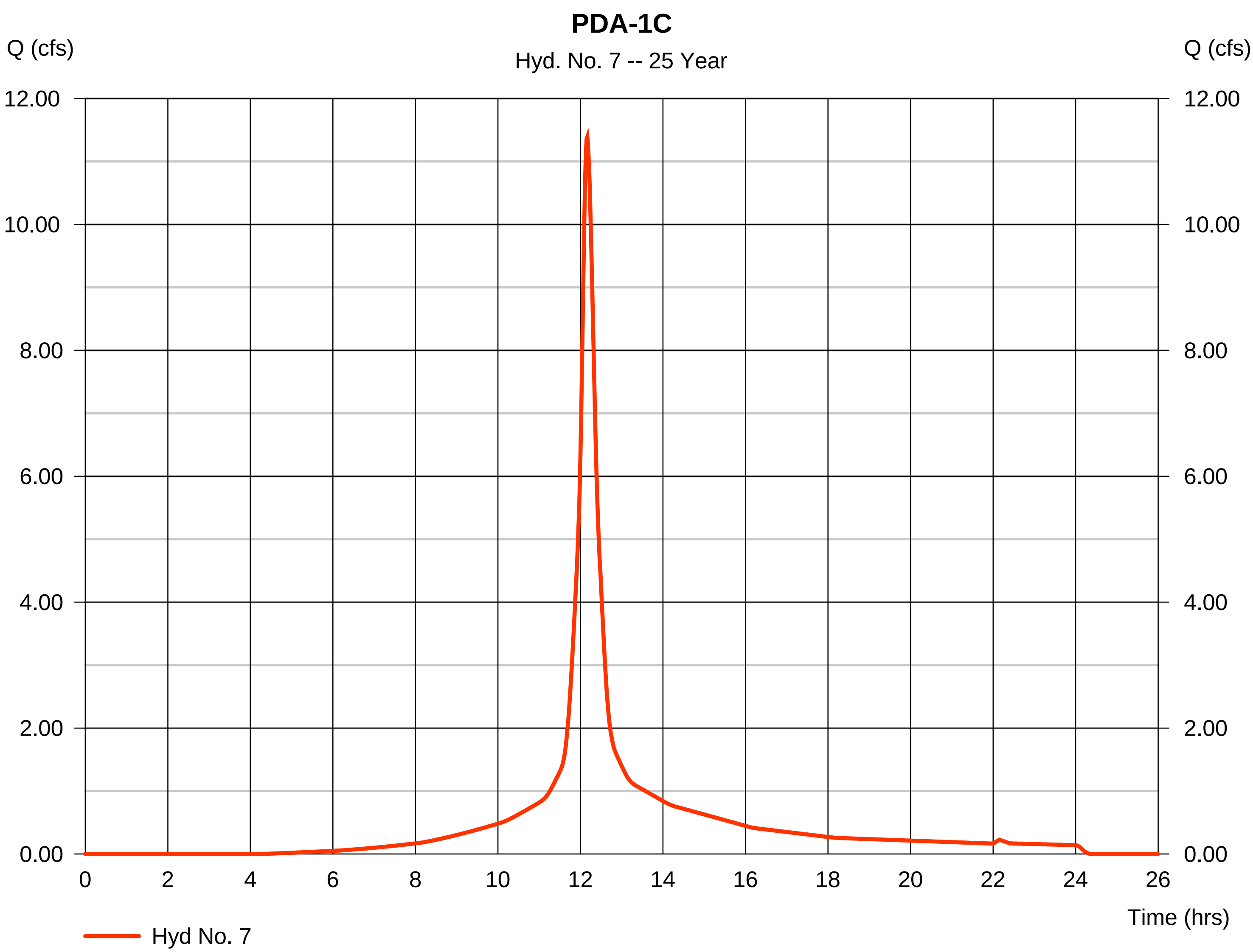
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 7

PDA-1C

Hydrograph type	= SCS Runoff	Peak discharge	= 11.39 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 46,515 cuft
Drainage area	= 2.460 ac	Curve number	= 87
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.90 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

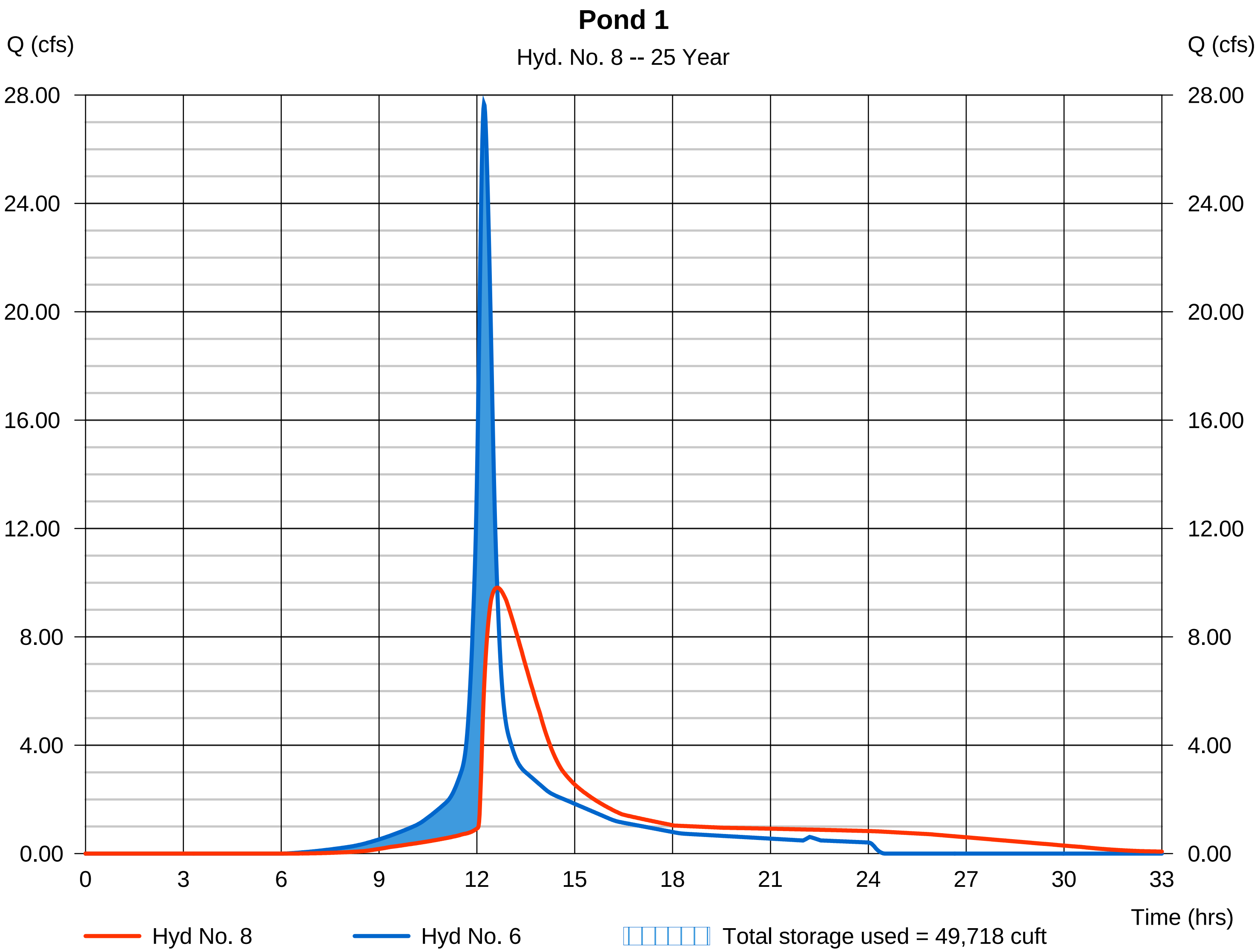
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 9.818 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.62 hrs
Time interval	= 1 min	Hyd. volume	= 123,073 cuft
Inflow hyd. No.	= 6 - PDA-1B	Max. Elevation	= 356.21 ft
Reservoir name	= Basin 1	Max. Storage	= 49,718 cuft

Storage Indication method used.



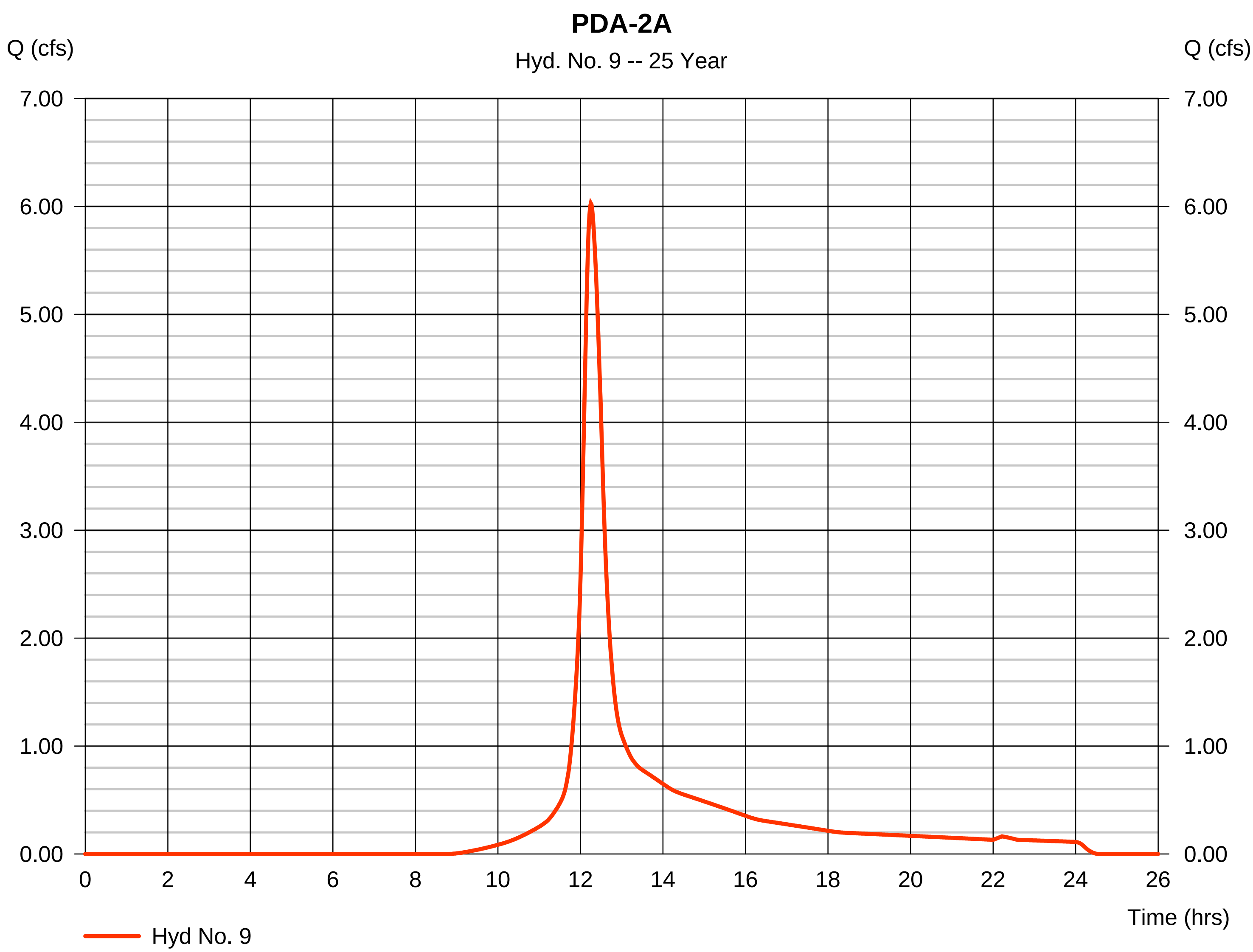
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 9

PDA-2A

Hydrograph type	= SCS Runoff	Peak discharge	= 6.029 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.25 hrs
Time interval	= 1 min	Hyd. volume	= 27,696 cuft
Drainage area	= 2.300 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.70 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



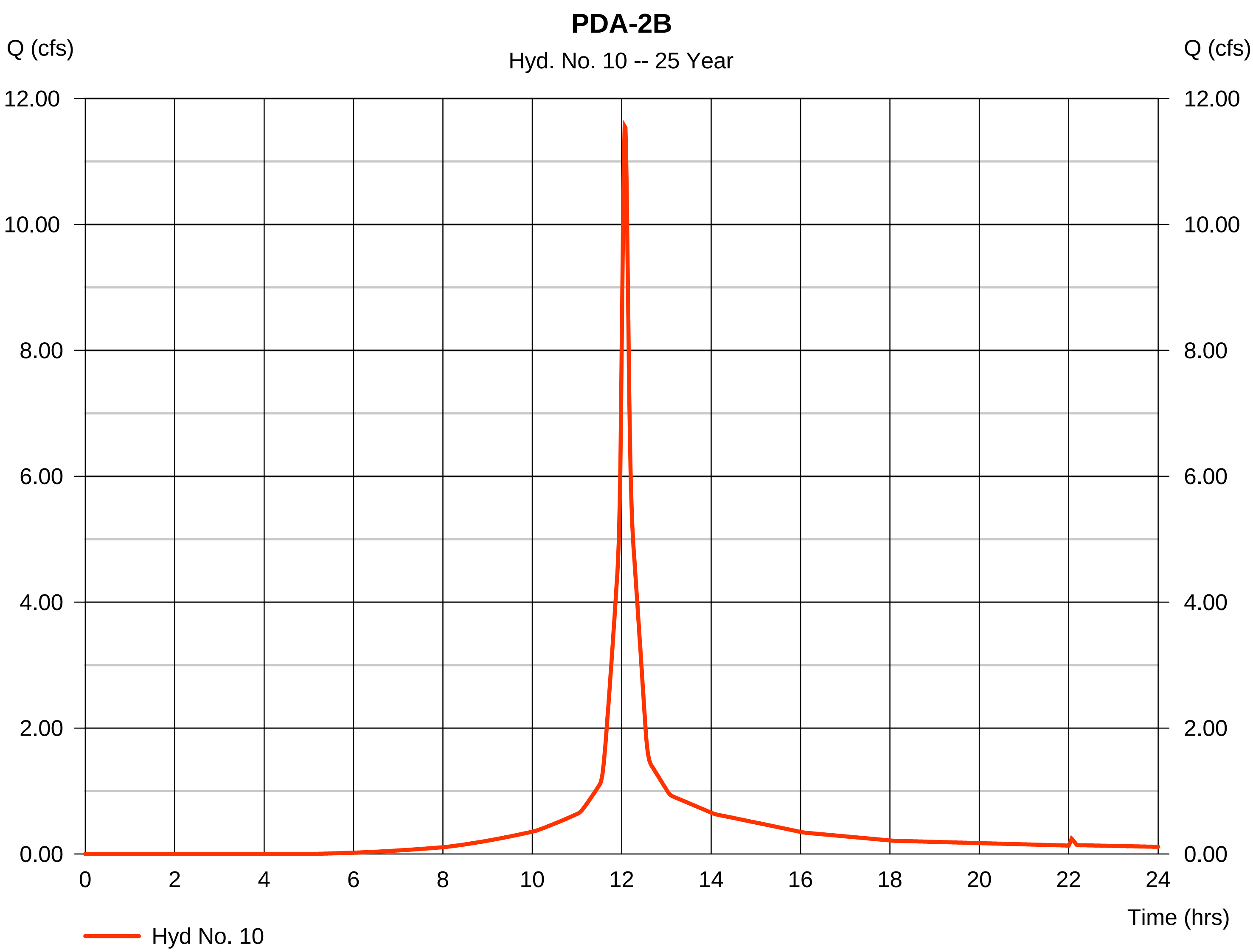
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 10

PDA-2B

Hydrograph type	= SCS Runoff	Peak discharge	= 11.56 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 36,494 cuft
Drainage area	= 2.000 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



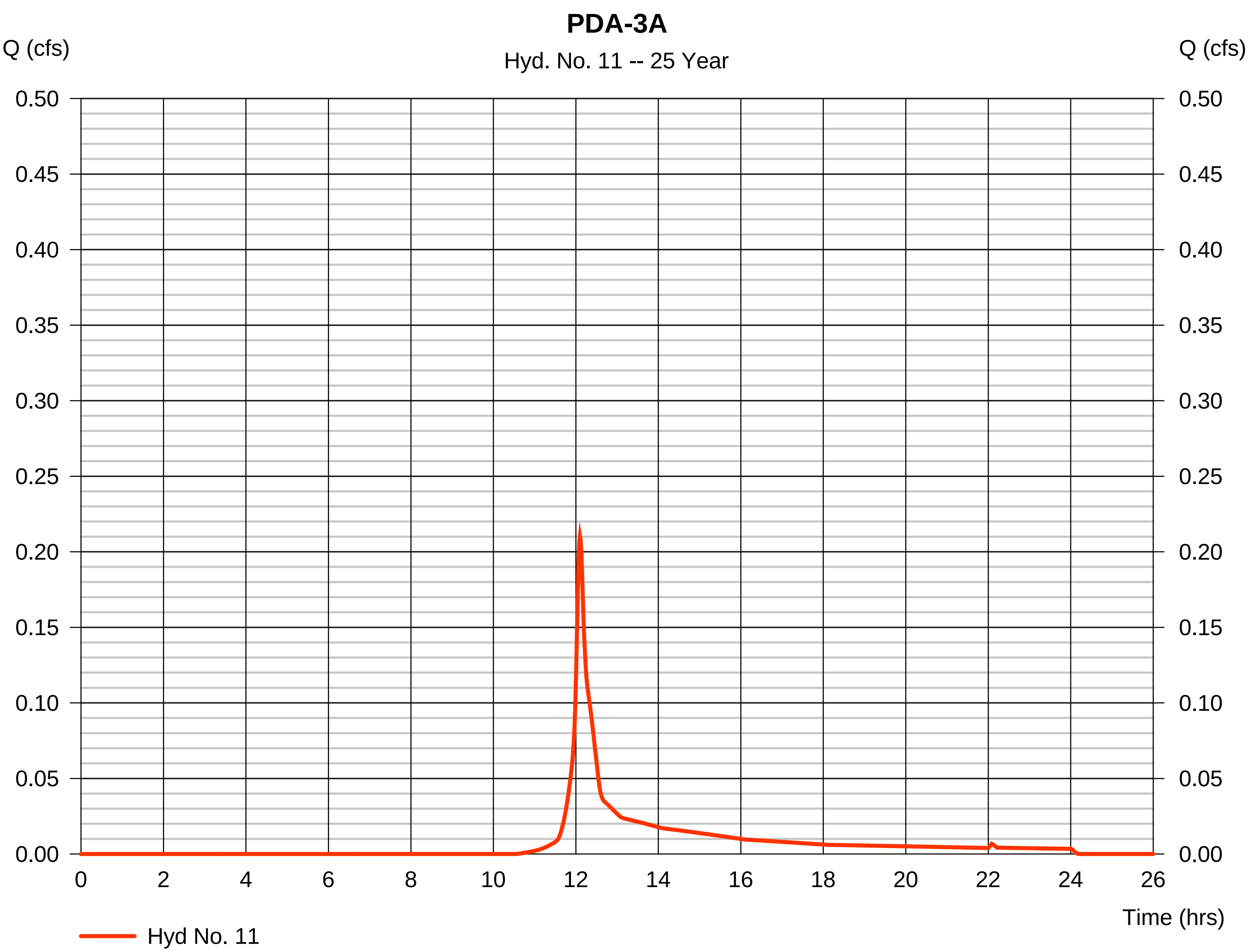
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 11

PDA-3A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.210 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 707 cuft
Drainage area	= 0.090 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.90 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



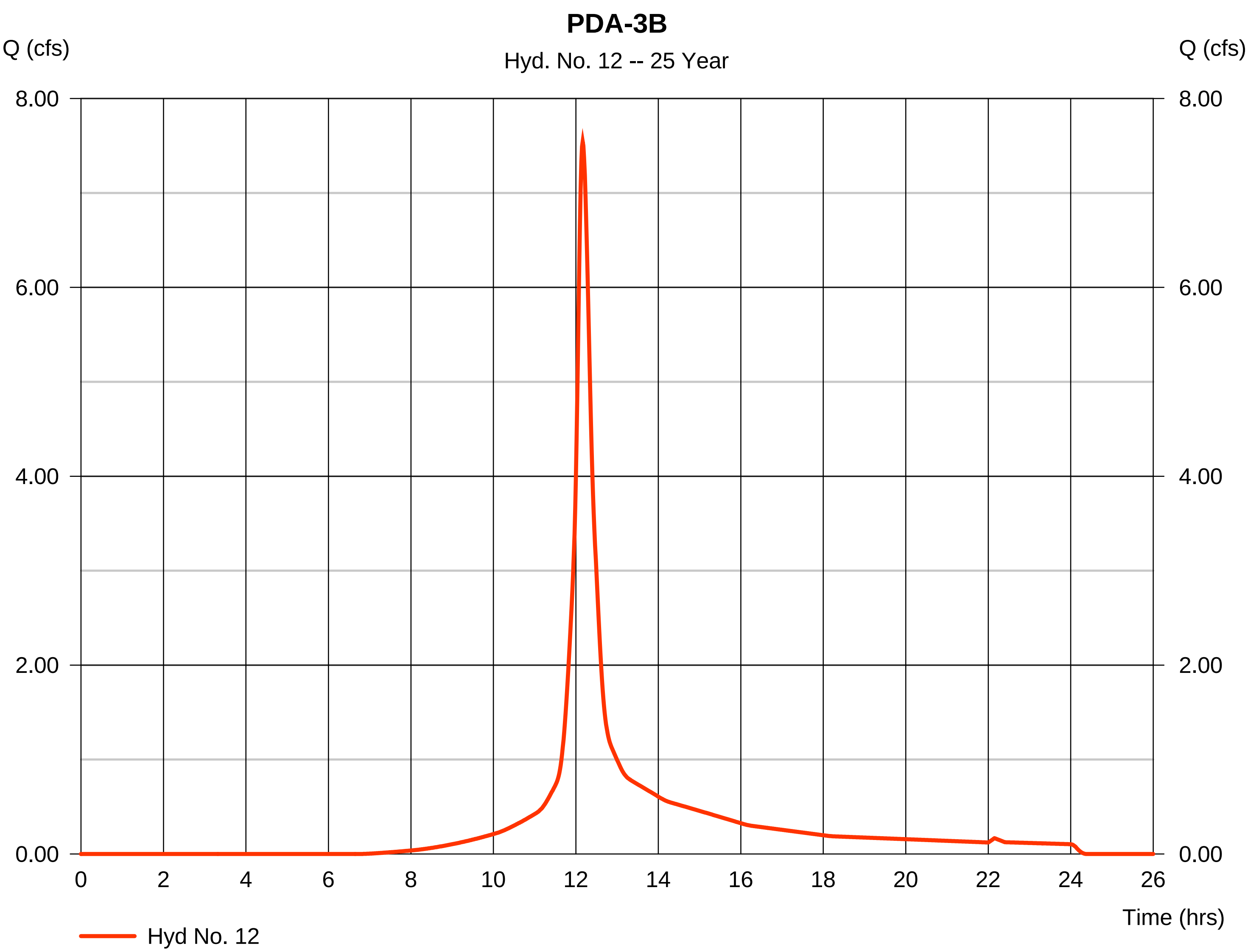
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 12

PDA-3B

Hydrograph type	= SCS Runoff	Peak discharge	= 7.543 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 29,883 cuft
Drainage area	= 1.950 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.70 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

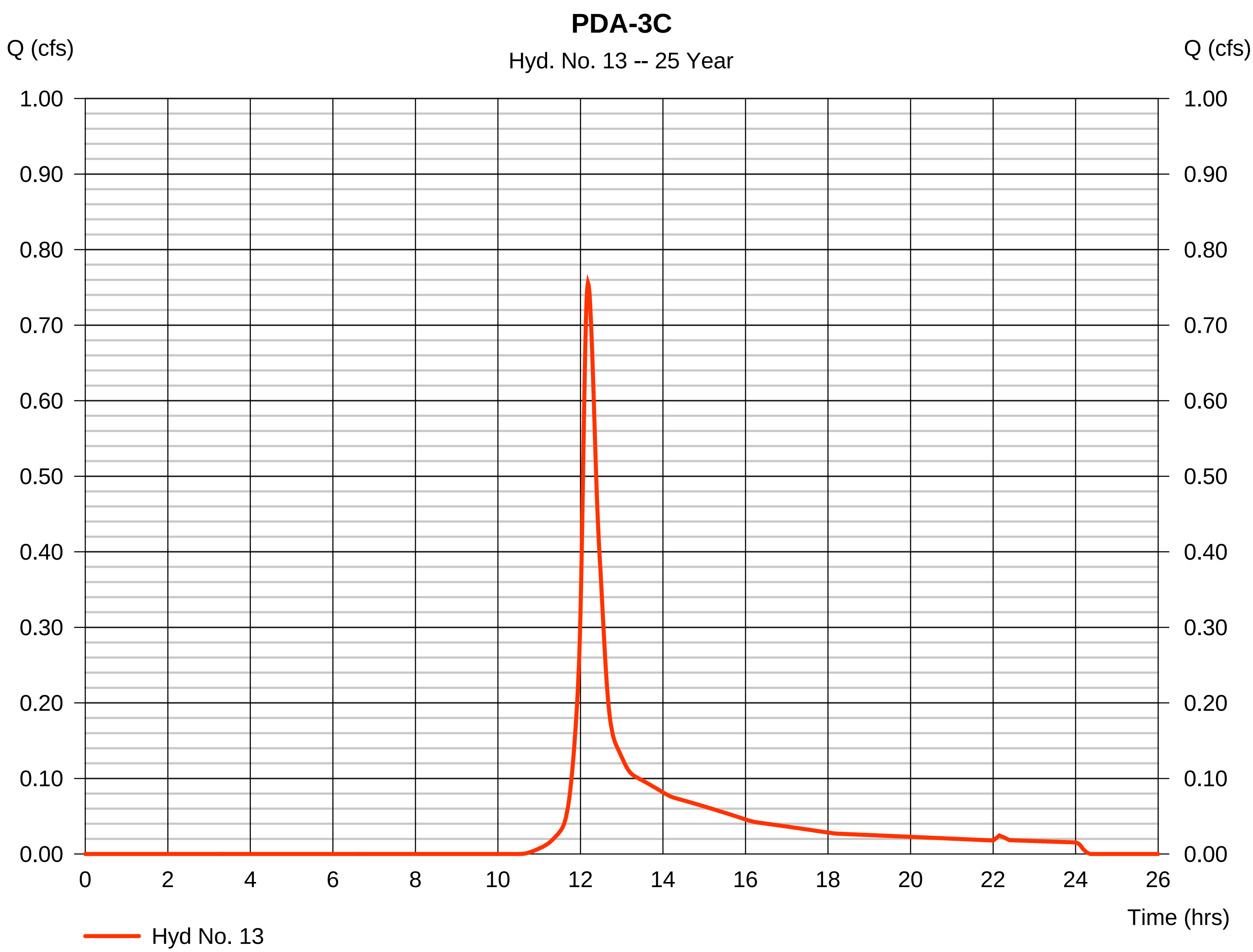


Hydrograph Report

Hyd. No. 13

PDA-3C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.756 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 3,144 cuft
Drainage area	= 0.390 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.80 min
Total precip.	= 6.72 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

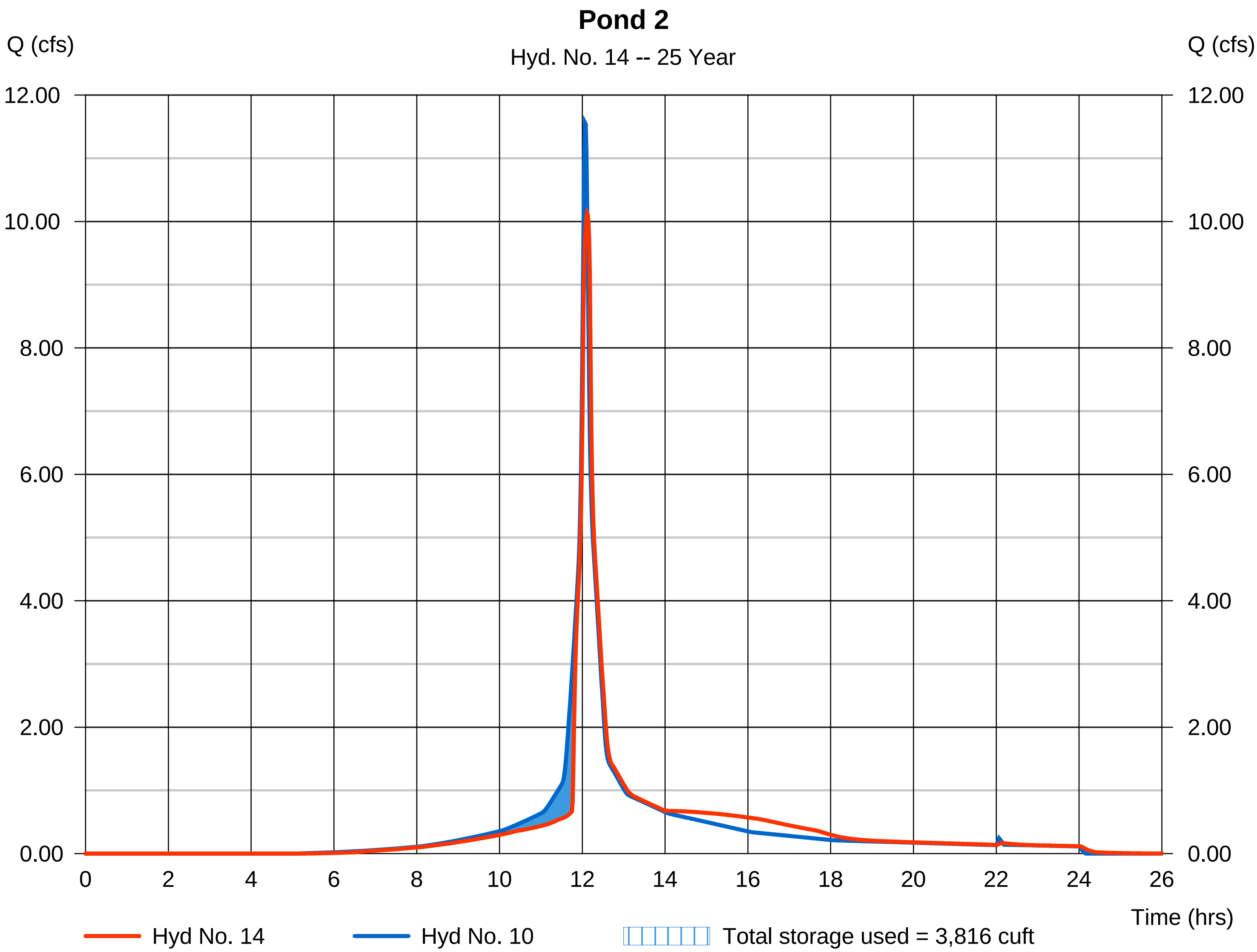
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 | Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 10.13 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.12 hrs
Time interval	= 1 min	Hyd. volume	= 36,492 cuft
Inflow hyd. No.	= 10 - PDA-2B	Max. Elevation	= 334.74 ft
Reservoir name	= Basin 2	Max. Storage	= 3,816 cuft

Storage Indication method used.



Hydrograph Report

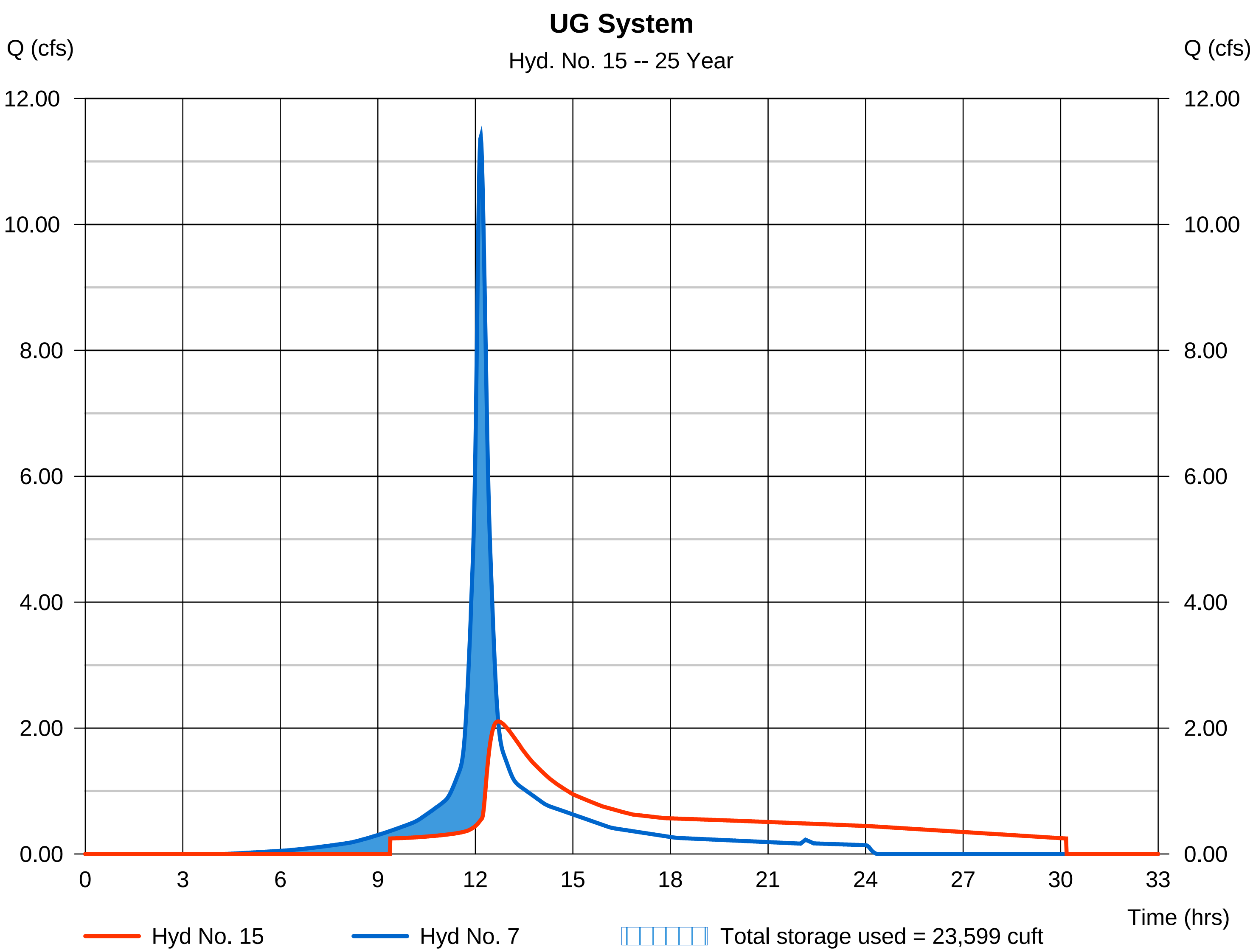
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 2.106 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.70 hrs
Time interval	= 1 min	Hyd. volume	= 44,368 cuft
Inflow hyd. No.	= 7 - PDA-1C	Max. Elevation	= 360.72 ft
Reservoir name	= Undergroud Detention	Max. Storage	= 23,599 cuft

Storage Indication method used.



Hydrograph Report

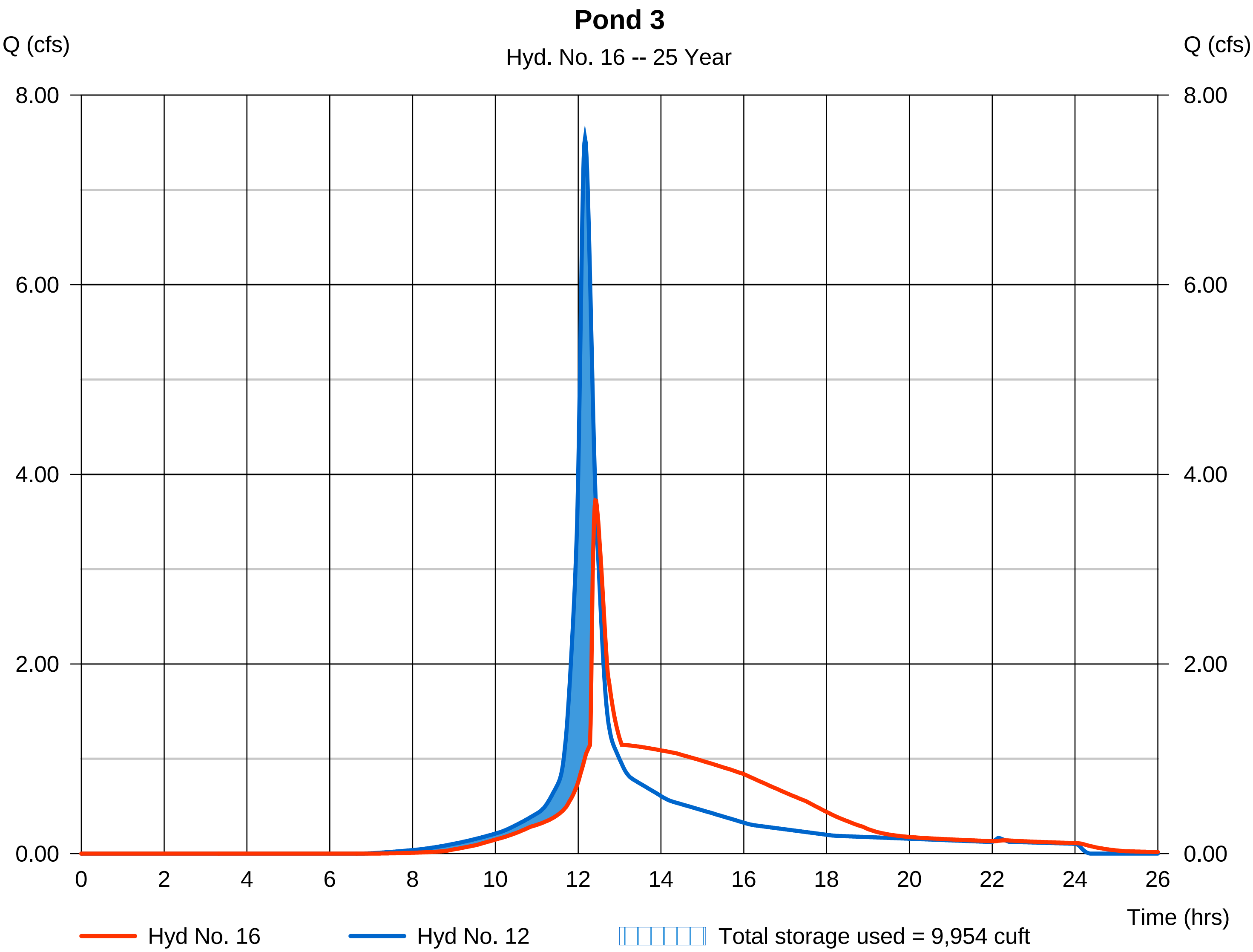
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 3.725 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.42 hrs
Time interval	= 1 min	Hyd. volume	= 29,876 cuft
Inflow hyd. No.	= 12 - PDA-3B	Max. Elevation	= 365.72 ft
Reservoir name	= Basin 3	Max. Storage	= 9,954 cuft

Storage Indication method used.



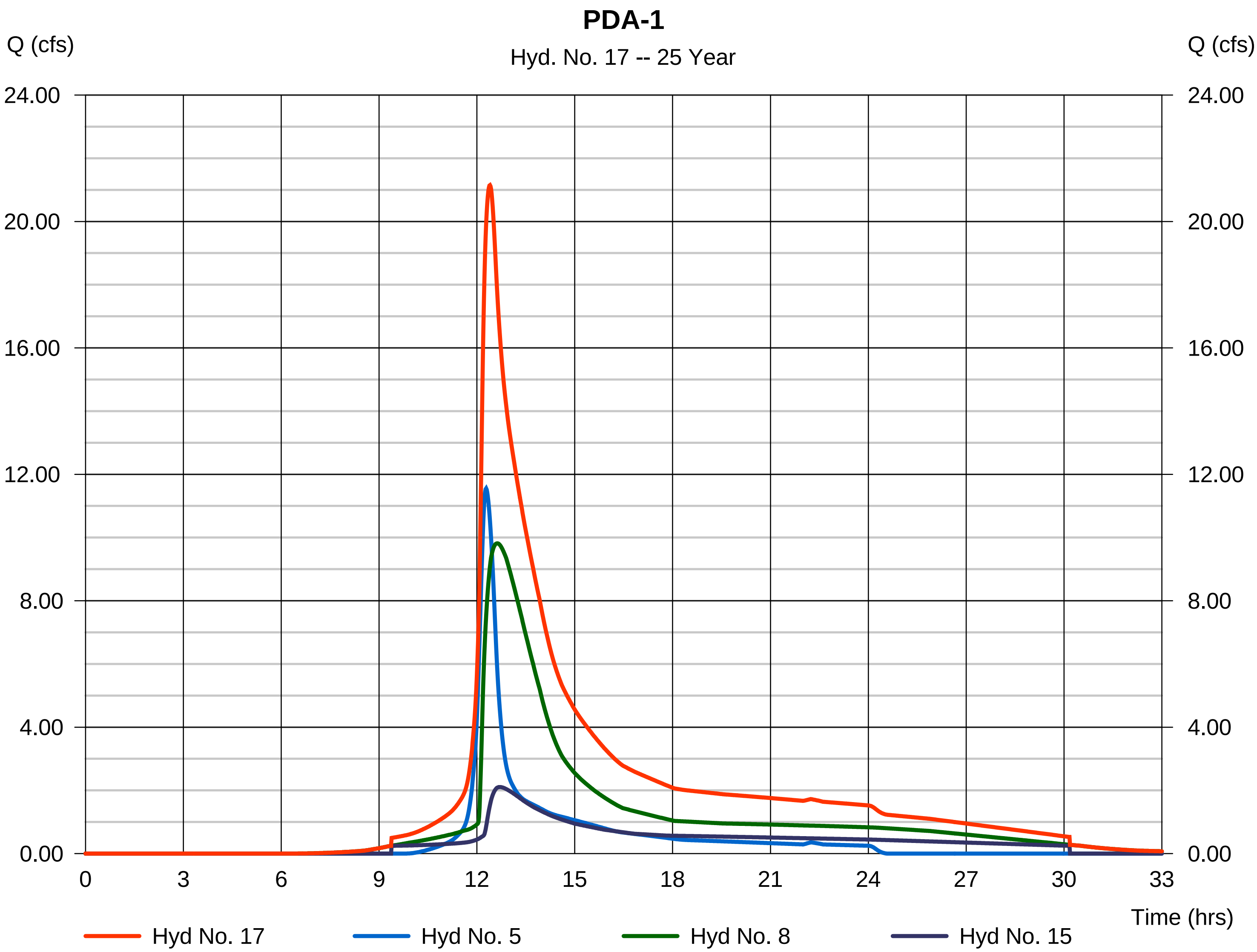
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 17

PDA-1

Hydrograph type	= Combine	Peak discharge	= 21.15 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.40 hrs
Time interval	= 1 min	Hyd. volume	= 222,667 cuft
Inflow hyds.	= 5, 8, 15	Contrib. drain. area	= 5.700 ac



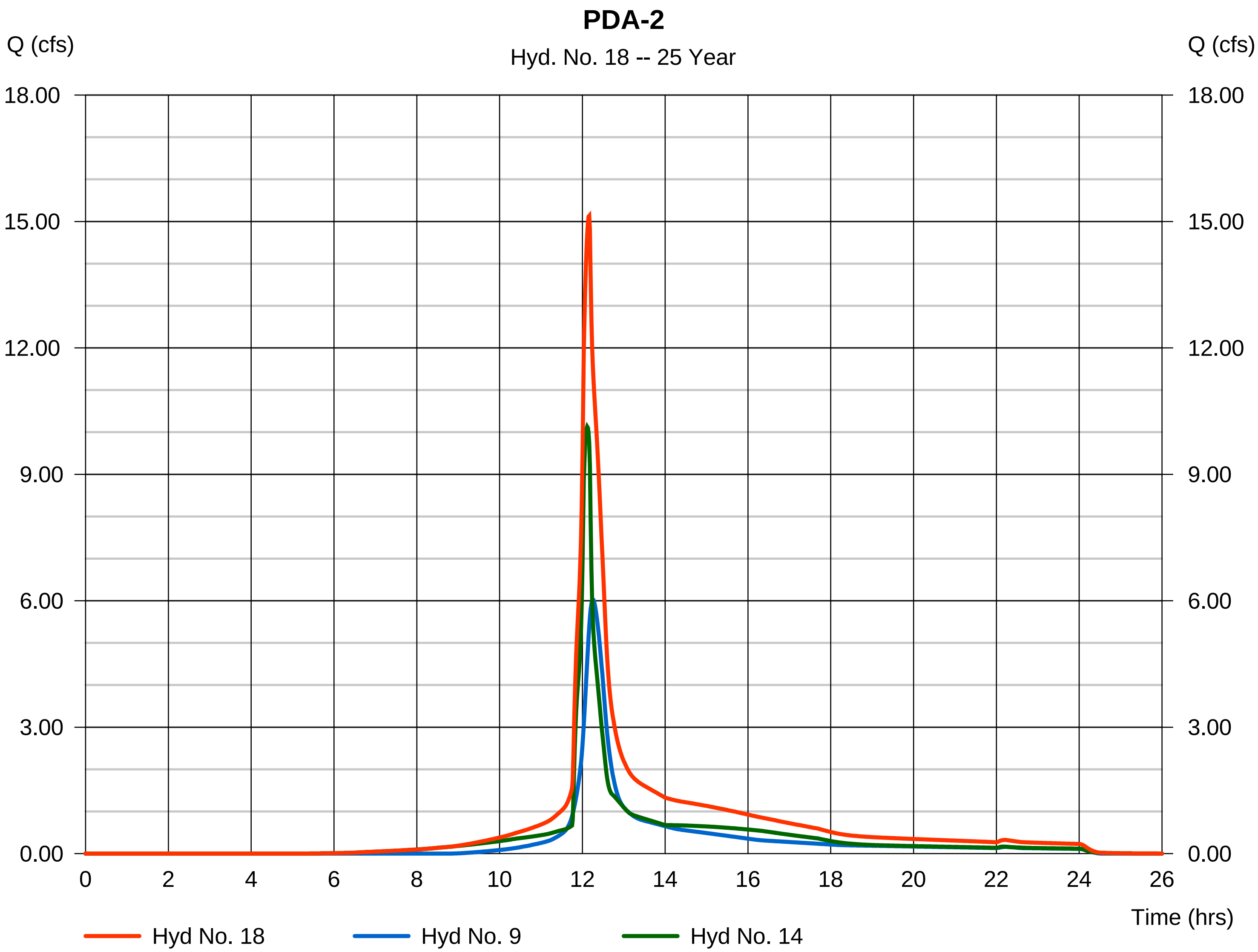
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 18

PDA-2

Hydrograph type	= Combine	Peak discharge	= 15.13 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 64,188 cuft
Inflow hyds.	= 9, 14	Contrib. drain. area	= 2.300 ac



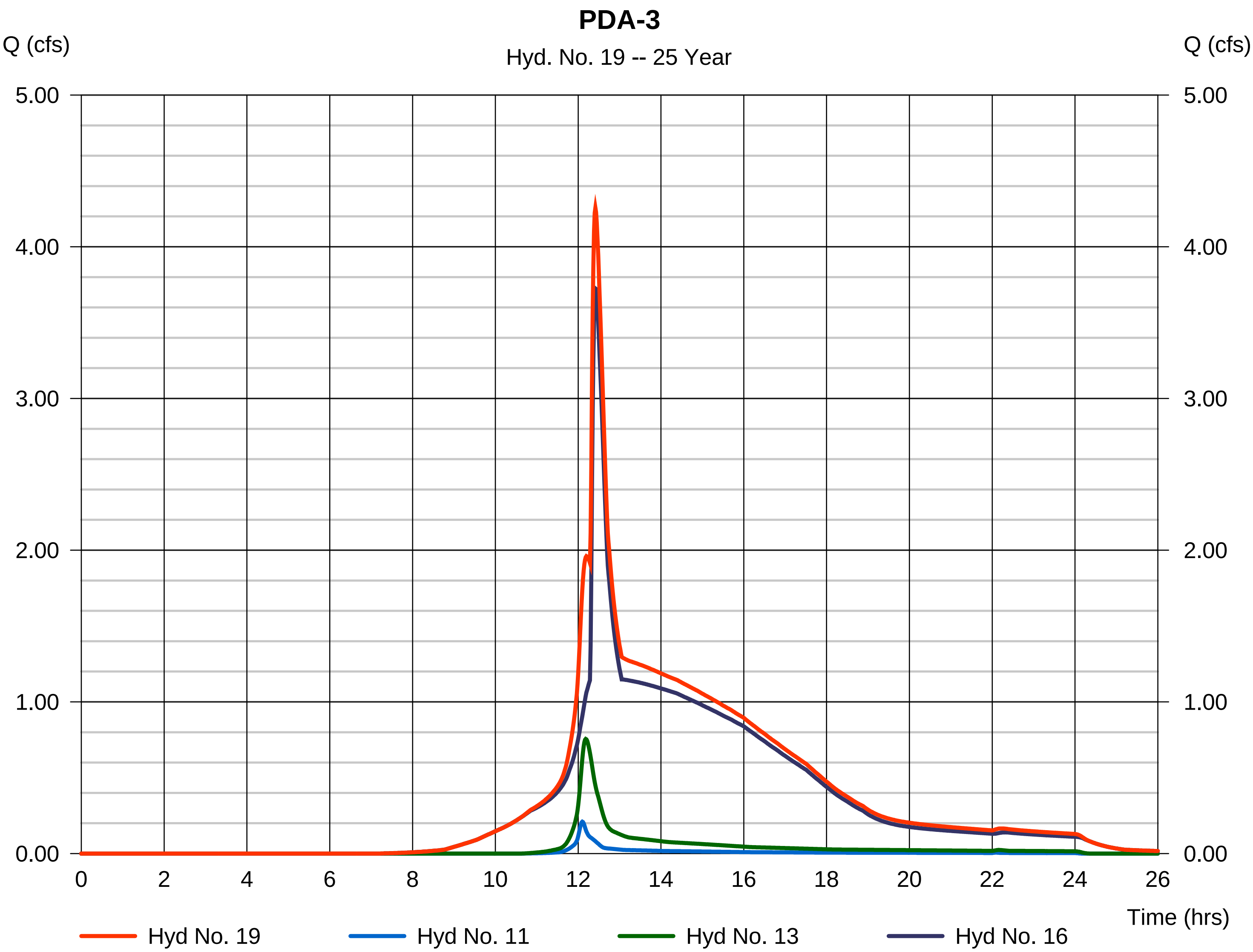
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 4.256 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.42 hrs
Time interval	= 1 min	Hyd. volume	= 33,728 cuft
Inflow hyds.	= 11, 13, 16	Contrib. drain. area	= 0.480 ac



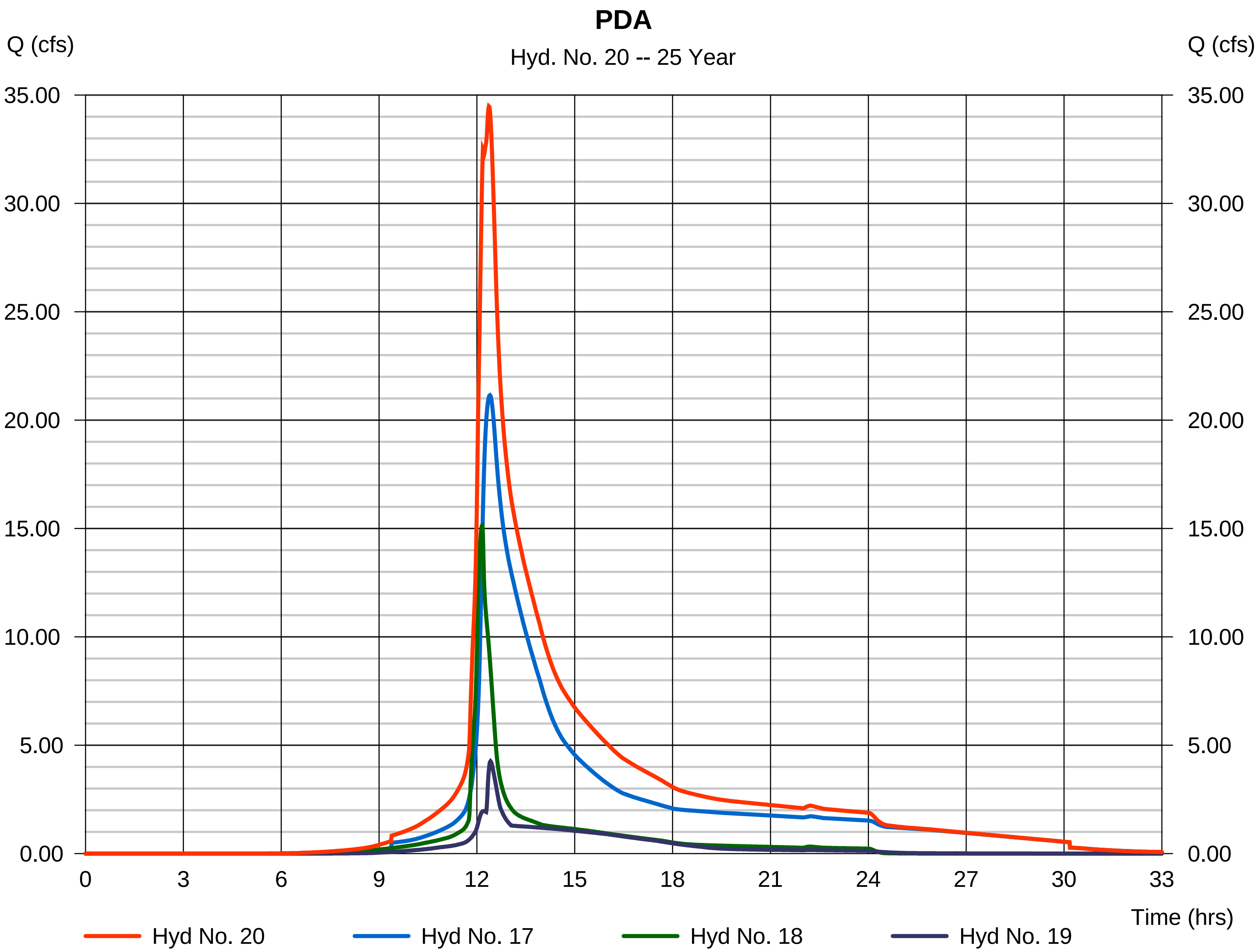
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 20

PDA

Hydrograph type	= Combine	Peak discharge	= 34.48 cfs
Storm frequency	= 25 yrs	Time to peak	= 12.37 hrs
Time interval	= 1 min	Hyd. volume	= 320,582 cuft
Inflow hyds.	= 17, 18, 19	Contrib. drain. area	= 0.000 ac



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	31.45	1	735	142,616	------	------	------	EDA-1
2	SCS Runoff	23.04	1	728	83,659	------	------	------	EDA-2
3	SCS Runoff	8.864	1	733	38,829	------	------	------	EDA-3
4	Combine	59.90	1	732	265,103	1, 2, 3	------	------	EDA
5	SCS Runoff	14.62	1	737	69,156	------	------	------	PDA-1A
6	SCS Runoff	32.61	1	733	145,813	------	------	------	PDA-1B
7	SCS Runoff	13.19	1	730	54,295	------	------	------	PDA-1C
8	Reservoir	12.26	1	756	145,802	6	356.86	58,601	Pond 1
9	SCS Runoff	7.420	1	735	33,958	------	------	------	PDA-2A
10	SCS Runoff	13.49	1	724	42,908	------	------	------	PDA-2B
11	SCS Runoff	0.274	1	726	905	------	------	------	PDA-3A
12	SCS Runoff	8.971	1	730	35,682	------	------	------	PDA-3B
13	SCS Runoff	0.986	1	731	4,020	------	------	------	PDA-3C
14	Reservoir	11.26	1	728	42,906	10	335.03	4,348	Pond 2
15	Reservoir	2.797	1	759	52,146	7	361.05	26,808	UG System
16	Reservoir	6.143	1	740	35,675	12	365.85	10,461	Pond 3
17	Combine	26.32	1	741	267,105	5, 8, 15,	------	------	PDA-1
18	Combine	17.41	1	731	76,864	9, 14,	------	------	PDA-2
19	Combine	7.011	1	740	40,600	11, 13, 16,	------	------	PDA-3
20	Combine	45.67	1	738	384,569	17, 18, 19	------	------	PDA

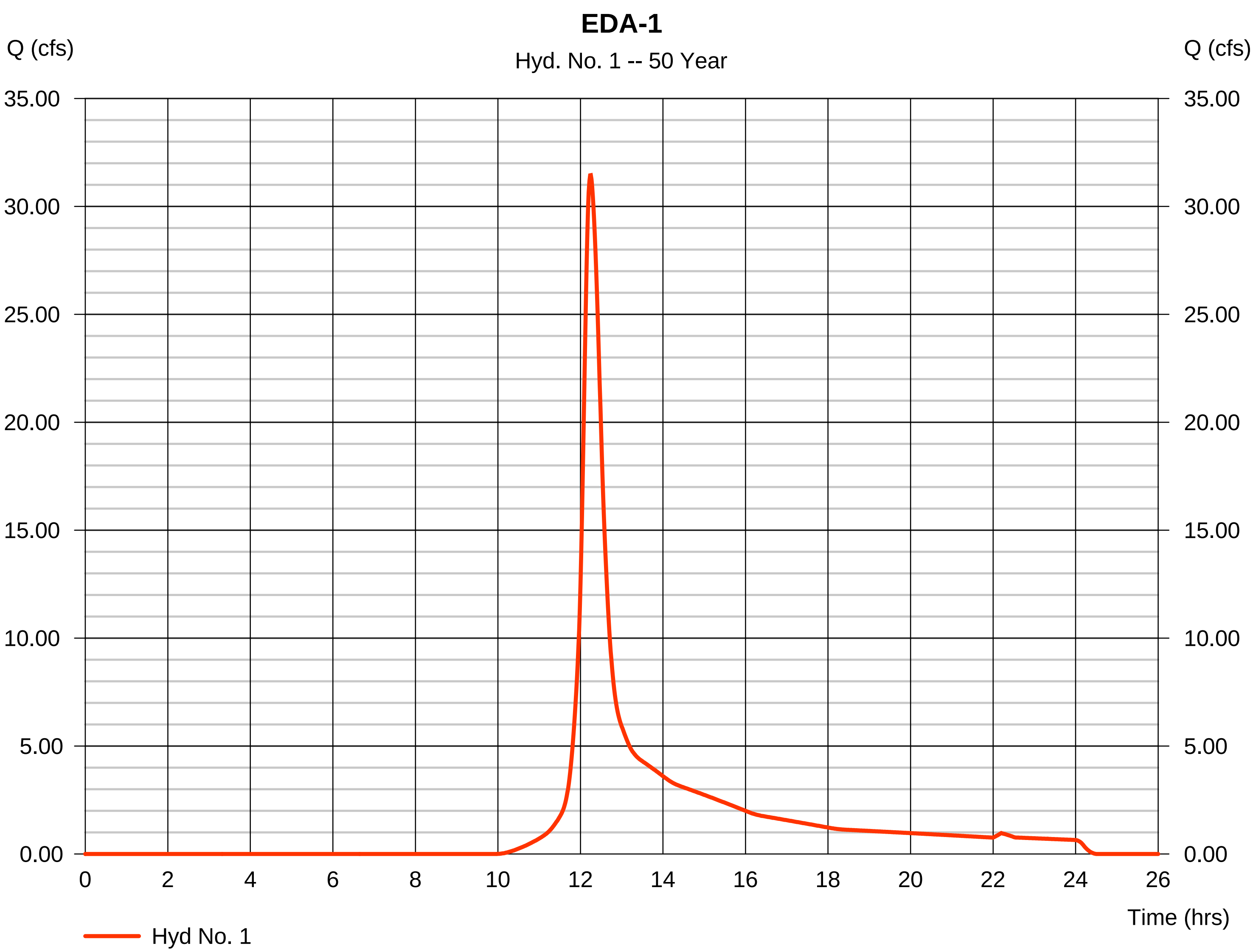
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 31.45 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.25 hrs
Time interval	= 1 min	Hyd. volume	= 142,616 cuft
Drainage area	= 13.340 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.20 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



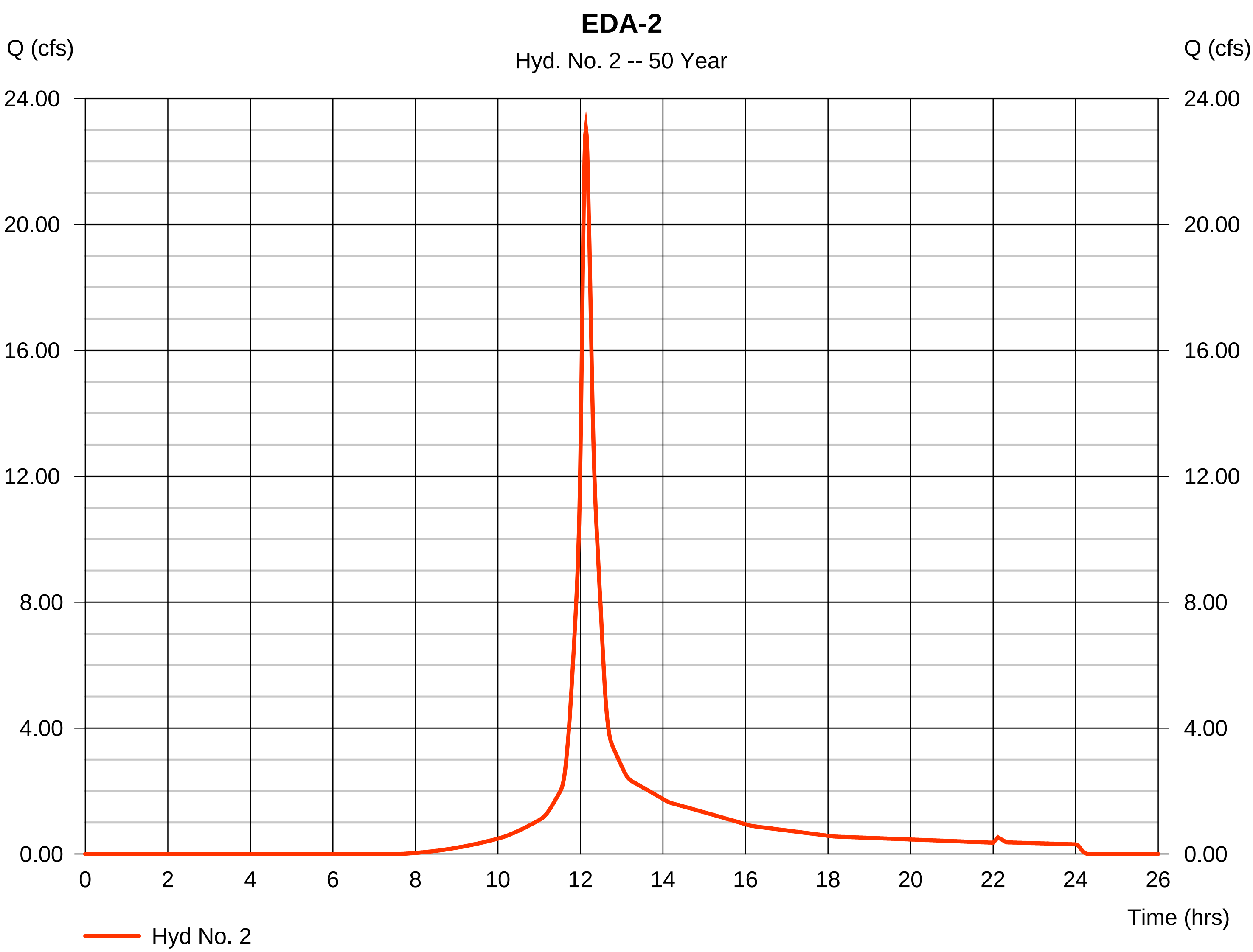
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 | Monday, 01 / 9 / 2023

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 23.04 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 83,659 cuft
Drainage area	= 5.190 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.10 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



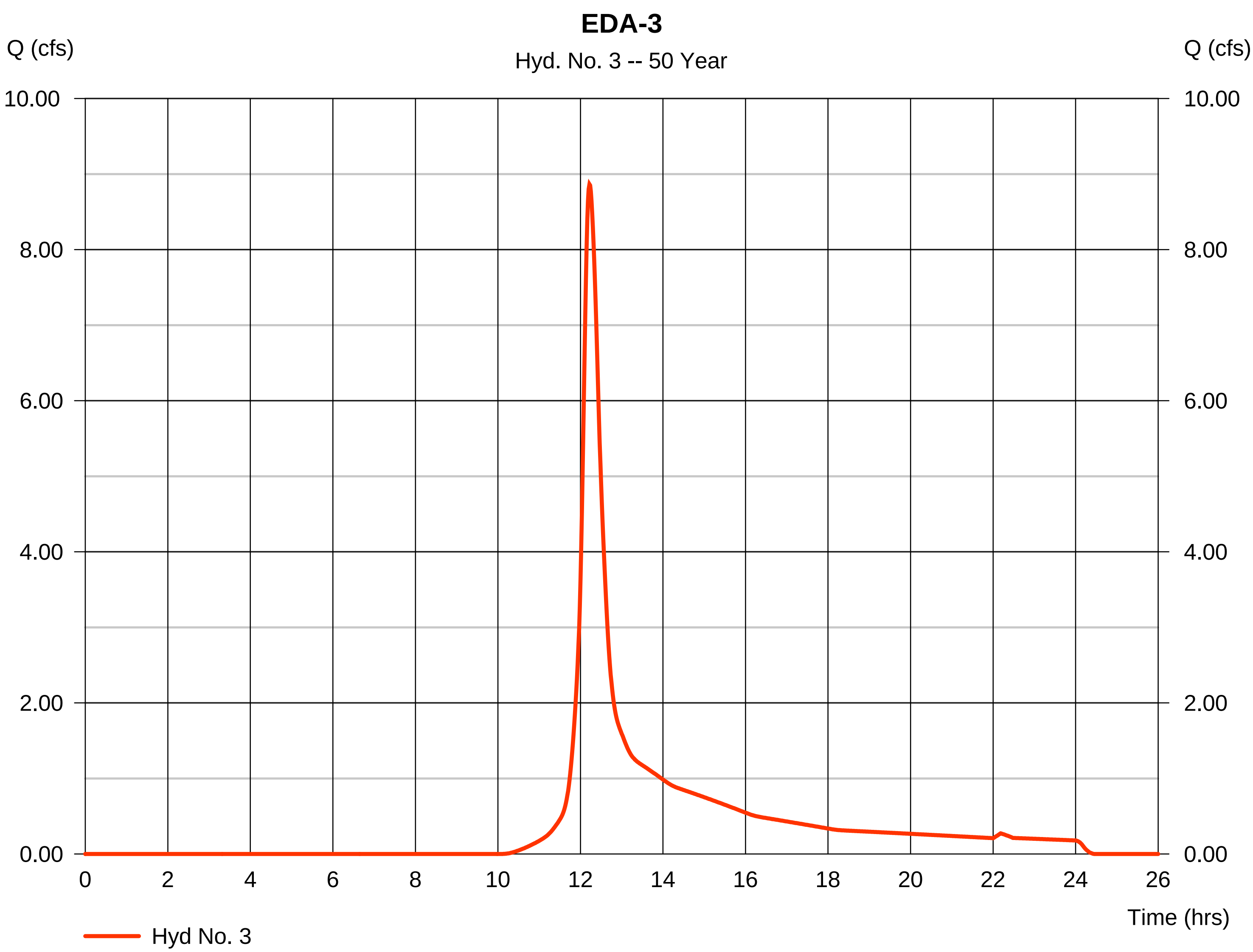
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 3

EDA-3

Hydrograph type	= SCS Runoff	Peak discharge	= 8.864 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 38,829 cuft
Drainage area	= 3.810 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.20 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



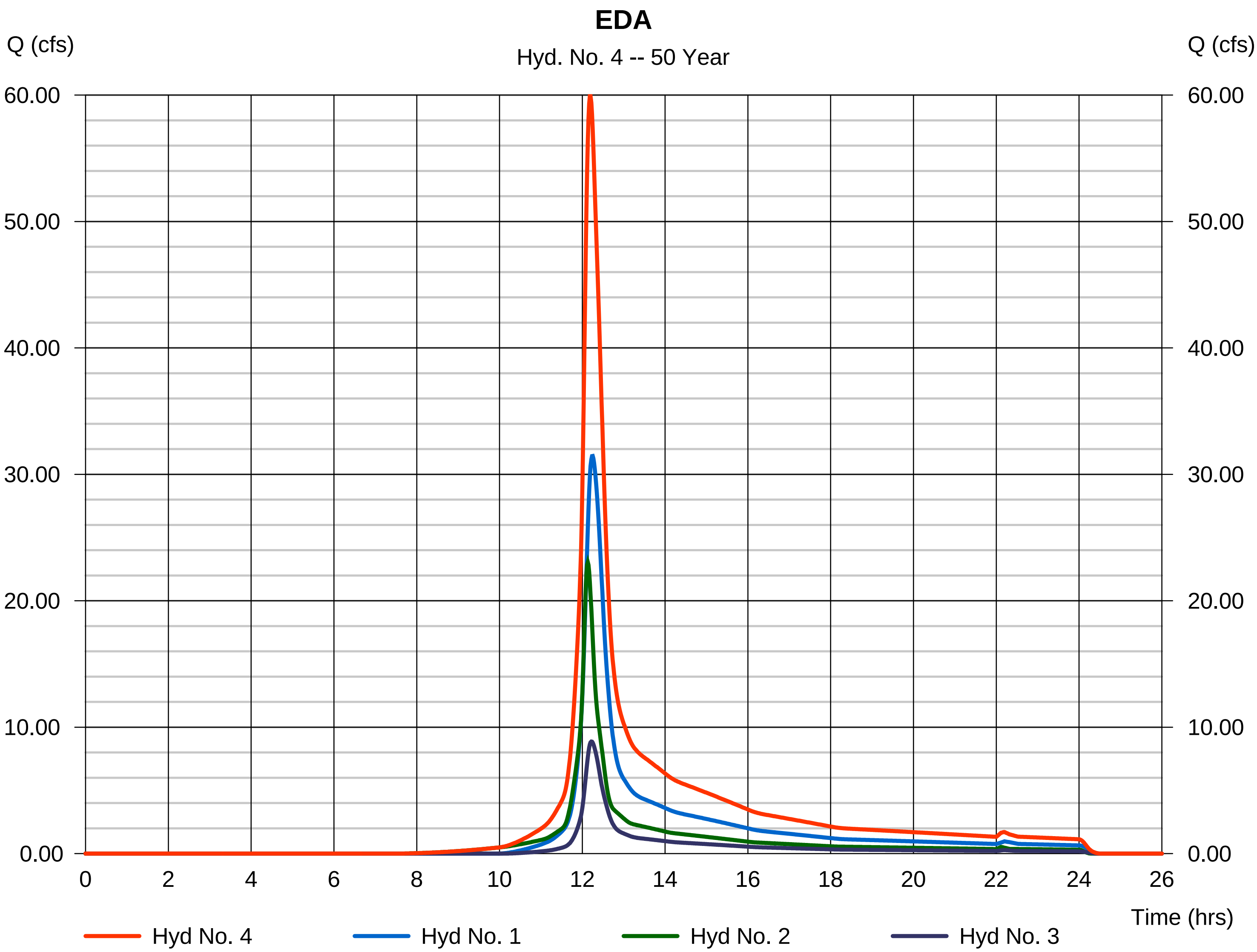
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 | Monday, 01 / 9 / 2023

Hyd. No. 4

EDA

Hydrograph type	= Combine	Peak discharge	= 59.90 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.20 hrs
Time interval	= 1 min	Hyd. volume	= 265,103 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 22.340 ac



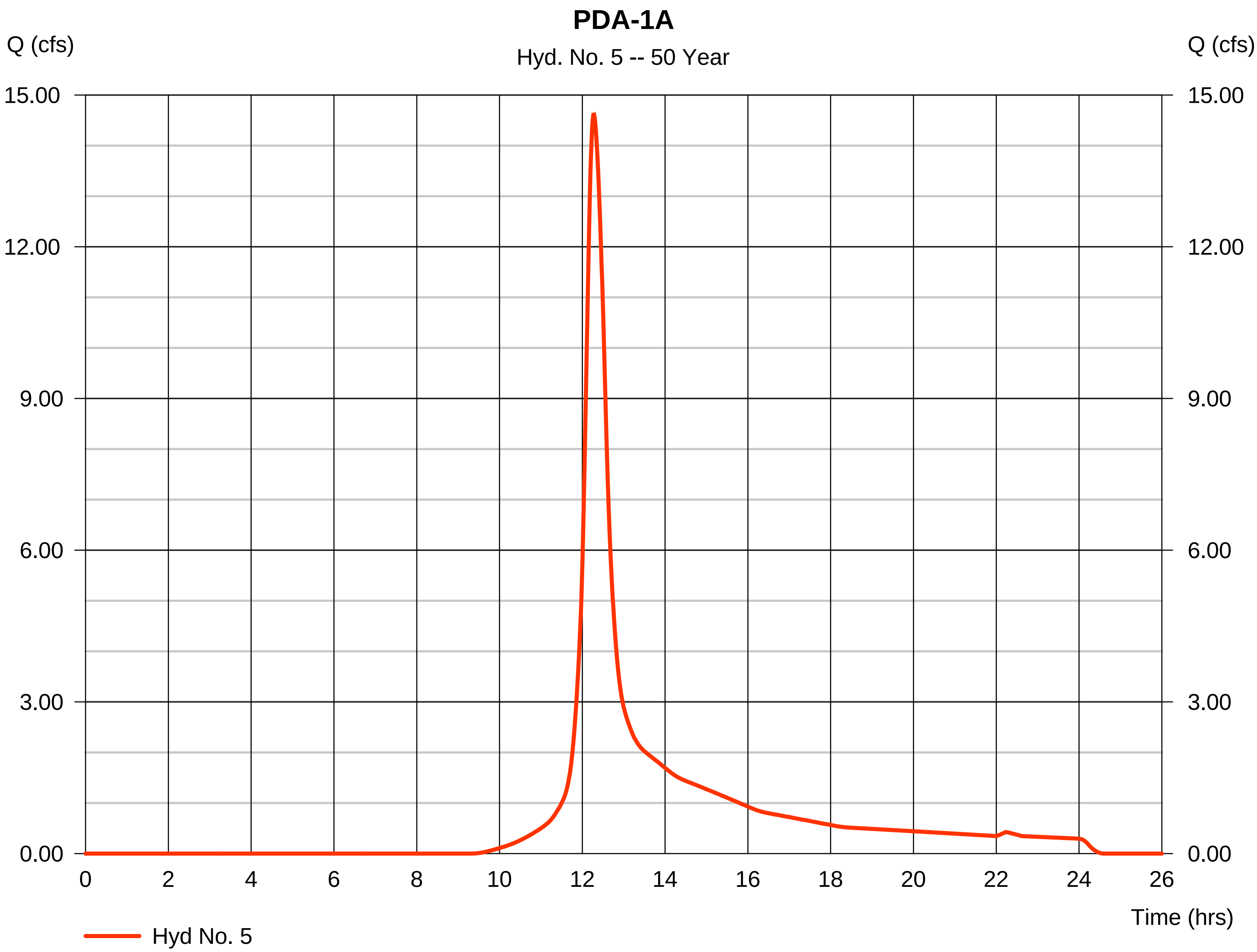
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 5

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 14.62 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 69,156 cuft
Drainage area	= 5.700 ac	Curve number	= 63
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.20 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



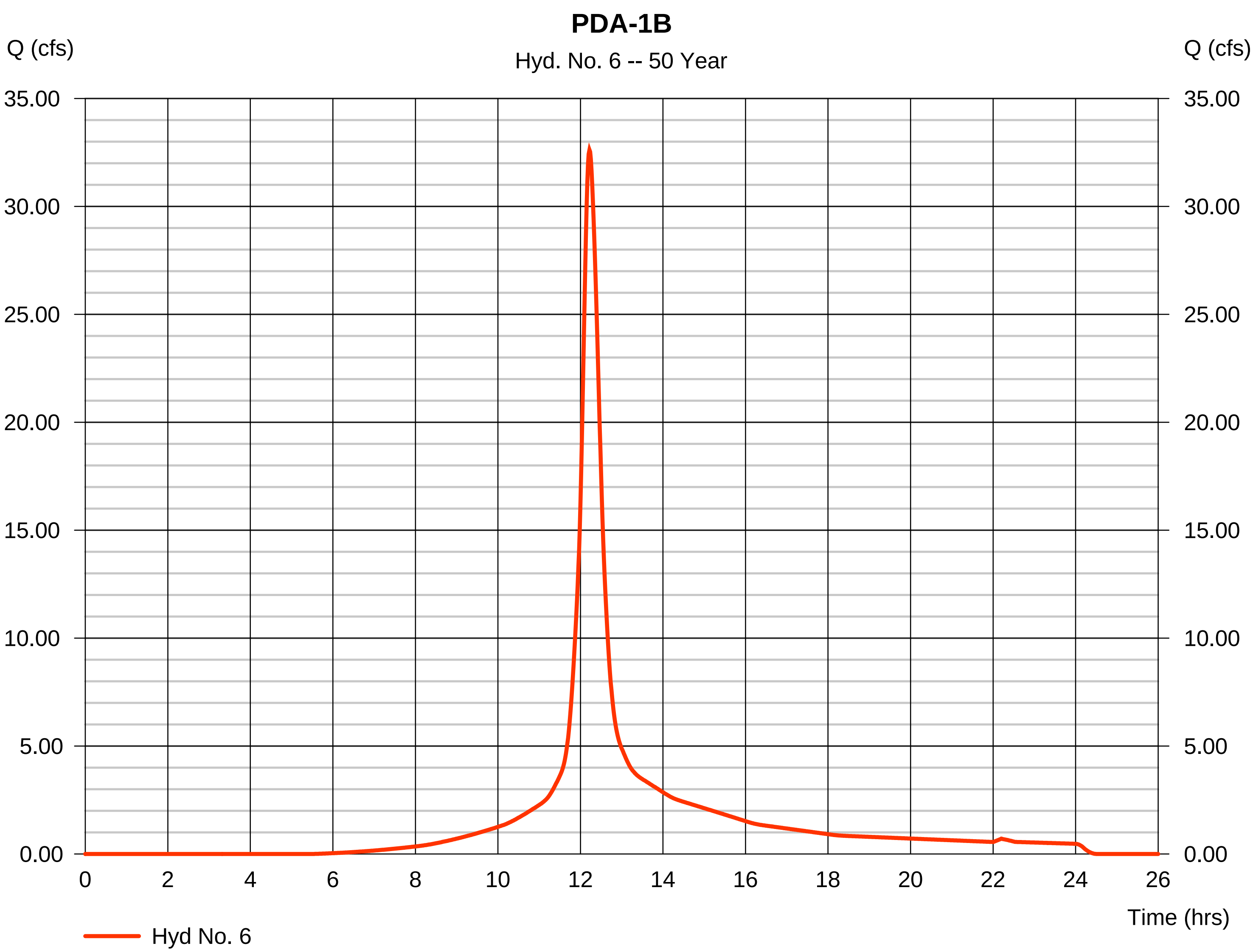
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 6

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 32.61 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 145,813 cuft
Drainage area	= 7.460 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.10 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



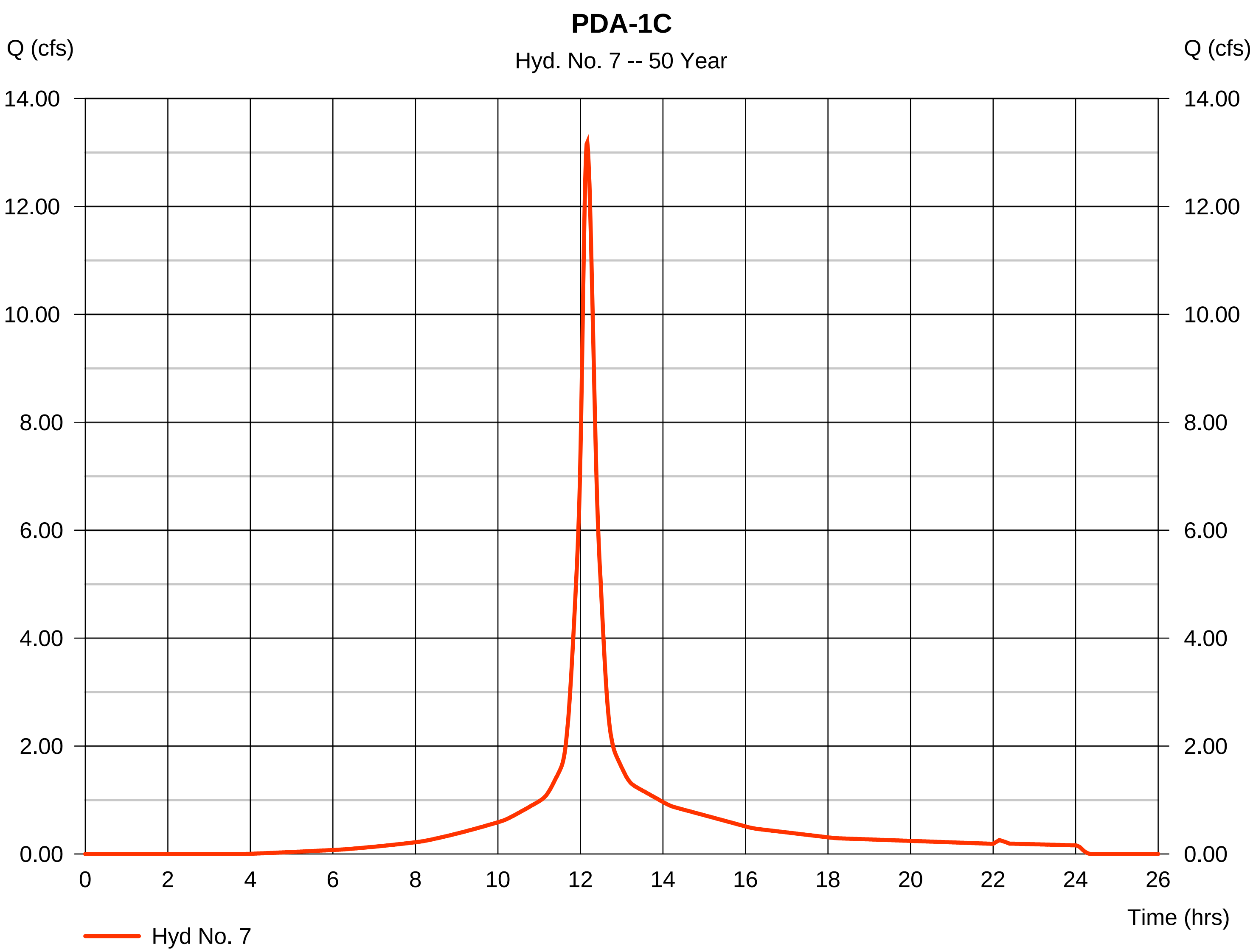
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 7

PDA-1C

Hydrograph type	= SCS Runoff	Peak discharge	= 13.19 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 54,295 cuft
Drainage area	= 2.460 ac	Curve number	= 87
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.90 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

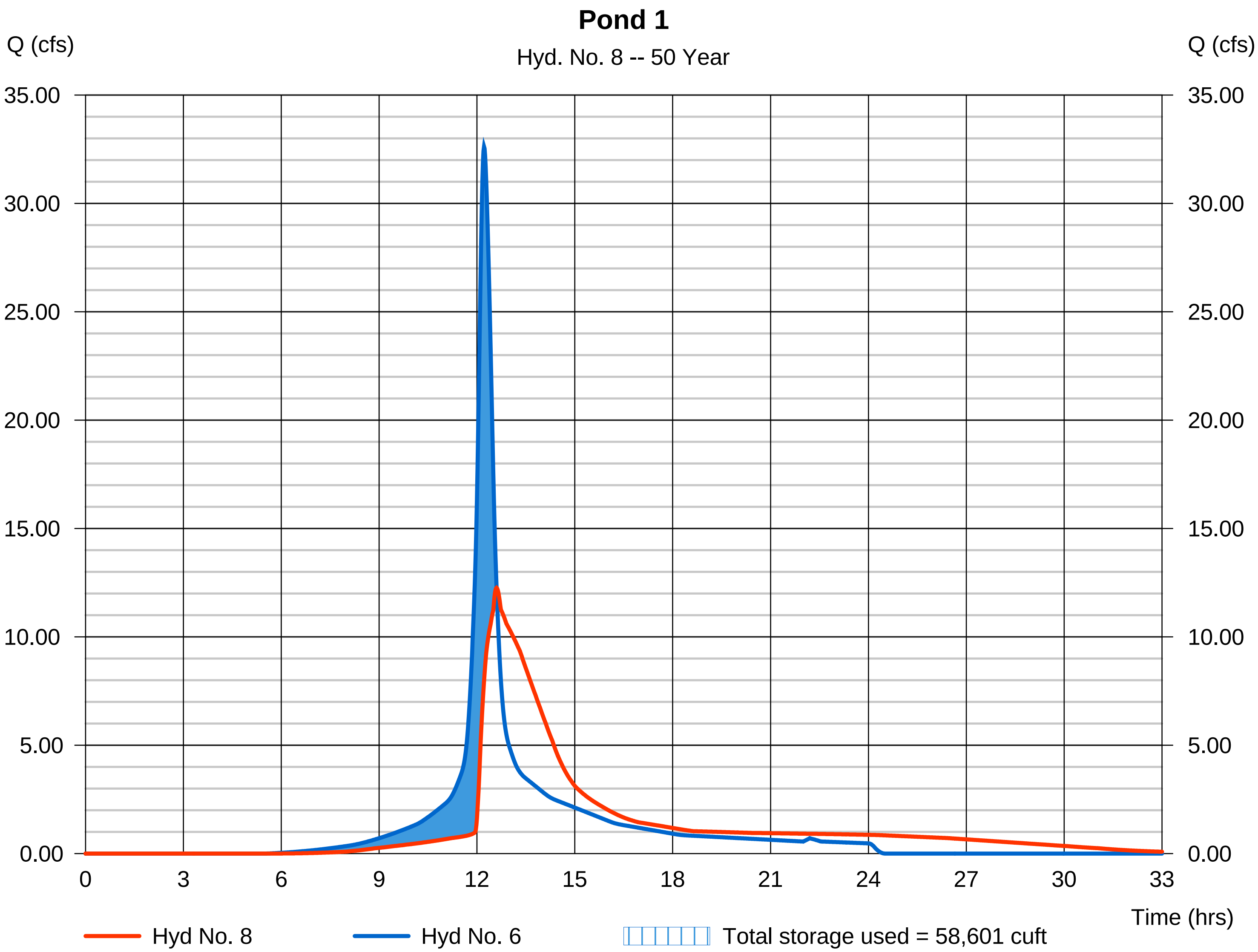
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 12.26 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.60 hrs
Time interval	= 1 min	Hyd. volume	= 145,802 cuft
Inflow hyd. No.	= 6 - PDA-1B	Max. Elevation	= 356.86 ft
Reservoir name	= Basin 1	Max. Storage	= 58,601 cuft

Storage Indication method used.



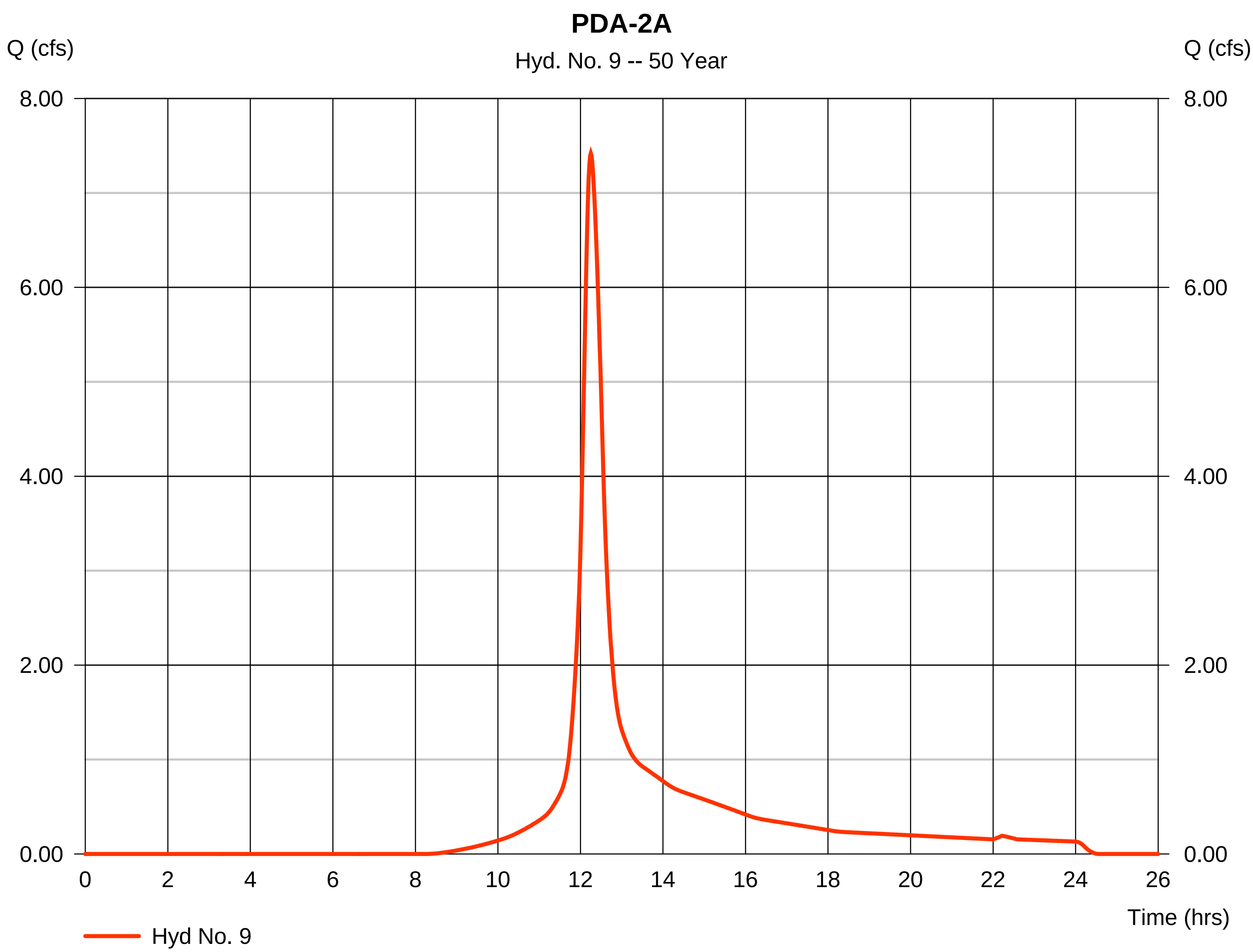
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 9

PDA-2A

Hydrograph type	= SCS Runoff	Peak discharge	= 7.420 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.25 hrs
Time interval	= 1 min	Hyd. volume	= 33,958 cuft
Drainage area	= 2.300 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.70 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



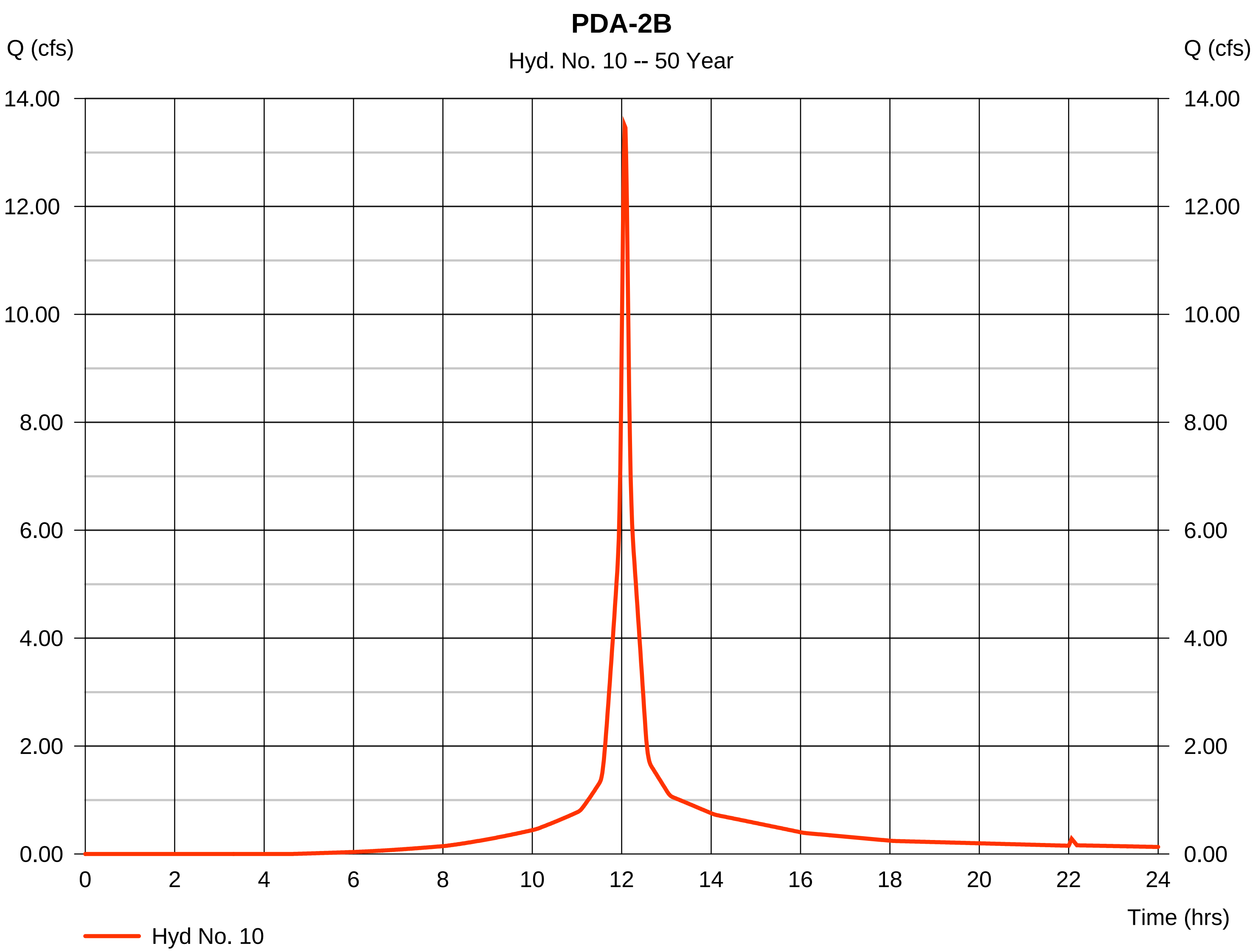
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 10

PDA-2B

Hydrograph type	= SCS Runoff	Peak discharge	= 13.49 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 42,908 cuft
Drainage area	= 2.000 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



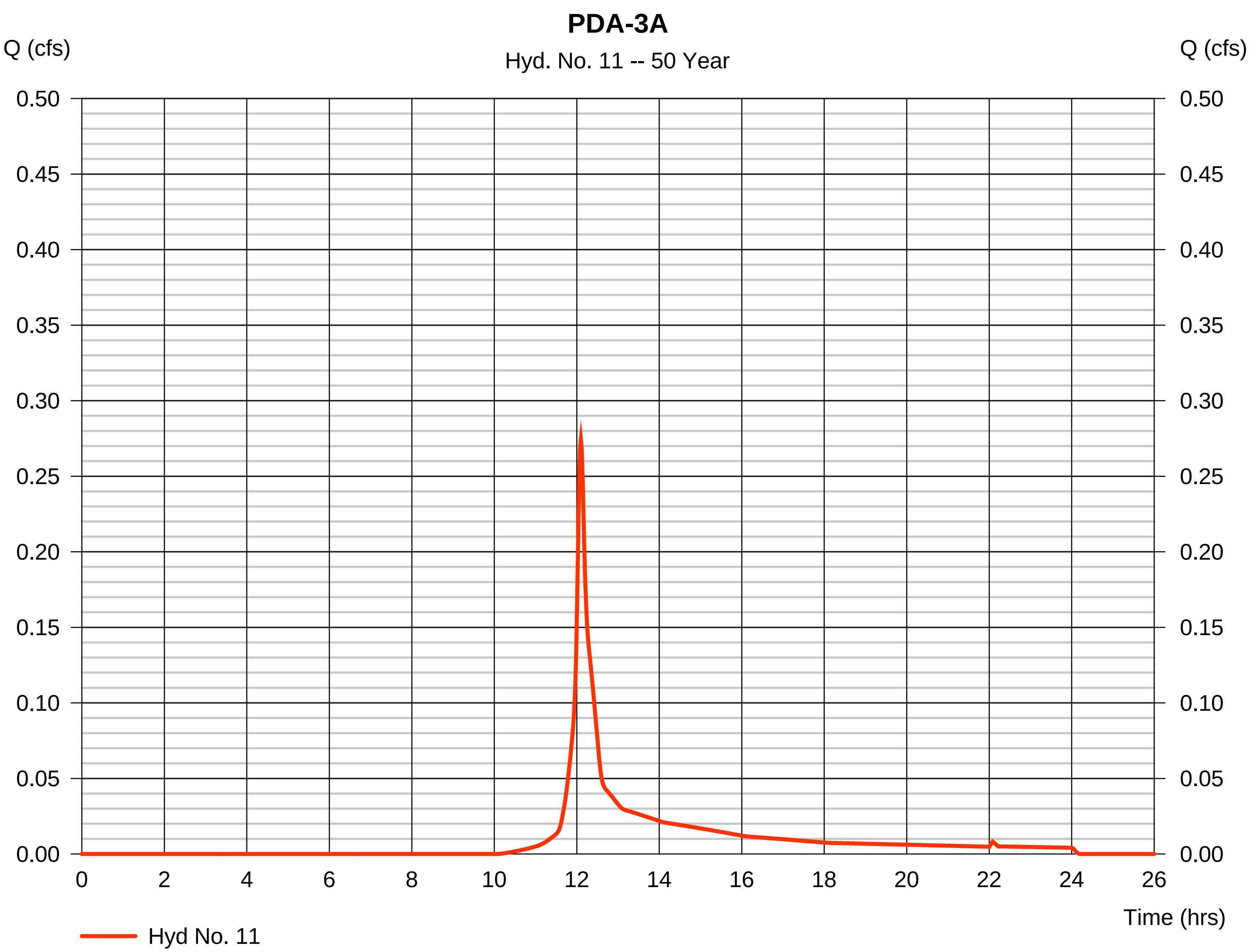
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 11

PDA-3A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.274 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 905 cuft
Drainage area	= 0.090 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.90 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



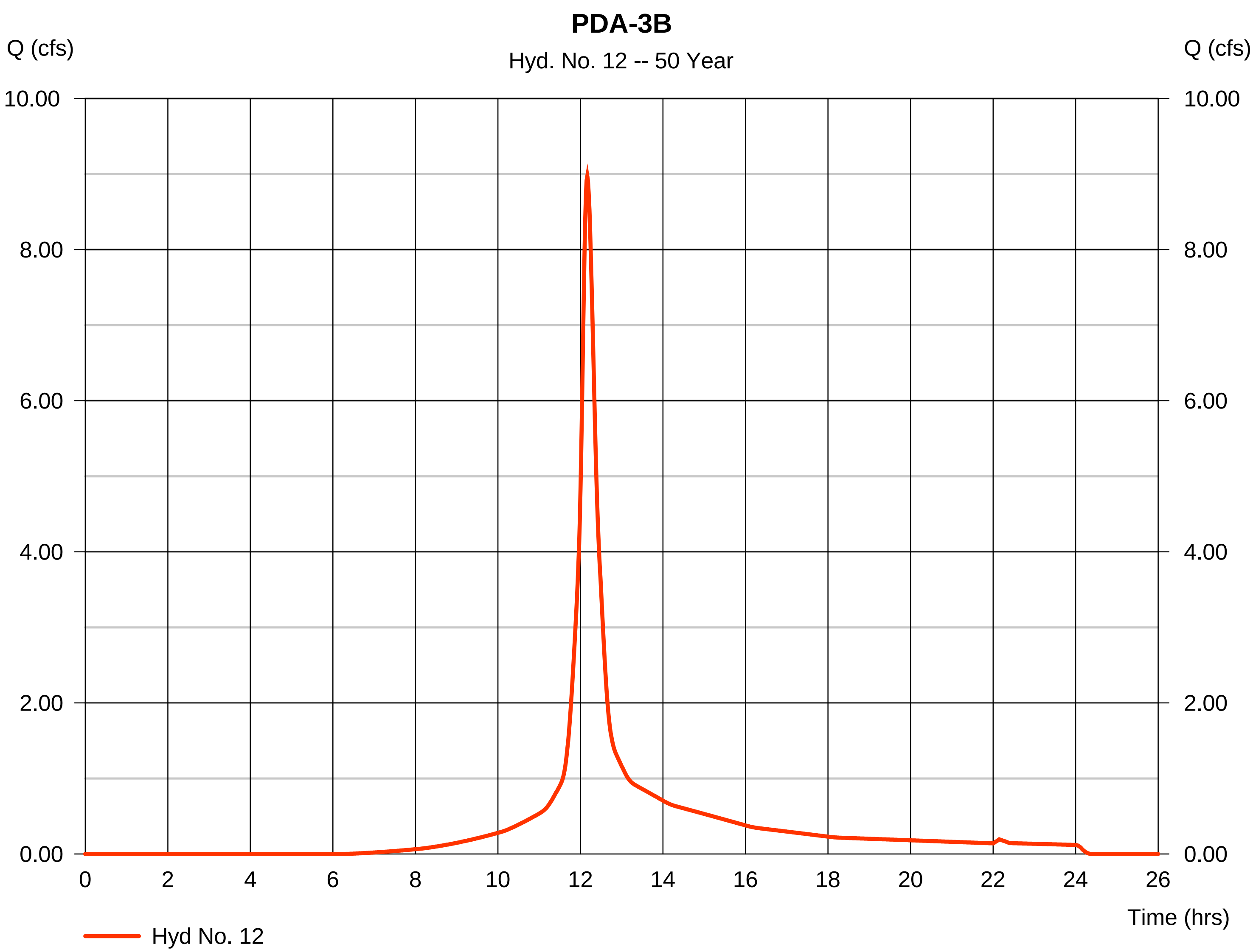
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 12

PDA-3B

Hydrograph type	= SCS Runoff	Peak discharge	= 8.971 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 35,682 cuft
Drainage area	= 1.950 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.70 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



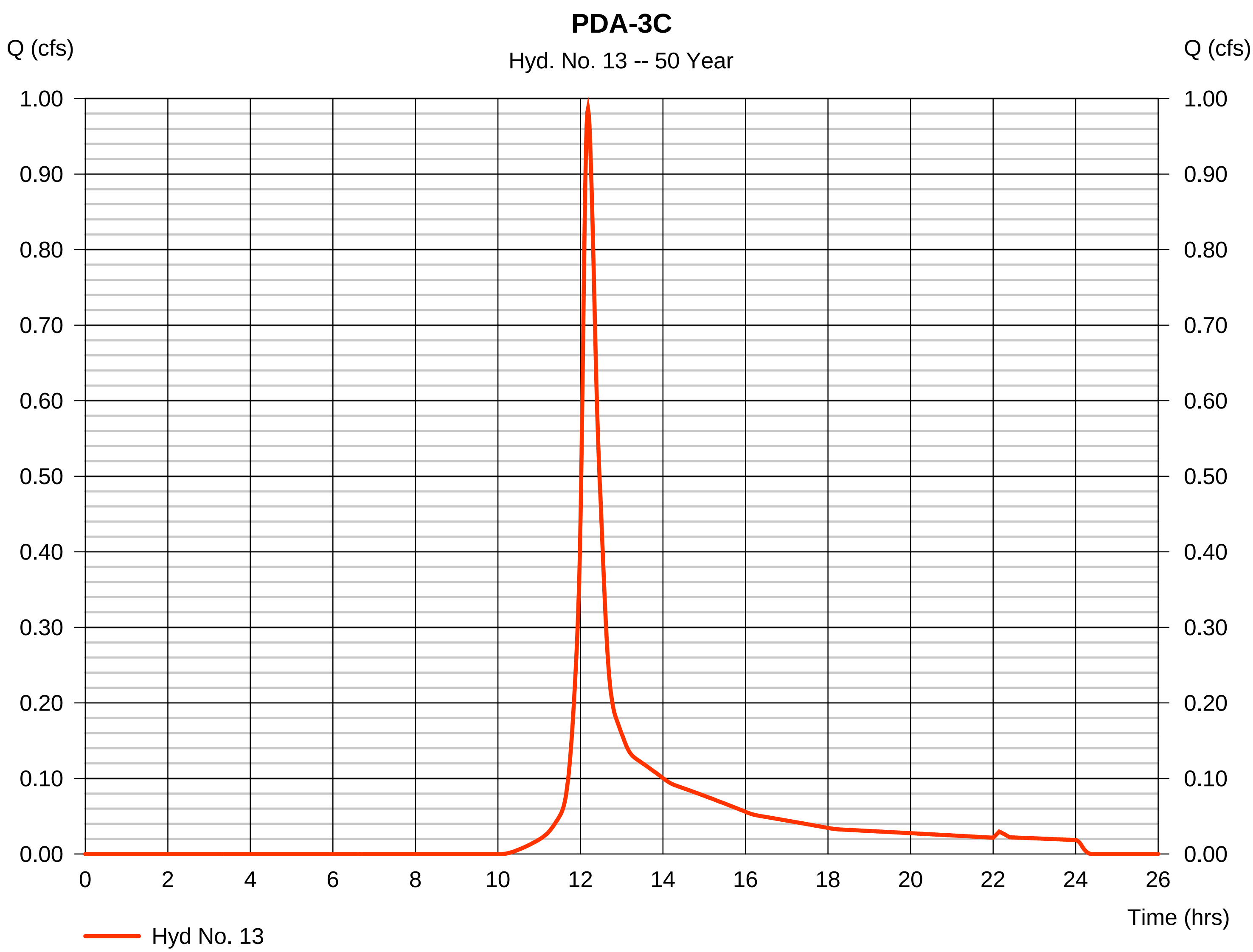
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 13

PDA-3C

Hydrograph type	= SCS Runoff	Peak discharge	= 0.986 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 4,020 cuft
Drainage area	= 0.390 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.80 min
Total precip.	= 7.62 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

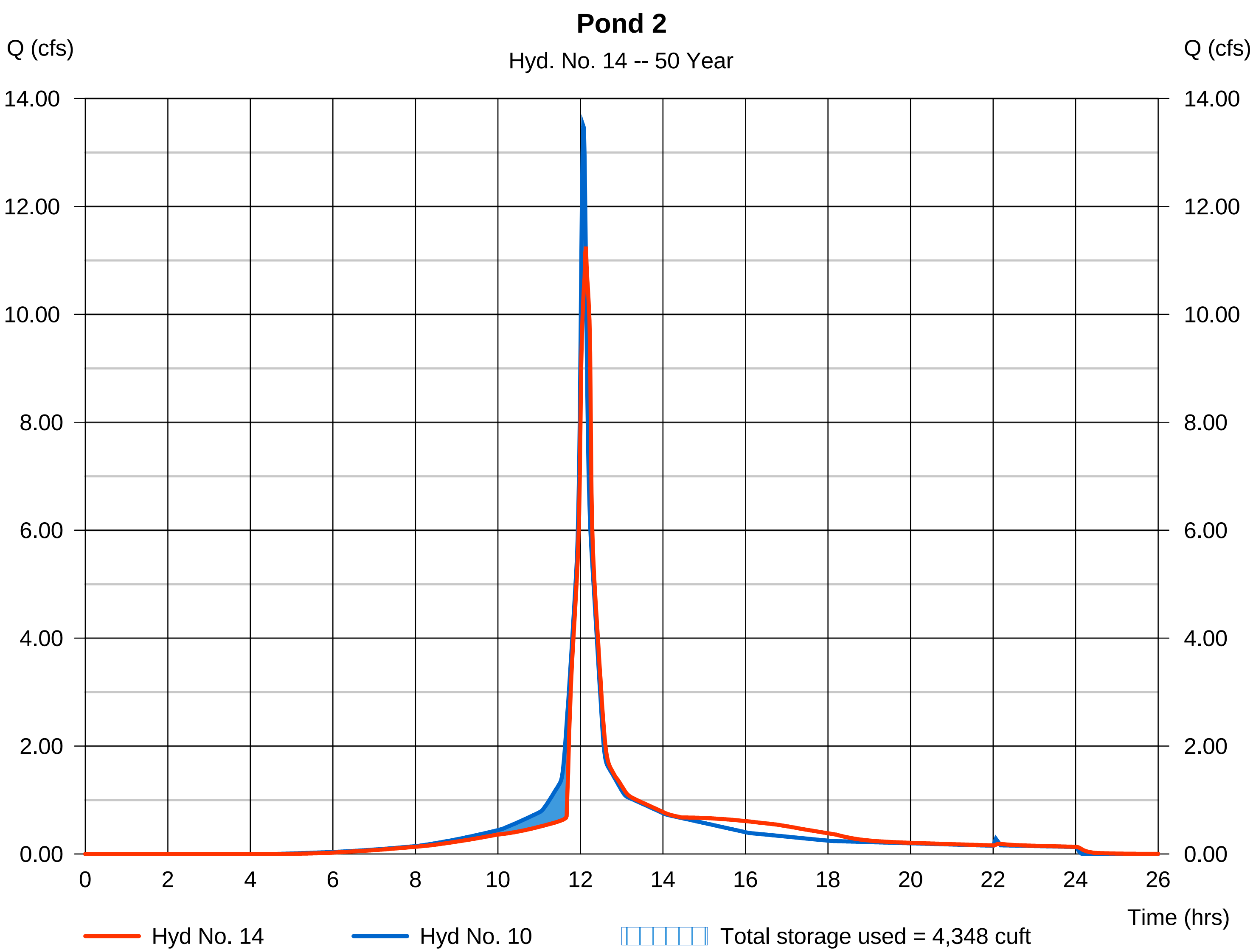
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 11.26 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 42,906 cuft
Inflow hyd. No.	= 10 - PDA-2B	Max. Elevation	= 335.03 ft
Reservoir name	= Basin 2	Max. Storage	= 4,348 cuft

Storage Indication method used.



Hydrograph Report

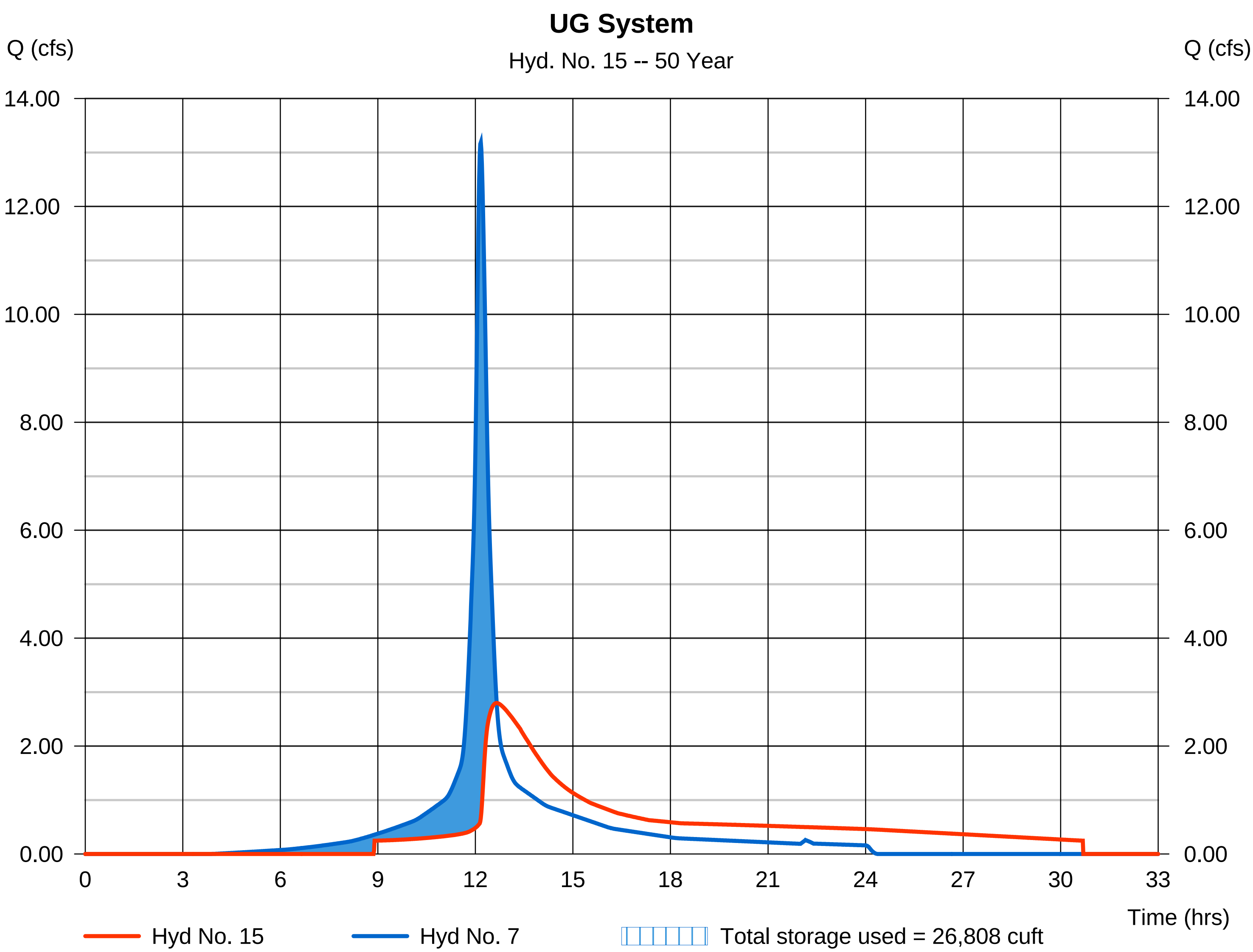
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 2.797 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.65 hrs
Time interval	= 1 min	Hyd. volume	= 52,146 cuft
Inflow hyd. No.	= 7 - PDA-1C	Max. Elevation	= 361.05 ft
Reservoir name	= Undergroud Detention	Max. Storage	= 26,808 cuft

Storage Indication method used.



Hydrograph Report

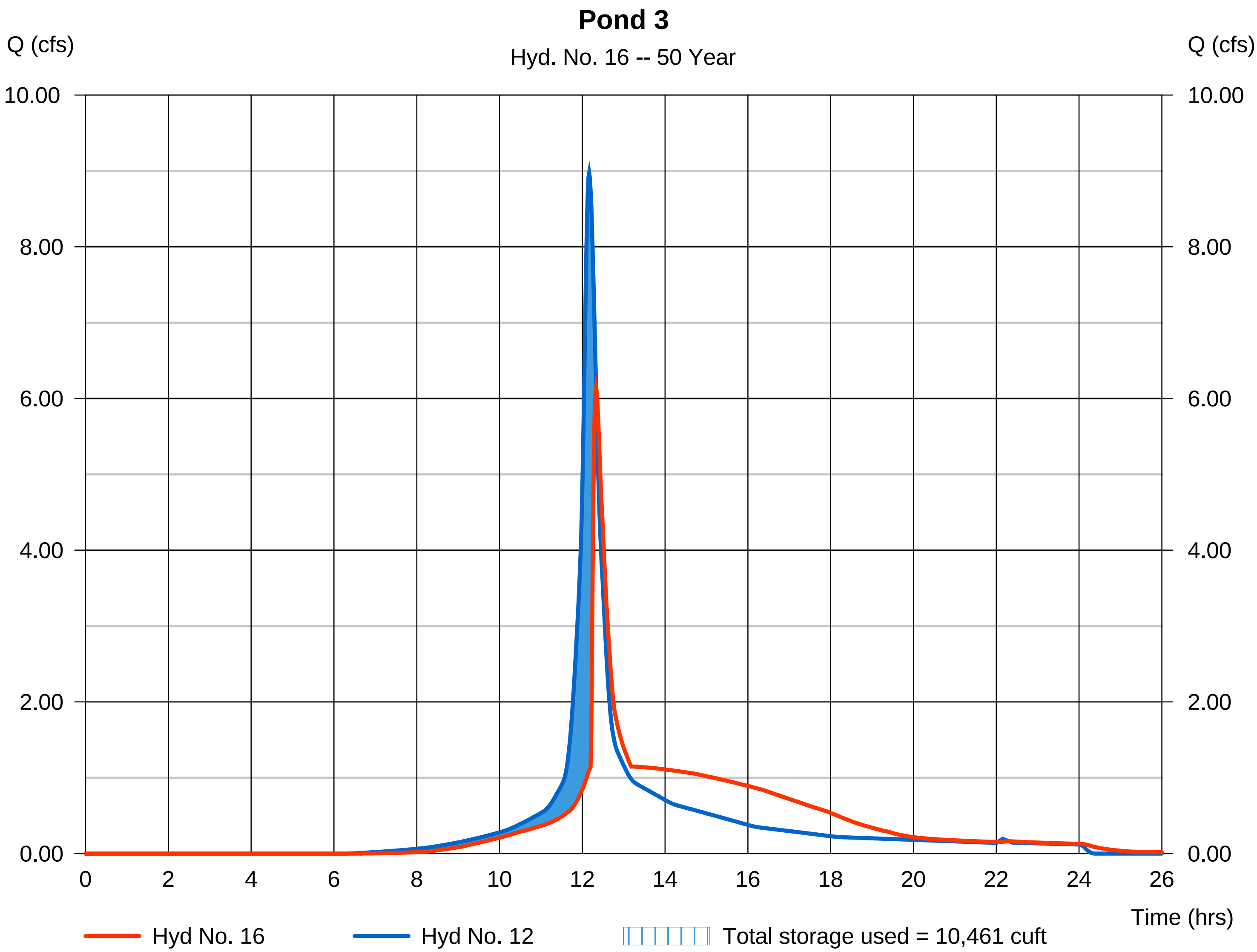
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 | Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 6.143 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.33 hrs
Time interval	= 1 min	Hyd. volume	= 35,675 cuft
Inflow hyd. No.	= 12 - PDA-3B	Max. Elevation	= 365.85 ft
Reservoir name	= Basin 3	Max. Storage	= 10,461 cuft

Storage Indication method used.



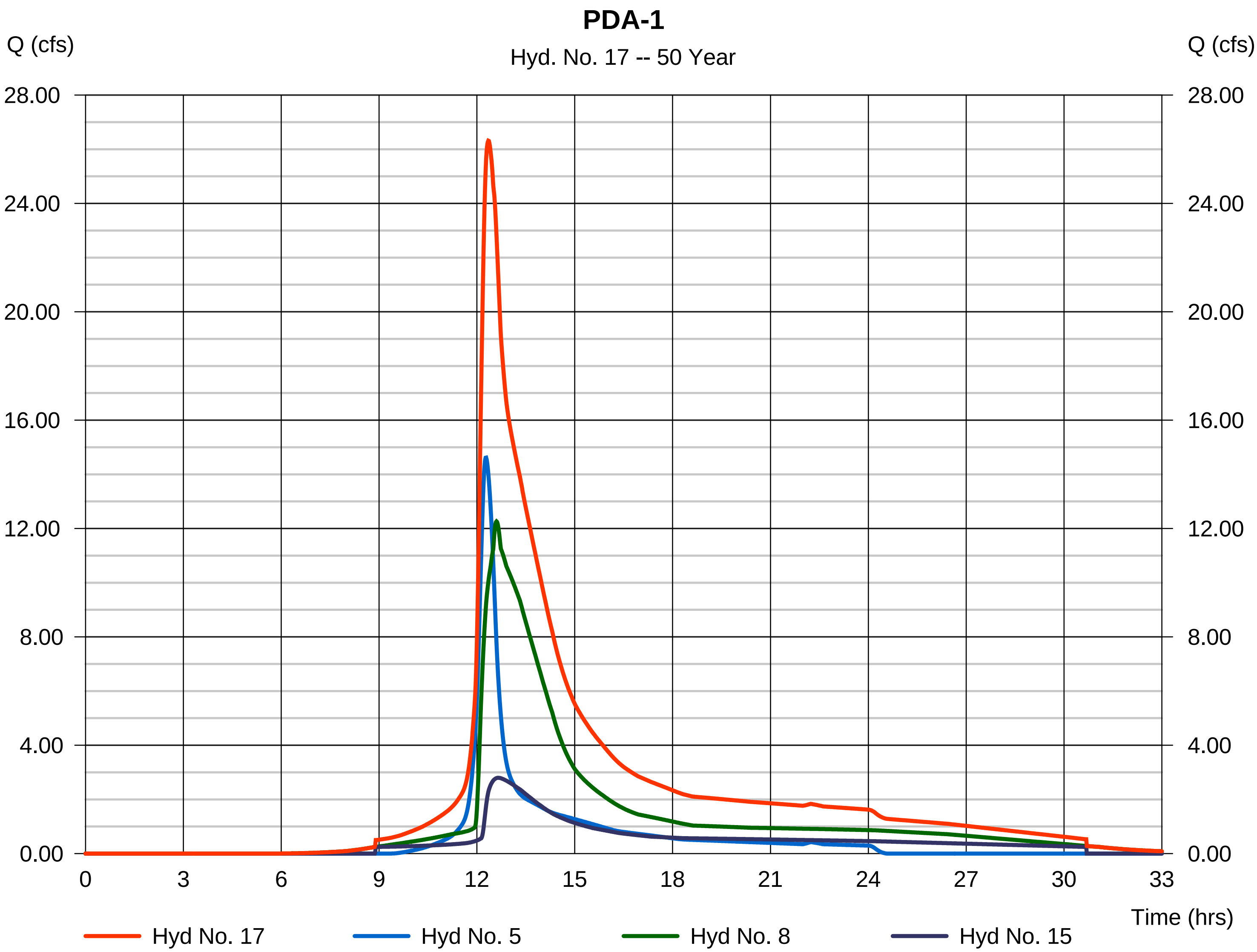
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 17

PDA-1

Hydrograph type	= Combine	Peak discharge	= 26.32 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.35 hrs
Time interval	= 1 min	Hyd. volume	= 267,105 cuft
Inflow hyds.	= 5, 8, 15	Contrib. drain. area	= 5.700 ac

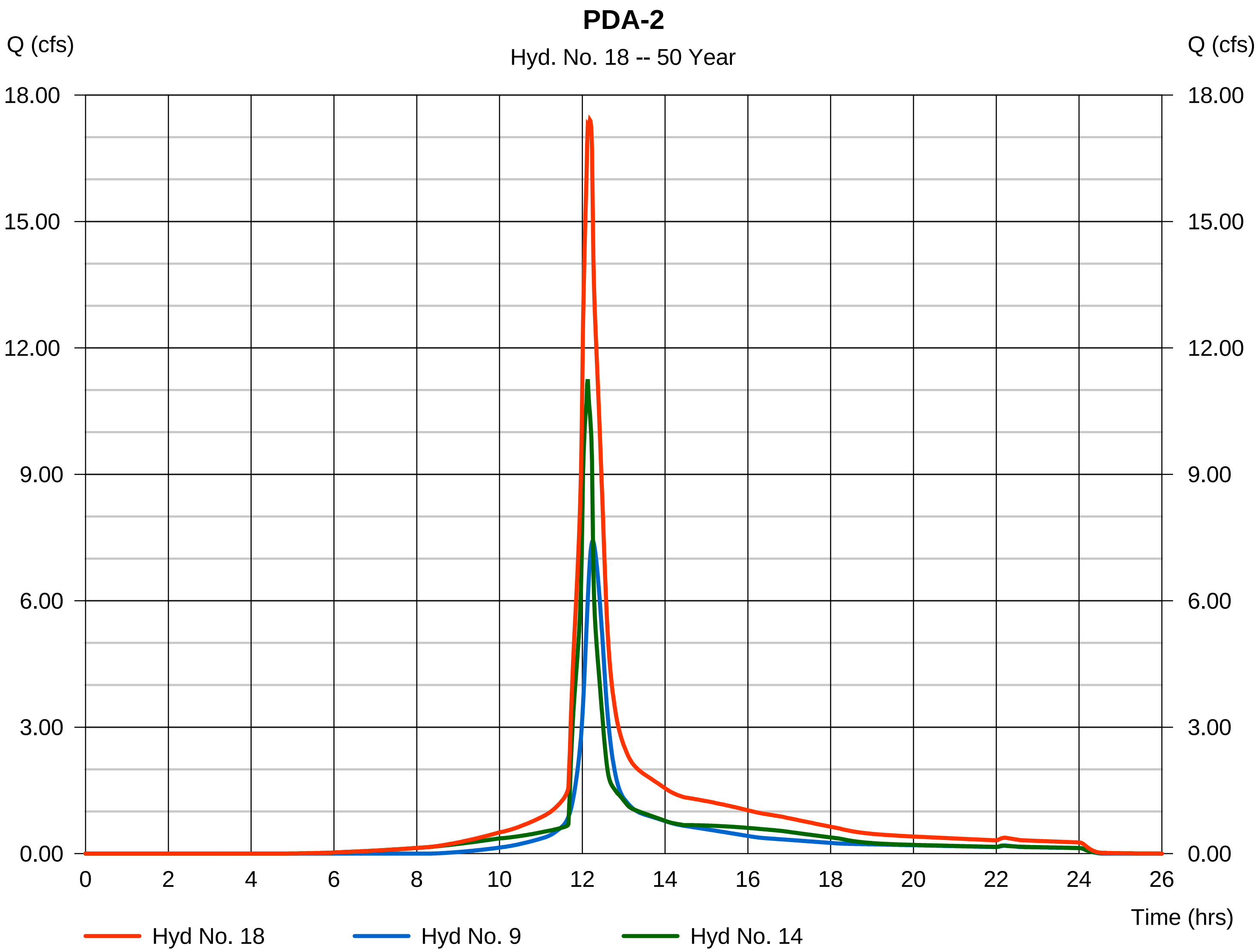


Hydrograph Report

Hyd. No. 18

PDA-2

Hydrograph type	= Combine	Peak discharge	= 17.41 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 76,864 cuft
Inflow hyds.	= 9, 14	Contrib. drain. area	= 2.300 ac



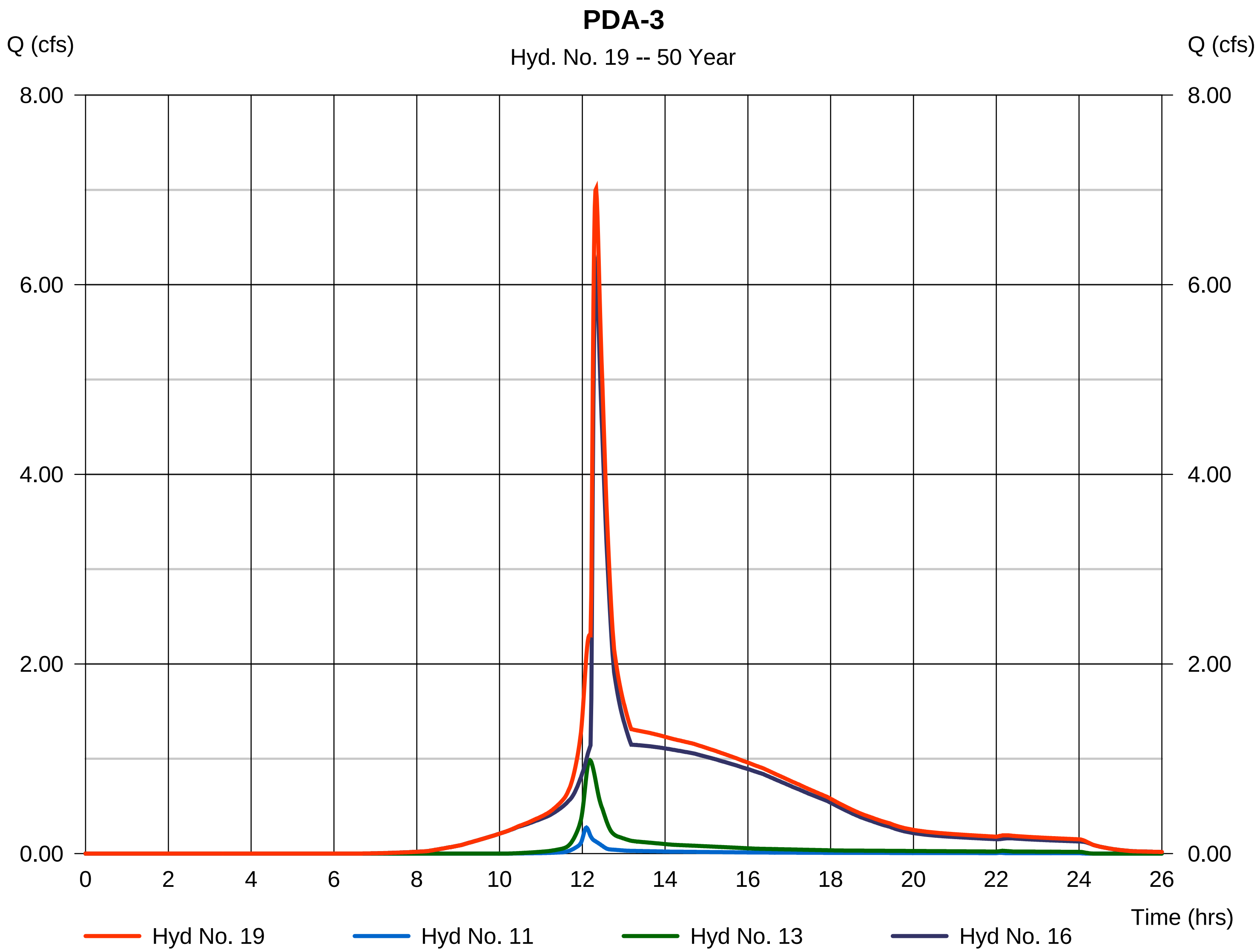
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 7.011 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.33 hrs
Time interval	= 1 min	Hyd. volume	= 40,600 cuft
Inflow hyds.	= 11, 13, 16	Contrib. drain. area	= 0.480 ac



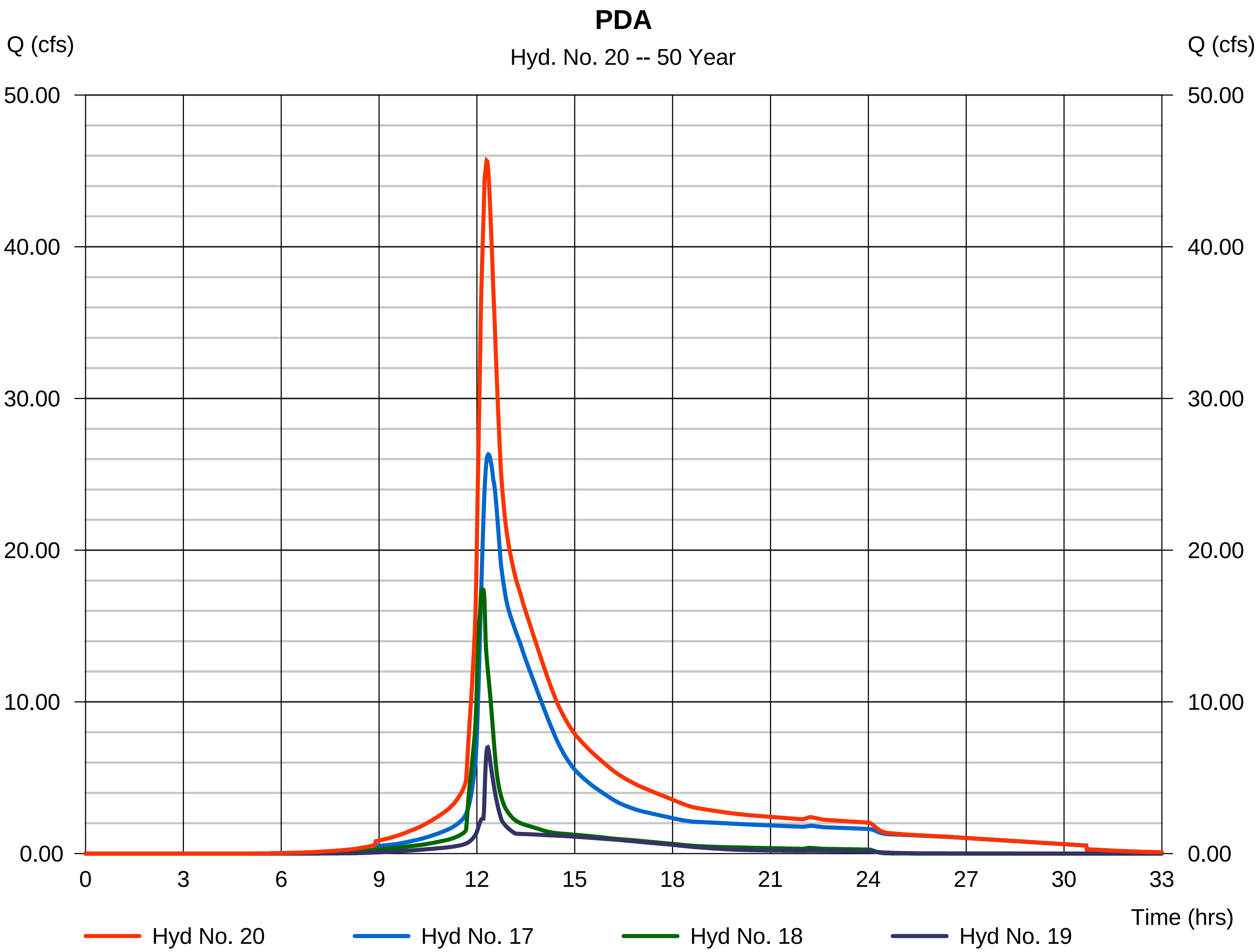
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 20

PDA

Hydrograph type	= Combine	Peak discharge	= 45.67 cfs
Storm frequency	= 50 yrs	Time to peak	= 12.30 hrs
Time interval	= 1 min	Hyd. volume	= 384,569 cuft
Inflow hyds.	= 17, 18, 19	Contrib. drain. area	= 0.000 ac



Hydrograph Summary Report

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

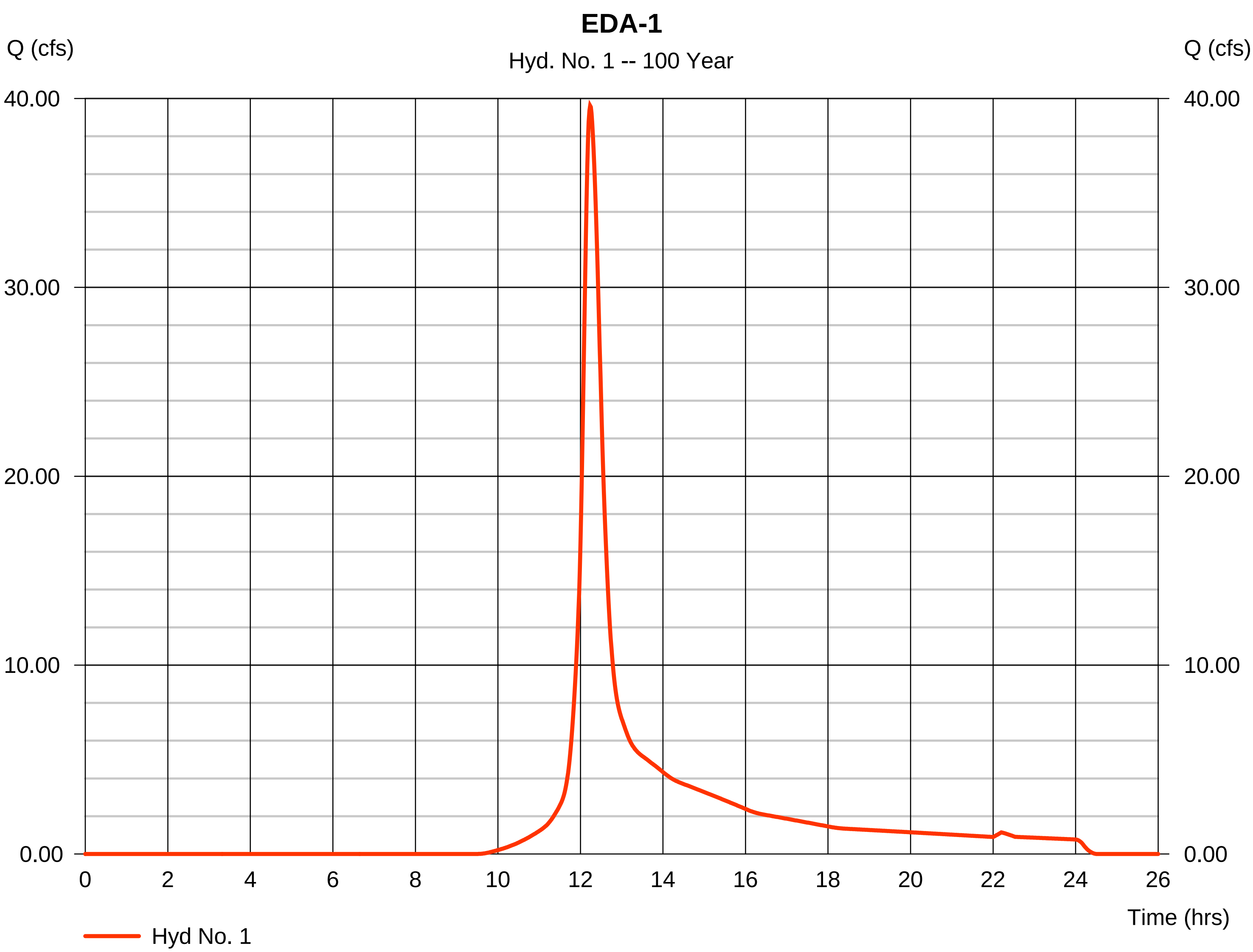
Hyd. No.	Hydrograph type (origin)	Peak flow (cfs)	Time interval (min)	Time to Peak (min)	Hyd. volume (cuft)	Inflow hyd(s)	Maximum elevation (ft)	Total strge used (cuft)	Hydrograph Description
1	SCS Runoff	39.61	1	734	177,424	------	------	------	EDA-1
2	SCS Runoff	27.50	1	728	100,019	------	------	------	EDA-2
3	SCS Runoff	11.22	1	733	48,487	------	------	------	EDA-3
4	Combine	74.30	1	731	325,930	1, 2, 3	------	------	EDA
5	SCS Runoff	18.06	1	736	84,856	------	------	------	PDA-1A
6	SCS Runoff	37.94	1	733	170,627	------	------	------	PDA-1B
7	SCS Runoff	15.12	1	730	62,733	------	------	------	PDA-1C
8	Reservoir	20.64	1	750	170,616	6	357.26	63,992	Pond 1
9	SCS Runoff	8.951	1	735	40,927	------	------	------	PDA-2A
10	SCS Runoff	15.57	1	724	49,885	------	------	------	PDA-2B
11	SCS Runoff	0.347	1	726	1,130	------	------	------	PDA-3A
12	SCS Runoff	10.52	1	730	42,038	------	------	------	PDA-3B
13	SCS Runoff	1.248	1	731	5,020	------	------	------	PDA-3C
14	Reservoir	14.25	1	727	49,883	10	335.16	4,644	Pond 2
15	Reservoir	3.400	1	758	60,587	7	361.43	30,501	UG System
16	Reservoir	8.548	1	737	42,031	12	365.96	10,895	Pond 3
17	Combine	37.93	1	747	316,059	5, 8, 15,	------	------	PDA-1
18	Combine	21.18	1	727	90,810	9, 14,	------	------	PDA-2
19	Combine	9.791	1	736	48,181	11, 13, 16,	------	------	PDA-3
20	Combine	58.73	1	735	455,049	17, 18, 19	------	------	PDA

Hydrograph Report

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 39.61 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.23 hrs
Time interval	= 1 min	Hyd. volume	= 177,424 cuft
Drainage area	= 13.340 ac	Curve number	= 59
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.20 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

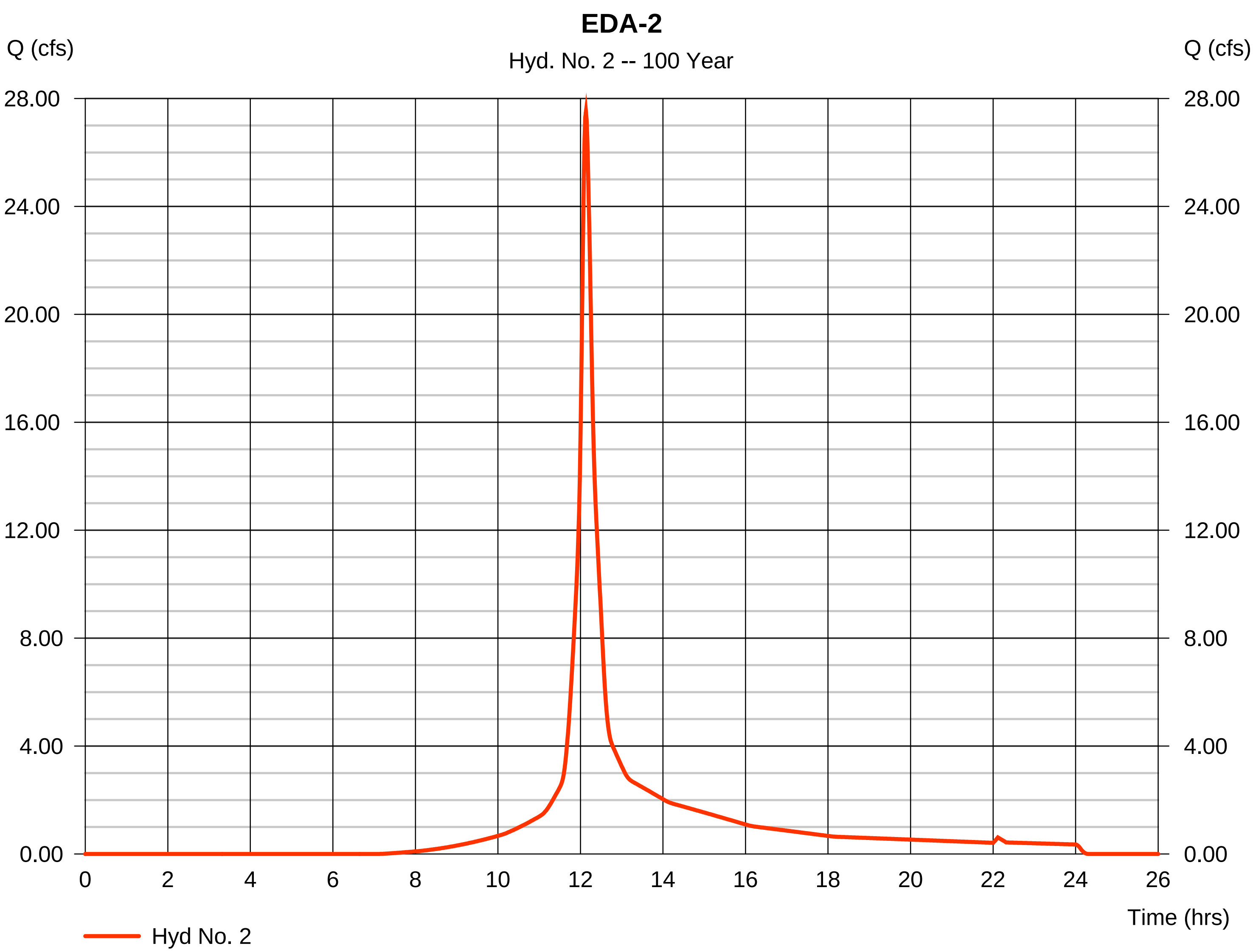


Hydrograph Report

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 27.50 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.13 hrs
Time interval	= 1 min	Hyd. volume	= 100,019 cuft
Drainage area	= 5.190 ac	Curve number	= 72
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 10.10 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



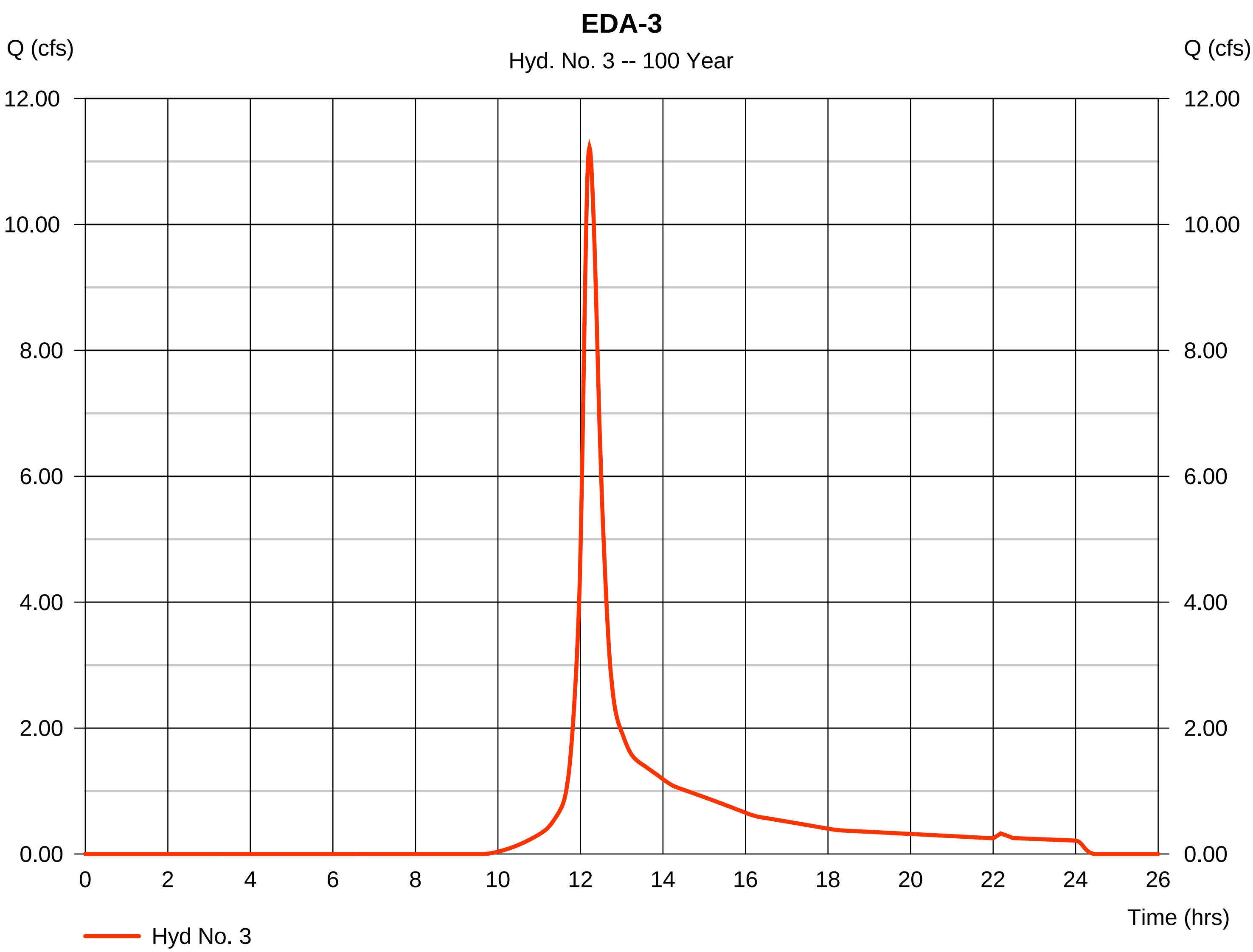
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 3

EDA-3

Hydrograph type	= SCS Runoff	Peak discharge	= 11.22 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 48,487 cuft
Drainage area	= 3.810 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 18.20 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



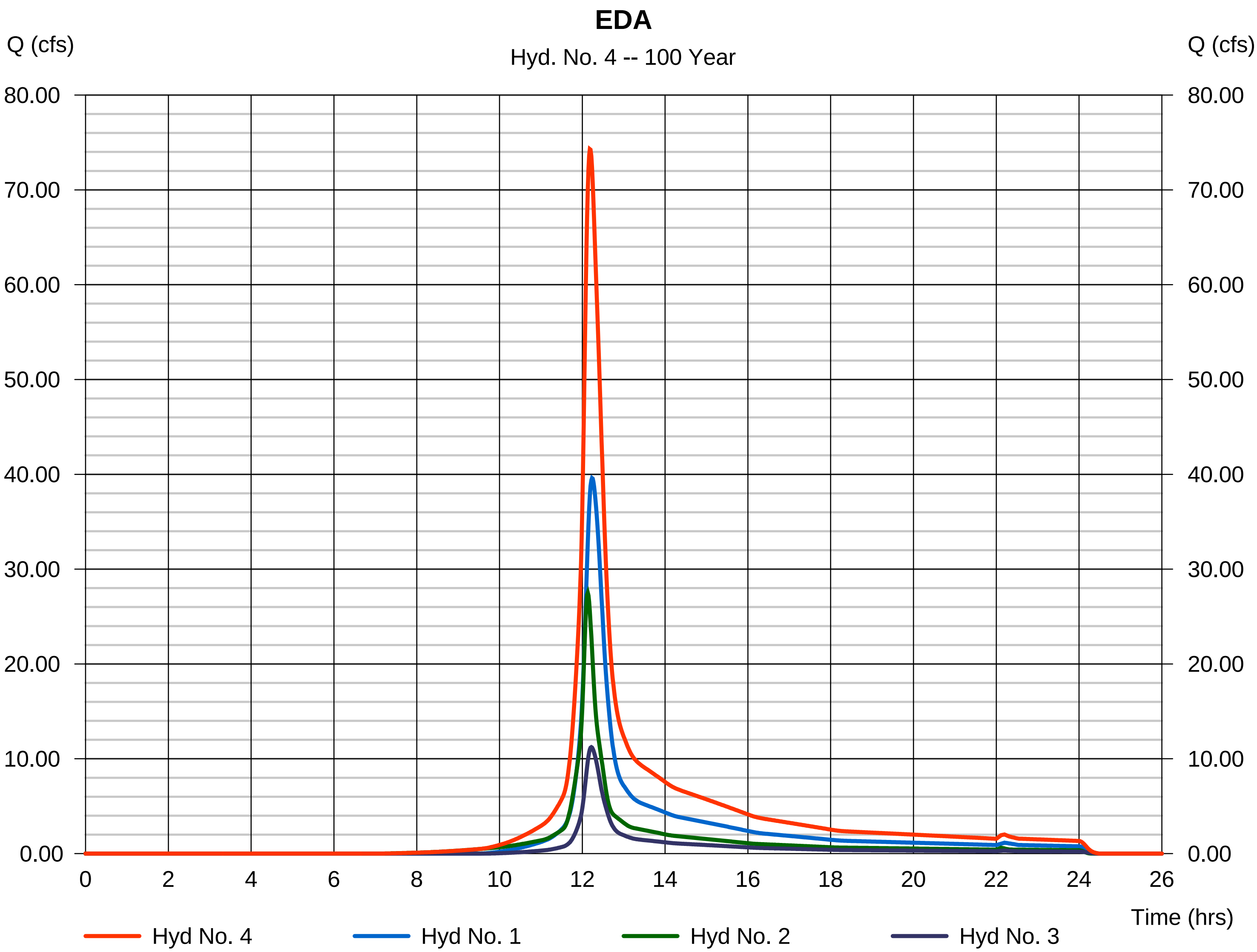
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 4

EDA

Hydrograph type	= Combine	Peak discharge	= 74.30 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 325,930 cuft
Inflow hyds.	= 1, 2, 3	Contrib. drain. area	= 22.340 ac



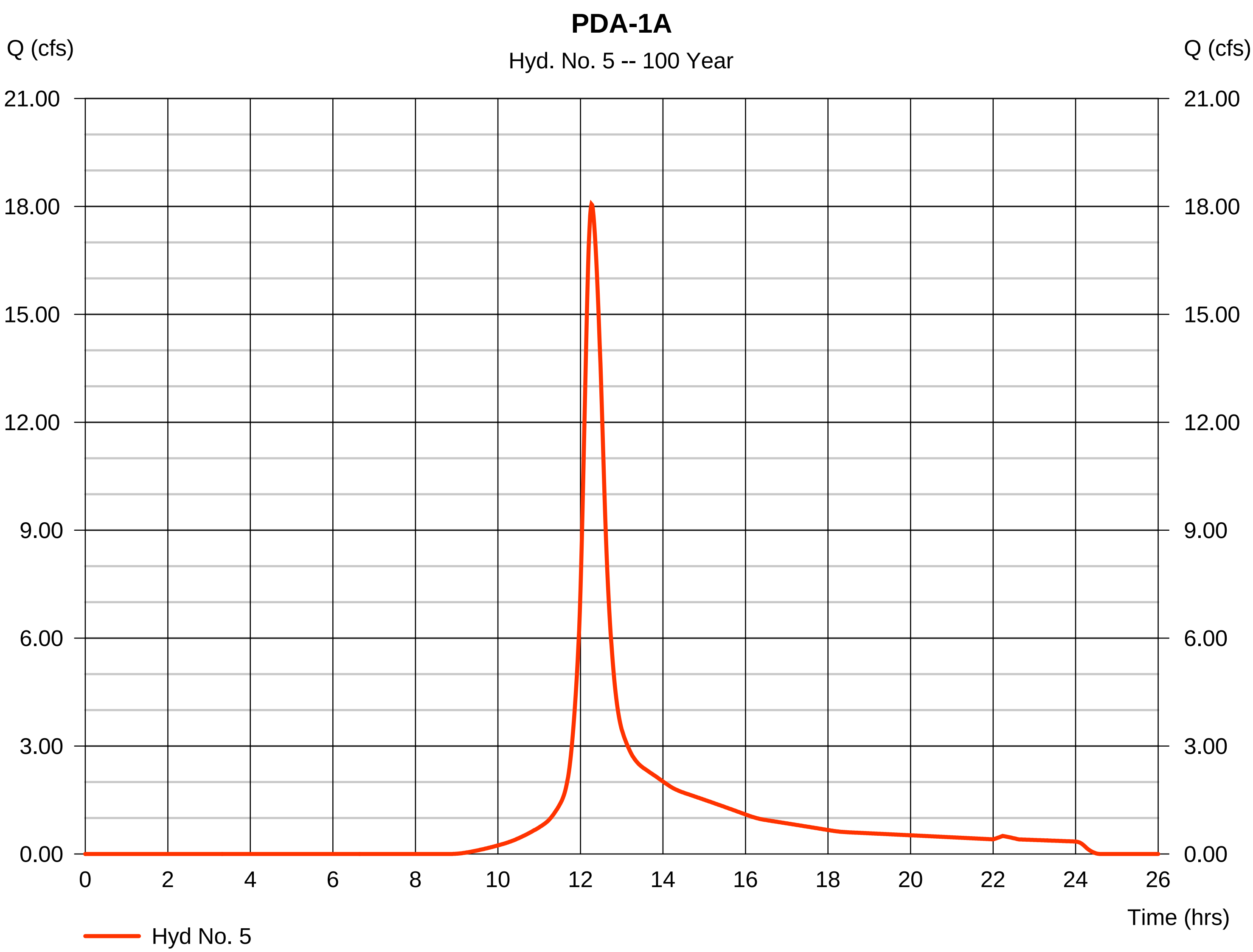
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 5

PDA-1A

Hydrograph type	= SCS Runoff	Peak discharge	= 18.06 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 84,856 cuft
Drainage area	= 5.700 ac	Curve number	= 63
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 22.20 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

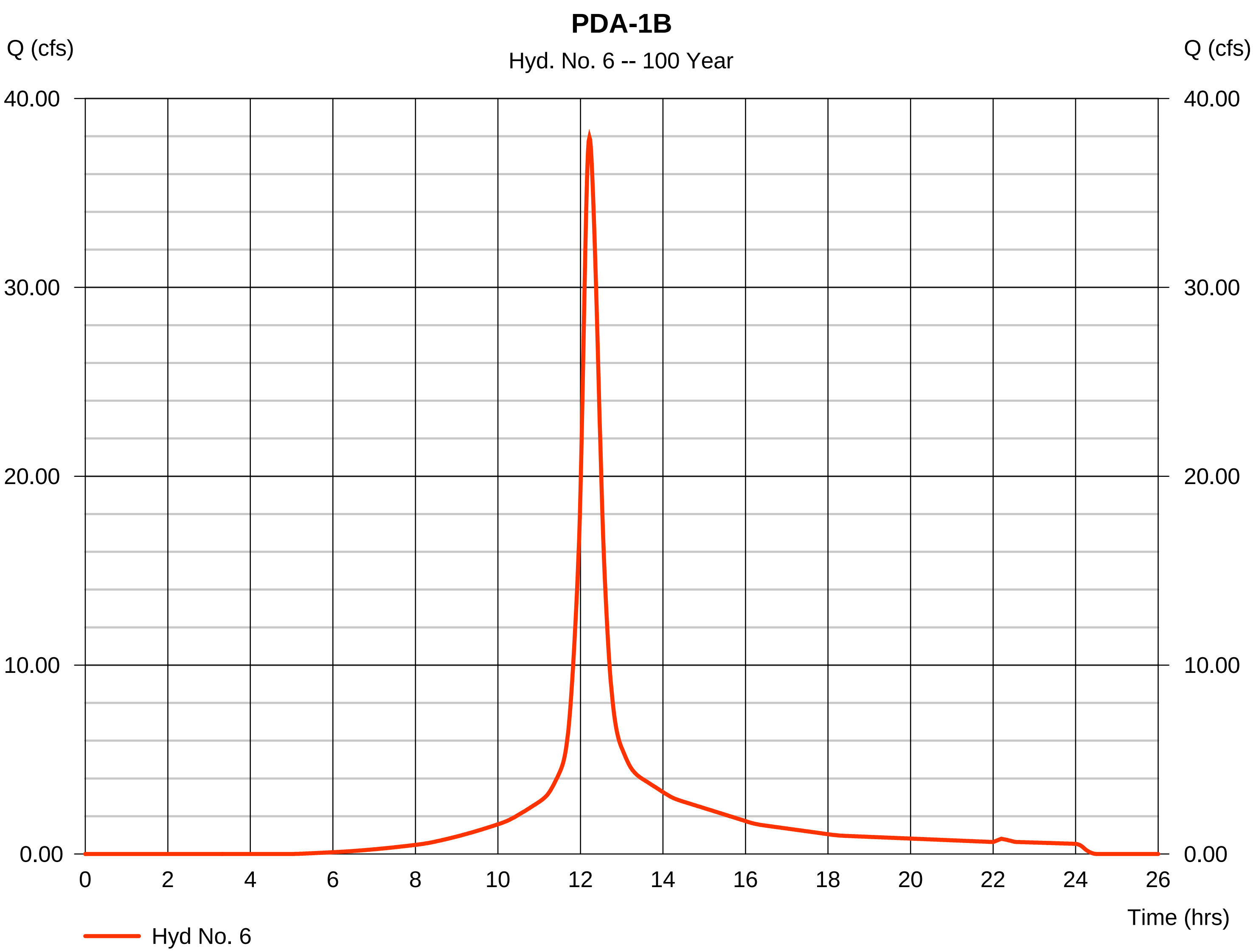


Hydrograph Report

Hyd. No. 6

PDA-1B

Hydrograph type	= SCS Runoff	Peak discharge	= 37.94 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.22 hrs
Time interval	= 1 min	Hyd. volume	= 170,627 cuft
Drainage area	= 7.460 ac	Curve number	= 81
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 19.10 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



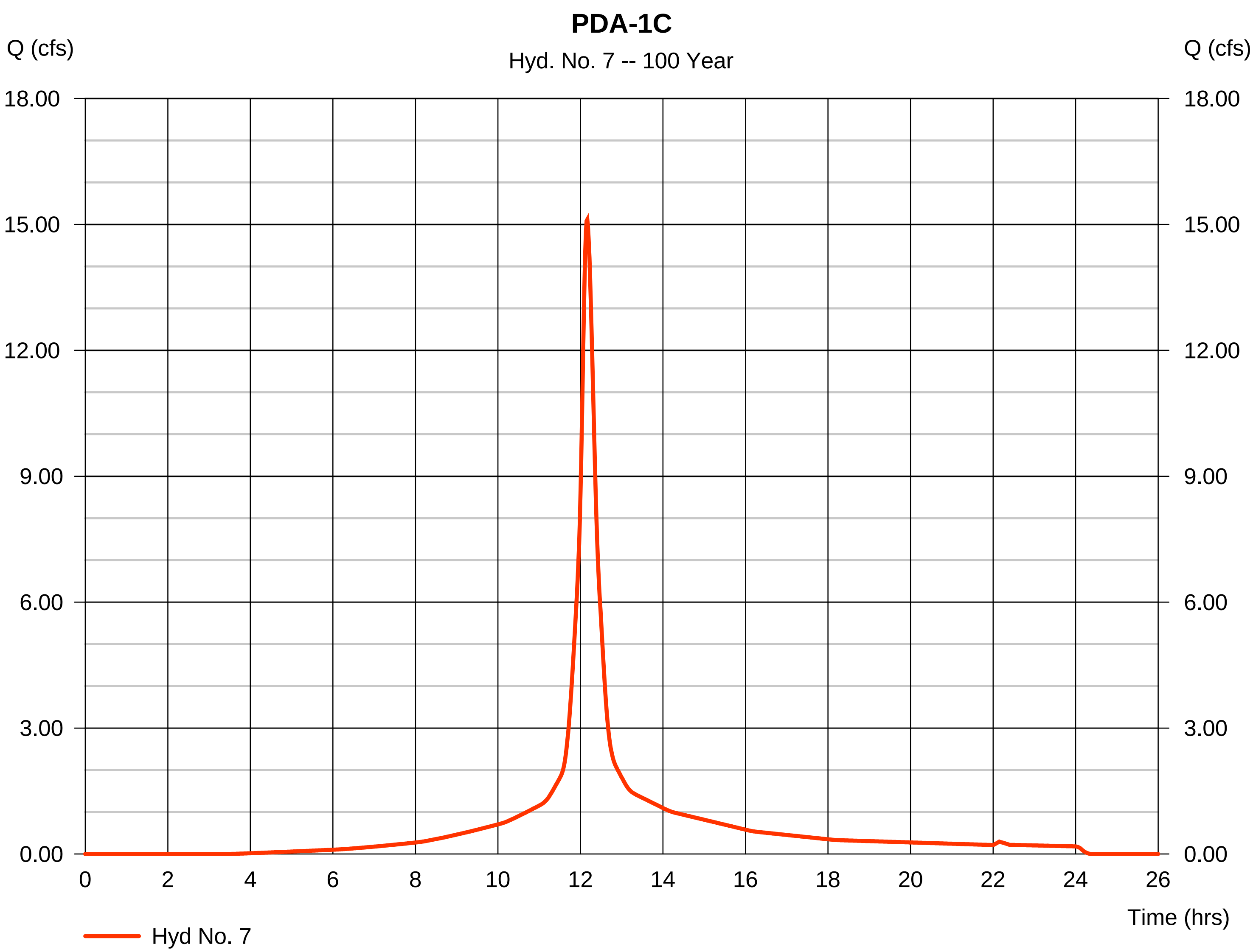
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 7

PDA-1C

Hydrograph type	= SCS Runoff	Peak discharge	= 15.12 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 62,733 cuft
Drainage area	= 2.460 ac	Curve number	= 87
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.90 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

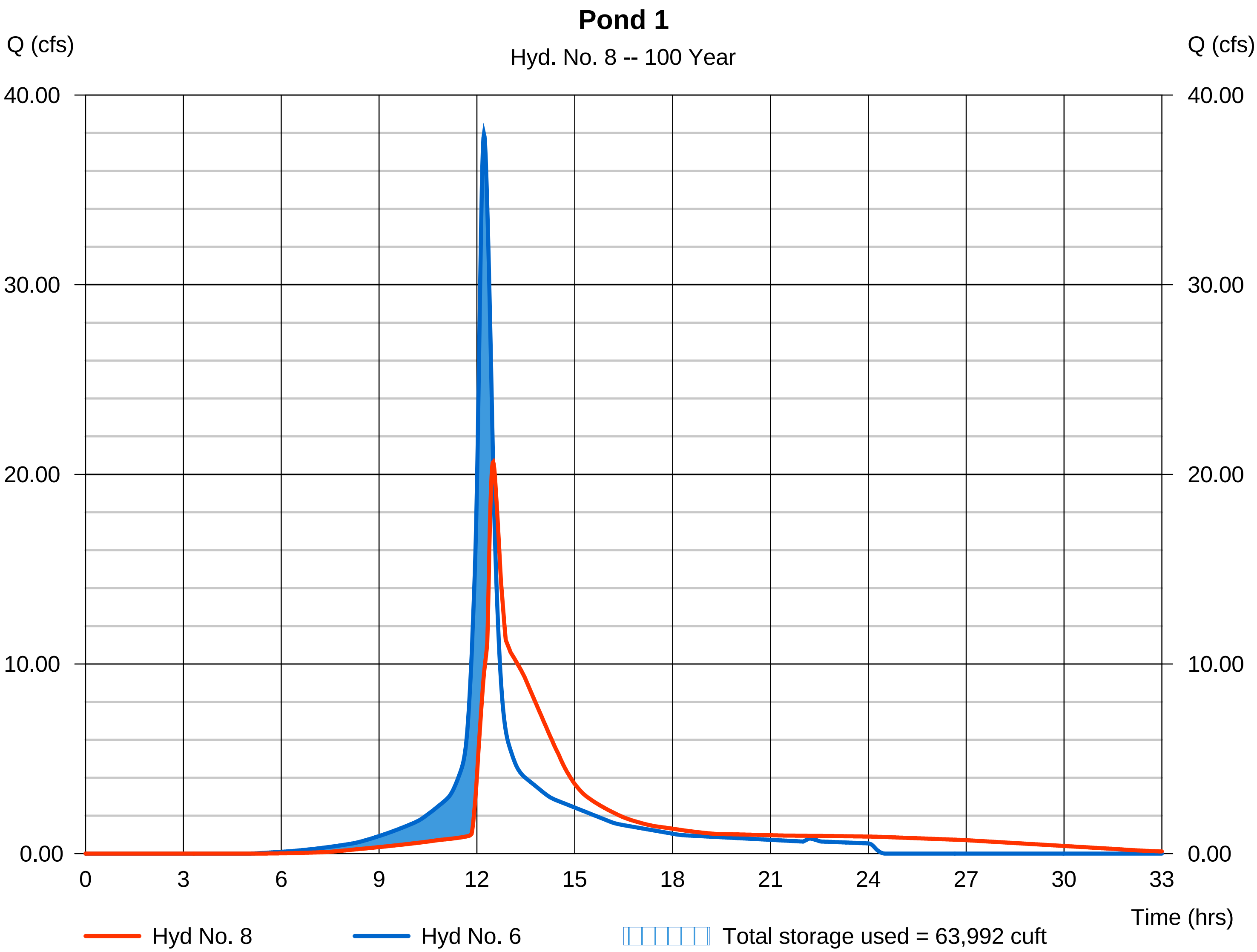
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 20.64 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.50 hrs
Time interval	= 1 min	Hyd. volume	= 170,616 cuft
Inflow hyd. No.	= 6 - PDA-1B	Max. Elevation	= 357.26 ft
Reservoir name	= Basin 1	Max. Storage	= 63,992 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 8

Pond 1

Hydrograph type	= Reservoir	Peak discharge	= 20.64 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.50 hrs
Time interval	= 1 min	Hyd. volume	= 170,616 cuft
Inflow hyd. No.	= 6 - PDA-1B	Reservoir name	= Basin 1
Max. Elevation	= 357.26 ft	Max. Storage	= 63,992 cuft

Storage Indication method used.

Hydrograph Discharge Table

(Printed values >= 1.00% of Qp. Print interval = 10)

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
8.33	0.591	350.38	5.348	0.233	-----	-----	-----	-----	-----	-----	-----	0.233
8.50	0.665	350.43	5.348	0.260	-----	-----	-----	-----	-----	-----	-----	0.260
8.67	0.746	350.48	5.348	0.285	-----	-----	-----	-----	-----	-----	-----	0.285
8.83	0.832	350.54	5.348	0.313	-----	-----	-----	-----	-----	-----	-----	0.313
9.00	0.924	350.61	5.348	0.344	-----	-----	-----	-----	-----	-----	-----	0.344
9.17	1.020	350.68	5.348	0.371	-----	-----	-----	-----	-----	-----	-----	0.371
9.33	1.122	350.76	5.348	0.402	-----	-----	-----	-----	-----	-----	-----	0.402
9.50	1.228	350.85	5.348	0.433	-----	-----	-----	-----	-----	-----	-----	0.433
9.67	1.338	350.95	5.348	0.464	-----	-----	-----	-----	-----	-----	-----	0.464
9.83	1.452	351.06	5.348	0.496	-----	-----	-----	-----	-----	-----	-----	0.496
10.00	1.571	351.18	5.348	0.530	-----	-----	-----	-----	-----	-----	-----	0.530
10.17	1.701	351.31	5.348	0.563	-----	-----	-----	-----	-----	-----	-----	0.563
10.33	1.870	351.45	5.348	0.598	-----	-----	-----	-----	-----	-----	-----	0.598
10.50	2.075	351.62	5.348	0.636	-----	-----	-----	-----	-----	-----	-----	0.636
10.67	2.295	351.80	5.348	0.675	-----	-----	-----	-----	-----	-----	-----	0.675
10.83	2.525	352.00	5.348	0.716	-----	-----	-----	-----	-----	-----	-----	0.716
11.00	2.764	352.15	5.348	0.745	-----	-----	-----	-----	-----	-----	-----	0.745
11.17	3.060	352.32	5.348	0.776	-----	-----	-----	-----	-----	-----	-----	0.776
11.33	3.600	352.51	5.348	0.810	-----	-----	-----	-----	-----	-----	-----	0.810
11.50	4.351	352.75	5.348	0.852	-----	-----	-----	-----	-----	-----	-----	0.852

Continues on next page...

Pond 1

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
11.67	5.817	353.07	5.348	0.902	-----	-----	-----	-----	-----	-----	-----	0.902
11.83	10.39	353.60	5.348	0.982	0.051	-----	-----	-----	-----	-----	-----	1.033
12.00	19.25	354.38	5.348	1.088	2.971	-----	-----	-----	-----	-----	-----	4.059
12.17	36.23	355.60	8.447	1.225	7.183	-----	-----	-----	-----	-----	-----	8.409
12.33	33.15	356.85	12.13	1.324	9.759	-----	1.022	-----	-----	-----	-----	12.11
12.50	20.23	357.26 <<	20.64	1.231	10.46	-----	8.954	-----	-----	-----	-----	20.64
<<												
12.67	11.32	357.10	16.59	1.289	10.18	-----	5.118	-----	-----	-----	-----	16.59
12.83	7.106	356.86	12.26	1.324	9.774	-----	1.145	-----	-----	-----	-----	12.24
13.00	5.613	356.64	10.76	1.316	9.375	-----	0.059	-----	-----	-----	-----	10.75
13.17	4.783	356.41	10.31	1.296	8.933	-----	-----	-----	-----	-----	-----	10.23
13.33	4.261	356.17	9.777	1.275	8.449	-----	-----	-----	-----	-----	-----	9.724
13.50	3.978	355.92	9.189	1.253	7.907	-----	-----	-----	-----	-----	-----	9.160
13.67	3.746	355.64	8.527	1.228	7.263	-----	-----	-----	-----	-----	-----	8.491
13.83	3.512	355.38	7.901	1.205	6.621	-----	-----	-----	-----	-----	-----	7.826
14.00	3.277	355.15	7.165	1.184	5.976	-----	-----	-----	-----	-----	-----	7.161
14.17	3.054	354.94	6.514	1.160	5.335	-----	-----	-----	-----	-----	-----	6.495
14.33	2.888	354.76	5.928	1.137	4.709	-----	-----	-----	-----	-----	-----	5.846
14.50	2.766	354.61	5.381	1.118	4.121	-----	-----	-----	-----	-----	-----	5.239
14.67	2.653	354.48	5.348	1.102	3.509	-----	-----	-----	-----	-----	-----	4.611
14.83	2.541	354.39	5.348	1.089	3.011	-----	-----	-----	-----	-----	-----	4.101
15.00	2.427	354.31	5.348	1.079	2.593	-----	-----	-----	-----	-----	-----	3.673
15.17	2.313	354.24	5.348	1.071	2.257	-----	-----	-----	-----	-----	-----	3.328
15.33	2.199	354.19	5.348	1.064	1.987	-----	-----	-----	-----	-----	-----	3.051
15.50	2.085	354.15	5.348	1.058	1.783	-----	-----	-----	-----	-----	-----	2.841
15.67	1.971	354.11	5.348	1.052	1.601	-----	-----	-----	-----	-----	-----	2.653
15.83	1.856	354.07	5.348	1.047	1.435	-----	-----	-----	-----	-----	-----	2.483
16.00	1.741	354.03	5.348	1.043	1.282	-----	-----	-----	-----	-----	-----	2.325

Continues on next page...

Pond 1

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
16.17	1.632	354.00	5.348	1.039	1.138	-----	-----	-----	-----	-----	-----	2.177
16.33	1.553	353.96	5.348	1.033	1.001	-----	-----	-----	-----	-----	-----	2.035
16.50	1.498	353.93	5.348	1.028	0.882	-----	-----	-----	-----	-----	-----	1.911
16.67	1.448	353.90	5.348	1.024	0.780	-----	-----	-----	-----	-----	-----	1.804
16.83	1.398	353.87	5.348	1.021	0.691	-----	-----	-----	-----	-----	-----	1.712
17.00	1.348	353.85	5.348	1.018	0.612	-----	-----	-----	-----	-----	-----	1.629
17.17	1.298	353.83	5.348	1.015	0.540	-----	-----	-----	-----	-----	-----	1.555
17.33	1.248	353.81	5.348	1.012	0.474	-----	-----	-----	-----	-----	-----	1.486
17.50	1.198	353.79	5.348	1.010	0.423	-----	-----	-----	-----	-----	-----	1.432
17.67	1.148	353.77	5.348	1.007	0.387	-----	-----	-----	-----	-----	-----	1.394
17.83	1.097	353.75	5.348	1.004	0.349	-----	-----	-----	-----	-----	-----	1.354
18.00	1.047	353.73	5.348	1.001	0.311	-----	-----	-----	-----	-----	-----	1.312
18.17	1.000	353.71	5.348	0.998	0.271	-----	-----	-----	-----	-----	-----	1.269
18.33	0.969	353.69	5.348	0.996	0.231	-----	-----	-----	-----	-----	-----	1.227
18.50	0.951	353.67	5.348	0.993	0.194	-----	-----	-----	-----	-----	-----	1.187
18.67	0.936	353.66	5.348	0.990	0.161	-----	-----	-----	-----	-----	-----	1.151
18.83	0.921	353.64	5.348	0.988	0.130	-----	-----	-----	-----	-----	-----	1.118
19.00	0.906	353.63	5.348	0.986	0.102	-----	-----	-----	-----	-----	-----	1.088
19.17	0.891	353.61	5.348	0.984	0.076	-----	-----	-----	-----	-----	-----	1.060
19.33	0.876	353.60	5.348	0.982	0.052	-----	-----	-----	-----	-----	-----	1.034
19.50	0.861	353.59	5.348	0.980	0.048	-----	-----	-----	-----	-----	-----	1.029
19.67	0.846	353.57	5.348	0.979	0.045	-----	-----	-----	-----	-----	-----	1.023
19.83	0.831	353.56	5.348	0.976	0.041	-----	-----	-----	-----	-----	-----	1.018
20.00	0.816	353.55	5.348	0.974	0.037	-----	-----	-----	-----	-----	-----	1.012
20.17	0.801	353.53	5.348	0.972	0.033	-----	-----	-----	-----	-----	-----	1.005
20.33	0.786	353.51	5.348	0.970	0.029	-----	-----	-----	-----	-----	-----	0.999
20.50	0.771	353.50	5.348	0.967	0.025	-----	-----	-----	-----	-----	-----	0.992
20.67	0.756	353.48	5.348	0.965	0.020	-----	-----	-----	-----	-----	-----	0.985

Continues on next page...

Pond 1

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
20.83	0.740	353.46	5.348	0.962	0.016	-----	-----	-----	-----	-----	-----	0.978
21.00	0.725	353.44	5.348	0.959	0.011	-----	-----	-----	-----	-----	-----	0.970
21.17	0.710	353.42	5.348	0.956	0.006	-----	-----	-----	-----	-----	-----	0.963
21.33	0.695	353.40	5.348	0.954	0.001	-----	-----	-----	-----	-----	-----	0.955
21.50	0.680	353.38	5.348	0.951	-----	-----	-----	-----	-----	-----	-----	0.951
21.67	0.665	353.36	5.348	0.947	-----	-----	-----	-----	-----	-----	-----	0.947
21.83	0.649	353.34	5.348	0.944	-----	-----	-----	-----	-----	-----	-----	0.944
22.00	0.634	353.32	5.348	0.940	-----	-----	-----	-----	-----	-----	-----	0.940
22.17	0.776	353.30	5.348	0.938	-----	-----	-----	-----	-----	-----	-----	0.938
22.33	0.746	353.29	5.348	0.936	-----	-----	-----	-----	-----	-----	-----	0.936
22.50	0.658	353.27	5.348	0.933	-----	-----	-----	-----	-----	-----	-----	0.933
22.67	0.629	353.25	5.348	0.930	-----	-----	-----	-----	-----	-----	-----	0.930
22.83	0.618	353.22	5.348	0.926	-----	-----	-----	-----	-----	-----	-----	0.926
23.00	0.606	353.20	5.348	0.923	-----	-----	-----	-----	-----	-----	-----	0.923
23.17	0.595	353.17	5.348	0.919	-----	-----	-----	-----	-----	-----	-----	0.919
23.33	0.584	353.15	5.348	0.915	-----	-----	-----	-----	-----	-----	-----	0.915
23.50	0.572	353.12	5.348	0.911	-----	-----	-----	-----	-----	-----	-----	0.911
23.67	0.561	353.10	5.348	0.907	-----	-----	-----	-----	-----	-----	-----	0.907
23.83	0.549	353.07	5.348	0.902	-----	-----	-----	-----	-----	-----	-----	0.902
24.00	0.538	353.04	5.348	0.898	-----	-----	-----	-----	-----	-----	-----	0.898
24.17	0.378	353.01	5.348	0.893	-----	-----	-----	-----	-----	-----	-----	0.893
24.33	0.108	352.96	5.348	0.885	-----	-----	-----	-----	-----	-----	-----	0.885
24.50	0.002	352.89	5.348	0.874	-----	-----	-----	-----	-----	-----	-----	0.874
24.67	0.000	352.83	5.348	0.864	-----	-----	-----	-----	-----	-----	-----	0.864
24.83	0.000	352.76	5.348	0.853	-----	-----	-----	-----	-----	-----	-----	0.853
25.00	0.000	352.69	5.348	0.842	-----	-----	-----	-----	-----	-----	-----	0.842
25.17	0.000	352.63	5.348	0.831	-----	-----	-----	-----	-----	-----	-----	0.831
25.33	0.000	352.56	5.348	0.820	-----	-----	-----	-----	-----	-----	-----	0.820

Continues on next page...

Pond 1

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
25.50	0.000	352.50	5.348	0.809	-----	-----	-----	-----	-----	-----	-----	0.809
25.67	0.000	352.44	5.348	0.798	-----	-----	-----	-----	-----	-----	-----	0.798
25.83	0.000	352.38	5.348	0.787	-----	-----	-----	-----	-----	-----	-----	0.787
26.00	0.000	352.32	5.348	0.776	-----	-----	-----	-----	-----	-----	-----	0.776
26.17	0.000	352.26	5.348	0.765	-----	-----	-----	-----	-----	-----	-----	0.765
26.33	0.000	352.20	5.348	0.754	-----	-----	-----	-----	-----	-----	-----	0.754
26.50	0.000	352.14	5.348	0.743	-----	-----	-----	-----	-----	-----	-----	0.743
26.67	0.000	352.08	5.348	0.732	-----	-----	-----	-----	-----	-----	-----	0.732
26.83	0.000	352.03	5.348	0.721	-----	-----	-----	-----	-----	-----	-----	0.721
27.00	0.000	351.96	5.348	0.707	-----	-----	-----	-----	-----	-----	-----	0.707
27.17	0.000	351.87	5.348	0.690	-----	-----	-----	-----	-----	-----	-----	0.690
27.33	0.000	351.79	5.348	0.674	-----	-----	-----	-----	-----	-----	-----	0.674
27.50	0.000	351.71	5.348	0.656	-----	-----	-----	-----	-----	-----	-----	0.656
27.67	0.000	351.64	5.348	0.640	-----	-----	-----	-----	-----	-----	-----	0.640
27.83	0.000	351.56	5.348	0.623	-----	-----	-----	-----	-----	-----	-----	0.623
28.00	0.000	351.49	5.348	0.606	-----	-----	-----	-----	-----	-----	-----	0.606
28.17	0.000	351.42	5.348	0.589	-----	-----	-----	-----	-----	-----	-----	0.589
28.33	0.000	351.35	5.348	0.572	-----	-----	-----	-----	-----	-----	-----	0.572
28.50	0.000	351.28	5.348	0.555	-----	-----	-----	-----	-----	-----	-----	0.555
28.67	0.000	351.21	5.348	0.538	-----	-----	-----	-----	-----	-----	-----	0.538
28.83	0.000	351.15	5.348	0.521	-----	-----	-----	-----	-----	-----	-----	0.521
29.00	0.000	351.09	5.348	0.504	-----	-----	-----	-----	-----	-----	-----	0.504
29.17	0.000	351.03	5.348	0.487	-----	-----	-----	-----	-----	-----	-----	0.487
29.33	0.000	350.97	5.348	0.470	-----	-----	-----	-----	-----	-----	-----	0.470
29.50	0.000	350.92	5.348	0.453	-----	-----	-----	-----	-----	-----	-----	0.453
29.67	0.000	350.86	5.348	0.436	-----	-----	-----	-----	-----	-----	-----	0.436
29.83	0.000	350.81	5.348	0.420	-----	-----	-----	-----	-----	-----	-----	0.420
30.00	0.000	350.76	5.348	0.402	-----	-----	-----	-----	-----	-----	-----	0.402

Continues on next page...

Pond 1

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
30.17	0.000	350.72	5.348	0.385	-----	-----	-----	-----	-----	-----	-----	0.385
30.33	0.000	350.67	5.348	0.368	-----	-----	-----	-----	-----	-----	-----	0.368
30.50	0.000	350.63	5.348	0.352	-----	-----	-----	-----	-----	-----	-----	0.352
30.67	0.000	350.59	5.348	0.335	-----	-----	-----	-----	-----	-----	-----	0.335
30.83	0.000	350.55	5.348	0.316	-----	-----	-----	-----	-----	-----	-----	0.316
31.00	0.000	350.51	5.348	0.299	-----	-----	-----	-----	-----	-----	-----	0.299
31.17	0.000	350.48	5.348	0.282	-----	-----	-----	-----	-----	-----	-----	0.282
31.33	0.000	350.44	5.348	0.266	-----	-----	-----	-----	-----	-----	-----	0.266
31.50	0.000	350.41	5.348	0.251	-----	-----	-----	-----	-----	-----	-----	0.251
31.67	0.000	350.38	5.348	0.233	-----	-----	-----	-----	-----	-----	-----	0.233
31.83	0.000	350.36	5.348	0.212	-----	-----	-----	-----	-----	-----	-----	0.212

...End

Pond Report

Pond No. 1 - Basin 1

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 350.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	350.00	3,750	0	0
2.00	352.00	6,400	10,032	10,032
4.00	354.00	9,194	15,508	25,540
6.00	356.00	12,130	21,254	46,793
8.00	358.00	15,268	27,335	74,128

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.50	15.00	0.00
Span (in)	= 24.00	4.50	15.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 349.00	350.00	353.50	0.00
Length (ft)	= 55.00	0.66	0.66	0.00
Slope (%)	= 3.60	0.50	0.50	n/a
N-Value	= .012	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 7.33	30.00	0.00	0.00
Crest El. (ft)	= 356.75	357.50	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 0.000 (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	350.00	0.00	0.00	0.00	---	0.00	0.00	---	---	---	---	0.000
2.00	10,032	352.00	5.35 ic	0.72 ic	0.00	---	0.00	0.00	---	---	---	---	0.716
4.00	25,540	354.00	5.35 ic	1.04 ic	1.13 ic	---	0.00	0.00	---	---	---	---	2.165
6.00	46,793	356.00	9.38 ic	1.26 ic	8.09 ic	---	0.00	0.00	---	---	---	---	9.350
8.00	74,128	358.00	32.19 ic	0.99 ic	11.01 ic	---	20.19 ic	35.32	---	---	---	---	67.51

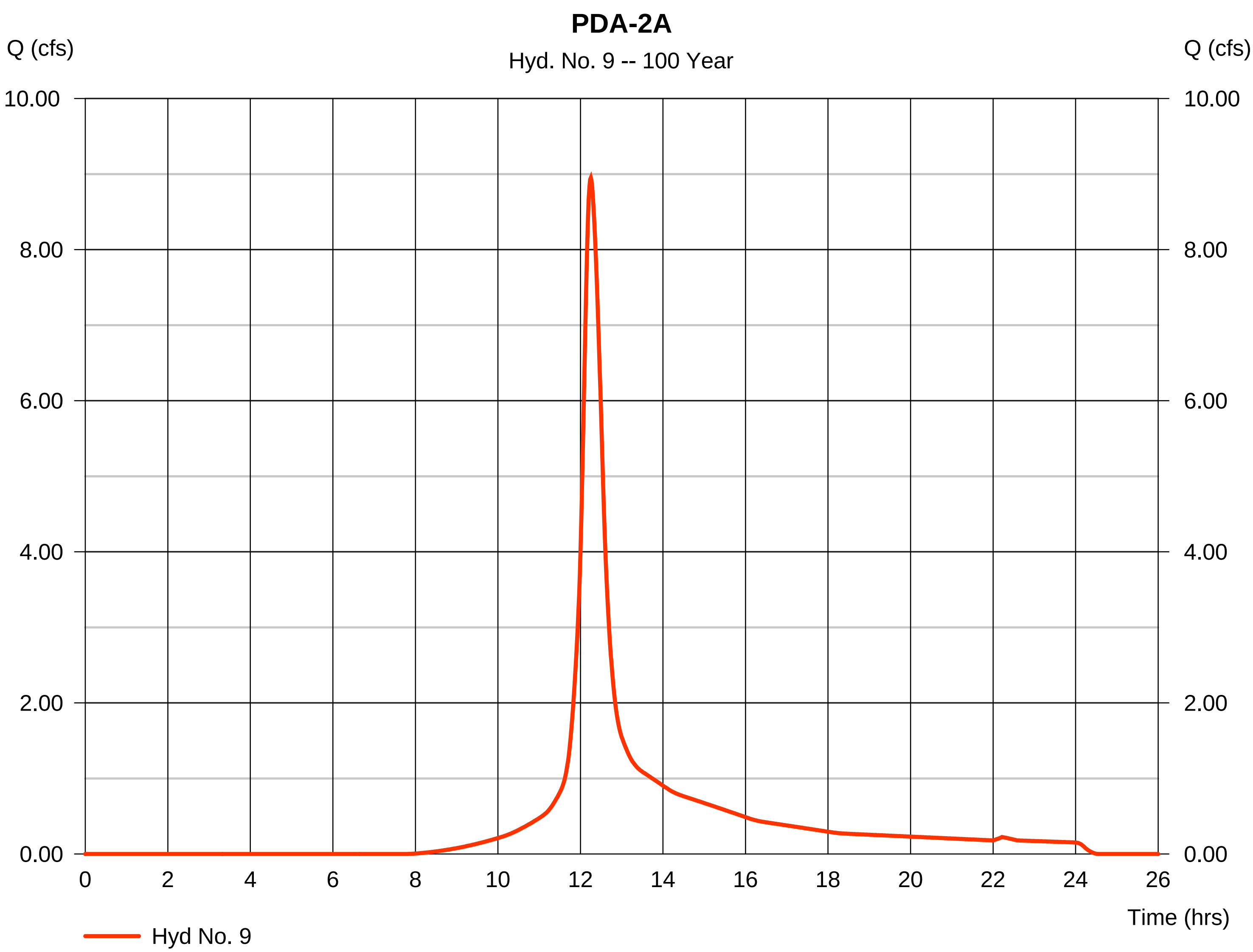
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 9

PDA-2A

Hydrograph type	= SCS Runoff	Peak discharge	= 8.951 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.25 hrs
Time interval	= 1 min	Hyd. volume	= 40,927 cuft
Drainage area	= 2.300 ac	Curve number	= 69
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 20.70 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

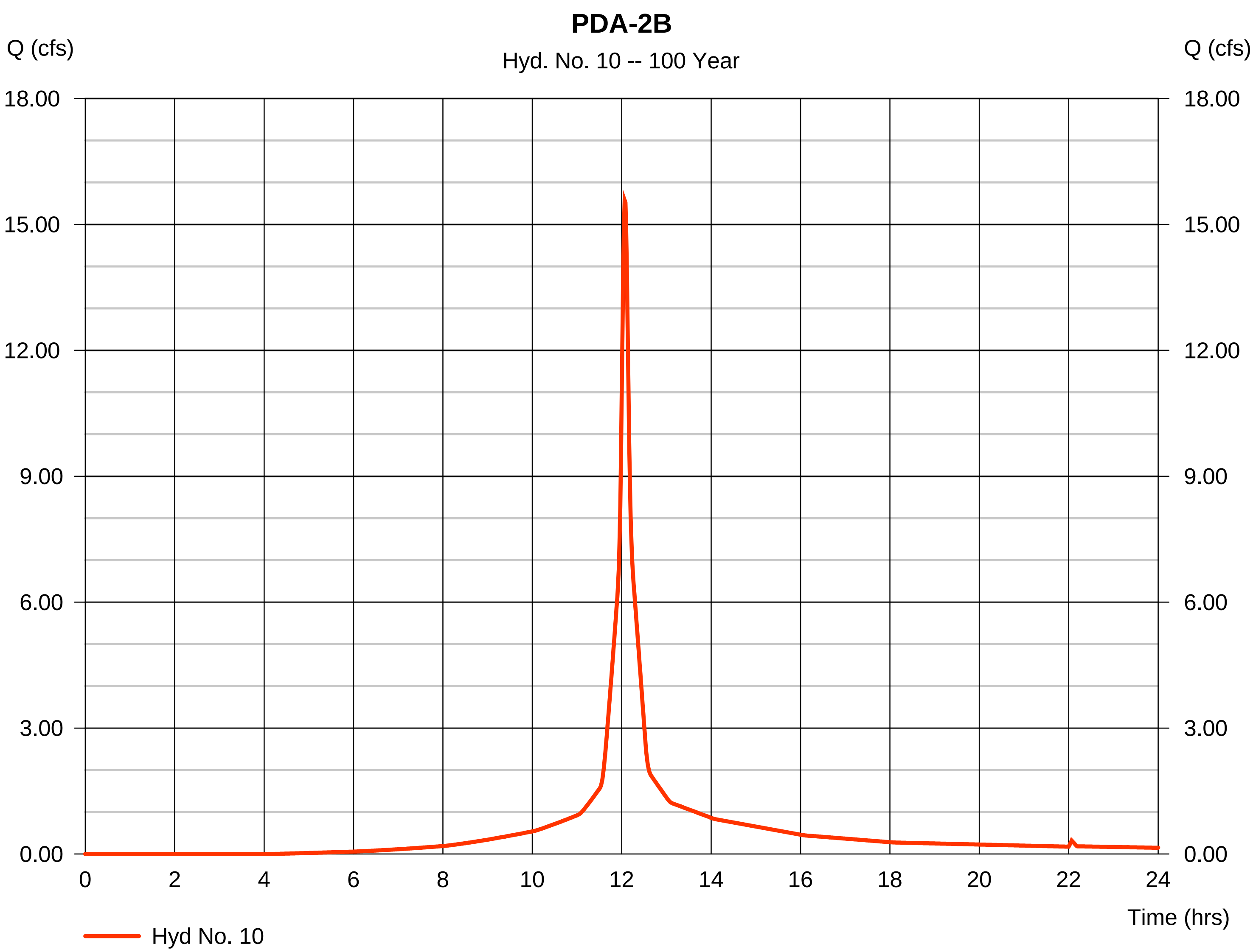


Hydrograph Report

Hyd. No. 10

PDA-2B

Hydrograph type	= SCS Runoff	Peak discharge	= 15.57 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 1 min	Hyd. volume	= 49,885 cuft
Drainage area	= 2.000 ac	Curve number	= 84
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



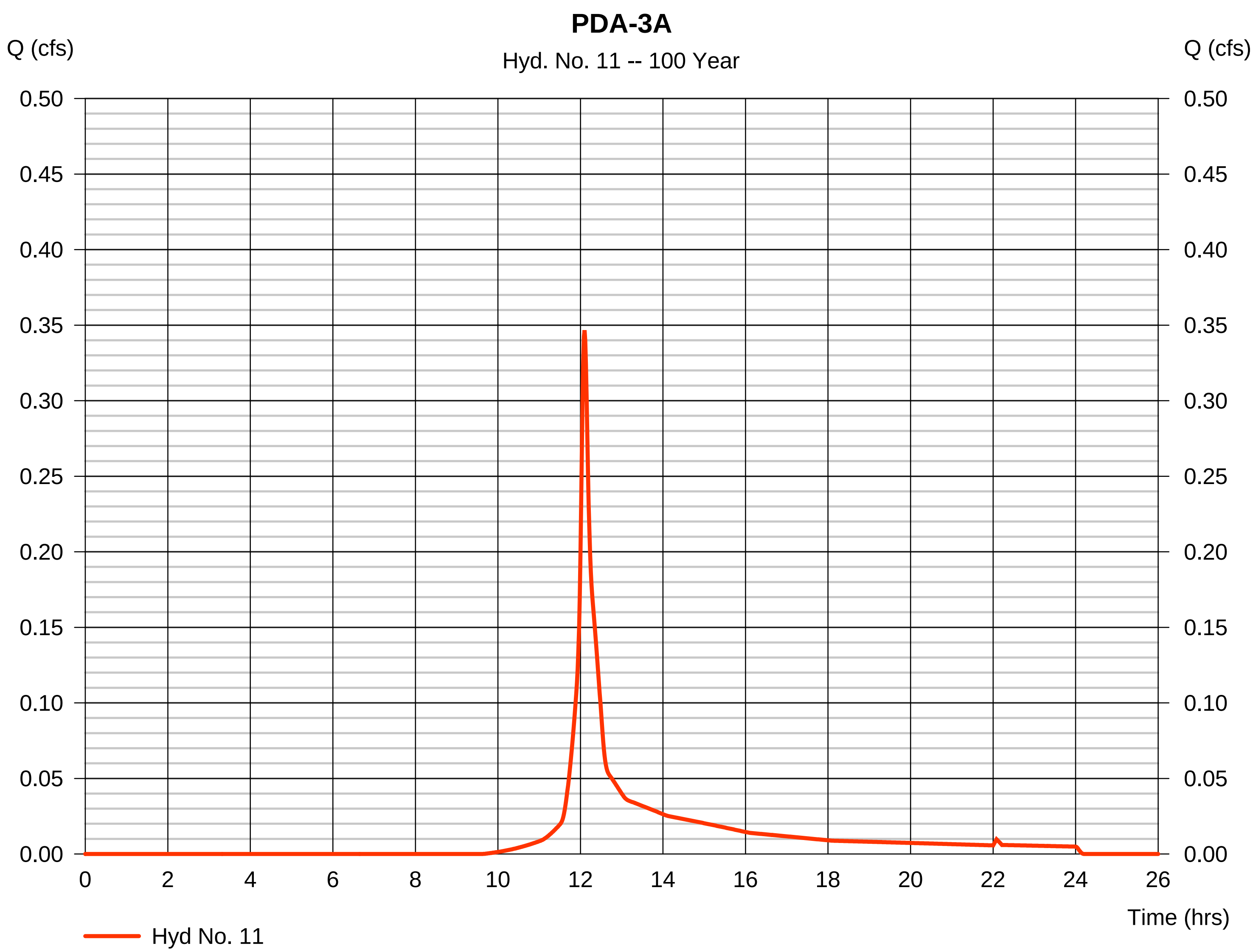
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 11

PDA-3A

Hydrograph type	= SCS Runoff	Peak discharge	= 0.347 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.10 hrs
Time interval	= 1 min	Hyd. volume	= 1,130 cuft
Drainage area	= 0.090 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 7.90 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



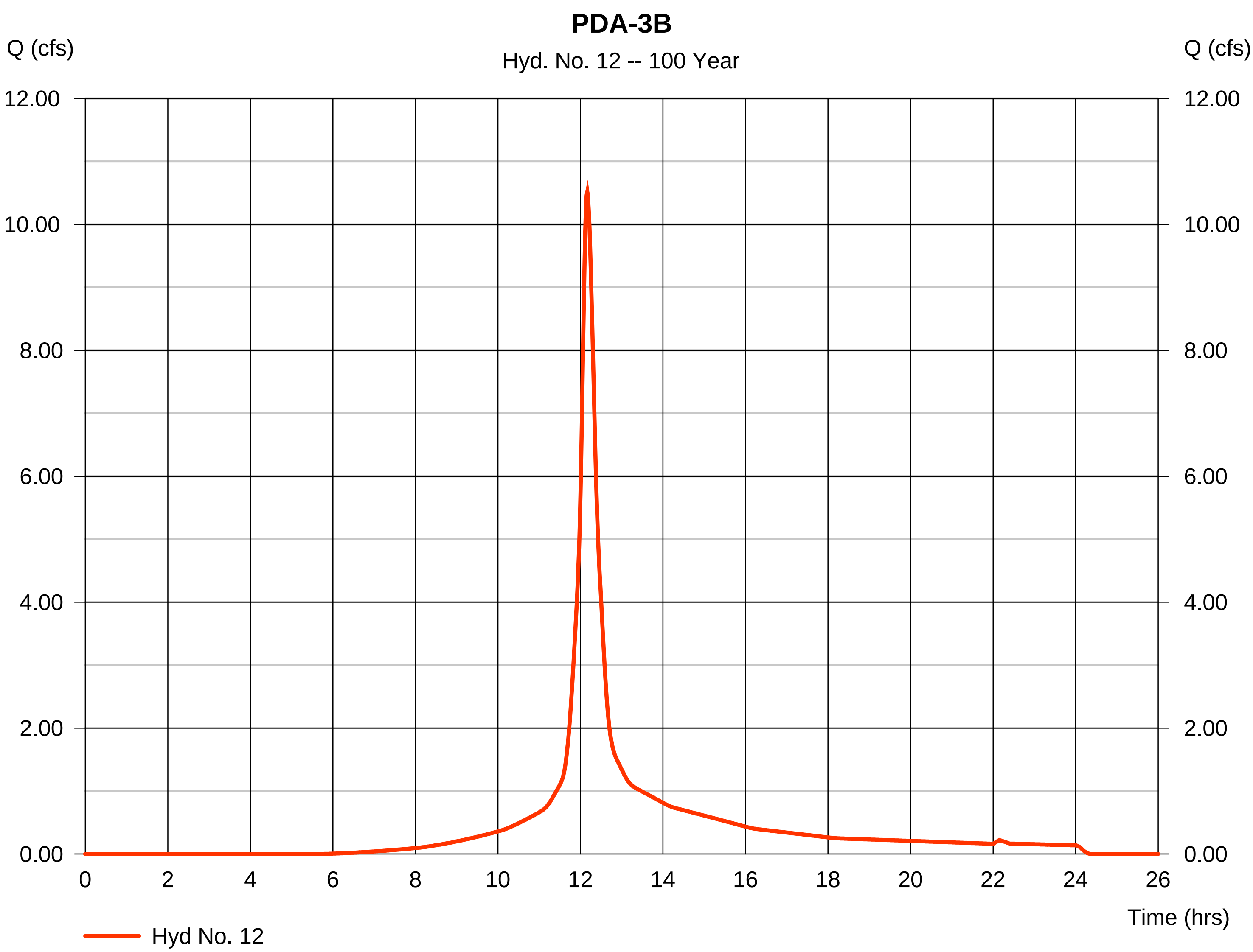
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 12

PDA-3B

Hydrograph type	= SCS Runoff	Peak discharge	= 10.52 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.17 hrs
Time interval	= 1 min	Hyd. volume	= 42,038 cuft
Drainage area	= 1.950 ac	Curve number	= 78
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 14.70 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



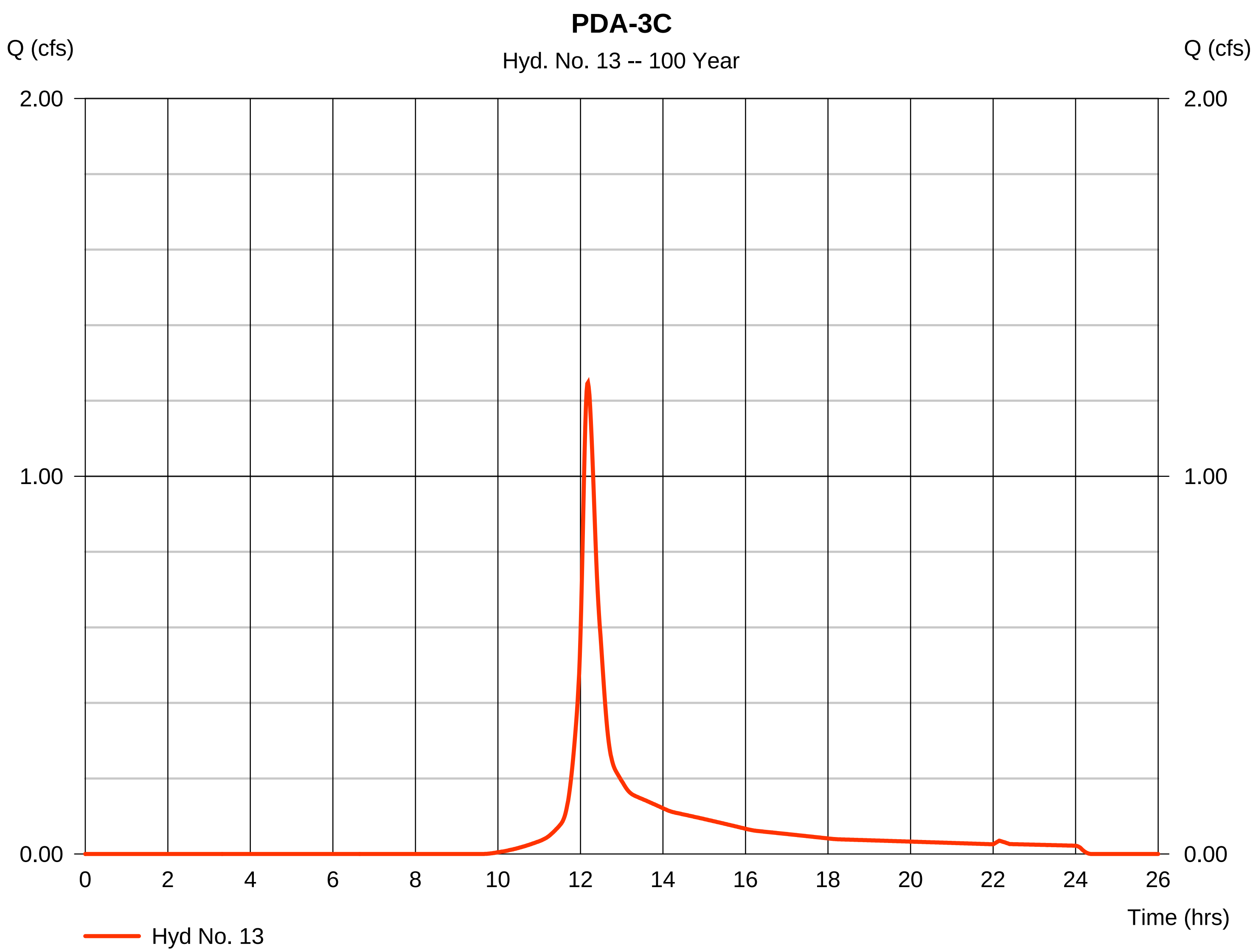
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 13

PDA-3C

Hydrograph type	= SCS Runoff	Peak discharge	= 1.248 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.18 hrs
Time interval	= 1 min	Hyd. volume	= 5,020 cuft
Drainage area	= 0.390 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 13.80 min
Total precip.	= 8.59 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



Hydrograph Report

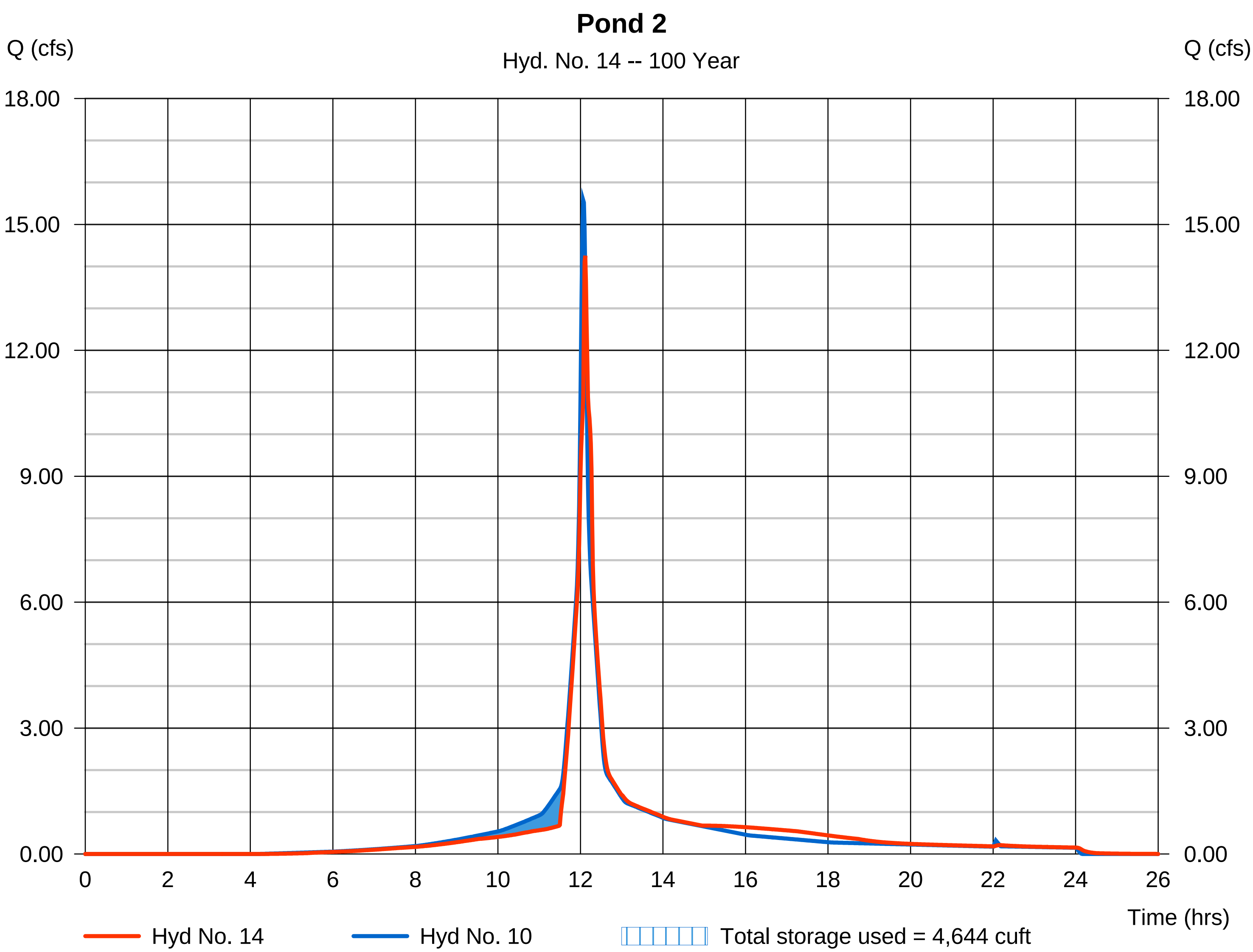
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 14.25 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.12 hrs
Time interval	= 1 min	Hyd. volume	= 49,883 cuft
Inflow hyd. No.	= 10 - PDA-2B	Max. Elevation	= 335.16 ft
Reservoir name	= Basin 2	Max. Storage	= 4,644 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 14

Pond 2

Hydrograph type	= Reservoir	Peak discharge	= 14.25 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.12 hrs
Time interval	= 1 min	Hyd. volume	= 49,883 cuft
Inflow hyd. No.	= 10 - PDA-2B	Reservoir name	= Basin 2
Max. Elevation	= 335.16 ft	Max. Storage	= 4,644 cuft

Storage Indication method used.

Hydrograph Discharge Table

(Printed values >= 1.00% of Qp. Print interval = 10)

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
7.67	0.162	331.31	0.151	0.147	-----	-----	-----	-----	-----	-----	-----	0.147
7.83	0.175	331.33	0.162	0.157	-----	-----	-----	-----	-----	-----	-----	0.157
8.00	0.189	331.36	0.175	0.169	-----	-----	-----	-----	-----	-----	-----	0.169
8.17	0.208	331.39	0.190	0.183	-----	-----	-----	-----	-----	-----	-----	0.183
8.33	0.232	331.43	0.205	0.199	-----	-----	-----	-----	-----	-----	-----	0.199
8.50	0.257	331.48	0.220	0.217	-----	-----	-----	-----	-----	-----	-----	0.217
8.67	0.284	331.54	0.238	0.237	-----	-----	-----	-----	-----	-----	-----	0.237
8.83	0.312	331.61	0.260	0.258	-----	-----	-----	-----	-----	-----	-----	0.258
9.00	0.341	331.68	0.287	0.280	-----	-----	-----	-----	-----	-----	-----	0.280
9.17	0.371	331.77	0.306	0.304	-----	-----	-----	-----	-----	-----	-----	0.304
9.33	0.403	331.87	0.338	0.328	-----	-----	-----	-----	-----	-----	-----	0.328
9.50	0.435	331.98	0.365	0.353	-----	-----	-----	-----	-----	-----	-----	0.353
9.67	0.469	332.05	0.381	0.370	-----	-----	-----	-----	-----	-----	-----	0.370
9.83	0.503	332.13	0.398	0.387	-----	-----	-----	-----	-----	-----	-----	0.387
10.00	0.539	332.22	0.417	0.405	-----	-----	-----	-----	-----	-----	-----	0.405
10.17	0.588	332.33	0.438	0.426	-----	-----	-----	-----	-----	-----	-----	0.426
10.33	0.650	332.46	0.465	0.450	-----	-----	-----	-----	-----	-----	-----	0.450
10.50	0.715	332.62	0.493	0.478	-----	-----	-----	-----	-----	-----	-----	0.478
10.67	0.781	332.80	0.516	0.510	-----	-----	-----	-----	-----	-----	-----	0.510
10.83	0.850	333.01	0.558	0.541	-----	-----	-----	-----	-----	-----	-----	0.541

Continues on next page...

Pond 2

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
11.00	0.921	333.17	0.573	0.565	-----	-----	-----	-----	-----	-----	-----	0.565
11.17	1.076	333.36	0.603	0.593	-----	-----	-----	-----	-----	-----	-----	0.593
11.33	1.308	333.64	0.635	0.631	-----	-----	-----	-----	-----	-----	-----	0.631
11.50	1.551	334.00	0.714	0.676	-----	-----	0.017	-----	-----	-----	-----	0.693
11.67	2.841	334.17	2.400	0.603	-----	-----	1.797	-----	-----	-----	-----	2.400
11.83	5.132	334.31	4.769	0.549	-----	-----	4.220	-----	-----	-----	-----	4.769
12.00	10.87	334.52	9.090	0.302	-----	-----	8.787	-----	-----	-----	-----	9.090
12.17	9.870	335.06	10.84	0.110	-----	-----	10.73	0.952	-----	-----	-----	11.79
12.33	5.495	334.37	5.948	0.511	-----	-----	5.436	-----	-----	-----	-----	5.948
12.50	3.087	334.24	3.480	0.572	-----	-----	2.907	-----	-----	-----	-----	3.479
12.67	1.853	334.14	1.968	0.626	-----	-----	1.342	-----	-----	-----	-----	1.968
12.83	1.600	334.12	1.656	0.643	-----	-----	1.013	-----	-----	-----	-----	1.656
13.00	1.345	334.10	1.411	0.655	-----	-----	0.755	-----	-----	-----	-----	1.411
13.17	1.193	334.07	1.243	0.661	-----	-----	0.577	-----	-----	-----	-----	1.238
13.33	1.128	334.06	1.162	0.663	-----	-----	0.492	-----	-----	-----	-----	1.155
13.50	1.062	334.05	1.097	0.665	-----	-----	0.423	-----	-----	-----	-----	1.087
13.67	0.995	334.05	1.033	0.667	-----	-----	0.354	-----	-----	-----	-----	1.021
13.83	0.928	334.04	0.968	0.669	-----	-----	0.286	-----	-----	-----	-----	0.954
14.00	0.861	334.03	0.903	0.671	-----	-----	0.217	-----	-----	-----	-----	0.888
14.17	0.814	334.02	0.847	0.672	-----	-----	0.158	-----	-----	-----	-----	0.830
14.33	0.782	334.02	0.812	0.673	-----	-----	0.121	-----	-----	-----	-----	0.795
14.50	0.750	334.01	0.781	0.674	-----	-----	0.088	-----	-----	-----	-----	0.762
14.67	0.718	334.01	0.750	0.675	-----	-----	0.055	-----	-----	-----	-----	0.730
14.83	0.686	334.00	0.719	0.676	-----	-----	0.022	-----	-----	-----	-----	0.698
15.00	0.653	334.00	0.697	0.677	-----	-----	-----	-----	-----	-----	-----	0.677
15.17	0.621	333.98	0.693	0.674	-----	-----	-----	-----	-----	-----	-----	0.674
15.33	0.589	333.95	0.685	0.671	-----	-----	-----	-----	-----	-----	-----	0.671
15.50	0.556	333.90	0.674	0.665	-----	-----	-----	-----	-----	-----	-----	0.665

Continues on next page...

Pond 2

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
15.67	0.524	333.84	0.674	0.657	-----	-----	-----	-----	-----	-----	-----	0.657
15.83	0.491	333.78	0.668	0.648	-----	-----	-----	-----	-----	-----	-----	0.648
16.00	0.459	333.70	0.649	0.639	-----	-----	-----	-----	-----	-----	-----	0.639
16.17	0.437	333.61	0.628	0.627	-----	-----	-----	-----	-----	-----	-----	0.627
16.33	0.422	333.52	0.627	0.614	-----	-----	-----	-----	-----	-----	-----	0.614
16.50	0.408	333.42	0.609	0.602	-----	-----	-----	-----	-----	-----	-----	0.602
16.67	0.394	333.33	0.603	0.589	-----	-----	-----	-----	-----	-----	-----	0.589
16.83	0.380	333.24	0.590	0.576	-----	-----	-----	-----	-----	-----	-----	0.576
17.00	0.366	333.15	0.569	0.562	-----	-----	-----	-----	-----	-----	-----	0.562
17.17	0.352	333.05	0.558	0.548	-----	-----	-----	-----	-----	-----	-----	0.548
17.33	0.338	332.94	0.545	0.530	-----	-----	-----	-----	-----	-----	-----	0.530
17.50	0.323	332.80	0.515	0.509	-----	-----	-----	-----	-----	-----	-----	0.509
17.67	0.309	332.67	0.493	0.487	-----	-----	-----	-----	-----	-----	-----	0.487
17.83	0.295	332.54	0.481	0.465	-----	-----	-----	-----	-----	-----	-----	0.465
18.00	0.281	332.42	0.456	0.443	-----	-----	-----	-----	-----	-----	-----	0.443
18.17	0.272	332.31	0.434	0.422	-----	-----	-----	-----	-----	-----	-----	0.422
18.33	0.268	332.20	0.413	0.402	-----	-----	-----	-----	-----	-----	-----	0.402
18.50	0.264	332.11	0.393	0.383	-----	-----	-----	-----	-----	-----	-----	0.383
18.67	0.259	332.03	0.376	0.365	-----	-----	-----	-----	-----	-----	-----	0.365
18.83	0.255	331.92	0.354	0.340	-----	-----	-----	-----	-----	-----	-----	0.340
19.00	0.251	331.82	0.319	0.316	-----	-----	-----	-----	-----	-----	-----	0.316
19.17	0.247	331.74	0.300	0.296	-----	-----	-----	-----	-----	-----	-----	0.296
19.33	0.242	331.68	0.286	0.280	-----	-----	-----	-----	-----	-----	-----	0.280
19.50	0.238	331.64	0.271	0.267	-----	-----	-----	-----	-----	-----	-----	0.267
19.67	0.234	331.60	0.259	0.257	-----	-----	-----	-----	-----	-----	-----	0.257
19.83	0.230	331.57	0.249	0.248	-----	-----	-----	-----	-----	-----	-----	0.248
20.00	0.225	331.55	0.242	0.241	-----	-----	-----	-----	-----	-----	-----	0.241
20.17	0.221	331.53	0.236	0.235	-----	-----	-----	-----	-----	-----	-----	0.235

Continues on next page...

Pond 2

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
20.33	0.217	331.51	0.230	0.229	-----	-----	-----	-----	-----	-----	-----	0.229
20.50	0.212	331.50	0.225	0.224	-----	-----	-----	-----	-----	-----	-----	0.224
20.67	0.208	331.48	0.221	0.218	-----	-----	-----	-----	-----	-----	-----	0.218
20.83	0.204	331.47	0.217	0.213	-----	-----	-----	-----	-----	-----	-----	0.213
21.00	0.200	331.45	0.213	0.209	-----	-----	-----	-----	-----	-----	-----	0.209
21.17	0.195	331.44	0.210	0.204	-----	-----	-----	-----	-----	-----	-----	0.204
21.33	0.191	331.43	0.206	0.200	-----	-----	-----	-----	-----	-----	-----	0.200
21.50	0.187	331.42	0.203	0.196	-----	-----	-----	-----	-----	-----	-----	0.196
21.67	0.183	331.41	0.199	0.191	-----	-----	-----	-----	-----	-----	-----	0.191
21.83	0.178	331.39	0.195	0.186	-----	-----	-----	-----	-----	-----	-----	0.186
22.00	0.174	331.38	0.189	0.182	-----	-----	-----	-----	-----	-----	-----	0.182
22.17	0.203	331.46	0.215	0.212	-----	-----	-----	-----	-----	-----	-----	0.212
22.33	0.180	331.43	0.206	0.200	-----	-----	-----	-----	-----	-----	-----	0.200
22.50	0.177	331.41	0.199	0.192	-----	-----	-----	-----	-----	-----	-----	0.192
22.67	0.174	331.39	0.192	0.184	-----	-----	-----	-----	-----	-----	-----	0.184
22.83	0.170	331.38	0.186	0.179	-----	-----	-----	-----	-----	-----	-----	0.179
23.00	0.167	331.37	0.181	0.174	-----	-----	-----	-----	-----	-----	-----	0.174
23.17	0.164	331.36	0.176	0.170	-----	-----	-----	-----	-----	-----	-----	0.170
23.33	0.161	331.35	0.172	0.166	-----	-----	-----	-----	-----	-----	-----	0.166
23.50	0.158	331.34	0.168	0.163	-----	-----	-----	-----	-----	-----	-----	0.163
23.67	0.154	331.33	0.165	0.160	-----	-----	-----	-----	-----	-----	-----	0.160
23.83	0.151	331.33	0.161	0.156	-----	-----	-----	-----	-----	-----	-----	0.156
24.00	0.148	331.32	0.158	0.153	-----	-----	-----	-----	-----	-----	-----	0.153

...End

Pond Report

Pond No. 3 - Basin 2

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 331.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	331.00	266	0	0
1.00	332.00	631	435	435
2.00	333.00	1,035	824	1,260
3.00	334.00	1,509	1,264	2,524
4.00	335.00	2,012	1,754	4,278
5.00	336.00	2,648	2,323	6,601

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 15.00	4.00	0.00	0.00
Span (in)	= 15.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 331.00	331.00	0.00	0.00
Length (ft)	= 28.00	0.66	0.00	0.00
Slope (%)	= 0.50	0.50	0.00	n/a
N-Value	= .012	.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	15.00	0.00	0.00
Crest El. (ft)	= 334.00	335.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (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	331.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.00	435	332.00	0.37 ic	0.36 ic	---	---	0.00	0.00	---	---	---	---	0.358
2.00	1,260	333.00	0.56 oc	0.54 ic	---	---	0.00	0.00	---	---	---	---	0.540
3.00	2,524	334.00	0.70 oc	0.68 ic	---	---	0.00	0.00	---	---	---	---	0.677
4.00	4,278	335.00	10.73 ic	0.12 ic	---	---	10.61 s	0.00	---	---	---	---	10.73
5.00	6,601	336.00	12.34 ic	0.05 ic	---	---	12.26 s	49.95	---	---	---	---	62.26

Hydrograph Report

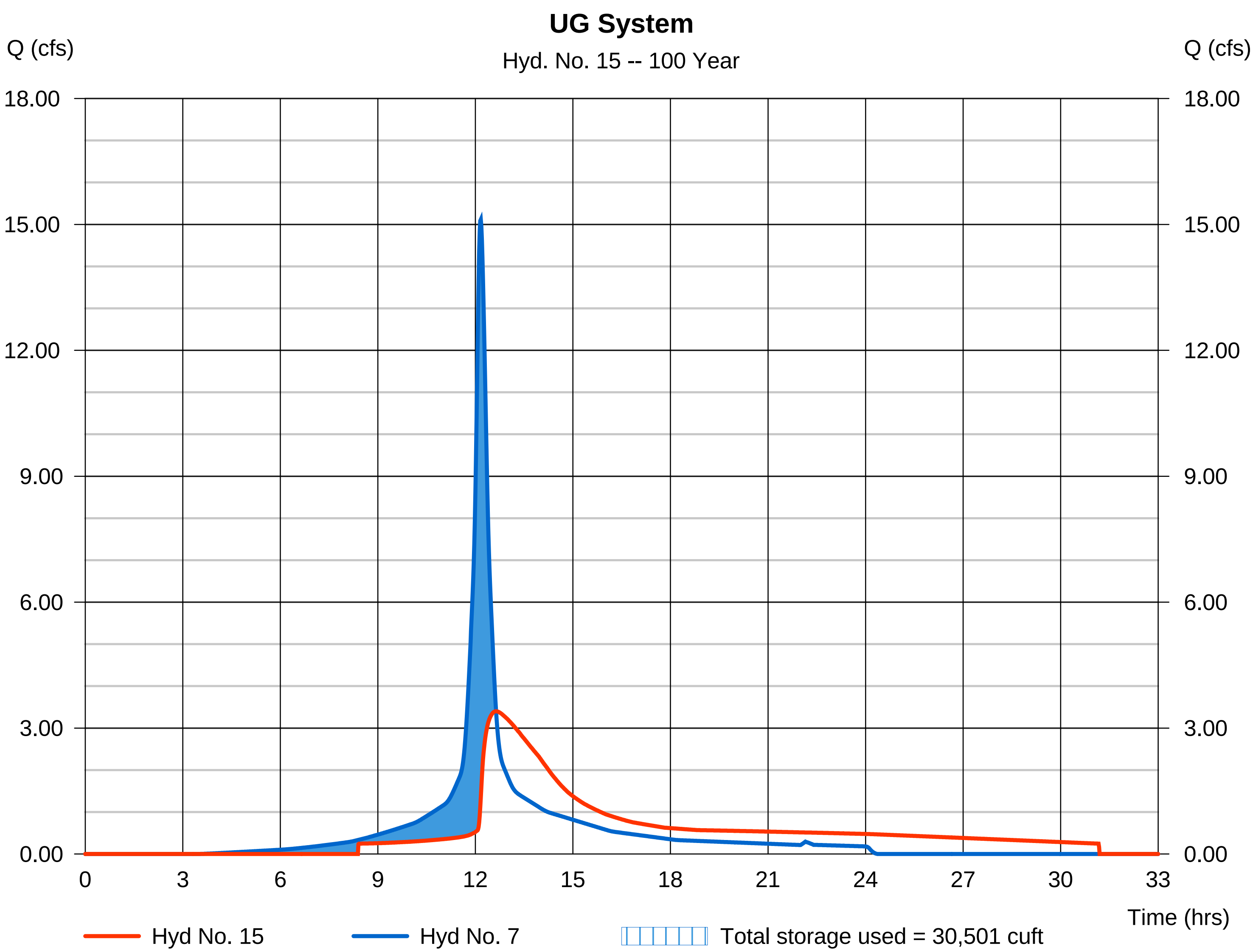
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 3.400 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.63 hrs
Time interval	= 1 min	Hyd. volume	= 60,587 cuft
Inflow hyd. No.	= 7 - PDA-1C	Max. Elevation	= 361.43 ft
Reservoir name	= Undergroud Detention	Max. Storage	= 30,501 cuft

Storage Indication method used.



Hydrograph Report

Hyd. No. 15

UG System

Hydrograph type	= Reservoir	Peak discharge	= 3.400 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.63 hrs
Time interval	= 1 min	Hyd. volume	= 60,587 cuft
Inflow hyd. No.	= 7 - PDA-1C	Reservoir name	= Undergroud Detent
Max. Elevation	= 361.43 ft	Max. Storage	= 30,501 cuft

Storage Indication method used.

Hydrograph Discharge Table

(Printed values >= 1.00% of Qp. Print interval = 10)

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
8.50	0.355	358.51	12.87	0.247	-----	-----	-----	-----	-----	-----	-----	0.247
8.67	0.389	358.52	12.87	0.250	-----	-----	-----	-----	-----	-----	-----	0.250
8.83	0.425	358.53	12.87	0.253	-----	-----	-----	-----	-----	-----	-----	0.253
9.00	0.461	358.54	12.87	0.257	-----	-----	-----	-----	-----	-----	-----	0.257
9.17	0.499	358.56	12.87	0.262	-----	-----	-----	-----	-----	-----	-----	0.262
9.33	0.539	358.57	12.87	0.267	-----	-----	-----	-----	-----	-----	-----	0.267
9.50	0.579	358.59	12.87	0.273	-----	-----	-----	-----	-----	-----	-----	0.273
9.67	0.620	358.61	12.87	0.279	-----	-----	-----	-----	-----	-----	-----	0.279
9.83	0.662	358.63	12.87	0.286	-----	-----	-----	-----	-----	-----	-----	0.286
10.00	0.705	358.66	12.87	0.293	-----	-----	-----	-----	-----	-----	-----	0.293
10.17	0.754	358.68	12.87	0.301	-----	-----	-----	-----	-----	-----	-----	0.301
10.33	0.824	358.71	12.87	0.310	-----	-----	-----	-----	-----	-----	-----	0.310
10.50	0.903	358.74	12.87	0.319	-----	-----	-----	-----	-----	-----	-----	0.319
10.67	0.985	358.78	12.87	0.330	-----	-----	-----	-----	-----	-----	-----	0.330
10.83	1.068	358.83	12.87	0.341	-----	-----	-----	-----	-----	-----	-----	0.341
11.00	1.154	358.87	12.87	0.353	-----	-----	-----	-----	-----	-----	-----	0.353
11.17	1.275	358.92	12.87	0.366	-----	-----	-----	-----	-----	-----	-----	0.366
11.33	1.518	358.99	12.87	0.380	-----	-----	-----	-----	-----	-----	-----	0.380
11.50	1.814	359.06	12.87	0.398	-----	-----	-----	-----	-----	-----	-----	0.398
11.67	2.544	359.17	12.87	0.420	-----	-----	-----	-----	-----	-----	-----	0.420

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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
11.83	4.774	359.36	12.87	0.459	-----	-----	-----	-----	-----	-----	-----	0.459
12.00	8.589	359.72	12.87	0.524	-----	-----	-----	-----	-----	-----	-----	0.524
12.17	15.12 <<	360.46	12.87	0.636	0.708	-----	-----	-----	-----	-----	-----	1.343
12.33	9.948	361.12	12.87	0.721	2.194	-----	-----	-----	-----	-----	-----	2.915
12.50	5.540	361.38	12.87	0.753	2.573	-----	-----	-----	-----	-----	-----	3.326
12.67	3.049	361.43	12.87	0.759	2.639	-----	-----	-----	-----	-----	-----	3.397
12.83	2.144	361.37	12.87	0.752	2.567	-----	-----	-----	-----	-----	-----	3.319
13.00	1.823	361.29	12.87	0.743	2.459	-----	-----	-----	-----	-----	-----	3.201
13.17	1.553	361.20	12.87	0.732	2.329	-----	-----	-----	-----	-----	-----	3.061
13.33	1.420	361.11	12.87	0.721	2.186	-----	-----	-----	-----	-----	-----	2.907
13.50	1.339	361.02	12.87	0.710	2.039	-----	-----	-----	-----	-----	-----	2.749
13.67	1.258	360.94	12.87	0.699	1.889	-----	-----	-----	-----	-----	-----	2.588
13.83	1.176	360.86	12.87	0.689	1.742	-----	-----	-----	-----	-----	-----	2.431
14.00	1.095	360.78	12.87	0.679	1.590	-----	-----	-----	-----	-----	-----	2.270
14.17	1.021	360.71	12.87	0.670	1.421	-----	-----	-----	-----	-----	-----	2.091
14.33	0.972	360.65	12.87	0.662	1.252	-----	-----	-----	-----	-----	-----	1.913
14.50	0.933	360.59	12.87	0.654	1.100	-----	-----	-----	-----	-----	-----	1.754
14.67	0.894	360.55	12.87	0.648	0.959	-----	-----	-----	-----	-----	-----	1.607
14.83	0.855	360.50	12.87	0.642	0.837	-----	-----	-----	-----	-----	-----	1.480
15.00	0.816	360.47	12.87	0.637	0.740	-----	-----	-----	-----	-----	-----	1.377
15.17	0.776	360.43	12.87	0.633	0.654	-----	-----	-----	-----	-----	-----	1.286
15.33	0.737	360.40	12.87	0.628	0.575	-----	-----	-----	-----	-----	-----	1.203
15.50	0.698	360.38	12.87	0.624	0.508	-----	-----	-----	-----	-----	-----	1.133
15.67	0.658	360.35	12.87	0.621	0.447	-----	-----	-----	-----	-----	-----	1.068
15.83	0.619	360.33	12.87	0.617	0.390	-----	-----	-----	-----	-----	-----	1.007
16.00	0.580	360.30	12.87	0.614	0.335	-----	-----	-----	-----	-----	-----	0.949
16.17	0.544	360.28	12.87	0.611	0.295	-----	-----	-----	-----	-----	-----	0.905
16.33	0.522	360.26	12.87	0.607	0.257	-----	-----	-----	-----	-----	-----	0.865

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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
16.50	0.505	360.24	12.87	0.604	0.222	-----	-----	-----	-----	-----	-----	0.826
16.67	0.488	360.22	12.87	0.602	0.188	-----	-----	-----	-----	-----	-----	0.790
16.83	0.470	360.20	12.87	0.599	0.157	-----	-----	-----	-----	-----	-----	0.756
17.00	0.453	360.18	12.87	0.596	0.137	-----	-----	-----	-----	-----	-----	0.733
17.17	0.436	360.16	12.87	0.594	0.117	-----	-----	-----	-----	-----	-----	0.711
17.33	0.419	360.15	12.87	0.591	0.098	-----	-----	-----	-----	-----	-----	0.689
17.50	0.402	360.13	12.87	0.589	0.078	-----	-----	-----	-----	-----	-----	0.667
17.67	0.384	360.11	12.87	0.586	0.059	-----	-----	-----	-----	-----	-----	0.646
17.83	0.367	360.10	12.87	0.584	0.042	-----	-----	-----	-----	-----	-----	0.626
18.00	0.350	360.08	12.87	0.581	0.035	-----	-----	-----	-----	-----	-----	0.616
18.17	0.335	360.07	12.87	0.579	0.028	-----	-----	-----	-----	-----	-----	0.607
18.33	0.327	360.05	12.87	0.576	0.021	-----	-----	-----	-----	-----	-----	0.597
18.50	0.322	360.03	12.87	0.574	0.014	-----	-----	-----	-----	-----	-----	0.587
18.67	0.317	360.02	12.87	0.571	0.007	-----	-----	-----	-----	-----	-----	0.578
18.83	0.312	360.00	12.87	0.569	0.000	-----	-----	-----	-----	-----	-----	0.569
19.00	0.306	359.98	12.87	0.566	0.000	-----	-----	-----	-----	-----	-----	0.566
19.17	0.301	359.97	12.87	0.564	0.000	-----	-----	-----	-----	-----	-----	0.564
19.33	0.296	359.95	12.87	0.561	0.000	-----	-----	-----	-----	-----	-----	0.561
19.50	0.291	359.93	12.87	0.559	0.000	-----	-----	-----	-----	-----	-----	0.559
19.67	0.286	359.92	12.87	0.556	0.000	-----	-----	-----	-----	-----	-----	0.556
19.83	0.281	359.90	12.87	0.553	0.000	-----	-----	-----	-----	-----	-----	0.553
20.00	0.275	359.88	12.87	0.551	-----	-----	-----	-----	-----	-----	-----	0.551
20.17	0.270	359.87	12.87	0.548	-----	-----	-----	-----	-----	-----	-----	0.548
20.33	0.265	359.85	12.87	0.545	-----	-----	-----	-----	-----	-----	-----	0.545
20.50	0.260	359.83	12.87	0.542	-----	-----	-----	-----	-----	-----	-----	0.542
20.67	0.255	359.81	12.87	0.539	-----	-----	-----	-----	-----	-----	-----	0.539
20.83	0.250	359.80	12.87	0.536	-----	-----	-----	-----	-----	-----	-----	0.536
21.00	0.244	359.78	12.87	0.533	-----	-----	-----	-----	-----	-----	-----	0.533

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
21.17	0.239	359.76	12.87	0.530	-----	-----	-----	-----	-----	-----	-----	0.530
21.33	0.234	359.74	12.87	0.527	-----	-----	-----	-----	-----	-----	-----	0.527
21.50	0.229	359.72	12.87	0.524	-----	-----	-----	-----	-----	-----	-----	0.524
21.67	0.224	359.71	12.87	0.521	-----	-----	-----	-----	-----	-----	-----	0.521
21.83	0.219	359.69	12.87	0.518	-----	-----	-----	-----	-----	-----	-----	0.518
22.00	0.213	359.67	12.87	0.515	-----	-----	-----	-----	-----	-----	-----	0.515
22.17	0.289	359.65	12.87	0.512	-----	-----	-----	-----	-----	-----	-----	0.512
22.33	0.240	359.64	12.87	0.510	-----	-----	-----	-----	-----	-----	-----	0.510
22.50	0.216	359.62	12.87	0.507	-----	-----	-----	-----	-----	-----	-----	0.507
22.67	0.212	359.60	12.87	0.503	-----	-----	-----	-----	-----	-----	-----	0.503
22.83	0.208	359.58	12.87	0.500	-----	-----	-----	-----	-----	-----	-----	0.500
23.00	0.204	359.57	12.87	0.497	-----	-----	-----	-----	-----	-----	-----	0.497
23.17	0.200	359.55	12.87	0.494	-----	-----	-----	-----	-----	-----	-----	0.494
23.33	0.197	359.53	12.87	0.490	-----	-----	-----	-----	-----	-----	-----	0.490
23.50	0.193	359.51	12.87	0.487	-----	-----	-----	-----	-----	-----	-----	0.487
23.67	0.189	359.49	12.87	0.484	-----	-----	-----	-----	-----	-----	-----	0.484
23.83	0.185	359.48	12.87	0.481	-----	-----	-----	-----	-----	-----	-----	0.481
24.00	0.181	359.46	12.87	0.477	-----	-----	-----	-----	-----	-----	-----	0.477
24.17	0.090	359.44	12.87	0.473	-----	-----	-----	-----	-----	-----	-----	0.473
24.33	0.006	359.41	12.87	0.469	-----	-----	-----	-----	-----	-----	-----	0.469
24.50	0.000	359.38	12.87	0.463	-----	-----	-----	-----	-----	-----	-----	0.463
24.67	0.000	359.35	12.87	0.458	-----	-----	-----	-----	-----	-----	-----	0.458
24.83	0.000	359.33	12.87	0.452	-----	-----	-----	-----	-----	-----	-----	0.452
25.00	0.000	359.30	12.87	0.447	-----	-----	-----	-----	-----	-----	-----	0.447
25.17	0.000	359.27	12.87	0.441	-----	-----	-----	-----	-----	-----	-----	0.441
25.33	0.000	359.24	12.87	0.436	-----	-----	-----	-----	-----	-----	-----	0.436
25.50	0.000	359.22	12.87	0.431	-----	-----	-----	-----	-----	-----	-----	0.431
25.67	0.000	359.19	12.87	0.425	-----	-----	-----	-----	-----	-----	-----	0.425

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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
25.83	0.000	359.17	12.87	0.420	-----	-----	-----	-----	-----	-----	-----	0.420
26.00	0.000	359.14	12.87	0.414	-----	-----	-----	-----	-----	-----	-----	0.414
26.17	0.000	359.11	12.87	0.409	-----	-----	-----	-----	-----	-----	-----	0.409
26.33	0.000	359.09	12.87	0.404	-----	-----	-----	-----	-----	-----	-----	0.404
26.50	0.000	359.06	12.87	0.398	-----	-----	-----	-----	-----	-----	-----	0.398
26.67	0.000	359.04	12.87	0.393	-----	-----	-----	-----	-----	-----	-----	0.393
26.83	0.000	359.02	12.87	0.387	-----	-----	-----	-----	-----	-----	-----	0.387
27.00	0.000	358.99	12.87	0.382	-----	-----	-----	-----	-----	-----	-----	0.382
27.17	0.000	358.97	12.87	0.376	-----	-----	-----	-----	-----	-----	-----	0.376
27.33	0.000	358.95	12.87	0.371	-----	-----	-----	-----	-----	-----	-----	0.371
27.50	0.000	358.92	12.87	0.366	-----	-----	-----	-----	-----	-----	-----	0.366
27.67	0.000	358.90	12.87	0.360	-----	-----	-----	-----	-----	-----	-----	0.360
27.83	0.000	358.88	12.87	0.355	-----	-----	-----	-----	-----	-----	-----	0.355
28.00	0.000	358.86	12.87	0.349	-----	-----	-----	-----	-----	-----	-----	0.349
28.17	0.000	358.84	12.87	0.344	-----	-----	-----	-----	-----	-----	-----	0.344
28.33	0.000	358.82	12.87	0.339	-----	-----	-----	-----	-----	-----	-----	0.339
28.50	0.000	358.80	12.87	0.333	-----	-----	-----	-----	-----	-----	-----	0.333
28.67	0.000	358.78	12.87	0.328	-----	-----	-----	-----	-----	-----	-----	0.328
28.83	0.000	358.76	12.87	0.322	-----	-----	-----	-----	-----	-----	-----	0.322
29.00	0.000	358.74	12.87	0.317	-----	-----	-----	-----	-----	-----	-----	0.317
29.17	0.000	358.72	12.87	0.311	-----	-----	-----	-----	-----	-----	-----	0.311
29.33	0.000	358.70	12.87	0.306	-----	-----	-----	-----	-----	-----	-----	0.306
29.50	0.000	358.68	12.87	0.300	-----	-----	-----	-----	-----	-----	-----	0.300
29.67	0.000	358.66	12.87	0.295	-----	-----	-----	-----	-----	-----	-----	0.295
29.83	0.000	358.64	12.87	0.290	-----	-----	-----	-----	-----	-----	-----	0.290
30.00	0.000	358.63	12.87	0.284	-----	-----	-----	-----	-----	-----	-----	0.284
30.17	0.000	358.61	12.87	0.279	-----	-----	-----	-----	-----	-----	-----	0.279
30.33	0.000	358.59	12.87	0.273	-----	-----	-----	-----	-----	-----	-----	0.273

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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
30.50	0.000	358.57	12.87	0.268	-----	-----	-----	-----	-----	-----	-----	0.268
30.67	0.000	358.56	12.87	0.262	-----	-----	-----	-----	-----	-----	-----	0.262
30.83	0.000	358.54	12.87	0.257	-----	-----	-----	-----	-----	-----	-----	0.257
31.00	0.000	358.53	12.87	0.252	-----	-----	-----	-----	-----	-----	-----	0.252
31.17	0.000	358.51	12.87	0.247	-----	-----	-----	-----	-----	-----	-----	0.247

...End

Pond Report

Pond No. 2 - Undergroud Detention

Pond Data

Pond storage is based on user-defined values.

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	358.00	n/a	0	0
0.01	358.01	n/a	2,150	2,150
0.50	358.50	n/a	0	2,150
0.51	358.51	n/a	0	2,150
1.50	359.50	n/a	9,679	11,829
2.50	360.50	n/a	9,679	21,508
3.50	361.50	n/a	9,679	31,187
4.50	362.50	n/a	9,679	40,866
5.50	363.50	n/a	9,679	50,545

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	4.00	10.00	0.00
Span (in)	= 24.00	4.00	10.00	0.00
No. Barrels	= 1	1	1	0
Invert El. (ft)	= 356.00	358.00	360.00	0.00
Length (ft)	= 172.60	0.10	0.10	0.00
Slope (%)	= 0.50	0.50	0.50	n/a
N-Value	= .012	.012	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	Yes	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 6.28	0.00	0.00	0.00
Crest El. (ft)	= 363.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	---	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)
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	358.00	0.00	0.00	0.00	---	0.00	---	---	---	---	---	0.000
0.01	2,150	358.01	12.87 oc	0.00 ic	0.00	---	0.00	---	---	---	---	---	0.000
0.50	2,150	358.50	12.87 oc	0.24 ic	0.00	---	0.00	---	---	---	---	---	0.243
0.51	2,150	358.51	12.87 oc	0.25 ic	0.00	---	0.00	---	---	---	---	---	0.246
1.50	11,829	359.50	12.87 oc	0.49 ic	0.00	---	0.00	---	---	---	---	---	0.485
2.50	21,508	360.50	12.87 oc	0.64 ic	0.82 ic	---	0.00	---	---	---	---	---	1.467
3.50	31,187	361.50	12.87 oc	0.77 ic	2.73 ic	---	0.00	---	---	---	---	---	3.500
4.50	40,866	362.50	12.87 oc	0.87 ic	3.79 ic	---	0.00	---	---	---	---	---	4.665
5.50	50,545	363.50	12.98 oc	0.97 ic	4.61 ic	---	7.39	---	---	---	---	---	12.97

Hydrograph Report

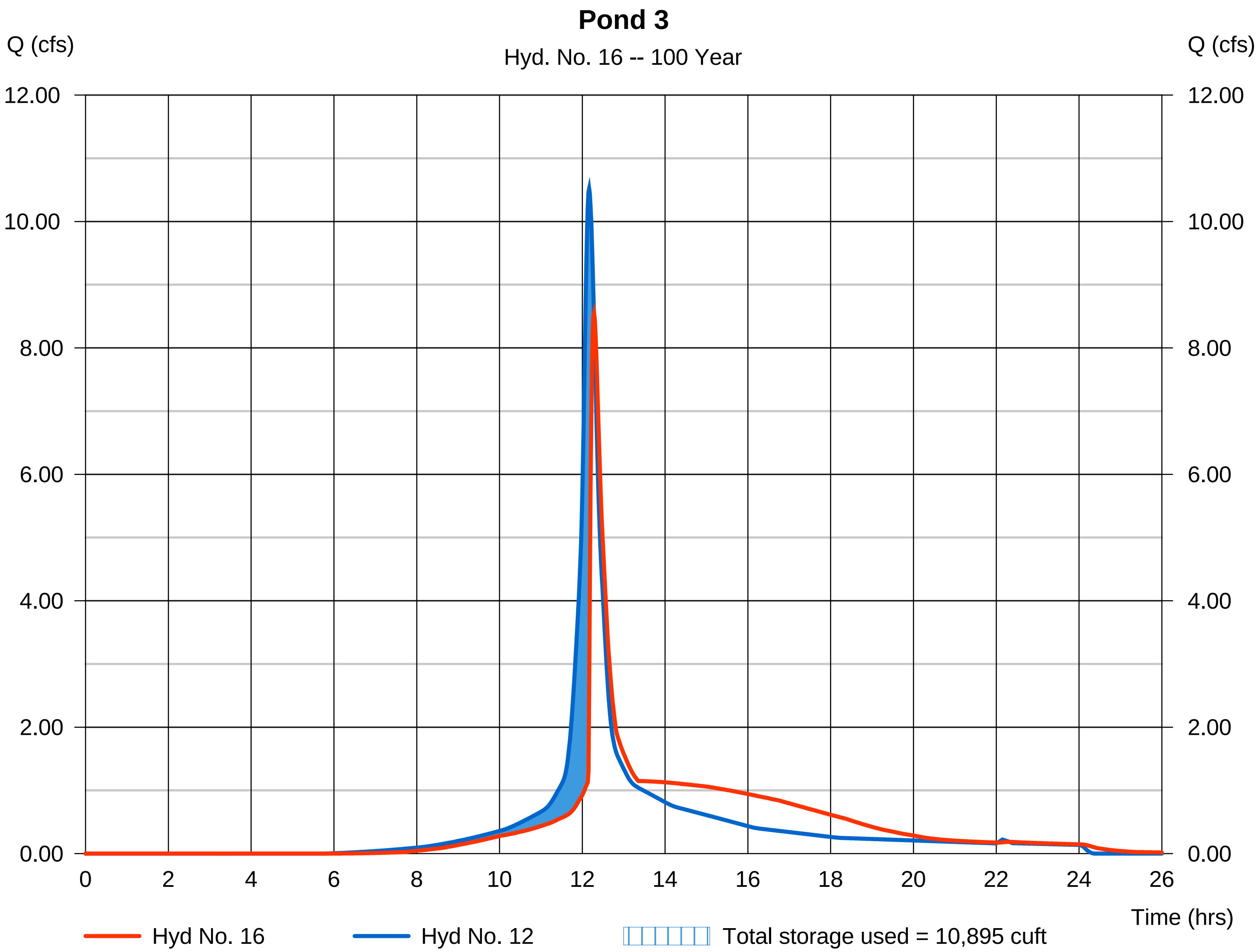
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 8.548 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 42,031 cuft
Inflow hyd. No.	= 12 - PDA-3B	Max. Elevation	= 365.96 ft
Reservoir name	= Basin 3	Max. Storage	= 10,895 cuft

Storage Indication method used.



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 16

Pond 3

Hydrograph type	= Reservoir	Peak discharge	= 8.548 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.28 hrs
Time interval	= 1 min	Hyd. volume	= 42,031 cuft
Inflow hyd. No.	= 12 - PDA-3B	Reservoir name	= Basin 3
Max. Elevation	= 365.96 ft	Max. Storage	= 10,895 cuft

Storage Indication method used.

Hydrograph Discharge Table

(Printed values >= 1.00% of Qp. Print interval = 10)

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
8.67	0.157	362.20	0.097	0.095	-----	-----	-----	-----	-----	-----	-----	0.095
8.83	0.178	362.23	0.117	0.115	-----	-----	-----	-----	-----	-----	-----	0.115
9.00	0.200	362.25	0.137	0.136	-----	-----	-----	-----	-----	-----	-----	0.136
9.17	0.223	362.27	0.158	0.157	-----	-----	-----	-----	-----	-----	-----	0.157
9.33	0.248	362.29	0.179	0.179	-----	-----	-----	-----	-----	-----	-----	0.179
9.50	0.273	362.32	0.204	0.202	-----	-----	-----	-----	-----	-----	-----	0.202
9.67	0.301	362.34	0.231	0.227	-----	-----	-----	-----	-----	-----	-----	0.227
9.83	0.329	362.37	0.259	0.252	-----	-----	-----	-----	-----	-----	-----	0.252
10.00	0.358	362.40	0.288	0.279	-----	-----	-----	-----	-----	-----	-----	0.279
10.17	0.392	362.43	0.306	0.298	-----	-----	-----	-----	-----	-----	-----	0.298
10.33	0.437	362.46	0.327	0.319	-----	-----	-----	-----	-----	-----	-----	0.319
10.50	0.489	362.51	0.352	0.345	-----	-----	-----	-----	-----	-----	-----	0.345
10.67	0.544	362.56	0.386	0.371	-----	-----	-----	-----	-----	-----	-----	0.371
10.83	0.602	362.63	0.418	0.401	-----	-----	-----	-----	-----	-----	-----	0.401
11.00	0.662	362.70	0.443	0.436	-----	-----	-----	-----	-----	-----	-----	0.436
11.17	0.745	362.79	0.473	0.471	-----	-----	-----	-----	-----	-----	-----	0.471
11.33	0.903	362.90	0.515	0.515	-----	-----	-----	-----	-----	-----	-----	0.515
11.50	1.100	363.04	0.573	0.567	-----	-----	-----	-----	-----	-----	-----	0.567
11.67	1.579	363.22	0.642	0.624	-----	-----	-----	-----	-----	-----	-----	0.624
11.83	3.054	363.63	0.752	0.745	-----	-----	-----	-----	-----	-----	-----	0.745

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Pond 3

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
12.00	5.724	364.38	0.946	0.927	-----	-----	-----	-----	-----	-----	-----	0.927
12.17	10.52 <<	365.65	2.593	1.133	-----	-----	1.432	-----	-----	-----	-----	2.565
12.33	7.107	365.93	8.018	1.002	-----	-----	6.979	-----	-----	-----	-----	7.980
12.50	4.024	365.79	4.930	1.091	-----	-----	3.753	-----	-----	-----	-----	4.845
12.67	2.230	365.67	2.965	1.127	-----	-----	1.794	-----	-----	-----	-----	2.922
12.83	1.574	365.60	1.895	1.143	-----	-----	0.751	-----	-----	-----	-----	1.894
13.00	1.342	365.56	1.601	1.145	-----	-----	0.435	-----	-----	-----	-----	1.581
13.17	1.145	365.52	1.370	1.147	-----	-----	0.187	-----	-----	-----	-----	1.334
13.33	1.049	365.50	1.209	1.149	-----	-----	0.014	-----	-----	-----	-----	1.162
13.50	0.990	365.48	1.185	1.146	-----	-----	-----	-----	-----	-----	-----	1.146
13.67	0.932	365.46	1.167	1.141	-----	-----	-----	-----	-----	-----	-----	1.141
13.83	0.873	365.42	1.145	1.135	-----	-----	-----	-----	-----	-----	-----	1.135
14.00	0.813	365.38	1.131	1.128	-----	-----	-----	-----	-----	-----	-----	1.128
14.17	0.759	365.33	1.130	1.118	-----	-----	-----	-----	-----	-----	-----	1.118
14.33	0.723	365.27	1.130	1.107	-----	-----	-----	-----	-----	-----	-----	1.107
14.50	0.695	365.21	1.130	1.096	-----	-----	-----	-----	-----	-----	-----	1.096
14.67	0.666	365.15	1.103	1.085	-----	-----	-----	-----	-----	-----	-----	1.085
14.83	0.638	365.09	1.074	1.073	-----	-----	-----	-----	-----	-----	-----	1.073
15.00	0.609	365.02	1.068	1.060	-----	-----	-----	-----	-----	-----	-----	1.060
15.17	0.580	364.94	1.066	1.043	-----	-----	-----	-----	-----	-----	-----	1.043
15.33	0.551	364.85	1.038	1.024	-----	-----	-----	-----	-----	-----	-----	1.024
15.50	0.522	364.75	1.010	1.006	-----	-----	-----	-----	-----	-----	-----	1.006
15.67	0.493	364.65	1.005	0.985	-----	-----	-----	-----	-----	-----	-----	0.985
15.83	0.464	364.55	0.981	0.964	-----	-----	-----	-----	-----	-----	-----	0.964
16.00	0.434	364.45	0.950	0.943	-----	-----	-----	-----	-----	-----	-----	0.943
16.17	0.408	364.35	0.946	0.920	-----	-----	-----	-----	-----	-----	-----	0.920
16.33	0.391	364.25	0.918	0.898	-----	-----	-----	-----	-----	-----	-----	0.898
16.50	0.379	364.15	0.890	0.875	-----	-----	-----	-----	-----	-----	-----	0.875

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Pond 3

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
16.67	0.366	364.05	0.866	0.852	-----	-----	-----	-----	-----	-----	-----	0.852
16.83	0.353	363.94	0.837	0.825	-----	-----	-----	-----	-----	-----	-----	0.825
17.00	0.340	363.82	0.800	0.795	-----	-----	-----	-----	-----	-----	-----	0.795
17.17	0.327	363.71	0.784	0.764	-----	-----	-----	-----	-----	-----	-----	0.764
17.33	0.315	363.59	0.736	0.735	-----	-----	-----	-----	-----	-----	-----	0.735
17.50	0.302	363.49	0.727	0.704	-----	-----	-----	-----	-----	-----	-----	0.704
17.67	0.289	363.38	0.679	0.675	-----	-----	-----	-----	-----	-----	-----	0.675
17.83	0.276	363.28	0.647	0.644	-----	-----	-----	-----	-----	-----	-----	0.644
18.00	0.263	363.19	0.636	0.614	-----	-----	-----	-----	-----	-----	-----	0.614
18.17	0.252	363.10	0.597	0.586	-----	-----	-----	-----	-----	-----	-----	0.586
18.33	0.246	363.02	0.562	0.557	-----	-----	-----	-----	-----	-----	-----	0.557
18.50	0.242	362.92	0.523	0.523	-----	-----	-----	-----	-----	-----	-----	0.522
18.67	0.238	362.83	0.488	0.488	-----	-----	-----	-----	-----	-----	-----	0.488
18.83	0.235	362.75	0.459	0.454	-----	-----	-----	-----	-----	-----	-----	0.454
19.00	0.231	362.67	0.434	0.423	-----	-----	-----	-----	-----	-----	-----	0.423
19.17	0.227	362.61	0.413	0.394	-----	-----	-----	-----	-----	-----	-----	0.394
19.33	0.223	362.56	0.383	0.369	-----	-----	-----	-----	-----	-----	-----	0.369
19.50	0.219	362.51	0.354	0.347	-----	-----	-----	-----	-----	-----	-----	0.347
19.67	0.215	362.47	0.331	0.324	-----	-----	-----	-----	-----	-----	-----	0.324
19.83	0.212	362.44	0.312	0.304	-----	-----	-----	-----	-----	-----	-----	0.304
20.00	0.208	362.41	0.296	0.286	-----	-----	-----	-----	-----	-----	-----	0.286
20.17	0.204	362.38	0.273	0.265	-----	-----	-----	-----	-----	-----	-----	0.265
20.33	0.200	362.36	0.253	0.247	-----	-----	-----	-----	-----	-----	-----	0.247
20.50	0.196	362.35	0.238	0.233	-----	-----	-----	-----	-----	-----	-----	0.233
20.67	0.192	362.34	0.225	0.222	-----	-----	-----	-----	-----	-----	-----	0.222
20.83	0.188	362.33	0.215	0.213	-----	-----	-----	-----	-----	-----	-----	0.213
21.00	0.185	362.32	0.207	0.205	-----	-----	-----	-----	-----	-----	-----	0.205
21.17	0.181	362.31	0.200	0.199	-----	-----	-----	-----	-----	-----	-----	0.199

Continues on next page...

Pond 3

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
21.33	0.177	362.31	0.194	0.193	-----	-----	-----	-----	-----	-----	-----	0.193
21.50	0.173	362.30	0.188	0.188	-----	-----	-----	-----	-----	-----	-----	0.188
21.67	0.169	362.30	0.183	0.183	-----	-----	-----	-----	-----	-----	-----	0.183
21.83	0.165	362.29	0.179	0.178	-----	-----	-----	-----	-----	-----	-----	0.178
22.00	0.161	362.29	0.174	0.174	-----	-----	-----	-----	-----	-----	-----	0.174
22.17	0.218	362.29	0.180	0.180	-----	-----	-----	-----	-----	-----	-----	0.180
22.33	0.181	362.30	0.186	0.185	-----	-----	-----	-----	-----	-----	-----	0.185
22.50	0.163	362.30	0.181	0.180	-----	-----	-----	-----	-----	-----	-----	0.180
22.67	0.160	362.29	0.176	0.175	-----	-----	-----	-----	-----	-----	-----	0.175
22.83	0.157	362.28	0.171	0.171	-----	-----	-----	-----	-----	-----	-----	0.171
23.00	0.154	362.28	0.167	0.167	-----	-----	-----	-----	-----	-----	-----	0.167
23.17	0.152	362.28	0.163	0.163	-----	-----	-----	-----	-----	-----	-----	0.163
23.33	0.149	362.27	0.160	0.159	-----	-----	-----	-----	-----	-----	-----	0.159
23.50	0.146	362.27	0.157	0.156	-----	-----	-----	-----	-----	-----	-----	0.156
23.67	0.143	362.27	0.153	0.153	-----	-----	-----	-----	-----	-----	-----	0.153
23.83	0.140	362.26	0.150	0.150	-----	-----	-----	-----	-----	-----	-----	0.150
24.00	0.137	362.26	0.147	0.146	-----	-----	-----	-----	-----	-----	-----	0.146
24.17	0.068	362.25	0.138	0.136	-----	-----	-----	-----	-----	-----	-----	0.136
24.33	0.004	362.22	0.108	0.106	-----	-----	-----	-----	-----	-----	-----	0.106

...End

Pond Report

Pond No. 4 - Basin 3

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 362.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	362.00	1,496	0	0
1.00	363.00	1,988	1,736	1,736
2.00	364.00	2,600	2,287	4,022
3.00	365.00	3,458	3,018	7,041
4.00	366.00	4,626	4,027	11,068
5.00	367.00	5,794	5,199	16,266

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 24.00	5.00	0.00	0.00
Span (in)	= 24.00	5.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 362.00	362.00	0.00	0.00
Length (ft)	= 58.00	0.66	0.00	0.00
Slope (%)	= 0.50	0.50	0.00	n/a
N-Value	= .012	.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	12.00	0.00	0.00
Crest El. (ft)	= 365.50	366.50	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= 1	Ciplti	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 0.000 (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	362.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.00	1,736	363.00	0.56 ic	0.55 ic	---	---	0.00	0.00	---	---	---	---	0.552
2.00	4,022	364.00	0.84 ic	0.84 ic	---	---	0.00	0.00	---	---	---	---	0.839
3.00	7,041	365.00	1.07 ic	1.06 ic	---	---	0.00	0.00	---	---	---	---	1.056
4.00	11,068	366.00	9.56 oc	0.93 ic	---	---	8.63	0.00	---	---	---	---	9.555
5.00	16,266	367.00	22.93 oc	0.82 ic	---	---	22.11 ic	14.13	---	---	---	---	37.06

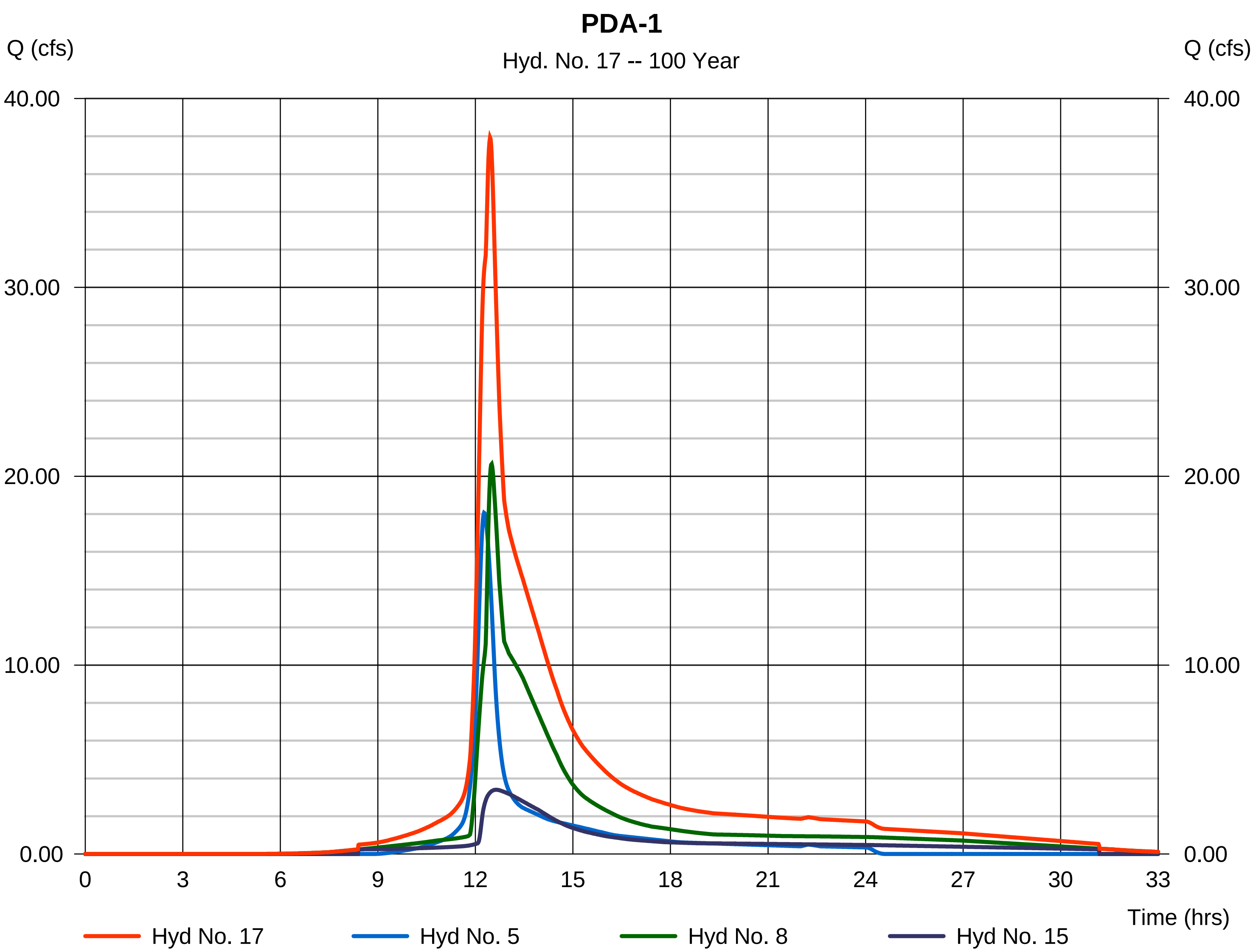
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Monday, 01 / 9 / 2023

Hyd. No. 17

PDA-1

Hydrograph type	= Combine	Peak discharge	= 37.93 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.45 hrs
Time interval	= 1 min	Hyd. volume	= 316,059 cuft
Inflow hyds.	= 5, 8, 15	Contrib. drain. area	= 5.700 ac



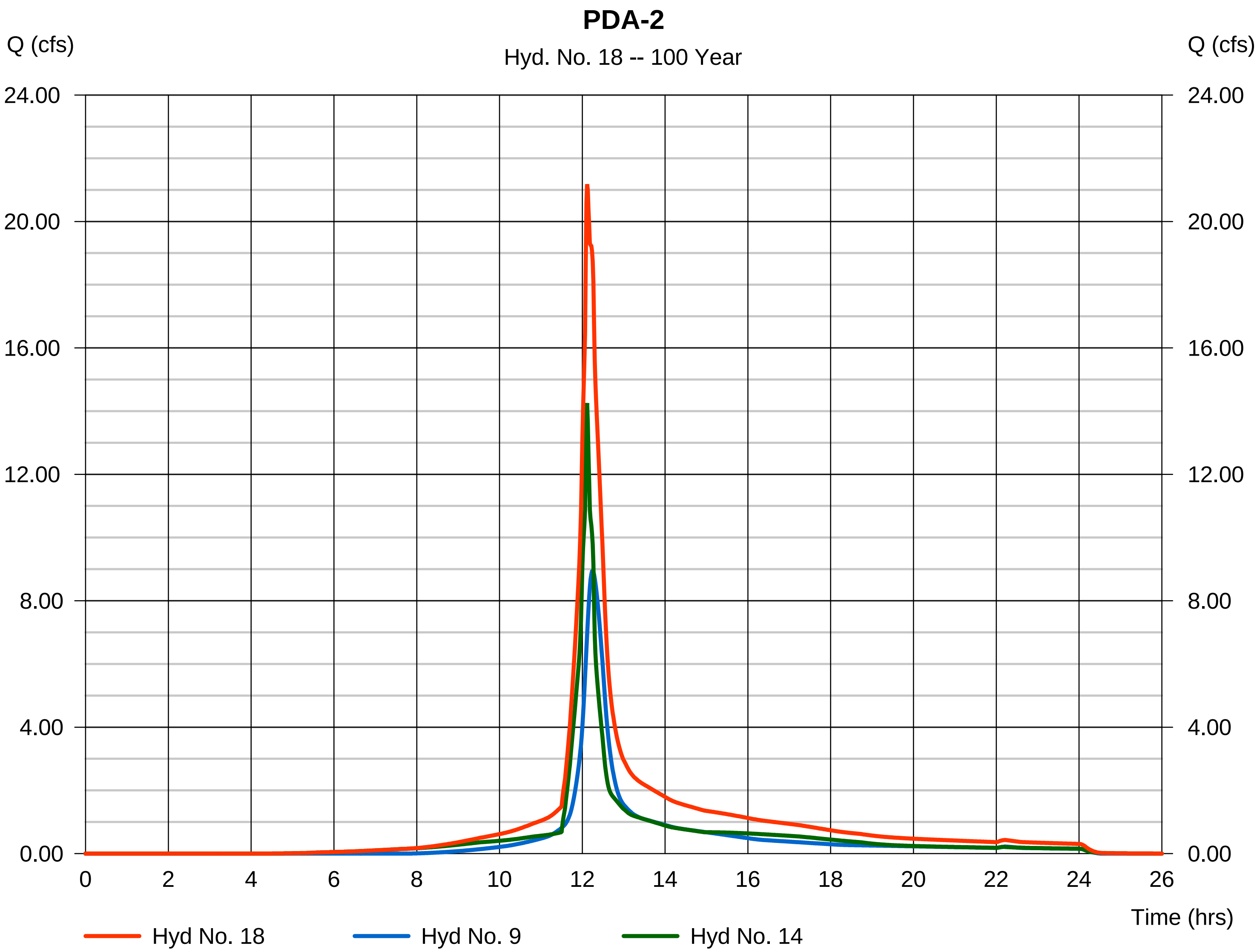
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 18

PDA-2

Hydrograph type	= Combine	Peak discharge	= 21.18 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.12 hrs
Time interval	= 1 min	Hyd. volume	= 90,810 cuft
Inflow hyds.	= 9, 14	Contrib. drain. area	= 2.300 ac



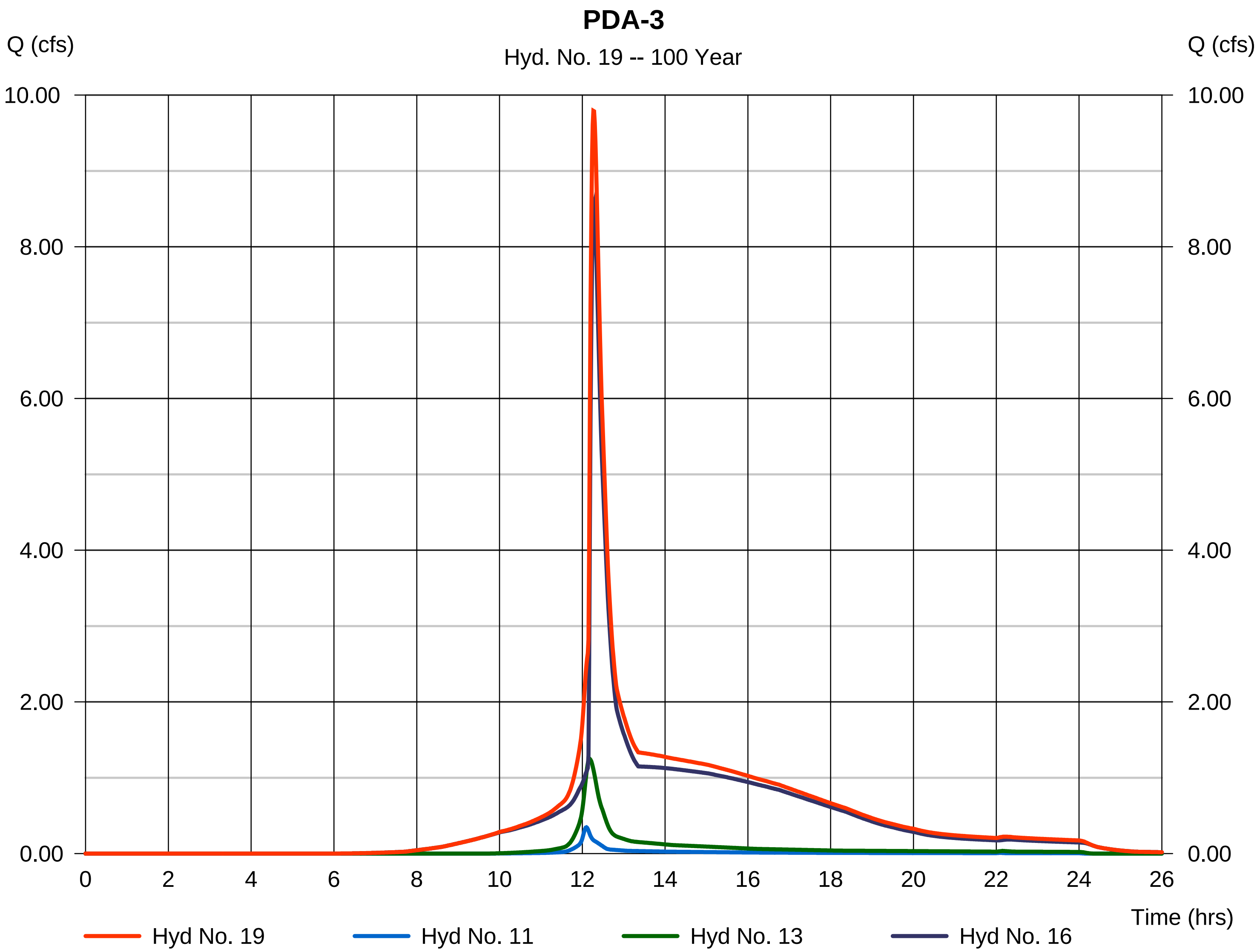
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 | Monday, 01 / 9 / 2023

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 9.791 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.27 hrs
Time interval	= 1 min	Hyd. volume	= 48,181 cuft
Inflow hyds.	= 11, 13, 16	Contrib. drain. area	= 0.480 ac



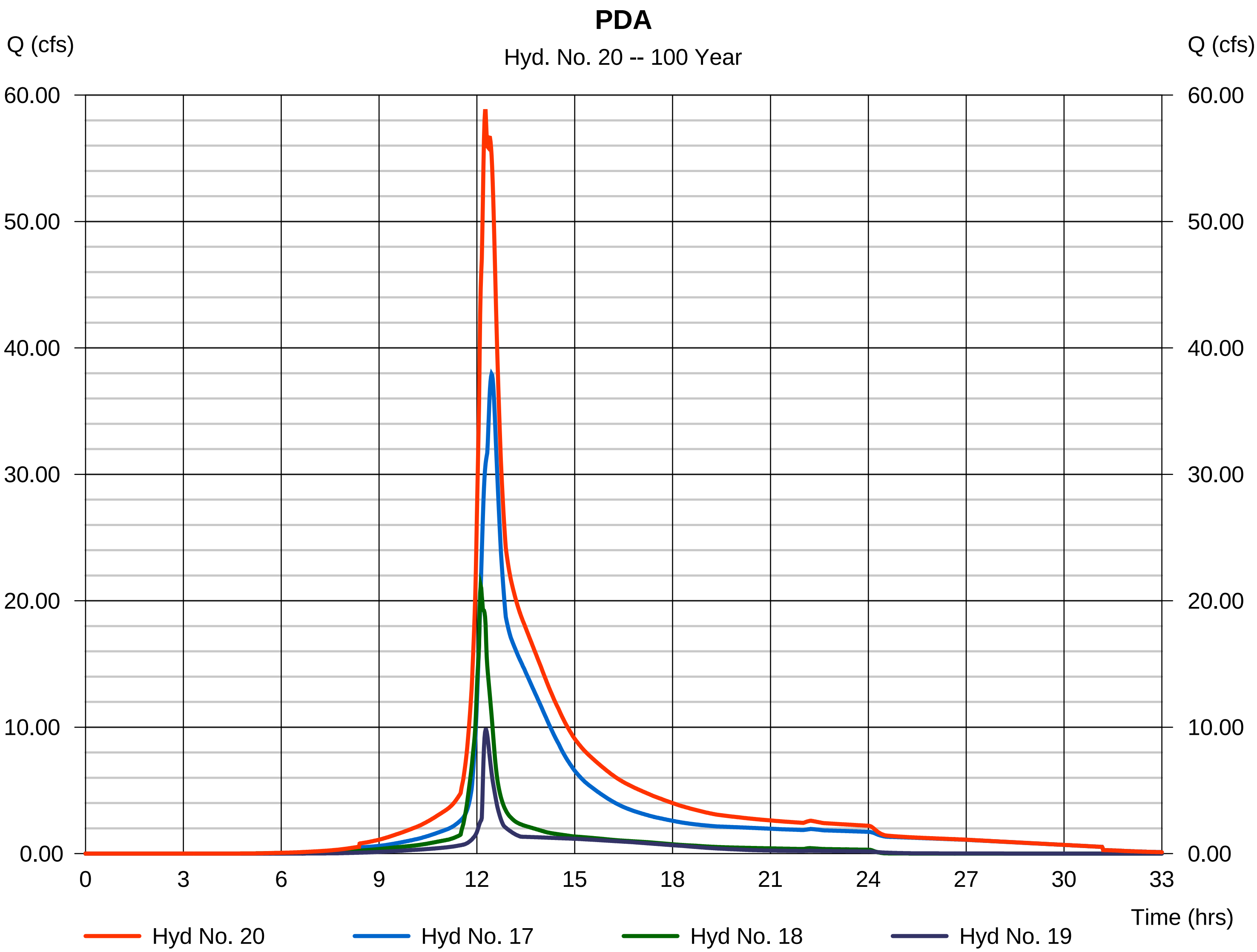
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Monday, 01 / 9 / 2023

Hyd. No. 20

PDA

Hydrograph type	= Combine	Peak discharge	= 58.73 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.25 hrs
Time interval	= 1 min	Hyd. volume	= 455,049 cuft
Inflow hyds.	= 17, 18, 19	Contrib. drain. area	= 0.000 ac



Project	**Pondview**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	**Existing** Proposed	**Existing 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 [X] acres [ ] mi^2 [ ] %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	**Meadow - Good**	**58**			**4.22**	**244.76**
D	**Meadow - Good**	**78**			**0.77**	**60.06**
B	**Woods - Good**	**58**			**8.16**	**473.28**
D	**Woods - Good**	**79**			**0.19**	**15.01**
						0.00
						0.00
						0.00
						0.00
				Totals =	**13.34**	**793.11**

1 Use only one CN source per line

$$CN\ (weighted) = \frac{\text{total product}}{\text{total area}} = \frac{793.11}{13.34} = 59.45$$

Use CN = **59**

Project	**Pondview**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	**Existing** Proposed	**Existing 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 [X] acres [ ] mi^2 [ ] %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B/D	**Impervious**	**98**			**1.16**	**113.68**
B	**Open Space - Good**	**61**			**0.16**	**9.76**
B	**Woods - Good**	**58**			**2.53**	**146.74**
D	**Woods - Good**	**79**			**1.34**	**105.86**
						0.00
						0.00
						0.00
						0.00
				Totals =	**5.19**	**376.04**

1 Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{376.04}{5.19} = 72.45$$

Use CN = **72**

Project **Pondview** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: **Existing** Proposed **Existing Drainage Area 3 (EDA-3)**

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 [X] acres [ ] mi^2 [ ] %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	**Woods - Good**	**58**			**3.81**	**220.98**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	**3.81**	**220.98**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{220.98}{3.81}$ = 58.00 Use CN = **58**

Project	Pond View	By	CMH	Date	01/09/23
Location	127 Main Street, Monroe CT	Checked	CJB	Date	01/09/23
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	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4	[X] acres [ ] mi^2 [ ] %	
B	**Impervious Area**	**98**			**0.00**	**0.00**
B	**Open Space - Good**	**61**			**2.11**	**128.71**
D	**Open Space - Good**	**80**			**0.43**	**34.40**
B	**Woods - Good**	**58**			**2.48**	**143.84**
D	**Woods - Good**	**77**			**0.68**	**52.36**
						0.00
						0.00
						0.00
				Totals =	**5.70**	**359.31**

1 Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{359.31}{5.70} = 63.04$$

Use CN = **63**

1910801-CN-PDA

Project	**Pond View**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
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 [X] acres [ ] mi^2 [ ] %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	**Impervious Area**	**98**			**4.05**	**396.90**
B	**Open Space - Good**	**61**			**2.36**	**143.96**
D	**Open Space - Good**	**80**			**0.21**	**16.80**
B	**Woods - Good**	**58**			**0.83**	**48.14**
						0.00
						0.00
						0.00
						0.00
				Totals =	**7.45**	**605.80**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{605.80}{7.45}$ = 81.32 Use CN = $\boxed{\textbf{81}}$

Project	**Pond View**	By **CMH**	Date **01/09/23**		
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**		
Bold one:	Existing **Proposed**	**Proposed Drainage Area 1C (PDA-1C)**			

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	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4	[X] acres [ ] mi^2 [ ] %	
B	**Impervious Area**	**98**			**1.72**	**168.56**
B	**Open Space - Good**	**61**			**0.74**	**45.14**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
					Totals = **2.46**	**213.70**

1 Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{213.70}{2.46} = 86.87$$

Use CN = **87**

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**
Bold one:	Existing **Proposed**		**Proposed Drainage Area 2A (PDA-2A)**		

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 ☒ acres ☐ mi^2 ☐ %	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4		
B	**Impervious Area**	**98**			**0.03**	**2.94**
B	**Open Space - Good**	**61**			**1.14**	**69.54**
D	**Open Space - Good**	**80**			**0.11**	**8.80**
B	**Woods - Good**	**58**			**0.02**	**1.16**
D	**Woods - Good**	**77**			**1.00**	**77.00**
						0.00
						0.00
						0.00
				Totals =	**2.30**	**159.44**

1 Use only one CN source per line

$$\text{CN (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{159.44}{2.30} = 69.32$$

Use CN = **69**

1910801-CN-PDA

Project **Pond View** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe, CT** Checked **CJB** Date **01/09/23**

Bold one: Existing **Proposed** **Proposed Drainage Area 2B (PDA-2B)**

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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [X] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Impervious Area**	**98**			**1.27**	**124.46**
B	**Open Space - Good**	**61**			**0.34**	**20.74**
B	**Woods - Good**	**58**			**0.39**	**22.62**
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	**2.00**	**167.82**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{167.82}{2.00} = 83.91$ Use CN = **84**

Project **Pond View** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe, CT** Checked **CJB** Date **01/09/23**

Bold one: Existing **Proposed** **Proposed Drainage Area 3A (PDA-3A)**

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	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4	[X] acres [ ] mi^2 [ ] %	
B	**Woods - Good**	**58**			**0.09**	**5.22**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	**0.09**	**5.22**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{5.22}{0.09}$ = 58.00 Use CN = **58**

Project	**Pond View**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Existing **Proposed**	**Proposed Drainage Area 3B (PDA-3B)**	

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	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4	[X] acres [ ] mi^2 [ ] %	
B	**Impervious Area**	**98**			**0.87**	**85.26**
B	**Open Space - Good**	**61**			**1.08**	**65.88**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	**1.95**	**151.14**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{151.14}{1.95}$ = 77.51 Use CN = **78**

Project **Pond View** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe, CT** Checked **CJB** Date **01/09/23**

Bold one: Existing **Proposed** **Proposed Drainage Area 3C (PDA-3C)**

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	Product of CN x area
		Table 2-2	Fig. 2-3	Fig. 2-4	[X] acres [ ] mi^2 [ ] %	
B	**Woods - Good**	**58**			**0.39**	**22.62**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	**0.39**	**22.62**

1 Use only one CN source per line

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{22.62}{0.39}$ = 58.00 Use CN = **58**

Project	Pondview	By	CMH	Date	01/09/23
Location	127 Main Street, Monroe, CT	Checked	CJB	Date	01/09/23

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)

	Units	Segment ID: AB	Segment ID:		Total
1. Surface description (table 3-1)		Woods			
2. Manning's roughness coeff., n (table 3-1)		0.400			
3. Flow Length, L (total L $\leq$ 300 ft)	ft	100			
4. Two-yr 24-hr rainfall, P_2	in	3.56			
5. Land slope, s	ft/ft	0.026			
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t	hr	0.306	+		= 0.306

Shallow concentrated flow

	Units	Segment ID: BC	Segment ID: CD		Total
7. Surface description (paved or unpaved)		unpaved	unpaved		
8. Flow length, L	ft	409	109.5		
9. Watercourse slope, s	ft/ft	0.12	0.04		
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	5.52	3.06		
11. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.021	+ 0.010		= 0.031

Channel flow

	Units	Segment ID:	Segment ID:		Total
12. Cross sectional flow area, a	ft^2				
13. Wetted perimeter, p_w	ft				
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft				
15. Channel slope, s	ft/ft				
16. Manning's roughness coeff., n					
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s				
18. Flow length, L	ft				
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr		+		= 0.000

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

Hours = 0.336

Minutes = 20.2

Project	Pondview	By	CMH	Date	01/09/23
Location	127 Main Street, Monroe, CT	Checked	CJB	Date	01/09/23

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)		Segment ID	AB			
1. Surface description (table 3-1)			Woods			
2. Manning's roughness coeff., n (table 3-1)			0.400			
3. Flow Length, L (total L $\leq$ 300 ft)		ft	100			
4. Two-yr 24-hr rainfall, P_2		in	3.56			
5. Land slope, s		ft/ft	0.140			
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.156	+		= 0.156

Shallow concentrated flow		Segment ID	CD			
7. Surface description (paved or unpaved)			unpaved			
8. Flow length, L		ft	354.4			
9. Watercourse slope, s		ft/ft	0.21			
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	7.43			
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.013	+		= 0.013

Channel flow		Segment ID				
12. Cross sectional flow area, a		ft^2				
13. Wetted perimeter, p_w		ft				
14. Hydraulic radius, r $\quad r = \frac{a}{p_w}$	Compute r	ft				
15. Channel slope, s		ft/ft				
16. Manning's roughness coeff., n						
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s				
18. Flow length, L		ft				
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+		= 0.000
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)					**Hours**	= 0.169
					Minutes	= 10.1

Project	Pondview	By	CMH	Date	01/09/23
Location	127 Main Street, Monroe, CT	Checked	CJB	Date	01/09/23

Bold One: **Present** Developed

Bold One: $\mathbf{T_c}$ T_t through subarea **Existing Drainage Area 3 (EDA-3)**

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)

	Unit				
Segment ID		AB			
1. Surface description (table 3-1)		Woods			
2. Manning's roughness coeff., n (table 3-1)		0.400			
3. Flow Length, L (total L ≤ 300 ft)	ft	100			
4. Two-yr 24-hr rainfall, P_2	in	3.56			
5. Land slope, s	ft/ft	0.030			
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.289	+	+	= 0.289

Shallow concentrated flow

	Unit			
Segment ID		BC	CD	
7. Surface description (paved or unpaved)		unpaved	unpaved	
8. Flow length, L	ft	194.5	127.35	
9. Watercourse slope, s	ft/ft	0.10	0.20	
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	5.17	7.29	
11. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.010	+ 0.005	= 0.015

Channel flow

	Unit			
Segment ID				
12. Cross sectional flow area, a	ft^2			
13. Wetted perimeter, p_w	ft			
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft			
15. Channel slope, s	ft/ft			
16. Manning's roughness coeff., n				
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s			
18. Flow length, L	ft			
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr		+	= 0.000

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

Hours = 0.304

Minutes = 18.2

ject **Pond View** By **CMH** Date **01/09/23**

ation **127 Main Street, Monroe, CT** Checked **CJB** Date **01/09/23**

l One: Present **Developed**

l One: **T_c** T_t through subarea **Prop Drainage Area 1A (PDA-1A)**

ES: 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.

et flow (Applicable to T_c Only)

Segment ID		AB	
Surface description (table 3-1)		Dense Grasses	
Manning's roughness coeff., n (table 3-1)		0.240	
Flow Length, L (total L ≤ 300 ft)	ft	100	
Two-yr 24-hr rainfall, P_2	in	3.56	
Land slope, s	ft/ft	0.01	
$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Comp T_t	hr	0.298	+ = 0.298

low concentrated flow

Segment ID		BC	CD	DE	EF	FG	
Surface description (paved or unpaved)		unpaved	unpaved	unpaved	unpaved	unpaved	
Flow length, L	ft	246.3	104.88	16	38	67.3	
Watercourse slope, s	ft/ft	0.01	0.04	0.25	0.26	0.03	
Avg velocity, V (ConnDOT Equ. 6.C.4 & C.C.5)	ft/s	1.25	3.15	8.07	8.27	2.78	
$T_t = \frac{L}{3600\ V}$ Comp T_t	hr	0.055 +	0.009 +	0.001 +	0.001 +	0.01	= 0.073

nel flow

Segment ID			
Cross sectional flow area, a	ft^2		
Wetted perimeter, p_w	ft		
Hydraulic radius, r $\quad r = \frac{a}{p_w}$ Comp r	ft		
Channel slope, s	ft/ft		
Manning's roughness coeff., n			
$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Comp V	ft/s		
Flow length, L	ft		
$T_t = \frac{L}{3600\ V}$ Comp T_t	hr	+	= 0.000

Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) **Hours** = 0.370

Min. = 22.2

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**

Bold One: Present **Developed**

Bold One: $\mathbf{T_c}$ 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)

	Unit	Segment 1	Segment 2	Total
Segment ID		**AB**		
1. Surface description (table 3-1)		**Dense Grasses**		
2. Manning's roughness coeff., n (table 3-1)		**0.240**		
3. Flow Length, L (total L $\le$ 300 ft)	ft	**100**		
4. Two-yr 24-hr rainfall, P_2	in	**3.56**		
5. Land slope, s	ft/ft	**0.02**		
6. $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	**0.253**	+	= **0.253**

Shallow concentrated flow

	Unit	Segment 1	Segment 2	Total
Segment ID		**BC**		
7. Surface description (paved or unpaved)		**unpaved**		
8. Flow length, L	ft	**97.75**		
9. Watercourse slope, s	ft/ft	**0.02**		
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	**2.28**		
11. $T_t = \dfrac{L}{3600\ V}$ Compute T_t	hr	**0.012**	+	= **0.012**

Channel flow

	Unit	Segment 1	Segment 2	Total
Segment ID		**CD**		
12. Cross sectional flow area, a	ft^2			
13. Wetted perimeter, p_w	ft			
14. Hydraulic radius, r $r = \dfrac{a}{p_w}$ Compute r	ft			
15. Channel slope, s	ft/ft			
16. Manning's roughness coeff., n				
17. $V = \dfrac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s	**5.00**		
18. Flow length, L	ft	**974.32**		
19. $T_t = \dfrac{L}{3600\ V}$ Compute T_t	hr	**0.054**	+	= **0.054**
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)			**Hours**	= **0.319**
			Minutes	= **19.1**

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 1C (PDA-1C)**

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)

		Unit			
	Segment ID		**AB**		
1.	Surface description (table 3-1)		**Dense Grasses**		
2.	Manning's roughness coeff., n (table 3-1)		**0.240**		
3.	Flow Length, L (total L ≤ 300 ft)	ft	**71**		
4.	Two-yr 24-hr rainfall, P_2	in	**3.56**		
5.	Land slope, s	ft/ft	**0.01**		
6.	$T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	**0.226**	+	= **0.226**

Shallow concentrated flow

		Unit			
	Segment ID				
7.	Surface description (paved or unpaved)				
8.	Flow length, L	ft			
9.	Watercourse slope, s	ft/ft			
10.	Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s			
11.	$T_t = \dfrac{L}{3600\ V}$ Compute T_t	hr		+	= **0.000**

Channel flow

		Unit			
	Segment ID		**CD**		
12.	Cross sectional flow area, a	ft^2			
13.	Wetted perimeter, p_w	ft			
14.	Hydraulic radius, r $r = \dfrac{a}{p_w}$ Compute r	ft			
15.	Channel slope, s	ft/ft			
16.	Manning's roughness coeff., n				
17.	$V = \dfrac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s	**5.00**		
18.	Flow length, L	ft	**397.5**		
19.	$T_t = \dfrac{L}{3600\ V}$ Compute T_t	hr	**0.022**	+	= **0.022**

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

Hours = **0.248**

Minutes = **14.9**

Project **Pond View** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe, CT** Checked **CJB** Date **01/09/23**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 2A (PDA-2A)**

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)

		Segment ID	AB			
1. Surface description (table 3-1)			Dense Grasses			
2. Manning's roughness coeff., n (table 3-1)			0.240			
3. Flow Length, L (total L ≤ 300 ft)		ft	100			
4. Two-yr 24-hr rainfall, P_2		in	3.56			
5. Land slope, s		ft/ft	0.02			
6. $T_t = \dfrac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.225	+		= 0.225

Shallow concentrated flow

		Segment ID	BC	CD	DE	
7. Surface description (paved or unpaved)			unpaved	unpaved	unpaved	
8. Flow length, L		ft	17	32	92	
9. Watercourse slope, s		ft/ft	0.12	0.06	0.34	
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	5.53	4.03	9.44	
11. $T_t = \dfrac{L}{3600\ V}$	Compute T_t	hr	0.001	+ 0.002	+ 0.003	= 0.006

Channel flow

		Segment ID			
12. Cross sectional flow area, a		ft^2			
13. Wetted perimeter, p_w		ft			
14. Hydraulic radius, r $r = \dfrac{a}{p_w}$	Compute r	ft			
15. Channel slope, s		ft/ft			
16. Manning's roughness coeff., n					
17. $V = \dfrac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s			
18. Flow length, L		ft			
19. $T_t = \dfrac{L}{3600\ V}$	Compute T_t	hr			= 0.000
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)				**Hours**	= 0.231
				Minutes	= 13.9

Project **Pond View** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe, CT** Checked **CJB** Date **01/09/23**

Bold One: Present **Developed**

Bold One: $\mathbf{T_c}$ T_t through subarea **Proposed Drainage Area 2B (PDA-2B)**

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)

	Unit	Segment 1	Segment 2	Total
Segment ID		AB		
1. Surface description (table 3-1)		Asphalt		
2. Manning's roughness coeff., n (table 3-1)		0.011		
3. Flow Length, L (total L ≤ 300 ft)	ft	100		
4. Two-yr 24-hr rainfall, P_2	in	3.56		
5. Land slope, s	ft/ft	0.08		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5}s^{0.4}}$ Compute T_t	hr	0.011	+	= 0.011

Shallow concentrated flow

	Unit	Segment 1	Segment 2	Segment 3	Total
Segment ID		BC			
7. Surface description (paved or unpaved)		paved			
8. Flow length, L	ft	145			
9. Watercourse slope, s	ft/ft	0.08			
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	5.79			
11. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.007	+	+	= 0.007

Channel flow

	Unit	Segment 1	Segment 2	Total
Segment ID		CD		
12. Cross sectional flow area, a	ft^2			
13. Wetted perimeter, p_w	ft			
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft			
15. Channel slope, s	ft/ft			
16. Manning's roughness coeff., n				
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s	5.00		
18. Flow length, L	ft	225		
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.013		= 0.013

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

Hours = 0.030

Minutes = 1.8

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 3A (PDA-3A)**

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)

		Segment 1	Segment 2	Total
Segment ID		**AB**		
1. Surface description (table 3-1)		**Woods**		
2. Manning's roughness coeff., n (table 3-1)		**0.400**		
3. Flow Length, L (total L $\leq$ 300 ft)	ft	**276.1**		
4. Two-yr 24-hr rainfall, P_2	in	**3.56**		
5. Land slope, s	ft/ft	**0.06**		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	**0.488** +		= **0.488**

Shallow concentrated flow

		Segment 1	Segment 2	Segment 3	Total
Segment ID		**BC**	**CD**		
7. Surface description (paved or unpaved)		**unpaved**	**unpaved**		
8. Flow length, L	ft	**49.5**	**160.5**		
9. Watercourse slope, s	ft/ft	**0.08**	**0.19**		
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	**4.59**	**6.98**		
11. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	**0.003** +	**0.006** +		= **0.009**

Channel flow

		Segment 1	Segment 2	Total
Segment ID				
12. Cross sectional flow area, a	ft^2			
13. Wetted perimeter, p_w	ft			
14. Hydraulic radius, r $\quad r = \frac{a}{p_w}$ Compute r	ft			
15. Channel slope, s	ft/ft			
16. Manning's roughness coeff., n				
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s			
18. Flow length, L	ft			
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr			= **0.000**

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

Hours = **0.497**

Minutes = **29.8**

Project	Pond View	By	CMH	Date	01/09/23
Location	127 Main Street, Monroe, CT	Checked	CJB	Date	01/09/23

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 3B (PDA-3B)**

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)

	Units	Segment 1	Segment 2	Total
Segment ID		AB		
1. Surface description (table 3-1)		Dense Grasses		
2. Manning's roughness coeff., n (table 3-1)		0.240		
3. Flow Length, L (total L $\leq$ 300 ft)	ft	100		
4. Two-yr 24-hr rainfall, P_2	in	3.56		
5. Land slope, s	ft/ft	0.02		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.225	+	= 0.225

Shallow concentrated flow

	Units	Segment 1	Segment 2	Segment 3	Total
Segment ID		BC			
7. Surface description (paved or unpaved)		unpaved			
8. Flow length, L	ft	37			
9. Watercourse slope, s	ft/ft	0.09			
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	4.84			
11. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.002	+	+	= 0.002

Channel flow

	Units	Segment 1	Segment 2	Total
Segment ID		CD		
12. Cross sectional flow area, a	ft^2			
13. Wetted perimeter, p_w	ft			
14. Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft			
15. Channel slope, s	ft/ft			
16. Manning's roughness coeff., n				
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s	5.00		
18. Flow length, L	ft	301		
19. $T_t = \frac{L}{3600\ V}$ Compute T_t	hr	0.017		= 0.017

20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19) **Hours** = 0.244

Minutes = 14.7

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 3B (PDA-3B)**

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)

		Segment ID	AB		BC		
1. Surface description (table 3-1)			Dense Grasses		Dense Grasses		
2. Manning's roughness coeff., n (table 3-1)			0.240		0.240		
3. Flow Length, L (total L ≤ 300 ft)		ft	45.5		35.5		
4. Two-yr 24-hr rainfall, P_2		in	3.56		3.56		
5. Land slope, s		ft/ft	0.11		0.03		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.061	+	0.086	=	0.147

Shallow concentrated flow

		Segment ID	CD						
7. Surface description (paved or unpaved)			unpaved						
8. Flow length, L		ft	140.4						
9. Watercourse slope, s		ft/ft	0.09						
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	4.70						
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	0.008	+		+		=	0.008

Channel flow

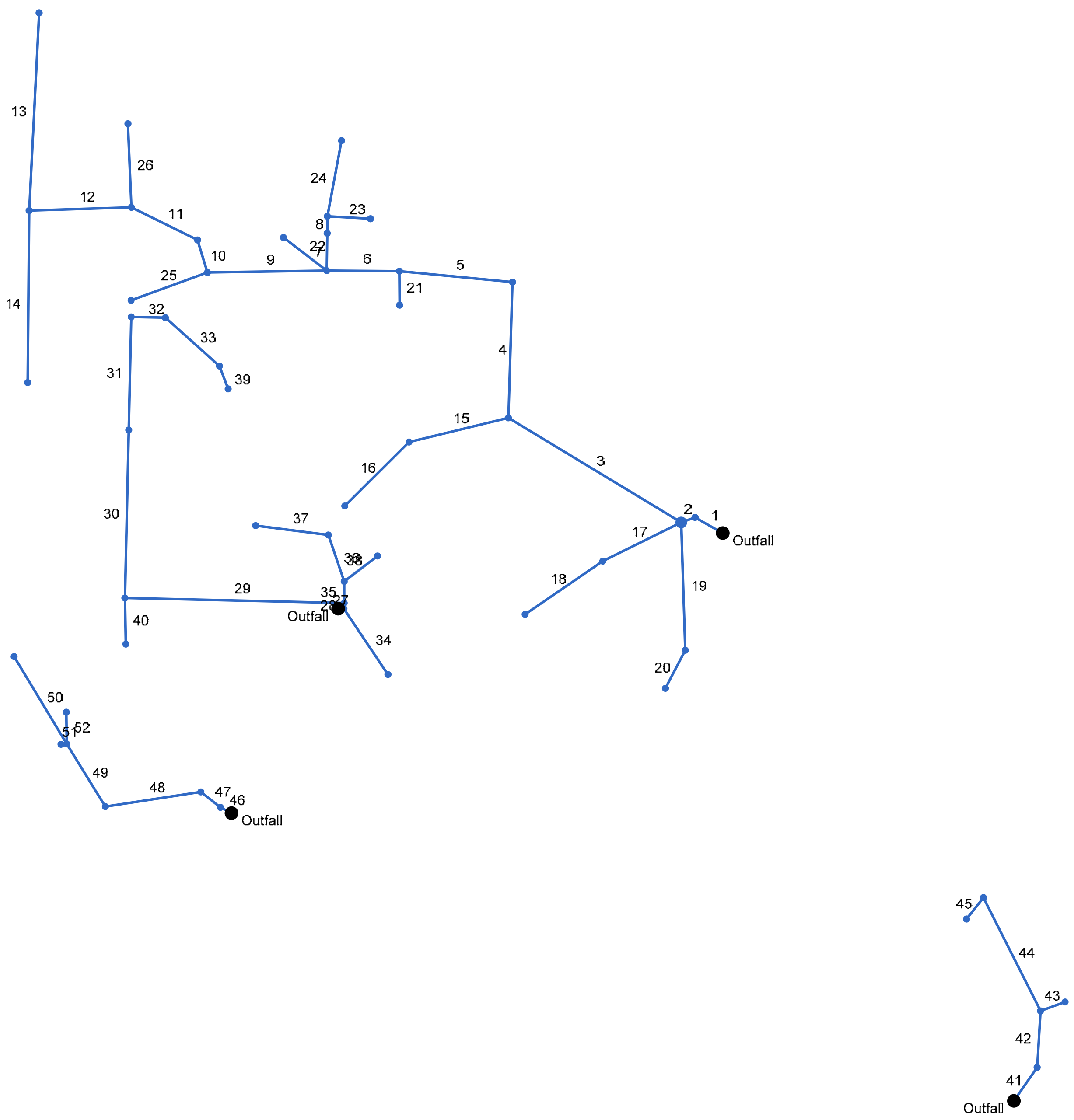
		Segment ID				
12. Cross sectional flow area, a		ft^2				
13. Wetted perimeter, p_w		ft				
14. Hydraulic radius, r	$r = \frac{a}{p_w}$ Compute r	ft				
15. Channel slope, s		ft/ft				
16. Manning's roughness coeff., n						
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s				
18. Flow length, L		ft				
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr			=	0.000
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)				**Hours**	=	0.155
				Minutes	=	9.3

Stormwater Calculations (100-year storm event)

Existing & Proposed Storm Sewer System – Schematic, DOT Reporting, Profiles

Runoff Coefficient & ToC Calculations – Existing & Proposed Conditions

Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



Project File: Storm Sewers.stm	Number of lines: 52	Date: 1/9/2023

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
1	Out-1A	24.97	36	Cir	28.000	352.00	355.60	12.857	357.26	357.21	n/a	357.21	End	Manhole
2	1A-1B	25.02	36	Cir	13.000	355.60	356.00	3.077	357.21	357.61	n/a	357.61	1	Combination
3	1B-1C	21.15	30	Cir	178.000	356.00	358.67	1.500	357.61	360.23	n/a	360.23 j	2	Grate
4	1C-1D	18.56	24	Cir	120.000	359.00	360.80	1.500	360.23	362.35	n/a	362.35	3	Grate
5	1D-1E	15.88	24	Cir	100.000	360.85	362.85	2.000	362.35	364.29	n/a	364.29 j	4	Grate
6	1E-1F	14.21	24	Cir	64.000	363.00	363.64	1.000	364.29	365.00	n/a	365.00	5	Manhole
7	1F-1G	7.33	18	Cir	33.000	363.75	364.75	3.030	365.00	365.80	n/a	365.80 j	6	Combination
8	1G-1H	5.81	12	Cir	15.000	365.00	365.15	1.000	366.00*	366.34*	1.37	367.71	7	Combination
9	1F-1I	9.77	18	Cir	105.000	363.75	364.80	1.000	365.00	366.00	n/a	366.00 j	6	Manhole
10	1I-1J	8.26	18	Cir	30.000	365.00	365.30	1.000	366.00	366.41	n/a	366.41	9	Combination
11	1J-1K	7.70	18	Cir	65.000	365.50	365.83	0.508	366.67	367.00	0.57	367.57	10	Grate
12	1K-1L	4.12	18	Cir	90.000	366.00	366.45	0.500	367.57	367.66	0.11	367.77	11	Manhole
13	1L-1M	3.14	12	Cir	175.000	366.50	367.40	0.514	367.77*	368.93*	0.25	369.18	12	Grate
14	1L-1N	1.40	12	Cir	152.000	366.50	367.26	0.500	367.77	367.97	0.08	368.06	12	Grate
15	1C-1O	4.29	12	Cir	90.000	359.00	362.60	4.000	360.23	363.47	n/a	363.47 j	3	Grate
16	1O-1P	2.14	12	Cir	80.000	362.75	363.15	0.500	363.47	363.80	0.24	364.04	15	Grate
17	1B-1Q	0.72	12	Cir	77.000	357.50	361.00	4.545	357.70	361.36	0.07	361.36	2	Grate
18	1Q-1R	0.49	6	Cir	83.000	361.00	362.00	1.205	361.36	362.36	0.17	362.36	17	Grate
19	1B-1S	4.26	18	Cir	113.000	357.09	357.65	0.496	357.87	358.44	0.26	358.44	2	Combination
20	1S-1T	3.14	12	Cir	38.000	357.80	358.00	0.526	358.80	359.00	0.25	359.25	19	Combination
21	1E-R	2.65	6	Cir	30.000	363.00	363.15	0.500	364.29*	370.01*	2.84	372.84	5	Grate
22	1F-R	0.57	4	Cir	48.000	364.00	364.24	0.500	365.00*	368.65*	0.66	369.31	6	Grate
23	1H-R1	0.57	4	Cir	38.000	365.25	365.44	0.500	367.71*	370.60*	0.66	371.26	8	Grate
24	1H-R2	2.65	6	Cir	68.000	365.25	365.59	0.500	367.71*	380.68*	2.84	383.52	8	Grate

Project File: Storm Sewers.stm	Number of lines: 52	Run Date: 1/9/2023

NOTES: Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
25	1I-R	2.65	6	Cir	71.500	365.00	365.36	0.503	366.00*	379.64*	2.84	382.48	9	Grate
26	1K-R	2.65	6	Cir	74.000	366.00	366.37	0.500	367.57*	381.68*	2.84	384.52	11	Grate
27	Out-1U	12.04	30	Cir	5.000	361.00	361.05	1.000	361.89	362.21	n/a	362.21	End	Manhole
28	1U-1V	9.96	30	Cir	5.000	361.05	361.10	1.000	362.21	362.15	0.76	362.15	27	Combination
29	1V-1W	6.52	24	Cir	193.000	361.10	362.10	0.518	362.15	363.00	n/a	363.00 j	28	Combination
30	1W-1X	4.85	18	Cir	148.500	362.15	363.65	1.010	363.00	364.50	n/a	364.50 j	29	Combination
31	1X-1Y	3.91	18	Cir	100.000	363.75	364.25	0.500	364.50	365.01	n/a	365.01	30	Combination
32	1Y-1Z	2.51	12	Cir	30.000	364.25	364.40	0.500	365.01	365.16	0.25	365.41	31	Grate
33	1Z-1AA	2.99	12	Cir	64.000	364.40	364.75	0.547	365.41	365.74	0.17	365.92	32	Grate
34	1U-1BB	3.60	12	Cir	70.000	361.05	362.50	2.071	362.21	363.31	n/a	363.31 j	27	Combination
35	1V-1CC	2.87	18	Cir	19.000	361.10	361.20	0.526	362.15	361.84	n/a	361.84	28	Grate
36	1CC-1DD	1.19	12	Cir	43.400	361.50	361.75	0.576	361.94	362.21	n/a	362.21	35	Grate
37	1DD-1EE	0.50	12	Cir	64.500	362.00	362.33	0.512	362.29	362.62	0.11	362.62	36	Grate
38	1CC-R	1.71	6	Cir	37.000	361.20	361.39	0.514	361.84*	364.76*	1.17	365.93	35	Grate
39	1BB-R	2.65	6	Cir	21.500	364.75	364.86	0.512	365.92*	370.02*	2.84	372.86	33	Grate
40	1W-R	0.66	4	Cir	40.750	362.15	362.35	0.491	363.00*	367.23*	0.90	368.13	29	Grate
41	Out-2A	3.84	18	Cir	36.000	332.20	333.50	3.611	335.16*	335.20*	0.04	335.24	End	Manhole
42	2A-2B	3.93	18	Cir	50.000	333.50	333.75	0.500	335.24*	335.30*	0.14	335.45	41	Combination
43	2B-2C	0.95	12	Cir	23.000	334.00	334.12	0.522	335.45*	335.46*	0.02	335.48	42	Combination
44	2B-2D	2.02	12	Cir	112.000	333.86	336.10	2.000	335.45	336.71	n/a	336.71 j	42	Combination
45	2D-2E	1.20	12	Cir	24.000	336.10	336.25	0.625	336.71	336.71	n/a	336.71 j	44	Combination
46	Out-3A	8.09	24	Cir	11.000	365.00	365.50	4.545	365.96	366.51	0.09	366.51	End	Manhole
47	3A-3B	8.16	24	Cir	22.000	365.50	365.61	0.500	366.51	366.63	n/a	366.63	46	Combination
48	3B-3C	7.33	18	Cir	85.000	365.75	366.18	0.506	366.87	367.30	0.59	367.88	47	Combination

Project File: Storm Sewers.stm | Number of lines: 52 | Run Date: 1/9/2023

NOTES: Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Summary Report

Line No.	Line ID	Flow rate (cfs)	Line Size (in)	Line shape	Line length (ft)	Invert EL Dn (ft)	Invert EL Up (ft)	Line Slope (%)	HGL Down (ft)	HGL Up (ft)	Minor loss (ft)	HGL Junct (ft)	Dns Line No.	Junction Type
49	3C-3D	5.06	18	Cir	65.000	366.25	366.58	0.508	367.88	368.00	0.12	368.12	48	Manhole
50	3D-3E	2.30	12	Cir	90.000	366.75	367.20	0.500	368.12*	368.44*	0.13	368.57	49	Grate
51	3D-R1	0.28	4	Cir	5.000	366.75	366.78	0.600	368.12*	368.21*	0.16	368.38	49	Grate
52	3D-R2	2.65	6	Cir	28.000	366.75	366.89	0.500	368.12*	373.46*	2.84	376.30	49	Grate

Project File: Storm Sewers.stm	Number of lines: 52	Run Date: 1/9/2023

NOTES: Return period = 100 Yrs. ; *Surcharged (HGL above crown). ; j - Line contains hyd. jump.

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
1	End	28.000	0.00	6.61	0.00	0.00	4.62	0.0	19.7	5.4	24.97	259.1	5.00	36	12.86	352.00	355.60	357.26	357.21	0.00	360.00	Out-1A
2	1	13.000	0.33	6.61	0.88	0.29	4.62	6.0	19.6	5.4	25.02	126.7	6.47	36	3.08	355.60	356.00	357.21	357.61	360.00	362.90	1A-1B
3	2	178.000	0.12	5.67	0.50	0.06	3.83	6.0	18.9	5.5	21.15	54.41	6.44	30	1.50	356.00	358.67	357.61	360.23	362.90	366.70	1B-1C
4	3	120.000	0.58	4.88	0.88	0.51	3.32	6.0	18.5	5.6	18.56	30.01	8.12	24	1.50	359.00	360.80	360.23	362.35	366.70	368.70	1C-1D
5	4	100.000	0.05	4.30	0.95	0.05	2.81	6.0	18.2	5.6	15.88	34.65	6.43	24	2.00	360.85	362.85	362.35	364.29	368.70	370.90	1D-1E
6	5	64.000	0.00	3.97	0.00	0.00	2.50	0.0	18.0	5.7	14.21	24.50	6.46	24	1.00	363.00	363.64	364.29	365.00	370.90	371.10	1E-1F
7	6	33.000	0.19	0.84	0.82	0.16	0.74	6.0	6.1	9.9	7.33	19.80	5.12	18	3.03	363.75	364.75	365.00	365.80	371.10	370.00	1F-1G
8	7	15.000	0.31	0.65	0.85	0.26	0.59	6.0	6.1	9.9	5.81	3.86	7.40	12	1.00	365.00	365.15	366.00	366.34	370.00	370.60	1G-1H
9	6	105.000	0.00	3.07	0.00	0.00	1.70	0.0	17.6	5.8	9.77	11.38	6.32	18	1.00	363.75	364.80	365.00	366.00	371.10	371.75	1F-1I
10	9	30.000	0.12	2.79	0.90	0.11	1.43	6.0	17.5	5.8	8.26	11.38	6.22	18	1.00	365.00	365.30	366.00	366.41	371.75	371.20	1I-1J
11	10	65.000	0.41	2.67	0.89	0.36	1.32	6.0	17.3	5.8	7.70	8.11	5.22	18	0.51	365.50	365.83	366.67	367.00	371.20	370.80	1J-1K
12	11	90.000	0.00	1.98	0.00	0.00	0.69	0.0	16.6	5.9	4.12	8.04	2.52	18	0.50	366.00	366.45	367.57	367.66	370.80	374.00	1K-1L
13	12	175.000	1.47	1.47	0.35	0.51	0.51	15.9	15.9	6.1	3.14	2.77	4.00	12	0.51	366.50	367.40	367.77	368.93	374.00	369.50	1L-1M
14	12	152.000	0.51	0.51	0.35	0.18	0.18	10.0	10.0	7.8	1.40	2.73	2.06	12	0.50	366.50	367.26	367.77	367.97	374.00	371.50	1L-1N
15	3	90.000	0.35	0.67	0.66	0.23	0.45	6.0	6.5	9.6	4.29	7.72	5.69	12	4.00	359.00	362.60	360.23	363.47	366.70	365.10	1C-1O
16	15	80.000	0.32	0.32	0.67	0.21	0.21	6.0	6.0	10.0	2.14	2.73	3.75	12	0.50	362.75	363.15	363.47	363.80	365.10	365.40	1O-1P
17	2	77.000	0.04	0.13	0.65	0.03	0.08	6.0	6.6	9.6	0.72	8.23	4.67	12	4.55	357.50	361.00	357.70	361.36	362.90	364.00	1B-1Q
18	17	83.000	0.09	0.09	0.55	0.05	0.05	6.0	6.0	10.0	0.49	0.67	3.30	6	1.20	361.00	362.00	361.36	362.36	364.00	364.00	1Q-1R
19	2	113.000	0.13	0.48	0.90	0.12	0.43	6.0	6.2	9.9	4.26	8.01	4.56	18	0.50	357.09	357.65	357.87	358.44	362.90	361.70	1B-1S
20	19	38.000	0.35	0.35	0.90	0.32	0.32	6.0	6.0	10.0	3.14	2.80	4.00	12	0.53	357.80	358.00	358.80	359.00	361.70	361.00	1S-1T
21	5	30.000	0.28	0.28	0.95	0.27	0.27	6.0	6.0	10.0	2.65	0.43	13.51	6	0.50	363.00	363.15	364.29	370.01	370.90	372.00	1E-R
22	6	48.000	0.06	0.06	0.95	0.06	0.06	6.0	6.0	10.0	0.57	0.15	6.51	4	0.50	364.00	364.24	365.00	368.65	371.10	372.00	1F-R

Project File: Storm Sewers.stm | Number of lines: 52 | Run Date: 1/9/2023

NOTES:Intensity = 48.72 / (Inlet time + 3.70) ^ 0.70; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Tabulation

Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
23	8	38.000	0.06	0.06	0.95	0.06	0.06	6.0	6.0	10.0	0.57	0.15	6.51	4	0.50	365.25	365.44	367.71	370.60	370.60	371.60	1H-R1
24	8	68.000	0.28	0.28	0.95	0.27	0.27	6.0	6.0	10.0	2.65	0.43	13.51	6	0.50	365.25	365.59	367.71	380.68	370.60	373.00	1H-R2
25	9	71.500	0.28	0.28	0.95	0.27	0.27	6.0	6.0	10.0	2.65	0.43	13.51	6	0.50	365.00	365.36	366.00	379.64	371.75	373.50	1I-R
26	11	74.000	0.28	0.28	0.95	0.27	0.27	6.0	6.0	10.0	2.65	0.43	13.51	6	0.50	366.00	366.37	367.57	381.68	370.80	373.00	1K-R
27	End	5.000	0.00	2.61	0.00	0.00	2.07	0.0	17.3	5.8	12.04	44.42	6.53	30	1.00	361.00	361.05	361.89	362.21	0.00	366.20	Out-1U
28	27	5.000	0.36	2.19	0.88	0.32	1.71	6.0	17.2	5.8	9.96	44.44	4.76	30	1.00	361.05	361.10	362.21	362.15	366.20	365.80	1U-1V
29	28	193.000	0.27	1.35	0.86	0.23	1.06	6.0	15.7	6.1	6.52	17.64	4.31	24	0.52	361.10	362.10	362.15	363.00	365.80	369.50	1V-1W
30	29	148.500	0.23	1.01	0.72	0.17	0.76	6.0	14.8	6.4	4.85	11.43	4.69	18	1.01	362.15	363.65	363.00	364.50	369.50	370.00	1W-1X
31	30	100.000	0.24	0.78	0.90	0.22	0.60	6.0	14.1	6.5	3.91	8.04	4.42	18	0.50	363.75	364.25	364.50	365.01	370.00	369.90	1X-1Y
32	31	30.000	0.18	0.54	0.45	0.08	0.38	13.9	13.9	6.6	2.51	2.73	3.94	12	0.50	364.25	364.40	365.01	365.16	369.90	370.00	1Y-1Z
33	32	64.000	0.08	0.36	0.43	0.03	0.30	6.0	6.0	10.0	2.99	2.85	3.81	12	0.55	364.40	364.75	365.41	365.74	370.00	368.00	1Z-1AA
34	27	70.000	0.42	0.42	0.86	0.36	0.36	6.0	6.0	10.0	3.60	5.55	4.94	12	2.07	361.05	362.50	362.21	363.31	366.20	365.50	1U-1BB
35	28	19.000	0.04	0.48	0.65	0.03	0.33	6.0	8.1	8.7	2.87	8.25	3.06	18	0.53	361.10	361.20	362.15	361.84	365.80	365.75	1V-1CC
36	35	43.400	0.15	0.26	0.55	0.08	0.13	6.0	7.7	8.9	1.19	2.93	3.45	12	0.58	361.50	361.75	361.94	362.21	365.75	365.00	1CC-1DD
37	36	64.500	0.11	0.11	0.46	0.05	0.05	6.0	6.0	10.0	0.50	2.76	2.64	12	0.51	362.00	362.33	362.29	362.62	365.00	365.80	1DD-1EE
38	35	37.000	0.18	0.18	0.95	0.17	0.17	6.0	6.0	10.0	1.71	0.44	8.69	6	0.51	361.20	361.39	361.84	364.76	365.75	365.50	1CC-R
39	33	21.500	0.28	0.28	0.95	0.27	0.27	6.0	6.0	10.0	2.65	0.43	13.51	6	0.51	364.75	364.86	365.92	370.02	368.00	371.00	1BB-R
40	29	40.750	0.07	0.07	0.95	0.07	0.07	6.0	6.0	10.0	0.66	0.14	7.60	4	0.49	362.15	362.35	363.00	367.23	369.50	370.00	1W-R
41	End	36.000	0.00	0.47	0.00	0.00	0.42	0.0	7.4	9.1	3.84	21.62	2.17	18	3.61	332.20	333.50	335.16	335.20	0.00	337.50	Out-2A
42	41	50.000	0.14	0.47	0.86	0.12	0.42	6.0	7.0	9.3	3.93	8.04	2.22	18	0.50	333.50	333.75	335.24	335.30	337.50	336.80	2A-2B
43	42	23.000	0.10	0.10	0.95	0.10	0.10	6.0	6.0	10.0	0.95	2.79	1.21	12	0.52	334.00	334.12	335.45	335.46	336.80	337.40	2B-2C
44	42	112.000	0.09	0.23	0.95	0.09	0.21	6.0	6.3	9.8	2.02	5.46	3.31	12	2.00	333.86	336.10	335.45	336.71	336.80	341.10	2B-2D

Project File: Storm Sewers.stm | Number of lines: 52 | Run Date: 1/9/2023

NOTES:Intensity = 48.72 / (Inlet time + 3.70) ^ 0.70; Return period =Yrs. 100 ; c = cir e = ellip b = box

Storm Sewer Tabulation

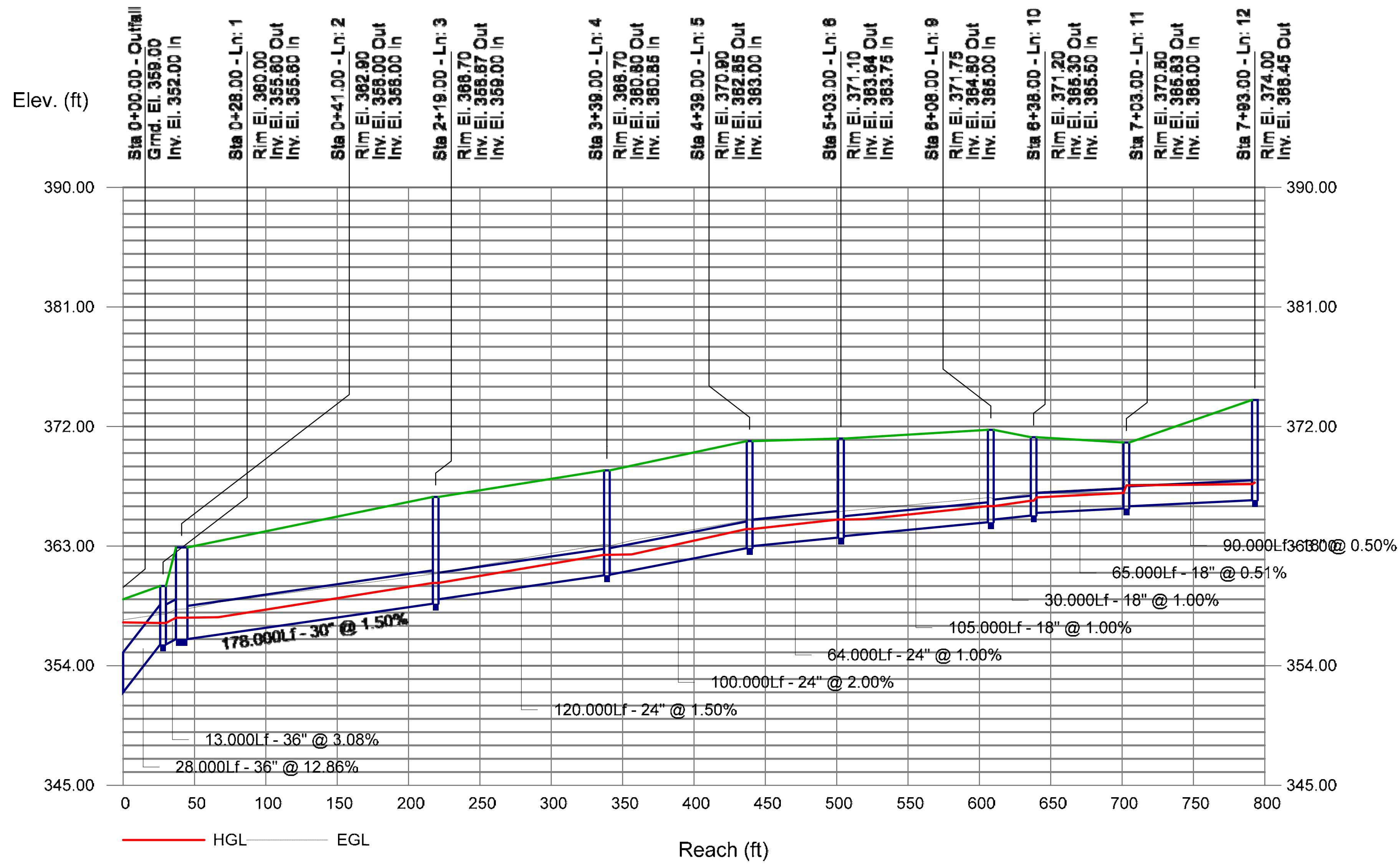
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line		Incr	Total		Incr	Total	Inlet	Syst					Size	Slope	Dn	Up	Dn	Up	Dn	Up	
		(ft)	(ac)	(ac)	(C)			(min)	(min)	(in/hr)	(cfs)	(cfs)	(ft/s)	(in)	(%)	(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	
45	44	24.000	0.14	0.14	0.86	0.12	0.12	6.0	6.0	10.0	1.20	3.05	2.90	12	0.62	336.10	336.25	336.71	336.71	341.10	341.00	2D-2E
46	End	11.000	0.00	1.41	0.00	0.00	0.89	0.0	7.4	9.1	8.09	52.24	5.25	24	4.55	365.00	365.50	365.96	366.51	0.00	370.00	Out-3A
47	46	22.000	0.12	1.41	0.90	0.11	0.89	6.0	7.2	9.2	8.16	17.32	5.10	24	0.50	365.50	365.61	366.51	366.63	370.00	370.25	3A-3B
48	47	85.000	0.32	1.29	0.80	0.26	0.78	6.0	6.9	9.4	7.33	8.09	5.19	18	0.51	365.75	366.18	366.87	367.30	370.25	370.50	3B-3C
49	48	65.000	0.00	0.97	0.00	0.00	0.53	0.0	6.5	9.6	5.06	8.11	2.89	18	0.51	366.25	366.58	367.88	368.00	370.50	371.50	3C-3D
50	49	90.000	0.66	0.66	0.35	0.23	0.23	6.0	6.0	10.0	2.30	2.73	2.93	12	0.50	366.75	367.20	368.12	368.44	371.50	370.00	3D-3E
51	49	5.000	0.03	0.03	0.95	0.03	0.03	6.0	6.0	10.0	0.28	0.16	3.26	4	0.60	366.75	366.78	368.12	368.21	371.50	371.50	3D-R1
52	49	28.000	0.28	0.28	0.95	0.27	0.27	6.0	6.0	10.0	2.65	0.43	13.51	6	0.50	366.75	366.89	368.12	373.46	371.50	372.00	3D-R2

Project File: Storm Sewers.stm | Number of lines: 52 | Run Date: 1/9/2023

NOTES:Intensity = 48.72 / (Inlet time + 3.70) ^ 0.70; Return period =Yrs. 100 ; c = cir e = ellip b = box

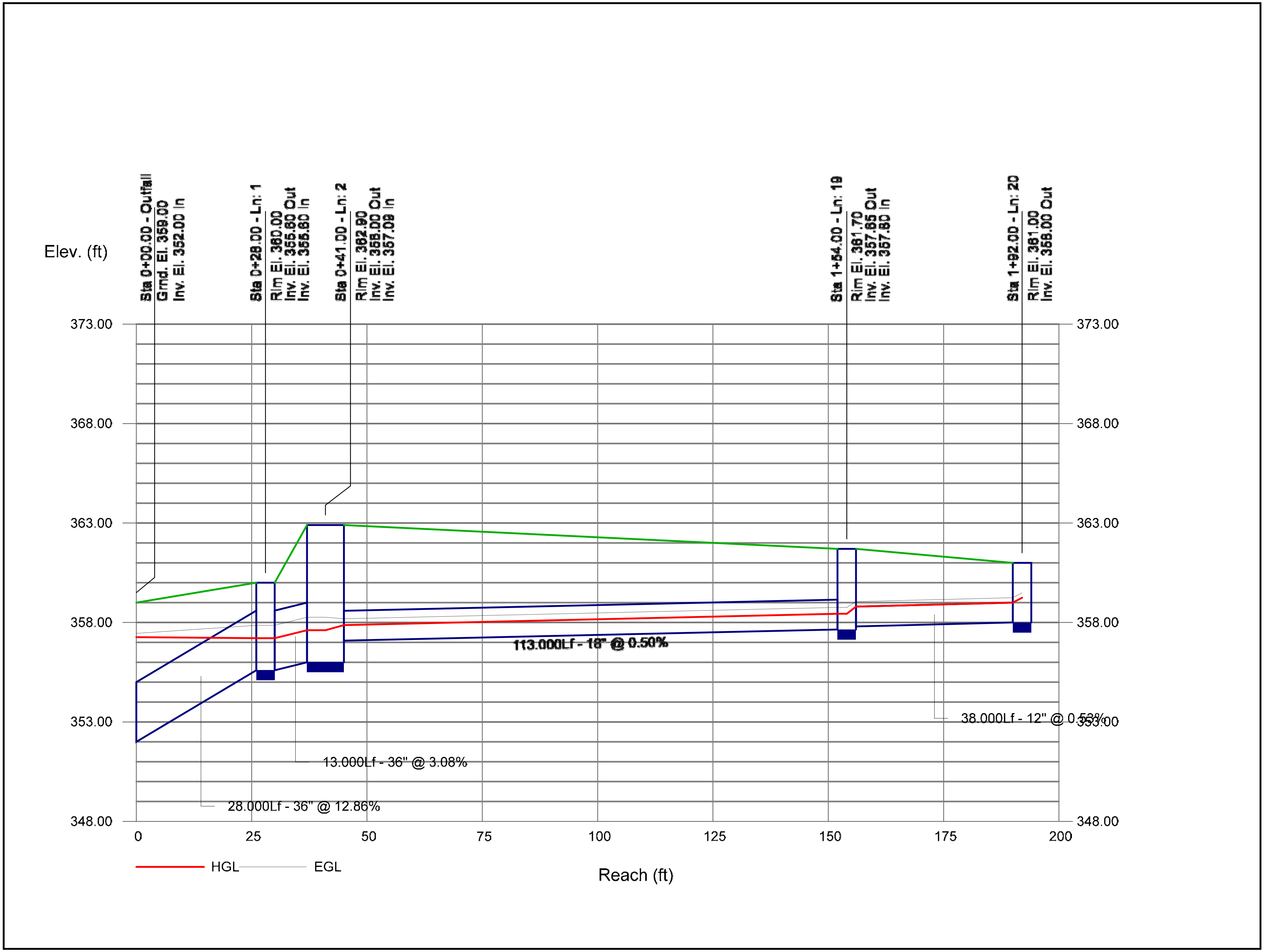
Storm Sewer Profile

Proj. file: Storm Sewers.stm



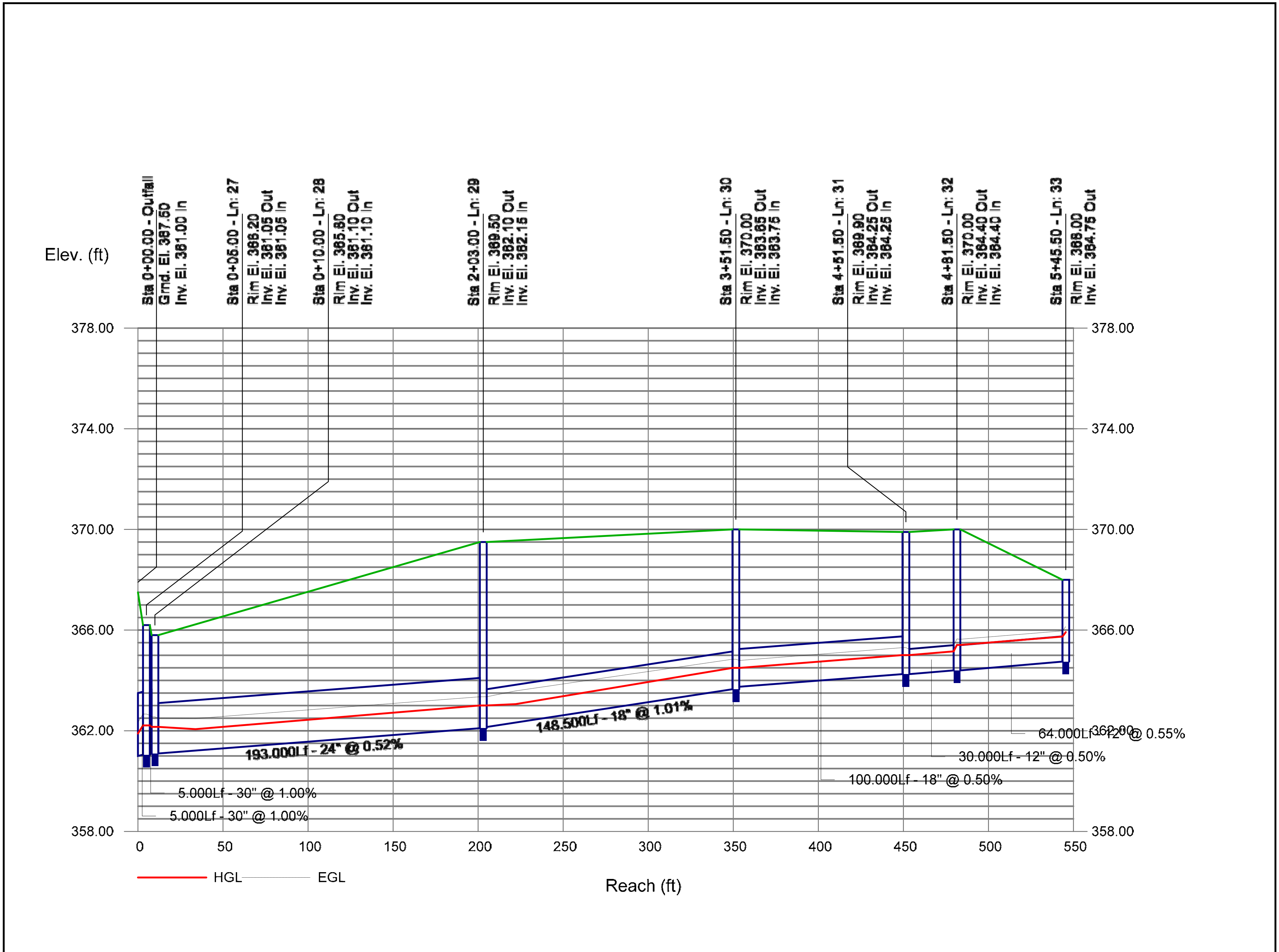
Storm Sewer Profile

Proj. file: Storm Sewers.stm



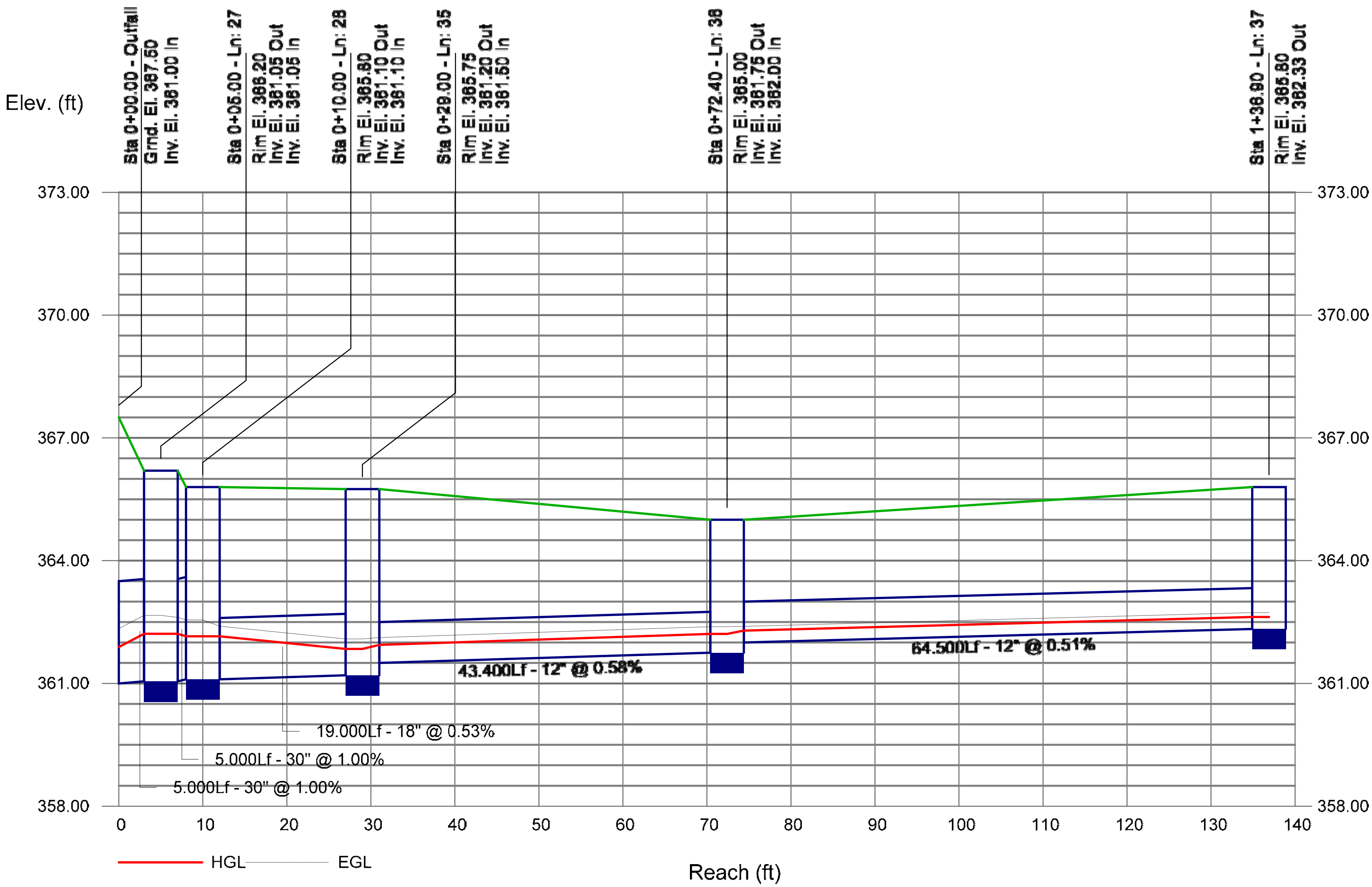
Storm Sewer Profile

Proj. file: Storm Sewers.stm



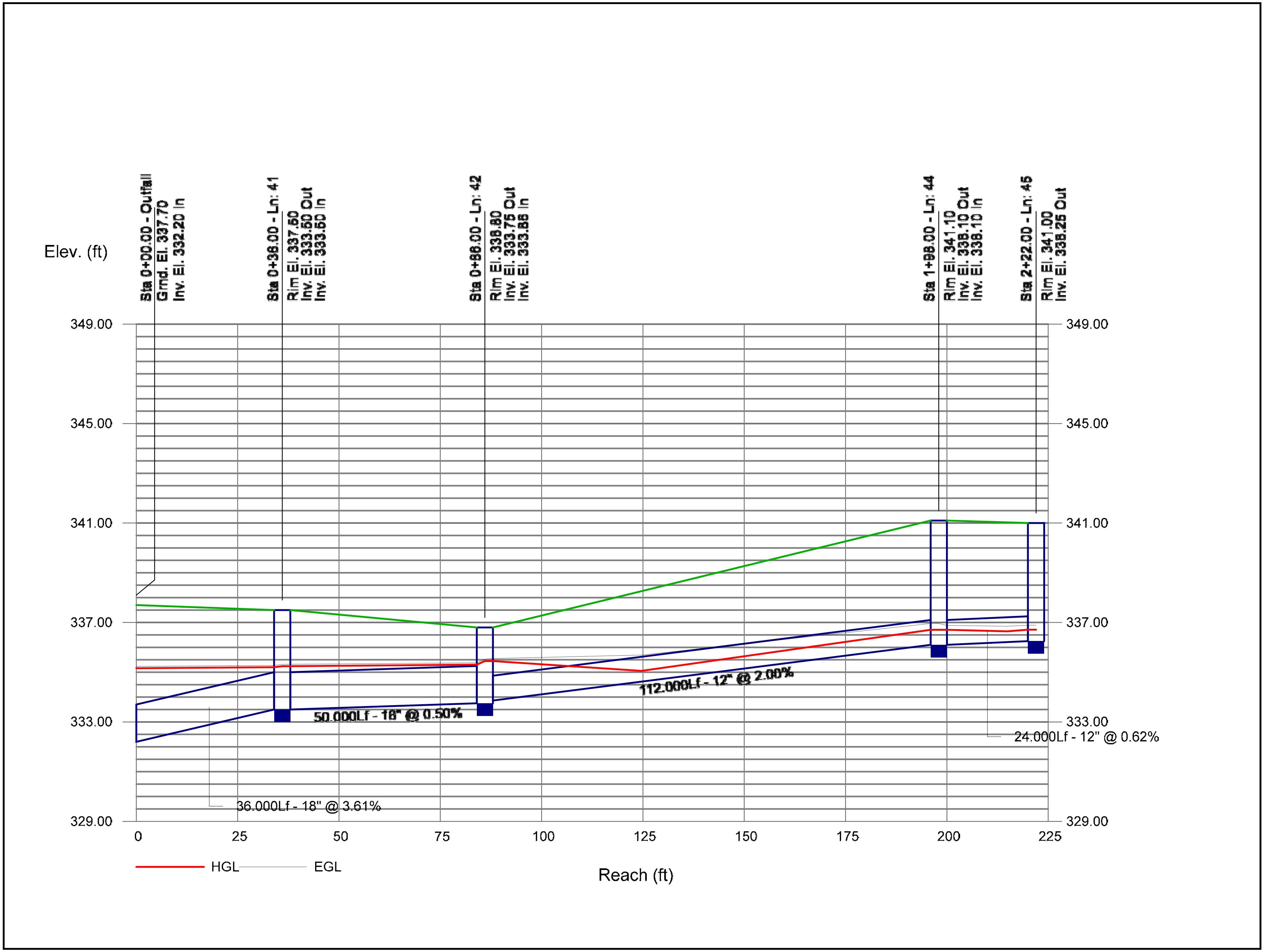
Storm Sewer Profile

Proj. file: Storm Sewers.stm



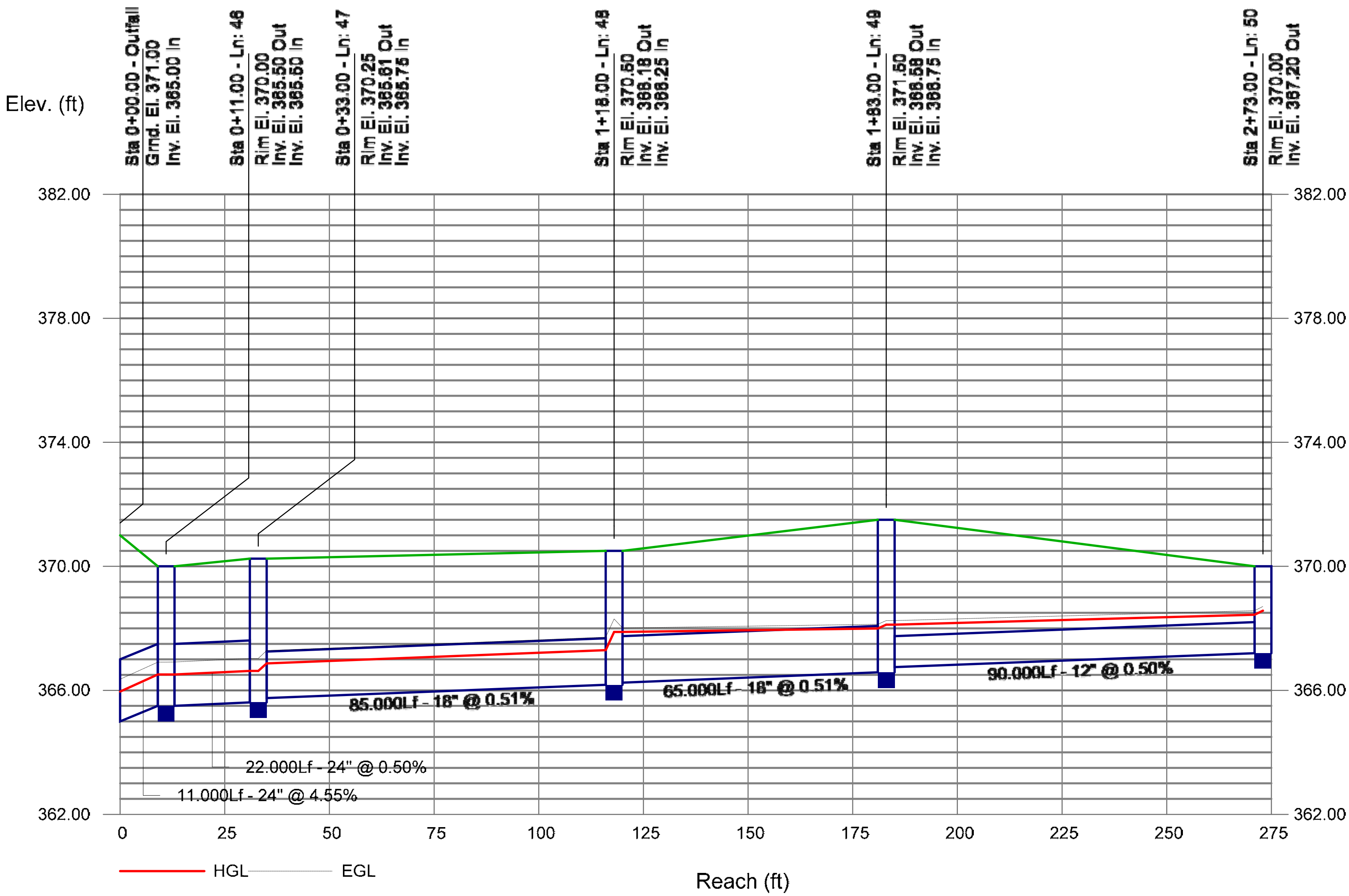
Storm Sewer Profile

Proj. file: Storm Sewers.stm



Storm Sewer Profile

Proj. file: Storm Sewers.stm



Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1A**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.29	0.28
	Landscaped Area	0.35			0.04	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.33	0.29

1 Use only one C source per line

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.29}{0.33} = 0.88$$

Use C = 0.88

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1B**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.03	0.03
	Landscaped Area	0.35			0.09	0.03
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.12	0.06

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.06}{0.12}$ = 0.50 Use C = 0.50

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1C**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.51	0.48
	Landscaped Area	0.35			0.07	0.02
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.58	0.51

1 Use only one C source per line

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.51}{0.58} = 0.88$$

Use C = **0.88**

Project	**Proposed Development**		By **CMH**	Date **01/09/23**		
Location	**127 Main Street, Monroe CT**		Checked **CJB**	Date **01/09/23**		
Bold one:	Present Developed		**Subcatchment Area CBDA-1D**			

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area ☒ acres ☐ mi^2 ☐ %	Product of C x area
	Impervious Area	0.95			0.05	0.05
	Landscaped Area	0.35			0.00	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.05	0.05

1 Use only one C source per line

$$C \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{0.05}{0.05} = 0.95$$

Use C = 0.95

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1E**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.15	0.14
	Landscaped Area	0.35			0.04	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.19	0.16

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.16}{0.19}$ = 0.82 Use C = **0.82**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1F**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.26	0.25
	Landscaped Area	0.35			0.05	0.02
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.31	0.26

1 Use only one C source per line

$$C \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{0.26}{0.31} = 0.85$$

Use C = **0.85**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1G**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.11	0.10
	Landscaped Area	0.35			0.01	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.12	0.11

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.11}{0.12}$ = 0.90 Use C = **0.90**

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1H**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.37	0.35
	Landscaped Area	0.35			0.04	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.41	0.37

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.37}{0.41}$ = 0.89 Use C = $\boxed{0.89}$

Project	**Proposed Development**	By **CMH**	Date **01/09/23**		
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**		
Bold one:	Present Developed	**Subcatchment Area CBDA-1I**			

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.00	0.00
	Landscaped Area	0.35			1.47	0.51
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	1.47	0.51

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.51}{1.47}$ = 0.35 Use C = 0.35

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1J**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.00	0.00
	Landscaped Area	0.35			0.51	0.18
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.51	0.18

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.18}{0.51}$ = 0.35 Use C = $\boxed{0.35}$

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1K**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.18	0.17
	Landscaped Area	0.35			0.17	0.06
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.35	0.23

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.23}{0.35}$ = 0.66 Use C = 0.66

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1L**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.17	0.16
	Landscaped Area	0.35			0.15	0.05
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.32	0.21

1 Use only one C source per line

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.21}{0.32} = 0.67$$

Use C = **0.67**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1M**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.02	0.02
	Landscaped Area	0.35			0.02	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.04	0.03

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.03}{0.04}$ = 0.65 Use C = **0.65**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1N**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.03	0.03
	Landscaped Area	0.35			0.06	0.02
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.09	0.05

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.05}{0.09}$ = 0.55 Use C = **0.55**

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1O**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.12	0.11
	Landscaped Area	0.35			0.01	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.13	0.12

1 Use only one C source per line

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.12}{0.13} = 0.90$$

Use C = 0.90

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1P**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.32	0.30
	Landscaped Area	0.35			0.03	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.35	0.31

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.31}{0.35}$ = 0.90 Use C = 0.90

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1Q**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.32	0.30
	Landscaped Area	0.35			0.04	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.36	0.32

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.32}{0.36}$ = 0.88 Use C = **0.88**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1R**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.23	0.22
	Landscaped Area	0.35			0.04	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.27	0.23

1 Use only one C source per line

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.23}{0.27} = 0.86$$

Use C = **0.86**

Project	**Proposed Development**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe CT**	Checked	**CJB**	Date	**01/09/23**
Bold one:	Present Developed		**Subcatchment Area CBDA-1S**		

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.14	0.13
	Landscaped Area	0.35			0.09	0.03
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.23	0.16

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.16}{0.23}$ = 0.72 Use C = **0.72**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1T**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.22	0.21
	Landscaped Area	0.35			0.02	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.24	0.22

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.22}{0.24}$ = 0.90 Use C = **0.90**

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1U**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.03	0.03
	Landscaped Area	0.35			0.15	0.05
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.18	0.08

1 Use only one C source per line

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.08}{0.18} = 0.45$$

Use C = 0.45

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1V**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.01	0.01
	Landscaped Area	0.35			0.07	0.02
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
					Totals = 0.08	0.03

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.03}{0.08}$ = 0.43 Use C = **0.43**

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-1W**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.36	0.34
	Landscaped Area	0.35			0.06	0.02
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.42	0.36

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.36}{0.42}$ = 0.86 Use C = 0.86

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1X**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.02	0.02
	Landscaped Area	0.35			0.02	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.04	0.03

1 Use only one C source per line

$$C \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{0.03}{0.04} = 0.65$$

Use C = 0.65

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1Y**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.05	0.05
	Landscaped Area	0.35			0.10	0.04
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.15	0.08

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.08}{0.15}$ = 0.55 Use C = **0.55**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-1Z**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.02	0.02
	Landscaped Area	0.35			0.09	0.03
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.11	0.05

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.05}{0.11}$ = 0.46 Use C = **0.46**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-2A**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.12	0.11
	Landscaped Area	0.35			0.02	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.14	0.12

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.12}{0.14}$ = 0.86 Use C = 0.86

Project	Proposed Development	By	CMH	Date	01/09/23
Location	127 Main Street, Monroe CT	Checked	CJB	Date	01/09/23
Bold one:	Present Developed		Subcatchment Area CBDA-2B		

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.10	0.10
	Landscaped Area	0.35			0.00	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.10	0.10

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}}$ = $\frac{0.10}{0.10}$ = 0.95 Use C = 0.95

Project	**Proposed Development**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe CT**	Checked **CJB**	Date **01/09/23**
Bold one:	Present Developed	**Subcatchment Area CBDA-2C**	

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.09	0.09
	Landscaped Area	0.35			0.00	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.09	0.09

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.09}{0.09}$ = 0.95 Use C = 0.95

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-2D**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi² [ ] %	Product of C x area
	Impervious Area	0.95			0.12	0.11
	Landscaped Area	0.35			0.02	0.01
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.14	0.12

1 Use only one C source per line

$$C \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{0.12}{0.14} = 0.86$$

Use C = 0.86

Project	**Proposed Development**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe CT**	Checked	**CJB**	Date	**01/09/23**
Bold one:	Present Developed		**Subcatchment Area CBDA-3A**		

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.11	0.10
	Landscaped Area	0.35			0.01	0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.12	0.11

1 Use only one C source per line

$$C\text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{0.11}{0.12} = 0.90$$

Use C = 0.90

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-3B**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.24	0.23
	Landscaped Area	0.35			0.08	0.03
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.32	0.26

1 Use only one C source per line

$$C \text{ (weighted)} = \frac{\text{total product}}{\text{total area}} = \frac{0.26}{0.32} = 0.80$$

Use C = **0.80**

Project **Proposed Development** By **CMH** Date **01/09/23**

Location **127 Main Street, Monroe CT** Checked **CJB** Date **01/09/23**

Bold one: Present Developed **Subcatchment Area CBDA-3C**

1. Runoff Coefficient ©

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	0.95			0.00	0.00
	Landscaped Area	0.35			0.66	0.23
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
				Totals =	0.66	0.23

1 Use only one C source per line

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{0.23}{0.66}$ = 0.35 Use C = 0.35

Project	**Pond View**	By **CMH**	Date **01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked **CJB**	Date **01/09/23**

Bold One: Present **Developed**

Bold One: $\mathbf{T_c}$ T_t through subarea **Subcatchment Area 1H (PDA-1H)**

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)

		Unit	Segment 1	Segment 2	Total
	Segment ID		**AB**		
1.	Surface description (table 3-1)		**Dense Grasses**		
2.	Manning's roughness coeff., n (table 3-1)		**0.240**		
3.	Flow Length, L (total L ≤ 300 ft)	ft	**100**		
4.	Two-yr 24-hr rainfall, P_2	in	**3.56**		
5.	Land slope, s	ft/ft	**0.02**		
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	**0.253**	+	= **0.253**

Shallow concentrated flow

		Unit	Segment 1	Segment 2	Total
	Segment ID		**BC**		
7.	Surface description (paved or unpaved)		**unpaved**		
8.	Flow length, L	ft	**97.75**		
9.	Watercourse slope, s	ft/ft	**0.02**		
10.	Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	**2.28**		
11.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	**0.012**	+	= **0.012**

Channel flow

		Unit	Segment 1	Segment 2	Total
	Segment ID				
12.	Cross sectional flow area, a	ft^2			
13.	Wetted perimeter, p_w	ft			
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft			
15.	Channel slope, s	ft/ft			
16.	Manning's roughness coeff., n				
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s			
18.	Flow length, L	ft			
19.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr		+	= **0.000**

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

Hours = **0.265**

Minutes = **15.9**

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Subcathcment Area 1T (PDA-1T)**

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)		Units			
	Segment ID		**AB**		
1. Surface description (table 3-1)			**Dense Grasses**		
2. Manning's roughness coeff., n (table 3-1)			**0.240**		
3. Flow Length, L (total L ≤ 300 ft)		ft	**71**		
4. Two-yr 24-hr rainfall, P_2		in	**3.56**		
5. Land slope, s		ft/ft	**0.01**		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.226**	+	= **0.226**

Shallow concentrated flow		Units			
	Segment ID				
7. Surface description (paved or unpaved)					
8. Flow length, L		ft			
9. Watercourse slope, s		ft/ft			
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s			
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+	= **0.000**

Channel flow		Units			
	Segment ID				
12. Cross sectional flow area, a		ft^2			
13. Wetted perimeter, p_w		ft			
14. Hydraulic radius, r $r = \frac{a}{p_w}$	Compute r	ft			
15. Channel slope, s		ft/ft			
16. Manning's roughness coeff., n					
17. $V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$	Compute V	ft/s			
18. Flow length, L		ft			
19. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr		+	= **0.000**

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

Hours = **0.226**

Minutes = **13.6**

Project	**Pond View**	By	**CMH**	Date	**01/09/23**
Location	**127 Main Street, Monroe, CT**	Checked	**CJB**	Date	**01/09/23**

Bold One: Present **Developed**

Bold One: $\mathbf{T_c}$ T_t through subarea **Proposed Drainage Area 3B (PDA-3B)**

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)

		Units	Segment 1	Segment 2	Total
	Segment ID		**AB**		
1.	Surface description (table 3-1)		**Dense Grasses**		
2.	Manning's roughness coeff., n (table 3-1)		**0.240**		
3.	Flow Length, L (total L ≤ 300 ft)	ft	**100**		
4.	Two-yr 24-hr rainfall, P_2	in	**3.56**		
5.	Land slope, s	ft/ft	**0.02**		
6.	$T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	**0.225**	+	= **0.225**

Shallow concentrated flow

		Units	Segment 1	Segment 2	Segment 3	Total
	Segment ID		**BC**			
7.	Surface description (paved or unpaved)		**unpaved**			
8.	Flow length, L	ft	**37**			
9.	Watercourse slope, s	ft/ft	**0.09**			
10.	Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)	ft/s	**4.84**			
11.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr	**0.002**	+	+	= **0.002**

Channel flow

		Units	Segment 1	Segment 2	Total
	Segment ID				
12.	Cross sectional flow area, a	ft^2			
13.	Wetted perimeter, p_w	ft			
14.	Hydraulic radius, r $r = \frac{a}{p_w}$ Compute r	ft			
15.	Channel slope, s	ft/ft			
16.	Manning's roughness coeff., n				
17.	$V = \frac{1.49\ r^{2/3}\ s^{1/2}}{n}$ Compute V	ft/s			
18.	Flow length, L	ft			
19.	$T_t = \frac{L}{3600\ V}$ Compute T_t	hr			= **0.000**
20.	Watershed or subarea T_c or T_t (add T_t in steps 6, 11, 19)			**Hours**	= **0.228**
				Minutes	= **13.7**

Best Management Practices

WQS TSS Removal Calculations

Water Quality Flow Calculations

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

Project: Pond View Development
Location: 127 Main Street, Monroe, CT
Date: 01/10/23

Water Quality Volume Calculations:

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

Where:
WQV = water quality volume (ac-ft)
R = volumentric 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}	4.05	Acres		
Total area of watershed, A_{TOT}	7.45	Acres		
Percent impverious cover, I	54.36	%		
Volumentric runoff coefficient, R	0.54			
Water Quality Volume, WQV	0.335	ac-ft	14,584	cf

Water Quality Flow Calculations:

WQf = (qu)(A)(Q)
WQf = Peak Discharge for water quality event (cfs)
qu = unit peak discharge (cfs/mi^2 /in)
A = drainage area (square miles)
Q = runoff volume (WQv/A) (watershed inches)

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

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P=	1	inches
Q=	0.539	inches
WQv =	0.335	acre-ft
Total Drainage Area =	7.45	acre
CN =	81	

Ia = 200/CN -2

Ia =	0.469	

Compute Ia/P

P=	1	inches
Ia / P =	0.47	

Tc=	19.1	min
	0.318	hr

Exhibit 4-III

Tc=	0.318
Ia / P =	0.47
q_u =	250

WQf = (qu)(A)(Q)

qu =	250	csm/in
A =	0.012	mi^2 (acre/640)
Q =	0.539	inches
WQf =	1.57	cfs

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

Project: Pond View Development
Location: 127 Main Street, Monroe, CT
Date: 01/10/23

Water Quality Volume Calculations:

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

Where:
WQV = water quality volume (ac-ft)
R = volumentric 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-1C			
Area of impervious coverage, A_{IMP}	1.72	Acres		
Total area of watershed, A_{TOT}	2.46	Acres		
Percent impverious cover, I	69.92	%		
Volumentric runoff coefficient, R	0.68			
Water Quality Volume, WQV	0.139	ac-ft	6,066	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)

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

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P=	1	inches
Q=	0.679	inches
WQv =	0.139	acre-ft
Total Drainage Area =	2.46	acre
CN =	87	

Ia = 200/CN -2

Ia =	0.299	

Compute Ia/P

P=	1	inches
Ia / P =	0.30	
Tc=	14.9	min
	0.248	hr

Exhibit 4-III

Tc=	0.248
Ia / P =	0.30
q_u =	450

WQf = (qu)(A)(Q)

qu =	450	csm/in
A =	0.004	mi² (acre/640)
Q =	0.679	inches
WQf =	1.17	cfs

WATER QUALITY VOLUME (WQV) COMPUTATIONS FOR PDA-2B

Project: Pond View Development
Location: 127 Main Street, Monroe, CT
Date: 01/10/23

Water Quality Volume Calculations:

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

Where:
WQV = water quality volume (ac-ft)
R = volumentric 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-2B			
Area of impervious coverage, A_{IMP}	1.27	Acres		
Total area of watershed, A_{TOT}	2.00	Acres		
Percent impverious cover, I	63.50	%		
Volumentric runoff coefficient, R	0.62			
Water Quality Volume, WQV	0.104	ac-ft	4,512	cf

Water Quality Flow Calculations:

WQf = (qu)(A)(Q)
WQf = Peak Discharge for water quality event (cfs)
qu = unit peak discharge (cfs/mi^2/in)
A = drainage area (square miles)
Q = runoff volume (WQv/A) (watershed inches)

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

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P=	1	inches
Q=	0.622	inches
WQv =	0.104	acre-ft
Total Drainage Area =	2.00	acre
CN =	84	

Ia = 200/CN -2

Ia =	0.381	

Compute Ia/P

P=	1	inches
Ia / P =	0.38	
Tc=	6	min
	0.100	hr

Exhibit 4-III

Tc=	0.100
Ia / P =	0.38
q_u =	475

WQf = (qu)(A)(Q)

qu =	475	csm/in
A =	0.003	mi^2 (acre/640)
Q =	0.622	inches
WQf =	0.92	cfs

WATER QUALITY VOLUME (WQV) COMPUTATIONS FOR PDA-3B

Project: Pond View Development
Location: 127 Main Street, Monroe, CT
Date: 01/10/23

Water Quality Volume Calculations:

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

Where:
WQV = water quality volume (ac-ft)
R = volumentric 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-3B			
Area of impervious coverage, A_{IMP}	0.87	Acres		
Total area of watershed, A_{TOT}	1.95	Acres		
Percent impverious cover, I	44.62	%		
Volumentric runoff coefficient, R	0.45			
Water Quality Volume, WQV	0.073	ac-ft	3,196	cf

Water Quality Flow Calculations:

WQf = (qu)(A)(Q)
WQf = Peak Discharge for water quality event (cfs)
qu = unit peak discharge (cfs/mi^2/in)
A = drainage area (square miles)
Q = runoff volume (WQv/A) (watershed inches)

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

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P=	1	inches
Q=	0.452	inches
WQv =	0.073	acre-ft
Total Drainage Area =	1.95	acre
CN =	78	

Ia = 200/CN -2

Ia =	0.564	

Compute Ia/P

P=	1	inches
Ia / P =	0.56	
Tc=	14.7	min
	0.245	hr

Exhibit 4-III

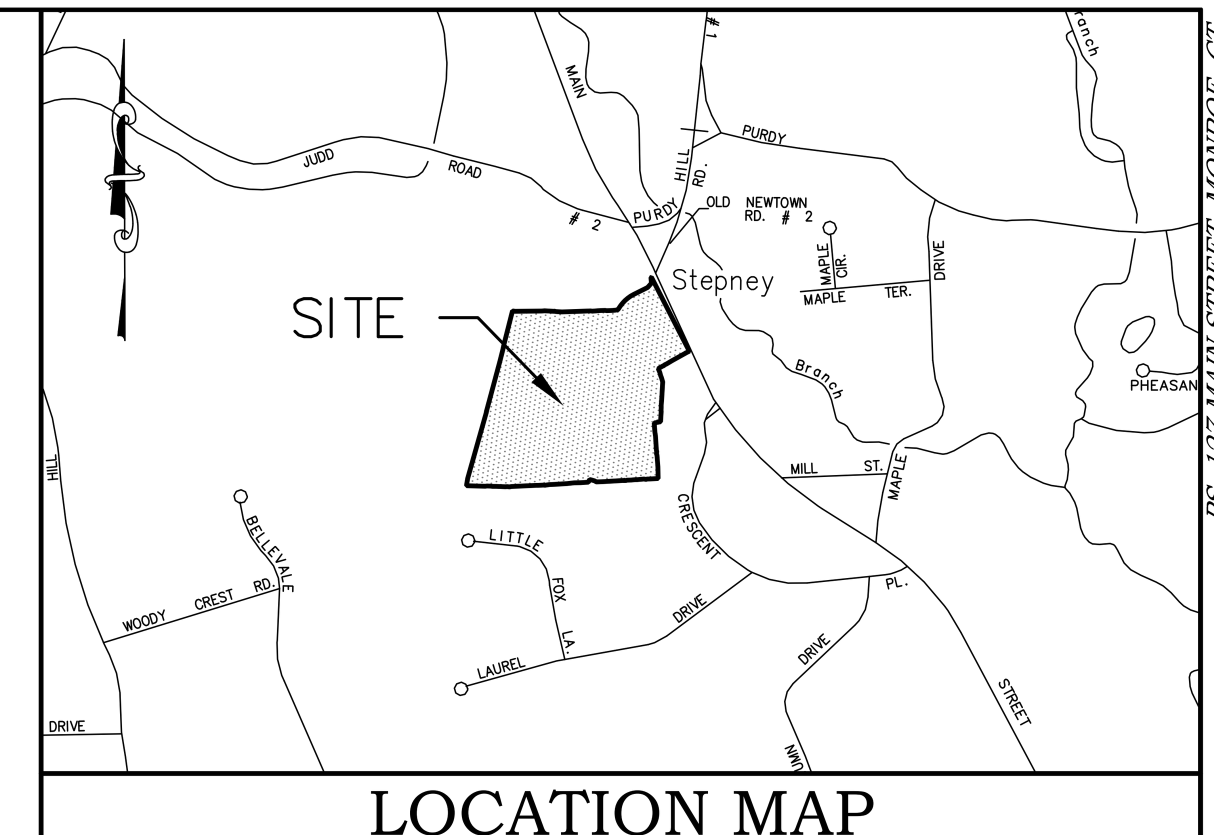
Tc=	0.245
Ia / P =	0.56
q_u =	250

WQf = (qu)(A)(Q)

qu =	250	csm/in
A =	0.003	mi^2 (acre/640)
Q =	0.452	inches
WQf =	0.34	cfs

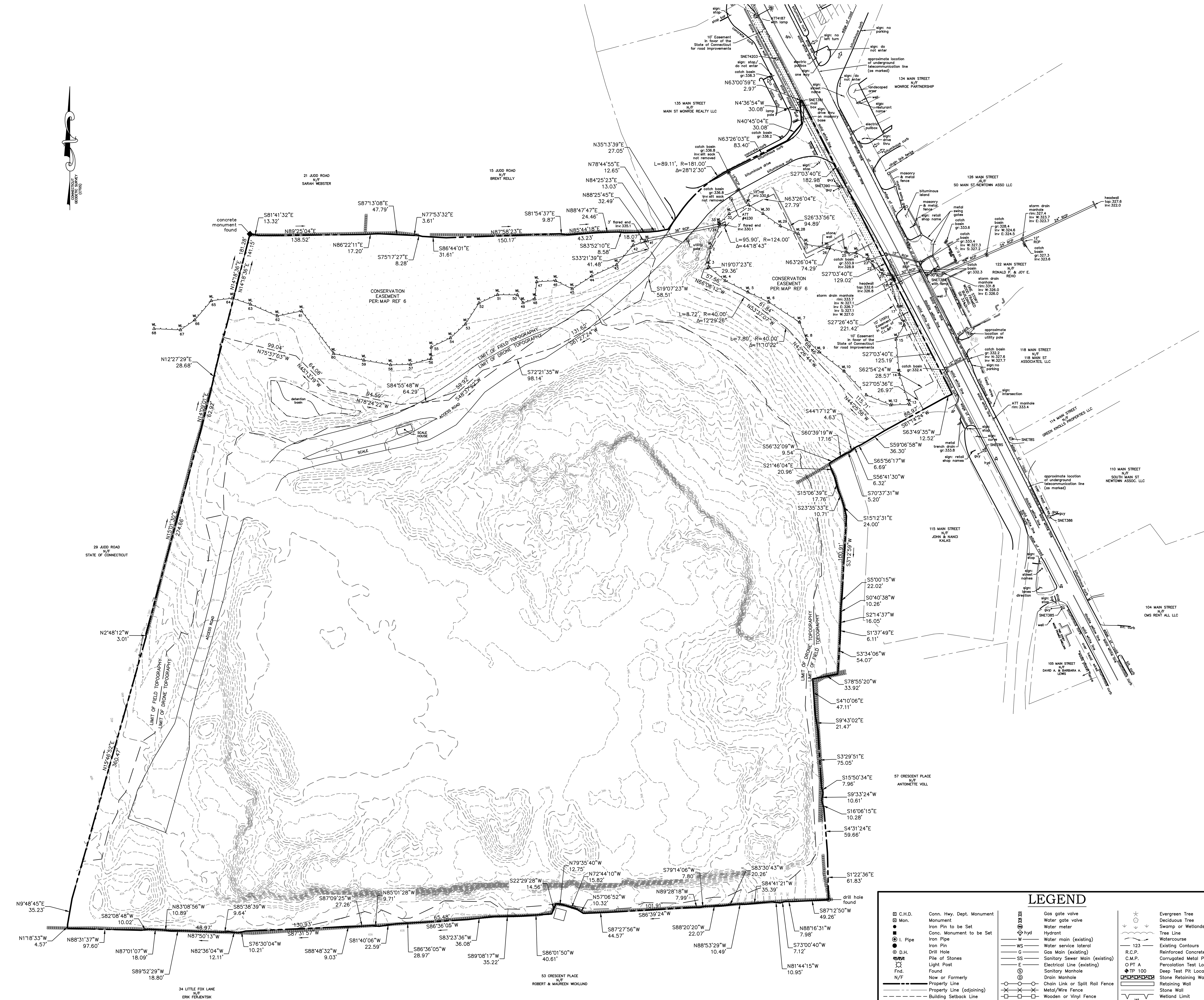
APPENDIX D
DETAILED DESIGN PLANS

Property Survey
Existing Drainage Area Map (EDA-1)
Proposed Drainage Area Map (PDA-1)
Subcatchment Drainage Area Map (CBDA-1)



LOCATION MAP

SCALE: 1"=800'



No.	Date	REVISION DESCRIPTION
3.	1/4/2023	UPDATED DRONE TOPOGRAPHY
2.	4/21/2022	UPDATED DRONE TOPOGRAPHY
1.	4/11/2022	UPDATED TOPOGRAPHY ALONG MAIN STREET NEAR WETLANDS

GENERAL SURVEY NOTES

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATION OF CONNECTICUT STATE AGENCIES, SECTION 20–300b–1 THROUGH 20–300b–20, EFFECTIVE OCTOBER 26, 2018, AND THE "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
2. THE BOUNDARY DETERMINATION SHOWN HEREON IS CONSIDERED A RESURVEY.
3. THE SURVEY CONFORMS TO HORIZONTAL CLASS A–2 ACCURACY STANDARDS. TOPOGRAPHIC DATA CONFORMS TO CLASS T–D STANDARDS. CONTOURS AND ELEVATIONS REFER TO NAVD 88 DATUM.
4. BEARINGS, COORDINATES AND ELEVATIONS ARE DERIVED FROM THE CONNECTICUT GEODETIC SURVEY (CTGS) VIA GPS TECHNOLOGY AND CONVENTIONAL SURVEY METHODS.
5. THIS IS A PROPERTY SURVEY. THE PURPOSE OF WHICH IS TO SHOW EXISTING CONDITIONS.
6. PROPERTY IS ALSO KNOWN AS TOWN OF MONROE TAX LOT 9 0B ON ASSESSORS MAP 12.
7. TOTAL AREA = 856,719.3 SQ.FT. OR 19.667 ACRES
8. PROPERTY LIES IN ZONING DISTRICT "B1".
9. PROPERTY DOES NOT LIE WITHIN A FLOOD HAZARD ZONE AS DETERMINED BY FEMA.
10. WETLANDS DELINEATED BY WILLIAM KENNY ASSOCIATES, SEPTEMBER 22, 2001. FLAGS WERE LOCATED VIA CONVENTIONAL SURVEY METHODS
11. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND OTHER THAN DEPICTED HEREON, IF ANY, IS UNKNOWN.
12. FIELD TOPOGRAPHY SHOWN HEREON REFLECTS SITE CONDITIONS AS OF 9/20/21 THRU 10/1/21. DRONE TOPOGRAPHY AS OF 12/27/22

MAP REFERENCES

1. PLAN ENTITLED "MAP OF PROPERTY OF CHARLES BOND, ETAL", SCALE 1"=60'. DATED: SEPTEMBER 11, 1975. BY J & D KASPER & ASSOC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1244.
2. PLAN ENTITLED "SUBDIVISION PLAN WOODLAND COMMONS CRESENT PLACE – MONROE, CONNECTICUT", SCALE: 1"=100'. DATED: DECEMBER 1, 1977. BY J & D KASPER & ASSOC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1370.
3. PLAN ENTITLED "PLOT PLAN OF PROPERTY ON CRESENT PLACE MONROE, CONNECTICUT PREPARED FOR ANTHONY H. JEWISS", SCALE: 1"=30'. DATED: OCTOBER 19, 1978. BY J & D KASPER & ASSOC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1398.
4. PLAN ENTITLED "MAP SHOWING EASEMENT AREA TO BE GRANTED TO THE CONNECTICUT LIGHT AND POWER COMPANY ACROSS THE PROPERTY OF POND VIEW LLC", SCALE: 1"=60'. DATED: MAY 3, 2002. BY LAND ENGINEERING ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 2764.
5. PLAN ENTITLED "FIRST DIVISION OF PROPERTY MAP FOR 133 MAIN STREET MONROE, CONNECTICUT PREPARED FOR POND VIEW LLC", SCALE: 1"=60'. DATED: MAY 5, 2003. BY LAND ENGINEERING ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 2804.
6. PLAN ENTITLED "CONSERVATION EASEMENT MAP FOR 127 MAIN STREET MONROE, CONNECTICUT PREPARED FOR POND VIEW LLC", SCALE: 1"=60'. DATED: JULY 24, 2004. BY LAND ENGINEERING ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1023–242.

LEGEND

Symbol	Meaning	Symbol	Meaning	Symbol	Meaning
C.H.D.	Conn. Hwy. Dept. Monument	GG	Gas gate valve		Evergreen Tree
Mon.	Monument	WG	Water gate valve		Deciduous Tree
	Iron Pin to be Set	WM	Water meter		Swamp or Wetlands
	Conc. Monument to be Set	hyd	Hydrant		Tree Line
I. Pipe	Iron Pipe	W	Water main (existing)		Watercourse
	Iron Pin	WS	Water service lateral	123	Existing Contours
D.H.	Drill Hole	G	Gas Main (existing)	R.C.P.	Reinforced Concrete Pipe
	Pile of Stones	SS	Sanitary Sewer Main (existing)	C.M.P.	Corrugated Metal Pipe
	Light Post	E	Electrical Line (existing)	PT A	Percolation Test Location
Fnd.	Found	S	Sanitary Manhole	TP 100	Deep Test Pit Location
N/F	Now or Formerly	D	Drain Manhole		Stone Retaining Wall
	Property Line		Chain Link or Split Rail Fence		Retaining Wall
	Property Line (adjoining)		Metal/Wire Fence		Stone Wall
	Building Setback Line		Wooden or Vinyl Fence		Wetland Limit
	Easement Line		Utility Pole	WL	Wetland Flag Number
	Edge of water	INV:	Invert Elevation of Pipe		Wetland Setback
	FEMA Flood Zone		Existing Catch Basin/Pipe		Benchmark
BFE:	Base Flood Elevation		Building (existing)		Well (Existing)
×200.0	Existing Spot Elevation			F.P.	Fence Post

SCALE: 1"=60'

0 30 60 120 180

ACCURATE
LAND SURVEYING, LLC

15 RESEARCH DRIVE	501 MAIN STREET
WOODBRIDGE, CT 06525	MONROE, CT 06468
TEL: 203.881.8145	TEL: 203.880.5455

PROPERTY SURVEY

OF

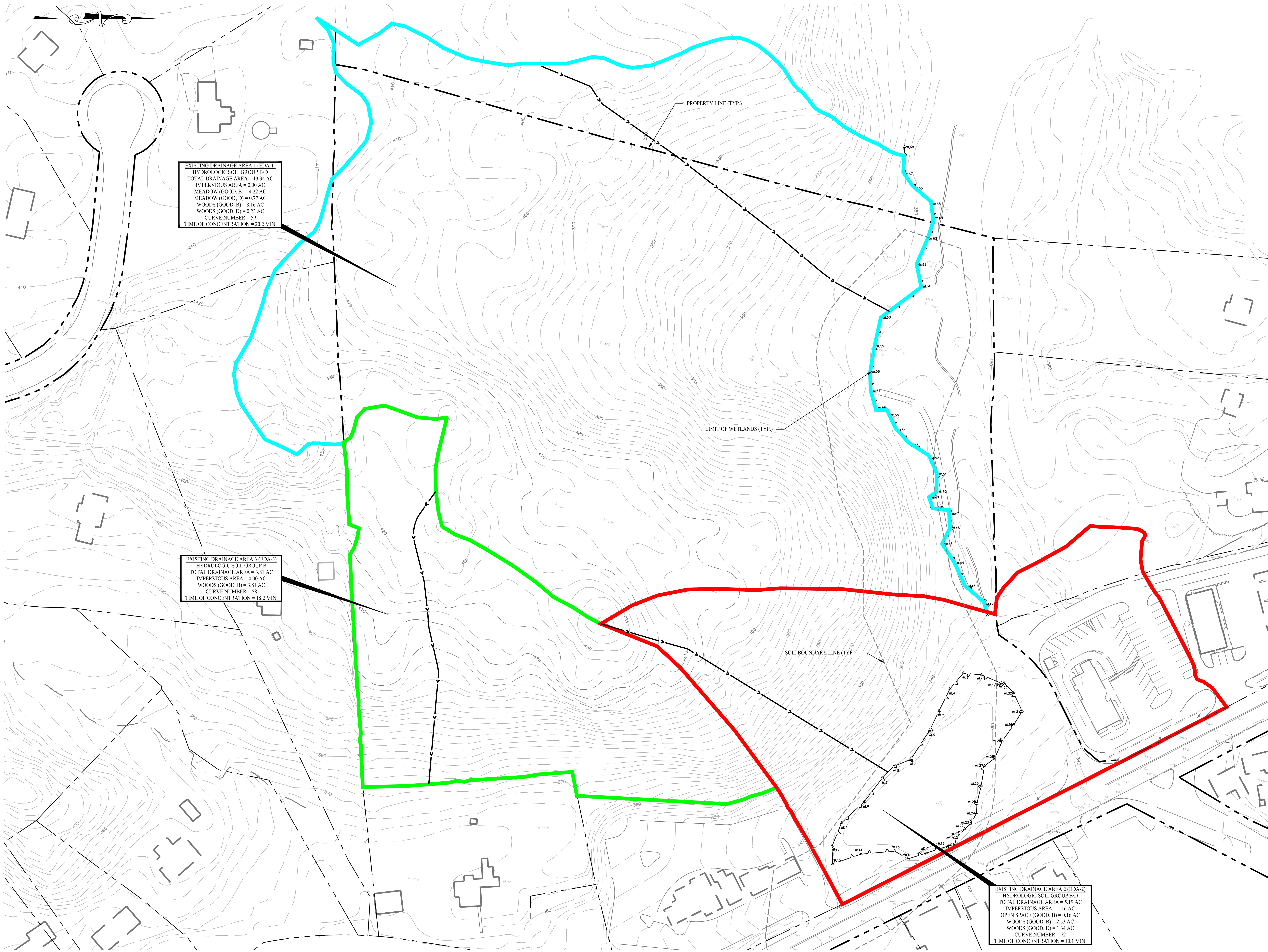
127 MAIN STREET
MONROE, CONNECTICUT

PREPARED FOR
POND VIEW LLC

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

BRYAN P. NESTERIAK, PE, LS 23556

Date	10/27/2021
Scale	1"=60'
Job No.	652
Drawing No.	1 of 1



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 1
LIMIT OF DRAINAGE AREA 2
LIMIT OF DRAINAGE AREA 3
FLOW PATH
SOIL TYPE BOUNDARY
51B SOIL TYPE

Rev. #: Date Description

Graphic Scale:
60 0 60 120

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:	CMH
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 60'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

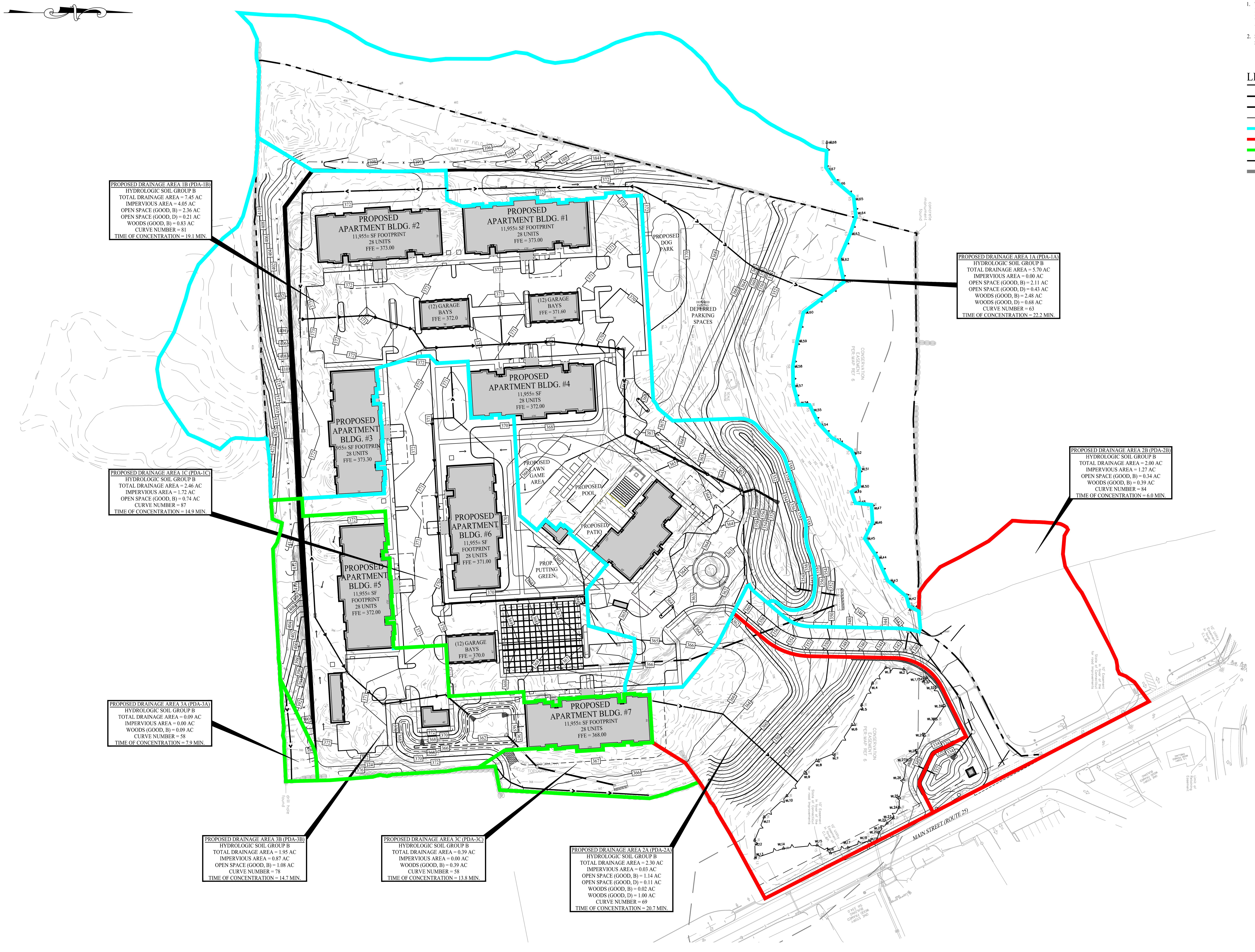
Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
EXISTING DRAINAGE AREA MAP

Sheet #:
EDA-1

Jan 09, 2023 – 1:46pm chartford
X:\SE Files\Project Data\2019\1910801 – Pondview – 127 Main Street, Monroe, CT\Cadd Data\1910801 – DA-1.dwg



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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 1
LIMIT OF DRAINAGE AREA 2
LIMIT OF DRAINAGE AREA 3
FLOW PATH
SOIL TYPE BOUNDARY
51B SOIL TYPE

Rev. #:	Date	Description
1	01/26/23	PZ SUBMISSION

Graphic Scale: 60 0 60 120

SOLLI ENGINEERING

501 Main Street, Monroe, CT 06468 T: (203) 880-5455 | F: (203) 880-9695
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Drawn By:	CMH
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 60'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

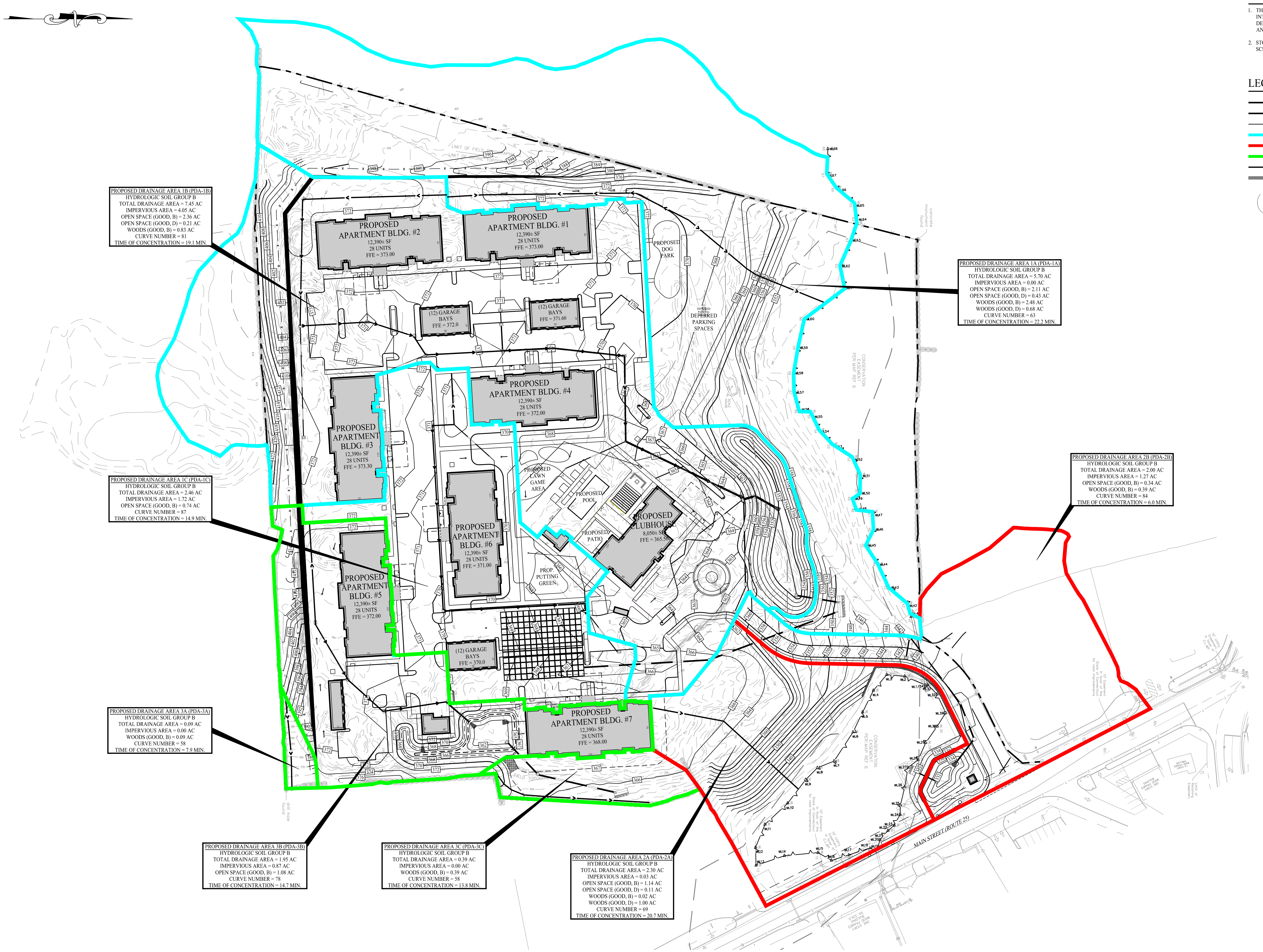
Project:

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: PROPOSED DRAINAGE AREA MAP

Sheet #: PDA-1



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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 1
- LIMIT OF DRAINAGE AREA 2
- LIMIT OF DRAINAGE AREA 3
- FLOW PATH
- SOIL TYPE BOUNDARY
- 51B SOIL TYPE

Rev. #:	Date	Description

Graphic Scale: 60 0 60 120

SOLLI ENGINEERING

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

Drawn By:	CMH
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 60'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:

PROPOSED DRAINAGE AREA MAP

Sheet #:

PDA-1

APPENDIX E
LONG-TERM OPERATION & MAINTENANCE

Operation & Maintenance Manual

LONG-TERM
OPERATION & MAINTENANCE MANUAL

For the Proposed:

POND VIEW DEVELOPMENT
AND RESTORATION

Located At:
127 Main Street
Monroe, Connecticut

Prepared On:
January 10th, 2023

Prepared By:

SOLLI ENGINEERING

11 Vanderbilt Avenue, Suite 240
Norwood, Massachusetts 02062
T: (781) 352-8491

Prepared For:

Pond View, LLC

TABLE OF CONTENTS

INTRODUCTION

Solli Engineering (Solli) has prepared this Operations and Maintenance (O&M), to be filed with the City of Norwich, Connecticut for the proposed Pond View Development at 127 Main Street in Monroe, Connecticut. The O&M Manual has been prepared to ensure that the stormwater management functions as designed. The owner possesses the primary responsibility for overseeing and implementing the O&M plan and assigning a Property Manager who will be responsible for the proper operation and maintenance of the stormwater structures. In case of transfer of property ownership, future property owners shall be notified of the presence of the stormwater management system and the requirements for proper implementation of the O&M plan. Included in the O&M plan identifying key components of the stormwater system as well as a log for tracking inspections & maintenance.

The stormwater management system protects and enhances the stormwater runoff water quality through the removal of sediment and pollutants, and source control significantly reduces the number of pollutants entering the system. Preventive maintenance of the system will include a comprehensive source reduction program of regular vacuuming and litter removal, prohibitions on the use of pesticides and maintenance of designated waste and recycling.

RESPONSIBILITY

The purpose of the Long-Term Operation and Maintenance (O&M) Manual is to ensure inspection of the system, removal of accumulated sediments, oils, and debris and implementation of corrective action and record keeping activities. The below O&M activities associated with the site will be performed by a Contract Operator for the scope of maintenance. The Contract Operator will be a professional engineer or other technical professional with expertise and experience with stormwater management facilities operation and maintenance.

The ongoing responsibility is the Owner, its successors, and assigns. Adequate maintenance is defined in this document as good working condition.

Responsibility for O&M (to be transferred upon sale of property / development):

Contact:	General Manager of Operations for Pondview, LLC
Address:	127 Main Street
City, State:	Hartford, CT 06486

DOCUMENTATION

An inspection and maintenance record log and schedule will be kept by the Owner or Property Manager summarizing inspections, maintenance, repairs and any corrective actions taken. The log will include the date on which each inspection or maintenance task was performed, a description of the inspection findings or maintenance completed, and the name of the inspector or maintenance personnel performing the task. If a maintenance task requires the clean-out of any sediments or debris, the location where the sediment and debris was disposed after removal will be indicated. Inspection & Maintenance Logs will be kept on file at the on-site Property Management office.

MAINTENANCE PROGRAM

The Owner, Property Manager and maintenance staff will conduct the Operation and Maintenance program set forth in this document. The Owner or Property Manager will ensure that inspections and record keeping are timely and accurate, and that cleaning and maintenance are performed in accordance with the recommended frequency for each stormwater component. Inspection & Maintenance Log Forms shall include the date and the amount of the last significant storm event in excess of 1-inch of rain in a 24-hour period, physical conditions of the structures, depth of sediment in structures, evidence of overtopping or debris blockage and maintenance required of each structure. The following areas, facilities and measures will be inspected by the Owner or Property Manager and maintained as specified below. Identified deficiencies will be corrected. Accumulated sediments and debris will be properly handled and disposed of off-site, in accordance with local, state, and federal guidelines and regulations.

WATER QUALITY UNIT

Water quality units protect the environment by removing a wide range of pollutants from stormwater runoff. Periodic removal of these captures pollutants is essential to the continuous, long-term functioning of the separator. The unit will capture and retain sediment and oil until the sediment and oil storage volumes are full to capacity. When sediment and oil storage capacities are reached, the structure will no longer be able to store removed sediment and oil.

The stormwater management system proposes to incorporate a water quality unit. Inspections shall take place at regular intervals to ensure optimum performance. At a minimum, inspections shall be performed twice a year (Ex.: spring & fall) however more frequent inspections may be required depending on several things one being severity of winter (excessive sanding/salting). The frequency of cleanout is determined in the field after installation. During the first year of operation, the units should be inspected regularly and then after, every six months (twice a year) to determine the rate of sediment and floatables accumulation. A simple probe can be used to determine the level of accumulated solids stored in the sump. This information should be recorded in the inspection logs. On the log it is important to note the date, location of structure (or identification), estimated volume of floatables, and depth of sediment. Securely replace the top of the structure and take down any safety equipment. Then notify the engineer of record for any irregularities in the structure's performance if any. The system should be cleaned when the level of sediment has reached 75% of capacity in the isolated sump or when an appreciable level of hydrocarbons and trash has accumulated. Sediment and debris removal can be done manually or with approved sumpvac (or equal).

CATCH BASIN

Catch basins are underground concrete structures which are designed to retain removed trash, debris, and coarse sediment from stormwater runoff and serve as temporary spill containment devices for floatables such as oil and greases prior to discharge into a storm sewer pipe. The functions of a catch basin include:

- A grate and/or vertical notch found in the curbing that allow stormwater to enter the structure while filtering out larger objects such as trash and leaves.
- A two-foot (minimum) sump below the invert of the storm sewer pipe provides an area for detention time which allows sands and other sediments to settle out of the runoff prior discharge.
- An attached hooded outlet, that prevents floatables and sediment from entering the storm sewer pipes.

At a minimum, catch basins and drain manholes shall be inspected quarterly (four times per year). Ideally, inspections should be conducted in the fall, at the end of the leaf-drop, in the spring following snowmelt and following heavy rain falls, defined as a storm event exceeding 1-inch of rain fall within a twenty-four-hour period to verify that inlet openings are not clogged by debris. Each structure should be cleaned whenever the depth of sediment deposits is greater than or equal to one half the depth of the sump from the bottom of the structure to the bottom of the lowest pipe invert. Structures shall be inspected for a buildup of sediments, oils, debris, cracks, breaks, or deformations. Any function of the catch basin and drain manhole that is not in working order will be replaced with similar materials, as per detail, to prevent the storm sewer system from failing.

If floating hydrocarbons are observed during an inspection, the material should be removed immediately by skimming, absorbent materials, or other method and disposed in conformance with applicable state and federal regulations.

The catch basins shall be cleaned by means of handheld shovels, scallop shovel and/or vacuum truck. Vacuum truck may be required instead of shovels to avoid damage to structure. The grate opening shall be clear of any foreign or lodged object. If floating hydrocarbons are observed during an inspection, the material should be removed immediately by skimming, absorbent materials or other methods and salts used in the winter will be removed from the catch basin sumps in the early spring. Leaves, pine needles and branches brought down by autumn winds, rain, and cold weather will be removed from the catch basin sumps in the late fall. Collected sediment, debris and hydrocarbons will be properly disposed of per local, state and federal requirements.

Damaged Hoods should be replaced when noted by inspection.

STREET MAINTENANCE

Street maintenance is a non-structural source control performed by mechanical means to limit sediment and particulates from impervious surfaces as an effort to control or limit the sediment migration to other stormwater BMP's during storm events. There are three typical types of sweeping methods, including mechanical, regenerative air and vacuum filter. Mechanical sweepers are the most common and use brooms or brushes to scour the pavement. Regenerative air sweepers blow air onto the impervious surface causing sediment and other fine particles to be blown from the surface so they can be vacuumed. Vacuum filter sweepers are available in wet and dry types. Dry types use brooms to agitate the sediment prior to vacuuming. Wet types work in a similar fashion but use water to suppress dust during the collection activity. Because of street maintenance, sediment and other fine particulates are limited on the impervious surfaces and be further controlled from entering other BMP's. They also allow for the removal and prevention of accumulation of sediment along parking or road edges.

This should be done periodically during dry weather to remove excess sediments to reduce the amount of sediments that the drainage system shall have to remove from runoff. Sweeping should mostly be conducted between the months of March and November, with special attention to sweeping during the wetter (earlier) months. Salt used for de-icing should be limited as much as possible as this will reduce the need for the removal and treatment. However, sand containing the minimum amount of calcium chloride (or approved equal) needed for handling may be applied as part of the routine winter maintenance activities.

PESTICIDES, HERBICIDES AND FERTILIZERS

Pesticides and herbicides shall be used sparingly. Fertilizers should be restricted to the use of organic fertilizers only. Exterior storage of fertilizers, herbicides, pesticides or other toxic or hazardous materials should be prohibited.

EMEREGENCY SPILL CONTAINMENT

The Owner, along with the on-site Property Manager is responsible for educating staff and informing tenants on the environmental benefits associated with the use of pavement at the site. Staff must be trained, and tenants informed via the community website as to the proper spill prevention control and response procedures should a spill occur on the pavement surface. Proper spill control products, such as a granular dry absorbent, must be kept on-site at the property management office in a clean, dry chemical and corrosion resistant container.

A spill of greater than 10 gallons of oil or a spill of any quantity that has reached a surface water, into a sewer, storm drain, ditch, or culvert leading to a surface water, is immediately reported to one or more municipal, state, or federal authority. In the event of a hazardous waste spill on-site, the following protocol should be followed.

- If it is safe to do so, maintenance staff or tenants detecting an oil spill should immediately stop the release and use available materials to prevent the spread of oil.
- If there is a potentially flammable, toxic, or explosive condition, evacuate the vicinity of the spill.
- If it's believed that a reportable or dangerous condition exists, immediately call your local Fire Department to notify them of the release.
- If it is believed that a reportable condition exists, immediately call the Connecticut Department of Energy & Environmental Protection (DEEP) to notify them of the release.
- Call the DEEP Emergency Response Section toll free statewide number, 1-866-337-7745. Be prepared to provide the following information to the DEEP and the Fire Department:
    - Identity of the caller
    - Contact phone number Location of the spill
    - Type of product spilled
    - Approximate quantity or product spilled Extent of actual and/or potential water pollution
    - Date and time of spill
    - Cause of spill
    - Contact a Licensed Site Professional (LSP) to assist in further handling of the material(s) and DEEP.

Title:
Location:

Inpsection #:
Project #:
Field Date:

INSPECTION & MAINTENANCE LOG

Name(s) & Title(s) of Individual(s) performing inspection: ____________________

Week of Inspection: ____________________

Type of Inspection:

☐ Monthly ☐ Quarterly ☐ Biannually ☐ Annually ☐ Emergency

Weather (during inspection)

☐ Clear ☐ Cloudy ☐ Rain ☐ Snow ☐ Sunny ☐ Windy ☐ Fog

Other:

Time of Inspection:				Temp. during inspection:	°F
Start Time:	a.m.	End Time:	a.m.	Precip. since last inspection:	"

Site Specific BMP's

#	BMP	Maintenance Required		Corrective Action Needed & Notes
1		☐ Yes	☐ No	
2		☐ Yes	☐ No	
3		☐ Yes	☐ No	
4		☐ Yes	☐ No	
5		☐ Yes	☐ No	
6		☐ Yes	☐ No	
7		☐ Yes	☐ No	
8		☐ Yes	☐ No	
9		☐ Yes	☐ No	
10		☐ Yes	☐ No	

Overall Site Maintenance Concerns

BMP/Activity	Maintenance Required		Corrective Action Needed & Notes
Are discharge points & receiving waters free of any sediment deposits?	☐ Yes	☐ No	
Are storm drain inlets properly working?	☐ Yes	☐ No	
Is trash/litter from site areas collected & placed in covered dumpsters?	☐ Yes	☐ No	
What is the level of sediment within infiltration basin?	☐ Yes	☐ No	
What is the level of sediment within the hydrodynamic separators?	☐ Yes	☐ No	
What is the levels of oil/grit/trash within the infiltration basin or hydrodynamic separators?	☐ Yes	☐ No	
(Other)	☐ Yes	☐ No	

Inspector(s) Signature(s): ____________________

January 5, 2021
Revised January 25, 2023

Planning & Zoning Commission
Town of Monroe
7 Fan Hill Road
Monroe, CT 06468

RE: Traffic Impact Assessment
Proposed Development
127 Main Street
Monroe, Connecticut
Project Number: 1910801

Dear Commissioners,

Solli Engineering, LLC has prepared this assessment to provide an analysis of the potential traffic impacts associated with the proposed development located at 127 Main Street (Route 25) in Monroe, Connecticut. The evaluation has been completed in accordance with the Town of Monroe and Connecticut Department of Transportation (CTDOT) requirements as well as standard traffic engineering methodology. Our investigation concludes that the proposed development will not have an adverse impact on the existing roadway network with the recommended driveway improvements.

Project Description:

The property is located along Main Street (Route 25) in Monroe, Connecticut. The site is currently operating as a quarry in preparation for the proposed development and is bound by a mix of retail and restaurant developments to the east and northeast along Main Street (Route 25), and by residential developments to the south and west. Refer to Figure 1, Site Location Map, for more details on the project location.

The project proposes the construction of seven (7) apartment buildings with a total of 196 dwelling units. The subject property will also be improved with accessory uses consisting of a 8,050 square foot clubhouse, a pool area with a pool house, and other outdoor recreation areas for tenants. The parcel is currently located in the Business-2 (B-2) zone and the Main Street Design District (MDD) overlay in the Town of Monroe. The MDD overlay zone will allow for residential land use on site. The site is currently accessed via a full movement stop-controlled site driveway via Main Street (Route 25). An additional full movement stop-controlled driveway is located east of the signalized intersection of Main Street (Route 25) and Judd Road/Purdy Hill Road. The existing site access via Judd Road provides shared access to the existing gas station and convenience store, as well as the Dunkin/Baskin-Robbins. Under the proposed conditions, all site driveways will remain with minor widening proposed to the access via Main Street (Route 25) to accommodate two exit lanes. See the Overall Site Plan, Sheet 2.10, for more details on the proposed site configuration.

Existing Conditions:

Main Street (Route 25) is classified by the Connecticut Department of Transportation as a principal arterial road. Main Street (Route 25) runs north to south with a posted speed limit of 40 miles per hour throughout the study area. Main Street (Route 25) is a two-line, bi-directional roadway that provides local and regional access to a mix of commercial, retail, and residential uses along the corridor. There are no sidewalks within the vicinity of the project site.

Judd Road is classified by the Connecticut Department of Transportation as a collector road. Judd Road is an east-west roadway with a posted speed limit of 25 miles per hour throughout the study area. Judd Road is a two-lane, bi-directional roadway that provides local access to surrounding residential and commercial uses on the adjacent roadway network. There are no sidewalks on Judd Road in the vicinity of the project site.

Purdy Hill Road is classified by the Connecticut Department of Transportation as a collector road. Purdy Hill Road is an east-west roadway with a posted speed limit of 30 miles per hour throughout the study area. Purdy Hill Road is a two-lane, bi-directional roadway that provides local access to surrounding residential and commercial uses on the adjacent roadway network. There are no sidewalks on Purdy Hill Road in the vicinity of the project site.

Turning movement count data was collected by Solli Engineering on August 18, 2021 for the weekday AM and weekday PM peak hours of the site driveways on Main Street (Route 25) and Judd Road. Turning movement count data for the signalized intersection of Main Street (Route 25) & Judd Road/Purdy Hill Road was collected July 23, 2019 by Connecticut Counts, LLC. Due to the impact of COVID-19 the 2019 turning movement count data was used to establish 2021 existing traffic conditions. The 2019 and 2021 turning movement counts were combined and balanced to establish the 2021 existing traffic volumes. The 2021 existing traffic volumes are illustrated in Figure 2.

Proposed Conditions:

Full movement access to the site will be maintained via the existing stop-controlled driveway onto Main Street (Route 25), located at the northeastern corner of the property. The proposed development includes widening of the site driveway via Main Street (Route 25) to provide two lanes of egress. Access to the site via the stop-controlled shared access driveway with Dunkin'/Baskin Robbins and the Shell gas station from Judd Road is proposed to remain.

The proposed development has been designed with an internal traffic circle at the end of the main driveway which provides direct access to the club house with a drop off area and access to the club house associated parking. Access to the residential buildings is provided via two main internal gated access points on the east and west sides of the club house. The internal parking layout has been designed to accommodate fire truck access throughout the site as illustrated in the Fire Truck Circulation Figure, Figure-TT provided as a supporting document to this assessment.

The anticipated number of trips that will be generated by proposed development was estimated using data from the Institute of Transportation Engineers (ITE) Trip Generation, 11th Edition. The trip generation was calculated for the weekday AM and weekday PM peak hour based on the proposed land use. The ITE trip generation rate sheets are provided as a supporting document to this assessment. Table 2 below illustrates the anticipated trips to be generated by the proposed project during the weekday AM and weekday PM peak hour, as these are the peak hours which have the greatest potential for impact on the adjacent roadway based on the proposed land use. A detailed breakdown of the proposed trip generation calculations are provided as a supporting document to this assessment. In order to provide a conservative analysis, no credit was taken for trips associated with the existing quarry operation.

TABLE 1 TRIP GENERATION SUMMARY						
LAND USE	WEEKDAY AM PEAK HOUR			WEEKDAY PM PEAK HOUR		
	ENTER	EXIT	TOTAL	ENTER	EXIT	TOTAL
Multifamily Housing (Mid-Rise) - LUC 221 196 Dwelling Units	17	56	73	47	30	77
Total New Trips	**17**	**56**	**73**	**47**	**30**	**77**

The anticipated distribution of new traffic entering and exiting the site was developed based on area populations, existing traffic patterns, and the layout of the adjacent roadway network. The following distributions were applied to the new site generated trips:

- 40% to/from the north via Main Street (Route 25)
- 45% to/from the south via Main Street (Route 25)
- 10% to/from the east via Purdy Hill Road
- 5% to/from the west via Judd Road

The anticipated percent distribution of the new site generated trips is illustrated in Figure 3. The new site generated trips were assigned to the site driveway intersections based on the anticipated percent distributions illustrated in Figure 3 and the resulting trip assignment is illustrated in Figure 4.

As the proposed development is anticipated to be opened in 2024, background traffic growth is estimated to account for any traffic increase as a result of regional population growth. Based on previous ADT data provided by the Connecticut Department of Transportation (CTDOT), there has been a minor decrease in overall traffic volumes in the study area in recent years. The ADT reported at count station MONR-136 at the Monroe-Trumbull town line in 2013 was 29,900 vehicles, while the reported ADT in 2020 was 21,300 vehicles. As a result, the existing traffic volumes on Main Street (Route 25) were projected to the 2024 design year using a conservative 1.0 percent per year growth factor to establish the 2024 background traffic volumes. The 2024 background traffic volumes are illustrated in Figure 5.

The trip assignment volumes illustrated in Figure 4 were combined the 2024 background volumes in Figure 5 to develop the build traffic volumes. Figure 6 illustrates the 2024 build traffic volumes.

The Town of Monroe was contacted to identify any ongoing or proposed projects within the study area which may impact the analysis. A project for a last-mile parking facility at 10 Victoria Drive in Monroe, Connecticut was identified as a potential background generator. Upon review of the trip generation of this project, the trips generated at the peak hour of adjacent street traffic at the study area intersections are negligible, and any peak hour traffic would likely be accounted for in the background traffic growth. As such, these trips are not included in this analysis.

Capacity Analysis:

To determine the operating conditions of the site driveway after the development has been constructed, the study area intersections were analyzed using the Synchro 11 capacity analysis software for the existing, background, and build peak hour conditions during the weekday AM and weekday PM peak hours, as these peak periods have the greatest potential for impact by the proposed development.

The results of the Synchro analysis describe the traffic impact in terms of Level of Service (LOS). LOS describes the operational condition of the signalized intersection in terms of delay (in seconds per vehicle) and is expressed on a scale of A through F with LOS A being the best and LOS F being the worst. LOS A reflects intersection operations with little to no vehicle delay (less than 10 seconds per vehicle) and LOS F reflects intersection conditions that are over capacity and experience long delays(more than 50 seconds of delay per vehicle at unsignalized intersections or 80 seconds of delay at signalized intersections). For unsignalized intersections, only the delay on the STOP-controlled approach is reported. Table 3 below summarizes the level of service for the study area intersections during the existing, background, and build conditions of the weekday AM and weekday PM peak hour.

TABLE 3
WEEKDAY CAPACITY ANALYSIS SUMMARY
(LOS/DELAY)

INTERSECTION	2021 Existing AM/PM	2024 Background AM/PM	2024 Build AM/PM
Main Street (Route 25) & Judd Road / Purdy Hill Road	(D/40.5)/(D/48.9)	(D/44.9)/(D/55.4)	(D/46.1)/(E/58.8)
Main Street (Route 25) – Northbound	(C/33.4)/(D/46.7)	(D/37.2)/(D/54.6)	(D/39.7)/(E/57.4)
Main Street (Route 25) – Southbound	(D/40.6)/(D/45.7)	(D/46.7)/(D/53.4)	(D/45.9)/(E/59.1)
Judd Road – Eastbound	(E/56.6)/(E/58.4)	(E/62.6)/(E/59.2)	(E/67.6)/(E/59.6)
Purdy Hill Road - Westbound	(D/48.5)/(E/58.5)	(D/49.3)/(E/61.5)	(D/49.6)/(E/62.2)
Judd Road & Site Driveway*			
Judd Road - Westbound	(B/11.5)/(B/11.6)	(B/11.6)/(B/11.7)	(B/11.6)/(B/12.0)
Main Street (Route 25) & Site Driveway*			
Site Driveway – Eastbound	(F/61.0)/(D/28.3)	(F/67.6)/(D/30.1)	(F/97.4)/(F/72.2)

*Unsignalized Intersection

Under the 2024 build condition, the proposed stop-controlled site driveway intersection with Main Street (Route 25) will operate at LOS F with 260.0 seconds of delay during the weekday AM peak hour and 202.3 seconds during the weekday PM peak hour under the proposed conditions with the widening of the exit driveway to provide two egress lanes. This represents an increase of 29.8 seconds of delay during the weekday AM peak hour and an increase of 42.1 seconds of delay during the weekday PM peak hour. This level of operation is consistent with a site driveway exiting onto a principal arterial roadway during peak hours. The site driveway is located in close proximity to a signalized intersection which will result in gaps for vehicles exiting the site due to yellow and all red phases of the signal cycle. The stop-controlled shared access driveway onto Judd Road is anticipated to maintain a level of service B under the 2024 build condition with less than a 0.5 second increase in delay during the weekday AM and weekday PM peak hours when compared to the 2024 background condition.

Under the 2024 build condition, the proposed signalized intersection of Main Street (Route 25) & Judd Road/Purdy Hill Road operates at LOS D during the weekday AM peak hour and LOS E during the weekday PM peak hour. A majority of the individual intersection movements will maintain background operating conditions with some exceptions. The southbound approach of Main Street (Route 25) & Judd Road/Purdy Hill Road degrades from LOS D (53.4s delay) to LOS E (59.1s delay) during the weekday PM peak hour when comparing the background to build conditions, representing a 5.7 second increase in delay on this approach. The northbound approach of Main Street (Route 25) & Judd Road/Purdy Hill Road degrades from LOS D (54.6s delay) to LOS E (57.4s delay) during the weekday PM peak hour when comparing the background to build conditions, representing a 2.8 second increase in delay on this approach.

The maximum 95th percentile queue at the site driveway onto Main Street (Route 25) during either peak hour is reported as 2.6 vehicles, which can be accommodated with the proposed driveway improvements. The 95th percentile queue at the Shell/Dunkin' driveway onto Judd Road is reported as 0.6 vehicles, which can be accommodated by the existing driveway configuration. The queue lengths at the intersection of Main Street (Route 25) & Judd Road/Purdy Hill Road during the build condition are similar to the queue lengths experienced in the background conditions. The traffic impact analysis indicates that the anticipated minor increase in traffic volume associated with the proposed development can be accommodated without adverse impact on the operating conditions of the adjacent roadway network. Copies of the Synchro analysis reports are provided as a supporting document to this assessment.

Conclusion:

A traffic impact analysis of the study area intersections indicates that the proposed development at 127 Main Street (Route 25) in Monroe, Connecticut can be accommodated without adverse impacts on the study area roadway network. The project proposes the construction of seven (7) apartment buildings with a combined total of 196 dwelling units along with associated parking and recreational facilities for tenants. Site access is proposed via an existing full movement unsignalized site driveway onto Main Street (Route 25) with two lanes of egress. Access onto Judd Road from a connection to the existing site driveway serving the adjacent Shell gas station and Dunkin' drive-through is proposed to remain.

Based on the analysis, a total of 73 new trips (17 enter, 56 exit) are generated during the weekday AM peak hour and a total of 77 net new trips (47 enter, 30 exit) are generated during the weekday PM peak hour. Under the build condition in the year 2024, the site driveway is expected to operate at level of service F during the weekday AM and PM peak hours. This level of function is consistent with the operating conditions of left turning vehicles from the site driveway onto a principal arterial roadway during a peak hour. The maximum queue length during either peak hour is 2.6 vehicles which occurs during the weekday AM peak hour for left turning vehicles. Right turning vehicles exiting the site driveway experience minimal delay and queue.

It is the professional opinion of Solli Engineering that the traffic anticipated to be generated by the proposed development can be accommodated by the surrounding roadway network. There is no indication that the proposed development will have an adverse impact on the operations of the adjacent roadway network with the recommended driveway improvements.

If you have any questions or require any additional information, please call at your convenience.

Sincerely,
Solli Engineering, LLC

Collene Byrne

Collene Byrne
Project Manager

Kevin Solli, P.E.
Principal

Supporting Documents:

Site Location Map	(Figure 1)
2021 Existing Traffic Volumes	(Figure 2)
Trip Distribution	(Figure 3)
Trip Assignment	(Figure 4)
2024 Background Traffic Volumes	(Figure 5)
2024 Build Traffic Volumes	(Figure 6)
Fire Truck Circulation Figure	(Figure TT)
Sheet 2.11 – Site Plan	
Trip Generation Summary	
ITE Trip Generation Rate Sheets	
Synchro Analysis Reports	
CT DOT Volume Data	
CT DOT Speed Data	

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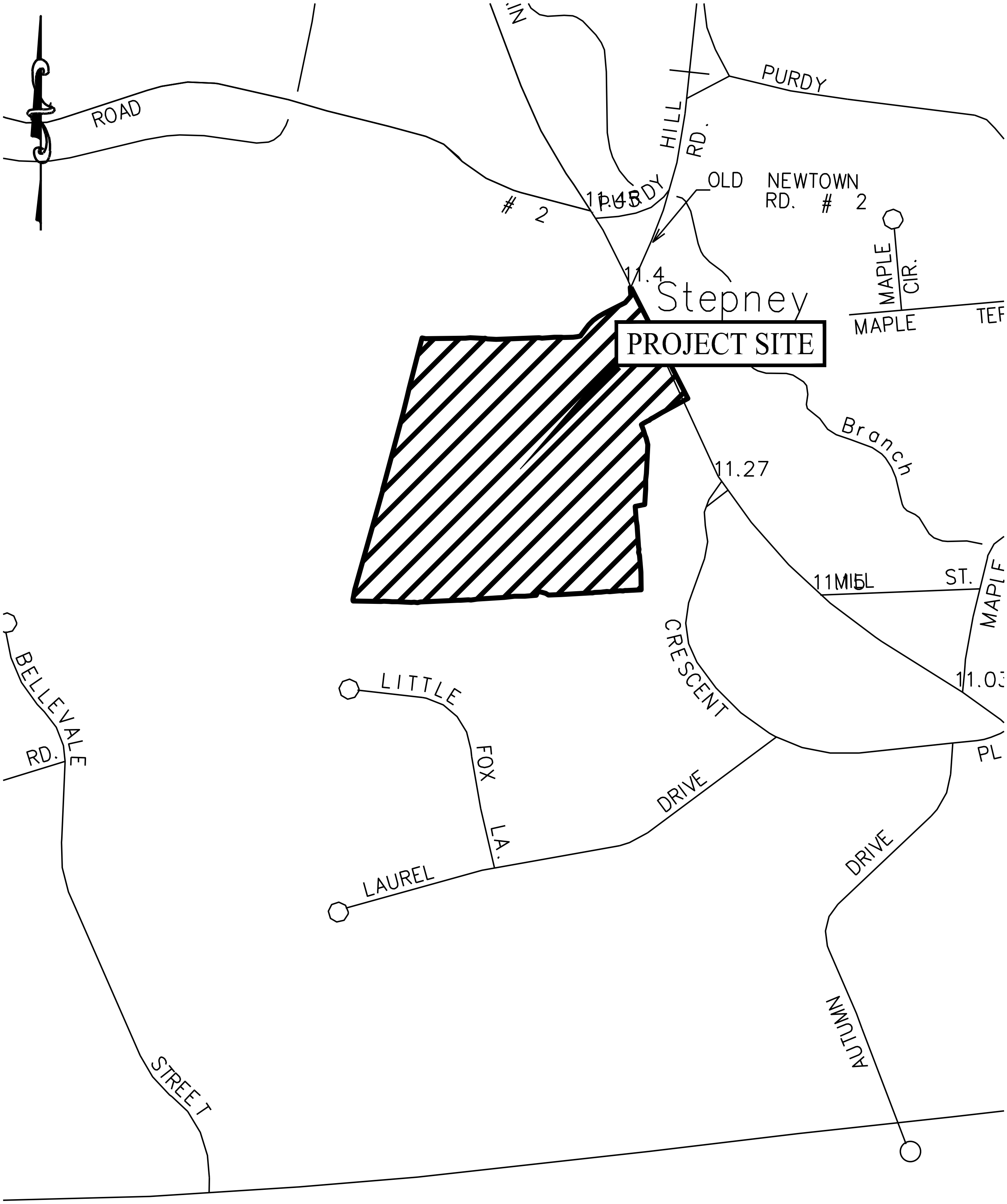

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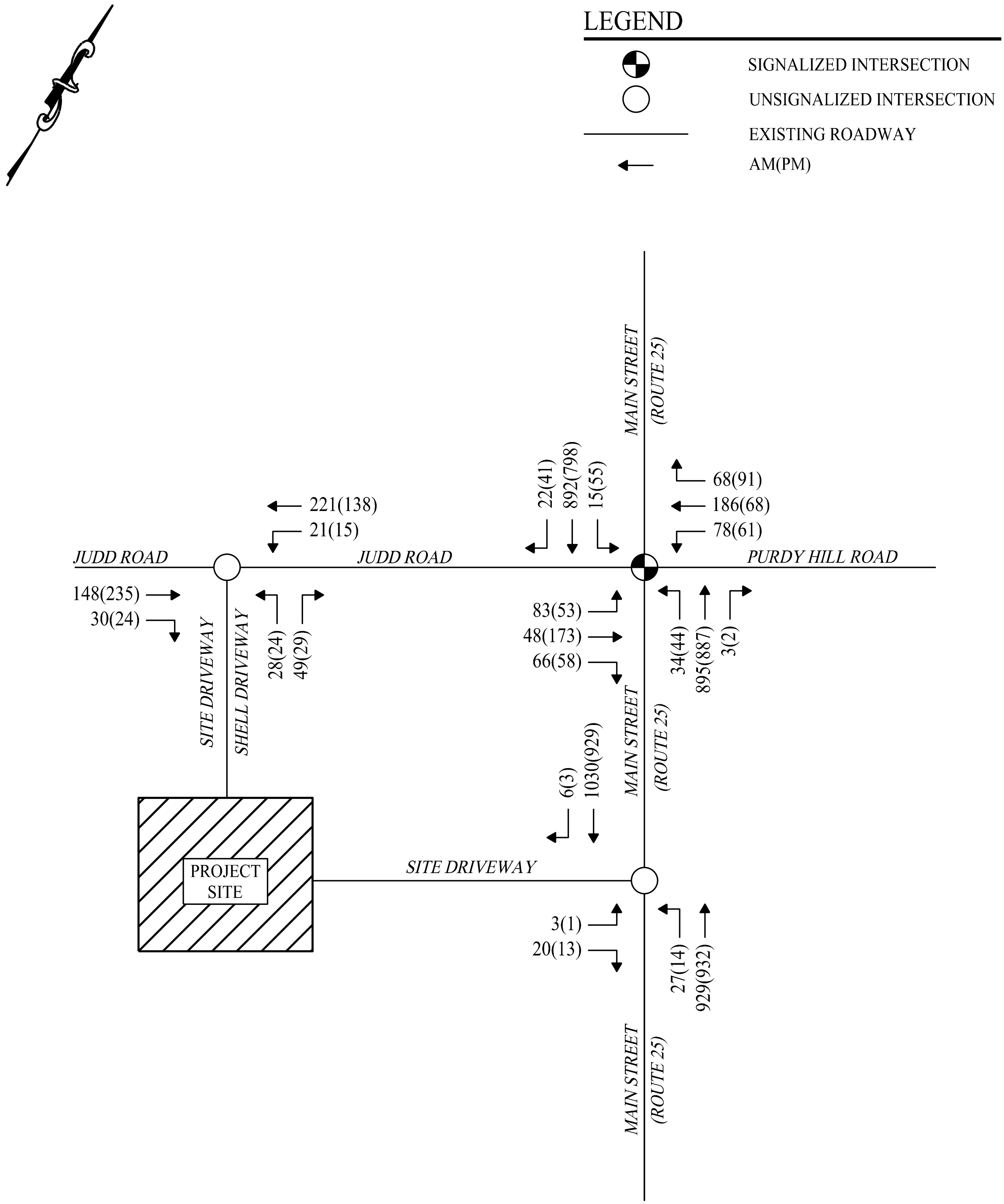
SITE LOCATION MAP

127 MAIN STREET (ROUTE 25)
MONROE, CT

Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 500'
Figure:	1



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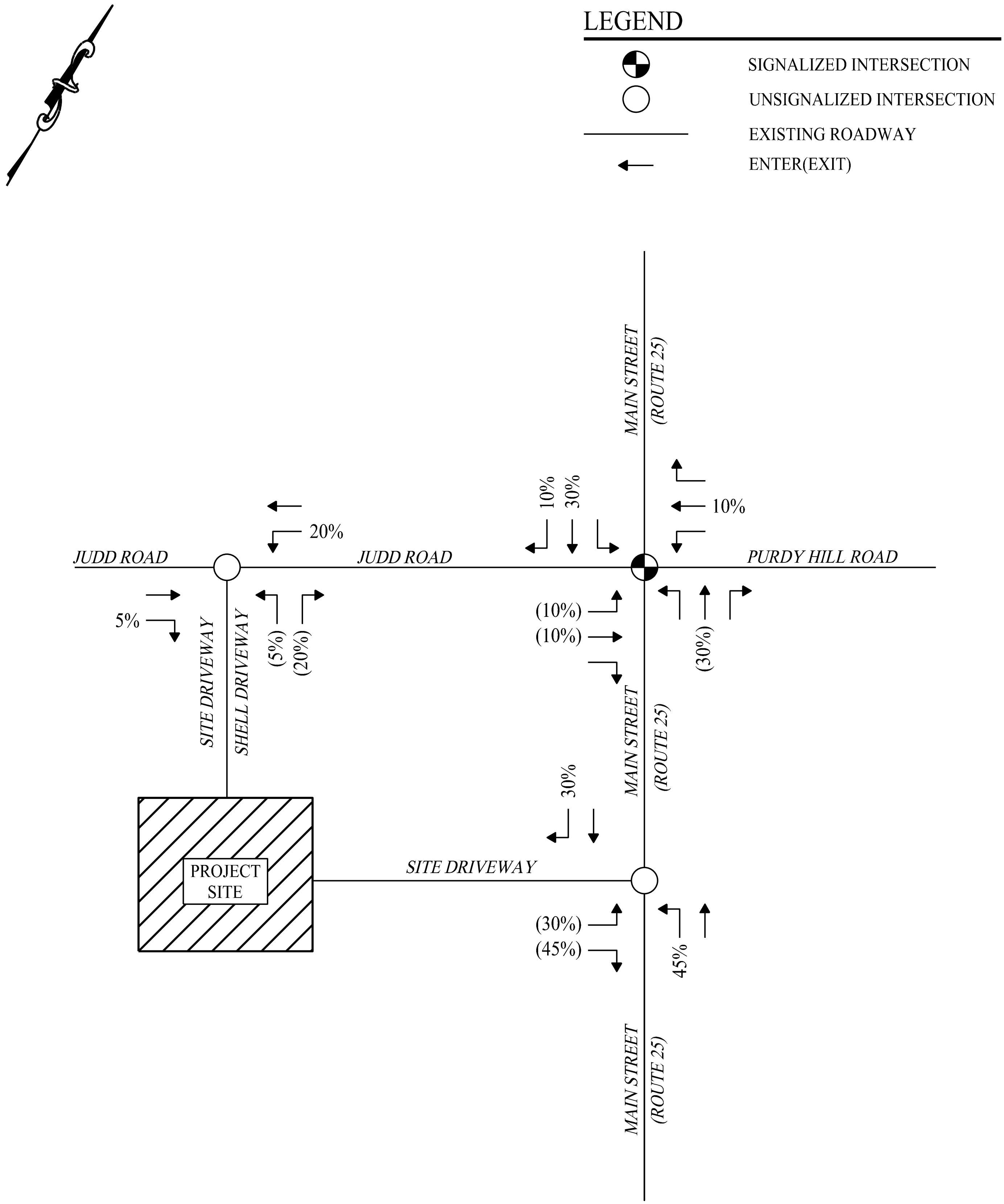
2021 EXISTING TRAFFIC VOLUMES

127 MAIN STREET (ROUTE 25)
MONROE, CT

Project #:	1910801
Plan Date:	08/16/21
Scale:	NTS
Figure:	2



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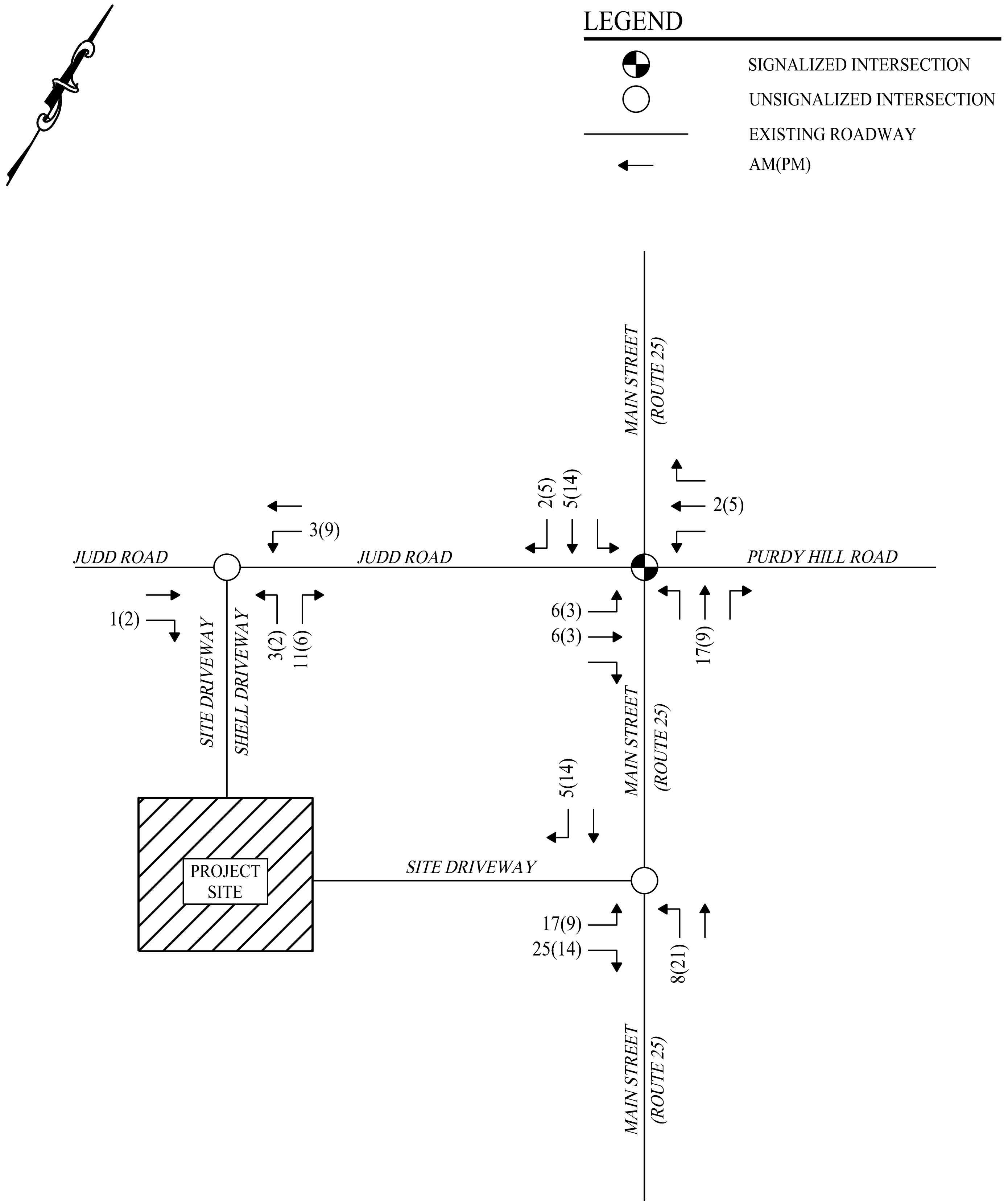
TRIP DISTRIBUTION

127 MAIN STREET (ROUTE 25)
MONROE, CT

Project #:	1910801
Plan Date:	08/16/21
Scale:	NTS
Figure:	3



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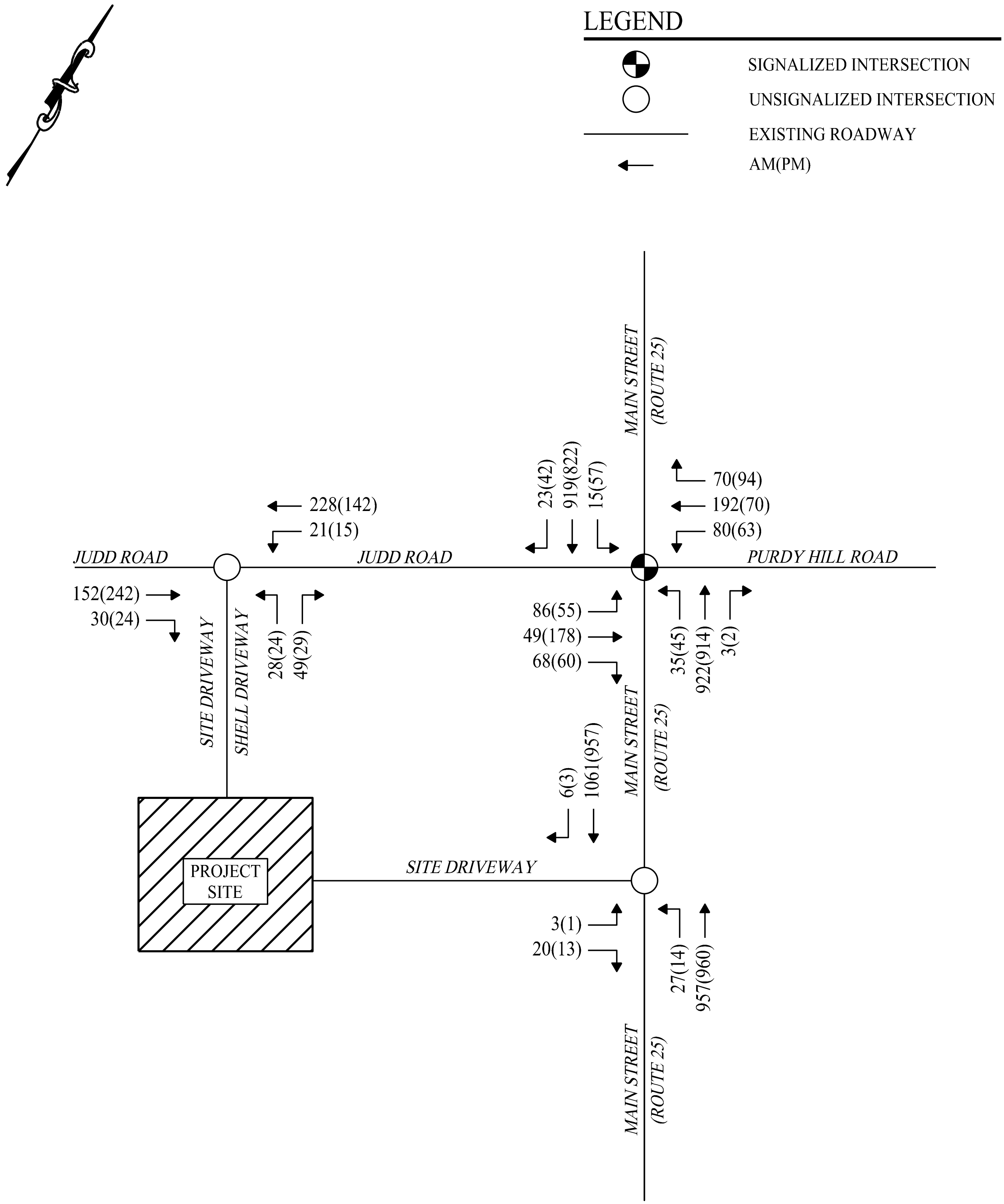
TRIP ASSIGNMENT

127 MAIN STREET (ROUTE 25)
MONROE, CT

Project #:	1910801
Plan Date:	01/11/23
Scale:	NTS
Figure:	4



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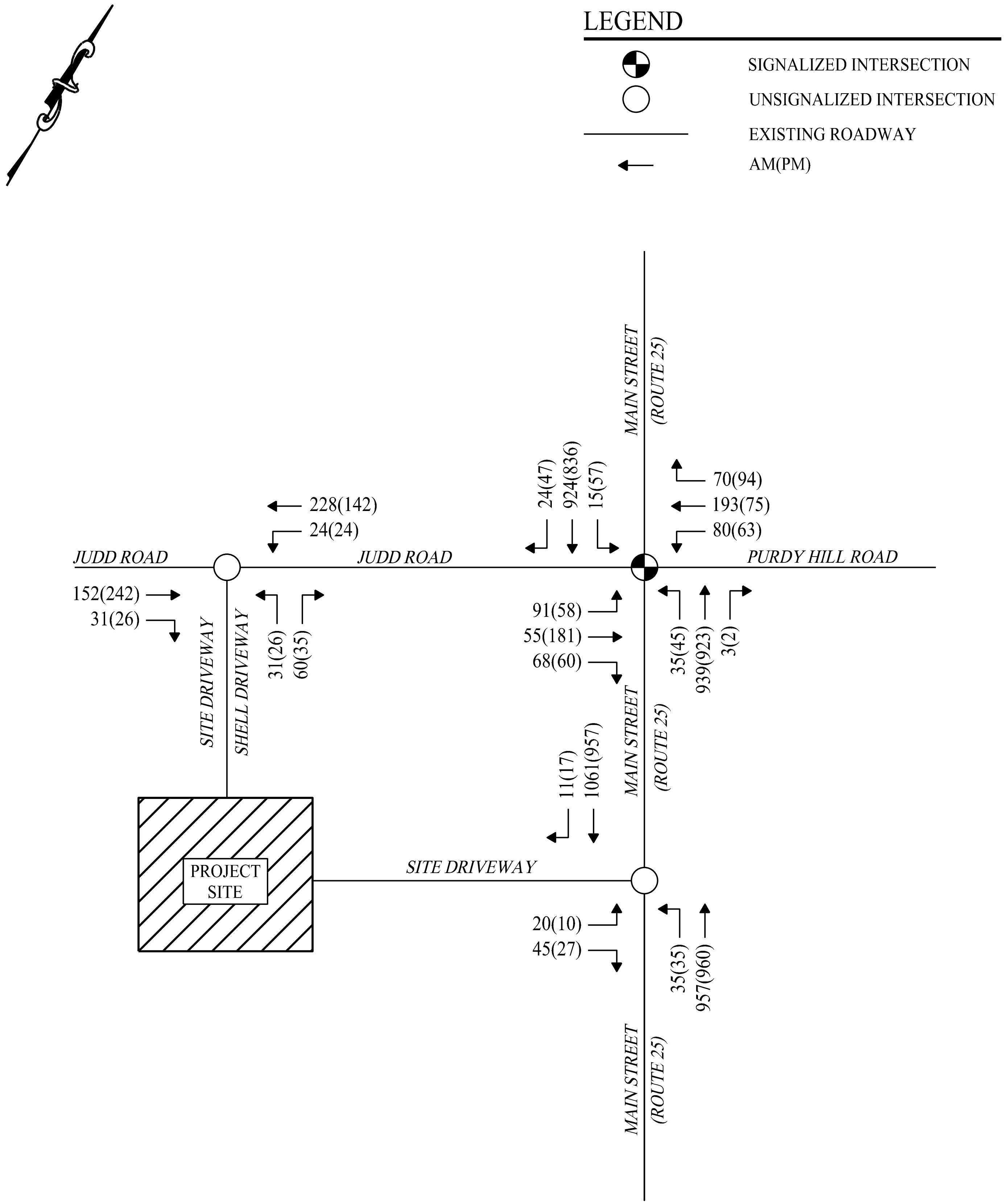
2024 BACKGROUND TRAFFIC VOLUMES

127 MAIN STREET (ROUTE 25)
MONROE, CT

Project #:	1910801
Plan Date:	01/11/23
Scale:	NTS
Figure:	5



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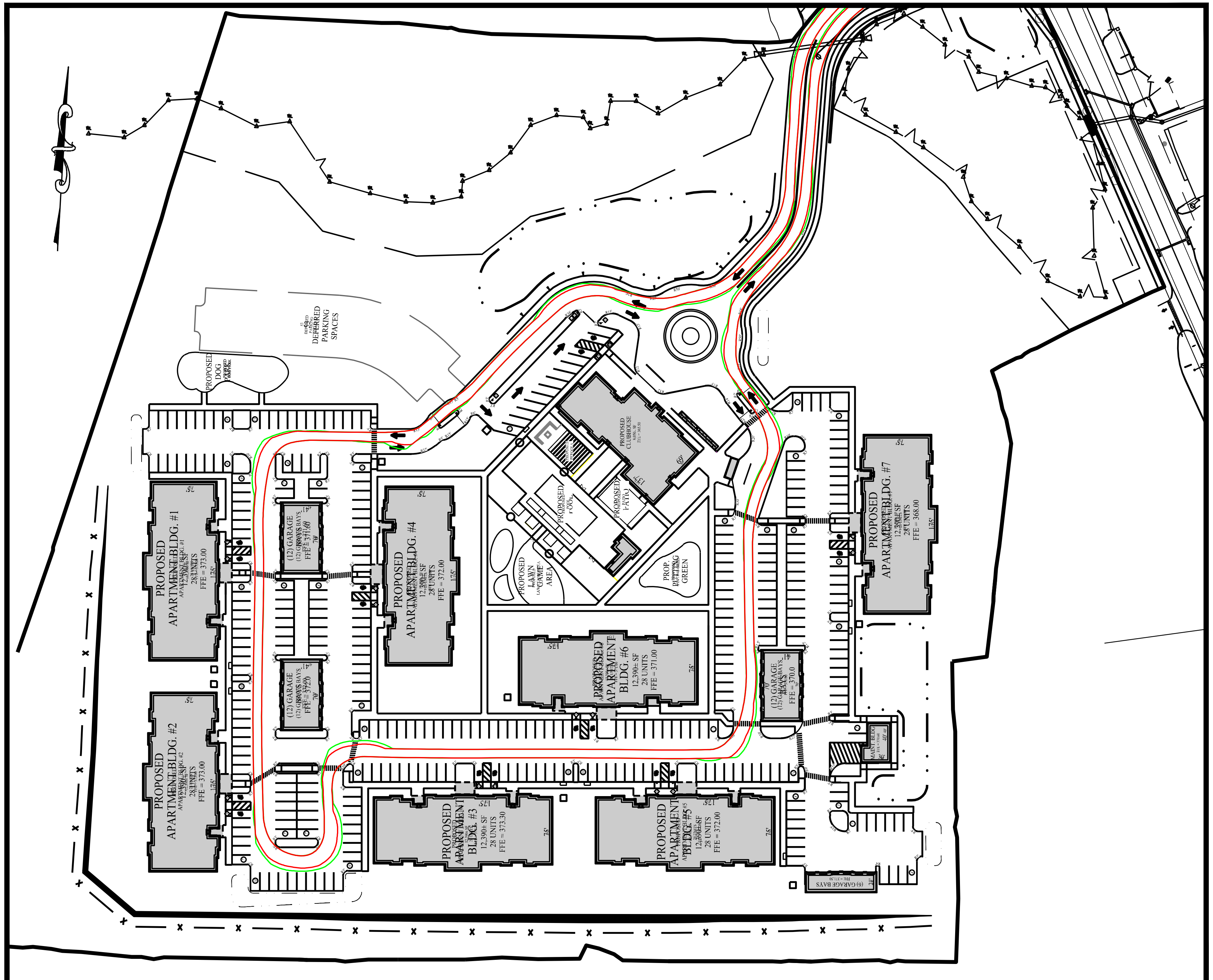
2024 BUILD TRAFFIC VOLUMES

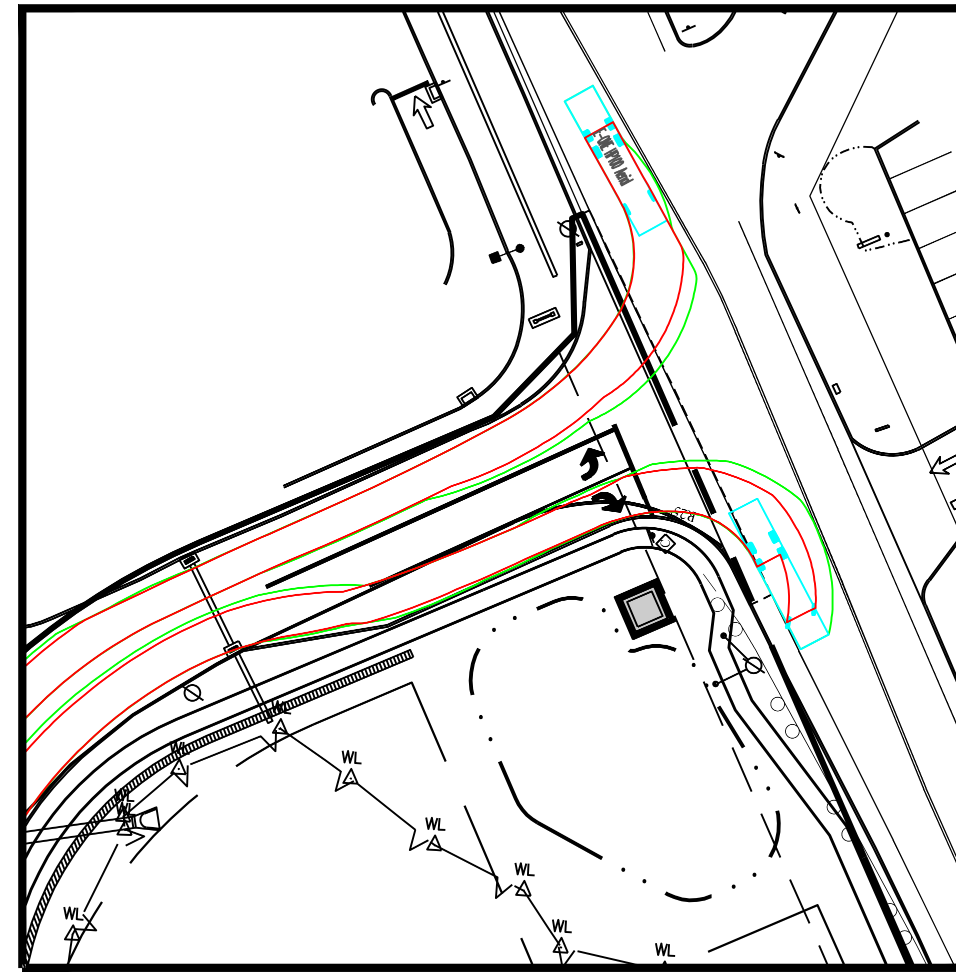
127 MAIN STREET (ROUTE 25)
MONROE, CT

Project #:	1910801
Plan Date:	01/11/23
Scale:	NTS
Figure:	6



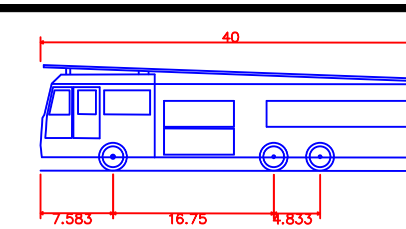
INTERNAL CIRCULATION

SCALE: 1" = 120'



ACCESS TO/FROM MAIN STREET (ROUTE 25)

SCALE: 1" = 50'



E-ONE HP100 Aerial	
Overall Length	40.000ft
Overall Width	8.333ft
Overall Body Height	11.000ft
Min Body Ground Clearance	1.393ft
Track Width	8.333ft
Lock-to-lock time	6.00s
Max Wheel Angle	45.00°

Rev. #:	Date	Description

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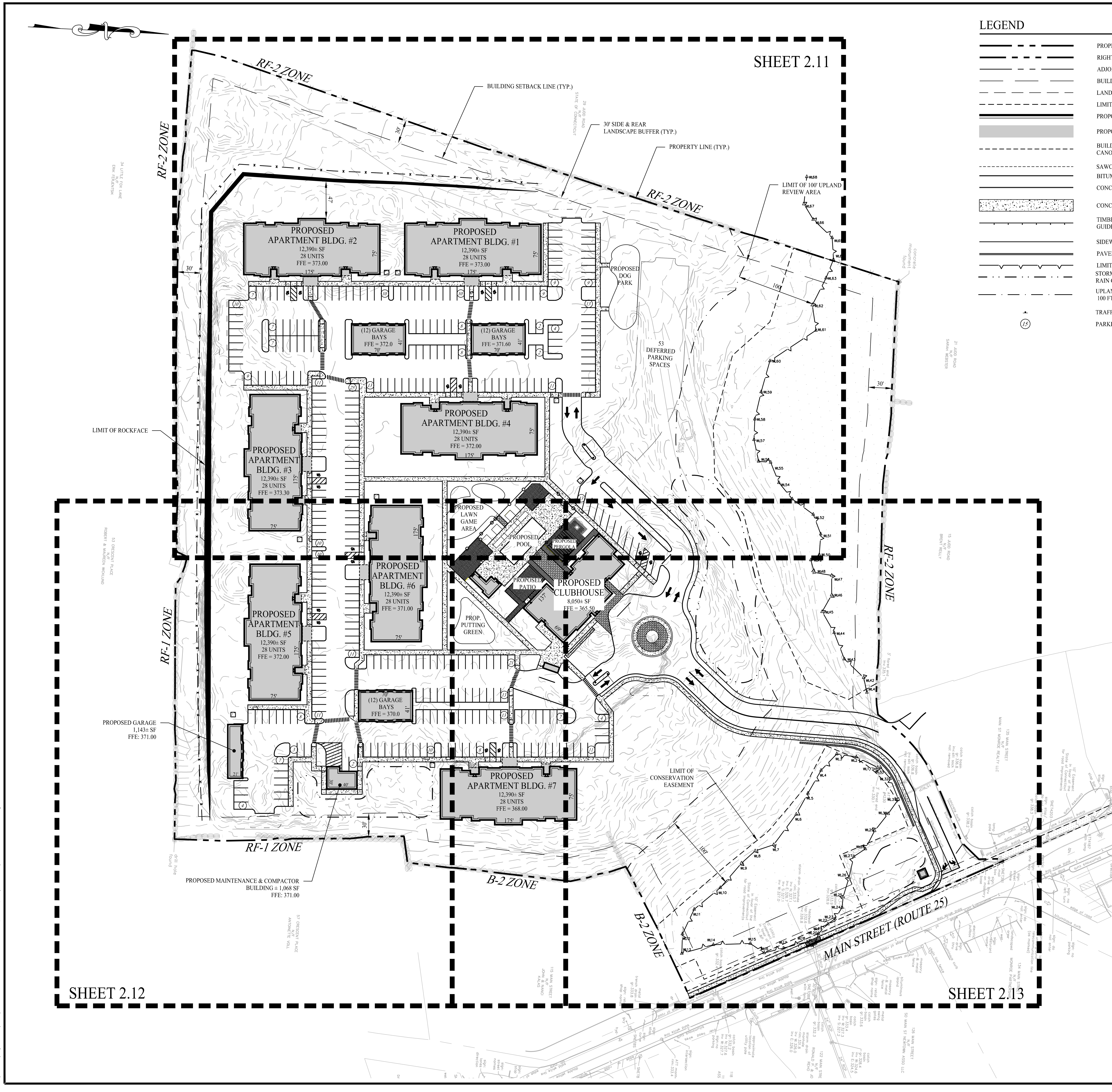
Drawn By:	MB
Checked By:	KMS
Project #:	1910801
Plan Date:	12/01/21
Scale:	AS NOTED

Project:
PROPOSED REDEVELOPMENT
127 MAIN STREET
MONROE, CT

Sheet Title:
FIRE TRUCK TURNING FIGURE

SHEET #:
FIG-TT



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- LIMIT OF EASEMENT
- PROPOSED BUILDING LIMITS
- PROPOSED BUILDING HATCH
- BUILDING OVERHANG LINE / CANOPY
- SAWCUT PAVEMENT LINE
- BITUMINOUS CONCRETE CURB
- CONCRETE CURB
- CONCRETE SIDEWALK / PAVEMENT
- TIMBER OR METAL BEAM GUIDE RAIL
- SIDEWALK LIMITS
- PAVEMENT STRIPING - YELLOW
- LIMIT OF WETLANDS
- STORMWATER BASIN/ RAIN GARDEN AREA
- UPLAND REVIEW AREA - 100 FT BUFFER
- TRAFFIC SIGN
- 15 PARKING SPACE COUNT

SITE PLAN NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL FINAL APPROVAL OF THIS PLAN.
2. ALL PROPOSED SITE WORK TO BE COMPLETED IN ACCORDANCE WITH ALL PERMITS, APPROVALS AND CONDITIONS OF APPROVALS ISSUED BY LOCAL, STATE AND/OR FEDERAL REVIEWING AGENCIES.
3. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON A DRAWING ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
4. ALL CONSTRUCTION SHALL COMPLY WITH CORPORATION STANDARDS, TOWN OF MONROE, STANDARDS CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
5. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL COUNTY AND TOWN CONSTRUCTION PERMITS, INCLUDING CONNECTICUT DOT & DPH PERMITS AND WATER CONNECTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
6. REFER TO PLANS BY SOLLI ENGINEERING, LLC DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
8. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN.
9. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING, AND THE RAISED CONCRETE SIDEWALKS AND RAMPS.
10. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
11. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
12. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
13. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT STIPULATIONS.
14. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.
15. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
16. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
17. THE CONTRACTOR SHALL ABIDE BY ALL OSHA FEDERAL STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
18. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAVEMENT MARKING PAINT MIXTURE PRIOR TO STRIPING.
19. PAVEMENT MARKING KEY:
   4" SYDL - 4" SOLID YELLOW DOUBLE LINE
   4" SWL - 4" SOLID WHITE LINE
   12" SWSB - 12" SOLID WHITE STOP BAR
20. PARKING SPACES SHALL BE STRIPED WITH 4" SWL; HATCHED AREA SHALL BE STRIPED WITH 4" SWL AT A 45° ANGLE, 2' ON CENTER. HATCHING, SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED BLUE. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.
21. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER.
22. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
23. THE ARCHITECT AND ENGINEER ARE NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
24. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
25. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
26. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "(800) 922-4455" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
27. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH CONNECTICUT DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.
28. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
29. THE SITE IS CURRENTLY SERVICED BY PUBLIC WATER.
30. NO PART OF THE PROJECT PARCEL IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.
31. WETLANDS WERE DELINEATED AND FLAGGED BY WILLIAM KENNY ASSOCIATES ON SEPTEMBER 22, 2021.
32. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.
33. THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS IN THE STATE HIGHWAY BY METHOD APPROVED BY CONNECTICUT DOT.

WETLAND AREA TABLE

AREA	LOT (ACRE)
LOT AREA	±19.667
WETLANDS ON LOT	±2.411
UPLAND REVIEW AREA ON LOT	±2.762

ZONING COMPLIANCE TABLE

ZONE: MAIN STREET DESIGN DISTRICT(MDD) OVERLAY IN B-1 BUSINESS ZONE

ZONING REQUIREMENT	ZONING STANDARD	EXISTING CONDITIONS	PROPOSED CONDITIONS
MINIMUM LOT AREA	1 AC	19.667 AC	19.667 ± AC
MINIMUM LOT FRONTAGE INDIVIDUAL LOTS - PUBLIC ROAD	125 FT	-	±437 FT
MINIMUM FRONT YARD	50 FT	-	±274 FT
MINIMUM SIDE YARD	30 FT	-	±70 FT
MINIMUM REAR YARD	30 FT	-	±51 FT
MINIMUM YARD ADJACENT TO RESIDENTIAL ZONE	30 FT	-	±51 FT
MAXIMUM BUILDING HEIGHT*	2.5 STORIES / 35 FEET *	-	<3 STORIES / 42 FEET*
MAXIMUM BUILDING COVERAGE	25%	-	10.36%
MAXIMUM DENSITY	15 UNITS/ACRE	-	9.56 UNITS/ACRE

*MDD ALLOWS 3 STORIES/42 FEET

PARKING COMPLIANCE TABLE

USE	SIZE GFA	ZONING STANDARD	REQUIRED SPACES
MULTIFAMILY HOUSING	196 UNITS	2 SPACES / UNIT	392
		TOTAL OFF-STREET PARKING REQUIRED	392
		PROPOSED STANDARD PARKING SPACES	376
		PROPOSED ADA ACCESSIBLE PARKING SPACES	16
		TOTAL PROPOSED PARKING SPACES	392
		DEFERRED PARKING SPACES	53

Rev. #:	Date	Description

Graphic Scale: 60 0 60 120

SOLLI ENGINEERING

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

Drawn By:	BCP
Checked By:	CJP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 60'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: OVERALL SITE PLAN

Sheet #: 2.10

New Trip Generation Summary Proposed Development, Monroe, Connecticut								
			AM Peak Hour			PM Peak Hour		
	Variable	LUC	Enter	Exit	Total	Enter	Exit	Total
Multifamily Housing (Mid-Rise)	196	221	17	56	73	47	30	77
Total New Trips			**17**	**56**	**73**	**47**	**30**	**77**

Source: ITE Trip Generation, 11th Edition

Land Use	Time Period	Avg Rate	Entering	Exiting
LUC 221 - Multifamily Housing (Mid-Rise)	AM	0.37	23%	77%
	PM	0.39	61%	39%

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Land Use: 221
Multifamily Housing (Mid-Rise)

Description

Mid-rise multifamily housing includes apartments and condominiums located in a building that has between four and 10 floors of living space. Access to individual dwelling units is through an outside building entrance, a lobby, elevator, and a set of hallways.

Multifamily housing (low-rise) (Land Use 220), multifamily housing (high-rise) (Land Use 222), off-campus student apartment (mid-rise) (Land Use 226), and mid-rise residential with ground-floor commercial (Land Use 231) are related land uses.

Land Use Subcategory

Data are presented for two subcategories for this land use: (1) not close to rail transit and (2) close to rail transit. A site is considered close to rail transit if the walking distance between the residential site entrance and the closest rail transit station entrance is ½ mile or less.

Additional Data

For the six sites for which both the number of residents and the number of occupied dwelling units were available, there were an average of 2.5 residents per occupied dwelling unit.

For the five sites for which the numbers of both total dwelling units and occupied dwelling units were available, an average of 96 percent of the total dwelling units were occupied.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

It is expected that the number of bedrooms and number of residents are likely correlated to the trips generated by a residential site. To assist in future analysis, trip generation studies of all multifamily housing should attempt to obtain information on occupancy rate and on the mix of residential unit sizes (i.e., number of units by number of bedrooms at the site complex).

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in Alberta (CAN), California, District of Columbia, Florida, Georgia, Illinois, Maryland, Massachusetts, Minnesota, Montana, New Jersey, New York, Ontario (CAN), Oregon, Utah, and Virginia.

Source Numbers

168, 188, 204, 305, 306, 321, 818, 857, 862, 866, 901, 904, 910, 949, 951, 959, 963, 964, 966, 967, 969, 970, 1004, 1014, 1022, 1023, 1025, 1031, 1032, 1035, 1047, 1056, 1057, 1058, 1071, 1076

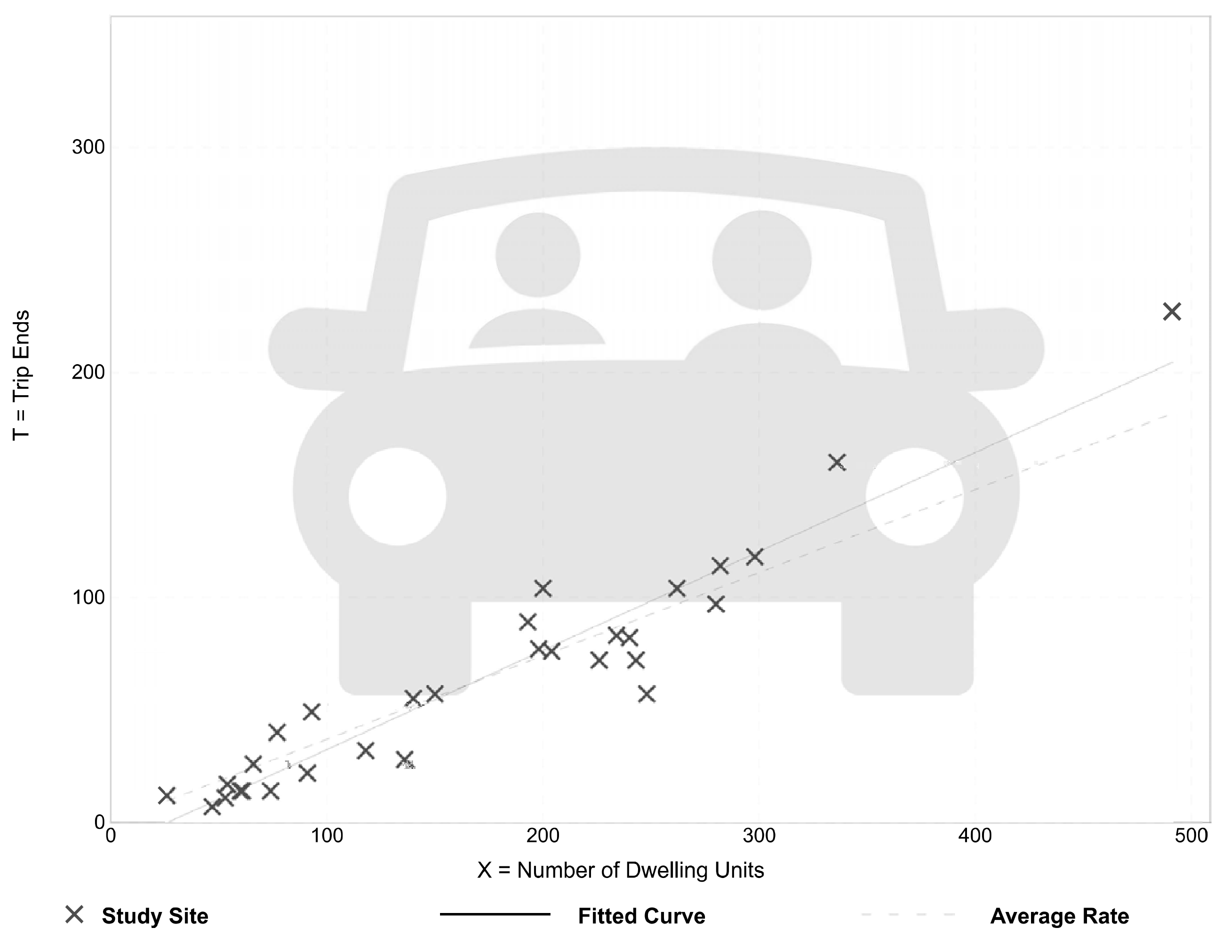
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 7 and 9 a.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	30
Avg. Num. of Dwelling Units:	173
Directional Distribution:	23% entering, 77% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.37	0.15 - 0.53	0.09

Data Plot and Equation



Fitted Curve Equation: $T = 0.44(X) - 11.61$ **$R^2 = 0.91$**

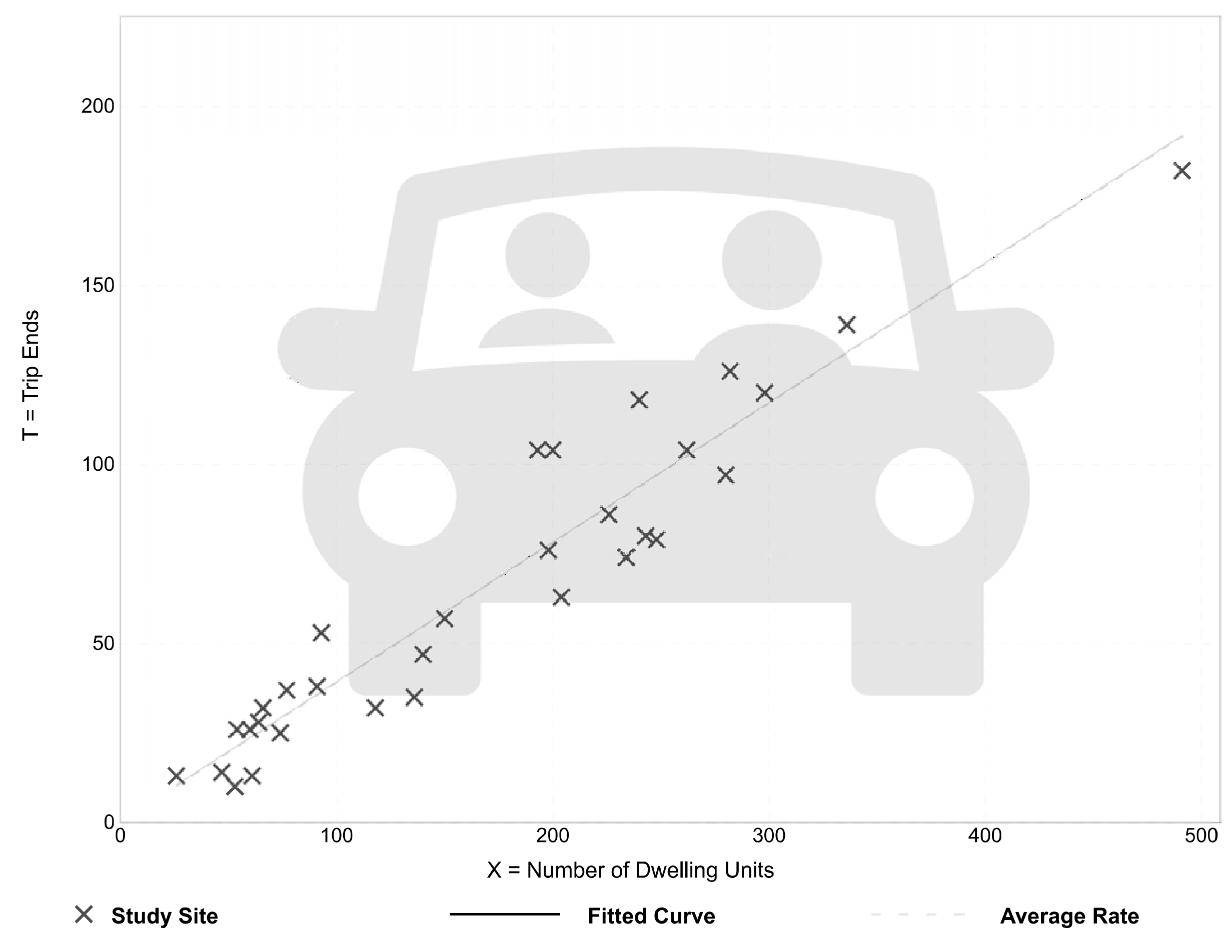
Multifamily Housing (Mid-Rise)
Not Close to Rail Transit (221)

Vehicle Trip Ends vs:	**Dwelling Units**
On a:	**Weekday,**
	Peak Hour of Adjacent Street Traffic,
	One Hour Between 4 and 6 p.m.
Setting/Location:	**General Urban/Suburban**
Number of Studies:	31
Avg. Num. of Dwelling Units:	169
Directional Distribution:	61% entering, 39% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.39	0.19 - 0.57	0.08

Data Plot and Equation



Fitted Curve Equation: $T = 0.39(X) + 0.34$

$R^2 = 0.91$

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	20	27	929	1030	6
Future Volume (vph)	3	20	27	929	1030	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.882				0.999	
Flt Protected	0.994			0.999		
Satd. Flow (prot)	1216	0	0	1768	1799	0
Flt Permitted	0.994			0.999		
Satd. Flow (perm)	1216	0	0	1768	1799	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	512			294	395	
Travel Time (s)	14.0			5.0	6.7	
Peak Hour Factor	0.72	0.72	0.88	0.88	0.91	0.91
Heavy Vehicles (%)	100%	28%	19%	7%	5%	86%
Adj. Flow (vph)	4	28	31	1056	1132	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	1087	1139	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 80.7%	ICU Level of Service D
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	20	27	929	1030	6
Future Vol, veh/h	3	20	27	929	1030	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	88	88	91	91
Heavy Vehicles, %	100	28	19	7	5	86
Mvmt Flow	4	28	31	1056	1132	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2254	1136	1139	0	-	0
Stage 1	1136	-	-	-	-	-
Stage 2	1118	-	-	-	-	-
Critical Hdwy	7.4	6.48	4.29	-	-	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	3.552	2.371	-	-	-
Pot Cap-1 Maneuver	23	218	555	-	-	-
Stage 1	201	-	-	-	-	-
Stage 2	206	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	20	218	555	-	-	-
Mov Cap-2 Maneuver	20	-	-	-	-	-
Stage 1	174	-	-	-	-	-
Stage 2	206	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	61	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	555	-	95	-	-
HCM Lane V/C Ratio	0.055	-	0.336	-	-
HCM Control Delay (s)	11.9	0	61	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	1.3	-	-

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	34	895	3	15	892	22	83	48	66	78	186	68
Future Volume (vph)	34	895	3	15	892	22	83	48	66	78	186	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	10	12	12
Storage Length (ft)	150		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			70			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996			0.913			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1874	0	1787	1735	0	1685	1824	0
Flt Permitted	0.950			0.950			0.295			0.640		
Satd. Flow (perm)	1805	1881	0	1805	1874	0	555	1735	0	1135	1824	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			25			30	
Link Distance (ft)		395			453			281			524	
Travel Time (s)		6.7			7.7			7.7			11.9	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%
Adj. Flow (vph)	39	1017	3	16	980	24	104	60	83	98	233	85
Shared Lane Traffic (%)												
Lane Group Flow (vph)	39	1020	0	16	1004	0	104	143	0	98	318	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	2		3	2		3	4		4	3	
Detector Template												
Leading Detector (ft)	26	306		26	296		26	41		41	26	
Trailing Detector (ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Size(ft)	6	6		6	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	5	300		5	290		5	5		5	5	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	20			20			20	20		20	20	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 4 Position(ft)								35		35		
Detector 4 Size(ft)								6		6		
Detector 4 Type								Cl+Ex		Cl+Ex		
Detector 4 Channel												
Detector 4 Extend (s)								0.0		0.0		
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		
Detector Phase	1	6		5	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.8	31.0		11.8	31.0		11.4	11.4		11.4	11.4	
Total Split (s)	18.8	66.0		18.8	66.0		31.4	31.4		31.4	31.4	
Total Split (%)	16.2%	56.8%		16.2%	56.8%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	12.0	60.0		12.0	60.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.2		3.0	4.2		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.8	1.8		3.8	1.8		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.0		6.8	6.0		6.4	6.4		6.4	6.4	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.5		1.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	6.7	63.7		5.6	60.3		24.8	24.8		24.8	24.8	
Actuated g/C Ratio	0.06	0.60		0.05	0.57		0.23	0.23		0.23	0.23	
v/c Ratio	0.34	0.90		0.17	0.94		0.80	0.35		0.37	0.74	
Control Delay	57.6	32.5		54.7	40.4		81.7	38.4		40.7	50.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	57.6	32.5		54.7	40.4		81.7	38.4		40.7	50.9	
LOS	E	C		D	D		F	D		D	D	
Approach Delay		33.4			40.6			56.6			48.5	
Approach LOS		C			D			E			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 116.2	
Actuated Cycle Length: 105.9	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 40.5	Intersection LOS: D
Intersection Capacity Utilization 82.5%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Main St. (Rt. 25) & Purdy Hill Rd. /Judd Rd.

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	39	1020	16	1004	104	143	98	318
v/c Ratio	0.34	0.90	0.17	0.94	0.80	0.35	0.37	0.74
Control Delay	57.6	32.5	54.7	40.4	81.7	38.4	40.7	50.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	32.5	54.7	40.4	81.7	38.4	40.7	50.9
Queue Length 50th (ft)	27	487	11	672	71	86	59	213
Queue Length 95th (ft)	61	#976	35	#1024	#148	132	101	281
Internal Link Dist (ft)		315		373		201		444
Turn Bay Length (ft)	150		100		125		100	
Base Capacity (vph)	205	1130	205	1067	131	411	269	432
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.90	0.08	0.94	0.79	0.35	0.36	0.74

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	28	49	148	30	21	221
Future Volume (vph)	28	49	148	30	21	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.977			
Flt Protected	0.982					0.996
Satd. Flow (prot)	1549	0	1823	0	0	1752
Flt Permitted	0.982					0.996
Satd. Flow (perm)	1549	0	1823	0	0	1752
Link Speed (mph)	25		25			25
Link Distance (ft)	264		249			281
Travel Time (s)	7.2		6.8			7.7
Peak Hour Factor	0.77	0.77	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	12%	9%	2%	1%	19%	7%
Adj. Flow (vph)	36	64	185	38	26	276
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	0	223	0	0	302
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 37.0%		ICU Level of Service A
Analysis Period (min) 15		

Intersection						
Int Delay, s/veh	2.2					

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	28	49	148	30	21	221
Future Vol, veh/h	28	49	148	30	21	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	80	80	80	80
Heavy Vehicles, %	12	9	2	1	19	7
Mvmt Flow	36	64	185	38	26	276

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	532	204	0	0	223	0
Stage 1	204	-	-	-	-	-
Stage 2	328	-	-	-	-	-
Critical Hdwy	6.52	6.29	-	-	4.29	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.381	-	-	2.371	-
Pot Cap-1 Maneuver	491	819	-	-	1252	-
Stage 1	807	-	-	-	-	-
Stage 2	708	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	479	819	-	-	1252	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	807	-	-	-	-	-
Stage 2	690	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	11.5	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	651	1252	-	-	-
HCM Lane V/C Ratio	0.154	0.021	-	-	-
HCM Control Delay (s)	11.5	7.9	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.5	0.1	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	13	14	932	929	3
Future Volume (vph)	1	13	14	932	929	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.872					
Flt Protected	0.997			0.999		
Satd. Flow (prot)	1590	0	0	1861	1863	0
Flt Permitted	0.997			0.999		
Satd. Flow (perm)	1590	0	0	1861	1863	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	512			294	395	
Travel Time (s)	14.0			5.0	6.7	
Peak Hour Factor	0.72	0.72	0.85	0.85	0.80	0.80
Heavy Vehicles (%)	2%	4%	2%	2%	2%	2%
Adj. Flow (vph)	1	18	16	1096	1161	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	1112	1165	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 70.2%	ICU Level of Service C
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0.3					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	13	14	932	929	3
Future Vol, veh/h	1	13	14	932	929	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	85	85	80	80
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	1	18	16	1096	1161	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2291	1163	1165	0	-	0
Stage 1	1163	-	-	-	-	-
Stage 2	1128	-	-	-	-	-
Critical Hdwy	6.42	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	43	235	600	-	-	-
Stage 1	297	-	-	-	-	-
Stage 2	309	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	40	235	600	-	-	-
Mov Cap-2 Maneuver	40	-	-	-	-	-
Stage 1	277	-	-	-	-	-
Stage 2	309	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.3	0.2	0
HCM LOS	D		

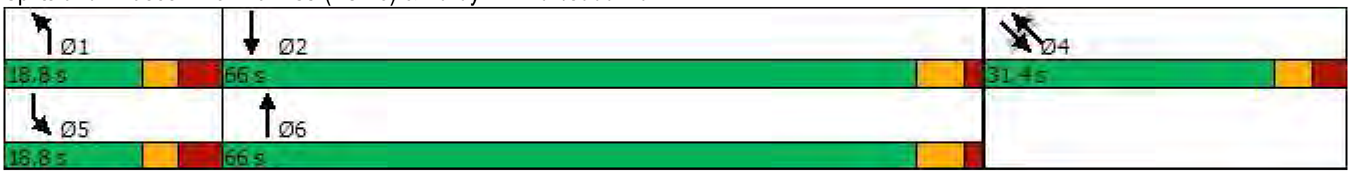
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	600	-	174	-	-
HCM Lane V/C Ratio	0.027	-	0.112	-	-
HCM Control Delay (s)	11.2	0	28.3	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	44	887	2	55	798	41	53	173	58	61	68	91
Future Volume (vph)	44	887	2	55	798	41	53	173	58	61	68	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	10	12	12
Storage Length (ft)	150		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			70			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.993			0.962			0.914	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1869	0	1787	1828	0	1685	1729	0
Flt Permitted	0.950			0.950			0.502			0.289		
Satd. Flow (perm)	1805	1881	0	1805	1869	0	944	1828	0	512	1729	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			25			30	
Link Distance (ft)		395			453			281			524	
Travel Time (s)		6.7			7.7			7.7			11.9	
Peak Hour Factor	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.81	0.81
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	1%	0%
Adj. Flow (vph)	52	1044	2	69	998	51	66	216	73	75	84	112
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	1046	0	69	1049	0	66	289	0	75	196	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	2		3	2		3	4		4	3	
Detector Template												
Leading Detector (ft)	26	306		26	296		26	41		41	26	
Trailing Detector (ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Size(ft)	6	6		6	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	5	300		5	290		5	5		5	5	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	20			20			20	20		20	20	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 4 Position(ft)								35		35		
Detector 4 Size(ft)								6		6		
Detector 4 Type								Cl+Ex		Cl+Ex		
Detector 4 Channel												
Detector 4 Extend (s)								0.0		0.0		
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		
Detector Phase	1	6		5	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.8	31.0		11.8	31.0		11.4	11.4		11.4	11.4	
Total Split (s)	18.8	66.0		18.8	66.0		31.4	31.4		31.4	31.4	
Total Split (%)	16.2%	56.8%		16.2%	56.8%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	12.0	60.0		12.0	60.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.2		3.0	4.2		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.8	1.8		3.8	1.8		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.0		6.8	6.0		6.4	6.4		6.4	6.4	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.5		1.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	7.4	60.8		8.2	61.6		20.3	20.3		20.3	20.3	
Actuated g/C Ratio	0.07	0.57		0.08	0.58		0.19	0.19		0.19	0.19	
v/c Ratio	0.41	0.97		0.49	0.97		0.36	0.83		0.77	0.59	
Control Delay	59.6	46.0		61.3	44.6		44.8	61.6		87.0	47.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	59.6	46.0		61.3	44.6		44.8	61.6		87.0	47.6	
LOS	E	D		E	D		D	E		F	D	
Approach Delay		46.7			45.7			58.4			58.5	
Approach LOS		D			D			E			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 116.2	
Actuated Cycle Length: 105.8	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 48.9	Intersection LOS: D
Intersection Capacity Utilization 79.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Main St. (Rt. 25) & Purdy Hill Rd. /Judd Rd.



Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	52	1046	69	1049	66	289	75	196
v/c Ratio	0.41	0.97	0.49	0.97	0.36	0.83	0.77	0.59
Control Delay	59.6	46.0	61.3	44.6	44.8	61.6	87.0	47.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.6	46.0	61.3	44.6	44.8	61.6	87.0	47.6
Queue Length 50th (ft)	36	~737	47	~719	40	194	50	125
Queue Length 95th (ft)	73	#1022	85	#911	75	262	#109	183
Internal Link Dist (ft)		315		373		201		444
Turn Bay Length (ft)	150		100		125		100	
Base Capacity (vph)	207	1080	207	1087	225	437	122	413
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.97	0.33	0.97	0.29	0.66	0.61	0.47

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	24	29	235	24	15	138
Future Volume (vph)	24	29	235	24	15	138
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.927		0.987			
Flt Protected	0.978					0.995
Satd. Flow (prot)	1723	0	1858	0	0	1844
Flt Permitted	0.978					0.995
Satd. Flow (perm)	1723	0	1858	0	0	1844
Link Speed (mph)	25		25			25
Link Distance (ft)	264		249			281
Travel Time (s)	7.2		6.8			7.7
Peak Hour Factor	0.78	0.78	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	1%	0%	7%	2%
Adj. Flow (vph)	31	37	294	30	19	173
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	324	0	0	192
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 29.8% ICU Level of Service A

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.6					

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	24	29	235	24	15	138
Future Vol, veh/h	24	29	235	24	15	138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	80	80	80	80
Heavy Vehicles, %	0	0	1	0	7	2
Mvmt Flow	31	37	294	30	19	173

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	520	309	0	0	324	0
Stage 1	309	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	520	736	-	-	1208	-
Stage 1	749	-	-	-	-	-
Stage 2	829	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	511	736	-	-	1208	-
Mov Cap-2 Maneuver	511	-	-	-	-	-
Stage 1	749	-	-	-	-	-
Stage 2	815	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	11.6	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	614	1208	-	-	-
HCM Lane V/C Ratio	0.111	0.016	-	-	-
HCM Control Delay (s)	11.6	8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	20	27	957	1061	6
Future Volume (vph)	3	20	27	957	1061	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.882				0.999	
Flt Protected	0.994			0.999		
Satd. Flow (prot)	1216	0	0	1768	1799	0
Flt Permitted	0.994			0.999		
Satd. Flow (perm)	1216	0	0	1768	1799	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	512			294	395	
Travel Time (s)	14.0			5.0	6.7	
Peak Hour Factor	0.72	0.72	0.88	0.88	0.91	0.91
Heavy Vehicles (%)	100%	28%	19%	7%	5%	86%
Adj. Flow (vph)	4	28	31	1088	1166	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	32	0	0	1119	1173	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 82.1%	ICU Level of Service E
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	1.1					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	20	27	957	1061	6
Future Vol, veh/h	3	20	27	957	1061	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	88	88	91	91
Heavy Vehicles, %	100	28	19	7	5	86
Mvmt Flow	4	28	31	1088	1166	7

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2320	1170	1173	0	-	0
Stage 1	1170	-	-	-	-	-
Stage 2	1150	-	-	-	-	-
Critical Hdwy	7.4	6.48	4.29	-	-	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	3.552	2.371	-	-	-
Pot Cap-1 Maneuver	21	208	539	-	-	-
Stage 1	192	-	-	-	-	-
Stage 2	197	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	18	208	539	-	-	-
Mov Cap-2 Maneuver	18	-	-	-	-	-
Stage 1	164	-	-	-	-	-
Stage 2	197	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	67.6	0.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	539	-	88	-	-
HCM Lane V/C Ratio	0.057	-	0.363	-	-
HCM Control Delay (s)	12.1	0	67.6	-	-
HCM Lane LOS	B	A	F	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	-	-

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	35	922	3	15	919	23	86	49	68	80	192	70
Future Volume (vph)	35	922	3	15	919	23	86	49	68	80	192	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	10	12	12
Storage Length (ft)	150		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			70			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996			0.913			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1874	0	1787	1735	0	1685	1824	0
Flt Permitted	0.950			0.950			0.280			0.634		
Satd. Flow (perm)	1805	1881	0	1805	1874	0	527	1735	0	1124	1824	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			25			30	
Link Distance (ft)		395			453			281			524	
Travel Time (s)		6.7			7.7			7.7			11.9	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%
Adj. Flow (vph)	40	1048	3	16	1010	25	108	61	85	100	240	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	1051	0	16	1035	0	108	146	0	100	328	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	2		3	2		3	4		4	3	
Detector Template												
Leading Detector (ft)	26	306		26	296		26	41		41	26	
Trailing Detector (ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Size(ft)	6	6		6	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	5	300		5	290		5	5		5	5	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	20			20			20	20		20	20	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 4 Position(ft)								35		35		
Detector 4 Size(ft)								6		6		
Detector 4 Type								Cl+Ex		Cl+Ex		
Detector 4 Channel												
Detector 4 Extend (s)								0.0		0.0		
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		
Detector Phase	1	6		5	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.8	31.0		11.8	31.0		11.4	11.4		11.4	11.4	
Total Split (s)	18.8	66.0		18.8	66.0		31.4	31.4		31.4	31.4	
Total Split (%)	16.2%	56.8%		16.2%	56.8%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	12.0	60.0		12.0	60.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.2		3.0	4.2		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.8	1.8		3.8	1.8		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.0		6.8	6.0		6.4	6.4		6.4	6.4	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.5		1.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	6.7	63.7		5.6	60.3		25.1	25.1		25.1	25.1	
Actuated g/C Ratio	0.06	0.60		0.05	0.57		0.24	0.24		0.24	0.24	
v/c Ratio	0.35	0.93		0.17	0.97		0.87	0.36		0.38	0.76	
Control Delay	57.9	36.4		54.8	46.6		95.4	38.5		41.0	51.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	57.9	36.4		54.8	46.6		95.4	38.5		41.0	51.9	
LOS	E	D		D	D		F	D		D	D	
Approach Delay		37.2			46.7			62.6			49.3	
Approach LOS		D			D			E			D	

Intersection Summary	
Area Type: Other	
Cycle Length: 116.2	
Actuated Cycle Length: 106.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.97	
Intersection Signal Delay: 44.9	Intersection LOS: D
Intersection Capacity Utilization 84.6%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 5: Main St. (Rt. 25) & Purdy Hill Rd. /Judd Rd.

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	40	1051	16	1035	108	146	100	328
v/c Ratio	0.35	0.93	0.17	0.97	0.87	0.36	0.38	0.76
Control Delay	57.9	36.4	54.8	46.6	95.4	38.5	41.0	51.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	36.4	54.8	46.6	95.4	38.5	41.0	51.9
Queue Length 50th (ft)	28	520	11	~783	75	88	61	222
Queue Length 95th (ft)	62	#1023	35	#1074	#160	134	102	291
Internal Link Dist (ft)		315		373		201		444
Turn Bay Length (ft)	150		100		125		100	
Base Capacity (vph)	204	1127	204	1063	124	410	265	431
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.93	0.08	0.97	0.87	0.36	0.38	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	28	49	152	30	21	228
Future Volume (vph)	28	49	152	30	21	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.977			
Flt Protected	0.982					0.996
Satd. Flow (prot)	1549	0	1823	0	0	1752
Flt Permitted	0.982					0.996
Satd. Flow (perm)	1549	0	1823	0	0	1752
Link Speed (mph)	25		25			25
Link Distance (ft)	264		249			281
Travel Time (s)	7.2		6.8			7.7
Peak Hour Factor	0.77	0.77	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	12%	9%	2%	1%	19%	7%
Adj. Flow (vph)	36	64	190	38	26	285
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	0	228	0	0	311
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 37.5%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	2.2					

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	28	49	152	30	21	228
Future Vol, veh/h	28	49	152	30	21	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	80	80	80	80
Heavy Vehicles, %	12	9	2	1	19	7
Mvmt Flow	36	64	190	38	26	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	546	209	0	0	228	0
Stage 1	209	-	-	-	-	-
Stage 2	337	-	-	-	-	-
Critical Hdwy	6.52	6.29	-	-	4.29	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.381	-	-	2.371	-
Pot Cap-1 Maneuver	482	814	-	-	1246	-
Stage 1	803	-	-	-	-	-
Stage 2	701	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	470	814	-	-	1246	-
Mov Cap-2 Maneuver	470	-	-	-	-	-
Stage 1	803	-	-	-	-	-
Stage 2	683	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	11.6	0	0.7
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	643	1246	-	-	-
HCM Lane V/C Ratio	0.156	0.021	-	-	-
HCM Control Delay (s)	11.6	8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.5	0.1	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	1	13	14	960	957	3
Future Volume (vph)	1	13	14	960	957	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.872					
Flt Protected	0.997			0.999		
Satd. Flow (prot)	1590	0	0	1861	1863	0
Flt Permitted	0.997			0.999		
Satd. Flow (perm)	1590	0	0	1861	1863	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	512			294	395	
Travel Time (s)	14.0			5.0	6.7	
Peak Hour Factor	0.72	0.72	0.85	0.85	0.80	0.80
Heavy Vehicles (%)	2%	4%	2%	2%	2%	2%
Adj. Flow (vph)	1	18	16	1129	1196	4
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	0	1145	1200	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 71.7%	ICU Level of Service C
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	13	14	960	957	3
Future Vol, veh/h	1	13	14	960	957	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	72	72	85	85	80	80
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	1	18	16	1129	1196	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2359	1198	1200	0	-	0
Stage 1	1198	-	-	-	-	-
Stage 2	1161	-	-	-	-	-
Critical Hdwy	6.42	6.24	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.336	2.218	-	-	-
Pot Cap-1 Maneuver	39	224	582	-	-	-
Stage 1	286	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	36	224	582	-	-	-
Mov Cap-2 Maneuver	36	-	-	-	-	-
Stage 1	265	-	-	-	-	-
Stage 2	298	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	30.1	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	582	-	163	-	-
HCM Lane V/C Ratio	0.028	-	0.119	-	-
HCM Control Delay (s)	11.4	0	30.1	-	-
HCM Lane LOS	B	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	45	914	2	57	822	42	55	178	60	63	70	94
Future Volume (vph)	45	914	2	57	822	42	55	178	60	63	70	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	10	12	12
Storage Length (ft)	150		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			70			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.993			0.962			0.914	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1869	0	1787	1828	0	1685	1729	0
Flt Permitted	0.950			0.950			0.491			0.276		
Satd. Flow (perm)	1805	1881	0	1805	1869	0	924	1828	0	489	1729	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			25			30	
Link Distance (ft)		395			453			281			524	
Travel Time (s)		6.7			7.7			7.7			11.9	
Peak Hour Factor	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.81	0.81
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	1%	0%
Adj. Flow (vph)	53	1075	2	71	1028	53	69	223	75	78	86	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	1077	0	71	1081	0	69	298	0	78	202	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	2		3	2		3	4		4	3	
Detector Template												
Leading Detector (ft)	26	306		26	296		26	41		41	26	
Trailing Detector (ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Size(ft)	6	6		6	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	5	300		5	290		5	5		5	5	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	20			20			20	20		20	20	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 4 Position(ft)								35		35		
Detector 4 Size(ft)								6		6		
Detector 4 Type								Cl+Ex		Cl+Ex		
Detector 4 Channel												
Detector 4 Extend (s)								0.0		0.0		
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		
Detector Phase	1	6		5	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.8	31.0		11.8	31.0		11.4	11.4		11.4	11.4	
Total Split (s)	18.8	66.0		18.8	66.0		31.4	31.4		31.4	31.4	
Total Split (%)	16.2%	56.8%		16.2%	56.8%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	12.0	60.0		12.0	60.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.2		3.0	4.2		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.8	1.8		3.8	1.8		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.0		6.8	6.0		6.4	6.4		6.4	6.4	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.5		1.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	7.5	60.8		8.3	61.6		20.8	20.8		20.8	20.8	
Actuated g/C Ratio	0.07	0.57		0.08	0.58		0.20	0.20		0.20	0.20	
v/c Ratio	0.42	1.00		0.50	1.00		0.38	0.83		0.82	0.60	
Control Delay	60.0	54.3		61.9	52.8		45.4	62.4		96.9	47.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.0	54.3		61.9	52.8		45.4	62.4		96.9	47.8	
LOS	E	D		E	D		D	E		F	D	
Approach Delay		54.6			53.4			59.2			61.5	
Approach LOS		D			D			E			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 116.2	
Actuated Cycle Length: 106.4	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 55.4	Intersection LOS: E
Intersection Capacity Utilization 81.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Main St. (Rt. 25) & Purdy Hill Rd. /Judd Rd.

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	53	1077	71	1081	69	298	78	202
v/c Ratio	0.42	1.00	0.50	1.00	0.38	0.83	0.82	0.60
Control Delay	60.0	54.3	61.9	52.8	45.4	62.4	96.9	47.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.0	54.3	61.9	52.8	45.4	62.4	96.9	47.8
Queue Length 50th (ft)	37	~840	49	~837	42	202	53	130
Queue Length 95th (ft)	75	#1067	86	#957	79	270	#119	189
Internal Link Dist (ft)		315		373		201		444
Turn Bay Length (ft)	150		100		125		100	
Base Capacity (vph)	206	1074	206	1082	219	434	116	411
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	1.00	0.34	1.00	0.32	0.69	0.67	0.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	24	29	242	24	15	142
Future Volume (vph)	24	29	242	24	15	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.927		0.988			
Flt Protected	0.978					0.995
Satd. Flow (prot)	1723	0	1860	0	0	1845
Flt Permitted	0.978					0.995
Satd. Flow (perm)	1723	0	1860	0	0	1845
Link Speed (mph)	25		25			25
Link Distance (ft)	264		249			281
Travel Time (s)	7.2		6.8			7.7
Peak Hour Factor	0.78	0.78	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	1%	0%	7%	2%
Adj. Flow (vph)	31	37	303	30	19	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	68	0	333	0	0	197
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 30.0%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	1.6

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	24	29	242	24	15	142
Future Vol, veh/h	24	29	242	24	15	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	80	80	80	80
Heavy Vehicles, %	0	0	1	0	7	2
Mvmt Flow	31	37	303	30	19	178

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	534	318	0	0	333	0
Stage 1	318	-	-	-	-	-
Stage 2	216	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.17	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.263	-
Pot Cap-1 Maneuver	510	727	-	-	1199	-
Stage 1	742	-	-	-	-	-
Stage 2	825	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	501	727	-	-	1199	-
Mov Cap-2 Maneuver	501	-	-	-	-	-
Stage 1	742	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	11.7	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	604	1199	-	-	-
HCM Lane V/C Ratio	0.112	0.016	-	-	-
HCM Control Delay (s)	11.7	8.1	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.4	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	20	45	35	957	1061	11
Future Volume (vph)	20	45	35	957	1061	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Storage Length (ft)	0	75	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.999	
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1652	1478	0	1859	1861	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1652	1478	0	1859	1861	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	512			294	395	
Travel Time (s)	14.0			5.0	6.7	
Peak Hour Factor	0.80	0.80	0.88	0.88	0.91	0.91
Adj. Flow (vph)	25	56	40	1088	1166	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	25	56	0	1128	1178	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	10			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.09	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 88.7%	ICU Level of Service E
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	45	35	957	1061	11
Future Vol, veh/h	20	45	35	957	1061	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	75	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	88	88	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	56	40	1088	1166	12

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2340	1172	1178	0	-	0
Stage 1	1172	-	-	-	-	-
Stage 2	1168	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	40	234	593	-	-	-
Stage 1	294	-	-	-	-	-
Stage 2	296	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	33	234	593	-	-	-
Mov Cap-2 Maneuver	33	-	-	-	-	-
Stage 1	244	-	-	-	-	-
Stage 2	296	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	97.4	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	593	-	33	234	-	-
HCM Lane V/C Ratio	0.067	-	0.758	0.24	-	-
HCM Control Delay (s)	11.5	0	260	25.2	-	-
HCM Lane LOS	B	A	F	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.6	0.9	-	-

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	35	939	3	15	915	24	91	55	68	80	193	70
Future Volume (vph)	35	939	3	15	915	24	91	55	68	80	193	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	10	12	12
Storage Length (ft)	150		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			70			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.996			0.917			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1874	0	1787	1742	0	1685	1824	0
Flt Permitted	0.950			0.950			0.278			0.618		
Satd. Flow (perm)	1805	1881	0	1805	1874	0	523	1742	0	1096	1824	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			25			30	
Link Distance (ft)		395			453			281			524	
Travel Time (s)		6.7			7.7			7.7			11.9	
Peak Hour Factor	0.88	0.88	0.88	0.91	0.91	0.91	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	0%	0%
Adj. Flow (vph)	40	1067	3	16	1005	26	114	69	85	100	241	88
Shared Lane Traffic (%)												
Lane Group Flow (vph)	40	1070	0	16	1031	0	114	154	0	100	329	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	2		3	2		3	4		4	3	
Detector Template												
Leading Detector (ft)	26	306		26	296		26	41		41	26	
Trailing Detector (ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Size(ft)	6	6		6	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	5	300		5	290		5	5		5	5	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	20			20			20	20		20	20	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 4 Position(ft)								35		35		
Detector 4 Size(ft)								6		6		
Detector 4 Type								Cl+Ex		Cl+Ex		
Detector 4 Channel												
Detector 4 Extend (s)								0.0		0.0		
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		
Detector Phase	1	6		5	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.8	31.0		11.8	31.0		11.4	11.4		11.4	11.4	
Total Split (s)	18.8	66.0		18.8	66.0		31.4	31.4		31.4	31.4	
Total Split (%)	16.2%	56.8%		16.2%	56.8%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	12.0	60.0		12.0	60.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.2		3.0	4.2		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.8	1.8		3.8	1.8		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.0		6.8	6.0		6.4	6.4		6.4	6.4	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.5		1.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	6.7	63.7		5.6	60.3		25.1	25.1		25.1	25.1	
Actuated g/C Ratio	0.06	0.60		0.05	0.57		0.24	0.24		0.24	0.24	
v/c Ratio	0.35	0.95		0.17	0.97		0.93	0.37		0.39	0.76	
Control Delay	57.9	39.0		54.8	45.8		106.6	38.8		41.4	52.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	57.9	39.0		54.8	45.8		106.6	38.8		41.4	52.0	
LOS	E	D		D	D		F	D		D	D	
Approach Delay		39.7			45.9			67.6			49.6	
Approach LOS		D			D			E			D	

Intersection Summary

Area Type: Other
Cycle Length: 116.2
Actuated Cycle Length: 106.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 46.1 — Intersection LOS: D
Intersection Capacity Utilization 84.7% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 5: Main St. (Rt. 25) & Purdy Hill Rd. /Judd Rd.

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	40	1070	16	1031	114	154	100	329
v/c Ratio	0.35	0.95	0.17	0.97	0.93	0.37	0.39	0.76
Control Delay	57.9	39.0	54.8	45.8	106.6	38.8	41.4	52.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	39.0	54.8	45.8	106.6	38.8	41.4	52.0
Queue Length 50th (ft)	28	541	11	~739	81	94	61	222
Queue Length 95th (ft)	62	#1052	35	#1066	#171	141	103	292
Internal Link Dist (ft)		315		373		201		444
Turn Bay Length (ft)	150		100		125		100	
Base Capacity (vph)	204	1127	204	1063	123	412	259	431
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.95	0.08	0.97	0.93	0.37	0.39	0.76

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	31	60	152	31	25	228
Future Volume (vph)	31	60	152	31	25	228
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.911		0.977			
Flt Protected	0.983					0.995
Satd. Flow (prot)	1668	0	1823	0	0	1853
Flt Permitted	0.983					0.995
Satd. Flow (perm)	1668	0	1823	0	0	1853
Link Speed (mph)	25		25			25
Link Distance (ft)	264		249			281
Travel Time (s)	7.2		6.8			7.7
Peak Hour Factor	0.77	0.77	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	2%	2%	2%	1%	2%	2%
Adj. Flow (vph)	40	78	190	39	31	285
Shared Lane Traffic (%)						
Lane Group Flow (vph)	118	0	229	0	0	316
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 38.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.4

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	31	60	152	31	25	228
Future Vol, veh/h	31	60	152	31	25	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	77	80	80	80	80
Heavy Vehicles, %	2	2	2	1	2	2
Mvmt Flow	40	78	190	39	31	285

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	557	210	0	0	229	0
Stage 1	210	-	-	-	-	-
Stage 2	347	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	491	830	-	-	1339	-
Stage 1	825	-	-	-	-	-
Stage 2	716	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	477	830	-	-	1339	-
Mov Cap-2 Maneuver	477	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	11.6	0	0.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	663	1339	-	-	-
HCM Lane V/C Ratio	0.178	0.023	-	-	-
HCM Control Delay (s)	11.6	7.8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.6	0.1	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	10	27	35	960	957	17
Future Volume (vph)	10	27	35	960	957	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	75	0			0
Storage Lanes	1	1	0			0
Taper Length (ft)	25		25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.998	
Flt Protected	0.950			0.998		
Satd. Flow (prot)	1770	1583	0	1859	1859	0
Flt Permitted	0.950			0.998		
Satd. Flow (perm)	1770	1583	0	1859	1859	0
Link Speed (mph)	25			40	40	
Link Distance (ft)	328			294	395	
Travel Time (s)	8.9			5.0	6.7	
Peak Hour Factor	0.80	0.80	0.85	0.85	0.80	0.80
Adj. Flow (vph)	13	34	41	1129	1196	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	13	34	0	1170	1217	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 88.8% ICU Level of Service E

Analysis Period (min) 15

Intersection						
Int Delay, s/veh	1.6					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	27	35	960	957	17
Future Vol, veh/h	10	27	35	960	957	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	75	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	80	80	85	85	80	80
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	34	41	1129	1196	21

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2418	1207	1217	0	-	0
Stage 1	1207	-	-	-	-	-
Stage 2	1211	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	36	223	573	-	-	-
Stage 1	283	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	29	223	573	-	-	-
Mov Cap-2 Maneuver	29	-	-	-	-	-
Stage 1	229	-	-	-	-	-
Stage 2	282	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	72.2	0.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	573	-	29	223	-	-
HCM Lane V/C Ratio	0.072	-	0.431	0.151	-	-
HCM Control Delay (s)	11.8	0	202.3	24	-	-
HCM Lane LOS	B	A	F	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.4	0.5	-	-

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	45	923	2	57	836	47	58	181	60	63	75	94
Future Volume (vph)	45	923	2	57	836	47	58	181	60	63	75	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	10	12	12
Storage Length (ft)	150		0	100		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	90			70			80			50		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.992			0.963			0.917	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1881	0	1805	1867	0	1787	1830	0	1685	1735	0
Flt Permitted	0.950			0.950			0.476			0.271		
Satd. Flow (perm)	1805	1881	0	1805	1867	0	895	1830	0	481	1735	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		40			40			25			30	
Link Distance (ft)		395			453			281			524	
Travel Time (s)		6.7			7.7			7.7			11.9	
Peak Hour Factor	0.85	0.85	0.85	0.80	0.80	0.80	0.80	0.80	0.80	0.81	0.81	0.81
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	1%	0%	0%	0%	1%	0%
Adj. Flow (vph)	53	1086	2	71	1045	59	73	226	75	78	93	116
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	1088	0	71	1104	0	73	301	0	78	209	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.09	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	3	2		3	2		3	4		4	3	
Detector Template												
Leading Detector (ft)	26	306		26	296		26	41		41	26	
Trailing Detector (ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Position(ft)	-10	180		-10	170		-10	-10		-10	-10	
Detector 1 Size(ft)	6	6		6	6		6	6		6	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	5	300		5	290		5	5		5	5	
Detector 2 Size(ft)	6	6		6	6		6	6		6	6	
Detector 2 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 3 Position(ft)	20			20			20	20		20	20	

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Detector 3 Size(ft)	6			6			6	6		6	6	
Detector 3 Type	Cl+Ex			Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 3 Channel												
Detector 3 Extend (s)	0.0			0.0			0.0	0.0		0.0	0.0	
Detector 4 Position(ft)								35		35		
Detector 4 Size(ft)								6		6		
Detector 4 Type								Cl+Ex		Cl+Ex		
Detector 4 Channel												
Detector 4 Extend (s)								0.0		0.0		
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			4	
Permitted Phases							4			4		
Detector Phase	1	6		5	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)	5.0	25.0		5.0	25.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.8	31.0		11.8	31.0		11.4	11.4		11.4	11.4	
Total Split (s)	18.8	66.0		18.8	66.0		31.4	31.4		31.4	31.4	
Total Split (%)	16.2%	56.8%		16.2%	56.8%		27.0%	27.0%		27.0%	27.0%	
Maximum Green (s)	12.0	60.0		12.0	60.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	3.0	4.2		3.0	4.2		3.3	3.3		3.3	3.3	
All-Red Time (s)	3.8	1.8		3.8	1.8		3.1	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.8	6.0		6.8	6.0		6.4	6.4		6.4	6.4	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	1.5	2.5		1.5	2.5		2.0	2.0		2.0	2.0	
Recall Mode	None	Min		None	Min		None	None		None	None	
Act Effct Green (s)	7.5	60.8		8.3	61.6		20.9	20.9		20.9	20.9	
Actuated g/C Ratio	0.07	0.57		0.08	0.58		0.20	0.20		0.20	0.20	
v/c Ratio	0.42	1.01		0.50	1.02		0.42	0.84		0.83	0.61	
Control Delay	60.1	57.2		61.9	58.9		46.8	62.7		99.3	48.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	60.1	57.2		61.9	58.9		46.8	62.7		99.3	48.4	
LOS	E	E		E	E		D	E		F	D	
Approach Delay		57.4			59.1			59.6			62.2	
Approach LOS		E			E			E			E	

Intersection Summary	
Area Type: Other	
Cycle Length: 116.2	
Actuated Cycle Length: 106.5	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 58.8	Intersection LOS: E
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 5: Main St. (Rt. 25) & Purdy Hill Rd. /Judd Rd.

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	NWL	NWT
Lane Group Flow (vph)	53	1088	71	1104	73	301	78	209
v/c Ratio	0.42	1.01	0.50	1.02	0.42	0.84	0.83	0.61
Control Delay	60.1	57.2	61.9	58.9	46.8	62.7	99.3	48.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	57.2	61.9	58.9	46.8	62.7	99.3	48.4
Queue Length 50th (ft)	37	~859	49	~874	45	204	53	135
Queue Length 95th (ft)	75	#1086	86	#989	83	273	#120	194
Internal Link Dist (ft)		315		373		201		444
Turn Bay Length (ft)	150		100		125		100	
Base Capacity (vph)	205	1072	205	1079	212	434	114	412
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	1.01	0.35	1.02	0.34	0.69	0.68	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	26	35	242	26	25	142
Future Volume (vph)	26	35	242	26	25	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.922		0.987			
Flt Protected	0.979					0.993
Satd. Flow (prot)	1715	0	1859	0	0	1850
Flt Permitted	0.979					0.993
Satd. Flow (perm)	1715	0	1859	0	0	1850
Link Speed (mph)	25		25			25
Link Distance (ft)	264		249			281
Travel Time (s)	7.2		6.8			7.7
Peak Hour Factor	0.78	0.78	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	1%	0%	2%	2%
Adj. Flow (vph)	33	45	303	33	31	178
Shared Lane Traffic (%)						
Lane Group Flow (vph)	78	0	336	0	0	209
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 36.8%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	1.9

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Vol, veh/h	26	35	242	26	25	142
Future Vol, veh/h	26	35	242	26	25	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	78	78	80	80	80	80
Heavy Vehicles, %	0	0	1	0	2	2
Mvmt Flow	33	45	303	33	31	178

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	560	320	0	0	336	0
Stage 1	320	-	-	-	-	-
Stage 2	240	-	-	-	-	-
Critical Hdwy	6.4	6.2	-	-	4.12	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.218	-
Pot Cap-1 Maneuver	493	725	-	-	1223	-
Stage 1	741	-	-	-	-	-
Stage 2	805	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	479	725	-	-	1223	-
Mov Cap-2 Maneuver	479	-	-	-	-	-
Stage 1	741	-	-	-	-	-
Stage 2	782	-	-	-	-	-

Approach	NB	SE	NW
HCM Control Delay, s	12	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	NWL	NWT	SET	SER
Capacity (veh/h)	595	1223	-	-	-
HCM Lane V/C Ratio	0.131	0.026	-	-	-
HCM Control Delay (s)	12	8	0	-	-
HCM Lane LOS	B	A	A	-	-
HCM 95th %tile Q(veh)	0.5	0.1	-	-	-

Status: OK North Combined South Class Speed

MONR-136 - North

Route 25 - 10.77 mi At Trumbull Town Line

Collected during COVID-19 epoch

Town....................................Monroe
Station....................................136
Location................. 41.295799,-73.246062
Posted Speed Limit......................40 MPH
2015-Principal Arterial - Other 3...2015-Urban
Start Report...............21-Oct-2020 11:00AM
End Report.................23-Oct-2020 12:00PM
Annualized ADT............................10700
24-Hour Count........11090 * G4(0.95) = 10535.5
Day 1..............+11338 * G4(0.95) = 21306.6
UnRounded AADT...........21306.6 / 2 = 10653.3
OK 2020 Wed 21-Oct -this report-........21300
OK 2013 Sun 10-Mar 29900
OK 2010 Thu 18-Nov 22300
OK 2007 Wed 01-Aug 23500

	21-Oct Wed	22-Oct Thu	23-Oct Fri
12:00am		51	65
01:00am		33	30
02:00am		20	28
03:00am		23	35
04:00am		64	68
05:00am		234	225
06:00am		559	517
07:00am		754	769
08:00am		770	767
09:00am		665	687
10:00am	x	652	617
11:00am	589	605	622
12:00pm	614	636	x
01:00pm	658	688	
02:00pm	763	741	
03:00pm	828	873	
04:00pm	903	901	
05:00pm	924	972	
06:00pm	694	696	
07:00pm	424	504	
08:00pm	333	363	
09:00pm	238	238	
10:00pm	179	197	
11:00pm	118	99	
Totals	7265	11338	4430

Status: OK North Combined South Class Speed

MONR-136 - South

Route 25 - 10.77 mi At Trumbull Town Line

Collected during COVID-19 epoch

Town.....................................Monroe
Station.....................................136
Location................. 41.295799,-73.246062
Posted Speed Limit......................40 MPH
2015-Principal Arterial - Other 3...2015-Urban
Start Report...............21-Oct-2020 11:00AM
End Report.................23-Oct-2020 12:00PM
Annualized ADT............................10600
24-Hour Count........11077 * G4(0.95) = 10523.2
Day 1..............+11298 * G4(0.95) = 21256.3
UnRounded AADT...........21256.3 / 2 = 10628.1
OK 2020 Wed 21-Oct -this report-........21300
OK 2013 Sun 10-Mar 29900
OK 2010 Thu 18-Nov 22300
OK 2007 Wed 01-Aug 23500

	21-Oct Wed	22-Oct Thu	23-Oct Fri
12:00am		57	70
01:00am		31	32
02:00am		27	41
03:00am		28	31
04:00am		69	66
05:00am		305	280
06:00am		629	599
07:00am		885	834
08:00am		767	780
09:00am		604	626
10:00am	x	624	687
11:00am	622	630	621
12:00pm	640	686	x
01:00pm	651	666	
02:00pm	758	793	
03:00pm	826	846	
04:00pm	906	849	
05:00pm	874	849	
06:00pm	635	649	
07:00pm	410	523	
08:00pm	310	364	
09:00pm	186	180	
10:00pm	144	162	
11:00pm	89	75	
Totals	7051	11298	4667

Status: OK North Combined South Class Speed

MONR-136 - Combined - n/s

Route 25 - 10.77 mi At Trumbull Town Line

Collected during COVID-19 epoch

Town.....................................Monroe
Station.....................................136
Location.................. 41.295799,-73.246062
Posted Speed Limit.......................40 MPH
2015-Principal Arterial - Other 3...2015-Urban
Start Report................21-Oct-2020 11:00AM
End Report..................23-Oct-2020 12:00PM
Annualized ADT............................21300
24-Hour Count........22167 * G4(0.95) = 21058.6
Day 1...............+22636 * G4(0.95) = 42562.8
UnRounded AADT...........42562.8 / 2 = 21281.4
OK 2020 Wed 21-Oct -this report-........21300
OK 2013 Sun 10-Mar 29900
OK 2010 Thu 18-Nov 22300
OK 2007 Wed 01-Aug 23500

	21-Oct Wed	22-Oct Thu	23-Oct Fri
12:00am		108	135
01:00am		64	62
02:00am		47	69
03:00am		51	66
04:00am		133	134
05:00am		539	505
06:00am		1188	1116
07:00am		1639	1603
08:00am		1537	1547
09:00am		1269	1313
10:00am	x	1276	1304
11:00am	1211	1235	1243
12:00pm	1254	1322	x
01:00pm	1309	1354	
02:00pm	1521	1534	
03:00pm	1654	1719	
04:00pm	1809	1750	
05:00pm	1798	1821	
06:00pm	1329	1345	
07:00pm	834	1027	
08:00pm	643	727	
09:00pm	424	418	
10:00pm	323	359	
11:00pm	207	174	
Totals	14316	22636	9097

Status: OK North Combined South

MONR-136 - Combined - n/s

Route 25 - 10.77 mi At Trumbull Town Line

Collected during COVID-19 epoch

Town....................................Monroe
Station....................................136
Location.................. 41.295799,-73.246062
Posted Speed Limit......................40 MPH
2015-Principal Arterial - Other 3...2015-Urban
Start Report................21-Oct-2020 11:00AM
End Report..................23-Oct-2020 12:00PM

All Vehicles Average Speed.............. 43 MPH
Total Vehicles...........................46049
Percentile Sampling Period.......... 9AM to 4PM
Vehicle Too Close........................5 secs
Vehicle Too Slow...................... < 25 MPH
Speed Lower Limit...........15 MPH below Posted

All Report Days
85th Percentile Speed..................49.7 MPH
50th Percentile Speed..................44.1 MPH
10 MPH Pace (66%).....................41-50 MPH
All Hours Total Vehicles..................46049
In-Period Total Vehicles.................20518
Omitted Vehicles Too Close (77%).........15754
Omitted Vehicles Too Slow (0%).............35
Sampled Vehicles (23%)....................4729

Wednesday 21-Oct-2020
85th Percentile Speed..................49.7 MPH
50th Percentile Speed..................44.2 MPH
10 MPH Pace (67%).....................41-50 MPH
All Hours Total Vehicles..................14316
In-Period Total Vehicles..................6949
Omitted Vehicles Too Close (78%)..........5421
Omitted Vehicles Too Slow (0%)..............7
Sampled Vehicles (22%)....................1521

Thursday 22-Oct-2020
85th Percentile Speed..................49.8 MPH
50th Percentile Speed..................44.0 MPH
10 MPH Pace (64%).....................41-50 MPH
All Hours Total Vehicles..................22636
In-Period Total Vehicles..................9709
Omitted Vehicles Too Close (77%)..........7473
Omitted Vehicles Too Slow (0%).............18
Sampled Vehicles (23%)....................2218

Friday 23-Oct-2020
85th Percentile Speed..................49.4 MPH
50th Percentile Speed..................44.0 MPH
10 MPH Pace (67%).....................41-50 MPH
All Hours Total Vehicles...................9097
In-Period Total Vehicles..................3860
Omitted Vehicles Too Close (74%)..........2860
Omitted Vehicles Too Slow (0%).............10
Sampled Vehicles (26%).....................990

Hour	MPH 0-15	MPH 16-20	MPH 21-25	MPH 26-30	MPH 31-35	MPH 36-40	MPH 41-45	MPH 46-50	MPH 51-55	MPH 56-60	MPH 61-65	MPH 66-60	MPH 71-75	MP 76
Wednesday														
21-Oct														
12:00am														
01:00am														
02:00am														
03:00am														
04:00am														
05:00am														
06:00am														
07:00am														
08:00am														
09:00am														
10:00am	x	x	x	x	x	x	x	x	x	x	x	x	x	
11:00am	.	.	5	13	38	255	520	295	64	19	2	.	.	
12:00pm	1	.	2	14	74	322	470	278	78	11	4	.	.	
01:00pm	.	1	6	31	66	319	495	295	78	16	1	1	.	
02:00pm	.	.	5	6	45	300	653	375	120	15	2	.	.	
03:00pm	5	8	8	26	138	397	705	284	72	10	1	.	.	
04:00pm	19	22	37	76	188	485	607	324	45	5	1	.	.	
05:00pm	35	43	60	114	166	500	583	255	35	6	1	.	.	
06:00pm	.	3	8	19	68	348	556	246	77	2	2	.	.	
07:00pm	.	.	6	9	33	99	341	256	78	8	3	.	1	
08:00pm	.	.	.	.	.	45	222	248	102	20	6	.	.	
09:00pm	.	.	.	1	4	41	145	134	75	17	6	.	1	
10:00pm	.	.	.	.	5	24	107	100	47	26	9	5	.	
11:00pm	.	.	.	2	6	12	48	72	40	23	3	1	.	
Totals	60	77	137	311	831	3147	5452	3162	911	178	41	7	2	
Percent	0.42	0.54	0.96	2.17	5.80	21.98	38.08	22.09	6.36	1.24	0.29	0.05	0.01	0.0
Thursday														
22-Oct														
12:00am	.	.	.	.	4	5	24	35	24	8	5	1	2	
01:00am	.	.	.	.	.	5	19	15	13	8	2	.	2	
02:00am	.	.	.	.	.	4	10	16	16	1	.	.	.	
03:00am	.	.	.	.	1	2	18	14	6	4	4	1	.	
04:00am	.	.	.	.	1	6	29	37	34	19	5	2	.	
05:00am	.	.	.	.	1	37	161	180	109	38	10	2	.	
06:00am	.	.	.	2	55	175	460	336	130	26	4	.	.	
07:00am	5	2	4	16	118	435	602	336	96	22	3	.	.	
08:00am	.	.	.	6	56	382	640	318	115	16	4	.	.	
09:00am	.	.	.	2	34	272	482	301	141	34	3	.	.	
10:00am	.	.	1	6	60	315	501	299	81	10	3	.	.	
11:00am	5	6	3	8	70	233	490	298	105	16	1	.	.	
12:00pm	.	1	3	6	73	302	540	274	100	19	4	.	.	
01:00pm	5	8	15	22	41	263	549	351	87	11	1	1	.	
02:00pm	.	1	6	26	135	382	589	322	60	13	.	.	.	
03:00pm	29	18	34	112	338	516	464	170	32	6	.	.	.	
04:00pm	14	19	17	61	144	430	654	344	59	7	.	1	.	
05:00pm	31	25	26	94	228	498	596	262	57	3	1	.	.	
06:00pm	.	.	5	10	59	382	560	247	68	14	.	.	.	
07:00pm	.	.	2	4	33	166	438	273	87	23	1	.	.	
08:00pm	.	.	.	.	9	60	256	256	114	27	4	1	.	
09:00pm	.	.	.	1	15	26	121	152	77	21	4	1	.	
10:00pm	.	.	.	.	6	25	106	122	61	28	7	1	1	
11:00pm	.	.	.	.	.	5	28	68	40	18	12	3	.	
Totals	89	80	116	376	1481	4926	8337	5026	1712	392	78	14	5	
Percent	0.39	0.35	0.51	1.66	6.54	21.76	36.83	22.20	7.56	1.73	0.34	0.06	0.02	0.0
Friday														
23-Oct														
12:00am	.	.	.	.	2	6	35	46	24	15	4	1	2	
01:00am	.	.	.	.	.	5	15	18	18	4	2	.	.	
02:00am	.	1	.	.	1	4	16	26	14	6	1	.	.	
03:00am	.	.	.	.	.	.	14	24	15	6	4	2	1	
04:00am	.	.	.	.	.	3	26	34	35	20	11	5	.	
05:00am	.	.	.	.	2	24	138	176	114	39	8	3	1	
06:00am	.	.	.	4	34	213	400	305	129	28	3	.	.	
07:00am	.	1	4	22	179	407	575	294	98	21	2	.	.	
08:00am	.	.	2	38	204	469	519	248	55	9	3	.	.	
09:00am	.	1	2	6	64	288	593	273	73	13	.	.	.	
10:00am	19	14	17	13	81	334	453	297	70	5	.	1	.	
11:00am	1	3	5	16	62	280	511	278	68	14	3	2	.	
12:00pm	x	x	x	x	x	x	x	x	x	x	x	x	x	
01:00pm														
02:00pm														
03:00pm														
04:00pm														
05:00pm														
06:00pm														
07:00pm														
08:00pm														
09:00pm														
10:00pm														
11:00pm														
Totals	20	20	30	99	629	2033	3295	2019	713	180	41	14	4	
Percent	0.22	0.22	0.33	1.09	6.91	22.35	36.22	22.19	7.84	1.98	0.45	0.15	0.04	0.0

Status: OK North Combined South

MONR-136 - Combined - n/s

Collected during COVID-19 epoch

Town.....................................Monroe
Station....................................136
Location................... 41.295799,-73.246062
Posted Speed Limit.......................40 MPH
2015-Principal Arterial - Other 3....2015-Urban
Start Report................21-Oct-2020 11:00AM
All Vehicle Peak Hour........22-Oct-2020 05:00PM
End Report..................23-Oct-2020 12:00PM
Annualized ADT.............................21300
24-Hour Count.........22167 * G4(0.95) = 21058.6
Day 1................+22636 * G4(0.95) = 42562.8
UnRounded AADT.............42562.8 / 2 = 21281.4
OK 2020 Wed 21-Oct -this report-.........21300
OK 2013 Sun 10-Mar 29900
OK 2010 Thu 18-Nov 22300
OK 2007 Wed 01-Aug 23500

	Count	Percent	Veh.Feet
Motorcycles..........	447	0.97%	0.0- 8.0
Passenger Cars.......	42700	92.73%	8.0-25.0
Single-Unit Trucks...	2078	4.51%	25.0-50.0
Combination Trucks...	824	1.79%	50.0 >
Total Vehicles.......	46049		

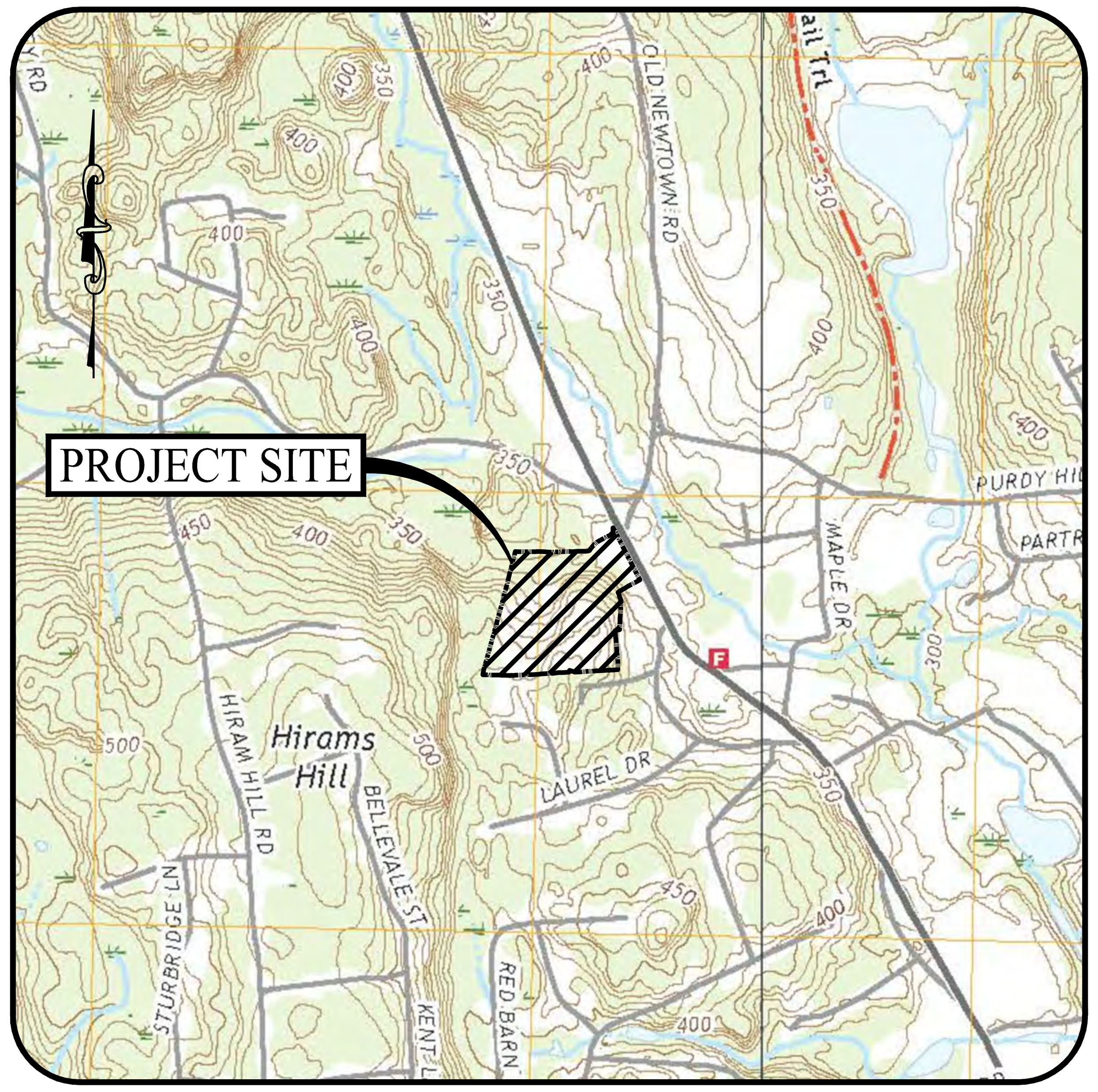
	Single	Combo
Peak Hour Truck Volume..........	22	9
% Total Peak Hour Volume.........	1.2%	0.5%
24 Hour Truck Volume............	960	392
All-Vehicle Annualized ADT.......	21300	21300
24Hour T-Vol % of A-V AADT.......	4.5%	1.8%
PeakHr T-Vol % of A-V AADT.......	0.1%	0.0%
K-Factor (Peak/AADT).............	8.5%	8.5%

(AADT & Legacy AADT match)

Route 25 - 10.77 mi At Trumbull Town Line

Hour	Motor Cycle	Pass Cars	Single Unit	Combo Unit	Day Total
21-Oct Wed					
12:00am					0
01:00am					0
02:00am					0
03:00am					0
04:00am					0
05:00am					0
06:00am					0
07:00am					0
08:00am					0
09:00am					0
10:00am	x	x	x	x	0
11:00am	10	1096	89	16	1211
12:00pm	9	1144	75	26	1254
01:00pm	14	1187	77	31	1309
02:00pm	22	1403	72	24	1521
03:00pm	24	1546	55	29	1654
04:00pm	20	1673	100	16	1809
05:00pm	19	1691	77	11	1798
06:00pm	10	1289	21	9	1329
07:00pm	11	798	13	12	834
08:00pm	2	622	12	7	643
09:00pm	2	416	3	3	424
10:00pm	3	308	5	7	323
11:00pm	1	196	2	8	207
Totals	147	13369	601	199	14316
Percent	1.03	93.39	4.20	1.39	
22-Oct Thu					
12:00am	.	99	3	6	108
01:00am	.	54	1	9	64
02:00am	.	31	2	14	47
03:00am	.	36	5	10	51
04:00am	1	100	19	13	133
05:00am	5	501	15	18	539
06:00am	11	1106	54	17	1188
07:00am	16	1520	79	24	1639
08:00am	15	1407	78	37	1537
09:00am	16	1139	83	31	1269
10:00am	15	1134	99	28	1276
11:00am	12	1120	75	28	1235
12:00pm	19	1204	69	30	1322
01:00pm	24	1238	67	25	1354
02:00pm	22	1394	100	18	1534
03:00pm	32	1607	62	18	1719
04:00pm	32	1660	43	15	1750
05:00pm	26	1764	22	9	1821
06:00pm	28	1284	25	8	1345
07:00pm	16	974	28	9	1027
08:00pm	6	699	12	10	727
09:00pm	2	401	10	5	418
10:00pm	2	346	7	4	359
11:00pm	.	166	2	6	174
Totals	300	20984	960	392	22636
Percent	1.33	92.70	4.24	1.73	

23-Oct Fri					
12:00am	.	120	5	10	135
01:00am	.	49	5	8	62
02:00am	.	51	2	16	69
03:00am	.	43	11	12	66
04:00am	.	108	16	10	134
05:00am	.	461	22	22	505
06:00am	.	1056	51	9	1116
07:00am	.	1490	81	32	1603
08:00am	.	1421	91	35	1547
09:00am	.	1214	74	25	1313
10:00am	.	1200	83	21	1304
11:00am	.	1134	76	33	1243
12:00pm	x	x	x	x	0
01:00pm					0
02:00pm					0
03:00pm					0
04:00pm					0
05:00pm					0
06:00pm					0
07:00pm					0
08:00pm					0
09:00pm					0
10:00pm					0
11:00pm					0
Totals	0	8347	517	233	9097
Percent	0.00	91.76	5.68	2.56	



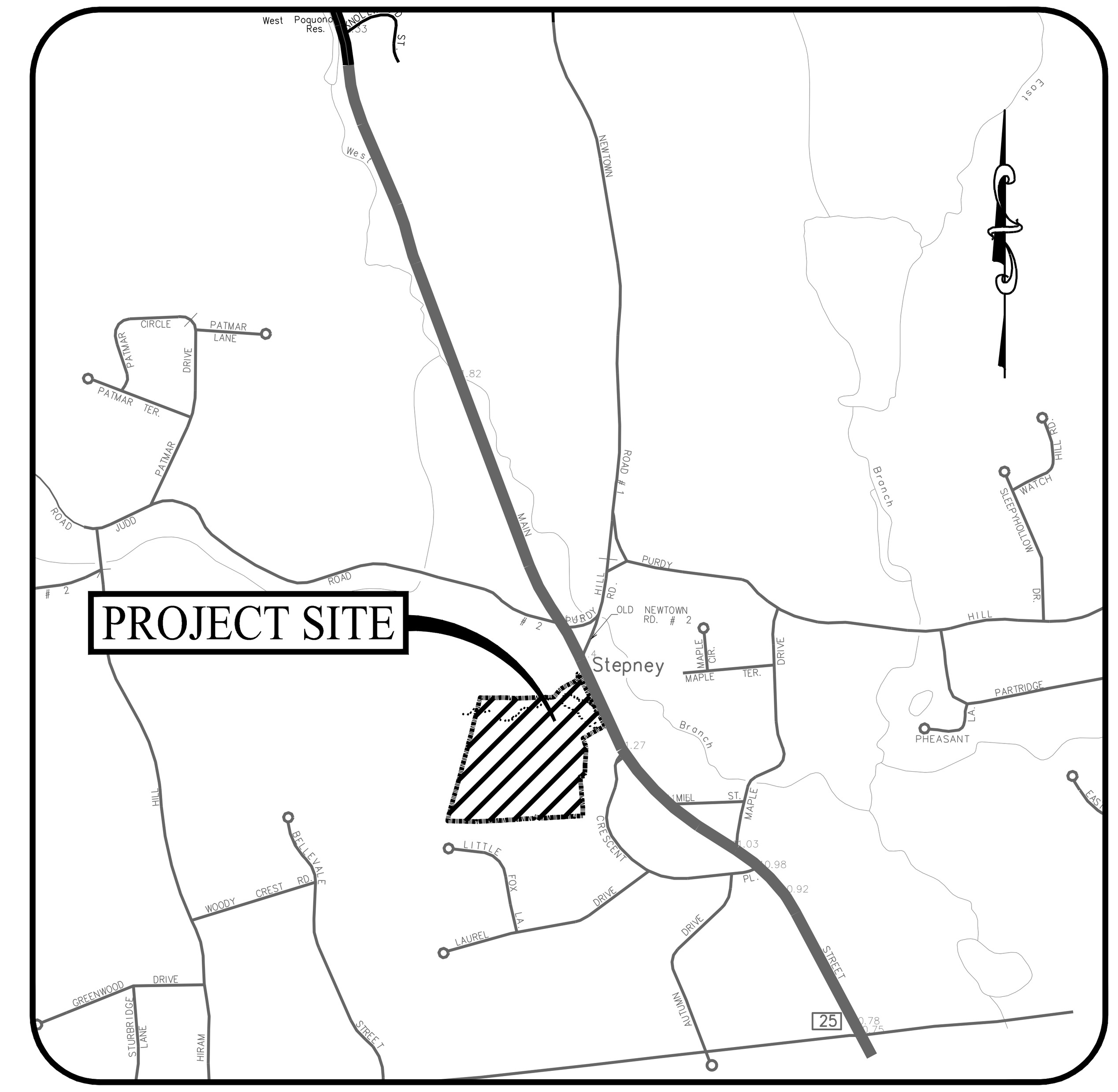
USGS MAP

SCALE: 1" = 1,000'

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

PLANNING & ZONING SUBMISSION



LOCATION MAP

SCALE: 1" = 1,000'

PREPARED FOR:

POND VIEW LLC

6754 PASEO CASTILLE
SARASOTA, FLORIDA 34238

PREPARED BY:

SOLLI ENGINEERING

501 MAIN STREET, MONROE, CONNECTICUT 06468

WETLANDS SCIENTIST

WILLIAM KENNY
WILLIAM KENNY ASSOCIATES
1899 BRONSON ROAD
FAIRFIELD, CT 06824
(203) 366-0588

OWNER / APPLICANT

POND VIEW LLC
C/O SABRINA KEILLOR
6754 PASEO CASTILLE
SARASOTA, FLORIDA 34238

PROPERTY INFORMATION

ADDRESS: 127 MAIN STREET, MONROE, CT, 06468
MAP-BLOCK-LOT: 012-0B-009

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

SURVEYOR OF RECORD

BRYAN NESTERIAK, PE, LS
LICENSE NO. 23556
ACCURATE LAND SURVEYING
15 RESEARCH DRIVE
WOODBRIDGE, CONNECTICUT 06525
(203) 881-8145

DRAWING LIST

SHEET #	SHEET NAME	PLAN DATE	LATEST REVISION
0.00	COVER SHEET	01/09/23	01/26/23
1 OF 1	SURVEY	10/27/21	01/04/23
1.40	PROPERTY RADIUS & SITE AREA MAP	01/09/23	01/26/23
2.10	OVERALL SITE PLAN	01/09/23	01/26/23
2.11	SITE PLAN	01/09/23	01/26/23
2.12	SITE PLAN	01/09/23	01/26/23
2.13	SITE PLAN	01/09/23	01/26/23
2.20	OVERALL GRADING & DRAINAGE PLAN	01/09/23	01/26/23
2.21	GRADING & DRAINAGE PLAN	01/09/23	01/26/23
2.22	GRADING & DRAINAGE PLAN	01/09/23	01/26/23
2.23	GRADING & DRAINAGE PLAN	01/09/23	01/26/23
2.31	PHASE I SOIL EROSION & SEDIMENT CONTROL PLAN	01/09/23	01/26/23
2.32	PHASE II SOIL EROSION & SEDIMENT CONTROL PLAN	01/09/23	01/26/23
2.41	SOIL EROSION & SEDIMENT CONTROL PLAN NOTES & DETAILS	01/09/23	01/26/23
2.50	OVERALL UTILITY PLAN	01/09/23	01/26/23
2.51	RESIDENCE BUILDING #1 UTILITY PLAN	01/09/23	01/26/23
2.52	RESIDENCE BUILDING #2 UTILITY PLAN	01/09/23	01/26/23
2.53	RESIDENCE BUILDING #3 UTILITY PLAN	01/09/23	01/26/23
2.54	RESIDENCE BUILDING #4 UTILITY PLAN	01/09/23	01/26/23
2.55	RESIDENCE BUILDING #5 UTILITY PLAN	01/09/23	01/26/23
2.56	RESIDENCE BUILDING #6 UTILITY PLAN	01/09/23	01/26/23
2.57	RESIDENCE BUILDING #7 UTILITY PLAN	01/09/23	01/26/23
2.58	MULTI-BUILDING UTILITY PLAN	01/09/23	01/26/23
2.61	LANDSCAPE PLAN	01/09/23	01/26/23
2.71	LIGHTING PLAN	01/09/23	01/26/23
3.01	CONSTRUCTION DETAILS	01/09/23	01/26/23
3.02	CONSTRUCTION DETAILS	01/09/23	01/26/23
3.03	CONSTRUCTION DETAILS	01/09/23	01/26/23
3.04	CONSTRUCTION DETAILS	01/09/23	01/26/23
3.05	CONSTRUCTION DETAILS	01/09/23	01/26/23
3.06	CONSTRUCTION DETAILS	01/09/23	01/26/23

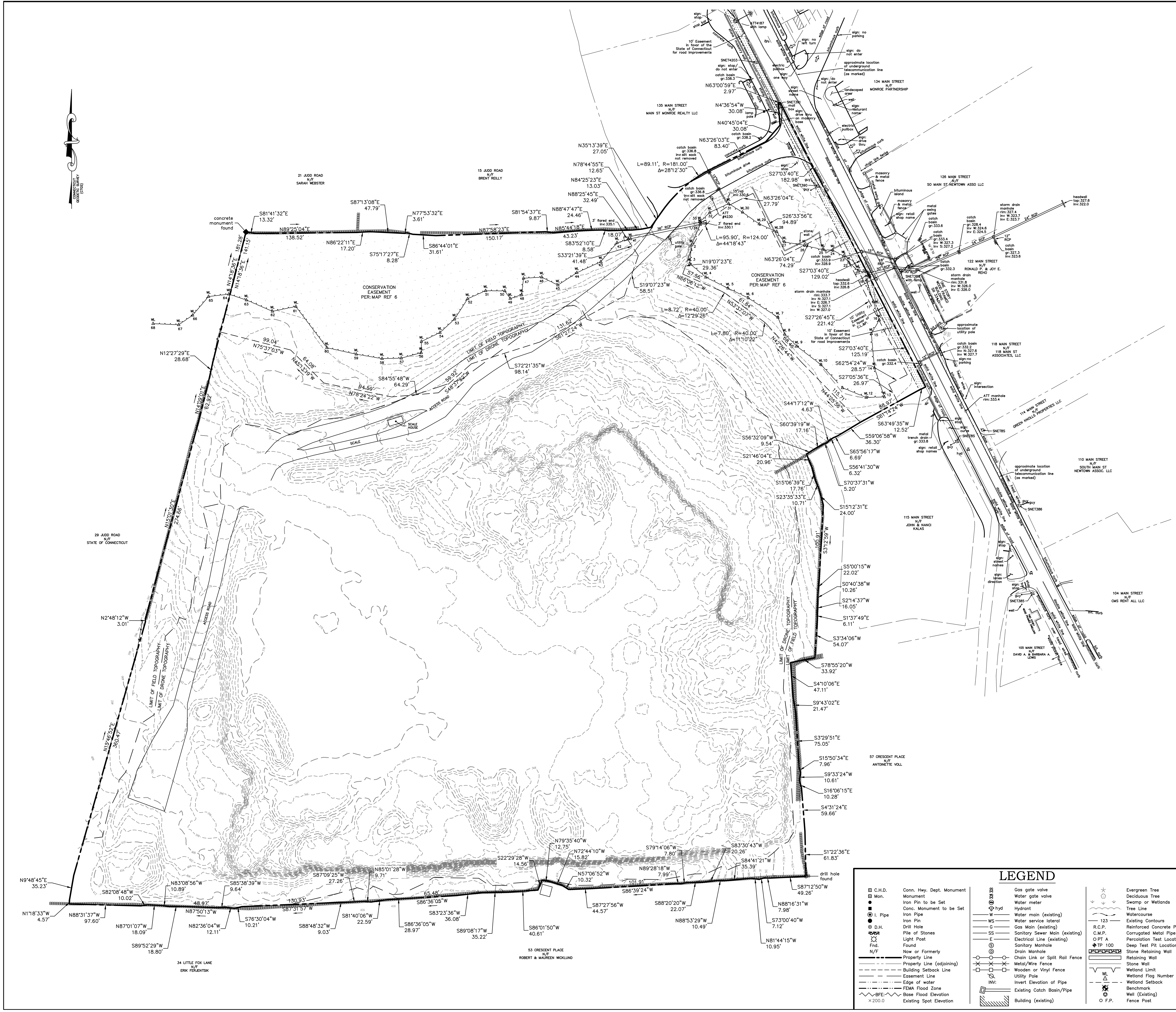
Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

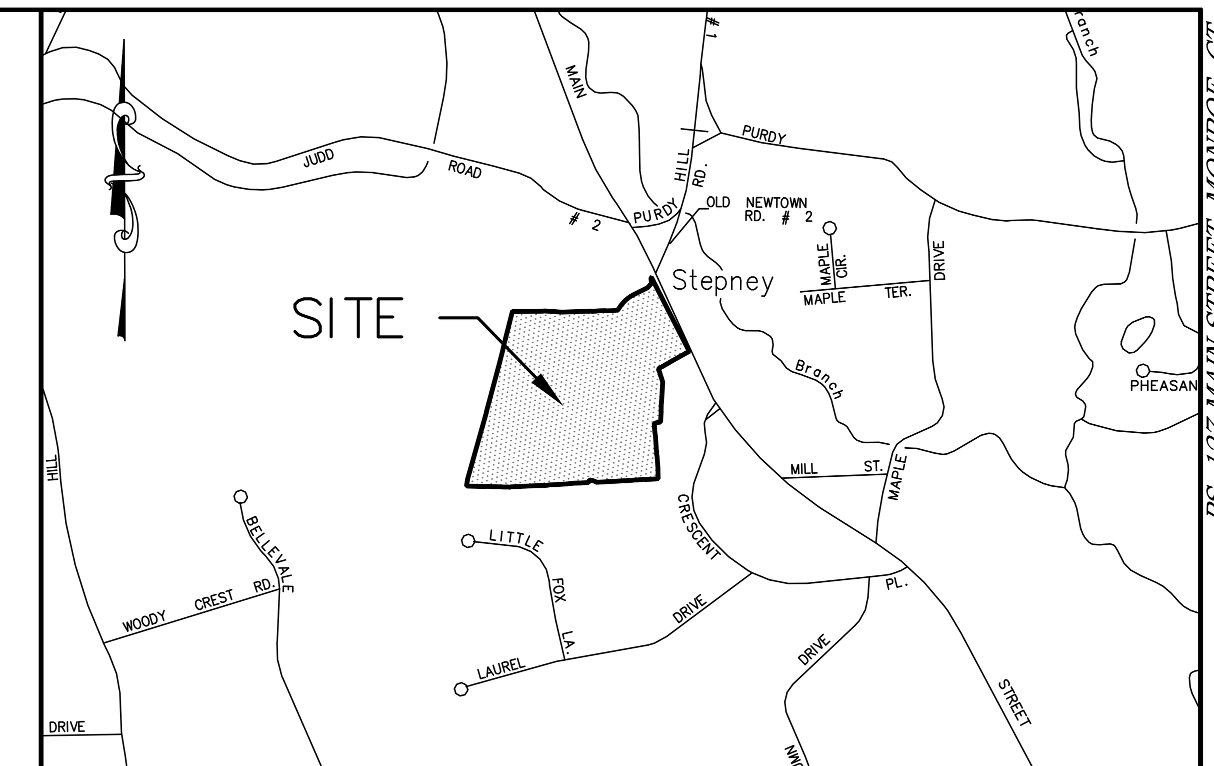
Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: COVER SHEET

Sheet #: 0.00





LOCATION MAP

SCALE: 1"=800'

PS. 127 MAIN STREET, MONROE, CT.

GENERAL SURVEY NOTES

1. THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATION OF CONNECTICUT STATE AGENCIES, SECTION 20–300b–1 THROUGH 20–300b–20, EFFECTIVE OCTOBER 26, 2018, AND THE "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC.
2. THE BOUNDARY DETERMINATION SHOWN HEREON IS CONSIDERED A RESURVEY.
3. THE SURVEY CONFORMS TO HORIZONTAL CLASS A–2 ACCURACY STANDARDS. TOPOGRAPHIC DATA CONFORMS TO CLASS T–D STANDARDS. CONTOURS AND ELEVATIONS REFER TO NAVD 88 DATUM.
4. BEARINGS, COORDINATES AND ELEVATIONS ARE DERIVED FROM THE CONNECTICUT GEODETIC SURVEY (CTGS) VIA GPS TECHNOLOGY AND CONVENTIONAL SURVEY METHODS.
5. THIS IS A PROPERTY SURVEY. THE PURPOSE OF WHICH IS TO SHOW EXISTING CONDITIONS.
6. PROPERTY IS ALSO KNOWN AS TOWN OF MONROE TAX LOT 9 0B ON ASSESSORS MAP 12.
7. TOTAL AREA = 856,719.3 SQ.FT. OR 19.667 ACRES
8. PROPERTY LIES IN ZONING DISTRICT "B1".
9. PROPERTY DOES NOT LIE WITHIN A FLOOD HAZARD ZONE AS DETERMINED BY FEMA.
10. WETLANDS DELINEATED BY WILLIAM KENNY ASSOCIATES, SEPTEMBER 22, 2001. FLAGS WERE LOCATED VIA CONVENTIONAL SURVEY METHODS
11. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND OTHER THAN DEPICTED HEREON, IF ANY, IS UNKNOWN.
12. FIELD TOPOGRAPHY SHOWN HEREON REFLECTS SITE CONDITIONS AS OF 9/20/21 THRU 10/1/21. DRONE TOPOGRAPHY AS OF 12/27/22

MAP REFERENCES

1. PLAN ENTITLED "MAP OF PROPERTY OF CHARLES BOND, ETAL", SCALE 1"=60', DATED: SEPTEMBER 11, 1975. BY J & D KASPER & ASSOC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1244.
2. PLAN ENTITLED "SUBDIVISION PLAN WOODLAND COMMONS CRESENT PLACE – MONROE, CONNECTICUT", SCALE: 1"=100', DATED: DECEMBER 1, 1977. BY J & D KASPER & ASSOC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1370.
3. PLAN ENTITLED "PLOT PLAN OF PROPERTY ON CRESENT PLACE MONROE, CONNECTICUT PREPARED FOR ANTHONY H. JEWISS", SCALE: 1"=30'. DATED: OCTOBER 19, 1978. BY J & D KASPER & ASSOC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1398.
4. PLAN ENTITLED "MAP SHOWING EASEMENT AREA TO BE GRANTED TO THE CONNECTICUT LIGHT AND POWER COMPANY ACROSS THE PROPERTY OF POND VIEW LLC", SCALE: 1"=60'. DATED: MAY 3, 2002. BY LAND ENGINEERING ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 2764.
5. PLAN ENTITLED "FIRST DIVISION OF PROPERTY MAP FOR 133 MAIN STREET MONROE, CONNECTICUT PREPARED FOR POND VIEW LLC", SCALE: 1"=60'. DATED: MAY 5, 2003. BY LAND ENGINEERING ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 2804.
6. PLAN ENTITLED "CONSERVATION EASEMENT MAP FOR 127 MAIN STREET MONROE, CONNECTICUT PREPARED FOR POND VIEW LLC", SCALE: 1"=60'. DATED: JULY 24, 2004. BY LAND ENGINEERING ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 1023–242.

LEGEND

Symbol	Description	Symbol	Description	Symbol	Description
C.H.D.	Conn. Hwy. Dept. Monument	GG	Gas gate valve		Evergreen Tree
Mon.	Monument	WG	Water gate valve		Deciduous Tree
	Iron Pin to be Set	WM	Water meter		Swamp or Wetlands
	Conc. Monument to be Set	hyd	Hydrant		Tree Line
I. Pipe	Iron Pipe	W	Water main (existing)		Watercourse
	Iron Pin	WS	Water service lateral	123	Existing Contours
D.H.	Drill Hole	G	Gas Main (existing)	R.C.P.	Reinforced Concrete Pipe
	Pile of Stones	SS	Sanitary Sewer Main (existing)	C.M.P.	Corrugated Metal Pipe
	Light Post	E	Electrical Line (existing)	PT A	Percolation Test Location
Fnd.	Found	S	Sanitary Manhole	TP 100	Deep Test Pit Location
N/F	Now or Formerly	D	Drain Manhole		Stone Retaining Wall
	Property Line		Chain Link or Split Rail Fence		Retaining Wall
	Property Line (adjoining)		Metal/Wire Fence		Stone Wall
	Building Setback Line		Wooden or Vinyl Fence		Wetland Limit
	Easement Line		Utility Pole	WL	Wetland Flag Number
	Edge of water	INV:	Invert Elevation of Pipe		Wetland Setback
	FEMA Flood Zone		Existing Catch Basin/Pipe		Benchmark
BFE:	Base Flood Elevation		Building (existing)		Well (Existing)
×200.0	Existing Spot Elevation			F.P.	Fence Post

No.	Date	REVISION DESCRIPTION
3.	1/4/2023	UPDATED DRONE TOPOGRAPHY
2.	4/21/2022	UPDATED DRONE TOPOGRAPHY
1.	4/11/2022	UPDATED TOPOGRAPHY ALONG MAIN STREET NEAR WETLANDS

SCALE: 1"=60'

0 30 60 120 180

ACCURATE LAND SURVEYING, LLC
15 RESEARCH DRIVE, WOODBRIDGE, CT 06525, TEL: 203.881.8145
501 MAIN STREET, MONROE, CT 06468, TEL: 203.880.5455

PROPERTY SURVEY

OF

127 MAIN STREET
MONROE, CONNECTICUT

PREPARED FOR
POND VIEW LLC

STATE OF CONNECTICUT
BRYAN P. NESTERIAK
23556
LICENSED LAND SURVEYOR

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

BRYAN P. NESTERIAK, PE, LS 23556

Date	10/27/2021
Scale	1"=60'
Job No.	652
Drawing No.	1 of 1

Rev. #	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale:

100 0 100 200

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:	MFJ
Checked By:	CJP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 100'

STATE OF CONNECTICUT KEVIN M. SOLLI LICENSED 25759 PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT

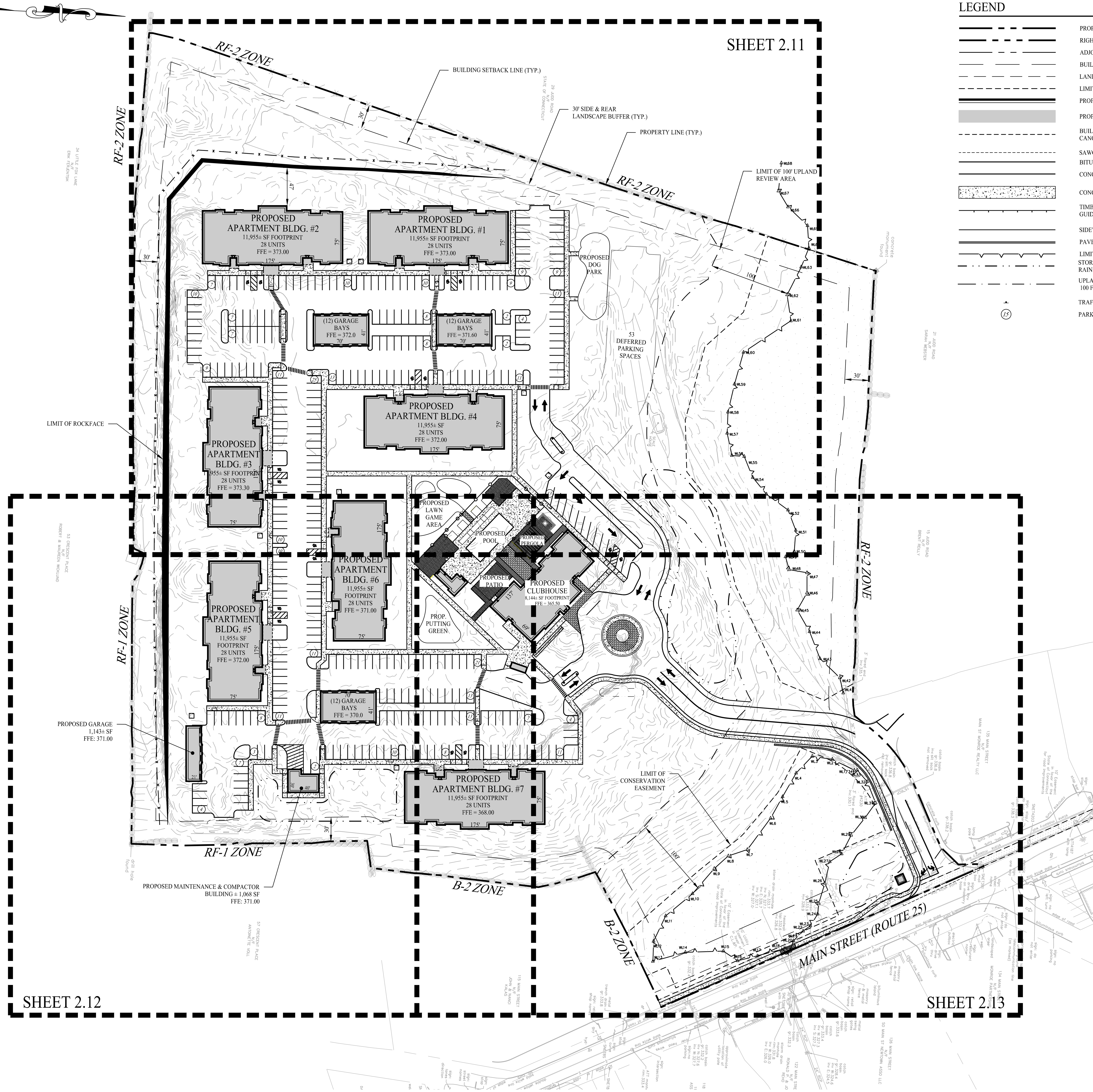
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:

PROPERTY RADIUS & SITE AREA MAP

Sheet #:

1.40



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- LIMIT OF EASEMENT
- PROPOSED BUILDING LIMITS
- PROPOSED BUILDING HATCH
- BUILDING OVERHANG LINE / CANOPY
- SAWCUT PAVEMENT LINE
- BITUMINOUS CONCRETE CURB
- CONCRETE CURB
- CONCRETE SIDEWALK / PAVEMENT
- TIMBER OR METAL BEAM GUIDE RAIL
- SIDEWALK LIMITS
- PAVEMENT STRIPING - YELLOW
- LIMIT OF WETLANDS
- STORMWATER BASIN/ RAIN GARDEN AREA
- UPLAND REVIEW AREA - 100 FT BUFFER
- TRAFFIC SIGN
- 15 PARKING SPACE COUNT

SITE PLAN NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL FINAL APPROVAL OF THIS PLAN.
2. ALL PROPOSED SITE WORK TO BE COMPLETED IN ACCORDANCE WITH ALL PERMITS, APPROVALS AND CONDITIONS OF APPROVALS ISSUED BY LOCAL, STATE AND/OR FEDERAL REVIEWING AGENCIES.
3. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON A DRAWING ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
4. ALL CONSTRUCTION SHALL COMPLY WITH CORPORATION STANDARDS, TOWN OF MONROE, STANDARDS CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
5. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL COUNTY AND TOWN CONSTRUCTION PERMITS, INCLUDING CONNECTICUT DOT & DPH PERMITS AND WATER CONNECTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
6. REFER TO PLANS BY SOLLI ENGINEERING, LLC DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
8. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN.
9. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING, AND THE RAISED CONCRETE SIDEWALKS AND RAMPS.
10. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
11. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
12. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
13. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT STIPULATIONS.
14. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.
15. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
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18. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAVEMENT MARKING PAINT MIXTURE PRIOR TO STRIPING.
19. PAVEMENT MARKING KEY:
    4" SYDL - 4" SOLID YELLOW DOUBLE LINE
    4" SWL - 4" SOLID WHITE LINE
    12" SWSB - 12" SOLID WHITE STOP BAR
20. PARKING SPACES SHALL BE STRIPED WITH 4" SWL; HATCHED AREA SHALL BE STRIPED WITH 4" SWL AT A 45° ANGLE, 2' ON CENTER. HATCHING, SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED BLUE. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.
21. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER.
22. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
23. THE ARCHITECT AND ENGINEER ARE NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
24. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
25. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
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WETLAND AREA TABLE

AREA	LOT (ACRE)
LOT AREA	±19.667
WETLANDS ON LOT	±2.411
UPLAND REVIEW AREA ON LOT	±2.762

ZONING COMPLIANCE TABLE

ZONE: MAIN STREET DESIGN DISTRICT(MDD) OVERLAY IN B-1 BUSINESS ZONE

ZONING REQUIREMENT	ZONING STANDARD	EXISTING CONDITIONS	PROPOSED CONDITIONS
MINIMUM LOT AREA	1 AC	19.667 AC	19.667 ± AC
MINIMUM LOT FRONTAGE INDIVIDUAL LOTS - PUBLIC ROAD	125 FT	-	±437 FT
MINIMUM FRONT YARD	50 FT	-	±274 FT
MINIMUM SIDE YARD	30 FT	-	±70 FT
MINIMUM REAR YARD	30 FT	-	±51 FT
MINIMUM YARD ADJACENT TO RESIDENTIAL ZONE	30 FT	-	±51 FT
MAXIMUM BUILDING HEIGHT*	2.5 STORIES / 35 FEET *	-	<3 STORIES / 42 FEET*
MAXIMUM BUILDING COVERAGE	25%	-	10.36%
MAXIMUM DENSITY	15 UNITS/ACRE	-	9.56 UNITS/ACRE

*MDD ALLOWS 3 STORIES/42 FEET

PARKING COMPLIANCE TABLE

USE	SIZE GFA	ZONING STANDARD	REQUIRED SPACES
MULTIFAMILY HOUSING	196 UNITS	2 SPACES / UNIT	392
		TOTAL OFF-STREET PARKING REQUIRED	392
		PROPOSED STANDARD PARKING SPACES	376
		PROPOSED ADA ACCESSIBLE PARKING SPACES	16
		TOTAL PROPOSED PARKING SPACES	392
		DEFERRED PARKING SPACES	53

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Graphic Scale:

60 0 60 120

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Drawn By: BCP
Checked By: CJP
Approved By: KMS
Project #: 1910801
Plan Date: 01/09/23
Scale: 1" = 60'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: OVERALL SITE PLAN

Sheet #: 2.10

SIGN LEGEND

A

SIZES (IN)	MUTCD #	SUPPORTS
12"x24" 12"x6"	* R7-8P	1

*MODERN INTERNATIONAL SYMBOL OF ACCESSIBILITY STATE OF CONNECTICUT PARKING SIGN.

B

SIZES (IN)	MUTCD #	SUPPORTS
12"x24"	*	1

*MODERN INTERNATIONAL SYMBOL OF ACCESSIBILITY STATE OF CONNECTICUT PARKING SIGN.

C STOP

SIZES (IN)	CONN DOT #	SUPPORTS
30"	31-0552	1

D DO NOT ENTER

SIZES (IN)	CONN DOT #	SUPPORTS
30"x30"	31-1119	1

E ONE WAY

SIZES (IN)	CONN DOT #	SUPPORTS
36"x12"	31-1177	2

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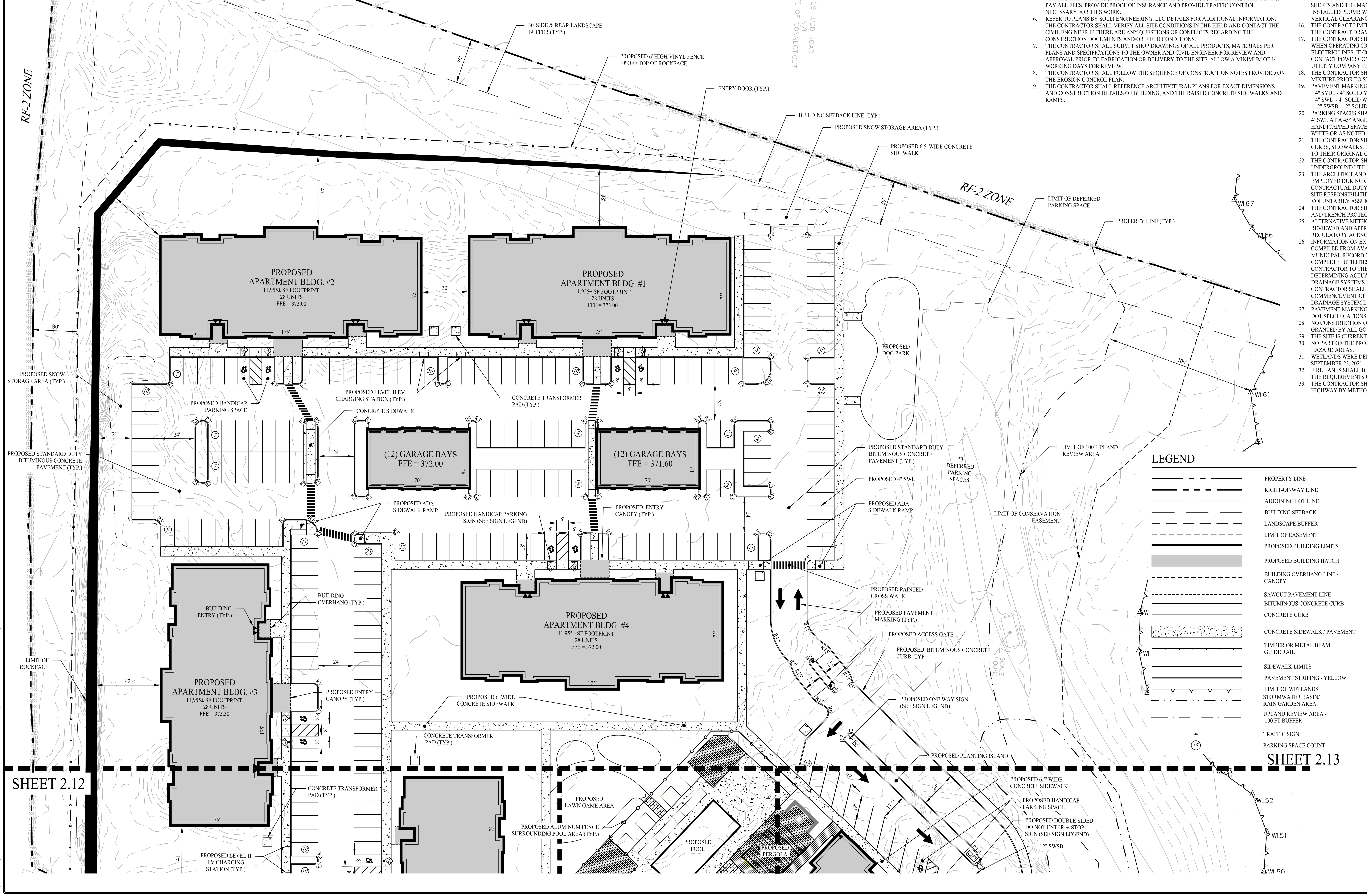

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Graphic Scale: 30 0 30 60

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Drawn By:	BCP
Checked By:	CJP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 30'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: SITE PLAN

Sheet #: 2.11

SIGN LEGEND

A	B	C
RESERVED PARKING PERMIT REQUIRED VIOLATORS WILL BE FINED MIN $150 / VAN ACCESSIBLE	RESERVED PARKING PERMIT REQUIRED VIOLATORS WILL BE FINED MIN $150	STOP

SIZES (IN)	MUTCD #	SUPPORTS
12"x24" 12"x6"	* R7-8P	1

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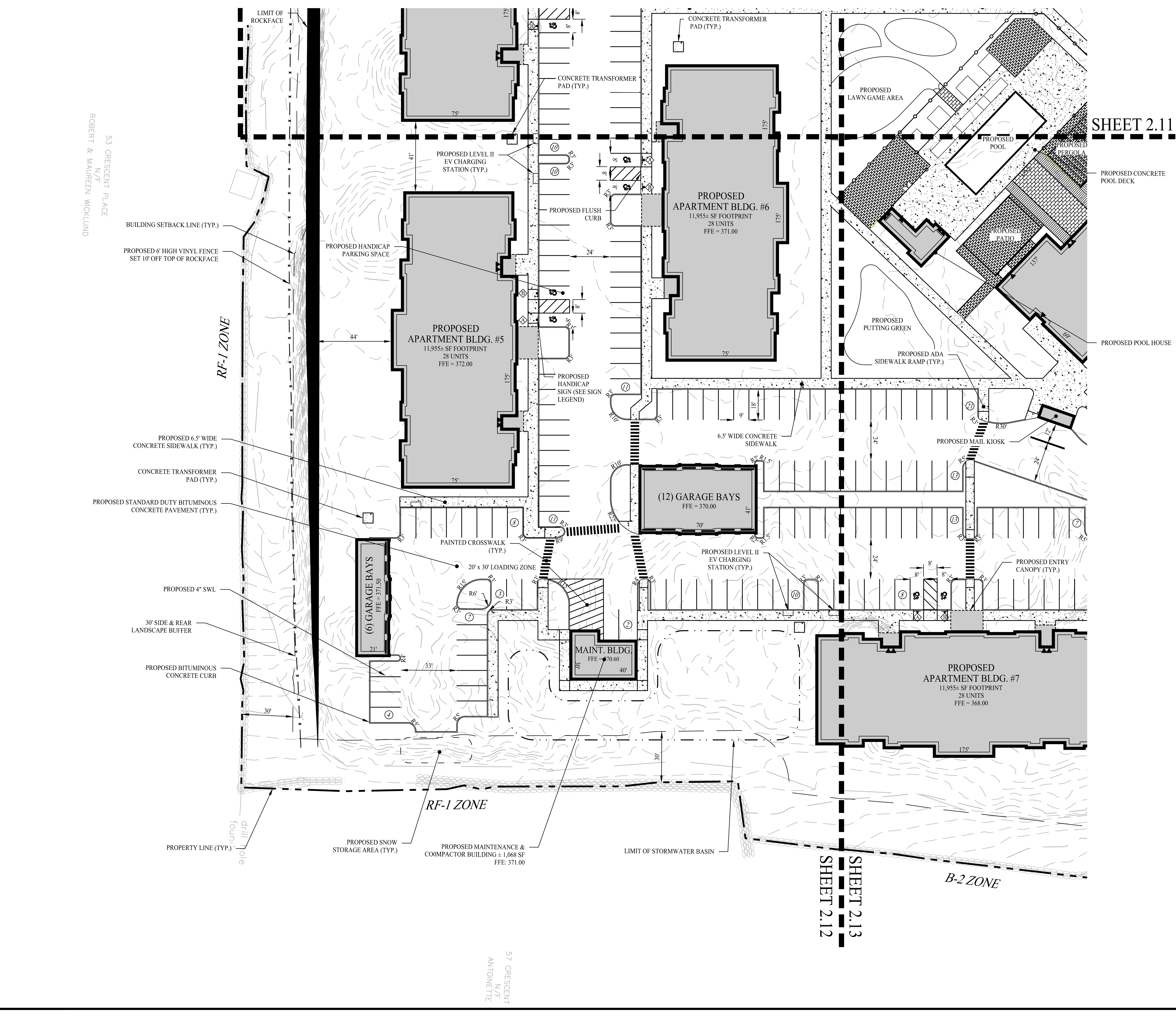

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
ADJOINING LOT LINE
BUILDING SETBACK
LANDSCAPE BUFFER
LIMIT OF EASEMENT
PROPOSED BUILDING LIMITS
PROPOSED BUILDING HATCH
BUILDING OVERHANG LINE / CANOPY
SAWCUT PAVEMENT LINE
BITUMINOUS CONCRETE CURB
CONCRETE CURB
CONCRETE SIDEWALK / PAVEMENT
TIMBER OR METAL BEAM GUIDE RAIL
SIDEWALK LIMITS
PAVEMENT STRIPING - YELLOW
LIMIT OF WETLANDS
STORMWATER BASIN/ RAIN GARDEN AREA
UPLAND REVIEW AREA - 100 FT BUFFER
TRAFFIC SIGN
15 PARKING SPACE COUNT

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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:	BCP
Checked By:	CJP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 30'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

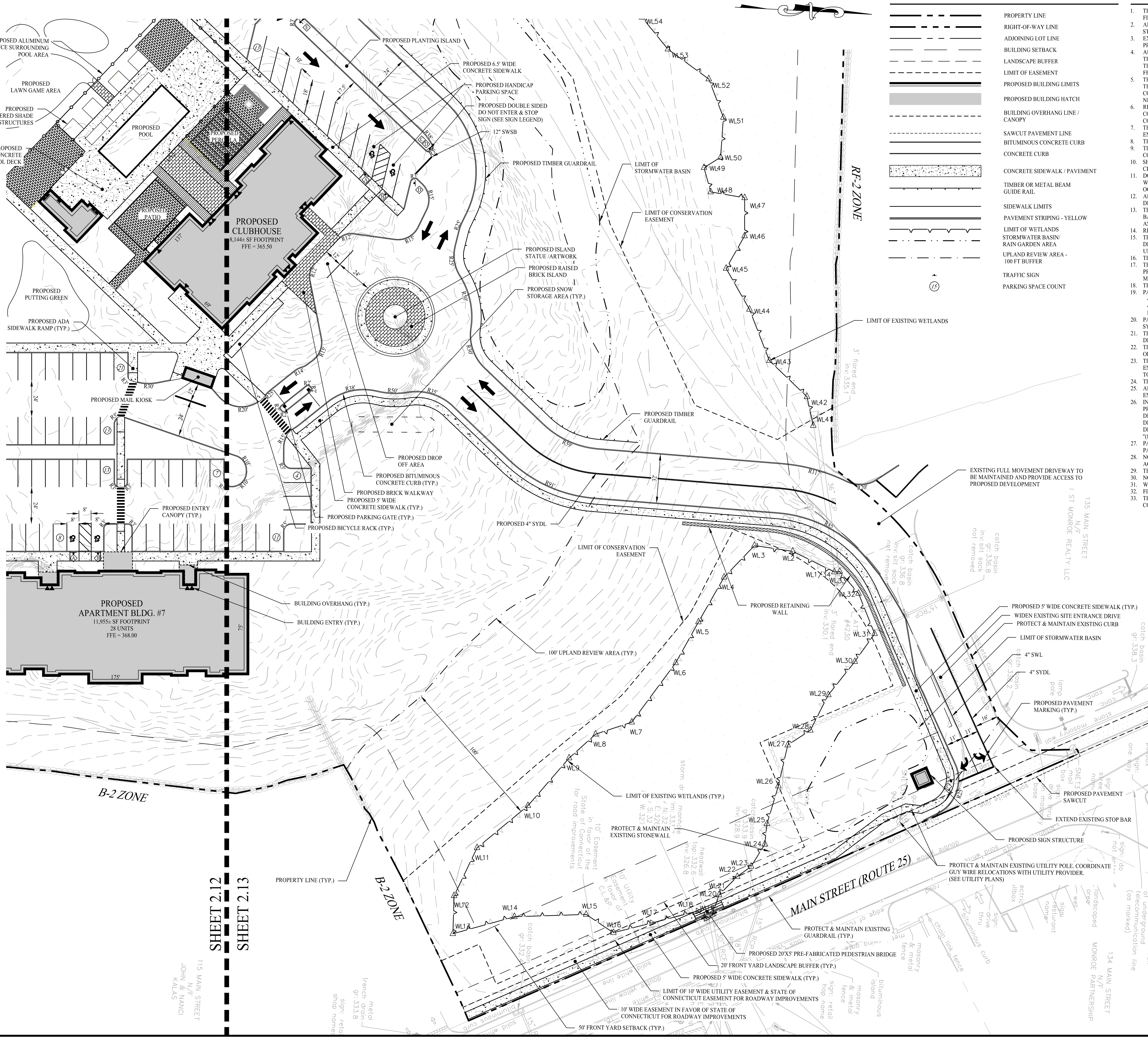
Project:

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: SITE PLAN

Sheet #: 2.12



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- LIMIT OF EASEMENT
- PROPOSED BUILDING LIMITS
- PROPOSED BUILDING HATCH
- BUILDING OVERHANG LINE / CANOPY
- SAWCUT PAVEMENT LINE
- BITUMINOUS CONCRETE CURB
- CONCRETE CURB
- CONCRETE SIDEWALK / PAVEMENT
- TIMBER OR METAL BEAM GUIDE RAIL
- SIDEWALK LIMITS
- PAVEMENT STRIPING - YELLOW
- LIMIT OF WETLANDS
- STORMWATER BASIN/ RAIN GARDEN AREA
- UPLAND REVIEW AREA - 100 FT BUFFER
- TRAFFIC SIGN
- PARKING SPACE COUNT

SITE PLAN NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL FINAL APPROVAL OF THIS PLAN.
2. ALL PROPOSED SITE WORK TO BE COMPLETED IN ACCORDANCE WITH ALL PERMITS, APPROVALS AND CONDITIONS OF APPROVALS ISSUED BY LOCAL, STATE AND/OR FEDERAL REVIEWING AGENCIES.
3. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON A DRAWING ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
4. ALL CONSTRUCTION SHALL COMPLY WITH CORPORATION STANDARDS, TOWN OF MONROE, STANDARDS CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
5. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL COUNTY AND TOWN CONSTRUCTION PERMITS, INCLUDING CONNECTICUT DOT & DPH PERMITS AND WATER CONNECTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
6. REFER TO PLANS BY SOLLI ENGINEERING, LLC DETAILS FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE CIVIL ENGINEER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS.
7. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS AND SPECIFICATIONS TO THE OWNER AND CIVIL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
8. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN.
9. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING, AND THE RAISED CONCRETE SIDEWALKS AND RAMPS.
10. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
11. DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE OWNER OR OTHERS DURING OCCUPIED HOURS EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE LOCAL MUNICIPALITIES. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
12. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFERENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
13. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES, TRAFFIC CONTROLLERS AND UNIFORMED TRAFFIC OFFICERS AS REQUIRED OR AS ORDERED BY THE ENGINEER OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES OR AS REQUIRED BY PERMIT STIPULATIONS.
14. REFER TO DETAIL SHEETS FOR PAVEMENT, CURBING, AND SIDEWALK INFORMATION.
15. TRAFFIC CONTROL SIGNAGE SHALL CONFORM TO THE STATE DOT STANDARD DETAIL SHEETS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. SIGNS SHALL BE INSTALLED PLUMB WITH THE EDGE OF THE SIGN 2' OFF THE FACE OF THE CURB, AND WITH 7' VERTICAL CLEARANCE UNLESS OTHERWISE DETAILED OR NOTED.
16. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
17. THE CONTRACTOR SHALL ABIDE BY ALL OSHA FEDERAL STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
18. THE CONTRACTOR SHALL SUBMIT A SHOP DRAWING OF THE PAVEMENT MARKING PAINT MIXTURE PRIOR TO STRIPING.
19. PAVEMENT MARKING KEY:
    4" SYDL - 4" SOLID YELLOW DOUBLE LINE
    4" SWL - 4" SOLID WHITE LINE
    12" SWSB - 12" SOLID WHITE STOP BAR
20. PARKING SPACES SHALL BE STRIPED WITH 4" SWL; HATCHED AREA SHALL BE STRIPED WITH 4" SWL AT A 45° ANGLE, 2' ON CENTER. HATCHING, SYMBOLS, AND STRIPING FOR HANDICAPPED SPACES SHALL BE PAINTED BLUE. OTHER MARKINGS SHALL BE PAINTED WHITE OR AS NOTED.
21. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER.
22. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
23. THE ARCHITECT AND ENGINEER ARE NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ARCHITECT AND ENGINEER HAVE NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OR TO SUPERVISE SAFETY AND DOES NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY.
24. THE CONTRACTOR SHALL COMPLY WITH CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
25. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, CIVIL ENGINEER, AND APPROPRIATE REGULATORY AGENCY PRIOR TO INSTALLATION DURING THE BIDDING PROCESS.
26. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "(800) 922-4455" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
27. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH CONNECTICUT DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.
28. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
29. THE SITE IS CURRENTLY SERVICED BY PUBLIC WATER.
30. NO PART OF THE PROJECT PARCEL IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.
31. WETLANDS WERE DELINEATED AND FLAGGED BY WILLIAM KENNY ASSOCIATES ON SEPTEMBER 22, 2021.
32. FIRE LANES SHALL BE ESTABLISHED AND PROPERLY DESIGNATED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRE DISTRICT FIRE MARSHAL.
33. THE CONTRACTOR SHALL REMOVE CONFLICTING PAVEMENT MARKINGS IN THE STATE HIGHWAY BY METHOD APPROVED BY CONNECTICUT DOT.

SIGN LEGEND

A

RESERVED PARKING PERMIT REQUIRED
VIOLATORS WILL BE FINED MIN $150
VAN ACCESSIBLE

SIZES (IN)	MUTCD #	SUPPORTS
12"x24" 12"x6"	* R7-8P	1

*MODERN INTERNATIONAL SYMBOL OF ACCESSIBILITY STATE OF CONNECTICUT PARKING SIGN.

B

RESERVED PARKING PERMIT REQUIRED
VIOLATORS WILL BE FINED MIN $150

SIZES (IN)	MUTCD #	SUPPORTS
12"x24"	*	1

*MODERN INTERNATIONAL SYMBOL OF ACCESSIBILITY STATE OF CONNECTICUT PARKING SIGN.

C

STOP

SIZES (IN)	CONN DOT #	SUPPORTS
30"	31-0552	1

D

DO NOT ENTER

SIZES (IN)	CONN DOT #	SUPPORTS
30"x30"	31-1119	1

E

ONE WAY

SIZES (IN)	CONN DOT #	SUPPORTS
36"x12"	31-1177	2

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Graphic Scale: 30 0 30 60

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STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

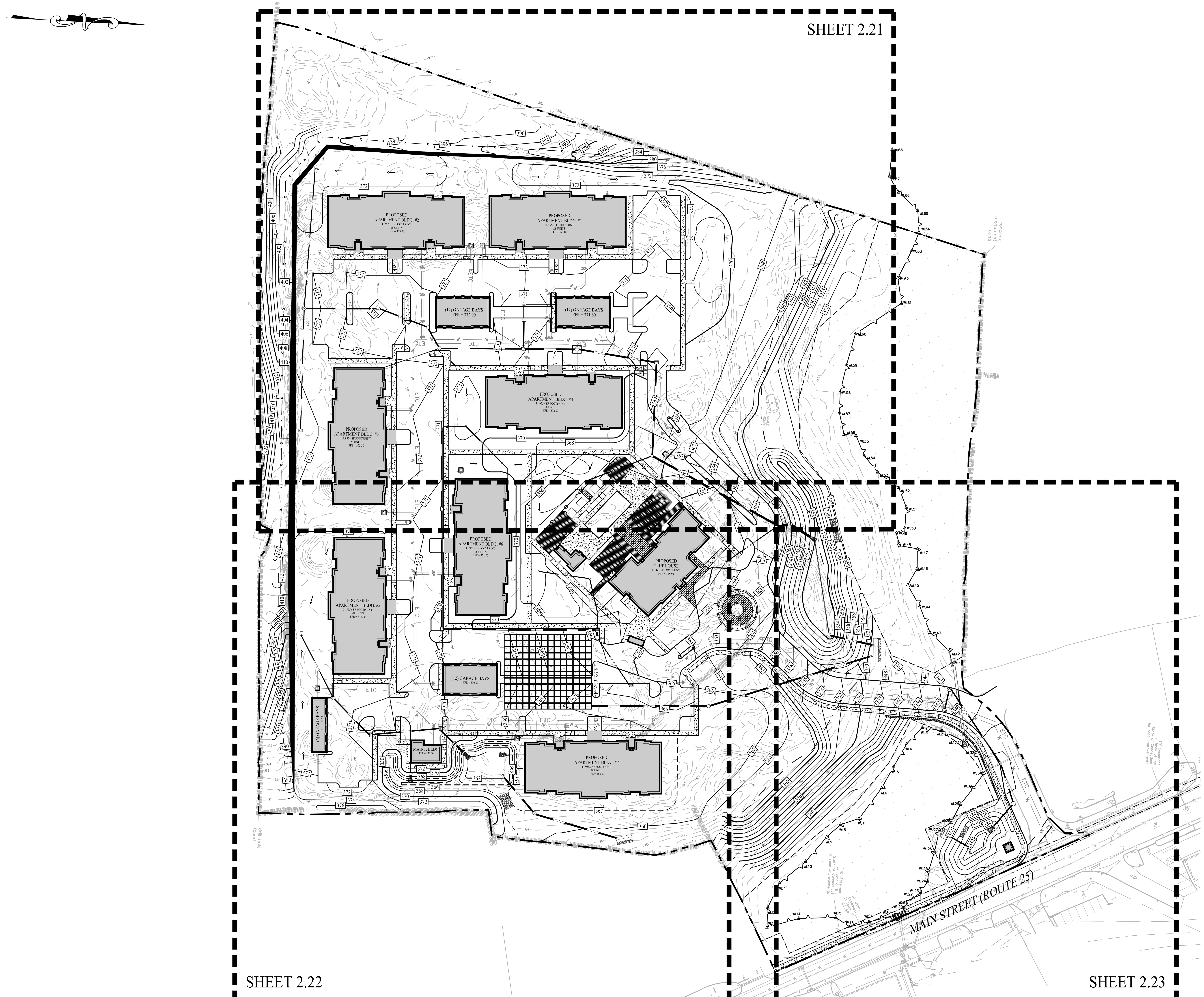
Project:

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: SITE PLAN

Sheet #: 2.13



GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
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4. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
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7. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
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12. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
13. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
14. GRADING CONTRACTOR SHALL RESTORE TO GRADE AND COMPACTION ALL AREAS DISTURBED BY BUILDING CONSTRUCTION PRIOR TO ABSE AND PAVING OPERATIONS COMMENCING.
15. ALL CATCH BASINS SHALL BE INSTALLED WITH A MINIMUM 2-FOOT SUMP BELOW OUTLET PIPE INVERT ELEVATION.

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 60 0 60 120

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STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: OVERALL GRADING & DRAINAGE PLAN

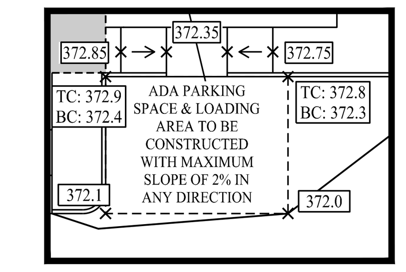
Sheet #: 2.20

ABBREVIATIONS

@	AT
BC	BOTTOM OF CURB
BLDG.	BUILDING
BW	BOTTOM OF WALL
CB	CATCH BASIN
DMH	DRAINAGE MANHOLE
ELEV.	ELEVATION
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
GTD	GRADE TO DRAIN
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
INV	INVERT
LF	LINEAR FEET
PR	PROPOSED
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TC	TOP OF CURB
TF	TOP OF FRAME
TW	TOP OF WALL
TYP	TYPICAL
TYPE C	TYPE C CATCH BASIN
TYPE CL	TYPE CL CATCH BASIN
WQU	WATER QUALITY UNIT
YD	YARD DRAIN

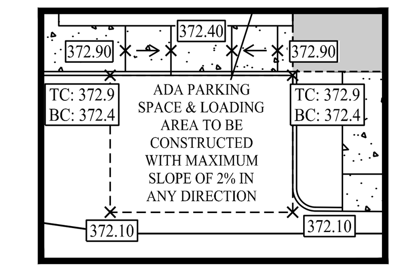
LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
ADJOINING LOT LINE
420 MAJOR CONTOURS
421 MINOR CONTOURS
EXISTING MAJOR CONTOURS
EXISTING MINOR CONTOURS
420 CONTOUR LABEL
568.85 PROPOSED SPOT ELEVATION
568.85 EXISTING SPOT ELEVATION
GRADE TO DRAIN
STORM DRAIN PIPE
TYPE "C" CATCH BASIN
TYPE "CL" CATCH BASIN
STORM MANHOLE
or WATER QUALITY UNIT
FLARE END SECTION
RIP RAP



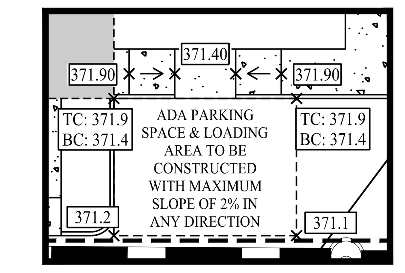
ENLARGEMENT A

SCALE 1" = 20'



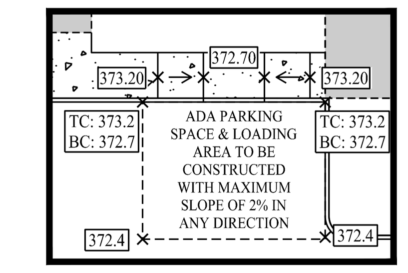
ENLARGEMENT B

SCALE 1" = 20'



ENLARGEMENT C

SCALE 1" = 20'



ENLARGEMENT D

SCALE 1" = 20'

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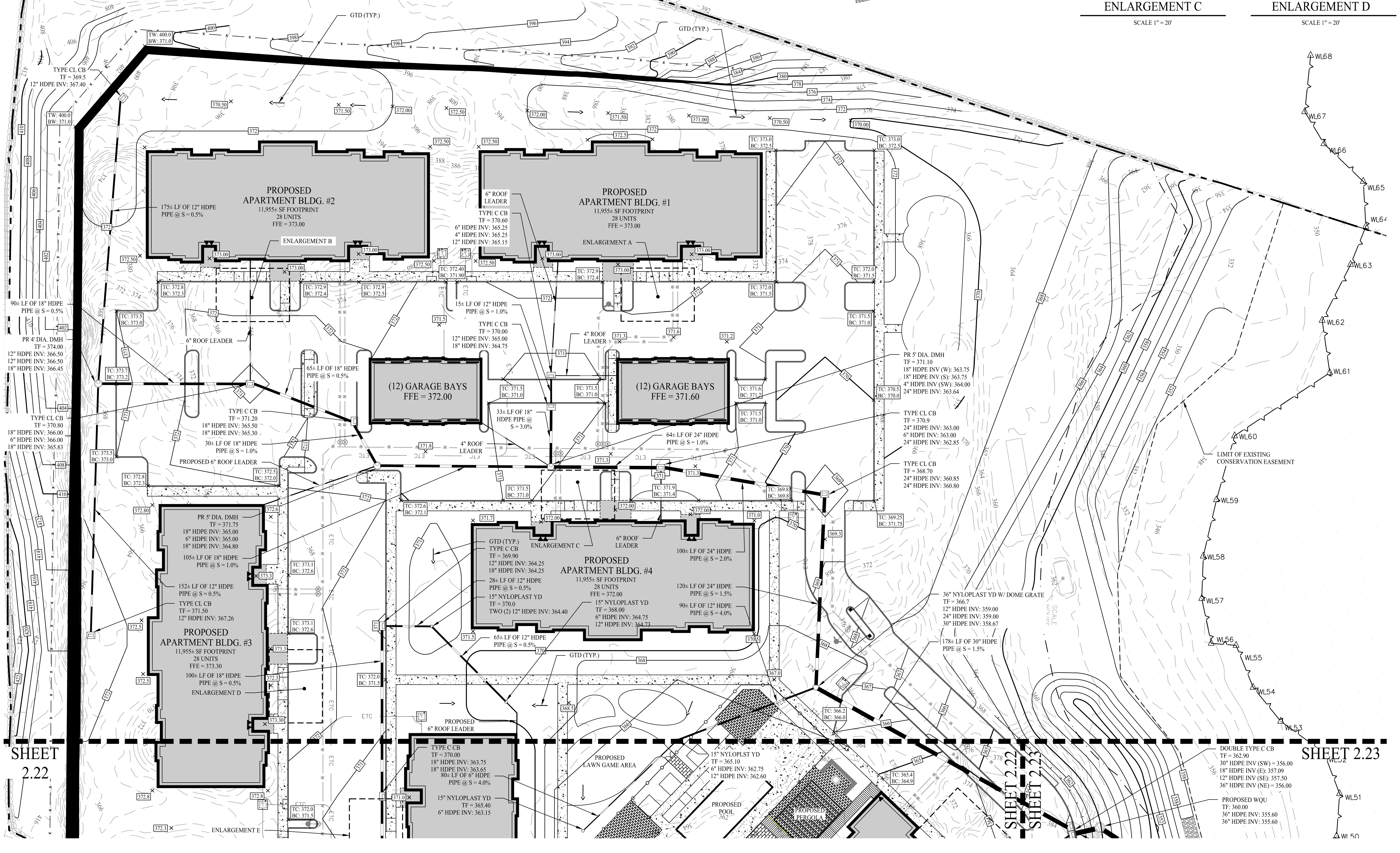
15. ALL CATCH BASINS SHALL BE INSTALLED WITH A MINIMUM 2-FOOT SUMP BELOW OUTLET PIPE INVERT ELEVATION.



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Graphic Scale: 30 0 30 60

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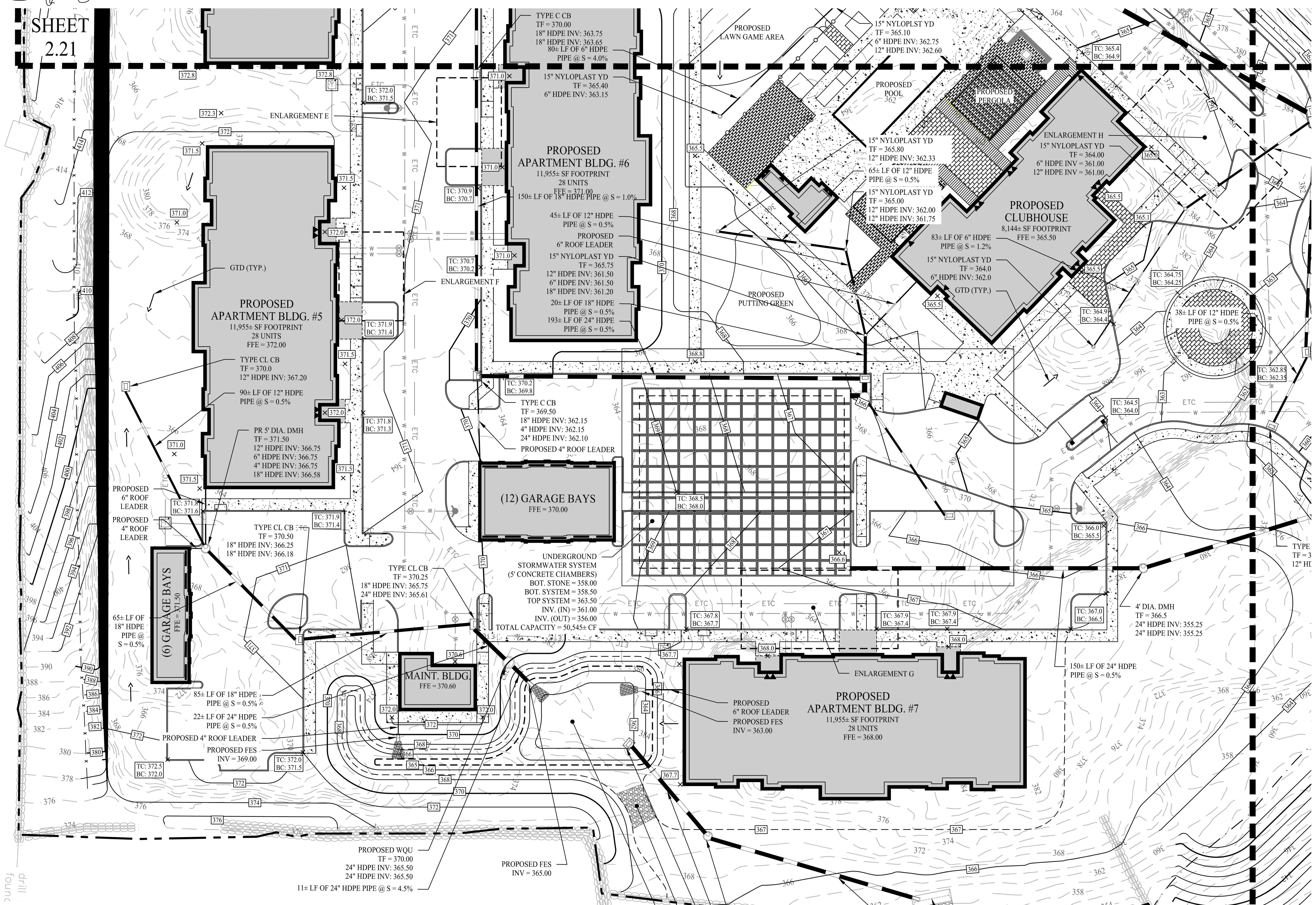
Kevin Solli, P.E.
CT 25759

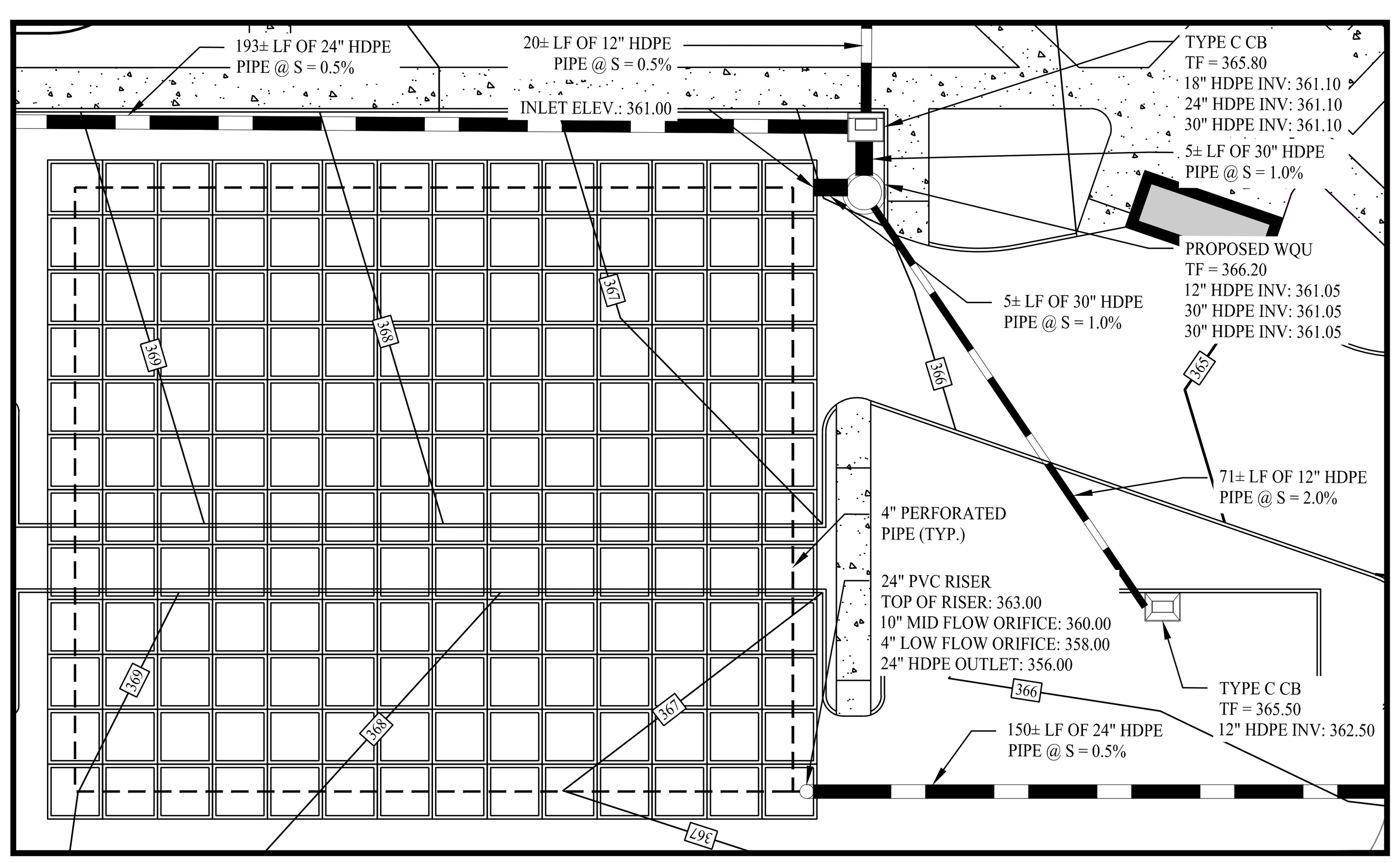
Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: GRADING & DRAINAGE PLAN

Sheet #: 2.21





UNDERGROUND STORMWATER SYSTEM - ENLARGEMENT

SCALE 1" = 20'

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY 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
- STORM DRAIN PIPE
- TYPE "C" CATCH BASIN
- TYPE "CL" CATCH BASIN
- STORM MANHOLE
- WATER QUALITY UNIT
- FLARE END SECTION
- RIP RAP

ABBREVIATIONS

@	AT
BC	BOTTOM OF CURB
BLDG.	BUILDING
BW	BOTTOM OF WALL
CB	CATCH BASIN
DMH	DRAINAGE MANHOLE
ELEV.	ELEVATION
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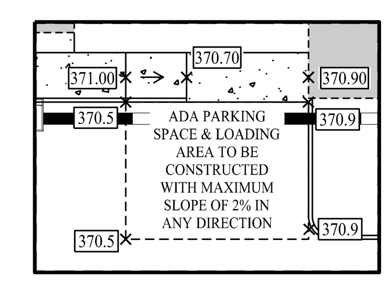
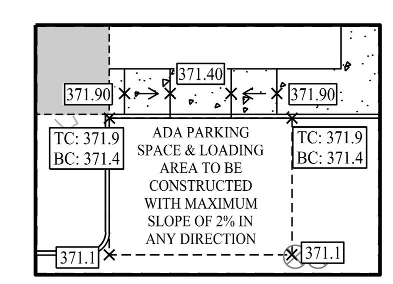
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
GTD	GRADE TO DRAIN
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
INV	INVERT
LF	LINEAR FEET
PR	PROPOSED
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TC	TOP OF CURB
TF	TOP OF FRAME
TW	TOP OF WALL
TYP	TYPICAL
TYPE C	TYPE C CATCH BASIN
TYPE CL	TYPE CL CATCH BASIN
WQU	WATER QUALITY UNIT
YD	YARD DRAIN



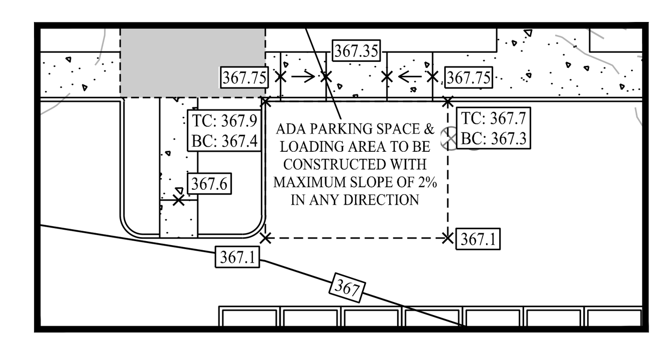
ENLARGEMENT E

SCALE 1" = 20'



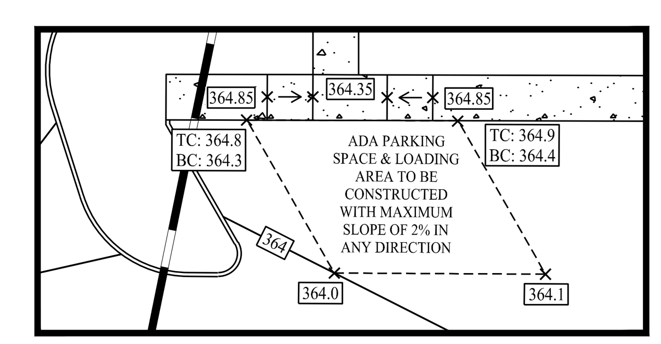
ENLARGEMENT F

SCALE 1" = 20'



ENLARGEMENT G

SCALE 1" = 20'



ENLARGEMENT H

SCALE 1" = 20'

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. 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.
3. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS.
4. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
5. CONTRACTOR TO PERFORM ALL SITE WORK PROPOSED HEREON IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL PERMITS AND CONDITIONS OF APPROVALS ISSUED FOR THIS PROJECT.
6. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY CONSTRUCTION PERMITS REQUIRED BY GOVERNMENT AND LOCAL AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY CONSTRUCTION PERMITS FROM LOCAL GOVERNING AUTHORITIES AND STATE REQUIRED TO PERFORM ALL REQUIRED WORK, INCLUDING FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES. THE CONTRACTOR SHALL POST ALL BONDS, EXCEPT CONNECTICUT DOT ENCROACHMENT PERMIT BOND, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
7. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
8. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED, EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE CIVIL ENGINEER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
9. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES AND UNIFORMED TRAFFIC CONTROLLERS AS REQUIRED, ORDERED BY THE ENGINEER OR REQUIRED BY THE STATE AND LOCAL GOVERNING AUTHORITIES.
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12. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLANDS IN ACCORDANCE WITH THE REGULATIONS OF THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
13. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
14. GRADING CONTRACTOR SHALL RESTORE TO GRADE AND COMPACTION ALL AREAS DISTURBED BY BUILDING CONSTRUCTION PRIOR TO ABSE AND PAVING OPERATIONS COMMENCING.
15. ALL CATCH BASINS SHALL BE INSTALLED WITH A MINIMUM 2-FOOT SUMP BELOW OUTLET PIPE INVERT ELEVATION.

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 30 0 30 60

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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:	MDM
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 30'

STATE OF CONNECTICUT · KEVIN M. SOLLI · 25759 · LICENSED · PROFESSIONAL ENGINEER

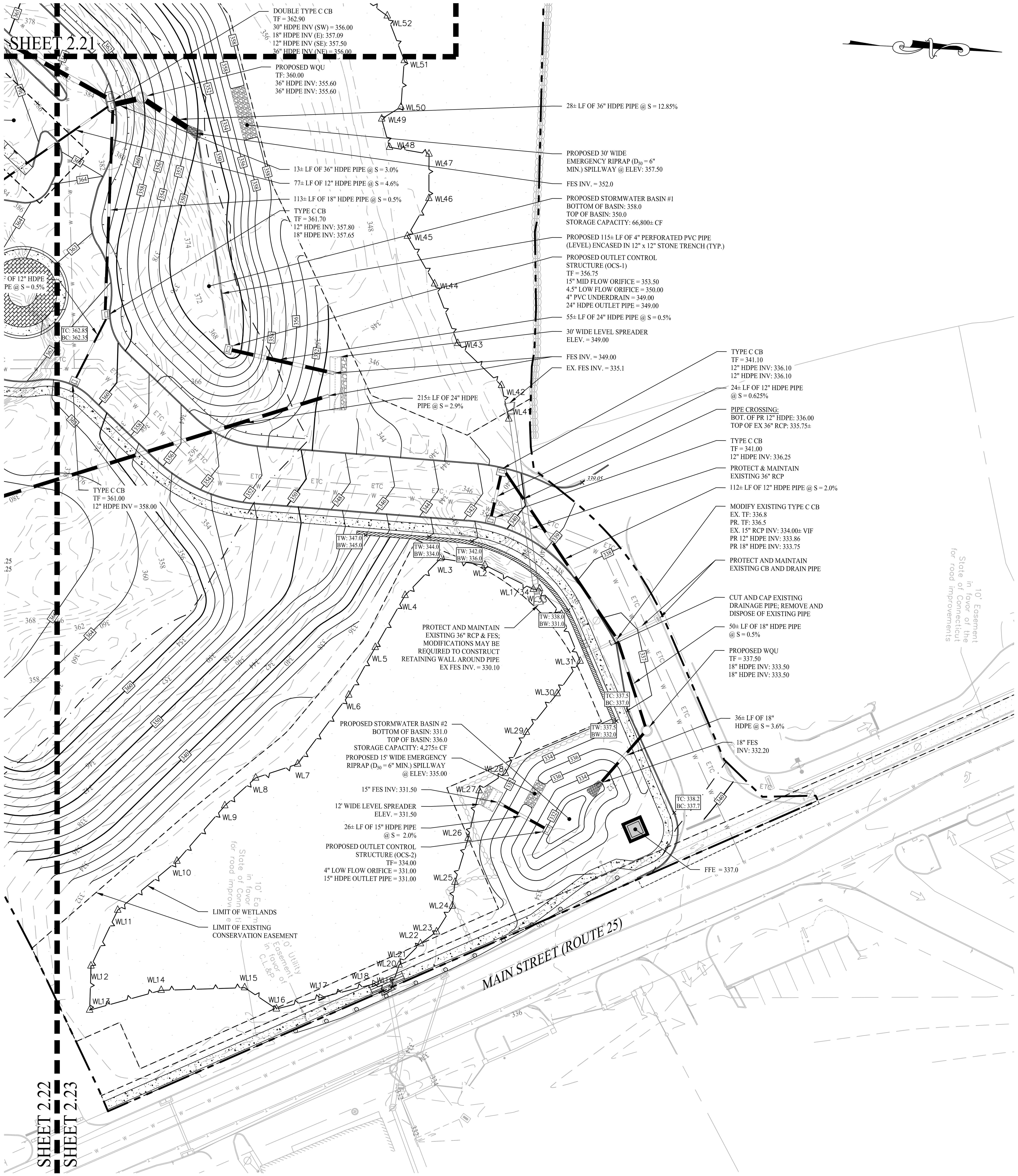
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: GRADING & DRAINAGE PLAN

Sheet #: 2.22

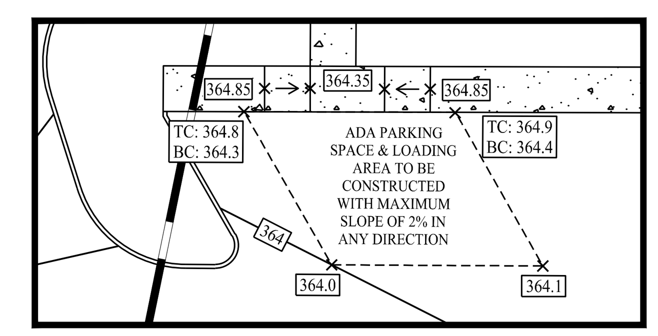


LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
ADJOINING LOT LINE
420 MAJOR CONTOURS
421 MINOR CONTOURS
EXISTING MAJOR CONTOURS
EXISTING MINOR CONTOURS
420 CONTOUR LABEL
568.85 PROPOSED SPOT ELEVATION
568.85 EXISTING SPOT ELEVATION
GRADE TO DRAIN
STORM DRAIN PIPE
TYPE "C" CATCH BASIN
TYPE "CL" CATCH BASIN
STORM MANHOLE
or WATER QUALITY UNIT
FLARE END SECTION
RIP RAP

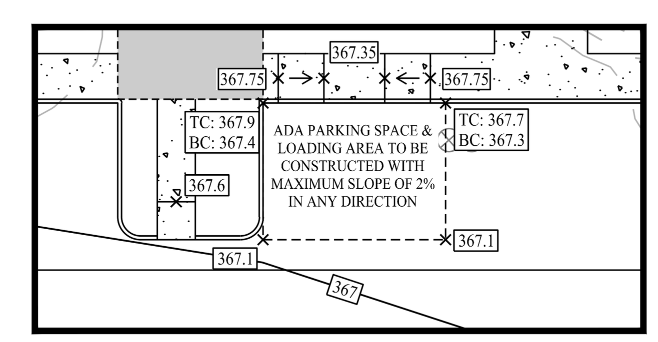
ABBREVIATIONS

@	AT
BC	BOTTOM OF CURB
BLDG.	BUILDING
BW	BOTTOM OF WALL
CB	CATCH BASIN
DMH	DRAINAGE MANHOLE
ELEV.	ELEVATION
EX	EXISTING
FES	FLARED END SECTION
FFE	FINISHED FLOOR ELEVATION
GTD	GRADE TO DRAIN
HDPE	HIGH-DENSITY POLYETHYLENE PIPE
INV	INVERT
LF	LINEAR FEET
PR	PROPOSED
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TC	TOP OF CURB
TF	TOP OF FRAME
TW	TOP OF WALL
TYP	TYPICAL
TYPE C	TYPE C CATCH BASIN
TYPE CL	TYPE CL CATCH BASIN
WQU	WATER QUALITY UNIT
YD	YARD DRAIN



ENLARGEMENT H

SCALE 1" = 20'



ENLARGEMENT G

SCALE 1" = 20'

GENERAL NOTES

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STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

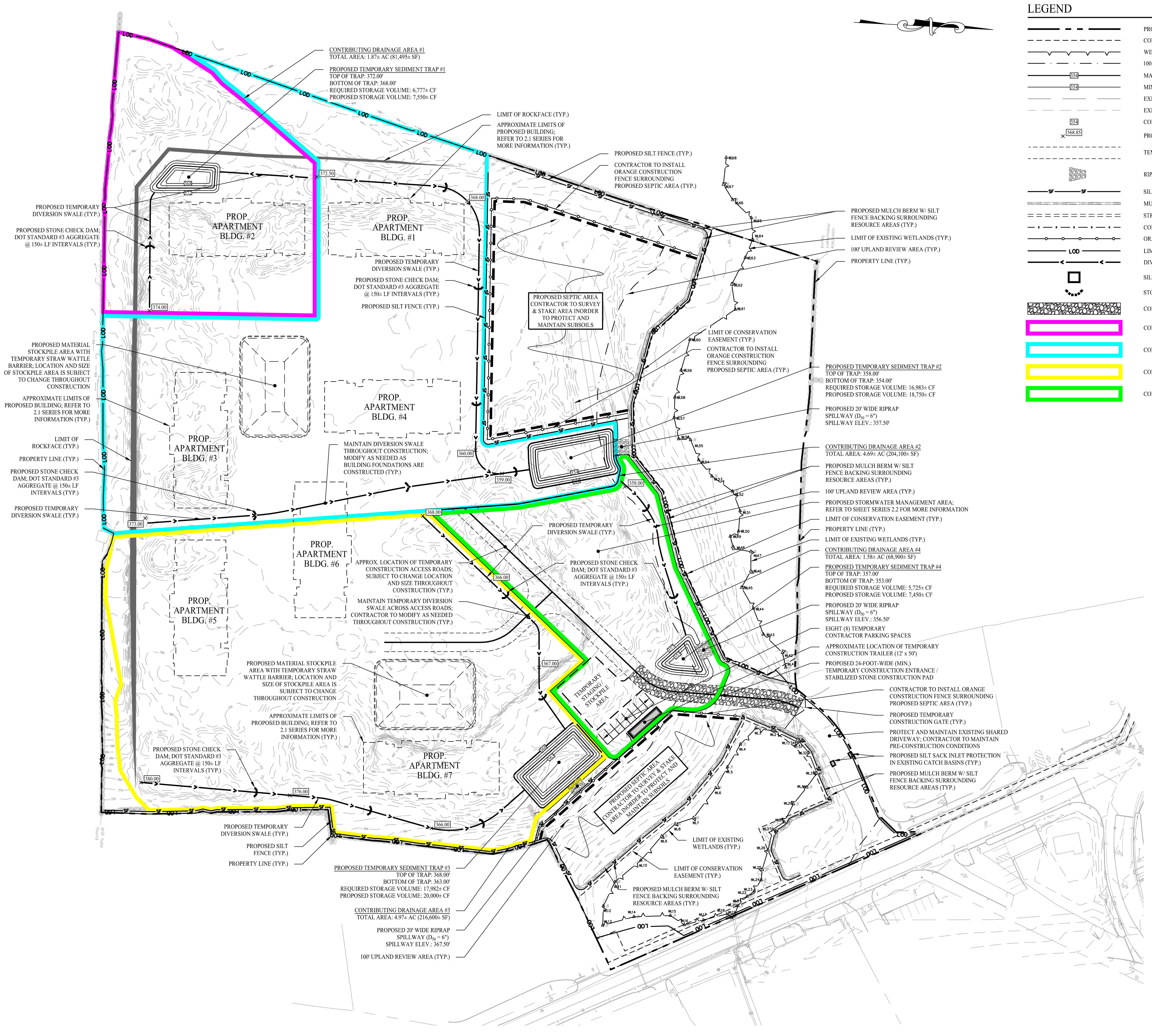
Project:

POND VIEW DEVELOPMENT

127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
GRADING & DRAINAGE PLAN

Sheet #:
2.23



LEGEND

- PROPERTY LINE
- CONSERVATION EASEMENT
- WETLAND LIMITS
- 100-FOOT UPLAND REVIEW AREA
- MAJOR CONTOURS
- MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- CONTOUR LABEL
- PROPOSED SPOT ELEVATION
- TEMPORARY ACCESS ROADS (TYP.)
- RIP RAP
- SILT FENCE PROTECTION
- MULCH BERM
- STRAW WATTLE BARRIER
- CONSTRUCTION FENCE
- ORANGE CONSTRUCTION FENCE
- LIMIT OF DISTURBANCE
- DIVERSION SWALE/BERM
- SILT SACK INLET PROTECTION
- STONE CHECK DAM
- CONSTRUCTION ENTRANCE
- CONTRIBUTING DRAINAGE AREA #1
- CONTRIBUTING DRAINAGE AREA #2
- CONTRIBUTING DRAINAGE AREA #3
- CONTRIBUTING DRAINAGE AREA #4

GENERAL NOTES

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9. THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
10. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, UTILITY, PAVEMENT, CURBS, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE CIVIL ENGINEER. DURING CONSTRUCTION CONTRACTOR IS TO HAVE THE SITE MAINTAINED FREE OF ALL TRASH, LITTER, DEBRIS AND OVERGROWN VEGETATION.
11. THE OWNER SHALL BE RESPONSIBLE TO HAVE THE SITE MAINTAINED FREE OF ALL TRASH, LITTER, DEBRIS AND OVERGROWN VEGETATION.
12. REFER TO SHEET 2.32 FOR THE PROPOSED SOIL EROSION AND SEDIMENT CONTROL MEASURES ASSOCIATED WITH PHASE II OF CONSTRUCTION.
13. REFER TO SHEET 2.41 FOR ADDITIONAL NOTES, CONSTRUCTION DETAILS, INSTALLATION GUIDES, AND MAINTENANCE INSTRUCTIONS FOR THE PROPOSED SOIL EROSION AND SEDIMENT CONTROL MEASURES.

SEDIMENT TRAP CALCULATIONS

NOTE:
TEMPORARY SEDIMENT TRAPS HAVE BEEN SIZED TO PROVIDE A MINIMUM STORAGE VOLUME OF 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA PER THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

SEDIMENT TRAP #1:
CONTRIBUTING DRAINAGE AREA = 1.87± ACRES
1.87 AC x 134 CY/AC = 251 CY
251 CY x 27 CF/CY = 6,777± CF
REQUIRED STORAGE CAPACITY = 6,777± CF
SEDIMENT TRAP #1 STORAGE CAPACITY = 7,550± CF

SEDIMENT TRAP #2:
CONTRIBUTING DRAINAGE AREA = 4.69± ACRES
4.69 AC x 134 CY/AC = 629 CY
629 CY x 27 CF/CY = 16,983± CF
REQUIRED STORAGE CAPACITY = 16,983± CF
SEDIMENT TRAP #2 STORAGE CAPACITY = 18,750± CF

SEDIMENT TRAP #3:
CONTRIBUTING DRAINAGE AREA = 4.97± ACRES
4.97 AC x 134 CY/AC = 666 CY
666 CY x 27 CF/CY = 17,982± CF
REQUIRED STORAGE CAPACITY = 17,982± CF
SEDIMENT TRAP #3 STORAGE CAPACITY = 20,000± CF

SEDIMENT TRAP #4:
CONTRIBUTING DRAINAGE AREA = 1.58± ACRES
1.58 AC x 134 CY/AC = 212 CY
212 CY x 27 CF/CY = 5,725± CF
REQUIRED STORAGE CAPACITY = 5,725± CF
SEDIMENT TRAP #4 STORAGE CAPACITY = 8,221± CF

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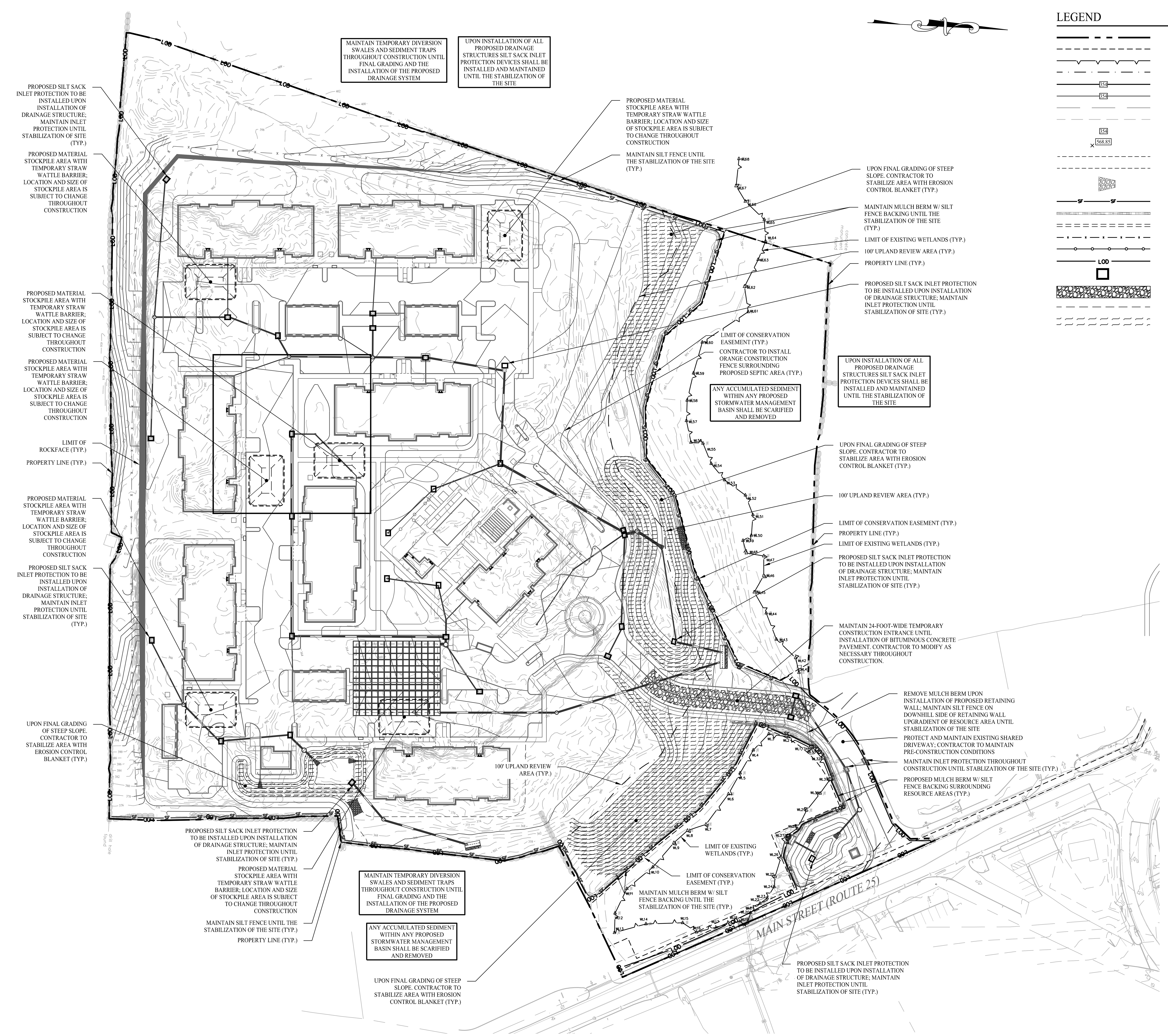
STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
PHASE I SOIL EROSION & SEDIMENT CONTROL PLAN

Sheet #:
2.31



LEGEND

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- TEMPORARY ACCESS ROADS (TYP.)
- RIP RAP
- SILT FENCE PROTECTION
- MULCH BERM
- STRAW WATTLE BARRIER
- CONSTRUCTION FENCE
- ORANGE CONSTRUCTION FENCE
- LIMIT OF DISTURBANCE
- SILT SACK INLET PROTECTION
- CONSTRUCTION ENTRANCE
- MATERIAL STOCKPILE
- SLOPE STABLIZATION MATTING

GENERAL NOTES

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Kevin Solli, P.E.
CT 25759

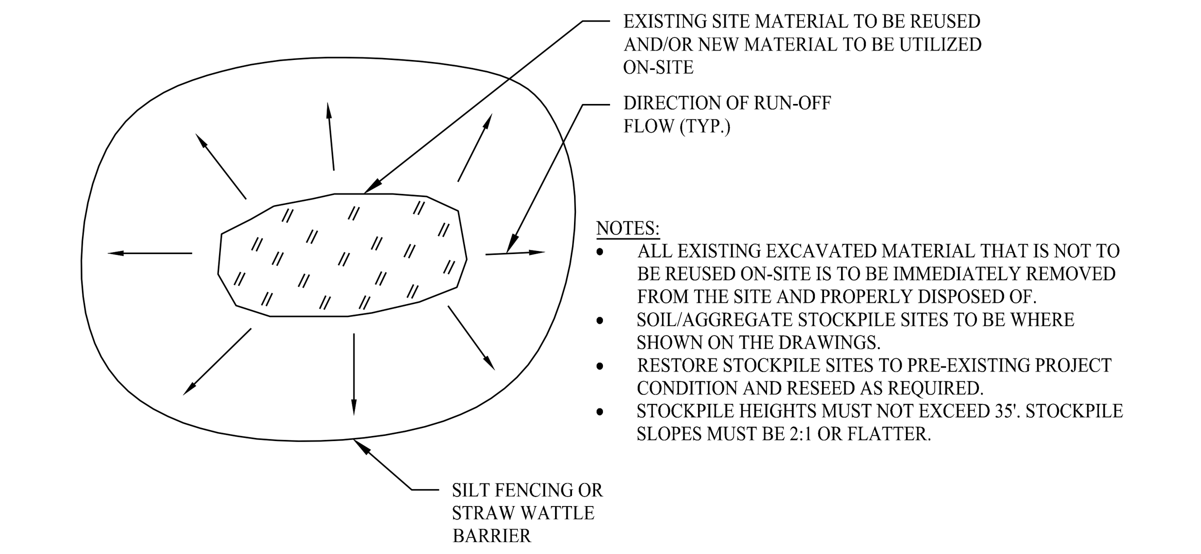
Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
PHASE II SOIL EROSION & SEDIMENT CONTROL PLAN

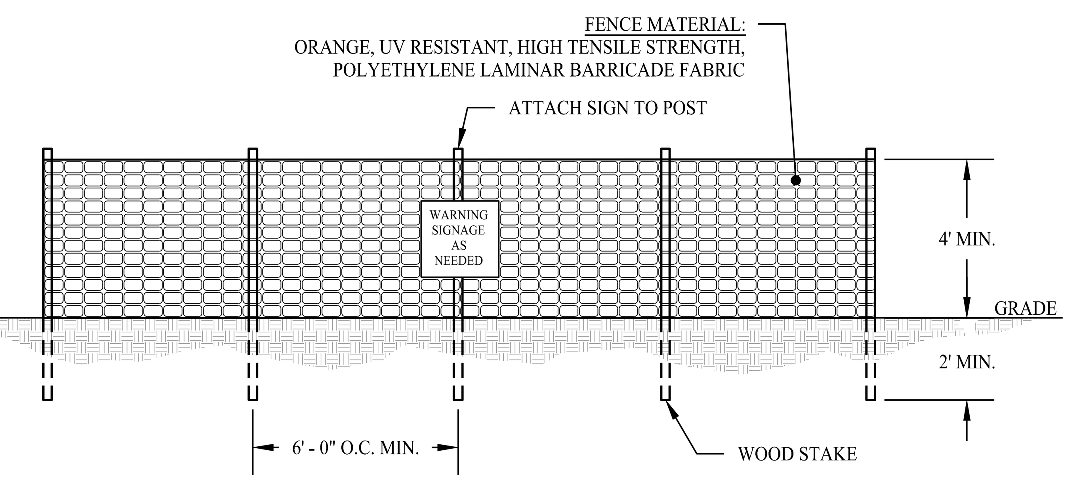
Sheet #: 2.32

NOTES:
1. ORANGE CONSTRUCTION FENCE TO BE STAKED WITH MIN. 6'-0" WOOD STAKES, 6'-0" ON CENTER
2. ORANGE CONSTRUCTION FENCE TO BE SECURED TO WOOD STAKES BY STAPLES OR ZIP TIES.



STOCKPILE AREA DETAIL

SCALE: NTS



ORANGE CONSTRUCTION FENCE DETAIL

SCALE: NTS

SOIL EROSION AND SEDIMENT CONTROL GENERAL NOTES

SEDIMENT & EROSION CONTROL NARRATIVE
THE SEDIMENT AND EROSION CONTROL PLAN WAS DEVELOPED TO PROTECT THE EXISTING ROADWAY AND STORM DRAINAGE SYSTEMS, ADJACENT PROPERTIES, AND ANY ADJACENT WETLAND AREA AND WATER COURSE FROM SEDIMENT LADEN SURFACE RUNOFF AND EROSION.

CONSTRUCTION SCHEDULE
THE ANTICIPATED STARTING DATE FOR CONSTRUCTION IS FALL 2023 WITH COMPLETION ANTICIPATED BY SUMMER 2024. 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.

CONTINGENCY EROSION PLAN
THE CONTRACTOR SHALL INSTALL ALL SPECIFIED EROSION CONTROL MEASURES AND WILL BE REQUIRED TO MAINTAIN THEM IN THEIR INTENDED FUNCTIONING CONDITION. THE LAND USE AGENTS OF THE TOWN OF MONROE AND ENGINEER OF RECORD SHALL HAVE THE AUTHORITY TO REQUIRE SUPPLEMENTAL MAINTENANCE OR ADDITIONAL MEASURES IF FIELD CONDITIONS ARE ENCOUNTERED BEYOND WHAT WOULD NORMALLY BE ANTICIPATED.

OPERATION REQUIREMENTS
CLEARING AND GRUBBING OPERATIONS:
1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES, INCLUDING THE CONSTRUCTION OF TEMPORARY SEDIMENTATION TRAPS AND STONE CONSTRUCTION ENTRANCE ANTI-TRACKING PADS, WILL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING OPERATIONS.
2. FOLLOWING INSTALLATION OF ALL SEDIMENTATION AND EROSION CONTROL MEASURES, THE CONTRACTOR SHALL NOT PROCEED WITH GRADING, FILLING OR OTHER CONSTRUCTION OPERATIONS UNTIL THE ENGINEER OF RECORD HAS INSPECTED AND APPROVED ALL INSTALLATIONS.
3. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CLEARING AND GRUBBING OPERATIONS SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR SEDIMENTATION AND EROSION CONTROL DEVICES.
4. FOLLOWING THE COMPLETION OF CLEARING AND GRUBBING OPERATIONS, ALL AREAS SHALL BE STABILIZED WITH TOPSOIL AND SEEDING OR PROCESSED AGGREGATE STONE AS SOON AS PRACTICAL.
5. ALL REMOVED INVASIVE PLANT SPECIES MATERIAL SHALL BE FULLY REMOVED FROM THE SITE AND TAKEN TO AN APPROVED AND/OR ACCEPTABLE DISPOSAL LOCATION.

ROUGH GRADING OPERATIONS:
1. DURING THE REMOVAL AND/OR PLACEMENT OF EARTH AS INDICATED ON THE GRADING PLAN, TOPSOIL SHALL BE STRIPPED AND APPROPRIATELY STOCKPILED FOR REUSE.
2. ALL STOCKPILED TOPSOIL SHALL BE SEEDED, MULCHED WITH HAY, AND ENCLOSED BY A SILTATION FENCE.

FILLING OPERATIONS:
1. PRIOR TO FILLING, ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE PROPERLY IMPLEMENTED, MAINTAINED AND FULLY INSTALLED, AS DIRECTED BY THE ENGINEER OF RECORD AND AS SHOWN ON THIS PLAN.
2. ALL FILL MATERIAL ADJACENT TO ANY WETLAND AREAS, IF APPLICABLE TO THIS PROJECT, SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN LIFT THICKNESS NOT GREATER THAN THAT SPECIFIED IN PROJECT SPECIFICATIONS. LIFTS SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS OR IN THE GEOTECHNICAL REPORT (IF AVAILABLE).
3. AS GENERAL GRADING OPERATIONS PROGRESS, ANY TEMPORARY DIVERSION DITCHES SHALL BE RAISED OR LOWERED, AS NECESSARY, TO DIVERT SURFACE RUNOFF TO THE SEDIMENT TRAPS AND BASIN.

PLACEMENT OF DRAINAGE STRUCTURES, UTILITIES, AND ROADWAY CONSTRUCTION OPERATIONS:
1. SILT FENCES SHALL BE INSTALLED AT THE DOWNHILL SIDES OF TEMPORARY SEDIMENT TRAP SLOPES, MUD PUMP DISCHARGES, AND UTILITY TRENCH MATERIAL STOCKPILES. HAY BALES MAY BE USED IF SHOWN ON THE EROSION CONTROL PLANS OR IF DIRECTED BY THE ENGINEER OF RECORD.

FINAL GRADING AND PAVING OPERATIONS:
1. ALL INLET AND OUTLET PROTECTION SHALL BE PLACED AND MAINTAINED AS SHOWN ON EROSION CONTROL PLANS AND DETAILS, AND AS DESCRIBED IN SPECIFICATIONS AND AS DESCRIBED HEREIN.
2. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS, JUTE MESH AND VEGETATION. ALL SLOPES SHALL BE SEEDED, AND ANY ROAD OR DRIVEWAY SHOULDER AND BANKS SHALL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
3. PAVEMENT SUB-BASE AND BASE COURSES SHALL BE INSTALLED OVER AREAS TO BE PAVED AS SOON AS FINAL SUB-GRADES ARE ESTABLISHED AND UNDERGROUND UTILITIES AND STORM DRAINAGE SYSTEMS HAVE BEEN INSTALLED.
4. AFTER CONSTRUCTION OF PAVEMENT, TOPSOIL, FINAL SEED, MULCH AND LANDSCAPING, REMOVE ALL TEMPORARY EROSION CONTROL DEVICES ONLY AFTER ALL AREAS HAVE BEEN PAVED AND/OR GRASS HAS BEEN WELL ESTABLISHED AND THE SITE HAS BEEN INSPECTED AND APPROVED BY THE TOWN OF MONROE

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES
I. SILTATION FENCE:
A. CONTRACTOR TO COORDINATE WITH SURVEYOR OF RECORD TO FIELD LOCATE PROPOSED SILT FENCE.
B. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
C. POSITION THE WOODEN STAKES AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND HAMMER THE STAKES INTO THE GROUND (MINIMUM OF 18 INCHES INTO THE GROUND).
D. LAY THE BOTTOM FOUR INCHES OF THE SILTATION FABRIC INTO THE TRENCH TO PREVENT STORMWATER RUNOFF FROM UNDERMINING THE FABRIC.
E. BACKFILL THE TRENCH AND COMPACT.

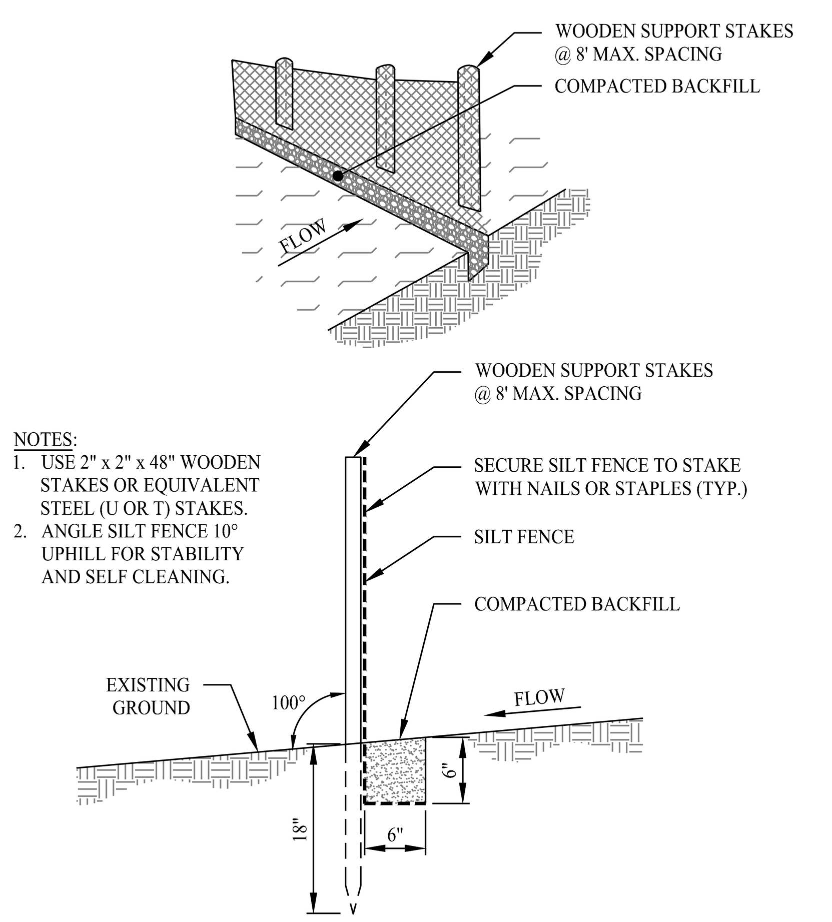
II. MULCH BERM:
A. ONCE SILTATION FENCE IS INSTALLED, AS SHOWN ON THE SEC PLANS, AN 18" HIGH BY 48" WIDE (MINIMUM) MULCH BERM SHALL BE INSTALLED ON THE UPHILL SIDE OF THE SILTATION FENCE.

III. SILT SACK INLET PROTECTION:
A. REMOVE CATCH BASIN GRATE AND PROPERLY PLACE THE SILT SACK INTO THE FRAME OF THE CATCH BASIN
B. PLACE THE GRATE BACK ONTO THE FRAME AND ENSURE NO PORTIONS OF THE SILT SACK HAVE SAGGED INTO THE CATCH BASIN.
C. ONCE GRATE IS PLACED BACK ONTO THE FRAME, MAKE AN OBSERVANCE TO SEE IF THE SILT SACK INSTALLED IN A MANNER THAT WILL ALLOW FOR SEDIMENT TO BE FILTERED BY THE SILT SACK DURING STORM EVENTS. REPEAT STEPS A - C AS NEEDED.
IV. CONSTRUCTION ENTRANCE:
A. REMOVE ALL VEGETATION AND OTHER MATERIALS FROM THE FOUNDATION AREA. GRADE AND CROWN FOUNDATION FOR POSITIVE DRAINAGE.
B. EXCAVATE A MINIMUM 6" FOUNDATION PAD, PLACE GEOTEXTILE FILTER FABRIC WITHIN FOUNDATION PAD AREA TO PROVIDE A SEPERATION BETWEEN UNEXCAVATED EARTH AND STONE PAD.
C. PLACE 1" - 3" STONE A MINIMUM OF 50FT ALONG THE FULL WIDTH OF THE CONSTRUCTION ACCESS ROAD. AGGREGATE SHOULD BE PLACED A MINIMUM OF 6" THICK.
D. IF ANY SURFACE WATER IS PROPOSED TO FLOW THROUGH OR TOWARDS THE CONSTRUCTION ENTRANCE AN ADEQUATELY SIZED DRAINAGE PIPE SHALL BE INSTALLED AND RUNOFF SHALL BE PIPED BENEATH THE ENTRANCE.
V. TEMPORARY DIVERSION SWALES:
A. EXCAVATE A MINIMUM CROSS SECTION WIDTH OF 4 FT, HEIGHT OF 1.5 FT, AND SIDE SLOPES OF 2:1.
B. SEED AND MULCH DIVERSION AS SOON AS THE SWALE IS CONSTRUCTED
C. THE MAXIMUMM CHANNEL GRADE SHALL BE LIMITED TO 3.0% AND HAVE A POSITIVE PITCH TO THE OUTLET.
D. OUTLET THE DIVERTED RUNOFF INTO THE STABILIZED SEDIMENTATION TRAP.
VI. CHECK DAMS:
A. CHECK DAMS MAY BE CONSTRUCTED OF ROCK, SAND BAGS FILLED WITH PEA GRAVEL, OR LOGS.
B. ENSURE DAMS ARE SPACED SO THAT THE ELEVATION OF THE TOW OF UPSTREAM DAM IS EQUAL TO THE ELEVATION OF THE TOP OF THE DOWNSTREAM DAM,
C. LOG DAMS SHALL BE CONSTRUCTED OF 24" DIAMETER LOGS EMBEDDED AT LEAST 18" DEEP INTO THE SOIL.
D. PLACE ROCK BY HAND OR MECHANICALLY TO ENSURE COMPLETE COVERAGE OF SWALE.
VII. TEMPORARY SEDIMENT TRAPS:
A. CLEAR, GRUB, AND STRIP ALL VEGETATION FROM THE EMBANKMENT AREA.
B. COMPACT AND FILL EMBANKMENT IN 9" LIFTS (MAX.)
C. OVERFILL EMBANKMENT 6" ABOVE DESIGN ELEVATION TO ALLOW FOR SETTLEMENT,
D. EXCAVATE TRAPEZOIDAL STONE OUTLET SECTION FROM COMPACTED EMBANKMENT. INSTALL FILTER FABRIC BENEATH RIPRAP OUTLET.

OPERATION AND MAINTENANCE OF SEDIMENTATION AND EROSION CONTROL MEASURES
I. SILTATION FENCE:
A. ALL SILTATION FENCES SHALL BE INSPECTED AS A MINIMUM WEEKLY OR AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED IN ACCORDANCE WITH THIS PLAN.
B. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE UPHILL SIDE OF THE SILTATION FENCE WHEN THE SEDIMENT EXCEEDS A HEIGHT OF 6".
II. MULCH BERM:
A. ALL MULCH BERMS SHALL BE INSPECTED AT A MINIMUM WEEKLY OR AFTER EACH RAINFALL EVENT. IF ANY DETERIORATED AREAS OF THE BERM ARE OBSERVED, THE BERM SHALL BE REPAIRED OR REPLACED PROMPTLY AS NEEDED.
B. DEPOSITS SHALL BE REMOVED FROM THE UPHILL SIDE OF THE MULCH BERM WHEN THE SEDIMENT EXCEEDS A HEIGHT OF 6".
III. SILT SACK INLET PROTECTION:
A. ALL SILT SACKS SHALL BE INSPECTED AT A MINIMUM WEEKLY OR AFTER EACH RAINFALL EVENT. ALL DETERIORATED SILT SACKS AND SACKS THAT APPEAR TO HAVE AN EXCESS OF SEDIMENT SHALL BE REPLACED AND PROPERLY REPOSITIONED IN ACCORDANCE WITH THE DETAILS HEREON.
B. SEDIMENT DEPOSITS SHALL BE REMOVED FROM THE SILT SACKS WHEN THEY EXCEED A COUPLE INCHES OF SEDIMENT WITHIN THE SACK.
IV. CONSTRUCTION ENTRANCE:
A. THE CONSTRUCTION ENTRANCE SHALL BE INSPECTED AT A MINIMUM WEEKLY OR AFTER EACH RAINFALL EVENT OR DURING PERIODS OF HEAVY VEHICULAR TRAFFIC.
B. DURING SAID INSPECTIONS, OBSERVATIONS OF SURROUNDING PUBLIC ROADS SHALL BE MADE. ANY TRACKED MUD OR SEDIMENT ONTO PUBLIC ROADS SHALL BE SWEPT UP.
C. IF EXCESSIVE SEDIMENT IS BEING TRACKED OFF-SITE, THE CONSTRUCTION ENTRANCE SHALL BE TOPDRESSED WITH NEW STONE DUE TO MUD / SEDIMENT CLOGGING THE VOIDS OF THE PAD.
D. RESHAPE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL, REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
V. TEMPORARY DIVERSION SWALES:
A. ALL DIVERSION SWALES SHALL BE INSPECTED AT A MINIMUM WEEKLY OR AFTER EACH RAINFALL EVENT.
B. DAMAGE CAUSED BY CONSTRUCTION TRAFFIC OR OTHER ACTIVITY SHALL BE REPAIRE DBY THE END OF EACH WORK DAY. IMEDIATELY REMOVE SEDIMENT FROM THE FLOW AREA AND REPAIR THE DIVERSION SWALE, CHECK OUTLETS CAREFULLY AND MAKE TIMELY REPAIRS AS NEEDED.
C. WHEN THE AREA PROTECTED HAS BEEN PERMANENTLY STABILIZED, REMOVE THE SWALE TO BLEND WITH THE NATURAL GROUND LEVEL, AND APPROPRIATELY STABILIZE IT.
VI. CHECK DAMS:
A. ALL CHECK DAMS SHALL BE INSPECTED AT A MINIMUM WEEKLY OR AFTER EACH RAINFALL EVENT.
B. REMOVE SEDIMENT ACCUMULATIONS FROM THE CHECK DAMS.
C. CHECK THE STRUCTURE AND ABUTMENTS FOR EROSION, PIPING OR ROCK DISPLACEMENT AND REPAIR IMMEDIATELY.
D. REMOVE CHECK DAMS AFTER DRAINAGE AREA GAS BEEN STABILIZED PERMANENTLY.
VII. TEMPORARY SEDIMENT TRAPS:
A. ALL SEDIMENT TRAPS SHALL BE INSPECTED AT A MINIMUM WEEKLY OR AFTER EACH RAINFALL EVENT. IF ANY EROSION OR PIPING IS OBSERVED IT SHALL BE REPAIRED IMMEDIATELY.
B. SET A STAKE AT ONE HALF THE DESIGN DEPTH OF THE SEDIMENT TRAP. REMOVE SEDIMENT ACCUMULATION WHEN THE SEDIMENT HAS ACCUMULATED TO A DEPTH OF HALF THE STAKE (25% OF DESIGN DEPTH).
C. CLEAN OR REPLACE SPILLWAY RIPRAP AS NEEDED IF EROSION IS OBSERVED.
D. INSPECT VEGETATION; RESEED AND REMULCH IF NECESSARY.

EROSION AND SEDIMENT CONTROL PLAN
1. HAY BALE FILTERS OR SILTATION FENCE WILL BE INSTALLED AT ALL CULVERT OUTLETS IF CULVERT OUTLETS ARE APPLICABLE TO THIS PROJECT AND ALONG THE TOE OF ALL CRITICAL CUT AND FILL SLOPES.
2. CULVERT DISCHARGE AREAS WILL BE PROTECTED WITH RIP RAP CHANNELS; ENERGY DISSIPATERS WILL BE INSTALLED AS SHOWN ON THESE PLANS AND AS NECESSARY.
3. CATCH BASINS WILL BE PROTECTED WITH HAY BALE FILTERS, SILT SACKS, SILTATION FENCE, OR OTHER INLET PROTECTION DEVICES PER DETAILS, THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
4. ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL MANUAL, LATEST EDITION.
5. EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO CONSTRUCTION WHENEVER POSSIBLE
6. ALL CONTROL MEASURES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD.
7. ADDITIONAL CONTROL MEASURES WILL BE INSTALLED DURING THE CONSTRUCTION PERIOD, IF NECESSARY OR REQUIRED OR AS DIRECTED BY THE CIVIL ENGINEER OR BY LOCAL GOVERNING OFFICIALS.
8. SEDIMENT REMOVED FROM EROSION CONTROL STRUCTURES WILL BE DISPOSED IN A MANNER WHICH IS CONSISTENT WITH THE INTENT AND REQUIREMENTS OF THE EROSION CONTROL PLANS, NOTES, AND DETAILS.
9. THE OWNER IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THIS EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN.

CONSTRUCTION SEQUENCE
THE FOLLOWING CONSTRUCTION SEQUENCE IS RECOMMENDED:
1. CONTACT TOWN OF MONROE AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.
2. CLEARING LIMITS SHALL BE PHYSICALLY MARKED IN THE FIELD AND APPROVED BY THE TOWN OF MONROE AGENT PRIOR TO THE START OF WORK ON THE SITE. INSTALL TREE PROTECTION AND PERIMETER SILT FENCE.
3. CONSTRUCT STONE CONSTRUCTION ANTI-TRACKING PADS AT CONSTRUCTION ENTRANCES/EXITS AND WRAP FILTER FABRIC AROUND GRATES OF CATCH BASINS OR INSTALL SILT SACKS ON CATCH BASIN INLETS ON OFF SITE ROADS. INSTALL SILT FENCE AND OTHER EROSION CONTROL DEVICES INDICATED ON THESE PLANS AT PERIMETER OF PROPOSED SITE DISTURBANCE AND INSTALL ALL EROSION CONTROL MEASURES AND TREE PROTECTION INDICATED ON THESE PLANS. INSTALL SEDIMENT BASINS AND SEDIMENT TRAPS IF REQUIRED AT LOW AREAS OF SITE OR AS ORDERED BY THE ENGINEER OF RECORD OR AS SHOWN ON THESE PLANS.
4. CLEAR AND GRUB SITE. STOCKPILE CHIPS. STOCKPILE TOPSOIL. INSTALL EROSION CONTROLS AT STOCKPILES.
5. COMMENCE EARTHWORK. CONSTRUCT FILL SLOPE AND RETAINING WALLS. INSTALL ADDITIONAL EROSION CONTROLS AS WORK PROGRESSES AND CONTINUE STORM DRAINAGE SYSTEM CONSTRUCTION, TOPSOIL AND SEED SLOPES WHICH HAVE ACHIEVED FINAL SITE GRADING.
6. CONSTRUCTION STAKING OF ALL BUILDING CORNERS, UTILITIES, ACCESS DRIVES, AND PARKING AREAS.
7. ROUGH GRADING AND FILLING OF SUBGRADES AND SLOPES.
8. 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.
9. BEFORE DISPOSING OF SOIL OR RECEIVING BORROW FOR THE SITE, THE CONTRACTOR MUST PROVIDE EVIDENCE THAT EACH SPOIL OR BORROW AREA HAS AN EROSION AND SEDIMENT CONTROL PLAN APPROVED BY THE TOWN OF MONROE AND WHICH IS BEING IMPLEMENTED AND MAINTAINED. THE CONTRACTOR SHALL ALSO NOTIFY THE TOWN OF MONROE IN WRITING OF ALL RECEIVING SPOIL AND BORROW AREAS WHEN THEY HAVE BEEN IDENTIFIED.
10. CONTINUE INSTALLATION OF STORM DRAINAGE AS SUBGRADE ELEVATIONS ARE ACHIEVED.
11. BUILDING FOUNDATION SUBGRADE AND PAD SUBGRADE PREPARATION.
12. BUILDING FOUNDATION CONSTRUCTION. BEGIN BUILDING SUPERSTRUCTURE
13. THROUGHOUT CONSTRUCTION SEQUENCE, REMOVE SEDIMENT FROM BEHIND SILT FENCES, HAY BALES AND OTHER EROSION CONTROL DEVICES, AND FROM SEDIMENTATION BASINS AND SEDIMENT TRAPS AS REQUIRED. REMOVAL SHALL BE ON A PERIODIC BASIS (EVERY SIGNIFICANT RAINFALL OF 0.25 INCH OR GREATER). INSPECTION OF EROSION CONTROL MEASURES SHALL BE ON A WEEKLY BASIS AND AFTER EACH RAINFALL OF 0.25 INCHES OR GREATER. SEDIMENT COLLECTED SHALL BE DEPOSITED AND SPREAD EVENLY UPLAND ON SLOPES DURING CONSTRUCTION.
14. INSTALL SANITARY LATERAL AND UTILITIES. COMPLETE STORM DRAINAGE SYSTEM.
15. INSTALL SITE LIGHTING AND TRASH ENCLOSURE.
16. COMPLETE GRADING TO SUBGRADES AND CONSTRUCT PARKING AREA SUBGRADE.
17. CONSTRUCT CURBS, PAVEMENT STRUCTURE AND SIDEWALKS
18. CONDUCT FINE GRADING.
19. CONSTRUCT OFF SITE ROADWAY AND SIGNAL IMPROVEMENTS
20. PAVING OF PARKING AREAS AND DRIVEWAYS
21. FINAL FINE GRADING OF SLOPE AND NON-PAVED AREAS.
22. PLACE 4" TOPSOIL ON SLOPES AFTER FINAL GRADING IS COMPLETED. FERTILIZE SEED AND MULCH. SEED MIXTURE TO BE INSTALLED APRIL 15- JUNE 1 OR AUGUST 15-OCTOBER 1 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 4.0 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.).
23. LANDSCAPE ISLANDS INTERIOR NON-PAVED AREA AND PERIMETER AREAS.
24. INSTALL SIGNING AND PAVEMENT MARKINGS
25. CLEAN STORM DRAINAGE PIPE STRUCTURES, DETENTION SYSTEMS AND WATER QUALITY DEVICES OF DEBRIS AND SEDIMENT.
26. UPON DIRECTION OF THE TOWN OF MONROE AGENT, EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED FOLLOWING STABILIZATION OF THE SITE.



SILT FENCE DETAIL

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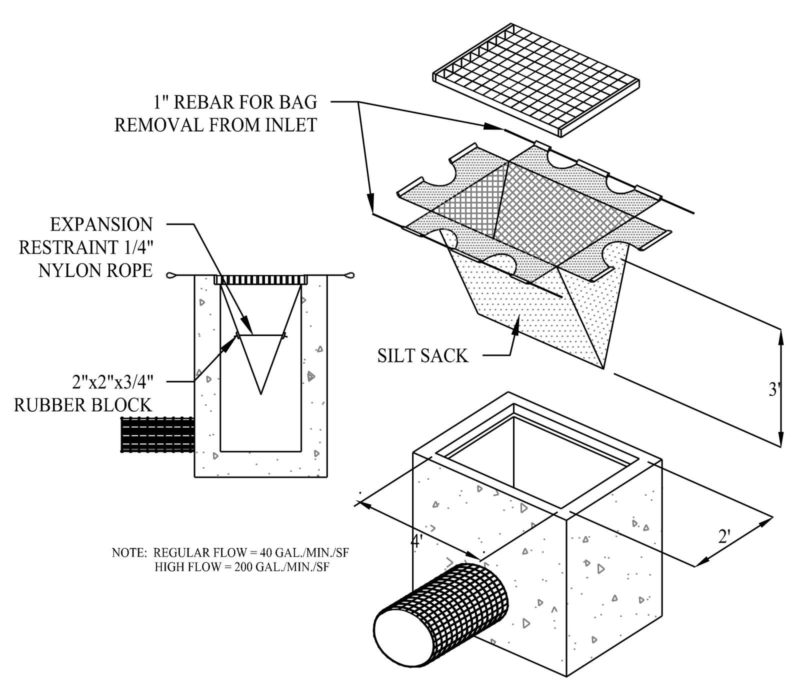

SILT SACK DETAIL

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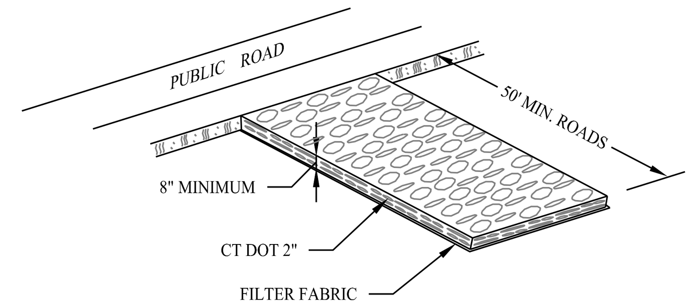


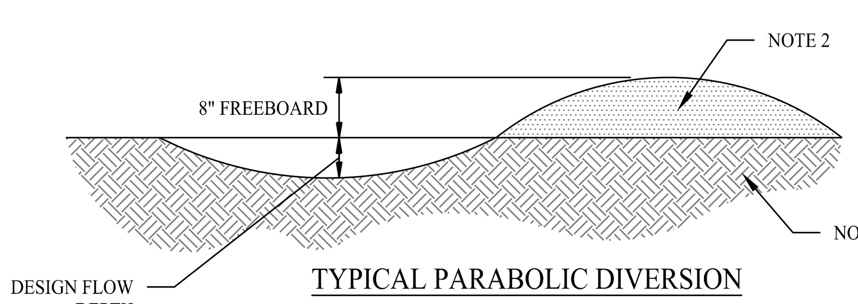
GRADATION TABLE

	CONN. DOT 2" CRUSHED GRAVEL	ASTM C-33 NO. 2	ASTM C-33 NO. 3
SQUARE MESH SIEVES	% FINER	% FINER	% FINER
2 1/2 INCHES	100	90-100	100
2 INCHES	95-100	35-70	90-100
1 1/2 INCHES	35-70	0-15	35-70
1 1/4 INCHES	0-25	—	—
1 INCHES	0-10	—	0-15
3/4 INCHES	—	0-5	—
1/2 INCHES	—	—	0-5
3/8 INCHES	—	—	—

SOURCE:
U.S. DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE, STORRS, CONNECTICUT

CONSTRUCTION ENTRANCE

SCALE: NTS

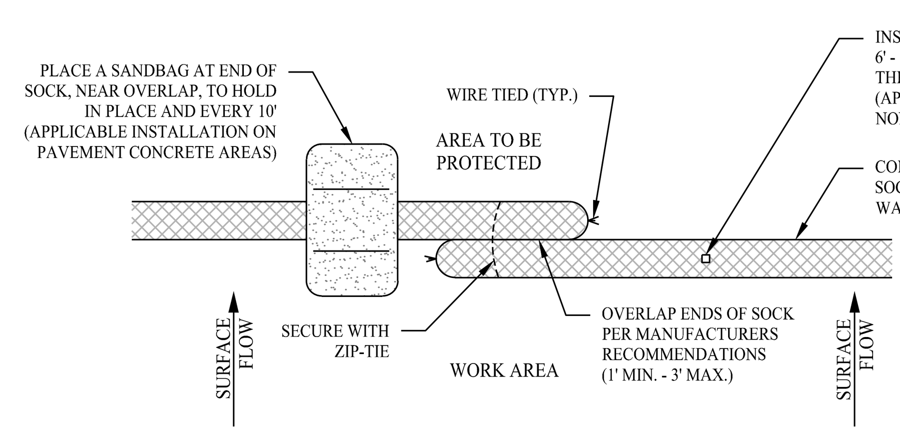


TYPICAL PARABOLIC DIVERSION

NOTES:
1. REMOVE ANY EXISTING VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING SWALE.
2. SWALE MATERIALS MUST BE ADEQUATELY COMPACTED AND STABILIZED.
3. REFER TO E&S PHASE I & II FOR TEMPORARY AND/OR FINAL STABILIZATION MEASURES.
4. SWALE SHALL NOT BE CONSTRUCTED OF TOPSOIL.

DIVERSION SWALE DETAIL

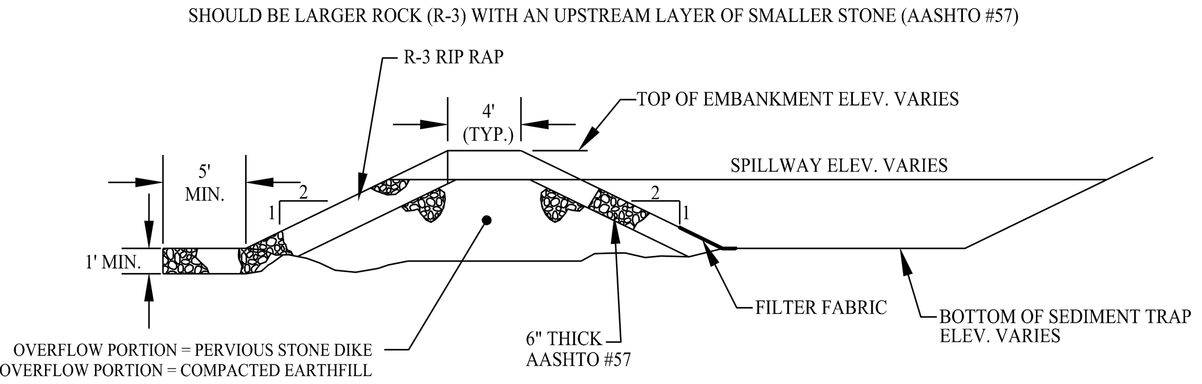
SCALE: NTS



STRAW WATTLE BARRIER

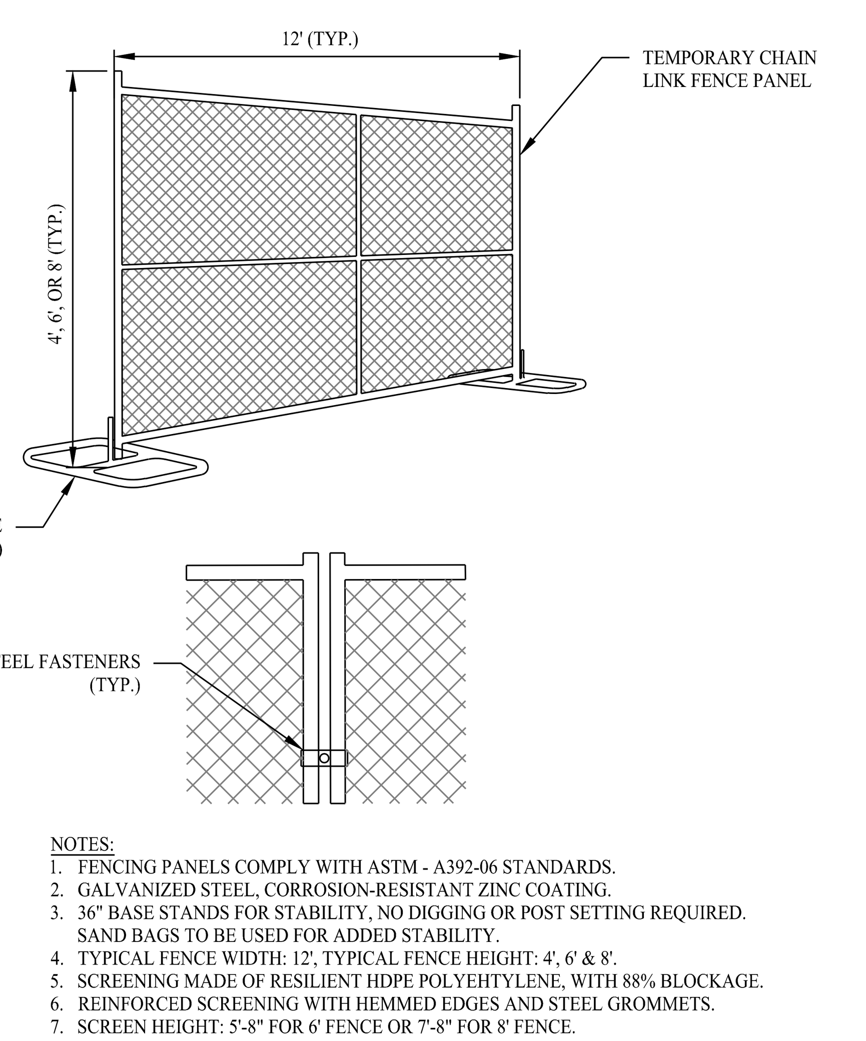
SCALE: NTS

NOTES:
1. SEDIMENT TRAPS SHOULD PROVIDE A MINIMUM OF 134 CUBIC YARDS OF SEDIMENT STORAGE PER DISTURBED ACRE CONTRIBUTING TO THE TRAP. SEE SAID VOLUMES ON SOIL, EROSION AND SEDIMENT CONTROL SHEETS.
2. THE OUTLET EMBANKMENT SHELL IS TO BE ENTIRELY OF ROCK. THE DOWNSTREAM SLOPE SHOULD BE LARGER ROCK (R-3) WITH AN UPSTREAM LAYER OF SMALLER STONE (AASHTO #57)



TYPICAL SEDIMENT TRAP DETAIL

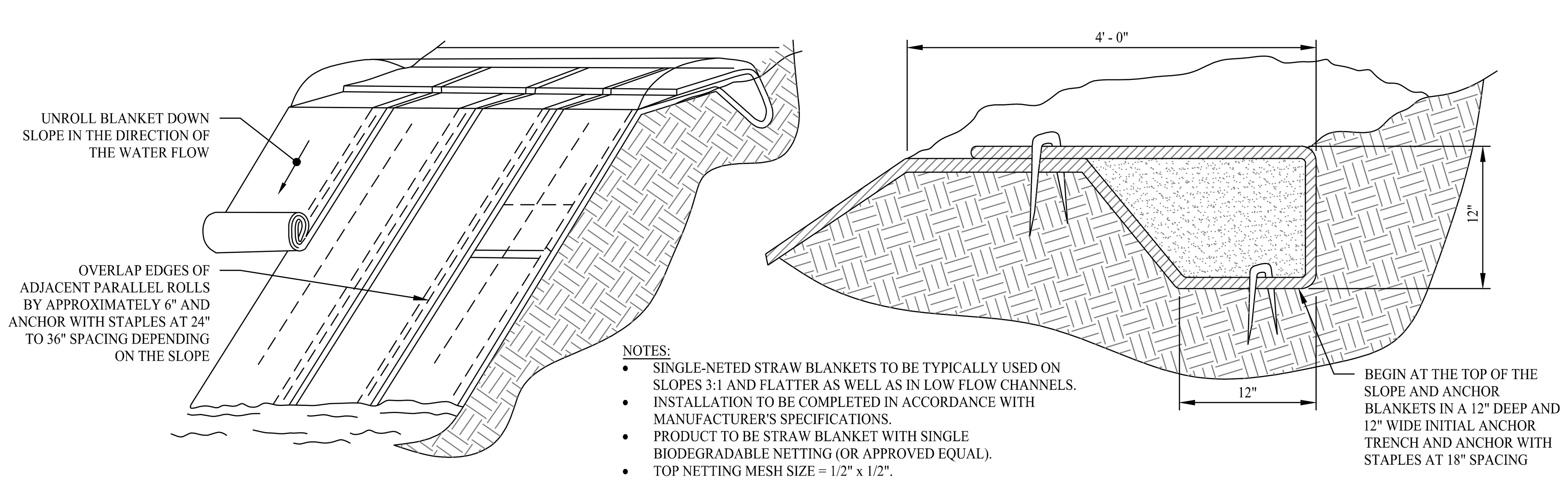
SCALE: N.T.S



NOTES:
1. FENCING PANELS COMPLY WITH ASTM - A392-06 STANDARDS.
2. GALVANIZED STEEL, CORROSION-RESISTANT ZINC COATING.
3. 36" BASE STANDS FOR STABILITY, NO DIGGING OR POST SETTING REQUIRED. SAND BAGS TO BE USED FOR ADDED STABILITY.
4. TYPICAL FENCE WIDTH: 12', TYPICAL FENCE HEIGHT: 4', 6' & 8'.
5. SCREENING MADE OF RESILIENT HDPE POLYETHYLENE, WITH 88% BLOCKAGE.
6. REINFORCED SCREENING WITH HEMMED EDGES AND STEEL GROMMETS.
7. SCREEN HEIGHT: 5'-8" FOR 6' FENCE OR 7'-8" FOR 8' FENCE.
8. SCREEN COLORS: GREEN, TAN, BLUE OR RED.

TEMPORARY CONSTRUCTION FENCE DETAIL

SCALE: NTS

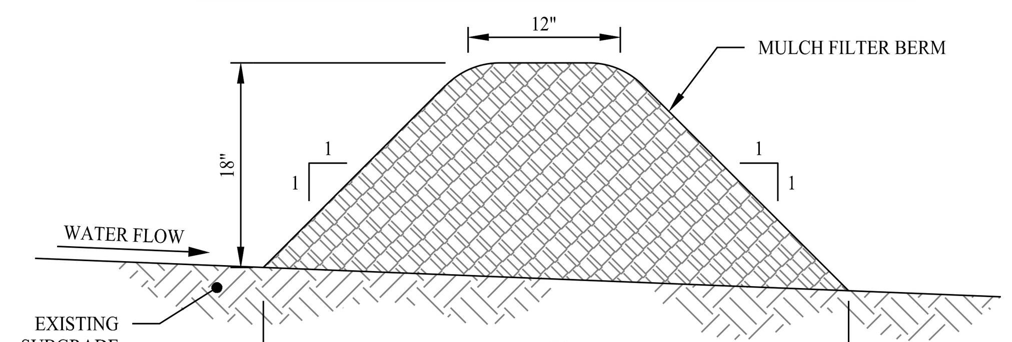


NOTES:
- SINGLE-NETED STRAW BLANKETS TO BE TYPICALLY USED ON SLOPES 3:1 AND FLATTER AS WELL AS IN LOW FLOW CHANNELS.
- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
- PRODUCT TO BE STRAW BLANKET WITH SINGLE BIODEGRADABLE NETTING (OR APPROVED EQUAL).
- TOP NETTING MESH SIZE = 1/2" x 1/2".

EROSION CONTROL BLANKET

SCALE: NTS

FILTER BERM MEDIA PARAMETERS	
MOISTER CONTENT	30 - 60
ORGANIC MATTER CONTENT	25 - 100
PARTICLE SIZE	3", 100% PASSING 1", 90% TO 100% PASSING 3/4", 70% TO 100% PASSING 1/4", 30% TO 75% PASSING MAXIMUM: PARTICLE SIZE LENGTH OF 6" (NO MORE THAN 50% PASSING 1/4" IN HIGH RAINFALL/FLOW RATE SITUATIONS)



TEMPORARY MULCH BERM

SCALE: NTS

1	01/26/23	P&Z SUBMISSION
Rev. #:	Date	Description

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Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	NTS

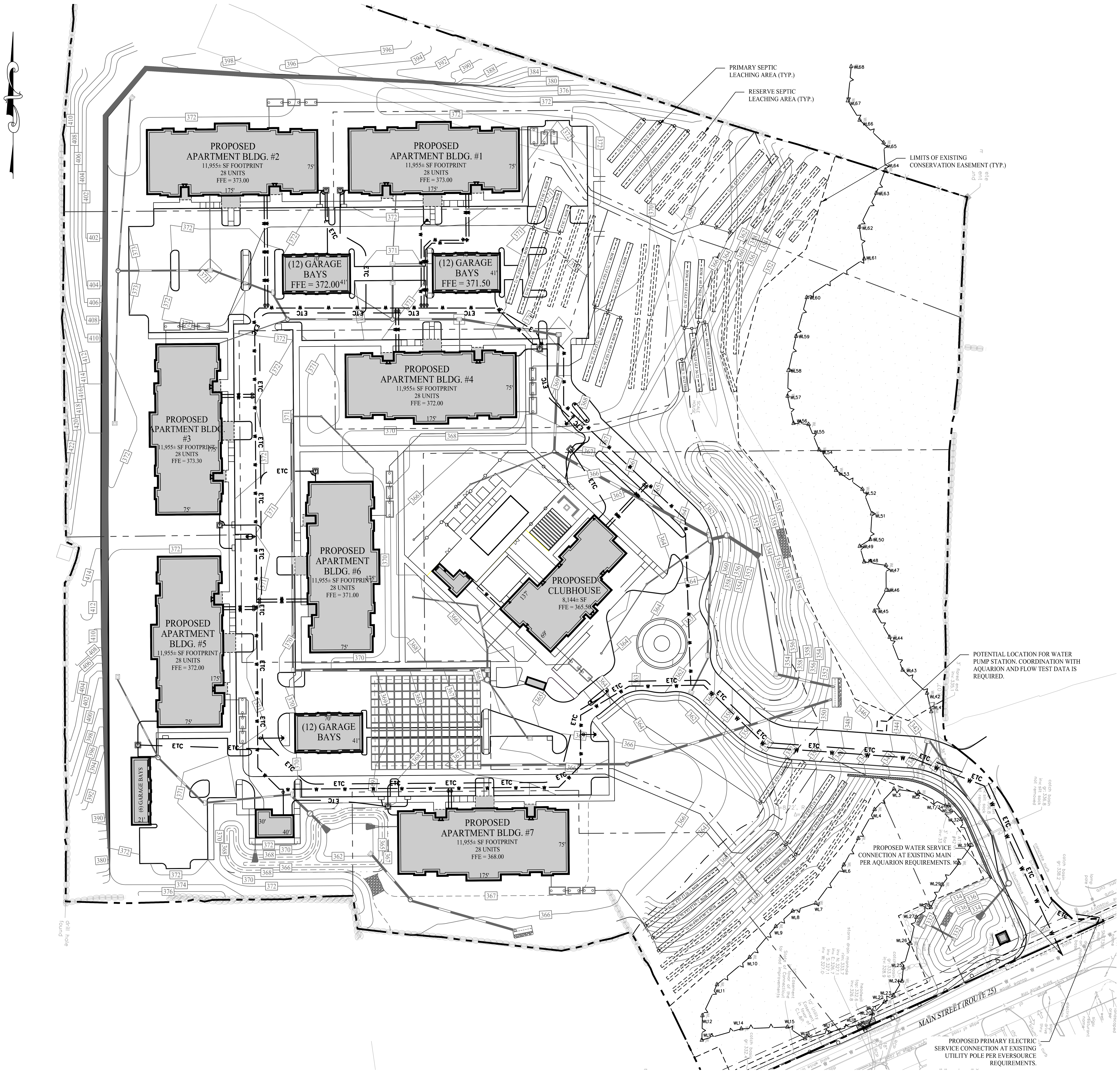
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

Sheet #:
2.41



GENERAL NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN IN THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES 72 HOURS PRIOR TO BEGINNING EXCAVATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
4. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
5. WHERE THE SANITARY SEWER LINE PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
6. WHERE THE SANITARY SEWER LINE PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
7. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
9. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
10. SHOULD LATENT SOIL CONDITIONS NECESSITATE, CONTRACTOR SHALL INSTALL SPECIAL SUPPORTS FOR PIPING AND/OR APPURTENANCES INCLUDING THE REMOVAL OF UNSUITABLE MATERIAL AND BACKFILLING WITH GRAVEL OR OTHER APPROVED MATERIAL. CONTRACTOR SHALL PERFORM ANY SUCH WORK AS DIRECTED BY THE CIVIL ENGINEER OF RECORD AND/OR SOILS ENGINEER AT NO COST TO OWNER.
11. ALL NOTES AND DIMENSIONS DESIGNATED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.
12. AN OVERALL SEPTIC SYSTEM AS-BUILT PLAN AND DETAILED AS-BUILTS FOR EACH SYSTEM ARE REQUIRED FOR THE RECORD WITH ELEVATIONS. ANY ADJUSTMENTS REQUIRED WHICH HAVE BEEN WITNESSED AND ACCEPTED BY PE/BHD SHALL BE SHOWN ON THE PLANS. THE SEPTIC AS-BUILT SHOULD ALSO SHOW THE ACTUAL FIELD LOCATION OF THE SEPTIC SYSTEM IN RELATION TO THE PERMITTED PROPOSED LOCATION.
   12.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
13. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
14. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
15. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOTING DRAINS.

BUILDING OWNERSHIP NOTES

1. EACH APARTMENT BUILDING AND ITS SEPTIC SYSTEM SHALL BE LOCATED ON ITS OWN CONDOMINIUM PARCEL AS INDICATED UNDER SEPARATE OWNERSHIP FROM OTHER PARCELS ON THE PROPERTY. LIKEWISE, THE CLUBHOUSE, AND MAINTENANCE BUILDINGS AS WELL AS THE COMMUNITY SEPTIC SYSTEM SERVING THESE BUILDINGS WILL BE LOCATED ON A SEPARATE CONDOMINIUM PARCEL.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
ADJOINING LOT LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA

RESIDENTIAL BUILDING PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

CLUBHOUSE / POOL HOUSE / MAINTENANCE BUILDING PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

CLUBHOUSE / POOL HOUSE / MAINTENANCE BUILDING

DAILY FLOW = 4.28 GPD/ BEDROOM*
DAILY FLOW = 4.28 GPD/ BEDROOM * 300 BEDROOMS = 1,350
MULTIPLY BY FACTOR OF SAFTEY OF 1.5 = 1,284 * 1.5 = 2,025 GPD
REQUIRED ELA: (2,025 GPD)/(1.5 GPD / SF ELA) = 1,350 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
52 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 1,362 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 2,025 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 2,500 GALLONS

*BASED OFF EXISTING WATER USAGE DATA FROM SIMILAR PROJECT

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 50 0 50 100

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Drawn By:	MDM
Checked By:	CJP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 50'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: OVERALL UTILITY PLAN

Sheet #: 2.50

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. 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.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN IN THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES 72 HOURS PRIOR TO BEGINNING EXCAVATION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
6. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
7. WHERE THE SEPTIC SEWER PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SEWER PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
11. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
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    14.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
15. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #1 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 1: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #1 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 1: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11-12, 1997.

TEST PIT 212
0"-6" TOPSOIL
6"-24" LIGHT BROWN FINE SANDY LOAM
24"-40" GREY COURSE SAND
40"-96" GREY M-C SAND
NO LEDGE
WATER @ 90" (APPROXIMATE ELEVATION 352.50)

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 13, 2019. SOIL TESTS WERE WITNESSED BY MATTHEW BRATTOLI, RS, TOWN OF MONROE HEALTH DEPARTMENT. TESTS WERE CONDUCTED TO IDENTIFY DEPTH TO LEDGE.

TEST PIT 604N
LEDGE @ 7' (APPROXIMATE ELEVATION 354.00)

SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING 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

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA
TP-103 TEST PIT
PT-103 PERC TEST PIT
DISTRIBUTION BOX
DISTRIBUTION BOX (H.L.O.)
SEPTIC TANK

Rev. #:	Date	Description
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Graphic Scale: 30 0 30 60

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Drawn By: CJP
Checked By: RPP
Approved By: KMS
Project #: 1910801
Plan Date: 01/09/23
Scale: 1" = 30'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: RESIDENCE BUILDING #1 UTILITY PLAN

Sheet #: 2.51

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
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6. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
7. WHERE THE SEPTIC SYSTEM PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
11. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
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    14.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
15. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #2 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 2: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #2 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 2: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11-12, 1997.

TEST PIT 206
0"-10" TOPSOIL
10"-32" LIGHT BROWN FINE SANDY LOAM
32"-110" GREY MED SAND
NO LEDGE
NO WATER

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 12, 2018. SOIL TESTS WERE WITNESSED BY RICH JACKSON, RS, TOWN OF MONROE HEALTH DEPARTMENT.

TEST PIT 506
0"-6" DARK BROWN TOPSOIL
6"-18" YELLOWISH BROWN FINE SANDY LOAM
18"-80" OLIVE BROWN FINE TO MEDIUM SAND
WATER @ 66" (APPROXIMATE ELEVATION: 364.50)

SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

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

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING TRENCH
RESERVE LEACHING AREA
DISTRIBUTION BOX
SEPTIC TANK
TP-103 TEST PIT
PT-103 PERC TEST PIT

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale:
30 0 30 60

SOLLI ENGINEERING
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Drawn By:	MDM
Checked By:	CJP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 30'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
RESIDENCE BUILDING #2 UTILITY PLAN

Sheet #:
2.52

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. 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.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN IN THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES 72 HOURS PRIOR TO BEGINNING EXCAVATION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
6. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
7. WHERE THE SEPTIC SYSTEM PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
11. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
12. SHOULD LATENT SOIL CONDITIONS NECESSITATE, CONTRACTOR SHALL INSTALL SPECIAL SUPPORTS FOR PIPING AND/OR APPURTENANCES INCLUDING THE REMOVAL OF UNSUITABLE MATERIAL AND BACKFILLING WITH GRAVEL OR OTHER APPROVED MATERIAL. CONTRACTOR SHALL PERFORM ANY SUCH WORK AS DIRECTED BY THE CIVIL ENGINEER OF RECORD AND/OR SOILS ENGINEER AT NO COST TO OWNER.
13. ALL NOTES AND DIMENSIONS DESIGNATED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.
14. AN OVERALL SEPTIC SYSTEM AS-BUILT PLAN AND DETAILED AS-BUILTS FOR EACH SYSTEM ARE REQUIRED FOR THE RECORD WITH ELEVATIONS. ANY ADJUSTMENTS REQUIRED WHICH HAVE BEEN WITNESSED AND ACCEPTED BY PE/BHD SHALL BE SHOWN ON THE PLANS. THE SEPTIC AS-BUILT SHOULD ALSO SHOW THE ACTUAL FIELD LOCATION OF THE SEPTIC SYSTEM IN RELATION TO THE PERMITTED PROPOSED LOCATION.
    14.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
15. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #3 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 3: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #3 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 3: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

TEST PIT 109
0"-6" TOPSOIL
6"-18" BROWN F-M SAND, TR SILT
18"-48" GREY M-C SAND
48"-99" GREY M-C SAND & GRAVEL, LI SMALL STONES, TR SILT
NO LEDGE/DRY/NO MOTTLING

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11, 1997.

TEST PIT 205
0"-9" TOPSOIL
9"-24" BROWN FINE SANDY LOAM
24"-66" GREY MED SAND, SO 1" STONE
66"-108" GREY M-C SAND & GRAVEL
NO LEDGE
NO WATER

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 3, 2019. SOIL TESTS WERE WITNESSED BY MATTHEW BRATTOLI, RS, TOWN OF MONROE HEALTH DEPARTMENT. TESTS WERE CONDUCTED TO IDENTIFY DEPTH TO LEDGE.

TEST PIT 703
LEDGE @ 5' (APPROXIMATE ELEVATION = 360.0

SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING 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

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA
TP-103 TEST PIT
PT-103 PERC TEST PIT
DISTRIBUTION BOX
SEPTIC TANK

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STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: RESIDENCE BUILDING #3 UTILITY PLAN

Sheet #: 2.53

GENERAL NOTES

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7. WHERE THE SEPTIC SYSTEM PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
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17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #4 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 4: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #4 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 4: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

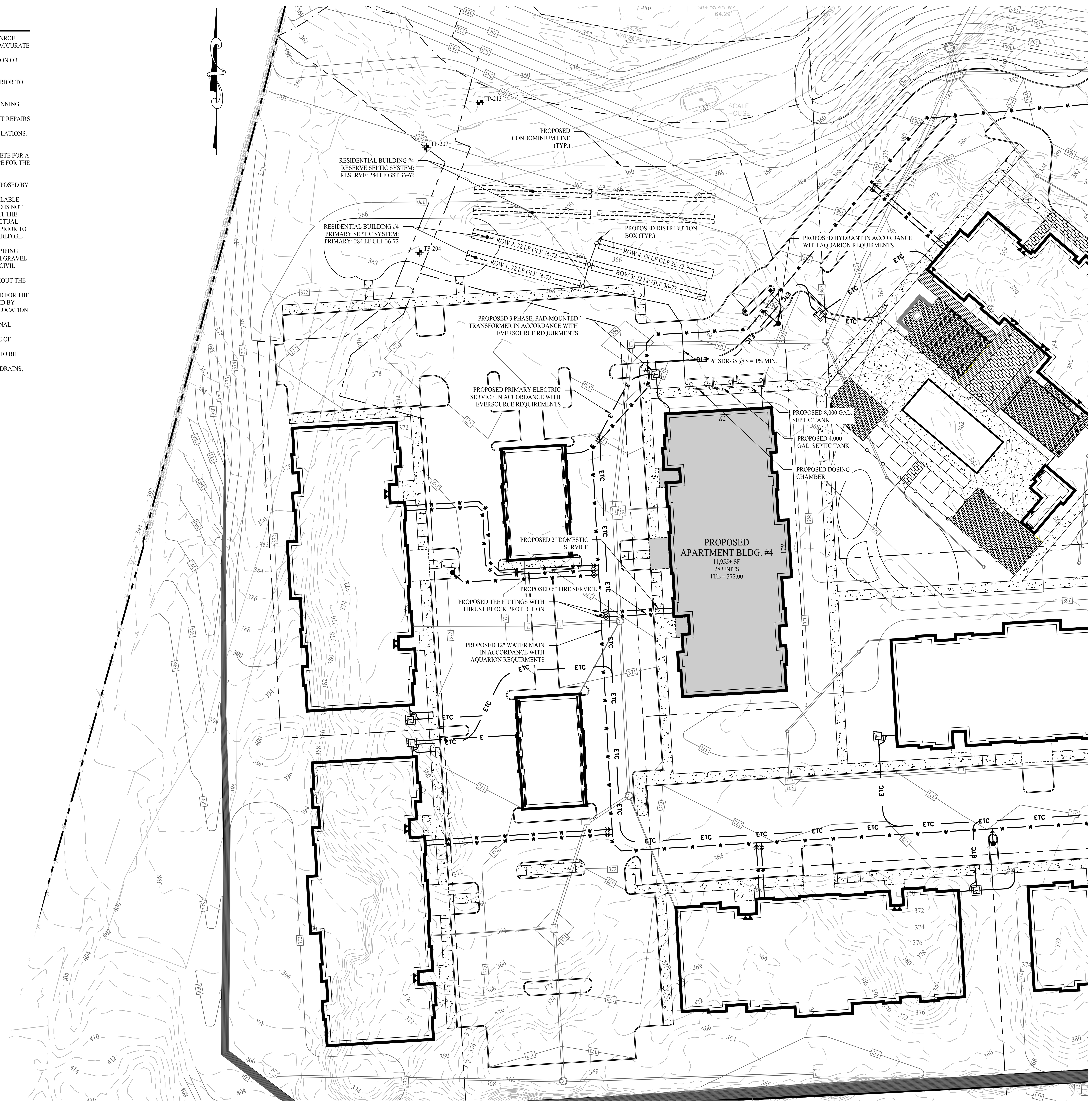
TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

TEST PIT 204
0"-9" TOPSOIL
9"-48" GRAY BROWN VERY FINE SANDY LOAM W/ STONES
48"-64" GREY FIRM FINE SAND W/ GRAVEL
64"-90" MED SAND & GRAVEL, SO LOOSE SILT
NO LEDGE
WATER @ 80" (APPROXIMATE ELEVATION: 359.33)

TEST PIT 207
0"-12" TOPSOIL
12"-30" LIGHT BROWN FINE SANDY LOAM
32"-95" GREY FIRM F-M SAND & GRAVEL
NO LEDGE
WATER @ 80" (APPROXIMATE ELEVATION: 351.83)

TEST PIT 213
0"-6" TOPSOIL
6"-24" LIGHT BROWN FINE SANDY LOAM
24"-40" GREY FINE SAND
40"-100" GREY F-M SAND
NO LEDGE
WATER @ 88" (APPROXIMATE ELEVATION: 346.17)



LEGEND

PROPERTY LINE	
RIGHT-OF-WAY LINE	
CONDOMINIUM LINE	
SANITARY SEWER PIPE	
LEACHING SYSTEM	
RESERVE LEACHING AREA	
TP-103	TEST PIT
PT-103	PERC TEST PIT
	DISTRIBUTION BOX

SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
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4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING DRY SIEVE
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Drawn By:	CJP
Checked By:	RPP
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STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: RESIDENCE BUILDING #4 UTILITY PLAN

Sheet #: 2.54

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8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
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16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #5 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 5: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
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REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #5 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 5: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

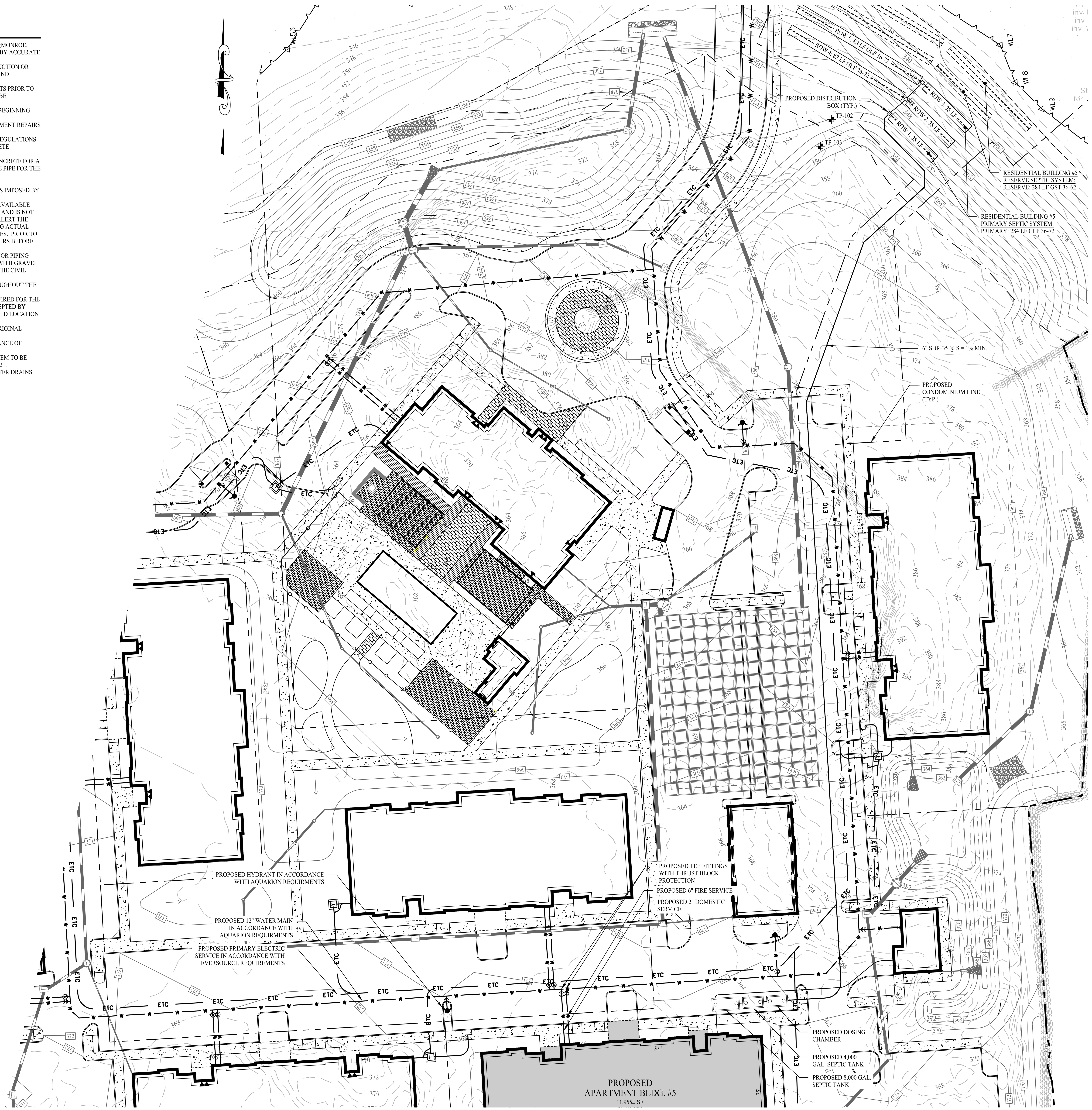
SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

TEST PIT 102
0"-5" TOPSOIL
5"-28" BROWN F-M SAND & SILT
28"-99" GREY M-C SAND & GRAVEL, LI COBBLES, TR SILT
NO LEDGE/DRY/NO MOTTLING

TEST PIT 103
0"-7" TOPSOIL
7"-32" BROWN F-M SAND & SILT
32"-64" GREY/TAN M-C SAND & GRAVEL, LI STONES, TR SILT
LEDGE @ 64" (APPROXIMATE ELEVATION = 352.67)
DRY/NO MOTTLING



SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING 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

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA
TP-103 TEST PIT
PT-103 PERC TEST PIT
DISTRIBUTION BOX
SEPTIC TANK

1	01/26/23	P&Z SUBMISSION
Rev. #:	Date	Description

Graphic Scale:
30 0 30 60

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: CJP
Checked By: RPP
Approved By: KMS
Project #: 1910801
Plan Date: 01/09/23
Scale: 1" = 30'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
RESIDENCE BUILDING #5 UTILITY PLAN

Sheet #:
2.55

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. 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.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN IN THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES 72 HOURS PRIOR TO BEGINNING EXCAVATION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
6. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
7. WHERE THE SEPTIC SYSTEM PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
11. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
12. SHOULD LATENT SOIL CONDITIONS NECESSITATE, CONTRACTOR SHALL INSTALL SPECIAL SUPPORTS FOR PIPING AND/OR APPURTENANCES INCLUDING THE REMOVAL OF UNSUITABLE MATERIAL AND BACKFILLING WITH GRAVEL OR OTHER APPROVED MATERIAL. CONTRACTOR SHALL PERFORM ANY SUCH WORK AS DIRECTED BY THE CIVIL ENGINEER OF RECORD AND/OR SOILS ENGINEER AT NO COST TO OWNER.
13. ALL NOTES AND DIMENSIONS DESIGNATED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.
14. AN OVERALL SEPTIC SYSTEM AS-BUILT PLAN AND DETAILED AS-BUILTS FOR EACH SYSTEM ARE REQUIRED FOR THE RECORD WITH ELEVATIONS. ANY ADJUSTMENTS REQUIRED WHICH HAVE BEEN WITNESSED AND ACCEPTED BY PE/BHD SHALL BE SHOWN ON THE PLANS. THE SEPTIC AS-BUILT SHOULD ALSO SHOW THE ACTUAL FIELD LOCATION OF THE SEPTIC SYSTEM IN RELATION TO THE PERMITTED PROPOSED LOCATION.
    14.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
15. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #6 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 6: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #6 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 6: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

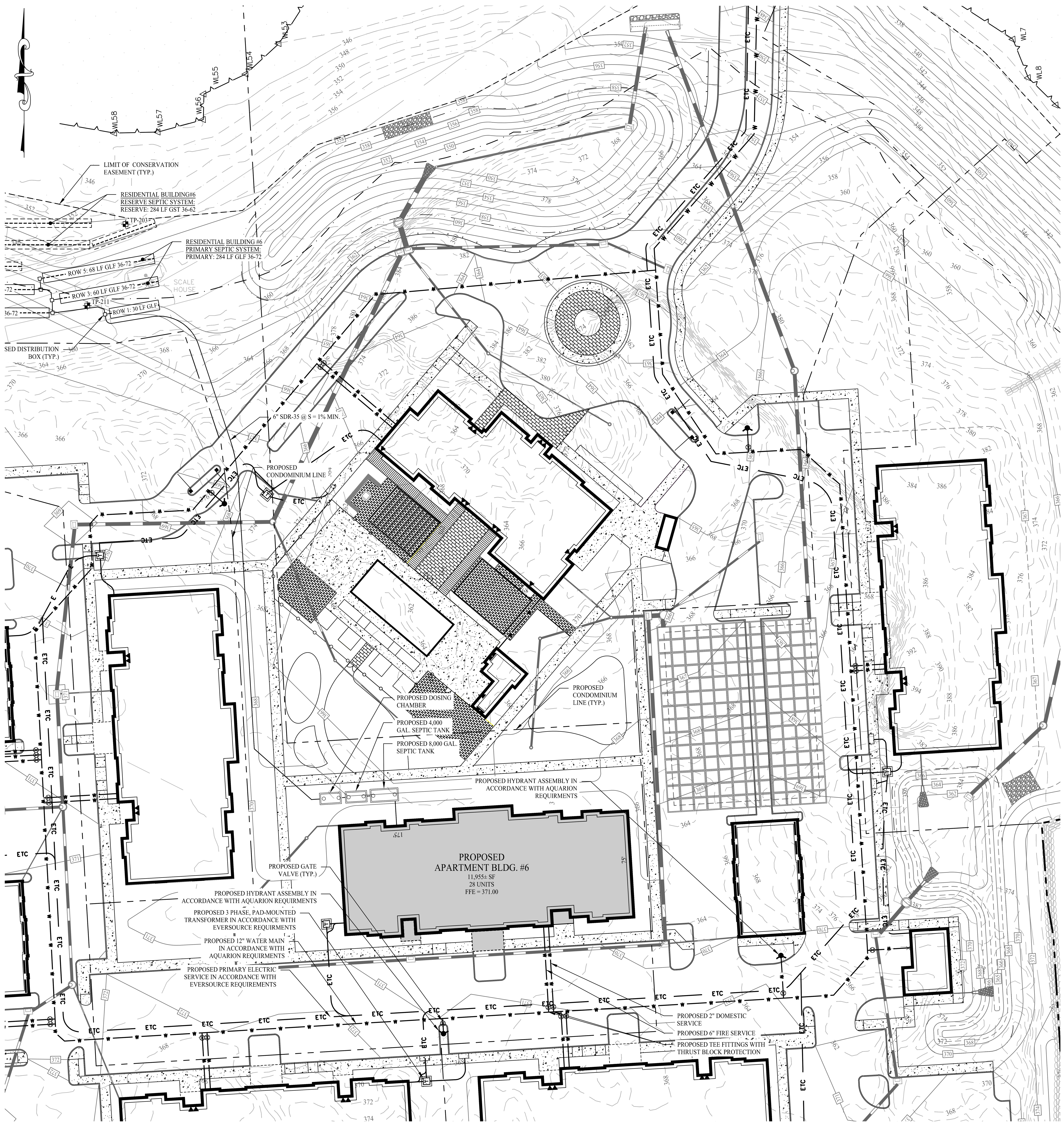
SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MARCH 11, 1997.

TEST PIT 203
0"-10" TOPSOIL
10"-24" BROWN LOAMY SAND & GRAVEL
24"-84" BROWN M-C SAND W/ COBBLES
NO LEDGE
WATER @ 72 +/-" (APPROXIMATE ELEVATION: 348.50)

TEST PIT 211
0"-9" TOPSOIL
9"-26" LIGHT BROWN FINE SANDY LOAM
26"-100" GREY M-C SAND
NO LEDGE
NO WATER



SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING DRY SIEVE
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#100	0-20	0-5
#200	0-5	0-2.5

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA
TP-103 TEST PIT
PT-103 PERC TEST PIT
DISTRIBUTION BOX
SEPTIC TANK

Rev. #:	Date	Description
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Graphic Scale:
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Drawn By:	CJP
Checked By:	RPP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 30'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title:
RESIDENCE BUILDING #6 UTILITY PLAN

Sheet #:
2.56

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
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4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES 72 HOURS PRIOR TO BEGINNING EXCAVATION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
6. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
7. WHERE THE SEPTIC SYSTEM PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
11. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
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13. ALL NOTES AND DIMENSIONS DESIGNATED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.
14. AN OVERALL SEPTIC SYSTEM AS-BUILT PLAN AND DETAILED AS-BUILTS FOR EACH SYSTEM ARE REQUIRED FOR THE RECORD WITH ELEVATIONS. ANY ADJUSTMENTS REQUIRED WHICH HAVE BEEN WITNESSED AND ACCEPTED BY PE/BHD SHALL BE SHOWN ON THE PLANS. THE SEPTIC AS-BUILT SHOULD ALSO SHOW THE ACTUAL FIELD LOCATION OF THE SEPTIC SYSTEM IN RELATION TO THE PERMITTED PROPOSED LOCATION.
    14.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
15. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

RESIDENTIAL BUILDING #7 PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 7: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
284 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 1,250 + (42 BEDROOMS) (250 GALLONS/BEDROOM)
REQUIRED SEPTIC TANK CAPACITY = 11,750 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 12,000 GALLONS

RESIDENTIAL BUILDING #7 RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

RESIDENCE 7: 28 UNITS (APARTMENTS): 45 TOTAL BEDROOMS

DESIGN FLOW: 150 GPD (45) = 6,750 GPD
REQUIRED ELA: 495 SF + 165(42) SF = 7,425 SF OF ELA
PROPOSED RESERVE LEACHING SYSTEM :
284 LF GEOMATRIX GST 6236 @ 26.2 SF/LF = 7,440 SF ELA
CENTER TO CENTER SPACING = 13'

SINCE DEPTH TO RESTRICTIVE LAYER IS > 60", MLSS NEED NOT BE CONSIDERED.

TEST PIT OBSERVATIONS

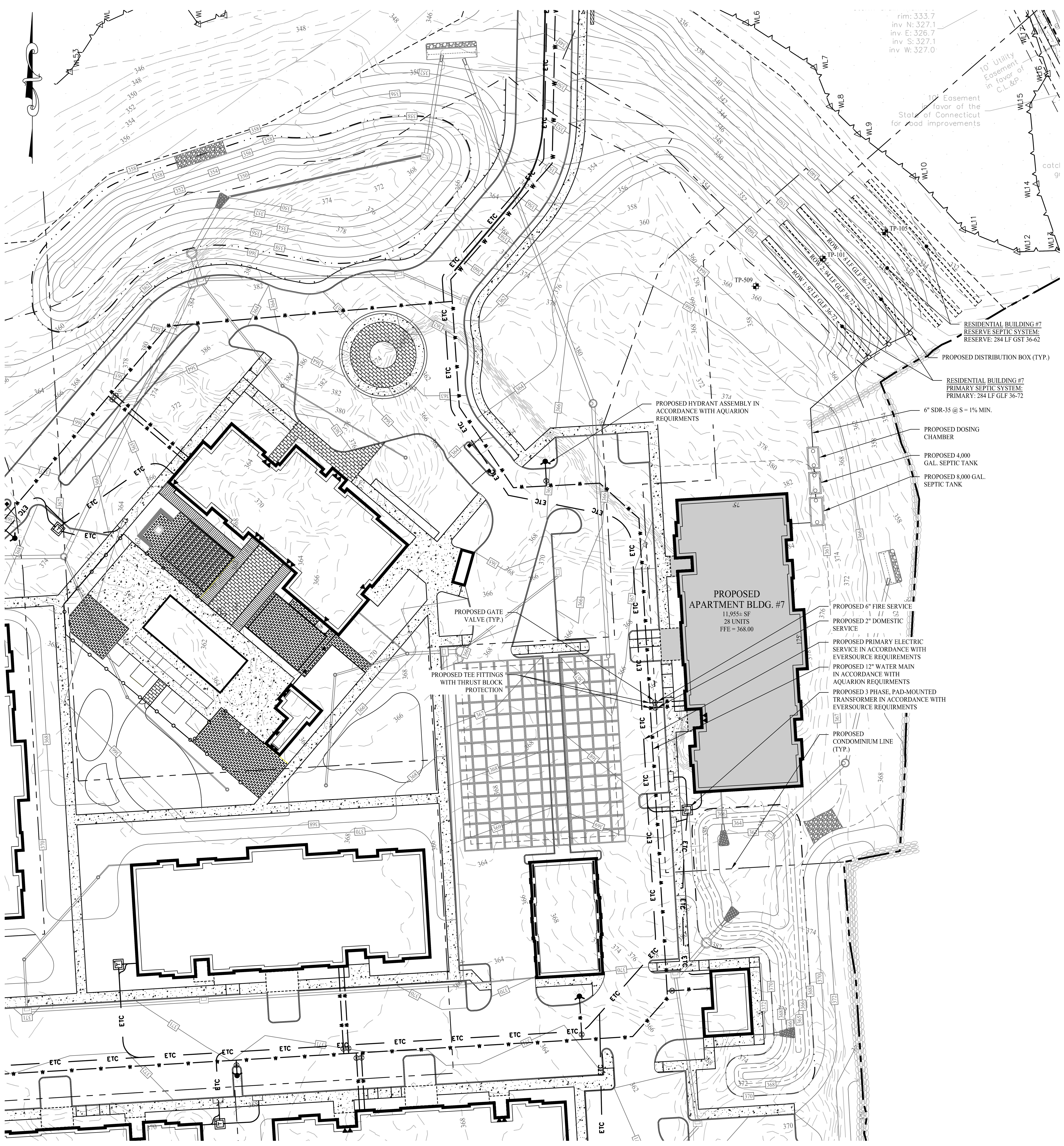
TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

TEST PIT 101
0"-5" TOPSOIL
5"-28" BROWN F-M SAND & SILT
28"-99" GREY M-C SAND & GRAVEL, LI COBBLES, TR SILT
NO LEDGE/DRY/NO MOTTLING

TEST PIT 105
0"-7" TOPSOIL
7"-36" BROWN F-M SAND & SILT
36"-70" GREY FINE SAND, TR SILT
70"-90" GREY M-C SAND & GRAVEL
NO LEDGE
WATER @ 70" (APPROXIMATE ELEVATION = 328.92)
NO MOTTLING

TESTING PERFORMED BY JAY KEILLOR, P.E. ON DECEMBER 12, 2018. SOIL TESTS WERE WITNESSED BY RICH JACKSON, RS, TOWN OF MONROE HEALTH DEPARTMENT.

TEST PIT 509
0"-12" DARK BROWN TOPSOIL
12"-30" YELLOWISH BROWN FINE SANDY LOAM
30"-81" OLIVE BROWN FINE SANDY LOAM



SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING 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

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA
TP-103 TEST PIT
PT-103 PERC TEST PIT
DISTRIBUTION BOX
SEPTIC TANK

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 30 0 30 60

SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
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Drawn By: CJP
Checked By: RPP
Approved By: KMS
Project #: 1910801
Plan Date: 01/09/23
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STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: RESIDENCE BUILDING #7 UTILITY PLAN

Sheet #: 2.57

GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A PLAN ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. 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.
3. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, UTILITY LOCATIONS, AND INVERTS PRIOR TO CONSTRUCTION. ANY CONDITIONS FOUND TO DIFFER FROM THOSE SHOWN IN THE DRAWINGS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES 72 HOURS PRIOR TO BEGINNING EXCAVATION.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND ALL PAVEMENT REPAIRS REQUIRED AS A RESULT OF ANY UTILITY WORK.
6. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
7. WHERE THE SEPTIC SYSTEM PIPING PASSES LESS THAN 18" BELOW THE WATER LINE, PROVIDE CONCRETE ENCASEMENT. THE LENGTH OF THE ENCASEMENT TO BE INCREASED TO THE NEAREST JOINT.
8. WHERE THE SEPTIC SYSTEM PIPING PASSES ABOVE THE WATER LINES, ENCASE SEWER IN 6" THICK CONCRETE FOR A DISTANCE OF 10 FEET ON EACH SIDE OF THE CROSSING, OR SUBSTITUTE RUBBER GASKETED PRESSURE PIPE FOR THE PIPE BEING USED FOR THE SAME DISTANCE.
9. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
11. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
12. SHOULD LATENT SOIL CONDITIONS NECESSITATE, CONTRACTOR SHALL INSTALL SPECIAL SUPPORTS FOR PIPING AND/OR APPURTENANCES INCLUDING THE REMOVAL OF UNSUITABLE MATERIAL AND BACKFILLING WITH GRAVEL OR OTHER APPROVED MATERIAL. CONTRACTOR SHALL PERFORM ANY SUCH WORK AS DIRECTED BY THE CIVIL ENGINEER OF RECORD AND/OR SOILS ENGINEER AT NO COST TO OWNER.
13. ALL NOTES AND DIMENSIONS DESIGNATED "TYP." APPLY TO ALL LIKE OR SIMILAR CONDITIONS THROUGHOUT THE PLAN SET.
14. AN OVERALL SEPTIC SYSTEM AS-BUILT PLAN AND DETAILED AS-BUILTS FOR EACH SYSTEM ARE REQUIRED FOR THE RECORD WITH ELEVATIONS. ANY ADJUSTMENTS REQUIRED WHICH HAVE BEEN WITNESSED AND ACCEPTED BY PE/BHD SHALL BE SHOWN ON THE PLANS. THE SEPTIC AS-BUILT SHOULD ALSO SHOW THE ACTUAL FIELD LOCATION OF THE SEPTIC SYSTEM IN RELATION TO THE PERMITTED PROPOSED LOCATION.
    14.1. ONE RED INK OVERLAY AS-BUILT PLAN TO BE CREATED SHOWING AS-BUILT LOCATIONS OVER ORIGINAL DESIGN PLAN WITH DISTANCES AND ELEVATIONS.
15. SEPTIC PRIMARY AREA MUST BE STAKED BY ENGINEER / SURVEYOR AND FENCED OFF PRIOR TO ISSUANCE OF PERMITS TO CONSTRUCT TO PREVENT TRAFFICKING.
16. STORMWATER CONVEYANCE PIPING WITHIN 25 FEET OF ANY PORTION OF THE PROPOSED SEPTIC SYSTEM TO BE APPROVED TIGHT PIPE COMPLYING WITH REQUIREMENTS OF TECHNICAL STANDARDS TABLE 3, PAGE 21.
17. SYSTEM TO MAINTAIN MINIMUM 25 FEET EDGE-TO-EDGE SEPARATION DISTANCE TO ALL GROUNDWATER DRAINS, INCLUDING BUILDING FOOT DRAINS.

CLUBHOUSE / POOL HOUSE / MAINTENANCE BUILDING PRIMARY SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

CLUBHOUSE / POOL HOUSE / MAINTENANCE BUILDING

DAILY FLOW = 4.28 GPD/ BEDROOM*
DAILY FLOW = 4.28 GPD/ BEDROOM * 300 BEDROOMS = 1,350
MULTIPLY BY FACTOR OF SAFTEY OF 1.5 = 1,284 * 1.5 = 2,025 GPD
REQUIRED ELA: (2,025 GPD)/(1.5 GPD / SF ELA) = 1,350 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
52 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 1,362 SF ELA
CENTER TO CENTER SPACING = 14'

REQUIRED SEPTIC TANK CAPACITY = 2,025 GALLONS
PROVIDED SEPTIC TANK CAPACITY = 2,500 GALLONS

*BASED OFF EXISTING WATER USAGE DATA FROM SIMILAR PROJECT

CLUBHOUSE / POOL HOUSE / MAINTENANCE BUILDING RESERVE SEPTIC DESIGN

DESIGN ANALYSIS

DESIGN PERCOLATION RATE: LESS THAN 10.1 MIN/INCH

CLUBHOUSE / POOL HOUSE / MAINTENANCE BUILDING

DAILY FLOW = 4.28 GPD/ BEDROOM*
DAILY FLOW = 4.28 GPD/ BEDROOM * 315 BEDROOMS = 1,350
MULTIPLY BY FACTOR OF SAFTEY OF 1.5 = 1,350 * 1.5 = 2,025 GPD
REQUIRED ELA: (2,025 GPD) / (1.5 GPD / SF ELA) = 1,350 SF OF ELA
PROPOSED PRIMARY LEACHING SYSTEM :
52 LF GREENLEACH FILTER (GLF) 36-72 @ 26.2 SF/LF = 1,362 SF ELA
CENTER TO CENTER SPACING = 14'

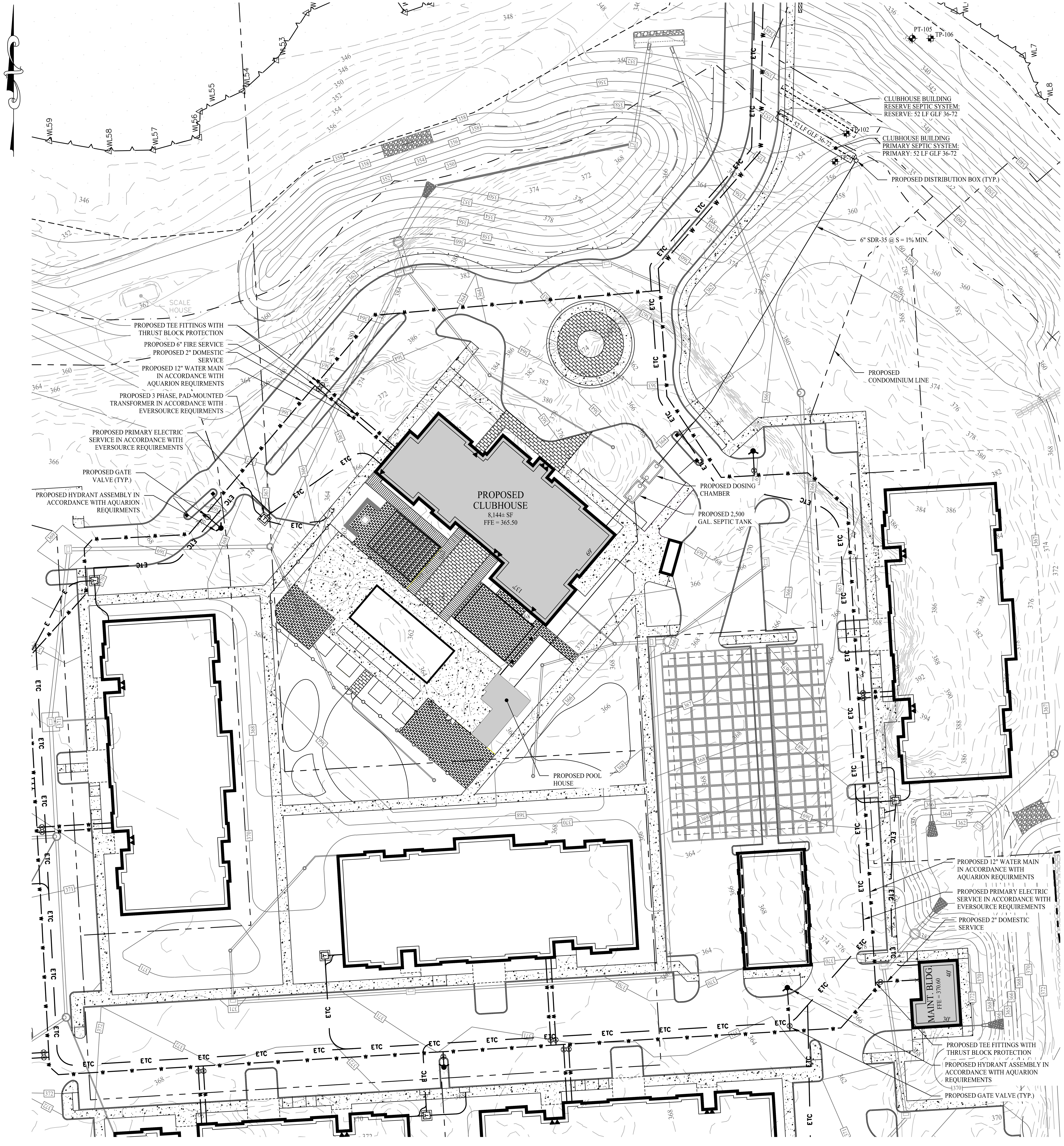
*BASED OFF EXISTING WATER USAGE DATA FROM SIMILAR PROJECT

TEST PIT OBSERVATIONS

TESTING PERFORMED BY JAY KEILLOR, P.E. ON MAY 24, 1990.

TEST PIT 102
0"-5" TOPSOIL
5"-28" BROWN F-M SAND & SILT
28"-99" GREY M-C SAND & GRAVEL, LI COBBLES, TR SILT
NO LEDGE/DRY/NO MOTTLING

TEST PIT 103
0"-7" TOPSOIL
7"-32" BROWN F-M SAND & SILT
32"-64" GREY/TAN M-C SAND & GRAVEL, LI STONES, TR SILT
LEDGE @ 64" (APPROXIMATE ELEVATION = 352.67)
DRY/NO MOTTLING



SEPTIC DESIGN NOTES

1. CONSTRUCTION OF SUBSURFACE SEWAGE DISPOSAL SYSTEMS AND MATERIALS OF CONSTRUCTION TO BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT DEPARTMENT OF HEALTH HEALTH CODE.
2. STORM DRAINAGE PIPE WITHIN 25 FEET OF LEACHING GALLERIES TO BE TIGHT PIPE WITH RUBBER GASKETED JOINTS AS SPECIFIED IN TABLE 2-6 OF THE CONNECTICUT PUBLIC HEALTH CODE - "REGULATIONS AND TECHNICAL STANDARDS FOR SUBSURFACE DISPOSAL SYSTEMS."
3. SELECT FILL TO BE PLACED IN PRIMARY AND RESERVE AREAS AS SHOWN ON THE PLAN. LEACHING GALLERIES TO BE SURROUNDED BY SELECT FILL MATERIAL FOR A DISTANCE OF 5 FEET IN AREAS WHERE TOP OF GALLERY WILL BE ABOVE EXISTING GRADE FOLLOWING REMOVAL OF TOPSOIL.
4. SELECT FILL MATERIAL PLACED WITHIN AND ADJACENT TO LEACHING AREAS SHALL BE COMPRISED OF CLEAN SAND, OR SAND AND GRAVEL FREE FROM ORGANIC MATTER AND FOREIGN SUBSTANCES. SELECT FILL EXCEEDING 6% PASSING THE #200 SIEVE BASED ON THE WET SIEVE TEST CANNOT BE APPROVED. SELECT FILL SHALL MEET THE FOLLOWING GRADATION CRITERIA.:

SIEVE SIZE	PERCENT PASSING WET SIEVE	PERCENT PASSING 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

5. SELECT FILL MATERIAL SHALL BE PLACED BY A LICENSED SEPTIC INSTALLER. THE LICENSED INSTALLER SHALL PREPARE THE LEACHING AREA BY REMOVING TOPSOIL AND SCARIFYING THE SUBSOIL PRIOR TO PLACEMENT OF SELECT FILL. THE INSTALLER SHALL TAKE PRECAUTION TO PROTECT THE UNDERLYING NATURALLY OCCURRING SOIL FROM OVER COMPACTION OR DAMAGE.
6. SELECT FILL SHALL BE PLACED IN 12" MAXIMUM LIFTS AND COMPACTED TO 90% COMPACTION, MODIFIED PROCTOR.
7. FOLLOWING SEPTIC SYSTEM INSTALLATION AND FINAL INSPECTION, A RECORD AS-BUILT PLAN MUST BE PREPARED BY THE LICENSED INSTALLER. THE PLAN MUST LOCATE BUILDING SEWER EXIT LOCATION AT THE BUILDING, SEWAGE SYSTEM ACCESS POINTS (CLEANOUTS, DISTRIBUTION BOXES, ETC.) AND LEACHING SYSTEM ENDS. TIE PLANS MUST NOTE DISTANCE BETWEEN REFERENCE POINTS.
8. ANY ORGANIC SOIL OR FILL WITHIN 10' OF THE PROPOSED SEPTIC SYSTEMS SHALL BE REMOVED AND THE AREA FILLED TO SUBGRADE WITH SELECT FILL, COMPACTED TO 90% DENSITY, MODIFIED PROCTOR.

LEGEND

PROPERTY LINE
RIGHT-OF-WAY LINE
CONDOMINIUM LINE
SANITARY SEWER PIPE
LEACHING SYSTEM
RESERVE LEACHING AREA
TP-103 TEST PIT
PT-103 PERC TEST PIT
DISTRIBUTION BOX

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 30 0 30 60

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Drawn By:	CJP
Checked By:	RPP
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 30'

Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: MULTI - BUILDING UTILITY PLAN

Sheet #: 2.58

GENERAL NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL FINAL APPROVAL OF THIS PLAN.
2. ALL PROPOSED SITE WORK TO BE COMPLETED IN ACCORDANCE WITH ALL PERMITS, APPROVALS AND CONDITIONS OF APPROVALS ISSUED BY LOCAL, STATE AND/OR FEDERAL REVIEWING AGENCIES.
3. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON A DRAWING ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC.

PLANTING NOTES

1. BE AWARE OF ALL UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION OR PLANTING OPERATIONS. USE CARE TO PROTECT EXISTING UTILITIES FROM DAMAGE, CONTACT "CALL BEFORE YOU DIG" PRIOR TO EXCAVATION.
2. ALL PLANTINGS ARE TO BE INSTALLED BY A QUALIFIED LANDSCAPE CONTRACTOR.
3. THE CONTRACTOR SHALL BE REQUIRED TO CARRY WORKMEN'S COMPENSATION INSURANCE AND COMPREHENSIVE GENERAL LIABILITY INSURANCE. CERTIFICATES WILL BE REQUIRED PRIOR TO SIGNING CONTRACTS.
4. CONTRACTOR IS RESPONSIBLE FOR JOBSITE SAFETY. CONTRACTOR SHALL MAINTAIN A SAFE JOBSITE AT ALL TIMES.
5. CONTRACTOR SHALL BE FAMILIAR WITH THE SITE TO VERIFY ALL DIMENSIONS, GRADES AND EXISTING CONDITIONS. REPORT ANY DISCREPANCIES TO LANDSCAPE DESIGNER.
6. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS AND LICENSES REQUIRED FOR COMPLETING WORK.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL EXCAVATED SOIL, BRUSH AND DEBRIS OFF-SITE IN A SAFE AND LEGAL MANNER.
8. NOTIFY OWNER OR LANDSCAPE DESIGNER 72 HOURS MINIMUM IN ADVANCE OF STARTING PLANTING OPERATIONS. RECEIVE APPROVAL FOR LAYOUT OF ALL BED LINES AND MATERIAL LOCATIONS PRIOR TO INSTALLATION.
9. PROTECT EXISTING VEGETATION TO REMAIN FROM DAMAGE DURING CONSTRUCTION. IT IS THE INTENT OF THIS CONTRACT TO AVOID ANY DISTURBANCE TO EXISTING VEGETATION ON THE SITE OTHER THAN THOSE SPECIFICALLY DESIGNATED FOR REMOVAL. ADJUSTMENTS SHALL BE MADE IN THE FIELD AT THE DIRECTION OF THE LANDSCAPE DESIGNER.
10. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL PLANTING, SEEDING AND TREE WORK WITH OTHER TRADES. RESPECT OTHER TRADES WORK AT ALL TIMES.
11. CONTRACTOR IS TO EXERCISE EXTREME CARE DURING THE COURSE OF DEMOLITION AND REMOVALS ANY DAMAGE TO EXISTING FACILITIES, UTILITIES OR TREES TO REMAIN SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO REPLACE IN KIND.
12. CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL AREAS DAMAGED TO PRE-EXISTING CONDITIONS AS A RESULT OF PLANTING OPERATIONS TO OWNERS AND/OR LANDSCAPE DESIGNERS APPROVAL.
13. VEGETATION TO BE REMOVED, NOT INDICATED ON PLAN, SHALL BE TAGGED IN FIELD BY LANDSCAPE DESIGNER.
14. THE LANDSCAPE DESIGNER RESERVES THE RIGHT TO REJECT INFERIOR PLANT MATERIALS AND SUBSTITUTIONS. THE LANDSCAPE DESIGNER IS WILLING TO MAKE TWO TRIPS TO SUPPLIERS TO TAG, REVIEW AND APPROVE MATERIALS. PREVIOUSLY UNAPPROVED MATERIALS MAY BE REJECTED AT THE SITE. MINIMALLY, ALL MATERIALS WILL CONFORM TO THE "AMERICAN STANDARD FOR NURSERY STOCK" (ANSI Z60.1 - 2004) OF THE AMERICAN ASSOCIATION OF NURSERYMEN.
15. ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE CONTRACTOR TO BE IN GOOD, HEALTHY AND FLOURISHING CONDITION FOR A PERIOD OF ONE YEAR FROM THE DATE OF ACCEPTANCE. THE CONTRACTOR SHALL REPLACE, AS SOON AS WEATHER AND SEASONAL CONDITIONS PERMIT, ALL DEAD PLANTS AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE DESIGNER DURING, AND AT THE END OF THE GUARANTEE PERIOD. WARRANTY REPLACEMENT WILL BE PROVIDED AT NO COST TO THE OWNER AND INCLUDE MATERIALS AND LABOR. CONTRACTOR IS RESPONSIBLE FOR REPAIR OF ANY DAMAGE INCURRED DURING REPLACEMENT OF WARRANTY MATERIALS.
16. WHEN THERE IS A DISCREPANCY BETWEEN PLANT QUANTITIES SHOWN ON THE PLANT LIST & THE PLAN, USE THE QUANTITIES FROM THE PLAN.
17. PERENNIALS, GROUNDCOVERS & GRASSES TO BE FIELD LOCATED BY LANDSCAPE DESIGNER. COORDINATE TO NOTIFY LANDSCAPE DESIGNER AT LEAST 72 HOURS IN ADVANCE OF EXPECTED INSTALLATION DATE. ON THAT DATE ALL BEDS SHALL BE PREPARED & ALL PLANT MATERIAL SHALL BE ON SITE.
18. PROVIDE A MINIMUM 6" TOPSOIL FOR ALL DISTURBED AREAS. SUBMIT SAMPLE OF TOPSOIL AND SOIL TEST RESULTS FOR LANDSCAPE DESIGNER APPROVAL PRIOR TO DELIVERING TO SITE.
19. ALL BEDS SHOWN AS CONTINUOUS WITH A 2" MINIMUM OF BROWNSTONE. SAMPLE TO BE SUBMITTED TO LANDSCAPE DESIGNER FOR APPROVAL.
20. ALL PLANT MATERIALS TO BE SOURCED FROM LOCALLY GROWN GROWERS.
21. TRANSPLANTED MATERIALS TO BE WATERED, HEELED IN AND TENDED BY CONTRACTOR UNTIL FINAL PLACEMENT.

PLANTING SOIL NOTES

1. ALL PLANTING MIXES SHALL BE PREPARED PRIOR TO DELIVERY TO SITE.
2. PLANTING MIX FOR TREES AND SHRUBS SHALL BE AS FOLLOWS:
   - 3 PARTS SCREED TOPSOIL
   - 1 PART CLEAN WASHED COARSE SAND
   - 1 PART PEAT HUMUS
   - 5 LBS. SUPER PHOSPHATE PER CUBIC YARD OF MIX
3. MYCORRHIZAL INNCOULANT TO BE MYCOR TREE SAVER TRANSPLANT BY PLANT HEALTH CARE, INC. (1-800-421-9051) OR APPROVED EQUAL.
4. TERRASORB AVAILABLE FROM PLANT HEALTH CARE, INC. OR APPROVED EQUAL
5. SUBMIT CERTIFICATION OF PLANTING MIX FOR TREES AND SHRUBS FROM SOIL DISTRIBUTOR.
6. TOPSOIL MIX SHALL INCLUDE:
   - 3 PARTS SCREENED TOPSOIL
   - 1 PART SAND
   - 1 PART HUMUS
   - 5 LBS. SUPER PHOSPHATE PER CU. YD. OF MIX
7. TOPSOIL:

   A. PROVIDE A NATURAL, FERTILE, FRIABLE, NATURAL LOAM SURFACE SOIL CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH. OF UNIFORM COMPOSITION THROUGHOUT AND WITHOUT ADMIXTURES OF SUBSOIL, AND FREE OF STONES, LUMPS, PLANTS, ROOTS, STICKS OR OTHER EXTRANEOUS MATTER.

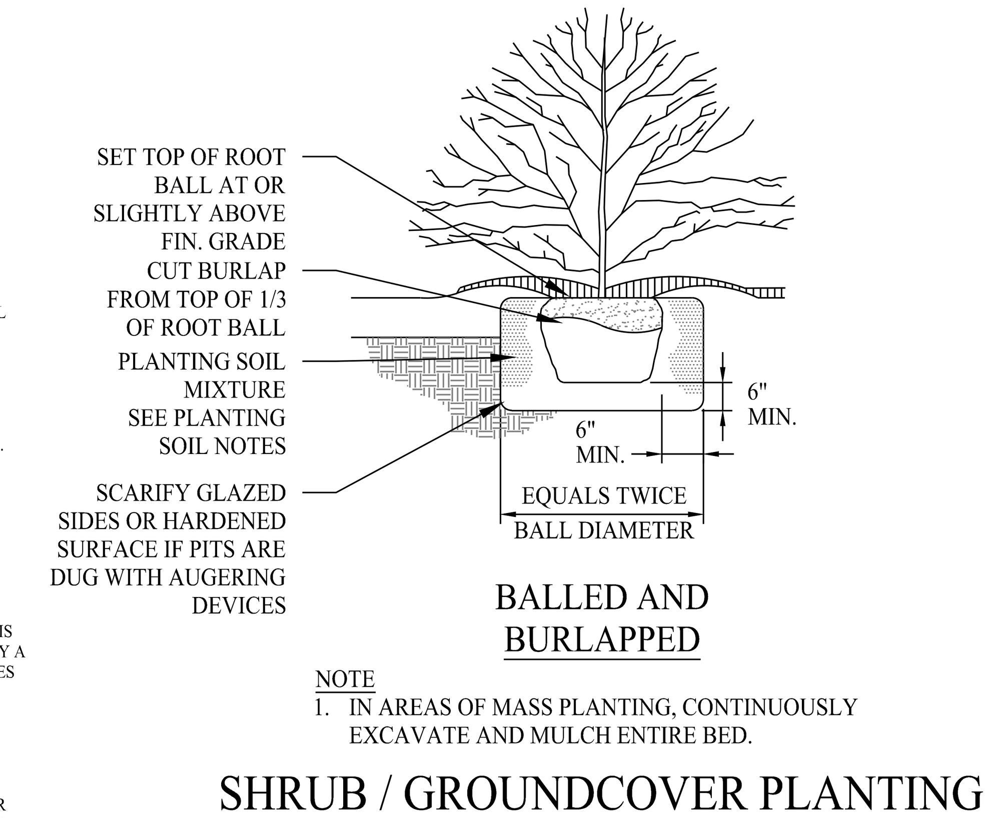
   B. TOPSOIL SHALL CONTAIN NOT LESS THAN 4% NOR MORE THAN 20% ORGANIC MATTER AS DETERMINED BY THE WET COMBUSTION METHOD.

   C. MECHANICAL ANALYSIS

SCREEN SIZE	% BY WEIGHT PASSING
1"	100
V4"	97 - 100
NO. 200	20 - 65

   D. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL TESTING AND ANALYSIS OF EXISTING AND IMPORTED SOILS. FURNISH A SOIL ANALYSIS MADE BY A QUALIFIED INDEPENDENT SOIL-TESTING AGENCY STATING PERCENTAGES OF ORGANIC MATTER, INORGANIC MATTER (SILT, CLAY, AND SAND), DELETERIOUS MATERIAL, PH, AND MINERAL AND PLANT-NUTRIENT CONTENT OF TOPSOIL.

   E. REPORT SUITABILITY OF TOPSOIL FOR LAWN AND SHRUB PLANTING GROWTH. RECOMMEND QUANTITIES OF NITROGEN, PHOSPHORUS, AND POTASH NUTRIENT AND ANY LIMESTONE, ALUMINUM SULFATE, OR OTHER SOIL AMENDMENTS TO BE ADDED TO PRODUCE A SATISFACTORY TOPSOIL.



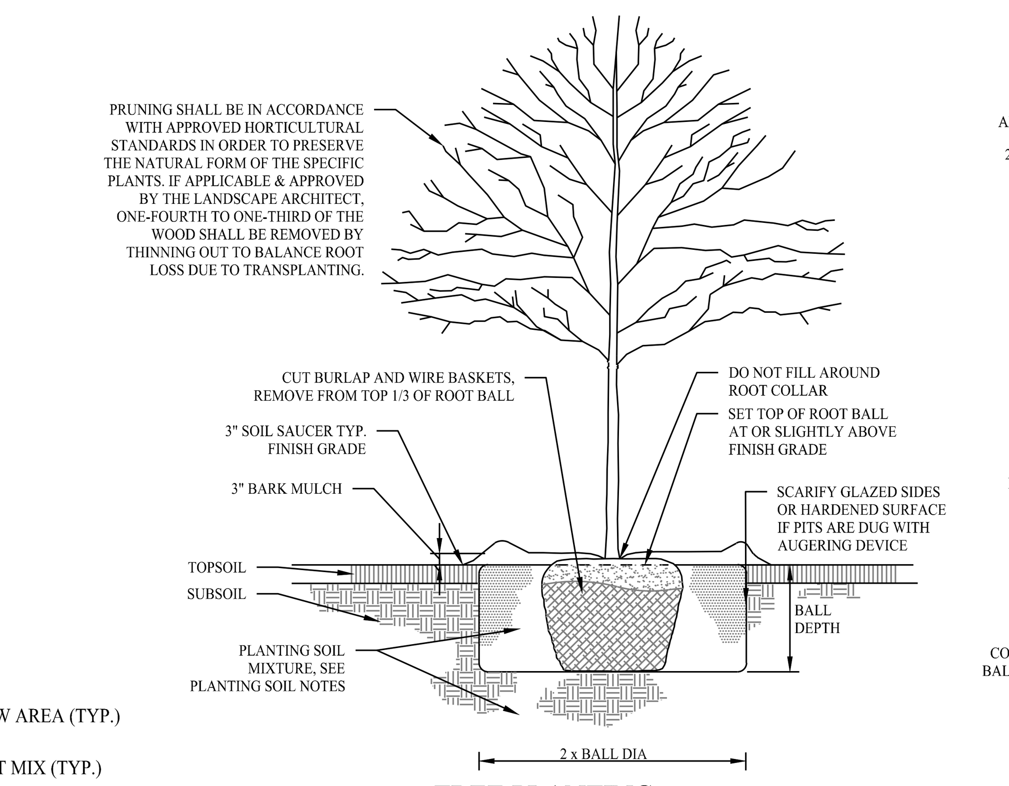
NOTE
1. IN AREAS OF MASS PLANTING, CONTINUOUSLY EXCAVATE AND MULCH ENTIRE BED.

SHRUB / GROUNDCOVER PLANTING

SCALE: NTS

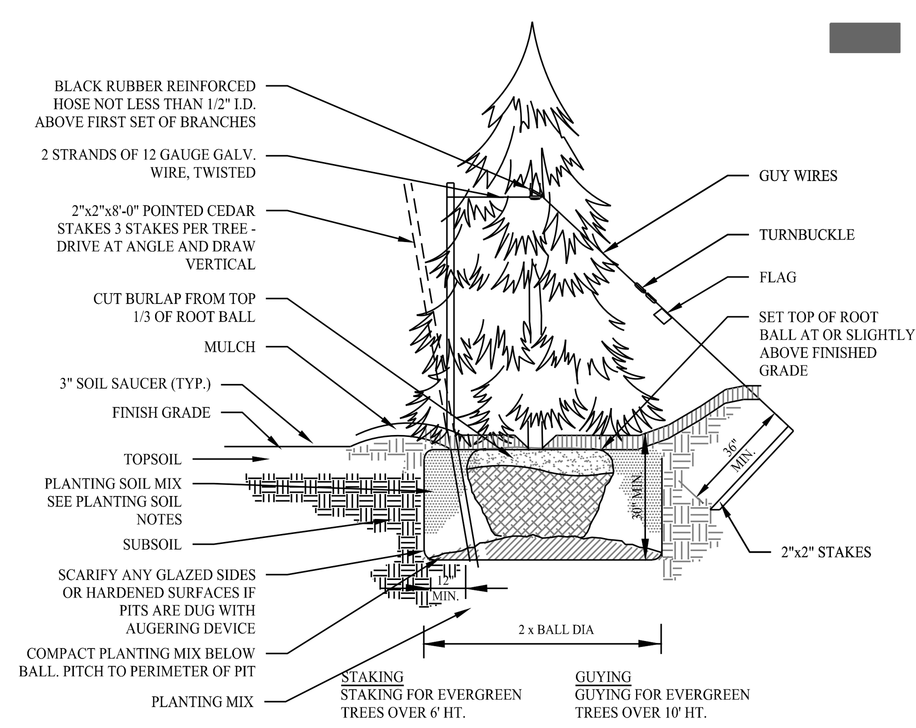
LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING TREE
- OVERSTORY TREE
- UNDERSTORY TREE
- EVERGREEN TREE
- SHRUBS & GROUNDCOVER
- LAWN AREA
- NEW ENGLAND WET MIX
- NEW ENGLAND EROSION CONTROL RESTORATION MIX
- PERENNIAL MIX
- SYNTHETIC GRASS



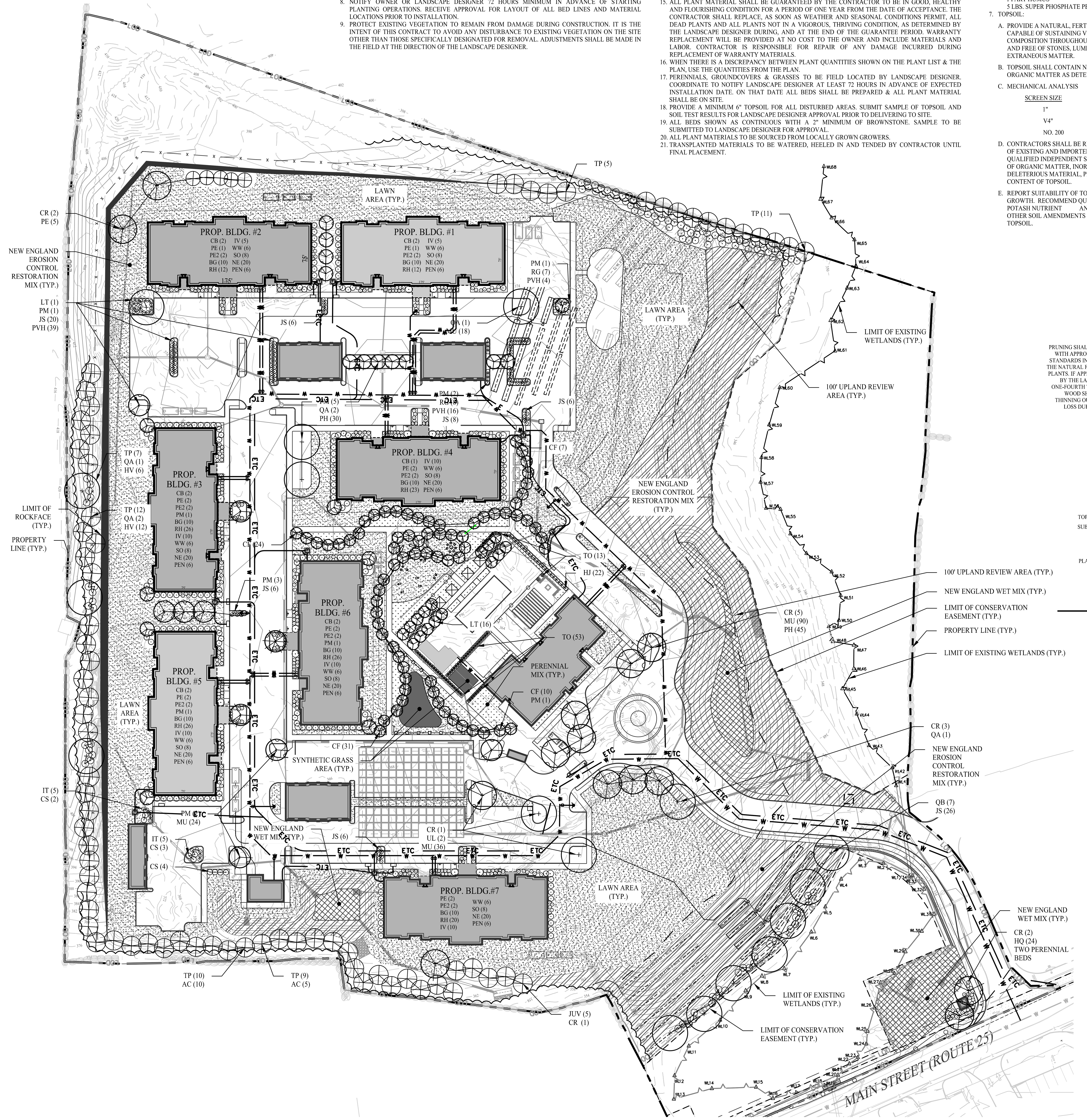
TREE PLANTING

SCALE: NTS



EVERGREEN TREE PLANTING

SCALE: NTS



SCHEMATIC PLANT SCHEDULE

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE
TREES				
AC	15	ABIES CONCOLOR	WHITE FIR	8'/10' HT.
CB	12	CARPINUS BETULUS 'COLUMNARIS'	COLUMNAR EUROPEAN HORNBEAM	2"-2.5" CAL.
CF	70	CARPINUS BETELUS 'FRANZ FONTAINE'	FRANZ FONTAIN HORNBEAM	2"-2.5" CAL.
CR	14	CORNUS X 'RUTCAN'	CONSTELLATION' FLOWERING DOGWOOD	2"-2.5" CAL.
JUV	5	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	8'/10' HT.
LT	17	LIRIODENDRON TULIPIFERA	TULIP TREE	2"-2.5" CAL.
PE	17	PICEA ENGLEMANII	ENGLEMANN SPRUCE	8'/10' HT.
PE2	14	POPULUS TREMULOIDES ERECTA	SWEDISH ASPEN	2.5"-3" CAL.
PM	18	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	2"-2.5" CAL.
QA	7	QUERCUS ALBA	WHITE OAK	2"-2.5" CAL.
QB	7	QUERCUS BICOLOR	SWAMP WHITE OAK	2"-2.5" CAL.
TP	54	THUJA PLICATA	WESTERN ARBORVITAE	8'-10' HT
UL	2	ULMUS AMERICANA 'LIBERTAS'	LIBERTY AMERICAN ELM	2"-2.5" CAL.
SHRUBS				
BG	70	BUXUS MICROPHYLLA 'WINTER GEM'	WINTER GEM BOXWOOD	18"-24" HT.
CS	9	CORNUS SERICEA 'BAILEYI'	RED TWIG DOGWOOD	#3
HJ	22	HOSTA X 'JUNE'	JUNE HOSTA	#1
HQ	24	HYDRANGEA QUERCIFOLIA 'RUBY SLIPPERS'	RUBY SLIPPERS HYDRANGREA	#3
HV	18	HAMAMELIS VIRGINIANA	COMMON WITCH HAZEL	#3
IT	10	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	#3
IV	60	ILEX VERTICILLATA 'MARYLAND BEAUTY'	WINTERBERRY HOLLY	#5
JS	78	JUNIPERUS CONFERTA 'BLUE PACIFIC'	SHORE JUNIPER	#2
PVH	59	PANICUM VIRGATUM 'HEAVY METAL'	BLUE SWITCH GRASS	#3
RG	15	RHUS AROMATIC 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3
RH	145	RHODODENDRON CATAWBIENSE 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHODEDENDRON	#6
SO	56	SPIREA THUNBERGII 'OGON'	OGON SPIREA	#3
TO	66	THUJA OCCIDENTALIS 'EMERA	EMERALD ARBORVITAE	8'-10' HT
WW	42	WEIGELA FLORIDA WINE & ROSES	WEIGELA	#3
HERBACEOUS PLANTS				
MU	168	MUHLENBERGIA CAPILLARIS	PINK MUHLY GRASS	#1
NE	140	NEPETA X FAASSENII 'SIX HILLS GIANT'	GIANT CATMINT	#1
PEN	42	PENNISETUM ALOPECUROIDES	FOUNTAIN GRASS	#1
PH	75	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMEIN DWARF FOUNTAIN GRASS	#1

SEED MIXES
NEW ENGLAND WETMIX (NEW ENGLAND WETLAND PLANTS, INC.)
APPLICATION RATE: 1 LB/2,500 S.F.
NEW ENGLAND EROSION CONTROL/RESTORATION MIX (NEW ENGLAND WETLAND PLANTS, INC.)
APPLICATION RATE: 1 LB/2,500 S.F.

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 50 0 50 100

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Drawn By:	STM
Checked By:	MFB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 50'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

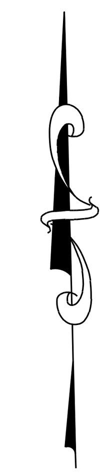
Project:

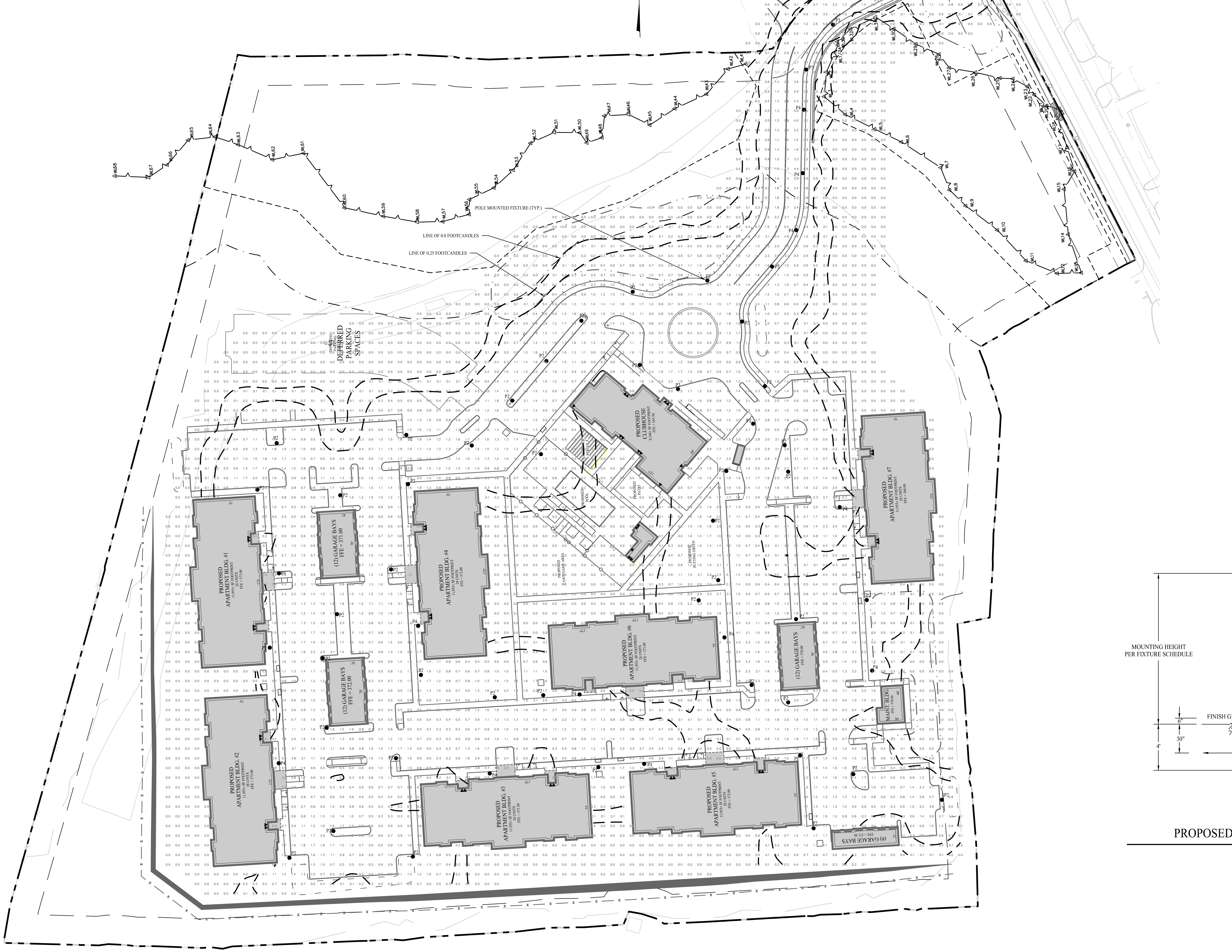
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: LANDSCAPE PLAN

Sheet #: 2.61

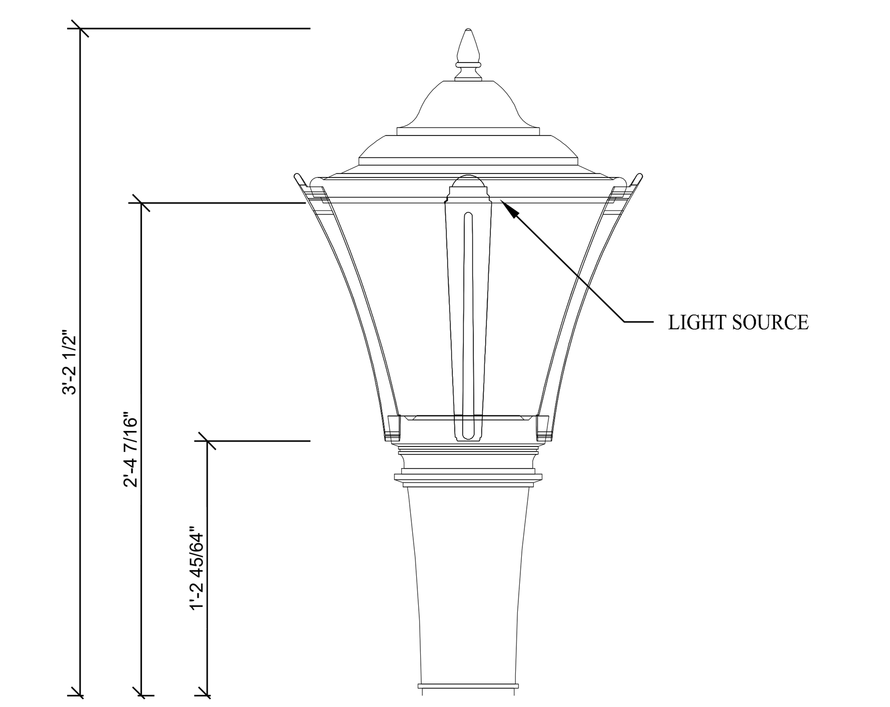
FIXTURE SCHEDULE						
QTY	CALLOUT	SYMBOL	FIXTURE DESCRIPTION	MODEL	NOTES	LUMENS
1	P1	●	POLE MOUNTED FIXTURE	LUMEC, METRO SCAPE LED POST-TOP, MPTR-32LED-G3-LE5 TYPE V	55W 4K LED, 10' MOUNTING HEIGHT	6,082
45	P2	●	POLE MOUNTED FIXTURE	LUMEC, METRO SCAPE LED POST-TOP, MPTR-32LED-G3-LE5 TYPE V	55W 4K LED, 12' MOUNTING HEIGHT	6,082
3	P3	●	POLE MOUNTED FIXTURE	LUMEC, METRO SCAPE LED POST-TOP, MPTR-32LED-G3-HS TYPE IV	55W 4K LED, 10' MOUNTING HEIGHT	4,228
12	P4	●	POLE MOUNTED FIXTURE	LUMEC, METRO SCAPE LED POST-TOP, MPTR-48LED-G3-HS TYPE IV	80W 4K LED, 12' MOUNTING HEIGHT	6,034





LEGEND

0.1 0.1 0.1 0.1 0.1 0.0 0.1 0.0 0.0	PROPOSED FOOTCANDLES
●	POLE MOUNTED FIXTURE
— — —	LINE OF 0.25 & 0.0 FOOTCANDLES

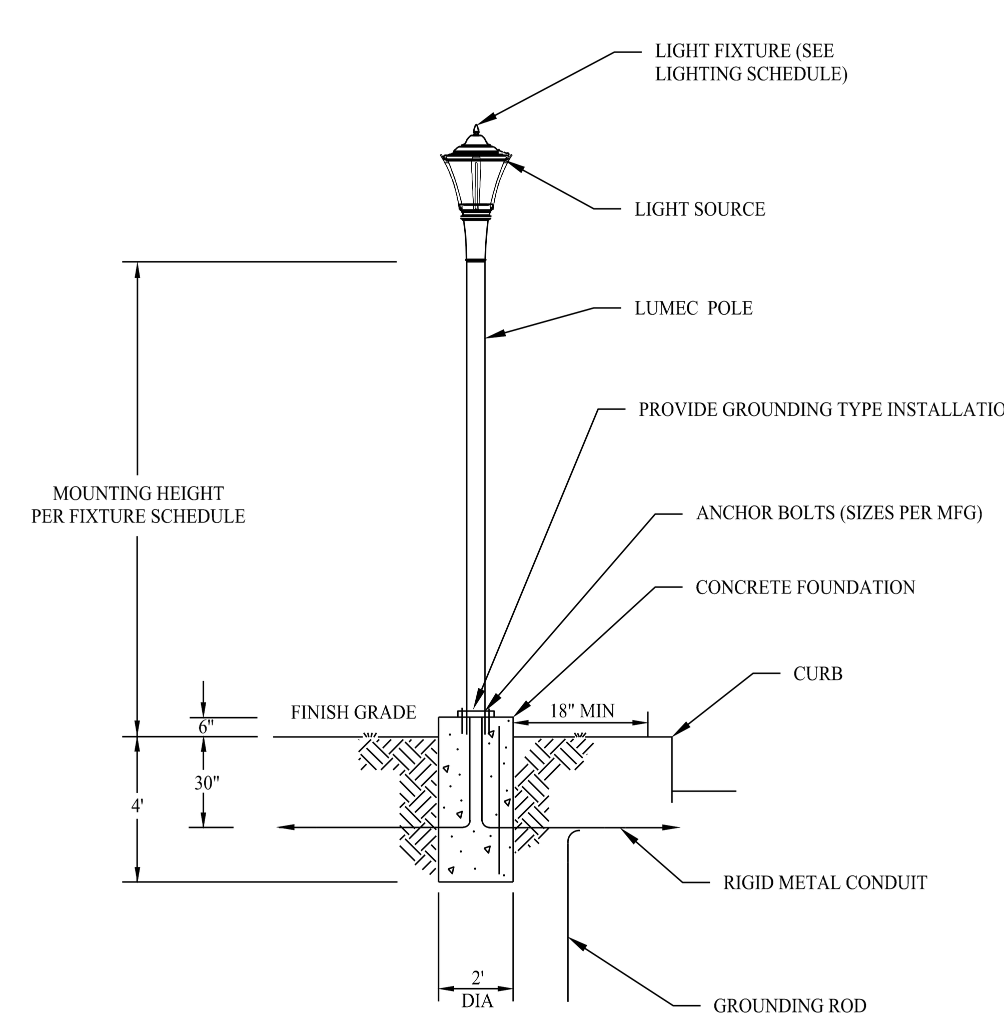


PROPOSED POLE MOUNTED LIGHT FIXTURE - P1, P2, P3 & P4

LUMEC, METRO SCAPE LED POST-TOP POLE MOUNTED FIXTURE
SCALE: NTS

LIGHTING NOTES

1. 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.
2. CONTRACTOR TO PERFORM ALL SITE WORK PROPOSED HEREON IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL PERMITS AND CONDITIONS OF APPROVALS ISSUED FOR THIS PROJECT.
3. EXISTING BOUNDARY AND TOPOGRAPHY IS BASED ON A DRAWING DRAWING ENTITLED "PROPERTY SURVEY OF 127 MAIN STREET;MONROE, CONNECTICUT; PREPARED FOR PONDVIEW LLC"; DATED: OCTOBER 27, 2021; SCALE: 1" = 60'; PREPARED BY ACCURATE LAND SURVEYING, LLC
4. ALL LIGHT FIXTURES TO BE MOUNTED AND INSTALLED PER MANUFACTURER SPECIFICATIONS.
5. ALL WORK AND RELATED MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.



PROPOSED LIGHT POLE - P1, P2, P3 & P4

SCALE: NTS

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

Graphic Scale: 50 0 50 100

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

Drawn By:	FLO
Checked By:	MFB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	1" = 50'

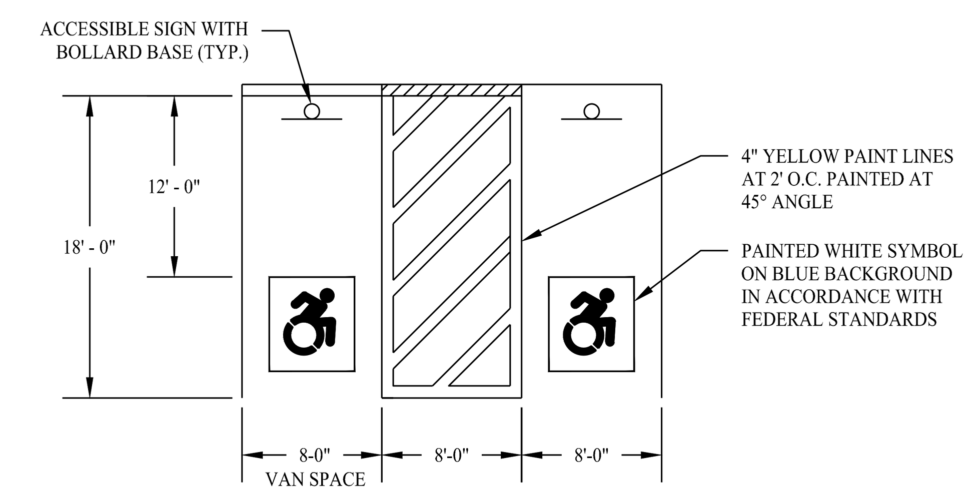
STATE OF CONNECTICUT · MARY F. BLACKBURN · NO. 1499 · LICENSED LANDSCAPE ARCHITECT
Mary Blackburn, P.L.A.
CT 1499

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: SCHEMATIC LIGHTING PLAN

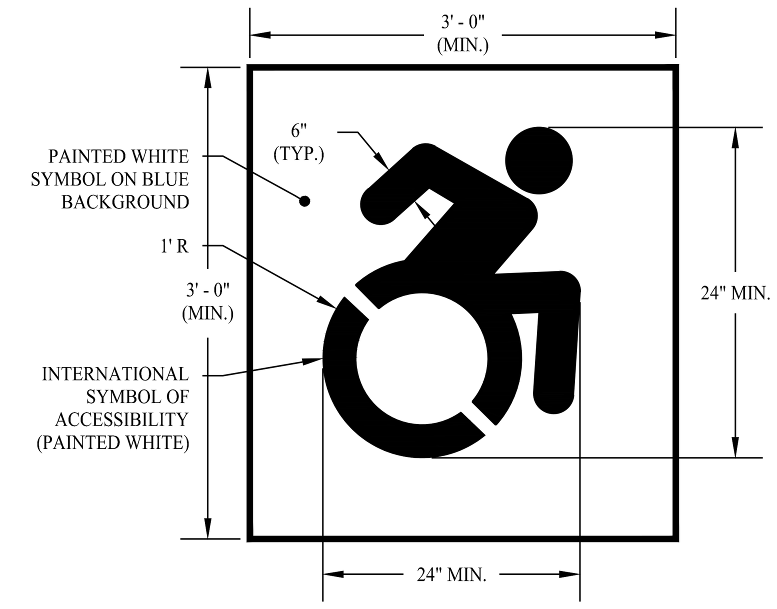
Sheet #: 2.71



NOTES:
1. SEE SITE PLAN FOR ACCESSIBLE SPACE LOCATIONS
2. PROVIDE 2 COATS OF PAINT ON ALL SURFACES.

ACCESSIBLE PARKING SPACE DETAIL

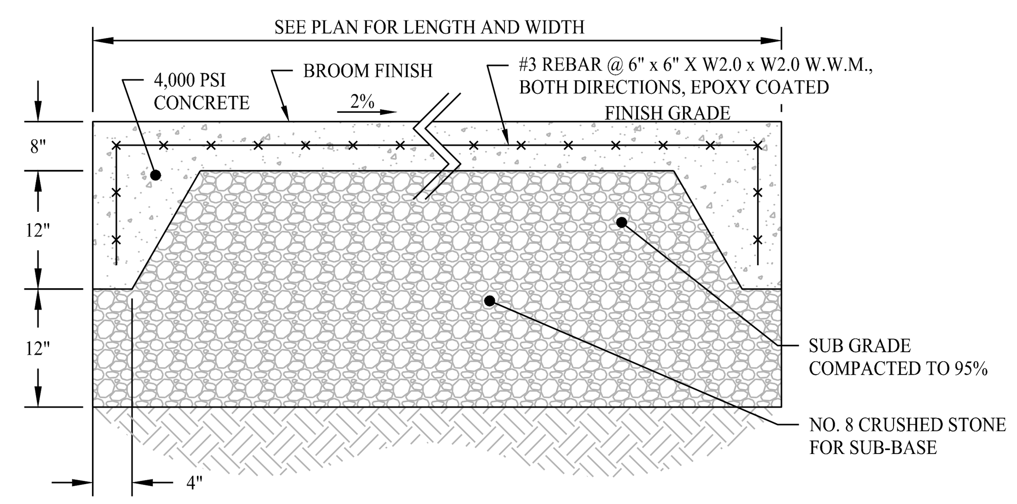
SCALE: NTS



NOTE:
LOCATE AT 3' FROM EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

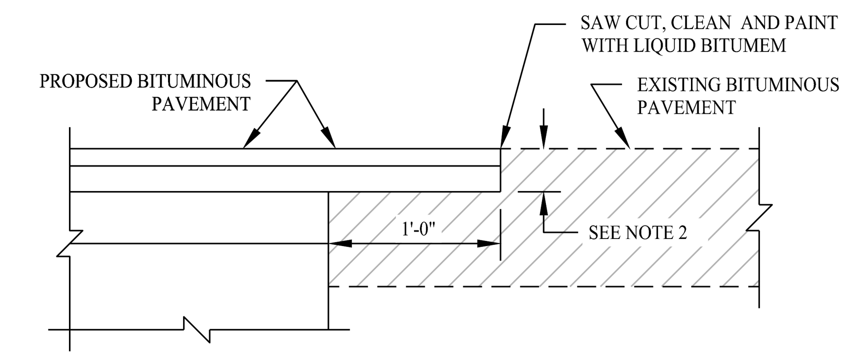
ACCESSIBLE PARKING SYMBOL

SCALE: NTS



CONCRETE PAD DETAIL

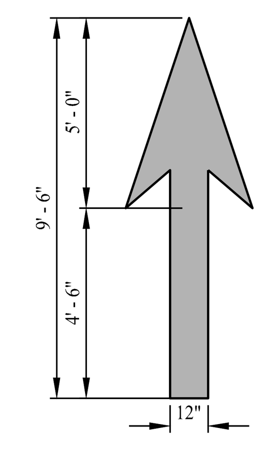
SCALE: NTS



NOTES:
1. OVERLAP BOTH PROPOSED BITUMINOUS CONCRETE COURSES (CLASS 1 AND CLASS 2) OVER EXISTING SUBBASE.
2. MINIMUM THICKNESS TO BE SAME AS PROPOSED BITUMINOUS OR MATCH THICKNESS OF EXISTING PAVEMENT, WHICH EVER IS GREATER.

PAVEMENT MATCH TREATMENT (SAWCUT) DETAIL

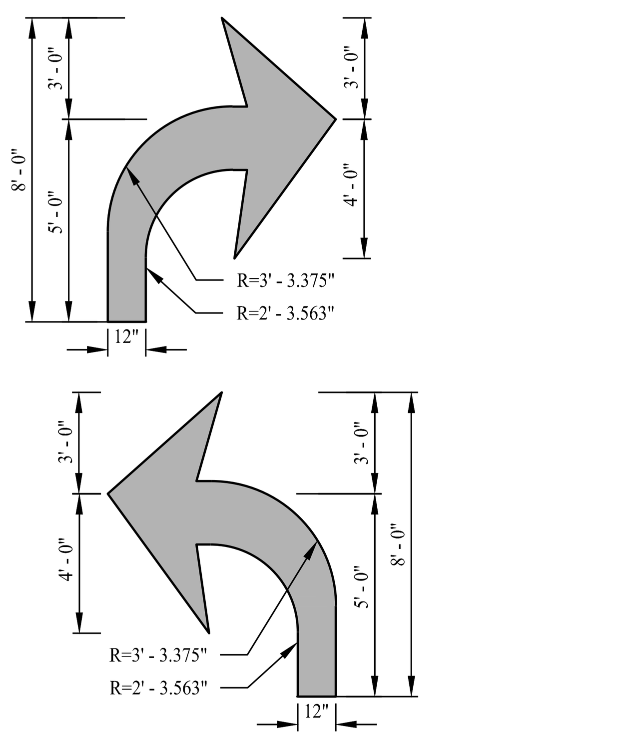
SCALE: NTS



NOTES:
1. PAVEMENT MARKING TO BE WHITE, RETROREFLECTIVE PAVEMENT PAINT COMPLIANT W/ MUTCD & DOT STANDARD SPECIFICATIONS
2. ARROW DIMENSIONS SHALL BE IN ACCORDANCE WITH SECTION 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

PAVEMENT ARROW DETAILS

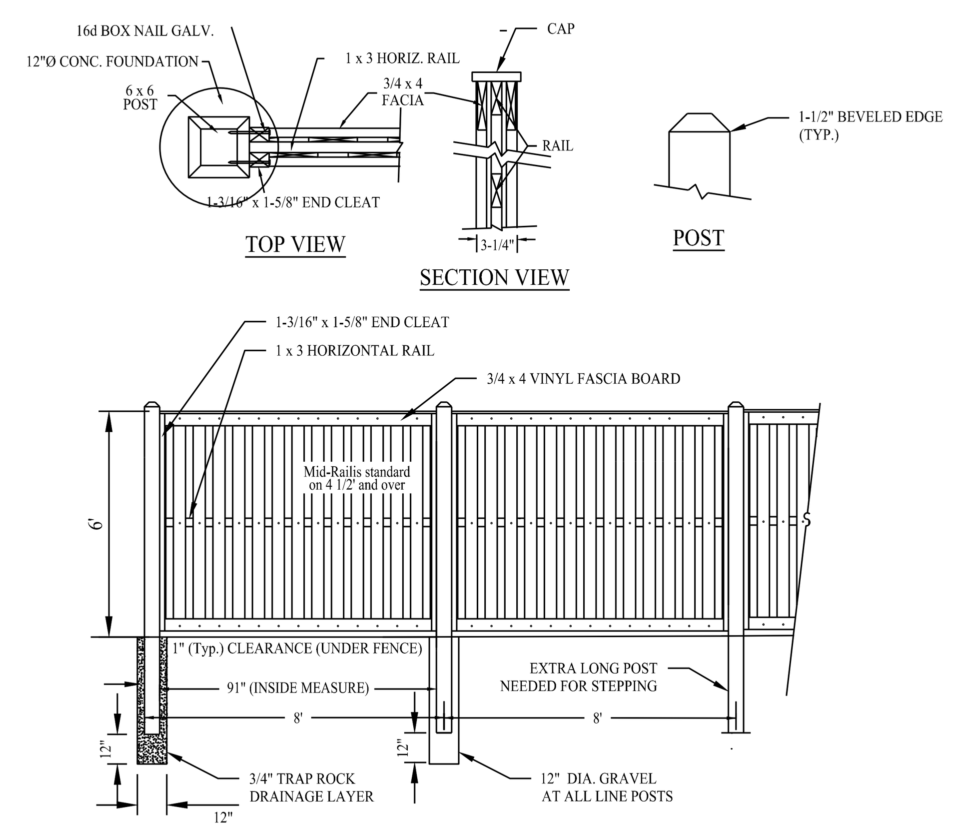
SCALE: NTS



NOTES:
1. PAVEMENT MARKING TO BE WHITE, RETROREFLECTIVE PAVEMENT PAINT COMPLIANT W/ MUTCD & DOT STANDARD SPECIFICATIONS
2. ARROW DIMENSIONS SHALL BE IN ACCORDANCE WITH SECTION 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS

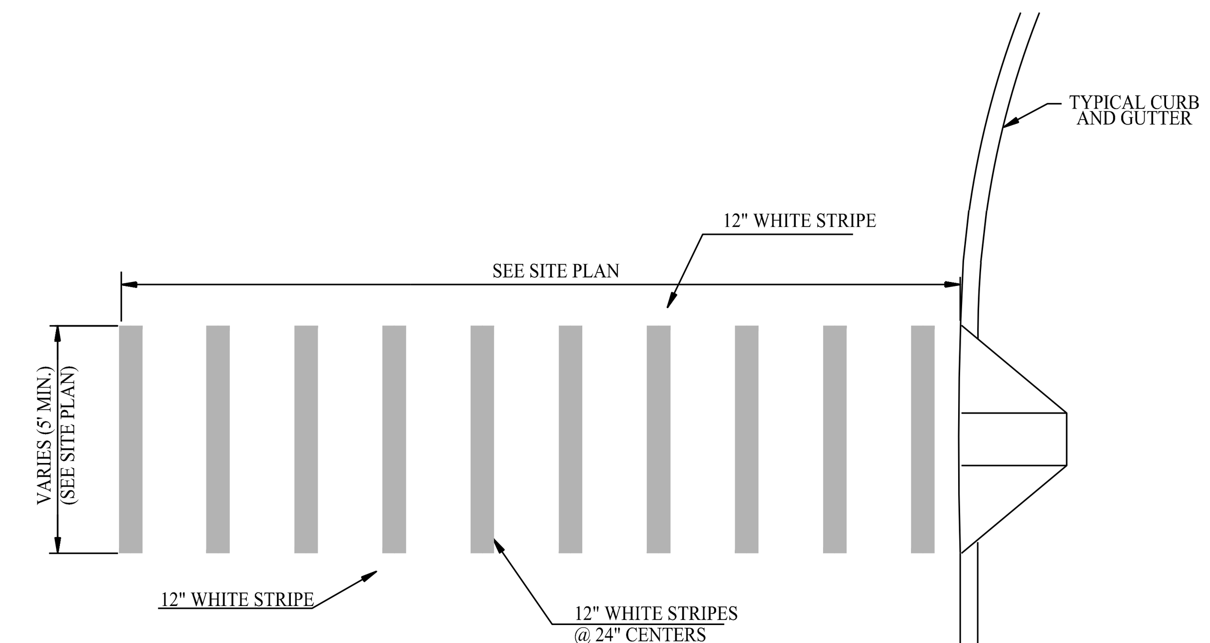
PAVEMENT ARROW DETAILS

SCALE: NTS



VINYL FENCE DETAIL

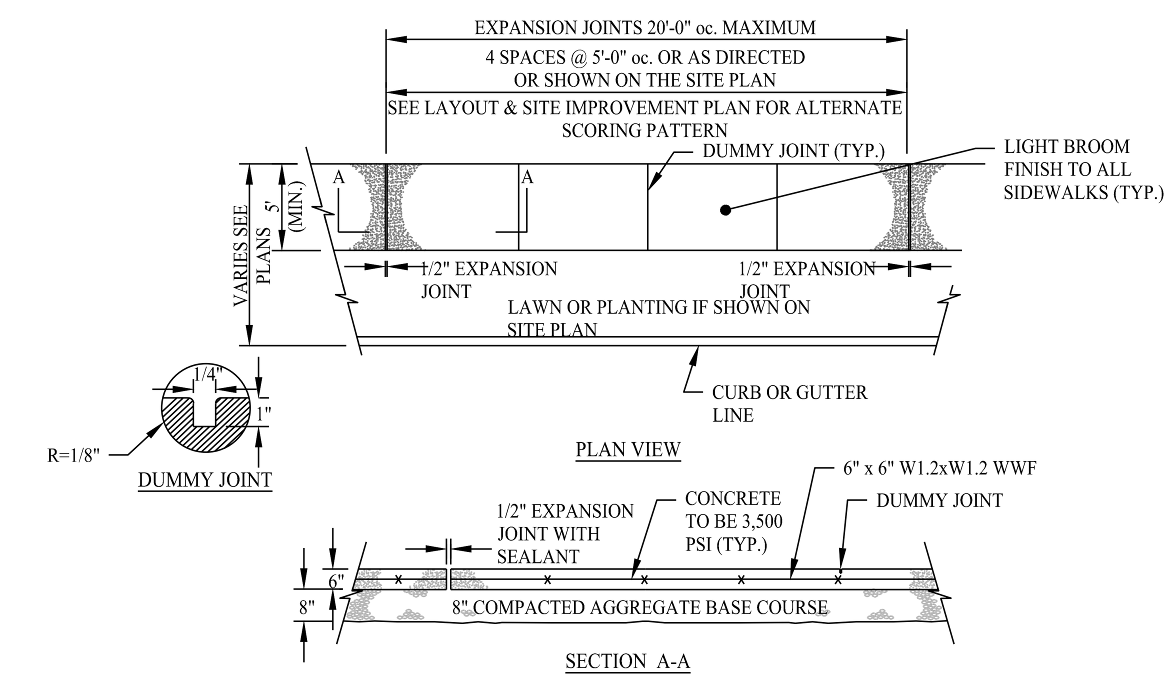
SCALE: NTS



NOTES:
- CROSS WALLS MARKINGS SHALL BE IN ACCORDANCE WITH THE LOCAL CODE REQUIREMENTS AND AS OUTLINED IN SECTION3 B OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
- ALL PAINT SHALL BE WHITE, RETROREFLECTIVE PAINT COMPLIANT WITH MUTCD AND DOT STANDARD SPECIFICATIONS.

PAINTED CROSSWALK DETAIL

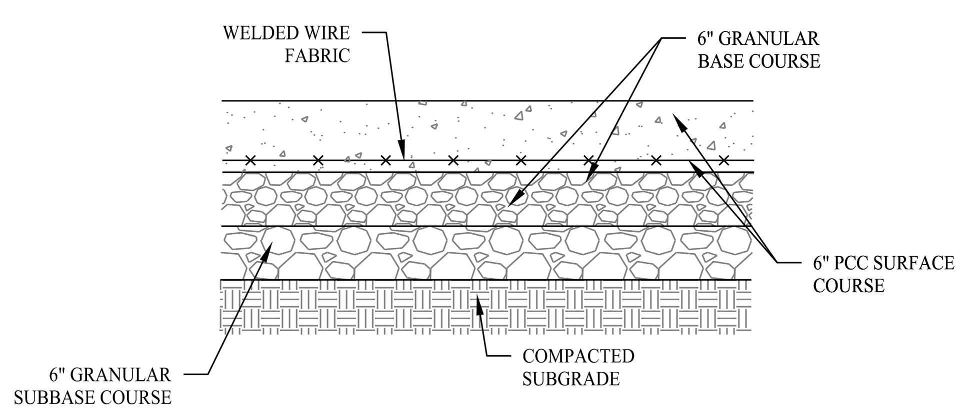
SCALE: NTS



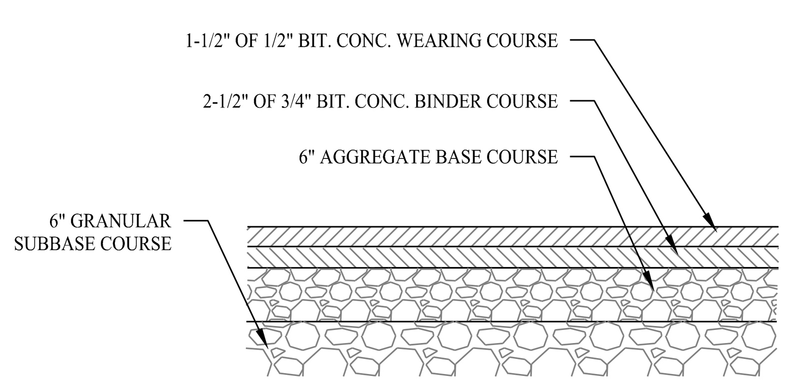
NOTES
1. PROVIDE 1/2" EXPANSION JOINT BETWEEN SIDEWALK AND ALL FIXED OBJECTS

CONCRETE SIDEWALK DETAIL

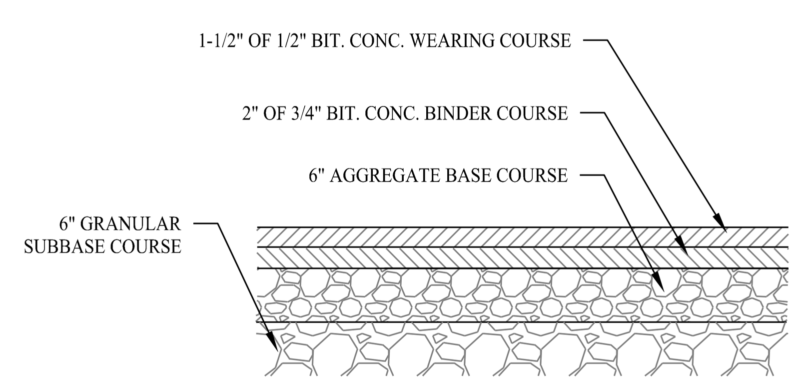
SCALE: NTS



HEAVY DUTY CONCRETE PAVEMENT



HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT

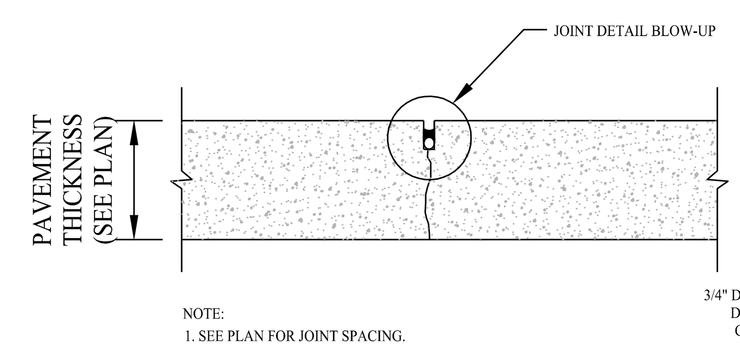


STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT

NOTE:
- ALL PAVEMENT BASE/SUBBASES SHALL BE COMPACTED IN ACCORDANCE W/ AASHTO T99. AT A MINIMUM, 95% AT THE STANDARD PROCTOR (AASHTO T99) DENSITY SHOULD BE ACHIEVED IN THE FIELD.

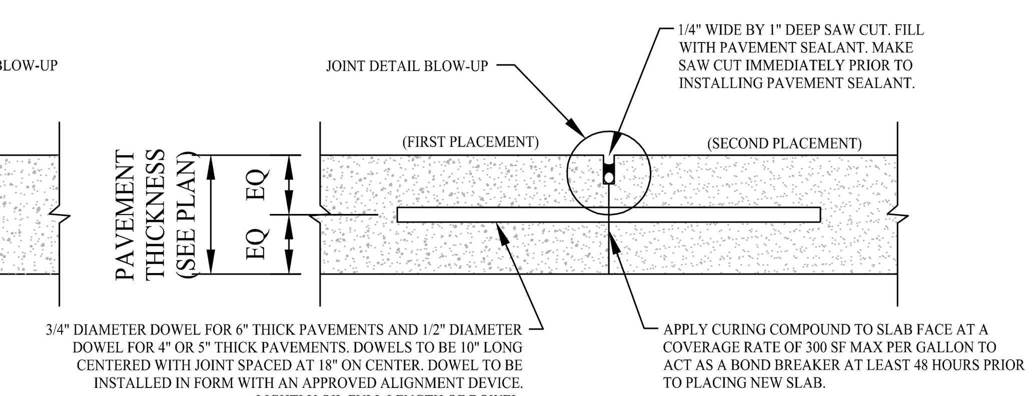
PAVING CROSS SECTION DETAILS

SCALE: NTS

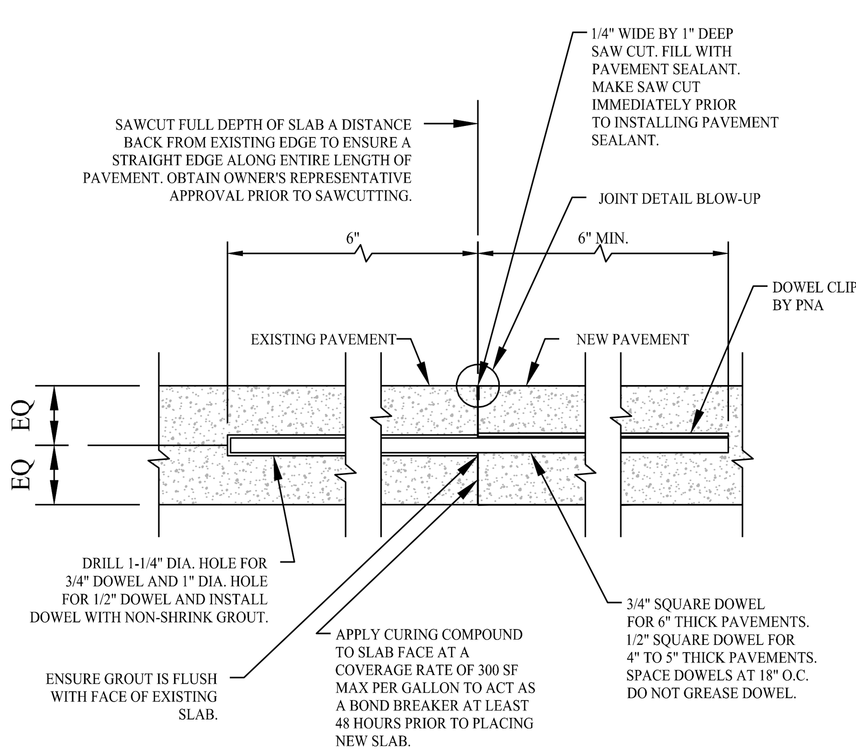


NOTE:
1. SEE PLAN FOR JOINT SPACING.

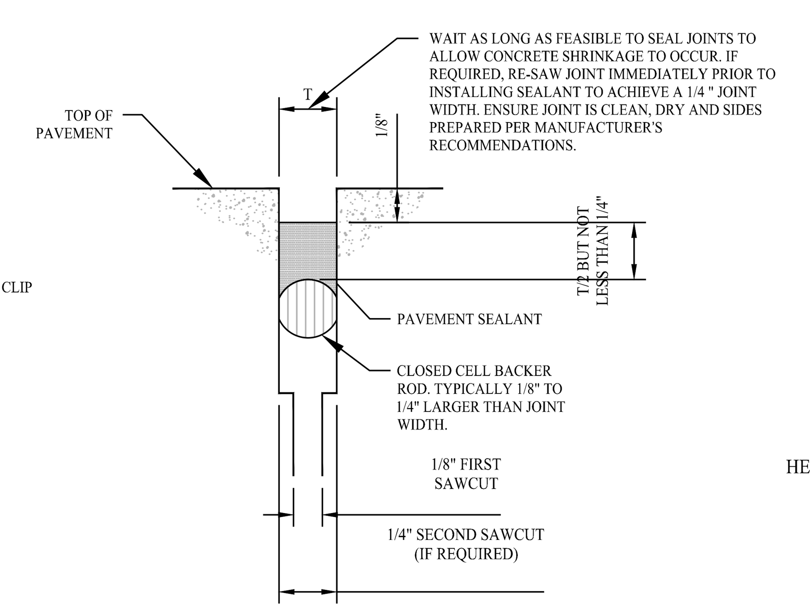
CONTRACTION JOINT



CONSTRUCTION JOINT



CONSTRUCTION JOINT TO EXISTING PAVEMENT

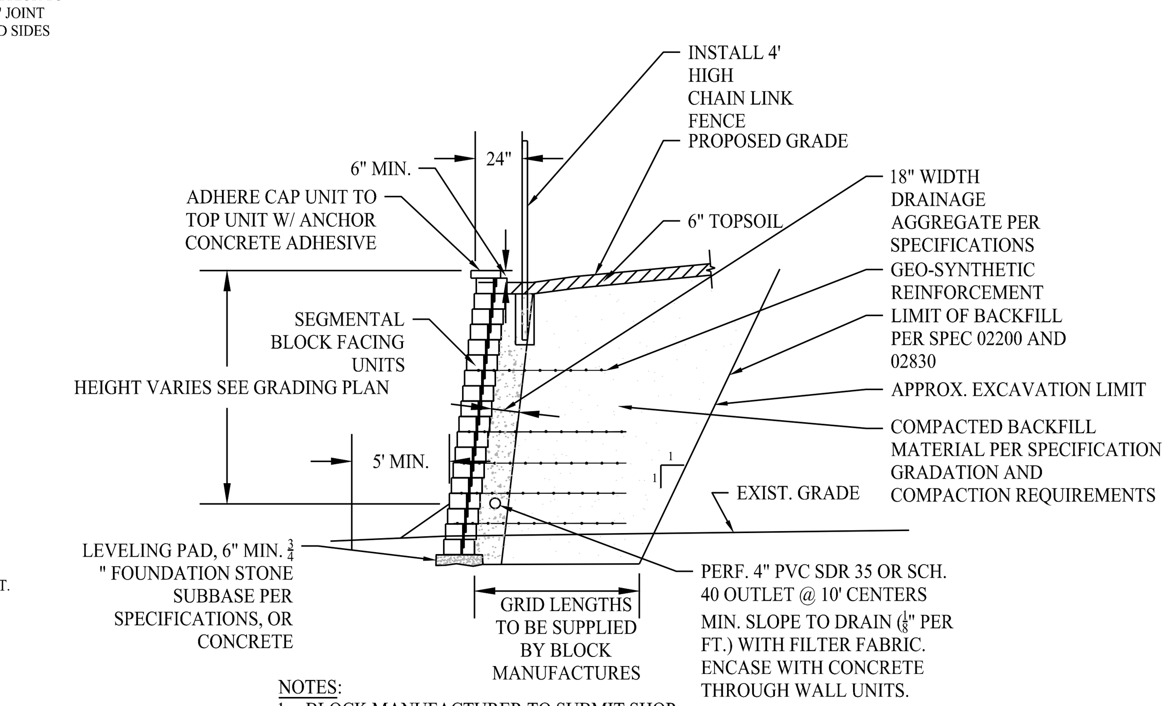


NOTES:
1. ENSURE JOINTS ARE CLEAN AND DRY PRIOR TO THE APPLICATION OF THE JOINT SEALANT.
2. INSTALL CLOSED CELL BACKER ROD AFTER JOINTS HAVE BEEN CLEANED AND DRIED IN ACCORDANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.
3. INSTALL BACKER TOD AT CONSISTENT AND UNIFORM DEPTH.
4. JOINT SEALANT APPLICATION SHALL BE IN STRICT COMPLIANCE WITH SEALANT MANUFACTURER'S REQUIREMENTS.

JOINT DETAIL BLOW-UP (TYP.)

CONCRETE JOINT DETAIL

SCALE: NTS



NOTES:
1. BLOCK MANUFACTURER TO SUBMIT SHOP DRAWINGS FOR RETAINING WALLS #1 THROUGH #6 PRIOR TO CONSTRUCTION

TYPICAL RETAINING WALL SECTION DETAIL

SCALE: NTS

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1	01/26/23	P&Z SUBMISSION

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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

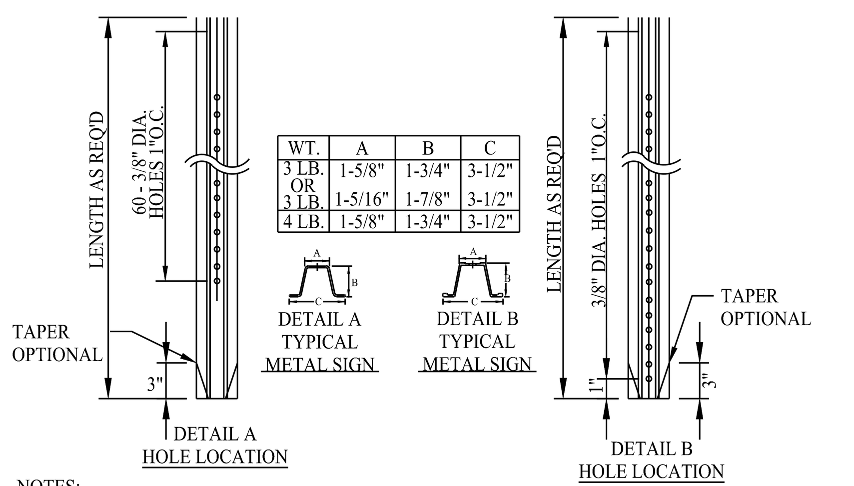
Drawn By:	STM
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	NTS

STATE OF CONNECTICUT KEVIN M. SOLLI LICENSED PROFESSIONAL ENGINEER 25759
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: CONSTRUCTION DETAILS

Sheet #: 3.01

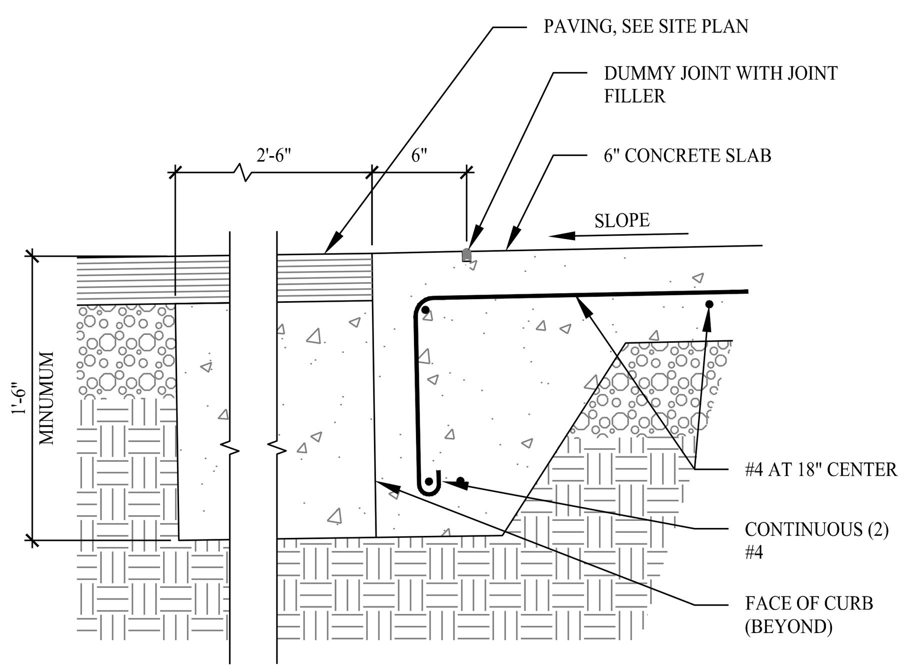


WT.	A	B	C
3 LB. OR 3 LB.	1-5/8"	1-3/4"	3-1/2"
	1-5/16"	1-7/8"	3-1/2"
4 LB.	1-5/8"	1-3/4"	3-1/2"

NOTES:
1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM AS 499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM AI-76 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT OF 91 LBS OR GREATER PER LINEAR YARD.
2. AFTER FABRICATION ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A-123.
3. SIGN MOUNTING HEIGHT TO BE APPROVED BY THE ENGINEER.

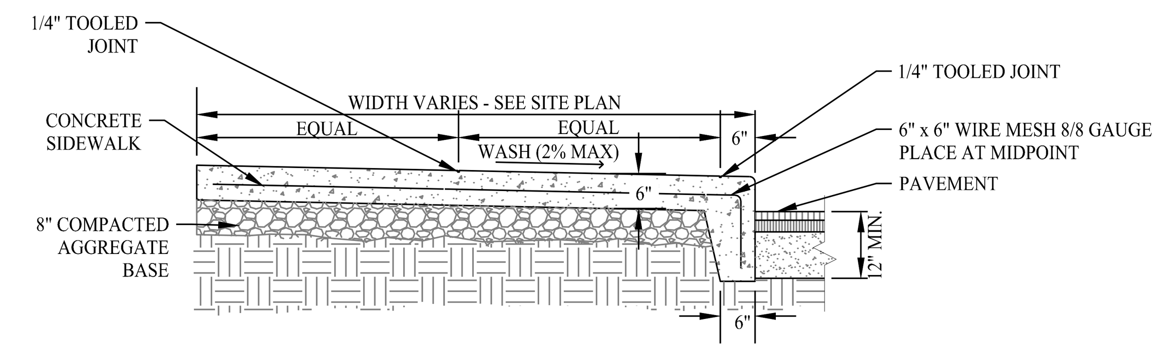
TYPICAL METAL SIGN POSTS

SCALE: NTS



FLUSH CONCRETE CURB DETAIL

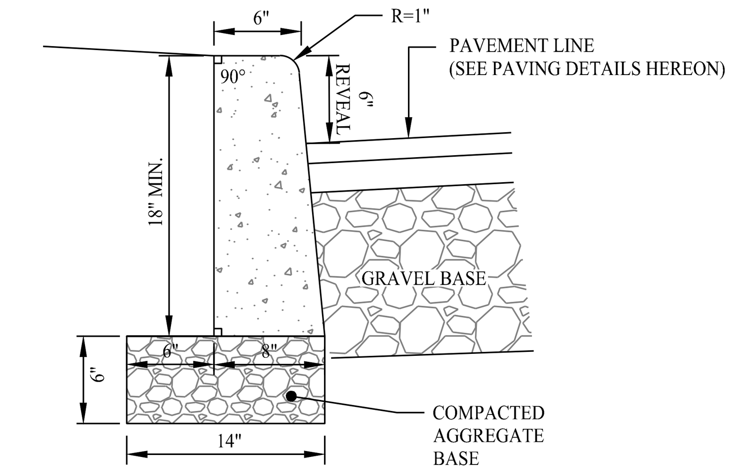
SCALE: NTS



NOTES:
1. CONCRETE SHALL BE 3,500 PSI AIR ENTRAINED AT A 4" SLUMP.
2. TRANSVERSE CONTROL JOINTS 1/4" WIDE BY 3/4" DEEP, TO BE FORMED EVERY 4'.
3. EXPANSION JOINTS WITH 1/2" PREMOLDED MATERIALS SHALL BE PLACED EVERY 28' TO FULL DEPTH.
4. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH DOT SPECIFICATIONS.
5. ALL EDGES SHALL BE ROUNDED WITH A 1/4" EDGE TOOL

INTEGRAL CONCRETE CURB

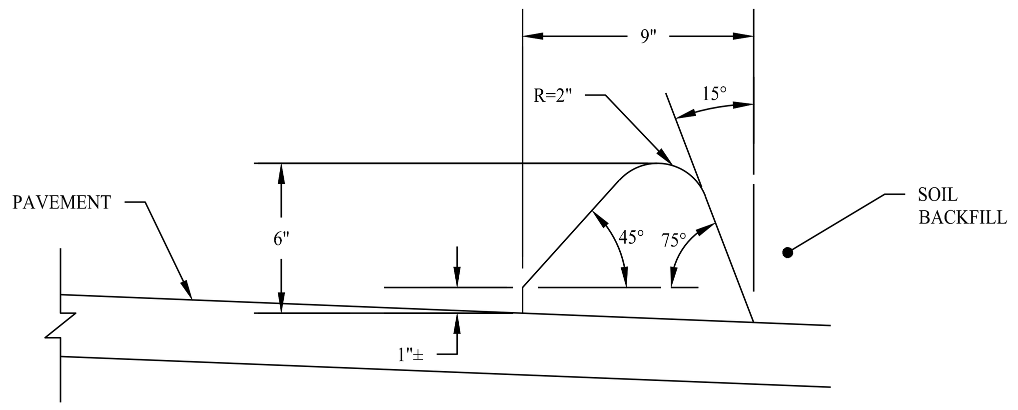
SCALE: NTS



NOTES:
1. POUR TO EXCAVATED BOTTOM OR WELL COMPACTED BANK RUN GRAVEL. BACK OF CURB IS STRAIGHT, FACE OF CURB IS TAPERED
2. CLASS "A" CONCRETE-3,500 PSI MINIMUM. EXPANSION JOINTS EVERY 10 FEET. IN NO CASE SHALL THERE BE LESS THAN 6' BETWEEN JOINTS.

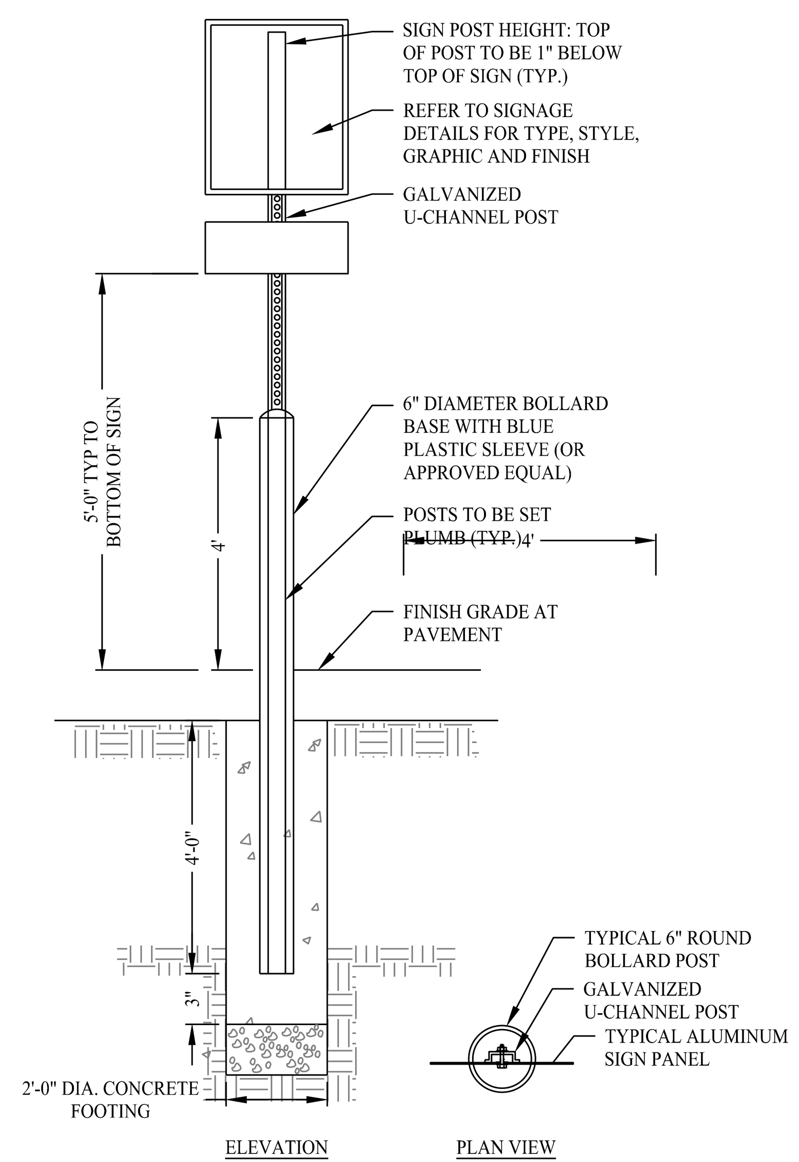
CONCRETE CURB DETAIL

SCALE: NTS



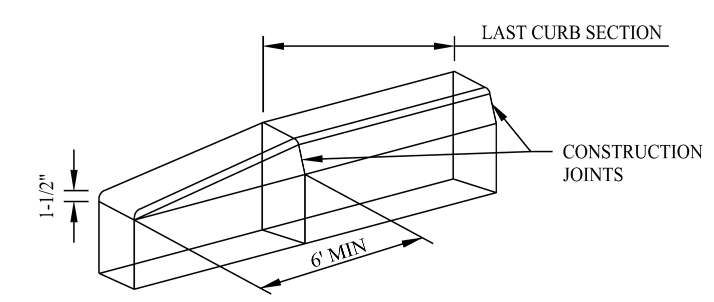
BITUMINOUS CONCRETE CURBING DETAIL

SCALE: NTS



TYPICAL SIGN MOUNT WITH BOLLARD BASE

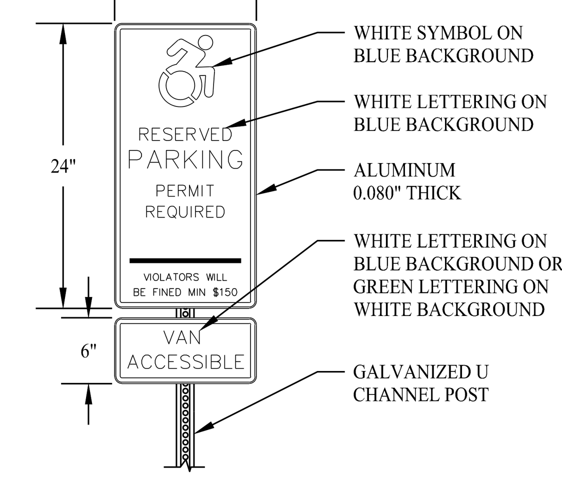
SCALE: NTS



NOTES:
1. CONCRETE SHALL BE 3,500 PSI AIR ENTRAINED AT A 4" SLUMP.
2. TRANSVERSE CONTROL JOINTS 1/4" WIDE BY 3/4" DEEP, TO BE FORMED EVERY 4'.
3. EXPANSION JOINTS WITH 1/2" PREMOLDED MATERIALS SHALL BE PLACED EVERY 28' TO FULL DEPTH.
4. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH DOT SPECIFICATIONS.
5. ALL EDGES SHALL BE ROUNDED WITH A 1/4" EDGE TOOL

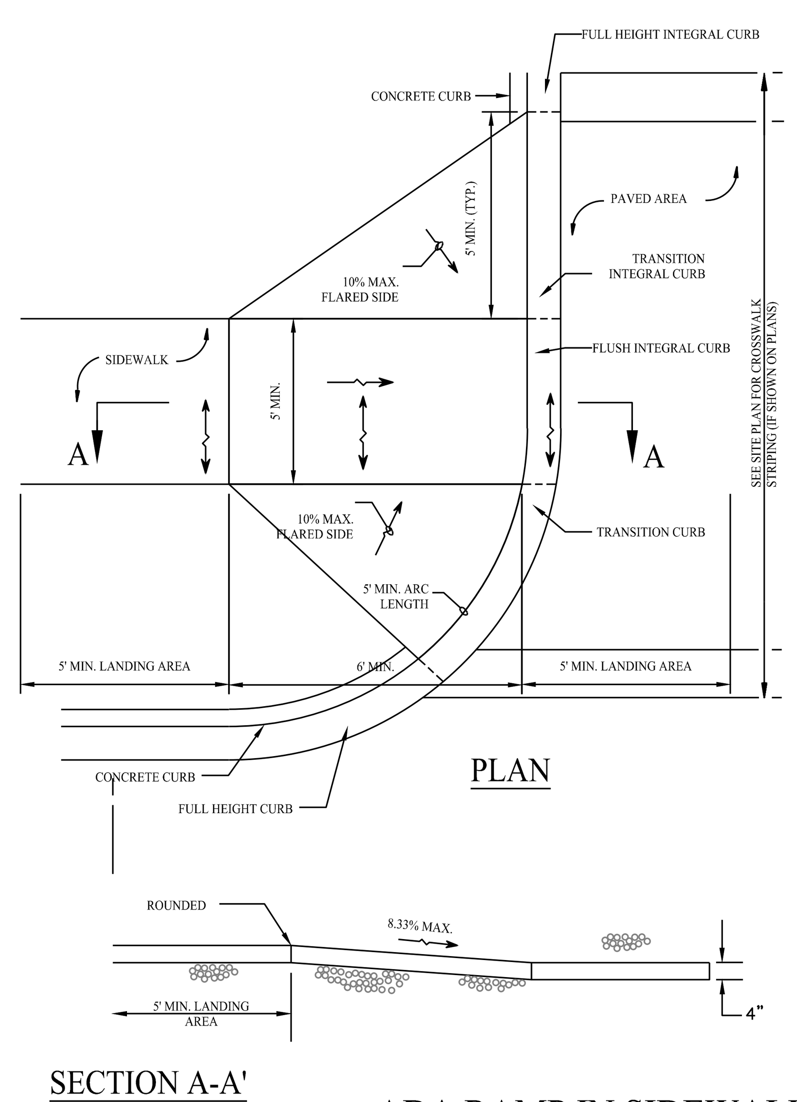
CURB TRANSITION DETAIL

SCALE: NTS



ACCESSIBLE PARKING SIGN

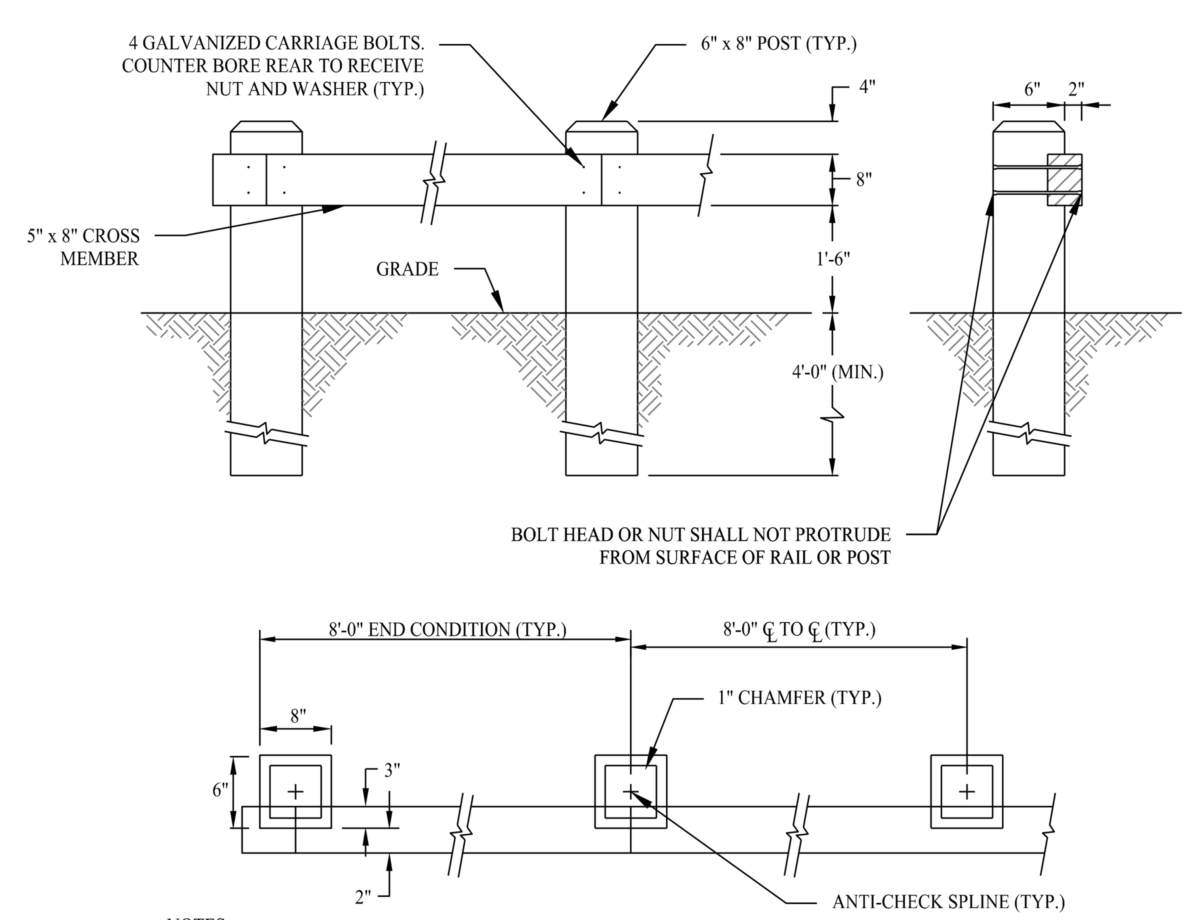
SCALE: NTS



NOTES:
1. THE SURFACE OF RAMP SHALL HAVE DETECTABLE WARNINGS AS SHOWN. DETECTABLE WARNINGS SHALL CONSIST OF RAISED TRUNCATED DOMES. SEE DETECTABLE WARNINGS DETAIL.
2. RAMP SIDE SLOPE VARIES UNIFORMLY FROM A MAXIMUM OF UP TO 10% AT CURB TO CONFORM WITH LONGITUDINAL SIDEWALK SLOPE ADJACENT TO TOP OF THE RAMP.
3. CONSTRUCT PER A.D.A. STANDARDS.
4. REFER TO PLANS FOR ADJACENT SLOPES.
5. THE CROSS SLOPE OF THE RAMP SURFACE SHALL BE NO GREATER THAN 1:50.

ADA RAMP IN SIDEWALK DETAIL

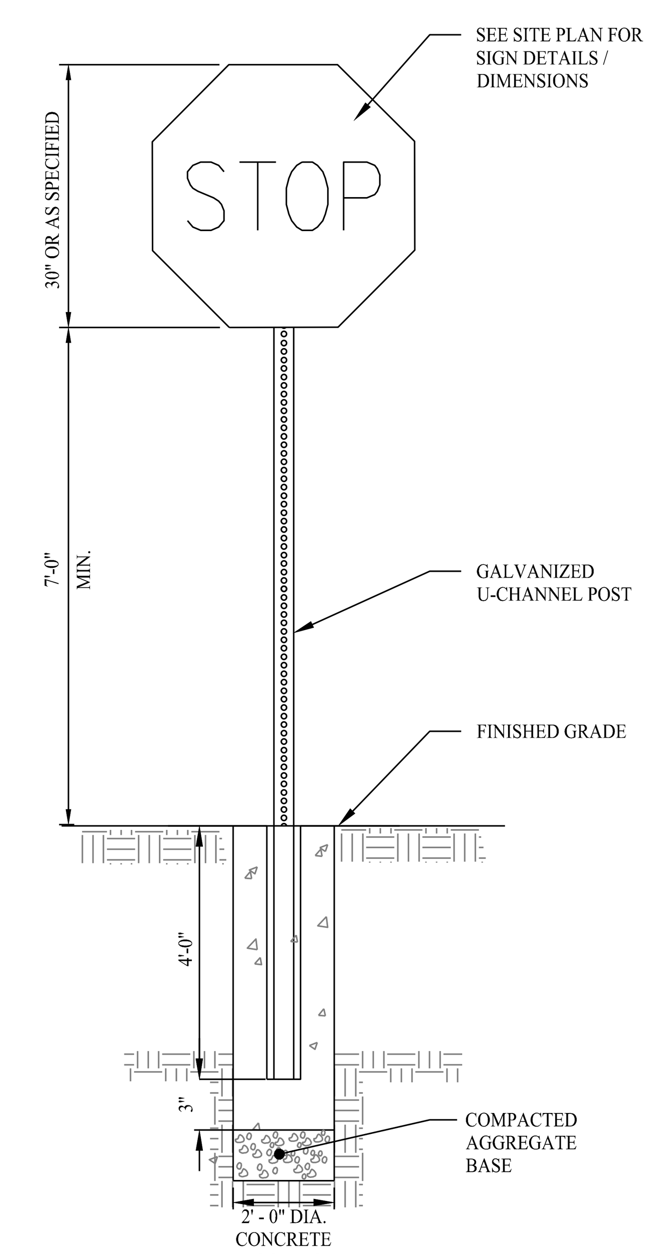
SCALE: NTS



NOTES:
- ALL TIMBER TO BE PRESSURE TREATED CCA=0.40 PCF SOUTHERN YELLOW PINE.

TIMBER GUIDE RAIL

SCALE: NTS



TYPICAL SIGN DETAIL

SCALE: NTS

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

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

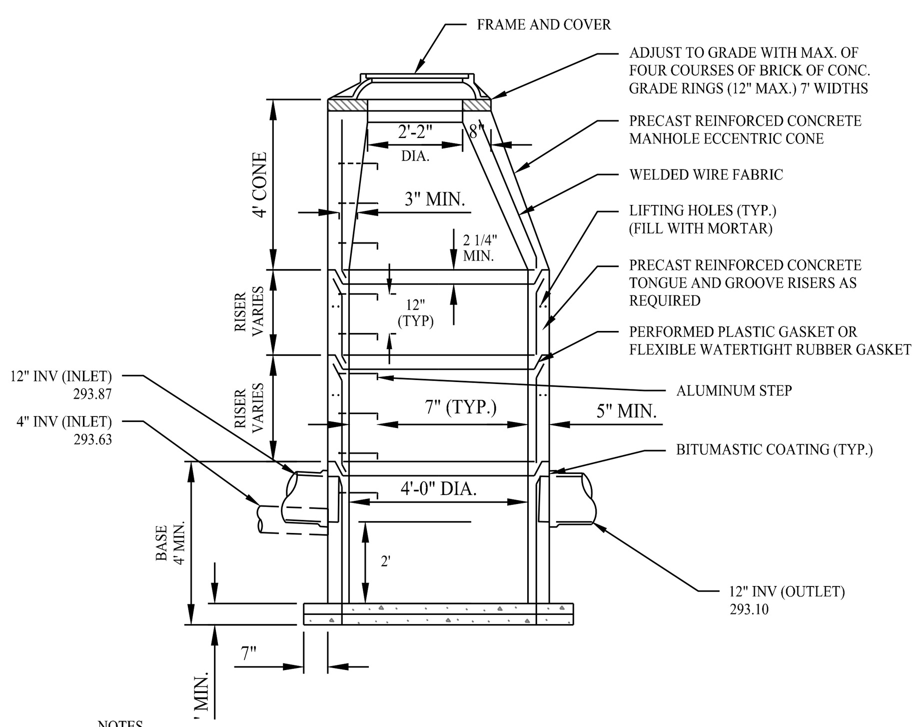
Drawn By:	STM
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	NTS

STATE OF CONNECTICUT KEVIN M. SOLLI LICENSED PROFESSIONAL ENGINEER 25759
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: CONSTRUCTION DETAILS

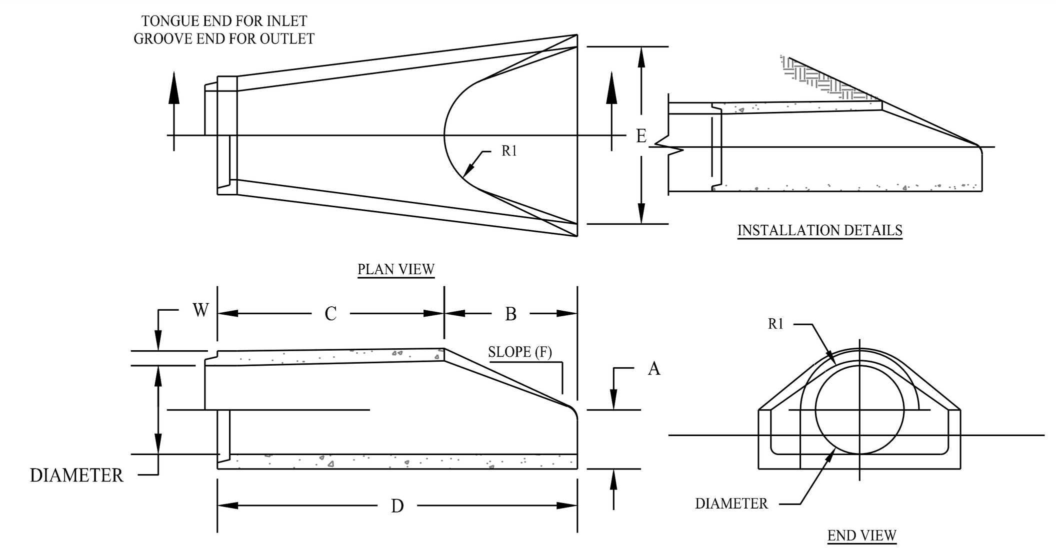
Sheet #: 3.02



NOTES
1. 5' OR 6' DIA. PRECAST BASES MAY BE USED WHEN REQUIRED DUE TO SIZE OR NUMBER OF PIPES AT THE MANHOLE. PRECAST REDUCERS WILL BE PLACED ABOVE THE 5' & 6' BASES AS DIRECTED BY THE ENGINEER.
2. WALL THICKNESS TO INCREASE 1" FOR EACH 1' OF INSIDE DIAMETER INCREASE.
3. WHEN INLET SEWER INVERT TO OUTLET SEWER INVERT ELEVATION EXCEEDS 24" USE DROP CONNECTION.

PRECAST STORM MANHOLE

SCALE: NTS



SECTION AT CENTERLINE (PROFILE VIEW)

Dimensions								
Diameter	A	B	C	D	E	F	R1	W
15"Ø	6"	2'-3"	3'-10"	6'-1"	2'-6"	3 : 1	11"	2 11/16"
18"Ø	9"	2'-3"	3'-10"	6'-1"	3'-0"	3 : 1	12"	2 13/16"
24"Ø	10"	3'-8"	2'-6"	6'-2"	4'-0"	3 : 1	14"	5 21/32"
30"Ø	12"	4'-6"	1'-8"	6'-2"	5'-0"	3 : 1	15"	4 17/32"

NOTES:

1. PRODUCED TO ASTM SPECIFICATIONS.

2. THIS DRAWING IS NOT INTENDED TO SHOW REINFORCEMENT DESIGN. EITHER AS TO PLACEMENT OR STEEL AREA. ACTUAL PROJECT SPECIFICATIONS OR CURRENT ASTM WILL GOVERN.

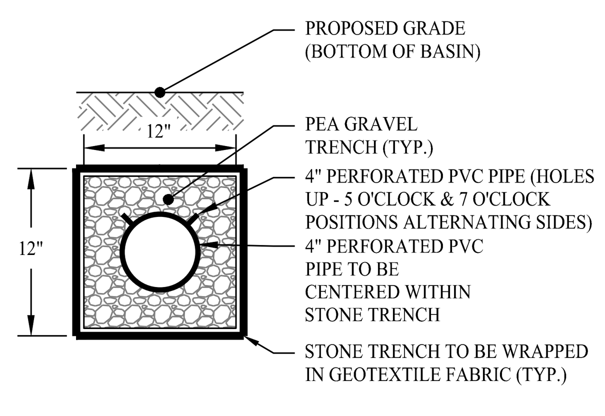
3. CONSULT HYDRO CONDUIT CORP. LOCAL REPRESENTATIVE FOR FURTHER DETAILS NOT LISTED ON THIS DRAWING.

TULSA PIPE
3200 NORTH 129TH EAST AVENUE
TULSA, OKLAHOMA 74116
P.O. BOX 581524
TULSA, OKLAHOMA 74158-1524
(918) 438-0230

CR 170
35
ISSUED 12/93

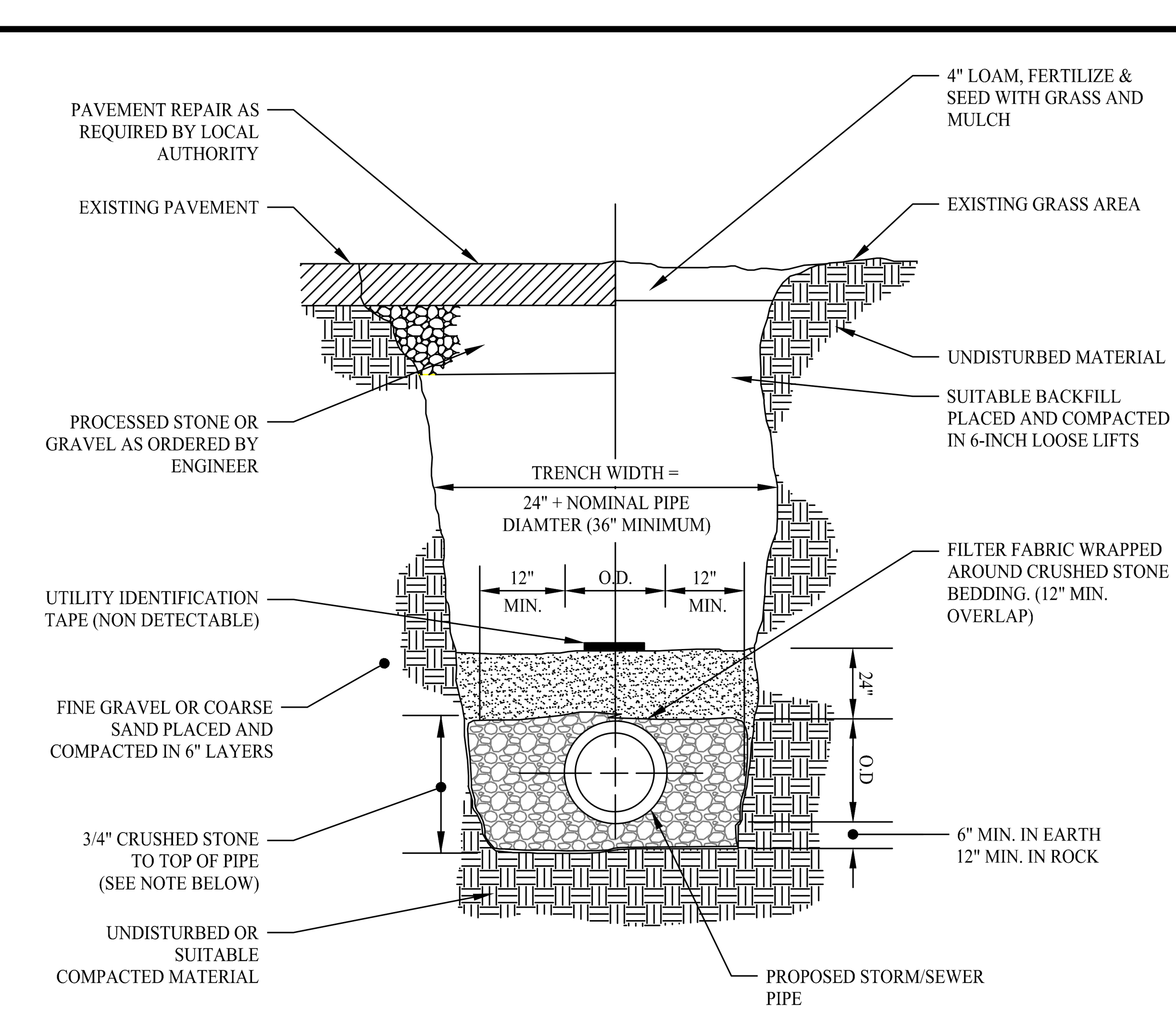
FLARED END SECTION DETAILS

SCALE: NTS



DRAINAGE BASIN UNDERDRAIN DETAIL

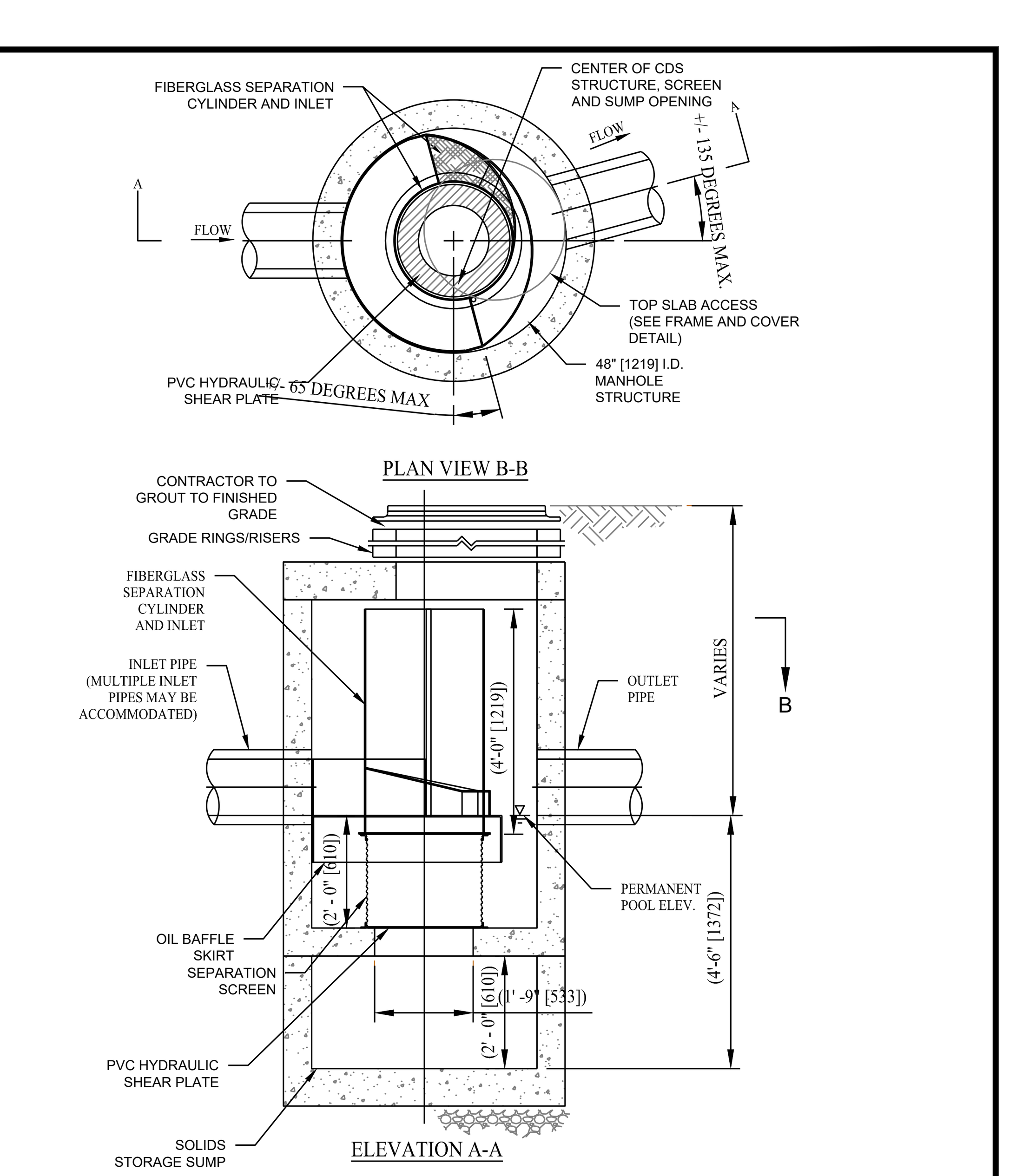
SCALE: NTS



NOTES:
- SUITABLE BACKFILL TO BE COMPACTED TO 95% MAX. DRY DENSITY IN LIFTS (6" TYPICAL) PER ASTM Δ1557/AASHTO T-99.
- SPECIAL FOUNDATION MAY BE REQUIRED AS DIRECTED BY CIVIL ENGINEER IN AREAS OF PEAT OR UNSUITABLES.
- TRENCH SUPPORT SYSTEMS TO BE USED PER OSHA STANDARDS.

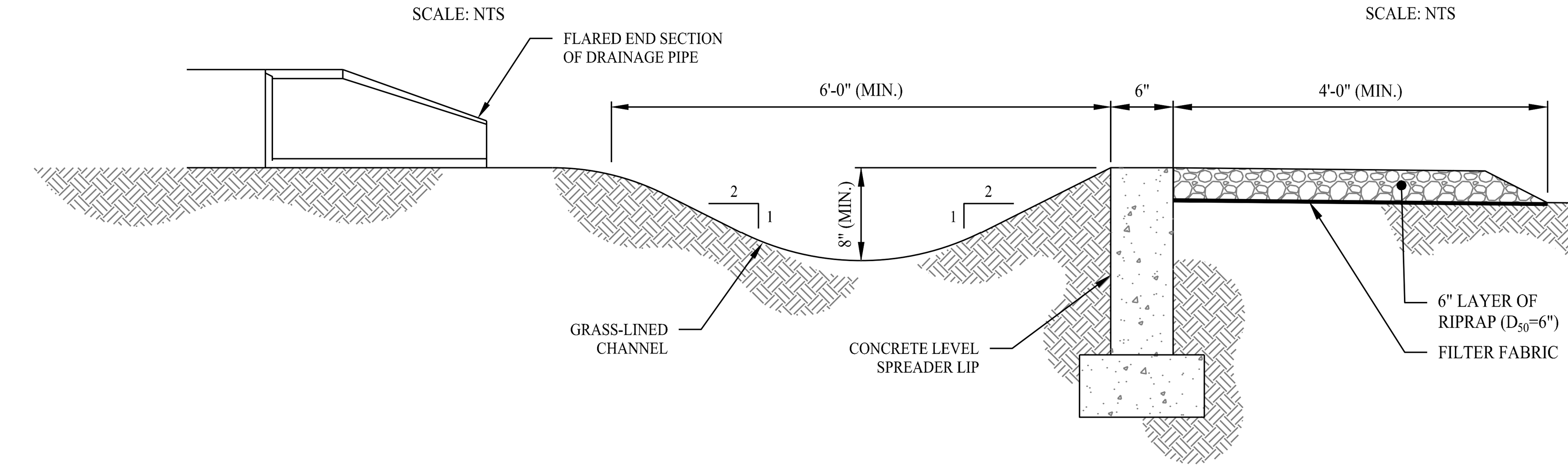
STORM / SEWER TRENCH SECTION DETAIL

SCALE: NTS



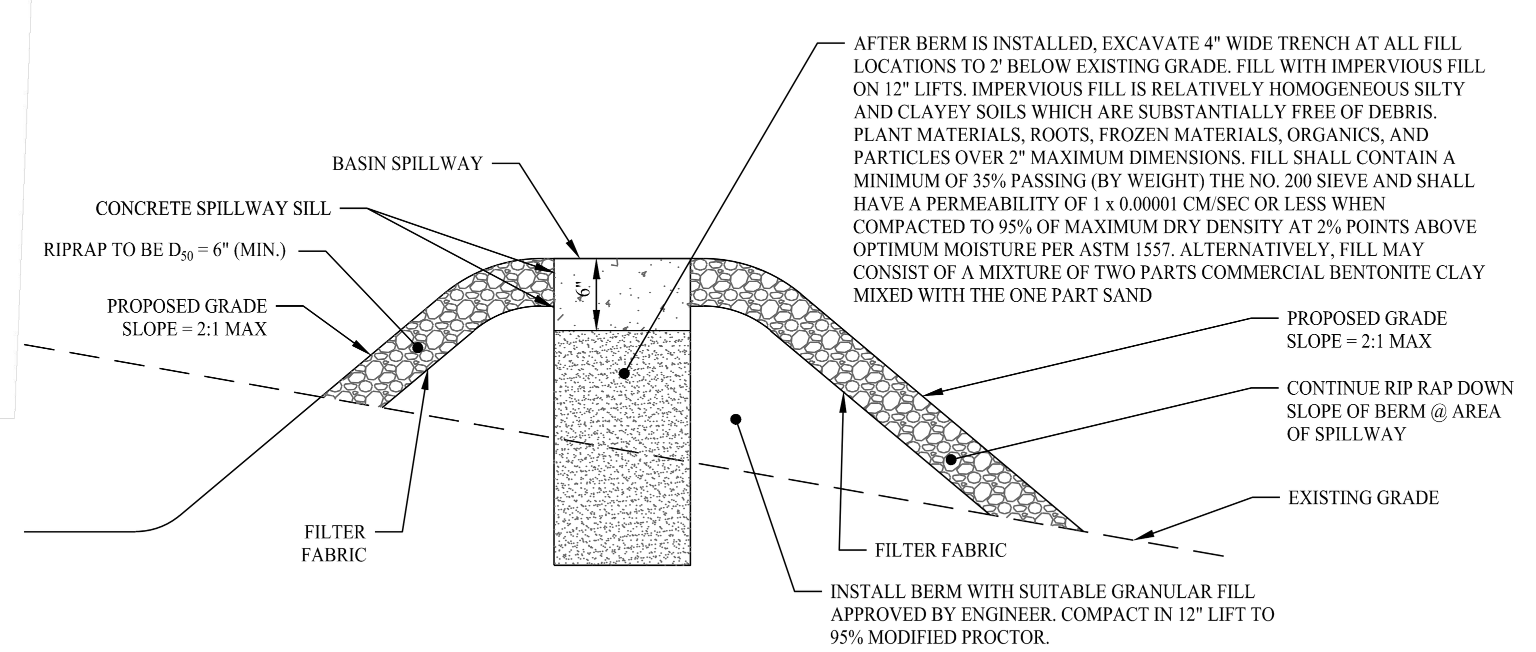
FIRST DEFENSE 5' HYDRODYNAMIC SEPARATOR

SCALE: NTS



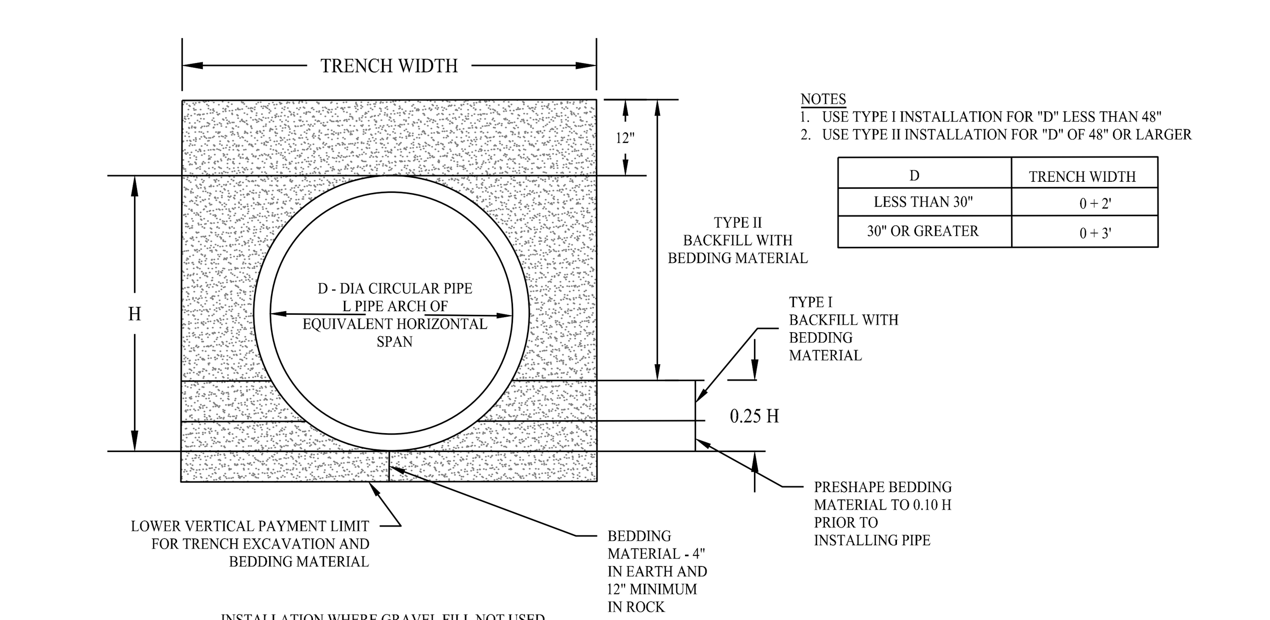
LEVEL SPREADER DETAIL

SCALE: NTS



TYPICAL BERM IN FILL SECTION

SCALE: NTS

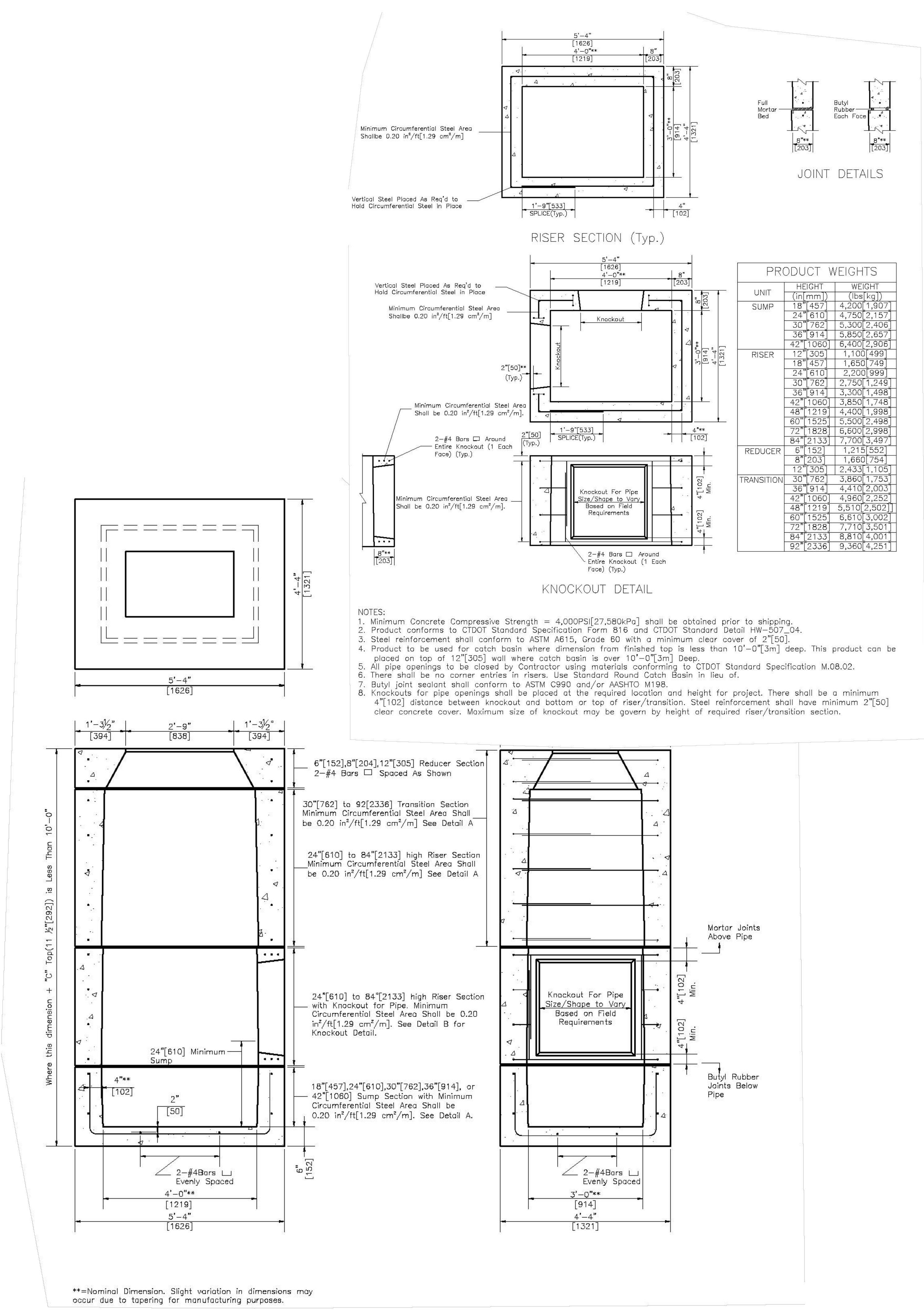


NOTES
1. USE TYPE I INSTALLATION FOR "D" LESS THAN 48"
2. USE TYPE II INSTALLATION FOR "D" OF 48" OR LARGER

D	TRENCH WIDTH
LESS THAN 30"	D + 2'
30" OR GREATER	D + 3'

UNDERDRAIN WITH STORM SEWER

SCALE: NTS | DETAIL PER TOWN OF MONROE STANDARDS

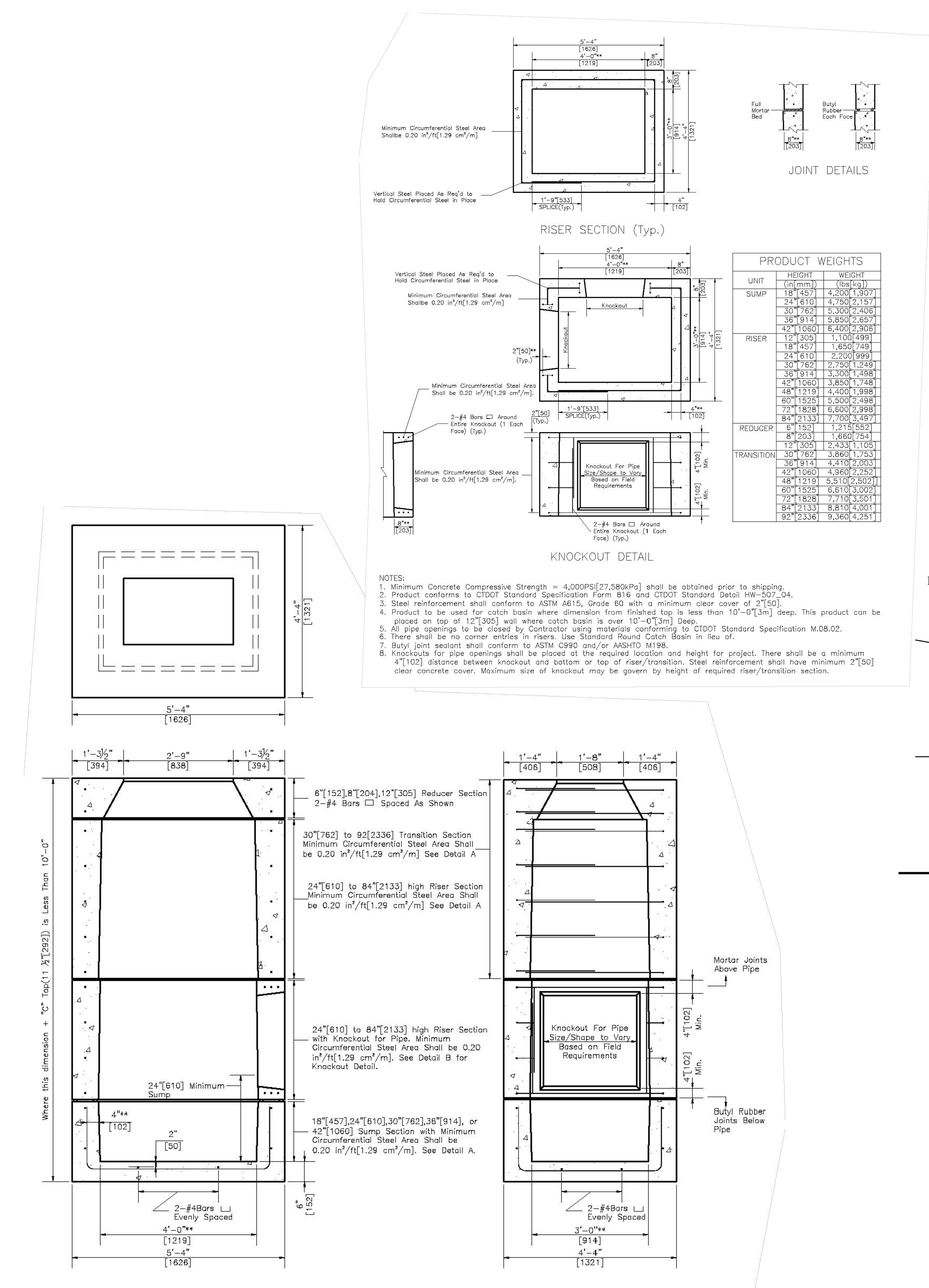


PRODUCT WEIGHTS		
UNIT	HEIGHT (in[mm])	WEIGHT (lbs[kg])
SUMP	18"[457]	4,200[1,907]
	24"[610]	4,750[2,157]
	30"[762]	5,300[2,406]
	36"[914]	5,850[2,657]
	42"[1060]	6,400[2,906]
RISER	12"[305]	1,100[499]
	18"[457]	1,650[749]
	24"[610]	2,200[999]
	30"[762]	2,750[1,249]
	36"[914]	3,300[1,498]
	42"[1060]	3,850[1,748]
	48"[1219]	4,400[1,998]
	60"[1525]	5,500[2,498]
	72"[1828]	6,600[2,998]
	84"[2133]	7,700[3,497]
REDUCER	6"[152]	1,215[552]
	8"[203]	1,660[754]
	12"[305]	2,433[1,105]
TRANSITION	30"[762]	3,860[1,753]
	36"[914]	4,410[2,003]
	42"[1060]	4,960[2,252]
	48"[1219]	5,510[2,502]
	60"[1525]	6,610[3,002]
	72"[1828]	7,710[3,501]
	84"[2133]	8,810[4,001]
	92"[2336]	9,360[4,251]

NOTES:
1. Minimum Concrete Compressive Strength = 4,000PSI[27,580kPa] shall be obtained prior to shipping.
2. Product conforms to CTDOT Standard Specification Form 816 and CTDOT Standard Detail HW-507_04.
3. Steel reinforcement shall conform to ASTM A615, Grade 60 with a minimum clear cover of 2"[50].
4. Product to be used for catch basin where dimension from finished top is less than 10'-0"[3m] deep. This product can be placed on top of 12"[305] wall where catch basin is over 10'-0"[3m] Deep.
5. All pipe openings to be closed by Contractor using materials conforming to CTDOT Standard Specification M.08.02.
6. There shall be no corner entries in risers. Use Standard Round Catch Basin in lieu of.
7. Butyl joint sealant shall conform to ASTM C990 and/or AASHTO M198.
8. Knockouts for pipe openings shall be placed at the required location and height for project. There shall be a minimum 4"[102] distance between knockout and bottom or top of riser/transition. Steel reinforcement shall have minimum 2"[50] clear concrete cover. Maximum size of knockout may be govern by height of required riser/transition section.

36"x48" STANDARD PRECAST CT DOT TYPE "C" CATCH BASIN

SCALE: NTS | DETAIL PROVIDED BY CONNECTICUT PRECAST CORPORATION



36"x48" STANDARD PRECAST CT DOT TYPE "CL" CATCH BASIN

SCALE: NTS | DETAIL PROVIDED BY CONNECTICUT PRECAST CORPORATION

Rev. #:	Date	Description
1	01/26/23	P&Z SUBMISSION

SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468 T: (203) 880-5455 F: (203) 880-9695
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Drawn By:	STM
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	NTS

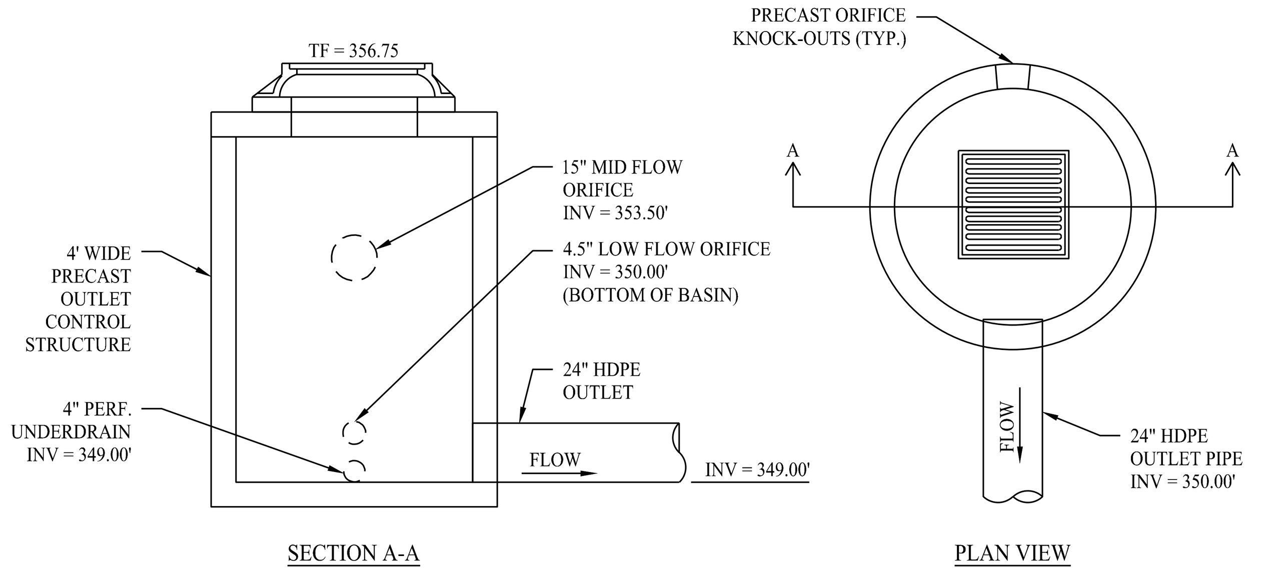
STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: CONSTRUCTION DETAILS

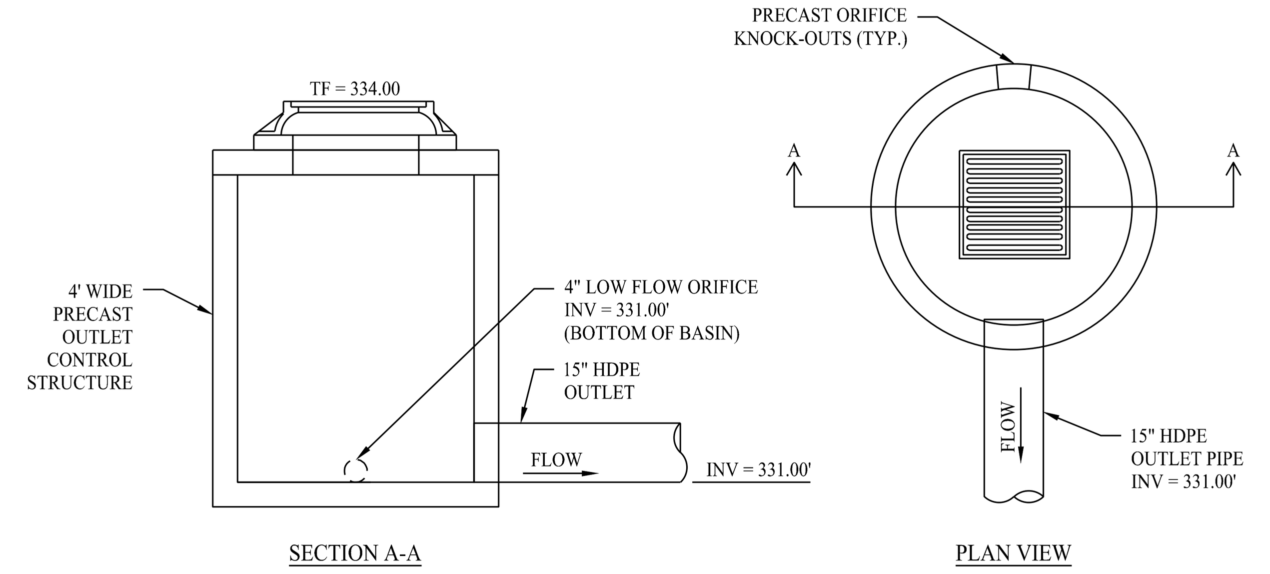
Sheet #: 3.03

Jan 26, 2023 - 5:52pm - tpalma
Z:\SE Files\Project Data\2019\1910801 - Pondview - 127 Main Street, Monroe, CT\Cadd Data\1910801-3.03.dwg



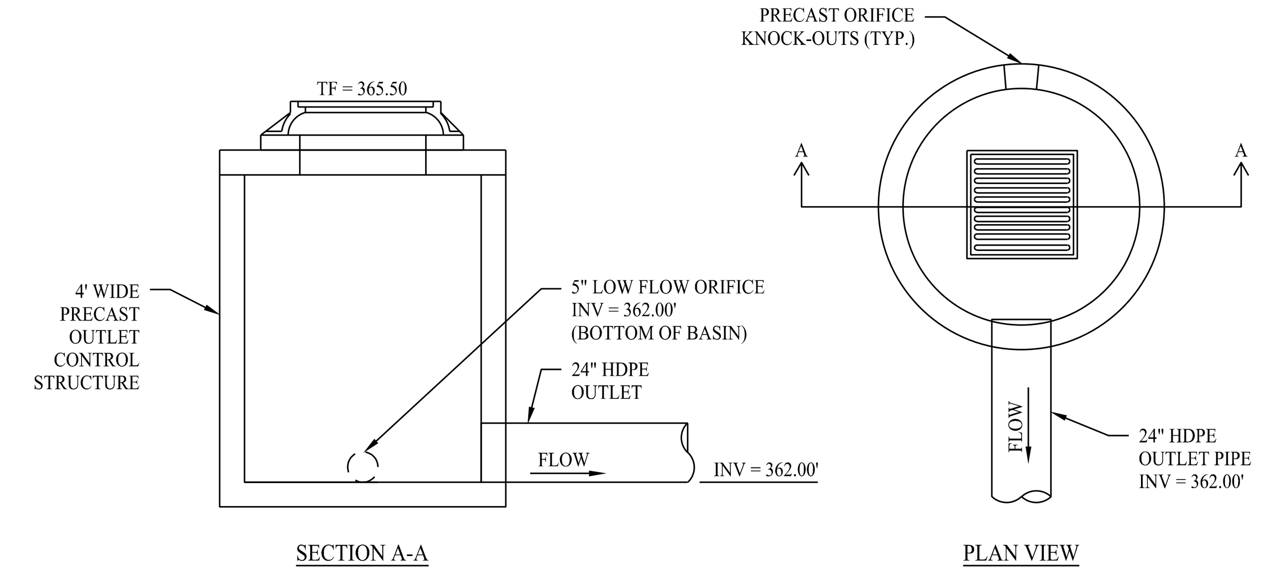
OUTLET CONTROL STRUCTURE (OCS-1)

SCALE: NTS



OUTLET CONTROL STRUCTURE (OCS-2)

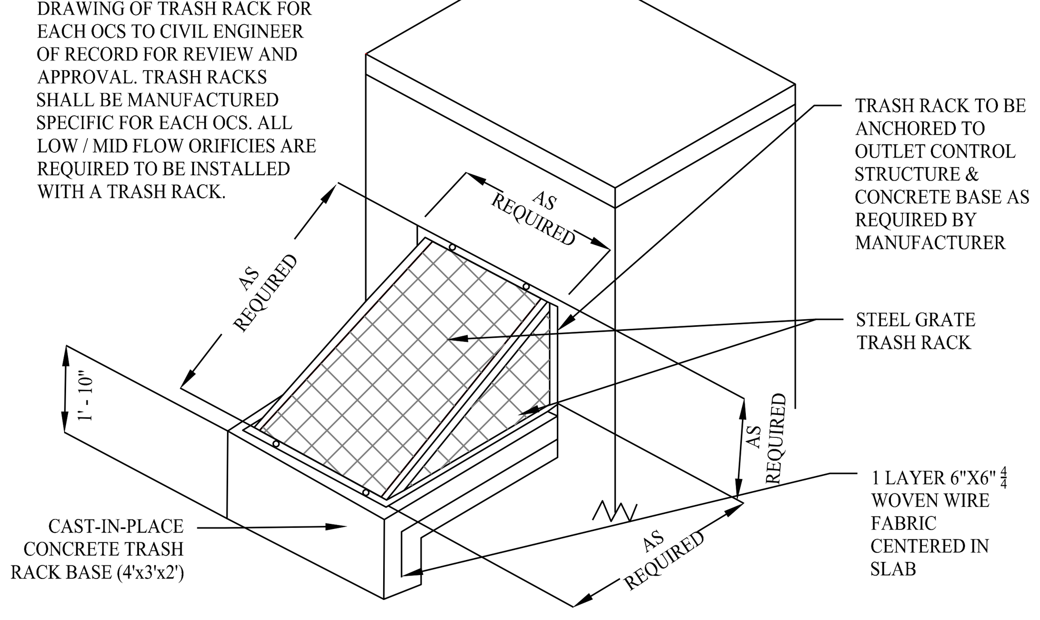
SCALE: NTS



OUTLET CONTROL STRUCTURE (OCS-3)

SCALE: NTS

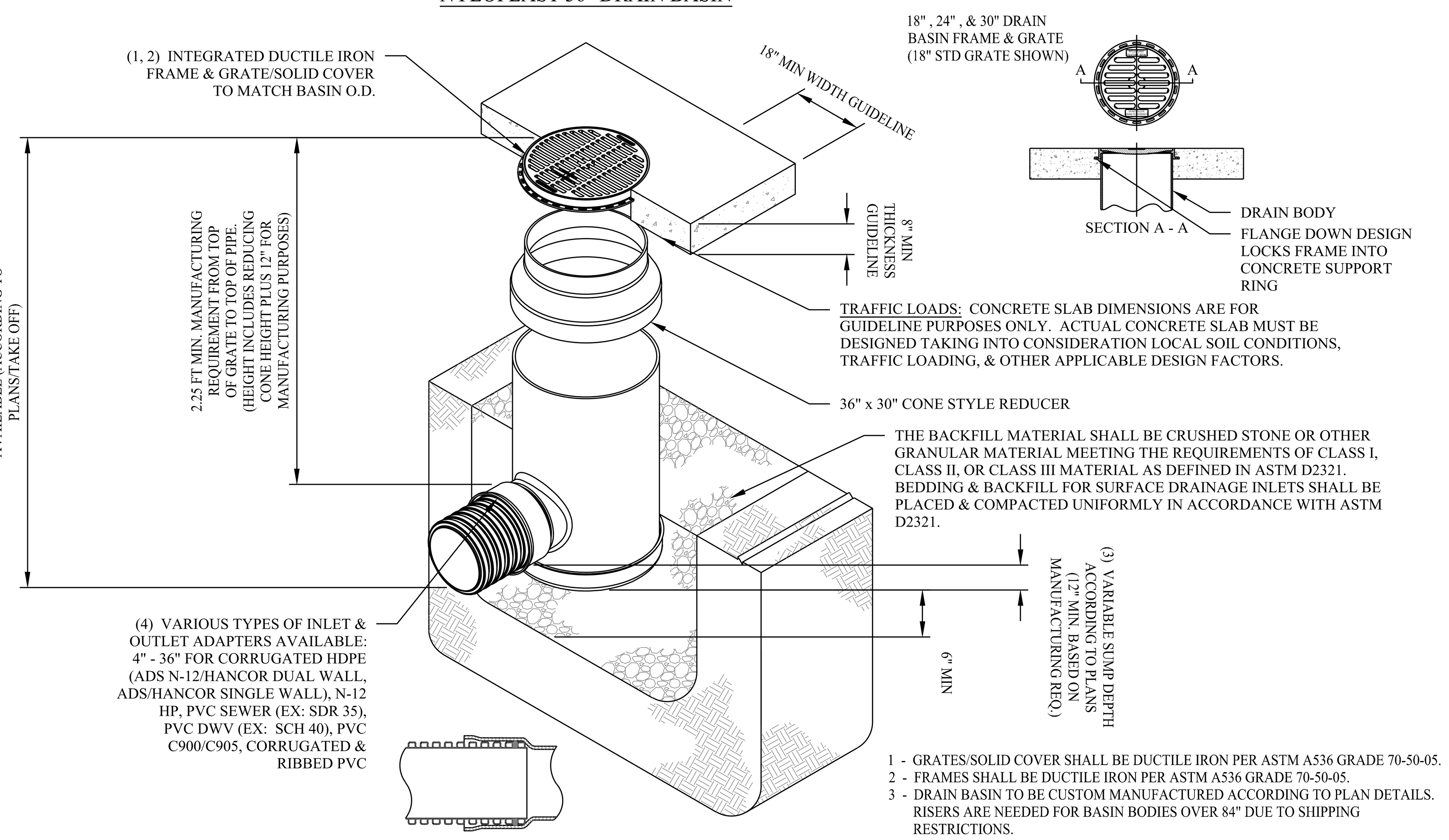
NOTES:
CONTRACTOR TO SUBMIT SHOP DRAWING OF TRASH RACK FOR EACH OCS TO CIVIL ENGINEER OF RECORD FOR REVIEW AND APPROVAL. TRASH RACKS SHALL BE MANUFACTURED SPECIFIC FOR EACH OCS. ALL LOW / MID FLOW ORIFICES ARE REQUIRED TO BE INSTALLED WITH A TRASH RACK.



PRIMARY OUTLET TRASH RACK DETAIL

SCALE: NTS

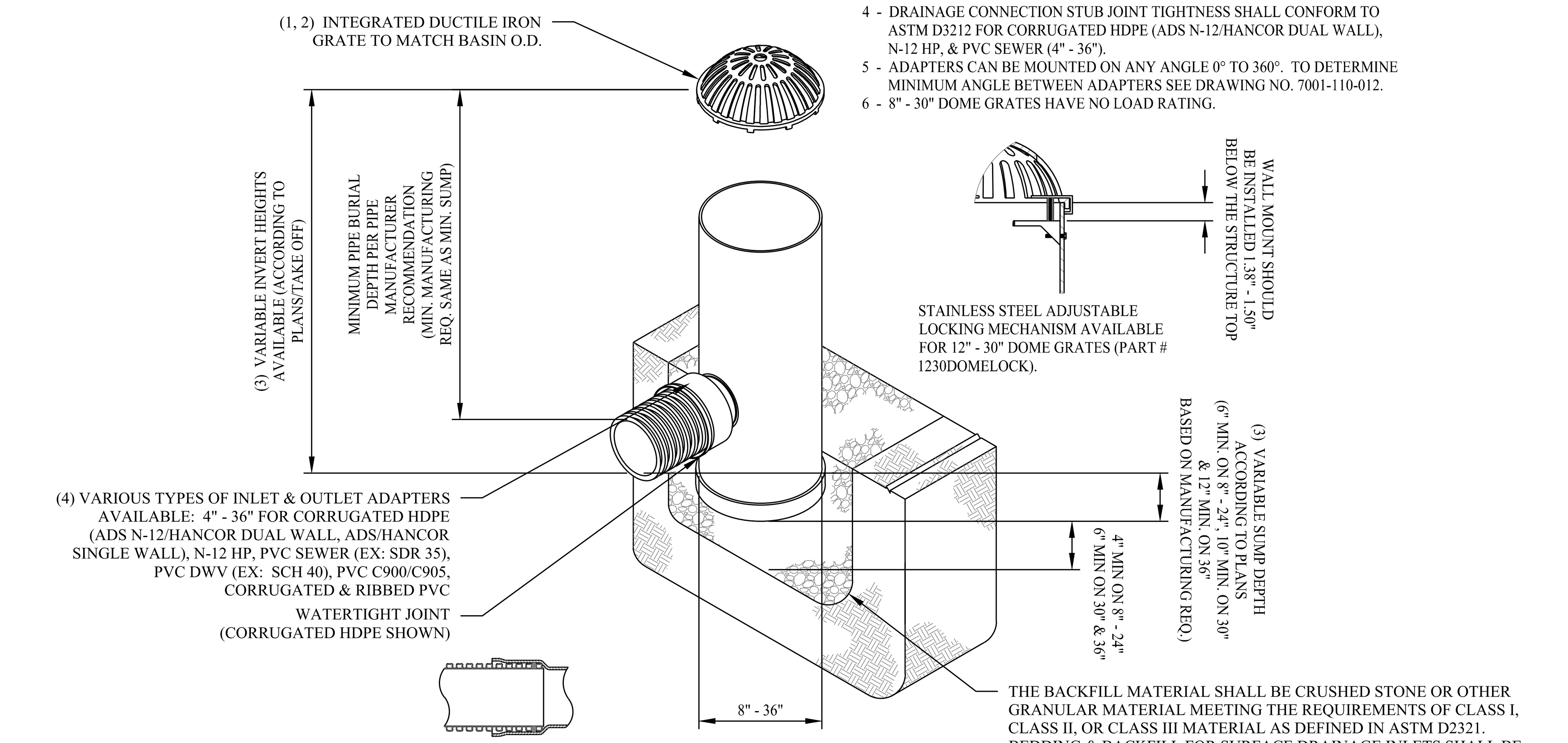
NYLOPLAST 36" DRAIN BASIN



1 - GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASIN BODIES OVER 84" DUE TO SHIPPING RESTRICTIONS.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER.
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.

NYLOPLAST (8" - 30") DRAIN BASIN WITH DOME GRATE

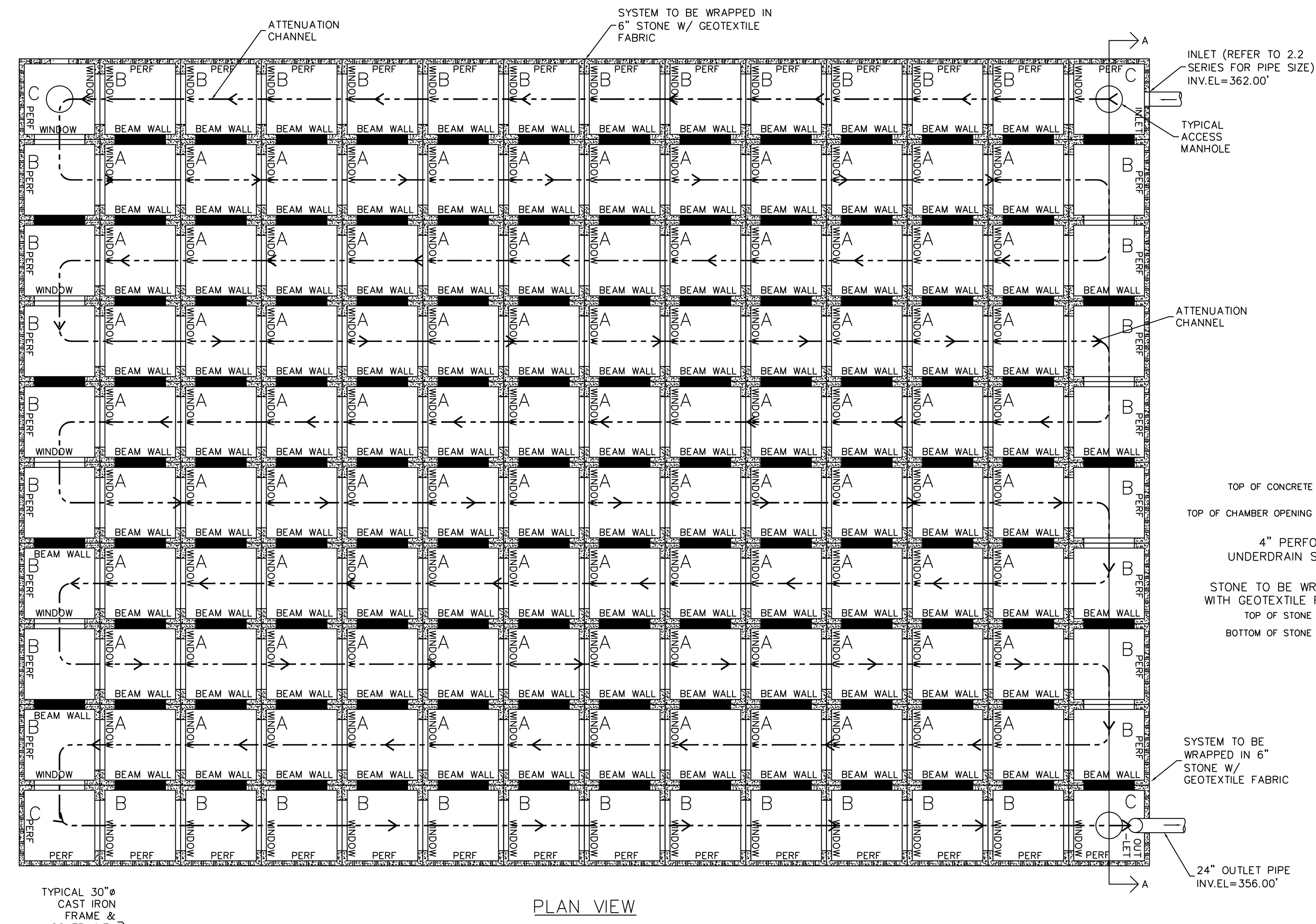
1 - 8" - 30" DOME GRATES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2 - 8" & 10" DOME GRATES FIT ONTO THE DRAIN BASINS WITH THE USE OF A PVC BODY TOP. SEE DRAWING NO. 7001-110-045.
3 - DRAIN BASIN TO BE CUSTOM MANUFACTURED ACCORDING TO PLAN DETAILS. RISERS ARE NEEDED FOR BASINS OVER 84" DUE TO SHIPPING RESTRICTIONS. SEE DRAWING NO. 7001-110-065.
4 - DRAINAGE CONNECTION STUB JOINT TIGHTNESS SHALL CONFORM TO ASTM D3212 FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL), N-12 HP, & PVC SEWER (4" - 36").
5 - ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 360°. TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012.
6 - 8" - 30" DOME GRATES HAVE NO LOAD RATING.

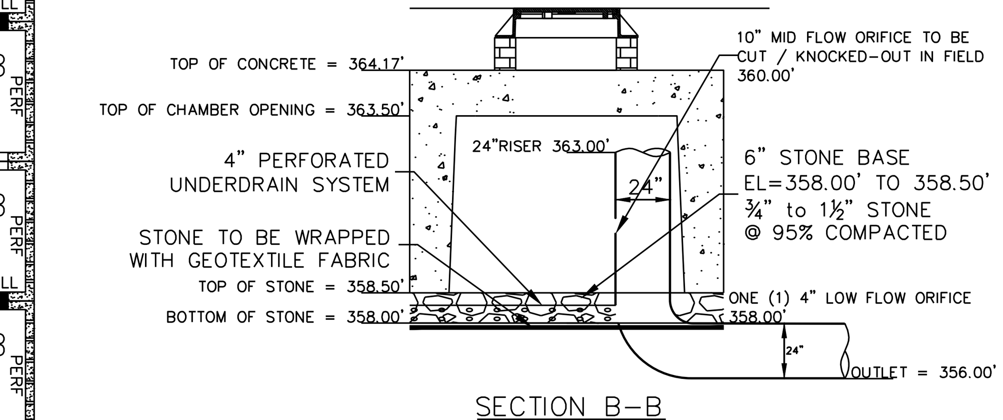


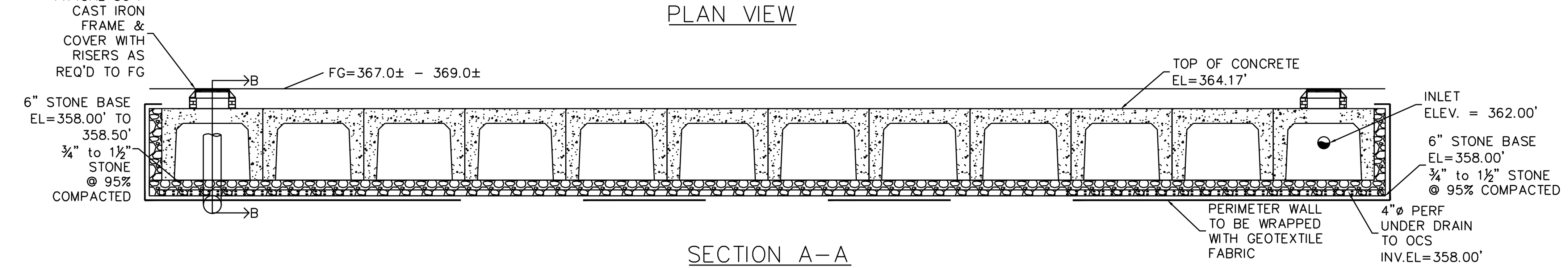
TYPICAL NYLOPLAST YARD DRAIN DETAILS

SCALE: NTS

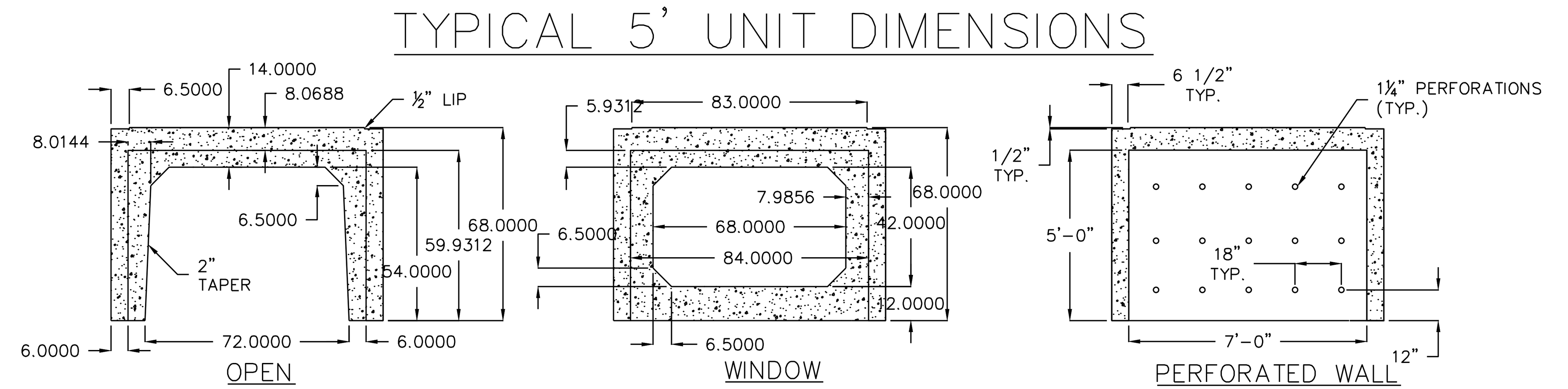
DETAIL PROVIDED BY ADS







TYPICAL 5' UNIT DIMENSIONS



UNDERGROUND RETAIN-IT STORMWATER MANAGEMENT SYSTEM
5' CONCRETE CHAMBERS (OR APPROVED EQUAL)

SCALE: NTS

DETAIL PROVIDED BY RETAIN-IT

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:	STM
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	NTS

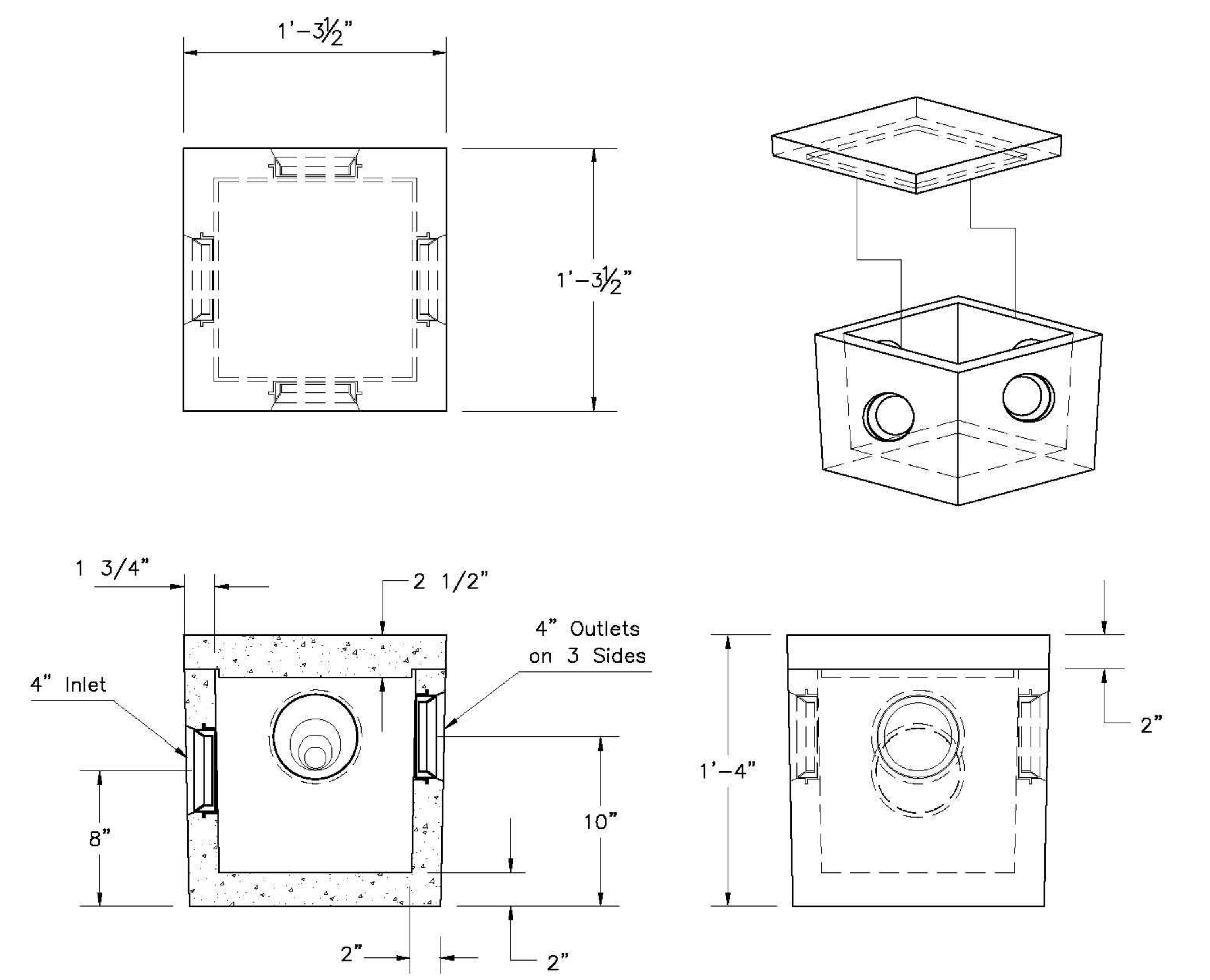
STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: CONSTRUCTION DETAILS

Sheet #: 3.04



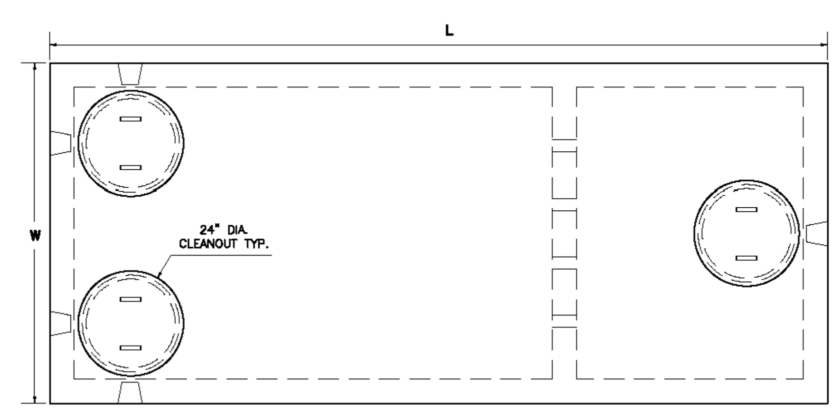
HIGH OVERFLOW DISTRIBUTION BOX DETAIL

SCALE: NTS

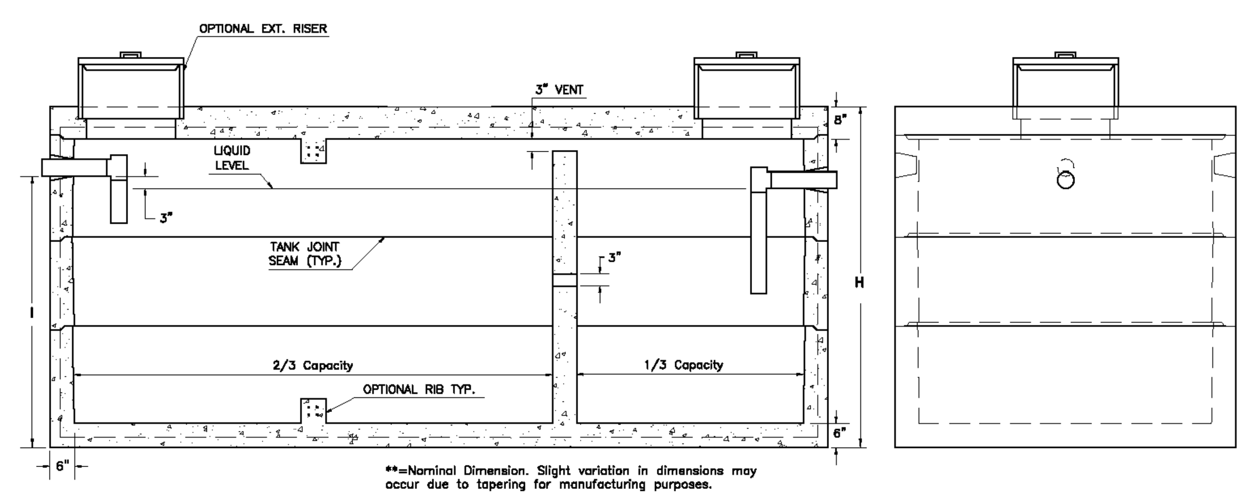
DETAIL COURTESY OF CONNECTICUT PRECAST

MODEL NO	LIQUID CAPACITY	LENGTH L	WIDTH W	INVERT I	HEIGHT H	WEIGHT (LBS.)
T4000(7X16)	4000	17'–0"	8'–0"	5'–7"	7'–0"	38358

PRECAST CONCRETE
4000 Gallon Capacity
7'-0" X 16'-0" (H20 Loading)



NOTES:
1. Concrete – 4,000 PSI @ 28 DAYS.
2. Meets or exceeds state and local requirements.
3. All shiplap joints sealed with Butyl Rubber.
4. Design loading: AASHTO HS–20.
5. Two compartment tank.
6. Side inlet pipes shall extend to cleanout cover thru cast in pipe support.
7. Maximum fill over top of tank – 3 feet.
8. Tank shall be marked with manufacturer name, and phone no., tank capacity, date of manufacture, and ASTM C1227 conformance.
9. Invert shown in table for ø4" PVC. Pipe locations and sizes may change due to project conditions.



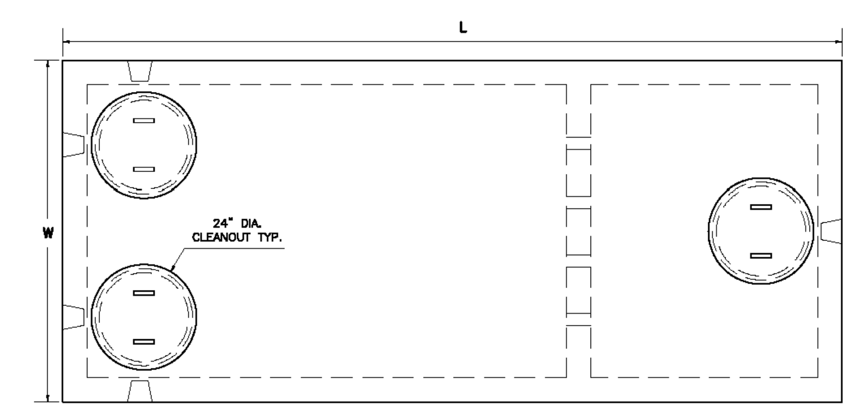
4,000 GAL. PRECAST CONCRETE SEPTIC TANK DETAIL

SCALE: NTS

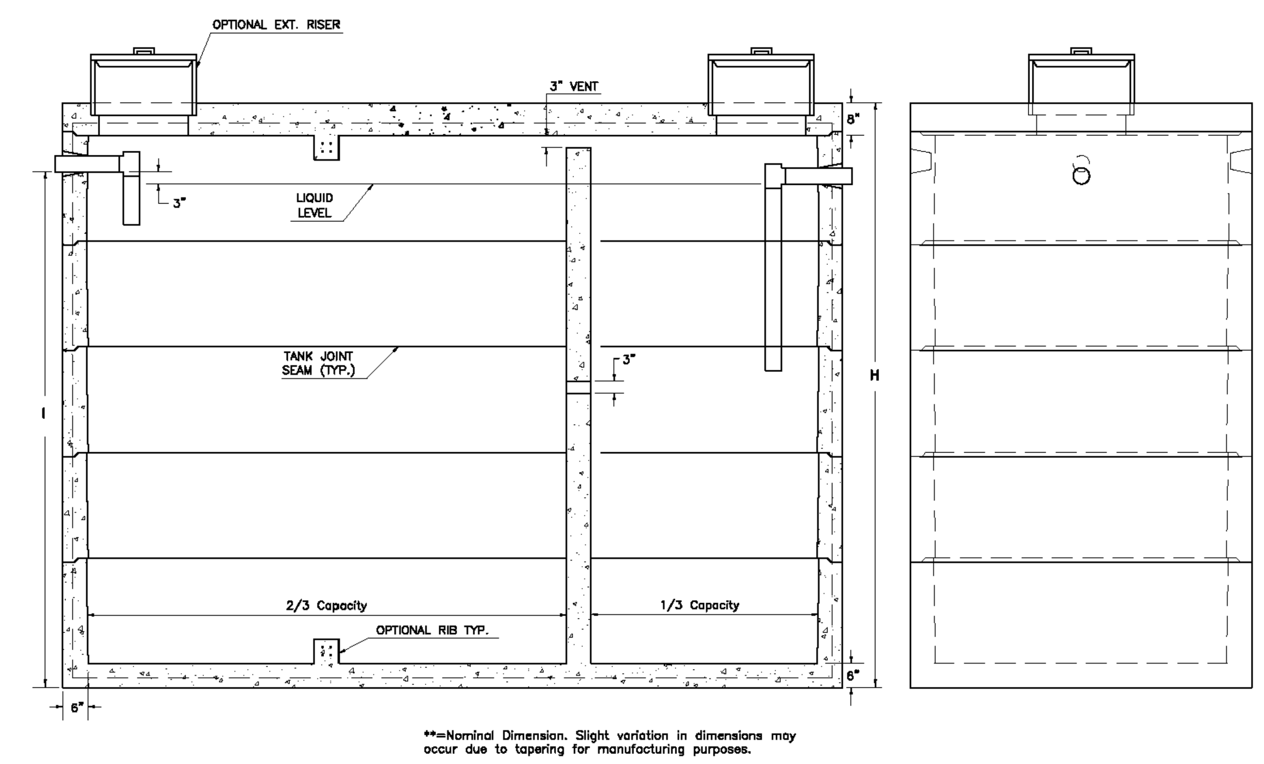
DETAIL COURTESY OF CONNECTICUT PRECAST

MODEL NO	LIQUID CAPACITY	LENGTH L	WIDTH W	INVERT I	HEIGHT H	WEIGHT (LBS.)
T8000(7X16)	8000	17'–0"	8'–0"	10'–5"	12'–0"	54655

PRECAST CONCRETE
8000 Gallon Capacity
7'-0" X 16'-0" (H20 Loading)



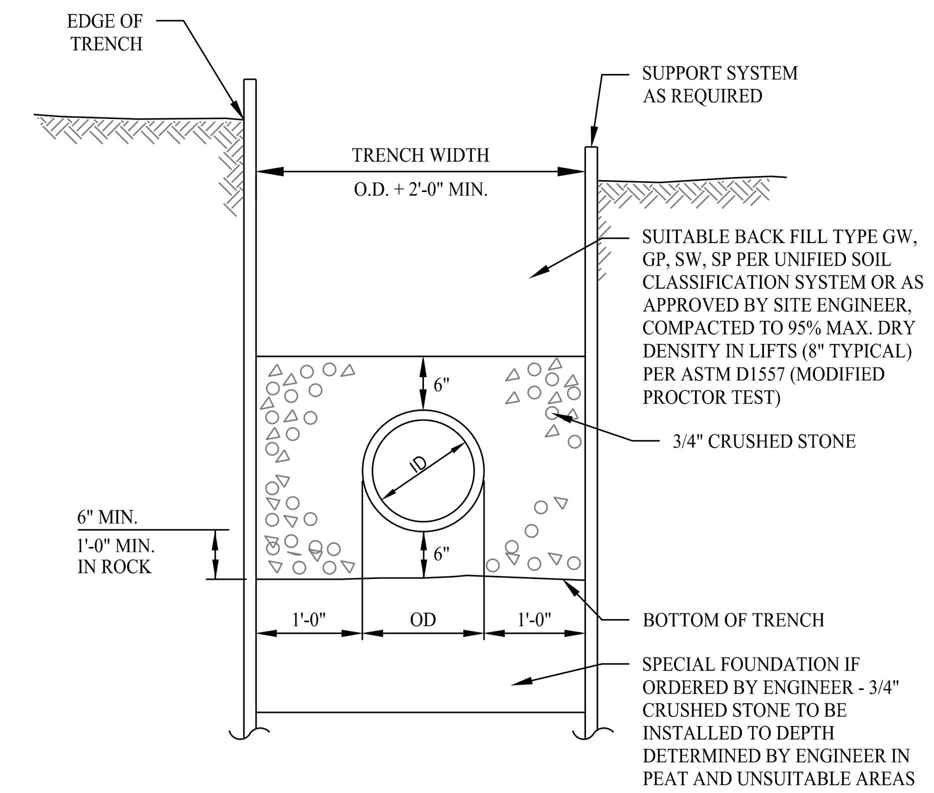
NOTES:
1. Concrete – 4,000 PSI @ 28 DAYS.
2. Meets or exceeds state and local requirements.
3. All shiplap joints sealed with Butyl Rubber.
4. Design loading: AASHTO HS–20.
5. Two compartment tank.
6. Side inlet pipes shall extend to clean–out cover.
7. Maximum fill over top of tank – 3 feet.
8. Tank shall be marked with manufacturer name, and phone no., tank capacity, date of manufacture, and ASTM C1227 conformance.
9. Invert shown in table for ø4" PVC. Pipe locations and sizes may change due to project conditions.



8,000 GAL. PRECAST CONCRETE SEPTIC TANK DETAIL

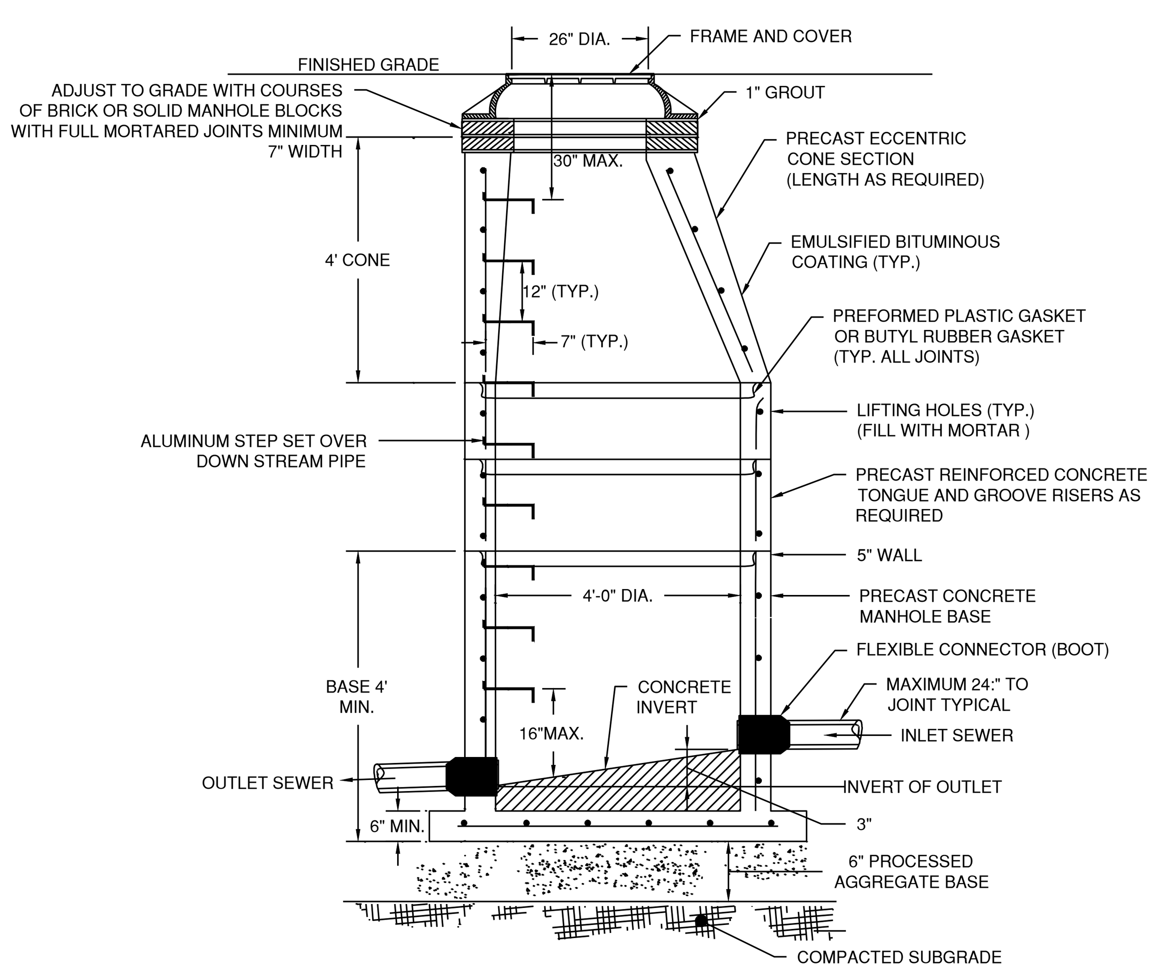
SCALE: NTS

DETAIL COURTESY OF CONNECTICUT PRECAST



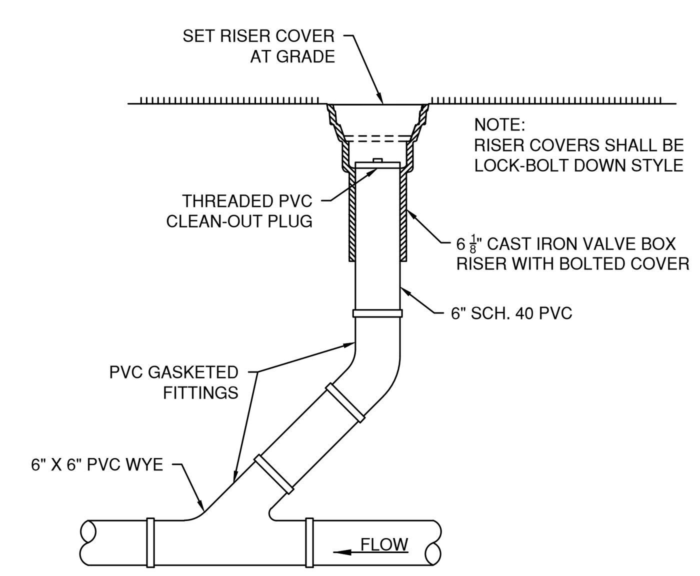
TYPICAL SANITARY SEWER TRENCH SECTION

SCALE: NTS



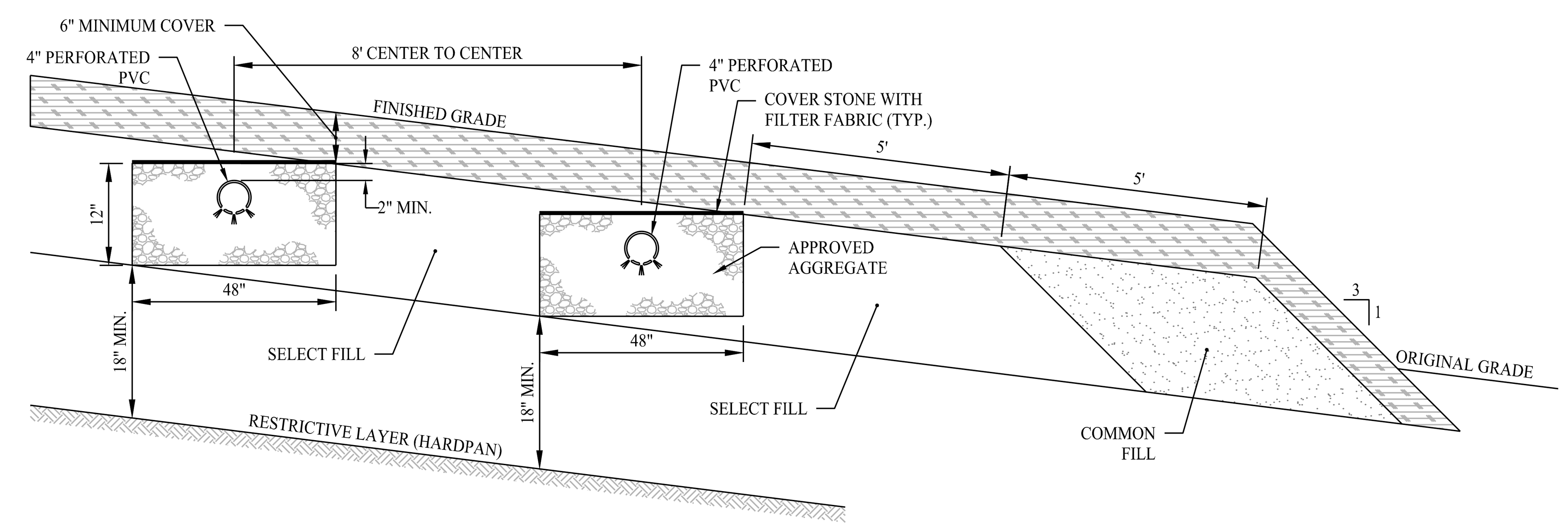
SANITARY SEWER MANHOLE DETAIL

SCALE: NTS



SANITARY CLEANOUT DETAIL

SCALE: NTS



TYPICAL LEACHING TRENCH SECTION

SCALE: NTS

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Drawn By:	NCM
Checked By:	CJB
Approved By:	KMS
Project #:	1910801
Plan Date:	01/09/23
Scale:	NTS

STATE OF CONNECTICUT KEVIN M. SOLLI LICENSED PROFESSIONAL ENGINEER 25759

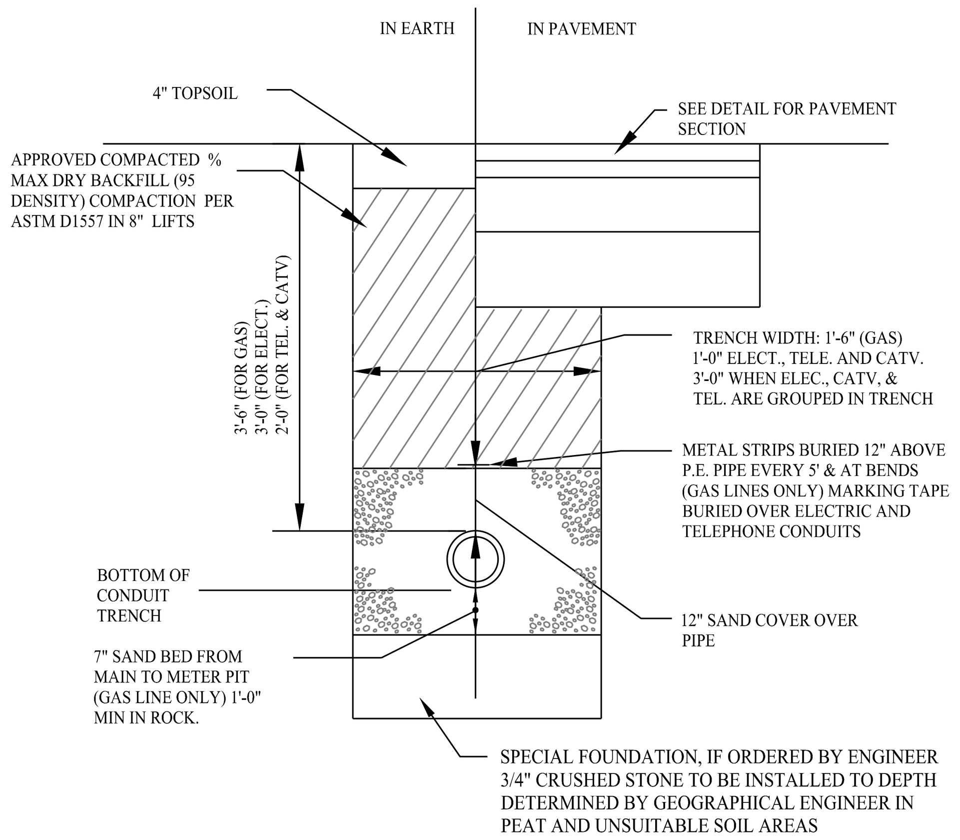
Kevin Solli, P.E.
CT 25759

Project:

POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

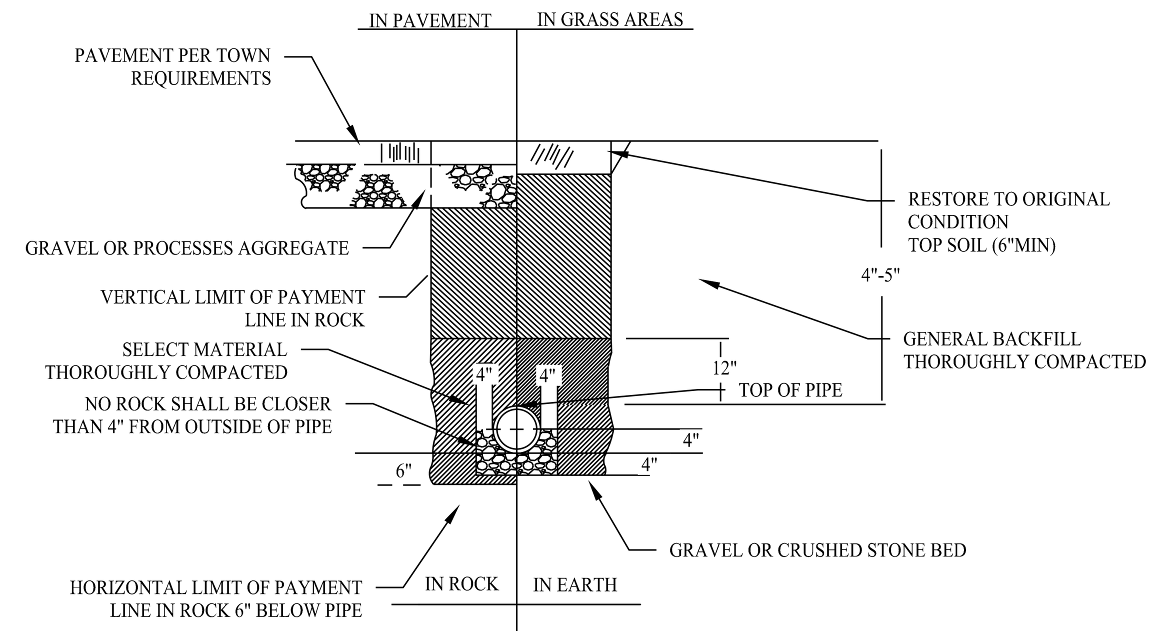
Sheet Title: CONSTRUCTION DETAILS

Sheet #: 3.05



ELECTRICAL, TELEPHONE AND GAS TRENCH

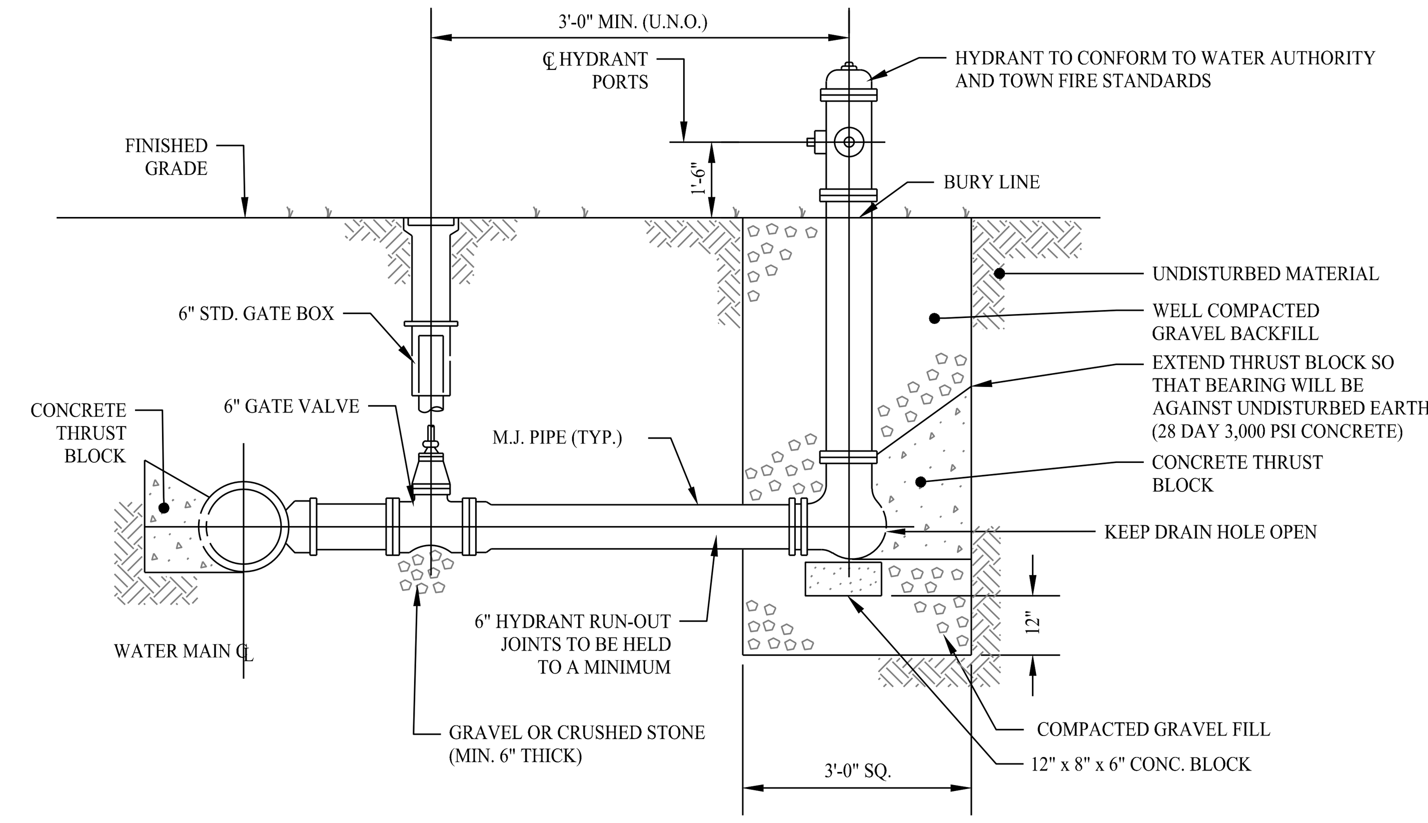
SCALE: NTS



TYPICAL WATER TRENCH DETAIL

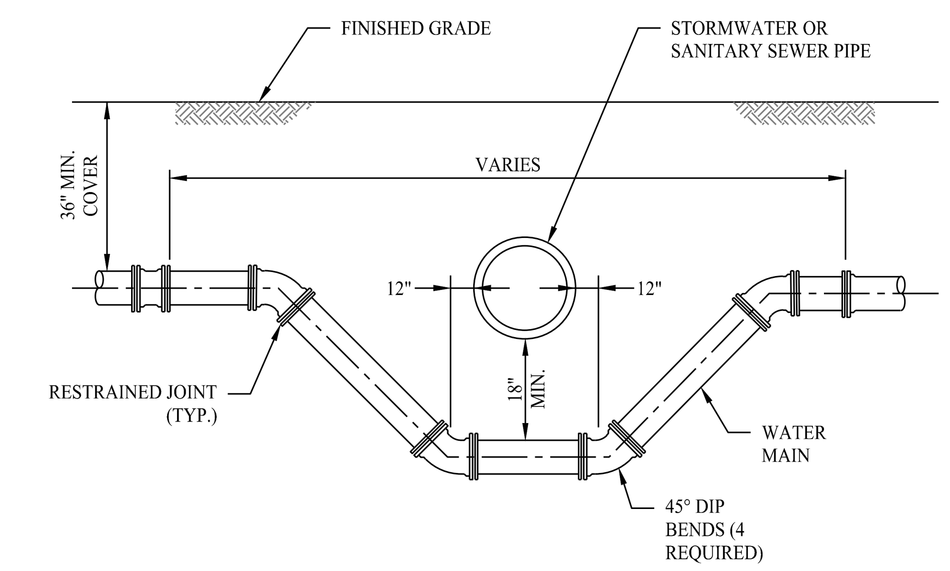
SCALE: NTS

DETAIL PROVIDED BY AQUARION WATER COMPANY



HYDRANT ASSEMBLY WITH GATE BOX

SCALE: NTS



NOTES

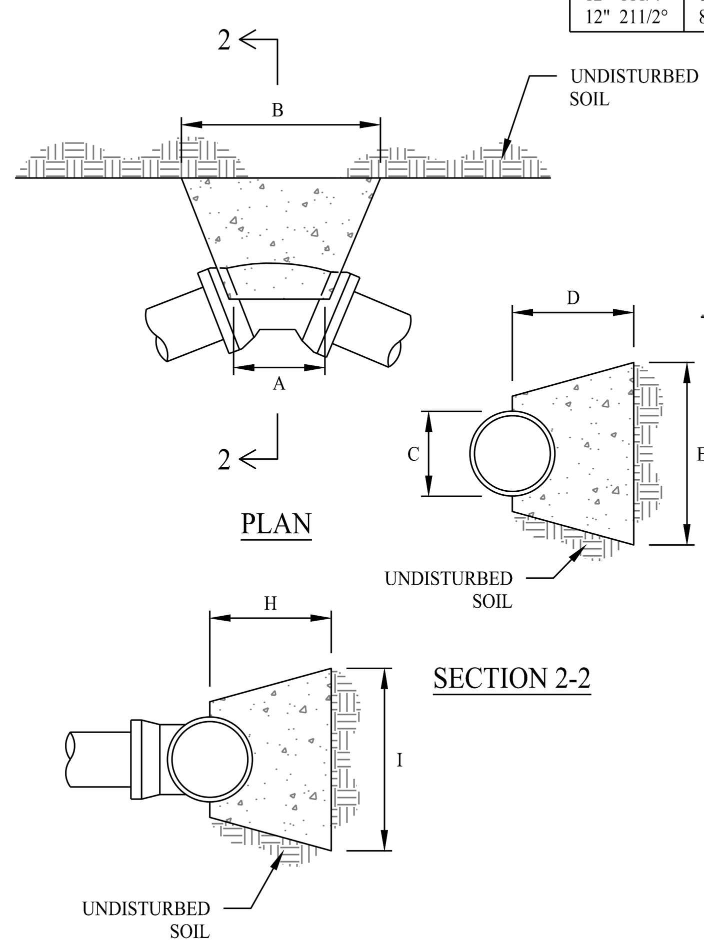
1. LENGTH OF SECTION BASED ON MINIMUM LENGTH AS DETERMINED BY DIPRA RESTRAINED JOIN MANUAL.
2. INSTALL RESTRAINED JOINTS, AS REQUIRED, FROM DEFLECTION POINT IN BOTH DIRECTIONS.
3. CONCRETE ENCASEMENT OF SANITARY SEWER IS AN ALTERNATIVE METHOD OF ADDRESSING A CONFLICT WHEN UNABLE TO MAINTAIN 18" VERTICAL SEPARATION DISTANCE. IN SUCH INSTANCES, THE MINIMUM PIPE VERTICAL SEPARATION SHALL BE 12".

WATER MAIN CROSSING DETAIL

SCALE: NTS

TABLE OF DIMENSION

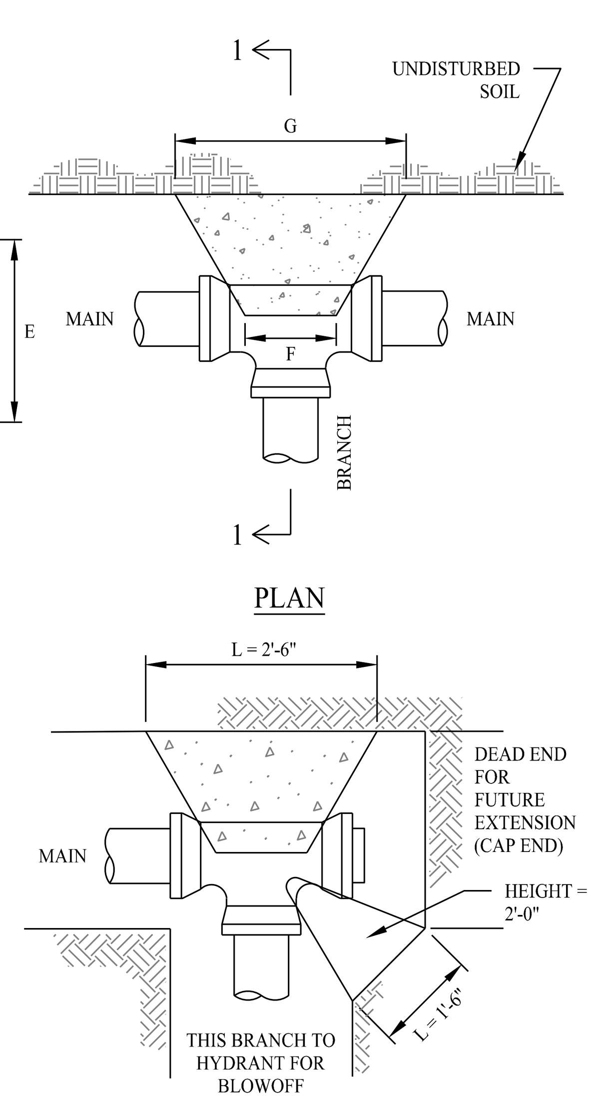
BENDS	A	B	C	D	E	BENDS	A	B	C	D	E
6" 111/4°	8"	15"	12"	24"	12"	6" 45°	8"	30"	12"	24"	14"
6" 211/2°	8"	19"	12"	24"	13"	6" 90°	8"	30"	12"	24"	27"
8" 111/4°	8"	20"	12"	24"	12"	8" 45°	8"	30"	12"	24"	24"
8" 211/2°	8"	22"	12"	24"	17"	8" 90°	8"	38"	12"	24"	36"
12" 111/4°	8"	30"	12"	24"	15"	12" 45°	8"	40"	12"	24"	40"
12" 211/2°	8"	35"	12"	24"	25"	12" 90°	8"	60"	12"	24"	52"



PLAN

SECTION 2-2

SECTION 1-1



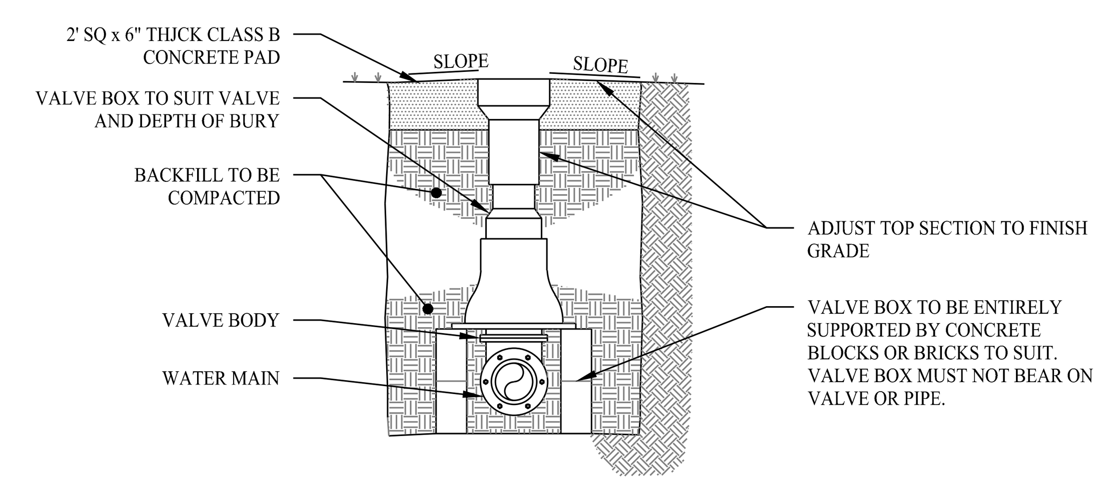
PLAN

TABLE OF DIMENSION

TEES	F	G	H	I
6"x6"x6"	12"	24"	24"	18"
8"x8"x6"	12"	24"	24"	18"
8"x8"x8"	12"	24"	24"	24"
12"x12"x6"	12"	24"	24"	18"
12"x12"x8"	12"	24"	24"	24"
12"x12"x12"	12"	36"	24"	36"

CONCRETE THRUST BLOCK

SCALE: NTS



TYPICAL GATE VALVE & VALVE BOX 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:	STM
Checked By:	CJB
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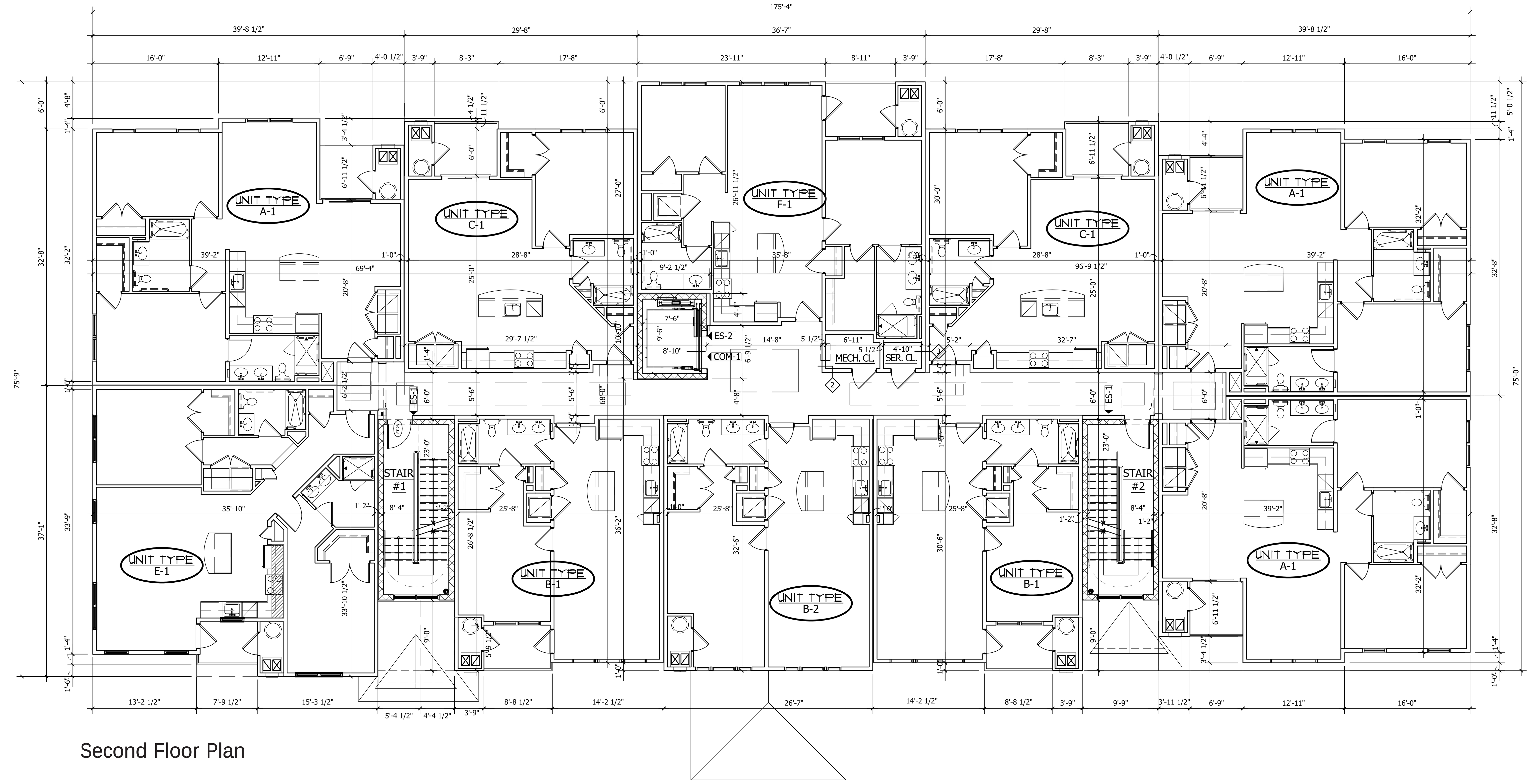
STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

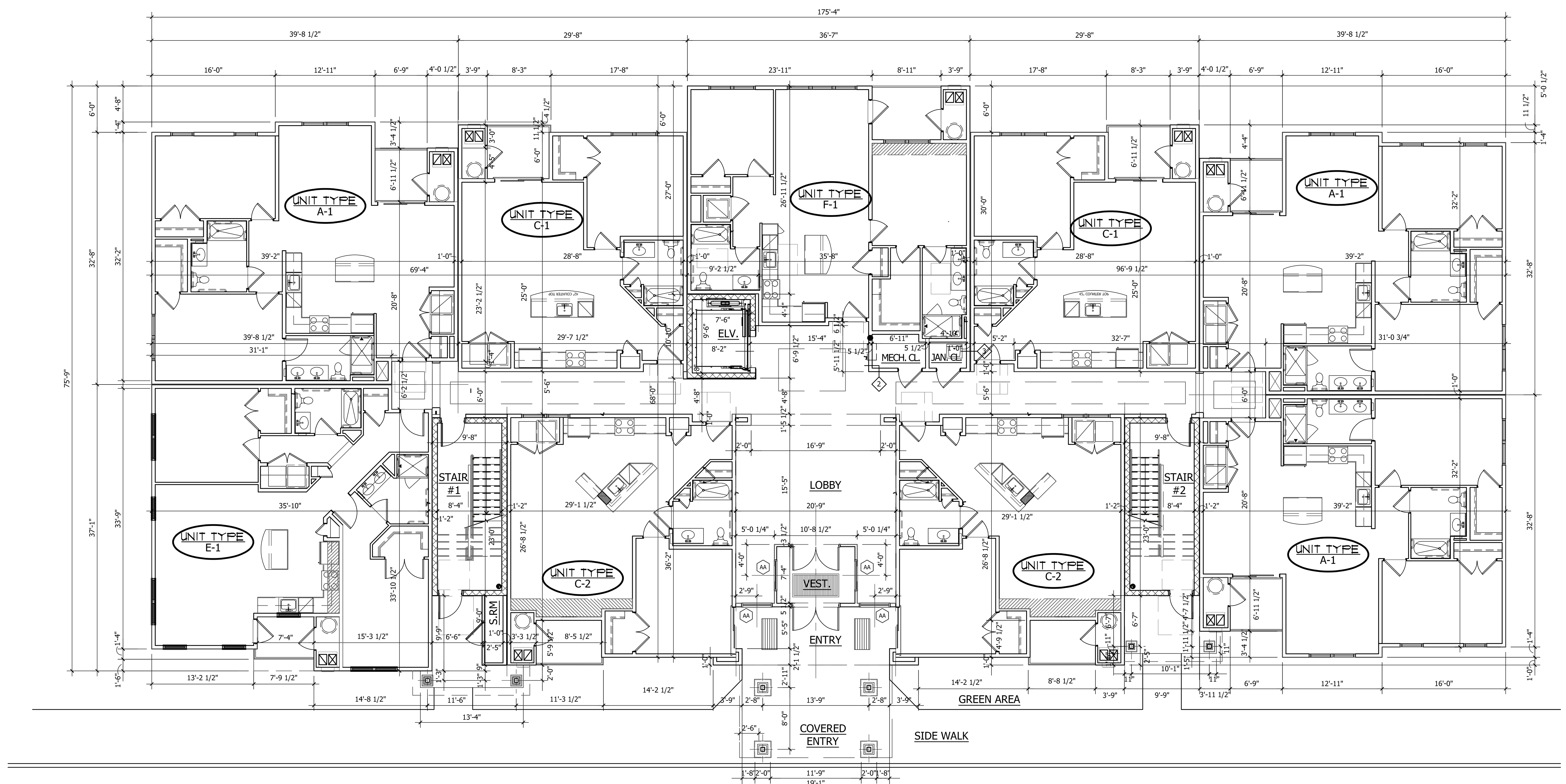
POND VIEW DEVELOPMENT
127 MAIN STREET
MONROE, CONNECTICUT

Sheet Title: CONSTRUCTION DETAILS

Sheet #: 3.06

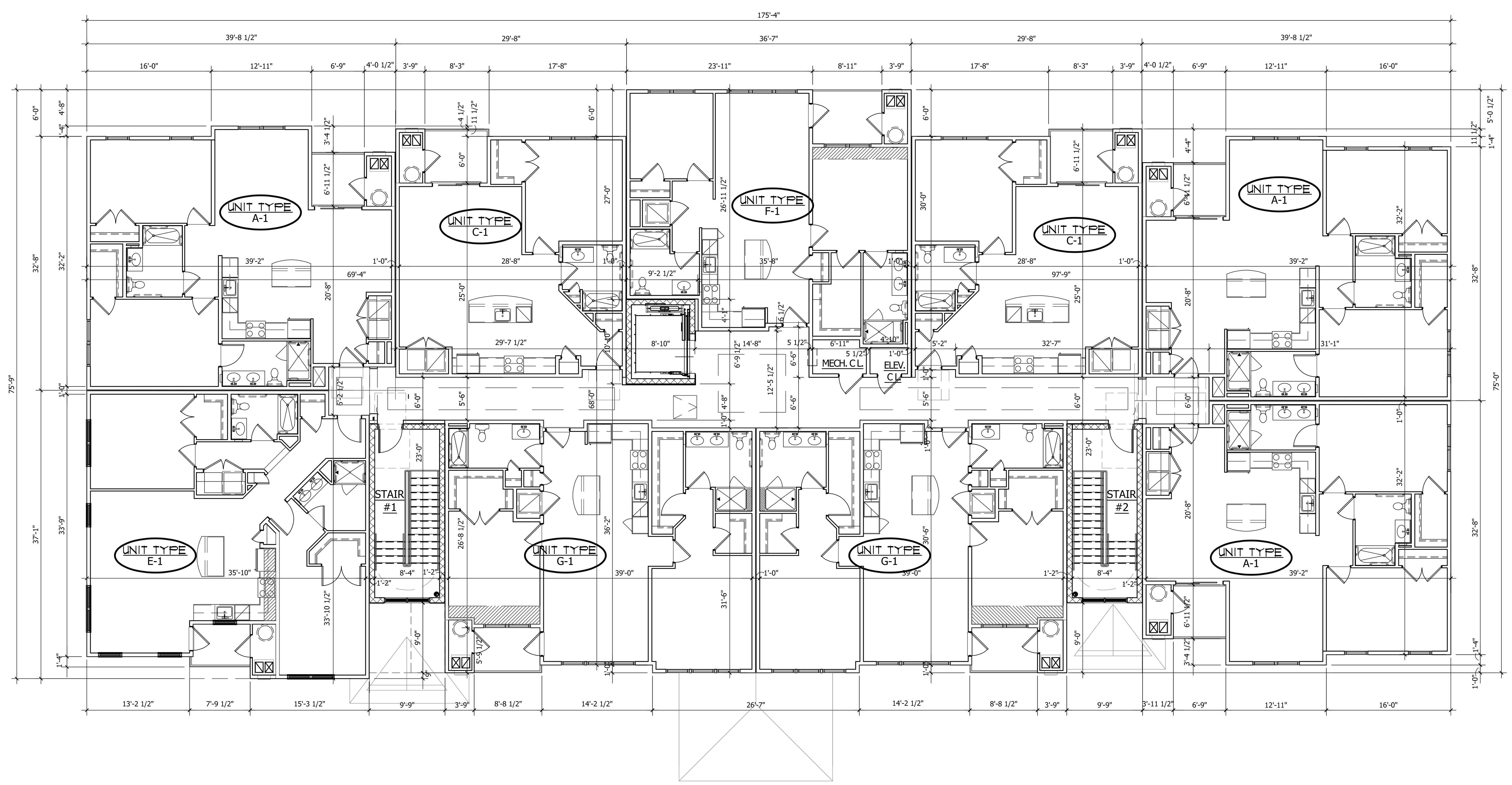


Second Floor Plan



Ground Floor Plan

0'-0" 8'-0" 16'-0" 32'-0"



Third Floor Plan

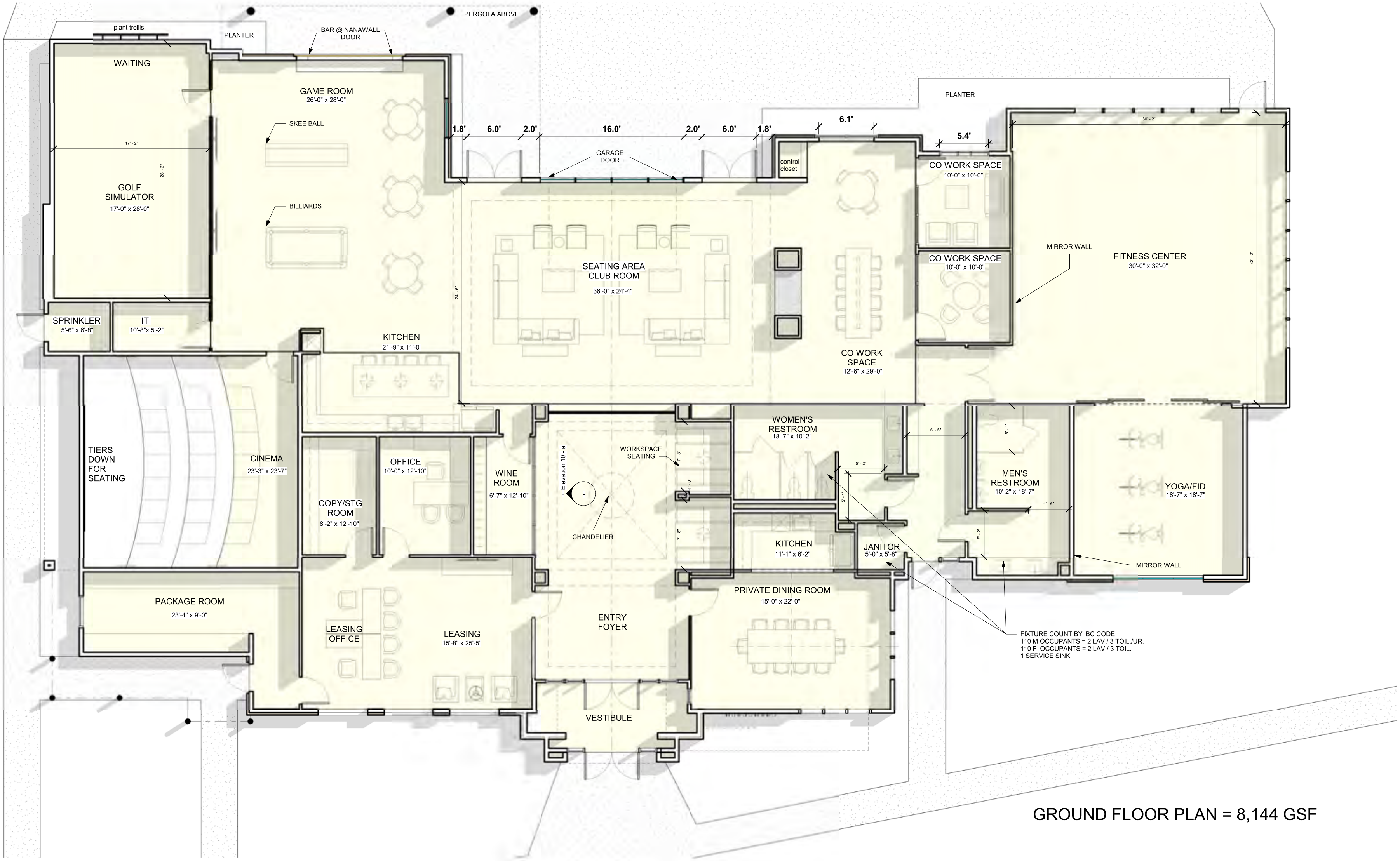
0'-0" 8'-0" 16'-0" 32'-0"

Front Elevation

Materials

A. Cellular PVC Panels
B. Certainteed Vinyl Siding (Horizontal, Sterling Gray) or equal
C. Certainteed Vinyl Siding (Vertical B&B, Colonial White) or equal
D. Certainteed Vinyl Siging (Horizontal, Savannah Wicker) or equal
E. Certainteed Vinyl Siging (Cedar Impressions, Savannah Wicker) or equal
F. Manufactured Stone (Cobblefield Gray) or equal
G. Metal Roof
H. Asphalt Shingles (Color TBD)
I. Vinyl Windows (White)

0'-0" 8'-0" 16'-0" 32'-0"



GROUND FLOOR PLAN = 8,144 GSF

lessard DESIGN
8521 LEESBURG PIKE, SEVENTH FLOOR, VIENNA, VA 22182
P: 571.830.1800 | F: 571.830.1801 | WWW.LESSARDDESIGN.COM

FLOOR PLAN

CONCEPT DESIGN

PONDVIEW CLUBHOUSE

MONROE,CT

CONTINENTAL PROPERTIES

JAN 18, 2023
CNT.000X

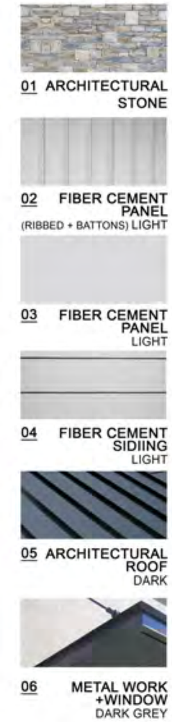
SCALE: 3/16"=1'-0" (@ 22"x34")

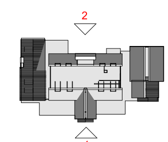
A.01

POOL VIEW
ELEVATION 1

FRONT ENTRANCE
ELEVATION 2

MATERIAL LEGEND





KEY PLAN

lessard DESIGN
8521 LEESBURG PIKE, SEVENTH FLOOR, VIENNA, VA 22182
P: 571.830.1800 | F: 571.830.1801 | WWW.LESSARDDESIGN.COM

BUILDING ELEVATIONS

CONCEPT DESIGN

PONDVIEW CLUBHOUSE

MONROE,CT

CONTINENTAL PROPERTIES

JAN 18, 2023
CNT.000X

A.02

SCALE: 3/16" = 1'-0" (@22"X34")

GOLF AND CINEMA ELEVATION
ELEVATION 3

FITNESS ELEVATION
ELEVATION 4

MATERIAL LEGEND

01 ARCHITECTURAL STONE

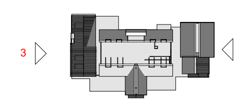
02 FIBER CEMENT PANEL (RIBBED + BATTONS) LIGHT

03 FIBER CEMENT PANEL LIGHT

04 FIBER CEMENT SIDIING LIGHT

05 ARCHITECTURAL ROOF DARK

06 METAL WORK +WINDOW DARK GREY



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