SOLLI ENGINEERING

October 21, 2022

Planning & Zoning Commission
Town of Monroe
7 Fan Hill Road
Monroe, CT 06468
(203) 452-2812

RE: Special Exception Permit Application
467-485 Pepper Street
Monroe, Connecticut 06468
Project Number: 1708001

Dear Commission Members,

On behalf of the Applicant, Monroe Recycling and Aggregates LLC, please find enclosed a Special Permit Application for the proposed site development and associated activity located at 467 and 485 Pepper Street, Monroe, CT. The project proposes to maintain the existing 1,795 SF building on 485 Pepper Street and construct an enclosed 9,000 SF crushing, screening & manufacturing facility on 467 Pepper Street with associated drives, packing areas, drainage, utility, and landscaping features. The proposed operations will also include 56,853 SF of outdoor storage and open material bins situated to the west and south of the properties. The project includes work within the regulated area and a permit from the Inland Wetlands Commission has been applied for. All known wetlands have been flagged by JMM Wetland Consulting Services and have been located by Accurate Land Surveying, LLC.

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

Chris Pawlowski, EIT
Assistant Project Manager

Enclosures:
Special Exception Permit Application
100' Abutters Mailing Addresses
Project Narrative
Engineering Report
Aquarion Notification & DPH Notification
Civil Plan Set
Architectural Plan Set
Bond Estimate Form
ARB Application

CC:
Richard Schultz, Town Planner
Joseph Grasso Jr., Monroe Recycling and Aggregates LLC

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: Proposed Site Development

Street Address: 467 & 465 Pepper Street

Zoning District(s): Industrial District 1 (I1)

Assessor Map #: 94 **Lot #:** 005 & 006 **Acreage:** 10.26 total **Deed: Volume #**1659 & 2207 **Page #** 117 & 764

Brief Description: Proposed 9,000 SF building & associated outdoor storage.
(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)

   Both 467 & 485 Pepper Street have been purchased by the Applicant as shown on a map entitled "Property Survey of 467 & 485 Pepper Street", prepared by Accurate Land Surveying, dated 07/18/2022.

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:** Chris Pawlowski, Solli Engineering
   Business Address: 501 Main Street, Suite 2A, Monroe CT 06468
   Phn/Cell: 203-880-5455 Email: chris@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:** 485 Pepper Street LLC
   Address: 314 Wilson Avenue, Norwalk, CT 06854 & 57 Viaduct Road, Stamford CT, 06907
   Phn/Cell: 203-838-0123 Email: _____

5. **Applicant's name:** Monroe Recycling and Aggregates, LLC
   Address: 485 Pepper Street, Monroe CT 06468
   Phn/Cell: 203-838-0123 Email: _____
   Property interest: X Owner ☐ Contract Vendee ☐ Tenant ☐ Other _____

6. **Application Professionals** *Name* *Phone/Cell* *Email*

   Attorney: _____
   Surveyor: Accurate Land Surveying - Bryan Nesteriak, L.S. 203-881-8145 bn@bbengrs.com
   Engineer: Solli Engineering - Kevin Solli, P.E. 203-880-5455 kevin@sollillc.com
   Landscape Architect: Solli Engineering - Mary Blackburn, PLA 203-880-5455 mary@sollillc.com
   Architect: Ralph Riccio, rriccio3@gmail.com
   Other: _____

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: West Pequonnock

    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 2.96 (ac) 29 (% 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-2018-06 & IWV-2022-01

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.**

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 (Previously Approved) ☐ 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 Within Pepper Street Distance: 0 (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?

1.80 ac (25% and greater) 1.14 ac (15-15%) 1.33 ac (10-15%) 5.01 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:
Stormwater Basins and underground detention. See Plans and Engineering report.

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 basins, hydrodynamic separators, level spreaders and more. See Plans and Engineering report.

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:
Vegetative buffers, stormwater basins, limited structures and overland flow. See Plans and Engineering report.

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)

_____	_____	10/21/22
Applicant Name Printed	**Authorized Signature**	**Date**
_____	_____	_____
Additional Applicant	**Authorized Signature**	**Date**

(Provide additional sheets as needed)

Subscribed and sworn to by Joseph Grasso *on this day of* October 21, 2022 *before me:*

_____

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

---

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

_____	_____	10/21/22
Authorized Member Name Printed	**Authorized Signature**	**Date**

Subscribed and sworn to by Joseph Grasso JR. *on this day of* October 21, 2022 *before me:*

_____ 5/31/24

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

PROJECT NARRATIVE:
PROPOSED SITE DEVELOPMENT
467 & 485 Pepper Street – Monroe, Connecticut

This Special Exception Permit Application is for the proposed site development activities located at 467 & 485 Pepper Street. 467 & 485 Pepper Street consist of 10.26 acres and are owned by 485 Pepper Street, LLC. The subject site is zoned Industrial District 1 (I-1) and has received various approvals from the Monroe Planning & Zoning and Inland Wetlands Commission over the past several years. The following summarizes the project and the work being completed within the regulated area.

Current Application:

The current application put forth before the commission includes the construction of a 9,000± SF material processing building and associated driveways, parking, outdoor storage areas, utility connections and landscaping.

The site is currently accessed via Pepper Street, with a gravel drive extending into the property. There is an existing building and associated construction equipment on 485 Pepper Street. 467 Pepper Street is an existing residence and garage which will be removed as part of the project. There are two wetland areas on the site, located down gradient to the southwest. The wetlands of 485 Pepper Street were originally flagged in February & April 2018 by JMM Wetland Consulting services. In June of 2022, JMM Wetlands visited both sites and flagged the wetlands located on 467 Pepper Street. The location of all wetland flags is shown on the Site Plans submitted as part of this application.

The project proposed to maintain the existing 1,795± SF office building and construct a 9,000± SF material processing building. The plans call for 56,853± SF of outdoor storage, located within 12 storage bins and three pre-defined storage areas. The outdoor storage areas will be used for aggregate material, construction material, and construction equipment storage. All outdoor aggregate storage bins will feature sprinklers mounted on top of concrete blocks for dust control. The site previously received approval for an indoor crushing/screening facility and this application will follow the same plan, as the crushing will take place within the new 9,000 SF enclosed building. There will be 15 parking spaces, including 2 handicap parking spaces. There will also be one designated loading space. There will be two site access drives, located at the northern portion of 485 Pepper Street and the southern portion of 467 Pepper Street, respectively. Truck traffic will be restricted to exit only through the 467 Pepper Street site drive due to sight distance restrictions within the 485 Pepper Street exit. There will be a permanent truck scale and associated construction trailer/scale house to track incoming and outgoing materials.

The previously approved application featured a 4,064 ± SF enclosed crushing and screening facility, with 8 outdoor storage bins. The current application features a 9,000 SF enclosed crushing and screening facility, with 12 outdoor storage bins. The previously approved application also featured an approximate processing & sorting area of approximately 45,000 SF, in comparison with the approximately 124,000 SF put forth in this application. The applicant purchased the property of 467 Pepper Street in order to provide more room for the operation.

The proposed metal building has been designed to house a series of crushing and screening machines. Conveyor belts, that fold in when not in use, protrude from inside the building walls outside through garage style doors and form product piles outside of the structure. to be picked up by transport equipment into the storage bins previously mentioned. Please refer to the architectural plans for more details on this metal structure.

In the rear of the site is a series of concrete and boulder retaining walls, protecting the existing wetlands from future disturbance. An outdoor storage area in the rear of the site is accessed via an existing gravel drive. While a significant portion of the site is to be paved, the majority of the work area will be finished with asphalt millings.

There will be no direct wetland impact as a result of this project, and significant buffer plantings have been provided between the wetlands and limit of work. Additional landscape screening and buffer plantings have been provided within both the front and rear setbacks.

In order to reduce and treat stormwater runoff, three stormwater basins and one underground detention system have been designed on the site plans. The site access drive located within 467 Pepper Street will include a permanent anti-tracking pad in the form of wide-grooved concrete pavement, which will direct runoff through a paved leak off to a permanent sedimentation basin. This will help prevent tracking onto Pepper Street.

The subsurface sewage disposal system, designed and approved under the previous application, will be installed as part of the proposed project. The proposed project proposes a subsurface sewage disposal system, consisting of a septic tank, distribution box, and leaching galleries, that will adequately handle the proposed capacity without any breakout of backflow.

Water, electric, cable, and telephone are available within Pepper Street. This project proposes to maintain the existing propane tanks and pipe configuration located behind the exiting building. The enclosed crushing building, as well as all the outdoor storage bins will be equipped with dust control sprinklers. See the Civil Plan Set and Engineering Report for more detailed information.

If the project were to receive all the necessary approvals, a Lot Consolidation Plan will be filed on the land records, creating one lot as shown on the Site Plans.

SOLLI ENGINEERING

Properties within 100 feet of 467-485 Pepper Street

453 Pepper Street
Pepper Street LLC
C/O Scott Polatsek MBR
375 Mountain Grove St
Bridgeport, CT 06605
094/003/00

459 Pepper Street
Cabral Jacinto + Maria J
43 Meadow Brook
Newtown, CT 06470
094/004/00

482 Pepper Street
Pepper Street Omega LLC
C/O Moishe Schwartz
1282 49th Street
Brooklyn NY, 11219
094/017/01

517 Pepper Street
Monroe Town of (Special Purposes)
7 Fan Hill Road
Monroe CT, 06468
094/008/00

472 Pepper Street
VAC Properties LLC
55 Osborne Hill Rd
Sandy Hook CT, 06482
094/018/00

448 Pepper Street
448 Pepper Street LLC
C/O Gerardo Burdo MGR
84 Old Orchard Park
Fairfield CT, 06824
094/020/00

423 Pepper Street
Aquarion Water Co of Connecticut
C/O % Tax Dept
600 Lindley St
Bridgeport CT, 06606
083/005/00

523 Pepper Street
Burtsche Realty LLC
C/O John V Burtsche MEMBER
11 Dingle Brook Ln
Newtown, CT 06470
094/009/00

490 Pepper Street
HCA Holdings LLC
831 Federal Rd
Brookfield, CT 06804
094/016/02

501 Pepper Street
Five Hundred One Pepper St LLC
C/O Donald T Parrott MBR Conn Arborists
PO Box 4042
501 Pepper St
Monroe, CT 06468
094/007/00

50 Cambridge Drive
Cambridge Drive LLC
50 Cambridge Dr
Monroe, Ct 06468
094/015/04

TOWN OF MONROE

Issued: 10-9-07

BOND ESTIMATE FORM (Private Site Development)

☐ PLANNING & ZONING COMMISSION
MEETING DATE _____

APPLICANT: Monroe Recycling and Aggregates, LLC
ENGINEER: Solli Engineering, LLC
TEL.: 203-880-5455

*APPLICATION NO: _____
*FILE NO: _____
DATE: 10-21-2022

PROJECT NAME: Proposed Site Development

PROJECT LOCATION: 467-485 Pepper Street, Monroe, CT 06468

*BOND RECOMMENDATION

NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	COST	Comments by Town Engr. Unit Price*	Comments by Town Engr. Cost*
1.	Sedimentation and Erosion Control Measures	L.S.	1	$1,500	$1,500		
2.	Silt Fence or Hay Bales	L.F.	881	$3.00	$2,643		
3.	Topsoil, Seed, Fertilizing, and Mulching (entire disturbed area)	S.F.	250,861	$0.25	$62,715.25		
4.	Landscaping (extent to provide for restoration and aesthetic considerations)	L.S.	1	$2,500	$2,500		
5.	Grading (for site restoration that will provide safe and stable conditions)	L.S.	1	$2,500	$2,500		
6.	Other						
	(+) 10% for Contingencies				$7,185.83		
* To be filled in by the Town				Total Cost =	$79,044.08	*	

Submitted by: Nicholas Marzullo

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).

SOLLI ENGINEERING

October 21, 2022

Commissioner Manisha Juthani, MD
Department of Public Health
410 Capitol Avenue
Hartford, CT 06134

RE: 467-485 Pepper Street, Monroe, CT 06468
Planning and Zoning Application Submission
Project Number: 1708001

Dear Dr. Juthani:

Please accept the following "notice" as required pursuant to CGS §8-3i in regard to our submission of a Planning & Zoning Application to the Town of Monroe Planning and Zoning Commission pertaining to the above referenced properties in the Town of Monroe.

The proposed Planning and Zoning Application involves the following activities:

> The project proposes to maintain the existing 1,795± square-foot house to the north and construct an enclosed, 9,000± square-foot, crushing and screening manufacturing facility to the south, with associated outdoor storage access drives, parking areas, utilities and drainage features. The proposed operations will also consist of grading and drainage work, retaining walls, landscaping, and wetland buffer plantings. The project proposes no impact to the wetlands on the site.

Copies of the Site Plan, Application and previously submitted permit are attached.

Thank you for your consideration in this matter.

Respectfully,

Solli Engineering, LLC

Nicholas Marzullo, EIT

Enclosures

CC: Kristi Reilly, Town of Monroe

X:\SE Files\Project Data\2017\1708001 - 485 Pepper Street - Monroe\Office Data\Applications\DPH (CT) Notice

SOLLI ENGINEERING

October 21, 2022

Joseph T. Welsh
Manager, Environmental Protection
Aquarion Water Company
714 Black Rock Turnpike
Easton, CT 06612
(203) 452-3508

RE: 467-485 Pepper Street, Monroe, CT 06468
Planning and Zoning Application Submission
Project Number: 1708001

Dear Mr. Welsh:

Please accept the following "notice" as required pursuant to CGS §8-3i in regard to our submission of a Planning and Zoning Permit Application to the Town of Monroe Planning and Zoning Commission pertaining to the above referenced properties in the Town of Monroe.

The proposed Planning and Zoning Permit Application involves the following activities:

> The project proposes to maintain the existing 1,795± square-foot house to the north and construct an enclosed, 9,000± square-foot, crushing and screening manufacturing facility to the south, with associated outdoor storage access drives, parking areas, utilities, and drainage features. The proposed operations will also consist of grading and drainage work, retaining walls, landscaping, and wetland buffer plantings. The project proposes no impacts to the wetlands on the site.

Copies of the Site Plan and Application are attached.

Thank you for your consideration in this matter.

Respectfully,

Solli Engineering, LLC

Nicholas Marzullo, EIT

Enclosures:

CC: Kristi Reilly, Town of Monroe

X:\SE Files\Project Data\2017\1708001 - 485 Pepper Street - Monroe\Office Data\Applications\Aquarion Notice

ENGINEERING REPORT

For The Proposed:

Site Development

Located At:
467 & 485 Pepper Street
Monroe, Connecticut 06468

Prepared On:
August 23, 2022
Revised On:
October 19, 2022

Prepared By:

SOLLI ENGINEERING

501 Main Street, Suite 2A
Monroe, Connecticut 06468
T: (203) 880-5455 F: (203) 445-9695

Prepared For:

Monroe Recycling & Aggregates LLC

485 Pepper Street
Monroe, Connecticut 06468

Kevin M. Solli
CT PE #25759

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Public Water Supply Watershed Map (Figure 4)
Regulated Area Map (Figure 5)
Slope Area Map (Figure 6)

APPENDIX B: EXISTING & PROPOSED HYDROLOGY

NOAA Precipitation Values
Existing Drainage Area Map (EDA-1)
Proposed Drainage area Map (PDA-1)
Hydraflow Report
Curve Number Calculations
Time of Concentration Calculations
Cultec Recharger Storage Volume Calculations
Water Quality Volume Calculations

APPENDIX C: PROPOSED HYDRAULICS

Subcatchment Drainage Area Map (DA-CB)
Hydraflow Storm Sewer Tabular Reports
Hydraflow Storm Sewer Profiles
Runoff Coefficient Calculations
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APPENDIX D: PLANS

Site Plan (2.11)
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Soil Erosion & Sediment Control Plan (2.31)
Soil Erosion & Sediment Notes & Details (2.41)
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APPENDIX E: INTERSECTION SIGHT DISTANCE FIGURES

ISD-1-Truck Intersection Site Distance
ISD-2-Passenger Car Intersection Site Distance (1 of 2)
ISD-3-Passenger Car Intersection Site Distance (1 of 2)

INTRODUCTION

Solli Engineering has prepared this engineering report to provide an analysis of the stormwater drainage, utilities and soil erosion and sediment control measures associated with the development of an industrial facility at 467 & 485 Pepper Street, Monroe, Connecticut. The design has been completed in compliance with all applicable Town of Monroe codes and regulations as well as all other applicable state and federal requirements.

PROJECT DESCRIPTION

EXISTING CONDITIONS

The site is located at 467 & 485 Pepper Street in Monroe, Connecticut. The overall site totals approximately 10.26 acres and is bounded by Pepper Street to the east, the Housatonic Valley Rail Trail to the west, residential development to the south, and industrial development to the north. The site is currently accessed from Pepper Street via a gravel driveway.

The site is currently developed with two 1.5-story wood framed building, covering approximately 1,750 square feet, with associated gravel drives and parking areas on 485 Pepper Street, with an existing residence, garage and associated paved driveway at 467 Pepper Street. Behind the existing residence and to the rear of 467 Pepper Street is wooded and undeveloped. 485 Pepper Street has been previously developed and is currently operational, with the majority of the site disturbed. Wetlands exist on both properties in the southwestern portion of the sites. Refer to the Property Survey (Sheet 1 of 1), in the accompanying Plan Set for more information regarding the existing site conditions.

The site consists of approximately 1.21 acres of wetland area and approximately 2.96 acres of upland review area (See Appendix A, Figure 5, Regulated Area Map). The wetlands were delineated and flagged by JMM Wetland Consulting Services LLC on February 24, 2018, in accordance with the Connecticut State Statutes (CGS Sections 22a-36 to 22a-45). An additional site visit was conducted on April 11, 2018. The wetlands on 485 Pepper Street were also revisited and the wetlands of 467 Pepper Street flagged on June 1, 2022. Refer to the Site Investigation Report, prepared by JMM Wetland Consulting Services LLC for more information regarding the existing on-site wetlands and vernal pool.

According to the map entitled “Aquarion Water Company Public Drinking Water Supply Watershed Area; Monroe, Connecticut,” the property is located within the West Pequonnock Public Drinking Water Supply Watershed. Aquarion Water Company has been notified of this application and proposed site work.

According to FEMA Flood Insurance Rate Map, Map Numbers 09001C0257F, 09001C0259F, 09001C0276F and 09001C0278F, 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)

PROPOSED CONDITIONS

The project proposes to maintain the existing 1,795± square-foot building within 485 Pepper Street and construct an enclosed, 9,000± square-foot, crushing and screening processing building within 467 Pepper Street, with associated drives, parking areas, utilities and drainage features. The proposed operations will also consist of 12 outdoor storage bins, and three outdoor storage areas, providing a total of 56,853± square foot of outdoor storage.

The proposed development includes two driveway accessways providing access from Pepper Street. The proposed layout provides 15 total parking spaces; of which two are ADA accessible spaces. Trucks and construction vehicles will enter the site via Pepper Street and travel around the rear of the existing building to access the surge pile and stone crushing area. Trucks will access the proposed truck scale after loading/unloading and navigate to the southern proposed drive on 467 Pepper Street to exit.

The proposed development results in an increase in impervious area of approximately 3.57± acres when compared to existing conditions. To attenuate the peak flows produced by the increase in impervious area the project has been designed with one sub-surface detention system, located at the center of the project site. The underground detention system is comprised of Cultec stormwater chambers, with associated catch basin, drainage pipes, pretreatment facilities and outlet protection. There are also three stormwater basins, including two water quality basins, proposed on site. Refer to the *Stormwater Management* section of this report for more details regarding the proposed drainage system.

The project proposes a subsurface sewage disposal system, consisting of a septic tank, distribution box, and leaching galleries, that will adequately handle the proposed capacity without breakouts or backflow. Refer to the *Septic System Design* section of this report for more details regarding the proposed system.

STORMWATER MANAGEMENT

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.

METHODOLOGY

Stormwater runoff analysis, for both existing and proposed conditions, was performed using the software package Civil 3D 2022 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.

Rainfall depths for this property were used for calculating the volumes and rates of runoff for this particular project. The depths were taken from the NOAA Atlas 14 documents (Latitude: 41.3456º, Longitude: -73.2509º) and are listed in Table 1 below.

Table 1: Rainfall Data

Return Period	24-hr Rainfall Depth (in)
2-year	3.59
5-year	4.67
10-year	5.57
25-year	6.80
50-year	7.72
100-year	8.71

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: 41.3456º, Longitude: -73.2509º) and are listed in Table 2 below.

Table 2: IDF Table

Intermediate Intensity Values (in/hr)				
Return Period	**5-Minute**	**15-Minute**	**30-Minute**	**60-Minute**
2-yr	5.11	2.84	2.44	1.26
5-yr	6.32	3.52	2.44	1.56
10-yr	7.33	4.08	2.82	1.80
25-yr	8.72	4.84	3.35	2.14
50-yr	9.77	5.42	3.76	2.40
100-yr	10.9	6.03	4.17	2.66

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 B 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 B for the calculations used in determining the existing and proposed time of concentrations, for the individual drainage areas.

EXISTING HYDROLOGY

Slopes on site range from approximately 1.5 percent to 30 percent, with a high elevation of approximately 438 feet and a low elevation of approximate 406 feet within the wetlands to the north. 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. 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 9.05 acres (project area) of the 10.26-acre site was analyzed for stormwater management purposes. This portion of the site evaluated contains the contributing areas directly impacted by the development. Based on existing drainage patterns, the 10.26-acre area was divided into four (4) contributing drainage areas, labeled Drainage Area EDA-1, Drainage Area EDA-2, Drainage Area EDA-3, and Drainage Area EDA-4. The approximate location and delineation of these drainage areas can be seen on Sheet DA-1, Existing Drainage Area Map, found in Appendix B. Existing conditions within 485 Pepper Street were evaluated prior to site disturbance.

EDA-1 has a contributing area of approximately 5.67 acres. The area is occupied by a gravel lot, woods in good conditions, and impervious coverage. This area encompasses the central portion of the project area. The majority of runoff from EDA-1 flows into the existing wetland to the west of the property.

EDA-2 has a contributing area of approximately 0.49 acres. The area is occupied by open space in poor condition, gravel access drive and parking area. Runoff from EDA-2 travels east onto Pepper Street located to the east of the property.

EDA-3 has a contributing area of approximately 2.26 acres. The area is occupied by woods in good conditions, open space in good condition, and impervious cover from the roofs and paved driveway. This area encompasses the southeastern portion of the project area. Runoff from EDA-3 travels east onto Pepper Street located to the east of the property.

EDA-4 has a contributing area of approximately 0.63 acres. The area is occupied by woods in good conditions. This area encompasses the southwestern portion of the project area. Runoff from EDA-4 travels southwest, overland, towards the neighboring property to the south.

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

Table 3: Existing Drainage Area Characteristics

Drainage Area	Area (Acres)	Curve Number (CN)	Time of Concentration (Minutes)
EDA-1	5.67	58	17.68
EDA-2	0.49	82	6.0
EDA-3	2.26	65	20.10
EDA-4	0.63	55	18.62

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

Table 4: Existing Peak Flows

Drainage Area	Peak Flow (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
EDA-1	1.535	3.868	6.302	10.09	13.19	16.69
EDA-2	1.036	1.551	1.989	2.592	3.045	3.530
EDA-3	1.267	2.498	3.675	5.415	6.785	8.305
EDA-4	0.111	0.327	0.570	0.956	1.280	1.651

PROPOSED HYROLOGY & HYDRAULICS

The proposed development consists of drainage areas that are of similar patterns to existing contributing areas, within the 9.05± acres analyzed. Based on the proposed drainage patterns, the 9.05-acre area was divided into seven (7) contributing drainage areas, labeled Drainage Area PDA-1A, Drainage Area PDA-1B, Drainage Area PDA 1C, Drainage Area PDA 1D, Drainage Area PDA-2, Drainage Area PDA-3A, Drainage Area PDA-3B, and Drainage Area PDA-4. The approximate location and delineation of these drainage areas can be seen on Sheet PDA-1, Drainage Area Map, found in Appendix B.

PDA-1A has a contributing area of approximately 1.93 acres. The area is occupied by herbaceous ground cover and consists of Group B and Group D soil. The runoff from PDA-1A flows overland into the existing wetland to the southwest of the property.

PDA-1B has a contributing area of approximately 3.41 acres. This area is comprised of southern portion of the proposed development area. Runoff from PDA-1B will travel over asphalt millings into the proposed stormwater conveyance system, which conveys runoff into a hydrodynamic separator before entering the stormwater detention basin. The basin discharges into the existing wetlands to the west of the property via a level spreader.

PDA-1C has a contributing area of approximately 0.91 acres. The area will be occupied by herbaceous ground cover in good condition. This area also features the gravel outdoor storage area. Runoff from PDA-1C travels southwest, overland, into the proposed stormwater detention basin. The basin discharges into the existing wetlands located to the west of the property via a level spreader.

PDA-1D has a contributing area of approximately 1.30 acres. This area is comprised of the construction yard within 485 Pepper Street. Runoff from PDA-1D travels, overland, into a proposed stormwater conveyance system and is routed through a hydrodynamic separator prior to entering an underground detention system. The system attenuates the runoff then discharges into the stormwater basin in the southwest corner of the property.

PDA-2 has a contributing area of approximately 0.27 acres. The area is occupied by herbaceous ground cover, an existing 1,795 SF building, and paved a driveway. This area encompasses the northeast portion of the project area. Runoff from PDA-2 travels east, overland, onto Pepper Street.

PDA-3A has a contributing area of approximately 0.39 acres. This area is comprised of the front portion of the 467 Pepper Street, site drive and a portion of the construction yard within 467 Pepper Street. Runoff from PDA-3A travels east, overland, into a stormwater basin before out letting through a riser to a riprap splash pad. This runoff then discharges into a culvert beneath Pepper Street.

PDA-3B has a contributing area of approximately 0.63 acres. This area is comprised of the front portion of the 467 Pepper Street and the front of the southern portion of 485 Pepper Street along the property. Runoff from PDA-3B travels east, overland, into a culvert beneath Pepper Street.

PDA-4 has a contributing area of approximately 0.21 acres. The area is occupied by open space in good conditions with herbaceous ground cover. This area encompasses the southern portion of the site. Runoff from PDA-4 travels southwest, overland, onto the neighboring property to the south.

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

Table 5: Proposed Drainage Area Characteristics

Drainage Area	Area (Acres)	Curve Number (CN)	Time of Concentration (Minutes)
PDA-1A	1.93	67	9.92
PDA-1B	3.41	90	6.0
PDA-1C	0.91	72	6.0
PDA-1D	1.30	95	6.0
PDA-2	0.27	74	7.70
PDA-3A	0.39	87	6.0
PDA-3B	0.63	66	8.23
PDA-4	0.21	61	30.27

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

Table 6: Proposed Peak Flows

Drainage Area	Peak Flow (cfs)					
	2-yr	5-yr	10-yr	25-yr	50-yr	100-yr
PDA-1A	1.507	2.836	4.067	5.872	7.304	8.886
PDA-1B	9.638	13.33	16.38	20.53	23.61	26.92
PDA-1C	1.164	1.990	2.732	3.792	4.606	5.495
PDA-1D	0.090	0.436	0.684	0.960	1.920	3.291
PDA-1	1.507	2.905	5.519	8.512	10.96	15.48
PDA-2	0.359	0.598	0.810	1.110	1.340	1.590
PDA-3A	0.999	1.421	1.773	2.252	2.608	2.990
PDA-3B	0.493	0.947	1.381	2.020	2.521	3.076
PDA-3	0.493	0.947	1.381	2.020	3.083	4.346
PDA-4	0.069	0.152	0.235	0.362	0.463	0.577

In an effort to improve the quality of the stormwater discharged from the site, the project will include two hydrodynamic separators up-gradient of both subsurface detention systems and catch basins with two-foot sumps. The site will also feature an oil-grit separator to handle runoff from the building. Additionally, a permanent sediment/stormwater basin has been provided at the 467 Pepper Street exit to collect and prevent untreated stormwater runoff from entering Pepper Street. These stormwater quality measures are intended to provide removal of suspended solids before runoff reaches the on-site wetlands. The catch basins onsite will also be outfitted with permanent silt sacks.

A proposed stormwater conveyance system, consisting of a series of pipes and catch basins, will collect the majority of the runoff from the proposed impervious areas. These areas include the proposed roof, driveways, and outdoor storage areas. The catch basins will include two-foot sumps to provide additional stormwater treatment.

The subsurface detention system is comprised of 48” high Cultec Recharger 902HD stormwater chambers in series. The systems are designed to attenuate peak flows for the 2-, 5-, 10-, 25-, 50-, and 100-year storm events. Stormwater leaves the subsurface detention system via an outlet control structure. The outlet control structure features two outlet orifices. The stormwater system will have 12” of stone below and above the stormwater chambers.

The site also features three stormwater basins, Stormwater Basin 1B, Stormwater Basin 1C and Stormwater Basin 3A. Stormwater Basin 1B is located in the southern most portion of the site and has been designed to accommodate the majority of the stormwater runoff from the site and will also provide water quality volume below the lowest outlet control structure orifice. This stormwater basin will outlet through an outlet control structure into a level lip spreader. It has also been designed to include one (1) foot of freeboard during the 100-year storm.

Stormwater Basin 1C is located in the western portion of the site. It has been designed to accommodate the stormwater runoff from the associated outdoor storage area. It will feature an outlet control structure with type CL top, before out letting to a flared end and level lip spreader. The water will then discharge

into the existing wetlands. The basin has been designed to include one (1) foot of freeboard during the 100-year storm.

Stormwater Basin 3A is located in the eastern portion of the site. It has been designed to accommodate the stormwater runoff from the exit drive on 467 Pepper Street. It will feature a Nyloplast riser outlet control structure, before out letting to a riprap splash pad. The water will then discharge into the existing culvert beneath Pepper Street. The basin has been designed as a permanent sedimentation basin and will be accessible via a paved leak off for maintenance purposes.

STORMWATER CONCLUSION

The proposed development results in an increase in impervious area of approximately 3.57 acres when compared to existing conditions. To manage the increase in runoff associated with the increase in impervious area, the project includes the construction of one subsurface detention system and three stormwater basins. These systems are designed to attenuate the proposed rate of runoff for the 2-, 5-, 10-, 25-, 50- and 100-year storm events to result in an overall peak runoff discharge rate to be less than that of overall existing conditions. See proposed hydrology data Appendix B, to confirm a decrease in peak discharge throughout all drainage areas.

Table 7: Peak Flows Comparison Table

Drainage Area	Peak Flow (cfs)					
	2-yr	**5-yr**	**10-yr**	**25-yr**	**50-yr**	**100-yr**
EDA-1	1.535	3.868	6.302	10.09	13.19	16.69
PDA-1	**1.507**	**2.905**	**5.519**	**8.512**	**10.96**	**15.48**
EDA-2	1.036	1.551	1.989	2.592	3.045	3.530
PDA-2	**0.359**	**0.598**	**0.810**	**1.110**	**1.340**	**1.590**
EDA-3	1.267	2.498	3.675	5.415	6.785	8.305
PDA-3	**0.493**	**0.947**	**1.381**	**2.020**	**3.083**	**4.346**
EDA-4	0.111	0.327	0.570	0.956	1.280	1.651
PDA-4	**0.069**	**0.152**	**0.235**	**0.362**	**0.463**	**0.577**

SEPTIC SYSTEM 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

A site investigation was performed on April 13, 2018 by Solli Engineering and Rich Jackson of the Monroe Health District. The investigation included the digging of three deep test pits labeled TP-101 through TP-103. Approximate locations of the test pits can be seen on the Site Utility Plan (Sheet 2.51) in Appendix D. Soil observations and descriptions for each test pit were recorded by Solli Engineering.

Test Pits TP-101, TP-102, TP-103 were general found to have 7-16 inches of topsoil; overlain with 7 to 20 inches of yellowish brown fine sandy loam; overlain with 64 to 78 inches of Light Olive Brown Gravelly Sandy Loam w/ Cobbles, Friable. No ledge or groundwater was encountered in any of the Test Pits.

Percolation tests were performed on April 13, 2018 by Solli Engineering. The percolation tests were performed adjacent to PT-101 and PT-102. The percolations rates observed in PT-101 and PT-102 were between 1 and 10.1 minutes per inch, and are illustrated on the Site Utility Plan (Sheet 2.51) in Appendix D.

LEACHING SYSTEM DESIGN

The required effective leaching area (ELA) was determined for the proposed primary and reserve leaching areas to serve the existing structure as an office use. Per the Connecticut Public Health Code, an office requires 20 gallons of design flow per day (GPD) for each employee, where one may assume about 1 employee for every 200 square feet (or 0.1 GPD/SF). Therefore the design flow for the proposed office use was calculated from the 1,776 SF floor area at 0.1 GPD/SF, yielding a design flow of 177.6 GPD. With a percolation rate of 1.0-10.0 min/inch, and an application rate of 1.5 GPD/SF, the Effective Leaching Area is calculated to be approximately 118.4 square feet. 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 proposed office use includes an H-20 load rated 1,000 gallon septic tank and 40 linear feet of 12”x48” leaching stone and perforated pipe trenching. With an ELA of 3.0 SF/LF of trench 40 LF yields 120 SF of leaching area meeting the required 118.4 minimum. The reserve area is designed with the use of 21 lf of 12”x48” concrete galleries at 5.9 sf of ELA per LF, yielding 123.9 SF of leaching area.

SOIL EROSION AND 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 hay bale 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 see Soil Erosion & Sediment Control Plan (Sheet 2.31) and Soil Erosion & Sediment Control Notes & Details (Sheet 2.41), in Appendix D.

EARTHWORK ANALYSIS WITHIN REGULATED AREA

The proposed development will have slopes that range from approximately 1.0 percent within the parking area to 30 percent within landscaped areas around the edge of the project site. Elevations will range from a high of approximately 440 feet, along the northern edge of the site to meet grading adjacent to a low of approximate 408 at the edge of the existing wetlands.

The project will require a retaining wall at the rear of the project area, adjacent to the wetland and vernal pool areas. A second retaining wall will be required to accommodate the change in grade through the center access aisle. There will also a 4' boulder wall on the backside of the outdoor storage bins.

Within the regulated area there will be a net fill of 3,046 CY. This is to accommodate the 3:1 slope to reach the higher elevations throughout the center of the site.

SITE UTILITIES

WATER

An existing twelve (12) inch water main within Pepper Street provides water service in front of the subject property. Water will be provided to the proposed building via a two (2) inch ductile iron pipe from the existing water main in Pepper Street, via a wet tap. The existing well on the property will be abandoned in place per the health department's requirements. An additional two (2) inch ductile iron pipe will come from the main building and provide service to the processing building to the south. Each of the outdoor storage bins will feature a dust control sprinkler which will be fed water supply from the proposed water lateral as shown on Sheet 2.51.

TELEPHONE AND ELECTRIC

Existing telephone and electrical services are located within Pepper Street and are provided by Frontier Communications and Eversource Energy, respectively. Existing telecommunication and electrical service exists along Pepper Street via utility poles and overhead lines. Proposed telecommunication and electrical service will be pulled from an existing utility pole (SBC 2145) located approximately 100 feet south from the proposed site drive. Refer to the Site Utility Plan, in Appendix D, for more detail regarding the layout of the proposed site utilities.

GAS

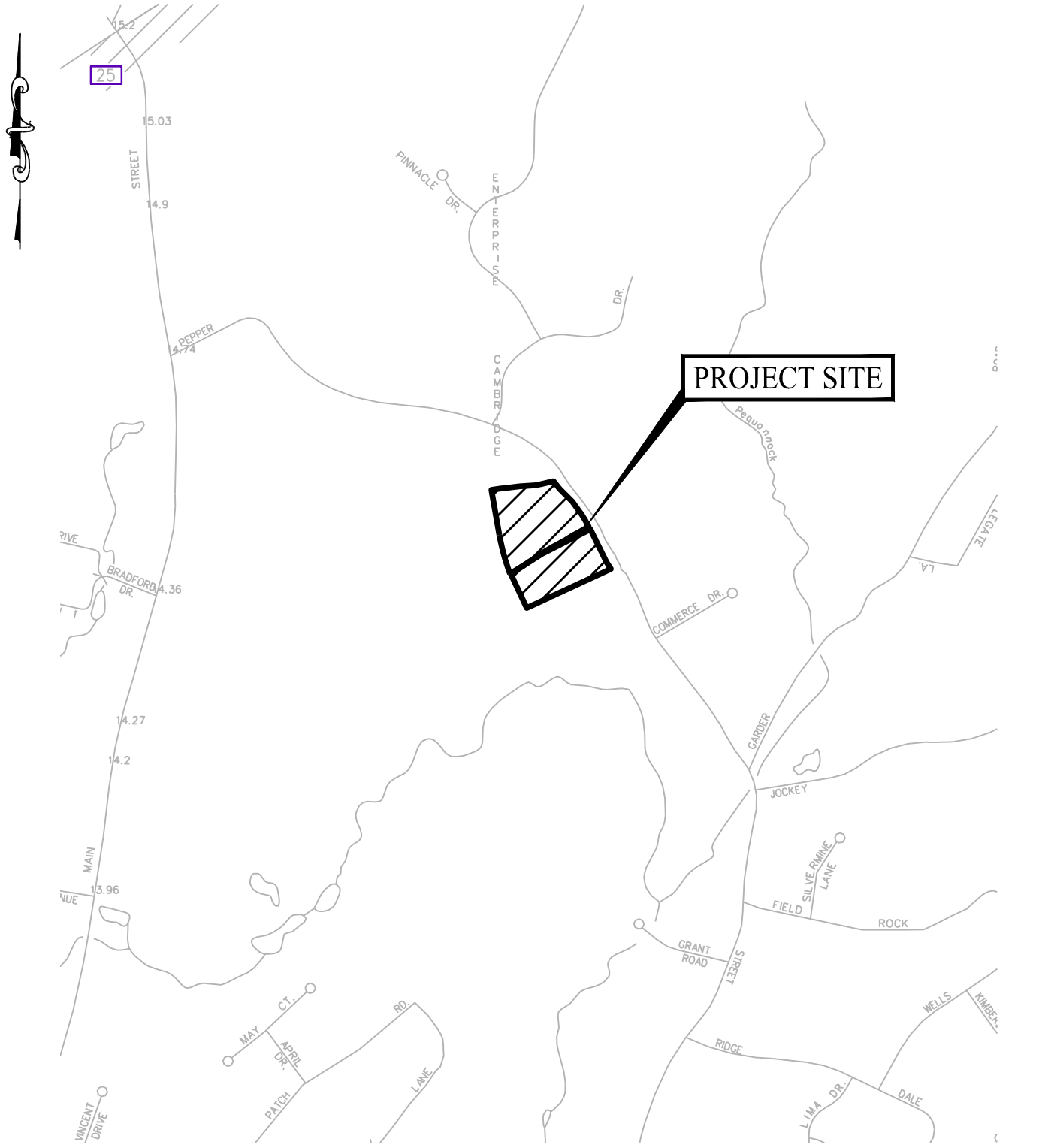
The project proposes to maintain the existing propane tanks and pipe configuration, located behind the existing building. This setup will continue to provide gas to the proposed facility.

Intersection Sight Distance

Intersection sight distance (ISD) at the proposed site driveways were reviewed and evaluated per guidance provided in the 2003 edition of the CTDOT Highway Design Manual. For passenger cars exiting the site driveways, based on the posted speed limit of 25 miles per hour, a minimum ISD of 280 feet is required looking both directions out of the site driveways. Truck traffic is proposed to exit only from the southeastern site driveway. Based on the posted speed limit of 25 miles per hour, a minimum ISD of 423 feet is require for trucks looking both directions out of the southeastern site driveway. The proposed site driveways have been designed to provide adequate sight distance for vehicles and trucks exiting the site driveways. Intersection sight distance for trucks is illustrated in Figure ISD-1, included in Appendix E of this report. Intersection sight distances for passenger cars are illustrated in Figure ISD-2 and Figure ISD-3 for the northern and southern driveways respectively, included in Appendix E of this report.

APPENDIX A
FIGURES

Site Location Map (Figure 1)
FEMA Flood Map (Figure 2)
Soil Survey Map (Figure 3)
Public Supply Watershed Map (Figure 4)
Regulated Area Map (Figure 5)
Slope Area Map (Figure 6)



NOTE: BASE MAP INFORMATION TAKEN FROM HTTP://CT.GOV/DOT, MAP NUMBERS 084

1,000 0 500 1,000

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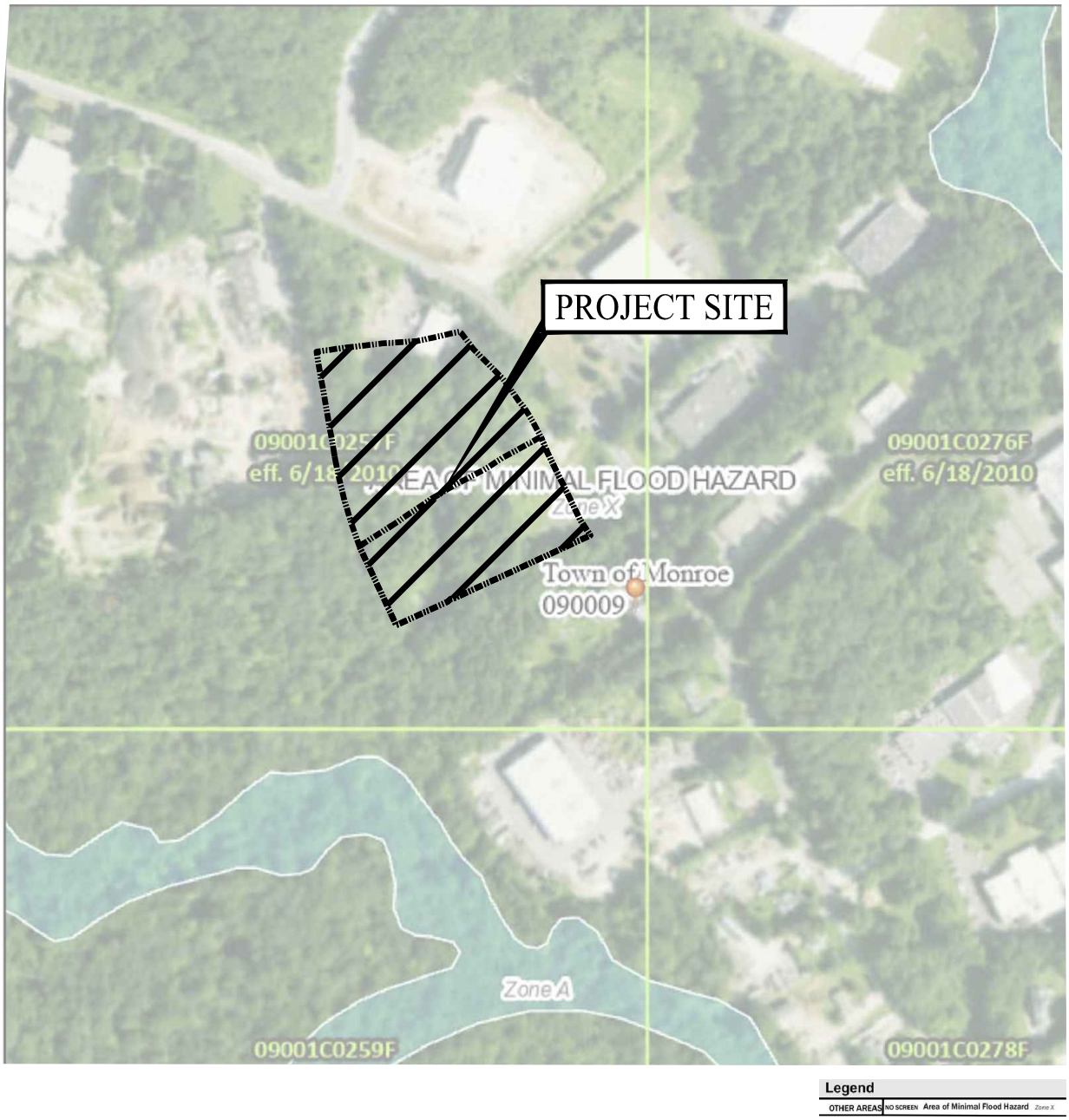
SITE LOCATION MAP

467 & 485 PEPPER STREET
MONROE, CT

Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 1,000'
Figure:	1



NOTE: BASE MAP INFORMATION TAKEN FROM MSC.FEMA.GOV, MAP NUMBER 09001C0257F

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FEMA FLOOD MAP

467 & 485 PEPPER STREET
MONROE, CT

Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 500'
Figure:	2

Map unit symbol	Map unit name	Rating
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D
52C	Sutton fine sandy loam, 2 to 15 percent slopes, extremely stony	B/D
60C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes	B
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	B

NOTE: BASE MAP INFORMATION TAKEN FROM NATURAL RESOURCES CONSERVATION SERVICE, URL: HTTP://WEBSOILSURVEY.NRCS.USDA.GOV
DATE OF IMAGE: JUNE 07, 2022.

250 0 125 250

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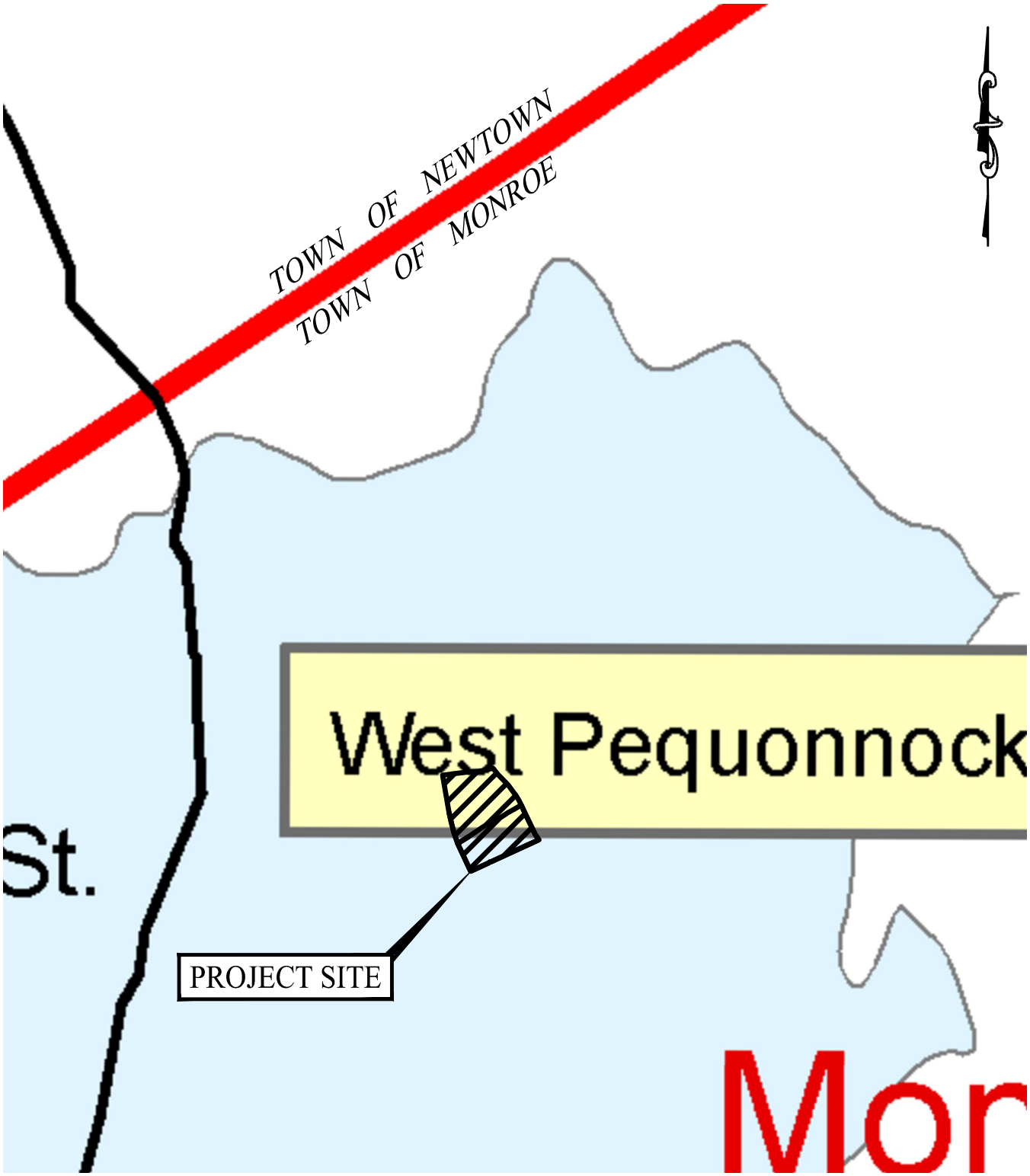
SOIL SURVEY MAP

467 & 485 PEPPER STREET
MONROE, CT

Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 250'
Figure:	3



NOTE: WATERSHED INFORMATION TAKEN FROM A MAP ENTITLED "AQUARION WATER COMPANY PUBLIC DRINKING WATER SUPPLY WATERSHED AREAS; MONROE, CONNECTICUT," PROVIDED BY THE TOWN OF MONROE.

1,250 0 750 1,250

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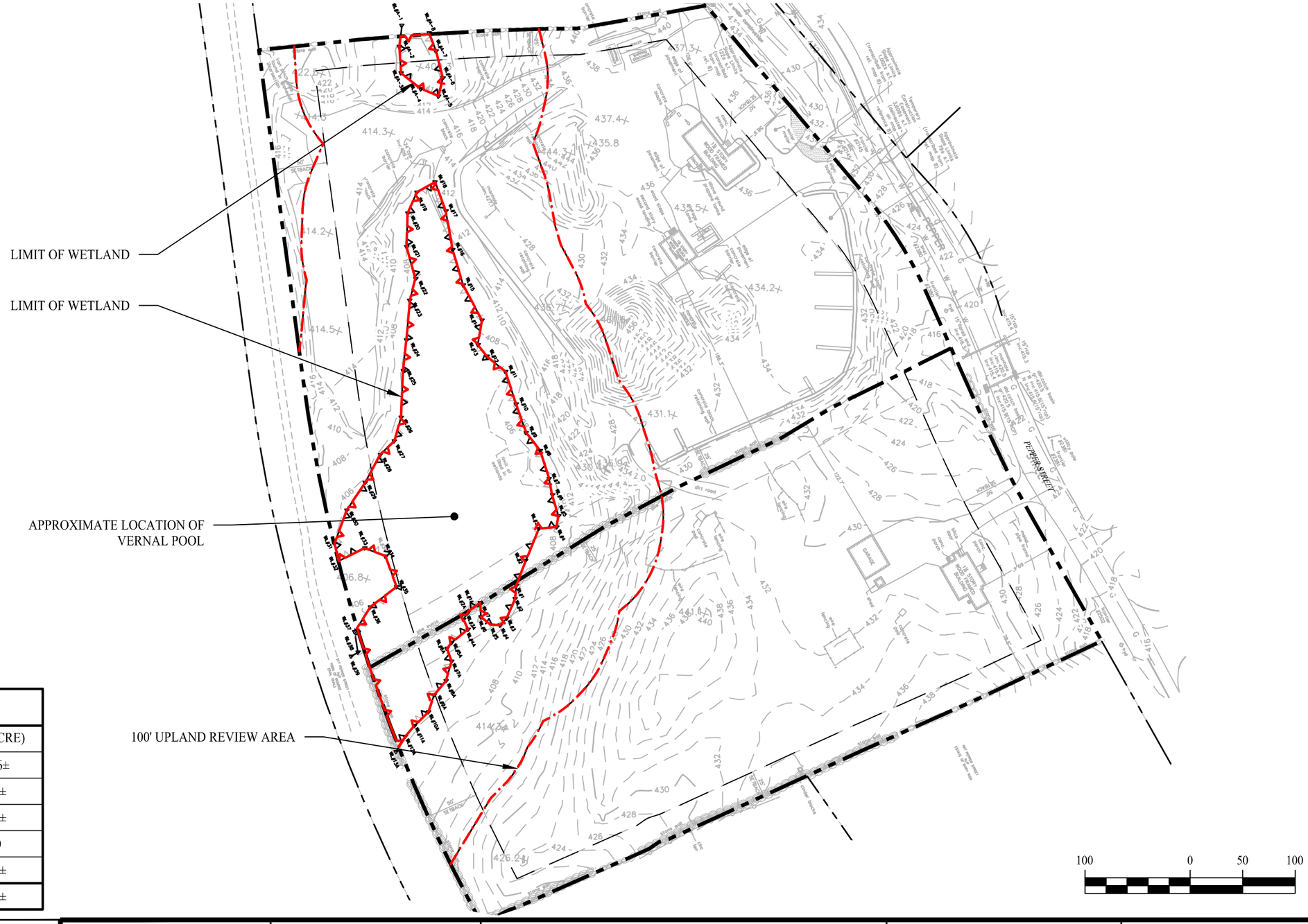
WATER SUPPLY WATERSHED

467 & 485 PEPPER STREET
MONROE, CT

Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 1,250'
Figure:	4



WETLAND AREA TABLE

AREA	LOT (ACRE)
LOT AREA	10.26±
WETLANDS ON LOT	1.21±
UPLAND REVIEW AREA ON LOT	2.96±
WETLANDS TO BE ALTERED	0.00
UPLAND REVIEW AREA TO BE ALTERED	2.25±
TOTAL REGULATED AREA TO BE ALTERED	2.25±

Rev. #: Date Description

SOLLI ENGINEERING
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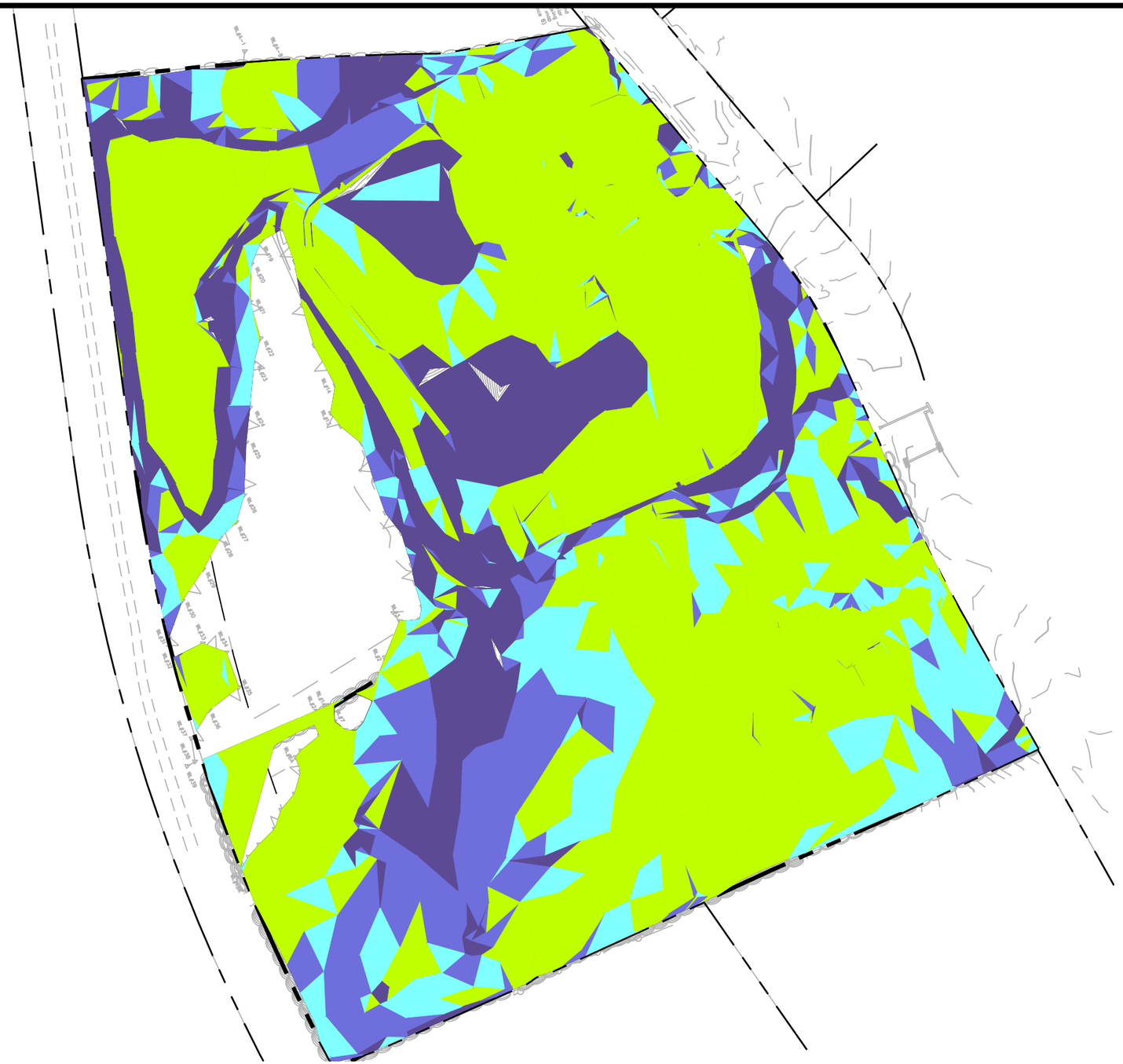
Drawn By:	CJP
Checked By:	KMS
Project #:	1708001
Plan Date:	10/19/22
Scale:	1" = 100'

Project:
PROPOSED DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:
REGULATED AREA MAP

SHEET #:
FIG. 5



Slopes Table			
Color	Minimum Slope	Maximum Slope	Area
	0%	10%	5.01 ACRE
	10%	15%	1.33 ACRE
	15%	25%	1.14 ACRE
	25%	100%	1.80 ACRE

100 0 50 100

Rev. #:	Date	Description

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Drawn By:	MFJ
Checked By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 100'

Project:
PROPOSED DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:
SLOPE AREA MAP

SHEET #:
FIG-6

APPENDIX B
EXISTING & PROPOSED HYDROLOGY

NOAA Precipitation Values
Existing Drainage Area Map (EDA-1)
Proposed Drainage Area Map (PDA-1)
Hydraflow Report
Curve Number Calculations
Time of Concentration Calculations
Cultec Recharger Storage Volume Calculations
Water Quality Volume Calculations

NOAA Atlas 14, Volume 10, Version 3
Location name: Monroe, Connecticut, USA*
Latitude: 41.3456°, Longitude: -73.2509°
Elevation: 436.4 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	**0.365** (0.278-0.469)	**0.426** (0.324-0.548)	**0.527** (0.400-0.680)	**0.611** (0.461-0.791)	**0.727** (0.533-0.972)	**0.814** (0.586-1.11)	**0.905** (0.635-1.26)	**1.01** (0.673-1.43)	**1.15** (0.742-1.68)	**1.26** (0.800-1.88)
10-min	**0.517** (0.393-0.664)	**0.604** (0.459-0.777)	**0.747** (0.566-0.963)	**0.866** (0.653-1.12)	**1.03** (0.755-1.38)	**1.15** (0.830-1.57)	**1.28** (0.899-1.79)	**1.42** (0.952-2.02)	**1.63** (1.05-2.38)	**1.79** (1.13-2.66)
15-min	**0.608** (0.463-0.781)	**0.711** (0.540-0.914)	**0.879** (0.666-1.13)	**1.02** (0.768-1.32)	**1.21** (0.888-1.62)	**1.36** (0.977-1.85)	**1.51** (1.06-2.11)	**1.68** (1.12-2.38)	**1.91** (1.24-2.80)	**2.11** (1.33-3.13)
30-min	**0.844** (0.642-1.08)	**0.986** (0.750-1.27)	**1.22** (0.924-1.57)	**1.41** (1.06-1.83)	**1.68** (1.23-2.24)	**1.88** (1.35-2.55)	**2.09** (1.46-2.90)	**2.31** (1.54-3.28)	**2.61** (1.69-3.81)	**2.84** (1.80-4.22)
60-min	**1.08** (0.822-1.39)	**1.26** (0.959-1.62)	**1.56** (1.18-2.01)	**1.80** (1.36-2.33)	**2.14** (1.57-2.86)	**2.40** (1.72-3.25)	**2.66** (1.86-3.69)	**2.94** (1.97-4.17)	**3.30** (2.14-4.82)	**3.58** (2.27-5.32)
2-hr	**1.40** (1.07-1.79)	**1.64** (1.26-2.10)	**2.04** (1.55-2.61)	**2.37** (1.80-3.04)	**2.82** (2.08-3.74)	**3.16** (2.29-4.26)	**3.51** (2.48-4.88)	**3.91** (2.63-5.52)	**4.47** (2.90-6.48)	**4.92** (3.12-7.26)
3-hr	**1.61** (1.24-2.05)	**1.90** (1.46-2.42)	**2.37** (1.82-3.02)	**2.76** (2.10-3.54)	**3.30** (2.44-4.37)	**3.70** (2.69-4.99)	**4.13** (2.93-5.73)	**4.61** (3.11-6.49)	**5.32** (3.46-7.69)	**5.90** (3.75-8.67)
6-hr	**2.03** (1.57-2.56)	**2.41** (1.87-3.05)	**3.05** (2.35-3.86)	**3.57** (2.74-4.55)	**4.29** (3.20-5.67)	**4.83** (3.54-6.49)	**5.41** (3.87-7.50)	**6.08** (4.11-8.51)	**7.09** (4.62-10.2)	**7.93** (5.06-11.6)
12-hr	**2.49** (1.94-3.12)	**3.00** (2.34-3.77)	**3.85** (2.98-4.84)	**4.55** (3.50-5.75)	**5.51** (4.13-7.23)	**6.23** (4.59-8.32)	**6.99** (5.03-9.65)	**7.90** (5.36-11.0)	**9.26** (6.06-13.2)	**10.4** (6.66-15.1)
24-hr	**2.92** (2.29-3.64)	**3.59** (2.81-4.47)	**4.67** (3.64-5.84)	**5.57** (4.32-6.99)	**6.80** (5.14-8.89)	**7.72** (5.73-10.3)	**8.71** (6.32-12.0)	**9.91** (6.74-13.7)	**11.7** (7.70-16.7)	**13.3** (8.55-19.2)
2-day	**3.31** (2.61-4.10)	**4.12** (3.25-5.11)	**5.45** (4.27-6.76)	**6.54** (5.11-8.16)	**8.05** (6.12-10.5)	**9.16** (6.85-12.2)	**10.4** (7.61-14.3)	**11.9** (8.13-16.4)	**14.3** (9.43-20.2)	**16.4** (10.6-23.5)
3-day	**3.61** (2.86-4.45)	**4.50** (3.55-5.55)	**5.94** (4.68-7.35)	**7.14** (5.60-8.87)	**8.80** (6.72-11.4)	**10.0** (7.52-13.2)	**11.3** (8.35-15.6)	**13.0** (8.92-17.8)	**15.7** (10.4-22.1)	**18.1** (11.7-25.7)
4-day	**3.88** (3.08-4.78)	**4.82** (3.82-5.93)	**6.35** (5.02-7.83)	**7.62** (5.98-9.44)	**9.37** (7.17-12.1)	**10.6** (8.01-14.0)	**12.1** (8.88-16.5)	**13.8** (9.49-18.9)	**16.7** (11.0-23.3)	**19.1** (12.3-27.1)
7-day	**4.66** (3.72-5.69)	**5.69** (4.53-6.96)	**7.37** (5.85-9.04)	**8.76** (6.92-10.8)	**10.7** (8.19-13.7)	**12.1** (9.11-15.8)	**13.6** (10.0-18.5)	**15.5** (10.7-21.0)	**18.5** (12.2-25.7)	**21.0** (13.6-29.6)
10-day	**5.42** (4.34-6.60)	**6.50** (5.20-7.92)	**8.27** (6.59-10.1)	**9.74** (7.71-12.0)	**11.8** (9.04-15.0)	**13.3** (10.00-17.2)	**14.9** (10.9-19.9)	**16.8** (11.6-22.7)	**19.7** (13.1-27.3)	**22.2** (14.4-31.2)
20-day	**7.73** (6.22-9.35)	**8.91** (7.17-10.8)	**10.9** (8.70-13.2)	**12.5** (9.93-15.2)	**14.7** (11.3-18.5)	**16.4** (12.3-20.9)	**18.1** (13.2-23.8)	**20.0** (13.9-26.8)	**22.7** (15.1-31.2)	**24.9** (16.2-34.7)
30-day	**9.63** (7.79-11.6)	**10.9** (8.79-13.1)	**12.9** (10.4-15.6)	**14.6** (11.7-17.8)	**17.0** (13.1-21.2)	**18.8** (14.2-23.8)	**20.6** (15.0-26.7)	**22.4** (15.6-29.9)	**25.0** (16.7-34.2)	**26.9** (17.6-37.5)
45-day	**12.0** (9.71-14.4)	**13.3** (10.8-16.0)	**15.5** (12.5-18.6)	**17.3** (13.9-20.9)	**19.7** (15.3-24.5)	**21.7** (16.4-27.2)	**23.6** (17.2-30.3)	**25.4** (17.8-33.7)	**27.8** (18.7-37.9)	**29.6** (19.3-41.0)
60-day	**13.9** (11.3-16.6)	**15.3** (12.4-18.3)	**17.5** (14.2-21.1)	**19.4** (15.6-23.4)	**22.0** (17.1-27.2)	**24.0** (18.2-30.1)	**26.0** (18.9-33.3)	**27.9** (19.5-36.8)	**30.2** (20.3-41.0)	**31.9** (20.8-44.0)

[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.

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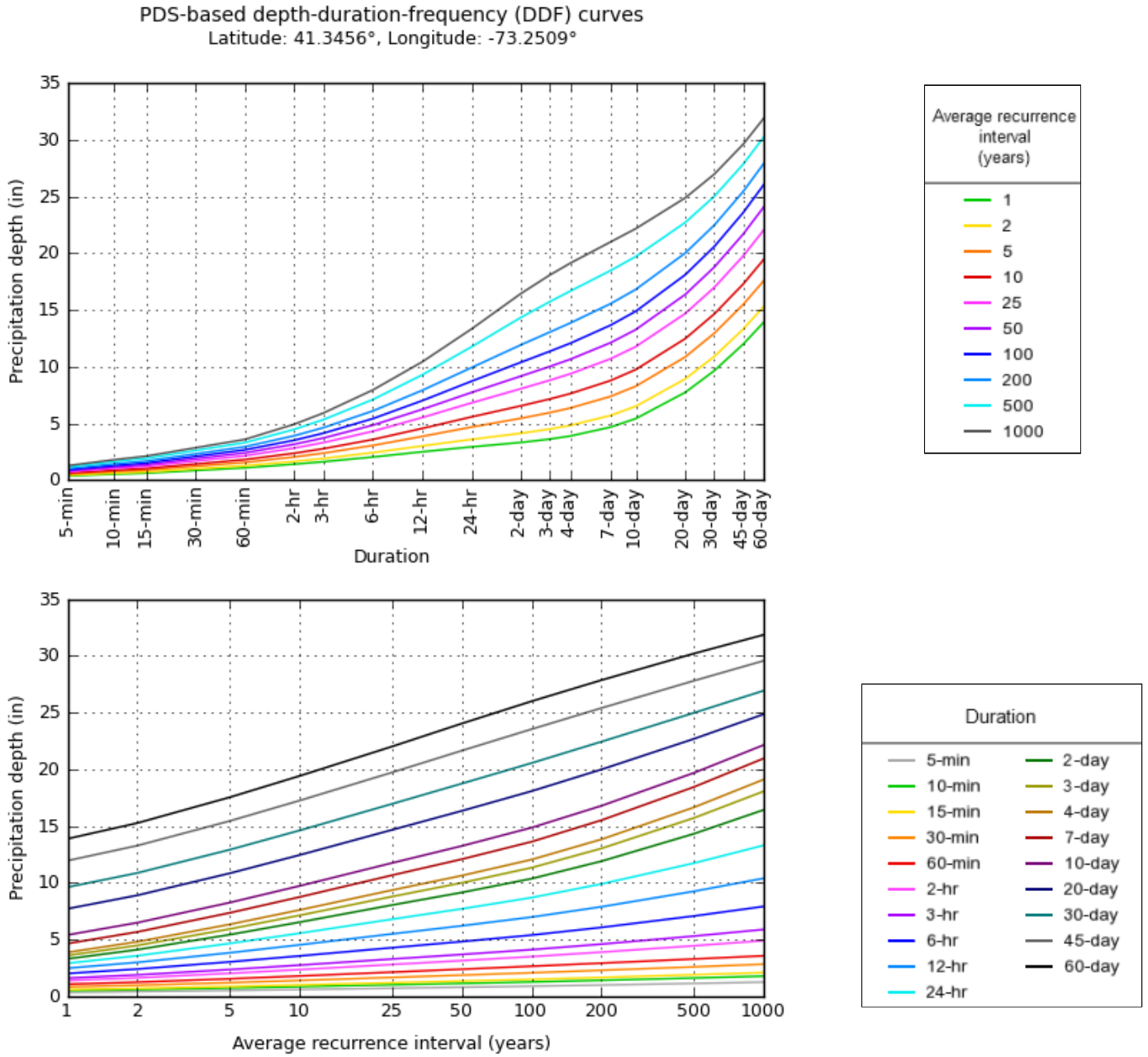
PF graphical



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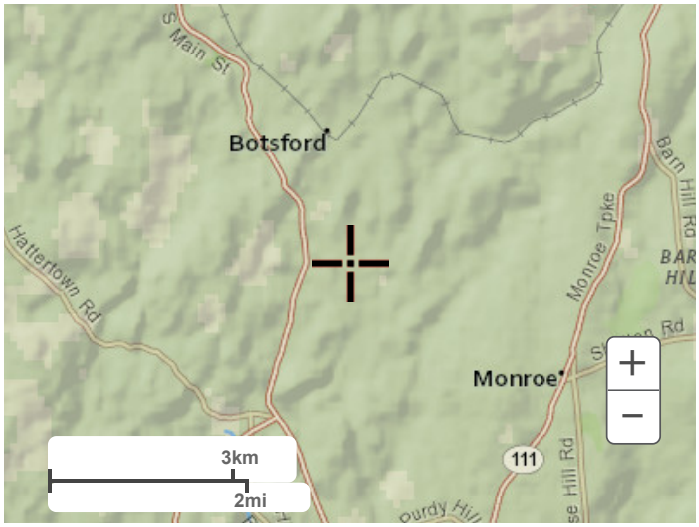
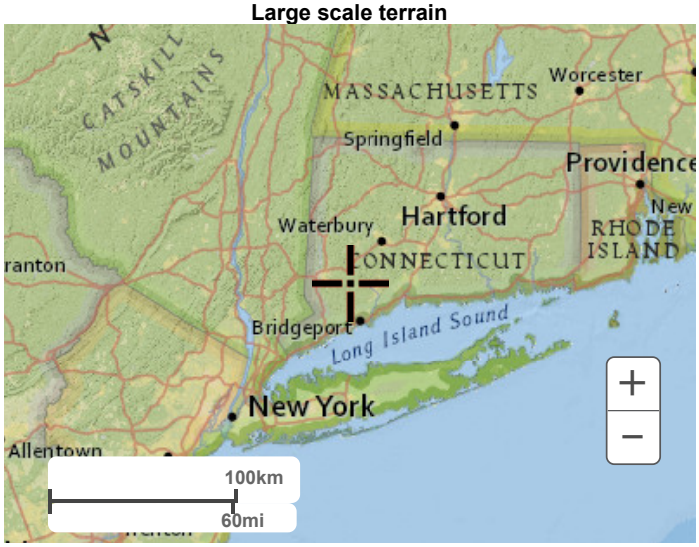
Maps & aerials

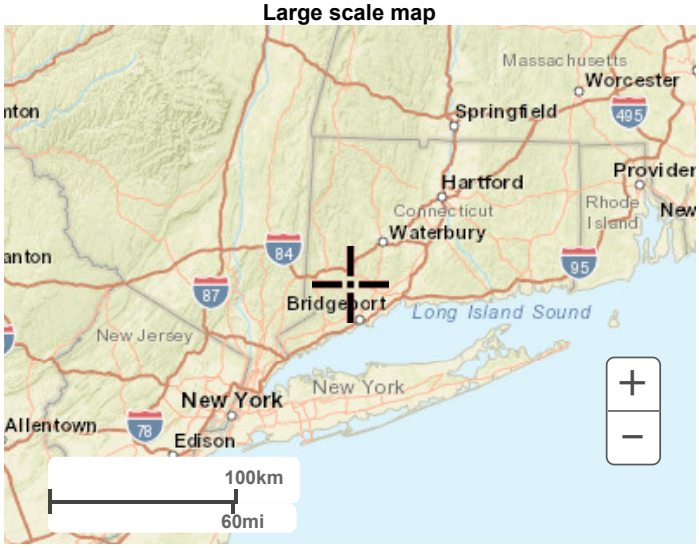
Small scale terrain



Large scale terrain



Large scale map



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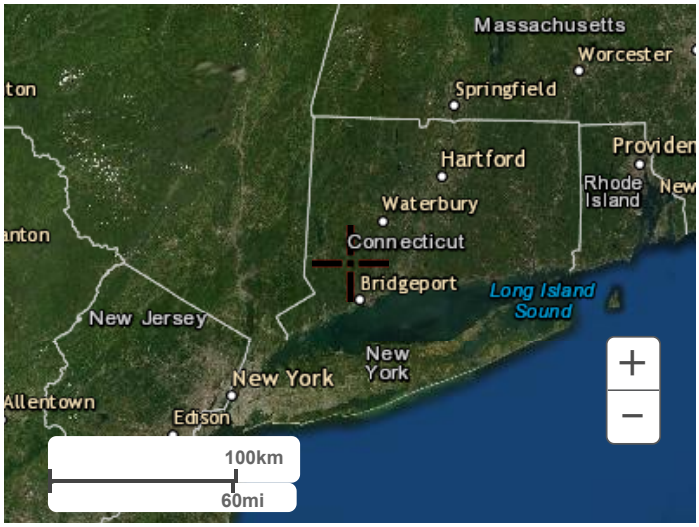

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Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

NOAA Atlas 14, Volume 10, Version 3
Location name: Monroe, Connecticut, USA*
Latitude: 41.3456°, Longitude: -73.2509°
Elevation: 436.4 ft**
* source: ESRI Maps
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POINT PRECIPITATION FREQUENCY ESTIMATES

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PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	**4.38** (3.34-5.63)	**5.11** (3.89-6.58)	**6.32** (4.80-8.16)	**7.33** (5.53-9.49)	**8.72** (6.40-11.7)	**9.77** (7.03-13.3)	**10.9** (7.62-15.2)	**12.1** (8.08-17.2)	**13.8** (8.90-20.1)	**15.2** (9.60-22.5)
10-min	**3.10** (2.36-3.98)	**3.62** (2.75-4.66)	**4.48** (3.40-5.78)	**5.20** (3.92-6.72)	**6.17** (4.53-8.26)	**6.91** (4.98-9.40)	**7.69** (5.39-10.8)	**8.54** (5.71-12.1)	**9.76** (6.31-14.3)	**10.7** (6.80-15.9)
15-min	**2.43** (1.85-3.12)	**2.84** (2.16-3.66)	**3.52** (2.66-4.53)	**4.08** (3.07-5.28)	**4.84** (3.55-6.48)	**5.42** (3.91-7.38)	**6.03** (4.23-8.43)	**6.70** (4.49-9.53)	**7.66** (4.95-11.2)	**8.43** (5.33-12.5)
30-min	**1.69** (1.28-2.17)	**1.97** (1.50-2.54)	**2.44** (1.85-3.14)	**2.82** (2.13-3.66)	**3.35** (2.46-4.48)	**3.76** (2.70-5.09)	**4.17** (2.91-5.80)	**4.61** (3.09-6.55)	**5.21** (3.37-7.61)	**5.69** (3.60-8.44)
60-min	**1.08** (0.822-1.39)	**1.26** (0.959-1.62)	**1.56** (1.18-2.01)	**1.80** (1.36-2.33)	**2.14** (1.57-2.86)	**2.40** (1.72-3.25)	**2.66** (1.86-3.69)	**2.94** (1.97-4.17)	**3.30** (2.14-4.82)	**3.58** (2.27-5.32)
2-hr	**0.700** (0.536-0.894)	**0.821** (0.628-1.05)	**1.02** (0.777-1.30)	**1.18** (0.898-1.52)	**1.41** (1.04-1.87)	**1.58** (1.14-2.13)	**1.76** (1.24-2.44)	**1.95** (1.31-2.76)	**2.23** (1.45-3.24)	**2.46** (1.56-3.63)
3-hr	**0.537** (0.413-0.683)	**0.633** (0.486-0.806)	**0.790** (0.604-1.01)	**0.919** (0.700-1.18)	**1.10** (0.813-1.46)	**1.23** (0.896-1.66)	**1.37** (0.974-1.91)	**1.54** (1.03-2.16)	**1.77** (1.15-2.56)	**1.97** (1.25-2.89)
6-hr	**0.339** (0.262-0.428)	**0.403** (0.312-0.510)	**0.509** (0.392-0.645)	**0.596** (0.457-0.759)	**0.717** (0.535-0.947)	**0.807** (0.591-1.08)	**0.903** (0.646-1.25)	**1.02** (0.686-1.42)	**1.18** (0.771-1.70)	**1.32** (0.845-1.93)
12-hr	**0.207** (0.161-0.259)	**0.249** (0.194-0.313)	**0.319** (0.248-0.402)	**0.377** (0.291-0.477)	**0.457** (0.343-0.600)	**0.517** (0.381-0.690)	**0.580** (0.417-0.801)	**0.656** (0.445-0.912)	**0.769** (0.503-1.10)	**0.864** (0.553-1.25)
24-hr	**0.122** (0.095-0.152)	**0.149** (0.117-0.186)	**0.195** (0.152-0.243)	**0.232** (0.180-0.291)	**0.283** (0.214-0.370)	**0.322** (0.239-0.428)	**0.363** (0.263-0.500)	**0.413** (0.281-0.570)	**0.489** (0.321-0.694)	**0.555** (0.356-0.799)
2-day	**0.069** (0.054-0.085)	**0.086** (0.068-0.106)	**0.113** (0.089-0.141)	**0.136** (0.106-0.170)	**0.168** (0.128-0.218)	**0.191** (0.143-0.253)	**0.216** (0.158-0.298)	**0.248** (0.169-0.341)	**0.298** (0.196-0.421)	**0.342** (0.220-0.490)
3-day	**0.050** (0.040-0.062)	**0.062** (0.049-0.077)	**0.083** (0.065-0.102)	**0.099** (0.078-0.123)	**0.122** (0.093-0.158)	**0.139** (0.104-0.184)	**0.158** (0.116-0.217)	**0.181** (0.124-0.248)	**0.218** (0.144-0.307)	**0.251** (0.162-0.357)
4-day	**0.040** (0.032-0.050)	**0.050** (0.040-0.062)	**0.066** (0.052-0.082)	**0.079** (0.062-0.098)	**0.098** (0.075-0.126)	**0.111** (0.083-0.146)	**0.126** (0.093-0.172)	**0.144** (0.099-0.197)	**0.174** (0.115-0.243)	**0.199** (0.129-0.283)
7-day	**0.028** (0.022-0.034)	**0.034** (0.027-0.041)	**0.044** (0.035-0.054)	**0.052** (0.041-0.064)	**0.064** (0.049-0.081)	**0.072** (0.054-0.094)	**0.081** (0.060-0.110)	**0.092** (0.064-0.125)	**0.110** (0.073-0.153)	**0.125** (0.081-0.176)
10-day	**0.023** (0.018-0.027)	**0.027** (0.022-0.033)	**0.034** (0.027-0.042)	**0.041** (0.032-0.050)	**0.049** (0.038-0.062)	**0.055** (0.042-0.072)	**0.062** (0.046-0.083)	**0.070** (0.048-0.094)	**0.082** (0.054-0.114)	**0.092** (0.060-0.130)
20-day	**0.016** (0.013-0.019)	**0.019** (0.015-0.022)	**0.023** (0.018-0.027)	**0.026** (0.021-0.032)	**0.031** (0.024-0.038)	**0.034** (0.026-0.044)	**0.038** (0.028-0.050)	**0.042** (0.029-0.056)	**0.047** (0.032-0.065)	**0.052** (0.034-0.072)
30-day	**0.013** (0.011-0.016)	**0.015** (0.012-0.018)	**0.018** (0.014-0.022)	**0.020** (0.016-0.025)	**0.024** (0.018-0.029)	**0.026** (0.020-0.033)	**0.029** (0.021-0.037)	**0.031** (0.022-0.041)	**0.035** (0.023-0.047)	**0.037** (0.024-0.052)
45-day	**0.011** (0.009-0.013)	**0.012** (0.010-0.015)	**0.014** (0.012-0.017)	**0.016** (0.013-0.019)	**0.018** (0.014-0.023)	**0.020** (0.015-0.025)	**0.022** (0.016-0.028)	**0.024** (0.016-0.031)	**0.026** (0.017-0.035)	**0.027** (0.018-0.038)
60-day	**0.010** (0.008-0.012)	**0.011** (0.009-0.013)	**0.012** (0.010-0.015)	**0.013** (0.011-0.016)	**0.015** (0.012-0.019)	**0.017** (0.013-0.021)	**0.018** (0.013-0.023)	**0.019** (0.014-0.026)	**0.021** (0.014-0.028)	**0.022** (0.014-0.031)

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

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

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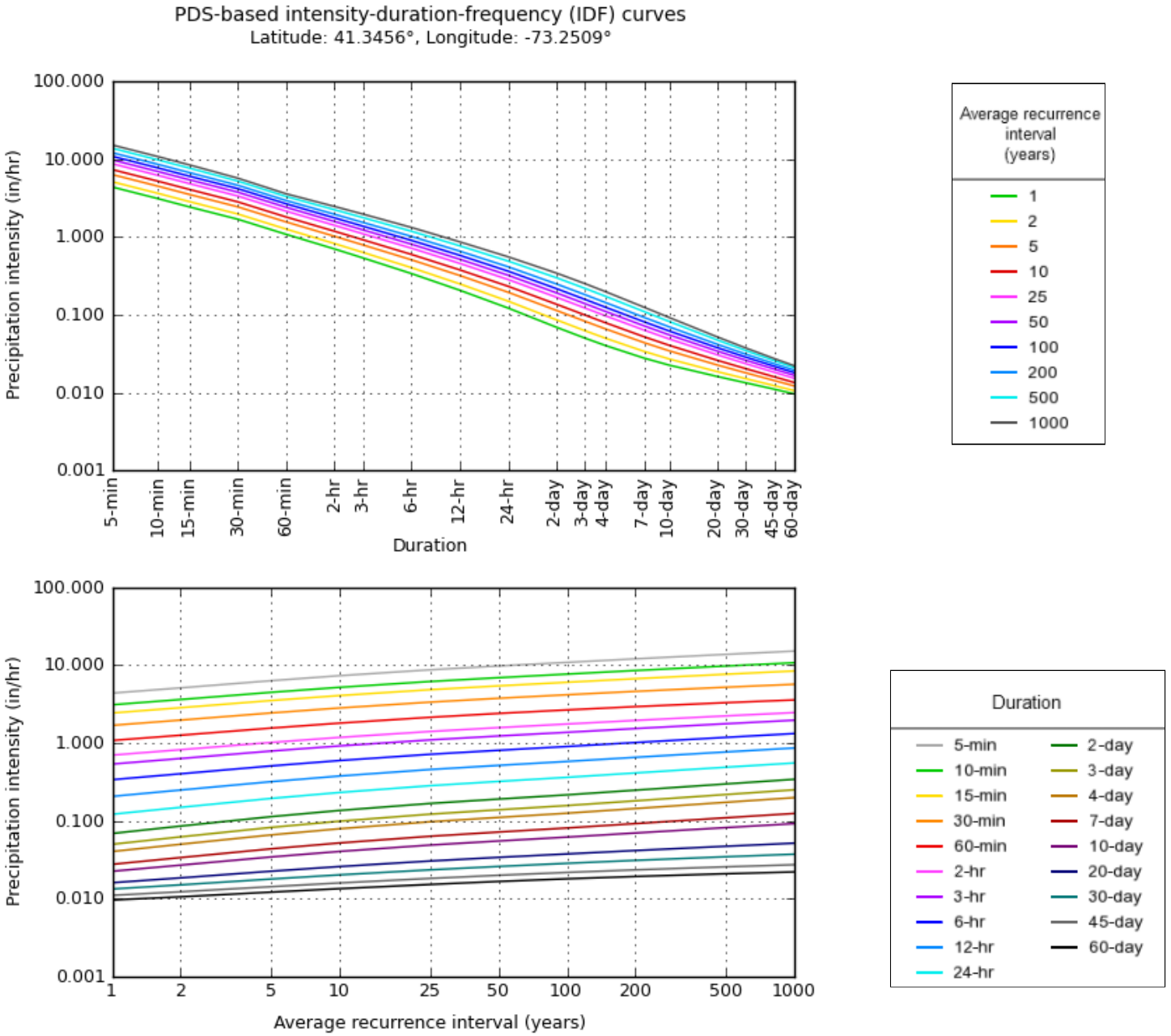
PF graphical



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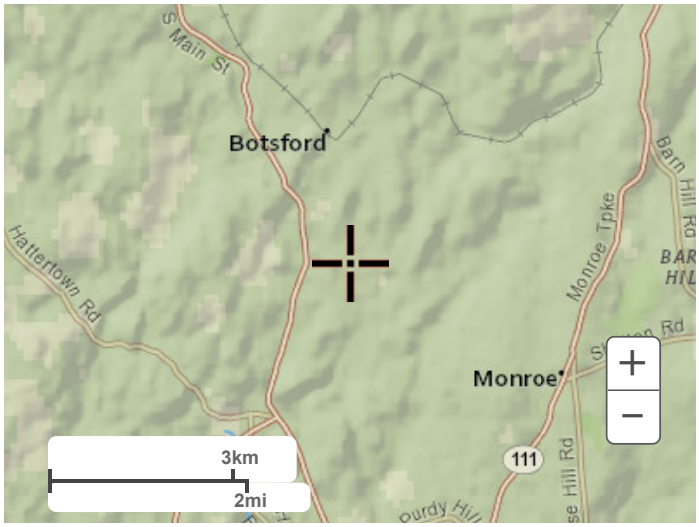
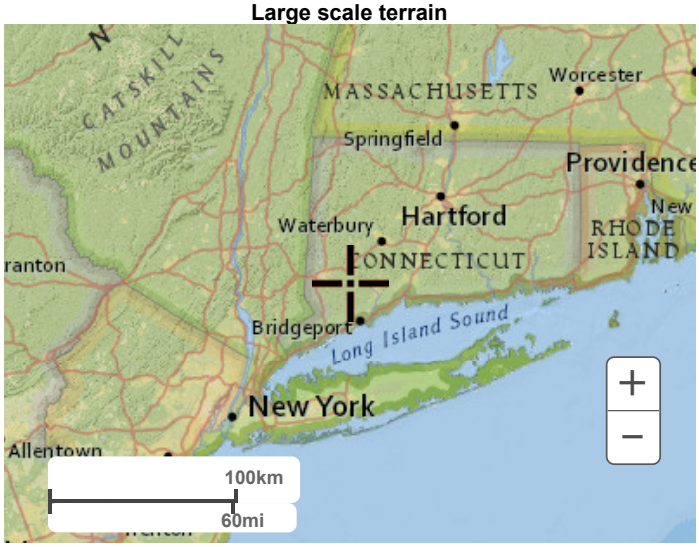
Maps & aerials

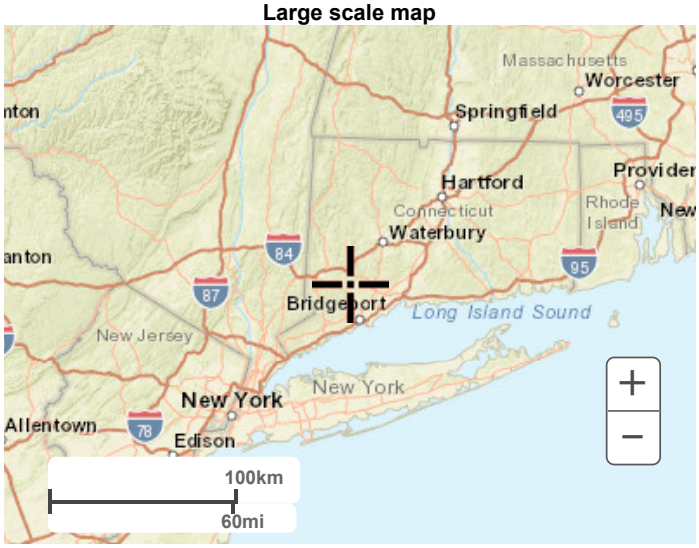
Small scale terrain



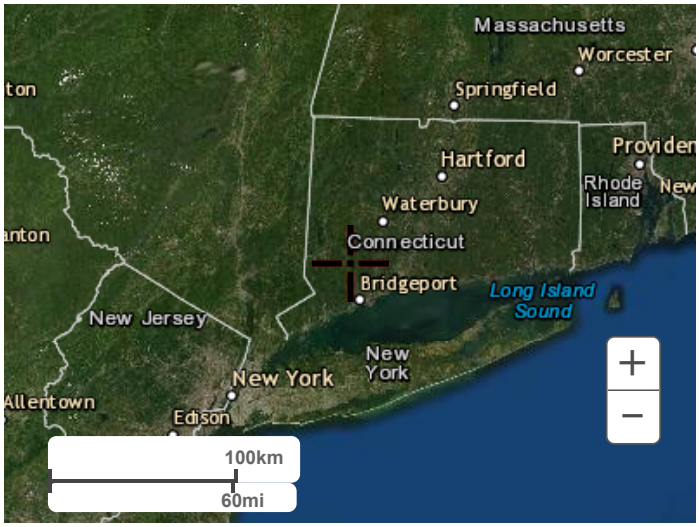
Large scale terrain



Large scale map



Large scale aerial



Back to Top

US Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service
National Water Center
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

Disclaimer

GENERAL NOTES

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

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- LIMIT OF DRAINAGE AREA
- FLOW PATH
- SOIL TYPE BOUNDARY
- 51B — SOIL TYPE

EXISTING DRAINAGE AREA 2 (EDA-2)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 0.49 AC
OPEN SPACE (B, POOR) = 0.40 AC
GRAVEL (B) = 0.04 AC
IMPERVIOUS AREA = 0.05 AC
CURVE NUMBER = 82
TIME OF CONCENTRATION = 6.0 MIN.

EXISTING DRAINAGE AREA 1 (EDA-1)
HYDROLOGIC SOIL GROUP B/D
TOTAL DRAINAGE AREA = 5.67 AC
WOODS (GOOD, B) = 5.16 AC
WOODS (GOOD, D) = 0.23 AC
GRAVEL (B) = 0.25 AC
IMPERVIOUS AREA = 0.03 AC
CURVE NUMBER = 58
TIME OF CONCENTRATION = 17.68 MIN.

EXISTING DRAINAGE AREA 3 (EDA-3)
HYDROLOGIC SOIL GROUP B/D
TOTAL DRAINAGE AREA = 2.26 AC
LAWN (GOOD, B) = 0.64 AC
WOODS (GOOD, B) = 1.24 AC
WOODS (GOOD, D) = 0.11 AC
IMPERVIOUS AREA = 0.17 AC
CURVE NUMBER = 65
TIME OF CONCENTRATION = 20.1 MIN.

EXISTING DRAINAGE AREA 4 (EDA-4)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 0.63 AC
WOODS (GOOD, B) = 0.63 AC
CURVE NUMBER = 55
TIME OF CONCENTRATION = 18.62 MIN.

PEPPER STREET

LIMIT OF DRAINAGE AREA (TYP.)

LIMIT OF WETLANDS (TYP.)

SOIL BOUNDARY LINE (TYP.)

FLOW PATH (TYP.)

PROPERTY LINE (TYP.)

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

STATE OF CONNECTICUT — KEVIN M. SOLLI — 28786 — REGISTERED PROFESSIONAL ENGINEER
Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: EXISTING DRAINAGE AREA MAP

Sheet #: EDA-1

Oct 19, 2022 - 9:31am chris
X:\SE Files\Project Data\2017\1708001 - 485 Pepper Street - Monroe\Civil Data\467-485 Pepper Street\1708001 - EDA-1.dwg

PROPOSED DRAINAGE AREA 3B (PDA-3B)
HYDROLOGIC SOIL GROUP B/D
TOTAL DRAINAGE AREA = 0.63 AC
OPEN SPACE (GOOD, B) = 0.50 AC
OPEN SPACE (GOOD, D) = 0.10 AC
IMPERVIOUS AREA = 0.03 AC
CURVE NUMBER = 66
TIME OF CONCENTRATION = 8.23 MIN.

PROPOSED DRAINAGE AREA 3A (PDA-3A)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 0.39 AC
OPEN SPACE (GOOD, B) = 0.09 AC
GRAVEL (B) = 0.08 AC
IMPERVIOUS AREA = 0.22 AC
CURVE NUMBER = 87
TIME OF CONCENTRATION = 6.0 MIN.

PROPOSED DRAINAGE AREA 2 (PDA-2)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 0.27 AC
OPEN SPACE (GOOD, B) = 0.18 AC
IMPERVIOUS AREA = 0.09 AC
CURVE NUMBER = 74
TIME OF CONCENTRATION = 7.70 MIN.

PROPOSED DRAINAGE AREA 1-D (PDA-1D)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 1.30 AC
OPEN SPACE (GOOD, B) = 0.14 AC
IMPERVIOUS AREA = 1.16 AC
CURVE NUMBER = 95
TIME OF CONCENTRATION = 6.00 MIN.

PROPOSED DRAINAGE AREA 1-A (PDA-1A)
HYDROLOGIC SOIL GROUP B/D
TOTAL DRAINAGE AREA = 1.93 AC
OPEN SPACE (GOOD, B) = 1.40 AC
OPEN SPACE (GOOD, D) = 0.53 AC
CURVE NUMBER = 67
TIME OF CONCENTRATION = 9.92 MIN.

PROPOSED DRAINAGE AREA 4 (PDA-4)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 0.21 AC
OPEN SPACE (GOOD, B) = 0.21 AC
CURVE NUMBER = 61
TIME OF CONCENTRATION = 30.27 MIN.

PROPOSED DRAINAGE AREA 1-B (PDA-1B)
HYDROLOGIC SOIL GROUP B
TOTAL DRAINAGE AREA = 3.41 AC
OPEN SPACE (GOOD, B) = 0.50 AC
GRAVEL (B) = 0.71 AC
IMPERVIOUS AREA = 2.20 AC
CURVE NUMBER = 90
TIME OF CONCENTRATION = 6.00 MIN.

PROPOSED DRAINAGE AREA 1-C (PDA-1C)
HYDROLOGIC SOIL GROUP B/D
TOTAL DRAINAGE AREA = 0.91 AC
OPEN SPACE (GOOD, B) = 0.53 AC
OPEN SPACE (GOOD, D) = 0.05 AC
GRAVEL (B) = 0.30 AC
IMPERVIOUS AREA = 0.03 AC
CURVE NUMBER = 72
TIME OF CONCENTRATION = 6.00 MIN.

PROPOSED ENCLOSED CRUSHING/SCREENING BUILDING
9,000± SF
FFE=429.00

EXISTING BUILDING
1,795± SF

PEPPER STREET

GENERAL NOTES

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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
- FLOW PATH
- SOIL TYPE BOUNDARY
- 51B — SOIL TYPE

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

STATE OF CONNECTICUT — KEVIN M. SOLLI — 25759 — LICENSED PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: PROPOSED DRAINAGE AREA MAP

Sheet #: PDA-1

Oct 19, 2022 - 10:09am chris
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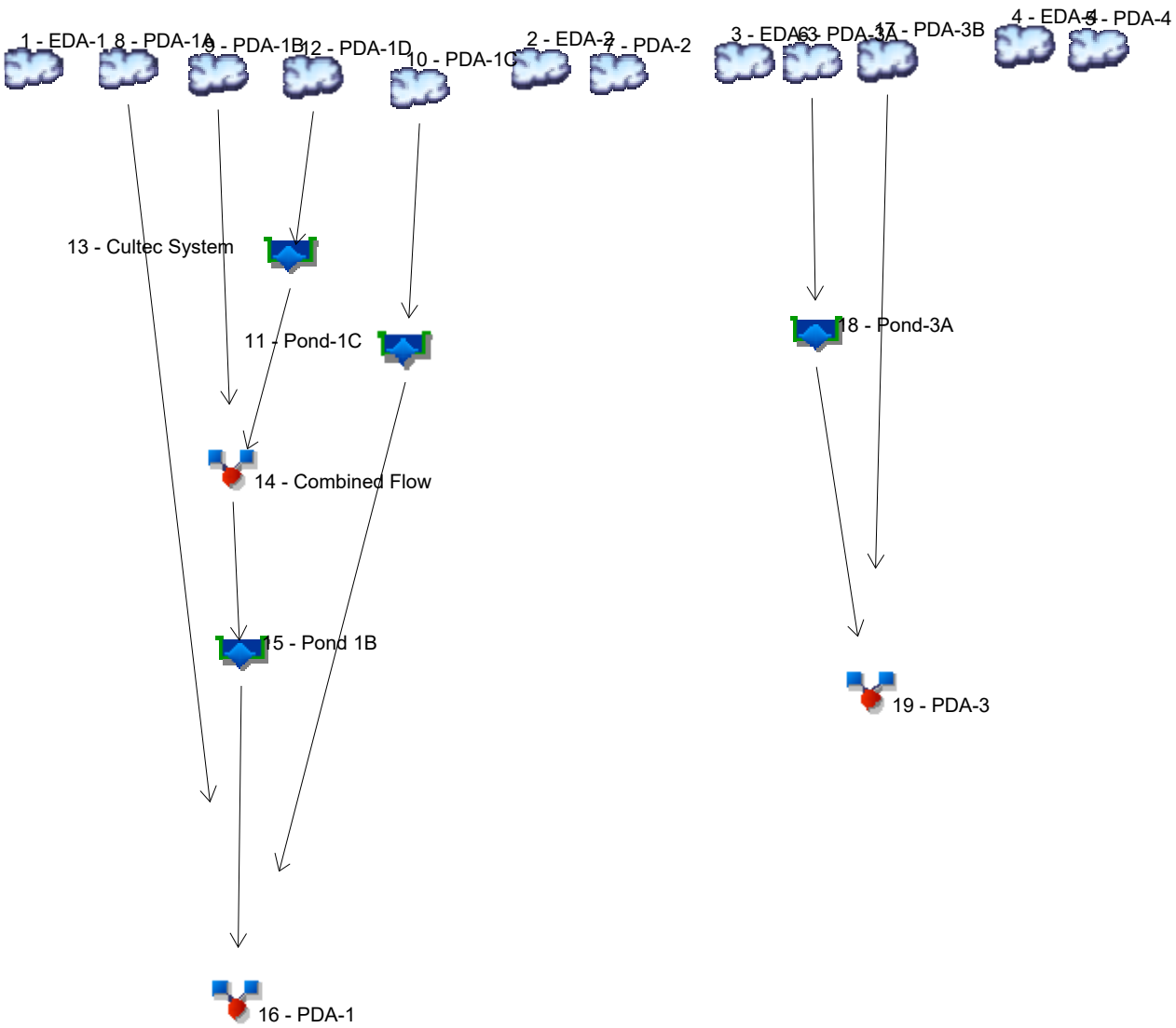
Watershed Model Schematic



Legend

Hyd.	Origin	Description
1	SCS Runoff	EDA-1
2	SCS Runoff	EDA-2
3	SCS Runoff	EDA-3
4	SCS Runoff	EDA-4
5	SCS Runoff	PDA-4
6	SCS Runoff	PDA-3A
7	SCS Runoff	PDA-2
8	SCS Runoff	PDA-1A
9	SCS Runoff	PDA-1B
10	SCS Runoff	PDA-1C
11	Reservoir	Pond-1C
12	SCS Runoff	PDA-1D
13	Reservoir	Cultec System
14	Combine	Combined Flow
15	Reservoir	Pond 1B
16	Combine	PDA-1
17	SCS Runoff	PDA-3B
18	Reservoir	Pond-3A
19	Combine	PDA-3

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	------	-------	1.535	-------	3.868	6.302	10.09	13.19	16.69	EDA-1
2	SCS Runoff	------	-------	1.036	-------	1.551	1.989	2.592	3.045	3.530	EDA-2
3	SCS Runoff	------	-------	1.267	-------	2.498	3.675	5.415	6.785	8.305	EDA-3
4	SCS Runoff	------	-------	0.111	-------	0.327	0.570	0.956	1.280	1.651	EDA-4
5	SCS Runoff	------	-------	0.069	-------	0.152	0.235	0.362	0.463	0.577	PDA-4
6	SCS Runoff	------	-------	0.999	-------	1.421	1.773	2.252	2.608	2.990	PDA-3A
7	SCS Runoff	------	-------	0.359	-------	0.598	0.810	1.110	1.340	1.590	PDA-2
8	SCS Runoff	------	-------	1.507	-------	2.836	4.067	5.872	7.304	8.886	PDA-1A
9	SCS Runoff	------	-------	9.638	-------	13.33	16.38	20.53	23.61	26.92	PDA-1B
10	SCS Runoff	------	-------	1.164	-------	1.990	2.732	3.792	4.606	5.495	PDA-1C
11	Reservoir	10	-------	0.090	-------	0.436	0.684	0.960	1.920	3.291	Pond-1C
12	SCS Runoff	------	-------	4.179	-------	5.550	6.684	8.226	9.376	10.61	PDA-1D
13	Reservoir	12	-------	2.753	-------	4.199	6.349	7.972	9.014	10.10	Cultec System
14	Combine	9, 13	-------	11.40	-------	17.10	22.11	28.50	32.63	37.01	Combined Flow
15	Reservoir	14	-------	0.570	-------	1.227	1.789	2.441	3.862	9.107	Pond 1B
16	Combine	8, 11, 15	-------	1.507	-------	2.905	5.519	8.512	10.96	15.48	PDA-1
17	SCS Runoff	------	-------	0.493	-------	0.947	1.381	2.020	2.521	3.076	PDA-3B
18	Reservoir	6	-------	0.000	-------	0.045	0.134	0.609	0.970	1.518	Pond-3A
19	Combine	17, 18	-------	0.493	-------	0.947	1.381	2.020	3.083	4.346	PDA-3

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	1.535	2	742	10,061	------	------	------	EDA-1
2	SCS Runoff	1.036	2	724	3,097	------	------	------	EDA-2
3	SCS Runoff	1.267	2	736	6,560	------	------	------	EDA-3
4	SCS Runoff	0.111	2	746	861	------	------	------	EDA-4
5	SCS Runoff	0.069	2	748	468	------	------	------	PDA-4
6	SCS Runoff	0.999	2	724	3,004	------	------	------	PDA-3A
7	SCS Runoff	0.359	2	726	1,276	------	------	------	PDA-2
8	SCS Runoff	1.507	2	730	6,510	------	------	------	PDA-1A
9	SCS Runoff	9.638	2	724	29,387	------	------	------	PDA-1B
10	SCS Runoff	1.164	2	724	3,655	------	------	------	PDA-1C
11	Reservoir	0.090	2	840	1,776	10	411.76	2,062	Pond-1C
12	SCS Runoff	4.179	2	724	13,394	------	------	------	PDA-1D
13	Reservoir	2.753	2	728	12,158	12	431.86	4,492	Cultec System
14	Combine	11.40	2	724	41,545	9, 13	------	------	Combined Flow
15	Reservoir	0.570	2	936	15,465	14	417.94	31,011	Pond 1B
16	Combine	1.507	2	730	23,752	8, 11, 15	------	------	PDA-1
17	SCS Runoff	0.493	2	728	1,943	------	------	------	PDA-3B
18	Reservoir	0.000	2	n/a	0	6	422.69	3,004	Pond-3A
19	Combine	0.493	2	728	1,943	17, 18	------	------	PDA-3

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	3.868	2	736	20,417	------	------	------	EDA-1
2	SCS Runoff	1.551	2	724	4,645	------	------	------	EDA-2
3	SCS Runoff	2.498	2	734	11,797	------	------	------	EDA-3
4	SCS Runoff	0.327	2	738	1,877	------	------	------	EDA-4
5	SCS Runoff	0.152	2	744	896	------	------	------	PDA-4
6	SCS Runoff	1.421	2	724	4,324	------	------	------	PDA-3A
7	SCS Runoff	0.598	2	726	2,062	------	------	------	PDA-2
8	SCS Runoff	2.836	2	730	11,394	------	------	------	PDA-1A
9	SCS Runoff	13.33	2	724	41,298	------	------	------	PDA-1B
10	SCS Runoff	1.990	2	724	6,029	------	------	------	PDA-1C
11	Reservoir	0.436	2	750	4,151	10	412.07	2,531	Pond-1C
12	SCS Runoff	5.550	2	724	18,107	------	------	------	PDA-1D
13	Reservoir	4.199	2	728	16,871	12	432.46	4,970	Cultec System
14	Combine	17.10	2	724	58,169	9, 13	------	------	Combined Flow
15	Reservoir	1.227	2	834	32,090	14	418.37	35,821	Pond 1B
16	Combine	2.905	2	730	47,634	8, 11, 15	------	------	PDA-1
17	SCS Runoff	0.947	2	726	3,446	------	------	------	PDA-3B
18	Reservoir	0.045	2	952	759	6	423.01	3,586	Pond-3A
19	Combine	0.947	2	726	4,205	17, 18	------	------	PDA-3

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	6.302	2	736	30,772	------	------	------	EDA-1
2	SCS Runoff	1.989	2	724	5,992	------	------	------	EDA-2
3	SCS Runoff	3.675	2	734	16,767	------	------	------	EDA-3
4	SCS Runoff	0.570	2	736	2,921	------	------	------	EDA-4
5	SCS Runoff	0.235	2	742	1,314	------	------	------	PDA-4
6	SCS Runoff	1.773	2	724	5,451	------	------	------	PDA-3A
7	SCS Runoff	0.810	2	726	2,771	------	------	------	PDA-2
8	SCS Runoff	4.067	2	730	15,970	------	------	------	PDA-1A
9	SCS Runoff	16.38	2	724	51,383	------	------	------	PDA-1B
10	SCS Runoff	2.732	2	724	8,193	------	------	------	PDA-1C
11	Reservoir	0.684	2	748	6,314	10	412.38	3,285	Pond-1C
12	SCS Runoff	6.684	2	724	22,052	------	------	------	PDA-1D
13	Reservoir	6.349	2	726	20,817	12	432.66	5,094	Cultec System
14	Combine	22.11	2	724	72,200	9, 13	------	------	Combined Flow
15	Reservoir	1.789	2	790	46,121	14	418.97	42,783	Pond 1B
16	Combine	5.519	2	732	68,404	8, 11, 15	------	------	PDA-1
17	SCS Runoff	1.381	2	726	4,863	------	------	------	PDA-3B
18	Reservoir	0.134	2	790	1,886	6	423.04	3,630	Pond-3A
19	Combine	1.381	2	726	6,749	17, 18	------	------	PDA-3

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	10.09	2	734	46,811	------	------	------	EDA-1
2	SCS Runoff	2.592	2	724	7,886	------	------	------	EDA-2
3	SCS Runoff	5.415	2	734	24,191	------	------	------	EDA-3
4	SCS Runoff	0.956	2	734	4,569	------	------	------	EDA-4
5	SCS Runoff	0.362	2	742	1,950	------	------	------	PDA-4
6	SCS Runoff	2.252	2	724	7,016	------	------	------	PDA-3A
7	SCS Runoff	1.110	2	726	3,791	------	------	------	PDA-2
8	SCS Runoff	5.872	2	728	22,746	------	------	------	PDA-1A
9	SCS Runoff	20.53	2	724	65,302	------	------	------	PDA-1B
10	SCS Runoff	3.792	2	724	11,332	------	------	------	PDA-1C
11	Reservoir	0.960	2	746	9,453	10	412.88	4,551	Pond-1C
12	SCS Runoff	8.226	2	724	27,459	------	------	------	PDA-1D
13	Reservoir	7.972	2	724	26,223	12	432.83	5,197	Cultec System
14	Combine	28.50	2	724	91,525	9, 13	------	------	Combined Flow
15	Reservoir	2.441	2	780	65,446	14	419.94	54,141	Pond 1B
16	Combine	8.512	2	730	97,645	8, 11, 15	------	------	PDA-1
17	SCS Runoff	2.020	2	726	6,971	------	------	------	PDA-3B
18	Reservoir	0.609	2	744	3,451	6	423.16	3,860	Pond-3A
19	Combine	2.020	2	726	10,422	17, 18	------	------	PDA-3

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	13.19	2	734	59,911	------	------	------	EDA-1
2	SCS Runoff	3.045	2	724	9,329	------	------	------	EDA-2
3	SCS Runoff	6.785	2	734	30,100	------	------	------	EDA-3
4	SCS Runoff	1.280	2	734	5,933	------	------	------	EDA-4
5	SCS Runoff	0.463	2	742	2,464	------	------	------	PDA-4
6	SCS Runoff	2.608	2	724	8,199	------	------	------	PDA-3A
7	SCS Runoff	1.340	2	726	4,583	------	------	------	PDA-2
8	SCS Runoff	7.304	2	728	28,105	------	------	------	PDA-1A
9	SCS Runoff	23.61	2	724	75,779	------	------	------	PDA-1B
10	SCS Runoff	4.606	2	724	13,780	------	------	------	PDA-1C
11	Reservoir	1.920	2	736	11,901	10	413.08	5,050	Pond-1C
12	SCS Runoff	9.376	2	724	31,510	------	------	------	PDA-1D
13	Reservoir	9.014	2	724	30,274	12	432.96	5,276	Cultec System
14	Combine	32.63	2	724	106,054	9, 13	------	------	Combined Flow
15	Reservoir	3.862	2	762	79,974	14	420.50	61,820	Pond 1B
16	Combine	10.96	2	732	119,980	8, 11, 15	------	------	PDA-1
17	SCS Runoff	2.521	2	726	8,643	------	------	------	PDA-3B
18	Reservoir	0.970	2	738	4,634	6	423.28	4,066	Pond-3A
19	Combine	3.083	2	728	13,277	17, 18	------	------	PDA-3

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	16.69	2	734	74,836	------	------	------	EDA-1
2	SCS Runoff	3.530	2	724	10,899	------	------	------	EDA-2
3	SCS Runoff	8.305	2	734	36,718	------	------	------	EDA-3
4	SCS Runoff	1.651	2	734	7,501	------	------	------	EDA-4
5	SCS Runoff	0.577	2	740	3,045	------	------	------	PDA-4
6	SCS Runoff	2.990	2	724	9,479	------	------	------	PDA-3A
7	SCS Runoff	1.590	2	726	5,455	------	------	------	PDA-2
8	SCS Runoff	8.886	2	728	34,081	------	------	------	PDA-1A
9	SCS Runoff	26.92	2	724	87,096	------	------	------	PDA-1B
10	SCS Runoff	5.495	2	724	16,484	------	------	------	PDA-1C
11	Reservoir	3.291	2	730	14,605	10	413.21	5,366	Pond-1C
12	SCS Runoff	10.61	2	724	35,874	------	------	------	PDA-1D
13	Reservoir	10.10	2	724	34,638	12	433.12	5,370	Cultec System
14	Combine	37.01	2	724	121,734	9, 13	------	------	Combined Flow
15	Reservoir	9.107	2	746	95,655	14	420.80	66,021	Pond 1B
16	Combine	15.48	2	740	144,341	8, 11, 15	------	------	PDA-1
17	SCS Runoff	3.076	2	726	10,512	------	------	------	PDA-3B
18	Reservoir	1.518	2	730	5,914	6	423.43	4,349	Pond-3A
19	Combine	4.346	2	728	16,426	17, 18	------	------	PDA-3

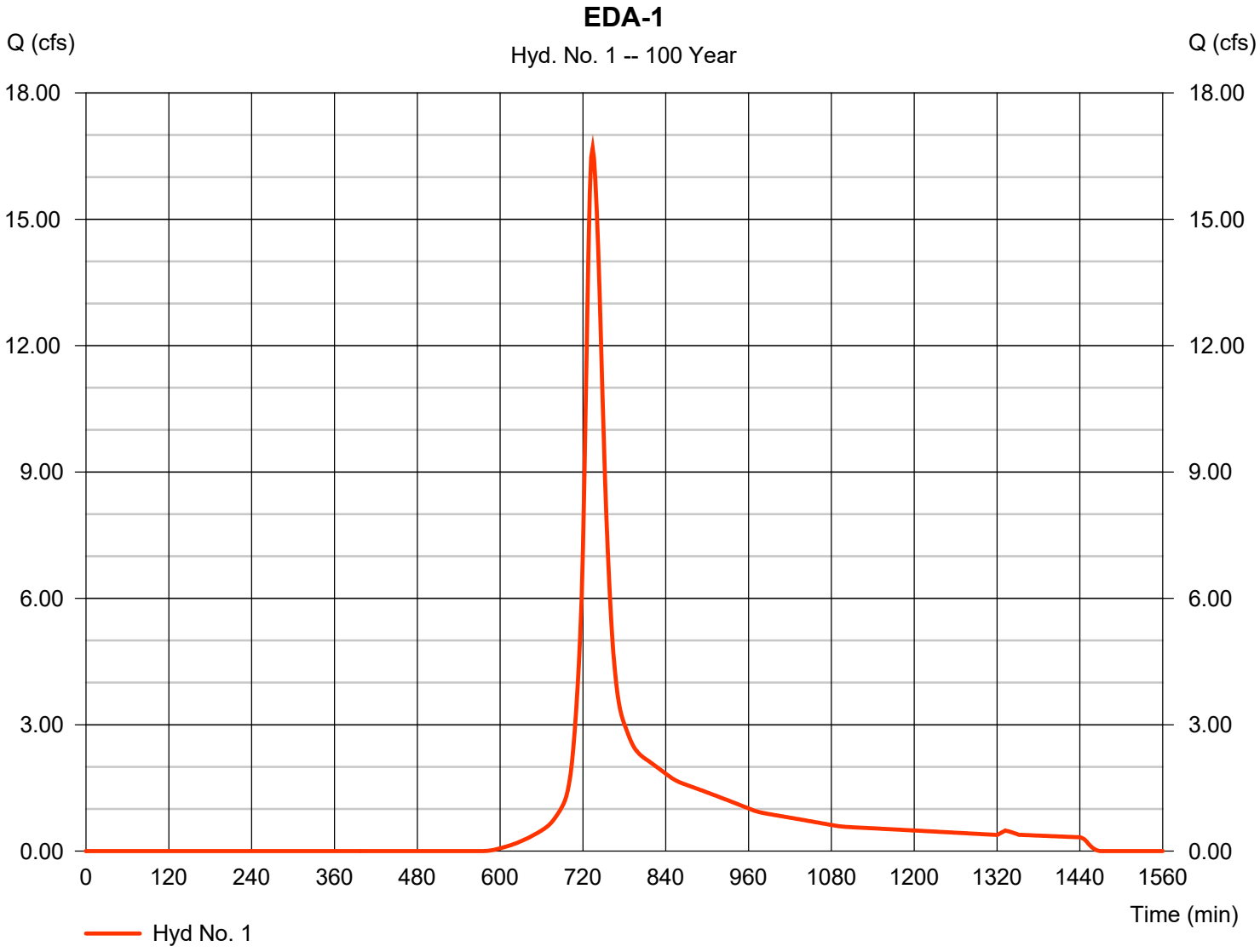
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 1

EDA-1

Hydrograph type	= SCS Runoff	Peak discharge	= 16.69 cfs
Storm frequency	= 100 yrs	Time to peak	= 734 min
Time interval	= 2 min	Hyd. volume	= 74,836 cuft
Drainage area	= 5.670 ac	Curve number	= 58
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 17.70 min
Total precip.	= 8.71 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484



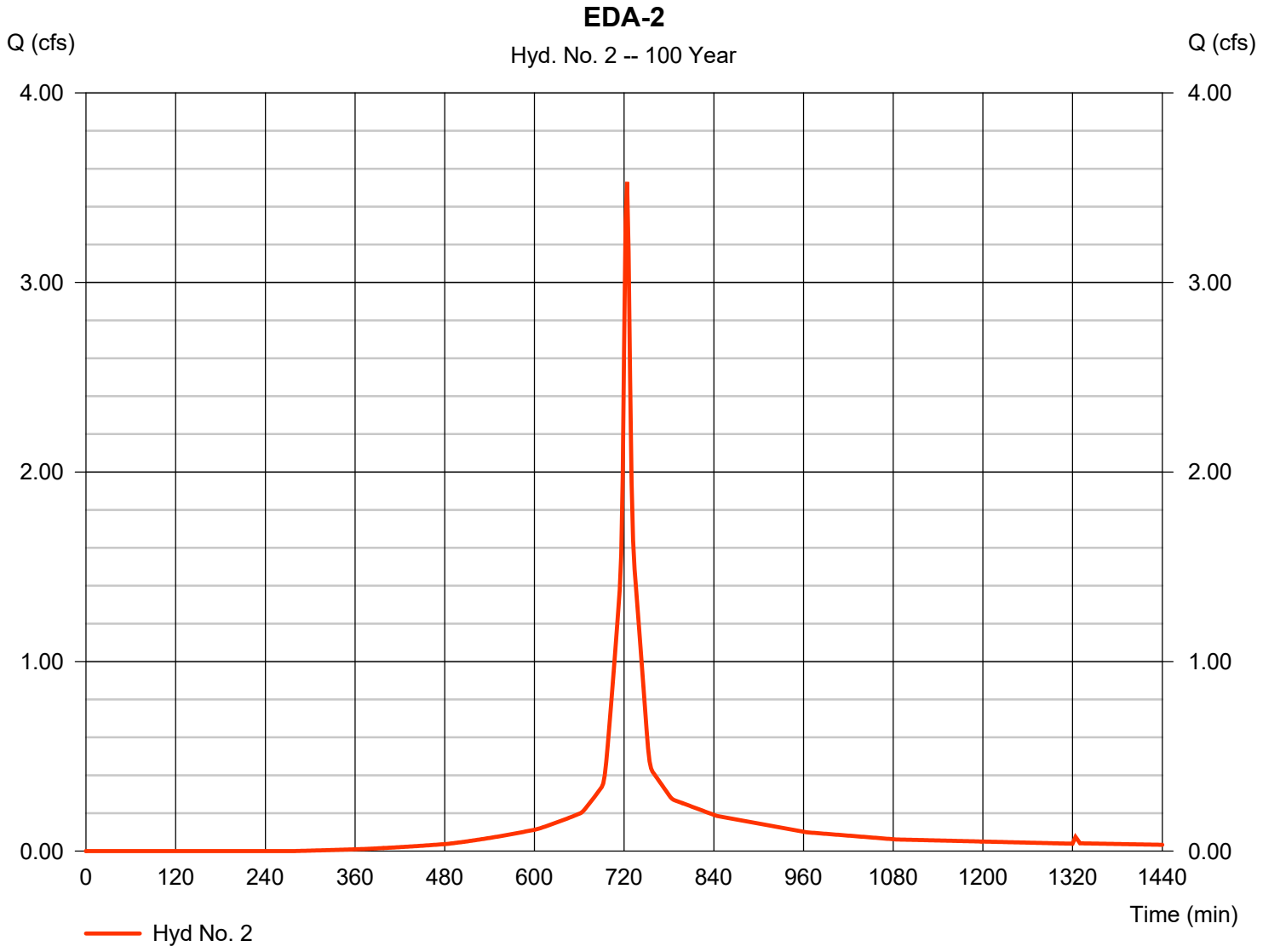
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 2

EDA-2

Hydrograph type	= SCS Runoff	Peak discharge	= 3.530 cfs
Storm frequency	= 100 yrs	Time to peak	= 724 min
Time interval	= 2 min	Hyd. volume	= 10,899 cuft
Drainage area	= 0.490 ac	Curve number	= 82
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 6.00 min
Total precip.	= 8.71 in	Distribution	= Type III
Storm duration	= 24 hrs	Shape factor	= 484

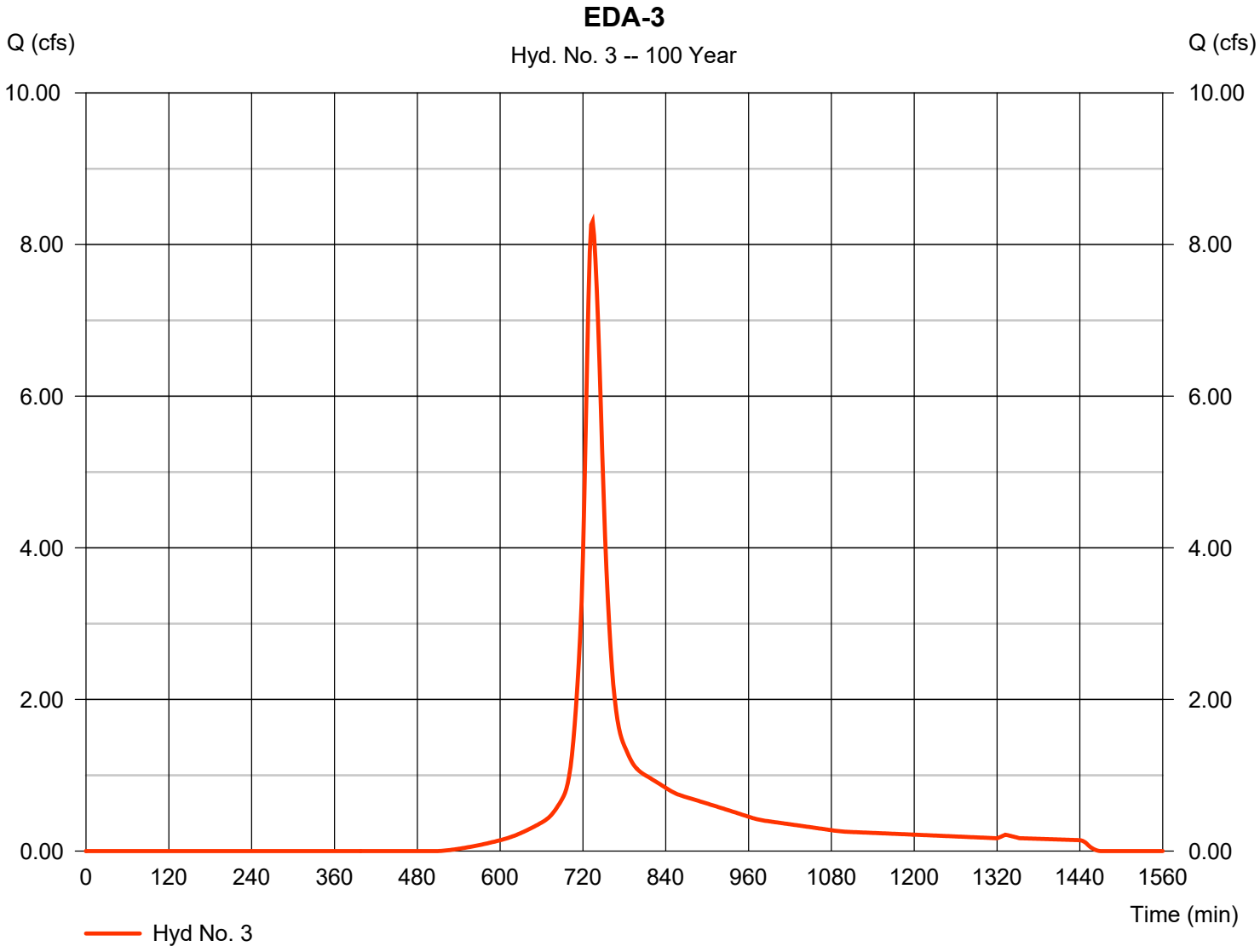


Hydrograph Report

Hyd. No. 3

EDA-3

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.305 cfs
Storm frequency	=	100 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	36,718 cuft
Drainage area	=	2.260 ac	Curve number	=	65
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	20.10 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



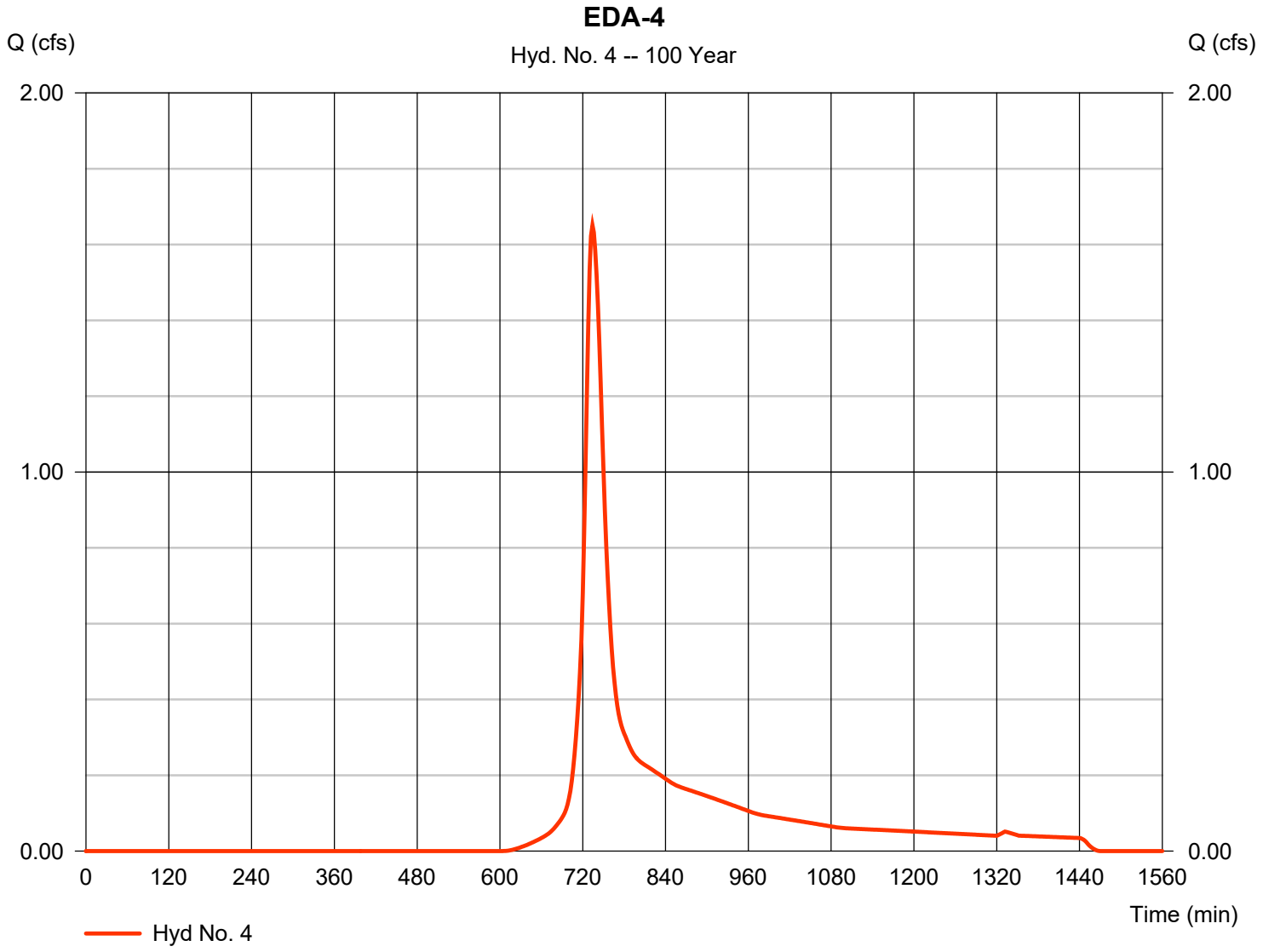
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 4

EDA-4

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.651 cfs
Storm frequency	=	100 yrs	Time to peak	=	734 min
Time interval	=	2 min	Hyd. volume	=	7,501 cuft
Drainage area	=	0.630 ac	Curve number	=	55
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	18.60 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



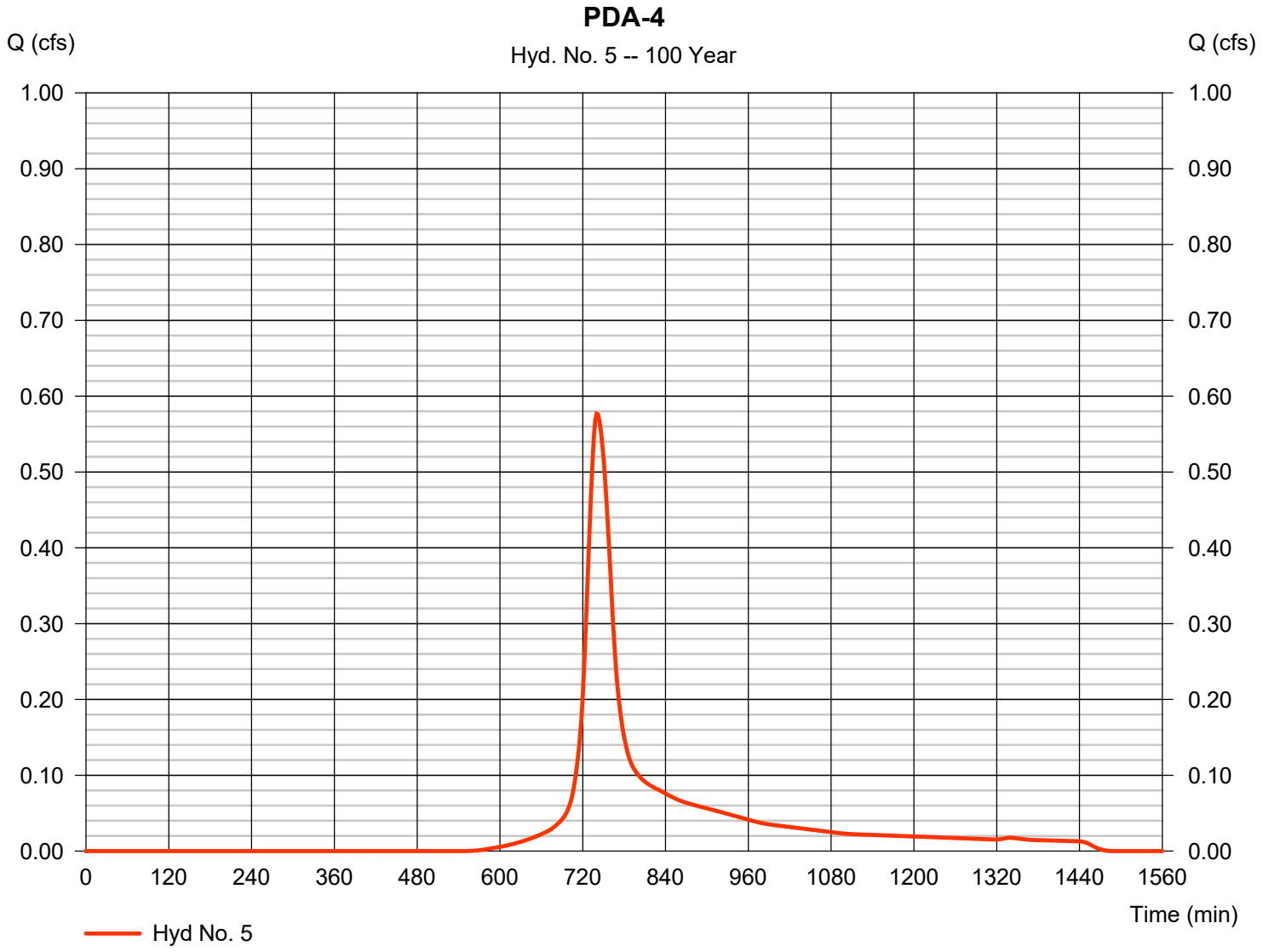
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 5

PDA-4

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.577 cfs
Storm frequency	=	100 yrs	Time to peak	=	740 min
Time interval	=	2 min	Hyd. volume	=	3,045 cuft
Drainage area	=	0.210 ac	Curve number	=	61
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	30.27 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



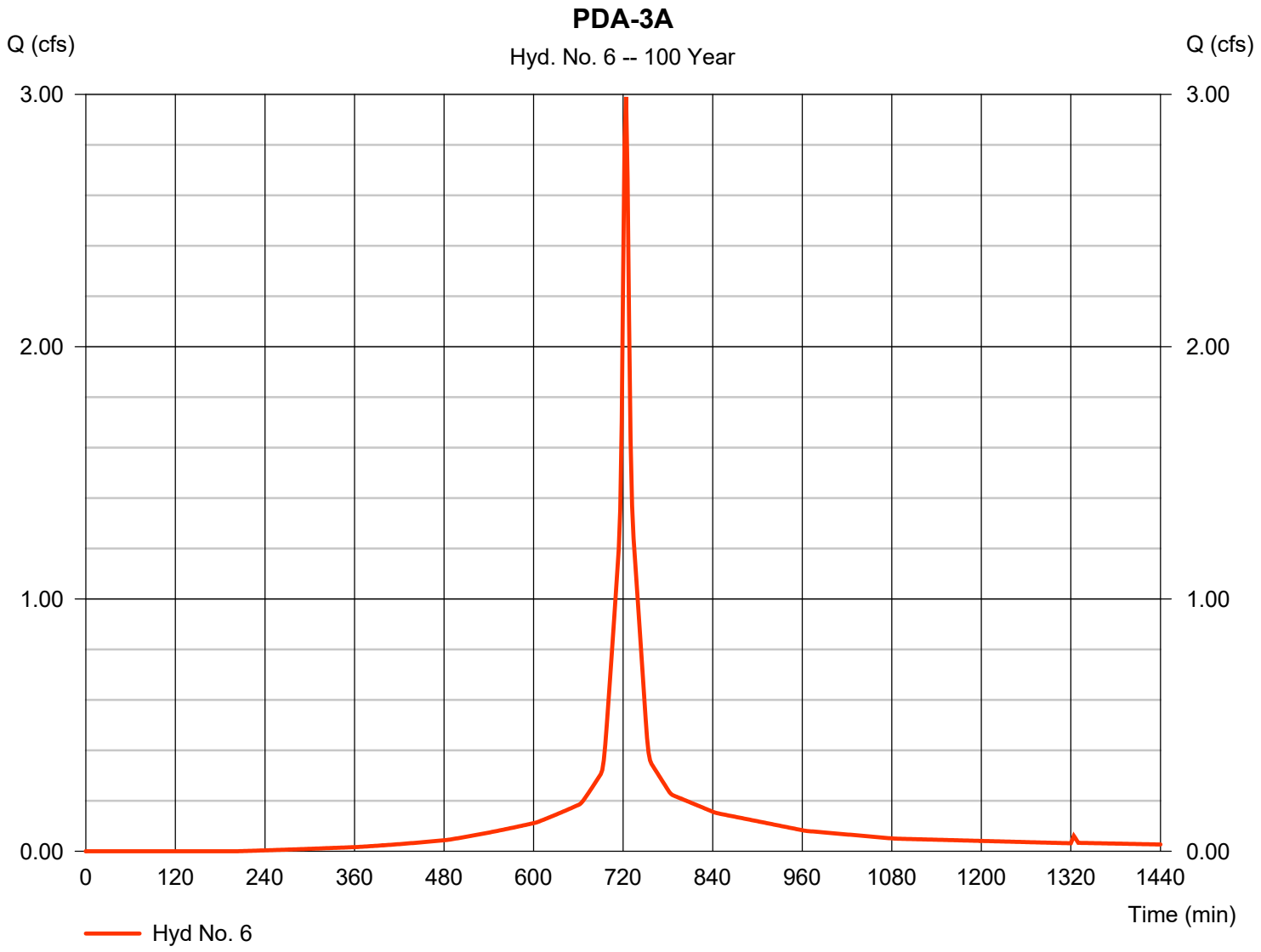
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 6

PDA-3A

Hydrograph type	=	SCS Runoff	Peak discharge	=	2.990 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	9,479 cuft
Drainage area	=	0.390 ac	Curve number	=	87
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



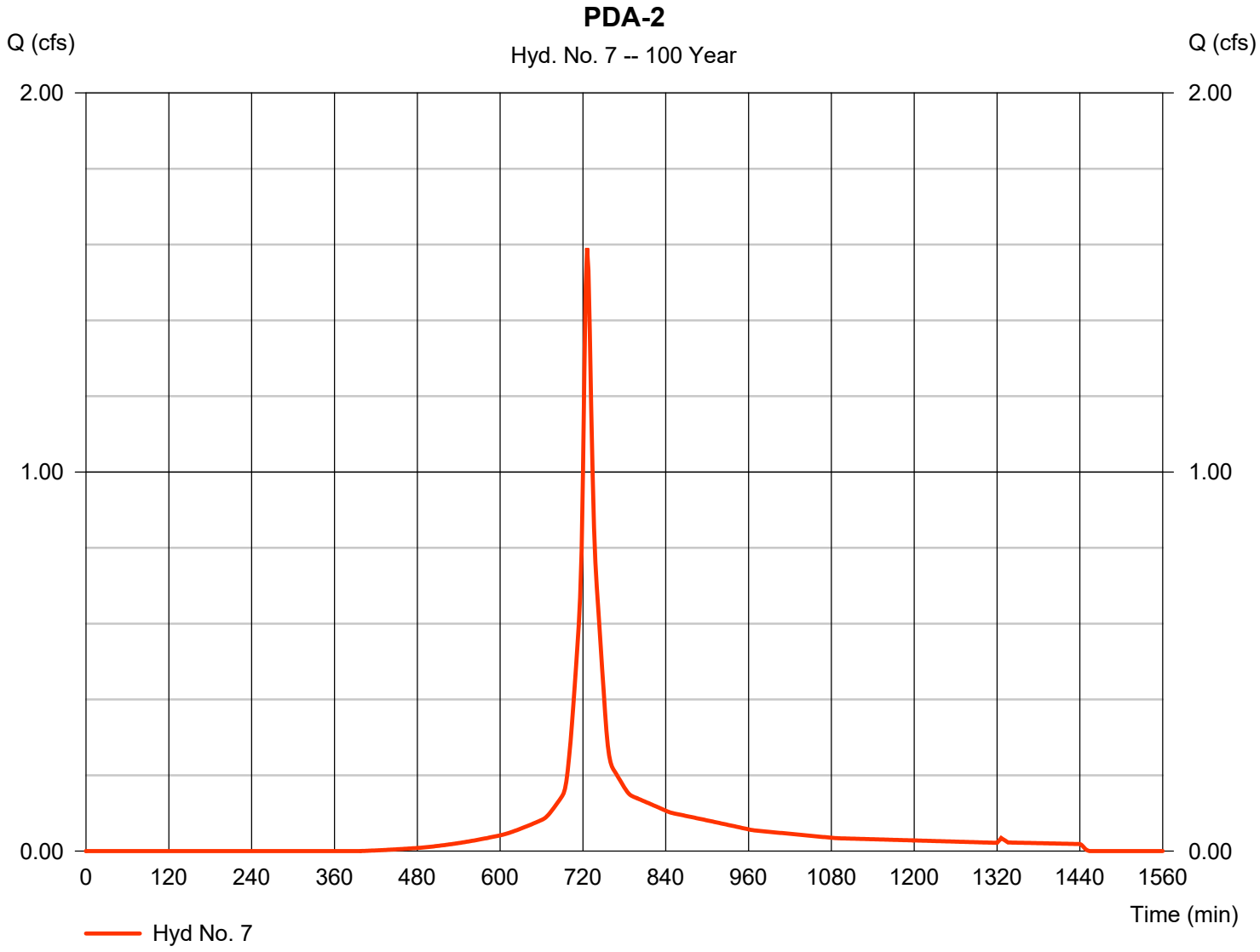
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 7

PDA-2

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.590 cfs
Storm frequency	=	100 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	5,455 cuft
Drainage area	=	0.270 ac	Curve number	=	74
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	7.70 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



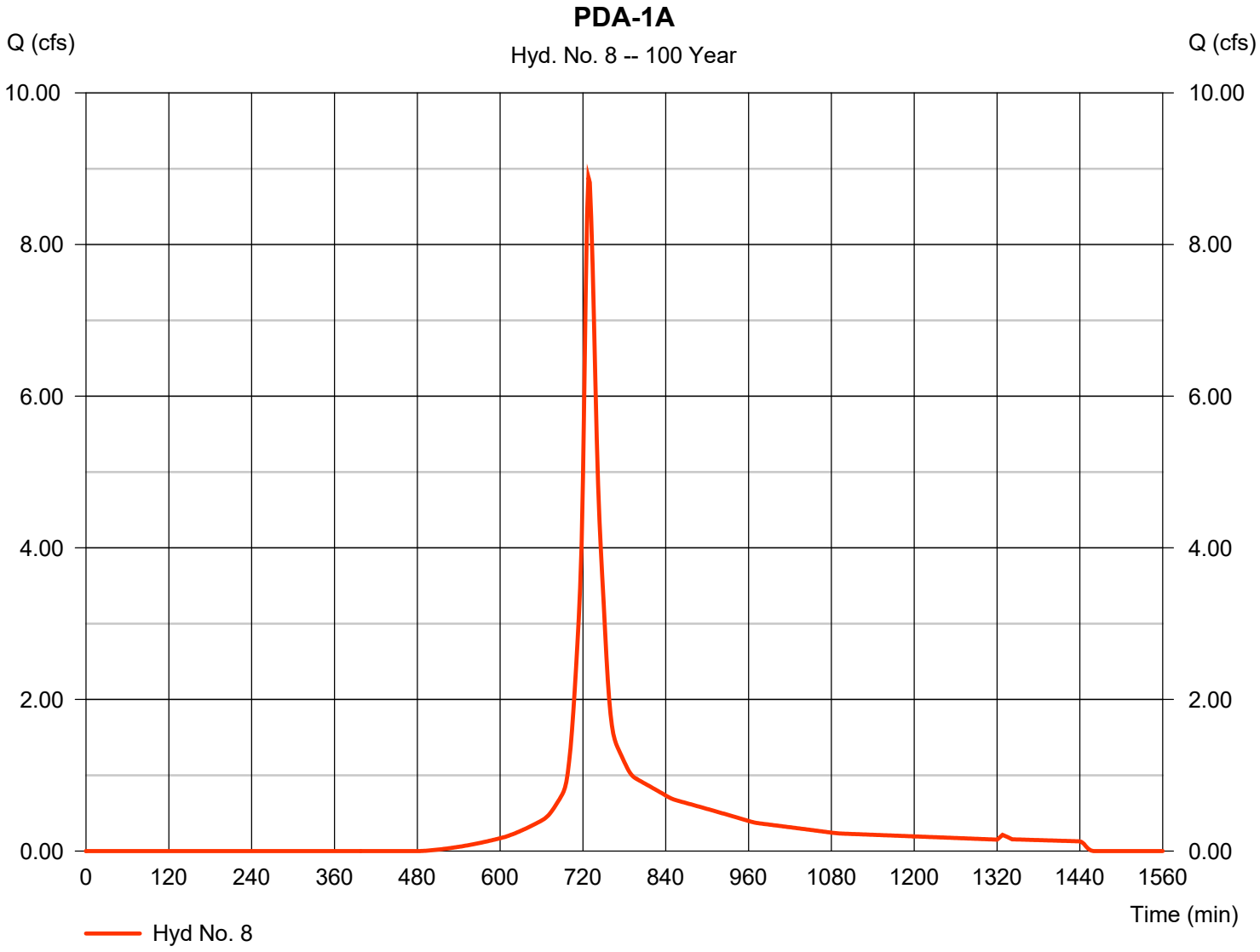
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 8

PDA-1A

Hydrograph type	=	SCS Runoff	Peak discharge	=	8.886 cfs
Storm frequency	=	100 yrs	Time to peak	=	728 min
Time interval	=	2 min	Hyd. volume	=	34,081 cuft
Drainage area	=	1.930 ac	Curve number	=	67
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	9.90 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



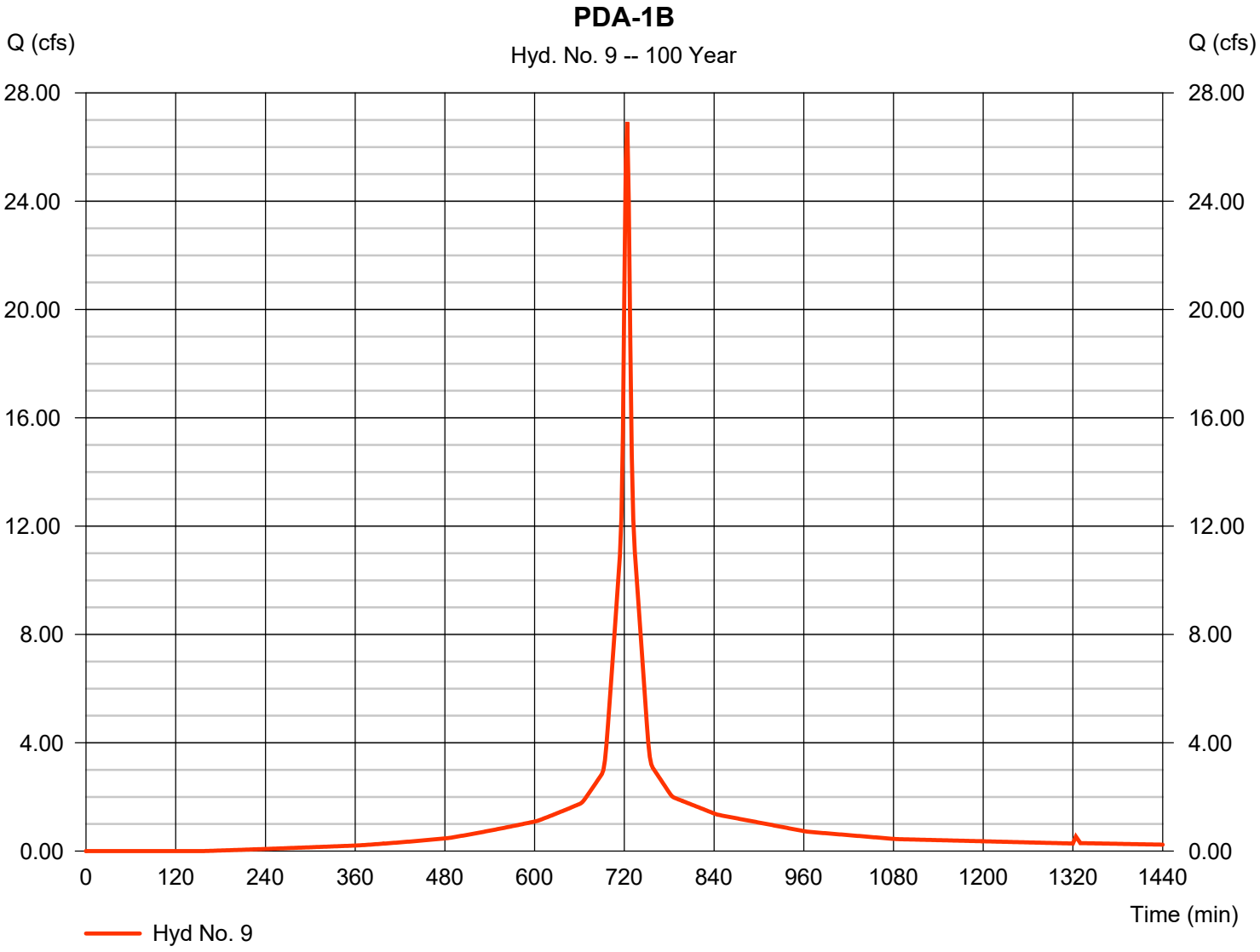
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 9

PDA-1B

Hydrograph type	=	SCS Runoff	Peak discharge	=	26.92 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	87,096 cuft
Drainage area	=	3.410 ac	Curve number	=	90
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



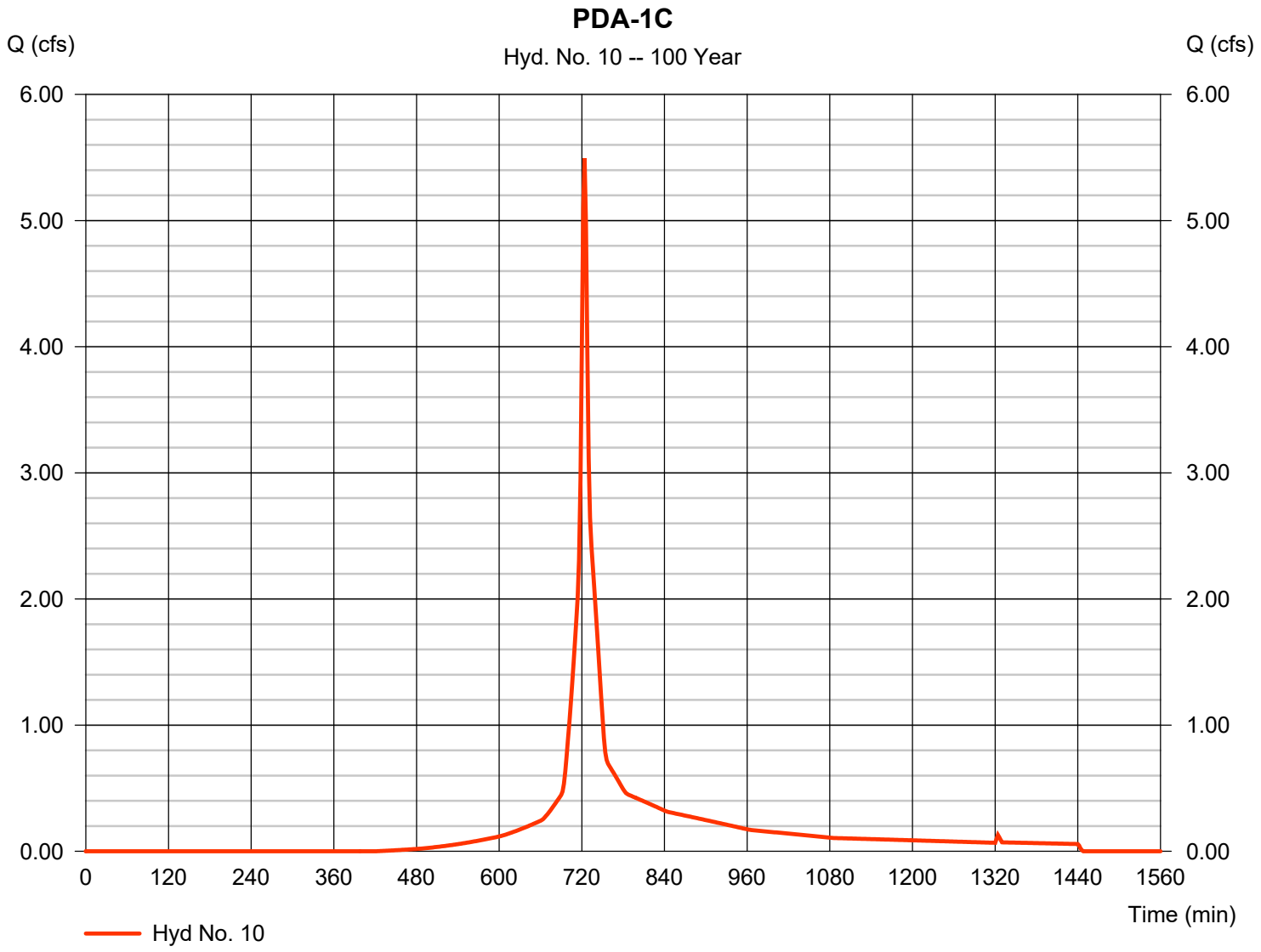
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 10

PDA-1C

Hydrograph type	=	SCS Runoff	Peak discharge	=	5.495 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	16,484 cuft
Drainage area	=	0.910 ac	Curve number	=	72
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

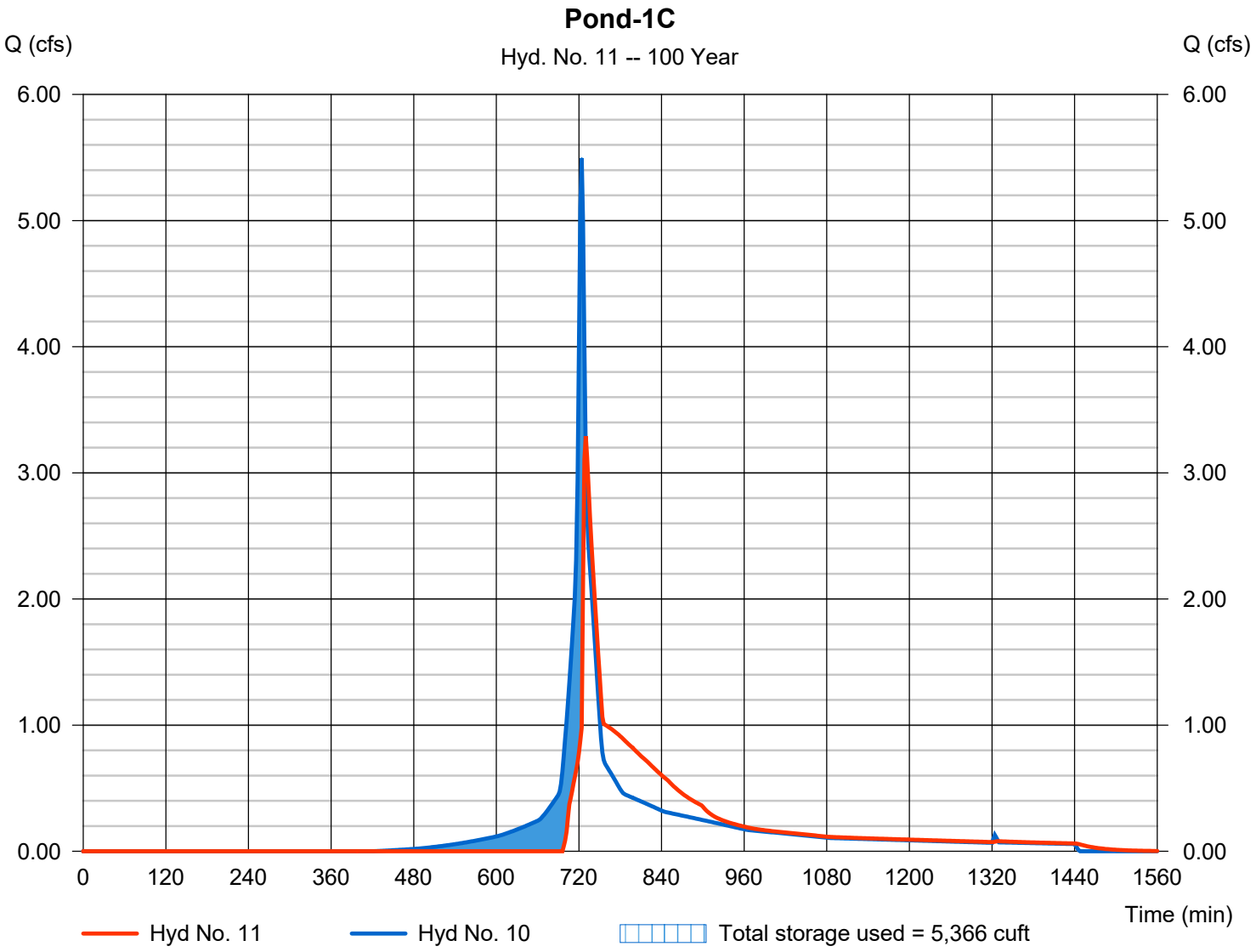
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 11

Pond-1C

Hydrograph type	=	Reservoir	Peak discharge	=	3.291 cfs
Storm frequency	=	100 yrs	Time to peak	=	730 min
Time interval	=	2 min	Hyd. volume	=	14,605 cuft
Inflow hyd. No.	=	10 - PDA-1C	Max. Elevation	=	413.21 ft
Reservoir name	=	Pond 1-C	Max. Storage	=	5,366 cuft

Storage Indication method used.



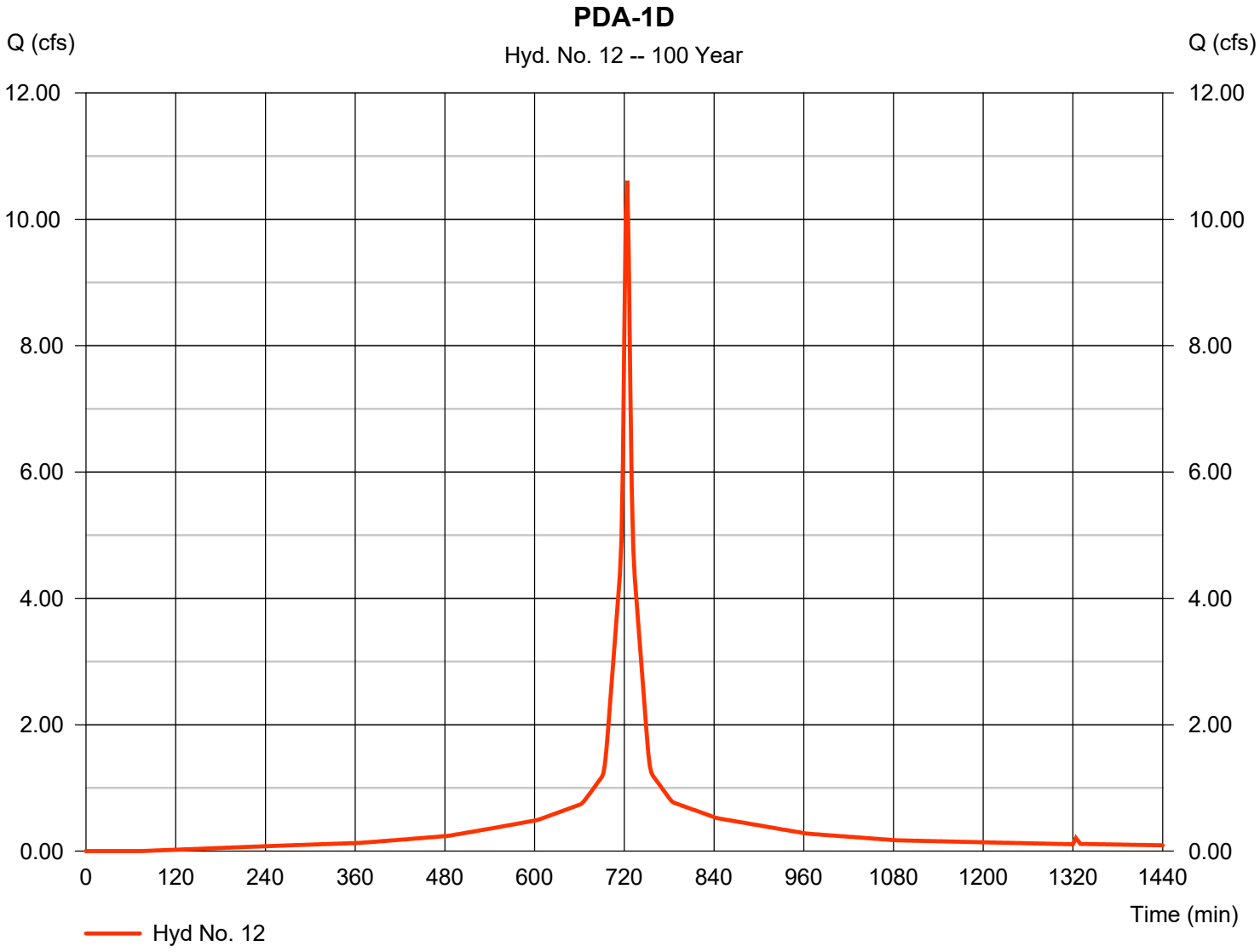
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 12

PDA-1D

Hydrograph type	=	SCS Runoff	Peak discharge	=	10.61 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	35,874 cuft
Drainage area	=	1.300 ac	Curve number	=	95
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	6.00 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

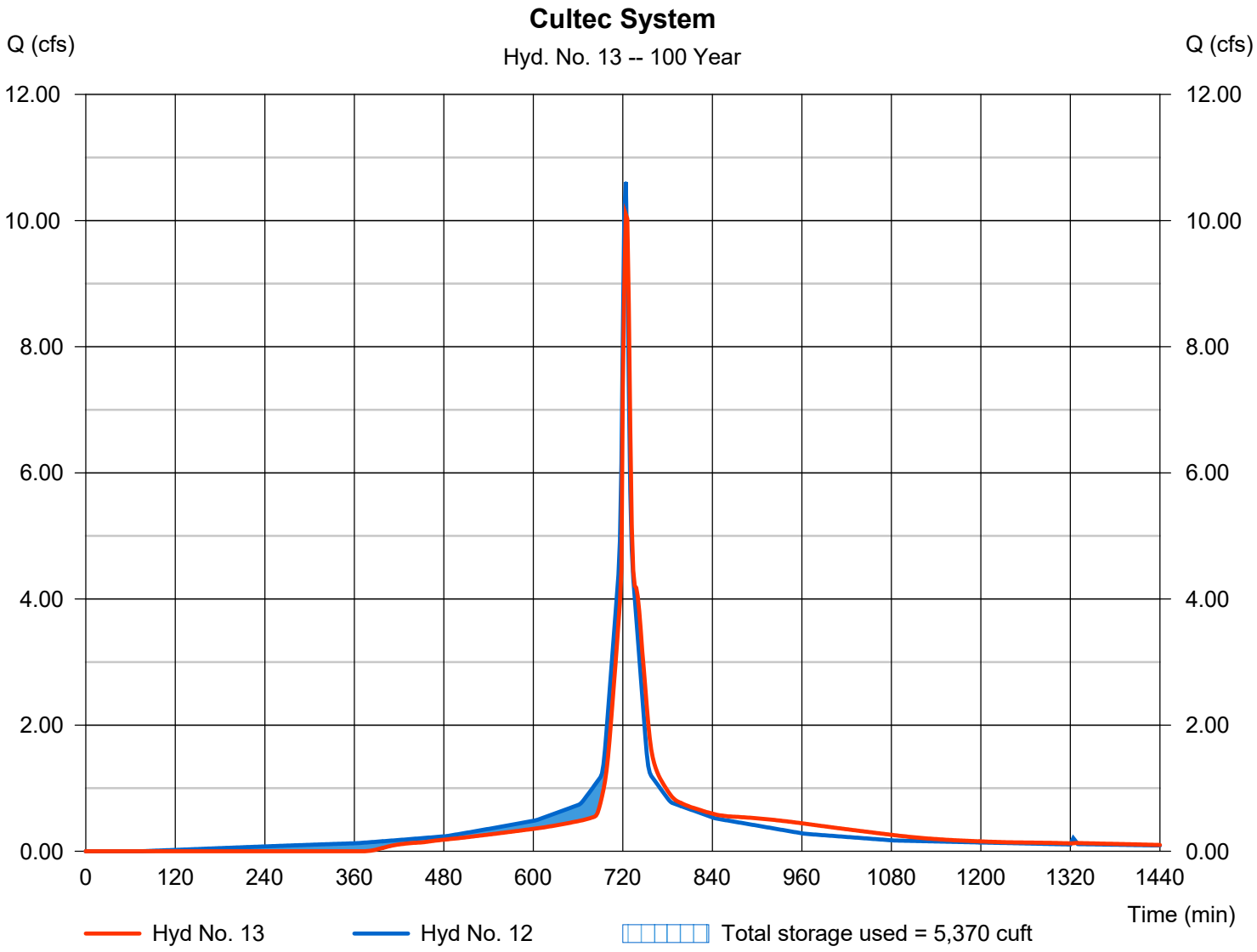
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 13

Cultec System

Hydrograph type	=	Reservoir	Peak discharge	=	10.10 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	34,638 cuft
Inflow hyd. No.	=	12 - PDA-1D	Max. Elevation	=	433.12 ft
Reservoir name	=	Cultec Recharger 330	Max. Storage	=	5,370 cuft

Storage Indication method used.

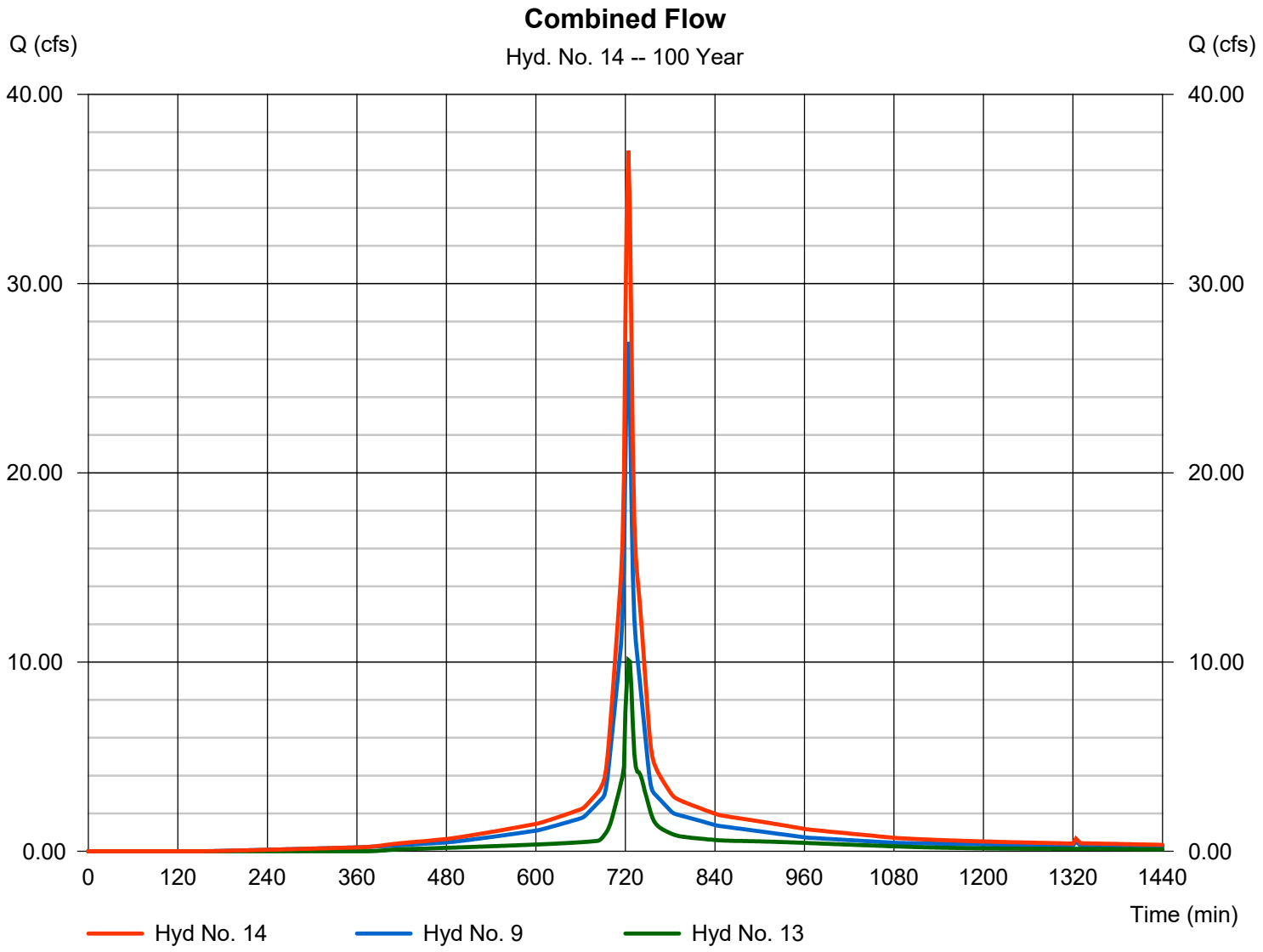


Hydrograph Report

Hyd. No. 14

Combined Flow

Hydrograph type	=	Combine	Peak discharge	=	37.01 cfs
Storm frequency	=	100 yrs	Time to peak	=	724 min
Time interval	=	2 min	Hyd. volume	=	121,734 cuft
Inflow hyds.	=	9, 13	Contrib. drain. area	=	3.410 ac



Hydrograph Report

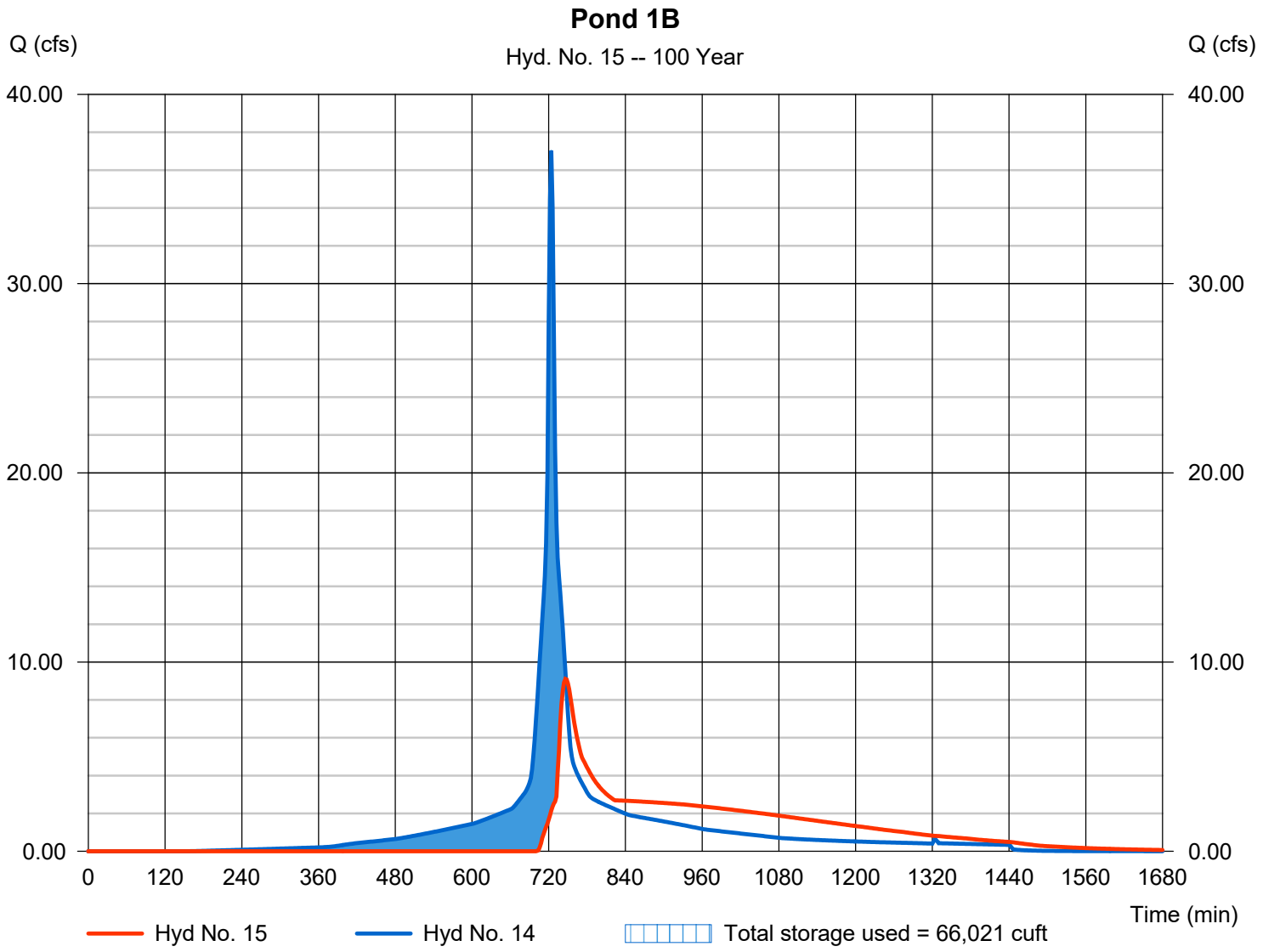
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 15

Pond 1B

Hydrograph type	=	Reservoir	Peak discharge	=	9.107 cfs
Storm frequency	=	100 yrs	Time to peak	=	746 min
Time interval	=	2 min	Hyd. volume	=	95,655 cuft
Inflow hyd. No.	=	14 - Combined Flow	Max. Elevation	=	420.80 ft
Reservoir name	=	Pond 1-B	Max. Storage	=	66,021 cuft

Storage Indication method used.



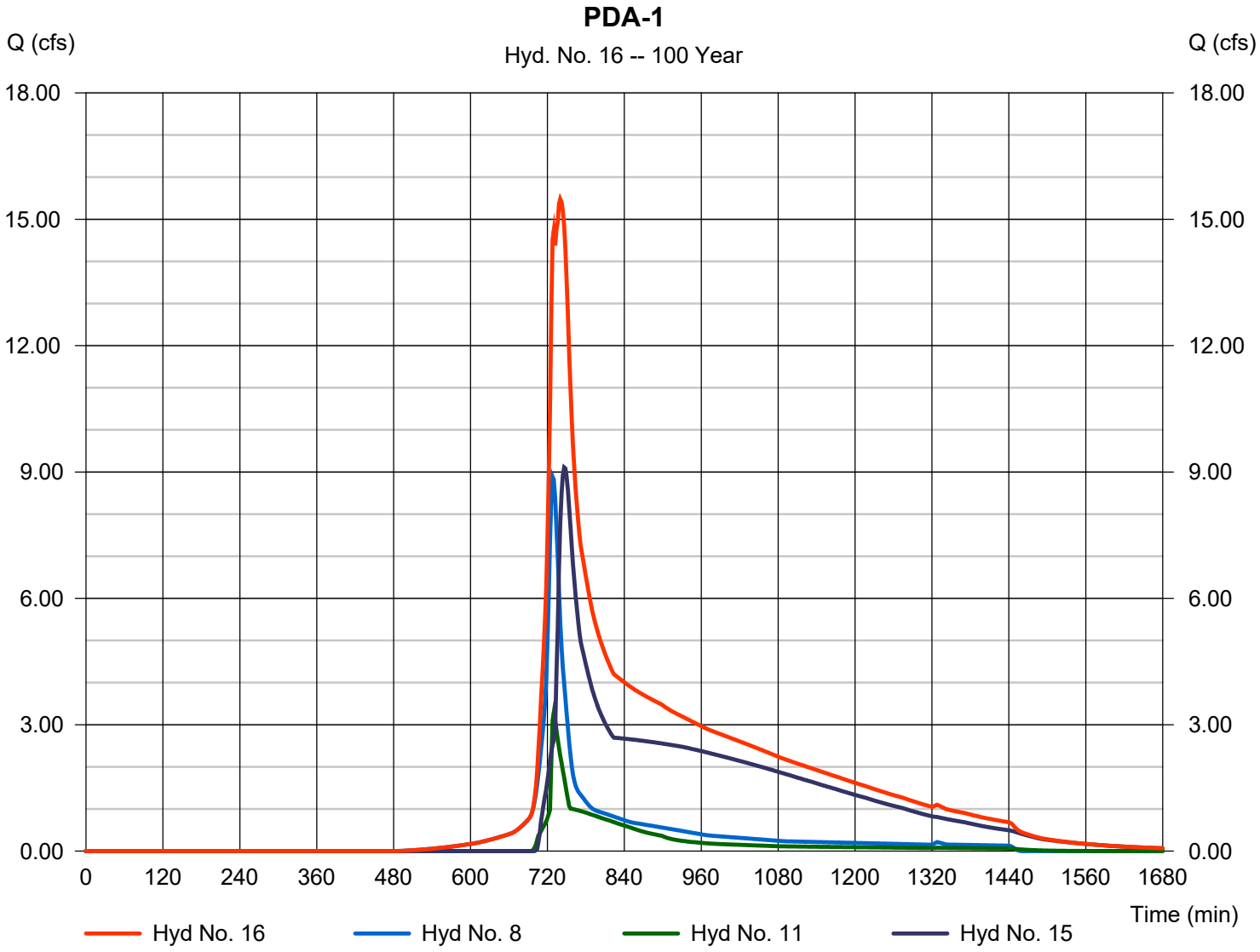
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 16

PDA-1

Hydrograph type	=	Combine	Peak discharge	=	15.48 cfs
Storm frequency	=	100 yrs	Time to peak	=	740 min
Time interval	=	2 min	Hyd. volume	=	144,341 cuft
Inflow hyds.	=	8, 11, 15	Contrib. drain. area	=	1.930 ac



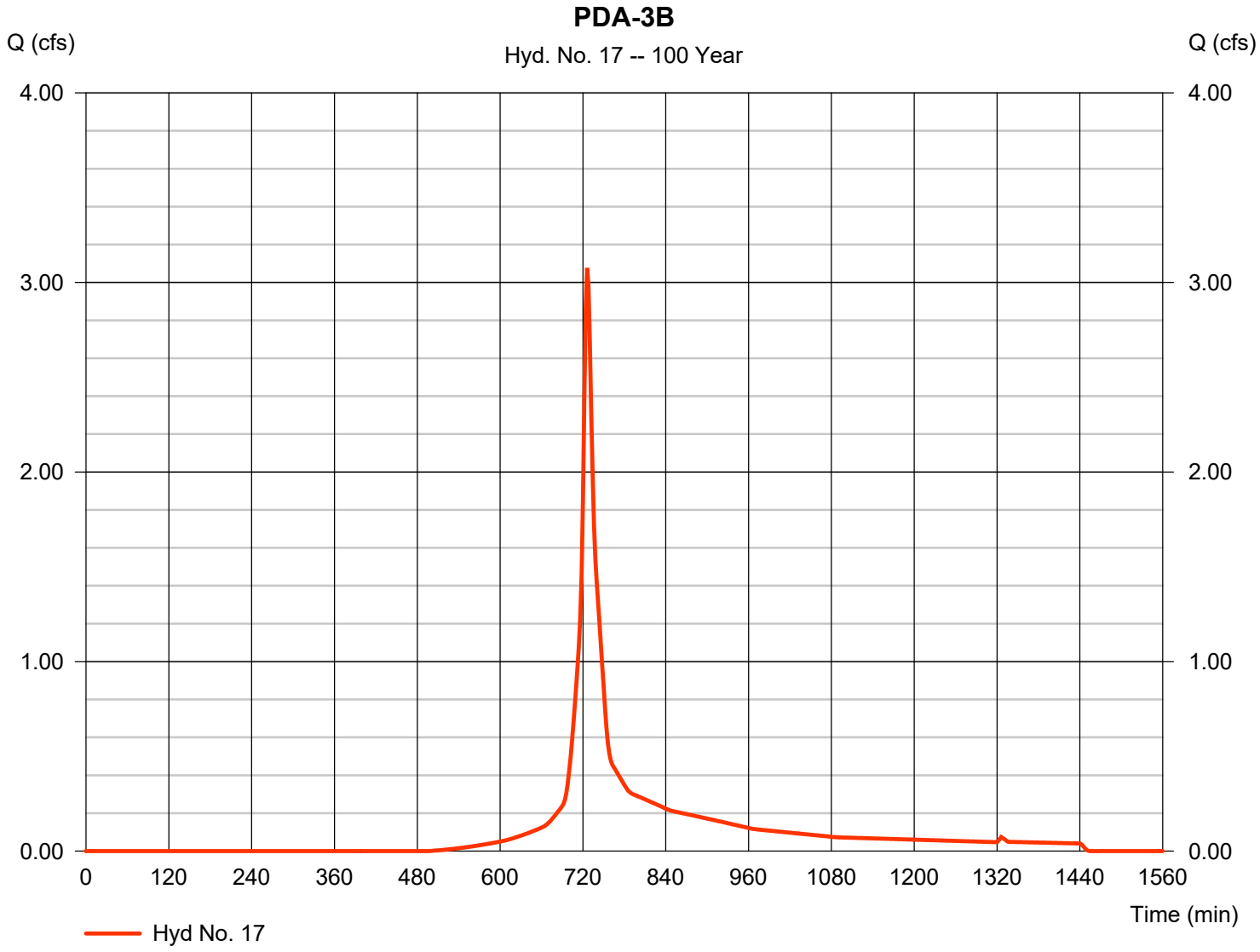
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 17

PDA-3B

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.076 cfs
Storm frequency	=	100 yrs	Time to peak	=	726 min
Time interval	=	2 min	Hyd. volume	=	10,512 cuft
Drainage area	=	0.630 ac	Curve number	=	66
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	8.23 min
Total precip.	=	8.71 in	Distribution	=	Type III
Storm duration	=	24 hrs	Shape factor	=	484



Hydrograph Report

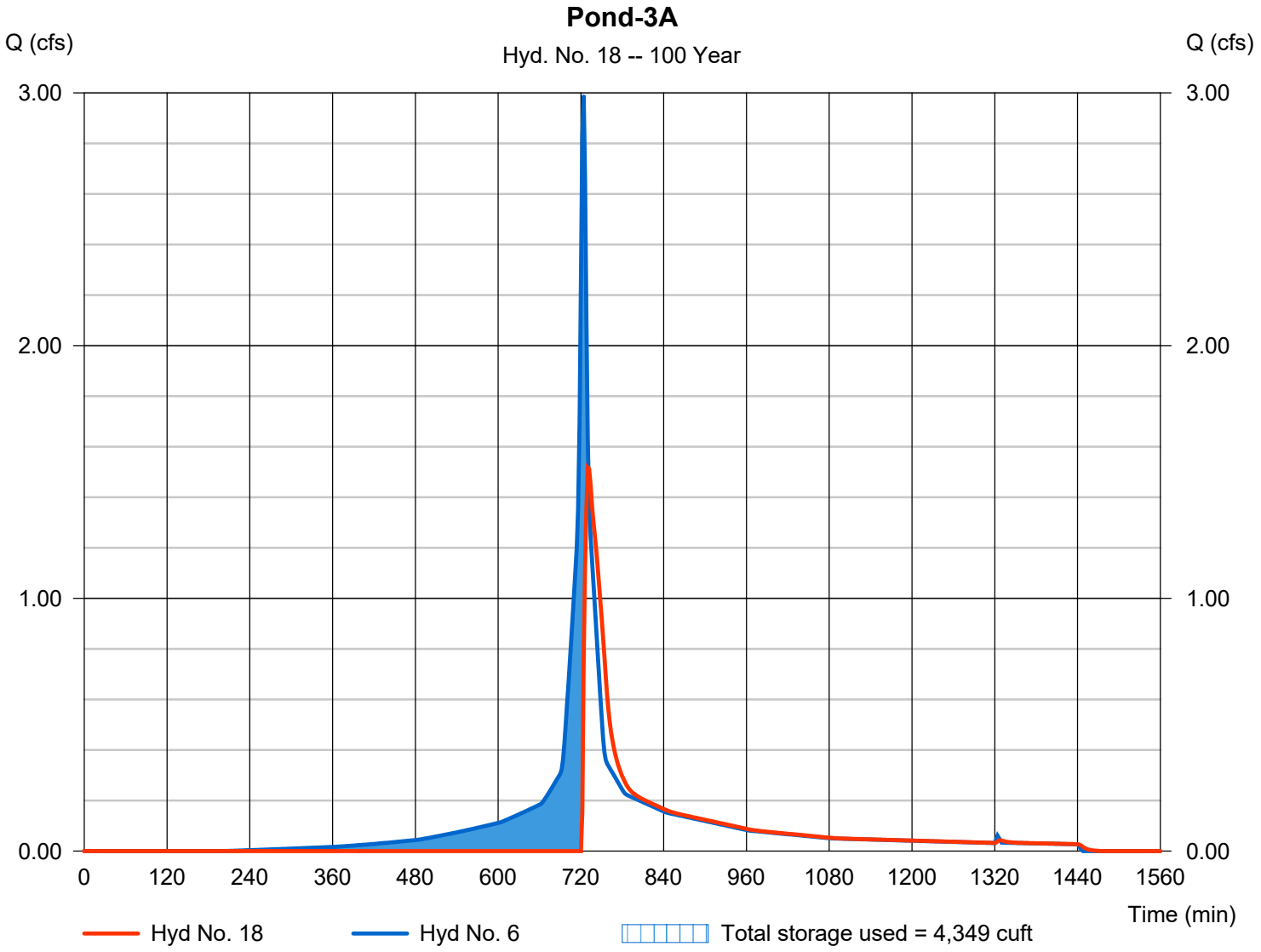
Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 18

Pond-3A

Hydrograph type	=	Reservoir	Peak discharge	=	1.518 cfs
Storm frequency	=	100 yrs	Time to peak	=	730 min
Time interval	=	2 min	Hyd. volume	=	5,914 cuft
Inflow hyd. No.	=	6 - PDA-3A	Max. Elevation	=	423.43 ft
Reservoir name	=	Pond 3A	Max. Storage	=	4,349 cuft

Storage Indication method used.



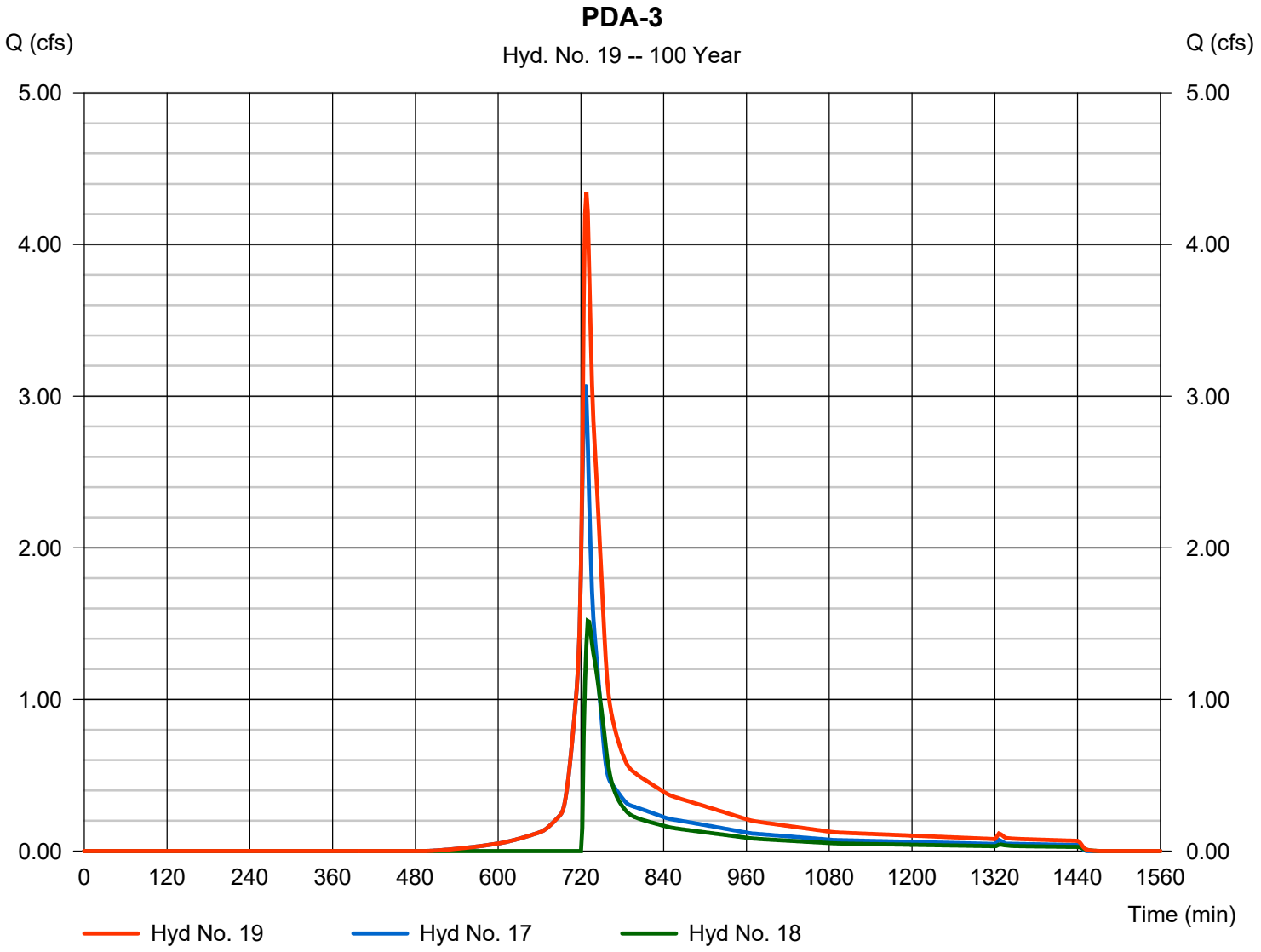
Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 19

PDA-3

Hydrograph type	= Combine	Peak discharge	= 4.346 cfs
Storm frequency	= 100 yrs	Time to peak	= 728 min
Time interval	= 2 min	Hyd. volume	= 16,426 cuft
Inflow hyds.	= 17, 18	Contrib. drain. area	= 0.630 ac



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 15

Pond 1B

Hydrograph type	= Reservoir	Peak discharge	= 9.107 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.43 hrs
Time interval	= 2 min	Hyd. volume	= 95,655 cuft
Inflow hyd. No.	= 14 - Combined Flow	Reservoir name	= Pond 1-B
Max. Elevation	= 420.80 ft	Max. Storage	= 66,021 cuft

Storage Indication method used.

Hydrograph Discharge Table

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

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
11.83	12.27	418.01	0.709	0.703	-----	-----	-----	-----	-----	-----	-----	0.703
12.00	27.90	418.82	1.672	1.669	-----	-----	-----	-----	-----	-----	-----	1.669
12.17	21.28	420.28	2.640	2.626	-----	-----	0.000	-----	-----	-----	-----	2.626
12.33	12.75	420.74	7.781	2.847	-----	-----	4.922	-----	-----	-----	-----	7.770
12.50	7.330	420.79	8.887	2.868	-----	-----	6.017	-----	-----	-----	-----	8.885
12.67	4.482	420.69	6.811	2.829	-----	-----	3.962	-----	-----	-----	-----	6.791
12.83	3.728	420.61	5.216	2.799	-----	-----	2.382	-----	-----	-----	-----	5.181
13.00	3.115	420.55	4.467	2.771	-----	-----	1.660	-----	-----	-----	-----	4.431
13.17	2.753	420.50	3.868	2.744	-----	-----	1.087	-----	-----	-----	-----	3.831
13.33	2.580	420.46	3.413	2.723	-----	-----	0.652	-----	-----	-----	-----	3.375
13.50	2.423	420.43	3.072	2.708	-----	-----	0.326	-----	-----	-----	-----	3.034
13.67	2.276	420.41	2.804	2.696	-----	-----	0.070	-----	-----	-----	-----	2.766
13.83	2.127	420.39	2.720	2.684	-----	-----	0.000	-----	-----	-----	-----	2.684
14.00	1.987	420.36	2.700	2.670	-----	-----	0.000	-----	-----	-----	-----	2.670
14.17	1.886	420.33	2.678	2.653	-----	-----	0.000	-----	-----	-----	-----	2.653
14.33	1.818	420.29	2.653	2.635	-----	-----	0.000	-----	-----	-----	-----	2.635
14.50	1.758	420.26	2.627	2.616	-----	-----	0.000	-----	-----	-----	-----	2.616
14.67	1.699	420.22	2.599	2.596	-----	-----	0.000	-----	-----	-----	-----	2.596
14.83	1.638	420.18	2.578	2.574	-----	-----	-----	-----	-----	-----	-----	2.574
15.00	1.576	420.14	2.563	2.551	-----	-----	-----	-----	-----	-----	-----	2.551

Continues on next page...

Hydrograph Discharge Table

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
15.17	1.513	420.10	2.548	2.527	-----	-----	-----	-----	-----	-----	-----	2.527
15.33	1.448	420.05	2.532	2.503	-----	-----	-----	-----	-----	-----	-----	2.503
15.50	1.383	420.01	2.515	2.477	-----	-----	-----	-----	-----	-----	-----	2.477
15.67	1.316	419.95	2.477	2.444	-----	-----	-----	-----	-----	-----	-----	2.444
15.83	1.249	419.89	2.435	2.410	-----	-----	-----	-----	-----	-----	-----	2.410
16.00	1.181	419.83	2.392	2.374	-----	-----	-----	-----	-----	-----	-----	2.374
16.17	1.131	419.77	2.349	2.337	-----	-----	-----	-----	-----	-----	-----	2.337
16.33	1.092	419.71	2.306	2.299	-----	-----	-----	-----	-----	-----	-----	2.299
16.50	1.053	419.64	2.264	2.261	-----	-----	-----	-----	-----	-----	-----	2.261
16.67	1.015	419.58	2.222	2.222	-----	-----	-----	-----	-----	-----	-----	2.222
16.83	0.976	419.52	2.181	2.181	-----	-----	-----	-----	-----	-----	-----	2.181
17.00	0.938	419.46	2.141	2.141	-----	-----	-----	-----	-----	-----	-----	2.141
17.17	0.900	419.40	2.100	2.100	-----	-----	-----	-----	-----	-----	-----	2.100
17.33	0.862	419.33	2.057	2.057	-----	-----	-----	-----	-----	-----	-----	2.057
17.50	0.824	419.27	2.015	2.015	-----	-----	-----	-----	-----	-----	-----	2.015
17.67	0.787	419.21	1.972	1.972	-----	-----	-----	-----	-----	-----	-----	1.972
17.83	0.749	419.15	1.933	1.927	-----	-----	-----	-----	-----	-----	-----	1.927
18.00	0.712	419.09	1.894	1.882	-----	-----	-----	-----	-----	-----	-----	1.882
18.17	0.685	419.03	1.856	1.837	-----	-----	-----	-----	-----	-----	-----	1.837
18.33	0.665	418.97	1.810	1.791	-----	-----	-----	-----	-----	-----	-----	1.791
18.50	0.646	418.91	1.757	1.744	-----	-----	-----	-----	-----	-----	-----	1.744
18.67	0.629	418.86	1.705	1.699	-----	-----	-----	-----	-----	-----	-----	1.699
18.83	0.612	418.80	1.655	1.655	-----	-----	-----	-----	-----	-----	-----	1.655
19.00	0.597	418.75	1.609	1.607	-----	-----	-----	-----	-----	-----	-----	1.607
19.17	0.582	418.70	1.564	1.561	-----	-----	-----	-----	-----	-----	-----	1.561
19.33	0.568	418.65	1.521	1.516	-----	-----	-----	-----	-----	-----	-----	1.516
19.50	0.555	418.60	1.479	1.472	-----	-----	-----	-----	-----	-----	-----	1.472
19.67	0.542	418.55	1.429	1.425	-----	-----	-----	-----	-----	-----	-----	1.425

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
19.83	0.530	418.51	1.382	1.378	-----	-----	-----	-----	-----	-----	-----	1.378
20.00	0.518	418.47	1.336	1.334	-----	-----	-----	-----	-----	-----	-----	1.334
20.17	0.507	418.43	1.292	1.292	-----	-----	-----	-----	-----	-----	-----	1.292
20.33	0.496	418.39	1.248	1.248	-----	-----	-----	-----	-----	-----	-----	1.248
20.50	0.486	418.35	1.201	1.201	-----	-----	-----	-----	-----	-----	-----	1.201
20.67	0.476	418.31	1.157	1.157	-----	-----	-----	-----	-----	-----	-----	1.157
20.83	0.468	418.28	1.114	1.114	-----	-----	-----	-----	-----	-----	-----	1.114
21.00	0.460	418.25	1.074	1.074	-----	-----	-----	-----	-----	-----	-----	1.074
21.17	0.451	418.21	1.036	1.036	-----	-----	-----	-----	-----	-----	-----	1.036
21.33	0.442	418.19	0.993	0.993	-----	-----	-----	-----	-----	-----	-----	0.993
21.50	0.434	418.16	0.948	0.947	-----	-----	-----	-----	-----	-----	-----	0.947
21.67	0.425	418.13	0.906	0.904	-----	-----	-----	-----	-----	-----	-----	0.904
21.83	0.415	418.11	0.866	0.863	-----	-----	-----	-----	-----	-----	-----	0.863
22.00	0.404	418.09	0.829	0.826	-----	-----	-----	-----	-----	-----	-----	0.826
22.17	0.425	418.07	0.806	0.802	-----	-----	-----	-----	-----	-----	-----	0.802
22.33	0.417	418.05	0.774	0.770	-----	-----	-----	-----	-----	-----	-----	0.770
22.50	0.409	418.04	0.745	0.740	-----	-----	-----	-----	-----	-----	-----	0.740
22.67	0.401	418.02	0.718	0.712	-----	-----	-----	-----	-----	-----	-----	0.712
22.83	0.393	418.00	0.692	0.686	-----	-----	-----	-----	-----	-----	-----	0.686
23.00	0.385	417.99	0.658	0.653	-----	-----	-----	-----	-----	-----	-----	0.653
23.17	0.377	417.97	0.625	0.620	-----	-----	-----	-----	-----	-----	-----	0.620
23.33	0.370	417.95	0.595	0.590	-----	-----	-----	-----	-----	-----	-----	0.590
23.50	0.361	417.94	0.568	0.563	-----	-----	-----	-----	-----	-----	-----	0.563
23.67	0.353	417.93	0.543	0.538	-----	-----	-----	-----	-----	-----	-----	0.538
23.83	0.345	417.92	0.520	0.515	-----	-----	-----	-----	-----	-----	-----	0.515
24.00	0.338	417.91	0.499	0.494	-----	-----	-----	-----	-----	-----	-----	0.494
24.17	0.083	417.89	0.461	0.456	-----	-----	-----	-----	-----	-----	-----	0.456
24.33	0.060	417.86	0.414	0.409	-----	-----	-----	-----	-----	-----	-----	0.409

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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
24.50	0.045	417.84	0.370	0.366	-----	-----	-----	-----	-----	-----	-----	0.366
24.67	0.035	417.82	0.331	0.326	-----	-----	-----	-----	-----	-----	-----	0.326
24.83	0.027	417.80	0.295	0.291	-----	-----	-----	-----	-----	-----	-----	0.291
25.00	0.022	417.79	0.272	0.268	-----	-----	-----	-----	-----	-----	-----	0.268
25.17	0.018	417.77	0.252	0.249	-----	-----	-----	-----	-----	-----	-----	0.249
25.33	0.015	417.76	0.234	0.230	-----	-----	-----	-----	-----	-----	-----	0.230
25.50	0.013	417.74	0.216	0.213	-----	-----	-----	-----	-----	-----	-----	0.213
25.67	0.011	417.73	0.200	0.197	-----	-----	-----	-----	-----	-----	-----	0.197
25.83	0.009	417.72	0.185	0.183	-----	-----	-----	-----	-----	-----	-----	0.183
26.00	0.008	417.71	0.171	0.169	-----	-----	-----	-----	-----	-----	-----	0.169
26.17	0.007	417.70	0.158	0.156	-----	-----	-----	-----	-----	-----	-----	0.156
26.33	0.006	417.69	0.146	0.144	-----	-----	-----	-----	-----	-----	-----	0.144
26.50	0.006	417.68	0.135	0.133	-----	-----	-----	-----	-----	-----	-----	0.133
26.67	0.005	417.67	0.125	0.123	-----	-----	-----	-----	-----	-----	-----	0.123
26.83	0.005	417.66	0.115	0.114	-----	-----	-----	-----	-----	-----	-----	0.114
27.00	0.005	417.66	0.107	0.105	-----	-----	-----	-----	-----	-----	-----	0.105
27.17	0.004	417.65	0.099	0.097	-----	-----	-----	-----	-----	-----	-----	0.097

...End

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Pond No. 2 - Pond 1-B

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 414.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	414.00	5,594	0	0
2.00	416.00	7,674	13,212	13,212
4.00	418.00	10,722	18,309	31,521
6.00	420.00	12,581	23,276	54,797
8.00	422.00	15,436	27,966	82,763

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	8.00	0.00	0.00
Span (in)	= 18.00	8.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 416.00	417.50	0.00	0.00
Length (ft)	= 65.00	0.67	0.00	0.00
Slope (%)	= 9.20	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 7.33	25.00	0.00	0.00
Crest El. (ft)	= 420.40	421.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 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	414.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.20	1,321	414.20	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.40	2,642	414.40	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.60	3,964	414.60	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.80	5,285	414.80	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.00	6,606	415.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.20	7,927	415.20	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.40	9,248	415.40	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.60	10,570	415.60	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.80	11,891	415.80	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
2.00	13,212	416.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
2.20	15,043	416.20	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
2.40	16,874	416.40	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
2.60	18,705	416.60	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
2.80	20,536	416.80	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
3.00	22,367	417.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
3.20	24,198	417.20	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
3.40	26,029	417.40	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
3.60	27,860	417.60	0.04 ic	0.04 ic	---	---	0.00	0.00	---	---	---	---	0.036
3.80	29,690	417.80	0.29 ic	0.29 ic	---	---	0.00	0.00	---	---	---	---	0.287
4.00	31,521	418.00	0.69 ic	0.68 ic	---	---	0.00	0.00	---	---	---	---	0.680
4.20	33,849	418.20	1.02 ic	1.02 ic	---	---	0.00	0.00	---	---	---	---	1.018
4.40	36,177	418.40	1.27 ic	1.27 ic	---	---	0.00	0.00	---	---	---	---	1.265
4.60	38,504	418.60	1.48 ic	1.47 ic	---	---	0.00	0.00	---	---	---	---	1.472
4.80	40,832	418.80	1.65 ic	1.65 ic	---	---	0.00	0.00	---	---	---	---	1.652
5.00	43,159	419.00	1.84 ic	1.82 ic	---	---	0.00	0.00	---	---	---	---	1.815
5.20	45,487	419.20	1.97 ic	1.96 ic	---	---	0.00	0.00	---	---	---	---	1.965
5.40	47,815	419.40	2.10 ic	2.10 ic	---	---	0.00	0.00	---	---	---	---	2.104
5.60	50,142	419.60	2.23 ic	2.23 ic	---	---	0.00	0.00	---	---	---	---	2.234
5.80	52,470	419.80	2.37 ic	2.36 ic	---	---	0.00	0.00	---	---	---	---	2.357
6.00	54,797	420.00	2.51 ic	2.47 ic	---	---	0.00	0.00	---	---	---	---	2.474
6.20	57,594	420.20	2.59 ic	2.59 ic	---	---	0.00	0.00	---	---	---	---	2.585
6.40	60,390	420.40	2.73 ic	2.69 ic	---	---	0.00	0.00	---	---	---	---	2.692
6.60	63,187	420.60	5.01 ic	2.80 ic	---	---	2.18	0.00	---	---	---	---	4.979
6.80	65,984	420.80	9.05 ic	2.87 ic	---	---	6.18	0.00	---	---	---	---	9.048
7.00	68,780	421.00	13.55 ic	2.20 ic	---	---	11.35	0.00	---	---	---	---	13.55
7.20	71,577	421.20	16.92 ic	1.18 ic	---	---	15.74 s	5.82	---	---	---	---	22.74
7.40	74,373	421.40	17.79 ic	0.88 ic	---	---	16.91 s	16.45	---	---	---	---	34.24

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Pond 1-B

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
7.60	77,170	421.60	18.39 ic	0.71 ic	---	---	17.68 s	30.22	---	---	---	---	48.61
7.80	79,966	421.80	18.89 ic	0.59 ic	---	---	18.30 s	46.52	---	---	---	---	65.41
8.00	82,763	422.00	19.33 ic	0.50 ic	---	---	18.83 s	65.00	---	---	---	---	84.33

...End

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Pond No. 2 - Pond 1-B

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 414.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	414.00	5,594	0	0
2.00	416.00	7,674	13,212	13,212
4.00	418.00	10,722	18,309	31,521
6.00	420.00	12,581	23,276	54,797
8.00	422.00	15,436	27,966	82,763

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	8.00	0.00	0.00
Span (in)	= 18.00	8.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 416.00	417.50	0.00	0.00
Length (ft)	= 65.00	0.67	0.00	0.00
Slope (%)	= 9.20	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

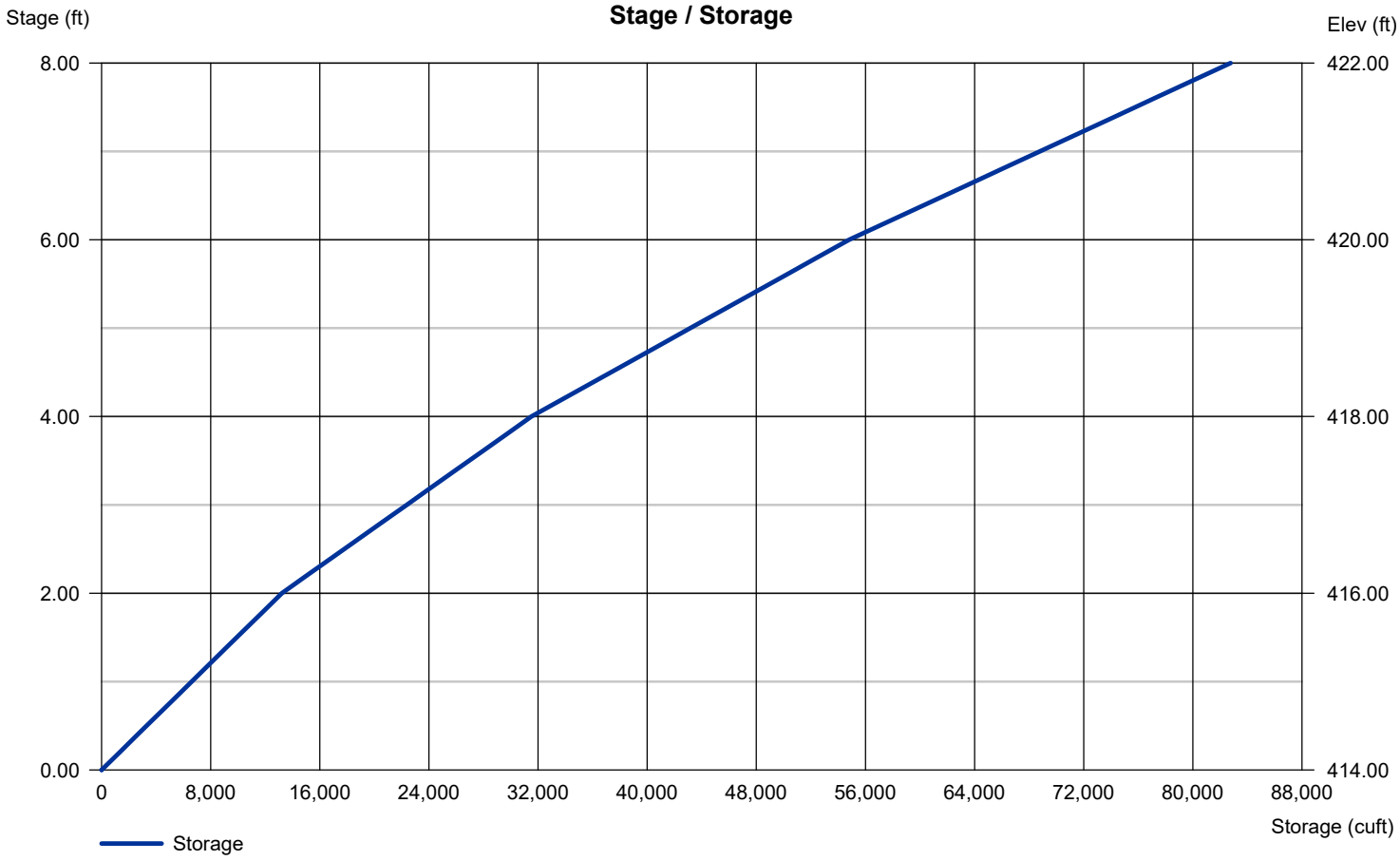
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 7.33	25.00	0.00	0.00
Crest El. (ft)	= 420.40	421.00	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 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).



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 11

Pond-1C

Hydrograph type	= Reservoir	Peak discharge	= 3.291 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 14,605 cuft
Inflow hyd. No.	= 10 - PDA-1C	Reservoir name	= Pond 1-C
Max. Elevation	= 413.21 ft	Max. Storage	= 5,366 cuft

Storage Indication method used.

Hydrograph Discharge Table

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

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
11.67	0.891	411.75	0.086	0.085	-----	-----	-----	-----	-----	-----	-----	0.085
11.83	1.657	412.11	0.475	0.474	-----	-----	-----	-----	-----	-----	-----	0.474
12.00	4.016	412.54	0.783	0.782	-----	-----	-----	-----	-----	-----	-----	0.782
12.17	3.118	413.21 <<	3.291	0.962	-----	-----	2.328	-----	-----	-----	-----	3.291
<<												
12.33	1.923	413.12	2.267	1.002	-----	-----	1.266	-----	-----	-----	-----	2.267
12.50	1.060	413.04	1.397	1.010	-----	-----	0.386	-----	-----	-----	-----	1.396
12.67	0.677	412.96	0.996	0.996	-----	-----	0.000	-----	-----	-----	-----	0.996
12.83	0.585	412.88	0.958	0.958	-----	-----	0.000	-----	-----	-----	-----	0.958
13.00	0.493	412.78	0.913	0.913	-----	-----	-----	-----	-----	-----	-----	0.913
13.17	0.443	412.68	0.861	0.860	-----	-----	-----	-----	-----	-----	-----	0.860
13.33	0.420	412.58	0.809	0.809	-----	-----	-----	-----	-----	-----	-----	0.809
13.50	0.396	412.49	0.757	0.756	-----	-----	-----	-----	-----	-----	-----	0.756
13.67	0.372	412.41	0.708	0.707	-----	-----	-----	-----	-----	-----	-----	0.707
13.83	0.347	412.33	0.655	0.654	-----	-----	-----	-----	-----	-----	-----	0.654
14.00	0.323	412.26	0.605	0.604	-----	-----	-----	-----	-----	-----	-----	0.604
14.17	0.306	412.20	0.559	0.558	-----	-----	-----	-----	-----	-----	-----	0.558
14.33	0.295	412.14	0.505	0.503	-----	-----	-----	-----	-----	-----	-----	0.503
14.50	0.283	412.10	0.460	0.458	-----	-----	-----	-----	-----	-----	-----	0.458
14.67	0.271	412.06	0.422	0.420	-----	-----	-----	-----	-----	-----	-----	0.420
14.83	0.259	412.03	0.389	0.387	-----	-----	-----	-----	-----	-----	-----	0.387

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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
15.00	0.247	411.99	0.355	0.353	-----	-----	-----	-----	-----	-----	-----	0.353
15.17	0.235	411.95	0.302	0.300	-----	-----	-----	-----	-----	-----	-----	0.300
15.33	0.223	411.92	0.268	0.266	-----	-----	-----	-----	-----	-----	-----	0.266
15.50	0.211	411.90	0.245	0.243	-----	-----	-----	-----	-----	-----	-----	0.243
15.67	0.199	411.89	0.227	0.225	-----	-----	-----	-----	-----	-----	-----	0.225
15.83	0.186	411.88	0.211	0.209	-----	-----	-----	-----	-----	-----	-----	0.209
16.00	0.174	411.87	0.197	0.195	-----	-----	-----	-----	-----	-----	-----	0.195
16.17	0.166	411.86	0.185	0.183	-----	-----	-----	-----	-----	-----	-----	0.183
16.33	0.161	411.85	0.176	0.174	-----	-----	-----	-----	-----	-----	-----	0.174
16.50	0.156	411.84	0.168	0.166	-----	-----	-----	-----	-----	-----	-----	0.166
16.67	0.150	411.84	0.162	0.160	-----	-----	-----	-----	-----	-----	-----	0.160
16.83	0.145	411.83	0.156	0.154	-----	-----	-----	-----	-----	-----	-----	0.154
17.00	0.140	411.83	0.150	0.148	-----	-----	-----	-----	-----	-----	-----	0.148
17.17	0.134	411.82	0.145	0.143	-----	-----	-----	-----	-----	-----	-----	0.143
17.33	0.129	411.82	0.140	0.138	-----	-----	-----	-----	-----	-----	-----	0.138
17.50	0.124	411.81	0.134	0.132	-----	-----	-----	-----	-----	-----	-----	0.132
17.67	0.118	411.81	0.129	0.127	-----	-----	-----	-----	-----	-----	-----	0.127
17.83	0.113	411.81	0.123	0.121	-----	-----	-----	-----	-----	-----	-----	0.121
18.00	0.107	411.80	0.118	0.116	-----	-----	-----	-----	-----	-----	-----	0.116
18.17	0.104	411.80	0.114	0.112	-----	-----	-----	-----	-----	-----	-----	0.112
18.33	0.103	411.79	0.112	0.110	-----	-----	-----	-----	-----	-----	-----	0.110
18.50	0.101	411.79	0.110	0.108	-----	-----	-----	-----	-----	-----	-----	0.108
18.67	0.100	411.79	0.108	0.106	-----	-----	-----	-----	-----	-----	-----	0.106
18.83	0.098	411.78	0.106	0.104	-----	-----	-----	-----	-----	-----	-----	0.104
19.00	0.096	411.78	0.104	0.103	-----	-----	-----	-----	-----	-----	-----	0.103
19.17	0.095	411.78	0.102	0.101	-----	-----	-----	-----	-----	-----	-----	0.101
19.33	0.093	411.77	0.101	0.099	-----	-----	-----	-----	-----	-----	-----	0.099
19.50	0.092	411.77	0.099	0.097	-----	-----	-----	-----	-----	-----	-----	0.097

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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
19.67	0.090	411.77	0.097	0.096	-----	-----	-----	-----	-----	-----	-----	0.096
19.83	0.088	411.76	0.096	0.094	-----	-----	-----	-----	-----	-----	-----	0.094
20.00	0.087	411.76	0.094	0.092	-----	-----	-----	-----	-----	-----	-----	0.092
20.17	0.085	411.76	0.092	0.091	-----	-----	-----	-----	-----	-----	-----	0.091
20.33	0.084	411.76	0.091	0.089	-----	-----	-----	-----	-----	-----	-----	0.089
20.50	0.082	411.75	0.089	0.087	-----	-----	-----	-----	-----	-----	-----	0.087
20.67	0.080	411.75	0.087	0.086	-----	-----	-----	-----	-----	-----	-----	0.086
20.83	0.079	411.75	0.086	0.084	-----	-----	-----	-----	-----	-----	-----	0.084
21.00	0.077	411.74	0.084	0.083	-----	-----	-----	-----	-----	-----	-----	0.083
21.17	0.075	411.74	0.082	0.081	-----	-----	-----	-----	-----	-----	-----	0.081
21.33	0.074	411.74	0.081	0.079	-----	-----	-----	-----	-----	-----	-----	0.079
21.50	0.072	411.74	0.079	0.078	-----	-----	-----	-----	-----	-----	-----	0.078
21.67	0.070	411.73	0.077	0.076	-----	-----	-----	-----	-----	-----	-----	0.076
21.83	0.069	411.73	0.076	0.074	-----	-----	-----	-----	-----	-----	-----	0.074
22.00	0.067	411.73	0.074	0.073	-----	-----	-----	-----	-----	-----	-----	0.073
22.17	0.071	411.74	0.081	0.080	-----	-----	-----	-----	-----	-----	-----	0.080
22.33	0.070	411.74	0.078	0.077	-----	-----	-----	-----	-----	-----	-----	0.077
22.50	0.068	411.73	0.076	0.075	-----	-----	-----	-----	-----	-----	-----	0.075
22.67	0.067	411.73	0.074	0.073	-----	-----	-----	-----	-----	-----	-----	0.073
22.83	0.066	411.73	0.073	0.071	-----	-----	-----	-----	-----	-----	-----	0.071
23.00	0.065	411.72	0.071	0.070	-----	-----	-----	-----	-----	-----	-----	0.070
23.17	0.063	411.72	0.070	0.068	-----	-----	-----	-----	-----	-----	-----	0.068
23.33	0.062	411.72	0.068	0.067	-----	-----	-----	-----	-----	-----	-----	0.067
23.50	0.061	411.72	0.067	0.066	-----	-----	-----	-----	-----	-----	-----	0.066
23.67	0.060	411.71	0.065	0.064	-----	-----	-----	-----	-----	-----	-----	0.064
23.83	0.058	411.71	0.064	0.063	-----	-----	-----	-----	-----	-----	-----	0.063
24.00	0.057	411.71	0.063	0.062	-----	-----	-----	-----	-----	-----	-----	0.062
24.17	0.000	411.69	0.052	0.051	-----	-----	-----	-----	-----	-----	-----	0.051

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Pond-1C

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
24.33	0.000	411.67	0.039	0.038	-----	-----	-----	-----	-----	-----	-----	0.038

...End

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Pond No. 1 - Pond 1-C

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 410.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	410.00	671	0	0
2.00	412.00	1,761	2,346	2,346
4.00	414.00	3,311	4,991	7,336
4.50	414.50	4,364	1,913	9,249

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	6.00	0.00	0.00
Span (in)	= 12.00	6.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 410.50	411.60	0.00	0.00
Length (ft)	= 28.00	0.50	0.00	0.00
Slope (%)	= 0.02	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 7.33	10.00	0.00	0.00
Crest El. (ft)	= 413.00	413.50	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 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	410.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.20	235	410.20	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.40	469	410.40	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.60	704	410.60	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
0.80	938	410.80	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.00	1,173	411.00	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.20	1,407	411.20	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.40	1,642	411.40	0.00	0.00	---	---	0.00	0.00	---	---	---	---	0.000
1.60	1,877	411.60	0.00 oc	0.00 ic	---	---	0.00	0.00	---	---	---	---	0.000
1.80	2,111	411.80	0.12 oc	0.11 ic	---	---	0.00	0.00	---	---	---	---	0.114
2.00	2,346	412.00	0.36 oc	0.36 ic	---	---	0.00	0.00	---	---	---	---	0.363
2.20	2,845	412.20	0.56 oc	0.56 ic	---	---	0.00	0.00	---	---	---	---	0.559
2.40	3,344	412.40	0.70 oc	0.70 ic	---	---	0.00	0.00	---	---	---	---	0.701
2.60	3,843	412.60	0.82 oc	0.82 ic	---	---	0.00	0.00	---	---	---	---	0.819
2.80	4,342	412.80	0.92 oc	0.92 ic	---	---	0.00	0.00	---	---	---	---	0.921
3.00	4,841	413.00	1.01 oc	1.01 ic	---	---	0.00	0.00	---	---	---	---	1.014
3.20	5,340	413.20	3.18 oc	0.99 ic	---	---	2.18	0.00	---	---	---	---	3.177
3.40	5,839	413.40	5.39 oc	0.39 ic	---	---	4.99 s	0.00	---	---	---	---	5.388
3.60	6,338	413.60	5.85 oc	0.24 ic	---	---	5.61 s	0.82	---	---	---	---	6.672
3.80	6,837	413.80	6.17 oc	0.17 ic	---	---	5.99 s	4.27	---	---	---	---	10.44
4.00	7,336	414.00	6.46 oc	0.13 ic	---	---	6.32 s	9.19	---	---	---	---	15.64
4.05	7,528	414.05	6.52 oc	0.13 ic	---	---	6.39 s	10.60	---	---	---	---	17.12
4.10	7,719	414.10	6.59 oc	0.12 ic	---	---	6.46 s	12.08	---	---	---	---	18.66
4.15	7,910	414.15	6.66 oc	0.11 ic	---	---	6.54 s	13.62	---	---	---	---	20.27
4.20	8,101	414.20	6.72 oc	0.11 ic	---	---	6.59 s	15.23	---	---	---	---	21.93
4.25	8,293	414.25	6.78 oc	0.10 ic	---	---	6.67 s	16.89	---	---	---	---	23.66
4.30	8,484	414.30	6.85 oc	0.10 ic	---	---	6.74 s	18.60	---	---	---	---	25.44
4.35	8,675	414.35	6.91 oc	0.10 ic	---	---	6.80 s	20.37	---	---	---	---	27.27
4.40	8,866	414.40	6.96 ic	0.09 ic	---	---	6.86 s	22.20	---	---	---	---	29.15
4.45	9,058	414.45	7.01 ic	0.09 ic	---	---	6.92 s	24.07	---	---	---	---	31.08
4.50	9,249	414.50	7.07 ic	0.08 ic	---	---	6.97 s	26.00	---	---	---	---	33.05

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Wednesday, 10 / 19 / 2022

Pond No. 1 - Pond 1-C

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 410.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	410.00	671	0	0
2.00	412.00	1,761	2,346	2,346
4.00	414.00	3,311	4,991	7,336
4.50	414.50	4,364	1,913	9,249

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 12.00	6.00	0.00	0.00
Span (in)	= 12.00	6.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 410.50	411.60	0.00	0.00
Length (ft)	= 28.00	0.50	0.00	0.00
Slope (%)	= 0.02	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	Yes	No	No

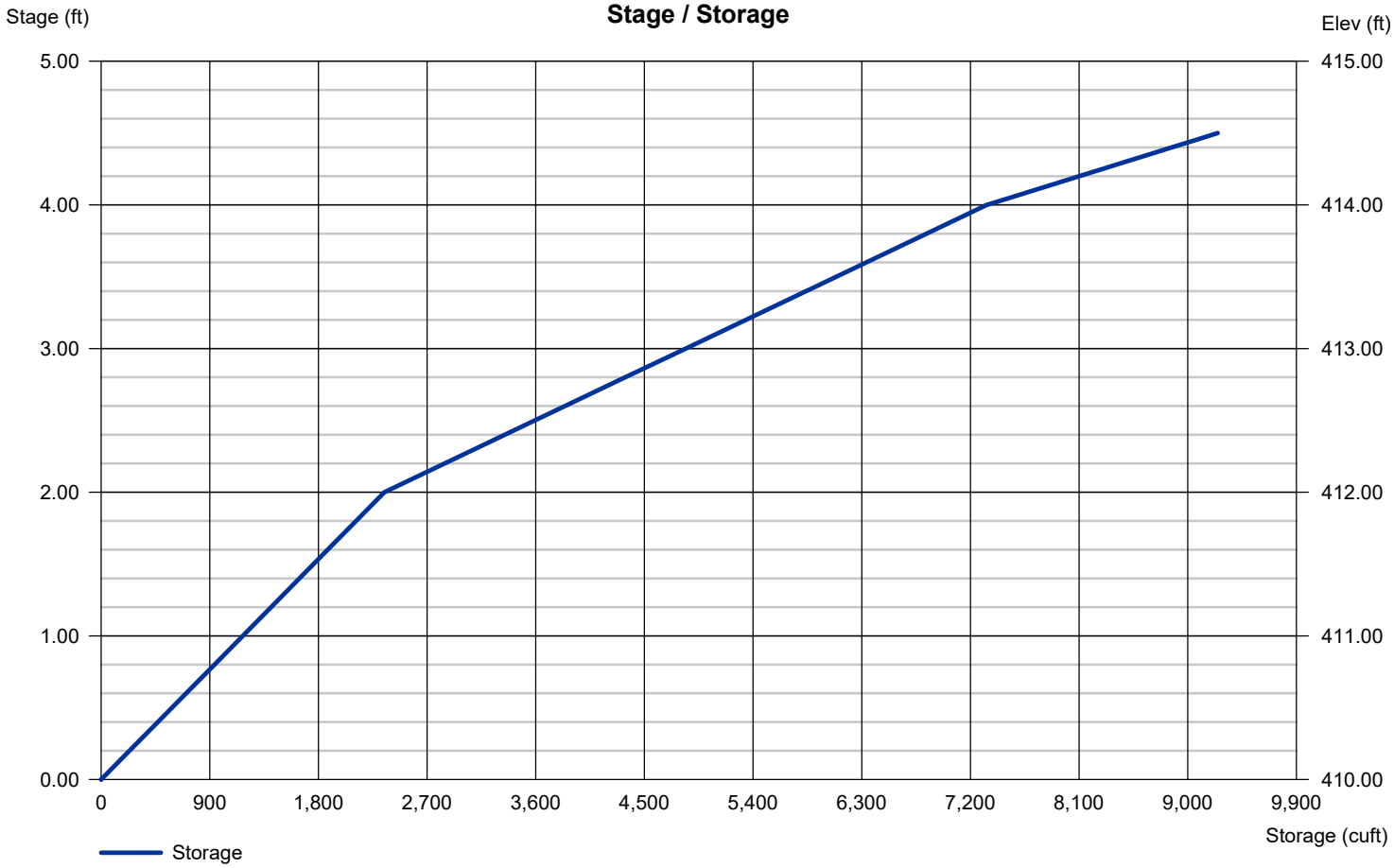
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 7.33	10.00	0.00	0.00
Crest El. (ft)	= 413.00	413.50	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No

Exfil.(in/hr) = 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).



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 18

Pond-3A

Hydrograph type	= Reservoir	Peak discharge	= 1.518 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.17 hrs
Time interval	= 2 min	Hyd. volume	= 5,914 cuft
Inflow hyd. No.	= 6 - PDA-3A	Reservoir name	= Pond 3A
Max. Elevation	= 423.43 ft	Max. Storage	= 4,349 cuft

Storage Indication method used.

Hydrograph Discharge Table

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

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
12.17	1.630	423.43 <<	1.379	-----	-----	-----	1.379	0.139	-----	-----	-----	1.518
12.33	0.977	423.37	1.256	-----	-----	-----	1.255	-----	-----	-----	-----	1.255
12.50	0.531	423.26	0.927	-----	-----	-----	0.923	-----	-----	-----	-----	0.923
12.67	0.337	423.15	0.560	-----	-----	-----	0.556	-----	-----	-----	-----	0.556
12.83	0.290	423.10	0.383	-----	-----	-----	0.380	-----	-----	-----	-----	0.380
13.00	0.243	423.08	0.298	-----	-----	-----	0.296	-----	-----	-----	-----	0.296
13.17	0.218	423.07	0.247	-----	-----	-----	0.245	-----	-----	-----	-----	0.245
13.33	0.206	423.06	0.222	-----	-----	-----	0.221	-----	-----	-----	-----	0.221
13.50	0.194	423.06	0.206	-----	-----	-----	0.205	-----	-----	-----	-----	0.205
13.67	0.181	423.05	0.193	-----	-----	-----	0.192	-----	-----	-----	-----	0.192
13.83	0.169	423.05	0.180	-----	-----	-----	0.179	-----	-----	-----	-----	0.179
14.00	0.157	423.04	0.168	-----	-----	-----	0.167	-----	-----	-----	-----	0.167
14.17	0.148	423.04	0.157	-----	-----	-----	0.156	-----	-----	-----	-----	0.156
14.33	0.143	423.04	0.149	-----	-----	-----	0.148	-----	-----	-----	-----	0.148
14.50	0.137	423.04	0.143	-----	-----	-----	0.142	-----	-----	-----	-----	0.142
14.67	0.131	423.04	0.137	-----	-----	-----	0.136	-----	-----	-----	-----	0.136
14.83	0.125	423.03	0.131	-----	-----	-----	0.130	-----	-----	-----	-----	0.130
15.00	0.119	423.03	0.125	-----	-----	-----	0.124	-----	-----	-----	-----	0.124
15.17	0.113	423.03	0.119	-----	-----	-----	0.118	-----	-----	-----	-----	0.118
15.33	0.107	423.03	0.113	-----	-----	-----	0.112	-----	-----	-----	-----	0.112

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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
15.50	0.101	423.03	0.107	-----	-----	-----	0.106	-----	-----	-----	-----	0.106
15.67	0.095	423.03	0.101	-----	-----	-----	0.100	-----	-----	-----	-----	0.100
15.83	0.089	423.03	0.095	-----	-----	-----	0.094	-----	-----	-----	-----	0.094
16.00	0.083	423.02	0.089	-----	-----	-----	0.088	-----	-----	-----	-----	0.088
16.17	0.080	423.02	0.083	-----	-----	-----	0.083	-----	-----	-----	-----	0.083
16.33	0.077	423.02	0.080	-----	-----	-----	0.079	-----	-----	-----	-----	0.079
16.50	0.074	423.02	0.077	-----	-----	-----	0.077	-----	-----	-----	-----	0.077
16.67	0.072	423.02	0.074	-----	-----	-----	0.074	-----	-----	-----	-----	0.074
16.83	0.069	423.02	0.072	-----	-----	-----	0.071	-----	-----	-----	-----	0.071
17.00	0.067	423.02	0.069	-----	-----	-----	0.069	-----	-----	-----	-----	0.069
17.17	0.064	423.02	0.067	-----	-----	-----	0.066	-----	-----	-----	-----	0.066
17.33	0.061	423.02	0.064	-----	-----	-----	0.063	-----	-----	-----	-----	0.063
17.50	0.059	423.02	0.061	-----	-----	-----	0.061	-----	-----	-----	-----	0.061
17.67	0.056	423.02	0.059	-----	-----	-----	0.058	-----	-----	-----	-----	0.058
17.83	0.054	423.02	0.056	-----	-----	-----	0.056	-----	-----	-----	-----	0.056
18.00	0.051	423.01	0.053	-----	-----	-----	0.053	-----	-----	-----	-----	0.053
18.17	0.050	423.01	0.051	-----	-----	-----	0.051	-----	-----	-----	-----	0.051
18.33	0.049	423.01	0.050	-----	-----	-----	0.050	-----	-----	-----	-----	0.050
18.50	0.048	423.01	0.049	-----	-----	-----	0.049	-----	-----	-----	-----	0.049
18.67	0.047	423.01	0.048	-----	-----	-----	0.048	-----	-----	-----	-----	0.048
18.83	0.046	423.01	0.047	-----	-----	-----	0.047	-----	-----	-----	-----	0.047
19.00	0.046	423.01	0.047	-----	-----	-----	0.046	-----	-----	-----	-----	0.046
19.17	0.045	423.01	0.046	-----	-----	-----	0.045	-----	-----	-----	-----	0.046
19.33	0.044	423.01	0.045	-----	-----	-----	0.045	-----	-----	-----	-----	0.045
19.50	0.043	423.01	0.044	-----	-----	-----	0.044	-----	-----	-----	-----	0.044
19.67	0.043	423.01	0.044	-----	-----	-----	0.043	-----	-----	-----	-----	0.043
19.83	0.042	423.01	0.043	-----	-----	-----	0.042	-----	-----	-----	-----	0.042
20.00	0.041	423.01	0.042	-----	-----	-----	0.042	-----	-----	-----	-----	0.042

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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
20.17	0.040	423.01	0.041	-----	-----	-----	0.041	-----	-----	-----	-----	0.041
20.33	0.039	423.01	0.040	-----	-----	-----	0.040	-----	-----	-----	-----	0.040
20.50	0.039	423.01	0.040	-----	-----	-----	0.039	-----	-----	-----	-----	0.039
20.67	0.038	423.01	0.039	-----	-----	-----	0.039	-----	-----	-----	-----	0.039
20.83	0.037	423.01	0.038	-----	-----	-----	0.038	-----	-----	-----	-----	0.038
21.00	0.036	423.01	0.037	-----	-----	-----	0.037	-----	-----	-----	-----	0.037
21.17	0.036	423.01	0.036	-----	-----	-----	0.036	-----	-----	-----	-----	0.036
21.33	0.035	423.01	0.036	-----	-----	-----	0.035	-----	-----	-----	-----	0.035
21.50	0.034	423.01	0.035	-----	-----	-----	0.035	-----	-----	-----	-----	0.035
21.67	0.033	423.01	0.034	-----	-----	-----	0.034	-----	-----	-----	-----	0.034
21.83	0.032	423.01	0.033	-----	-----	-----	0.033	-----	-----	-----	-----	0.033
22.00	0.032	423.01	0.033	-----	-----	-----	0.032	-----	-----	-----	-----	0.032
22.17	0.033	423.01	0.042	-----	-----	-----	0.042	-----	-----	-----	-----	0.042
22.33	0.033	423.01	0.036	-----	-----	-----	0.036	-----	-----	-----	-----	0.036
22.50	0.032	423.01	0.034	-----	-----	-----	0.033	-----	-----	-----	-----	0.033
22.67	0.032	423.01	0.033	-----	-----	-----	0.032	-----	-----	-----	-----	0.032
22.83	0.031	423.01	0.032	-----	-----	-----	0.031	-----	-----	-----	-----	0.032
23.00	0.030	423.01	0.031	-----	-----	-----	0.031	-----	-----	-----	-----	0.031
23.17	0.030	423.01	0.031	-----	-----	-----	0.030	-----	-----	-----	-----	0.030
23.33	0.029	423.01	0.030	-----	-----	-----	0.030	-----	-----	-----	-----	0.030
23.50	0.029	423.01	0.029	-----	-----	-----	0.029	-----	-----	-----	-----	0.029
23.67	0.028	423.01	0.029	-----	-----	-----	0.029	-----	-----	-----	-----	0.029
23.83	0.027	423.01	0.028	-----	-----	-----	0.028	-----	-----	-----	-----	0.028
24.00	0.027	423.01	0.028	-----	-----	-----	0.027	-----	-----	-----	-----	0.027

...End

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Pond No. 4 - Pond 3A

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 420.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	420.00	482	0	0
2.00	422.00	1,346	1,755	1,755
4.00	424.00	2,316	3,618	5,374

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 420.00	0.00	0.00	0.00
Length (ft)	= 38.00	0.00	0.00	0.00
Slope (%)	= 5.30	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 2.50	10.00	0.00	0.00
Crest El. (ft)	= 423.00	423.50	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 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	420.00	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
0.20	176	420.20	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
0.40	351	420.40	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
0.60	527	420.60	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
0.80	702	420.80	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
1.00	878	421.00	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
1.20	1,053	421.20	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
1.40	1,229	421.40	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
1.60	1,404	421.60	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
1.80	1,580	421.80	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
2.00	1,755	422.00	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
2.20	2,117	422.20	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
2.40	2,479	422.40	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
2.60	2,841	422.60	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
2.80	3,203	422.80	0.00	---	---	---	0.00	0.00	---	---	---	---	0.000
3.00	3,564	423.00	0.00 ic	---	---	---	0.00	0.00	---	---	---	---	0.000
3.20	3,926	423.20	0.75 ic	---	---	---	0.75	0.00	---	---	---	---	0.745
3.40	4,288	423.40	1.33 ic	---	---	---	1.33 ic	0.00	---	---	---	---	1.328
3.60	4,650	423.60	1.63 ic	---	---	---	1.63 ic	0.82	---	---	---	---	2.450
3.80	5,012	423.80	1.88 ic	---	---	---	1.88 ic	4.27	---	---	---	---	6.153
4.00	5,374	424.00	2.10 ic	---	---	---	2.10 ic	9.19	---	---	---	---	11.29

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Pond No. 4 - Pond 3A

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 420.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	420.00	482	0	0
2.00	422.00	1,346	1,755	1,755
4.00	424.00	2,316	3,618	5,374

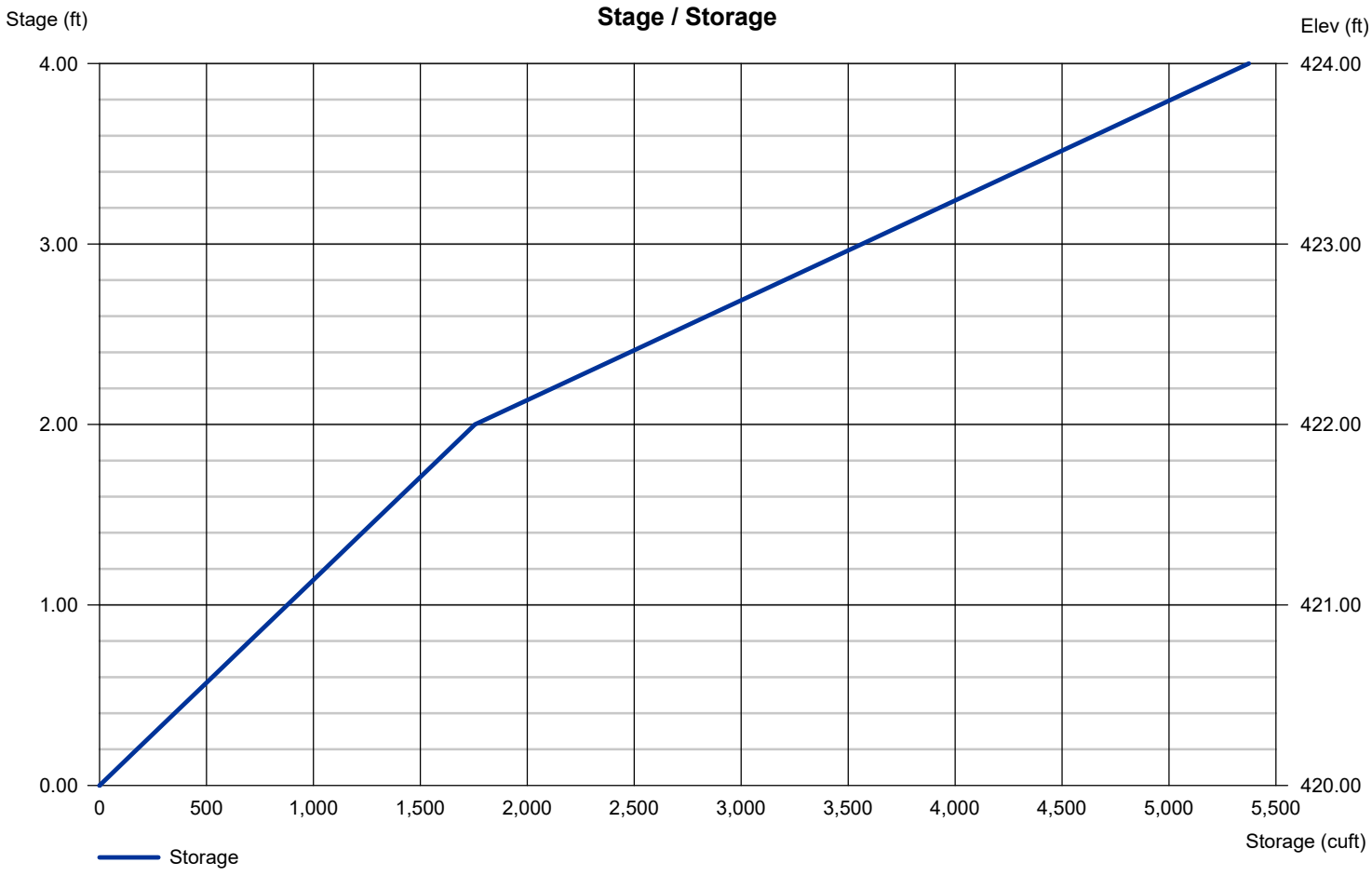
Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 8.00	0.00	0.00	0.00
Span (in)	= 8.00	0.00	0.00	0.00
No. Barrels	= 1	0	0	0
Invert El. (ft)	= 420.00	0.00	0.00	0.00
Length (ft)	= 38.00	0.00	0.00	0.00
Slope (%)	= 5.30	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 2.50	10.00	0.00	0.00
Crest El. (ft)	= 423.00	423.50	0.00	0.00
Weir Coeff.	= 3.33	2.60	3.33	3.33
Weir Type	= 1	Broad	---	---
Multi-Stage	= Yes	No	No	No
Exfil.(in/hr)	= 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).



Hydrograph Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 Wednesday, 10 / 19 / 2022

Hyd. No. 13

Cultec System

Hydrograph type	= Reservoir	Peak discharge	= 10.10 cfs
Storm frequency	= 100 yrs	Time to peak	= 12.07 hrs
Time interval	= 2 min	Hyd. volume	= 34,638 cuft
Inflow hyd. No.	= 12 - PDA-1D	Reservoir name	= Cultec Recharger
Max. Elevation	= 433.12 ft	Max. Storage	= 5,370 cuft

Storage Indication method used.

Hydrograph Discharge Table

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

Time (hrs)	Inflow cfs	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	Outflow cfs
7.00	0.179	429.24	-----	0.109	-----	-----	-----	-----	-----	-----	-----	0.109
7.17	0.188	429.28	-----	0.123	-----	-----	-----	-----	-----	-----	-----	0.123
7.33	0.198	429.31	-----	0.133	-----	-----	-----	-----	-----	-----	-----	0.133
7.50	0.207	429.34	-----	0.140	-----	-----	-----	-----	-----	-----	-----	0.140
7.67	0.217	429.37	-----	0.155	-----	-----	-----	-----	-----	-----	-----	0.155
7.83	0.226	429.40	-----	0.171	-----	-----	-----	-----	-----	-----	-----	0.171
8.00	0.236	429.43	-----	0.183	-----	-----	-----	-----	-----	-----	-----	0.183
8.17	0.252	429.45	-----	0.196	-----	-----	-----	-----	-----	-----	-----	0.196
8.33	0.272	429.48	-----	0.208	-----	-----	-----	-----	-----	-----	-----	0.208
8.50	0.293	429.52	-----	0.222	-----	-----	-----	-----	-----	-----	-----	0.222
8.67	0.313	429.55	-----	0.236	-----	-----	-----	-----	-----	-----	-----	0.236
8.83	0.334	429.59	-----	0.250	-----	-----	-----	-----	-----	-----	-----	0.250
9.00	0.355	429.64	-----	0.264	-----	-----	-----	-----	-----	-----	-----	0.264
9.17	0.376	429.68	-----	0.279	-----	-----	-----	-----	-----	-----	-----	0.279
9.33	0.397	429.73	-----	0.294	-----	-----	-----	-----	-----	-----	-----	0.294
9.50	0.418	429.79	-----	0.309	-----	-----	-----	-----	-----	-----	-----	0.309
9.67	0.440	429.84	-----	0.325	-----	-----	-----	-----	-----	-----	-----	0.325
9.83	0.461	429.90	-----	0.340	-----	-----	-----	-----	-----	-----	-----	0.340
10.00	0.483	429.96	-----	0.355	-----	-----	-----	-----	-----	-----	-----	0.355
10.17	0.517	430.03	-----	0.371	-----	-----	-----	-----	-----	-----	-----	0.371

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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
10.33	0.560	430.11	-----	0.390	-----	-----	-----	-----	-----	-----	-----	0.390
10.50	0.603	430.20	-----	0.410	-----	-----	-----	-----	-----	-----	-----	0.410
10.67	0.646	430.31	-----	0.431	-----	-----	-----	-----	-----	-----	-----	0.431
10.83	0.690	430.42	-----	0.454	-----	-----	-----	-----	-----	-----	-----	0.454
11.00	0.733	430.55	-----	0.477	-----	-----	-----	-----	-----	-----	-----	0.477
11.17	0.851	430.70	-----	0.504	-----	-----	-----	-----	-----	-----	-----	0.504
11.33	1.012	430.92	-----	0.540	-----	-----	-----	-----	-----	-----	-----	0.540
11.50	1.175	431.19	0.187	0.581	-----	-----	-----	-----	-----	-----	-----	0.768
11.67	2.206	431.46	0.869	0.620	-----	-----	-----	-----	-----	-----	-----	1.489
11.83	3.755	431.93	2.277	0.683	-----	-----	-----	-----	-----	-----	-----	2.960
12.00	8.148	432.76	6.585	0.781	-----	-----	-----	-----	-----	-----	-----	7.366
12.17	5.710	432.69	5.917	0.773	-----	-----	-----	-----	-----	-----	-----	6.690
12.33	3.393	432.34	3.306	0.733	-----	-----	-----	-----	-----	-----	-----	4.040
12.50	1.837	431.82	1.937	0.668	-----	-----	-----	-----	-----	-----	-----	2.605
12.67	1.162	431.46	0.868	0.620	-----	-----	-----	-----	-----	-----	-----	1.488
12.83	0.999	431.34	0.549	0.603	-----	-----	-----	-----	-----	-----	-----	1.152
13.00	0.837	431.26	0.365	0.593	-----	-----	-----	-----	-----	-----	-----	0.957
13.17	0.750	431.21	0.234	0.584	-----	-----	-----	-----	-----	-----	-----	0.818
13.33	0.708	431.18	0.174	0.580	-----	-----	-----	-----	-----	-----	-----	0.754
13.50	0.665	431.15	0.130	0.576	-----	-----	-----	-----	-----	-----	-----	0.706
13.67	0.623	431.13	0.096	0.573	-----	-----	-----	-----	-----	-----	-----	0.668
13.83	0.580	431.10	0.060	0.569	-----	-----	-----	-----	-----	-----	-----	0.629
14.00	0.538	431.07	0.033	0.564	-----	-----	-----	-----	-----	-----	-----	0.597
14.17	0.509	431.04	0.011	0.559	-----	-----	-----	-----	-----	-----	-----	0.570
14.33	0.489	431.00	0.001	0.553	-----	-----	-----	-----	-----	-----	-----	0.555
14.50	0.468	430.97	-----	0.547	-----	-----	-----	-----	-----	-----	-----	0.547
14.67	0.448	430.92	-----	0.540	-----	-----	-----	-----	-----	-----	-----	0.540
14.83	0.427	430.87	-----	0.532	-----	-----	-----	-----	-----	-----	-----	0.532

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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
15.00	0.407	430.81	-----	0.522	-----	-----	-----	-----	-----	-----	-----	0.522
15.17	0.387	430.75	-----	0.512	-----	-----	-----	-----	-----	-----	-----	0.512
15.33	0.366	430.68	-----	0.500	-----	-----	-----	-----	-----	-----	-----	0.500
15.50	0.346	430.61	-----	0.487	-----	-----	-----	-----	-----	-----	-----	0.487
15.67	0.325	430.53	-----	0.474	-----	-----	-----	-----	-----	-----	-----	0.474
15.83	0.305	430.45	-----	0.459	-----	-----	-----	-----	-----	-----	-----	0.459
16.00	0.285	430.37	-----	0.444	-----	-----	-----	-----	-----	-----	-----	0.444
16.17	0.272	430.29	-----	0.428	-----	-----	-----	-----	-----	-----	-----	0.428
16.33	0.263	430.21	-----	0.412	-----	-----	-----	-----	-----	-----	-----	0.412
16.50	0.254	430.14	-----	0.396	-----	-----	-----	-----	-----	-----	-----	0.396
16.67	0.245	430.07	-----	0.380	-----	-----	-----	-----	-----	-----	-----	0.380
16.83	0.236	430.00	-----	0.364	-----	-----	-----	-----	-----	-----	-----	0.364
17.00	0.227	429.94	-----	0.349	-----	-----	-----	-----	-----	-----	-----	0.349
17.17	0.218	429.88	-----	0.334	-----	-----	-----	-----	-----	-----	-----	0.334
17.33	0.209	429.82	-----	0.319	-----	-----	-----	-----	-----	-----	-----	0.319
17.50	0.201	429.77	-----	0.305	-----	-----	-----	-----	-----	-----	-----	0.305
17.67	0.192	429.72	-----	0.290	-----	-----	-----	-----	-----	-----	-----	0.290
17.83	0.183	429.67	-----	0.275	-----	-----	-----	-----	-----	-----	-----	0.275
18.00	0.174	429.63	-----	0.261	-----	-----	-----	-----	-----	-----	-----	0.261
18.17	0.169	429.59	-----	0.247	-----	-----	-----	-----	-----	-----	-----	0.247
18.33	0.166	429.55	-----	0.234	-----	-----	-----	-----	-----	-----	-----	0.234
18.50	0.164	429.52	-----	0.222	-----	-----	-----	-----	-----	-----	-----	0.222
18.67	0.161	429.49	-----	0.211	-----	-----	-----	-----	-----	-----	-----	0.211
18.83	0.158	429.47	-----	0.202	-----	-----	-----	-----	-----	-----	-----	0.202
19.00	0.156	429.45	-----	0.193	-----	-----	-----	-----	-----	-----	-----	0.193
19.17	0.153	429.43	-----	0.185	-----	-----	-----	-----	-----	-----	-----	0.185
19.33	0.150	429.42	-----	0.178	-----	-----	-----	-----	-----	-----	-----	0.178
19.50	0.148	429.40	-----	0.172	-----	-----	-----	-----	-----	-----	-----	0.172

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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
19.67	0.145	429.39	-----	0.166	-----	-----	-----	-----	-----	-----	-----	0.166
19.83	0.142	429.38	-----	0.161	-----	-----	-----	-----	-----	-----	-----	0.161
20.00	0.140	429.38	-----	0.156	-----	-----	-----	-----	-----	-----	-----	0.156
20.17	0.137	429.37	-----	0.152	-----	-----	-----	-----	-----	-----	-----	0.152
20.33	0.134	429.36	-----	0.148	-----	-----	-----	-----	-----	-----	-----	0.148
20.50	0.132	429.35	-----	0.144	-----	-----	-----	-----	-----	-----	-----	0.144
20.67	0.129	429.35	-----	0.142	-----	-----	-----	-----	-----	-----	-----	0.142
20.83	0.126	429.34	-----	0.140	-----	-----	-----	-----	-----	-----	-----	0.140
21.00	0.124	429.33	-----	0.139	-----	-----	-----	-----	-----	-----	-----	0.139
21.17	0.121	429.33	-----	0.137	-----	-----	-----	-----	-----	-----	-----	0.137
21.33	0.118	429.32	-----	0.135	-----	-----	-----	-----	-----	-----	-----	0.135
21.50	0.116	429.31	-----	0.134	-----	-----	-----	-----	-----	-----	-----	0.134
21.67	0.113	429.30	-----	0.132	-----	-----	-----	-----	-----	-----	-----	0.132
21.83	0.110	429.29	-----	0.128	-----	-----	-----	-----	-----	-----	-----	0.128
22.00	0.108	429.28	-----	0.125	-----	-----	-----	-----	-----	-----	-----	0.125
22.17	0.113	429.30	-----	0.131	-----	-----	-----	-----	-----	-----	-----	0.131
22.33	0.111	429.29	-----	0.128	-----	-----	-----	-----	-----	-----	-----	0.128
22.50	0.109	429.28	-----	0.125	-----	-----	-----	-----	-----	-----	-----	0.125
22.67	0.107	429.28	-----	0.122	-----	-----	-----	-----	-----	-----	-----	0.122
22.83	0.105	429.27	-----	0.119	-----	-----	-----	-----	-----	-----	-----	0.119
23.00	0.103	429.26	-----	0.117	-----	-----	-----	-----	-----	-----	-----	0.117
23.17	0.101	429.26	-----	0.114	-----	-----	-----	-----	-----	-----	-----	0.114
23.33	0.099	429.25	-----	0.112	-----	-----	-----	-----	-----	-----	-----	0.112
23.50	0.097	429.24	-----	0.109	-----	-----	-----	-----	-----	-----	-----	0.108
23.67	0.095	429.24	-----	0.106	-----	-----	-----	-----	-----	-----	-----	0.106
23.83	0.093	429.23	-----	0.103	-----	-----	-----	-----	-----	-----	-----	0.103

...End

Pond Report

Pond No. 3 - Cultec Recharger 330

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	427.50	n/a	0	0
0.50	428.00	n/a	301	301
1.00	428.50	n/a	300	601
1.50	429.00	n/a	625	1,226
2.00	429.50	n/a	614	1,840
2.50	430.00	n/a	603	2,443
3.00	430.50	n/a	588	3,031
3.50	431.00	n/a	569	3,600
4.00	431.50	n/a	538	4,138
4.50	432.00	n/a	486	4,624
5.00	432.50	n/a	374	4,998
5.50	433.00	n/a	300	5,298
6.00	433.50	n/a	301	5,599

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 431.00	429.00	0.00	0.00
Length (ft)	= 10.00	10.00	0.00	0.00
Slope (%)	= 1.00	1.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	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	427.50	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.05	30	427.55	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.10	60	427.60	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.15	90	427.65	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.20	120	427.70	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.25	151	427.75	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.30	181	427.80	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.35	211	427.85	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.40	241	427.90	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.45	271	427.95	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.50	301	428.00	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.55	331	428.05	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.60	361	428.10	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.65	391	428.15	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.70	421	428.20	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.75	451	428.25	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.80	481	428.30	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.85	511	428.35	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.90	541	428.40	0.00	0.00	---	---	---	---	---	---	---	---	0.000
0.95	571	428.45	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.00	601	428.50	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.05	664	428.55	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.10	726	428.60	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.15	789	428.65	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.20	851	428.70	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.25	914	428.75	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.30	976	428.80	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.35	1,039	428.85	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.40	1,101	428.90	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.45	1,164	428.95	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.50	1,226	429.00	0.00	0.00	---	---	---	---	---	---	---	---	0.000

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Cultec Recharger 330

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
1.55	1,287	429.05	0.00	0.01 ic	---	---	---	---	---	---	---	---	0.006
1.60	1,349	429.10	0.00	0.02 ic	---	---	---	---	---	---	---	---	0.024
1.65	1,410	429.15	0.00	0.05 ic	---	---	---	---	---	---	---	---	0.050
1.70	1,472	429.20	0.00	0.08 ic	---	---	---	---	---	---	---	---	0.083
1.75	1,533	429.25	0.00	0.11 oc	---	---	---	---	---	---	---	---	0.112
1.80	1,594	429.30	0.00	0.13 oc	---	---	---	---	---	---	---	---	0.131
1.85	1,656	429.35	0.00	0.14 oc	---	---	---	---	---	---	---	---	0.142
1.90	1,717	429.40	0.00	0.17 oc	---	---	---	---	---	---	---	---	0.170
1.95	1,779	429.45	0.00	0.19 oc	---	---	---	---	---	---	---	---	0.194
2.00	1,840	429.50	0.00	0.21 oc	---	---	---	---	---	---	---	---	0.215
2.05	1,900	429.55	0.00	0.23 oc	---	---	---	---	---	---	---	---	0.234
2.10	1,961	429.60	0.00	0.25 oc	---	---	---	---	---	---	---	---	0.252
2.15	2,021	429.65	0.00	0.27 oc	---	---	---	---	---	---	---	---	0.268
2.20	2,081	429.70	0.00	0.28 oc	---	---	---	---	---	---	---	---	0.284
2.25	2,142	429.75	0.00	0.30 oc	---	---	---	---	---	---	---	---	0.299
2.30	2,202	429.80	0.00	0.31 oc	---	---	---	---	---	---	---	---	0.313
2.35	2,262	429.85	0.00	0.33 oc	---	---	---	---	---	---	---	---	0.327
2.40	2,322	429.90	0.00	0.34 oc	---	---	---	---	---	---	---	---	0.340
2.45	2,383	429.95	0.00	0.35 oc	---	---	---	---	---	---	---	---	0.352
2.50	2,443	430.00	0.00	0.36 oc	---	---	---	---	---	---	---	---	0.364
2.55	2,502	430.05	0.00	0.38 oc	---	---	---	---	---	---	---	---	0.376
2.60	2,561	430.10	0.00	0.39 oc	---	---	---	---	---	---	---	---	0.387
2.65	2,619	430.15	0.00	0.40 oc	---	---	---	---	---	---	---	---	0.398
2.70	2,678	430.20	0.00	0.41 oc	---	---	---	---	---	---	---	---	0.409
2.75	2,737	430.25	0.00	0.42 oc	---	---	---	---	---	---	---	---	0.419
2.80	2,796	430.30	0.00	0.43 oc	---	---	---	---	---	---	---	---	0.429
2.85	2,855	430.35	0.00	0.44 oc	---	---	---	---	---	---	---	---	0.439
2.90	2,913	430.40	0.00	0.45 oc	---	---	---	---	---	---	---	---	0.449
2.95	2,972	430.45	0.00	0.46 oc	---	---	---	---	---	---	---	---	0.459
3.00	3,031	430.50	0.00	0.47 oc	---	---	---	---	---	---	---	---	0.468
3.05	3,088	430.55	0.00	0.48 oc	---	---	---	---	---	---	---	---	0.477
3.10	3,145	430.60	0.00	0.49 oc	---	---	---	---	---	---	---	---	0.486
3.15	3,202	430.65	0.00	0.49 oc	---	---	---	---	---	---	---	---	0.495
3.20	3,259	430.70	0.00	0.50 oc	---	---	---	---	---	---	---	---	0.504
3.25	3,315	430.75	0.00	0.51 oc	---	---	---	---	---	---	---	---	0.512
3.30	3,372	430.80	0.00	0.52 oc	---	---	---	---	---	---	---	---	0.520
3.35	3,429	430.85	0.00	0.53 oc	---	---	---	---	---	---	---	---	0.529
3.40	3,486	430.90	0.00	0.54 oc	---	---	---	---	---	---	---	---	0.537
3.45	3,543	430.95	0.00	0.54 oc	---	---	---	---	---	---	---	---	0.545
3.50	3,600	431.00	0.00	0.55 oc	---	---	---	---	---	---	---	---	0.553
3.55	3,654	431.05	0.01 ic	0.56 oc	---	---	---	---	---	---	---	---	0.574
3.60	3,708	431.10	0.05 ic	0.57 oc	---	---	---	---	---	---	---	---	0.623
3.65	3,761	431.15	0.12 ic	0.58 oc	---	---	---	---	---	---	---	---	0.697
3.70	3,815	431.20	0.21 ic	0.58 oc	---	---	---	---	---	---	---	---	0.796
3.75	3,869	431.25	0.33 ic	0.59 oc	---	---	---	---	---	---	---	---	0.921
3.80	3,923	431.30	0.46 oc	0.60 oc	---	---	---	---	---	---	---	---	1.053
3.85	3,977	431.35	0.58 oc	0.60 oc	---	---	---	---	---	---	---	---	1.183
3.90	4,030	431.40	0.71 oc	0.61 oc	---	---	---	---	---	---	---	---	1.320
3.95	4,084	431.45	0.84 oc	0.62 oc	---	---	---	---	---	---	---	---	1.463
4.00	4,138	431.50	0.99 oc	0.63 oc	---	---	---	---	---	---	---	---	1.611
4.05	4,187	431.55	1.13 oc	0.63 oc	---	---	---	---	---	---	---	---	1.765
4.10	4,235	431.60	1.28 oc	0.64 oc	---	---	---	---	---	---	---	---	1.917
4.15	4,284	431.65	1.43 oc	0.65 oc	---	---	---	---	---	---	---	---	2.073
4.20	4,332	431.70	1.58 oc	0.65 oc	---	---	---	---	---	---	---	---	2.232
4.25	4,381	431.75	1.73 oc	0.66 oc	---	---	---	---	---	---	---	---	2.389
4.30	4,430	431.80	1.88 oc	0.67 oc	---	---	---	---	---	---	---	---	2.550
4.35	4,478	431.85	2.04 oc	0.67 oc	---	---	---	---	---	---	---	---	2.708
4.40	4,527	431.90	2.19 oc	0.68 oc	---	---	---	---	---	---	---	---	2.864
4.45	4,575	431.95	2.33 oc	0.69 oc	---	---	---	---	---	---	---	---	3.016
4.50	4,624	432.00	2.48 oc	0.69 oc	---	---	---	---	---	---	---	---	3.168
4.55	4,661	432.05	2.62 oc	0.70 oc	---	---	---	---	---	---	---	---	3.313
4.60	4,699	432.10	2.75 oc	0.70 oc	---	---	---	---	---	---	---	---	3.457
4.65	4,736	432.15	2.88 oc	0.71 oc	---	---	---	---	---	---	---	---	3.593
4.70	4,774	432.20	3.00 oc	0.72 oc	---	---	---	---	---	---	---	---	3.721
4.75	4,811	432.25	3.12 oc	0.72 oc	---	---	---	---	---	---	---	---	3.842
4.80	4,848	432.30	3.22 oc	0.73 oc	---	---	---	---	---	---	---	---	3.952
4.85	4,886	432.35	3.32 oc	0.73 oc	---	---	---	---	---	---	---	---	4.052
4.90	4,923	432.40	3.39 oc	0.74 oc	---	---	---	---	---	---	---	---	4.134
4.95	4,961	432.45	3.45 oc	0.75 oc	---	---	---	---	---	---	---	---	4.196
5.00	4,998	432.50	3.46 oc	0.75 oc	---	---	---	---	---	---	---	---	4.210
5.05	5,028	432.55	4.24 oc	0.76 oc	---	---	---	---	---	---	---	---	4.993
5.10	5,058	432.60	4.89 oc	0.76 oc	---	---	---	---	---	---	---	---	5.654

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Cultec Recharger 330

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
5.15	5,088	432.65	5.47 oc	0.77 oc	---	---	---	---	---	---	---	---	6.237
5.20	5,118	432.70	5.99 oc	0.77 oc	---	---	---	---	---	---	---	---	6.765
5.25	5,148	432.75	6.47 oc	0.78 oc	---	---	---	---	---	---	---	---	7.250
5.30	5,178	432.80	6.92 oc	0.79 oc	---	---	---	---	---	---	---	---	7.702
5.35	5,208	432.85	7.34 oc	0.79 oc	---	---	---	---	---	---	---	---	8.127
5.40	5,238	432.90	7.73 oc	0.80 oc	---	---	---	---	---	---	---	---	8.530
5.45	5,268	432.95	8.11 oc	0.80 oc	---	---	---	---	---	---	---	---	8.912
5.50	5,298	433.00	8.47 oc	0.81 oc	---	---	---	---	---	---	---	---	9.279
5.55	5,328	433.05	8.82 oc	0.81 oc	---	---	---	---	---	---	---	---	9.630
5.60	5,358	433.10	9.15 oc	0.82 oc	---	---	---	---	---	---	---	---	9.969
5.65	5,388	433.15	9.47 oc	0.82 oc	---	---	---	---	---	---	---	---	10.29
5.70	5,418	433.20	9.78 oc	0.83 oc	---	---	---	---	---	---	---	---	10.61
5.75	5,449	433.25	10.08 oc	0.83 oc	---	---	---	---	---	---	---	---	10.92
5.80	5,479	433.30	10.38 oc	0.84 oc	---	---	---	---	---	---	---	---	11.21
5.85	5,509	433.35	10.66 oc	0.84 oc	---	---	---	---	---	---	---	---	11.50
5.90	5,539	433.40	10.93 ic	0.85 oc	---	---	---	---	---	---	---	---	11.78
5.95	5,569	433.45	11.09 ic	0.85 oc	---	---	---	---	---	---	---	---	11.95
6.00	5,599	433.50	11.25 ic	0.86 oc	---	---	---	---	---	---	---	---	12.11

...End

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2022 — Wednesday, 10 / 19 / 2022

Pond No. 3 - Cultec Recharger 330

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	427.50	n/a	0	0
0.50	428.00	n/a	301	301
1.00	428.50	n/a	300	601
1.50	429.00	n/a	625	1,226
2.00	429.50	n/a	614	1,840
2.50	430.00	n/a	603	2,443
3.00	430.50	n/a	588	3,031
3.50	431.00	n/a	569	3,600
4.00	431.50	n/a	538	4,138
4.50	432.00	n/a	486	4,624
5.00	432.50	n/a	374	4,998
5.50	433.00	n/a	300	5,298
6.00	433.50	n/a	301	5,599

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 18.00	4.00	0.00	0.00
Span (in)	= 18.00	4.00	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 431.00	429.00	0.00	0.00
Length (ft)	= 10.00	10.00	0.00	0.00
Slope (%)	= 1.00	1.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

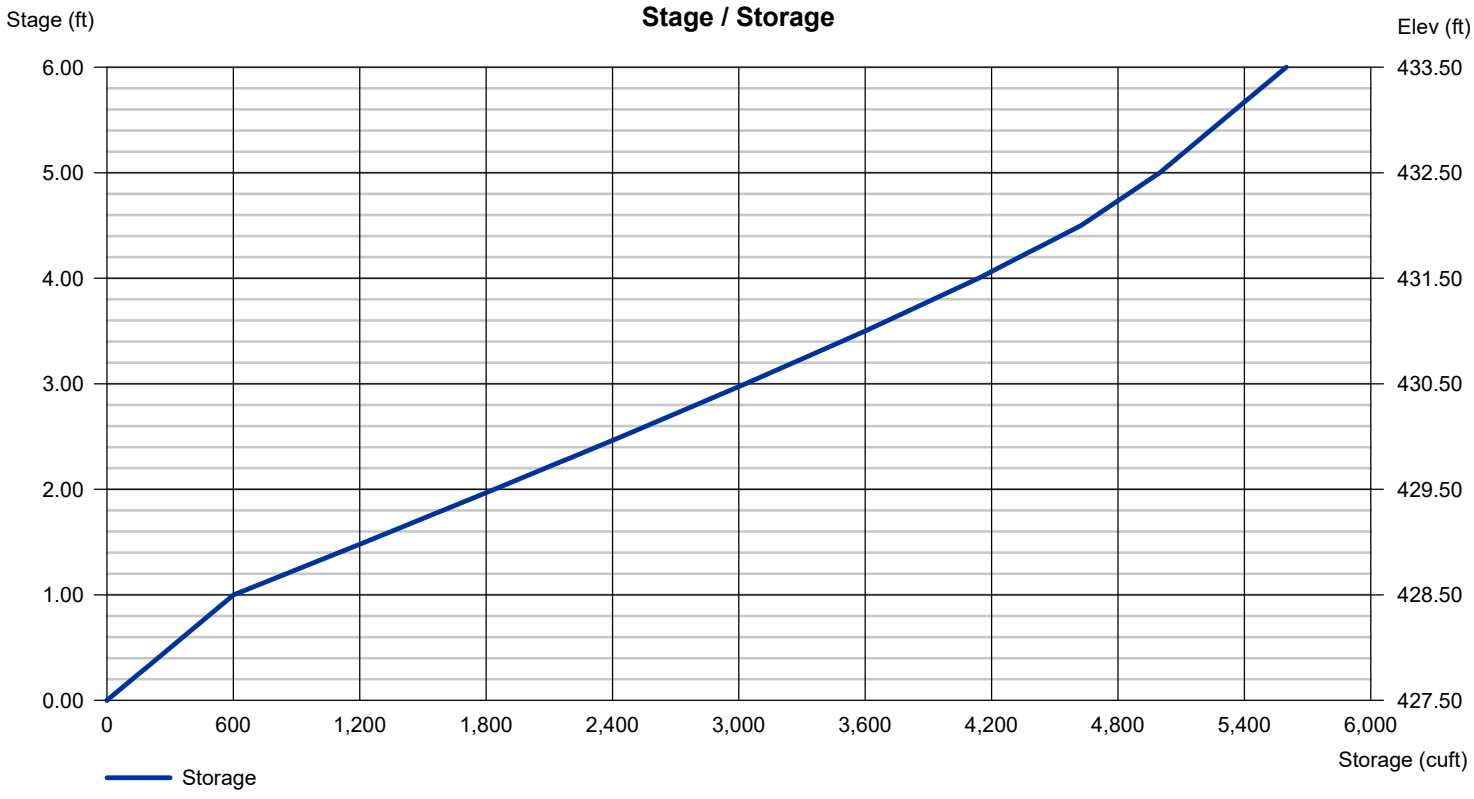
Weir Structures

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



Project	**Proposed Development**	By	**MDM**	Date	**08/09/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/09/22**

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)		Segment ID	**AB**				
1. Surface description (table 3-1)			**Woods (Light Underbrush)**				
2. Manning's roughness coeff., n (table 3-1)			**0.40**				
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**150**				
4. Two-yr 24-hr rainfall, P_2		in	**3.59**				
5. Land slope, s		ft/ft	**0.07**				
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.292**	+	**0.000**	=	**0.292**

Shallow concentrated flow		Segment ID	**BC**				
7. Surface description (paved or unpaved)			**Unpaved**				
8. Flow length, L		ft	**76**				
9. Watercourse slope, s		ft/ft	**0.194**				
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	**7.11**				
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.003**	+		=	**0.003**

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**	=	**0.295**
					Minutes	=	**17.68**

Project	**Proposed Development**	By	**MDM**	Date	**08/09/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/09/22**

Bold One: **Present** Developed

Bold One: **T_c** T_t through subarea **Existing Drainage Area 2 (EDA-2)**

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

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

Sheet flow (Applicable to T_c Only)		Segment ID	**AB**			
1. Surface description (table 3-1)			**Gravel**			
2. Manning's roughness coeff., n (table 3-1)			**0.01**			
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**126.7**			
4. Two-yr 24-hr rainfall, P_2		in	**3.59**			
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	**0.024**	+		= **0.024**

Shallow concentrated flow		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		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** =	**0.024**
	Minutes =	**1.41**

Use 6 Min.

Project	**Proposed Development**	By	**MDM**	Date	**08/09/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/09/22**

Bold One: **Present** Developed

Bold One: **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)		Segment ID	**AB**		**BC**		
1. Surface description (table 3-1)			**Woods (Light Underbrush)**		**Dense Grass**		
2. Manning's roughness coeff., n (table 3-1)			**0.40**		**0.240**		
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**85.67**		**63.1**		
4. Two-yr 24-hr rainfall, P_2		in	**3.59**		**3.59**		
5. Land slope, s		ft/ft	**0.06**		**0.040**		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.192**	+	**0.118**	=	**0.310**

Shallow concentrated flow		Segment ID	**CD**		**DE**		
7. Surface description (paved or unpaved)			**Unpaved**		**Unpaved**		
8. Flow length, L		ft	**137**		**151.4**		
9. Watercourse slope, s		ft/ft	**0.022**		**0.079**		
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	**2.39**		**4.53**		
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.016**	+	**0.009**	=	**0.025**

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**	=	**0.335**
					Minutes	=	**20.12**

Project	**Proposed Development**	By	**MDM**	Date	**08/09/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/09/22**

Bold One: **Present** Developed

Bold One: **T_c** T_t through subarea **Existing Drainage Area 4 (EDA-4)**

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 (Light Underbrush)**				
2. Manning's roughness coeff., n (table 3-1)			**0.40**				
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**150**				
4. Two-yr 24-hr rainfall, P_2		in	**3.59**				
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	**0.301**	+	**0.000**	=	**0.301**

Shallow concentrated flow		Segment ID	**BC**				
7. Surface description (paved or unpaved)			**Unpaved**				
8. Flow length, L		ft	**126.2**				
9. Watercourse slope, s		ft/ft	**0.057**				
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	**3.85**				
11. $T_t = \frac{L}{3600\ V}$	Compute T_t	hr	**0.009**	+		=	**0.009**

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**	=	**0.310**
	Minutes	=	**18.62**

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

Bold One: Present **Developed**

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

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

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

Sheet flow (Applicable to T_c Only)		Segment ID	AB		BC		BC		
1. Surface description (table 3-1)			Dense Grass		Dense Grass		Woods (Light Underbrush)		
2. Manning's roughness coeff., n (table 3-1)			0.24		0.24		0.40		
3. Flow Length, L (total L $\leq$ 150 ft)		ft	41		25.4		36		
4. Two-yr 24-hr rainfall, P_2		in	3.59		3.59		3.59		
5. Land slope, s		ft/ft	0.33		0.15		0.06		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	0.036	+	0.034	+	0.096	=	0.17

Shallow concentrated flow		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		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**	=	0.165
	Minutes	=	9.92

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

Bold One: Present **Developed**

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

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

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

Sheet flow (Applicable to T_c Only)		Segment ID				
1. Surface description (table 3-1)						
2. Manning's roughness coeff., n (table 3-1)						
3. Flow Length, L (total L $\leq$ 150 ft)		ft				
4. Two-yr 24-hr rainfall, P_2		in				
5. Land slope, s		ft/ft				
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr		+		= **0.000**

Shallow concentrated flow		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		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** =	**0.000**
	Minutes =	**6.00**

All Impervious - > **Use TC = 6.0 Min.**

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

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)		Segment ID	**AB**		**BC**		
1. Surface description (table 3-1)			**Dense Grass**		**Dense Grass**		
2. Manning's roughness coeff., n (table 3-1)			**0.24**		**0.24**		
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**36.5**		**10**		
4. Two-yr 24-hr rainfall, P_2		in	**3.59**		**3.59**		
5. Land slope, s		ft/ft	**0.05**		**0.20**		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.069**	+	**0.014**	=	**0.084**

Shallow concentrated flow		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		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** =	**0.084**
	Minutes =	**5.02**

Use 6.00 Min.

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

Bold One: Present **Developed**

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

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					
1. Surface description (table 3-1)							
2. Manning's roughness coeff., n (table 3-1)							
3. Flow Length, L (total L $\leq$ 150 ft)		ft					
4. Two-yr 24-hr rainfall, P_2		in					
5. Land slope, s		ft/ft					
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr		+		=	**0.000**

Shallow concentrated flow		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		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** =	**0.000**
	Minutes =	**0.00**

Use 6.00 Min.

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 2 (PDA-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)			**Dense Grass**				
2. Manning's roughness coeff., n (table 3-1)			**0.24**				
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**66.7**				
4. Two-yr 24-hr rainfall, P_2		in	**3.59**				
5. Land slope, s		ft/ft	**0.04**				
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.128**	+		=	**0.128**

Shallow concentrated flow		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		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**	=	**0.128**
	Minutes	=	**7.70**

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 3 (PDA-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)		Segment ID	**AB**			
1. Surface description (table 3-1)			**Dense Grass**			
2. Manning's roughness coeff., n (table 3-1)			**0.24**			
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**72.4**			
4. Two-yr 24-hr rainfall, P_2		in	**3.59**			
5. Land slope, s		ft/ft	**0.04**			
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.137**	+		= **0.137**

Shallow concentrated flow		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		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** =	**0.137**
	Minutes =	**8.23**

Project	**Proposed Development**	By	**MDM**	Date	**08/16/22**
Location	**467 & 485 Pepper Street, Monroe, CT**	Checked	**RPP**	Date	**08/16/22**

Bold One: Present **Developed**

Bold One: **T_c** T_t through subarea **Proposed Drainage Area 4 (PDA-4)**

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 Grass**		**Dense Grass**		
2. Manning's roughness coeff., n (table 3-1)			**0.24**		**0.24**		
3. Flow Length, L (total L $\leq$ 150 ft)		ft	**80.2**		**140.1**		
4. Two-yr 24-hr rainfall, P_2		in	**3.59**		**3.59**		
5. Land slope, s		ft/ft	**0.03**		**0.01**		
6. $T_t = \frac{0.007(nL)^{0.8}}{P_2^{0.5} s^{0.4}}$	Compute T_t	hr	**0.160**	+	**0.336**	=	**0.496**

Shallow concentrated flow		Segment ID	**CD**				
7. Surface description (paved or unpaved)			**Unpaved**				
8. Flow length, L		ft	**150**				
9. Watercourse slope, s		ft/ft	**0.100**				
10. Average velocity, V (Conn DOT Equations 6.C.4 & C.C.5)		ft/s	**5.10**				
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**	=	**0.505**
	Minutes	=	**30.27**

Project **Proposed Development** By **MDM** Date **10/18/22**

Location **467 &485 Pepper Street, Monroe, CT** Checked **CJP** Date **10/18/22**

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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Gravel**	**85**			**0.25**	**21.25**
B	**Woods (Good)**	**55**			**5.16**	**283.80**
D	**Woods (Good)**	**77**			**0.23**	**18.02**
-	**Impervious (Pavement)**	**98**			**0.03**	**2.94**
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**5.67**	**326.01**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{326.01}{5.67} =$ 57.46 Use CN = **58**

Project	**Proposed Development**		By **MDM**	Date	**08/08/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**08/08/22**
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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Gravel**	**85**			**0.04**	**3.40**
B`	**Open Space (Poor)**	**79**			**0.40**	**31.60**
-	**Impervious (Pavement)**	**98**			**0.05**	**4.90**
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.49**	**39.90**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{39.90}{0.49} =$ 81.43 Use CN = **82**

Project **Proposed Development** By **MDM** Date **08/08/22**

Location **467 &485 Pepper Street, Monroe, CT** Checked **CJP** Date **08/08/22**

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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Lawn (Fair, B)**	**69**			**0.79**	**54.51**
B	**Woods (Good, B)**	**55**			**1.19**	**65.45**
D	**Woods (Good, D)**	**77**			**0.11**	**8.62**
-	**Impervious (Pavement)**	**98**			**0.17**	**16.17**
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**2.26**	**144.75**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{144.75}{2.26} =$ 64.14 Use CN = **65**

Project **Proposed Development** By **MDM** Date **08/08/22**

Location **467 &485 Pepper Street, Monroe, CT** Checked **CJP** Date **08/08/22**

Bold one: **Existing** Proposed **Existing Drainage Area 4 (EDA-4)**

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	**Woods (Good, B)**	**55**			**0.63**	**34.76**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.63**	**34.76**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{34.76}{0.63} =$ 55.00 Use CN = **55**

Project	**Proposed Development**		By **MDM**	Date	**10/18/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**10/18/22**
Bold one:	Existing **Proposed**		**Proposed Drainage Area 1-A (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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Open Space (Good)**	**61**			**1.40**	**85.40**
D	**Open Space (Good)**	**80**			**0.53**	**42.40**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**1.93**	**127.80**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{127.80}{1.93} =$ 66.22 Use CN = **67**

Project	**Proposed Development**		By **MDM**	Date	**08/16/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**08/16/22**
Bold one:	Existing **Proposed**		**Proposed Drainage Area 1-B (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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Open Space (Good)**	**61**			**0.50**	**30.50**
B	**Gravel**	**85**			**0.71**	**60.35**
-	**Impervious (Pavement)**	**98**			**2.20**	**215.60**
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**3.41**	**306.45**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{306.45}{3.41} =$ 89.87 Use CN = **90**

Project	**Proposed Development**		By **MDM**	Date	**10/18/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**10/18/22**
Bold one:	Existing **Proposed**		**Proposed Drainage Area 1-C (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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Open Space (Good)**	**61**			**0.53**	**32.33**
D	**Open Space (Good)**	**80**			**0.05**	**4.00**
B	**Gravel**	**85**			**0.30**	**25.50**
-	**Impervious (Pavement)**	**98**			**0.03**	**2.94**
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.91**	**64.77**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{64.77}{0.91} =$ 71.18 Use CN = **72**

Project **Proposed Development** By **MDM** Date **10/18/22**

Location **467 &485 Pepper Street, Monroe, CT** Checked **CJP** Date **10/18/22**

Bold one: Existing **Proposed** **Proposed Drainage Area 1-D (PDA-1D)**

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	**Open Space (Good)**	**61**			**0.14**	**8.54**
-	**Impervious**	**98**			**1.16**	**113.68**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**1.30**	**122.22**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{122.22}{1.30} =$ 94.02 Use CN = **95**

Project	**Proposed Development**		By **MDM**	Date	**08/16/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**08/16/22**
Bold one:	Existing **Proposed**		**Proposed Drainage Area 2 (PDA-2)**		

1. Runoff Curve Number (CN)

Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN [1] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Open Space (Good)**	**61**			**0.18**	**10.98**
-	**Impervious (Pavement)**	**98**			**0.09**	**8.82**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.27**	**19.80**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{19.80}{0.27} =$ 73.33 Use CN = **74**

Project	**Proposed Development**		By **MDM**	Date	**10/18/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**10/18/22**
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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Open Space (Good)**	**61**			**0.09**	**5.49**
						0.00
B	**Gravel**	**85**			**0.08**	**6.80**
-	**Impervious (Pavement)**	**98**			**0.22**	**21.56**
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.39**	**33.85**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{33.85}{0.39} =$ 86.79 Use CN = **87**

Project	**Proposed Development**		By **MDM**	Date	**10/18/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**10/18/22**
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] Table 2-2	CN [1] Fig. 2-3	CN [1] Fig. 2-4	Area [x] acres [ ] mi^2 [ ] %	Product of CN x area
B	**Open Space (Good)**	**61**			**0.50**	**30.50**
D	**Open Space (Good)**	**80**			**0.10**	**8.00**
						0.00
-	**Impervious (Pavement)**	**98**			**0.03**	**2.94**
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.63**	**41.44**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{41.44}{0.63} =$ 65.78 Use CN = **66**

Project	**Proposed Development**		By **MDM**	Date	**08/16/22**
Location	**467 &485 Pepper Street, Monroe, CT**		Checked **CJP**	Date	**08/16/22**
Bold one:	Existing **Proposed**		**Proposed Drainage Area 4 (PDA-4)**		

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	**Open Space (Good)**	**61**			**0.21**	**12.81**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one CN source per line				Totals =	**0.21**	**12.81**

CN (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{12.81}{0.21} =$ 61.00 Use CN = **61**

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custservice@cultec.com

Project Information:

Date:

Proposed Development
467 & 485 Pepper Street

Chamber Model-	**Recharger 902HD**	
Number of Rows-	3	units
Total number of chambers -	51	units
HVLV FC-48 Feed Connectors-	3	units
Stone Void -	40	%
Stone Base -	12	inches
Stone Above Units -	12	inches
Area -	1502.71	ft^2
Base of Stone Elevation-	427.50	ft

Click for Metric

1502.71 Min. Area Required

Note: Min. Area required is based on 12" around the system and typ. spacing

Recharger 902HD Incremental Storage Volumes

Height of System	Chamber Volume	HVLV Feed Connector Volume	Stone Volume	Cumulative Storage Volume	Total Cumulative Storage Volume	Elevation
in	ft^3	ft3	ft^3	ft^3	ft^3	ft
72	0.00	0.00	50.09	50.09	5598.83	433.50
71	0.00	0.00	50.09	50.09	5548.74	433.42
70	0.00	0.00	50.09	50.09	5498.65	433.33
69	0.00	0.00	50.09	50.09	5448.56	433.25
68	0.00	0.00	50.09	50.09	5398.47	433.17
67	0.00	0.00	50.09	50.09	5348.38	433.08
66	0.00	0.00	50.09	50.09	5298.29	433.00
65	0.00	0.00	50.09	50.09	5248.20	432.92
64	0.00	0.00	50.09	50.09	5198.10	432.83
63	0.00	0.00	50.09	50.09	5148.01	432.75
62	0.00	0.00	50.09	50.09	5097.92	432.67
61	0.00	0.00	50.09	50.09	5047.83	432.58
60	3.86	0.00	48.55	52.40	4997.74	432.50
59	7.65	0.00	47.03	54.68	4945.34	432.42
58	15.13	0.00	44.04	59.17	4890.66	432.33
57	24.54	0.00	40.27	64.82	4831.48	432.25
56	32.08	0.00	37.26	69.34	4766.67	432.17
55	39.50	0.00	34.29	73.79	4697.33	432.08
54	43.30	0.00	32.77	76.07	4623.54	432.00
53	47.04	0.00	31.27	78.31	4547.47	431.92
52	50.78	0.00	29.78	80.56	4469.15	431.83
51	52.65	0.00	29.03	81.68	4388.59	431.75
50	56.39	0.00	27.53	83.92	4306.91	431.67
49	58.32	0.00	26.76	85.08	4222.99	431.58
48	62.00	0.00	25.29	87.29	4137.90	431.50
47	62.00	0.00	25.29	87.29	4050.61	431.42
46	65.80	0.00	23.77	89.57	3963.32	431.33
45	67.61	0.00	23.05	90.66	3873.75	431.25
44	67.61	0.00	23.05	90.66	3783.10	431.17
43	71.41	0.00	21.53	92.94	3692.44	431.08

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Recharger 902HD Incremental Storage Volumes

Height of System	Chamber Volume	HVLV Feed Connector Volume	Stone Volume	Cumulative Storage Volume	Total Cumulative Storage Volume	Elevation
in	ft^3	ft3	ft^3	ft^3	ft^3	ft
42	71.35	0.00	21.55	92.90	3599.50	431.00
41	73.34	0.00	20.76	94.09	3506.60	430.92
40	73.22	0.00	20.80	94.02	3412.51	430.83
39	77.02	0.00	19.28	96.30	3318.49	430.75
38	75.15	0.00	20.03	95.18	3222.19	430.67
37	76.96	0.00	19.31	96.27	3127.01	430.58
36	78.89	0.00	18.53	97.42	3030.74	430.50
35	78.89	0.00	18.53	97.42	2933.31	430.42
34	78.95	0.00	18.51	97.46	2835.89	430.33
33	80.76	0.00	17.79	98.55	2738.43	430.25
32	80.76	0.00	17.79	98.55	2639.89	430.17
31	80.76	0.00	17.79	98.55	2541.34	430.08
30	82.63	0.00	17.04	99.67	2442.79	430.00
29	82.63	0.00	17.04	99.67	2343.13	429.92
28	82.69	0.00	17.02	99.70	2243.46	429.83
27	84.50	0.00	16.29	100.79	2143.76	429.75
26	84.50	0.00	16.29	100.79	2042.97	429.67
25	86.37	0.00	15.54	101.91	1942.18	429.58
24	84.56	0.01	16.26	100.83	1840.26	429.50
23	86.37	0.07	15.51	101.95	1739.43	429.42
22	86.43	0.14	15.47	102.03	1637.48	429.33
21	88.30	0.16	14.71	103.17	1535.45	429.25
20	88.30	0.18	14.70	103.18	1432.29	429.17
19	88.30	0.19	14.70	103.18	1329.11	429.08
18	88.24	0.20	14.71	103.15	1225.92	429.00
17	90.17	0.21	13.94	104.32	1122.77	428.92
16	88.30	0.21	14.69	103.20	1018.45	428.83
15	92.10	0.22	13.17	105.48	915.26	428.75
14	90.17	0.22	13.93	104.32	809.78	428.67
13	90.23	0.24	13.90	104.37	705.45	428.58
12	0.00	0.00	50.09	50.09	601.09	428.50
11	0.00	0.00	50.09	50.09	551.00	428.42
10	0.00	0.00	50.09	50.09	500.90	428.33
9	0.00	0.00	50.09	50.09	450.81	428.25
8	0.00	0.00	50.09	50.09	400.72	428.17
7	0.00	0.00	50.09	50.09	350.63	428.08
6	0.00	0.00	50.09	50.09	300.54	428.00
5	0.00	0.00	50.09	50.09	250.45	427.92
4	0.00	0.00	50.09	50.09	200.36	427.83
3	0.00	0.00	50.09	50.09	150.27	427.75
2	0.00	0.00	50.09	50.09	100.18	427.67
1	0.00	0.00	50.09	50.09	50.09	427.58
0	0.00	0.00	0.00	0.00	0.00	427.50

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Recharger 902HD Incremental Storage Volumes

Height of System	Chamber Volume	HVLV Feed Connector Volume	Stone Volume	Cumulative Storage Volume	Total Cumulative Storage Volume	Elevation
in	ft^3	ft3	ft^3	ft^3	ft^3	ft

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WATER QUALITY VOLUME (WQV) COMPUTATIONS

Project: Proposed Site Development
Location: 467-485 Pepper Street, Monroe, CT
Date: 10/18/22

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

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

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

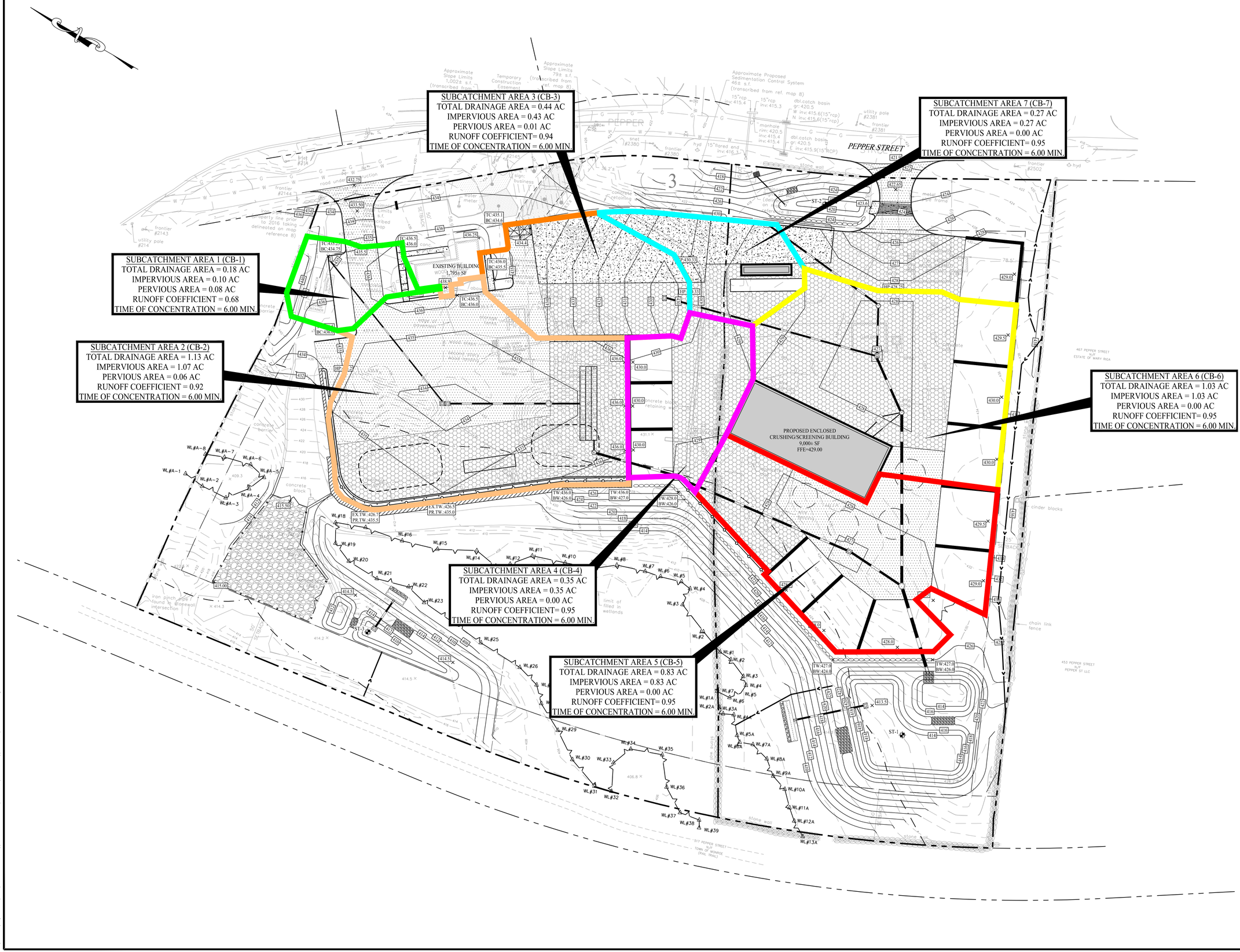
Where:
I = percent impervious cover
A_{IMP} = area of impervious cover
A_{TOT} = total area of watershed

Watershed Description:	Overall Watershed			
Area of impervious coverage, A_{IMP}	4.82	Acres		
Total area of watershed, A_{TOT}	9.05	Acres		
Percent impverious cover, I	53.26	%		
Volumentric runoff coefficient, R	0.53			
Water Quality Volume, WQV	0.399	ac-ft	17,390	cf

Water Quality Volume Provided Pond 1B (Below Lowest Orifice):	26,945	cf
Water Quality Volume Provided Pond 1C (Below Lowest Orifice):	1,877	cf
Total WQV Provided:	28,822	cf

APPENDIX C
EXISTING & PROPOSED HYDROLOGY

Subcatchment Drainage Area Map (DA-CB)
Hydraflow Storm Sewer Tabular Reports
Hydraflow Storm Sewer Profiles
Runoff Coefficient Calculations
First Defense Hydrodynamic Separator Details



GENERAL NOTES

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

LEGEND

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

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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 #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

STATE OF CONNECTICUT KEVIN M. SOLLI 25759 LICENSED PROFESSIONAL ENGINEER

Kevin Solli, P.E.
CT 25759

Project:

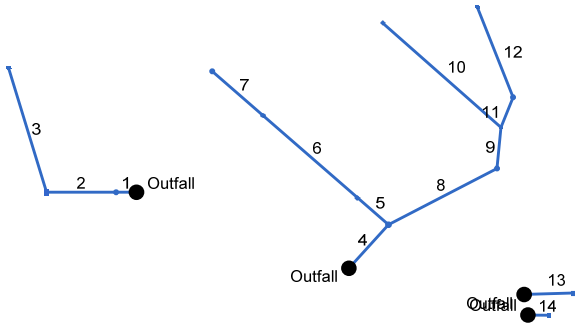
PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SUBCATCHMENT DRAINAGE AREA MAP

Sheet #: DA-CB

Oct 19, 2022 - 10:41am chris
X:\SE Files\Project Data\2017\1708001 - 485 Pepper Street - Monroe\Cadd Data\467-485 Pepper Street\1708001-DA-CB.dwg

Storm Sewers



Project File: Storm Sewers.stm	Number of lines: 14	Date: 10/19/2022

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		10.12	18	Cir	27.000	429.50	430.00	1.852	431.00	431.22	n/a	431.22 j	End	Manhole
2	(2)	10.27	18	Cir	92.000	430.00	430.50	0.543	431.50*	432.38*	0.76	433.14	1	Grate
3	(2)(2)	1.23	12	Cir	173.000	430.60	432.00	0.809	433.14*	433.35*	0.04	433.39	2	Combination
4		32.92	36	Cir	78.000	422.00	422.85	1.090	425.00	424.98	0.59	425.56	End	Manhole
5	(2)	20.73	24	Cir	55.000	422.85	423.50	1.182	425.56*	426.03*	0.34	426.37	4	Grate
6	(2)	13.29	24	Cir	166.000	423.50	425.50	1.205	426.37	426.84	0.27	427.12	5	Combination
7	(2)(2)	9.94	24	Cir	89.000	425.50	426.50	1.124	427.12	427.63	n/a	427.63 j	6	Manhole
8		14.39	30	Cir	162.000	422.85	423.70	0.525	425.56	425.72	0.15	425.88	4	Manhole
9		14.56	24	Cir	55.000	423.70	424.00	0.545	425.88*	426.11*	0.56	426.66	8	Grate
10		4.17	18	Cir	209.000	424.00	426.00	0.957	426.66	427.01	0.17	427.18	9	Grate
11		2.34	18	Cir	43.000	424.00	424.85	1.977	426.66*	426.68*	0.02	426.70	9	Manhole
12		2.59	18	Cir	129.000	424.85	425.50	0.504	426.70	426.77	0.04	426.81	11	Combination
13	OCS 1B	9.11	18	Cir	65.000	410.00	416.00	9.231	411.50	417.17	n/a	417.17 j	End	Grate
14	OCS 1C	3.29	12	Cir	28.000	410.00	410.50	1.786	411.00	411.28	n/a	411.28 j	End	Grate

Storm Sewers | Number of lines: 14 | Run Date: 10/19/2022

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

Storm Sewer Tabulation

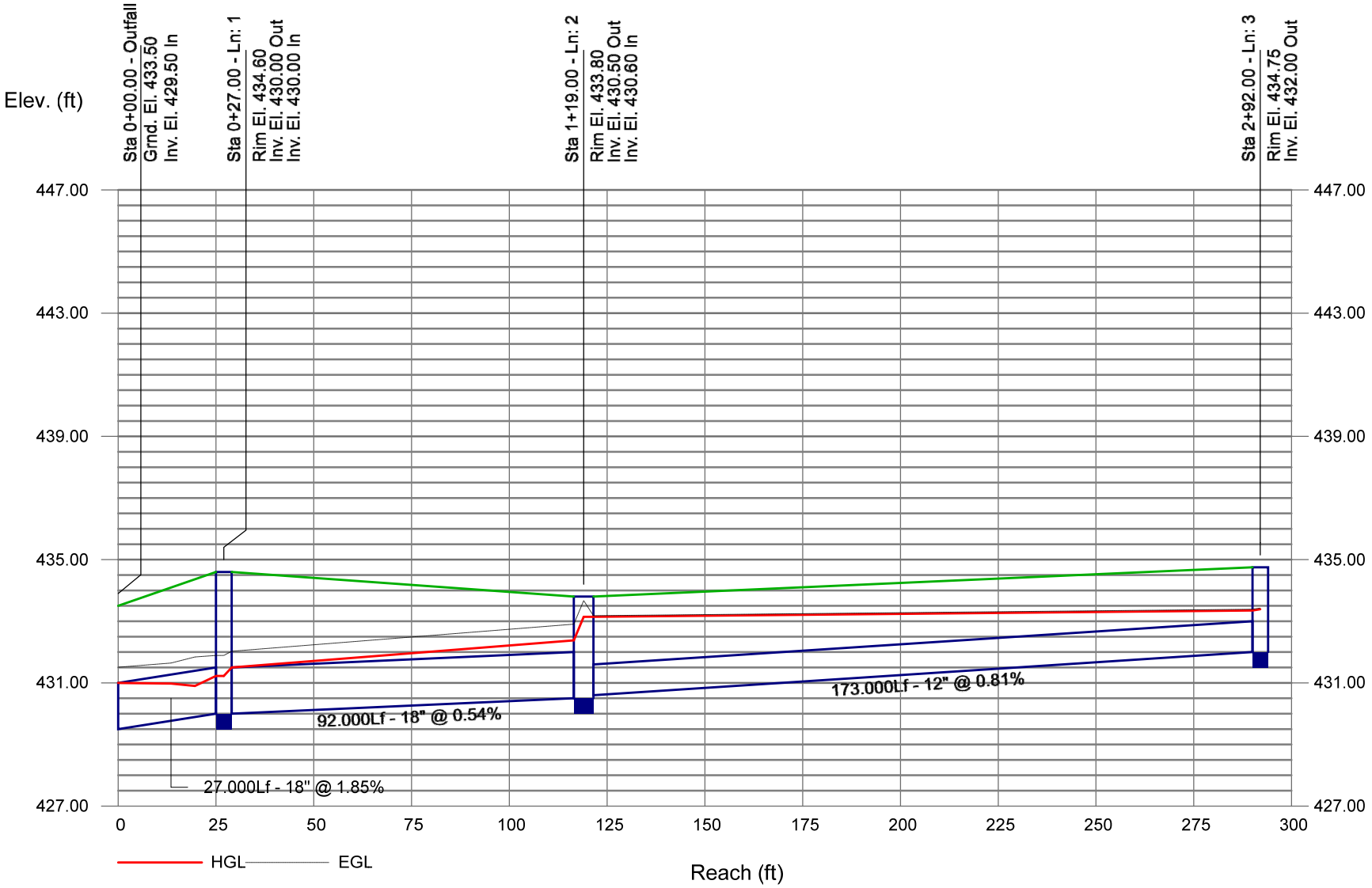
Station		Len	Drng Area		Rnoff coeff	Area x C		Tc		Rain (I)	Total flow	Cap full	Vel	Pipe		Invert Elev		HGL Elev		Grnd / Rim Elev		Line ID
Line	To Line	(ft)	Incr (ac)	Total (ac)	(C)	Incr	Total	Inlet (min)	Syst (min)	(in/hr)	(cfs)	(cfs)	(ft/s)	Size (in)	Slope (%)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	Dn (ft)	Up (ft)	
1	End	27.000	0.00	1.30	0.00	0.00	1.15	0.0	8.1	8.8	10.12	14.29	6.14	18	1.85	429.50	430.00	431.00	431.22	433.50	434.60	
2	1	92.000	1.12	1.30	0.92	1.03	1.15	6.0	7.8	8.9	10.27	7.74	5.81	18	0.54	430.00	430.50	431.50	432.38	434.60	433.80	(2)
3	2	173.000	0.18	0.18	0.68	0.12	0.12	6.0	6.0	10.1	1.23	3.20	1.57	12	0.81	430.60	432.00	433.14	433.35	433.80	434.75	(2)(2)
4	End	78.000	0.00	2.92	0.00	0.00	2.77	0.0	9.1	8.3	32.92	69.62	5.40	36	1.09	422.00	422.85	425.00	424.98	425.00	427.60	
5	4	55.000	0.83	1.18	0.95	0.79	1.12	6.0	6.7	9.6	20.73	24.59	6.60	24	1.18	422.85	423.50	425.56	426.03	427.60	426.80	(2)
6	5	166.000	0.35	0.35	0.95	0.33	0.33	6.0	6.0	10.1	13.29	24.83	5.08	24	1.20	423.50	425.50	426.37	426.84	426.80	428.50	(2)
7	6	89.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	9.94	23.97	4.55	24	1.12	425.50	426.50	427.12	427.63	428.50	435.80	(2)(2)
8	4	162.000	0.00	1.74	0.00	0.00	1.65	0.0	8.2	8.7	14.39	29.71	3.16	30	0.52	422.85	423.70	425.56	425.72	427.60	427.80	
9	8	55.000	1.03	1.74	0.95	0.98	1.65	6.0	8.0	8.8	14.56	16.70	4.63	24	0.55	423.70	424.00	425.88	426.11	427.80	426.80	
10	9	209.000	0.44	0.44	0.94	0.41	0.41	6.0	6.0	10.1	4.17	10.27	2.83	18	0.96	424.00	426.00	426.66	427.01	426.80	429.67	
11	9	43.000	0.00	0.27	0.00	0.00	0.26	0.0	7.5	9.1	2.34	14.76	1.32	18	1.98	424.00	424.85	426.66	426.68	426.80	427.80	
12	11	129.000	0.27	0.27	0.95	0.26	0.26	6.0	6.0	10.1	2.59	7.45	1.54	18	0.50	424.85	425.50	426.70	426.77	427.80	428.50	
13	End	65.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	9.11	31.90	5.67	18	9.23	410.00	416.00	411.50	417.17	411.50	420.40	OCS 1B
14	End	28.000	0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.0	3.29	4.76	4.61	12	1.79	410.00	410.50	411.00	411.28	411.00	413.00	OCS 1C

Storm Sewers | Number of lines: 14 | Run Date: 10/19/2022

NOTES:Intensity = 49.61 / (Inlet time + 3.60) ^ 0.70; Return period =Yrs. 100 ; c = cir e = ellip b = box

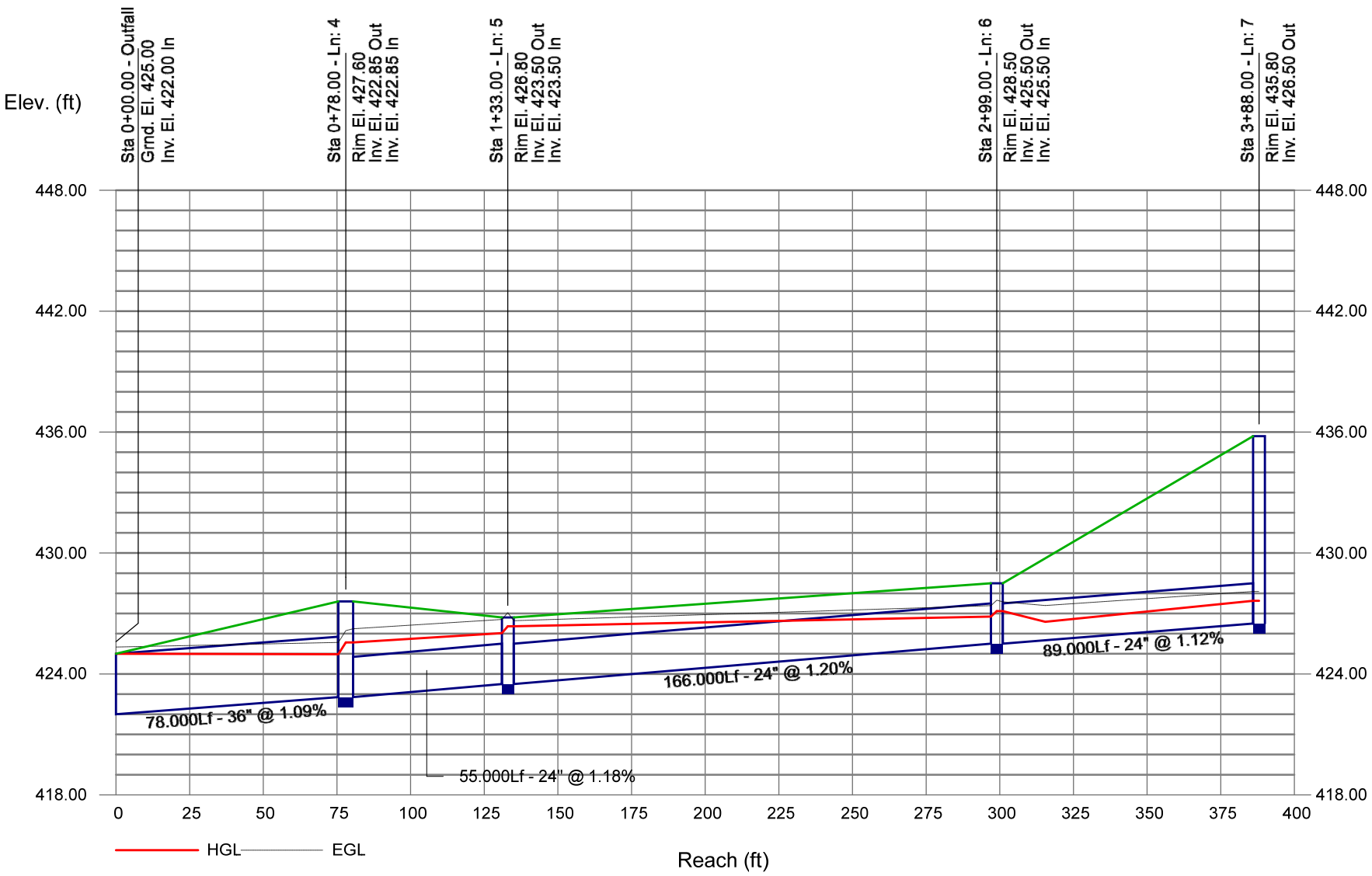
Storm Sewer Profile

Proj. file: Storm Sewers.stm



Storm Sewer Profile

Proj. file: Storm Sewers.stm



Storm Sewer Profile

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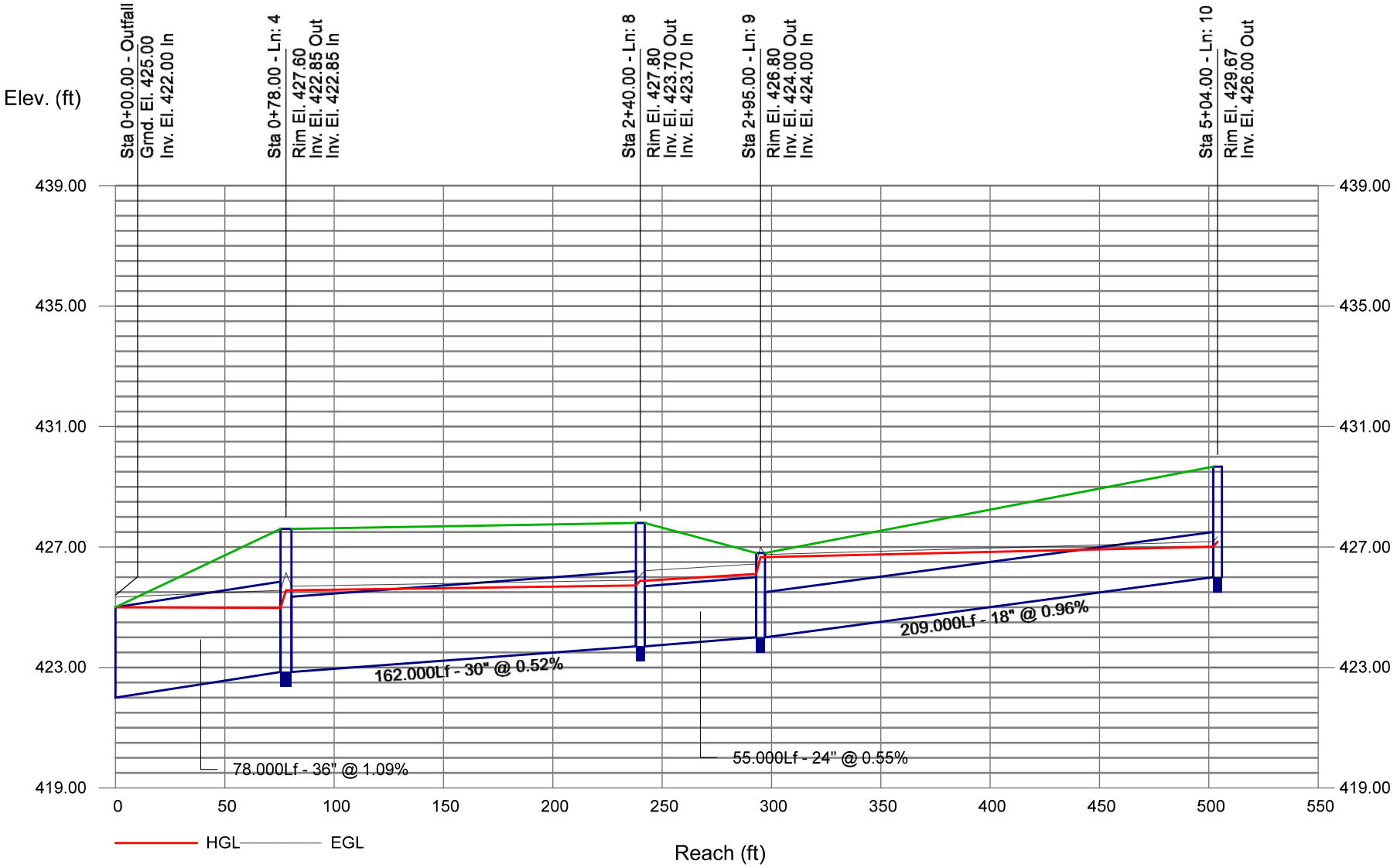
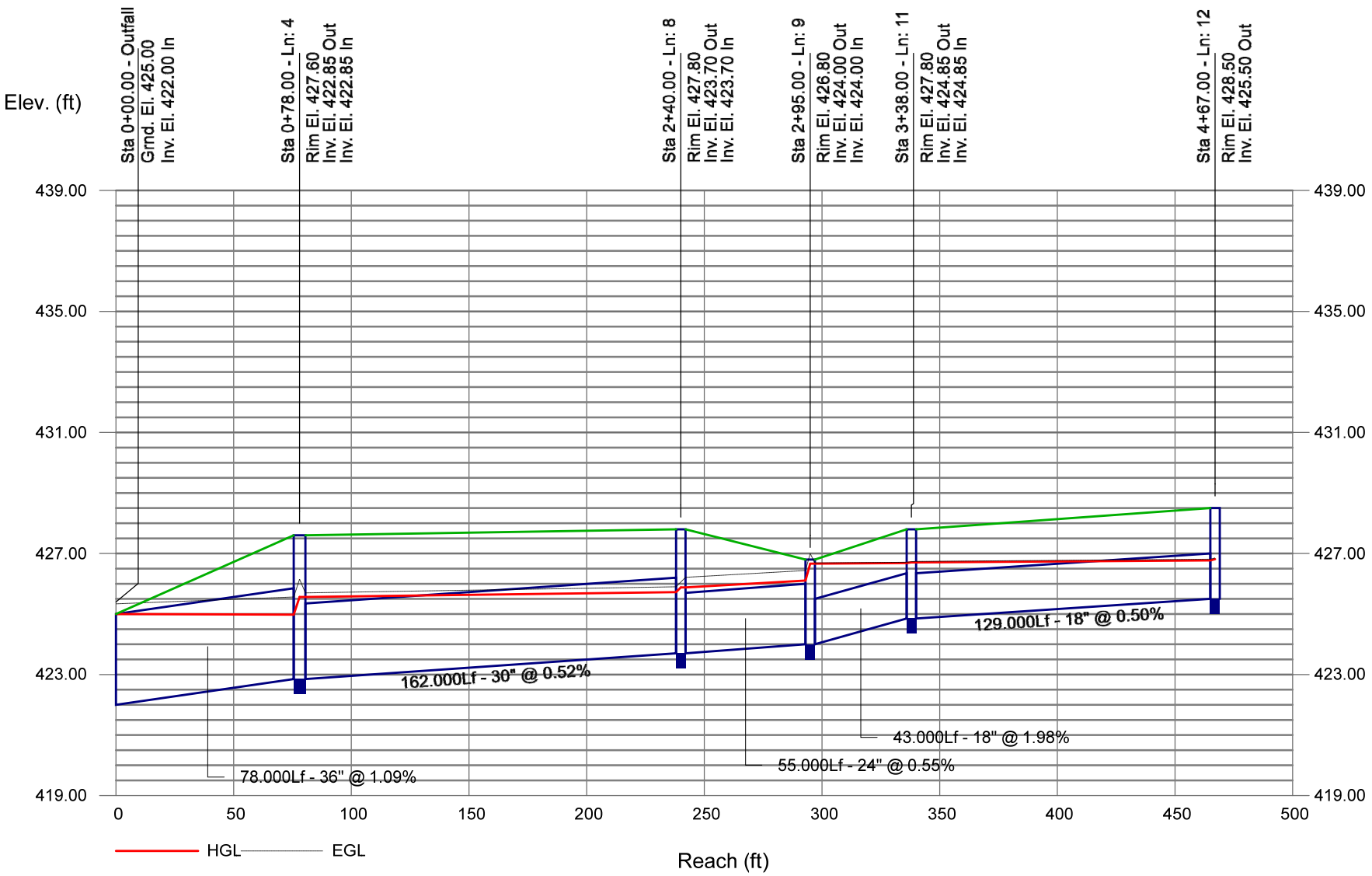


Storm Sewer Profile

Proj. file: Storm Sewers.stm



Storm Sewer Profile

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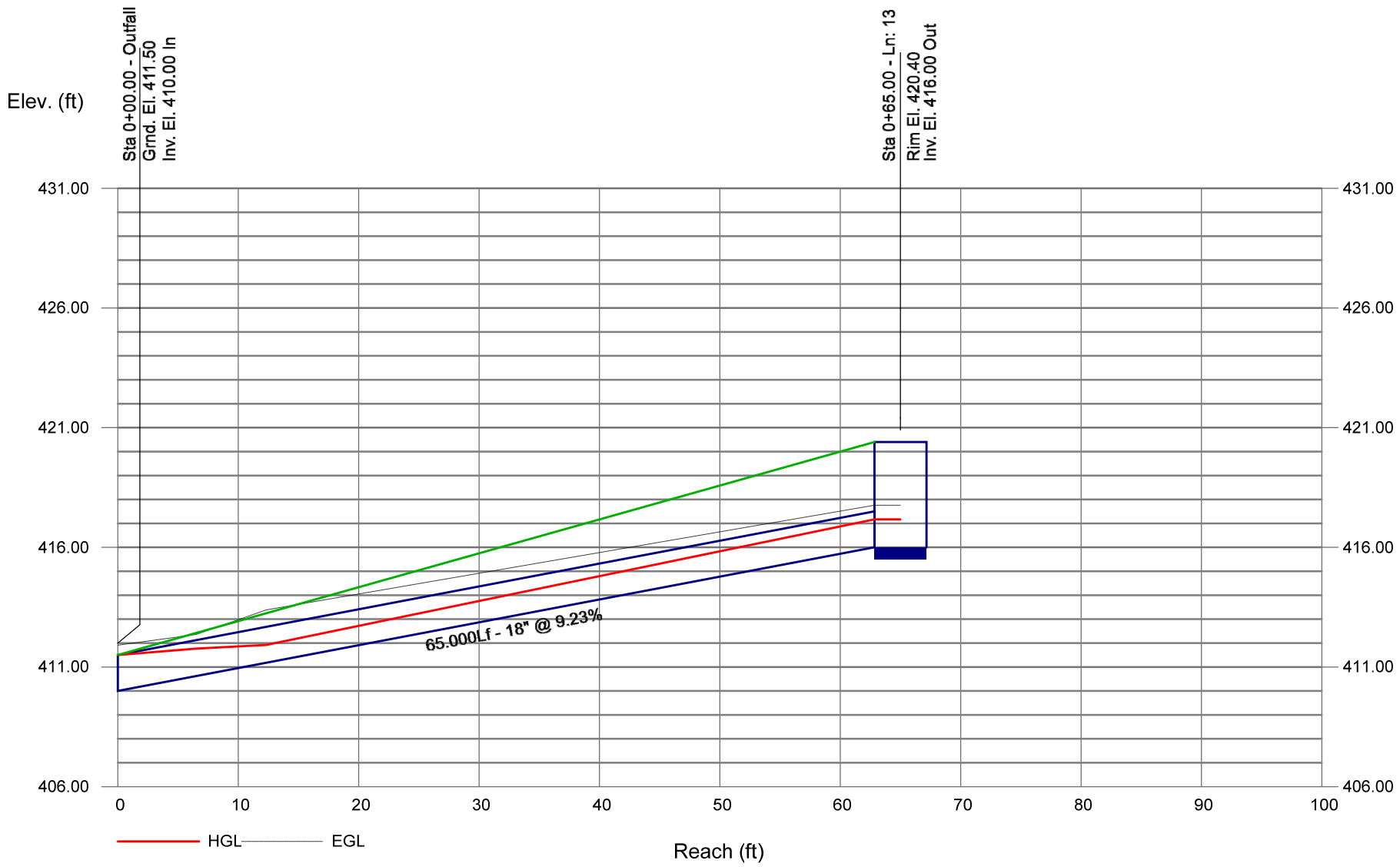

Storm Sewer Profile

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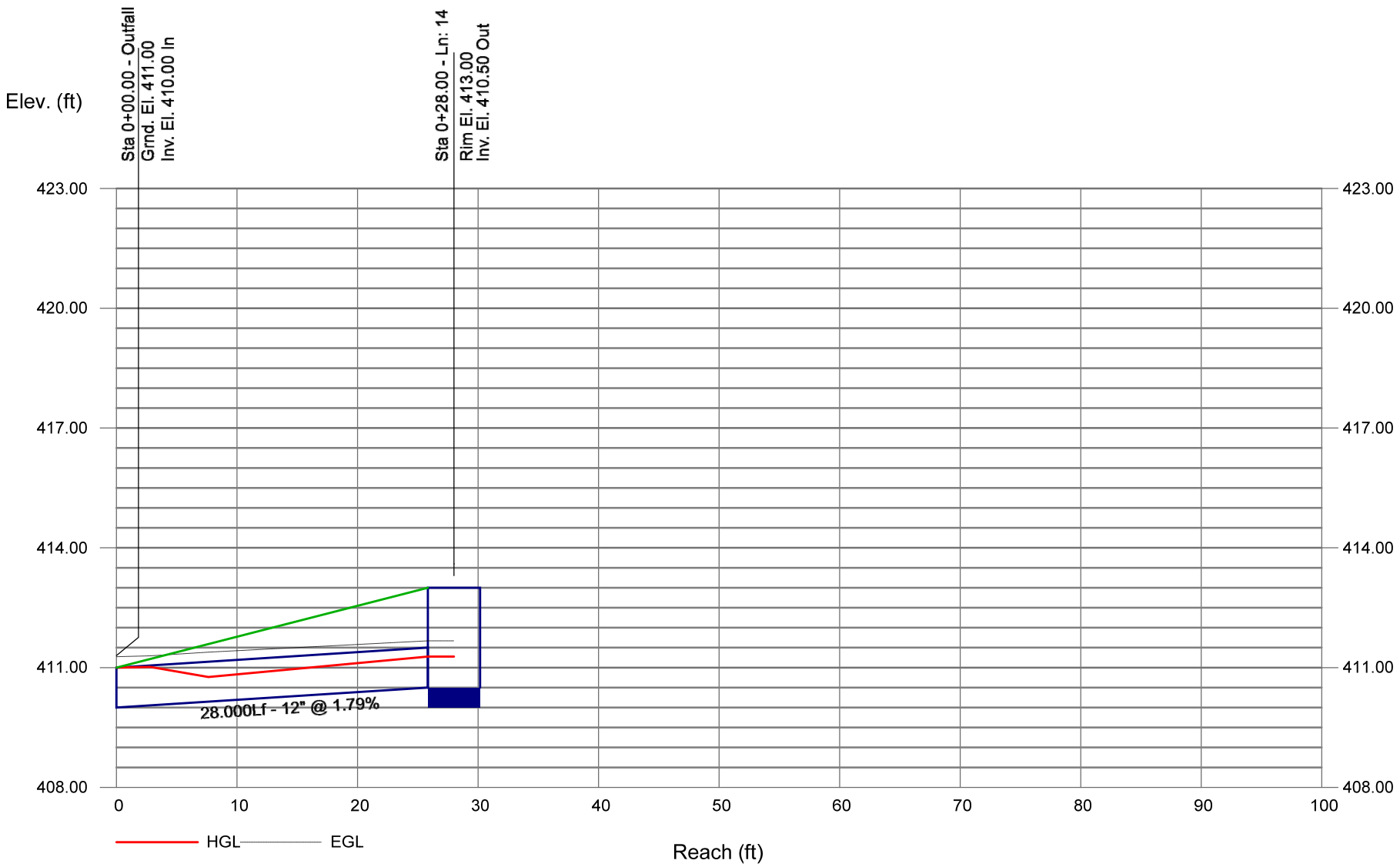


Project **Proposed Site Development** By **CJP** Date **08/23/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **08/23/22**

Bold one: **Present** Developed **CB-1**

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**
	Pervious Area	**0.35**			**0.08**	**0.03**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**0.18**	**0.12**

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.12}{0.18} = 0.68$$

Use C = **0.68**

Project **Proposed Site Development** By **CJP** Date **10/18/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **10/18/22**

Bold one: **Present** Developed **CB-2**

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**			**1.07**	**1.02**
	Pervious Area	**0.35**			**0.06**	**0.02**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**1.13**	**1.04**

C (weighted) = $\frac{\text{total product}}{\text{total area}} = \frac{1.04}{1.13} =$ 0.92 Use C = **0.92**

Project **Proposed Site Development** By **CJP** Date **08/23/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **08/23/22**

Bold one: **Present** Developed **CB-3**

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**			**0.43**	**0.41**
	Pervious Area	**0.35**			**0.01**	**0.00**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**0.44**	**0.41**

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.41}{0.44} = 0.94$$

Use C = **0.94**

Project **Proposed Site Development** By **CJP** Date **08/23/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **08/23/22**

Bold one: **Present** Developed **CB-4**

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**			**0.35**	**0.33**
	Pervious Area	**0.35**			**0.00**	**0.00**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**0.35**	**0.33**

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.33}{0.35} = 0.95$$ Use C = **0.95**

Project **Proposed Site Development** By **CJP** Date **08/23/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **08/23/22**

Bold one: **Present** Developed **CB-5**

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**			**0.83**	**0.79**
	Pervious Area	**0.35**			**0.00**	**0.00**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**0.83**	**0.79**

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.79}{0.83} = 0.95$$

Use C = **0.95**

Project **Proposed Site Development** By **CJP** Date **08/23/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **08/23/22**

Bold one: **Present** Developed **CB-6**

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**			**1.03**	**0.98**
	Pervious Area	**0.35**			**0.00**	**0.00**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**1.03**	**0.98**

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.98}{1.03} = 0.95$$

Use C = **0.95**

Project **Proposed Site Development** By **CJP** Date **08/23/22**

Location **467 & 485 Pepper Street, Monroe CT** Checked **RPP** Date **08/23/22**

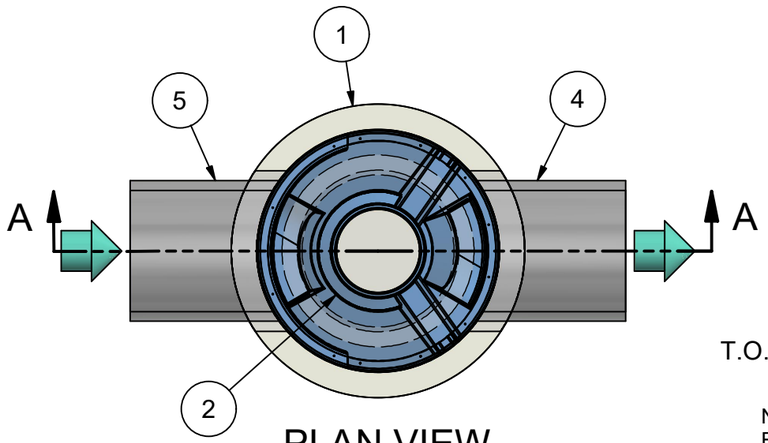
Bold one: **Present** Developed **CB-7**

1. Runoff Coefficient ©

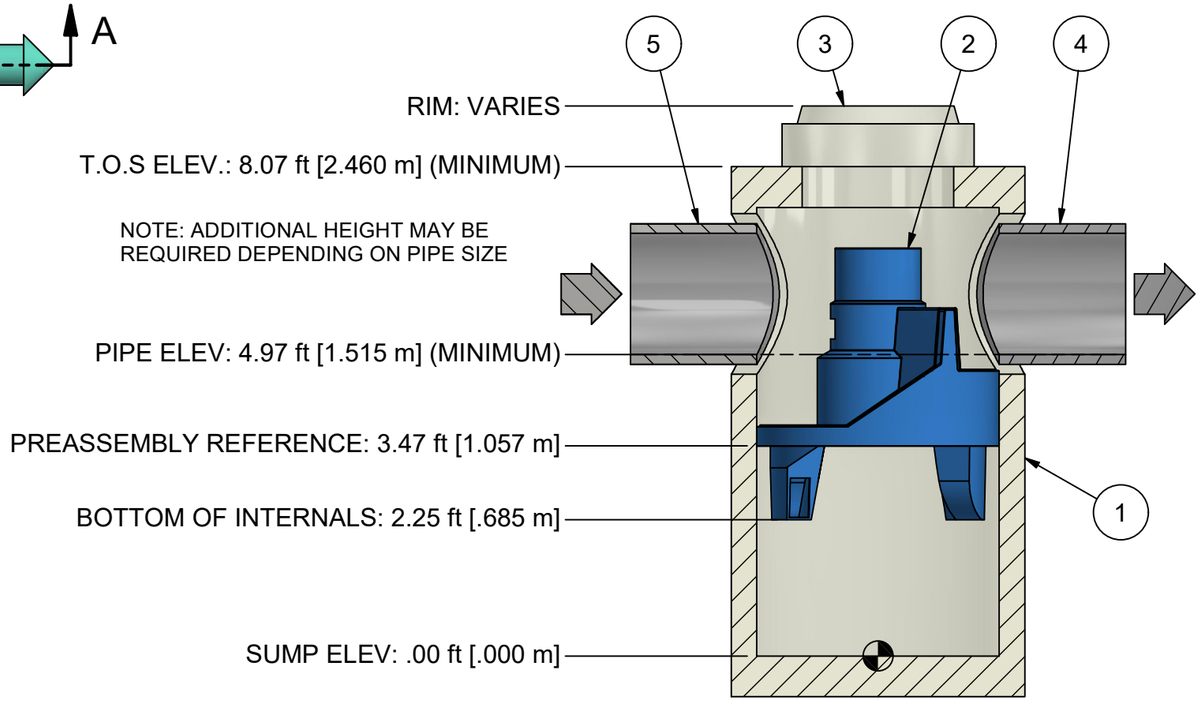
Soil Name and hydrologic group (Appendix A)	Cover description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	C [1]			Area [x] acres [ ] mi^2 [ ] %	Product of C x area
	Impervious Area	**0.95**			**0.27**	**0.26**
	Pervious Area	**0.35**			**0.00**	**0.00**
						0.00
						0.00
						0.00
						0.00
						0.00
						0.00
1 Use only one C source per line				Totals =	**0.27**	**0.26**

$$C\ (\text{weighted}) = \frac{\text{total product}}{\text{total area}} = \frac{0.26}{0.27} = 0.95$$

Use C = **0.95**



PLAN VIEW



SECTION A-A

HYDRO FRAME AND COVER (INCLUDED)

GRADE RINGS BY OTHERS AS REQUIRED

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.

2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING FIRST DEFENSE MANHOLE.

3. CONTRACTOR TO CONFIRM RIM, PIPE INVERTS, PIPE DIA. AND PIPE ORIENTATION PRIOR TO RELEASE OF UNIT TO FABRICATION.

PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 18.0 cfs (510 l/s)
2. Min Sediment Storage Capacity: 0.7 cu. yd. (0.5 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 24 in. (600 mm)
4. The Treatment System Shall Use An Induced Vortex To Separate Pollutants From Stormwater Runoff.
5. For More Product Information Including Regulatory Acceptances, Please Visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 24".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plans).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

PARTS LIST

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	48	1200	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	24 (MAX)	600 (MAX)	OUTLET PIPE (BY OTHERS)
5	1	24 (MAX)	600 (MAX)	INLET PIPE (BY OTHERS)

PROJECTION

IF IN DOUBT ASK

DATE:	SCALE:
11/2/2021	1:30

DRAWN BY:	CHECKED BY:	APPROVED BY
ER	MRJ	

Title
4-ft DIAMETER
FIRST DEFENSE

GENERAL ARRANGEMENT

Hydro International®
hydro-int.com
HYDRO INTERNATIONAL

WEIGHT:	MATERIAL:

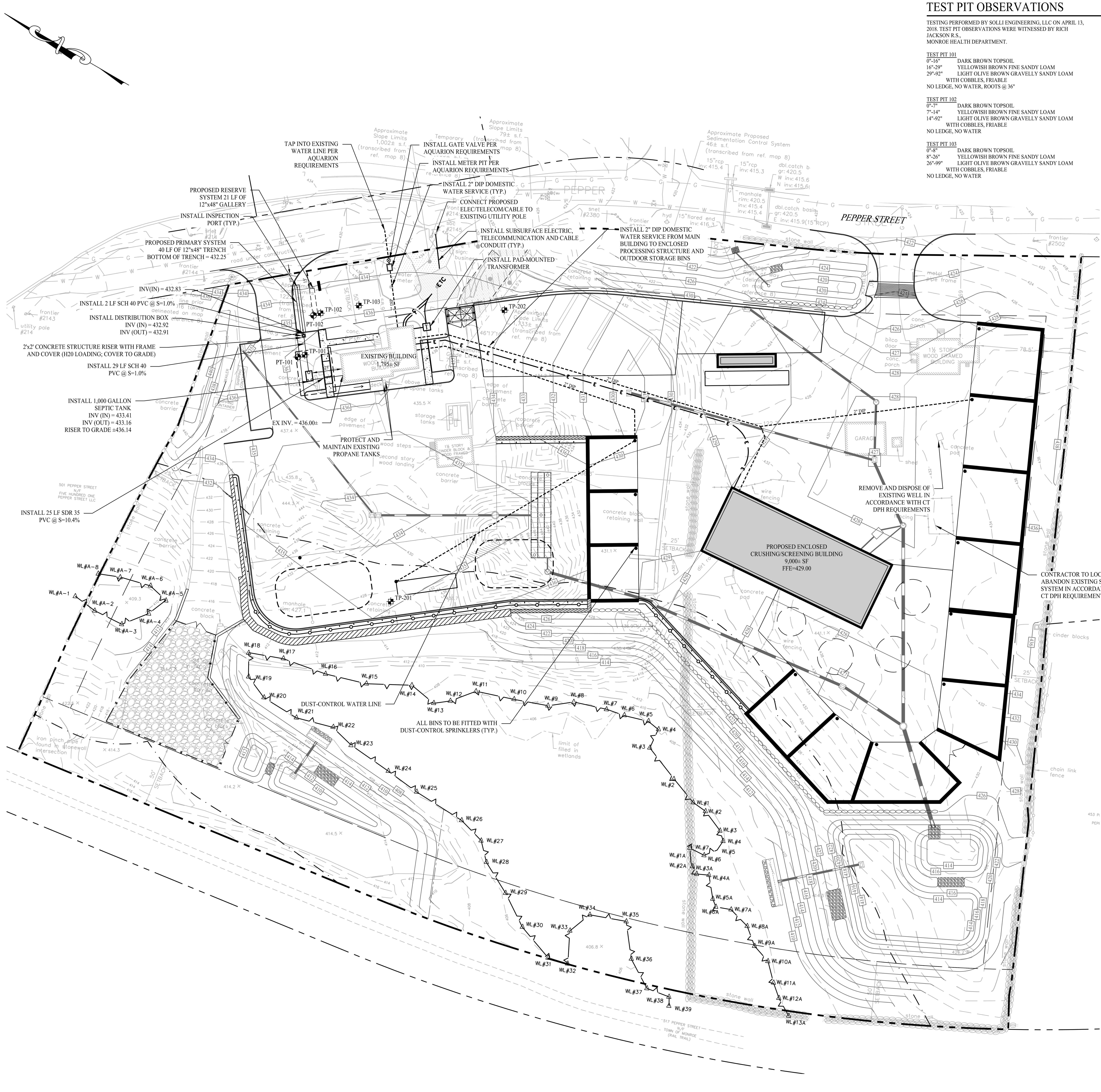
STOCK NUMBER:

DRAWING NO.: FD GA-4

SHEET SIZE:	SHEET:	Rev:
B	1 OF 1	-

APPENDIX D
PLANS

Site Plan (2.11)
Grading & Drainage Plan (2.21)
Soil Erosion & Sediment Control Plan (2.31)
Soil Erosion & Sediment Notes & Details (2.41)
Site Utility Plan (2.51)



TEST PIT OBSERVATIONS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON APRIL 13, 2018. TEST PIT OBSERVATIONS WERE WITNESSED BY RICH JACKSON R.S., MONROE HEALTH DEPARTMENT.

TEST PIT 101
0"-16" DARK BROWN TOPSOIL
16"-29" YELLOWISH BROWN FINE SANDY LOAM
29"-92" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES, FRIABLE
NO LEDGE, NO WATER, ROOTS @ 36"

TEST PIT 102
0"-7" DARK BROWN TOPSOIL
7"-14" YELLOWISH BROWN FINE SANDY LOAM
14"-92" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES, FRIABLE
NO LEDGE, NO WATER

TEST PIT 103
0"-8" DARK BROWN TOPSOIL
8"-26" YELLOWISH BROWN FINE SANDY LOAM
26"-99" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES, FRIABLE
NO LEDGE, NO WATER

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON JUNE 4, 2018.

TEST PIT 201
0"-6" DARK BROWN TOPSOIL
6"-54" LIGHT BROWN FINE SANDY LOAM
54"-66" YELLOWISH BROWN GRAVELLY SANDY LOAM
66"-108" GRAY GRAVELLY SANDY LOAM
NO LEDGE, NO WATER, ROOTS @ 96"

TEST PIT 202
0"-12" DARK BROWN TOPSOIL
12"-30" LIGHT BROWN FINE SANDY LOAM
30"-114" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES
NO LEDGE, NO WATER

PERCOLATION TESTS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON APRIL 13, 2018.

PERCOLATION TEST: PT-101
DIAMETER OF PIT: 10"
DEPTH OF PIT: 27.5"
HOLE PRESOAKED PRIOR TO TEST

ELAPSED TIME (MIN.)	WATER ELEVATION (IN.)
0	9.5
10	8.5
20	7.75
30	6
40	5
50	4.25
60	3
PERC RATE: 1"/1-10.1 MINUTES	

PERCOLATION TEST: PT-102
DIAMETER OF PIT: 10"
DEPTH OF PIT: 24"
HOLE PRESOAKED PRIOR TO TEST

ELAPSED TIME (MIN.)	WATER ELEVATION (IN.)
0	10
10	8.75
20	7
30	5.75
40	5
50	4.25
60	3.5
PERC RATE: 1"/1-10.1 MINUTES	

SEPTIC DESIGN

DESIGN ANALYSIS

Design Percolation Rate 1-10.1 min/inch
Design Flow for Office Use = 178 GPD
MLSS Not Required as DTR exceeds 60"

Office: 1,776 SF
Flow: 1,776 x 0.1 (200 SF/Person x 20 GPD) = 177.6 GPD
ELA: 178 GPD ÷ 1.5 GPD/SF (App. Rate) = 118.7 SF of ELA

Primary Leaching System: 12"x48" Trench = 3.0 SF/LF of ELA
118.7 SF ÷ 3.0 SF/LF = 39.6 or **40 LF**

Reserve Leaching System: 12"x48" Galleries = 5.9 SF/LF of ELA
118.7 SF ÷ 5.9 SF/LF = 20.2 or **21 LF**

UTILITY NOTES

1. THIS PLAN IS FOR PERMITTING PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION.
2. 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.
3. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE, ROOF DRAINS, AND ALL OTHER UTILITIES. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION OF AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
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. GENERAL CONTRACTOR SHALL PROVIDE 2'x2'x6" THICK CONCRETE APRON AT ALL CLEANOUTS, VALVES, AND METERS OUTSIDE OF THE BUILDING.
7. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
8. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
9. CONTRACTOR TO COORDINATE GAS MAIN, WATER, ELECTRIC, AND TELEPHONE INSTALLATION WITH APPROPRIATE UTILITY COMPANIES.
10. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 2 FEET OF COVER FOR ALL UNDERGROUND ELECTRIC, TELEPHONE AND GAS UTILITIES.
11. TRENCHING WITHIN 25 FEET OF THE LEACHING SYSTEM SHALL NOT BE BACKFILLED WITH FREE DRAINING MATERIAL (FDM) PER CT PUBLIC HEALTH CODE TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS TABLE 1.
12. 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.
13. 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.
14. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4.5 FEET OF COVER FOR ALL WATER DISTRIBUTION PIPING.
15. ALL NEW WATER LINES SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C600.
16. ALL NEW WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.
17. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE AT A MAXIMUM OF 5'-0" FROM HYDRANT.
18. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
19. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
20. CONTRACTOR SHALL ADJUST LOCATION OF PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH STORM SEWER OR OTHER UTILITIES AT NO EXTRA COST.
21. ALL MATERIAL SHALL BE APPROVED BY THE LOCAL UTILITY COMPANIES UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
22. 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 "1 (800) 922-4455" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
23. UTILITY LEAD-INS TO BUILDING SHALL NOT BE INSTALLED UNTIL BUILDING PLANS ARE COMPLETED AND LOCATIONS ESTABLISHED ON THE ARCHITECTURAL MECHANICAL, ELECTRICAL AND PLUMBING PLANS. UTILITY CONTRACTOR SHALL REQUEST AND RECEIVE WRITTEN APPROVAL FROM PRIME CONTRACTOR PRIOR TO INSTALLATION OF LEAD-INS.
24. BUILDING PLUMBING CONTRACTOR SHALL PAY ALL COST FOR WATER METERS, METER BOXES, VALVES, ETC. TO PROVIDE A COMPLETE JOB PER LOCAL AUTHORITY REQUIREMENTS.
25. THRUST BLOCKS SHALL BE PROVIDED AT ALL TEES, ELBOWS, BENDS AND PLUGS OF SUFFICIENT SIZE TO COMPLY WITH MINIMUM STANDARDS OF N.F.P.A - EXISTING SOIL CONDITIONS.
26. 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 AND/OR SOILS ENGINEER AT NO COST TO OWNER.

SEPTIC SYSTEM NOTES

1. THIS PLAN IS FOR APPROVAL PURPOSES ONLY AND IS NOT FOR CONSTRUCTION.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR MUST VERIFY ALL ELEVATIONS AND DIMENSIONS SHOWN ON THIS PLAN.
3. WATER SERVICE IS TO BE PROVIDED BY PUBLIC WATER SUPPLY.
4. ALL PORTIONS OF THE SEPTIC SYSTEM SHALL BE A MINIMUM OF 10' FROM ANY PROPERTY LINE.
5. BENCHMARK: THE BENCHMARK IS SET IN THE FIELD AS NOTED ON PLANS.
6. CONSTRUCTION: ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT PUBLIC HEALTH CODE AND WITH THE STANDARDS SET FORTH BY THE TOWN OF MONROE HEALTH DEPARTMENT, AND BY THE STANDARDS ASSOCIATED WITH GOOD WORKMANSHIP.
7. INSPECTION: THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR ANY CHANGE DURING CONSTRUCTION. PLEASE NOTIFY IN ADVANCE OF THE ESTIMATED TIME OF COMPLETION TO SCHEDULE FINAL INSPECTION AND AS-BUILT REQUIREMENTS.
8. THIS DESIGN CONFORMS TO ALL STATE AND LOCAL CODE REQUIREMENTS AND GOOD ENGINEERING PRACTICE. WE CANNOT GUARANTEE AGAINST FAILURE DUE TO NATURAL PHENOMENA BEYOND THE SCOPE OF NORMAL FIELD INVESTIGATION.
9. WELLS WITHIN 75' OF THE PROPOSED SEPTIC SYSTEM WILL BE ABANDONED.
10. THE SEPTIC SYSTEM SHALL BE PROPERLY BACKFILLED WITHIN TWO DAYS OF THE TOWN HEALTH DEPARTMENTS' INSPECTION AND APPROVAL.
11. PRIOR TO ANY EXCAVATION ON-SITE, THE CONTRACTOR SHALL CALL 1-800-922-4455 (CALL BEFORE YOU DIG) TO LOCATE ANY EXISTING UNDERGROUND UTILITIES.

LEGEND

- PROPERTY LINE
- ADJOINING LOT LINE
- WATER MAIN / LATERAL
- ELECTRIC CONDUIT
- TELEPHONE CONDUIT
- CABLE TV UNDERGROUND LINE
- ETC — UNDERGROUND ELECTRIC, TELEPHONE AND CABLE LINES
- SANITARY SEWER PIPE
- LEACHING TRENCH
- RESERVE LEACHING AREA
- TP-103 — TEST PIT
- PT-103 — PERC TEST PIT
- DISTRIBUTION BOX
- SEPTIC TANK
- WATER VALVE
- ELECTRIC METER
- UTILITY HANDHOLE
- ELECTRIC TRANSFORMER

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT

467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SITE UTILITY PLAN

Sheet #: 2.51

Oct 19, 2022 – 2:24pm bpalma
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SOIL EROSION AND SEDMIMENT 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
CONSTRUCTION TO BEGIN IN FALL 2022 WITH EXPECTED COMPLETION SUMMER 2023. 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 PROJECT ENGINEER 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 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 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.
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.

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 PROJECT ENGINEER.

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, EASTERN CONNECTICUT SOILS CONSERVATION DISTRICT, TOWN OF MONROE INLAND WETLANDS COMMISSION.

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES
I. SILTATION FENCE:
A. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
B. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND HAMMER THE POST AT LEAST 1.5 FEET INTO THE GROUND.
C. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
D. BACKFILL THE TRENCH AND COMPACT.

II. HAY BALES:
A. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
B. BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.
C. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.
D. THE GAPS BETWEEN BALES SHALL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.
E. THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUN-OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, BUT NOT AROUND IT.

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. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THEY EXCEED A HEIGHT OF ONE FOOT.

II. HAY BALES:
A. ALL HAY BALE RINGS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE PROMPTLY MADE AS NEEDED.
B. DEPOSITS SHALL BE REMOVED AND CLEANED-OUT IF ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

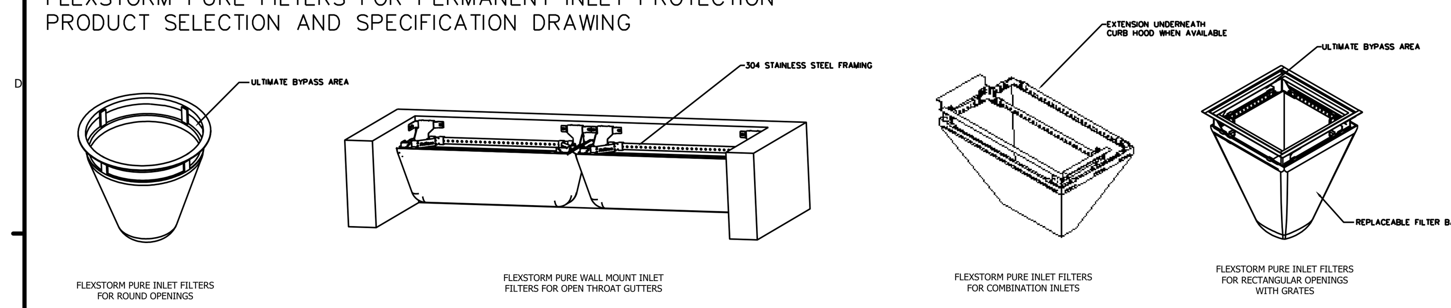
III. SEDIMENT TRAPS:
A. CONTRACTOR TO KEEP WEEKLY CHECKLIST LOGS FOR INSPECTIONS OF ALL SEDIMENT AND EROSION CONTROL DEVICES AND HAVE THEM READILY AVAILABLE ON-SITE AT ALL TIMES FOR INSPECTION BY CT DEEP, LOCAL AUTHORITIES OR ENGINEER.
B. ALL SEDIMENT TRAPS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OF SLOPES SHALL BE PROMPTLY MADE AS NEEDED. EROSION CONTROL BLANKETS MAY BE USED FOLLOWING REPAIR OF SLOPE AS DIRECTED BY THE ENGINEER.
C. SEDIMENT DEPOSITS SHALL BE REMOVED FROM SEDIMENT TRAPS AND/OR SEDIMENT TRAPS WHEN THEY EXCEED A HEIGHT OF ONE FOOT UNLESS OTHERWISE INDICATED ON THE EROSION CONTROL PLANS AND DETAILS TO BE AT A SPECIFIC ELEVATION PER CLEAN OUT MARKERS.
D. SEDIMENT SHALL BE DISPOSED OF ON-SITE OR AS DIRECTED BY THE ENGINEER AND LOCAL GOVERNING OFFICIALS. SEE SEDIMENT AND EROSION CONTROL NOTES HEREIN REGARDING DISPOSAL REQUIREMENTS FOR OFF SITE SPOIL DISPOSAL.

V. TEMPORARY/PERMANENT DRAINAGE SWALES:
A. SWALES SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OF ANY WASHED OUT OR ERODED SLOPES SHALL BE MADE PROMPTLY AND THE AREA SHALL BE RESEEDED AS NECESSARY.
B. EROSION CONTROL BLANKETS MAY BE USED TO REPAIR ERODED SWALES AS DIRECTED BY THE ENGINEER OR TOWN OF MONROE AGENT.

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.

SEDIMENT AND EROSION CONTROL NOTES
1. THE OWNER IS RESPONSIBLE FOR IMPLEMENTING THIS SEDIMENT AND EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE PROPER INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED WITH CONSTRUCTION ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, INFORMING THE GOVERNING AUTHORITY OR INLAND WETLANDS AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE SEDIMENT & EROSION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
2. AN EROSION CONTROL BOND MAY BE REQUIRED TO BE POSTED WITH THE TOWN OF MONROE TO ENSURE IMPLEMENTATION OF THE EROSION CONTROL MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF THIS BOND AND FOR INQUIRIES TO THE TOWN OF MONROE FOR INFORMATION ON THE METHOD, TYPE AND AMOUNT OF THE BOND POSTING UNLESS OTHERWISE DIRECTED BY THE OWNER.
3. VISUAL SITE INSPECTIONS SHALL BE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT OF 0.10 INCHES OR GREATER BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE EROSION AND SEDIMENT CONTROL (E&S) BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT, AND INCLUDE:
   A) A SUMMARY OF THE SITE CONDITIONS, E&S BMPS, AND COMPLIANCE; AND
   B) THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION
4. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, PREPARED BY CTDEEP, LATEST EDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF MONROE. THE CONTRACTOR SHALL KEEP A COPY OF THE GUIDELINES ON-SITE FOR REFERENCE DURING CONSTRUCTION.
5. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, CIVIL ENGINEER, TOWN OF MONROE, EASTERN CONNECTICUT SOILS CONSERVATION DISTRICT, TOWN OF MONROE INLAND WETLANDS COMMISSION, OR GOVERNING AGENCIES. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED.
6. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS BEFORE AND AFTER EACH STORM (0.10 INCHES OR GREATER RAINFALL), OR AT LEAST WEEKLY, TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS WHERE NECESSARY.
7. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (HAY BALES, SILT FENCE, JUTE MESH,RIP RAP ETC.) ON-SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.
8. INSTALL PERIMETER SEDIMENT CONTROLS PRIOR TO CLEARING OR CONSTRUCTION. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SILT FENCE UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE FENCE.
9. STONE CONSTRUCTION ENTRANCE ANTI-TRACKING PADS SHALL BE INSTALLED AT START OF CONSTRUCTION AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED.
10. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING. ALL EARTH STOCKPILES SHALL HAVE HAY BALES OR SILT FENCE AROUND THE LIMIT OF PILE. PILES SHALL BE TEMPORARILY SEEDED IF PILE IS TO REMAIN IN PLACE FOR MORE THAN 7 DAYS.
11. SEDIMENTATION TRAPS SHALL PROVIDE 134 CUBIC YARDS OF SEDIMENT STORAGE PER DISTURBED ACRE CONTRIBUTING TO THE BASIN. PROVIDE BASIN VOLUMES FOR ALL DISTURBANCE ON SITE.
12. STONE CONSTRUCTION ENTRANCE ANTI-TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY ON SITE EXCAVATION AND SHALL BE MAINTAINED DURING ALL EXCAVATION AND CONSTRUCTION ACTIVITIES.
13. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
14. SILT FENCE AND OTHER SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH CONTRACT DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO WORK IN ANY UPLAND AREAS.
15. EXCAVATED MATERIAL FROM TEMPORARY SILT TRAPS MUST BE STOCKPILED ON UPHILL SIDE OF SILT FENCE.
16. INSTALL SILT FENCE ACCORDING TO MANUFACTURER'S INSTRUCTION, PARTICULARLY, BURY LOWER EDGE OF FABRIC INTO GROUND. SILT FENCE SHALL BE MIRAFI ENVIROFENCE, AMOCO SILT STOP OR EQUIVALENT APPROVED BY THE CIVIL ENGINEER. FILTER FABRIC USED SHALL BE MIRAFI 100X OR EQUIVALENT. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
17. WHERE INDICATED ON EROSION CONTROL PLANS USE NEW HAY BALES AND REPLACE THEM WHENEVER THEIR CONDITION DETERIORATES BEYOND REASONABLE USABILITY. STAKE HAY BALES SECURELY INTO GROUND AND BUTT TIGHTLY TOGETHER TO PREVENT UNDERCUTTING AND BYPASSING.
18. INSTALL TEMPORARY DIVERSION DITCHES, PLUNGE POOLS, SEDIMENT TRAPS, AND DEWATERING PITS AS SHOWN AND AS NECESSARY DURING VARIOUS PHASES OF CONSTRUCTION TO CONTROL RUNOFF UNTIL UPHILL AREAS ARE STABILIZED. LOCATION OF TEMPORARY SEDIMENT TRAPS WILL REQUIRE REVIEW AND APPROVAL BY THE CIVIL ENGINEER AND GOVERNING OFFICIAL.
19. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE SUCH AS TEMPORARY PITS, SEDIMENT TRAPS OR GRASS FILTERS WITHIN THE APPROVED LIMIT OF DISTURBANCE. DISCHARGE TO STORM DRAINAGE SYSTEM OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR.
20. BLOCK THE OPEN UPSTREAM ENDS OF DETENTION BASIN/SEDIMENTATION BASIN OUTLET CONTROL ORIFICE UNTIL SITE IS STABILIZED. CONVERT TEMPORARY SEDIMENT TRAPS TO PERMANENT DETENTION BASINS ONCE SITE HAS BEEN STABILIZED. CLEAN OUTLET CONTROL STRUCTURES AS NECESSARY AND REMOVE ACCUMULATED SEDIMENT FROM BOTTOM OF BASIN. BLOCK END OF STORM SEWERS IN EXPOSED TRENCHES WITH BOARDS AND SANDBAGS AT THE END OF EACH WORKING DAY WHEN RAIN IS EXPECTED.
21. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. OTHER DUST CONTROL MEASURES TO BE USED AS NECESSARY INCLUDE WATERING DOWN DISTURBED AREAS, USING CALCIUM CHLORIDE, AND COVERING LOADS ON DUMP TRUCKS.
22. PERIODICALLY CHECK ACCUMULATED SEDIMENT LEVELS IN THE SEDIMENT TRAPS DURING CONSTRUCTION AND CLEAN ACCUMULATED SILT WHEN NECESSARY OR WHEN ONE FOOT OF SEDIMENT HAS ACCUMULATED OR PER SPECIFIC CLEANOUT MARKER ELEVATION. CLEAN ACCUMULATED SEDIMENT FROM CATCH BASIN SUMPS AS NECESSARY AND AS DIRECTED BY THE CIVIL ENGINEER OR OWNER'S CONSTRUCTION REPRESENTATIVE. REMOVE ACCUMULATED SEDIMENT FROM BEHIND HAY BALES AND SILT FENCE WHEN LEVEL REACHES HALF THE HEIGHT OF THE HAY BALE OR ONE FOOT AT SILT FENCE. DISPOSE OF SEDIMENT LEGALLY EITHER ON OR OFF SITE.
23. 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.
24. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
25. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF UTILITY AND STORM PIPE TRENCHES SO AS TO ALLOW THE TRENCH TO INTERCEPT ALL SILT LADEN RUNOFF.
26. CONTRACTOR SHALL ONLY EXCAVATE AS MUCH UTILITY AND STORM PIPE TRENCH WORK AS CAN BE COMPLETED, BACKFILLED AND STABILIZED IN ONE DAY SO AS TO LIMIT THE AMOUNT OF OPEN, DISTURBED TRENCHING.
27. ANY STOCKPILES OF STRIPPED MATERIALS ARE TO BE PERIODICALLY SPRAYED WITH WATER OR A CRUSTING AGENT TO STABILIZE POTENTIALLY WIND-BLOWN MATERIAL. HAUL ROADS BOTH INTO AND AROUND THE SITE ARE TO BE SPRAYED AS NEEDED TO SUPPRESS DUST. TRUCKS HAULING IMPORT FILL MATERIAL ARE TO BE TARPED TO AID IN THE CONTROL OF AIRBORNE DUST. DURING HIGH WIND EVENTS (20 TO 30 MPH SUSTAINED) CONSTRUCTION ACTIVITY SHALL BE LIMITED OR CEASED IF DUST CANNOT BE CONTROLLED BY WETTING.
28. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 70% UNIFORM PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.
29. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP PARKING LOT AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS WHEN AUTHORIZED BY LOCAL GOVERNING AUTHORITY. FILE NOT (NOTICE OF TERMINATION) WITH GOVERNING AUTHORITY RESPONSIBLE FOR REGULATING STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES PER NPDES.

FLEXSTORM PURE FILTERS FOR PERMANENT INLET PROTECTION
PRODUCT SELECTION AND SPECIFICATION DRAWING



For Round Openings with Grates		Minimum Bypass Flow Rates (CFS)* Based on Nominal Frame Size with minimum 2" Bypass flow gap
Drop Thru Opening Size Dia	Flexstorm Frame P/N	
Small: 10.0" - 18.0"	62SHDR	1.6
Medium: 18.1" - 24.0"	62MHDR	2.7
Large: 24.1" - 36.0"	62LHDR	3.8

For Open Throat Curb Inlets - Mounted to Wall Beneath Curb Opening	
Curb Opening Size	Flexstorm Frame P/N
Up to 4' curb openings (1 Filter)	62HDWM1
Between 4' and 8' curb openings (2 Filters)	62HDWM2
Between 8' and 12' curb openings (3 Filters)	62HDWM3
Between 12' and 16' curb openings (4 Filters)	62HDWM4

For Rectangular/Square Openings with Grates			Minimum Bypass Flow Rates (CFS)* Based on Nominal Frame Size with minimum 2" Bypass flow gap
Clear Drop Thru Opening Size (not grate or seat size)	Flexstorm Frame P/N	Combination P/N	
Small: 12" x 12" up to 16" x 16" (or 64" max perimeter)	62SHD	62SHDCB	2.4
Medium: 18" x 18" up to 24" x 24" (or 96" max perimeter)	62MHD	62MHDCB	3.5
Large: 26" x 26" up to 30" x 30" (or 120" max perimeter)	62LHD	62LHDCB	5.0
XL: 32" x 32" up to 48" x 48" (or 192" max perimeter) typ 2 pc set	62XLHD	62XLHDCB	7.2

CREATE YOUR ADS FLEXSTORM PART NUMBER BY COMBINING FRAME P/N AND BAG P/N
1. IDENTIFY YOUR FLEXSTORM FRAME PART NUMBER FROM TABLES ABOVE
2. SELECT YOUR BAG PART NUMBER BASED ON APPLICATION NEEDS

FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER

Frame P/N from Step 1. Filter Bag P/N from Step 2.

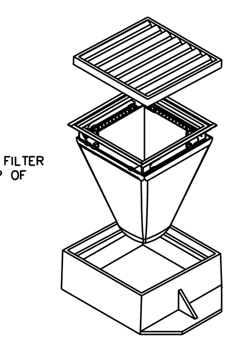
SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL BAG / FRAME SIZE

Nominal Bag Size *Matched to Frame Size*	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max (CFS) FX (Woven)	PC (Post Constr)	IL (NonWoven)	* PC Oil Retention (Oz)	**PC+ Oil Retention (Oz)	**FX+ Oil Retention (Oz)
Small	1.6	1.2	0.8	0.9	79	168	89
Medium	2.1	1.7	1.2	1.3	115	204	89
Large	3.8	2.7	1.8	1.9	173	262	89
XL	4.2	3.6	2.4	2.6	230	319	178
Filtration Efficiency		82%	NA	Large scale 3rd party testing per ASTM D 7351 using 7% concentration USDA Sandy Loam			
TSS (total suspended solids rem)		NA	99%	Large Scale testing at 90 GPM using US Silica OK-110 sand at 1750 mg/L measuring TSS per SM 2540D.			
TPH (tot petroleum hydrocarbons)		NA	96%	Large Scale testing at 90 GPM with used motor oil at 243 mg/L measuring per EPA Method 1664A.			

* PC filter bag at 50% max adsorption capacity
** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity

NOTES:
1. ALL FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL FOR 25 YEAR SERVICE LIFE RATING
2. TOTAL BYPASS CAPACITY: BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE.
3. UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
4. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE



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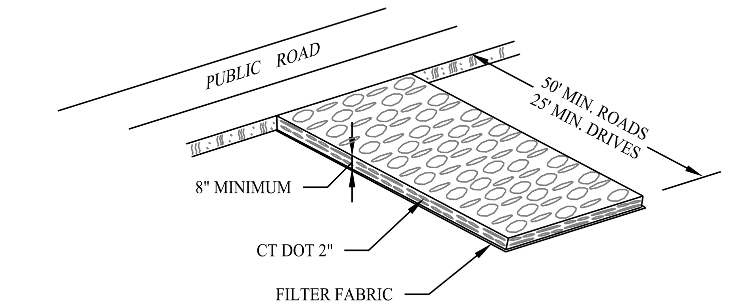
SIZE C | DWG NO IPP Flexstorm HD Specifications | REV A | SCALE | SHEET 1 OF 1

PERMANENT SILT SACK INLET PROTECTION

SCALE: NTS



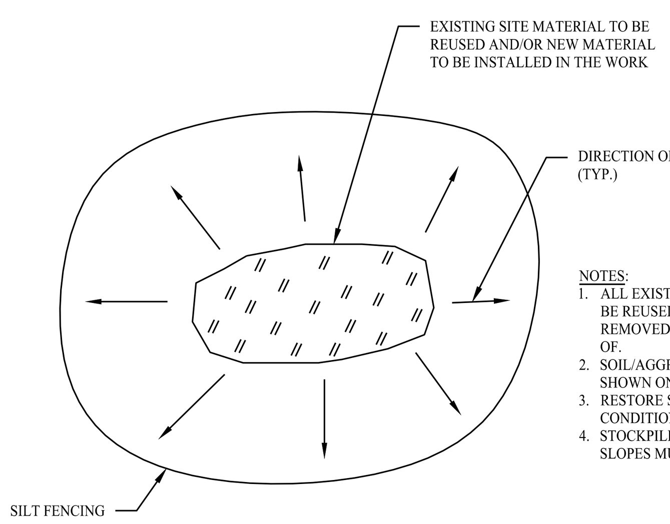
GRADATION TABLE

	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

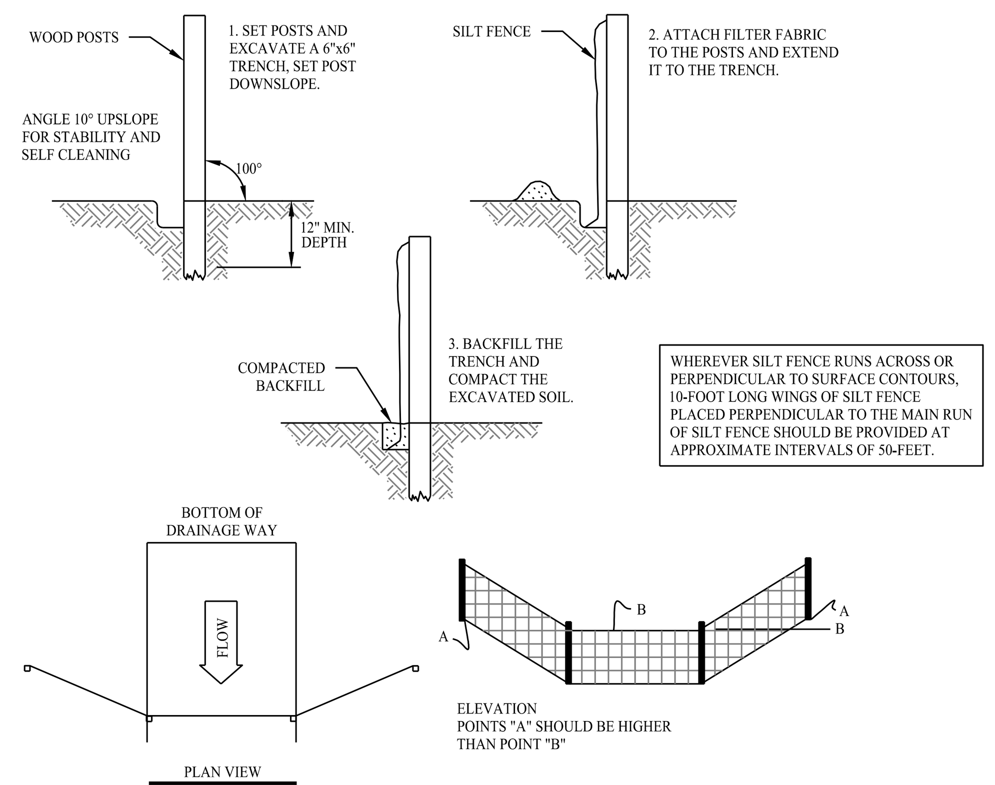
SCALE: NTS



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

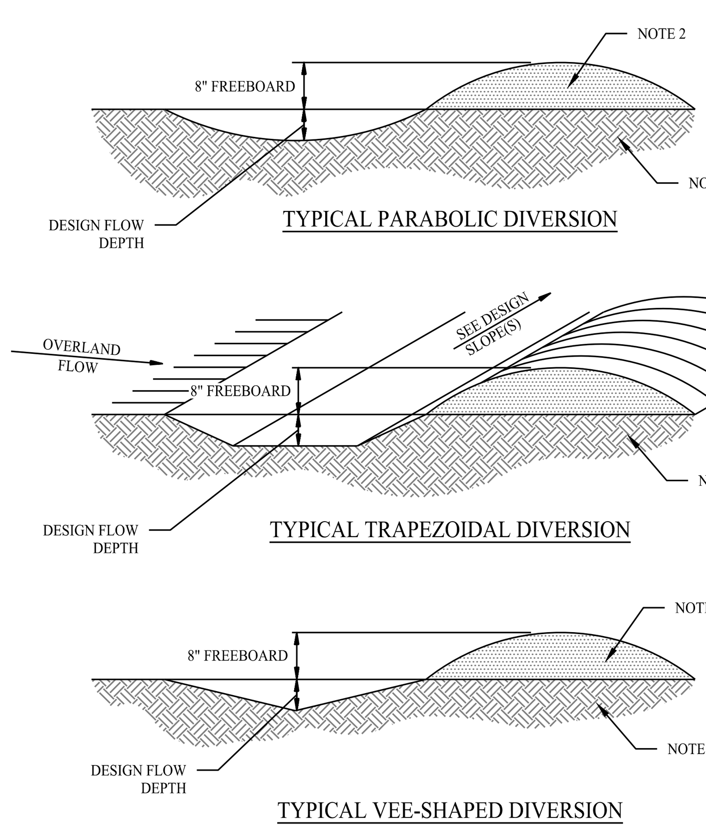
STOCKPILE AREA DETAIL

SCALE: NTS



SILT FENCE BARRIER DETAIL

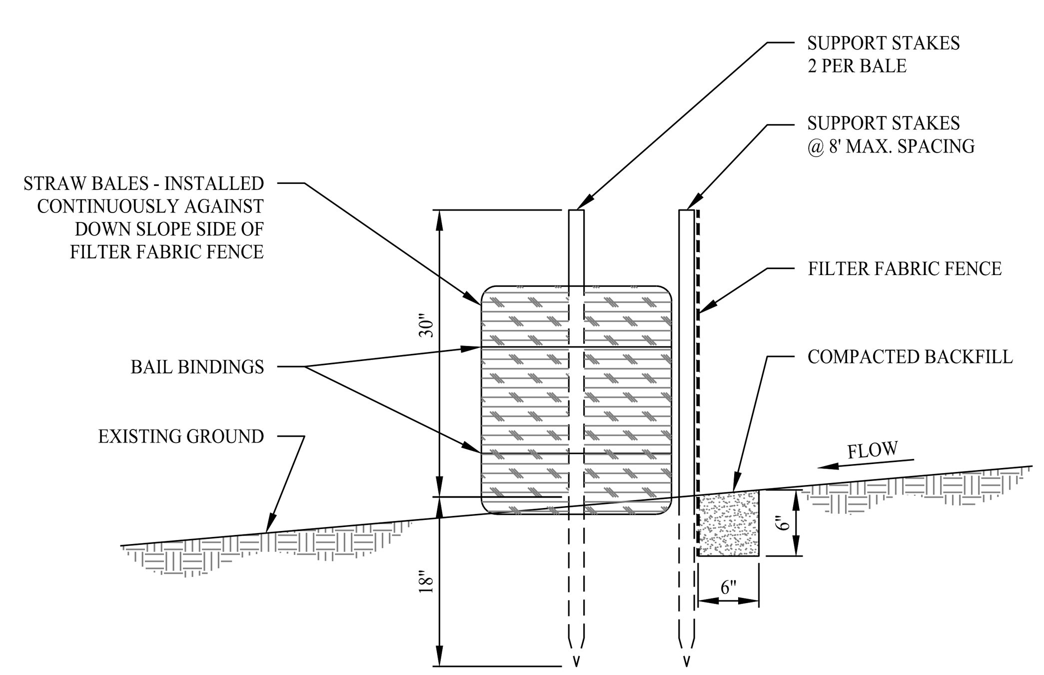
SCALE: NTS



NOTES:
1. REMOVE ANY EXISTING VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING BERM.
2. BERM MATERIALS MUST BE ADEQUATELY COMPACTED AND STABILIZED.
3. REFER TO E&S PHASE I & II FOR TEMPORARY AND/OR FINAL STABILIZATION MEASURES.
4. BERM SHALL NOT BE CONSTRUCTED OF TOPSOIL.

DIVERSION BERM DETAIL

SCALE: NTS

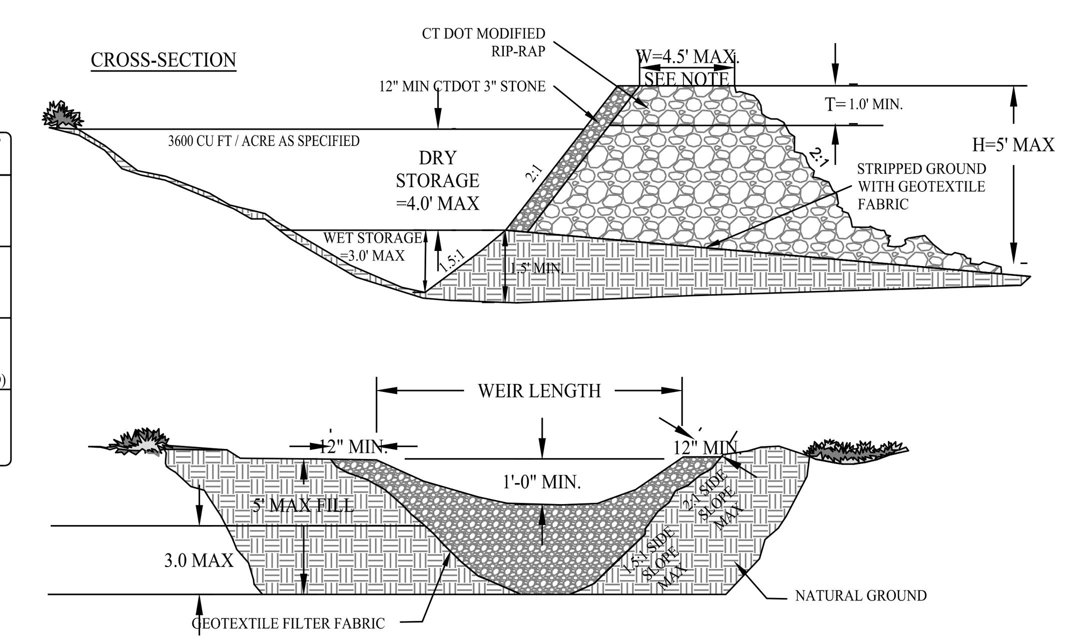


NOTE:
1. USE 2" x 2" x 48" WOODEN STAKES OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE WITH HAYBALE BACKING

SCALE: NTS

TEMPORARY SEDIMENT TRAP DESIGN CRITERIA	
DRAINAGE AREA (ACRES)	< 5 AC.
MIN. LENGTH TO WIDTH RATIO	2:1
MIN. VOLUME REQUIRED	3600 (CU. FT. PER AC. DISTURBED)
SURFACE AREA REQUIRED	435 (SQ. FT. PER CFS.)



NOTE: TOP WIDTH (FT) VS. HEIGHT (FT)	
1.5	2.0
2.0	2.0
2.5	2.5
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5

TEMPORARY SEDIMENT TRAP

SCALE: NTS

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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

Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Kevin Solli, P.E.
CT 25759

Project:
PROPOSED
SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:
SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

Sheet #:
2.41

Oct 19, 2022 – 2:24pm bpalma
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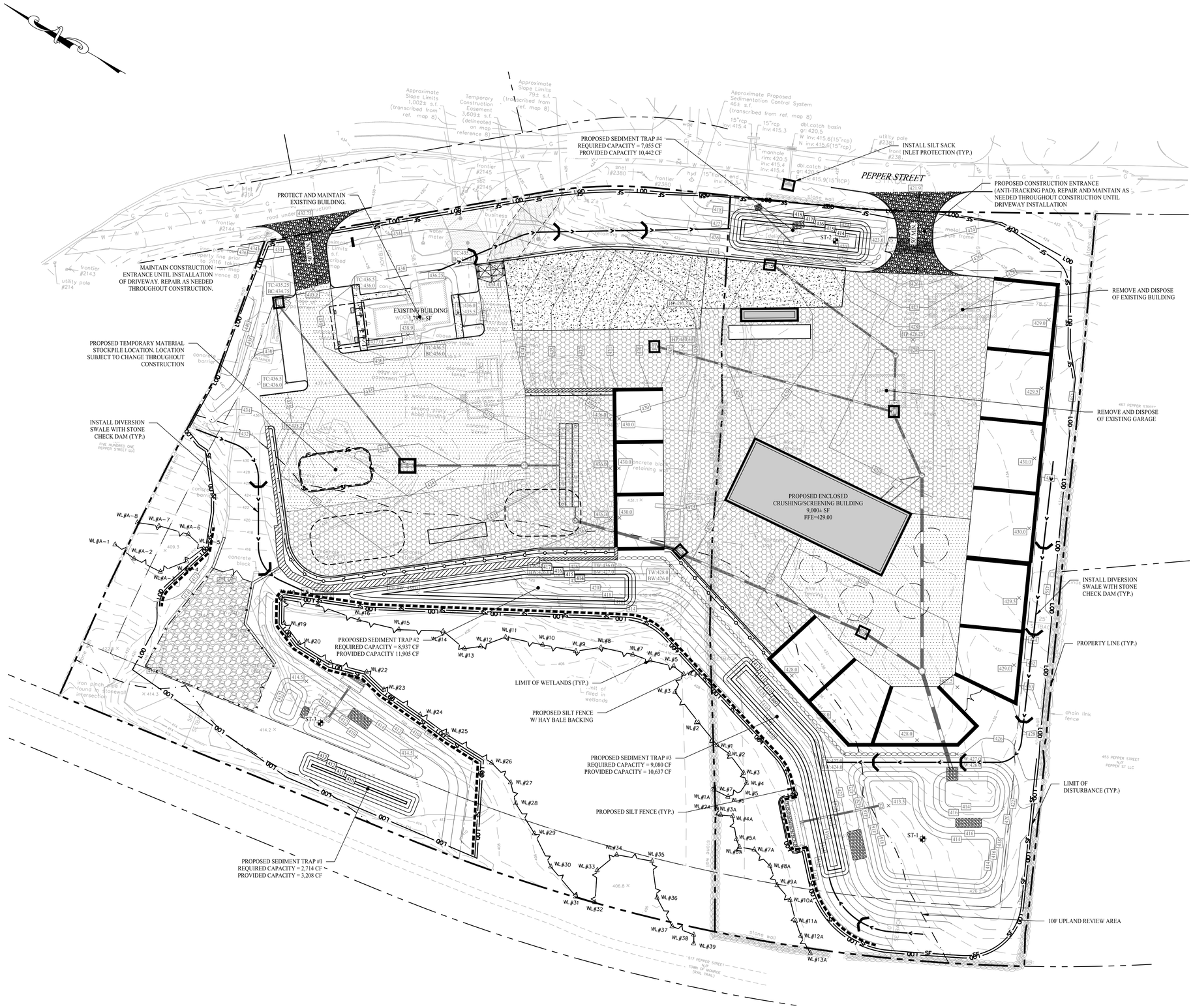

GENERAL NOTES

1. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES DEPICTED HEREON HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL MANUAL, BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION.
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. ALL SITE WORK TO BE COMPLETED IN ACCORDANCE WITH ALL PERMITS, APPROVALS AND CONDITIONS OF APPROVALS ISSUED BY THE TOWN OF MONROE FOR THIS PROJECT.
4. SEE SHEET 2.21 FOR DETAILS REGARDING THE PROPOSED GRADING AND DRAINAGE FEATURES, STORMWATER CONVEYANCE SYSTEM AND STORMWATER DETENTION FACILITIES.
5. SEE SHEET 2.41 FOR SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
6. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED HEREON ARE CONSIDERED TEMPORARY, UNLESS OTHERWISE NOTED, AND SHALL BE REMOVED UPON COMPLETION OF SITE WORK. REFER TO THE OPERATION REQUIREMENT ON SHEET 2.41 FOR MORE DETAIL.

LEGEND

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

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 = 0.75 ACRES
0.75 AC x 134 CY/AC = 100.5 CY
100.5 CY x 27 CF/CY = 2,714 CF
SEDIMENT TRAP #2 STORAGE CAPACITY = 3,208 CF

SEDIMENT TRAP #2:
CONTRIBUTING DRAINAGE AREA = 2.47 ACRES
2.47 AC x 134 CY/AC = 331 CY
331 CY x 27 CF/CY = 8,937 CF
SEDIMENT TRAP #2 STORAGE CAPACITY = 11,905 CF

SEDIMENT TRAP #3:
CONTRIBUTING DRAINAGE AREA = 2.51 ACRES
2.51 AC X 134 CY/AC = 336.3 CY
336.3 CY X 27 CF/CY = 9,080 CF
SEDIMENT TRAP #3 STORAGE CAPACITY = 10,637 CF

SEDIMENT TRAP #4:
CONTRIBUTING DRAINAGE AREA = 1.95 ACRES
1.95 AC X 134 CY/AC = 261.3 CY
261.3 CY X 27 CF/CY = 7,055 CF
SEDIMENT TRAP #4 STORAGE CAPACITY = 10,442 CF

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1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SOIL EROSION AND SEDIMENT CONTROL PLAN

Sheet #: 2.31

Oct 19, 2022 - 2:24pm bpalmo
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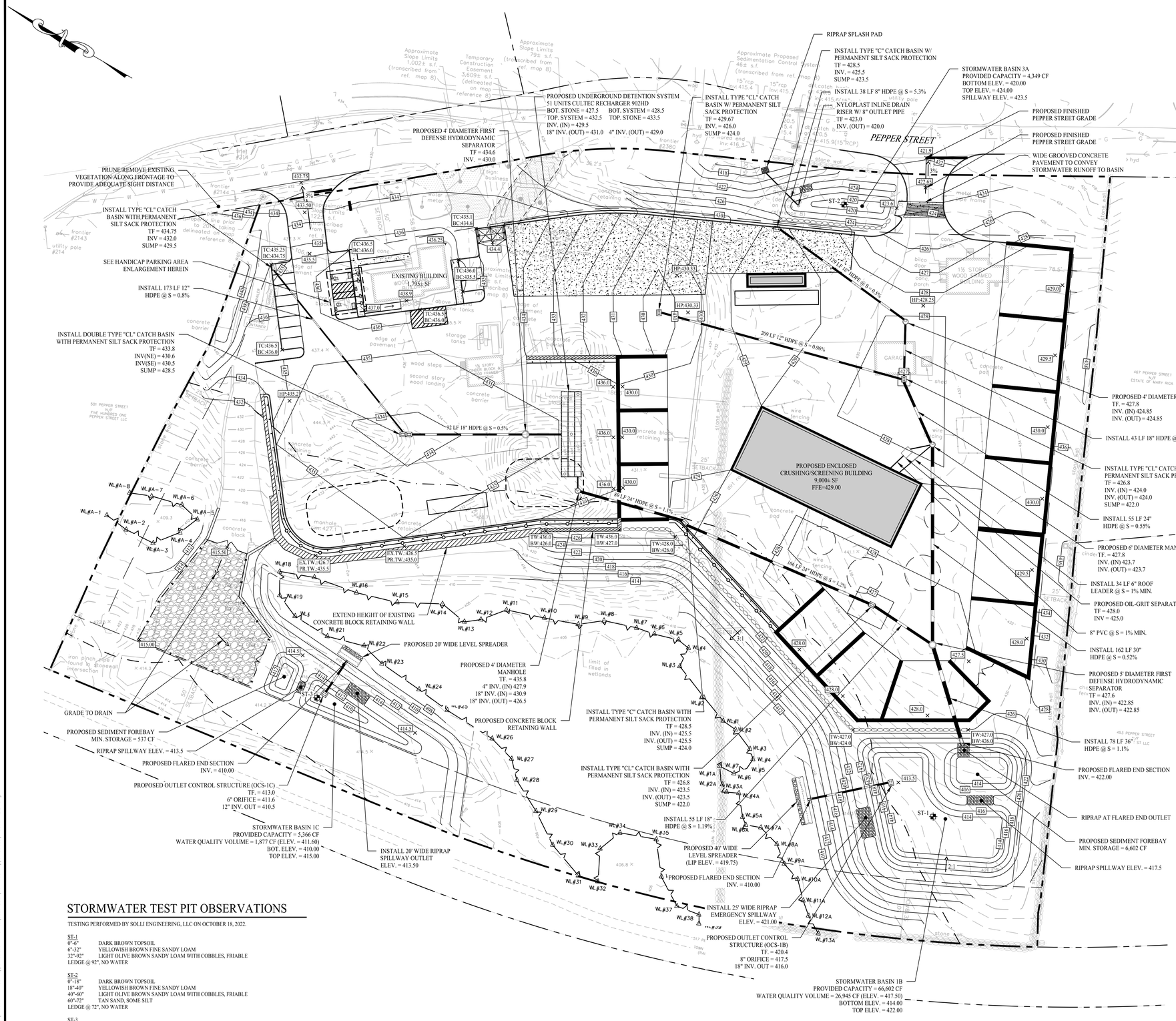


ABBREVIATIONS

&	AND
@	AT
BW	BOTTOM OF WALL
DIA	DIAMETER
ELEV	ELEVATION
FEE	FINCH FLOOR ELEVATION
GFA	GROSS FLOOR AREA
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LOD	LIMIT OF DISTURBANCE
LF	LINEAR FEET
MCL	MAJOR CONTOUR LAY
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TF	TOP OF FRAME
TR	TOP OF RIM
TW	TOP OF WALL
W/	WITH

GRADING AND DRAINAGE NOTES

1. THIS DRAWING IS INTENDED TO DESCRIBE GRADING AND DRAINAGE ONLY. REFER TO SITE PLAN FOR GENERAL INFORMATION, AND DETAIL SHEETS FOR DETAILS.
2. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND EROSION CONTROL NOTES.
3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
4. 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 THE TOWN OF MONROE REQUIRED TO PERFORM ALL WORK, INCLUDING FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
5. 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.
6. FILL WITHIN FORMER BUILDING FOUNDATION SHALL BE CHECKED BY TEST PIT AND PROOF-ROLLING AND SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER. SUBGRADE SHALL BE FORMED WITH REMOVAL AND REPLACEMENT OF FILL AND REMOVAL AND REPLACEMENT OF SOFT SUBGRADE MATERIAL AS ORDERED BY THE GEOTECHNICAL ENGINEER.
7. THE CONTRACTOR SHALL COMPACT FILL IN 12" MAXIMUM LIFTS UNDER ALL PARKING, BUILDING, AND DRIVE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
8. UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE OWNER/GEOTECHNICAL ENGINEER, AFTER SUBGRADE IS ROUGH GRADED.
9. ALL DISTURBANCE INCURRED TO TOWN OR STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF MONROE AUTHORITY.
10. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.
11. IF GROUNDWATER IS ENCOUNTERED DURING THE INSTALLATION OF THE UNDERGROUND DETENTION SYSTEM THEN THE BASIN SHALL BE LINED WITH AN IMPERVIOUS MEMBRANE PREVENT GROUNDWATER FROM ENTERING THE SYSTEM.

OPERATIONS AND MAINTENANCE PLAN

THE PROPERTY OWNER, ITS SUCCESSORS AND ASSIGNS, IS COMMITTED TO MAINTAINING ITS PROPERTY AT 467&485 PEPPER STREET IN ACCORDANCE WITH THIS SITE MAINTENANCE PLAN, AS FOLLOWS, TO MAINTAIN THE AESTHETIC QUALITY AND CLEANLINESS OF THE SITE.

ALL CATCH BASINS ARE TO BE CHECKED AND CLEANED OF TRASH, EXCESSIVE SEDIMENT AND OTHER DEBRIS, BIANNUALLY IN MAY AND NOVEMBER, WITH ADDITIONAL INSPECTIONS AND CLEANING AS NEEDED. ALL PAVED AREAS ARE TO BE CHECKED FOR PERIMETER EROSION, TRASH, SPILLAGE, AND PAVEMENT CONDITIONS DURING THESE INSPECTIONS. THE UNDERGROUND DETENTION SYSTEMS ARE TO BE INSPECTED BI-ANNUALLY DURING THOSE MONTHS AND CLEANED OF EXCESSIVE SEDIMENT AND DEBRIS.

THE HYDRODYNAMIC SEPARATORS ARE TO BE INSPECTED BIANNUALLY AND 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. CLEANING OF THE SYSTEM SHOULD BE DONE WITH A VACUUM TRUCK DURING DRY WEATHER CONDITIONS WHEN NO FLOW IS ENTERING THE SYSTEM.

DUST SUPPRESSION SYSTEM(S) ASSOCIATED WITH OPERATIONAL EQUIPMENT, SUCH AS WET METHODS USING SPRAY BARS WITH ATOMIZER NOZZLES WHERE DUST IS GENERATED (I.E. HOPPERS, CONVEYORS, SIEVES, SIZING, OR VIBRATING COMPONENTS) ARE TO BE USED DURING OPERATION. DUST SUPPRESSION SYSTEM(S) ARE TO BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. IN ADDITION, DUST EXPOSURE MITIGATION MEASURES TO; LOCATE NOZZLES UPSTREAM OF DUST GENERATION POINTS; POSITION NOZZLES TO THOROUGHLY WET MATERIAL, ENSURE THE VOLUME AND SIZE OF DROPLETS IS ADEQUATE TO SUFFICIENTLY WET MATERIAL; ENSURE NOZZLES PROVIDE COMPLETE WATER COVERAGE BUT ARE NOT SO FAR THAT THE WATER IS CARRIED AWAY BY WIND, ARE TO BE PRACTICED DURING OPERATION.

THESE OPERATIONS AND MAINTENANCE NOTES, AS WELL AS THOSE PROVIDED BY THE MANUFACTURER OF THE EQUIPMENT IN USE ARE TO BE POSTED AND MADE AVAILABLE IN THE BUILDING OF OPERATION AT ALL TIMES.

A STREET SWEEPER SHALL REMAIN ON SITE AT ALL TIMES IN ORDER TO REMOVE POTENTIAL SEDIMENT AND DEBRIS FROM PAVED AREAS.

STORMWATER TEST PIT OBSERVATIONS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON OCTOBER 18, 2022.

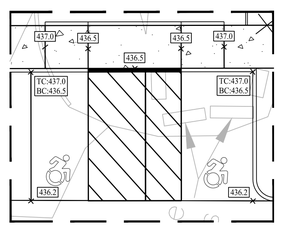
ST-1
0'-6" DARK BROWN TOPSOIL
6"-32" YELLOWISH BROWN FINE SANDY LOAM
32"-92" LIGHT OLIVE BROWN SANDY LOAM WITH COBBLES, FRIABLE
LEDGE @ 92", NO WATER

ST-2
0"-18" DARK BROWN TOPSOIL
18"-40" YELLOWISH BROWN FINE SANDY LOAM
40"-60" LIGHT OLIVE BROWN SANDY LOAM WITH COBBLES, FRIABLE
60"-72" TAN SAND, SOME SILT
LEDGE @ 72", NO WATER

ST-3
0"-4" MILLINGS
4"-13" DARK BROWN TOPSOIL
13"-84" SAND AND GRAVEL, SOME SILT, BONEY
LEDGE @ 84", NO WATER

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
- SWALE
- STORM DRAIN PIPE
- PERFORATED UNDERDRAIN / TRENCH DRAIN
- TYPE "C" CATCH BASIN
- TYPE "CL" CATCH BASIN
- STORM MANHOLE
- WATER QUALITY UNIT
- FLARE END SECTION



HANDICAP PARKING AREA ENLARGEMENT

SCALE : 1" = 10'

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: GRADING AND DRAINAGE PLAN

Sheet #: 2.21

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SIGN LEGEND

A	SIZES (IN)	CONN DOT #	SUPPORTS
STOP	30"	31-0552	1

B	SIZES (IN)	CONN DOT #	SUPPORTS
RESERVED PARKING / FINED $150	12"x18" 12"x6"	31-0629P 31-0648	1

C	SIZES (IN)	CONN DOT #	SUPPORTS
RESERVED PARKING VAN ACCESSIBLE / FINED $150	12"x18" 12"x6"	31-0629P 31-0648	1

D	SIZES (IN)	CONN DOT #	SUPPORTS
NO TRUCK EXIT TRUCKS MUST USE OTHER DRIVEWAY	36"x18"	N/A	1

E	SIZES (IN)	CONN DOT #	SUPPORTS
TRUCK TRAFFIC MUST EXIT LEFT	36"x18"	N/A	1

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- EXISTING BUILDING LIMITS
- PROPOSED BUILDING LIMITS
- PROPOSED BUILDING HATCH
- EDGE OF PAVEMENT
- BITUMINOUS CONCRETE CURB
- CONCRETE CURB
- STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT
- HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT
- ASPHALT MILLINGS
- CONCRETE SIDEWALK / PAVEMENT
- GRAVEL
- RETAINING WALL / GRAVITY OR SEGMENTAL BLOCK
- SIDEWALK LIMITS
- PAVEMENT STRIPING - YELLOW
- STORMWATER BASIN/RAIN GARDEN AREA
- CHAIN LINK FENCE
- METAL BEAM GUIDE RAIL
- ISD = XXX — INTERSECTION SIGHT DISTANCE (ISD)
- DUMPSTER / TRASH RECEPTACLE
- TRAFFIC SIGN
- TRAFFIC SIGN DESIGNATION
- LIMIT OF WETLANDS
- UPLAND REVIEW AREA

POTENTIAL CONSTRUCTION EQUIPMENT/STORAGE ITEMS

- CATCH BASIN STRUCTURES, TOPS, RIMS, & PARTS
- MANHOLE STRUCTURES, COVERS, & PARTS
- BELGIAN, CONCRETE, MANHOLE, & WALL BLOCK
- STONE
- VARIOUS STORM AND SANITARY PIPE SIZES AND LENGTHS

AGGREGATE MATERIAL LIST

- SCREENED TOPSOIL
- ¼" STONE
- ¾" STONE
- 1 ¼" STONE
- PROCESSED AGGREGATE
- 1 ½" PROCESSED SUBBASE
- 4" PROCESSED AGGREGATE
- BEDDING SAND
- SCREENED COMMON FILL

WETLAND AREA TABLE

AREA	LOT (ACRE)
LOT AREA	10.26±
WETLANDS ON LOT	1.21±
UPLAND REVIEW AREA ON LOT	2.96±
WETLANDS TO BE ALTERED	0.00
UPLAND REVIEW AREA TO BE ALTERED	2.25±
TOTAL REGULATED AREA TO BE ALTERED	2.25±

ZONING COMPLIANCE TABLE

ZONE: REGIONAL BUSINESS DISTRICT (RB)

ZONING REQUIREMENT	ZONING STANDARD	PROPOSED
MINIMUM LOT AREA	1 AC	10.26 AC
MINIMUM LOT FRONTAGE	120 FT	717 FT
MINIMUM FRONT YARD SETBACK	50 FT	58.9 FT
MINIMUM SIDE YARD SETBACK	25 FT	26 FT
MINIMUM REAR YARD SETBACK	25 FT	51 FT
MAXIMUM BUILDING COVERAGE	25 %	10.2 %
MAXIMUM HEIGHT	40 FT	< 40 FT
MAXIMUM HEIGHT (STORIES)	3 STORIES	1 STORY

PARKING COMPLIANCE TABLE

USE	SIZE GFA	ZONING STANDARD	REQUIRED SPACES
OFFICE SPACE	1,795± SF	4 SPACE / 1,000 SF	8
		TOTAL OFF-STREET PARKING REQUIRED	8
		TOTAL PROPOSED PARKING SPACES	15

OUTDOOR STORAGE

ZONING STANDARD	LOT SIZE	AREA ALLOWED	AREA PROPOSED
40%	446,962± SF	178,784 SF	56,853 SF

SITE PLAN NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION.
2. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY TOWN OF MONROE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
3. 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.
4. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING AND STORAGE BINS.
5. 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.
6. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFFRENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
7. PAVEMENT MARKING KEY:
   4" SYDL 4' SOLID YELLOW DOUBLE LINE
   4" SYL 4" SOLID YELLOW LINE
   4" SWL 4" SOLID WHITE LINE
   12" SWSB 12" SOLID WHITE STOP BAR
   4" BWL 4" BROKEN WHITE LINE 10' STRIPE 30'SPACE
8. 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.
9. 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.
10. 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.
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. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH CONNECTICUT DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.
13. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
14. NO PART OF THE PROJECT PARCEL IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.
15. WETLANDS WERE DELINEATED AND FLAGGED BY JMM WETLAND CONSULTING SERVICES, LLC, ON JUNE 1, 2022.
16. 12" SWSB (STOP BAR) AND 4" SDYL AND SWL PAVEMENT MARKINGS LOCATED IN DRIVEWAYS AND IN STATE HIGHWAY SHALL BE EPOXY RESIN TYPE ACCORDING TO CONNDOT SPECIFICATIONS.
17. EXISTING CONDITIONS INFORMATION TAKEN FROM A PLAN ENTITLED "ZONING LOCATION SURVEY OF 467 & 485 PEPPER STREET, MONROE, CONNECTICUT," DATED 07/18/22, SCALE: 1" = 40', BY ACCURATE LAND SURVEYING, LLC.
18. PROPOSED ROADWAY AND DRAINAGE IMPROVEMENTS IN PEPPER STREET ARE TAKEN FROM PLAN SET ENTITLED "RECONSTRUCTION PLANS FOR PEPPER STREET, TOWN OF MONROE; PRELIMINARY DESIGN SUBMISSION," DATED AUGUST 22, 2014, PREPARED BY BL COMPANIES.
19. A SWEEPER SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
20. REMOVE EXISTING STORAGE TRAILER PRIOR TO SITEWORK.
21. ALL OUTDOOR STORAGE BINS WILL HAVE SPRINKLERS INSTALLED ON TOP FOR DUST CONTROL.

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SITE PLAN

Sheet #: 2.11

Oct 19, 2022 - 2:25pm bpalma
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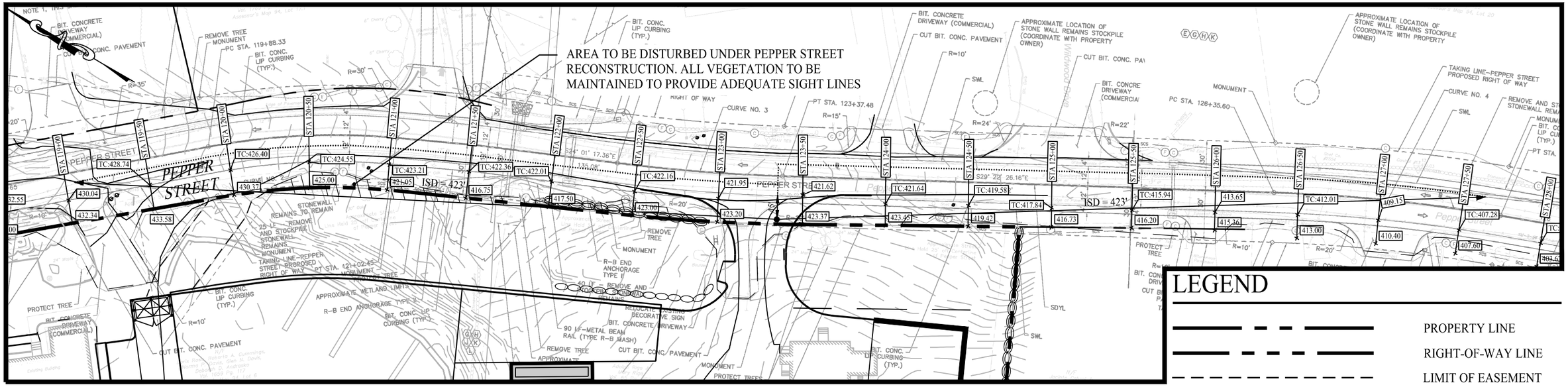
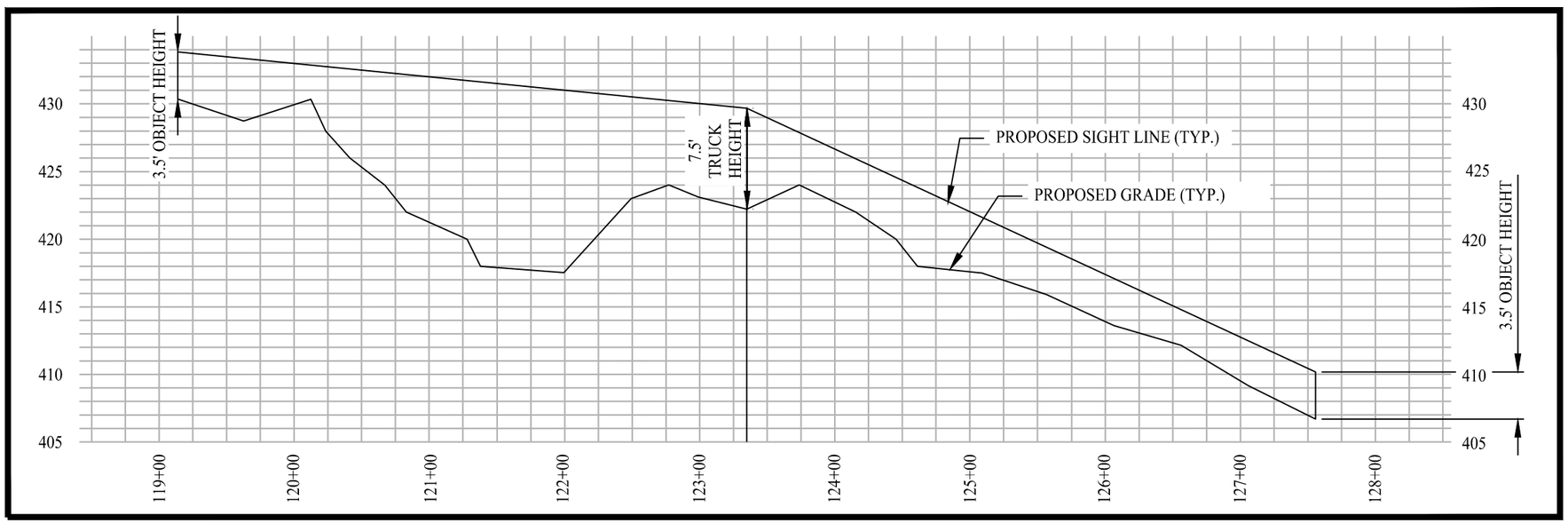
APPENDIX E
INTERSECTION SIGHT DISTANCE FIGURES

ISD-1-Truck Intersection Site Distance
ISD-2-Passenger Car Intersection Site Distance (1 of 2)
ISD-3-Passenger Car Intersection Site Distance (1 of 2)



INTERSECTION SIGHT DISTANCE

SCALE: 1" = 60'



SIGHT LINE PROFILE

SCALE: 1" = 100' HORIZ : 1" = 10' VERT.

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- LIMIT OF EASEMENT
- EXISTING TREE LINE
- AREA TO BE CLEARED WITHIN TREE LINE
- CUT-FILL LINE
- AREA TO BE CLEARED UNDER PEPPER STREET RECONSTRUCTION

NOTES:

1. THE PROPOSED ROADWAY RECONSTRUCITON INFORMATION IS TAKEN FROM PLANS ENTITLED "ROADWAY RECONSTRUCTION - PEPPER STREET, MONROE, CONNECTICUT," DATED 06/26/19, PREPARED BY BL COMPANIES.
2. THE GRADING SHOWN ALONG PEPPER STREET IS CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED UPON COMPLETION OF THE PEPPER STREET RECONSTRUCTION PROJECT.
3. INTERSECTION SIGHT DISTANCE WAS MEASURED 15 FEET FROM THE EDGE OF TRAVEL WAY.
4. INTERSECTION SIGHT DISTANCE FOR TRACTOR TRAILER AND PASSENGER VEHICLE IS BASED ON A SPEED OF 25 MILES PER HOUR IN BOTH DIRECTIONS.
5. STATIONING ON SIGHT LINE PROFILES IS ALONG THE SIGHT LINE.

Rev. #:	Date	Description

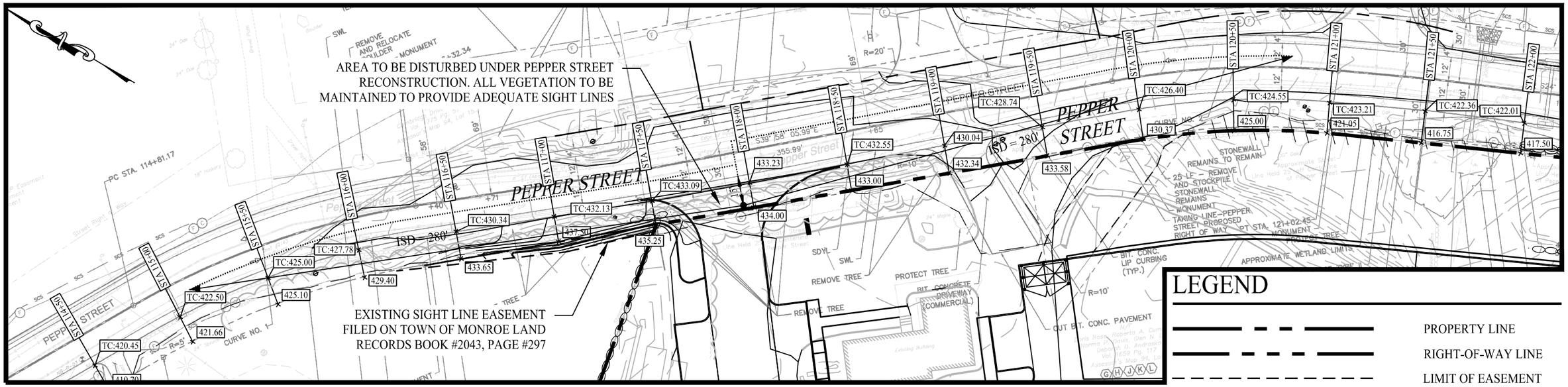
SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 | F: (203) 880-9695

Drawn By:	ABS
Checked By:	KMS
Project #:	1708001
Plan Date:	08/19/22
Scale:	VARIES

Project: MONROE RECYCLING AND AGGREGATES
485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: TRUCK INTERSECTION SIGHT DISTANCE

SHEET #: ISD-1

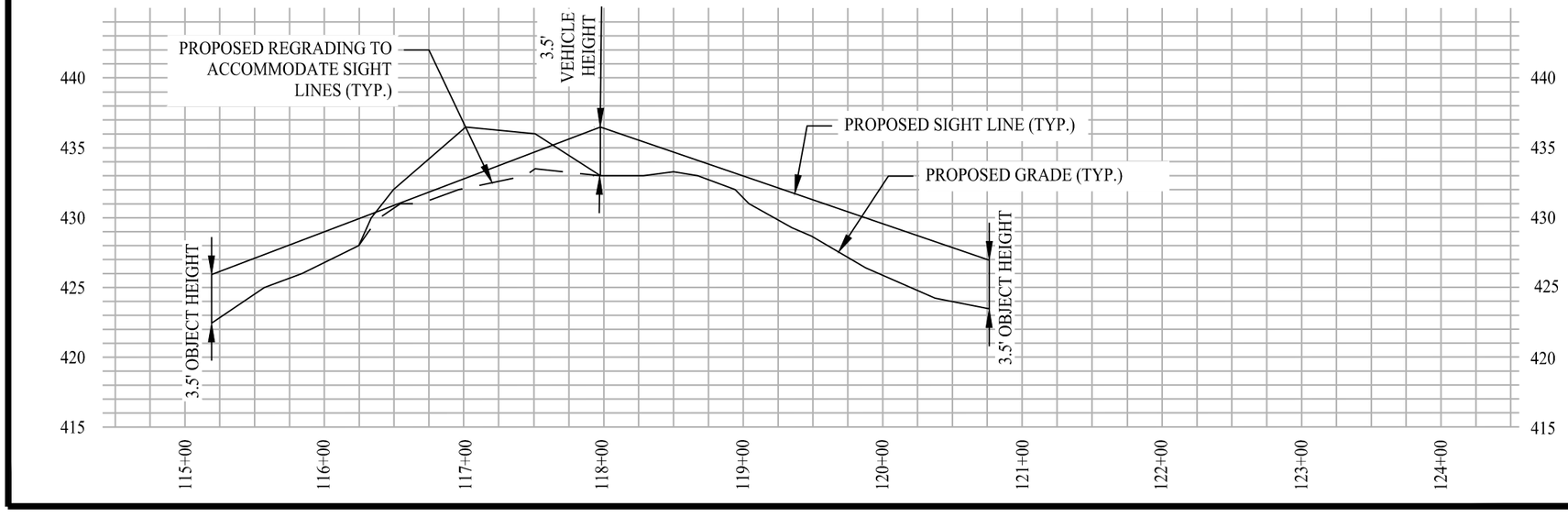


INTERSECTION SIGHT DISTANCE

SCALE: 1" = 50'

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- LIMIT OF EASEMENT
- EXISTING TREE LINE
- AREA TO BE CLEARED WITHIN TREE LINE
- CUT-FILL LINE
- AREA TO BE CLEARED UNDER PEPPER STREET RECONSTRUCTION



SIGHT LINE PROFILE

SCALE: 1" = 100' HORIZ : 1" = 10' VERT.

NOTES:

1. THE PROPOSED ROADWAY RECONSTRUCITON INFORMATION IS TAKEN FROM PLANS ENTITLED "ROADWAY RECONSTRUCTION - PEPPER STREET, MONROE, CONNECTICUT," DATED 06/26/19, PREPARED BY BL COMPANIES.
2. THE GRADING SHOWN ALONG PEPPER STREET IS CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED UPON COMPLETION OF THE PEPPER STREET RECONSTRUCTION PROJECT.
3. INTERSECTION SIGHT DISTANCE WAS MEASURED 15 FEET FROM THE EDGE OF TRAVEL WAY.
4. INTERSECTION SIGHT DISTANCE FOR TRACTOR TRAILER AND PASSENGER VEHICLE IS BASED ON A SPEED OF 25 MILES PER HOUR IN BOTH DIRECTIONS.
5. STATIONING ON SIGHT LINE PROFILES IS ALONG THE SIGHT LINE.

Rev. #:	Date	Description

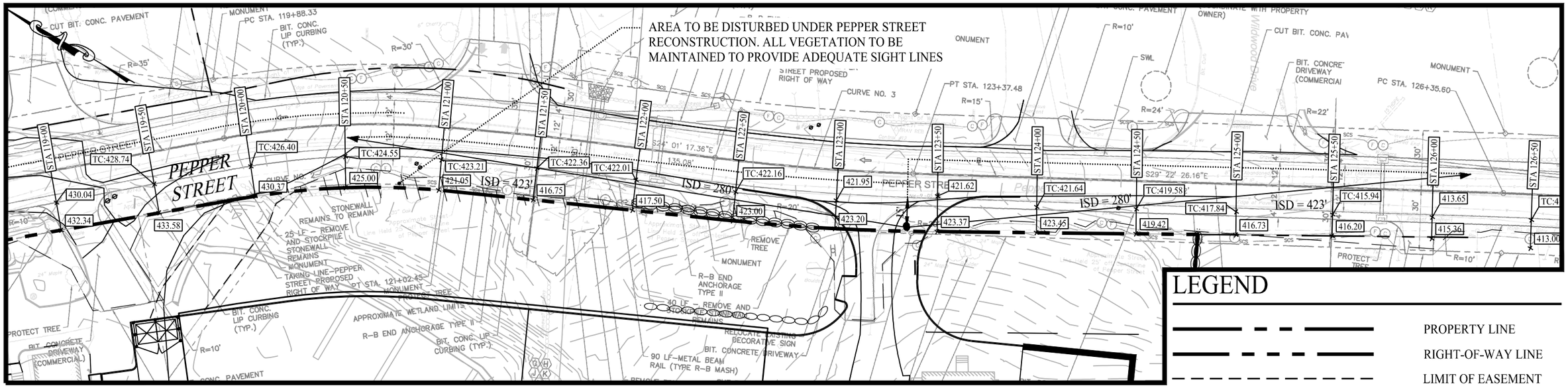
SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 | F: (203) 880-9695

Drawn By:	ABS
Checked By:	KMS
Project #:	1708001
Plan Date:	08/19/22
Scale:	VARIES

Project: MONROE RECYCLING AND AGGREGATES
485 PEPPER STREET
MONROE, CONNECTICUT

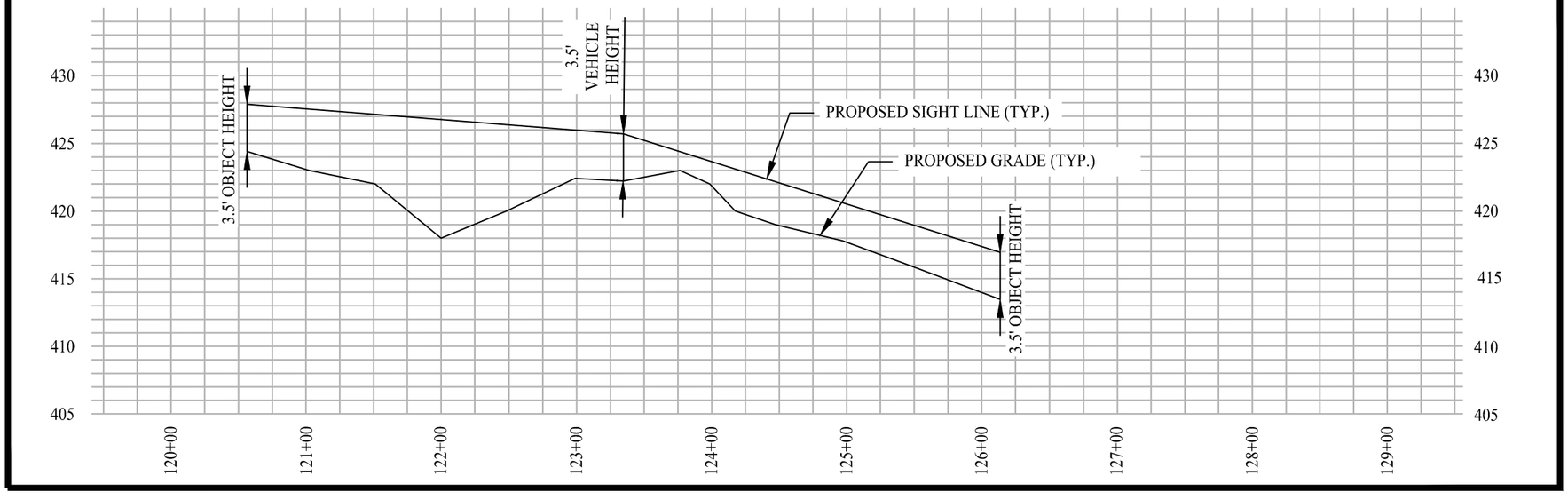
Sheet Title: PASSENGER CAR INTERSECTION SIGHT DISTANCE (1 OF 2)

SHEET #: ISD-2



INTERSECTION SIGHT DISTANCE

SCALE: 1" = 50'



SIGHT LINE PROFILE

SCALE: 1" = 100' HORIZ : 1" = 10' VERT.

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- LIMIT OF EASEMENT
- EXISTING TREE LINE
- AREA TO BE CLEARED WITHIN TREE LINE
- CUT-FILL LINE
- AREA TO BE CLEARED UNDER PEPPER STREET RECONSTRUCTION

NOTES:

1. THE PROPOSED ROADWAY RECONSTRUCITON INFORMATION IS TAKEN FROM PLANS ENTITLED "ROADWAY RECONSTRUCTION - PEPPER STREET, MONROE, CONNECTICUT," DATED 06/26/19, PREPARED BY BL COMPANIES.
2. THE GRADING SHOWN ALONG PEPPER STREET IS CONSIDERED APPROXIMATE AND MUST BE FIELD VERIFIED UPON COMPLETION OF THE PEPPER STREET RECONSTRUCTION PROJECT.
3. INTERSECTION SIGHT DISTANCE WAS MEASURED 15 FEET FROM THE EDGE OF TRAVEL WAY.
4. INTERSECTION SIGHT DISTANCE FOR TRACTOR TRAILER AND PASSENGER VEHICLE IS BASED ON A SPEED OF 25 MILES PER HOUR IN BOTH DIRECTIONS.
5. STATIONING ON SIGHT LINE PROFILES IS ALONG THE SIGHT LINE.

Rev. #: Date Description

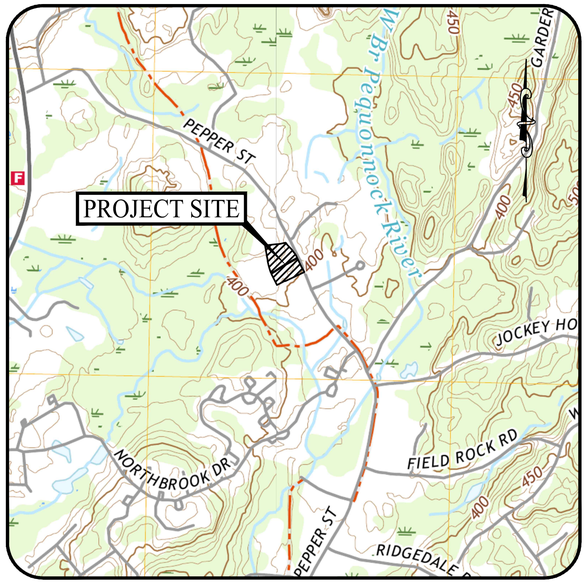
SOLLI ENGINEERING
501 Main Street, Monroe, CT 06468
T: (203) 880-5455 | F: (203) 880-9695

Drawn By:	ABS
Checked By:	KMS
Project #:	1708001
Plan Date:	08/19/22
Scale:	1" = 50'

Project: MONROE RECYCLING AND AGGREGATES
485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: PASSENGER CAR INTERSECTION SIGHT DISTANCE (2 OF 2)

SHEET #: ISD-3



USGS MAP

SCALE: 1" = 1,500'

PROPOSED SITE DEVELOPMENT

467 & 485 PEPPER STREET
MONROE , CONNECTICUT 06468

PREPARED FOR:

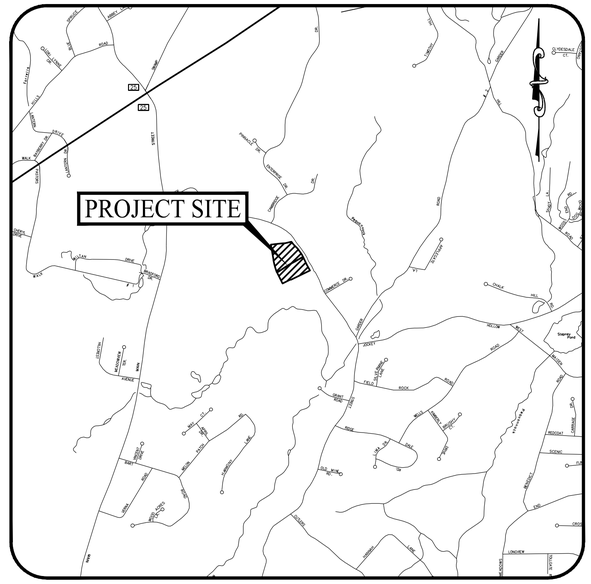
MONROE RECYCLING AND AGGREGATES, LLC

485 PEPPER STREET
MONROE, CONNECTICUT 06468

PREPARED BY:

SOLLI ENGINEERING

501 MAIN STREET, MONROE, CONNECTICUT 06468



LOCATION MAP

SCALE: 1" = 1,500'

APPLICANT

MONROE RECYCLING AND AGGREGATES, LLC
485 PEPPER STREET
MONROE, CONNECTICUT 06468
(203) 838-0123

OWNER: 467 PEPPER STREET

485 PEPPER STREET, LLC
314 WILSON AVENUE
NORWALK, CONNECTICUT 06854
(203) 838-0123

OWNER: 485 PEPPER STREET

485 PEPPER STREET, LLC
314 WILSON AVENUE
NORWALK, CONNECTICUT 06854
(203) 838-0123

PROPERTY INFORMATION

ADDRESS: 467 PEPPER STREET, MONROE, CT, 06468
MAP-BLOCK-LOT: 094-005-00
ADDRESS: 485 PEPPER STREET, MONROE, CT, 06468
MAP-BLOCK-LOT: 094-006-00

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

SITE/LANDSCAPE ARCHITECT

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

SOIL SCIENTIST

JAMES McMANUS
JMM WETLAND CONSULTANTS
23 HORSESHOE RIDGE ROAD
NEWTOWN, CT 06482
(203) 364-0382

SURVEYOR OF RECORD

BRYAN NESTERIAK, PE, LS
LICENSE NO. 23556
ACCURATE LAND SURVEYING
15 RESEARCH DRIVE, SUITE 3
WOODBRIDGE, CONNECTICUT 06525
(203) 881-8145

DRAWING LIST

SHEET #	SHEET NAME	PLAN DATE	LATEST REVISION
0.00	COVER SHEET	08/23/22	10/19/22
1 OF 1	PROPERTY SURVEY	07/18/22	N/A
1.40	PROPERTY RADIUS & SITE AREA MAP	08/23/22	10/19/22
2.11	SITE PLAN	08/23/22	10/19/22
2.21	GRADING & DRAINAGE PLAN	08/23/22	10/19/22
2.31	SOIL EROSION & SEDIMENT CONTROL PLAN	08/23/22	10/19/22
2.41	SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS	08/23/22	10/19/22
2.51	UTILITY PLAN	08/23/22	10/19/22
2.61	LANDSCAPE PLAN	08/23/22	10/19/22
2.62	LANDSCAPE NOTES AND DETAILS	08/23/22	10/19/22
2.71	LIGHTING PLAN	08/23/22	10/19/22
3.01	DETAIL SHEET	08/23/22	10/19/22
3.02	DETAIL SHEET	08/23/22	10/19/22
3.03	DETAIL SHEET	08/23/22	10/19/22
3.04	DETAIL SHEET	08/23/22	10/19/22

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
COVER SHEET	0.00

Oct 19, 2022 - 12:51pm chris
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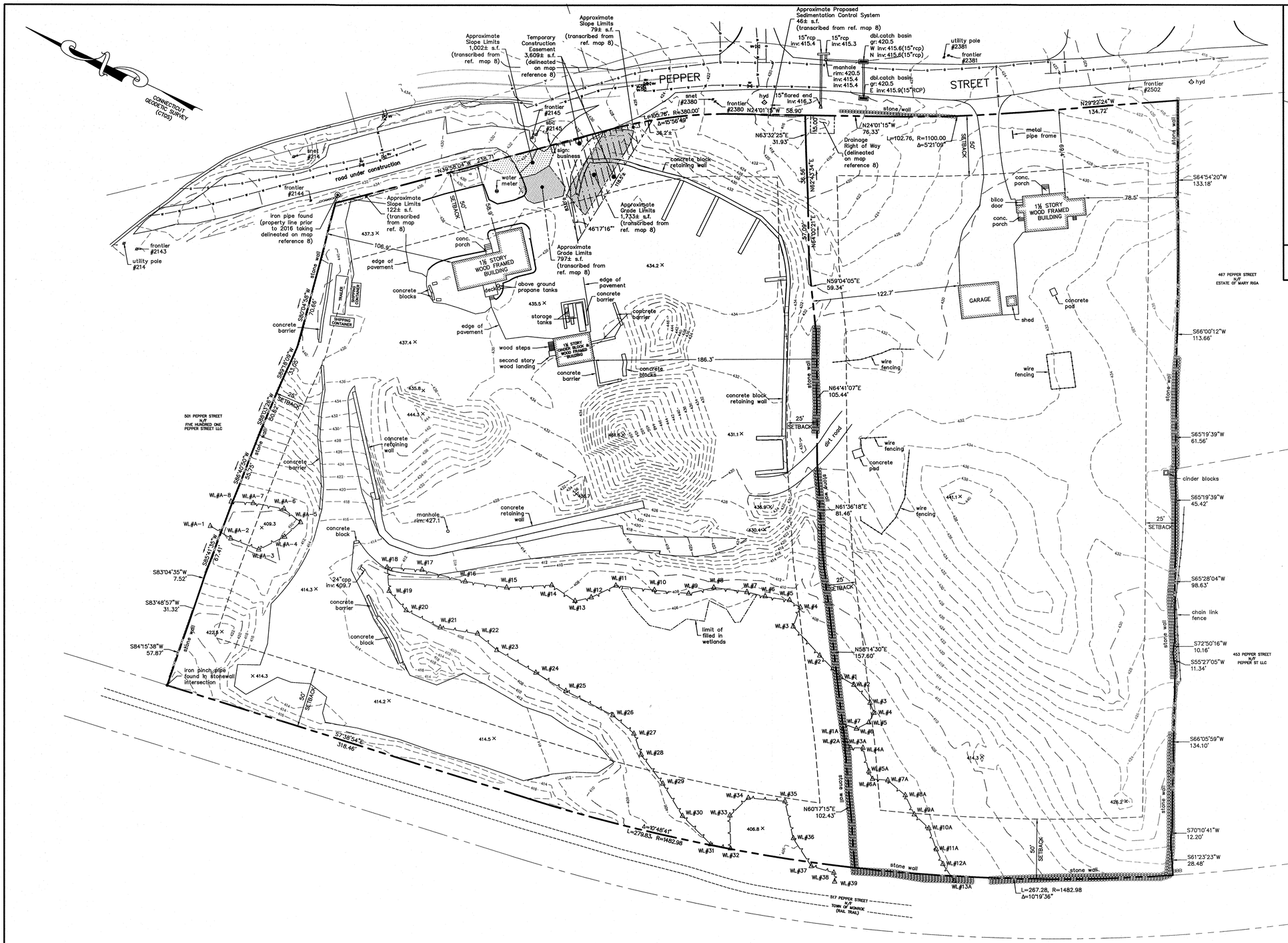

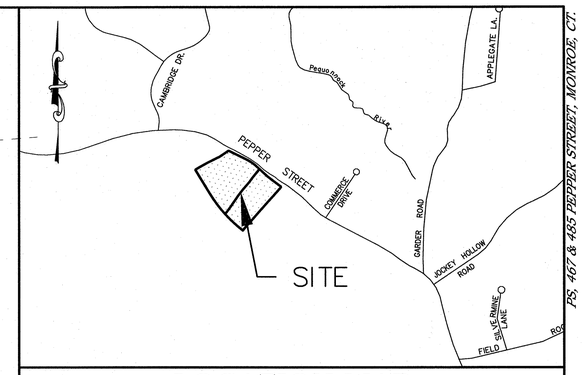

LOCATION MAP

SCALE: 1"=800'

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. VERTICAL DATA CONFORMS TO CLASS V-2 STANDARDS. TOPOGRAPHIC DATA CONFORMS TO CLASS T-2 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. PROPERTIES ARE ALSO KNOWN AS TOWN OF MONROE TAX LOTS 5 AND 6 ON ASSESSORS MAP 94.
7. TOTAL AREA = 446,962 SQ.FT. OR 10.260 ACRES
   467 PEPPER STREET = 188,400 SQ.FT. OF 4.325 ACRES
   485 PEPPER STREET = 258,562 SQ.FT. OR 5.936 ACRES
8. PROPERTIES LIE IN ZONING DISTRICT "I-1".
9. PROPERTIES DO NOT LIE WITHIN A FLOOD HAZARD ZONE AS DETERMINED BY FEMA.
10. THE LOCATION OF UNDERGROUND UTILITIES SHOULD BE CONSIDERED APPROXIMATE AND OTHER THAN DEPICTED HEREON, IF ANY, IS UNKNOWN.
11. WETLANDS FLAGS FOR 485 PEPPER STREET WERE TRANSCRIBED FROM MAP REFERENCE 6, AND WERE ORIGINALLY FLAGGED BY JMM WETLAND CONSULTING SERVICES FEBRUARY 24, 2018.
12. WETLANDS FLAGS FOR 467 PEPPER STREET WERE DELINEATED BY JMM WETLAND CONSULTING SERVICES, LLC, INC. JULY 7, 2022. FLAGS WERE LOCATED VIA CONVENTIONAL SURVEY METHODS
13. FIELD TOPOGRAPHY SHOWN HEREON REFLECTS SITE CONDITIONS AS OF JUNE 28, 2022.

MAP REFERENCES

1. PLAN ENTITLED "R.O.W. AND TRACK MAP – THE NEW YORK, NEW HAVEN & HARTFORD R.R. CO., FROM BRIDGEPORT TO PITTSFIELD", SCALE: 1"=100'. DATED: JUNE 30, 1915. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE.
2. PLAN ENTITLED "MAP OF SURVEY OF PROPERTY IN MONROE, CONN. FOR DANIEL W. ROWELL, 3RD.", SCALE: 1"=30'. DATED: APRIL 20, 1962. BY FULLER & CO. INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 611.
3. PLAN ENTITLED "PLAN OF PROPERTY FOR 485 PEPPER STREET, MONROE, CONN.", SCALE: 1"=50'. DATED: JULY 3, 1988. REVISED THRU: JAN. 4, 1989. BY CHARLES T. GALIAN. ON FILE IN THE TOWN OF MONROE BUILDING DEPARTMENT.
4. PLAN ENTITLED "SHEET THREE OF THREE BASELINE SURVEY FORMER RAILROAD RIGHT OF WAY PURDY HILL ROAD TO NEWTOWN TOWN LINE MONROE, CONN. PREPARED FOR THE TOWN OF MONROE", SCALE: 1"=100'. DATED: MARCH 31, 1994. BY SPATH-BJORKLUND ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 2407.
5. PLAN ENTITLED "PROPERTY SURVEY # 501 PEPPER STREET, MONROE, CONNECTICUT", SCALE: 1"=30'. DATED: FEBRUARY 6, 1998. BY SPATH-BJORKLUND INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 2671.
6. PLAN ENTITLED "DATA ACCUMULATION PLAN DEPICTING A LOT LINE REVISION PREPARED FOR ERIC & SUSAN ERICKSON 453 & 459 PEPPER STREET MONROE, CONN. PREPARED FOR THE TOWN OF MONROE", SCALE: 1"=40'. DATED: APRIL 9, 2009. BY SPATH-BJORKLUND ASSOCIATES INC. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 3047.
7. PLAN ENTITLED "RIGHT OF WAY SURVEY TOWN OF MONROE MAP SHOWING LAND ACQUIRED FROM MARY RIGA BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION PEPPER STRRET RECONSTRUCTION", PROJECT NO 84-109, SERIAL NO.10 SHEET 1 OF 1. SCALE: 1"=40'. DATED: AUGUST 2015. BY JENNIFER MARKS L.S.. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 3164.
8. PLAN ENTITLED "RIGHT OF WAY SURVEY, TOWN OF MONROE, MAP SHOWING LAND ACQUIRED FROM DORIS ROSE URBAN, ET AL., BY THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION, PEPPER STREET RECONSTRUCTION", PROJECT NO. 84 -109, SERIAL NO. 7, SHEET 1 OF 1. SCALE: 1"=40', DATED: AUGUST 2015, REVISED THRU: 5/16/16. ON FILE IN THE TOWN OF MONROE CLERK'S OFFICE AS MAP 3181.
9. PLAN ENTITLED "ZONING LOCATION SURVEY OF 485 PEPPER STREET MONROE, CONNECTICUT", SCALE 1"=30'. DATED MARCH 9, 2018. BY ACCURATE LAND SURVEYING.

LEGEND

⊡ C.H.D.	Conn. Hwy. Dept. Monument	Gas gate valve	Evergreen Tree
⊡ Mon.	Monument	Water gate valve	Deciduous Tree
●	Iron Pin to be Set	Water meter	Swamp or Wetlands
■	Conc. Monument to be Set	◇ hyd Hydrant	Tree Line
◉ I. Pipe	Iron Pipe	W Water main (existing)	Watercourse
● I. Pin	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	Ⓢ Sanitary Manhole	◆ TP 100 Deep Test Pit Location
N/F	Now or Formerly	Ⓓ 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		Well (Existing)
×200.0	Existing Spot Elevation	Building (existing)	O F.P. Fence Post

SITE STATISTICS
467 PEPPER STREET

ZONING DISTRICT "I-1"	REQUIRED	PROVIDED
BULK STATISTICS		
MIN. LOT AREA	1.0 ACRES (43,560 S.F.)	4.325 ACRES (188,400 S.F.)
MIN. LOT FRONTAGE:	120'	313.81'
MIN. SQUARE	110'	>110'
MIN. BUILDING SETBACK (FRONT)	50'	69.4'
MIN. BUILDING SETBACK (SIDE)	25'	78.5'
MIN. BUILDING SETBACK (REAR)	50'	>50'
MAX. HEIGHT	3 STORIES/40'	1.5 STORIES/<40'
BUILDING COVERAGE	25% (47,100 S.F.)	<25%

SITE STATISTICS
485 PEPPER STREET

ZONING DISTRICT "I-1"	REQUIRED	PROVIDED
BULK STATISTICS		
MIN. LOT AREA	1.0 ACRES (43,560 S.F.)	5.936 ACRES (258,562 S.F.)
MIN. LOT FRONTAGE:	120'	403.37'
MIN. SQUARE	110'	>110'
MIN. BUILDING SETBACK (FRONT)	50'	58.9'
MIN. BUILDING SETBACK (SIDE)	25'	106.9'
MIN. BUILDING SETBACK (REAR)	50'	>50'
MAX. HEIGHT	3 STORIES/40'	1.5 STORIES/<40'
BUILDING COVERAGE	25% (64,640.5 S.F.)	<25%

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No.	Date	REVISION DESCRIPTION

SCALE: 1"=40'

0 20 40 80 120

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

467 & 485 PEPPER STREET
MONROE, CONNECTICUT

PREPARED FOR
485 PEPPER STREET, LLC

TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

BRIAN P. NESTERIAK, PE, LS 23556

Date	7/18/2022
Scale	1"=40'
Job No.	838
Drawing No.	1 of 1

FS, 467 & 485 PEPPER STREET, MONROE, CT.

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 100 0 100 200

SOLLI ENGINEERING
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Drawn By:	MFJ
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 100'

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: PROPERTY RADIUS & SITE AREA MAP

Sheet #: 1.40

Oct. 19, 2022 - 12:53pm chris
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SIGN LEGEND

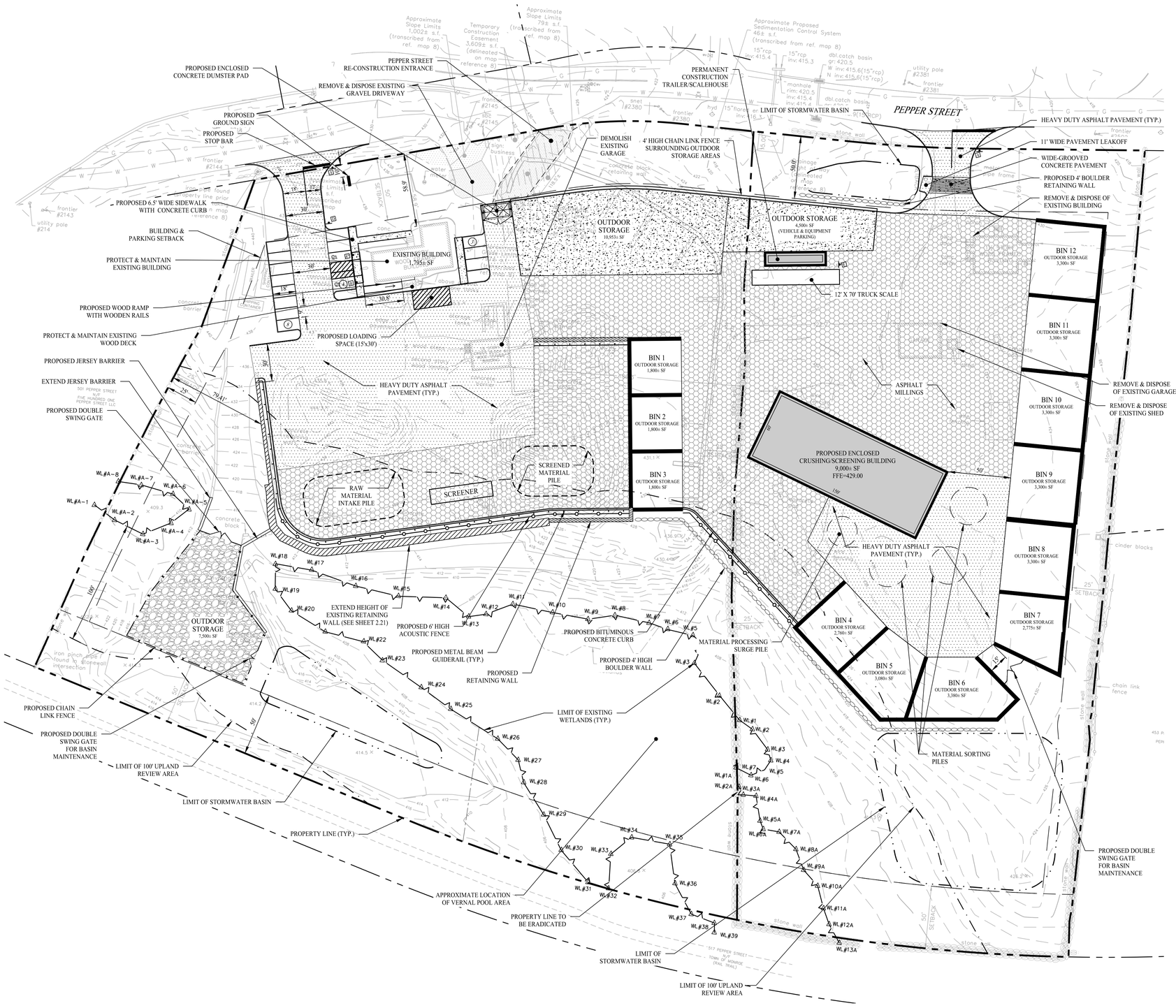
A	SIZES (IN)	CONN DOT #	SUPPORTS
STOP	30"	31-0552	1

B	SIZES (IN)	CONN DOT #	SUPPORTS
RESERVED PARKING / FINED $150	12"x18" 12"x6"	31-0629P 31-0648	1

C	SIZES (IN)	CONN DOT #	SUPPORTS
RESERVED PARKING / VAN ACCESSIBLE / FINED $500	12"x18" 12"x6"	31-0629P 31-0648	1

D	SIZES (IN)	CONN DOT #	SUPPORTS
NO TRUCK EXIT TRUCKS MUST USE OTHER DRIVEWAY	36"x18"	N/A	1

E	SIZES (IN)	CONN DOT #	SUPPORTS
TRUCK TRAFFIC MUST EXIT LEFT	36"x18"	N/A	1



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJOINING LOT LINE
- BUILDING SETBACK
- LANDSCAPE BUFFER
- EXISTING BUILDING LIMITS
- PROPOSED BUILDING LIMITS
- PROPOSED BUILDING HATCH
- EDGE OF PAVEMENT
- BITUMINOUS CONCRETE CURB
- CONCRETE CURB
- STANDARD DUTY BITUMINOUS CONCRETE PAVEMENT
- HEAVY DUTY BITUMINOUS CONCRETE PAVEMENT
- ASPHALT MILLINGS
- CONCRETE SIDEWALK / PAVEMENT
- GRAVEL
- RETAINING WALL / GRAVITY OR SEGMENTAL BLOCK
- SIDEWALK LIMITS
- PAVEMENT STRIPING - YELLOW
- STORMWATER BASIN/RAIN GARDEN AREA
- CHAIN LINK FENCE
- METAL BEAM GUIDE RAIL
- ISD = XXX — INTERSECTION SIGHT DISTANCE (ISD)
- DUMPSTER / TRASH RECEPTACLE
- TRAFFIC SIGN
- TRAFFIC SIGN DESIGNATION
- LIMIT OF WETLANDS
- UPLAND REVIEW AREA

POTENTIAL CONSTRUCTION EQUIPMENT/STORAGE ITEMS

- CATCH BASIN STRUCTURES, TOPS, RIMS, & PARTS
- MANHOLE STRUCTURES, COVERS, & PARTS
- BELGIAN, CONCRETE, MANHOLE, & WALL BLOCK
- STONE
- VARIOUS STORM AND SANITARY PIPE SIZES AND LENGTHS

AGGREGATE MATERIAL LIST

- SCREENED TOPSOIL
- ¼" STONE
- ¾" STONE
- 1 ¼" STONE
- PROCESSED AGGREGATE
- 1 ½" PROCESSED SUBBASE
- 4" PROCESSED AGGREGATE
- BEDDING SAND
- SCREENED COMMON FILL

WETLAND AREA TABLE

AREA	LOT (ACRE)
LOT AREA	10.26±
WETLANDS ON LOT	1.21±
UPLAND REVIEW AREA ON LOT	2.96±
WETLANDS TO BE ALTERED	0.00
UPLAND REVIEW AREA TO BE ALTERED	2.25±
TOTAL REGULATED AREA TO BE ALTERED	2.25±

ZONING COMPLIANCE TABLE

ZONE: REGIONAL BUSINESS DISTRICT (RB)

ZONING REQUIREMENT	ZONING STANDARD	PROPOSED
MINIMUM LOT AREA	1 AC	10.26 AC
MINIMUM LOT FRONTAGE	120 FT	717 FT
MINIMUM FRONT YARD SETBACK	50 FT	58.9 FT
MINIMUM SIDE YARD SETBACK	25 FT	26 FT
MINIMUM REAR YARD SETBACK	25 FT	51 FT
MAXIMUM BUILDING COVERAGE	25 %	10.2 %
MAXIMUM HEIGHT	40 FT	< 40 FT
MAXIMUM HEIGHT (STORIES)	3 STORIES	1 STORY

PARKING COMPLIANCE TABLE

USE	SIZE GFA	ZONING STANDARD	REQUIRED SPACES
OFFICE SPACE	1,795± SF	4 SPACE / 1,000 SF	8
		TOTAL OFF-STREET PARKING REQUIRED	8
		TOTAL PROPOSED PARKING SPACES	15

OUTDOOR STORAGE

ZONING STANDARD	LOT SIZE	AREA ALLOWED	AREA PROPOSED
40%	446,962± SF	178,784 SF	56,853 SF

SITE PLAN NOTES

1. THESE PLANS ARE FOR PERMITTING PURPOSES ONLY AND ARE NOT FOR CONSTRUCTION.
2. THE OWNER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING PERMITS REQUIRED BY TOWN OF MONROE PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
3. 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.
4. THE CONTRACTOR SHALL REFERENCE ARCHITECTURAL PLANS FOR EXACT DIMENSIONS AND CONSTRUCTION DETAILS OF BUILDING AND STORAGE BINS.
5. 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.
6. ALL SITE DIMENSIONS ARE REFERENCED TO THE FACE OF CURBS OR EDGE OF PAVING AS APPLICABLE UNLESS OTHERWISE NOTED. ALL BUILDING DIMENSIONS ARE REFFRENCED TO THE OUTSIDE FACE OF THE STRUCTURE.
7. PAVEMENT MARKING KEY:
   4" SYDL 4' SOLID YELLOW DOUBLE LINE
   4" SYL 4" SOLID YELLOW LINE
   4" SWL 4" SOLID WHITE LINE
   12" SWSB 12" SOLID WHITE STOP BAR
   4" BWL 4" BROKEN WHITE LINE 10' STRIPE 30'SPACE
8. 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.
9. 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.
10. 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.
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. PAVEMENT MARKINGS SHALL BE HOT APPLIED TYPE IN ACCORDANCE WITH CONNECTICUT DOT SPECIFICATIONS, UNLESS WHERE EPOXY RESIN PAVEMENT MARKINGS ARE INDICATED.
13. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.
14. NO PART OF THE PROJECT PARCEL IS LOCATED WITHIN ANY FEMA DESIGNATED FLOOD HAZARD AREAS.
15. WETLANDS WERE DELINEATED AND FLAGGED BY JMM WETLAND CONSULTING SERVICES, LLC, ON JUNE 1, 2022.
16. 12" SWSB (STOP BAR) AND 4" SDYL AND SWL PAVEMENT MARKINGS LOCATED IN DRIVEWAYS AND IN STATE HIGHWAY SHALL BE EPOXY RESIN TYPE ACCORDING TO CONNDOT SPECIFICATIONS.
17. EXISTING CONDITIONS INFORMATION TAKEN FROM A PLAN ENTITLED "ZONING LOCATION SURVEY OF 467 & 485 PEPPER STREET, MONROE, CONNECTICUT," DATED 07/18/22, SCALE: 1" = 40', BY ACCURATE LAND SURVEYING, LLC.
18. PROPOSED ROADWAY AND DRAINAGE IMPROVEMENTS IN PEPPER STREET ARE TAKEN FROM PLAN SET ENTITLED "RECONSTRUCTION PLANS FOR PEPPER STREET, TOWN OF MONROE; PRELIMINARY DESIGN SUBMISSION," DATED AUGUST 22, 2014, PREPARED BY BL COMPANIES.
19. A SWEEPER SHALL BE MAINTAINED ON-SITE AT ALL TIMES.
20. REMOVE EXISTING STORAGE TRAILER PRIOR TO SITEWORK.
21. ALL OUTDOOR STORAGE BINS WILL HAVE SPRINKLERS INSTALLED ON TOP FOR DUST CONTROL.

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Kevin Solli, P.E. CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SITE PLAN

Sheet #: 2.11

Oct 19, 2022 - 2:07pm chris
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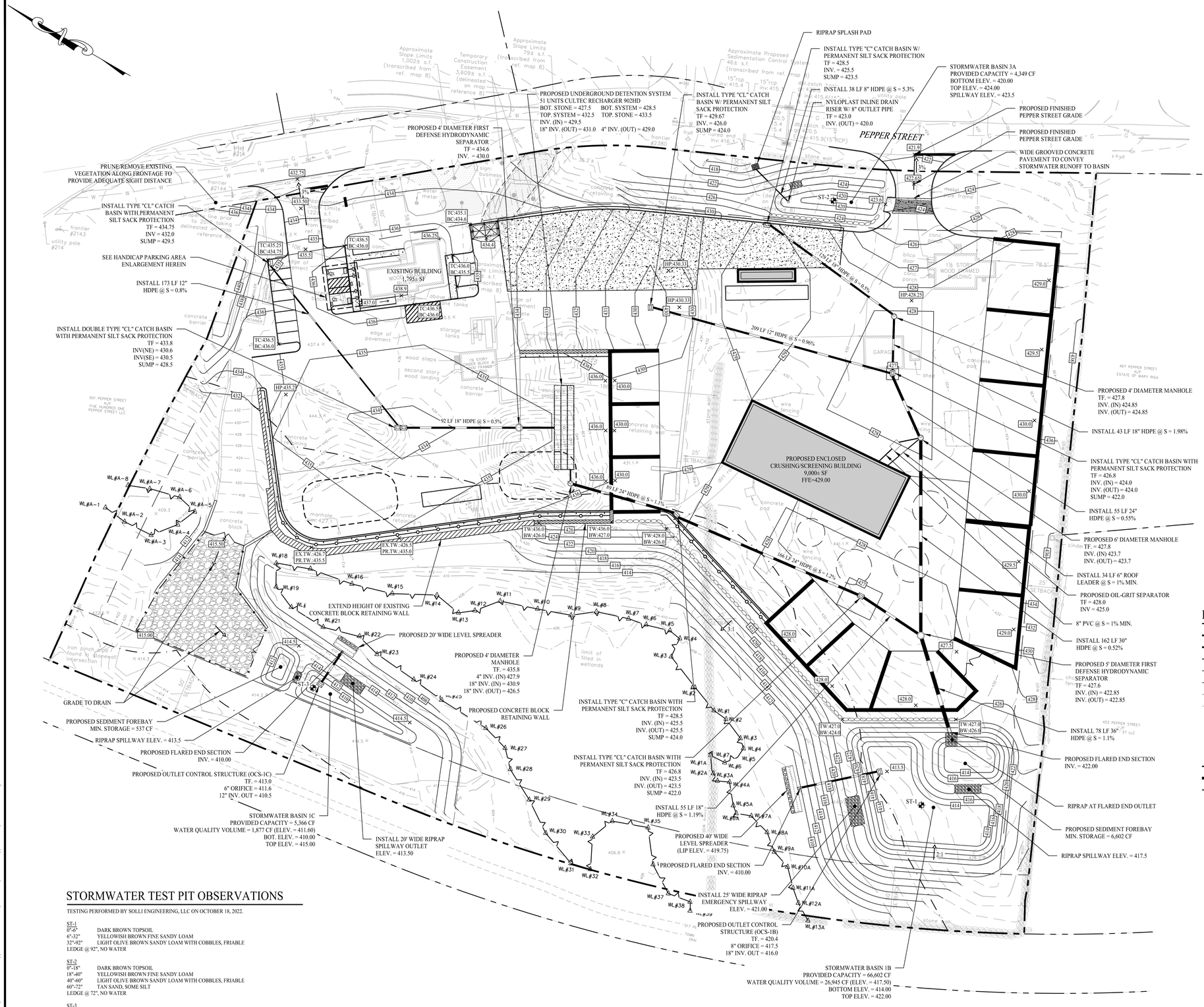

ABBREVIATIONS

&	AND
@	AT
BW	BOTTOM OF WALL
DIA	DIAMETER
ELEV	ELEVATION
FEE	FINCH FLOOR ELEVATION
GFA	GROSS FLOOR AREA
HDPE	HIGH DENSITY POLYETHYLENE
INV	INVERT
LOD	LIMIT OF DISTURBANCE
LF	LINEAR FEET
MCL	MAJOR CONTOUR LAY
RCP	REINFORCED CONCRETE PIPE
S	SLOPE
SF	SQUARE FEET
TF	TOP OF FRAME
TR	TOP OF RIM
TW	TOP OF WALL
W/	WITH

GRADING AND DRAINAGE NOTES

1. THIS DRAWING IS INTENDED TO DESCRIBE GRADING AND DRAINAGE ONLY. REFER TO SITE PLAN FOR GENERAL INFORMATION, AND DETAIL SHEETS FOR DETAILS.
2. THE CONTRACTOR SHALL PRESERVE EXISTING VEGETATION WHERE POSSIBLE AND/OR AS NOTED ON DRAWINGS. REFER TO EROSION CONTROL PLAN FOR LIMIT OF DISTURBANCE AND EROSION CONTROL NOTES.
3. TOPSOIL SHALL BE STRIPPED AND STOCKPILED ON SITE FOR USE IN FINAL LANDSCAPING.
4. 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 THE TOWN OF MONROE REQUIRED TO PERFORM ALL WORK, INCLUDING FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
5. 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.
6. FILL WITHIN FORMER BUILDING FOUNDATION SHALL BE CHECKED BY TEST PIT AND PROOF-ROLLING AND SHALL BE OBSERVED BY THE GEOTECHNICAL ENGINEER. SUBGRADE SHALL BE FORMED WITH REMOVAL AND REPLACEMENT OF FILL AND REMOVAL AND REPLACEMENT OF SOFT SUBGRADE MATERIAL AS ORDERED BY THE GEOTECHNICAL ENGINEER.
7. THE CONTRACTOR SHALL COMPACT FILL IN 12" MAXIMUM LIFTS UNDER ALL PARKING, BUILDING, AND DRIVE AREAS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 (MODIFIED PROCTOR TEST), OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
8. UNDERDRAINS SHALL BE ADDED, IF DETERMINED NECESSARY IN THE FIELD BY THE OWNER/GEOTECHNICAL ENGINEER, AFTER SUBGRADE IS ROUGH GRADED.
9. ALL DISTURBANCE INCURRED TO TOWN OR STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF MONROE AUTHORITY.
10. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE OWNER AND/OR OWNER'S ENVIRONMENTAL CONSULTANT.
11. IF GROUNDWATER IS ENCOUNTERED DURING THE INSTALLATION OF THE UNDERGROUND DETENTION SYSTEM THEN THE BASIN SHALL BE LINED WITH AN IMPERVIOUS MEMBRANE PREVENT GROUNDWATER FROM ENTERING THE SYSTEM.

OPERATIONS AND MAINTENANCE PLAN

THE PROPERTY OWNER, ITS SUCCESSORS AND ASSIGNS, IS COMMITTED TO MAINTAINING ITS PROPERTY AT 467&485 PEPPER STREET IN ACCORDANCE WITH THIS SITE MAINTENANCE PLAN, AS FOLLOWS, TO MAINTAIN THE AESTHETIC QUALITY AND CLEANLINESS OF THE SITE.

ALL CATCH BASINS ARE TO BE CHECKED AND CLEANED OF TRASH, EXCESSIVE SEDIMENT AND OTHER DEBRIS, BIANNUALLY IN MAY AND NOVEMBER, WITH ADDITIONAL INSPECTIONS AND CLEANING AS NEEDED. ALL PAVED AREAS ARE TO BE CHECKED FOR PERIMETER EROSION, TRASH, SPILLAGE, AND PAVEMENT CONDITIONS DURING THESE INSPECTIONS. THE UNDERGROUND DETENTION SYSTEMS ARE TO BE INSPECTED BI-ANNUALLY DURING THOSE MONTHS AND CLEANED OF EXCESSIVE SEDIMENT AND DEBRIS.

THE HYDRODYNAMIC SEPARATORS ARE TO BE INSPECTED BIANNUALLY AND 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. CLEANING OF THE SYSTEM SHOULD BE DONE WITH A VACUUM TRUCK DURING DRY WEATHER CONDITIONS WHEN NO FLOW IS ENTERING THE SYSTEM.

DUST SUPPRESSION SYSTEM(S) ASSOCIATED WITH OPERATIONAL EQUIPMENT, SUCH AS WET METHODS USING SPRAY BARS WITH ATOMIZER NOZZLES WHERE DUST IS GENERATED (I.E. HOPPERS, CONVEYORS, SIEVES, SIZING, OR VIBRATING COMPONENTS) ARE TO BE USED DURING OPERATION. DUST SUPPRESSION SYSTEM(S) ARE TO BE OPERATED AND MAINTAINED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. IN ADDITION, DUST EXPOSURE MITIGATION MEASURES TO; LOCATE NOZZLES UPSTREAM OF DUST GENERATION POINTS; POSITION NOZZLES TO THOROUGHLY WET MATERIAL, ENSURE THE VOLUME AND SIZE OF DROPLETS IS ADEQUATE TO SUFFICIENTLY WET MATERIAL; ENSURE NOZZLES PROVIDE COMPLETE WATER COVERAGE BUT ARE NOT SO FAR THAT THE WATER IS CARRIED AWAY BY WIND, ARE TO BE PRACTICED DURING OPERATION.

THESE OPERATIONS AND MAINTENANCE NOTES, AS WELL AS THOSE PROVIDED BY THE MANUFACTURER OF THE EQUIPMENT IN USE ARE TO BE POSTED AND MADE AVAILABLE IN THE BUILDING OF OPERATION AT ALL TIMES.

A STREET SWEEPER SHALL REMAIN ON SITE AT ALL TIMES IN ORDER TO REMOVE POTENTIAL SEDIMENT AND DEBRIS FROM PAVED AREAS.

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
- SWALE
- STORM DRAIN PIPE
- PERFORATED UNDERDRAIN / TRENCH DRAIN
- TYPE "C" CATCH BASIN
- TYPE "CL" CATCH BASIN
- STORM MANHOLE
- or WATER QUALITY UNIT
- FLARE END SECTION

STORMWATER TEST PIT OBSERVATIONS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON OCTOBER 18, 2022.

ST-1
0'-6" DARK BROWN TOPSOIL
6"-32" YELLOWISH BROWN FINE SANDY LOAM
32"-92" LIGHT OLIVE BROWN SANDY LOAM WITH COBBLES, FRIABLE
LEDGE @ 92", NO WATER

ST-2
0"-18" DARK BROWN TOPSOIL
18"-40" YELLOWISH BROWN FINE SANDY LOAM
40"-60" LIGHT OLIVE BROWN SANDY LOAM WITH COBBLES, FRIABLE
60"-72" TAN SAND, SOME SILT
LEDGE @ 72", NO WATER

ST-3
0"-4" MILLINGS
4"-13" DARK BROWN TOPSOIL
13"-84" SAND AND GRAVEL, SOME SILT, BONEY
LEDGE @ 84", NO WATER

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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Drawn By:	NCM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: GRADING AND DRAINAGE PLAN

Sheet #: 2.21

Oct 19, 2022 - 2:08pm chris
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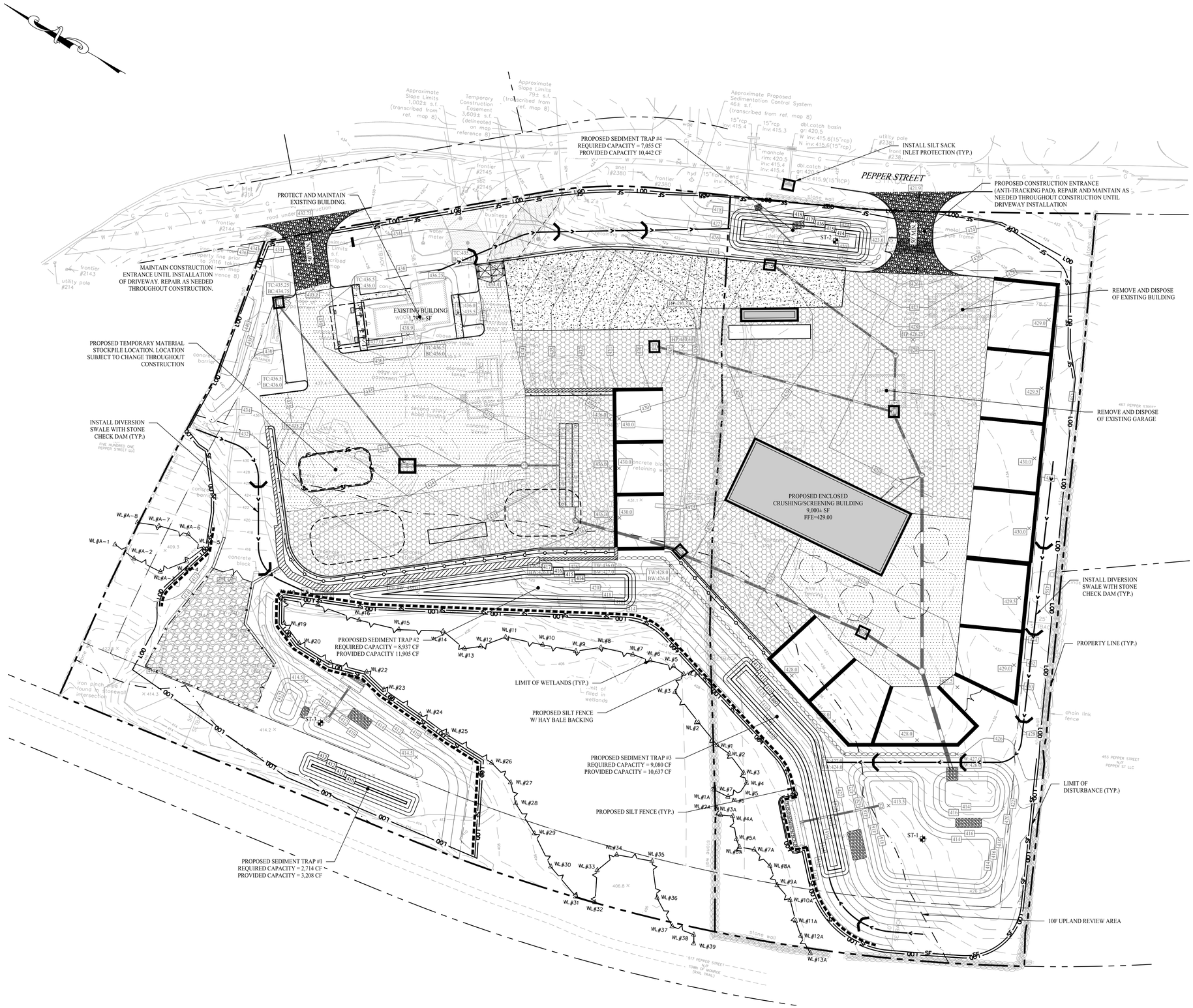

GENERAL NOTES

1. THE SOIL EROSION AND SEDIMENT CONTROL MEASURES DEPICTED HEREON HAVE BEEN DESIGNED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL MANUAL, BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION IN COOPERATION WITH THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION.
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. ALL SITE WORK TO BE COMPLETED IN ACCORDANCE WITH ALL PERMITS, APPROVALS AND CONDITIONS OF APPROVALS ISSUED BY THE TOWN OF MONROE FOR THIS PROJECT.
4. SEE SHEET 2.21 FOR DETAILS REGARDING THE PROPOSED GRADING AND DRAINAGE FEATURES, STORMWATER CONVEYANCE SYSTEM AND STORMWATER DETENTION FACILITIES.
5. SEE SHEET 2.41 FOR SOIL EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
6. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PROVIDED HEREON ARE CONSIDERED TEMPORARY, UNLESS OTHERWISE NOTED, AND SHALL BE REMOVED UPON COMPLETION OF SITE WORK. REFER TO THE OPERATION REQUIREMENT ON SHEET 2.41 FOR MORE DETAIL.

LEGEND

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

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 = 0.75 ACRES
0.75 AC x 134 CY/AC = 100.5 CY
100.5 CY x 27 CF/CY = 2,714 CF
SEDIMENT TRAP #2 STORAGE CAPACITY = 3,208 CF

SEDIMENT TRAP #2:
CONTRIBUTING DRAINAGE AREA = 2.47 ACRES
2.47 AC x 134 CY/AC = 331 CY
331 CY x 27 CF/CY = 8,937 CF
SEDIMENT TRAP #2 STORAGE CAPACITY = 11,905 CF

SEDIMENT TRAP #3:
CONTRIBUTING DRAINAGE AREA = 2.51 ACRES
2.51 AC X 134 CY/AC = 336.3 CY
336.3 CY X 27 CF/CY = 9,080 CF
SEDIMENT TRAP #3 STORAGE CAPACITY = 10,637 CF

SEDIMENT TRAP #4:
CONTRIBUTING DRAINAGE AREA = 1.95 ACRES
1.95 AC X 134 CY/AC = 261.3 CY
261.3 CY X 27 CF/CY = 7,055 CF
SEDIMENT TRAP #4 STORAGE CAPACITY = 10,442 CF

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Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SOIL EROSION AND SEDIMENT CONTROL PLAN

Sheet #: 2.31

Oct 19, 2022 - 2:08pm chris
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SOIL EROSION AND SEDMIMENT 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
CONSTRUCTION TO BEGIN IN FALL 2022 WITH EXPECTED COMPLETION SUMMER 2023. 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 PROJECT ENGINEER 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 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 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.
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.

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 PROJECT ENGINEER.

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, EASTERN CONNECTICUT SOILS CONSERVATION DISTRICT, TOWN OF MONROE INLAND WETLANDS COMMISSION.

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES
I. SILTATION FENCE:
A. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
B. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND HAMMER THE POST AT LEAST 1.5 FEET INTO THE GROUND.
C. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
D. BACKFILL THE TRENCH AND COMPACT.

II. HAY BALES:
A. BALES SHALL BE PLACED IN A SINGLE ROW, LENGTHWISE, ORIENTED PARALLEL TO THE CONTOUR, WITH ENDS OF ADJACENT BALES TIGHTLY ABUTTING ONE ANOTHER.
B. BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES. AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.
C. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.
D. THE GAPS BETWEEN BALES SHALL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.
E. THE BARRIER SHALL BE EXTENDED TO SUCH A LENGTH THAT THE BOTTOMS OF THE END BALES ARE HIGHER IN ELEVATION THAN THE TOP OF THE LOWEST MIDDLE BALE, TO ENSURE THAT RUN-OFF WILL FLOW EITHER THROUGH OR OVER THE BARRIER, BUT NOT AROUND IT.

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. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THEY EXCEED A HEIGHT OF ONE FOOT.

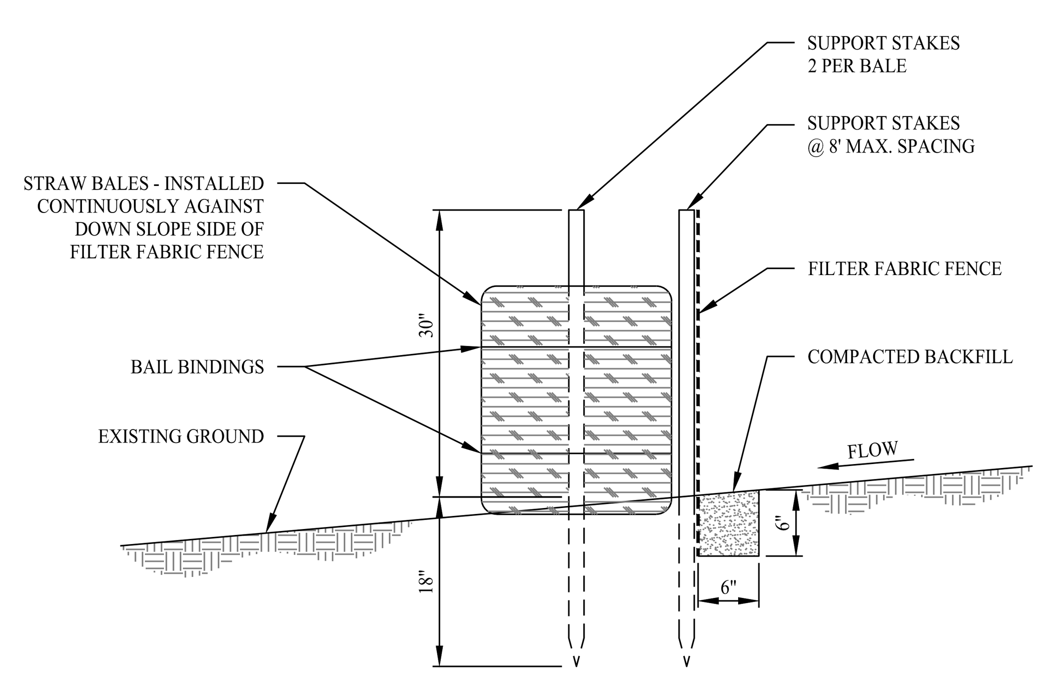
II. HAY BALES:
A. ALL HAY BALE RINGS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE PROMPTLY MADE AS NEEDED.
B. DEPOSITS SHALL BE REMOVED AND CLEANED-OUT IF ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

III. SEDIMENT TRAPS:
A. CONTRACTOR TO KEEP WEEKLY CHECKLIST LOGS FOR INSPECTIONS OF ALL SEDIMENT AND EROSION CONTROL DEVICES AND HAVE THEM READILY AVAILABLE ON-SITE AT ALL TIMES FOR INSPECTION BY CT DEEP, LOCAL AUTHORITIES OR ENGINEER.
B. ALL SEDIMENT TRAPS SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OF SLOPES SHALL BE PROMPTLY MADE AS NEEDED. EROSION CONTROL BLANKETS MAY BE USED FOLLOWING REPAIR OF SLOPE AS DIRECTED BY THE ENGINEER.
C. SEDIMENT DEPOSITS SHALL BE REMOVED FROM SEDIMENT TRAPS AND/OR SEDIMENT TRAPS WHEN THEY EXCEED A HEIGHT OF ONE FOOT UNLESS OTHERWISE INDICATED ON THE EROSION CONTROL PLANS AND DETAILS TO BE AT A SPECIFIC ELEVATION PER CLEAN OUT MARKERS.
D. SEDIMENT SHALL BE DISPOSED OF ON-SITE OR AS DIRECTED BY THE ENGINEER AND LOCAL GOVERNING OFFICIALS. SEE SEDIMENT AND EROSION CONTROL NOTES HEREIN REGARDING DISPOSAL REQUIREMENTS FOR OFF SITE SPOIL DISPOSAL.

V. TEMPORARY/PERMANENT DRAINAGE SWALES:
A. SWALES SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OF ANY WASHED OUT OR ERODED SLOPES SHALL BE MADE PROMPTLY AND THE AREA SHALL BE RESEEDED AS NECESSARY.
B. EROSION CONTROL BLANKETS MAY BE USED TO REPAIR ERODED SWALES AS DIRECTED BY THE ENGINEER OR TOWN OF MONROE AGENT.

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.

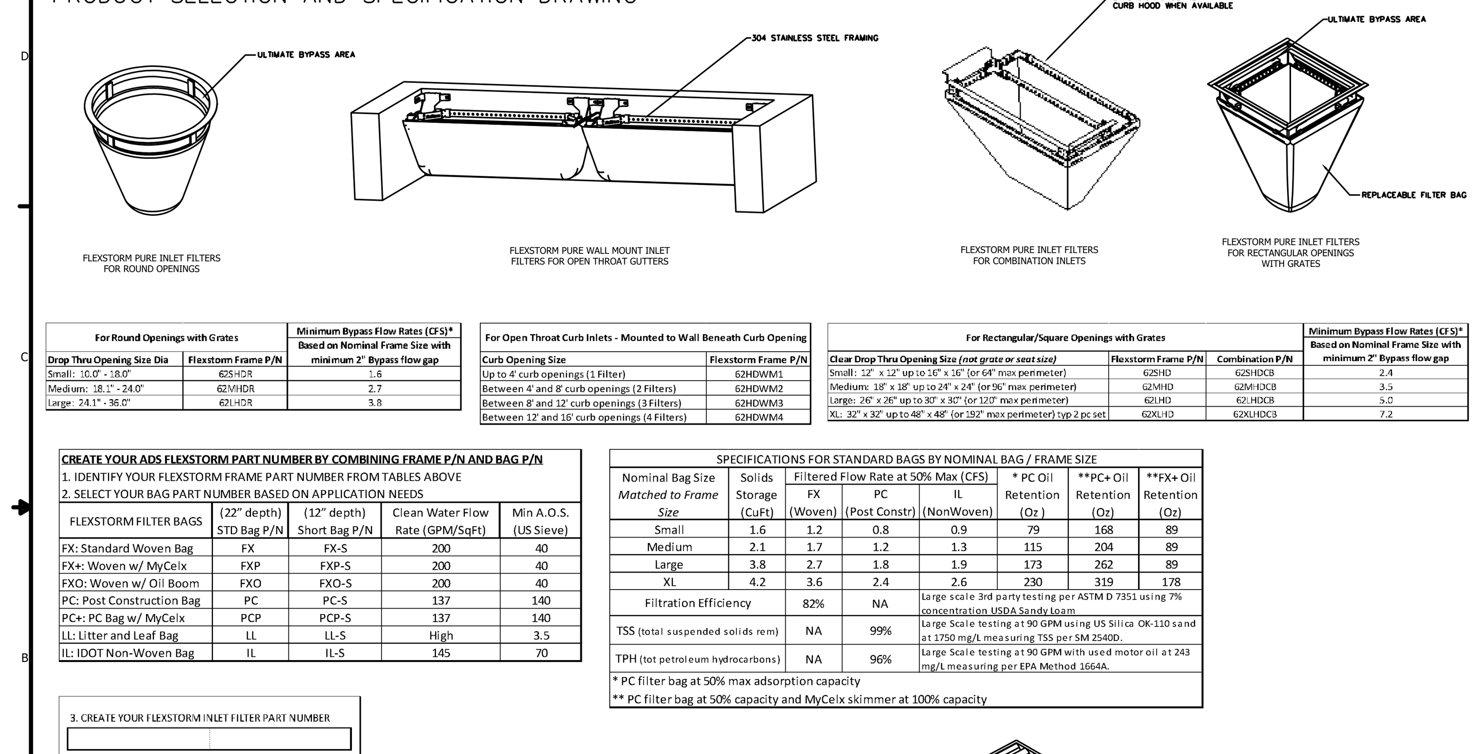
SEDIMENT AND EROSION CONTROL NOTES
1. THE OWNER IS RESPONSIBLE FOR IMPLEMENTING THIS SEDIMENT AND EROSION CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE PROPER INSTALLATION AND MAINTENANCE OF EROSION CONTROL MEASURES, INFORMING ALL PARTIES ENGAGED WITH CONSTRUCTION ON THE SITE OF THE REQUIREMENTS AND OBJECTIVES OF THIS PLAN, INFORMING THE GOVERNING AUTHORITY OR INLAND WETLANDS AGENCY OF ANY TRANSFER OF THIS RESPONSIBILITY, AND FOR CONVEYING A COPY OF THE SEDIMENT & EROSION CONTROL PLAN IF THE TITLE TO THE LAND IS TRANSFERRED.
2. AN EROSION CONTROL BOND MAY BE REQUIRED TO BE POSTED WITH THE TOWN OF MONROE TO ENSURE IMPLEMENTATION OF THE EROSION CONTROL MEASURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE POSTING OF THIS BOND AND FOR INQUIRIES TO THE TOWN OF MONROE FOR INFORMATION ON THE METHOD, TYPE AND AMOUNT OF THE BOND POSTING UNLESS OTHERWISE DIRECTED BY THE OWNER.
3. VISUAL SITE INSPECTIONS SHALL BE CONDUCTED WEEKLY, AND AFTER EACH MEASURABLE PRECIPITATION EVENT OF 0.10 INCHES OR GREATER BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCED IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE EROSION AND SEDIMENT CONTROL (E&S) BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT, AND INCLUDE:
A) A SUMMARY OF THE SITE CONDITIONS, E&S BMPS, AND COMPLIANCE; AND
B) THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION
4. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, PREPARED BY CTDEEP, LATEST EDITION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF MONROE. THE CONTRACTOR SHALL KEEP A COPY OF THE GUIDELINES ON-SITE FOR REFERENCE DURING CONSTRUCTION.
5. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, CIVIL ENGINEER, TOWN OF MONROE, EASTERN CONNECTICUT SOILS CONSERVATION DISTRICT, TOWN OF MONROE INLAND WETLANDS COMMISSION, OR GOVERNING AGENCIES. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED.
6. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS BEFORE AND AFTER EACH STORM (0.10 INCHES OR GREATER RAINFALL), OR AT LEAST WEEKLY, TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS WHERE NECESSARY.
7. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (HAY BALES, SILT FENCE, JUTE MESH,RIP RAP ETC.) ON-SITE FOR MAINTENANCE AND EMERGENCY REPAIRS.
8. INSTALL PERIMETER SEDIMENT CONTROLS PRIOR TO CLEARING OR CONSTRUCTION. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SILT FENCE UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE FENCE.
9. STONE CONSTRUCTION ENTRANCE ANTI-TRACKING PADS SHALL BE INSTALLED AT START OF CONSTRUCTION AND MAINTAINED THROUGHOUT THE DURATION OF CONSTRUCTION. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED.
10. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR USE IN FINAL LANDSCAPING. ALL EARTH STOCKPILES SHALL HAVE HAY BALES OR SILT FENCE AROUND THE LIMIT OF PILE. PILES SHALL BE TEMPORARILY SEEDED IF PILE IS TO REMAIN IN PLACE FOR MORE THAN 7 DAYS.
11. SEDIMENTATION TRAPS SHALL PROVIDE 134 CUBIC YARDS OF SEDIMENT STORAGE PER DISTURBED ACRE CONTRIBUTING TO THE BASIN. PROVIDE BASIN VOLUMES FOR ALL DISTURBANCE ON SITE.
12. STONE CONSTRUCTION ENTRANCE ANTI-TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY ON SITE EXCAVATION AND SHALL BE MAINTAINED DURING ALL EXCAVATION AND CONSTRUCTION ACTIVITIES.
13. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
14. SILT FENCE AND OTHER SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH CONTRACT DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS PRIOR TO WORK IN ANY UPLAND AREAS.
15. EXCAVATED MATERIAL FROM TEMPORARY SILT TRAPS MUST BE STOCKPILED ON UPHILL SIDE OF SILT FENCE.
16. INSTALL SILT FENCE ACCORDING TO MANUFACTURER'S INSTRUCTION, PARTICULARLY, BURY LOWER EDGE OF FABRIC INTO GROUND. SILT FENCE SHALL BE MIRAFI ENVIROFENCE, AMOCO SILT STOP OR EQUIVALENT APPROVED BY THE CIVIL ENGINEER. FILTER FABRIC USED SHALL BE MIRAFI 100X OR EQUIVALENT. SEE SPECIFICATIONS FOR FURTHER INFORMATION.
17. WHERE INDICATED ON EROSION CONTROL PLANS USE NEW HAY BALES AND REPLACE THEM WHENEVER THEIR CONDITION DETERIORATES BEYOND REASONABLE USABILITY. STAKE HAY BALES SECURELY INTO GROUND AND BUTT TIGHTLY TOGETHER TO PREVENT UNDERCUTTING AND BYPASSING.
18. INSTALL TEMPORARY DIVERSION DITCHES, PLUNGE POOLS, SEDIMENT TRAPS, AND DEWATERING PITS AS SHOWN AND AS NECESSARY DURING VARIOUS PHASES OF CONSTRUCTION TO CONTROL RUNOFF UNTIL UPHILL AREAS ARE STABILIZED. LOCATION OF TEMPORARY SEDIMENT TRAPS WILL REQUIRE REVIEW AND APPROVAL BY THE CIVIL ENGINEER AND GOVERNING OFFICIAL.
19. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE SUCH AS TEMPORARY PITS, SEDIMENT TRAPS OR GRASS FILTERS WITHIN THE APPROVED LIMIT OF DISTURBANCE. DISCHARGE TO STORM DRAINAGE SYSTEM OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR.
20. BLOCK THE OPEN UPSTREAM ENDS OF DETENTION BASIN/SEDIMENTATION BASIN OUTLET CONTROL ORIFICE UNTIL SITE IS STABILIZED. CONVERT TEMPORARY SEDIMENT TRAPS TO PERMANENT DETENTION BASINS ONCE SITE HAS BEEN STABILIZED. CLEAN OUTLET CONTROL STRUCTURES AS NECESSARY AND REMOVE ACCUMULATED SEDIMENT FROM BOTTOM OF BASIN. BLOCK END OF STORM SEWERS IN EXPOSED TRENCHES WITH BOARDS AND SANDBAGS AT THE END OF EACH WORKING DAY WHEN RAIN IS EXPECTED.
21. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. OTHER DUST CONTROL MEASURES TO BE USED AS NECESSARY INCLUDE WATERING DOWN DISTURBED AREAS, USING CALCIUM CHLORIDE, AND COVERING LOADS ON DUMP TRUCKS.
22. PERIODICALLY CHECK ACCUMULATED SEDIMENT LEVELS IN THE SEDIMENT TRAPS DURING CONSTRUCTION AND CLEAN ACCUMULATED SILT WHEN NECESSARY OR WHEN ONE FOOT OF SEDIMENT HAS ACCUMULATED OR PER SPECIFIC CLEANOUT MARKER ELEVATION. CLEAN ACCUMULATED SEDIMENT FROM CATCH BASIN SUMPS AS NECESSARY AND AS DIRECTED BY THE CIVIL ENGINEER OR OWNER'S CONSTRUCTION REPRESENTATIVE. REMOVE ACCUMULATED SEDIMENT FROM BEHIND HAY BALES AND SILT FENCE WHEN LEVEL REACHES HALF THE HEIGHT OF THE HAY BALE OR ONE FOOT AT SILT FENCE. DISPOSE OF SEDIMENT LEGALLY EITHER ON OR OFF SITE.
23. 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.
24. ALL PUMPING OF SEDIMENT LADEN WATER SHALL BE THROUGH A SEDIMENT CONTROL BMP, SUCH AS A PUMPED WATER FILTER BAG OR EQUIVALENT SEDIMENT REMOVAL FACILITY, OVER UNDISTURBED VEGETATED AREAS.
25. ALL EXCAVATED MATERIAL SHALL BE PLACED ON THE HIGH SIDE OF UTILITY AND STORM PIPE TRENCHES SO AS TO ALLOW THE TRENCH TO INTERCEPT ALL SILT LADEN RUNOFF.
26. CONTRACTOR SHALL ONLY EXCAVATE AS MUCH UTILITY AND STORM PIPE TRENCH WORK AS CAN BE COMPLETED, BACKFILLED AND STABILIZED IN ONE DAY SO AS TO LIMIT THE AMOUNT OF OPEN, DISTURBED TRENCHING.
27. ANY STOCKPILES OF STRIPPED MATERIALS ARE TO BE PERIODICALLY SPRAYED WITH WATER OR A CRUSTING AGENT TO STABILIZE POTENTIALLY WIND-BLOWN MATERIAL. HAUL ROADS BOTH INTO AND AROUND THE SITE ARE TO BE SPRAYED AS NEEDED TO SUPPRESS DUST. TRUCKS HAULING IMPORT FILL MATERIAL ARE TO BE TARPED TO AID IN THE CONTROL OF AIRBORNE DUST. DURING HIGH WIND EVENTS (20 TO 30 MPH SUSTAINED) CONSTRUCTION ACTIVITY SHALL BE LIMITED OR CEASED IF DUST CANNOT BE CONTROLLED BY WETTING.
28. AN AREA SHALL BE CONSIDERED TO HAVE ACHIEVED FINAL STABILIZATION WHEN IT HAS A MINIMUM OF 70% UNIFORM PERENNIAL VEGETATIVE COVER OR OTHER PERMANENT NON-VEGETATIVE COVER WITH A DENSITY SUFFICIENT TO RESIST ACCELERATED SURFACE EROSION AND SUBSURFACE CHARACTERISTICS SUFFICIENT TO RESIST SLIDING OR OTHER MOVEMENTS.
29. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP PARKING LOT AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS WHEN AUTHORIZED BY LOCAL GOVERNING AUTHORITY. FILE NOT (NOTICE OF TERMINATION) WITH GOVERNING AUTHORITY RESPONSIBLE FOR REGULATING STORM WATER DISCHARGES FROM CONSTRUCTION ACTIVITIES PER NPDES.



NOTE:
1. USE 2" x 2" x 48" WOODEN STAKES OR EQUIVALENT STEEL (U OR T) STAKES.

SILT FENCE WITH HAYBALE BACKING

SCALE: NTS



FLEXSTORM PURE FILTERS FOR PERMANENT INLET PROTECTION
PRODUCT SELECTION AND SPECIFICATION DRAWING

ULTIMATE BYPASS AREA / 304 STAINLESS STEEL FRAMING / EXTENSION UNDERNEATH CURB HOOD WHEN AVAILABLE / REPLACEABLE FILTER BAG

FLEXSTORM PURE INLET FILTERS FOR ROUND OPENINGS — FLEXSTORM PURE WALL MOUNT INLET FILTERS FOR OPEN THROAT GUTTERS — FLEXSTORM PURE INLET FILTERS FOR COMBINATION INLETS — FLEXSTORM PURE INLET FILTERS FOR RECTANGULAR OPENINGS WITH GRATES

For Round Openings with Grates		Minimum Bypass Flow Rates (CFS)* Based on Nominal Frame Size with minimum 2" Bypass flow gap
Drop Thru Opening Size Dia	Flexstorm Frame P/N	
Small: 10.0" - 18.0"	62SHDR	1.6
Medium: 18.1" - 24.0"	62MHDR	2.7
Large: 24.1" - 36.0"	62LHDR	3.8

For Open Throat Curb Inlets - Mounted to Wall Beneath Curb Opening	
Curb Opening Size	Flexstorm Frame P/N
Up to 4' curb openings (1 Filter)	62HDWM1
Between 4' and 8' curb openings (2 Filters)	62HDWM2
Between 8' and 12' curb openings (3 Filters)	62HDWM3
Between 12' and 16' curb openings (4 Filters)	62HDWM4

For Rectangular/Square Openings with Grates			Minimum Bypass Flow Rates (CFS)* Based on Nominal Frame Size with minimum 2" Bypass flow gap
Clear Drop Thru Opening Size (not grate or seat size)	Flexstorm Frame P/N	Combination P/N	
Small: 12" x 12" up to 16" x 16" (or 64" max perimeter)	62SHD	62SHDCB	2.4
Medium: 18" x 18" up to 24" x 24" (or 96" max perimeter)	62MHD	62MHDCB	3.5
Large: 26" x 26" up to 30" x 30" (or 120" max perimeter)	62LHD	62LHDCB	5.0
XL: 32" x 32" up to 48" x 48" (or 192" max perimeter) typ 2 pc set	62XLHD	62XLHDCB	7.2

CREATE YOUR ADS FLEXSTORM PART NUMBER BY COMBINING FRAME P/N AND BAG P/N
1. IDENTIFY YOUR FLEXSTORM FRAME PART NUMBER FROM TABLES ABOVE
2. SELECT YOUR BAG PART NUMBER BASED ON APPLICATION NEEDS

FLEXSTORM FILTER BAGS	(22" depth) STD Bag P/N	(12" depth) Short Bag P/N	Clean Water Flow Rate (GPM/SqFt)	Min A.O.S. (US Sieve)
FX: Standard Woven Bag	FX	FX-S	200	40
FX+: Woven w/ MyCelx	FXP	FXP-S	200	40
FXO: Woven w/ Oil Boom	FXO	FXO-S	200	40
PC: Post Construction Bag	PC	PC-S	137	140
PC+: PC Bag w/ MyCelx	PCP	PCP-S	137	140
LL: Litter and Leaf Bag	LL	LL-S	High	3.5
IL: IDOT Non-Woven Bag	IL	IL-S	145	70

3. CREATE YOUR FLEXSTORM INLET FILTER PART NUMBER
Frame P/N from Step 1. Filter Bag P/N from Step 2.

SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL BAG / FRAME SIZE

Nominal Bag Size Matched to Frame Size	Solids Storage (CuFt)	Filtered Flow Rate at 50% Max (CFS) FX (Woven)	PC (Post Constr)	IL (NonWoven)	* PC Oil Retention (Oz)	**PC+ Oil Retention (Oz)	**FX+ Oil Retention (Oz)
Small	1.6	1.2	0.8	0.9	79	168	89
Medium	2.1	1.7	1.2	1.3	115	204	89
Large	3.8	2.7	1.8	1.9	173	262	89
XL	4.2	3.6	2.4	2.6	230	319	178
Filtration Efficiency		82%	NA	Large scale 3rd party testing per ASTM D 7351 using 7% concentration USDA Sandy Loam			
TSS (total suspended solids rem)		NA	99%	Large Scale testing at 90 GPM using US Silica OK-110 sand at 1750 mg/L measuring TSS per SM 2540D.			
TPH (tot petroleum hydrocarbons)		NA	96%	Large Scale testing at 90 GPM with used motor oil at 243 mg/L measuring per EPA Method 1664A.			

* PC filter bag at 50% max adsorption capacity
** PC filter bag at 50% capacity and MyCelx skimmer at 100% capacity

NOTES:
1. ALL FRAMING IS CONSTRUCTED OF 304 STAINLESS STEEL FOR 25 YEAR SERVICE LIFE RATING
2. TOTAL BYPASS CAPACITY: BYPASS CAPACITY WILL VARY WITH EACH SIZE DRAINAGE STRUCTURE. FLEXSTORM DESIGNS FRAMING BYPASS TO MEET OR EXCEED THE DESIGN FLOW OF THE PARTICULAR DRAINAGE STRUCTURE.
3. UPON ORDERING CONFIRMATION OF THE DOT CALLOUT, PRECAST OR CASTING MAKE AND MODEL, OR DETAILED DIMENSIONAL FORMS MUST BE PROVIDED TO CONFIGURE AND ASSEMBLE YOUR CUSTOMIZED FLEXSTORM INLET FILTER. PART NUMBER ALONE IS NOT SUFFICIENT.
4. FOR WRITTEN SPECIFICATIONS AND MAINTENANCE GUIDELINES VISIT WWW.INLETFILTERS.COM

INSTALLATION:
1. REMOVE GRATE
2. DROP FLEXSTORM INLET FILTER ONTO LOAD BEARING LIP OF CASTING OR CONCRETE STRUCTURE
3. REPLACE GRATE

ALL PRODUCTS MANUFACTURED BY INLET & PIPE PROTECTION, INC A DIVISION OF ADS, INC.
WWW.INLETFILTERS.COM
(866) 287-8655 PH
(630) 355-3477 FX
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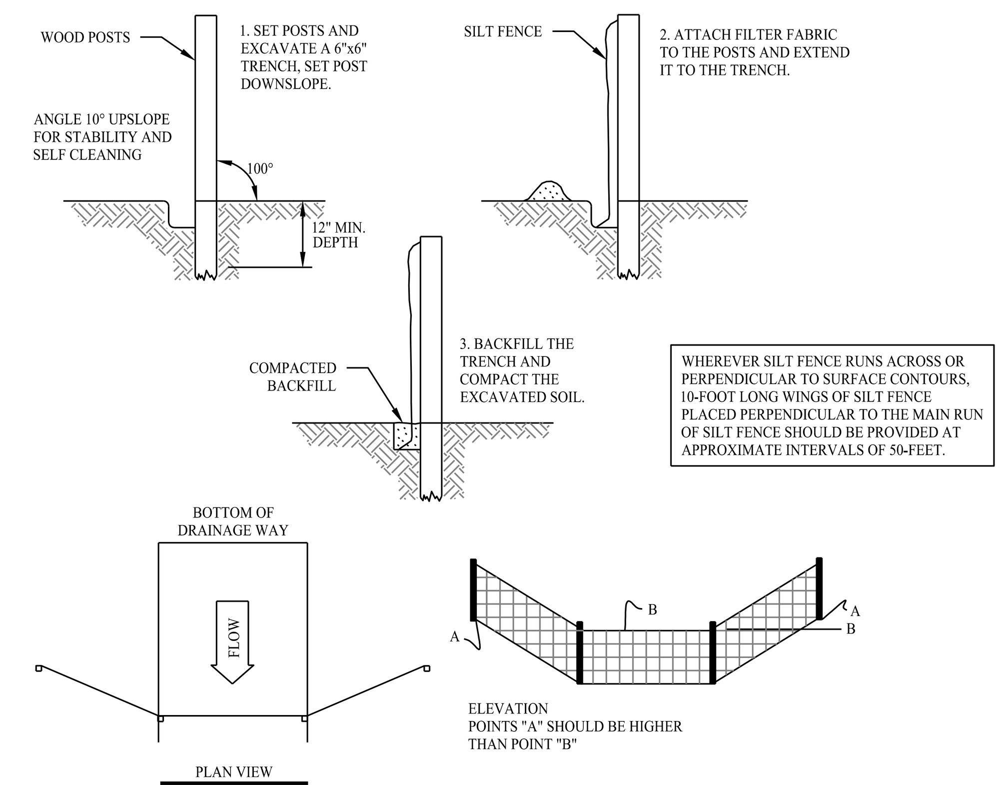
SIZE C | DWG NO IPP Flexstorm HD Specifications | REV A | SCALE | SHEET 1 OF 1

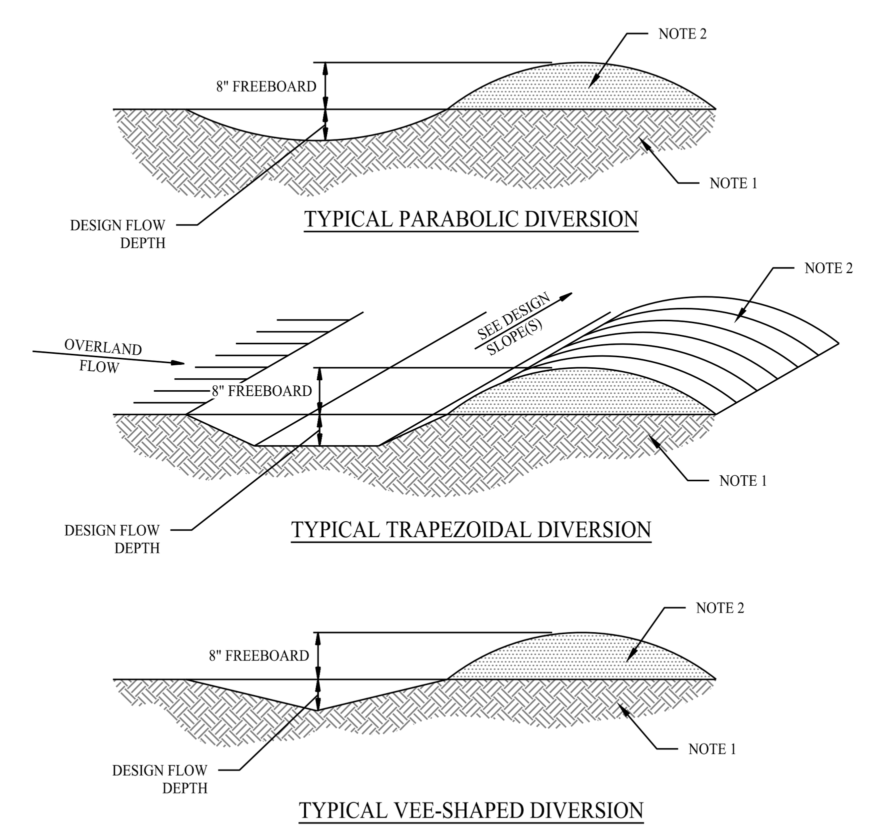
PERMANENT SILT SACK INLET PROTECTION

SCALE: NTS



SILT FENCE BARRIER DETAIL

SCALE: NTS

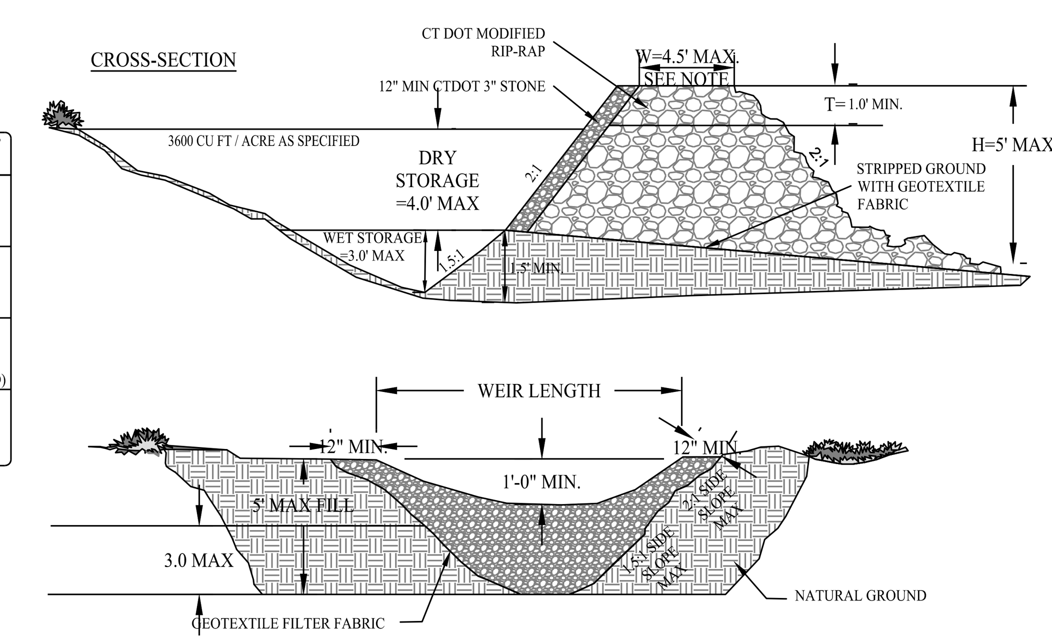


NOTES:
1. REMOVE ANY EXISTING VEGETATION AND SCARIFY OR BENCH ADJACENT SOILS PRIOR TO PLACING BERM.
2. BERM MATERIALS MUST BE ADEQUATELY COMPACTED AND STABILIZED.
3. REFER TO E&S PHASE I & II FOR TEMPORARY AND/OR FINAL STABILIZATION MEASURES.
4. BERM SHALL NOT BE CONSTRUCTED OF TOPSOIL.

DIVERSION BERM DETAIL

SCALE: NTS

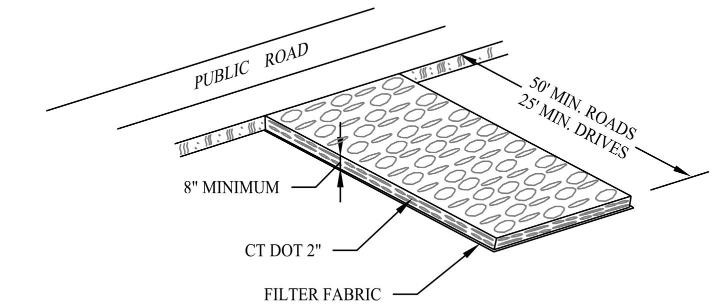
TEMPORARY SEDIMENT TRAP DESIGN CRITERIA	
DRAINAGE AREA (ACRES)	< 5 AC.
MIN. LENGTH TO WIDTH RATIO	2:1
MIN. VOLUME REQUIRED	3600 (CU. FT. PER AC. DISTURBED)
SURFACE AREA REQUIRED	435 (SQ. FT. PER CFS.)



NOTE: TOP WIDTH (FT) VS. HEIGHT (FT)	
1.5	2.0
2.0	2.0
2.5	2.5
3.0	2.5
3.5	3.0
4.0	3.0
4.5	4.0
5.0	4.5

TEMPORARY SEDIMENT TRAP

SCALE: NTS



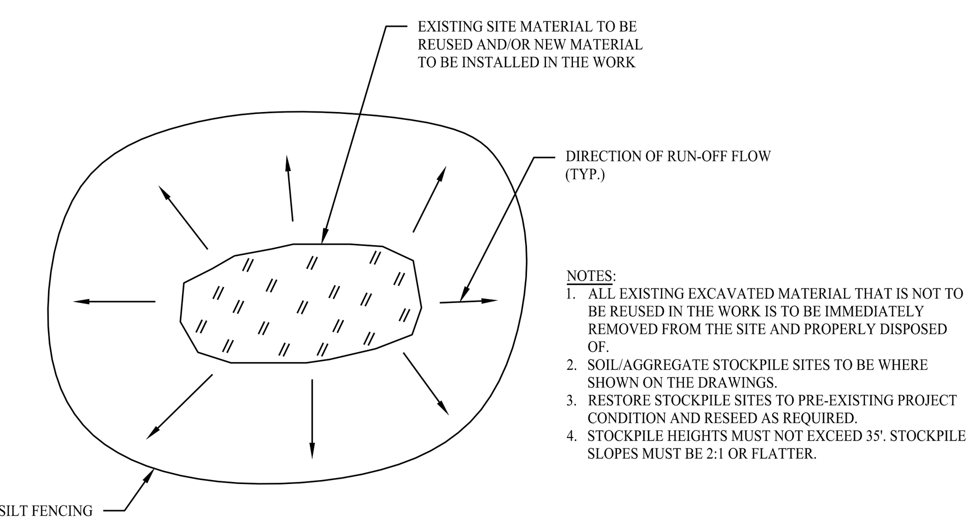
GRADATION TABLE

SQUARE MESH SIEVES	CONN. DOT 2" CRUSHED GRAVEL % FINER	ASTM C-33 NO. 2 % FINER	ASTM C-33 NO. 3 % 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



NOTES:
1. ALL EXISTING EXCAVATED MATERIAL THAT IS NOT TO BE REUSED IN THE WORK IS TO BE IMMEDIATELY REMOVED FROM THE SITE AND PROPERLY DISPOSED OF.
2. SOIL/AGGREGATE STOCKPILE SITES TO BE WHERE SHOWN ON THE DRAWINGS.
3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.
4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

STOCKPILE AREA DETAIL

SCALE: NTS

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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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:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Kevin Solli, P.E.
CT 25759

Project:
PROPOSED
SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: SOIL EROSION & SEDIMENT CONTROL NOTES & DETAILS

Sheet #: 2.41

Oct 19, 2022 - 2:08pm chris
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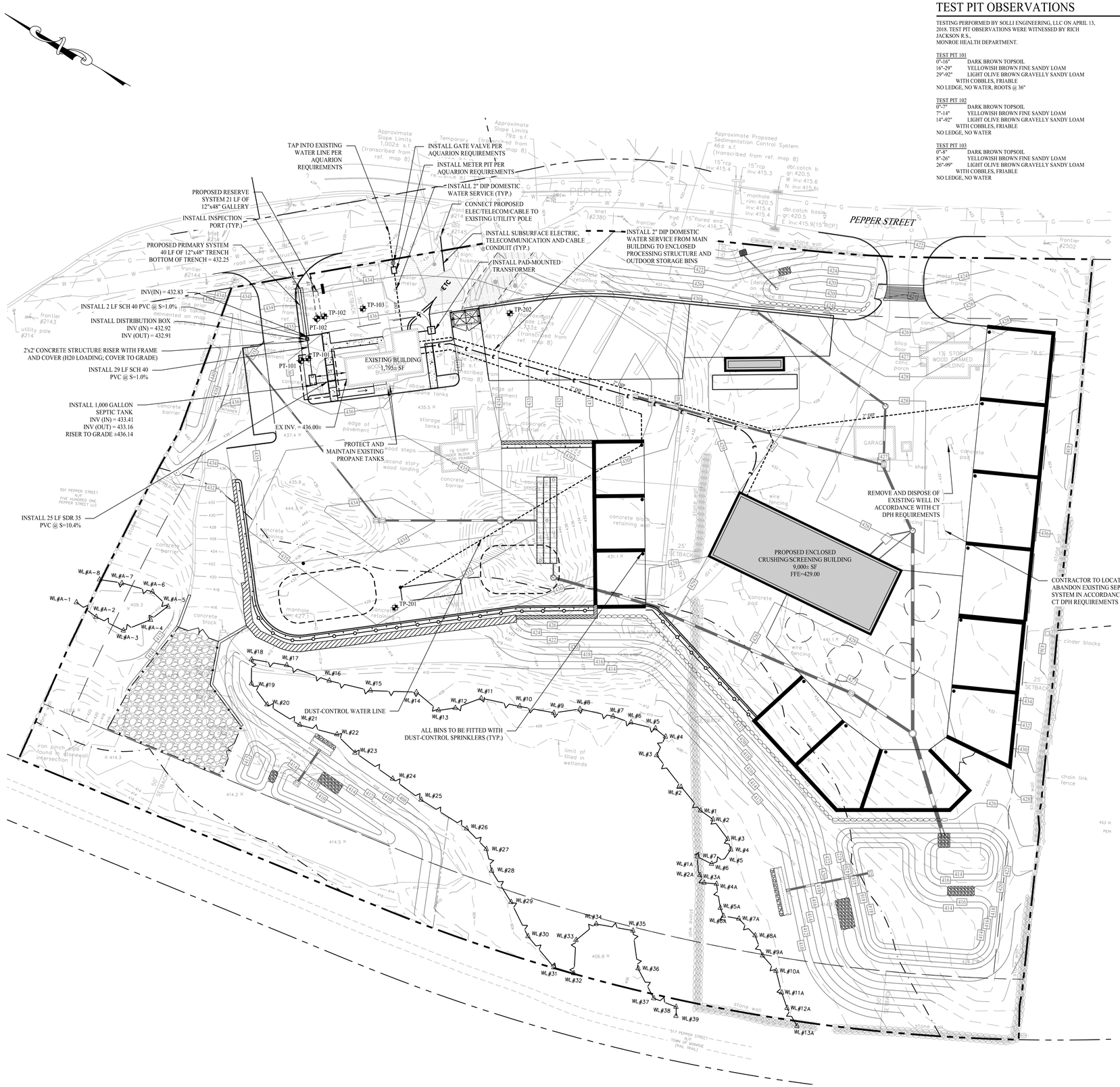

TEST PIT OBSERVATIONS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON APRIL 13, 2018. TEST PIT OBSERVATIONS WERE WITNESSED BY RICH JACKSON R.S., MONROE HEALTH DEPARTMENT.

TEST PIT 101
0"-16" DARK BROWN TOPSOIL
16"-29" YELLOWISH BROWN FINE SANDY LOAM
29"-92" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES, FRIABLE
NO LEDGE, NO WATER, ROOTS @ 36"

TEST PIT 102
0"-7" DARK BROWN TOPSOIL
7"-14" YELLOWISH BROWN FINE SANDY LOAM
14"-92" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES, FRIABLE
NO LEDGE, NO WATER

TEST PIT 103
0"-8" DARK BROWN TOPSOIL
8"-26" YELLOWISH BROWN FINE SANDY LOAM
26"-99" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES, FRIABLE
NO LEDGE, NO WATER

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON JUNE 4, 2018.

TEST PIT 201
0"-6" DARK BROWN TOPSOIL
6"-54" LIGHT BROWN FINE SANDY LOAM
54"-66" YELLOWISH BROWN GRAVELLY SANDY LOAM
66"-108" GRAY GRAVELLY SANDY LOAM
NO LEDGE, NO WATER, ROOTS @ 96"

TEST PIT 202
0"-12" DARK BROWN TOPSOIL
12"-30" LIGHT BROWN FINE SANDY LOAM
30"-114" LIGHT OLIVE BROWN GRAVELLY SANDY LOAM WITH COBBLES
NO LEDGE, NO WATER

PERCOLATION TESTS

TESTING PERFORMED BY SOLLI ENGINEERING, LLC ON APRIL 13, 2018.

PERCOLATION TEST: PT-101
DIAMETER OF PIT: 10"
DEPTH OF PIT: 27.5"
HOLE PRESOAKED PRIOR TO TEST

ELAPSED TIME (MIN.)	WATER ELEVATION (IN.)
0	9.5
10	8.5
20	7.75
30	6
40	5
50	4.25
60	3
PERC RATE: 1"/1-10.1 MINUTES	

PERCOLATION TEST: PT-102
DIAMETER OF PIT: 10"
DEPTH OF PIT: 24"
HOLE PRESOAKED PRIOR TO TEST

ELAPSED TIME (MIN.)	WATER ELEVATION (IN.)
0	10
10	8.75
20	7
30	5.75
40	5
50	4.25
60	3.5
PERC RATE: 1"/1-10.1 MINUTES	

SEPTIC DESIGN

DESIGN ANALYSIS

Design Percolation Rate 1-10.1 min/inch
Design Flow for Office Use = 178 GPD
MLSS Not Required as DTR exceeds 60"

Office: 1,776 SF
Flow: 1,776 x 0.1 (200 SF/Person x 20 GPD) = 177.6 GPD
ELA: 178 GPD ÷ 1.5 GPD/SF (App. Rate) = 118.7 SF of ELA

Primary Leaching System: 12"x48" Trench = 3.0 SF/LF of ELA
118.7 SF ÷ 3.0 SF/LF = 39.6 or **40 LF**

Reserve Leaching System: 12"x48" Galleries = 5.9 SF/LF of ELA
118.7 SF ÷ 5.9 SF/LF = 20.2 or **21 LF**

UTILITY NOTES

1. THIS PLAN IS FOR PERMITTING PURPOSES ONLY AND SHOULD NOT BE USED FOR CONSTRUCTION.
2. 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.
3. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS FOR ACTUAL LOCATIONS OF ALL UTILITY ENTRANCES TO INCLUDE SANITARY SEWER LATERALS, DOMESTIC AND FIRE PROTECTION WATER SERVICE, ELECTRICAL, TELEPHONE AND GAS SERVICE, ROOF DRAINS, AND ALL OTHER UTILITIES. CONTRACTOR SHALL COORDINATE INSTALLATION OF UTILITIES IN SUCH A MANNER AS TO AVOID CONFLICTS AND TO ENSURE PROPER DEPTHS ARE ACHIEVED AS WELL AS COORDINATING WITH THE REGULATORY AGENCY AS TO LOCATION OF AND SCHEDULING OF CONNECTIONS TO THEIR FACILITIES.
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. GENERAL CONTRACTOR SHALL PROVIDE 2'x2'x6" THICK CONCRETE APRON AT ALL CLEANOUTS, VALVES, AND METERS OUTSIDE OF THE BUILDING.
7. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TAP AND TIE ON FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
8. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL OSHA REGULATIONS.
9. CONTRACTOR TO COORDINATE GAS MAIN, WATER, ELECTRIC, AND TELEPHONE INSTALLATION WITH APPROPRIATE UTILITY COMPANIES.
10. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 2 FEET OF COVER FOR ALL UNDERGROUND ELECTRIC, TELEPHONE AND GAS UTILITIES.
11. TRENCHING WITHIN 25 FEET OF THE LEACHING SYSTEM SHALL NOT BE BACKFILLED WITH FREE DRAINING MATERIAL (FDM) PER CT PUBLIC HEALTH CODE TECHNICAL STANDARDS FOR SUBSURFACE SEWAGE DISPOSAL SYSTEMS TABLE 1.
12. 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.
13. 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.
14. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4.5 FEET OF COVER FOR ALL WATER DISTRIBUTION PIPING.
15. ALL NEW WATER LINES SHALL BE PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA STANDARD C600.
16. ALL NEW WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA STANDARD C651.
17. ALL FIRE HYDRANTS SHALL BE PROVIDED WITH AN APPROVED GATE VALVE AT A MAXIMUM OF 5'-0" FROM HYDRANT.
18. ALL PIPE LENGTHS ARE HORIZONTAL DISTANCES AND ARE APPROXIMATE.
19. ALL WORK SHALL COMPLY WITH ALL APPLICABLE CODES, REGULATIONS, AND/OR LOCAL STANDARDS IMPOSED BY LOCAL UTILITY AUTHORITIES.
20. CONTRACTOR SHALL ADJUST LOCATION OF PROPOSED WATER LINES AS REQUIRED TO AVOID CONFLICTS WITH STORM SEWER OR OTHER UTILITIES AT NO EXTRA COST.
21. ALL MATERIAL SHALL BE APPROVED BY THE LOCAL UTILITY COMPANIES UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
22. 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 "1 (800) 922-4455" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
23. UTILITY LEAD-INS TO BUILDING SHALL NOT BE INSTALLED UNTIL BUILDING PLANS ARE COMPLETED AND LOCATIONS ESTABLISHED ON THE ARCHITECTURAL MECHANICAL, ELECTRICAL AND PLUMBING PLANS. UTILITY CONTRACTOR SHALL REQUEST AND RECEIVE WRITTEN APPROVAL FROM PRIME CONTRACTOR PRIOR TO INSTALLATION OF LEAD-INS.
24. BUILDING PLUMBING CONTRACTOR SHALL PAY ALL COST FOR WATER METERS, METER BOXES, VALVES, ETC. TO PROVIDE A COMPLETE JOB PER LOCAL AUTHORITY REQUIREMENTS.
25. THRUST BLOCKS SHALL BE PROVIDED AT ALL TEES, ELBOWS, BENDS AND PLUGS OF SUFFICIENT SIZE TO COMPLY WITH MINIMUM STANDARDS OF N.F.P.A - EXISTING SOIL CONDITIONS.
26. 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 AND/OR SOILS ENGINEER AT NO COST TO OWNER.

SEPTIC SYSTEM NOTES

1. THIS PLAN IS FOR APPROVAL PURPOSES ONLY AND IS NOT FOR CONSTRUCTION.
2. PRIOR TO CONSTRUCTION THE CONTRACTOR MUST VERIFY ALL ELEVATIONS AND DIMENSIONS SHOWN ON THIS PLAN.
3. WATER SERVICE IS TO BE PROVIDED BY PUBLIC WATER SUPPLY.
4. ALL PORTIONS OF THE SEPTIC SYSTEM SHALL BE A MINIMUM OF 10' FROM ANY PROPERTY LINE.
5. BENCHMARK: THE BENCHMARK IS SET IN THE FIELD AS NOTED ON PLANS.
6. CONSTRUCTION: ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF CONNECTICUT PUBLIC HEALTH CODE AND WITH THE STANDARDS SET FORTH BY THE TOWN OF MONROE HEALTH DEPARTMENT, AND BY THE STANDARDS ASSOCIATED WITH GOOD WORKMANSHIP.
7. INSPECTION: THE DESIGN ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR ANY CHANGE DURING CONSTRUCTION. PLEASE NOTIFY IN ADVANCE OF THE ESTIMATED TIME OF COMPLETION TO SCHEDULE FINAL INSPECTION AND AS-BUILT REQUIREMENTS.
8. THIS DESIGN CONFORMS TO ALL STATE AND LOCAL CODE REQUIREMENTS AND GOOD ENGINEERING PRACTICE. WE CANNOT GUARANTEE AGAINST FAILURE DUE TO NATURAL PHENOMENA BEYOND THE SCOPE OF NORMAL FIELD INVESTIGATION.
9. WELLS WITHIN 75' OF THE PROPOSED SEPTIC SYSTEM WILL BE ABANDONED.
10. THE SEPTIC SYSTEM SHALL BE PROPERLY BACKFILLED WITHIN TWO DAYS OF THE TOWN HEALTH DEPARTMENTS' INSPECTION AND APPROVAL.
11. PRIOR TO ANY EXCAVATION ON-SITE, THE CONTRACTOR SHALL CALL 1-800-922-4455 (CALL BEFORE YOU DIG) TO LOCATE ANY EXISTING UNDERGROUND UTILITIES.

LEGEND

- PROPERTY LINE
- ADJOINING LOT LINE
- WATER MAIN / LATERAL
- ELECTRIC CONDUIT
- TELEPHONE CONDUIT
- CABLE TV UNDERGROUND LINE
- UNDERGROUND ELECTRIC, TELEPHONE AND CABLE LINES SANITARY SEWER PIPE
- LEACHING TRENCH
- RESERVE LEACHING AREA
- TEST PIT
- PERC TEST PIT
- DISTRIBUTION BOX
- SEPTIC TANK
- WATER VALVE
- ELECTRIC METER
- UTILITY HANDHOLE
- ELECTRIC TRANSFORMER

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	MDM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
SITE UTILITY PLAN	2.51

Oct 19, 2022 - 2:08pm chris
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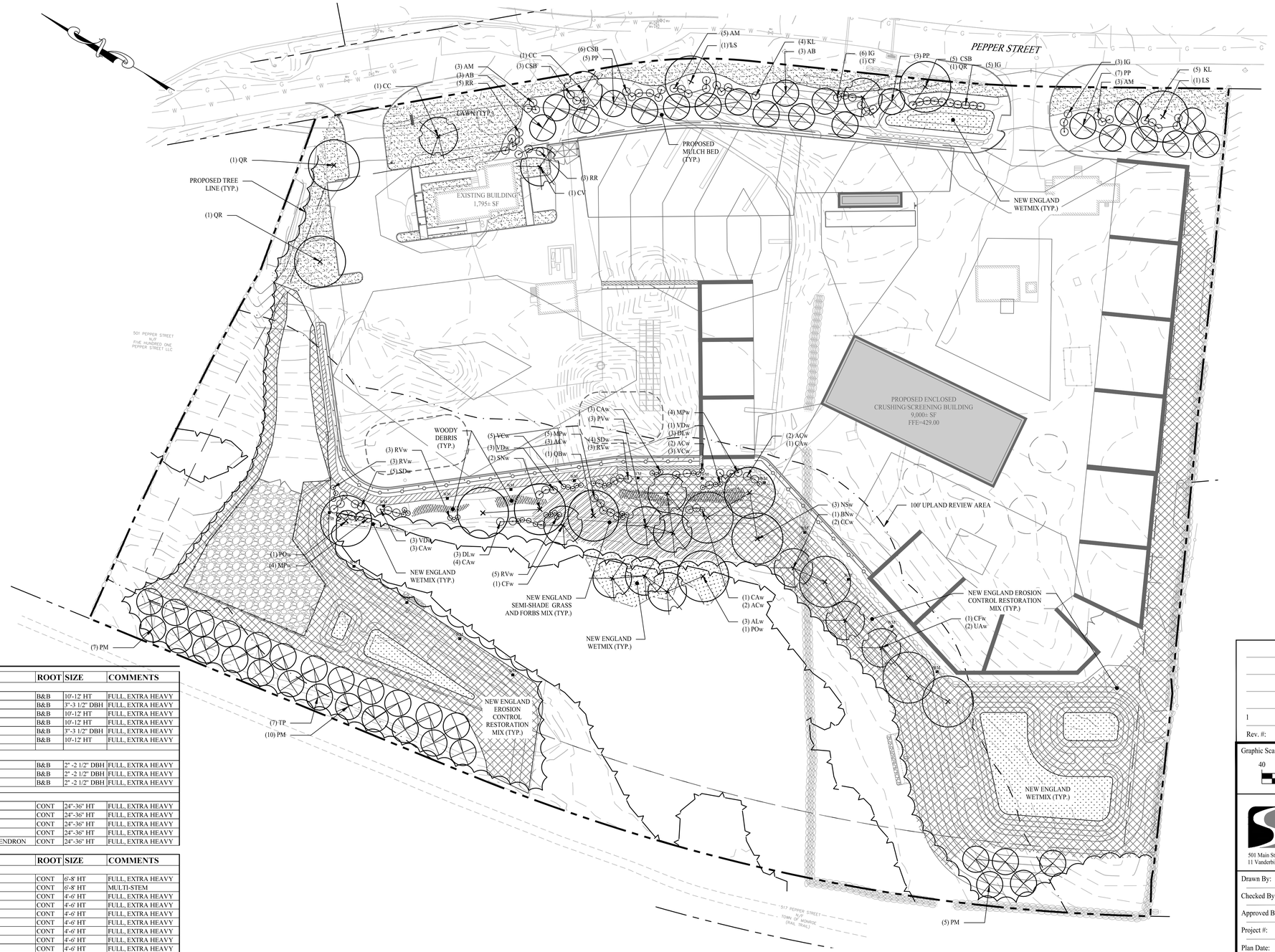
GENERAL NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A SURVEY PLAN ENTITLED "ZONING LOCATION SURVEY OF 467 & 485 PEPPER STREET MONROE, CONNECTICUT," DATE: 07/18/22, SCALE: 1" = 40', PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. SEE SHEET 2.21 FOR DETAILS REGARDING THE PROPOSED GRADING AND DRAINAGE FEATURES, STORMWATER CONVEYANCE SYSTEM AND STORMWATER DETENTION FACILITIES.
3. SEE SHEET 2.62 FOR PLANTING DETAILS AND NOTES.

LEGEND

- PROPERTY LINE
- ADJOINING LOT LINE
- PROPOSED TREE LINE
- OVERSTORY TREE
- UNDERSTORY TREE
- EVERGREEN TREE
- SHRUBS & GROUNDCOVER
- LAWN
- NEW ENGLAND EROSION CONTROL RESTORATION MIX
- NEW ENGLAND SEMI-SHADE GRASS AND FORBES MIX
- NEW ENGLAND WETMIX
- WETLAND MARKER (WM)



PLANT LIST

KEY	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	COMMENTS
TREES						
AB	13	ABIES BALSAMEA	BALSAM FIR	B&B	10'-12' HT	FULL, EXTRA HEAVY
LS	2	LIQUIDAMBAR STYRACIFLUA	SWEETGUM	B&B	3"-3 1/2" DBH	FULL, EXTRA HEAVY
PM	24	PICEA MARIANA	BLACK SPRUCE	B&B	10'-12' HT	FULL, EXTRA HEAVY
PP	15	PICEA PUNGENS	COLORADO BLUE SPRUCE	B&B	10'-12' HT	FULL, EXTRA HEAVY
QR	3	QUERCUS RUBRA	RED OAK	B&B	3"-3 1/2" DBH	FULL, EXTRA HEAVY
TP	7	THUJA PLICATA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	B&B	10'-12' HT	FULL, EXTRA HEAVY
UNDERSTORY TREES						
CC	2	CERCIS CANADENSIS	EASTERN REDBUD	B&B	2" -2 1/2" DBH	FULL, EXTRA HEAVY
CF	1	CORNUS FLORIDA	FLOWERING DOGWOOD	B&B	2" -2 1/2" DBH	FULL, EXTRA HEAVY
CV	1	CRATAEGUS VIRIDIS 'WINTER KING'	WINTER KING HAWTHORN	B&B	2" -2 1/2" DBH	FULL, EXTRA HEAVY
UPLAND SHRUBS						
AM	11	ARONIA MELANOCARPA	BLACK CHOKEBERRY	CONT	24"-36" HT	FULL, EXTRA HEAVY
CSB	14	CORNUS SERICA 'BAAILEYI'	RED TWIG DOGWOOD	CONT	24"-36" HT	FULL, EXTRA HEAVY
IG	14	ILEX GLABRA	INKBERRY	CONT	24"-36" HT	FULL, EXTRA HEAVY
KL	9	KALMIA LATIFOLIA	MOUNTAIN LAUREL	CONT	24"-36" HT	FULL, EXTRA HEAVY
RR	8	RHODODENDRON 'ROSEUM ELEGANS'	ROSEUM ELEGANS RHODODENDRON	CONT	24"-36" HT	FULL, EXTRA HEAVY

KEY	QTY	BOTANICAL NAME	COMMON NAME	ROOT	SIZE	COMMENTS
WETLAND MITIGATION TREES						
ALw	3	AMELANCHIER LAEVIS	SMOOTH SHADBUSH	CONT	6'-8' HT	FULL, EXTRA HEAVY
BNw	1	BETULA NIGRA	RIVER BIRCH	CONT	6'-8' HT	MULTI-STEM
CCw	2	CERCIS CANADENSIS	EASTERN REDBUD	CONT	4'-6' HT	FULL, EXTRA HEAVY
CFw	2	CORNUS FLORIDA	FLOWERING DOGWOOD	CONT	4'-6' HT	FULL, EXTRA HEAVY
NSw	3	NYSSA SYLVATICA	BLACK TUPELO	CONT	4'-6' HT	FULL, EXTRA HEAVY
POw	2	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	CONT	4'-6' HT	FULL, EXTRA HEAVY
QBw	1	QUERCUS BICOLOR	SWAMP WHITE OAK	CONT	4'-6' HT	FULL, EXTRA HEAVY
PVw	3	PRUNUS VIRGINIANA	CHOKECHERRY	CONT	4'-6' HT	FULL, EXTRA HEAVY
SNw	2	SALIX NIGRA	BLACK WILLOW	CONT	4'-6' HT	FULL, EXTRA HEAVY
UAw	2	ULMAS AMERICANA 'PRINCETON'	PRINCETON ELM	CONT	6'-8' HT	FULL, EXTRA HEAVY
WETLAND MITIGATION SHRUBS						
ACw	13	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	CONT	18"-24" HT	FULL, EXTRA HEAVY
CAw	12	CLETHERA ALNIFOLIA	PEPPERBUSH	CONT	18"-24" HT	FULL, EXTRA HEAVY
DLw	15	DIERVILLA LONICERA	NOTHERN BUSH HONEYSUCKLE	CONT	18"-24" HT	FULL, EXTRA HEAVY
MPw	13	MORELLA PENSYLVANICA	NORTHERN BAYBERRY	CONT	18"-24" HT	FULL, EXTRA HEAVY
RVw	14	RHODODENDRON VISCOSUM	SWAMP AZALEA	CONT	18"-24" HT	FULL, EXTRA HEAVY
SDw	15	SALIX DSICOLOR	PUSSY WILLOW	CONT	18"-24" HT	FULL, EXTRA HEAVY
VCw	14	VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	CONT	18"-24" HT	FULL, EXTRA HEAVY
VDw	15	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	CONT	18"-24" HT	FULL, EXTRA HEAVY

SEED MIXES

NEW ENGLAND WETMIX (NEW ENGLAND WETLAND PLANTS, INC.)
APPLICATION RATE: 1 LB/2,500 S.F.

NEW ENGLAND EROSION CONTROL/RESTORATION MIX
APPLICATION RATE: 1 LB/2,500 S.F.

PENNINGTON SMART SEED SUN AND SHADE
APPLICATION RATE PER MFG RECOMMENDATIONS

NEW ENGLAND SEMI-SHADE GRASS AND FORBES MIX
APPLICATION RATE: 30 LB/ACRE

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	MDM
Checked By:	MFB
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Mary Blackburn, P.L.A.
CT 1499

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: LANDSCAPE PLAN

Sheet #: 2.61

Oct 19, 2022 - 2:08pm chris
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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. COMPOST 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. COMPOST 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

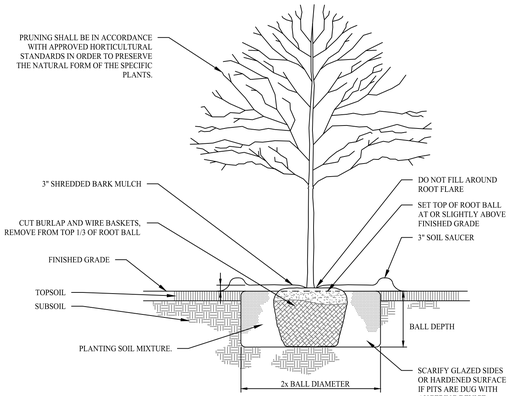
   D. CONTRACTORS SHALL BE RESPONSIBLE FOR ALL TESTING AND ANALYSIS OF EXISTING AND IMPORTED SOILS. FURNISH A SOIL ANALYSIS MADE BY A QUALIFIED INDEPENDENT SOIL - TESTING AGENCY STATING PERCENTAGES OF ORGANIC MATTER, INORGANIC MATTER (SILT, CLAY, AND SAND), DELETERIOUS MATERIAL, PH, AND MINERAL AND PLANT - 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.

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 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 4" TOPSOIL FOR ALL DISTURBED AREAS. SUBMIT SAMPLE OF TOPSOIL AND SOIL TEST RESULTS FOR LANDSCAPE DESIGNER APPROVAL PRIOR TO DELIVERING TO SITE.
19. MULCH ALL BEDS SHOWN AS CONTINUOUS WITH A 3" MINIMUM OF SWEET PEAT MULCH. 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.

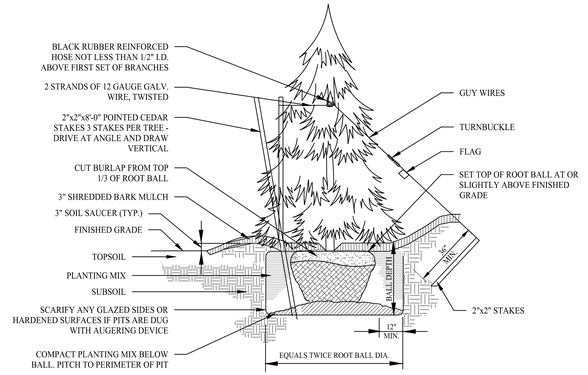
WETLAND MITIGATION PLANTING NOTES

1. INVASIVE NON-NATIVE SPECIES SHALL BE ERADICATED OR REMOVED FROM WETLAND BUFFER AND DETENTION BASIN AREAS.
2. ANY HERBICIDE USED FOR INVASIVE ERADICATION OR CONTROL SHALL BE APPROVED BY PROJECT WETLAND SCIENTIST AND APPLIED BY A LICENSED PROFESSIONAL.
3. A MARKER DYE SHALL BE ADDED TO ANY HERBICIDES USED FOR SELECTIVE INVASIVE PLANT REMOVAL.
4. DISPOSAL OF INVASIVE PLANT MATERIAL SHALL COMPLY WITH CT DEEP "GUIDELINES FOR DISPOSAL OF TERRESTRIAL INVASIVE PLANTS" SUCH MATERIAL MAY BE CHIPPED AND COMPOSTED ON SITE IF DONE PRIOR TO FLOWERING. IF AFTER FLOWERING SHALL BE DISPOSED OF OFF SITE BY BEING BAGGED, TRANSPORTED SECURELY, AND INCINERATED.
5. MAXIMIZE THE PROTECTION OF NATIVE TREES AND SHRUBS AT THE LIMIT OF DISTURBANCE USING ORANGE CONSTRUCTION FENCING OR EQUIVALENT.
6. A 50:50 MIX OF WEED-FREE LEAF COMPOST AND SAND SHALL BE AN ACCEPTABLE SUBSTITUTE FOR NATURAL TOPSOIL. IF USED, THE COMPOST SHALL BE TESTED FOR GERMINATION OF WEED SEEDS.
7. PLANTS SHALL BE NATIVE SPECIES FROM NEW ENGLAND SOURCES TO THE EXTENT FEASIBLE. CULTIVARS OR HYBRIDS ARE NOT ACCEPTABLE.
8. PLANT TREES AND SHRUBS AROUND EXISTING NATIVE VEGETATION IN BEDS AND MULCH WITH PINE BARK MULCH. MULCH AROUND TREES WITH PINE BARK MULCH.
9. AVERAGE DENSITY OF SHRUBS SHALL BE IN GROUPINGS 4-6 FEET O.C.
10. PLANT TREES AND SHRUBS IN BEDS AND MULCH WITH PINE BARK MULCH. MULCH AROUND TREES WITH PINE BARK MULCH.
11. MULCH IS NOT TO BE RENEWED.
12. SEED DISTURBED SOILS WITH NEW ENGLAND EROSION CONTROL/RESTORATION MIX (1 LB/1250 S.F.
13. TREES AND SHRUBS SHALL BE PROTECTED FROM DEER BROWSE WITH REPELLANT OR CAGES.



TREE PLANTING

SCALE: NTS



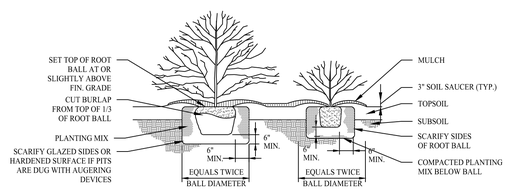
STAKING
STAKING FOR EVERGREEN TREES OVER 6' HT.

GUYING
GUYING FOR EVERGREEN TREES OVER 10' HT.

NOTE:
SHOULD STAKING OR GUYING BE REQUIRED SEE DECIDUOUS TREE PLANTING DETAIL FOR METHODS.

EVERGREEN TREE PLANTING

SCALE: NTS

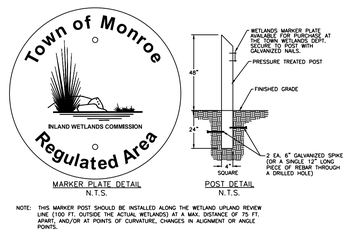


BALLED AND BURLAPPED CONTAINER GROWN

NOTE
1. IN AREAS OF MASS PLANTING, CONTINUOUSLY EXCAVATE AND MULCH ENTIRE BED.

SHRUB PLANTING

SCALE: NTS



NOTE: THIS MARKER POST SHOULD BE INSTALLED ALONG THE WETLAND UPLAND REVIEW LINE (100 FT. OUTSIDE THE ACTUAL WETLANDS) AT A MAX. DISTANCE OF 75 FT. APART, AND/OR AT POINTS OF CURVATURE, CHANGES IN ALIGNMENT OR ANGLE POINTS.

INLAND WETLANDS MARKER AND POST DETAIL (WM) (TYP OF 11)

SCALE: NTS

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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

Drawn By:	MDM
Checked By:	MFB
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Mary Blackburn, P.L.A.
CT 1499

Project:

PROPOSED
SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:
LANDSCAPE NOTES AND DETAILS

Sheet #:
2.62

Oct 19, 2022 – 2:09pm chris
X:\SE Files\Project Data\2017\1708001 – 485 Pepper Street – Monroe\Cadd Data\467-485 Pepper Street\1708001-2.62.dwg

LIGHTING SCHEDULE

QTY	CALLOUT	SYMBOL	FIXTURE DESCRIPTION	MODEL	NOTES	LUMENS
9	W1		WALL MOUNTED FIXTURE	RAB WPLED26N, POWDER COATED ALUMINUM, BRONZE	26W 4K LED, MOUNTING HEIGHT AS SHOWN IN PLAN	2,415
1	P1		POLE MOUNTED FIXTURE	HUBBELL LIGHTING, AIRO MICRO STRIKE, ASL2-320L-255-3K TYPE II DARK BRONZE	255W 3K LED, 18' MOUNTING HEIGHT	34,588

LIGHTING NOTES

1. EXISTING SITE CONDITIONS TAKEN FROM A SURVEY PLAN ENTITLED "ZONING LOCATION SURVEY OF 467 & 485 PEPPER STREET MONROE, CONNECTICUT," DATE: 07/18/22, SCALE: 1" = 40', PREPARED BY ACCURATE LAND SURVEYING, LLC.
2. ALL LIGHT FIXTURES TO BE MOUNTED AND INSTALLED PER MANUFACTURER SPECIFICATIONS.
3. ALL WORK AND RELATED MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
4. THE EXISTING FLOOD LIGHTS ON THE PROPOSED OFFICE BUILDING SHALL BE REMOVED; NEW DARK-SKY COMPLIANT LIGHT FIXTURES SHALL BE INSTALLED ON THE BUILDING AS SHOWN HEREON.

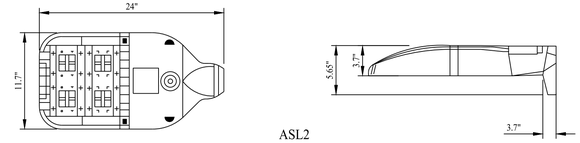
LEGEND

0.1 0.1 0.1
0.1 0.1 0.0 — PROPOSED FOOTCANDLES
0.1 0.0 0.0

PROPOSED WALL MOUNTED FIXTURE

PROPOSED POLE MOUNTED FIXTURE

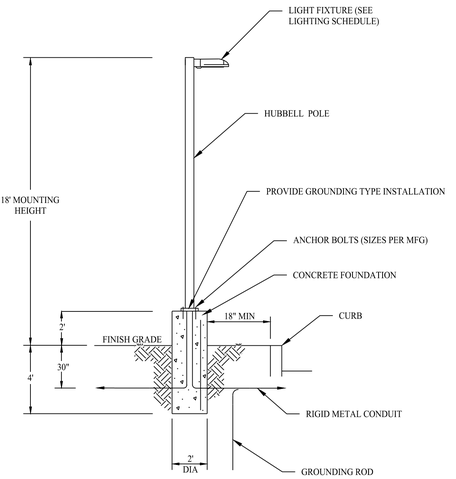
FOOTCANDLE - 0.0 & 0.2



ASL2

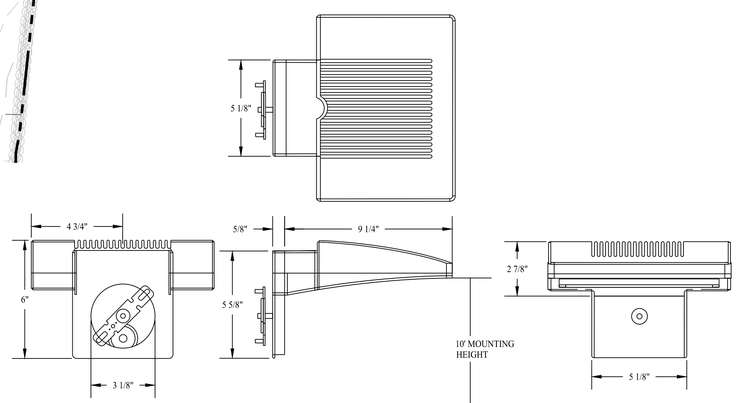
PROPOSED MOUNTED LIGHT FIXTURE - P1

HUBBELL ASL LED SERIES, POWDER COATED ALUMINUM, DARK BRONZE
SCALE: NTS



PROPOSED LIGHT POLE - P1

SCALE: NTS



PROPOSED WALL MOUNTED LIGHT FIXTURE - W1 SERIES

RAB LIGHTING LED WALL PACK, MODEL WPLED26N, POWDER COATED ALUMINUM, BRONZE
SCALE: NTS

AVERAGE ILLUMINATION

REQUIREMENT	PROPOSED
0.75 - 5 FOOTCANDLES	1.40* FOOTCANDLES

*AVERAGE ILLUMINATION CALCULATED IN OFFICE AND PARKING AREA

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

Graphic Scale: 40 0 40 80

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

Drawn By:	BCP
Checked By:	MFB
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	1" = 40'

Mary Blackburn, P.L.A.
CT 1499

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: LIGHTING PLAN

Sheet #: 2.71

Oct 19, 2022 – 2:09pm chris
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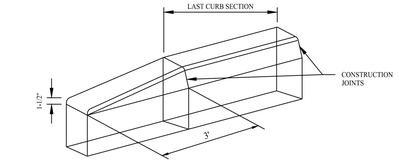
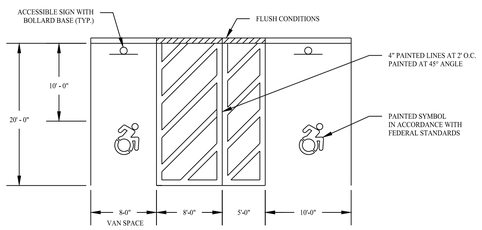


NOTES
1. CONCRETE SHALL BE 3500 PSI AIR ENTRAINED AT A 4" SLUMP.
2. TRANSVERSE CONTROL JOINTS 1/4" WIDE BY 3/4" DEEP, TO BE FORMED EVERY 4'.
3. EXPANSION JOINTS WITH 1/2" PREMOLDED MATERIALS SHALL BE PLACED EVERY 28' TO FULL DEPTH.
4. WEATHER PROTECTION AND CURING COMPOUNDS SHALL BE USED IN ACCORDANCE WITH CTDOT SPECIFICATIONS.
5. ALL EDGES SHALL BE ROUNDED WITH A 1/4" EDGE TOOL

CURB TRANSITION DETAIL

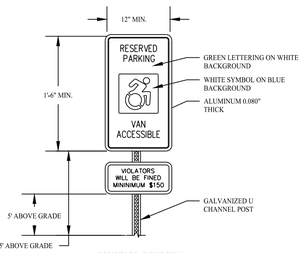
SCALE: NTS



NOTES
1. SEE SITE PLAN FOR ACCESSIBLE SPACE LOCATIONS
2. PROVIDE 2 COATS OF PAINT ON ALL SURFACES.

ACCESSIBLE PARKING SPACE DETAIL

SCALE: NTS



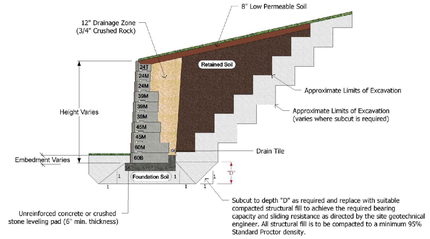
ACCESSIBLE PARKING SIGN

NOTE
SUPPORTS-SEE STD. SHEET-"TYPICAL METAL SIGN POSTS AND SIGN MOUNTING DETAILS" PREPARED BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION; BUREAU OF HIGHWAYS; DIVISION OF TRAFFIC SUPPORTS-WT/FT 3 LB.(UNLESS OTHERWISE NOTED)

ACCESSIBLE SIGN DETAILS

SCALE: NTS

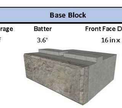
Typical Gravity Wall Cross Section



Retaining Wall Blocks

Base Block

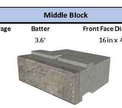
Wall Coverage	Batter	Front Face Dimensions
5.33 sf	3.6°	16 in x 48 in



Unit ID	Depth (in)	Volume (cf)	Weight (lb)
24B	24	10.04	1456
30B	30	15.70	2277
45B	45	17.58	2549
60B	60	21.88	3173
66B	66	23.56	3416
72B	72	25.24	3660
78B	78	26.91	3902
84B	84	28.59	4146

Middle Block

Wall Coverage	Batter	Front Face Dimensions
5.33 sf	3.6°	16 in x 48 in

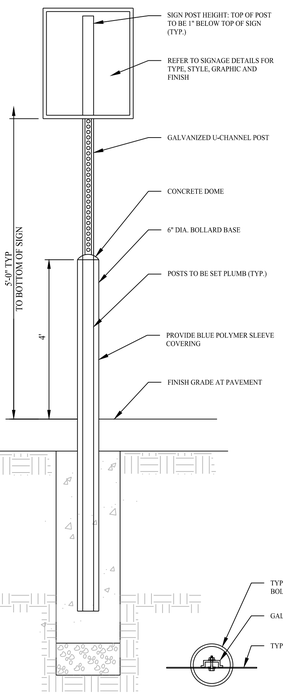


Unit ID	Depth (in)	Volume (cf)	Weight (lb)
24M	24	9.73	1411
30M	30	15.18	2201
45M	45	17.18	2491
60M	60	21.48	3115
66M	66	23.16	3358
72M	72	24.84	3602
78M	78	26.51	3844
84M	84	28.19	4088

TYPICAL RETAINING WALL SECTION DETAIL

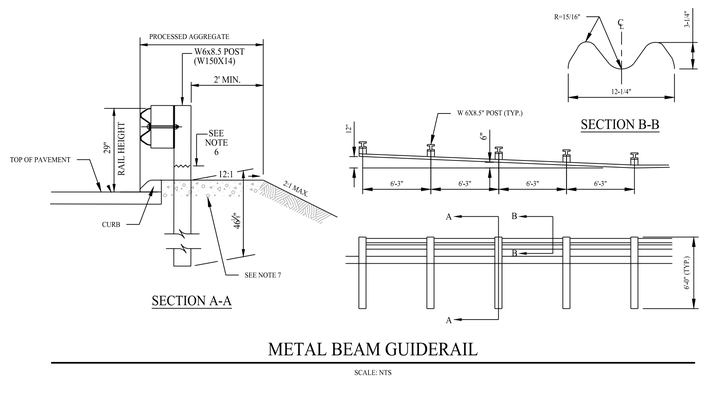
DETAIL PER RECON RETAINING WALLS

SCALE: NTS



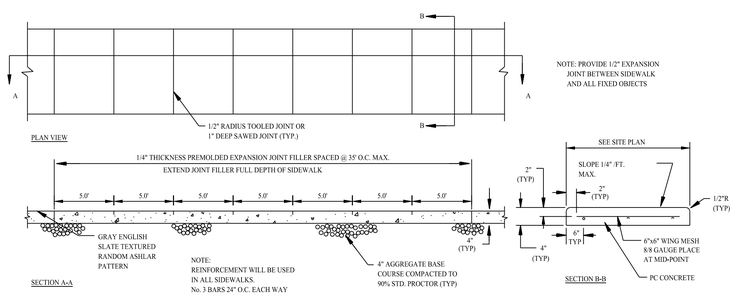
SIGN MOUNTING FOR ACCESSIBLE SIGN

SCALE: NTS



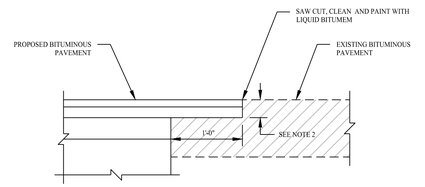
METAL BEAM GUIDERAIL

SCALE: NTS



CONCRETE SIDEWALK

SCALE: NTS

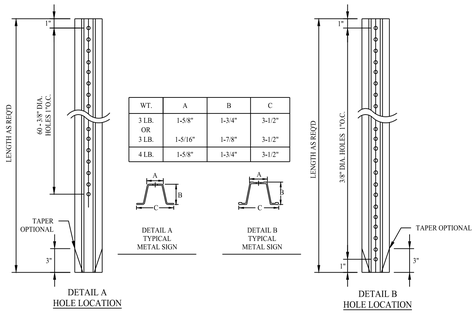


NOTES
1. OVERLAP BOTH PROPOSED BITUMINOUS CONCRETE COURSES (CLASS 1 AND CLASS 2) OVER EXISTING SUBBASE.
2. MINIMUM THICKNESS TO BE SAME AS PROPOSED BITUMINOUS OR MATCH THICKNESS OF EXISTING PAVEMENT, WHICH EVER IS GREATER.

PAVEMENT MATCH TREATMENT DETAIL

SCALE: NTS

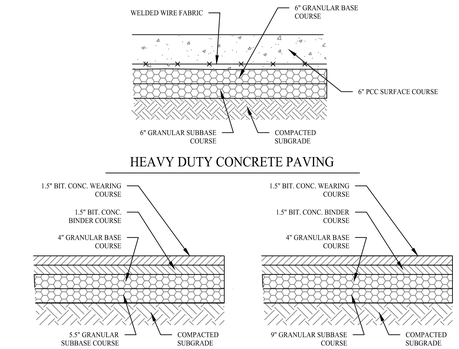
DETAIL PER TOWN OF MONROE DPW STANDARD DRAWINGS



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 AU-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.

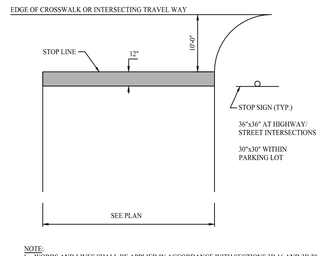
TYPICAL METAL SIGN POSTS

SCALE: NTS



PAVING DETAILS

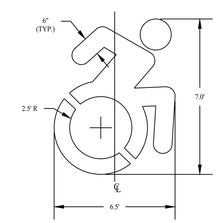
SCALE: NTS



NOTE:
1. WORDS AND LINES SHALL BE APPLIED IN ACCORDANCE WITH SECTIONS 3B.16 AND 3B.20 OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
2. THESE WORDS AND BAR ARE TO BE PAINTED RETROREFLECTIVE WHITE.

STOP SIGNAGE AND MARKING

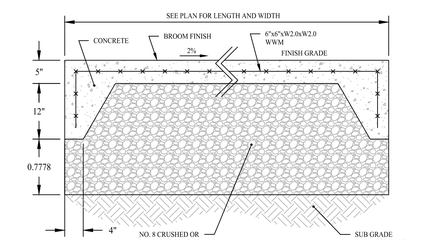
SCALE: NTS



NOTES:
LOCATE AT EDGE OF PARKING SPACE UNLESS ACCOMPANIED BY "VAN" LETTERING

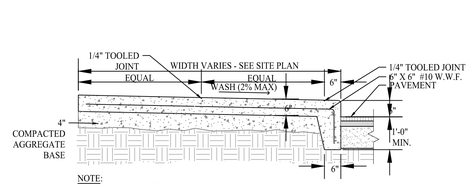
ACCESSIBLE PARKING SYMBOL

SCALE: NTS



CONCRETE PAD DETAIL

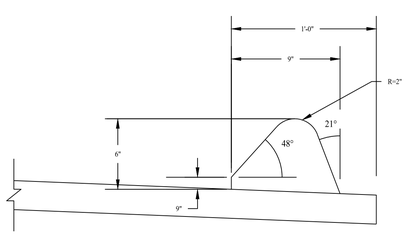
SCALE: NTS



NOTE:
EXPANSION JOINT 20' O.C.
MAXIMUM. 1/4" TOOL JOINT
4' O.C. OR AS DIRECTED.
CONCRETE TO BE 3000 P.S.I.

EXTRUDED INTEGRAL CONCRETE CURB

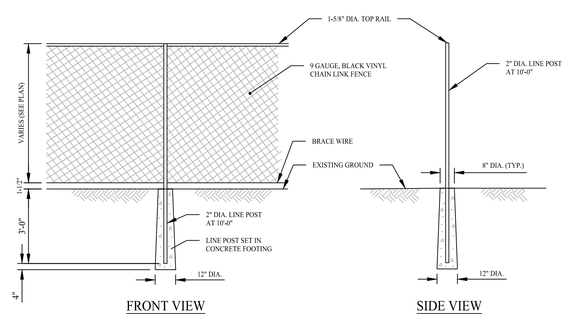
SCALE: NTS



BITUMINOUS CONCRETE LIP CURBING DETAIL

SCALE: NTS

DETAIL PER TOWN OF MONROE DPW STANDARD DRAWINGS



CHAIN LINK FENCE DETAIL

SCALE: NTS

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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:	NCM
Checked By:	RRP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Kevin Solli, P.E.
CT 25759

Project:

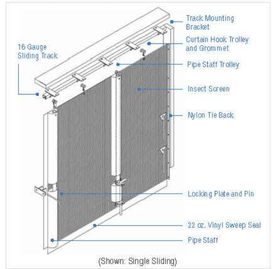
PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
DETAIL SHEET	3.01

Oct 19, 2022 - 1:08pm chris
X:\SE Files\Project Data\20\7\1708001 - 485 Pepper Street - Monroe\Cadd Data\467-485 Pepper Street\1708001-3.01.dwg

SINGLE SLIDE OPERATION

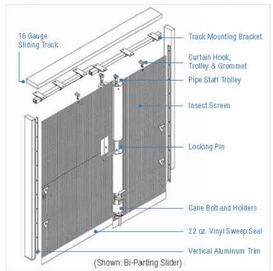
Single Slide Bug Barrier® Doors are manually operated. The curtain is fixed to one side of the jamb and locks on the other. Fixed side is determined from access side (interior or exterior).



(Shown: Single Sliding)

BI PARTING OPERATION

Bi-Parting Bug Barrier® Doors are manually operated. Bi-Parting door is fixed to both jambs and locks in center. Leading edges of curtain overlap to seal.



(Shown: Bi-Parting Slider)

MOUNTING OPTIONS:
Header Mount (In Jamb)
Face of Wall Mount

TRACK:
1-1/2" Wide 16 gauge galvanized steel sliding track
Heavy duty ball bearing

STABILIZATION:
Full-height, 1-¼" diameter galvanized pipe staff enclosed in
Vinyl Pockets – Standard Safety Yellow
5/8" Steel cane bolt floor locking pins at each pipe staff

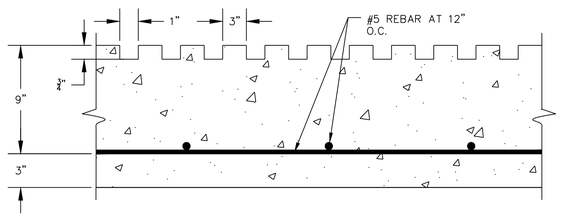
HEAD ROOM / SIDE ROOM REQUIREMENTS:
3.5" Head Room (In Jamb or Header Mount)
5.5" Head Room (Wall Mount)
Curtain material will take up approximately 1" per foot when bunched.

CURTAIN OPTIONS:
SOLID VINYL
Aids in controlling dust and temperature.
Standard Colors: Green, Blue, Black, Yellow
Standard Vinyl: 22 Ounce
OPTIONAL: 40 Ounce Premium
Puncture resistant up to 225 lbs
Low temperature resistant to -40 F
Door Size: Doors sizes available up to 34' W or 30' H

VINYL DOOR DETAIL

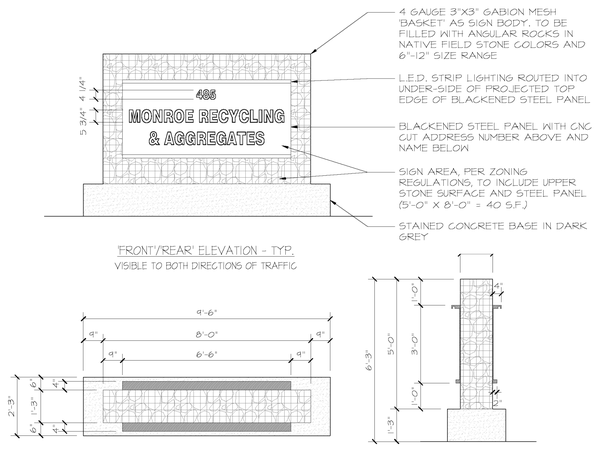
SCALE: NTS

DETAIL PROVIDED BY GATEWAY INDUSTRIAL PRODUCTS, INC.



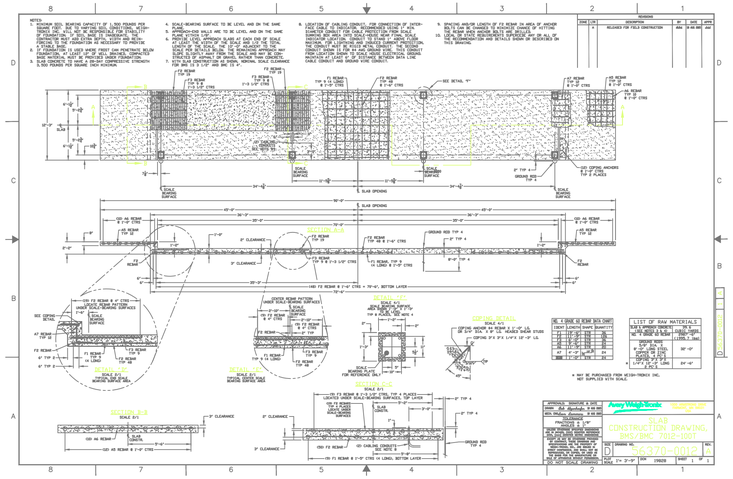
WIDE-GROOVED CONCRETE PAVEMENT DETAIL

SCALE: NTS



MONUMENT SIGN

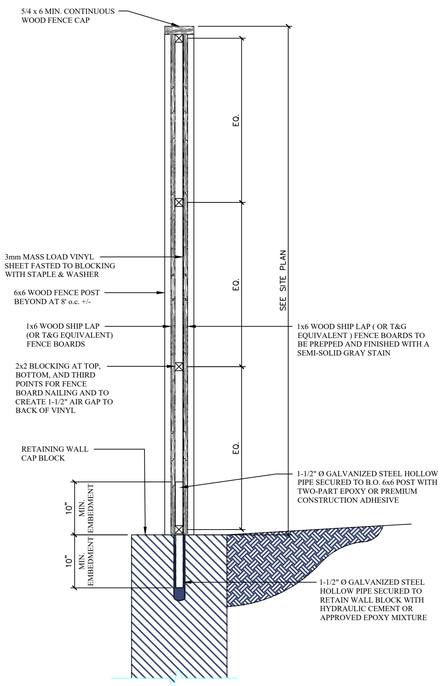
SCALE: NTS



IN-GROUND TRUCK SCALE DETAIL

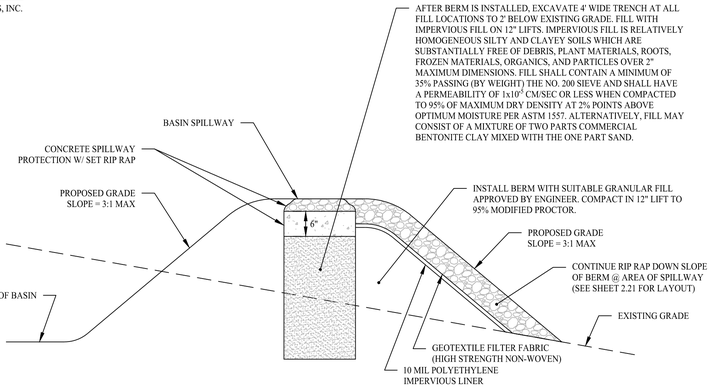
SCALE: NTS

DETAIL PROVIDED BY AVERY WEIGH-TRONIX



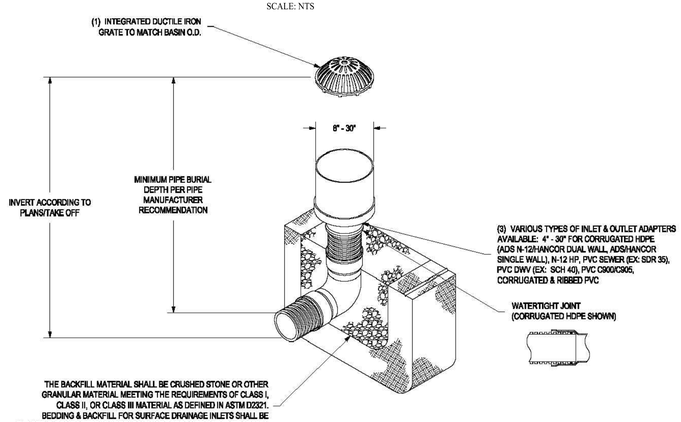
ACOUSTIC FENCE

SCALE: NTS



TYPICAL SPILLWAY IN FILL SECTION

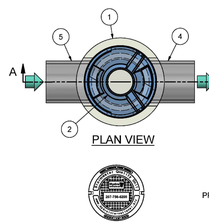
SCALE: NTS

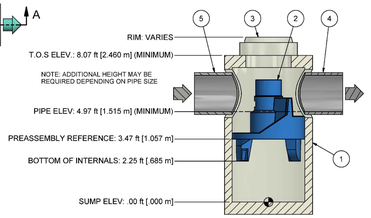


NYLOPAST INLINE DRAIN WITH DOME GRATE DETAIL

SCALE: NTS

DETAIL PER ADS





PRODUCT SPECIFICATION:

1. Peak Hydraulic Flow: 18.0 cfs (510 l/s)
2. Min Sediment Storage Capacity: 0.7 cu. yd. (0.5 cu. m.)
3. Maximum Inlet/Outlet Pipe Diameters: 24 in. (600 mm)
4. The Treatment System Shall Use An Induced Vortex To Separate Pollutants From Stormwater Runoff.
5. For More Product Information Including Regulatory Acceptances, Please Visit https://hydro-int.com/en/products/first-defense

GENERAL NOTES:
1. General Arrangement drawings only. Contact Hydro International for site specific drawings.
2. The diameter of the inlet and outlet pipes may be no more than 24".
3. Multiple inlet pipes possible (refer to project plan).
4. Inlet/outlet pipe angle can vary to align with drainage network (refer to project plans).
5. Peak flow rate and minimum height limited by available cover and pipe diameter.
6. Larger sediment storage capacity may be provided with a deeper sump depth.

NOTE: FINAL DESIGN TO BE REVIEWED BY TOWNSHIP ENGINEER

PARTS LIST

ITEM	QTY	SIZE (in)	SIZE (mm)	DESCRIPTION
1	1	48	1200	I.D. PRECAST MANHOLE
2	1			INTERNAL COMPONENTS (PRE-INSTALLED)
3	1	30	750	FRAME AND COVER (ROUND)
4	1	24 (MAX.)	600 (MAX.)	OUTLET PIPE (BY OTHERS)
5	1	24 (MAX.)	600 (MAX.)	INLET PIPE (BY OTHERS)

HYDRODYNAMIC SEPARATOR DETAIL

SCALE: NTS

DETAIL COURTESY OF HYDRO INTERNATIONAL

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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:	NCM
Checked By:	RRP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Kevin Solli, P.E.
CT 25759

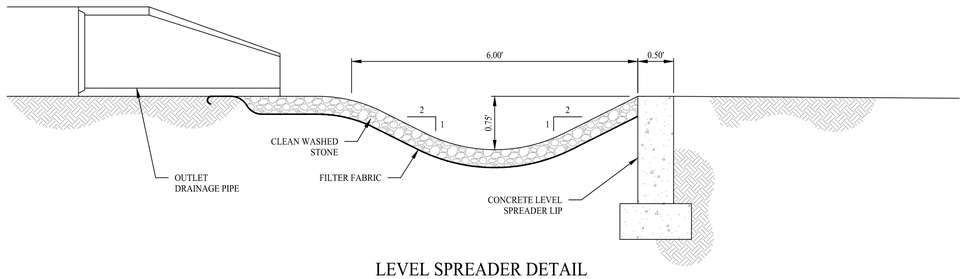
Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: DETAIL SHEET

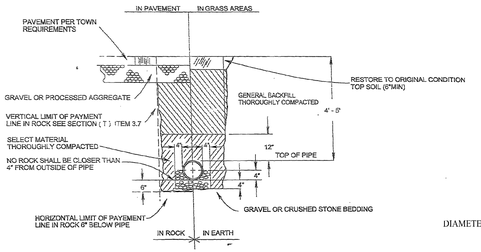
Sheet #: 3.02

Oct 19, 2022 - 1:38pm chris
X:\SE Files\Project Data\2017\1708001 - 485 Pepper Street - Monroe\Cadd Data\467-485 Pepper Street\1708001-3.02.dwg



LEVEL SPREADER DETAIL

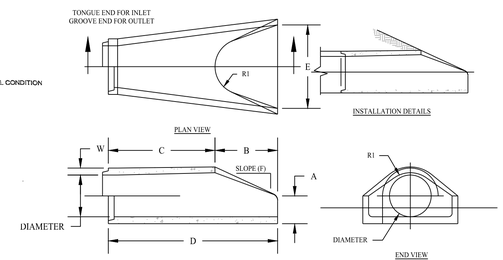
SCALE: NTS



TYPICAL WATER TRENCH DETAIL

SCALE: NTS

DETAIL PROVIDED BY AQUARION WATER COMPANY



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:

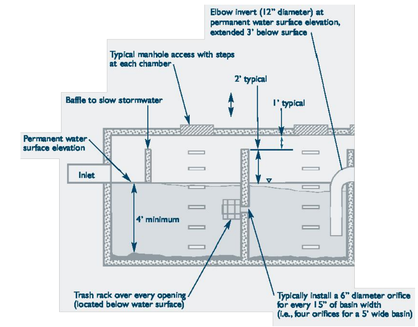
1. PRODUCED TO ASTM SPECIFICATIONS.
2. THIS DRAWING IS NOT INTENDED TO SHOW REINFORCEMENT DESIGN. EITHER AS TO PLACEMENT OR STEEL AREA. ACTUAL PROJECT SPECIFICATIONS OR CURRENT ASTM WILL GOVERN.
3. CONSULT HYDRO CONDUIT CORP. LOCAL REPRESENTATIVE FOR FURTHER DETAILS NOT LISTED ON THIS DRAWING.

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

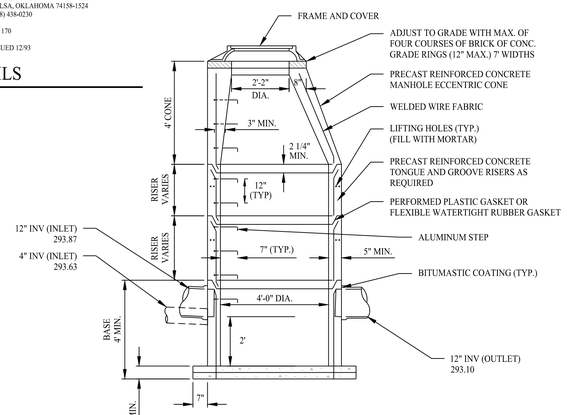
FLARED END SECTION DETAILS

SCALE: NTS



OIL PARTICLE SEPERATOR DETAIL

DETAIL PER 2004 CONNECTICUT STORMWATER QUALITY MANUAL

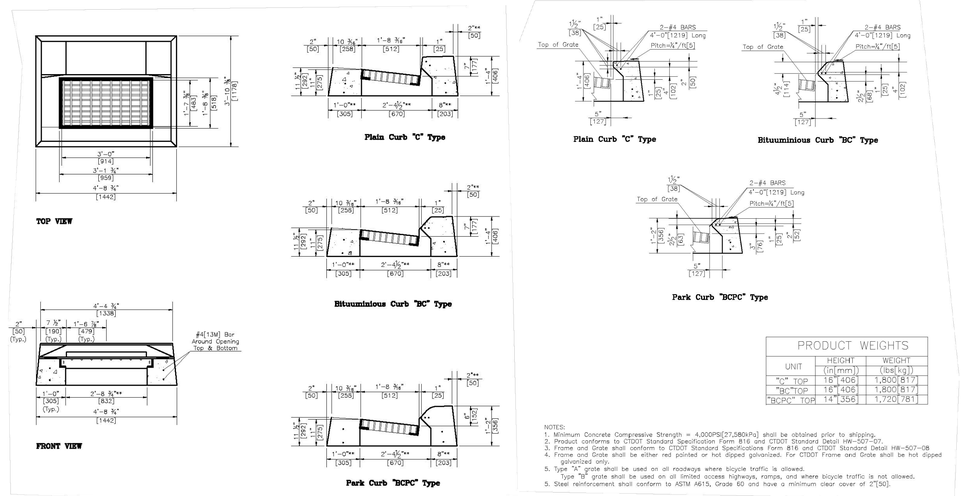


NOTES

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



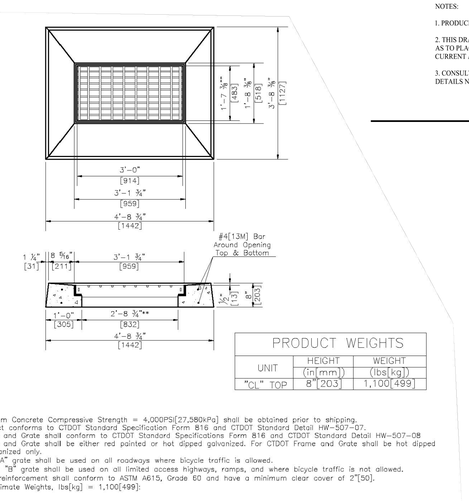
PRODUCT WEIGHTS		
UNIT	HEIGHT (in[mm])	WEIGHT (lbs[kg])
"C" TOP	16"[406]	1,800[817]
"BC"TOP	16"[406]	1,800[817]
"BCPC" TOP	14"[356]	1,720[781]

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-507-07.
3. Frame and Grate shall conform to CTDOT Standard Specifications Form 816 and CTDOT Standard Detail HW-507-08
4. Frame and Grate shall be either red painted or hot dipped galvanized. For CTDOT Frame and Grate shall be hot dipped galvanized only.
5. Type "A" grate shall be used on all roadways where bicycle traffic is allowed.
   Type "B" grate shall be used on all limited access highways, ramps, and where bicycle traffic is not allowed.
6. Steel reinforcement shall conform to ASTM A615, Grade 60 and have a minimum clear cover of 2"[50].

CTDOT STANDARD PRECAST CONCRETE CATCH BASIN TYPE "C" TOP

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORPORATION



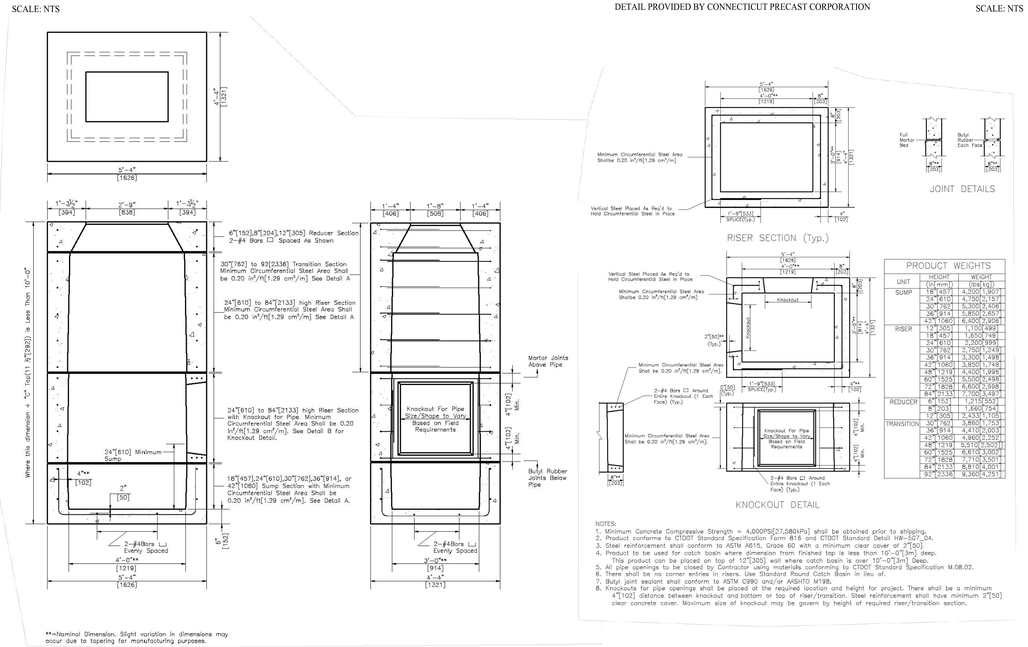
PRODUCT WEIGHTS		
UNIT	HEIGHT (in[mm])	WEIGHT (lbs[kg])
"CL" TOP	8"[203]	1,100[499]

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-507-07.
3. Frame and Grate shall conform to CTDOT Standard Specifications Form 816 and CTDOT Standard Detail HW-507-08
4. Frame and Grate shall be either red painted or hot dipped galvanized. For CTDOT Frame and Grate shall be hot dipped galvanized only.
5. Type "A" grate shall be used on all roadways where bicycle traffic is allowed.
   Type "B" grate shall be used on all limited access highways, ramps, and where bicycle traffic is not allowed.
6. Steel reinforcement shall conform to ASTM A615, Grade 60 and have a minimum clear cover of 2"[50].
7. Approximate Weights, lbs[kg] = 1,100[499].

CTDOT STANDARD PRECAST CONCRETE CATCH BASIN TYPE "CL" TOP

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORPORATION



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	8"[203]	1,260[572]
	12"[305]	1,660[754]
	18"[305]	2,435[1,105]
TRANSITION	30"[762]	3,860[1,753]
	36"[914]	4,410[2,003]
	42"[1060]	4,960[2,253]
	48"[1219]	5,510[2,503]
	60"[1525]	6,610[3,000]
	72"[1828]	7,710[3,501]
	84"[2133]	8,810[4,001]
	92"[2336]	9,360[4,251]

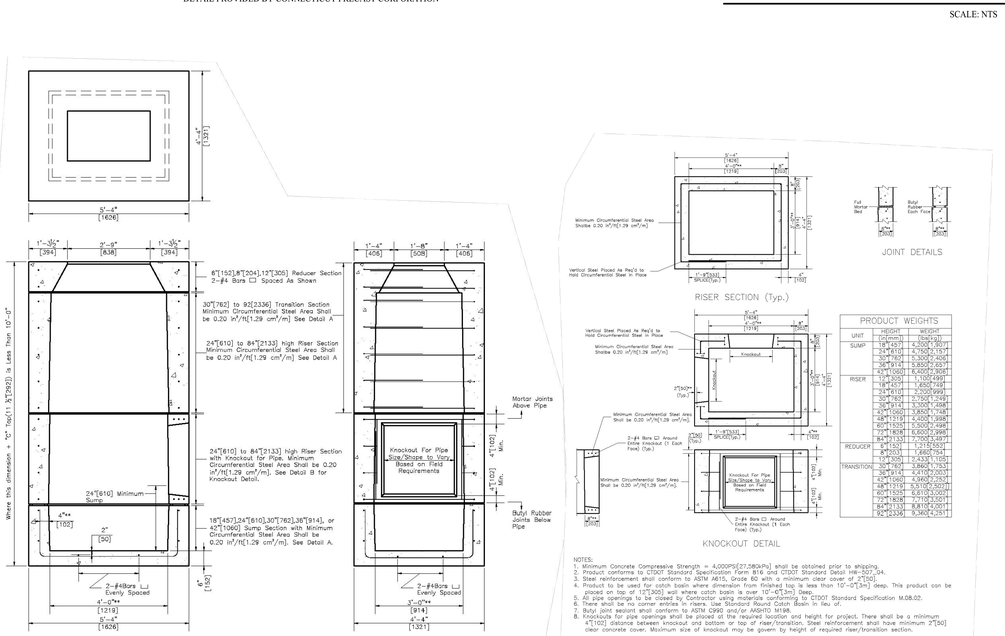
NOTES:
1. Minimum Concrete Compressive Strength = 4,000PSI[27,580kPa] shall be obtained prior to shipping.
2. Product conforms to CTDOT Standard Specification Form 816 and CTDOT Standard Detail HW-507_04.
3. Steel reinforcement shall conform to ASTM A615, Grade 60 with a minimum clear cover of 2"[50].
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.

**=Nominal Dimension. Slight variation in dimensions may occur due to tapering for manufacturing purposes.

36"x48" STANDARD PRECAST CT DOT TYPE "C" CATCH BASIN

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORPORATION



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	8"[203]	1,260[572]
	12"[305]	1,660[754]
	18"[305]	2,435[1,105]
TRANSITION	30"[762]	3,860[1,753]
	36"[914]	4,410[2,003]
	42"[1060]	4,960[2,253]
	48"[1219]	5,510[2,503]
	60"[1525]	6,610[3,000]
	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 "CL" CATCH BASIN

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORPORATION

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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:	NCM
Checked By:	RRP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Kevin Solli, P.E.
CT 25759

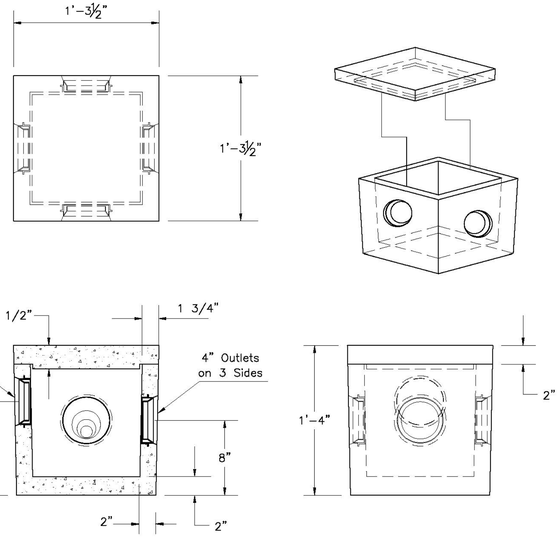
Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title: DETAIL SHEET

Sheet #: 3.03

Oct 19, 2022 - 1:09pm chris
X:\SE Files\Project Data\2017\1708001 - 485 Pepper Street - Monroe\Cadd Data\467-485 Pepper Street\1708001 - 3.03.dwg



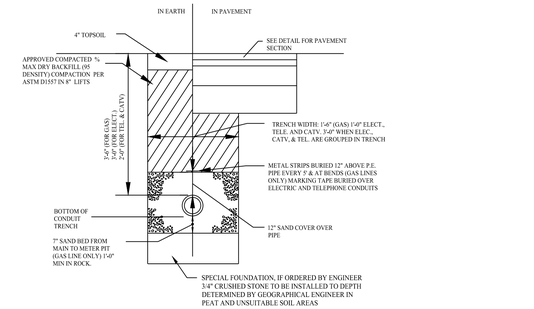
NOTES:

1. Concrete – 4,000 PSI @ 28 DAYS.
2. Euipped with Polypropylene pipe seals.

PRECAST CONCRETE DB-3 DETAIL

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORP



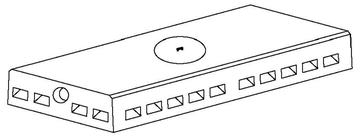
ELECTRICAL, TELEPHONE AND GAS TRENCH

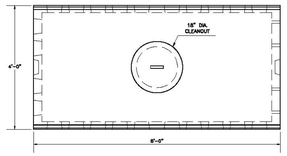
SCALE: NTS

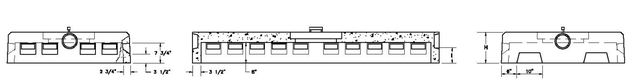
MODEL NO.	HEIGHT H	INVERT I	EFFECTIVE LEACHING (SF/LF)	WEIGHT (LBS.)
LPG12	12	6	5.9	2127

NOTES:

1. Concrete – 4,000 PSI @ 28 DAYS.
2. Heavy Duty available upon request.
3. Meets or exceeds state and local requirements.



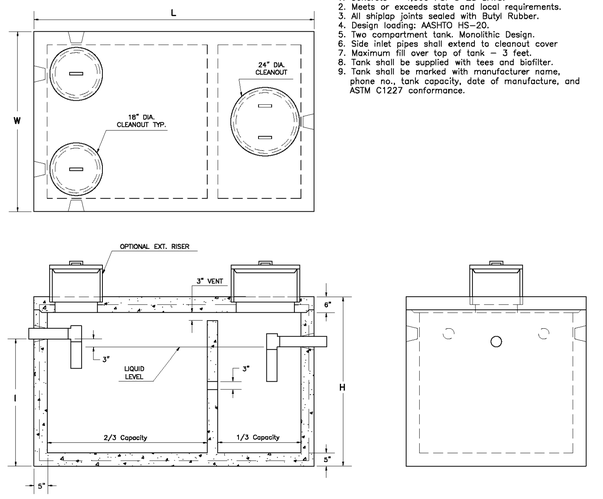




PRECAST CONCRETE LOW PROFILE GALLERIES DETAIL

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORP



MODEL NO.	LIQUID CAPACITY	LENGTH L	WIDTH W	INVERT I	HEIGHT H	WEIGHT (LBS.)
T1000H20	1000	8'–10"	5'–8"	4'–3"	5'–4"	14300

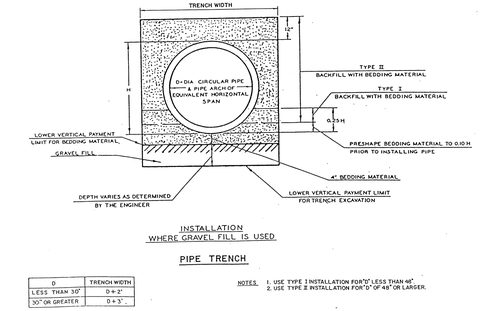
NOTES:

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. Monolithic Design.
6. Side inlet pipes shall extend to cleanout cover
7. Maximum fill over top of tank – 3 feet.
8. Tank shall be supplied with tees and biofilter.
9. Tank shall be marked with manufacturer name, phone no., tank capacity, date of manufacture, and ASTM C1227 conformance.

PRECAST CONCRETE 1000 GALLON (H-20 LOADING) SEPTIC TANK DETAIL

SCALE: NTS

DETAIL PROVIDED BY CONNECTICUT PRECAST CORP



INSTALLATION
WHERE GRAVEL FILL IS USED

PIPE TRENCH

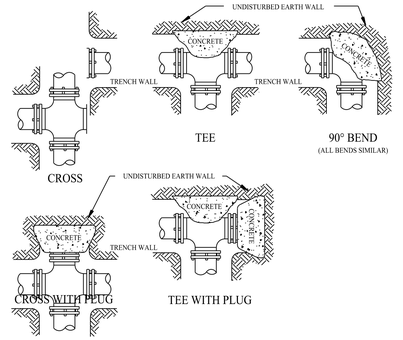
O	TRENCH WIDTH
LESS THAN 30"	O + 2'
30" OR GREATER	O + 3'

NOTES. 1. USE TYPE I INSTALLATION FOR "O" LESS THAN 48".
2. USE TYPE II INSTALLATION FOR "O" OF 48" OR LARGER.

PIPE TRENCH DETAIL

SCALE: NTS

DETAIL PER TOWN OF MONROE DPW STANDARD DRAWINGS

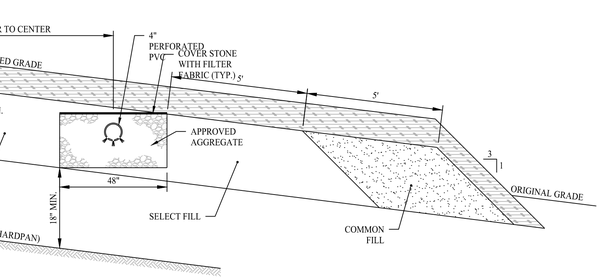


NOTES:

1. DO NOT COVER BELLS OR FLANGES WITH CONCRETE
2. WRAP ALL FITTINGS WITH VISQUEEN.
3. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
4. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
5. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL SHALL BE BACKED.
6. ALL CONCRETE SHALL BE 2500 P.S.I.
7. 18" AND LARGER REQUIRES SPECIFIC ANTI-THRUST DESIGN.

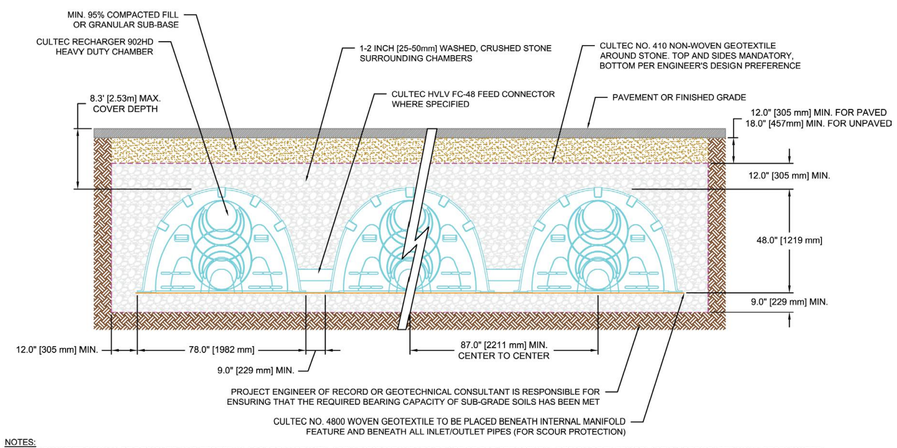
HORIZONTAL THRUST BLOCKING DETAIL

SCALE: NTS



TYPICAL LEACHING TRENCH SECTION

SCALE: NTS



NOTES:

1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS." THE LOAD CONFIGURATION SHALL INCLUDE:
   - 1.a. INSTANTANEOUS AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
   - 1.b. MAXIMUM PERMANENT (50-YEAR) COVER LOAD
   - 1.c. 1-WEEK PARKED AASHTO DESIGN TRUCK LOAD
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F3430-20 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS"
3. THE INSTALLED CHAMBER SYSTEM SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
   - 3.a. THE CREEP MODULUS SHALL BE 50-YEAR AS SPECIFIED IN ASTM F3430
   - 3.b. THE MINIMUM SAFETY FACTOR FOR LIVE LOADS SHALL BE 1.75
   - 3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.95

CULTEC RECHARGER 902-HD DETAIL

SCALE: NTS

DETAIL PROVIDED BY CULTEC, INC

Rev. #:	Date	Description
1	10/19/22	RESPONSE TO COMMENTS

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:	NCM
Checked By:	RPP
Approved By:	KMS
Project #:	1708001
Plan Date:	08/23/22
Scale:	NTS

Kevin Solli, P.E.
CT 25759

Project:

PROPOSED SITE DEVELOPMENT
467 & 485 PEPPER STREET
MONROE, CONNECTICUT

Sheet Title:	Sheet #:
DETAIL SHEET	3.04

Oct 19, 2022 – 1:09pm chris
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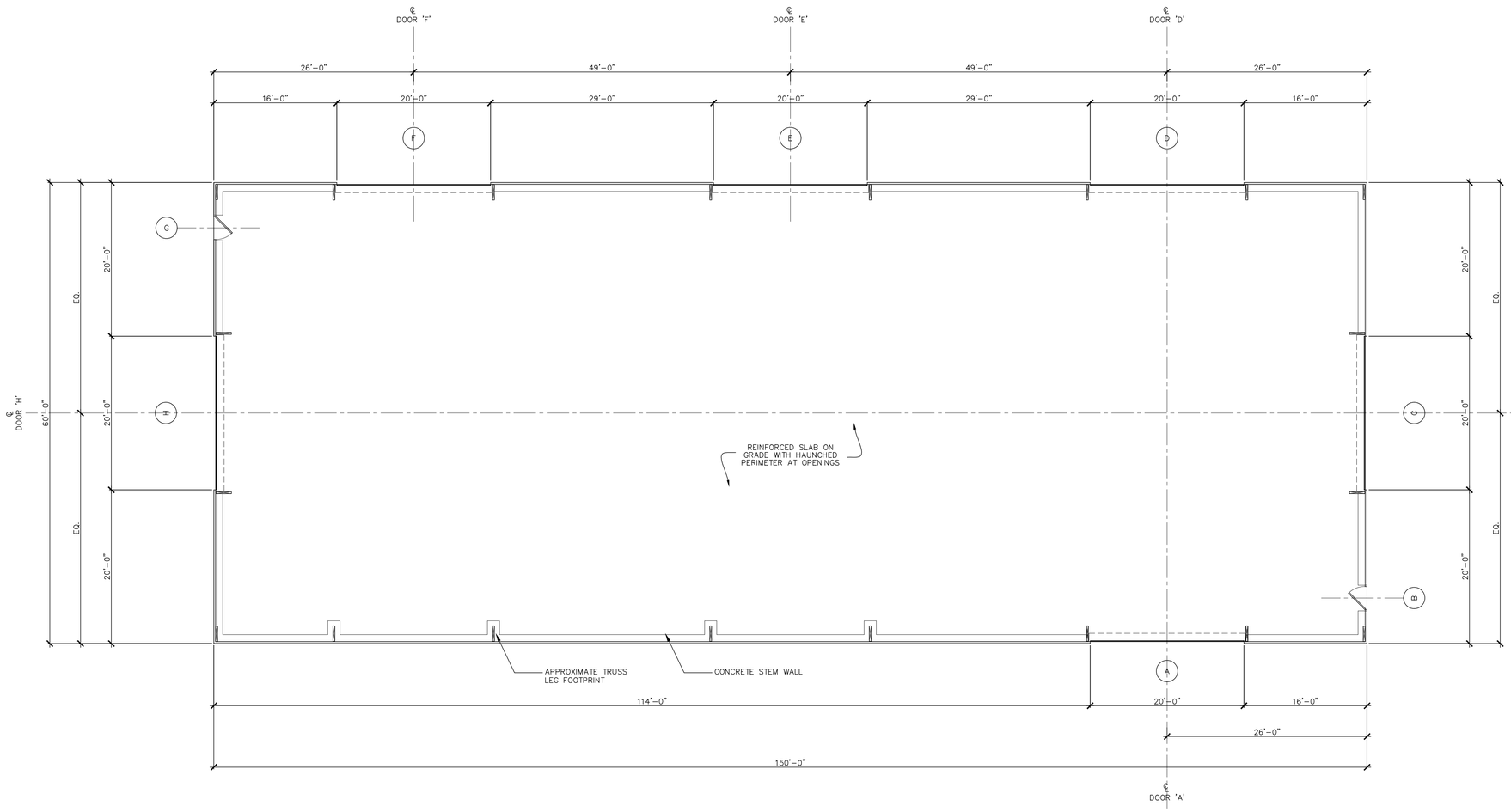


1 FLOOR PLAN
1/8"=1'-0"

DISCLAIMER

PREPARED BY:
R. W. RICCIO & COMPANY LLC
30 FALLOWFIELD LANE
FAIRFIELD, CT.

THE GRASSO COMPANIES
467 PEPPER STREET, MONROE, CT

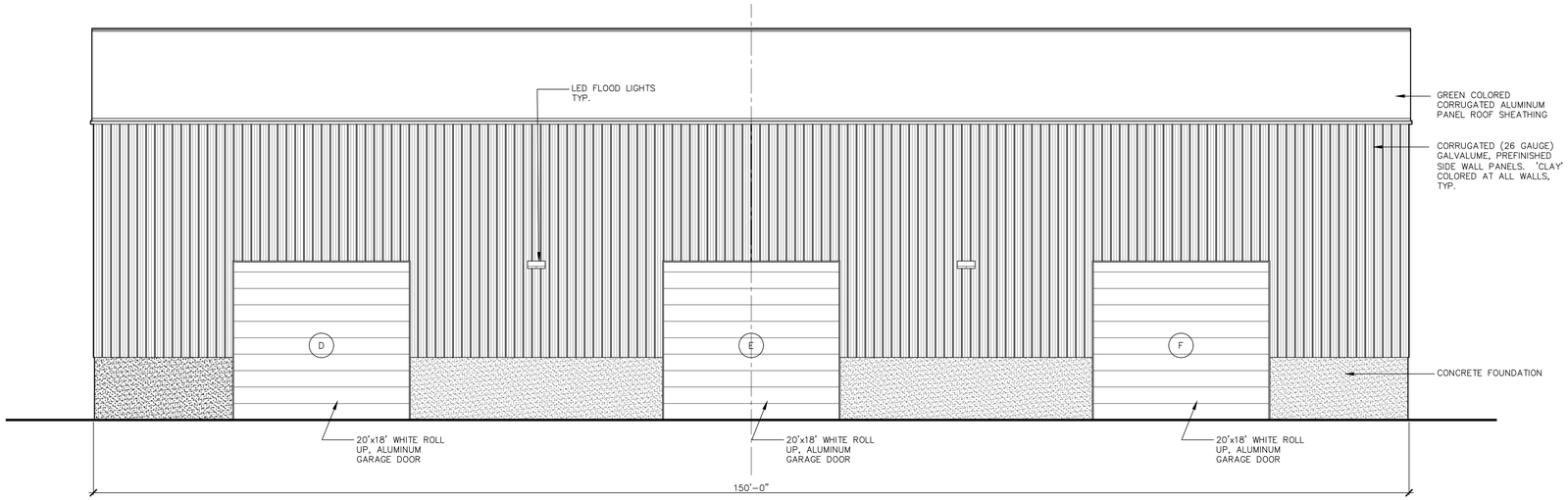
DRAWING TITLE:
BUILDING PLAN

REVISED
x/xx/xx LAYOUT
x/xx/xx A.R.B.

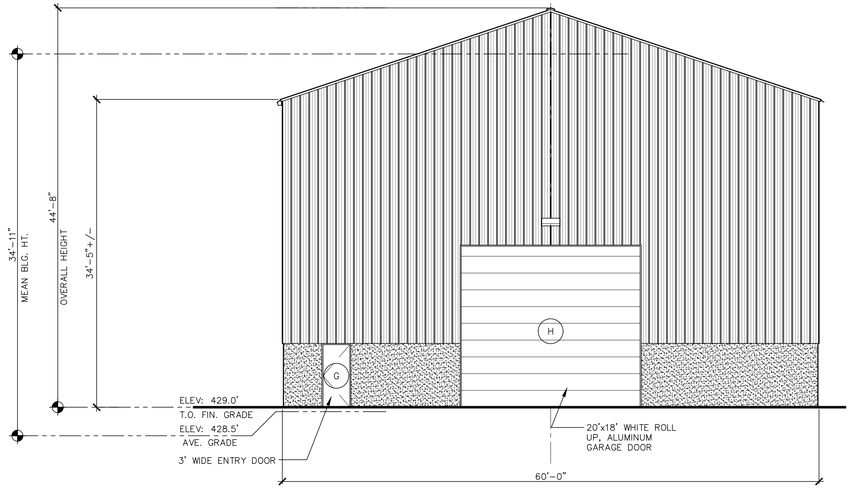
ORIGINAL DATE
10/12/22

DRAWN BY
R.R.

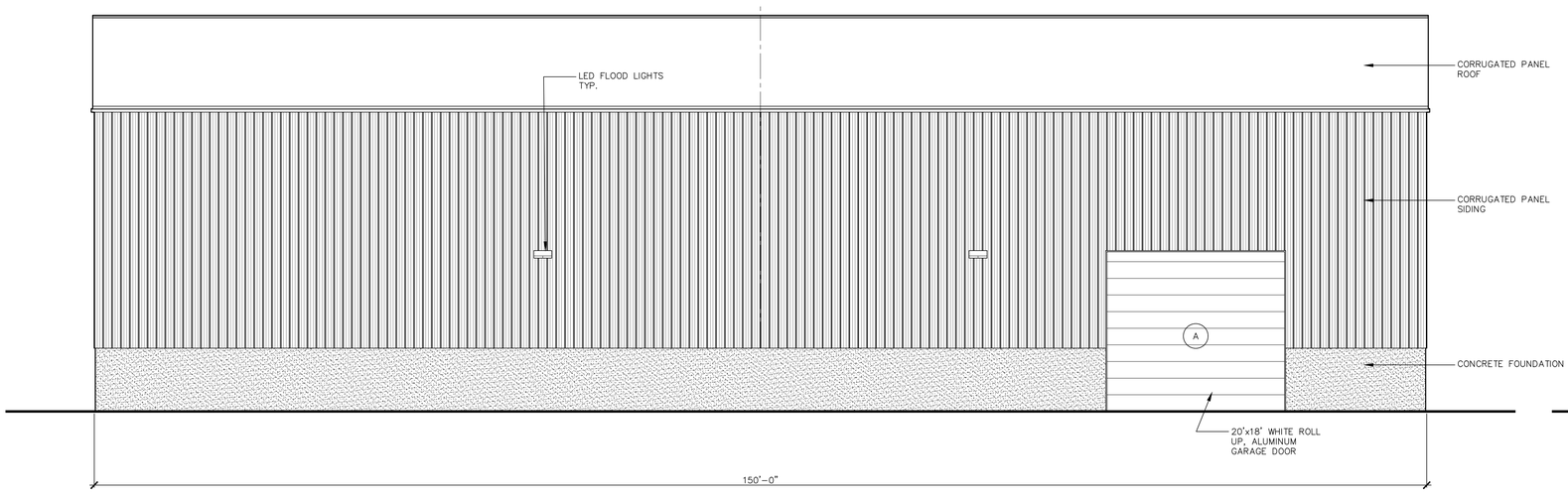
A-1.1



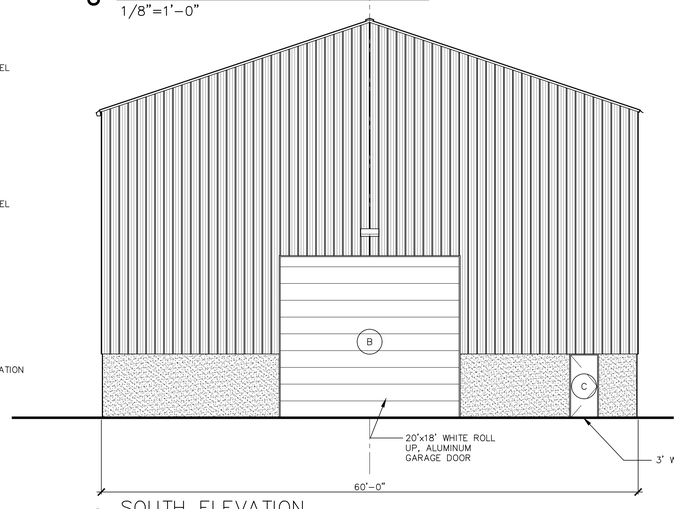
1 EAST ELEVATION
1/8"=1'-0"



3 NORTH ELEVATION
1/8"=1'-0"



2 WEST ELEVATION
1/8"=1'-0"



4 SOUTH ELEVATION
1/8"=1'-0"

DISCLAIMER

PREPARED BY:
R. W. RICCIO & COMPANY LLC
30 FALLOWFIELD LANE
FAIRFIELD, CT.

THE GRASSO COMPANIES
467 PEPPER STREET, MONROE, CT

DRAWING TITLE:
BUILDING ELEVATIONS

REVISED
x/xx/xx LAYOUT
x/xx/xx A.R.B.

ORIGINAL DATE
10/12/22

DRAWN BY
R.R.

A-2.0

ARCHITECTURAL REVIEW BOARD
APPLICATION

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

FOR OFFICE USE:

ARB File # _____

Project Name: Proposed Site Development

PZC Project #: _____ **PZC File #:** _____

Street Address: 467 & 465 Pepper Street, Monroe CT 06468

Assessor Map: 94 **and Lot:** 005 & 006 **Zoning District:** Industrial District 1 (I1) **Lot Acreage:** 10.26 total

REQUIRED APPLICATION SUBMISSION MATERIALS

- **Formal Application Submission** – Provide **four (4) 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; and (c) Submission Materials Required as listed below.
- **Sealed and Certified Plans** – All Surveys, Site Plans and Architectural Plans shall be current and include an original seal and live signature certification of the professional preparer.
- **Submission Materials Required**

☑ **Site Plans and Details – Layout, Grading and Landscape Plans and Details (24" x 36" Sheets)**

Site Plans shall indicate the existing and proposed treatment and detail of all site and building improvements; landscaping specifying location, number and type of vegetation; ingress and egress of vehicular and pedestrian traffic; parking and sidewalks; and the like.

☑ **Architectural Plans – Floor Plans and Exterior Elevations of ALL sides (24" x 36" Sheets)**

Floor Plans shall indicate entrances and exits with relation to exterior components, and interior use and layout, as well as interior connections between floors. Elevations shall clearly show and indicate proposed building materials and finishes; dimensions sufficient to establish overall building height and width and other pertinent dimensions to clearly describe design intent. Where an addition to an existing building or structure is proposed, the existing building or structure shall be shown grayed-out to contrast existing from proposed.

☑ **Signage and Lighting Plans and Details (24" x 36" Sheets)**

Design and details of signs and light fixtures, including catalog cuts, materials, colors and photometric plan.

☑ **Materials/Finishes**

Indicate materials and finishes on Elevations and Details. Provide samples of materials and finishes.

☑ **Relation to Adjacent Area**

Provide photographs of the project site and surrounding area.

☑ **Other Information**

Provide additional information as necessary to clearly describe the proposed project or as required by the ARB.

Application No. _____ **File No.** _____

CONTACT INFORMATION

1. **Applicant's name:** Monroe Recycling and Aggregates, LLC
   Address: 485 Pepper Street, Monroe CT 06468
   Phn/Cell: 203-838-0123 Email: _____
   Property interest: ☒ Owner ☐ Contract Vendee ☐ Tenant ☐ Other _____

2. **Owner's Name:** 485 Pepper Street LLC
   Address: 314 Wilson Avenue, Norwalk, CT 06854 & 57 Viaduct Road, Stamford CT, 06907
   Phn/Cell: 203-838-0123 Email: _____

3. **Primary Contact Name:** Chris Pawlowski, Solli Engineering
   Business Address: 501 Main Street, Suite 2A, Monroe CT 06468
   Phn/Cell: 203-880-5455 Email: chris@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.

4. Application Professionals	*Name*	*Phone/Cell*	*Email*
Attorney:			
Surveyor:	Accurate Land Surveying - Bryan Nesteriak, L.S.	203-881-8145	bn@bbengrs.com
Engineer:	Solli Engineering - Kevin Solli, P.E.	203-880-5455	kevin@sollillc.com
Landscape Architect:	Solli Engineering - Mary Blackburn	203-880-5455	mary@sollillc.com
Architect:	Ralph Riccio		rriccio3@gmail.com
Other:			

DESCRIPTION OF PROPOSED PROJECT

The proposes the construction of a 9,000± SF crushing and screening building and associated outdoor storage. The existing building is to remain.

☒ New Building/Structure on Undeveloped Lot ☐ Addition to Existing Building/Structure on Developed Lot

Existing Footprint: 0 sf New Footprint: 9000 sf Total Footprint: 9000 sf

Existing GFA: 0 sf New GFA: 9000 sf Total GFA: 9000 sf

Existing Height/Stories: 0 ft 0 Stories New Height/Stories: 35 ft _____ Stories

☐ Other Proposed Site Improvements:

Other proposed site improvements include outdoor storage access, grading and drainage, landscaping, retaining walls and buffer plantings.

Application No. _____ **File No.** _____

ARB MISSION

The mission of the Architectural Review Board (ARB) is to assist applicants interested in constructing new buildings and structures, or altering and expanding existing buildings and structures, in the Town of Monroe ensure such proposals compliment the historical and residential nature of the Town and help preserve the quality of the Town's built and natural environments for generations to come.

ARB SERVES AN ADVISORY ROLE TO PLANNING AND ZONING COMMISSION

The ARB serves as an advisory Board to the Monroe Planning and Zoning Commission. The Planning and Zoning Commission is the approval entity of all projects before ARB.

ELEMENTS CONSIDERED BY ARB

The ARB evaluation will consider the following:

- **Landscape and Environment – To ensure compatibility and complimentary changes to Monroe landscapes and environmental conditions; and to prevent the unnecessary destruction or blighting of the natural landscape or of the existing developed environment.**

- **Design of Buildings and Structures – To ensure Site Plans, architectural design and construction materials and finishes are of such nature and character they will compliment, be compatible and protect and preserve the integrity of existing patterns, styles, and vernacular image and character of the project site and surrounding area; while protecting property values of the Town.**

- **Relationship of Buildings and Structure(s) to Open Space – To ensure the treatment of disturbed areas in relation to open areas relates to existing topography and natural environmental conditions and patterns, as well as to existing buildings and structures of the site and surrounding area.**

- **Consideration of Adjoining Properties and Uses – To ensure reasonable provisions have been made for sight and sound buffers, preservation of views, and other design elements which may have impact adjoining properties and land uses.**

- **Design of Accessory Elements – To ensure the function and design of accessory project elements including but not limited to lighting, signage, landscaping are appropriately considered and incorporated, with emphasis on the scale and density of street landscaping elements, delivery route and refuse storage screening, and the like.**

ARB MEETING SCHEDULE

- **ARB meetings are second and third Tuesday of each month, except August and December, and holidays.**
- **ARB meetings begin at 7:30 pm and applicants and their professional representatives must attend and present their proposed project plans, and answer questions of the ARB.**
- **Most applications are evaluated in a single meeting, but additional meetings may be required based on the proposed project, its complexity or scale, and if sufficient information is not provided.**

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 Architecture Review Board (ARB) 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 ARB's satisfaction. If

the information provided is incomplete or inaccurate, the ARB may hold additional meetings with the applicant and/or render a negative report and recommendation to the Planning and Zoning Commission.

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)

Applicant Name Printed	**Authorized Signature**	**Date**
Additional Applicant	**Authorized Signature**	**Date**

(Provide additional sheets as needed)

Subscribed and sworn to by Joseph Grasso *on this day of* October 21, 20 22, *before me:*

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

---

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

Authorized Member Name Printed	**Authorized Signature**	**Date**

Subscribed and sworn to by Joseph Grasso *on this day of* October 21, 20 22, *before me:*

5/31/24

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