



**Office Use Only**

Project# \_\_\_\_\_

Address: \_\_\_\_\_

MBL: \_\_\_\_\_

*INLAND WETLANDS & WATERCOURSES AGENCY  
TOWN OF EAST HAMPTON*

**RECEIVED**  
**4.20.2023**  
East Hampton  
Land Use Dept.

## Minimum Requirements for Submission of Application to Inland Wetlands and Watercourses Agency

*This form must be submitted with your application*

**Please check all that are being submitted:**

- Completed Application Form (4 Pages)
  - Fee Paid
  - Site Plan (Showing project location, extent of wetlands, dimensions, etc) – PDF & 4 Copies of 11 x 17s
  - PDF & 4 Copies Project Narrative – PDF & 4 Copies of 11 x 17s
  - Soils Report (As Required)
  - Stormwater Report (As Required)
  - Completed Application Checklist (Page 3 of Application)
  - Schedule a Site Visit with Planning & Zoning Official at time of Application
- Date of Site Visit: \_\_\_\_\_

*I certify that this application is complete:*

**Signature of Applicant:** \_\_\_\_\_ **Date:** \_\_\_\_\_

The Agency reserves the right to add additional requirements in accordance with the Regulations.

***Only Complete Application Packages Will Be Accepted***

Office Use Only

Fee Paid \_\_\_\_\_ Date Approved \_\_\_\_\_ Permit Number \_\_\_\_\_  
Public Hearing: YES NO Agent Approval: YES NO

TOWN OF EAST HAMPTON  
INLAND WETLANDS & WATERCOURSES AGENCY

Date: \_\_\_\_\_

1. Name of Applicant\* \_\_\_\_\_ Email: \_\_\_\_\_

Phone Numbers: Home \_\_\_\_\_, Business \_\_\_\_\_, Cell \_\_\_\_\_

Home Address: Street \_\_\_\_\_ Town \_\_\_\_\_ State/Zip \_\_\_\_\_

Business Address: Street \_\_\_\_\_ Town \_\_\_\_\_ State/Zip \_\_\_\_\_

\* All applications MUST list contact phone numbers. If the applicant is a Limited Liability Corporation or a Corporation, provide the managing member's or responsible corporate officer's name, address, and telephone number.

2. Name of Property Owner (if different from Applicant): \_\_\_\_\_ Phone \_\_\_\_\_

Address: Street \_\_\_\_\_ Town \_\_\_\_\_ State/Zip \_\_\_\_\_

**As the legal owner of the property listed on this application I hereby consent to the proposed activities. I hereby authorize the members and agents of the Agency to inspect the subject land, at reasonable times, during the pendency of the application and for the life of the permit.**

Printed Name: \_\_\_\_\_, Signature: \_\_\_\_\_, Date: \_\_\_\_\_

3. Provide the applicant's interest in the land. Future Occupant

4. Site Location and Description: Assessor's Map \_\_\_\_\_, Block \_\_\_\_\_, Lot \_\_\_\_\_

Address: Street \_\_\_\_\_ Town \_\_\_\_\_ State/Zip \_\_\_\_\_

Note: It is the applicant's responsibility to provide the correct site address, map, block, and lot number for the legal notice.

Provide a description of the land in sufficient detail to allow identification of the inland wetlands and watercourses, the area(s) (in acres or square feet) of wetlands or watercourses to be disturbed, soil type(s), and wetland vegetation.

Area of Wetland to be disturbed: \_\_\_\_\_ acres or sq. ft.

Area of Watercourse to be disturbed \_\_\_\_\_ acres or sq. ft.

Area of Upland Review Area to be disturbed: \_\_\_\_\_ acres or sq. ft. (Area within ~~100'~~ 200' of wetland)

**TOTAL AREA OF DISTURBANCE \_\_\_\_\_ acres or sq. ft.**

Lake Pocotopaug Upland Review Area

Will fill be needed on site? Yes  No  If yes, how much fill is needed? \_\_\_\_\_ cubic yards

The property contains (circle one or more)

WETLANDS, BROOK, RIVER, INTERMITTANT STREAM, VERNAL POOL, SWAMP, OTHER \_\_\_\_\_

Description of soil types on site: \_\_\_\_\_

Description of wetland vegetation: Wooded

Name of Soil Scientist and date of survey: \_\_\_\_\_

5. Attach a written narrative of the purpose and description of the proposed activity and proposed erosion and sedimentation controls, best management practices, and mitigation measures which may be considered as a condition of issuing a permit for the proposed regulated activity including but not limited to; measures to:

(1) prevent or minimize pollution or other environmental damage, (2) maintain or enhance existing environmental quality, or (3) in the following order of priority: restore, enhance or create productive wetland or watercourse resources. Depending on the complexity of the project, include the following: sequence of operations, drainage computations with pre and post construction runoff quantities and runoff rates, plans clearly showing the drainage areas corresponding to the drainage computations, existing wetland inventory and functional assessment, soils report, construction plans signed by a certified soils scientist, licensed surveyor, and licensed professional engineer. Include a construction schedule, impacts to vegetation, and pictures that clearly show the existing conditions of all areas to be disturbed and/or cleared of vegetation.

6. Provide information of all alternatives considered. List all alternatives which would cause less or no environmental impact to wetlands or watercourses and state why the alternative as set forth in the application was chosen. All such alternatives shall be diagramed on a site plan or drawing.

Attach plans showing all alternatives considered.

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7. Attach a site plan showing the proposed activity and existing and proposed conditions in relation to wetlands and watercourses and identifying any further activities associated with, or reasonably related to, the proposed regulated activity which are made inevitable by the proposed regulated activity and which may have an impact on wetlands or watercourses. Include a colored grading plan showing areas to be filled (green) and areas to be excavated (brown) that clearly shows existing and proposed contours and proposed limits of disturbance.

8. Attach the names and mailing addresses of adjacent landowners. Attach additional sheets if necessary.

Name \_\_\_\_\_ Address \_\_\_\_\_  
Name \_\_\_\_\_ Address \_\_\_\_\_  
Name \_\_\_\_\_ Address \_\_\_\_\_

9. Attach a completed DEEP reporting form.

*The Agency shall revise or correct the information provided by the applicant and submit the form to the Commissioner of Environmental Protection in accordance with section 22a-39-14 of the Regulations of Connecticut State Agencies.*

10. Attach the appropriate filing fee based on the fee schedule in Section 19 of the regulations.

Fee: \_ (Make check payable to "The Town of East Hampton")

11. Name of Erosion Control Agent (Person Responsible for Compliance): \_\_\_\_\_  
Phone Numbers: Home \_\_\_\_\_, Business \_\_\_\_\_,  
Cell \_\_\_\_\_ Address: Street \_\_\_\_\_, Town \_\_\_\_\_  
State/Zip \_\_\_\_\_

12. Are you aware of any wetland violations (past or present) on this property? YES  NO   
If yes, explain \_\_\_\_\_

13. Are you aware of any vernal pools located on or adjacent (within 500') to the property? YES  NO

14. For projects that do not fall under the ACOE Category 1 general permit – Have you contacted the Army Corps of Engineers? YES NO Not Applicable

15. Is this project within a public water supply aquifer protection area or a public water supply watershed area? YES  NO

If so, have you notified the Commissioner of the Connecticut Department of Public Health and the East Hampton WPCA? YES NO

(Proof of notification must be submitted with your application.)

16. PUBLIC HEARINGS ONLY. The applicant must provide proof of mailing notices to the abutters prior to the hearing date.

17. ***As the applicant I am familiar with all the information provided in the application and I am aware of the penalties for obtaining a permit through deception or through inaccurate or misleading information.***

Printed name: \_\_\_\_\_, Signature: \_\_\_\_\_, Date: \_\_\_\_\_

***Please Note: You or a representative must attend the Inland Wetlands meeting to present your application.***

## CHECKLIST FOR A COMPLETE APPLICATION

- A narrative of the purpose and description and methodology of all proposed activities;
- Alternatives considered by the applicant, reasons for leaving less than a 10' buffer between clearing and the wetlands. Such alternatives to be diagrammed on a site plan or drawing and submitted to the commission as part of the application;
- Names and mailing addresses of abutting property owners;
- Three copies of approximately 1"=40' scale plans
- Locations of existing and proposed land uses
- Locations of existing and proposed buildings
- Locations of existing and proposed subsurface sewage disposal systems, and test hole descriptions
- Existing and proposed topographical and man-made features including roads and driveways, on and adjacent to the site. Include a colored grading plan showing areas to be filled (green) and areas to be excavated (brown) that clearly shows existing and proposed contours and proposed limits of disturbance.
- Location and diagrams of proposed erosion control structures
- Pictures of existing conditions clearly showing all areas to be disturbed, and/or cleared of vegetation.
- Assessor map, block and lot number
- Key or inset map
- North arrow
- Flood zone classification and delineation
- Use of wetland and watercourse markers where appropriate.
- Soil types classification and boundary delineation (flagged and numbered boundary), Soil Scientist's original signature and certification on plans
- Soil Scientist's (or other wetland scientist) report on the function of the wetlands
- Watercourse channel location and flow direction, where appropriate
- 100 ft. regulated area depicted on plans
- Conservation easements where appropriate
- A detailed erosion and sediment control plan which meets requirements set forth in the most recent revision of the *Connecticut Guidelines for Soil Erosion and Sediment Control*, published by the Connecticut Council on Soil and Water Conservation, including:

In the case of filling in wetlands, watercourses, or regulated upland areas, the following items are necessary:

- Area to be filled
- Volume of requested fill
- Finished slopes of filled areas
- Containment and stabilization measures
- Proposed finished contours
- Evaluation of the effect of filling the wetlands with respect to storage volume and its impact downstream showing before and after development flows, and the evaluation of storm water detention including the existing need for flood control downstream

Other required items:

- Proof of adjoining Town notification, where required;
- All application fees required by Section 19 of these regulations;
- A written narrative detailing how the effects of the applicant's proposed activities upon wetlands and watercourses shall be mitigated.
- A written description of any and all future plans which may be linked to the activities proposed in the current application.
- Address the potential to enhance the current buffer area.
- Review drainage information with Town Engineering
- Mailing requirements for abutters (public hearing only)

SECTION 19  
APPLICATION FEES

19.5 Fee Schedule. Application fees will be based on the following schedule:

DEEP fee required by C.G.S. 22a-27j will be added to the base fee	\$60.00
19.5.1 Application Fee plus fee from Schedule A	
19.5.1.1 Residential Uses.	\$75.00 Plus
*Each additional lot with regulated activities.	*Plus \$50.00/lot
19.5.1.2 Commercial/Industrial/Other Uses.	\$400.00
19.5.2 Approval by Authorized Agent	
19.5.2.1 Residential	\$60.00
19.5.2.2 Commercial	\$75.00
19.5.3 Public Hearing Fee	
19.5.3.1 Single Residential	\$100.00
19.5.3.2 Subdivision	\$400.00
19.5.3.2 Commercial, Industrial, Other	\$400.00
19.5.4 Complex Application Fee	(Actual Cost)
The Inland Wetland Agency may charge an additional fee sufficient to cover the cost of reviewing and acting on complex applications. Such fee may include, but not be limited to, the cost of retaining experts, to advise, review, and report on issues requiring such experts. The Agency shall estimate the complex application fee, which shall be paid pursuant to section 19 of these regulations within 10 days of the applicant's receipt or notice of such estimate. Any portion of the complex application fee in excess of the actual cost shall be refunded to the applicant no later than 30 days after publication of the Agency's decision.	
19.5.5 Permitted and Nonregulated Uses:	
19.5.5.1 Permitted Uses as of Right	\$25.00
19.5.5.2 Nonregulated	\$0.00
19.5.6 Regulation Amendment Petitions	\$150.00
(Does not include Notices or Regulation Advisories from DEEP.)	
19.5.6.1 Map Amendment Petitions	\$50.00
Plus fee from Schedule B	
19.5.7 Modification of Previous Approval	
19.5.7.1 Residential	\$ 25.00
19.5.7.2 Subdivision	\$ 50.00
19.5.7.3 Commercial/Industrial/Other	\$ 75.00
19.5.8 Renewal of Previous Approval	\$50.00
19.5.9 SCHEDULE A. For the purposes of calculating the permit application fee, the area in schedule A is the total area of wetlands and watercourses and upland review area upon which a regulated activity is proposed.	
SQUARE FEET OF AREA	
19.5.9.1 Less than 1,000	\$0.00
19.5.9.2 1,000 to 5,000	\$200.00
19.5.9.3 More than 5,000	\$400.00
19.5.10 SCHEDULE B. For the purposed of calculating the map amendment petition fee, the linear feet in schedule B is the total length of wetlands and watercourses boundary subject to the proposed boundary change.	
LINEAR FEET	
19.5.10.1 Less than 500	\$0.00
19.5.10.2 500 to 1,000	\$100.00
19.5.10.3 More than 1,000	\$200.00

Town of East Hampton  
INLAND WETLANDS WATERCOURSE AGENCY  
2023 Meeting Dates  
1 Community Drive  
Town Hall Council Chambers & Via Zoom  
6:30 p.m.

Meeting Date:

Deadline:

January 25, 2023

January 11, 2023

February 22, 2023

February 8, 2023

March 29, 2023

March 15, 2023

April 26, 2023

April 12, 2023

May 31, 2023

May 17, 2023

June 28, 2023

June 14, 2023

July 26, 2023

July 12, 2023

August 30, 2023

August 16, 2023

September 27, 2023

September 13, 2023

October 25, 2023

October 11, 2023

November 15, 2023

November 1, 2023

December 20, 2023

December 6, 2023

January 31, 2024

January 17, 2024



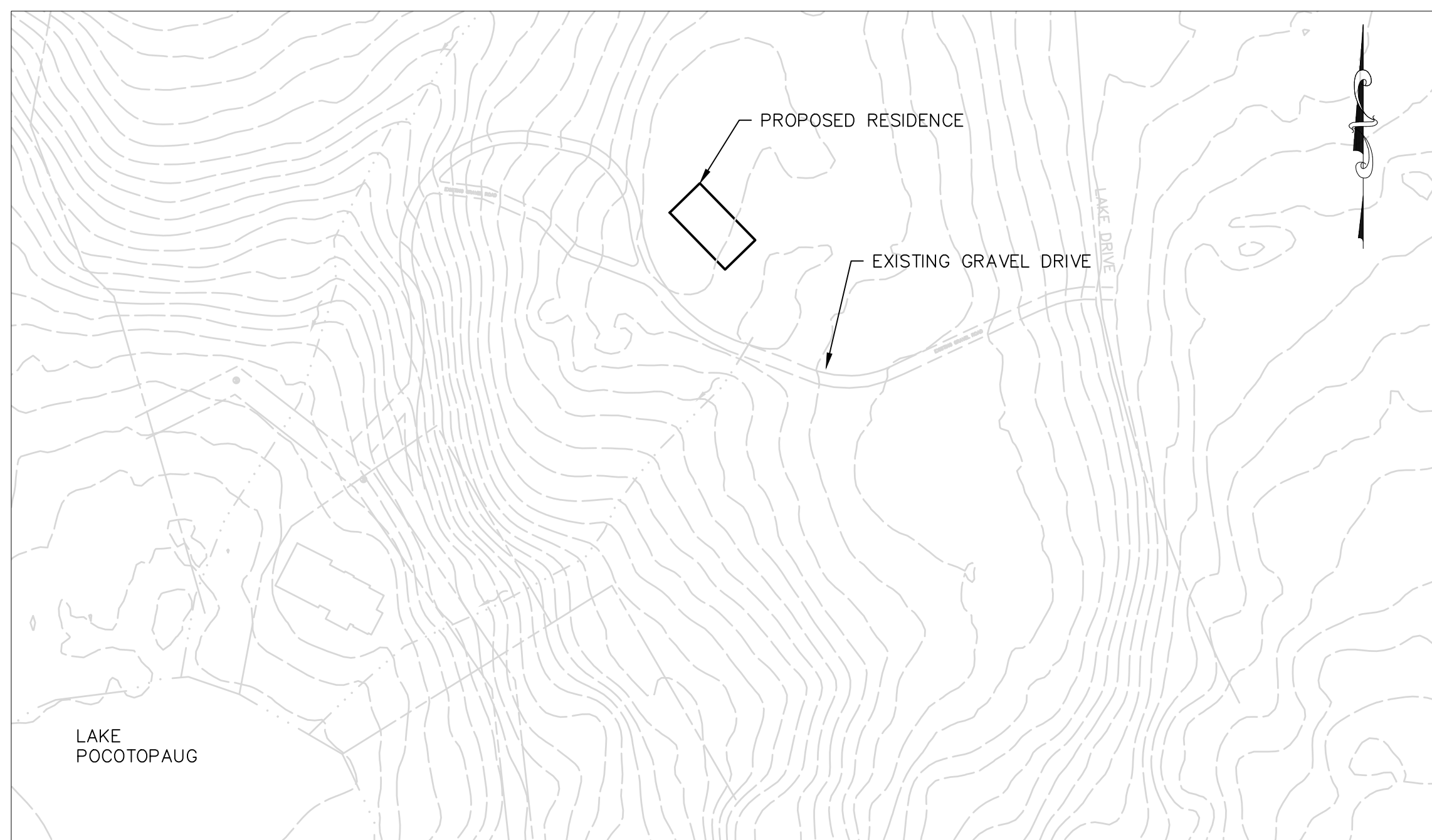
LOCATION MAP APPROX. SCALE 1"= 1500'

# MINOR FAMILY RESIDENCE

## LAKE DRIVE, EAST HAMPTON, CT

### PROJECT NUMBER 22190

### APRIL 2023



KEY MAP APPROX. SCALE 1"=100'

PREPARED FOR  
TUCKER MINOR  
198 LAKE DRIVE  
EAST HAMPTON, CT 06424

PREPARED BY  
**zuvic**  
INFRASTRUCTURE SOLUTIONS

40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
 (860) 436-4901 ■ WWW.ZUVIC.COM

LIST OF DRAWINGS	
--	COVER SHEET
GN-1	GENERAL NOTES AND LEGEND
ES-1	EROSION & SEDIMENTATION CONTROL PLAN
SP-1	SITE PLAN
CD-1	CIVIL DETAILS
CD-2	CIVIL DETAILS

ZONING TABLE		
	PROVIDED	REQUIRED
ZONING REQUIREMENTS		R-1 ZONE (WITH SEWER)
PERMITTED USES	RESIDENTIAL	PERMITTED
SET BACKS	FRONT YARD	280' / 25'
	SIDE YARD	257' / 15'
	REAR YARD	265' / 25'
MAXIMUM LOT COVERAGE	0.4%	20%
MAXIMUM BUILDING HEIGHT	26 FT	30 FT
IMPERVIOUS AREA	PROPOSED - 4%	EXISTING - 2%



## GENERAL NOTES

1. ALL CONSTRUCTION ACTIVITIES SHALL BE COMPLETED AS INDICATED IN THE CONTRACT DOCUMENTS AND SHALL COMPLY WITH ALL APPLICABLE BUILDING CODES, AND THE REQUIREMENTS OF THE TOWN OF EAST HAMPTON.
2. THE CONTRACTOR SHALL NOTIFY ALL LOCAL UTILITY COMPANIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY COMPANIES FOR SERVICE INSTALLATIONS AND CONNECTIONS.
3. THE STATE OF CONNECTICUT, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS FOR ROADS, BRIDGES AND INCIDENTAL CONSTRUCTION, FORM 818 WITH SUPPLEMENTAL SPECIFICATIONS DATED JULY 2022 SHALL BE MADE PART OF THE CONTRACT AS MODIFIED BY THE PLANS AND NOTES CONTAINED HEREIN.
4. THE CONTRACTOR SHALL MAINTAIN ONE SET OF CONTRACT DOCUMENTS ON THE PREMISES IN GOOD CONDITION AT ALL TIMES. THE SET SHALL INCLUDE ALL ADDENDA AND CHANGE ORDERS.
5. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE OWNER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONTRACT DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS SHALL BE CONFIRMED WITH THE OWNER PRIOR TO BIDDING.
6. STATED DIMENSIONS TAKE PRECEDENCE OVER GRAPHICS. DO NOT SCALE DRAWINGS TO DETERMINE LOCATION AND/OR DIMENSIONS.
7. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER AND THE APPROPRIATE REGULATORY AGENCIES IF APPLICABLE PRIOR TO INSTALLATION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES, STRUCTURES AND OTHER SITE FEATURES NOT BEING REMOVED AND/OR ALTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH EXECUTION OF THE WORK.
9. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL REQUIRED SUBMITTALS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 15 WORKING DAYS FOR REVIEW.
10. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
11. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. THE LOCATIONS ARE APPROXIMATED. ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455.
12. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY THE SUBCONTRACTORS.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE CONSTRUCTION AREA UNTIL THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER.
14. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED EXISTING PIPE OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE RESPECTIVE UTILITY COMPANY IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH THE WORK IN THIS AREA.
15. DO NOT INTERRUPT EXISTING UTILITIES SERVICING ADJACENT PROPERTIES EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE TOWN.
16. OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN TEN (10) FEET OF ANY ELECTRIC LINE UNDER 50 KV. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS.
17. NO DEMOLITION OR CONSTRUCTION ACTIVITIES SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL LOCAL AND STATE GOVERNING AND REGULATORY AGENCIES.
18. ALL DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PREMISES AND SHALL BE PROPERLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ALL AREAS SHALL BE KEPT IN A NEAT AND ORDERLY MANNER AT ALL TIMES.
19. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES.
20. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
21. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLAND IN ACCORDANCE WITH THE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES FOR SOIL EROSION AND SEDIMENT POLLUTION CONTROL. IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE "EROSION CONTROL PLAN" CONTAINED HEREIN.
22. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHODS.
23. THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. THE TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS.
24. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS PRIOR TO THE START OF CONSTRUCTION.
25. EXISTING TREES AND VEGETATION ARE NOT SHOWN ON THESE PLANS. CONTRACTOR SHALL FAMILIARIZE THEMSELVES W/ EXISTING CONDITIONS AND INDICATE TO OWNER ANY VEGETATION THAT MAY IMPACT OPERATIONS PRIOR TO MOBILIZING TO THE SITE.

## ABBREVIATIONS

(NOT ALL ABBREVIATIONS MAY BE USED)

APPROX.	APPROXIMATE	IPIN	IRON PIN
BCLC	BITUMINOUS CONCRETE LIP CURB	INV.	INVERT
BOT.	BOTTOM	LP	LOW POINT
BIT.	BITUMINOUS	LSA	LANDSCAPED AREA
CB	CATCH BASIN	MB	MAILBOX
C-CB	CURBED CATCH BASIN	MDPE	MEDIUM DENSITY POLYETHYLENE
CL-CB	CURBLESS CATCH BASIN	MH	MANHOLE
C.I.P.	CAST IRON PIPE	MON	MONUMENT
C.L.F.	CHAIN LINK FENCE	NTS	NOT TO SCALE
C.O.	CLEAN OUT	O.C.	ON CENTER
CONC.	CONCRETE	O.D.	OUTSIDE DIAMETER
COMM.	COMMUNICATIONS	OE	OVERHEAD ELECTRIC
D.I.	DUCTILE IRON	PE	POLYETHYLENE
D.I.P.	DUCTILE IRON PIPE	PL	PLATE
DMH	DRAINAGE MANHOLE	PVMT	PAVEMENT
ELEC.	ELECTRICAL	PVC	POLYVINYL CHLORIDE
EL.	ELEVATION	R	RADIUS
EMH	ELECTRICAL MANHOLE	RCP	REINFORCED CONCRETE PIPE
EOP	EDGE OF PAVEMENT	S	SANITARY
EX.	EXISTING	SAN	SANITARY
F.F.	FINISHED FLOOR	SMH	SANITARY MANHOLE
FFE	FINISHED FLOOR ELEVATION	SSWR	SANITARY SEWER
F.L.	FLOW LINE	STM	STORM
G	GAS	SW	SANITARY MANHOLE
GM	GAS METER	TEMP.	TEMPORARY
GRAN	GRANITE	TEL.	TELEPHONE
GTD	GRADE TO DRAIN	T.F.	TOP OF FRAME
GV	GAS VALVE	T.P.	TOP OF PIPE
HH	HANDHOLE	TYP.	TYPICAL
HDPPE	HIGH DENSITY POLYETHYLENE	UKWN	UNKNOWN
HP	HIGH POINT	W	VERIFY IN FIELD
HYD	HYDRANT	WMH	WATER MANHOLE
I.D.	INSIDE DIAMETER	WV	WATER VALVE
		YD	YARD DRAIN

## LEGEND

(NOT ALL SYMBOLS MAY BE USED)

	PROPERTY LINE		CONTROL POINT
	EASEMENT LINE		MONUMENT
	CURB		IRON PIPE
	EDGE OF PAVEMENT (EOP)		IRON PIN
	STOCKADE FENCE		TYPE 'C' CATCH BASIN
	CHAIN LINK FENCE		TYPE 'CL' CATCH BASIN
	TREE/VEGETATION LINE		STORM DRAINAGE MANHOLE
	MAJOR CONTOUR		SANITARY SEWER MANHOLE
	MINOR CONTOUR		WATER MANHOLE
	SPOT ELEVATION		GAS VALVE
	TOP/BOTTOM OF CURB EL.		WATER VALVE
	PIPES ≥ 12" (SIZE, MATERIAL, AND FLOW DIRECTION)		HYDRANT
	GAS		ELECTRICAL BOX
	STORM DRAINAGE		HANDHOLE
	UNDERGROUND ELECTRIC		UTILITY POLE W/ GUY WIRE
	OVERHEAD ELECTRIC		LUMINAIRE
	SANITARY SEWER		LUMINAIRE ON STANDARD
	TELECOMMUNICATIONS		SIGNS
	WATER		MONITORING WELL
	TEMPORARY SEDIMENTATION CONTROL		BOLLARD
	FLUSH CONDITION		TREES/SHRUBS
	POST		TREES/SHRUBS

## NARRATIVE

THE SUBJECT SITE IS COMPRISED OF 15.2± ACRES OF LAND LOCATED NORTH OF LAKE POCOTPAUG IN EAST HAMPTON. SITE DEVELOPMENT WILL BE PERFORMED WHICH INCLUDES CONSTRUCTION OF A SINGLE FAMILY DWELLING, GRAVEL DRIVEWAY, PAVED PARKING AREAS AND DRAINAGE FEATURES ALONG WITH SITE GRADING TO SUPPORT CONSTRUCTION OF THESE ITEMS.

## CONSTRUCTION SCHEDULE

ANTICIPATED CONSTRUCTION START DATE IS SPRING 2023 AND ANTICIPATED COMPLETION DATE IS FALL 2023. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN ALL CONTROLS DURING CONSTRUCTION AND UNTIL THE SITE IS STABILIZED.

## RESPONSIBLE CONTACT

THE RESPONSIBLE CONTACT PERSON FOR ASSURING THAT ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE PROPERLY INSTALLED AND MAINTAINED WILL BE THE OWNER.

## GENERAL CONSTRUCTION SEQUENCE

1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO CONSTRUCTION ACCESS PAD, HAY BALES, AND SILT FENCE SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION ACTIVITIES UNTIL THE ENGINEER HAS INSPECTED AND APPROVED THE INSTALLATION OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES.
3. PERFORM EARTHWORK IN EXPEDITIOUS MANNER, AND STABILIZE.
4. ESTABLISH THE SUBGRADE FOR AREAS TO BE FILLED AND/OR SEEDED.
5. CONSTRUCT BUILDING AND SEWER SERVICE CONNECTION.
6. PLACE GRAVEL IN DRIVEWAY AREAS TO FINISHED GRADE AND COMPACT. INSTALL BITUMINOUS CONCRETE IN PAVED AREAS.
7. PREPARE LANDSCAPE AREAS. PLACE 6" TOPSOIL. FERTILIZE, SEED AND MULCH WHERE SHOWN. INSTALL LANDSCAPE PLANTINGS.
8. 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.
9. CONTRACTOR SHALL BE PREPARED AT ALL TIMES TO SWEEP THE SURROUNDING ROADWAYS AS REQUIRED BY THE TOWN AND/OR THE OWNER'S REPRESENTATIVE

## EROSION AND SEDIMENT CONTROL PLAN

1. HAYBALES, SILT FENCE, AND GRAVEL CHECK DAMS SHALL BE INSTALLED DOWNGRADE OF WORK AREA AS SHOWN OR AS REQUIRED BY THE ENGINEER.
2. SOIL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.
3. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL HANDBOOK.
4. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION WHENEVER POSSIBLE.
5. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD AS NECESSARY OR REQUIRED.
6. SEDIMENT REMOVED FROM CONTROL STRUCTURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
7. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB SEDIMENTATION AND EROSION CONTROL STRUCTURES.
8. ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS PRACTICAL.

## INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES

### HAYBALES

- A. 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.
- B. SIDES OF ADJACENT BALES SHALL TIGHTLY ABUT ONE ANOTHER.
- 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.

### SILT FENCE

- A. SILT FENCE SHALL BE INSTALLED AT LOCATIONS SHOWN ON THIS PLAN AND AS DIRECTED BY THE ENGINEER.
- B. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCE LINE LOCATION.
- C. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND INSTALL THE POST AT LEAST 1.5 FEET INTO THE GROUND.
- D. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
- E. BACKFILL THE TRENCH AND COMPACT.

### GRAVEL CHECK DAM

- A. STONE (GRAVEL) CHECK DAMS SHALL BE INSTALLED AT LOCATIONS AS SHOWN ON PLANS AND AS DIRECTED BY ENGINEER. THESE CHECK DAMS ARE INTENDED TO REMAIN IN PLACE POST CONSTRUCTION.
- B. PLACE THE STONE BY HAND OR MACHINE, MAKING SIDE SLOPES NO STEEPER THAN 1:1 (I.E., THE ANGLE OF REPOSE) WITH A MAXIMUM HEIGHT OF 3 FEET AT THE CENTER OF THE CHECK DAM.

### SEDIMENT CONTROL AT CATCH BASINS

- A. PLACE SILT SACKS UNDER GRATE AT EACH CATCH BASINS AT LOCATIONS SHOWN ON DRAWINGS.

### OPERATION AND MAINTENANCE OF TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

#### HAYBALES, SILT FENCE, GRAVEL CHECK DAMS AND SEDIMENT CONTROL AT CATCH BASINS

- A. ALL EROSION CONTROL MEASURES SHALL BE INSPECTED FOLLOWING EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE PROMPTLY MADE AS NEEDED.
- B. DEPOSITS SHALL BE REMOVED AND/OR CLEANED-OUT WHEN ONE HALF OF THE ORIGINAL HEIGHT OF THE FEATURE BECOMES FILLED WITH SEDIMENT.
- C. ALL SILT FENCES SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED.
- D. SEDIMENT DEPOSITS SHALL BE REMOVED WHEN THEY EXCEED A HEIGHT OF ONE FOOT OR 1/2 THE HEIGHT OF THE SILT FENCE BARRIER.
- E. REPLACE OR REPAIR THE CHECK DAM WITHIN 24 HOURS OF OBSERVED FAILURE. FAILURE OF THE CHECK DAMN HAS OCCURRED WHEN SEDIMENT FAILS TO BE RETAINED BECAUSE:
  1. STONE HAS MOVED
  2. SOIL HAS ERODED AROUND OR UNDER THE CHECK DAMN REDUCING ITS FUNCTIONAL CAPACITY; OR
  3. TRAPPED SEDIMENTS ARE OVERTOPPING THE CHECK DAM
- F. INSPECT SILT SACKS WEEKLY AND AFTER EACH RAINFALL.
- G. SILT SACKS SHALL BE EMPTIED WHEN THEY HAVE COLLECTED 6" TO 12" OF SEDIMENT.

### CONTINGENCY EROSION PLAN

SHOULD UNFORESEEN EROSION OR SEDIMENTATION PROBLEMS ARISE, THE DESIGN ENGINEER OF RECORD (ZUVIC, INC) AND LOCAL ENFORCEMENT AGENT SHALL BE NOTIFIED IMMEDIATELY. AN INSPECTION OF THE AFFECTED AREA(S) SHALL BE PROMPTLY PERFORMED. A REMEDIAL ACTION PLAN SHALL BE FORMULATED WITH THE LOCAL ENFORCEMENT AGENT'S APPROVAL. THE SITE CONTRACTOR SHALL THEN IMPLEMENT THE RECOMMENDED COURSE OF ACTION WHICH HAS BEEN DETERMINED BY BOTH THE ENGINEER AND LOCAL ENFORCEMENT AGENT.

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DESIGNED BY:	DV							
DRAWN BY:	DV							
SHEET CHK'D BY:	FW							
CROSS CHK'D BY:	FW							
APPROVED BY:	DV							
DATE:	APRIL 2023							
PREPARED FOR:	TUCKER MINOR 198 LAKE DRIVE EAST HAMPTON, CT 06424			PREPARED BY:	 MINOR RESIDENCE LAKE DRIVE EAST HAMPTON, CT 06424			SHEET NO.  <b>GN-1</b>
REV. NO.	DATE	DRWN	CHKD	REMARKS				GENERAL NOTES



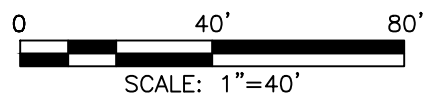
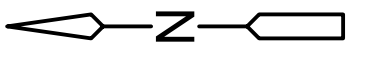


**LEGEND**

 DISTURBANCE AREA

**NOTES:**

1. CONTRACTOR SHALL CLEAR AND GRUB ALL AREAS SHOWN AS "DISTURBED" ON THIS PLAN. TREES LARGER THAN 18" IN DIAMETER SHALL BE STACKED ONSITE PER THE DIRECTION OF THE OWNER.



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REV. NO.	DATE	DRWN	CHKD	REMARKS

PROJECT NO.: 22190  
 DESIGNED BY: DV  
 DRAWN BY: AM  
 SHEET CHK'D BY: X  
 CROSS CHK'D BY: X  
 APPROVED BY: X  
 DATE: APRIL 2023

PREPARED FOR:  
**TUCKER MINOR**  
 198 LAKE DRIVE  
 EAST HAMPTON, CT 06424

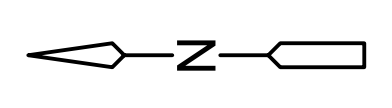
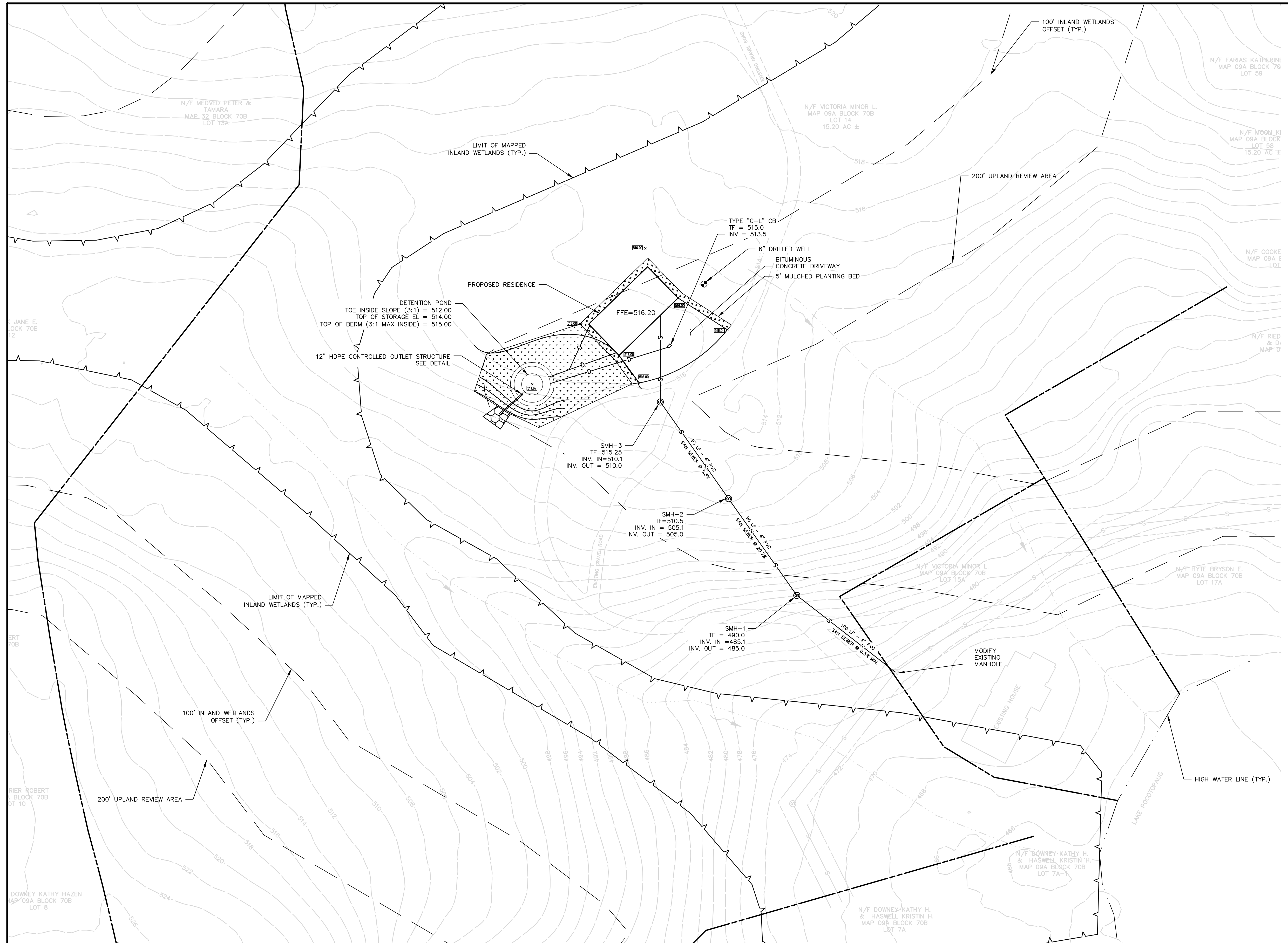
PREPARED BY:  
**zuvic**  
INFRASTRUCTURE SOLUTIONS  
 40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
 (860) 436-4901 WWW.ZUVIC.COM

**MINOR RESIDENCE**  
 LAKE DRIVE  
 EAST HAMPTON, CT 06424

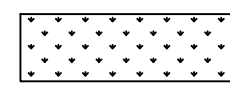
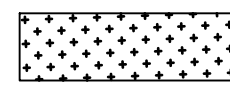
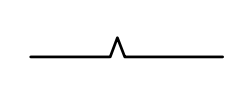
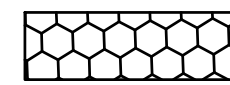
**EROSION AND SEDIMENTATION CONTROL PLAN**

SHEET NO.  
**ES-1**

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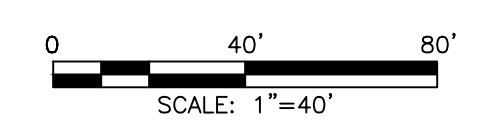


**LEGEND**

-  TOPSOIL AND SEED
-  MULCH PLANTING BEDS
-  INLAND WETLANDS
-  STANDARD RIPRAP

**NOTES:**

1. PROPOSED USE IS A SINGLE FAMILY RESIDENCE.
2. DESIGN FLOWS: 1 BEDROOM @ 150 GPD PER TABLE 4, CT DPH TECH STANDARDS, 2018
3. ALL SLOPES 3:1 OR GREATER SHALL BE REINFORCED WITH EROSION CONTROL MATTING. EROSION CONTROL MATTING SHALL BE IN ACCORDANCE WITH THE CT DOT APPROVED QUALIFIED PRODUCT LIST, TYPE "D"
4. UNLESS OTHERWISE NOTED, ALL DISTURBED AREAS SHALL BE STABILIZED WITH 6" TOPSOIL AND SEED. SEE TURF ESTABLISHMENT DETAIL CD-1
5. ALL PROPOSED SANITARY SEWER LATERALS SHALL BE SDR-35
6. ALL ROOF LEADERS SHALL BE 6" PVC WITH 3.5' MINIMUM COVER UNLESS OTHERWISE NOTED



REV. NO.	DATE	DRWN	CHKD	REMARKS

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 CROSS CHK'D BY: X  
 APPROVED BY: X  
 DATE: APRIL 2023

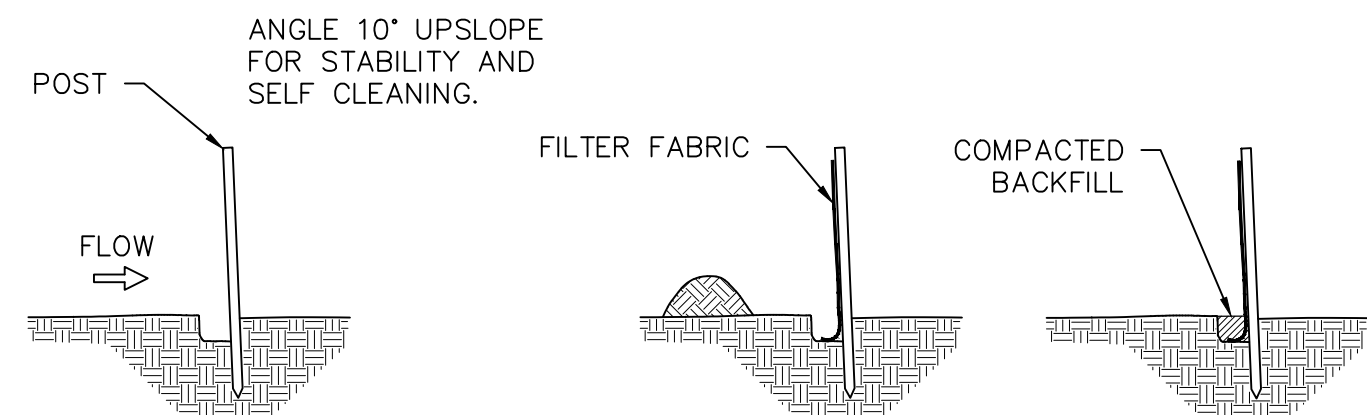
PREPARED FOR:  
**TUCKER MINOR**  
 198 LAKE DRIVE  
 EAST HAMPTON, CT 06424

PREPARED BY:  
**zuvic**  
 INFRASTRUCTURE SOLUTIONS  
 40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
 (860) 436-4901 WWW.ZUVIC.COM

**MINOR RESIDENCE**  
 LAKE DRIVE  
 EAST HAMPTON, CT 06424

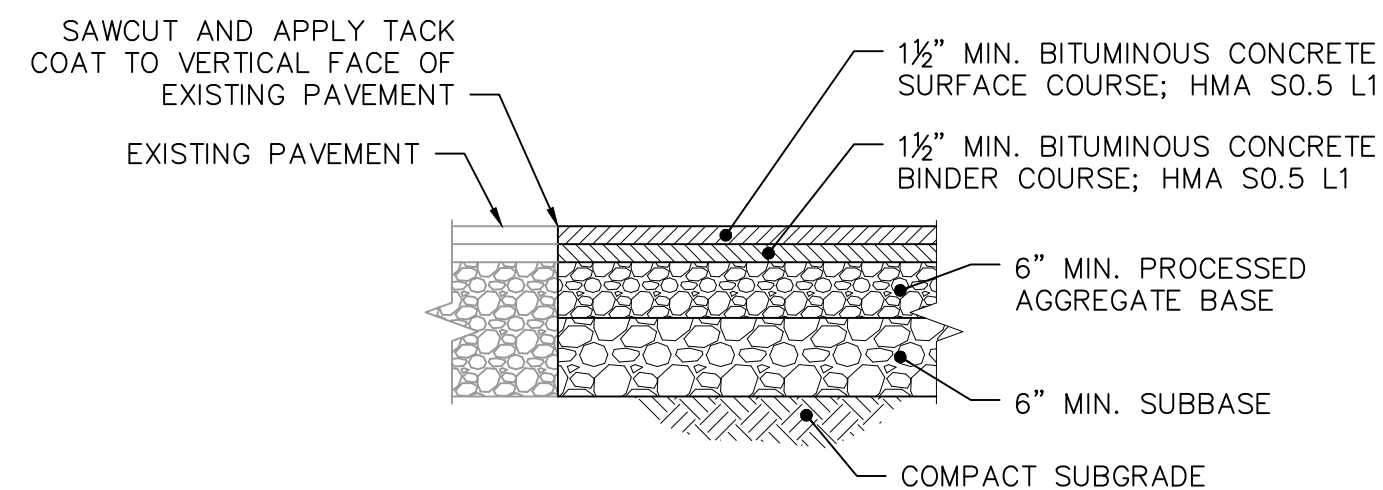
**SITE PLAN**

SHEET NO.  
**SP-1**



1. SET POSTS AND EXCAVATE A 6"x6" TRENCH. SET POST DOWNSLOPE.
2. ATTACH FILTER FABRIC FENCING TO POST AND EXTEND IT TO THE TRENCH BOTTOM.
3. BACKFILL THE TRENCH AND COMPACT THE EXCAVATED SOIL.

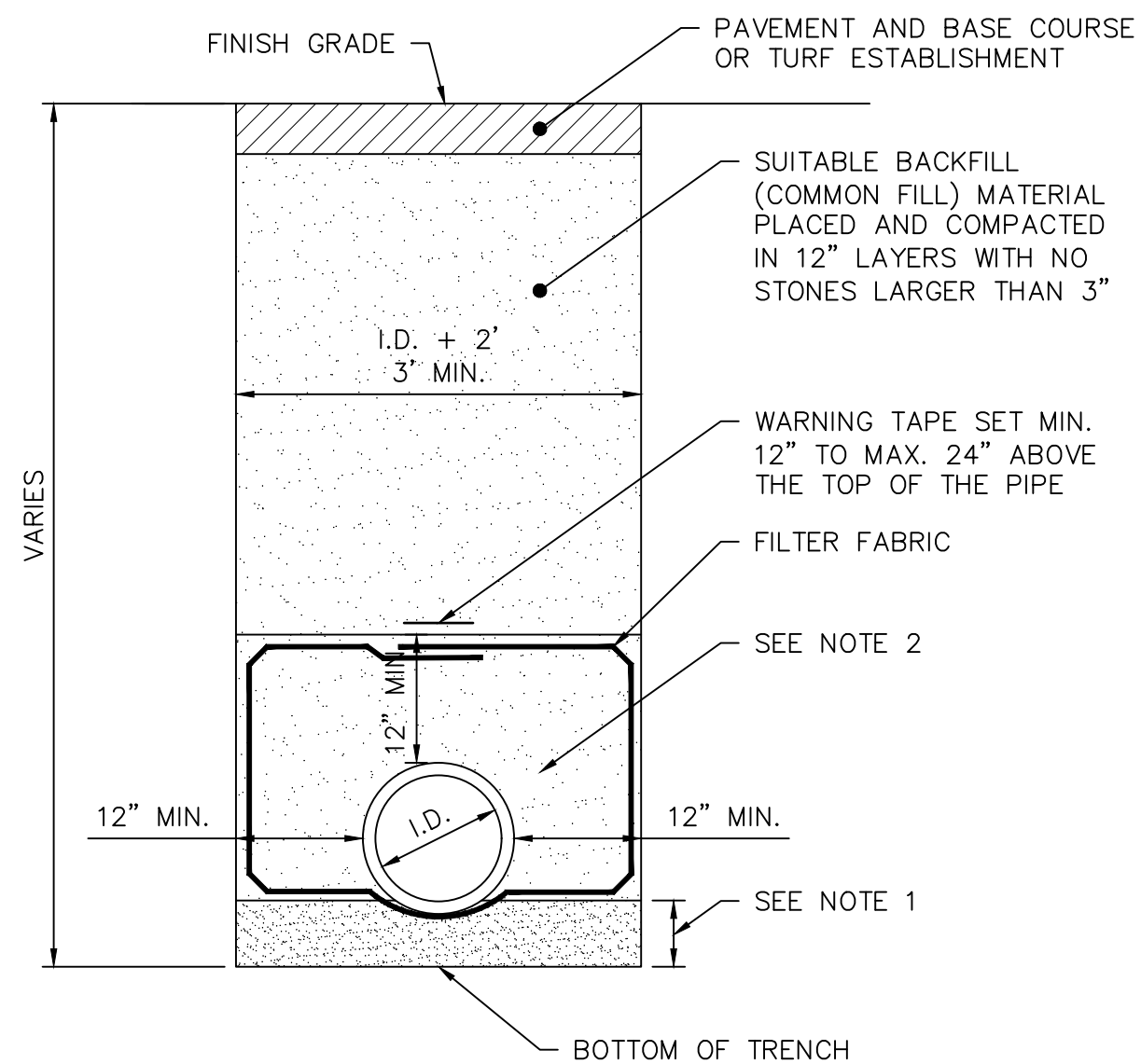
**SILT FENCE**  
NOT TO SCALE



NOTE:

1. HMA BITUMINOUS CONCRETE MIXTURES SHALL COMPLY WITH CT DOT FORM 818 MATERIAL SPECIFICATIONS.

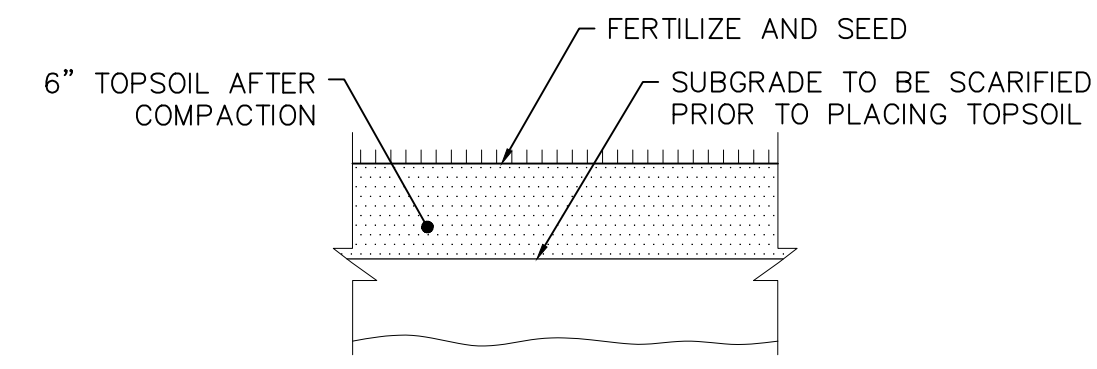
**BITUMINOUS CONCRETE PAVEMENT**  
NOT TO SCALE



NOTES:

1. FOR HDPE PIPE, INSTALL 6" SAND BEDDING MATERIAL OR 3/4" CRUSHED STONE WHEN IN ROCK OR UNSUITABLE MATERIAL. FOR CONCRETE PIPE, INSTALL 3" GRANULAR FILL.
2. FOR HDPE PIPE, INSTALL 3/4" CRUSHED STONE. FOR CONCRETE PIPE, INSTALL GRANULAR FILL.

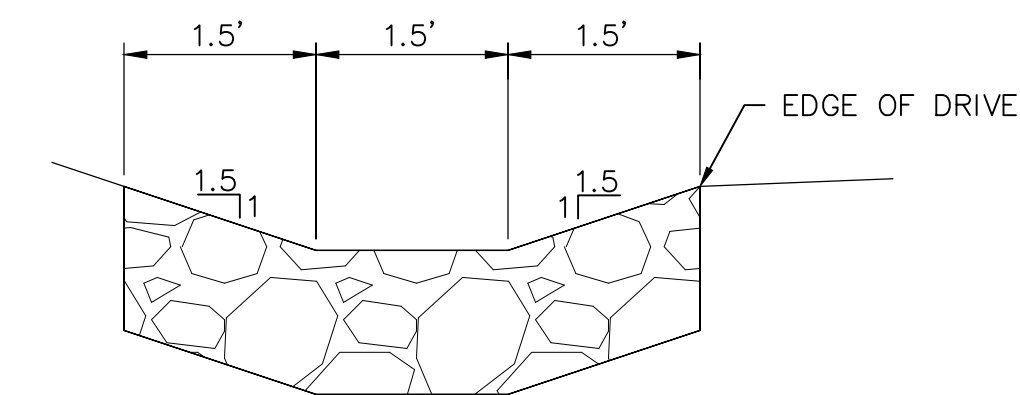
**TYPICAL STORM TRENCH**  
NOT TO SCALE



NOTES:

1. THE PERMANENT SEED MIX FOR TURF ESTABLISHMENT IS AS FOLLOWS:  
NEW ENGLAND CONSERVATION/WILDLIFE MIX  
5311 CONSERVATION MIX  
VERMONT CONSERVATION AND WILDLIFE  
OR APPROVED ALTERNATE
2. SEED SHALL BE APPLIED AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET. THE SEEDED AREA SHALL BE MULCHED WITH A LAYER OF GRASS, HAY OR STRAW AT A RATE OF 10 POUNDS PER 100 SQUARE FEET. THE SEEDED AREAS SHALL BE THOROUGHLY WATERED UNTIL SATISFACTORY STAND OF GRASS HAS BEEN ESTABLISHED.

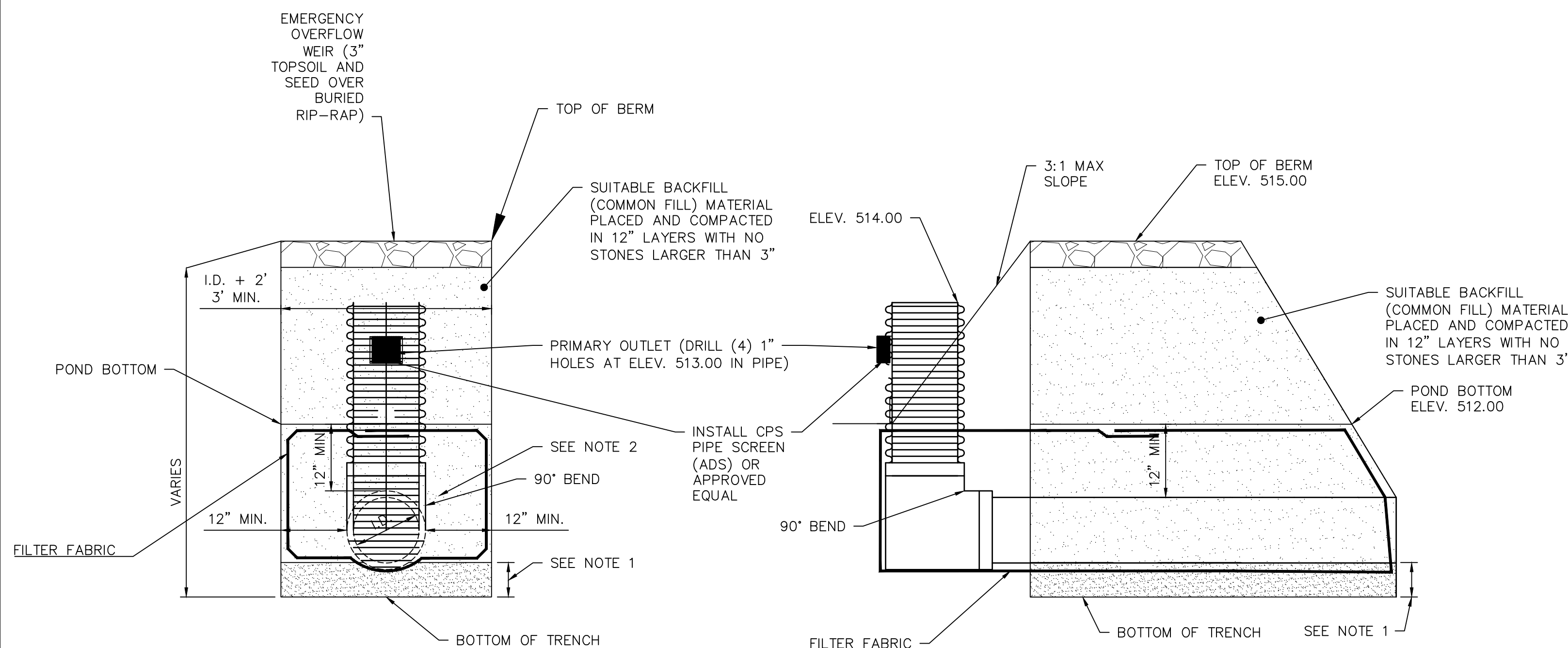
**TURF ESTABLISHMENT**  
NOT TO SCALE



NOTE:

1. CRUSHED GRAVEL SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION M.01.02 NO. 3

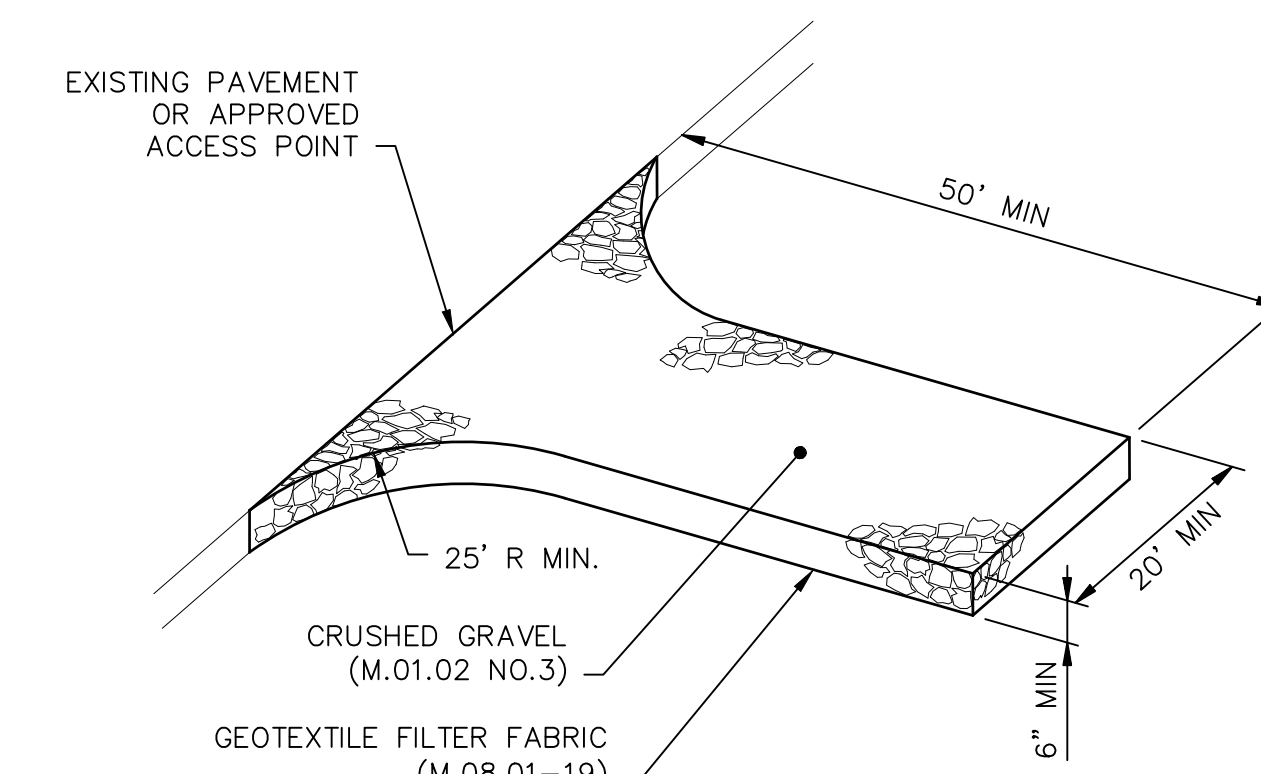
**2" STONE DITCH**  
NOT TO SCALE



NOTES:

1. FOR HDPE PIPE, INSTALL 6" SAND BEDDING MATERIAL OR 3/4" CRUSHED STONE WHEN IN ROCK OR UNSUITABLE MATERIAL. FOR CONCRETE PIPE, INSTALL 3" GRANULAR FILL.
2. FOR HDPE PIPE, INSTALL 3/4" CRUSHED STONE. FOR CONCRETE PIPE, INSTALL GRANULAR FILL.
3. RISER SHALL BE EXPOSED NO MORE THAN 3'.

**TYPICAL STORM TRENCH**  
NOT TO SCALE



NOTES:

1. INSPECT ANTI-TRACKING CONSTRUCTION ENTRANCE PAD ON A DAILY BASIS AND MAINTAIN IN GOOD CONDITION THROUGHOUT CONSTRUCTION PERIOD.
2. ROADWAY SHALL BE SWEEP DAILY TO REMOVE ANY MATERIAL THAT MAY BE TRACKED ONTO THE PAVEMENT.

**ANTI-TRACKING PAD**  
NOT TO SCALE

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PROJECT NO.:	22190
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DRAWN BY:	AM
SHEET CHK'D BY:	X
CROSS CHK'D BY:	X
APPROVED BY:	X
DATE:	APRIL 2023

PREPARED FOR:	TUCKER MINOR
	198 LAKE DRIVE
	EAST HAMPTON, CT 06424

PREPARED BY:

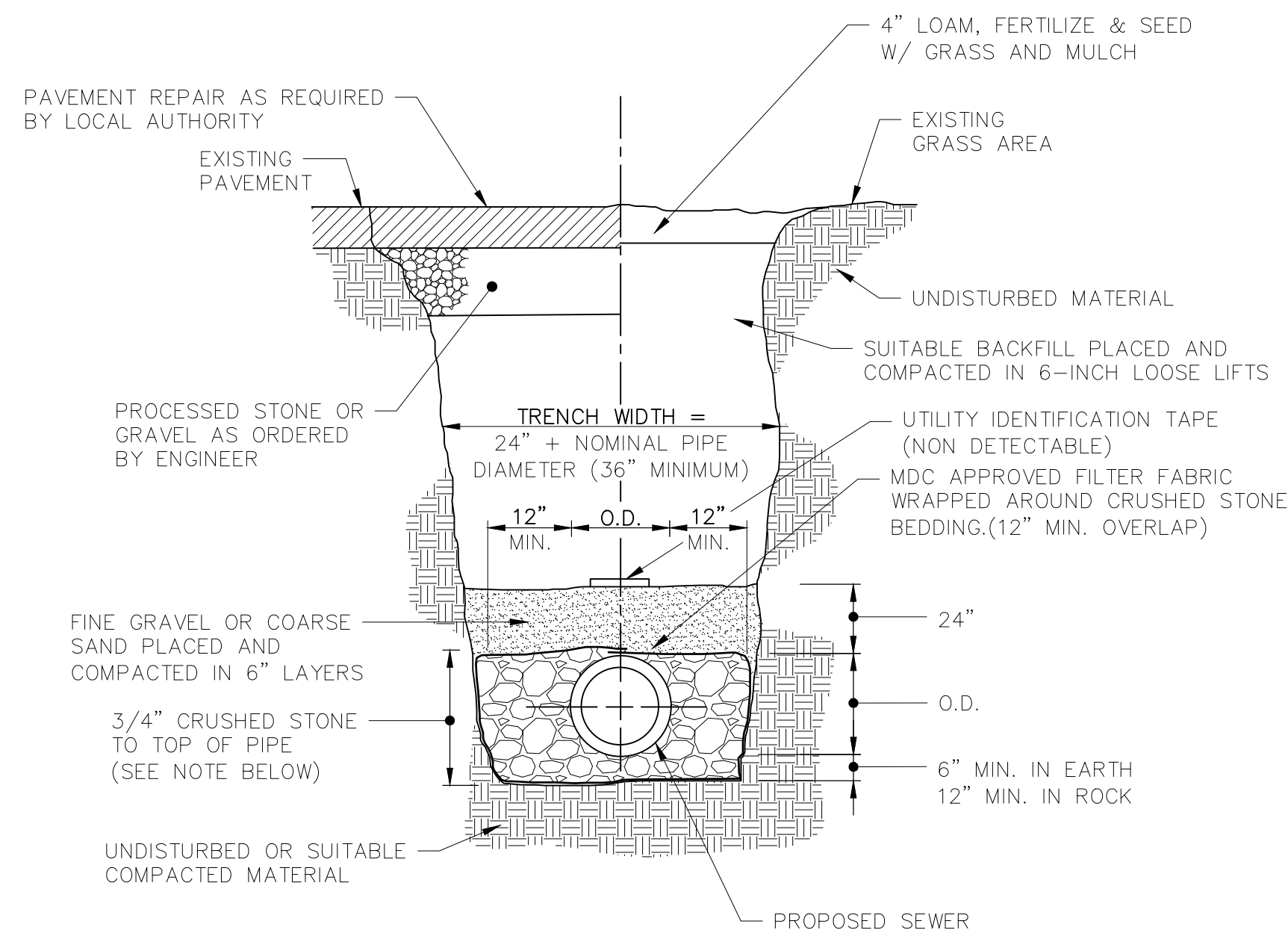
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40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
(860) 436-4901 WWW.ZUVIC.COM

MINOR RESIDENCE  
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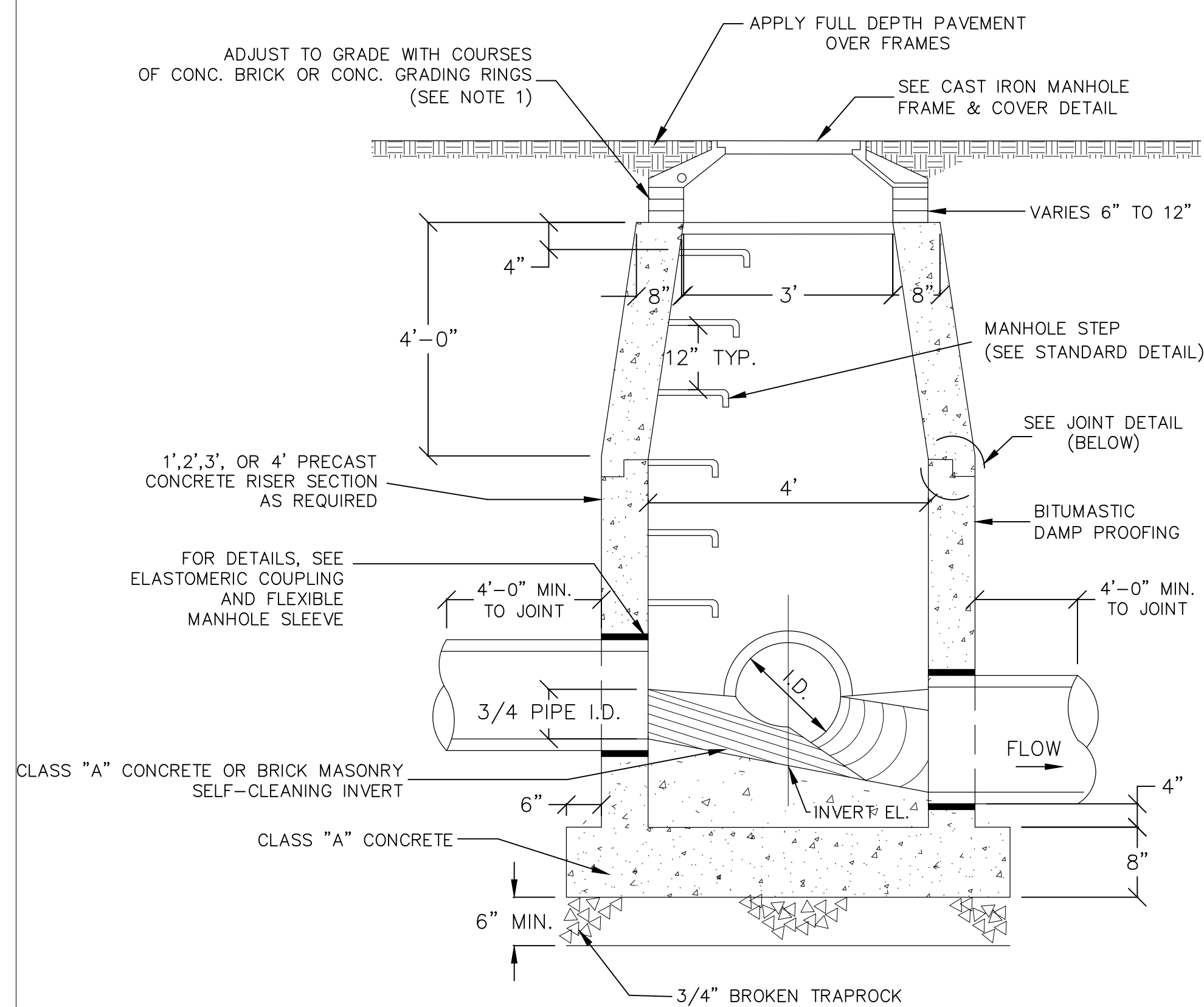
CIVIL DETAILS

SHEET NO.  
**CD-1**

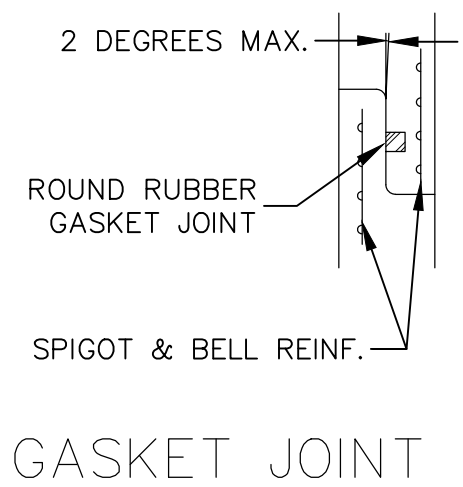




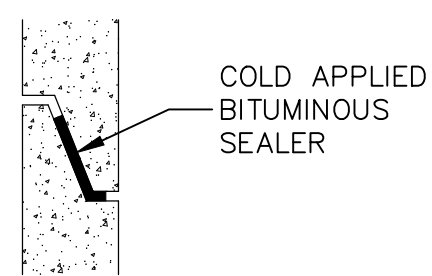
**SEWER TRENCH DETAIL**  
NOT TO SCALE



**ELEVATION**



**GASKET JOINT**



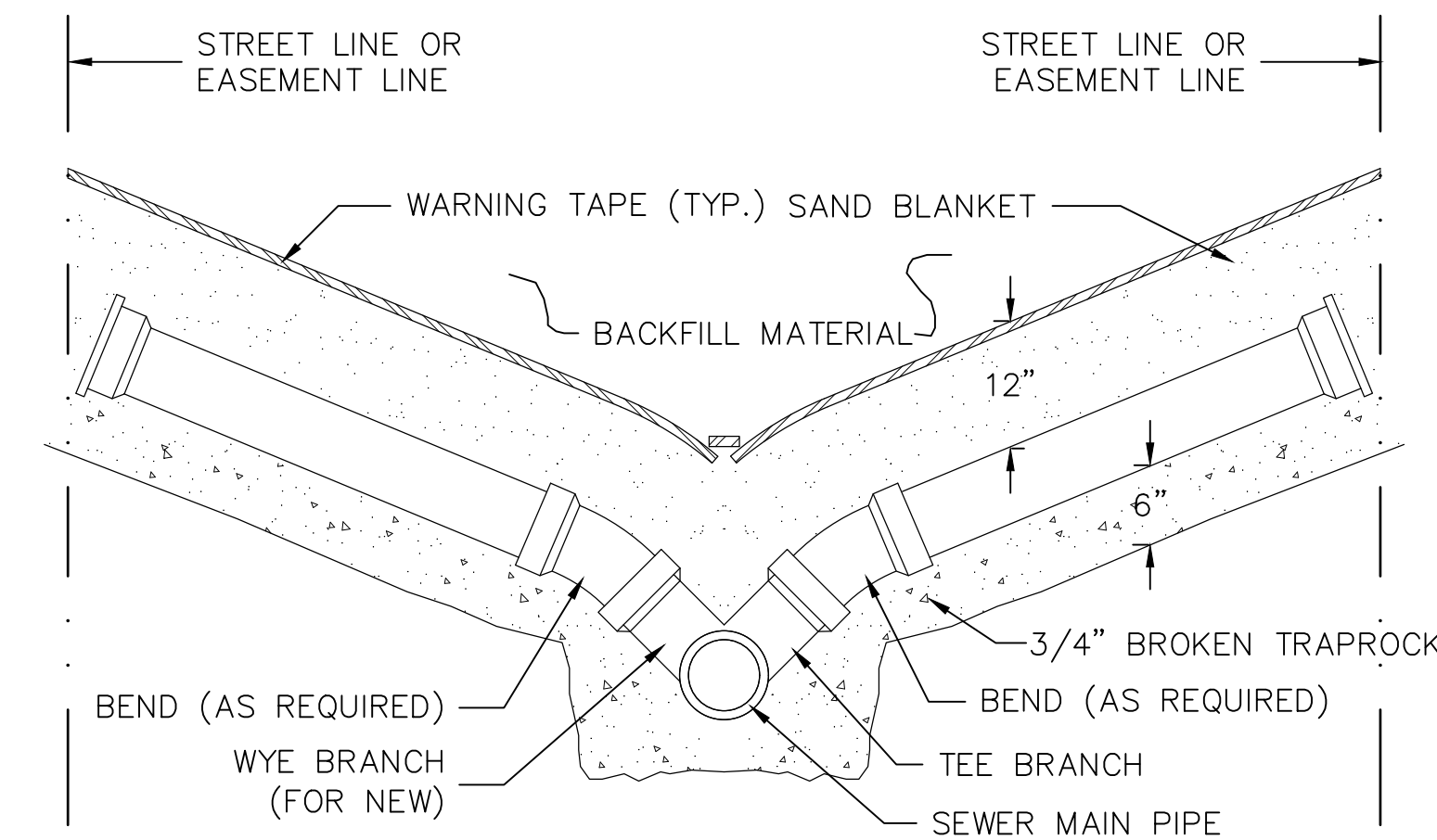
**SECTION JOINT**

**NOTES:**

1. TOP STEP TO BE A MAXIMUM OF 24" BELOW TOP OF MANHOLE FRAME & COVER ELEVATION.
2. IF TOTAL DEPTH IS TEN FEET OR GREATER, CERTIFICATION OF HS-20 LOAD BEARING CAPACITY SHALL BE SUBMITTED TO THE TOWN ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.
3. SEE MISCELLANEOUS MANHOLE DETAILS SHEET.
4. SEAL ALL LIFTING HOLES INSIDE AND OUTSIDE OF RISER SECTION.

**PRECAST CONCRETE SANITARY SEWER MANHOLE**

NOT TO SCALE



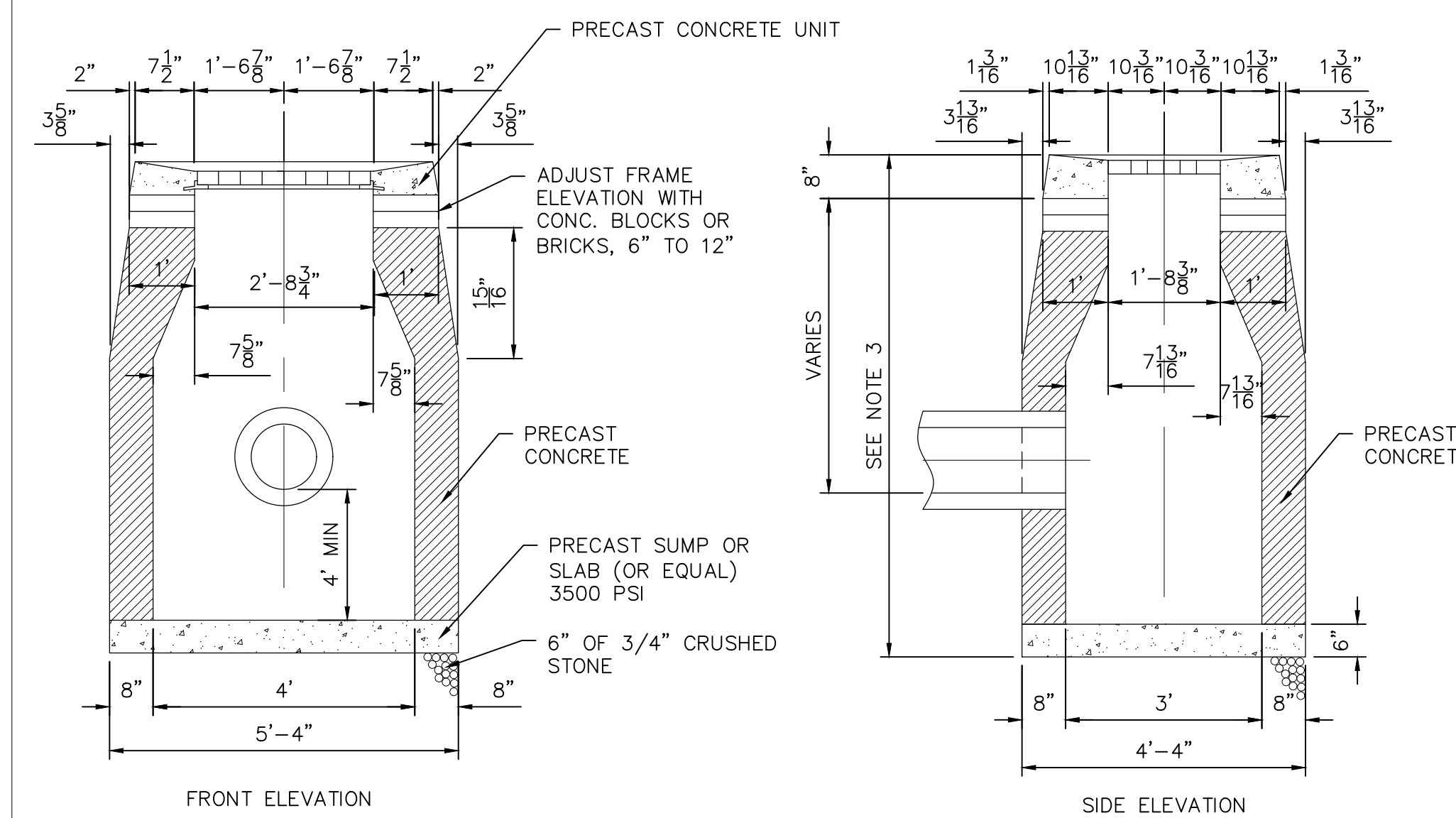
**SECTION**

**NOTES:**

1. SEE STANDARD DETAILS "TYPICAL BLDG. SEWER" AND "TYPICAL SANITARY SEWER TRENCH SECTION" FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

**SERVICE CONNECTION FOR SHALLOW SEWER**

NOT TO SCALE



**FRONT ELEVATION**

**SIDE ELEVATION**

**NOTES:**

1. MINIMUM COVER OVER TOP OF PIPE SHALL BE 2'-0".
2. WALL THICKNESS SHALL BE SUFFICIENT TO MEET HS-20 LOADING.
3. WALL THICKNESS FOR STRUCTURES OVER 10' HIGH IS 12" FOR CONCRETE BLOCK UNITS. INSIDE DIMENSIONS REMAIN THE SAME.
4. ALL PIPES SHALL BE CUT FLUSH WITH INSIDE WALLS.
5. ALL BRICKS SHALL BE CONCRETE.
6. ALL PIPE PENETRATIONS SHALL BE PARGED SMOOTH TO PROVIDE A WATERTIGHT SEAL BOTH INSIDE AND OUTSIDE THE BASIN.
7. INSIDE WALLS OF STRUCTURE TO BE SMOOTH. NO SHELVES ALLOWED.
8. IF A 4' SUMP IS NOT POSSIBLE DUE TO UTILITY CONFLICTS OR SITE CONSTRAINTS, A 2' SUMP MAY BE SUBMITTED FOR APPROVAL BY THE ENGINEER.
9. FRAME AND GRATE SHALL BE GALVANIZED.

**TYPE "C-L" CATCH BASIN**  
NOT TO SCALE

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DESIGNED BY:	DV
DRAWN BY:	AM
SHEET CHK'D BY:	X
CROSS CHK'D BY:	X
APPROVED BY:	X
DATE:	APRIL 2023

PREPARED FOR:	TUCKER MINOR
	198 LAKE DRIVE
	EAST HAMPTON, CT 06424

PREPARED BY:

INFRASTRUCTURE SOLUTIONS  
40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
(860) 436-4901 WWW.ZUVIC.COM

MINOR RESIDENCE

LAKE DRIVE  
EAST HAMPTON, CT 06424

CIVIL DETAILS

SHEET NO.

**CD-2**

**Narrative**  
**Inland Wetlands Application**  
**Minor Family Residence, Lake Drive**  
**April 2023**

The Minor Family property is located on Lake Drive on the north shore of Lake Pocotopaug. It presently has no address and is immediately upland from 198 Lake Drive. The site is composed of 15.2 acres of undeveloped land. The property is owned by Victoria Man (formerly Minor).

The site is presently undeveloped except for a gravel driveway and gravel parking area used to access 198 Lake Drive. The average slope of the site is approximately 6% from northeast to southwest, or toward the lake. The site is bound to the south by homes on Mohican Trail, to the north and west by undeveloped land, and to the east by Lake Drive.

Construction of a single-family dwelling is proposed with associated paved parking areas, stormwater collection system, sanitary sewer service, minor grading, and landscape restoration. Construction phasing is proposed as follows:

1. Installation of E&S Controls
2. Selective clearing & thinning
3. Installation of utilities (drainage and sanitary sewer) adjacent to the structure
4. Construction of single family structure
5. Bituminous Paving
6. Planting and landscaping
7. Remainder of sewer connection
8. Final restoration

No direct impacts to inland wetlands are anticipated. Erosion control measures surround areas of disturbance within the upland review area. The location of these improvements was selected based on a combination of favorable natural grades and minimal impact in the upland review area. A 200' upland review area is considered due to the Lake Pocotopaug Protection Zone. Alternative locations for the residence explored did not yield a smaller impact area or reduced possibility for erosion.

# ***Summary of Hydraulic Analysis***

## ***Minor Family Residence Lake Drive East Hampton, CT***

*PREPARED FOR:*

***Tucker Minor  
198 Lake Drive  
East Hampton, CT 06424***

*PREPARED BY:*

**zuvic**

***ZUVIC PROJECT NUMBER - 22190***

***April 2023***



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Introduction	1
Existing Site/Drainage Conditions	2
Existing Soil Conditions	2
Existing Drainage System Conditions	2
Proposed Improvements	3
Proposed Conditions Design Approach	4
Proposed Drainage Conditions	4
Summary	5

## **Appendices**

Appendix A – Existing Drainage Analysis and Soils Map

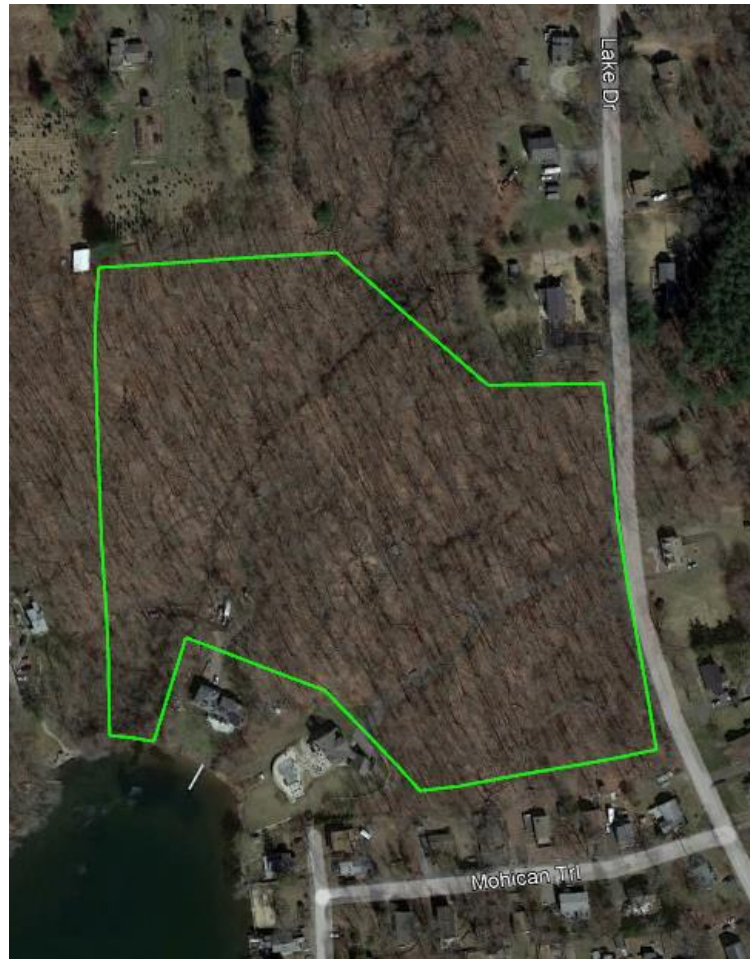
Appendix B – Proposed Catchment Maps and Hydrologic Properties

Appendix C – Proposed Drainage Analysis

Appendix D – Water Quality Calculations

## Introduction

The Minor Family property is located on Lake Drive on the north shore of Lake Pocotopaug. It presently has no address and is immediately upland from 198 Lake Drive. The site is composed of 15.2 acres of undeveloped land. The property is owned by Victoria Man (formerly Minor).



This drainage report has been prepared to describe proposed site improvements and proposed storm water quality treatment systems.

## Existing Site Conditions

The site is presently undeveloped except for a gravel driveway and gravel parking area used to access 198 Lake Drive. The average slope of the site is approximately 6% from northeast to southwest, or toward the lake. The site is bound to the south by homes on Mohican Trail, to the north and west by undeveloped land, and to the east by Lake Drive.

The site presently discharges stormwater overland toward the lake in two intermittent, undefined channels. The property is bounded downgradient by 198 Lake Drive and by the lake itself.

The previously undeveloped site has zero total impervious coverage, except for the existing gravel road.

## Existing Soil Conditions

Review of NRCS soil survey data indicated a variety of soil types were present on the site. The report of this soil data is located in **Appendix A**.

## Existing Drainage Conditions

As previously described, the subject site discharges stormwater to the southwest via overland flow onto the neighboring properties and toward Lake Pocotopaug. The site is heavily wooded. Two intermittent, undefined channels convey surface runoff to Lake Pocotopaug. No other drainage system or structures were noted on the site.

Existing Catchments: A theoretical catchment representing the area of future improvements is shown in the figure titled "Existing Drainage Conditions" in **Appendix A**.

Existing storm events: Theoretical rainfall data was used to create a hydraulic model of the existing and proposed conditions. The storm data was taken from NOAA Atlas 14

Existing flows: Using the above mentioned catchment delineation and theoretical storm events, an existing conditions model was created in CivilStorm

using the rational method (modified). This model was used to estimate stormwater flows from the area to be improved.

## **Proposed Improvements**

Construction of a single-family dwelling is proposed with associated paved parking areas, stormwater collection system, sanitary sewer service, and minor grading.

A bituminous concrete parking area is proposed. A catch basin will convey collected stormwater via proposed PVC pipe to a proposed detention pond. Building roof leaders will also connect to this system. As with the existing overland flows, this system will ultimately discharge stormwater overland toward the existing undefined channel on the property.

A pond is proposed to retain the 1" first flush Water Quality Volume (WQV) from the proposed impervious areas. An outlet structure will control discharge of additional stormwater to match existing peak flows. Calculations based on the CT Stormwater Quality Manual for the Water Quality Volume (WQV) and the proposed pond are included in **Appendix D**.

## **Proposed Conditions Design Approach**

After constructing the proposed site improvements and water quality improvements, the property will have more impervious coverage (proposed impervious coverage of 4% versus 2%) than the existing condition.

The intent of the proposed design, is to:

1. Install water quality measures to treat the first flush runoff from the sites, as well as detain stormwater runoff prior to discharging toward Lake Pocotopaug. The pond is sized to contain the first 1" of runoff from the site for water quality.
2. Provide a stormwater conveyance system to convey stormwater runoff from the site improvements toward the existing channels at historic discharge rates.
3. Provide a stormwater detention system with controlled outlet structure, designed to limit flows off the site to their pre-development values, accounting for theoretical storms up to and including the 100-year return period.

## Proposed Drainage Conditions

The proposed improvements will be constructed in compliance with applicable state regulations, including the General Permit for the Discharge of Stormwater. These regulations call for the pretreatment of stormwater runoff and for providing infiltration of the 1" theoretical storm event.

The proposed storm water conveyance system design is based on a theoretical 25-year frequency storm event. The proposed stormwater collection system will be comprised of a catch basin with minimum 1' sump, and PVC storm sewers which discharge to a detention pond.

Stormwater runoff calculations for the site were performed using the rational method, with catchment areas measured using Civil 3D (CAD). The proposed site hydraulics were analyzed using CivilStorm by Bentley.

Proposed conditions drainage area exhibits are included in *Appendix B*. The exhibits describe the drainage catchment area.

The proposed drainage model analysis results are included in *Appendix C*. Appendix C contains the following:

1. "Scenario: Pre-Development" and "Scenario: Post-Development" showing the setup of the model.
2. Hydraulic Model Results: Profiles for the theoretical 2, 5, 10, 25, 50, and 100 year storm events.
3. Hydrographs of the Existing and Proposed 2, 5, 10, 25, 50, and 100 year storm events.

Stormwater runoff from all the proposed improvements shall be collected within the proposed storm sewer system and ultimately conveyed west toward the detention pond. Ultimately, all flows from the site discharge toward Lake Pocotopaug in existing intermittent watercourses.

*Appendix D* contains the water quality calculations for the proposed site, following the guidance of the CT Stormwater Quality Manual. The bottom of the proposed pond will provide the required water quality volume. A controlled outlet structure is proposed at the pond, as shown in the calculations in Appendix D.

A summary of the results of the water quality calculations is as follows:

1. Water Quality Volume Required = 447 CF
2. Water Quality Storage Elevation = 513.75

Peak-flow rates from the proposed project site will be controlled by additional storage within pond above the elevation of the Water Quality Volume in combination with the proposed outlet control structure. The outlet control structure has been designed with multiple outlets for control of discharge at historic rates of the 2, 5, 10, 25, 50, and 100-year design storms. Stormwater runoff during the 50 and 100-year storms may overtop the catch basin resulting in overland flows similar to the existing condition.

Analysis Point – Site Outlet							
		Peak Runoff Rate (CFS)					
Storm Frequency (years)	Area (ac)	2	5	10	25	50	100
Existing Condition (O-1)	0.307	0.25	0.33	0.39	0.48	0.54	0.61
Proposed Condition (O-1)	0.307	0.03	0.04	0.05	0.05	0.06	0.06

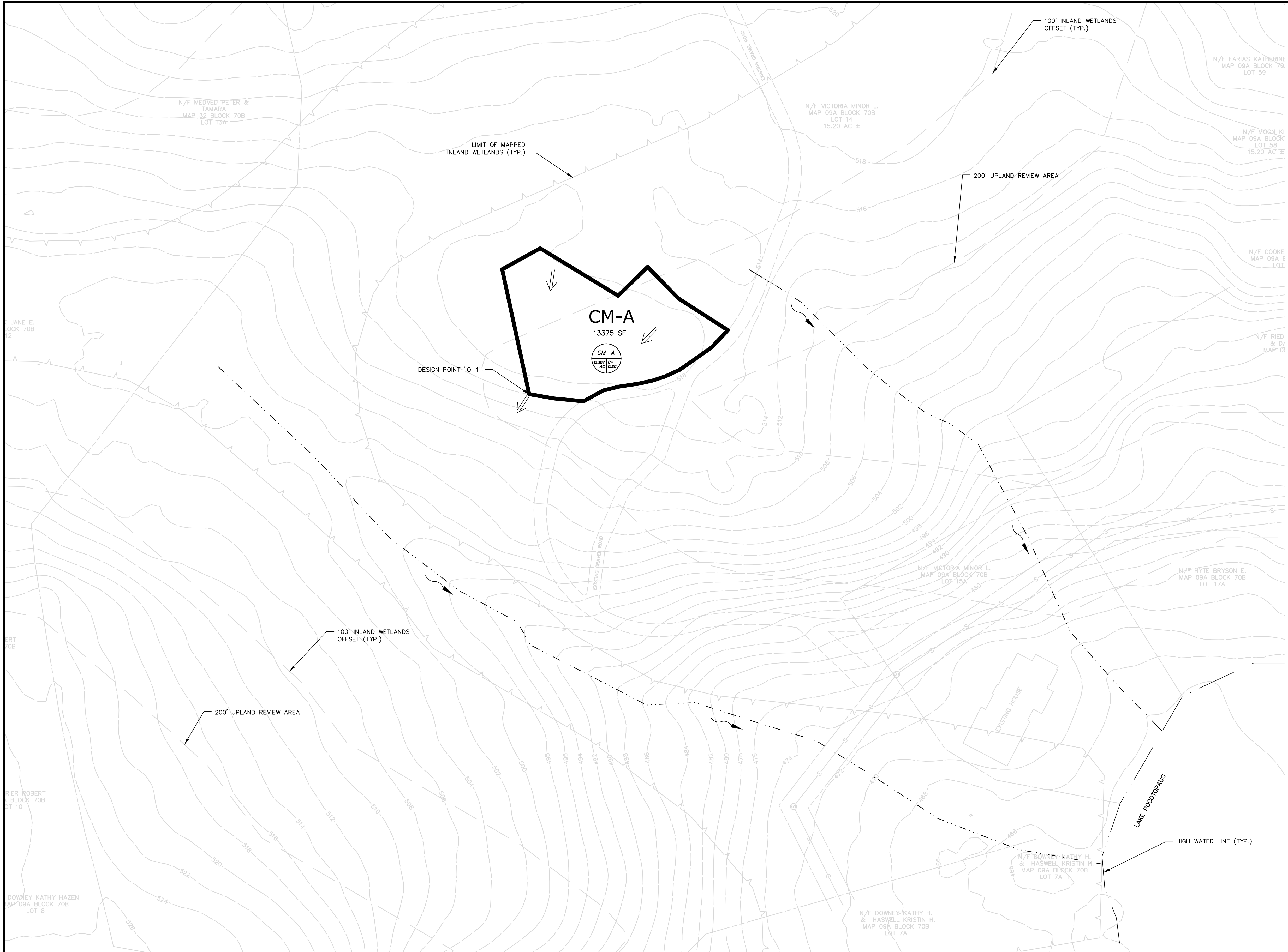
The above analysis does not include the exfiltration from the pond under existing or developed conditions.

### Summary

The storm drainage system has been designed to convey stormwater runoff from the 25-year storm to western property boundary. Stormwater flows off the site shall be consistent with the existing condition.



## **APPENDIX A**



**LEGEND**

← SURFACE FLOW DIRECTION

○ CATCHMENT NAME

○ AREA

○ RUNOFF COEFFICIENT

FILE PATH: H:\Projects\22190 - Minor Lakeside Site Plan\AutoCAD\22190 - EXDR.dwg PLOT DATE: 4/19/2023 PLOT TIME: 1:47:11 PM

REV. NO.	DATE	DRWN	CHKD	REMARKS

PROJECT NO.: 22190  
 DESIGNED BY: X  
 DRAWN BY: X  
 SHEET CHK'D BY: X  
 CROSS CHK'D BY: X  
 APPROVED BY: X  
 DATE: APRIL 2023

PREPARED FOR:  
**TUCKER MINOR**  
 198 LAKE DRIVE  
 EAST HAMPTON, CT 06424

PREPARED BY:  
**zuvic**  
 INFRASTRUCTURE SOLUTIONS  
 40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
 (860) 436-4901 WWW.ZUVIC.COM

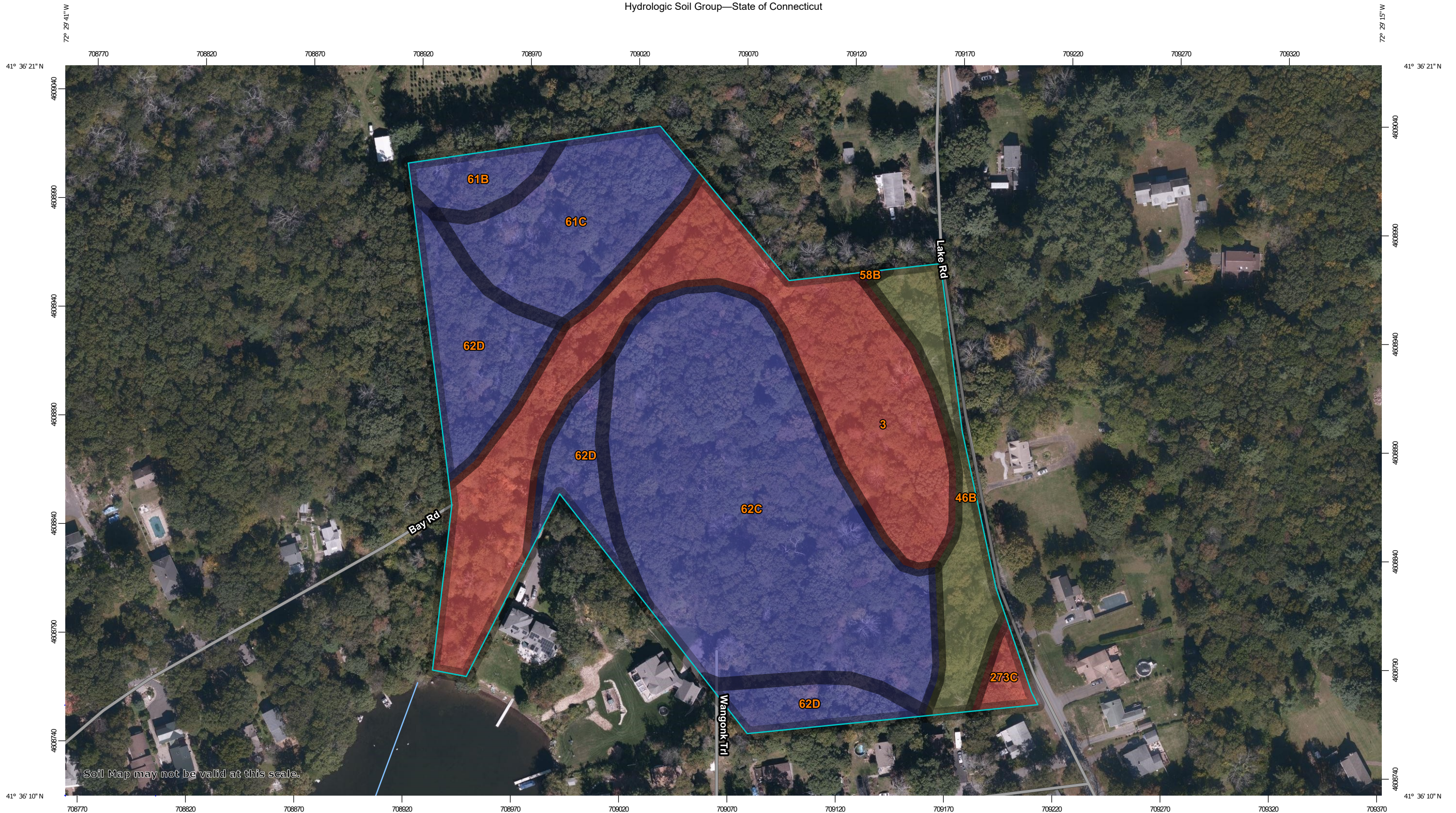
MINOR RESIDENCE  
 LAKE DRIVE  
 EAST HAMPTON, CT 06424

EXISTING DRAINAGE AREAS

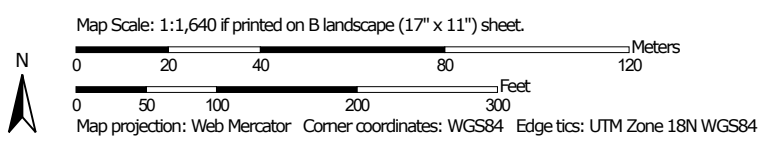
SHEET NO.  
**EXDR**



Hydrologic Soil Group—State of Connecticut



Soil Map may not be valid at this scale.





## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons

 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Lines

 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Points

 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available

### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

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

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

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

Soil Survey Area: State of Connecticut  
 Survey Area Data: Version 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Sep 3, 2019—Oct 22, 2019

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

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	D	3.5	26.8%
46B	Woodbridge fine sandy loam, 0 to 8 percent slopes, very stony	C/D	1.0	7.3%
58B	Gloucester gravelly sandy loam, 3 to 8 percent slopes, very stony	A	0.0	0.1%
61B	Canton and Charlton fine sandy loams, 0 to 8 percent slopes, very stony	B	0.4	2.8%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	B	1.5	11.2%
62C	Canton and Charlton fine sandy loams, 3 to 15 percent slopes, extremely stony	B	4.8	36.4%
62D	Canton and Charlton fine sandy loams, 15 to 35 percent slopes, extremely stony	B	1.9	14.3%
273C	Urban land-Charlton-Chatfield complex, rocky, 3 to 15 percent slopes	D	0.2	1.2%
<b>Totals for Area of Interest</b>			<b>13.1</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

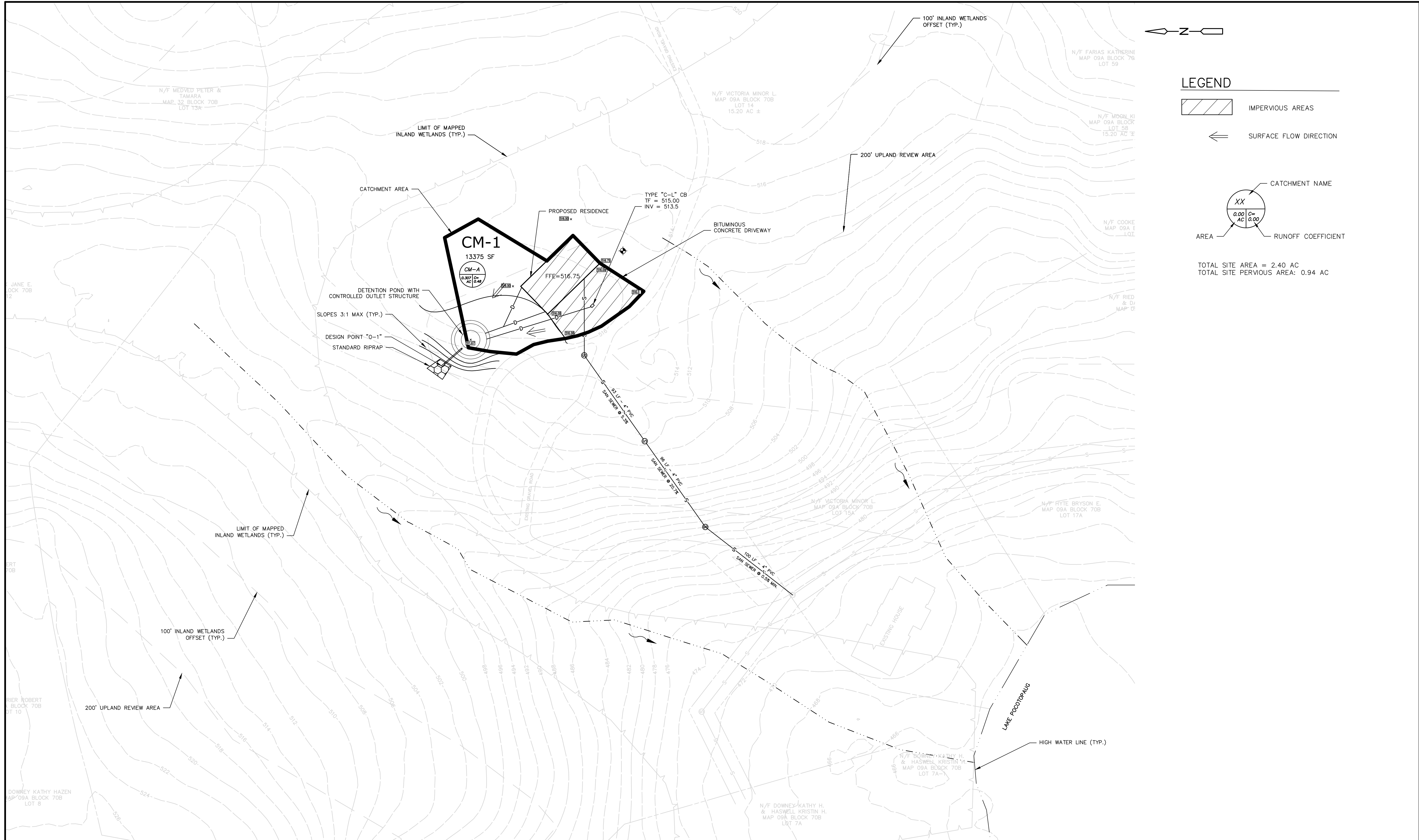
*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher



## **APPENDIX B**



**LEGEND**

IMPERVIOUS AREAS

SURFACE FLOW DIRECTION

CATCHMENT NAME  
AREA      RUNOFF COEFFICIENT

TOTAL SITE AREA = 2.40 AC  
TOTAL SITE PERVIOUS AREA: 0.94 AC

FILE PATH: H:\Projects\22190 - Minor Lakeside Site Plan\AutoCAD\22190 - PRDR.dwg PLOT DATE: 4/19/2023 PLOT TIME: 1:47:27 PM

REV. NO.	DATE	DRWN	CHKD	REMARKS

PROJECT NO.: 22190  
 DESIGNED BY: X  
 DRAWN BY: X  
 SHEET CHK'D BY: X  
 CROSS CHK'D BY: X  
 APPROVED BY: X  
 DATE: APRIL 2023

PREPARED FOR:  
**TUCKER MINOR**  
 198 LAKE DRIVE  
 EAST HAMPTON, CT 06424

PREPARED BY:  
**zuvic**  
 INFRASTRUCTURE SOLUTIONS  
 40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067  
 (860) 456-4901 WWW.ZUVIC.COM

**MINOR RESIDENCE**  
 LAKE DRIVE  
 EAST HAMPTON, CT 06424

**PROPOSED DRAINAGE CONDITIONS**

SHEET NO.  
**PRDR**

## Rational Method Individual Basin Calculations

Project: Tucker Minor  
 Location: 198 Lake Drive Upper Lot

By: DV  
 Checked: FW  
 Date: 4/17/2023  
 Date: 4/17/2023

### EXISTING CONDITIONS

Basin Name	Impervious Area C=.9 (sf)	Gravel Area C=.6 (sf)	Grassed Area C=.3 (sf)	Wooded Area C=.2 (sf)	Total Area (sf)	Total Area (ac)	Weighted C	Tc (min)*	% Impervious
CM-1				13375	13375	0.307	0.20	5.0	0%
TOTAL	0	0			13375	0.307	0.20		0%

\*Minimum Tc = 5 min.

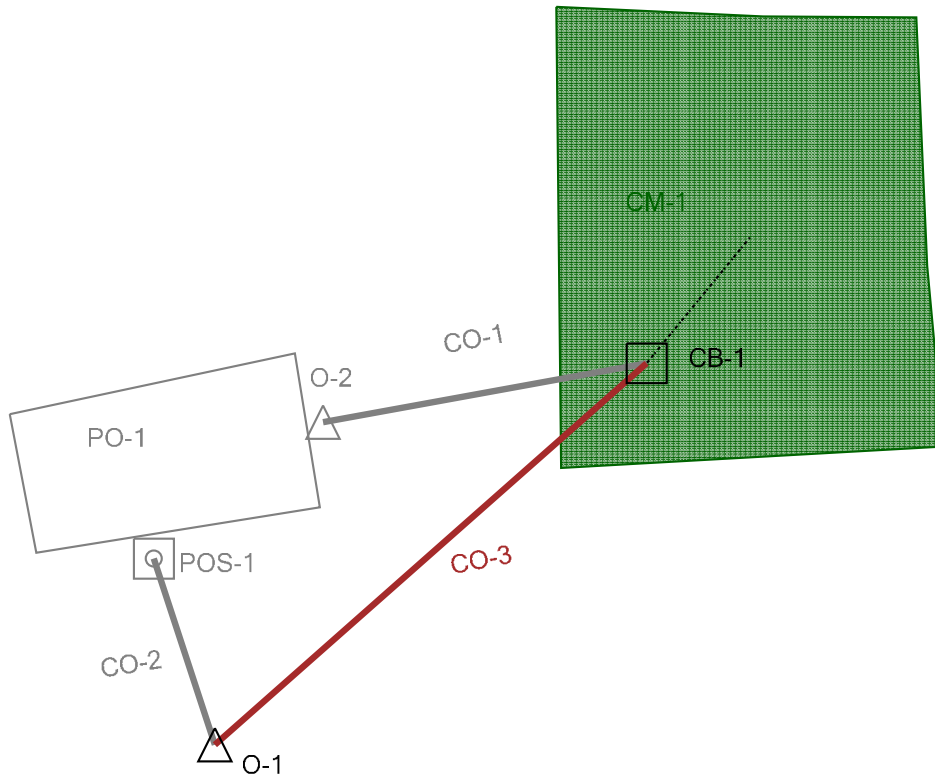
### PROPOSED CONDITIONS

Basin Name	Impervious Area C=.9 (sf)	Gravel Area C=.6 (sf)	Grassed Area C=.3 (sf)	Wooded Area C=.2 (sf)	Total Area (sf)	Total Area (ac)	Weighted C	Tc (min)*	% Impervious
CM-1	5364			8011	13375	0.307	0.48	5.0	40%
TOTAL	5364	0			13375	0.307	0.48		40%

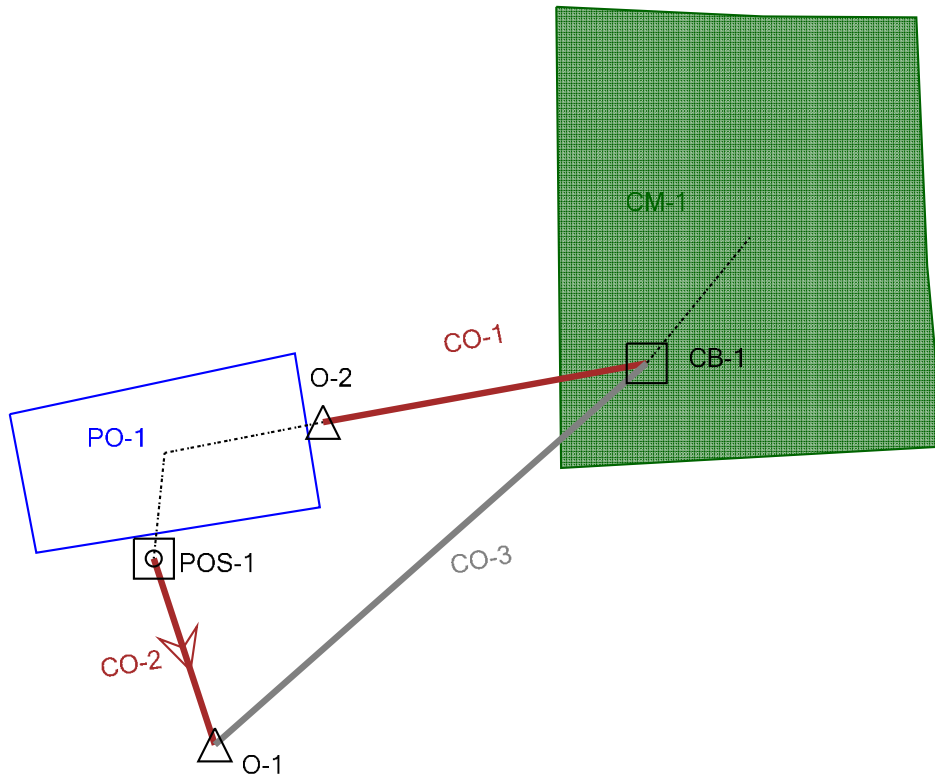
\*Minimum Tc = 5 min.

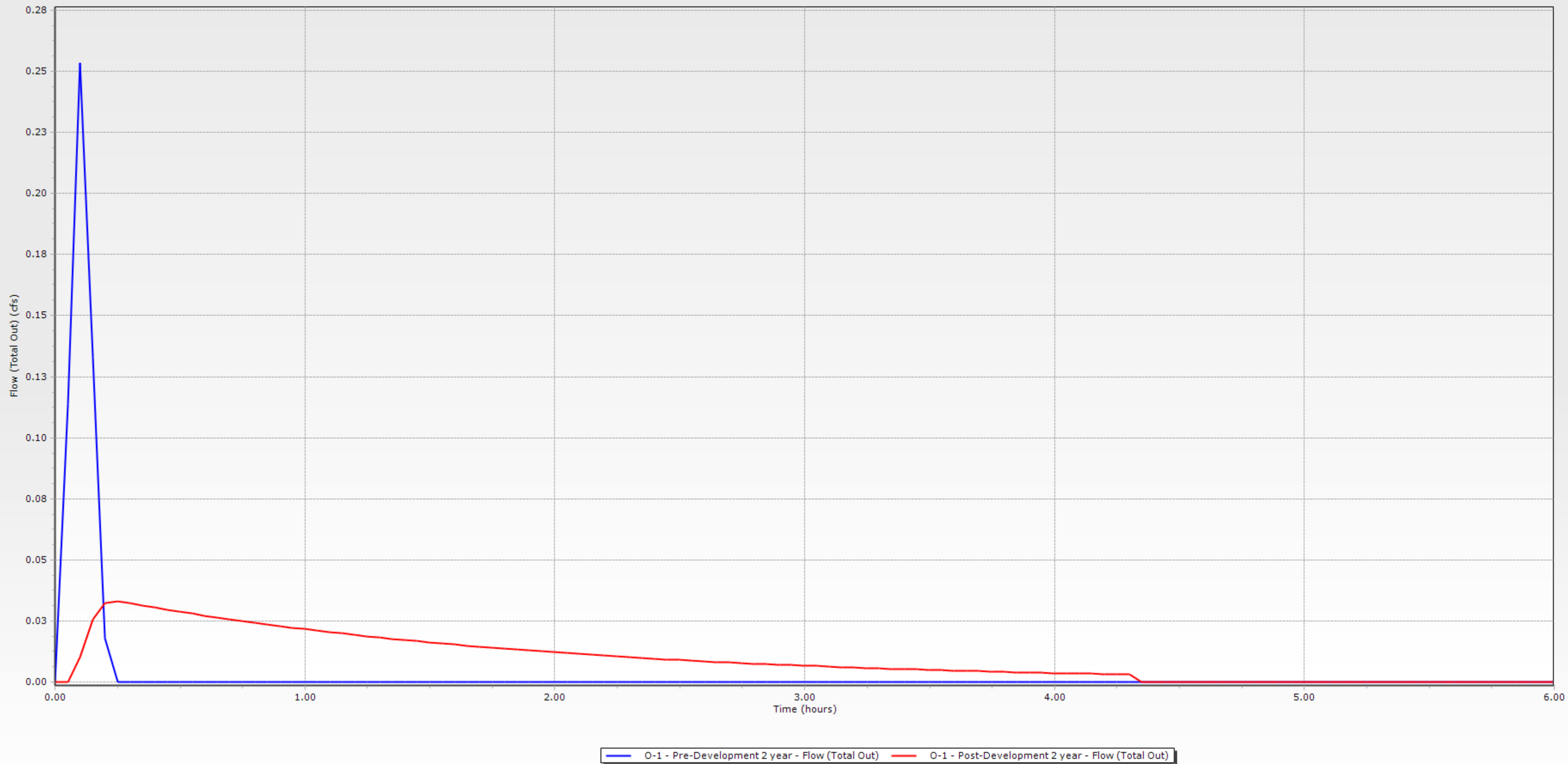
## **APPENDIX C**

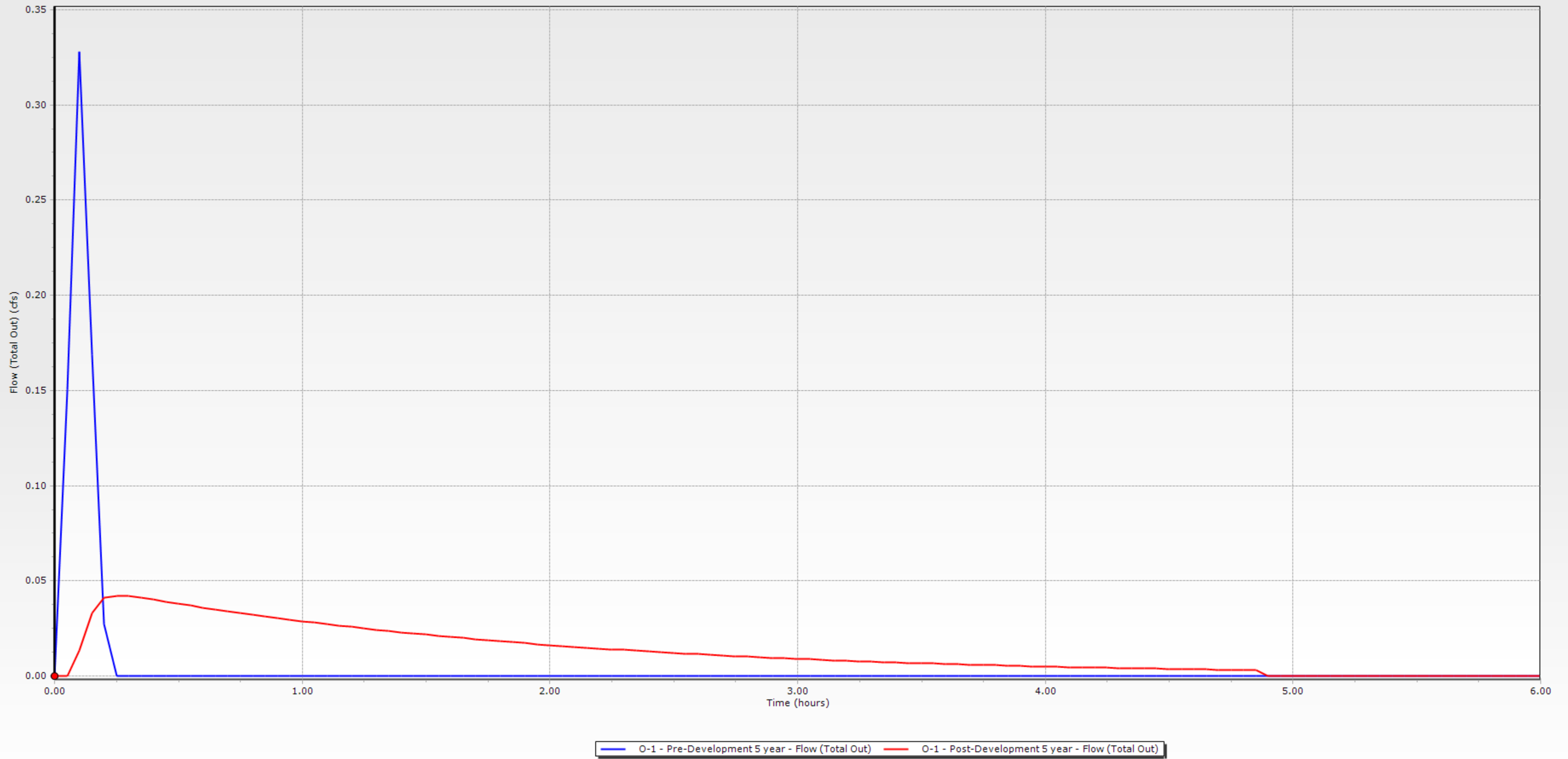
# Scenario: Pre-Development 2 year



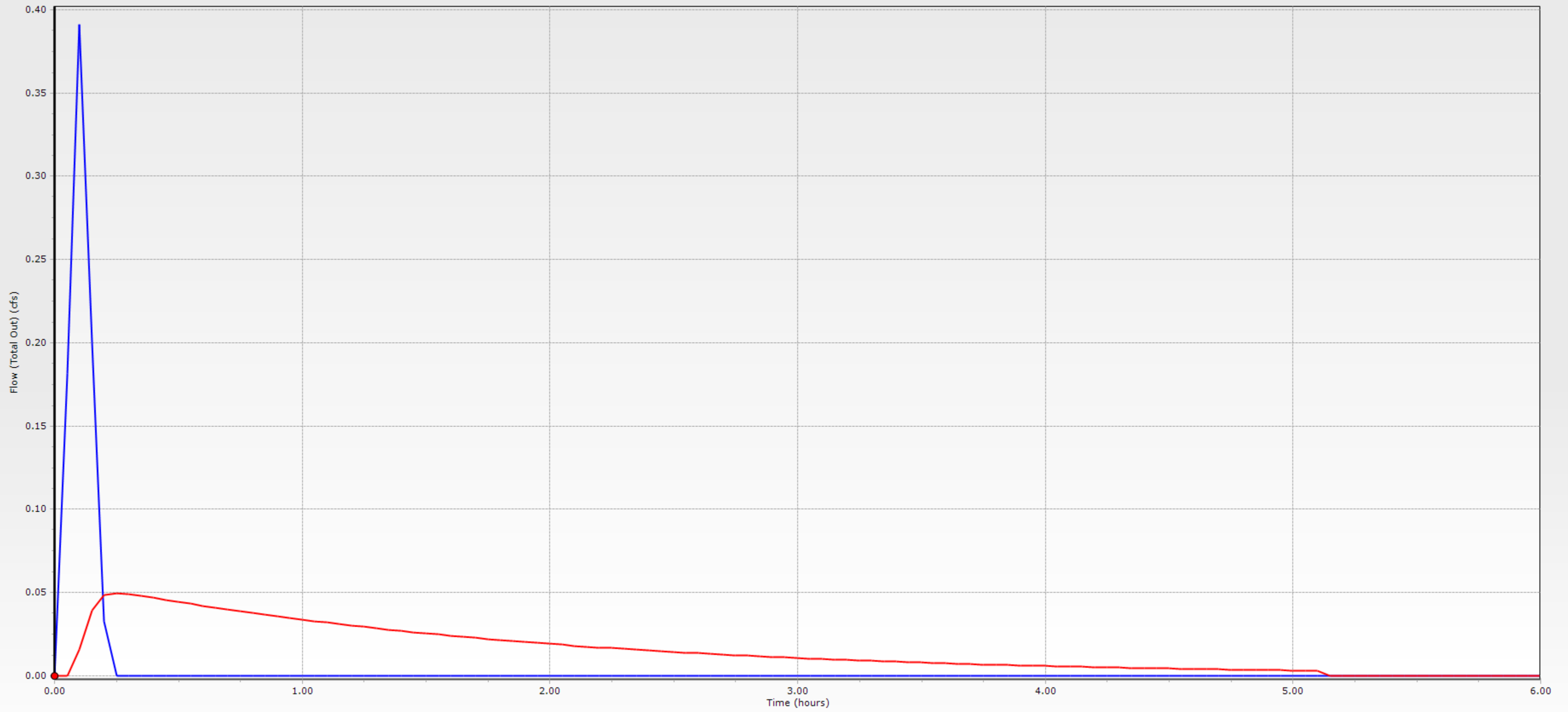
# Scenario: Post-Development 2 year



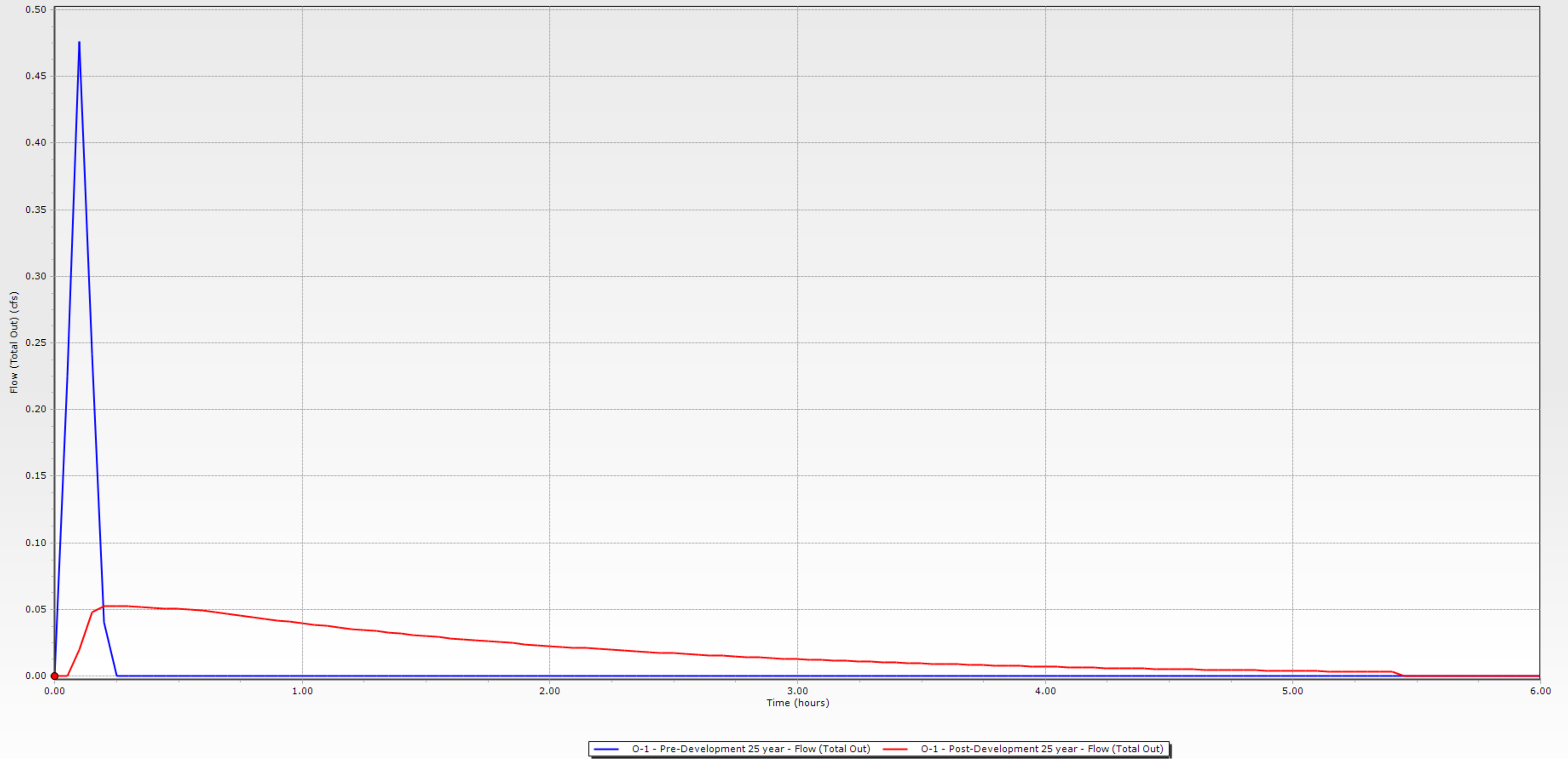


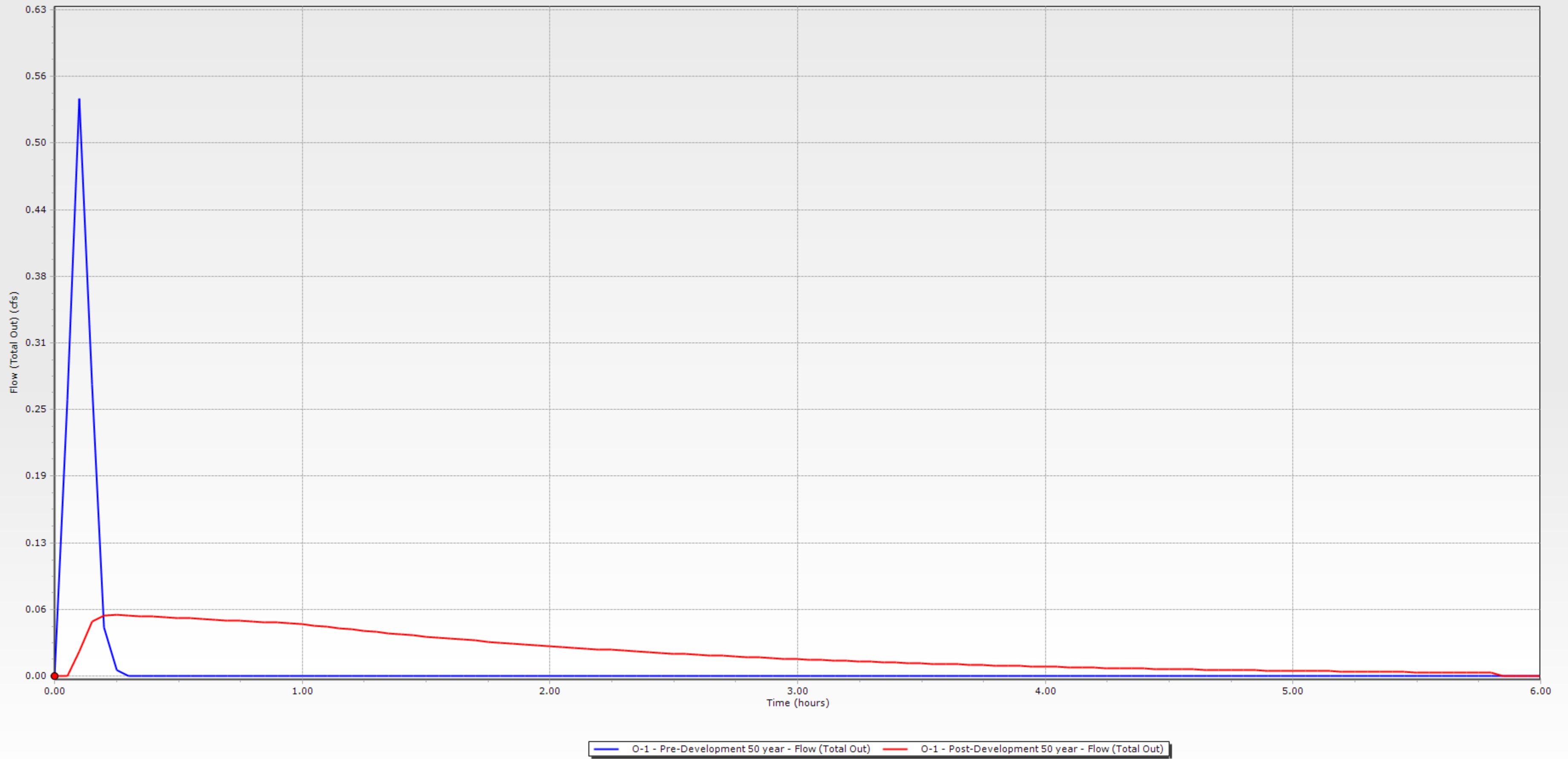


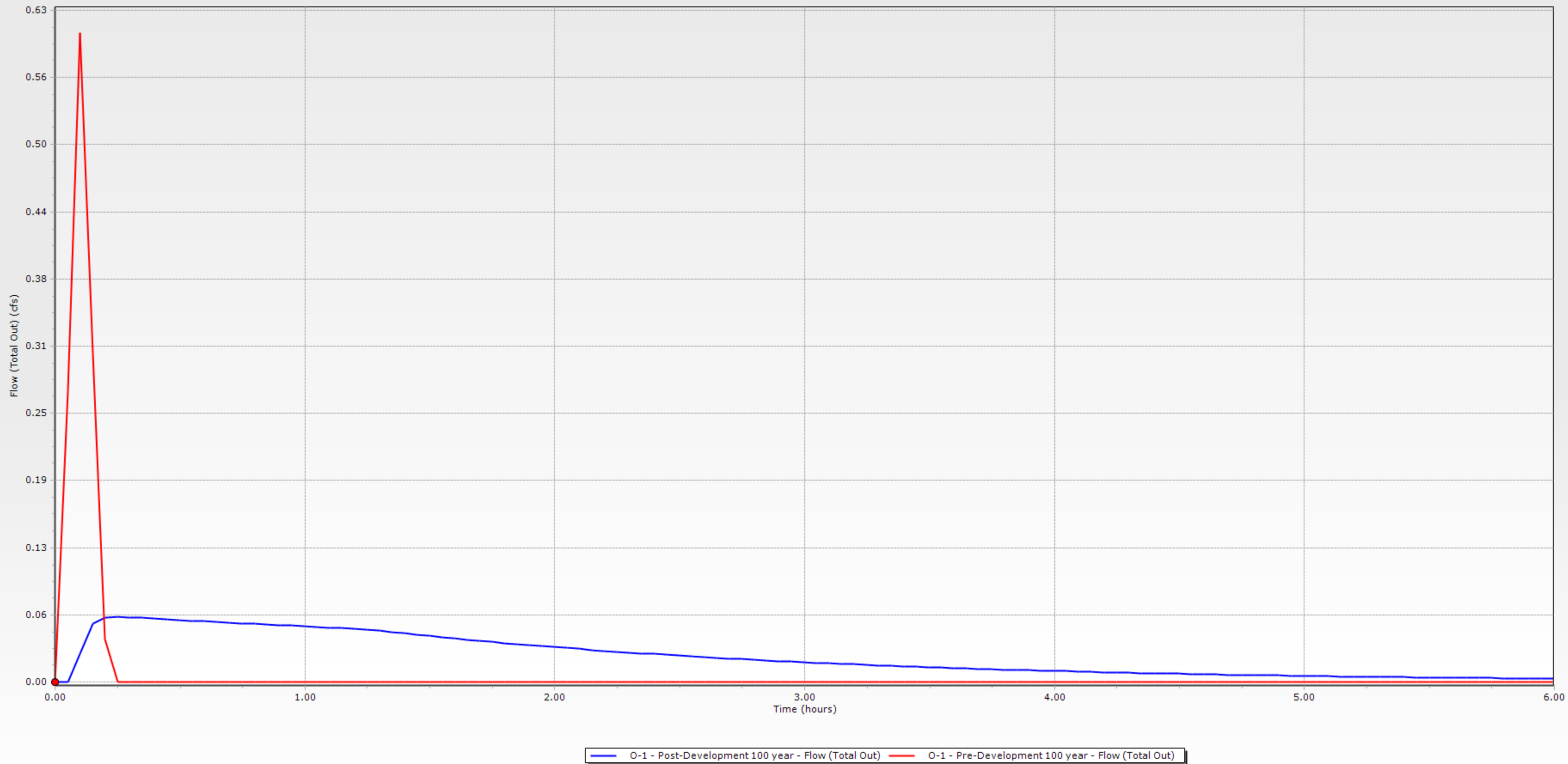




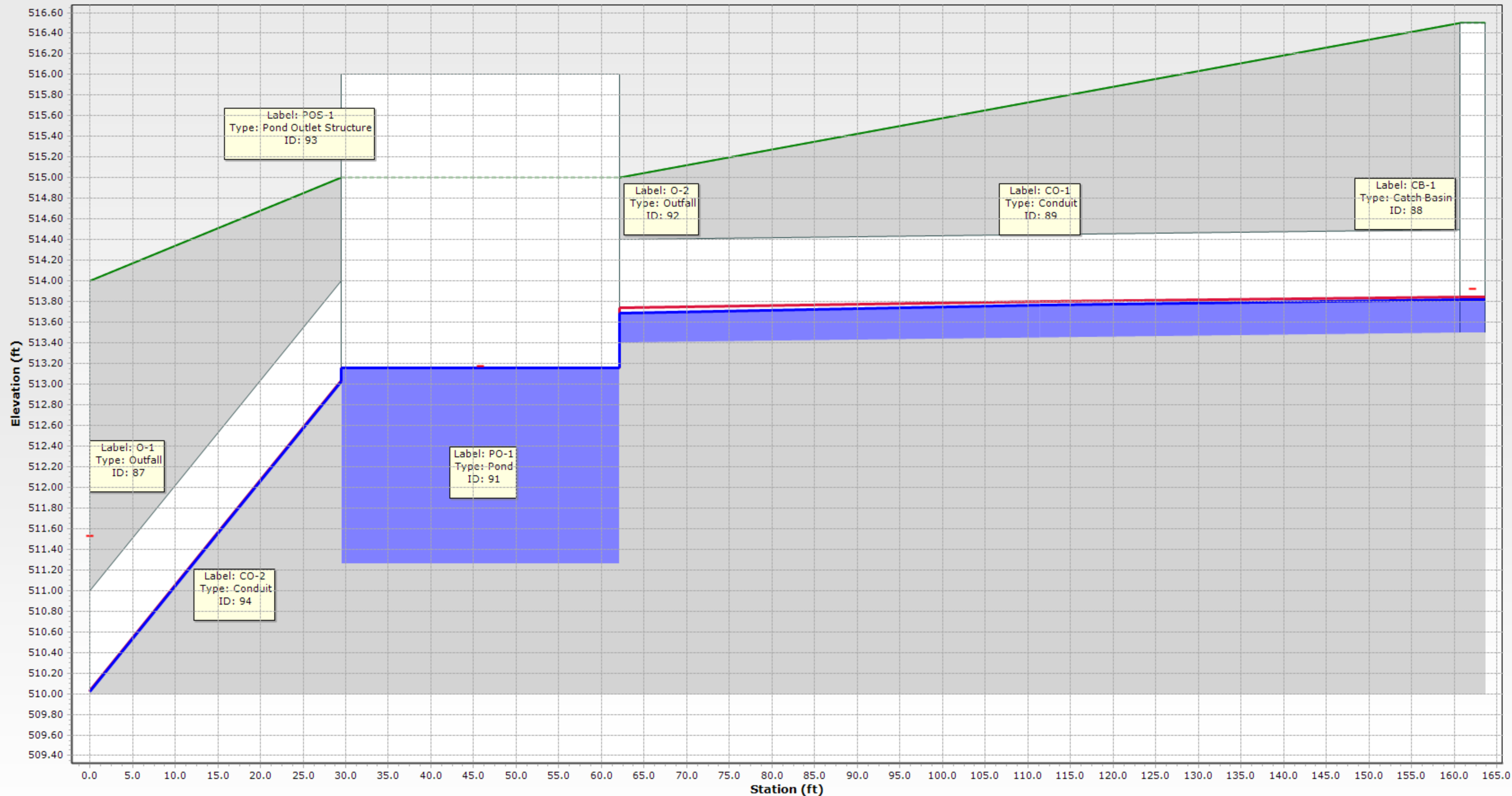
O-1 - Pre-Development 10 year - Flow (Total Out) O-1 - Post-Development 10 year - Flow (Total Out)





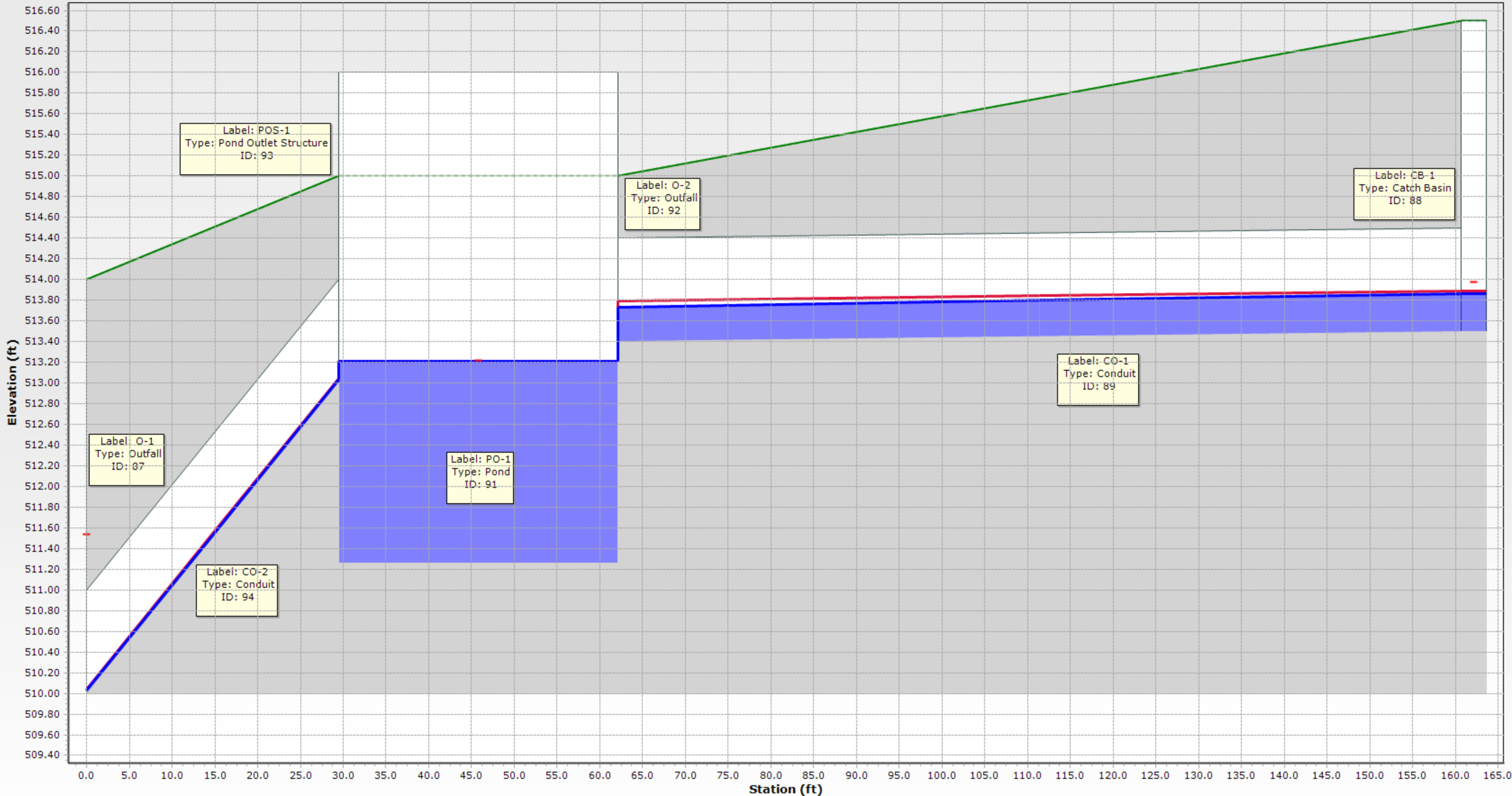


Profile - 1 - Post-Development 2 year - Time: 0.15

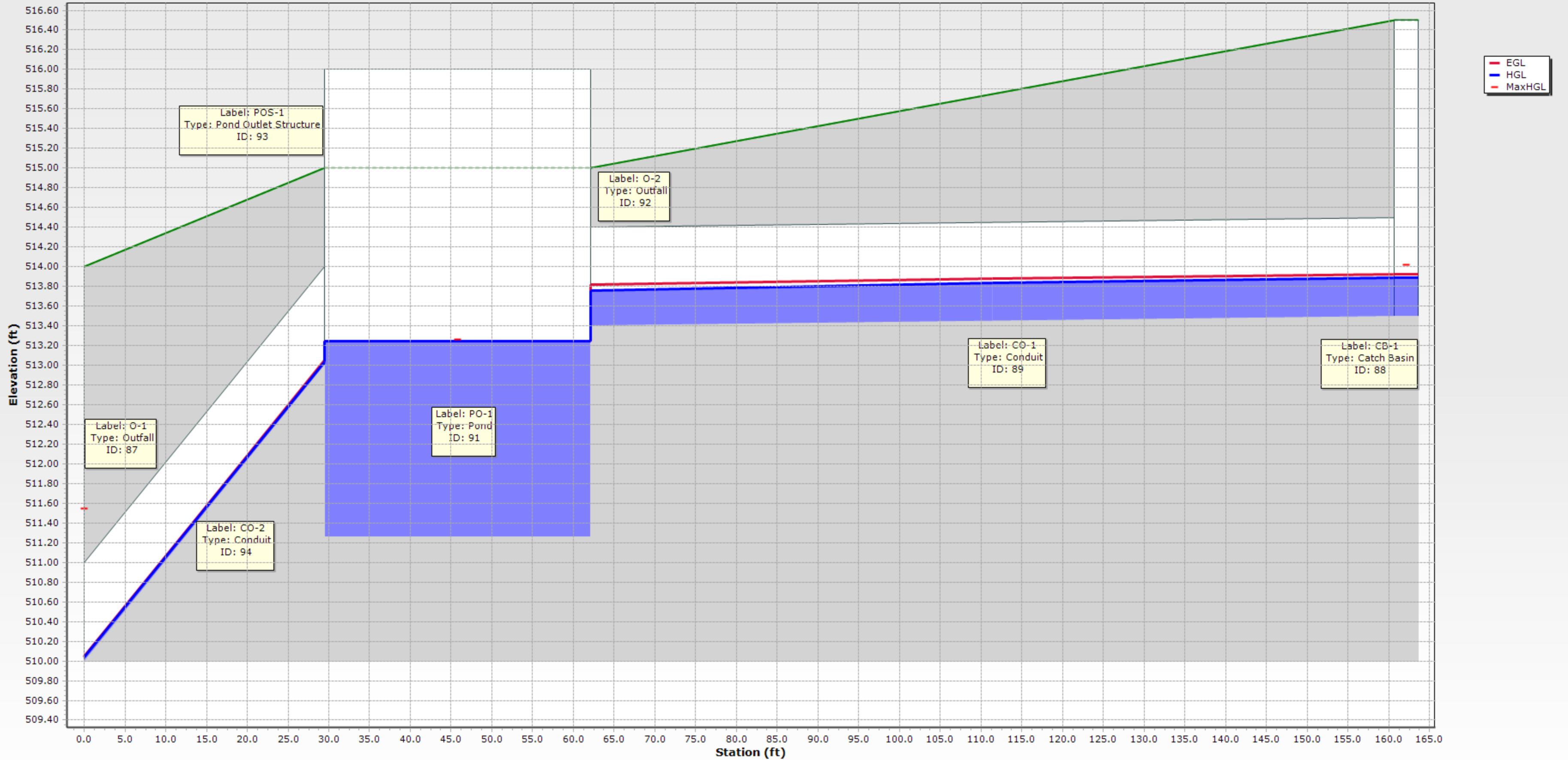


EGL  
HGL  
MaxHGL

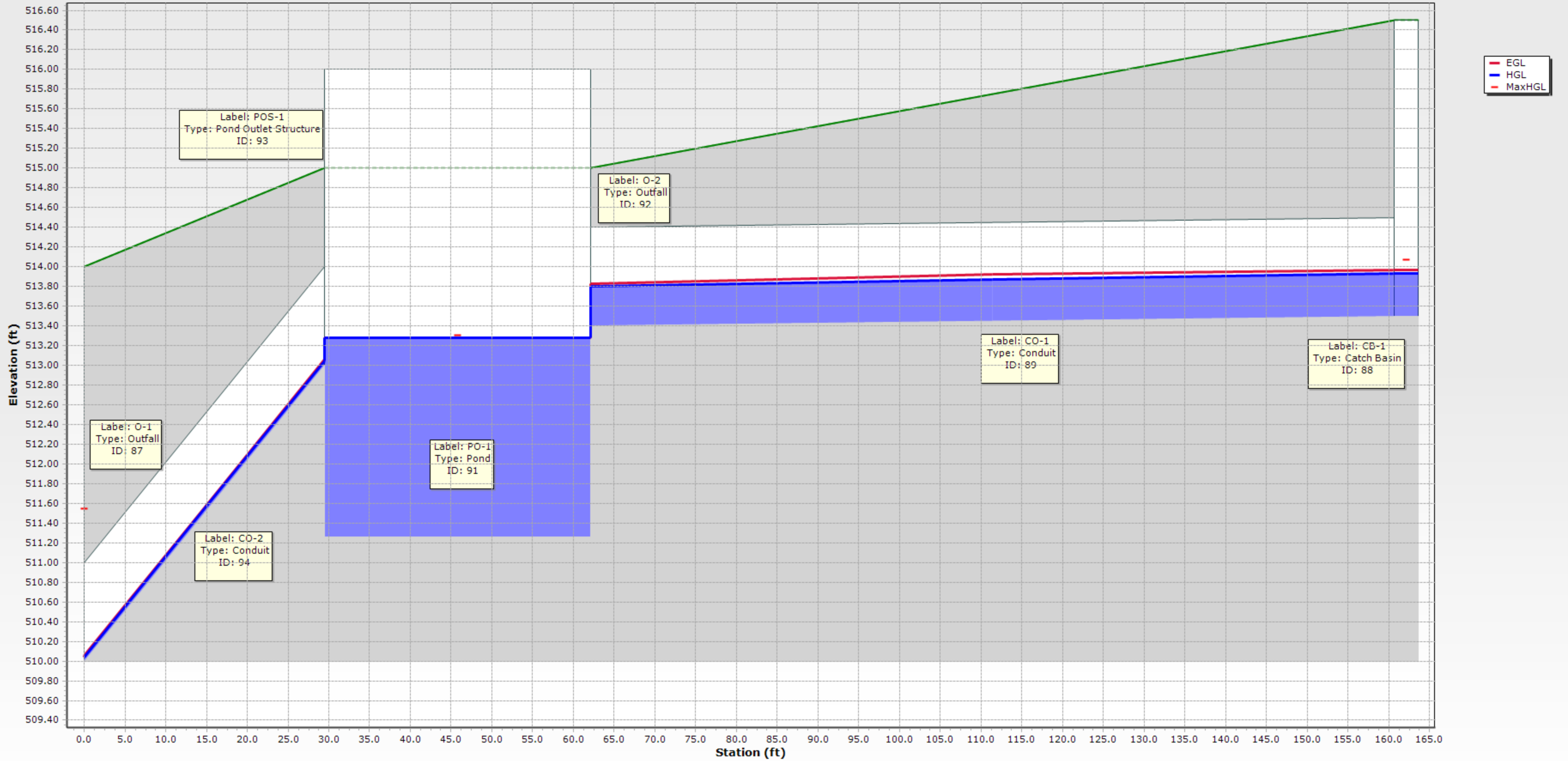
Profile - 1 - Post-Development 5 year - Time: 0.15



Profile - 1 - Post-Development 10 year - Time: 0.15

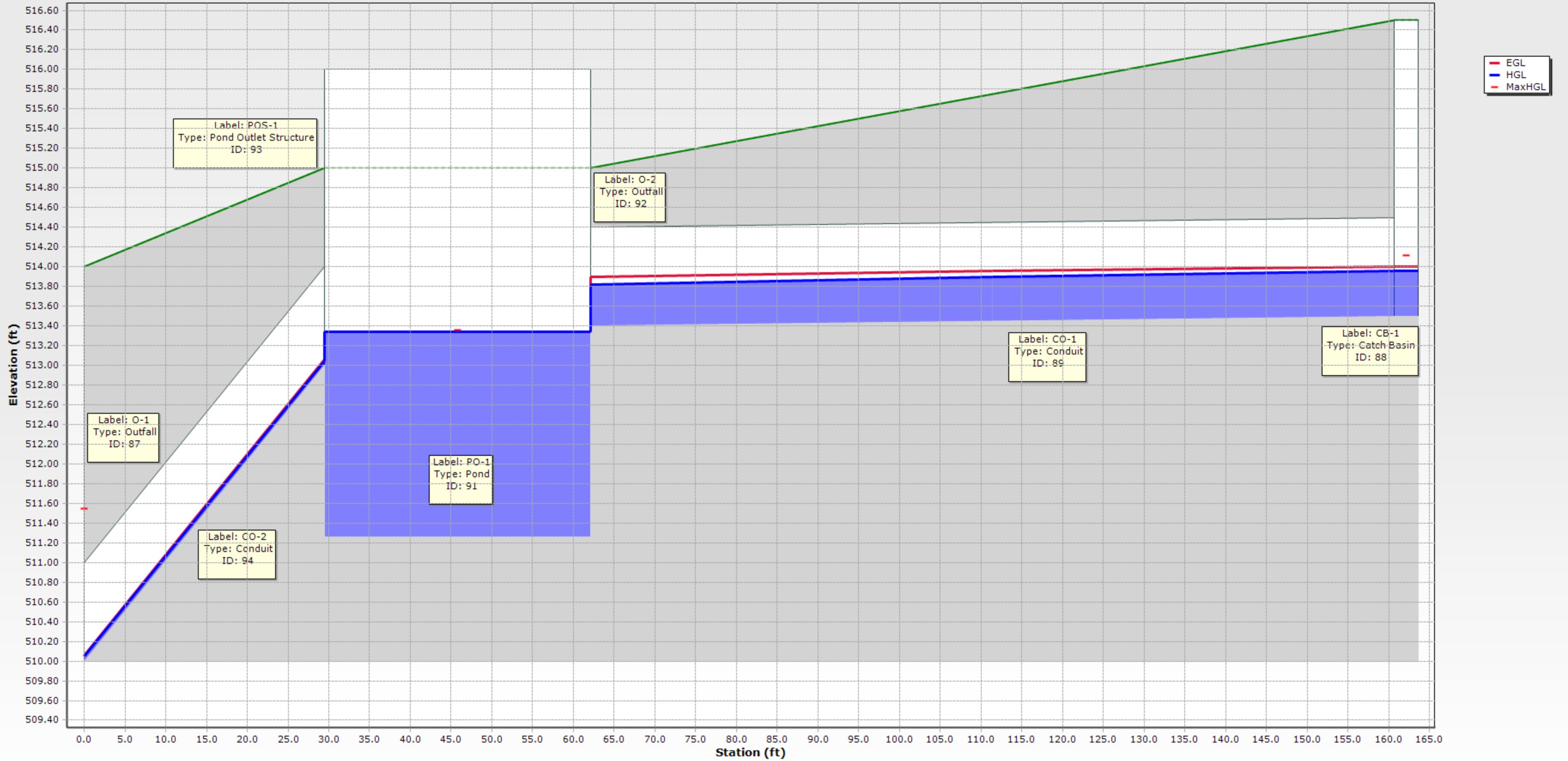


Profile - 1 - Post-Development 25 year - Time: 0.15

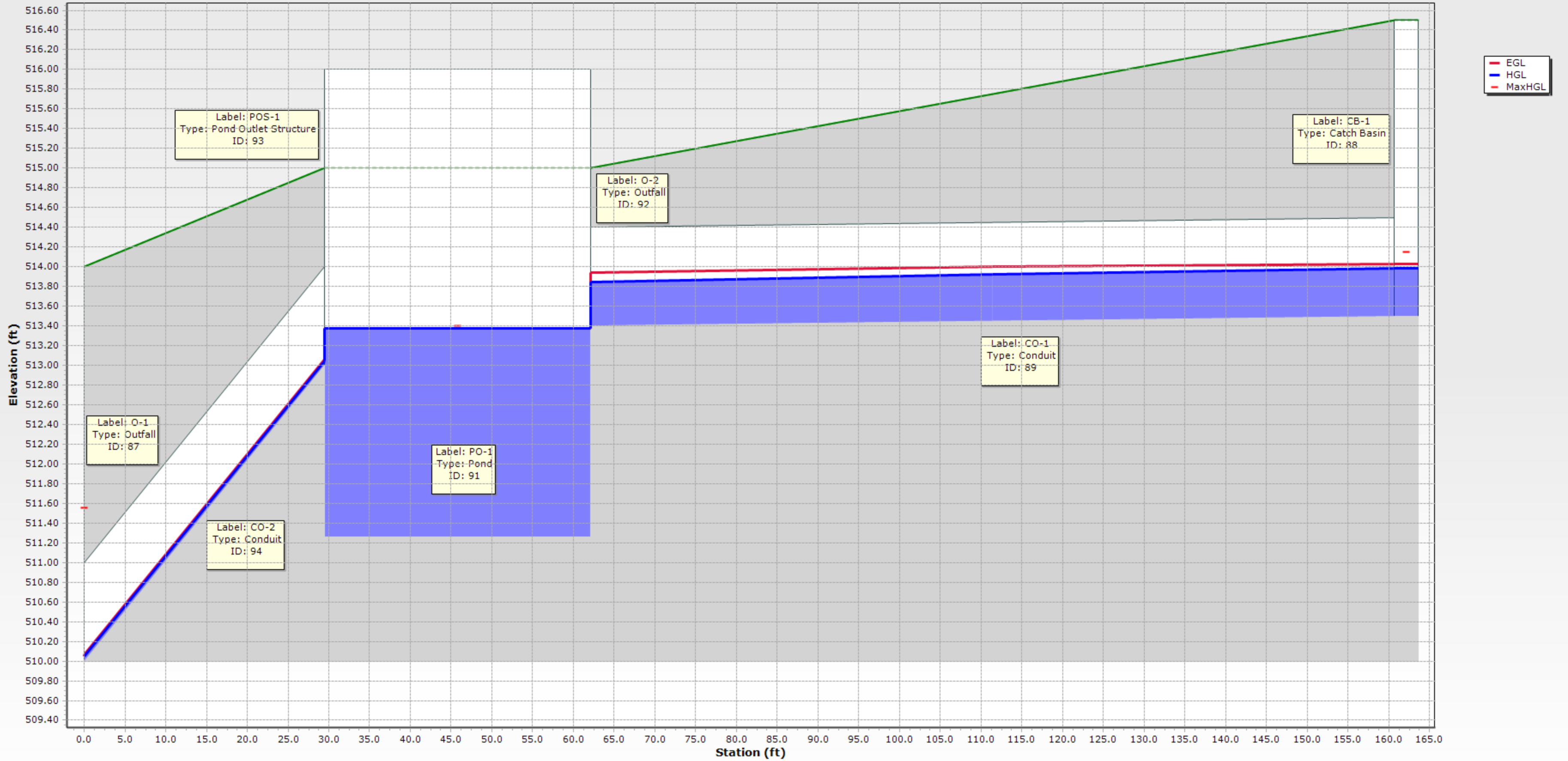




Profile - 1 - Post-Development 50 year - Time: 0.15



Profile - 1 - Post-Development 100 year - Time: 0.15



25-Year Conduit Report

Label	Start Node	Stop Node	Length (Unified) (ft)	Capacity (Full Flow) (cfs)	Flow (Maximum) (cfs)	Velocity		Hydraulic Grade (Maximum) (ft)	Slope (Calculated) (ft/ft)	Is Ever Surcharged?	Notes	
						(Maximum Calculated) (ft/s)	Invert (Start) (ft)					
CO-1	CB-1	O-2	100	0.46	1.13	2.88	513.5	513.4	514.67	0.001	TRUE	
CO-2	POS-1	O-1	29.4	0.46	0.05	1.27	513	512	513.1	0.034	FALSE	

## **APPENDIX D**



40 COLD SPRING  
ROAD ROCKY HILL,  
CT 06067

PROJECT	DATE
LOCATION	DATE

**Pond Storage**

Elev	A Total Area (sf)	V Volume per Elev (cf)	V Volume per Elev (Ac-ft)	Total Cumulative Volume (cf)	Total Cumulative Volume (Ac-ft)
511.6666667	177				
512	227	67	0.00	67	0.00
514	660	887	0.02	954	0.02
515	962	811	0.02	1,765	0.04





Property Abutters  
Inland Wetlands Application  
Minor Family Residence  
Lake Drive  
April 2023

Kathy Hazen Downey & Kristine H. Haswell  
145 Parker Street  
Lowell, MA 01851

Kathy Hazen Downey  
166 Lake Drive  
East Hampton, CT 06424

Robert Currier  
170 Lake Drive  
East Hampton, CT 06424

Robert Currier  
172 Lake Drive  
East Hampton, CT 06424

Jane E. Knotek  
174 Lake Drive  
East Hampton, CT 06424

Tamara & Peter Medved  
188 Lake Drive  
East Hampton, CT 06424

Dennis J. Lavigne III  
193 Lake Drive  
East Hampton, CT 06424

Spencer Daly  
195 Lake Drive  
East Hampton, CT 06424

Victoria L. Man  
198 Lake Drive  
East Hampton, CT 06424

Joanne M. Breton  
201 Lake Drive  
East Hampton, CT 06424

Bryson E. Hyte  
202 Lake Drive  
East Hampton, CT 06424

Wayne H. Maynard  
206 Lake Drive  
East Hampton, CT 06424

Jessica Lee Tully  
209 Lake Drive  
East Hampton, CT 06424

David Jackson  
211 Lake Drive  
East Hampton, CT 06424

A.J. Laplanta  
6 Mohican Trail  
East Hampton, CT 06424

Pamela M. & Jeffery L. Cowan  
8 Mohican Trail  
East Hampton, CT 06424

Katherine M. Farias  
10 Mohican Trail  
East Hampton, CT 06424

Kim Moon  
12 Mohican Trail  
East Hampton, CT 06424

Damon G. Cooke  
16 Mohican Trail  
East Hampton, CT 06424