

Memorandum

- ▲ Date: 2/23/2026
- ▲ Attention: CT DEEP Reviewer
- ▲ Regarding: Permit Number GSN004035 – Mirror Lake - Resubmission
- ▲ Project Name: Mirror Lake
- ▲ Project Number: #300174
- ▲ From: Daniel Cefaratti, P.E.

Remarks

The General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities, effective 12/31/2020, modified 11/25/2022 (general permit) was approved for the Mirror Lake project on April 12th, 2024 under Application NO.: 202401838, GSN004035.

Under the regulations of the current general permit (effective January 1, 2026), the Mirror Lake project's permit must be renewed. The project has been substantially complete since approximately December 2025.

A portion of the site, approximately 0.95 acres, will have sod installed in the spring of 2026. All other portions of the site are stabilized. All water quality structures have been installed and the dam and spillway are complete.

Post construction inspection was completed on September 02, 2025 and final stabilization inspection will take place when the remaining sod is installed.

Attached to this memo is the Stormwater Pollution Control Plan associated with the original application.



STORMWATER POLLUTION CONTROL PLAN

Mirror Lake Improvements

Project # 300174

**Mansfield Road
Storrs, Connecticut**

February 9, 2024

BVH Integrated Services, Inc.

206 West Newberry Road, Bloomfield, CT 06002

ph. (860) 286-9171

One Gateway Center, Suite 701, Newton, MA 02458

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1. Introduction

This Stormwater Pollution Control Plan (SWPCP) is being provided as required by Section 5(b) of the 2020 General Permit for the Discharge of Stormwater and Dewatering from Construction Activities.

Mirror Lake is located on the University of Connecticut Storrs Campus between Mansfield Road and Route 195.

The project consists of reconstruction of the existing dam and spillway. Construction of a sediment forebay, hydrodynamic separators, storm drainage infrastructure. New walks and lighting are included as alternates to the project. The improvements are being constructed to enhance lake health, bring the dam up to current standards, and for stormwater management purposes.

The project will be disturbing approximately 3.42 acres. Refer to drawings in Appendix A for total limits of disturbance.

The base bid project is proposing to decrease impervious coverage by 0.14 acres. Should project budget allow, an existing walk to be demoed will be replaced resulting in no net change in impervious coverage.

Construction is expected to be started March 2025 and be complete by December 2025.

Other Permits

The project is being reviewed/authorized under the following permits

- CT DEEP LWRD License for activities in Inland Wetlands and Watercourses
- USACE Section 404, Individual Permit
- Dam Safety Individual Permit for Repairs/Modifications
- CTDEEP Master Plan Flood Management Certification Verification Report

Relevant Information:

Owner:	University of Connecticut
Developer:	University of Connecticut
Construction Mgr.	Turner Construction
Engineer:	Salas O'Brien
Contractor:	TBD
Registrant:	University of Connecticut

2. Site Description and Drainage Patterns

2.1. Hydrology/Hydraulic - Pre-Development Conditions

Mirror Lake is a major stormwater management facility as well as an iconic landscape feature on the UConn Storrs CT campus. The lake, earthen berm and spillway serve as a stormwater detention facility. Approximately 165 acres of watershed drain to the lake via seven (7) piped discharges, with a small portion of overland flow also draining to the lake.

Flows are discharged over a concrete spillway and travel downstream via Roberts Brook and eventually discharge into the Fenton River.

Refer to drawings in Appendix A for additional information.

2.2. Hydrology/Hydraulic - Post-Development Conditions

The project will maintain drainage patterns similar to the existing condition. The spillway of the lake is being reconstructed in order to provide additional stormwater attenuation in the lake for area outside the limits of this project. The project is not increasing impervious coverage.

Treatment will be provided through the use of disconnected impervious coverage and existing hydrodynamic separators. Upgraded hydrodynamic separators and a sediment forebay are being designed as alternates to the project to provide additional storm water quality for areas outside the project limits.

3. Construction Sequencing

3.1 Phasing/Logistics

Prior to any excavation on the site, temporary erosion and sedimentation controls will be installed. The contractor will be responsible for installing and maintaining all erosion control measures as well as modifications needed during all phases of the project.

As demolition is complete in areas, the completed areas will be protected and stabilized.

Logistics plans are included in Appendix B.

4. Control Measures

4.1 Erosion and Sediment Control Plan

The sediment and erosion control for this project will address all disturbed areas. A variety of temporary measures will be used throughout construction for soil erosion and sediment control. Multiple details are included with the plan for measures such as silt fence, stockpile stabilization and inlet protection. All

measures taken and implemented shall comply with specifications and standards of the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

The installation of erosion control and stabilization shall be installed and coordinated by the contractor throughout the project.

For additional information refer to the soil erosion and sediment control plans and details included in Appendix A.

4.2 Maintenance

All erosion and sediment controls will be maintained throughout the project. All components of the sediment and erosion controls will be inspected, repaired, and enhanced routinely throughout the course of this project. All damaged slopes or protective measures shall be repaired and restored as soon as possible.

All protective measures shall be inspected and maintained prior to each forecast storm event in addition to the routine inspections.

The contractor shall have additional materials on site throughout the project to repair or replace all components of the sedimentation and erosion control system at any time.

Maintenance shall include the replacement of sediment collection areas, removal of collected sediment, and restoration of all measures protecting adjacent areas from runoff during the project.

A copy of a sample erosion and sediment controls checklist is included on the drawings in Appendix A.

4.3 Dewatering

Prior to initiating any dewatering, a plan must be proposed by the contractor for review and approval by the owner's representative. All dewatering activities shall be in accordance with the approved "General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with Construction Activities". The contractor shall reroute surface water runoff away from excavated areas and not allow water to accumulate in excavations. The Contractor shall grade and ditch the site as necessary to direct surface runoff away from open excavations and will not use excavated trenches as temporary drainage ditches. The contractor will also install dewatering as required to keep subgrades dry and convey groundwater away from excavations until dewatering is no longer required.

Dewatering of a portion of the lake will be required for construction of the dam and spillway work. A temporary dam will be installed in the work area and water will be pumped out and discharged downstream through filter bags. During construction activities within the lake, any accumulated water which enters the downstream side of the temporary dam will be pumped out and discharge at the far end of the lake through filter bags.

A temporary rip-rap spillway will be installed to convey water from the lake during construction of the new spillway.

5. Runoff Reduction and Low Impact Development Information

5.1 Runoff Reduction

The proposed project base scope will result in a 0.14 acre decrease in impervious coverage. Should the add alternate walkway replacement be accepted, the project will result in no increase in impervious coverage. Runoff volume from the project site will not increase from current conditions. Given the proximity to the lake and relatively high ground water table, infiltration is not feasible.

5.2 Stormwater Treatment

Water quality is currently being provided by various measures within the campus watershed. These include, but are not limited to bio-retention areas, vegetated swales, and deep sump catch basins. Most of these measures are localized to specific buildings or areas of development within the area draining to Mirror Lake. The University has also installed five hydrodynamic separators (HDS), one at each of the main inlets piped to Mirror Lake.

The following measures are being included as alternates to the project to treat stormwater which drains to Mirror Lake from outside the Mirror Lake Improvements project area.

The project is proposing to replace one of the hydrodynamic separators on the south side of the lake with two separate units. The existing unit treats the runoff from two large diameter storm pipes. The proposed design will include two separate units to treat the runoff from each pipe separately. The new units replacing the existing unit are labeled HDS01 and HDS02 on Figure 1 in Appendix C.

The project is also proposing to replace an existing HDS unit just east of the intersection of Gilbert Road and Mansfield Road. This separator is labeled HDS03 on Figure 1 in Appendix C.

To supplement the upstream treatment facilities a vegetated forebay is being included as an alternate. The forebay has been sized to store 10% of the water quality volume, plus an additional percent of the water quality volume for sediment storage.

A maintenance program for the forebay will be developed with the University. This will include cleaning of sediment and debris and vegetation maintenance. Cleaning of sediment and maintaining flow paths through the small diameter drains will be critical.

The University currently has a maintenance program in place for the hydrodynamic separators installed on the lake inlets.

HDS units EX-HDS01 through EX-HDS04 were designed and installed by others. Design information for EX-HDS01 and EX-HDS02 is included in the appendix. Information was not available for EX-HDS03 and EX-HDS04. The Mirror Lake project is not modifying flows or surface coverage to the existing units to remain.

Refer to Appendix C for water quality calculations and separator locations.

6. Inspections

6.1 Plan Implementation

The Permittee shall conduct a preconstruction meeting with the contractor that conveys the design, stormwater control measures, plan implementation, routine site inspections, erosion and sediment controls, and contract requirements for the project prior to earth disturbance. Such meeting shall include a site walk of the project site.

The erosion and sediment control components will require inspection throughout the project by a Qualified Inspector as defined by the General Permit.

Prior to commencement of each phase of the construction activity on the site, the permittee shall contact the qualified professional to ensure that all required inspections are conducted. Given this project is being conducted by a state agency the individual must be included on the State's list of Qualified Professionals.

For each phase of construction, the site shall be inspected at least once within the first thirty (30) days of construction activity and at least three times, with seven (7) or more days between inspections, within the first ninety (90) days of construction activity to confirm compliance with the general permit and proper initial implementation of all control measures designated in the Plan for each phase of construction.

6.2 Routine Inspections

The permittee is required to perform routine inspections for compliance as required in the General Permit. The routine inspections shall continue until a Notice of Termination has been submitted.

The permittee shall maintain a rain gauge on-site to monitor and document rainfall amounts.

A qualified inspector shall routinely inspect all disturbed areas that have not been stabilized, all sedimentation and erosion control measures, stockpile areas, washout areas, site entrances/exits, etc. Inspections shall occur at least once a week and within 24 hours of an event that generates a discharge.

For storm events that occur on a weekend or holiday inspections are required within 24 hours only for storms that equal or exceed 0.5 inches. If storms are less than 0.5 inches the inspection can occur immediately at the start of the next business day.

The qualified inspector conducting routine inspections shall prepare a report of each inspection. Each such report shall be retained as part of the Plan.

6.3 Post-Construction Inspections

Post construction stormwater inspections shall be performed per section 5(b)(4)(C) of the Stormwater General Permit. This project is being conducted by state agency, therefore, once all post-construction stormwater measures have been installed in accordance with the Post-Construction Stormwater

Management section (subsection 5(b)(2)(C)) and cleaned of any construction sediment or debris, the DOT District Engineer or his/her designee and/or DOT District Environmental Coordinator, or the designated employee of another state agency, will inspect the site to confirm compliance with the post-construction stormwater management requirements of the general permit.

6.4 Final Stabilization Inspection

Once the site has achieved final stabilization for at least one full growing season (April – October) in the year following the end of construction, the Permittee shall have the site inspected by a qualified inspector to confirm such stabilization is maintained. The Permittee shall indicate compliance with this requirement on the Notice of Termination form.

6.5 Corrective Actions

Non-engineered corrective actions shall be implemented on site within 24 hours and incorporated into a revised plan with 3 calendar days of the date of inspection. Engineered corrective actions shall be implemented on site within 7 days and incorporated into a revised plan with 10 days of the date of inspection. During the period in which any corrective actions are being developed and have not yet been fully implemented, interim measures shall be implemented to minimize the potential for the discharge of pollutants from the site.

For more specific requirements refer to Section 5 (b) (4) of the general permit.

6.6 Reporting

A copy of each inspection report shall be submitted electronically via the State's NetDMR tool in accordance with the General Permit.

7. Other Controls

7.1 Waste Disposal

The Contractor will be responsible for the proper handling and disposal of construction waste and debris. All waste material shall be disposed of offsite according to all applicable federal, state and local laws and regulations.

7.2 Washout Areas

Washout of applicators, containers, vehicles and equipment for concrete, paint and other materials shall be conducted in a designated washout area. There shall be no surface discharge of washout wastewaters from this area. Such washout shall be conducted: (1) outside of any buffers and at least 50 feet from any stream, wetland or other sensitive resource; or (2) in an entirely self-contained washout system. The permittee shall clearly flag off and designate areas to be used for washing and conduct such activities only in these areas. The permittee shall direct all washwater into a container or pit designed such that no overflows can occur during rainfall or after snowmelt. Dumping of waste wash water into

storm sewers is not permitted. Waste water for washing shall be disposed of per all applicable federal, state and local laws and regulations.

7.3 Sediment Tracking and Dust Control

Stone construction entrances and haul roads shall be installed and maintained where vehicles enter or leave the site. Inlet protection shall be installed as shown on the Soil Erosion and Sediment Control plans in Appendix A.

Dust suppression shall be provided in accordance with the erosion control specifications, and 22a-174-18b of the Connecticut General Statutes for any construction activity that causes airborne particulates.

7.4 Chemical and Petroleum Storage

All chemical and petroleum product containers stored on the site (excluding those contained within vehicles and equipment) shall be provided with impermeable containment which will hold at least 110% of the volume of the largest container, or 10% of the total volume of all containers in the area, whichever is larger, without overflow from the containment area. All chemicals and their containers shall be stored under a roofed area except for those chemicals stored in containers of 100 gallon capacity or more, in which case a roof is not required. Double-walled tanks satisfy this requirement.

8. Records Keeping

The permittee shall retain copies of the plan and all reports required by the general permit, and all records used to complete the registration for this general permit, for a period of 5 years from the date that construction is complete. Inspection records must be retained for 5 years after the date of inspection. A copy of this plan shall be retained at the site until construction is complete.

9. Termination Requirements

At the completion of the project the Permittee shall submit a Notice of Termination. A project shall be considered complete after all post-construction measures are installed, cleaned, functioning, and inspected and the site has achieved final stabilization and inspection (see Sections 5(b)(4)(C) & (D) of the general permit, respectively) for at least one full growing season (April through October) in the year following the cessation of activities. Final stabilization must be achieved before a Notice of Termination may be submitted.

A site is considered stabilized when there is no active erosion or sedimentation present and no disturbed areas remain exposed for all phases and silt fence and other temporary measures are removed.

Once the site has been stabilized for at least one growing season, the registrant shall have the site inspected by a qualified inspector to confirm final stabilization. The registrant shall indicate compliance with this requirement on the notice of termination form.



A final copy of the stormwater pollution control plan and all inspection records shall be submitted to the design engineer and registrant.

10. Contractor Certification Statements

Contractor Certification Statement

The plan shall clearly identify each contractor and subcontractor that will perform construction activities on the site that have the potential to cause pollution of the waters of the State. The Plan shall include a copy of the certification statement in the “Contractor Certification Statement” section, below, signed by each such contractor and subcontractor.

<p>“I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with construction activities. I understand that as a contractor or subcontractor at the site, I am authorized by this General Permit, and must comply with the terms and conditions of this permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site.”</p>		
Signatory	Company Information	Responsible For
_____	_____	_____
(Name)	(Company)	
_____	_____	_____
(Position)	(Street/P.O. Box)	
_____	_____	_____
(Signature)	(City, State, Zip)	
_____	_____	_____
(Date)	(Phone)	(Activity)

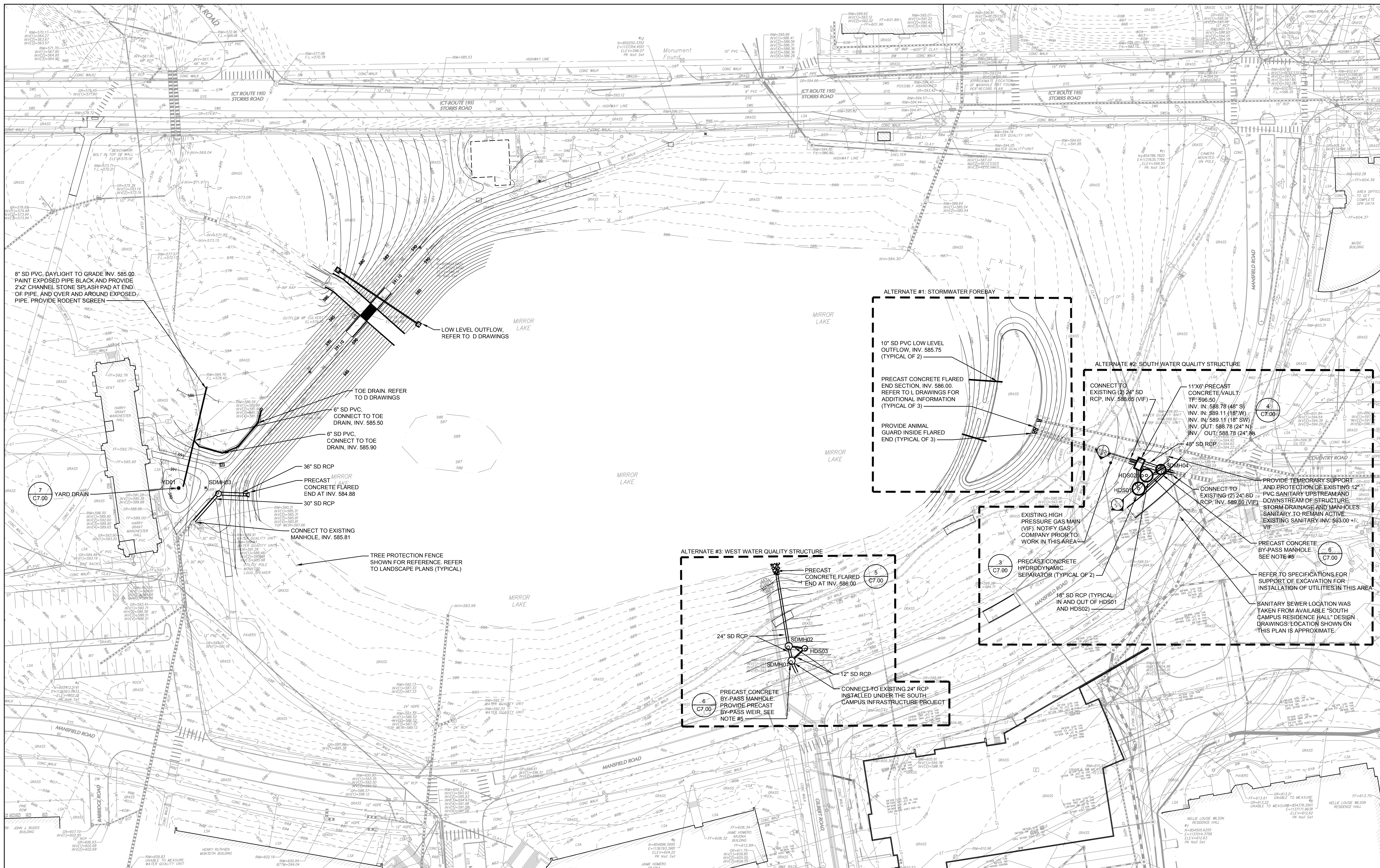


Contractor Certification Statement (continued from previous page if additional signatures are required)

<p>"I certify under penalty of the law that I have read and understand the terms and conditions of the General Permit for the Discharge of Stormwater and Dewatering Wastewaters Associated with construction activities. I understand that as a contractor or subcontractor at the site, I am authorized by this General Permit, and must comply with the terms and conditions of this permit, including but not limited to the requirements of the Stormwater Pollution Control Plan prepared for the site."</p>		
Signatory	Company Information	Responsible For
_____ (Name)	_____ (Company)	_____
_____ (Position)	_____ (Street/P.O. Box)	_____
_____ (Signature)	_____ (City, State, Zip)	_____
_____ (Date)	_____ (Phone)	_____ (Activity)
_____ (Name)	_____ (Company)	_____
_____ (Position)	_____ (Street/P.O. Box)	_____
_____ (Signature)	_____ (City, State, Zip)	_____
_____ (Date)	_____ (Phone)	_____ (Activity)



APPENDIX A



8" SD PVC, DAYLIGHT TO GRADE INV. 585.00. PAINT EXPOSED PIPE BLACK AND PROVIDE 2"x2" CHANNEL STONE SPLASH PAD AT END OF PIPE, AND OVER AND AROUND EXPOSED PIPE. PROVIDE RODENT SCREEN

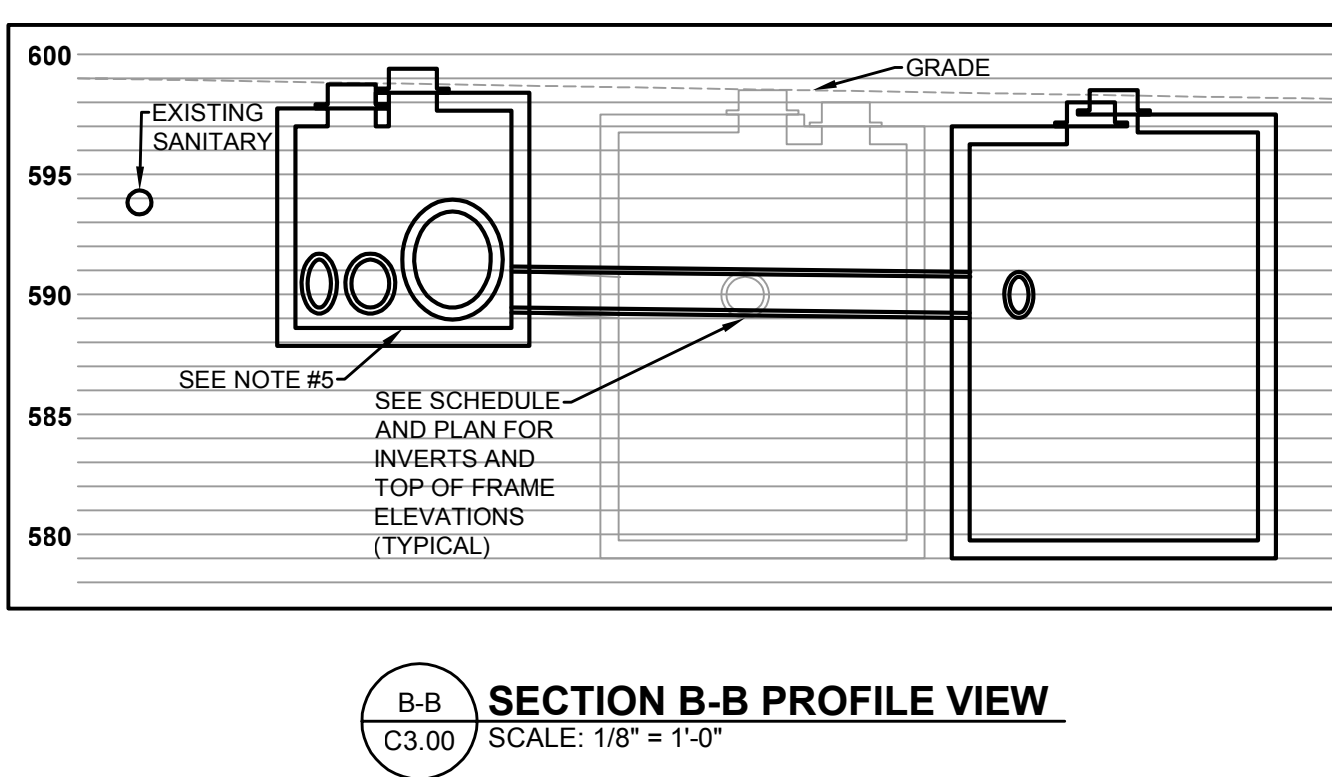
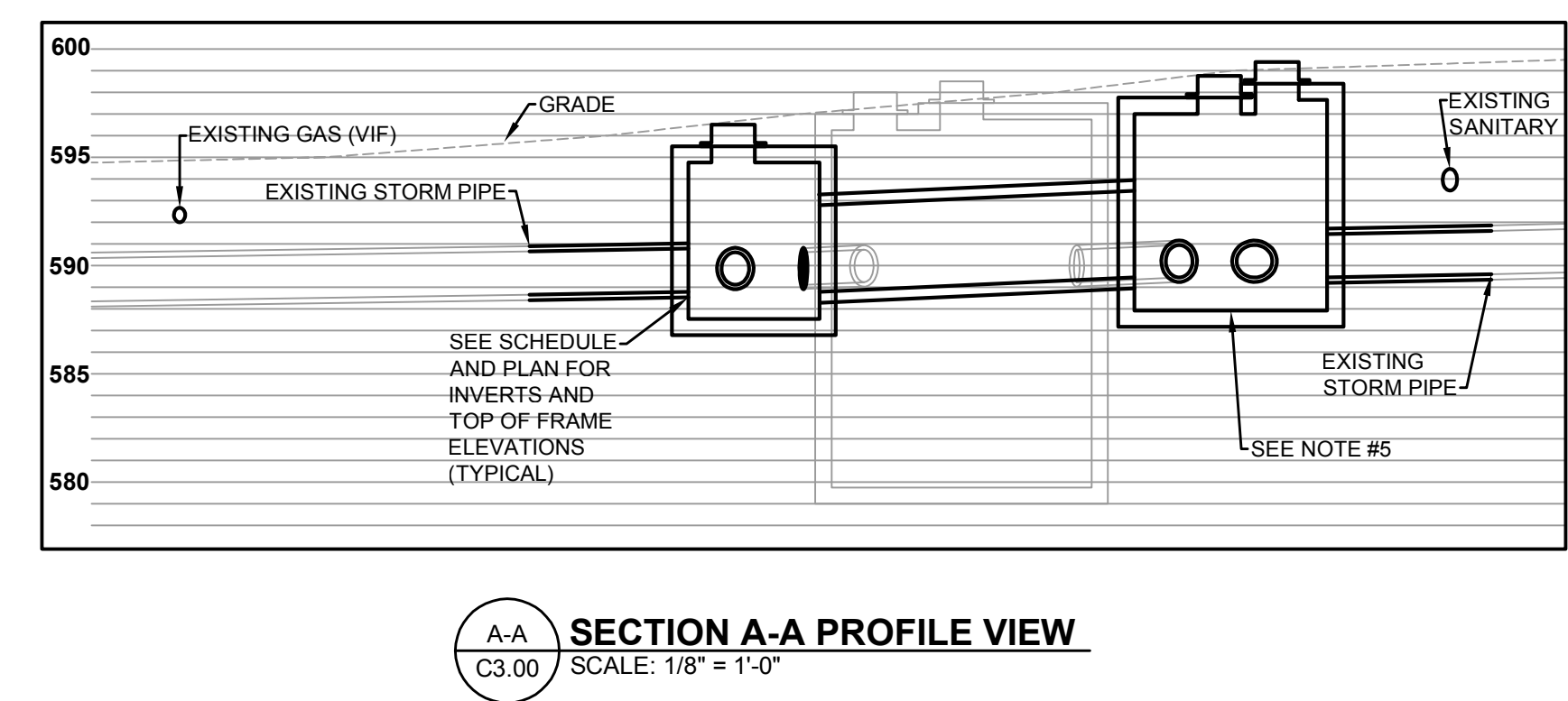
LOW LEVEL OUTFLOW, REFER TO D DRAWINGS

ALTERNATE #1: STORMWATER FOREBAY
 10" SD PVC LOW LEVEL OUTFLOW, INV. 585.75 (TYPICAL OF 2)
 PRECAST CONCRETE FLARED END SECTION, INV. 586.00. REFER TO L DRAWINGS FOR ADDITIONAL INFORMATION (TYPICAL OF 3)
 PROVIDE ANIMAL GUARD INSIDE FLARED END (TYPICAL OF 3)

ALTERNATE #2: SOUTH WATER QUALITY STRUCTURE
 CONNECT TO EXISTING (2) 24" SD RCP, INV. 588.65 (VIF)
 11'x6' PRECAST CONCRETE VAULT, T/F: 596.50 / INV. IN: 588.78 (48" S) / INV. IN: 589.11 (18" W) / INV. IN: 589.78 (24" N) / INV. OUT: 588.78 (24" N) / 48" SD RCP

ALTERNATE #3: WEST WATER QUALITY STRUCTURE
 PRECAST CONCRETE FLARED END AT INV. 586.00
 24" SD RCP
 12" SD RCP
 PRECAST CONCRETE BY-PASS MANHOLE, PROVIDE PRECAST BY-PASS WEIR, SEE NOTE #5
 CONNECT TO EXISTING 24" RCP INSTALLED UNDER THE SOUTH CAMPUS INFRASTRUCTURE PROJECT

PROVIDE TEMPORARY SUPPORT AND PROTECTION OF EXISTING 12" PVC SANITARY UPSTREAM AND DOWNSTREAM OF STRUCTURE. STORM DRAINAGE AND MANHOLES SANITARY TO REMAIN ACTIVE. EXISTING SANITARY INV. 593.00 +/- VIF
 PRECAST CONCRETE BY-PASS MANHOLE, SEE NOTE #5
 REFER TO SPECIFICATIONS FOR SUPPORT OF EXCAVATION FOR INSTALLATION OF UTILITIES IN THIS AREA
 SANITARY SEWER LOCATION WAS TAKEN FROM AVAILABLE "SOUTH CAMPUS RESIDENCE HALL" DESIGN DRAWINGS. LOCATION SHOWN ON THIS PLAN IS APPROXIMATE.



ALTERNATE #2: SOUTH WATER QUALITY STRUCTURE

SDMH #	TYPE	T/F	INVERT IN	INVERT OUT
HDS01	HDS	598.50 / 598.00	589.23	589.23
HDS02	HDS	598.50 / 598.00	589.23	589.23
HDS03	HDS	595.48	587.45 (W)	588.45 (NW)
SDMH01	BY-PASS	597.50	VIF (SW)	592.83 (NE) / VIF (SE)
SDMH02	MH	594.90	591.03 (SW) / VIF (NW)	591.03 (NE)
SDMH03	MH	591.00	585.60 (W)	585.60 (E)

ALTERNATE #3: WEST WATER QUALITY STRUCTURE

SDMH #	TYPE	T/F	INVERT IN	INVERT OUT
SDMH04	BY-PASS	599.50 / 598.75	589.45	589.45 (N) / 589.45 (NW) / 589.45 (W)
YD01	YD	589.50	-	586.75 (E)

STORM DRAINAGE SCHEDULE

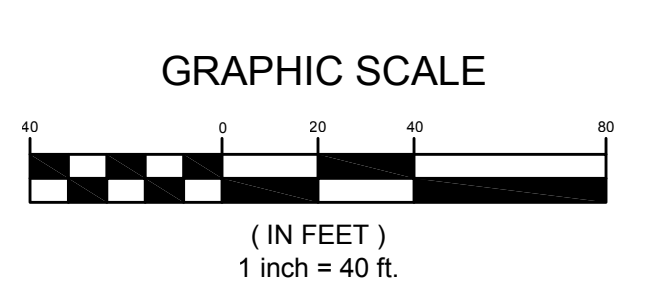
SDMH #	TYPE	T/F	INVERT IN	INVERT OUT
HDS01	HDS	598.50 / 598.00	589.23	589.23
HDS02	HDS	598.50 / 598.00	589.23	589.23
HDS03	HDS	595.48	587.45 (W)	588.45 (NW)
SDMH01	BY-PASS	597.50	VIF (SW)	592.83 (NE) / VIF (SE)
SDMH02	MH	594.90	591.03 (SW) / VIF (NW)	591.03 (NE)
SDMH03	MH	591.00	585.60 (W)	585.60 (E)

STORM DRAINAGE SCHEDULE

SDMH #	TYPE	T/F	INVERT IN	INVERT OUT
SDMH04	BY-PASS	599.50 / 598.75	589.45	589.45 (N) / 589.45 (NW) / 589.45 (W)
YD01	YD	589.50	-	586.75 (E)

GRADING AND DRAINAGE GENERAL NOTES:

- UTILITIES ARE SHOWN FOR REFERENCE ONLY.
- FOR UTILITY TRENCH DETAILS, REFER TO SITE DETAILS.
- FINAL TOP OF FRAME ELEVATIONS FOR NEW DRAINAGE STRUCTURES MAY NEED TO BE FIELD ADJUSTED TO COORDINATE WITH SITE CONDITIONS AND FINAL GRADING (TYPICAL).
- INVERTS, PIPE ORIENTATION AND PIPE SIZES FROM BY-PASS MANHOLE, INTO HYDRODYNAMIC SEPARATOR AND OUT OF HYDRODYNAMIC SEPARATOR MAY VARY BASED ON HYDRODYNAMIC SEPARATOR MANUFACTURER. CONTRACTOR SHALL OBTAIN INVERTS, SYSTEM LAYOUT AND PIPE SIZES FROM THE MANUFACTURER AND SUBMIT THEM TO THE ENGINEER AS PART OF THE PRODUCT SUBMITTAL FOR APPROVAL. REFER TO DETAIL SHEETS FOR DESIGN INFORMATION REQUIRED BY THE MANUFACTURER TO SET INVERTS AND PIPE SIZES. OBTAIN INVERTS PRIOR TO PROCUREMENT OF BY-PASS STRUCTURE.
- HYDRODYNAMIC SEPARATOR (HDS) MANUFACTURER TO SET BY-PASS WEIR ELEVATION BASED ON HDS CHARACTERISTICS AND DESIGN DATA INCLUDED ON DETAIL 3/C7.00.
- ADJUST TOP OF FRAMES OF EXISTING DRAINAGE STRUCTURES TO MEET PROPOSED GRADES.
- GRADING IS SHOWN FOR REFERENCE ONLY. REFER TO L DRAWINGS FOR SURFACE GRADING AND D DRAWINGS FOR BATHYMETRIC GRADING.



CERTIFICATION:
 STATUS:
 BID AND PERMIT SET


CONSULTANT:

 A SALASOBRIEN COMPANY
 206 WEST NEWBERRY ROAD
 BLOOMFIELD, CT 06002
 860.286.9171

REVISIONS:

#	DATE	DESCRIPTION

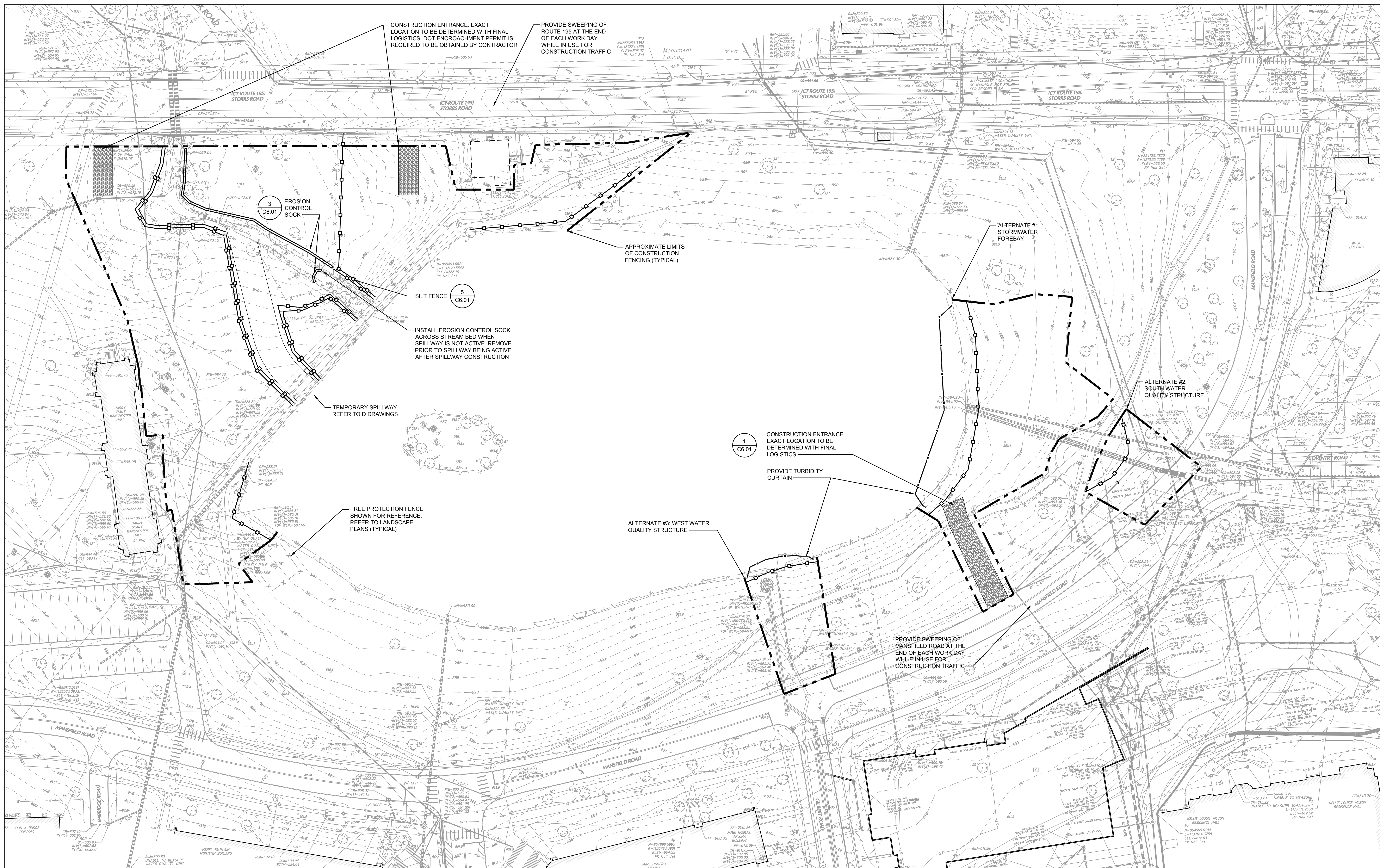
UNIVERSITY OF CONNECTICUT
 UNIVERSITY PLANNING DESIGN & CONSTRUCTION
 31 LEDYWOOD ROAD UNIT 3038
 STORRS, CONNECTICUT 06269-3038
 TELEPHONE: (860) 486-3127
 FACSIMILE: (860) 486-3177



PROJECT:
 MIRROR LAKE IMPROVEMENTS
 Storrs Ct. 06269-3038
 Mansfield Road

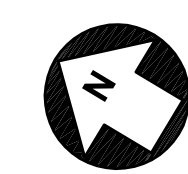
PROJECT NO.: 900174
 AUTHOR: BV11
 DRAFTER: BV11
 SCALE: 1"=40'
 PRINT DATE: 01/19/24
 SHEET TITLE: SITE DRAINAGE PLAN

SHEET:
 C3.00

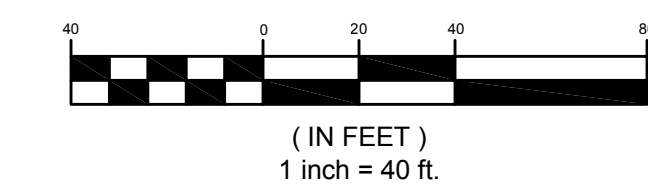


SOIL EROSION AND SEDIMENTATION CONTROL GENERAL NOTES:

1. STORM DRAINAGE AND GRADING ARE SHOWN FOR REFERENCE ONLY.
2. REFER TO C6.00 FOR SOIL EROSION AND SEDIMENTATION CONTROL NARRATIVE.
3. THE CONTRACTOR SHALL PROVIDE FINAL STABILIZATION IN ALL AREAS WHERE WORK HAS BEEN COMPLETED. CONTRACTOR SHALL MAINTAIN PERIMETER CONTROL MEASURES UNTIL SUCH TIME THE ENGINEER, OWNER AND QUALIFIED INSPECTOR DEEM THE SITE STABILIZED. THE CONTRACTOR, AT THAT TIME, SHALL REMOVE ANY REMAINING TEMPORARY MEASURES INCLUDING RESTORATION OF DISTURBED AREAS DUE TO REMOVAL OF TEMPORARY MEASURES.
4. REFER TO D DRAWINGS FOR ADDITIONAL EROSION CONTROL MEASURES.
5. REFER TO LOGISTICS PLANS FOR SITE FENCING, CONSTRUCTION ACCESS ROADS, GATES, ETC.



GRAPHIC SCALE



CERTIFICATION:

STATUS:
BID AND PERMIT SET

CONSULTANT:



REVISIONS:

#	DATE	DESCRIPTION

UNIVERSITY OF CONNECTICUT
UNIVERSITY PLANNING DESIGN & CONSTRUCTION
31 LEDOYT ROAD UNIT 3038
STORRS, CONNECTICUT 06269-3038
TELEPHONE: (860) 486-3127
FACSIMILE: (860) 486-3177



PROJECT:

MIRROR LAKE IMPROVEMENTS
Storrs CT. 06269-3038
Mansfield Road

PROJECT NO.: 900174
AUTHOR: BV11
DRAFTER: BV11
SCALE: 1"=40'
PRINT DATE: 01/19/24
SHEET TITLE:

SITE SOIL EROSION AND SEDIMENTATION CONTROL PLAN - INITIAL

SHEET:

C4.00

GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES REQUIREMENTS

INSPECTIONS

-PLAN IMPLEMENTATION:

THE EROSION AND SEDIMENT CONTROL COMPONENTS WILL REQUIRE INSPECTION THROUGHOUT THE PROJECT BY A QUALIFIED INSPECTOR

QUALIFIED INSPECTOR MEANS AN INDIVIDUAL POSSESSING EITHER:

(1) A PROFESSIONAL LICENSE OR CERTIFICATION BY A PROFESSIONAL ORGANIZATION RECOGNIZED BY THE COMMISSIONER RELATED TO AGRICULTURE, CIVIL ENGINEERING, LANDSCAPE ARCHITECTURE, SOIL SCIENCE, AND TWO YEARS OF DEMONSTRABLE AND FOCUSED EXPERIENCE IN EROSION AND SEDIMENT CONTROL PLAN READING, INSTALLATION, INSPECTION AND/OR REPORT WRITING FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION PROJECTS IN ACCORDANCE WITH THE GUIDELINES;

(2) FIVE YEARS OF DEMONSTRABLE AND FOCUSED EXPERIENCE IN EROSION AND SEDIMENT CONTROL PLAN READING, INSTALLATION, INSPECTION AND/OR REPORT WRITING FOR RESIDENTIAL AND COMMERCIAL CONSTRUCTION PROJECTS IN ACCORDANCE WITH THE GUIDELINES

(3) CERTIFICATION BY THE CONNECTICUT DEPARTMENT OF TRANSPORTATION (DOT).

THE IMPLEMENTATION PORTION OF THE GENERAL PERMIT REQUIRES UP TO 3 INSPECTIONS WITHIN THE FIRST 90 DAYS OF THE PROJECT. THE QUALIFIED INSPECTOR WILL BE REQUIRED TO REPORT ON THE CONDITIONS, WHETHER THEY ARE COMPLIANT OR DEFICIENT. IF THE PROJECT CONDITIONS ARE ACCEPTABLE AFTER THE FIRST, SECOND, OR THIRD INSPECTION THE PROJECT CAN MOVE FORWARD. IF THE CONDITIONS ARE STILL DEFICIENT AFTER THE THIRD INSPECTION THE QUALIFIED INSPECTOR IS REQUIRED TO REPORT THE FINDINGS TO THE CT DEEP WHO WILL THEN INTERVIEW.

-ROUTINE INSPECTIONS:

THE PERMITTEE IS REQUIRED TO PERFORM ROUTINE INSPECTIONS FOR COMPLIANCE AS REQUIRED IN THE GENERAL PERMIT. THE ROUTINE INSPECTIONS SHALL CONTINUE UNTIL A NOTICE OF TERMINATION HAS BEEN SUBMITTED.

THE PERMITTEE SHALL MAINTAIN A RAIN GAUGE ON-SITE TO MONITOR AND DOCUMENT RAINFALL AMOUNTS.

A QUALIFIED INSPECTOR (PROVIDED BY THE PERMITTEE) SHALL ROUTINELY INSPECT ALL DISTURBED AREAS THAT HAVE NOT BEEN STABILIZED, ALL SEDIMENTATION AND EROSION CONTROL MEASURES, STOCKPILE AREAS, WASHOUT AREAS, SITE ENTRANCES/EXITS, ETC. INSPECTIONS SHALL OCCUR AT LEAST ONCE A WEEK AND WITHIN 24 HOURS OF AN EVENT THAT GENERATES A DISCHARGE.

FOR STORM EVENTS THAT OCCUR ON A WEEKEND OR HOLIDAY INSPECTIONS ARE REQUIRED WITHIN 24 HOURS ONLY FOR STORMS THAT EQUAL OR EXCEED 0.5 INCHES. IF STORMS ARE LESS THAN 0.5 INCHES THE INSPECTION CAN OCCUR IMMEDIATELY AT THE START OF THE NEXT BUSINESS DAY.

-CORRECTIVE ACTIONS:

NON-ENGINEERED CORRECTIVE ACTIONS SHALL BE IMPLEMENTED ON SITE WITHIN 24 HOURS AND INCORPORATED INTO A REVISED PLAN WITHIN 3 CALENDAR DAYS OF THE DATE OF INSPECTION. ENGINEERED CORRECTIVE ACTIONS SHALL BE IMPLEMENTED ON SITE WITHIN 7 DAYS AND INCORPORATED INTO A REVISED PLAN WITHIN 10 DAYS OF THE DATE OF INSPECTION. DURING THE PERIOD IN WHICH ANY CORRECTIVE ACTIONS ARE BEING DEVELOPED AND HAVE NOT YET BEEN FULLY IMPLEMENTED, INTERIM MEASURES SHALL BE IMPLEMENTED TO MINIMIZE THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS FROM THE SITE.

FOR MORE SPECIFIC REQUIREMENTS REFER TO SECTION 5 (B) (4) OF THE GENERAL PERMIT.

GENERAL GUIDELINES AND PRINCIPALS

- THE CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THE EROSION AND SEDIMENT CONTROL PLAN. THIS RESPONSIBILITY INCLUDES THE INSTALLATION AND MAINTENANCE OF CONTROL MEASURES, INFORMING ALL PARTIES OF ENGAGED ON THE CONSTRUCTION SITE OF THE REQUIREMENTS AND OBJECTIVES OF THE PLAN.
- THE OBJECTIVE IS TO MINIMIZE THE AMOUNT OF SEDIMENT-LADEN RUNOFF THROUGH IMPLEMENTATION OF A VARIETY OF CONVENTIONAL SOIL SEDIMENTATION AND EROSION CONTROL PRACTICES RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL PROCEDURES AND APPLICATION TECHNIQUES SHALL CONFORM TO THE ABOVE MENTIONED GUIDELINES. THE DETAILS SHOWN ON THE CONTRACT DRAWINGS AND THE CT DEEP GENERAL PERMIT FOR THE DISCHARGE OF STORMWATER AND DEWATERING WASTEWATERS FROM CONSTRUCTION ACTIVITIES (GENERAL PERMIT).
- EXISTING TREES TO REMAIN MUST BE PROTECTED. DO NOT PARK OR STORE MATERIALS UNDER TREES. DO NOT DIRECT RUNOFF OR ALLOW SILT TO EXTEND UNDER TREES. AVOID DAMAGE TO TRUNKS AND BRANCHES. CONTRACTOR MUST CLEAN UP EDGE BEFORE LEAVING SITE.
- STAGE CONSTRUCTION ACTIVITIES SUCH THAT ONLY THOSE AREAS OF THE SITE SCHEDULED FOR IMMEDIATE DEVELOPMENT ARE DISTURBED AND ACTIVITIES SCHEDULED FOR LATER DEVELOPMENT ARE NOT STARTED PREMATURELY. RE-STABILIZATION SHALL BE SCHEDULED IMMEDIATELY AFTER DISTURBANCE.
- EARTH DISTURBANCE SHOULD BE TIMED TO MINIMIZE POTENTIAL IMPACTS CAUSED BY SEASONAL WEATHER CHANGES AND SCHEDULED FOR PERIODS WHEN SOIL SATURATION IS LOW AND SOIL LOSS HAZARD IS AT MINIMUM RISK.
- SUSPEND EARTHWORK CONSTRUCTION ACTIVITIES FOR MAJOR STORM EVENTS AND IMPLEMENT ADDITIONAL SEDIMENTATION AND EROSION CONTROL MEASURES, AS NECESSARY.
- THERE WILL BE NO LARGE CUTS OR FILLS LEFT AS "RAW" AREAS. SUB-GRADE WILL BE ACHIEVED AS SOON AS POSSIBLE AND AN ESTABLISHED PROCEDURE FOR TEMPORARY SEEDING AND/OR COVER WITH EROSION PROTECTION (EROSION CONTROL BLANKETS FOR SLOPES AND MULCH OR EROSION CONTROL BLANKETS FOR FLAT AREAS), WILL BE FOLLOWED TO INSURE MINIMAL SOIL LOSS.
- ALL SURFACES DESIGNATED FOR PAVING WILL HAVE THE SUB-BASE, BASE AND BINDER INSTALLED AS SOON AS POSSIBLE. WHERE FEASIBLE THE STORM DRAINAGE SYSTEM WILL BE INSTALLED TO PROVIDE CONTROL OF SURFACE RUNOFF.
- PROVIDE SILT FENCE BARRIER AROUND STOCKPILES.
- EROSION CHECK DAMS CONSISTING OF STONE, SILT FENCE OR HAYBALES SHALL BE INSTALLED TO PREVENT SILTATION DOWNGRADE OF CONSTRUCTION.
- SILT FENCE FABRIC BARRIERS SHALL BE INSTALLED AT ALL OUTLETS AND ALONG TOE OF CRITICAL SLOPES.
- FLARED END DISCHARGE AREAS SHALL BE PROTECTED WITH RIPRAP PADS. ENERGY DISSIPATORS WILL BE PROVIDED AS NECESSARY.
- INLET STRUCTURES (EXISTING AND PROPOSED) SHALL BE PROTECTED WITH FILTER FABRIC BARRIERS INSTALLED BETWEEN GRATE AND FRAME AS WELL AS SURROUNDING STRUCTURE IN SOFTSCAPE AREAS.
- CREATE TEMPORARY SEDIMENT TRAPS AS NECESSARY WITHIN WORK AREA AND SIZED AT 3.600 CF/ACRE CONTRIBUTING. DESIGN AND CONSTRUCT IN ACCORDANCE WITH THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.
- INSTALL RIPRAP OR GRASS LINED SWALES TO DIRECT DRAINAGE TO TEMPORARY SEDIMENT TRAPS.
- ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD IS NECESSARY OR REQUIRED.
- WHEN RIPRAP IS USED, PROVIDE FABRIC BETWEEN SOIL AND RIPRAP.
- IN AREAS OF GENERAL FILLS, PITCH SLOPE AWAY FROM EDGE OF FILL SLOPE DURING CONSTRUCTION EACH NIGHT. GRADE LAND TOWARD RIPRAP SWALES AT END OF EACH NIGHT.
- PROTECT STREET SIDE OF CONSTRUCTION ENTRANCES AT END OF THE WORK DAY BY SILT FENCE FABRIC, HAYGALES OR STONE BERMS.
- AS TOPOGRAPHY CHANGES, DIRECT STORM WATER RUNOFF TO TEMPORARY SEDIMENT TRAPS.
- PITCH ALL WATER AT END OF EACH WORK DAY INTO TEMPORARY SEDIMENT TRAPS. VEHICLES SHALL BE WASHED OFF IN AREAS THAT DO NOT RESULT IN SEDIMENT OR OTHER MATERIALS LEAVING THE SITE. NO VEHICLES SHALL BE WASHED UNDER TREES, ON ROADS, OR IN SENSITIVE AREAS OF THE SITE.
- MAINTAIN CONSTRUCTION ENTRANCES AND HAUL ROADS REGULARLY. REMOVE AND REPLACE STONE SURFACE AS NECESSARY.
- SEDIMENT REMOVAL FROM CONTROL MEASURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.
- PROVIDE STREET SWEEPING ON A REGULAR BASIS.
- ON-SITE TRUCKS SHALL HAVE COVERS TO MINIMIZE DUST.

MAINTENANCE

ALL EROSION AND SEDIMENT CONTROLS WILL BE MAINTAINED THROUGHOUT THE PROJECT. ALL COMPONENTS OF THE SEDIMENT AND EROSION CONTROLS WILL BE INSPECTED, REPAIRED, AND ENHANCED IF NECESSARY ROUTINELY THROUGHOUT THE COURSE OF THIS PROJECT. ALL DAMAGED SLOPES OR PROTECTIVE MEASURES SHALL BE REPAIRED AND RESTORED AS SOON AS POSSIBLE.

ALL PROTECTIVE MEASURES SHALL BE INSPECTED AND MAINTAINED PRIOR TO EACH FORECAST STORM EVENT IN ADDITION TO THE ROUTINE INSPECTIONS.

THE CONTRACTOR SHALL HAVE ADDITIONAL MATERIALS ON SITE THROUGHOUT THE PROJECT TO REPAIR OR REPLACE ALL COMPONENTS OF THE SEDIMENTATION AND EROSION CONTROL SYSTEM AT ANY TIME.

MAINTENANCE SHALL INCLUDE THE REPLACEMENT OF SEDIMENT COLLECTION AREAS, REMOVAL OF COLLECTED SEDIMENT, AND RESTORATION OF ALL MEASURES PROTECTING ADJACENT AREAS FROM RUNOFF DURING THE PROJECT.

OTHER CONTROLS

-WASTE DISPOSAL:

THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PROPER HANDLING AND DISPOSAL OF CONSTRUCTION WASTE AND DEBRIS. ALL WASTE MATERIAL SHALL BE DISPOSED OF OFFSITE ACCORDING TO ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

-WASHOUT AREAS:

IF ON SITE WASHOUT OF CONTAINERS, VEHICLES, EQUIPMENT, APPLICATORS ETC WILL TAKE PLACE, THE CONTRACTOR SHALL SET UP DESIGNATED WASHOUT AREAS OUTSIDE ANY BUFFERS AND AT LEAST 30 FEET FROM ANY STREAM OR OTHER SENSITIVE RESOURCE. WASHOUT AREAS SHALL BE FLAGGED AND ALL WATER USED FOR WASHING SHALL BE DIRECTED INTO A DESIGNATED CONTAINER OR PIT. DUMPING OF WASTE WASH WATER INTO STORM SEWERS IS NOT PERMITTED. WASTE WATER FOR WASHING SHALL BE DISPOSED OF PER ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS AND REGULATIONS.

-SEDIMENT TRACKING AND DUST CONTROL:

STONE CONSTRUCTION ENTRANCES AND STONE HAUL ROADS SHALL BE INSTALLED AND MAINTAINED WHERE VEHICLES ENTER OR LEAVE THE SITE AND ON ACCESS ROADS THROUGH THE SITE. INLET PROTECTION SHALL BE INSTALLED AS SHOWN ON SEDIMENT AND EROSION CONTROL PLANS.

DUST SUPPRESSION SHALL BE PROVIDED IN ACCORDANCE WITH THE EROSION CONTROL SPECIFICATIONS, AND 22A-174-189 OF THE CONNECTICUT GENERAL STATUTES FOR ANY CONSTRUCTION ACTIVITY THAT CAUSES AIRBORNE PARTICULATES.

-CHEMICAL AND PETROLEUM STORAGE:

ALL CHEMICAL AND PETROLEUM PRODUCT CONTAINERS STORED ON THE SITE EXCLUDING THOSE CONTAINED WITHIN VEHICLES AND EQUIPMENT SHALL BE PROVIDED WITH IMPERMEABLE CONTAINMENT WHICH WILL HOLD AT LEAST 110% OF THE VOLUME OF THE LARGEST CONTAINER, OR 10% OF THE TOTAL VOLUME OF ALL CONTAINERS IN THE AREA, WHICHEVER IS LARGER. WITHOUT OVERFLOW FROM THE CONTAINMENT AREA. ALL CHEMICALS AND THEIR CONTAINERS SHALL BE STORED UNDER A ROOFED AREA EXCEPT FOR THOSE CHEMICALS STORED IN CONTAINERS OF 100 GALLON CAPACITY OR MORE, IN WHICH CASE A ROOF IS NOT REQUIRED. DOUBLE-WALLED TANKS SATISFY THIS REQUIREMENT.

KEEPING THE PLAN CURRENT

THE PERMITTEE IS RESPONSIBLE FOR KEEPING THEIR PLAN IN COMPLIANCE WITH THIS GENERAL PERMIT AT ALL TIMES. THIS MAY INVOLVE ANY OR ALL OF THE FOLLOWING:

THE PERMITTEE SHALL AMEND THE PLAN IF THE ACTIONS REQUIRED BY THE PLAN FAIL TO PREVENT POLLUTION OR FAIL TO OTHERWISE COMPLY WITH ANY OTHER PROVISION OF THIS GENERAL PERMIT. THE PLAN SHALL ALSO BE AMENDED WHENEVER THERE IS A CHANGE IN CONTRACTORS OR SUBCONTRACTORS AT THE SITE, OR A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE AT THE SITE WHICH HAS THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE PLAN.

THE COMMISSIONER MAY NOTIFY THE PERMITTEE AT ANY TIME THAT THE PLAN AND/OR THE SITE DO NOT MEET ONE OR MORE OF THE MINIMUM REQUIREMENTS OF THE GENERAL PERMIT. WITHIN 7 DAYS OF SUCH NOTICE, OR SUCH OTHER TIME AS THE COMMISSIONER MAY ALLOW, THE PERMITTEE SHALL MAKE THE REQUIRED CHANGES TO THE PLAN AND PERFORM ALL ACTIONS REQUIRED BY SUCH REVISED PLAN. WITHIN 15 DAYS OF SUCH NOTICE, OR SUCH OTHER TIME AS THE COMMISSIONER MAY ALLOW, THE PERMITTEE SHALL SUBMIT TO THE COMMISSIONER A WRITTEN CERTIFICATION THAT THE REQUESTED CHANGES HAVE BEEN MADE AND IMPLEMENTED AND SUCH OTHER INFORMATION AS THE COMMISSIONER REQUIRES, IN ACCORDANCE WITH THE "DUTY TO PROVIDE INFORMATION" AND "CERTIFICATION OF DOCUMENTS" SECTIONS OF THE GENERAL PERMIT.

RECORDS KEEPING AND TERMINATION

THE PERMITTEE SHALL RETAIN COPIES OF THE PLAN AND ALL REPORTS REQUIRED BY THE GENERAL PERMIT, AND ALL RECORDS USED TO COMPLETE THE REGISTRATION FOR THIS GENERAL PERMIT, FOR A PERIOD OF 5 YEARS FROM THE DATE THAT CONSTRUCTION IS COMPLETE. INSPECTION RECORDS MUST BE RETAINED FOR 5 YEARS AFTER THE DATE OF INSPECTION. A SAMPLE INSPECTION REPORT IS INCLUDED ON THE NEXT DRAWING. A COPY OF THIS PLAN SHALL BE RETAINED AT THE SITE UNTIL CONSTRUCTION IS COMPLETE.

AT COMPLETION OF CONSTRUCTION A NOTICE OF TERMINATION MUST BE FILED WITH THE COMMISSIONER. A PROJECT SHALL BE CONSIDERED COMPLETE AFTER ALL POST-CONSTRUCTION MEASURES AND DRAINAGE STRUCTURES ARE INSTALLED, CLEANED, AND FUNCTIONING AND THE SITE HAS BEEN STABILIZED FOR AT LEAST 3 MONTHS. CLEANING SHALL INCLUDE REMOVAL OF TRASH, DEBRIS, SEDIMENT ETC FROM CATCH BASINS, DRAINS, MANHOLES, DETENTION SYSTEMS, HYDRODYNAMIC SEPARATORS, SWALES AND PIPING.

A SITE IS CONSIDERED STABILIZED WHEN THERE IS NO ACTIVE EROSION OR SEDIMENTATION PRESENT AND NO DISTURBED AREAS REMAIN EXPOSED FOR ALL PHASES AND SILT FENCE AND OTHER TEMPORARY MEASURES ARE REMOVED.

ONCE THE SITE HAS BEEN STABILIZED FOR AT LEAST 3 MONTHS, THE REGISTRANT SHALL HAVE THE SITE INSPECTED BY A QUALIFIED INSPECTOR TO CONFIRM FINAL STABILIZATION. THE REGISTRANT SHALL INDICATE COMPLIANCE WITH THIS REQUIREMENT ON THE NOTICE OF TERMINATION FORM.

A FINAL COPY OF THE STORMWATER POLLUTION CONTROL PLAN AND ALL INSPECTION RECORDS SHALL BE SUBMITTED TO THE DESIGN ENGINEER AND REGISTRANT.

EROSION AND SEDIMENTATION CONTROL CONSTRUCTION STAGES:

STAGE I:

- IMMEDIATELY AFTER MOBILIZATION BUT PRIOR TO INITIATING ANY SOIL-DISTURBING ACTIVITIES THE CONTRACTOR SHALL MAKE A GENERAL SITE ASSESSMENT TO ESTABLISH CONSTRUCTION LIMITS, DESIGNATE CONSTRUCTION ENTRANCES AND MAIN HAUL ROADS WITHIN THE SITE AND INSTALL ALL SPECIFIED SOIL EROSION AND SEDIMENT CONTROL MEASURES.

STAGE II:

- CLEAR SITE AS REQUIRED ACCOMMODATING THE CONSTRUCTION. LEGALLY CUT AND CHIP BRUSH AND REMOVE STUMPS FROM THE SITE TO BE DISPOSED OF IN A PROPER MANNER. THE OWNER'S PERMISSION IS REQUIRED BEFORE CLEARING BEYOND TREE LINE OR WOODED AREA DEFINED ON THE PLANS.
- ADDRESS ALL STOCKPILE MATERIAL AS INDICATED IN THE EROSION CONTROL SPECIFICATION.
- EXCAVATE SITE TO SUB GRADE AND INSTALL ALL REQUIRED MEASUREMENTS TO STABILIZE THE SITE AND PREVENT SOIL EROSION AND CONTROL SOIL SEDIMENTATION. NO RAW CUTS OR FILL SHALL BE LEFT EXPOSED TO THE ELEMENTS. IF NO WORK IS ANTICIPATED WITHIN A TWO (2) WEEK PERIOD, OR IF SIGNIFICANT RAINFALL IS ANTICIPATED, COVER EXPOSED AREAS AS INDICATED IN THE APPLICATION/GENERAL PROCEDURE.

STAGE III:

- SURVEY, STAKE, AND PLACE NEW IMPROVEMENTS IDENTIFIED WITHIN THE WORK AREA AND AS SHOWN ON THE CONTRACT DRAWINGS.
- MAINTAIN, CLEAN AND REPAIR EROSION CONTROL AND SEDIMENT PROTECTION MEASURES AS RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

STAGE IV:

- RESPREAD TOPSOIL TO DESIGNATED AREAS.
- INSTALL NEW PLANTING. BEGIN WITH THE SITE PERIMETER PLANTING IN BUFFER YARDS TO ACHIEVE EARLY STABILIZATION, AND THEN PLANT SITE INTERIOR AREAS AND FINALLY PLACE SEED.
- CLEAN UP SITE BUT LEAVE REMAINING EROSION CONTROL AND SEDIMENT PROTECTION MEASURES IN PLACE UNTIL SITE IS STABILIZED AS APPROVED BY THE ENGINEER.
- MAINTAIN, CLEAN AND REPAIR EROSION CONTROL AND SEDIMENT PROTECTION MEASURES AS RECOMMENDED BY THE LATEST REVISION OF THE LOCAL AND STATE GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL.

SITE EROSION CONTROL CHECKLIST				
PROJECT:				BY:
LOCATION:				DATE:
AREA INSPECTED:				
MEASURED RAINFALL AMOUNT FOR STORM EVENT:				
	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO	COMMENTS:
DEWATERING INFILTRATION BASINS	G F P Y N			
EROSION CONTROL SOCK	G F P Y N			
CONTINUOUS BERM	G F P Y N			
DRAIN/INLET PROTECTION	G F P Y N			
TREE PROTECTION	G F P Y N			
TOPSOILING	G F P Y N			
LAND GRADING	G F P Y N			
SURFACE ROUGHENING	G F P Y N			
DUST CONTROL	G F P Y N			
TEMPORARY SEEDING	G F P Y N			
PERMANENT SEEDING	G F P Y N			
SODDING	G F P Y N			
LANDSCAPE PLANING	G F P Y N			
TEMPORARY SOIL PROTECTION	G F P Y N			
MULCH FOR SEED	G F P Y N			
LANDSCAPE MULCH	G F P Y N			
TEMPORARY EROSION CONTROL BLANKET	G F P Y N			
PERMANENT TURF REINFORCEMENT MAT	G F P Y N			
STONE SLOPE PROTECTION	G F P Y N			
RETAINING WALLS	G F P Y N			
RIPRAP	G F P Y N			
PERMANENT SLOPE DRAIN	G F P Y N			
CHANNEL GRADE STABILIZATION STRUCTURE	G F P Y N			
TEMPORARY LINED CHUTE	G F P Y N			
TEMPORARY PIPE SLOPE DRAIN	G F P Y N			
VEGETATED WATERWAY	G F P Y N			
TEMPORARY LINED CHANNEL	G F P Y N			
PERMANENT LINED WATERWAY	G F P Y N			
TEMPORARY FILL BERM	G F P Y N			
WATER BAR	G F P Y N			
TEMPORARY DIVERSION	G F P Y N			
PERMANENT DIVERSION	G F P Y N			
SUBSURFACE DRAIN	G F P Y N			
DETENTION BASIN	G F P Y N			
LEVEL SPREADER	G F P Y N			
OUTLET PROTECTION	G F P Y N			
STONE CHECK DAM	G F P Y N			
TEMPORARY SEDIMENT BASIN	G F P Y N			
TEMPORARY SEDIMENT TRAP	G F P Y N			
HAY BALE BARRIER	G F P Y N			
GEOTEXTILE SILT FENCE	G F P Y N			
VEGETATIVE FILTER	G F P Y N			
CONSTRUCTION ENTRANCE	G F P Y N			
PUMP INTAKE AND OUTLET PROTECTION	G F P Y N			
PUMPING SETTling BASIN	G F P Y N			
PORTABLE SEDIMENT TANK	G F P Y N			
DEWATERING OF EARTH MATERIALS	G F P Y N			
ARE CONTROLLED RELEASES OF MUD OR MUDDY WATER FROM THE SITE EVIDENT?			YES	NO
IF YES, WHAT CORRECTIVE ACTIONS ARE RECOMMENDED?				
ARE DEPOSITS OF SEDIMENT EVIDENT ON ADJACENT OFF-SITE STREETS OR PROPERTIES?			YES	NO
IF YES, WHAT CORRECTIVE ACTIONS ARE RECOMMENDED?				
	OVERALL CONDITION	NEED REPAIR	G=GOOD, F=FAIR, P=POOR, Y=YES, N=NO	COMMENTS:
STAGING REMOVAL OF VEGETATION	G F P Y N			
NEW VEGETATION ESTABLISHMENT	G F P Y N			
MULCH AND/OR BFM PROTECTION	G F P Y N			
SOIL BINDER PROTECTION	G F P Y N			
HILLSIDE REC'PS	G F P Y N			
DRAINAGE CHANNEL ECB'S	G F P Y N			
RIPRAP	G F P Y N			
ADDITIONAL COMMENTS:				
INSPECTION COMPLETED ON:				BY:
I CERTIFY THIS INSPECTION WAS COMPLETED BY MYSELF OR UNDER MY SUPERVISION:				
DATE:				

MAINTENANCE SCHEDULE FOR TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES		
TYPE	INSPECTION SCHEDULE	REPAIR SCHEDULE
SILT FENCE	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPLACE IMMEDIATELY AND REMOVE SEDIMENT WHEN DEPTH EQUALS 1/2 HEIGHT OF FENCE
INLET PROTECTION	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPLACE DAMAGED SEDIMENT FILTER INSERT OR CURB FILTER IMMEDIATELY AND REMOVE SEDIMENT WHEN DEPTH EQUALS 1/4 HEIGHT OF SEDIMENT FILTER INSERT
STABILIZED LAYDOWN AREA	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPAIR IMMEDIATELY. REMOVE ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO NEARBY PAVED SURFACES
EROSION CONTROL SOCK	MINIMUM ONCE PER WEEK AND AFTER STORM EVENTS OF 0.5 INCHES OR GREATER	REPLACE IMMEDIATELY AND REMOVE SEDIMENT WHEN DEPTH EQUALS 1/2 HEIGHT OF EROSION CONTROL SOCK OR EROSION CONTROL SOCK BECOMES FLATTENED OR DETERIORATED

CERTIFICATION:

STATUS: BID AND PERMIT SET

CONSULTANT:

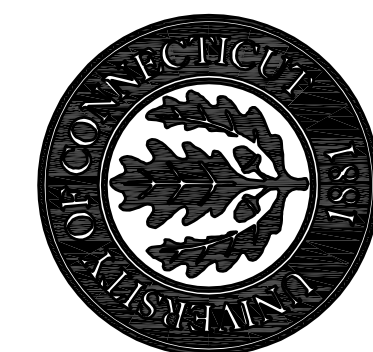


REVISIONS:

#	DATE	DESCRIPTION

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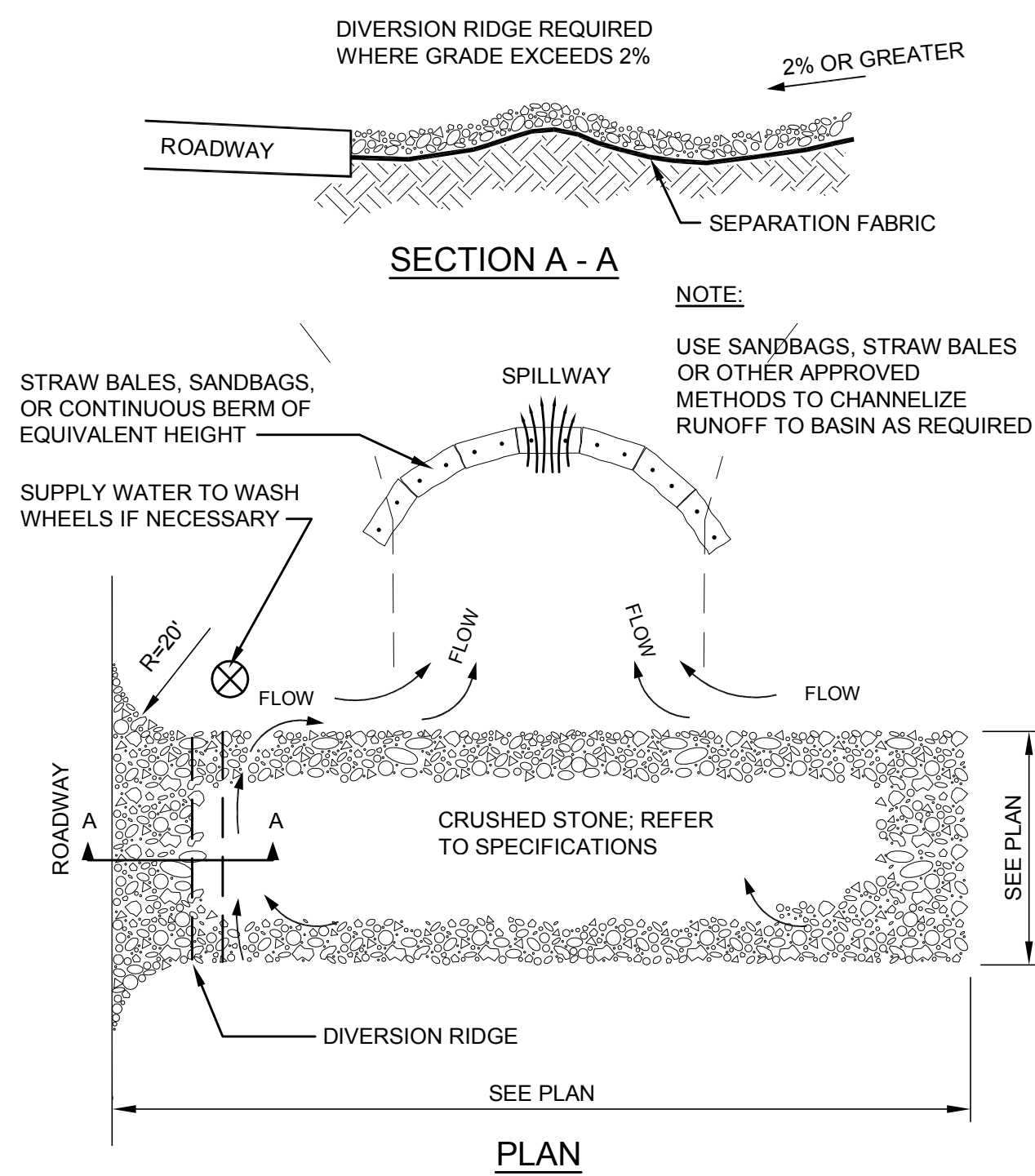
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Storrs Ct. 06269-3038
Mansfield Road

PROJECT NO.: 300174
AUTHOR: BV1
DRAFTER: BV1
SCALE: AS NOTED
PRINT DATE: 01/19/24

SHEET TITLE:
SOIL EROSION AND SEDIMENTATION CONTROL NARRATIVE

SHEET:

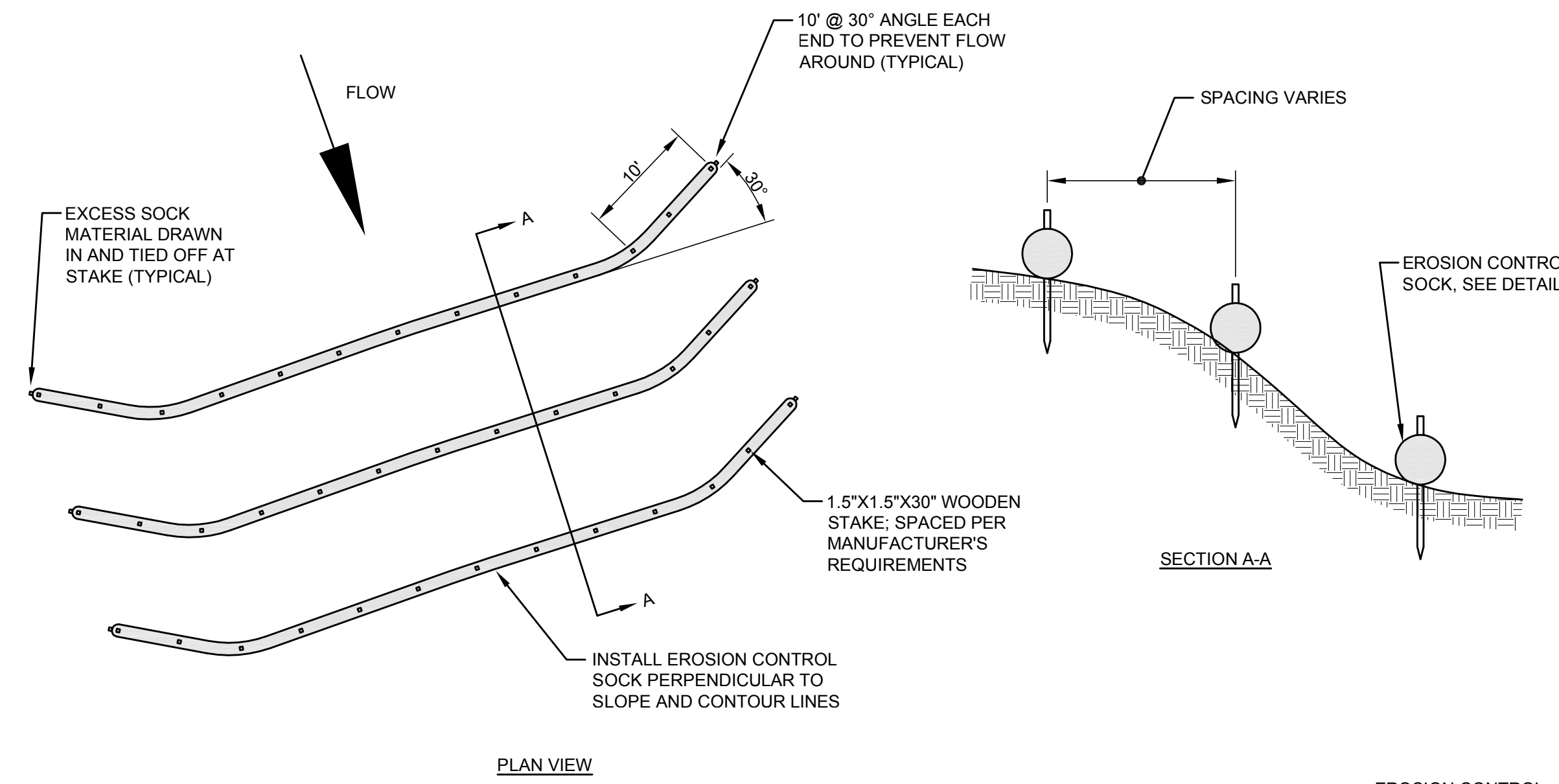
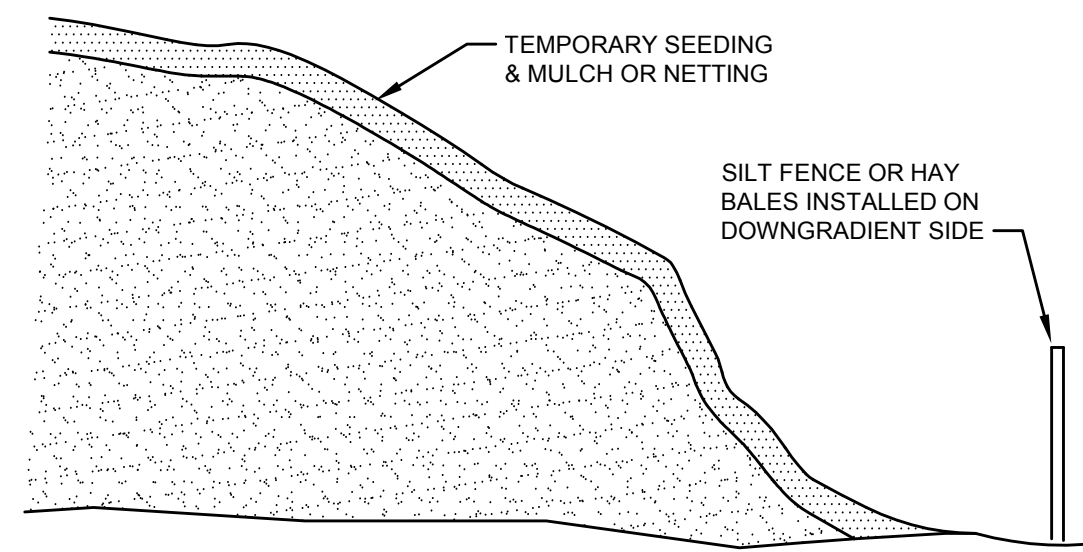
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NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. AT ANY POINT THE UNIVERSITY CAN REQUIRE CONTRACTOR (AT THEIR COST) TO INSTALL TRUCK TIRE WASH OR FOD MATS IF TRACKING IS POSSIBLE
4. WHEN WASHING IS REQUIRED AS DIRECTED BY THE UNIVERSITY AND/OR ENGINEER, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP (SEE DETAIL 7/C6.01).

1
C6.01 / NOT TO SCALE
TEMPORARY GRAVEL CONSTRUCTION ENTRANCE/EXIT

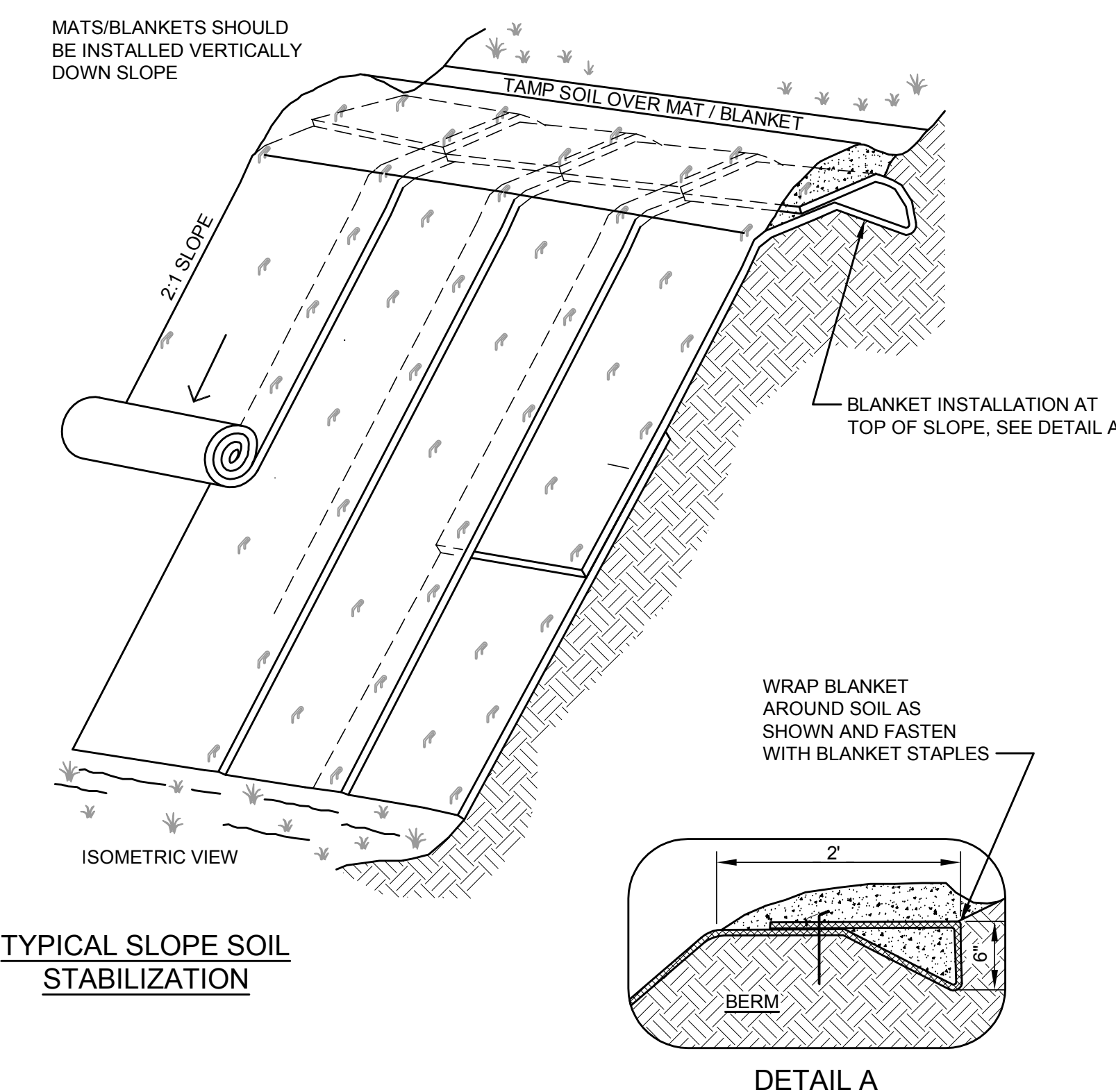


NOTES:

1. FOR INSTALLATION IN HARDSCAPE AREAS, INSTALL EROSION CONTROL SOCK WITH CONCRETE MASONRY UNITS, SPACED 1 EVERY 4' MINIMUM, ON THE DOWN SLOPE SIDE OF THE SOCK FOR SUPPORT TO PREVENT THE EROSION CONTROL SOCK FROM SLIDING WITH THE FLOW OF RUNOFF.
2. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

3
C6.01 / NOT TO SCALE
EROSION CONTROL SOCK DETAIL

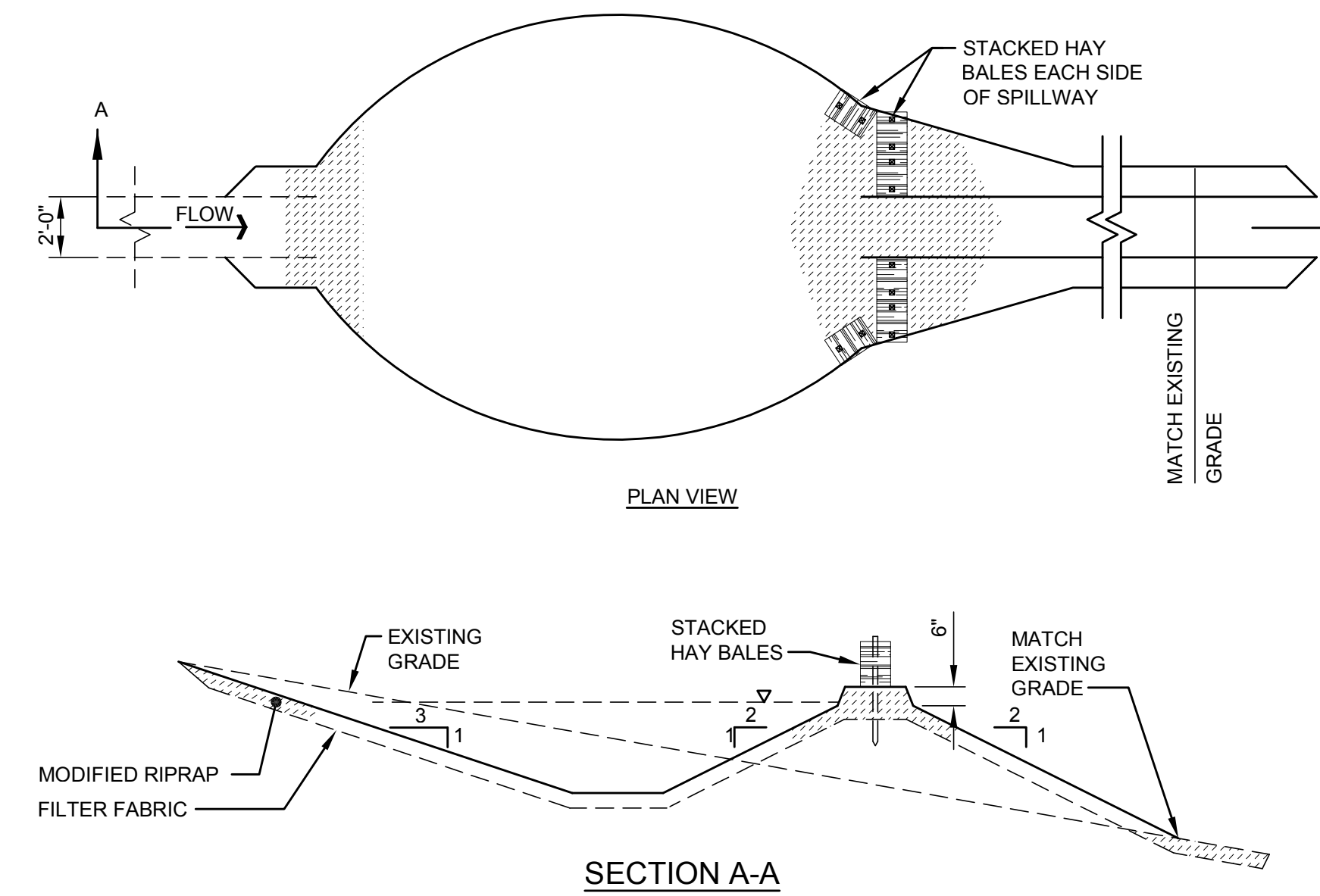
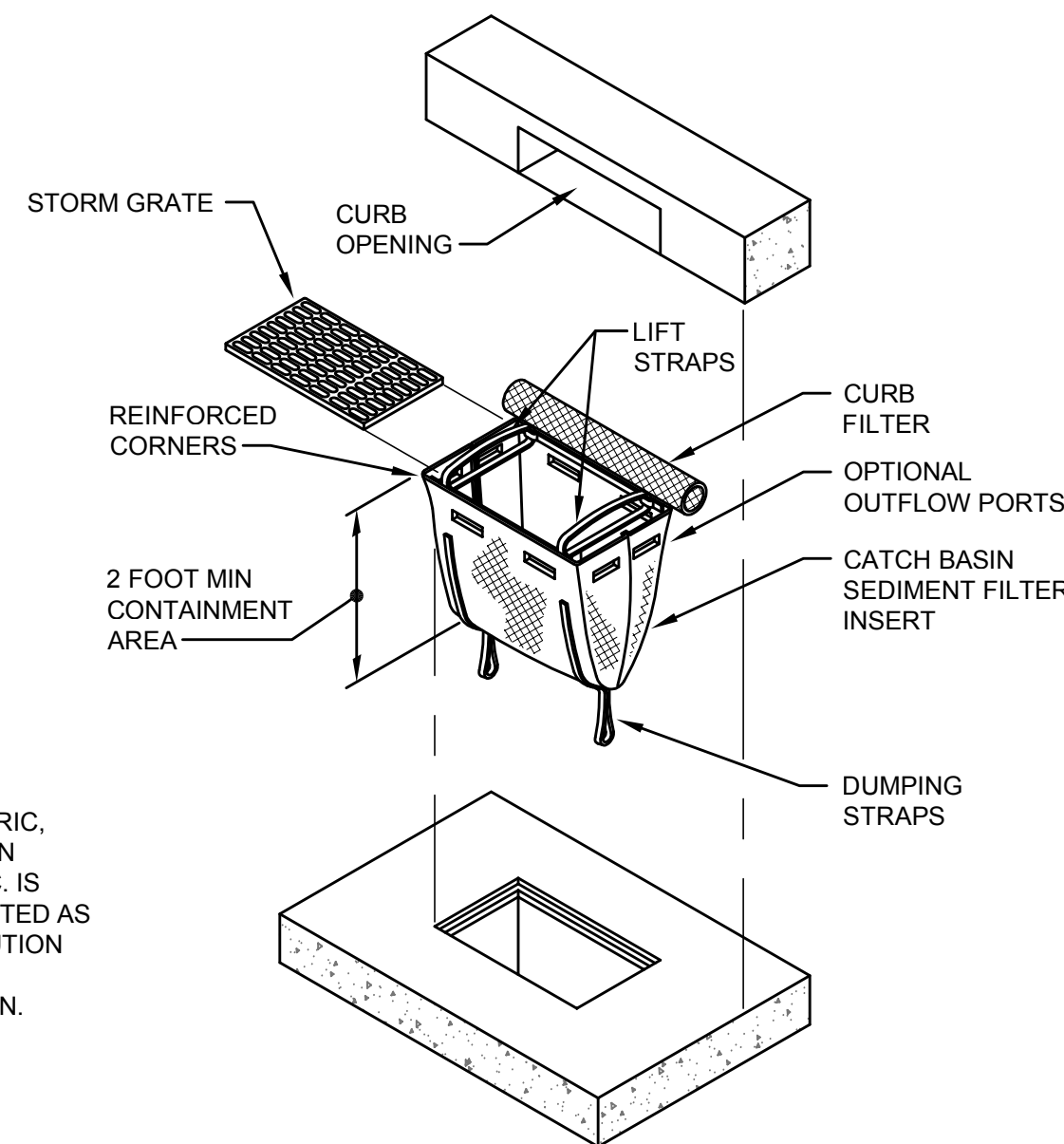
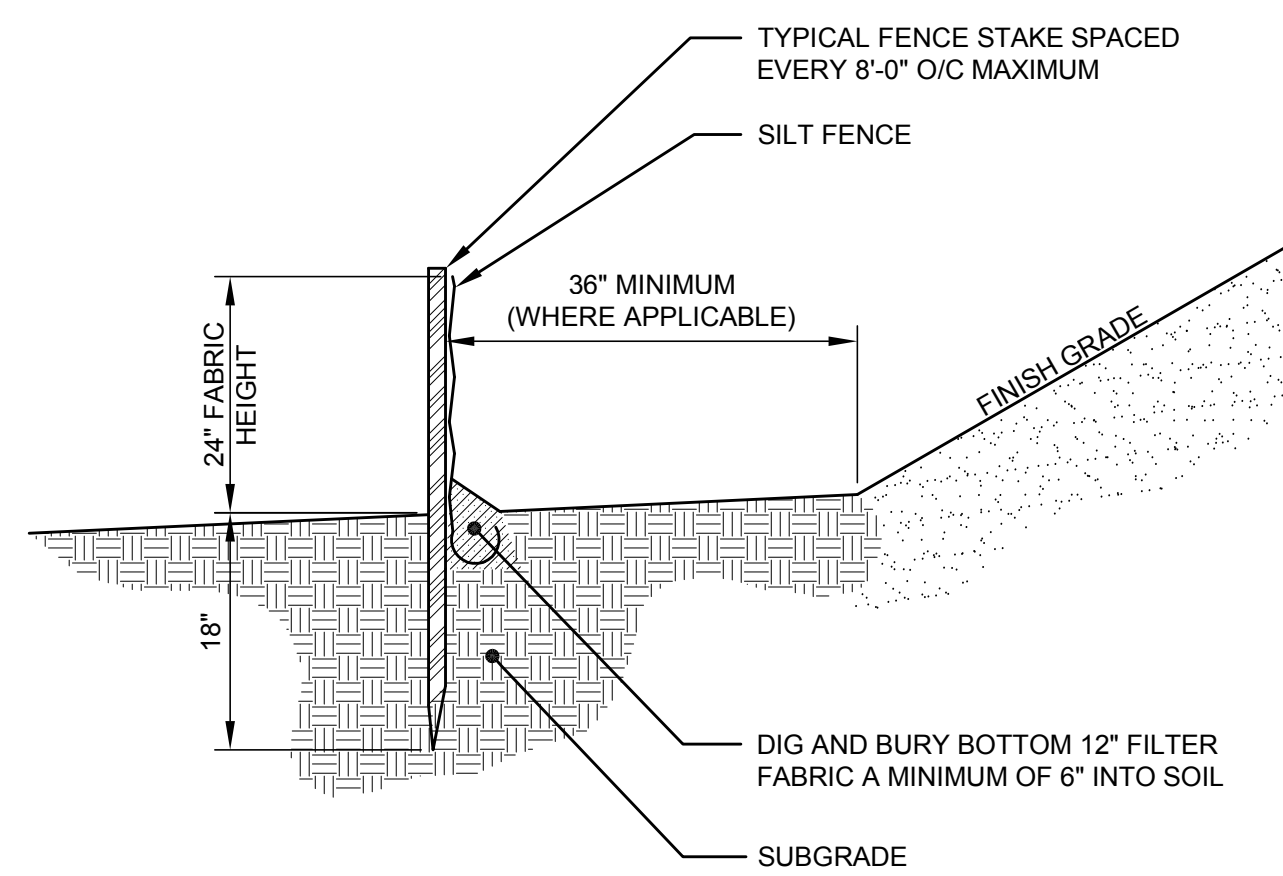
YARD DRAIN INSTALLATION (GRASS AREAS)



NOTES:

1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. REFER TO SPECIFICATIONS FOR INSTALLATION AND ADDITIONAL INFORMATION.

4
C6.01 / NOT TO SCALE
EROSION BLANKETS & TURF REINFORCEMENT MATS SLOPE INSTALLATION



CERTIFICATION:

STATUS:
BID AND PERMIT SET

CONSULTANT:



REVISIONS:

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PROJECT:

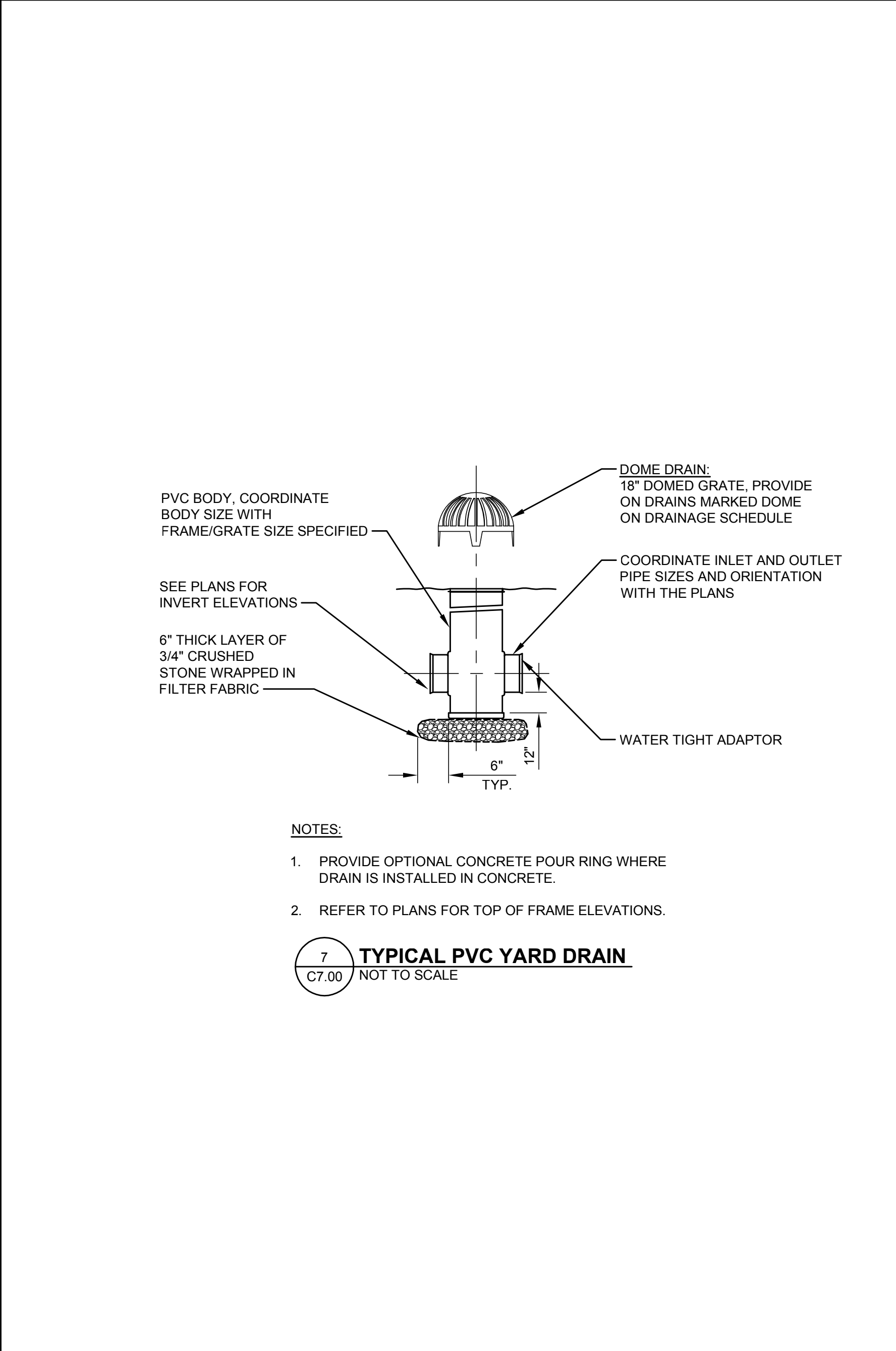
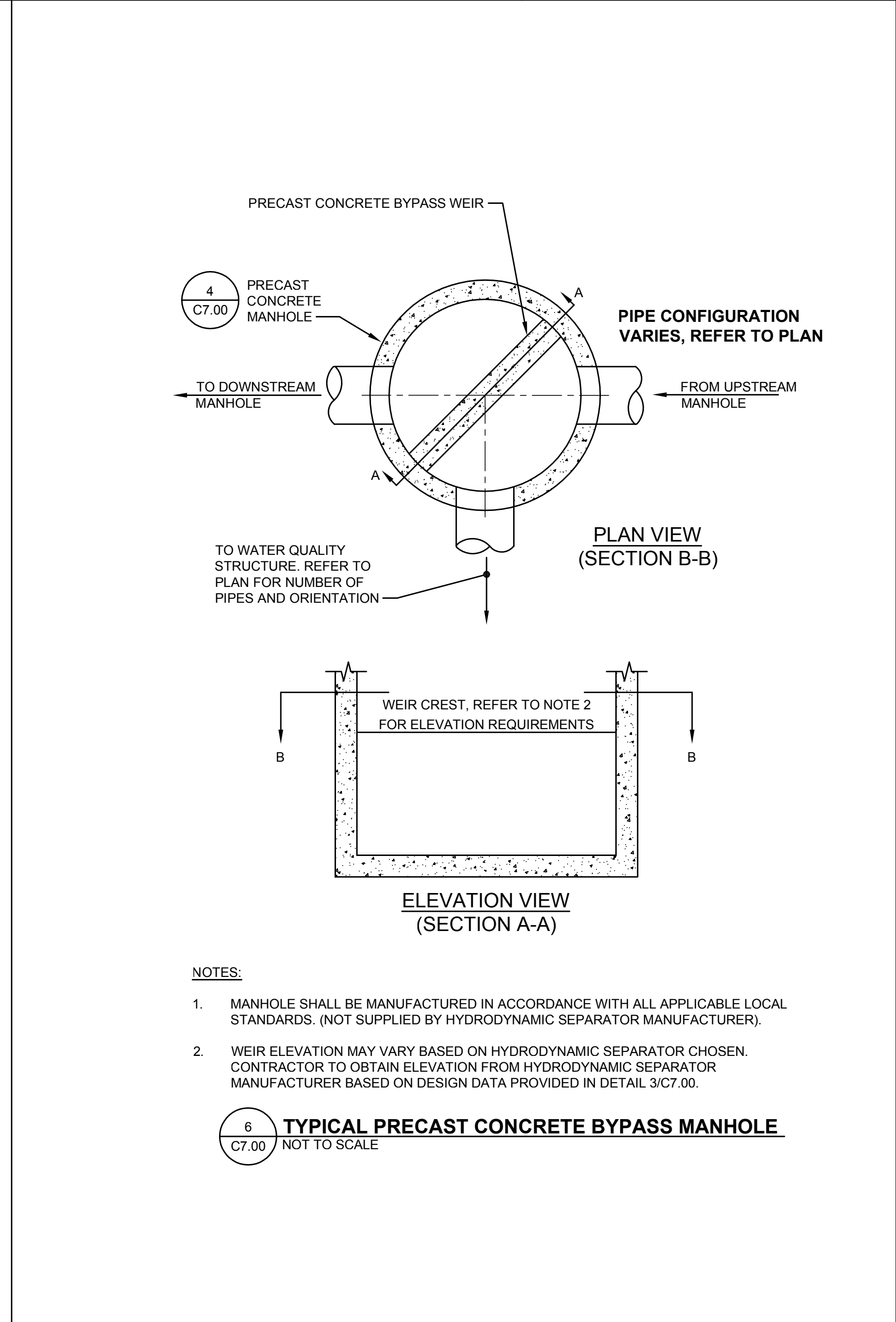
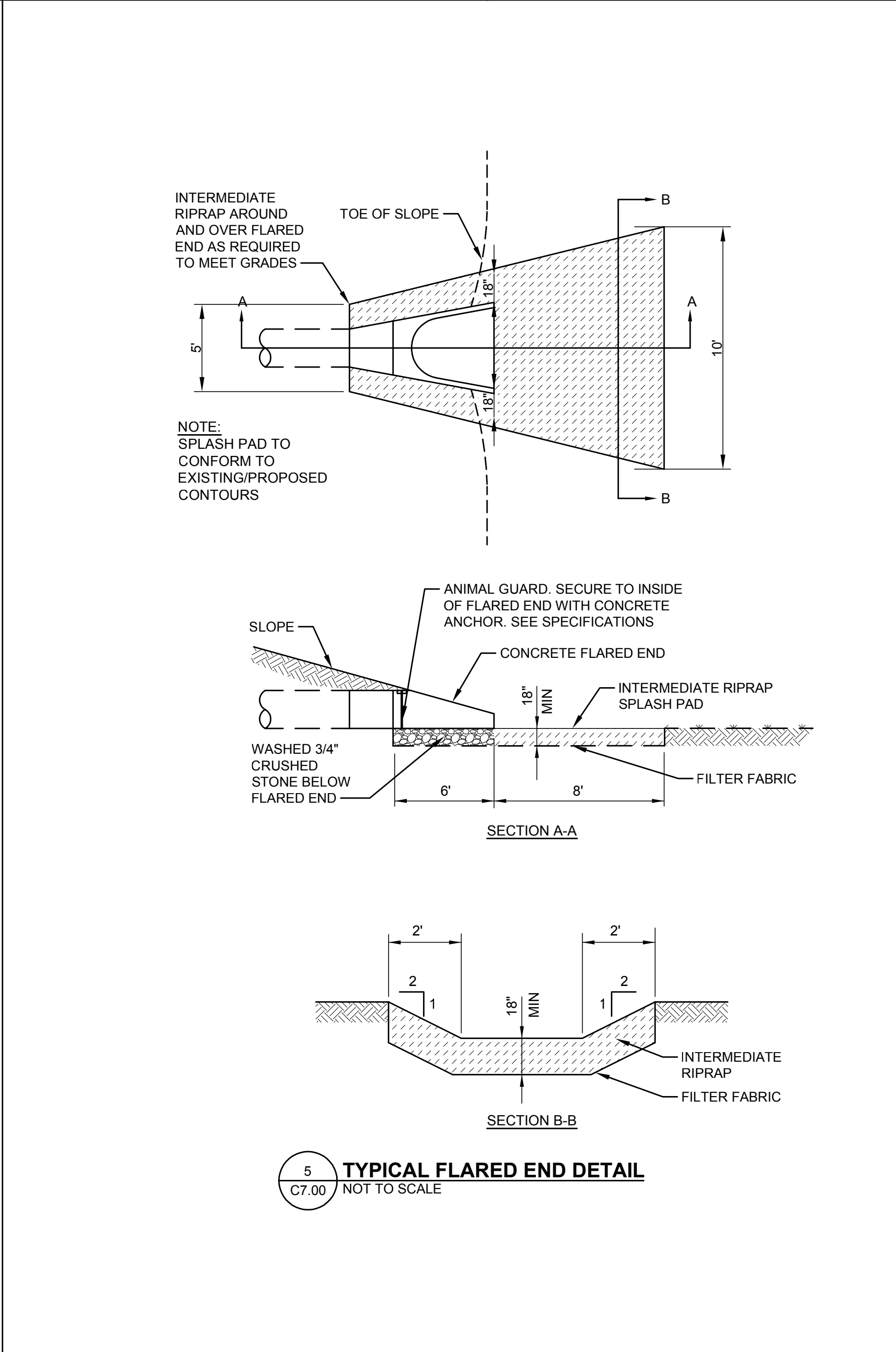
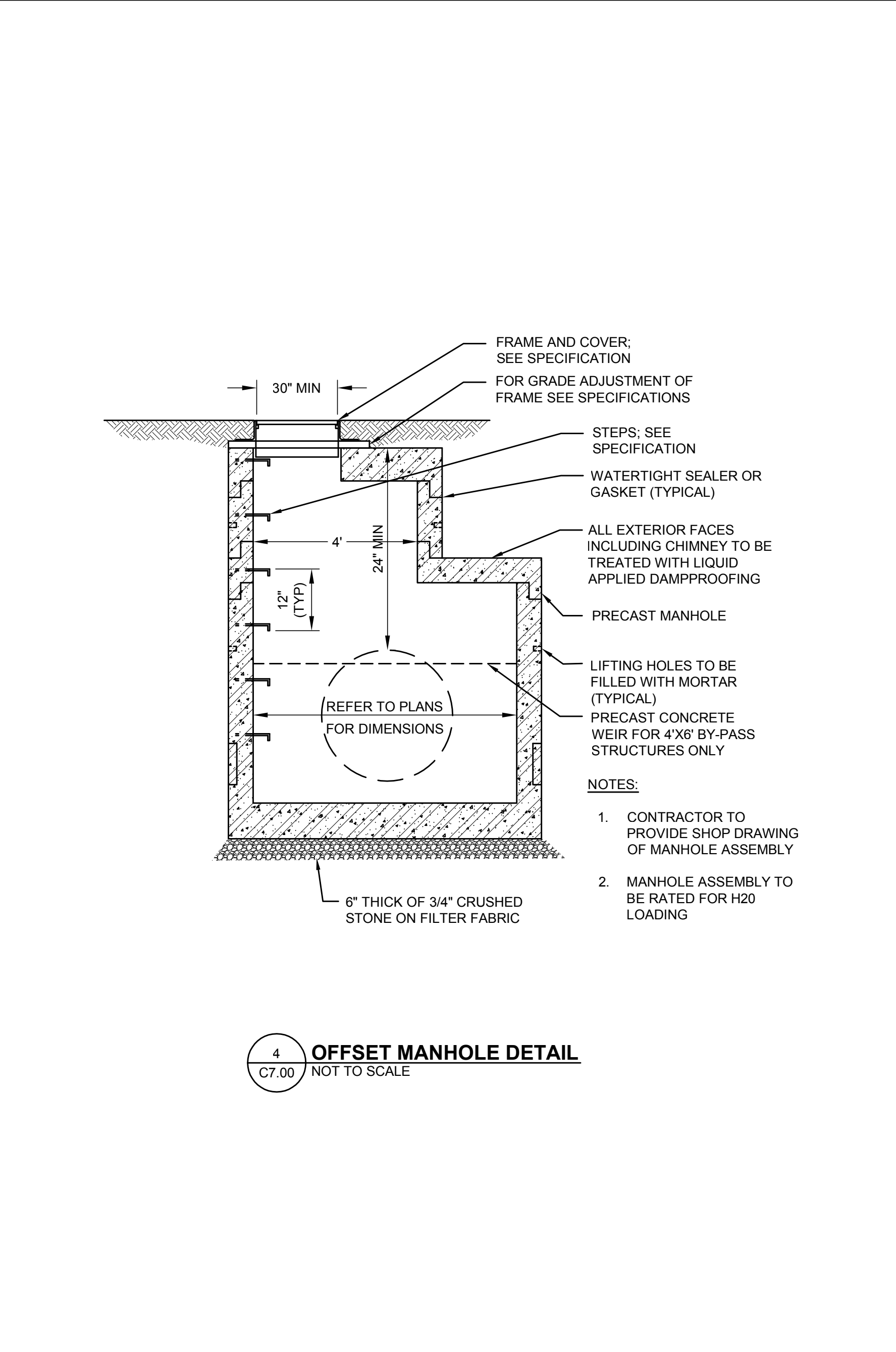
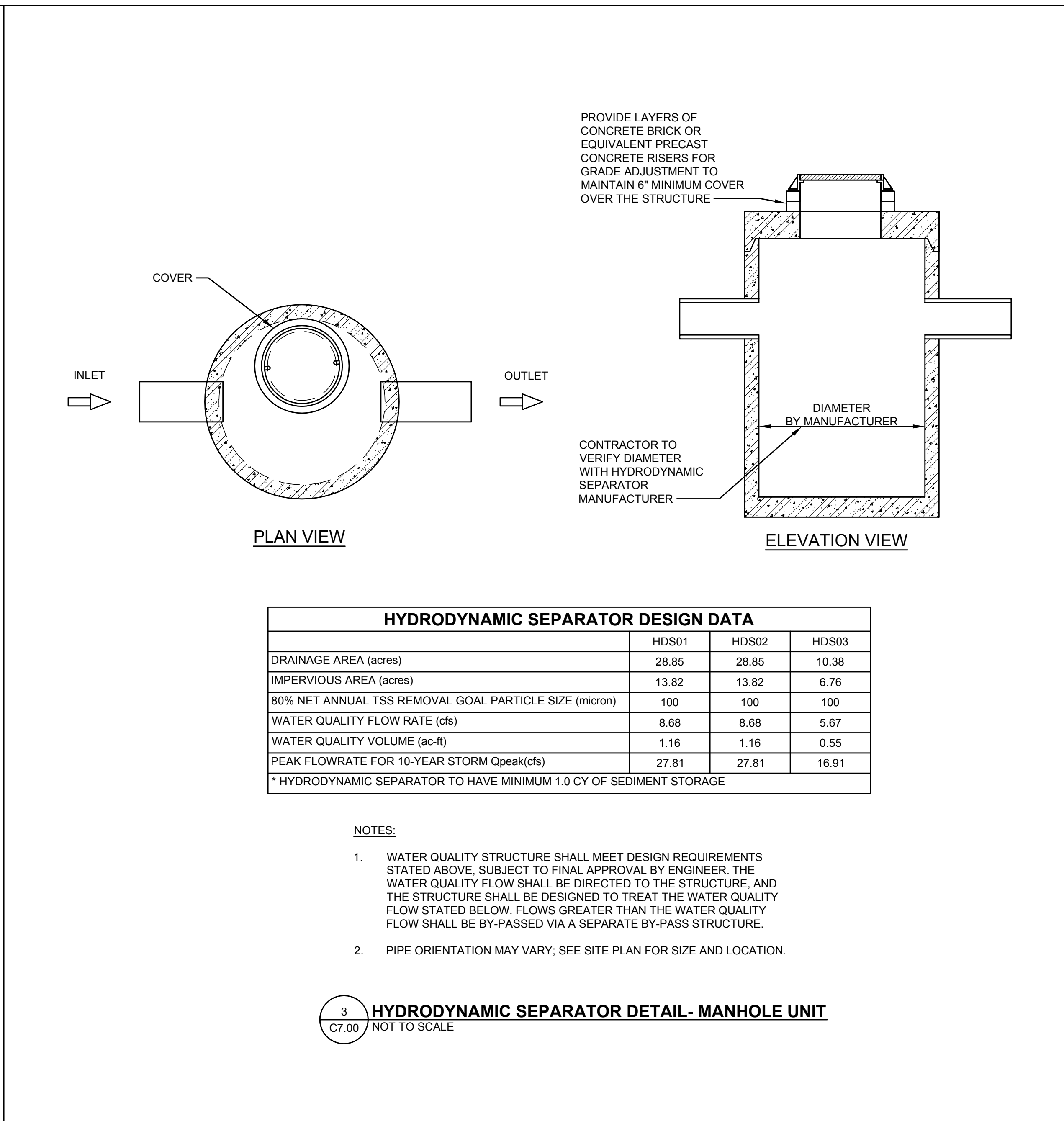
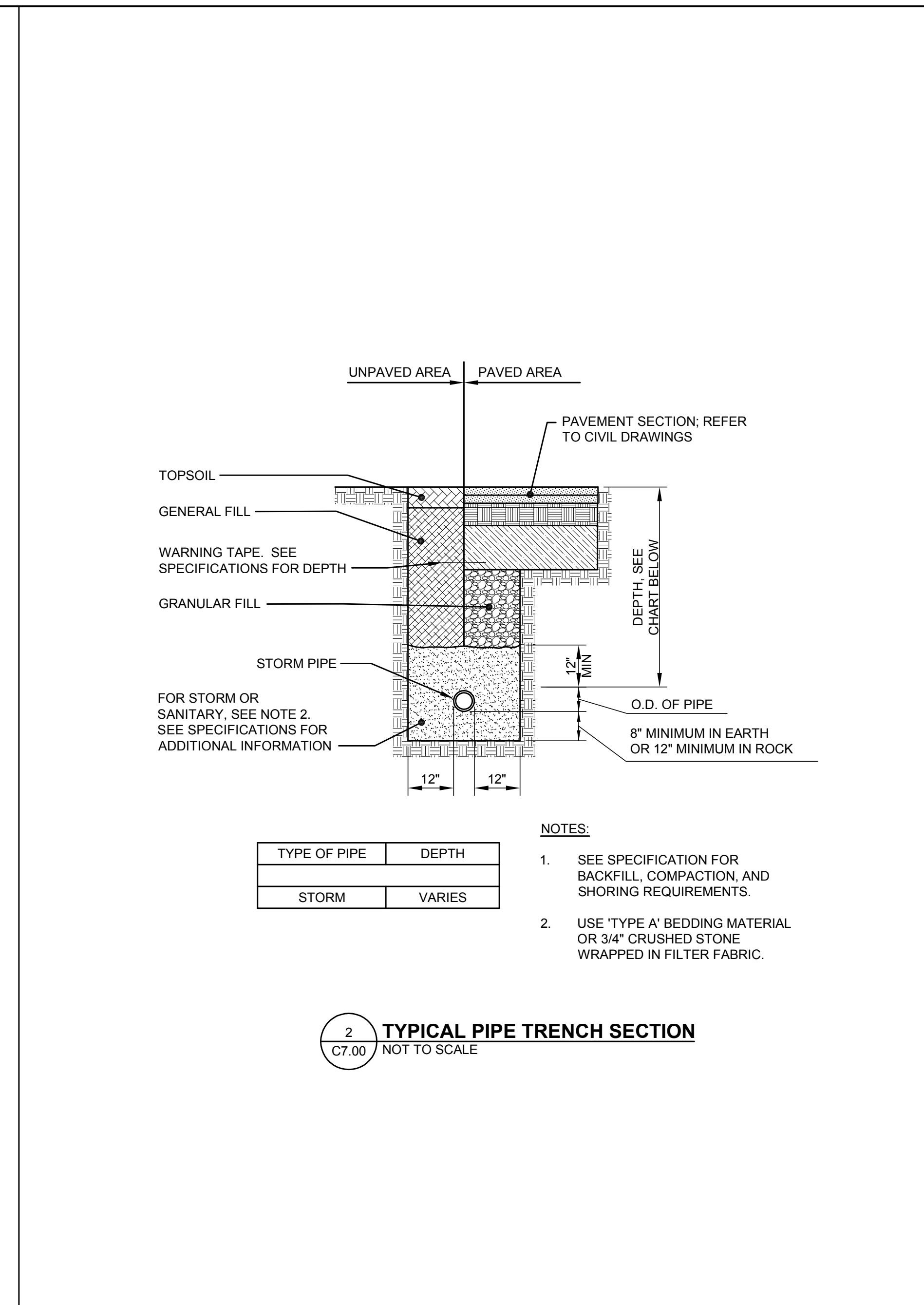
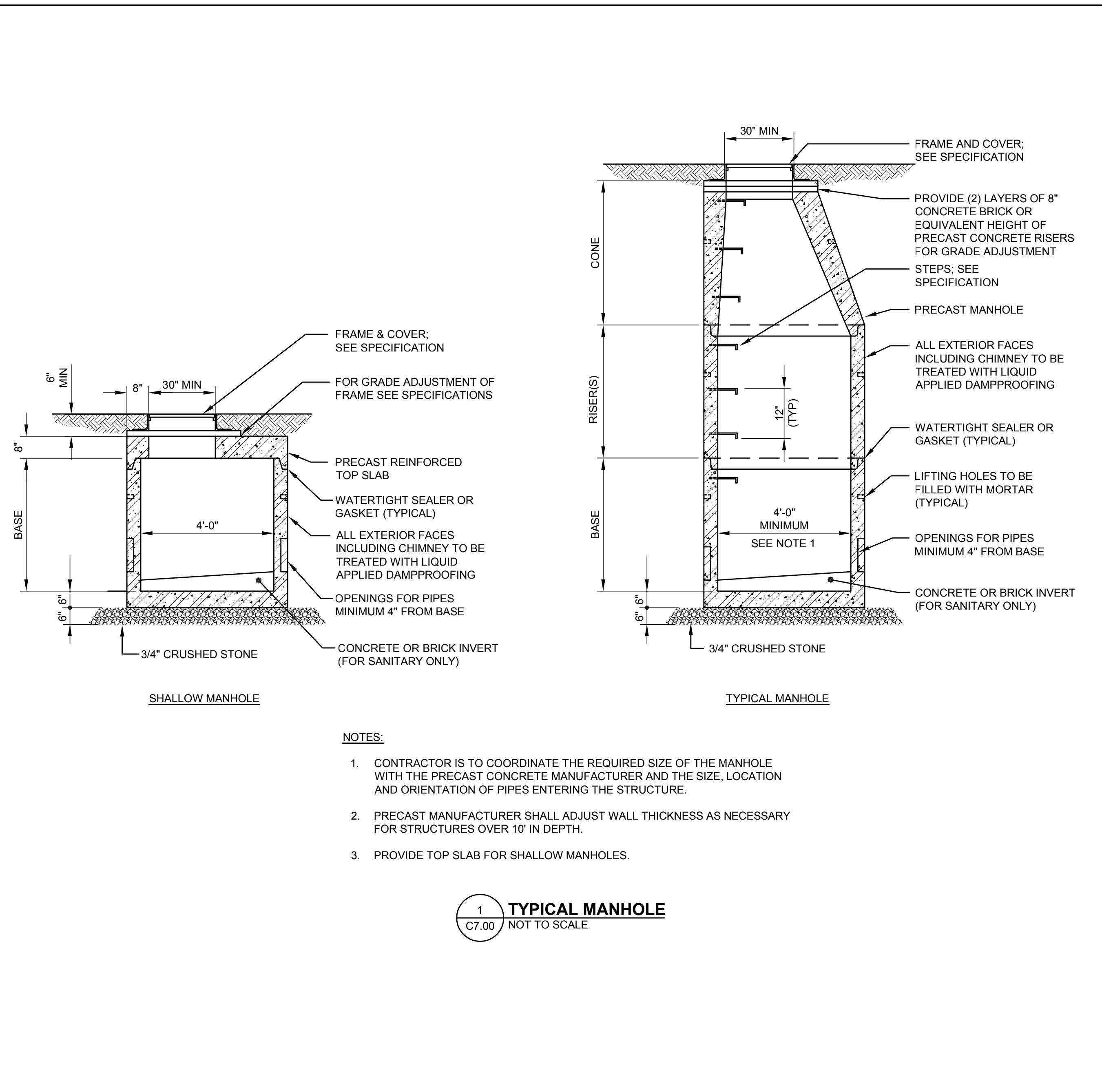
MIRROR LAKE IMPROVEMENTS
Storrs CT. 06269-3038
Mansfield Road

PROJECT NO: 300174
AUTHOR: BV11
DRAFTER: BV11
SCALE: AS NOTED
PRINT DATE: 01/19/24

SHEET TITLE:
SOIL EROSION AND SEDIMENTATION CONTROL DETAILS

SHEET:

C6.01



CERTIFICATION:

STATUS: BID AND PERMIT SET

CONSULTANT:

BVH
A SALASOBRIEN COMPANY
206 WEST NEWBERRY ROAD
BLOOMFIELD, CT 06002
860.286.9171

REVISIONS:

#	DATE	DESCRIPTION

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31 LEDOYT ROAD UNIT 3038
STORRS, CONNECTICUT 06269-3038
TELEPHONE: (860) 486-3127
FACSIMILE: (860) 486-3177

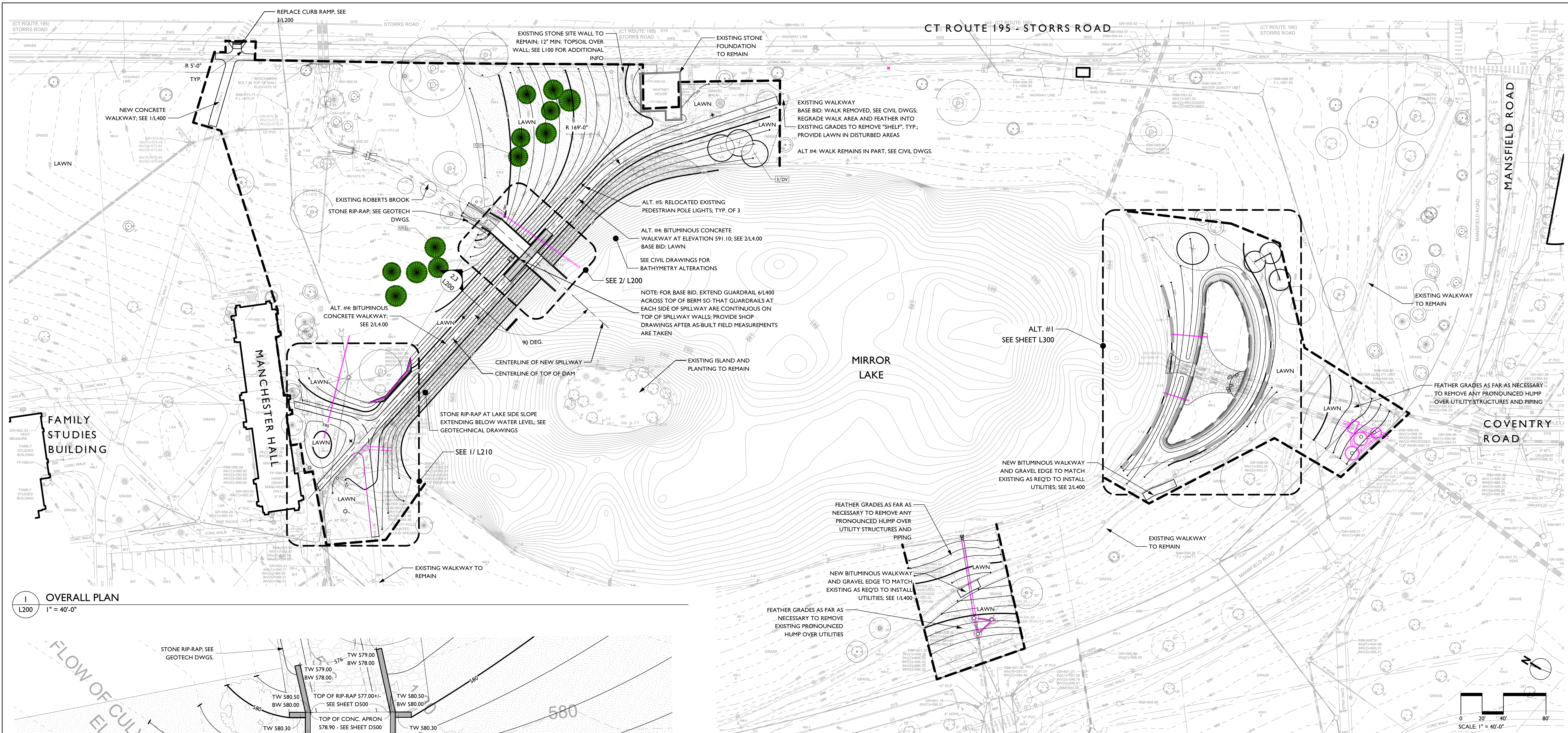
PROJECT:

MIRROR LAKE IMPROVEMENTS
Storrs CT, 06269-3038
Mansfield Road

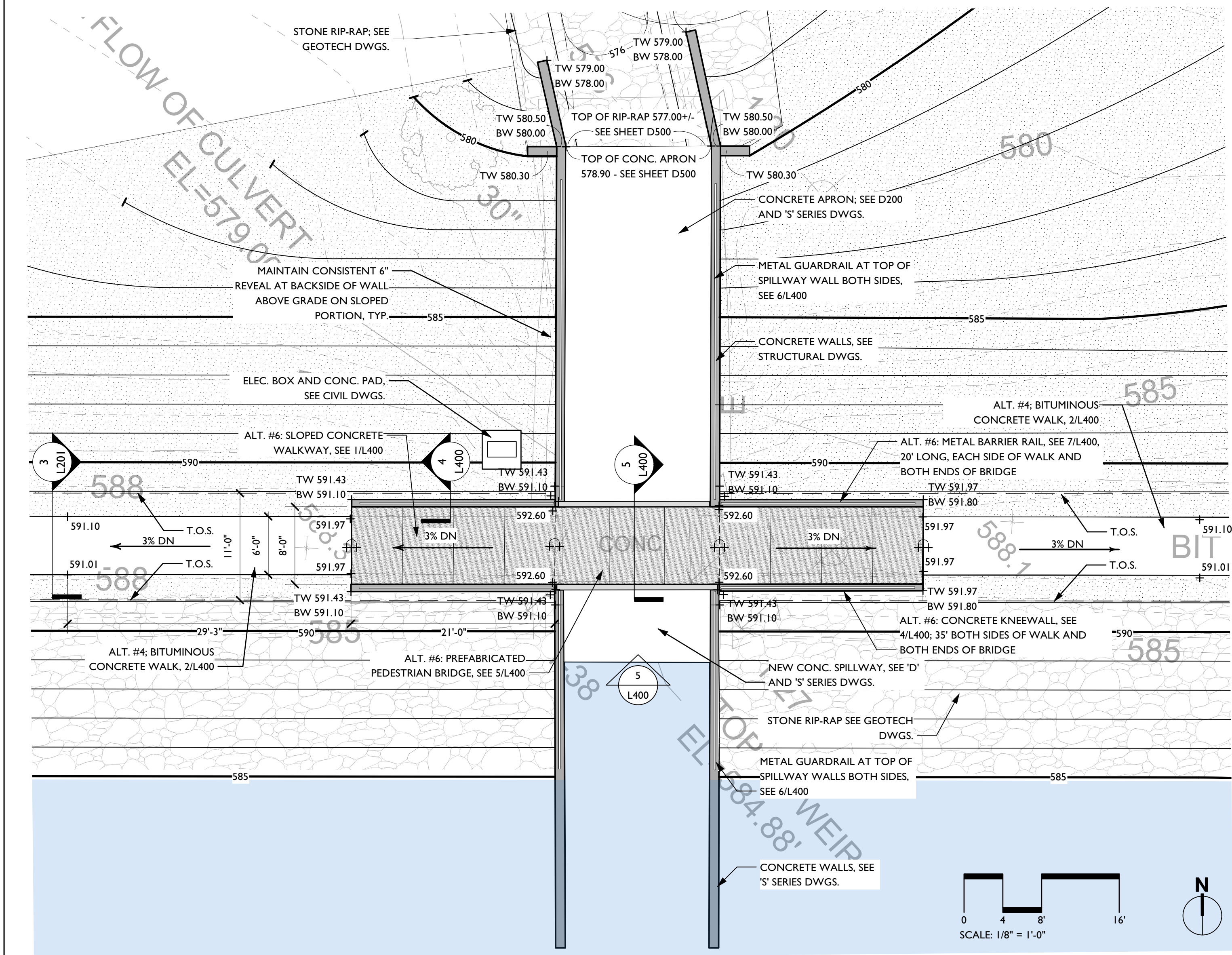
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AUTHOR: BV1
DRAFTER: BV1
SCALE: AS NOTED
PRINT DATE: 01/19/24
SHEET TITLE: SITE DETAILS

SHEET: C7.00

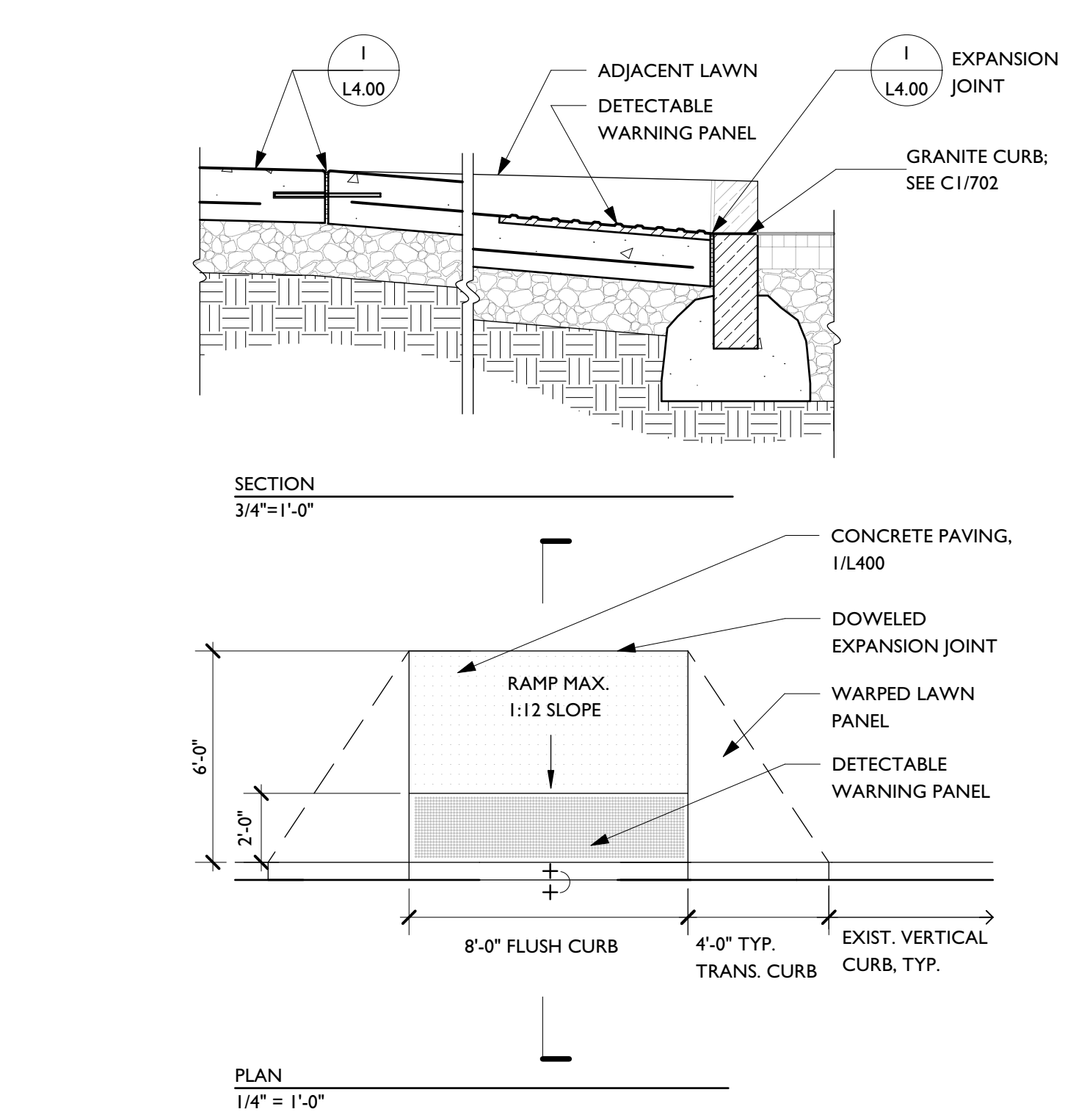
1/18/24, 8:31:56 AM, W:\2024\1212\256 - UConn Framework Mirror Lake Improvements\DWGS\C21256-detailed-C20.dwg



1 OVERALL PLAN
L200
1" = 40'-0"



2 BRIDGE AREA - ALTERNATE #6 AND ALTERNATE #4 SHOWN
L200
1/8" = 1'-0"



3 CONCRETE CURB RAMP
L200
SCALE: AS SHOWN

GRADING LEGEND	
EXISTING SPOT ELEVATION	EXISTING CONTOUR
PROPOSED SPOT ELEVATION	PROPOSED MINOR CONTOUR
FLUSH CONDITION	PROPOSED MAJOR CONTOUR
SLOPE DOWN	LIMIT OF RE-GRADING LAKE WATER SURFACE ELEVATION / STREAM EDGE

CERTIFICATION:
STATUS: BID AND PERMIT SET

CONSULTANT:
LANDSCAPE ARCHITECTS
TOWERS | GOLDE
85 Willow Street
New Haven, Connecticut 06511
203.773.1153
www.towersgolde.com

REVISIONS:

#	DATE	DESCRIPTION

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FACSIMILE: (860) 486-3177

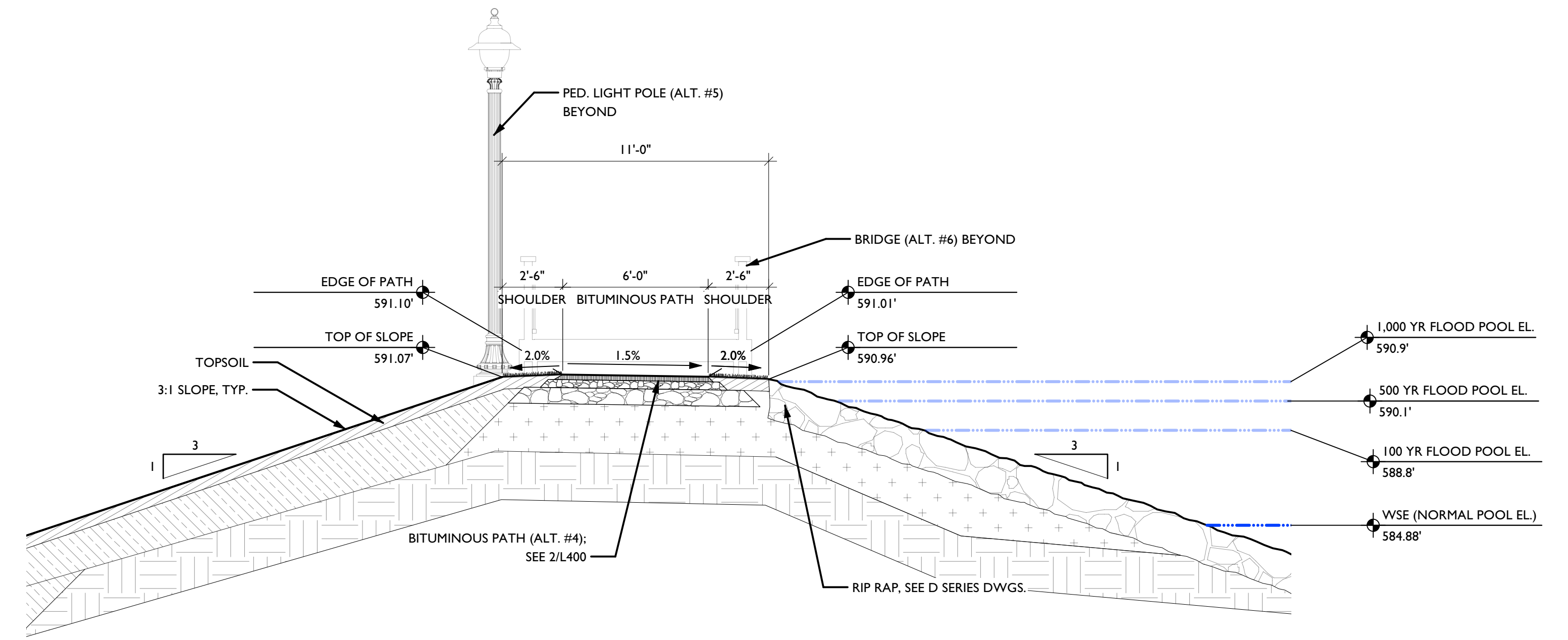
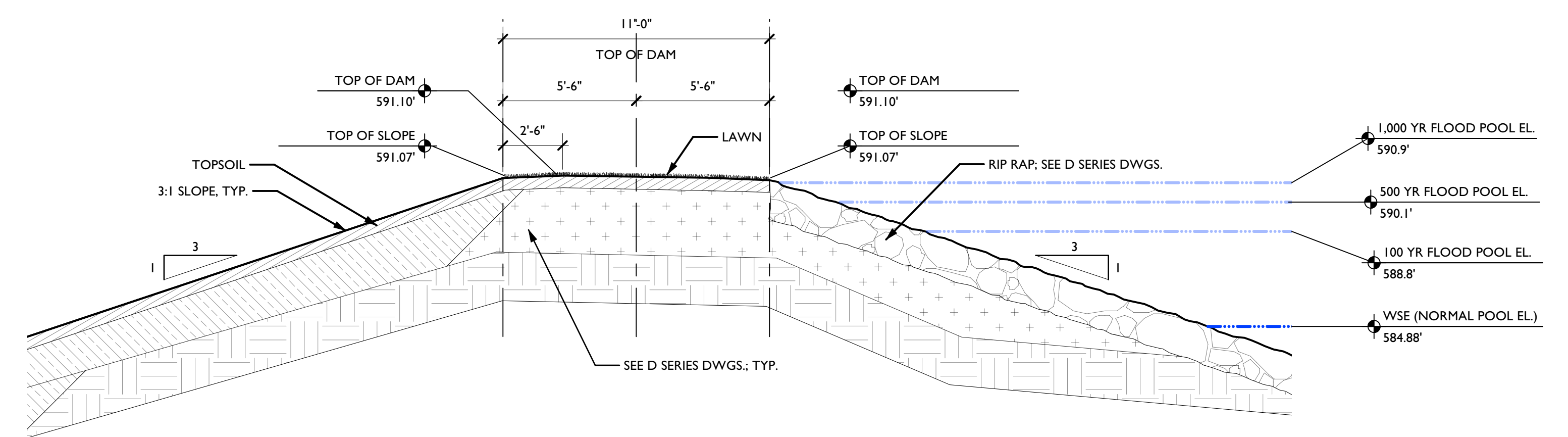
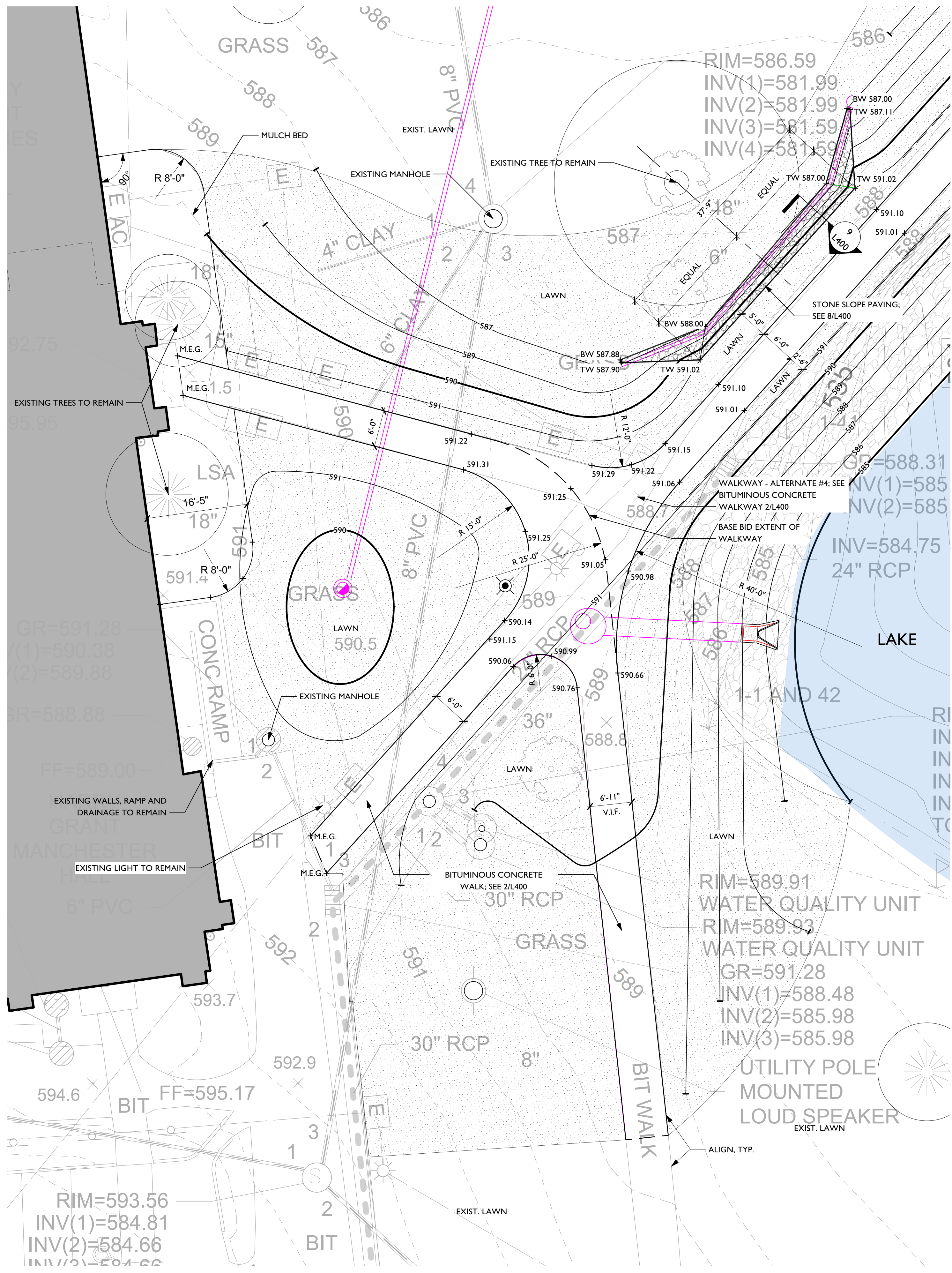


PROJECT:
MIRROR LAKE
IMPROVEMENTS
REDESIGN - FEASIBILITY
STUDY
Storrs CT. 06269-3038
Mansfield Road

PROJECT NO: 300174
AUTHOR: WW
DRAFTER: WW
SCALE: 1" = 40'-0"
PRINT DATE: 01/19/24
SHEET TITLE:

OVERALL SITE
IMPROVEMENTS PLAN

SHEET:
L200



CERTIFICATION:

STATUS: BID AND PERMIT SET

CONSULTANT:

TOWERS | GOLDE
 LANDSCAPE ARCHITECTS
 SITE PLANNERS
 85 Willow Street
 New Haven, Connecticut 06511
 203.773.1153
 www.towersgolde.com

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 31 LEDDY ROAD UNIT 3038
 STORRS, CONNECTICUT 06269-3038
 TELEPHONE: (860) 486-3127
 FACSIMILE: (860) 486-3177



PROJECT:

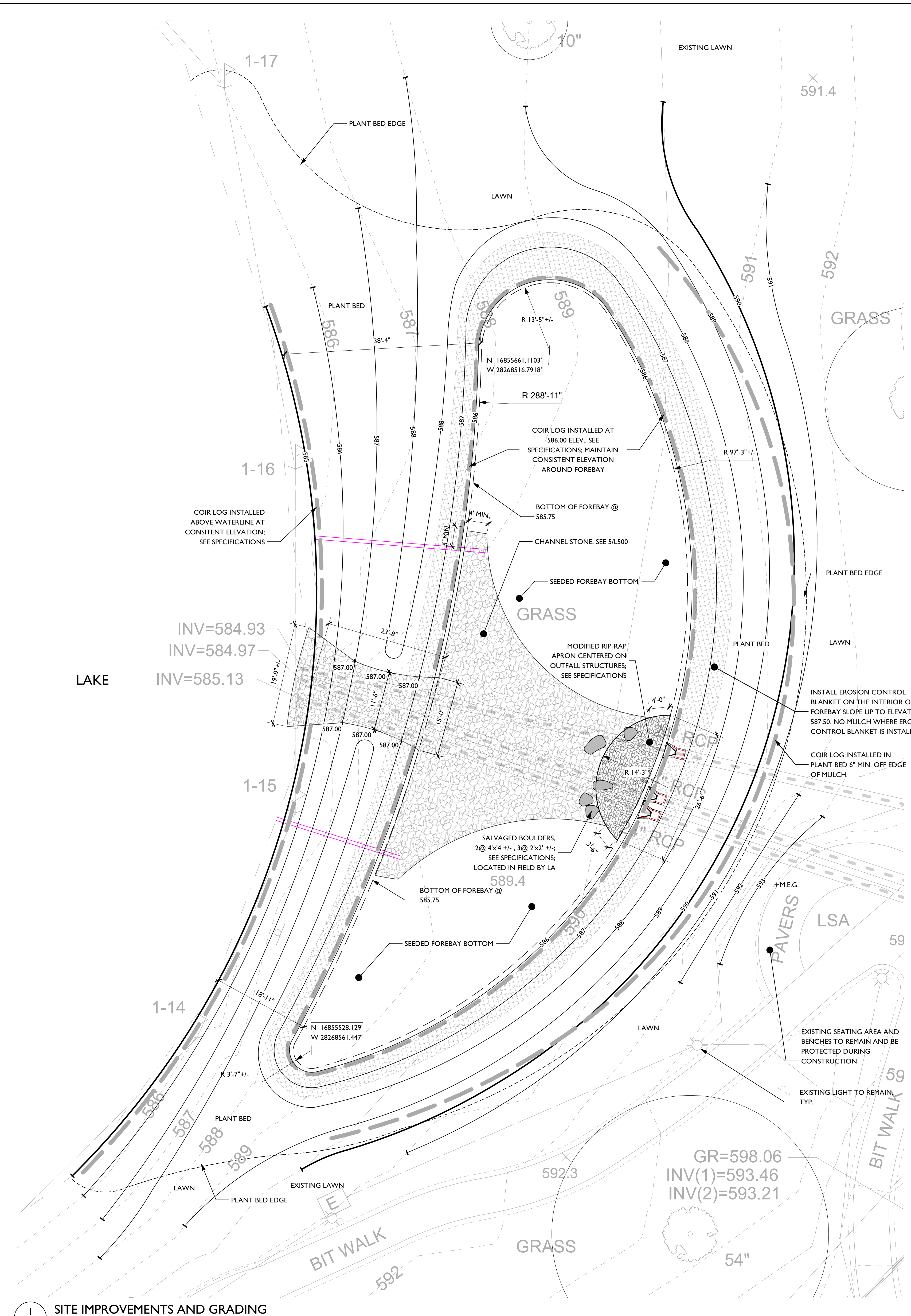
MIRROR LAKE IMPROVEMENTS REDESIGN - FEASIBILITY STUDY
 Storrs CT: 06269-3038
 Mansfield Road

PROJECT NO:	300174
AUTHOR:	WW
DRAFTER:	WW
SCALE:	AS SHOWN
PRINT DATE:	01/19/24
SHEET TITLE:	

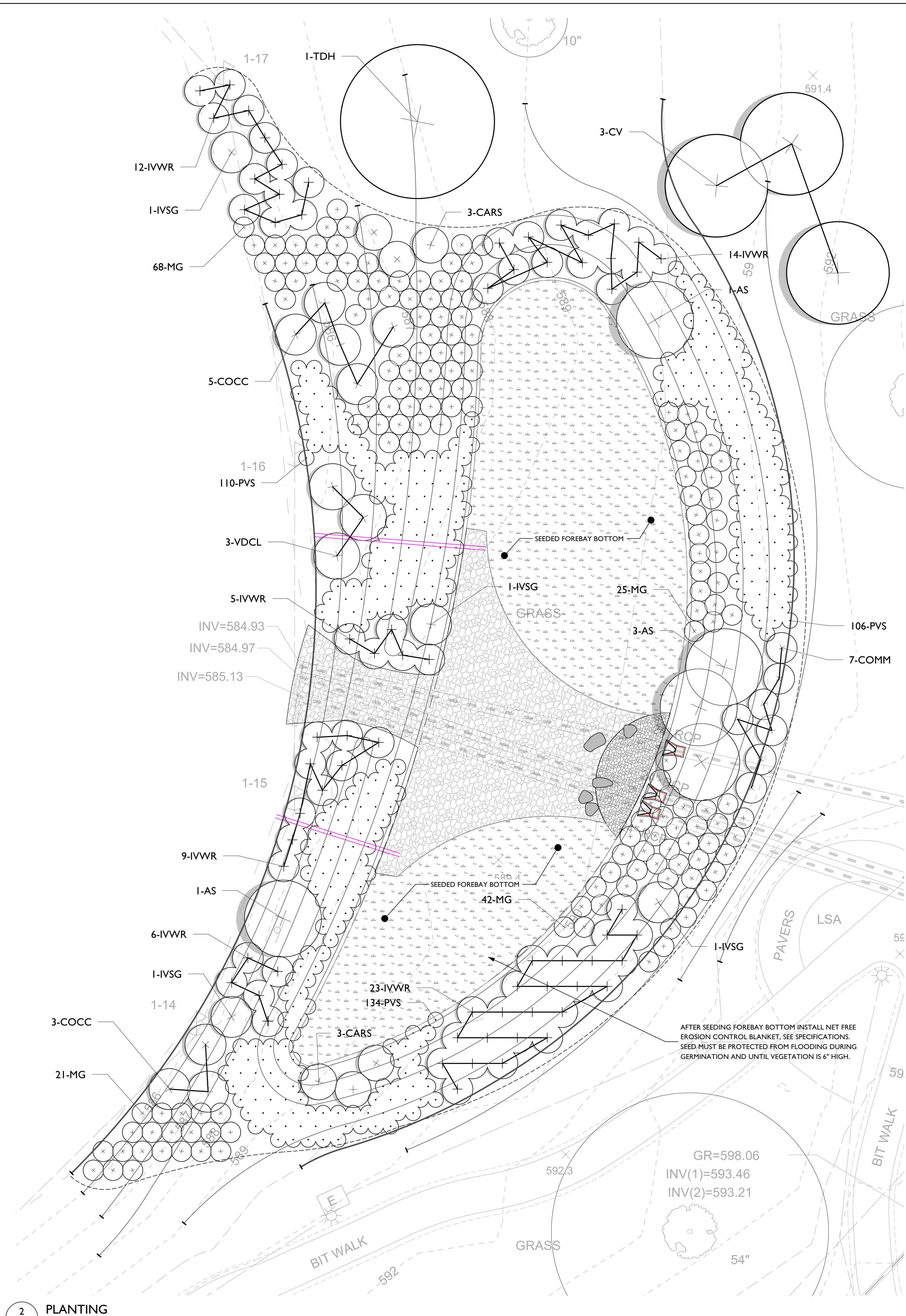
MANCHESTER HALL SITE IMPROVEMENTS PLAN

SHEET:

L201



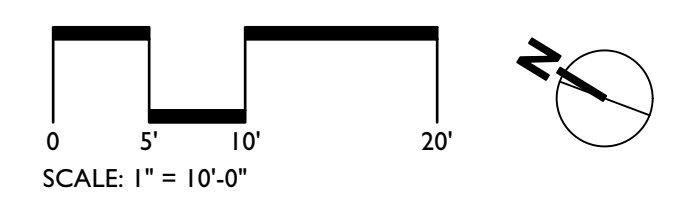
1 SITE IMPROVEMENTS AND GRADING
L300 SCALE: 1"=120'



2 PLANTING
L300 SCALE: 1"=10'

GRADING LEGEND

EXISTING SPOT ELEVATION		EXISTING CONTOUR	
PROPOSED SPOT ELEVATION		PROPOSED MINOR CONTOUR	
FLUSH CONDITION		PROPOSED MAJOR CONTOUR	
SLOPE DOWN		LIMIT OF RE-GRADING	
		WATER SURFACE ELEVATION	



CERTIFICATION:
STATUS: BID AND PERMIT SET

CONSULTANT:
TOWERS | GOLDE
LANDSCAPE ARCHITECTS
85 Willow Street
New Haven, Connecticut 06511
203.773.1153
www.towersgolde.com

REVISIONS:

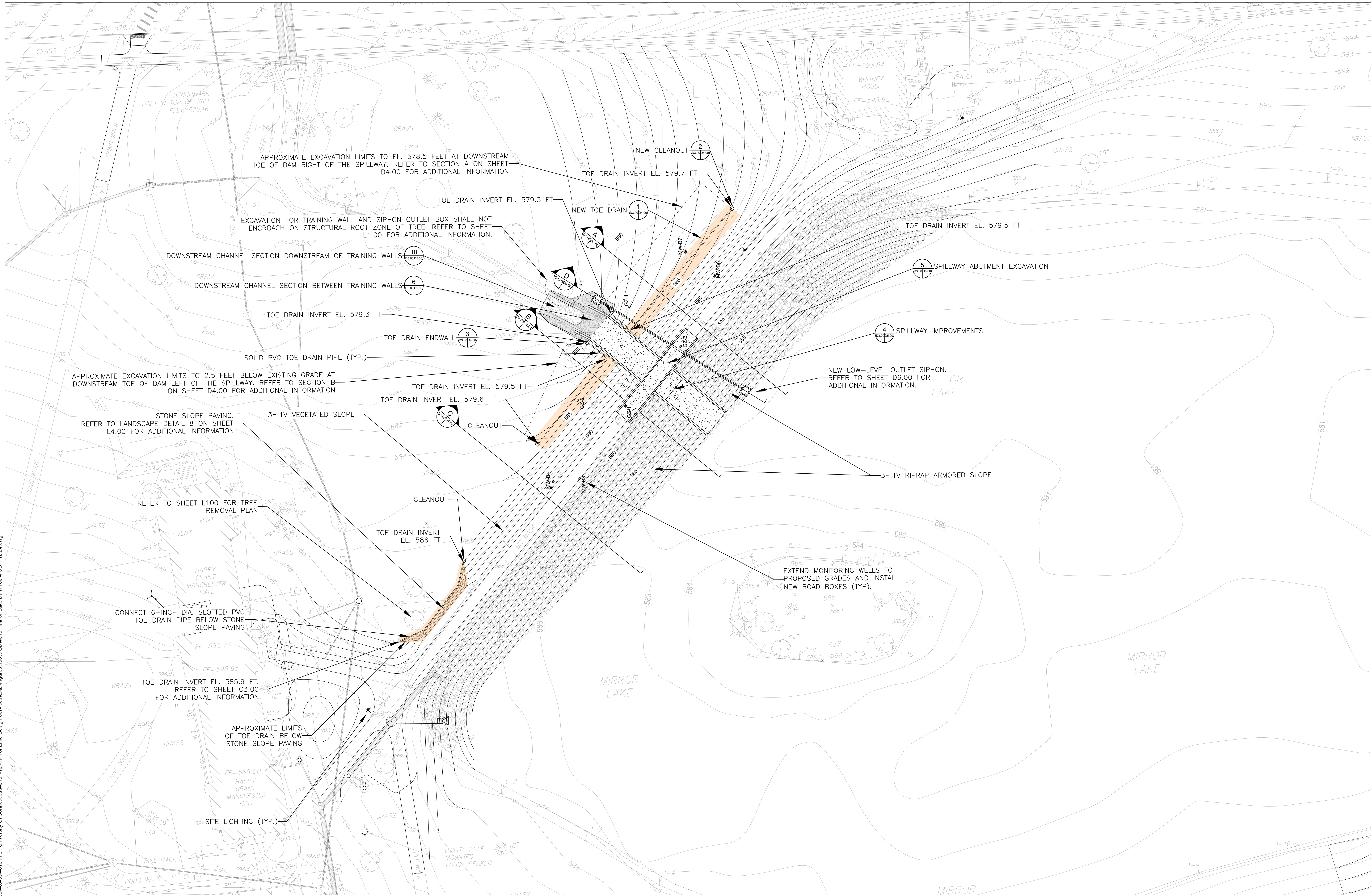
#	DATE	DESCRIPTION

UNIVERSITY OF CONNECTICUT
UNIVERSITY PLANNING DESIGN & CONSTRUCTION
31 LEDOYT ROAD UNIT 3038
STORRS, CONNECTICUT 06269-3038
TELEPHONE: (860) 486-3127
FACSIMILE: (860) 486-3177

PROJECT:
MIRROR LAKE IMPROVEMENTS REDESIGN - FEASIBILITY STUDY
Storrs CT: 06269-3038
Mansfield Road

PROJECT NO: 300174
AUTHOR: WW
DRAFTER: WW
SCALE: 1" = 10'
PRINT DATE: 01/19/24
SHEET TITLE:
FOREBAY SITE IMPROVEMENTS - ALTERNATE #1

SHEET:
L300

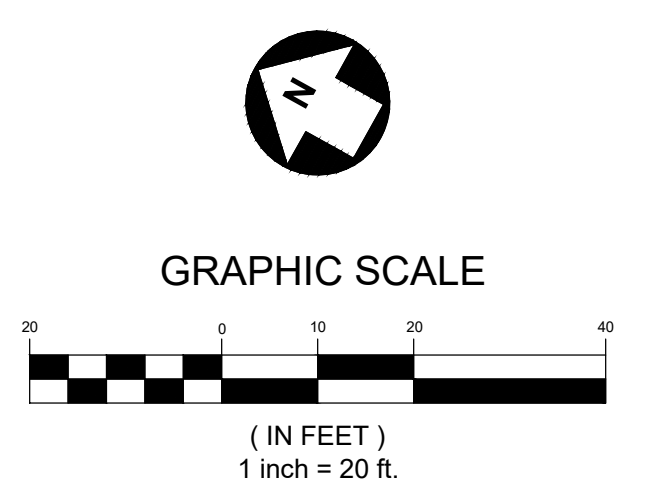


GENERAL NOTES

1. BASE MAP BASED ON ELECTRONIC FILE TITLED "140242901-2101 MIRROR 05-04-2022.DWG", PROVIDED BY BVM, PLAN TITLED "MIRROR LAKE BATHYMETRY", PREPARED BY GZA, DATED JANUARY 21, 2021. ELECTRONIC FILE TITLED "MIRROR LAKE LANDSCAPE BASE 1-17-24.DWG", PROVIDED BY TOWERS GOLDE.
2. VERTICAL ELEVATIONS ARE IN REFERENCE TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. EXISTING LAKE BOTTOM (TOP OF SOFT SEDIMENT) ELEVATIONS ARE BASED ON BATHYMETRIC SURVEY OF MIRROR LAKE BOTTOM CONDUCTED BY GZA ON JANUARY 18, 2021.

LEGEND

- FOOTPRINT OF UNROUTED RIPRAP ON UPSTREAM AND DOWNSTREAM SIDE OF DAM
- FOOTPRINT OF GROUTED RIPRAP ON DOWNSTREAM SIDE OF DAM
- FOOTPRINT OF PROPOSED CONCRETE
- APPROXIMATE LOCATION OF EXISTING MONITORING WELL



CERTIFICATION:

STATUS:
BID AND PERMIT SET

CONSULTANT:

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

95 GLASTONBURY BLVD, 3RD FLOOR
GLASTONBURY, CT 06033
860.286.8900

REVISIONS:

#	DATE	DESCRIPTION

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STORRS, CONNECTICUT 06269-3038
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PROJECT:

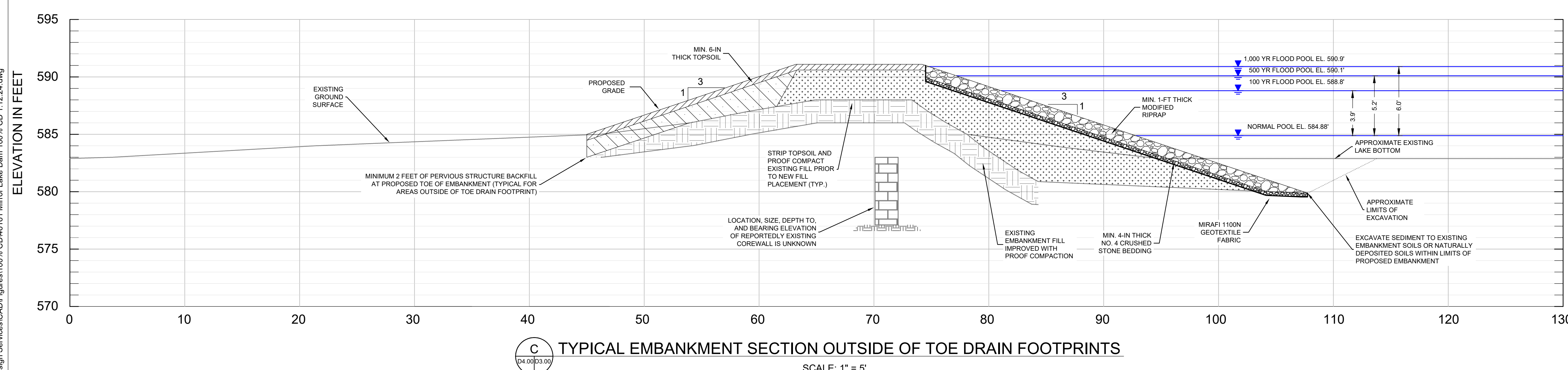
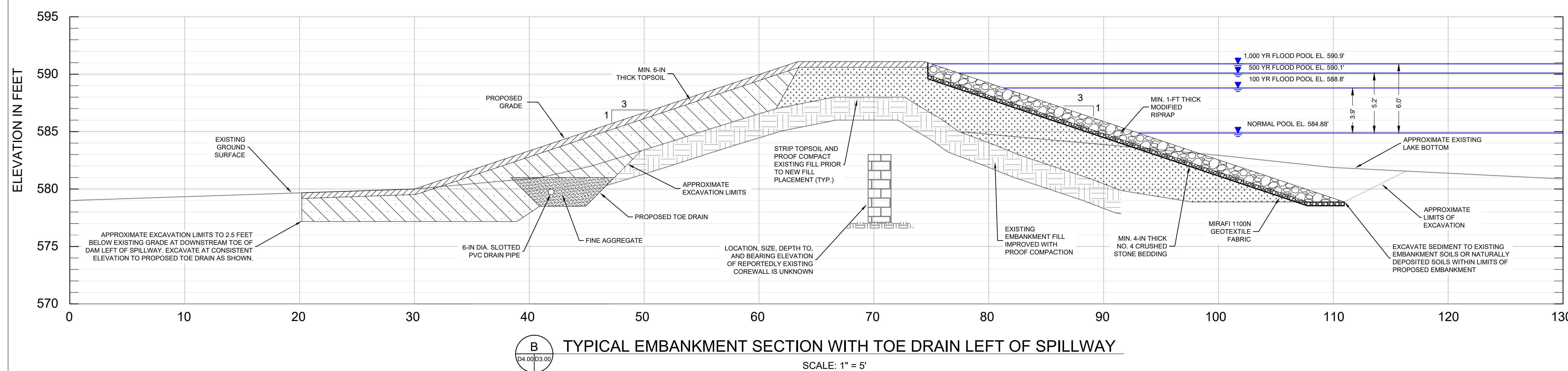
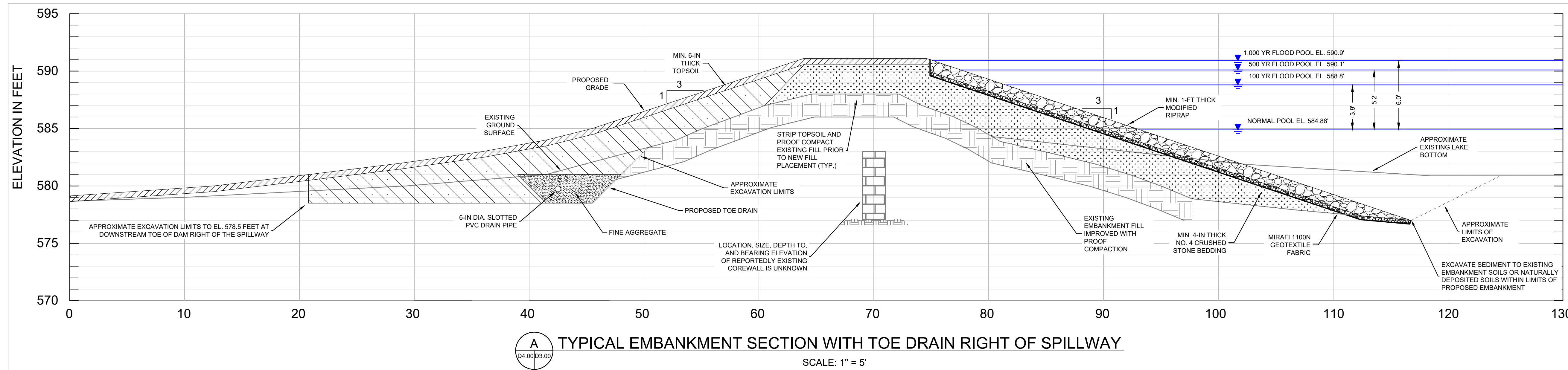
MIRROR LAKE IMPROVEMENTS
Storrs CT: 06269-3038
Mansfield Road

PROJECT NO: 300174
AUTHOR: GZA
DRAFTER: GZA
SCALE: AS NOTED
PRINT DATE: 01/19/24
SHEET TITLE:

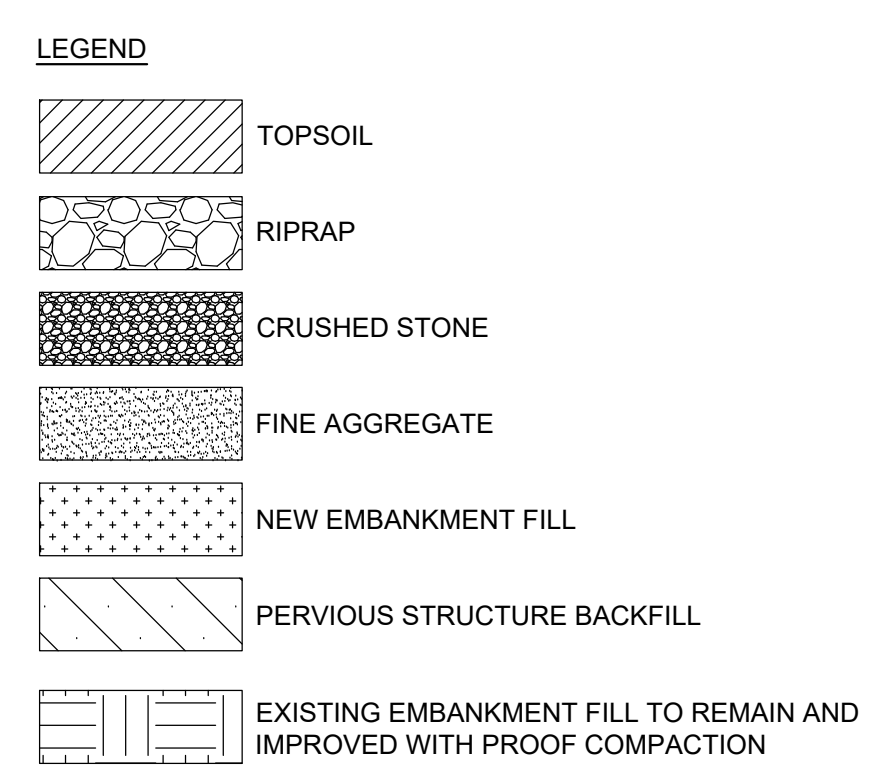
MIRROR LAKE DAM PROPOSED CONDITIONS PLAN

SHEET:

D3.00



- NOTES:**
- VERTICAL ELEVATIONS ARE IN REFERENCE TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 - DEPTHS, THICKNESS AND LAYERING OF THE SUBSURFACE STRATA INDICATED ON THE CROSS SECTIONS AND DETAILS ARE GENERALIZED AND INFORMATION SHOWN FOR THE DAM IS INTERPOLATED AND MAY VARY. NO AS-BUILT DRAWINGS OF THE EXISTING DAM ARE KNOWN TO EXIST. NOTIFY THE ENGINEER IF ACTUAL CONDITIONS IN THE FIELD VARY FROM THE CONDITIONS ASSUMED ON THE DRAWINGS.
 - THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.
 - THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF ALL PERMITS FOR THE WORK.
 - THE CONTRACTOR SHALL FOLLOW ALL OSHA AND OTHER APPLICABLE FEDERAL, STATE AND LOCAL STANDARDS FOR THE PROJECT. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SITE SAFETY REGARDLESS OF THE PRESENCE OF THE OWNER OR ENGINEER.



STATUS:
BID AND PERMIT SET

CONSULTANT:

GZA GeoEnvironmental, Inc.
Engineers and Scientists
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860.286.8900

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TELEPHONE: (860) 486.3127
FACSIMILE: (860) 466-3177

PROJECT:

MIRROR LAKE
IMPROVEMENTS

Storrs CT: 06269-3038
Mansfield Road

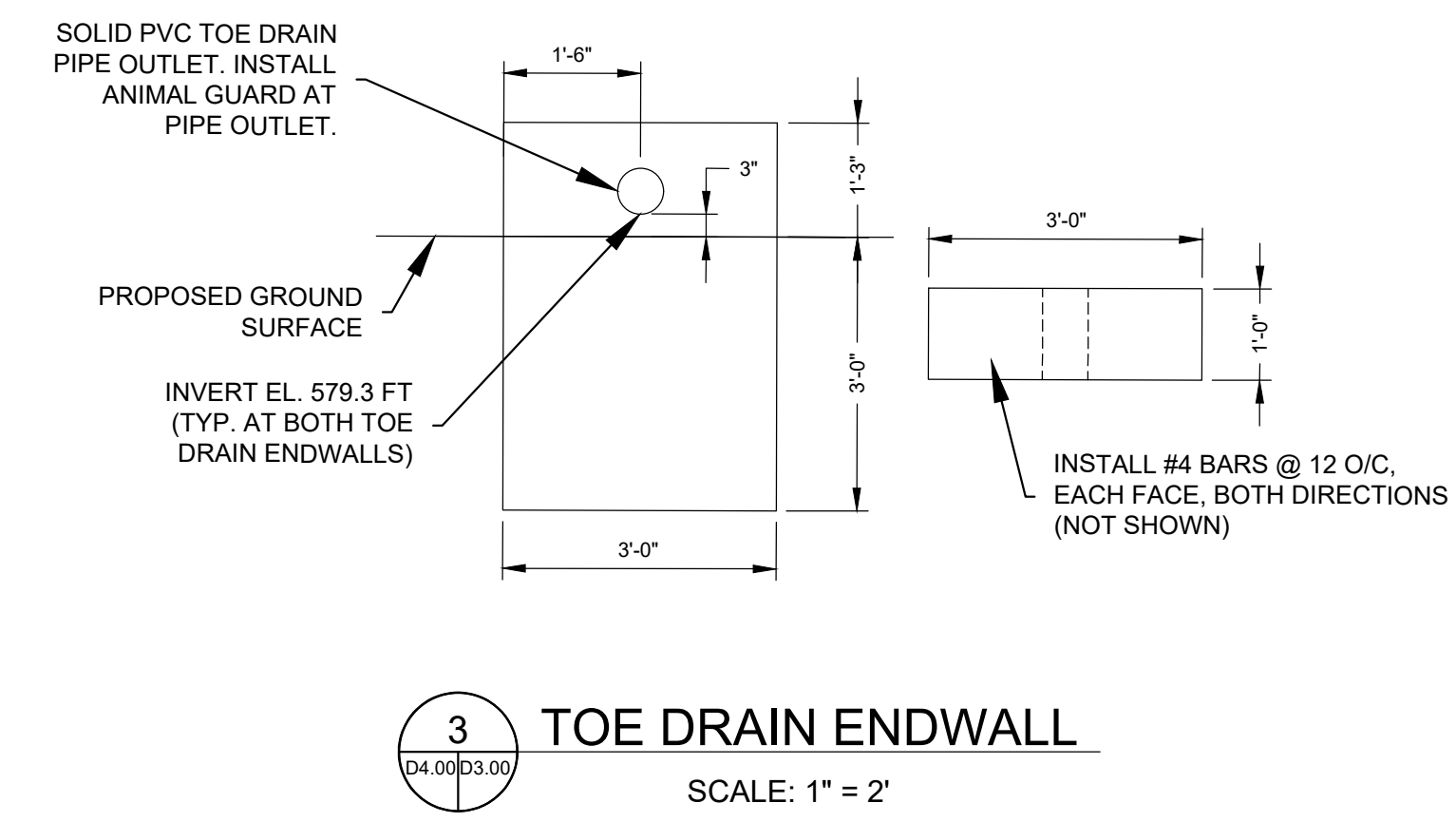
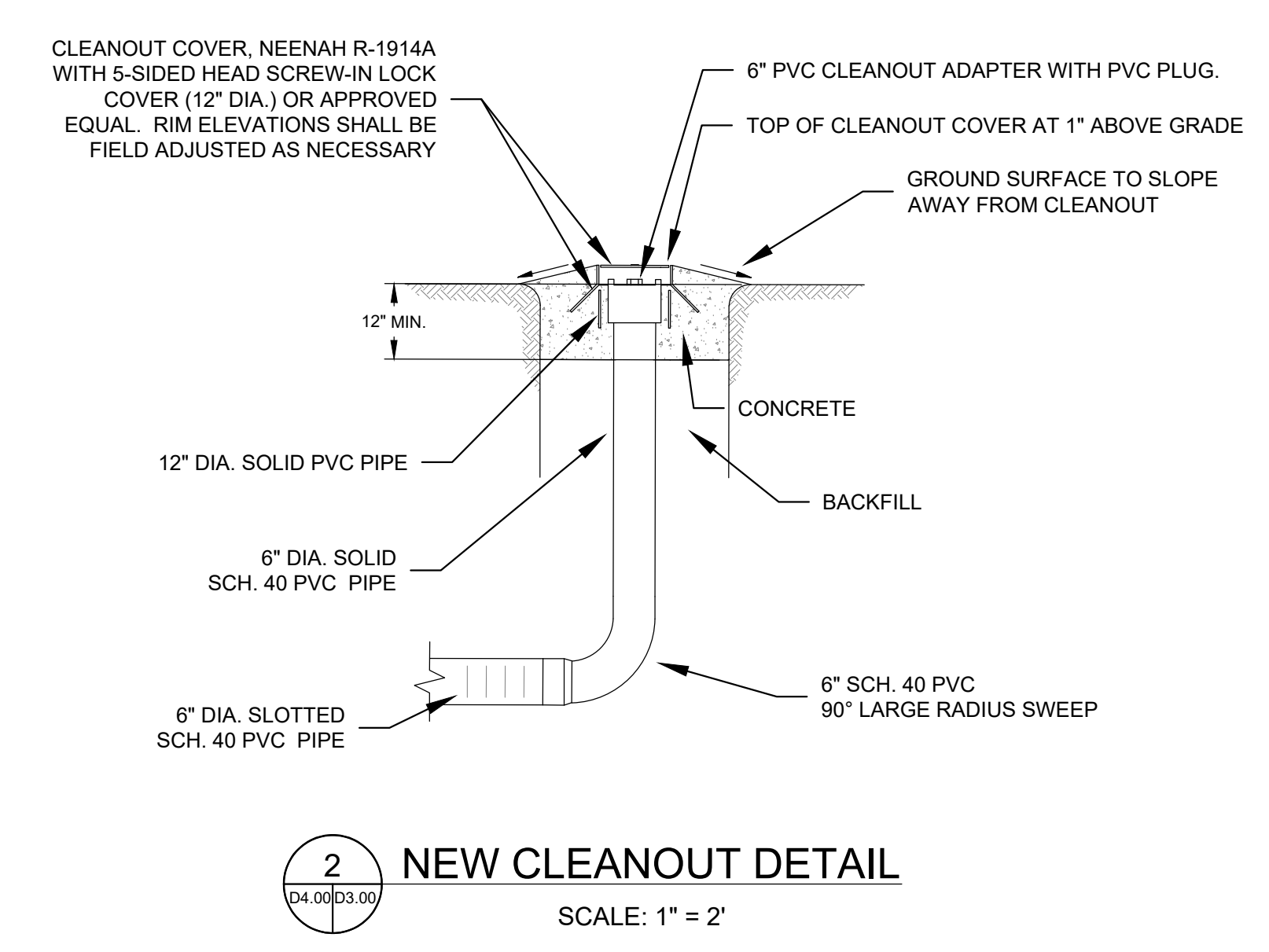
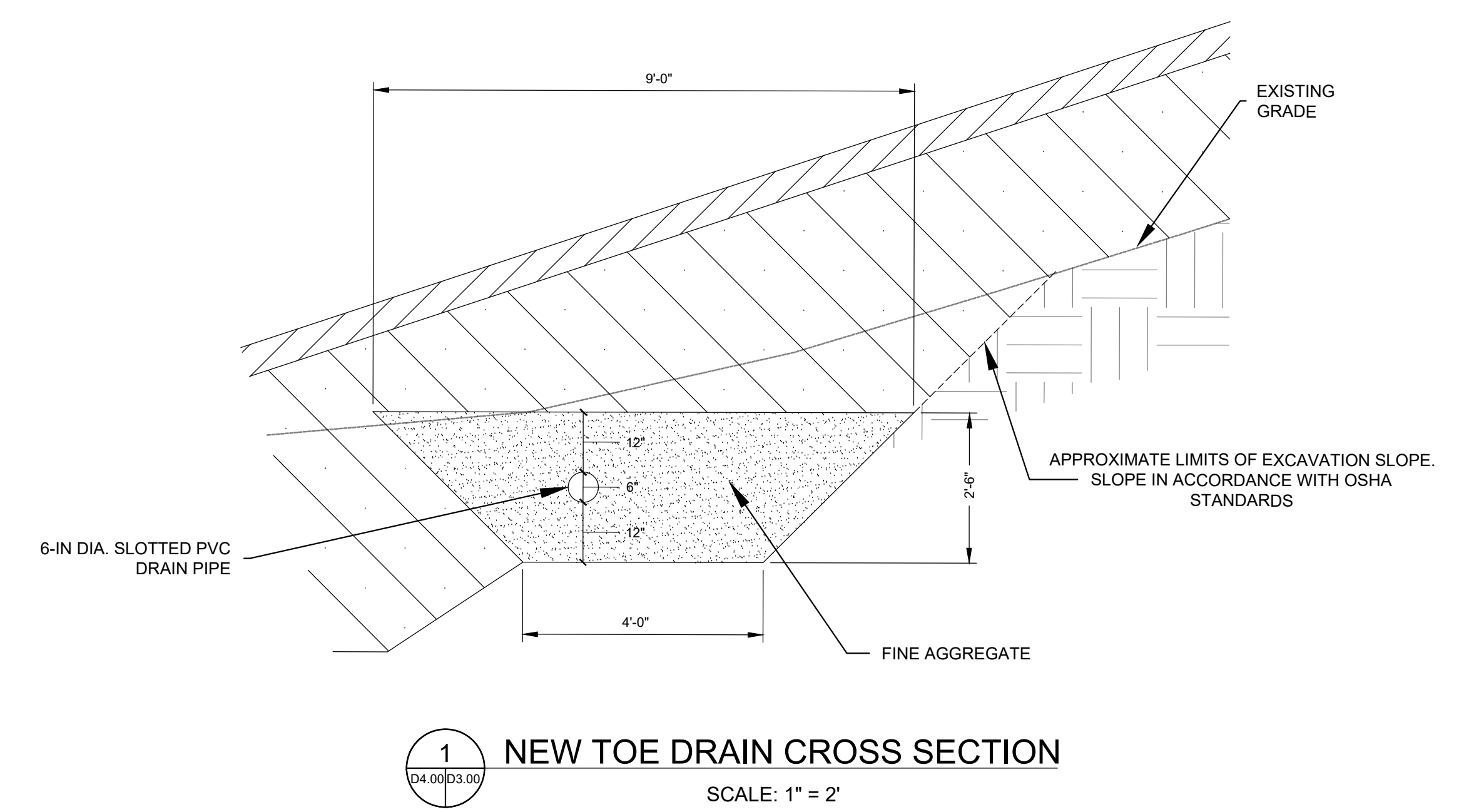
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DRAFTER: GZA
SCALE: AS NOTED
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SHEET TITLE:

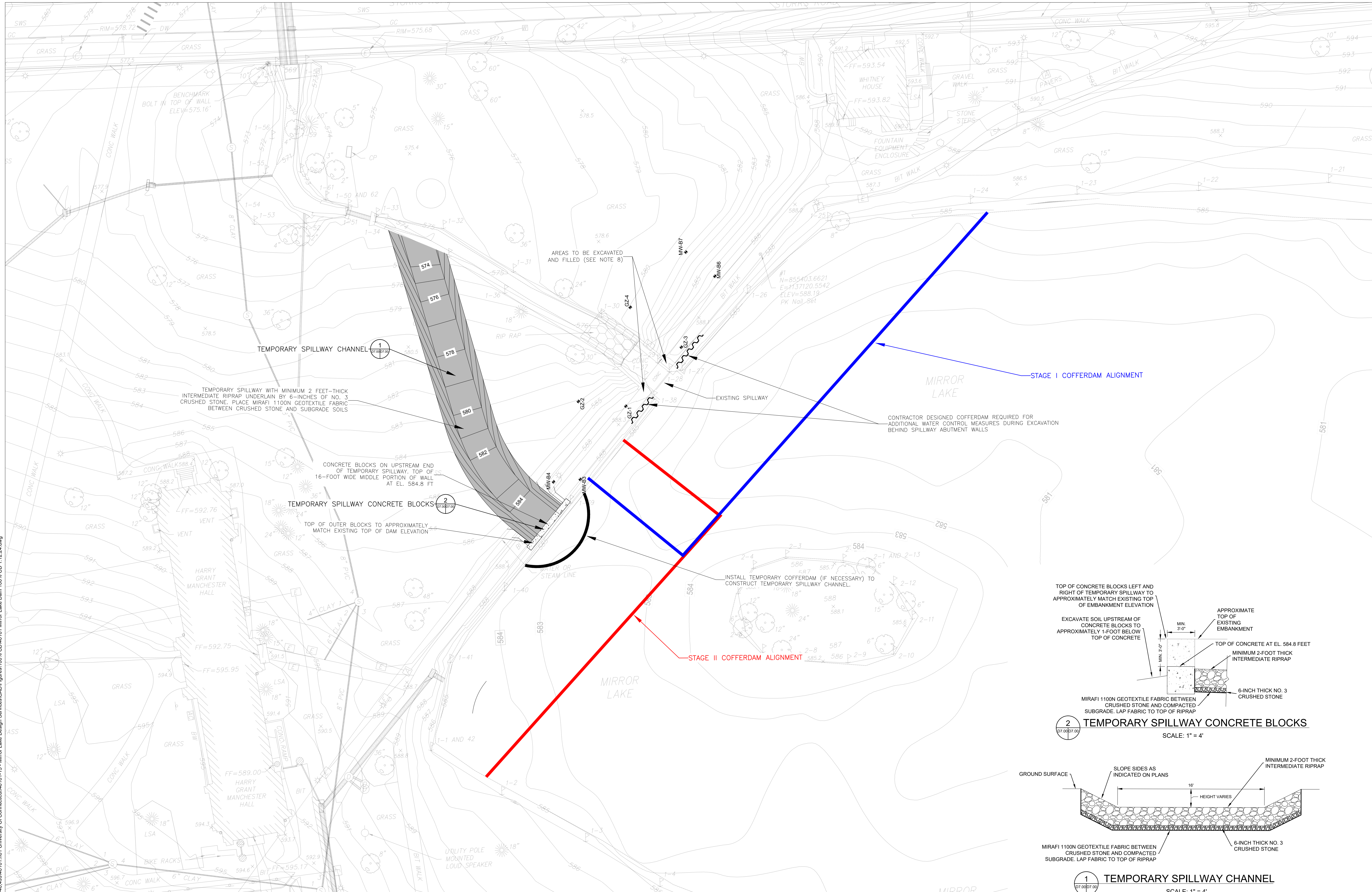
MIRROR LAKE DAM
EMBANKMENT
SECTIONS AND DETAILS

SHEET:

D4.00

1/18/24 4:08:48 PM \\GZAGLAST\Tubes\46.000-46.899\461161 - Mirror Lake Dam 100% CD 1.12.24.dwg

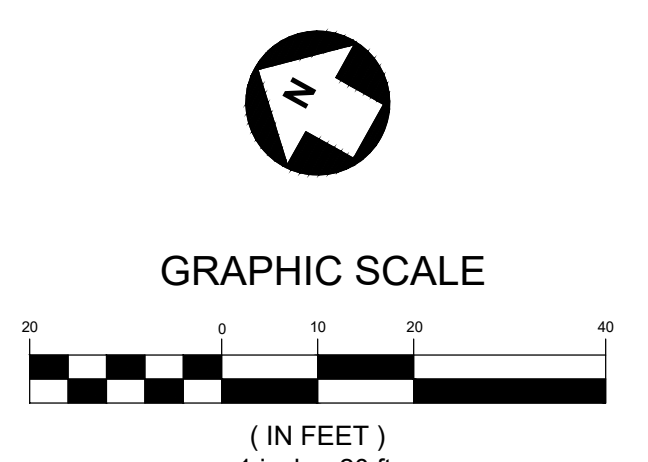
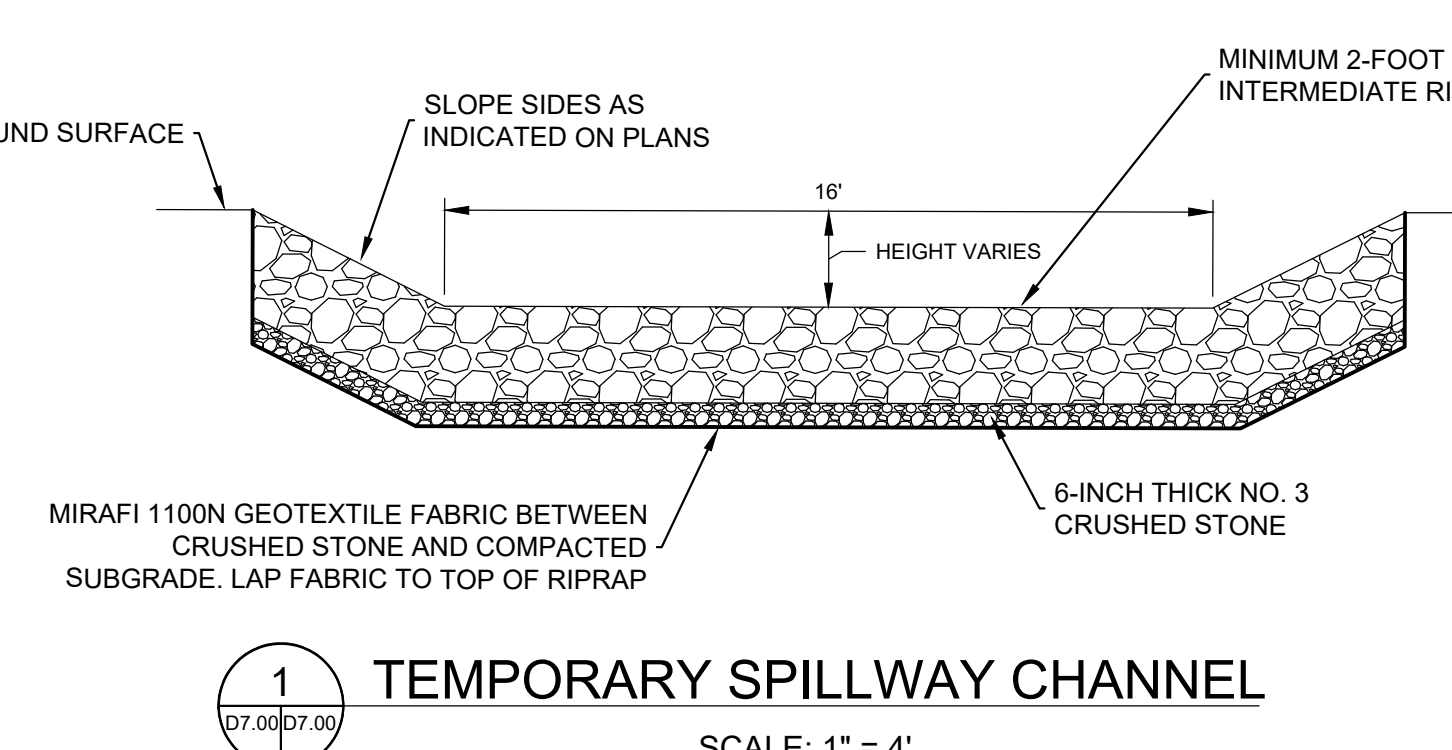
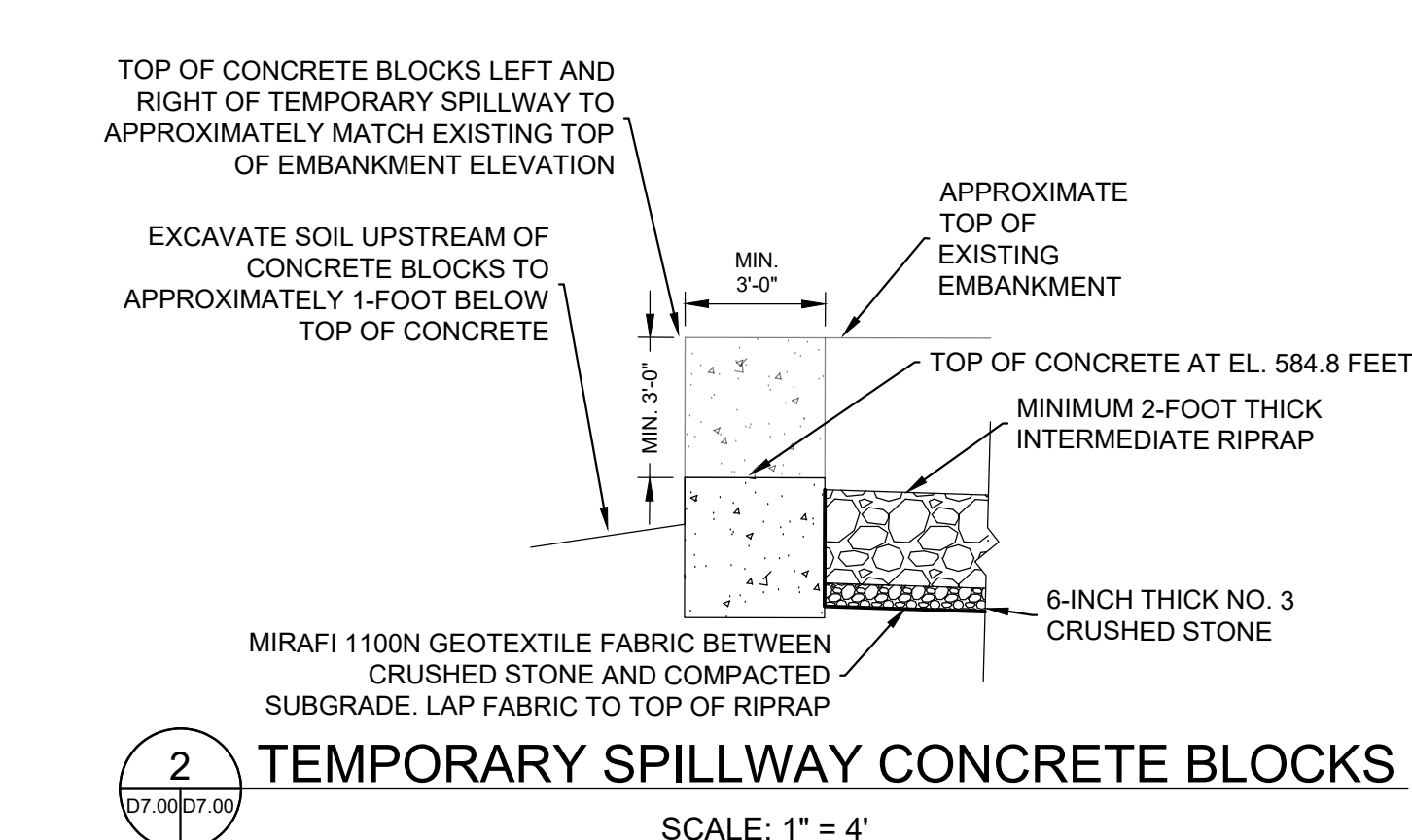




- GENERAL NOTES**
- BASE MAP BASED ON ELECTRONIC FILE ENTITLED "140242901-EK101 MIRROR - 05-04-2022.DWG", PROVIDED BY BVH, AND PLAN TITLED "MIRROR LAKE BATHYMETRY", PREPARED BY GZA, DATED JANUARY 21, 2021.
 - VERTICAL ELEVATIONS ARE IN REFERENCE TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
 - LAKE BOTTOM ELEVATIONS (TOP OF SOFT SEDIMENT) ARE BASED ON BATHYMETRIC SURVEY OF MIRROR LAKE BOTTOM CONDUCTED BY GZA ON JANUARY 18, 2021.

- CONCEPTUAL CONSTRUCTION SEQUENCE**
- STAGE I CONSTRUCTION SEQUENCE:**
- MOBILIZE TO THE SITE AND INSTALL EROSION AND SEDIMENTATION CONTROL MEASURES.
 - CONSTRUCT A TEMPORARY OPEN CHANNEL SPILLWAY IN THE EMBANKMENT SECTION WEST OF THE SPILLWAY TO PASS WATER INTO THE DOWNSTREAM CHANNEL DURING STAGE I CONSTRUCTION.
 - INSTALL THE STAGE I COFFERDAM.
 - EXCAVATE THE SOFT SEDIMENT FROM THE LAKE BOTTOM DOWN TO THE EXISTING EMBANKMENT SOILS OR NATURALLY DEPOSITED GLACIAL TILL WITHIN THE LIMITS OF THE PROPOSED UPSTREAM EMBANKMENT SLOPE.
 - DEMOLISH THE EXISTING BRIDGE INCLUDING THE EXISTING WATER CONTROLS FOR THE LOW-LEVEL OUTLET.
 - INSTALL TEMPORARY SUPPORT OF EXCAVATION ON UPSTREAM SIDES OF EXISTING SPILLWAY ABUTMENTS.
 - EXCAVATE TO BOTTOM OF EXISTING ABUTMENT WALLS AND BACKFILL WITH CONCRETE TO TOP OF EXISTING SPILLWAY ABUTMENTS.
 - CONSTRUCT THE SPILLWAY MODIFICATIONS WHICH INCLUDES THE NEW MASS CONCRETE UPSTREAM OF THE EXISTING SPILLWAY, NEW UPSTREAM AND DOWNSTREAM TRAINING WALLS WITH CONCRETE APPROXS, AND THE CONCRETE TO NARROW THE EXISTING SPILLWAY FROM 12 FEET TO 11 FEET.
 - INSTALL RIPRAP PROTECTION IN DOWNSTREAM CHANNEL.
- STAGE II CONSTRUCTION SEQUENCE:**
- REMOVE THE STAGE I COFFERDAM FROM MIRROR LAKE WHICH WILL ALLOW WATER TO PASS THROUGH THE IMPROVED EXISTING SPILLWAY.
 - INSTALL THE STAGE II COFFERDAM. DIVERT THE WATER FROM THE STORMWATER OUTLET INSIDE THE STAGE II COFFERDAM BY PUMPING FROM THE EXISTING MANHOLE.
 - EXCAVATE THE SOFT SEDIMENT FROM THE LAKE BOTTOM DOWN TO THE EXISTING EMBANKMENT SOILS OR NATURALLY DEPOSITED GLACIAL TILL WITHIN THE LIMITS OF THE PROPOSED UPSTREAM EMBANKMENT SLOPE.

- INCREASE THE BRIDGE ABUTMENT HEIGHT TO THE NEW DAM CREST ELEVATION AND CONSTRUCT THE NEW BRIDGE.
- STRIP THE TOPSOIL AND ASPHALT FROM THE EMBANKMENT SECTION WITHIN THE APPROXIMATE LIMITS OF THE STAGE I COFFERDAM AND PROOF COMPACT THE EMBANKMENT WITH A LARGE VIBRATORY ROLLER.
- INSTALL NEW LOW-LEVEL OUTLET SIPHON.
- INSTALL THE TOE DRAIN AT THE TOE OF THE DOWNSTREAM SLOPE WITHIN THE APPROXIMATE LIMITS OF THE STAGE I COFFERDAM.
- PLACE THE EMBANKMENT FILL TO CONSTRUCT THE EMBANKMENT SECTION WITHIN THE APPROXIMATE LIMITS OF THE STAGE I COFFERDAM.
- PLACE RIP RAP ARMORING ON THE UPSTREAM SLOPE OF THE EMBANKMENT SECTION WITHIN THE APPROXIMATE LIMITS OF THE STAGE I COFFERDAM.
- PLACE TOPSOIL AND SEED THE CREST AND DOWNSTREAM SLOPE OF THE EMBANKMENT SECTION WITHIN THE APPROXIMATE LIMITS OF THE STAGE I COFFERDAM.
- REMOVE THE STAGE II COFFERDAM.
- REMOVE THE EROSION AND SEDIMENTATION CONTROL MEASURES AND DEMOBILIZE FROM THE SITE.



CERTIFICATION:

STATUS:
BID AND PERMIT SET

CONSULTANT:

GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

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GLASTONBURY, CT 06033
860.286.8900

REVISIONS:

#	DATE	DESCRIPTION

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FACSIMILE: (860) 466-3177

PROJECT:

MIRROR LAKE IMPROVEMENTS
Storrs CT: 06269-3038
Mansfield Road

PROJECT NO: 300174
AUTHOR: GZA
DRAFTER: GZA
SCALE: AS NOTED
PRINT DATE: 01/19/24
SHEET TITLE:

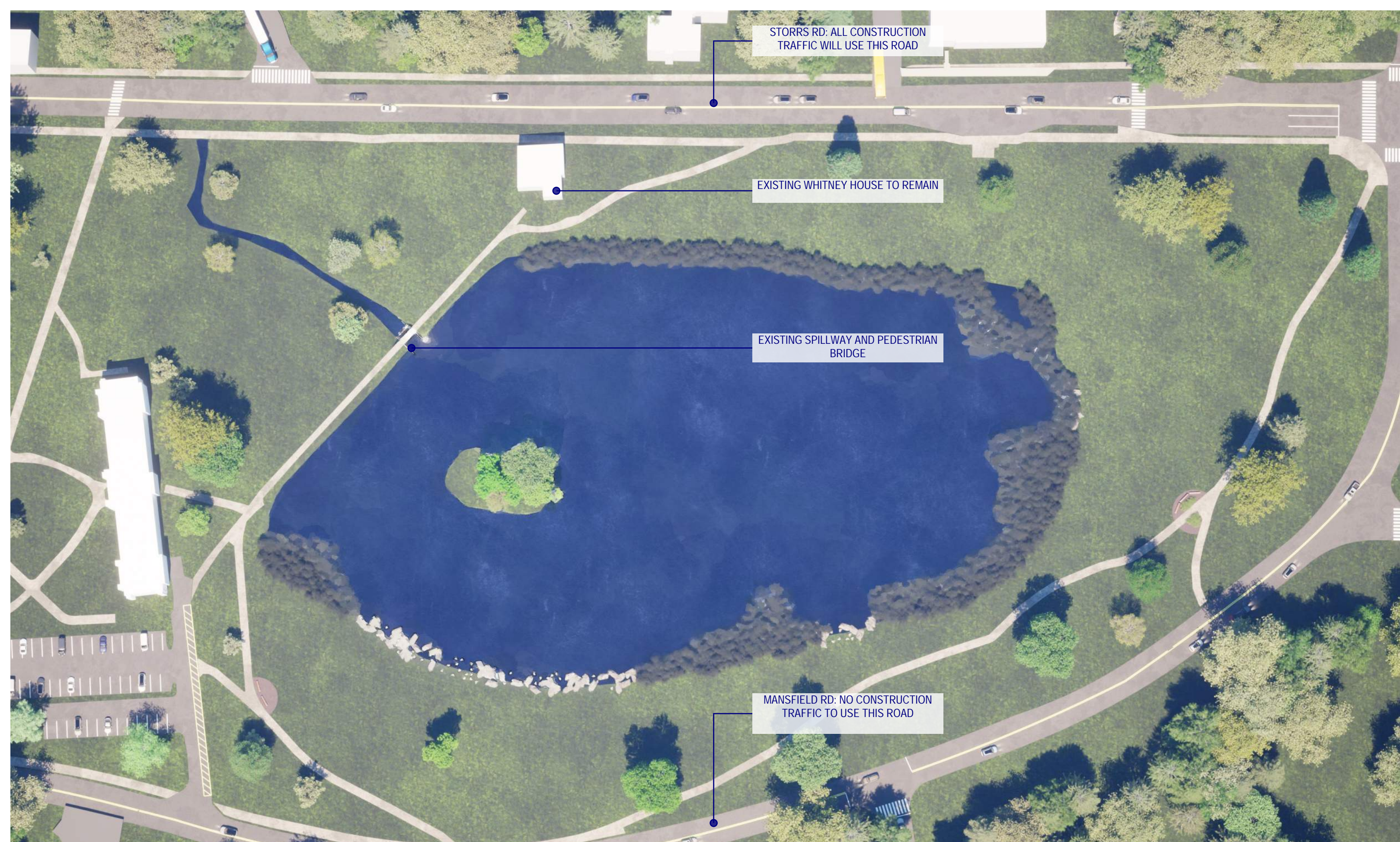
MIRROR LAKE DAM PROPOSED WATER CONTROL PLAN

SHEET:

D7.00



APPENDIX B



STORRS RD: ALL CONSTRUCTION TRAFFIC WILL USE THIS ROAD

EXISTING WHITNEY HOUSE TO REMAIN

EXISTING SPILLWAY AND PEDESTRIAN BRIDGE

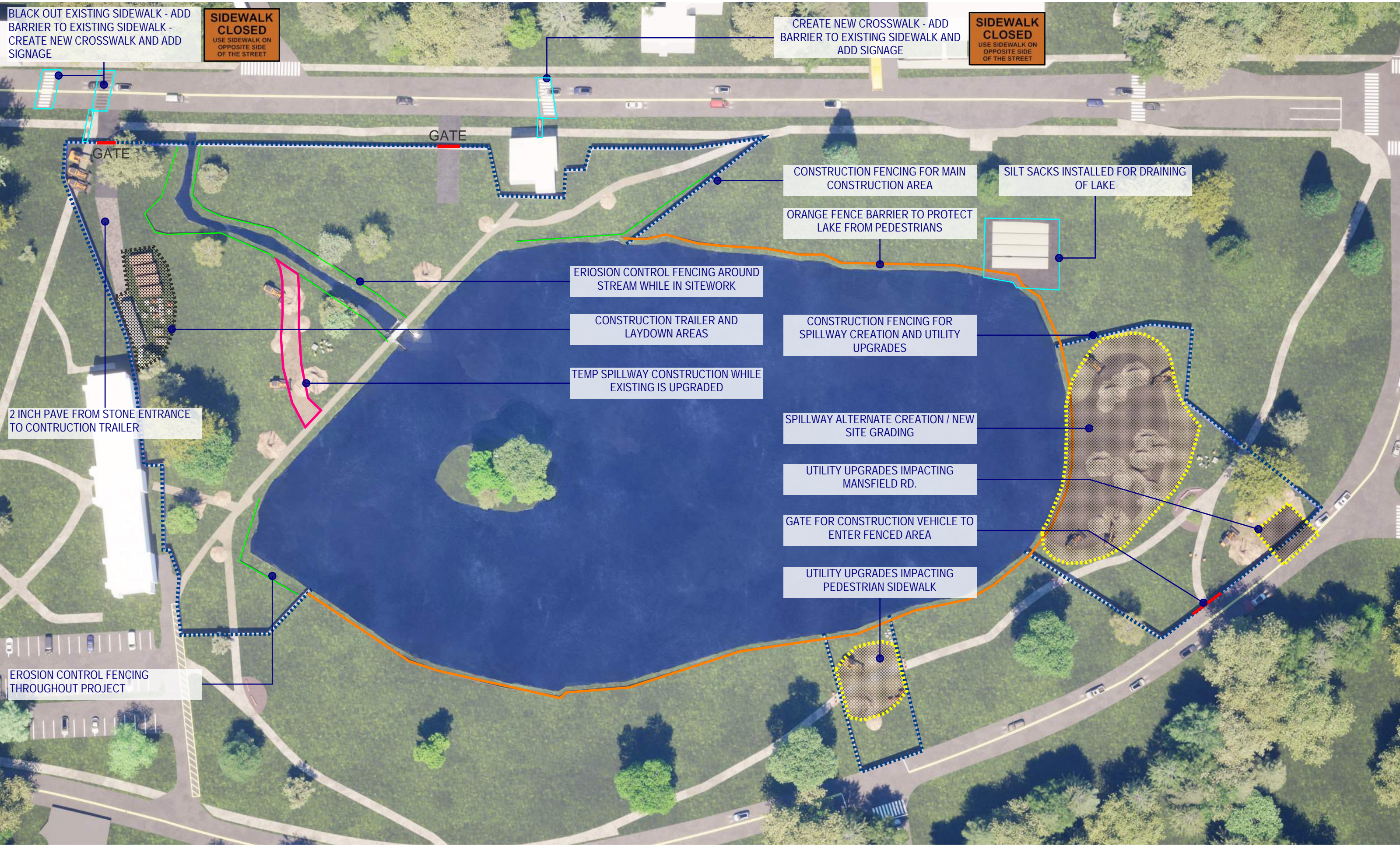
MANSFIELD RD: NO CONSTRUCTION TRAFFIC TO USE THIS ROAD

BLACK OUT EXISTING SIDEWALK - ADD BARRIER TO EXISTING SIDEWALK - CREATE NEW CROSSWALK AND ADD SIGNAGE

SIDEWALK CLOSED
USE SIDEWALK ON OPPOSITE SIDE OF THE STREET

CREATE NEW CROSSWALK - ADD BARRIER TO EXISTING SIDEWALK AND ADD SIGNAGE

SIDEWALK CLOSED
USE SIDEWALK ON OPPOSITE SIDE OF THE STREET



GATE

GATE

CONSTRUCTION FENCING FOR MAIN CONSTRUCTION AREA

SILT SACKS INSTALLED FOR DRAINING OF LAKE

ORANGE FENCE BARRIER TO PROTECT LAKE FROM PEDESTRIANS

ERIOSION CONTROL FENCING AROUND STREAM WHILE IN SITEWORK

CONSTRUCTION TRAILER AND LAYDOWN AREAS

CONSTRUCTION FENCING FOR SPILLWAY CREATION AND UTILITY UPGRADES

TEMP SPILLWAY CONSTRUCTION WHILE EXISTING IS UPGRADED

2 INCH PAVE FROM STONE ENTRANCE TO CONSTRUCTION TRAILER

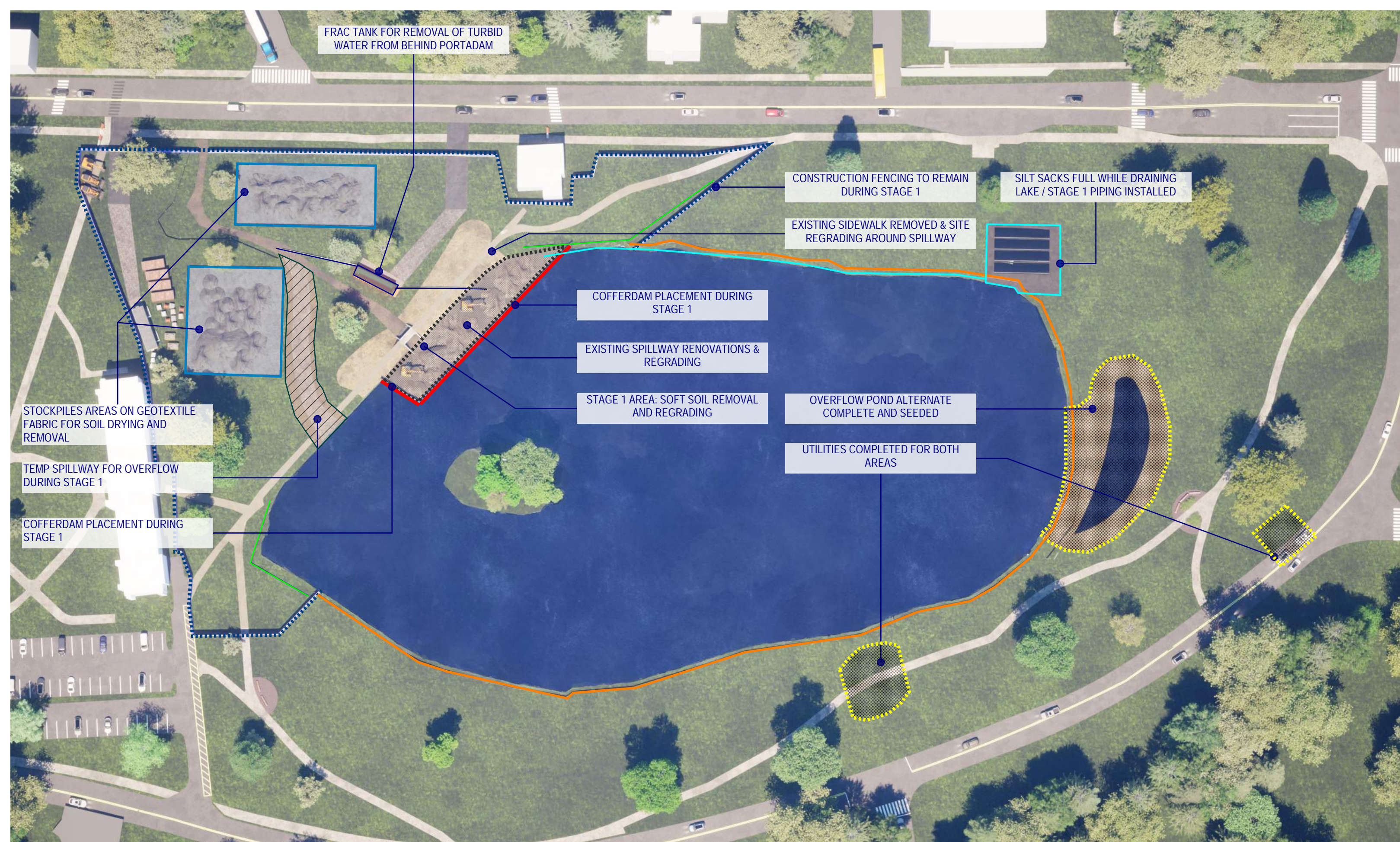
SPILLWAY ALTERNATE CREATION / NEW SITE GRADING

UTILITY UPGRADES IMPACTING MANSFIELD RD.

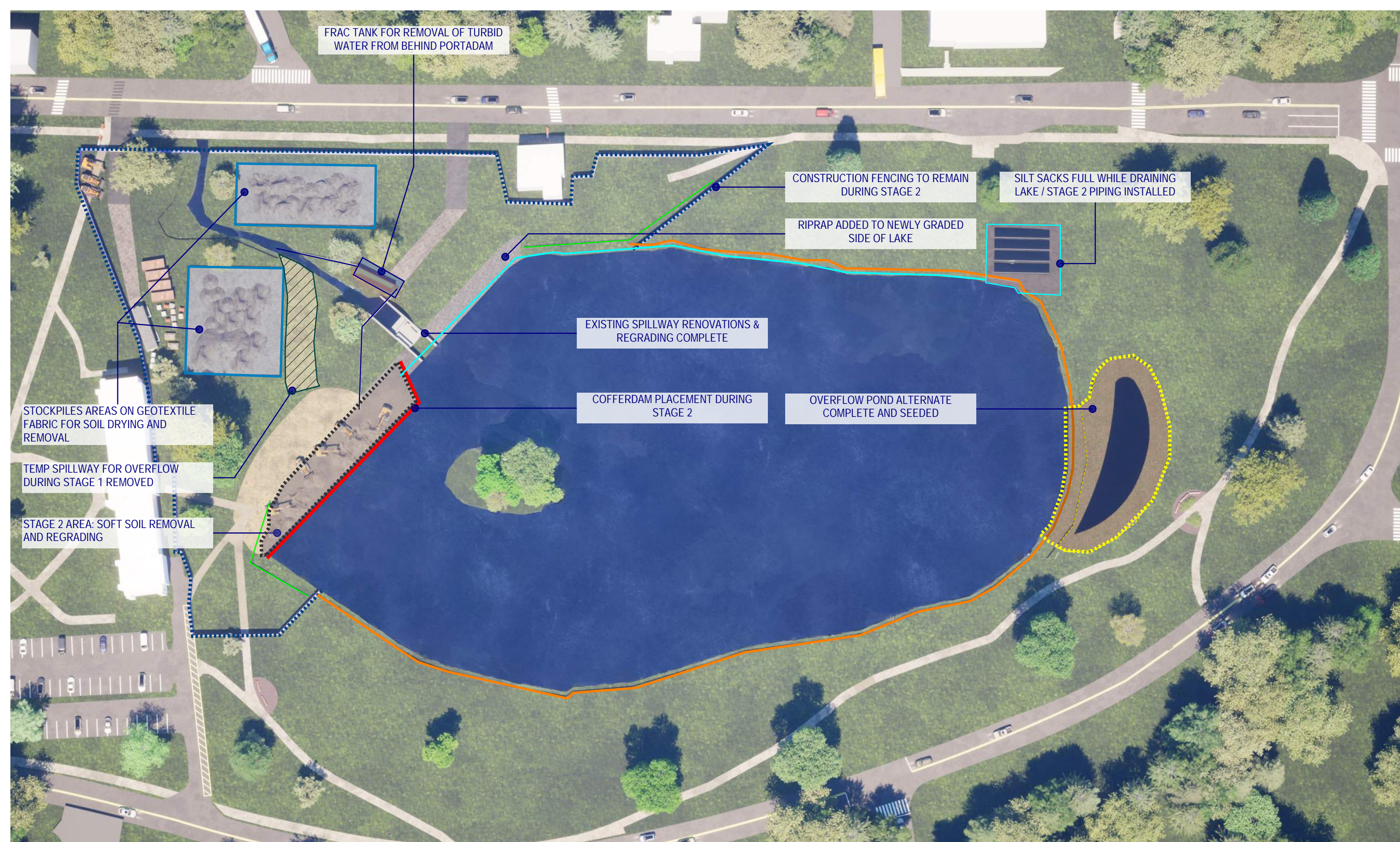
GATE FOR CONSTRUCTION VEHICLE TO ENTER FENCED AREA

UTILITY UPGRADES IMPACTING PEDESTRIAN SIDEWALK

EROSION CONTROL FENCING THROUGHOUT PROJECT



UCONN - Mirror Lake
Renovations [Logistics Plan] - Portadam Stage 1



FRAC TANK FOR REMOVAL OF TURBID WATER FROM BEHIND PORTADAM

CONSTRUCTION FENCING TO REMAIN DURING STAGE 2

SILT SACKS FULL WHILE DRAINING LAKE / STAGE 2 PIPING INSTALLED

RIPRAP ADDED TO NEWLY GRADED SIDE OF LAKE

EXISTING SPILLWAY RENOVATIONS & REGRADING COMPLETE

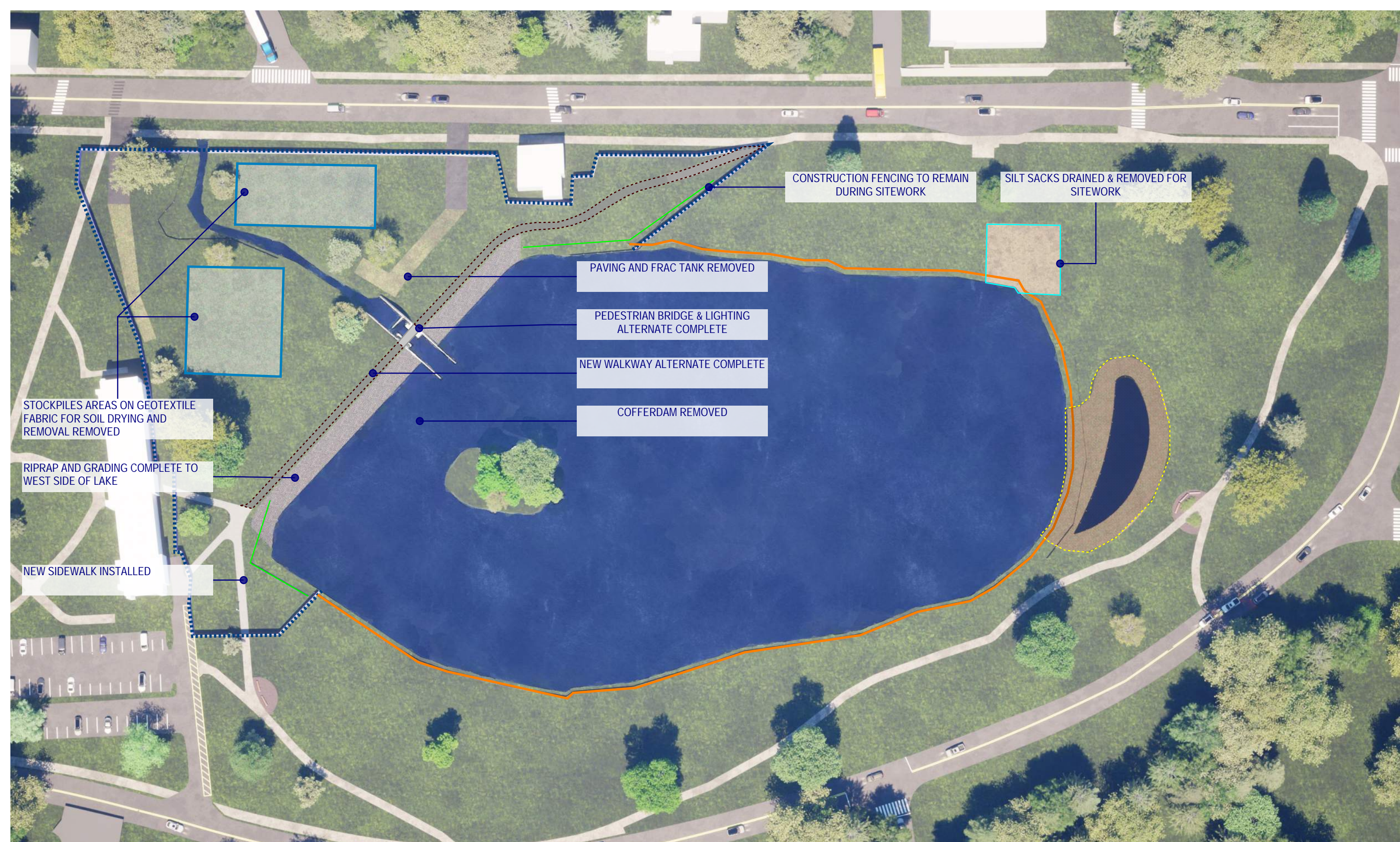
COFFERDAM PLACEMENT DURING STAGE 2

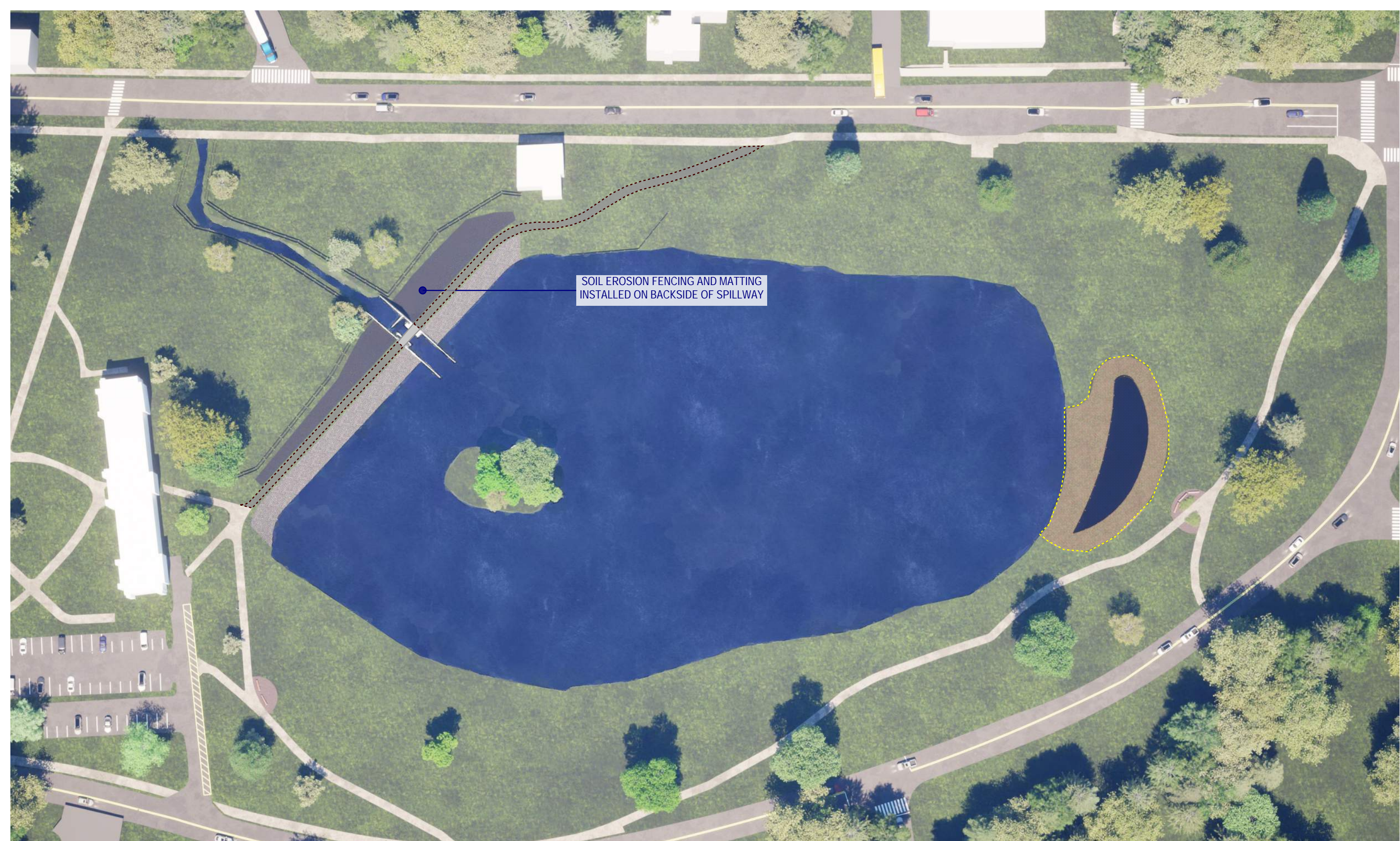
OVERFLOW POND ALTERNATE COMPLETE AND SEEDED

STOCKPILES AREAS ON GEOTEXTILE FABRIC FOR SOIL DRYING AND REMOVAL

TEMP SPILLWAY FOR OVERFLOW DURING STAGE 1 REMOVED

STAGE 2 AREA: SOFT SOIL REMOVAL AND REGRADING





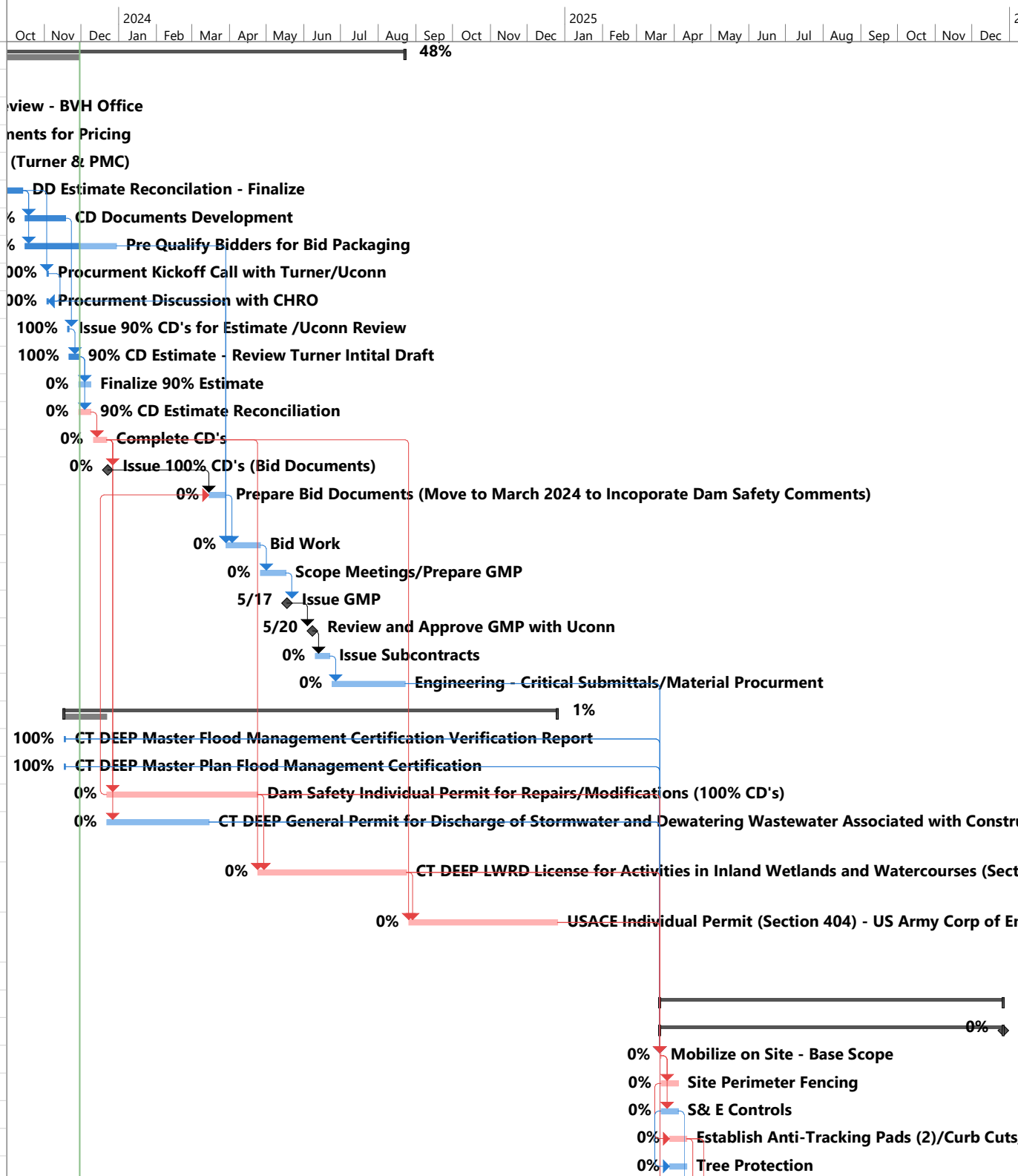
SOIL EROSION FENCING AND MATTING
INSTALLED ON BACKSIDE OF SPILLWAY



APPENDIX C

Mirror Lake Precon Schedule 11.30.23 Draft

ID	Task Name	Duration	Start	Finish	Predecessors	Successors	% Comple	
8	Preconstruction	331 days	Thu 5/18/23	Thu 8/22/24			48%	
9	Project Re-Kickoff	1 day	Thu 5/18/23	Thu 5/18/23		10	100%	
10	Project Scope Review - BVH Office	1 day	Mon 6/12/23	Mon 6/12/23	9	28	100%	Review - BVH Office
28	Issue DD Documents for Pricing	1 day	Mon 6/19/23	Mon 6/19/23	10	29	100%	Documents for Pricing
29	DD Estimate (Turner & PMC)	14 days	Tue 6/20/23	Fri 7/7/23	28	30FS+2 days	100%	(Turner & PMC)
30	DD Estimate Reconciliation - Finalize	68 days	Wed 7/12/23	Fri 10/13/23	29FS+2 days	11,16,12FS+14	100%	DD Estimate Reconciliation - Finalize
11	CD Documents Development	25 days	Mon 10/16/23	Fri 11/17/23	30	17	100%	CD Documents Development
16	Pre Qualify Bidders for Bid Packaging	55 days	Mon 10/16/23	Fri 12/29/23	30	22	60%	Pre Qualify Bidders for Bid Packaging
12	Procurement Kickoff Call with Turner/Uconn	1 day	Fri 11/3/23	Fri 11/3/23	30FS+14 days	13FF	100%	Procurement Kickoff Call with Turner/Uconn
13	Procurement Discussion with CHRO	1 day	Fri 11/3/23	Fri 11/3/23	12FF	22	100%	Procurement Discussion with CHRO
17	Issue 90% CD's for Estimate /Uconn Review	1 day	Mon 11/20/23	Mon 11/20/23	11	18	100%	Issue 90% CD's for Estimate /Uconn Review
18	90% CD Estimate - Review Turner Intital Draft	6 days	Tue 11/21/23	Tue 11/28/23	17	19,14	100%	90% CD Estimate - Review Turner Intital Draft
14	Finalize 90% Estimate	8 days	Wed 11/29/23	Fri 12/8/23	18		0%	Finalize 90% Estimate
19	90% CD Estimate Reconciliation	8 days	Wed 11/29/23	Fri 12/8/23	18	15	0%	90% CD Estimate Reconciliation
15	Complete CD's	9 days	Mon 12/11/23	Thu 12/21/23	19	20,2,3,6,5	0%	Complete CD's
20	Issue 100% CD's (Bid Documents)	1 day	Fri 12/22/23	Fri 12/22/23	15	21	0%	Issue 100% CD's (Bid Documents)
21	Prepare Bid Documents (Move to March 2024 to Incorporate Dam Safety Comments)	10 days	Fri 3/15/24	Thu 3/28/24	20,3SS+60 days	22	0%	Prepare Bid Documents (Move to March 2024 to Incorporate Dam Safety Comments)
22	Bid Work	20 days	Fri 3/29/24	Thu 4/25/24	21,13,16	23	0%	Bid Work
23	Scope Meetings/Prepare GMP	15 days	Fri 4/26/24	Thu 5/16/24	22	24	0%	Scope Meetings/Prepare GMP
24	Issue GMP	1 day	Fri 5/17/24	Fri 5/17/24	23	25	0%	Issue GMP
25	Review and Approve GMP with Uconn	15 days	Mon 5/20/24	Fri 6/7/24	24	26	0%	Review and Approve GMP with Uconn
26	Issue Subcontracts	10 days	Mon 6/10/24	Fri 6/21/24	25	27	0%	Issue Subcontracts
27	Engineering - Critical Submittals/Material Procurement	44 days	Mon 6/24/24	Thu 8/22/24	26	34,71	0%	Engineering - Critical Submittals/Material Procurement
1	Permits	289 days	Fri 11/17/23	Wed 12/25/24			1%	
4	CT DEEP Master Flood Management Certification Verification Report	1 day	Fri 11/17/23	Fri 11/17/23		71,34	100%	CT DEEP Master Flood Management Certification Verification Report
7	CT DEEP Master Plan Flood Management Certification	1 day	Fri 11/17/23	Fri 11/17/23		71,34	100%	CT DEEP Master Plan Flood Management Certification
3	Dam Safety Individual Permit for Repairs/Modifications (100% CD's)	88 days	Fri 12/22/23	Tue 4/23/24	15	2,34,71,21SS+	0%	Dam Safety Individual Permit for Repairs/Modifications (100% CD's)
6	CT DEEP General Permit for Discharge of Stormwater and Dewatering Wastewater Associated with Construction Activities - (BVH/Paul Ferri)	60 days	Fri 12/22/23	Thu 3/14/24	15	71,34	0%	CT DEEP General Permit for Discharge of Stormwater and Dewatering Wastewater Associated with Construction
2	CT DEEP LWRD License for Activities in Inland Wetlands and Watercourses (Section 401)	88 days	Wed 4/24/24	Fri 8/23/24	15,3	5,34,71	0%	CT DEEP LWRD License for Activities in Inland Wetlands and Watercourses (Section 401)
5	USACE Individual Permit (Section 404) - US Army Corp of Engineers - Environmental Impacts	88 days	Mon 8/26/24	Wed 12/25/24	15,2	34FS+60 days,71FS+60	0%	USACE Individual Permit (Section 404) - US Army Corp of Engineers
31								
32	Construction	202 days	Thu 3/20/25	Fri 12/26/25			0%	
33	Construction - Dam	202 days	Thu 3/20/25	Fri 12/26/25			0%	
34	Mobilize on Site - Base Scope	1 day	Thu 3/20/25	Thu 3/20/25	5FS+60 days,2	35,36	0%	Mobilize on Site - Base Scope
35	Site Perimeter Fencing	10 days	Fri 3/21/25	Thu 4/3/25	34	37SS+5 days	0%	Site Perimeter Fencing
36	S& E Controls	10 days	Fri 3/21/25	Thu 4/3/25	34	40,38SS+5 day	0%	S& E Controls
37	Establish Anti-Tracking Pads (2)/Curb Cuts/Revisions @ 195	10 days	Fri 3/28/25	Thu 4/10/25	35SS+5 days	41,39,42	0%	Establish Anti-Tracking Pads (2)/Curb Cuts
38	Tree Protection	10 days	Fri 3/28/25	Thu 4/10/25	36SS+5 days		0%	Tree Protection

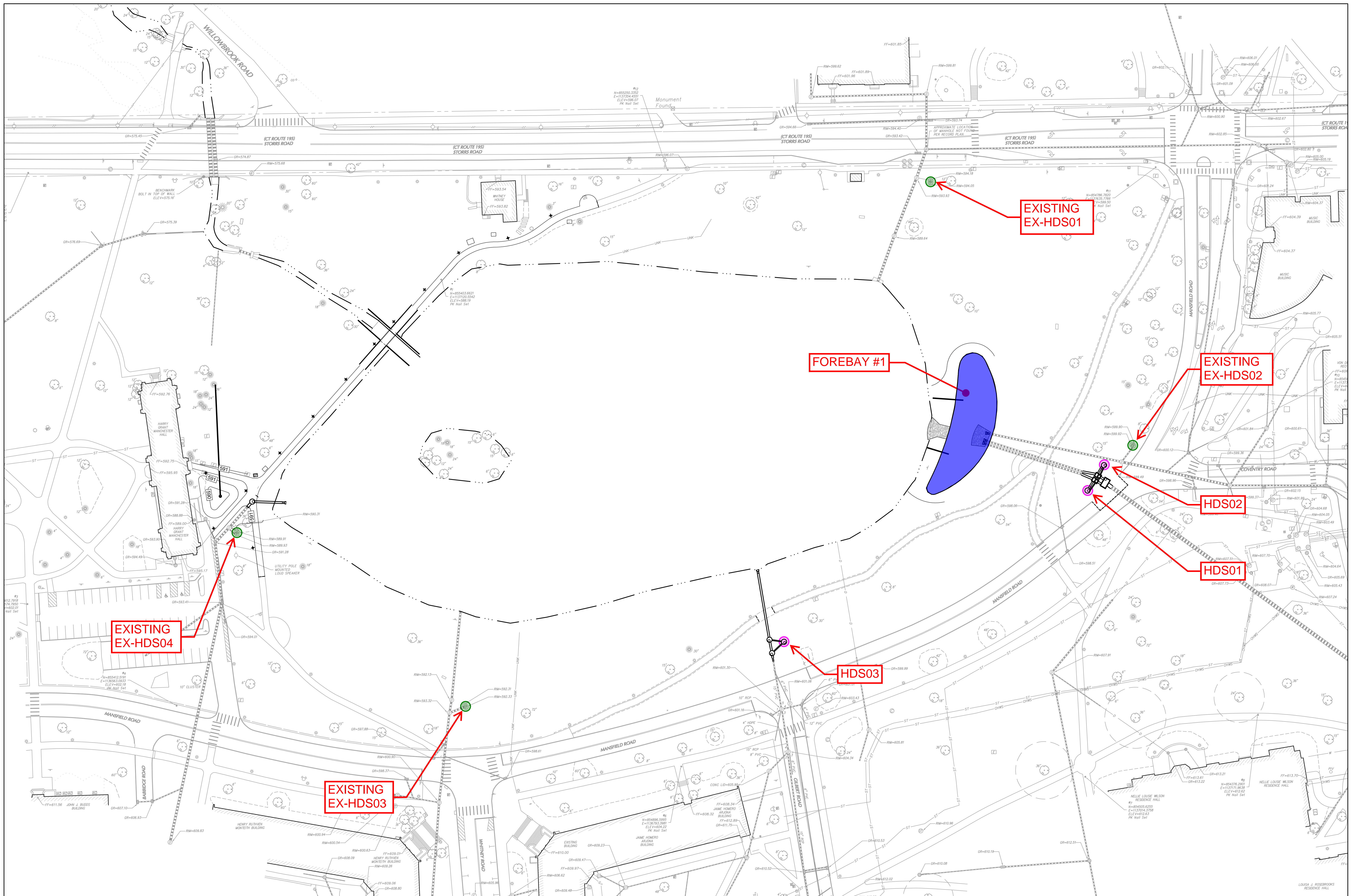


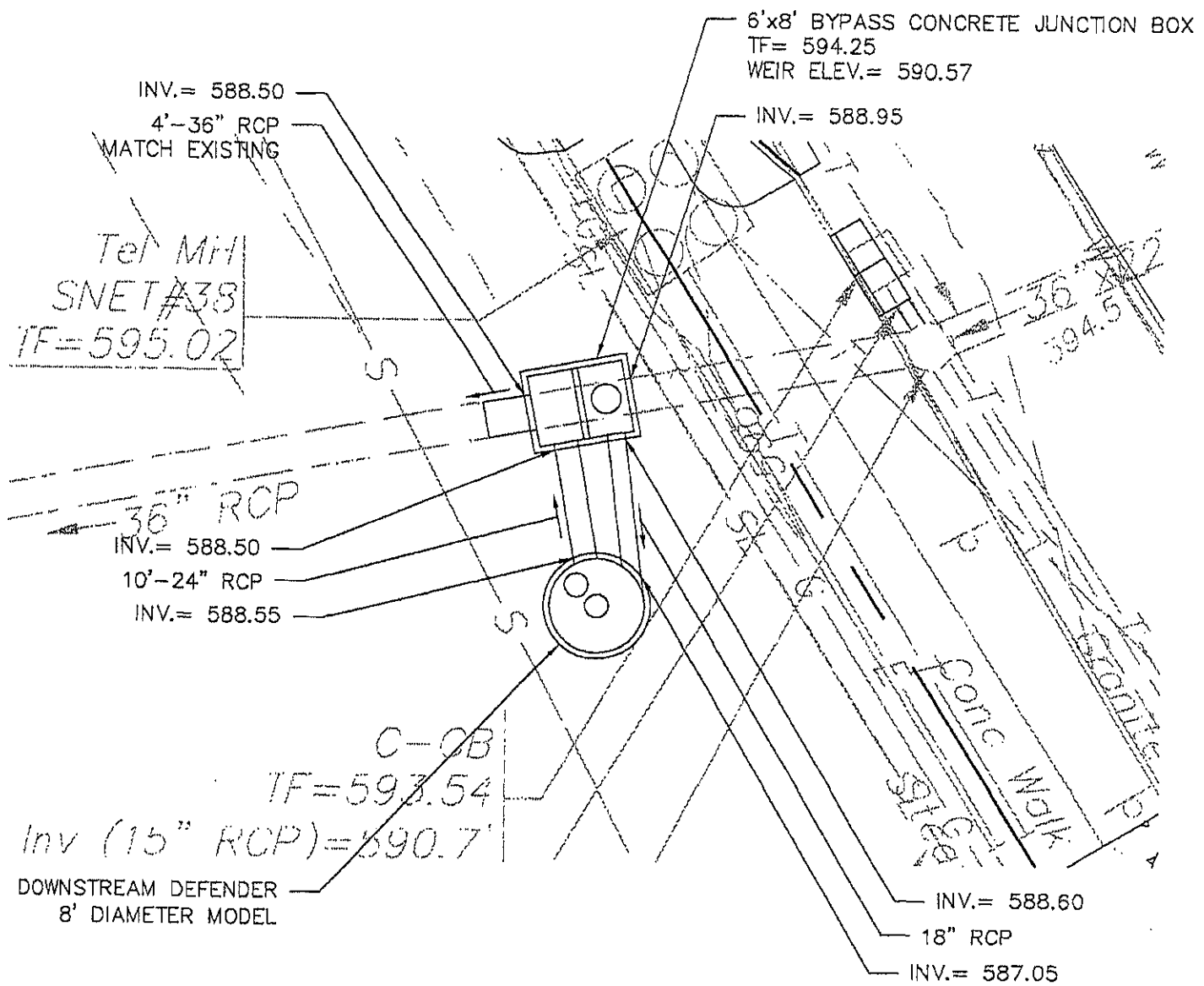
UConn Mirror Lake Mirror Lake Precon Schedule 11.30.23 Draft	Critical	Task	Manual Task	Duration-only	Baseline Milestone	Summary	External Tasks	Inactive Milestone
	Critical Split	Split	Start-only	Baseline	Milestone	Manual Summary	External Milestone	Inactive Summary
	Critical Progress	Task Progress	Finish-only	Baseline Split	Summary Progress	Project Summary	Inactive Task	Deadline



APPENDIX D

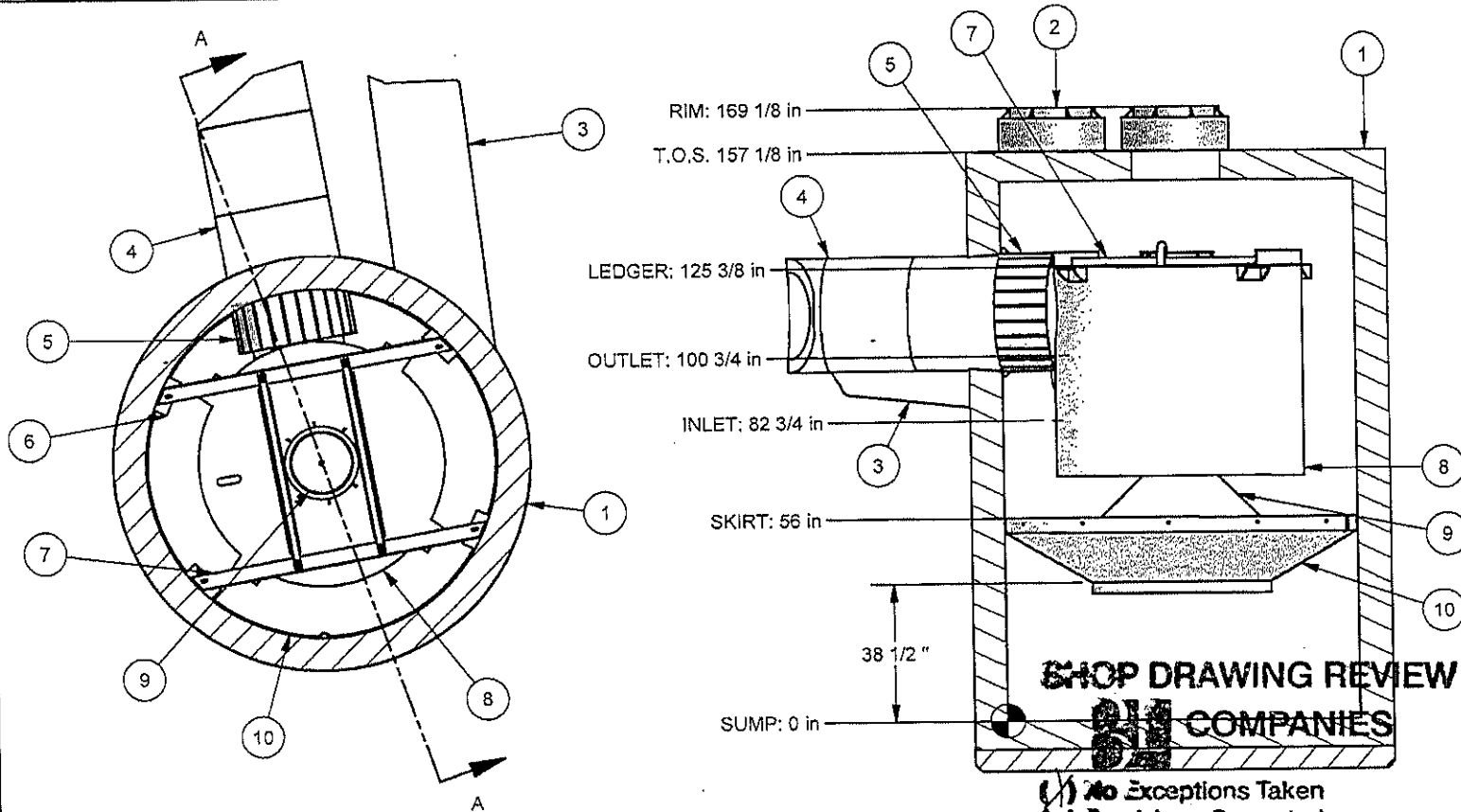
FIGURE 1 - WATER QUALITY MEASURES





HYDRODYNAMIC SEPARATOR #1 - LAYOUT PLAN

1"=10'



Notes
 1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
 2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

REVISION HISTORY		
REV BY	DATE	DESCRIPTION
MJ	5/27/10	FIRST ISSUE
Date	5/27/2010	Scale 1/4" = 1'-0"

Drawn MJ	Checked <i>MJ</i>	Approved
----------	-------------------	----------

Title
 8-FT DIAMETER DOWNSTREAM DEFENDER HDS #1

Mansfield Rd. Realignment



94 Hutchins Drive
 Portland, Maine 04102
 Tel: (207) 756-6200
 Fax: (207) 756-6212
 Email: hitech@hil-tech.com

CAD Ref: D8S1.1
Project No. 2010-0060
Drawing No. D8S1.1 Rev.

Parts List		
ITEM	DESCRIPTION	SIZE
1	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)	96 in
2	FRAMES AND COVERS	
3	INLET PIPE (BY OTHERS)	18 in
4	OUTLET PIPE (BY OTHERS)	24 in
5	PIPE COUPLING (BY OTHERS)	
6	LEDGER ANGLE	
7	SUPPORT FRAME	
8	DIP PLATE	
9	CENTER SHAFT AND CONE	
10	BENCHING SKIRT	

EQUIPMENT PERFORMANCE

The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the removal efficiencies and storage capacities as follows:

1. Performance objectives: The unit shall be capable of treating the peak flow rate listed below.
2. Peak Treatment Flow: 15.0 cfs
3. Sediment Storage Capacity: 6.00 cu. yd.
4. Continuous Oil Storage Capacity: 525 gal.
5. Sediment shall be stored in a zone that is above the normal flow path and protected from reentrainment by a benching skirt.

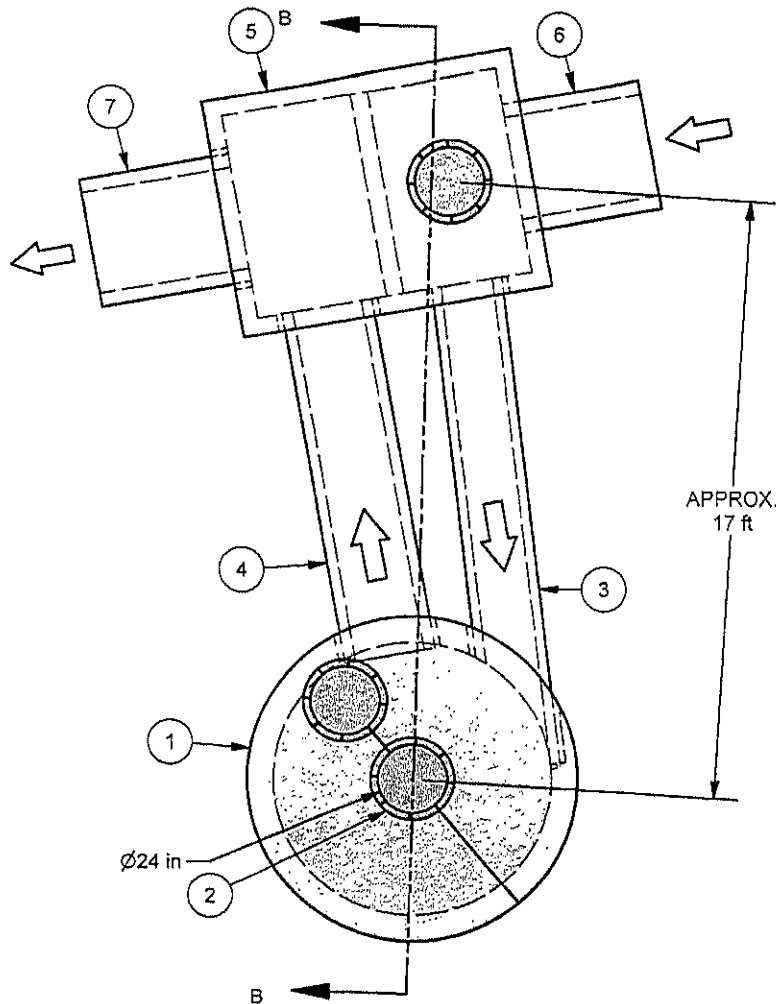
- () No Exceptions Taken
- () Furnish as Corrected
- () Resubmit
- () Rejected
- () Resubmit for Record
- () Not required for Review

Submitted # 2
 Date 6-15-10 By S. BEARCE

The Contractor is responsible for dimensions to be confirmed and controlling at the jobsite information that pertains to construction methods, sequences and procedures of construction, coordination of the work with that of all other trades; and performing all work in a safe and satisfactory manner.
 Rev. 3/02

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SHOP DRAWING REVIEW



- No Exceptions Taken
- Furnish as Corrected
- Revise and Resubmit
- Rejected
- Resubmit for Record
- Not required for Review

Submittal # 2

Date 6-15-10 By S. BEARCE

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Rev. 3/02

Parts List		
ITEM	DESCRIPTION	SIZE
1	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)	96 in
2	FRAMES AND COVERS	
3	INLET PIPE (BY OTHERS)	18 in
4	OUTLET PIPE (BY OTHERS)	24 in
5	DIVERSION STRUCTURE (BY OTHERS)	
6	MAIN PIPE (BY OTHERS)	36 in
7	BYPASS PIPE (BY OTHERS)	36 in

Notes

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
	MJ	5/27/10	FIRST ISSUE

Date 5/27/2010	Scale 3/16" = 1'-0"
-------------------	------------------------

Drawn MJ	Checked <i>[Signature]</i>	Approved
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Title

8-FT DIAMETER
DOWNSTREAM DEFENDER
HDS #1

Mansfield Rd. Realignment

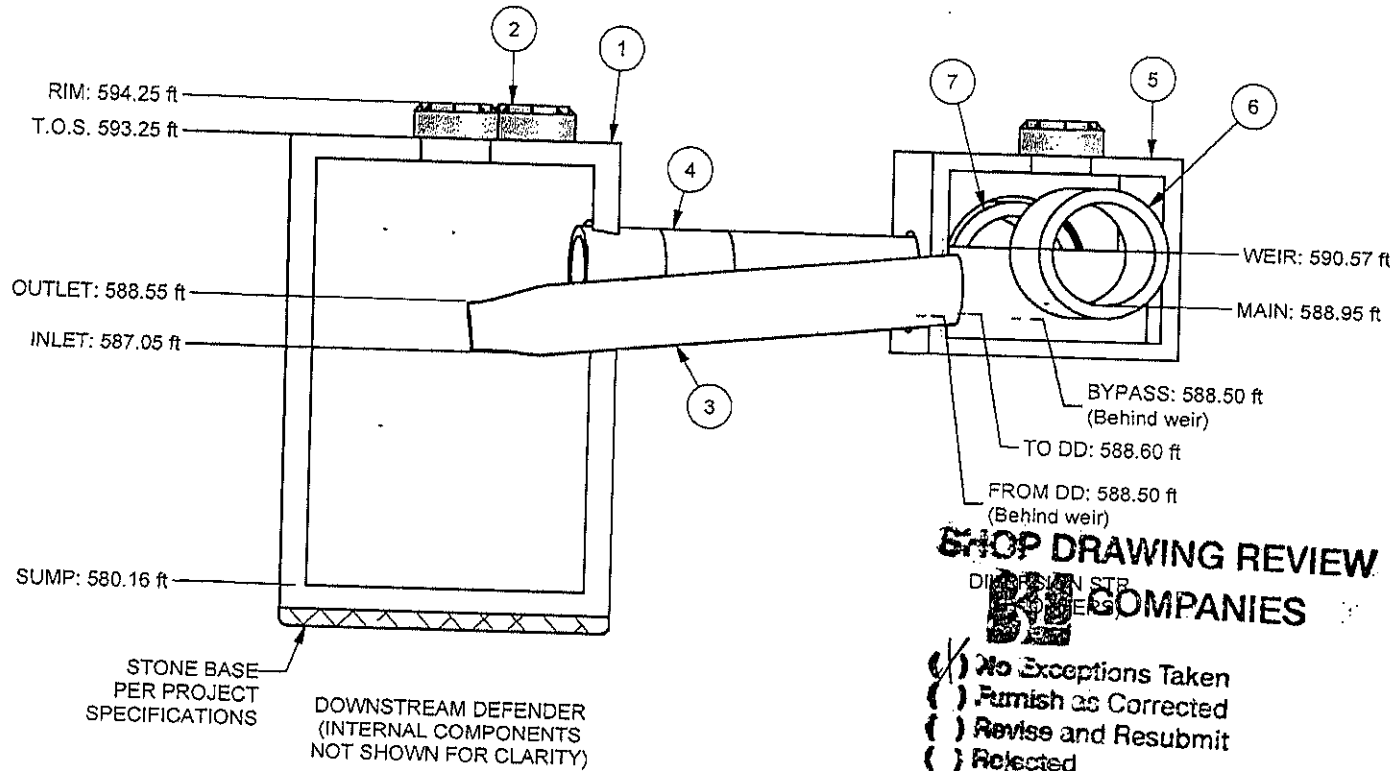


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CAD Ref: D8S2.1

Project No. 2010-0060

Drawing No. D8S2.1 Rev.



Notes
 1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
 2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

REVISION HISTORY			
REV	BY	DATE	DESCRIPTION
	MJ	5/27/10	FIRST ISSUE

Date: 5/27/2010
 Scale: 3/16"=1'0"

Drawn MJ	Checked <i>[Signature]</i>	Approved
-------------	-------------------------------	----------

Title
 8-FT DIAMETER
 DOWNSTREAM DEFENDER
 HDS #1

Mansfield Rd. Realignment

SHOP DRAWING REVIEW
 DIMENSION STUB
 DEFENDERS
HYDRO COMPANIES

- No Exceptions Taken
- Furnish as Corrected
- Revise and Resubmit
- Rejected
- Resubmit for Record
- Not required for Review

Submittal # 2
 Date 6-15-10 By S. BEARCE

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 Rev. 3/02

SECTION B-B

DEFENDER PIPE CONNECTIONS

1. Pipe openings will be sized for RCP unless noted otherwise. Information given in the returned submittal.
2. Large diameter coupling required to connect outlet pipe to overflow stub.

OVERFLOW PIPE STUB DIMENSIONS

O.D. = 24.80 in, I.D. = 24.00 in, STUB LENGTH = 6.00 in

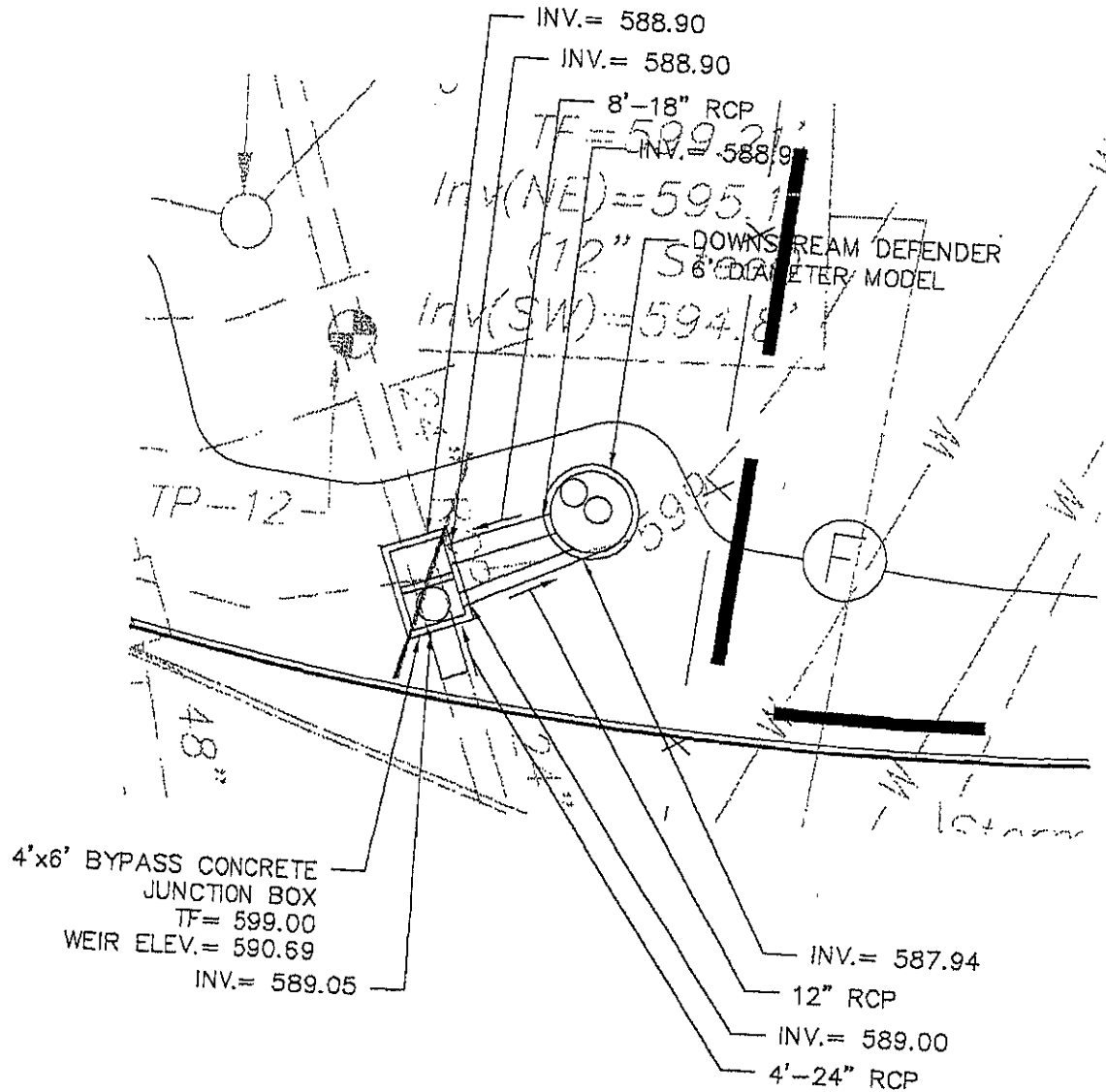
3. Inlet pipe enters unit tangent to inside of Defender manhole. Pipe off at 30 degree angle. (See installation notes for details.)
4. Grout inlet and outlet pipes with non-shrink grout to ensure a watertight connection.
5. Backfill structures and pipes per project specifications in a satisfactory manner.

Parts List		
ITEM	DESCRIPTION	SIZE
1	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)	96 in
2	FRAMES AND COVERS	
3	INLET PIPE (BY OTHERS)	18 in
4	OUTLET PIPE (BY OTHERS)	24 in
5	DIVERSION STRUCTURE (BY OTHERS)	
6	MAIN PIPE (BY OTHERS)	36 in
7	BYPASS PIPE (BY OTHERS)	36 in

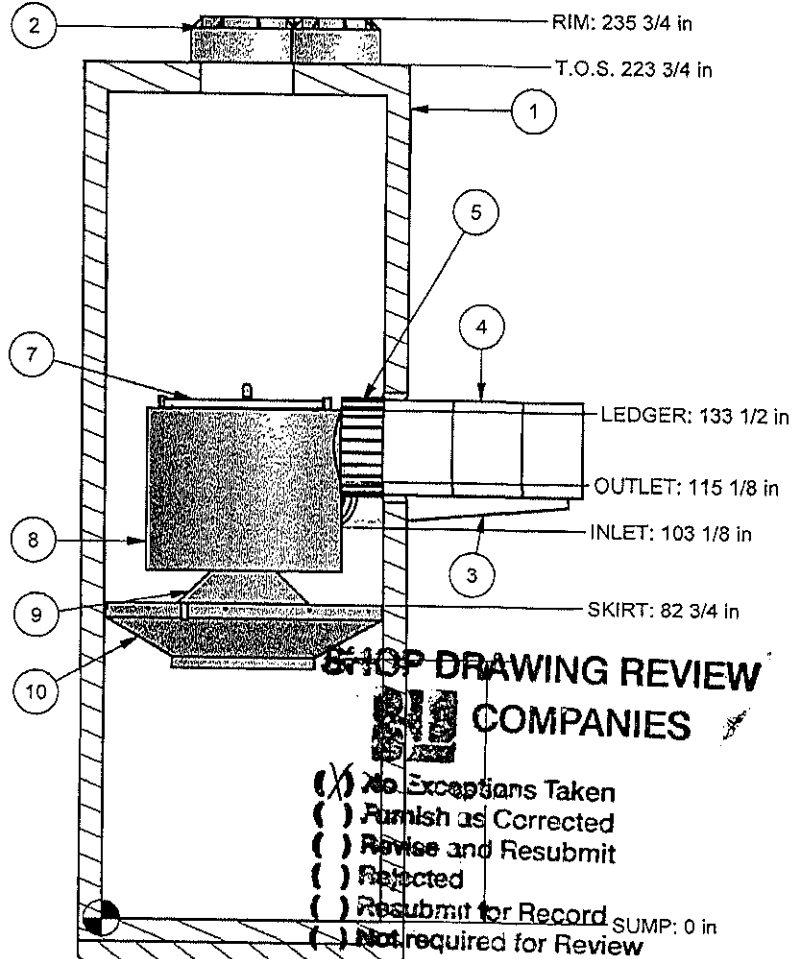
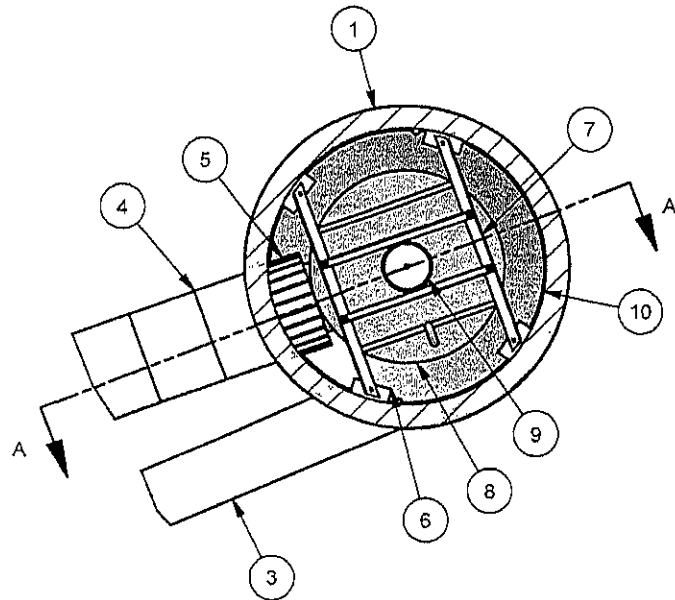
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CAD Ref: D8S3.1
Project No. 2010-0060
Drawing No. D8S3.1 Rev.



HYDRODYNAMIC SEPARATOR #2 - LAYOUT PLAN
1"=10'



SHOP DRAWING REVIEW
COMPANIES

(X) No Exceptions Taken
 () Furnish as Corrected
 () Revise and Resubmit
 () Rejected
 () Resubmit for Record
 () Not required for Review

Submit # 2

Parts List		
ITEM	DESCRIPTION	SIZE
1	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)	72 in
2	FRAMES AND COVERS	
3	INLET PIPE (BY OTHERS)	12 in
4	OUTLET PIPE (BY OTHERS)	18 in
5	PIPE COUPLING (BY OTHERS)	
6	LEDGER ANGLE	
7	SUPPORT FRAME	
8	DIP PLATE	
9	CENTER SHAFT AND CONE	
10	BENCHING SKIRT	

EQUIPMENT PERFORMANCE

The stormwater treatment unit shall adhere to the hydraulic parameters given in the chart below and provide the following efficiencies and storage capacities as follows:

1. Performance objectives: The unit shall be capable of treating peak flow rate listed below.
2. Peak Treatment Flow: 8.0 cfs
3. Sediment Storage Capacity: 6.00 cu. yd.
4. Continuous Oil Storage Capacity: 230 gal.
5. Sediment shall be stored in a zone that is isolated from the main flow path and protected from reentrainment.

SECTION A-A
 Date 6-15-10 By S. BEARCE
 This review is for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments are to be made on drawings during this review do not relieve Contractor from compliance with the requirements of the plans and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for dimensions to be shown on drawings and for complying at the jobsite; information that pertains solely to the fabrication processes or to its means, methods, techniques, sequences and procedures, or to the selection of equipment or materials, is not to be construed as a design specification. The Contractor shall be responsible for obtaining all necessary permits and approvals in accordance with applicable laws, codes, and regulations. The Contractor shall be responsible for obtaining all necessary permits and approvals in accordance with applicable laws, codes, and regulations. The Contractor shall be responsible for obtaining all necessary permits and approvals in accordance with applicable laws, codes, and regulations.

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Notes

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

REVISION HISTORY		
REV BY	DATE	DESCRIPTION
MJ	5/27/10	FIRST ISSUE

Date 5/27/2010 Scale 1/4" = 1'-0"

Drawn MJ Checked *MJ* Approved

Title
 6-FT DIAMETER DOWNSTREAM DEFENDER HDS #2

Mansfield Rd. Realignment



94 Hutchins Drive
 Portland, Maine 04102
 Tel: (207) 756-6200
 Fax: (207) 756-6212
 Email: hlitech@hil-tech.com

CAD Ref: D6S1.2
 Project No. 2010-0060
 Drawing No. D6S1.2 Rev.

SHOP DRAWING REVIEW

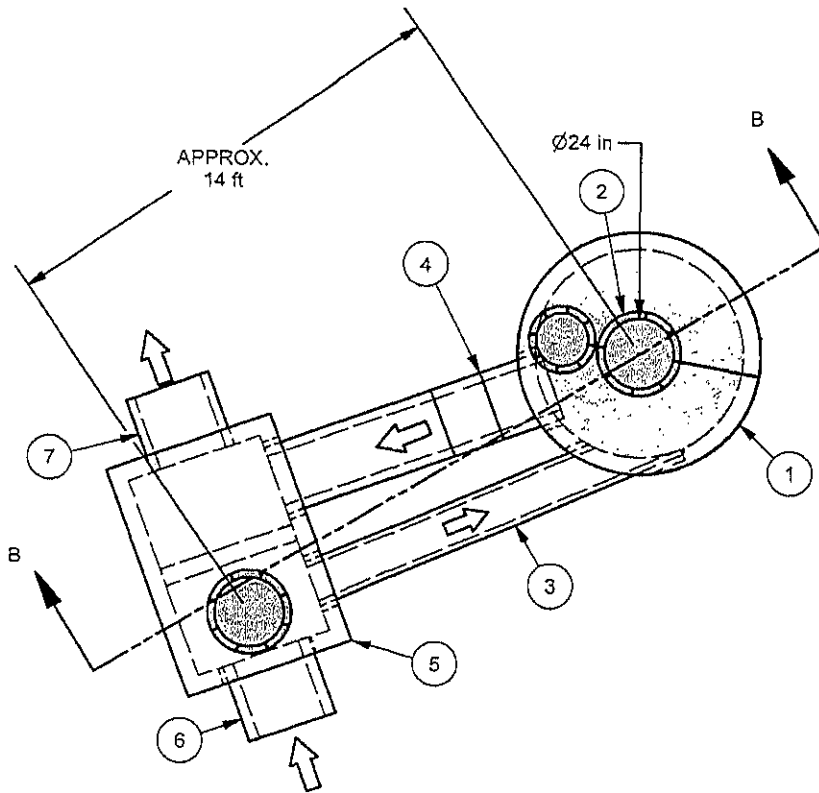


- No Exceptions Taken
- Furnish as Corrected
- Revise and Resubmit
- Rejected
- Resubmit for Record
- Not required for Review

Submittal # 2

Date 6-15-10 By S. BEARCE

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Rev 3/02



Parts List		
ITEM	DESCRIPTION	SIZE
1	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)	72 in
2	FRAMES AND COVERS	
3	INLET PIPE (BY OTHERS)	12 in
4	OUTLET PIPE (BY OTHERS)	18 in
5	DIVERSION STRUCTURE (BY OTHERS)	
6	MAIN PIPE (BY OTHERS)	24 in
7	BYPASS PIPE (BY OTHERS)	24 in

Notes

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
	MJ	5/27/10	FIRST ISSUE

Date	Scale
5/27/2010	3/16" = 1'-0"

Drawn	Checked	Approved
MJ	<i>MJ</i>	

Title
6-FT DIAMETER
DOWNSTREAM DEFENDER
HDS #2

Mansfield Rd. Realignment



94 Hutchins Drive
Portland, Maine 04102
Tel: (207) 756-6200
Fax: (207) 756-6212
Email: hiltech@hil-tech.com

CAD Ref: D6S2.2

Project No. 2010-0060

Drawing No. D6S2.2 Rev.



- (X) No Exceptions Taken
- () Furnish as Corrected
- () Revise and Resubmit
- () Rejected
- () Resubmit for Record
- () Not required for Review

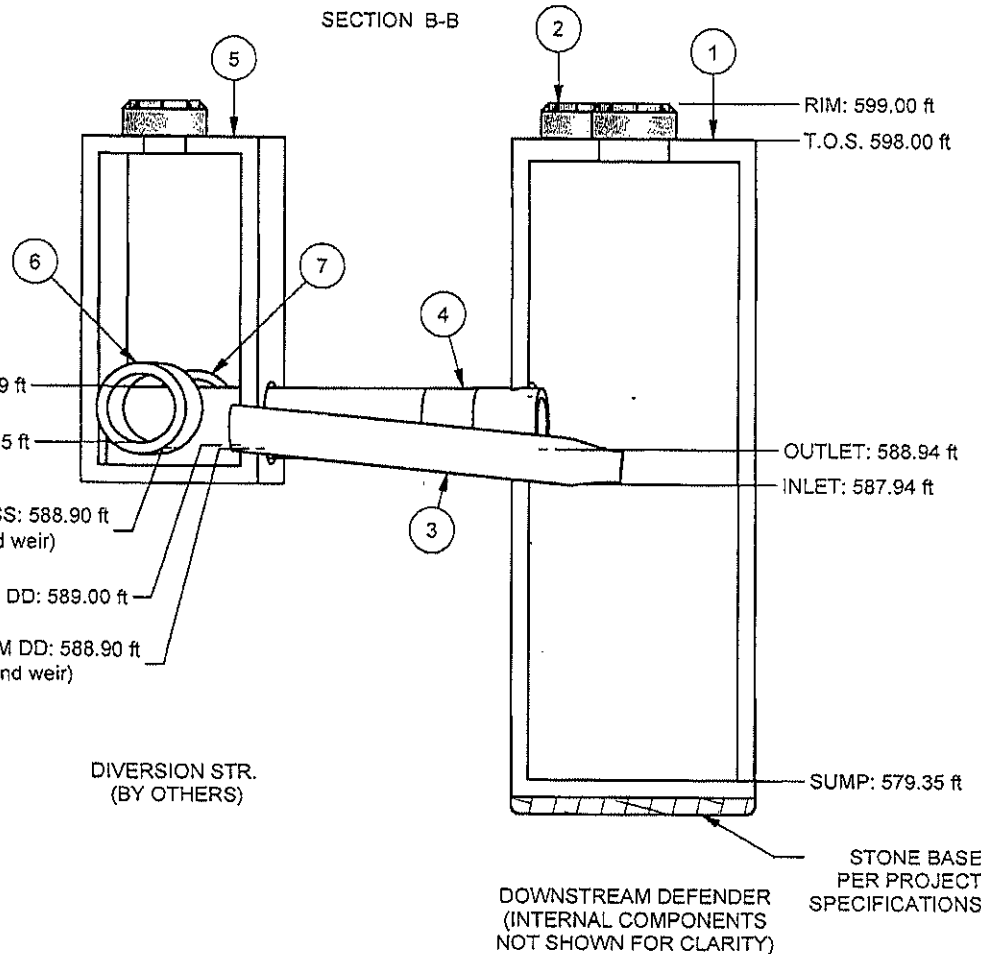
Submittal # 2

Date 6-15-10 By S. BEARCE

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Rev. 3/02



DIVERSION STR.
(BY OTHERS)

DOWNSTREAM DEFENDER
(INTERNAL COMPONENTS
NOT SHOWN FOR CLARITY)

STONE BASE
PER PROJECT
SPECIFICATIONS

Parts List		
ITEM	DESCRIPTION	SIZE
1	PRECAST MANHOLE (BY HYDRO VIA PRECASTER)	72 in
2	FRAMES AND COVERS	
3	INLET PIPE (BY OTHERS)	12 in
4	OUTLET PIPE (BY OTHERS)	18 in
5	DIVERSION STRUCTURE (BY OTHERS)	
6	MAIN PIPE (BY OTHERS)	24 in
7	BYPASS PIPE (BY OTHERS)	24 in

DEFENDER PIPE CONNECTIONS

1. Pipe openings will be sized for RCP unless noted otherwise on the returned submittal.
2. Large diameter coupling required to connect outlet pipe to overflow stub.

OVERFLOW PIPE STUB DIMENSIONS:

O.D. = 18.70 in, I.D. = 18.00 in, STUB LENGTH = 6.00 in

3. Inlet pipe enters unit tangent to inside of Defender manhole. Cut Pipe off at 30 degree angle. (See installation instructions.)
4. Grout inlet and outlet pipes with non-shrink grout to ensure a watertight connection.
5. Backfill structures and pipes per project specifications.

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Notes

1. MANHOLE WALL AND SLAB THICKNESSES ARE NOT TO SCALE.
2. CONTACT HYDRO INTERNATIONAL FOR A BOTTOM OF STRUCTURE ELEVATION PRIOR TO SETTING DOWNSTREAM DEFENDER MANHOLE.

REVISION HISTORY

REV	BY	DATE	DESCRIPTION
	MJ	5/27/10	FIRST ISSUE

Date	Scale
5/27/2010	3/16"=1'0"

Drawn	Checked	Approved
MJ	<i>MJ</i>	

Title

6-FT DIAMETER
DOWNSTREAM DEFENDER
HDS #2

Mansfield Rd. Realignment



94 Hutchins Drive
Portland, Maine 04102
Tel: (207) 756-6200
Fax: (207) 756-6212
Email: hltech@hl-tech.com

CAD Ref: D6S3.2

Project No. 2010-0060

Drawing No. D6S3.2 Rev.

Water Quality Volume Forebay #1

1. Compute Volumetric Runoff Coefficient, R

$R = 0.05 + 0.009(i)$ where (i) is percent impervious cover, i.e. use 80 for 80% impervious cover

$$i = \frac{\text{Impervious Area (ac)}}{\text{Total Area (ac)}} = \frac{32.560 \text{ acres}}{63.850 \text{ acres}} = 51 \%$$

2. Compute Water Quality Volume, WQV

$$WQV = \frac{(1") (R) (A)}{12} \quad \text{where: } R = \text{volumetric runoff coefficient} = 0.05 + 0.009(i)$$

A = site area in acres

$$WQV = \frac{(1") (0.51) (63.85)}{12} = \boxed{2.708} \text{ ac-ft}$$

CT DEP Stormwater Quality Manual (pg. 7-3)

$$\boxed{117962} \text{ ft}^3$$

Water Quality Flow - NA

1. Compute the water quality flow (WQF) for off-line stormwater treatment

- a. Compute the runoff depth, Q

$$Q = \frac{[WQV (\text{ac-ft})] \times [12 (\text{in/ft})]}{\text{Drainage Area (acres)}} = \frac{2.71 \times 12}{63.85} = 0.51 \text{ in}$$

- b. Compute the NRCS Runoff Curve Number (CN)

$$CN = \frac{1000}{[10 + 5P + 10Q - 10(Q^2 + 1.25QP)^{1/2}]} \quad P = 1 (\text{in})$$

$$CN = \frac{1000}{10.63} = 94$$

- c. Read initial abstraction, I_a (Table 4-1 in Chapter 4, TR-55)

- f. Compute water quality flow (WQF)

- d. Compute, I_a / P

$$I_a / P = 0$$

- e. Read Unit Peak Discharge, q_u (Exhibit 4-III in Chapter 4, TR-55)

$$WQF = (q_u) (A) (Q)$$

For $T_c = 0.0 \text{ hrs}$ & $I_a / P = 0$

$$q_u = 0 \text{ csm/in (Type III Storm)}$$

$$WQF = \boxed{0.00} \text{ cfs}$$



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JOB NO.: 21-21-256
CLIENT: University of Connecticut
SUBJECT: Water Quality Volume Forebay #1
PREPARED BY: DCC DATE: 06/29/2023 CHK BY: SPW

Water Quality Volume - HDS01

1. Compute Volumetric Runoff Coefficient, R

$R = 0.05 + 0.009(i)$ where (i) is percent impervious cover, i.e. use 80 for 80% impervious cover

$$i = \frac{\text{Impervious Area (ac)}}{\text{Total Area (ac)}} = \frac{13.820 \text{ acres}}{28.850 \text{ acres}} = 48 \%$$

2. Compute Water Quality Volume, WQV

$$WQV = \frac{(1") (R) (A)}{12} \quad \text{where: } R = \text{volumetric runoff coefficient} = 0.05 + 0.009(i)$$

A = site area in acres

$$WQV = \frac{(1") (0.48) (28.85)}{12} = \boxed{1.157} \text{ ac-ft}$$

CT DEP Stormwater Quality
Manual (pg. 7-3)

$$\boxed{50386} \text{ ft}^3$$

Water Quality Flow HDS01

1. Compute the water quality flow (WQF) for off-line stormwater treatment

- a. Compute the runoff depth, Q

$$Q = \frac{[WQV (\text{ac-ft})] \times [12 (\text{in/ft})]}{\text{Drainage Area (acres)}} = \frac{1.16 \times 12}{28.85} = 0.48 \text{ in}$$

- b. Compute the NRCS Runoff Curve Number (CN)

$$CN = \frac{1000}{[10 + 5P + 10Q - 10(Q^2 + 1.25QP)^{1/2}]} \quad P = 1 (\text{in})$$

$$CN = \frac{1000}{10.68} = 94$$

- c. Read initial abstraction, I_a (Table 4-1 in Chapter 4, TR-55)

- d. Compute, I_a / P

$$I_a / P = 0.105$$

- e. Read Unit Peak Discharge, q_u (Exhibit 4-III in Chapter 4, TR-55)

For T_c **0.5 hrs** & $I_a / P = 0.105$

$$q_u = 400 \text{ csm/in (Type III Storm)}$$

- f. Compute
water quality flow (WQF)

$$WQF = (q_u) (A) (Q)$$

$$WQF = \boxed{8.68} \text{ cfs}$$



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JOB NO.: 21-21-256

CLIENT: University of Connecticut

SUBJECT: Water Quality Volume & Flow for HDS01

PREPARED BY: DCC DATE: 06/29/2023 CHK BY: SPW

CIVIL, STRUCTURAL, MECHANICAL AND ELECTRICAL ENGINEERS

Water Quality Volume - HDS02

1. Compute Volumetric Runoff Coefficient, R

$R = 0.05 + 0.009(i)$ where (i) is percent impervious cover, i.e. use 80 for 80% impervious cover

$$i = \frac{\text{Impervious Area (ac)}}{\text{Total Area (ac)}} = \frac{13.820 \text{ acres}}{28.850 \text{ acres}} = 48 \%$$

2. Compute Water Quality Volume, WQV

$$WQV = \frac{(1") (R) (A)}{12} \quad \text{where: } R = \text{volumetric runoff coefficient} = 0.05 + 0.009(i)$$

A = site area in acres

$$WQV = \frac{(1") (0.48) (28.85)}{12} = \boxed{1.157} \text{ ac-ft}$$

CT DEP Stormwater Quality
Manual (pg. 7-3)

$$\boxed{50386} \text{ ft}^3$$

Water Quality Flow - HDS02

1. Compute the water quality flow (WQF) for off-line stormwater treatment

- a. Compute the runoff depth, Q

$$Q = \frac{[WQV (\text{ac-ft})] \times [12 (\text{in/ft})]}{\text{Drainage Area (acres)}} = \frac{1.16 \times 12}{28.85} = 0.48 \text{ in}$$

- b. Compute the NRCS Runoff Curve Number (CN)

$$CN = \frac{1000}{[10 + 5P + 10Q - 10(Q^2 + 1.25QP)^{1/2}]} \quad P = 1 (\text{in})$$

$$CN = \frac{1000}{10.68} = 94$$

- c. Read initial abstraction, I_a (Table 4-1 in Chapter 4, TR-55)

- d. Compute, I_a / P

$$I_a / P = 0.105$$

- e. Read Unit Peak Discharge, q_u (Exhibit 4-III in Chapter 4, TR-55)

For $T_c = 0.5 \text{ hrs}$ & $I_a / P = 0.105$

$$q_u = 400 \text{ csm/in (Type III Storm)}$$

- f. Compute water quality flow (WQF)

$$WQF = (q_u) (A) (Q)$$

$$WQF = \boxed{8.68} \text{ cfs}$$



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JOB NO.: 21-21-256
CLIENT: UNIVERSITY OF CONNECTICUT
SUBJECT: Water Quality Volume & Flow for HDS02
PREPARED BY: DCC DATE: 06/29/23 CHK BY: SPW

Water Quality Volume - HDS03

1. Compute Volumetric Runoff Coefficient, R

$R = 0.05 + 0.009(i)$ where (i) is percent impervious cover, i.e. use 80 for 80% impervious cover

$$i = \frac{\text{Impervious Area (ac)}}{\text{Total Area (ac)}} = \frac{6.760 \text{ acres}}{10.380 \text{ acres}} = 65 \%$$

2. Compute Water Quality Volume, WQV

$$WQV = \frac{(1") (R) (A)}{12} \quad \text{where: } R = \text{volumetric runoff coefficient} = 0.05 + 0.009(i)$$

$$WQV = \frac{(1") (0.64) (10.38)}{12} = \boxed{0.550} \text{ ac-ft}$$

CT DEP Stormwater Quality
Manual (pg. 7-3)

$$\boxed{23969} \text{ ft}^3$$

Water Quality Flow - HDS03

1. Compute the water quality flow (WQF) for off-line stormwater treatment

- a. Compute the runoff depth, Q

$$Q = \frac{[WQV (\text{ac-ft})] \times [12 (\text{in/ft})]}{\text{Drainage Area (acres)}} = \frac{0.55 \times 12}{10.38} = 0.64 \text{ in}$$

- b. Compute the NRCS Runoff Curve Number (CN)

$$CN = \frac{1000}{[10 + 5P + 10Q - 10(Q^2 + 1.25QP)^{1/2}]} \quad P = 1 (\text{in})$$

$$CN = \frac{1000}{10.41} = 96$$

- c. Read initial abstraction, I_a (Table 4-1 in Chapter 4, TR-55)

- d. Compute, I_a / P

$$I_a / P = 0.083$$

- e. Read Unit Peak Discharge, q_u (Exhibit 4-III in Chapter 4, TR-55)

For T_c **0.33 hrs** & $I_a / P = 0.083$

$$q_u = 550 \text{ csm/in (Type III Storm)}$$

- f. Compute water quality flow (WQF)

$$WQF = (q_u) (A) (Q)$$

$$WQF = \boxed{5.67} \text{ cfs}$$



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SUBJECT: Water Quality Volume & Flow for HDS03
PREPARED BY: DCC DATE: 06/29/23 CHK BY: SPW