



## PUBLIC NOTICE

**Comment Period Begins:** October 31, 2023  
**Comment Period Ends:** November 30, 2023  
**File Number:** **NAE-2023-1568**  
**In Reply Refer to:** Paul Sneeringer  
**Phone:** (978) 318-8491  
**Email:** paul.j.sneeringer@usace.army.mil

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The District Engineer, U.S. Army Corps of Engineers, New England District (USACE), has received a permit application, file number **NAE-2023-1568**, to discharge dredged and/or fill material into waters of the United States from Margaret White of the Town of Winchester – Engineering Department, 71 Mount Vernon Street, in Winchester, Massachusetts. This work is proposed within South Reservoir and Smelt Brook off Dam Road in Medford, Massachusetts. The site coordinates are: Latitude **42.441504** Longitude **-71.118180**.

The South Reservoir Dam Improvement Project involves grading and discharges of dredged and/or fill material into approximately **84,900** square feet (**1.95** acres) of waters of the United States, including jurisdictional wetlands, associated with South Reservoir and Smelt Brook, in order to make upgrades to the existing South Reservoir Dam located off South Dam Road in Medford, Massachusetts. South Reservoir is one of the Town of Winchester's primary drinking water reservoirs. It was constructed in 1890.

The South Reservoir Dam is a gravity dam. The primary goal of this project is to fill and to armor the upgradient (within the reservoir) and downgradient (within adjacent non-tidal wetlands) side slopes of the dam embankment to flatten them out, so that the dam will meet current dam safety requirements. Approximately **74,500** square feet (**1.71** acres) of the existing reservoir side slopes and bottom will be filled as part of this project. In addition, flattening the downgradient embankment slope and installing an associated filter blanket/apron will impact another approximately **10,400** square feet (**0.24** acres) of adjacent wetland areas. This includes approximately **6,500** square impacts of permanent wetland impacts and approximately **3,900** square feet of temporary wetland impacts. This project also involves making repairs to the primary dam spillway that outfalls into Smelt Brook.

This work is described on the enclosed plan drawings entitled "TOWN OF WINCHESTER, MASSACHUSETTS, 01890, DEPARTMENT OF PUBLIC WORKS, SOUTH RESERVOIR DAM IMPROVEMENTS," on a total of eleven sheets, and dated "10-03-2023".

The South Reservoir Dam Improvement Project has been designed to avoid and minimize adverse effects to waters of the United States. The Town of Winchester has attempted to limit the scope of the proposed jurisdictional impacts to the minimum necessary to meet the project goals. This project includes the permanent loss of waters of the United States. The Corps is considering various options to compensate for these unavoidable permanent impacts to waters of the United States.

## **AUTHORITY**

Permits are required pursuant to:

- Section 10 of the Rivers and Harbors Act of 1899
- Section 404 of the Clean Water Act
- Section 103 of the Marine Protection, Research and Sanctuaries Act.

The decision whether to issue a permit will be based on an evaluation of the probable impact of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which may reasonably accrue from the proposal must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are: conservation, economics, aesthetics, general environmental concerns, wetlands, cultural value, fish and wildlife values, flood hazards, flood plain value, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food production and, in general, the needs and welfare of the people.

The USACE is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. The USACE will consider all comments received to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an environmental assessment and/or an environmental impact statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

Where the activity involves the discharge of dredged or fill material into waters of the United States or the transportation of dredged material for the purpose of disposing it in ocean waters, the evaluation of the impact of the activity in the public interest will also include application of the guidelines promulgated by the Administrator, U.S. Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act, and/or Section 103 of the Marine Protection Research and Sanctuaries Act of 1972, as amended.

## **NATIONAL HISTORIC PRESERVATION ACT**

Based on our initial review, the proposed project would affect historic properties. Additional review and consultation to fulfil requirements under Section 106 of the National Historic Preservation Act of 1966, as amended, will be ongoing as part of the permit review process.

## **ENDANGERED SPECIES CONSULTATION**

The USACE has reviewed the application for the potential impact on federally listed threatened or endangered species and their designated critical habitat pursuant to section 7 of the Endangered Species Act (ESA) as amended. It is our preliminary determination that the proposed activity for which authorization is being sought is designed, situated, or will be operated/used in such a manner that it is not likely to adversely affect a listed species or their critical habitat. We are coordinating with the U.S. Fish and Wildlife Service on listed species under their jurisdiction and the ESA consultation will be concluded prior to the final decision.

## **OTHER GOVERNMENT AUTHORIZATIONS**

The states of Connecticut, Maine, Massachusetts, New Hampshire, and Rhode Island have approved Coastal Zone Management Programs. Where applicable, the applicant states that any proposed activity will comply with and will be conducted in a manner that is consistent with the approved Coastal Zone Management Program. By this public notice, we are requesting the state concurrence or objection to the applicant's consistency statement.

The following authorizations have been applied for, or have been, or will be obtained:

- (XX) Permit, license or assent from State.
- (XX) Permit from local wetland agency or conservation commission.
- (XX) Water Quality Certification in accordance with Section 401 of the Clean Water Act.

## **COMMENTS**

The Corps of Engineers is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and to evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps of Engineers to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general

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File Number # NAE-2023-01568

environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity. People submitting comments are advised that all comments received will be available for public review in their entirety and will be considered a matter of public record.

Comments should be submitted in writing by the above date. If you have any questions, please contact Paul Sneeringer at [paul.j.sneeringer@usace.army.mil](mailto:paul.j.sneeringer@usace.army.mil), (978) 318-8491, (800) 343-4789 or (800) 362-4367.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider the application. Requests for a public hearing shall specifically state the reasons for holding a public hearing. The USACE holds public hearings for the purpose of obtaining public comments when that is the best means for understanding a wide variety of concerns from a diverse segment of the public.

The initial determinations made herein will be reviewed considering facts submitted in response to this notice. Copies of letters of objection will be forwarded to the applicant who will normally be requested to contact objectors directly to reach an understanding.

**THIS NOTICE IS NOT AN AUTHORIZATION TO DO ANY WORK.**

*Paul Maniccia*

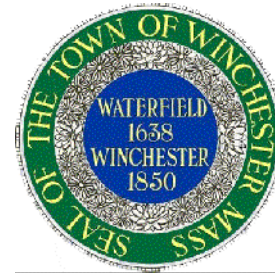
Paul. M. Maniccia  
Chief, Massachusetts Permits & Enforcement Section  
Regulatory Division

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Please contact Ms. Tina Chaisson at [bettina.m.chaisson@usace.army.mil](mailto:bettina.m.chaisson@usace.army.mil) or (978) 318-8058 if you would like to be removed from our public notice mailing list.

# TOWN OF WINCHESTER, MASSACHUSETTS

## DEPARTMENT OF PUBLIC WORKS



*SELECT BOARD MEMBERS:*  
 RICHARD M. MUCCI - CHAIR  
 ANTHEA BRADY  
 MICHAEL BETTENCOURT  
 JOHN FALLON  
 MICHELLE PRIOR

## SOUTH RESERVOIR DAM IMPROVEMENTS

MASSACHUSETTS OFFICE OF DAM SAFETY ID NO. 4-9-176-1

NATIONAL DAM ID NO. MA00453



LOCUS MAP

SCALE : 1"=4000'

DRAWING INDEX	
SHEET	TITLE
G000	COVER
G001	ABBREVIATIONS, NOTES AND LEGEND
C101	EXISTING SITE CONDITIONS
C102	SITE PREPARATION AND DEMOLITION
C103	PROPOSED SITE CONDITIONS
C103P	RESOURCE IMPACT
D101	CIVIL SECTIONS I
D102	CIVIL SECTIONS II
D103	CIVIL SECTIONS III
D104	CIVIL DETAILS IV
D105	WETLAND REPLICATION AREA

Seal:



**Weston & Sampson**

Weston & Sampson Engineers, Inc.  
 55 Walkers Brook Drive, Suite 100  
 Reading, MA 01867

978.532.1900 800.SAMPSON

www.westonandsampson.com

Issued Date:

**OCTOBER 2023**



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PERMITTING

**FOR PERMIT APPROVAL ONLY**  
**10-03-2023**

**GENERAL NOTES**

- 1. THE PLANS ARE BASED ON THE FOLLOWING:
- AN EXISTING CONDITIONS AND BATHYMETRIC SURVEY COMPLETED BY GRADY CONSULTING, LLC IN NOVEMBER 2022.
2. THE VERTICAL DATUM IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAV88). ELEVATIONS ARE IN FEET. THE HORIZONTAL DATUM IS THE NORTH AMERICAN DATUM OF 1983 (NAD83). BOTH DATUMS WERE ESTABLISHED BY STATIC GPS SURVEY AND POST PROCESSED THROUGH OPUS (ONLINE POSITIONING USER SERVICE).
3. RIGHT AND LEFT ARE REFERENCED AS THOUGH STANDING IN SOUTH RESERVOIR FACING DOWNSTREAM (NORTH).
4. BENCHMARKS USED FOR THE SURVEY AND PROVIDED FOR CONSTRUCTION ARE LABELED BM-A, BM-B AND BM-C ON SHEET C101.
5. WETLAND AREAS WERE DELINEATED BY A WESTON & SAMPSON CERTIFIED WETLAND SCIENTIST IN DECEMBER 2022. THE WETLAND FLAGS WERE LOCATED VIA TOTAL STATION SURVEY AND GPS.
6. EXISTING CONDITIONS ARE BASED PRIMARILY ON THE REFERENCED TOPOGRAPHIC SURVEY. CURRENT CONDITIONS MAY VARY FROM THOSE SHOWN ON THE DRAWINGS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW ALL AVAILABLE INFORMATION AND VISIT THE SITE TO INSPECT THE CURRENT CONDITIONS PRIOR TO SUBMITTING BID DOCUMENTS. THE TOWN OF WINCHESTER WILL CONDUCT ONE PRE-BID MEETING TO PROVIDE ACCESS TO AREAS OF THE SITE. ANY VARIATIONS FROM THE CONDITIONS SHOWN SHOULD BE BROUGHT TO THE ENGINEER'S ATTENTION IN WRITING DURING THE BID PERIOD. NO ADDITIONAL COMPENSATION WILL BE APPROVED DUE TO OBSERVABLE SURFICIAL SITE CONDITIONS NOT SHOWN ON THE DRAWINGS.
7. THE CONTRACTOR SHALL CALL DIGSAFE, CITY OF MEDFORD AND THE TOWN OF WINCHESTER AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER PRIOR TO EXCAVATION.
8. LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OR UNDERWATER OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING DIMENSIONS AND COLLECTING NECESSARY INFORMATION IN THE FIELD PRIOR TO SUBMITTING SHOP DRAWINGS AND ORDERING EQUIPMENT FOR THE PROJECT.
10. THE MAINTENANCE OF THE CRITICAL PATH PROJECT SCHEDULE IS ESSENTIAL TO THE SUCCESSFUL COMPLETION OF THIS PROJECT. REFER TO SPECIFICATION SECTION 01014 FOR ADDITIONAL INFORMATION AND REQUIREMENTS REGARDING THE SCOPE AND SEQUENCE OF WORK.
11. THE CONTRACTOR SHALL COORDINATE ACTIVITY WITH RESPECTIVE UTILITY COMPANIES, EMERGENCY SERVICES, AND THE TOWN OF WINCHESTER.
12. CONTRACTOR SHALL INSTALL AND MAINTAIN SITE PERIMETER TRAFFIC BARRIERS, SAFETY WARNING DEVICES AND FENCING AS SHOWN ON THE DRAWINGS, AND WHERE NECESSARY, THE SITE SHALL BE MADE SECURE AND SAFE DURING THE DURATION OF CONSTRUCTION BY THE CONTRACTOR INCLUDING NON-WORKING HOURS.
13. PREVENT PUBLIC ACCESS TO THE WORK SITE AT ALL TIMES, EXCEPT FOR THE EXISTING WALKING TRAILS, WHERE CONTRACTOR SHALL PROVIDE SAFE PUBLIC ACCESS OUTSIDE THE WORK HOURS OF 7AM TO 5PM, AND ON

WEEKENDS. ALL SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO THE WORK.

- 14. THE CONTRACTOR SHALL SUBMIT FLOOD WARNING/EMERGENCY RESPONSE PROCEDURES INCLUDING AN EMERGENCY CONTACT LIST AND PROCEDURES TO BE FOLLOWED IN THE CASE OF A LARGE RUNOFF EVENT DURING CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING AND MAINTAINING, THROUGHOUT CONSTRUCTION, ALL EROSION AND SEDIMENTATION CONTROLS AS SHOWN ON SHEETS C102 AND D104.
16. ALL PRODUCTS AND MATERIALS IN CONTACT WITH TOWN WATER SUPPLY SHALL BE APPROVED IN ACCORDANCE WITH ANSI/NSF 61 FOR USE IN POTABLE WATER.
17. THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES, OR EQUIPMENT ON THE EMBANKMENT ITSELF, ANY DRAINAGE STRUCTURES, OR WITHIN 100 FEET OF WETLANDS UNLESS IDENTIFIED ON THE PLANS AS THE STAGING OR TEMPORARY STOCKPILE AREA.
18. THE CONTRACTOR IS RESPONSIBLE FOR ALL CONSTRUCTION DEWATERING AND SURFACE WATER CONTROL TO ACHIEVE FIRM, DRY EXCAVATION SUBGRADE CONDITIONS AND ALLOW ALL BACKFILL IN-THE-DRY. MAINTAIN GROUNDWATER LEVEL 24-INCHES BELOW THE EXCAVATION/BACKFILL LEVEL AT ALL TIMES.
19. CONTRACTOR SHALL PLAN AND CONDUCT ALL CONSTRUCTION ACTIVITIES TO ACCOMMODATE DISCHARGE FROM DAM TO DOWNSTREAM CHANNEL, INCLUDING ALL STORM FLOWS DURING CONSTRUCTION.
20. ONLY THE TOWN WATER DEPARTMENT PERSONNEL SHALL OPERATE EXISTING VALVES, IF NECESSARY. VALVE OPERATIONS SHALL BE SCHEDULED AT LEAST SEVENTY-TWO HOURS IN ADVANCE.
21. THE CONTRACTOR SHALL MAINTAIN SIDE SLOPES AND DRAINAGE SWALES DURING CONSTRUCTION TO PREVENT PONDING AND EROSION.
22. THE CONTRACTOR SHALL MAINTAIN EXCAVATION SLOPES DURING CONSTRUCTION IN ACCORDANCE WITH THE MINIMUM AND MAXIMUM SLOPES SPECIFIED IN THE CONTRACT AND AS REQUIRED BY STATE OR FEDERAL EXCAVATION SAFETY REGULATIONS. ANY LATERAL SUPPORT SYSTEM USED IN THE FIELD SHALL BE INCIDENTAL TO THE APPROPRIATE WORK ITEM AND CONFORM TO SPECIFICATION 02252 AND 02300.
23. UNSUITABLE MATERIALS MAY BE ENCOUNTERED IN THE EXCAVATIONS. THE CONTRACTOR SHALL NOT OVER-EXCAVATE. UNLESS APPROVED BY THE ENGINEER, WHERE OVER-EXCAVATION OCCURS, THE CONTRACTOR SHALL REPLACE THE EXCAVATED MATERIAL WITH SUITABLE FILL MATERIAL AS REQUIRED BY THE ENGINEER. FILTER FABRIC MAY BE REQUIRED AT THE ENGINEER'S DISCRETION AND IS CONSIDERED INCIDENTAL TO THE WORK.
24. THE CONTRACTOR SHALL DISPOSE OFF-SITE ALL EXCESS SOIL, TREES, PAVEMENT, AND DEMOLITION DEBRIS RESULTING FROM CONSTRUCTION ACTIVITIES ONSITE IN ACCORDANCE WITH SPECIFICATION SECTIONS 02300, 02220, AND 02230.
25. THE PROJECT IS IN CLOSE PROXIMITY TO RESIDENTIAL NEIGHBORHOODS. PREVENT WINDBLOWN DUST FROM LEAVING THE SITE AT ALL TIMES. REFER TO SPECIFICATION 01562 FOR ADDITIONAL INFORMATION.
26. ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE LIMITS OF WORK SHALL BE RESTORED AT NO ADDITIONAL COST TO THE OWNER.

27. CONTRACTOR SHALL PROTECT THE EXISTING EMBANKMENT CORE WALL.

28. THE CONTRACTOR SHALL PROVIDE, POST, MAINTAIN, AND REMOVE CONSTRUCTION SIGNAGE AND BARRICADES TO ALERT MOTORISTS AND PEDESTRIANS OF CONSTRUCTION AND EQUIPMENT ACCESS/EGRESS AND TO RESTRICT UNAUTHORIZED ACCESS TO THE WORK AREA.

**PROJECT COMPONENTS**

- 1. PRIOR TO THE START OF PROJECT, THE TOWN WILL LOWER THE RESERVOIR LEVEL TO EL. 155.4 FT. WATER LEVEL SHALL NOT BE LOWERED FURTHER BY THE CONTRACTOR.
2. CONTRACTOR SHALL REVIEW THE LOGS OF SUBSURFACE EXPLORATIONS CONDUCTED FOR THE PROJECT AND SHALL BE AWARE THAT LOOSE TO VERY LOOSE CONDITIONS ARE PRESENT WITHIN THE EXISTING EMBANKMENT SOILS. CONTRACTOR SHALL NOT PLACE CONSTRUCTION EQUIPMENT ON THE EMBANKMENT UNTIL EQUIPMENT LOAD AND SLOPE STABILITY CONDITIONS ARE CONFIRMED BY THE CONTRACTOR. CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF PROJECT WORK.

**AT THE START OF THE WORK AND PRIOR TO START OF GENERAL EXCAVATION:**

- 3. DELINEATE LIMITS OF WORK AS INDICATED ON SHEET C-102 AND REVIEW WITH THE ENGINEER.
4. INSTALL AND MAINTAIN PERIMETER EROSION AND SEDIMENTATION CONTROLS ALONG THE LIMITS OF WORK FOR THE DURATION OF THE PROJECT, ABIDE BY THE REQUIREMENTS OF THE TOWN CONSERVATION COMMISSION ORDER OF CONDITIONS, INTEGRAL TO THE PROJECT DOCUMENTS.
5. CUT TREES, REMOVE STUMPS AND ROOT SYSTEMS, CLEAR AND GRUB WITHIN THE WORK LIMIT.
6. INSTALL A DEWATERING SYSTEM AT THE TOE OF THE DAM CAPABLE OF LOWERING SEEPAGE WATER LEVELS TO A MINIMUM OF 2 FEET BELOW PROPOSED SUBGRADE.
7. PERFORM MISCELLANEOUS SITE DEMOLITION AS INDICATED ON THE DRAWINGS, INCLUDING REMOVAL OF GABION BASKETS, AND FENCING. SUBMIT DEMOLITION PLAN AS REQUIRED BY SECTION 02220.
8. SOIL SHALL BE EXCAVATED TO THE DEPTHS REQUIRED FOR THE WORK AND AS SHOWN ON SHEET C103 PROPOSED CONDITIONS.

**DOWNSTREAM SLOPE:**

- 9. WORK REQUIRES STRIPPING ALL TOPSOIL AND SUBSOIL AS DETERMINED BY THE ENGINEER FROM THE FOOTPRINT OF PROPOSED CONDITIONS, EXCEPT WHERE BELOW WATER.
10. THE REMAINING SOILS WILL BE EVALUATED IN THE FIELD BY THE ENGINEER TO DETERMINE SUITABILITY FOR REUSE. CONTRACTOR SHALL ANTICIPATE RE-HANDLING OF A PORTION OF THE SOILS TO REMOVE ORGANICS, CLAYEY SOILS, COBBLES, BOULDERS, TRASH AND DELETERIOUS MATERIALS.
11. SUBGRADE SHALL NOT BE EXPOSED UNLESS BACKFILL WILL BE PLACED ON THE SAME DAY. SUBGRADE SHOULD BE OBSERVED AND APPROVED BY THE ENGINEER.

12. INSTALL MINERAL FILTER MATERIAL ON THE EXISTING DAM SOILS FOLLOWING REMOVAL OF TOPSOIL AND SUBSOIL AS OBSERVED BY THE ENGINEER, AND AS INDICATED ON THE DRAWINGS.

13. PLACE BACKFILL STARTING AT THE TOE KEY, IN LIFTS, AS DESCRIBED IN SECTION 02300. PLACE AND COMPACT MATERIALS TO THE SPECIFIED DENSITY IN CONTINUOUS HORIZONTAL LAYERS TO THE BELOW DENSITIES PER ASTM D1557 METHOD C:

Table with 2 columns: MATERIAL and COMPACTION. Rows include EMBANKMENT MATERIAL (95% AT -1% TO +3% OF OPTIMUM MOISTURE CONTENT) and FINE FILTER MATERIAL EMBANKMENT MATERIAL (95% AT 1-3% WET OF OPTIMUM MOISTURE (ADJACENT TO PIPES AND STRUCTURES))

14. WHERE HORIZONTAL LAYERS MEET A RISING SLOPE, KEY EACH LAYER INTO THE EXISTING SLOPE BY BENCHING INTO THE SLOPE.

15. USE EXTRA CARE WHEN COMPACTING ADJACENT TO DRAINAGE PIPES AND STRUCTURES. BACKFILL AND COMPACTION SHALL PROCEED ALONG SIDES OF DRAINAGE STRUCTURES SO THAT THE DIFFERENCE IN TOP OF FILL LEVEL ON ANY SIDE OF THE STRUCTURE SHALL NOT EXCEED TWO (2) FEET AT ANY STAGE OF CONSTRUCTION.

16. SLOPE OF ANY EXCAVATION WITHIN THE EMBANKMENT LIMITS SHALL NOT BE STEEPER THAN A 2 HORIZONTAL TO 1 VERTICAL SLOPE ANGLE.

17. PLACE BACKFILL ON THE FILTER MATERIAL TO FINAL GRADES.

18. INSTALL LOAM AND SEED AND PROTECT SLOPES FROM EROSION UNTIL GRASS COVER IS ESTABLISHED TO AT LEAST 85 PERCENT COVERAGE AS ESTIMATED BY THE ENGINEER.

**UPSTREAM SLOPE:**

19. RIPRAP BELOW RESERVOIR LEVEL SHALL BE PLACED IN THE WET.

**CLOSING:**

- 20. PERFORM MISCELLANEOUS SITE IMPROVEMENTS AS INDICATED ON THE DRAWINGS, INCLUDING INSTALLATION OF MONITORING WELLS, FENCING, AND PLANTINGS.
21. RESTORE DISTURBED AREAS ON THE SITE TO PRE-CONSTRUCTION CONDITIONS. RESTORE TEMPORARILY IMPACTED WETLANDS IN PLACE BY PLACING WETLAND SEED MIX.
22. PERFORM GENERAL SITE CLEANUP.
23. RESTORE ACCESS TO THE WALKING TRAILS AROUND THE SITE.

**RESERVOIR LEVEL MANAGEMENT**

SOUTH RESERVOIR IS A CRITICAL PUBLIC DRINKING WATER SUPPLY FOR THE TOWN OF WINCHESTER AND IS GENERALLY OPERATED IN THE ELEVATION RANGE OF EL. 155.4 TO EL. 158.4. DISCHARGES FROM THE RESERVOIR ARE CURRENTLY CONTROLLED VIA THE PUMP STATION SHOWN ON THE DRAWINGS

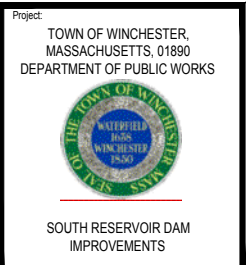
**ABBREVIATIONS**

Table mapping abbreviations to full names: BM BENCHMARK, BWV BORDERING VEGETATED WETLAND, CDF CONTROLLED DENSITY FILL, CI CAST IRON, CONC CONCRETE, DI DUCTILE IRON, DIA DIAMETER, D/S DOWNSTREAM, WF WETLAND FLAG, ELEC ELECTRIC, EL ELEVATION, EXIST EXISTING, FF FINISH FLOOR, FT FEET, FOOT, HDPE HIGH DENSITY POLYETHYLENE, ID INSIDE DIAMETER, LIDAR LIGHT DETECTION AND RANGING, LLO LOW LEVEL OUTLET, LUW LAND UNDER WATER, MAX MAXIMUM, MIN MINIMUM, MISC MISCELLANEOUS, MJ MECHANICAL JOINT, MW MONITORING WELL, N NORTH, OC ON CENTER, OD OUTSIDE DIAMETER, OHWL ORDINARY HIGH WATER LEVEL, PE PROFESSIONAL ENGINEER, PL PROPERTY LINE, SDR STANDARD DIMENSIONAL RATIO, SECT SECTION

Table mapping SPECIFICATION to full names: SS STAINLESS STEEL, TBD TO BE DETERMINED, TOB TOP OF BANK, TC THRUST COLLAR, TYP TYPICAL, UG UNDERGROUND, U/S UPSTREAM, VIF VERIFY IN FIELD, W/ WITH, W/O WITHOUT

LEGEND table mapping symbols to descriptions: SURVEY BENCHMARK, SIGN, BOLLARD, UTILITY POLE, LIGHT POLE, GAS VALVE, WATER VALVE, DRAINAGE MANHOLE, UNKNOWN MANHOLE, CLEANOUT, WETLAND FLAG, TOP OF BANK, DECIDUOUS TREE, CONIFEROUS TREE, SPOT ELEVATION, ROCK OUTCROP, COMPOST FILTER TUBES, HAND HOLE, PROPERTY LINE, CHAIN LINK FENCE, WATER LINE, GAS LINE, ELECTRIC LINE, CATCH BASIN, FLAGGED WETLAND, WETLAND, 100 YEAR FLOOD ZONE, 100 FOOT WETLAND BUFFER, 200 FOOT WETLAND BUFFER, EDGE OF WATER, RESERVOIR ORDINARY HIGH WATER LINE, PERENNIAL STREAM ORDINARY HIGH WATER LINE, EXISTING EXPLORATION DESIGNATION AND APPROXIMATE LOCATION, TEMPORARY CHAIN LINK FENCE, DECIDUOUS TREE TO BE REMOVED, CONIFEROUS TREE TO BE REMOVED

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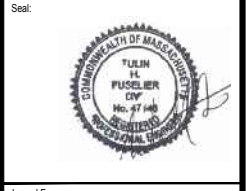


Weston & Sampson Engineers, Inc. 55 Walkers Brook Drive, Suite 100 Reading, MA 01867 978.532.1900 800.SAMPSON www.westonandsampson.com

Revisions table with columns: No, Date, Description. Contains one blank row.

COA table with columns: No, Date, Description. Contains one blank row.

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Issued For: PERMITTING SET

Scale: AS SHOWN

Date: 10-03-2023 Drawn By: VS Reviewed By: DD Approved By: THF

W&S Project No.: ENG22 - 1197 W&S File No.:

Drawing Title: ABBREVIATIONS, NOTES AND LEGEND

Sheet Number: G001

**BENCHMARKS**

BENCHMARK	DESCRIPTION	ELEVATION
BM-A	CENTER OF CONCRETE BRIDGE	167.00
BM-B	MONITORING WELL	145.32
BM-C	MONITORING WELL	122.30

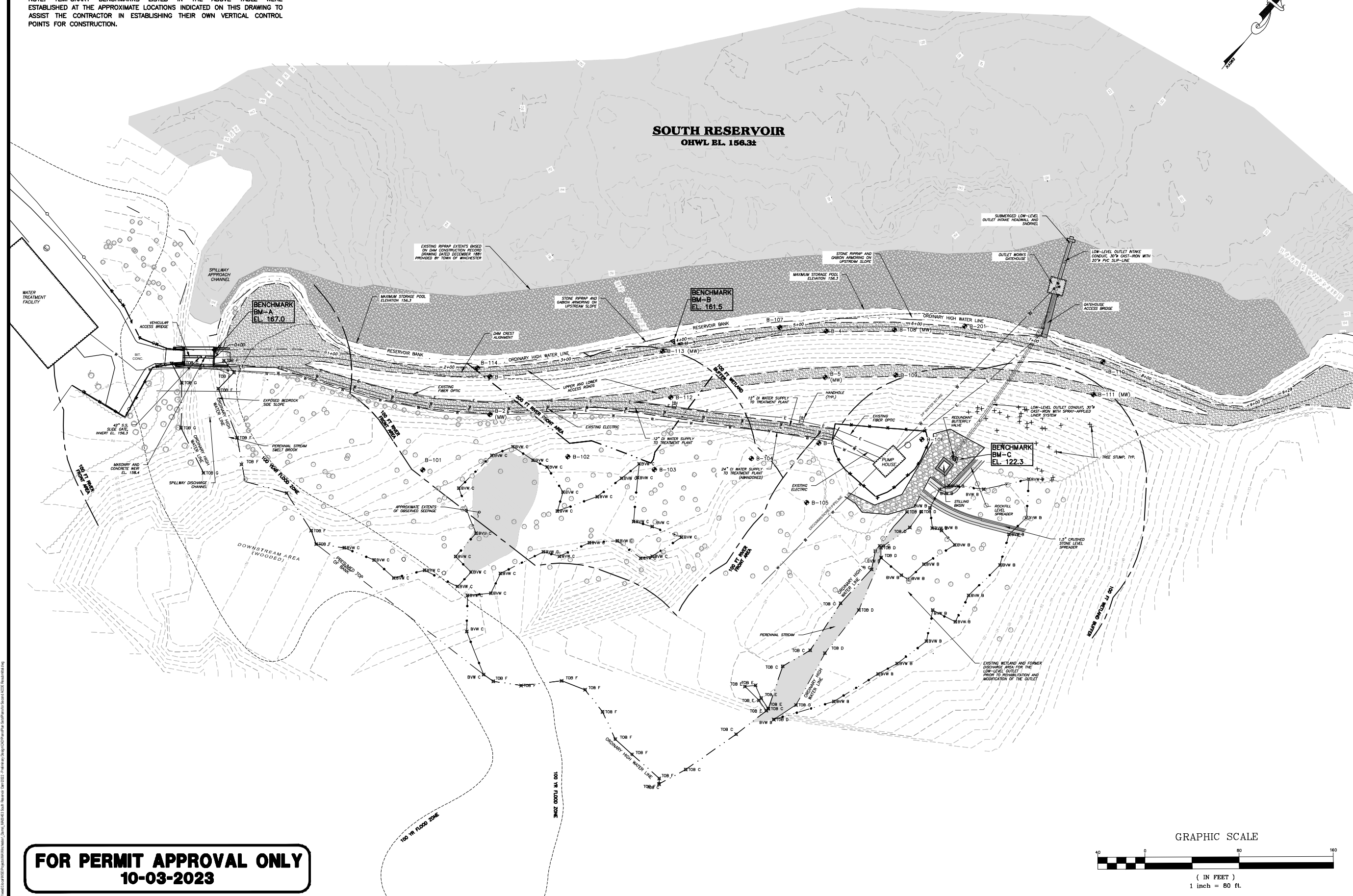
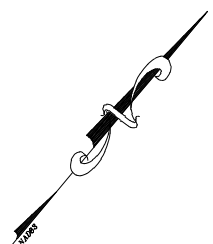
NOTE: TEMPORARY BENCHMARKS LISTED IN THE ABOVE TABLE WERE ESTABLISHED AT THE APPROXIMATE LOCATIONS INDICATED ON THIS DRAWING TO ASSIST THE CONTRACTOR IN ESTABLISHING THEIR OWN VERTICAL CONTROL POINTS FOR CONSTRUCTION.

Project:  
**TOWN OF WINCHESTER,**  
 MASSACHUSETTS, 01890  
 DEPARTMENT OF PUBLIC WORKS

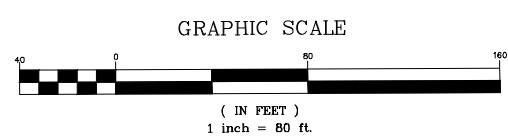


**SOUTH RESERVOIR DAM**  
 IMPROVEMENTS

**Weston & Sampson**  
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Revisions:

No.	Date	Description

COA:

No.	Date	Description

Seal:

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Scale: AS SHOWN

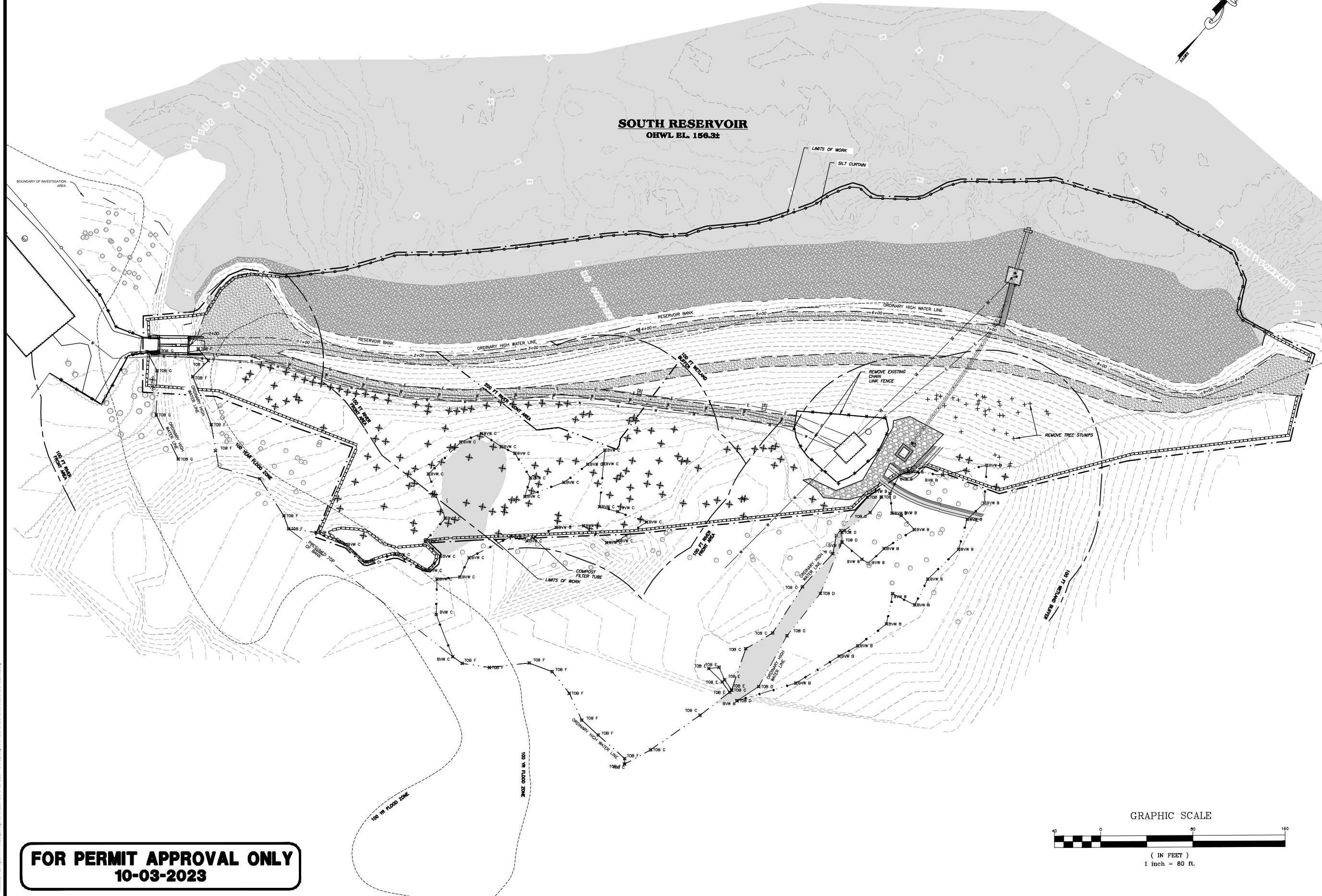
Date: 10-03-2023  
 Drawn By: VS  
 Reviewed By: THF  
 Approved By: THF  
 W&S Project No.: ENG22 - 1197  
 W&S File No.:

Drawing Title:  
**EXISTING CONDITIONS**

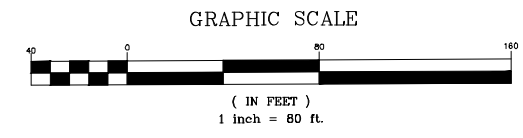
Sheet Number:  
**C101**

**SITE PREPARATION NOTES:**

1. ALL CLEARING AND GRUBBING OPERATIONS SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION SECTION 02230 AND TREE REMOVAL DETAIL (SEE SHEET D104).



**FOR PERMIT APPROVAL ONLY**  
**10-03-2023**



Project:  
 TOWN OF WINCHESTER,  
 MASSACHUSETTS, 01890  
 DEPARTMENT OF PUBLIC WORKS



**SOUTH RESERVOIR DAM IMPROVEMENTS**

**Weston & Sampson**  
 Weston & Sampson Engineers, Inc.  
 55 Walkers Brook Drive, Suite 100  
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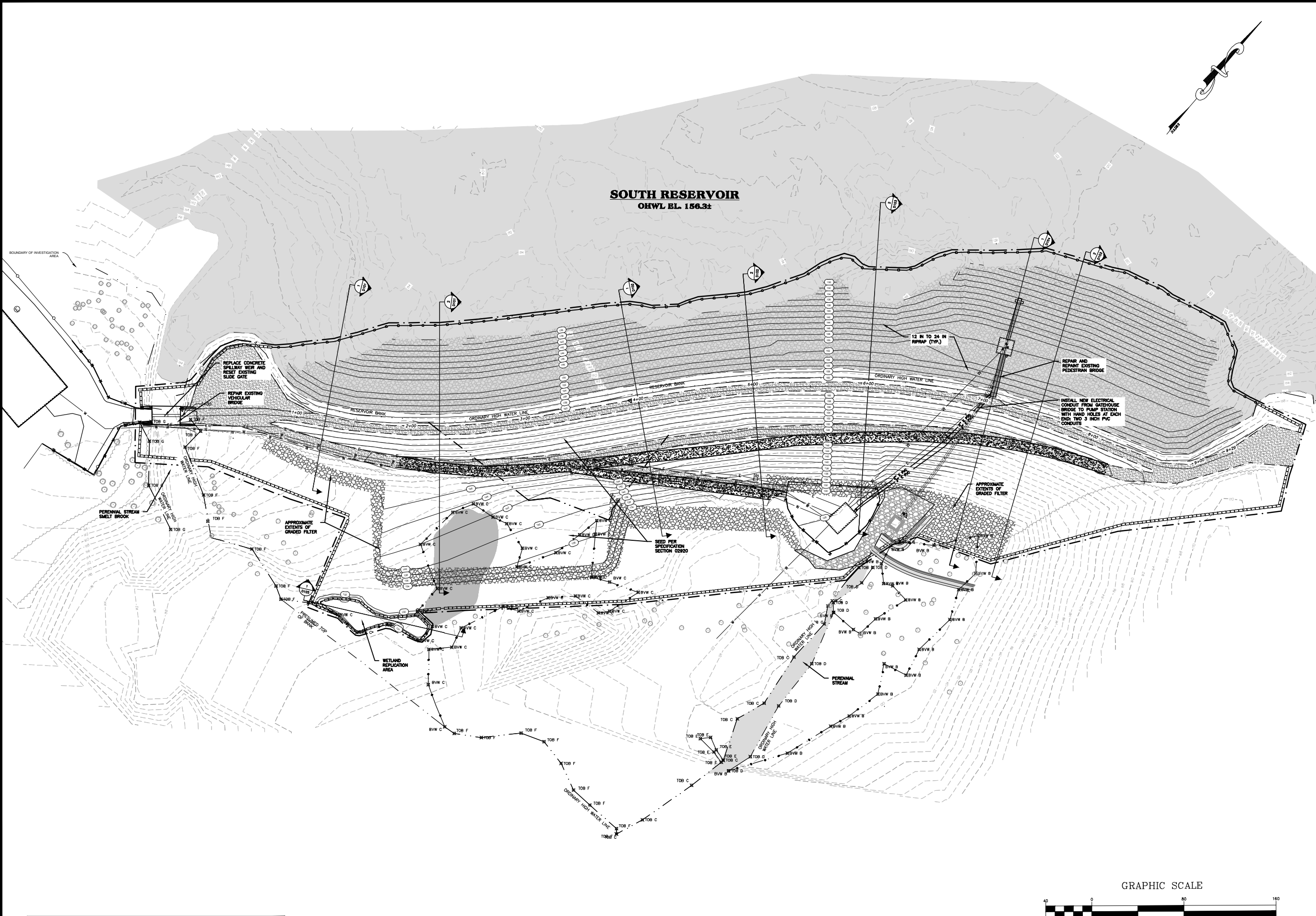
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Date: 10-03-2023  
 Drawn By: VS  
 Reviewed By: DD  
 Approved By: THF  
 W&S Project No.: ENG22 - 1197  
 W&S File No.:

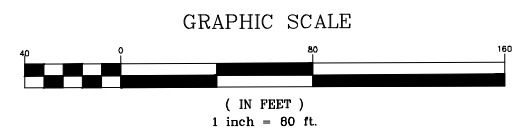
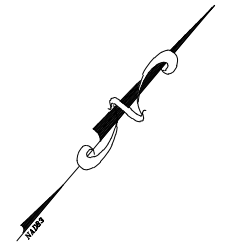
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**SITE PREPARATION AND DEMOLITION PLAN**

Sheet Number:  
**C102**





**SOUTH RESERVOIR**  
OHWL BL. 156.3±



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**10-03-2023**

Project:  
TOWN OF WINCHESTER,  
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DEPARTMENT OF PUBLIC WORKS



SOUTH RESERVOIR DAM  
IMPROVEMENTS

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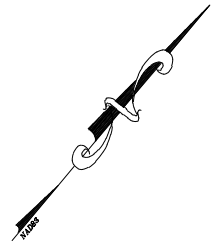
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**PROPOSED  
CONDITIONS**

Sheet Number:  
**C103**

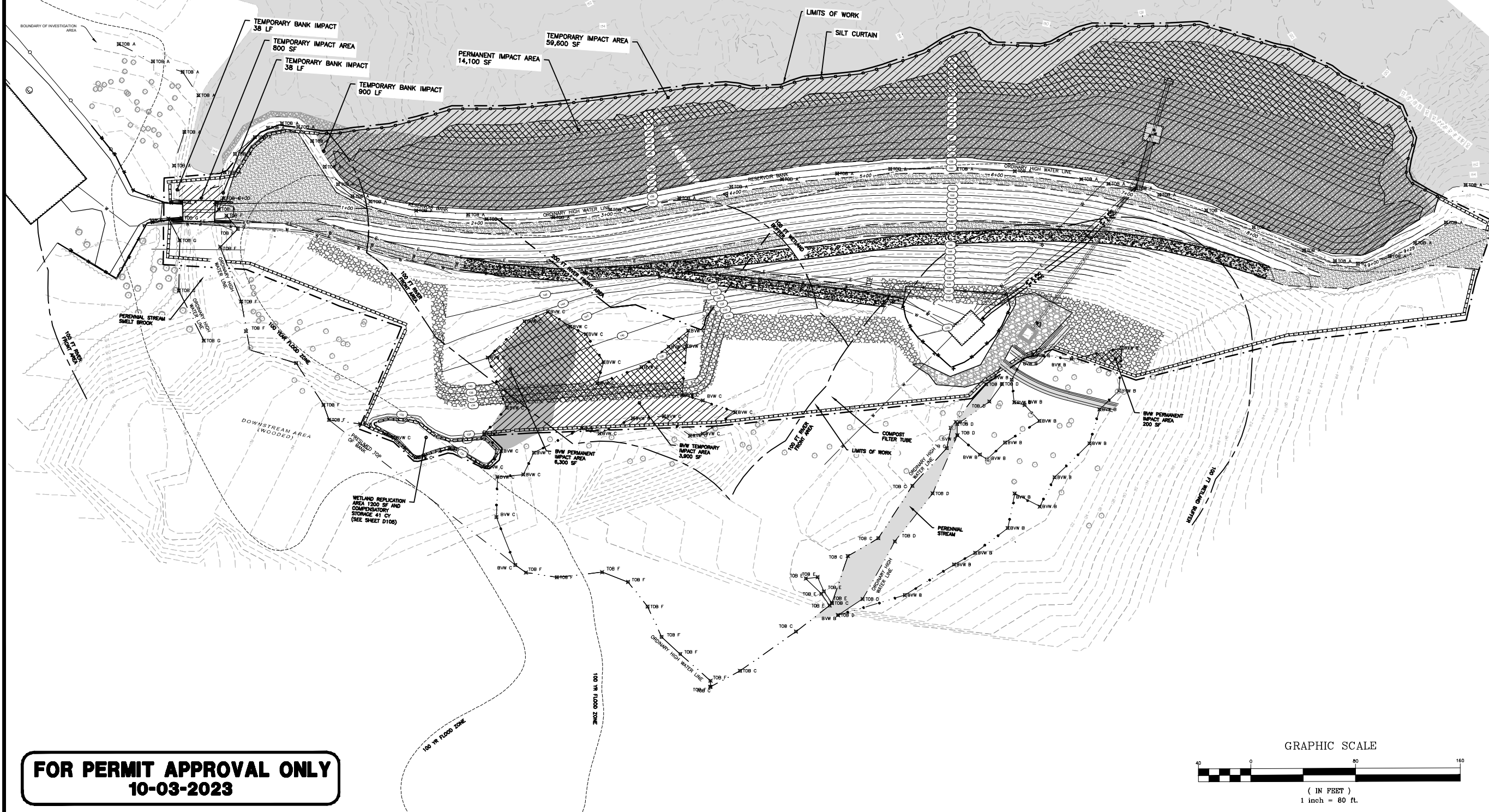
JURISDICTIONAL RESOURCE AREA CATEGORY	TEMPORARY IMPACT	PERMANENT IMPACT	TOTAL
VEGETATED WETLANDS (SQ FT)	3,900 SF	6,500 SF	10,400 SF
OPEN WATER (SQ FT)	60,400 SF	14,100 SF	74,500 SF
SUBMERGED AQUATIC VEGETATION (SQ FT)	0 SF	0 SF	0 SF
STREAMS (LINEAR FEET OF BOTH BANKS)	976 LF	0 LF	976 LF

**LEGEND**

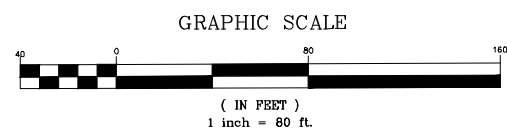
 TEMPORARY WETLAND IMPACT  
 PERMANENT WETLAND IMPACT



**SOUTH RESERVOIR**  
OHWL BL. 156.3±



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TOWN OF WINCHESTER,  
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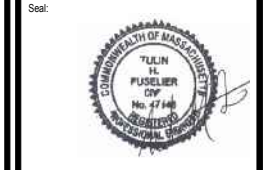
Consultants:

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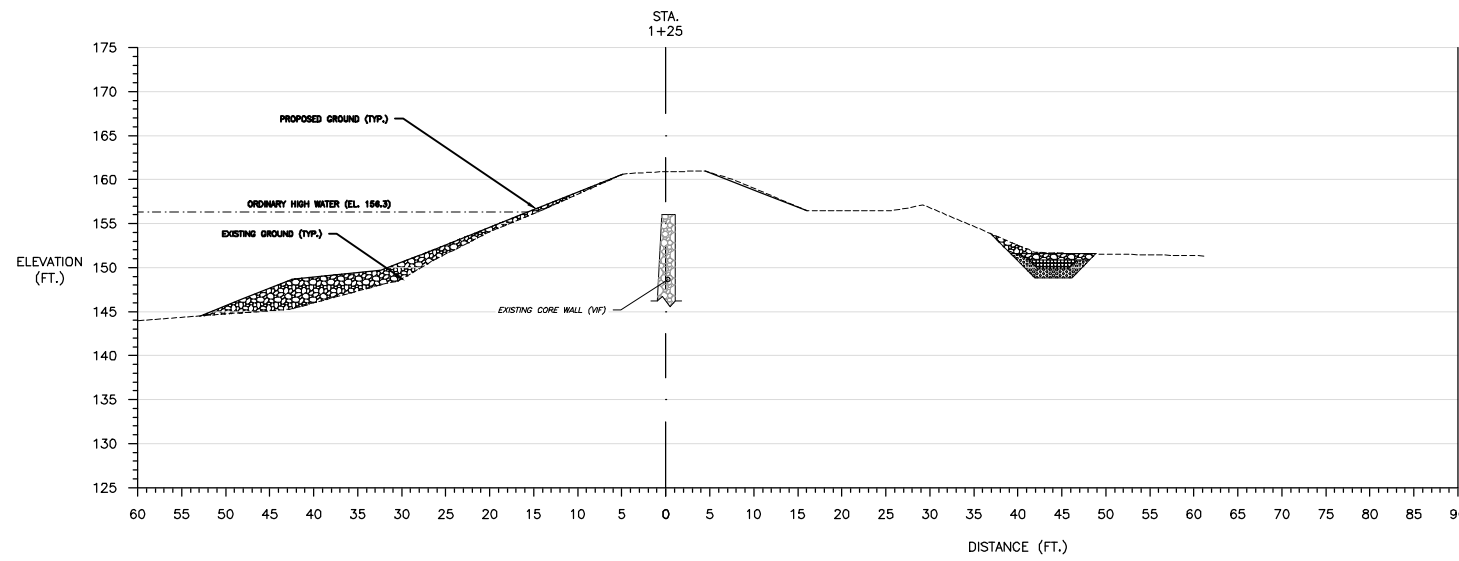
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Date: 10-03-2023  
 Drawn By: VS  
 Reviewed By: DD  
 Approved By: THF

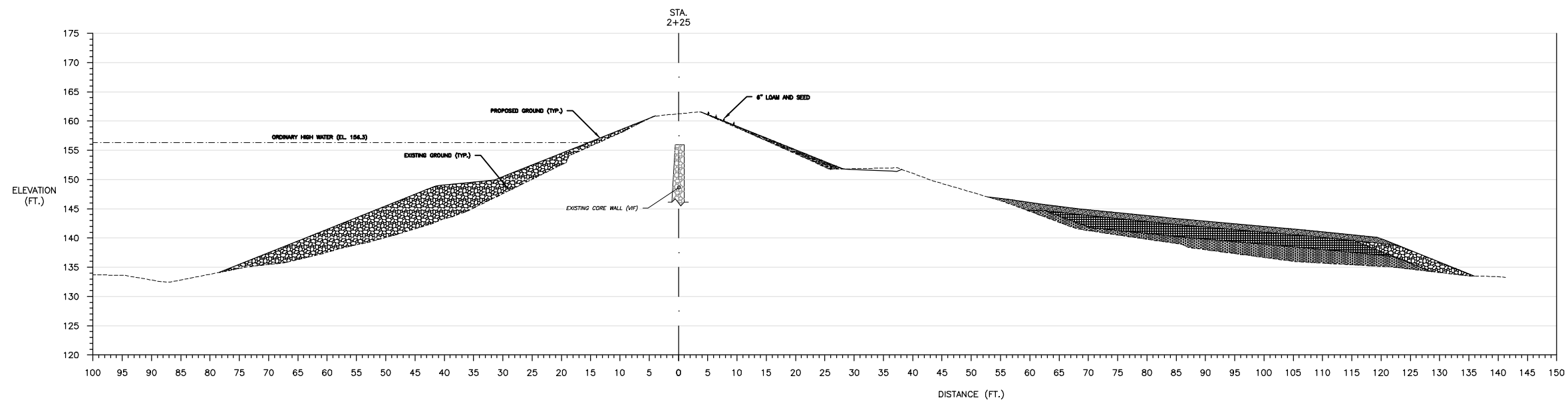
W&S Project No.: ENG22 - 1197  
 W&S File No.:

Drawing Title:  
**RESOURCE IMPACT**

Sheet Number:  
**C103P**



SECTION 1  
 SCALE: 1"=20' HORIZ.  
 1"=20' VERT. C104



SECTION 2  
 SCALE: 1"=20' HORIZ.  
 1"=20' VERT. C104

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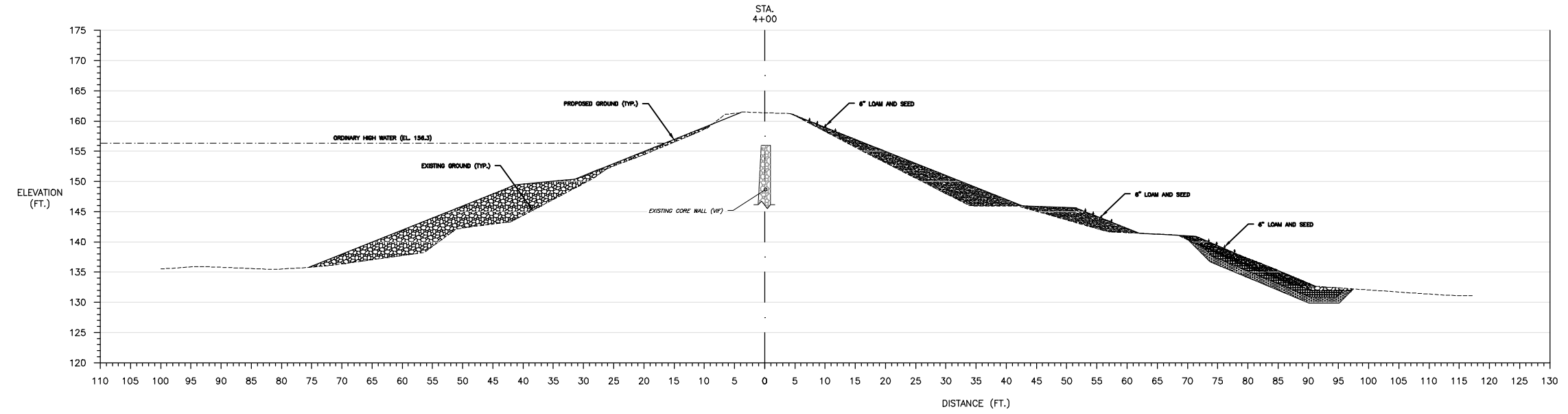
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Drawing Title:  
**CIVIL SECTIONS I**

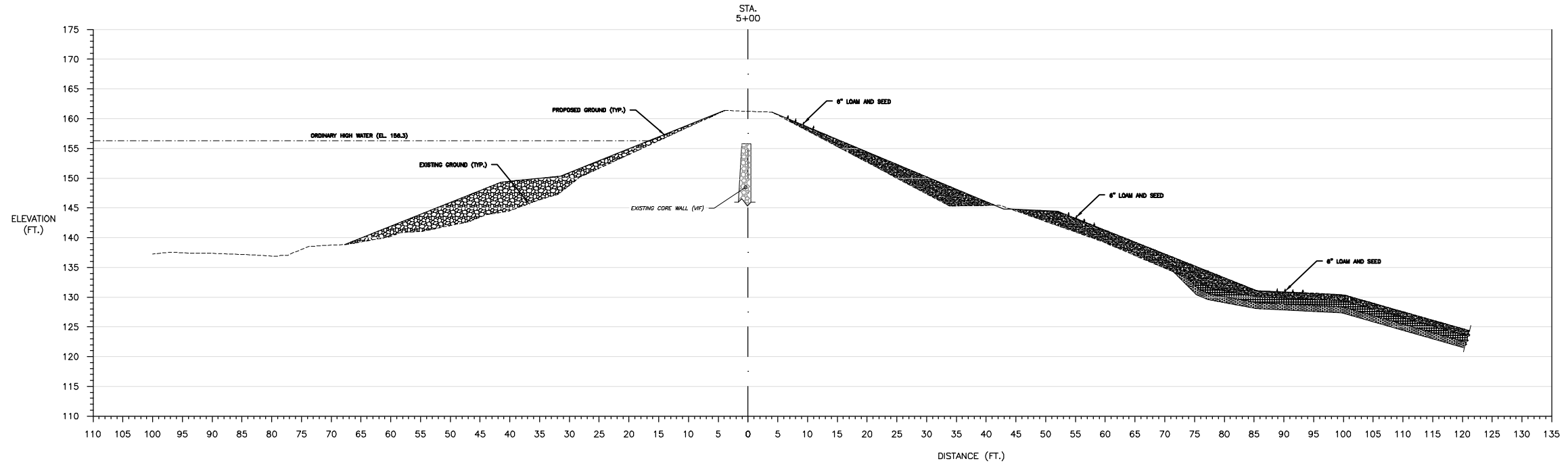
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Consultants:

SECTION 1  
 SCALE: 1"=20' HORIZ.  
 1"=20' VERT. C104



SECTION 2  
 SCALE: 1"=20' HORIZ.  
 1"=20' VERT. C104

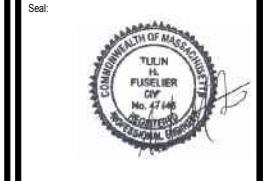
- PROPOSED RIP RAP
- PROPOSED STRUCTURAL FILL
- PROPOSED FILTER SAND
- PROPOSED DRAIN GRAVEL

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W&S Project No.: ENG22 - 1197  
 W&S File No.:

Drawing Title:  
**CIVIL SECTIONS II**

Sheet Number:  
**D102**

Consultants:


Revisions:

No.	Date	Description

COA:



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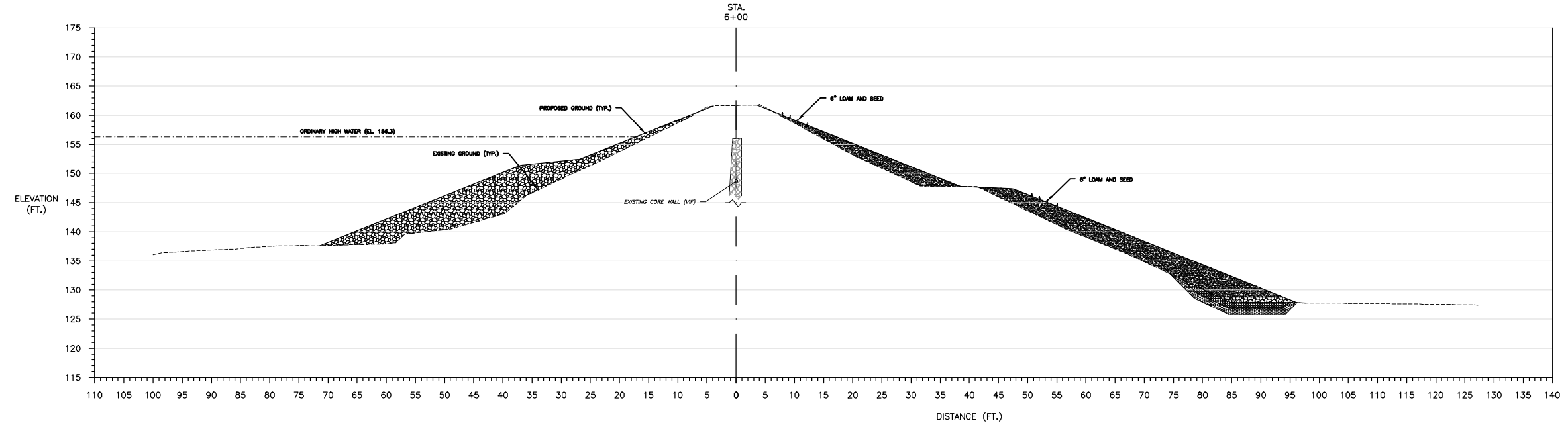
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Date: 10-03-2023  
Drawn By: VS  
Reviewed By: DD  
Approved By: THF

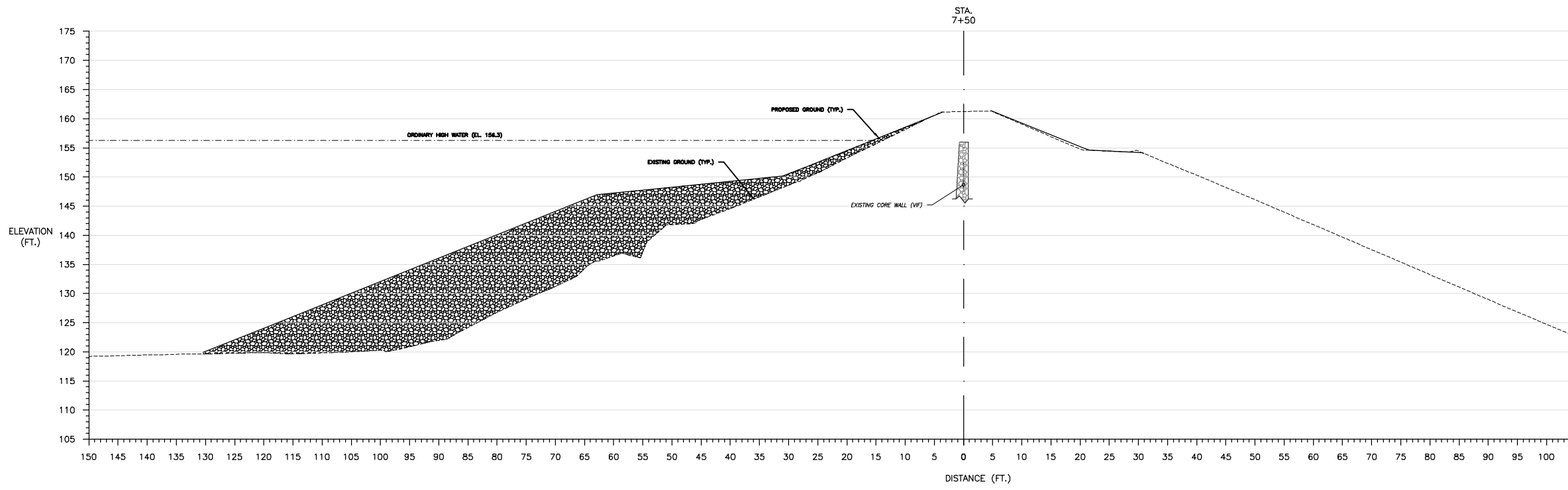
W&S Project No.: ENG22 - 1197  
W&S File No.:

Drawing Title:  
**CIVIL SECTIONS III**





Sheet Number:  
**D103**



SECTION 1  
SCALE: 1"=20' HORIZ. C104  
1"=20' VERT.



SECTION 2  
SCALE: 1"=20' HORIZ. C104  
1"=20' VERT.

-  PROPOSED RIP RAP
-  PROPOSED STRUCTURAL FILL
-  PROPOSED FILTER SAND
-  PROPOSED DRAIN GRAVEL

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No.	Date	Description

Revisions:

No.	Date	Description

COA:



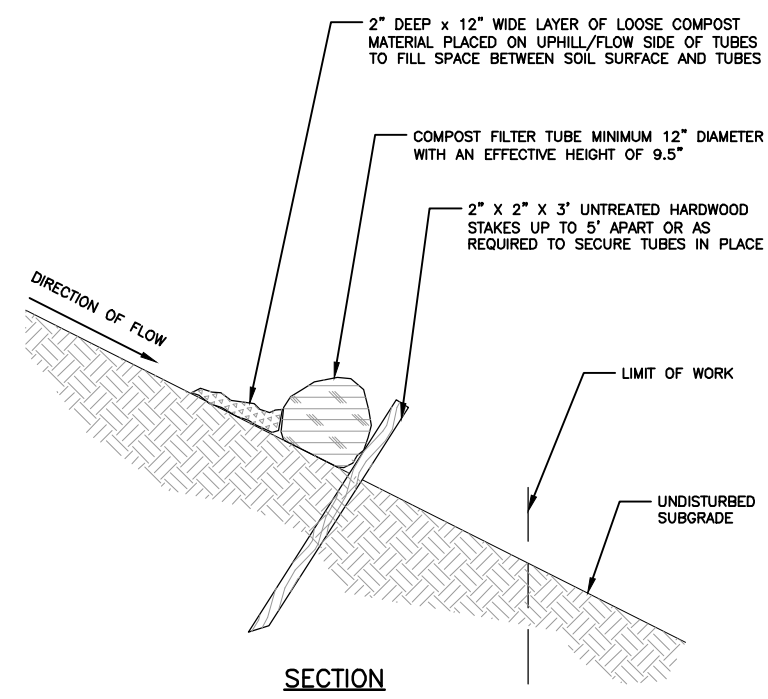
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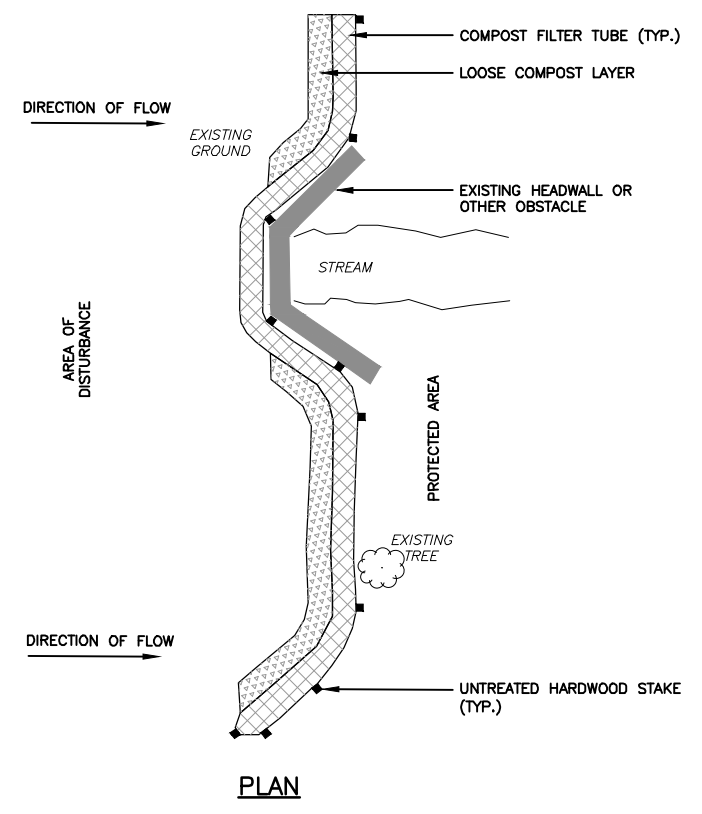
Date: 10-03-2023  
Drawn By: VS  
Reviewed By: DD  
Approved By: THF  
W&S Project No.: ENG22 - 1197  
W&S File No.:

Drawing Title:  
**CIVIL DETAILS IV**

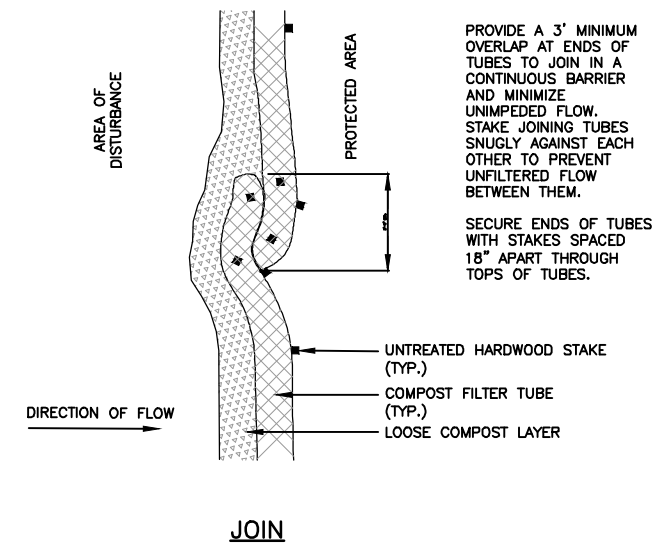
Sheet Number:  
**D104**



- NOTES:**
- TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AS REQUIRED BY THE ENGINEER.
  - TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.
  - WHEN STAKING IS NOT POSSIBLE, SUCH AS WHEN TUBES MUST BE PLACED ON PAVEMENT, HEAVY CONCRETE OR CINDER BLOCKS CAN BE USED BEHIND TUBES UP TO 5' APART OR AS REQUIRED TO SECURE TUBES IN PLACE.

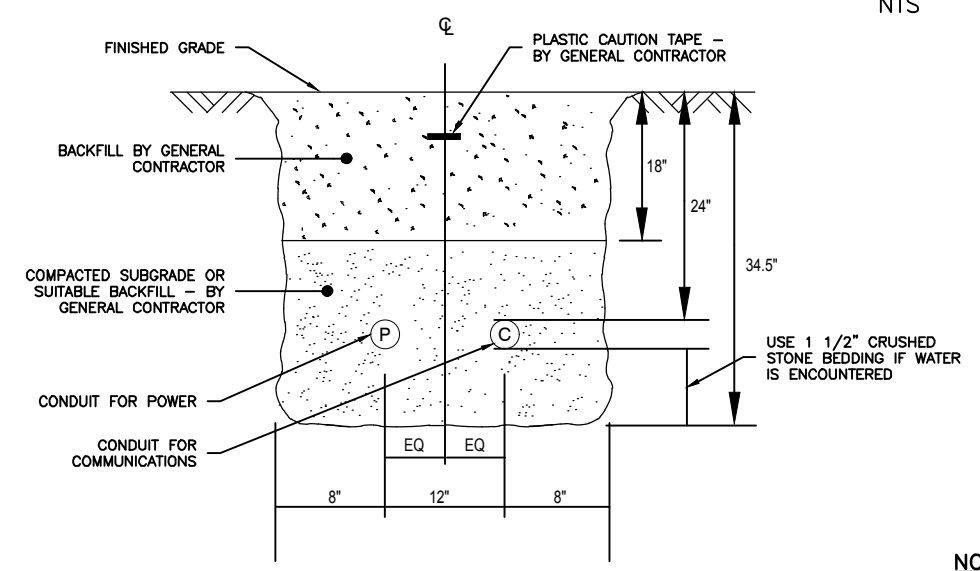


- NOTES:**
- TUBES CAN BE PLACED DIRECTLY ON EXISTING PAVEMENT WHEN NECESSARY.
  - PLACING TUBES AGAINST THE UPHILL SIDE OF WELL-ANCHORED, STATIONARY FEATURES SUCH AS EXISTING TREES CAN PROVIDE ADDITIONAL BRACING.
  - CURVE ENDS UPHILL TO PREVENT DIVERSION OF UNFILTERED RUN-OFF.

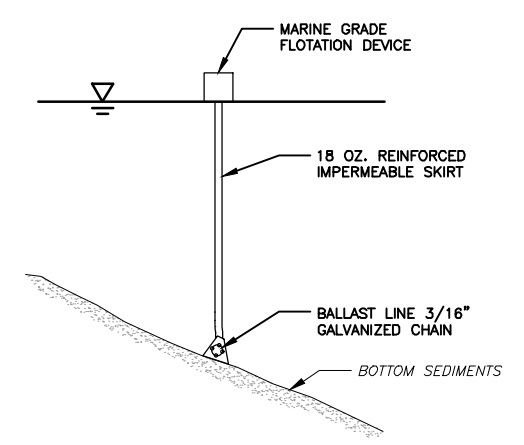


- NOTES:**
- PROVIDE A MINIMUM TUBE DIAMETER OF 12" FOR SLOPES UP TO 50' IN LENGTH WITH A SLOPE RATIO OF 3H:1V OR STEEPER. LONGER SLOPES OF 3H:1V MAY REQUIRE LARGER TUBE DIAMETER OR ADDITIONAL COURSING OF FILTER TUBES TO CREATE A FILTER BERM. REFER TO MANUFACTURER'S RECOMMENDATIONS FOR SITUATIONS WITH LONGER OR STEEPER SLOPES.
  - INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
  - DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
  - CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.

**COMPOST FILTER TUBE DETAILS** 1 D104

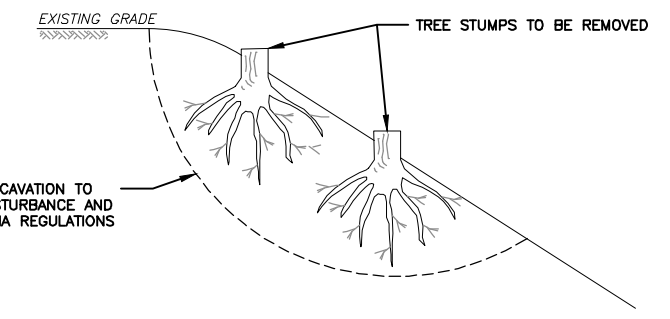


**BURIED MULTIPLE CONDUIT DETAIL** 1 C104



- NOTES:**
- INSTALL THE SILT CURTAIN PRIOR TO STARTING WORK.
  - SECURELY FASTEN THE RIGHT AND LEFT ENDS OF THE SILT CURTAIN ALONG THE SHORE LINE. PROVIDE INTERMEDIATE ANCHORING DEVICES IF NECESSARY TO KEEP THE SILT CURTAIN IN POSITION.
  - IF NECESSARY, JOIN ADJACENT ENDS OF SILT CURTAIN BY CONNECTING REINFORCING GROMMETS AND SHACKLING BALLAST LINES.

**SILT CURTAIN DETAIL** 2 D104



- NOTES:**
- CUT DESIGNATED TREES AND REMOVE FROM THE EMBANKMENT.
  - EXCAVATE TO REMOVE ALL STUMPS AND ROOTS TO 1" IN DIAMETER AS WELL AS AREAS OF CONCENTRATED SMALLER ROOTS.
  - TREE STUMPS TO BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH APPLICABLE REGULATIONS.
  - ALL VOIDS ARE TO BE BACKFILLED WITH COMPACTED GRAVEL BORROW IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

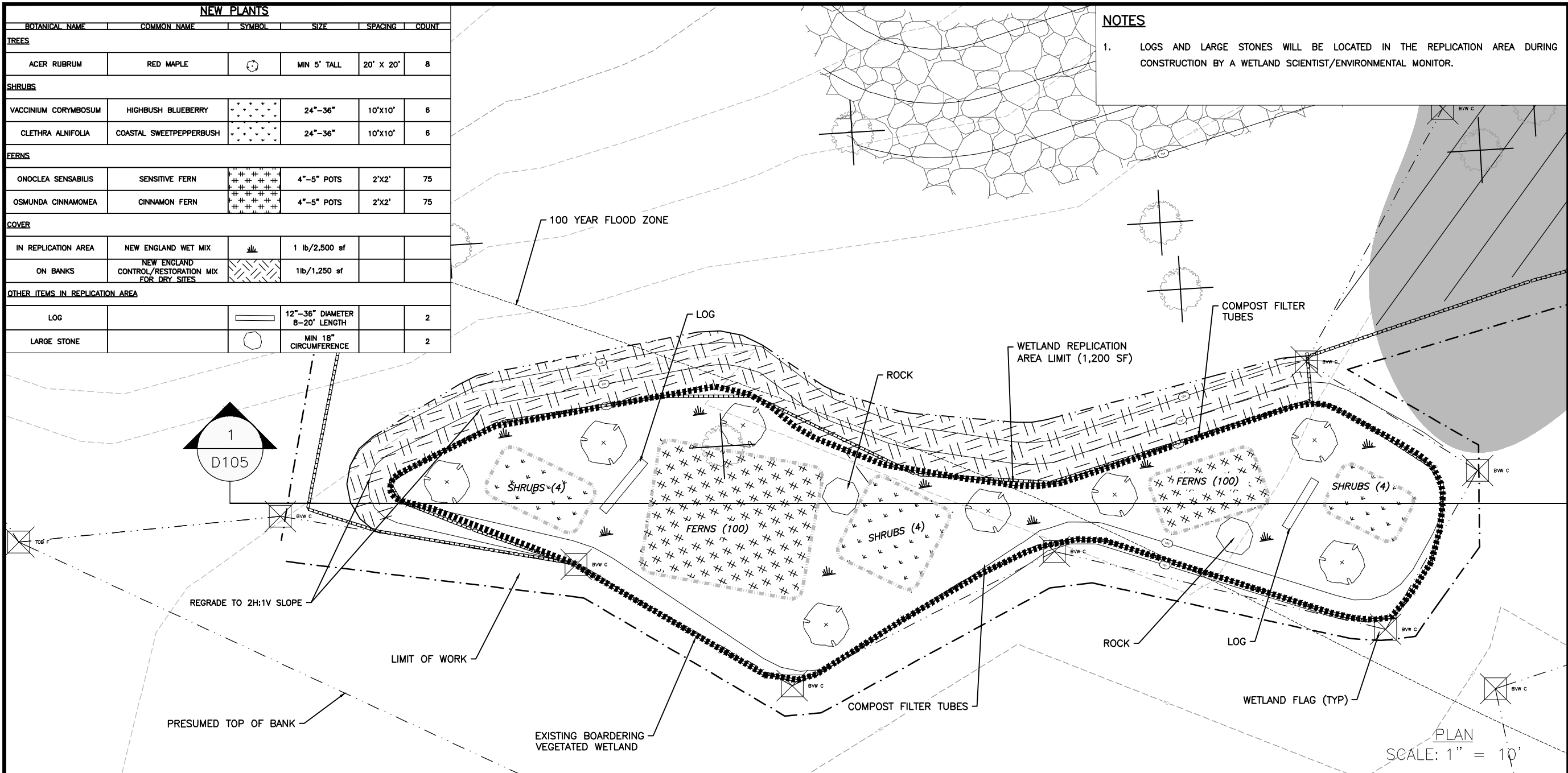
**CLEARING AND GRUBBING DETAIL** 3 D104

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**10-03-2023**

NEW PLANTS					
BOTANICAL NAME	COMMON NAME	SYMBOL	SIZE	SPACING	COUNT
<b>TREES</b>					
ACER RUBRUM	RED MAPLE		MIN 5" TALL	20' X 20'	8
<b>SHRUBS</b>					
VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY		24"-36"	10'X10'	6
CLETHRA ALNIFOLIA	COASTAL SWEETPEPPERBUSH		24"-36"	10'X10'	6
<b>FERNS</b>					
ONOCLEA SENSABILIS	SENSITIVE FERN		4"-5" POTS	2'X2'	75
OSMUNDA CINNAMOMEA	CINNAMON FERN		4"-5" POTS	2'X2'	75
<b>COVER</b>					
IN REPLICATION AREA	NEW ENGLAND WET MIX		1 lb/2,500 sf		
ON BANKS	NEW ENGLAND CONTROL/RESTORATION MIX FOR DRY SITES		1lb/1,250 sf		
<b>OTHER ITEMS IN REPLICATION AREA</b>					
LOG			12"-36" DIAMETER 8-20' LENGTH		2
LARGE STONE			MIN 18" CIRCUMFERENCE		2

**NOTES**

- LOGS AND LARGE STONES WILL BE LOCATED IN THE REPLICATION AREA DURING CONSTRUCTION BY A WETLAND SCIENTIST/ENVIRONMENTAL MONITOR.



PLAN  
SCALE: 1" = 10'

Project:  
TOWN OF WINCHESTER,  
MASSACHUSETTS, 01890  
DEPARTMENT OF PUBLIC WORKS

SOUTH RESERVOIR DAM  
IMPROVEMENTS

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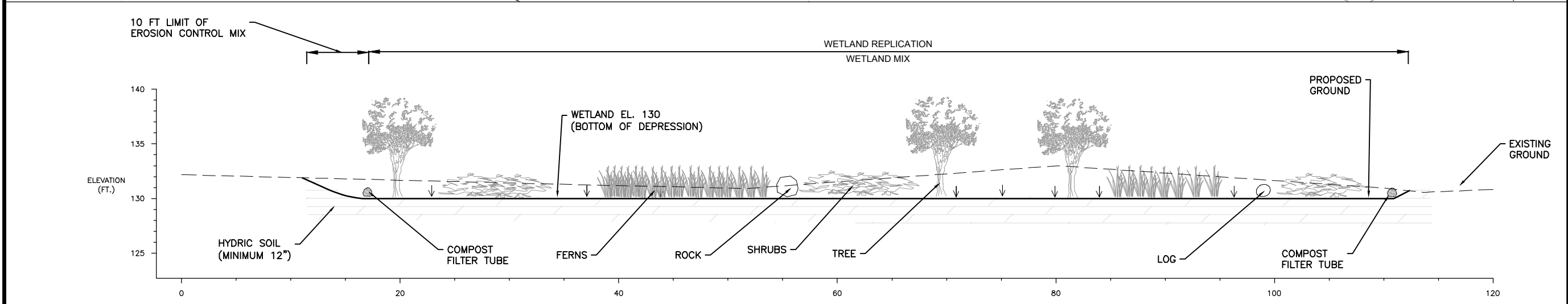
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Drawn By: VS  
Reviewed By: DD  
Approved By: THF

W&S Project No.: ENG22 - 1197  
W&S File No.:

Drawing Title:  
**WETLAND  
REPLICATION AREA**

Sheet Number:  
**D105**



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**10-03-2023**

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

