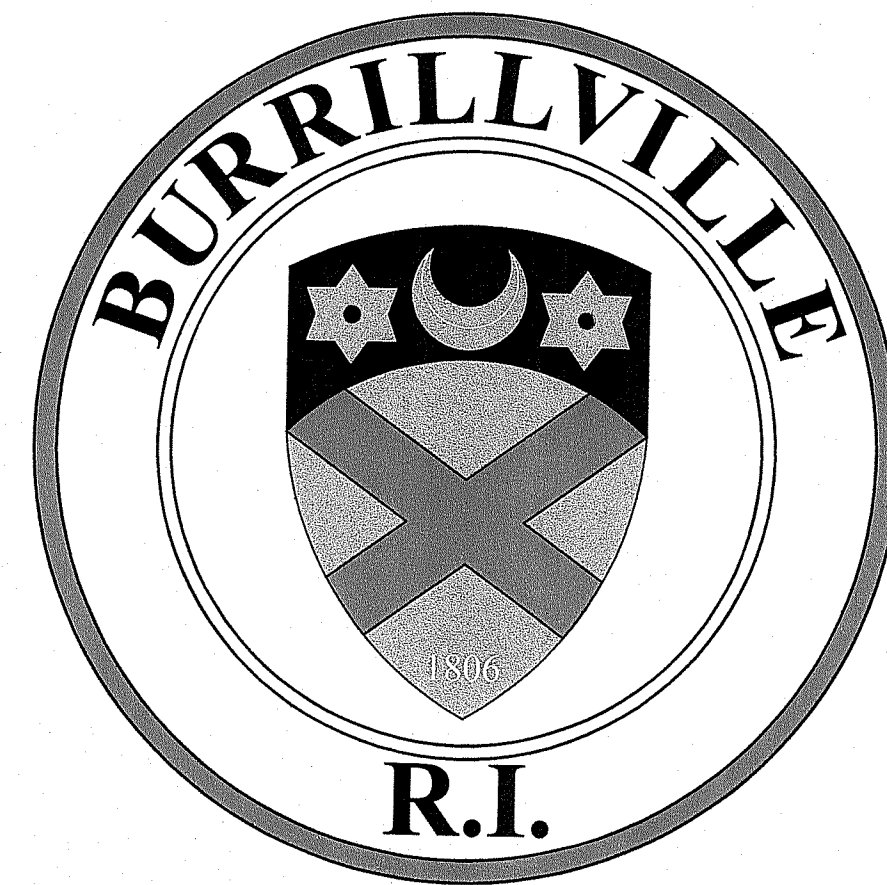


SITE IMPROVEMENT PLANS AND DETAILS FOR
**WALLUM LAKE DAM
 SPILLWAY IMPROVEMENTS**
 SOUTH SHORE ROAD

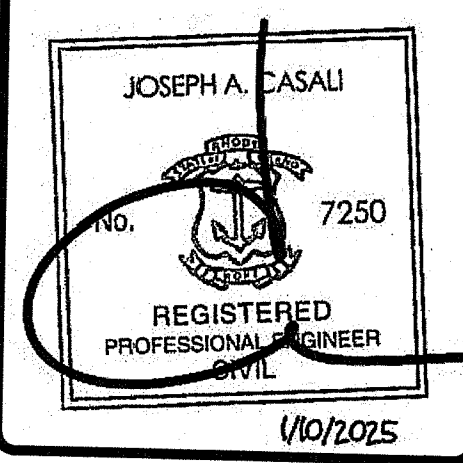
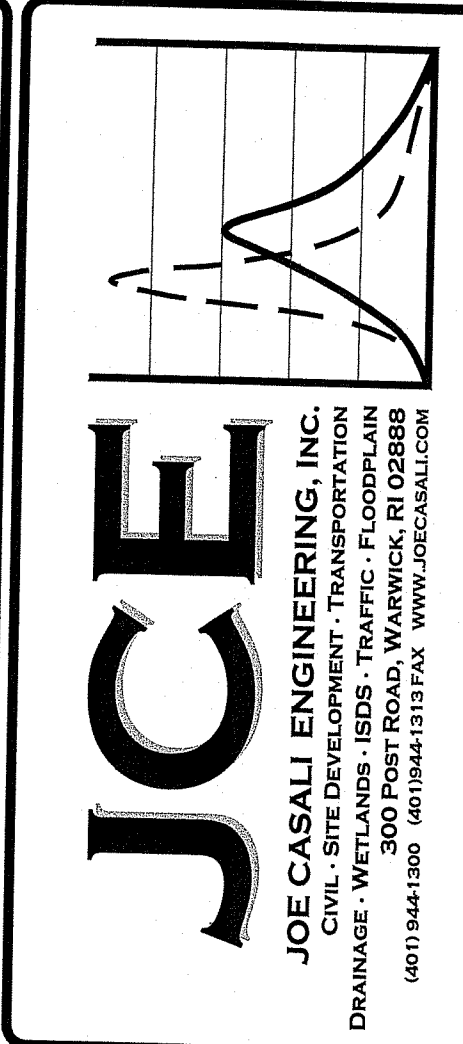


BURRILLVILLE, RHODE ISLAND

MICHAEL C. WOOD, TOWN MANAGER
 JEFFREY M. McCORMICK, P.E., DIRECTOR OF PUBLIC WORKS

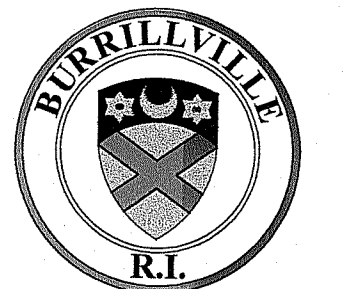
ISSUED FOR PERMITTING: JANUARY 2025

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 NOTE PER DEM:
 Kindly be advised that this Permit
 is not equivalent to a
 verification of the type or extent
 of freshwater wetlands on site



RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS
 SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 20 2025 FILE # 25-0027
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Walter D. Wenzel

**WALLUM LAKE DAM
 SPILLWAY IMPROVEMENTS**
 BURRILLVILLE, RHODE ISLAND
 AP 34, LOT 11



REVISIONS:

NO.	DATE	DESCRIPTION

DESIGNED BY:	DRD
DRAWN BY:	DRD/SD
CHECKED BY:	JAC
DATE:	JAN 2025
PROJECT NO:	05-92eu

PRELIMINARY, NOT FOR CONSTRUCTION

COVER SHEET

SHEET 1 OF 6

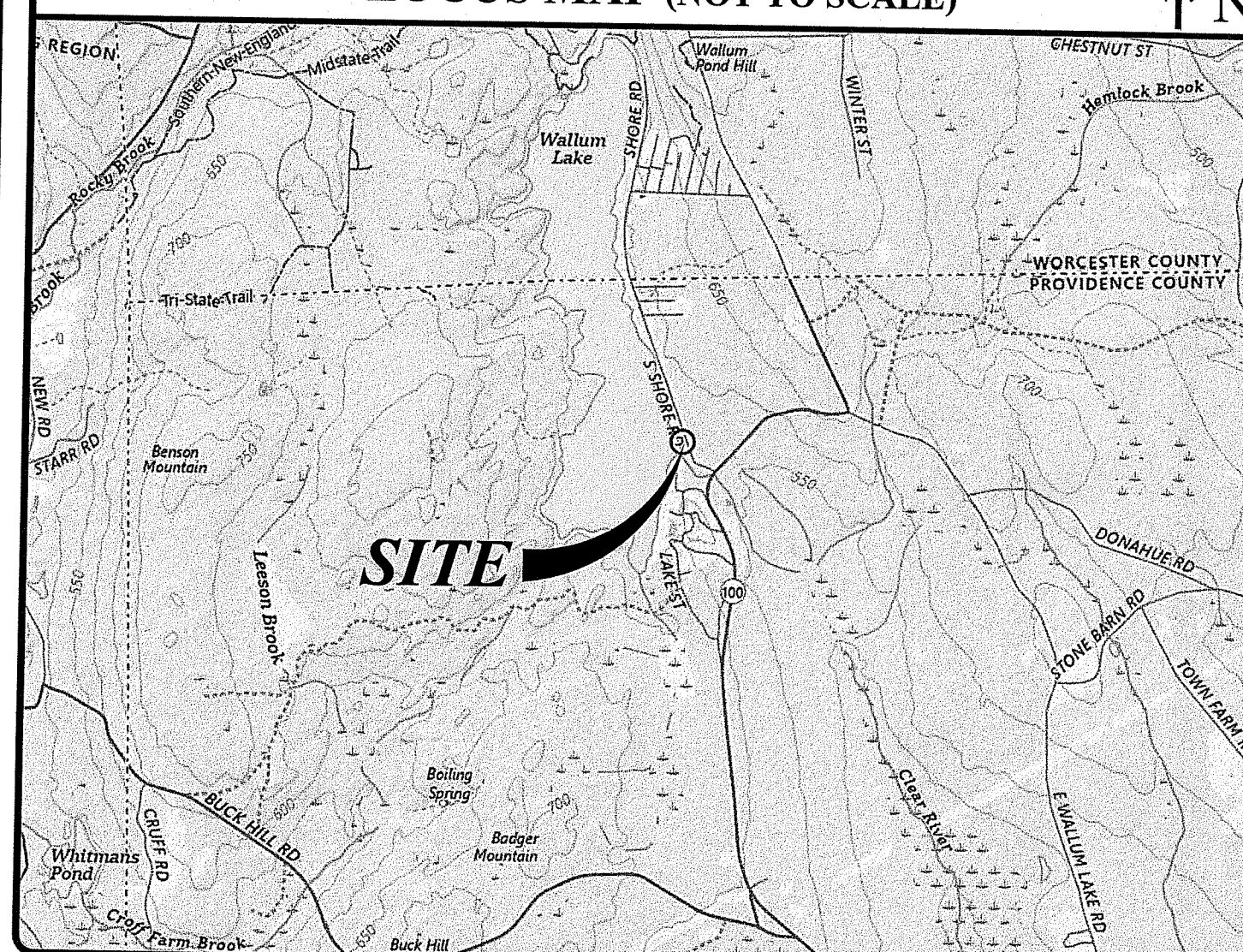
PROJECT TEAM

OWNER: TOWN OF BURRILLVILLE
 ATTN: JEFF M. McCORMICK, P.E., DPW DIRECTOR
 105 HARRISVILLE MAIN STREET
 BURRILLVILLE, RI 02830
 PHONE: 401-568-4440
 FAX: 401-568-9469

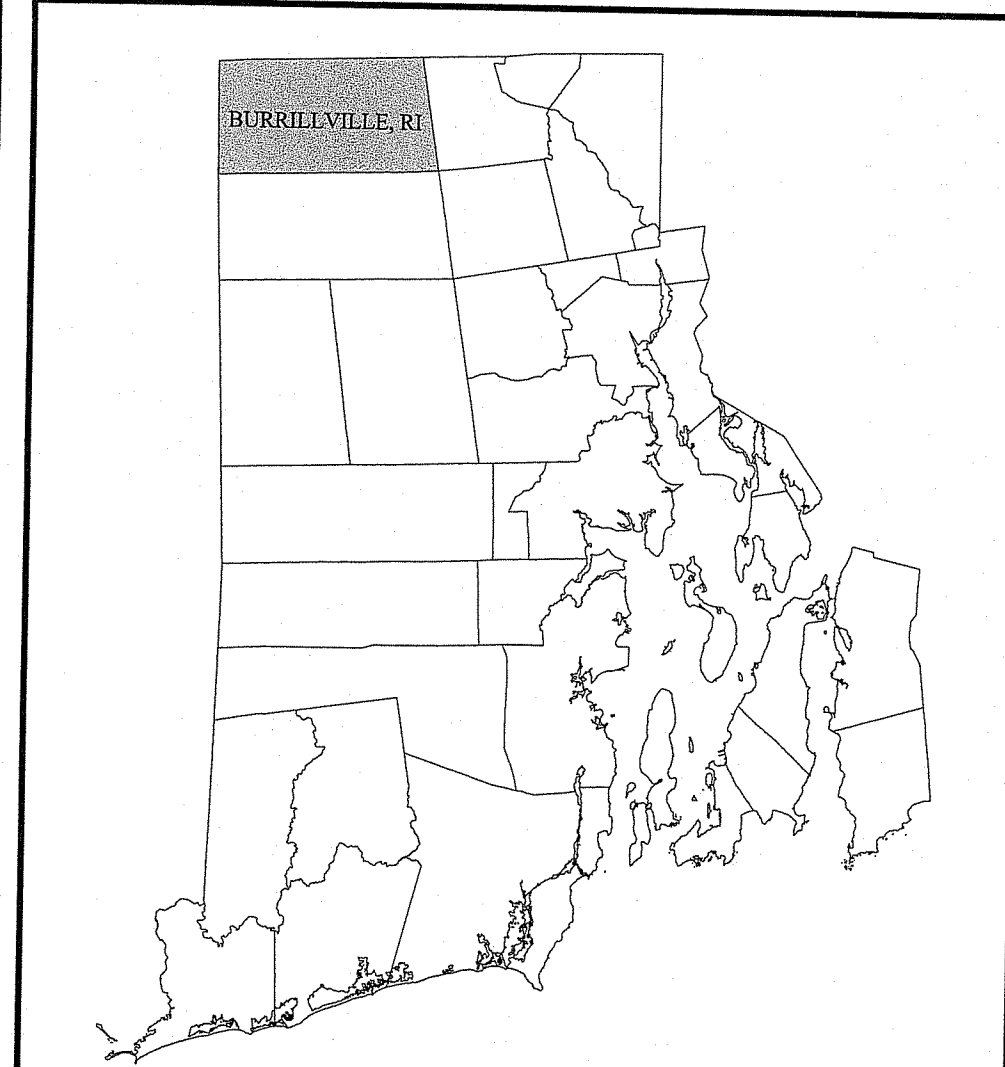
CIVIL ENGINEER: JOE CASALI ENGINEERING, INC.
 300 POST ROAD
 WARWICK, RI 02888
 PHONE: 401-944-1300
 FAX: 401-944-1313

WETLAND BIOLOGIST: NATURAL RESOURCE SERVICES, INC.
 P.O. BOX 311
 HARRISVILLE, RI 02830
 PHONE: 401-568-7390

LOCUS MAP (NOT TO SCALE)



STATE WIDE MAP



INDEX OF DRAWINGS

SHEET NO.	PLAN
1	COVER SHEET
2	GENERAL NOTES & LEGEND
3	EXISTING CONDITIONS & SITE PREPARATION PLAN
4	SITE PLAN & DETAILS
5	CIVIL DETAILS I
6	CIVIL DETAILS II

JAN 24 2025

GENERAL NOTES:

- THESE PLANS ARE BASED ON A PLAN TITLED "PLAN OF ELEVATIONS STUDY, WALLUM LAKE/ZAMBARANO DAM, SHORE ROAD, BURRILLVILLE, RHODE ISLAND", PREPARED BY GREEN INTERNATIONAL AFFILIATES, INC., DATED AUGUST 25, 2021. SUPPLEMENTAL PROPERTY LINE AND BOUNDARIES AND EXISTING CONDITIONS INFORMATION OBTAINED FROM TOWN OF BURRILLVILLE TAX ASSESSOR'S MAPS, TOWN OF BURRILLVILLE GEOGRAPHIC INFORMATION SYSTEM DATABASE, AND RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT ENVIRONMENTAL RESOURCE MAPPING DATABASE.
- THE LOCATION AND DEPTH OF EXISTING UTILITIES ARE APPROXIMATE AND HAVE BEEN PLOTTED FROM THE LATEST AVAILABLE INFORMATION. THE UTILITY LOCATIONS ARE APPROXIMATE AND MAY NOT BE ALL INCLUSIVE. THE CONTRACTOR SHALL CHECK AND VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES, BOTH OVERHEAD AND UNDERGROUND, AND "DIG-SAFE" MUST BE NOTIFIED PRIOR TO COMMENCING ANY CONSTRUCTION OPERATIONS. RESTORATION AND REPAIR OF DAMAGE TO EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR WITH NO ADDITIONAL COST TO THE OWNER. NO EXCAVATION SHALL COMMENCE UNTIL ALL INVOLVED UTILITY COMPANIES AND/OR CITY WHOSE FACILITIES MIGHT BE AFFECTED BY ANY WORK TO BE PERFORMED BY THE CONTRACTOR ARE NOTIFIED AT LEAST 72 HOURS IN ADVANCE.
- THE MAJORITY OF THE PROJECT AREA LIES WITHIN ZONE A (SPECIAL FLOOD HAZARD AREAS WITHIN THE 100-YEAR FLOODPLAIN, BASE FLOOD ELEVATIONS NOT DETERMINED), AS SHOWN ON THE FIRM MAP FOR PROVIDENCE COUNTY, TOWN OF BURRILLVILLE, RI, MAP NUMBER 44007C0020H, EFFECTIVE DATE JULY 19, 2023.
- BASED ON SOILS MAPPING PREPARED BY THE USDA, SOILS ON THE SITE CONSIST OF RIDGEBURY, LEICESTER, AND WHITMAN SOILS, 0 TO 8 PERCENT SLOPES, EXTREMELY STONY (R), RI SOILS GENERALLY CONSIST OF COARSE-LOAMY LOESS TILL WITH A DEPTH TO THE SEASONAL HIGH GROUNDWATER TABLE OF BETWEEN 0- AND 6-INCHES BELOW THE EXISTING GROUND SURFACE, BELONGING TO HYDROLOGIC SOILS GROUP D.
- CONTRACTOR SHALL OBTAIN ALL NECESSARY FEDERAL, STATE AND LOCAL APPROVALS PRIOR TO THE START OF CONSTRUCTION.

SITE NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING (R&D) OF ALL MATERIALS INDICATED ON THE PLANS AT NO ADDITIONAL COST TO THE TOWN.
- STOCKPILES OF EARTH MATERIALS SHALL NOT BE LOCATED ADJACENT TO DRAINAGE STRUCTURES, STOCKPILE AND CONCRETE WASHOUT AREAS ARE TO BE DETERMINED BY THE ENGINEER OR TOWN PRIOR TO CONSTRUCTION. NO STOCKPILING OF MATERIAL IS TO BE LOCATED WITHIN TOWN RIGHT-OF-WAYS.
- ALL DISTURBED AREAS OUTSIDE OF THE PAVED AREAS WILL RECEIVE A MINIMUM OF 6" OF LOAM AND SEED.
- THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SURVEY LAYOUT SERVICES FOR THE WORK AND SHALL SUBMIT "AS-BUILT" DRAWINGS OF ALL WORK, WHICH SHALL BE STAMPED AND CERTIFIED BY A RHODE ISLAND REGISTERED PROFESSIONAL LAND SURVEYOR OR A RHODE ISLAND REGISTERED PROFESSIONAL ENGINEER.
- ANY ITEM OF WORK NOT SPECIFICALLY INDICATED ON THE PLANS BUT IS REQUIRED FOR THE COMPLETE CONSTRUCTION OF THE PROJECT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND INCLUDED IN THE CONTRACT BID PRICE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING SITE CONDITIONS.
- WHERE NECESSARY TO REMOVE CURBS, CATCH BASINS OR DRAINS TO COMPLETE WORK, THE CONTRACTOR SHALL REPLACE SUCH ITEMS TO THE SATISFACTION OF THE TOWN AT NO ADDITIONAL COST TO THE OWNER.
- ANY EXISTING PIPE OR UTILITY DAMAGED BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY BY THE CONTRACTOR AT NO COST TO THE OWNER OR TOWN.
- THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION OR REPLACE TREES, SHRUBS, FENCES, SIGNS, GUARDRAILS, DRIVEWAYS, SIDEWALKS AND ANY OTHER OBJECT AFFECTED BY THIS OPERATION.
- ROADWAYS SHALL BE LEFT PASSABLE AT ALL TIMES. CLOSURE OF ROADWAY IS NOT PERMITTED. REFER TO TRAFFIC MANAGEMENT PLANS.
- THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL DRIVEWAYS AT COMPLETION OF EACH DAY'S WORK.
- ALL LEDGE TO BE REMOVED BY MECHANICAL MEANS.
- ALL CONSTRUCTION WORK SHALL BE PERFORMED IN THE DRY. THE CONTRACTOR SHALL PROVIDE, OPERATE AND MAINTAIN ALL PUMPS, DRAINS, WET POINTS, SCREENS, OR OTHER FACILITIES NECESSARY TO CONTROL, COLLECT AND DISPOSE OF ALL SURFACE AND SUBSURFACE WATER ENCOUNTERED IN THE PERFORMANCE OF THE WORK.
- ALL SITE WORK, INCLUDING BUT NOT LIMITED TO, BITUMINOUS PAVEMENT, ROADWAY CONSTRUCTION, AGGREGATE MATERIALS, DRAINAGE STRUCTURES, CURBING, SIDEWALK, LANDSCAPING, SAW CUTTING, ETC. SHALL CONFORM TO THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2004 EDITION (WITH LATEST ADDENDA) AND THE RIDOT STANDARD DETAILS, 1998 EDITION (WITH LATEST ADDENDA), AND/OR TOWN OF BURRILLVILLE CONSTRUCTION STANDARDS, WHICHEVER IS MORE STRINGENT.

LAYOUT NOTE:

THE LAYOUT SHOWN REPRESENTS A GRAPHICAL DESIGN, AND PRIOR TO THE CONSTRUCTION, THE CONTRACTOR SHALL ENGAGE A PROFESSIONAL LAND SURVEYOR (PLS) REGISTERED IN THE STATE OF RHODE ISLAND TO SET AND VERIFY ALL LINES AND GRADES. ALL EXISTING UTILITY LOCATIONS AND ELEVATIONS ARE TO BE CONFIRMED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. ANY ITEMS FOUND WHICH DO NOT MATCH THE PLANS MUST BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO CONSTRUCTION FOR REVIEW. NO WORK SHALL PROCEED UNTIL AUTHORIZED BY THE ENGINEER.

MAINTENANCE AND PROTECTION OF TRAFFIC NOTES:

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY AND VEHICULAR SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST REVISIONS OF MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- TEMPORARY CONSTRUCTION SIGNS AND ALL APPLICABLE TRAFFIC CONTROL DIVIDES SHALL BE IN PLACE PRIOR TO THE START OF WORK IN ANY AREA OPEN TO TRAFFIC.
- ALL MAINTENANCE AND PROTECTION OF TRAFFIC CONTROL SETUPS, SIGNS CHANNELING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, 1988 EDITION, INCLUDING REVISION 3, SEPTEMBER 3, 1993 AND SUBSEQUENT ADDENDA.
- SIGN MOUNTINGS SHALL BE IN ACCORDANCE WITH THE RIDOT SPECIFICATIONS FOR TEMPORARY CONSTRUCTION SIGNS.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES:

- THE SILT FENCE LINE ILLUSTRATED ON THESE PLANS SHALL SERVE AS THE STRICT LIMIT OF DISTURBANCE FOR THE PROJECT WITHIN OR ADJACENT TO REGULATED FRESHWATER WETLAND AREAS.
- THE LIMITS OF CLEARING, GRADING, AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE PROPOSED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THESE LIMITS, AS DEPICTED ON THE PLAN SHALL BE TOTALLY UNDISTURBED, TO REMAIN IN NATURAL CONDITION.
- ALL CATCH BASINS AND CULVERTS SHALL BE PROTECTED WITH STAKED HAYBALES (R.I. STD. 9.8.0) DURING CONSTRUCTION ACTIVITIES. ALL PROPOSED STORM WATER DISCHARGE AREAS SHALL BE LINED WITH A RIPRAP SPLASH PAD AND PROTECTED WITH STAKED HAYBALE WITH SILT FENCE (R.I. STD. 9.3.0) AND STAKED HAYBALE WITH SILT FENCE SHALL ALSO BE INSTALLED AT ALL EXISTING STORMWATER DISCHARGE LOCATIONS WHERE DISTRIBUTING PIPES, CATCH BASINS, AND MANHOLES ARE TO BE CLEANED AND FLUSHED.
- ALL DISTURBED SLOPES EITHER NEWLY CREATED OR CURRENTLY EXPOSED SHALL BE SEEDED, PROTECTED AND MAINTAINED BY THE CONTRACTOR. THE CONTRACTOR SHALL REGULARLY CHECK ALL SEEDED AREAS TO ENSURE THAT A GOOD STAND IS MAINTAINED.
- ALL SILT FENCE, TEMPORARY TREATMENT (HAY, STRAW, ETC.) AND TEMPORARY EROSION PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE STAND OF GRASS OR APPROVED GROUND COVER IS ESTABLISHED.
- STOCKPILES OF TOPSOIL SHALL NOT BE LOCATED NEAR WATERWAYS. THEY SHALL HAVE SIDE SLOPES OF NO GREATER THAN 2:1 AND SHALL BE TEMPORARILY SEEDED AND/OR STABILIZED PER CONTRACT SPECIFICATIONS.
- THE SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE ANY SILT FENCE AS NEEDED.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN ALL SOIL EROSION AND SEDIMENT CONTROLS ON THE PROJECT SITE FOR THE ENTIRE DURATION OF THE CONSTRUCTION PERIOD. THE CONTRACTOR SHALL FOLLOW THE DIRECTION OF THE RESIDENT ENGINEER WITH REGARD TO INSTALLATION, MAINTENANCE, AND REPAIR OF ALL SOIL EROSION AND SEDIMENTATION CONTROLS ON THE PROJECT SITE. TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROLS (HAYBALES, SILT FENCE, ETC.) SHALL BE MAINTAINED UNTIL ALL EXPOSED SOILS ARE SATISFACTORILY STABILIZED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND/OR RESEEDING ALL AREAS THAT DO NOT DEVELOP WITHIN ONE YEAR FROM THE COMPLETION OF CONSTRUCTION.
- ALL REFERENCED SOIL EROSION AND SEDIMENTATION CONTROLS INCLUDING MATERIALS USED, APPLICATION RATES AND THE INSTALLATION PROCEDURES SHALL BE PERFORMED PER THE "RHODE ISLAND EROSION AND SEDIMENTATION HANDBOOK", UPDATED 2016.

LOAMING & SEEDING NOTES:

SEEDING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH SECTION L.02 SEEDING OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA), AND SHALL ALSO CONFORM TO THE FOLLOWING:

- AFTER ROUGH GRADING IS COMPLETED, ALL DISTURBED AREAS AND AREAS LABELED AS "LOAM AND SEED" ARE TO BE BROUGHT TO AN ELEVATION OF 6" BELOW THE PROPOSED FINISHED GRADE. SCARIFY THE SUBGRADE TO A DEPTH OF 12" WITH THE TEETH OF A BACKHOE OR A POWER RAKE TO RESULT IN AN UNCOMPACTED SUBSOIL. 6" OF GOOD QUALITY TOPSOIL IS TO BE APPLIED AND RAKED TO FINISHED GRADE.
- THE TOPSOIL IS TO BE GOOD QUALITY LOAM, FERTILE AND FREE OF WEEDS, STICKS AND STONES OVER 3/4" IN SIZE AND OTHERWISE COMPLYING WITH SECTION M.18.01 OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION, 2010 EDITION (WITH LATEST ADDENDA).
- PRIOR TO SEEDING OR SODDING, FERTILIZE WITH 10-10-10 OR EQUIVALENT ANALYSIS. AT LEAST 40% OF THE FERTILIZER NITROGEN SHALL BE IN SLOW RELEASE FORM. INCORPORATE THE FERTILIZER INTO THE TOP 1-2" OF THE PLANTING SOIL. APPLY AT A RATE OF 8 LBS. PER 1000 SQUARE FEET.
- APPLY LIME AT A RATE OF ONE TON PER ACRE AND UNIFORMLY INCORPORATE INTO THE TOP 1-2" OF TOPSOIL.
- SEEDING
AFTER THE SEED BED IS PREPARED, SEED IS TO BE BROADCAST EVENLY OVER THE SURFACE AND WORKED INTO THE TOP 1" OF SOIL. SEED SHALL BE APPROVED URI #2 OR APPROVED EQUAL. APPLY AT A RATE OF 4-5 LBS. PER 1000 SQUARE FEET OR AS OTHERWISE DIRECTED BY THE MANUFACTURER.

URI #2 IMPROVED SEED MIX, % BY WEIGHT:

- 40% CREEPING RED FESCUE
- 20% IMPROVED PERENNIAL RYEGRASS
- 20% IMPROVED KENTUCKY BLUEGRASS
- 20% KENTUCKY BLUEGRASS

RECOMMENDED SEEDING DATES ARE APRIL 1 TO JUNE 15 AND AUGUST 15 TO OCTOBER 15. AT THE CONTRACTOR'S DISCRETION, SEED MAY BE APPLIED BY HYDROSEEDING RATHER THAN THE METHOD DESCRIBED ABOVE.

SEQUENCE OF CONSTRUCTION NOTES:

- INSTALL ALL NECESSARY SOIL EROSION AND SEDIMENT CONTROLS.
- ESTABLISH STAGING, STOCKPILE, AND STORAGE AREAS.
- IF STREAM FLOW IS PRESENT, THE CONTRACTOR SHALL PROVIDE FLOW DIVERSION BARRIERS DURING SPILLWAY CONSTRUCTION IMPROVEMENTS. FLOW DIVERSION SHALL CONSIST OF MEDIAN BARRIERS BACKED BY AN IMPERMEABLE LINER, OR APPROVED EQUAL.
- PERFORM SPILLWAY AND RETAINING WALL CONSTRUCTION.
- DEMOBILIZE TEMPORARY FLOW DIVERSION MEASURES.
- STABILIZE SITE, REMOVE AND DISPOSE SOIL EROSION AND SEDIMENT CONTROL MEASURES.

LEGEND:

---	EXISTING PROPERTY LINE	—S—S—	EXISTING SEWER LINE
---	ABUTTING PROPERTY LINE	—S—S—	PROPOSED SEWER LINE
---	BUILDING SETBACK LINE	⊙	EXISTING SEWER MANHOLE
	EXISTING EASEMENT	⊙	PROPOSED SEWER MANHOLE
---	100' EXISTING CONTOUR	—W—	EXISTING WATER LINE
---	PROPOSED CONTOUR	—W—	PROPOSED WATER LINE
---	EXISTING FENCE	LOD	LIMIT OF DISTURBANCE
---	EXISTING CURB	WG	EXISTING WATER GATE
---	PROPOSED CURB	WG	PROPOSED WATER GATE
---	GUARD RAIL	—GAS—	EXISTING GAS LINE
—D—D—	EXISTING DRAIN LINE	—GAS—	PROPOSED GAS LINE
—D—D—	PROPOSED DRAIN LINE	⊙	EXISTING UTILITY POLE
⊙	EXISTING DRAINAGE MANHOLE	⊙	PROPOSED UTILITY POLE
⊙	PROPOSED DRAINAGE MANHOLE	TH	EXISTING TEST HOLE
⊙	EXISTING CATCH BASIN	⊙	EXISTING HYDRANT
⊙	PROPOSED CATCH BASIN	N/F	NOW OR FORMERLY

DEWATERING NOTES AND REQUIREMENTS:

THE FOLLOWING ARE THE REQUIREMENTS FOR DESIGNING, FURNISHING, INSTALLING, MAINTAINING, OPERATING AND REMOVAL OF TEMPORARY DEWATERING SYSTEMS REQUIRED TO MANAGE GROUNDWATER DURING EXCAVATION ACTIVITIES.

1.01 DEFINITIONS

A. DEWATERING: LOWERING THE ZONE OF SATURATION AND INTERCEPTING GROUNDWATER SEEPAGE WHICH WOULD OTHERWISE EMERGE FROM THE SLOPES OR BOTTOM OF THE EXCAVATIONS. THE PURPOSES OF DEWATERING ARE TO INCREASE THE STABILITY OF EXCAVATED SLOPES; PREVENT LOSS OF MATERIAL FROM BENEATH THE SLOPES OR BOTTOM OF THE EXCAVATION; IMPROVE THE EXCAVATING AND HAULING CHARACTERISTICS OF ON SITE SOIL; PREVENT RUPTURE OR HEAVING OF THE BOTTOM OF AN EXCAVATION; AND DISPOSE OF PUMPED WATER.

1.02 DESIGN REQUIREMENTS

- THE CONTRACTOR IS RESPONSIBLE FOR THE ADEQUACY OF THE DEWATERING AND SEDIMENT REMOVAL SYSTEM.
- DESIGN DEWATERING AND SEDIMENT REMOVAL SYSTEMS TO:
 - EFFECTIVELY REDUCE THE HYDROSTATIC PRESSURE AND LOWER THE GROUNDWATER LEVELS TO A MINIMUM OF 2 FEET BELOW EXCAVATION IN SOIL;
 - DEVELOP A SUBSTANTIALLY DRY AND STABLE SUBGRADE FOR THE PROTECTION OF SUBSEQUENT OPERATIONS;
 - RESULT IN NO DAMAGE TO ADJACENT BUILDINGS, STRUCTURES, UTILITIES AND OTHER WORK, INCLUDED IN THIS CONTRACT.
 - DEPRESSURIZE STRATIFIED LAYERS OF SAND THAT MAY BE CONFINED BY SILT LAYERS SO THAT A STABLE EXCAVATION BOTTOM IS MAINTAINED.
 - ROUTE DISCHARGE FROM DEWATERING SYSTEM THROUGH A SEDIMENT REMOVAL SYSTEM SUCH THAT SEDIMENTS ARE NOT DISCHARGED TO OPEN WATERS OR WETLAND SYSTEMS. SEDIMENT REMOVAL SYSTEM SHALL BE SIZED BASED ON ANTICIPATED DISCHARGE FROM DEWATERING SYSTEM AND ADEQUATE DETENTION TIME FOR SEDIMENT REMOVAL.
 - PROTECT SEDIMENT REMOVAL SYSTEM DISCHARGE AREA FROM SCOURING.
- DEWATERING METHODS MAY INCLUDE SUMP PUMPING, SINGLE OR MULTIPLE STAGE WELL POINT OR JET EDUCTOR WELL POINT SYSTEMS, DEEP WELLS, OR COMBINATIONS THEREOF.
- LOCATE DEWATERING FACILITIES WHERE THEY WILL NOT INTERFERE WITH EXISTING UTILITIES, FACILITIES AND/OR CONSTRUCTION WORK TO BE DONE UNDER THIS CONTRACT.
- SEDIMENT REMOVAL SYSTEM METHODS MAY INCLUDE FILTRATION SYSTEMS, SETTLING BASINS, SEDIMENTATION TANKS OR OTHER APPROVED METHOD.
- CONTRACTOR IS RESPONSIBLE TO OBTAIN ALL NECESSARY PERMITS FROM STATE AND LOCAL AUTHORITIES REGARDING THE OPERATION AND DISCHARGE OF THE DEWATERING AND SEDIMENT REMOVAL SYSTEM, AND TO CONDUCT ALL NECESSARY SAMPLING AND TESTING THAT MAY BE REQUIRED BY THOSE AUTHORITIES.

1.03 SUBMITTALS

- SHOP DRAWINGS
THE FOLLOWING PRIOR TO DEWATERING SYSTEM AND SEDIMENT REMOVAL SYSTEM INSTALLATION:
 - PROPOSED SYSTEM COMPONENTS.
 - OPERATIONAL PLAN TO INCLUDE LOCATIONS AND DEPTH OF COMPONENTS.
 - METHOD OF DISPOSAL OF PUMPED WATER, INCLUDING METHOD OF INSURING PROPER SEDIMENT REMOVAL SHOULD UPSET IN DEWATERING SYSTEM OCCUR.
 - SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER AND THE RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT DIVISION OF FRESHWATER WETLANDS.
- QUALITY ASSURANCE/CONTROL SUBMITTALS
 - IN ACCORDANCE WITH SECTION 01300 SUBMIT THE FOLLOWING:
 - DEWATERING SYSTEMS TO BE DESIGNED UNDER THE DIRECT SUPERVISION OF A PROFESSIONAL CIVIL ENGINEER REGISTERED IN THE STATE WHICH THE WORK IS TO BE DONE.

1.04 PROJECT/SITE CONDITIONS

- ENVIRONMENTAL REQUIREMENTS
 - DISPOSE OF ALL PUMPED WATER IN ACCORDANCE WITH RIDEM RULES AND REGULATIONS GOVERNING THE ADMINISTRATION AND ENFORCEMENT OF THE FRESHWATER WETLANDS ACT AND ALL REQUIREMENTS OF RIDEM PERMIT NO. 05-0535.
- EXISTING CONDITIONS
 - GROUNDWATER ELEVATIONS HAVE BEEN INTERPRETED FROM SOIL EVALUATIONS AND ARE NOTED IN THE TEST PIT LOGS.
 - GROUNDWATER SURFACE IS SUBJECT TO FLUCTUATIONS DURING PERIODS OF HEAVY PRECIPITATION.

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

- SITE PREPARATION AND INSTALLATION
 - SURFACE DRAINAGE
 - CONSTRUCT DIKES, DITCHES, PIPE LINES, SUMPS OR OTHER MEANS TO INTERCEPT AND DIVERT PRECIPITATION AND SURFACE WATER AWAY FROM EXCAVATIONS.
 - DRAINAGE OF EXCAVATED AREAS
 - CONSTRUCT DIKES, DITCHES, PIPE LINES, SUMPS OR OTHER MEANS TO COLLECT SURFACE AND SEEPAGE WATER WHICH MAY ENTER THE EXCAVATION.
 - DISCHARGE WATER THROUGH DEWATERING BASINS OR METHOD APPROVED BY ENGINEER.
 - AT NO TIME SHALL DISCHARGE WATERS BE DIRECTLY DISCHARGES TO REGULATED WETLANDS OR SURFACE WATERS.
- MONITORING
 - OBSERVE AND RECORD DAILY THE ELEVATION OF THE GROUNDWATER DURING THE LENGTH OF THE DEWATERING OPERATION AND PROVIDE DATA TO ENGINEER ON DAILY BASIS.
- OPERATION
 - OPERATE DEWATERING SYSTEMS TO LOWER THE GROUNDWATER LEVEL IN EXCAVATIONS ALLOWING ALL SUBSEQUENT WORK TO BE DONE ON A STABLE DRY SUBGRADE.
 - MODIFY DEWATERING PROCEDURES WHICH CAUSE, OR THREATEN TO CAUSE, DAMAGE TO NEW OR EXISTING FACILITIES, TO PREVENT FURTHER DAMAGE. MODIFICATIONS MADE AT NO ADDITIONAL EXPENSE TO THE OWNER.
 - MAINTAIN THE WATER LEVEL A MINIMUM OF TWO (2) FEET BELOW SUBGRADE OR AT LOWER ELEVATION TO ELIMINATE HYDROSTATIC PRESSURE ON STRUCTURES.
 - PREVENT DISTURBANCE OF FOUNDATION SOILS AND LOSS OF GROUND AS WATER IS REMOVED.
 - NOTIFY THE ENGINEER OF DISTURBANCE TO THE FOUNDATION SOILS CAUSED BY AN INTERRUPTION OR INADEQUACY OF THE DEWATERING SYSTEM.
 - MAINTAIN ON SITE, AUXILIARY EQUIPMENT TO OPERATE THE DEWATERING SYSTEM CONTINUOUSLY WHILE EXCAVATIONS ARE OPENED BELOW ELEVATION OF FINAL GRADE.
- DISPOSAL OF WATER
 - DISCHARGE WATER IN A MANNER THAT WILL NOT CAUSE EROSION, FLOODING, DAMAGE TO EXISTING FACILITIES, COMPLETED WORK OR ADJACENT PROPERTY, IMPROVED OR OTHERWISE.
- REMOVAL
 - REMOVE ALL MATERIAL AND EQUIPMENT FROM THE SITE UPON COMPLETION OF DEWATERING OPERATIONS.
 - SEAL ALL DEWATERING WELLS UPON COMPLETION OF THE DEWATERING BY PRESSURE INJECTING A GROUT CAPABLE OF SEALING THE WELLS AND PREVENTING LEAKAGE.

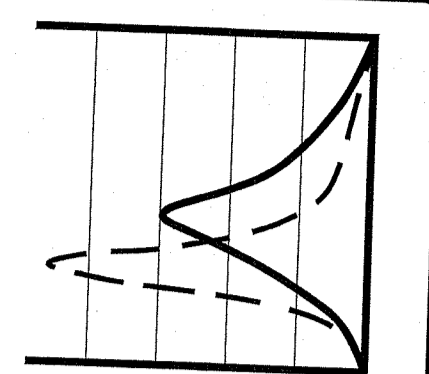


KEY PLAN
SCALE: 1"=200'

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS AS
SPECIFIED IN THE LETTER OF APPROVAL
DATED: MAR 20 2025 FILE #: 25-0027
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Martin D. Wansok

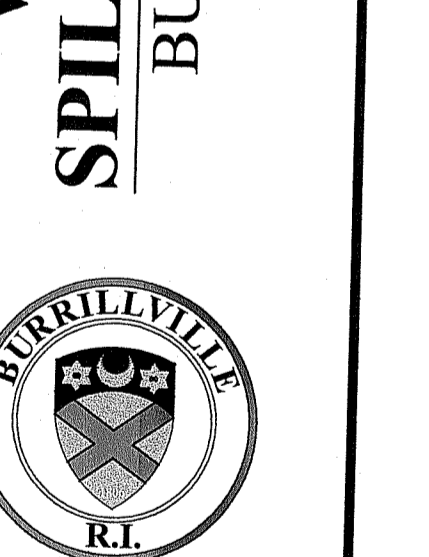
Environmental Management
JAN 24 2025
Office of Water Resources



JOE CASALI ENGINEERING, INC.
CIVIL - SITE DEVELOPMENT - TRANSPORTATION
DRAINAGE - WETLANDS - ISDS - TRAFFIC - FLOODPLAIN
16019441300 (401)944-1313 FAX: (401)944-1314
WWW.JOEENGINEERING.COM

JOSEPH A. CASALI
No. 7250
REGISTERED PROFESSIONAL ENGINEER
05/10/2015

**WALLUM LAKE DAM
SPILLWAY IMPROVEMENTS**
BURRILLVILLE, RHODE ISLAND
AP 34, LOT 11



REVISIONS:

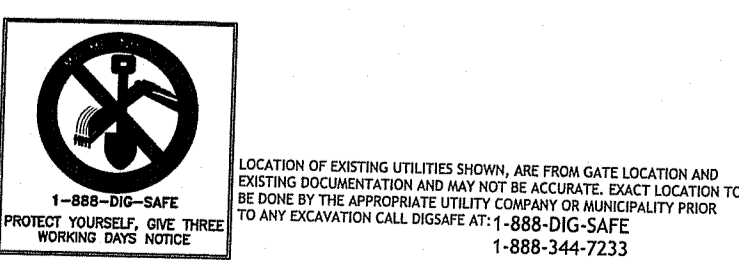
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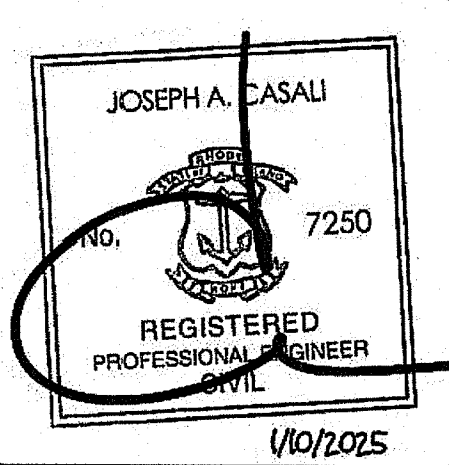
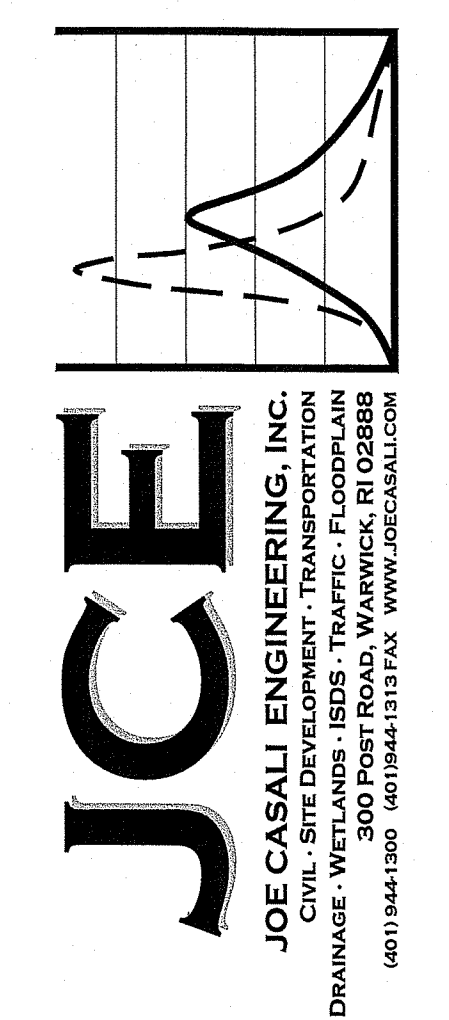
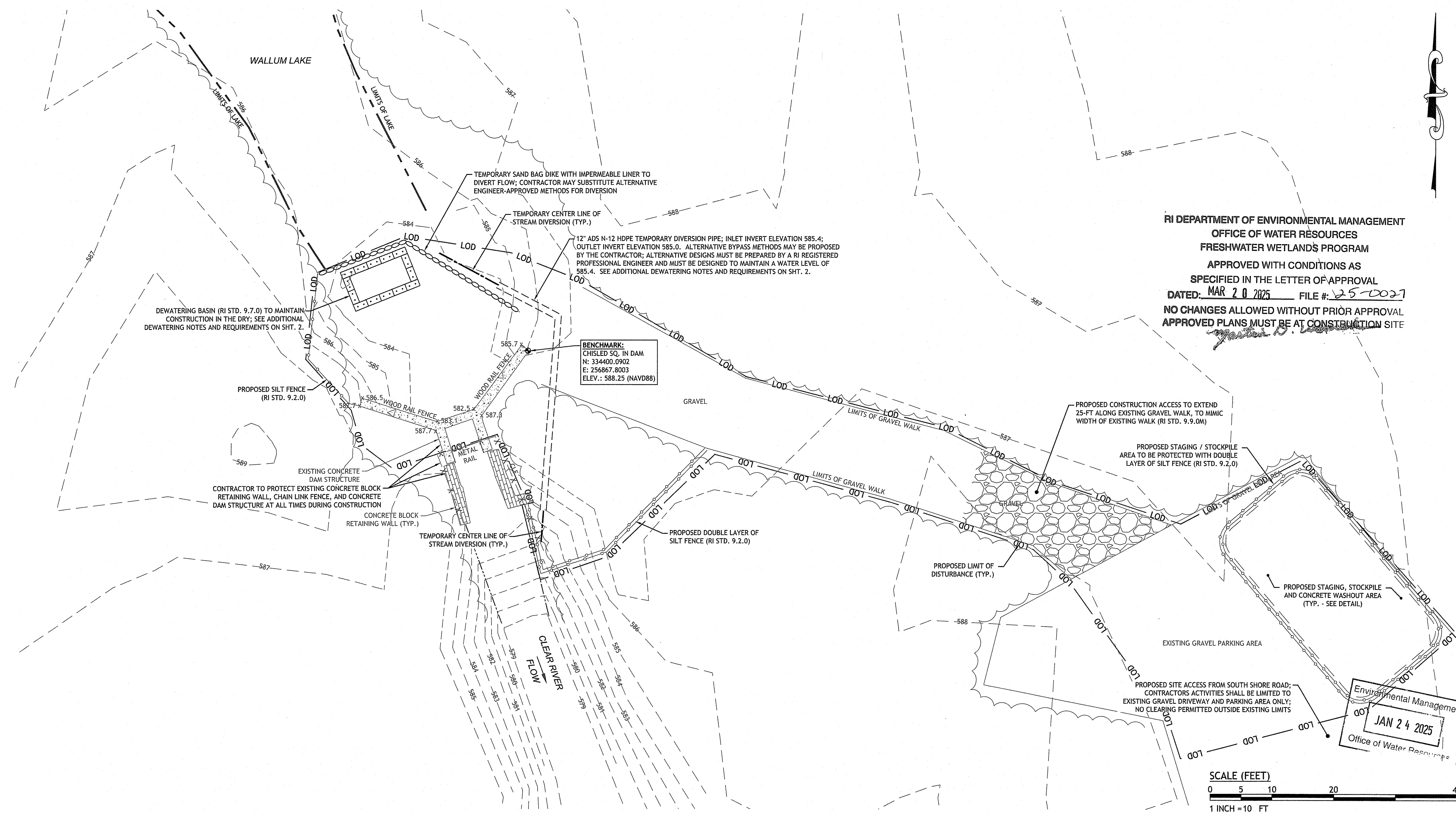
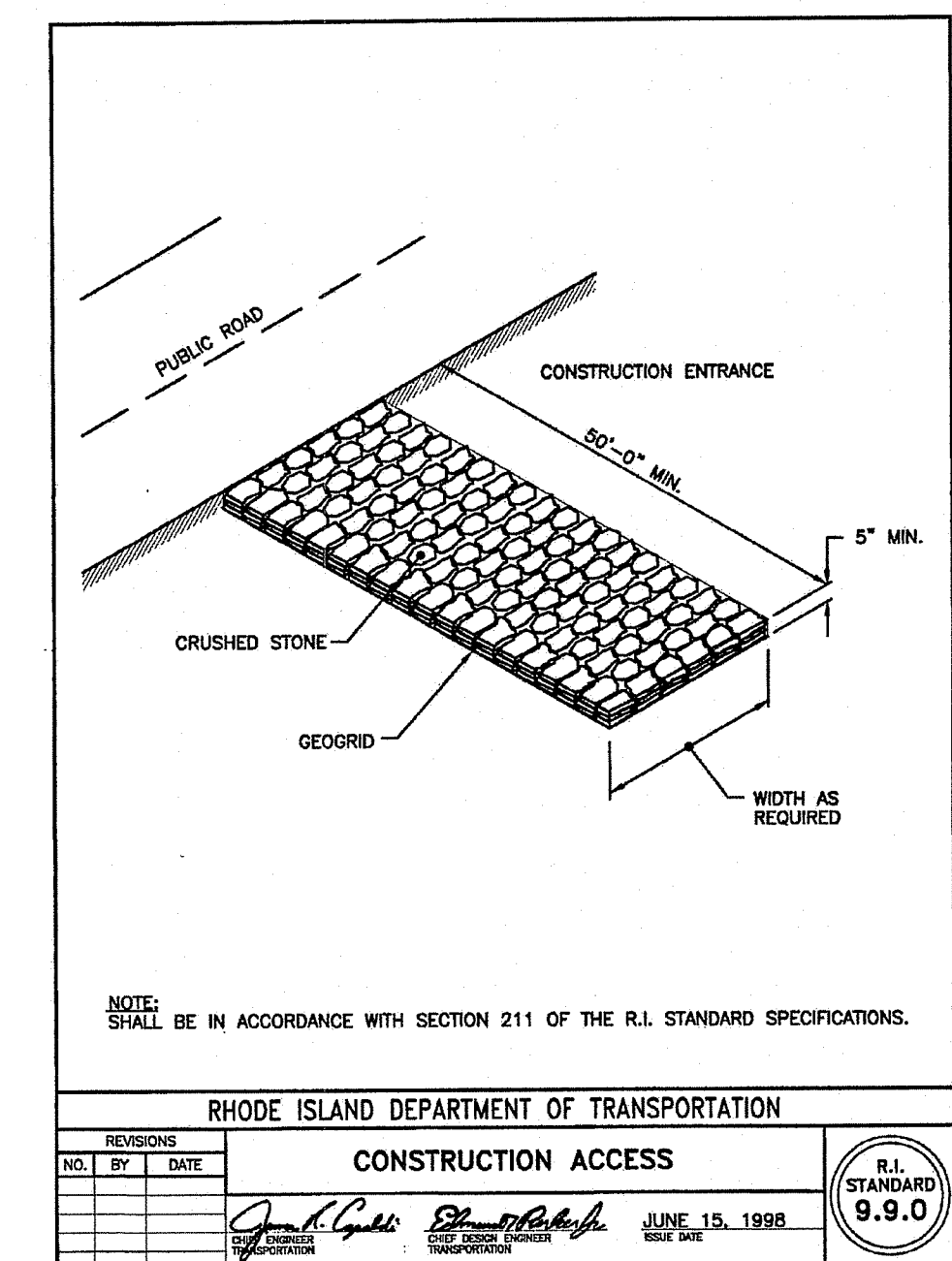
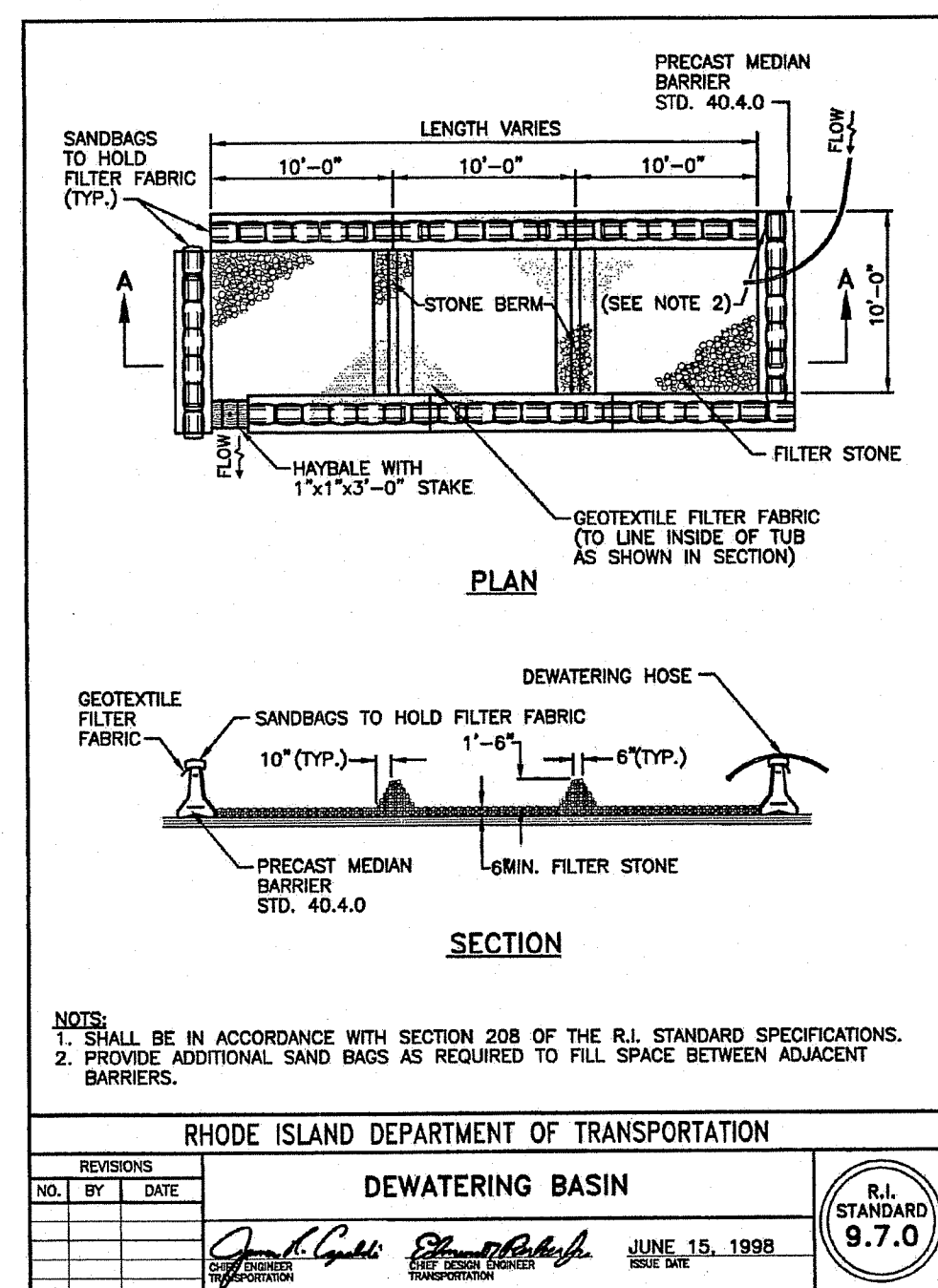
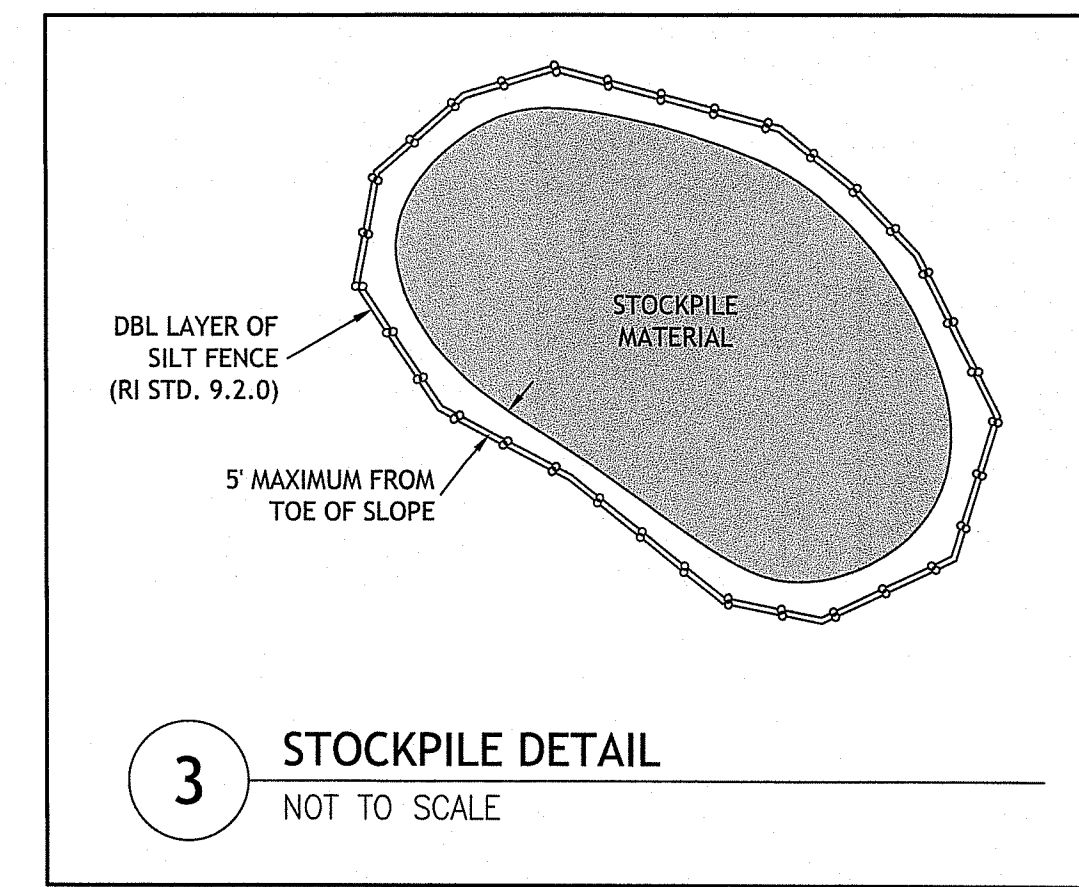
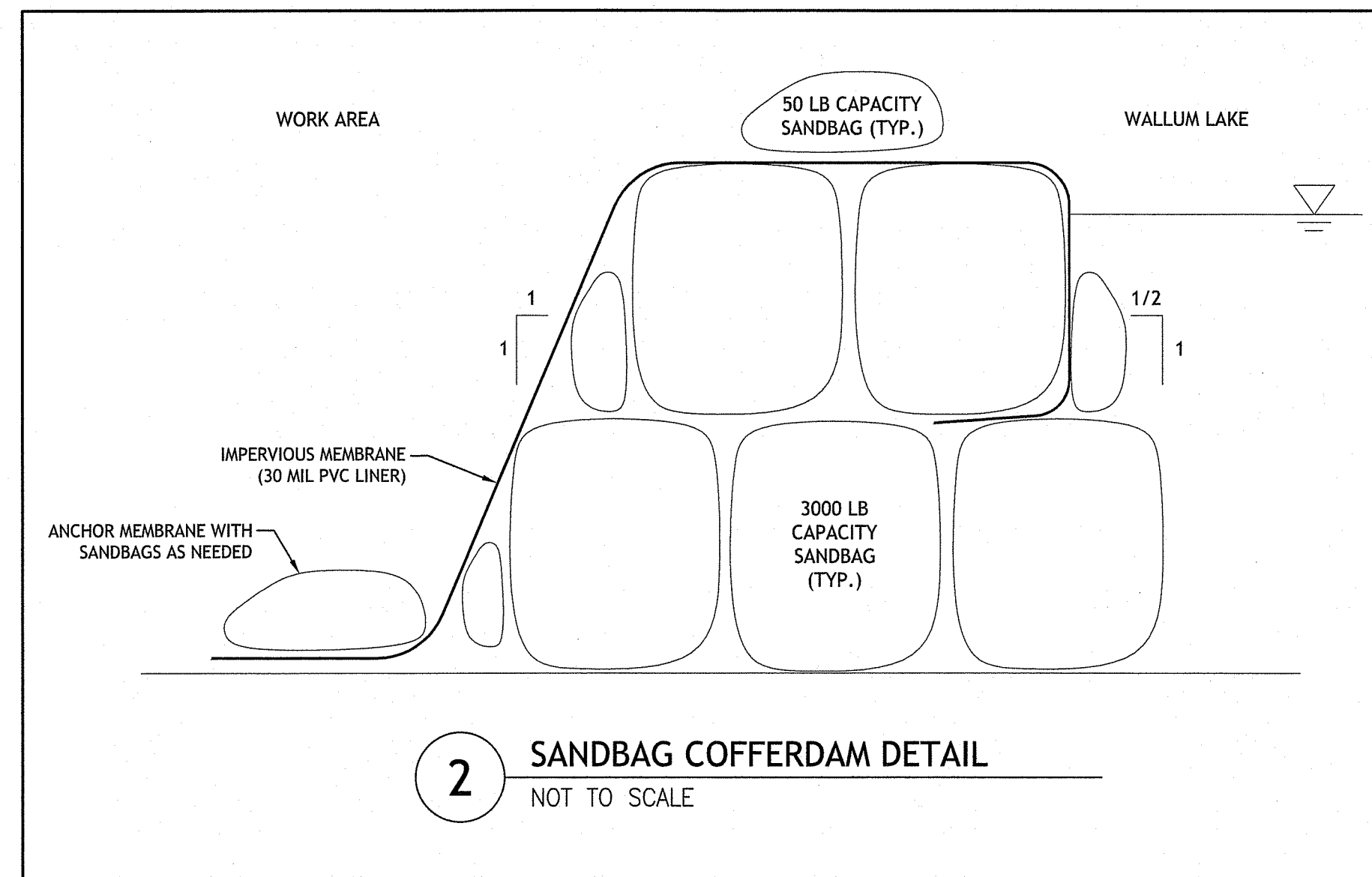
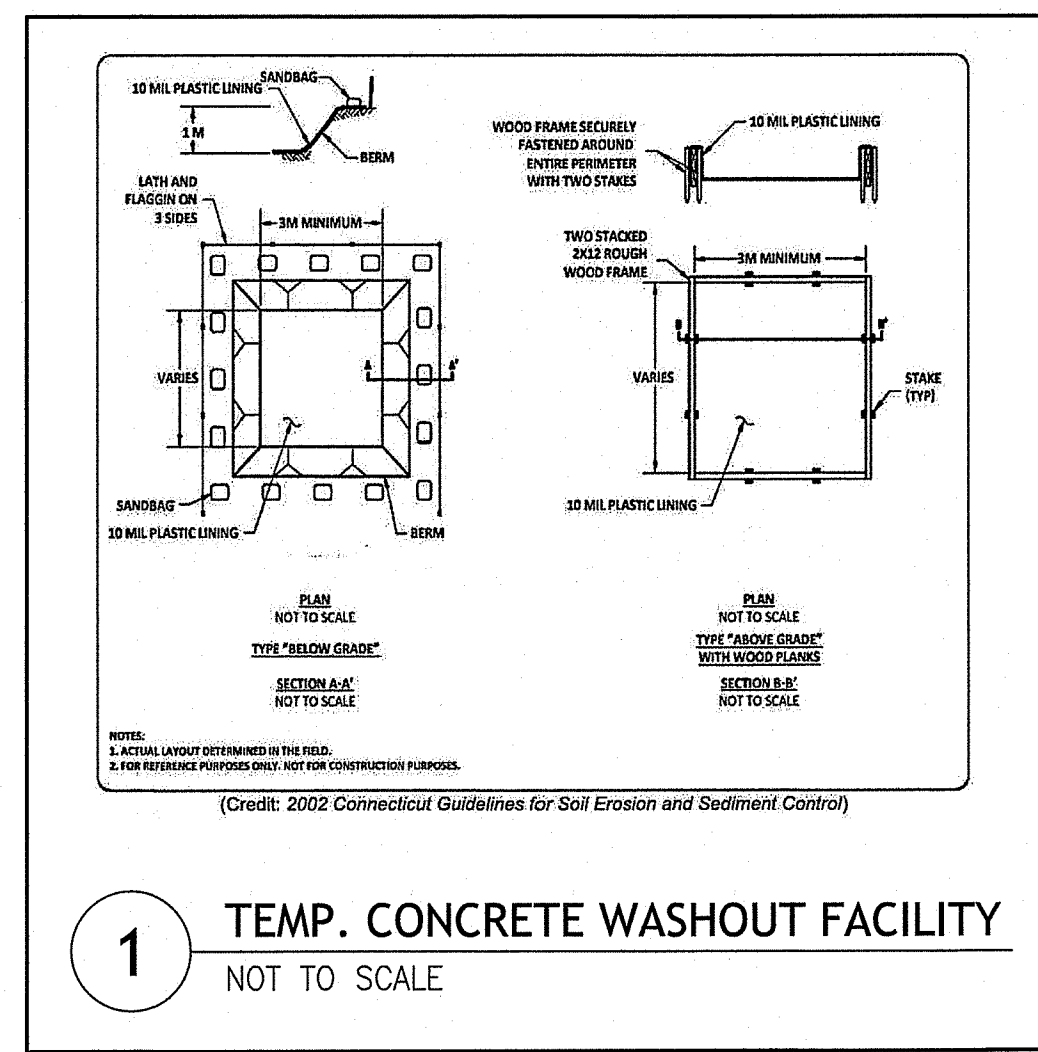
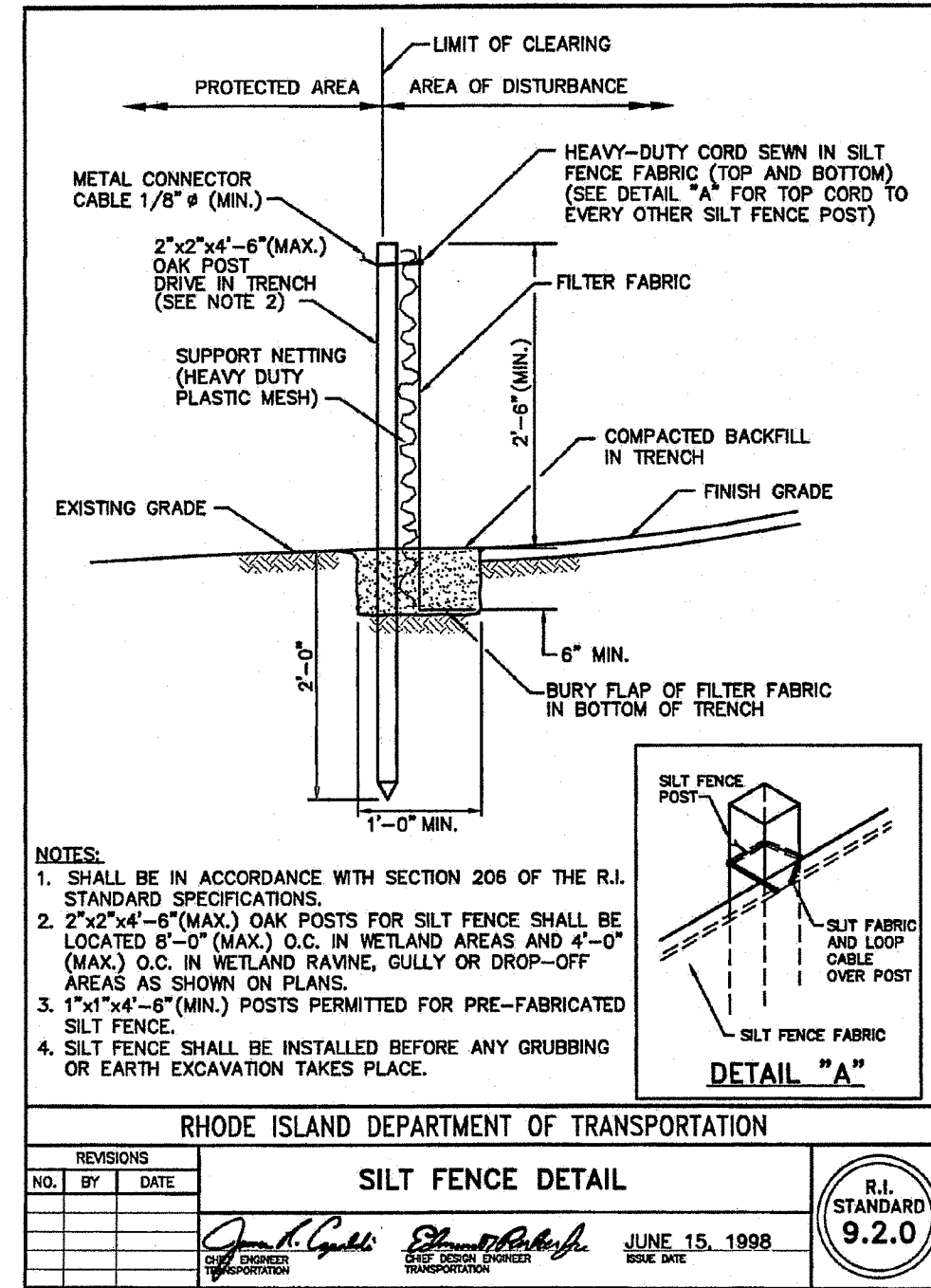
DESIGNED BY: DRD
DRAWN BY: DRD/SD
CHECKED BY: JAC
DATE: JAN. 2025
PROJECT NO: 05-922a

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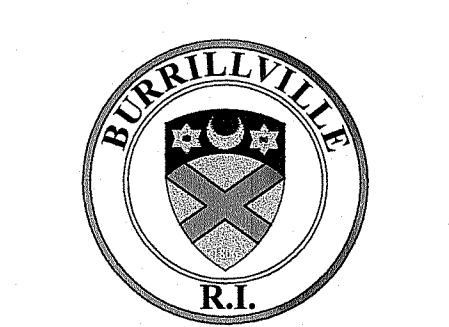
GENERAL NOTES AND LEGEND

SHEET 2 OF 6





**WALLUM LAKE DAM
SPILLWAY IMPROVEMENTS**
BURRILLVILLE, RHODE ISLAND
AP 34, LOT 11



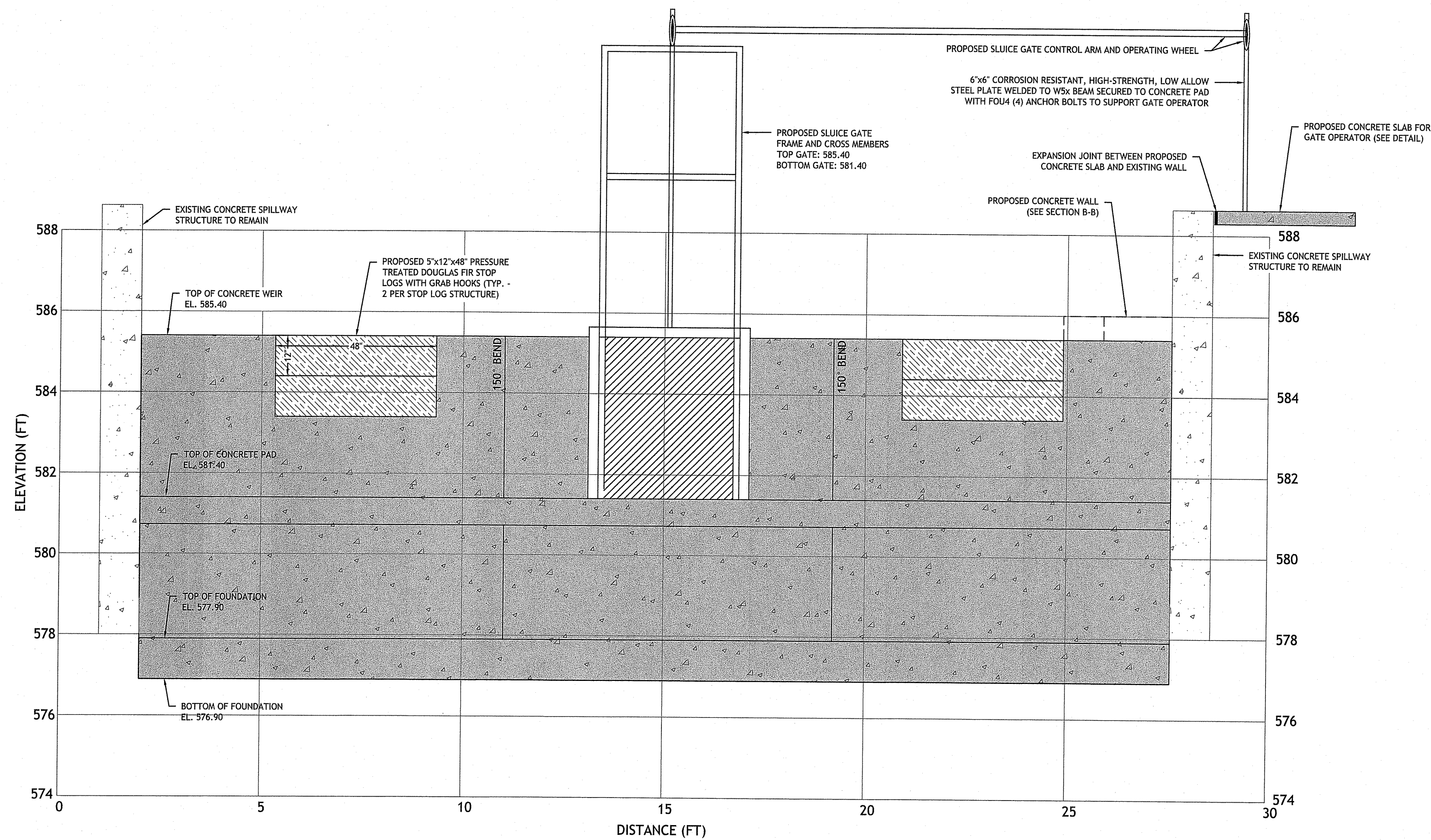
REVISIONS:
NO. DATE DESCRIPTION

DESIGNED BY: DRD
DRAWN BY: DRD/SD
CHECKED BY: JAC
DATE: JAN 2025
PROJECT NO: 05-92cu

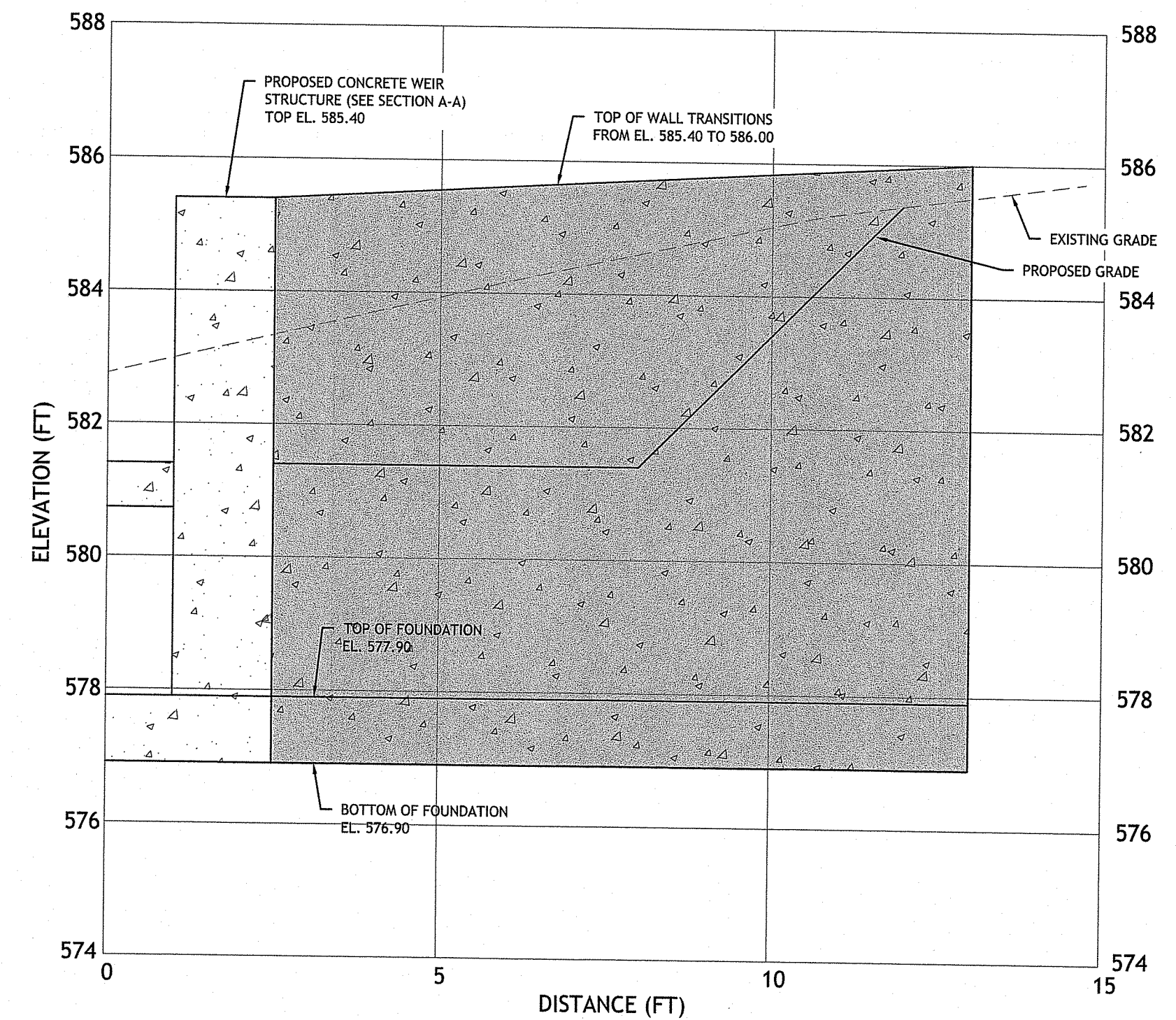
PRELIMINARY, NOT FOR CONSTRUCTION

EXISTING CONDITIONS AND SITE PREP. PLAN

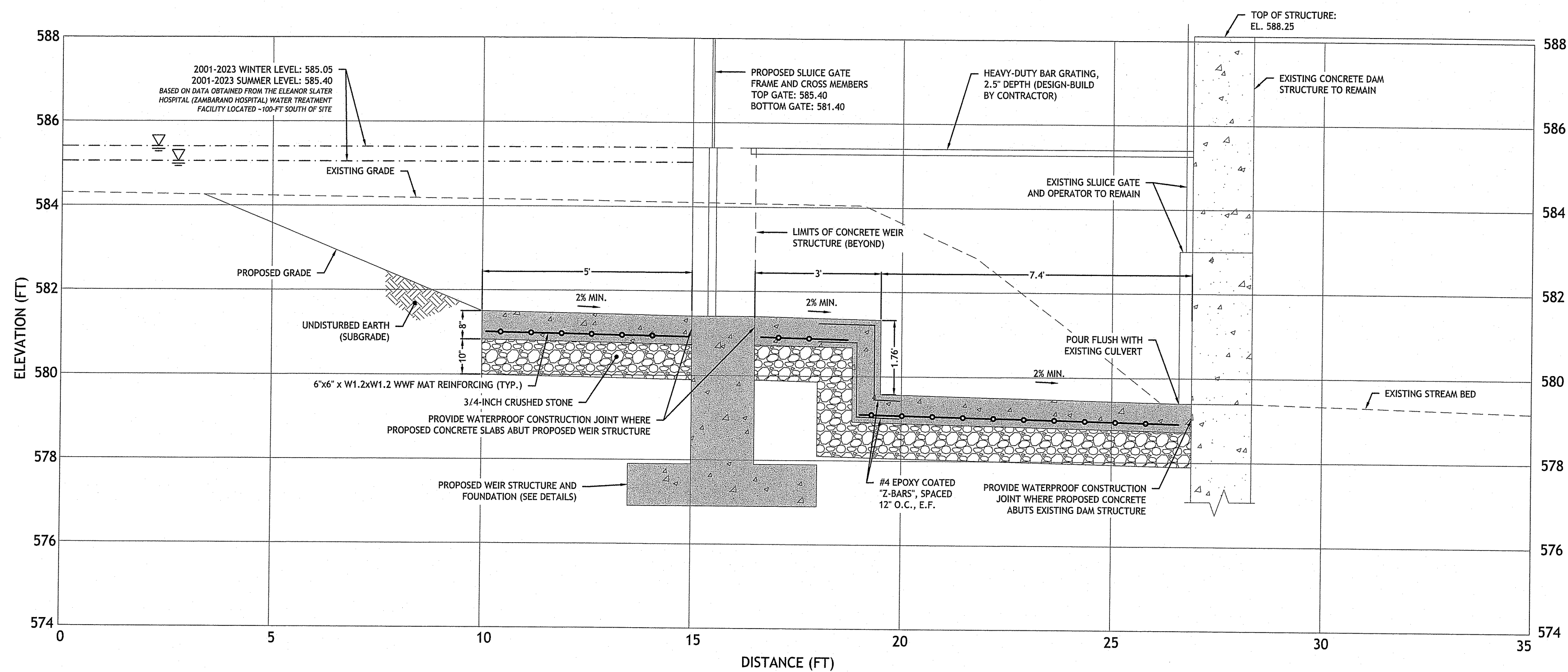
SHEET 3 OF 6



CONCRETE WEIR PROFILE A-A
 HORIZONTAL & VERTICAL SCALES: 1" = 2"

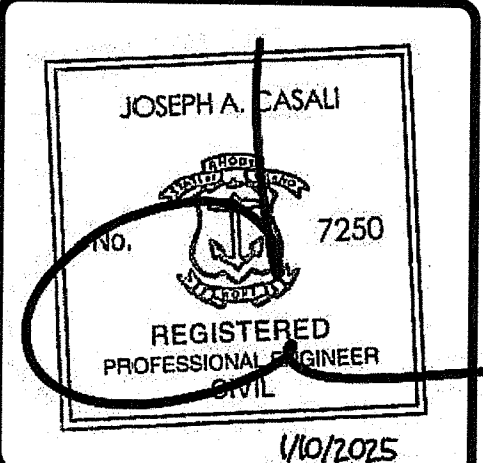
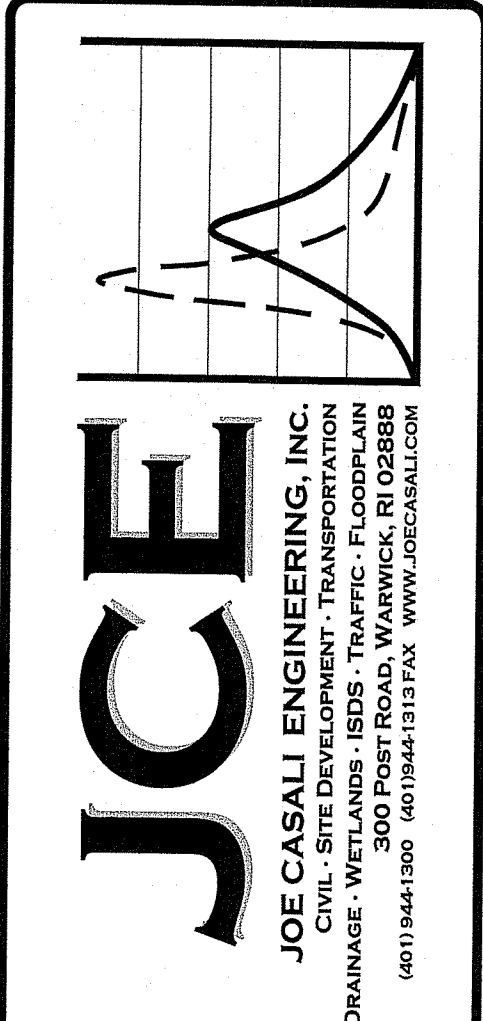


CONCRETE WALL PROFILE B-B
 HORIZONTAL & VERTICAL SCALES: 1" = 2"

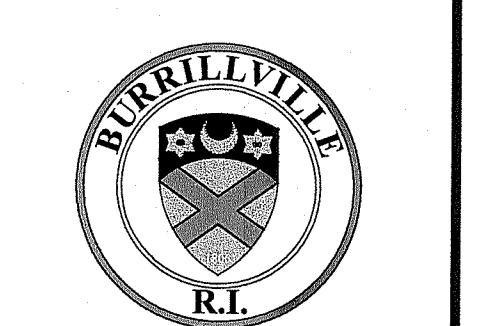


CONCRETE WEIR SECTION C-C
 HORIZONTAL & VERTICAL SCALES: 1" = 2"

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED: MAR 20 2025 FILE #: 25-0027
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



**WALLUM LAKE DAM
 SPILLWAY IMPROVEMENTS**
 BURRILLVILLE, RHODE ISLAND
 AP 34, LOT 11



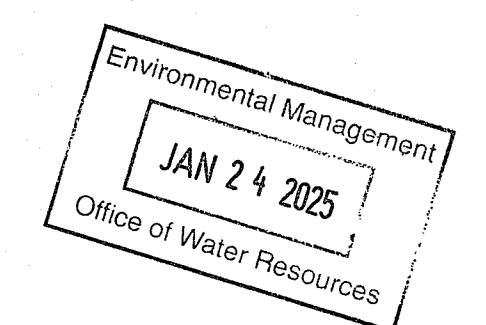
REVISIONS:	NO.	DATE	DESCRIPTION

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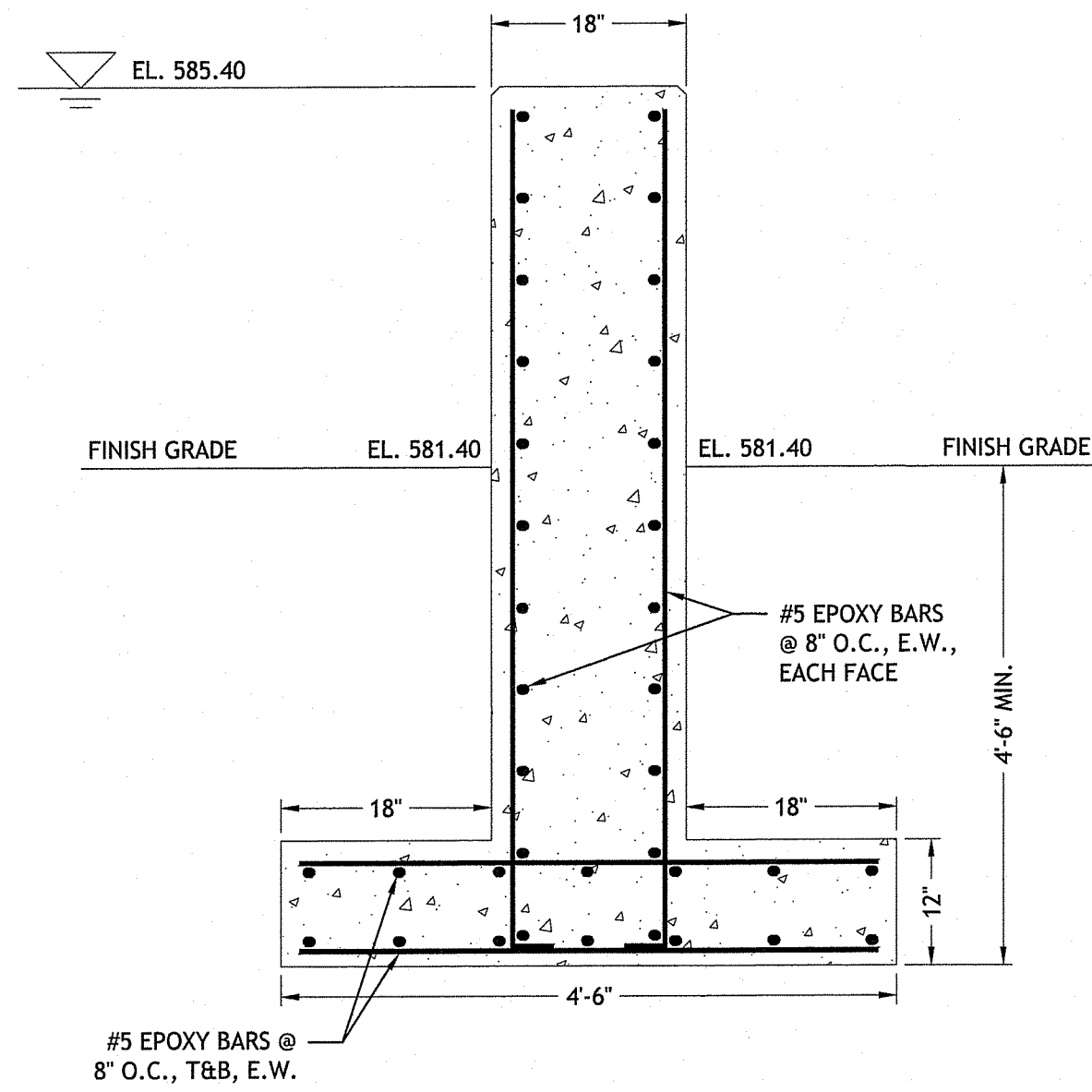
PRELIMINARY, NOT FOR CONSTRUCTION

**CIVIL
 DETAILS I**

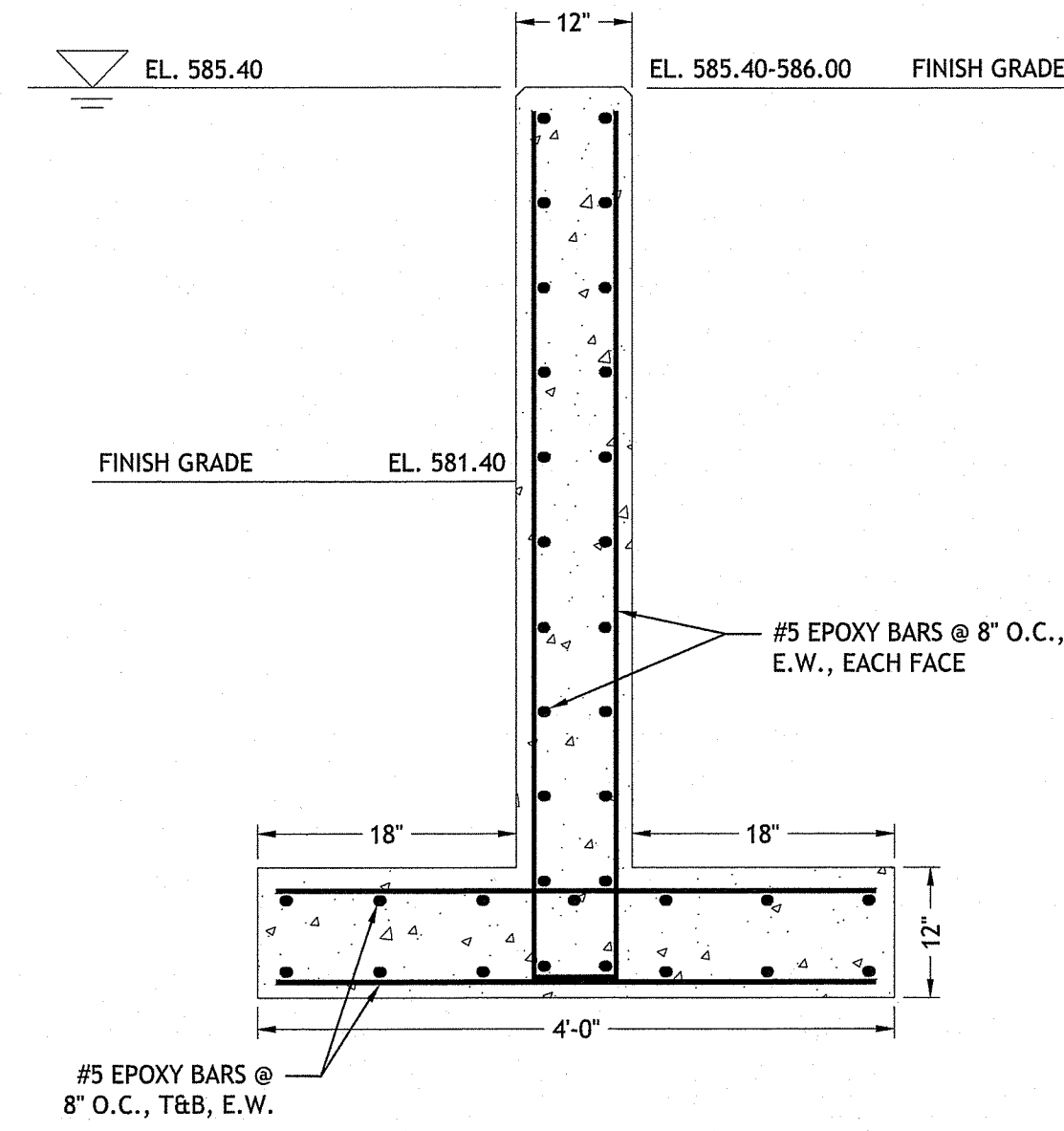
**SHEET
 5 OF 6**



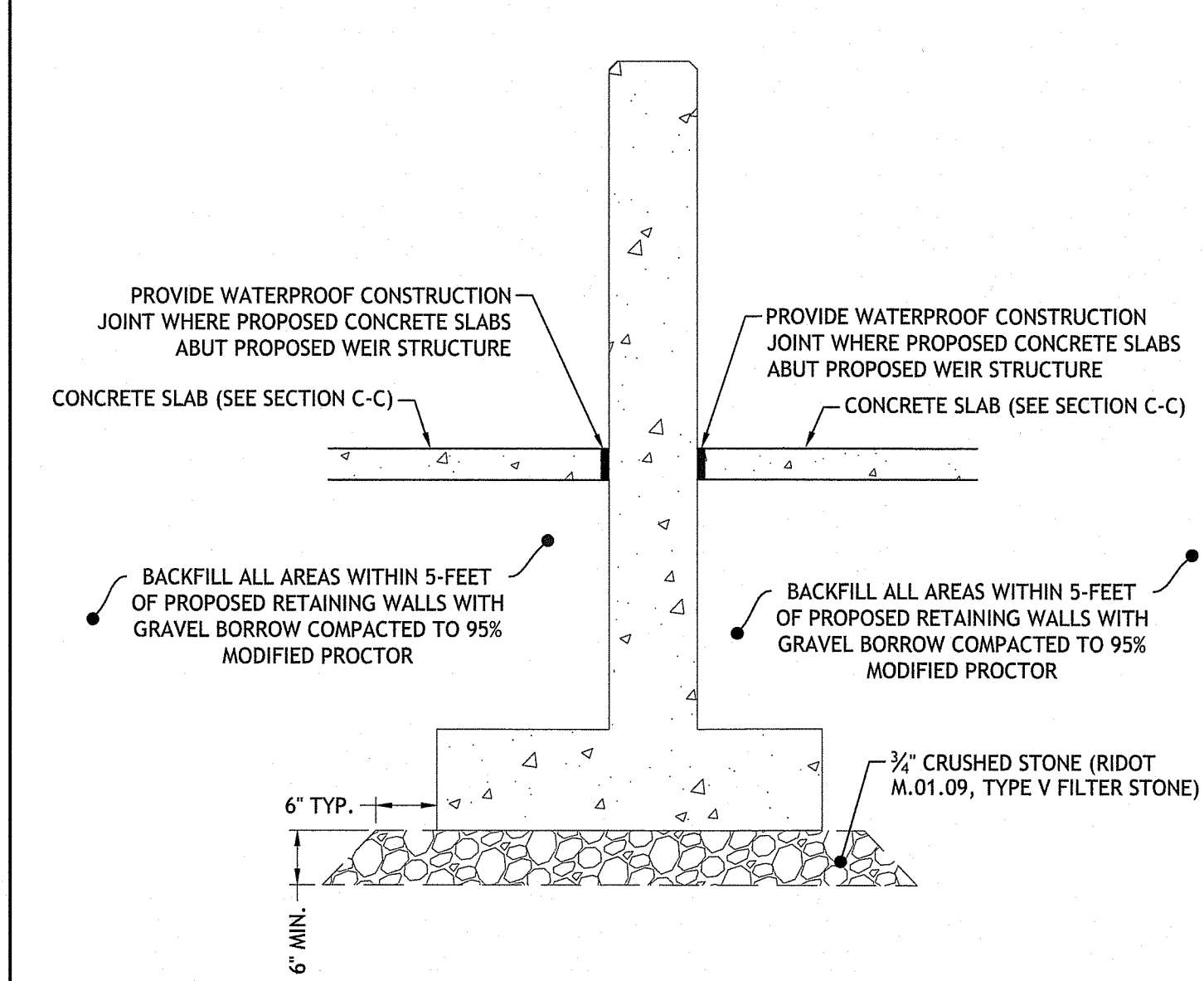
Q:\05-92 Town of Burrillville\05-92cu Zambarano Dam\PERMIT SET.dwg Jan 23, 2025 9:17am



4 CONCRETE WEIR WALL STRUCTURAL DETAIL
NOT TO SCALE



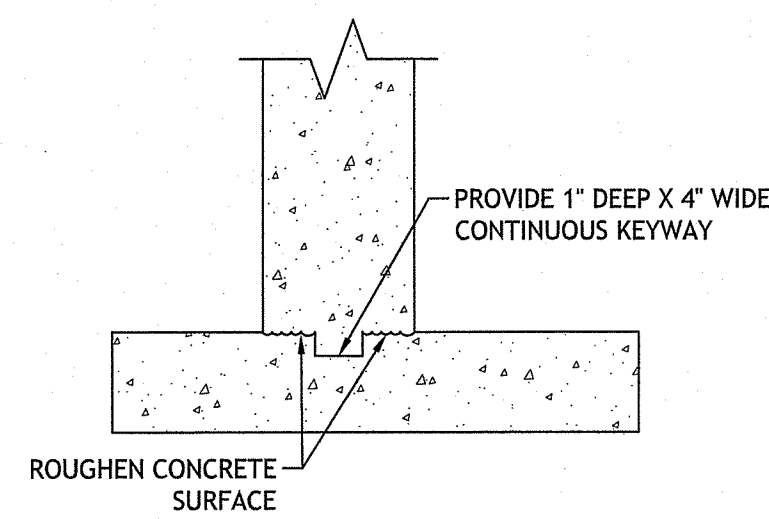
5 CONCRETE RETAINING WALL STRUCTURAL DETAIL
NOT TO SCALE



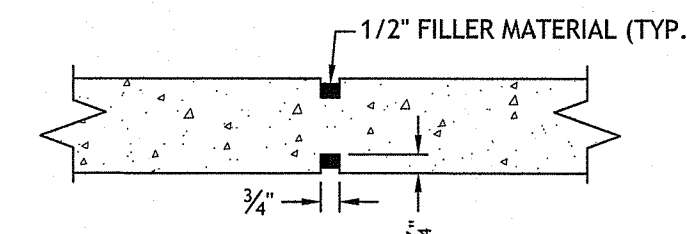
5 TYPICAL WALL SECTION
NOT TO SCALE

CONCRETE WEIR AND RETAINING WALL NOTES:

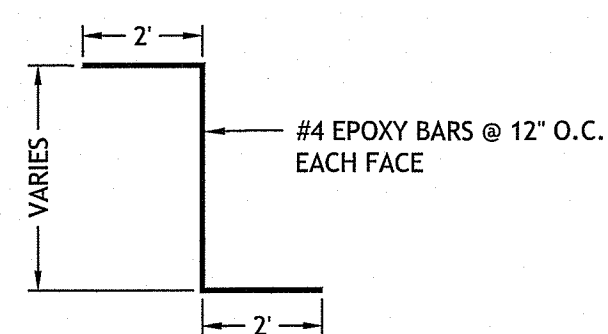
- ALL CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, FOR ROAD AND BRIDGE CONSTRUCTION, 2004 EDITION WITH LATEST AMENDMENTS AND RHODE ISLAND STATE BUILDING CODE.
- FOOTINGS MAY BEAR ON EXISTING IN-SITU SOIL OR IMPORTED GRAVEL BORROW EXHIBITING A 4,000 PSF MINIMUM ALLOWABLE SOIL BEARING PRESSURE. ALL SUBGRADES SHALL BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO FORMING OR PLACING ANY CONCRETE OR REBAR. SUBGRADE SHALL BE PROOF ROLLED IN THE PRESENCE OF THE ENGINEER OF RECORD PRIOR TO RETAINING WALL CONSTRUCTION. IF ENCOUNTERED, BEDROCK SHALL BE EXCAVATED TO A MINIMUM OF 12-INCHES BELOW THE BOTTOM OF FOOTING ELEVATION AND BACKFILLED WITH COMPACTED GRAVEL BORROW.
- PLACE BACKFILL IN 8" THICK LOOSE LIFTS & COMPACT WITH HAND-OPERATED COMPACTION EQUIPMENT. FILL SHOULD BE COMPACTED TO 95% MODIFIED PROCTOR. MOISTURE CONTENT SHALL BE ±2% OF OPTIMUM. BACKFILL SYMMETRICALLY SUCH THAT THE DIFFERENTIAL SOIL LEVEL DOES NOT EXCEED 2 FEET.
- RETAINING WALL SHALL REACH DESIGN STRENGTH BEFORE PLACEMENT OF FILL.
- ALL CONCRETE SHALL BE IN ACCORDANCE WITH ACI 318-05.
- CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSION STRENGTH OF 5,000 PSI. CONCRETE CLASS SHALL BE AS FOLLOWS:
A. FOOTINGS = CLASS XX AIR-ENTRAINED
B. WALL STEM = CLASS HP AIR ENTRAINED
- REINFORCING STEEL SHALL BE ASTM A615 GRADE 60, EPOXY COATED, UNLESS OTHERWISE NOTED.
- ALL REINFORCING BAR SPLICES SHALL BE IN ACCORDANCE WITH ACI 318-02.
- CONCRETE COVER OF REINFORCING STEEL SHALL BE AS FOLLOWS:
A. FOOTINGS = 3.0 INCHES
B. WALL STEM @ FREE FACE = 2.0 INCHES
C. WALL STEM @ FILL FACE = 3.0 INCHES
- CURE CONCRETE PER RIDOT SPECIFICATIONS.
- TEST CYLINDERS SHALL BE MADE FOR EVERY 20 CY OF CONCRETE PLACED IN A SINGLE POUR.



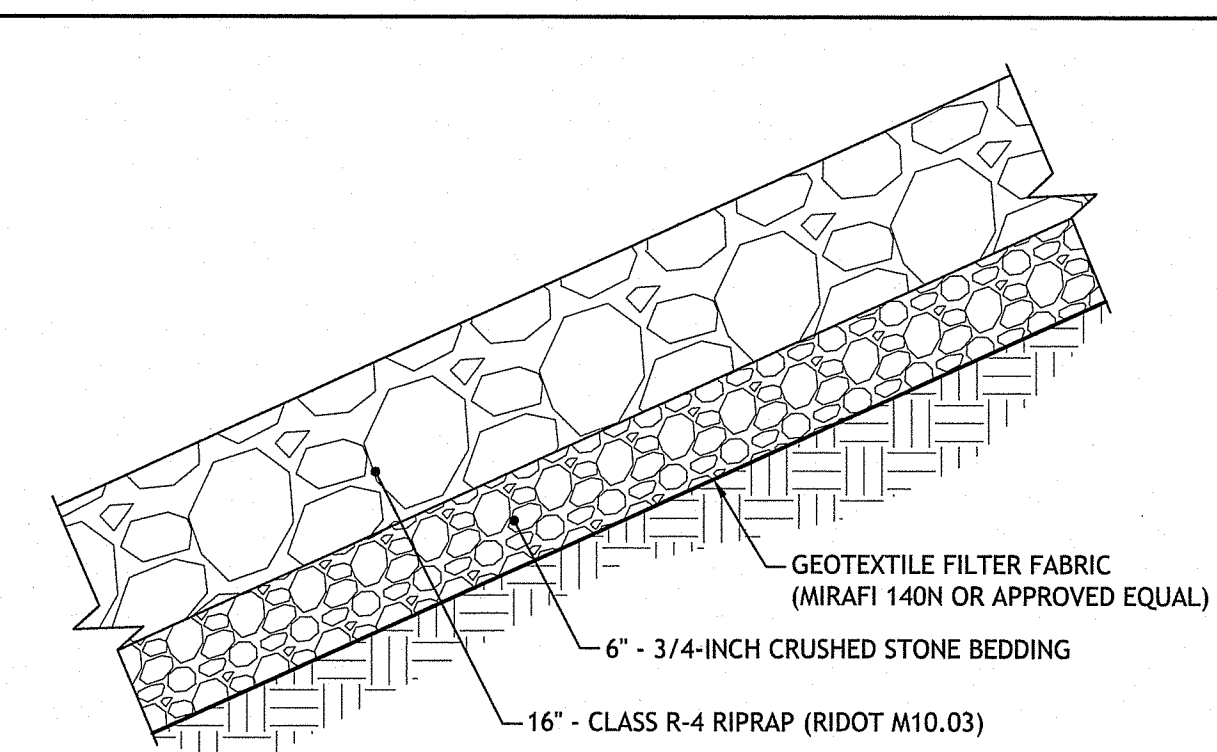
5 RETAINING WALL KEY DETAIL
NOT TO SCALE



5 RETAINING WALL CONTROL JOINT DETAIL
NOT TO SCALE

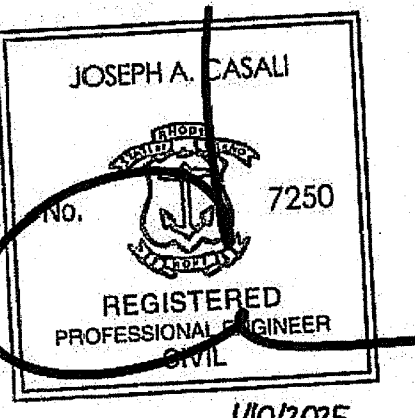
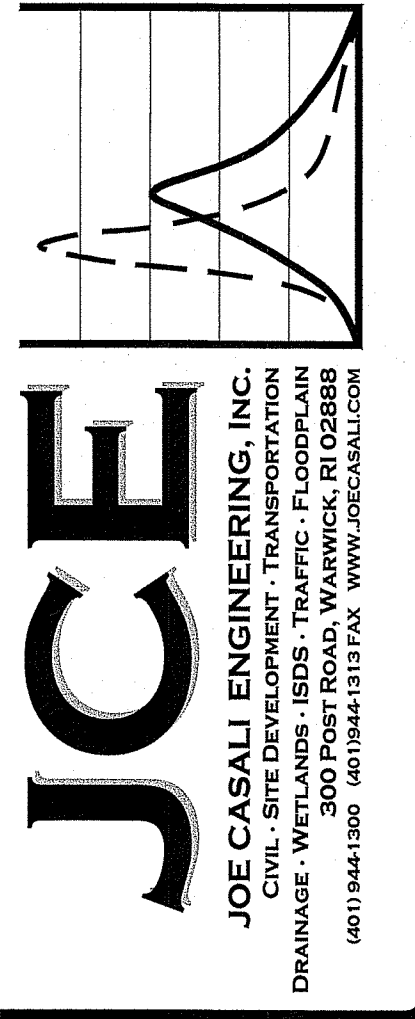


6 CONCRETE SLAB Z-BAR DETAIL
NOT TO SCALE

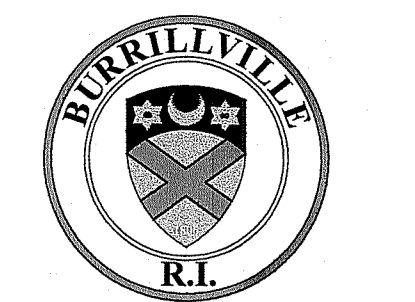


7 RIPRAP SLOPE PROTECTION DETAIL
NOT TO SCALE

RI DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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SPILLWAY IMPROVEMENTS**
BURRILLVILLE, RHODE ISLAND
AP 34, LOT 11



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CIVIL DETAILS II

SHEET 6 OF 6

Environmental Management
JAN 24 2025
Office of Water Resources