

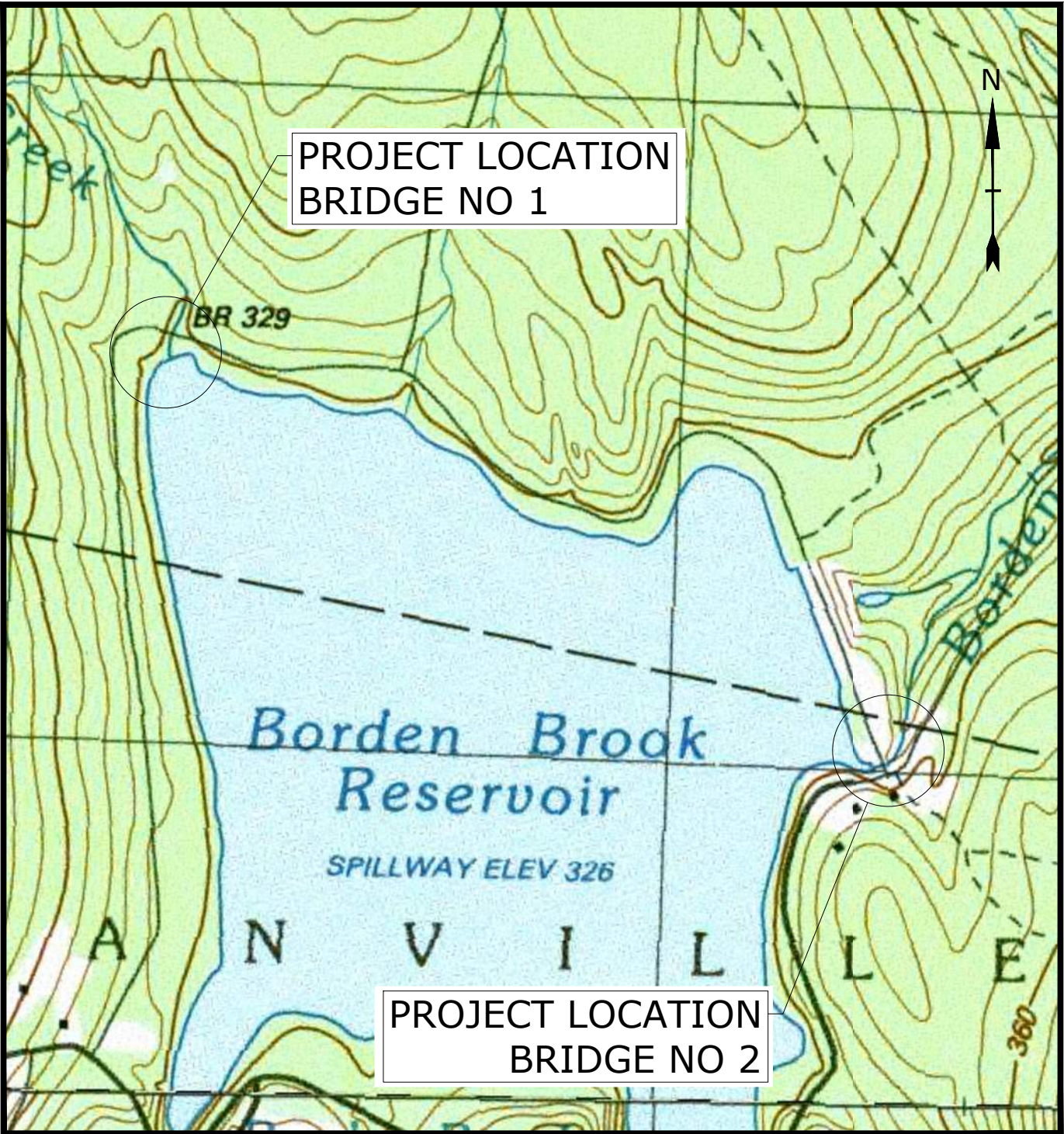
SPRINGFIELD WATER AND SEWER COMMISSION

# BORDEN BROOK RESERVOIR SPILLWAY BRIDGE AND SUGAR CREEK BRIDGE REPAIRS

BID NO. 25-51

APRIL 16, 2025

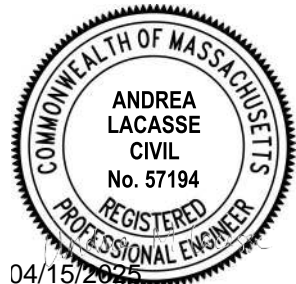
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LOCATION MAP  
SCALE: 1" = 2000'

PREPARED BY:

**Tighe&Bond**



PREPARED FOR:

SPRINGFIELD WATER AND SEWER COMMISSION  
DANIEL RODRIGUEZ, CHAIRMAN  
VANESSA OTERO, COMMISSIONER  
WILLIAM E. LEONARD, COMMISSIONER  
JOSHUA D. SCHIMMEL, EXECUTIVE DIRECTOR

COMPLETE SET 12 SHEETS



SPECIFICATIONS: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 9TH ED., 2020  
MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, 2023 AS AMENDED

13. ALL DISTURBED AREAS SHALL BE LOAMED & SEEDED OTHERWISE SPECIFIED. OVER EXCAVATE LOAM & SEED AREAS AS REQUIRED TO MEET GRADE.
14. THE CONTRACTOR SHALL REESTABLISH ANY BANKS DISTURBED FROM CONSTRUCTION ACTIVITY WITH LIKE-SIZED GRAVEL AND COBBLES.
15. WETLAND RESOURCE AREAS WERE DELINEATED BY TIGHE & BOND ON 11/17/2023.
16. IF LOCATIONS, SIZES, ETC. CHANGE FROM THESE PLANS, THE NEW CHANGES SHALL BE SUBMITTED TO THE OWNER/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
17. ALL DIMENSIONS ARE HORIZONTAL AND VERTICAL, AND ARE GIVEN AT 68 DEGREES FAHRENHEIT.
18. ALL WORK PERFORMED BY THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND REQUIREMENTS.
19. THE CONTRACTOR SHALL REVIEW AND UNDERSTAND ALL APPLICABLE ENVIRONMENTAL PERMITS AND ENSURE THAT ALL CONSTRUCTION CONDITIONS ARE MET.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION SAFETY, AND MEANS AND METHODS TO PERFORM AND COMPLETE THE WORK.
21. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO PRIVATE OR PUBLIC PROPERTY OUTSIDE THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS CAUSED BY THE CONTRACTOR, AT THE SOLE COST TO THE CONTRACTOR.
22. THE CONTRACTOR SHALL SUBMIT LITERATURE (MANUFACTURER'S LITERATURE, CUT SHEETS, APPLICATION PROCEDURES, ETC.) FOR ALL PRODUCTS PROPOSED FOR USE ON THE PROJECT, FOR APPROVAL BY THE ENGINEER. APPROVAL OF MATERIALS SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION AS AMENDED, SUBSECTION 5.03 AND SECTION 6.00, CONTROL OF MATERIALS.
23. DETAIL OR SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION AS AMENDED, SUBSECTION 5.02, PLANS AND DETAIL DRAWINGS.
24. STORE FUEL, OIL, PAINT, OR OTHER HAZARDOUS MATERIALS IN A SECONDARY CONTAINER AND REMOVE FROM THE SITE TO A LOCKED INDOOR AREA WITH AN IMPERVIOUS FLOOR DURING NON-WORK HOURS.
25. IMMEDIATELY REPORT SPILLS OF OIL AND/OR HAZARDOUS MATERIALS (OHM) TO THE MASSDEP.
26. PROVIDE A SUFFICIENT SUPPLY OF ABSORBENT SPILL RESPONSE MATERIALS, SUCH AS BOOMS OR BLANKETS, AT THE CONSTRUCTION SITES AT ALL TIMES TO CLEAN UP POTENTIAL SPILLS OF HAZARDOUS MATERIALS.
27. COORDINATE DAILY ACCESS WITH OWNER AND ENGINEER.
28. COORDINATE BORDEN BROOK RESERVOIR SPILLWAY BRIDGE CLOSURE WITH OWNER AND ENGINEER.

EXISTING	PROPOSED	DESCRIPTION
		STRUCTURE
---		STRUCTURE (HIDDEN)
---		EDGE OF ROADWAY
---		MAJOR CONTOUR
---		MINOR CONTOUR
	=====	LIMITS OF WORK
	~~~~~	LIMITS OF COFFERDAM
---		APPROXIMATE TOP OF BANK
		INLAND BANK / MEAN ANNUAL HIGH WATER
~~~~~		TREELINE
	[X-X-X-X-X-X-X-X]	EROSION CONTROL BARRIER
	[Patterned Box]	DEWATERED WORK AREA
	[Patterned Box]	EROSION CONTROL AREA
	[Patterned Box]	COMPOST FILTER TUBE
▲ ▲ ▲		BORDERING VEGETATED WETLAND
---		LIMITS OF DREDGING
— x —		TEMPORARY CHAIN LINK FENCE

AASHTO	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
CL	CENTERLINE
DIA	DIAMETER
ED	EDITION
FAC	FACULTATIVE
FACU	FACULTATIVE UPLAND
FACW	FACULTATIVE WETLAND
FT	FEET
GIS	GEOGRAPHIC INFORMATION SYSTEM
INC	INCORPORATED
MASH	MANUAL FOR ASSESSING SAFETY HARDWARE
MASSDEP	MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
MASSDOT	MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
MAX	MAXIMUM
MIN	MINIMUM
NAVD 88	NORTH AMERICAN VERTICAL DATUM OF 1988
NI	NO INDICATOR
NO	NUMBER
NRCS	NATIONAL RESOURCES CONSERVATION SERVICE
NTU	NEPHELOMETRIC TURBIDITY UNIT
OC	ON CENTER
OHM	OIL, HAZARDOUS MATERIALS
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
PSI	POUNDS PER SQUARE INCH
SSD	SATURATED SURFACE DRY
SWSC	SPRINGFIELD WATER AND SEWER COMMISSION
TL	TEST LEVEL
TYP	TYPICAL
USDA	UNITED STATES DEPARTMENT OF AGRICULTURE
V:H	VERTICAL TO HORIZONTAL

IMPACT QUANTITIES AND DURATIONS (BORDEN BROOK)			
IMPACT TYPE	LUWW (SF)	LUWW FILL OR DREDGE (CY)	DURATION
COFFERDAM	230	8	2 WEEKS
DEWATERED WORK AREA	50	N/A	2 WEEKS

IMPACT QUANTITIES AND DURATIONS (SUGAR CREEK)				
IMPACT TYPE	BVV (SF)	LUWW (SF)	LUWW FILL OR DREDGE (CY)	DURATION
COFFERDAM	92	558	12	8 WEEKS
DEWATERED WORK AREA	60	200	N/A	8 WEEKS
DREDGING	0	50	5	4 WEEKS

04/15/2025



Springfield  
Water & Sewer  
Commission

Blandford, MA  
Granville, MA


MARK	DATE	DESCRIPTION
PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_General.dwg	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AML	

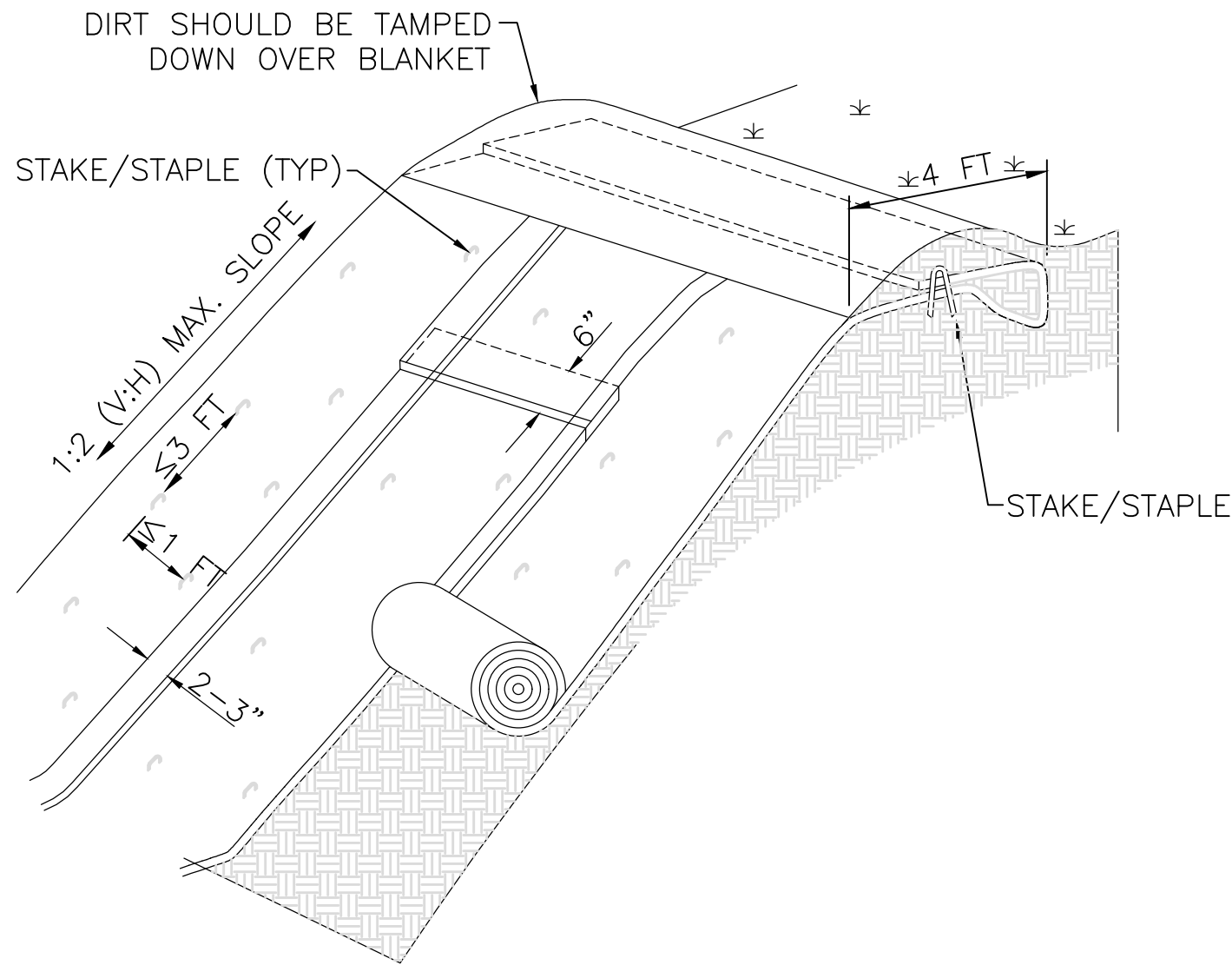
## GENERAL NOTES, LEGENDS AND ABBREVIATIONS

SCALE: NO SCALE

SHEET 2 OF 12



Last Saved: 4/15/2025 11:29am By: Ccarron  
Printed On: Apr 15, 2025 11:29am  
Title & Content: Blandford and Sugar Creek Bridge Repairs Drawings AutoCAD Sheet Combined 2025 Sheet S2057-071 Civil\_SugarCreek.dwg



### EROSION CONTROL BLANKET

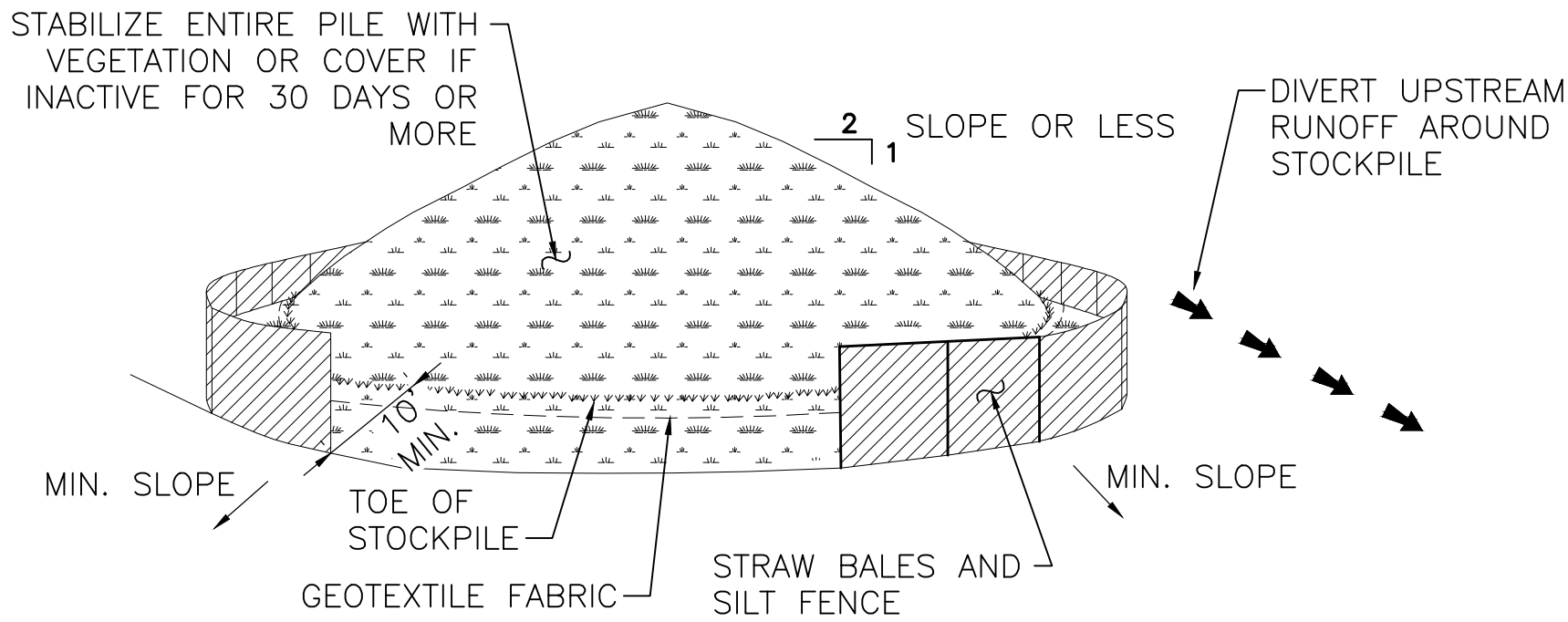
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#### INSTALLATION NOTES:

1. 6" LOAM & SEED OVER 100% DEGRADABLE EROSION CONTROL BLANKET.
2. EROSION CONTROL BLANKET SHOULD BE INSTALLED VERTICALLY DOWNSLOPE.
3. STAKES/STAPLES SHOULD BE PLACED NO MORE THAN 3 FT APART VERTICALLY, AND 1 FT APART HORIZONTALLY.
4. SLOPE SURFACE SHOULD BE FREE OF STICKS, ROCKS, AND OTHER OBSTRUCTIONS.
5. BLANKETS SHOULD BE ROLLED OUT LOOSELY AND STAKED/STAPLED TO MAINTAIN DIRECT SOIL CONTACT. DO NOT STRETCH THE BLANKETS.
6. INSTALL EROSION CONTROL BLANKETS AS NEEDED,

#### EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES SHOWN, SPECIFIED AND REQUIRED BY THE ENGINEER SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION OR IMMEDIATELY UPON REQUEST. MAINTAIN ALL SUCH CONTROL MEASURES UNTIL FINAL SURFACE TREATMENTS ARE IN PLACE AND/OR UNTIL PERMANENT VEGETATION IS ESTABLISHED.
2. MAINTAIN AN ADDITIONAL SUPPLY OF EROSION CONTROL MEASURES THROUGHOUT THE CONSTRUCTION PERIOD.
3. PRIOR TO STARTING WORK, CLEARLY STAKE WORK LIMIT LINE(S). DO NOT DISTURB VEGETATION AND TOPSOIL BEYOND THE NEW LIMIT LINE. COORDINATE WITH THE ENGINEER THE LOCATIONS FOR THE TEMPORARY STOCKPILING OF TOPSOIL DURING CONSTRUCTION.
4. SIDE SLOPES, AND DISTURBED VEGETATED AREAS, SHALL BE A MAXIMUM GRADE OF 2:1 COMPACTED, STABILIZED, LOAMED AND SEEDED AS SHOWN ON DRAWINGS. SIDE SLOPES SHALL BE IMMEDIATELY FINE GRADED AND SEEDED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
5. SILT TRAPPED AT BARRIERS SHALL BE REMOVED AND DISPOSED OF IN UPLAND AREAS OUTSIDE BUFFER ZONES. MATERIALS DEPOSITED IN ANY TEMPORARY SETTLING BASIN SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT. ALL DISTURBED AREAS SHALL BE RESTORED.
6. INSTALL EROSION CONTROLS AT THE EDGE OF NEW WORK. EROSION CONTROLS SHALL ACT AS LIMIT OF WORK LINE TO HELP ENSURE THAT EQUIPMENT DOES NOT DISTURB ADJACENT PROPERTIES.
7. ADDITIONAL EROSION CONTROLS MAY BE REQUIRED TO LIMIT SEDIMENTS FROM DISCHARGING TO ADJACENT PROPERTIES OR WATERWAYS.
8. PROPERLY STABILIZE AND PROTECT TEMPORARY STOCKPILES OF MATERIALS RELATED TO THE CONSTRUCTION ACTIVITIES TO LIMIT MOVEMENT OF MATERIAL ONTO ADJACENT PARCELS, OR INTO THE STREAM.
9. STABILIZE THE AREAS OF CONSTRUCTION ACTIVITIES AT THE CLOSE OF EACH CONSTRUCTION DAY. CHECK EROSION CONTROLS AT THIS TIME AND MAINTAIN OR REINFORCE IF NECESSARY
10. PROTECT NEW WORK FROM FLOODING. PROPERLY SLOPE GRADING IN THE AREAS SURROUNDING ALL EXCAVATIONS TO LIMIT WATER FROM RUNNING INTO THE EXCAVATED AREA OR TO ADJACENT PROPERTIES. UPON COMPLETION OF THE WORK, RESTORE ALL AREAS IN A SATISFACTORY MANNER.
11. ALL SILT-LADEN WATER MUST BE SETTLED OR FILTERED TO REMOVE ALL SEDIMENTS PRIOR TO RELEASE TO AN UPLAND AREA, IN A SEDIMENTATION OR FILTER BAG LOCATED DOWN GRADIENT.
12. DEWATER AS NECESSARY TO KEEP CONSTRUCTION AREAS FREE OF WATER, DISCHARGE WATER FROM DEWATERING TO APPROPRIATE UPLAND LOCATION AND WITHOUT SEDIMENT (SEE DEWATERING REQUIREMENTS).
13. AT THE END OF EACH WORK DAY, ANY SEDIMENTS TRACKED ONTO PUBLIC RIGHTS-OF-WAY BEYOND THE PROJECT LIMITS SHALL BE SWEEPED.



### SOIL STOCKPILING

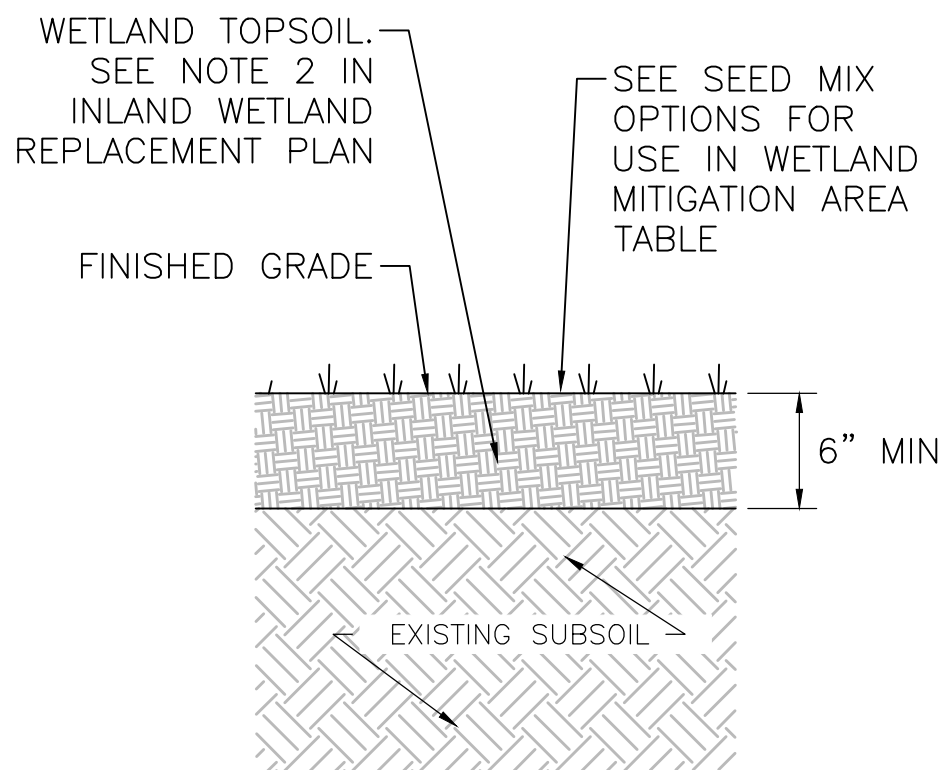
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#### INSTALLATION NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 2H:1V.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH EITHER SILT FENCING AND STRAWBALES, THEN STABILIZED WITH VEGETATION OR COVERED.

#### INLAND WETLAND REPLACEMENT PLAN NOTES FOR SUGAR CREEK BRIDGE ONLY:

1. STABILIZATION OF DISTURBED AREAS OR NEW SOIL SHALL BE IMPLEMENTED WITHIN 14 DAYS AFTER GRADING OR CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. APPROPRIATE VEGETATIVE SOIL STABILIZATION IS TO BE USED TO MINIMIZE EROSION. TEMPORARY OR PERMANENT VEGETATIVE COVER IS TO BE ESTABLISHED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, USING HYDRO-SEEDING, BROADCASTING, OR OTHER APPROVED TECHNIQUES.
2. IF NEEDED, WETLAND TOPSOIL FOR WETLAND REPLACEMENT AREAS SHALL CONSIST OF A MIXTURE OF EQUAL VOLUMES OF CLEAN, WEED AND SEED FREE ORGANIC AND MINERAL MATERIALS. WELL-DECOMPOSED CLEAN LEAF COMPOST SHALL BE USED AS A SOIL AMENDMENT TO ACHIEVE THE ORGANIC STANDARD. WOOD CHIPS, PEAT MOSS, AND PEAT MOSS BY-PRODUCTS SHALL NOT BE USED AS ORGANIC AMENDMENTS. SUPPLEMENTAL TOPSOIL IN WETLAND REPLACEMENT AREAS SHALL HAVE A MINIMUM ORGANIC CARBON CONTENT OF 4-12% (7 TO 21% ORGANIC MATTER) ON A DRY WEIGHT BASIS.
3. NATIVE HERBACEOUS PLANTS (CINNAMON FERN / OSMUNDA CINNAMOMEA) SHOULD BE INSTALLED DURING THE GROWING SEASON.
4. MAINTAIN VEGETATED SURFACES, INCLUDING WATER, AND PLANT REPLACEMENT UNTIL ESTABLISHED CONDITIONS ARE MET AND UNTIL THE END OF THE CONTRACTUAL MAINTENANCE PERIOD.
5. THE INLAND WETLAND REPLACEMENT AREAS SHALL BE MULCHED WITH STRAW FOLLOWING NATIVE PLANT INSTALLATION.
6. FOR WETLAND 1J, INSTALL OSMUNDA CINNAMONEA (6'-0" SPACING, 10 PLANTS MIN), AND FOR WETLAND 1F, INSTALL SEED MIX PER MANUFACTURER RECOMMENDATIONS.

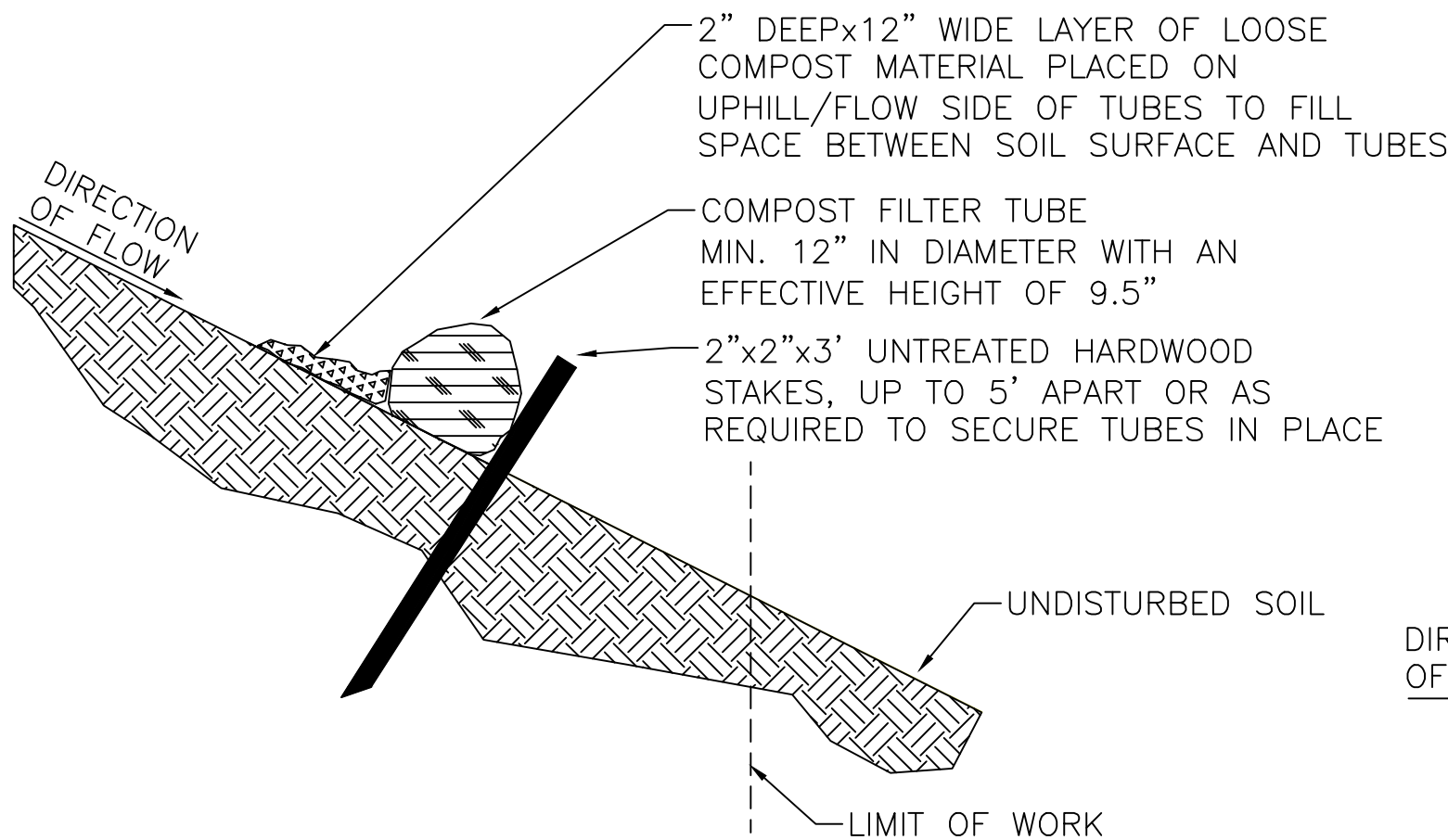


### WETLAND TOPSOIL FOR INLAND WETLAND REPLACEMENT AREA

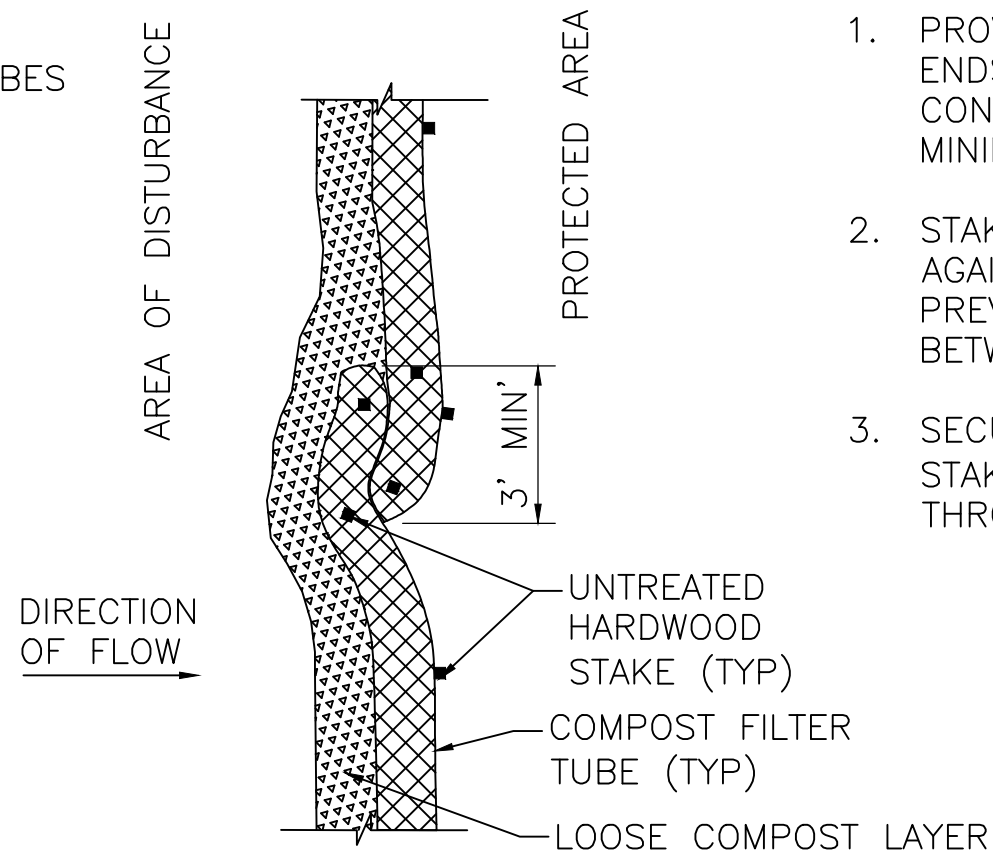
NOT TO SCALE

#### NOTES:

1. PROVIDE 3' MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW.
2. STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM.
3. SECURE ENDS OF TUBES WITH STAKES SPACED 18" APART THROUGH TOPS OF TUBES.



#### SECTION VIEW



#### PLAN VIEW - JOIN DETAIL

#### COMPOST FILTER TUBE NOTES:

1. 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 SITUATION WITH LONGER SLOPES OR STEEPER SLOPES.
2. INSTALL TUBES ALONG CONTOURS AND PERPENDICULAR TO SHEET OR CONCENTRATED FLOW.
3. DO NOT INSTALL IN PERENNIAL, EPHEMERAL OR INTERMITTENT STREAMS.
4. CONFIGURE TUBES AROUND EXISTING SITE FEATURES TO MINIMIZE SITE DISTURBANCE AND MAXIMIZE CAPTURE AREA OF STORMWATER RUN-OFF.
5. TUBES FOR COMPOST FILTERS SHALL BE JUTE MESH OR APPROVED BIODEGRADABLE MATERIAL. ADDITIONAL TUBES SHALL BE USED AT THE DIRECTION OF THE ENGINEER.
6. TAMP TUBES IN PLACE TO ENSURE GOOD CONTACT WITH SOIL SURFACE. IT IS NOT NECESSARY TO TRENCH TUBES INTO EXISTING GRADE.
7. 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.
8. PROVIDE 3' MINIMUM OVERLAP AT ENDS OF TUBES TO JOIN IN A CONTINUOUS BARRIER AND MINIMIZE UNIMPEDED FLOW.
9. STAKE JOINING TUBES SNUGLY AGAINST EACH OTHER TO PREVENT UNFILTERED FLOW BETWEEN THEM.
10. SECURE ENDS OF TUBES WITH STAKES SPACED 18" APART THROUGH TOPS OF TUBES.

### COMPOST FILTER TUBES

NOT TO SCALE

Tighe&Bond



## Borden Brook Reservoir Spillway Bridge and Sugar Creek Bridge Repairs

### Springfield Water & Sewer Commission

Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_Civil_SugarCreek.dwg	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AML	

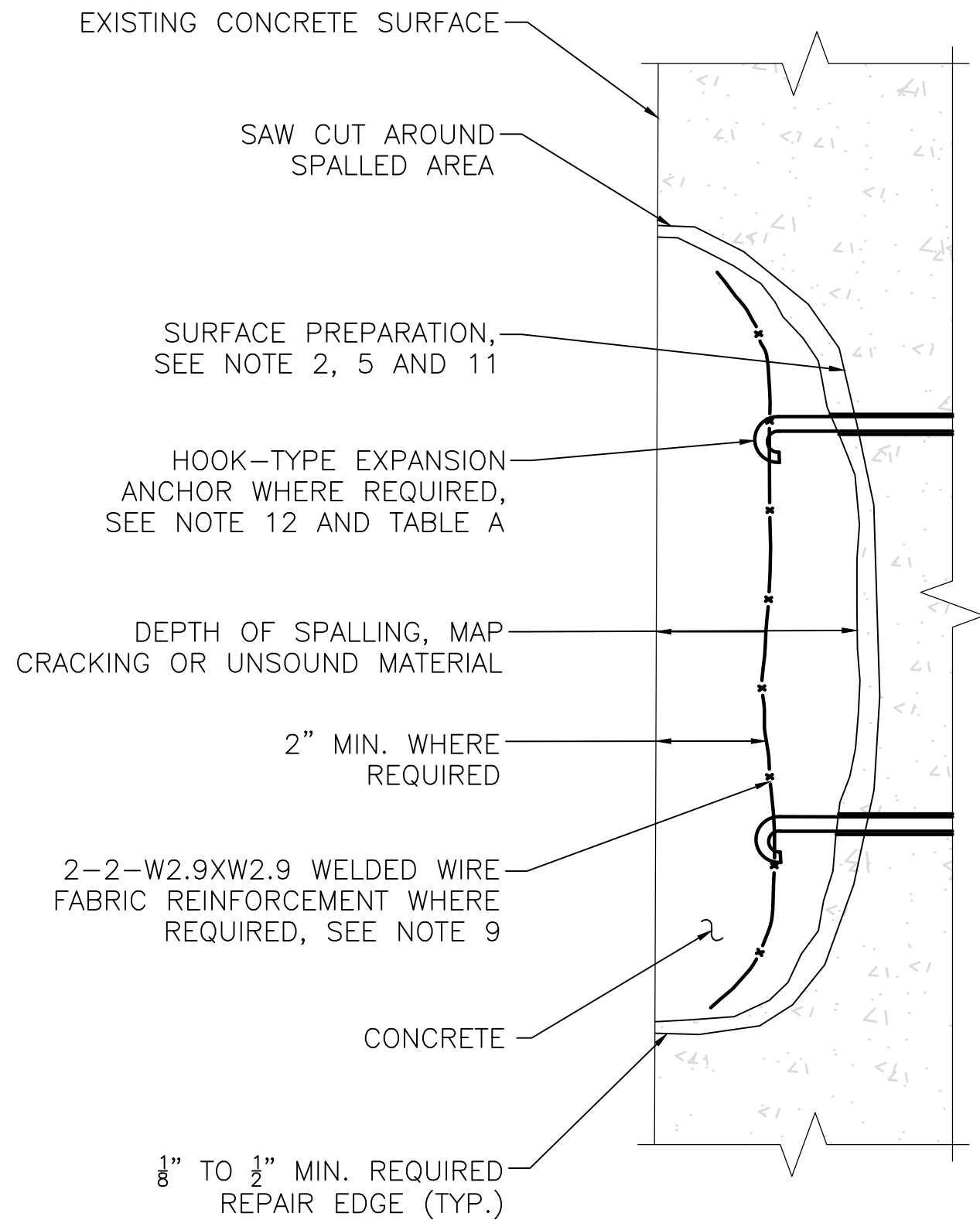
#### SITE DETAILS

SCALE: NO SCALE

SHEET 3 OF 12

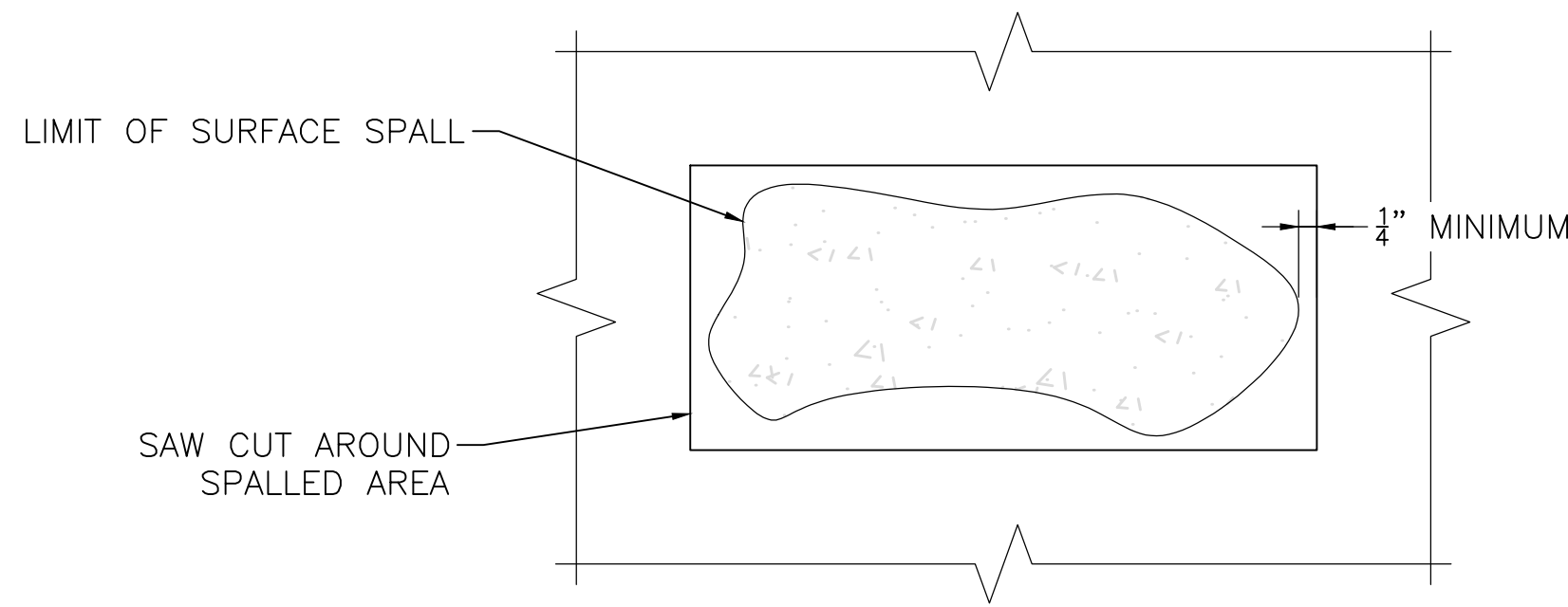


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File: S2057-071\_Structural\_BordenBrook.dwg  
Project: Borden Brook and Sugar Creek Bridge Repairs  
Drawing: S2057-071\_Structural\_BordenBrook.dwg  
Sheet: 4 of 12



TYPICAL SPALL REPAIR DETAIL  
NOT TO SCALE

TABLE A	
SIZE AND SPACING OF HOOK-TYPE ANCHORS	
THICKNESS OF PATCH MATERIAL	SIZE AND SPACING
4" +/-	$\frac{1}{2}$ " DIA. AT +/-24" O.C.
5" +/-	$\frac{1}{2}$ " DIA. AT +/-22" O.C.
6" +/-	$\frac{1}{2}$ " DIA. AT +/-20" O.C.



TYPICAL SPALL REPAIR PLAN  
NOT TO SCALE

NOTES:

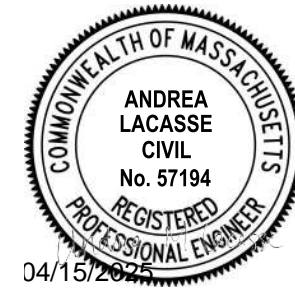
- ALL WORK ON THIS DRAWING SHALL BE PERFORMED WHERE INDICATED ON THE PLANS AND ELEVATIONS TO THE EXTENTS AS DETERMINED BY THE ENGINEER IN THE FIELD. REFER TO PROJECT SPECIFICATIONS FOR MORE DETAIL.
- SURFACE PREPARATION, PROPORTIONING AND MIXING OF MATERIALS, APPLICATION OF MATERIALS, AND REPAIR PROCEDURES SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS, MANUFACTURER'S RECOMMENDATIONS, AND ENGINEER'S SATISFACTION.
- NEW CONCRETE PATCHES SHALL MATCH SHAPE OF EXISTING CONCRETE SURFACES.
- EXPOSED REINFORCING BARS SHALL BE COATED WITH A ZINC-RICH PAINT THAT CONFORMS TO PS TT-P-641, BEFORE APPLYING THE PATCHING MATERIAL. COST OF PAINT SHALL BE INCLUDED IN THE COST OF PATCHING MATERIAL ITEM. PRIOR TO APPLYING ZINC-RICH PAINT, REMOVE RUST AND DEBRIS WITH A WIRE BRUSH.
- THE REMOVAL OF DETERIORATED CONCRETE SHALL OCCUR IN THE PRESENCE OF THE ENGINEER OR HIS APPOINTED REPRESENTATIVE. IF THE REMOVAL OF DETERIORATED CONCRETE EXCEEDS THE AREA SHOWN ON THE PLAN BY MORE THAN 25%, THE REMOVAL WORK SHALL BE STOPPED AT THAT LOCATION AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY. THE ENGINEER SHALL DETERMINE IF THE REMOVAL OPERATIONS REDUCE THE STRUCTURAL CAPACITY OF THE ELEMENT. COST OF REMOVAL OF DETERIORATED CONCRETE AND SURFACE PREPARATION OF THE REPAIR AREA SHALL BE INCLUDED IN THE PAY ITEM OF THE CAST-IN-PLACE CONCRETE.
- AREA DISTURBED BY THE CONSTRUCTION SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UNLESS OTHERWISE NOTED OR AS ORDERED BY THE ENGINEER.
- REPAIR DETAILS APPLY TO SPALLED, SCALED, AND HOLLOW AREAS IN ABUTMENTS, ARCH, AND SPANDREL WALLS WHERE REQUIRED AND NOTED ON THE DRAWINGS TO THE EXTENTS IDENTIFIED BY THE ENGINEER IN THE FIELD.
- REPAIR DEPTH SHALL BE  $\frac{1}{8}$ "(MIN.) OR GREATER. REPAIR DEPTHS LESS THAN  $\frac{1}{8}$ " NEED NOT BE REPAIRED.
- FOR AREAS WHERE CONCRETE REPAIR EXCEEDS 4" IN DEPTH, A SINGLE LAYER OF WELDED WIRE FABRIC REINFORCEMENT SHALL BE USED TO REINFORCE EACH 4" THICKNESS OF CONCRETE. THE COST OF THE WELDED WIRE FABRIC REINFORCEMENT SHALL BE INCLUDED IN THE COST OF THE SPALL REPAIR. SEE SPECIFICATION SECTION 03930 FOR MATERIAL REQUIREMENTS.
- THE PERIMETER OF EACH DETERIORATED AREA SHALL BE SQUARED OFF BY CHISELING OR SAWCUTTING.
- SURFACE PREPARATIONS:  
REMOVE LOOSE AND DETERIORATED CONCRETE, INCLUDING DIRT, OIL, GREASE, AND ALL BOND-INHIBITING MATERIALS FROM SURFACE, LEAVING NO OFFSET OR ABRUPT CHANGES IN CONTOUR. SURFACE PREPARATION SHALL BE DONE BY SCABBLER, CHISELING, WIRE BRUSHING, OR OTHER APPROPRIATE MECHANICAL MEANS AS APPROVED OF BY THE ENGINEER.  
ROUGHEN CONTACT SURFACES WITH A MINIMUM PROFILE OF APPROXIMATELY  $\frac{1}{16}$ " FOR BONDING WITH PATCHING MATERIAL.  
SATURATE WITH CLEAN WATER PRIOR TO APPLYING MORTAR. SUBSTRATE SHOULD BE SATURATED SURFACE DRY (SSD) WITH NO STANDING WATER DURING APPLICATION OF PATCHING MATERIAL.
- EXPANSION ANCHORS SHALL BE MECHANICALLY GALVANIZED IN ACCORDANCE WITH ASTM B695, CLASS 50, TYPE 1. COST OF HOOK-TYPE ANCHORS, INCLUDING MATERIAL AND INSTALLATION, SHALL BE INCLUDED IN THE COST OF PATCHING MATERIAL.
- CONCRETE REPAIRS WITH A DEPTH GREATER THAN 4" SHALL BE FORMED AND POURED. CONCRETE REPAIRS WITH A DEPTH LESS THAN 4" SHALL BE A TROWEL ON MORTAR REPAIR.

CAVITY REPAIR NOTES (BORDEN BROOK RESERVOIR SPILLWAY BRIDGE ONLY):

- CAVITIES SHALL BE REPAIRED USING SIKAQUICK VOH OR APPROVED EQUAL. REPAIR MATERIAL SHALL BE PLACED PER MANUFACTURER'S RECOMMENDATIONS.

CRACK REPAIR NOTES (BORDEN BROOK RESERVOIR SPILLWAY BRIDGE ONLY):

- CRACKS ARE TO BE REPAIRED WITH POLYURETHANE CHEMICAL GROUT INJECTION. REFER TO SPECIFICATION SECTION 03930.



Borden Brook  
Reservoir  
Spillway  
Bridge and  
Sugar Creek  
Bridge Repairs

Springfield  
Water & Sewer  
Commission

Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
PROJECT NO: S2057-071		
DATE: 04/15/2025		
FILE: S2057-071_Structural_BordenBrook.dwg		
DRAWN BY: JG		
DESIGNED/CHECKED BY: AvC		
APPROVED BY: AML		

STRUCTURAL REPAIR  
DETAILS

SCALE: NO SCALE





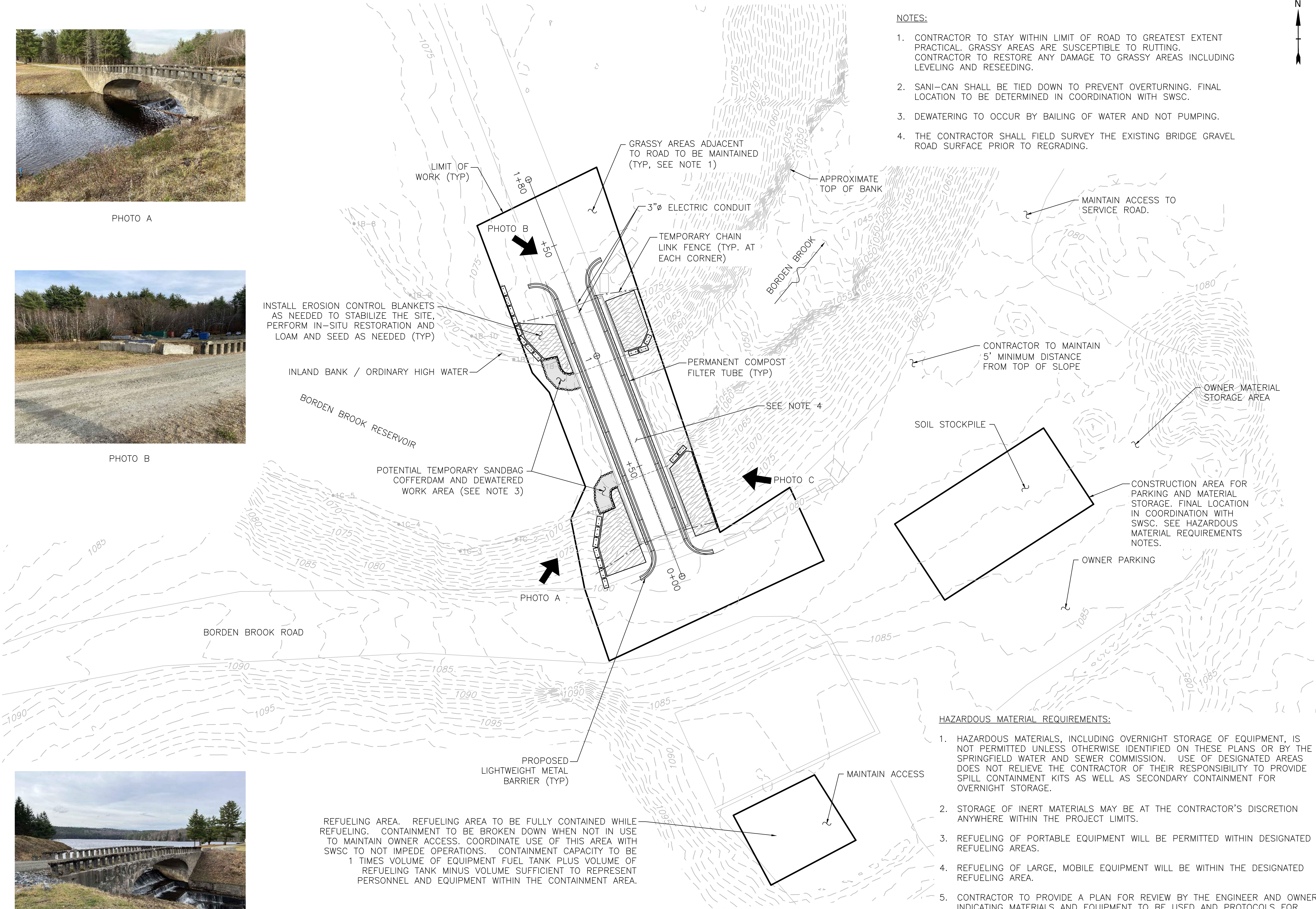
PHOTO A



PHOTO B

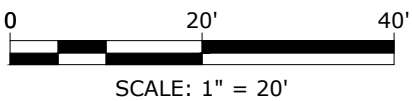


PHOTO C



SITE PLAN (BORDEN BROOK RESERVOIR SPILLWAY BRIDGE)

SCALE: 1" = 20'



NOTES:

1. CONTRACTOR TO STAY WITHIN LIMIT OF ROAD TO GREATEST EXTENT PRACTICAL. GRASSY AREAS ARE SUSCEPTIBLE TO RUTTING. CONTRACTOR TO RESTORE ANY DAMAGE TO GRASSY AREAS INCLUDING LEVELING AND RESEEDING.
2. SANI-CAN SHALL BE TIED DOWN TO PREVENT OVERTURNING. FINAL LOCATION TO BE DETERMINED IN COORDINATION WITH SWSC.
3. DEWATERING TO OCCUR BY BAILING OF WATER AND NOT PUMPING.
4. THE CONTRACTOR SHALL FIELD SURVEY THE EXISTING BRIDGE GRAVEL ROAD SURFACE PRIOR TO REGRADING.



Borden Brook Reservoir Spillway Bridge and Sugar Creek Bridge Repairs

Springfield Water & Sewer Commission

Blandford, MA  
Granville, MA

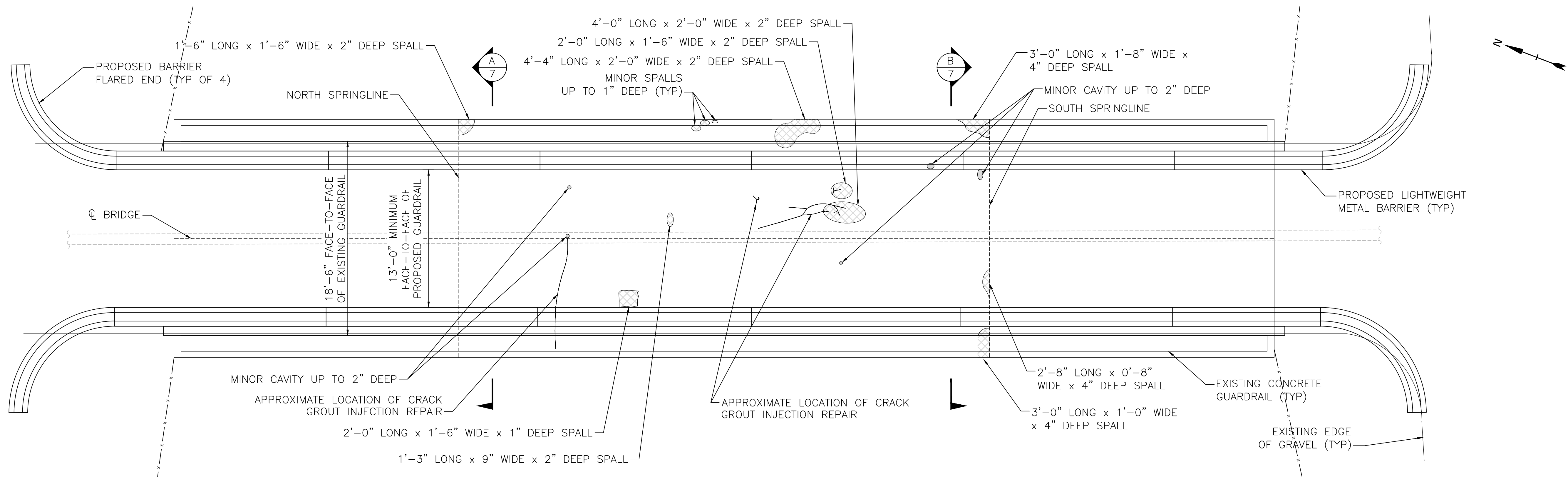
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PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_Civil_BordenBrook.dwg	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AML	

PROPOSED SITE PLAN  
(BRIDGE NO. 1)

SCALE: 1" = 20'



Last Saved: 4/9/2025  
Printed On: Apr 15, 2025 5:21 PM  
Title & Author: S2057-SWSC-071 - Borden Brook and Sugar Creek Bridge Repairs  
Drawings/AutoCAD/Sheet/Combined 2025/Sheet/S2057-071\_Structural\_BordenBrook.dwg

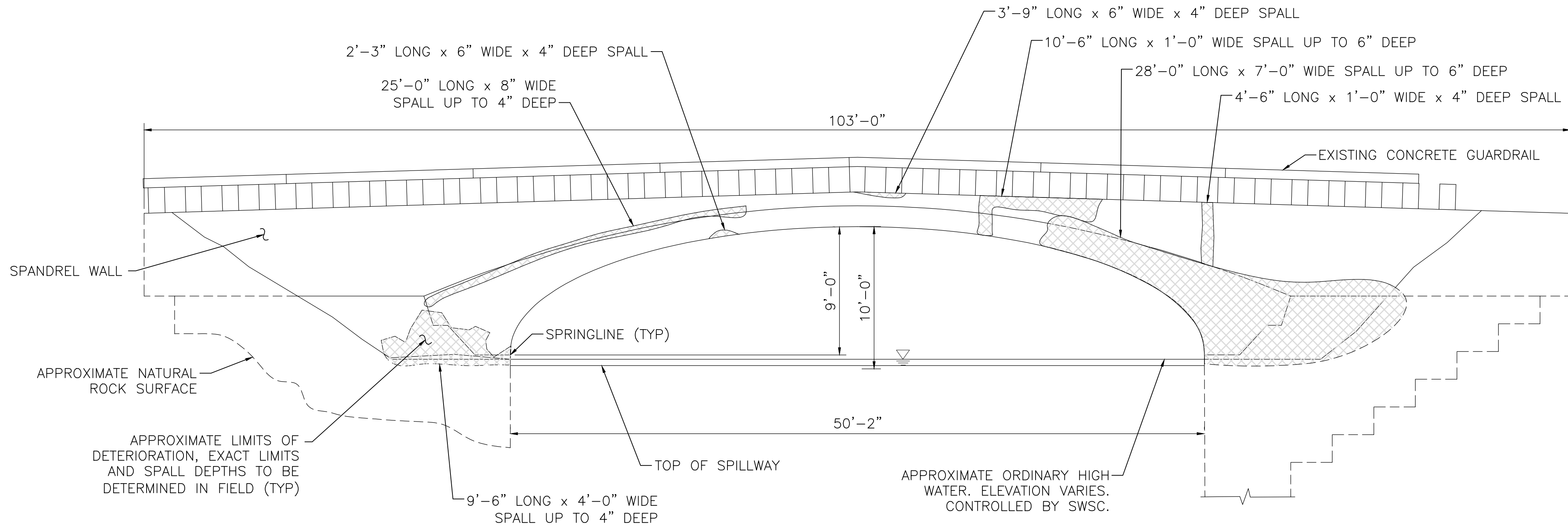


BRIDGE PLAN

SCALE:  $\frac{3}{16}$ " = 1'-0"

NOTES:

1. DETERIORATION SHOWN ON PLAN IS LOCATED ON UNDERSIDE OF ARCH. CONDITION OF CONCRETE ON TOPSIDE OF ARCH IS UNKNOWN.



WEST ELEVATION (LOOKING EAST)

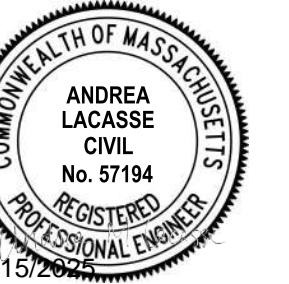
SCALE:  $\frac{3}{16}$ " = 1'-0"

NOTES:

1. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROTECT THE BROOK AND KEEP WORK OUT OF THE BROOK. ALL DEBRIS INCLUDING ANY CONCRETE DUST SHALL BE CAPTURED AND PROPERLY DISPOSED OF. COOLING WATER USED TO CUT CONCRETE SHALL BE CAPTURED AND NOT DISCHARGED INTO THE BROOK.
2. CONTRACTOR MAY USE THE BRIDGE TO SUPPORT TEMPORARY SCAFFOLDING. SUBMIT CALCULATIONS EVALUATING THE ADEQUACY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED SCAFFOLDING STAMPED BY A PROFESSIONAL ENGINEER FOR REVIEW BY THE ENGINEER PRIOR TO SETTING UP STAGING.
3. IF THE BRIDGE IS USED TO ANCHOR SCAFFOLDING, CONTRACTOR SHALL PROPOSE PLAN TO ABANDON ANCHORS IN PLACE SUCH THAT THEY WILL BE CONCEALED FROM SIGHT AND WILL NOT CAUSE FUTURE DEGRADATION OF THE CONCRETE.
4. SCAFFOLDING OR OTHER MEANS OF ACCESS SHALL REMAIN ABOVE THE WATERWAY AND SHALL NOT UTILIZE ANY PORTION OF THE SPILLWAY FOR SUPPORT.
5. SPALLS, CRACKS AND CAVITIES SHOWN ARE APPROXIMATE. ENGINEER TO DETERMINE FINAL LIMITS IN THE FIELD.

LEGEND:

- INDICATES APPROXIMATE AREAS OF CONCRETE SPALL REPAIR WORK
- INDICATES APPROXIMATE AREAS OF CONCRETE CAVITY REPAIR WORK
- INDICATES APPROXIMATE AREAS OF CONCRETE CRACK REPAIR WORK

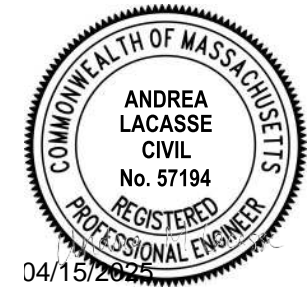


Borden Brook Reservoir Spillway Bridge and Sugar Creek Bridge Repairs

Springfield Water & Sewer Commission

Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
PROJECT NO:		S2057-071
DATE:		04/15/2025
FILE:		S2057-071_Structural_BordenBrook.dwg
DRAWN BY:		JG
DESIGNED/CHECKED BY:		AvC
APPROVED BY:		AML
STRUCTURE PLAN AND ELEVATIONS 1 (BRIDGE NO. 1)		
SCALE:		AS SHOWN
SHEET 6 OF 12		



Borden Brook  
Reservoir  
Spillway  
Bridge and  
Sugar Creek  
Bridge Repairs

Springfield  
Water & Sewer  
Commission

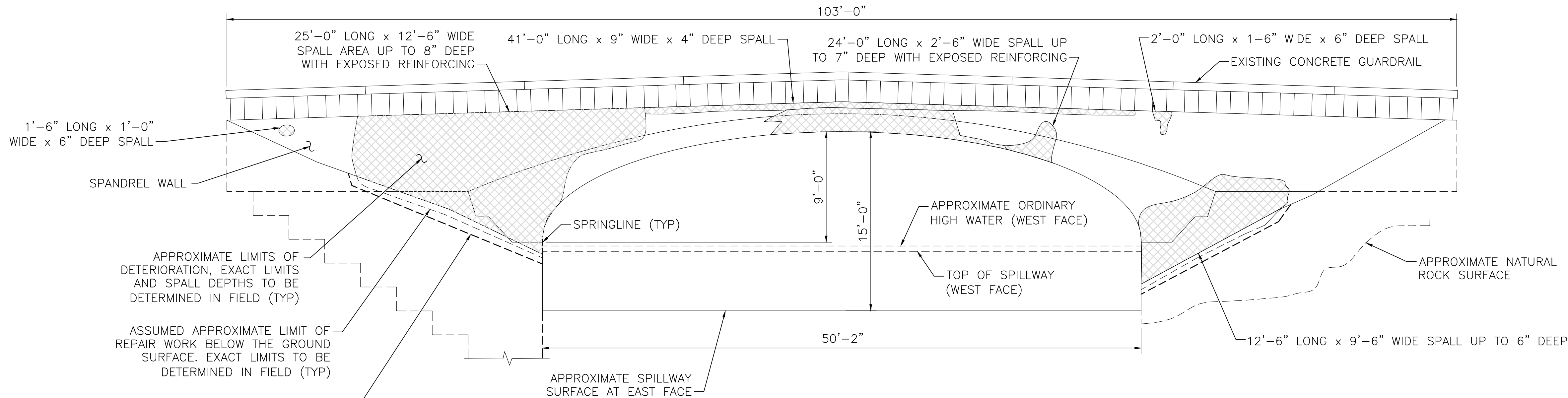
Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
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PROJECT NO:	S2057-071
DATE:	04/15/2025
FILE:	S2057-071_Structural_BordenBrook.dwg
DRAWN BY:	JG
DESIGNED/CHECKED BY:	AvC
APPROVED BY:	AML

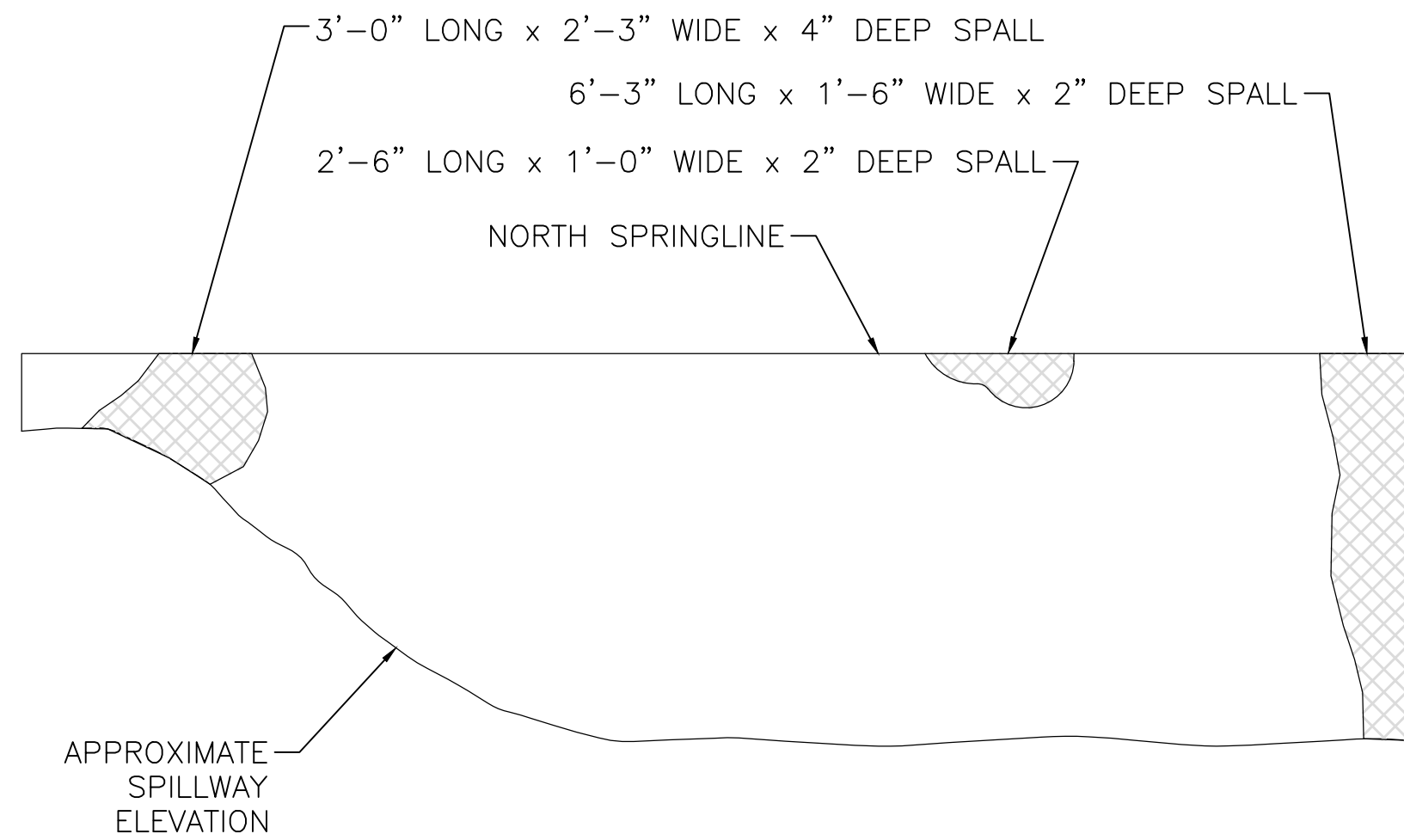
STRUCTURE PLAN AND  
ELEVATIONS 2 (BRIDGE  
NO. 1)

SCALE: AS SHOWN



EAST ELEVATION (LOOKING WEST)

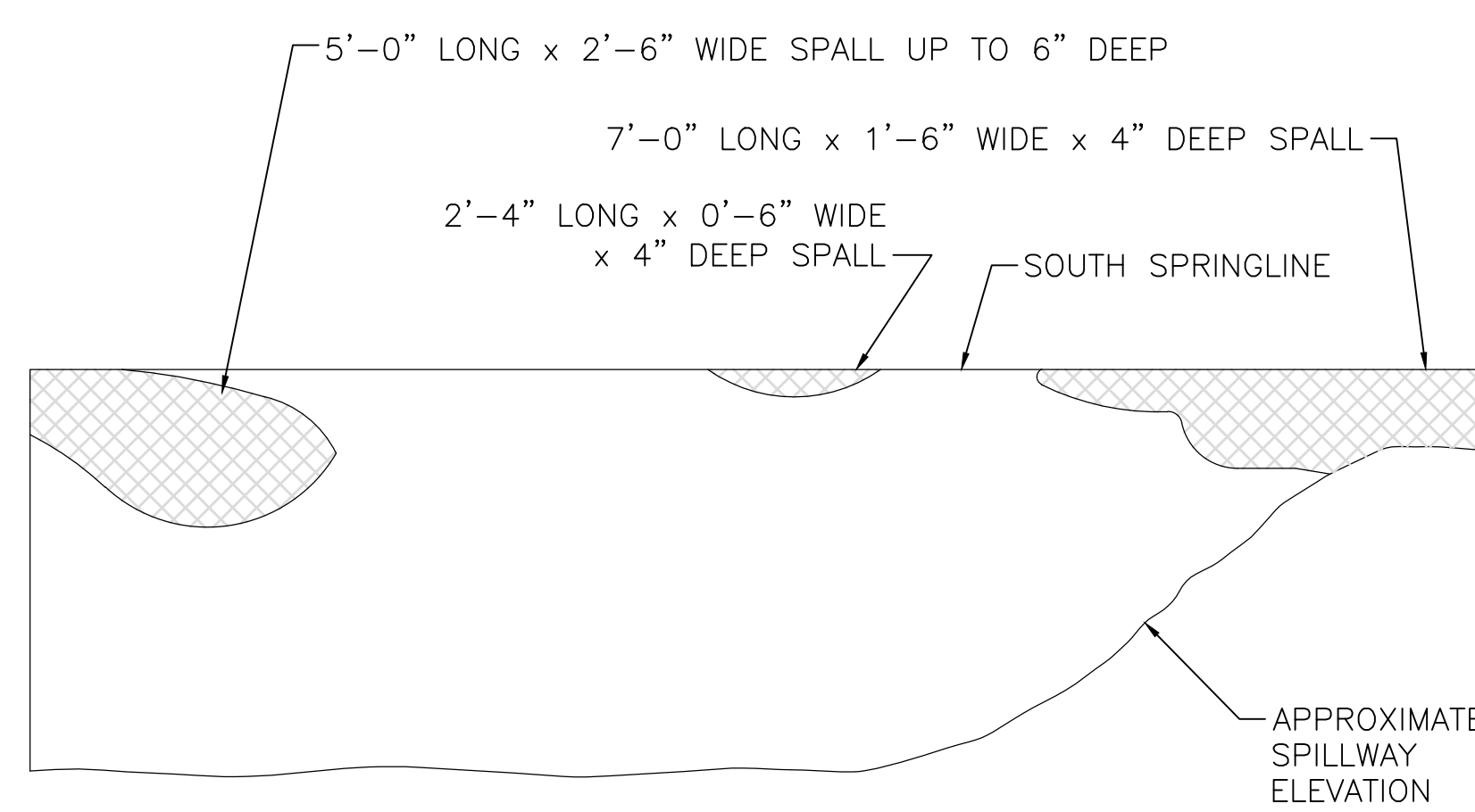
SCALE:  $\frac{3}{16}$ " = 1'-0"



NORTH ABUTMENT ELEVATION A

SCALE:  $\frac{3}{8}$ " = 1'-0"

6



SOUTH ABUTMENT ELEVATION B

SCALE:  $\frac{3}{8}$ " = 1'-0"

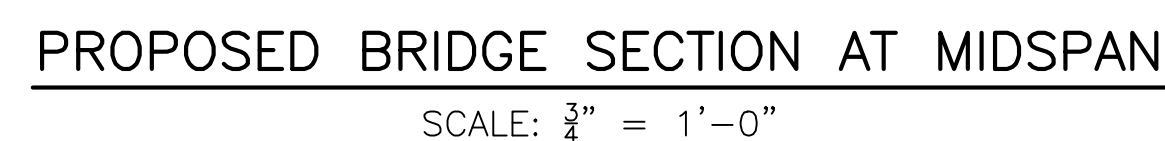
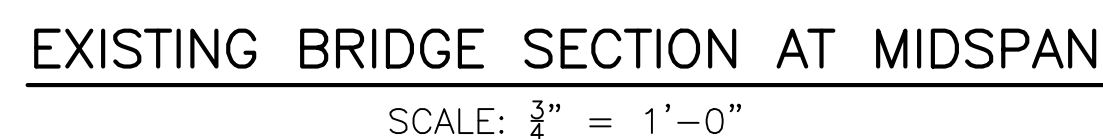
6

NOTES:

1. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROTECT THE BROOK AND KEEP WORK OUT OF THE BROOK. ALL DEBRIS INCLUDING ANY CONCRETE DUST SHALL BE CAPTURED AND PROPERLY DISPOSED OF. COOLING WATER USED TO CUT CONCRETE SHALL BE CAPTURED AND NOT DISCHARGED INTO THE BROOK.
2. CONTRACTOR MAY USE THE BRIDGE TO SUPPORT TEMPORARY SCAFFOLDING. SUBMIT CALCULATIONS EVALUATING THE ADEQUACY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED SCAFFOLDING STAMPED BY A PROFESSIONAL ENGINEER FOR REVIEW BY THE ENGINEER PRIOR TO SETTING UP STAGING.
3. IF THE BRIDGE IS USED TO ANCHOR SCAFFOLDING, CONTRACTOR SHALL PROPOSE PLAN TO ABANDON ANCHORS IN PLACE SUCH THAT THEY WILL BE CONCEALED FROM SIGHT AND WILL NOT CAUSE FUTURE DEGRADATION OF THE CONCRETE.
4. SCAFFOLDING OR OTHER MEANS OF ACCESS SHALL REMAIN ABOVE THE WATERWAY AND SHALL NOT UTILIZE ANY PORTION OF THE SPILLWAY FOR SUPPORT.
5. SPALLS, CRACKS AND CAVITIES SHOWN ARE APPROXIMATE. ENGINEER TO DETERMINE FINAL LIMITS IN THE FIELD.

LEGEND:

- INDICATES APPROXIMATE AREAS OF CONCRETE SPALL REPAIR WORK
- INDICATES APPROXIMATE AREAS OF CONCRETE CAVITY REPAIR WORK
- INDICATES APPROXIMATE AREAS OF CONCRETE CRACK REPAIR WORK



1. THE SELECTED GUARDRAIL SYSTEM SHALL MEET THE REQUIREMENTS OF MASH TL-1. THE MAXIMUM ALLOWABLE LATERAL DEFLECTION SHALL BE EQUAL TO 'DISTANCE A' SHOWN IN THE SECTION AS MEASURED IN THE FIELD.
2. NON-DEGRADABLE COMPOST FILTER TUBES SHALL BE PLACED PRIOR TO ALL ROADWAY WORK ON THE BRIDGE.
3. NON-DEGRADABLE COMPOST FILTER TUBES ARE INTENDED TO BE PERMANENT AND SHALL BE LEFT IN PLACE IN THE FINAL CONDITION. ANY FILTER TUBES DAMAGED DURING CONSTRUCTION MUST BE REPLACED.
4. PROVIDE LEVEL SURFACE FOR PROPOSED BARRIER SYSTEM AND ROADWAY. MINIMUM DEPTH OF GRAVEL LAYER SHALL BE 6". EXISTING GRAVEL ON BRIDGE MAY BE REUSED. PROVIDE NEW GRAVEL AS NEEDED.

Springfield  
Water & Sewer  
Commission

Blandford, MA  
Granville, MA

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MARK	DATE	DESCRIPTION
PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_Structural_BordenBrook.d	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AM	

TYPICAL SECTIONS  
(BRIDGE NO. 1)

SCALE: AS SHOWN



Last Saved: 4/15/2025  
Plotted On: Apr 15, 2025  
Title & Content: 2025/071 Civil\_SugarCreek.dwg  
User: CGarzon  
Table & Layout: 2025/071 Civil\_SugarCreek.dwg  
Project: Borden Brook and Sugar Creek Bridge Repairs  
Drawing: AutoCAD Sheet (Combined 2025/071 Civil\_SugarCreek.dwg)

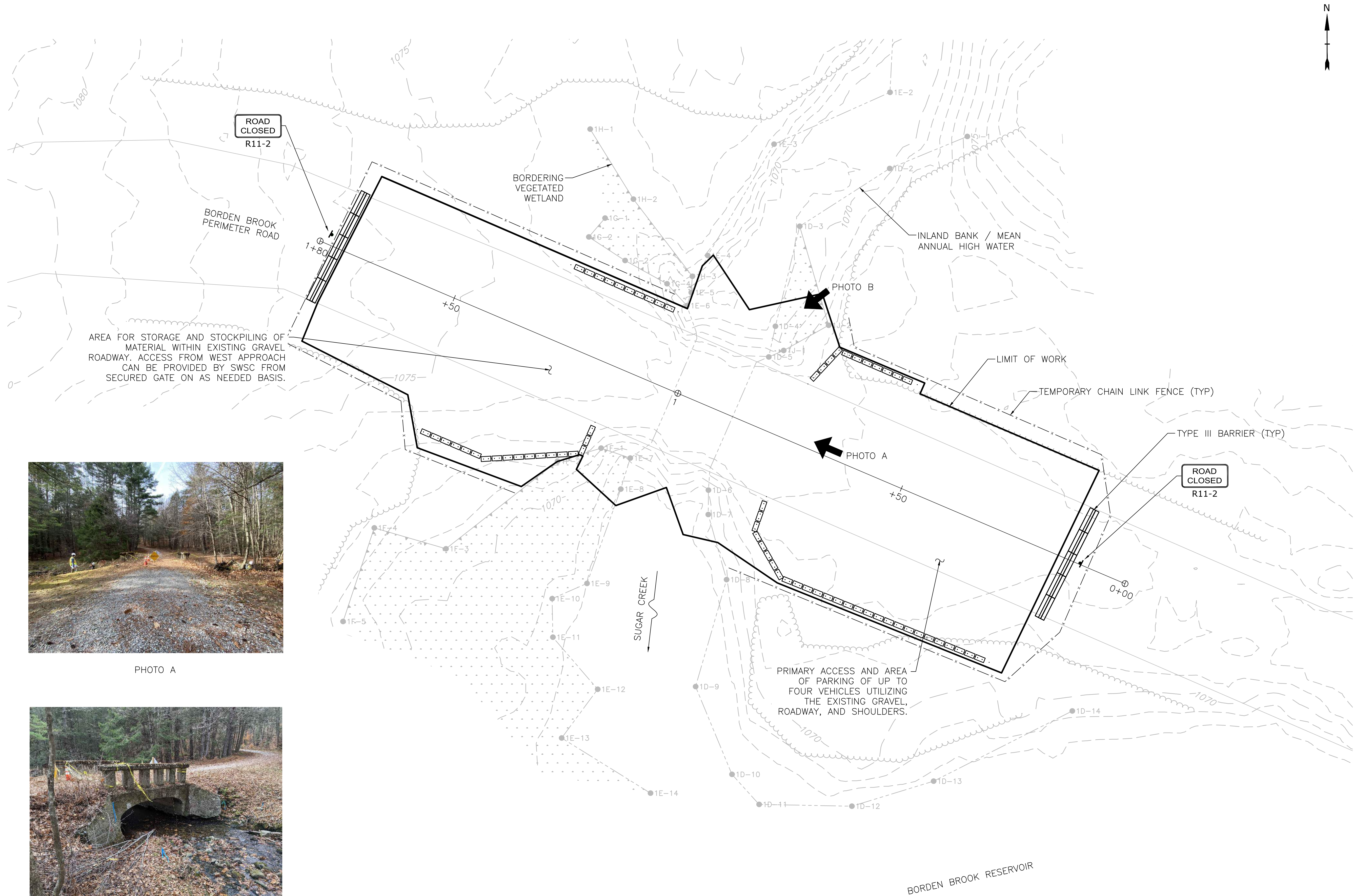


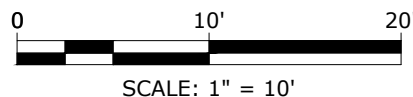
PHOTO A



PHOTO B

SITE PLAN

SCALE: 1" = 10'



Borden Brook Reservoir Spillway Bridge and Sugar Creek Bridge Repairs

Springfield Water & Sewer Commission

Blandford, MA  
Granville, MA

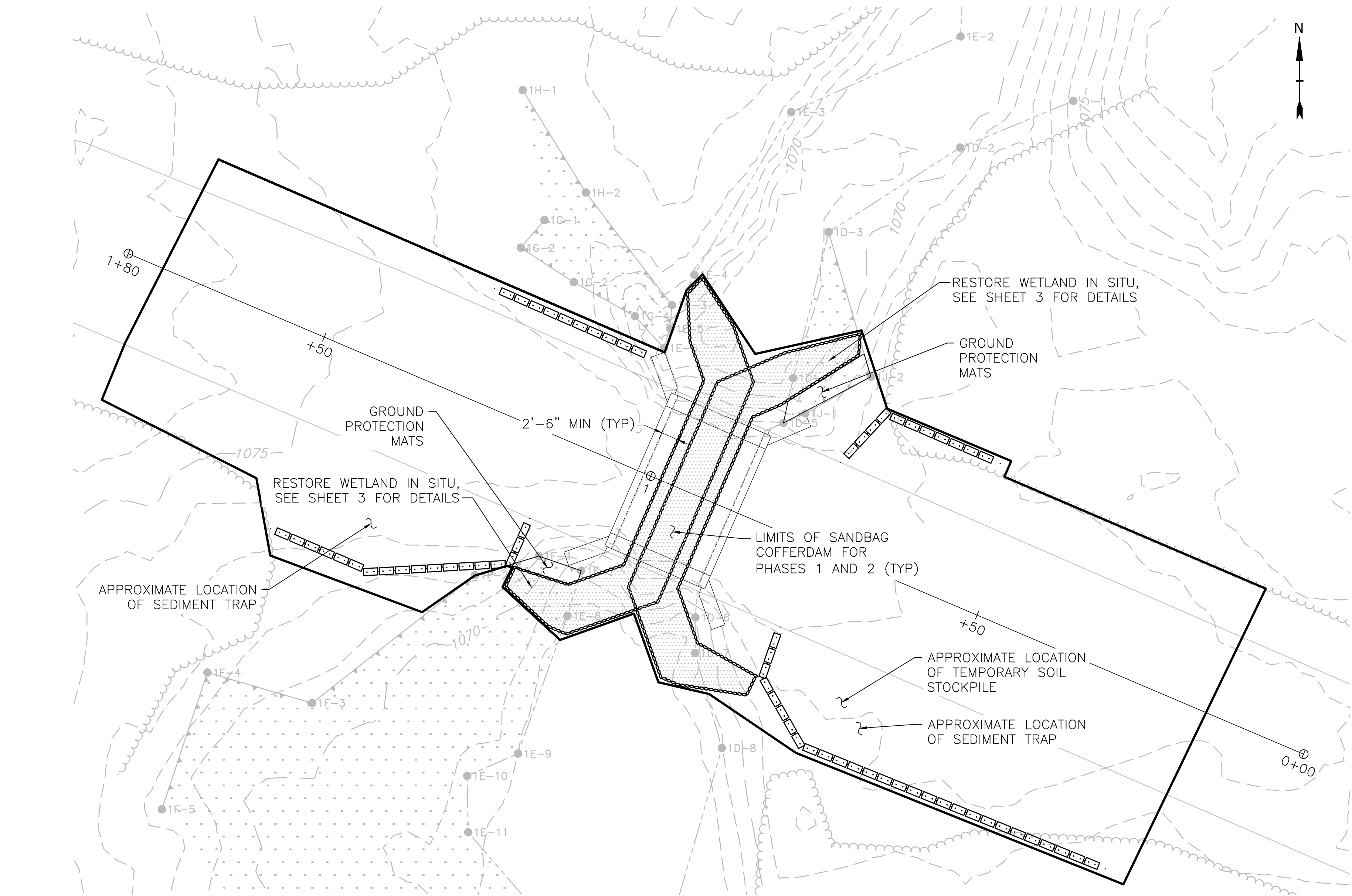
MARK	DATE	DESCRIPTION
PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_Civil_SugarCreek.dwg	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AML	

PROPOSED SITE PLAN  
(BRIDGE NO. 2)

SCALE: 1" = 10'

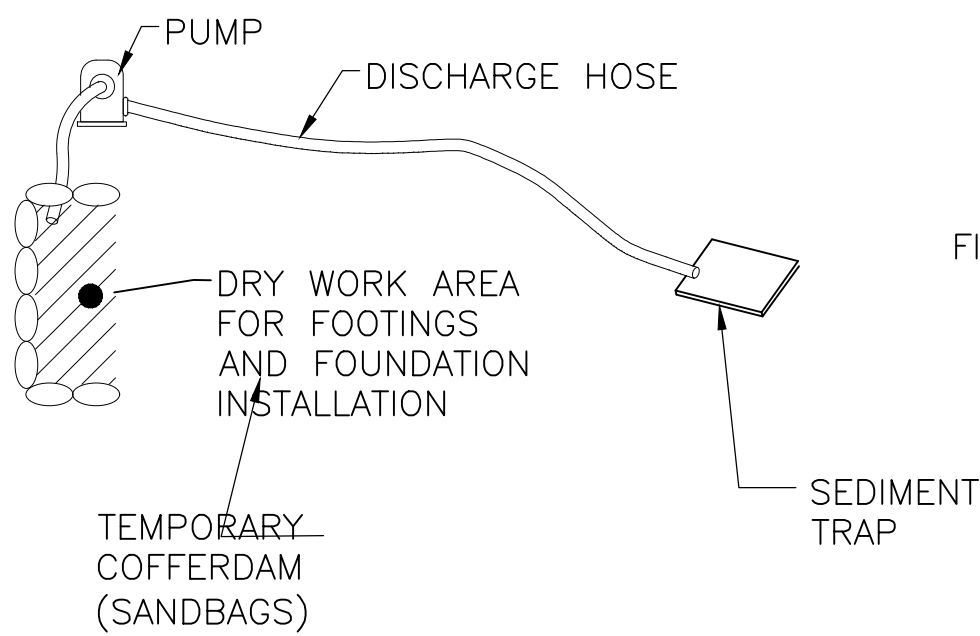


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Plotted On: Apr 15, 2025 5:55pm  
Title & Content: Borden Brook and Sugar Creek Bridge Repairs Drawings AutoCAD Sheet Combined 2025 Sheet S2057-071 Structural\_SugarCreek.dwg



### WATER HANDLING PLAN

SCALE: 1" = 10'

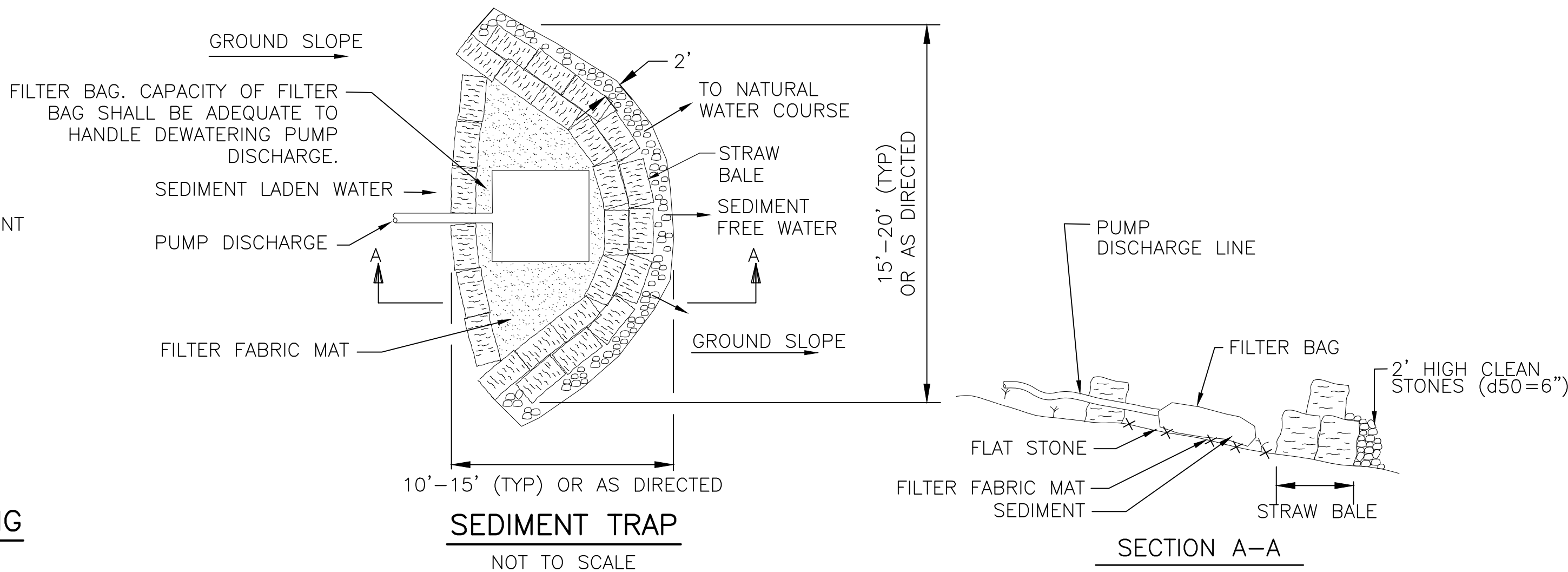


#### NOTES:

- DEWATERING EQUIPMENT SHALL REMAIN WITHIN THE PERMANENTLY IMPACTED AREAS.
- DISCHARGE HOSE SHALL NOT CROSS THE STREAM AT ANY LOCATION.

### COFFERDAM AND DEWATERING

NOT TO SCALE



### SEDIMENT TRAP

NOT TO SCALE

### SECTION A-A

#### WATER CONTROL NOTES:

- THE ISOLATED WORK AREA WITHIN THE COFFERDAMS MAY BE DEWATERED AS NEEDED TO PERFORM WORK IN THE DRY. ALL WORK MUST BE PERFORMED IN THE DRY. ANY DEWATERING ACTIVITIES SHALL BE PERFORMED USING A DISCHARGE HOSE, FILTER BAG, AND SEDIMENT TRAP (SHOWN ON THIS SHEET).
- PRIOR TO BEGINNING ANY CONSTRUCTION IN THE STREAM, SUBMIT TO THE OWNER A WORK SEQUENCE INDICATING ANTICIPATED COFFERDAM LOCATIONS, OR ALTERNATE SYSTEM. WORK SHALL ONLY BE PERFORMED DURING LOW FLOW CONDITIONS. A COMPLETE BYPASS IS NOT ALLOWED.
- THE COFFERDAM WORK MAY BE MODIFIED TO ADDRESS THE CONTRACTOR'S SEQUENCE OF CONSTRUCTION, WITH THE APPROVAL OF THE OWNER.
- TEMPORARY COFFERDAMS (SAND BAG, JERSEY BARRIER, WATER FILLED BARRIER OR EQUIVALENT; USE OF UNCONSOLIDATED MATERIALS STRICTLY PROHIBITED) WILL BE INSTALLED TO MAINTAIN A DRY WORK AREA DURING CONSTRUCTION ACTIVITIES AND TO LIMIT SEDIMENTATION AS A RESULT OF THE PROPOSED WORK. THE WORK AREA LOCATED WITHIN THE COFFERDAMS SHALL BE DEWATERED. THE COFFERDAMS WILL BE LOCATED WITHIN THE STREAM WHERE DEWATERING NEAR THE STREAM IS REQUIRED.
- WATER CONTROLS SHOULD BE DESIGNED FOR A 2-YEAR STORM. PRIOR TO COMMENCING WORK SUBMIT TO THE ENGINEER DRAWINGS AND CALCULATIONS, STAMPED BY A PROFESSIONAL ENGINEER IN THE STATE OF MASSACHUSETTS, INDICATING THE CONTRACTOR'S METHOD FOR CONTROL OF WATER. THE SUBMITTAL SHALL INCLUDE PROPOSED IMPACT AREAS, RESTORATION METHODS, FLOW RATES, DEWATERING METHODS AND A DETAILED SCHEDULE FOR THE CONTROL OF WATER.

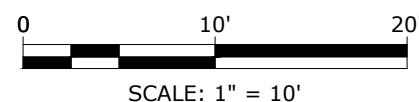
#### DEWATERING REQUIREMENTS:

PREPARE A DEWATERING PLAN TO ADDRESS THE FOLLOWING CONCERNS AND ADHERE TO THE FOLLOWING REQUIREMENTS:

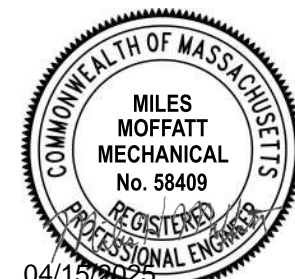
- IF THE WATER TABLE IS INTERCEPTED DURING EXCAVATION, WATER COLLECTED IN THE TRENCH SHALL BE PUMPED OUT SO THAT THE WORK CAN BE PERFORMED "IN THE DRY." PROVIDE ADEQUATELY SIZED DEWATERING EQUIPMENT WITH 100% BACKUP AND SEDIMENTATION/EROSION CONTROL STRUCTURES AS DETAILED ON THE CONTRACT DRAWINGS TO ENSURE CONSTRUCTION "IN THE DRY" AND ADEQUATELY PROTECT ADJACENT WETLAND AREAS AND WATERWAYS.
- ALL GROUNDWATER REMOVED (PUMPED) FROM THE TRENCH EXCAVATION AND DISCHARGED SHALL BE A "CLEAN DISCHARGE." PROVIDE WHATEVER DEVICES ARE REQUIRED TO ACHIEVE THE "CLEAN DISCHARGE." IF THE OWNER'S REPRESENTATIVE DETERMINES THE PUMPED DISCHARGE IS CLEAN (LESS THAN 50 NTU), THE FLOW CAN BE DIRECTED TO AN UPLAND AREA. IF THE OWNER'S REPRESENTATIVE DETERMINES THAT THE FLOW IS NOT CLEAN, DIRECT THAT FLOW TO ONE OR MORE FILTRATION DEVICES FOR THE PURPOSE OF SUBSTANTIALLY REMOVING SUSPENDED SOLIDS FROM THE WATER. THE FILTRATION DEVICES SHALL BE AS SHOWN ON THE DRAWINGS OR APPROVED ALTERNATES SUGGESTED BY THE CONTRACTOR, OR AS REQUIRED BY THE LOCAL PERMITS.
- DEWATERING DISCHARGE LOCATIONS ARE TO BE REVIEWED AND APPROVED BY THE OWNER'S REPRESENTATIVE.
- ANY PROPOSED DEWATERING AND SHORING PROCEDURES SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND ACCEPTANCE. THE DEWATERING/WATER CONTROL AND SHORING/TEMPORARY EARTH SUPPORT SHALL BE DESIGNED AND STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF MASSACHUSETTS.
- DEWATERING MATERIALS SHALL BE DISPOSED OF APPROPRIATELY.

#### HAZARDOUS MATERIAL REQUIREMENTS:

- HAZARDOUS MATERIALS, INCLUDING OVERNIGHT STORAGE OF EQUIPMENT, IS NOT PERMITTED UNLESS OTHERWISE IDENTIFIED ON THESE PLANS (SEE PROPOSED SITE PLAN BRIDGE NO. 1) OR BY THE SPRINGFIELD WATER AND SEWER COMMISSION. USE OF DESIGNATED AREAS DOES NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO PROVIDE SPILL CONTAINMENT KITS AS WELL AS SECONDARY CONTAINMENT FOR THE DURATION OF EQUIPMENT OPERATION AND OVERNIGHT STORAGE (IF VARIES).
- STORAGE OF INERT MATERIALS MAY BE AT THE CONTRACTOR'S DISCRETION ANYWHERE WITHIN THE PROJECT LIMITS.
- REFUELING OF PORTABLE EQUIPMENT WILL BE PERMITTED WITHIN THE DESIGNATED REFUELING AREA.
- REFUELING OF LARGE, MOBILE EQUIPMENT WILL BE WITHIN THE DESIGNATED REFUELING AREA.
- CONTRACTOR TO PROVIDE A PLAN FOR REVIEW BY THE ENGINEER AND OWNER INDICATING MATERIALS AND EQUIPMENT TO BE USED AND PROTOCOLS FOR STORAGE AT THE SITE INCLUDING OVERNIGHT, REFUELING CONTAINMENT, AND PROVISIONS FOR SPILL KITS.



**Tighe&Bond**



## Borden Brook Reservoir Spillway Bridge and Sugar Creek Bridge Repairs

### Springfield Water & Sewer Commission

Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_Structural_SugarCreek.dwg	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AML	

### WATER HANDLING PLAN AND DETAILS (BRIDGE NO. 2)

SCALE: 1" = 10'

**SHEET 10 OF 12**



Last Saved: 4/15/2025 10:41:15 AM  
Project: Borden Brook and Sugar Creek Bridge Repairs  
Title: Borden Brook and Sugar Creek Bridge Repairs  
File: S2057-071\_Structural\_SugarCreek.dwg  
Drawn by: C. Garzon  
Checked by: J. Garzon  
Date: 4/15/2025



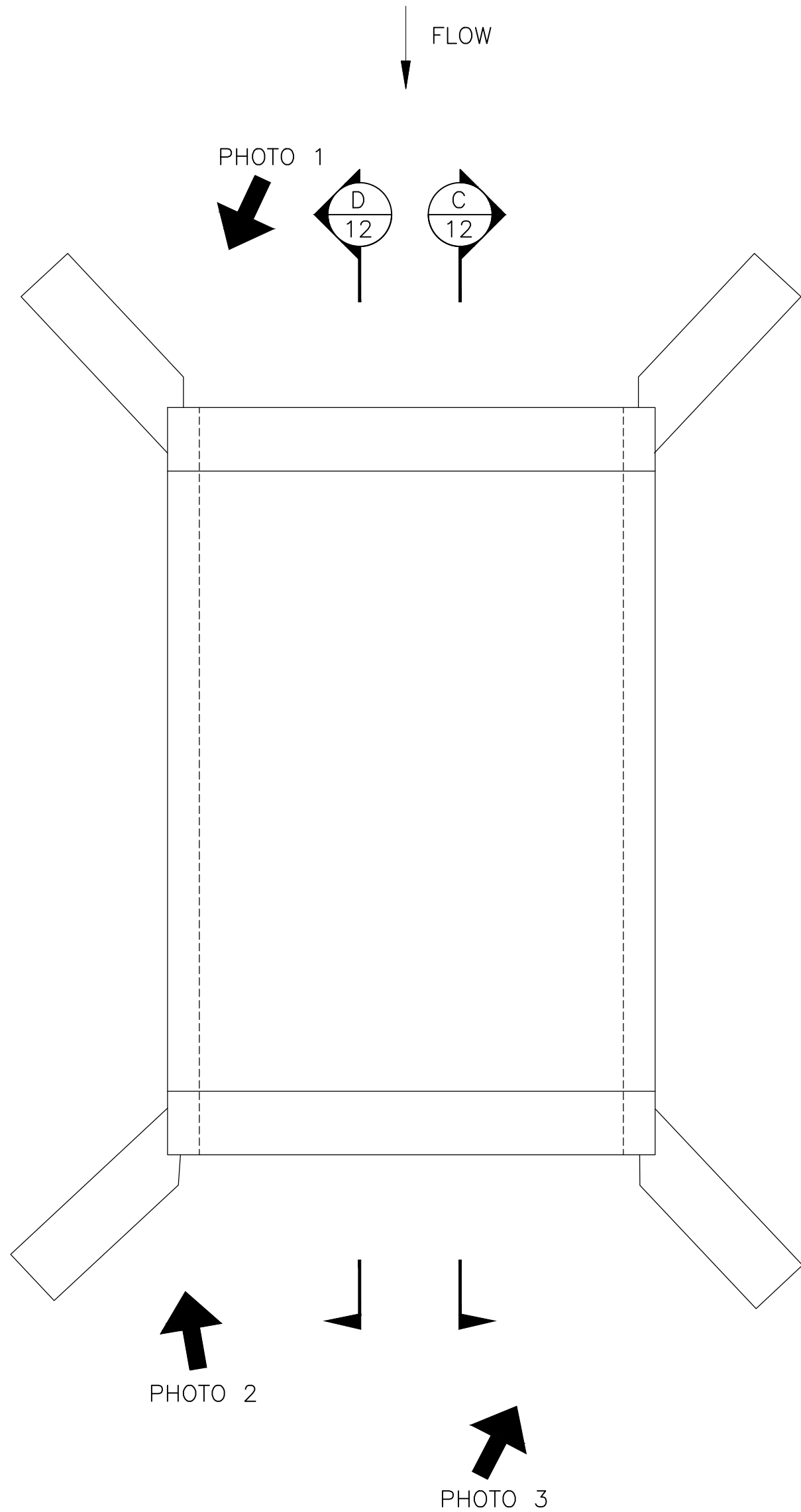
PHOTO 1  
EXISTING NORTHWEST WINGWALL

APPROXIMATE DETERIORATED  
AREA TO BE FIELD VERIFIED.  
SEE SHEET 12 FOR DETAILS



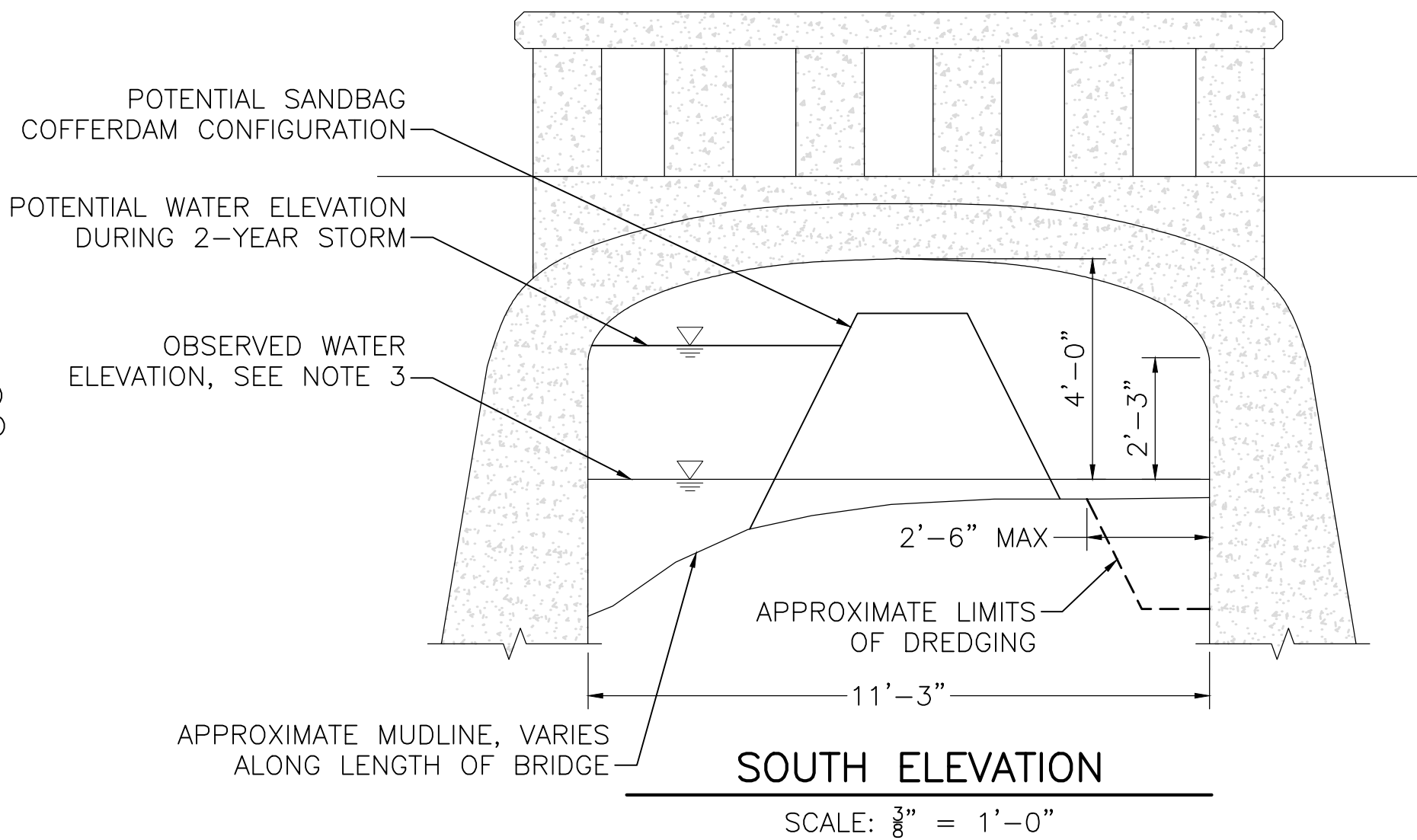
PHOTO 2  
EXISTING SOUTHWEST WINGWALL

APPROXIMATE DETERIORATED  
AREA TO BE FIELD VERIFIED



BRIDGE PLAN

SCALE:  $\frac{1}{4}$ " = 1'-0"



SOUTH ELEVATION


SCALE:  $\frac{3}{8}$ " = 1'-0"

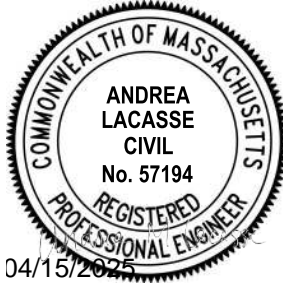


PHOTO 3  
EXISTING SOUTHEAST WINGWALL

APPROXIMATE DETERIORATED  
AREA TO BE FIELD VERIFIED.  
SEE SHEET 12 FOR DETAILS

NOTES:

1. APPROXIMATE PHOTO LOCATION AND ORIENTATION SHOWN ON BRIDGE PLAN  
THUS: 
2. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE BASED ON FIELD MEASUREMENTS. THE CONTRACTOR SHOULD VERIFY ALL MEASUREMENTS IN THE FIELD.
3. WATER LEVEL AND MUDLINE SHOWN ARE APPROXIMATE AND BASED ON FIELD OBSERVATIONS FROM 11/17/2023.
4. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROTECT THE CREEK AND KEEP WORK OUT OF THE CREEK. ALL DEBRIS INCLUDING ANY CONCRETE DUST SHALL BE CAPTURED AND PROPERLY DISPOSED OF. COOLING WATER USED TO CUT CONCRETE SHALL BE CAPTURED AND NOT DISCHARGED INTO THE CREEK.



**Borden Brook  
Reservoir  
Spillway  
Bridge and  
Sugar Creek  
Bridge Repairs**

Springfield  
Water & Sewer  
Commission

Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
PROJECT NO:	S2057-071	
DATE:	04/15/2025	
FILE:	S2057-071_Structural_SugarCreek.dwg	
DRAWN BY:	JG	
DESIGNED/CHECKED BY:	AvC	
APPROVED BY:	AML	

STRUCTURE PLAN AND  
ELEVATION (BRIDGE NO. 2)

SCALE: AS SHOWN





Borden Brook Reservoir Spillway Bridge and Sugar Creek Bridge Repairs

Springfield Water & Sewer Commission

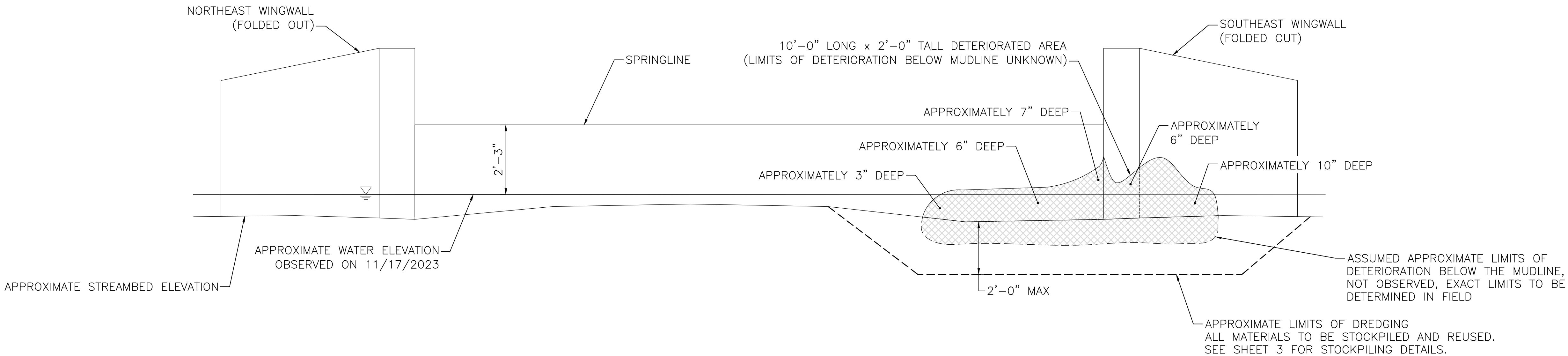
Blandford, MA  
Granville, MA

MARK	DATE	DESCRIPTION
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PROJECT NO:	S2057-071
DATE:	04/15/2025
FILE:	S2057-071_Structural_SugarCreek.dwg
DRAWN BY:	JG
DESIGNED/CHECKED BY:	AvC
APPROVED BY:	AML

WINGWALL AND ARCH LEG ELEVATIONS (BRIDGE NO. 2)

SCALE: AS SHOWN

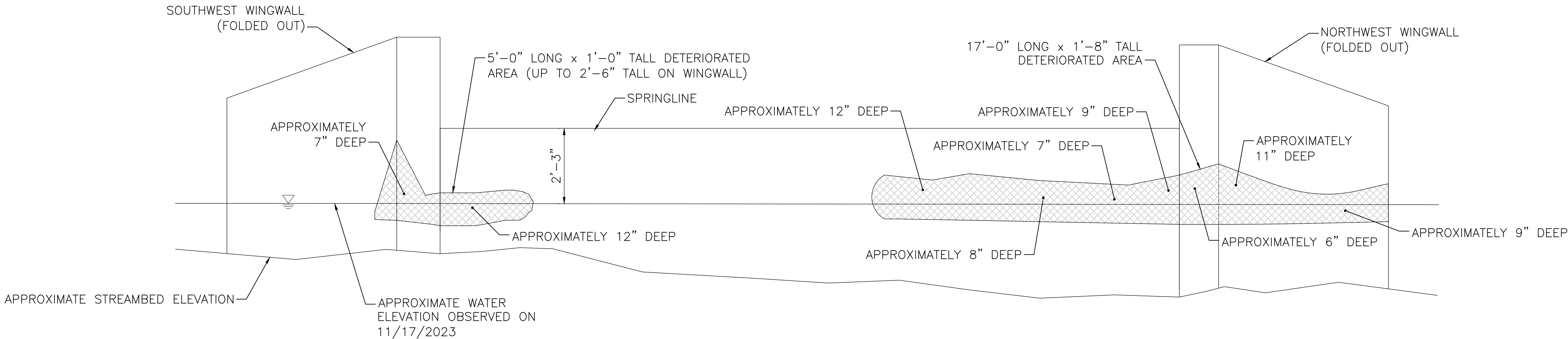


ARCH EAST LEG (LOOKING EAST) C

SCALE: 1/2" = 1'-0"

11

- NOTES:
1. WATER LEVEL AND MUDLINE SHOWN ARE APPROXIMATE AND BASED ON FIELD OBSERVATIONS FROM 11/17/2023.
  2. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROTECT THE CREEK AND KEEP WORK OUT OF THE CREEK. ALL DEBRIS INCLUDING ANY CONCRETE DUST SHALL BE CAPTURED AND PROPERLY DISPOSED OF. COOLING WATER USED TO CUT CONCRETE SHALL BE CAPTURED AND NOT DISCHARGED INTO THE CREEK.
  3. DIMENSIONS OF DETERIORATED AREAS SHOWN ARE APPROXIMATE. ENGINEER TO DETERMINE FINAL LIMITS IN THE FIELD.



ARCH WEST LEG (LOOKING WEST) D

SCALE: 1/2" = 1'-0"

11

LEGEND:

INDICATES APPROXIMATE AREAS OF CONCRETE SPALL REPAIR WORK