

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION RAIL AND TRANSIT DIVISION

EMERGENCY REPAIRS TO CULVERTS AT WARE RIVER SECONDARY MP 19.84 & MP 19.96

IN THE TOWN OF
GILBERTVILLE, MA

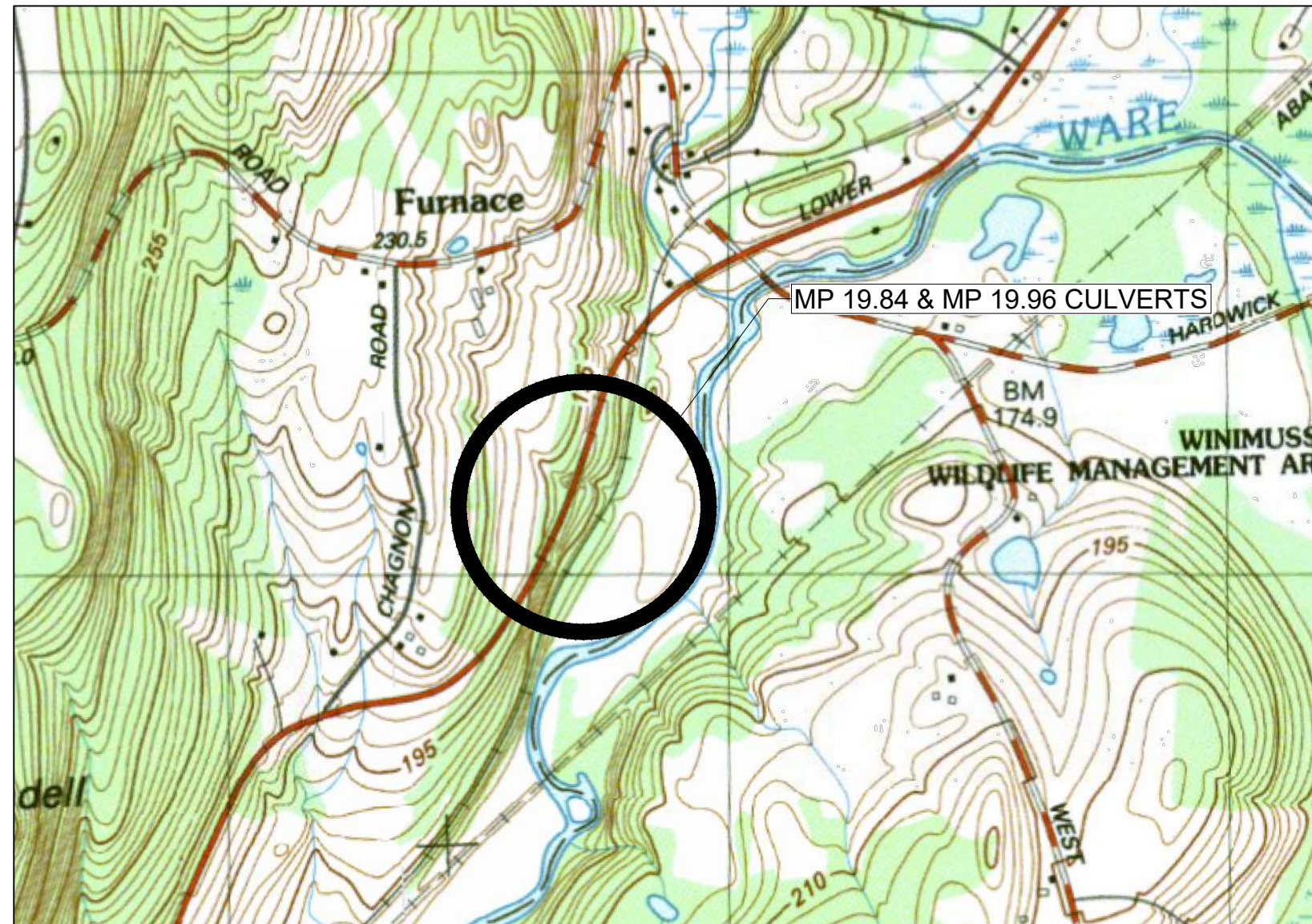
WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	1	10

COVER SHEET

INDEX OF DRAWINGS

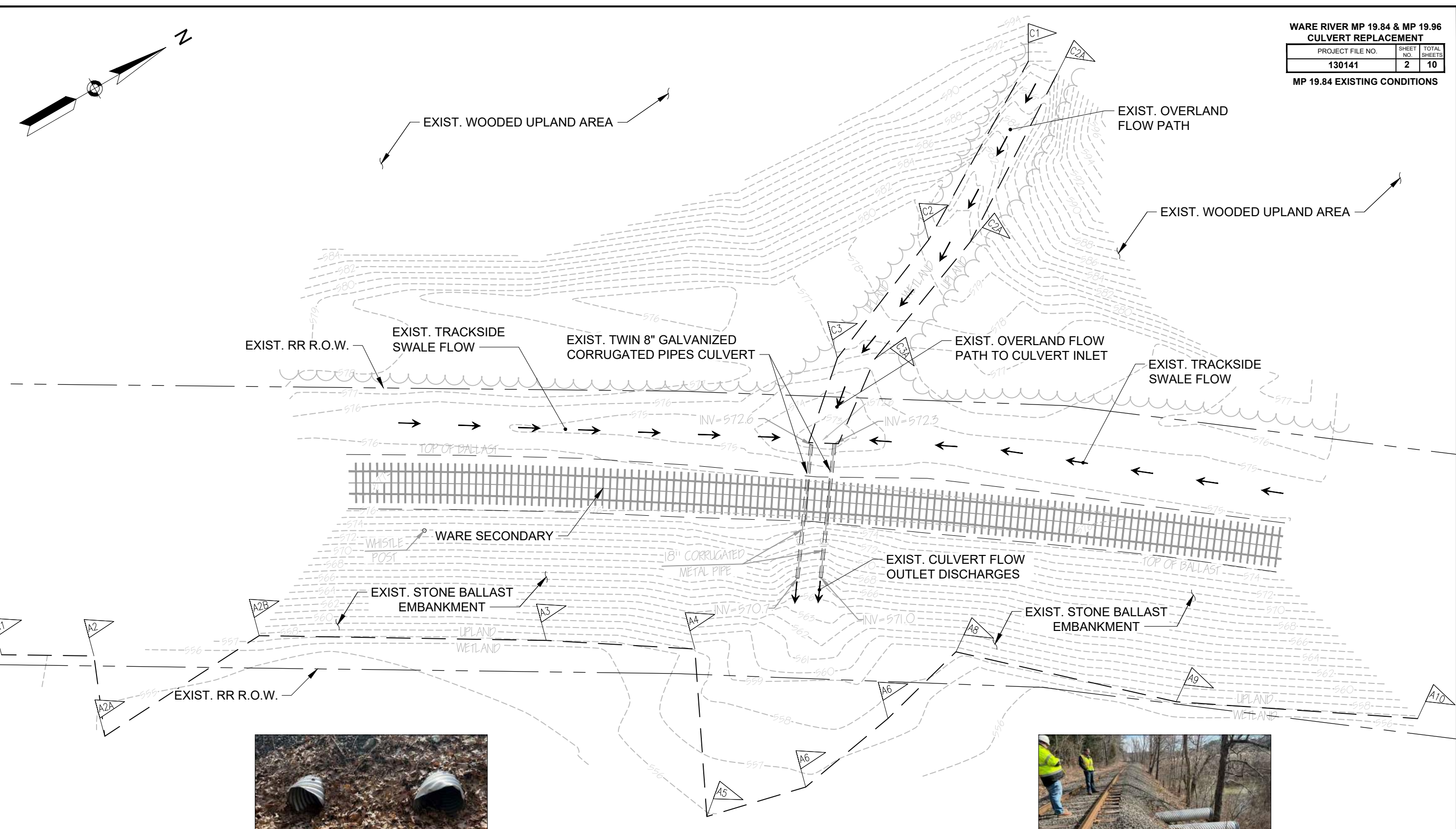
SHEET	TITLE
1	COVER SHEET
2	MP 19.84 EXISTING CONDITIONS
3	MP 19.84 PROPOSED PRECAST PIPE CULVERT REPLACEMENT
4	MP 19.96 EXISTING CONDITIONS
5	MP 19.96 PROPOSED PRECAST PIPE REPLACEMENT
6	PROPOSED MP 19.84 WINGWALL DETAILS
7	PROPOSED MP 19.96 WINGWALL DETAILS
8	MP 19.84 EROSION PROTECTION PLAN
9	MP 19.96 EROSION PROTECTION PLAN
10	EROSION PROTECTION DETAILS



LOCUS PLAN

SCALE: 1" = 1000'

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\Ware River MP 19 Culverts.dwg Aug. 29, 2023



WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	2	10
MP 19.84 EXISTING CONDITIONS		



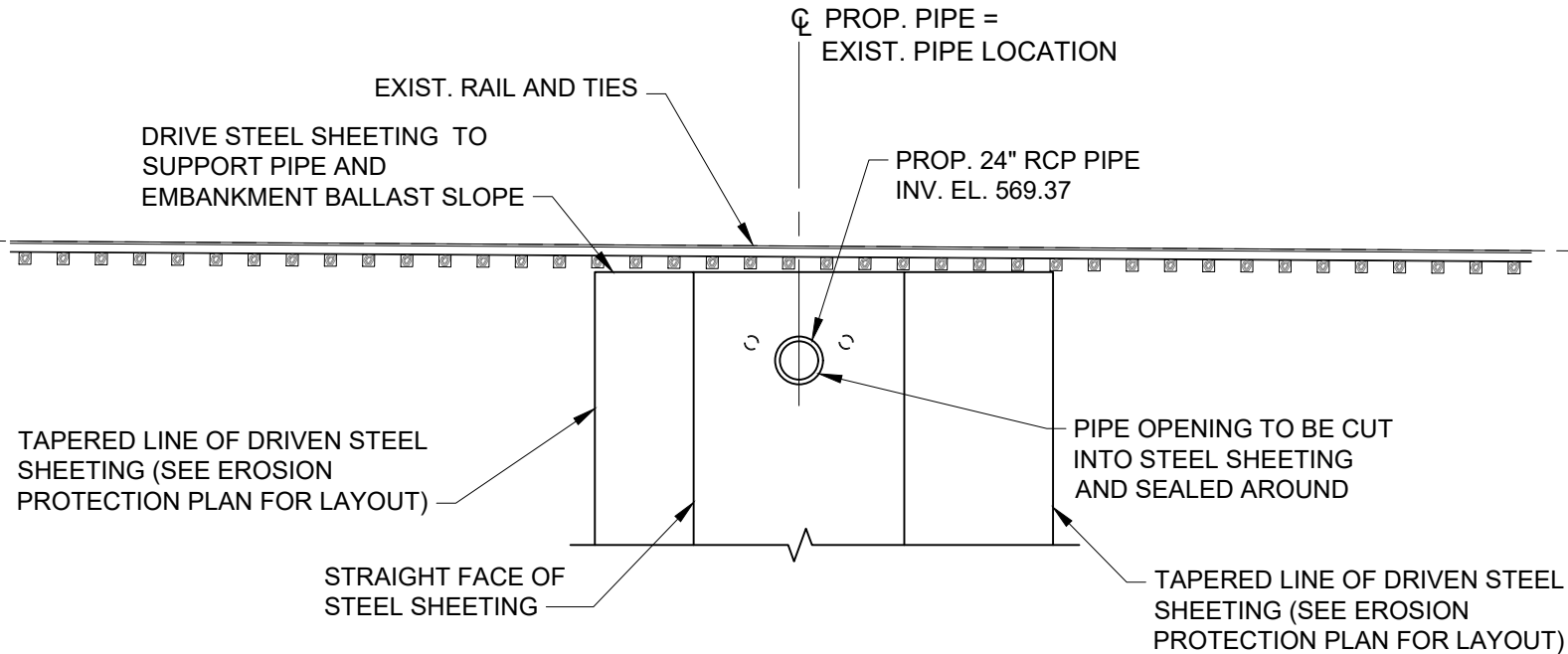
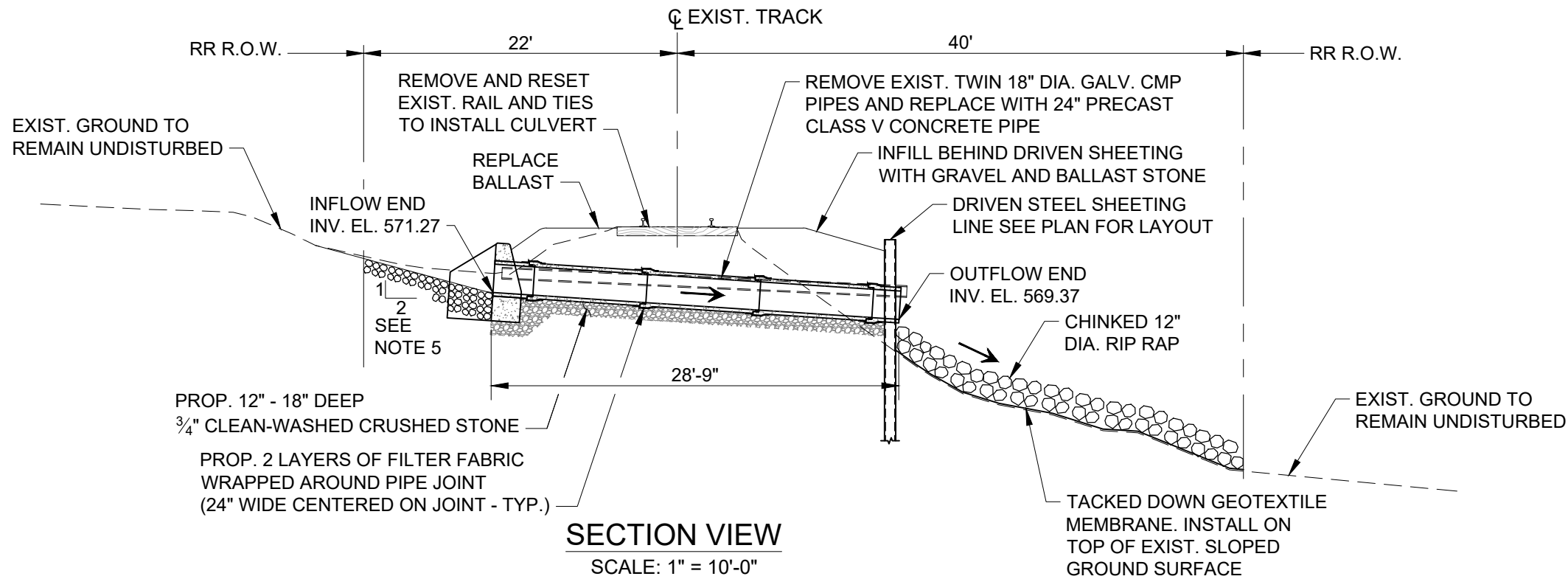
INLET (LOOKING EAST)



OUTLET (LOOKING NORTH)

PLAN
SCALE: 1" = 20'-0"

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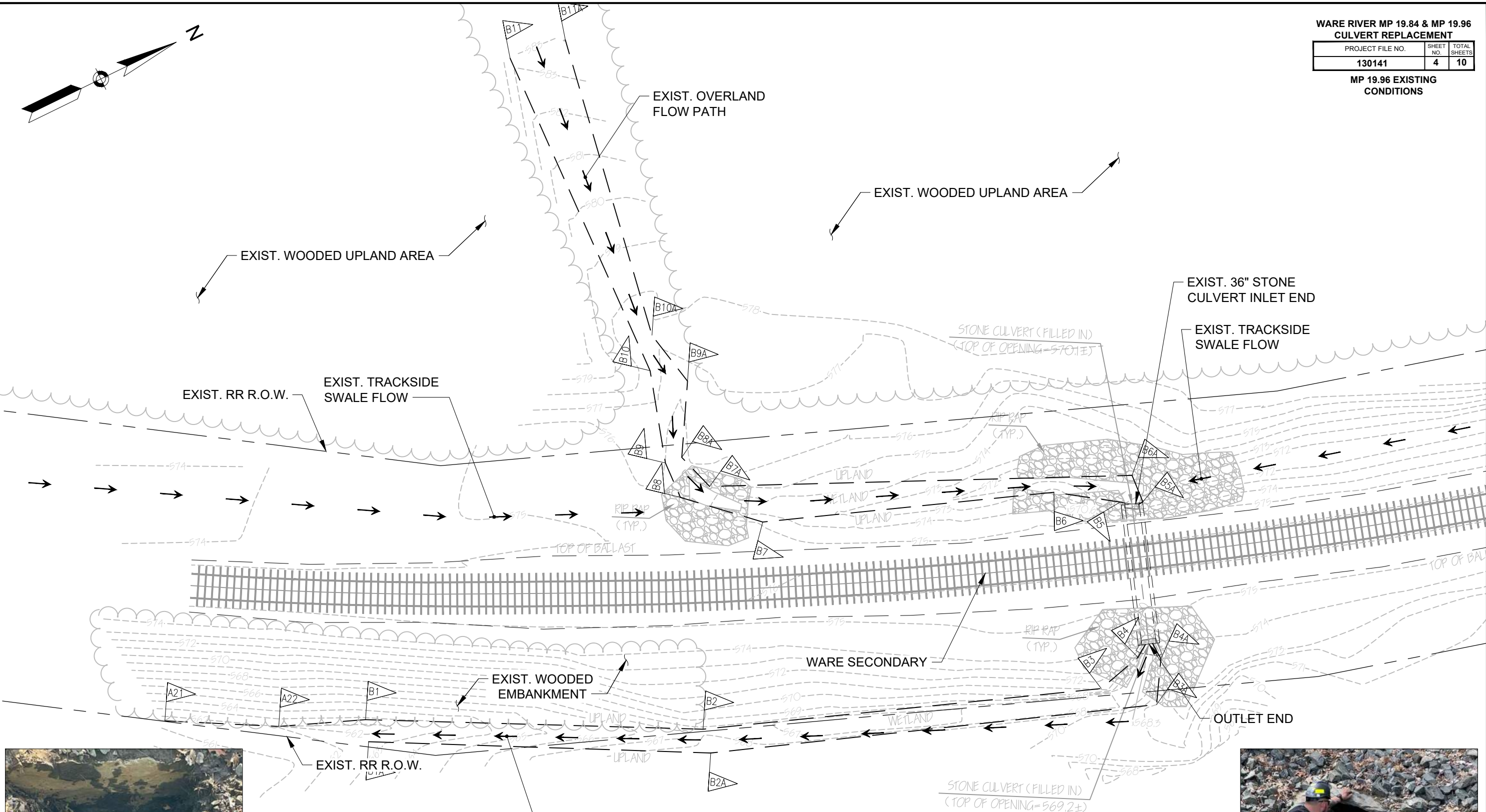


WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	3	10
MP 19.84 PROPOSED PRECAST PIPE		

NOTES:

1. ALL CULVERT AND WINGWALL INSTALLATION WORK SHALL BE PERFORMED IN THE DRY WITH TEMPORARY COFFERDAMS, DEWATERING PUMPING, AND ALL EROSION CONTROL MEASURES IN PLACE AND MAINTAINED FOR THE DURATION OF THE WORK.
2. CONTRACTOR SHALL MINIMIZE ENCROACHMENT INTO THE ADJACENT WATER AND NATURAL VEGETATION TO THE GREATEST EXTENT POSSIBLE TO LIMIT SOIL AND WATER DISTURBANCE.
3. CONTRACTOR SHALL REMOVE AND TEMPORARILY STOCKPILE EMBANKMENT SLOPE SOILS AND SURFACE BALLAST TO BE RESET TO MATCH EXISTING CONDITION FOLLOWING CULVERT INSTALLATION WORK AT THE DIRECTION OF THE ENGINEER ONLY.
4. ANY ADDITIONAL PROCESSED GRAVEL, CRUSHED STONE, AND STONE BALLAST DETERMINED TO BE NEEDED BY THE CONTRACTOR SHALL BE APPROVED BY MASSDOT'S ENGINEER PRIOR TO ORDERING FOR DELIVERY TO THE SITE.
5. CONTRACTOR SHALL PLACE AND EMBED STONE ARMOR RIP RAP ON BOTH SIDES OF THE CULVERT TO LIMITS SHOWN. STONES SHALL BE CHINKED IN TO ELIMINATE ANY DISLODGING OR SLIP-FAILING OF THE RECONSTRUCTED SLOPE.
6. ALL EMBANKMENT FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED TWELVE (12) INCHES IN LAYERED DEPTH FOLLOWING COMPACTION. SUBSEQUENT LAYERS SHALL ONLY THEN PLACED AND COMPACTED AFTER THE PREVIOUS LOWER FILL LAYER IS FULLY COMPACTED IN PLACE.

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WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	4	10
MP 19.96 EXISTING CONDITIONS		



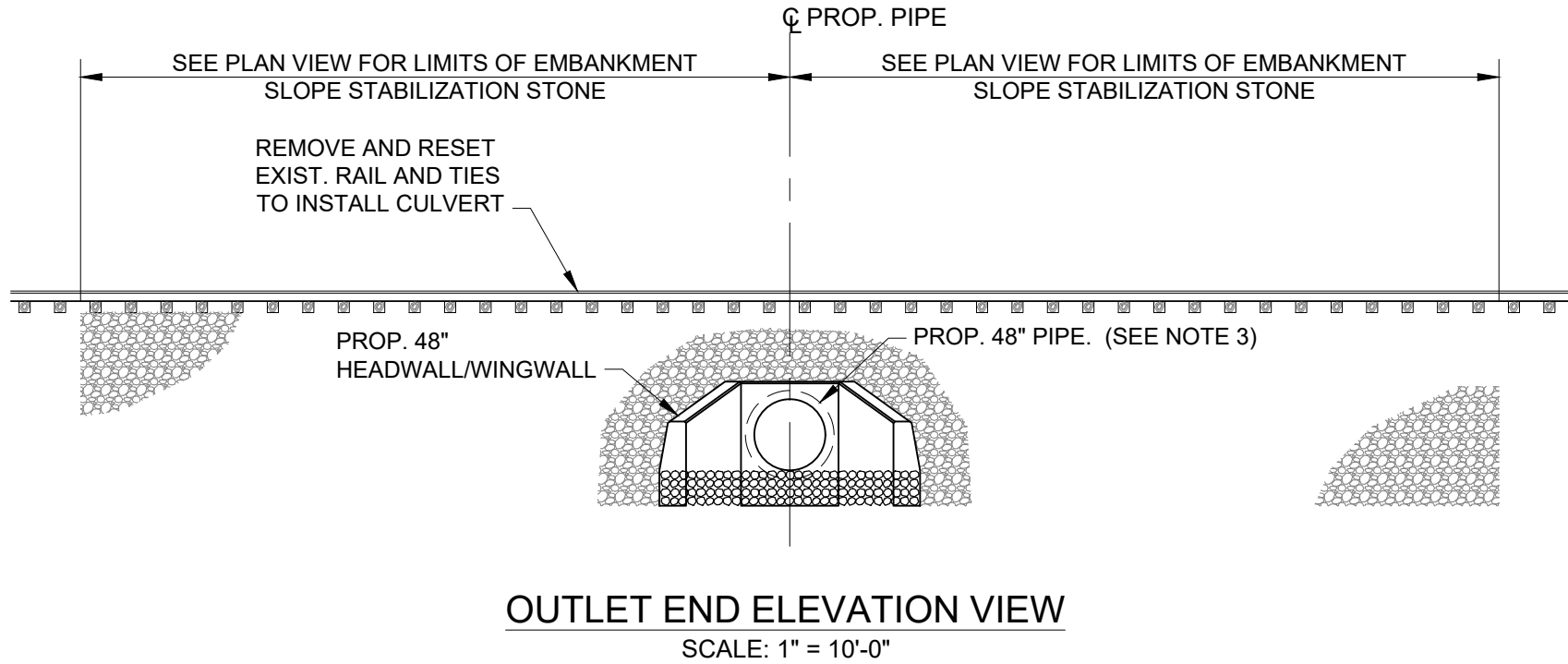
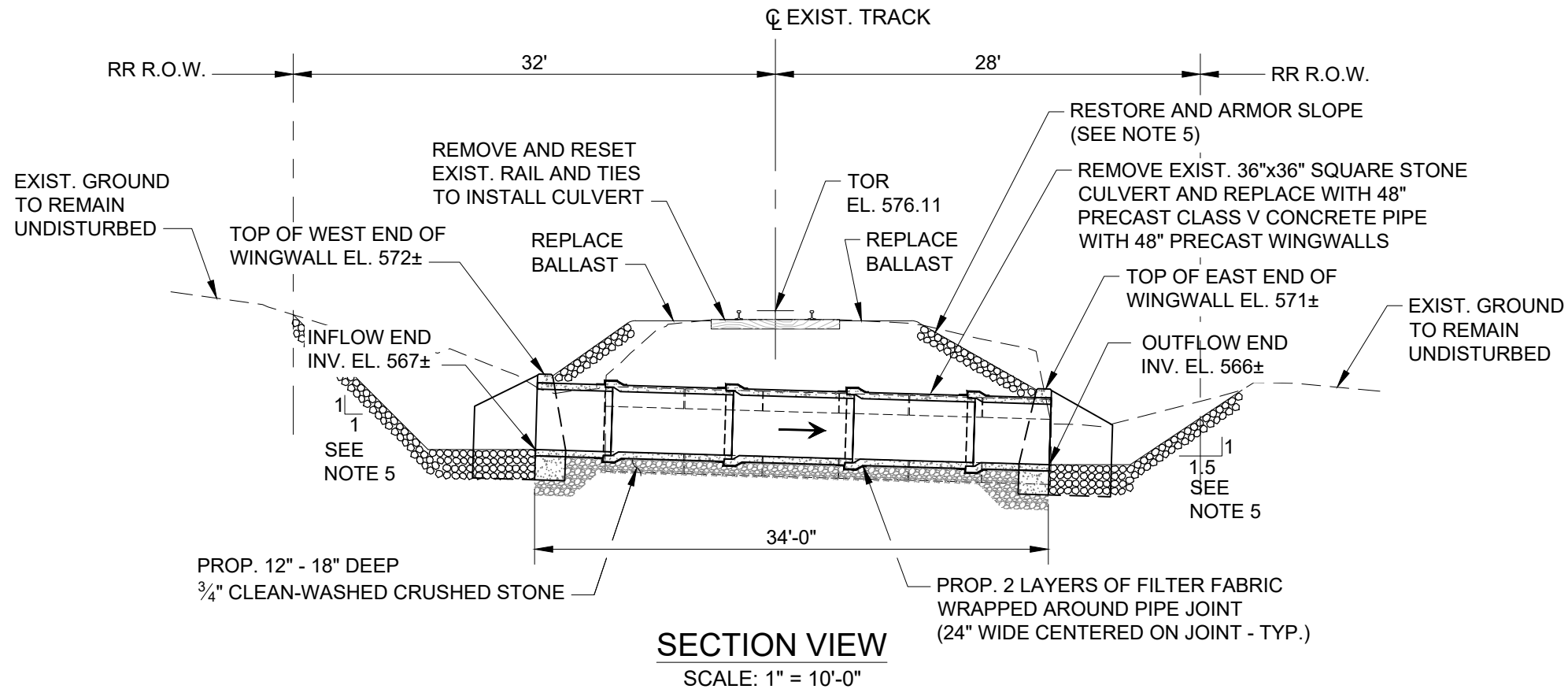
INLET (LOOKING EAST)



OUTLET (LOOKING WEST)

PLAN
SCALE: 1" = 20'-0"

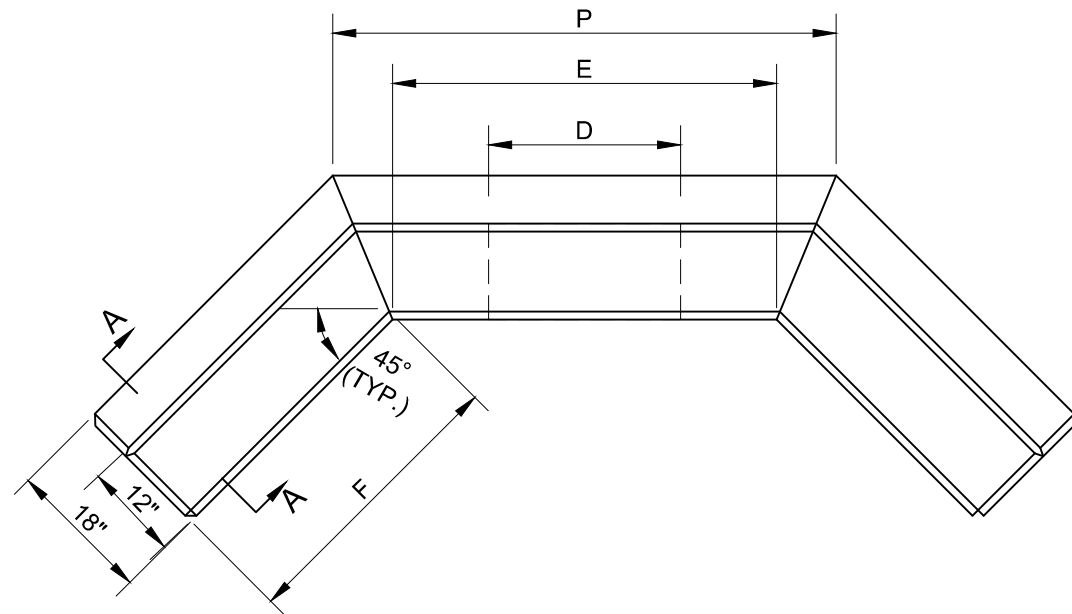
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WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	5	10
MP 19.96 PROPOSED PRECAST PIPE		

- NOTES:**
- ALL CULVERT AND WINGWALL INSTALLATION WORK SHALL BE PERFORMED IN THE DRY WITH TEMPORARY COFFERDAMS, DEWATERING PUMPING, AND ALL EROSION CONTROL MEASURES IN PLACE AND MAINTAINED FOR THE DURATION OF THE WORK.
 - CONTRACTOR SHALL MINIMIZE ENCROACHMENT INTO THE ADJACENT WATER AND NATURAL VEGETATION TO THE GREATEST EXTENT POSSIBLE TO LIMIT SOIL AND WATER DISTURBANCE.
 - CONTRACTOR SHALL REMOVE AND TEMPORARILY STOCKPILE EMBANKMENT SLOPE SOILS AND SURFACE BALLAST TO BE RESET TO MATCH EXISTING CONDITION FOLLOWING CULVERT INSTALLATION WORK AT THE DIRECTION OF THE ENGINEER ONLY.
 - ANY ADDITIONAL PROCESSED GRAVEL, CRUSHED STONE, AND STONE BALLAST DETERMINED TO BE NEEDED BY THE CONTRACTOR SHALL BE APPROVED BY MASSDOT'S ENGINEER PRIOR TO ORDERING FOR DELIVERY TO THE SITE.
 - CONTRACTOR SHALL PLACE AND EMBED STONE ARMOR RIP RAP ON BOTH SIDES OF THE CULVERT TO LIMITS SHOWN. STONES SHALL BE CHINKED IN TO ELIMINATE ANY DISLODGING OR SLIP-FAILING OF THE RECONSTRUCTED SLOPE.
 - ALL EMBANKMENT FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED TWELVE (12) INCHES IN LAYERED DEPTH FOLLOWING COMPACTION. SUBSEQUENT LAYERS SHALL ONLY THEN PLACED AND COMPACTED AFTER THE PREVIOUS LOWER FILL LAYER IS FULLY COMPACTED IN PLACE.

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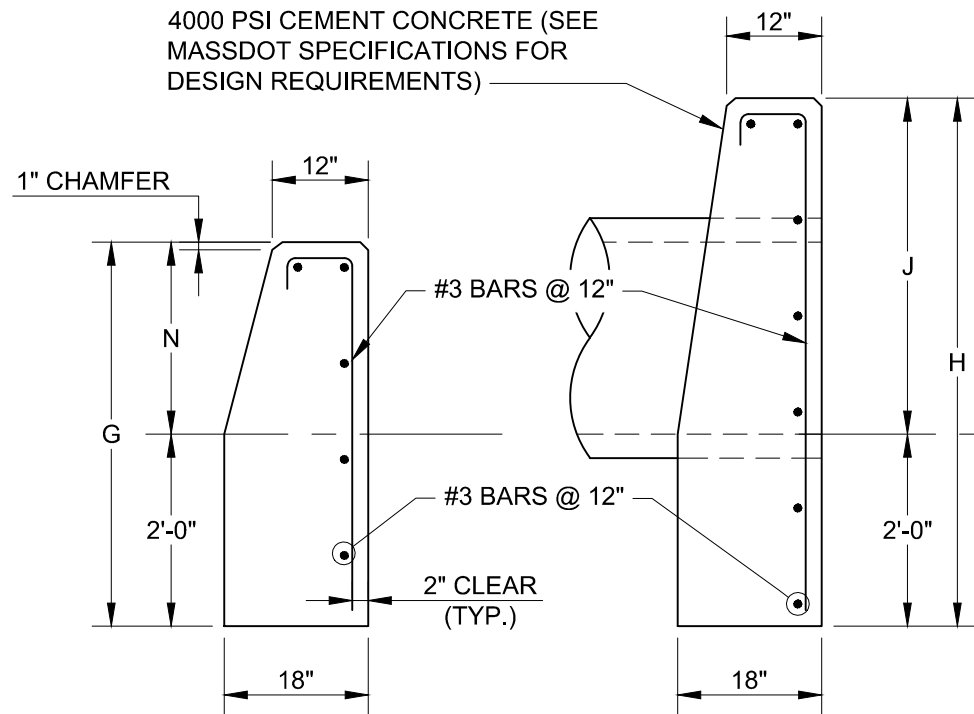


PLAN

1V:1.5H SLOPE										
D	E	G	H	J	L	N	P	F	CONC. MASONRY CY	STEEL LBS
24"	4'-0"	4'-0"	5'-6"	3'-6"	1'-6"	2'-0"	5'-3"	3'-0"	2.6	45

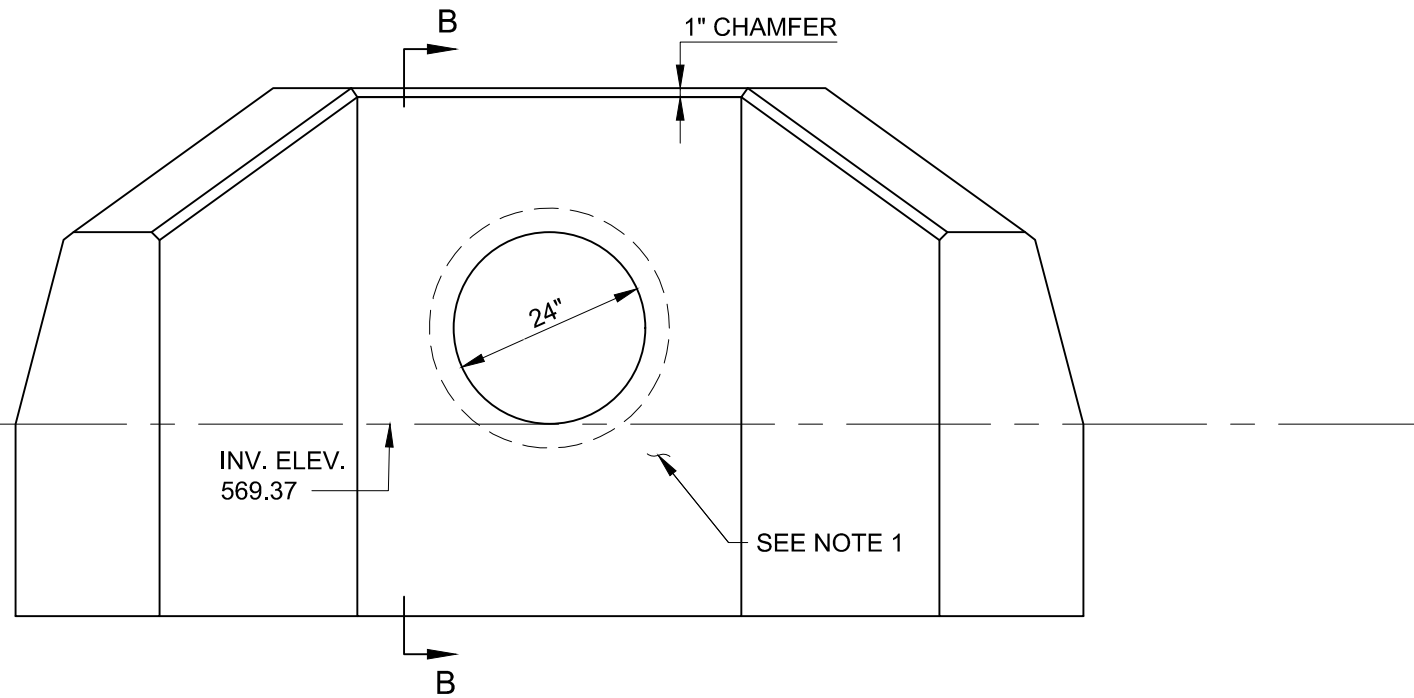
NOTE:

1. CONTRACTOR SHALL INSTALL REPLACEMENT, PRECAST WINGWALL AND SEAL CONCRETE CULVERT END WITH WATERTIGHT GROUT SEALANT PRIOR TO REMOVAL OF COFFERDAM.



SECTION A-A

SECTION B-B



FRONT ELEVATION

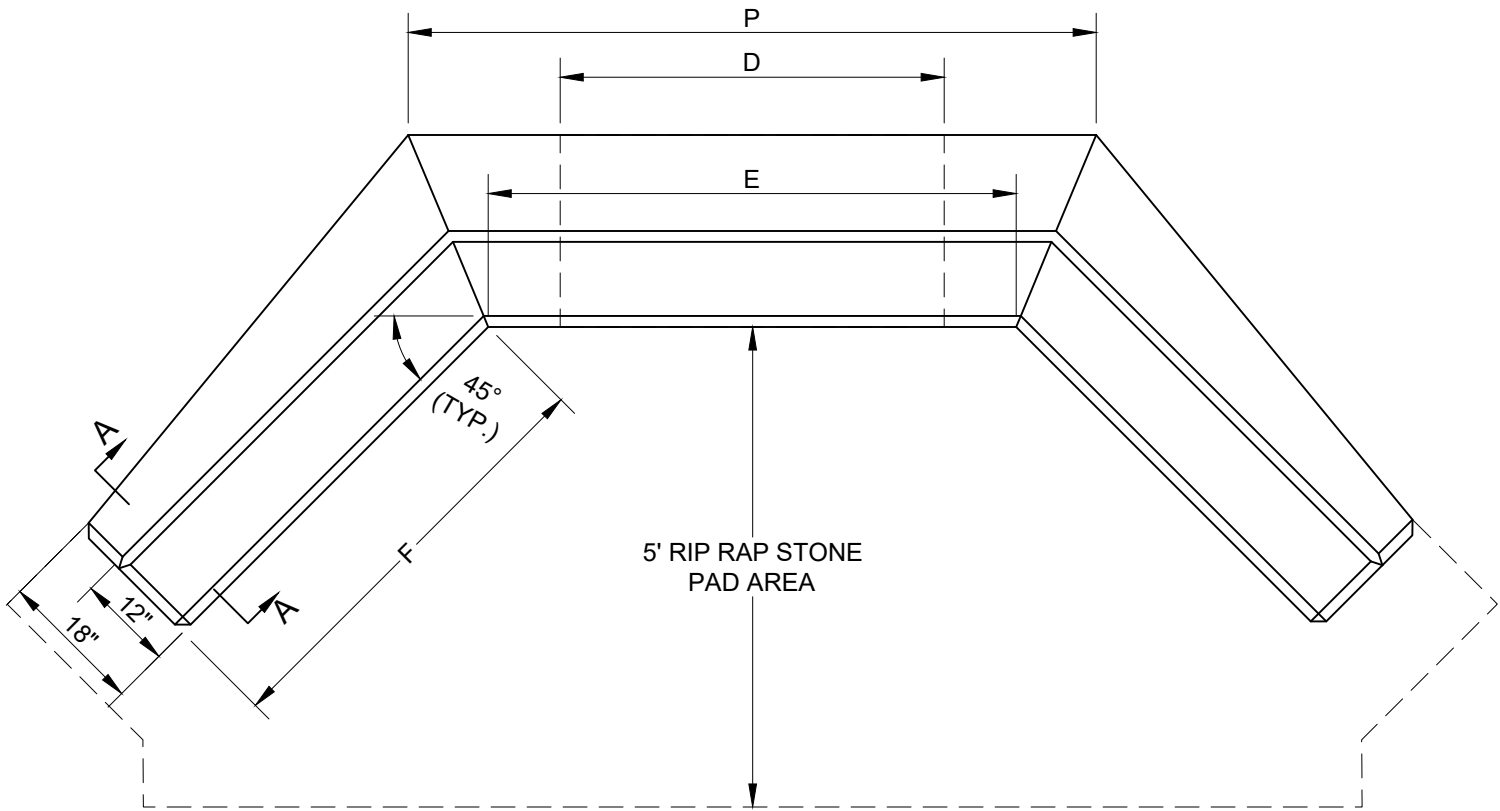
WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	6	10
PROPOSED MP 19.84 CULVERT WINGWALL DETAILS		

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WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	7	10

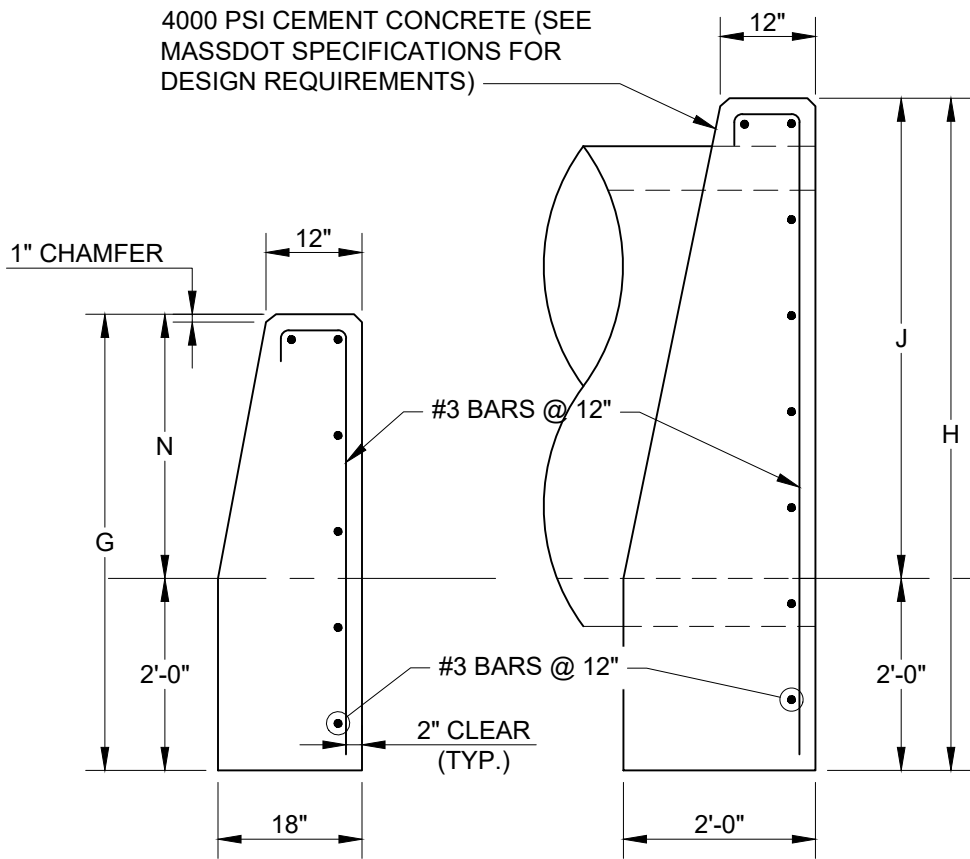
PROPOSED MP 19.96
WINGWALL REPLACEMENT
DETAILS



PLAN

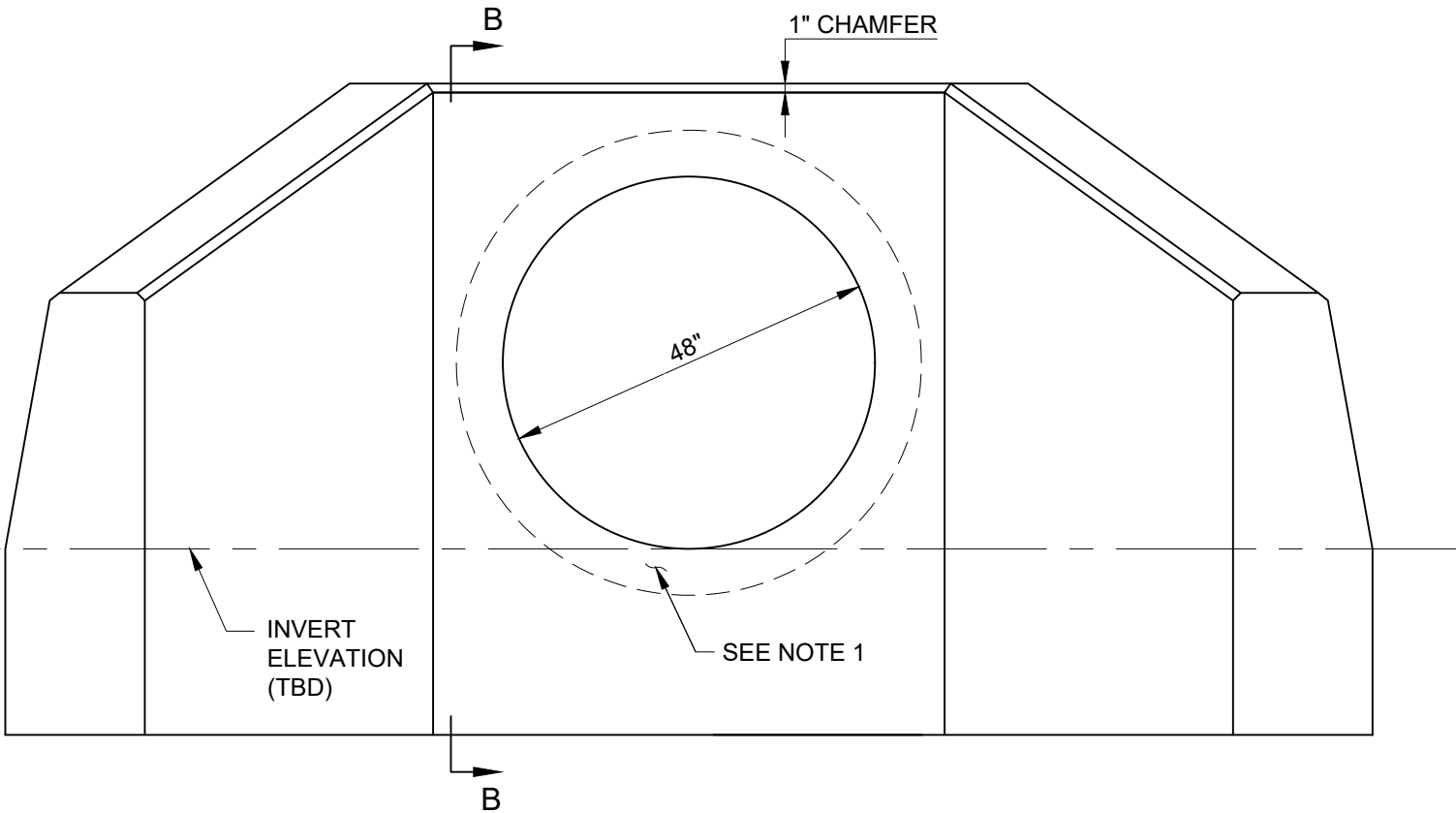
1V:1.5H SLOPE										
D	E	G	H	J	L	N	P	F	CONC. MASONRY CY	STEEL LBS
48"	5'-6"	4'-9"	7'-0"	5'-0"	2'-0"	2'-9"	7'-2"	4'-6"	5.19	65

- NOTE:
- CONTRACTOR SHALL INSTALL REPLACEMENT, PRECAST WINGWALL AND SEAL CONCRETE CULVERT END WITH WATERTIGHT GROUT SEALANT PRIOR TO REMOVAL OF COFFERDAM.



SECTION A-A

SECTION B-B



FRONT ELEVATION

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\Ware River MP 19 Culvert Erosion Protection.dwg Aug. 29, 2023

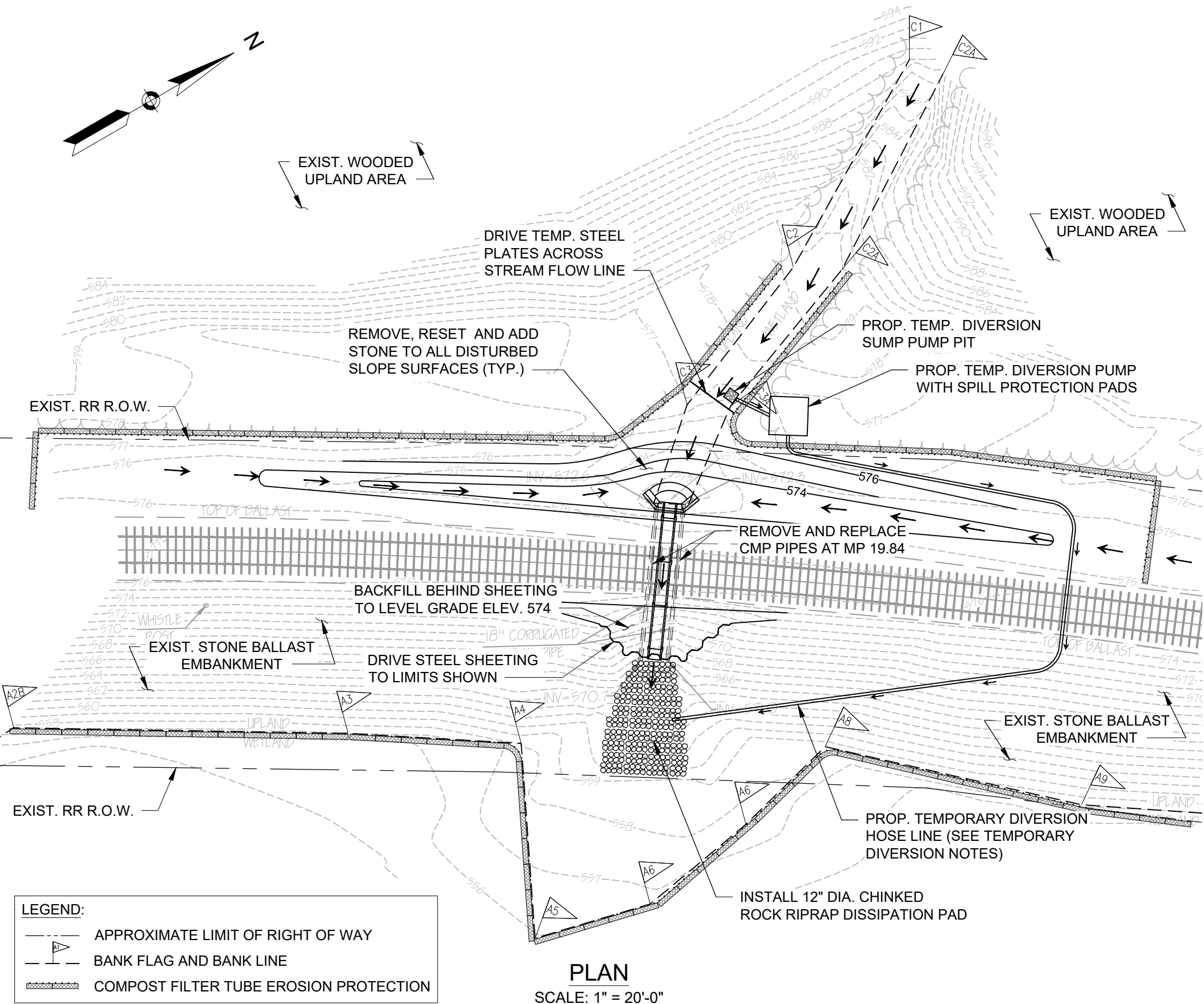
WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	8	10
MP 19.84 EROSION PROTECTION PLAN		

TEMPORARY DIVERSION NOTES:

1. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A TEMPORARY PUMP DIVERSION SYSTEM TO DIVERT WATER FLOW AROUND CULVERT CONSTRUCTION AREA, INCLUDING REQUIRED SIZE/LOCATION OF DIVERSION PUMP, DISCHARGE PIPE SIZE, AS WELL AS CONTINGENCY PLANS IN THE EVENT OF PUMP FAILURE.
2. WATER LEVELS ARE SUBJECT TO CHANGE, THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION AND INSTALL AND REFORTIFY COFFER DAMS AS APPLICABLE.
3. UPON INSTALLATION OF ALL SEDIMENT CONTROL MEASURES THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE DIVERSION AND DEWATERING PLAN FOLLOWING INSPECTION.
4. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DISCHARGE PIPES, SUMP-HOLE, DIVERSION PUMPS AND RIP-RAP DISCHARGE SPLASH PAD PRIOR TO PLACING PIPE PLUGS, DRIVEN STEEL PLATES AND SAND BAG COFFERDAMS.
5. THE TEMPORARY DISCHARGE PIPE SHALL BE CONSTRUCTED OF DURABLE MATERIAL ABLE TO WITHSTAND ANTICIPATED SITE CONDITIONS.
6. WATER FROM THE WORK AREA SHALL BE PUMPED TO A DEWATERING CONTAINMENT AREA THE AREA SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE GROUND AREA BELOW THE DOWNGRADIENT COFFERDAM.
7. AFTER THE CULVERT HAS BEEN REPLACED AND READY TO RECEIVE FLOW AND THE DISTURBED AREA HAS BEEN STABILIZED, THE DRIVEN STEEL SHEETS SHALL BE PULLED OUT AND "COFFERDAMS" SHALL BE REMOVED STARTING ON THE EASTERN END. THEN THE TEMPORARY DIVERSION SHALL BE REMOVED.

TEMPORARY DEWATERING NOTES:

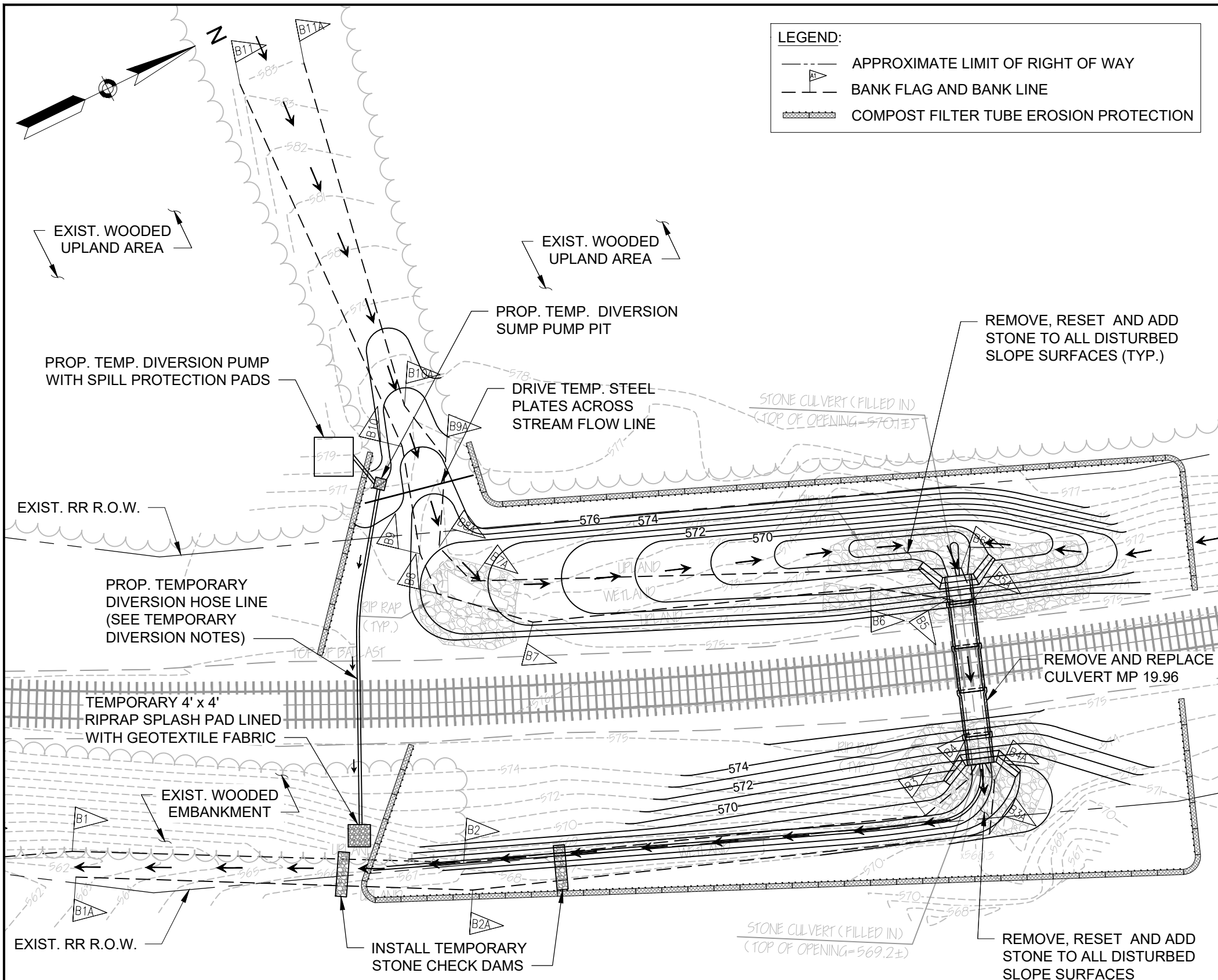
1. THE PROP. TEMPORARY DEWATERING CONTAINMENT AREA. SIZE AND LOCATION OUTSIDE THE WETLAND AREA TO BE DETERMINED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER'S DRAINAGE ENGINEER AND WETLAND SCIENTIST.
2. CONTRACTOR SHALL EXCAVATE BACK THIS EMBANKMENT AREA AS REQUIRED TO INSTALL DEWATERING CONTAINMENT AREA AND RESTORE SLOPE UPON ITS REMOVAL.



PLAN
SCALE: 1" = 20'-0"

LEGEND:	
	APPROXIMATE LIMIT OF RIGHT OF WAY
	BANK FLAG AND BANK LINE
	COMPOST FILTER TUBE EROSION PROTECTION

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PLAN
SCALE: 1" = 20'-0"

LEGEND:

- APPROXIMATE LIMIT OF RIGHT OF WAY
- BANK FLAG AND BANK LINE
- COMPOST FILTER TUBE EROSION PROTECTION

WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	9	10
MP 19.96 EROSION PROTECTION PLAN		

TEMPORARY DIVERSION NOTES:

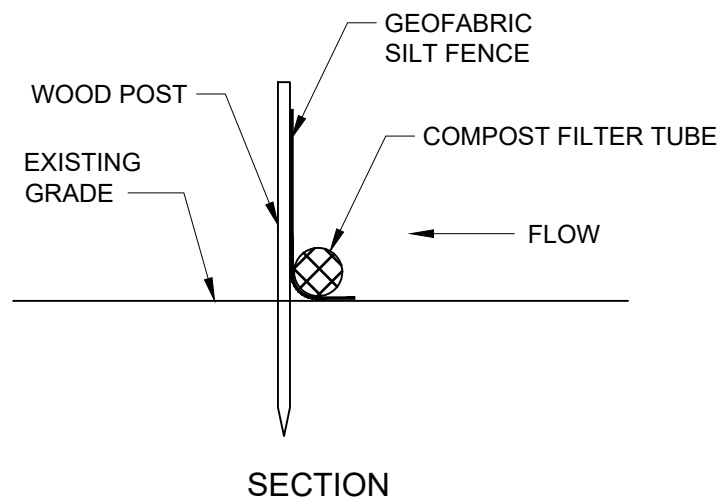
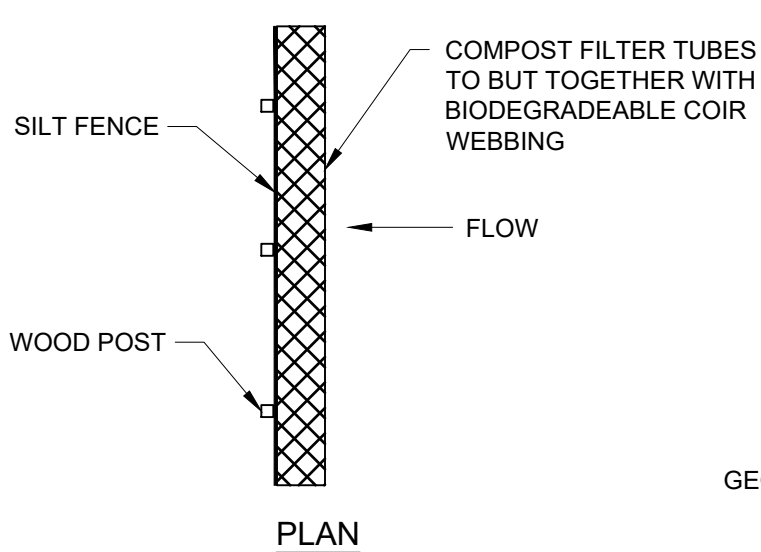
1. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A TEMPORARY PUMP DIVERSION SYSTEM TO DIVERT WATER FLOW AROUND CULVERT CONSTRUCTION AREA, INCLUDING REQUIRED SIZE/LOCATION OF DIVERSION PUMP, DISCHARGE PIPE SIZE, AS WELL AS CONTINGENCY PLANS IN THE EVENT OF PUMP FAILURE.
2. WATER LEVELS ARE SUBJECT TO CHANGE, THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION AND INSTALL AND REFORTIFY COFFER DAMS AS APPLICABLE.
3. UPON INSTALLATION OF ALL SEDIMENT CONTROL MEASURES THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE DIVERSION AND DEWATERING PLAN FOLLOWING INSPECTION.
4. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DISCHARGE PIPES, SUMP-HOLE, DIVERSION PUMPS AND RIP-RAP DISCHARGE SPLASH PAD PRIOR TO PLACING PIPE PLUGS, DRIVEN STEEL PLATES AND SAND BAG COFFERDAMS.
5. THE TEMPORARY DISCHARGE PIPE SHALL BE CONSTRUCTED OF DURABLE MATERIAL ABLE TO WITHSTAND ANTICIPATED SITE CONDITIONS.
6. WATER FROM THE WORK AREA SHALL BE PUMPED TO A DEWATERING CONTAINMENT AREA THE AREA SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE GROUND AREA BELOW THE DOWNGRADIENT COFFERDAM.
7. AFTER THE CULVERT HAS BEEN REPLACED AND READY TO RECEIVE FLOW AND THE DISTURBED AREA HAS BEEN STABILIZED, THE DRIVEN STEEL SHEETS SHALL BE PULLED OUT AND "COFFERDAMS" SHALL BE REMOVED STARTING ON THE EASTERN END. THEN THE TEMPORARY DIVERSION SHALL BE REMOVED.

TEMPORARY DEWATERING NOTES:

1. THE PROP. TEMPORARY DEWATERING CONTAINMENT AREA. SIZE AND LOCATION OUTSIDE THE WETLAND AREA TO BE DETERMINED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER'S DRAINAGE ENGINEER AND WETLAND SCIENTIST.
2. CONTRACTOR SHALL EXCAVATE BACK THIS EMBANKMENT AREA AS REQUIRED TO INSTALL DEWATERING CONTAINMENT AREA AND RESTORE SLOPE UPON ITS REMOVAL.

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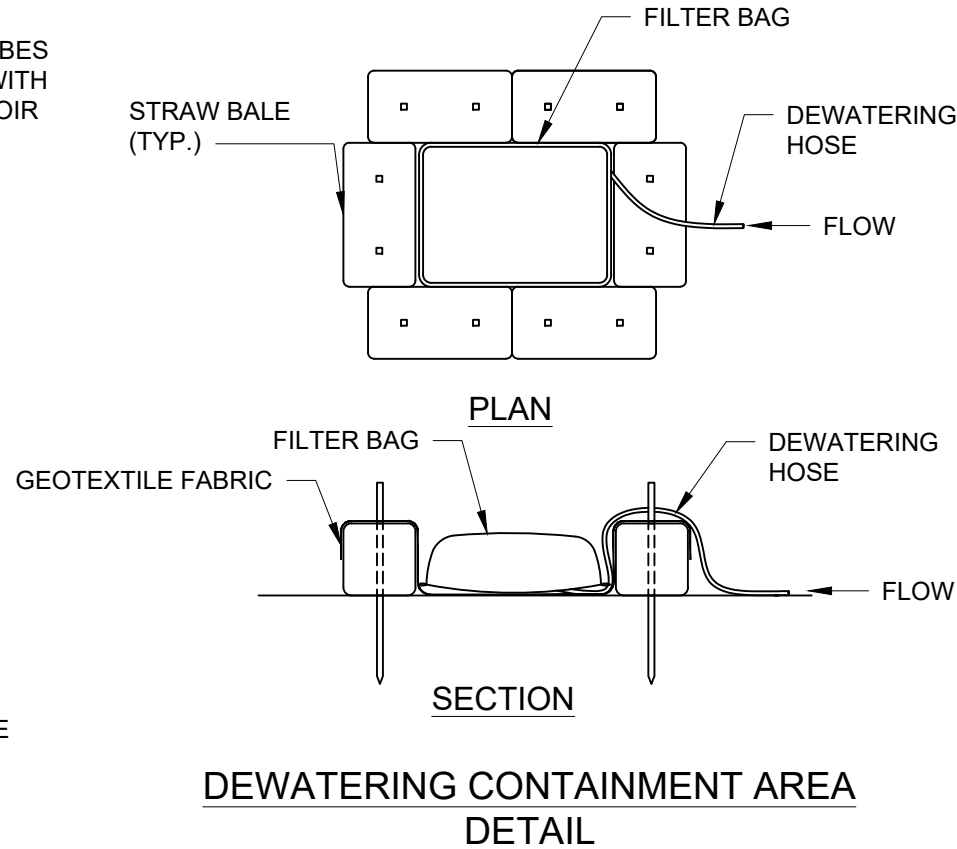
WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
130141	10	10
EROSION PROTECTION DETAILS AND NOTES		



SILT FENCE / COMPOST FILTER TUBE
EROSION CONTROL BARRIER



STONE CHECK DAM DETAIL



EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR ACCEPTANCE A GENERAL WORK SCHEDULE, CONSTRUCTION SEQUENCE AND PLAN WHICH INDICATES PLANNED IMPLEMENTATION OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THIS PLAN SHALL INCLUDE PROPOSED METHODS OF SOILS MANAGEMENT AND LEGAL OFFSITE DISPOSAL OF WASTE MATERIALS.
2. THE TOE OF ANY SLOPE IS TO REMAIN AT LEAST ONE FOOT INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROLS WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED, AT NO COST TO THE OWNER.
3. ADDITIONAL AND/OR REPLACEMENT EROSION CONTROLS SHALL BE INSTALLED AS CONDITIONS WARRANT, OR AS DIRECTED BY THE ENGINEER'S WETLAND SCIENTIST.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT AND/OR REPLACE ALL CONTROLS AS NEEDED. MAINTENANCE WILL BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATIONS AND PERMIT CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT NECESSARY MAINTENANCE DURING ALL PHASES OF PROJECT CONSTRUCTION AND SHALL BE SUBJECT TO THE INSPECTION AND ACCEPTANCE OF THE ENGINEER.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL, THROUGHOUT THE WORK AREA.
6. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AS DESCRIBED IN THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER'S WETLAND SCIENTIST.
7. DISTURBED SLOPES ALONG THE ROW EMBANKMENT WITHIN THE WORK ZONE WILL BE STABILIZED WITH LOAM AND SEED OR BALLAST AS DIRECTED BY THE ENGINEER.

FY 2025-2026 CAPITAL IMPROVEMENT PROGRAM

**WARE RIVER SECONDARY
CULVERT REPLACEMENTS AT MP 19.84 & MP 19.96
IN GILBERTVILLE, MA**

APPENDIX A

**DEPARTMENT OF ARMY
US ARMY CORPS OF ENGINEERS,
NEW ENGLAND DISTRICT**

**MASSACHUSETTS GENERAL PERMIT
SELF VERIFICATION NOTIFICATION (SVN)**

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249 Vanderbilt Avenue
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F: 781.278.5701
F: 781.278.5702
www.gza.com

August 15, 2024
File No. 01.0174521.06

Massachusetts Department of Transportation
Rail and Transit Division
10 Park Plaza
Boston, MA 02116

Re: Ware River Secondary MP 19.96 Culvert Replacement
Hardwick, Massachusetts 01031

To Whom It May Concern,

GZA GeoEnvironmental, Inc. (GZA) is writing to inform the Massachusetts Department of Transportation, Rail and Transit Division (MassDOT) (Applicant) of the completed notification to the U.S. Army Corps of Engineers (USACE), regarding necessary culvert replacement along the Ware River Secondary near mile post 19.96 in Hardwick, Massachusetts. According to USACE Self Verification procedures under Massachusetts General Permit, Appendix C – Self Verification (SVN), the SVN should be submitted within 30 days of the start of the USACE regulated activity, assuming the work qualifies under one or more General Permit Activities (GPs).

The signed SVN was submitted to USACE on November 22, 2023 under General Permit #23 – Linear Transportation Projects and Wetland/Stream Crossings, and #24 – Temporary Construction, Access, and Dewatering.

If you have any questions or would like more information, please do not hesitate to contact Anthony Damiano of GZA at (603) 213-2682 and Anthony.Damiano@gza.com.

Thank you in advance for your attention to this matter.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Anthony Damiano, WPIT
Project Manager

Stephen L. Lecco, AICP, CEP, PWS
Associate Principal

Attachment: USACE Appendix C – Self Verification Form

U.S. Army Corps of Engineers (USACE)
SELF-VERIFICATION NOTIFICATION (SVN)

DATA REQUIRED BY THE PRIVACY ACT OF 1974

Authority	Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332.
Principal Purpose	This information will be used in evaluating activities under Self-Verification procedures within Massachusetts.
Routine Uses	Routine uses will include: (1) Documenting compliance with the terms and conditions of the General Permit (GP) for activities that may require authorization pursuant to one or more of USACE's Regulatory authorities. (2) Records may be referred to other Federal, State, and local agencies for evaluation and enforcement purposes.
Disclosure	Failure to fully comply and abide by the GP terms and conditions prior to commencing work and after completion project may result in formal enforcement action, up to and including monetary penalties and/or legal action, pursuant to 33 CFR Part 326.
Instructions	The permittee must complete ALL required sections of this document before commencing USACE-regulated activities. A copy of this completed SVN must be kept on site during construction and be made available for review by USACE and other Federal, State, & Local regulatory authorities at any time. Within 30 days of initiating project construction, the permittee shall submit the completed SVN to USACE. The SVN shall be submitted to USACE as ONE signed document that includes project plans and documentation that supports each field (e.g., emails, letters, description, phone calls, surveys). Electronic submissions to the following address are strongly preferred: cenae-r-ma-sv@usace.army.mil . The email subject line shall contain the following: GP #, SVN, City/Town, and date submitted.

(ITEMS 1 THRU 3 TO BE FILLED BY USACE)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED
--------------------	----------------------	------------------

APPLICANT AND AGENT INFORMATION

4. APPLICANT'S NAME First - Chalita Middle- Last- Belfield Company- MassDOT Rail and Transit E-mail Address - chalita.belfield@dot.state.ma.us	7. AGENT'S ADDRESS: First - Kimberly Middle- K Last - Degutis Company- GZA GeoEnvironmental E-mail Address - kimberly.degutis@gza.com
5. APPLICANT'S ADDRESS: Address- 10 Park Plaza City- Boston State - MA Zip- 02116 Country- USA	8. AGENT'S ADDRESS: Address- 249 Vanderbilt Ave City- Norwood State - MA Zip- 0206 Country- US
6. APPLICANT'S PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 857.368.8957	9. AGENTS PHONE NOS. w/AREA CODE a. Residence b. Business c. Fax 781.278.58

NAME, LOCATION, AND DESCRIPTION OF PROJECT SITE

10. PROJECT NAME OR TITLE Ware River Secondary MP 19.96 Culvert Replacement	
11. FILE NUMBER(S) OF PREVIOUS USACE ACTIONS ON THE SITE (if applicable)	12. NAME OF WATERBODY unnamed trib to Ware River
13. PROJECT COORDINATES (in decimal degrees) Latitude: °N Longitude: °W 42°20'26.22"N 72° 9'40.60"W	14. PROJECT STREET ADDRESS (if applicable) Address n/a City - Hardwick State- MA Zip - 01031

ACTIVITY TYPE, PROJECT IMPACTS, AVOIDANCE & MINIMIZATION

15. GENERAL PERMIT ACTIVITIES (CHECK ALL THAT APPLY) <table style="width: 100%;"><tr><td>1 <input type="checkbox"/></td><td>6 <input type="checkbox"/></td><td>11 <input type="checkbox"/></td><td>16 <input type="checkbox"/></td><td>21 <input type="checkbox"/></td></tr><tr><td>2 <input type="checkbox"/></td><td>7 <input type="checkbox"/></td><td>12 <input type="checkbox"/></td><td>17 <input type="checkbox"/></td><td>22 <input type="checkbox"/></td></tr><tr><td>3 <input type="checkbox"/></td><td>8 <input type="checkbox"/></td><td>13 <input type="checkbox"/></td><td>18 <input type="checkbox"/></td><td>23 <input checked="" type="checkbox"/></td></tr><tr><td>4 <input type="checkbox"/></td><td>9 <input type="checkbox"/></td><td>14 <input type="checkbox"/></td><td>19 <input type="checkbox"/></td><td>24 <input checked="" type="checkbox"/></td></tr><tr><td>5 <input type="checkbox"/></td><td>10 <input type="checkbox"/></td><td>15 <input type="checkbox"/></td><td>20 <input type="checkbox"/></td><td>25 <input type="checkbox"/></td></tr></table>	1 <input type="checkbox"/>	6 <input type="checkbox"/>	11 <input type="checkbox"/>	16 <input type="checkbox"/>	21 <input type="checkbox"/>	2 <input type="checkbox"/>	7 <input type="checkbox"/>	12 <input type="checkbox"/>	17 <input type="checkbox"/>	22 <input type="checkbox"/>	3 <input type="checkbox"/>	8 <input type="checkbox"/>	13 <input type="checkbox"/>	18 <input type="checkbox"/>	23 <input checked="" type="checkbox"/>	4 <input type="checkbox"/>	9 <input type="checkbox"/>	14 <input type="checkbox"/>	19 <input type="checkbox"/>	24 <input checked="" type="checkbox"/>	5 <input type="checkbox"/>	10 <input type="checkbox"/>	15 <input type="checkbox"/>	20 <input type="checkbox"/>	25 <input type="checkbox"/>	16. SUMMARY OF PROJECT IMPACTS (see instructions) <table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th>Area (squarefeet)</th><th>Length (linearfeet)</th><th>Volume (cubicyards)</th><th>Duration</th></tr></thead><tbody><tr><td>1,154</td><td></td><td>10 / rip rap</td><td>Perm</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	Area (squarefeet)	Length (linearfeet)	Volume (cubicyards)	Duration	1,154		10 / rip rap	Perm																
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Area (squarefeet)	Length (linearfeet)	Volume (cubicyards)	Duration																																															
1,154		10 / rip rap	Perm																																															

17. PROJECT PLANS (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE ITEMS ARE COMPLETE) (*see instructions*)

- ☒ a. Plans shall at least contain the following: Vicinity Map, Plan View, and Typical Cross Section View of the proposed activity.
- ☒ b. All direct, indirect and secondary impacts from USACE regulated activities are shown on the project plans.
- ☒ c. The size of the impact area for each activity (acre, square feet, linear feet) are shown on the project plans.
- ☒ d. The discharge of fill material (§404), the volume of fill material is identified on the project plans.
- ☒ e. The duration of each impact, permanent or temporary (X days), is identified on the project plans.
- ☒ f. Do activities with permanent impacts result in the loss of waters? If so, this is identified on the project plans.
- ☒ g. All aquatic resources in the vicinity of the USACE regulated activities are delineated on the project plans.

18. AVOIDANCE & MINIMIZATION (BY CHECKING THE BOXES BELOW, YOU CERTIFY THESE CRITERIA ARE MET) (*see instructions*)

- ☒ a. The project has been designed to avoid and minimize impacts to aquatic resources.
- ☒ b. The footprint of activities in waters of the U.S. has been reduced to only what is necessary to achieve the overall project purpose.
- ☒ c. All practicable measures have been taken to avoid and minimize impacts to aquatic resources through construction techniques and site access (e.g., Best Management Practices, Time of Year Restrictions).
- ☒ d. All temporary impacts from USACE regulated activities will be restored upon completion of construction and the project area will be returned to pre-construction contours and conditions.

COMPLIANCE WITH FEDERAL REGULATIONS & SUPPLEMENTAL INFORMATION

19. DUE DILIGENCE (*see instructions*)

Complete the entries below to document compliance with the following Federal requirements. Construction may NOT begin if a PCN is/may be required, and you must contact USACE to determine permitting requirements. Documentation that demonstrates how the activity complies with each field below shall be submitted to the USACE as noted in the instructions block. See each General Condition (GC) in the GP for how to comply with each requirement.

- | | |
|--|---|
| a. State Historic Preservation Officer | Per Appendix A, SHPO was notified and they did not respond with concerns within 30 days. |
| b. Massachusetts BUAR | Per Appendix A, BUAR was notified and they did not respond with concerns within 30 days. |
| c. Tribal Historic Preservation Officers | The Tribe(s) were notified and they didn't respond with concerns within 30 days. |
| d. Endangered Species Act - NOAA | The activity is not located within the ESA-listed Species Range. |
| e. Endangered Species Act - USFWS | The activity is not located within the ESA-listed Species Range. |
| f. Northern Long Eared Bat (ESA) | No effect determination reached with the Rangewide D-Key. See Instructions below.* |
| g. Essential Fish Habitat | The project footprint does not contain EFH (see EFH definition in the MA GP). |
| h. Wild & Scenic Rivers | There are no WSR's within 0.25 miles of the project area. |
| i. 401 Water Quality Certification 401 | The activity qualifies under the general 401 WQC for the 2023 MA GPs.
401 WQC/OOC File Number: _____ OOC issued: _____ 401 issued: _____ |
| j. Section 408 Permission | Not Required per GC 15a-f, no Federal Projects are within the project vicinity. |
| k. Coastal Zone | The project is not located within the coastal zone. |
| l. Construction Mats | Placement of construction mats complies with GC 22. |
| m. Time of Year Restrictions | N/A, the project is not located in a waterbody that has TOY restrictions. |
| n. Vernal Pools | Per GC 28, the project is not located in a vernal pool. |
| o. Sediment & Erosion Controls | Per GC 25, the activity uses BMPs to avoid/minimize sedimentation & erosion. |
| p. Stream/Wetland Crossings | The activity complies with all applicable terms in GC 31. |

20. AQUACULTURE ACTIVITIES - GP 18 (*see instructions*)

- ☐ a. If required, an Aquaculture Certification from the Massachusetts Division of Marine Fisheries was obtained prior to commencing work.
- ☐ b. Coordination with the U.S. Coast Guard pursuant to Private Aids to Navigation has occurred prior to commencing work.
- ☐ c. If required, a MEPA Certificate was obtained from the Massachusetts Environmental Protection Agency prior to commencing work. **Select Option**
- ☐ d. The prospective permittee contacted local authorities (e.g. harbor master, select board, shellfish constable) for authorization of their facility prior to commencing work.

21. ADDITIONAL INFORMATION/ATTACHMENTS (*see instructions*)

- ☒ a. The project plans are enclosed in this SVN submittal (see block 17).
- ☒ b. The activity **IS NOT** funded through the Bipartisan Infrastructure Bill (also known as the Infrastructure Investment and Jobs Act).
- ☒ c. All required state, local and federal approvals were acquired prior to starting construction in USACE jurisdiction.
- ☒ d. After construction of the activity is completed, a complete Certificate of Compliance will be submitted to USACE.

22. IS THERE ANOTHER LEAD FEDERAL AGENCY:

☐ YES ☒ NO

23. STATEMENT OF AUTHORIZATION (see instructions)

I certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

Chaita Belfield
SIGNATURE OF APPLICANT

11.16.23
DATE

[Signature]
SIGNATURE OF AGENT

11/17/23
DATE

24. SIGNATURES (see instructions)

I hereby certify that the information in this Self-Verification Notification is complete and accurate. As the applicant or their duly authorized agent, I certify the activity was completed in accordance with the terms and conditions of the GP. This includes all applicable terms, general conditions, and activity-specific GP criteria. I agree to allow the duly authorized representatives of the Corps of Engineers Regulatory Program and other regulatory or advisory agencies to enter upon the premises of the project site at reasonable times to evaluate inspect and photograph site conditions. This consent to enter the property is superior to, takes precedence over, and waives any communication to the contrary. For example, if the property is posted as "no trespassing" this consent specifically supersedes and waives that prohibition and grants permission to enter the property despite such posting.

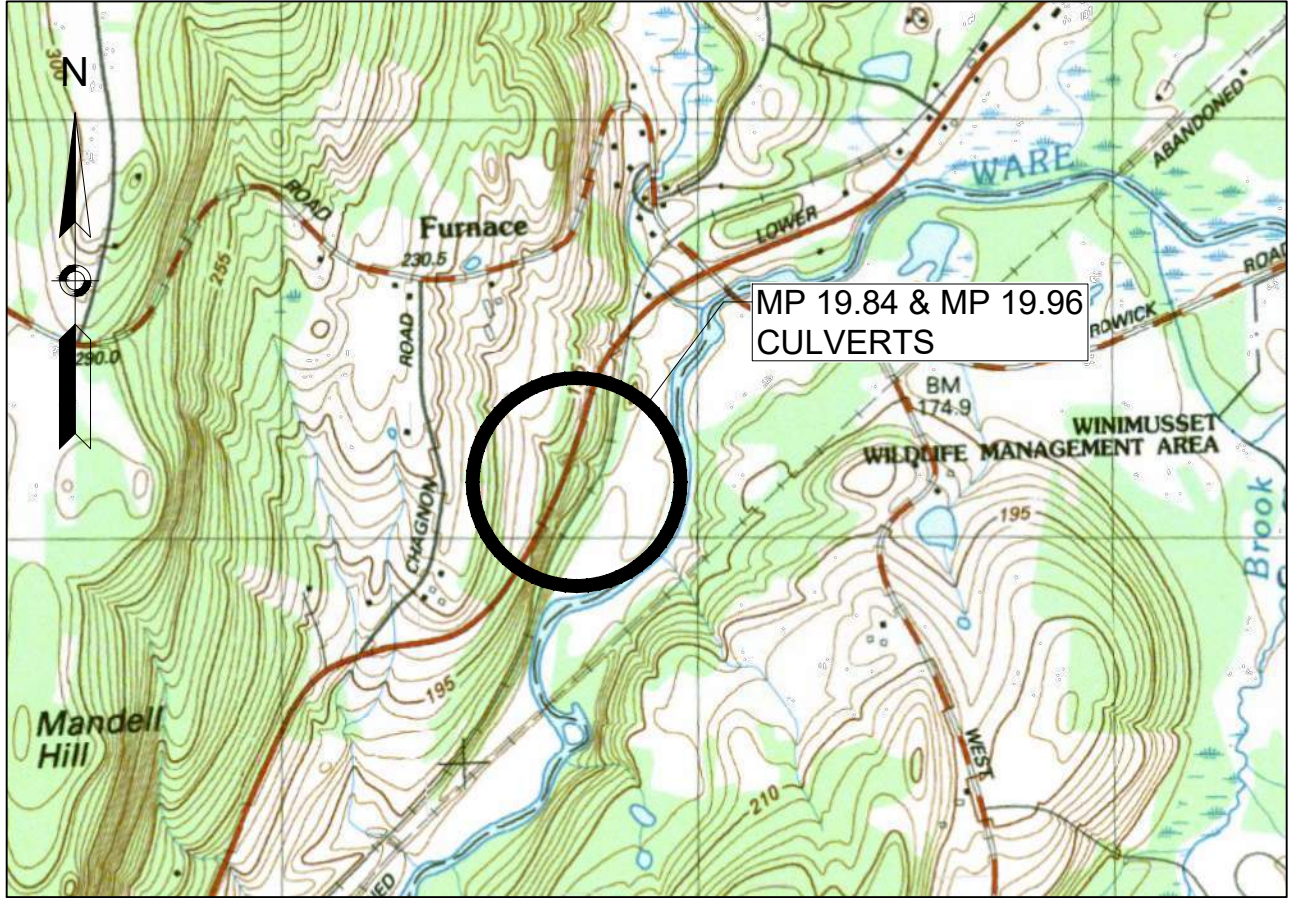
Chaita Belfield
SIGNATURE OF APPLICANT

11.16.23
DATE

[Signature]
SIGNATURE OF AGENT

11/17/23
DATE

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.



LOCUS PLAN

SCALE: 1" = 1500'

**CULVERT REPLACEMENT PROJECT
AT WARE RIVER SECONDARY MP 19.84 & MP 19.96
GILBERTVILLE, MA**

**401 WATER QUALITY CERTIFICATE /
404 ARMY CORPS OF ENGINEERS
PERMITTING PLANS**

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
RAIL AND TRANSIT DIVISION

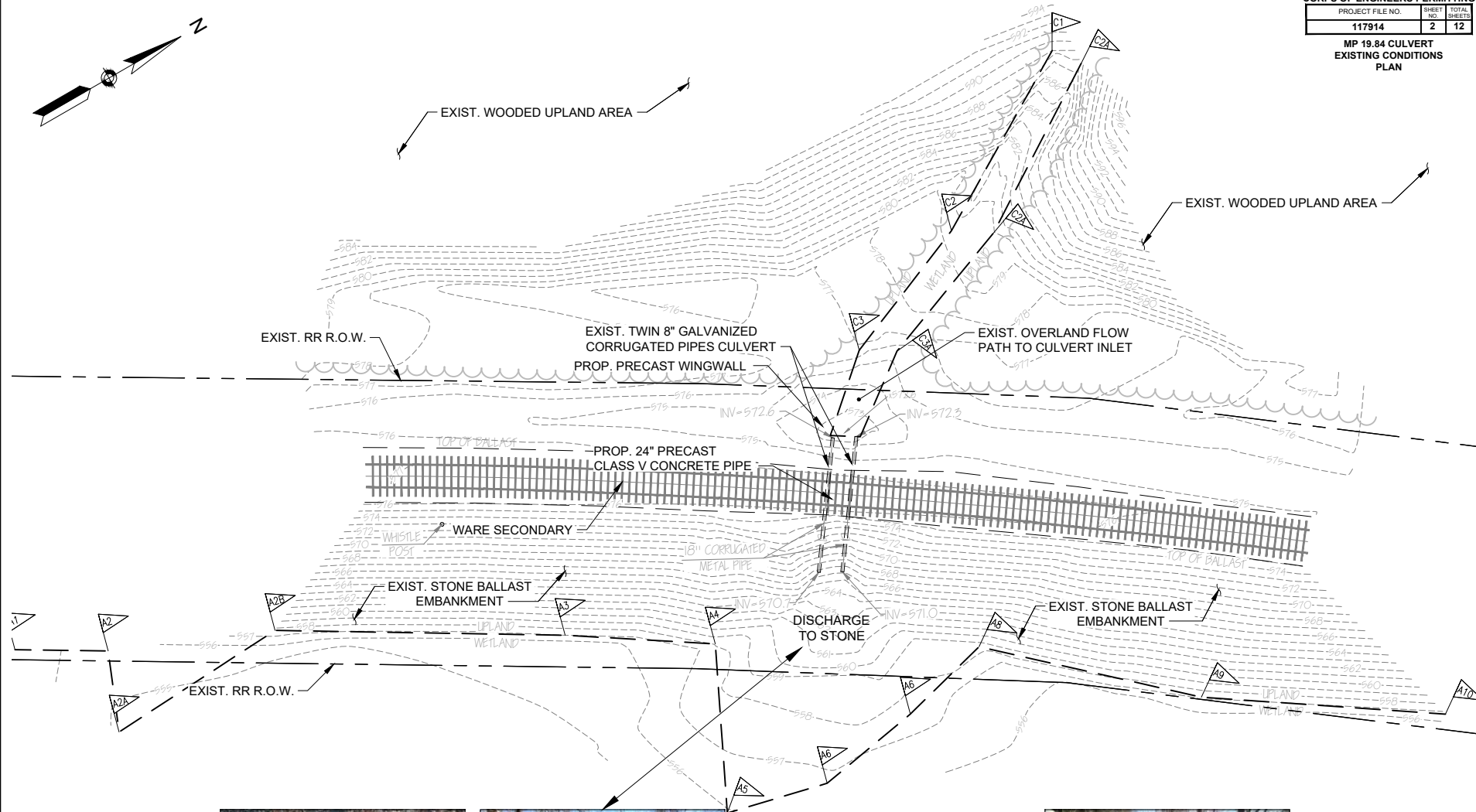
SEPTEMBER 2023

PERMITTING PLANS - NOT FOR CONSTRUCTION

WARE RIVER CULVERT
REPLACEMENT MP 19.84 & MP 19.96
CULVERT REPLACEMENT - ARMY
CORPS OF ENGINEERS PERMITTING

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	2	12

MP 19.84 CULVERT
EXISTING CONDITIONS
PLAN



INLET (LOOKING EAST)



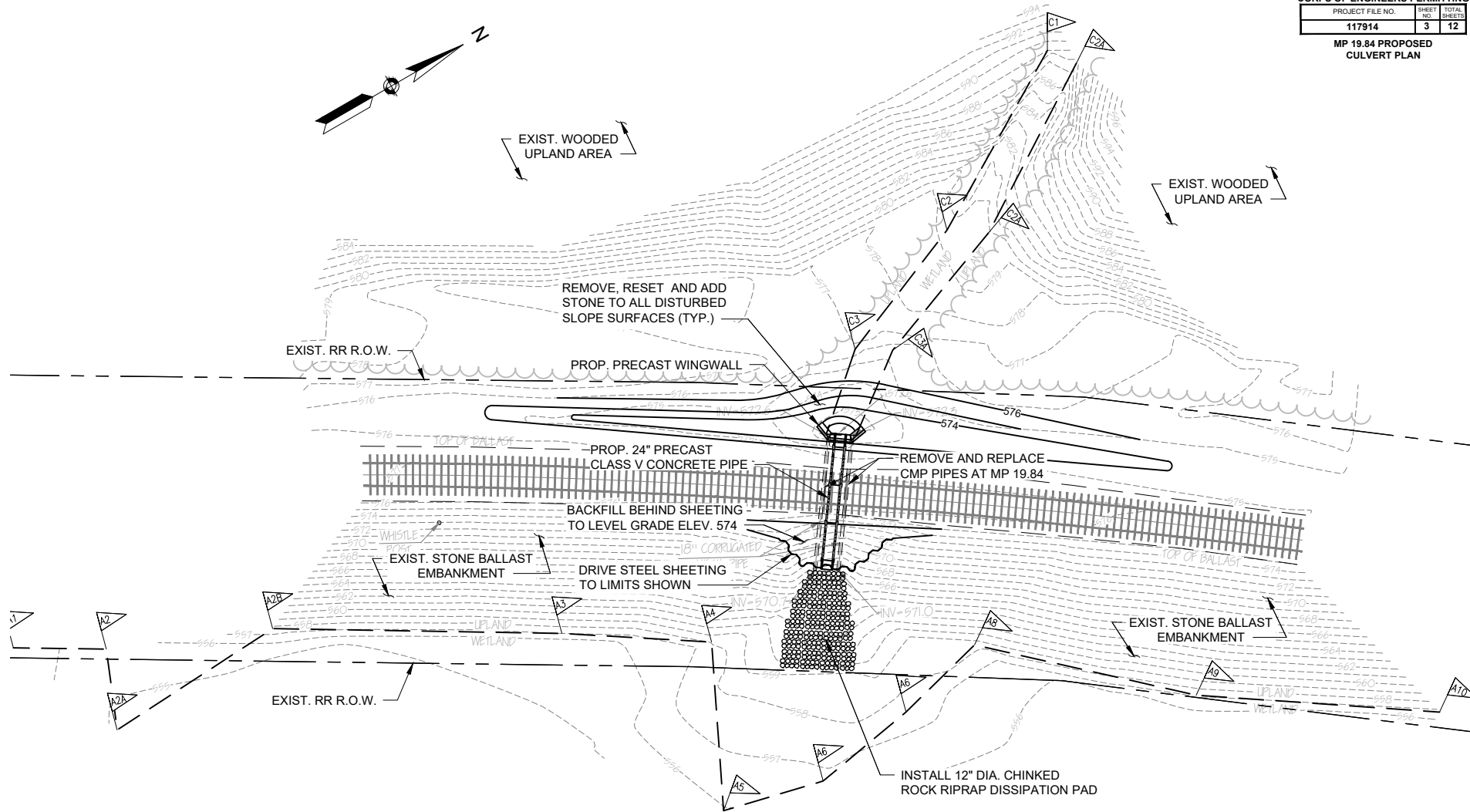
OUTLET (LOOKING EAST)

CULVERT MP 19.84
EXISTING CONDITIONS PLAN
NOT TO SCALE



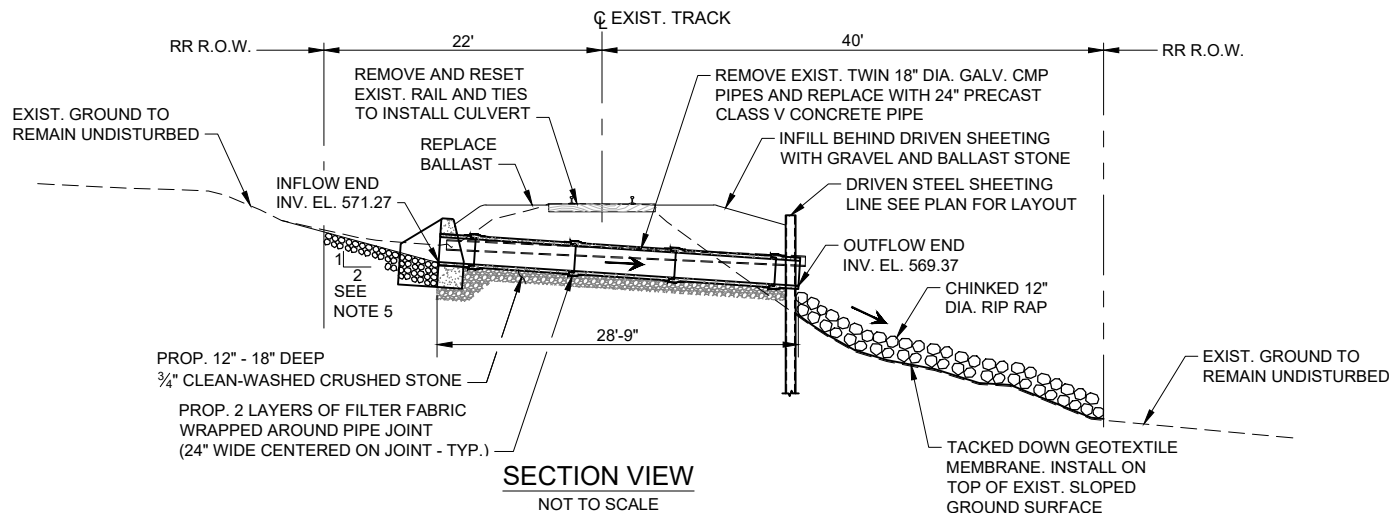
OUTLET (LOOKING NORTH)

PERMITTING PLANS - NOT FOR CONSTRUCTION



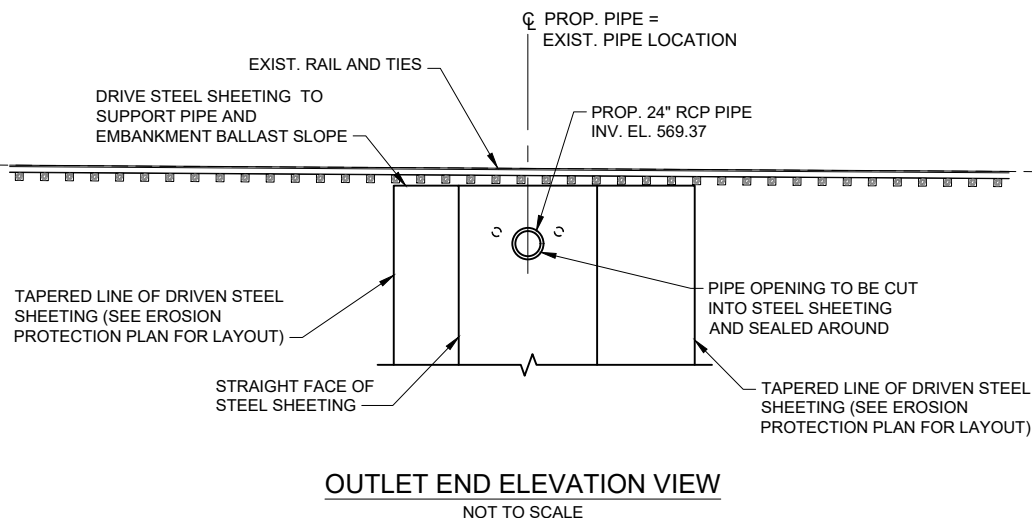
CULVERT MP 19.84 PROPOSED PLAN
NOT TO SCALE

PERMITTING PLANS - NOT FOR CONSTRUCTION



NOTES:

1. ALL CULVERT AND WINGWALL INSTALLATION WORK SHALL BE PERFORMED IN THE DRY WITH TEMPORARY COFFERDAMS, DEWATERING PUMPING, AND ALL EROSION CONTROL MEASURES IN PLACE AND MAINTAINED FOR THE DURATION OF THE WORK.
2. CONTRACTOR SHALL MINIMIZE ENCROACHMENT INTO THE ADJACENT WATER AND NATURAL VEGETATION TO THE GREATEST EXTENT POSSIBLE TO LIMIT SOIL AND WATER DISTURBANCE.
3. CONTRACTOR SHALL REMOVE AND TEMPORARILY STOCKPILE EMBANKMENT SLOPE SOILS AND SURFACE BALLAST TO BE RESET TO MATCH EXISTING CONDITION FOLLOWING CULVERT INSTALLATION WORK AT THE DIRECTION OF THE ENGINEER ONLY.
4. ANY ADDITIONAL PROCESSED GRAVEL, CRUSHED STONE, AND STONE BALLAST DETERMINED TO BE NEEDED BY THE CONTRACTOR SHALL BE APPROVED BY MASSDOT'S ENGINEER PRIOR TO ORDERING FOR DELIVERY TO THE SITE.
5. CONTRACTOR SHALL PLACE AND EMBED STONE ARMOR RIP RAP ON BOTH SIDES OF THE CULVERT TO LIMITS SHOWN. STONES SHALL BE CHINKED IN TO ELIMINATE ANY DISLODGING OR SLIP-FAILING OF THE RECONSTRUCTED SLOPE.
6. ALL EMBANKMENT FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED TWELVE (12) INCHES IN LAYERED DEPTH FOLLOWING COMPACTION. SUBSEQUENT LAYERS SHALL ONLY THEN BE PLACED AND COMPACTION AFTER THE PREVIOUS LOWER FILL LAYER IS FULLY COMPACTIONED IN PLACE.



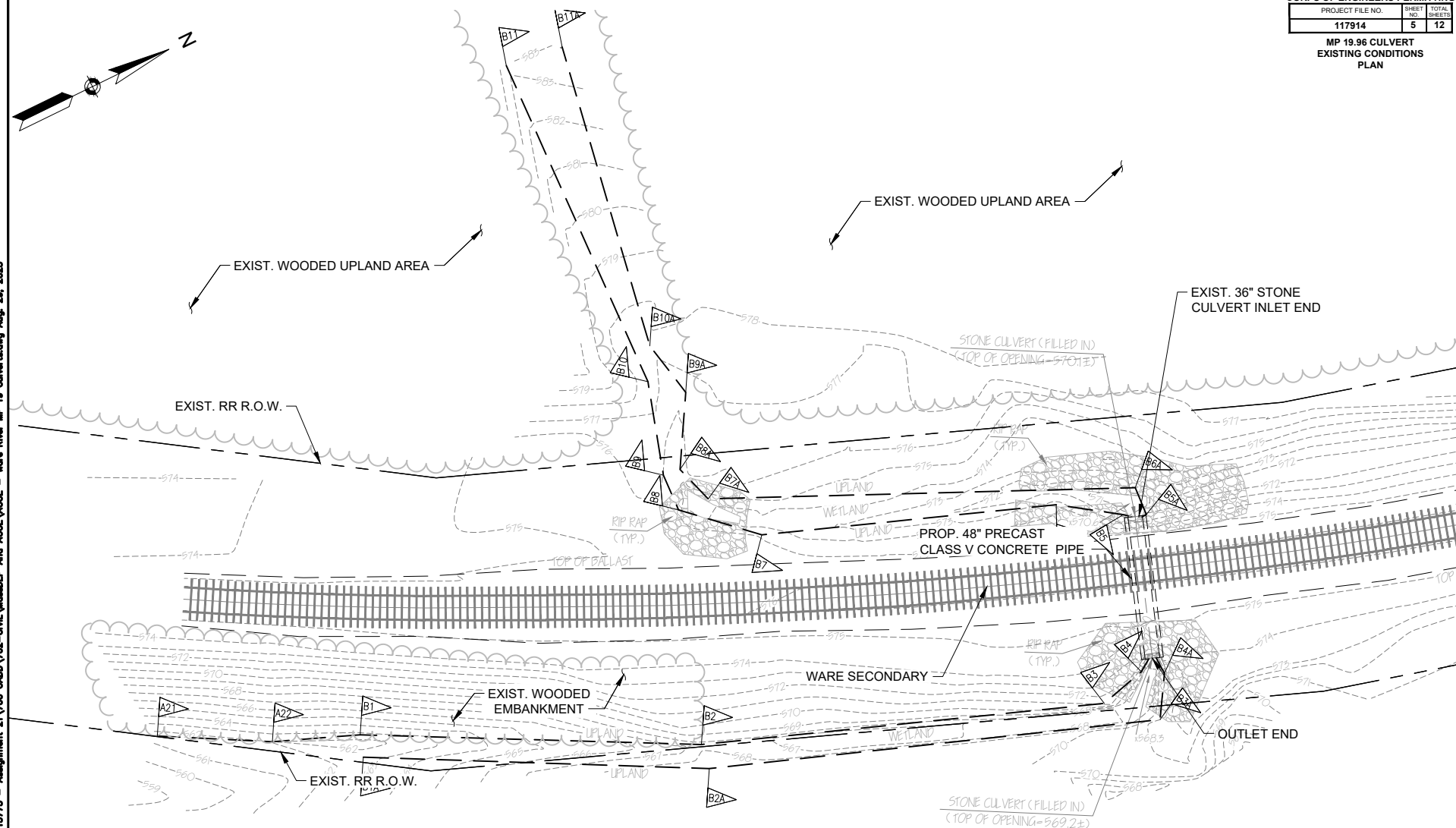
PERMITTING PLANS - NOT FOR CONSTRUCTION

P:\MASSDOT\2022\220303021 - MassDOT MSA Contract 115773 - Assignment 21\700 CAD\702-CHL\WoodSEP And ACCE\ACCE - Ware River MP 19 Culverts.dwg Aug. 28, 2023

WARE RIVER CULVERT
REPLACEMENT MP 19.84 & MP 19.96
CULVERT REPLACEMENT - ARMY
CORPS OF ENGINEERS PERMITTING

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	5	12

MP 19.96 CULVERT
EXISTING CONDITIONS
PLAN



INLET (LOOKING EAST)

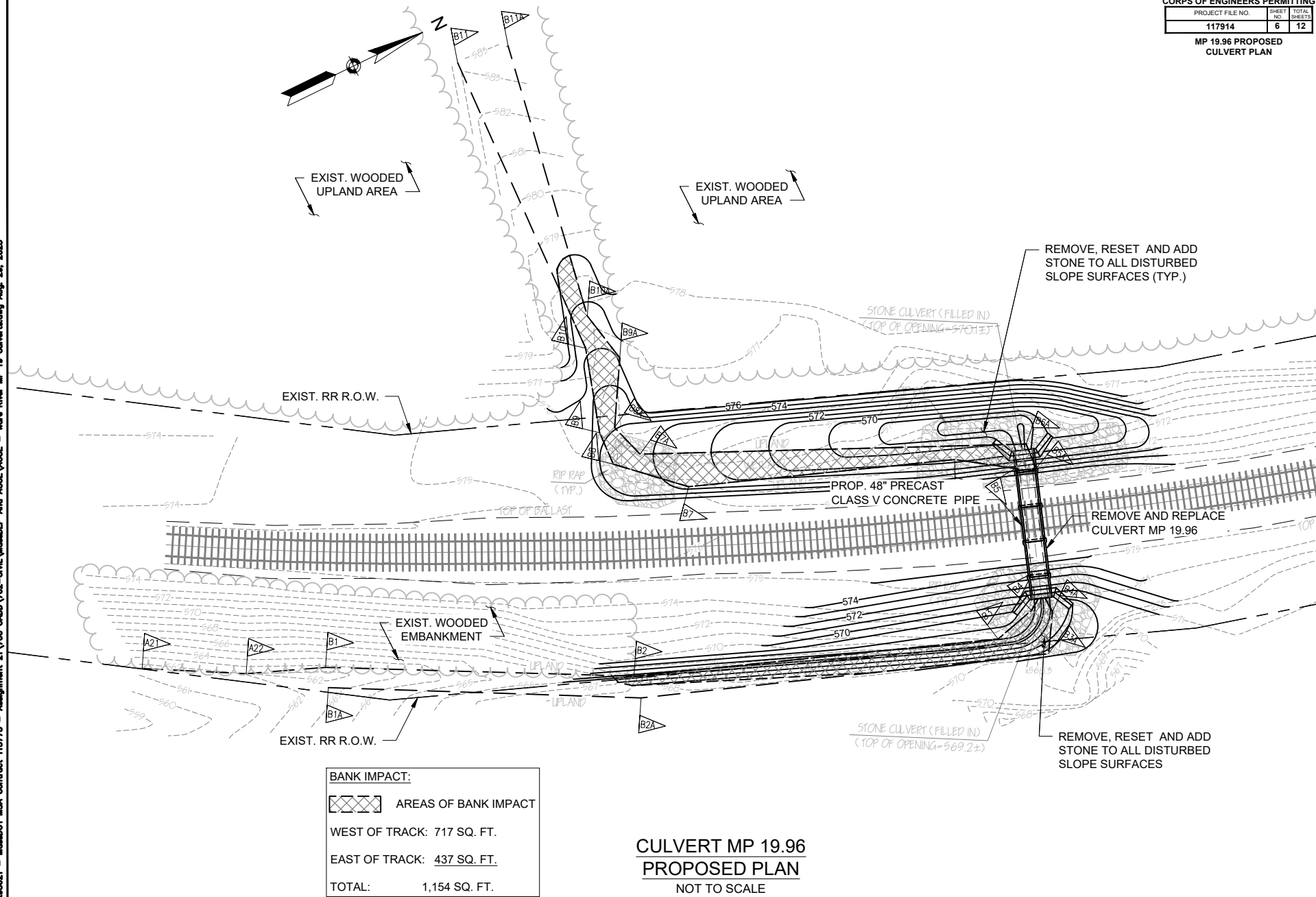
CULVERT MP 19.96
EXISTING CONDITIONS PLAN
NOT TO SCALE



OUTLET (LOOKING WEST)

PERMITTING PLANS - NOT FOR CONSTRUCTION

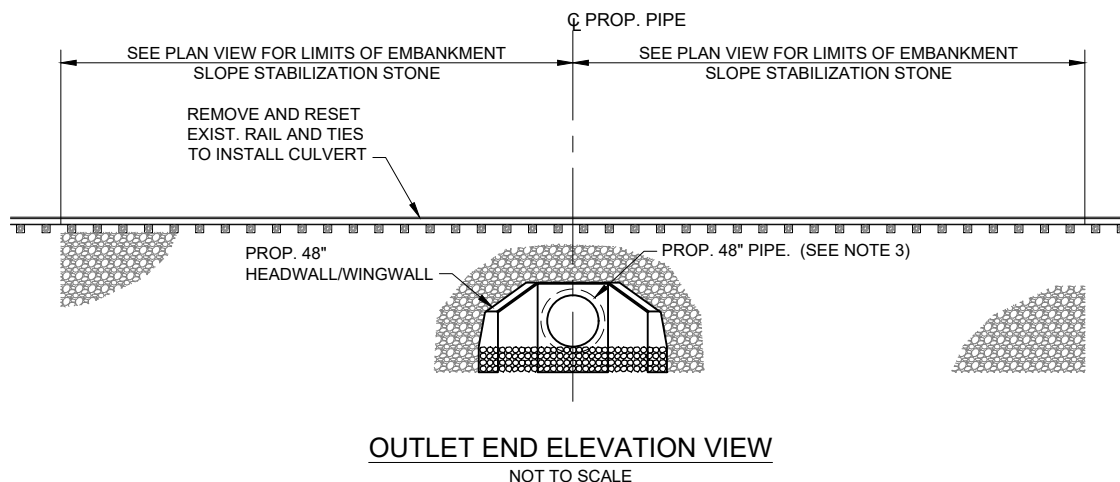
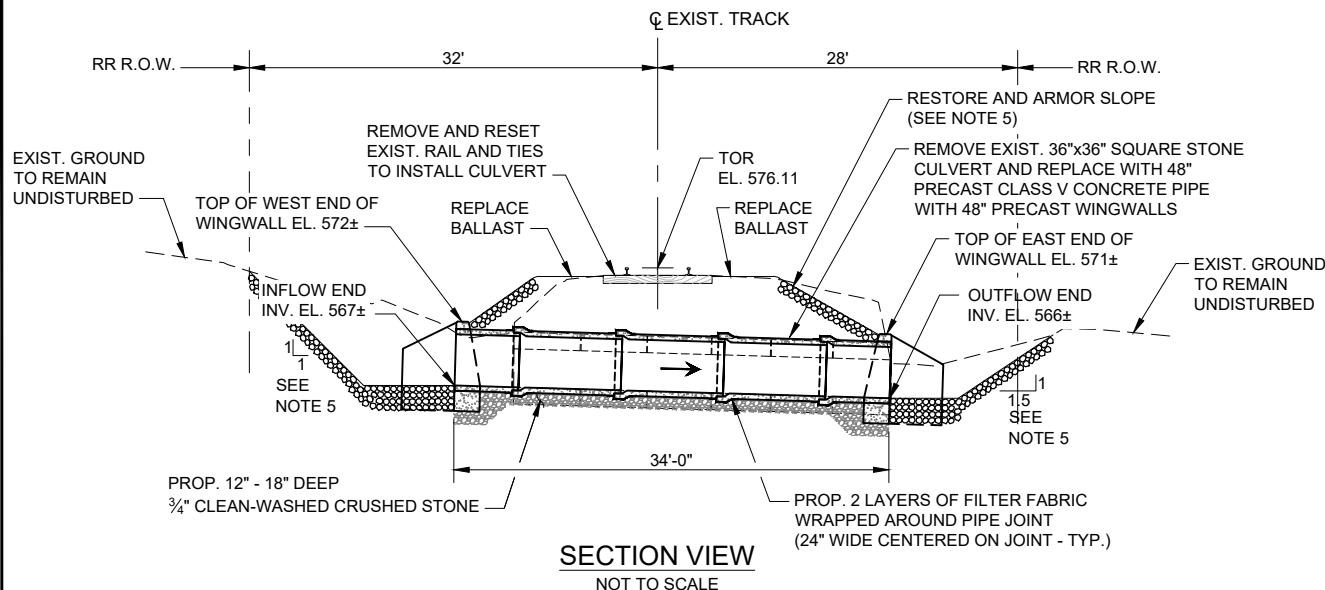
WARE RIVER CULVERT REPLACEMENT MP 19.84 & MP 19.96 CULVERT REPLACEMENT - ARMY CORPS OF ENGINEERS PERMITTING		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	6	12
MP 19.96 PROPOSED CULVERT PLAN		



BANK IMPACT:	
	AREAS OF BANK IMPACT
WEST OF TRACK: 717 SQ. FT.	
EAST OF TRACK: 437 SQ. FT.	
TOTAL: 1,154 SQ. FT.	

CULVERT MP 19.96
PROPOSED PLAN
NOT TO SCALE

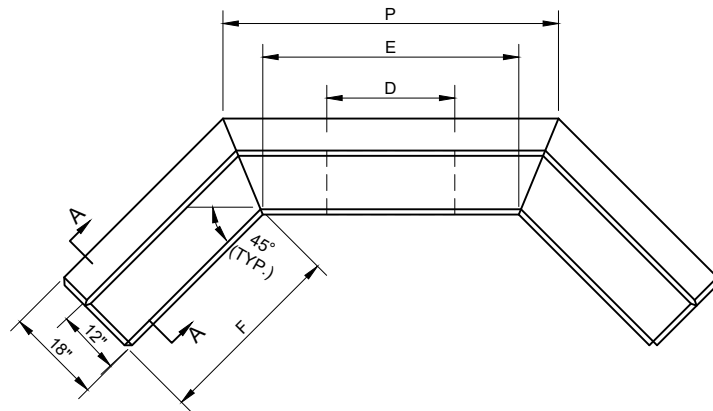
PERMITTING PLANS - NOT FOR CONSTRUCTION



NOTES:

1. ALL CULVERT AND WINGWALL INSTALLATION WORK SHALL BE PERFORMED IN THE DRY WITH TEMPORARY COFFERDAMS, DEWATERING PUMPING, AND ALL EROSION CONTROL MEASURES IN PLACE AND MAINTAINED FOR THE DURATION OF THE WORK.
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PERMITTING PLANS - NOT FOR CONSTRUCTION

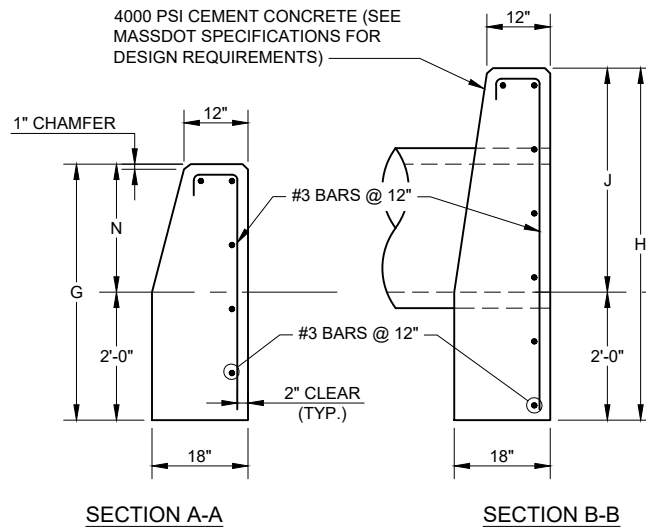


PLAN

1V:1.5H SLOPE									
D	E	G	H	J	L	N	P	F	CONC. MASONRY CY
24"	4'-0"	4'-0"	5'-6"	3'-6"	1'-6"	2'-0"	5'-3"	3'-0"	2.6
									STEEL LBS
									45

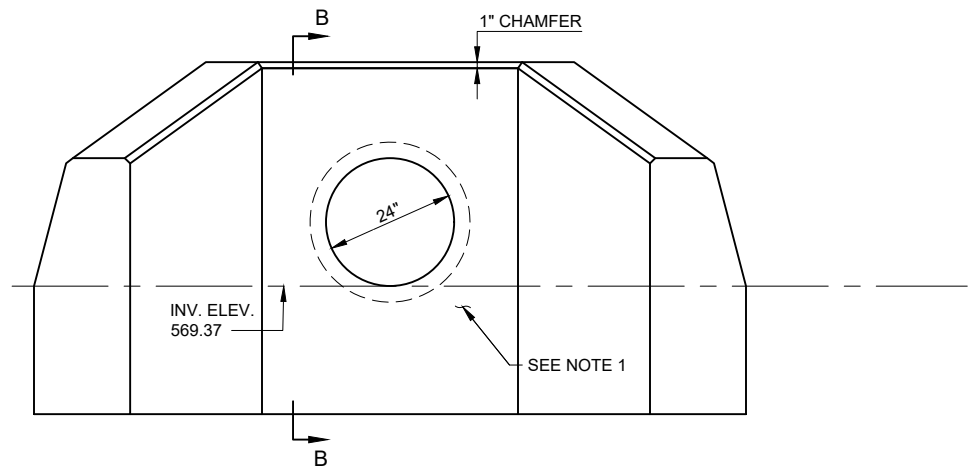
NOTE:

1. CONTRACTOR SHALL INSTALL REPLACEMENT, PRECAST WINGWALL AND SEAL CONCRETE CULVERT END WITH WATERTIGHT GROUT SEALANT PRIOR TO REMOVAL OF COFFERDAM.



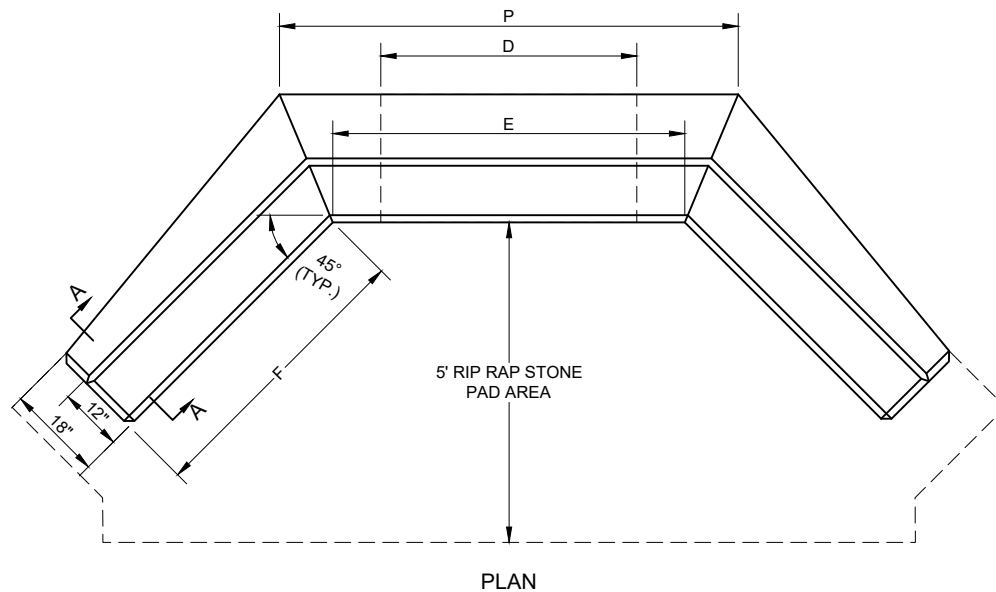
SECTION A-A

SECTION B-B



FRONT ELEVATION

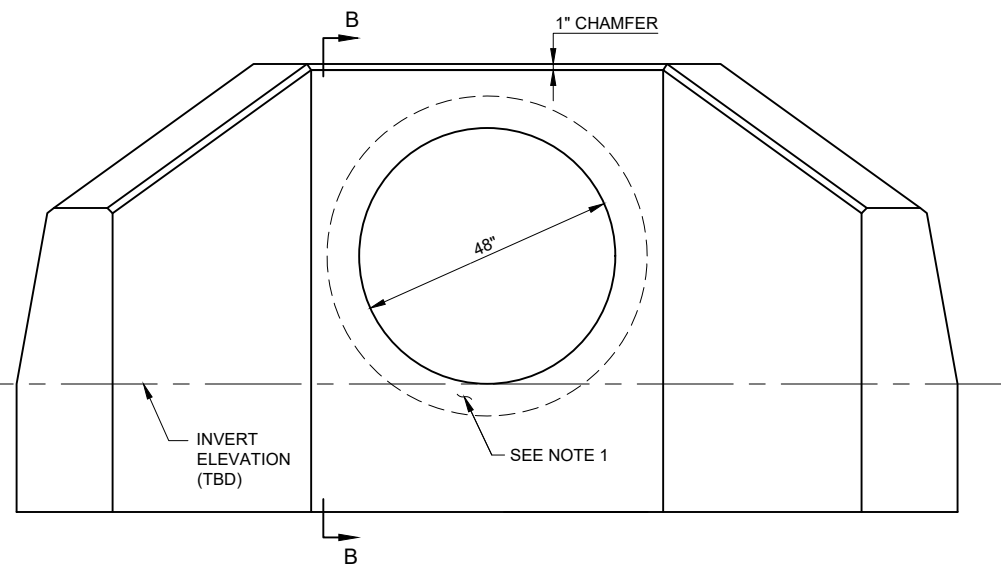
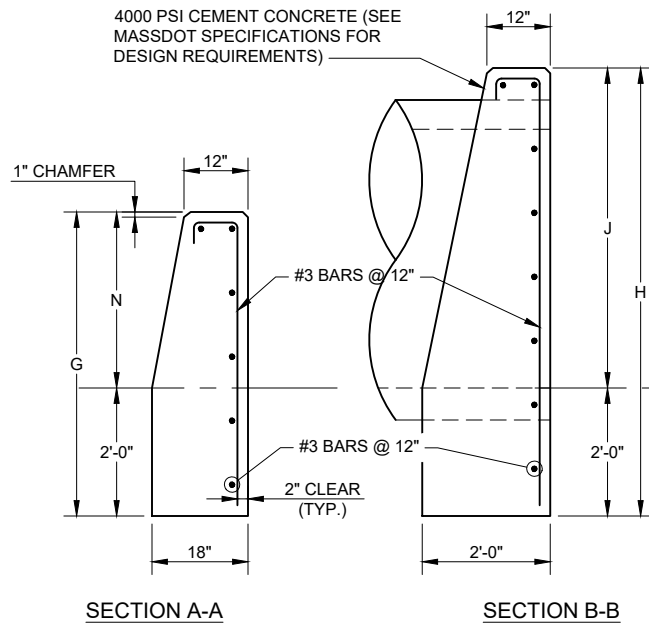
PERMITTING PLANS - NOT FOR CONSTRUCTION



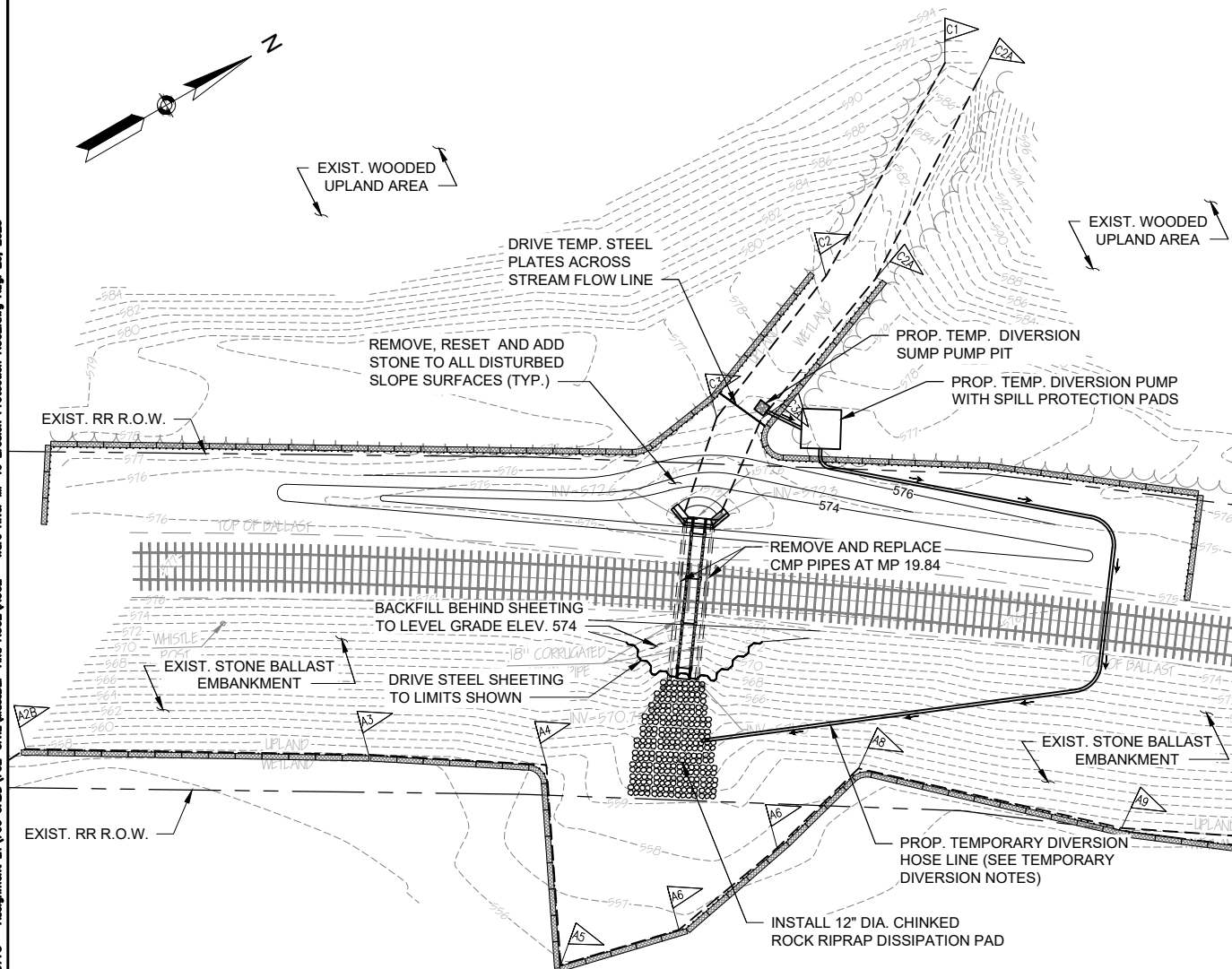
1V:1.5H SLOPE										
D	E	G	H	J	L	N	P	F	CONC. MASONRY CY	STEE LBS
48"	5'-6"	4'-9"	7'-0"	5'-0"	2'-0"	2'-9"	7'-2"	4'-6"	5.19	65

NOTE:

- CONTRACTOR SHALL INSTALL REPLACEMENT, PRECAST WINGWALL AND SEAL CONCRETE CULVERT END WITH WATERTIGHT GROUT SEALANT PRIOR TO REMOVAL OF COFFERDAM.



PERMITTING PLANS - NOT FOR CONSTRUCTION



PLAN
NOT TO SCALE

TEMPORARY DIVERSION NOTES:

1. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A TEMPORARY PUMP DIVERSION SYSTEM TO DIVERT WATER FLOW AROUND CULVERT CONSTRUCTION AREA, INCLUDING REQUIRED SIZE/LOCATION OF DIVERSION PUMP, DISCHARGE PIPE SIZE, AS WELL AS CONTINGENCY PLANS IN THE EVENT OF PUMP FAILURE.
2. WATER LEVELS ARE SUBJECT TO CHANGE, THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION AND INSTALL AND REFORTIFY COFFER DAMS AS APPLICABLE.
3. UPON INSTALLATION OF ALL SEDIMENT CONTROL MEASURES THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE DIVERSION AND DEWATERING PLAN FOLLOWING INSPECTION.
4. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DISCHARGE PIPES, SUMP-HOLE, DIVERSION PUMPS AND RIP-RAP DISCHARGE SPLASH PAD PRIOR TO PLACING PIPE PLUGS, DRIVEN STEEL PLATES AND SAND BAG COFFERDAMS.
5. THE TEMPORARY DISCHARGE PIPE SHALL BE CONSTRUCTED OF DURABLE MATERIAL ABLE TO WITHSTAND ANTICIPATED SITE CONDITIONS.
6. WATER FROM THE WORK AREA SHALL BE PUMPED TO A DEWATERING CONTAINMENT AREA THE AREA SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE GROUND AREA BELOW THE DOWNGRADIENT COFFERDAM.
7. AFTER THE CULVERT HAS BEEN REPLACED AND READY TO RECEIVE FLOW AND THE DISTURBED AREA HAS BEEN STABILIZED, THE DRIVEN STEEL SHEETS SHALL BE PULLED OUT AND "COFFERDAMS" SHALL BE REMOVED STARTING ON THE EASTERN END. THEN THE TEMPORARY DIVERSION SHALL BE REMOVED.

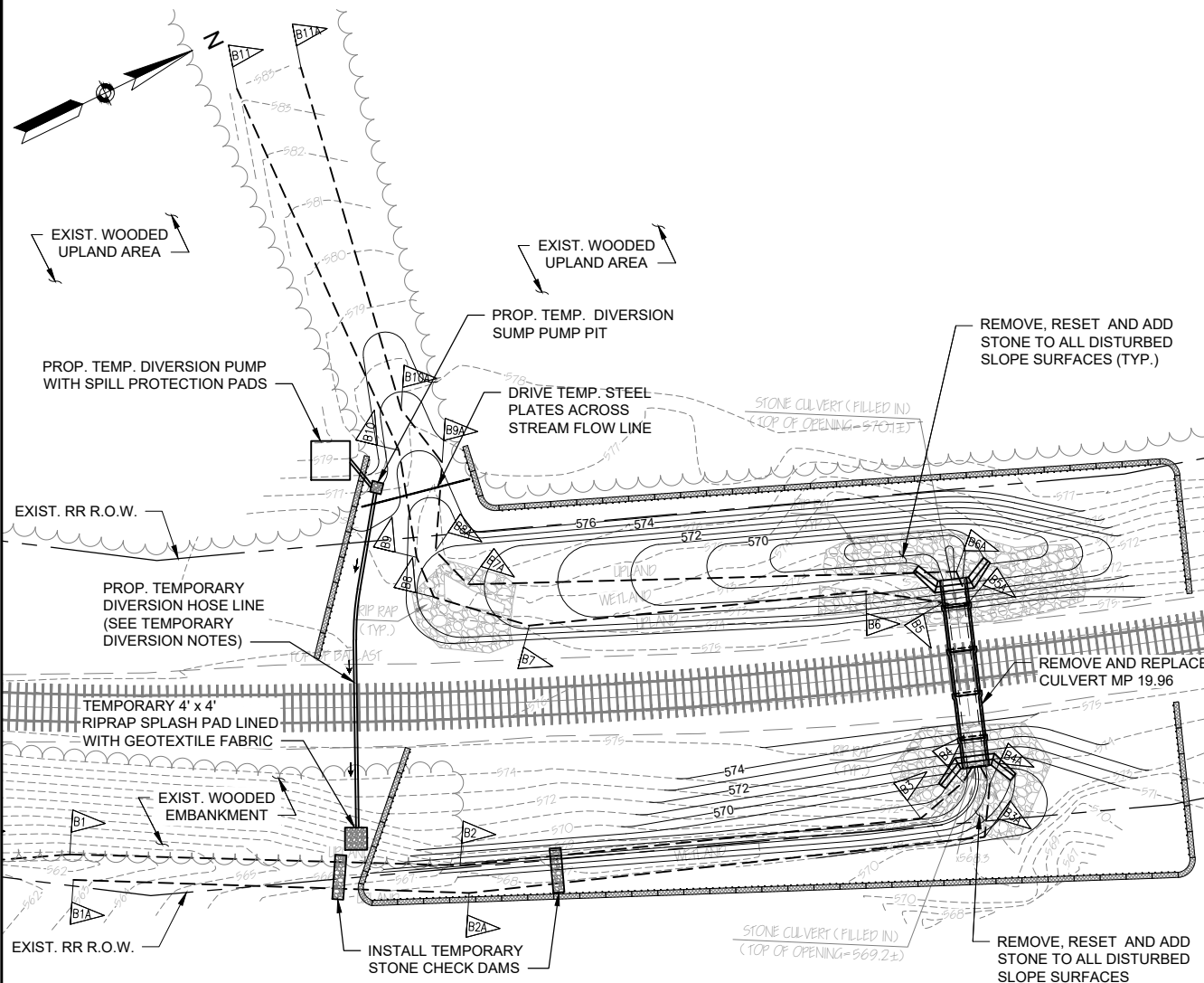
TEMPORARY DEWATERING NOTES:

1. THE PROP. TEMPORARY DEWATERING CONTAINMENT AREA. SIZE AND LOCATION OUTSIDE THE WETLAND AREA TO BE DETERMINED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER'S DRAINAGE ENGINEER AND WETLAND SCIENTIST.
2. CONTRACTOR SHALL EXCAVATE BACK THIS EMBANKMENT AREA AS REQUIRED TO INSTALL DEWATERING CONTAINMENT AREA AND RESTORE SLOPE UPON ITS REMOVAL.

LEGEND:

- APPROXIMATE LIMIT OF RIGHT OF WAY
- BANK FLAG AND BANK LINE
- COMPOST FILTER TUBE EROSION PROTECTION

PERMITTING PLANS - NOT FOR CONSTRUCTION



PLAN
NOT TO SCALE

LEGEND:

	APPROXIMATE LIMIT OF RIGHT OF WAY
	BANK FLAG AND LINE
	COMPOST FILTER TUBE EROSION PROTECTION

TEMPORARY DIVERSION NOTES:

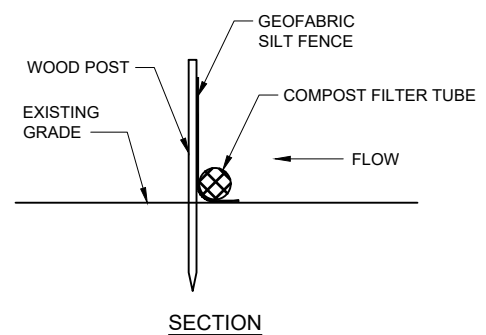
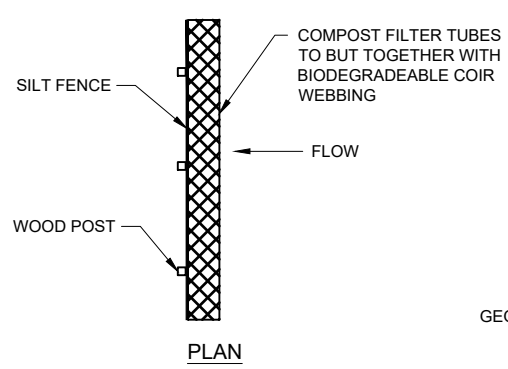
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2. WATER LEVELS ARE SUBJECT TO CHANGE, THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION AND INSTALL AND REFORIFY COFFER DAMS AS APPLICABLE.
3. UPON INSTALLATION OF ALL SEDIMENT CONTROL MEASURES THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE DIVERSION AND DEWATERING PLAN FOLLOWING INSPECTION.
4. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DISCHARGE PIPES, SUMP-HOLE, DIVERSION PUMPS AND RIP-RAP DISCHARGE SPLASH PAD PRIOR TO PLACING PIPE PLUGS, DRIVEN STEEL PLATES AND SAND BAG COFFERDAMS.
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7. AFTER THE CULVERT HAS BEEN REPLACED AND READY TO RECEIVE FLOW AND THE DISTURBED AREA HAS BEEN STABILIZED, THE DRIVEN STEEL SHEETS SHALL BE PULLED OUT AND "COFFERDAMS" SHALL BE REMOVED STARTING ON THE EASTERN END. THEN THE TEMPORARY DIVERSION SHALL BE REMOVED.

TEMPORARY DEWATERING NOTES:

1. THE PROP. TEMPORARY DEWATERING CONTAINMENT AREA, SIZE AND LOCATION OUTSIDE THE WETLAND AREA TO BE DETERMINED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER'S DRAINAGE ENGINEER AND WETLAND SCIENTIST.
2. CONTRACTOR SHALL EXCAVATE BACK THIS EMBANKMENT AREA AS REQUIRED TO INSTALL DEWATERING CONTAINMENT AREA AND RESTORE SLOPE UPON ITS REMOVAL.

PERMITTING PLANS - NOT FOR CONSTRUCTION

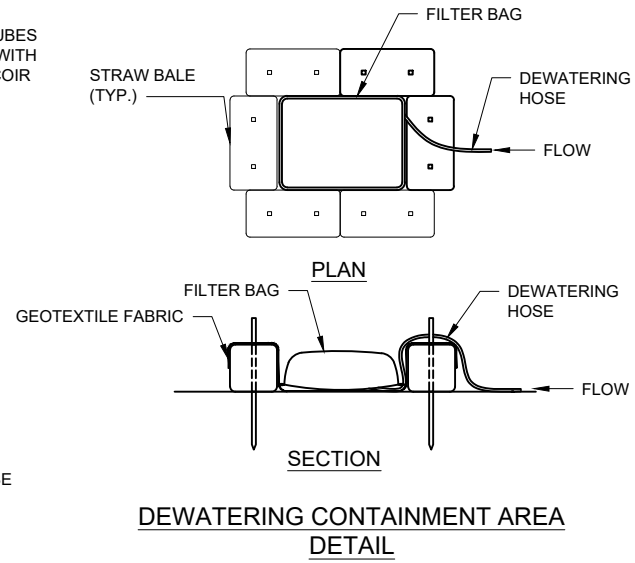
F:\MASSDOT\2022\12103021 - MassDOT MSA Contract 115773 - Assignment 21\700 CAD\1702-CHL\MSADP And AOC\ACOE - Ware River MP 19 Erosion Protection ACOE.dwg Aug. 28, 2023



SILT FENCE / COMPOST FILTER TUBE
EROSION CONTROL BARRIER



STONE CHECK DAM DETAIL



DEWATERING CONTAINMENT AREA
DETAIL

EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR ACCEPTANCE A GENERAL WORK SCHEDULE, CONSTRUCTION SEQUENCE AND PLAN WHICH INDICATES PLANNED IMPLEMENTATION OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THIS PLAN SHALL INCLUDE PROPOSED METHODS OF SOILS MANAGEMENT AND LEGAL OFFSITE DISPOSAL OF WASTE MATERIALS.
2. THE TOE OF ANY SLOPE IS TO REMAIN AT LEAST ONE FOOT INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROLS WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED, AT NO COST TO THE OWNER.
3. ADDITIONAL AND/OR REPLACEMENT EROSION CONTROLS SHALL BE INSTALLED AS CONDITIONS WARRANT, OR AS DIRECTED BY THE ENGINEER'S WETLAND SCIENTIST.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT AND/OR REPLACE ALL CONTROLS AS NEEDED. MAINTENANCE WILL BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATIONS AND PERMIT CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT NECESSARY MAINTENANCE DURING ALL PHASES OF PROJECT CONSTRUCTION AND SHALL BE SUBJECT TO THE INSPECTION AND ACCEPTANCE OF THE ENGINEER.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL, THROUGHOUT THE WORK AREA.
6. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AS DESCRIBED IN THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER'S WETLAND SCIENTIST.
7. DISTURBED SLOPES ALONG THE ROW EMBANKMENT WITHIN THE WORK ZONE WILL BE STABILIZED WITH LOAM AND SEED OR BALLAST AS DIRECTED BY THE ENGINEER.

FY 2025-2026 CAPITAL IMPROVEMENT PROGRAM

**WARE RIVER SECONDARY
CULVERT REPLACEMENTS AT MP 19.84 & MP 19.96
IN GILBERTVILLE, MA**

APPENDIX B

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL
PROTECTION (MASSDEP)**

**SECTION 401 FOR
WATER QUALITY CERTIFICATION (WQC)**

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Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Western Regional Office • 436 Dwight Street, Springfield MA 01103 • 413-784-1100

Maura T. Healey
Governor

Kimberely Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

ISSUED ELECTRONICALLY ONLY

Chalita Belfield
Massachusetts Department of Transportation
Rail and Transit Division
10 Park Plaza, Room 4160
Boston, Massachusetts 02116
Chalita.Belfield@mass.gov

June 21, 2024

Re: WATER QUALITY CERTIFICATION
Application for: BRP WW 10
MINOR FILL AND EXCAVATION PROJECT
Culvert Replacement at Ware River Secondary MP 19.96
Unnamed tributary to Ware River
Hardwick, Massachusetts

USACOE Application Number: n/a
MassDEP Wetlands File Number: n/a
Authorization Number: WW10-0000092

Dear Chalita Belfield:

The Massachusetts Department of Environmental Protection (hereinafter the Department) has completed its Technical Review of the permit application for the project listed above. In accordance with the provisions of Massachusetts General Laws, Chapter 21, Sections 26 through and including 53 and the Regulations promulgated thereunder at 314 CMR 9.00, and its subpart at 314 CMR 9.09(1)(c); and Section 401 of the federal Clean Water Act as amended (33 USC §1251 et seq.), it has been determined that there is reasonable assurance this railroad culvert replacement will be conducted in a manner which will not violate applicable Surface Water Quality Standards at 314 CMR 4.00 *Massachusetts Surface Water Quality Standards* as implemented and supplemented, without limitation at 314 CMR 9.00; and other applicable requirements of state law.

Findings:

The Department received a complete Application on December 22, 2023. The Department subsequently conducted its administrative and technical review.

This information is available in alternate format. Contact Michelle Waters-Ekanem, Director of Diversity/Civil Rights at 617-292-5751.

TTY# MassRelay Service 1-800-439-2370

MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

- The Activity (as defined at 314 CMR 9.02) described within the Water Quality Certification application and supplemental information (hereinafter the “application”) will result in the Discharge of Dredged or Fill Material (hereinafter “Discharge”) into and within Waters of the United States within the Commonwealth (hereinafter “WUSWC”) and Waters of the Commonwealth (hereafter CW) [each as defined at 314 CMR 9.02] at the Project Locus described below;
- The application involves a portion of the Massachusetts Department of Transportation (MassDOT) railroad right-of-way located approximately 1,600 feet south of the intersection with Lower Road (Route 32) within the Town of Hardwick, Massachusetts (hereinafter the “Project Locus”);
- The Project Locus contains and includes WUSWC which have been determined to meet the jurisdictional definition of Land Under Water (LUW) [as defined at 314 CMR 9.02];
- The Department hereby approves the following site plan(s) and documents as the “plan(s) of record”:
 - “Massachusetts Department of Transportation Rail and Transit Division Culvert Replacement at Ware River Secondary MP 19.84 & MP 19.96 in the Town of Gilbertville, MA 401 Water Quality Certificate Permitting Plans”, Dated April 10, 2024;
- The boundary of Land Under Water on the parcel in question is demarcated at the High Water Mark [as defined at 314 CMR 9.02], via flags B1 through and including B9 and flags B1A through and including B8A, as shown on the plan(s) of record;
- The area of Activity (314 CMR 9.02 Activity) constitute the “Project Site”;
- The Department has determined that the project, as shown on the plan(s) of record and further described in supplemental information, is the “least environmentally damaging practicable alternative”, and therefore meets the criteria at 314 CMR 9.06(1);
- The project, as approved in this Water Quality Certification, will result in the permanent Discharge into: 1,154 square feet of Land Under Water;
- Per the authority of the Department at 314 CMR 9.09(1)(d), the Department has determined that the proposed project maintains water quality within Land Under Water on the Site, and adequately minimizes damage to the Aquatic Ecosystem [as defined at 314 CMR 9.02] therein associated, through application of the mitigation proposed, and as conditioned by this Water Quality Certification;
- The Department has determined that proposed Activities will occur, at least in part, within WUSWC that is also designated Rare Species Habitat (as defined at 314 CMR 9.02); however, the Applicant has not consulted with the Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife (NHESP-DFW) regarding this project. In accordance with the Department’s responsibilities and authority at 314 CMR 9.06(2), no Activity shall occur until NHESP-DFW has issued a written determination that the proposed Activities will not have any adverse effect on Rare Species Habitat.
- The Department has determined that the proposed crossing of a non-tidal stream shown on the plan(s) of record complies with 314 CMR 9.06(2)(b)1. and 4., as it meets the applicable provisions of the Massachusetts River and Stream Crossing Standards (as defined at 314 CMR 9.02).
- The Ware River (from the dam at South Barre to the confluence with the Quaboag River) and its associated tributaries and Bordering and Isolated Vegetated Wetlands are

classified in the Massachusetts Surface Water Quality Standards (314 CMR 4.00) as Class B, Warm Waters. As such, they are protected by the antidegradation provisions specified in 314 CMR 4.04(1). The antidegradation provisions are implemented and supplemented, without limitation, by 314 CMR 9.00, per 314 CMR 9.01(3). Therefore, appropriate care and diligence shall be taken by the permittee to assure that the proposed activity will be conducted in a manner that will avoid violations of these Standards.

Water Quality Certification Conditions for Authorization Number WW10-0000092

Therefore, based on information currently in the record, the Department **grants a Water Quality Certification** (hereinafter “Certification”) for this project subject to the following conditions necessary to maintain water quality, to minimize impact to WUSWC, and to ensure compliance with appropriate state law:

Administrative and Procedural Conditions

1. This Certification does not relieve the permittee or any other person or party of the necessity of complying with all other applicable federal, state, or municipal statutes, ordinances, bylaws, or regulations, including those administered by the US Army Corps of Engineers. Activities, as defined at 314 CMR 9.02 Activity, conducted in accord with this Certification may only begin following the twenty-one (21) calendar day appeal period, as specified at 314 CMR 9.09(1)(e) and 314 CMR 9.10(2), and once all other required permits and licenses have been received. The permittee shall comply with all the Conditions of the “Department of the Army General Permits, Commonwealth of Massachusetts” (US Army Corps of Engineers, effective on June 2, 2023 (available from the US Army Corps of Engineers, New England District, Regulatory Division at www.nae.usace.army.mil)). The General Permits Conditions therein hereby form a part of, and are inseparable from, this Certification.
2. This Certification does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of property rights.
3. The permittee, property owner, all successors and assigns in interest or control of the property subject to this Certification and any contractor or other person performing work conditioned by this Certification shall adhere to all applicable procedural and technical Conditions of this Certification. All work upon or within WUSWC allowed per this Certification shall be accomplished by reference to the plan(s) of record, and to the Conditions of this Certification. In the event of any conflict between the Conditions of this Certification and the plans of record, the Conditions of this Certification shall prevail.
4. The permittee shall arrange to procure and submit a good resolution electronic copy of the plans of record (as referenced above) by close-of-business on July 31, 2024. Upon review and acceptance of these plans of record by the Department, the permittee will affix a prominent “Approved by MassDEP on **Month, Date** 2024” label upon each sheet, and shall electronically resubmit the plans to the Department. A copy shall be retained by the Department, and a copy shall be retained by the permittee and the general contractor (or equivalent) and made available on appropriately sized paper when requested. Thereafter, all

work conducted per this Certification shall fully and completely comply with these plans of record.

5. No less than 5 business days prior to the initiation of activities permitted by this Certification, the permittee shall arrange for a videoconference to be held with the Department's Western Region Wetlands Program. It shall be the responsibility of the permittee to propose a platform for this videoconference, with whatever security protocols they may require; and to ensure that their representative(s) (if any), as well as the general contractor, all appointed compliance monitors and environmental consultants required within this Certification (if any), and all other pertinent firms or persons, are in attendance. The permittee shall also ensure that all plans of record, contracts, and other pertinent documents are made available and viewable at this videoconference. No activities otherwise permitted by this Certification may proceed until this videoconference has been held.
6. The permittee shall notify the Department at least 48 hours prior to the commencement of construction that construction activities will commence.
7. Should contractors not be able to build according to the plan(s) of record (or any sheet, detail, schematic, or collar note therein) approved in this Certification, because said plans do not to accurately reflect site conditions (or standard construction methodologies, or practical construction considerations), the Department maintains the right to require an immediate cessation of work, in whole or in part. Should the Department, at its sole discretion, require such cessation, it shall do so in writing to the permittee, and such notice shall require adequate interim erosion and sedimentation controls and the submittal of proposed plan revisions that address the inadequacies, and result in the same or reduced Discharges to WUSWC as approved in the plan(s) of record. Activities shall not recommence until written approval to proceed has been issued by the Department.
8. The contractor(s) employed to execute earth-moving, vegetation removal, demolition, and/or motorized vehicle operation activities on the property subject to this Certification must be provided a copy of this Certification prior to the commencement of any such activities. Said contractor(s) may be held responsible with the permittee and property owner for violations by the contractor, and may be subject to penalties authorized by law and/or regulation for those violations.
9. This Certification specifically prohibits any Activity (as defined at 314 CMR 9.02) within or upon any WUSWC not specifically authorized by this Certification. Any failure to abide by the Conditions of this Certification that results in or contributes to a Discharge into WUSWC and CW constitutes a violation of this Certification. The permittee, property owner, and/or Contractor(s), may be subject to penalties authorized by law and/or regulation for those violations.
10. As this project has been determined to meet the definition of Single and Complete Project at 314 CMR 9.02, the amount of proposed Discharge within WUSWC permitted by this Certification shall not be exceeded, regardless of future project modifications or any proposed modifications under Condition #11 of this Certification. This prohibition does not expire.
11. The Department shall be notified in writing of any proposed changes in construction methodology or design necessary to complete this project. Any proposed modifications involving additional Discharge are strictly prohibited. Proposed reduction of Discharge may be submitted under this Condition. Based upon submittals under this Condition, the

Department will determine whether any proposed changes will require an “Amendment” to this Certification per the Department’s authority at 314 CMR 9.09(2).

12. Failure to comply with this Certification is grounds for enforcement, including but not limited to civil and criminal penalties, under MGL c. 21, § 42; 314 CMR 9.00; MGL c. 21A, § 16; 310 CMR 5.00; or other possible actions/penalties as authorized by the General Laws of the Commonwealth of Massachusetts.
13. Department staff shall have the right to enter and inspect the property subject to this Certification at reasonable hours to evaluate compliance with the Conditions of this Certification.
14. This Water Quality Certification expires on June 1, 2028, unless the US Army Corps of Engineers, New England District, Regulatory Division specifically authorizes a different expiration date in writing in a Pre-Construction Notification Authorization or Individual Permit issued under § 404 of the federal Clean Water Act and the “Department of the Army General Permits, Commonwealth of Massachusetts” (US Army Corps of Engineers, effective June 2, 2023) issued thereunder.

Site Stabilization Conditions

15. This Certification prohibits the discharge of any amount of untreated sediment-laden stormwater at any time from within or adjacent to the Project Site to any WUSWC outside the demarcated limit-of-work, as shown on the plan(s) of record. This prohibition applies regardless of any structural or nonstructural stormwater best management practices otherwise required by this Certification or any other regulatory authority; and despite any singular precipitation event, climactic pattern, or related phenomena. Discharges of sediment-laden stormwater in violation of this Condition would constitute a violation of this Certification, and may result in enforcement actions taken by the Department, or other regulatory agencies as appropriate. .
16. Prior to commencement of any work on the Site, adequate erosion and sedimentation control measures shall be implemented, including any necessary controls not specifically referenced in the plan(s) of record, and they shall be maintained in effect throughout the entire project, and until the Site has become stabilized with an adequate vegetative or landscaping cover. Structural failure of the erosion and sedimentation controls required by this Certification, and subsequent discharge of untreated stormwater to WUSWC, would constitute a violation of this Certification, and could result in enforcement actions taken by the Department.
17. Prior to the commencement of any earth-moving activity, a double-staked weed-free straw bale barrier (end to end) shall be placed along the limit of activity between all disturbed areas and WUSWC not subject to Discharge, regardless of what is shown on the plan(s) of record. Each bale shall be properly bound with at least two (2) lengths of twine or wire, and shall be entrenched to an excavated depth of at least four (4) inches, but no greater than six (6) inches. Excavated spoils from entrenching shall be deposited on the up-gradient side of the barrier. Bales shall be tightly butted against each other. A geotextile siltation fence shall be placed on the down-gradient side of the aforementioned straw bale barrier, and shall be entrenched in a like manner such that the base of the fabric lies below grade extending at least six (6) inches away from the fence. This fence shall be located no further than twelve (12) inches from the down-gradient side of the straw bale barrier. These erosion and sedimentation controls shall be constructed and installed per this Condition, and shall be

maintained in proper functioning condition until all disturbed areas have been stabilized, or until the Department has determined that the control measures are no longer necessary.

18. Prior to the initiation of any activities otherwise permitted in this Certification the permittee shall insure that a "Construction Sequencing Plan" appropriate to project and site conditions is submitted to the Department and approved in writing by the Department. Such a plan shall minimally follow the US Environmental Protection Agency's National Pollutant Discharge Elimination System (NPDES) "Construction Sequencing" Best Management Practice at <https://www.epa.gov/system/files/documents/2021-11/bmp-construction-sequencing.pdf> . In addition, at no time shall greater than ½ acre of land be disturbed or in a state of disturbance in any catchment at the site without the express written permission of the Department.

Compliance Monitoring Conditions

19. At least 10 days prior to the videoconference referenced in Condition #5, the permittee shall nominate a Primary Compliance Monitor in writing, who shall be subject to approval by the Department. The nominated primary compliance monitor shall have adequate and relevant education, training, and/or experience necessary to understand and perform the duties described herein, and the Department reserves the right to accept nominees based upon its review of such education, training, and/or experience, as documented in resumes submitted to the Department. The approved primary compliance monitor shall personally observe all "construction activity" at all times within all WUSWC and/or CW permitted by this Certification and subject to it; and are responsible for carrying out all relevant monitoring activities specified within this Certificate. Failure of the compliance Monitor to adequately perform the required duties in the opinion of the Department shall be grounds for revoking the approval of the Compliance Monitor.
20. The permittee may also nominate Alternative Compliance Monitor(s). The nominated Alternative compliance monitor(s) shall be nominated and subject to the same approval and conditions as the primary compliance monitor. The Alternative Compliance Monitor(s) may perform the duties of the Primary Compliance Monitor in the event the Primary Compliance Monitor is unavailable. However, the Alternative Compliance Monitor(s) may not serve as the Primary Compliance Monitor without the express written approval of the MassDEP. In all cases, the Primary Compliance Monitor is responsible for ensuring the duties of any Alternative Compliance Monitor are adequately performed.
21. For purposes of this Certification, "construction activities" are all activities (as defined at 314 CMR 9.02 Activity). These Activities include:
- a. mechanized vegetation removal and grubbing/land clearing;
 - b. the placement and the extraction of the proposed cofferdam;
 - c. placement of any material into standing water within WUSWC;
 - d. placement of fill within WUSWC and/or CW;
 - e. the extraction of temporary fill from any WUSWC;
 - f. The removal and placement of any material or substance for purposes of mitigation which is required in this Certification

The compliance monitor(s) are not required to be present for any work:

- g. taking place within the area dewatered by the proposed temporary cofferdam;
22. In addition to the above, the compliance monitor(s) shall conduct a thorough inspection of the site within 24 hours of any rainfall which equals or exceeds 0.5 inches within 24 hours (as measured from the nearest applicable station on the NOAA “Daily Summaries Map”, see <https://www.ncei.noaa.gov/maps/daily-summaries/>) or at least once every calendar week during active construction in the absence of a threshold rainfall event as outlined above.
23. While performing their inspection the primary compliance monitor shall confirm that all relevant Conditions of this Certification are being complied with. The compliance monitor(s) shall sufficiently document any and all observed conditions of the site as well as any noncompliance with any of the Conditions of this Certification. The compliance monitor(s) shall submit such electronic documentation at least once per week during active construction to: mary.grover@mass.gov. This electronic documentation shall be in the form of a concise written report which adequately describes the activities and/or conditions and cites the Condition(s) which have been violated (if appropriate), and shall always be accompanied by the submittal of digital photographs, which shall clearly and adequately show the nature and extent of activities and/or conditions and support the written report.
24. In the event non-compliant activities or events have or are occurring, the electronic documentation shall be submitted when the non-compliant activity or event is first noted by the compliance monitor. If, in unusual circumstances, this is not physically possible, then the compliance monitor shall submit electronic documentation within no more than four (4) hours of the initial observance of the noncompliant activity and/or condition. Within this same time period, the compliance monitor shall also report the noncompliant activities and/or conditions via telephone to each of the following Department staff: Mary Grover at 617-352-9918.
25. Failure of any compliance monitor to fulfill these duties in compliance with the Conditions of this Certificate is grounds for an enforcement action against the permittee. The permittee, its employees, agents, successors, and assigns shall not impede the compliance monitor(s) in the performance of their duties under this Certification. Any change in staffing of the compliance monitor(s) must be approved by the Department.

Prohibitions and Mitigation for Activities in Land Under Water

25. Activities below the High Water Mark [as defined at 314 CMR 9.02] and within Land Under Water associated with the unnamed tributary to the Ware River, shall take place between July 1st and September 30th of any given year unless otherwise approved by the Department in writing. Work within Land Under Water may continue after September 30th only if the area of proposed work is hydrologically isolated through mechanical means from surface water after June 30th but before October 1st of that year, as confirmed and approved through Condition #11 of this Certification. Any proposed modification under Condition #11 of this Certification not conforming to this Condition of the Certification shall only occur after a written request has been submitted to the Department. The request shall specify the exact position and extent of any proposed in-stream work not in conformance with the above time-of-year (TOY) window; and shall detail why such work must take place outside the specified time period and any additional erosion and sedimentation controls necessary as a result of

such proposed work. The Department reserves the right to deny any such request if a practicable alternative exists, as determined solely by the Department.

33. The use of geotextiles below the High Water Mark [as defined at 314 CMR 9.02] and within Land Under Water associated with the unnamed tributary to the Ware River is prohibited.
35. The permittee shall maintain the proposed embedded culvert in working order at all times. Failure to maintain said culvert such that the culvert no longer functions as designed; or no longer discharges surface water downstream to other jurisdictional WUSWC (as defined at 314 CMR 9.02) shall not constitute any change to the legal or regulatory status of any jurisdictional WUSWC, either upstream or downstream of said culvert as determined by this Certification. Upon the expiration of this Certification, all jurisdictional WUSWC shall be determined as if the culvert were still properly functioning as required by this Condition. This Condition is ongoing and does not end upon the completion of this project or the expiration of this Certification.

Compliance with Natural Heritage and Endangered Species Program

36. In accordance with the Department's responsibilities and authority at 314 CMR 9.06(2), no work shall occur until Natural Heritage and Endangered Species Program of the Massachusetts Division of Fisheries and Wildlife (NHESP-MassDFW) has issued a written determination that the proposed Activities will not have any adverse effect on Rare Species Habitat. If NHESP-MassDFW issues a no adverse effect determination, the permittee shall fully comply with all requirements specified within the "adverse effect determination."

Appeal Rights

Certain persons shall have a right to request an adjudicatory hearing concerning certifications by the Department when an application is required:

- a. The applicant or property owner;
- b. Any person aggrieved by this certification who has submitted written comments during the public comment period;
- c. Any ten (10) citizens of the Commonwealth pursuant to MGL c. 30A where a group member has submitted written comments during the public comment period; or
- d. Any governmental body or private organization with a mandate to protect the environment that has submitted written comments during the public comment period.

Any person aggrieved, any ten (10) citizens of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to MGL c. 30A, § 10, a Notice of Claim to an Adjudicatory Hearing must be made in writing, provided that the request is made by certified mail or hand delivery to the Department, with the appropriate

filing fee specified within 310 CMR 4.10 along with a Departmental Action Fee Transmittal Form within twenty-one (21) days from the date of issuance of this Certificate, and addressed to:

Massachusetts Department of Environmental Protection
Case Administrator
One Winter Street, 2nd Floor
Boston, MA 02108

A copy of the request shall at the same time be sent by certified mail or hand delivery to the issuing office of the Wetlands and Waterways Program at:

Massachusetts Department of Environmental Protection
Springfield State Office Building
436 Dwight Street
Springfield, MA 01103

A Notice of Claim for Adjudicatory Hearing shall comply with the Department's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 310 CMR 4.10(3):

- a. The §401 Certification Authorization Number and DEP Wetlands Protection Act File Number;
- b. The complete name of the applicant and address of the project;
- c. The complete name, address, and facsimile and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, facsimile and telephone numbers, and address of the attorney;
- d. If claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found at 314 CMR 9.02;
- e. A clear and concise statement that an adjudicatory hearing is being requested;
- f. A clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the Department's Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written Certification; and
- g. A statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Massachusetts Department of Conservation and Recreation (when the Certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

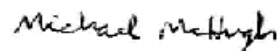
The hearing request along with a Departmental Action Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars (\$100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
Post Office Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory-hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

If you have further questions regarding this Certification, please contact Mary Grover at 617-352-9918.

Sincerely,



Michael McHugh
Chief, Division of Wetlands and Waterways

ISSUED ELECTRONICALLY ONLY

ec: Hardwick Conservation Commission
conservation@townofhardwick.com

Anthony Damiano
GZA
Anthony.Damiano@gza.com

Paul Maniccia, Supervisor
Regulatory Division, Permits and Enforcement Branch A
United States Department of the Army
New England District, Corps of Engineers
Paul.M.Maniccia@usace.army.mil

Timothy McGuire, Endangered Species Review Biologist
Natural Heritage and Endangered Species Program of the
Massachusetts Division of Fisheries and Wildlife
1 Rabbit Hill Road
Westborough, MA 01581
Timothy.McGuire2@mass.gov

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MASSACHUSETTS DEPARTMENT OF TRANSPORTATION RAIL AND TRANSIT DIVISION

CULVERT REPLACEMENT AT WARE RIVER SECONDARY MP 19.84 & MP 19.96

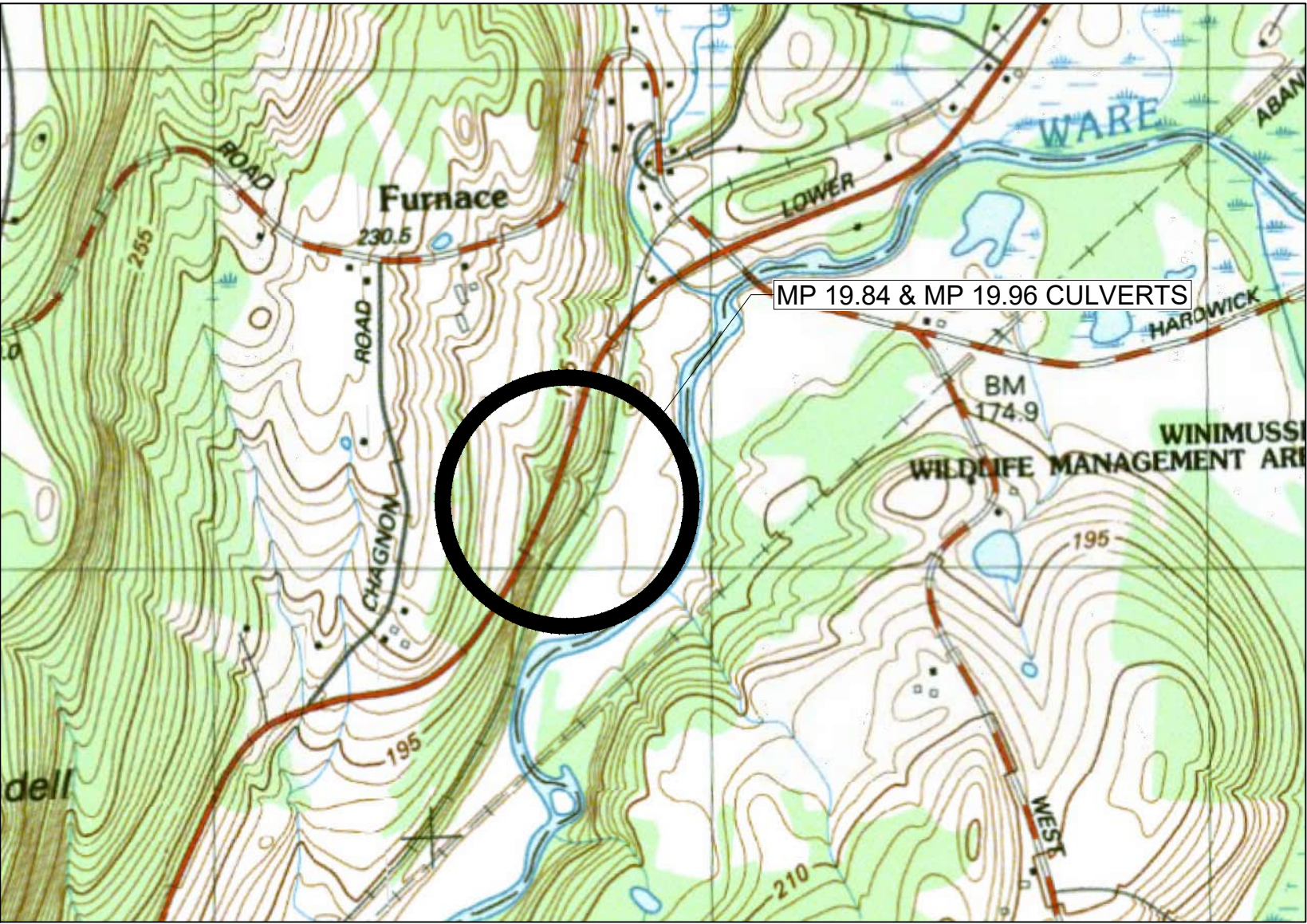
IN THE TOWN OF
GILBERTVILLE, MA

401 WATER QUALITY CERTIFICATE PERMITTING PLANS

WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT PERMITTING PLANS		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	1	11
COVER SHEET		

INDEX OF DRAWINGS

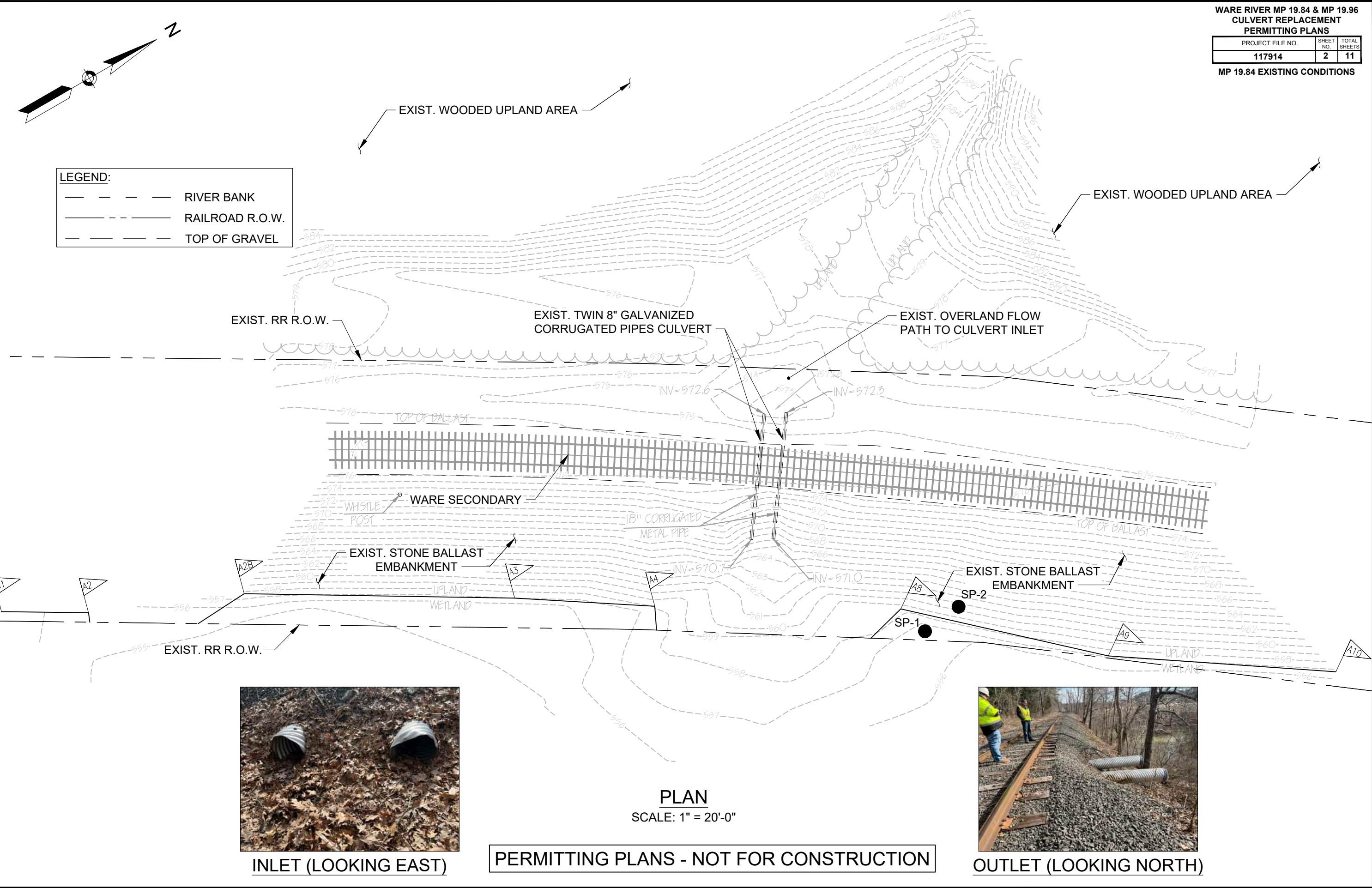
SHEET	TITLE
1	COVER SHEET
2	MP 19.84 EXISTING CONDITIONS
3	MP 19.84 PROPOSED PRECAST PIPE CULVERT REPLACEMENT
4	MP 19.96 EXISTING CONDITIONS
5	MP 19.96 PROPOSED PRECAST PIPE REPLACEMENT
6	PROPOSED MP 19.84 WINGWALL DETAILS
7	PROPOSED MP 19.96 WINGWALL DETAILS
8	MP 19.84 EROSION PROTECTION PLAN
9	MP 19.96 EROSION PROTECTION PLAN
10	EROSION PROTECTION DETAILS
11	EROSION CONTROL AND PLANTING NOTES



LOCUS PLAN
SCALE: 1" = 1000'

PERMITTING PLANS - NOT FOR CONSTRUCTION

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WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT
PERMITTING PLANS

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	2	11

MP 19.84 EXISTING CONDITIONS



INLET (LOOKING EAST)



OUTLET (LOOKING NORTH)

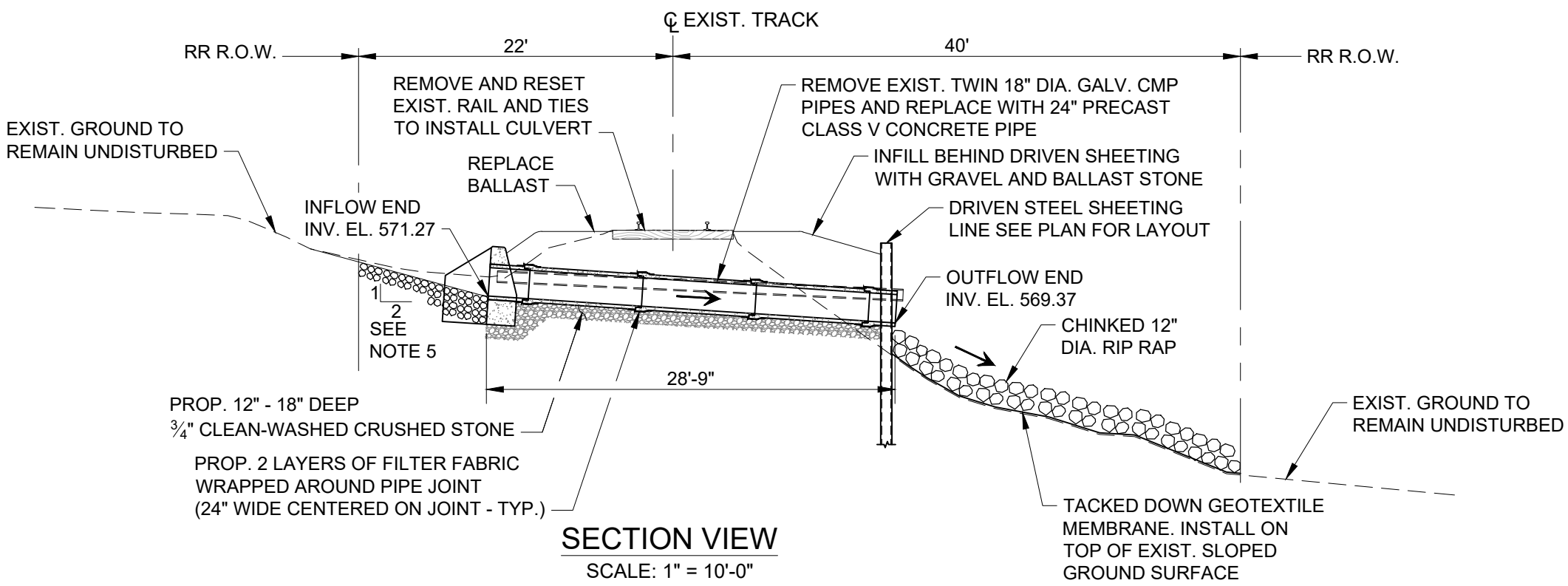
PERMITTING PLANS - NOT FOR CONSTRUCTION

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDOT And ACOE\MassDOT - Ware River MP 19 Culverts.dwg Feb. 12, 2024

WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT
PERMITTING PLANS

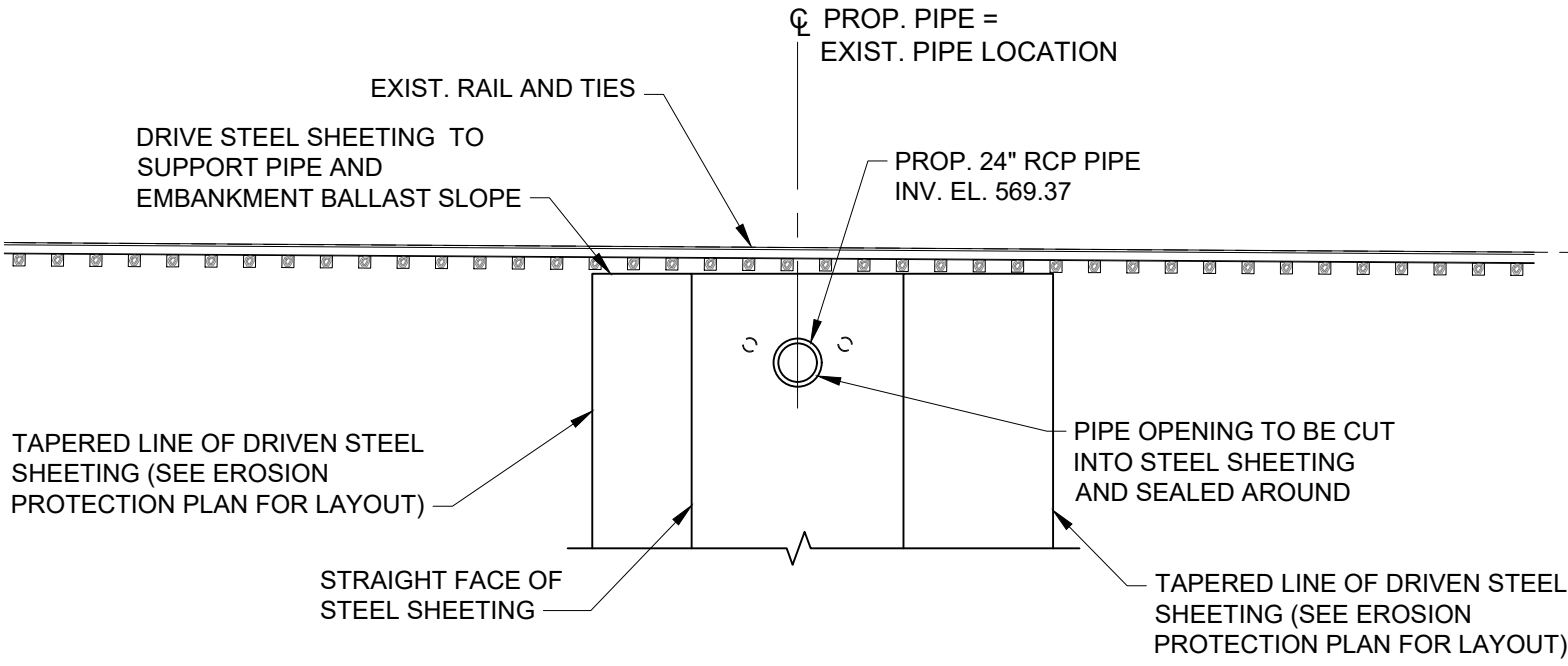
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	3	11

MP 19.84 PROPOSED
PRECAST PIPE



NOTES:

- ALL CULVERT AND WINGWALL INSTALLATION WORK SHALL BE PERFORMED IN THE DRY WITH TEMPORARY COFFERDAMS, DEWATERING PUMPING, AND ALL EROSION CONTROL MEASURES IN PLACE AND MAINTAINED FOR THE DURATION OF THE WORK.
- CONTRACTOR SHALL MINIMIZE ENCROACHMENT INTO THE ADJACENT WATER AND NATURAL VEGETATION TO THE GREATEST EXTENT POSSIBLE TO LIMIT SOIL AND WATER DISTURBANCE.
- CONTRACTOR SHALL REMOVE AND TEMPORARILY STOCKPILE EMBANKMENT SLOPE SOILS AND SURFACE BALLAST TO BE RESET TO MATCH EXISTING CONDITION FOLLOWING CULVERT INSTALLATION WORK AT THE DIRECTION OF THE ENGINEER ONLY.
- ANY ADDITIONAL PROCESSED GRAVEL, CRUSHED STONE, AND STONE BALLAST DETERMINED TO BE NEEDED BY THE CONTRACTOR SHALL BE APPROVED BY MASSDOT'S ENGINEER PRIOR TO ORDERING FOR DELIVERY TO THE SITE.
- CONTRACTOR SHALL PLACE AND EMBED STONE ARMOR RIP RAP ON BOTH SIDES OF THE CULVERT TO LIMITS SHOWN. STONES SHALL BE CHINKED IN TO ELIMINATE ANY DISLODGING OR SLIP-FAILING OF THE RECONSTRUCTED SLOPE.
- ALL EMBANKMENT FILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED TWELVE (12) INCHES IN LAYERED DEPTH FOLLOWING COMPACTION. SUBSEQUENT LAYERS SHALL ONLY THEN BE PLACED AND COMPACTED AFTER THE PREVIOUS LOWER FILL LAYER IS FULLY COMPACTED IN PLACE.



OUTLET END ELEVATION VIEW
SCALE: 1" = 10'-0"

PERMITTING PLANS - NOT FOR CONSTRUCTION

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDEP And ACOE\MassDEP - Ware River MP 19 Culverts.dwg Feb. 12, 2024

WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT
PERMITTING PLANS

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	4	11

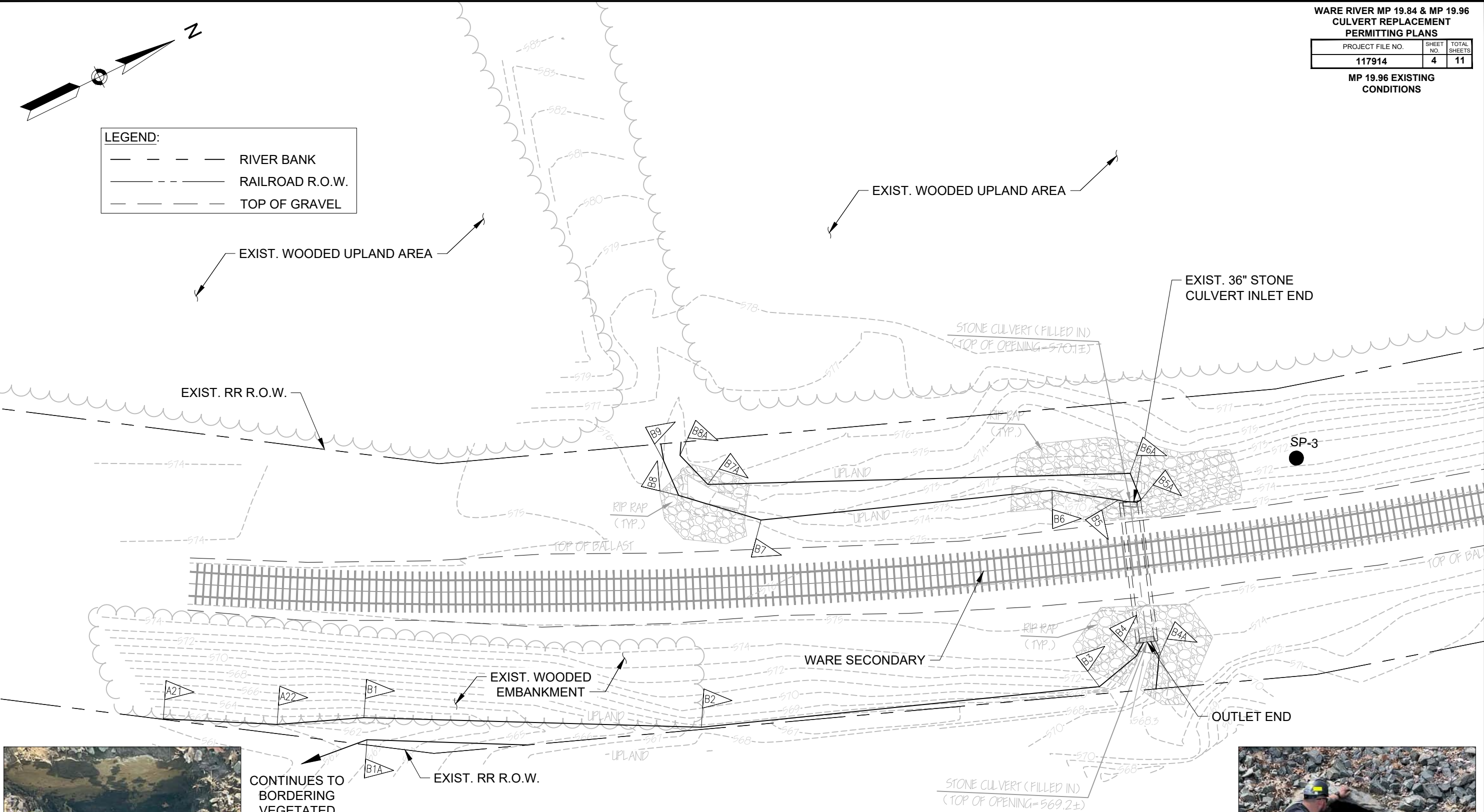
MP 19.96 EXISTING
CONDITIONS

LEGEND:

RIVER BANK

RAILROAD R.O.W.

TOP OF GRAVEL



INLET (LOOKING EAST)



OUTLET (LOOKING WEST)

PLAN
SCALE: 1" = 20'-0"

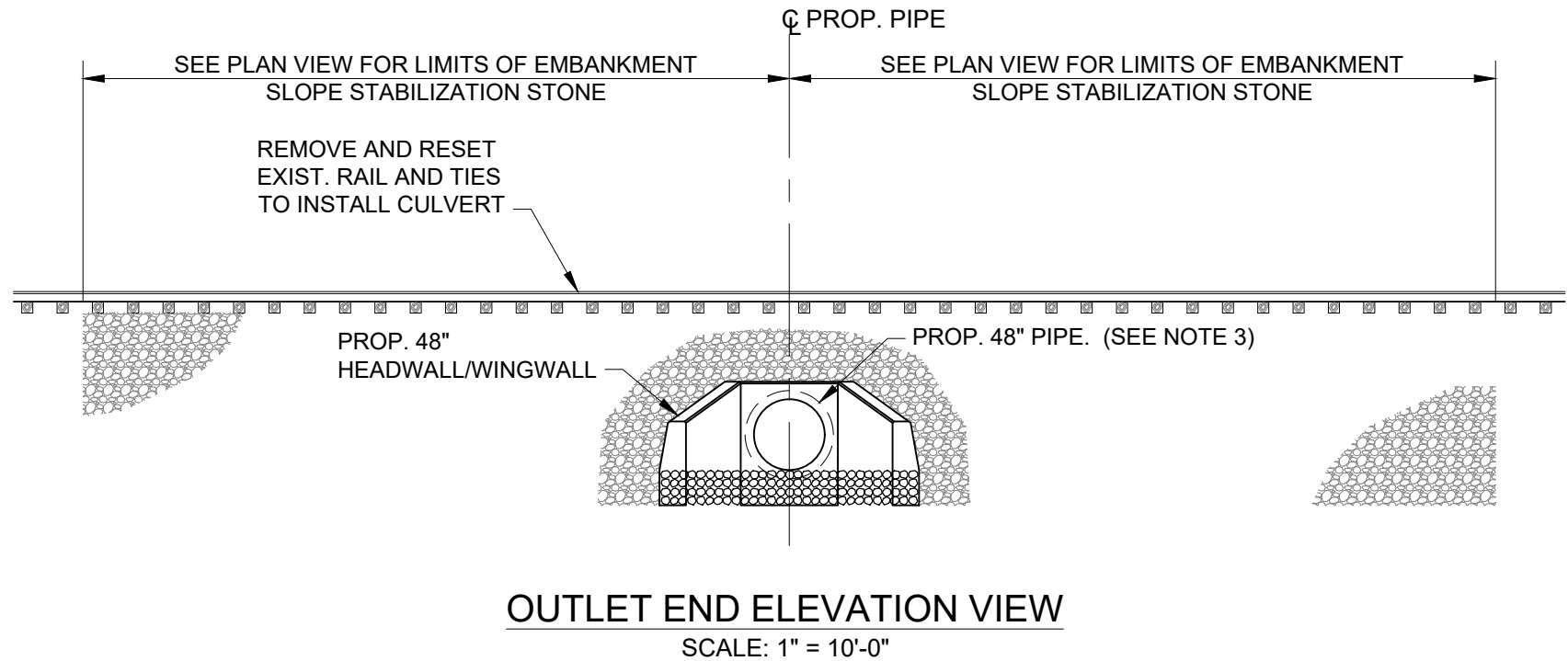
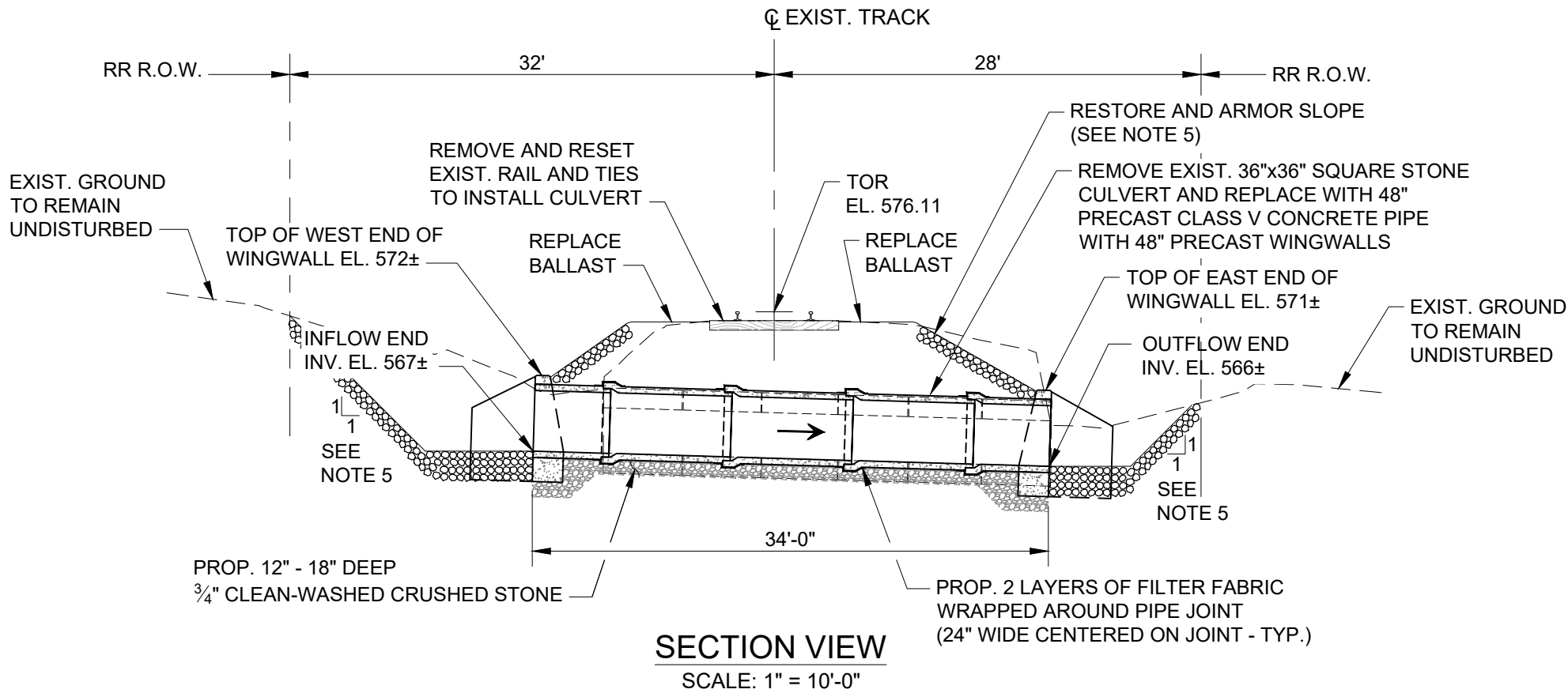
PERMITTING PLANS - NOT FOR CONSTRUCTION

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDEP And ACOE\MassDEP - Ware River MP 19 Culverts.dwg Feb. 12, 2024

WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT
PERMITTING PLANS

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	5	11

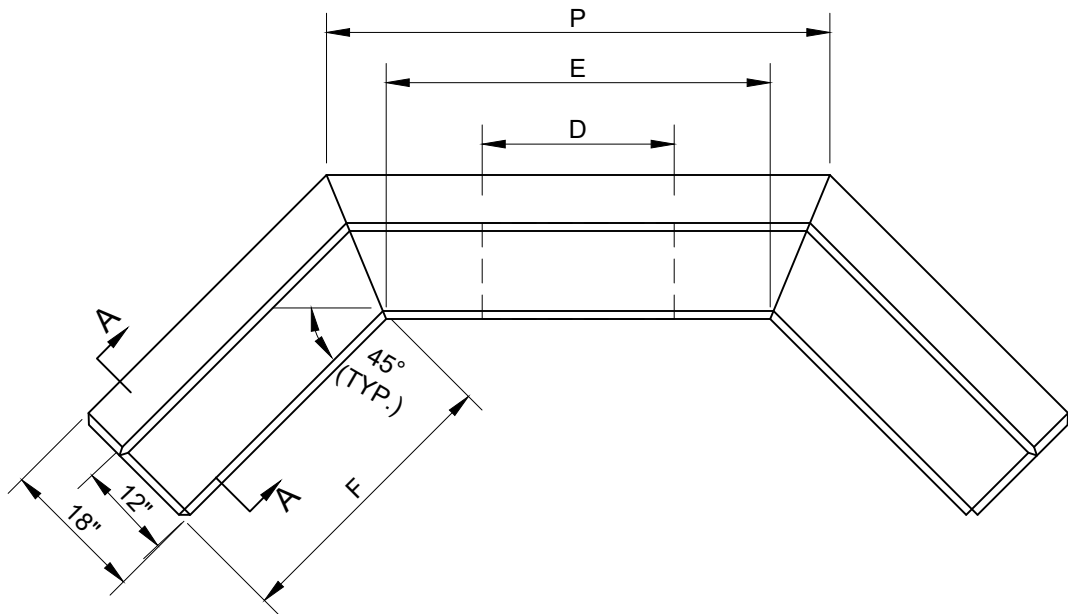
MP 19.96 PROPOSED
PRECAST PIPE



- NOTES:**
- ALL CULVERT AND WINGWALL INSTALLATION WORK SHALL BE PERFORMED IN THE DRY WITH TEMPORARY COFFERDAMS, DEWATERING PUMPING, AND ALL EROSION CONTROL MEASURES IN PLACE AND MAINTAINED FOR THE DURATION OF THE WORK.
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PERMITTING PLANS - NOT FOR CONSTRUCTION

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDEP And ACOE\MassDEP - Ware River MP 19 Culverts.dwg Feb. 12, 2024

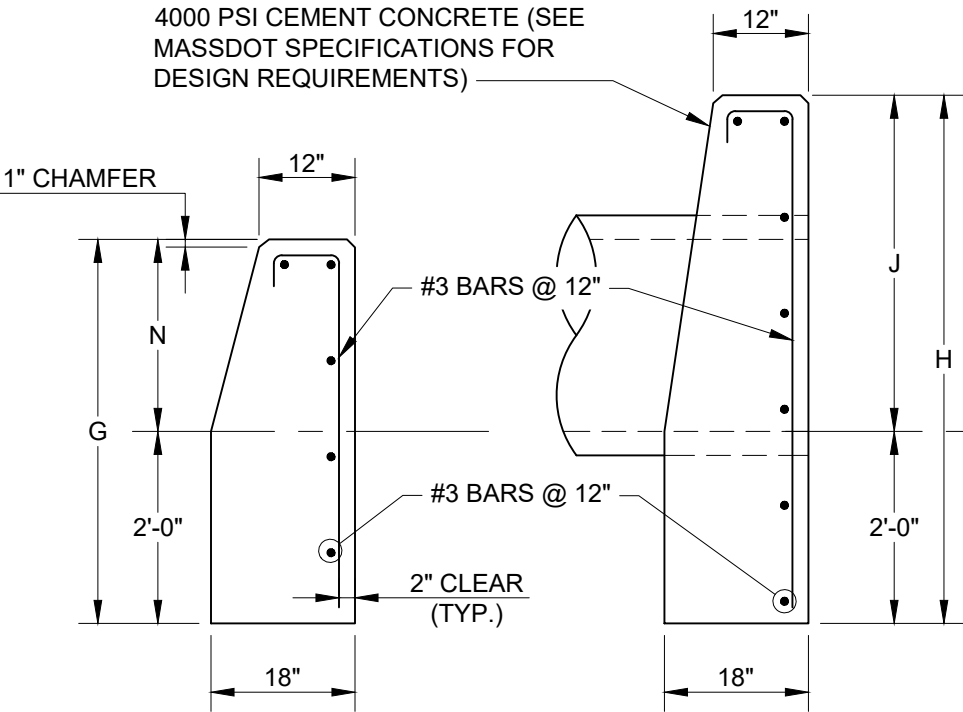


PLAN

1V:1.5H SLOPE										
D	E	G	H	J	L	N	P	F	CONC. MASONRY CY	STEEL LBS
24"	4'-0"	4'-0"	5'-6"	3'-6"	1'-6"	2'-0"	5'-3"	3'-0"	2.6	45

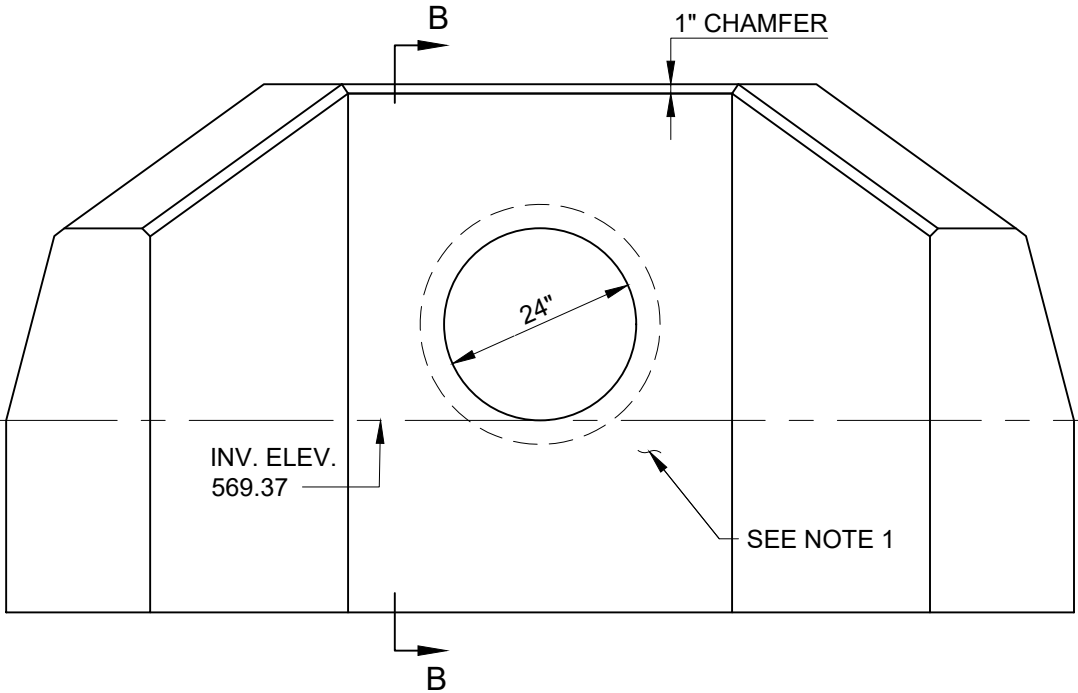
- NOTE:
- CONTRACTOR SHALL INSTALL REPLACEMENT, PRECAST WINGWALL AND SEAL CONCRETE CULVERT END WITH WATERTIGHT GROUT SEALANT PRIOR TO REMOVAL OF COFFERDAM.

PERMITTING PLANS - NOT FOR CONSTRUCTION



SECTION A-A

SECTION B-B



FRONT ELEVATION

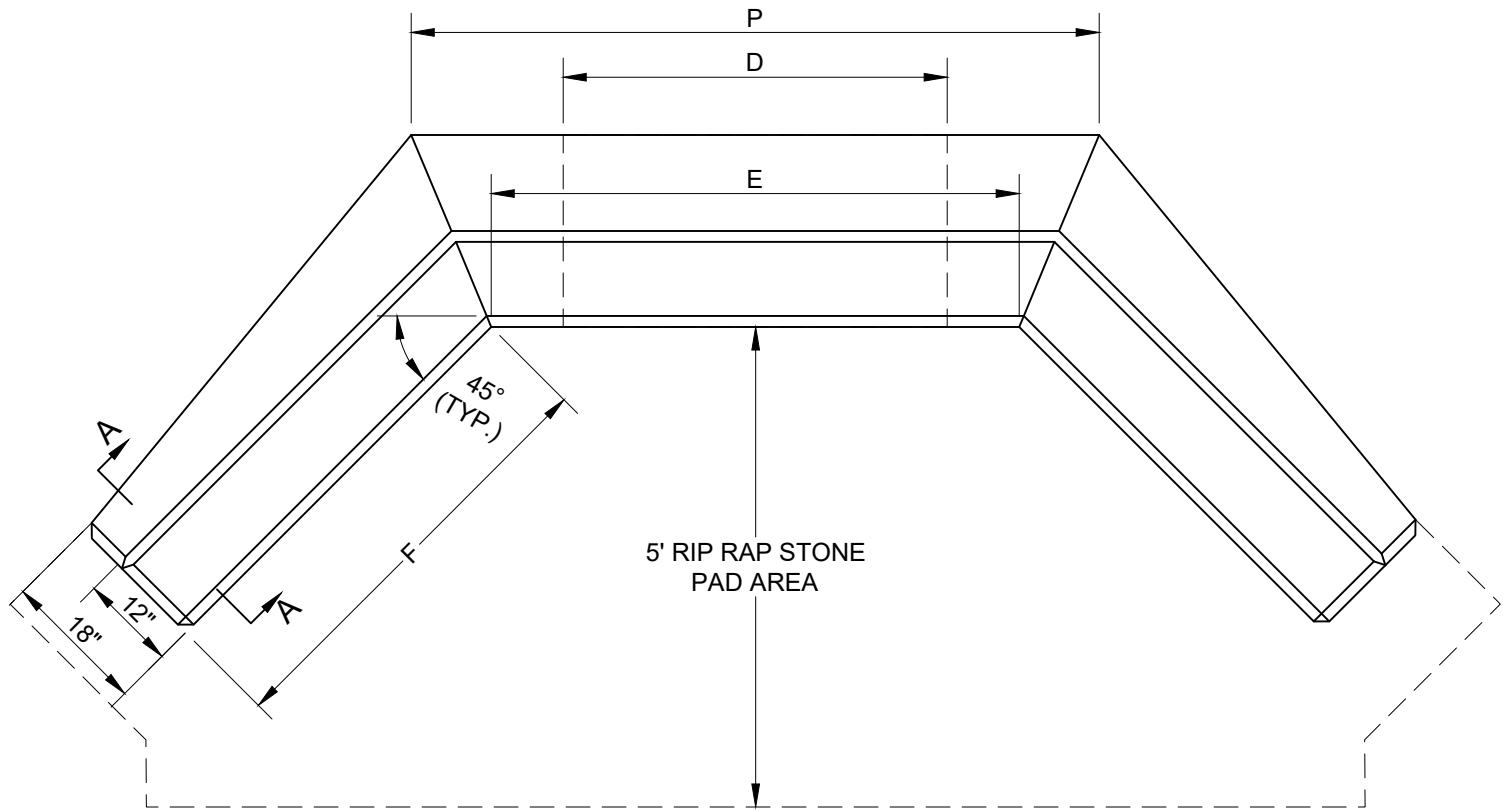
WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT PERMITTING PLANS		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	6	11
PROPOSED MP 19.84 CULVERT WINGWALL DETAILS		

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDEP And ACOE\MassDEP - Ware River MP 19 Culverts.dwg Feb. 12, 2024

WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT
PERMITTING PLANS

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	7	11

PROPOSED MP 19.96
WINGWALL REPLACEMENT
DETAILS

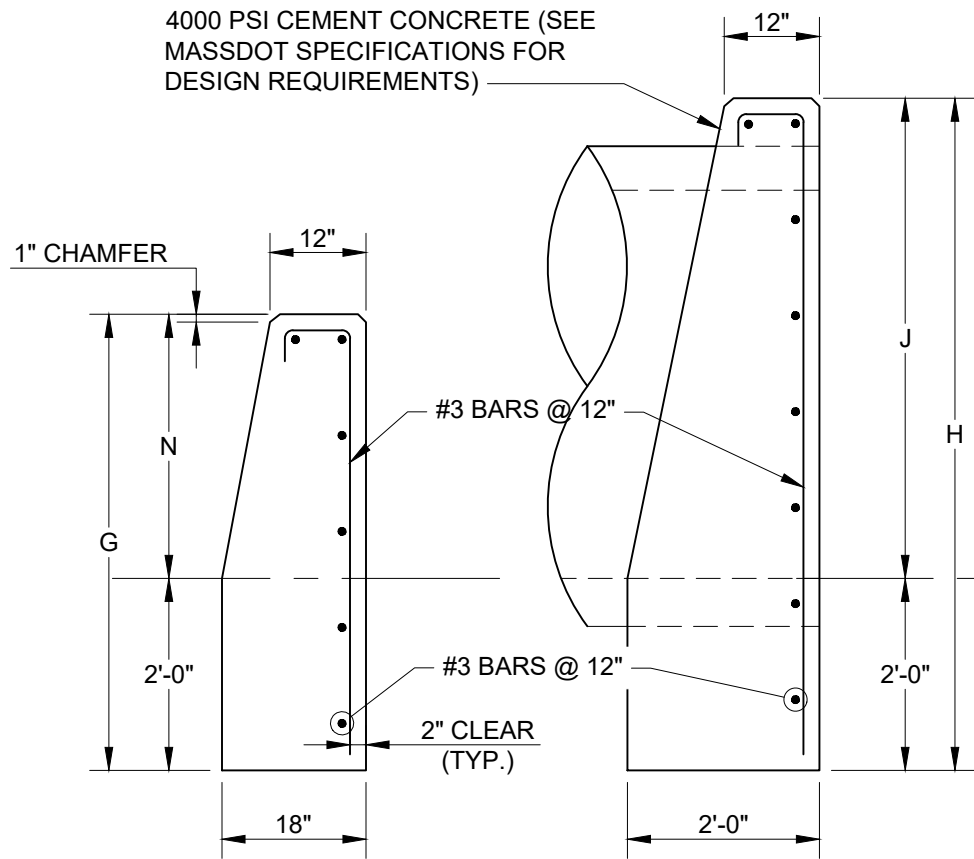


PLAN

1V:1.5H SLOPE										
D	E	G	H	J	L	N	P	F	CONC. MASONRY CY	STEEL LBS
48"	5'-6"	4'-9"	7'-0"	5'-0"	2'-0"	2'-9"	7'-2"	4'-6"	5.19	65

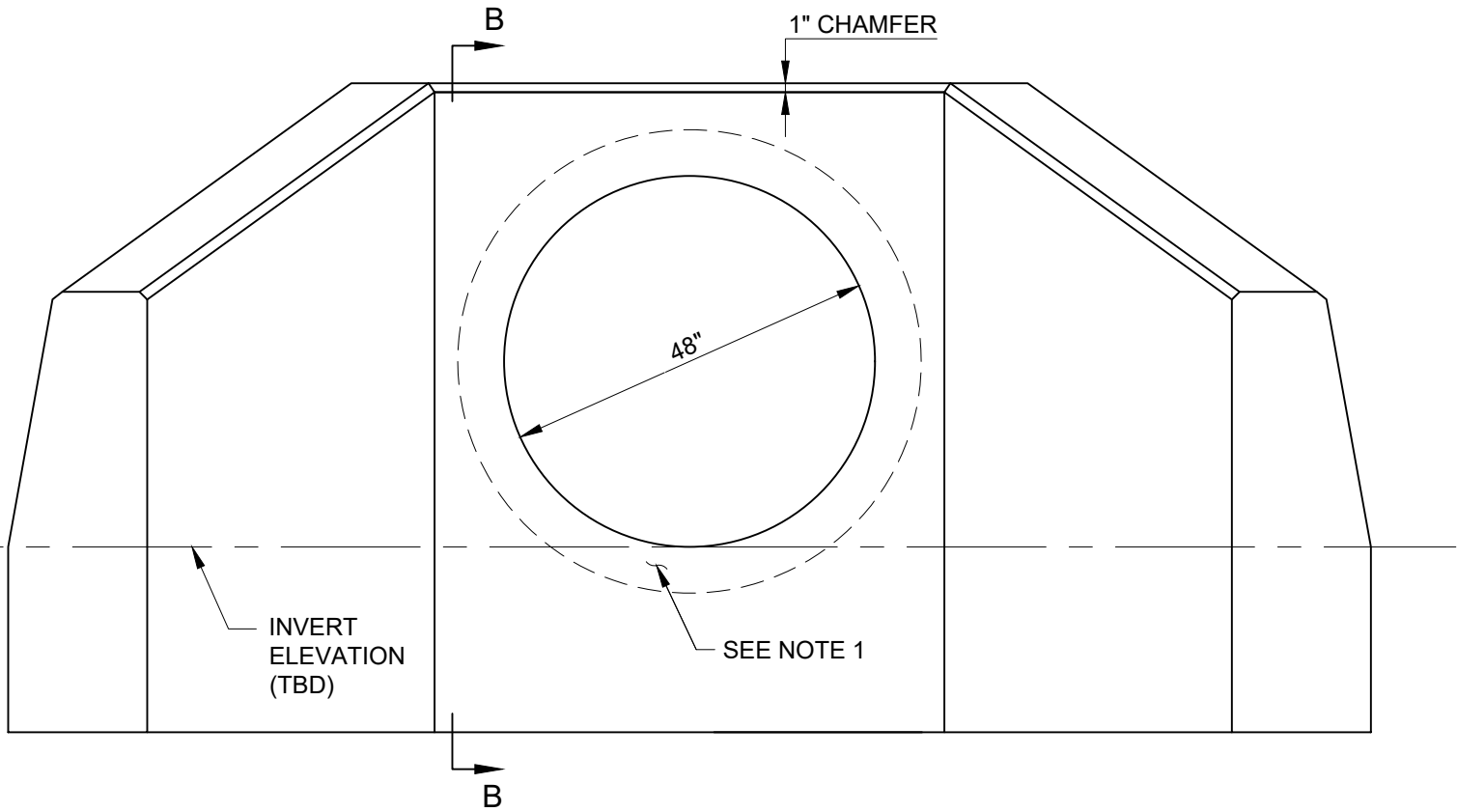
- NOTE:
- CONTRACTOR SHALL INSTALL REPLACEMENT, PRECAST WINGWALL AND SEAL CONCRETE CULVERT END WITH WATERTIGHT GROUT SEALANT PRIOR TO REMOVAL OF COFFERDAM.

PERMITTING PLANS - NOT FOR CONSTRUCTION



SECTION A-A

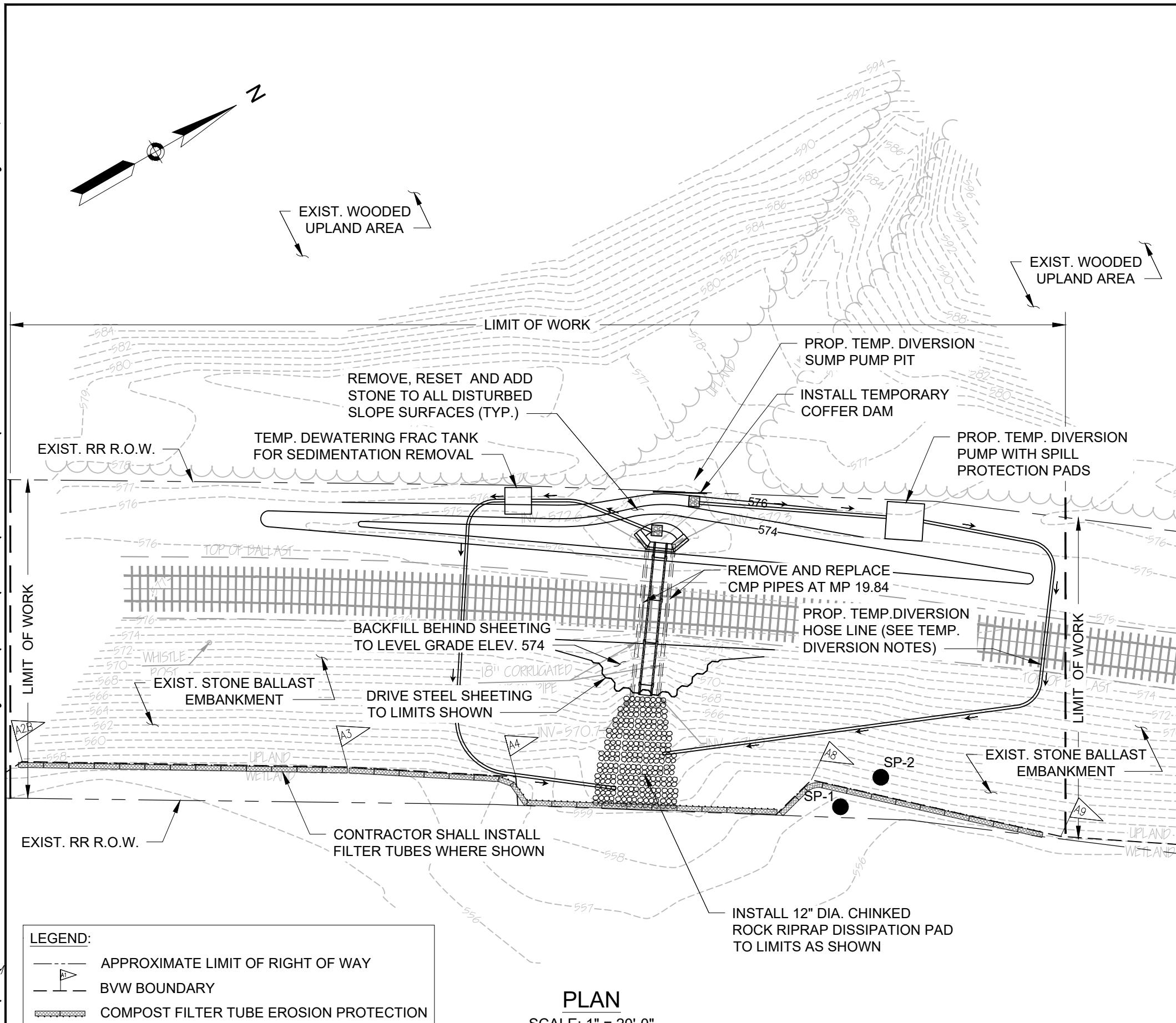
SECTION B-B



FRONT ELEVATION

P:\MASSDOT\2022\22X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDEP And ACOE\MassDEP - Ware River MP 19 Erosion Protection.dwg Feb. 13, 2024

WARE RIVER MP 19.84 & MP 19.96 CULVERT REPLACEMENT PERMITTING PLANS		
PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	8	11
MP 19.84 EROSION PROTECTION PLAN		



TEMPORARY DIVERSION NOTES:

1. THE CONTRACTOR SHALL DESIGN AND SUBMIT FOR APPROVAL A TEMPORARY PUMP DIVERSION SYSTEM TO DIVERT WATER FLOW AROUND CULVERT CONSTRUCTION AREA, INCLUDING REQUIRED SIZE/LOCATION OF DIVERSION PUMP, DISCHARGE PIPE SIZE, AS WELL AS CONTINGENCY PLANS IN THE EVENT OF PUMP FAILURE.
2. WATER LEVELS ARE SUBJECT TO CHANGE, THE CONTRACTOR IS RESPONSIBLE FOR MAKING DETERMINATION OF WATER LEVELS THAT WILL EXIST DURING CONSTRUCTION AND INSTALL AND REFORTIFY COFFER DAMS AS APPLICABLE.
3. UPON INSTALLATION OF ALL SEDIMENT CONTROL MEASURES THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE DIVERSION AND DEWATERING PLAN FOLLOWING INSPECTION.
4. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DISCHARGE PIPES, SUMP-HOLE, DIVERSION PUMPS AND RIP-RAP DISCHARGE SPLASH PAD PRIOR TO PLACING PIPE PLUGS, AND COFFERDAMS.
5. THE TEMPORARY DISCHARGE PIPE SHALL BE CONSTRUCTED OF DURABLE MATERIAL ABLE TO WITHSTAND ANTICIPATED SITE CONDITIONS.
6. WATER FROM THE WORK AREA SHALL BE PUMPED TO A DEWATERING CONTAINMENT AREA THE AREA SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE GROUND AREA BELOW THE DOWNGRAIENT COFFERDAM.
7. AFTER THE CULVERT HAS BEEN REPLACED AND READY TO RECEIVE FLOW AND THE DISTURBED AREA HAS BEEN STABILIZED, THE "COFFERDAMS" SHALL BE REMOVED STARTING ON THE EASTERN END. THEN THE TEMPORARY DIVERSION SHALL BE REMOVED.

TEMPORARY DEWATERING NOTES:

1. THE PROP. TEMPORARY DEWATERING CONTAINMENT AREA. SIZE AND LOCATION OUTSIDE THE WETLAND AREA TO BE DETERMINED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER'S DRAINAGE ENGINEER AND WETLAND SCIENTIST.
2. CONTRACTOR SHALL EXCAVATE BACK THIS EMBANKMENT AREA AS REQUIRED TO INSTALL DEWATERING CONTAINMENT AREA AND RESTORE SLOPE UPON ITS REMOVAL.

LEGEND:

- APPROXIMATE LIMIT OF RIGHT OF WAY
- BVW BOUNDARY
- COMPOST FILTER TUBE EROSION PROTECTION

PLAN

SCALE: 1" = 20'-0"

PERMITTING PLANS - NOT FOR CONSTRUCTION

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LINEAR FEET OF BANK IMPACT:

BANK	
WEST OF TRACK:	105 LF
EAST OF TRACK:	215 LF
TOTAL:	505 LF

LEGEND:

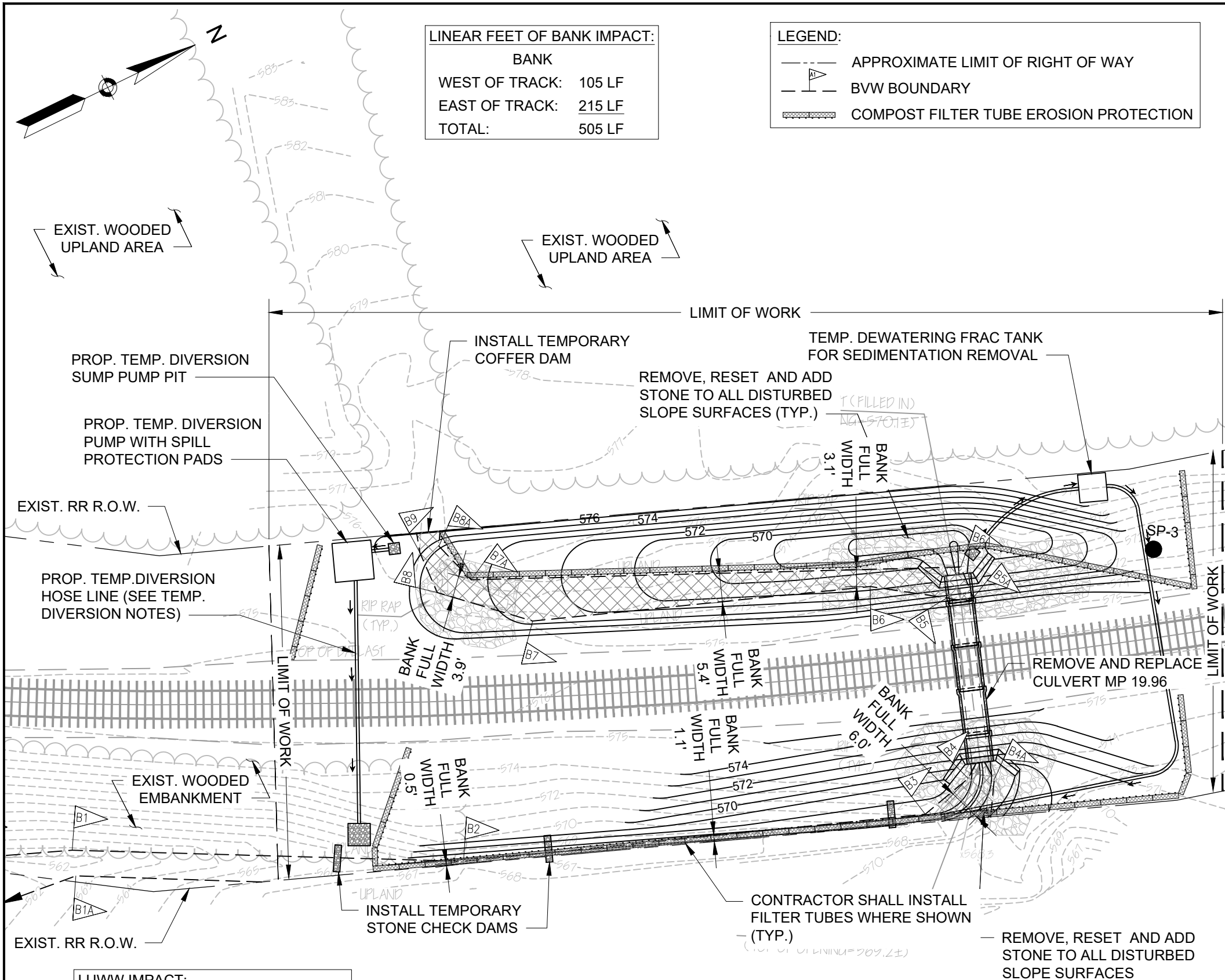
	APPROXIMATE LIMIT OF RIGHT OF WAY
	BVW BOUNDARY
	COMPOST FILTER TUBE EROSION PROTECTION

TEMPORARY DIVERSION NOTES:

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3. UPON INSTALLATION OF ALL SEDIMENT CONTROL MEASURES THE CONTRACTOR SHALL BEGIN IMPLEMENTING THE DIVERSION AND DEWATERING PLAN FOLLOWING INSPECTION.
4. THE CONTRACTOR SHALL INSTALL THE TEMPORARY DISCHARGE PIPES, SUMP-HOLE, DIVERSION PUMPS AND RIP-RAP DISCHARGE SPLASH PAD PRIOR TO PLACING PIPE PLUGS, AND COFFERDAMS.
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6. WATER FROM THE WORK AREA SHALL BE PUMPED TO A DEWATERING CONTAINMENT AREA THE AREA SHALL BE LOCATED SUCH THAT THE WATER DRAINS BACK INTO THE GROUND AREA BELOW THE DOWNGRAIENT COFFERDAM.
7. AFTER THE CULVERT HAS BEEN REPLACED AND READY TO RECEIVE FLOW AND THE DISTURBED AREA HAS BEEN STABILIZED, THE "COFFERDAMS" SHALL BE REMOVED STARTING ON THE EASTERN END. THEN THE TEMPORARY DIVERSION SHALL BE REMOVED.

TEMPORARY DEWATERING NOTES:

1. THE PROP. TEMPORARY DEWATERING CONTAINMENT AREA. SIZE AND LOCATION OUTSIDE THE WETLAND AREA TO BE DETERMINED BY THE CONTRACTOR AND PRE-APPROVED BY THE ENGINEER'S DRAINAGE ENGINEER AND WETLAND SCIENTIST.
2. CONTRACTOR SHALL EXCAVATE BACK THIS EMBANKMENT AREA AS REQUIRED TO INSTALL DEWATERING CONTAINMENT AREA AND RESTORE SLOPE UPON ITS REMOVAL.

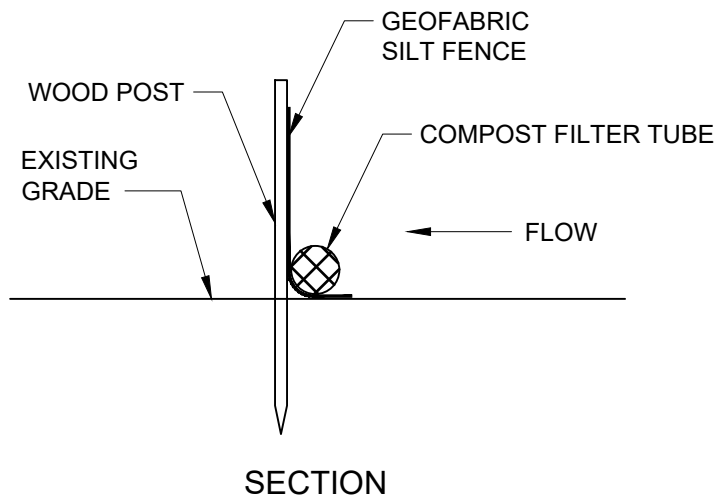
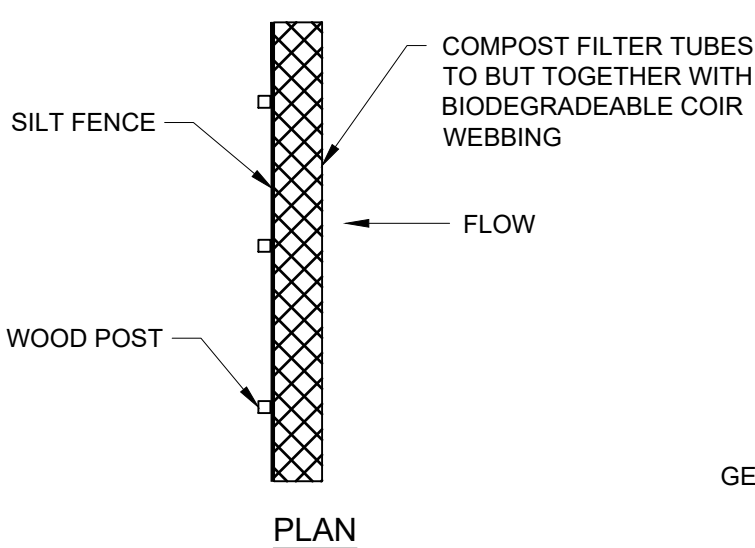


LUWW IMPACT:

	AREAS OF LUWW IMPACT
WEST OF TRACK:	537 SQ. FT.
EAST OF TRACK:	214 SQ. FT.
TOTAL:	1,154 SQ. FT.

PLAN
SCALE: 1" = 20'-0"

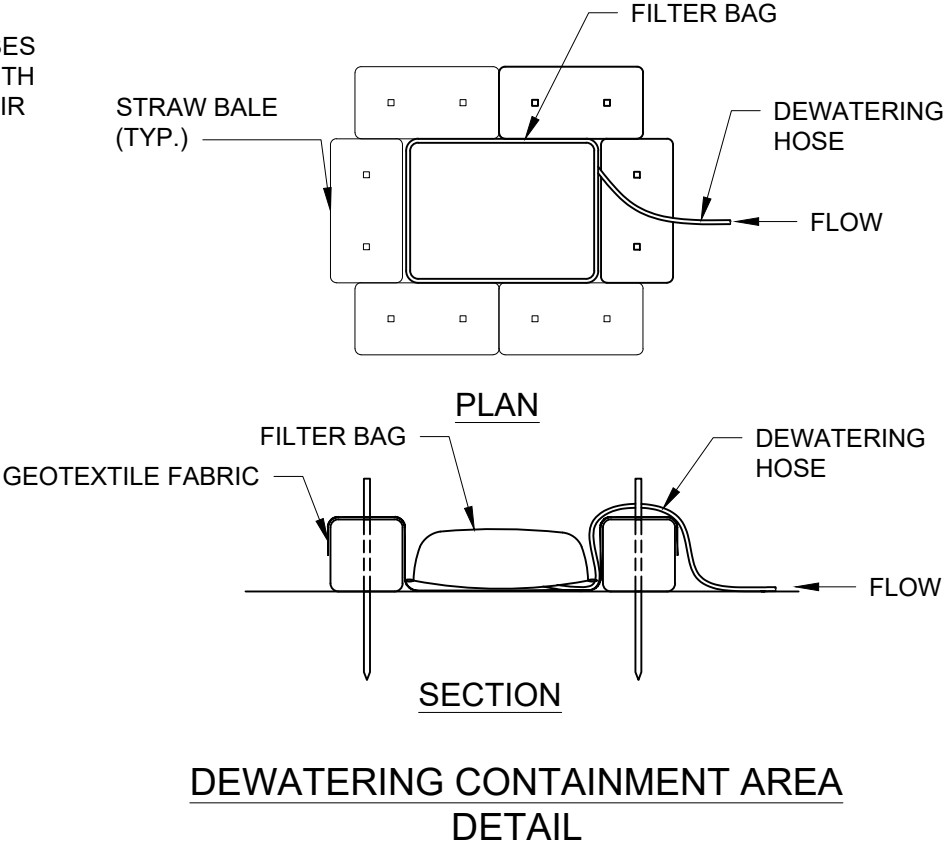
PERMITTING PLANS - NOT FOR CONSTRUCTION



SILT FENCE / COMPOST FILTER TUBE
EROSION CONTROL BARRIER



STONE CHECK DAM DETAIL



EROSION CONTROL NOTES:

1. PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT FOR ACCEPTANCE A GENERAL WORK SCHEDULE, CONSTRUCTION SEQUENCE AND PLAN WHICH INDICATES PLANNED IMPLEMENTATION OF TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THIS PLAN SHALL INCLUDE PROPOSED METHODS OF SOILS MANAGEMENT AND LEGAL OFFSITE DISPOSAL OF WASTE MATERIALS.
2. THE TOE OF ANY SLOPE IS TO REMAIN AT LEAST ONE FOOT INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROLS WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED, AT NO COST TO THE OWNER.
3. ADDITIONAL AND/OR REPLACEMENT EROSION CONTROLS SHALL BE INSTALLED AS CONDITIONS WARRANT, OR AS DIRECTED BY THE ENGINEER'S WETLAND SCIENTIST.
4. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EROSION CONTROL MAINTENANCE AND SHALL INSPECT AND/OR REPLACE ALL CONTROLS AS NEEDED. MAINTENANCE WILL BE CARRIED OUT IN ACCORDANCE WITH THE SPECIFICATIONS AND PERMIT CONDITIONS. THE CONTRACTOR IS RESPONSIBLE FOR CARRYING OUT NECESSARY MAINTENANCE DURING ALL PHASES OF PROJECT CONSTRUCTION AND SHALL BE SUBJECT TO THE INSPECTION AND ACCEPTANCE OF THE ENGINEER.
5. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL, THROUGHOUT THE WORK AREA.
6. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AS DESCRIBED IN THE SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER'S WETLAND SCIENTIST.
7. DISTURBED SLOPES ALONG THE ROW EMBANKMENT WITHIN THE WORK ZONE WILL BE STABILIZED WITH LOAM AND NATIVE SEED OR BALLAST AS DIRECTED BY THE ENGINEER.

P:\MASSDOT\2022\E2X83621 - MassDOT MSA Contract 115773 - Assignment 21\700 CADD\702-CIVIL\MassDEP And ACOE\MassDEP - Ware River MP 19 Erosion Protection.dwg Feb. 13, 2024

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2. FOR EROSION CONTROL INSTALLATION REQUIREMENTS, REFER TO SHEET 10.
3. THE TOE OF ANY SLOPE IS TO REMAIN AT LEAST ONE FOOT INSIDE OF ALL EROSION CONTROLS. UNDER NO CIRCUMSTANCE SHALL THE CONTRACTOR COVER ANY PORTION OF THE EROSION CONTROLS WITH MATERIAL. ANY MATERIAL THAT IS PLACED ON ANY EROSION CONTROLS BY THE CONTRACTOR, OR ANY AGENT OF THE CONTRACTOR, SHALL BE IMMEDIATELY REMOVED BY THE CONTRACTOR, AND ANY NECESSARY REPAIRS TO THE EROSION CONTROLS ACCOMPLISHED, AT NO COST TO THE OWNER.
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WARE RIVER MP 19.84 & MP 19.96
CULVERT REPLACEMENT
PERMITTING PLANS

PROJECT FILE NO.	SHEET NO.	TOTAL SHEETS
117914	11	11

EROSION CONTROL
PLANTING NOTES

PERMITTING PLANS - NOT FOR CONSTRUCTION