

# WASHINGTON COUNTY, MARYLAND DIVISION OF ENGINEERING



## MOUSETOWN ROAD CULVERT REPLACEMENTS

PROJECT NO. 14-212

CONTRACT NO. BR-MT-212-14

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWG\01 TITLE 14-212.DWG PLOT DATE: 12/8/2021 9:29 AM

ENGINEER / ARCHITECT DESIGN CERTIFICATION  
I HEREBY CERTIFY THIS PLAN FOR SOIL EROSION AND SEDIMENT CONTROL HAS BEEN DESIGNED IN ACCORDANCE WITH LOCAL ORDINANCES, COMAR 28.17.01.07, AND MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

*Scott Hobbs* 31179 12/8/21  
SIGNATURE REGISTRATION NUMBER DATE

SEAL:  
  
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 31179 EXPIRATION DATE: 1/19/23

OWNER / DEVELOPER CERTIFICATION  
WE CERTIFY ALL / ANY PARTIES RESPONSIBLE FOR CLEARING, GRADING, CONSTRUCTION, AND / OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SOIL EROSION AND SEDIMENT.

*Scott Hobbs* 12/8/21  
SCOTT HOBBS, P.E.  
DIRECTOR OF ENGINEERING  
FOR WASHINGTON COUNTY, MD

APPROVED FOR CONSTRUCTION  
*Scott Hobbs* 12/8/21  
SCOTT HOBBS, P.E.  
DIRECTOR OF ENGINEERING  
FOR WASHINGTON COUNTY, MD

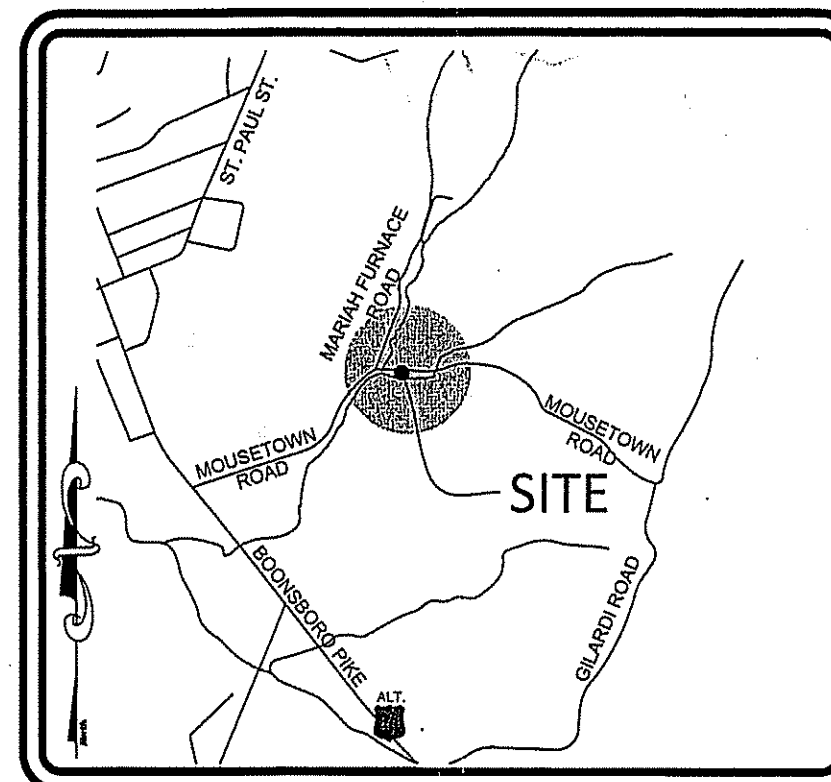
I / WE CERTIFY ALL / ANY PARTIES RESPONSIBLE FOR CLEARING, GRADING, CONSTRUCTION, AND / OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SOIL EROSION AND SEDIMENT.

APPROVED FOR CONSTRUCTION.  
*Scott Hobbs* 12/8/21  
SCOTT HOBBS, P.E.  
DIRECTOR OF ENGINEERING  
FOR WASHINGTON COUNTY, MD

THE STORMWATER MANAGEMENT PLAN SHOWN HEREON IS APPROVED.  
*Scott Hobbs* 12/8/21  
SCOTT HOBBS, P.E.  
DIRECTOR OF ENGINEERING  
FOR WASHINGTON COUNTY, MD

WASHINGTON COUNTY SOIL CONSERVATION DISTRICT  
SOIL EROSION AND SEDIMENT CONTROL PLAN APPROVAL  
BY *Clare Wray*  
DATE: 1/5/22  
(PLAN IS VALID FOR TWO YEARS FROM DATE OF APPROVAL)

OWNER/DEVELOPER:  
BOARD OF COUNTY COMMISSIONERS FOR WASHINGTON COUNTY,  
MD AGENT: SCOTT HOBBS, P.E.  
DIRECTOR OF ENGINEERING  
80 WEST BALTIMORE STREET  
HAGERSTOWN, MARYLAND 21740  
PHONE: 240-313-2460  
FAX: 240-313-2401



PROJECT VICINITY MAP  
SCALE: 1" = 2,000'

BOARD OF COUNTY COMMISSIONERS:  
JEFFREY A. CLINE, PRESIDENT  
TERRY L. BAKER, VICE PRESIDENT  
WAYNE K. KEEFER  
RANDALL E. WAGNER  
CHARLES A. BURKETT JR.  
  
JOHN M. MARTIRANO, COUNTY ADMINISTRATOR  
SCOTT HOBBS, P.E., DIRECTOR OF ENGINEERING

**DISTURBED AREA QUANTITY CULVERT #1**  
THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 0.21 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 92 CU. YDS. OF EXCAVATION AND APPROXIMATELY 85 CU. YDS. OF FILL.

**DISTURBED AREA QUANTITY CULVERT #2**  
THE TOTAL AREA TO BE DISTURBED SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 0.16 ACRES AND THE TOTAL AMOUNT OF EXCAVATION AND FILL SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE APPROXIMATELY 62 CU. YDS. OF EXCAVATION AND APPROXIMATELY 40 CU. YDS. OF FILL.

**MOUSETOWN CULVERT #1:**

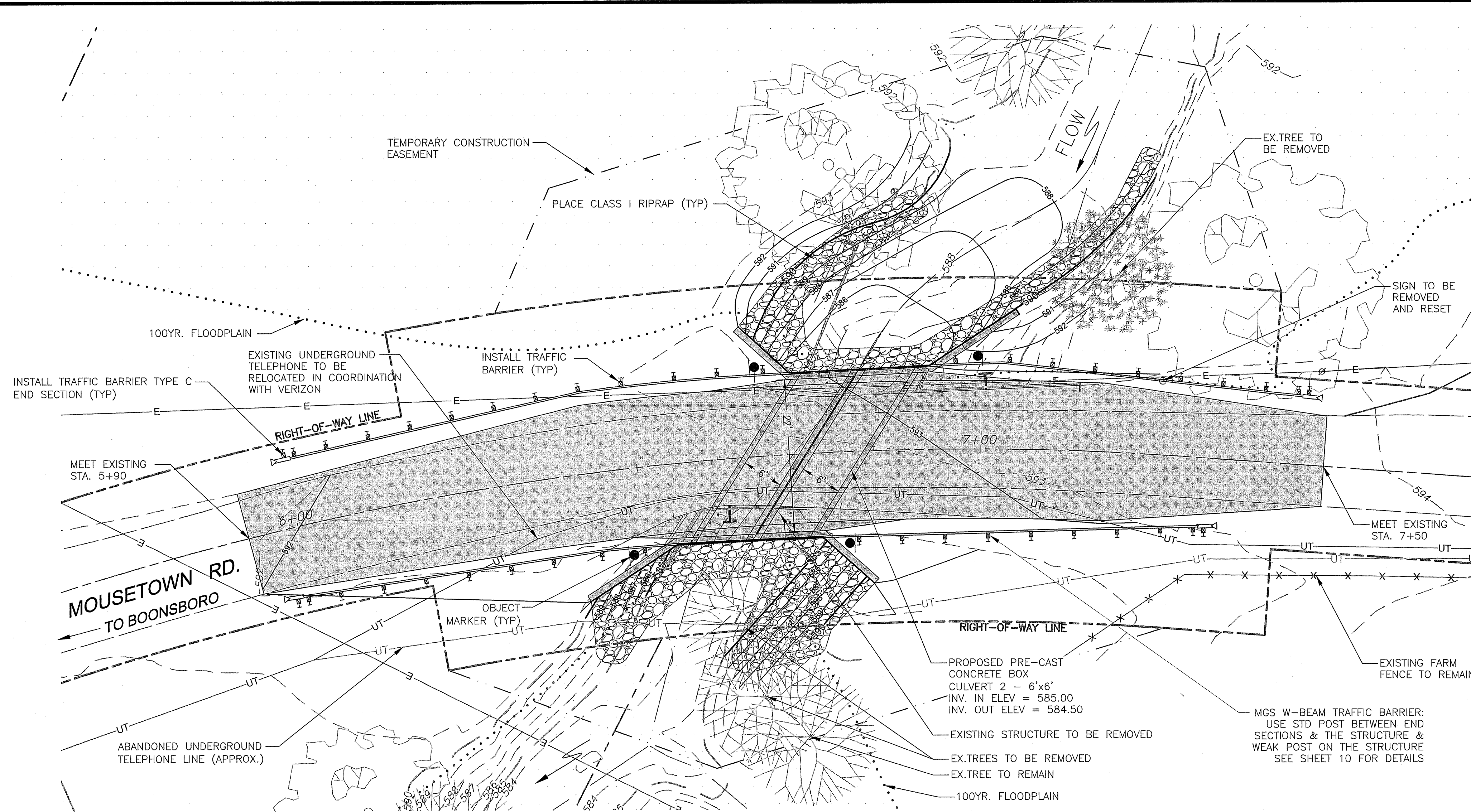
SHEET 1	COVER SHEET
SHEET 2	PLAN AND PROFILE CULVERT #1
SHEET 3	TYPICAL SECTIONS CULVERT #1
SHEET 4	EROSION & SEDIMENT CONTROL PLAN CULVERT #1
SHEET 5	EROSION & SEDIMENT CONTROL DETAILS CULVERT #1
SHEET 6	PLAN AND ELEVATION UPSTREAM ENDWALL CULVERT #1
SHEET 7	PLAN AND ELEVATION DOWNSTREAM ENDWALL CULVERT #1
SHEET 8	OFFSET AND LAYOUT CULVERT #1
SHEET 9	REINFORCING DETAILS CULVERT #1
SHEET 10	TRAFFIC BARRIER DETAILS CULVERT #1

**MOUSETOWN CULVERT #2:**

SHEET 11	PLAN AND PROFILE CULVERT #2
SHEET 12	TYPICAL SECTIONS & DETAIL CULVERT #2
SHEET 13	EROSION & SEDIMENT CONTROL PLAN CULVERT #2
SHEET 14	EROSION & SEDIMENT CONTROL DETAILS CULVERT #2
SHEET 15	PLAN AND ELEVATION UPSTREAM ENDWALL CULVERT #2
SHEET 16	PLAN AND ELEVATION DOWNSTREAM ENDWALL CULVERT #2
SHEET 17	OFFSET AND LAYOUT CULVERT #2
SHEET 18	REINFORCING DETAILS CULVERT #2
SHEET 19	TRAFFIC BARRIER DETAILS CULVERT #2

SHEET 20 TRAFFIC CONTROL PLAN - CULVERT #1 & #2  
SHEET 21 SUMMARY OF QUANTITIES - CULVERT #1 & #2

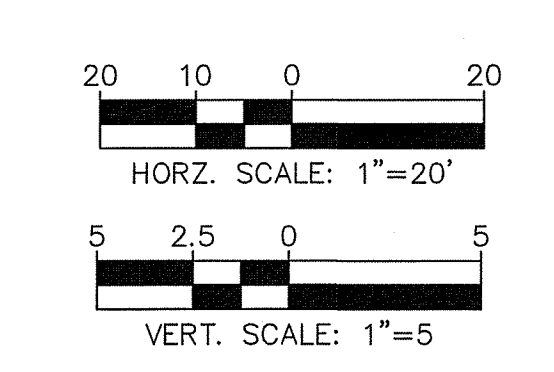
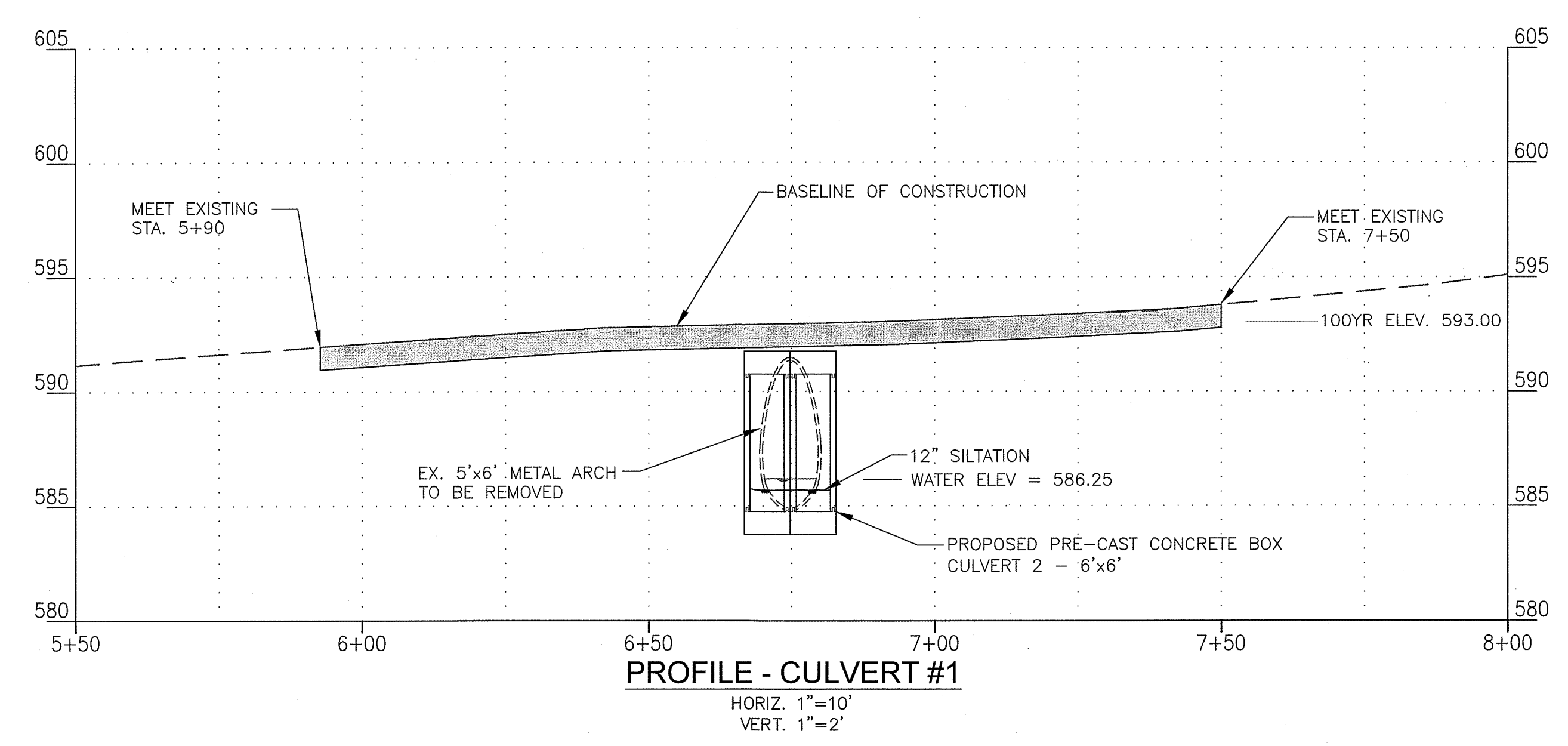
FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWGS\02 PLAN PROFILE 14-212.DWG PLOT DATE: 3/18/2022 7:06 AM



**LEGEND**

EX. CONTOURS	--- 100 ---
PROP. CONTOURS	— 100 —
EX. RIGHT-OF-WAY LINE	-----
PROPOSED RIGHT-OF-WAY LINE	-----
EX. PROPERTY LINE	-----
EX. EDGE OF PAVEMENT	-----
EXISTING TELEPHONE LINE	- T - T -
EXISTING ELECTRIC LINE	- E - E -
EX. STREAM	~~~~~
EDGE OF TREELINE	~~~~~
PROPOSED TRAFFIC BARRIER W-BEAM	
PROPOSED RIPRAP	XXXXX
PROPOSED OBJECT MARKER SIGN	●
UTILITY POLE	⊕
FULL DEPTH PAVEMENT SECTION REFER TO PAVEMENT SECTION SHOWN ON SHEET 3	

- NOTES:**
1. W.S.ELEV. = 586.25, WATER SURFACE ELEVATION MEASURED AND OBSERVED JUNE 2021. THIS IS NO INDICATION OF THE ACTUAL ELEVATION TO BE EXPECTED DURING CONSTRUCTION.
  2. ALL DIMENSIONS AFFECTED BY THE GEOMETRICS AND/OR LOCATION OF THE EXISTING STRUCTURE SHALL BE CHECKED IN THE FIELD BY THE CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS, AND BEFORE ANY REINFORCING STEEL, STEEL ANGLES, ETC. ARE ORDERED OR FABRICATED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY THE ENGINEER WITH ALL FIELD DIMENSIONS REQUIRED TO CHECK DETAILED SHOP DRAWINGS.
  3. INSTALL TRAFFIC BARRIER W-BEAM IN ACCORDANCE WITH STANDARD DETAILS LOCATED ON SHEET 10, AS SHOWN ON THIS SHEET, SHEETS 6 AND 7.
  4. REFER TO WASHINGTON COUNTY PLAT 100-10-596, "MOUSETOWN ROAD" FOR PROPOSED RIGHT OF WAY LINES AND TEMPORARY CONSTRUCTION EASEMENT AREAS.



NO.	REVISION DESCRIPTION	BY	DATE
DESIGNED BY:	KU/SH		
DRAWN BY:	BM/KU		
CHECKED BY:	SH		
DATE:	DEC 2021		

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

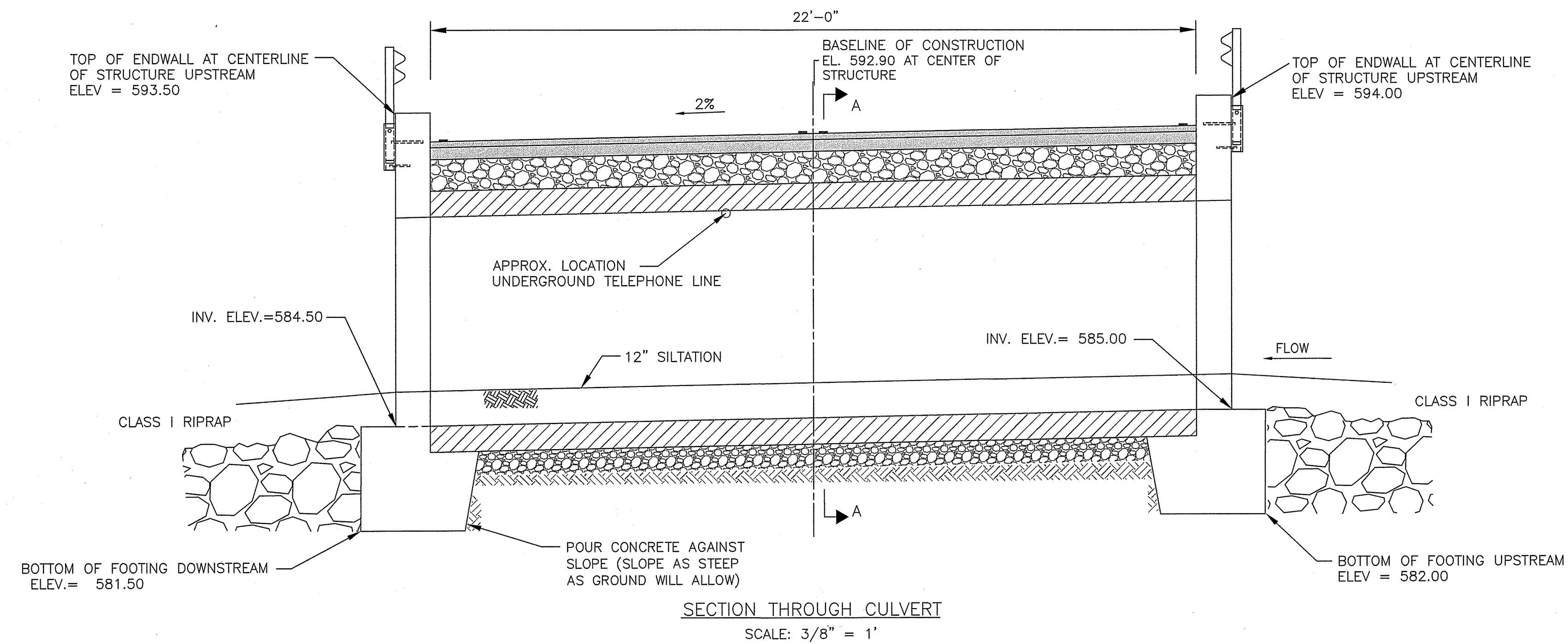
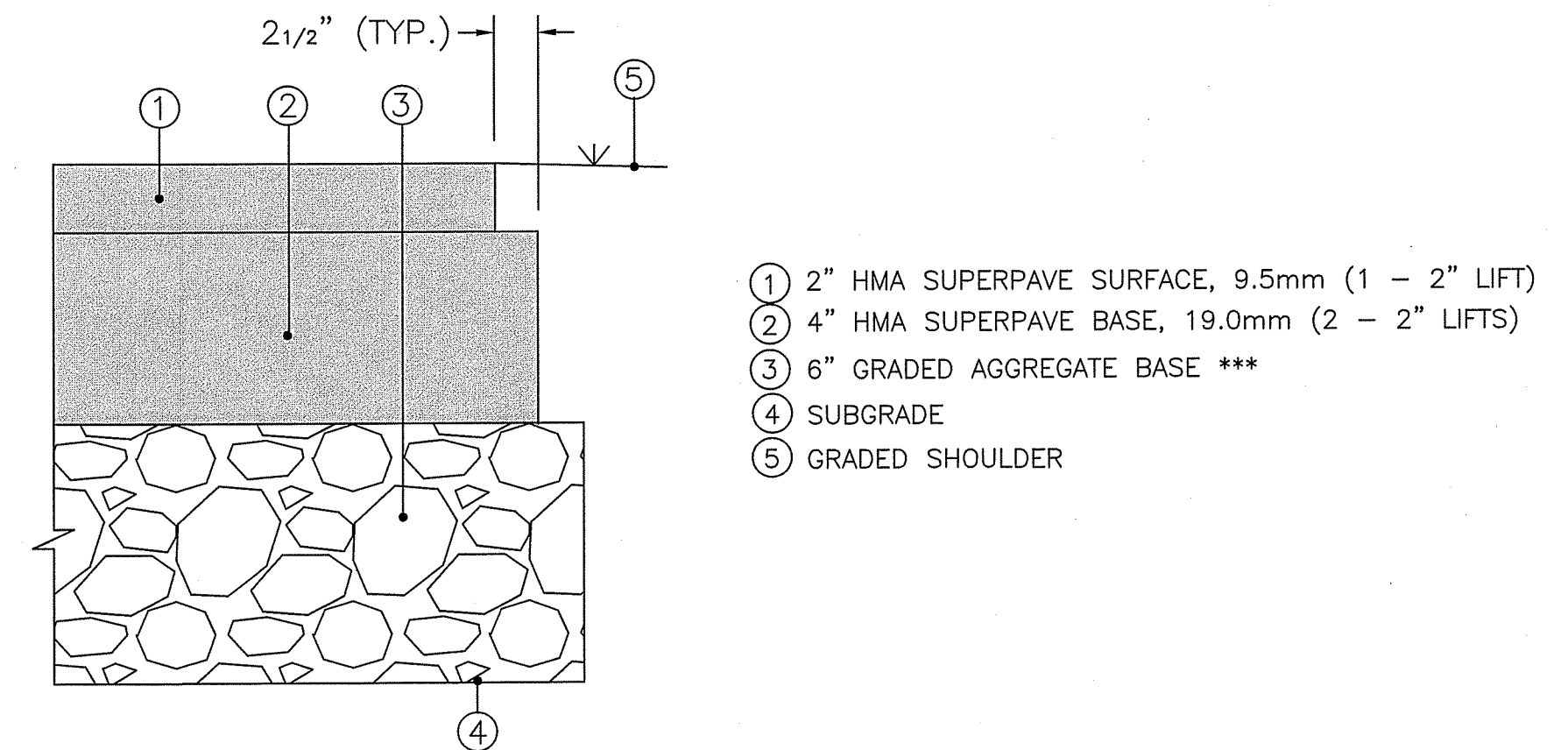
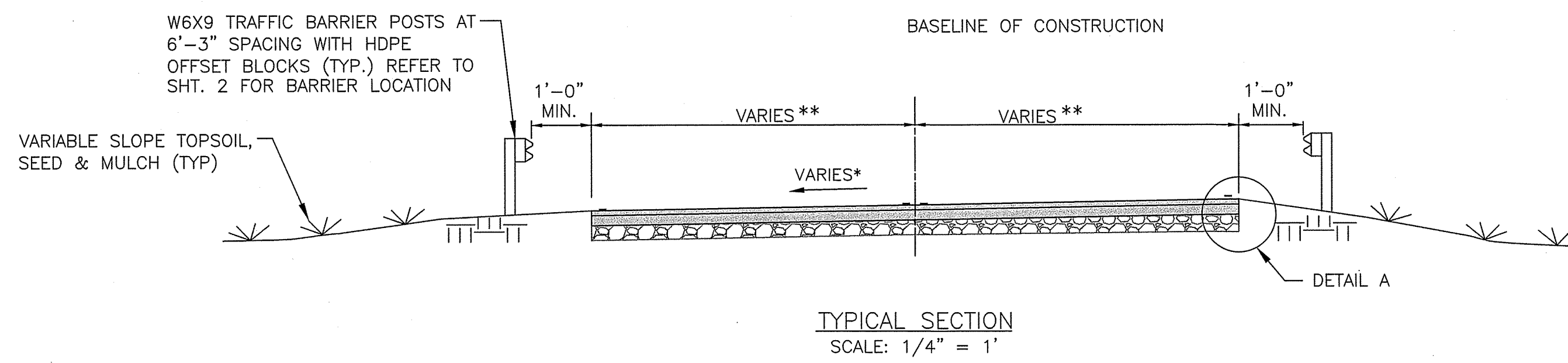
Washington County Administrative Annex Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

**MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
PLAN AND PROFILE  
CULVERT #1**

SCALE AS SHOWN  
SHEET NO. 2  
PROJECT NO. 14-212

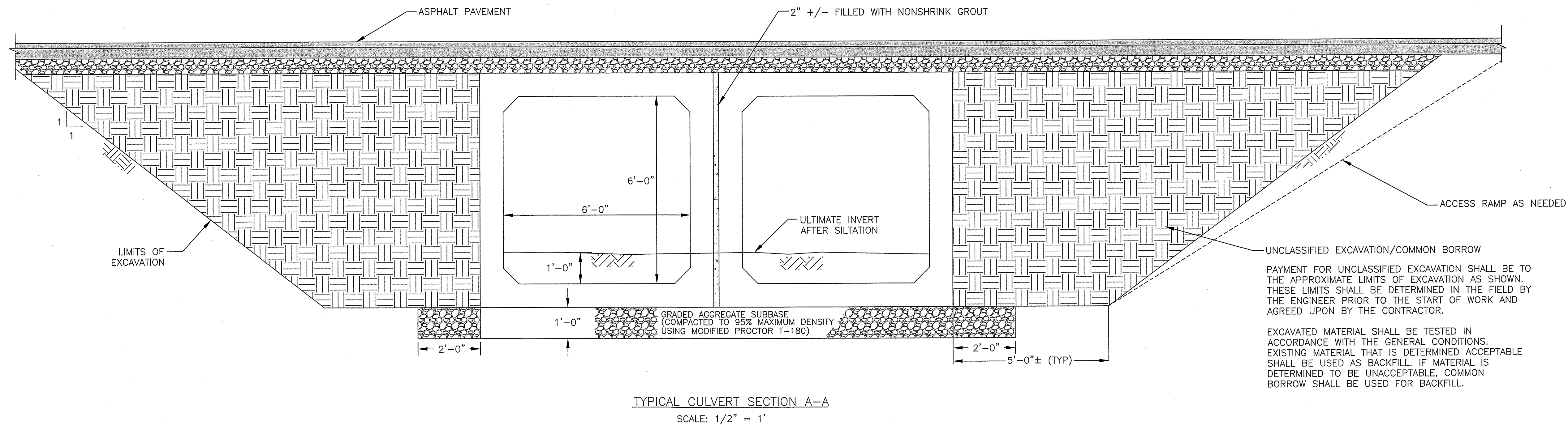
Before You Dig Call "MISS UTILITY" Service Protection Center  
MEMBER ONE CALL SYSTEMS INTERNATIONAL  
CALL TOLL FREE 1-800-257-7777

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWG\SITYP SECTIONS AND QUANTITIES 14-212.DWG PLOT DATE: 3/18/2022 7:50 AM



NOTES:

1. NEW PAVEMENT SECTIONS SHALL CLOSELY MATCH EXISTING ELEVATIONS AND PROFILES AS SHOWN ON SHEET 2.
  2. SAWCUTS SHALL BE PROVIDED AT TIE-INS TO EXISTING PAVEMENT.
  3. REFER TO SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS.
  4. REFER TO SHEET 9 FOR REINFORCING DETAILS.
- \* SEE CROSS SLOPE ON SHEET 2.
- \*\* DIMENSION FROM EDGE OF PAVEMENT TO CENTERLINE OF BASELINE (REFER TO SHEET 2 FOR LIMITS OF PAVEMENT)
- \*\*\* GAB VARIES IN THICKNESS WITH TOP OF BOX ELEVATION



NO.	REVISION DESCRIPTION	BY	DATE

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DATE: DEC 2021

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER  
12/17/21

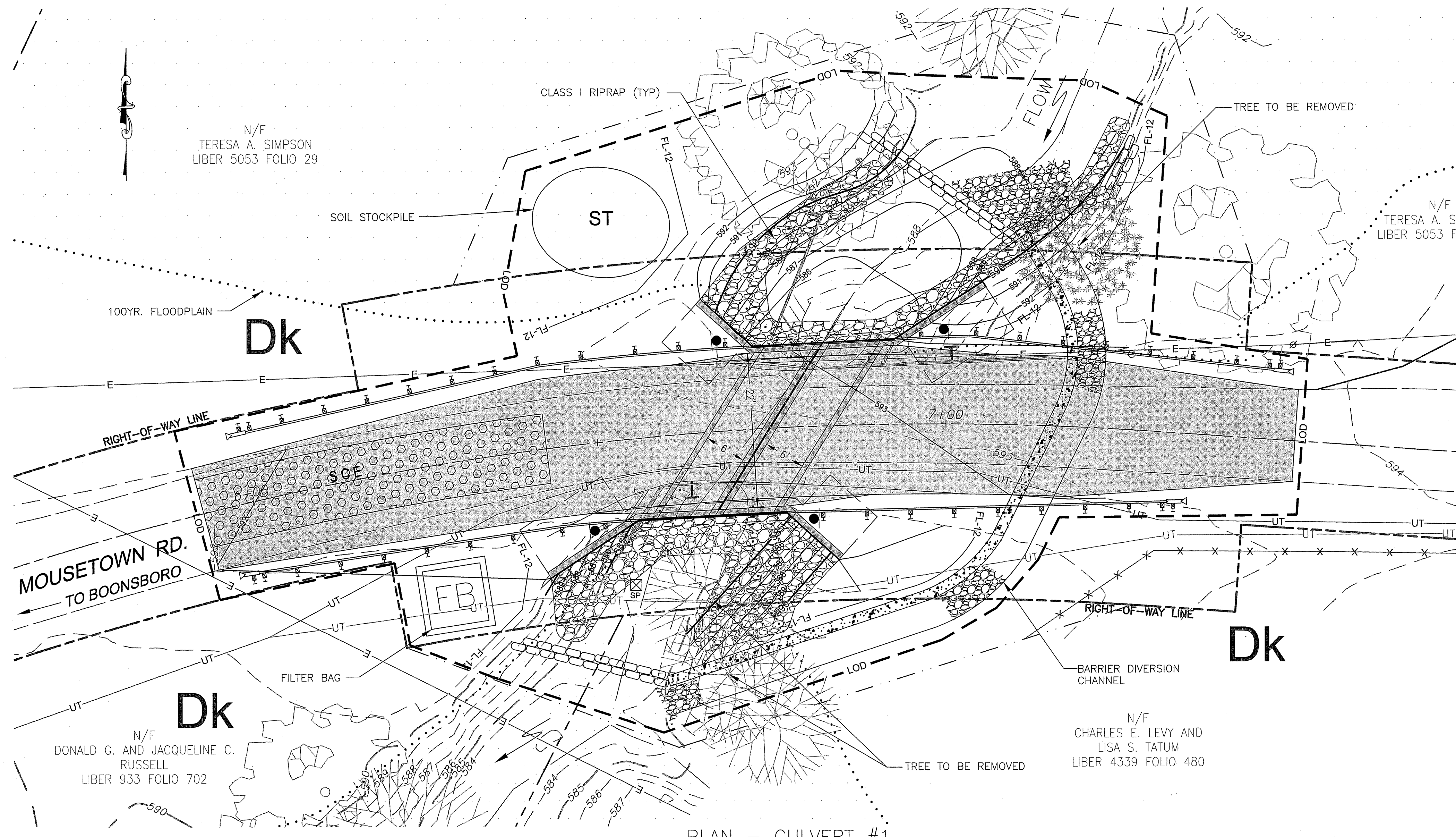
MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
TYPICAL SECTIONS  
CULVERT #1

SCALE  
AS SHOWN

SHEET NO.  
3

PROJECT NO.  
14-212

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWG\02 PLAN PROFILE 14-212.DWG PLOT DATE: 3/18/2022 7:09 AM



PLAN - CULVERT #1  
SCALE: 1"=10'

**STREAM DIVERSION NOTES:**

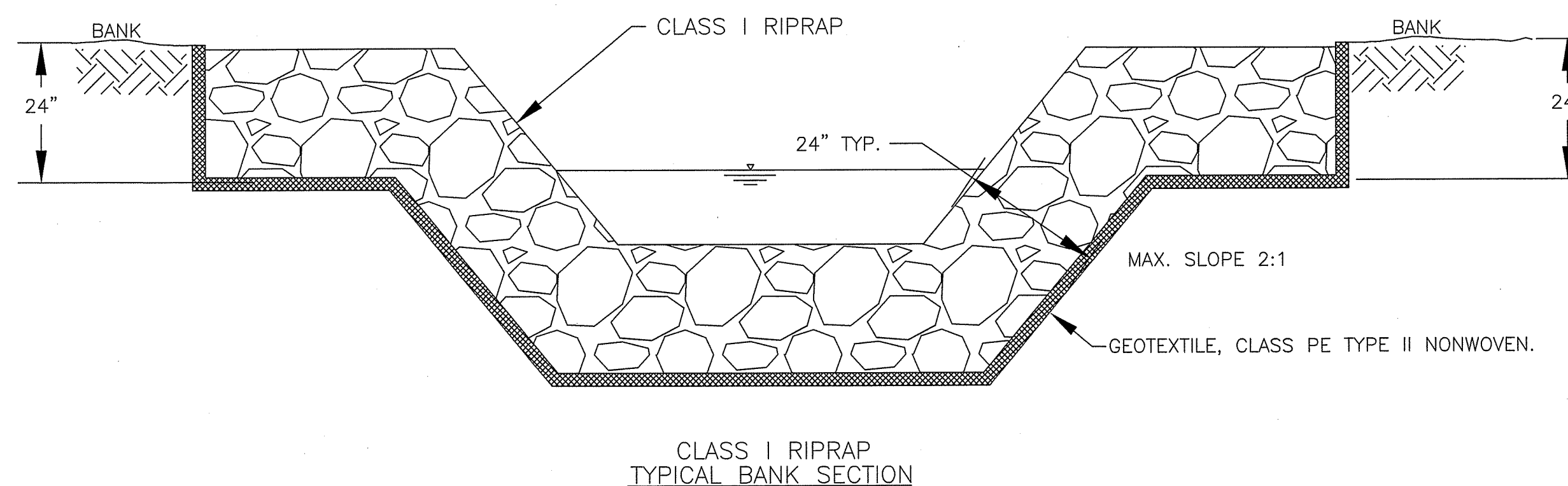
1. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE DIMENSIONS, SHAPE, AND SIZE OF THE STREAM DIVERSION IN ACCORDANCE WITH THE MARYLAND DEPARTMENT OF ENVIRONMENT WATER ADMINISTRATION "MARYLAND GUIDELINES TO WATERWAY CONSTRUCTION DETAIL 1.2 PUMP AROUND PRACTICE", DETAIL C-7 FOR DIVERSION CHANNEL, AND 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL DETAIL C-6 CLEAR WATER DIVERSION PIPE.
2. IN THE EVENT OF A STORM THAT OVERTOPS THE STREAM DIVERSION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OR PROTECTION OF ANY EQUIPMENT, TOOLS, MATERIALS, OR OTHER ITEMS NEEDED TO COMPLETE THE WORK THAT COULD BE AFFECTED BY THE STORM FLOWS. THE REMOVAL AND/OR REPLACEMENT OF ANY EQUIPMENT OR MATERIALS IS INCIDENTAL TO THE PERTINENT STREAM DIVERSION PIPE.

**CONSTRUCTION SPECIFICATIONS**

1. FOR SANDBAGS USE MATERIALS THAT ARE RESISTANT TO ULTRA-VIOLET RADIATION, TEARING AND PUNCTURE, AND WOVEN TIGHTLY ENOUGH TO PREVENT LEAKAGE OF FILL MATERIAL.
2. USE BARRIER MADE OF CONCRETE OR OTHER APPROVED MATERIAL.
3. USE 10 MIL OR THICKER, UV RESISTANT, IMPERMEABLE SHEETING OR OTHER APPROVED MATERIAL THAT IS IMPERMEABLE AND RESISTANT TO PUNCTURING AND TEARING.
4. ESTABLISH TOP ELEVATION AT H/2 +1 FOOT FOR PROJECTS OF DURATION LESS THAN 2 WEEKS OR AS SPECIFIED ON APPROVED PLAN.
5. INSTALL DIVERSION STRUCTURE FROM DOWNSTREAM TO UPSTREAM.
6. PLACE IMPERMEABLE SHEETING SUCH THAT UPGRADE PORTION OVERLAPS DOWNGRADE PORTION BY A MINIMUM OF 2 FEET.
7. USE SANDBAG BASE FOR LEVELING AND TO ESTABLISH MINIMUM TOP ELEVATION OF THE BARRIER AS REQUIRED.
8. DISPOSE OF ALL EXCAVATED MATERIALS IN AN APPROVED DISPOSAL AREA OUTSIDE THE OF THE 100-YEAR FLOODPLAIN.
9. DEWATER WORK AREA USING AN APPROVED EROSION AND SEDIMENT CONTROL PRACTICE AS SPECIFIED ON APPROVED PLAN.
10. REPLACE SANDBAGS AND IMPERMEABLE SHEETING IF TORN.

**RIPRAP NOTES:**

1. PLACE RIPRAP STONES TO A 24" MIN. DEPTH FLUSH WITH THE EXISTING STREAM BED/BANK IN THE LOCATION AS SHOWN AND/OR AS DIRECTED BY THE ENGINEER.
2. STONES FOR RIPRAP MAY BE PLACED BY EQUIPMENT. STONES SHALL BE PLACED TO THE FULL DEPTH COURSE THICKNESS IN ONE OPERATION IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIPRAP SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS.



CLASS I RIPRAP  
TYPICAL BANK SECTION

**LEGEND**

- FILTER LOG
- LIMITS OF DISTURBANCE
- FILTER BAG
- SOIL/MATERIAL STOCKPILE
- PUMP AROUND PRACTICE
- BARRIER DIVERSION
- SANDBAGS
- SUMP PIT
- STABILIZED CONSTRUCTION ENTRANCE

**SOILS DESCRIPTIONS**

**Dk** DEPOSIT GRAVELLY LOAM

**SEQUENCE OF CONSTRUCTION**

1. THE TRIBUTARY OF LITTLE ANTIETAM CREEK IS A CLASS IV-P STREAM WITH INSTREAM WORK PROHIBITED DURING THE CLOSURE PERIOD OF MARCH 1 THROUGH MAY 31.
2. NOTIFY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT AT 301-797-6821, EXT. 3, THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE INSPECTOR) AT 443-835-9397, AND THE WASHINGTON COUNTY DIVISION OF ENGINEERING AT 240-313-2460 AT LEAST FIVE (5) DAYS BEFORE CONSTRUCTION BEGINS TO SCHEDULE A PRE-CONSTRUCTION MEETING. A COPY OF THE CONTRACTOR'S SCHEDULE SHALL BE PROVIDED TO WASHINGTON COUNTY AND MDE PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR IS TO NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. INSTALL TRAFFIC CONTROL. TRIM AND REMOVE TREES WITHIN THE LOD ONLY AS NECESSARY FOR COMPLETION OF THE WORK.
4. INSTALL FILTER LOG, CLEAR AND GRUB ONLY THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS. INSTALL STOCKPILE AREA IN THE LOCATIONS AS SHOWN, WITH FILTER LOG ALONG THE DOWNSTREAM SIDE OF THE PILE. ALL FILL MUST COME FROM OR GO TO A SITE THAT HAS A CURRENT, APPROVED SOIL, EROSION AND SEDIMENT CONTROL PLAN.
5. PLACE SANDBAG DIVERSION WHERE THE TEMPORARY BARRIER DIVERSION WILL TIE INTO THE EXISTING STREAM. EXCAVATE AREAS NECESSARY TO INSTALL TEMPORARY BARRIER DIVERSION BEHIND THE SANDBAGS. INSTALL BARRIER DIVERSION. REMOVE TEMPORARY SANDBAG DIVERSION AND DIVERT WATER THROUGH DIVERSION CHANNEL; RELOCATE SANDBAGS. INSTALL SUMP PIT AND DEWATERING BAG.
6. REMOVE THE EXISTING METAL PIPE ARCH, ASPHALT WEARING SURFACE AND STONE ENDWALLS. EXCAVATE AND GRADE FOR PLACEMENT OF BEDDING MATERIAL FOR THE CULVERTS AND WINGWALL FOOTINGS. CONSTRUCT CONCRETE FOOTINGS.
7. PLACE CONCRETE PRECAST BOX CULVERTS ON COMPACTED BEDDING MATERIAL. GRADED AGGREGATE SUBBASE IS TO BE COMPACTED TO 95% MAXIMUM DENSITY. CONSTRUCT ENDWALLS.
8. BACKFILL CONCRETE ENDWALLS AND BOX CULVERTS. GRADE AND PLACE RIPRAP ALONG THE UPSTREAM AND DOWNSTREAM SIDE OF CULVERTS AS SHOWN ON SHEET 2 AND RESTORE STREAMBANKS TO NATURAL CONDITIONS AS DIRECTED BY THE ENGINEER.
9. REMOVE DIVERSION CHANNEL, AND SUMP PIT. DIRECT STREAM THROUGH CONCRETE BOX CULVERTS. BACKFILL TEMPORARY DIVERSION CHANNEL.
10. GRADE AND SEED UPSTREAM BANK WHERE TEMPORARY DIVERSION CHANNEL WAS WITH STABILIZATION MATTING, RIPRAP, AND LIVE STAKES.
11. REMOVE AND STOCKPILE EXISTING STREAM BED MATERIAL. GRADE CHANNEL BANKS.
12. SAW CUT ROAD AND REMOVE PAVEMENT AS SPECIFIED. PLACE ROADWAY BASE, GRADED AGGREGATE, AND ASPHALT PAVEMENT.
13. FINE GRADE AND TOPSOIL ALL DISTURBED AREAS AS DIRECTED BY THE ENGINEER. PROVIDE PERMANENT SEEDING. SET TRAFFIC BARRIER.
14. NOTIFY WASHINGTON COUNTY DIVISION OF ENGINEERING, WASHINGTON COUNTY SOIL CONSERVATION DISTRICT, AND MARYLAND DEPARTMENT OF ENVIRONMENT INSPECTOR FIVE DAYS PRIOR TO FINAL INSPECTION. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES ONLY AFTER FINAL APPROVAL FROM THE SOIL CONSERVATION DISTRICT.
15. REMOVE TRAFFIC CONTROL.

**STANDARD UTILITY NOTES**

1. CONTRACTOR TO ONLY OPEN UP LENGTH OF TRENCH THAT CAN BE CONSTRUCTED AND BACKFILLED IN ONE WORKING DAY IN PAVED AREAS.
2. CONTRACTOR TO PLACE EXCAVATED MATERIALS IN A DUMP TRUCK AND HAULED TO AN APPROVED LOCATION TO WASTED MATERIALS TO PAVED AREAS.
3. CONTRACTOR TO BACKFILL TRENCH WITH APPROVED MATERIALS AND STABILIZE DISTURBED AREAS THE SAME WORKING DAY.
4. IN AREAS WHERE THE CONSTRUCTION TAKES TO PLACE OUTSIDE OF THE EXISTING ROADBED, CONTRACTOR TO INSTALL SILT FENCE ALONG THE DOWNHILL SIDE OF THE TRENCH BEFORE BEGINNING CONSTRUCTION AND PLACE EXCAVATED MATERIAL FROM THE TRENCH ON THE UPHILL SIDE.
5. IF DEWATERING OF THE TRENCH IS REQUIRED, CONTRACTOR TO PUMP WATER TO A FILTER BAG TO DEWATER.
6. CONTRACTOR TO SWEEP STREETS OF ANY DEBRIS OR SEDIMENTS CAUSED BY CONSTRUCTION OPERATIONS AND DISPOSE OF AT AN APPROVED LOCATION.
7. CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITH SEED & MULCH OR APPROPRIATE STREET REPAIR.

DESIGNED BY:	NO.	REVISION DESCRIPTION	BY	DATE
DRAWN BY:				
CHECKED BY:				
DATE:				

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
EROSION AND SEDIMENT  
CONTROL PLAN CULVERT #1

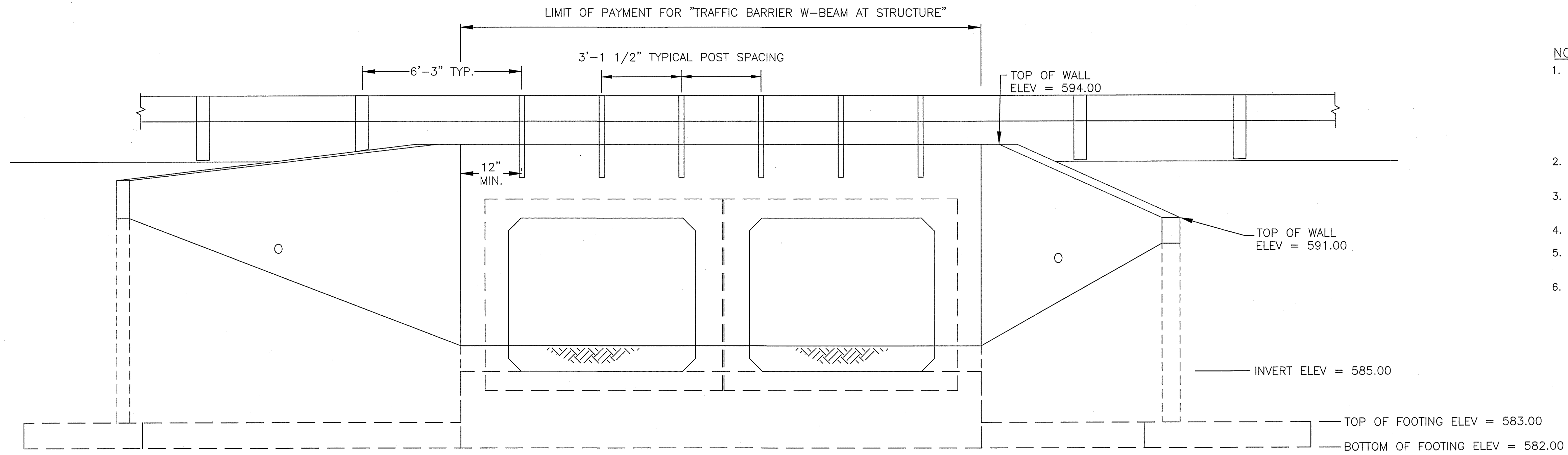
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SHEET NO.  
4

PROJECT NO.  
14-212



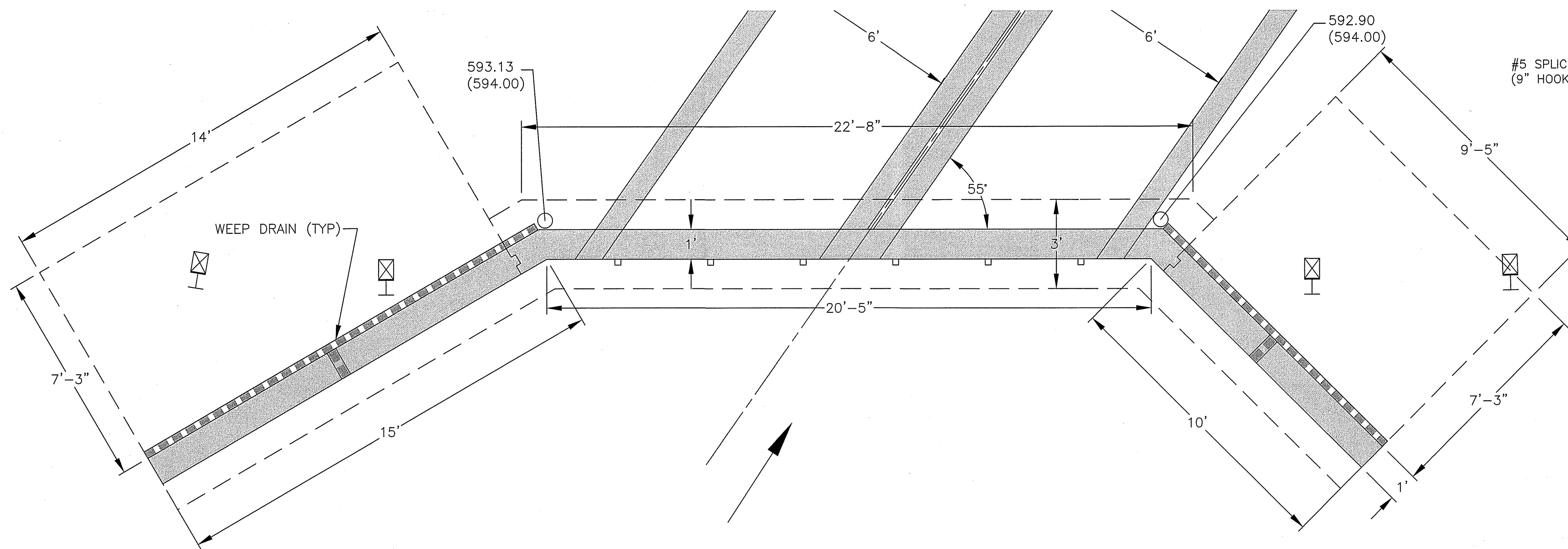
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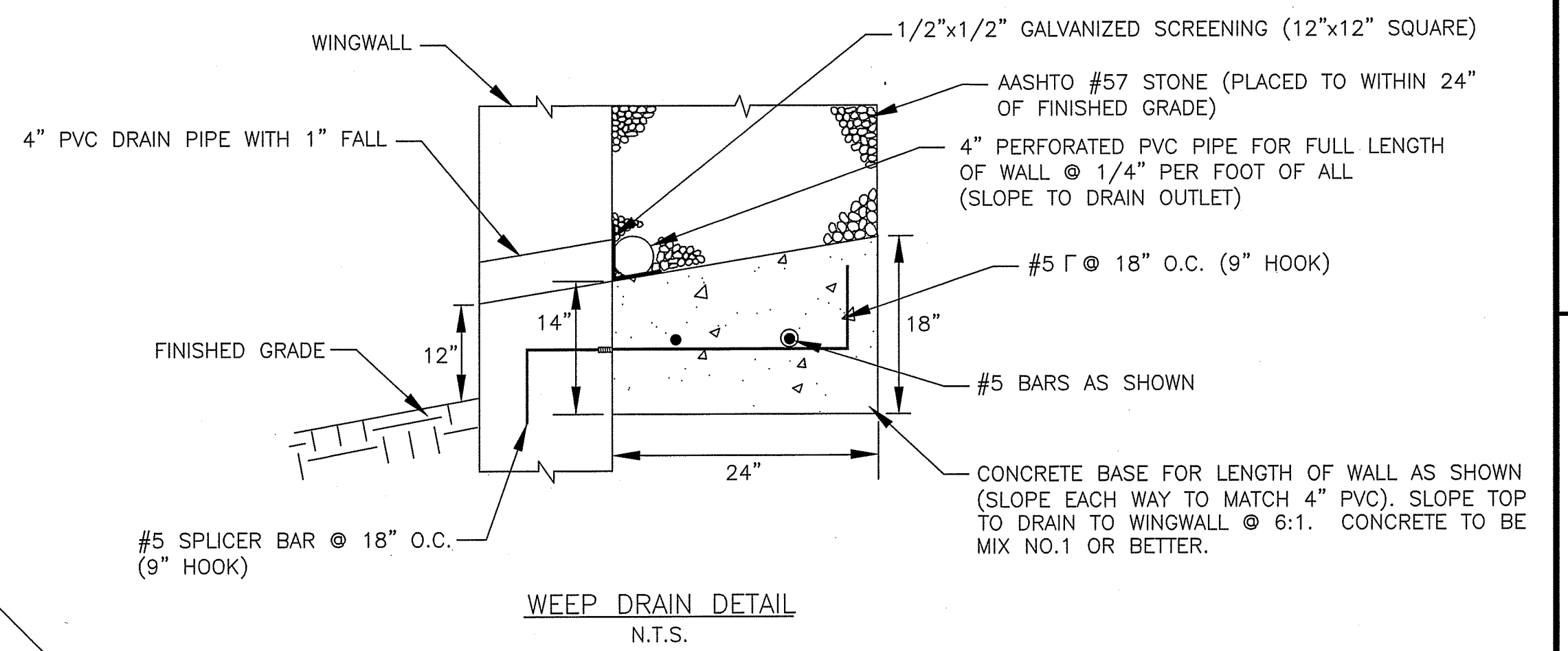
TYPICAL ELEVATION - UPSTREAM ENDWALL  
SCALE: 3/8"=1'

- NOTES:**
1. THE PROPOSED ENDWALL FOOTINGS HAVE BEEN DESIGNED FOR A BEARING PRESSURE OF 3,000 PSF WHICH SHALL BE VERIFIED DURING CONSTRUCTION BY A MARYLAND LICENSED GEOTECHNICAL ENGINEER RETAINED BY THE CONTRACTOR. SHOULD THE ACTUAL BEARING PRESSURE AT THE PLANNED BOTTOM OF FOOTING ELEVATION BE FOUND TO BE LESS THAN ASSUMED, THE FOOTING DIMENSIONS SHALL BE ADJUSTED AT THE DIRECTION OF THE ENGINEER.
  2. WATERPROOFING MEMBRANE SHALL BE 2-PLY AND 16" MINIMUM WIDTH CENTERED ON ALL CONCRETE JOINTS.
  3. DAMPPROOFING SHALL BE APPLIED TO ALL CONCRETE SURFACES IN CONTACT WITH BACKFILL.
  4. REFER TO REINFORCING DETAILS ON SHEET 9.
  5. SLOPE WILL VARY. GRADE EMBANKMENTS AS SHOWN ON SHEET 2 AND AS DIRECTED BY THE ENGINEER.
  6. TRAFFIC BARRIER NOT SHOWN IN PLAN VIEW FOR CLARITY.

NOTE: XXX.XX = FINISHED ROADWAY ELEVATION  
(xxx.xx) = FINISHED TOP OF WALL



TYPICAL ELEVATION - UPSTREAM ENDWALL  
SCALE: 3/8"=1'



WEEP DRAIN DETAIL  
N.T.S.

NO.	REVISION DESCRIPTION	BY	DATE

DESIGNED BY: KJ/SH  
DRAWN BY: BN/KU  
CHECKED BY: SH  
DATE: DEC 2021

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

STATE OF MARYLAND  
REGISTERED PROFESSIONAL ENGINEER  
12/1/21

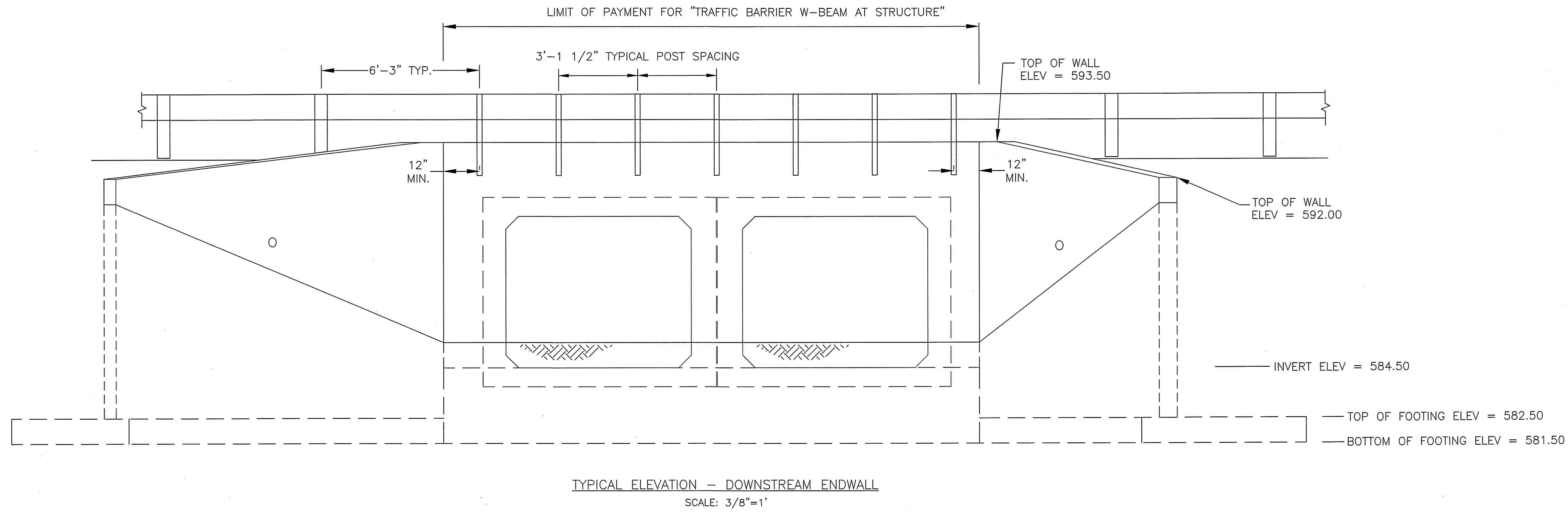
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AS SHOWN

SHEET NO.  
6

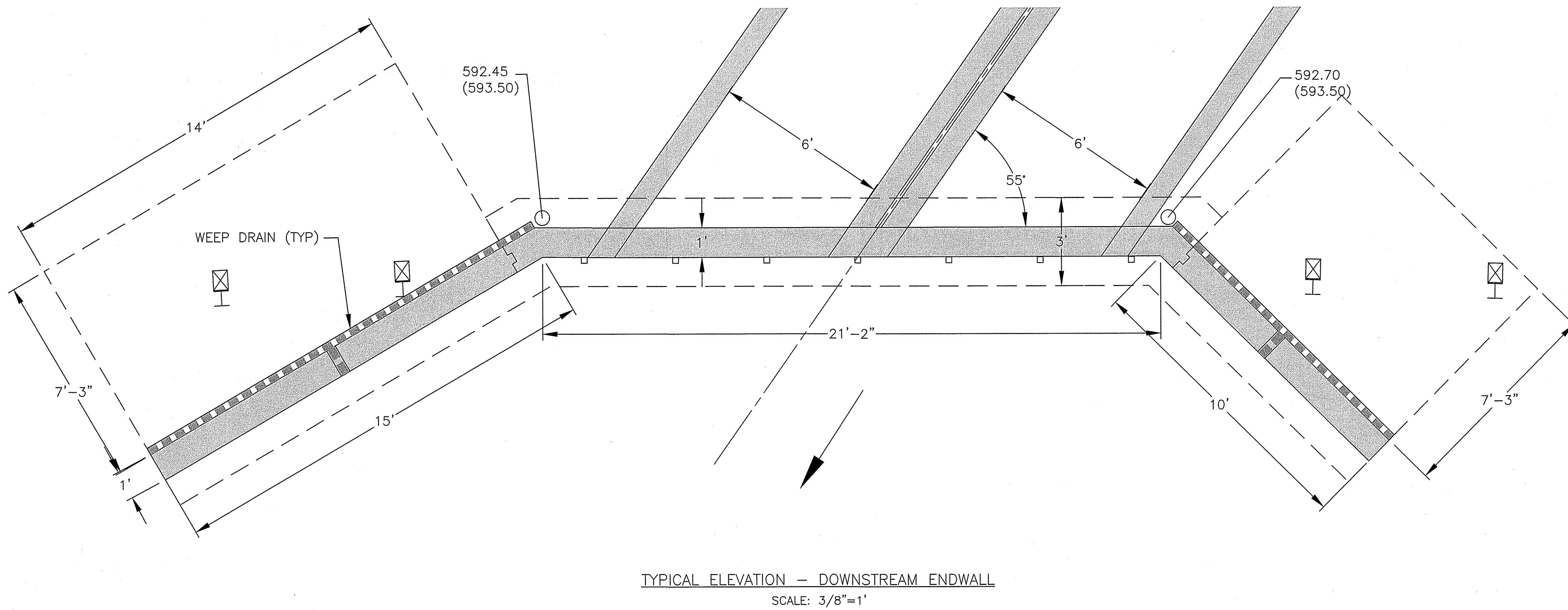
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14-212

MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
UPSTREAM ENDWALL  
CULVERT #1

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWG\REINFORCING AND DETAILS 14-212.DWG PLOT DATE: 3/19/2022 7:38 AM



NOTE: xxx.xx = FINISHED ROADWAY ELEVATION  
(xxx.xx) = FINISHED TOP OF WALL



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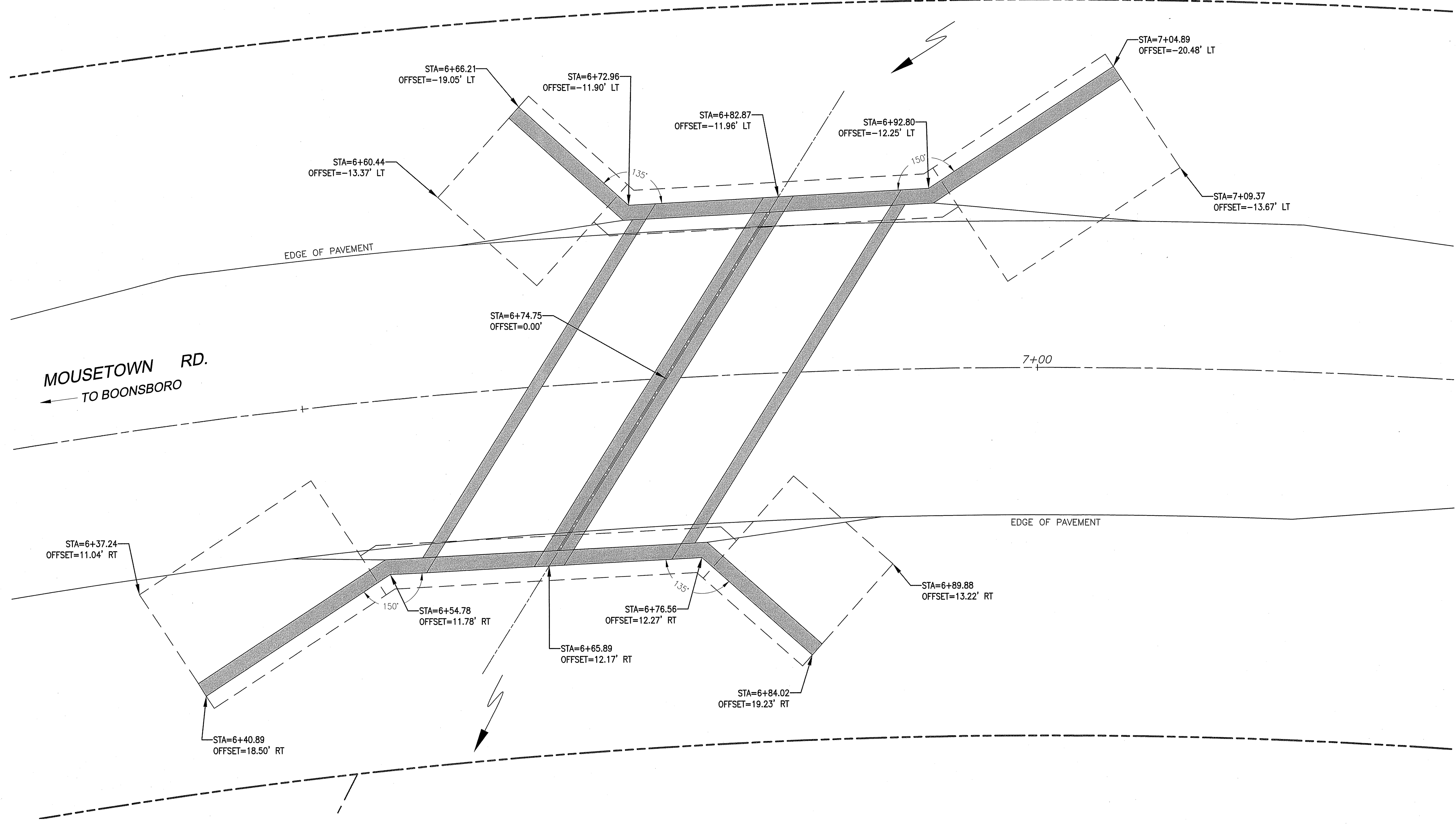
**MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
DOWNSTREAM ENDWALL  
CULVERT #1**



SCALE  
AS SHOWN

SHEET NO.  
7

PROJECT NO.  
14-212



LAYOUT - CULVERT #1  
SCALE: 1/4"=1'

NO.	REVISION DESCRIPTION	BY	DATE

DESIGNED BY: KUI/SH  
 DRAWN BY: BM/KUI  
 CHECKED BY: SH  
 DATE: DEC 2021

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**MOUSETOWN ROAD**  
**CULVERT REPLACEMENTS**  
**OFFSET/LAYOUT PLAN**  
**CULVERT #1**

SCALE  
 AS SHOWN

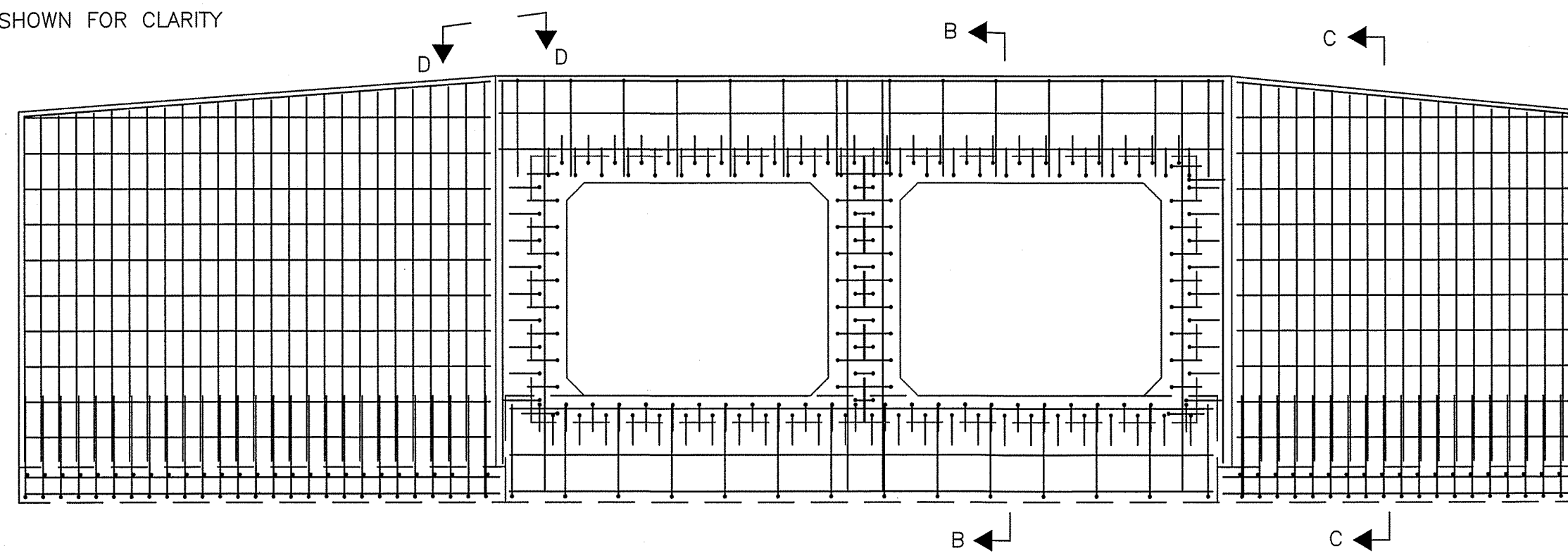
SHEET NO.  
 8

PROJECT NO.  
 14-212

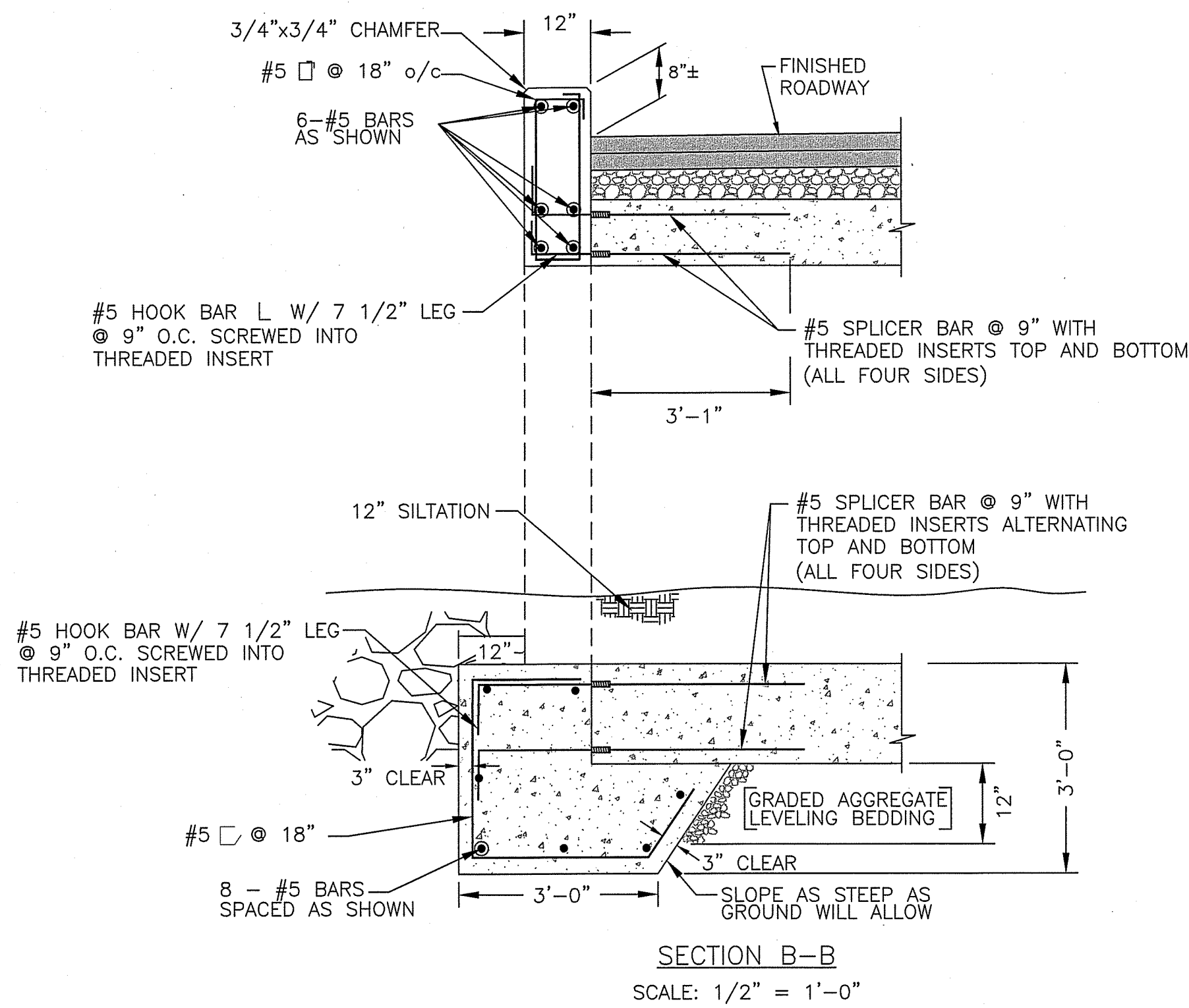


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NOTE: REINFORCING IN CULVERT NOT SHOWN FOR CLARITY

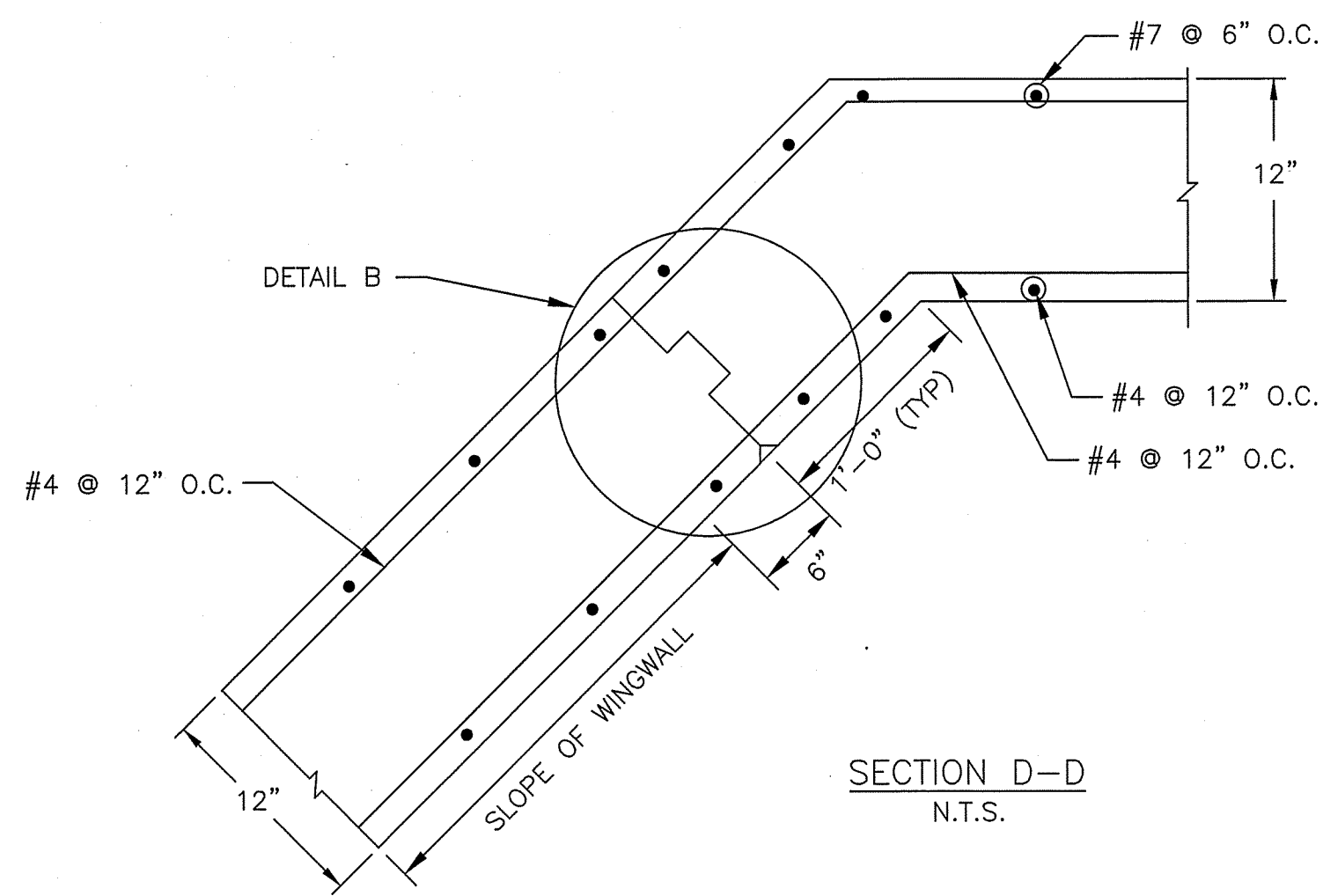


TYPICAL ELEVATION - UPSTREAM ENDWALL SHOWN  
SCALE: 1/4"=1'

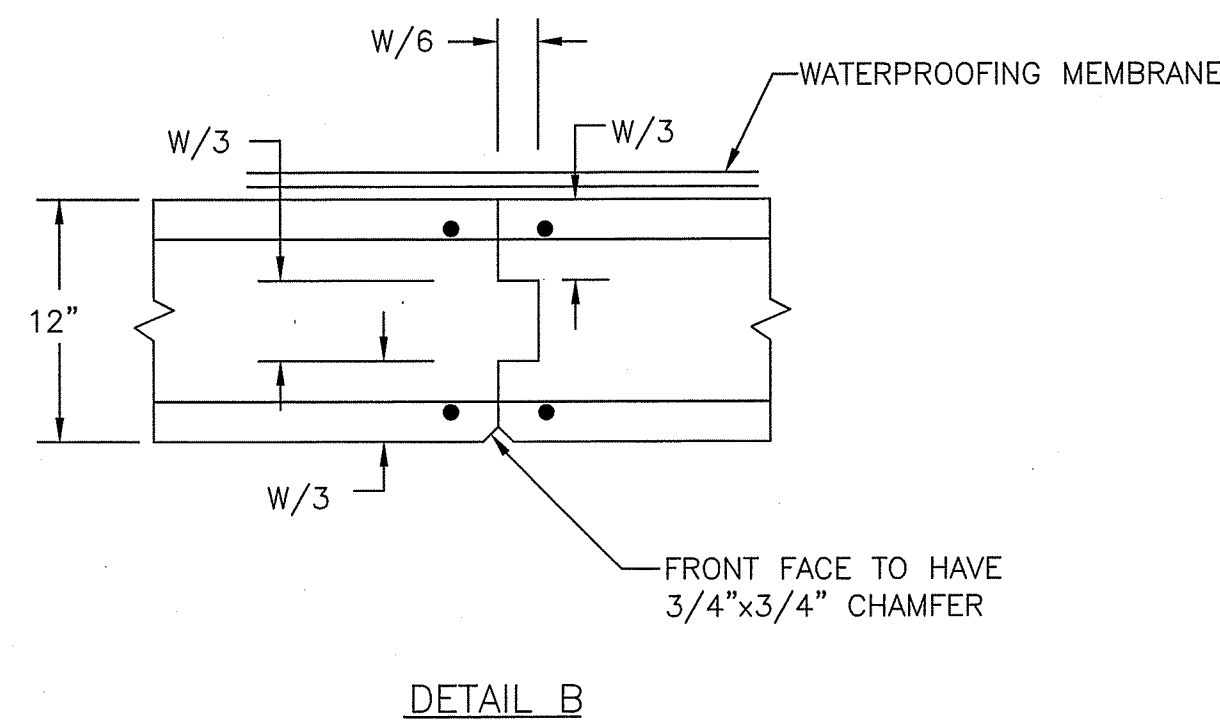


SECTION B-B  
SCALE: 1/2" = 1'-0"

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



SECTION D-D  
N.T.S.



DETAIL B

NOTES:

DESIGN SPECIFICATIONS: AASHTO LOAD AND RESISTANCE FACTOR DESIGN (LRFD) BRIDGE DESIGN SPECIFICATIONS, 9TH EDITION, DATED 2020, INCLUDING INTERIM SPECIFICATIONS.

DESIGN/LOADING: STRUCTURAL DESIGN OF PRECAST CONCRETE BOX SHALL MEET OR EXCEED AASHTO HL-93 LOADING.

LOAD RATING CALCULATIONS SHALL VERIFY THE STRUCTURE DOES NOT REQUIRE A WEIGHT RESTRICTION POSTING FOR ALL FOUR MARYLAND LEGAL LOAD TYPES (H-15, HS-20, TYPE 4, TYPE 3S2). ALL CALCULATIONS INCLUDING THE STRUCTURAL DESIGN AND LOAD RATING CALCULATIONS SHALL BE SUBMITTED TO THE WASHINGTON COUNTY ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE MANUFACTURE OF THE STRUCTURE.

PRECAST CONCRETE: ALL CONCRETE FOR THE PRECAST BOX CULVERT UNITS SHALL BE 5,000 PSI MIN. AT 28 DAYS.

CULVERT SLAB THICKNESSES, WALL DIMENSIONS, AND REINFORCING DESIGNED TO MEET LOADING REQUIREMENTS MAY VARY FROM THOSE FOUND IN ASTM AND AASHTO SPECIFICATIONS.

REFER TO ASTM C1433/AASHTO M259 AND AASHTO M273 (FORMERLY ASTM C789/AASHTO M259 FOR CULVERTS WITH FILL HEIGHTS OF 2 FEET OR GREATER AND ASTM C850/AASHTO M273 FOR CULVERTS WITH FILL HEIGHTS OF LESS THAN 2 FEET).

ALL CONCRETE EDGES SHALL BE CHAMFERED 3/4" x 3/4".

LIFTING EYES/HOLES SHALL BE PROVIDED IN EACH SECTION FOR HANDLING. THEY SHALL BE FILLED AS DIRECTED BY THE MANUFACTURER AFTER THE BOX SECTIONS ARE IN PLACE.

AN APPROVED BUTYL RUBBER, FLEXIBLE FOAM, OR BITUMINOUS MASTIC FROM THE MANUFACTURER SHALL BE PROVIDED IN EACH JOINT TO PROVIDE A WATERTIGHT SEAL.

ALL SIDES OF THE BOX CULVERT SHALL BE DAMPPROOFED WITH AN APPROVED ASPHALT BASED PAINT/PRIMER.

ALL BOX SECTIONS SHALL BE MARKED AS FOLLOWS IN ACCORDANCE WITH AASHTO M273 BY INDENTATION OR WATERPROOF PAINT: 1.) SECTION RISE, SPAN AND SPECIFICATION DESIGNATION, 2.) DATE OF MANUFACTURE, 3.) NAME OR TRADEMARK OF MANUFACTURER, 4.) PLANT IDENTIFICATION, 5.) MARKED BY INDENTATION ON INSIDE OR OUTSIDE SO THAT THE LOCATION OF THE TOP WILL BE EVIDENT IMMEDIATELY AFTER THE FORMS ARE STRIPPED.

THE MANUFACTURER/ENGINEER SHALL SUBMIT SHOP DRAWINGS OF THE CULVERT TO THE WASHINGTON COUNTY ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL PRIOR TO THE MANUFACTURE OF THE STRUCTURE.

CAST-IN-PLACE CONCRETE: CONCRETE FOR HEADWALL AND WINGWALL STEMS SHALL BE MSHA MIX NO. 6 (4,500 PSI MIN). FOOTINGS SHALL BE MSHA MIX NO. 3 (3,500 PSI MIN).

ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH 3/4" x 3/4" MILLED CHAMFER STRIPS.

DAMPPOOFING SHALL BE APPLIED TO ALL CONCRETE SURFACES COMING IN CONTACT WITH BACKFILL. WATERPROOFING MEMBRANE SHALL BE 2-PLY AND 16" MIN. WIDTH CENTERED ON THE CONSTRUCTION JOINTS.

REINFORCING STEEL: REINFORCING STEEL FOR THE PRECAST BOX CULVERT SHALL BE WELDED WIRE FABRIC (WWF) WITH DEFORMED WIRES PER AASHTO M221 AND M225 (MIN. FY=65,000 PSI) OR DEFORMED REBAR CONFORMING TO ASTM A615, GRADE 60 (MIN. FY=60,000 PSI). SPLICES SHALL BE LAPPED ACCORDING TO AASHTO REQUIREMENTS OR BAR LAP CHARTS. MINIMUM COVER FOR ANY BAR IN THE PRECAST BOX CULVERT SHALL BE 1".

ALL REINFORCING STEEL IN THE TOP SLAB OF THE PRECAST CULVERT UNITS AND IN THE CAST-IN-PLACE HEADWALLS SHALL BE EPOXY COATED.

REINFORCING STEEL FOR CAST-IN-PLACE HEADWALLS AND WINGWALLS SHALL CONFORM TO ASTM 615, GRADE 60. SPLICES NOT SHOWN SHALL BE LAPPED ACCORDING TO AASHTO REQUIREMENTS OR BAR LAP CHARTS. MINIMUM COVER FOR ANY BAR SHALL BE 2 INCHES, UNLESS OTHERWISE NOTED, WITH THE EXCEPTION OF BARS AT THE BOTTOM OF ALL FOOTINGS, WHICH SHALL HAVE 3 INCH MINIMUM COVER.

FOR TIES AND STIRRUPS: STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.

BAR LAP DIMENSIONS FOR GRADE 60 REINFORCING STEEL

BAR SIZE	* LOCATION CATEGORY				BAR SIZE	* LOCATION CATEGORY			
	NON-EPOXY		EPOXY COATED			NON-EPOXY		EPOXY COATED	
	A	B	A	B	A	B	A	B	
#4	2'-5"	1'-10"	2'-10"	2'-2"	#4	2'-1"	1'-7"	2'-6"	1'-11"
#5	3'-0"	2'-4"	3'-7"	2'-9"	#5	2'-7"	2'-0"	3'-1"	2'-5"
#6	3'-7"	2'-9"	4'-8"	4'-1"	#6	3'-1"	2'-5"	4'-0"	3'-7"
#7	4'-2"	3'-2"	5'-5"	4'-9"	#7	3'-7"	2'-9"	4'-8"	4'-2"
#8	4'-9"	3'-8"	6'-2"	5'-5"	#8	4'-1"	3'-2"	5'-4"	4'-9"
#9	5'-10"	4'-6"	7'-8"	6'-9"	#9	5'-1"	3'-11"	6'-7"	5'-10"
#10	7'-2"	5'-7"	9'-5"	8'-4"	#10	6'-3"	4'-10"	8'-2"	7'-2"
#11	8'-8"	6'-8"	11'-4"	10'-0"	#11	7'-6"	5'-9"	9'-9"	8'-8"

MIX NO. 3 (3,500psi) CONCRETE

MIX NO. 6 (4,500psi) CONCRETE

\* LOCATION CATEGORY

A - BARS IN HORIZONTAL LAYERS IN TOP OF POUR WITH 12" OR MORE OF CONCRETE BELOW THEM SUCH AS IN FOOTINGS, PIER CAPS, ETC.

B - ALL BARS NOT IN CATEGORY A

NOTE:

1. WHEN BAR LAP IS NOT SPECIFIED ON THE PLANS, THE ABOVE DIMENSIONS SHALL BE USED.
2. FOR CENTER TO CENTER SPACING <6" SEE MD DOT O.O.S. DETAILS FOR REBAR-BL-101 AND BL-103.

END HOOKS

BAR SIZE	FINISHED BEND DIAMETER	90° HOOKS
#4	3"	8"
#5	3-3/4"	10"
#6	4-1/2"	1'-0"
#7	5-1/4"	1'-2"
#8	6"	1'-4"
#9	9-1/2"	1'-6"
#10	10-3/4"	1'-8"
#11	1'-0"	1'-10"

MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
REINFORCING DETAILS  
CULVERT #1

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-318-2480 Fax: 240-313-2401



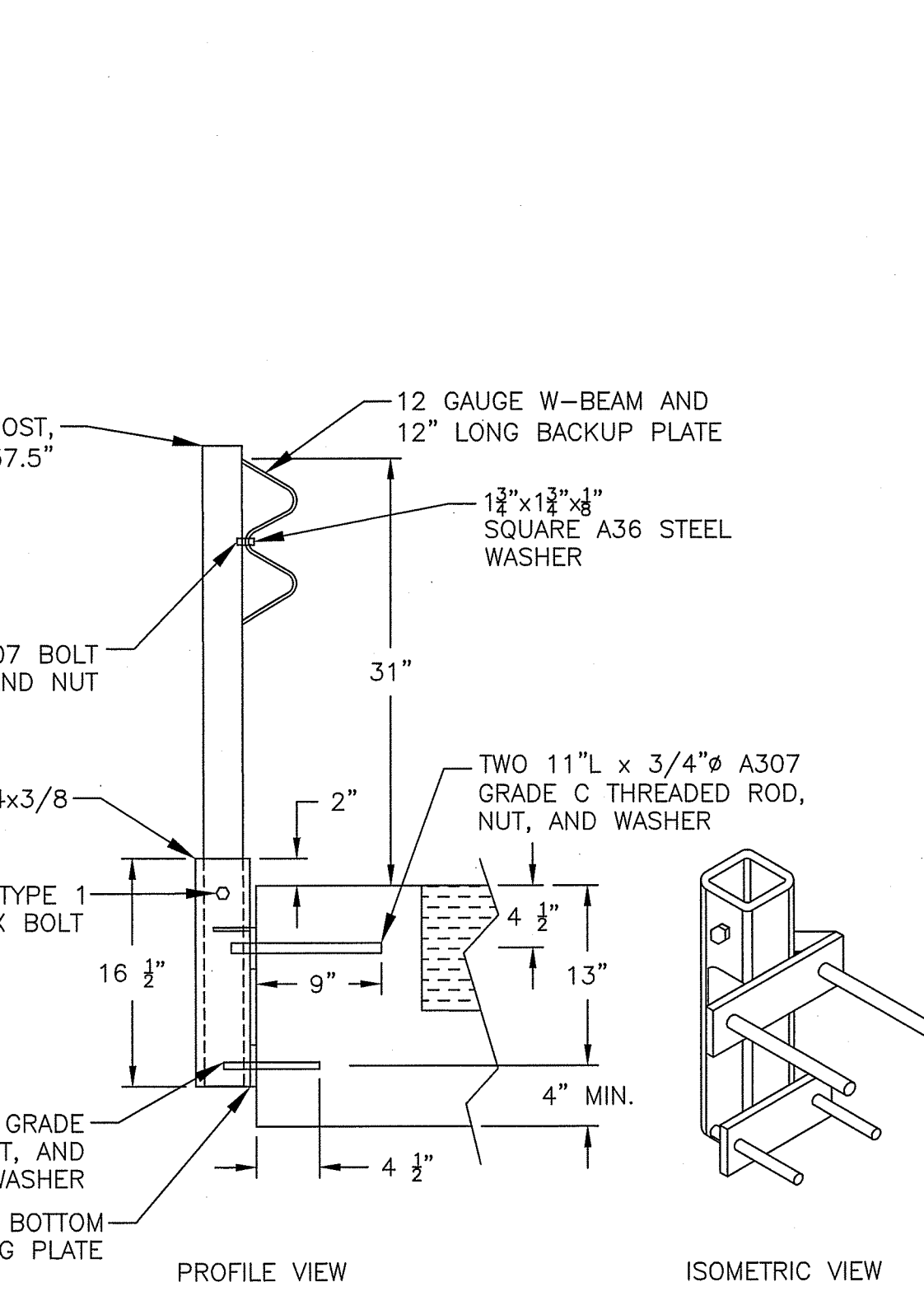
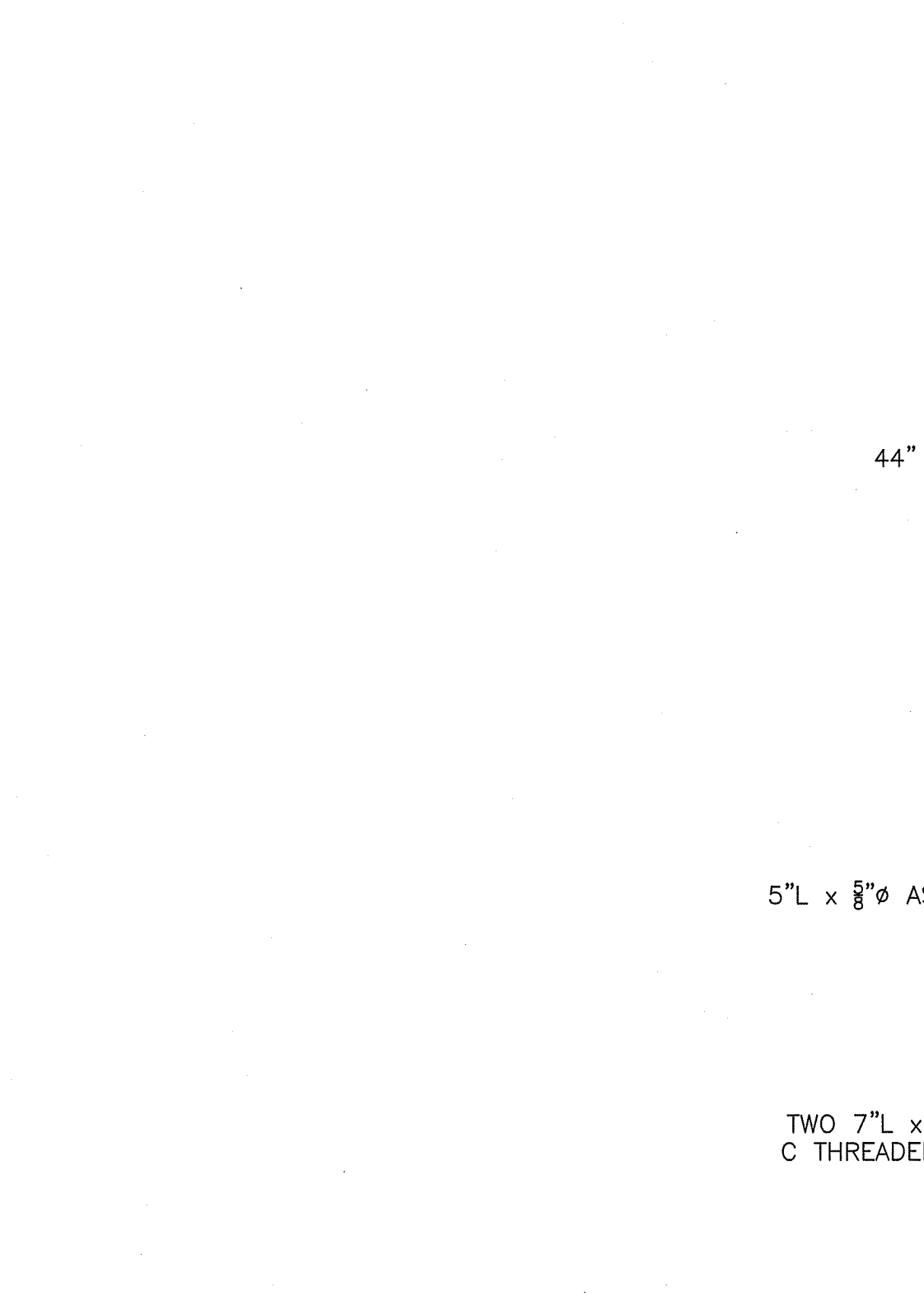
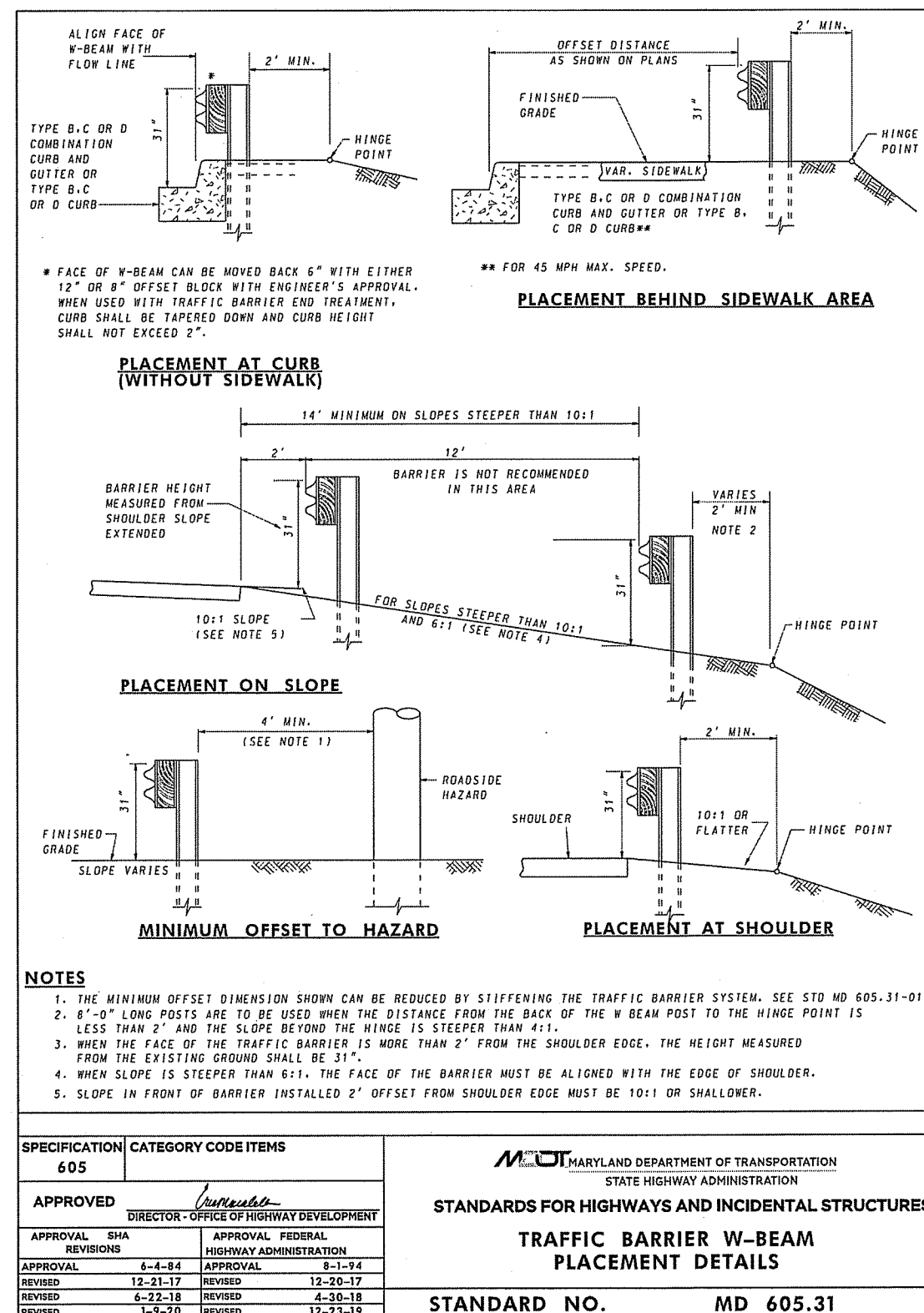
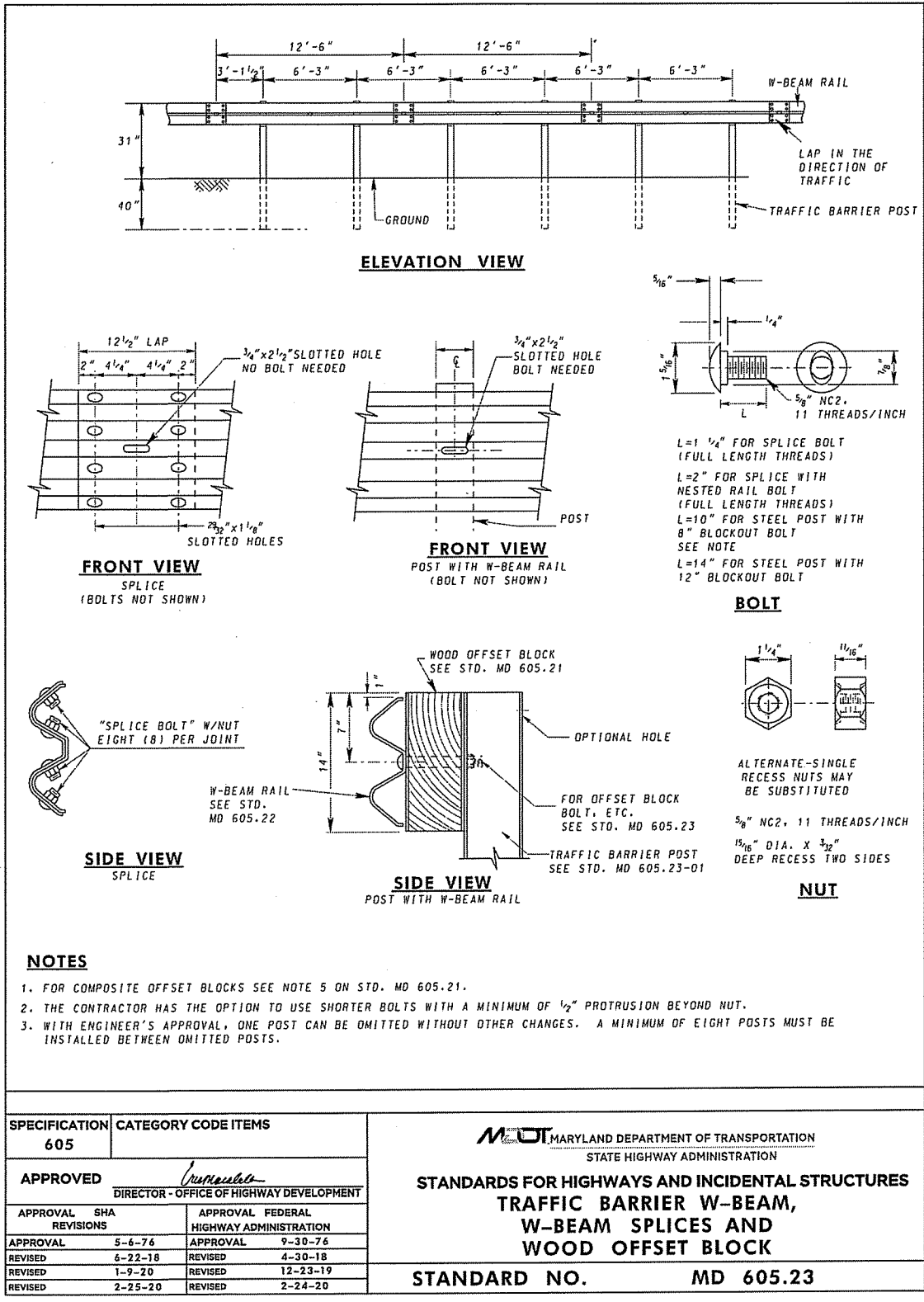
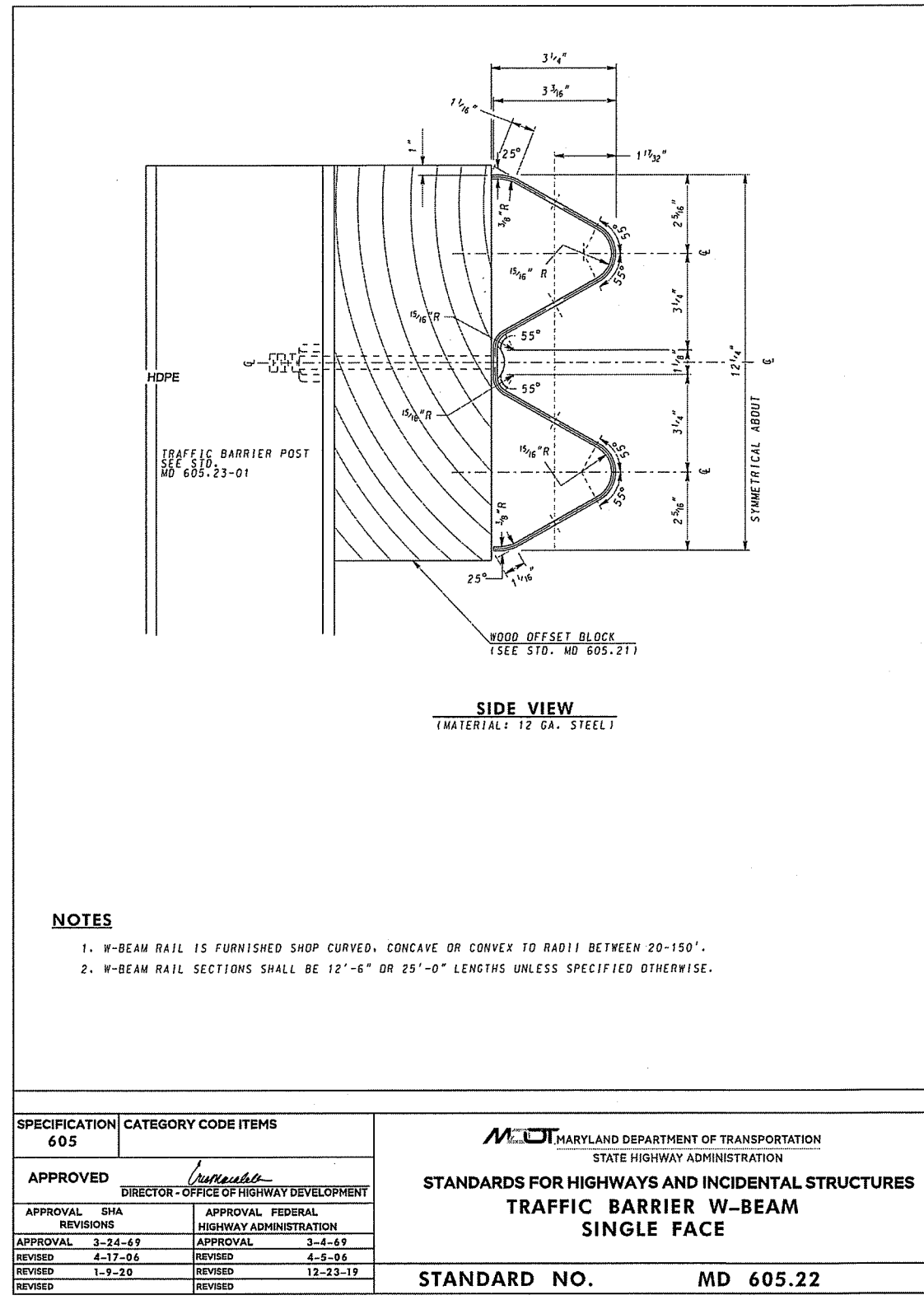
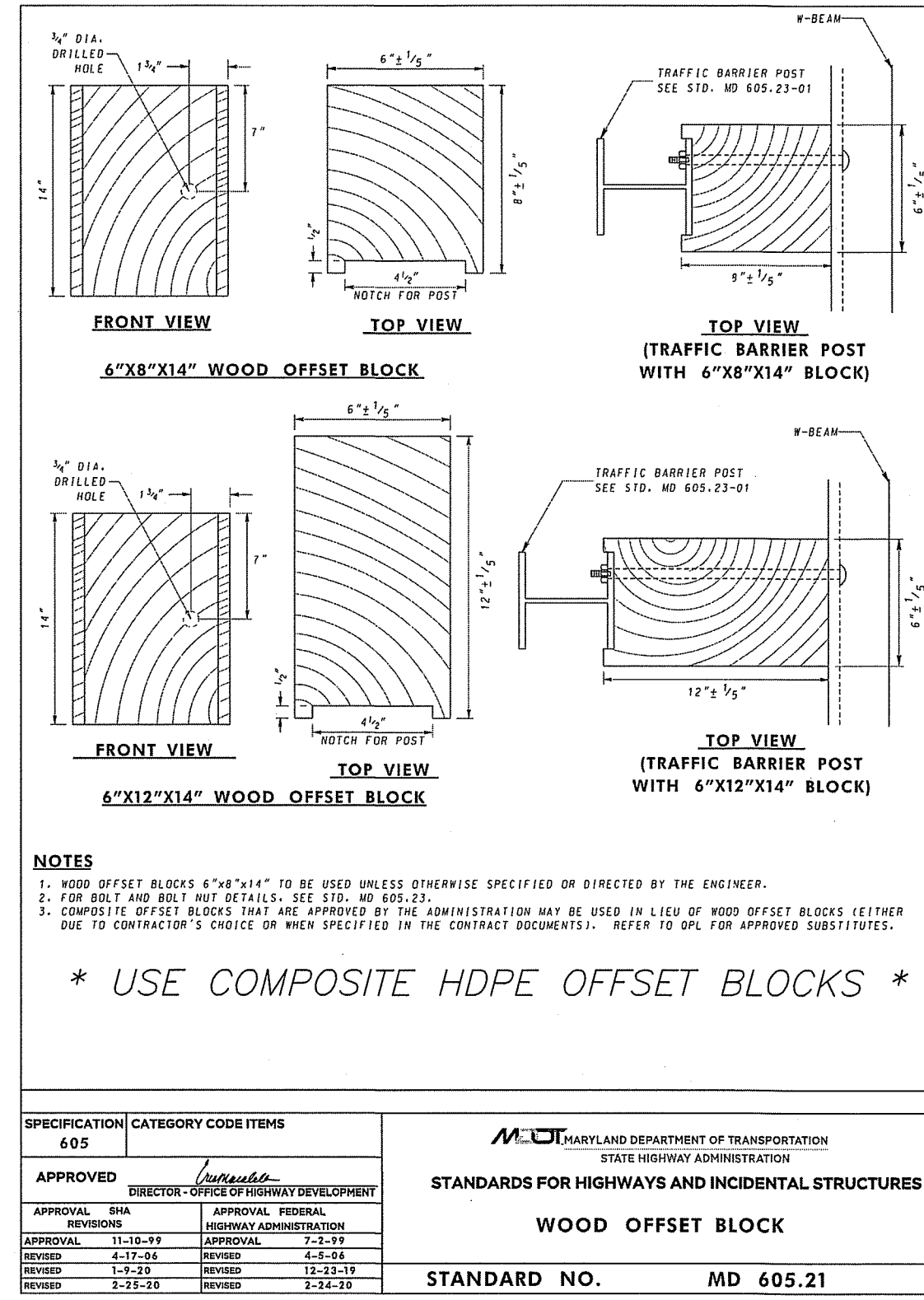
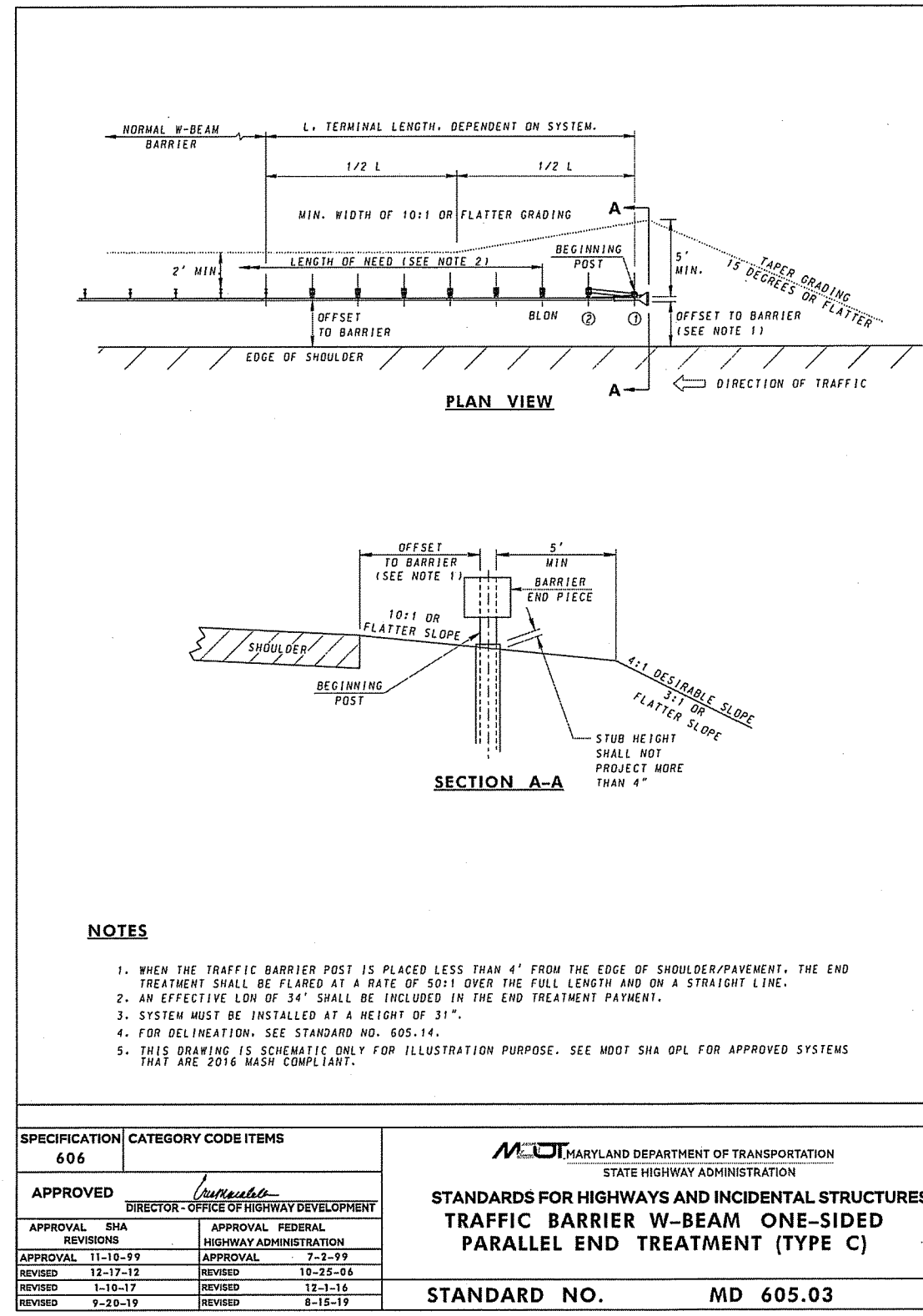
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SHEET NO.  
9

PROJECT NO.  
14-212

NO.	REVISION DESCRIPTION	BY	DATE

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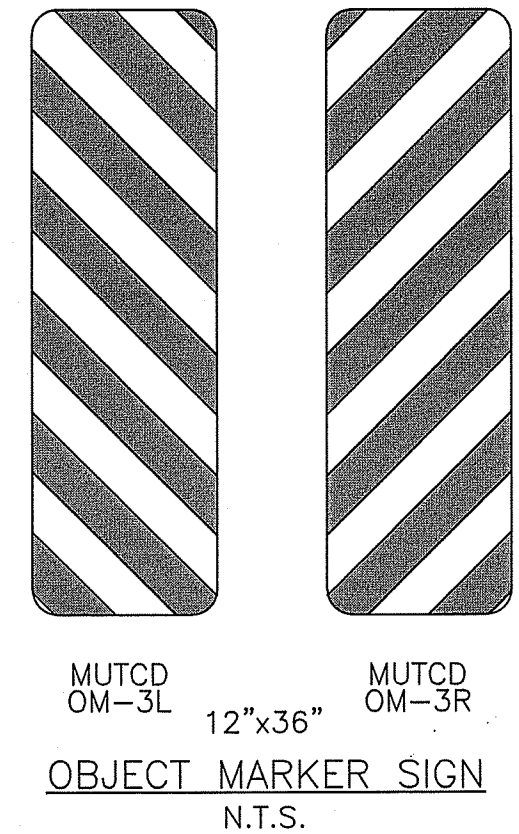


SPECIFICATION	CATEGORY CODE ITEMS	APPROVED	REVISIONS	DATE	BY
605	605	APPROVED	REVISIONS		
<p>STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES TRAFFIC BARRIER W-BEAM SINGLE SIDED PARALLEL END TREATMENT (TYPE C)</p> <p>STANDARD NO. MD 605.03</p>					

SPECIFICATION	CATEGORY CODE ITEMS	APPROVED	REVISIONS	DATE	BY
605	605	APPROVED	REVISIONS		
<p>STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES WOOD OFFSET BLOCK</p> <p>STANDARD NO. MD 605.21</p>					

SPECIFICATION	CATEGORY CODE ITEMS	APPROVED	REVISIONS	DATE	BY
605	605	APPROVED	REVISIONS		
<p>STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES TRAFFIC BARRIER W-BEAM SINGLE FACE</p> <p>STANDARD NO. MD 605.22</p>					

SPECIFICATION	CATEGORY CODE ITEMS	APPROVED	REVISIONS	DATE	BY
605	605	APPROVED	REVISIONS		
<p>STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES TRAFFIC BARRIER W-BEAM, W-BEAM SPLICES AND WOOD OFFSET BLOCK</p> <p>STANDARD NO. MD 605.23</p>					



MUTCD OM-3L 12'x36'  
MUTCD OM-3R 12'x36'  
OBJECT MARKER SIGN N.T.S.

- NOTES:
1. THE 4"x4" SQUARE TUBE SHALL BE ASTM A500 GRADE B GALVANIZED STEEL.
  2. THE TOP AND BOTTOM MOUNTING PLATES SHALL BE ASTM A572 GRADE 50 GALVANIZED STEEL.
  3. THE TOP MOUNTING PLATE GUSSET SHALL BE ASTM A572 GRADE 50 GALVANIZED STEEL.
  4. MEETS MASH TL-2 AT 6'-3" SPACING AND MASH TL-3 AT 3'-1 1/2" SPACING PER FHWA LETTER OF ELIGIBILITY B-264.

BARRIER ATTACHMENT TO BRIDGE SUPERSTRUCTURE N.T.S.

- NOTES:
1. REFER TO THIS SHEET, SHEET 2, AND SHEET 3 FOR TRAFFIC BARRIER TYPE AND LOCATION.

DESIGNED BY:	DRAWN BY:	CHECKED BY:	DATE:
KU/SH	BM/KU	SH	DEC 2021

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
3110  
Professional Engineer  
Phone: 240-313-2468 Fax: 240-313-2470

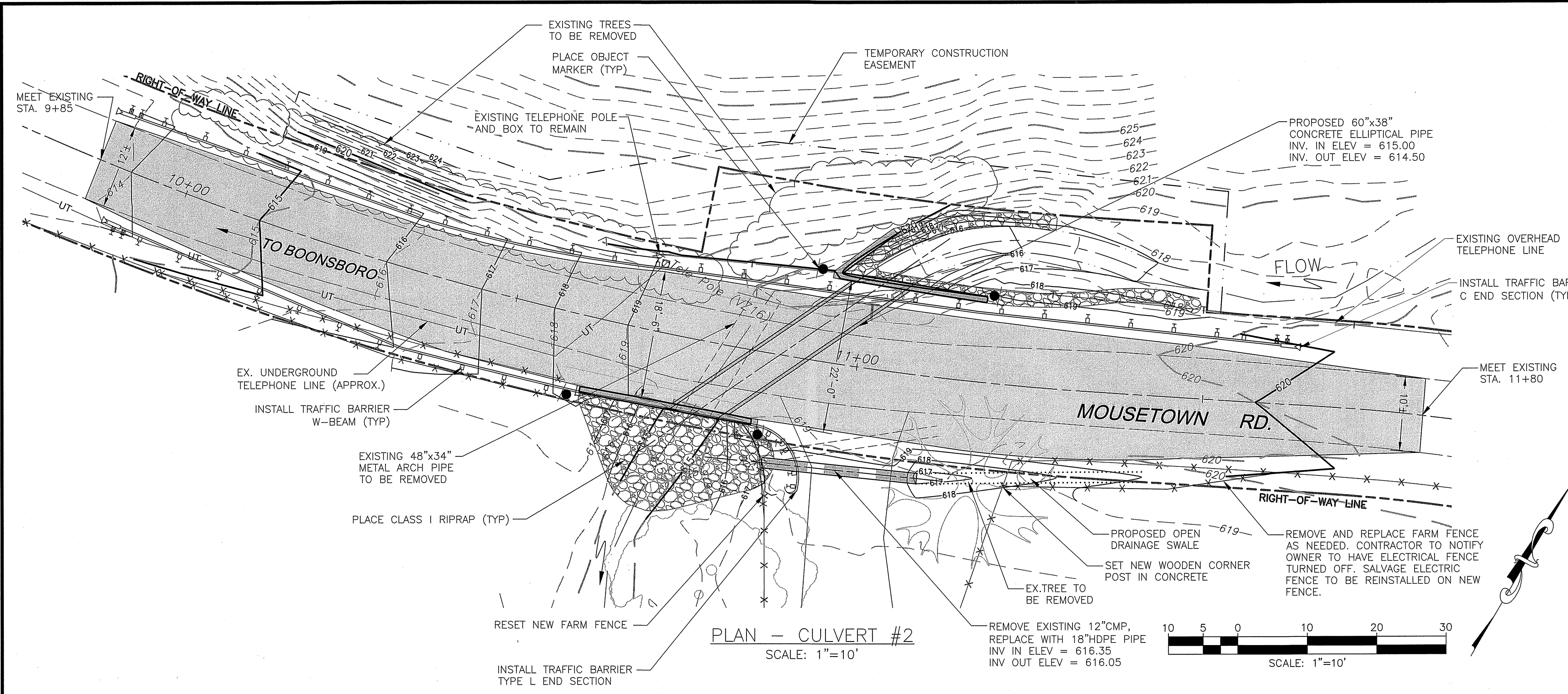
MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
TRAFFIC BARRIER DETAILS  
CULVERT #1

SCALE  
AS SHOWN

SHEET NO.  
10

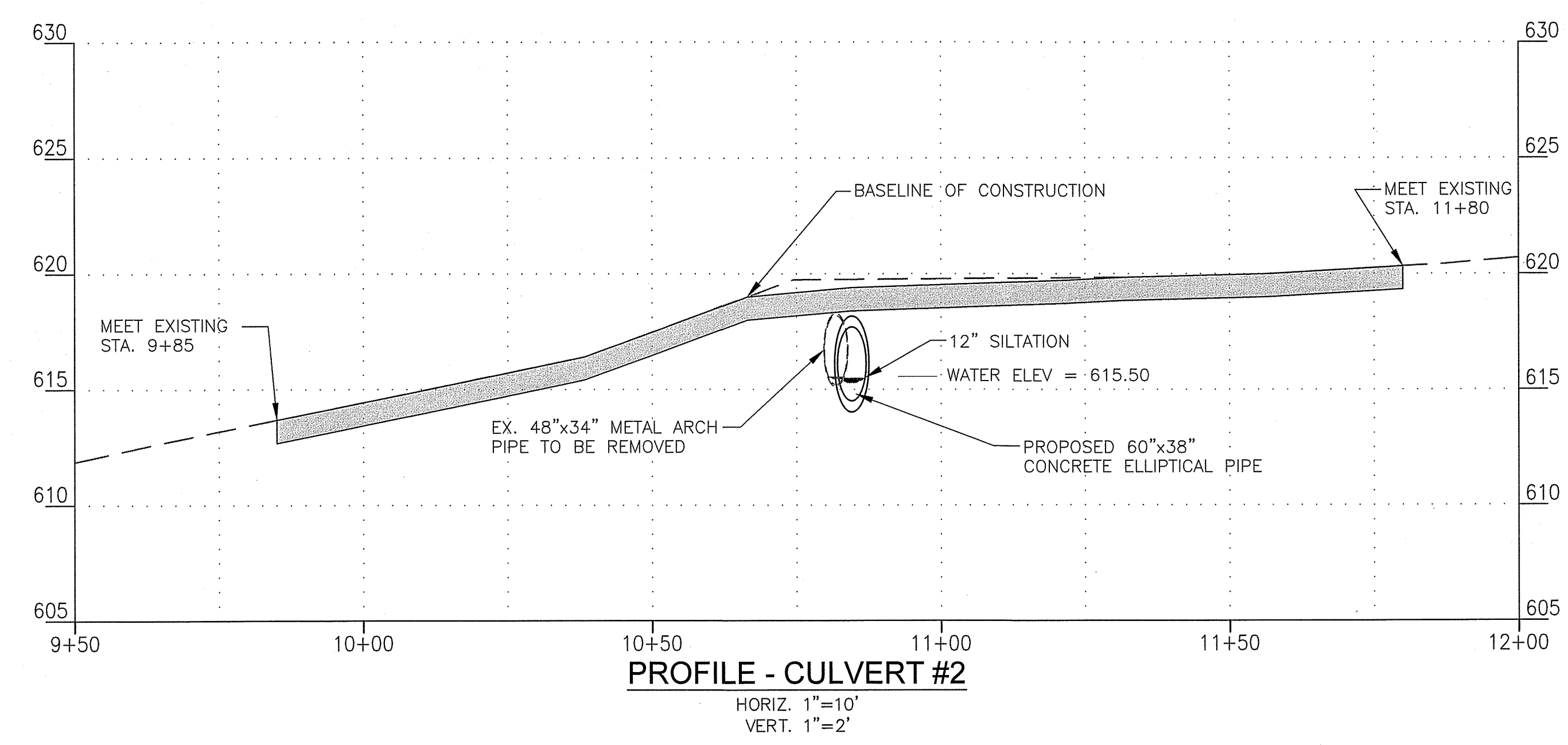
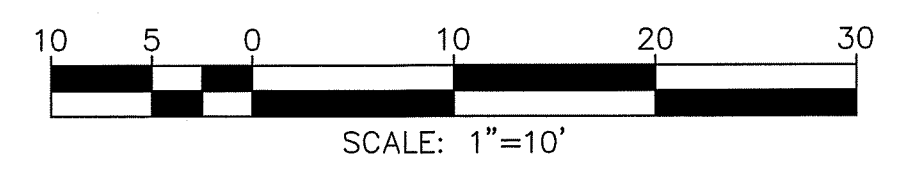
PROJECT NO.  
14-212

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**LEGEND**

EX. CONTOURS	---100---
PROP. CONTOURS	—100—
EX. RIGHT-OF-WAY LINE	— — — — —
PROPOSED RIGHT-OF-WAY LINE	— — — — —
EX. PROPERTY LINE	— — — — —
EX. EDGE OF PAVEMENT	— — — — —
EXISTING TELEPHONE LINE	— T — T —
EXISTING ELECTRIC LINE	— E — E —
EX. STREAM	— — — — —
EDGE OF TREELINE	— — — — —
PROPOSED TRAFFIC BARRIER W-BEAM	— — — — —
PROPOSED RIPRAP	
PROPOSED OBJECT MARKER SIGN	●
FULL DEPTH PAVEMENT SECTION REFER TO PAVEMENT SECTION SHOWN ON SHEET 12	



- NOTES:**
1. W.S.ELEV. = 615.50, WATER SURFACE ELEVATION MEASURED AND OBSERVED JUNE, 2021. THIS IS NO INDICATION OF THE ACTUAL ELEVATION TO BE EXPECTED DURING CONSTRUCTION.
  2. ALL DIMENSIONS AFFECTED BY THE GEOMETRICS AND/OR LOCATION OF THE EXISTING STRUCTURE SHALL BE CHECKED IN THE FIELD BY THE CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS.
  3. INSTALL TRAFFIC BARRIER W-BEAM IN ACCORDANCE WITH STANDARD DETAILS LOCATED ON SHEET 12 AND 19.
  4. REFER TO WASHINGTON COUNTY PLAT 100-10-597, "MOUSETOWN ROAD" FOR PROPOSED RIGHT OF WAY LINE AND TEMPORARY CONSTRUCTION EASEMENT AREAS.

DATE	
BY	
REVISION DESCRIPTION	
NO.	
DESIGNED BY:	KU/SH
DRAWN BY:	BM/KU
CHECKED BY:	SH
DATE:	DEC 2021

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

**MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
PLAN AND PROFILE  
CULVERT #2**

SCALE AS SHOWN

SHEET NO. 11

PROJECT NO. 14-212

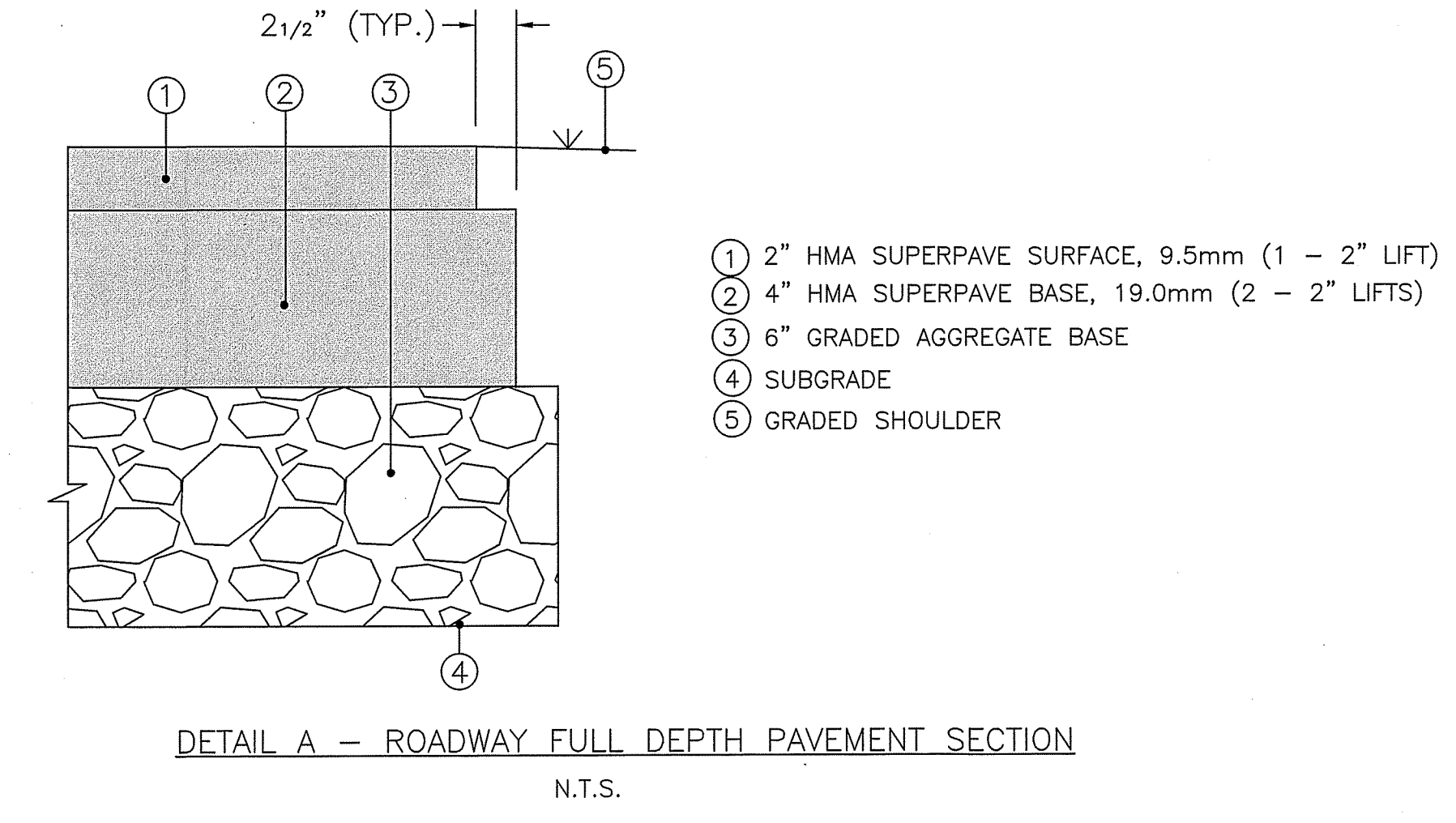
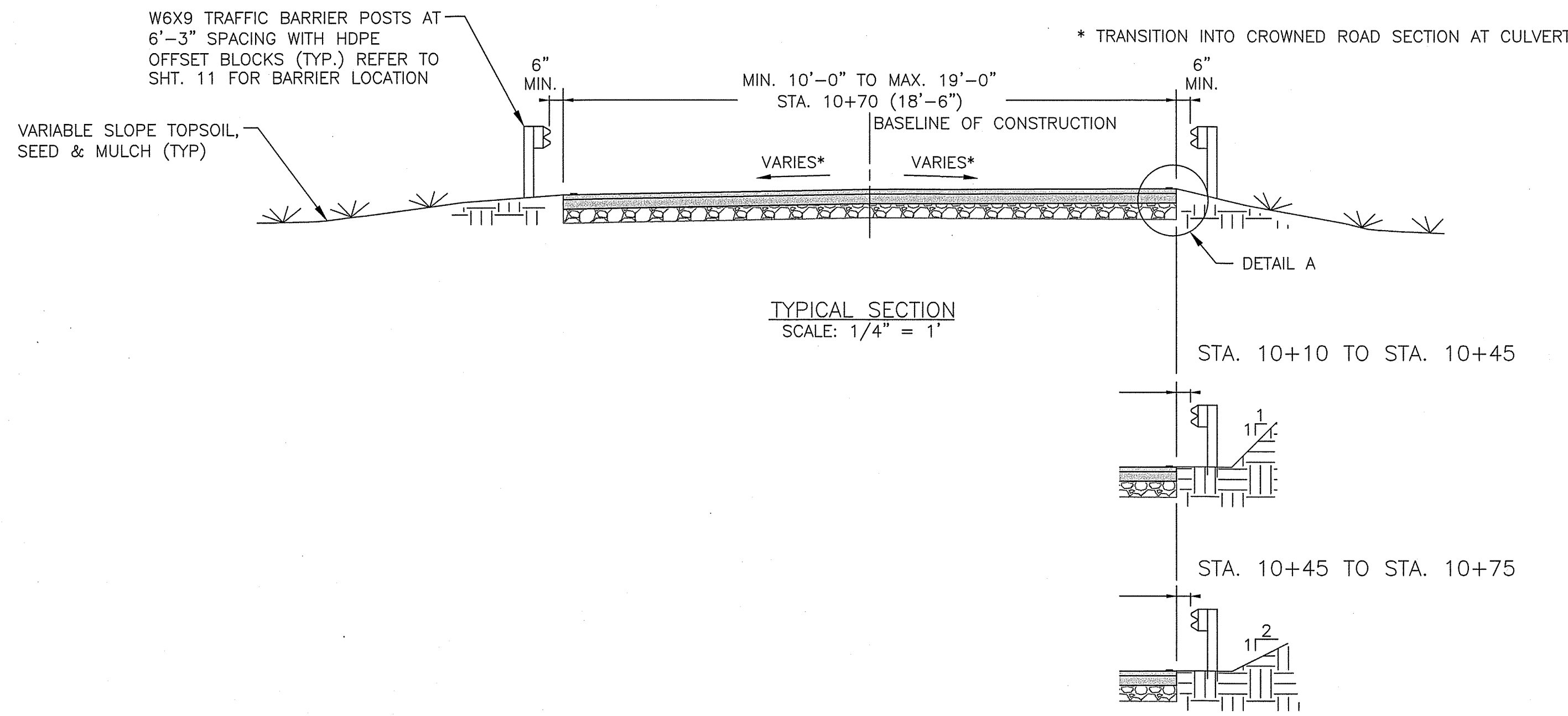
Before You Dig Call  
"MISS UTILITY"  
Service Protection Center

MEMBER  
OF CALL SYSTEMS INTERNATIONAL

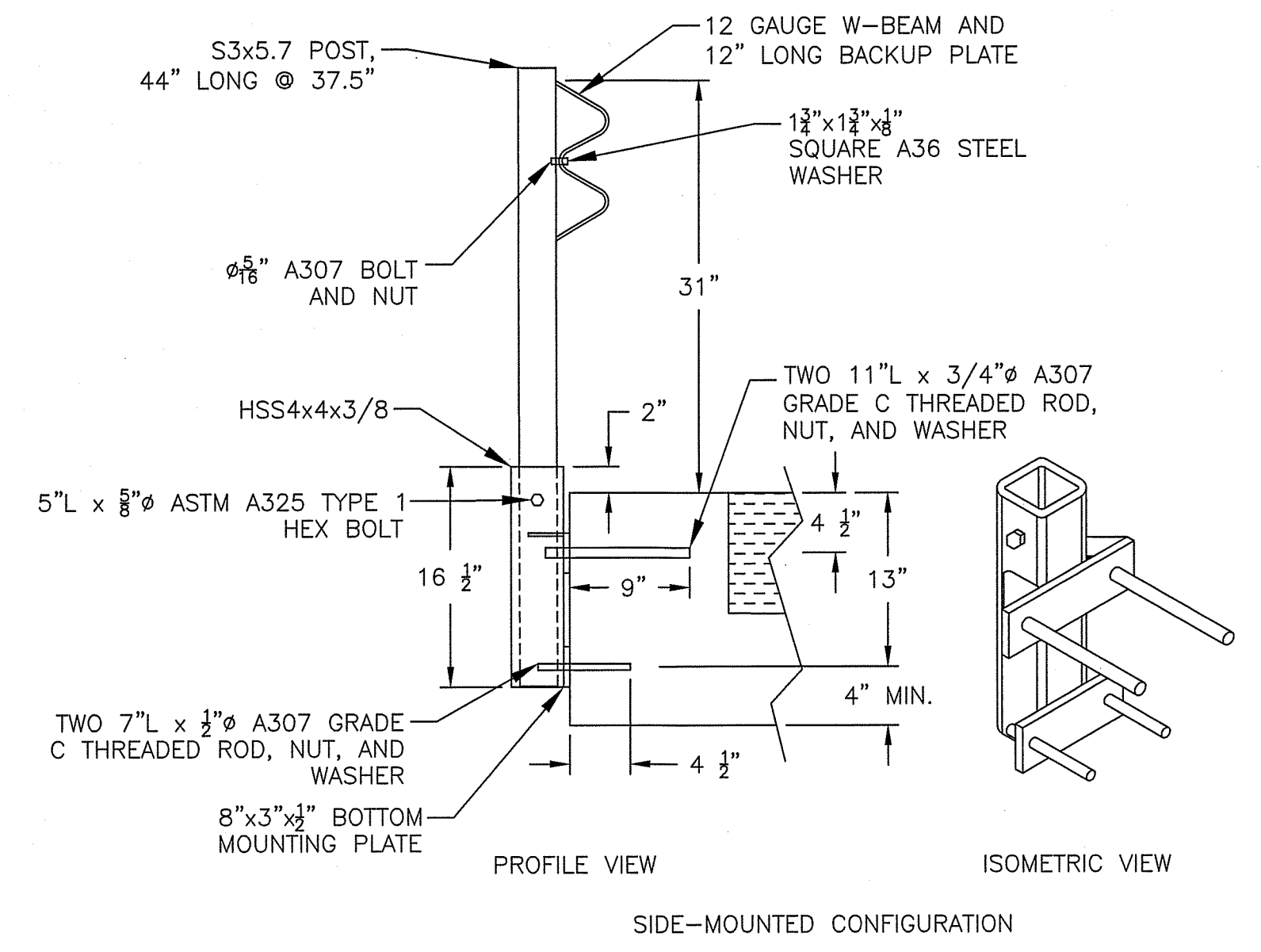
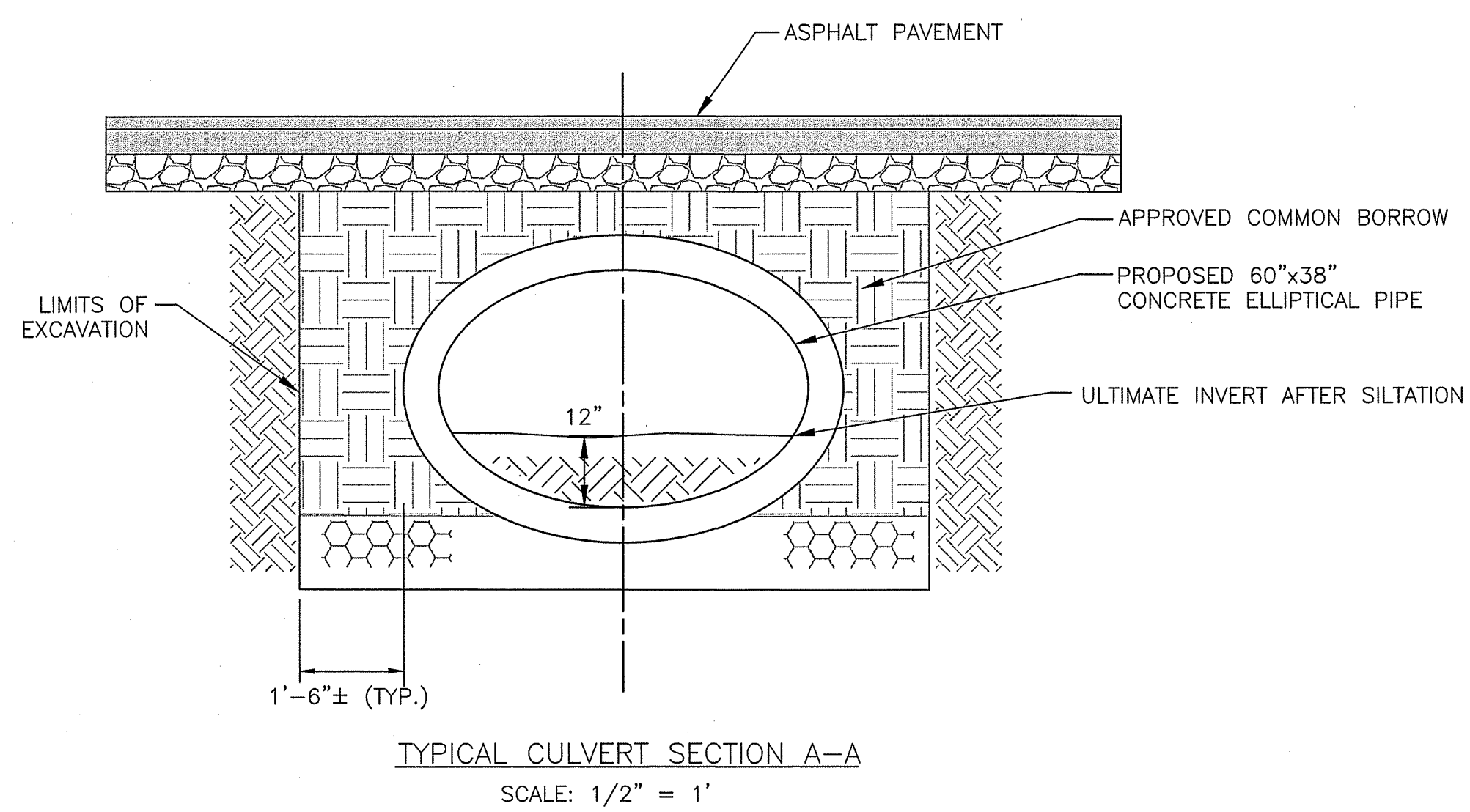
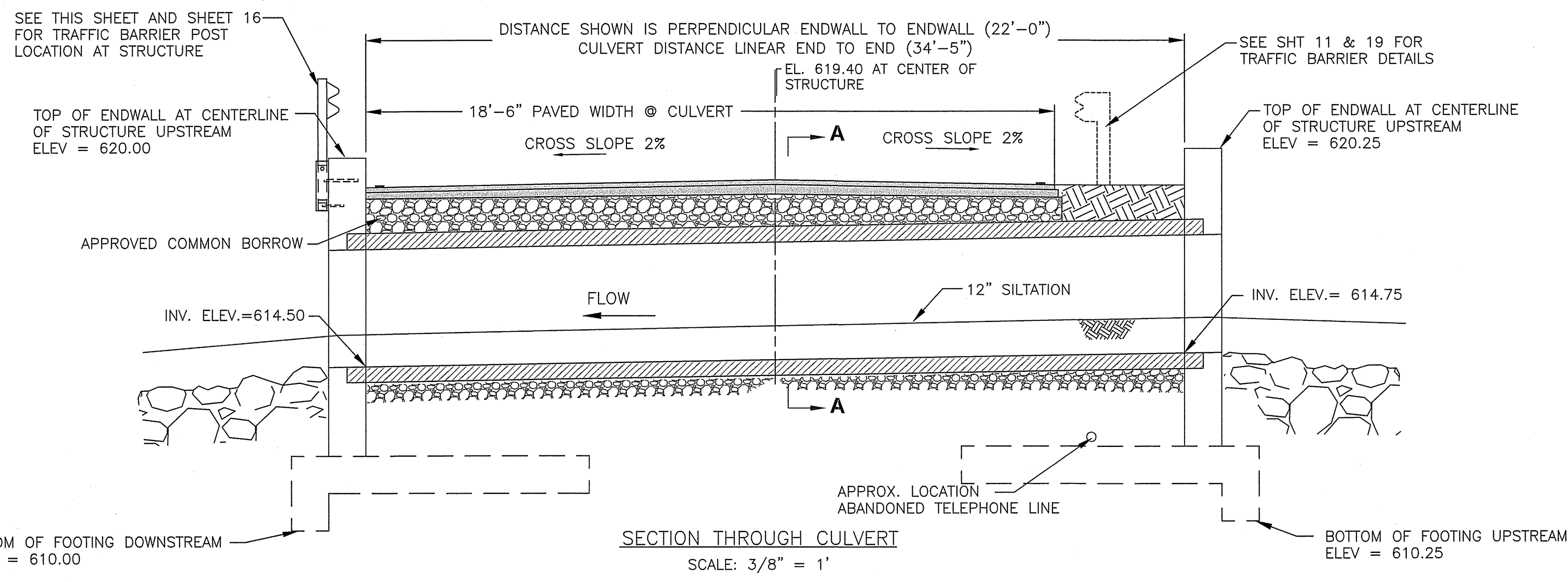
CALL TOLL FREE  
1-800-257-7777

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
12/21

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- NOTES:**
1. NEW PAVEMENT SECTIONS SHALL CLOSELY MATCH EXISTING ELEVATIONS AND PROFILES AS SHOWN ON SHEET 11.
  2. SAWCUTS SHALL BE PROVIDED AT TIE-INS TO EXISTING PAVEMENT.
  3. REFER TO SPECIFICATIONS FOR BACKFILL AND COMPACTION REQUIREMENTS.
  4. REFER TO SHEET 9 FOR REINFORCING DETAILS.



- NOTES:**
1. THE 4"x4" SQUARE TUBE SHALL BE ASTM A500 GRADE B GALVANIZED STEEL.
  2. THE TOP AND BOTTOM MOUNTING PLATES SHALL BE ASTM A572 GRADE 50 GALVANIZED STEEL.
  3. THE TOP MOUNTING PLATE GUSSET SHALL BE ASTM A572 GRADE 50 GALVANIZED STEEL.
  4. MEETS MASH TL-2 AT 6'-3" SPACING AND MASH TL-3 AT 3'-1 1/2" SPACING PER FHWA LETTER OF ELIGIBILITY B-264.

DATE	
BY	
REVISION DESCRIPTION	
NO.	
DESIGNED BY: KJ/SH	
DRAWN BY: BM/KJ	
CHECKED BY: SH	
DATE: DEC 2021	

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
TYPICAL SECTIONS & DETAIL  
CULVERT #2

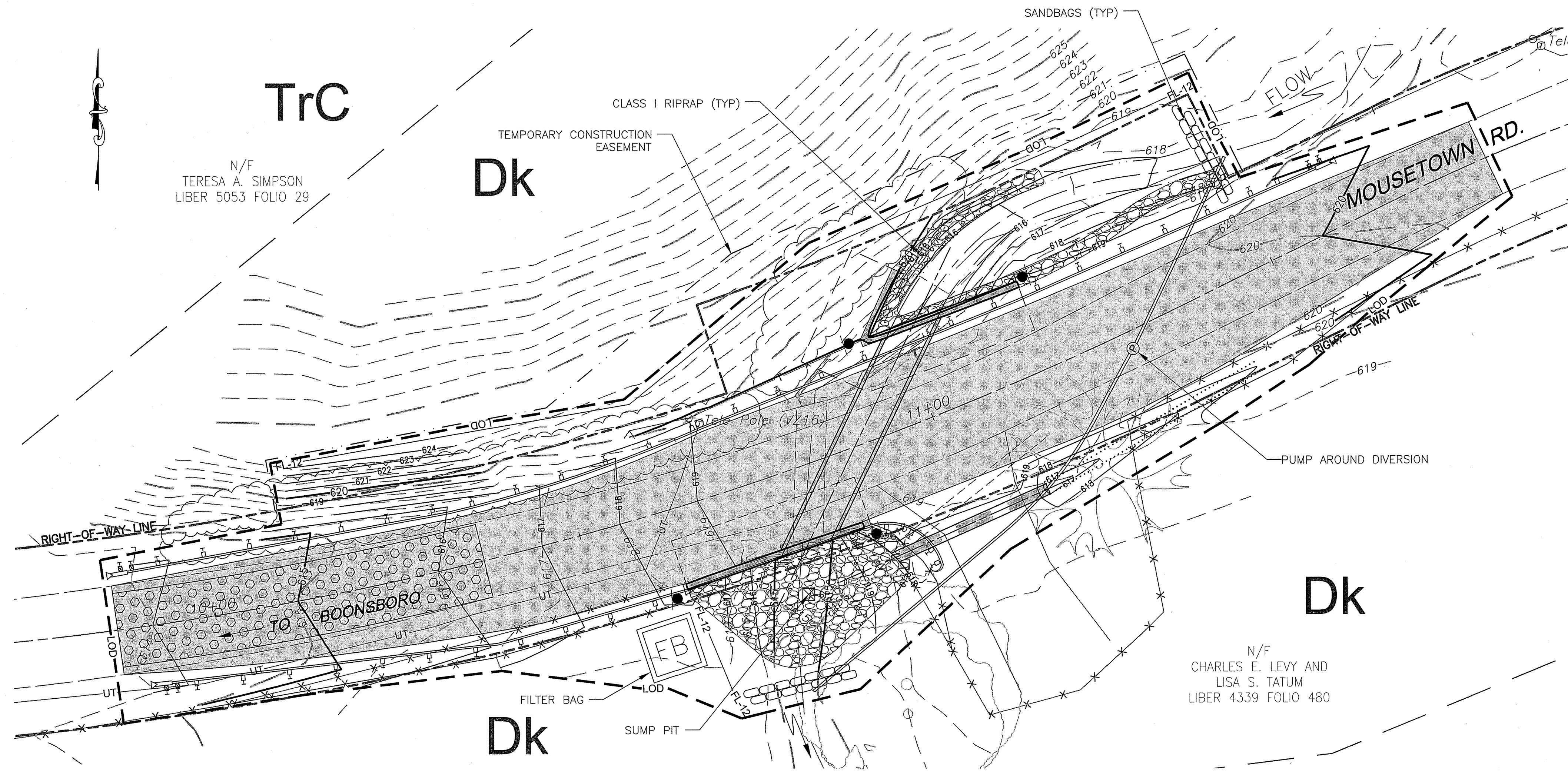
STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
NO. 81128  
12/21

SCALE  
AS SHOWN

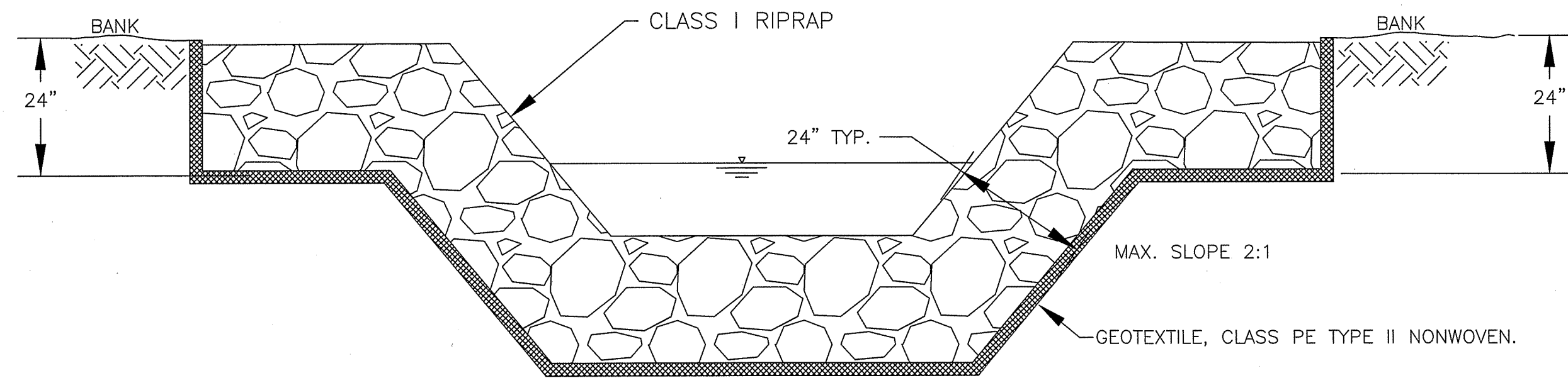
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PROJECT NO.  
14-212

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWGS\02 PLAN PROFILE 14-212.DWG PLOT DATE: 3/18/2022 7:21 AM



PLAN - CULVERT #2  
SCALE: 1"=10'



CLASS I RIPRAP  
TYPICAL BANK SECTION

**RIPRAP NOTES:**

1. PLACE RIPRAP STONES TO A 24" MIN. DEPTH FLUSH WITH THE EXISTING STREAM BED/BANK IN THE LOCATION AS SHOWN AND/OR AS DIRECTED BY THE ENGINEER.
2. STONES FOR RIPRAP MAY BE PLACED BY EQUIPMENT. STONES SHALL BE PLACED TO THE FULL DEPTH COURSE THICKNESS IN ONE OPERATION IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIPRAP SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS.

**STREAM DIVERSION NOTES:**

1. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE DIMENSIONS, SHAPE, AND SIZE OF THE STREAM DIVERSION IN ACCORDANCE WITH THE MARYLAND DEPARTMENT OF ENVIRONMENT WATER ADMINISTRATION "MARYLAND GUIDELINES TO WATERWAY CONSTRUCTION DETAIL 1.2 PUMP AROUND PRACTICE" AND 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL DETAIL C-6 CLEAR WATER DIVERSION PIPE.
2. IN THE EVENT OF A STORM THAT OVERTOPS THE STREAM DIVERSION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OR PROTECTION OF ANY EQUIPMENT, TOOLS, MATERIALS, OR OTHER ITEMS NEEDED TO COMPLETE THE WORK THAT COULD BE AFFECTED BY THE STORM FLOWS. THE REMOVAL AND/OR REPLACEMENT OF ANY EQUIPMENT OR MATERIALS IS INCIDENTAL TO THE PERTINENT STREAM DIVERSION PAY ITEM.

**LEGEND**

- FILTER LOG
- LIMITS OF DISTURBANCE
- FILTER BAG
- PUMP AROUND PRACTICE
- SANDBAGS
- SUMP PIT
- STABILIZED CONSTRUCTION ENTRANCE

**SOILS DESCRIPTIONS**

- Dk DEPOSIT GRAVELLY LOAM
- TrC TREGO GRAVELLY LOAM, 8%-15% SLOPES

**SEQUENCE OF CONSTRUCTION**

1. THE TRIBUTARY OF LITTLE ANTIETAM CREEK IS A CLASS IV-P STREAM WITH INSTREAM WORK PROHIBITED DURING THE CLOSURE PERIOD OF MARCH 1 THROUGH MAY 31.
2. NOTIFY THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT AT 301-797-6821, EXT. 3, THE MARYLAND DEPARTMENT OF ENVIRONMENT (MDE INSPECTOR) AT 443-835-9397, AND THE WASHINGTON COUNTY DIVISION OF ENGINEERING AT 240-313-2460 AT LEAST FIVE (5) DAYS BEFORE CONSTRUCTION BEGINS TO SCHEDULE A PRE-CONSTRUCTION MEETING. A COPY OF THE CONTRACTOR'S SCHEDULE SHALL BE PROVIDED TO WASHINGTON COUNTY AND MDE PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR IS TO NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 3 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. INSTALL TRAFFIC CONTROL. TRIM AND REMOVE TREES WITHIN THE LOD ONLY AS NECESSARY FOR COMPLETION OF THE WORK.
4. INSTALL FILTER LOG, CLEAR AND GRUB ONLY THOSE AREAS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS. ALL FILL MUST COME FROM OR GO TO A SITE THAT HAS A CURRENT, APPROVED SOIL, EROSION AND SEDIMENT CONTROL PLAN.
5. INSTALL THE CLEAR WATER PIPE STREAM DIVERSION AROUND THE EXISTING CULVERT. INSTALL SANDBAGS, INSTALL SUMP PIT AND FILTER BAG. ALL SEDIMENT LADEN WATER FROM DEWATERING SHALL BE PUMPED TO AN APPROVED DEWATERING DEVICE (FILTER BAG) PRIOR TO DISCHARGING TO A VEGETATED AREA.
6. REMOVE THE EXISTING CULVERT STRUCTURE AND EXISTING WALLS IN ITS ENTIRETY. RETAIN ANY STONE FROM THE DOWNSTREAM CULVERT TO BE USED IN THE REBUILDING OF THE DRY STACK WALL AT THE DOWNSTREAM CULVERT. REPLACE CULVERT AT DRIVEWAY ENTRANCE.
7. PLACE REINFORCED CONCRETE ELLIPTICAL PIPE ON COMPACTED BEDDING MATERIAL. GRADED AGGREGATE SUBBASE IS TO BE COMPACTED TO 95% MAXIMUM DENSITY. CONSTRUCT CONCRETE ENDWALL FOOTINGS AND ENDWALLS.
8. BACKFILL CONCRETE ENDWALLS AND ELLIPTICAL PIPE. REBUILD STONE WALL. PLACE RIPRAP AT THE CULVERT AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. REMOVE THE CLEAR WATER DIVERSION PIPE AND SUMP PIT.
9. REMOVE SUMP PIT. DIRECT STREAM THROUGH CONCRETE ELLIPTICAL PIPE, BACKFILL AND GRADE REMAINING ROAD SURFACE AND SIDE SLOPES.
10. SAW CUT ROAD AND REMOVE PAVEMENT AS SPECIFIED. PAVE BASE ASPHALT AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. FINAL SURFACE ASPHALT PAVEMENT SHALL BE PLACED AS SHOWN ON THE PLANS.
11. FINE GRADE AND TOPSOIL ALL DISTURBED AREAS AND AS DIRECTED BY THE ENGINEER. RESET AND REPLACE FARM FENCE AS SHOWN ON SHEET 11. PROVIDE PERMANENT SEEDING. SET TRAFFIC BARRIER AND OBJECT MARKERS.
12. NOTIFY WASHINGTON COUNTY DIVISION OF ENGINEERING, WASHINGTON COUNTY SOIL CONSERVATION DISTRICT, AND MARYLAND DEPARTMENT OF ENVIRONMENT INSPECTOR FIVE DAYS PRIOR TO FINAL INSPECTION. REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES ONLY AFTER GAINING FINAL APPROVAL FROM SCD.
13. REMOVE TRAFFIC CONTROL.

**STANDARD UTILITY NOTES**

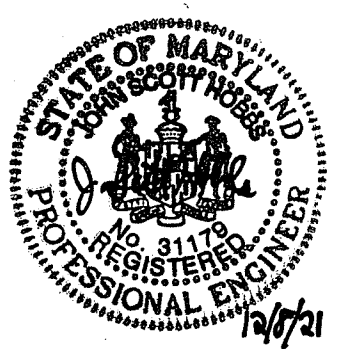
1. CONTRACTOR TO ONLY OPEN UP LENGTH OF TRENCH THAT CAN BE CONSTRUCTED AND BACKFILLED IN ONE WORKING DAY IN PAVED AREAS.
2. CONTRACTOR TO PLACE EXCAVATED MATERIALS IN A DUMP TRUCK AND HAULED TO AN APPROVED LOCATION TO WASTED MATERIALS TO PAVED AREAS.
3. CONTRACTOR TO BACKFILL TRENCH WITH APPROVED MATERIALS AND STABILIZE DISTURBED AREAS THE SAME WORKING DAY.
4. IN AREAS WHERE THE CONSTRUCTION TAKES TO PLACE OUTSIDE OF THE EXISTING ROADBED, CONTRACTOR TO INSTALL SILT FENCE ALONG THE DOWNHILL SIDE OF THE TRENCH BEFORE BEGINNING CONSTRUCTION AND PLACE EXCAVATED MATERIAL FROM THE TRENCH ON THE UPHILL SIDE.
5. IF DEWATERING OF THE TRENCH IS REQUIRED, CONTRACTOR TO PUMP WATER TO A FILTER BAG TO DEWATER.
6. CONTRACTOR TO SWEEP STREETS OF ANY DEBRIS OR SEDIMENTS CAUSED BY CONSTRUCTION OPERATIONS AND DISPOSE OF AT AN APPROVED LOCATION.
7. CONTRACTOR TO STABILIZE ALL DISTURBED AREAS WITH SEED & MULCH OR APPROPRIATE STREET REPAIR.

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401



MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
EROSION AND SEDIMENT  
CONTROL PLAN CULVERT #2



SCALE  
AS SHOWN

SHEET NO.  
13

PROJECT NO.  
14-212

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWGS\REINFORCING AND DETAILS 14-212.DWG PLOT DATE: 3/18/2022 7:33 AM

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measure for dewatering in-channel construction sites

DESCRIPTION

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

1. Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
2. The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
3. The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should take out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
4. Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
5. Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
6. Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of rip rap or sandbags.

TEMPORARY INSTREAM CONSTRUCTION MEASURES

MARYLAND DEPARTMENT OF THE ENVIRONMENT  
WATERWAY CONSTRUCTION GUIDELINES  
REVISED NOVEMBER 2009  
PAGE 1.2 - 1

MGWC 1.2: PUMP-AROUND PRACTICE

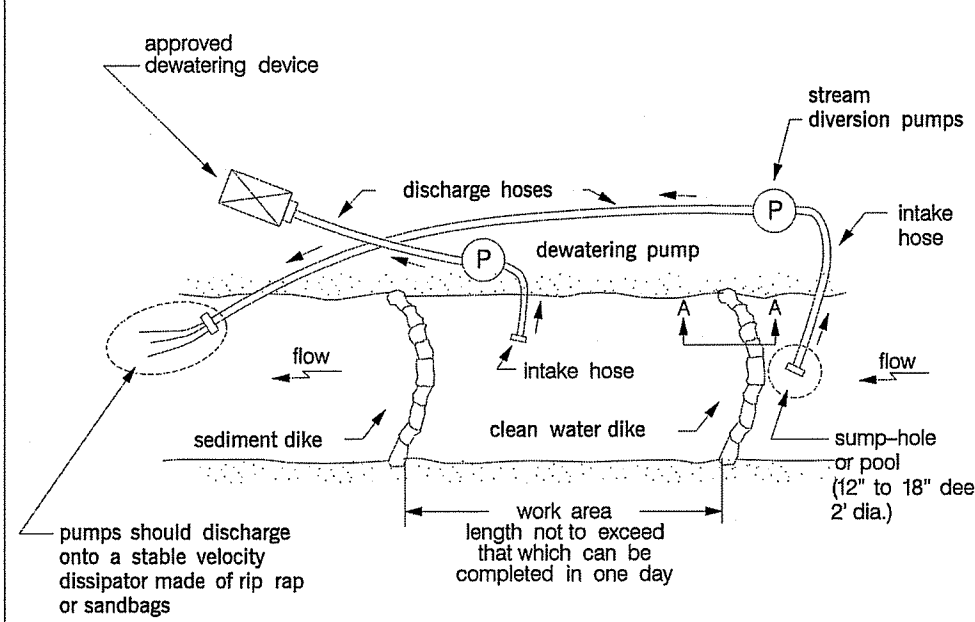
7. Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
8. Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction).
9. All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
10. After an area is completed and stabilized, the clean water dike should be removed. After the first sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
11. A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
12. If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
13. The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
14. After construction, all disturbed areas should be graded and revegetated as per the planting plan.

TEMPORARY INSTREAM CONSTRUCTION MEASURES

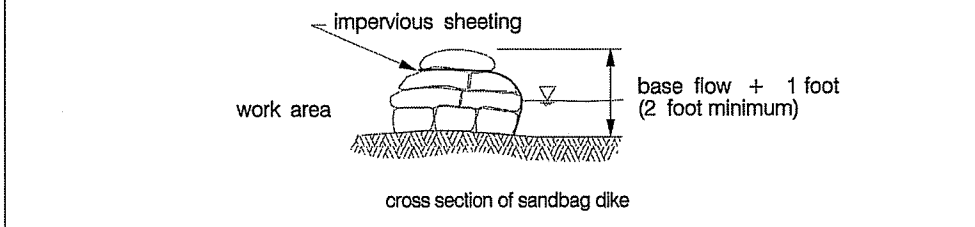
MARYLAND DEPARTMENT OF THE ENVIRONMENT  
WATERWAY CONSTRUCTION GUIDELINES  
REVISED NOVEMBER 2009  
PAGE 1.2 - 2

Maryland's Guidelines To Waterway Construction  
DETAIL 1.2: PUMP-AROUND PRACTICE

PLAN VIEW



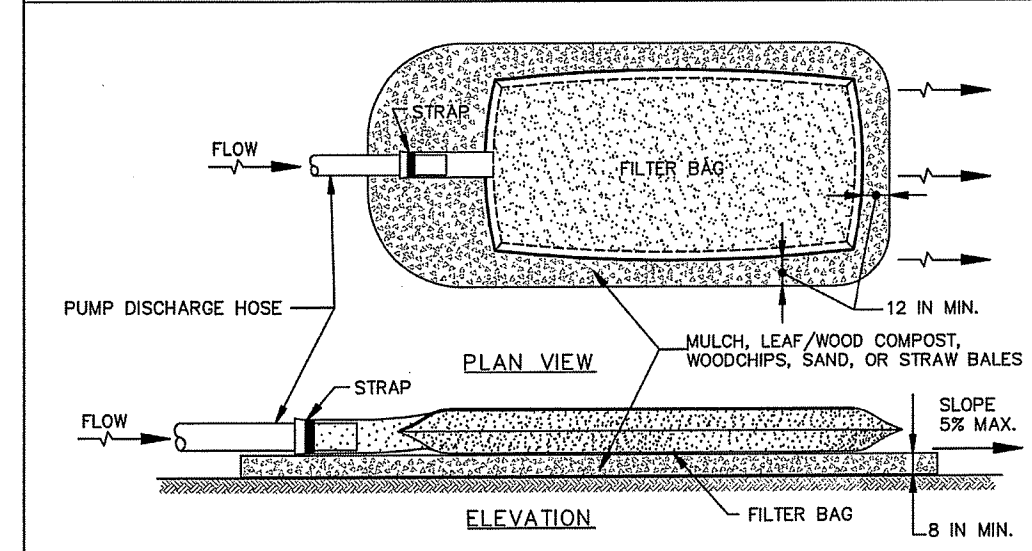
SECTION A-A



TEMPORARY INSTREAM CONSTRUCTION MEASURES  
REVISED NOVEMBER 2009  
PAGE 1.2 - 4  
MARYLAND DEPARTMENT OF THE ENVIRONMENT  
WATER MANAGEMENT ADMINISTRATION

DETAIL F-4 FILTER BAG

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
2. PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
3. CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
4. REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
5. USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MAYV) FOR THE FOLLOWING:
 

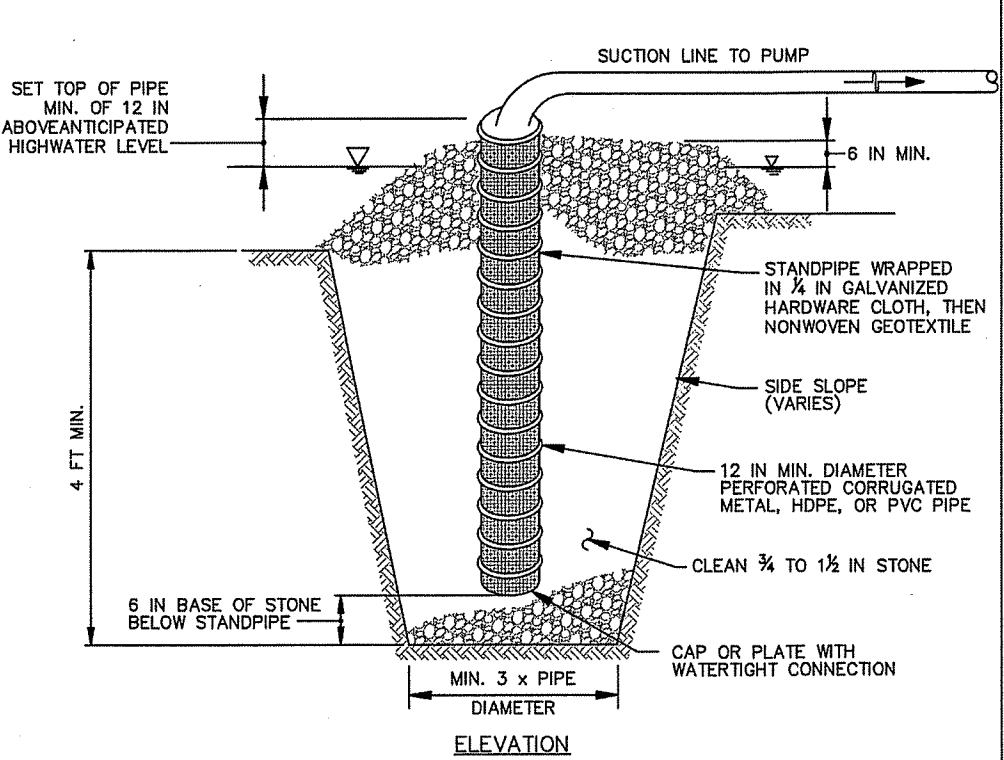
GRAB TENSILE	250 LB	ASTM D-4632
PUNCTURE	150 LB	ASTM D-4633
FLOW RATE	70 GAL/MIN/FT <sup>2</sup>	ASTM D-4491
PERMITTIVITY (SEC <sup>-1</sup> )	1.2 SEC <sup>-1</sup>	ASTM D-4491
UV RESISTANCE	70% STRENGTH @ 500 HOURS	ASTM D-4555
APPARENT OPENING SIZE (AOS)	0.10-0.18 MM	ASTM D-4751
SEAM STRENGTH	90%	ASTM D-4632
6. REPLACE FILTER BAG IF BAG CLOSURES OR HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEGING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
2011  
MARYLAND DEPARTMENT OF ENVIRONMENT  
WATER MANAGEMENT ADMINISTRATION

DETAIL F-2 SUMP PIT

STANDARD SYMBOL



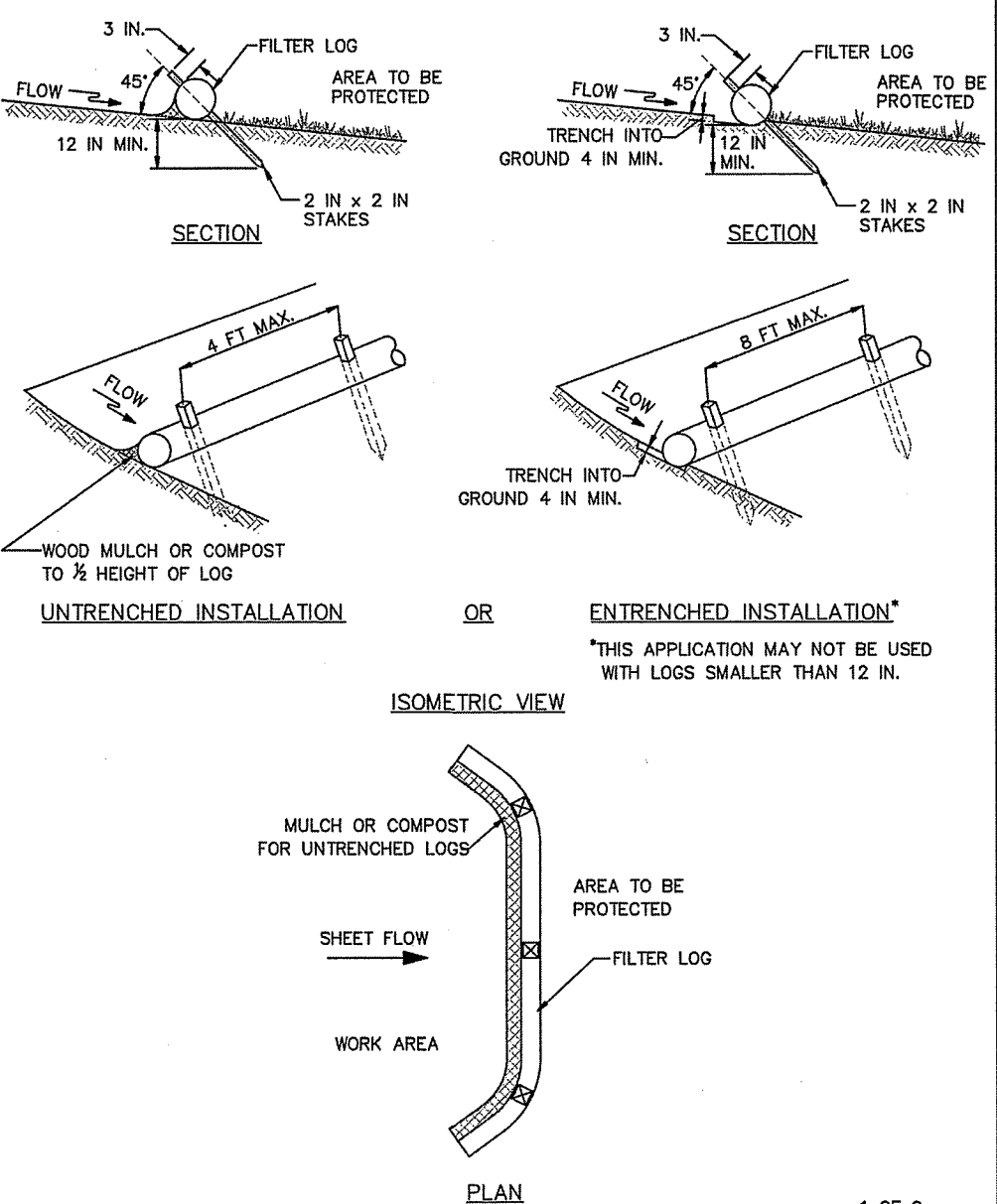
CONSTRUCTION SPECIFICATIONS

1. USE 12 INCH OR LARGER DIAMETER CORRUGATED METAL, HDPE, OR PVC PIPE WITH 1 INCH DIAMETER PERFORATIONS, 6 INCHES ON CENTER. BOTTOM OF PIPE MUST BE CAPPED WITH WATER TIGHT SEAL.
2. WRAP PIPE WITH 4 INCH GALVANIZED HARDWARE CLOTH AND WRAP NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE HARDWARE CLOTH.
3. DCAVATE PIT TO THREE TIMES THE PIPE DIAMETER AND FOUR FEET IN DEPTH. PLACE 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE, 6 INCHES IN DEPTH PRIOR TO PIPE PLACEMENT.
4. SET TOP OF PIPE MINIMUM 12 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
5. BACKFILL PIT AROUND THE PIPE WITH 3/4 TO 1 1/2 INCH CLEAN STONE OR EQUIVALENT RECYCLED CONCRETE AND EXTEND STONE A MINIMUM OF 6 INCHES ABOVE ANTICIPATED WATER SURFACE ELEVATION.
6. DISCHARGE TO A STABLE AREA AT A NONEROSIVE RATE.
7. A SUMP PIT REQUIRES FREQUENT MAINTENANCE. IF SYSTEM CLOGS, REMOVE PERFORATED PIPE AND REPLACE GEOTEXTILE AND STONE. KEEP POINT OF DISCHARGE FREE OF EROSION.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
2011  
MARYLAND DEPARTMENT OF ENVIRONMENT  
WATER MANAGEMENT ADMINISTRATION  
F.5

DETAIL E-6 FILTER LOG

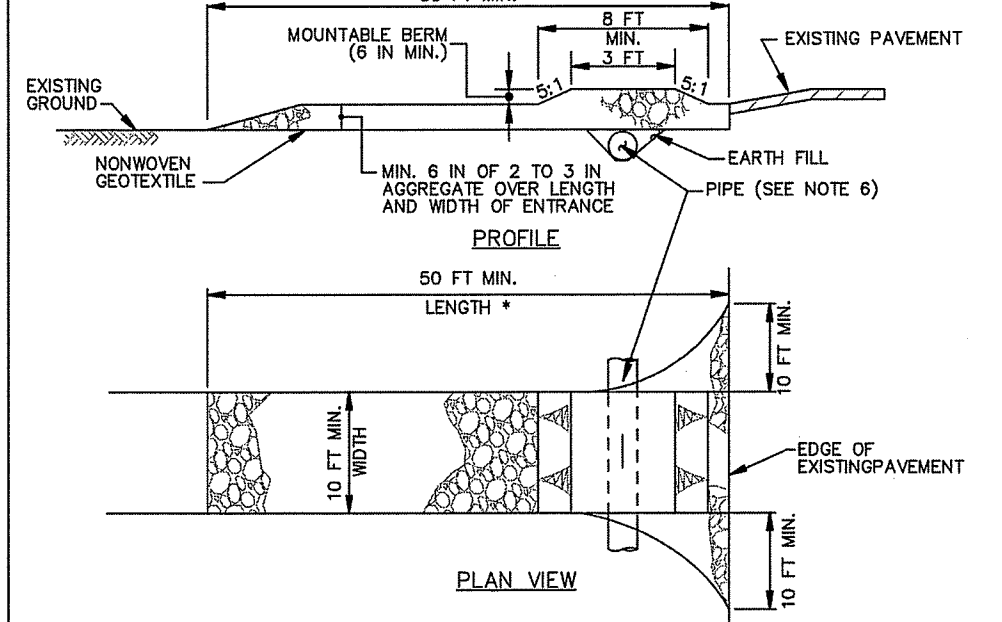
STANDARD SYMBOL



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
2011  
MARYLAND DEPARTMENT OF ENVIRONMENT  
WATER MANAGEMENT ADMINISTRATION  
E.15

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL



CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPE AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN, WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERMS AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE  
2011  
MARYLAND DEPARTMENT OF ENVIRONMENT  
WATER MANAGEMENT ADMINISTRATION  
B.2

SEDIMENT AND EROSION CONTROL NOTES

1. ALL SOIL EROSION/SEDIMENT CONTROL MEASURES SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" AND THE PROVISIONS OF THE APPROVED PLAN.
2. ALL GRADING AND STABILIZATION SHALL COMPLY WITH THE "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", "SECTION B - GRADING AND STABILIZATION" AND THE PROVISIONS OF THE APPROVED PLAN.
3. ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES (BMP'S) ARE TO BE CONSTRUCTED AND/OR INSTALLED PRIOR TO OR AT THE INITIATION OF GRADING IN ACCORDANCE WITH "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND THE APPROVED PLAN.
4. A GRADING UNIT IS THE MAXIMUM CONTIGUOUS AREA ALLOWED TO BE GRADED AT A GIVEN TIME AND IS LIMITED TO 20 ACRES. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY AND/OR THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT (APPROVAL AUTHORITY). UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
5. FOR INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, TEMPORARY OR PERMANENT STABILIZATION MUST BE COMPLETED WITHIN:
  - a) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND
  - b) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
6. STOCKPILES MUST BE STABILIZED IN ACCORDANCE WITH THE 7 DAY STABILIZATION REQUIREMENT, AS WELL AS, STANDARD B-4-1 INCREMENTAL STABILIZATION AND STANDARD B-4-4 TEMPORARY STABILIZATION (AS APPLICABLE).
7. ALL CONSTRUCTED CHANNELS AND SWALES SHALL HAVE SPECIFIED TREATMENT INSTALLED TO THE DESIGN FLOW DEPTH COMPLETED DOWNSTREAM TO UPSTREAM AS CONSTRUCTION PROGRESSES. AN INSTALLATION DETAIL SHALL BE SHOWN ON THE PLANS.
8. ALL STORM DRAIN AND SANITARY SEWER LINES NOT IN PAVED AREAS ARE TO BE MULCHED AND SEEDED WITHIN 3 DAYS OF INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
9. ELECTRIC POWER, TELEPHONE, AND GAS LINES ARE TO BE COMPACTED, SEEDED, AND MULCHED WITHIN 3 DAYS AFTER INITIAL BACKFILL UNLESS OTHERWISE SPECIFIED ON PLANS.
10. NO SLOPE SHALL BE GREATER THAN 2:1.
11. AS REQUIRED BY SECTION B, OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, "ADEQUATE VEGETATIVE STABILIZATION", IS DEFINED AS 95 PERCENT GROUND COVER. THE WASHINGTON COUNTY SOIL CONSERVATION DISTRICT REQUIRES THE PROJECT ADHERE TO THIS FOR SCHEDULING OF THE FINAL SITE CLOSEOUT REVIEW, AND/OR RELEASE OF THE SITE FOR SOIL EROSION AND SEDIMENT CONTROL.

TURFGRASS ESTABLISHMENT SEEDING SUMMARY

Species	Application Rate (lb/ac)	Seeding Dates		Seeding Depths	Fertilizer Rate (10-20-20)			Lime Rate
		From Figure B.3 (2011 MDE Standards)	Seeding		N	P205	K2O	
Tall Fescue (85%) Perennial Ryegrass (10%) Kentucky Bluegrass (5%)	125 15 10	3/1-5/15 8/15-10/15	1/4" to 1/2"	45 lb/ac (1.0 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	90 lb/ac (2 lb/ 1000 sf)	2 tons/ac (90 lb/1000 sf)	

TEMPORARY SEEDING SUMMARY

Species	Application Rate (lb/ac)	Seeding Dates		Seeding Depths	Fertilizer Rate (10-20-20)			Lime Rate
		From Figure B.3 (2011 MDE Standards)	Seeding		N	P205	K2O	
Barley (Hordeum Vulgare)	(96 lbs)	3/1-5/15 8/1-10/15	1 in.	438 lb/ac (10 lb/1000 sf)			2 tons/ac (90 lb/1000 sf)	

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex Building  
1200 North Washington Street  
P.O. Box 100  
Pleasant Hill, MD 21094  
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MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
EROSION & SEDIMENT CONTROL  
DETAILS CULVERT #2

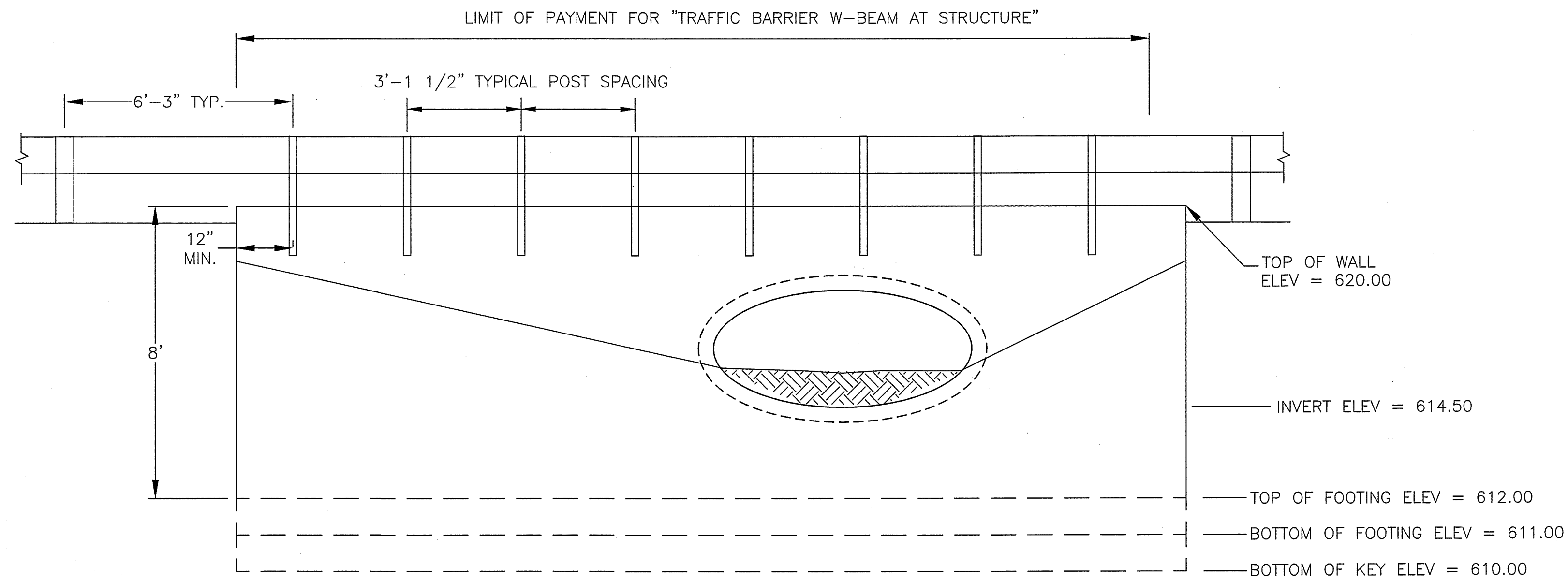
SCALE  
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SHEET NO.  
14

PROJECT NO.  
14-212

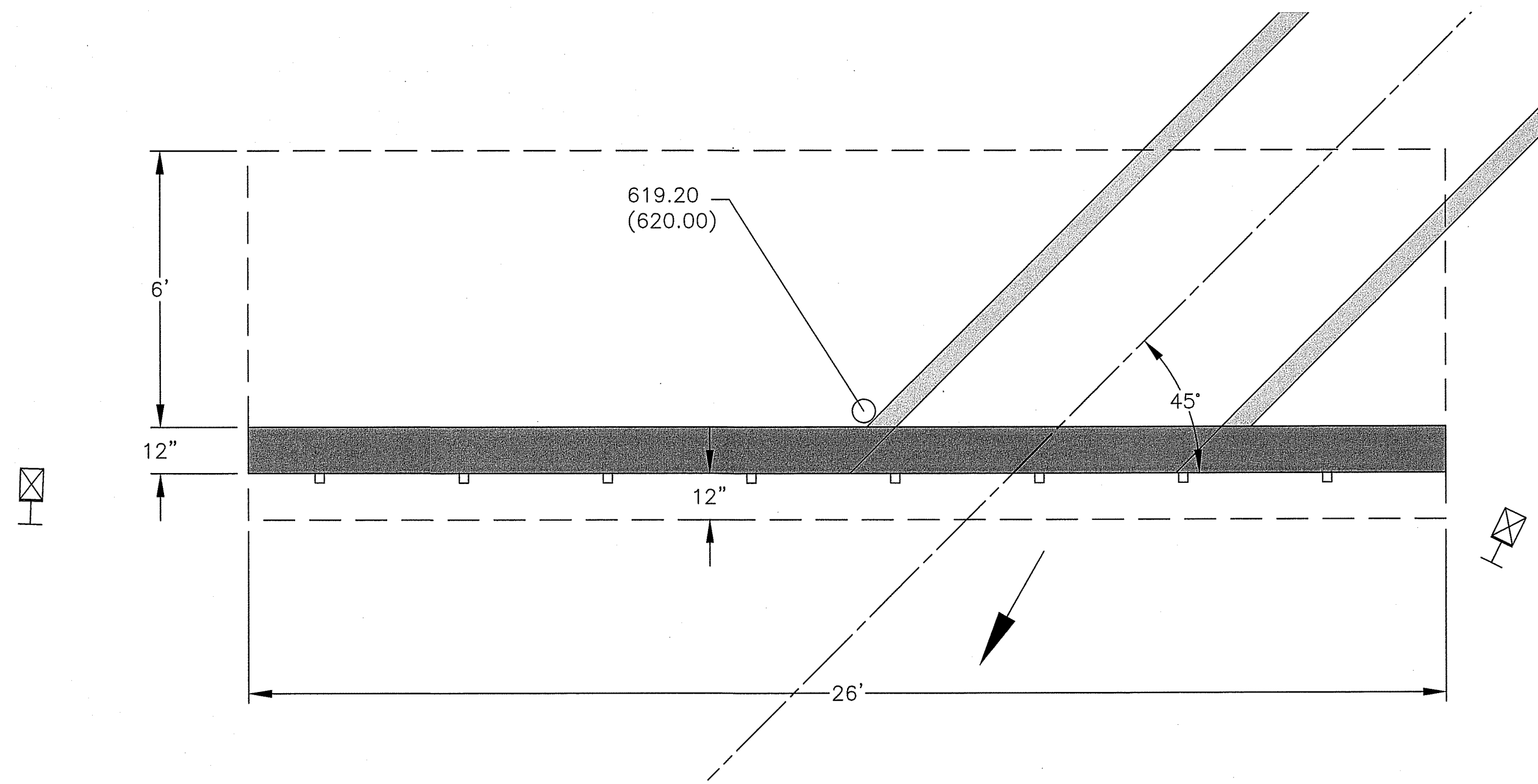


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ELEVATION - DOWNSTREAM ENDWALL  
SCALE: 3/8"=1'

NOTE: XXX.XX = FINISHED ROADWAY ELEVATION  
(xxx.xx) = FINISHED TOP OF WALL



PLAN - DOWNSTREAM ENDWALL  
SCALE: 3/8"=1'

NO.	REVISION DESCRIPTION	BY	DATE

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING  
Washington County Administrative Annex, Building  
80 W. Business St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
DOWNSTREAM ENDWALL  
CULVERT #2



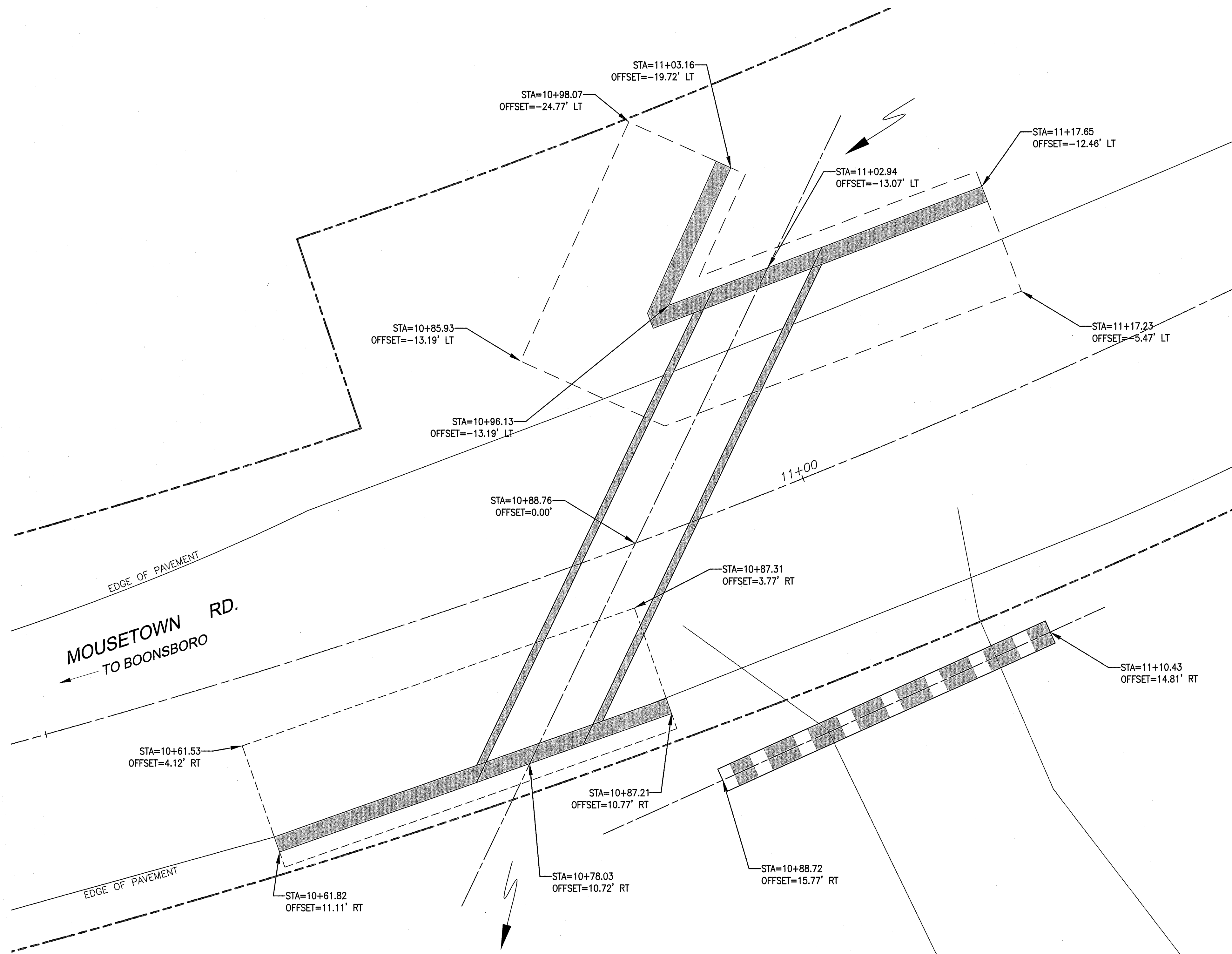
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SHEET NO.  
16

PROJECT NO.  
14-212



FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWGS\02 PLAN PROFILE 14-212.DWG PLOT DATE: 3/19/2022 12:52 PM



LAYOUT - CULVERT #2  
SCALE: 1/4"=1'

NO.	REVISION DESCRIPTION	BY	DATE

DESIGNED BY: KJ / SH  
 DRAWN BY: BM / KU  
 CHECKED BY: SH  
 DATE: DEC 2021

WASHINGTON COUNTY, MARYLAND  
 DIVISION OF ENGINEERING  
 Washington County Administrative Annex, Building  
 80 W. Baltimore St., Hagerstown, MD 21740  
 Phone: 240-313-2460 Fax: 240-313-2401

MOUSETOWN ROAD  
 CULVERT REPLACEMENTS  
 OFFSET/LAYOUT PLAN  
 CULVERT #2

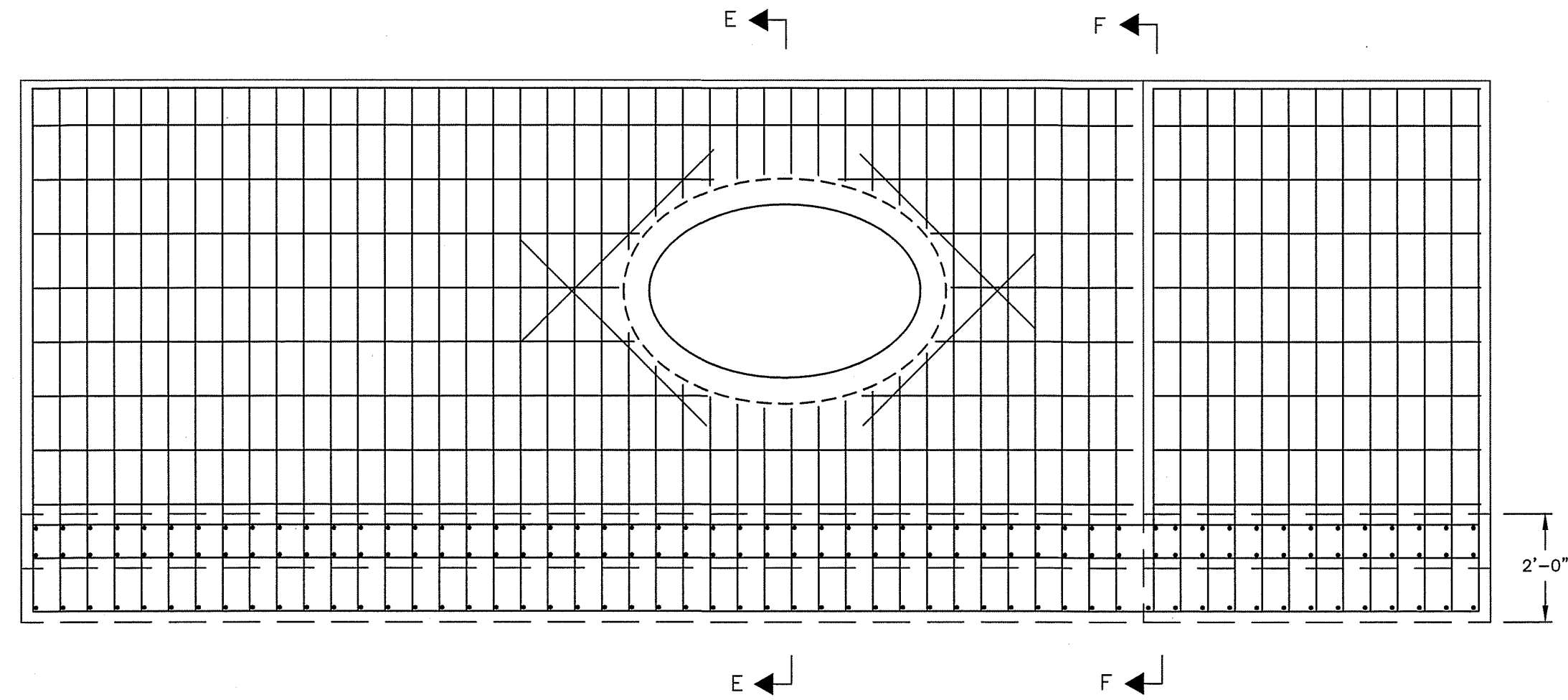


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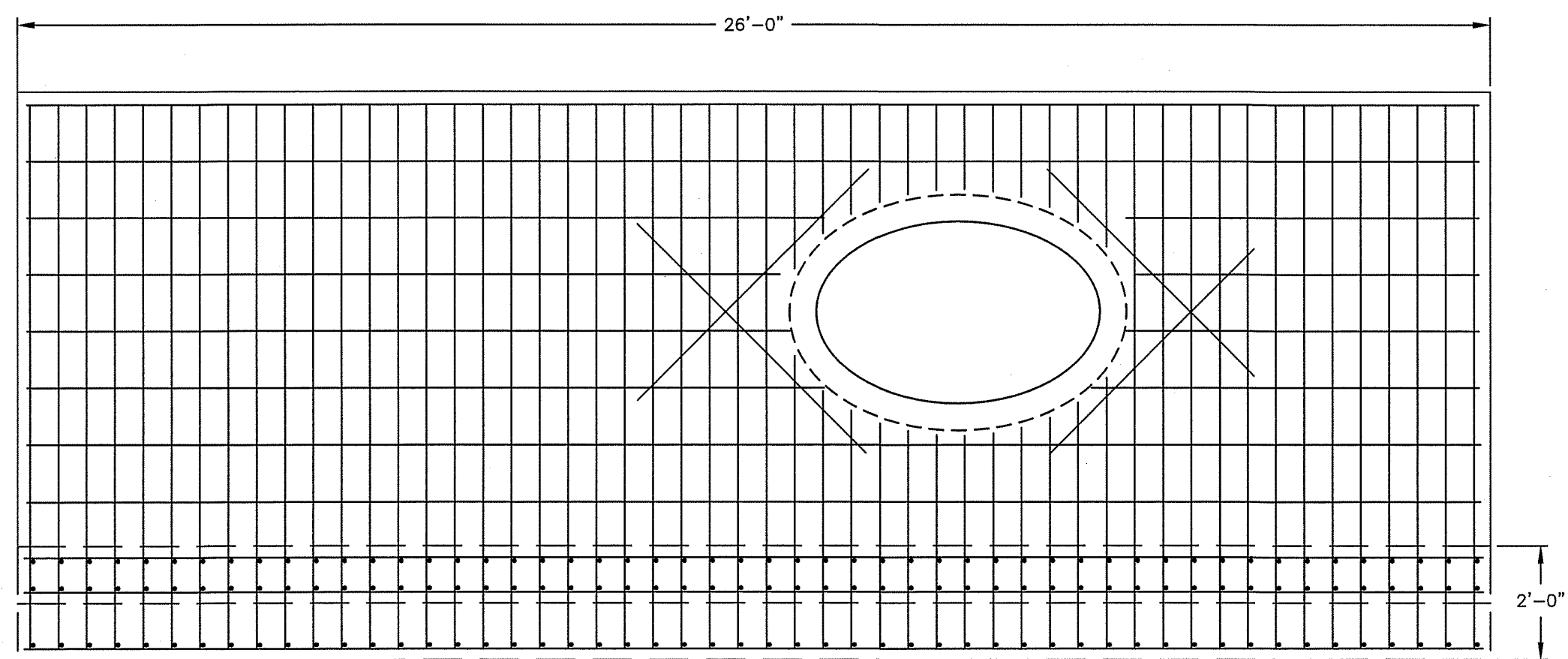
SHEET NO.  
17

PROJECT NO.  
14-212

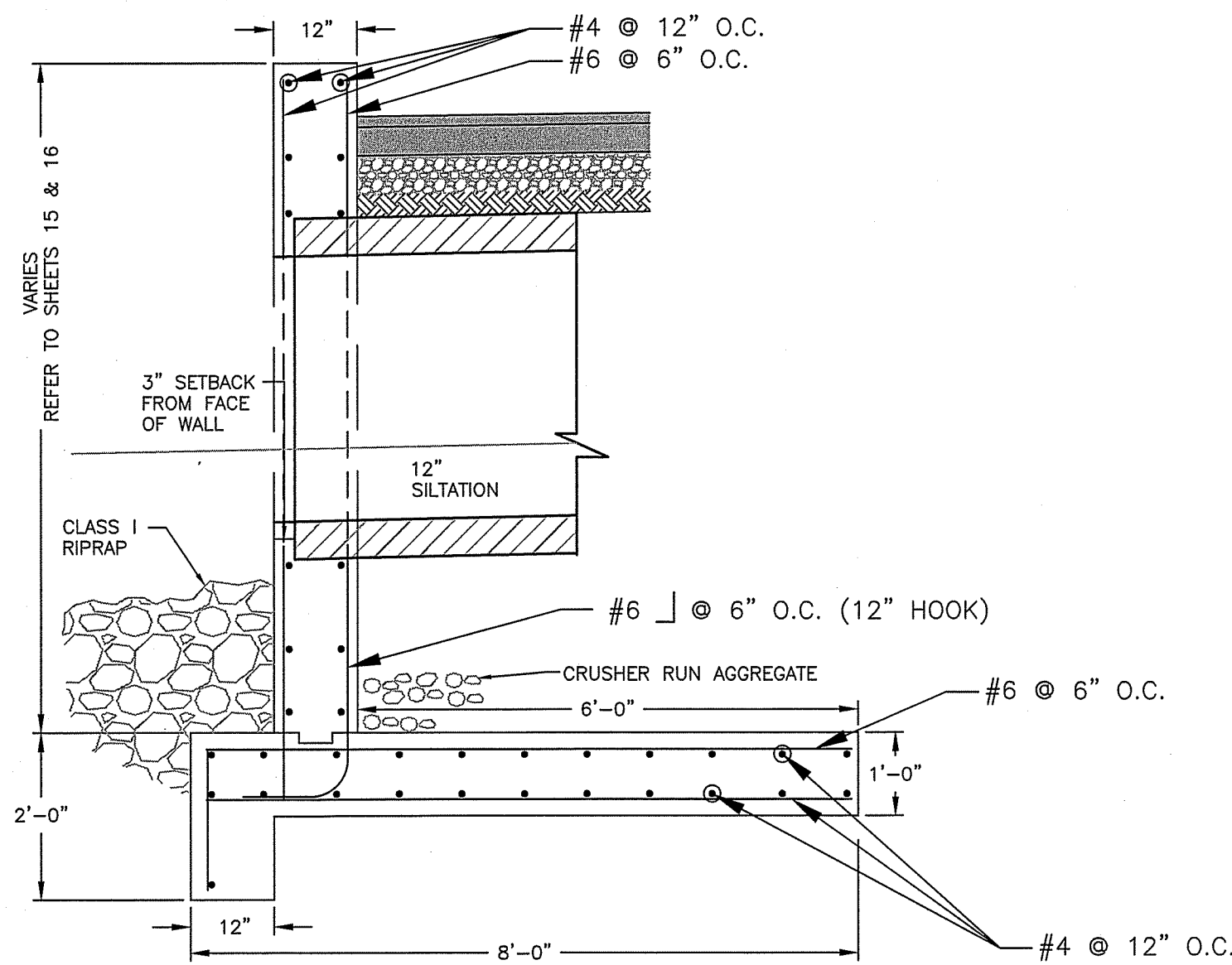
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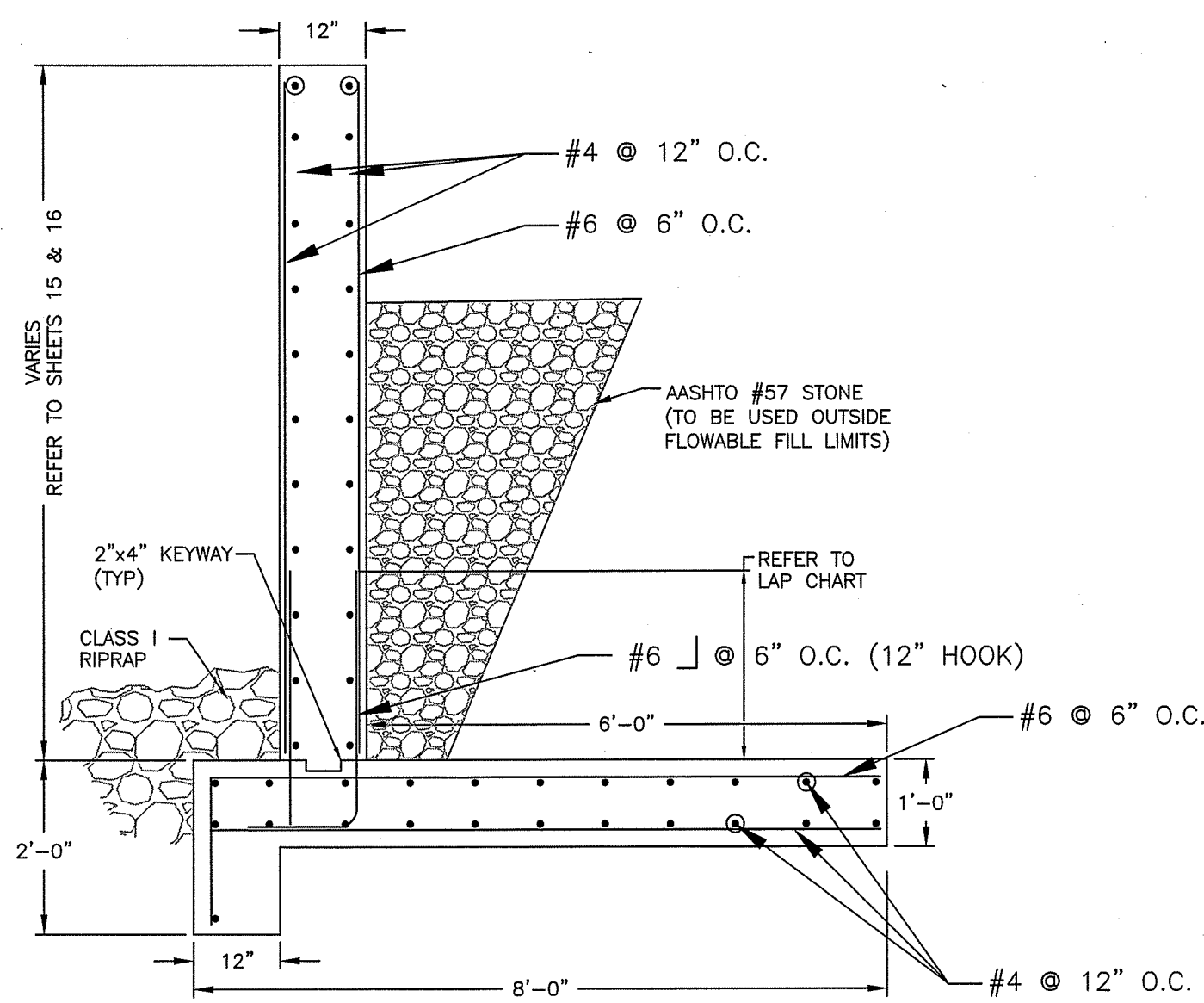
TYPICAL ELEVATION - UPSTREAM ENDWALL  
SCALE: 3/8"=1'



TYPICAL ELEVATION - DOWNSTREAM ENDWALL  
SCALE: 3/8"=1'



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



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

NOTES:

CONCRETE PIPE: ALL CONCRETE FOR THE PRECAST PIPE SECTIONS SHALL BE 4,000 PSI MIN. THE PIPE SHALL ADHERE TO ASTM C506 (AASHTO M206) AND CLASS IV REQUIREMENTS. REFER TO MSHA SECTIONS 905.01 AND 905.02 FOR ADDITIONAL CONDITIONS.

CAST-IN-PLACE CONCRETE: CONCRETE FOR HEADWALL AND WINGWALL STEMS SHALL BE MSHA MIX NO. 6 (4,500 PSI MIN). FOOTINGS SHALL BE MSHA MIX NO. 3 (3,500 PSI MIN.)

ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH 3/4" x 3/4" MILLED CHAMFER STRIPS.

DAMP-PROOFING SHALL BE APPLIED TO ALL CONCRETE SURFACES COMING IN CONTACT WITH BACKFILL. WATERPROOFING MEMBRANE SHALL BE 2-PLY AND 16" MIN. WIDTH CENTERED ON THE CONSTRUCTION JOINTS.

SHEAR KEY SIZES SHOWN SHALL BE NOMINAL.

THE PIPE ENDS AND ENDWALLS SHALL BE PARGED WITH MORTAR AS DIRECTED BY THE ENGINEER. THIS COST IS INCIDENTAL TO THE CAST-IN-PLACE CONCRETE ITEM.

REINFORCING STEEL: REINFORCING STEEL FOR THE CAST-IN-PLACE HEADWALLS AND WINGWALLS SHALL CONFORM TO ASTM A615, GRADE 60 (MIN. FY=60,000 PSI). SPLICES SHALL BE LAPPED ACCORDING TO AASHTO REQUIREMENTS OR BAR LAP CHARTS.

ALL REINFORCING STEEL IN THE CAST-IN-PLACE HEADWALLS SHALL BE EPOXY COATED.

FOR TIES AND STIRRUPS: STANDARD ACI BENDING TOLERANCES ARE MODIFIED TO PLUS (+) ZERO INCHES, MINUS (-) NORMAL ACI BENDING TOLERANCES.

GROUT: ALL GROUT USED FOR PIPE CONNECTIONS AT DRAINAGE STRUCTURES SHALL BE NON SHRINK AND HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI IN 7 DAYS PER T106. REFER TO MSHA SECTION 902.11

BAR LAP DIMENSIONS FOR GRADE 60 REINFORCING STEEL

BAR SIZE	* LOCATION CATEGORY			
	NON-EPOXY		EPOXY COATED	
	A	B	A	B
#4	2'-5"	1'-10"	2'-10"	2'-2"
#5	3'-0"	2'-4"	3'-7"	2'-9"
#6	3'-7"	2'-9"	4'-8"	4'-1"
#7	4'-2"	3'-2"	5'-5"	4'-9"
#8	4'-9"	3'-8"	6'-2"	5'-5"
#9	5'-10"	4'-6"	7'-8"	6'-9"
#10	7'-2"	5'-7"	9'-5"	8'-4"
#11	8'-8"	6'-8"	11'-4"	10'-0"

MIX NO. 3 (3,500psi) CONCRETE

BAR SIZE	* LOCATION CATEGORY			
	NON-EPOXY		EPOXY COATED	
	A	B	A	B
#4	2'-1"	1'-7"	2'-6"	1'-11"
#5	2'-7"	2'-0"	3'-1"	2'-5"
#6	3'-1"	2'-5"	4'-0"	3'-7"
#7	3'-7"	2'-9"	4'-8"	4'-2"
#8	4'-1"	3'-2"	5'-4"	4'-9"
#9	5'-1"	3'-11"	6'-7"	5'-10"
#10	6'-3"	4'-10"	8'-2"	7'-2"
#11	7'-6"	5'-9"	9'-9"	8'-8"

MIX NO. 6 (4,500psi) CONCRETE

END HOOKS

BAR SIZE	FINISHED BEND DIAMETER	90° HOOKS
#4	3"	8"
#5	3-3/4"	10"
#6	4-1/2"	1'-0"
#7	5-1/4"	1'-2"
#8	6"	1'-4"
#9	9-1/2"	1'-6"
#10	10-3/4"	1'-8"
#11	1'-0"	1'-10"

\* LOCATION CATEGORY

- A - BARS IN HORIZONTAL LAYERS IN TOP OF POUR WITH 12" OR MORE OF CONCRETE BELOW THEM SUCH AS IN FOOTINGS, PIER CAPS, ETC.
- B - ALL BARS NOT IN CATEGORY A

NOTE:

- WHEN BAR LAP IS NOT SPECIFIED ON THE PLANS, THE ABOVE DIMENSIONS SHALL BE USED.
- FOR CENTER TO CENTER SPACING <6" SEE MD DOT O.O.S. DETAILS FOR REBAR-BL-101 AND BL-103.

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex, Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401



MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
REINFORCING DETAILS  
CULVERT #2

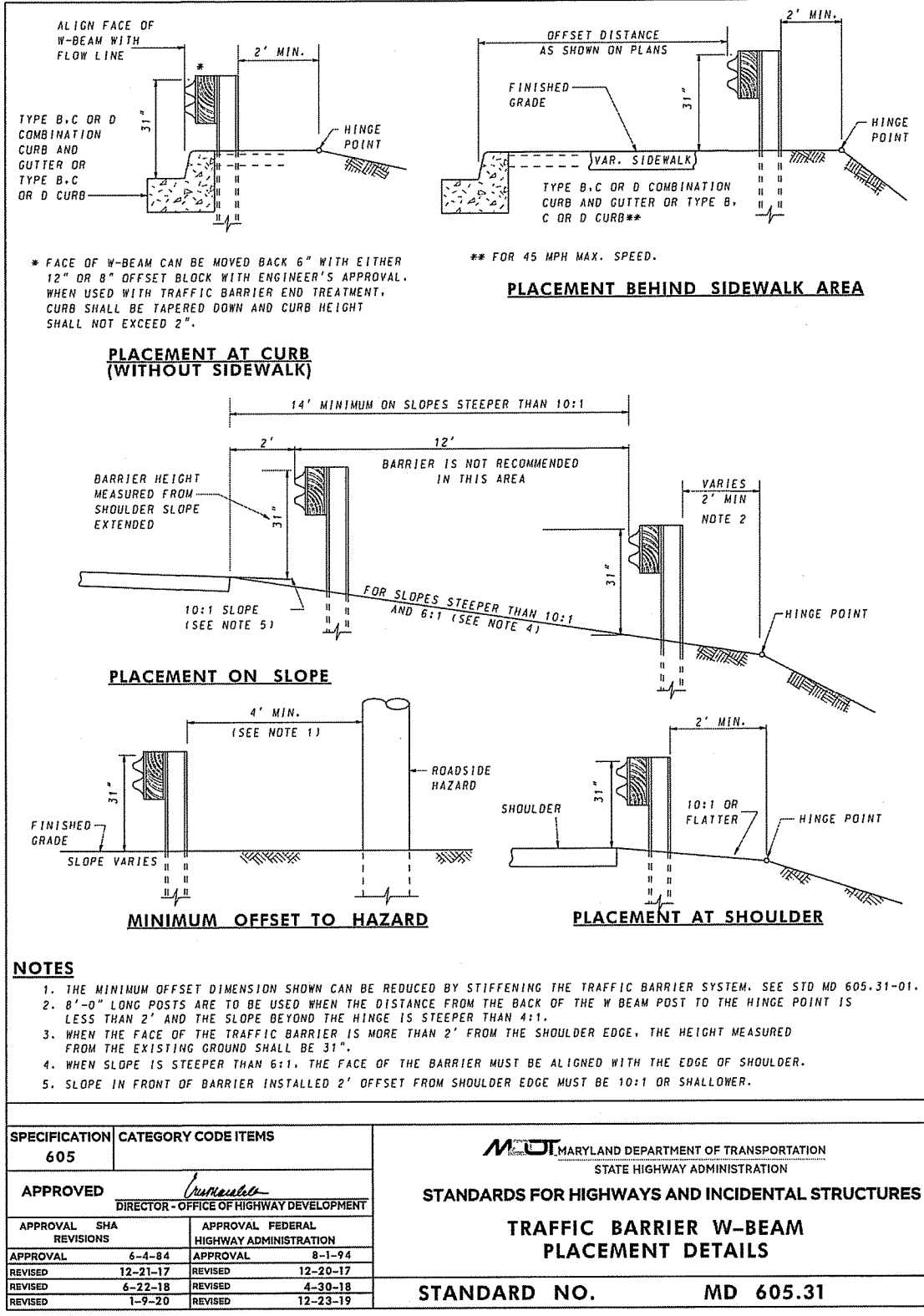
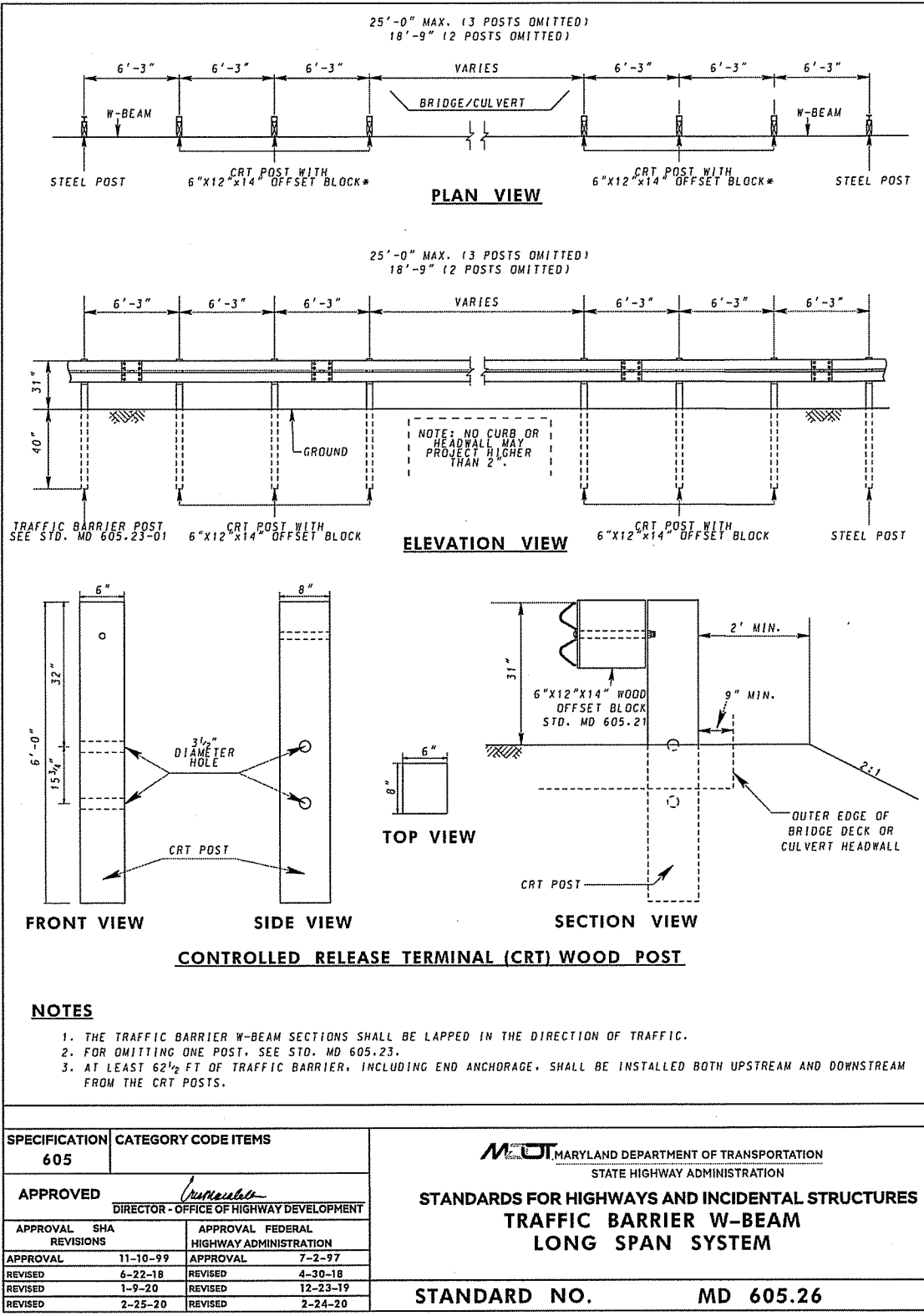
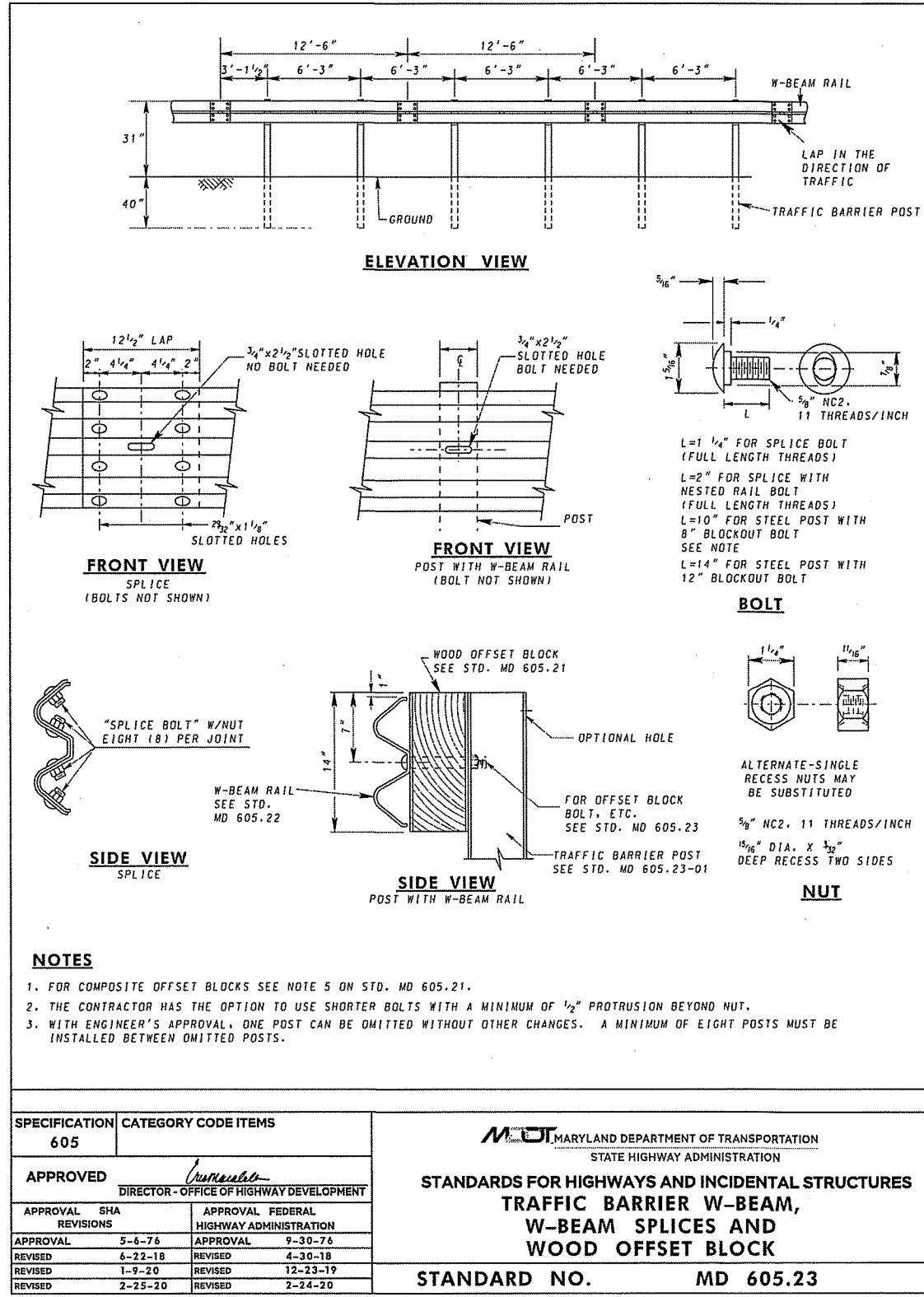
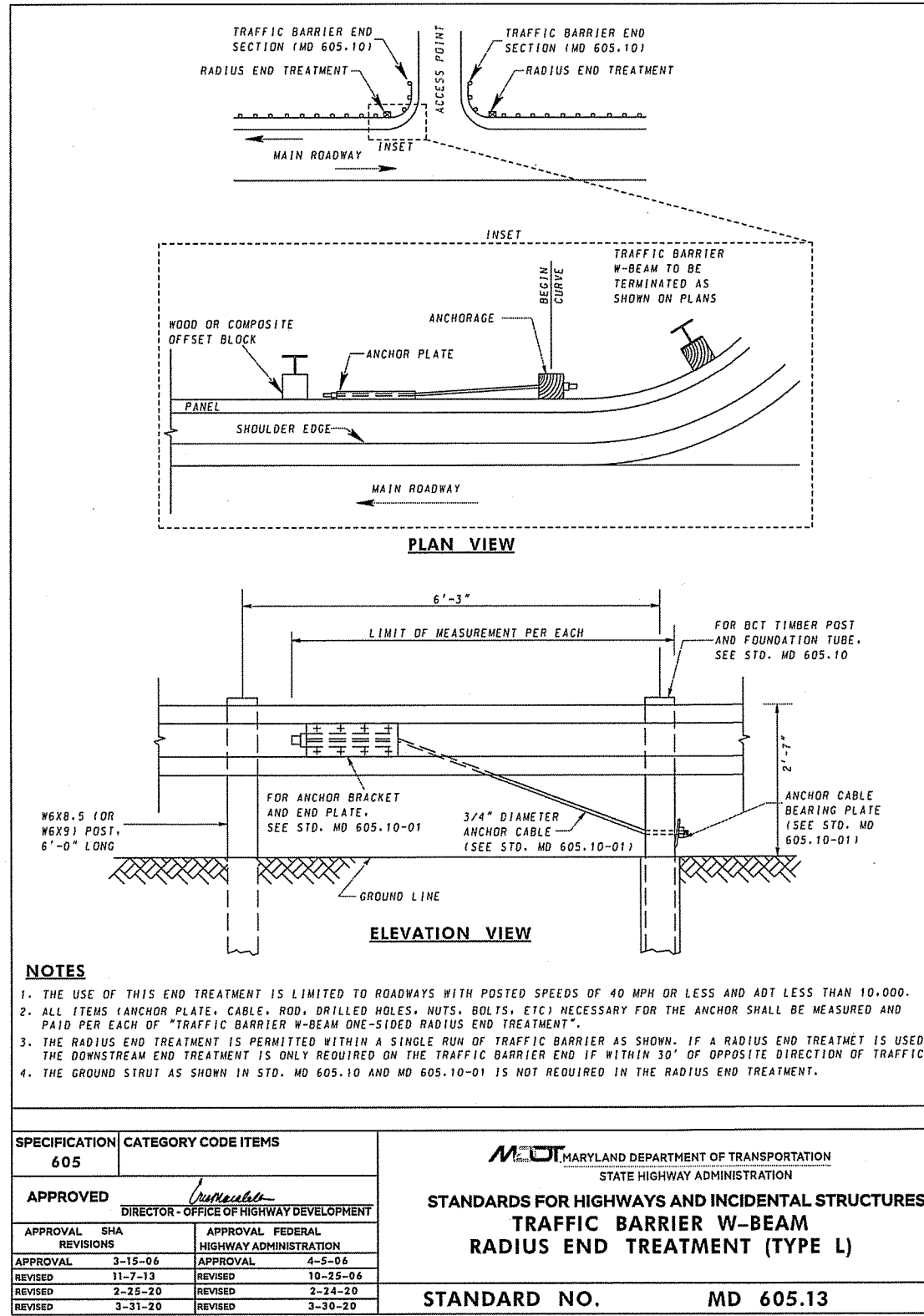
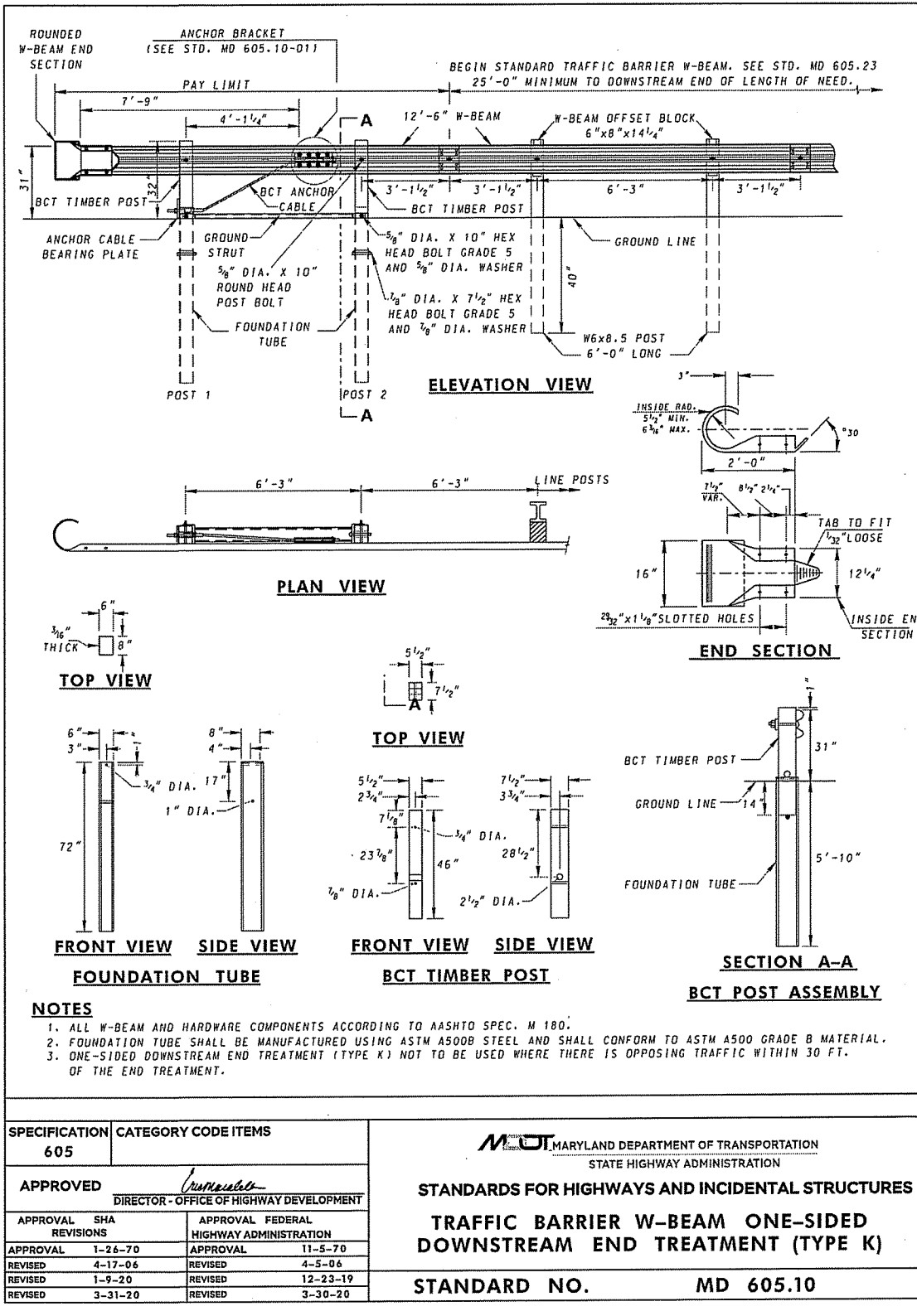
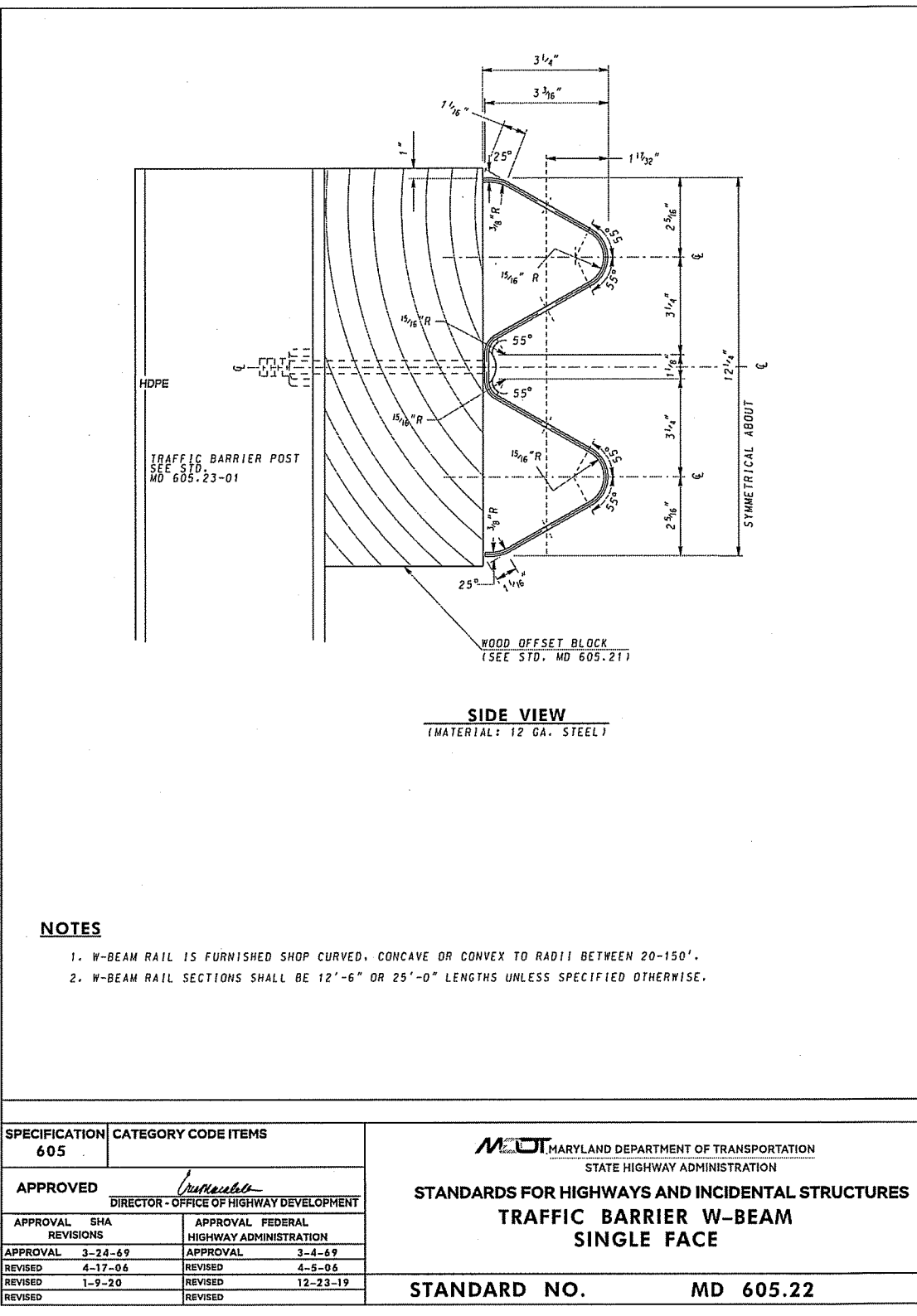
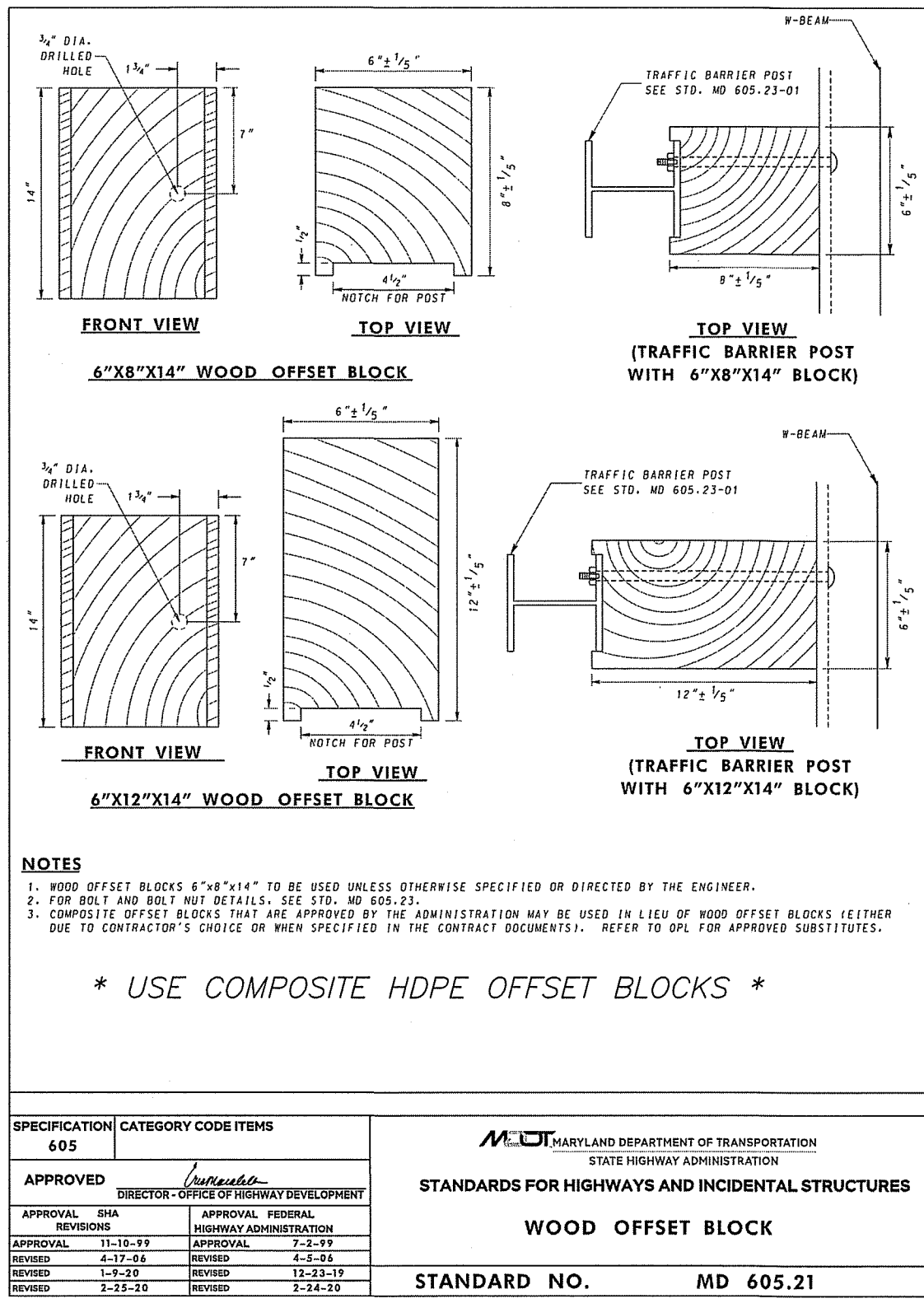
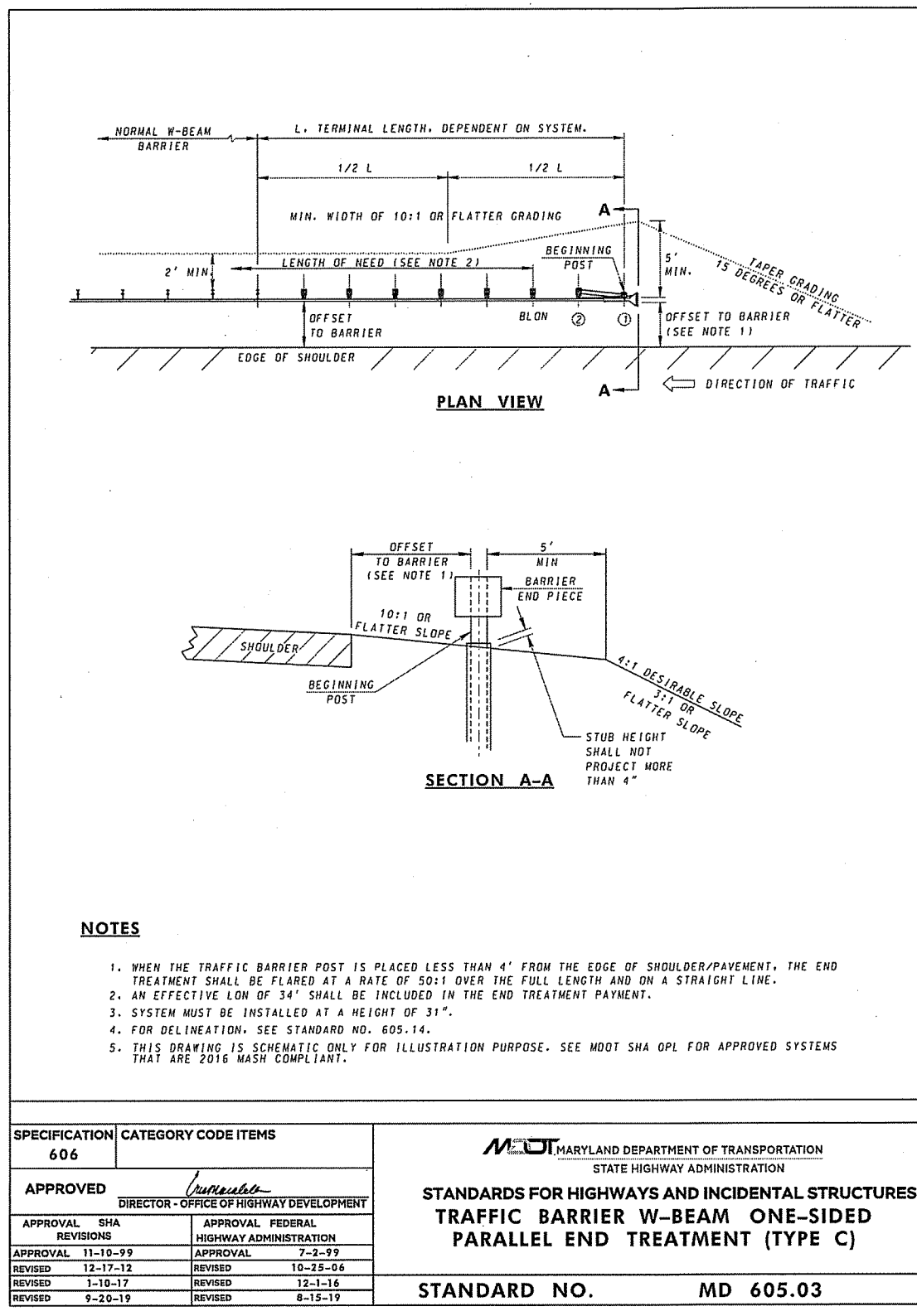


SCALE  
AS SHOWN

SHEET NO.  
18

PROJECT NO.  
14-212

FILE PATH: K:\CADD\14-212 MOUSETOWN RD\CONSTRUCTION PLOT DWG\STYP SECTIONS AND QUANTITIES 14-212.DWG PLOT DATE: 3/18/2022 7:42 AM



SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
606	TRAFFIC BARRIER W-BEAM ONE-SIDED PARALLEL END TREATMENT (TYPE C)	APPROVED	REVISIONS	STANDARD NO.	MD 605.03

SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
605	WOOD OFFSET BLOCK	APPROVED	REVISIONS	STANDARD NO.	MD 605.21

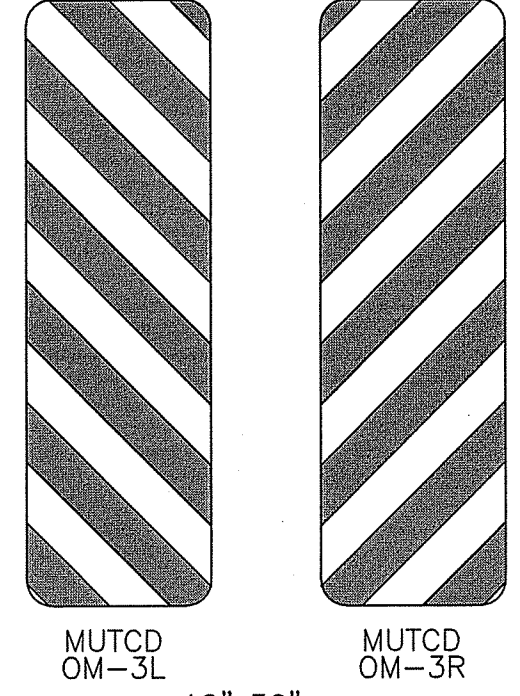
SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
605	TRAFFIC BARRIER W-BEAM SINGLE FACE	APPROVED	REVISIONS	STANDARD NO.	MD 605.22

SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
605	TRAFFIC BARRIER W-BEAM ONE-SIDED RADIUS END TREATMENT (TYPE L)	APPROVED	REVISIONS	STANDARD NO.	MD 605.13

SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
605	TRAFFIC BARRIER W-BEAM, W-BEAM SPLICES AND WOOD OFFSET BLOCK	APPROVED	REVISIONS	STANDARD NO.	MD 605.23

SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
605	CONTROLLED RELEASE TERMINAL (CRT) WOOD POST	APPROVED	REVISIONS	STANDARD NO.	MD 605.26

SPECIFICATION CATEGORY CODE ITEMS		APPROVED		STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES	
605	TRAFFIC BARRIER W-BEAM PLACEMENT DETAILS	APPROVED	REVISIONS	STANDARD NO.	MD 605.31

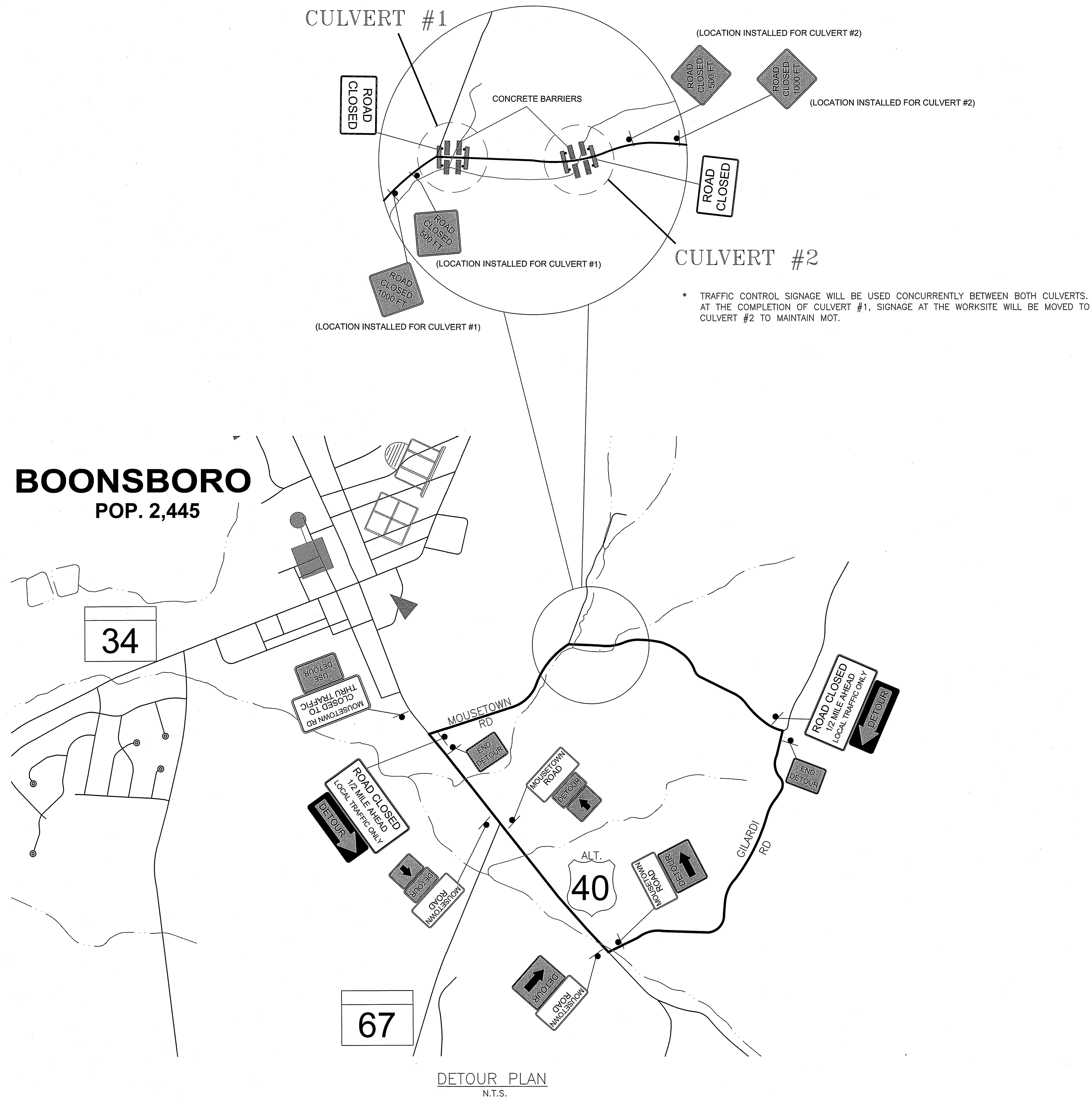


MUTCD OM-3L  
MUTCD OM-3R  
12"x36"  
OBJECT MARKER SIGN  
N.T.S.

NOTES:  
1. REFER TO THIS SHEET, AND SHEET 12 & 13 FOR TRAFFIC BARRIER TYPE AND LOCATION.

DESIGNED BY:	KUL/SH	DATE:	DEC 2021
DRAWN BY:	BM/KJU	CHECKED BY:	SH
REVISION DESCRIPTION:			
NO.			
WASHINGTON COUNTY, MARYLAND DIVISION OF ENGINEERING Washington County Administrative Annex, Building 86 W. Baltimore Street, P.O. Box 121740 Phone: 240-313-2400 Fax: 240-313-2601			
WASHINGTON COUNTY, MARYLAND DIVISION OF ENGINEERING MOUSETOWN ROAD CULVERT REPLACEMENTS TRAFFIC BARRIER DETAILS CULVERT #2			
SCALE AS SHOWN			
SHEET NO. 19			
PROJECT NO. 14-212			

**BOONSBORO**  
POP. 2,445



\* TRAFFIC CONTROL SIGNAGE WILL BE USED CONCURRENTLY BETWEEN BOTH CULVERTS. AT THE COMPLETION OF CULVERT #1, SIGNAGE AT THE WORKSITE WILL BE MOVED TO CULVERT #2 TO MAINTAIN MOT.

SIGN LEGEND				
SIGN	SIZE COLOR	QUANTITY	TOTAL S.F.	REMARKS
	HORIZONTAL RECT. 36"x18" (4.5 S.F.) BLACK ON WHITE	4	18	USE 4" SERIES C LETTERING FOR ALL SIGNS IN TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED.
	R11-3A 60"x30" (12.5 S.F.) BLACK ON WHITE	2	25	
	R11-2 48"x30" (10 S.F.) BLACK ON WHITE	2	20	INSTALL ON TYPE III BARRICADES AS NOTED.
	R11-4 (MODIFIED) 60"x30" (12.5 S.F.) BLACK ON WHITE	1	12.5	
	HORIZONTAL RECTANGLE 36"x24" (6 S.F.) BLACK ON ORANGE	1	6	
	M4-10R 48"x18" (6 S.F.) ORANGE ON BLACK	1	6	
	M4-10L 48"x18" (6 S.F.) ORANGE ON BLACK	1	6	
	M4-8 30"x24" (6 S.F.) BLACK ON ORANGE	2	4	
	M4-9 30"x24" (6 S.F.) BLACK ON ORANGE	2	4.5	
	M4-9R 30"x24" (6 S.F.) BLACK ON ORANGE	2	10	
	M4-9L 30"x24" (6 S.F.) BLACK ON ORANGE	2	10	
	M4-8A 24"x18" (3 S.F.) BLACK ON ORANGE	2	6	
	W20-3 36"x36" (9 S.F.) BLACK ON ORANGE	4	36	
	G95-2 (MOD) 60"x48" (20 S.F.) BLACK ON YELLOW (TOP) BLACK ON WHITE (BOTTOM)	2	40	PLACE IN SAME LOCATION AS R11-3A (WITH DETOUR ARROW) TWO WEEKS PRIOR TO START OF WORK. REMOVE AT START OF WORK AND REPLACE WITH R11-3A. USE LETTERING THAT FITS APPROPRIATELY ONTO SIGN.
	ALTERNATING ORANGE AND WHITE RETRO- REFLECTIVE STRIPES	2		TYPE III BARRICADE WITH WARNING LIGHTS
	12' LENGTHS (TYP.)	8		PRECAST CONCRETE JERSEY BARRIER
	ORANGE TRAFFIC BARRELS	10		

- NOTES:**
- THE TRAFFIC CONTROL PLAN INDICATED IS FOR A FULL ROAD CLOSURE. ONLY ONE CULVERT LOCATION MAY BE CLOSED AT A TIME. THIS SHEET TO BE USED FOR BOTH CULVERTS DURING CONSTRUCTION FOR TRAFFIC CONTROL.
  - ALL TRAFFIC CONTROL DEVICES, METHODS, AND MATERIALS USED SHALL CONFORM TO THE APPLICABLE SPECIFICATIONS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
  - THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF THE WORK AND SAFETY OF THE PUBLIC, ALL AS INDICATED IN THE MUTCD.
  - THE TRAFFIC CONTROL PLAN DEPICTS THE MINIMUM TRAFFIC CONTROL REQUIRED DURING WORK TO PROVIDE A ROAD CLOSURE. THE ENGINEER MAY DIRECT ADJUSTMENT OF THE LOCATION OF THE TRAFFIC CONTROL DEVICES AT NO ADDITIONAL COST TO THE COUNTY.
  - TRAFFIC CONTROL DEVICES SHALL BE INSTALLED AT THE INCEPTION OF THE WORK DESCRIBED AND SHALL BE PROPERLY MAINTAINED AND OPERATED. UPON COMPLETION OF THE WORK, THE DEVICES SHALL BE REMOVED AND ALL SALVAGED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.
  - TEMPORARY PRECAST CONCRETE JERSEY BARRIERS SHALL BE PLACED AT CULVERT #1 AND RESET TO CULVERT #2 AT THE COMPLETION OF CULVERT #1. FOR PROTECTION AGAINST THE OPEN CUT IN THE ROADWAY, (ORANGE TRAFFIC BARRELS) SHALL BE PLACED AS NEEDED TO DELINEATE DRIVEWAY ENTRANCES AT CONSTRUCTION SITE AND SHALL BE INCIDENTAL TO MOT ITEM.
  - WEEDS, SHRUBBERY, CONSTRUCTION MATERIALS OR EQUIPMENT, SPOIL, ETC. SHALL NOT BE ALLOWED TO OBSCURE ANY TRAFFIC CONTROL DEVICE.
  - ALL EQUIPMENT AND MATERIALS SHALL BE STORED OUTSIDE OF THE ROADWAY CLEAR ZONE AND WITHIN THE EXISTING RIGHT OF WAY.
  - THE CONTRACTOR SHALL MAINTAIN INGRESS/EGRESS TO ALL DRIVEWAYS AND PROPERTIES AT ALL TIMES.

DATE	
BY	
REVISION DESCRIPTION	
NO.	
DESIGNED BY:	KU/SH
DRAWN BY:	BM/KU
CHECKED BY:	SH
DATE:	DEC 2021

WASHINGTON COUNTY, MARYLAND  
DIVISION OF ENGINEERING

Washington County Administrative Annex Building  
80 W. Baltimore St., Hagerstown, MD 21740  
Phone: 240-313-2460 Fax: 240-313-2401

MOUSETOWN ROAD  
CULVERT REPLACEMENTS  
TRAFFIC CONTROL PLAN  
CULVERT #1 & #2

SCALE  
AS SHOWN

SHEET NO.  
20

PROJECT NO.  
14-212

SUMMARY OF QUANTITIES CULVERT #1

ITEM NO.	DESCRIPTION	UNIT	EST. QUAN.
101-1	CLEARING AND GRUBBING	L.S.	L.S.
102-1	MOBILIZATION	L.S.	L.S.
103-1	MAINTENANCE OF TRAFFIC	L.S.	L.S.
104-1	TEMPORARY TRAFFIC SIGNS	S.F.	204
105-1	TEMPORARY CONCRETE TRAFFIC BARRIERS FOR MOT	L.F.	72
106-1	TYPE III BARRICADE FOR MAINTENANCE OF TRAFFIC	EA.	2
107-1	CONSTRUCTION STAKEOUT	L.S.	L.S.
201-1	UNCLASSIFIED EXCAVATION	C.Y.	495
202-1	CONTINGENT UNSUITABLE MATERIAL EXCAVATION	C.Y.	25
203-1	COMMON BORROW	C.Y.	200
204-1	SELECTED BACKFILL	C.Y.	75
205-1	REMOVAL OF EXISTING PAVEMENT	S.Y.	200
301-1	STABILIZED CONSTRUCTION ENTRANCE	EA.	1
302-1	BARRIER (CHANNEL) STREAM DIVERSION	L.S.	L.S.
303-1	FILTER LOG 12" DIAMETER	L.F.	150
304-1	CLASS I RIPRAP	S.Y.	100
305-1	SUMP PIT	EA.	1
306-1	FILTER BAG	EA.	1
401-1	REMOVAL OF EXISTING STRUCTURE	L.S.	L.S.
402-1	REINFORCED CONCRETE BOX CULVERTS (2) 6'x6'	L.S.	L.S.
403-1	CAST-IN-PLACE CONC. MIX #3 FOR FOOTING	C.Y.	30
404-1	CAST-IN-PLACE CONC. MIX #6 FOR ENDWALL & WINGWALL STEM	C.Y.	35
405-1	TRAFFIC BARRIER W-BEAM AT STRUCTURE	L.S.	L.S.
501-1	6" GRADED AGGREGATE BASE COURSE	S.Y.	330
502-1	HOT MIX ASPHALT SUPERPAVE SURFACE, 9.5mm	TON	40
503-1	HOT MIX ASPHALT SUPERPAVE BASE, 19.0mm	TON	100
504-1	SAW CUTTING	L.F.	30
601-1	REMOVE AND DISPOSE EXISTING TRAFFIC BARRIER	L.F.	113
602-1	TRAFFIC BARRIER W-BEAM	L.F.	60
603-1	TRAFFIC BARRIER TYPE C END TREATMENT	EA.	4
701-1	PLACING FURNISHED TOPSOIL, 4" DEPTH	S.Y.	500
702-1	TEMPORARY SEEDING	S.Y.	50
703-1	TURFGRASS ESTABLISHMENT	S.Y.	500
704-1	TYPE A SOIL STABILIZATION MATTING	S.Y.	50
801-1	PERMANENT TRAFFIC SIGNS	S.F.	12

SUMMARY OF QUANTITIES CULVERT #2

ITEM NO.	DESCRIPTION	UNIT	EST. QUAN.
101-2	CLEARING AND GRUBBING	L.S.	L.S.
102-2	MOBILIZATION	L.S.	L.S.
103-2	MAINTENANCE OF TRAFFIC	L.S.	L.S.
104-2	RESET TEMPORARY TRAFFIC SIGNS	S.F.	76
105-2	RESET TEMPORARY CONCRETE TRAFFIC BARRIERS FOR MOT	L.F.	72
106-2	RESET TYPE III BARRICADE FOR MAINTENANCE OF TRAFFIC	EA.	2
107-2	CONSTRUCTION STAKEOUT	L.S.	L.S.
201-2	UNCLASSIFIED EXCAVATION	C.Y.	175
202-2	CONTINGENT UNSUITABLE MATERIAL EXCAVATION	C.Y.	25
203-2	COMMON BORROW	C.Y.	120
204-2	SELECTED BACKFILL	C.Y.	75
205-2	REMOVAL OF EXISTING PAVEMENT	S.Y.	100
301-2	STABILIZED CONSTRUCTION ENTRANCE	EA.	1
302-2	PUMP AROUND STREAM DIVERSION	L.S.	L.S.
303-2	FILTER LOG 12" DIAMETER	L.F.	140
304-2	REMOVAL OF EXISTING CMP UNDER FARM LANE	L.F.	23
305-2	REINFORCED CONC. ELLIPTICAL PIPE 60"x38" CLASS IV	L.F.	40
306-2	18" HIGH DENSITY POLYETHYLENE PIPE	L.F.	24
307-2	CLASS I RIPRAP	S.Y.	55
308-2	SUMP PIT	EA.	1
309-2	FILTER BAG	EA.	1
401-2	REMOVAL OF EXISTING STRUCTURE	L.S.	L.S.
402-2	CAST-IN-PLACE CONCRETE MIX #3 FOR FOOTING	C.Y.	25
403-2	CAST-IN-PLACE CONC. MIX #6 FOR ENDWALL & WINGWALL STEM	C.Y.	20
404-2	TRAFFIC BARRIER W-BEAM AT STRUCTURE	L.S.	L.S.
405-2	STONE WALL RECONSTRUCTION	S.F.	48
501-2	6" GRADED AGGREGATE BASE COURSE	S.Y.	365
502-2	HOT MIX ASPHALT SUPERPAVE SURFACE, 9.5mm	TON	45
503-2	HOT MIX ASPHALT SUPERPAVE BASE, 19.0mm	TON	110
504-2	SAW CUTTING	L.F.	22
601-2	REMOVE AND DISPOSE EXISTING TRAFFIC BARRIER	L.F.	65
602-2	TRAFFIC BARRIER W-BEAM	L.F.	128
603-2	TYPE C END TREATMENT	EA.	3
604-2	TYPE K END TREATMENT	EA.	1
605-2	TYPE L END TREATMENT	EA.	1
606-2	REMOVE AND REPLACE FENCE	L.F.	125
701-2	PLACING FURNISHED TOPSOIL, 4" DEPTH	S.Y.	400
702-2	TEMPORARY SEEDING	S.Y.	50
703-2	TURFGRASS ESTABLISHMENT	S.Y.	400
801-2	PERMANENT TRAFFIC SIGNS	S.F.	12

NO.	REVISION DESCRIPTION	BY	DATE
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____ DATE: DEC 2021			
<b>WASHINGTON COUNTY, MARYLAND</b> DIVISION OF ENGINEERING Washington County Administrative Annex Building 80 W. Baltimore St., Hagerstown, MD 21740 Phone: 240-313-2460 Fax: 240-313-2401			
<b>MOUSETOWN ROAD</b> <b>CULVERT REPLACEMENTS</b> <b>SUMMARY OF QUANTITIES</b> <b>CULVERT #1 &amp; #2</b>			
SCALE AS SHOWN			
SHEET NO. 21			
PROJECT NO. 14-212			