



THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEET .....	SIGN1
ESTIMATED BRIDGE QUANTITIES AND GENERAL NOTES .....	2 (BR-133-220)
LAYOUT OF BOX BRIDGE TO BE REPAIRED.....	BR-133-219
UNDERSIDE DECK REPAIR DETAILS .....	BR-133-221
CULVERT SUPPORT SECTIONS .....	BR-133-222
CULVERT SUPPORT SECTIONS .....	BR-133-223



THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE OF TENN. CODE ANN. §62-2-306.

SHEET NAME	SHEET NO.
SIGNATURE SHEETS.....	SIGN1
TITLE SHEET .....	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS.....	1A
PROJECT COMMITMENTS .....	1B
ESTIMATED ROADWAY QUANTITIES.....	2A
TYPICAL SECTIONS.....	2B
GENERAL NOTES.....	2C
SPECIAL NOTES.....	2D
ENVIRONMENTAL NOTES.....	2E- 2E2
PRESENT LAYOUT(S).....	4 - 5
PROPOSED LAYOUT(S) .....	4A – 5A
EROSION PREVENTION AND SEDIMENT CONTROL PLANS.....	6 - 8
PAVEMENT EDGE DROP-OFF NOTES FOR TRAFFIC CONTROL.....	T1
TRAFFIC CONTROL LEGEND AND TABULATION .....	T2
TRAFFIC CONTROL PLANS .....	T3 – T5

YEAR	PROJECT NO.	SHEET NO.			
2025	33005-4188-04	SIGN1			
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION					
SIGNATURE SHEET					



Index Of Sheets  
SEE SHEET NO. 1A

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF ENGINEERING

HAMILTON COUNTY

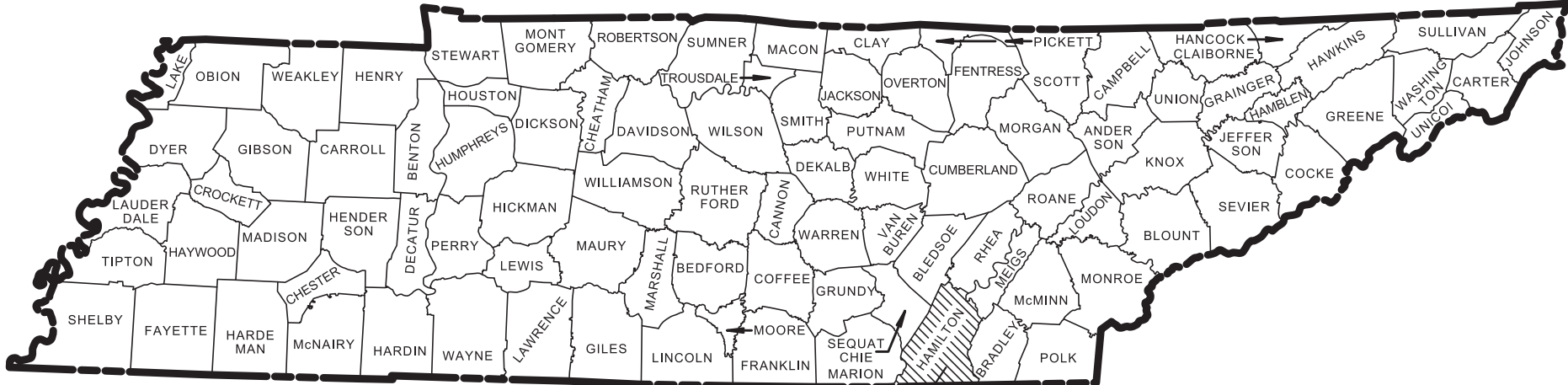
BRIDGE (TWO-BARREL CULVERT)  
OVER BRANCH, LM 4.13

PS&E  
BRIDGE REPAIR

INTERSTATE 75

DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86	YES	NO
WORK ZONE SIGNIFICANCE DETERMINATION		
SIGNIFICANT	YES	NO

TENN.	YEAR 2025	SHEET NO. 1
FED. AID PROJ. NO.		
STATE PROJ. NO.	33005-4188-04	



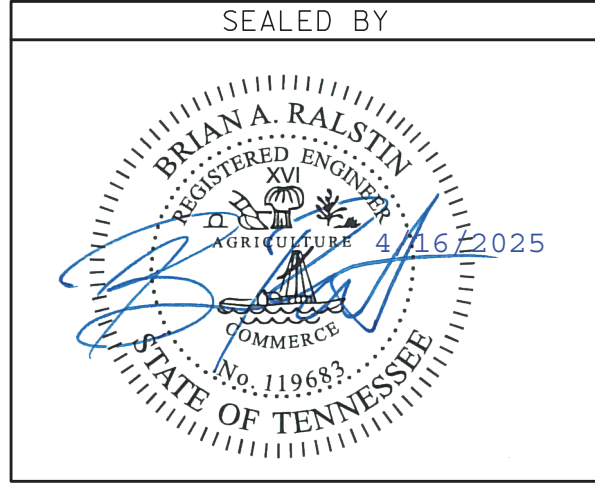
PROJECT LOCATION  
BRIDGE ID, # 33-10075-4.08

NO EXCLUSIONS

NO EXCEPTIONS

PS&E

SEALED BY



APPROVED:   
WILL REID, DEPUTY COMMISSIONER /  
CHIEF ENGINEER

DATE:

APPROVED:   
HOWARD H. ELEY, DEPUTY GOVERNOR &  
COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:  
DIVISION ADMINISTRATOR DATE

DISTURBED AREA:

0.55 AC

TRAFFIC DATA

ADT (2023) 114,993  
POSTED SPEED 55 MPH

COORDINATES ARE NAD 83 (2011). ARE  
DATUM ADJUSTED BY THE FACTOR  
OF 0.99998, AND TIED TO THE TGRN.  
ALL ELEVATIONS ARE REFERENCED  
TO THE NAVD 1988 WITH GEOID 12B MODEL.



SCALE: 1"= 1 MILE

ROADWAY LENGTH 0.383 MILES  
BRIDGE LENGTH 0.009 MILES  
PROJECT LENGTH 0.383 MILES

BEGIN PROJECT NO. 33005-4188-04 CONSTRUCTION

N. 254692.5726 E. 227070.7732

END PROJECT NO. 33005-4188-04 CONSTRUCTION

N. 253061.5626 E. 2215882.1092

SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES  
CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW  
THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE STANDARD SPECIFICATIONS OF  
THE TENNESSEE DEPARTMENT OF TRANSPORTATION DATED JANUARY 1, 2021 AND  
ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS  
AND IN THE PROPOSAL CONTRACT.

TDOT PROJECT MANAGER : SEAN MONTGOMERY

DESIGN FIRM : BENESCH

DESIGNER : NITAYA CHAYANGKURA, P.E. CHECKED BY : BHAVYA PATEL, P.E.

P.E. NO. 33005-4188-04

PIN NO. 131498.00



4/11/2025 12:45:42 PM  
Y:\Nashville\16019000S\16019020.18\Eng\_Docs\Roadway\1A.sht

ROADWAY INDEX

SHEET NAME SHEET NO.

SIGNATURE SHEETS.....	SIGN1
TITLE SHEET .....	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS.....	1A
PROJECT COMMITMENTS.....	1B
ESTIMATED BRIDGE QUANTITIES AND GENERAL NOTES.....	2
ESTIMATED ROADWAY QUANTITIES.....	2A
TYPICAL SECTIONS.....	2B
GENERAL NOTES.....	2C
SPECIAL NOTES.....	2D
ENVIRONMENTAL NOTES.....	2E- 2E2
PRESENT LAYOUT(S).....	4 - 5
PROPOSED LAYOUT(S) .....	4A – 5A
EROSION PREVENTION AND SEDIMENT CONTROL PLANS.....	6 - 8
PAVEMENT EDGE DROP-OFF NOTES FOR TRAFFIC CONTROL.....	T1
TRAFFIC CONTROL LEGEND AND TABULATION .....	T2
TRAFFIC CONTROL PLANS .....	T3 – T5
NOTE: THE ALPHABETICAL LETTERS “I”, “O” & “Q” ARE NOT USED IN THE NUMBERING OF SHEETS.	

BRIDGE INDEX

SHEET NAME SHEET NO.

LAYOUT OF BOX BRIDGE TO BE REPAIRED.....	BR-133-219
ESTIMATED BRIDGE QUANTITIES AND GENERAL NOTES .....	BR-133-220
UNDERSIDE DECK REPAIR DETAILS .....	BR-133-221
CULVERT SUPPORT SECTIONS .....	BR-133-222
CULVERT SUPPORT SECTIONS .....	BR-133-223

STANDARD ROADWAY DRAWINGS

DWG. REV. DESCRIPTION DWG. REV. DESCRIPTION

10-100.00 STANDARD ROADWAY TITLE SHEET, ABBREVIATIONS, AND LEGENDS

RD-TP-1	10-01-24	STANDARD ROADWAY DRAWINGS TITLE SHEET
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND
RD-L-2	02-20-20	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-5	07-30-24	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
RD-L-6	02-20-20	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL

10-106.00 SAFETY DESIGN AND GUARDRAILS

S-PL-1	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED
S-PL-1A	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED (FOR RIGID OBJECTS)
S-GR31-1	06-15-21	GUARDRAIL DETAILS
S-GR31-1A	06-28-19	GUARDRAIL AND BLOCK-OUT DETAILS
S-GR31-1B		GUARDRAIL FASTENING HARDWARE
S-GR31-1C	07-07-23	GUARDRAIL GENERAL NOTES AND POST DETAILS
S-GR31-1D	03-01-23	GUARDRAIL POST PLACEMENT IN ROCK
S-GRT-1A		LAYOUT OF FLARED GUARDRAIL (TL-3)
S-GRT-2	06-28-19	TYPE 38 GUARDRAIL END TERMINAL
S-GRT-2P	10-16-20	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL
S-GRA-3	01-09-24	TYPE 13 GUARDRAIL ANCHOR

10-204.00 DESIGN - TRAFFIC CONTROL

T-M-1	01-24-25	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	01-24-25	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-18	07-07-23	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS
T-WZ-PBR1	12-09-22	INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-PCB1	10-10-24	10 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB2	10-01-24	20 FOOT PORTABLE CONCRETE BARRIER RAIL
T-WZ-PCB3	01-28-22	PORTABLE CONCRETE BARRIER RAIL DETAILS

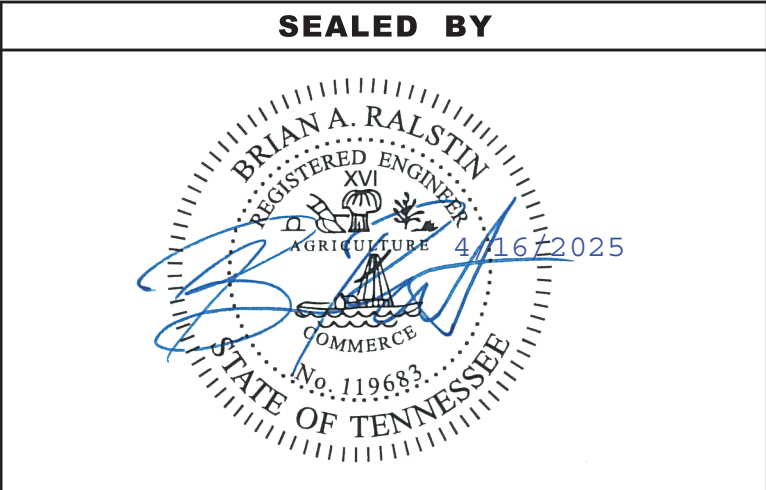
10-107.00 EROSION PREVENTION AND SEDIMENT CONTROL

EC-STR-2	08-01-12	SEDIMENT FILTER BAG
EC-STR-3C	03-01-23	SILT FENCE WITH WIRE BACKING
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)

10-301.00 LRFD BOX CULVERTS

STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY OF DRAWINGS
STD-17-3		GENERAL NOTES
STD-17-10		TYPICAL WINGWALL DETAILS AND NOTES
STD-17-12		WINGWALL DIMENSIONS AND QUANTITIES
STD-17-16		WINGWALL DESIGN SECTION
STD-17-17	06-01-2011	BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-53		BOX BRIDGE, 1 BARREL AT 8', CLEAR HTS. 6'-8', 0-60' FILL

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	1A



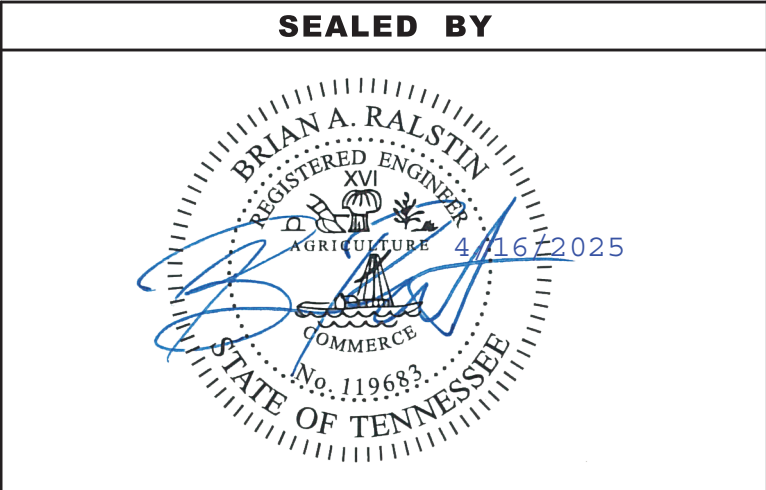
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX  
AND STANDARD  
ROADWAY  
DRAWINGS

4/11/2025 12:45:49 PM  
Y:\Nashville\16019000S\16019020.18\Eng\_Docs\Structures\DGN\00#\_Project Commitments.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	1B

PROJECT COMMITMENTS			
COMMITMENT ID	SOURCE DIVISION	DESCRIPTION	STA. / LOCATION
EDHZ001	Environmental	An Asbestos Containing Material (ACM) survey was completed on Bridge No. 33I00750029 I-75 over Branch LM 4.08 (33-I0075-04.08). No ACM was detected. Please see the report for further details and photographs. No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2021) Sections 107.08.D and 202.03)	Branch



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PROJECT  
COMMITMENTS



GENERAL NOTES

- (1)

**CONSTRUCTION SPECIFICATIONS:** STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (JANUARY 1, 2021 EDITION), AND THE 4<sup>TH</sup> EDITION (2017) AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS WITH INTERIMS.
- (2)

**DESIGN SPECIFICATIONS:** 9<sup>TH</sup> EDITION (2020) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS WITH INTERIMS, AND THE 2<sup>ND</sup> EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERIMS.
- (3)

**REINFORCING STEEL:** SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS.
- (4)

**CONCRETE:** TO BE CLASS A (CAST-IN-PLACE) F'C = 3000 PSI EXCEPT AS NOTED OTHERWISE.
- (5)

**CONCRETE CURING:** ALL CONCRETE IN REPAIR AREAS SHALL BE CURED ACCORDING TO THE STANDARD SPECIFICATIONS
- (6)

**SHOP DRAWINGS:** REFER TO SECTION 105.02 OF THE STANDARD SPECIFICATIONS. IF USING PAPER COPIES, SHOP DRAWINGS ARE TO BE SENT TO THE BRIDGE REPAIR OFFICE IN THE DIVISION OF STRUCTURES, FOR ELECTRONIC SUBMITTALS, SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS. EACH SHOP DRAWING SHALL CONTAIN IN THE TITLE BLOCK THE FOLLOWING: THE STATE PROJECT NUMBER, COUNTY, BRIDGE NAME, BRIDGE NUMBER (OR STRUCTURE TYPE AND NUMBER), STATION, AND CONTRACT NUMBER. SHOP DRAWINGS WITH TITLE BLOCKS NOT INCLUDING THE FOREGOING IDENTIFICATION WILL BE RETURNED FOR CORRECTION BEFORE ANY REVIEWS FOR APPROVAL ARE CONDUCTED.
- (7)

**SPECIAL NOTE TO CONTRACTOR:** CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURES NECESSARY TO ENSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVAL AND DISPOSAL OF DEBRIS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.
- (8)

**DEMOLITION:** THE CONTRACTOR SHALL TAKE SPECIAL CARE TO PROTECT ANY PARTS OF THE STRUCTURE THAT ARE NOT TO BE REMOVED SPECIFICALLY. FOR FULL DEPTH SLAB REMOVAL, EXCEPT OVER BEAMS, THE MAXIMUM HAMMER SIZE IS

90 POUND CLASS. FOR PARTIAL DEPTH SLAB REMOVAL AND ANY WORK OVER THE BEAMS, THE MAXIMUM HAMMER SIZE IS 60 POUND CLASS; CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL. SAWING OR CUTTING OF THE CONCRETE IS ACCEPTABLE AS LONG AS ANY SPECIFIED PROJECTION OF THE EXISTING REINFORCING STEEL IS MAINTAINED. EXPANSION JOINT REMOVAL SHALL FOLLOW THE SAME RESTRICTIONS AS FULL DEPTH SLAB REMOVAL. ALL DEVICES PROPOSED FOR CONCRETE DEMOLITION SHALL MEET THE APPROVAL OF THE ENGINEER.

- (9)

THE CONTRACTOR IS NOT ALLOWED TO USE A HYDRAULIC RAM MOUNTED ON A BACKHOE (COMMONLY CALLED A HOE RAM), MINI EXCAVATOR, OR OTHER EQUIPMENT FOR ANY CONCRETE REMOVAL.
- (10)

**GROUTED BARS IN DRILLED HOLES:** HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT, AND THE BAR ROTATED (NOT DRIVEN) TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT, AND THE BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY TDOT MATERIALS AND TESTS.
- (11)

**STREAM CHANNEL:** ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G. PIER/BENT FOOTING, RIP-RAP PLACEMENT, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR TEMPORARY DIVERSION CHANNELS (EC-STR-31).
- (12)

**QUICK-SET PATCHING MATERIAL:** QUICK-SET PATCHING MATERIAL SHALL BE A POLYMER MODIFIED CEMENTITIOUS PATCHING MATERIAL. SEE TDOT QUALIFIED PRODUCTS LIST 13.009 POLY MOD CEMENT STRUCT PATCH VERT & OVER FOR ACCEPTABLE PATCHING MATERIALS.
- (13)

**SPECIAL NOTE FOR UTILITIES:** CARE SHALL BE TAKEN WHEN REMOVING AND REPAIRING BRIDGE COMPONENTS SO AS NOT TO DISTURB OR DAMAGE ANY UTILITIES.

THE LOCATION OF UTILITIES SHOWN IN THESE PLANS ARE APPROXIMATE ONLY. EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE

UTILITY COMPANIES INVOLVED. NOTIFICATION BY CALLING THE TENNESSEE ONE-CALL SYSTEM INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THIS PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER OR AROUND THE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE OF OTHER ITEMS OF CONSTRUCTION.

CONST. NO.			
PROJECT NO.	YEAR	SHEET NO.	
33005-4188-04	2025	2	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED BRIDGE QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL
(1)	602-10.05	BRACING REPAIRS	LS	1
(2)	604-02.01	CLASS A CONCRETE (BOX BRIDGES)	C.Y.	42
(3)	604-02.02	STEEL BAR REINFORCEMENT (BOX BRIDGES)	LB.	5,047
(4)	604-10.05	CONCRETE	S.F.	480
(5)	604-10.54	CONCRETE REPAIRS	S.F.	480

FOOTNOTES:

- (1)

INCLUDES ALL LABOR AND MATERIALS ASSOCIATED WITH THE COST OF PLACEMENT OF FORMWORK OR ANY TYPE OF TEMPORARY SUPPORT SYSTEM BELOW THE EXISTING BRIDGE DECK. DETAILS OF TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO DEMOLITION AND CONSTRUCTION.
- (2)

INCLUDES THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF CLASS A CONCRETE.
- (3)

INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF STEEL BAR REINFORCING.
- (4)

INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY TO PLACE HIGH EARLY STRENGTH CONCRETE FOR REPAIR AREAS INDICATED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. ITEM MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.
- (5)

INCLUDES COST OF ALL LABOR AND MATERIALS NECESSARY FOR THE PLACEMENT OF A POLYMER MODIFIED CEMENTITIOUS STRUCTURAL PATCHING MATERIAL FOR REPAIR AREAS INDICATED IN THE PLANS OR AS DIRECTED BY THE

LIST OF STANDARD DRAWINGS

LIST OF SPECIAL PROVISIONS

LIST OF REFERENCE DRAWINGS

B-2-70 \_\_\_\_\_ CONCRETE BOX BRIDGE



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
ESTIMATED BRIDGE QUANTITIES  
AND GENERAL NOTES

BRIDGE NO. 33-I0075-4.08  
FED. ID. NO. 33I00750029  
I-75 NBL AND SBL  
OVER BRANCH  
HAMILTON COUNTY  
2025

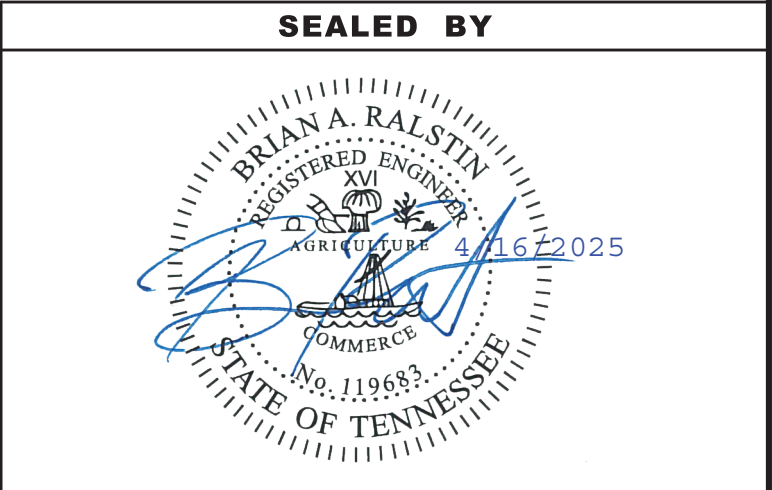
DESIGNED BY BENESCH \_\_\_\_\_ DATE 03/2025  
DRAWN BY NITAYA CHAYANGKURA, P.E. \_\_\_\_\_ DATE 03/2025  
SUPERVISED BY JACOB WILLIAMS, P.E. \_\_\_\_\_ DATE 03/2025  
CHECKED BY BHAYYA PATEL, P.E. \_\_\_\_\_ DATE 03/2025



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2A

ROADWAY ESTIMATED QUANTITIES				
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
	105-01	CONSTRUCTION STAKES, LINES, AND GRADES	L.S.	1
(3)	202-03.01	REMOVAL OF ASPHALT PAVEMENT	S.Y.	1643
	203-01	ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	548
	203-03	BORROW EXCAVATION (UNCLASSIFIED)	C.Y.	548
(11)	203-04	PLACING AND SPREADING TOPSOIL	C.Y.	170
(7)	209-05	SEDIMENT REMOVAL	C.Y.	17
(6)(7)(9)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	1538
(7)	209-08.08	ENHANCED ROCK CHECK DAM	EACH	2
(6)(7)	209-09.04	SEDIMENT FILTER BAG (15' X 10')	EACH	1
(5)(7)(8)	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	150
(1)	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	371
(6)(7)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	8
(1)	307-01.08	ASPHALT CONCRETE MIX (PG64-22)(BPMB-HM) GRADING B-M2	TON	163
(1)	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	3
(1)	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	9
(1)	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	2
(1)	411-01.10	ACS MIX(PG64-22) GRADING D	TON	109
	501-03.10	CONCRETE SHOULDER RUMBLE STRIPS	L.F.	211
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EA	2
	705-06.01	W BEAM GR (TYPE 2) MASH TL-3	L.F.	275
	705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL-3	EA	2
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EA	2
	706-01	GUARDRAIL REMOVED	L.F.	385
(7)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	1400
	712-01	TRAFFIC CONTROL	L.S.	1
	712-02.10	PORTABLE BARRIER RAIL (MASH TL-3)	L.F.	1540
	712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EA	1
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EA	50
	712-06	SIGNS (CONSTRUCTION)	S.F.	101
	716-02.07	PLASTIC PAVEMENT MARKING (24" BARRIER LINE)	L.F.	200
	716-12.02	ENHANCED FLAT THERMO P.M. (6IN)	L.M.	0.5
	717-01	MOBILIZATION	L.S.	1
(2)(6)(7)	740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	80
(7)(10)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	19
(7)(12)	801-03	WATER (SEEDING & SODDING)	M.G.	3
(4)(7)	801-01.38	NATIVE SEED MIX FINAL STABILIZATION OF SLOPES	UNIT	19
(11)	803-01	SODDING (NEW SOD)	S.Y.	1000

FOOTNOTES	
(1)	ITEMS SHALL BE USED FOR TEMPORARY PAVEMENT AND HAUL ROADS.
(2)	ITEM SHALL BE USED FOR SEDIMENT AND WATER PUMPING FROM STREAM.
(3)	ITEM INCLUDES TO THE REMOVAL OF ALL TEMPORARY PAVEMENT ON EXISTING SHOULDERS AND THE REMOVAL OF HAULS ROAD.
(4)	PERMANENT STABILIZATION WITH NATIVE OR NATURALIZED PERENNIAL VEGETATION IS REQUIRED IN ALL AREAS AUTHORIZED FOR TEMPORARY AND PERMANENT IMPACTS TO STREAMS AND RIPARIAN AREAS, INCLUDING ADJACENT BUFFER ZONES WITHIN 60FT OF THE EDGE OF WATER. THE APPROPRIATE SEED MIXTURE FOR THE REGION AND SITE CONDITIONS SHALL BE SELECTED FROM TABLE 7.9-1 (PREFERRED SEED MIXES USING NATIVES OR NATURALIZED PLANTS AND PLANTING DATES) FOUND IN CHAPTER 7.9 (PERMANENT VEGETATION) OF THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK 4TH EDITION.
(5)	ITEM SHALL CONSIST OF JERSEY BARRIER FOR INSTREAM DIVERSION.
(6)	ITEMS SHALL BE USED FOR SEDIMENT FILTER BAG.
(7)	SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATION FOR MAINTENANCE REPLACEMENT. ALL ITEMS ARE TO BE USED AS DIRECTED BY ENGINEER.
(8)	PAY ITEM SHALL INCLUDE ALL NECESSARY INCIDENTALS FOR STREAM DIVERSION AND DE-WATERING AROUND CULVERT AND WORK AREA.
(9)	PAY ITEM INCLUDES 87.6 L.F. FOR SEDIMENT FILTER BAG (15' X 10').
(10)	PAY ITEM SHALL INCLUDE ALL INCIDENTALS INCLUDING WATER.
(11)	ITEM SHALL BE USED TO REPAIR DISTURBANCE FROM INSTALLATION AND REMOVAL OF HAUL ROAD.

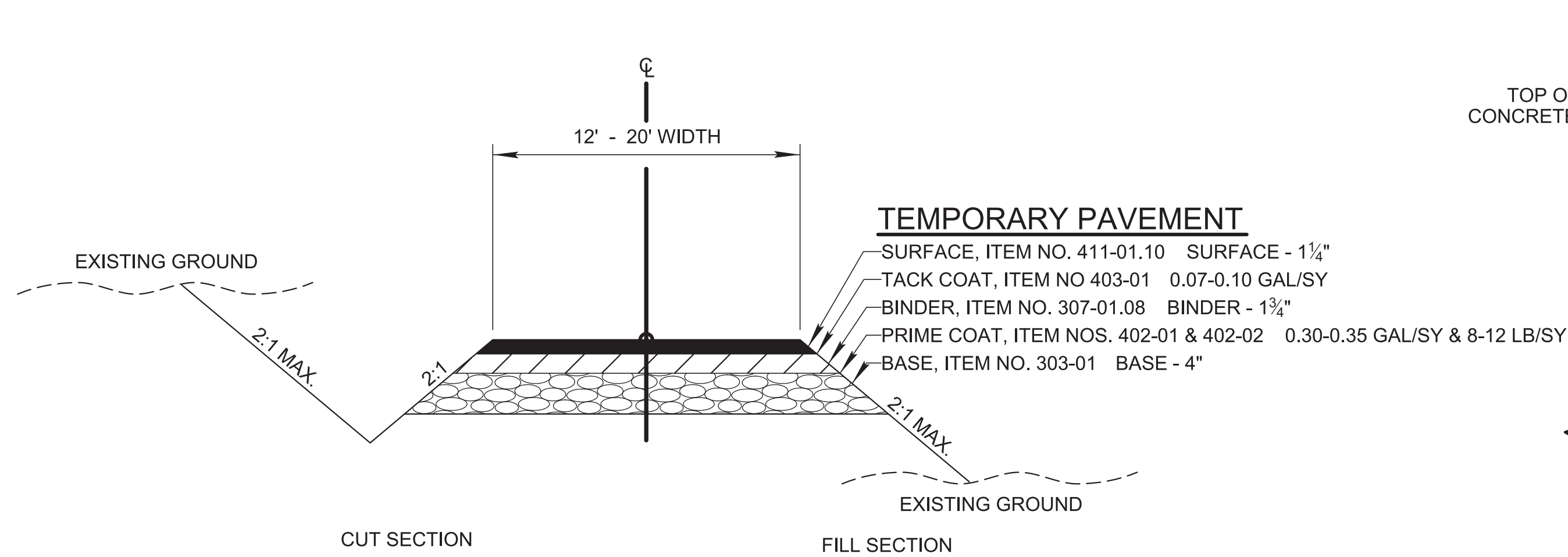


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

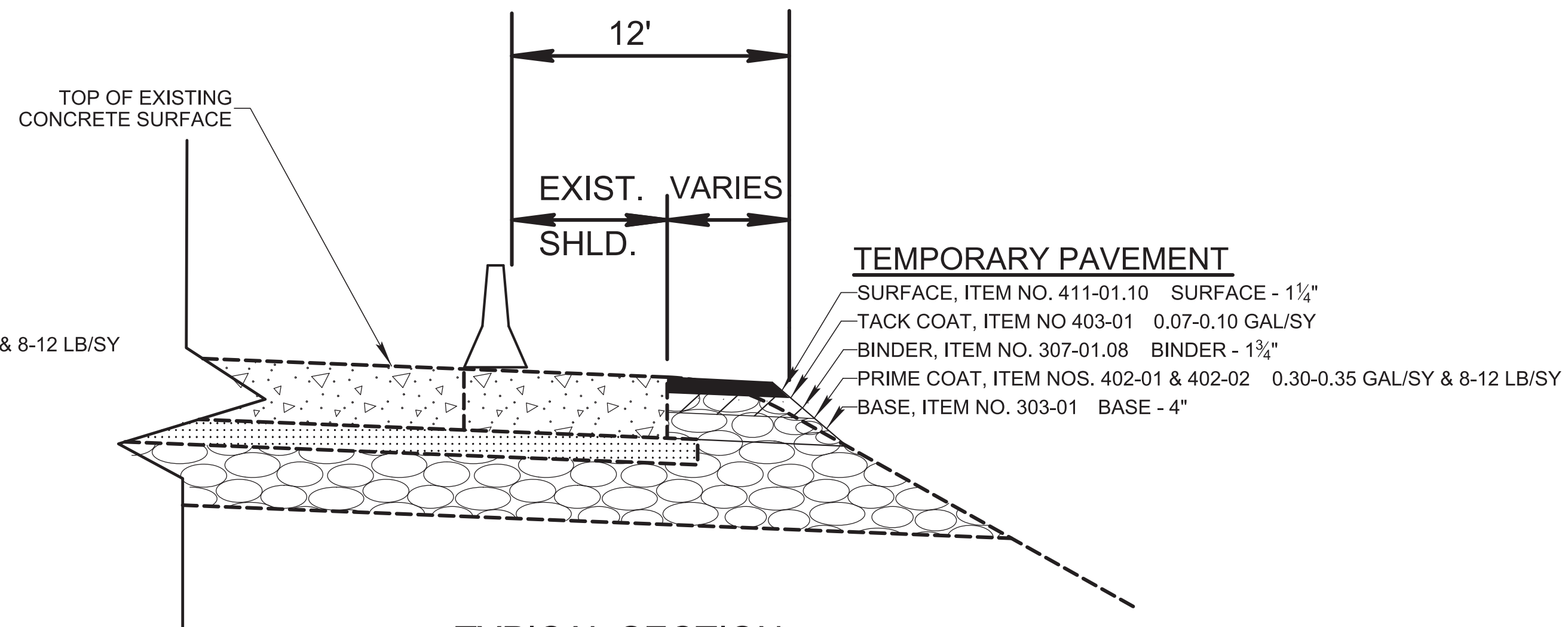
ESTIMATED  
ROADWAY  
QUANTITIES



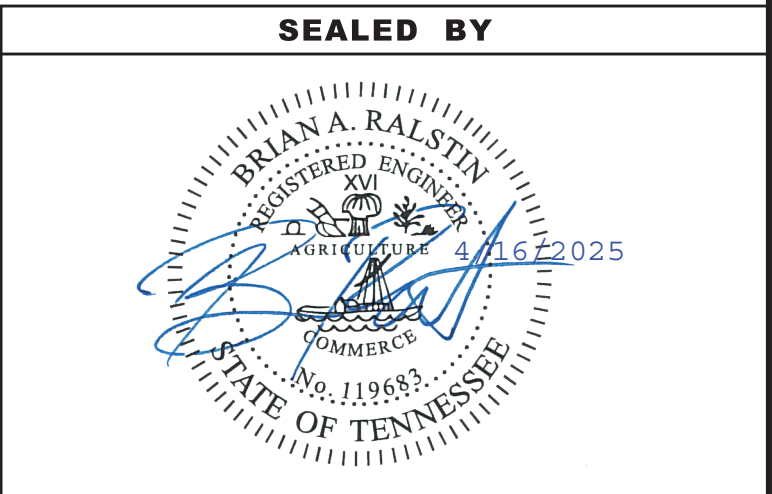
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2B



TYPICAL SECTION  
HAUL ROAD



TYPICAL SECTION  
TEMPORARY PAVED SHOULDER



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TYPICAL  
SECTIONS



4/11/2025 12:46:04 PM  
Y:\Nashville\16019000S\16019020.18\Eng\_Docs\Roadway\2C.sht

## GENERAL NOTES

### GRADING

- (1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.
- (2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.
- (3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

### SEEDING AND SODDING

- (4) ITEM NO. 801-01.38 NATIVE SEED MIX FINAL STABILIZATION OF SLOPES SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

### GUARDRAIL

- (1) THE CONTRACTOR SHALL NOT REMOVE ANY SECTIONS OF EXISTING GUARDRAIL TO REWORK SHOULDERS OR FLATTEN SLOPES UNTIL THE ENGINEER CONCURS IN THE NECESSITY OF REMOVAL DUE TO CONSTRUCTION REQUIREMENTS AND THE APPROPRIATE WARNING DEVICES ARE INSTALLED. THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

### DRAINAGE

- (1) THE CONTRACTOR SHALL SHAPE DITCHES TO THE SPECIFIED DESIGN. THIS WORK WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

### MISCELLANEOUS

- (3) NOTHING IN THE GENERAL NOTES OR SPECIAL PROVISIONS SHALL RELIEVE THE CONTRACTOR FROM HIS RESPONSIBILITIES TOWARD THE SAFETY AND CONVENIENCE OF THE GENERAL PUBLIC AND THE RESIDENTS ALONG THE PROPOSED CONSTRUCTION AREA.

### PAVEMENT MARKINGS

#### FINAL PAVEMENT MARKING

- (8) PERMANENT PAVEMENT LINE MARKINGS SHALL BE 6" ENHANCED FLATLINE THERMOPLASTIC INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT UNMARKED SECTIONS SHALL NOT BE ALLOWED. PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-12.02, ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE), L.M. THE CONTRACTOR SHALL HAVE THE OPTION OF USING REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK AND THEN INSTALLING THE PERMANENT MARKINGS AFTER THE PAVING OPERATION IS COMPLETED. THE TEMPORARY MARKINGS FOR THE FINAL SURFACE WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR THE PERMANENT MARKINGS.

### PAVEMENT

#### PAVING

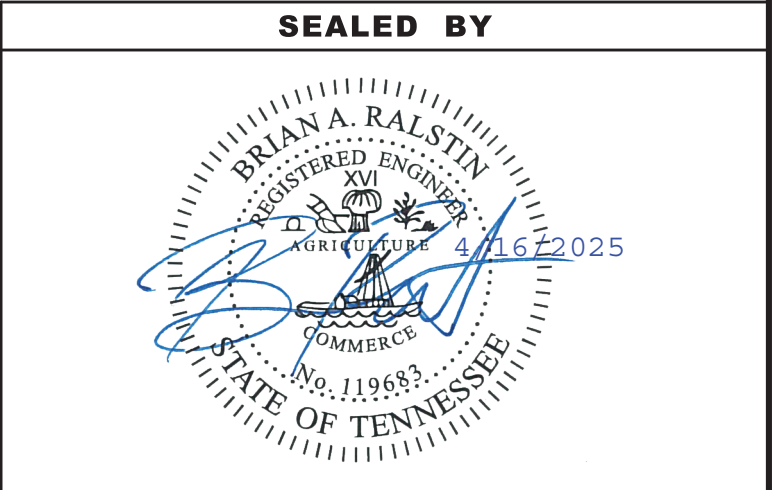
- (1) THE CONTRACTOR SHALL BE REQUIRED TO PAVE IN THE DIRECTION OF TRAFFIC.
- (2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.
- (3) THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLEL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE

REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

### CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.
- (2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.
- (3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.
- (4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.
- (5) USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.
- (7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- (8) THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING CONSTRUCTION SIGNS. THE COST OF THIS WORK SHALL BE INCLUDED IN ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2C



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

GENERAL  
NOTES

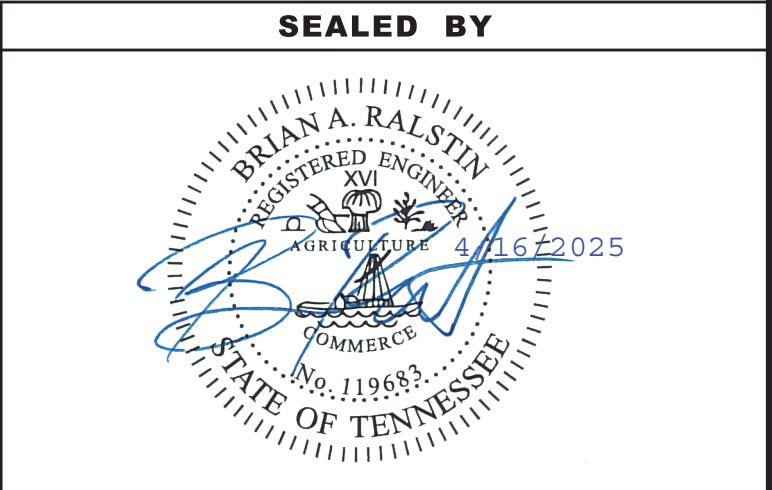


SPECIAL NOTES

MISCELLANEOUS

- (1) FRESH CONCRETE AND CEMENT DUST MUST BE KEPT OUT OF THE STR-1 CHANNEL AND WATER, AS THEY ALTER CHEMICAL PROPERTIES AND CAN BE TOXIC TO AQUATIC SPECIES.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2D



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ROADWAY  
SPECIAL  
NOTES



4/11/2025 12:46:14 PM  
Y:\Nashville\16019000S\16019020.18\Eng\_Docs\Roadway\2E.sht

ENVIRONMENTAL NOTES

ENVIRONMENTAL GENERAL NOTES

NATURAL RESOURCES

- (1)

SOIL MATERIALS MUST BE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. EPSC MEASURES TO PROTECT NATURAL RESOURCES AND WATER QUALITY SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD. APPROPRIATE EPSC MEASURES MUST BE INSTALLED ALONG THE BASE OF ALL FILLS AND CUTS, ON THE DOWNHILL SIDE OF STOCKPILED SOIL, AND ALONG NATURAL RESOURCES IN CLEARED AREAS TO PREVENT SEDIMENT MIGRATION INTO STREAMS, WETLANDS OR OTHER NATURAL FEATURES IN ACCORDANCE WITH TDOT STANDARDS. EPSC MEASURES SHALL BE INSTALLED ON THE CONTOUR, ENTRENCHED AND STAKED, AND EXTEND THE WIDTH OF THE AREA TO BE CLEARED.
- (2)

NEW CHANNEL CONSTRUCTION SHALL BE COMPLETED IN THE DRY AND STABILIZED FOR AT LEAST 72 HOURS PRIOR TO DIVERTING WATER FROM THE EXISTING AND/OR TEMPORARY CHANNEL.
- (3)

INSTREAM EPSC DEVICES REQUIRE THE TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION REVIEW AND MUST BE PROCESSED BY THE PERMITS SECTION TO OBTAIN WATER QUALITY PERMITS.
- (4)

THE OPERATION OF EQUIPMENT IN WATERS OF THE STATE/U.S., INCLUDING WETLANDS AND EPHEMERAL, INTERMITTENT, AND PERENNIAL STREAMS, IS NOT ALLOWED.
- (5)

THE WIDTH OF THE FILL ASSOCIATED WITH TEMPORARY CROSSINGS SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR THE ACTUAL CROSSING, NOT TO EXCEED THE WIDTH SPECIFIED IN THE STANDARD DRAWING.
- (6)

STREAM BEDS SHALL NOT BE USED AS TRANSPORTATION ROUTES FOR CONSTRUCTION EQUIPMENT. TEMPORARY CULVERT CROSSINGS SHALL BE LIMITED TO ONE POINT PER STREAM AND EPSC MEASURES SHALL BE USED WHERE THE STREAM BANKS ARE DISTURBED. WHERE THE STREAMBED IS NOT COMPOSED OF BEDROCK, A PAD OF CLEAN ROCK SHALL BE USED AT THE CROSSING POINT AND CULVERTED TO PREVENT THE IMPOUNDMENT OF WATER FLOW. CLEAN ROCK IS ROCK OF VARIOUS TYPE AND SIZE, DEPENDING UPON APPLICATION, WHICH CONTAINS NO FINES, SOILS, OR OTHER WASTES OR CONTAMINANTS. OTHER MATERIALS USED FOR ALL TEMPORARY FILLS SHALL BE COMPLETELY REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED AND THE AFFECTED AREAS RETURNED TO PREEXISTING ELEVATIONS. ALL TEMPORARY CROSSINGS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. DWG. EC-STR-25 UNLESS SPECIFICALLY ADDRESSED IN THE EPSC PLANS. ALTERNATIVELY, PLACING A TEMPORARY BRIDGE (E.G. BAILEY BRIDGE OR EQUIVALENT, TIMBERS, ETC.) FROM TOP OF BANK TO TOP OF BANK OR THE APPROPRIATE USE OF BARGES AT THE CROSSING TO AVOID DISTURBANCE OF THE STREAMBED IS AN ACCEPTABLE OPTION.
- (7)

HEAVY EQUIPMENT WORKING IN WETLANDS WITH PERMITTED TEMPORARY IMPACTS SHALL BE PLACED ON MATS, OR OTHER MEASURES MUST BE TAKEN TO MINIMIZE SOIL DISTURBANCE AND COMPACTION UNLESS SPECIFICALLY ADDRESSED IN THE CONSTRUCTION PLANS. ANY MATS AND OTHER MEASURES USED FOR HEAVY EQUIPMENT SHALL BE REMOVED IN THEIR ENTIRETY AFTER THE WORK IS COMPLETED. ALL AFFECTED AREAS SHOULD BE RETURNED TO PRE-EXISTING CONDITIONS.
- (8)

WETLANDS SHALL NOT BE USED AS EQUIPMENT STORAGE, STAGING, OR TRANSPORTATION AREAS, UNLESS SPECIFICALLY PROVIDED FOR IN THE CONSTRUCTION PLANS AND PERMITS.
- (9)

THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS PRIOR TO ANY CONSTRUCTION AND MAINTENANCE ACTIVITIES TO ENSURE THAT ENVIRONMENTAL FEATURES (E.G., STREAMS, WETLANDS, SPRINGS, ETC.) ARE NOT IMPACTED BEYOND PERMITTED LOCATIONS. IF THE CONTRACTOR OR TDOT INSPECTOR IS UNSURE OF THE IDENTITY OF AN ENVIRONMENTAL FEATURE, THE INSPECTOR SHALL CONTACT THE TDOT REGION ENVIRONMENTAL TECH GROUP IMMEDIATELY.

SPECIES

- (10)

NO ACTIVITY MAY SUBSTANTIALLY DISRUPT THE MOVEMENT OF THOSE SPECIES OF AQUATIC LIFE INDIGENOUS TO THE WATER BODY, INCLUDING THOSE SPECIES THAT NORMALLY MIGRATE THROUGH THE AREA.
- (11)

SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND

EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).

- (12)

IF THE REMOVAL OF ANY TREES WITH A DIAMETER AT BREAST HEIGHT (DBH) GREATER THAN 3 INCHES IS DEEMED NECESSARY THE TDOT SUPERVISOR SHALL CONTACT THE TDOT ENVIRONMENTAL DIVISION, ECOLOGY SECTION IMMEDIATELY.

PERMITS, PLANS & RECORDS

- (13)

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR AND OBTAIN ANY NECESSARY ENVIRONMENTAL PERMITS OR APPROVALS, INCLUDING BUT NOT LIMITED TO ARCHAEOLOGY, ECOLOGY, HISTORICAL, HAZARDOUS MATERIALS, AIR AND NOISE, TDEC ARAP/401, USACE SECTION 404, TVA SECTION 26A, AND TDEC NPDES PERMITS, FROM FEDERAL, STATE AND/OR LOCAL AGENCIES REGARDING ANY MATERIAL AND STAGING AREAS AND THE OPERATION OF ANY PROJECT-DEDICATED ASPHALT AND/OR CONCRETE PLANTS TO BE USED. ANY SUCH PERMITS SHALL BE SUPPLIED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO THE USE OF THE PERMITTED AREA(S).
- (14)

ANY DISAGREEMENT BETWEEN THE CONSTRUCTION PLANS, THE PROJECT AS CONSTRUCTED, AND THE PERMIT(S) ISSUED FOR THE PROJECT, SHALL BE BROUGHT TO THE ATTENTION OF THE TDOT PROJECT RESPONSIBLE PARTY. THE ENVIRONMENTAL DIVISION, DESIGN DIVISION, AND HEADQUARTERS CONSTRUCTION OFFICE SHALL BE CONTACTED IN THESE INSTANCES AND DECIDE WHICH HAS PRECEDENCE AND WHETHER PERMIT OR PLANS REVISIONS ARE NEEDED. IN GENERAL, PERMIT CONDITIONS WILL PREVAIL.
- (15)

IF A CHANGE IN PROJECT SCOPE OCCURS DURING CONSTRUCTION, INCLUDING VALUE ENGINEERING, THE TDOT PERMIT SECTION SHALL BE CONTACTED TO DETERMINE WHETHER PERMIT REVISIONS ARE NEEDED. THE ROADWAY DESIGN DIVISION SHALL BE CONTACTED TO DETERMINE IF ANY PLAN REVISIONS ARE NEEDED.
- (16)

THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATE. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.
- (17)

ALL WATER QUALITY PERMITS SHALL BE POSTED NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE ACCESSIBLE TO THE PUBLIC. THE NAME, COMPANY NAME, EMAIL ADDRESS, TELEPHONE NUMBER AND ADDRESS OF THE PROJECT SITE OWNER, OPERATOR, OR A LOCAL CONTACT PERSON WITH A BRIEF DESCRIPTION OF THE PROJECT SHALL ALSO BE POSTED. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE, THE INFORMATION SHALL BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION NEAR WHERE THE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY. THIS LOCATION SHALL BE POSTED AT THE CONSTRUCTION SITE. ALL POSTINGS SHALL BE MAINTAINED IN LEGIBLE CONDITION.

SUPPORT ACTIVITIES

- (18)

MATERIALS AND STAGING AREAS SHALL NOT AFFECT ANY WATERS OF THE STATE/U.S. UNLESS THESE AREAS ARE SPECIFICALLY COVERED BY ENVIRONMENTAL PERMITS, OBTAINED SOLELY BY THE CONTRACTOR. THE CONTRACTOR SHALL REVIEW ALL EXISTING PERMITS TO ENSURE THAT WORK AT PERMITTED SITES DOES NOT EXCEED EXPIRATION DATES. IF WORK IS GOING TO BE CONTINUED AFTER EXPIRATION DATES, THE CONTRACTOR SHALL CONTACT THE TDOT PROJECT RESPONSIBLE PARTY TO COMMENCE PERMIT RENEWAL PROCESS.

ENVIRONMENTAL

- (19)

EXCEPT AS OTHERWISE SPECIFIED, THERE ARE NO KNOWN SPECIAL ENVIRONMENTAL FACTORS PRESENT ON THIS PROJECT THAT INDICATE A NEED FOR SEASONAL LIMITATIONS ON THE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING OPERATIONS OR ON THE TOTAL AREA OF EXPOSED SOIL.

ENVIRONMENTAL SPECIAL NOTES

ENVIRONMENTAL

- (1)

STAFF FROM THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE SHALL BE INVITED TO ALL PRE-CONSTRUCTION MEETINGS.

ECOLOGY

- (2)

STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.
- (3)

STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ATTEND THE PRE-CONSTRUCTION MEETING FOR ALL PROJECTS WHICH HAVE THREATENED OR ENDANGERED SPECIES OR CRITICAL HABITAT PROXIMAL TO SCHEDULED WORK. THIS WILL PROVIDE THE OPPORTUNITY TO ENSURE THAT PERSONNEL INCLUDING THE CONTRACTOR'S PERSONNEL AND SUBCONTRACTORS ARE MADE AWARE OF THE NECESSARY PRECAUTIONS THAT MUST BE FOLLOWED.
- (4)

ALL PROJECTS WITH LEGALLY PROTECTED SPECIES OR CRITICAL HABITAT IDENTIFIED SHALL HAVE MEASURES IN PLACE TO CONTAIN CONCRETE DUST, CEMENT DUST AND ALL OTHER MATERIALS. THESE MATERIALS ARE NOT ALLOWED TO ENTER WATERS OF THE STATE/U.S.

PROJECT COMMITMENTS

- (5)

SEE PROJECT COMMITMENTS, SHEET 1B, FOR DETAILS RELATING TO SPECIAL ENVIRONMENTAL COMMITMENTS REQUIRED BY THIS PROJECT.

SCOPE OF WORK

- (1)

REMOVE VEGETATION AT INLET OF CULVERT.
- (2)

ESTABLISH TRAFFIC CONTROL AND HAUL ROAD NECESSARY TO ACCESS AREAS OF REPAIR.
- (3)

ESTABLISH REQUIRED EROSION CONTROL REQUIRED FOR CONSTRUCTION ACTIVITES.
- (4)

REPAIR CRACKS, SPALLS, AND DELAMINATIONS IN CULVERT WALLS AND UNDERSIDE OF TOP SLAB.
- (5)

EPOXY GROUT REINFORCING STEEL INTO EXISTING BOX CULVERT SLAB FOOTING AND INSTALL REINFORCING STEEL.
- (6)

FORM AND POUR SIDE WALLS AND INTERIOR TOP SLABS AS INDICATED IN THE PLANS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2E

SEALED BY



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL  
NOTES



ENVIRONMENTAL NOTES (CONT.)

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

DISTURBED AREA

- (1)

IF DISTURBED ACREAGE IS EQUAL TO ONE ACRE OR MORE, PLEASE CONTACT TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION AS SOON AS POSSIBLE BECAUSE AN NPDES PERMIT WILL BE REQUIRED.
- (2)

AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.
- (3)

UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES.
- (4)

PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 14 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS APPLIED.
- (5)

CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

SEDIMENT CONTROL

- (6)

EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- (7)

TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE/DURING A PRECIPITATION EVENT.
- (8)

THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFFSITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFFSITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE NEGOTIATED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (9)

OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- (10)

THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER DISCHARGED SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL-VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.

INSPECTION, MAINTENANCE & REPAIR

- (11)

THE TDOT CONSTRUCTION SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S RESPONSIBLE PARTY ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT CONSTRUCTION SUPERVISOR OR THEIR DESIGNEE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.
- (12)

TDOT CONSULTANTS AND CONTRACTOR STAFF RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE, AND/OR REPAIR OF EPSC MEASURES SHALL SUCCESSFULLY COMPLETE THE TDEC "LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. TDOT STAFF AND SUPERVISORS RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE, AND/OR REPAIR OF EPSC MEASURES SHALL SUCCESSFULLY COMPLETE THE TDOT "FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL" CLASS AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION.
- (13)

EPSC CONTROLS SHALL BE INSPECTED ACCORDING TO PERMIT REQUIREMENTS TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT.
- (14)

DISCHARGE POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE ROADWAY SEDIMENT TRACKING.
- (15)

UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE 24 HOUR TIMEFRAME, WRITTEN DOCUMENTATION SHALL BE PROVIDED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.
- (16)

INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES SHALL BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.
- (17)

THE EPSC PLAN SHALL BE UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.
- (18)

SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT SHALL BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.

EROSION PREVENTION

- (19)

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
- (20)

THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- (21)

NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE TDOT RESPONSIBLE PARTY. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN.

- (22)

TEMPORARY STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDAR DAYS WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION MEASURES IN DISTURBED AREAS SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY PHASE OF CONSTRUCTION.
- (23)

STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT.
- (24)

PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (25)

TEMPORARY OR PERMANENT STABILIZATION MUST BE FREE OF FINES (SILT AND CLAY SIZED PARTICLES). UNPACKED GRAVEL CONTAINING FINES OR CRUSHER-RUN WILL NOT BE CONSIDERED SUFFICIENT STABILIZATION.
- (26)

DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED.

PERMITS, PLANS & RECORDS

- (27)

THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER A CHANGE IN THE DESIGN OR CONSTRUCTION OF THE PROJECT OCCURS. THE STAGES DEPICTED IN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL PHASES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS PHASES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE PHASES OF CONSTRUCTION THAT WILL OCCUR; THUS THESE DOCUMENTS WILL HAVE TO BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

- (28)

THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.
- (29)

THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.
- (30)

CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.
- (31)

WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.
- (32)

IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2E1

SEALED BY



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL  
NOTES



ENVIRONMENTAL NOTES (CONT.)

- (33) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
- (34) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.
- (35) ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
- (36) ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
- (37) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.
- (38) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.
- (39) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

SUPPORT ACTIVITIES

- (40) IF OFFSITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT WASTE AND BORROW MANUAL.
- (41) MATERIALS AND STAGING AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN.
- (42) IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY EPSC PLANS FOR THE MATERIAL AND STAGING AREAS TO THE ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

- (43) ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE AND SPILLS.
- (44) FOR ALL HAZARDOUS MATERIALS STORED ONSITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED. SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- (45) APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ONSITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
- (46) ALL SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

- (47) THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.
- (48) IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION SHALL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR SHALL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
- (49) FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.
- (50) IF A SPILL OCCURS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT RESPONSIBLE PARTY. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.
- (51) WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, SEE THE LATEST TENNESSEE GENERAL PERMIT NO. TNR100000 STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SECTION 5.1 FOR REPORTING REQUIREMENTS.
- (52) CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ONSITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE CONTAINERS WITH A COMBINED CAPACITY OF 1320 GALLONS OR MORE SHALL HAVE SECONDARY CONTAINMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN FOR THE BULK STORAGE AND BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ONSITE AND A COPY PROVIDED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO STORING 1320 GALLONS ON SITE.

STREAMS, WETLANDS & BUFFER ZONES

- (53) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., PIER FOOTING, RIP-RAP PLACEMENT, CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS (EC-STR-31) AND TEMPORARY DIVERSION CULVERTS (EC STR-32) FOR SINGLE BARREL CULVERT CONSTRUCTION.

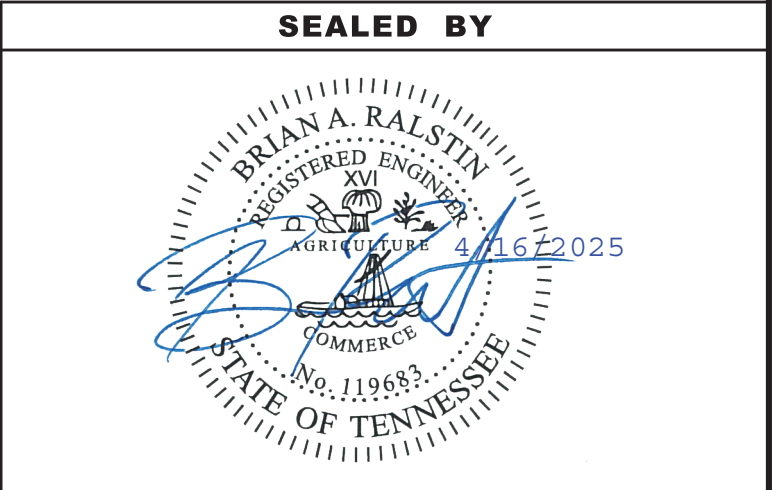
EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

STREAMS, WETLANDS & BUFFER ZONES

- (1) FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION.
- (2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES.

- (3) BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND MUST NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPs) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	2E2

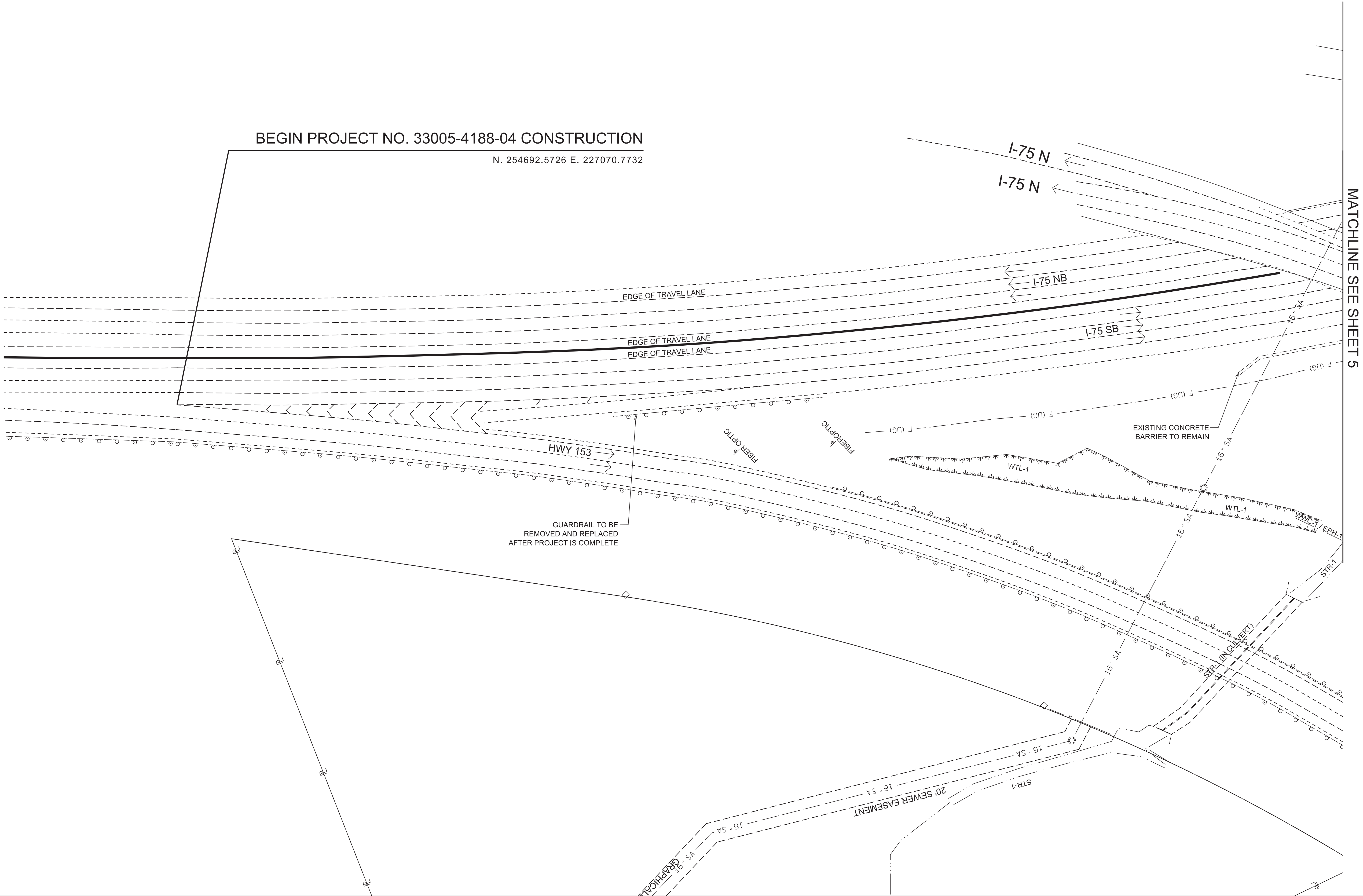
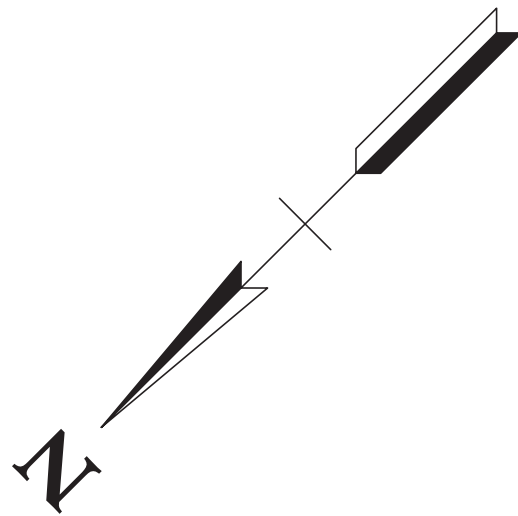


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL  
NOTES



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	4



SEALED BY

COORDINATES ARE NAD 83 (2011). ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

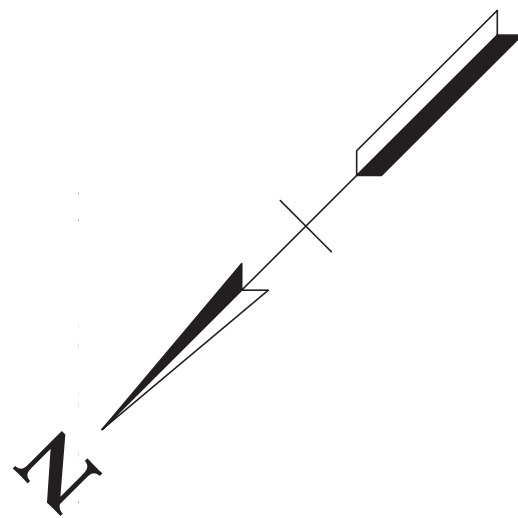
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PRESENT  
LAYOUT

SCALE: 1"=50'

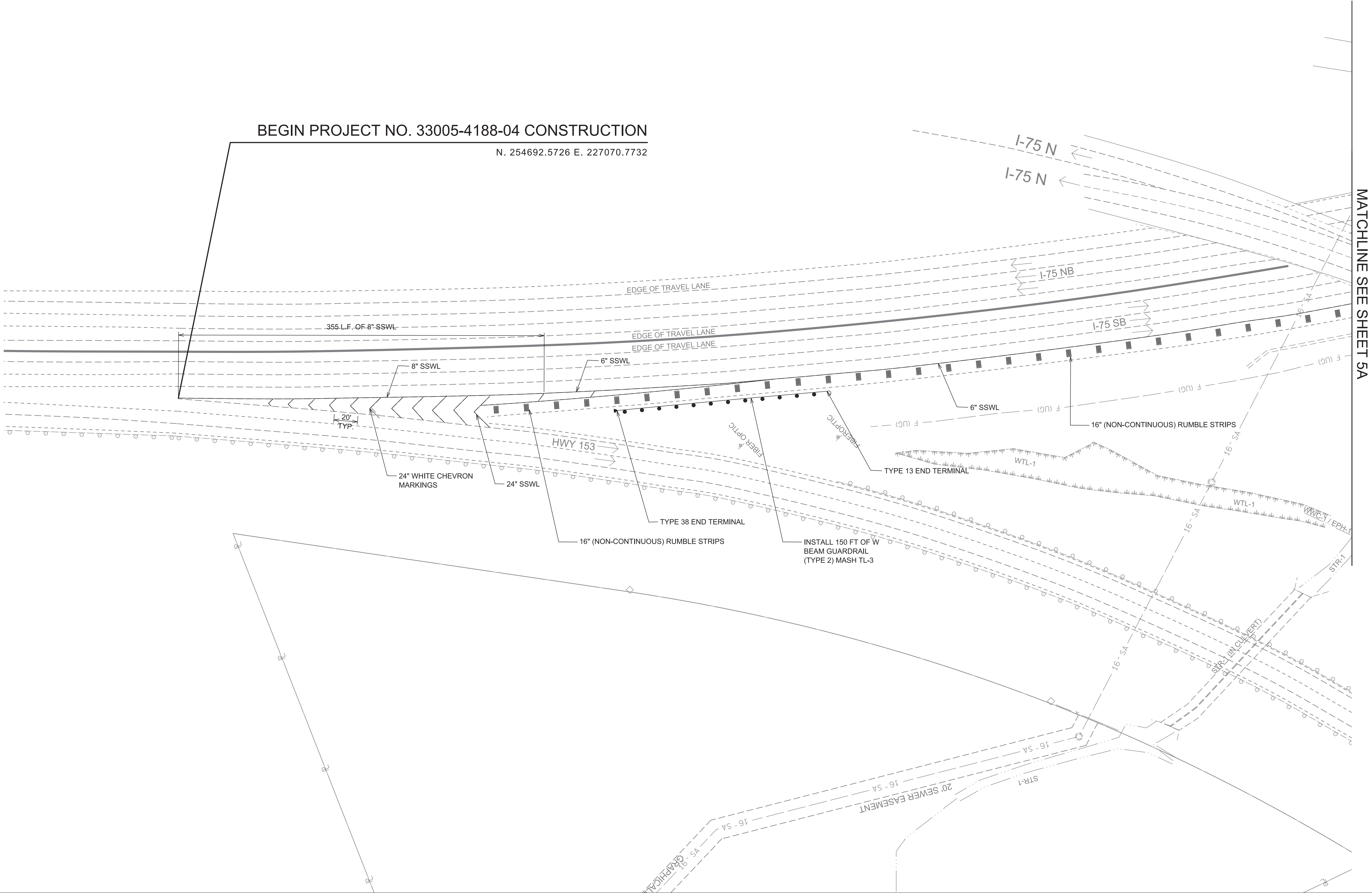


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	4A



BEGIN PROJECT NO. 33005-4188-04 CONSTRUCTION

N. 254692.5726 E. 227070.7732



MATCHLINE SEE SHEET 5A

SEALED BY

COORDINATES ARE NAD 83 (2011). ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

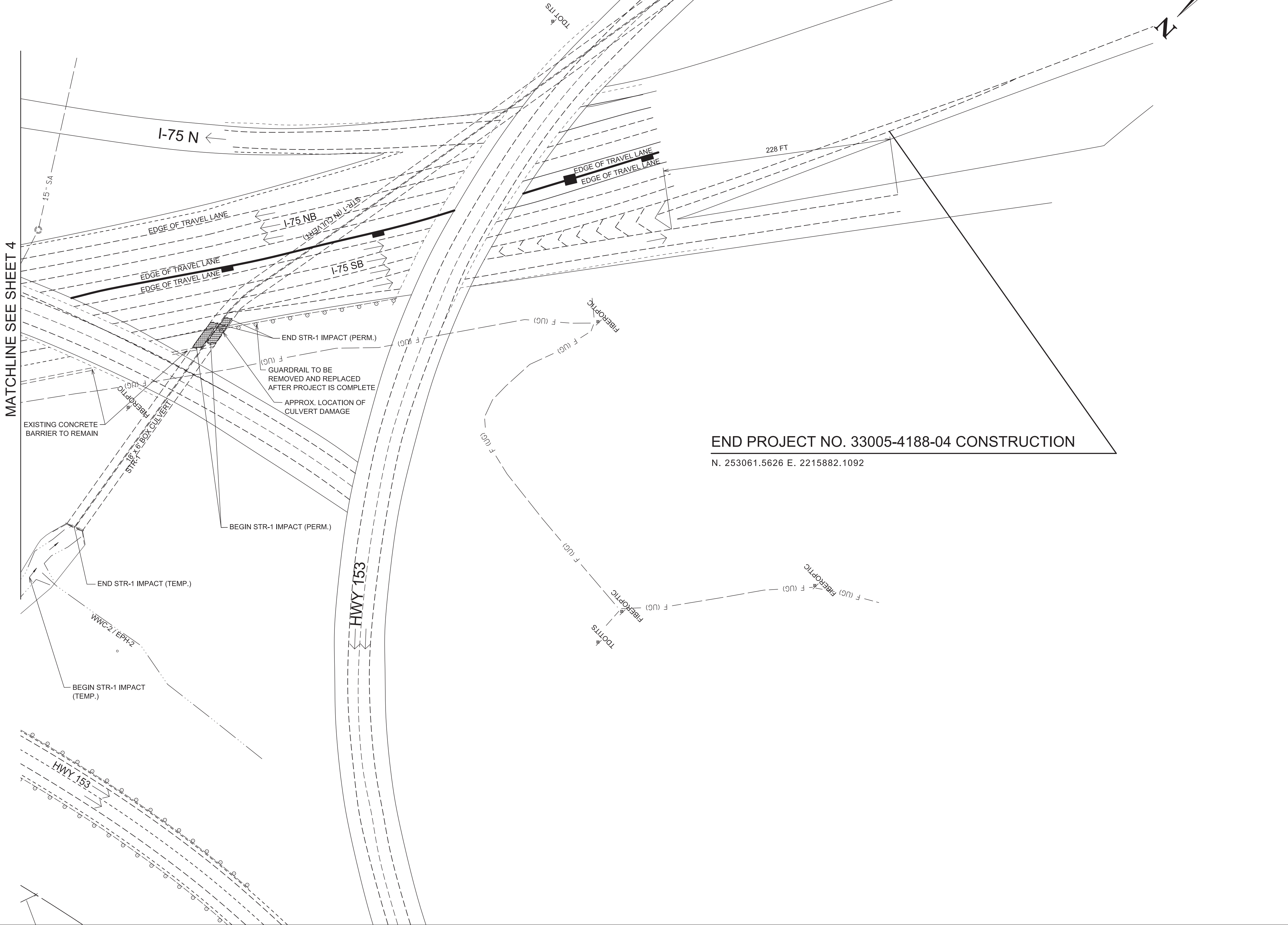
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PROPOSED  
LAYOUT

SCALE: 1"=50'



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	5



SEALED BY

COORDINATES ARE NAD 83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

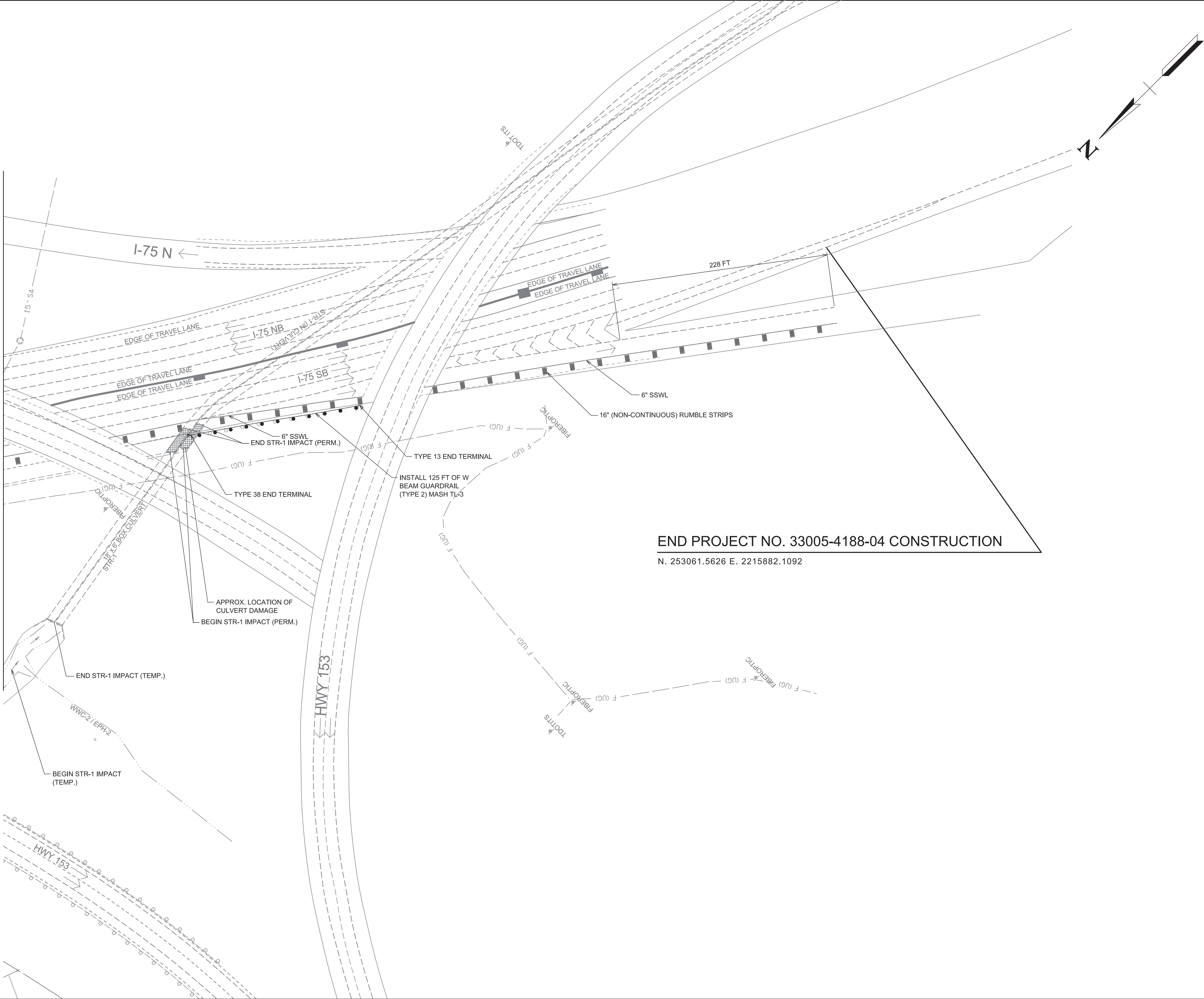
PRESENT  
LAYOUT

SCALE: 1"=50'



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	5A

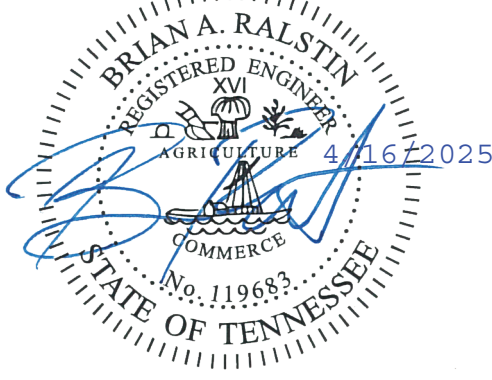
MATCHLINE SEE SHEET 4A



END PROJECT NO. 33005-4188-04 CONSTRUCTION

N. 253061.5626 E. 2215882.1092

SEALED BY



COORDINATES ARE NAD 83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PROPOSED  
LAYOUT

SCALE: 1"=50'



4/11/2025 12:46:42 PM  
Y:\Nashville\16019000S\16019020.18\Eng\_Docs\Roadway\6.sht

## EPSC NOTES

### STREAMS, WETLANDS & BUFFER ZONES

- (53) ANY WORK WITHIN THE STREAM CHANNEL AREA (E.G., PIER FOOTING, RIP-RAP PLACEMENT, CULVERT/BRIDGE CONSTRUCTION, ETC.) SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW FLOW CONDITIONS. ALL ITEMS USED WITHIN THE STREAM CHANNEL AREA FOR DIVERSION OF FLOW (OR EXPECTED FLOW), UNLESS SPECIFIED IN THE PLANS, SHALL NOT BE PAID FOR DIRECTLY BUT SHALL BE INCLUDED IN THE COST OF OTHER ITEMS. THIS NOTE EXCLUDES ANY ITEMS SPECIFIED IN THE PLANS FOR THE TEMPORARY DIVERSION CHANNELS (EC-STR-31) AND TEMPORARY DIVERSION CULVERTS (EC STR-32) FOR SINGLE BARREL CULVERT CONSTRUCTION.

### EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

### STREAMS, WETLANDS & BUFFER ZONES

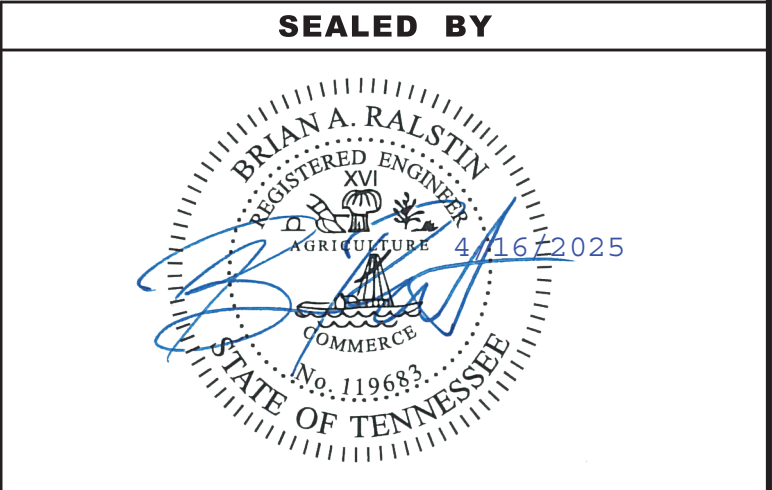
- (1) FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION.
- (2) A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES.
- (3) BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND MUST NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(5) 203-04	PLACING AND SPREADING TOPSOIL	C.Y.	170
(1) 209-05	SEDIMENT REMOVAL	C.Y.	17
(1)(3) 209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	1538
(1) 209-08.08	ENHANCED ROCK CHECK DAM	EACH	2
(1) 209-09.04	SEDIMENT FILTER BAG (15' X 10')	EACH	1
(1)(2) 209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	150
(1) 303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	8
(1) 707-08.11	HIGH VISIBILITY CONSTRUCTION FENCE	L.F.	1400
(1) 740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	80
(1)(4) 801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	19
(1) 801-03	WATER (SEEDING & SODDING)	M.G.	3
(1) 801-01.38	NATIVE SEED MIX FINAL STABILIZATION OF SLOPES	UNIT	19
(5) 803-01	SODDING (NEW SOD)	S.Y.	1000

EPSC FOOTNOTES	
(1)	SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATION FOR MAINTENANCE REPLACEMENT. ALL ITEMS ARE TO BE USED AS DIRECTED BY ENGINEER.
(2)	PAY ITEM SHALL INCLUDE ALL NECESSARY INCIDENTALS FOR STREAM DIVERSION AND DE-WATERING AROUND CULVERT AND WORK AREA.
(3)	PAY ITEM INCLUDES 87.6 L.F. FOR SEDIMENT FILTER BAG (15' X 10').
(4)	PAY ITEM SHALL INCLUDE ALL INCIDENTALS INCLUDING WATER.
(5)	ITEM SHALL BE USED TO REPAIR DISTURBANCE FROM INSTALLATION AND REMOVAL OF HAUL ROAD.

OUTFALL INFORMATION								
OUTFALL LABEL	STAGE 1		STAGE 2		STAGE 3		SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING NATURAL RESOURCE NAME OR LABEL
	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)	SLOPE WITHIN ROW (%)	DRAINAGE AREA (AC)		
OUTFALL 1	4.2	1.62	4.2	1.62	4.2	1.62	N/A	STR-1
OUTFALL 2	3.8	2.09	3.8	2.09	3.8	2.09	N/A	STR-1

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	6

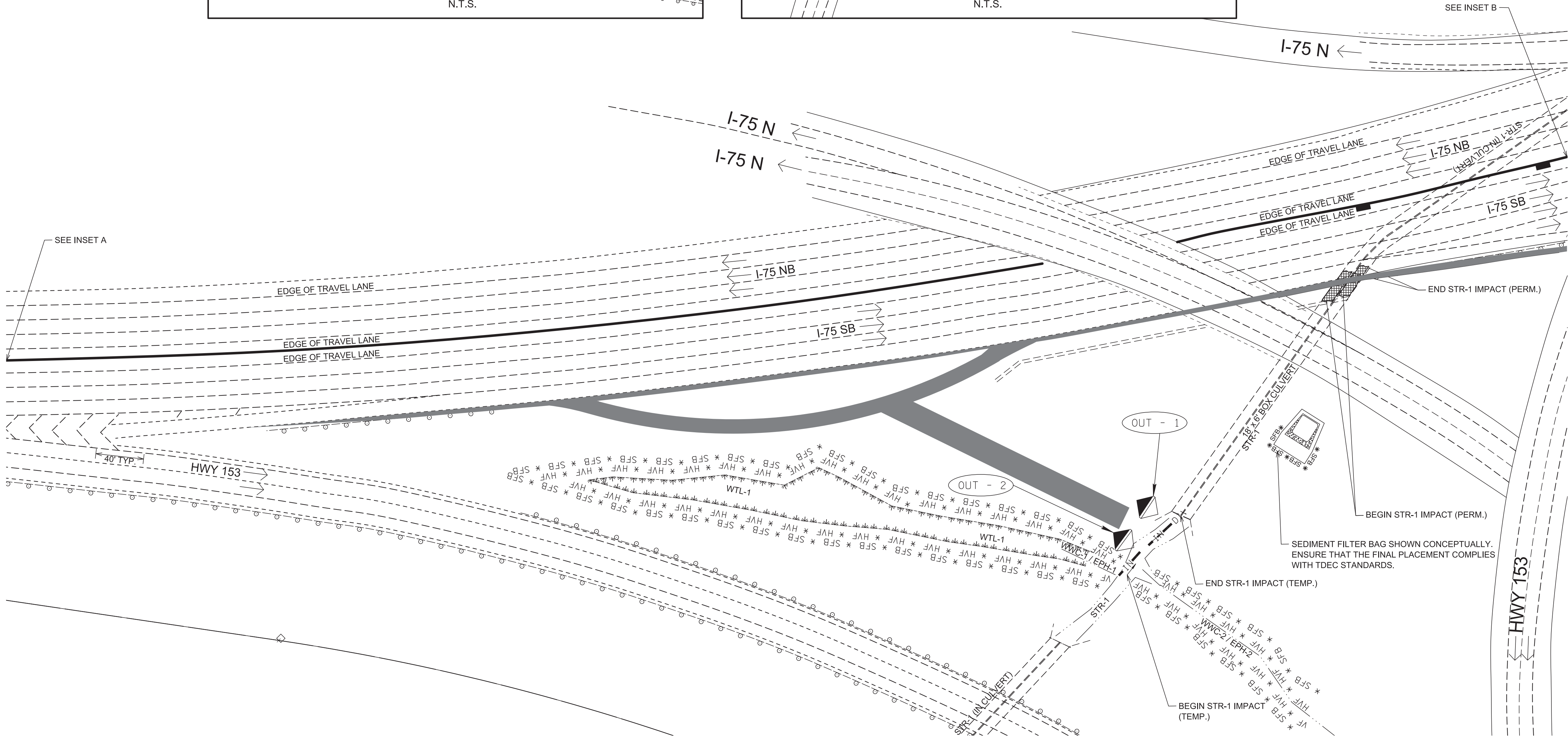
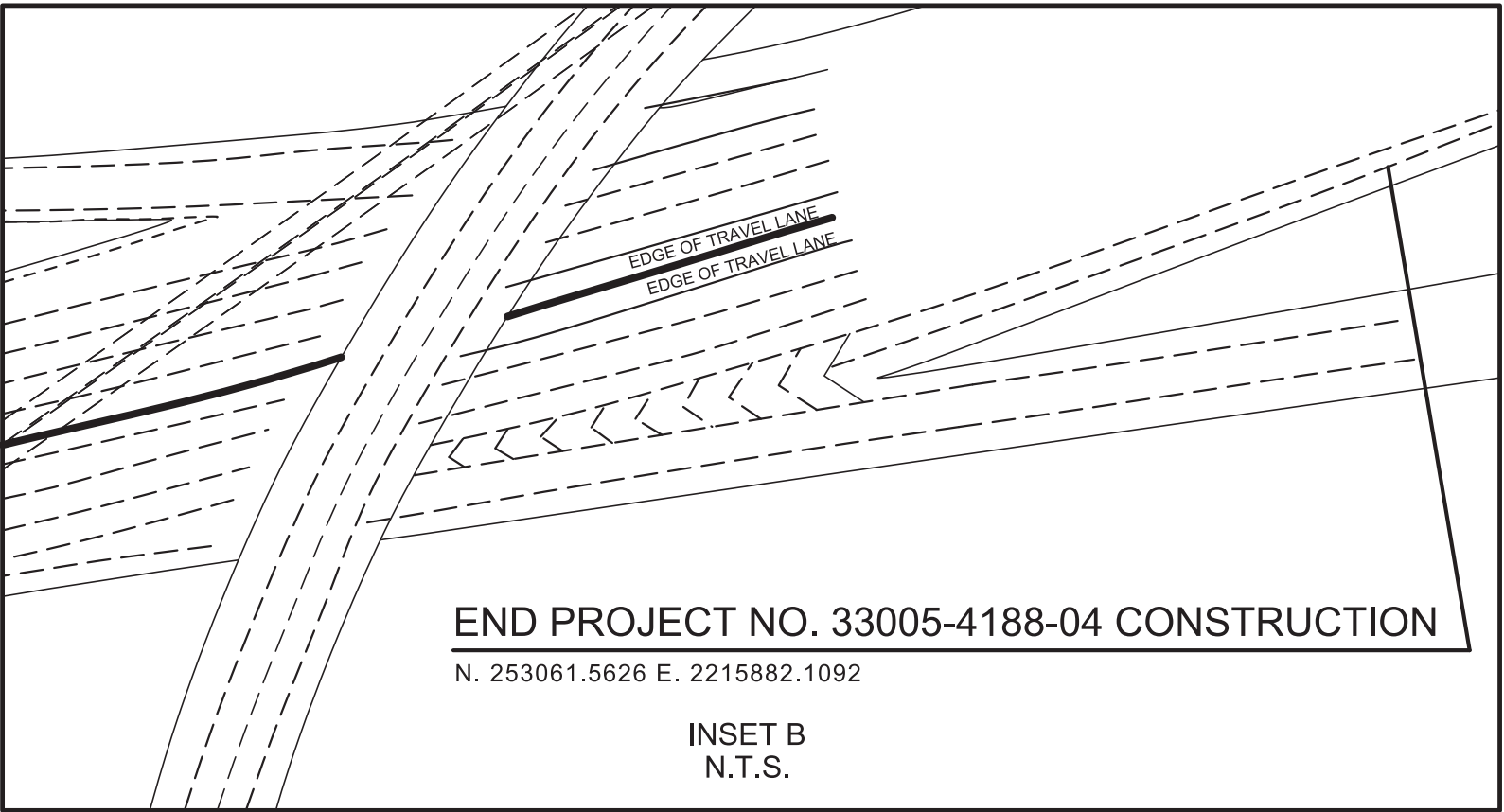
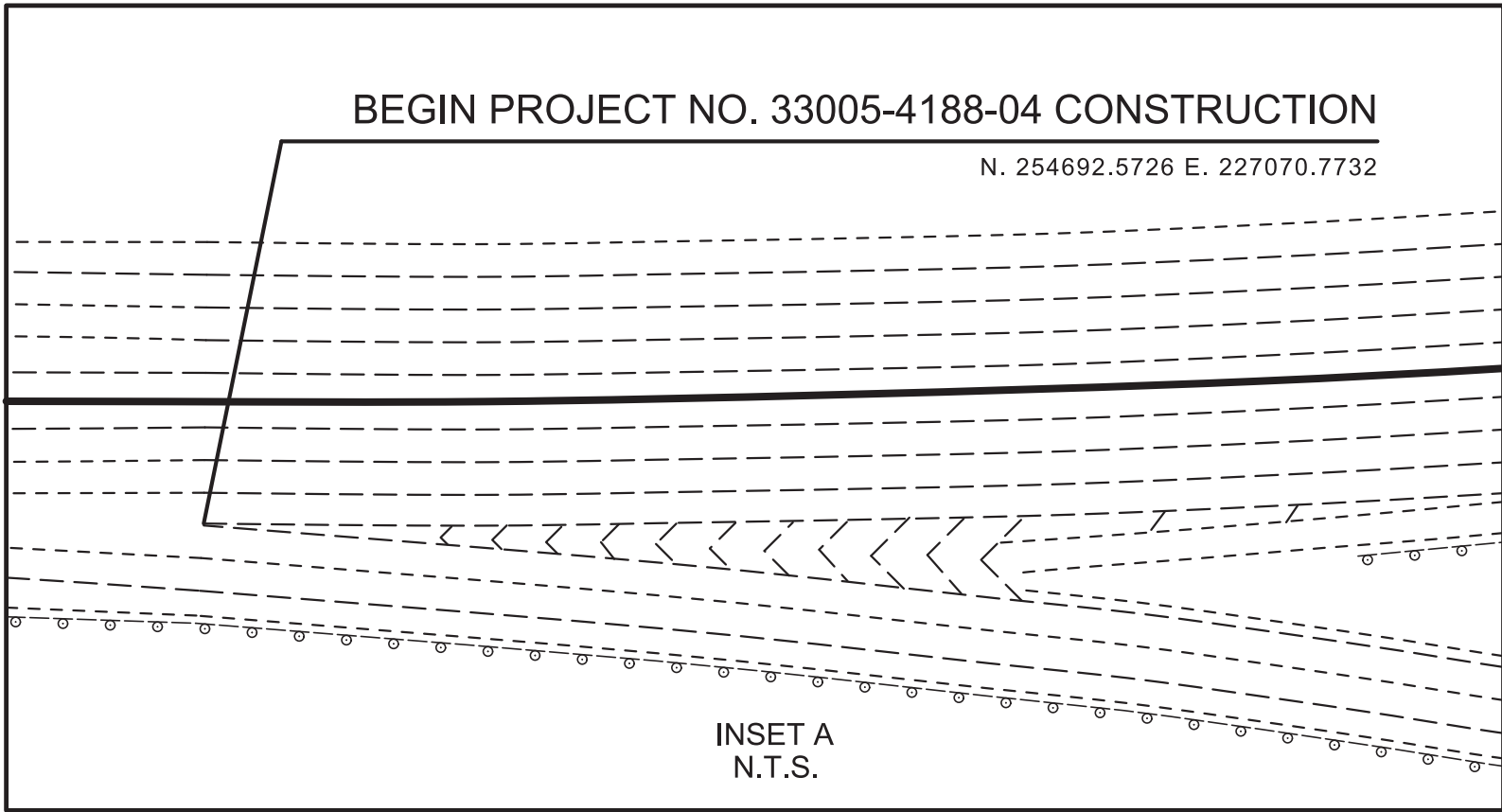
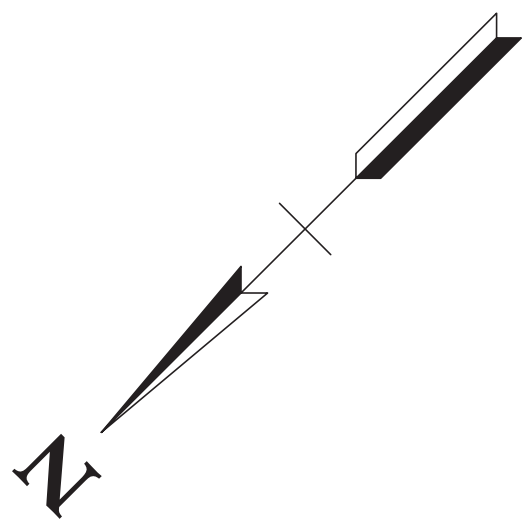


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

EROSION  
PREVENTION &  
SEDIMENT CONTROL  
(EPSC) NOTES, OUTFALL  
TABLE, AND QUANTITIES



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	6A

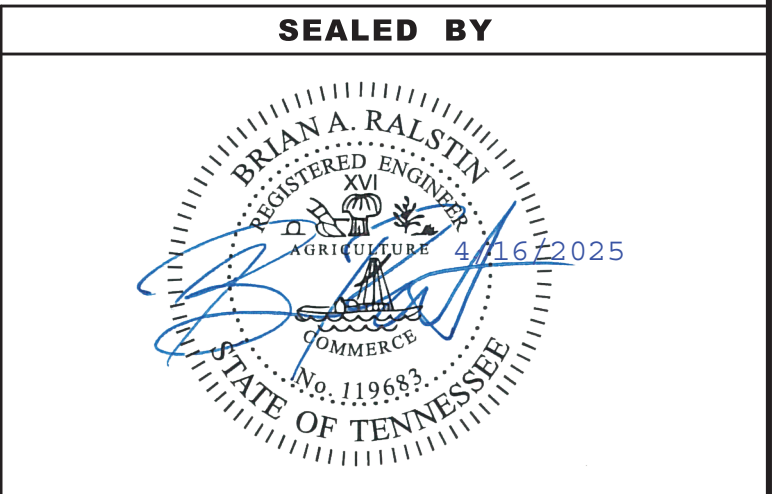


NOTES:

1. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF WTL-1, WWC-1/EPH-1 AND WWC-2/EPH-2; AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.
2. HIGH-VISIBILITY FENCE (HVF) SHALL BE PLACED ALONG ALL NON-IMPACTED PORTIONS OF WTL-1, WWC-1/EPH-1 AND WWC-2/EPH-2.
3. EPSC MEASURES SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF THE PROJECT.
4. THE CONTRACTOR SHALL CONTACT THE PROJECT ECOLOGIST A MINIMUM OF TWO WEEKS PRIOR TO WORK IN THIS AREA TO VERIFY THE WETLAND LIMITS. CONTACT: COLBY MANN (PHONE: 423-353-0274)
5. ANY WORK WITHIN THE WETLANDS AND WWC/EPH IS PROHIBITED.
6. CONTRACTOR SHALL REFER TO DRAINAGE MANUAL FOR MINIMUM BUFFER DISTANCES BETWEEN ENVIRONMENTAL FEATURES AND EPSC MEASURES.
7. WORK WITHIN STR-1 SHALL BE CONDUCTED IN TWO PHASES (3 MTHS./PHASE) AND THE INSTREAM DIVERSION SHALL BE ALTERNATED TO ALLOW FOR FLOW INTO ONE BARREL.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* HVF * HVF *	HIGH VISIBILITY FENCE	S-F-1
	SEDIMENT FILTER BAG 15' x 10'	EC-STR-2
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A

STAGE I



COORDINATES ARE NAD 83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

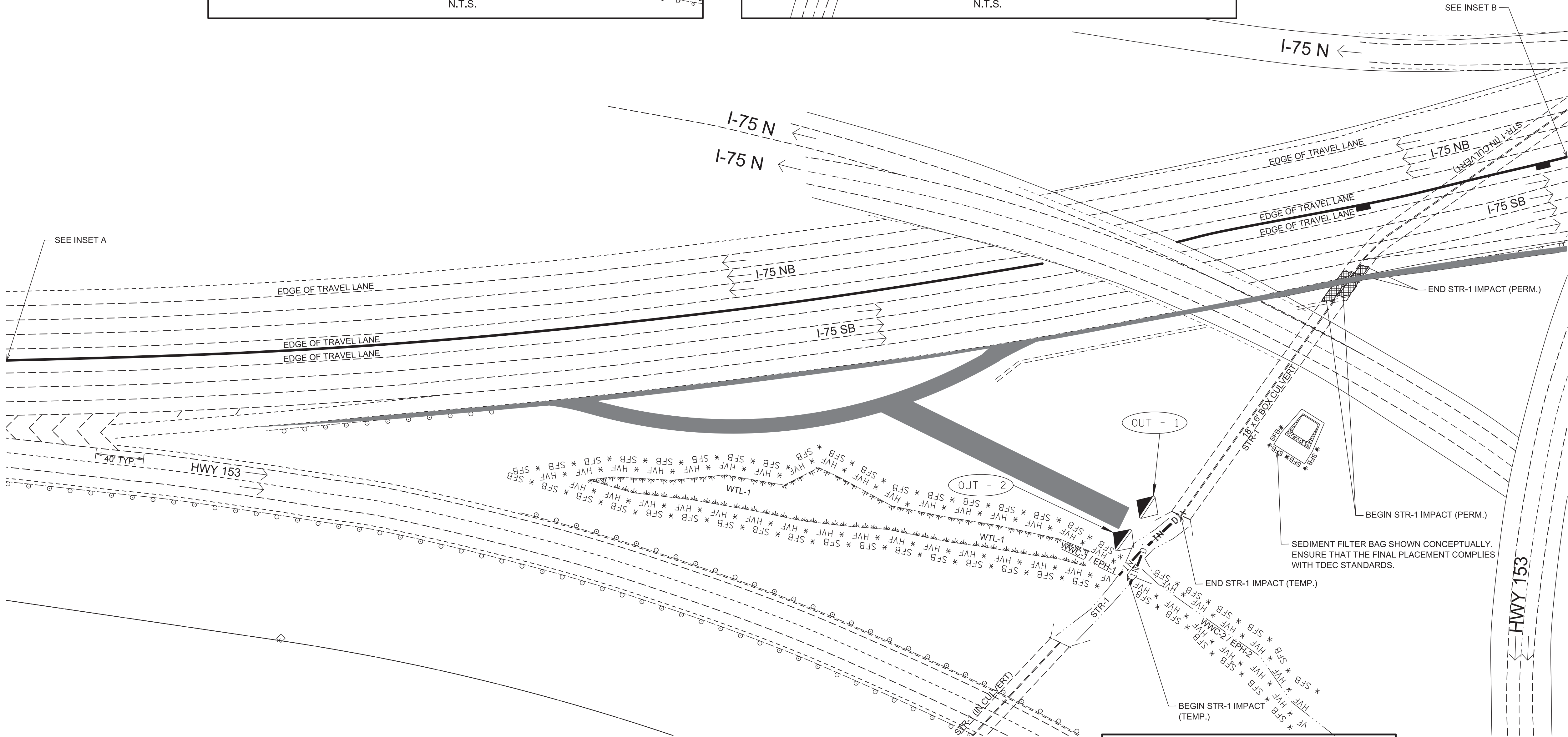
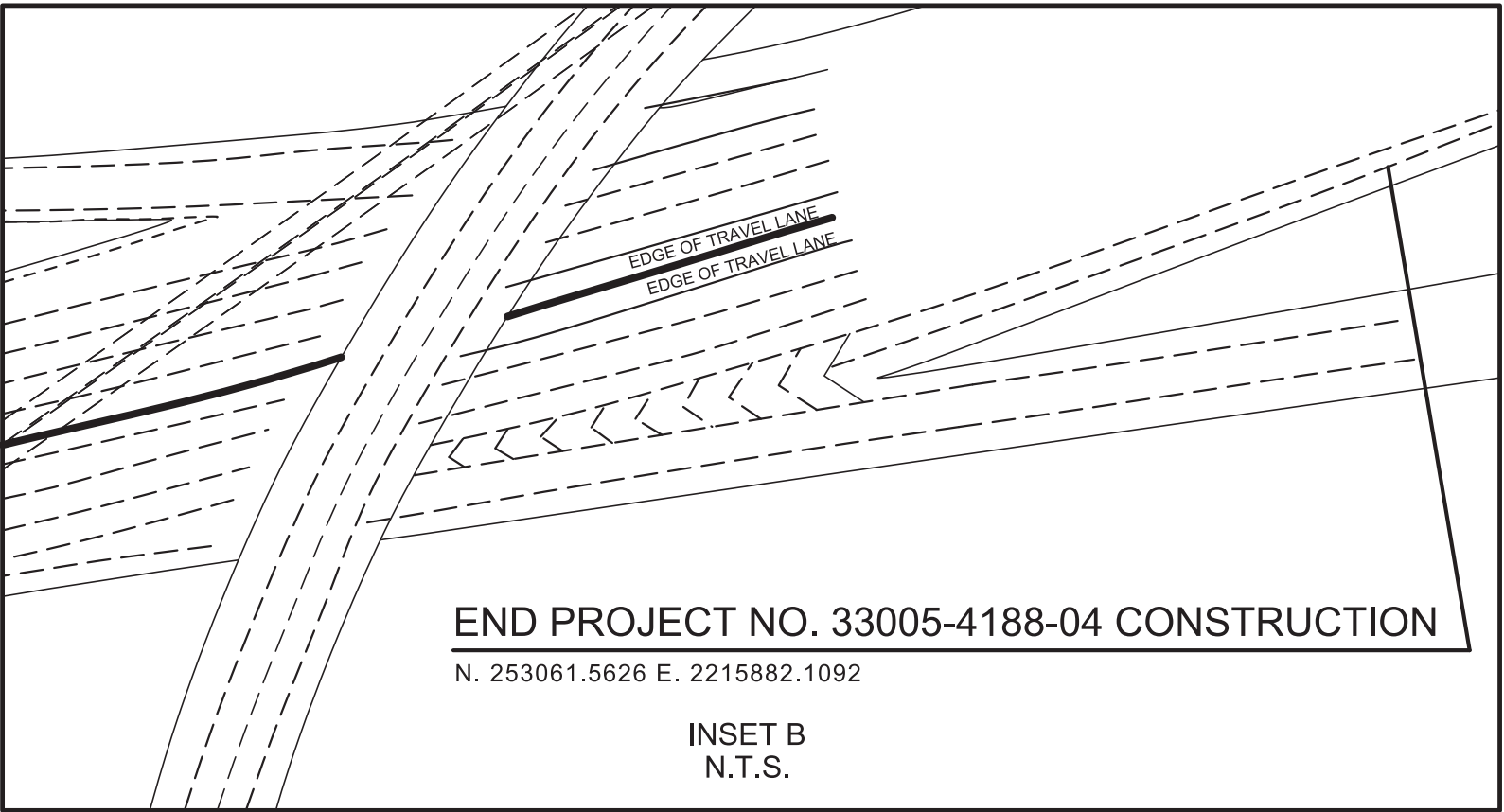
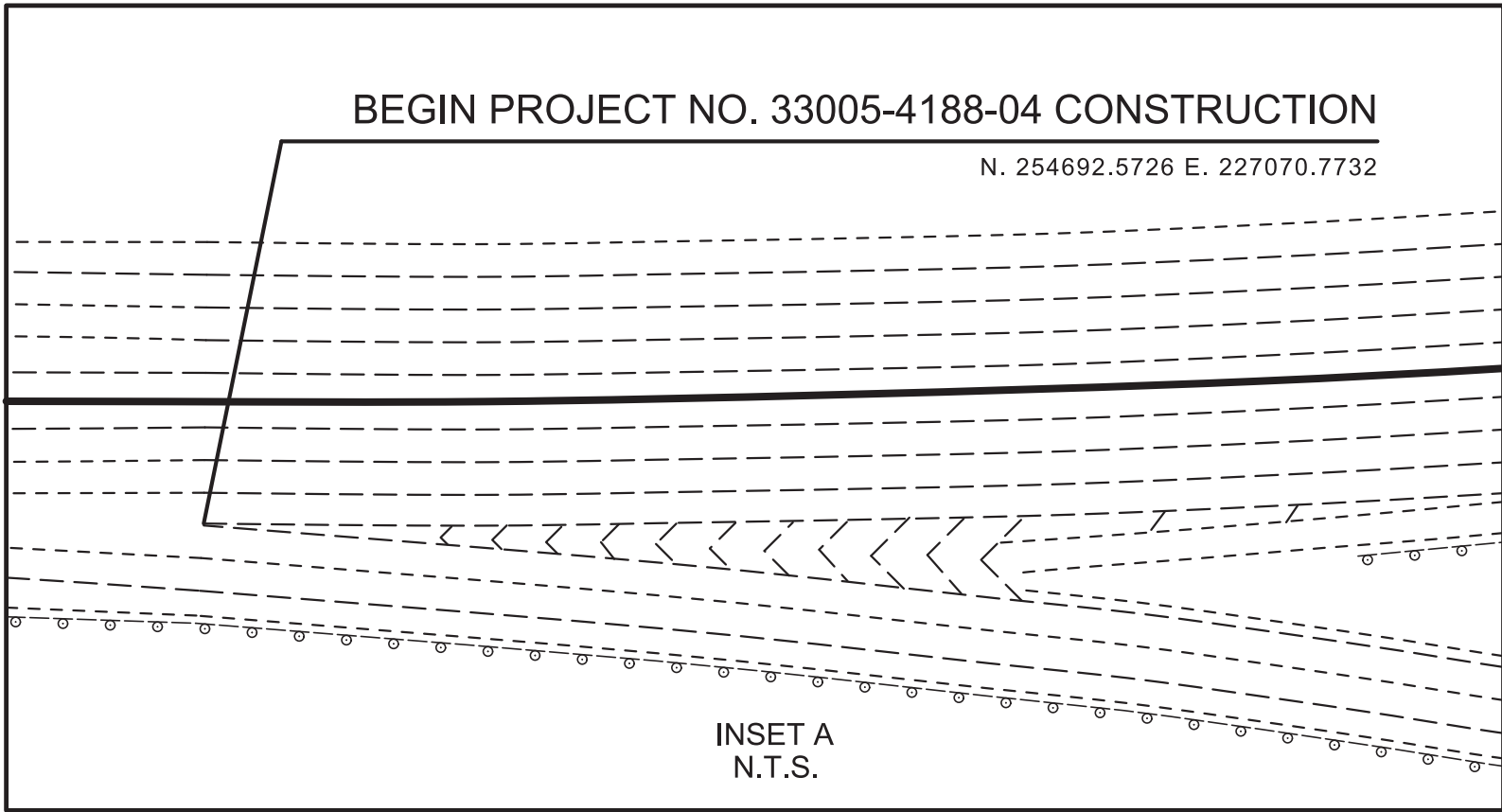
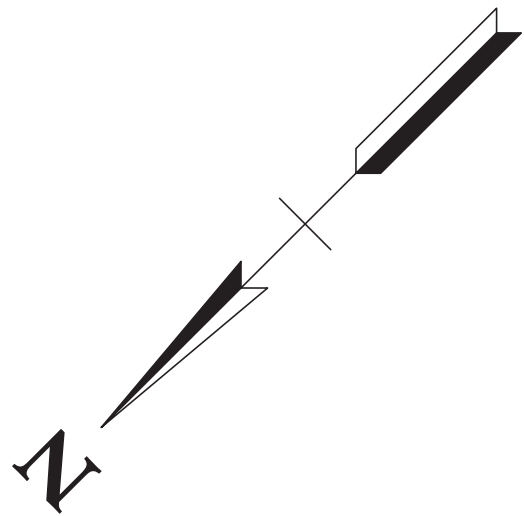
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

EROSION  
PREVENTION &  
SEDIMENT CONTROL  
(EPSC) PLANS

SCALE: 1"=50'



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	7



NOTES:

1. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF WTL-1, WWC-1/EPH-1 AND WWC-2/EPH-2; AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.
2. HIGH-VISIBILITY FENCE (HVF) SHALL BE PLACED ALONG ALL NON-IMPACTED PORTIONS OF WTL-1, WWC-1/EPH-1 AND WWC-2/EPH-2.
3. EPSC MEASURES SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF THE PROJECT.
4. THE CONTRACTOR SHALL CONTACT THE PROJECT ECOLOGIST A MINIMUM OF TWO WEEKS PRIOR TO WORK IN THIS AREA TO VERIFY THE WETLAND LIMITS. CONTACT: COLBY MANN (PHONE: 423-353-0274)
5. ANY WORK WITHIN THE WETLANDS AND WWC/EPH IS PROHIBITED.
6. CONTRACTOR SHALL REFER TO DRAINAGE MANUAL FOR MINIMUM BUFFER DISTANCES BETWEEN ENVIRONMENTAL FEATURES AND EPSC MEASURES.
7. WORK WITHIN STR-1 SHALL BE USED FOR WORK IN BARREL 2 FOR STAGE II.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* HVF * HVF *	HIGH VISIBILITY FENCE	S-F-1
	SEDIMENT FILTER BAG 15' x 10'	EC-STR-2
— IN — DIV —	INSTREAM DIVERSION	EC-STR-30
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A

STAGE II

SEALED BY

COORDINATES ARE NAD 83 (2011). ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

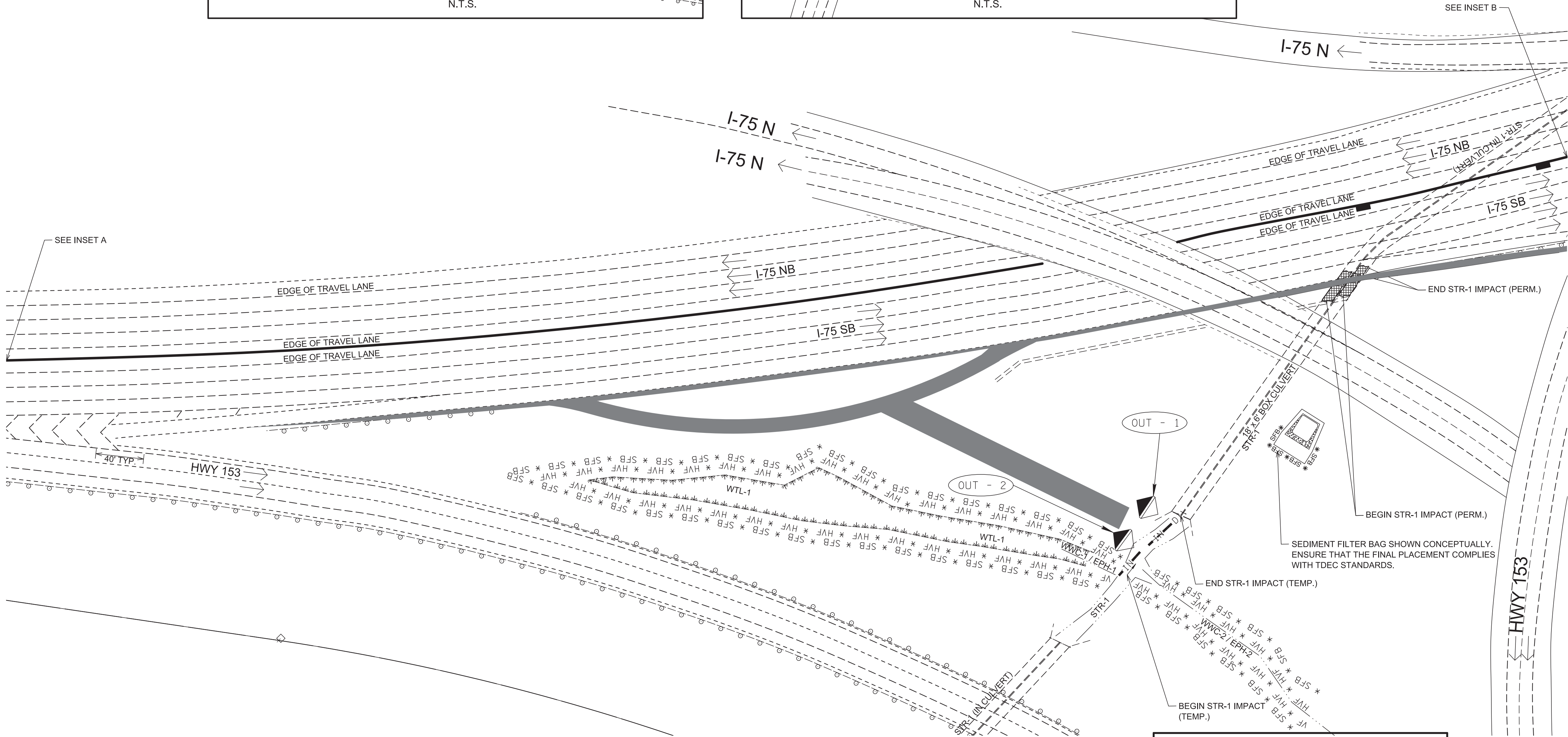
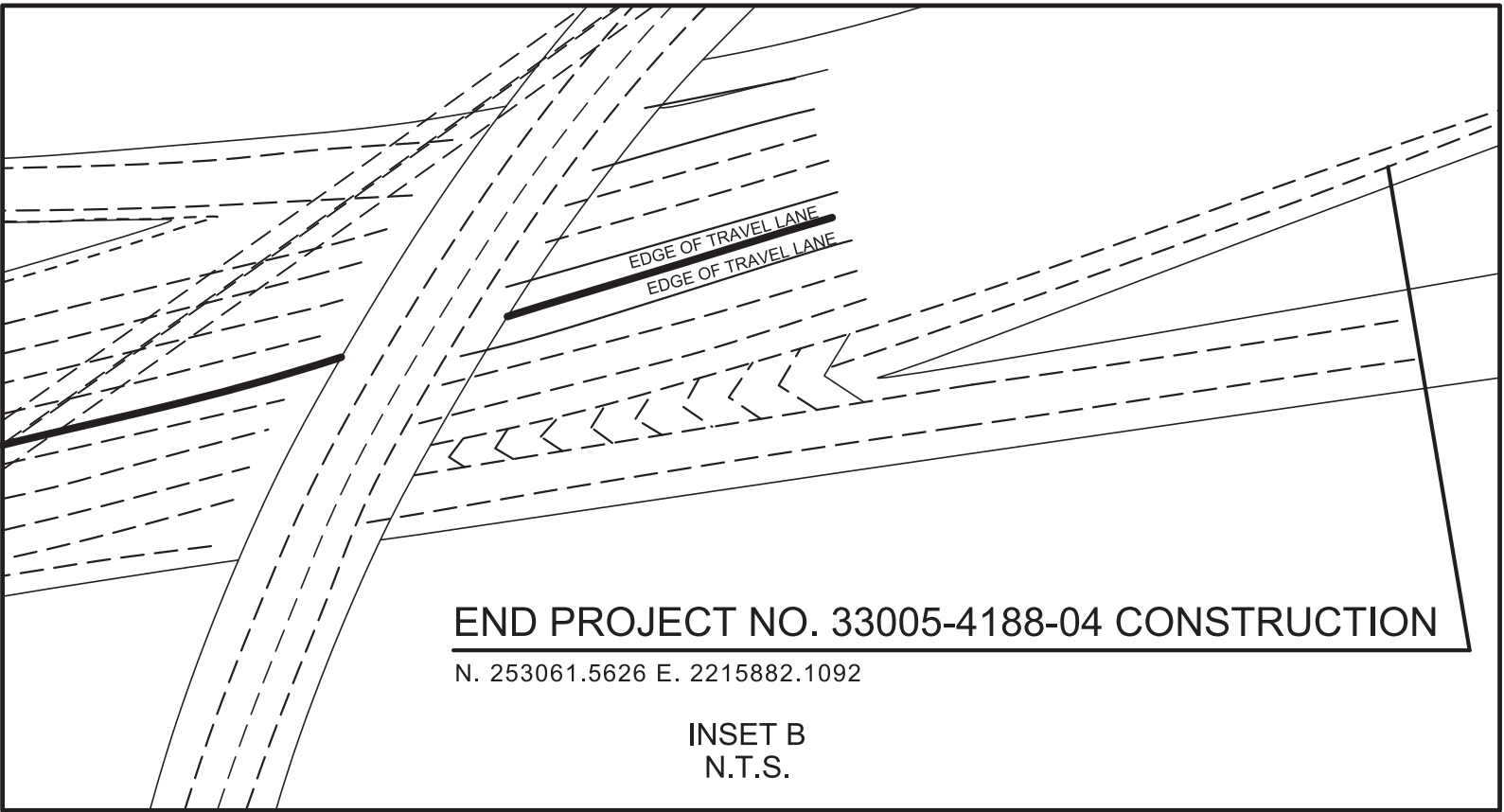
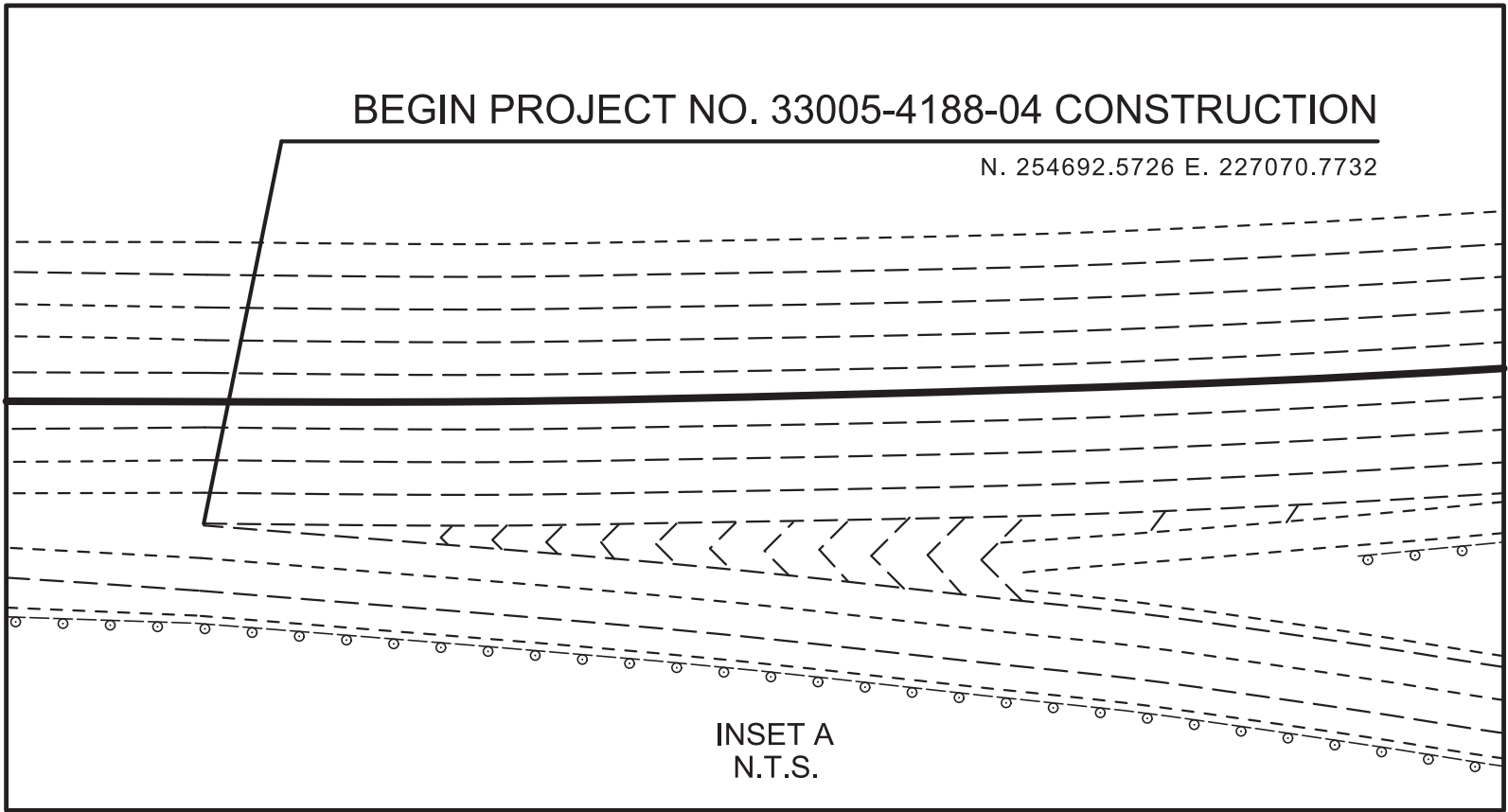
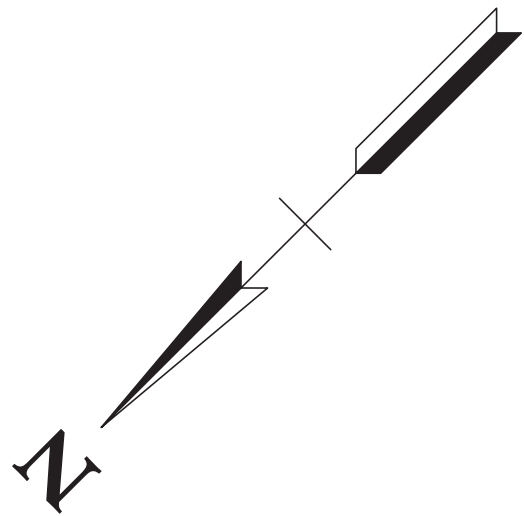
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

**EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS**

SCALE: 1"=50'



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	8



NOTES:

1. THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF WTL-1, WWC-1/EPH-1 AND WWC-2/EPH-2; AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.
2. HIGH-VISIBILITY FENCE (HVF) SHALL BE PLACED ALONG ALL NON-IMPACTED PORTIONS OF WTL-1, WWC-1/EPH-1 AND WWC-2/EPH-2.
3. EPSC MEASURES SHALL REMAIN IN PLACE UNTIL THE COMPLETION OF THE PROJECT.
4. THE CONTRACTOR SHALL CONTACT THE PROJECT ECOLOGIST A MINIMUM OF TWO WEEKS PRIOR TO WORK IN THIS AREA TO VERIFY THE WETLAND LIMITS. CONTACT: COLBY MANN (PHONE: 423-353-0274)
5. ANY WORK WITHIN THE WETLANDS AND WWC/EPH IS PROHIBITED.
6. CONTRACTOR SHALL REFER TO DRAINAGE MANUAL FOR MINIMUM BUFFER DISTANCES BETWEEN ENVIRONMENTAL FEATURES AND EPSC MEASURES.
7. WORK WITHIN STR-1 SHALL BE USED FOR WORK IN BARREL 1 FOR STAGE III.
8. AFTER STAGE III ALL EPSC MEASURES SHALL BE REMOVED AND WORK ZONES STABILIZED.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
* HVF * HVF *	HIGH VISIBILITY FENCE	S-F-1
	SEDIMENT FILTER BAG 15' x 10'	EC-STR-2
— IN — DIV —	INSTREAM DIVERSION	EC-STR-30
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A

STAGE III

SEALED BY

COORDINATES ARE NAD 83 (2011). ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

SCALE: 1"=50'



4/11/2025 12:46:56 PM  
Y:\Nashville\16019000S\16019020.18\Eng\_Docs\Roadway\T1.sht

PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

A. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES OR TRAFFIC LANE AND SHOULDER WHERE THE TRAFFIC LANE IS BEING USED BY TRAFFIC, CAUSED BY BASE, PAVING OR RESURFACING:

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 1.75 INCHES:
- a. WARNING SIGNS, UNEVEN LANES (W8-11) AND/OR SHOULDER DROP-OFF WITH PLAQUE (W8-17 AND W8-17P), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

b. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY ADDED PAVEMENT SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

c. DIFFERENCES IN ELEVATION BETWEEN ADJACENT TRAFFIC LANES BEING UTILIZED BY TRAFFIC CAUSED BY COLD PLANING SHALL BE ELIMINATED WITHIN THREE WORKDAYS.

d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.
2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 1.75 INCHES AND NOT EXCEEDING 6 INCHES, TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.
- a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

(1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

(2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.
- b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH a, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

- c. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE THROUGH TRAFFIC LANE AND THE SHOULDER AND THE ELEVATION DIFFERENCE IS LESS THAN 3 INCHES, THE CONTRACTOR MAY USE WARNING SIGNS AND/OR PROTECTIVE DEVICES AS APPLICABLE AND APPROVED BY THE REGIONAL TRAFFIC ENGINEER. SEE PARAGRAPH a REGARDING USE OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) WILL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 2 MILES IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

3. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 6 INCHES BUT NOT EXCEEDING 18 INCHES, THE CONTRACTOR, WITH THE ENGINEER'S APPROVAL, MAY UTILIZE ONE OF THE FOLLOWING:

- a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:
- (1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

(2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

IN ORDER TO USE THIS METHOD, THE CONTRACTOR MUST REDUCE THE DIFFERENCE IN ELEVATION TO 6 INCHES OR LESS BY THE END OF THE WORKDAY THAT THE CONDITION IS CREATED.

- b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.
- c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.
- d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

FOR PRECEDING CONDITIONS a, b, AND c, THE CONTRACTOR SHALL USE THE SHOULDER DROP-OFF WARNING SIGN WITH PLAQUE (W8-17 AND W8-17P). IT SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN THE SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. IN THESE SITUATIONS, THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

4. FOR DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 18 INCHES.

SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

IN THIS SITUATION THE CONTRACTOR SHALL LIMIT HIS OPERATIONS TO ONE WORK ZONE NOT EXCEEDING 1 MILE IN LENGTH UNLESS OTHERWISE NOTED ON THE PLANS OR APPROVED BY THE ENGINEER. ONCE THE CONTRACTOR BEGINS WORK IN A WORK ZONE, A CONTINUOUS OPERATION SHALL BE MAINTAINED UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED. SIMULTANEOUS WORK ON SEPARATE ROADWAYS OF DIVIDED HIGHWAYS WILL BE CONSIDERED INDEPENDENTLY IN REGARD TO RESTRICTION OF WORK ZONE ACTIVITY.

B. IF THE DIFFERENCE IN ELEVATION IS WITHIN 30 FEET OF THE NEAREST TRAFFIC LANE BEING USED BY TRAFFIC CAUSED BY GRADING, EXCAVATION FOR UTILITIES, DRAINAGE STRUCTURES, UNDERCUTTING, ETC.:

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES.
- a. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.
2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:
- a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

(1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

(2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.
3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:
- a. SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

(1) WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.

(2) WHERE POSTED SPEEDS ARE LESS THAN 50 MPH THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.
- b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE WITHIN 8 FEET OF A TRAFFIC LANE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

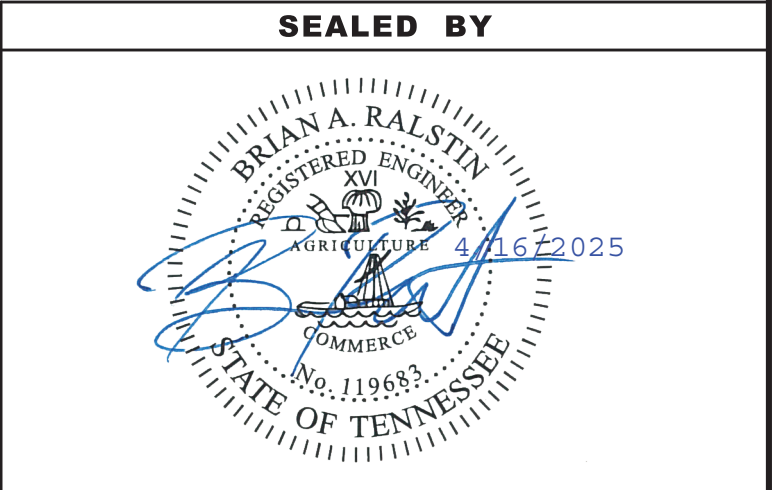
C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

SEPARATION SHALL BE ACCOMPLISHED BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

1. WHERE POSTED SPEEDS ARE 50 MPH OR GREATER, SPACING OF THE PROTECTIVE DEVICES SHALL NOT EXCEED 100 FEET.
2. WHERE POSTED SPEEDS ARE LESS THAN 50 MPH, THE MAXIMUM SPACING OF THE PROTECTIVE DEVICES IN FEET SHALL NOT EXCEED TWICE THE POSTED SPEED IN MILES PER HOUR OR 50 FEET, WHICHEVER SPACING IS GREATER.

THE CONTRACTOR SHALL SCHEDULE THE WORK SO AS TO MINIMIZE THE TIME TRAFFIC IS EXPOSED TO AN ELEVATION DIFFERENCE. ONCE THE CONTRACTOR BEGINS AN ACTIVITY THAT CREATES AN ELEVATION DIFFERENCE, THE ACTIVITY SHALL BE PURSUED AS A CONTINUOUS OPERATION UNTIL THE ELEVATION DIFFERENCE IS ELIMINATED.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	T 1



STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE  
DROP-OFF NOTES  
FOR  
TRAFFIC CONTROL



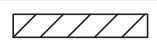





TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	T2

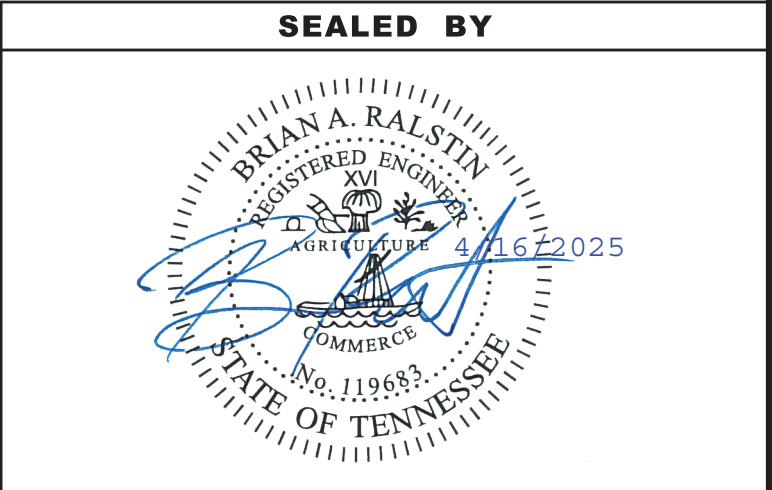
TRAFFIC CONTROL QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	REMARKS
(1) 303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	371	
(1) 307-01.08	ASPHALT CONCRETE MIX (PG64-22)(BPMB-HM) GRADING B-M2	TON	163	
(1) 402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	3	
(1) 402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	9	
(1) 403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	2	
(1) 411-01.10	ACS MIX(PG64-22) GRADING D	TON	109	
706-01	GUARDRAIL REMOVED	L.F.	385	
712-01	TRAFFIC CONTROL	LS	1	
712-02.10	PORTABLE BARRIER RAIL (MASH TL-3)	L.F.	1540	
712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EA	1	
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EA	50	
712-06	SIGNS (CONSTRUCTION)	S.F.	101	

(1)  
(1)  
(1)  
(1)  
(1)  
(1)  
(1)

TRAFFIC CONTROL SIGN TABULATION						
M.U.T.C.D. SIGN NO.	LEGEND	SIZE IN INCHES L x W	S.F.	NO. REQUIRED PHASE I	TOTAL NO . REQUIRED	ITEM NO. 712-06 S.F.
W20-1	ROAD WORK 1 MILE	48" X 48"	8.00	2	2	16.00
W20-1	ROAD WORK 1/2 MILE	48" X 48"	8.00	2	2	16.00
W21-5R	RIGHT SHOULDER CLOSED 1500 FT	48" X 48"	8.00	2	2	16.00
W21-5R	RIGHT SHOULDER CLOSED	48" X 48"	8.00	2	2	16.00
W11-V4	TRUCKS ENTERING HIGHWAY	48" X 48"	8.00	1	1	8.00
G20-2	END ROAD WORK	36" X 18"	4.50	4	4	18.00
SPECIAL	CONSTRUCTION TRAFFIC ONLY	42" X 36"	10.50	1	1	10.50
					TOTAL	101

FOOTNOTES	
(1)	ITEMS SHALL BE USED FOR TEMPORARY PAVEMENT AND HAUL ROADS.

TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	WORK ZONE
	SIGN (CONSTRUCTION)
	TRAFFIC FLOW
	PORTABLE BARRIER RAIL
	TEMPORARY ATTENUATOR
	FLEXIBLE DRUMS (CHANNELIZING)

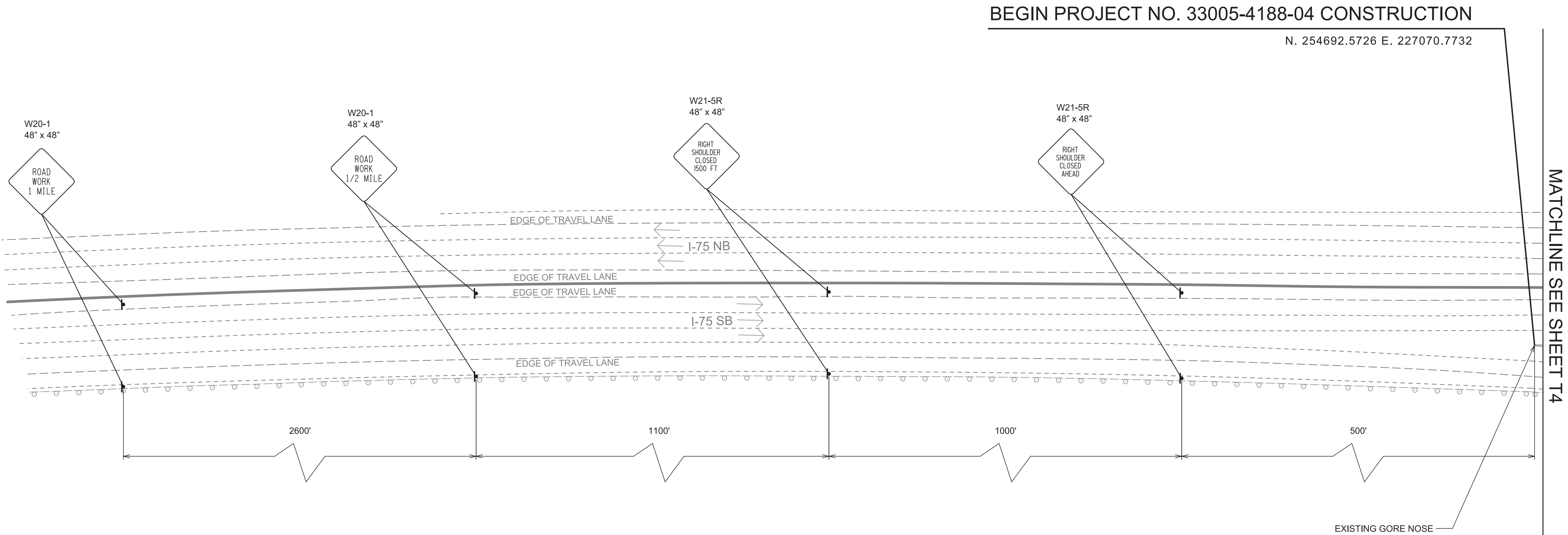
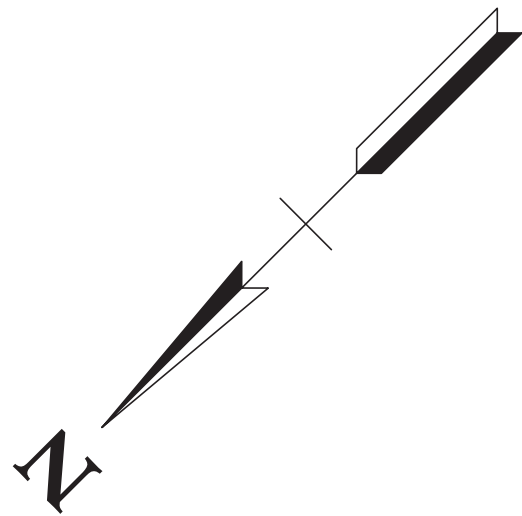


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL  
LEGEND AND  
TABULATION



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	T3



- PHASING NOTES
1. SEE STD. DWG. T-WZ-18 FOR SHOULDER CLOSURE DETAILS.
  2. COMPLETE SHOULDER CLOSURE AND COMPLETE WORK FOR WIDENING AND HAUL ROAD.
  3. REMOVE PAVEMENT FROM WIDENING AND HAUL ROAD INSTALLATION.
  4. COMPLETE REMEDIATION OF SITE BACK TO EXISTING CONDITIONS.
  5. REMOVE SHOULDER CLOSURE AND TRAFFIC CONTROL SIGNS.

SEALED BY

COORDINATES ARE NAD 83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

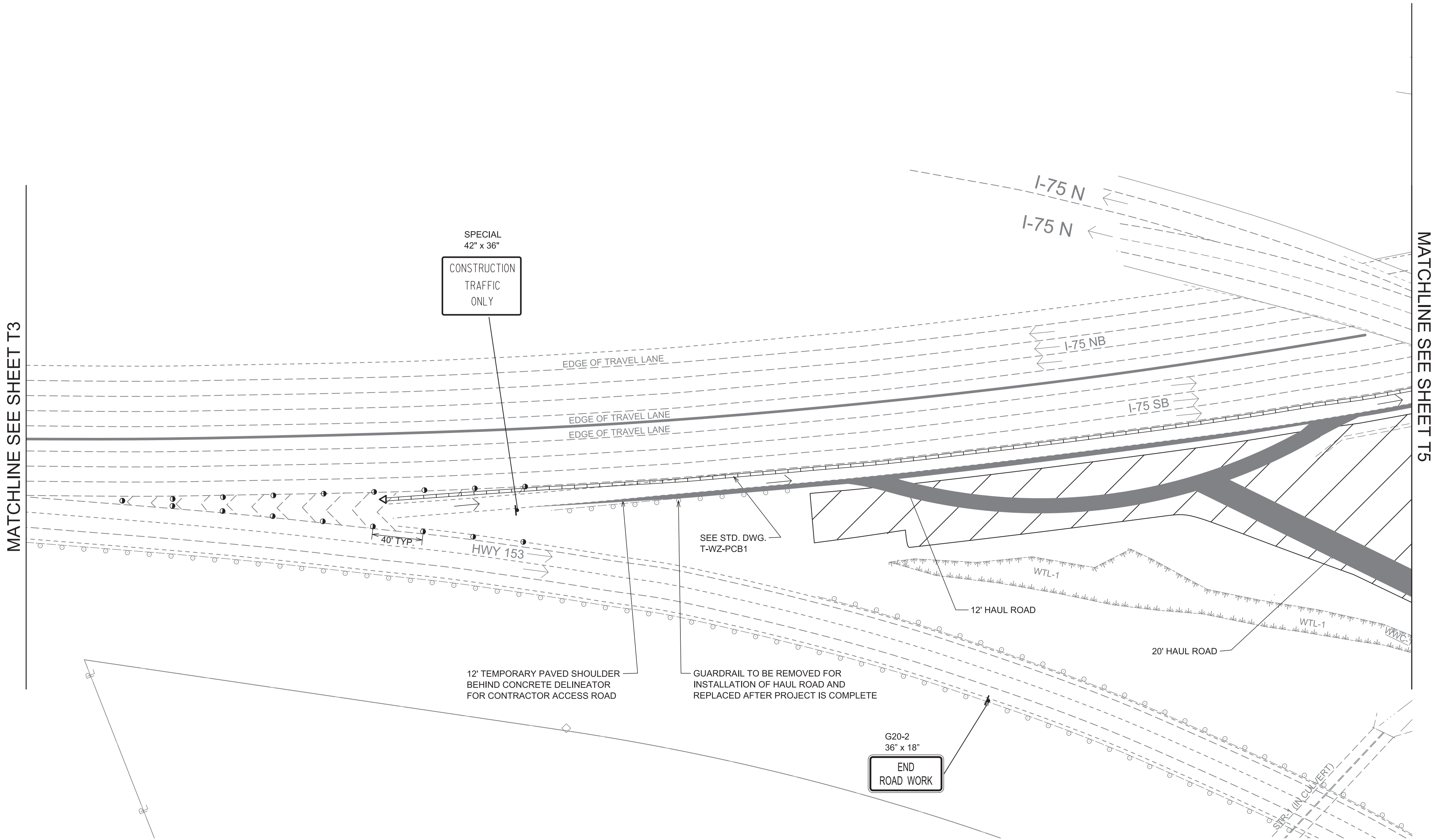
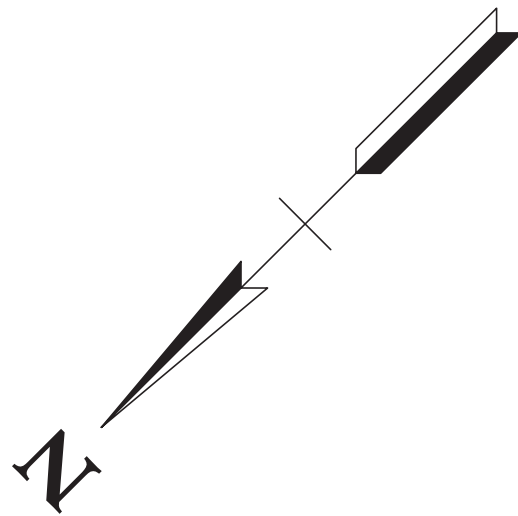
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

SCALE: 1"=50'



TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	33005-4188-04	T4



SEALED BY

COORDINATES ARE NAD 83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 0.99998, AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B MODEL.

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION

TRAFFIC  
CONTROL  
PLANS

SCALE: 1"=50'



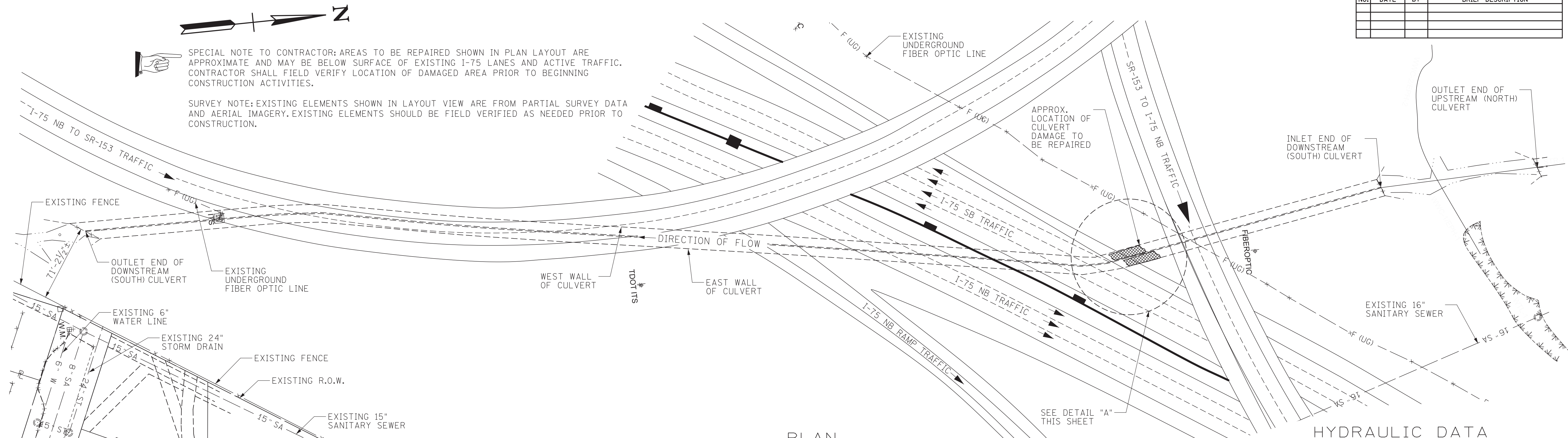




CONST. NO.			
PROJECT NO.		YEAR	SHEET NO.
33005-4188-04		2025	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

SPECIAL NOTE TO CONTRACTOR: AREAS TO BE REPAIRED SHOWN IN PLAN LAYOUT ARE APPROXIMATE AND MAY BE BELOW SURFACE OF EXISTING I-75 LANES AND ACTIVE TRAFFIC. CONTRACTOR SHALL FIELD VERIFY LOCATION OF DAMAGED AREA PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

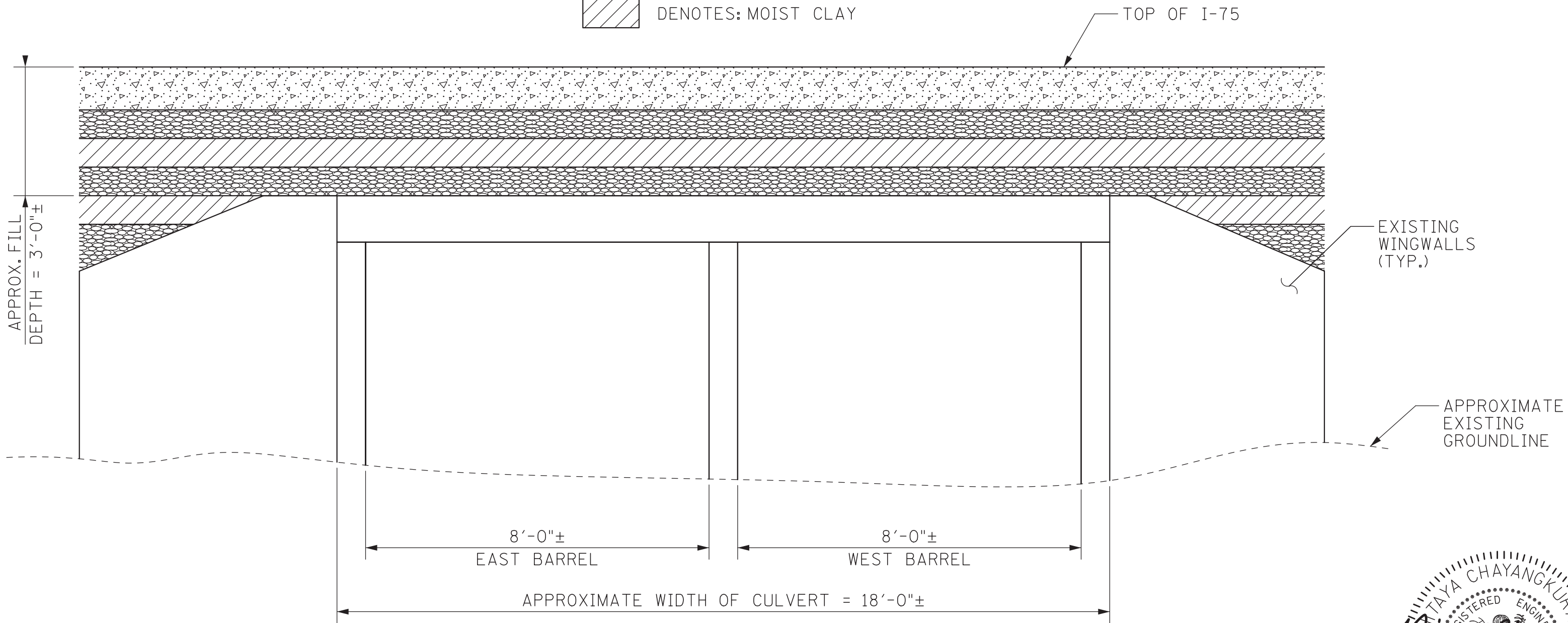
SURVEY NOTE: EXISTING ELEMENTS SHOWN IN LAYOUT VIEW ARE FROM PARTIAL SURVEY DATA AND AERIAL IMAGERY. EXISTING ELEMENTS SHOULD BE FIELD VERIFIED AS NEEDED PRIOR TO CONSTRUCTION.



PLAN

NOTE: ROADWAY LINES SHOWN IN PLAN VIEW ARE BASED ON AERIAL IMAGERY AND NOT SURVEY. CONTRACTOR SHALL VERIFY ANY LOCATIONS AND DIMENSIONS NECESSARY.

- DENOTES: CONCRETE PAVEMENT
- DENOTES: BASE STONE
- DENOTES: MOIST CLAY



ELEVATION

(LOOKING DOWNSTREAM)  
(DIMENSIONS ALONG THE CULVERT & ARE APPROXIMATE)

HYDRAULIC DATA

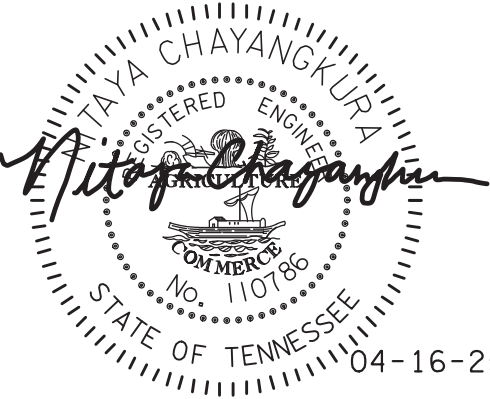
STRUCTURE: 1200 FT OF 2 @ 8'X6' EXISTING BOX BRIDGE  
DRAINAGE AREA: 0.81 SQ. MI.  
DESIGN DISCHARGE (Q100): 419 CFS  
OVERTOPPING ELEV.: 695.00  
ALLOWABLE HEADWATER ELEV.: 682.29  
Q100 HEADWATER ELEV.: 680.24  
VELOCITY (Q100) = 9.45 FT/S

SCOPE OF WORK

- REMOVE VEGETATION AT INLET OF CULVERT.
- ESTABLISH TRAFFIC CONTROL AND HAUL ROAD NECESSARY TO ACCESS AREAS OF REPAIR.
- ESTABLISH REQUIRED EROSION CONTROL REQUIRED FOR CONSTRUCTION ACTIVITIES.
- REPAIR CRACKS, SPALLS, AND DELAMINATIONS IN CULVERT WALLS AND UNDERSIDE OF TOP SLAB.
- EPOXY GROUT REINFORCING STEEL INTO EXISTING BOX CULVERT SLAB FOOTING AND INSTALL REINFORCING STEEL.
- FORM AND POUR SIDE WALLS AND INTERIOR TOP SLAB AS INDICATED IN THE PLANS.

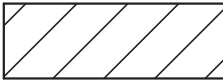
STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
LAYOUT OF BOX BRIDGE  
TO BE REPAIRED

BRIDGE NO. 33-10075-4.08  
FED. ID. NO. 33100750029  
I-75 NBL AND SBL  
OVER BRANCH  
HAMILTON COUNTY  
2025

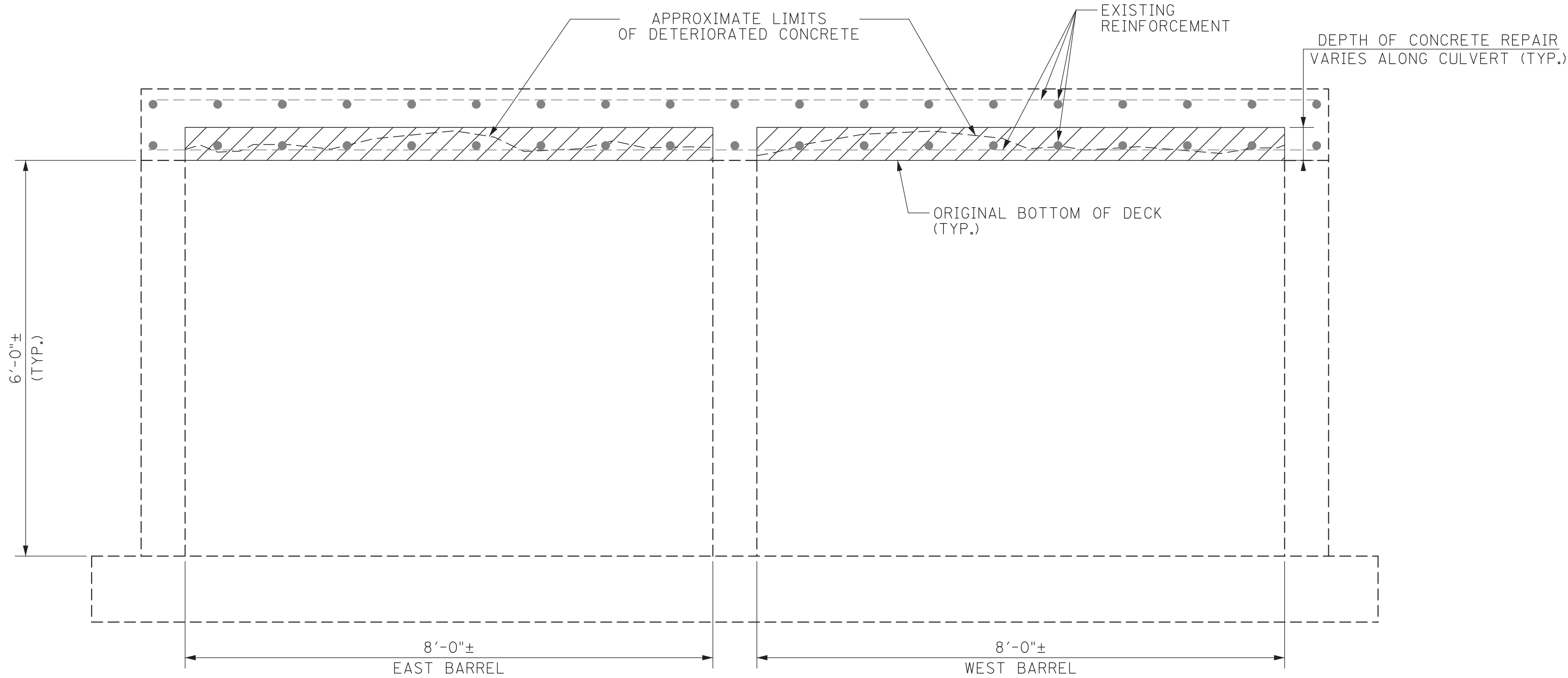


DESIGNED BY BENESCH DATE 03/2025  
DRAWN BY NITAYA CHAYANGKURA, P.E. DATE 03/2025  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 03/2025  
CHECKED BY BHAVYA PATEL, P.E. DATE 03/2025

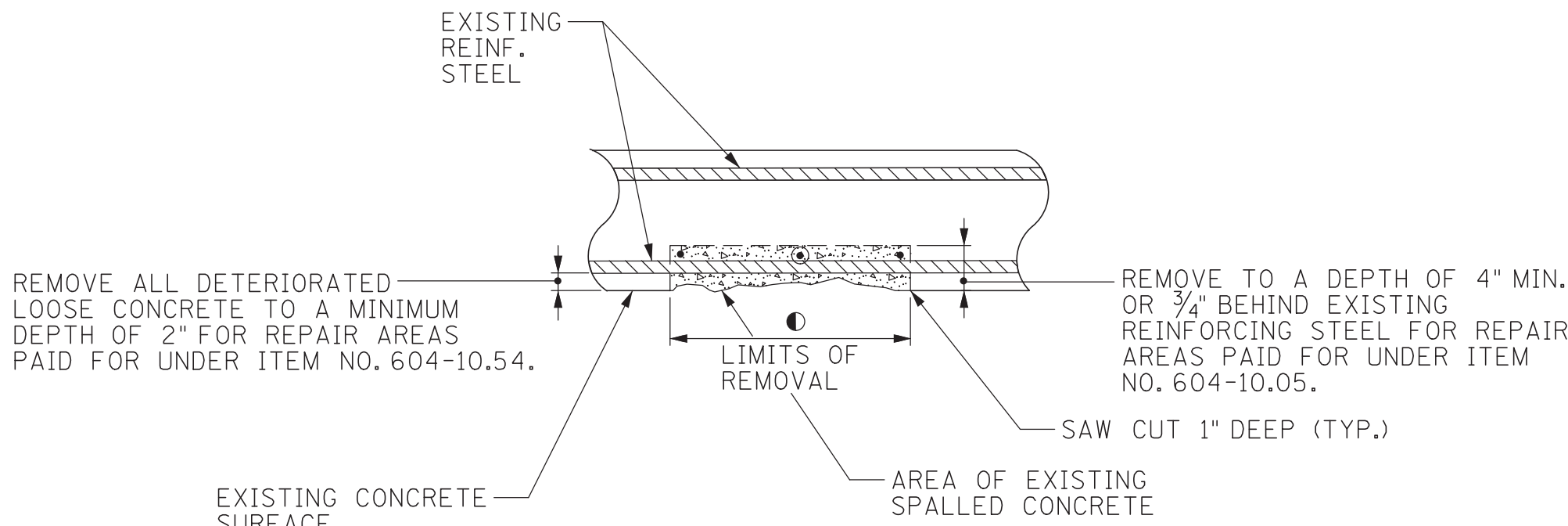
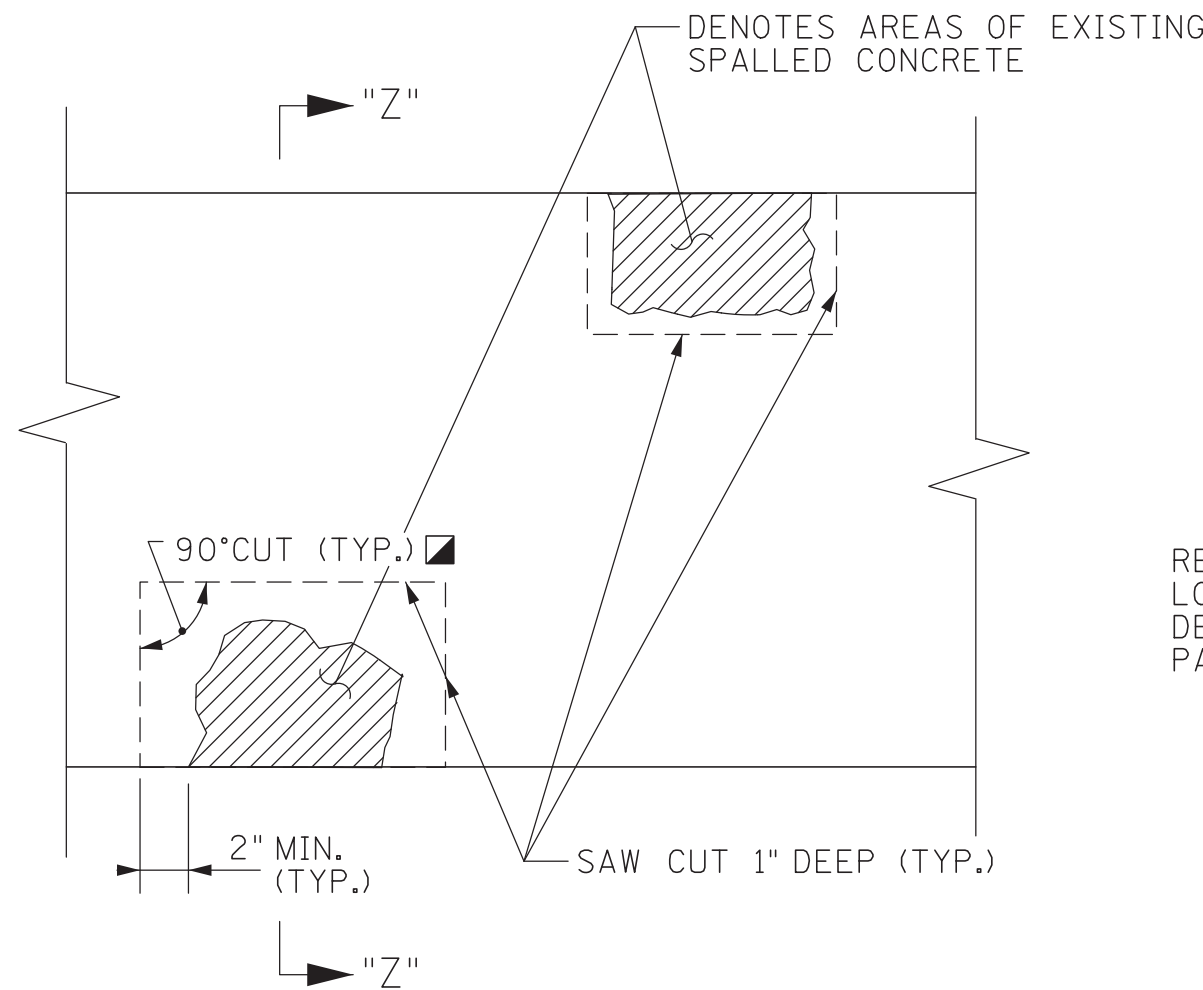




DENOTES: AREA OF CONCRETE REPAIR (ITEM NO. 604-10.54)



ELEVATION VIEW - UNDERSIDE DECK REPAIR  
(LOOKING DOWNSTREAM)



SECTION "Z"-"Z"

DETAIL SHOWING UNDERSIDE DECK SPALL REPAIR

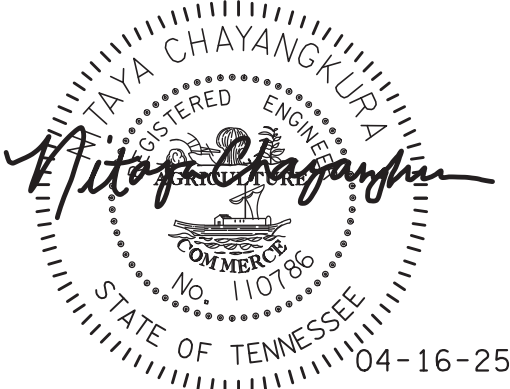


CONTRACTOR SHALL LIMIT AREAS OF UNDERSIDE DECK REPAIR TO SECTIONS OF SIZE NO GREATER THAN REQUIRED BY CALCULATIONS FOR BRACING SYSTEM DESIGN.

CONST. NO.			
PROJECT NO.		YEAR	SHEET NO.
33005-4188-04		2025	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

NOTES:

- COST OF SAW CUTTING, EXISTING CONCRETE REMOVAL, COMPETE CLEANING OF EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, LABOR, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE REPAIRS AS SHOWN IN THESE PLANS TO BE INCLUDED UNDER ITEM NO. 604-10.05, CONCRETE, S.F., OR 604-10.54, CONCRETE REPAIRS, S.F.
- EXTREME CARE SHALL BE TAKEN WHEN REMOVING THE EXISTING DETERIORATED CONCRETE SO AS NOT TO DAMAGE THE EXISTING REINFORCING STEEL. ALL EXPOSED REINFORCING STEEL SHALL BE COMPLETELY CLEANED TO REMOVE ALL RUST. ALL EXISTING REINFORCEMENT SHALL REMAIN IN PLACE. ALL WORK MUST MEET WITH FULL APPROVAL OF THE ENGINEER.
- CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE UNSOUND CONCRETE FOR REPAIRS. FOR GENERAL LOCATIONS SEE LAYOUT OF BRIDGE TO BE REPAIRED SHEET.
- THE ENGINEER SHALL HAVE THE OPTION OF DESIGNATING A SPALL AREA TO BE REPAIRED UNDER ITEM NO. 604-10.05 OR 604-10.54. PATCHING MATERIAL FOR ITEM NO. 604-10.54 SHALL BE A POLYMER MODIFIED CEMENTIOUS STRUCTURAL PATCHING MATERIAL. PATCHING MATERIAL FOR ITEM NO. 604-10.05 SHALL BE HIGH EARLY STRENGTH CONCRETE. SEE CURRENT TDOT QUALIFIED PRODUCTS LIST.
- THE ENGINEER SHALL DESIGNATE ALL SPALLED CONCRETE REPAIR AREAS IN THE FIELD. QUANTITIES GIVEN ARE APPROXIMATE. ITEM NO. 604-10.05 AND 604-10.54 SHALL BE BID WITH THE CONTINGENCY THAT IT MAY BE INCREASED, DECREASED, OR ELIMINATED BY THE ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING ALL NECESSARY MEASURES TO PREVENT DEBRIS FROM FALLING INTO THE CREEK.
- THE CONTRACTOR WILL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD ALL EXISTING UTILITIES FROM DAMAGE DURING CONSTRUCTION OF THE PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND ANY EXISTING UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO FURNISH SUCH EQUIPMENT. THE COST OF PROTECTING UTILITIES FROM DAMAGE AND FURNISHING SPECIAL EQUIPMENT WILL BE INCLUDED IN THE PRICE OF ITEMS BID ON.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING FORMWORK BELOW THE EXISTING BRIDGE DECK. THE FORMWORK IS REQUIRED SO THAT NO DEBRIS WILL FALL INTO THE CREEK DURING SLAB REPAIR. DETAILS OF TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY DEMOLITION IS BEGUN. COST OF FORMWORK SHALL BE INCLUDED IN ITEM NO. 602-10.05, BRACING REPAIRS, L.S.
- IN AREAS OF SLAB REPAIR, THE EXISTING BRIDGE MUST BE ADEQUATELY BRACED DURING ALL PHASES OF CONSTRUCTION. DETAILS OF THE TEMPORARY SUPPORT SYSTEM AND DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY REPAIR WORK IS BEGUN. BRACING DETAILS SHALL BE DESIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TENNESSEE. THE COST OF ALL MATERIALS, LABOR, BRACING AND BRACING DESIGN, ETC. REQUIRED TO SUPPORT THE EXISTING STRUCTURE SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 602-10.05, BRACING REPAIRS, L.S.

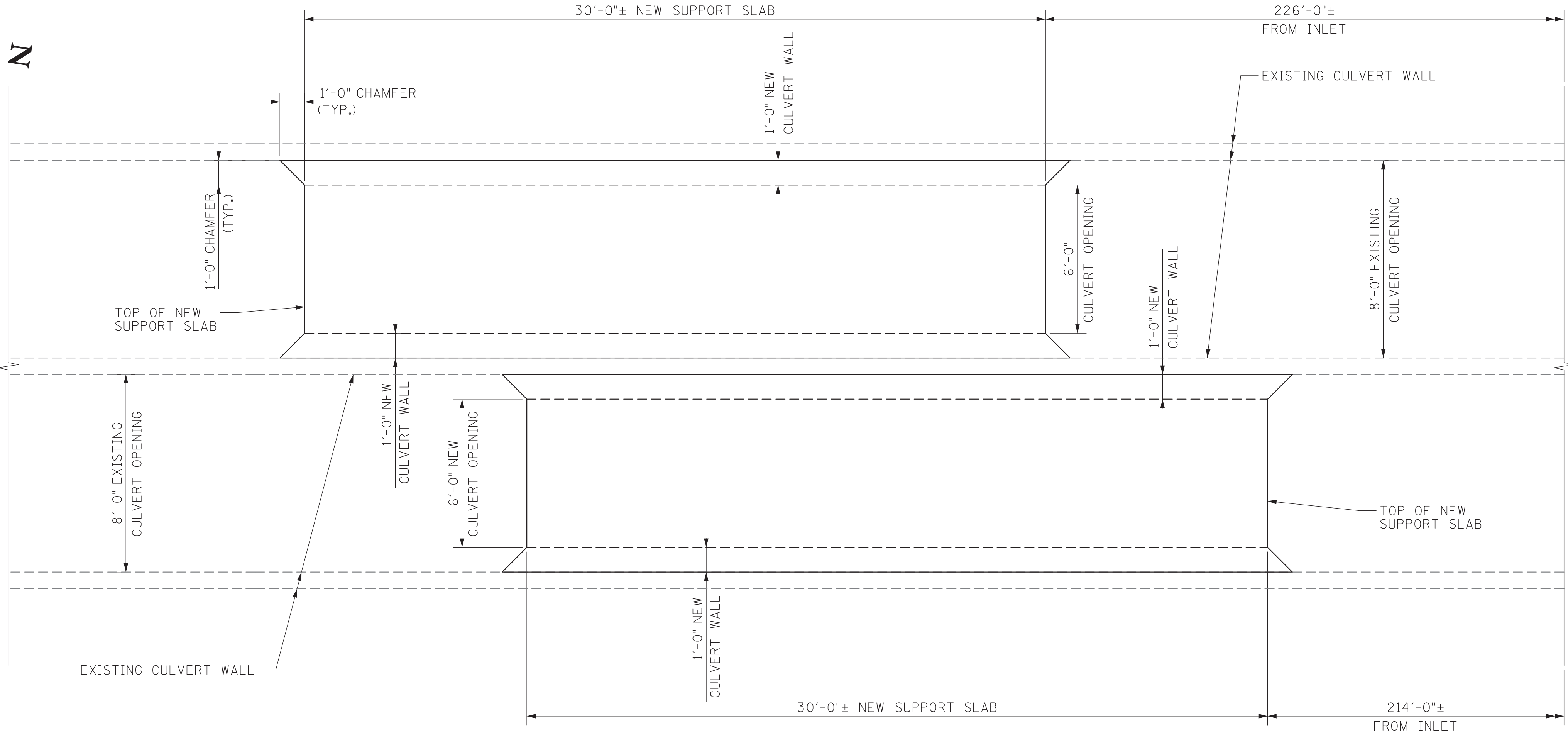
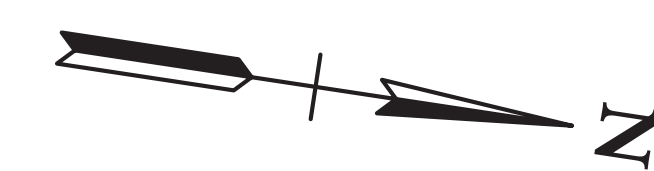


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
UNDERSIDE DECK  
REPAIR DETAILS

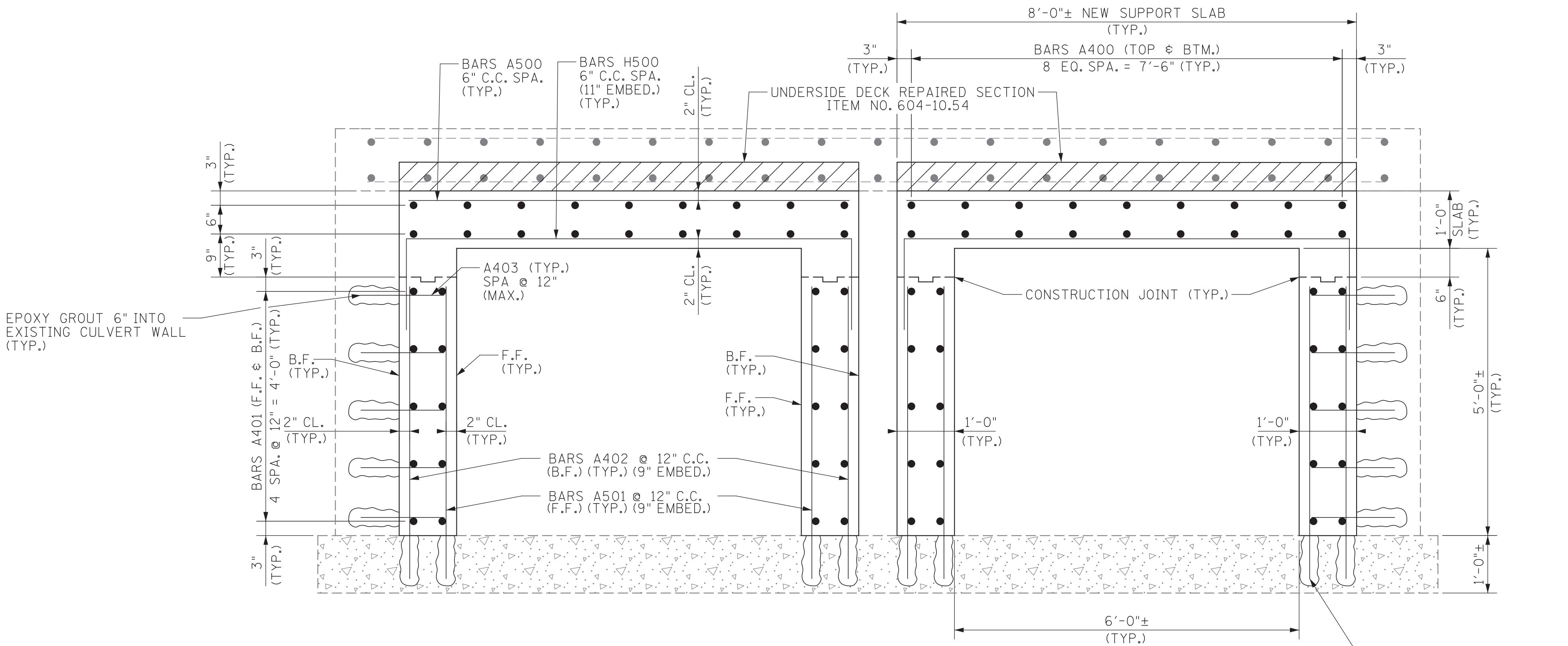
BRIDGE NO. 33-10075-4.08  
FED. ID. NO. 33I00750029  
I-75 NBL AND SBL  
OVER BRANCH  
HAMILTON COUNTY  
2025

DESIGNED BY BENESCH \_\_\_\_\_ DATE 03/2025  
DRAWN BY NITAYA CHAYANGKURA, P.E. \_\_\_\_\_ DATE 03/2025  
SUPERVISED BY JACOB WILLIAMS, P.E. \_\_\_\_\_ DATE 03/2025  
CHECKED BY BHAYYA PATEL, P.E. \_\_\_\_\_ DATE 03/2025





PLAN VIEW - CULVERT SUPPORT SECTION



ELEVATION VIEW - CULVERT SUPPORT SECTION  
(LOOKING DOWNSTREAM)

CONST. NO.			
PROJECT NO.		YEAR	SHEET NO.
33005-4188-04		2025	
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

ESTIMATED QUANTITIES

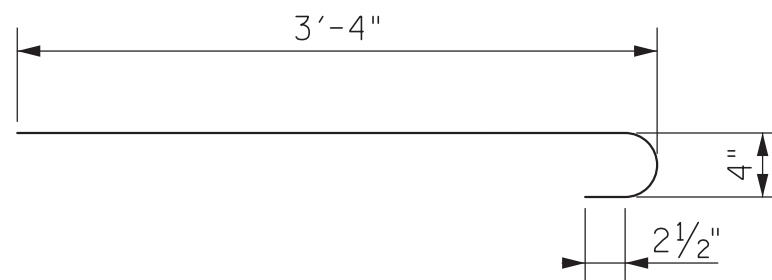
ITEM NO. 604-02.01 CLASS "A" CONCRETE (BOX BRIDGES) (C.Y.)	ITEM NO. 604-02.02 STEEL BAR REINFORCEMENT (BOX BRIDGES) (LB.)
41	5,047

BILL OF STEEL

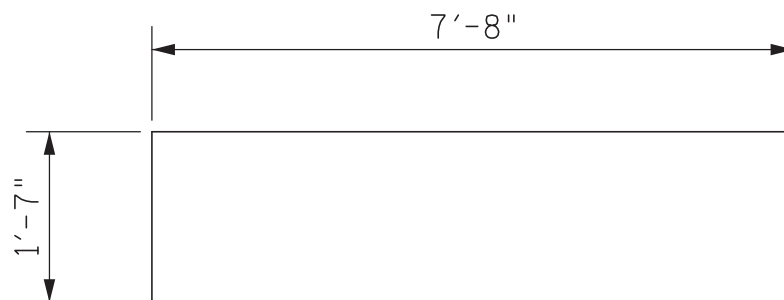
BAR	LOCATION	SIZE	NO. REQ'D.	TOTAL LENGTH
A400	SLAB	4	36	29'-8"
A401	WALL	4	40	29'-8"
A402	WALL	4	124	5'-1"
A403	WALL	4	310	1'-1"
A500	SLAB	5	120	7'-8"
A501	WALL	5	124	5'-1"
B400	SLAB/WALL	4	56	3'-11"
H500	SLAB	5	120	10'-10"



BARS A



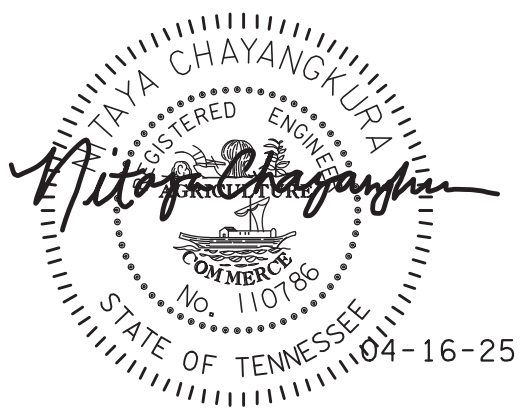
BARS B400



BARS H500

STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
CULVERT SUPPORT SECTION

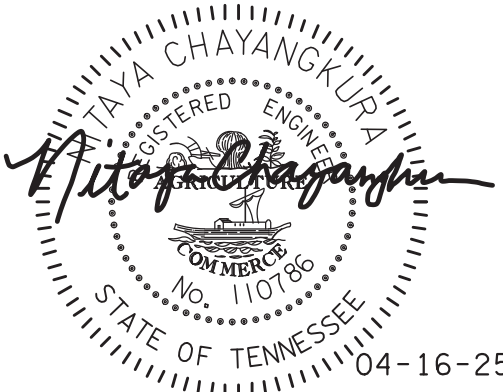
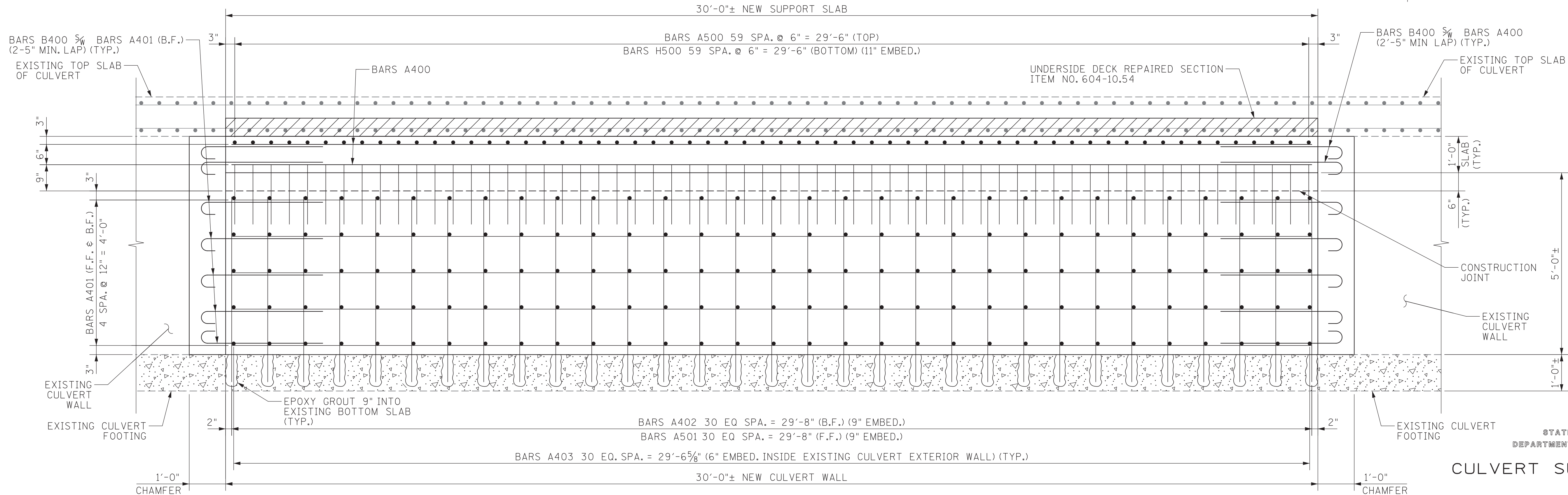
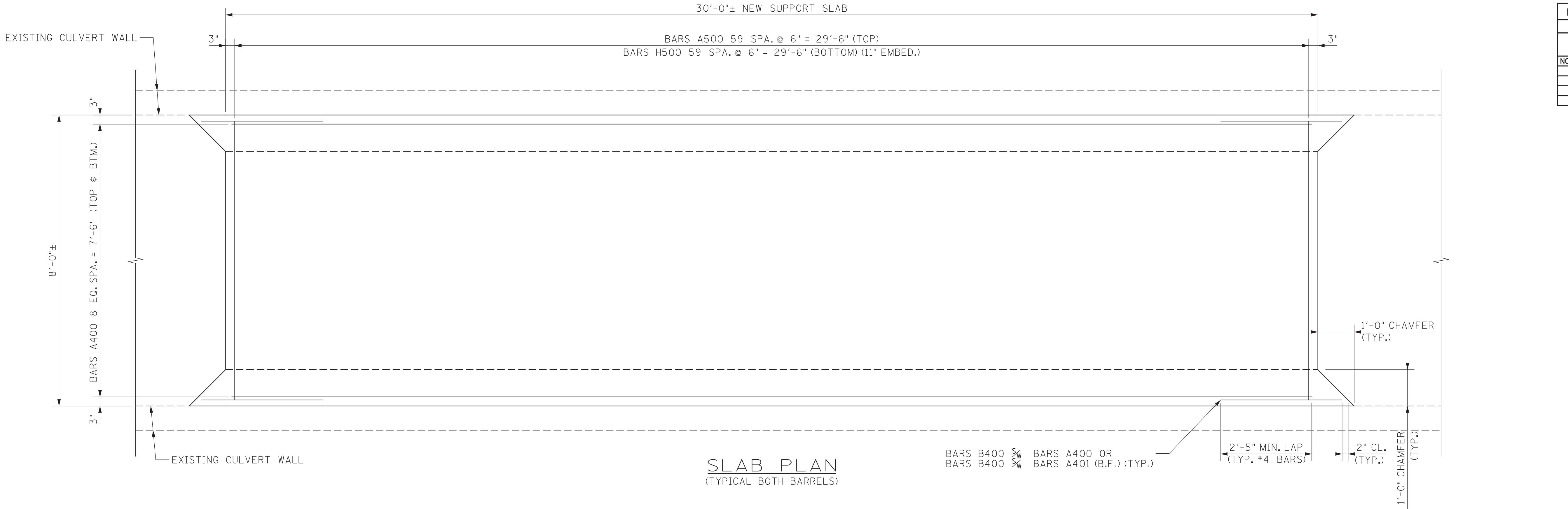
BRIDGE NO. 33-10075-4.08  
FED. ID. NO. 33I00750029  
I-75 NBL AND SBL  
OVER BRANCH  
HAMILTON COUNTY  
2025



DESIGNED BY BENESCH \_\_\_\_\_ DATE 03/2025  
DRAWN BY NITAYA CHAYANGKURA, P.E. \_\_\_\_\_ DATE 03/2025  
SUPERVISED BY JACOB WILLIAMS, P.E. \_\_\_\_\_ DATE 03/2025  
CHECKED BY BHAVYA PATEL, P.E. \_\_\_\_\_ DATE 03/2025



CONST. NO.			
PROJECT NO.	YEAR	SHEET NO.	
33005-4188-04	2025		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION

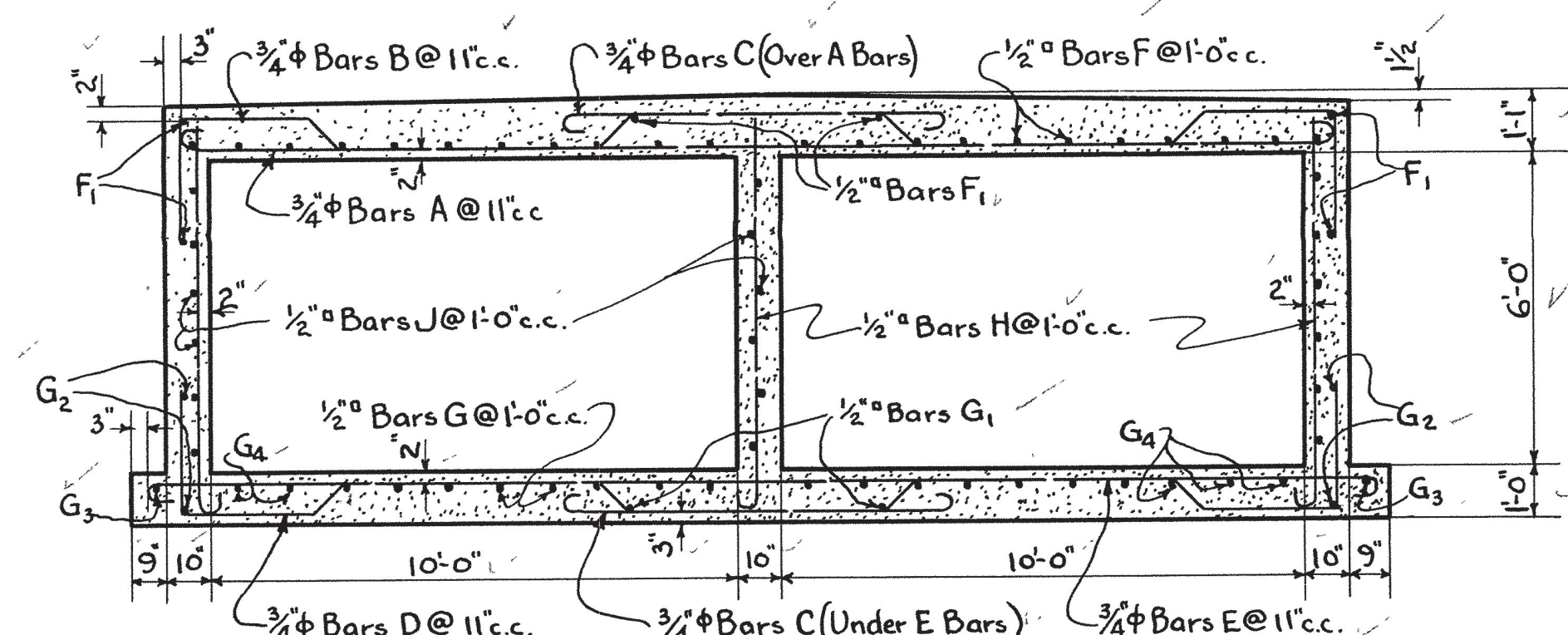


STATE OF TENNESSEE  
DEPARTMENT OF TRANSPORTATION  
CULVERT SUPPORT SECTION

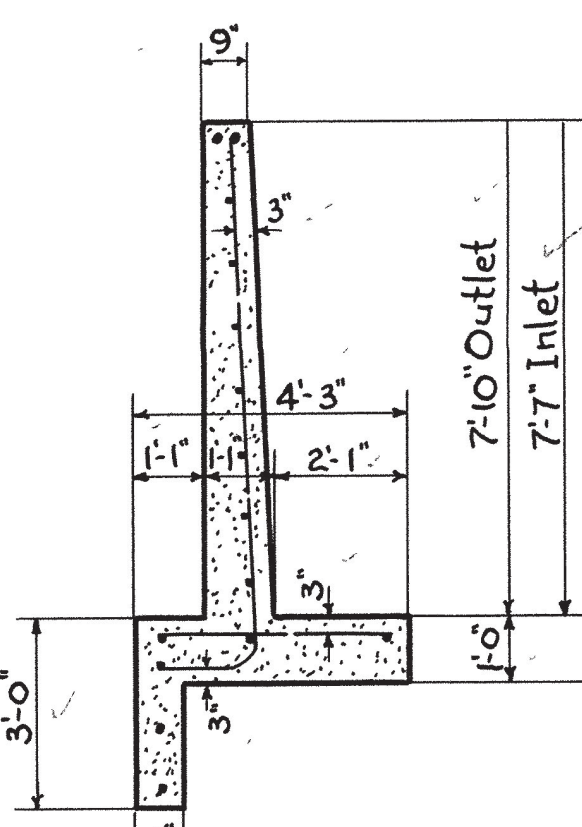
BRIDGE NO. 33-I0075-4.08  
FED. ID. NO. 33I00750029  
I-75 NBL AND SBL  
OVER BRANCH  
HAMILTON COUNTY  
2025

DESIGNED BY BENESCH DATE 03/2025  
DRAWN BY NITAYA CHAYANGKURA, P.E. DATE 03/2025  
SUPERVISED BY JACOB WILLIAMS, P.E. DATE 03/2025  
CHECKED BY BHAVYA PATEL, P.E. DATE 03/2025

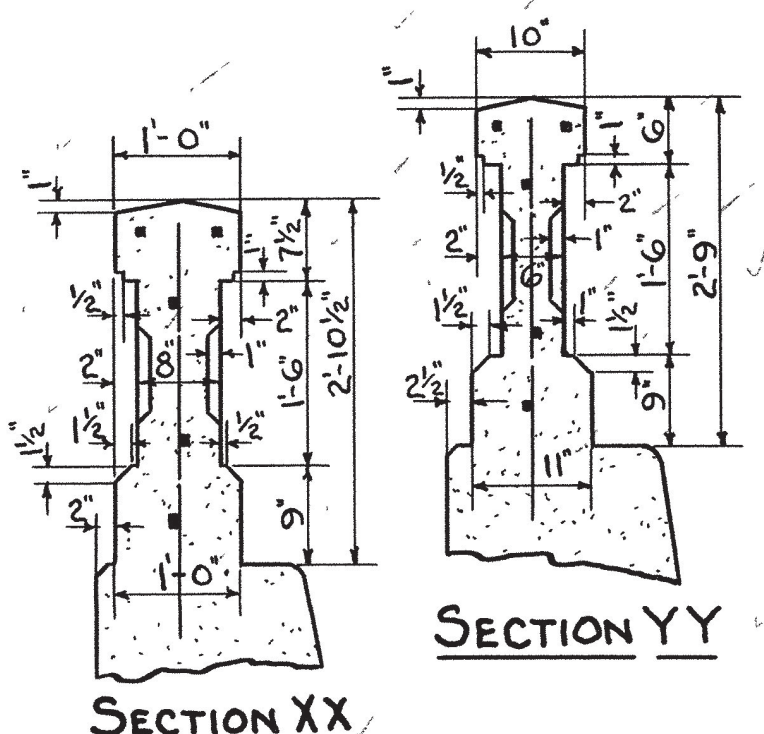




SECTION A-A

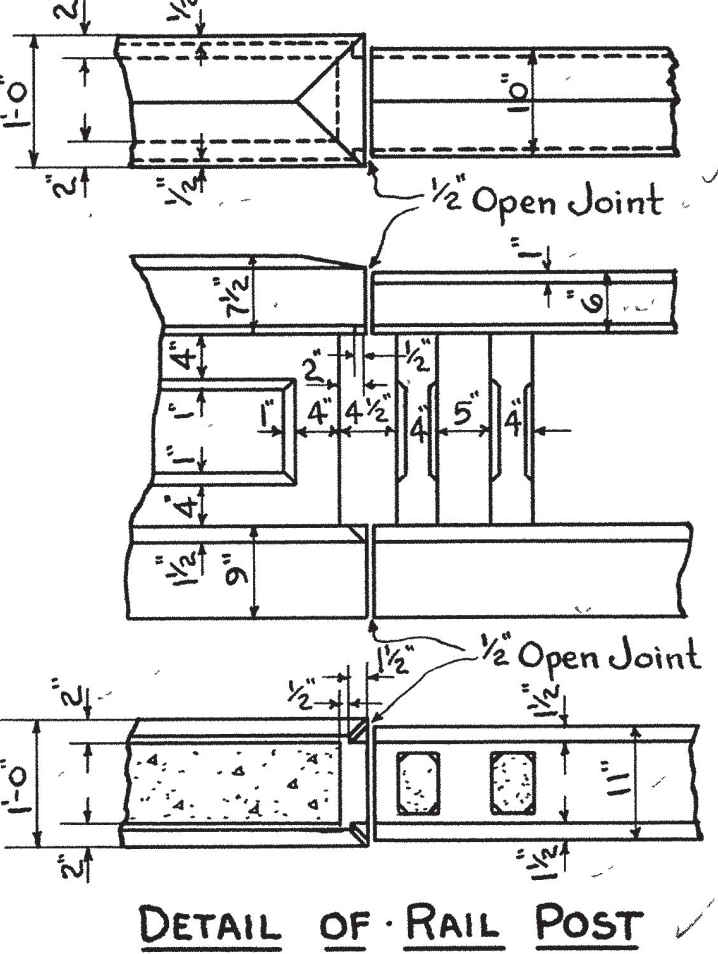


SECTION B-B

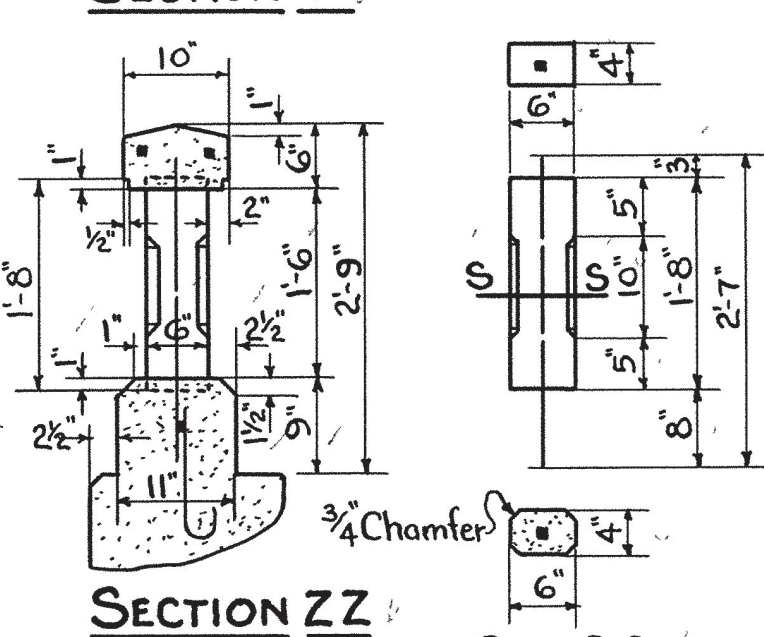


SECTION XX

SECTION YY



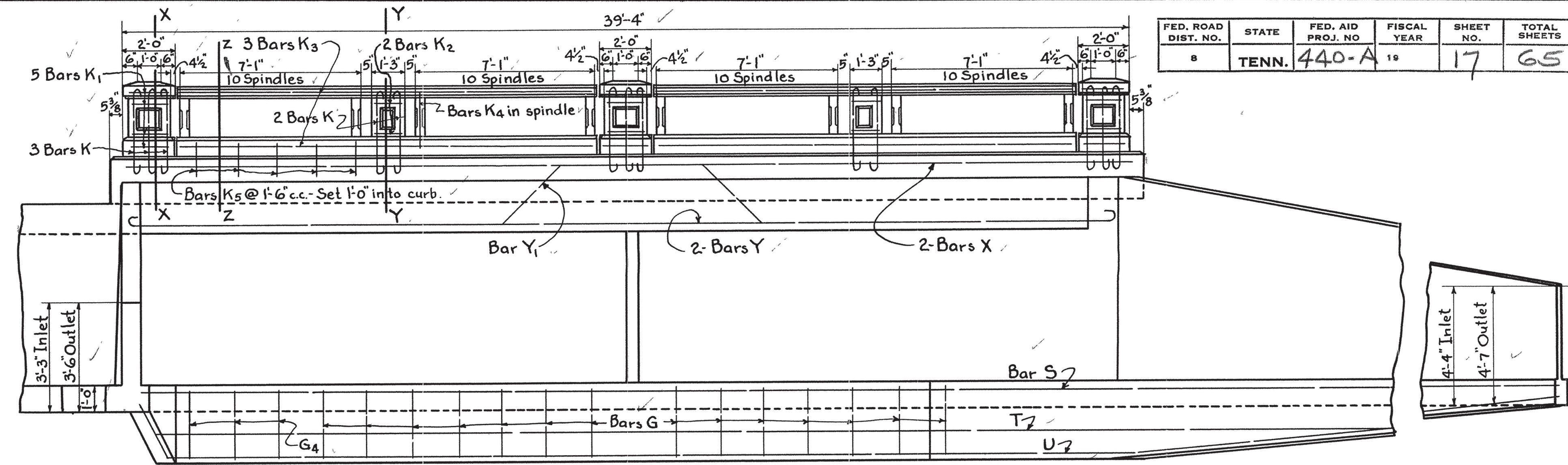
DETAIL OF RAIL POST



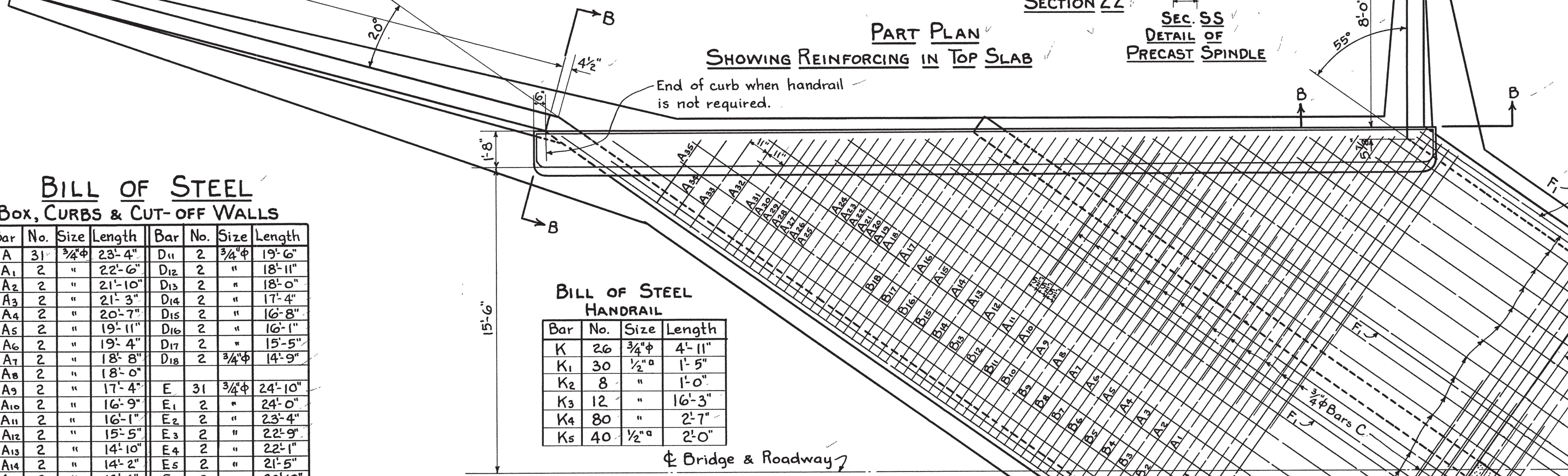
SECTION ZZ

SECTION SS

DETAIL OF PRECAST SPINDLE



END ELEVATION



PART PLAN

SHOWING REINFORCING IN TOP SLAB

**BILL OF STEEL**  
 Box, CURBS & CUT-OFF WALLS

Bar No.	Size	Length	Bar No.	Size	Length
A1	3/4"	23'-4"	D11	3/4"	19'-6"
A2	"	22'-6"	D12	"	18'-11"
A3	"	21'-10"	D13	"	18'-0"
A4	"	21'-3"	D14	"	17'-4"
A5	"	20'-7"	D15	"	16'-8"
A6	"	19'-11"	D16	"	16'-1"
A7	"	19'-4"	D17	"	15'-5"
A8	"	18'-8"	D18	"	14'-9"
A9	"	18'-0"	E1	3/4"	24'-10"
A10	"	17'-4"	E2	"	24'-0"
A11	"	16'-9"	E3	"	23'-4"
A12	"	16'-1"	E4	"	22'-9"
A13	"	15'-5"	E5	"	22'-1"
A14	"	14'-10"	E6	"	21'-5"
A15	"	13'-6"	E7	"	20'-10"
A16	"	12'-11"	E8	"	20'-2"
A17	"	12'-3"	E9	"	19'-6"
A18	"	11'-7"	E10	"	18'-11"
A19	"	11'-4"	E11	"	18'-5"
A20	"	11'-0"	E12	"	17'-9"
A21	"	10'-5"	E13	"	17'-0"
A22	"	10'-0"	E14	"	16'-4"
A23	"	9'-5"	E15	"	15'-8"
A24	"	9'-0"	E16	"	15'-0"
A25	"	8'-5"	E17	"	14'-5"
A26	"	8'-0"	E18	"	13'-9"
A27	"	7'-5"	E19	"	13'-1"
A28	"	7'-0"	E20	"	12'-10"
A29	"	6'-5"	E21	"	12'-6"
A30	"	6'-0"	E22	"	12'-2"
A31	"	5'-5"	E23	"	11'-10"
A32	"	5'-0"	E24	"	11'-6"
A33	"	4'-5"	E25	"	11'-2"
A34	"	4'-0"	E26	"	10'-7"
A35	"	3'-5"	E27	"	10'-3"
A36	"	3'-0"	E28	"	9'-9"
A37	"	2'-5"	E29	"	9'-5"
A38	"	2'-0"	E30	"	9'-1"
A39	"	1'-5"	E31	"	8'-7"
A40	"	1'-0"	E32	"	8'-3"
A41	"	0'-5"	E33	"	7'-9"
A42	"	0'-0"	E34	"	7'-5"
A43	"	0'-0"	E35	"	7'-1"
A44	"	0'-0"	E36	"	6'-7"
A45	"	0'-0"	E37	"	6'-3"
A46	"	0'-0"	E38	"	5'-9"
A47	"	0'-0"	E39	"	5'-5"
A48	"	0'-0"	E40	"	5'-1"
A49	"	0'-0"	E41	"	4'-7"
A50	"	0'-0"	E42	"	4'-3"
A51	"	0'-0"	E43	"	3'-9"
A52	"	0'-0"	E44	"	3'-5"
A53	"	0'-0"	E45	"	3'-1"
A54	"	0'-0"	E46	"	2'-7"
A55	"	0'-0"	E47	"	2'-3"
A56	"	0'-0"	E48	"	1'-9"
A57	"	0'-0"	E49	"	1'-5"
A58	"	0'-0"	E50	"	1'-1"
A59	"	0'-0"	E51	"	0'-7"
A60	"	0'-0"	E52	"	0'-3"
A61	"	0'-0"	E53	"	0'-0"
A62	"	0'-0"	E54	"	0'-0"
A63	"	0'-0"	E55	"	0'-0"
A64	"	0'-0"	E56	"	0'-0"
A65	"	0'-0"	E57	"	0'-0"
A66	"	0'-0"	E58	"	0'-0"
A67	"	0'-0"	E59	"	0'-0"
A68	"	0'-0"	E60	"	0'-0"
A69	"	0'-0"	E61	"	0'-0"
A70	"	0'-0"	E62	"	0'-0"
A71	"	0'-0"	E63	"	0'-0"
A72	"	0'-0"	E64	"	0'-0"
A73	"	0'-0"	E65	"	0'-0"
A74	"	0'-0"	E66	"	0'-0"
A75	"	0'-0"	E67	"	0'-0"
A76	"	0'-0"	E68	"	0'-0"
A77	"	0'-0"	E69	"	0'-0"
A78	"	0'-0"	E70	"	0'-0"
A79	"	0'-0"	E71	"	0'-0"
A80	"	0'-0"	E72	"	0'-0"
A81	"	0'-0"	E73	"	0'-0"
A82	"	0'-0"	E74	"	0'-0"
A83	"	0'-0"	E75	"	0'-0"
A84	"	0'-0"	E76	"	0'-0"
A85	"	0'-0"	E77	"	0'-0"
A86	"	0'-0"	E78	"	0'-0"
A87	"	0'-0"	E79	"	0'-0"
A88	"	0'-0"	E80	"	0'-0"
A89	"	0'-0"	E81	"	0'-0"
A90	"	0'-0"	E82	"	0'-0"
A91	"	0'-0"	E83	"	0'-0"
A92	"	0'-0"	E84	"	0'-0"
A93	"	0'-0"	E85	"	0'-0"
A94	"	0'-0"	E86	"	0'-0"
A95	"	0'-0"	E87	"	0'-0"
A96	"	0'-0"	E88	"	0'-0"
A97	"	0'-0"	E89	"	0'-0"
A98	"	0'-0"	E90	"	0'-0"
A99	"	0'-0"	E91	"	0'-0"
A100	"	0'-0"	E92	"	0'-0"
A101	"	0'-0"	E93	"	0'-0"
A102	"	0'-0"	E94	"	0'-0"
A103	"	0'-0"	E95	"	0'-0"
A104	"	0'-0"	E96	"	0'-0"
A105	"	0'-0"	E97	"	0'-0"
A106	"	0'-0"	E98	"	0'-0"
A107	"	0'-0"	E99	"	0'-0"
A108	"	0'-0"	E100	"	0'-0"

**BILL OF STEEL**  
 HANDRAIL

Bar No.	Size	Length
K1	3/4"	4'-11"
K2	"	1'-5"
K3	"	1'-0"
K4	"	16'-5"
K5	"	2'-7"
K6	"	2'-0"

**BILL OF STEEL**  
 WINGWALLS

Bar	Size	Long Wing	Short Wing	Long Wing	Short Wing
L	3/4"	27'-0"	10'-9"	27'-0"	10'-9"
M	1/2"	7'-0"	5'-0"	6'-0"	4'-6"
M1	"	13'-3"	6'-6"	12'-3"	6'-0"
M2	"	18'-9"	7'-9"	17'-9"	7'-3"
M3	"	24'-9"	9'-9"	23'-9"	8'-9"
M4	1/2"	4'-6"	3'-9"	4'-6"	3'-9"
N	1/2"	4'-9"	3'-9"	4'-6"	3'-6"
N1	"	5'-0"	4'-6"	4'-9"	4'-3"
N2	"	5'-3"	5'-3"	5'-0"	5'-0"
N3	"	5'-6"	6'-0"	5'-3"	5'-9"
N4	"	5'-9"	6'-3"	5'-6"	6'-6"
N5	"	6'-0"	6'-6"	5'-9"	6'-9"
N6	"	6'-3"	6'-9"	6'-0"	6'-3"
N7	"	6'-6"	7'-3"	6'-3"	6'-6"
N8	"	6'-9"	7'-6"	6'-6"	6'-9"
N9	"	7'-0"	7'-9"	6'-9"	7'-3"
N10	"	7'-3"	8'-2"	7'-0"	7'-6"
N11	"	7'-6"	8'-5"	7'-3"	7'-9"
N12	"	7'-9"	8'-8"	7'-6"	8'-2"
N13	"	8'-2"	9'-1"	7'-9"	8'-5"
N14	"	8'-5"	9'-4"	8'-2"	8'-8"
N15	"	8'-8"	9'-7"	8'-5"	9'-1"
N16	"	9'-1"	10'-0"	8'-8"	9'-4"
N17	"	9'-4"	10'-3"	9'-1"	9'-7"
N18	"	9'-7"	10'-6"	9'-4"	10'-0"
N19	"	10'-0"	10'-9"	9'-7"	10'-3"
N20	"	10'-3"	11'-2"	10'-0"	10'-6"
N21	"	10'-6"	11'-5"	10'-3"	10'-9"
N22	"	10'-9"	11'-8"	10'-6"	11'-2"
N23	"	11'-2"	12'-1"	10'-9"	11'-5"
N24	"	11'-5"	12'-4"	11'-2"	11'-8"
N25	"	11'-8"	12'-7"	11'-5"	12'-1"
N26	"	12'-1"	13'-0"	11'-8"	12'-4"
N27	"	12'-4"	13'-3"	12'-1"	12'-7"
N28	"	12'-7"	13'-6"	12'-4"	13'-0"
N29	"	13'-0"	13'-9"	12'-7"	13'-3"
N30	"	13'-3"	14'-2"	13'-0"	13'-6"
N31	"	13'-6"	14'-5"	13'-3"	13'-9"
N32	"	13'-9"	14'-8"	13'-6"	14'-2"
N33	"	14'-2"	15'-1"	13'-9"	14'-5"
N34	"	14'-5"	15'-4"	14'-2"	14'-8"
N35	"	14'-8"	15'-7"	14'-5"	15'-1"
N36	"	15'-1"	16'-0"	14'-8"	15'-4"
N37	"	15'-4"	16'-3"	15'-1"	15'-7"
N38	"	15'-7"	16'-6"	15'-4"	16'-0"
N39	"	16'-0"	16'-9"	15'-7"	16'-3"
N40	"	16'-3"	17'-2"	16'-0"	16'-6"
N41	"	16'-6"	17'-5"	16'-3"	16'-9"
N42	"	16'-9"	17'-8"	16'-6"	17'-2"
N43	"	17'-2"	18'-1"	16'-9"	17'-5"
N44	"	17'-5"	18'-4"	17'-2"	17'-8"
N45	"	17'-8"	18'-7"	17'-5"	18'-1"
N46	"	18'-1"	19'-0"	17'-8"	18'-4"
N47	"	18'-4"	19'-3"	18'-1"	18'-7"
N48	"	18'-7"	19'-6"	18'-4"	19'-0"
N49	"	19'-0"	19'-9"	18'-7"	19'-3"
N50	"	19'-3"	20'-2"	19'-0"	19'-6"
N51	"	19'-6"	20'-5"	19'-3"	19'-9"
N52	"	19'-9"	20'-8"	19'-6"	20'-2"
N53	"	20'-2"	21'-1"	19'-9"	20'-5"
N54	"	20'-5"	21'-4"	20'-2"	20'-8"
N55	"	20'-8"	21'-7"	20'-5"	21'-1"
N56	"	21'-1"	22'-0"	20'-8"	21'-4"
N57	"	21'-4"	22'-3"	21'-1"	21'-7"
N58	"	21'-7"	22'-6"	21'-4"	22'-0"
N59	"	22'-0"	22'-9"	21'-7"	22'-3"
N60	"	22'-3"	23'-2"	22'-0"	22'-6"
N61	"	22'-6"	23'-5"	22'-3"	22'-9"
N62	"	22'-9"	23'-8"	22'-6"	23'-2"
N63	"	23'-2"	24'-1"	22'-9"	23'-5"
N64	"	23'-5"	24'-4"	23'-2"	23'-8"
N65	"	23'-8"	24'-7"	23'-5"	24'-1"
N66	"	24'-1"	25'-0"	23'-8"	24'-4"
N67	"	24'-4"	25'-3"	24'-1"	24'-7"
N68	"	24'-7"	25'-6"	24'-4"	25'-0"
N69	"	25'-0"	25'-9"	24'-7"	25'-3"
N70	"	25'-3"	26'-2"	25'-0"	25'-6"
N71	"	25'-6"	26'-5"	25'-3"	25'-9"
N72	"	25'-9"	26'-8"	25'-6"	26'-2"
N73	"	26'-2"	27'-1"	25'-9"	26'-5"
N74	"	26'-5"	27'-4"	26'-2"	26'-8"
N75	"	26'-8"	27'-7"	26'-5"	27'-1"
N76	"	27'-1"	28'-0"	26'-8"	27'-4"
N77	"	27'-4"	28'-3"	27'-1"	27'-7"
N78	"	27'-7"	28'-6"	27'-4"	28'-0"
N79	"	28'-0"	28'-9"	27'-7"	28'-3"
N80	"	28'-3"	29'-2"	28'-0"	28'-6"
N81	"	28'-6"	29'-5"	28'-3"	28'-9"
N82	"	28'-9"	29'-8"	28'-6"	29'-2"
N83	"	29'-2"	30'-1"	28'-9"	29'-5"
N84	"	29'-5"	30'-4"	29'-2"	29'-8"
N85	"	29'-8"	30'-7"	29'-5"	29'-2"
N86	"	30'-1"	31'-0"	29'-8"	29'-5"
N87	"	30'-4"	31'-3"	29'-2"	29'-8"
N88	"	30'-7"	31'-6"	29'-5"	29'-2"
N89	"	31'-0"	31'-9"	29'-8"	29'-5"
N90	"	31'-3"	32'-2"	29'-2"	29'-8"
N91	"	31'-6"	32'-5"	29'-5"	29'-2"
N92	"	31'-9"	32'-8"	29'-8"	29'-5"
N93	"	32'-2"	33'-1"	29'-2"	29'-8"
N94	"	32'-5"	33'-4"	29'-5"	29'-2"
N95	"	32'-8"	33'-7"	29'-8"	29'-5"
N96	"	33'-1"	34'-0"	29'-2"	29'-8"
N97	"	33'-4"	34'-3"	29'-5"	29'-2"
N98	"	33'-7"	34'-6"	29'-8"	29'-5"
N99	"	34'-0"	34'-9"	29'-2"	29'-8"
N100	"	34'-3"	35'-2"	29'-5"	29'-2"

