



THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

James Fritz Brogdon, PE

Digitally signed by: James Fritz Brogdon, PE
DN: CN = James Fritz Brogdon, PE email = fritz.brogdon@arcadis.
com C = US O = Arcadis, Inc. OU = Senior Transportation Engineer
Date: 2025.06.23 16:34:35 -04'00'

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ARCADIS US, INC.
1210 PREMIER DRIVE, SUITE 200
CHATTANOOGA, TN

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 ROADWAY-SIGN1

TITLE SHEET 1

ROADWAY INDEX AND STANDARD

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NOTE: THE ALPHABETICAL LETTERS "I", "O" & "Q" ARE NOT USED IN THE NUMBERING OF SHEETS.

YEAR	PROJECT NO.	SHEET NO.
2025	58S002-S3-004	ROADWAY-SIGN 1

**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

SIGNATURE SHEET

SEE SHEET 1A FOR
INDEX OF SHEETS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

MARION COUNTY

SR-2 (LEE HIGHWAY) (US-41)
DRAINAGE PIPES AT L.M. 17.25 (ARPA)

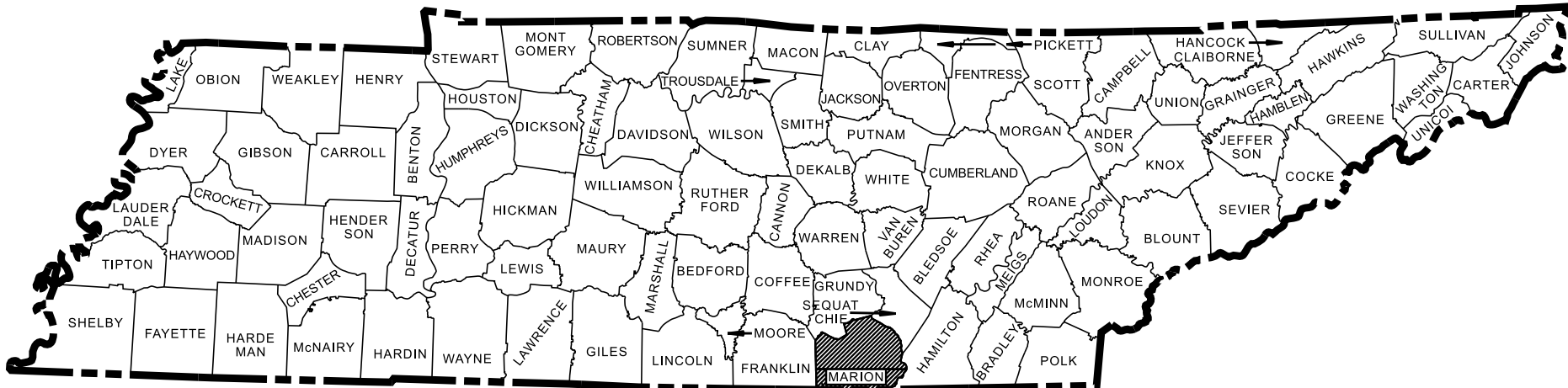
PS&E

GRADE, DRAIN, RETAINING WALL, PAVE, GUARDRAIL, AND PAVEMENT MARKING

STATE HIGHWAY NO. 2 F.A.H.S. NO. 41

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

TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.	N/A	
STATE PROJ. NO.	58S002-S3-004	



SR-2
MARION COUNTY

NO EXCLUSIONS

NO EQUATIONS

BEGIN CONSTRUCTION PROJECT NO. 58S002-S3-004

STA. 11+80.06

N 264430.0669 E 2088822.1732

BEGIN R.O.W. PROJECT NO. 58S002-S2-004

STA 12+07.12

N 264411.3840° E 2088841.7437'

END R.O.W. PROJECT NO. 58S002-S2-004

STA 13+84.72

N 264288.7482 E 2088970.2058

END CONSTRUCTION PROJECT NO. 58S002-S3-004

STA. 15+26.81

N 264190.6337 E 2089072.9816

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: JASON TAYS, P.E.

DESIGNED FIRM : ARCADIS US, INC.

DESIGNER : LINA KHOURY, P.E.

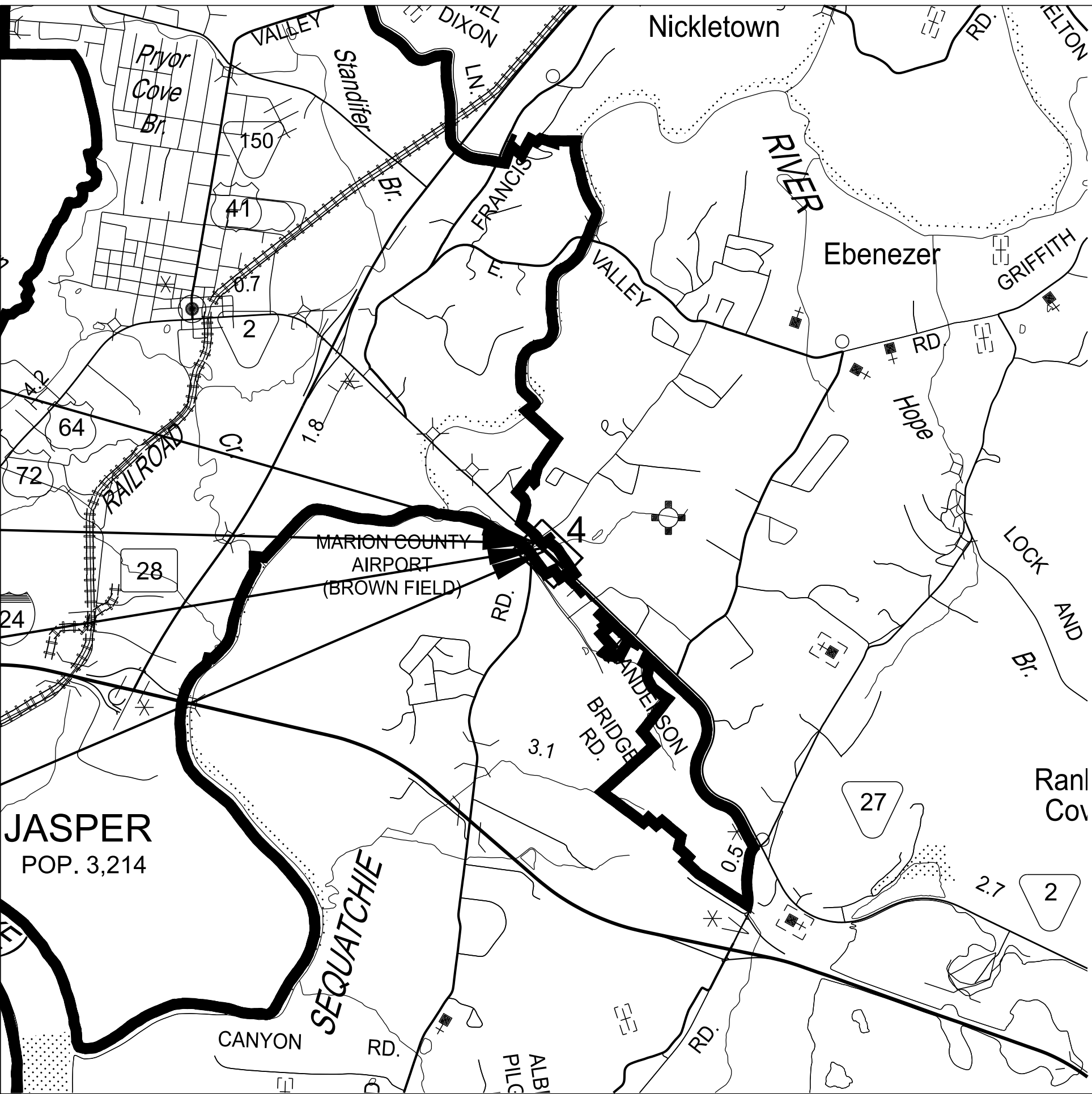
CHECKED BY : JAMES FRITZ BROGDON, P.E.

P.E. NO. 58S002-S1-004 (PE-D)

PIN NO. 133630.00

R.O.W. LENGTH 0.033 MILES
ROADWAY LENGTH 0.065 MILES
BRIDGE LENGTH 0.000 MILES
BOX BRIDGE LENGTH 0.000 MILES
BOX BRIDGE LENGTH 0.000 MILES
PROJECT LENGTH 0.065 MILES

Not included in the project length (Non Riding Surface).



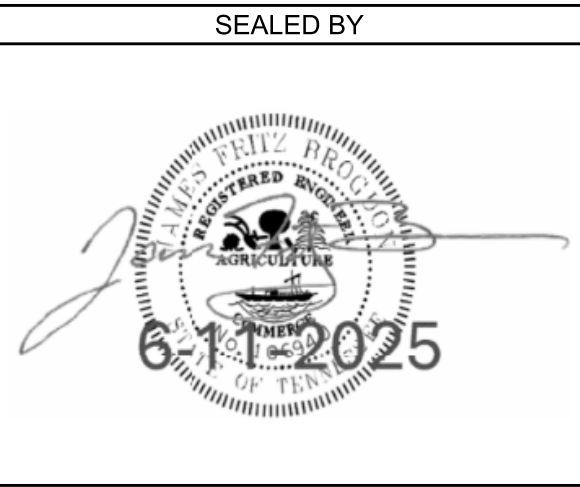
SCALE: 1"= 2640'

0 0.5 1 1.5 MILES



SURVEY 05-03-23	TRAFFIC DATA	
	ADT (2025)	4880
	ADT (2045)	5370
	DHV (2045)	591
	D	65-35
	T (ADT)	6
	T (DHV)	4
	V	45 MPH

COORDINATES ARE NAD/83(2011) ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 USING GEOID 18.



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

ROADWAY INDEX

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ROADWAY INDEX AND STANDARD	
ROADWAY & STRUCTURE DRAWINGS.....	1A
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NOTE: THE ALPHABETICAL LETTERS “I”, “O” & “Q” ARE NOT USED IN THE NUMBERING OF SHEETS.	

STANDARD ROADWAY DRAWINGS

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-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
RD-L-7	02-20-20	STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL
10-101.00 STANDARDS ROADWAY DRAWINGS		
RD11-SE-1		TRANSITION AND CROSS SLOPE DETAILS
RD11-TS-2		DESIGN STANDARDS FOR COLLECTORS, 2-LANE ROADS AND STREETS
RD11-LR-2		MINIMUM RUNOFF LENGTHS (LR) FOR RURAL HIGHWAYS
RD11-S-11		DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD11-S-11A		ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
10-104.00 ROADWAY, PAVEMENT APPURTENANCES, AND FENCES		
S-F-1	03-01-23	HIGH VISIBILITY FENCE
S-F-10B	06-28-19	STANDARD RIGHT-OF-WAY CHAIN LINK FENCE
10-106.00 SAFETY DESIGN AND GUARDRAILS		
S-CZ-1	06-28-19	CLEAR ZONE CRITERIA
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-PL-6	07-30-24	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-CC-1	10-01-24	CRASH CUSHION
S-GR31-1	03-13-25	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-GRS-3	06-28-19	SPECIAL CASE GUARDRAIL FOOTING
S-GRS-8		SAFETY PLAN AT SIDEROADS OR DRIVEWAYS FOR LOW SPEED ROADWAYS
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
S-GRA-4	03-01-23	IN-LINE GUARDRAIL ANCHOR TO PRIVATE DRIVE
S-GR28-3M	01-28-22	GUARDRAIL HEIGHT ADJUSTMENT

STANDARD TRAFFIC DESIGN DRAWINGS

DWG.	REV.	DESCRIPTION
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-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)
EC-STR-30A		INSTREAM DIVERSION (WITH TRAFFIC)
EC-STR-33	05-04-22	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-33A	05-04-22	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-34	05-04-22	EROSION CONTROL BLANKET FOR SLOPE INSTALLATION
EC-STR-37	06-10-14	SEDIMENT TUBE

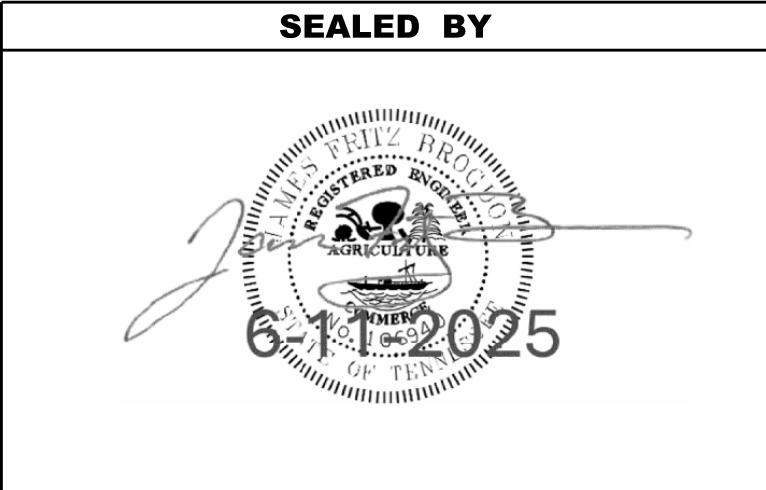
STANDARD TRAFFIC DESIGN DRAWINGS

10-200.00 SIGNS		
T-S-20	07-11-17	SIGN DETAILS
10-204.00 PAVEMENT MARKINGS		
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-M-3	01-24-25	MARKING STANDARDS FOR TRAFFIC ISLANDS, PAVED SHOULDERS AND MEDIANS FOR CONVENTIONAL ROADS
T-M-4	01-24-25	STANDARD INTERSECTION PAVEMENT MARKINGS
10-205.00 WORK ZONES		
T-WZ-10	03-26-25	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-FAB1	03-26-25	FLASHING YELLOW ARROW BOARD
T-WZ-PBR1	03-26-25	INTERCONNECTED PORTABLE BARRIER RAIL
T-WZ-PBR2	03-26-25	DETAILS FOR WORK ZONE CHANNELIZATION DEVICES
T-WZ-PCB3	03-26-25	PORTABLE CONCRETE BARRIER RAIL DETAILS

STANDARD STRUCTURE DRAWINGS

10-301.00 LRFD BOX CULVERTS		
STD-17-1		INDEX OF DRAWINGS
STD-17-2		TERMINOLOGY OF DRAWINGS
STD-17-3		GENERAL NOTES
STD-17-4		DESIGN SECTION LIMITS
STD-17-5		TYPICAL SECTIONS AND DETAILS
STD-17-6		TYPICAL ELEVATION
STD-17-8		EDGE BEAM DETAILS FOR FILLS GREATER THAN 3' - 6"
STD-17-17	06-01-11	BACKFILL AND DRAINAGE DETAILS
STD-17-18		BACKFILL DETAILS
STD-17-54		BOX BRIDGE, 1 BARREL AT 10', CLEAR HTS. 4' - 6', 0 - 60' FILL

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	1A
PS&E	2025	58S002-S3-004	1A



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX
AND
STANDARD
ROADWAY & STRUCTURE
DRAWINGS


ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 58S002-S3-004
(16)	202-01.13	REMOVAL OF PIPE (66" CMP)	L.F. 140
	202-01.56	REMOVAL OF STRUCTURES & OBSTRUCTIONS (CB, STA. 13+39.03 OFF. 32.5')	LS 1
(1)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y. 2443
	203-04	PLACING AND SPREADING TOPSOIL	C.Y. 85
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y. 50
	204-08	FOUNDATION FILL MATERIAL	C.Y. 3
(2), (3)	209-02.07	18" TEMPORARY SLOPE DRAIN	L.F. 96
(4)	209-03.53	STREAM MITIGATION - ARTICULATED CONCRETE MAT	S.Y. 660
(2), (3)	209-05	SEDIMENT REMOVAL	C.Y. 13
(2), (3)	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F. 244
(2), (3)	209-09.01	SANDBAGS	BAG 360
(2), (3)	209-09.04	SEDIMENT FILTER BAG(15' X 10')	EACH 4
(2), (3)	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y. 32
(2), (3)	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F. 222
	303-01.01	GRANULAR BACKFILL (ROADWAY)	TON 99
(5)	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON 145
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON 96
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON 0.3
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON 3
	407-20.05	SAW CUTTING ASPHALT PAVEMENT	L.F. 150
	411-01.10	ACS MIX(PG64-22) GRADING D	TON 437
	415-01.02	COLD PLANING BITUMINOUS PAVEMENT	S.Y. 5488
	602-01	STRUCTURAL STEEL	LB 180.5
(14)	604-01.01	CLASS A CONCRETE (ROADWAY)	C.Y. 110
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	LB 3292
(6), (7)	604-07.01	RETAINING WALL (R1, STA. 13+00.39 TO STA. 13+33.46 RT)	S.F. 155
(6), (7)	604-07.02	RETAINING WALL (R2, STA. 13+46.30 TO STA. 13+72.10 RT)	S.F. 134
(2)	621-03.06	42" TEMPORARY DRAINAGE PIPE	L.F. 40
(15)	621-05.02	TEMPORARY SHORING	LS 1
	705-04.09	EARTH PAD FOR TYPE 38 GR END TREATMENT	EACH 1
	705-06.02	W BEAM GR (TYPE 2) MASH TL3 (LONG POST)	L.F. 196
	705-06.10	GR TERMINAL TRAILING END (TYPE 13) MASH TL-3	EACH 1
	705-06.11	GR TERMINAL (INLINE) MASH TL-3	EACH 2
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH 1
	706-06.03	RADIUS RAIL	L.F. 60
	706-10.26	ROUNDED END ELEMENT	EACH 1
	707-01.11	CHAIN LINK FENCE (6 FOOT)	L.F. 130
	707-01.12	END & CORNER POST ASSEMBLY (CHAIN-LINK FENCE 6')	EACH 2
(12)	707-06.01	REMOVAL OF FENCE (TRACT 1)	L.F. 130
(11)	707-06.03	REMOVAL AND RESET FENCE (TRACT 1)	L.F. 130
(2), (3)	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F. 43
(2), (3)	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON 50
(2), (3)	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON 23
(2), (3)	709-05.08	MACHINED RIP-RAP (CLASS B)	TON 16
	712-01	TRAFFIC CONTROL	LS 1
	712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F. 290
	712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH 2
	712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH 100
	712-06	SIGNS (CONSTRUCTION)	S.F. 269
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F. 20
(13)	712-08.03	ARROW BOARD (TYPE C)	EACH 2
	712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F. 4500
	712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F. 40
	712-09.30	REMOVABLE BLACK-OUT TAPE (6")	L.F. 2500
	716-01.21	SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR) (1 COLOR)	EACH 55
	716-01.22	SNOWPLOWABLE RAISED PAVEMENT MARKERS (MONO-DIR) (1 COLOR)	EACH 10
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y. 130
	716-02.05	PLASTIC PAVEMENT MARKING (STOP LINE)	L.F. 55
	716-02.06	PLASTIC PAVEMENT MARKING (TURN LANE ARROW)	EACH 2
	716-02.12	PLASTIC PAVEMENT MARKING (8IN LINE)	L.M. 0.1
(18)	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M. 1

ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 58S002-S3-004
717-01	MOBILIZATION	LS	1
(10)	730-01.04	MODIFICATION OF EXISTING TRAFFIC SIGNAL EQUIPMENT	LS 1
(2), (3)	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y. 240
(2), (3)	740-11.03	TEMPORARY SEDIMENT TUBE 18IN	L.F. 619
(2), (3)	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT 9
(2), (3), (8)	801-01.38	NATVE SEED MX FINAL STABILZATN OF SLOPES	UNIT 14
	801-01.65	TEMPORARY MULCH	UNIT 1
(2), (3), (9)	801-03	WATER (SEEDING & SODDING)	M.G. 2
(2), (3)	805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y. 800

FOOTNOTES	
(1)	INCLUDES 29 CUBIC YARDS FOR EPSC AND 2414 FOR GENERAL PROJECT CHANNEL QUANTITY CALCULATED FROM SURFACES. EXCAVATION FOR CONSTRUCTION OF RETAINING WALLS CALCULATED FROM CROSS SECTION END AREAS.
(2)	ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(3)	FOR EROSION PREVENTION AND SEDIMENT CONTROL.
(4)	FOR STREAM CHANNEL STABILIZATION. TO BE USED AS SPECIFIED ON PLANS. SEE DETAILS SHEETS.
(5)	INCLUDES 15 TONS FOR EPSC AND 130 TONS FOR PAVEMENT REPAIRS.
(6)	RETAINING WALL SHALL BE MSE MODULAR BLOCK FACING RETAINING WALL.
(7)	SEE SPECIAL NOTES SHEET 2D.
(8)	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 30 FT 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 ENVIRONMMENT AND CONSERVATION (TDEC) TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK 4TH EDITION.
(9)	INCLUDES 2000 GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL
(10)	THE COST BID WILL INCLUDE ANY MODIFICATIONS (INCLUDING TIMING) REQUIRED FOR THE TRAFFIC SIGNAL SYSTEM LOCATED AT THE INTERSECTION OF SR-2/US11 @ SHELLMOUND ROAD/PLEASANT GROVE ROAD TO FACILIATE CONSTRUCTION DURING THE DURATION OF THE PROJECT. THIS COST WILL ALSO INCLUDE RETURNING THE TRAFFIC SIGNAL (INCLUDING TIMING) TO ITS ORIGINAL CONDITION AT THE COMPLETION OF THE PROJECT.
(11)	PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL REMOVE AND RESET THE EXISTING FENCE ON TRACT 1. IT SHALL BE RESET IN A MANNER AS TO ALLOW FOR CONSTRUCTION OF THE PROPOSED CHANNEL AND MAINTAIN ACCESS CONTROL FOR TRACT 1. THE RESET LOCATION SHALL BE COORDINATED WITH THE OWNER OF TRACT 1.
(12)	AT THE CONCLUSION OF CONSTRUCTION ACTIVITIES, THE REMOVAL SHALL BE COORDINATED WITH INSTALLATION OF THE PROPOSED FENCE AS TO MAINTAIN ACCESS CONTROL TO TRACT 1. THE REMOVAL AND INSTALLATION SHALL BE COORDINATED WITH THE OWNER OF TRACT 1.
(13)	TO BE USED AT THE DIRECTION OF THE ENGINEER.
(14)	INCLUDES 2 CUBIC YARDS FOR SPECIAL GUARDRAIL FOOTING.
(15)	ESTIMATED AT 400 SF TO BE USED AS NECESSARY TO FACILITATE CONSTRUCTION OF THE RETAINING WALL AND BOX CULVERT EXTENSION.
(16)	THE REMOVED PIPE SHALL BECOME THE PROPERTY OF THE CONTRACTOR FOR DISPOSAL.
(17)	FOR SPECIAL GUARDRAIL FOOTING
(18)	CONTRACTOR SHALL USE THE EXTRUDED OR RIBBON METHOD FOR APPLICATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2
PS&E	2025	58S002-S3-004	2

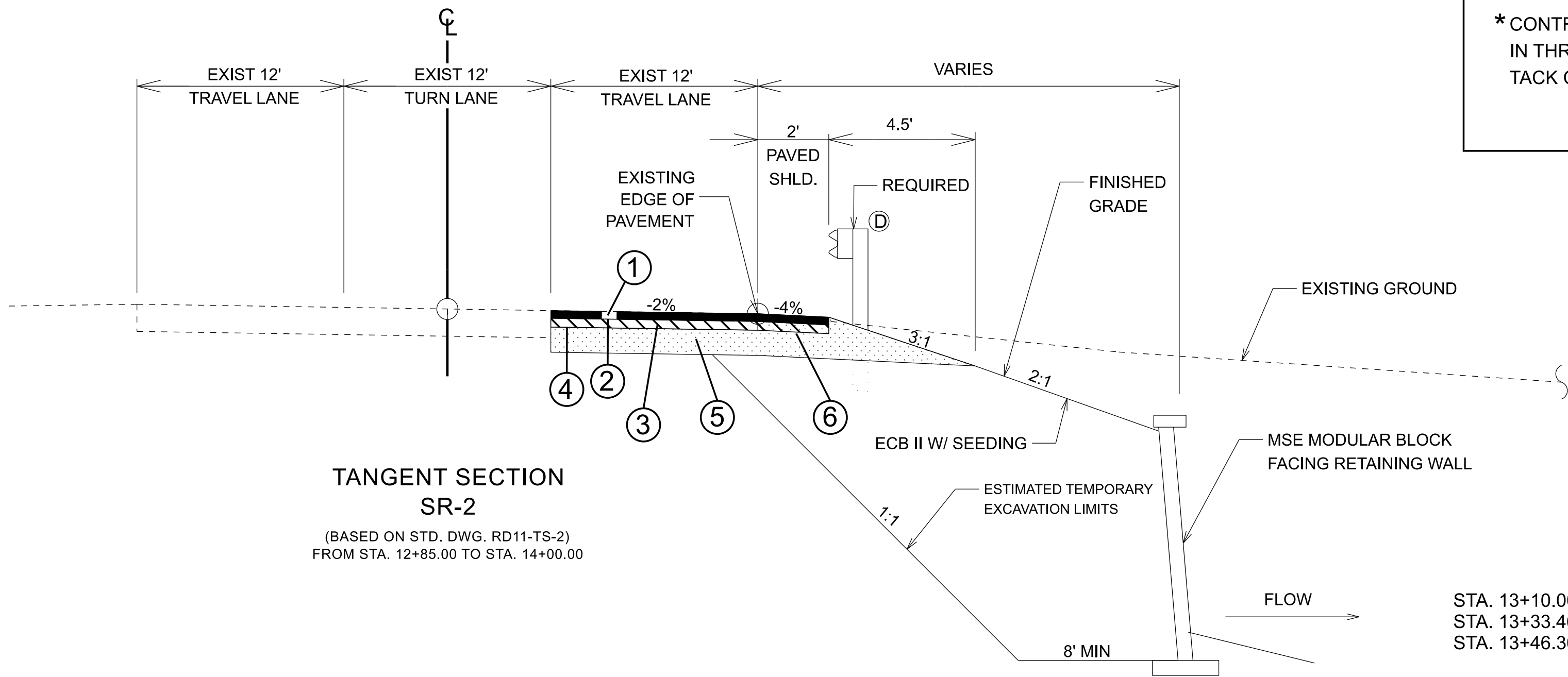
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED
ROADWAY
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2B
PS&E	2025	58S002-S3-004	2B

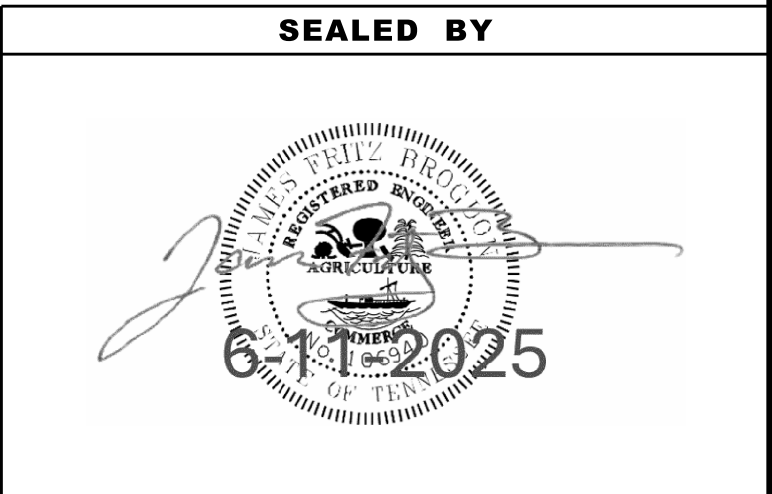


NOTES:
(1) MSE WALL SHALL BE CONNECTED TO CULVERT EXTENSION.
① SEE STANDARD DRAWING S-PL-6 FOR TYPICAL GUARDRAIL PLACEMENT.
* CONTRACTOR SHALL PAVE ITEM NO. 307-01.08 IN THREE LIFTS AND COMPACT WITH TACK COAT BETWEEN EACH LAYER

STA. 13+10.00 TO STA. 13+33.46 - OUTSIDE WALL
STA. 13+33.46 TO STA. 13+46.30 - OUTSIDE CULVERT/CHANNEL
STA. 13+46.30 TO STA. 13+72.10 - OUTSIDE WALL

PROPOSED PAVEMENT SCHEDULE

①	ASPHALTIC CONCRETE SURFACE (HOT MIX) PG64-22 GRADING "D" SURFACE @ 1.5" THICK @ 159.0 LBS/SY 411-01.10 ACS MIX (PG64-22) GRADING "D"
②	TACK COAT 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC) APPLY AT A RATE OF 0.08 GAL/S.Y.
③*	BITUMINOUS PLANT MIX BASE (HOT MIX) PG64-22 GRADING "B-M2" @ 10.5" THICK @ 1186.5 LBS/SY 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "B-M2"
④	PRIME COAT 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) @ 0.30-0.35 GAL./SQ. YD.
⑤	MINERAL AGGREGATE TYPE 57 STONE @ 12.0" THICK 303-10.01 MINERAL AGGREGATE (SIZE 57)
⑥	MINERAL AGGREGATE TYPE 57 STONE @ 22.5" THICK 303-10.01 MINERAL AGGREGATE (SIZE 57)



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TYPICAL
SECTIONS
& PAVEMENT
SCHEDULE

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.
- (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

- (1) ITEM NO. 801-01.38 NATIVE SEED MIX FINAL STABILIZATION OF SLOPES SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

GUARDRAIL

- (2) 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.
- (3) IF ANY APPROACH END OF A SECTION OF GUARDRAIL OR BRIDGE RAIL MUST TEMPORARILY BE LEFT INCOMPLETE AND EXPOSED TO TRAFFIC, THE CONTRACTOR SHALL USE TWO (2) TEMPORARY BARRICADES OR DRUMS WITH TYPE "A" LIGHTS AND ROUNDED END ELEMENTS AS MINIMUM MEASURES TO PROTECT TRAFFIC FROM THE HAZARD OF AN EXPOSED END. ALL COST OF FURNISHING AND INSTALLING TEMPORARY BARRICADES OR DRUMS WITH TYPE "A" LIGHTS TO DELINEATE GUARDRAIL END AND A TEMPORARY ROUNDED END ELEMENT SHALL BE INCLUDED IN THE COST OF THE PROPOSED GUARDRAIL END TERMINAL.

DRAINAGE

- (3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.
- (6) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

FENCING

- (3) THE CONTRACTOR SHALL GIVE THE AFFECTED PROPERTY OWNERS A TWO-WEEK NOTICE PRIOR TO CUTTING FENCES.

MISCELLANEOUS

- (2) THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND RESET MAILBOXES AND POSTS WHERE AND AS DIRECTED BY THE ENGINEER. COST TO BE INCLUDED IN PRICE BID FOR OTHER CONSTRUCTION ITEMS.
- (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

TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

- (2) TEMPORARY PAVEMENT LINE MARKINGS ON INTERMEDIATE LAYERS OF PAVEMENT SHALL BE REFLECTIVE TAPE OR REFLECTORIZED PAINT INSTALLED TO PERMANENT STANDARDS AT THE END OF EACH DAY'S WORK. SHORT, UNMARKED SECTIONS SHALL NOT BE ALLOWED. THESE MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 716-05.20, PAINTED PAVEMENT MARKING (6" LINE), L.M.

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.

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

- (16) THE PAVEMENT MARKINGS ON THE LANE SHIFT FOR CENTERLINE, EDGELINES & LANE LINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO.716-05.20 L.M.
- (18) BEFORE OPENING THE LANE SHIFT TO TRAFFIC, THE TRANSITIONAL MARKINGS ON THE EXISTING ROADWAY MUST BE IN PLACE. ALL EXISTING MARKINGS IN THE AREA OF THESE TRANSITIONAL MARKINGS SHALL BE OBLITERATED AND ALL EXISTING RAISED PAVEMENT MARKERS SHALL BE REMOVED TO ELIMINATE CONFLICTING MARKINGS. REMOVAL OF THE EXISTING CONFLICTING MARKINGS AND RAISED PAVEMENT MARKERS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN ITEM NO. 712-01, TRAFFIC CONTROL, LUMP SUM.

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.

SIGNING

- (12) ALL SIGNS WHICH INTERFERE WITH CONSTRUCTION WILL BE RELOCATED OUTSIDE LIMITS OF CONSTRUCTION BY THE CONTRACTOR. UPON COMPLETION OF CONSTRUCTION, THE CONTRACTOR WILL RESTORE THE SIGNS TO ORIGINAL LOCATION. THE CONTRACTOR SHALL CHECK WITH THE REGIONAL TRAFFIC ENGINEER PRIOR TO MOVING ANY PERMANENT SIGNS.

SIGNALIZATION

- (1) EQUIPMENT AND INSTALLATION OF TRAFFIC SIGNALS SHALL COMPLY WITH TDOT STANDARD SPECIFICATIONS, SECTION 730.

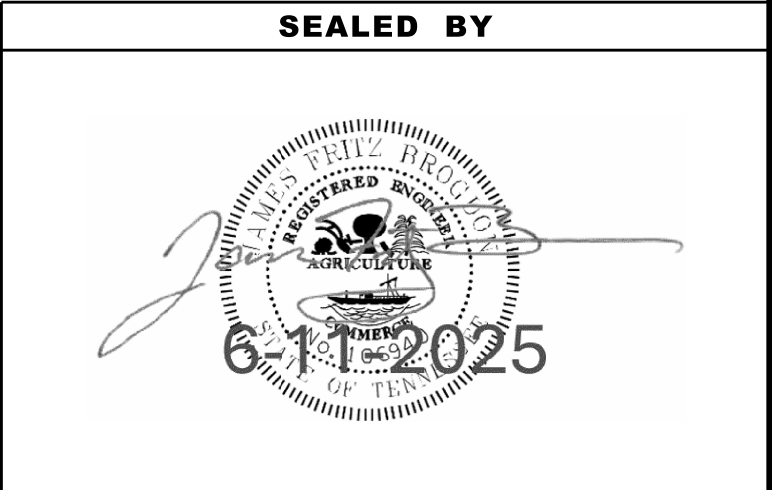
CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

- (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.
- (9) 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.
P-I-H	2025	58S002-S3-004	2C
PS&E	2025	58S002-S3-004	2C



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL
NOTES


SPECIAL NOTES

RETAINING WALLS

- (1) THE RIGHT-OF-WAY BETWEEN STATION 13+00 TO STATION 14+00 SHALL REMAIN CLEAR FOR THE CONSTRUCTION OF THE RETAINING WALL. NO UTILITY LINES MAY BE PLACED THERE WITHOUT APPROVAL FROM STRUCTURES DIVISION.
- (2) THE OPTIONS FOR RETAINING WALL TYPES SHALL BE LIMITED TO THE APPROVED ALTERNATIVES AS SPECIFIED ON THE RETAINING WALL SHEET(S).
- (3) VALUE ENGINEERING CHANGE PROPOSALS WILL NOT BE ACCEPTED FOR RETAINING WALLS ITEM NUMBER(S): 604-07.01 (R1, STA. 13+00.39 TO STA. 13+33.46 RT.) AND 604-07.02 (R2, STA. 13+46.30 TO STA. 13+72.10 RT.)
- (4) ALL COST OF BUILDING, INSTALLING AND BACKFILLING THE RETAINING WALL, INCLUDING GRANULAR BACKFILL, GEOTEXTILE FABRIC (TYPE IV), LEVELING PAD, AMD MOMENT SLAB, SHALL BE INCLUDED IN THE COST BID FOR ITEM NUMBERS – 604-07.01 AND 604-07.02. COSTS FOR EXCAVATION OF THE WALL SHALL BE INCLUDED IN ITEM NO. 203-01, ROAD AND DRAINAGE EXCAVATION PER CUBIC YARD. END AREAS FOR EXCAVATION FOR THE WALL SHALL BE INCLUDED IN END AREA TOTALS ON CROSS-SECTIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2D
PS&E	2025	58S002-S3-004	2D

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL
NOTES

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.

SCOPE OF WORK

- CULVERT EXTENSION
- RETAINING WALLS
- OPEN CHANNEL DESIGN AND STABILIZATION
- TRAFFIC CONTROL

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2E
PS&E	2025	58S002-S3-004	2E

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL
NOTES

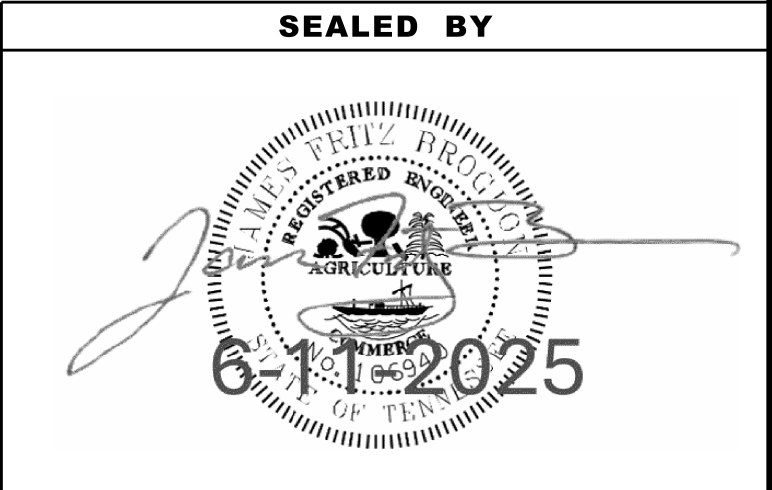
TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2F
PS&E	2025	58S002-S3-004	2F

BOX CULVERT TABULATION														
STATION	LOCATION	TYPE		SKEW	NO. BARRELS	WIDTH	HEIGHT	LENGTH	DRAINAGE AREA SQ.MILE	STANDARD DRAWING NO.	CULVERT ≤ 20 FT.		STD. DWG. STD-17-17 & 18	
		BOX	SLAB								CLASS "A" CONCRETE 604-01.01 CU. YD.	STEEL BAR REINF. 604-01.02 LB.	FOUNDATION FILL MATERIAL 204-08 CU. YD.	GRANULAR BACKFILL 303-01.01 TONS
13+40.20	SR-2	X		45°	1	10	6	11	1.16	STD-17-6	108	3292	3	99
TOTALS											108	3292	3	99

TOPSOIL							
IF EXISTING TOPSOIL IS SUITABLE FOR REUSE							
PROPOSED SLOPE AREA S.F.	EXISTING TOPSOIL (EXC.)	EXISTING TOPSOIL (EMB.)	EXISTING TOPSOIL (TOTAL) C.Y.	REQUIRED TOPSOIL C.Y.	PLACING TOPSOIL 203-04 C.Y.	FURNISHED TOPSOIL 203-07 C.Y.	EXCESS TOPSOIL C.Y.
8766	163	0	163	85	85	0	78
IF EXISTING TOPSOIL IS NOT SUITABLE FOR REUSE							
PROPOSED SLOPE AREA S.F.	EXISTING TOPSOIL (EXC.)	EXISTING TOPSOIL (EMB.)	EXISTING TOPSOIL (TOTAL) C.Y.	REQUIRED TOPSOIL C.Y.	PLACING TOPSOIL 203-04 C.Y.	FURNISHED TOPSOIL 203-07 C.Y.	EXCESS TOPSOIL C.Y.
0	N/A	N/A	N/A	0	N/A	0	N/A

ESTIMATED GRADING QUANTITIES						
DESCRIPTION		UNADJUSTED VOLUMES (CY)		ADJUSTED VOLUMES (CY)	BALANCE SUMMARY	
		EXC.	EMB.	EXC.	SHRINK = 20 %	SWELL = 20 %
MAINLINE		305	6	244	EXC.	EMB.
SIDE ROADS		0	0			
PVT. DRIVES, BUSINESS AND FIELD ENTRANCES		0	0			
INDEPENDENT DITCHES		1946	8	1557		
TEMPORARY CONSTRUCTION EXITS		29	0	24		
OTHER (BRIDGE EXCAVATION, PAVEMENT, ETC...)		0	0		1824	VS. -14
TOPSOIL (EMB.)		0			AVAILABLE	= 1810
TOPSOIL (EXC.)		163				
TOPSOIL TOTALS (SEE TOPSOIL TABLE)					WASTE MATERIAL	= 2172
ROCK (C.Y.)		TOTALS (C.Y.)				
EXC.	EMB.	EXC. (UNCL.) EMB. (UNCL.)		EXC (COMMON) EXC. (AVAIL.)		EXC. (ADJ.)
0	0	2443	14	2443	2280	1824

PROPOSED GUARDRAIL													
SHEET NO.	LOCATION												
		SIDE		STATIONS		W BEAM GR (TYPE 2) LONG POST MASH TL3 705-06.02 (L.F.)	TYPE 38 MASH TL3 (46.875') 705-06.20 (EACH)	EARTH PAD FOR TYPE 38 GR END TREATMENT 705-04.09 (EACH)	GR TERMINAL TRAILING END (TYPE 13) MASH TL-3 705-06.10 (EACH)	GR TERMINAL (INLINE) MASH TL3 705-06.11 (EACH)	RADIUS RAIL 706-06.03 (L.F.)	ROUNDED END ELEMENT 706-10.26 (EACH)	REMARKS
						LT	RT	FROM	TO				
4	SR 2		X	11+83.37	14+21.37	196	1	1	1	2	60	1	
TOTALS						196	1	1	1	2	60	1	



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED
QUANTITIES


TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2F1
PS&E	2025	58S002-S3-004	2F1

PAVEMENT QUANTITIES																
LOCATION (ROADWAY)	TYPE - GRADE - PAY ITEM (TON)												COLD PLANING			
	MINERAL AGG.	BITUMINOUS PLANT MIX BASE (HOT MIX)				PRIME COAT		TACK COAT	ASPHALTIC CONCRETE SURFACE (HOT MIX)				BITUMINOUS PLANT MIX			
		D	A	A-S	B-M				B-M2 *	D	E			TON	S.Y.	C.Y.
		303-01	307-01.01	307-01.20	307-01.07				307-01.08	402-01	402-02	403-01	411-01.10	411-01.07	411-xx.xx	411-xx.xx
SR-2 (SEE SHT T-4)					96.0	0.3		3.0	437.0					5488.0		
TOTALS					96.0	0.3		3.0	437.0					5488.0		

* - ONLY USED IN FULL DEPTH REPAIR AREA - SR-2 (STA 12+85.00 TO STA 14+00)

TRAFFIC CONTROL SIGN TABULATION						
M.U.T.C.D. SIGN NO.	LEGEND \ DESCRIPTION	SIZE IN INCHES L x W		S.F.	TOTAL NUMBER REQUIRED	ITEM NO. 712-06 S.F.
G20-2	END ROAD WORK	48"	24"	8	4	32
R3-7	RIGHT LANE MUST TURN RIGHT	36"	36"	9	1	9
W1-4L	LANE SHIFT LEFT	48"	48"	16	2	32
W1-4R	LANE SHIFT RIGHT	48"	48"	16	2	32
W6-3	TWO-WAY TRAFFIC	48"	48"	16	2	32
W16-9P	AHEAD (PLAQUE)	24"	12"	2	2	4
W20-1	ROAD WORK	48"	48"	16	8	128
TOTAL						269

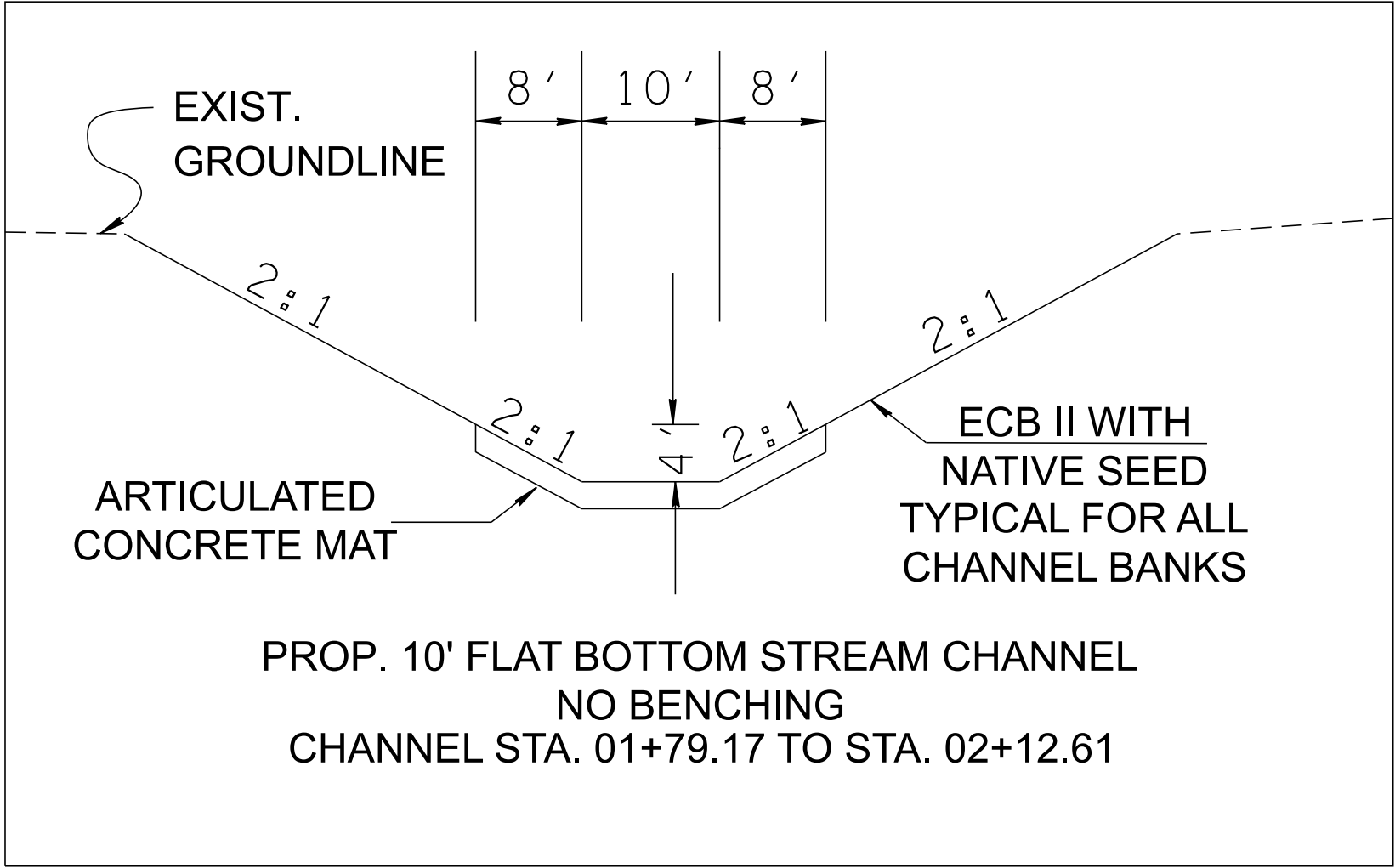
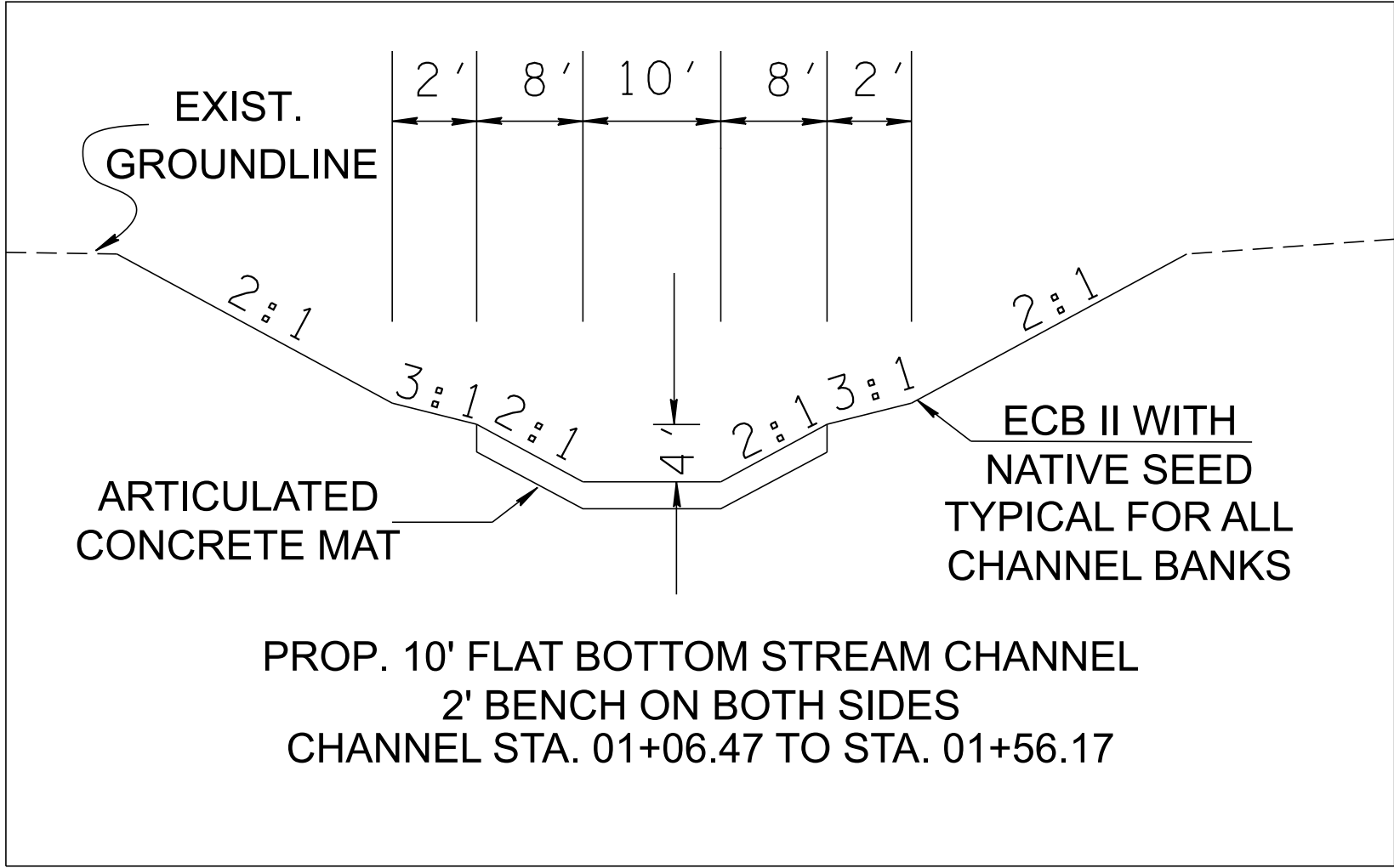
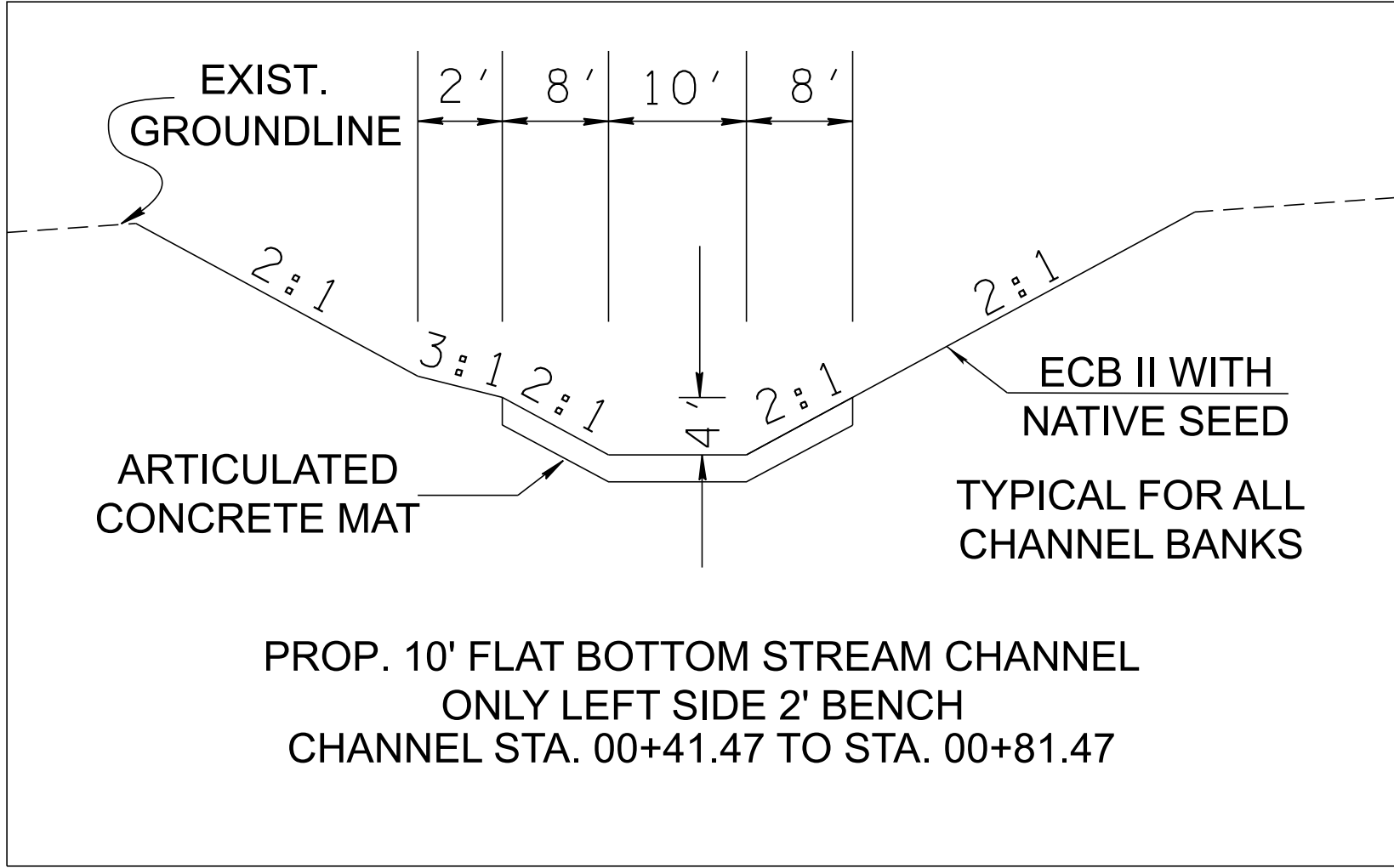
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED
QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	2G
PS&E	2025	58S002-S3-004	2G



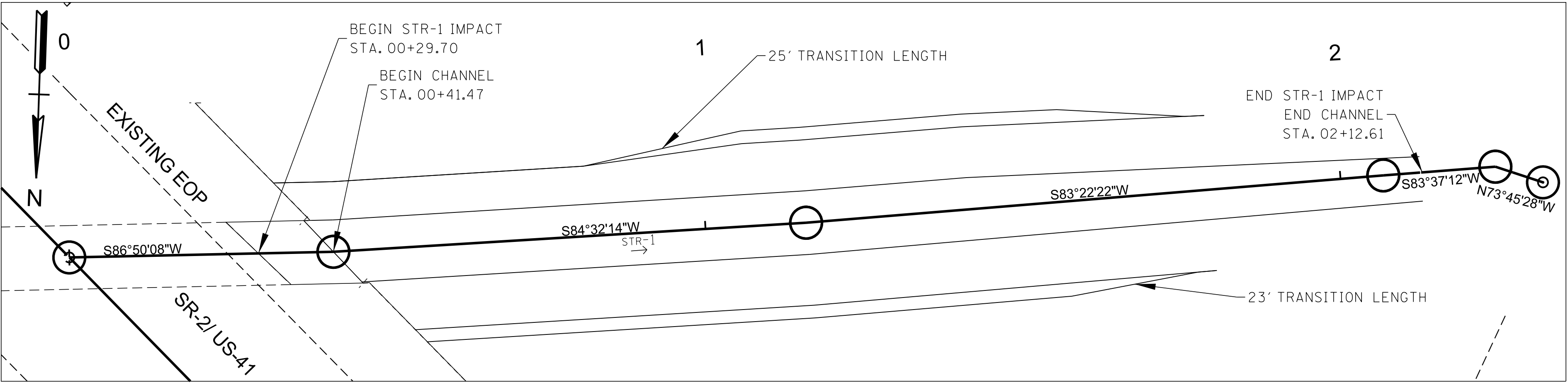
Horizontal Alignment Review Report

Alignment Name: STREAM CL_NEW

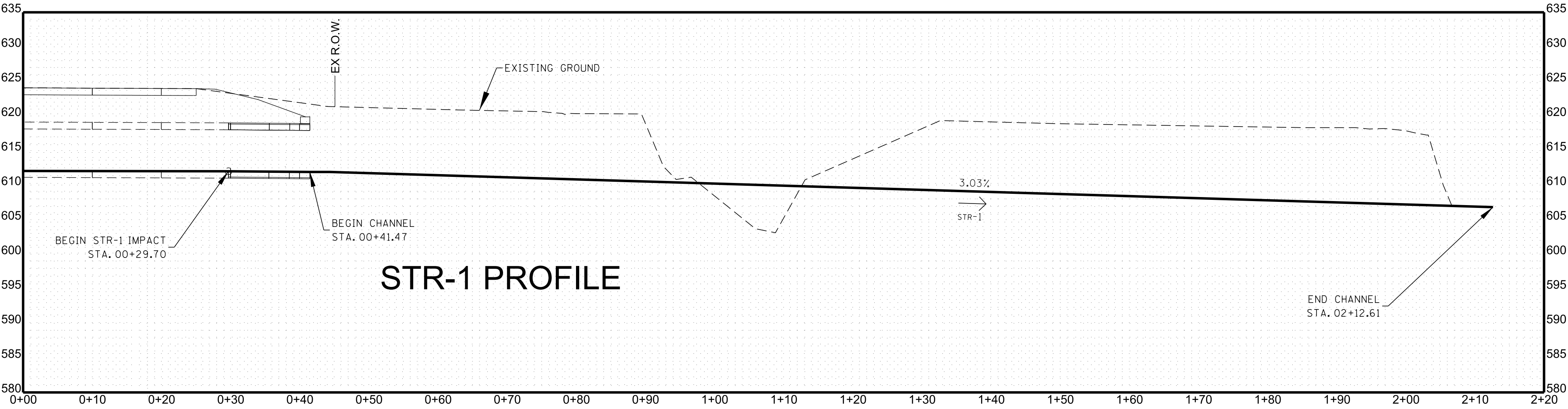
Alignment Description:

Alignment Style: Alignment\Prop HA Temporary

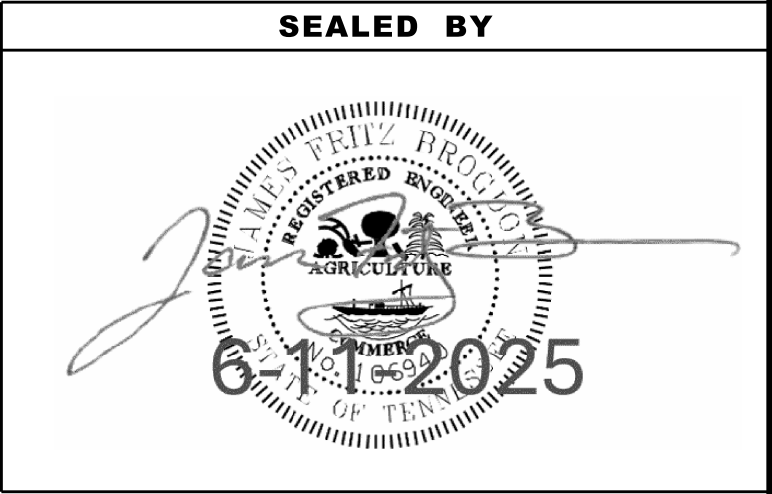
		Station	Northing	Easting
Element: Linear				
START	()	0+00.00	264299.886	2088958.539
HPI	()	0+41.47	264297.5967	2088917.132
	Tangential Direction:	S86°50'07.6"W		
	Tangential Length:	41.47		
Element: Linear				
HPI	()	0+41.47	264297.5967	2088917.132
HPI	()	1+15.82	264290.5185	2088843.118
	Tangential Direction:	S84°32'14.0"W		
	Tangential Length:	74.35		
Element: Linear				
HPI	()	1+15.82	264290.5185	2088843.118
HPI	()	2+06.74	264280.0262	2088752.812
	Tangential Direction:	S83°22'22.0"W		
	Tangential Length:	90.91		
Element: Linear				
HPI	()	2+06.74	264280.0262	2088752.812
HPI	()	2+24.38	264278.065	2088735.272
	Tangential Direction:	S83°37'11.5"W		
	Tangential Length:	17.65		
Element: Linear				
HPI	()	2+24.38	264278.065	2088735.272
END	()	2+32.25	264280.2657	2088727.718
	Tangential Direction:	N73°45'27.7"W		
	Tangential Length:	7.87		



STR-1 ALIGNMENT DETAIL
N.T.S.



STR-1 PROFILE



STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION
DETAIL SHEETS

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	3A
PS&E	2025	58S002-S3-004	3A


R.O.W. ACQUISITION TABLE																	
TRACT NO.	PROPERTY OWNERS	COUNTY RECORDS				TOTAL AREA (ACRES)			AREA TO BE ACQUIRED (ACRES)			AREA REMAINING (ACRES)		EASEMENT (ACRES)			
		TAX MAP NO.	PARCEL NO.	DEED DOCUMENT REFERENCE		LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERMANENT	SLOPE	CONSTRUCTION	AIR RIGHTS
				BOOK	PAGE												
1	JOSHUA KILGORE	120 N A	032.00	540	331		6.182	6.182					6.182			0.298 ①	
2	ROGER D. YORK AND WIFE, KAREN S. YORK AND RANDY YORK AND WIFE, LISA YORK AS JOINT TENANTS WITH THE RIGHT OF SURVIVORSHIP	120	052.03	352	882	0.400						0.400					
3	SHANNON YORK	120	052.04	369	182	0.365						0.365					
4	VINCENT C. SKILES	120	062.06	477	1237	0.460						0.460					
ACQUISITION TOTALS (ACRES)																0.298	

FOOTNOTES:

① TRACT 1 CONST. ESMT. FOR CONSTRUCTION USE

DISTURBED AREA		
IN BETWEEN SLOPE LINES	0.210	(AC)
15 FOOT WIDE STRIP (OUT SIDE SLOPE LINES)	0.100	(AC)
TOTAL DISTURBED AREA	0.310	(AC)
TOTAL PROJECT AREA	0.310	(AC)

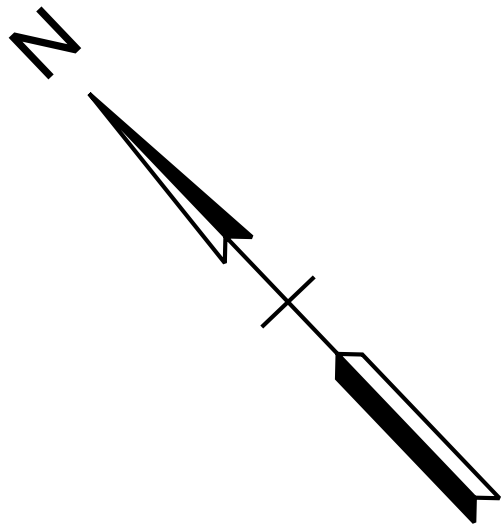
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY
ACQUISITION
TABLE

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	4
PS&E	2025	58S002-S3-004	4



20

STA. 21+00.00
N 263794.5382
E 2089487.5810

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-2 AND THAT THE STREAM AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

BEGIN CONSTRUCTION PROJECT NO. 58S002-S3-004

STA. 11+80.06

N 264430.0669 E 2088822.1732

BEGIN R.O.W. PROJECT NO. 58S002-S2-004

STA. 12+07.12

N 264411.3840' E 2088841.7437'

~~ROGER D. YORK AND WIFE,
KAREN S. YORK AND RANDY YORK
AND WIFE, LISA YORK AS JOINT TENANTS
WITH THE RIGHT OF SURVIVORSHIP~~

STA. 13+68.59

SR-2/US-41=

STA. 0+00.00

STREAM CL_NEW

N 264299.8863 E 2088958.5386

END R.O.W. PROJECT NO. 58S002-S2-004

STA. 13+84.72

N 264288.7482 E 2088970.2058

END CONSTRUCTION PROJECT NO. 58S002-S3-004

STA. 15+26.81

N 264190.6337 E 2089072.9816

PLEASANT GROVE RD
CURVE 1
PI 100+61.67
N 264474.9812
E 2088864.4419
Δ 07°30'25" RT.
D 06°35'08"
R 870.00'
L 113.99'
T 57.08'

10

STA. 10+00.00
N 263594.4033
E 2086691.9286

Pleasant Grove Rd STA. 101+76.64
N 264547.1570
E 2088954.1395

STA. 11+79.62 SR-2/US-41=
STA. 100+00.00 Pleasant Grove Rd
N 264430.3709 E 2088821.8548
PT STA. 101+18.59

PC STA. 100+04.60

SR-2/US-41=

Pleasant Grove Rd

N 264430.3709 E 2088821.8548

PC STA. 50+20.21

STA. 11+60.84

SR-2/US-41=

STA. 50+00.00

Shellmound Rd

N 264443.3411 E 2088808.2684

PT STA. 50+98.56

SHELLMOUND RD
CURVE 1
PI 50+59.80
N 264400.0893
E 2088766.9783
Δ 20°11'06" LT.
D 25°45'41"
R 222.41'
L 78.35'
T 39.59'

NEIL-WEB
MEMORIAL-BRIDGE
30' SINGLE SPAN CONCRETE
BOX BEAM BRIDGE
29' LENGTH ALONG STREAM CL
LOW CHRDL= 617.41
(TO REMAIN)

Shellmound Rd STA. 52+66.26
N 264209.9761
E 2088684.3705

JOSHUA KILGORE

SEE DETAIL SHEET 2G
FOR STREAM ALIGNMENT BEARINGS

NOTE 1:
CULVERT IS BURIED BOTH ENDS THESE PIPES WERE TIED INTO
THE CULVERT AND BRICKED IN TO FIT
NOTE 2:
18" STS HAS BEEN CUT INTO THE SIDE OF THE 66" STS AND
THE LOCATION ELEVATION ARE BOTH APPROXIMATE

Point	North	East	Elevation	Station	Offset	Feature	Description
S21	264392.393	2088824.738	623.309	12+07.90	25.51	XCP	GPS MA-02-21
S22	264204.667	2089025.155	623.681	14+82.53	22.87	XCP	GPS MA-02-22

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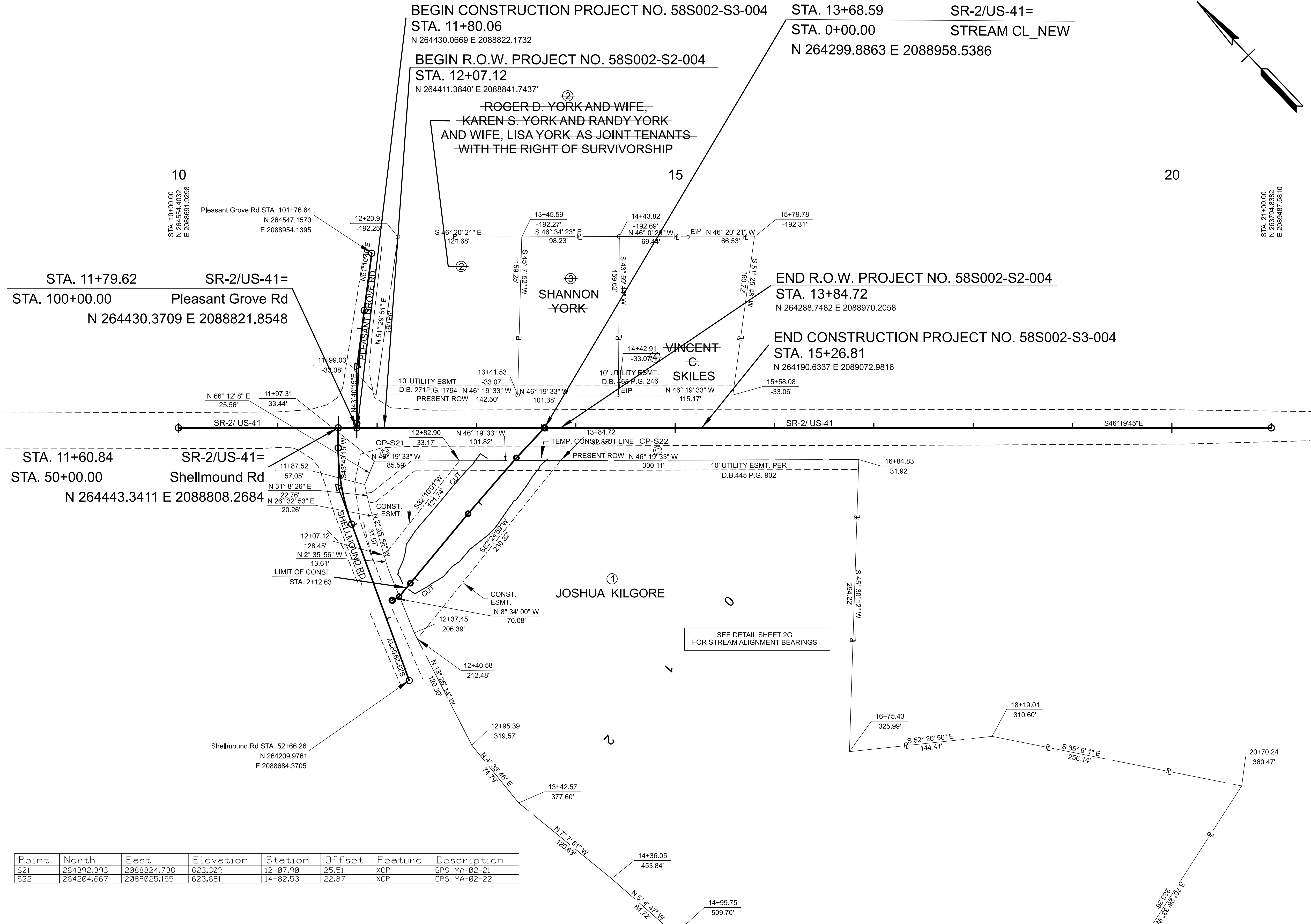
COORDINATES ARE NAD 83(2011), ARE
DATUM ADJUSTED BY THE FACTOR
OF 1.00000 AND TIED TO THE TGRN.
ALL ELEVATIONS ARE REFERENCED
TO THE NAVD 1988 WITH GEOID 18.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT
LAYOUT

STA. 10+00 TO STA. 21+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	4A
PS&E	2025	58S002-S3-004	4A



Point	North	East	Elevation	Station	Offset	Feature	Description
S21	264392.393	2088824.738	623.309	12+07.90	25.51	XCP	GPS MA-02-21
S22	264204.667	2089025.155	623.681	14+82.53	22.87	XCP	GPS MA-02-22

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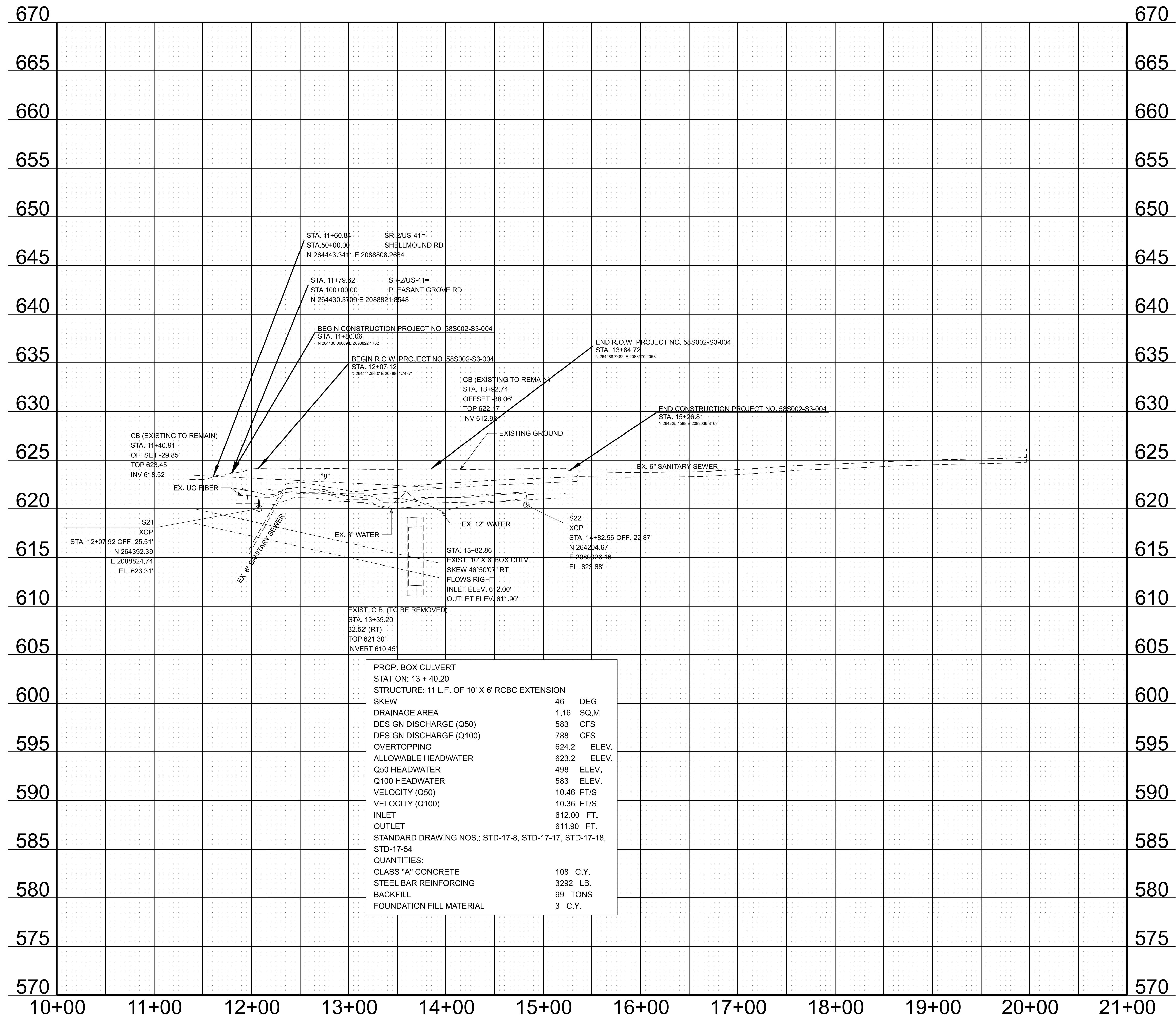
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY
DETAILS

STA. 10+00 TO STA. 21+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	4C
PS&E	2025	58S002-S3-004	4C



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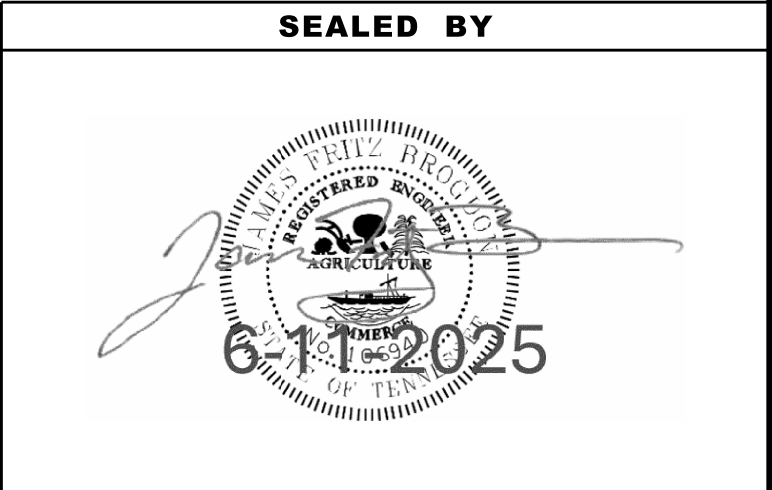
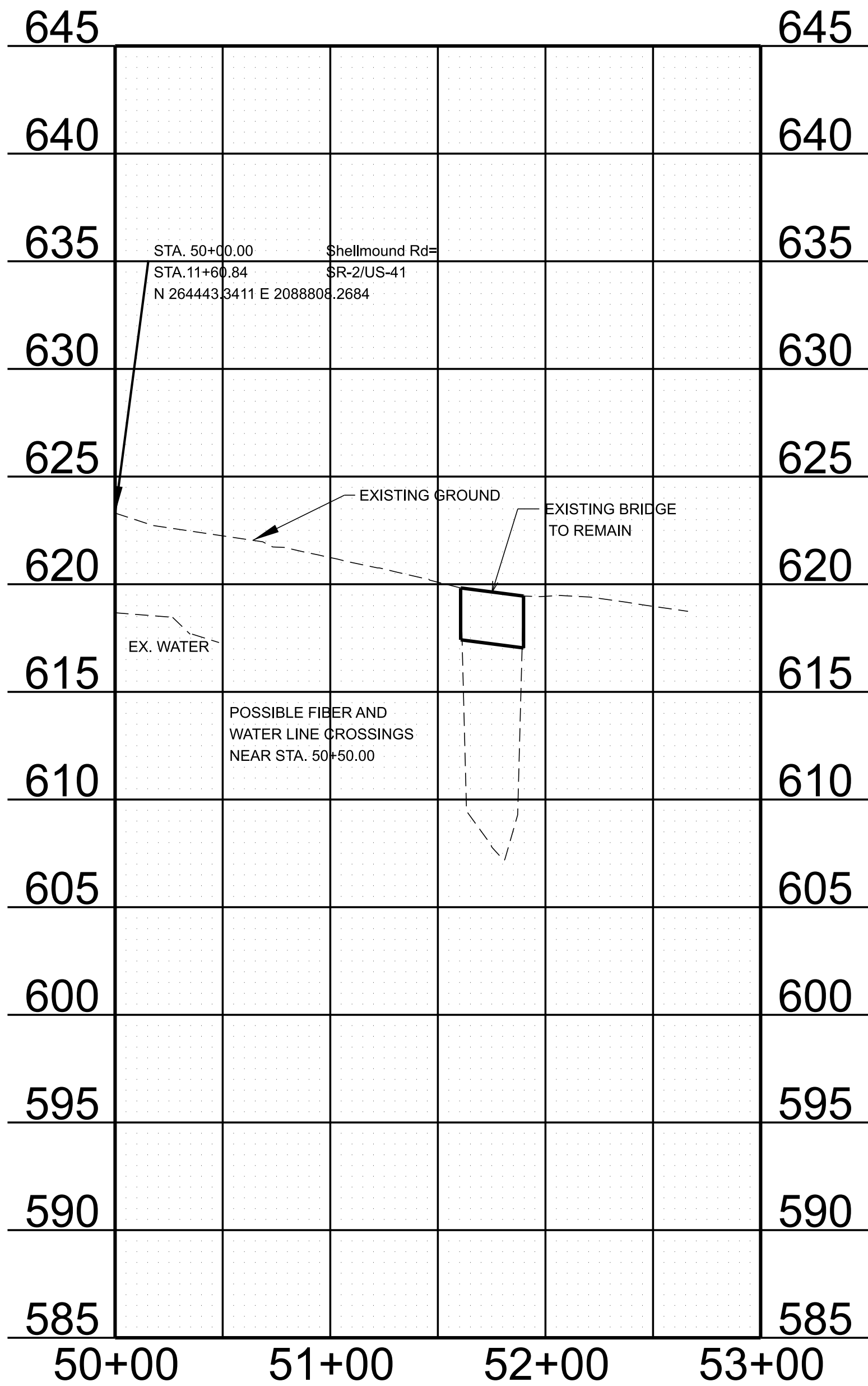


**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

PROPOSED
SR-2
PROFILE
A. 10+00 TO STA. 21+00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	5
PS&E	2025	58S002-S3-004	5

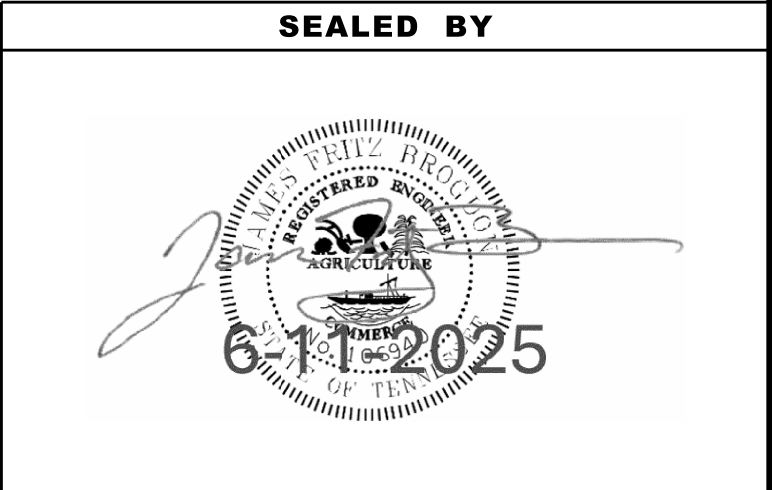
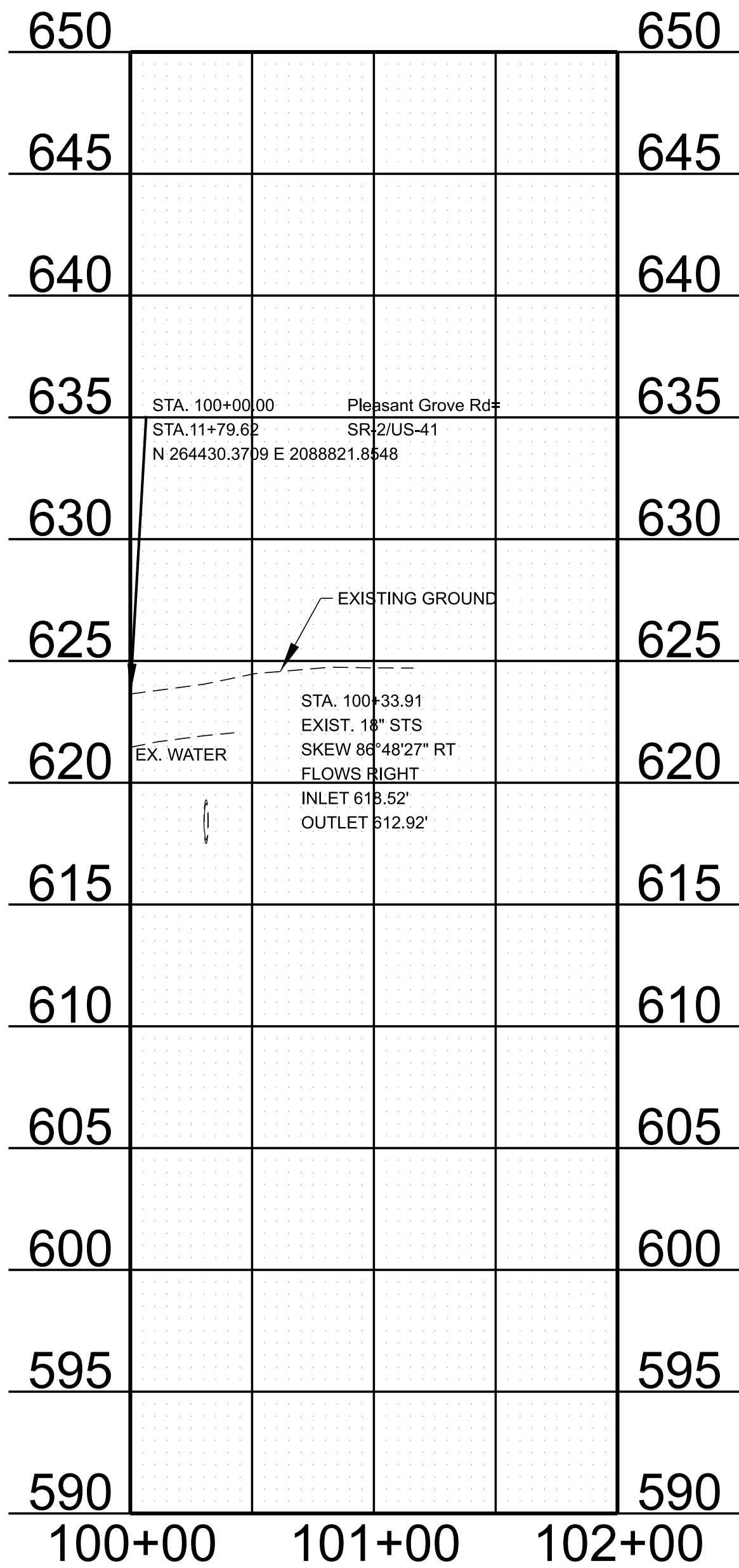


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED
SHELLMOUND ROAD
PROFILE
STA. 50+00 TO STA. 53+00

SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	6
PS&E	2025	58S002-S3-004	6

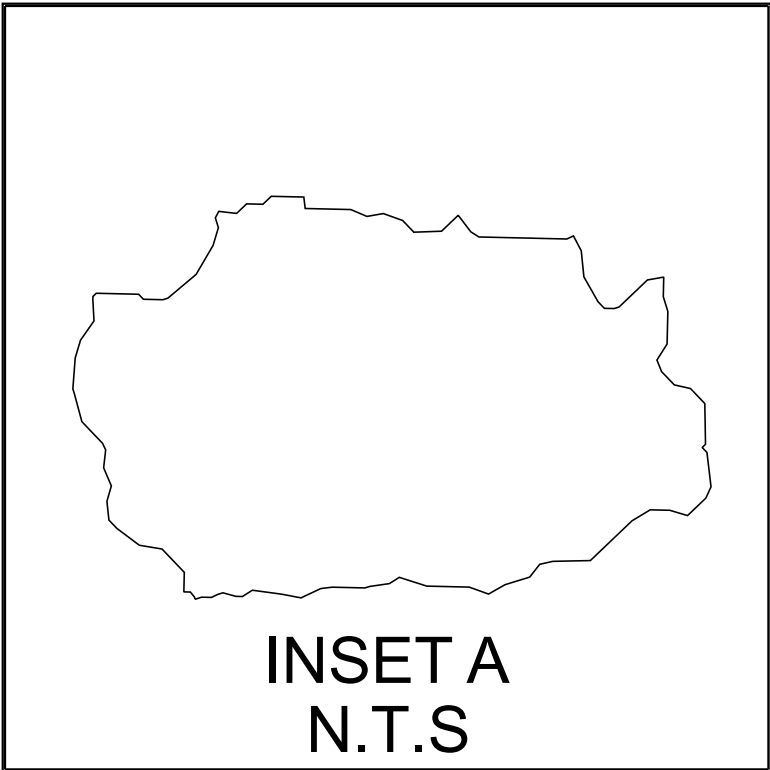
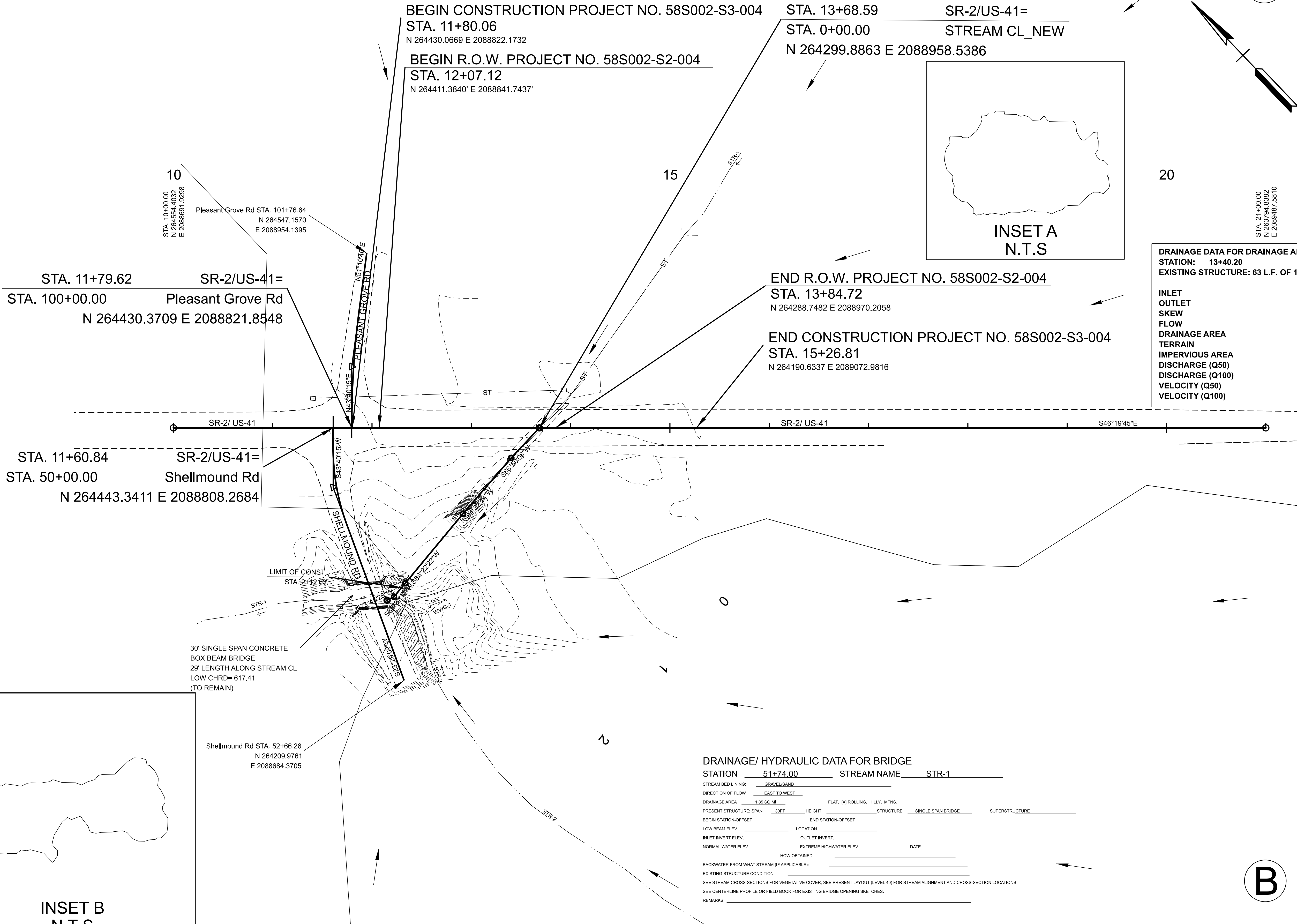


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED
PLEASANT GROVE ROAD
PROFILE
STA. 100+00 TO STA. 102+00

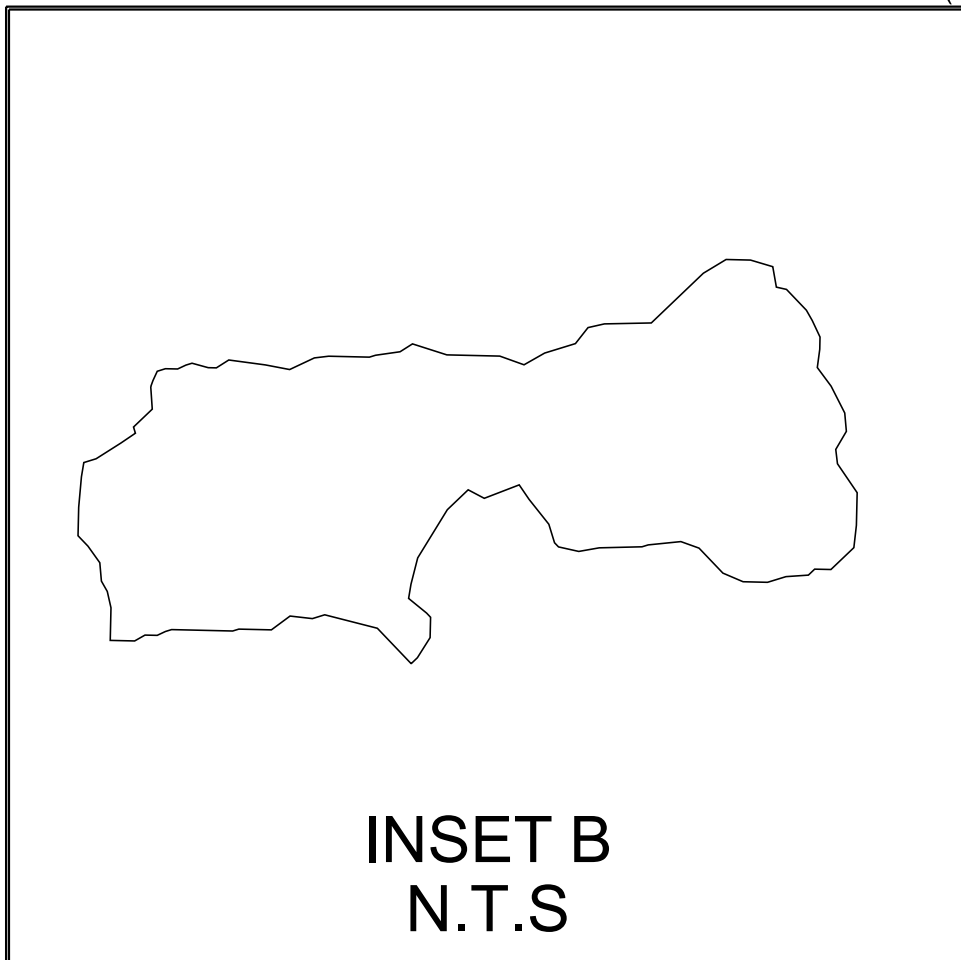
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	7
PS&E	2025	58S002-S3-004	7



DRAINAGE DATA FOR DRAINAGE AREA	
STATION: 13+40.20	
EXISTING STRUCTURE: 63 L.F. OF 10' X 6' RCBC	
INLET	612.26 ELEV.
OUTLET	612.00 ELEV.
SKEW	46 DEG.
FLOW	WEST
DRAINAGE AREA	0.116 SQ. MI.
TERRAIN	ROLLING
IMPERVIOUS AREA	8.5 %
DISCHARGE (Q50)	493 CFS
DISCHARGE (Q100)	583 CFS
VELOCITY (Q50)	9.49 FT/S
VELOCITY (Q100)	9.83 FT/S

DRAINAGE/ HYDRAULIC DATA FOR BRIDGE	
STATION	51+74.00
STREAM NAME	STR-1
STREAM BED LINING:	GRAVEL/SAND
DIRECTION OF FLOW	EAST TO WEST
DRAINAGE AREA	1.85 SQ.MI.
PRESENT STRUCTURE: SPAN	30 FT
HEIGHT	
STRUCTURE	SINGLE SPAN BRIDGE
SUPERSTRUCTURE	
BEGIN STATION-OFFSET	
END STATION-OFFSET	
LOW BEAM ELEV.	
LOCATION	
INLET INVERT ELEV.	
OUTLET INVERT	
NORMAL WATER ELEV.	
EXTREME HIGHWATER ELEV.	
DATE	
HOW OBTAINED	
BACKWATER FROM WHAT STREAM (IF APPLICABLE)	
EXISTING STRUCTURE CONDITION	
SEE STREAM CROSS-SECTIONS FOR VEGETATIVE COVER, SEE PRESENT LAYOUT (LEVEL 40) FOR STREAM ALIGNMENT AND CROSS-SECTION LOCATIONS.	
SEE CENTERLINE PROFILE OR FIELD BOOK FOR EXISTING BRIDGE OPENING SKETCHES.	
REMARKS	



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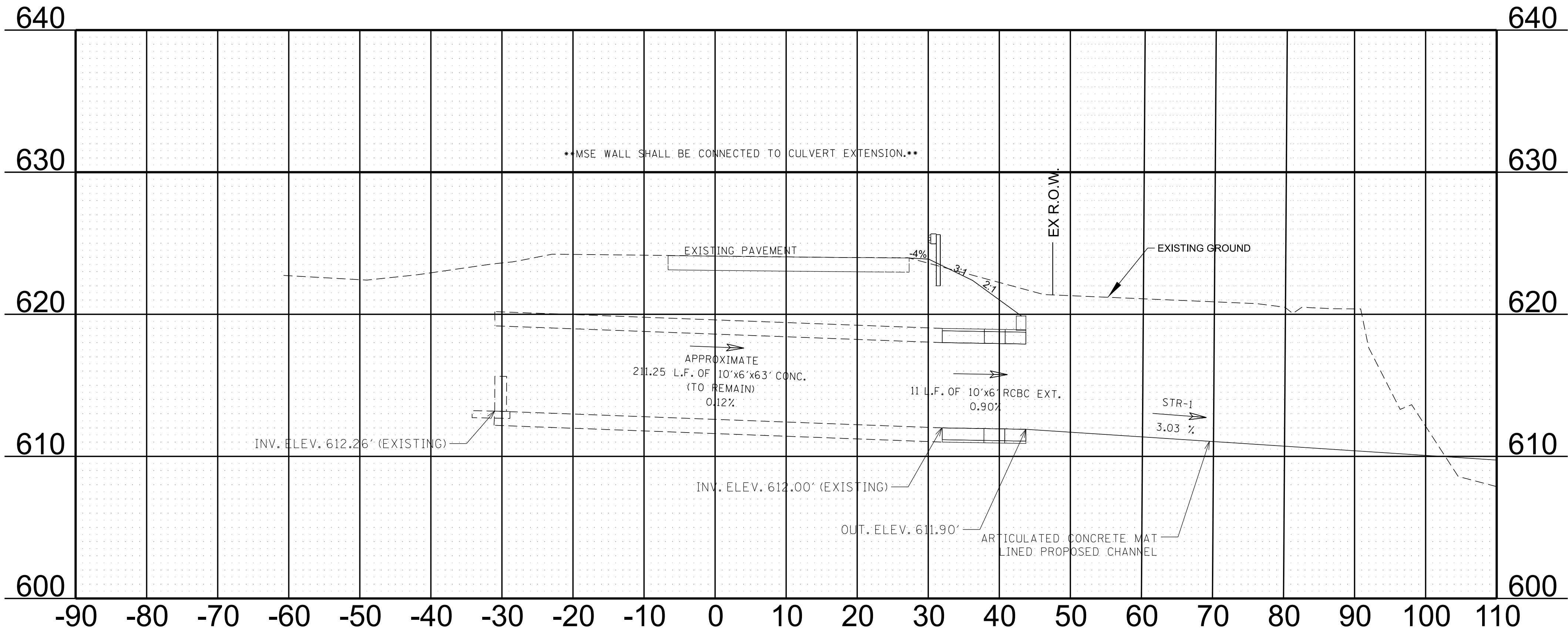
COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 18.

**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

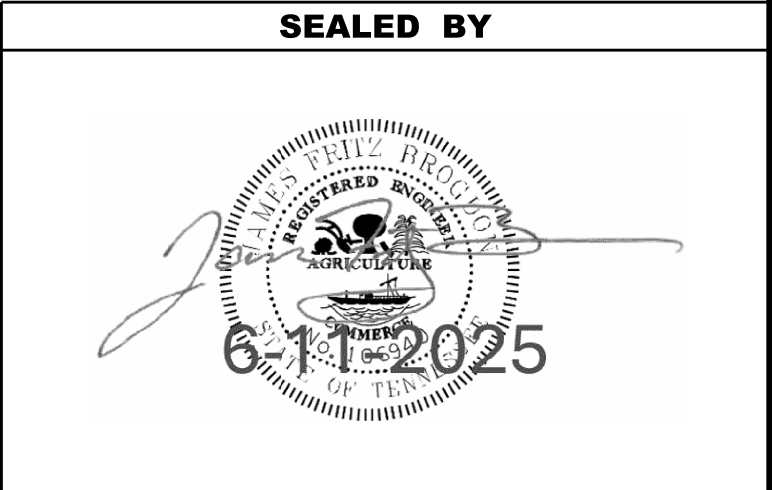
**DRAINAGE
MAP**

STA. 10+00 TO STA. 21+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	8
PS&E	2025	58S002-S3-004	8



PROP. BOX CULVERT	
STATION: 13 + 40.20	
STRUCTURE: 11 L.F. OF 10' X 6' RCBC EXTENSION	
SKEW	46 DEG
DRAINAGE AREA	1.16 SQ.M
DESIGN DISCHARGE (Q50)	583 CFS
DESIGN DISCHARGE (Q100)	788 CFS
OVERTOPPING	624.2 ELEV.
ALLOWABLE HEADWATER	623.2 ELEV.
Q50 HEADWATER	498 ELEV.
Q100 HEADWATER	583 ELEV.
VELOCITY (Q50)	10.46 FT/S
VELOCITY (Q100)	10.36 FT/S
INLET	612.00 FT.
OUTLET	611.90 FT.
STANDARD DRAWING NOS.: STD-17-8, STD-17-17, STD-17-18, STD-17-54	
QUANTITIES:	
CLASS "A" CONCRETE	108 C.Y.
STEEL BAR REINFORCING	3292 LB.
BACKFILL	99 TONS
FOUNDATION FILL MATERIAL	3 C.Y.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT
SECTION
STA. 13+14.20

SCALE: 1" = 10' HORIZ.
1" = 5' VERT.

EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

STREAMS, WETLANDS & BUFFER ZONES

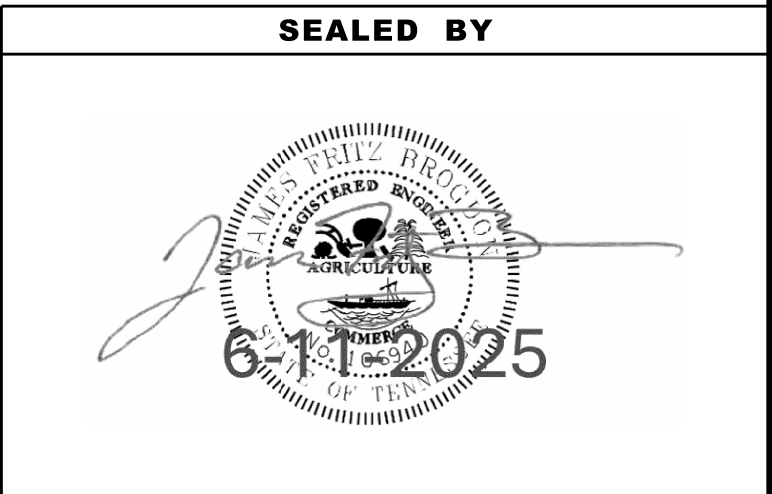
- (1)

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.
P-I-H	2025	58S002-S3-004	9B
PS&E	2025	58S002-S3-004	9B


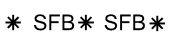
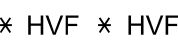

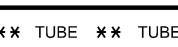
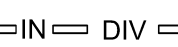
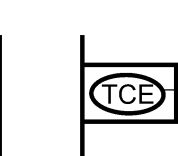
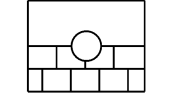
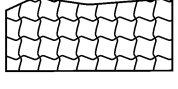


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION
PREVENTION
AND SEDIMENT
SPECIAL NOTES


TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	9C
PS&E	2025	58S002-S3-004	9C

TABULATED EPSC QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 58S002-S3-004
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	29
209-02.07	18" TEMPORARY SLOPE DRAIN	L.F.	96
(1) 209-03.53	STREAM MITIGATION - ARTICULATED CONCRETE MAT	S.Y.	660
(10) 209-05	SEDIMENT REMOVAL	C.Y.	13
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	244
(2) 209-09.01	SANDBAGS	BAG	360
(11) 209-09.04	SEDIMENT FILTER BAG(15' X 10')	EACH	4
(2) 209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	32
(3) 209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	222
(8) 303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	15
(2) 621-03.06	42" TEMPORARY DRAINAGE PIPE	L.F.	40
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	43
(4) 709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	50
(5) 709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	23
(2) 709-05.08	MACHINED RIP-RAP (CLASS B)	TON	16
(8) 740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	240
740-11.03	TEMPORARY SEDIMENT TUBE 18IN	L.F.	619
801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	9
(6) 801-01.38	NATIVE SEED MX FINAL STABILZATN OF SLOPES	UNIT	14
(9) 801-03	WATER (SEEDING & SODDING)	M.G.	2
801-01.65	TEMPORARY MULCH	UNIT	1
(7) 805-12.02	EROSION CONTROL BLANKET (TYPE II)	S.Y.	800

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
	SEDIMENT FILTER BAG	EC-STR-2
	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	HIGH VISIBILITY FENCE	S-F-1
	TEMPORARY SLOPE DRAIN	EC-STR-27
	SEDIMENT TUBE	EC-STR-37
	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	SUSPENDE PIPE DIVERSION	EC-STR-33 EC-STR-33A
	EROSION CONTROL BLANKET	EC-STR-34

FOOTNOTES	
	ALL EROSION PREVENTION AND SEDIEMNT CONTROL QUANTITES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT
(1)	FOR STABILIZING THE CHANNEL. SEE DETAIL SHEET FOR MORE INFORMATION.
(2)	FOR SUSPENDE PIPE DIVERSION.
(3)	PUMP AROUND AND CONSTRUCT IN THE DRY.
(4)	FOR THE TEMPORARY CONSTRUCTION EXIT.
(5)	FOR TEMPORARY SLOPE DRAINS.
(6)	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 30 FT 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.
(7)	FOR PERMANENT STABILIZATION WITH SEED.
(8)	INCLUDES 154 S.Y. FOR THE SEDIMENT FILTER BAG AND 86 S.Y. FOR TEMPORARY CONSTRUCTION EXIT.
(9)	INCLUDES 2000 GALLONS FOR EPSC
(10)	INCLUDES QUANTITIES FOR DISTURBED AREA
(11)	INCLUDES 2 SEDIMENT FILTER BAG TO BE USED AS REPLACEMENTS.

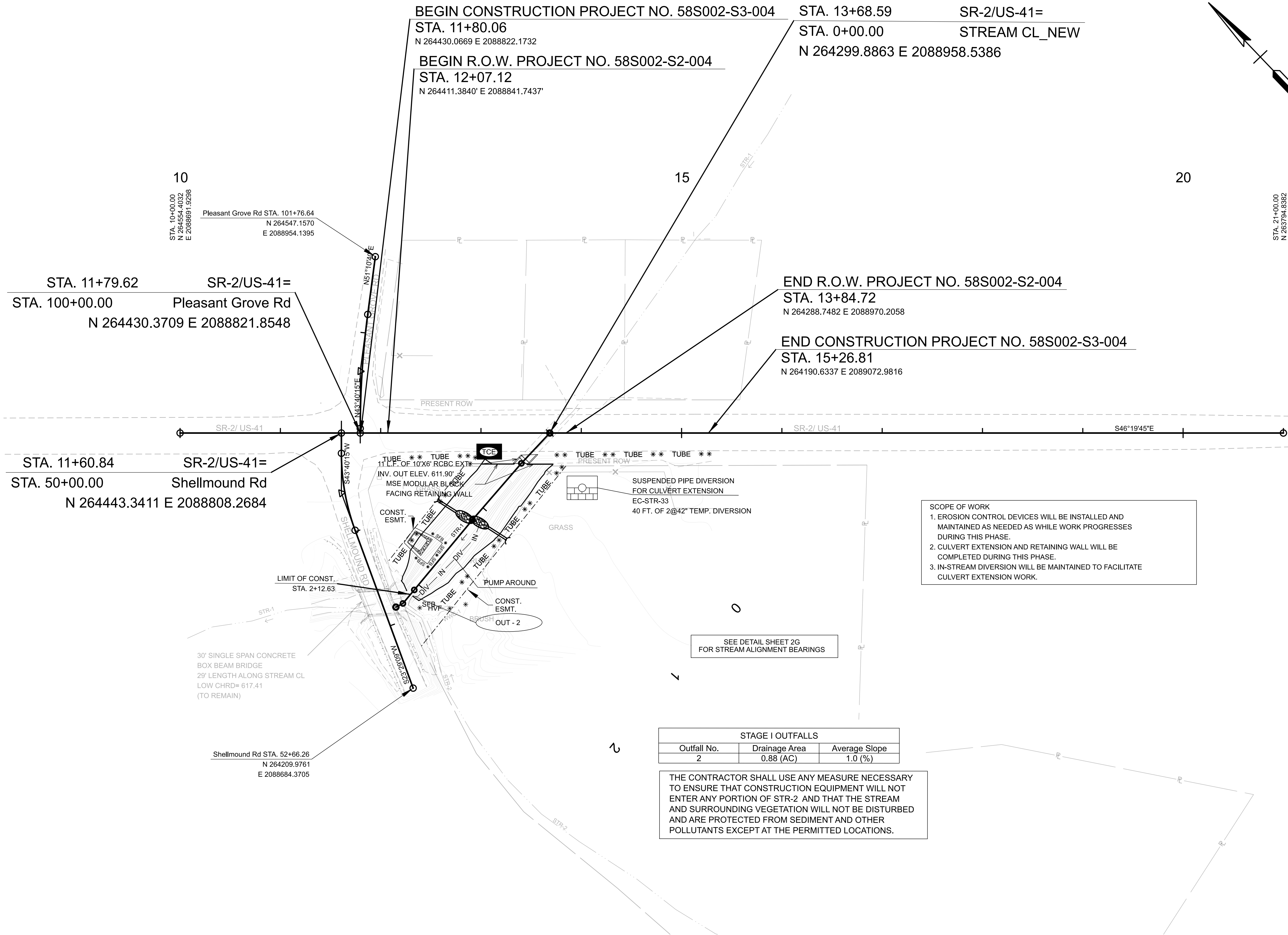
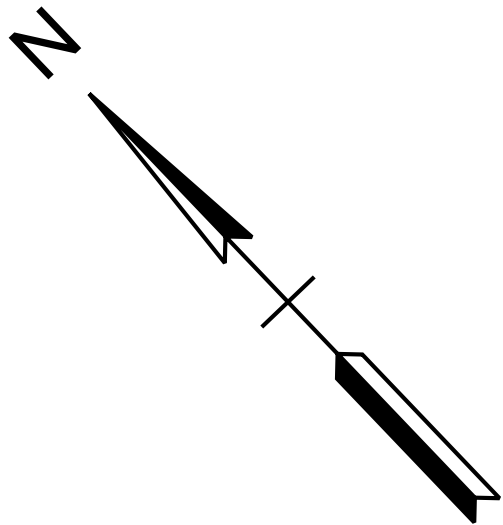
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION
PREVENTION &
SEDIMENT CONTROL
LEGEND & TABULATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	11
PS&E	2025	58S002-S3-004	11



SCOPE OF WORK
1. EROSION CONTROL DEVICES WILL BE INSTALLED AND MAINTAINED AS NEEDED AS WHILE WORK PROGRESSES DURING THIS PHASE.
2. CULVERT EXTENSION AND RETAINING WALL WILL BE COMPLETED DURING THIS PHASE.
3. IN-STREAM DIVERSION WILL BE MAINTAINED TO FACILITATE CULVERT EXTENSION WORK.

STAGE I OUTFALLS		
Outfall No.	Drainage Area	Average Slope
2	0.88 (AC)	1.0 (%)

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-2 AND THAT THE STREAM AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

STAGE II
GRADING
PROPOSED CONTOURS

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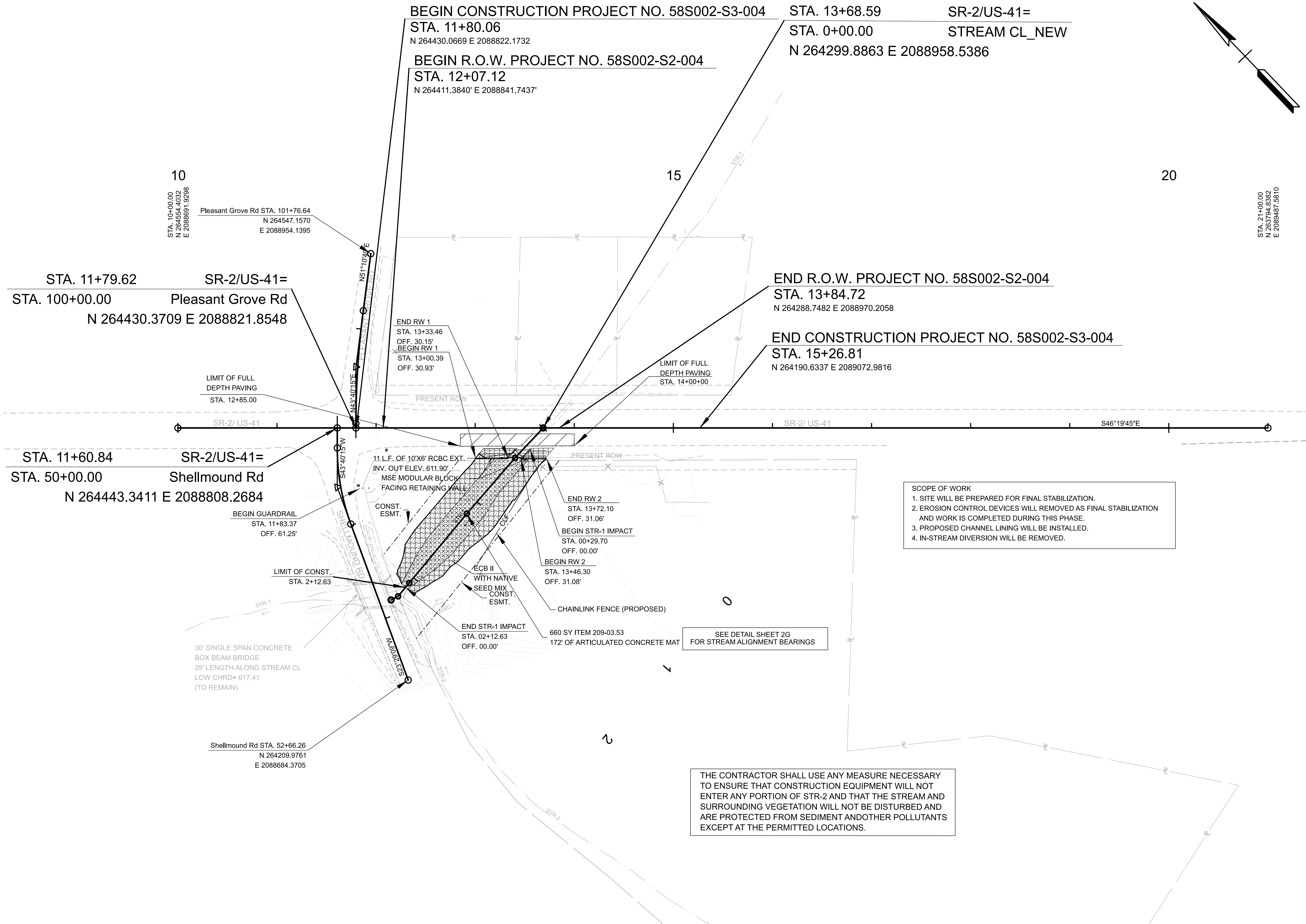
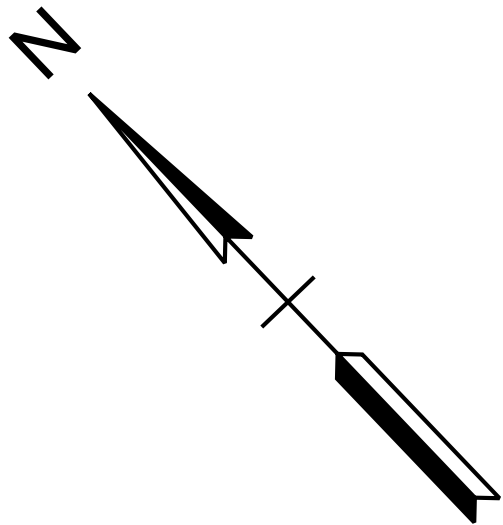
6-1-2025

COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 18.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION
PREVENTION &
SEDIMENT CONTROL
(EPSC) PLANS
STA. 10+00 TO STA. 21+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	12
PS&E	2025	58S002-S3-004	12



STAGE III
FINAL STABILIZATION
PROPOSED CONTOURS

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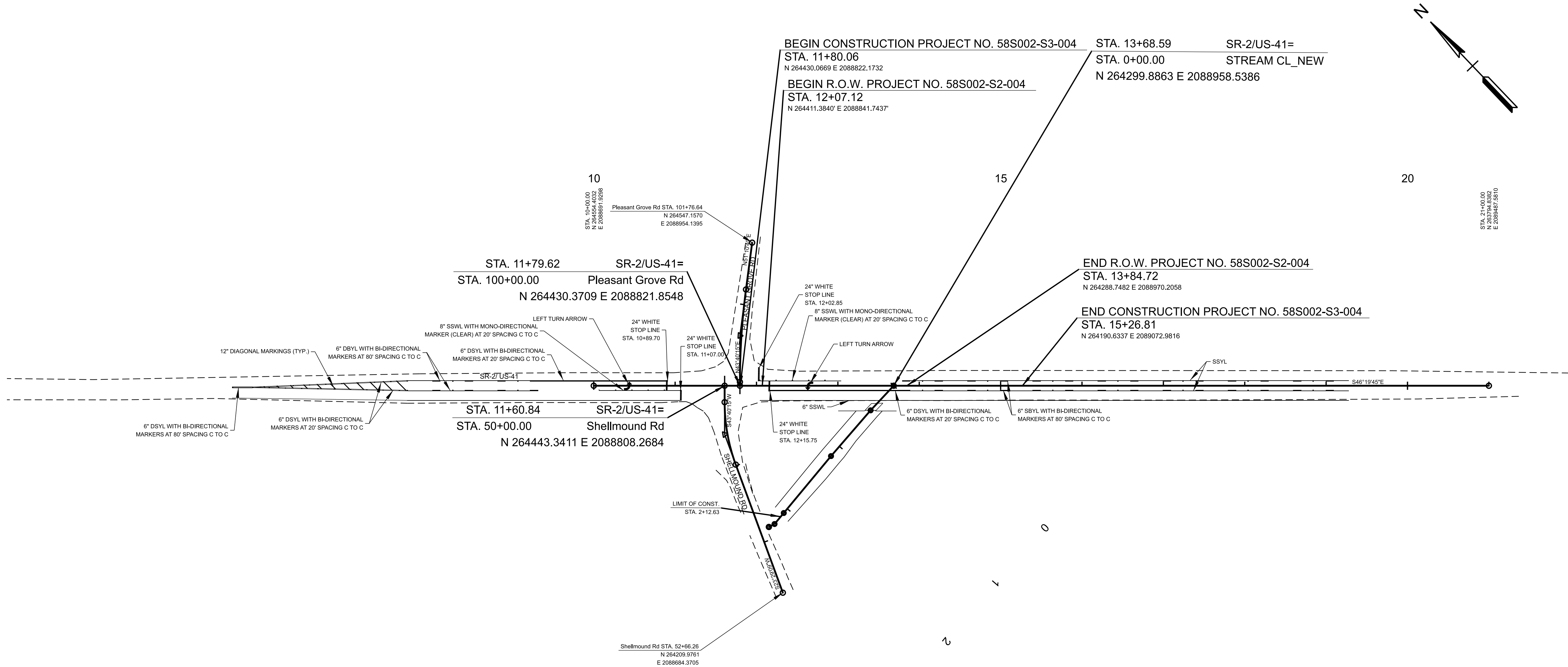
6-1-2025

COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 18.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION
PREVENTION &
SEDIMENT CONTROL
(EPSC) PLANS
STA. 10+00 TO STA. 21+00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	58S002-S3-004	13



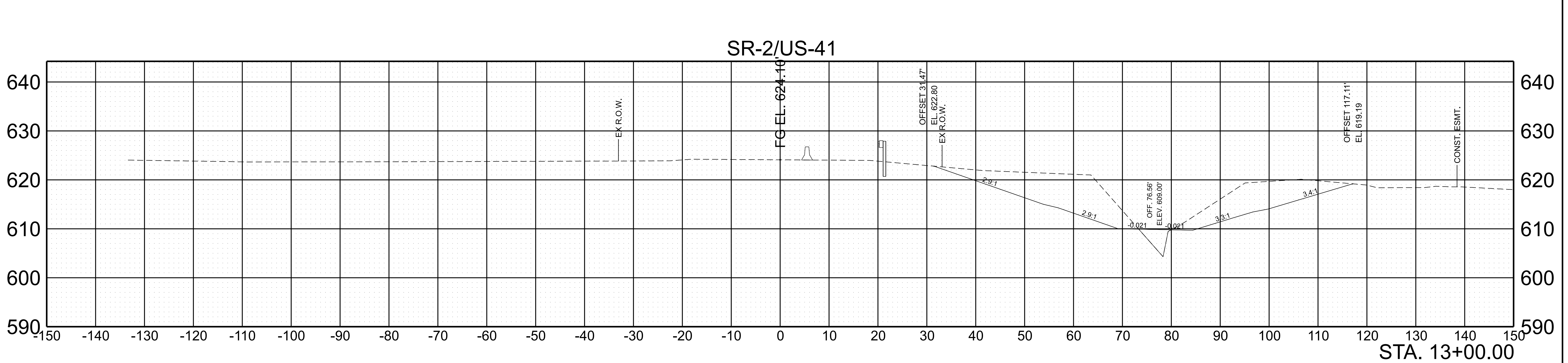
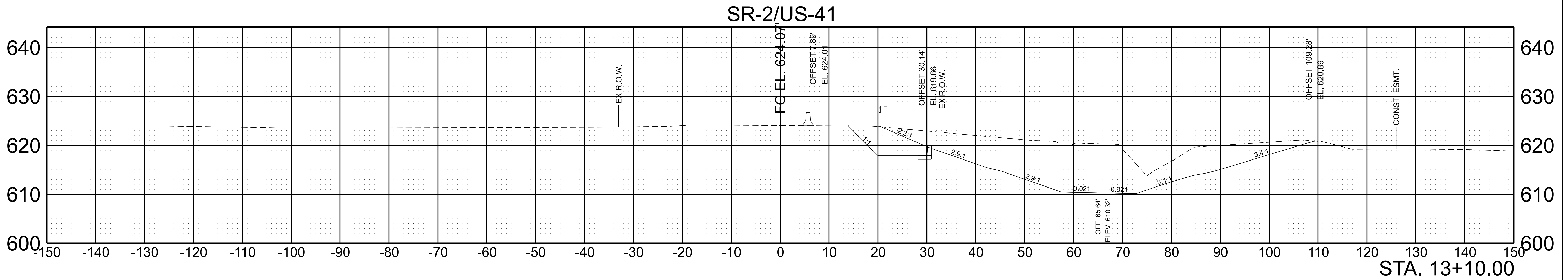
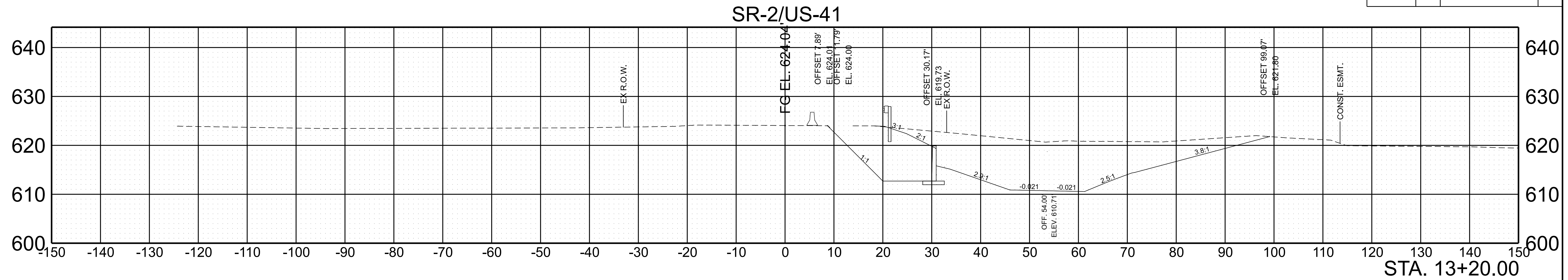
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COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 18.

**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

**SIGNING AND
PAVEMENT
MARKING
PLAN**
STA. 10+00 TO STA. 21+00.00
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	14

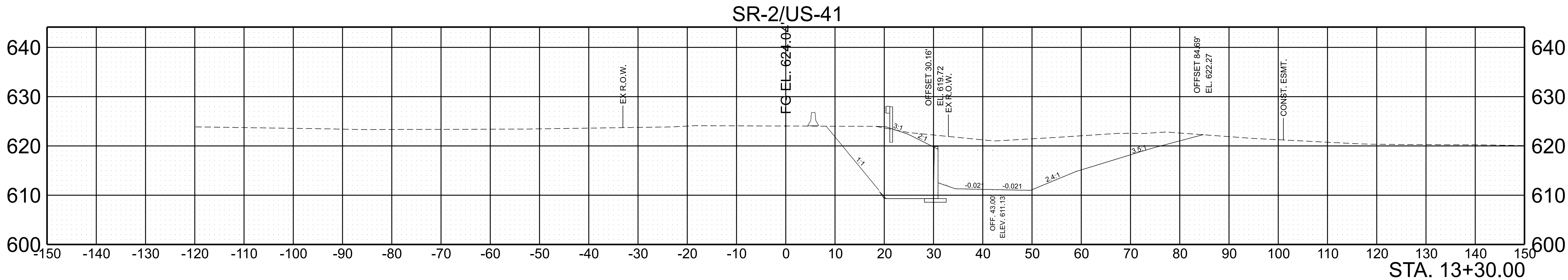
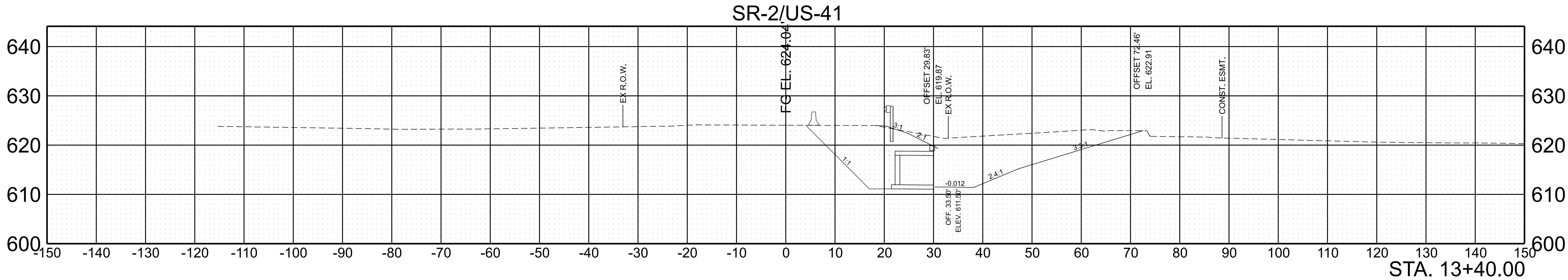
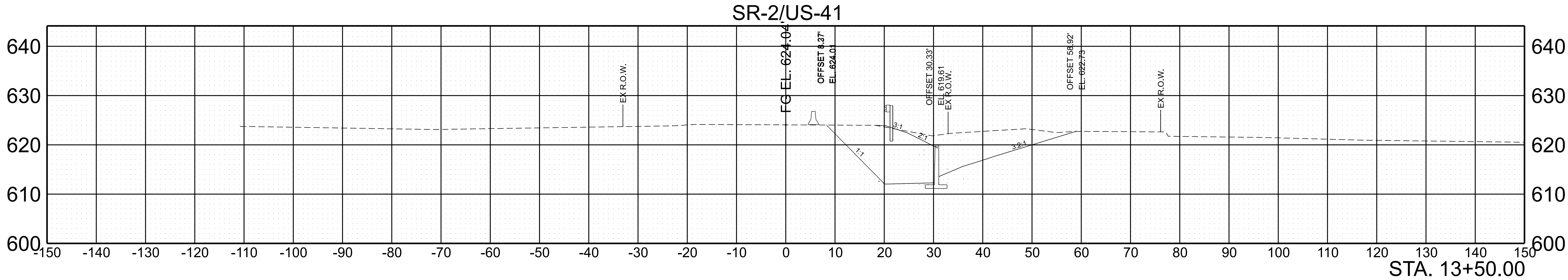


SCALE: 1"=10' HORIZ.
1"=10' VERT.

BEGIN STA. 13+00
END STA. 13+20

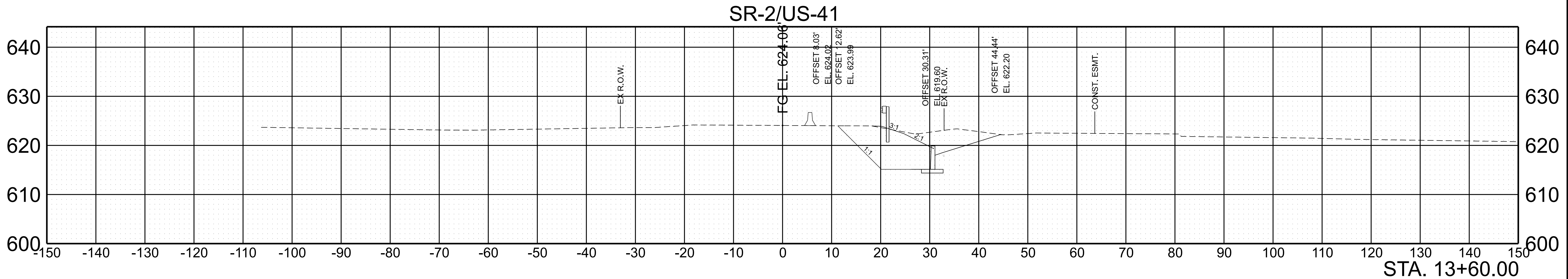
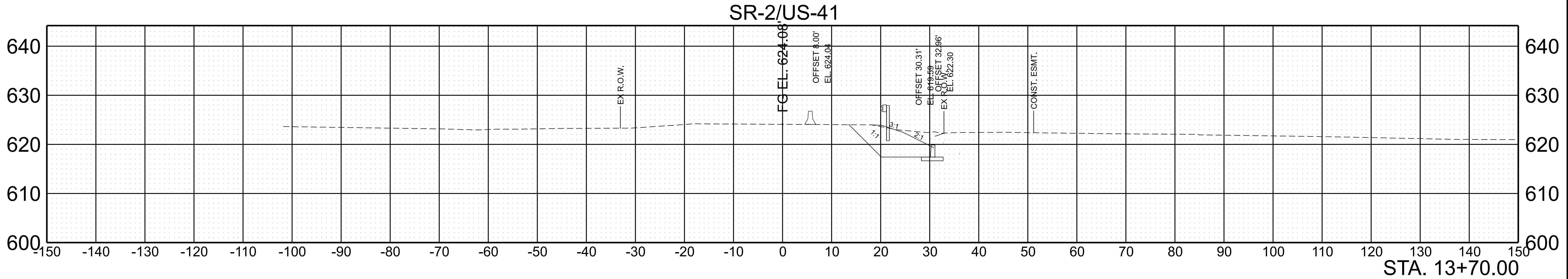
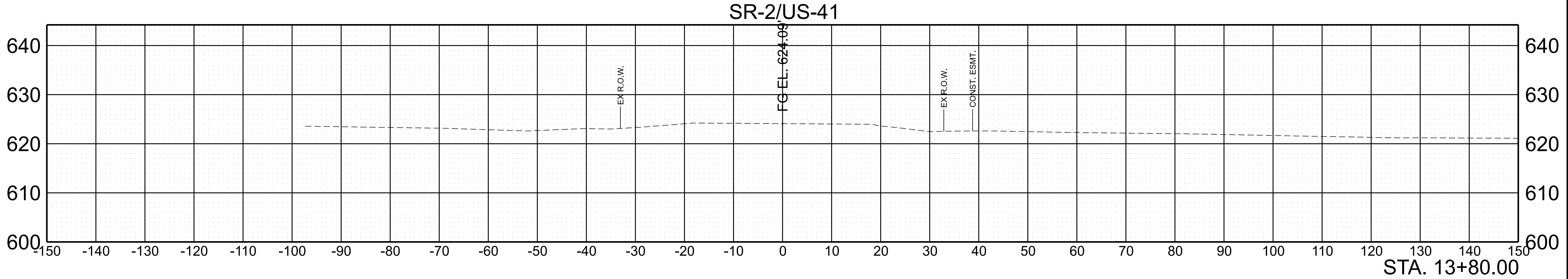
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TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S2-004	15



SCALE:	1"=10' HORIZ.	BEGIN STA. 13+30
	1"=10' VERT.	END STA. 13+50

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	16



SCALE:	1"=10' HORIZ.	BEGIN STA. 13+60
	1"=10' VERT.	END STA. 13+80

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.

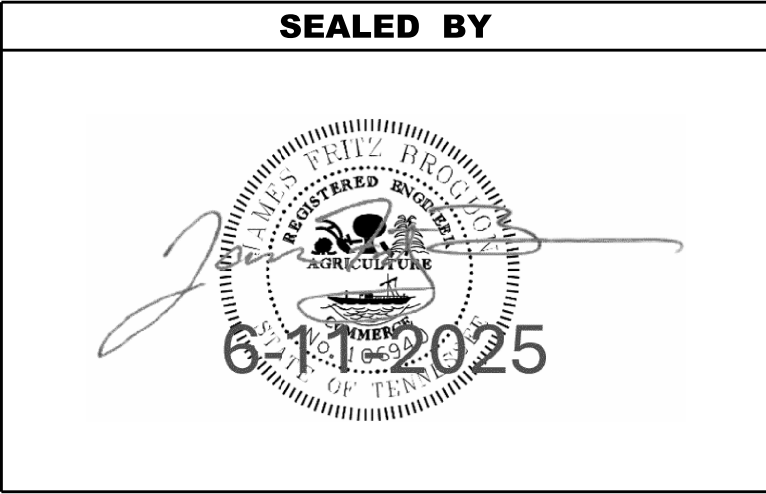
C. IF THE DIFFERENCE IN ELEVATION IS FARTHER THAN 8 FEET FROM THE NEAREST TRAFFIC LANE BUT NOT MORE THAN 30 FEET FROM THE NEAREST TRAFFIC LANE:

- 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.
P-I-H	2025	58S002-S3-004	T-1
PS&E	2025	58S002-S3-004	T-1



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PAVEMENT EDGE
DROP-OFF NOTES
FOR
TRAFFIC CONTROL

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	T-2
PS&E	2025	58S002-S3-004	T-2

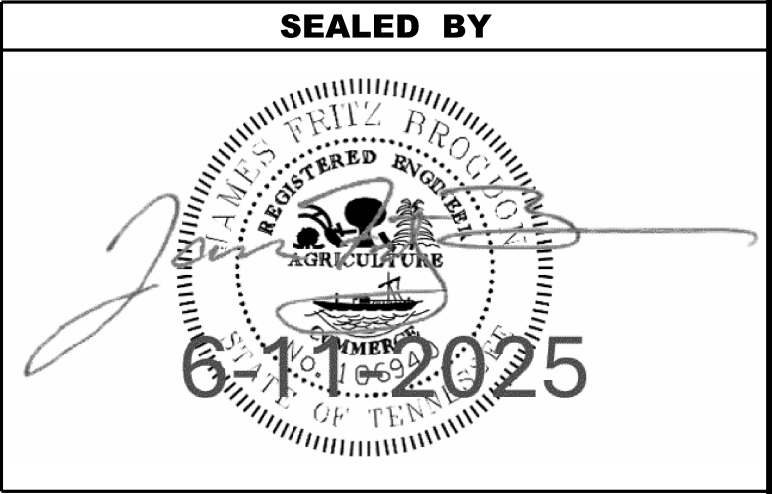
TABULATED TRAFFIC CONTROL QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 58S002-S3-004
712-01	TRAFFIC CONTROL	LS	1
712-02.02	INTERCONNECTED PORTABLE BARRIER RAIL	L.F.	290
712-02.60	TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3)	EACH	2
712-04.01	FLEXIBLE DRUMS (CHANNELIZING)	EACH	100
712-06	SIGNS (CONSTRUCTION)	S.F.	269
712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	20
712-08.03	ARROW BOARD (TYPE C)	EACH	2
712-09.02	REMOVABLE PAVEMENT MARKING (8" BARRIER LINE)	L.F.	4500
712-09.04	REMOVABLE PAVEMENT MARKING (STOP LINE)	L.F.	40
712-09.30	REMOVABLE BLACK-OUT TAPE (6")	L.F.	2500
730-01.04	MODIFICATION OF EXISTING TRAFFIC SIGNAL EQUIPMENT	LS	1

TRAFFIC CONTROL SIGN TABULATION						
M.U.T.C.D. SIGN NO.	LEGEND \ DESCRIPTION	SIZE IN INCHES L x W		S.F.	TOTAL NUMBER REQUIRED	ITEM NO. 712-06 S.F.
G20-2	END ROAD WORK	48"	24"	8	4	32
R3-7	RIGHT LANE MUST TURN RIGHT	36"	36"	9	1	9
W1-4L	LANE SHIFT LEFT	48"	48"	16	2	32
W1-4R	LANE SHIFT RIGHT	48"	48"	16	2	32
W6-3	TWO-WAY TRAFFIC	48"	48"	16	2	32
W16-9P	AHEAD (PLAQUE)	24"	12"	2	2	4
W20-1	ROAD WORK	48"	48"	16	8	128
TOTAL						269

PHASING NOTES

PHASE 1:
THE CONTRACTOR SHALL IMPLEMENT THE TRAFFIC CONTROL PLAN AS SHOWN ON SHEET T-3. NO WORK SHALL BEGIN UNTIL THE TRAFFIC CONTROL SHOWN SHEET T-3 IS COMPLETELY INSTALLED. THE MODIFICATION OF THE EXISTING TRAFFIC SIGNAL MUST ALSO BE COMPLETED AT THIS TIME. THIS TRAFFIC CONTROL PLAN SHALL REMAIN IN EFFECT UNTIL ALL WORK RELATED TO THE EXTENSION OF THE BOX CULVERT AND ASSOCIATED CHANNEL WORK ARE COMPLETED.

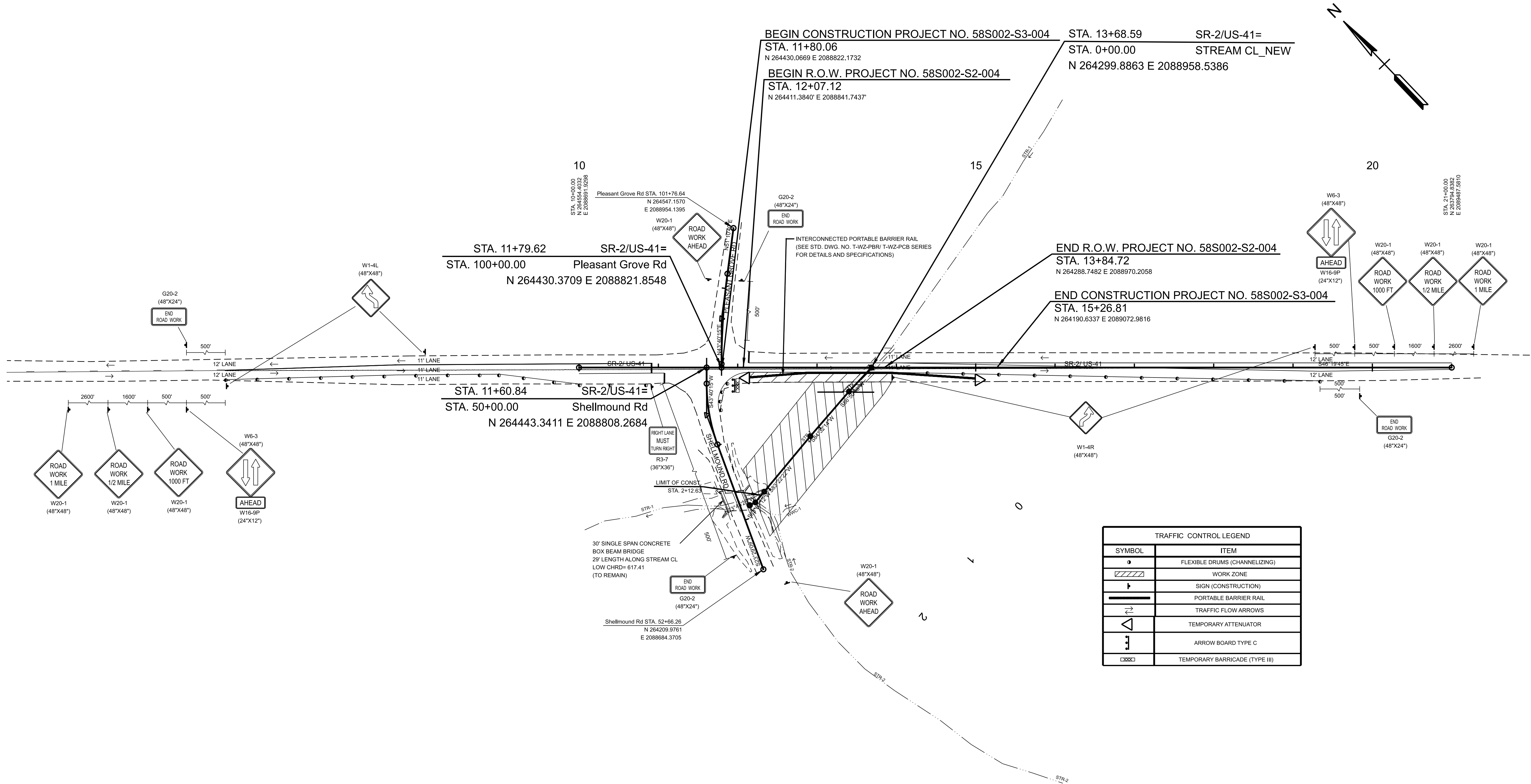
PHASE 2:
THE CONTRACTOR SHALL IMPLEMENT THE TRAFFIC CONTROL PLAN AS SHOWN ON SHEET T-4. NO WORK SHALL BEGIN UNTIL THE TRAFFIC CONTROL SHOWN SHEET T-3 IS COMPLETELY INSTALLED. THE MILLING AND OVERLAYING OPERATION WILL BE ACCOMPLISHED UNDER TRAFFIC. THIS TRAFFIC CONTROL PLAN SHALL REMAIN IN EFFECT UNTIL ALL WORK RELATED TO THE MILLING, OVERLAY, AND PROPOSED STRIPING ARE COMPLETE.



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL
PHASING NOTES
LEGEND AND
TABULATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	T-3
PS&E	2025	58S002-S3-004	T-3



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6-1-2025

COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 18.

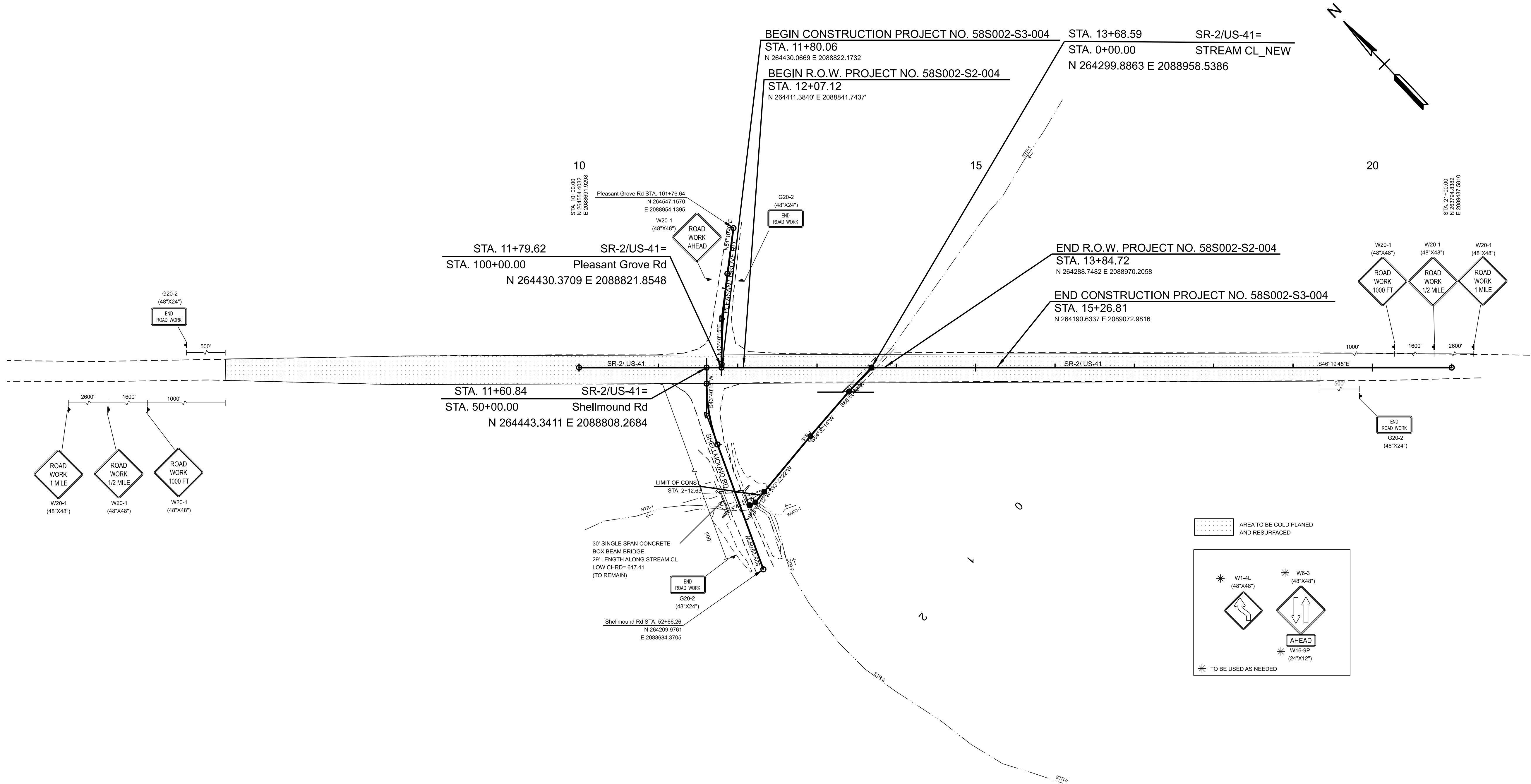
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

STA. 10+00.00 TO STA. 21+00.00
SCALE: 1" = 50'

PHASE I

TYPE	YEAR	PROJECT NO.	SHEET NO.
P-I-H	2025	58S002-S3-004	T-4
PS&E	2025	58S002-S3-004	T-4



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COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00000 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 18.

**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

**TRAFFIC
CONTROL
PLANS**

STA. 10+00.00 TO STA. 21+00.00
SCALE: 1" = 50'


PHASE II

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	58S002-S3-004	R-1

GEOTECHNICAL INDEX

SHEET NAME	SHEET NO.
RETAINING WALL INDEX.....	R-1
RETAINING WALL GEOTECHNICAL	
DESIGN NOTES AND REQUIREMENTS	R-2
RETAINING WALL TYPICAL DETAIL	R-3
RETAINING WALL GEOMETRIC LAYOUT	R-4
RETAINING WALL SOIL PROFILE AND DETAILS	R-5

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GEOTECHNICAL
INDEX

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ACCEPTABLE WALL TYPES

MECHANICALLY STABILIZED EARTH (MSE) WALL - MODULAR BLOCK

THE RETAINING WALL(S) SHALL BE ONE OF THE WALL TYPE(S) AS LISTED ABOVE OR ON FORTHCOMING "RETAINING WALL DETAIL-GEOMETRIC LAYOUT" SHEET(S). ANY PROPRIETARY RETAINING WALL SYSTEM SHALL BE LISTED AS PRE-APPROVED IN OPL 38.

RETAINING WALL DESIGN NOTES

UNLESS SPECIFICALLY STATED OTHERWISE IN THE CONTRACT PLANS, THE BIDDING FOR, THE DESIGN OF AND THE CONSTRUCTION OF RETAINING WALLS SHOWN IN THE PLANS SHALL BE GOVERNED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. THIS SPECIAL PROVISION SHALL BE CONSIDERED AS ONE OF THOSE DOCUMENTS WHICH THE BIDDER/CONTRACTOR HAS EXAMINED AND MADE HIMSELF FAMILIAR WITH AS DESCRIBED IN SECTION 102.04 - EXAMINATION OF THE SITE, THE WORK, THE PLANS, AND THE SPECIFICATIONS IN THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXCAVATION FOR THE WALL AND/OR ITS FOOTING SHALL NOT BE ACCOMPLISHED UNTIL THE CONTRACTOR HAS SUBMITTED WALL DESIGNS AND CALCULATIONS AND HAS BEEN ISSUED AN APPROVED SET OF WALL PLANS AND HAS LABOR AND MATERIAL RESOURCES AVAILABLE TO BEGIN AND CONTINUE WALL CONSTRUCTION IMMEDIATELY AFTER EXCAVATION.

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN:
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020
- PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS

FOR PROPRIETARY WALL SYSTEMS THAT HAVE BEEN APPROVED AS SHOWN IN OPL 38, THE WALL DESIGNER SHALL BE RESPONSIBLE FOR PROVIDING WALL DESIGNS INCORPORATING MATERIALS AND COMPONENTS (I.E. REINFORCEMENT CONNECTION DEVICES, SPECIFIC MANUFACTURER AND PROPERTIES OF GEOGRID) AS WAS ORIGINALLY SUBMITTED AND APPROVED BY TDOT. IF A MATERIAL AND/OR COMPONENT OF THE WALL SYSTEM HAVE BEEN MODIFIED FROM THE ORIGINALLY APPROVED SYSTEM, A WALL DESIGN AND SET OF PLANS AND CALCULATIONS FOR THIS WALL SYSTEM CANNOT BE SUBMITTED FOR REVIEW AND APPROVAL UNTIL THE WALL SYSTEM DESIGNER WHO ORIGINALLY SUBMITTED THE WALL SYSTEM FOR APPROVAL BY TDOT SUBMITS A REQUEST FOR RE-APPROVAL UTILIZING THE MODIFIED ELEMENTS OF THE WALL. THIS SUBMITTAL DOES NOT GUARANTEE APPROVAL OF THE MODIFIED SYSTEM. IF THIS RE-APPROVAL PROCESS DOES NOT MEET THE CONTRACTOR'S SCHEDULE OR IF THE MODIFIED SYSTEM IS NOT APPROVED, THE CONTRACTOR/WALL DESIGNER SHALL PROVIDE A WALL DESIGN FOR ONE OF THE APPROVED SYSTEMS AT NO CHANGE IN CONTRACT PRICE FOR THE RETAINING WALL AND NO CHANGE IN PROJECT SCHEDULE REQUIREMENTS WILL BE ALLOWED.

THE WALL DESIGNER SHALL PROVIDE RETAINING WALL PLANS, DETAILS AND CALCULATIONS AS REQUIRED BY SPECIAL PROVISION 624 AND AS REQUIRED HEREIN.

- THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE "RETAINING WALL DETAIL" SHEET(S) TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS AND PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS.
- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. FOR MSE WALLS, THE WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL REQUIREMENTS. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.
- UNLESS OTHERWISE STATED, THE WALL DESIGNER CAN ASSUME THAT MINIMUM GLOBAL STABILITY AND SETTLEMENT CRITERIA IS ACHIEVED WITH A WALL DESIGN MEETING OTHER MINIMUM EXTERNAL STABILITY REQUIREMENTS AND ASSUMING WALL FOUNDATION BEARING IMPROVEMENTS ARE MET. WHILE THE WALL DESIGNER'S DESIGN MUST DEMONSTRATE COMPLIANCE WITH EXTERNAL STABILITY REQUIREMENTS AS DISCUSSED ABOVE, THE WALL DESIGNER PROVIDES CERTIFICATION (BY SIGNING AND STAMPING BY PROFESSIONAL ENGINEER REGISTERED IN STATE OF TENNESSEE) OF THE WALLS, PLANS, AND CALCULATIONS "FOR INTERNAL STABILITY ONLY".
- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II SHALL BE EVALUATED AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS. FOR MSE WALLS, LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED.

NOTE REGARDING CONSTRUCTION SLOPES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING THE EXCAVATION IN ACCORDANCE WITH OSHA AND OTHER APPLICABLE STATE AND LOCAL REGULATIONS REGARDING CONSTRUCTION SLOPES AND TRENCHES. IN ADDITION TO FOLLOWING APPLICABLE REGULATORY REQUIREMENTS, AS A MINIMUM REQUIREMENT, ALL TEMPORARY CONSTRUCTION SLOPES SHALL BE PLACED AT A MAXIMUM OF A 1:1 SLOPE IN SOIL AND SHALL NOT BE LEFT OPEN WITHOUT SHORING FOR ANY LONGER THAN ABSOLUTELY NECESSARY. THE CONTRACTOR BUILDING THE WALL SHALL ENSURE THAT THESE TEMPORARY BACK SLOPES ARE NOT AND DO NOT BECOME UNSTABLE. IF SLOPE IS UNSTABLE, BECOMES UNSTABLE, IS CUT STEEPER THAN A 1:1 SLOPE OR IS UNACCEPTABLE FOR ANOTHER REASON, THEN TEMPORARY SHORING SHALL BE USED. ANY UNUSUAL SOIL CONDITIONS OTHER THAN THOSE ASSUMED SHOULD BE REPORTED TO THE PROJECT ENGINEER.

AASHTO LRFD SECTION 3.10.3.1 - SITE CLASS DEFINITION

SITE CLASS D

GES No. 5804224

VERSION 01/29/2024

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	MSE WALLS	NOTE
DESIGN LIFE	75 YEARS	
SEISMIC ACCELERATION COEFFICIENTS		
As	0.18	
S _{DS}	0.362	
S _{D1}	0.164	
EFFECTIVE (DRAINED) FRICTION ANGLE		
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	28 °	
RETAINED BACKFILL-SELECT BACKFILL	34 ° TO MAX 40 °	1
REINFORCED BACKFILL	34 ° TO MAX 40 °	1
UNIT WEIGHT		
UNCLASSIFIED SITE OR BORROW SOIL	120 POUNDS PER CUBIC FOOT	
SELECT BACKFILL MATERIAL	VARIES	1A
DESIGN BASIS		
COEFFICIENT OF SLIDING FRICTION	SEE TABLE 2	3
NOMINAL BEARING RESISTANCE	SEE TABLE 2	3
MINIMUM LENGTH OF SOIL REINFORCEMENT, L	GREATER OF 8-FT OR 0.8H OR AS SPECIFIED ON THE PLANS	2,2A,2B
LIMITING ECCENTRICITY	L/4 (SOIL), 3L/8 (ROCK)	
RESISTANCE FACTORS		
SLIDING-STATIC	1.0	4
SLIDING-COMBINED STATIC+EARTHQUAKE	1.0	4
BEARING-STATIC	0.65	5
BEARING-COMBINED STATIC+EARTHQUAKE	0.9	5
PULLOUT RESISTANCE OF METALLIC REINFORCEMENT		
STATIC -STEEL STRIP REINFORCEMENTS -STEEL GRID REINFORCEMENTS	0.90 0.90	6
COMBINED STATIC/EARTHQUAKE -STEEL STRIP REINFORCEMENTS -STEEL GRID REINFORCEMENTS	1.20 1.20	6
PULLOUT RESISTANCE OF GEOSYNTHETIC REINFORCEMENT		
STATIC -GEOTEXTILES AND GEOGRIDS -GEOSTRIP REINFORCEMENTS	0.70 0.70	6
COMBINED STATIC/EARTHQUAKE -GEOTEXTILES AND GEOGRIDS -GEOSTRIP REINFORCEMENTS	1.00 1.00	6
TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS		
STATIC -STRIP REINFORCEMENT -GRID REINFORCEMENT	0.75 0.65	7 7.8
COMBINED STATIC/EARTHQUAKE -STRIP REINFORCEMENT -GRID REINFORCEMENT	1.00 0.85	7 7.8
TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS		
STATIC -GEOTEXTILE AND GEOGRID REINFORCEMENTS -GEOSTRIP REINFORCEMENTS	0.80 0.55	
COMBINED STATIC/EARTHQUAKE -GEOTEXTILE AND GEOGRID REINFORCEMENTS -GEOSTRIP REINFORCEMENTS	1.00 1.00	

NOTES FOR TABLE 1		
NO.	NOTE	
1	A MAXIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1. MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE THAN 34 DEGREES CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES. INDEPENDENT TESTING MUST BE VERIFIED ANNUALLY.	
1A	SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1. MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE Ø FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF WALL FOOTING OR REINFORCED SOIL ZONE FOR MSE WALLS UP TO FINISHED GRADE.	
2	H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, L, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCKFACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, B _r AS MEASURED FROM THE FRONT FACE OF THE WALL IS THE LENGTH L AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE).	
2A	WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS.	
2B	ALL DESIGN SECTION REINFORCEMENT LENGTHS SHALL BE EQUAL.	
3	THESE VALUES WILL BE PROVIDED IN TABLES 2 AND/OR 3	
4	PASSIVE RESISTANCE SHALL <u>NOT</u> BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE. NO SHEAR KEYS NOR DOWELS WILL BE PERMITTED. FOR CAST-IN-PLACE CONCRETE CANTILEVER WALLS, THE FOOTING SHALL BE UNIFORM IN THICKNESS THROUGHOUT THE DESIGN SECTION.	
5	FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED BEARING RESISTANCE, WHICH IS THE PRODUCT OF THE NOMINAL BEARING RESISTANCE SPECIFIED IN TABLES 2 AND/OR 3 AND THE APPROPRIATE RESISTANCE FACTOR.	
6	LIVE LOAD DUE TO VEHICULAR TRAFFIC SHALL BE INCLUDED IN THE COMPUTATIONS TO DETERMINE THE MAXIMUM TENSILE FORCES IN REINFORCEMENT LAYERS, BUT SHALL BE NEGLECTED IN THE COMPUTATIONS FOR PULLOUT RESISTANCE.	
7	APPLY TO GROSS CROSS-SECTION LESS SACRIFICIAL AREA. FOR SECTIONS WITH HOLES, REDUCE GROSS AREA IN ACCORDANCE WITH ARTICLE 6.8.3 OF AASHTO (2020) AND APPLY TO NET SECTION LESS SACRIFICIAL AREA.	
8	APPLIES TO GRID REINFORCEMENTS CONNECTED TO A RIGID FACING ELEMENT, E.G., A CONCRETE PANEL OR BLOCK. FOR GRID REINFORCEMENTS CONNECTED TO A FLEXIBLE FACING MAT OR WHICH ARE CONTINUOUS WITH THE FACING MAT, USE THE RESISTANCE FACTOR FOR STRIP REINFORCEMENTS.	

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	58S002-S3-004	R-2

TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR MSE WALLS

STATION LIMITS	FOUNDATION (REINFORCED ZONE) BEARING CONDITION REQUIREMENT	NOMINAL BEARING RESISTANCE (psf)	COEFFICIENT OF SLIDING FRICTION
13+10 TO 13+33.46	UNDERCUT 3 FEET BELOW PROPOSED LEVELING PAD ELEVATION AND REPLACE WITH GRADED SOLID ROCK	6000	0.65
13+46.30 TO 13+72.10	UNDERCUT 3 FEET BELOW PROPOSED LEVELING PAD ELEVATION AND REPLACE WITH GRADED SOLID ROCK	6000	0.65

OTHER DESIGN REQUIREMENTS

THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALLS. DETAILS OF THIS DRAINAGE FEATURE SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS AND COSTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WALL.

FOR FOUNDATION IMPROVEMENT AND EXCAVATION ZONE DETAILS, SEE TYPICAL DETAIL FOR UNDERCUTTING AND BACKFILLING DETAIL ON ACCOMPANYING SHEET.

ANY SHIMMING PLATES MUST BE PERMANENT (NO ASPHALT SHIMS).

ALL WALL ELEMENTS SHALL BE WITHIN TDOT ROW.

ALL CONSTRUCTION MUST STAY WITHIN TDOT ROW, SLOPE EASEMENT, AND CONSTRUCTION EASEMENT.

IF A STEEPER THAN 1:1 BACKSLOPE IS REQUIRED BEHIND RETAINING WALL OR TEMPORARY SHORING, THE EFFECTIVE FRICTION ANGLE FOR SELECT BACKFILL WILL NOT BE ALLOWABLE FOR DESIGN AND THE EFFECTIVE FRICTION ANGLE FOR UNCLASSIFIED SITE OR BORROW SITE SHALL BE REQUIRED.

THE CONTRACTOR SHALL COORDINATE AND PERFORM ALL UTILITY RELOCATION SO THAT IT DOES NOT INTERFERE WITH THE RETAINING WALL INSTALLATION.

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING AND PRESERVING THE INTEGRITY AND FUNCTION OF THE ROADWAY DURING CONSTRUCTION AND THROUGHOUT THE DESIGN LIFE OF THE WALL.

WHERE A PROPOSED RETAINING WALL MEETS AN EXISTING RETAINING WALL OR ANOTHER STRUCTURE, THE INTERFACE SHOULD BE ONE VERTICAL JOINT. THIS INTERFACE SHOULD BE DESIGNED TO PREVENT LOSS OF FINES AND ALLOW FOR DIFFERENTIAL SETTLEMENT. DETAILS OF THIS JOINT SHALL BE PROVIDED IN WALL DESIGNER/CONTRACTOR'S WALL DESIGN PLANS AND COSTS SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE WALL.

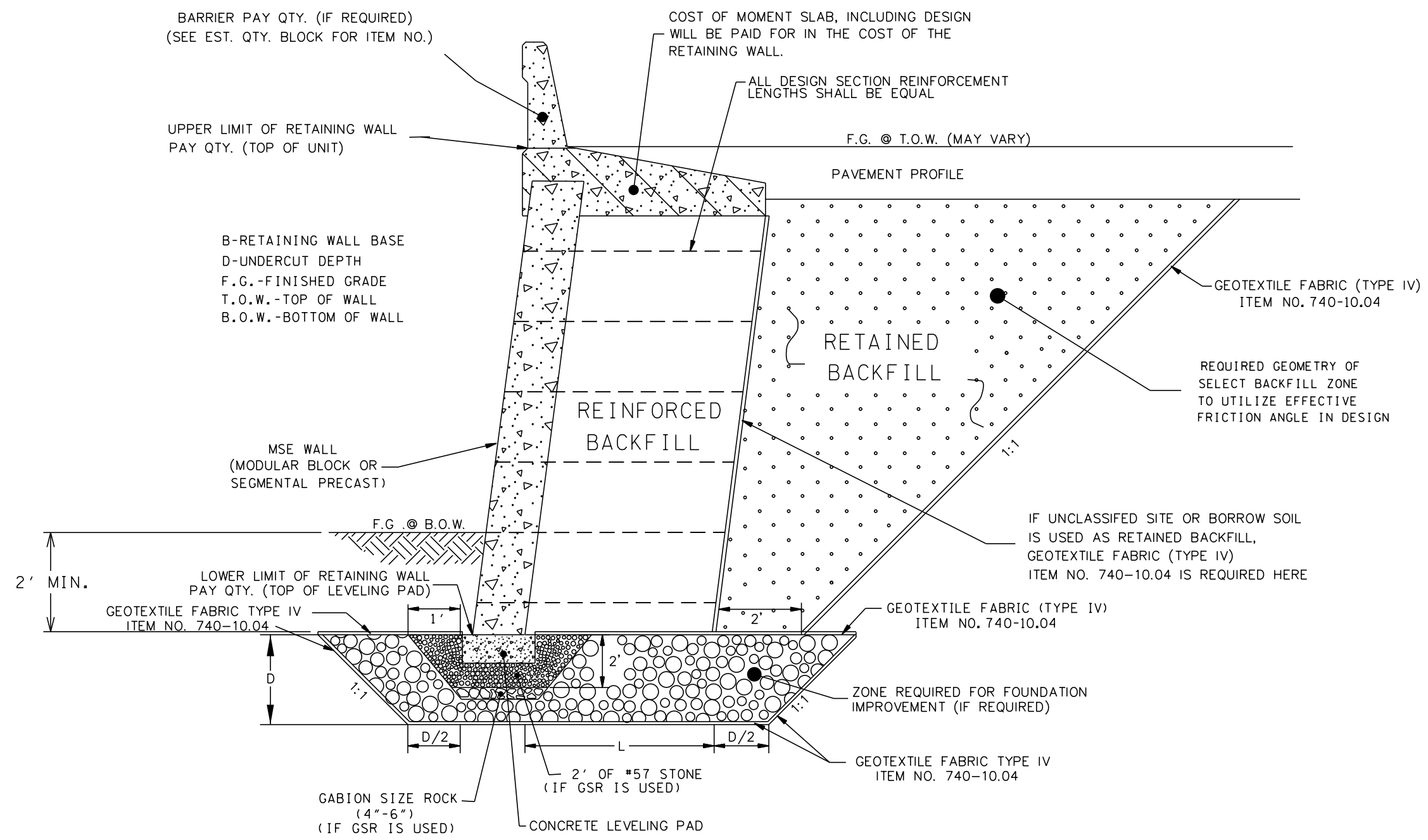
FOR MSE WALLS, A MINIMUM HORIZONTAL BENCH 4 FEET WIDE AS MEASURED FROM THE FACE SHALL BE PROVIDED IN FRONT OF WALLS FOUNDED ON SLOPES. THE BENCH MAY BE FORMED OR THE SLOPE CONTINUED ABOVE THAT LEVEL. SEE ARTICLE 11.10.2.2, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS. ALTERNATIVELY, THE EMBEDMENT DEPTH MAY BE INCREASED TO SATISFY THE REQUIREMENTS.

MINIMUM WALL EMBEDMENT SHALL BE 2 FT BELOW PROPOSED GROUND SURFACE OR SCOUR ELEVATION AS APPLICABLE.

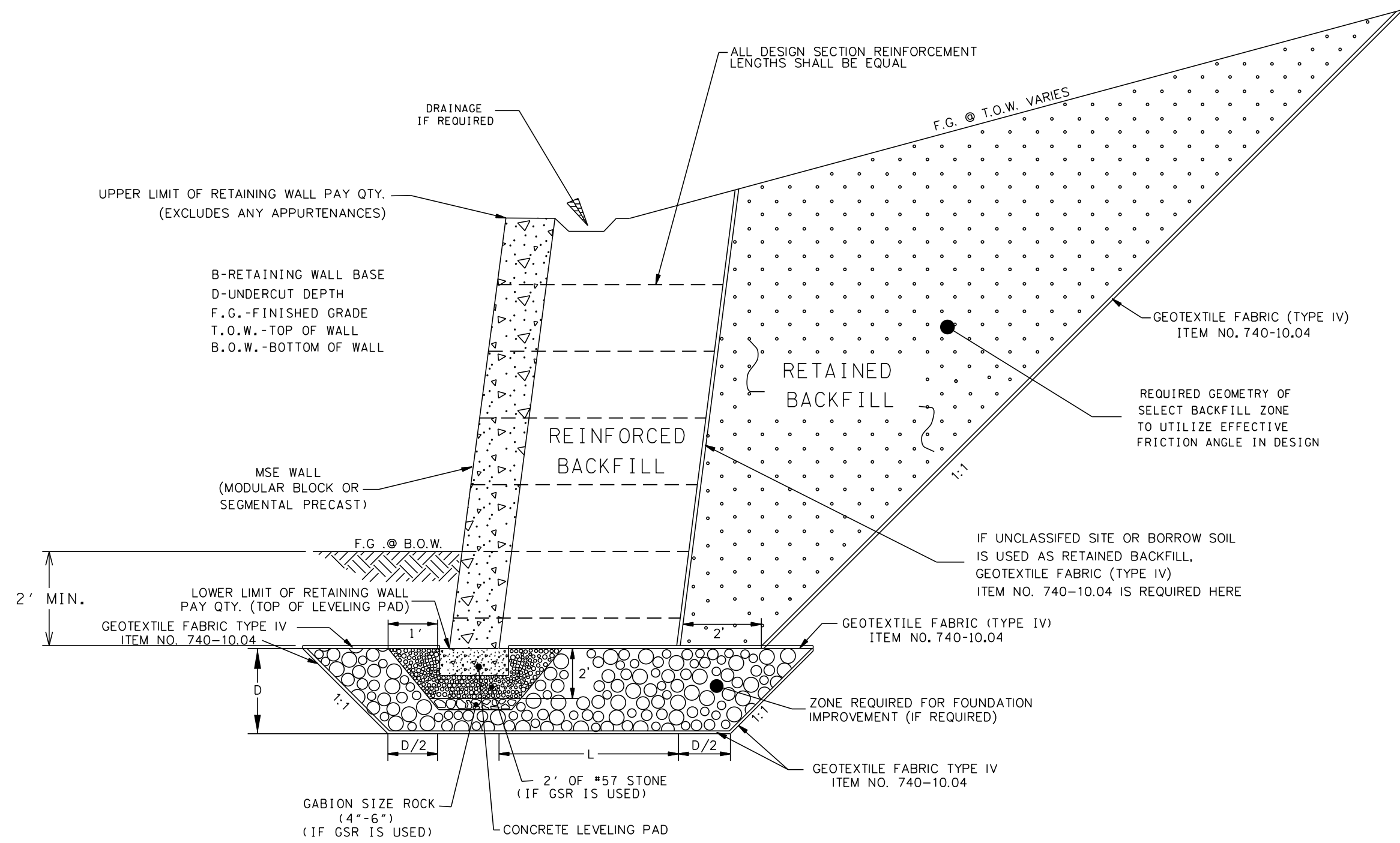
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL
GEOTECHNICAL
DESIGN NOTES &
REQUIREMENTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	58S002-S3-004	R-3



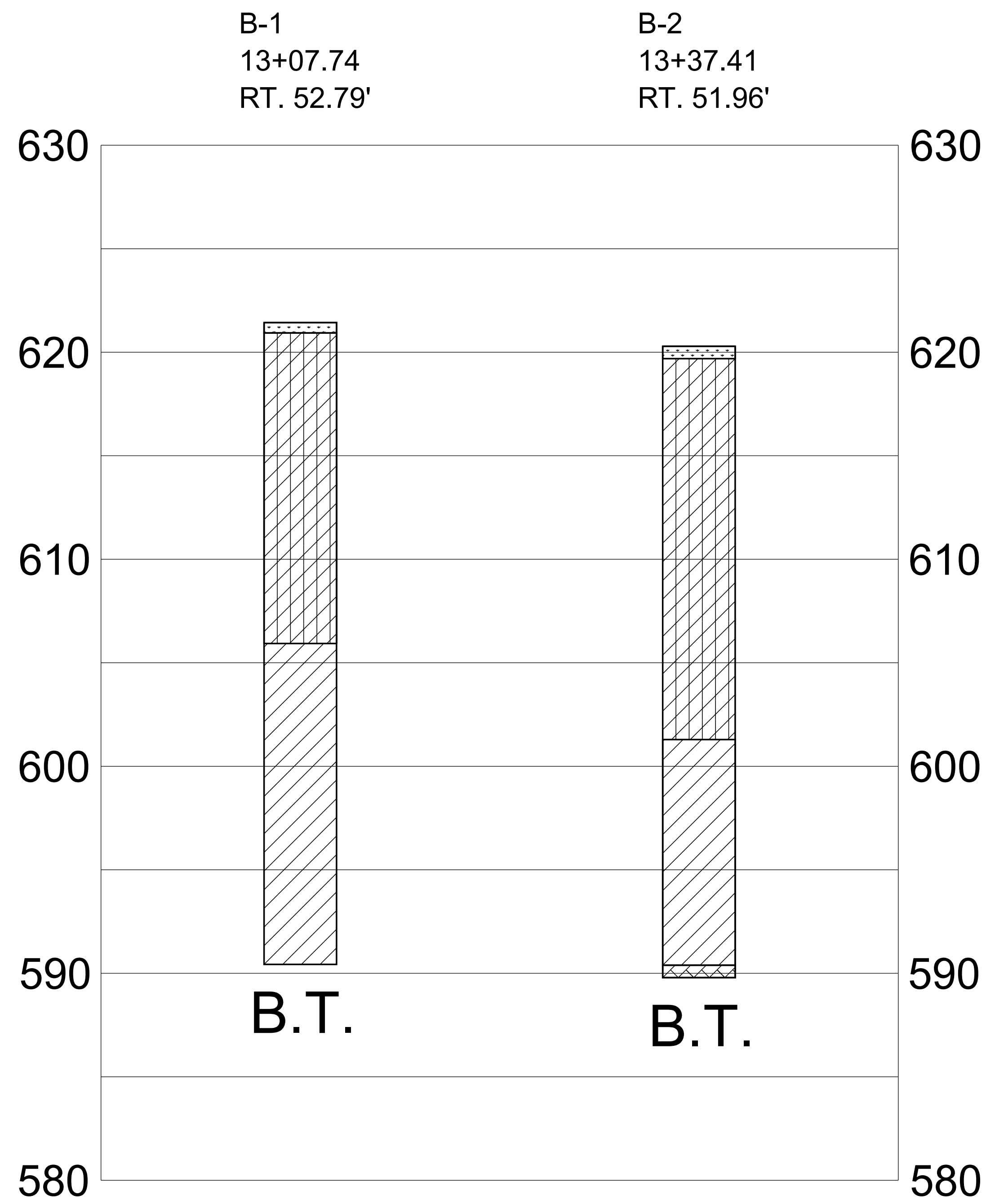
TYPICAL DETAIL
MSE WALL – MODULAR BLOCK\SEGMENTAL PRECAST
BARRIER REQUIRED



TYPICAL DETAIL
MSE WALL – MODULAR BLOCK\SEGMENTAL PRECAST

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	58S002-S3-004	R-5



BORING NO.	STATION	OFFSET	GROUND ELEVATION	ROCK ELEVATION	TOTAL DEPTH
1	13+07.74	RT. 52.79'	621.43	N/A	31.0'
2	13+37.41	RT. 51.96'	620.29	N/A	30.5'

NOTE:
BORING DEPICTIONS SHOWN ON FOUNDATION DATA SHEET INDICATE GENERAL SOIL AND ROCK TYPES AT THE SPECIFIC BORING LOCATIONS.

LEGEND

- TOPSOIL
- FILL
- CLAY
- WEATHERED LIMESTONE

TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON GEOTECHNICAL NOTES AND EST. QTYS. SHEET.
B.T.= BORING TERMINATED

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL
SOIL PROFILES
AND DETAILS

