THIS DOCUMENT HAS BEGUN DIGITALLY SIGNED AND SEALED BY:

Andrew Wisniewski Date: 2025.02.20 12:41:42 -06'00'

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TENNESSEE DEPARTMENT OF TRANSPORTATION
MAIN OFFICE BUILDING, 2ND FLOOR,
6601 CENTENNIAL BLVD,
NASHVILLE, TN 37243
ANDREW WISNIEWSKI, P.E. NO. 114267

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

SHEET NAME	SHEET NO.
SIGNATURE SHEET	ROADWAY-SIGN1
TITLE SHEET	1
ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS	1A
STANDARD STRUCTURE AND TRAFFIC OPERATIONS DRAWINGS	1A1
PROJECT COMMITMENTS	1B
ESTIMATED ROADWAY QUANTITIES	2, 2-1
TYPICAL SECTIONS AND PAVEMENT SCHEDULE	2B, 2B1
GENERAL NOTES	2C, 2C1
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HAUL ROAD PROFILE	6
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EROSION PREVENTION AND SEDIMENT CONTROL PLANS	9-13
SIGNING AND PAVEMENT MARKING PLAN	14
SIGN SCHEDULE SHEET	15
ROADWAY CROSS SECTIONS	16-27
HAUL ROAD CROSS SECTIONS	28-31
TRAFFIC CONTROL PLAN	T1

YEAR	PROJECT NO.	SHEET NO.
2025	18004-3227-04	ROADWAY-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

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Index Of Sheets
SEE SHEET NO. 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

CUMBERLAND COUNTY

S.R. 24 (70 N)
BRIDGE OVER OBED RIVER,
LM 15.37 IN CROSSVILLE (IA) (TMA)

PS&E

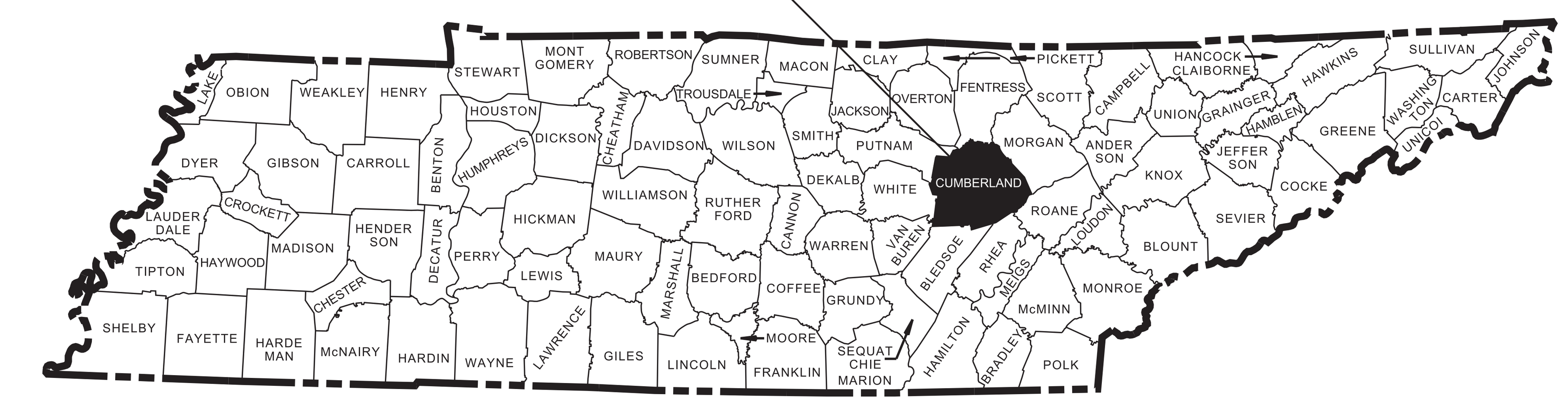
BRIDGE REPLACEMENT

STATE HIGHWAY NO. 24 F.A.H.S. NO. 70 N

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

TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.		
STATE PROJ. NO.	18004-3227-04	

PROJECT LOCATION
BRIDGE ID. # 18SR0240003

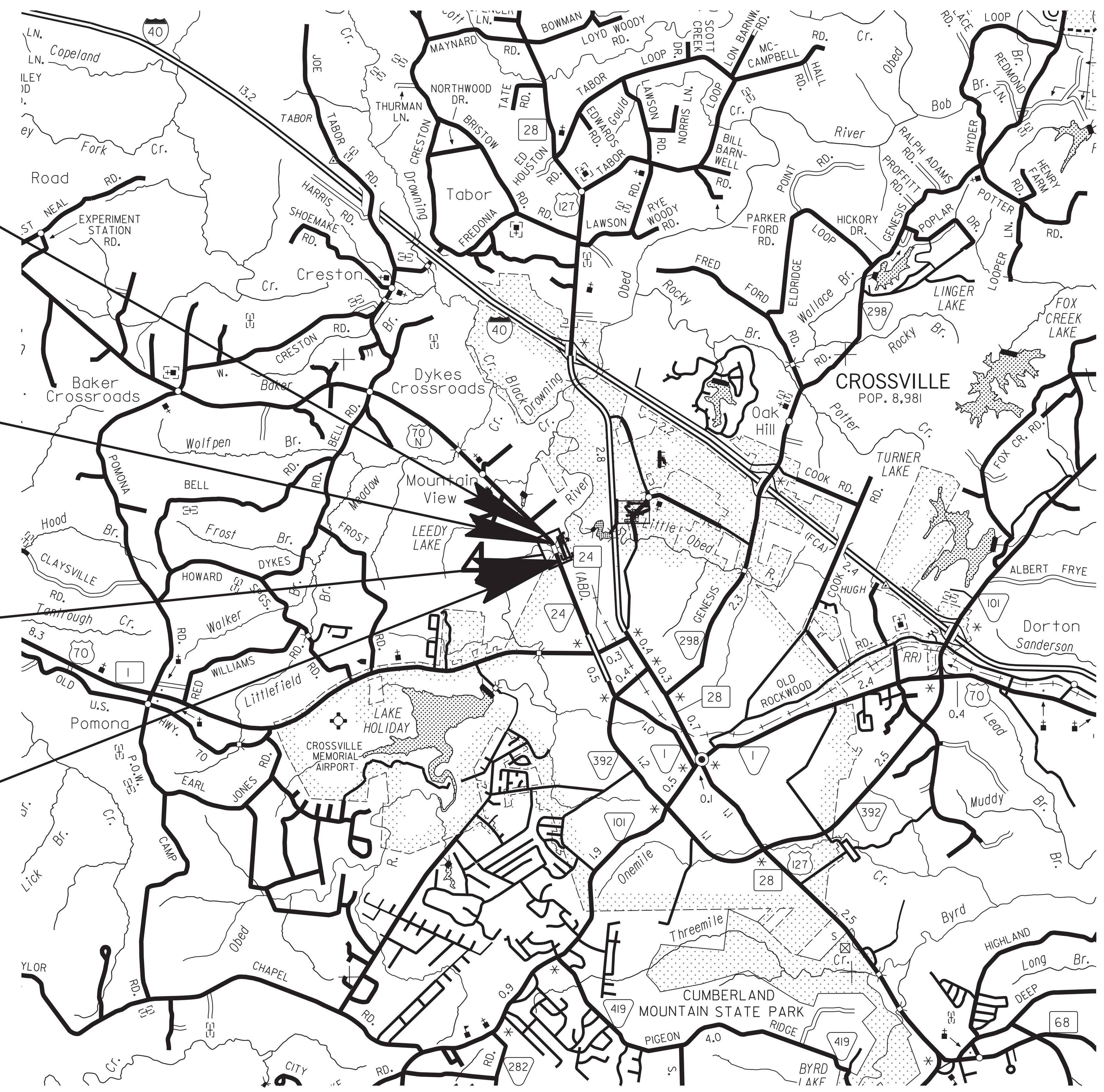


BEGIN PROJECT NO. 18004-3227-04 CONST.
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

END PROJECT NO. 18004-3227-04 CONST.
STA. 66+00.00
N 598206.5356 E 2250579.3489



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NO EXCLUSIONS

ROAD TO BE CLOSED
DURING CONSTRUCTION

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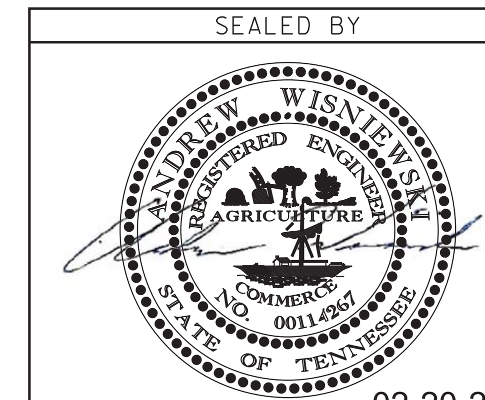

02-20-2025

APPROVED: ____________________
WILL REID, CHIEF ENGINEER

DATE: ____________________

APPROVED: ____________________
HOWARD H. ELEY, COMMISSIONER

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 C.E. MANAGER 1: ANDREW WISNIEWSKI, P.E.
DESIGNER : JORDAN DEL SARDO, P.E. CHECKED BY : WESLEY APPLE, P.E.
P.E. NO. 18004-1227-94 (DESIGN)
PIN NO. 124053.00

SCALE: 1"= 5280'

0 1 2 3 MILE

R.O.W. LENGTH	0.165 MILES
ROADWAY LENGTH	0.156 MILES
BRIDGE LENGTH	0.045 MILES
BOX BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES ▲
PROJECT LENGTH	0.201 MILES

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

SURVEY 04/02/18	TRAFFIC DATA	
SURVEY UPDATE 07/20/18	ADT (2024)	7,880
SURVEY UPDATE 08/07/18	ADT (2044)	9,460
SURVEY UPDATE 01/29/19	DHV (2044)	946
	D	65 - 35
	T (ADT)	3 %
	T (DHV)	2 %
	V	45 MPH

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED: ____________________
DIVISION ADMINISTRATOR DATE

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ROADWAY INDEX

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BRIDGE PLANS	B-1
GEOTECHNICAL PLANS	G-1
STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLANS	S-1
UTILITY PLANS	U1-1

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

Footnotes:

① HAUL ROAD PROFILES FOLLOW SIDE ROAD PROFILES IN THE SHEET NUMBERING SEQUENCE.

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

STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
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

RD01-SE-3	10-15-02	RURAL SUPERELEVATION DETAILS
RD01-TS-3	10-15-02	DESIGN STANDARD FOR 2-LANE ARTERIAL HIGHWAYS
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-SD-1		INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES
RD01-SD-2		INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION
RD01-SD-3		INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS

10-102.00 PIPE CULVERTS AND ENDWALLS

D-PB-1	03-01-23	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-2	03-01-23	STANDARD DETAILS FOR FLEXIBLE PIPE INSTALLATION
D-PG-3	06-28-19	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
D-SEW-1A	07-07-23	TYPE "SAFETY" SIDE ENDWALL WITH STEEL PIPE GRATE, FOR 15" THRU 48" PIPES, 6:1 SLOPE
D-PEW-1		PROTECTED ENDWALLS FOR ROUND & OVAL PIPES (PIPE SIZES 18” TO 72”, ALL SKEWS, 2:1 & 3:1 SLOPES)

10-103.00 CATCH BASINS AND MANHOLES

D-MH-6	02-20-20	STANDARD 7' X 7' SQUARE CONCRETE NO. 3 MANHOLE

10-104.00 ROADWAY, PAVEMENT APPURTENANCES, AND FENCES

RP-I-5	05-01-20	EXAMPLES OF STREET & ALLEY INTERSECTIONS
RP-R-1	10-16-20	STANDARD RAMP DETAILS FOR ROADWAYS AND DRIVEWAYS
S-F-1	03-01-23	HIGH VISIBILITY FENCE
S-F-10B	06-28-19	STANDARD RIGHT-OF-WAY CHAIN LINK FENCE
S-RP-2	06-28-19	STANDARD CONCRETE RIGHT-OF-WAY MARKERS

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-3	03-01-23	SAFETY PLAN MINIMUM INSTALLATION AT BRIDGE ENDS
S-PL-4	01-09-24	SAFETY PLAN FOR BRIDGE PIERS IN CLEAR ZONE
S-PL-6	07-30-24	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-GR31-1	06-15-21	GUARDRAIL DETAILS
S-GR31-1A	06-28-19	GUARDRAIL AND BLOCK-OUT DETAILS
S-GR31-1B		GUARDRAIL FASTENING HARDWARE
S-GR31-1C	07-07-23	GUARDRAIL GENERAL NOTES AND POST DETAILS
S-GRC-4	07-07-23	GUARDRAIL CONNECTION TO BRIDGE RAILING CONCRETE PARAPET
S-GRC-5	02-28-20	GUARDRAIL CONNECTION TO BRIDGE ENDS (TRAILING ENDS)
S-GRS-2	01-28-22	SPECIAL CASE GUARDRAIL ATTACHMENT TO CONCRETE DECKS
S-GRS-7	01-09-24	SHORT – RADIUS GUARDRAIL SYSTEM (SRGS)
S-GRS-7A	07-30-24	SHORT – RADIUS GUARDRAIL SYSTEM (SRGS) DETAILS
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

10-107.00 DESIGN - TRAFFIC CONTROL

T-M-1	06-28-19	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	01-09-24	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	07-07-23	MARKING STANDARDS FOR TRAFFIC ISLANDS, PAVED SHOULDERS, AND MEDIANS FOR CONVENTIONAL ROADS
T-M-4	07-17-20	STANDARD INTERSECTION PAVEMENT MARKINGS
T-M-15A	06-28-19	ASPHALT SHOULDER RUMBLE STRIP INSTALLATION DETAILS FOR NON-ACCESS CONTROLLED RURAL ROUTES
T-M-16	07-30-24	RUMBLE STRIPE INSTALLATION LAYOUT
T-M-16A	02-03-20	RUMBLE STRIPE DETAILS FOR EDGE OF PAVEMENT AND CENTERLINE
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS

10-108.00 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-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-8	06-10-14	FILTER SOCK
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-6A	05-06-16	ENHANCED ROCK CHECK DAM
EC-STR-19	04-01-08	CATCH BASIN PROTECTION
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-30		INSTREAM DIVERSION (WITHOUT TRAFFIC)
EC-STR-33	08-01-12	SUSPENDED PIPE DIVERSION (DOWNSTREAM)

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	1A
PS&E	2025	18004-3227-04	1A

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ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE COMMERCE 0011.2007 STATE OF TENNESSEE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	1A1
PS&E	2025	18004-3227-04	1A1

STANDARD STRUCTURE DRAWING

DWG.	REV.	DESCRIPTION
10-300.00		**NEW STRUCTURES**
STD-10-2	06-05-23	MISC. ABUTMENT & PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS
STD-10-3	01-10-24	STANDARD FLUME DETAILS

STANDARD TRAFFIC OPERATIONS DRAWINGS

DWG.	REV.	DESCRIPTION
10-200.00		**SIGNS**
T-S-9	06-10-14	STANDARD LAYOUT GROUND MOUNTED SIGNS
T-S-10	04-04-12	STANDARD MOUNTING DETAILS FLAT SHEET SIGNS ALUMINUM-STEEL DESIGN
T-S-13	10-21-19	STANDARD STEEL GROUND MOUNTED SIGNS, BREAK-AWAY TYPE POST FOOTING DETAILS, I-BEAMS
T-S-17	07-11-17	STANDARD GROUND MOUNTED SIGN USING PERFORATED/KNOCKOUT SQUARE TUBE
T-S-19	06-12-20	STANDARD STEEL SIGN SUPPORTS
T-S-20	07-11-17	SIGN DETAILS

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STANDARD
STRUCTURE
AND TRAFFIC
OPERATION
DRAWINGS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	1B
PIH	2024	BR-STP-24(69)	1B
PS&E	2025	18004-3227-04	1B

PROJECT COMMITMENTS

COMMITMENT ID	SOURCE DIVISON	DESCRIPTION	STATION / LOCATION
EDHZ001	ENVIRONMENTAL DIVISION HAZARDOUS MATERIALS	Asbestos Containing Material (ACM) surveys were conducted on Bridge No. 18SR0240003, SR-24 over Obed River LM 15.37 (18-SR024-15.37). No ACM was detected. No special accommodations for demolition and waste disposal are anticipated for these structures and the material can be deposited in a C&D landfill. Prior to the demolition or rehabilitation of any structure (bridge or building), the contractor is required to submit the National Emission Standards for Hazardous Air Pollutants standard 10-day notice of demolition to the TDEC Division of Air Pollution Control (per TDOT Standard Specifications for Road and Bridge Construction (January 1, 2015) Sections 107.08 D and 202.03).	BRIDGE NO. 18SR0240003
EDPL001	ENVIRONMENTAL DIVISION PLANNING	The following environmental commitments are being made in regard to the Obed River Park and are in compliance with the approved August 2020 Section 4(f) De Minimis Determination: If during subsequent project development phases, the design features associated with the bridge replacement along State Route 24 are modified from what was proposed in the August 2020 Section 4(f) De Minimis Determination, the TDOT Environmental Division is to be notified immediately in writing. No loss of access to the Obed River Park via Obed River Park Drive is anticipated. No loss of parking at the Obed River Park is anticipated. Temporary traffic signage will be posted informing the public that State Route 24 will be closed during construction. High visibility fencing will be placed around the proposed right-of-way area to restrict public access to the active construction site.	LT. STA. 66+00.00+/-

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROJECT COMMITMENTS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	2
PS&E	2025	18004-3227-04	2

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 18004-3227-04
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
25	201-01	CLEARING AND GRUBBING	LS	1
1	202-01.01	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	1
	202-04.01	REMOVAL OF STRUCTURES (WINGWALL, LT.63+16.81 STA.)	LS	1
2,4	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	8472
16	203-06	WATER	M.G.	23
	203-07	FURNISHING & SPREADING TOPSOIL	C.Y.	584
3,12	203-50	CONSTRUCTION OF HAUL ROAD	LS	1
4	209-02.04	10" TEMPORARY SLOPE DRAIN	L.F.	196
4	209-05	SEDIMENT REMOVAL	C.Y.	101
4,18,20	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	3040
4	209-08.08	ENHANCED ROCK CHECK DAM	EACH	8
4	209-08.09	FILTER SOCK CHECK DAM	EACH	20
4,24	209-09.01	SANDBAGS	BAG	660
4,15	209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	6
4,24	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	25
4	209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	2
4	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	100
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	2701
4,13	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	1284
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	415
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	306
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	6.4
6	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	23
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	2.4
	407-20.05	SAW CUTTING ASPHALT PAVEMENT	L.F.	90
	411-01.10	ACS MIX(PG64-22) GRADING D	TON	311
	411-12.01	SCORING SHOULDERS (CONTINUOUS) (16IN WIDTH)	L.M.	0.21
	411-12.03	SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) (8IN WIDTH)	L.M.	0.1
5	607-10.02	54" CONCRETE PIPE CULVERT (CLASS III)	L.F.	20
	607-39.02	18" PIPE CULVERT (SIDE DRAIN)	L.F.	121
	607-39.03	24" PIPE CULVERT (SIDE DRAIN)	L.F.	73
	610-07.03	18" PIPE DRAIN (BRIDGE DRAIN)	L.F.	80
	611-01.03	MANHOLES, > 8' - 12' DEPTH	EACH	1
	611-07.01	CLASS A CONCRETE (PIPE ENDWALLS)	C.Y.	9
	611-07.02	STEEL BAR REINFORCEMENT (PIPE ENDWALLS)	LB.	378
	611-07.31	18IN ENDWALL (SIDE DRAIN)	EACH	6
	611-07.32	24IN ENDWALL (SIDE DRAIN)	EACH	2
	611-09.03	CAPPING EXISTING CATCHBASIN	EACH	1
4,24	621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	52
	705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.	250
	705-06.10	GR TERMINALTRAILING END (TYPE 13) MASH TL3	EACH	2
	705-06.11	GR TERMINAL (IN-INLINE) MASH TL3	EACH	2
	705-06.20	TANGENT ENERGY ABSORBING TERM MASH TL-3	EACH	4
	705-06.25	THRIE BEAM BRIDGE TRANSITION MASH TL-3	EACH	2
10	706-01	GUARDRAIL REMOVED	L.F.	630
	706-10.80	MICHIGAN AND MODIFIED MICHIGAN END SHOE	EACH	2
	707-01.11	CHAIN LINK FENCE (6 FOOT)	L.F.	618
	707-01.12	END & CORNER POST ASSEMBLY(CHAIN-LINK FENCE 6')	EACH	12
	707-01.13	GATE - CHAIN-LINK FENCE-6 FOOT (GATE)	EACH	1
	707-06.01	REMOVAL OF FENCE (CHAIN LINK)	L.F.	568
	707-06.02	REMOVAL OF GATE (CHAIN-LINK)	EACH	1
4,18	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	1800
	708-02.01	MARKERS (CONCRETE R.O.W. POSTS)	EACH	11
	709-01.01	RUBBLE STONE RIP-RAP	C.Y.	5
4,14	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	100
4,21	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	840
11	709-05.08	MACHINED RIP-RAP (CLASS B)	TON	1548
	712-01	TRAFFIC CONTROL	LS	1
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	16
	712-06	SIGNS (CONSTRUCTION)	S.F.	337

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 18004-3227-04
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	96
	713-06	STEEL I-BEAMS & WF-BEAMS(BREAKAWAY) SIGN SUPPORT	LB.	1272
	713-11.02	PERFORATED/KNOCKOUT SQUARE TUBE POST	LB.	662
	713-13.02	FLAT SHEET ALUMINUM SIGNS (0.080" THICK)	S.F.	42
	713-13.03	FLAT SHEET ALUMINUM SIGNS (0.100" THICK)	S.F.	29
	713-14	EXTRUDED ALUMINUM PANEL SIGNS	S.F.	112
10	713-15	REMOVAL OF SIGNS, POSTS AND FOOTINGS	LS	1
6	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2
	716-01.21	SNOWPLOWABLE RAISED PAVMENT MARKERS (BI-DIR) (1 COLOR)	EACH	32
	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	12
8	716-12.02	ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE)	L.M.	0.9
	716-02.04	PLASTIC PAVEMENT MARKING(CHANNELIZATION STRIPING)	S.Y.	5
26	716-15.10	PREFORMED PERMANENT TAPE (6IN LINE)	L.F.	952
	717-01	MOBILIZATION	LS	1
19	740-07.04	GEOGRID REINFORCEMENT TYPE 2	S.Y.	1414
4,7	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	584
19	740-10.04	GEOTEXTILE (TYPE IV)(STABILIZATION)	S.Y.	462
4,17	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	95
22	801-01.38	NATVE SEED MX FINAL STABLIZATN OF SLOPES	UNIT	5
4,9	801-03	WATER (SEEDING & SODDING)	M.G.	47
23	802-11.01	ACER NEGUNDO (BOX ELDER 2-5FT CNTNR GRWN)	EACH	7
23	802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	7
23	802-11.07	BETULA NIGRA (RIVER BIRCH 2-5FT CNTNR GRWN)	EACH	7
23	802-11.29	QUERCUS ALBA (WHITE OAK 2-5FT CNTNR GRWN)	EACH	7
23	802-11.44	ULMUS AMERICANA (AMERICAN ELM 2-5FT CNTNR GRWN)	EACH	7
	803-01	SODDING (NEW SOD)	S.Y.	3504

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ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE & COMMERCE REG. 0011.2247 STATE OF TENNESSEE

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	2-1
PS&E	2025	18004-3227-04	2-1

FOOTNOTES

(1) REMOVE EXISTING PIPES AND OTHER OBSTRUCTIONS. SEE SHEET 2F1 FOR DETAILS.

(2) INCLUDES 15 C.Y. FOR TEMPORARY CONST. EXITS. AND 24 C.Y. FOR TEMPORARY SLOPE DRAINS.

(3) ITEM 203-50 SHALL INCLUDES GEOTEXTILE (TYPE IV), BORROW EXCAVATION (GRADED SOLID ROCK), OR MACHINED RIP-RAP (CLASS A-1,CLASS B, OR CLASS C), MINERAL AGGREGATE (TYPE 57), AND TEMPORARY DRAINAGE PIPE (IF APPICABLE). THE MINERAL AGGREGATE INCLUDES TEN (10) PERCENT FOR MAINTENANCE.

(4) SEE SUBSECTION 209.07 OF THE STD. SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.

(5) BEDDING MATERIAL SHALL BE INCLUDED IN THE COST OF THE PROPOSED PIPE.

(6) TO BE USED AS DIRECTED BY THE ENGINEER.

(7) INCLUDES 172 S.Y. FOR TEMPORARY CONSTRUCTION EXITS, 226 S.Y. FOR STRUCTURE AND 186 S.Y. FOR SEDIMENT FILTER BAGS.

(8) THE CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME BID PRICE FOR THERMOPLASTIC.

(9) INCLUDES 10 M.G. FOR EPSC, 36 M.G. FOR SODDING, AND 1 M.G. FOR NATIVE SEED MIX.

(10) SEE SHEET 2F1 FOR DETAILS.

(11) INCLUDES 1475 TONS (SUPPLIED BY STRUCTURES) FOR SLOPE PROTECTION ON BRIDGE AND 73 TONS FOR RIPRAP APRON AT PROPOSED CULVERT.

(12) REMOVAL AND SEEDING OF HAUL ROAD AREA TO BE INCLUDED IN ITEM NO. 203-50.

(13) INCLUDES 15 TONS FOR SEDIMENT FILTER BAGS, 809 TONS FOR BRIDGE ENDS AND 460 TONS FOR STRUCTURE.

(14) FOR TEMPORARY CONSTRUCTION EXITS.

(15) INCLUDES 4 ADDITIONAL SEDIMENT FILTER BAGS TO BE USED AS REPLACEMENTS.

(16) INCLUDES 2 M.G. FOR EMBANKMENT AND 21 M.G. FOR BASE MATERIAL.

(17) THE COST OF NEW FERTILIZER AND LIME USED IN INITIAL SEED BED PREPARATION IS TO BE INCLUDED IN THE COST OF SEEDING. SEE SECTION 801 OF TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

(18) INCLUDES COST OF SAFETY CAPS FOR METAL POSTS.

(19) TO BE USED FOR BRIDGE ENDS.

(20) INCLUDES 193 L.F. FOR SEDIMENT FILTER BAGS.

FOOTNOTES

(21) INCLUDES 24 TONS FOR TEMPORARY SLOPE DRAINS, 42 TONS FOR BRIDGE ENDS, 766 TONS FOR RIPRAP APRON AND 8 TONS FOR SUSPENDED PIPE DIVERSION (DOWNSTREAM)

(22) PERMANENT STABILIZATION WITH NATIVE OR NATURALIZED PERENNIAL VEGETATION IS REQUIRED IN ALL AREAS AUTHORIZED FOR TEMPORARY AND PERMANENT IMPACTS TO STREAMS AND RIPARIAN AREAS, INCLUDED ADJACENT BUFFER ZONES WITHIN 60FT OF THE EDGE OF WATER. THE APPROPRIATE SEED MIXTURE FOR THE REGION AND SITE CONDITIONS SHALL BE SELECTED FROM TABLE 7.9-1 (PREFERRED SEED MIXES USING NATIVES OR NATURALIZED PLANTS AND PLANTING DATES) FOUND IN CHAPTER 7.9 (PERMANENT VEGETATION) OF THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION (TDEC) TENNESSEE EROSION & SEDIMENT CONTROL HANDBOOK 4TH EDITION.

(23) TO BE USED IN STR-1 BUFFER AREA AFTER HAUL ROAD HAS BEEN REMOVED.

(24) TO BE USED FOR SUSPENDED PIPE DIVERSION (DOWNSTREAM).

(25) INCLUDES TREE TRIMMING/CUTTING ALONG THE ELECTRIC RELOCATION ROUTE.

(26) TO BE USED FOR EDGELINES AND DOUBLE YELLOW CENTERLINE ON CONCRETE BRIDGE.

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DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

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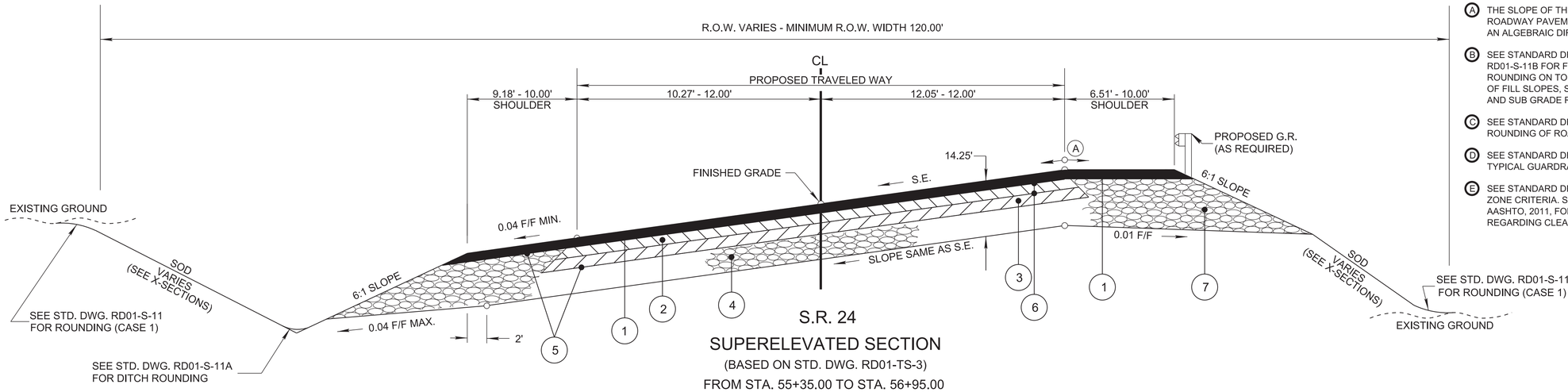
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	2B
PIH	2024	BR-STP-24(69)	2B
PS&E	2025	18004-3227-04	2B



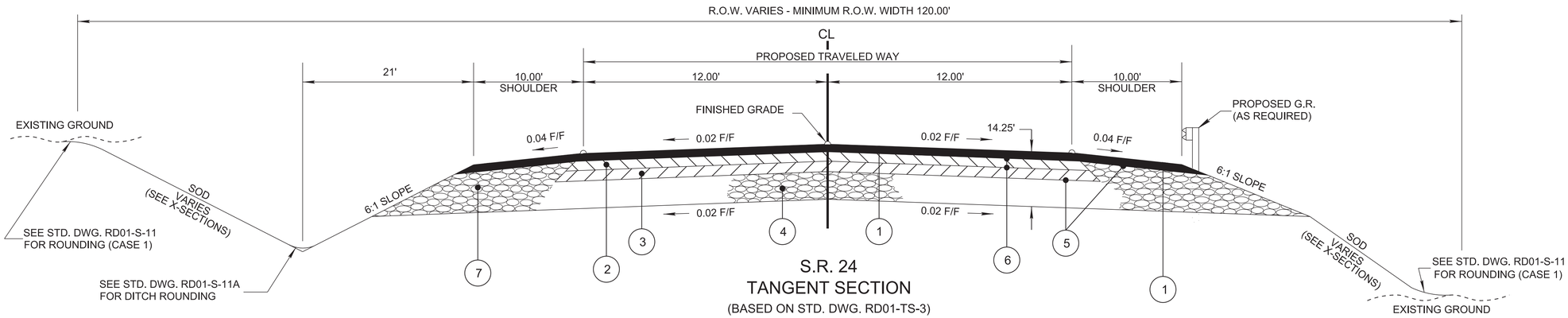
Ⓐ THE SLOPE OF THE SHOULDER AND THE ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 7%.

Ⓑ SEE STANDARD DRAWINGS RD01-S-11 AND RD01-S-11B FOR FILL AND CUT SLOPE TABLES, ROUNDING ON TOP OF CUT SLOPES AND TOE OF FILL SLOPES, SPECIAL ROCK TREATMENT AND SUB GRADE ROUNDING IF APPLICABLE.

Ⓒ SEE STANDARD DRAWING RD01-S-11A FOR ROUNDING OF ROADSIDE DITCH SLOPES.

Ⓓ SEE STANDARD DRAWING S-PL-6 FOR TYPICAL GUARDRAIL PLACEMENT.

Ⓔ SEE STANDARD DRAWING S-CZ-1 FOR CLEAR ZONE CRITERIA. SEE THE "ROADSIDE DESIGN GUIDE", AASHTO, 2011, FOR FURTHER INFORMATION REGARDING CLEAR ZONES.



BEG. BRIDGE STA. 58+21.00 - END BRIDGE STA. 60+59.00

PROPOSED PAVEMENT SCHEDULE

(1) ASPHALTIC CONCRETE SURFACE (HOT MIX) PG64-22 GRADING "D" SURFACE @ 1.25" THICK (APPROX. 132.50 LB./S.Y.) 411-01.10 ACS MIX (PG64-22) GRADING "D"	**(5) PRIME COAT** 402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) AT 0.30 - 0.35 GALLONS/S.Y. 402-02 AGGREGATE FOR COVER MATERIAL (PC) AT 8 - 12 LB./S.Y.
(2) BITUMINOUS PLANT MIX BASE (HOT MIX) PG64-22 GRADING "B-M2" @ 2.00" THICK (APPROX. 226 LB./S.Y.) 307-01.08 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "B-M2"	**(6) TACK COAT** 403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC). SEE 403.05 FOR DETERMINING APPLICATION RATE IN FIELD
(3) BITUMINOUS PLANT MIX BASE (HOT MIX) PG64-22 GRADING "A" @ 3.00" THICK (APPROX. 345 LB./S.Y.) 307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING "A"	**(7) MINERAL AGGREGATE 13.00" THICK** 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"
(4) MINERAL AGGREGATE 8" THICK 303-01 MINERAL AGGREGATE, TYPE "A" BASE, GRADING "D"	

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DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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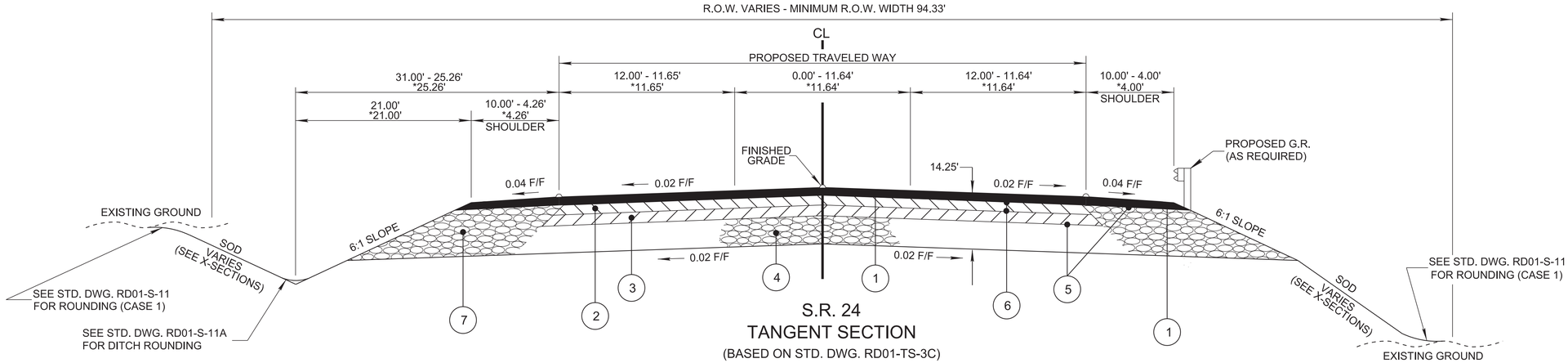
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	2B1
PIH	2024	BR-STP-24(69)	2B1
PS&E	2025	18004-3227-04	2B1

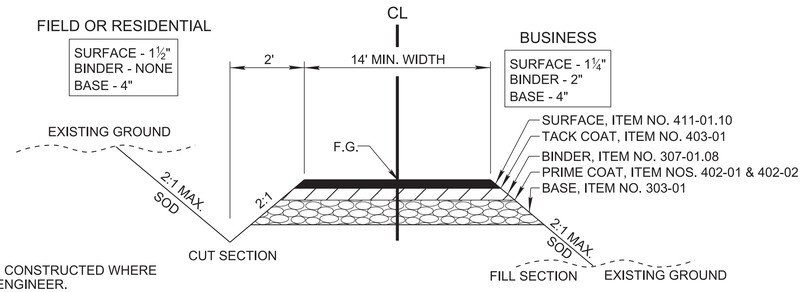
REV. 08-07-2023 - ADDED SHEET



S.R. 24
TANGENT SECTION

(BASED ON STD. DWG. RD01-TS-3C)

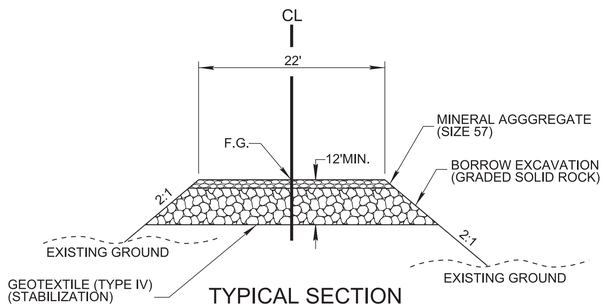
FROM STA. 62+50.00 TO STA. 65+05.00
*FROM STA. 65+05.00 TO STA. 65+55.00



NOTE: DITCH TO BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER.

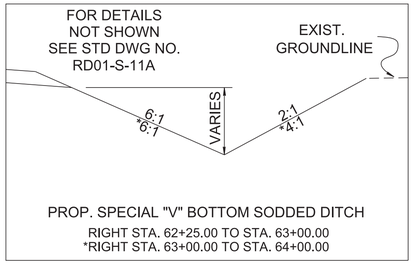
NOTE: SLOPES IN PARKING AREA SHALL BE FLATTENED TO 12:1 AND DITCH IS TO BE ELIMINATED.

TYPICAL SECTION
PRIVATE DRIVE TO BUSINESS,
FIELD, OR RESIDENTIAL PROPERTY



TYPICAL SECTION
HAUL ROAD

STA. 0+00.00 TO STA.2+30.00
ITEM NO. 203-50



PROP. SPECIAL "V" BOTTOM SODDED DITCH

RIGHT STA. 62+25.00 TO STA. 63+00.00
*RIGHT STA. 63+00.00 TO STA. 64+00.00

SEE SHEET 2B FOR PAVEMENT SCHEDULE

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TYPICAL SECTIONS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	2C
PS&E	2025	18004-3227-04	2C

GENERAL NOTES

GRADING

(1) ANY AREA THAT IS DISTURBED OUTSIDE LIMITS OF CONSTRUCTION DURING THE LIFE OF THIS PROJECT SHALL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE.

(2) CERTIFICATION FOR ALL BORROW PITS MUST BE OBTAINED IN ACCORDANCE WITH SUBSECTION 107.06 OF THE STANDARD SPECIFICATIONS.

(3) THE CONTRACTOR SHALL NOT DISPOSE OF ANY MATERIAL EITHER ON OR OFF STATE-OWNED R.O.W. IN A REGULATORY FLOOD WAY AS DEFINED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) WITHOUT APPROVAL BY FEMA. ALL MATERIAL SHALL BE DISPOSED OF IN UPLAND (NON-WETLAND) AREAS AND ABOVE ORDINARY HIGH WATER OF ANY ADJACENT WATERCOURSE. THIS DOES NOT ELIMINATE THE NEED TO OBTAIN ANY OTHER LICENSES OR PERMITS THAT MAY BE REQUIRED BY ANY OTHER FEDERAL, STATE OR LOCAL AGENCY.

SEEDING AND SODDING

(1) ALL EXISTING ROADS WITHIN THE RIGHT-OF-WAY AND NOT IN THE GRADED AREA THAT ARE TO BE ABANDONED SHALL BE SCARIFIED, OBLITERATED, TOPSOILED AND SEEDED. SCARIFYING AND OBLITERATING THE PAVEMENT WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS. TOPSOIL, IN ACCORDANCE WITH SECTION 203 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 203-04 AND/OR 203-07. SEEDING, IN ACCORDANCE WITH SECTION 801 OF THE STANDARD SPECIFICATIONS, WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 801-01.07.

(2) SOD SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS TO PREVENT DAMAGE TO ADJACENT FACILITIES AND PROPERTY DUE TO EROSION ON ALL NEWLY GRADED CUT AND FILL SLOPES AS WORK PROGRESSES.

GUARDRAIL

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

(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.

(4) GUARDRAIL IS TO BE COMPLETE IN PLACE BEFORE THE MAINLINE ROADWAY IS OPENED TO TRAFFIC.

DRAINAGE

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

(2) EXCAVATION FOR PIPE CULVERTS WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE CULVERTS.

(4) THE CUTTING OF INLET AND OUTLET DITCHES WHERE SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER WILL BE MEASURED AND PAID FOR AS ITEM NO. 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED).

(5) WHERE A CULVERT PIPE IS MOVED TO A NEW LOCATION OTHER THAN THAT SHOWN ON THE PLANS, INCREASING OR DECREASING THE AMOUNT OF CULVERT EXCAVATION WILL NOT RESULT IN AN INCREASE OR DECREASE IN THE AMOUNT OF PAYMENT THAT WILL BE MADE DUE TO SUCH CHANGE.

FENCING

(1) LOCATION OF THE FENCE SHALL BE ONE FOOT INSIDE THE RIGHT-OF-WAY EXCEPT WHERE SHOWN OTHERWISE ON THE PLANS.

(2) FENCES SHALL BE TURNED IN AT DRAINAGE STRUCTURES, STOCK PASSES AND BRIDGES WHERE DIRECTED BY THE ENGINEER SO AS TO ABUT WINGWALLS AND/OR ABUTMENTS.

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

(4) THE CONTRACTOR SHALL BE REQUIRED TO INSTALL ACCESS CONTROL FENCES PRIOR TO CUTTING EXISTING STOCK FENCES IN AREAS UTILIZED BY DOMESTIC LIVESTOCK OR OTHER AREAS AS DIRECTED BY THE ENGINEER.

MISCELLANEOUS

(1) ALL DETOUR, ACCESS, SERVICE AND FRONTAGE ROADS SHALL BE CONSTRUCTED WITH A MINIMUM OF ONE (1) COURSE OF BASE MATERIAL BEFORE TRAFFIC IS INTERRUPTED ON EXISTING ROADS.

(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.

ROAD CLOSURE

(1) NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF THE ROAD, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND THE APPROXIMATE DURATION OF THE CONSTRUCTION: THESE PARTIES INCLUDE, BUT ARE NOT LIMITED TO: (1) LOCAL LAW ENFORCEMENT OFFICE, (2) LOCAL FIRE DEPARTMENT, (3) AMBULANCE SERVICE, (4) LOCAL SCHOOL SUPERINTENDENT, (5) UNITED STATES POSTAL SERVICE, AND (6) LOCAL ROAD SUPERINTENDENT.

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

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

DETOURS, LANE SHIFTS AND MEDIAN CROSS-OVERS

(18) BEFORE OPENING THE DETOUR 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.

SNOWPLOWABLE REFLECTIVE PAVEMENT MARKERS

(19) REMOVE EXISTING SNOWPLOWABLE MARKERS PRIOR TO PAVING AND/OR COLD PLANING. REMOVE ALL ADHESIVES PRIOR TO PAVING. PATCH ANY HOLES OR DIVOTS RESULTING FROM THE REMOVAL OF A MARKER IN A MANNER WHICH ENSURES A UNIFORM PAVED SURFACE. PATCH WORK SHALL BE INCLUDED WITH COST OF OTHER ITEMS OF CONSTRUCTION.

PAVEMENT

PAVING

(1) THE CONTRACTOR SHALL BE REQUIRED TO 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

(1) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND. THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL EXTRUDED PANEL SIGNS SHALL BE DIRECT APPLIED OR DEMOUNTABLE. ALL EXTRUDED PANEL SIGNS SHALL BE ATTACHED TO THE SIGN FACE, AS OUTLINED IN THE STANDARD SPECIFICATIONS. ALL SHIELDS ON GUIDE SIGNS SHALL BE DIRECT APPLIED OR DEMOUNTABLE AND ATTACHED TO THE SIGN FACE AS OUTLINED IN THE STANDARD SPECIFICATIONS.

(2) FOR ALL PERMANENT PANEL SIGNS WITH A SILVER-WHITE, YELLOW, RED, GREEN, BROWN, OR BLUE BACKGROUND, PROVIDE REFLECTIVE SHEETING THAT MEETS OR EXCEEDS AASHTO M268, TYPE D.

(3) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE LENGTHS WERE COMPUTED FROM THE CROSS-SECTIONS CONTAINED IN THE CONSTRUCTION PLANS. IN THE EVENT THE SUPPORT LENGTHS ARE 2 FEET SHORTER OR LONGER THAN SHOWN ON THE PLANS, THE ENGINEER SHALL VERIFY THE SUPPORT TYPE WITH THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION, TELEPHONE NO. (615)-741-0802. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ORDERING MATERIAL.

(4) THE TOP OF THE SIGN FOOTINGS SHALL BE PLACED LEVEL WITH THE GROUND LINE.

(5) AFTER THE SIGN LOCATIONS HAVE BEEN STAKED, BUT PRIOR TO ORDERING ANY MATERIAL FOR THE SUPPORTS, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE REGIONAL CONSTRUCTION OFFICE.

(6) THE CONTRACTOR SHALL BE REQUIRED TO FURNISH LAYOUT DRAWINGS OF ALL EXTRUDED PANEL SIGNS WITH SPACING OF ALL LETTERS, NUMERALS, SHIELDS, AND ARROWS. ONE PDF SET OF THE LAYOUT DRAWINGS SHALL BE SENT TO THE TRAFFIC OPERATIONS DIVISION, SIGNING SECTION (TDOT.TrafficOps.Sign-Reviews@tn.gov) FOR REVIEW. ONE PDF SET OF THE LAYOUT DRAWINGS SHALL BE SENT TO THE REGIONAL SIGN DESIGNER FOR REVIEW.

(7) ALL SIGNS MARKED "TO BE REMOVED" ARE TO BE REMOVED BY THE CONTRACTOR AND PAID FOR UNDER ITEM NO. 713-15 AND BECOME THE PROPERTY OF THE CONTRACTOR.

(8) THE EXISTING FOOTINGS ARE TO BE REMOVED 6 INCHES BELOW GROUND LINE.

(9) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS, EXCEPT THAT CUT-OUT DIRECT APPLIED COPY SHALL BE USED ON ALL FLAT SHEET SIGNS WITH A GREEN BACKGROUND, OR BROWN BACKGROUND.

(10) THE LENGTHS OF ALL SIGN SUPPORTS SHOWN ON THE SIGN SCHEDULE ARE APPROXIMATE AND ARE FOR ESTIMATING PURPOSES ONLY. THE CONTRACTOR SHALL VERIFY ALL SUPPORT LENGTHS AT THE SITE PRIOR TO ERECTION.

(11) THE LETTERS, DIGITS, ARROWS, BORDERS, AND ALPHABET ACCESSORIES ON ALL FLAT SHEET SIGNS SHALL BE APPLIED BY SILK SCREENING PROCESS.

(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.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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GENERAL NOTES CONTINUED

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

(1) ADVANCED WARNING SIGNS SHALL NOT BE DISPLAYED MORE THAN FORTY-EIGHT (48) HOURS BEFORE PHYSICAL CONSTRUCTION BEGINS. SIGNS MAY BE ERECTED UP TO ONE WEEK BEFORE NEEDED, IF THE SIGN FACE IS FULLY COVERED.

(2) IF THE CONTRACTOR MOVES OFF THE PROJECT, HE SHALL COVER OR REMOVE ALL UNNEEDED SIGNS AS DIRECTED BY THE ENGINEER. COSTS OF REMOVAL, COVERING, AND REINSTALLING SIGNS SHALL NOT BE MEASURED AND PAID FOR SEPARATELY, BUT ALL COSTS SHALL BE INCLUDED IN THE ORIGINAL UNIT PRICE BID FOR ITEM NO. 712-06, SIGNS (CONSTRUCTION) PER SQUARE FOOT.

(3) A LONG TERM BUT SPORADIC USE WARNING SIGN, SUCH AS A FLAGGER SIGN, MAY REMAIN IN PLACE WHEN NOT REQUIRED PROVIDED THE SIGN FACE IS FULLY COVERED.

(4) TRAFFIC CONTROL DEVICES SHALL NOT BE DISPLAYED OR ERECTED UNLESS RELATED CONDITIONS ARE PRESENT NECESSITATING WARNING.

(5) USE OF BARRICADES, PORTABLE BARRIER RAILS, AND DRUMS SHALL BE LIMITED TO THE IMMEDIATE AREAS OF CONSTRUCTION WHERE A HAZARD IS PRESENT. THESE DEVICES SHALL NOT BE STORED ALONG THE ROADWAY WITHIN THIRTY (30) FEET OF THE EDGE OF THE TRAVELED WAY BEFORE OR AFTER USE UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL INCREASE TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. THESE DEVICES SHALL BE REMOVED FROM THE CONSTRUCTION WORK ZONE WHEN THE ENGINEER DETERMINES THEY ARE NO LONGER NEEDED. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(6) THE CONTRACTOR SHALL NOT BE PERMITTED TO PARK ANY VEHICLES OR CONSTRUCTION EQUIPMENT DURING PERIODS OF INACTIVITY, WITHIN THIRTY (30) FEET OF THE EDGE OF PAVEMENT WHEN THE LANE IS OPEN TO TRAFFIC UNLESS PROTECTED BY GUARDRAIL, BRIDGE RAIL, AND/OR BARRIERS INSTALLED FOR OTHER PURPOSES FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. PRIVATELY OWNED VEHICLES SHALL NOT BE ALLOWED TO PARK WITHIN THIRTY (30) FEET OF AN OPEN TRAFFIC LANE AT ANY TIME UNLESS PROTECTED AS DESCRIBED ABOVE FOR ROADWAYS WITH CURRENT ADT'S LESS THAN 1500 AND DESIGN SPEED OF LESS THAN 60 MPH. THIS DISTANCE SHALL BE INCREASED TO FORTY-FIVE (45) FEET FOR ROADWAYS WITH CURRENT ADT'S OF 1500 OR GREATER AND DESIGN SPEED OF 60 MPH OR GREATER OR ON THE OUTSIDE OF A HORIZONTAL CURVE. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

(7) ALL DETOUR AND CONSTRUCTION SIGNING SHALL BE IN STRICT ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(8) ALL DETOURS SHALL BE PAVED, STRIPED, SIGNED, AND FLEXIBLE DRUMS ARE TO BE IN PLACE BEFORE IT IS OPENED TO TRAFFIC.

(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.

LIGHTING

(1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 1, 2015 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.

(2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.

(3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.

(4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.

(5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.

(6) LIGHT STANDARDS SHALL BE ROUND TAPERED POLES. LENGTH SHALL BE DETERMINED BY REQUIRED MOUNTING HEIGHT.

(7) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE LATEST EDITION OF THE STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.

(8) STANDARDS SHALL BE DESIGNED FOR 80-MPH WIND PRESSURE AND SHALL SUPPORT A 62-POUND LUMINAIRE ON A 15-FOOT ARM.

(9) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.

(10) BRACKET ARMS SHALL BE ROUND TAPERED TRUSS TYPE WITH STRAP MOUNTING AND LENGTHS AS SCHEDULED.

(11) BRACKET ARM UPSWEEP SHALL BE THE SAME FOR ALL LIGHT STANDARDS OF THE SAME TYPE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	2C1
PS&E	2025	18004-3227-04	2C1

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ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE COMMERCE 0011-0267 STATE OF TENNESSEE

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	2D
PS&E	2025	18004-3227-04	2D

SPECIAL NOTES

GRADING

(1) THE GRADING TABULATIONS AND RESULTING EARTHWORK ASSOCIATED BID QUANTITIES WERE PREPARED UTILIZING AVAILABLE GEOTECHNICAL INFORMATION AND/OR REPORTS PREPARED FOR THIS PROJECT. THIS INFORMATION IS PROVIDED FOR GENERAL INFORMATION AND ESTIMATION GUIDANCE ONLY.

(2) BORING DEPICTIONS SHOWN ON THE FOUNDATION DATA SHEETS, SOILS SHEETS, PLANS, AND CROSS-SECTIONS INDICATE SOIL AND ROCK CONDITIONS AT THE SPECIFIC BORING LOCATIONS. ANY SOIL PROFILE AND/OR ROCK LINE IS INTERPRETIVE BASED ON THE JUDGMENT OF THE GEOTECHNICAL ENGINEER/GEOLOGIST. THE TRANSITION BETWEEN BORINGS AND LAYERS MAY VARY SIGNIFICANTLY DEPENDING ON THE GEOLOGIC FORMATIONS ENCOUNTERED.

(3) TO ASSIST IN BID PREPARATION FOR EARTHWORK AND FOUNDATION CONSTRUCTION, DETAIL ROCK AND SOIL DESCRIPTION AND ON SOME PROJECTS, ROCK CORE SAMPLES ARE AVAILABLE FOR INSPECTION AT THE MATERIALS AND TESTS HEADQUARTERS AT 6601 CENTENNIAL BOULEVARD, NASHVILLE, TN OR AT THE TDOT REGION 1 BUILDING IN KNOXVILLE, TN.

(4) THE CONTRACTOR SHALL UTILIZE ALL INFORMATION PROVIDED IN THE PLANS, CROSS-SECTIONS AND CONTRACT DOCUMENTS INCLUDING ANY SPECIAL PROVISIONS AS WELL AS UTILIZING HIS PAST EXPERIENCE WITH PROJECTS OF SIMILAR NATURE, SCOPE AND LOCATION IN PREPARATION OF HIS BID FOR EARTHWORK ITEMS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE AND PROVIDE EQUIPMENT AND MEANS NECESSARY TO CONDUCT THE EXCAVATION ACTIVITIES IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.

(5) EARTHWORK IS PAID FOR UNDER ITEM NO. 203-01, ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED). NO ADDITIONAL PAYMENT WILL BE MADE FOR EARTHWORK QUANTITIES BASED SOLELY ON A CLAIM THAT THE QUANTITIES SHOWN IN THE GRADING TABULATION OR ELSEWHERE IN THE PLANS ARE INACCURATE WITH RESPECT TO THE TYPE OF MATERIALS ENCOUNTERED DURING CONSTRUCTION EXCEPT AS PROVIDED FOR BY SECTION 104.02 IN THE CURRENT EDITION OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OR AS AMENDED IN SUPPLEMENTAL SPECIFICATIONS.

DEMOLITION

DEMOLITION, REPAIR, OR REHABILITATION OF BRIDGES

(1) THE CONTRACTOR SHALL VERIFY THAT AN ASBESTOS SURVEY HAS BEEN COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATIONS ACTIVITIES (NOT INCLUDING ASPHALT MILLING OR OVERLAY).

(2) ASBESTOS-CONTAINING MATERIALS (ACM) ABATEMENT IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE COMPLETED PRIOR TO ANY DEMOLITION, REPAIR OR REHABILITATION OF BRIDGE(S). ABATEMENT SHOULD BE ACCOMPLISHED PER SP202ACM SPECIAL PROVISION REGARDING REMOVAL OF ASBESTOS-CONTAINING MATERIALS. STATE OF TENNESSEE ASBESTOS ACCREDITATION REQUIREMENTS (TCA 1200-01-20) MANDATE THAT ACM ABATEMENT WORK BE PERFORMED BY AN ACCREDITED FIRM (CONTRACTOR) USING ACCREDITED ABATEMENT WORKERS AND SUPERVISORS.

(3) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING A NOTICE TO THE TDEC, DIVISION OF AIR POLLUTION CONTROL TEN (10) DAYS IN ADVANCE OF ANY ACM ABATEMENT, DEMOLITION, OR MAJOR REPAIR INVOLVING THE REMOVAL/REPLACEMENT OF A STRUCTURAL COMPONENT.

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DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	2E
PIH	2024	BR-STP-24(69)	2E
PS&E	2025	18004-3227-04	2E

ENVIRONMENTAL NOTES

SUBSECTION 1 – ENVIRONMENTAL GENERAL 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.

SUBSECTION 2 – ENVIRONMENTAL SPECIAL NOTES

ENVIRONMENTAL SPECIAL NOTES

ENVIRONMENTAL

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

ECOLOGY

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

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

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

PROJECT COMMITMENTS

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

SCOPE OF WORK

(6) APPROACH WORK AND BRIDGE REPLACEMENT.

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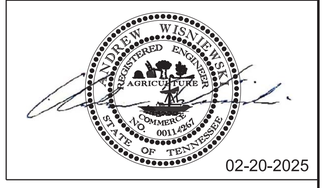

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STATE OF TENNESSEE
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ENVIRONMENTAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	2F
PIH	2024	BR-STP-24(69)	2F
PS&E	2025	18004-3227-04	2F

ESTIMATED GRADING QUANTITIES

DESCRIPTION	UNADJUSTED VOLUMES (CY)		ADJUSTED VOLUMES (CY)
	EXC.	EMB.	EXC.
MAINLINE	1869	578	1683
SIDE ROADS			
PVT. DRIVES, BUSINESS AND FIELD ENTRANCES	92	29	83
INDEPENDENT DITCHES			
TEMPORARY CONSTRUCTION EXITS	15		14
OTHER (BRIDGE EXCAVATION, EPSC, ETC.)	3737		3364
TOPSOIL (EMB.)			
TOPSOIL (EXC.)			
TOPSOIL TOTALS (SEE TOPSOIL TABLE)			

ROCK (C.Y.)		TOTALS (C.Y.)				
EXC.	EMB.	EXC. (UNCL.)	EMB. (UNCL.)	EXC (COMMON)	EXC. (AVAIL.)	EXC. (ADJ.)
2759		8472	607	5713	5713	8453

BALANCE SUMMARY

SHRINK = 10 % SWELL = 20 %

EXC.		EMB.
8453	VS.	-607
AVAILABLE	=	7846
WASTE MATERIAL	=	8631

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.
0	0	0	0	0	0	0	0

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.
31532	N/A	N/A	N/A	584	N/A	584	N/A

PAVEMENT QUANTITIES

LOCATION (ROADWAY)	TYPE - GRADE - PAY ITEM (TON)											
	MINERAL AGG.	BITUMINOUS PLANT MIX BASE (HOT MIX)				PRIME COAT		TACK COAT	ASPHALTIC CONCRETE SURFACE (HOT MIX)			
	D	A	A-S	B-M	B-M2				D	E		
	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
S.R. 24	2525.0	415.0			272.0	5.3	19.0	2.1	249.0			
PVT. DRS.	176.0				34.0	1.1	4.0	0.3	62.0			
TOTALS	2701.0	415.0			306.0	6.4	23.0	2.4	311.0			

RIGHT OF WAY MARKERS

SHEET NO.	ITEM NO. 708-02.01 QUANTITIES			
	"A"	"B"	"C"	TOTALS
4	4	3	4	11
TOTALS	4		4	11

STORM DRAIN ENDWALLS

LOCATION \ SHEET NO.	STATION	OFFSET (FT.)	SKEW	CODE	TYPE	STANDARD DRAWING NO.	RIP-RAP CLASS "B" 709-05.08 (TON)	PROTECTED ENDWALLS CLASS "A" CONCRETE 611-07.01 (C.Y.)	PROTECTED ENDWALLS STEEL BAR REINFORCING 611-07.02 (LB.)
STA. 63+16.81 \ 4B	S.R. 24	LT. 42'	48°	2	"A"	D-PEW-1	73.0	9.0	378
TOTALS							73.0	9.0	378

STORM DRAINAGE PIPES

SHEET NO.	INLET		OUTLET		% GRADE	REINFORCED CONCRETE PIPE - CLASS, ITEM NO., SIZE & LENGTH (FT.)						
	CODE NO.	INLET ELEV.	CODE NO.	OUTLET ELEV.		CLASS III 607-03.02 18"	CLASS III 607-05.02 24"	CLASS III 607-06.02 30"	CLASS III 607-07.02 36"	CLASS III 607-08.02 42"	CLASS III 607-09.02 48"	CLASS III 607-10.02 54"
4B		1722.58		1722.12	-2.30%							20'
TOTALS												20'

SIDE DRAIN TABULATION

STATION	LOCATION LT.	LOCATION RT.	DESCRIPTION	SURFACE WIDTH FT.	SKEW	RCP CLASS III OR CMP 16 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT ≤ 10 FT. 18"	24"	30"	36"	42"	48"	RCP CLASS III OR CMP 14 GA OR PVC OR SRTRP OR HDPE OR PP (L.F.) FILL HEIGHT > 10 FT. AND ≤ 16 FT 18"	24"	30"	36"	42"	48"	END TREATMENT INLET TYPE	INLET DRAWING NO	OUTLET TYPE	OUTLET DRAWING NO	REMARKS
57+05.00	X		FLD. ENT.	30	90°	42												U	D-SEW-1A	U	D-SEW-1A	S.R. 24
57+30.00		X	PVT.DR.	14	86°	28												U	D-SEW-1A	U	D-SEW-1A	S.R. 24
57+50.00	X		HAUL ROAD	22	87°																	* 30'-18" TEMP PIPE
62+65.00		X	PVT. DR.	14	82°		73											U	D-SEW-1A	U	D-SEW-1A	S.R. 24
64+30.00		X	BUS. ENT.	38	86°	51												U	D-SEW-1A	U	D-SEW-1A	S.R. 24
TOTALS						121	73															

Pipe Tabulation For Private Drives, Business & Field Entrances

*** INCLUDED IN ITEM NO. 203-50**

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ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 0011.4261 STATE OF TENNESSEE

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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\\AG03SDCWF00010.net.ads.state.tn.us\PROJECTS\Cumberland\SR24 Over Obed\002F.sht

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	2F1
PIH	2024	BR-STP-24(69)	2F1
PS&E	2025	18004-3227-04	2F1

REMOVAL OF SIGNS

STATION	LOCATION	DESCRIPTION
57+27.00	LT.	TRUCKS ENTERING HIGHWAY
58+05.00	RT.	SPEED LIMIT 45 MPH/ RADAR CONTROLLED
58+19.50	LT.	MOUNTAIN VIEW
58+34.00	LT.	OBJECT MARKER - LT.
58+34.00	RT.	OBJECT MARKER - RT.
58+38.00	RT.	OBED RIVER
60+00.00	LT.	OBED RIVER
60+04.50	LT.	OBJECT MARKER - RT.
60+04.50	RT.	OBJECT MARKER - LT.
60+51.00	RT.	SCHOOL ADVANCE CROSSING ASSEMBLY
62+00.00	RT.	SCHOOL SPEED LIMIT ASSEMBLY
62+09.00	LT.	END 15 MILE SPEED
64+91.00	RT.	WARNING
65+12.50	RT.	CENTER LANE ONLY

REMOVAL OF PIPES AND OBSTRUCTIONS

STATION	LOCATION	DESCRIPTION
LT. 57+05.00	S.R. 24	36'-18" CMP
RT. 57+63.34	S.R. 24	30'-18" CMP W/ 2 EW'S
LT. 60+39.83	S.R. 24	POWER POLE
RT. 62+77.57	S.R. 24	73'-12" CMP
RT. 64+32.00	S.R. 24	38'-15" CMP

REMOVAL OF GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATIONS		ITEM NO. 706-01
		LT	RT	FROM	TO	LF
4	S.R. 24	X		57+58.56	60+69.56	311.00
4	S.R. 24		X	57+84.78	61+03.55	319.00
TOTALS						630

MANHOLES

SHEET NO.	LOCATION	STATION	OFFSET (FT.)	DRAINAGE CODE	GRATE/ TOP ELEV.	INVERT ELEV.	DEPTH (FT.)	INSIDE DIM.	STANDARD DRAWING NO.	PAY ITEMS								
										TYPE 3 611-01-01 0' - 4'	TYPE 3 611-01-02 4' - 8'	TYPE 3 611-01-03 8' - 12'	TYPE 3 611-01-04 12' - 16'	TYPE 3 611-01-05 16' - 20'	TYPE 3 611-01-06 20' - 24'	TYPE 3 611-01-07 24' - 28'	TYPE 38 611-38.02 4'-8'	TYPE 38 611-38.03 8'-12'
4B	S.R. 24	63+16.81	28' LT.	1	1734.43	1722.79	11.85	60	D-MH-6			1						
TOTALS												1						

PROPOSED GUARDRAIL

SHEET NO.	LOCATION	SIDE		STATIONS		GUARDRAIL						TERMINAL ANCHORS					REMARKS
		LT	RT	FROM	TO	THRIE BEAM BRIDGE TRAN. MASH TL-3 (20.65') 705-06.25 EACH	METAL BEAM GUARD FENCE 705-01.04 (L.F.)	THRIE BEAM BRIDGE TRAN. MASH TL-2 (20.65') 705-06.26 EACH	W BEAM GR (TYPE 2) MASH TL3 705-06.01 (L.F.)	MICHIGAN END SHOE 706-10.80 (EACH)	ROUND END ELEMENT 706-10.26 (EACH)	TYPE 12 VARIES 705-04.02 (EACH)	TYPE 13 MASH TL3 (9.375') 705-06.10 (EACH)	IN-LINE MASH TL3 705-06.11 (EACH)	TYPE 38 MASH TL3 (46.875') 705-06.20 (EACH)	TYPE 21 MASH TL2 (21.875') 705-06.30 (EACH)	
4	S.R. 24	X		57+35.27	58+07.00				25.00	1					1		
4	S.R. 24		X	57+46.92	58+07.00	1			62.50				1	1			
4	S.R. 24	X		60+73.00	61+40.60	1									1		
4	S.R. 24		X	60+73.00	61+44.88				25.00	1					1		
4	S.R. 24	X		62+39.35	64+30.16				137.50				1	1	1		
TOTALS						2.00			250.00	2.00			2.00	2.00	4.00		

SEALED BY

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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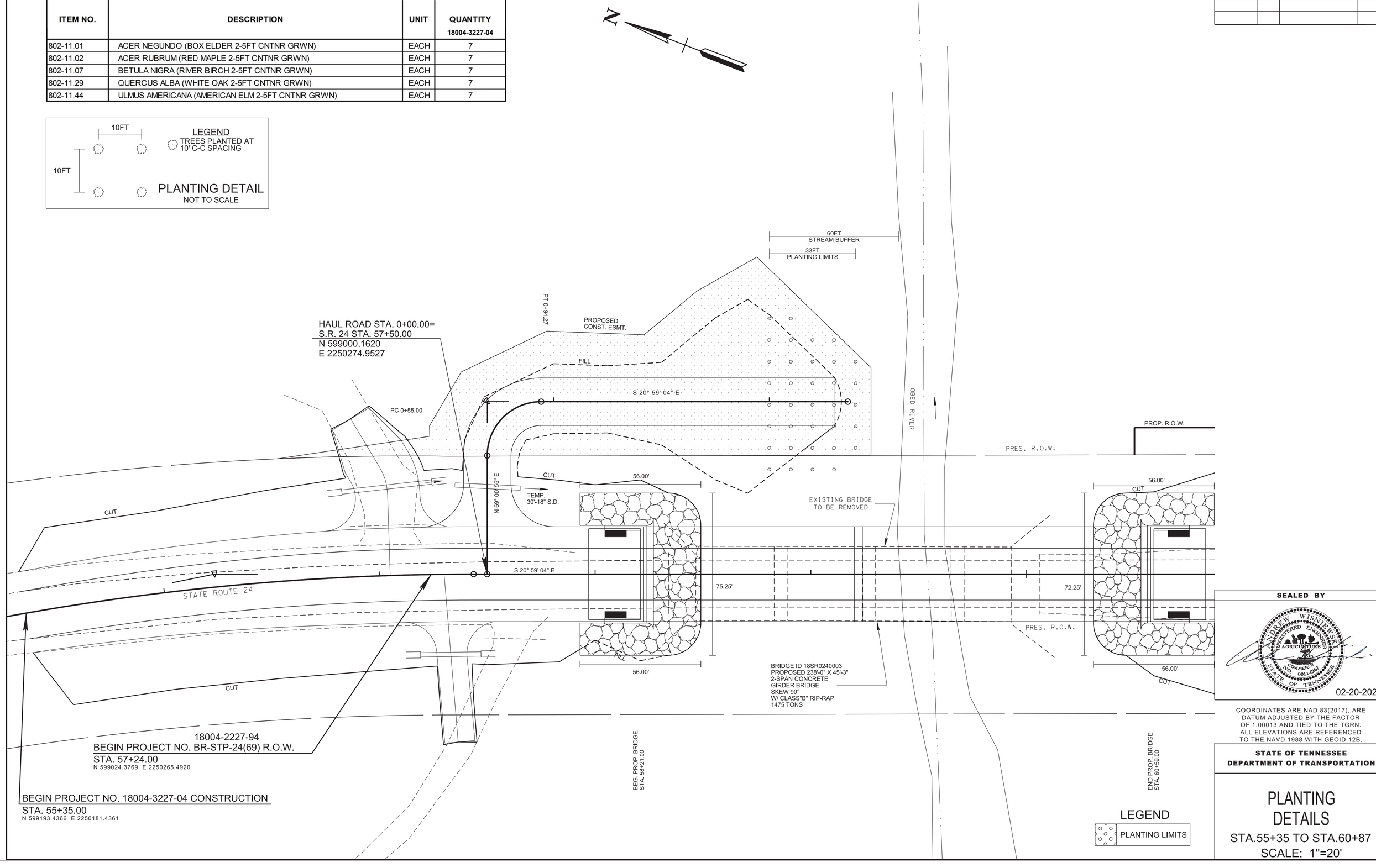
TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	2G
PS&E	2025	18004-3227-04	2G

TABULATED PLANTING QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY 18004-3227-04
802-11.01	ACER NEGUNDO (BOX ELDER 2-5FT CNTNR GRWN)	EACH	7
802-11.02	ACER RUBRUM (RED MAPLE 2-5FT CNTNR GRWN)	EACH	7
802-11.07	BETULA NIGRA (RIVER BIRCH 2-5FT CNTNR GRWN)	EACH	7
802-11.29	QUERCUS ALBA (WHITE OAK 2-5FT CNTNR GRWN)	EACH	7
802-11.44	ULMUS AMERICANA (AMERICAN ELM 2-5FT CNTNR GRWN)	EACH	7



SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
0011.4287
STATE OF TENNESSEE

02-20-2025

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PLANTING DETAILS

STA.55+35 TO STA.60+87

SCALE: 1"=20'

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RIGHT-OF-WAY

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, ROADWAY DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(8) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

UTILITY

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS. AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE, AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN THREE (3) OR NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

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

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106 NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111 WILL BE REQUIRED.

UTILITY OWNERS

CABLE:
CHARTER COMMUNICATIONS
851 S. WILLOW AVENUE, SUITE 206
COOKEVILLE, TN 38501
CONTACT: MORGAN WILCHER
OFFICE PHONE: 931 239 9222
FAX:
EMAIL: Morgan.Wilcher@charter.com

ELECTRIC:
VOLUNTEER ENERGY COOPERATIVE
P.O. BOX 277
DECATUR, TN 37322
CONTACT: MR. MATTHEW TEAGUE
OFFICE PHONE: 423 334 7040
FAX: 423 334 7005
EMAIL: mteague@vec.org

GAS:
MIDDLE TENNESSEE NATURAL GAS
P.O. BOX 670
SMITHVILLE, TN 37166
CONTACT: MATT STENNETT
OFFICE PHONE: 931 239 9111
FAX:
EMAIL: mstennett@mtng.com

TELEPHONE:
FRONTIER/CITIZENS COMMUNICATIONS CO.
174 SPARTA HIGHWAY
CROSSVILLE, TN 38572
CONTACT: MR. JIM HEATHERLY
OFFICE PHONE: 865 947 8260
FAX:
EMAIL: james.heatherly@ftr.com

CABLE:
FIBER OPTICS: VOLFIRST
P.O. BOX 670
MCMINNVILLE, TN 37111
CONTACT: MR. RICHARD BOYD
OFFICE PHONE: 931 668 6692
FAX 931 668 7653
EMAIL: richardboyd@benlomand.org

WATER:
CITY OF CROSSVILLE
392 NORTH MAIN STREET
CROSSVILLE, TN 38555-4232
CONTACT: MR. TIM BEGLEY
OFFICE PHONE: 931 456 5680
FAX: 931 484 7713
EMAIL: tim.begley@crossvilletn.gov

SEWER:
CITY OF CROSSVILLE
392 NORTH MAIN STREET
CROSSVILLE, TN 38555-4232
CONTACT: MR. TIM BEGLEY
OFFICE PHONE: 931 456 5680
FAX: 931 484 7713
EMAIL: tim.begley@crossvilletn.gov

FIBER:
COGENT COMMUNICATIONS
1594 HIGHWAY 73
MARIANNA, FL 32448
CONTACT: CAMERON JERNIGAN
OFFICE PHONE: 448 234 3503
FAX:
EMAIL: cjernigan@cogentco.com

DISTURBED AREA		
IN BETWEEN SLOPE LINES	2.057	(AC)
15 FOOT WIDE STRIP (OUTSIDE SLOPE LINES)	0.959	(AC)
TOTAL DISTURBED AREA	3.016	(AC)
TOTAL PROJECT AREA	3.613	(AC)

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 (1)	AIR RIGHTS
				BOOK	PAGE												
~~1~~	~~FRED STOUT~~	~~87I~~	~~005.00~~	~~1493~~	~~692~~	~~1.010~~		~~1.010~~				~~1.010~~					
~~2~~	~~FRED STOUT~~	~~87I~~	~~006.00~~	~~1493~~	~~692~~	~~1.040~~		~~1.040~~				~~1.040~~					
~~3~~	~~JAMES JOSEPH MITCHELL~~	~~086~~	~~057.00~~	~~285~~	~~788~~		~~115.910~~	~~115.910~~					~~115.910~~				
4	TONY PAGE AND KARI PAGE, HUSBAND AND WIFE	087I A	015.00	1603	830	33.260		33.260				33.260				0.290	
~~5~~	~~VONDA M NEWBY AND HUSBAND CHARLES R NEWBY~~	~~087~~	~~053.00~~	~~1327~~	~~678~~		~~4.300~~	~~4.300~~					~~4.300~~				
6	SHARON A SHELLEY AND ROBIN L JONES	087	054.00	1236	1981		3.330	3.330		0.136	0.136		3.194				
7	CUMBERLAND COUNTY	087	59.00	1262	1312	67.030		67.030	0.349		0.349	66.681					
8	JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE	087	055.00	1669	1821		2.070	2.070		0.151	0.151		1.919				
9	DOROTHY L. LILLY	087	056.00	1300	1976		2.020	2.020		2864 S.F.	2864 S.F.		1.954				
ACQUISITION TOTALS (ACRES)									**0.702**							**0.290**	

(1) ESMT. NEEDED FOR HAUL ROAD.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	3
PIH	2024	BR-STP-24(69)	3
PS&E	2025	18004-3227-04	3

REV. 08-07-2023 - UPDATED CONSTRUCTION EASEMENT AREA FOR HAUL ROAD AND SLOPE CONSTRUCTION.

REV. 01-17-2024 - UPDATED PROPERTY OWNERS AND COUNTY RECORDS FOR TRACTS 4 AND 8.

SEALED BY

ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE COMMERCE 0011.2947 STATE OF TENNESSEE

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT-OF-WAY NOTES, UTILITY NOTES, UTILITY OWNERS & R.O.W. ACQUISITION TABLE

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DISCLAIMER

THIS SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN (3) THREE OR NO MORE THAN (10) TEN WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. TENNESSEE ONE CALL 1-800-351-1111.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	3A
PIH	2024	BR-STP-24(69)	3A
PS&E	2025	18004-3227-04	3A

REV. 08-07-2023 - INCREASED AREA OF CONSTRUCTION EASEMENT FOR HAUL ROAD AND SLOPE CONSTRUCTION

N

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

55 60 65

PROPOSED CONST ESMT.

S 20° 59' 04" E

25'R

N 69° 00' 56" E

PRES. R.O.W.

R=1372.40'
L=512.90'

S 32° 25' 00" E

STATE ROUTE 24

R=1372.40'
L=451.10'

PRES. R.O.W.

PROP. R.O.W.

STR-1

STR-2

STR-3

OBED RIVER

TTL-1

75.00'

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2724 1947

CLOSED TRACT DETAIL

N.T.S.

3 4 5 6 7 8 9

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
0011.2017
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPERTY MAP

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	4
PIH	2024	BR-STP-24(69)	4
PS&E	2025	18004-3227-04	4

REV. 08-07-2023 - INCREASED AREA OF CONSTRUCTION EASEMENT FOR HAUL ROAD AND SLOPE CONSTRUCTION.

REV. 01-17-2024 - UPDATED PROPERTY OWNERS FOR TRACTS 4 AND 8.

N&C IN EDGE OF PAVEMENT

CP-3
N 599204.2366
E 2250123.6680
EL. 1745.70
ALUM. DISK ATOP ⅝" REBAR
STAMPED "18-24-03"

27.2' WSW
48.3' ESE
88.4' N
CONC. ROW MARKER
N&C IN UTILITY POLE

S.R. 24
PI 56+24.37
N 599,118.2052
E 2,250,229.6769
Δ 11° 25' 56" (RT)
D 4° 46' 28"
R 1,200.02
L 239.44
T 120.12
SE 0.061 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 185.00'

HAUL ROAD
PI 0+80.00
N 599,028.8111
E 2,250,349.6469
Δ 90° 00' 00" (RT)
D 229° 10' 59"
R 25.00
L 39.27
T 25.00

EXISTING CONC. BRIDGE LOCATOR NO. 18-SR24-15.37
STATION 59+53.45
DIRECTION OF FLOW: LEFT

DRAINAGE AREA 5907 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.

PRESENT STRUCTURE: EXISTING CONC. BRIDGE

EXISTING STRUCTURE CONDITION: FAIR

STATION 63+16.84
4'X3' EXISTING BOX CULVERT
DIRECTION OF FLOW: LEFT

DRAINAGE AREA 82.30 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 4'X3' EXISTING BOX CULVERT

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

4
TONY PAGE AND KARI PAGE, HUSBAND AND WIFE

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

55
60
65
CUMBERLAND COUNTY
7

POT 55+00.00
POT 2+87.81
POT 66+35.89
PT 0+94.27
PC 0+55.00
PT 57+43.69

THE 6" SANITARY SEWER IN QUESTION IS A OLD 6" WATER LINE (NOT IN USE NOW) THAT WILL BE USED FOR SEWER IN THE FUTURE IF NEEDED. ITS LOCATION IS NOT LOCATEDABLE DUE TO NO TAPE ON IT. LOCATION IS ONLY APPROXIMATE ON PLANS

BEG.IMPACT STR-1
STA. 59+52.54
-22.00

END IMPACT STR-1
STA. 59+55.85
22.00'

BEGIN IMPACT STR-2
STA.62+77.73
-63.06

END IMPACT STR-2
STA.63+16.66
-25.10'

BRIDGE ID 18SR0240003
PROPOSED 238'-0" X 45'-3"
2-SPAN CONCRETE
GIRDER BRIDGE
SKEW 90°
W/ CLASS"B" RIP-RAP
1475 TONS

BEG. PROP. BRIDGE
STA. 58+21.00

END PROP. BRIDGE
STA. 60+59.00

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

EXISTING BRIDGE INFO:
149'-6" LENGTH X 34'-6" OUT-TO-OUT WIDTH,
4-SPAN CONCRETE TEE BULB

3
~~JAMES JOSEPH MITCHELL~~
1S-ROCK-RES
SIDEWALK

5
~~VONDA M. NEWBY AND HUSBAND CHARLES R. NEWBY~~
1S-BR-RES
SEPTIC

6
SHARON A. SHELLEY & ROBIN L JONES
GARAGE

8
JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE

9
DOROTHY L. LILLY

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2T2A 1947
DB 110T PG 1034 RECORDS OFFICE CUMBERLAND COUNTY

CONTROL POINT TABLE

Point	North	East	Elevation	Station	Offset	Feature
S03	599204.2366	2250123.6681	1745.7000	54+95.87	47.4947	XCP
STR627	598780.0060	2250330.4400	1702.7110	59+75.43	27.0335	XSPUR
STR632	598775.6100	2250458.5270	1718.7740	60+25.40	-90.9843	XSPUR

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
0011 (2)247
STATE OF TENNESSEE

02-20-2025

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT LAYOUT

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	4A
PIH	2024	BR-STP-24(69)	4A
PS&E	2025	18004-3227-04	4A

REV. 08-07-2023 - INCREASED AREA OF CONSTRUCTION EASEMENT FOR HAUL ROAD AND SLOPE CONSTRUCTION.

REV. 01-17-2024 - UPDATED PROPERTY OWNERS FOR TRACTS 4 AND 8.

N&C IN EDGE OF PAVEMENT

27.2' WSW

CP-3
N 599204.2366
E 2250123.6680
EL. 1745.70
ALUM. DISK ATOP ⅝" REBAR
STAMPED "18-24-03"

48.3' ESE

88.4' N

CONC. ROW MARKER

N&C IN UTILITY POLE

N

N 50° 41' 15" E
163.81'

N 58° 18' 12" E
106.08'

S 66° 18' 16" W
84.83'

4

TONY PAGE AND KARI PAGE,
HUSBAND AND WIFE

60

7

CUMBERLAND COUNTY

65

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

75.00'

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

55

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

PROPOSED CONST. ESMT.

57+31.78
54.76'

FILL

S 20° 59' 04" E

25'R

CUT

PRES. R.O.W.

R=1372.40'
L=512.90'

N 69° 00' 56" E

S 32° 25' 00" E

CUT

FILL

CP-3

R=1372.40'
L=451.10'

PRES. R.O.W.

S 21° 5' 48" E
234.33'

57+34.57
64.24'

N 21° 5' 48" W
84.10'

59+52.66
55.14'

59+65.90
64.83'

SPUR-STR627

SPUR-STR632

S 69° 00' 56" W
12.67'

60+50.00
55.33'

N 21° 5' 48" W
97.34'

N 21° 5' 48" W
221.33'

60+50.00
68.00'

61+50.87
55.53'

61+50.92
30.53'

B

C

A

PROP. R.O.W.

N 21° 5' 48" W
100.87'

CUT

S 68° 54' 12" W
25.00'

S 68° 54' 12" W
25.00'

61+51.06
39.47'

61+51.11
64.47'

N 21° 5' 48" W
134.63'

CUT

N 21° 5' 48" W
101.11'

N 12° 15' 58" W
101.17'

60+50.00
64.67'

61+50.00
80.00'

S 20° 59' 04" E
50.00'

62+00.00
80.00'

S 26° 28' 05" E
86.19'

62+85.80
71.76'

62+85.68
39.20'

S 20° 59' 04" E
300.00'

63+50.00
68.00'

64+00.65
26.02'

64+00.64
31.02'

S 15° 57' 59" E
205.79'

65+55.00
50.00'

S 69° 00' 56" W
24.17'

65+55.00
25.83'

N 21° 5' 48" W
249.72'

S 68° 54' 12" W
5.00'

N 21° 5' 48" W
154.35'

PRES. R.O.W.

STR-1

STR-2

STR-3

WTL-1

S 68° 54' 12" W
5.00'

N 68° 54' 12" E
5.00'

64+00.77
33.98'

N 21° 5' 48" W
93.47'

64+94.23
33.79'

S 21° 5' 48" E
105.77'

S 21° 5' 48" E
91.27'

PRES. R.O.W.

66+00.00
38.59'

A

B

C

PROP. R.O.W.

S 20° 59' 04" E
168.70'

S 20° 59' 04" E
61.30'

63+25.00
68.00'

64+00.78
38.98'

64+93.70
68.00'

65+55.00
68.00'

S 26° 28' 05" E
39.38'

N 69° 54' 59" E
34.21'

S 58° 23' 19" E
56.65'

N 68° 48' 42" E
32.56'

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

52+58.94
61.90'

N 34° 3' 19" E
327.72'

5

~~VONDA M. NEWBY AND HUSBAND CHARLES R. NEWBY~~

3

~~JAMES JOSEPH MITCHELL~~

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2724 1947

DB 1107 PG 1034
RECORDS OFFICE CUMBERLAND COUNTY

S 69° 7' 24" W
175.48'

N 89° 36' 37" W
164.52'

S 85° 45' 10" W
77.85'

N 22° 52' 44" W
429.71'

6

SHARON A. SHELLEY
& ROBIN L JONES

8

JOHN E. BARNWELL AND
TINA L. BARNWELL,
HUSBAND AND WIFE

9

DOROTHY L. LILLY

N 68° 48' 42" E
407.44'

N 69° 54' 59" E
410.19'

N 19° 24' 20" W
404.21'

N 21° 17' 13" W
200.00'

N 21° 17' 13" W
200.00'

75.00'

CONTROL POINT TABLE

Point	North	East	Elevation	Station	Offset	Feature
S03	599204.2366	2250123.6681	1745.7000	54+95.87	47.4947	XCP
STR627	598780.0060	2250330.4400	1702.7110	59+75.43	27.0335	XSPUR
STR632	598775.6100	2250458.5270	1718.7740	60+25.40	-90.9843	XSPUR

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STATE OF TENNESSEE

02-20-2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY DETAILS

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

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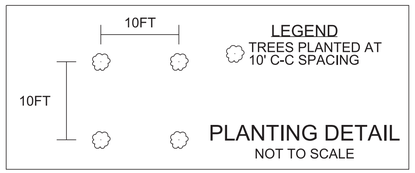
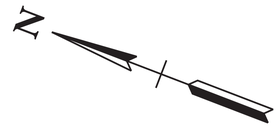
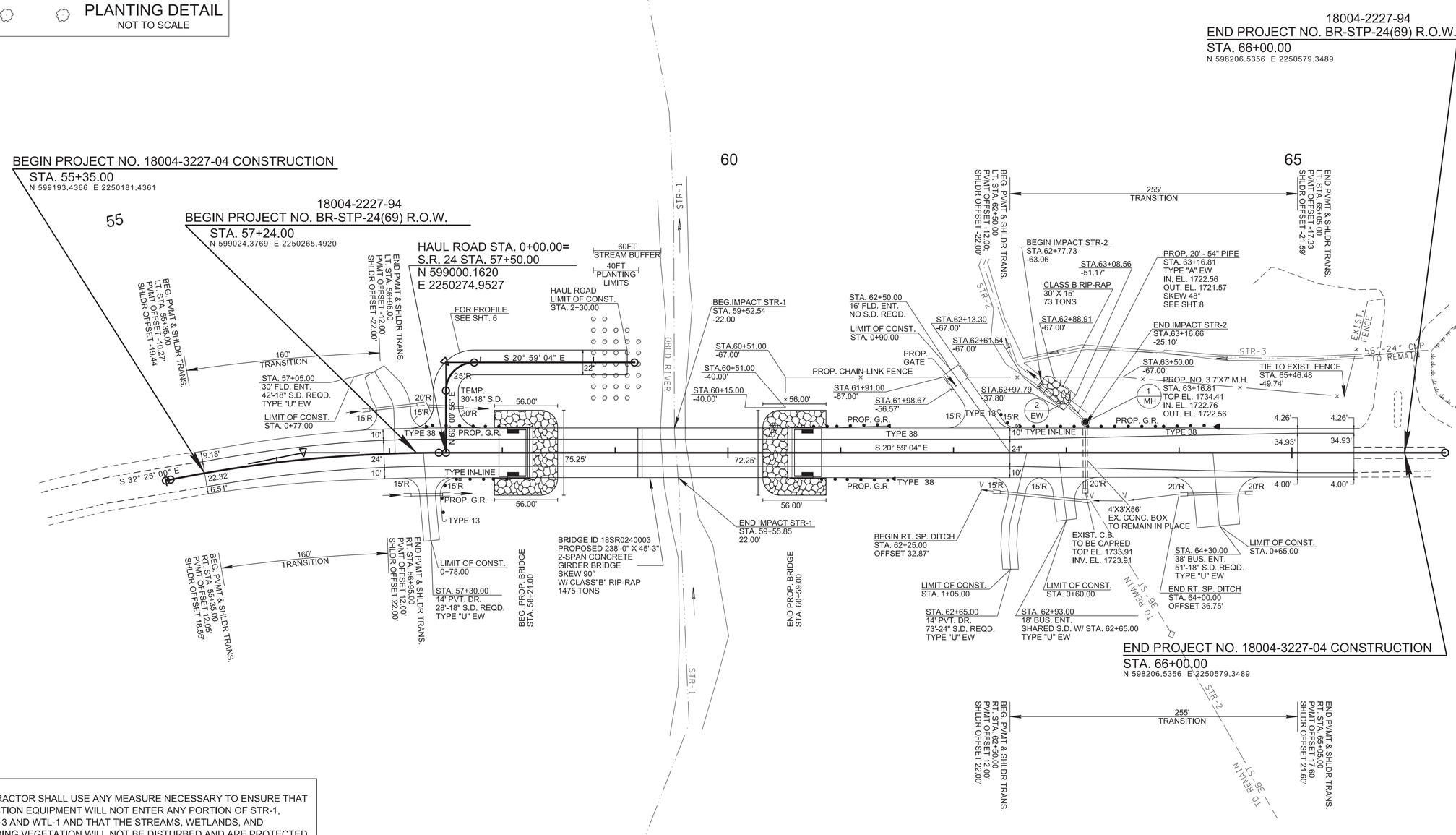
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	4B
PIH	2024	BR-STP-24(69)	4B
PS&E	2025	18004-3227-04	4B







NOTE:
THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT CONSTRUCTION EQUIPMENT WILL NOT ENTER ANY PORTION OF STR-1, STR-2, STR-3 AND WTL-1 AND THAT THE STREAMS, WETLANDS, AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND ARE PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

NOTE:
RIPRAP SHALL BE PLACED AS TO MIMIC THE EXISTING CONTOURS OF THE STREAM CHANNEL. THE TOP OF THE PROPOSED RIPRAP SHALL BE AT GRADE WITH THE BOTTOM OF THE EXISTING STREAM CHANNEL. VOIDS WITHIN THE RIPRAP SHALL BE FILLED WITH STREAM BED SUBSTRATE, IF AVAILABLE, TO PREVENT LOSS OF STREAM WITHIN RIP-RAP AREAS. STREAM BED SUBSTRATE CAN BE REMOVED FROM RIP-RAP EMBEDMENT AREA. IF STREAM BED SUBSTRATE IS NOT AVAILABLE, THE FOLLOWING SHOULD BE USED. PRIOR TO PLACEMENT OF RIPRAP, IT SHOULD BE MIXED WITH A MIXTURE OF 70 PERCENT CREEK GRAVEL AND 30 PERCENT SAND TO FILL THE VOIDS. ONCE THE RIP-RAP MIXTURE HAS BEEN INSTALLED THE AREA SHOULD BE THOROUGHLY COMPACTED. ONCE COMPACTED AN ADDITIONAL 1 TO 2 INCHES OF SAND AND CREEK GRAVEL SHALL BE ADDED TO FILL IN THE REMAINING VOIDS IF NEEDED. THE CONTRACTOR SHALL ENSURE THAT WATER WILL FLOW OVER THE RIPRAP AND THAT FLOW IS NOT LOST BELOW OR WITHIN THE ROCK.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	4C
PIH	2024	BR-STP-24(69)	4C
PS&E	2025	18004-3227-04	4C

SUPERELEVATION

55+35.00 10.00% LT

55+35.00 -10.00% RT

58+33.00 -2.00% LT & RT

57+34.00 -2.00% RT

NORMAL CROWN -2.00%

64+48.00 -2.00% RT

65+55.00 1.10% RT

65+23.00 -2.00% LT

65+55.00 -1.10% LT

OH WIRE
STA. 60+01.46
LOW WIRE EL.1777.58'
TEMP. 75 DEG.
1 POWER
_ TELEPHONE
_ CABLE
_ GUY WIRE

OH WIRE
STA. 59+86.83
LOW WIRE EL.1767.67'
TEMP. 75 DEG.
1 POWER
_ TELEPHONE
_ CABLE
_ GUY WIRE

OH WIRE
STA. 59+84.75
LOW WIRE EL.1761.72'
TEMP. 75 DEG.
1 POWER
_ TELEPHONE
_ CABLE
_ GUY WIRE

OH WIRE
STA. 59+97.60
LOW WIRE EL.1761.50'
TEMP. 75 DEG.
1 POWER
_ TELEPHONE
_ CABLE
_ GUY WIRE

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

VPI 55+35.00 EL. 1741.06

VPI 55+50.00 EL. 1740.25

VPI 56+00.00 EL. 1737.39

VPI 56+50.00 EL. 1734.43

VPI 57+00.00 EL. 1731.59

VPI 57+50.00 EL. 1729.26

VPI 58+00.00 EL. 1726.96

VPI 58+21.00 EL. 1726.22

VPI 60+23.08 EL. 1725.09

VPI 60+50.00 EL. 1725.82

VPI 60+59.00 EL. 1726.09

VPI 61+00.00 EL. 1727.35

VPI 61+50.00 EL. 1729.09

VPI 62+00.00 EL. 1731.10

VPI 62+50.00 EL. 1733.16

VPI 63+00.00 EL. 1735.06

VPI 63+50.00 EL. 1737.15

VPI 64+00.00 EL. 1739.33

VPI 64+50.00 EL. 1741.26

VPI 65+00.00 EL. 1743.18

VPI 65+50.00 EL. 1745.26

VPI 65+55.00 EL. 1745.45

OH WIRE
STA. 52+92.25
LOW WIRE EL.1750.63'
TEMP.40 DEG.
2 POWER
1 TELEPHONE
1 CABLE
0 GUY WIRE

HAUL ROAD STA. 0+00.00
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

OH WIRE
STA. 59+08.24
LOW WIRE EL.1744.81'
TEMP.40 DEG.
2 POWER
1 TELEPHONE
1 CABLE
0 GUY WIRE

OH WIRE
STA. 61+81.51
TEMP.40 DEG.
LOW WIRE EL.1749.50'
0 POWER
1 TELEPHONE
0 CABLE
1 GUY WIRE

OH WIRE
STA. 60+16.73
LOW WIRE EL.1745.23'
TEMP.40 DEG.
1 POWER
4 TELEPHONE
0 CABLE
0 GUY WIRE

GRAPHICAL GRADE

EXISTING GROUND

-5.59%
-5.73%
-5.91%
-5.49%
-4.86%
-4.60%
-3.57%
-0.55%
2.72%
3.04%
3.06%
3.47%
4.03%
4.11%
3.80%
4.18%
4.37%
3.85%
3.84%
4.16%
3.86%

END RT. SP. DITCH
STA. 64+00.00
EL. 1736.27

PROP. NO. 3 7'X 7' M.H.
STA. 63+16.81 (28' LT.)
TOP EL. 1734.41
IN. EL. 1722.76
OUT. EL.1722.56

1 MH

-6.46%
-1.60%

EX.CB (TO REMAIN IN PLACE)
STA. 63+16.81
33.77'(RT)
TOP 1733.91
INVERT 1723.91

6"WATER LINE
STA.62+83.32

PROP. 20' - 54" PIPE
STA.63+16.81
TYPE "A" EW
IN. EL. 1722.56
OUT. EL. 1721.57
SKEW 48°
-4.90%

2 EW

BEGIN RT. SP. DITCH
STA. 62+25.00
EL. 1729.87

STA. 63+16.81
EXIST. BOX CUL.
SKEW 90°
FLOWS LEFT
IN. ET. 1734.13
OUTLET 1722.79

THE 6" SANITARY SEWER IN QUESTION IS AN OLD 6" WATER LINE (NOT IN USE NOW) THAT WILL BE USED FOR SEWER IN THE FUTURE IF NEEDED. ITS LOCATION IS NOT LOCATABLE DUE TO NO TAPE ON IT. IT IS ONLY APPROXMIATE ON PLANS.

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

BEG. PROP. BRIDGE
STA. 58+21.00

PROPOSED BRIDGE
ID# 18SR0240003

EXISTING CONC. BRIDGE

END PROP. BRIDGE
STA. 60+59.00

BEAM

PIER

PIER

PIER

OHWM
EL. 1708.00
FILL VOL: 0 CY
ACRE: 0 AC

OBED STA. 3+47.14 = MAINLINE STA. 59+53.45

EXISTING GROUND

THE 6" SANITARY SEWER IN QUESTION IS AN OLD 6" WATER LINE (NOT IN USE NOW) THAT WILL BE USED FOR SEWER IN THE FUTURE IF NEEDED. ITS LOCATION IS NOT LOCATABLE DUE TO NO TAPE ON IT. IT IS ONLY APPROXMIATE ON PLANS.

6" GAS LINE
STA. 59+90.57

S.R. 24

PROPOSED BRIDGE ID# 18SR0240003
STATION: 59+40.00
STRUCTURE: 238'-0" X 45'-3", 2-SPAN CONCRETE GIRDER BRIDGE
W/ CLASS "B" RIP-RAP

SKEW	90 DEG.
DRAINAGE AREA	14 SQ. MI.
DESIGN DISCHARGE (100 YR)	1456.92 CFS
WATER AREA PROVIDED	
BELOW ELEV. 1708.86	794.60 SQ. FT.
100 YR BACKWATER	1.84 FT. @ ELEV. 1708.86
100 YR VELOCITY 1.88 FPS	
ROADWAY OVERTOPPING ELEV.	1724.62

EXISTING BRIDGE (TO BE REMOVED)
BRIDGE LOCATOR NO. 18-SR24-15.37
STATION: 59 + 53.45
STRUCTURE: 149'-6" X 34'-6", 4 SPAN CONCRETE TEE BULB

SKEW	90 DEG.
DRAINAGE AREA	5907 AC.
DESIGN DISCHARGE (Q50)	2440 CFS
DESIGN DISCHARGE (Q100)	2830 CFS

54+00 55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00 64+00 65+00 66+00

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02-20-2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED PROFILE

STA. 53+50 TO STA. 66+50

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

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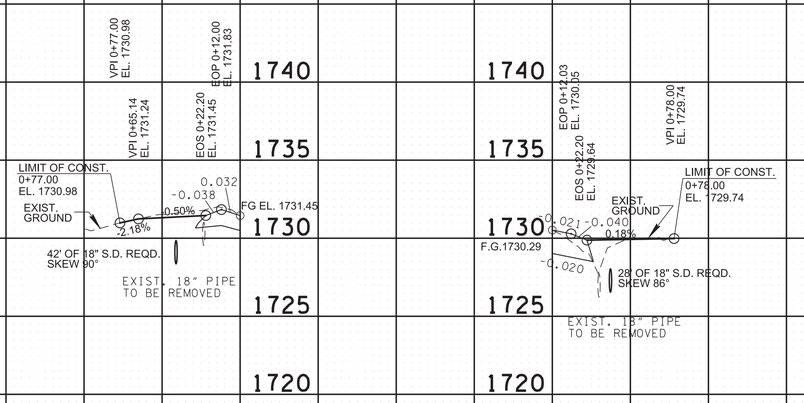
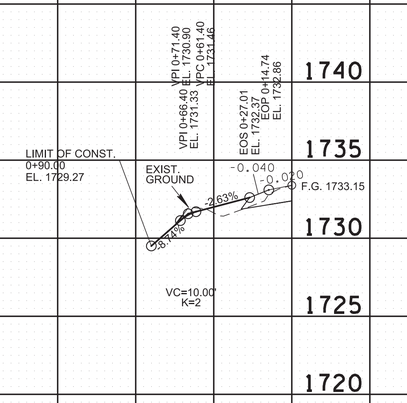
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	5
PIH	2024	BR-STP-24(69)	5
PS&E	2025	18004-3227-04	5

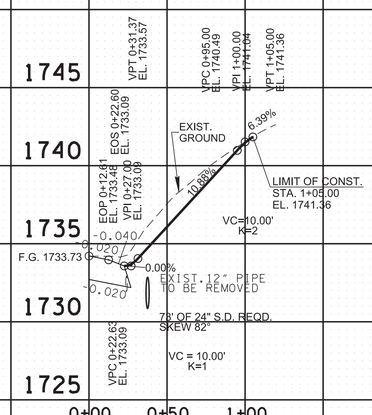


30' FLD. ENT. LT. 57+05.00
TRACT NO. 4
S.R. 24

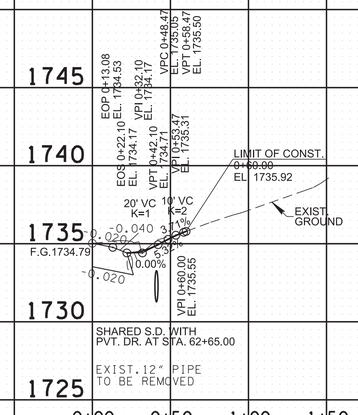
14' PVT. DR. RT. 57+30.00
TRACT NO. 5
S.R. 24



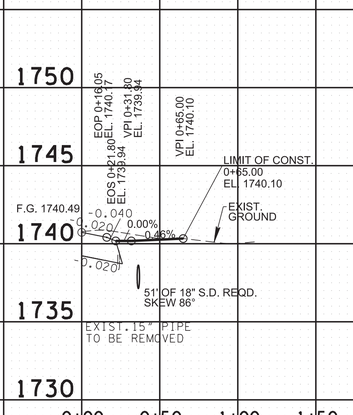
16' FLD. ENT. LT. 62+50.00
TRACT NO. 7
S.R. 24



14' PVT. DR. RT. 62+65.00
TRACT NO. 6
S.R. 24



18' BUS. ENT. RT. 62+93.00
TRACT NO. 8
S.R. 24



38' BUS. ENT. RT. 64+30.00
TRACT NO. 8
S.R. 24

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRIVATE DRIVE, BUSINESS, AND FIELD ENTRANCE PROFILES

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

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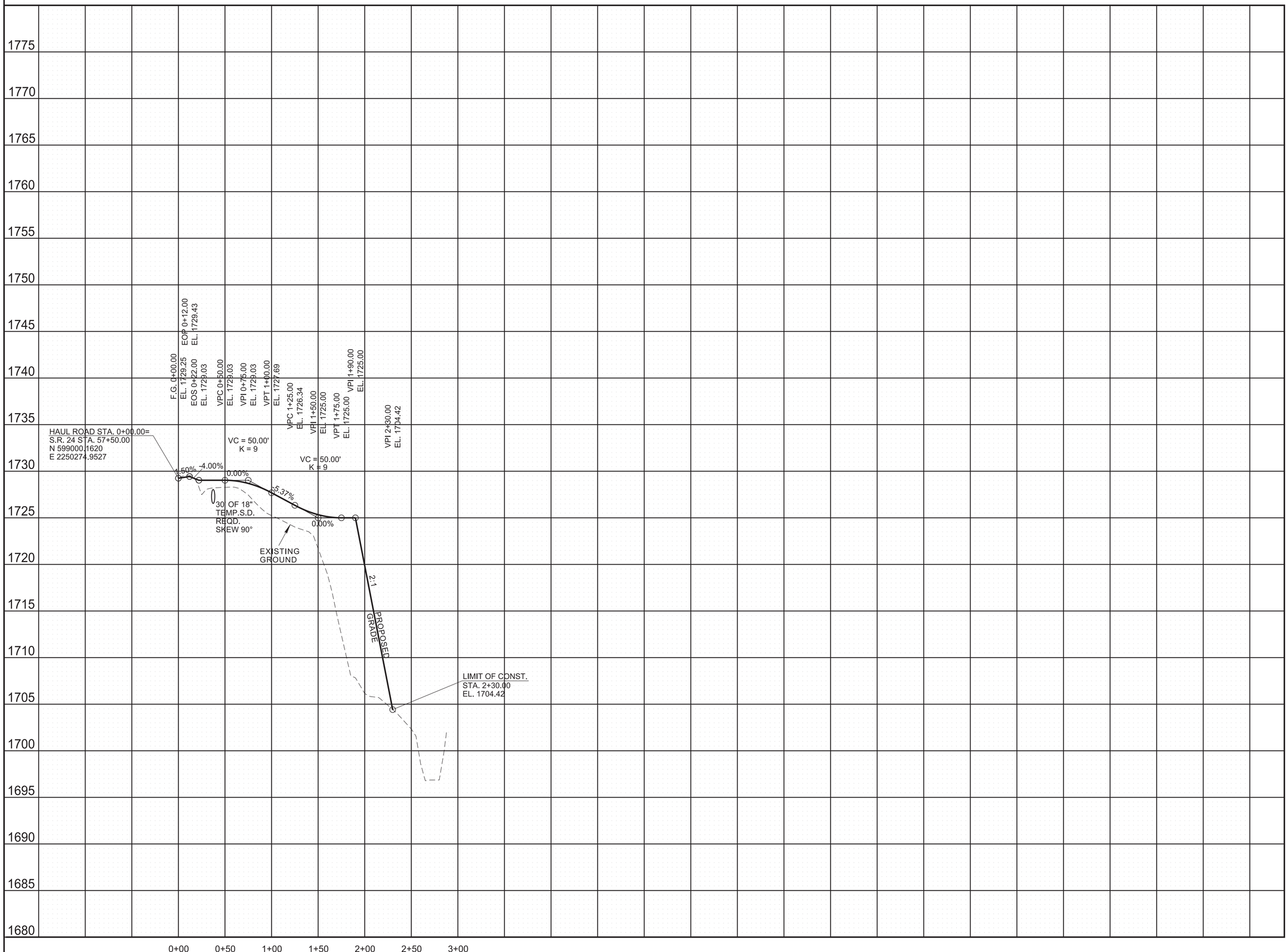
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	6
PIH	2024	BR-STP-24(69)	6
PS&E	2025	18004-3227-04	6



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STATE OF TENNESSEE

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DEPARTMENT OF TRANSPORTATION

HAUL ROAD PROFILE

STA.0+00 TO STA.3+00

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

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	7
PIH	2024	BR-STP-24(69)	7
PS&E	2025	18004-3227-04	7

D.A. 2
82.3 ACRES
N.T.S.

D.A. 1
5907 ACRES
N.T.S.

N

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

55 60 65

STATE ROUTE 24

OBED RIVER

STR-1 STR-2 STR-3

S 20° 59' 04" E

S 32° 25' 00" E

25'R

18"CMP
INV-1728.65

EXISTING/BRIDGE
TO BE REMOVED

PIERS
TO BE REMOVED

INV-1736.41

INV-1751.03

18CMP

INV-1725.14
TO BE REMOVED
INV-1725.14

BRIDGE ID 18SR0240003
PROPOSED 238'-0" X 45'-3"
2-SPAN CONCRETE
GIRDER BRIDGE
SKEW 90°
W/ CLASS "B" RIP-RAP
1475 TONS

BEG. PROP. BRIDGE
STA. 58+21.00

END PROP. BRIDGE
STA. 60+59.00

FIELD VERIFIED
(TO REMAIN IN PLACE)
4'x3'x56'
EX.CONC. BOX

INV-1736.03

24" CMP
TO BE REMOVED
INV-1737.66

WTL-1

EW TO BE REMOVED
OUTLET EL. 1722.79

INV-1733.39
12CMP

TO BE REMOVED

15CMP
INV-1738.69

INV-1737.50

INV-1731.48

INV-1724.12

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

EXISTING BRIDGE INFO:
149'-6" LENGTH X 34'-6" OUT-TO-OUT WIDTH,
4-SPAN CONCRETE TEE BULB

DRAINAGE AREA 1

DRAINAGE DATA FOR EXISTING CONC. BRIDGE
STATION 59+53.45

DIRECTION OF FLOW: LEFT

DRAINAGE AREA 5907 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.

PRESENT STRUCTURE: EXISTING CONC. BRIDGE

EXISTING STRUCTURE CONDITION: FAIR

DRAINAGE AREA 2

DIRECTION OF FLOW: LEFT

DRAINAGE AREA 82.30 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.

PRESENT STRUCTURE: 4'X3' EXISTING BOX CULVERT

EXISTING STRUCTURE CONDITION: FAIR

REMARKS:

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
0011.2847
STATE OF TENNESSEE

02-20-2025

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE MAP

STA. 55+00 TO STA.66+35.89
SCALE: 1"=50'

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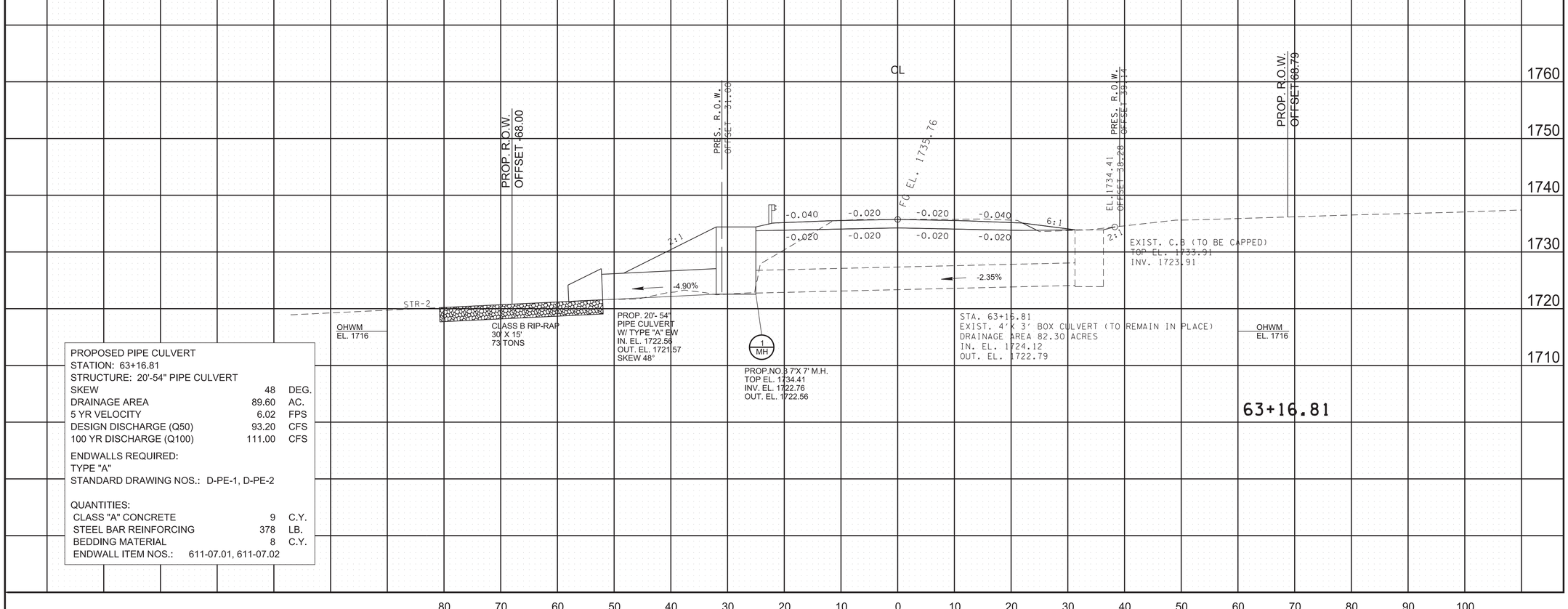
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	8
PIH	2024	BR-STP-24(69)	8
PS&E	2025	18004-3227-04	8



PROPOSED PIPE CULVERT
STATION: 63+16.81
STRUCTURE: 20'-54" PIPE CULVERT

SKEW	48	DEG.
DRAINAGE AREA	89.60	AC.
5 YR VELOCITY	6.02	FPS
DESIGN DISCHARGE (Q50)	93.20	CFS
100 YR DISCHARGE (Q100)	111.00	CFS

ENDWALLS REQUIRED:
TYPE "A"
STANDARD DRAWING NOS.: D-PE-1, D-PE-2

QUANTITIES:

CLASS "A" CONCRETE	9	C.Y.
STEEL BAR REINFORCING	378	LB.
BEDDING MATERIAL	8	C.Y.
ENDWALL ITEM NOS.:	611-07.01, 611-07.02	

SEALED BY

ANDREW WISNIEWSKI
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AGRICULTURE
COMMERCE
NO. 00114967
STATE OF TENNESSEE

02-20-2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CULVERT SECTION

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

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	9
PIH	2024	BR-STP-24(69)	9
PS&E	2025	18004-3227-04	9

ENVIRONMENTAL NOTES

SUBSECTION 3 – EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

SEDIMENT CONTROL

INSPECTION, MAINTENANCE & REPAIR

(11) REFER TO THE STORM WATER POLLUTION AND PREVENTION PLAN SHEET SERIES (S-1) FOR SWPPP, PERMITS, AND RECORDS NOTES.

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

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

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

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

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

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

(34) ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.

(35) WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.

(36) ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

(37) ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

(38) OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.

(39) DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.

(40) WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ANY AND ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S), CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

STREAMS, WETLANDS & BUFFER ZONES

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

SEALED BY

ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE COMMERCE NO. 001142627 STATE OF TENNESSEE

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL SPECIAL NOTES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	10
PIH	2024	BR-STP-24(69)	10
PS&E	2025	18004-3227-04	10

TABULATED EPSC QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 18004-3227-04
1,2	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	39
2	209-02.04	10" TEMPORARY SLOPE DRAIN	L.F.	196
2	209-05	SEDIMENT REMOVAL	C.Y.	101
2,6,9	209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	3040
2	209-08.08	ENHANCED ROCK CHECK DAM	EACH	8
2	209-08.09	FILTER SOCK CHECK DAM	EACH	20
2,10	209-09.01	SANDBAGS	BAG	660
2,7	209-09.03	SEDIMENT FILTER BAG (15' X 15')	EACH	6
2,10	209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	25
2	209-40.33	CATCH BASIN PROTECTION (TYPE D)	EACH	2
2	209-65.04	TEMPORARY IN STREAM DIVERSION	L.F.	100
2,3	303-10.01	MINERAL AGGREGATE (SIZE 57)	TON	15
2,10	621-03.03	24" TEMPORARY DRAINAGE PIPE	L.F.	52
2,6	707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	1800
2,4	709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	100
2,11	709-05.06	MACHINED RIP-RAP (CLASS A-1)	TON	32
2,5	740-10.03	GEOTEXTILE (TYPE III)(EROSION CONTROL)	S.Y.	358
2,8	801-01.07	TEMPORARY SEEDING (WITH MULCH)	UNIT	95
2	801-03	WATER (SEEDING & SODDING)	M.G.	10

FOOTNOTES

(1) INCLUDES 15 C.Y. FOR TEMPORARY CONST. EXITS. AND 24 C.Y. FOR TEMPORARY SLOPE DRAINS.

(2) SEE SUBSECTION 209.07 OF THE STD. SPECIFICATIONS FOR MAINTENANCE REPLACEMENT. ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.

(3) TO BE USED FOR SEDIMENT FILTER BAGS.

(4) FOR TEMPORARY CONSTRUCTION EXITS.

(5) INCLUDES 172 S.Y. FOR TEMPORARY CONSTRUCTION EXITS AND 186 S.Y. FOR SEDIMENT FILTER BAGS.

(6) INCLUDES COST OF SAFETY CAPS FOR METAL POSTS.

(7) INCLUDES 4 ADDITIONAL SEDIMENT FILTER BAGS TO BE USED AS REPLACEMENTS.

(8) THE COST OF NEW FERTILIZER AND LIME USED IN INITIAL SEED BED PREPARATION IS TO BE INCLUDED IN THE COST OF SEEDING. SEE SECTION 801 OF TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

(9) INCLUDES 193 L.F. FOR SEDIMENT FILTER BAGS.

(10) TO BE USED FOR SUSPENDED PIPE DIVERSION (DOWNSTREAM).

(11) INCLUDES 24 TONS TO BE USED FOR TEMPORARY SLOPE DRAIN AND 8 TONS FOR SUSPENDED PIPE DIVERSION (DOWNSTREAM).

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
SFB SFB SFB SFB SFB	SEDIMENT FILTER BAG	EC-STR-2
SFB SFB SFB	SILT FENCE WITH WIRE BACKING	EC-STR-3C
	ENHANCED ROCK CHECK DAM (V-DITCH)	EC-STR-6A
SOCK 24" SOCK 24"	24 INCH FILTER SOCK	EC-STR-8
D	CATCH BASIN PROTECTION (TYPE D)	EC-STR-19
TCE	TEMPORARY CONSTRUCTION EXIT	EC-STR-25
	TEMPORARY SLOPE DRAIN	EC-STR-27
IN DIV	INSTREAM DIVERSION	EC-STR-30 EC-STR-30A
	SUSPENDED PIPE DIVERSION	EC-STR-33 EC-STR-33A
HVF HVF	HIGH VISIBILITY FENCE	S-F-1

* TO BE USED WHERE AS DIRECTED BY THE ENGINEER.

EPSC STAGING NOTES

STAGE I (CLEARING/GRUBBING):

- INSTALL SILT FENCE W/ BACKING AND HIGH VISIBILITY FENCES AROUND SLOPE LINES AND STREAM BANK.
- PLACE ENHANCED ROCK CHECK DAMS AT OUTFALLS 1-4 AND CATCH BASIN PROTECTION (TYPE D) AT OUTFALL 5.
- INSTALL TEMPORARY CONSTRUCTION EXITS AT BEGIN/END PROJECT LIMITS.

STAGE II (INTERMEDIATE GRADING):

- INSTALL TEMPORARY SLOPE DRAINS ON BOTH BRIDGE APPROACHES FOR EACH SIDE OF THE ROAD.
- MOVE ENHANCED ROCK CHECK DAM AT OUTFALL 1 TO THE TEMPORARY DRAINAGE PIPE AT THE HAUL ROAD.
- PLACE 24” FILTER SOCKS IN DITCHES.
- CONSTRUCT SUSPENDED PIPE DIVERSION FOR PIPE CONSTRUCTION AT STR-2.
- PLACE SEDIMENT FILTER BAGS AND CONSTRUCT IN-STREAM DIVERSION FOR BRIDGE CONSTRUCTION.

STAGE III (FINAL CONSTRUCTION):

- REMOVE SEDIMENT FILTER BAGS, SUSPENDED PIPE DIVERSION, CATCH BASIN PROTECTION (TYPE D), IN-STREAM DIVERSION AND TEMPORARY SLOPE DRAINS.
- ADEQUATE COVER WHEN APPLYING FINAL SEEDING/SODDING FOR PERMANENT STABILIZATION SHALL BE ACHIEVED PRIOR TO COMPLETION OF PROJECT.

SEALED BY

ANDREW WISNIEWSKI REGISTERED ENGINEER AGRICULTURE COMMERCE 0011 6267 STATE OF TENNESSEE

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL LEGEND & TABULATION

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	11
PIH	2024	BR-STP-24(69)	11
PS&E	2025	18004-3227-04	11

REV. 08-07-2023 - INCREASED AREA OF CONSTRUCTION EASEMENT FOR HAUL ROAD AND SLOPE CONSTRUCTION

EXISTING CONC. BRIDGE LOCATOR NO. 18-SR24-15.37
STATION 59+53.45 (TO BE REMOVED)

DIRECTION OF FLOW: LEFT
DRAINAGE AREA 5907 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.
PRESENT STRUCTURE: EXISTING CONC. BRIDGE
EXISTING STRUCTURE CONDITION: FAIR

STATION 63+16.84
4'X3' EXISTING BOX CULVERT

DIRECTION OF FLOW: LEFT
DRAINAGE AREA 82.30 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.
PRESENT STRUCTURE: 4'X3' EXISTING BOX CULVERT
EXISTING STRUCTURE CONDITION: FAIR
REMARKS:

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

55 60 65

STATE ROUTE 24
PRES. R.O.W.
PROP. R.O.W.
R=1372.40'
L=512.90'
R=1372.40'
L=451.10'
S 32° 25' 00" E
S 20° 59' 04" E
25' R
EXISTING/BRIDGE TO BE REMOVED
PROPOSED CONST. ESMT.
L.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2724 1947
15.00'
OBED RIVER
STR-1
STR-2
STR-3
OUT - 1
OUT - 2
OUT - 3
OUT - 4
OUT - 5
TCP
WTL-1
HICKORY TREES
HICKORY AND CHERRY TREES
CYPRESS
HICKORY
HOLLY
TO REMAIN
SFB
HVF
CUT
FILL

OUTFALLS		
Outfall No.	Drainage Area	Average Slope
1	.550 AC	1.99%
2	.430 AC	2.04%
3	.350 AC	2.43%
4	.840 AC	2.37%
5	.797 AC	5.20%

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

EXISTING BRIDGE INFO:
149'-6" LENGTH X 34'-6" OUT-TO-OUT WIDTH,
4-SPAN CONCRETE TEE BULB

ALL SILT FENCE AND TUBES SHOULD BE INSTALLED ON CONTOUR TO THE MAXIMUM EXTENT PRACTICABLE. WHERE SILT FENCE IS INSTALLED ACROSS A CONTOUR, J-HOOKS SHALL BE UTILIZED TO PREVENT CONCENTRATED FLOW.

STAGE I

EXISTING CONTOURS SHOWN

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 0011.4267
STATE OF TENNESSEE

02-20-2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	12
PIH	2024	BR-STP-24(69)	12
PS&E	2025	18004-3227-04	12

REV. 08-07-2023 - INCREASED AREA OF CONSTRUCTION EASEMENT FOR HAUL ROAD AND SLOPE CONSTRUCTION

EXISTING CONC. BRIDGE LOCATOR NO. 18-SR24-15.37
STATION 59+53.45 (TO BE REMOVED)

DIRECTION OF FLOW: LEFT
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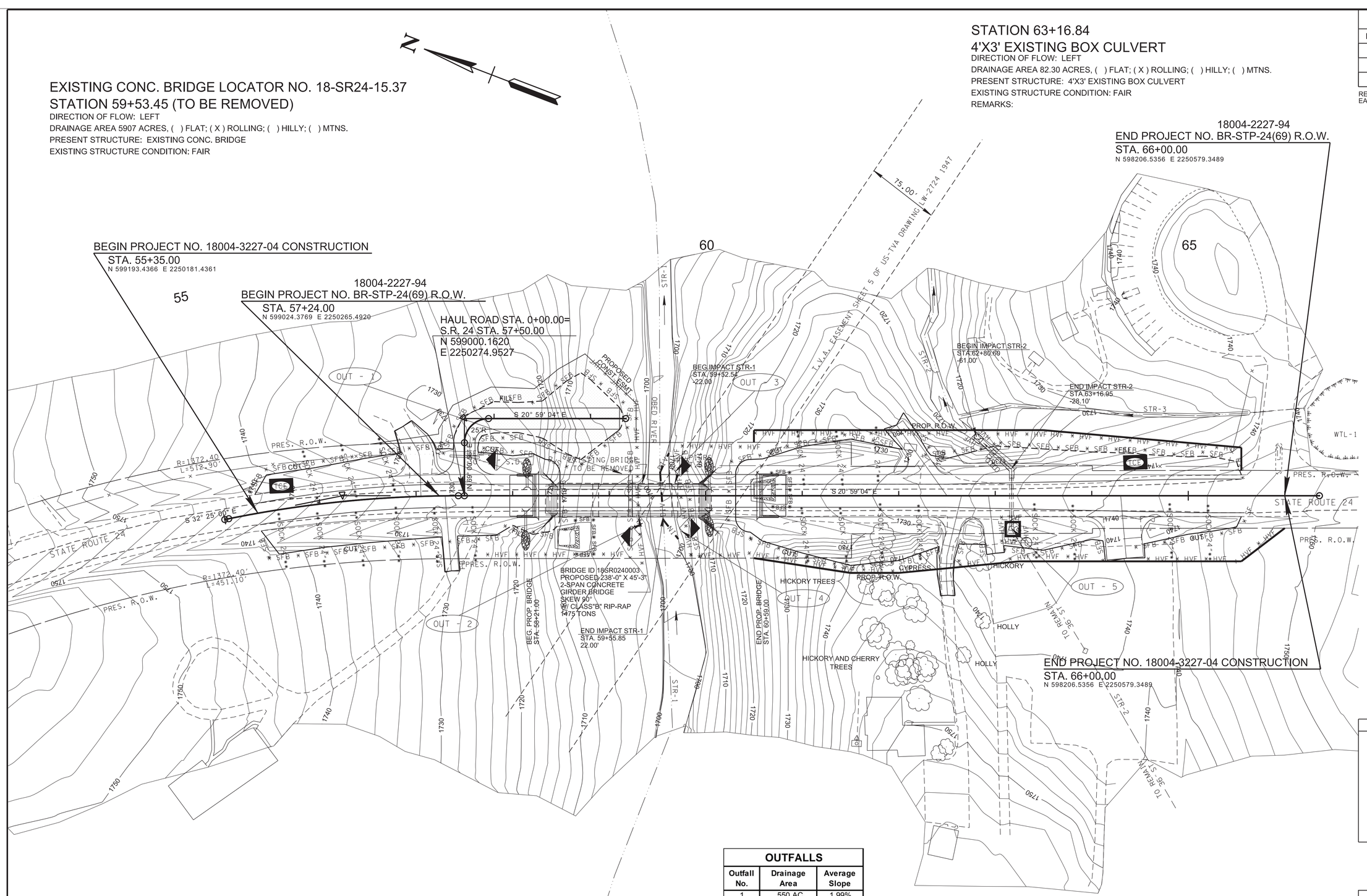
PRESENT STRUCTURE: EXISTING CONC. BRIDGE
EXISTING STRUCTURE CONDITION: FAIR

STATION 63+16.84
4'X3' EXISTING BOX CULVERT

DIRECTION OF FLOW: LEFT
DRAINAGE AREA 82.30 ACRES, ( ) FLAT; (X) ROLLING; ( ) HILLY; ( ) MTNS.
PRESENT STRUCTURE: 4'X3' EXISTING BOX CULVERT
EXISTING STRUCTURE CONDITION: FAIR
REMARKS:



OUTFALLS		
Outfall No.	Drainage Area	Average Slope
1	.550 AC	1.99%
2	.430 AC	2.04%
3	.350 AC	2.43%
4	.840 AC	2.37%
5	.797 AC	5.20%

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

EXISTING BRIDGE INFO:
149'-6" LENGTH X 34'-6" OUT-TO-OUT WIDTH,
4-SPAN CONCRETE TEE BULB

ALL SILT FENCE AND TUBES SHOULD BE INSTALLED ON CONTOUR TO THE MAXIMUM EXTENT PRACTICABLE. WHERE SILT FENCE IS INSTALLED ACROSS A CONTOUR, J-HOOKS SHALL BE UTILIZED TO PREVENT CONCENTRATED FLOW.

STAGE II

PROPOSED CONTOURS SHOWN

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
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COMMERCE
NO. 0011.4987
STATE OF TENNESSEE

02-20-2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	13
PIH	2024	BR-STP-24(69)	13
PS&E	2025	18004-3227-04	13

REV. 08-07-2023 - ADDED SHEET

BEGIN PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-94
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

18004-2227-94
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

END PROJECT NO. 18004-3227-04 CONSTRUCTION
STA. 66+00.00
N 598206.5356 E 2250579.3489

55 60 65

STATE ROUTE 24

PRES. R.O.W.

PROP. R.O.W.

BEG. IMPACT STR-1
STA. 59+52.54
-22.00

END IMPACT STR-1
STA. 59+55.85
22.00'

BEGIN IMPACT STR-2
STA.62+80.69
-61.00'

END IMPACT STR-2
STA.63+16.95
-28.10'

CLASS B RIP-RAP
30' X 15'
73 TONS

BRIDGE ID 18SR0240003
PROPOSED 238'-0" X 45'-3"
2-SPAN CONCRETE
GIRDER BRIDGE
SKEW 90°
W/ CLASS "B" RIP-RAP
1475 TONS

BEG. PROP. BRIDGE
STA. 58+21.00

END PROP. BRIDGE
STA. 60+59.00

EXIST. C.B.
TO BE CAPPED
TOP EL. 1733.91
INV. EL. 1723.91

EXISTING BRIDGE TO BE REMOVED

OUT - 1
OUT - 2
OUT - 3
OUT - 4

STR-1
STR-2
STR-3

WTL-1

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2124 1944

DB 110 PG 1094
RECORDS OF THE CUMBERLAND COUNTY

75.00'

OUTFALLS		
Outfall No.	Drainage Area	Average Slope
1	.550 AC	1.99%
2	.430 AC	2.04%
3	.350 AC	2.43%
4	1.637 AC	3.79%

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

EXISTING BRIDGE INFO:
149'-6" LENGTH X 34'-6" OUT-TO-OUT WIDTH,
4-SPAN CONCRETE TEE BULB

ALL SILT FENCE AND TUBES SHOULD BE INSTALLED ON CONTOUR TO THE MAXIMUM EXTENT PRACTICABLE. WHERE SILT FENCE IS INSTALLED ACROSS A CONTOUR, J-HOOKS SHALL BE UTILIZED TO PREVENT CONCENTRATED FLOW.

STAGE III

PROPOSED CONTOURS SHOWN

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 0011.4267
STATE OF TENNESSEE

02-20-2025

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS

STA. 55+00 TO STA. 66+35.89

SCALE: 1"=50'

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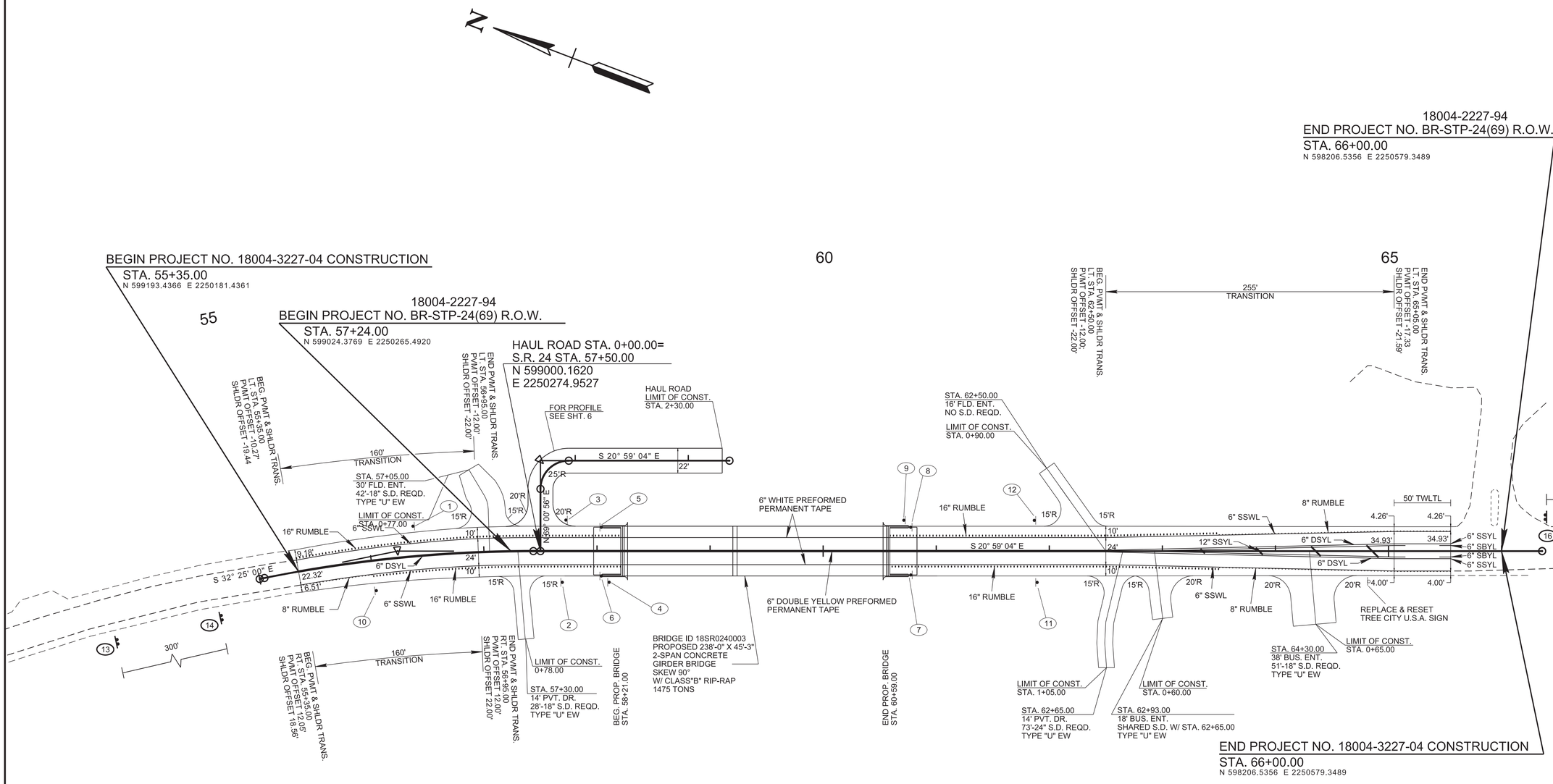
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	14
PIH	2024	BR-STP-24(69)	14
PS&E	2025	18004-3227-04	14



13 15

14 16

PLACE SIGN 300' BEFORE THE ROAD WORK ADVANCED WARNING SIGNS.

NOTES:
1. PROJECT INFORMATION SIGN TO BE REMOVED ONCE CONSTRUCTION IS COMPLETE.
2. DATE TO BE COMPLETED BY THE CONTRACTOR ONCE DETERMINED.

PAVEMENT MARKINGS LEGEND	
SSWL	SINGLE SOLID WHITE LINE
DSYL	DOUBLE SOLID YELLOW LINE
SSYL	SINGLE SOLID YELLOW LINE
SBYL	SINGLE BROKEN YELLOW LINE
TWLTL	TWO-WAY LEFT TURN LANE

NOTE: 6" PREFORMED PERMANENT TAPE TO BE USED ON BRIDGE ONLY.

SEALED BY

02-20-2025

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNING AND PAVEMENT MARKING PLAN

STA. 55+00 TO STA. 66+35.89

SCALE: 1"=50'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	15
PS&E	2025	18004-3227-04	15

ALL SIGNS SHOWN WITH DESIGNATIONS ARE TO BE FABRICATED AS DETAILED IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (CURRENT EDITION)

SIGN NO	LEGEND	SHEET NO	SIZE				COPY				SHIELD	ARROW	SIGN FACE			STEEL DESIGN (BREAK-AWAY)					MINIMUM VERTICAL CLEARANCE	REMARKS
			LENGTH	HEIGHT	RADIUS	BORDER WIDTH	CAPITAL	LOWER CASE	NUMERAL	SERIES			COPY	BACKGROUND	MATERIAL	SUPPORT TYPE	SUPPORT LENGTH	FOOTING	CONC. CU. YD.	REIN. STEEL LBS.		
1	W11-10	14	36"	36"									BLACK	YELLOW (FLOR.)	0.100 SHEET ALUMINUM	P5	13'-6"				5'-0"	STA. 56+40.00 LT.
2	R2-1	14	24"	30"									BLACK	WHITE (REF.)	0.080 SHEET ALUMINUM	P2	11'-0"				5'-0"	STA. 57+68.00 RT.
3	TN-4	14	66"	24"	3"	1"	6" 3"	4"		C			WHITE (REF.) GREEN (REF.)	GREEN (REF.)	0.100" SHEET ALUMINUM	P2	h_1 = 10'-6" h_2 = 11'-0"				5'-0"	STA. 57+74.00 LT.
4 9	TN-5	14	18"	18"	2.3"	0.8"	5" 4"	4"		C			WHITE (REF.)	GREEN (REF.)	0.080" SHEET ALUMINUM	P2	10'-0"				5'-0"	STA. 58+09.50 RT. STA. 60+72.50 LT.
5 7	OM-3L	14	12"	36"									BLACK	YELLOW (FLOR.)	0.080 SHEET ALUMINUM	P5	11'-6"				4'-0"	STA. 58+02.50 LT. STA. 60+78.50 RT.
6 8	OM-3R	14	12"	36"									BLACK	YELLOW (FLOR.)	0.080 SHEET ALUMINUM	P5	11'-6"				4'-0"	STA. 58+02.50 RT. STA. 60+78.50 LT.
10	S1-1 W16-9PS	14	36" 24"	36" 12"									BLACK BLACK	YELLOW GREEN (FLOR.) YELLOW GREEN (FLOR.)	0.100 SHEET ALUMINUM 0.080 SHEET ALUMINUM	P5	13'-0"				5'-0"	STA. 56+00.00 RT.
11	S4-3P R2-1 S4-2P	14	24" 24" 24"	9" 30" 12"									BLACK BLACK BLACK	YELLOW GREEN (FLOR.) WHITE (REF.) WHITE (REF.)	0.080 SHEET ALUMINUM 0.080 SHEET ALUMINUM 0.080 SHEET ALUMINUM	P5	13'-0"				5'-0"	STA. 61+88.00 RT.
12	R2-1 S5-3	14	24" 24"	30" 30"									BLACK BLACK	WHITE (REF.) WHITE (REF.)	0.080 SHEET ALUMINUM 0.080 SHEET ALUMINUM	P5	14'-0"				5'-0"	STA. 61+88.00 LT.
13 15	D12-5	14	48"	60"									WHITE	BLUE	EXTRUDED ALUMINUM PANEL	S5	h_1 = 15.50' h_2 = 16.00'				5'-0"	SEE NOTE ON SHT. 14 FOR PLACEMENT
14 16	I2-5	14	108"	48"									WHITE	GREEN	EXTRUDED ALUMINUM PANEL	S5	h_1 = 14.50' h_2 = 15.00'				5'-0"	SEE NOTE ON SHT. 14 FOR PLACEMENT

SEALED BY

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGN SCHEDULE SHEET

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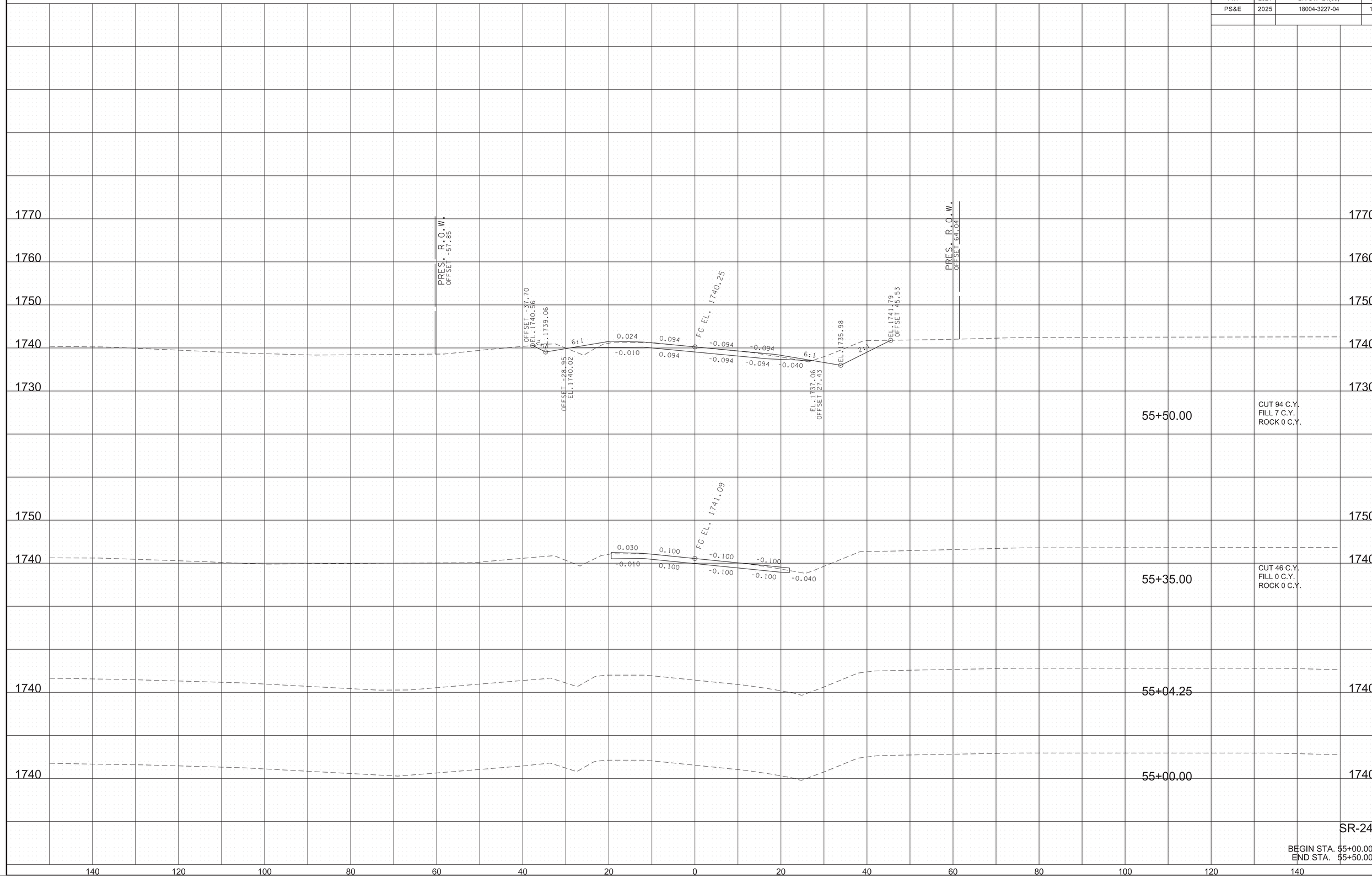
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	15
PIH	2024	BR-STP-24(69)	16
PS&E	2025	18004-3227-04	16



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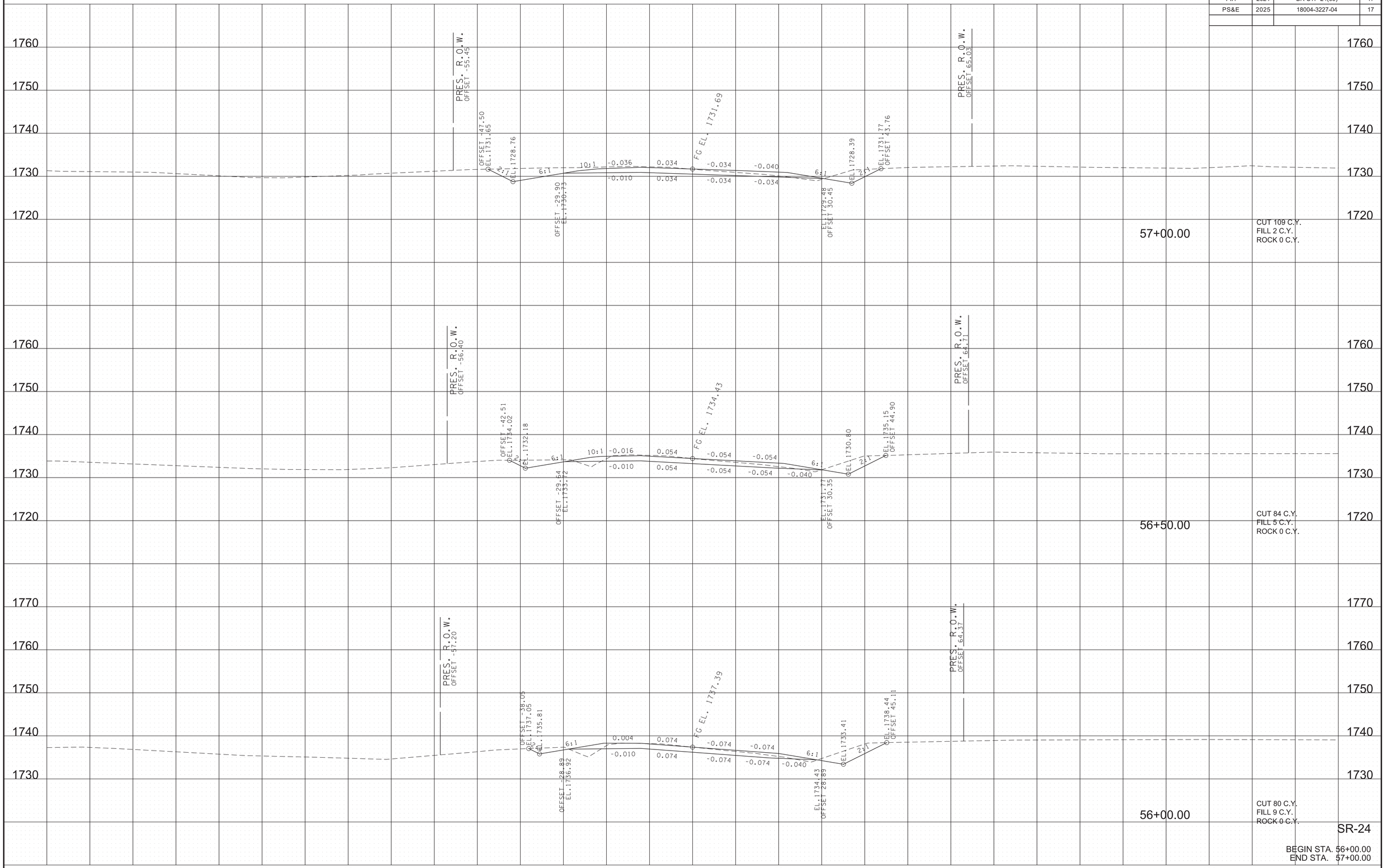
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	16
PIH	2024	BR-STP-24(69)	17
PS&E	2025	18004-3227-04	17



SR-24

BEGIN STA. 56+00.00
END STA. 57+00.00

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TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	17
PIH	2024	BR-STP-24(69)	18
PS&E	2025	18004-3227-04	18

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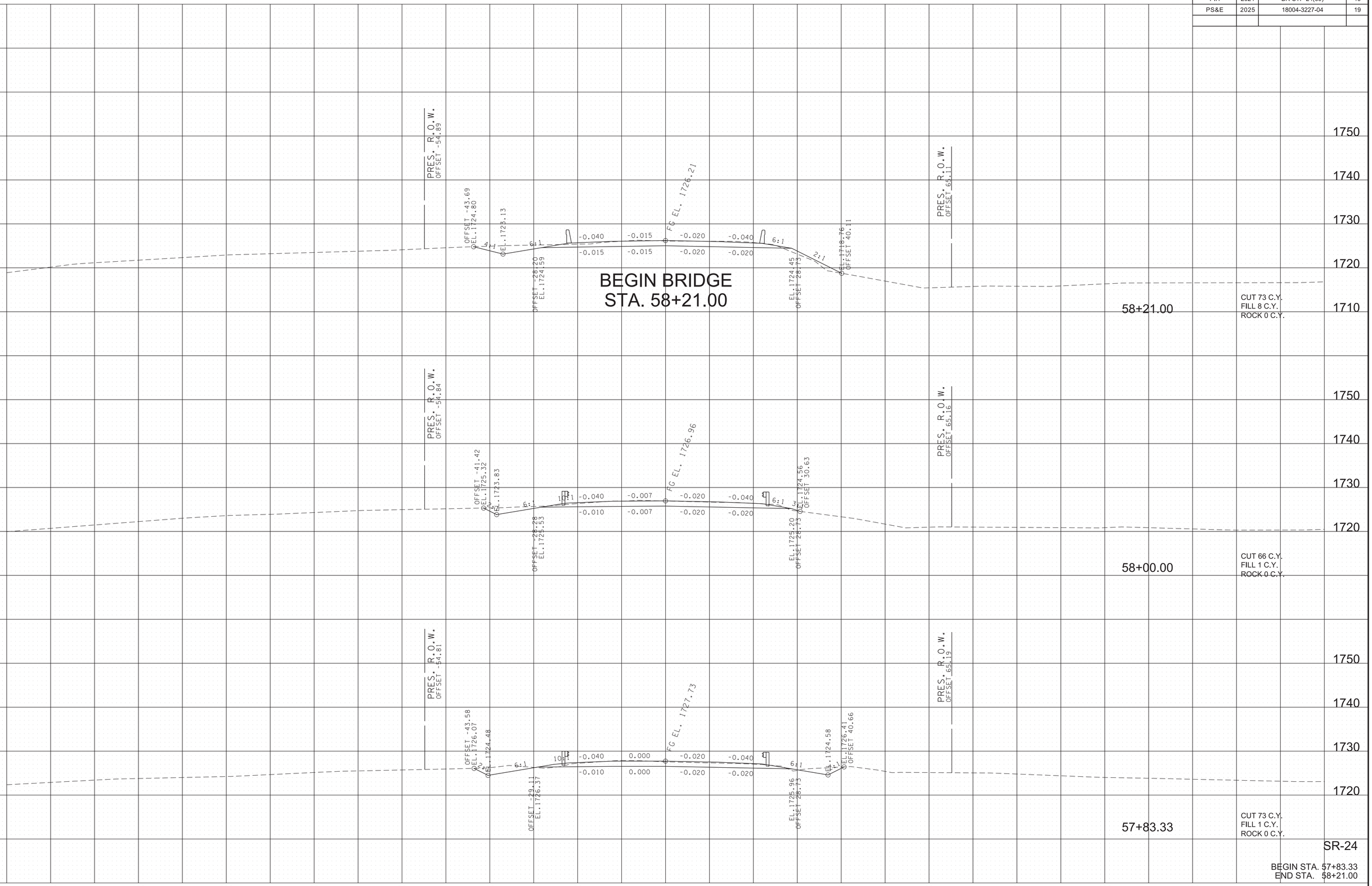
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	18
PIH	2024	BR-STP-24(69)	19
PS&E	2025	18004-3227-04	19



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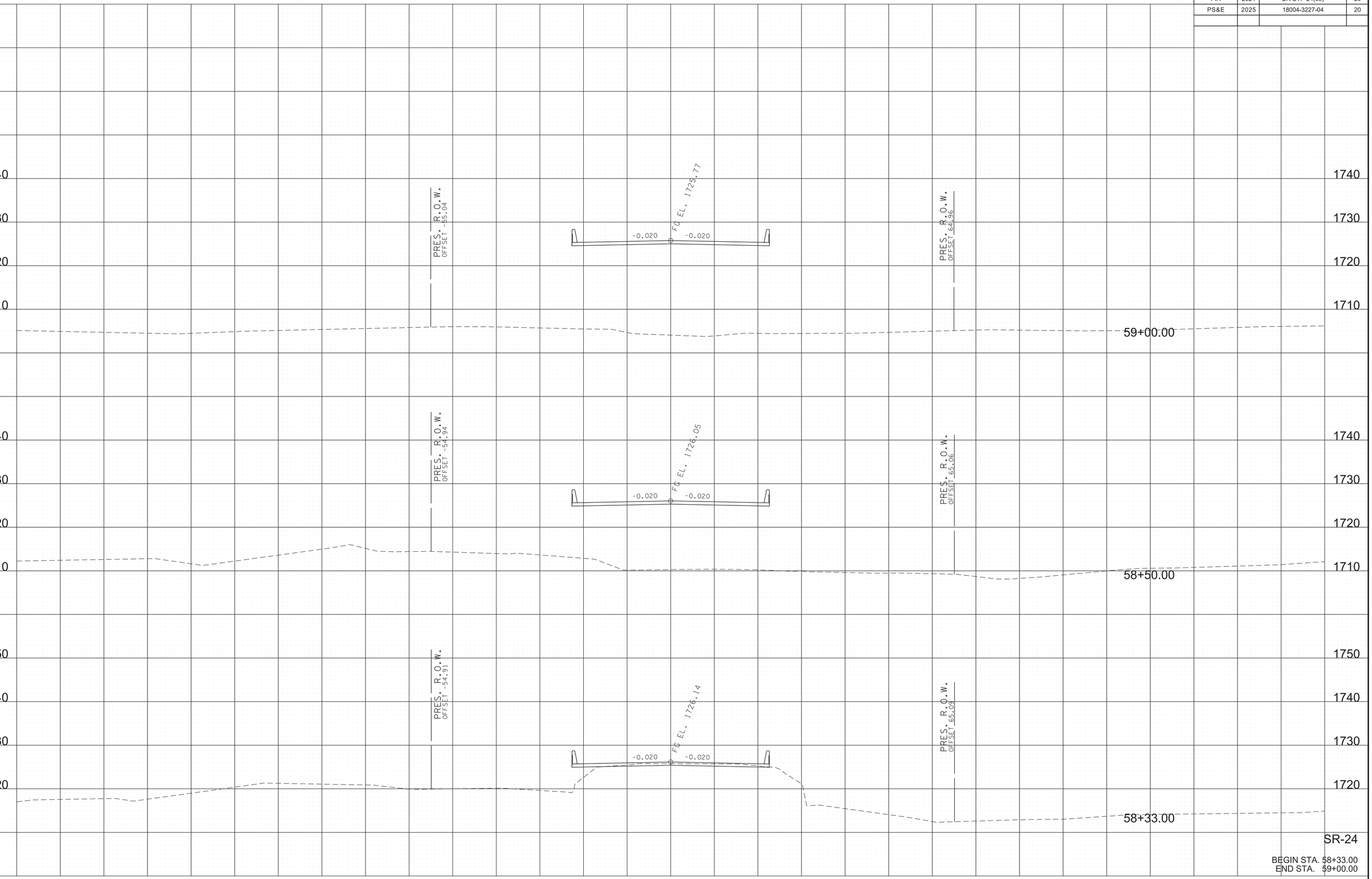
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	19
PIH	2024	BR-STP-24(69)	20
PS&E	2025	18004-3227-04	20



SR-24

BEGIN STA. 58+33.00
END STA. 59+00.00

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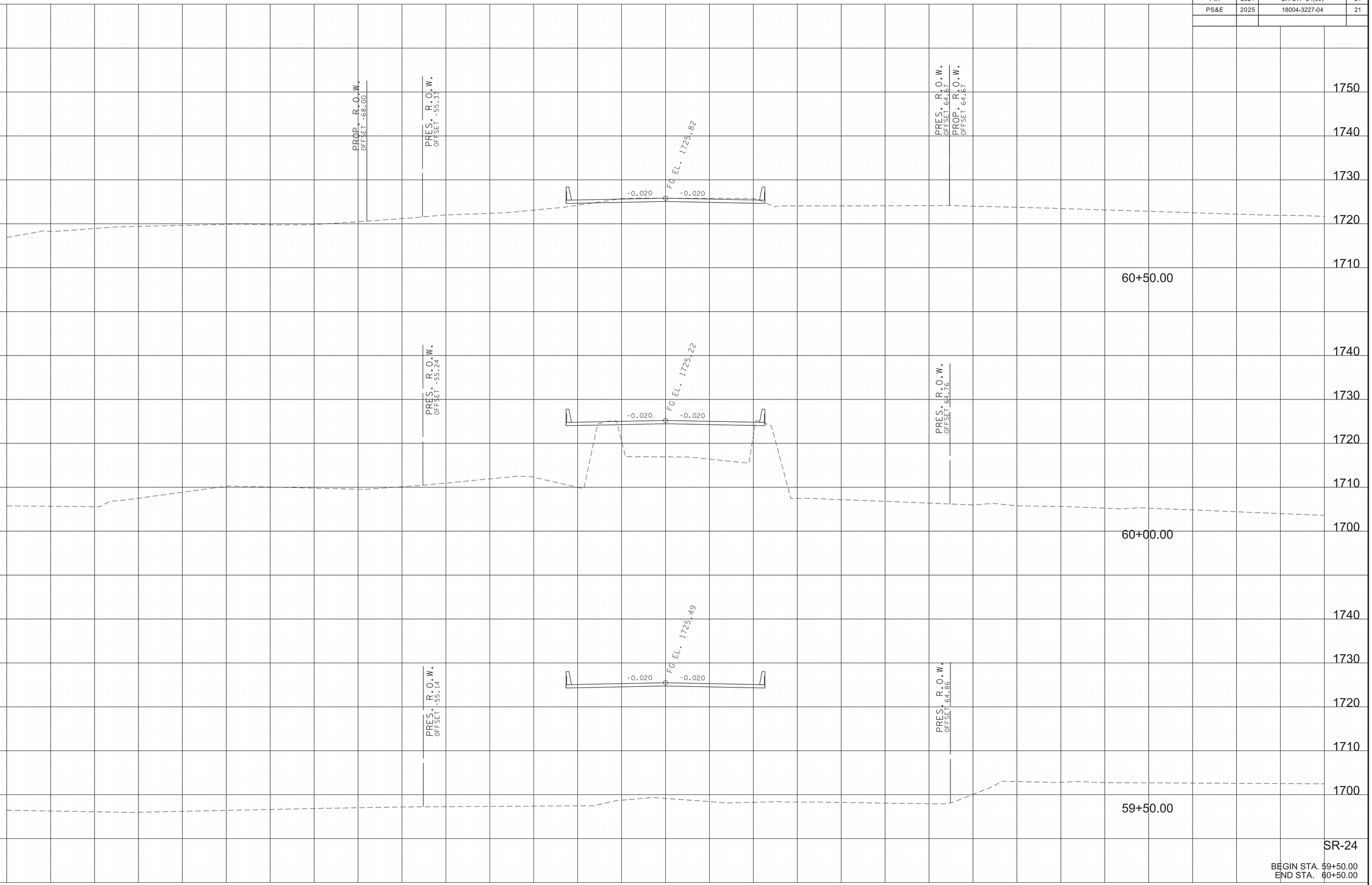
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	20
PIH	2024	BR-STP-24(69)	21
PS&E	2025	18004-3227-04	21



SR-24

BEGIN STA. 59+50.00
END STA. 60+50.00

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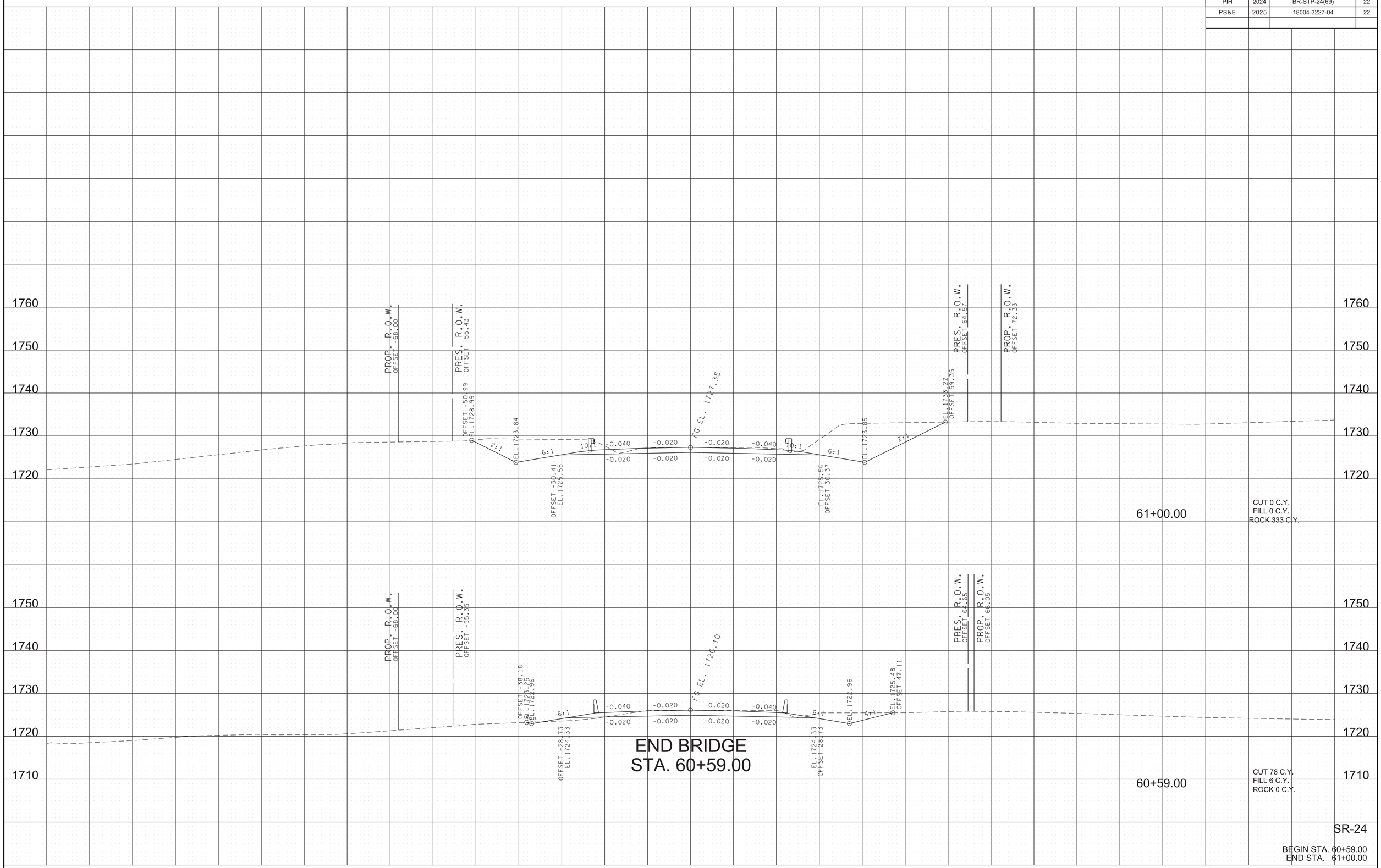
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	21
PIH	2024	BR-STP-24(69)	22
PS&E	2025	18004-3227-04	22



SR-24

BEGIN STA. 60+59.00
END STA. 61+00.00

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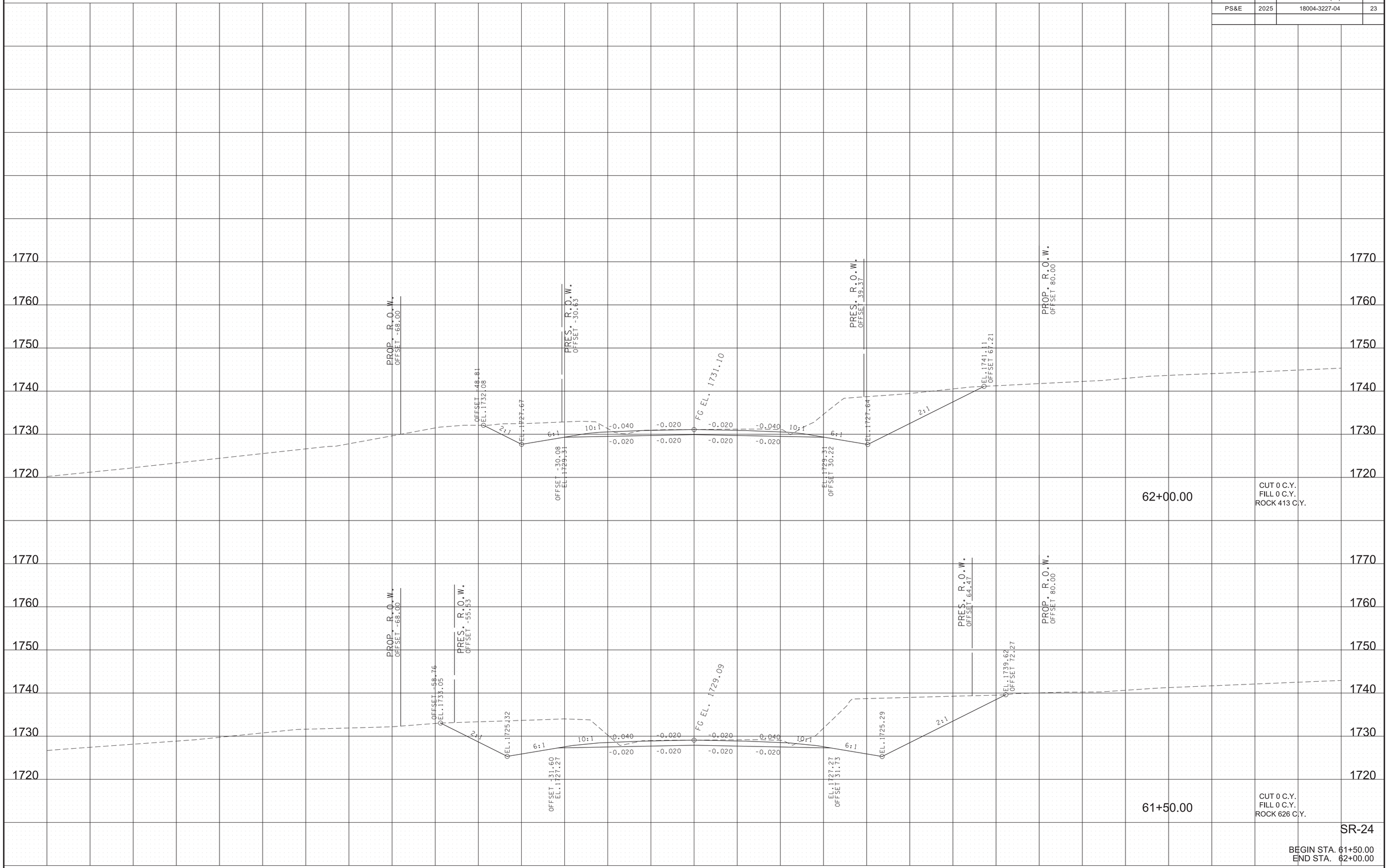
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	22
PIH	2024	BR-STP-24(69)	23
PS&E	2025	18004-3227-04	23



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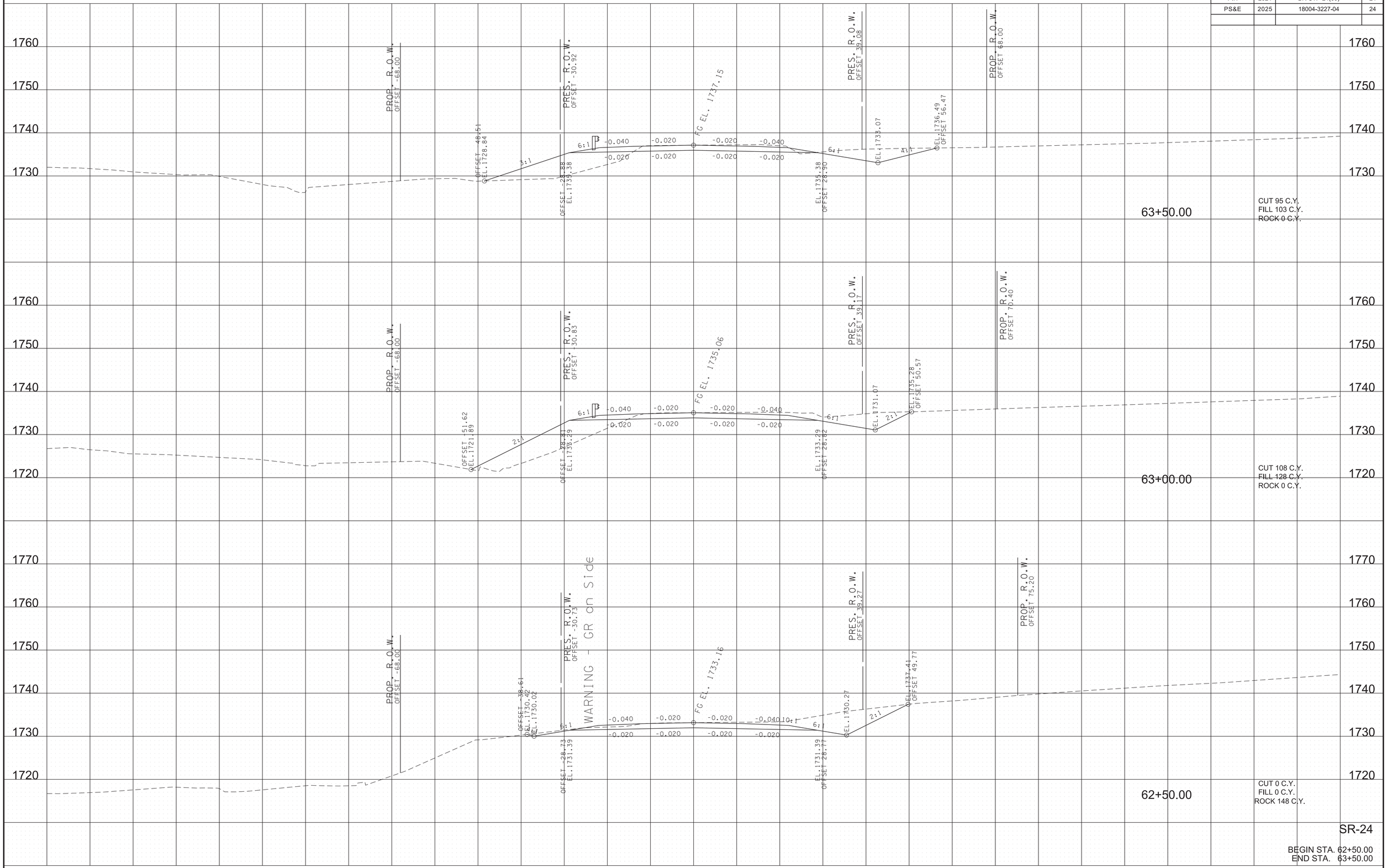
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	23
PIH	2024	BR-STP-24(69)	24
PS&E	2025	18004-3227-04	24



SR-24

BEGIN STA. 62+50.00
END STA. 63+50.00

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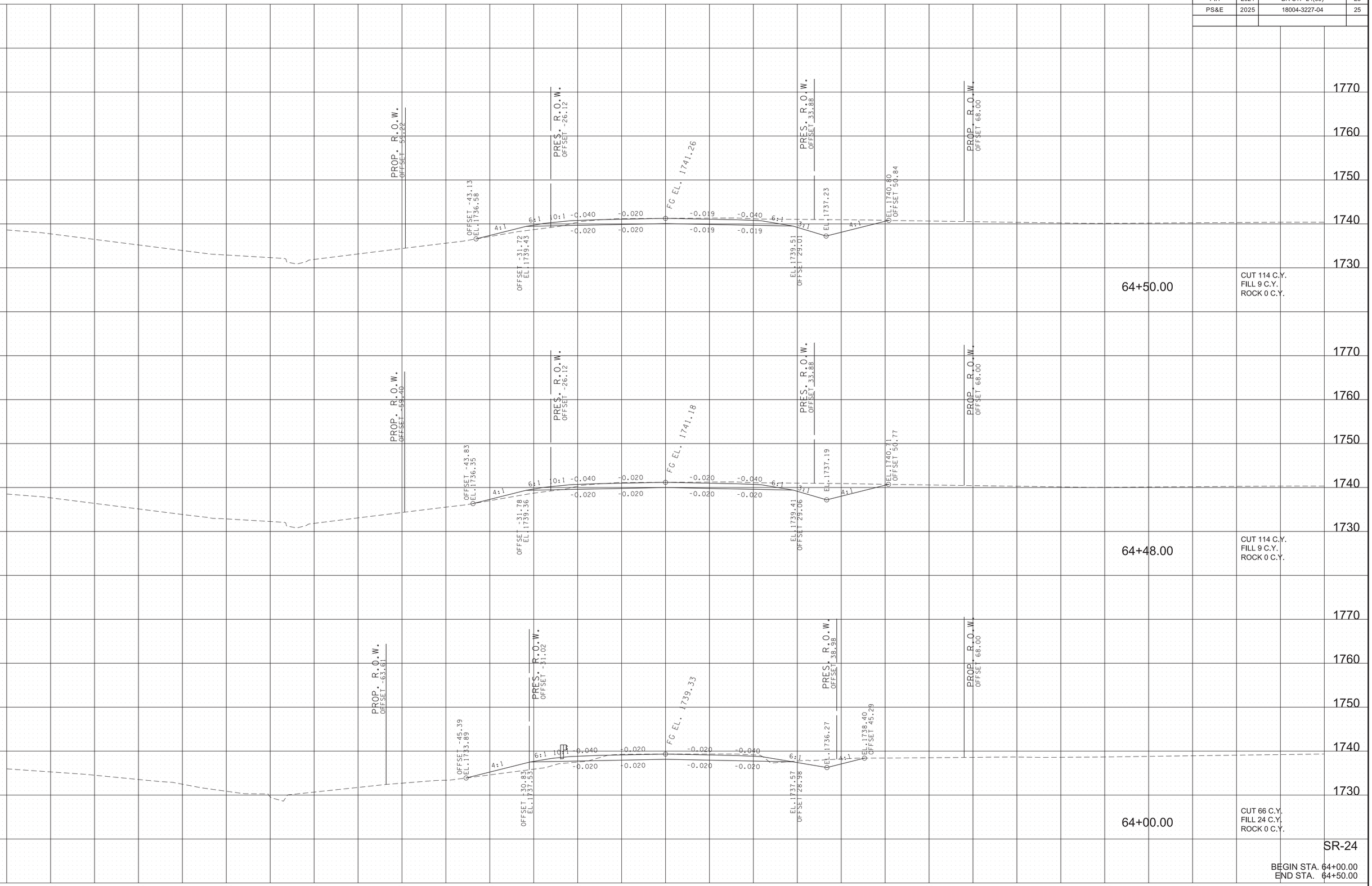
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	24
PIH	2024	BR-STP-24(69)	25
PS&E	2025	18004-3227-04	25



SR-24

BEGIN STA. 64+00.00
END STA. 64+50.00

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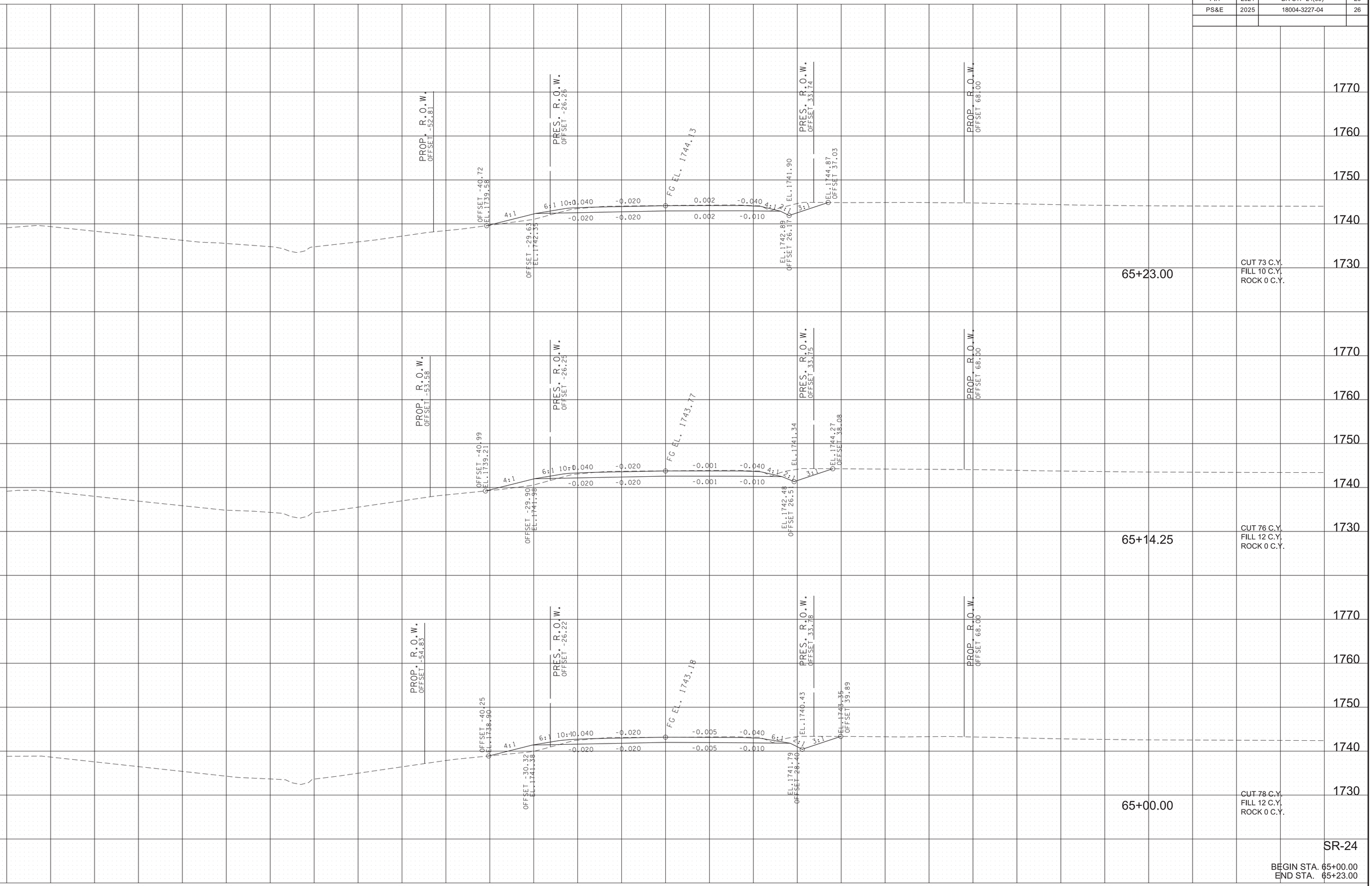
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	25
PIH	2024	BR-STP-24(69)	26
PS&E	2025	18004-3227-04	26



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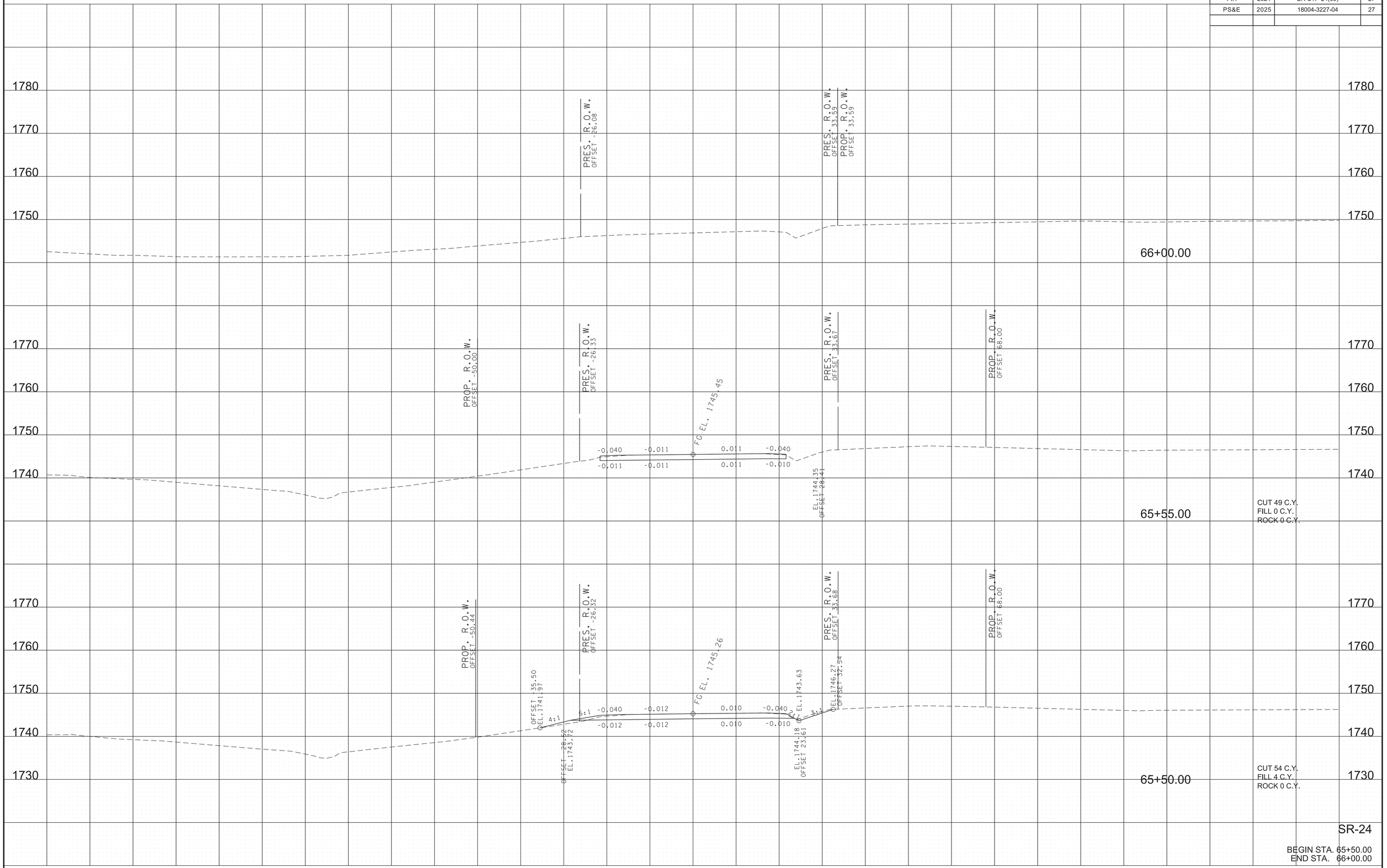
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	26
PIH	2024	BR-STP-24(69)	27
PS&E	2025	18004-3227-04	27



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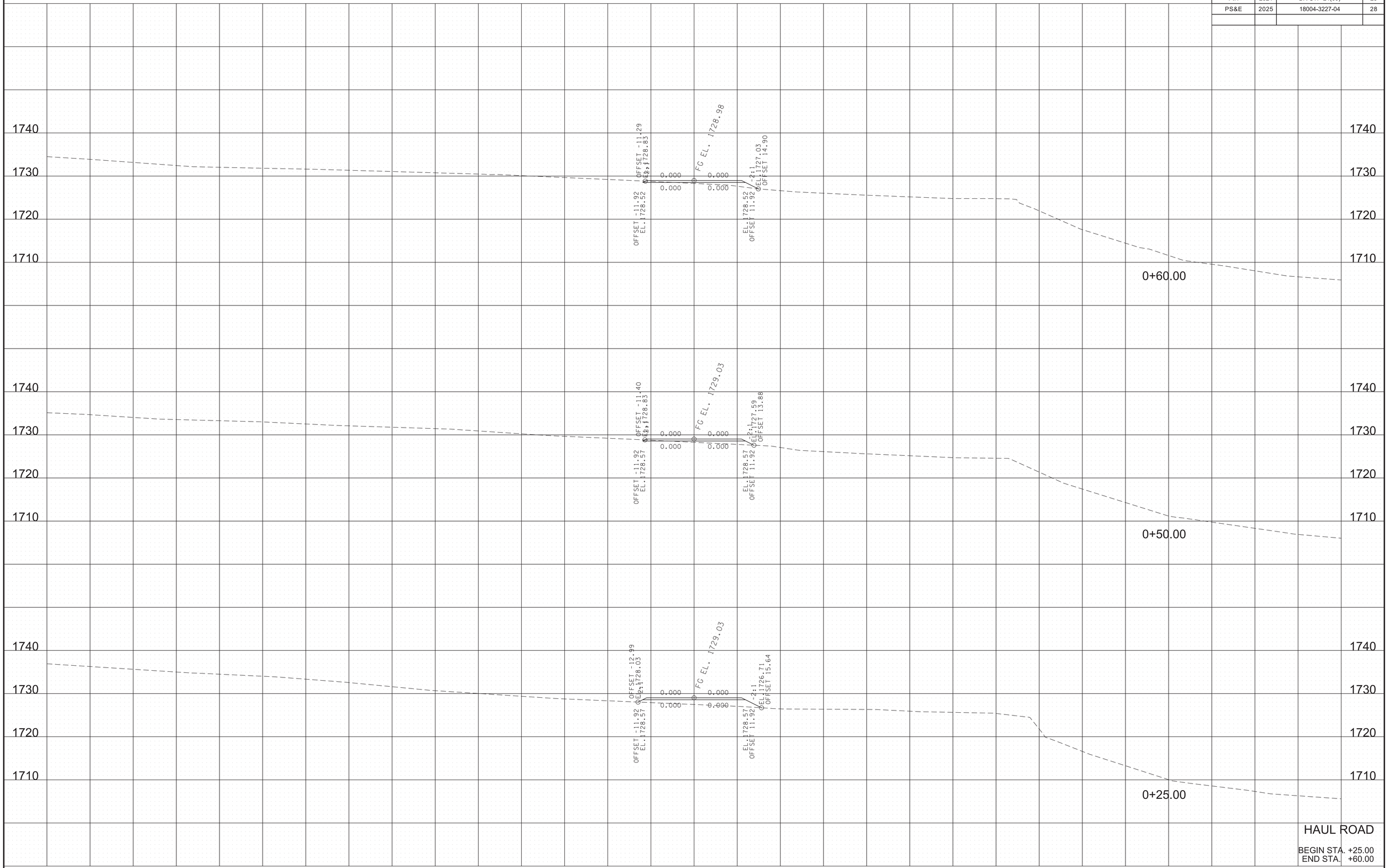
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	27
PIH	2024	BR-STP-24(69)	28
PS&E	2025	18004-3227-04	28



HAUL ROAD

BEGIN STA. +25.00
END STA. +60.00

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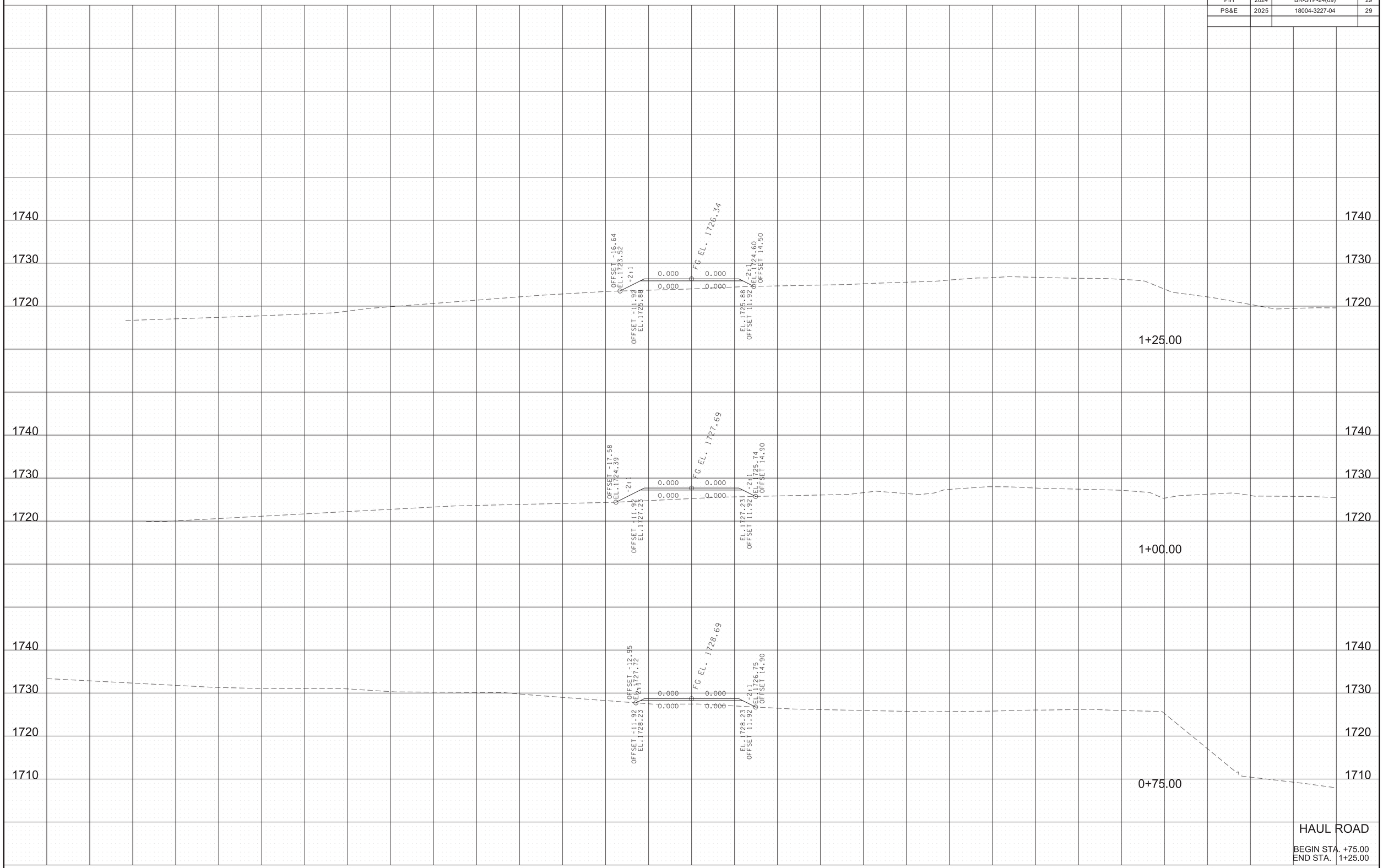
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	28
PIH	2024	BR-STP-24(69)	29
PS&E	2025	18004-3227-04	29



HAUL ROAD

BEGIN STA. +75.00
END STA. 1+25.00

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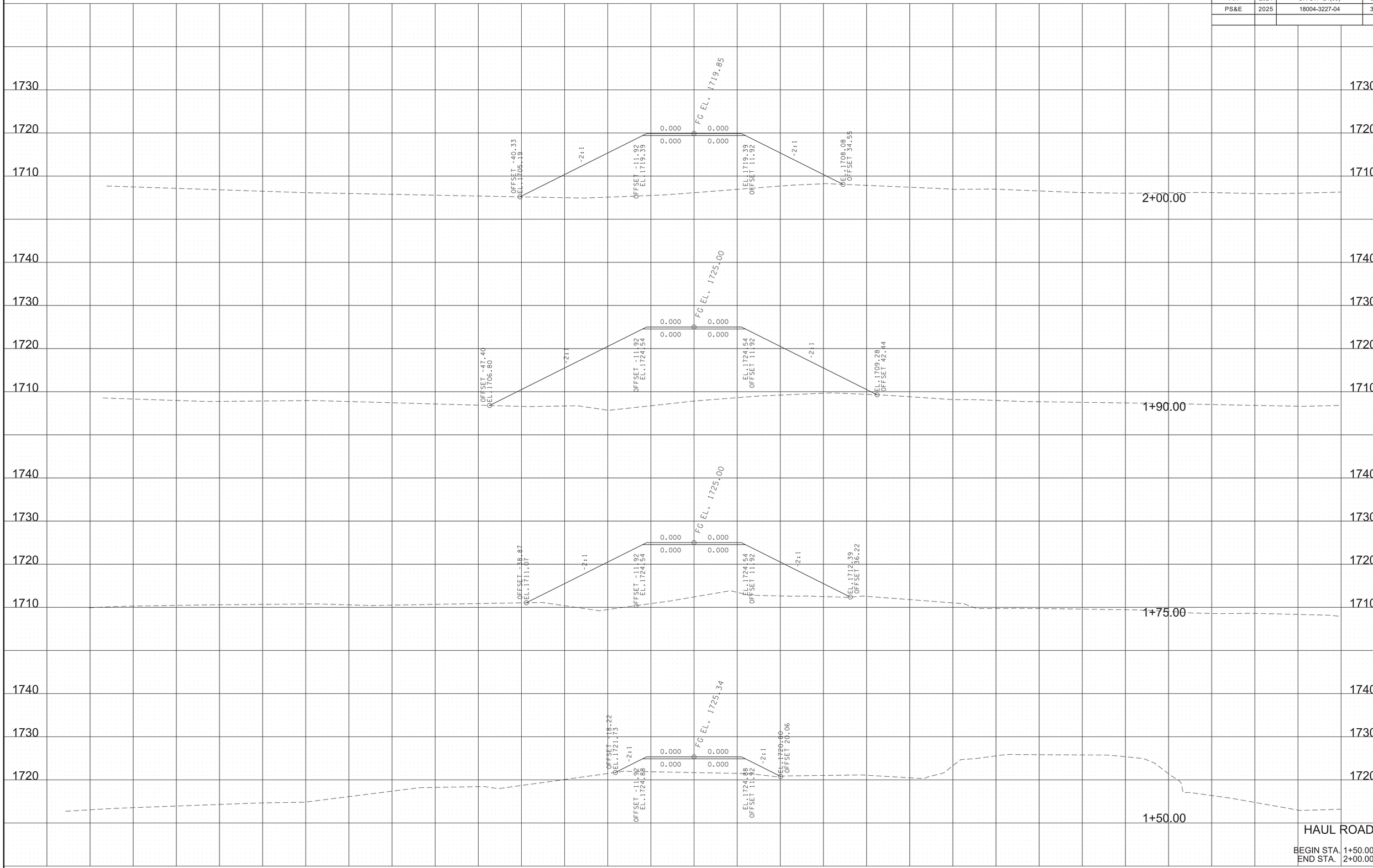
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	29
PIH	2024	BR-STP-24(69)	30
PS&E	2025	18004-3227-04	30



HAUL ROAD

BEGIN STA. 1+50.00
END STA. 2+00.00

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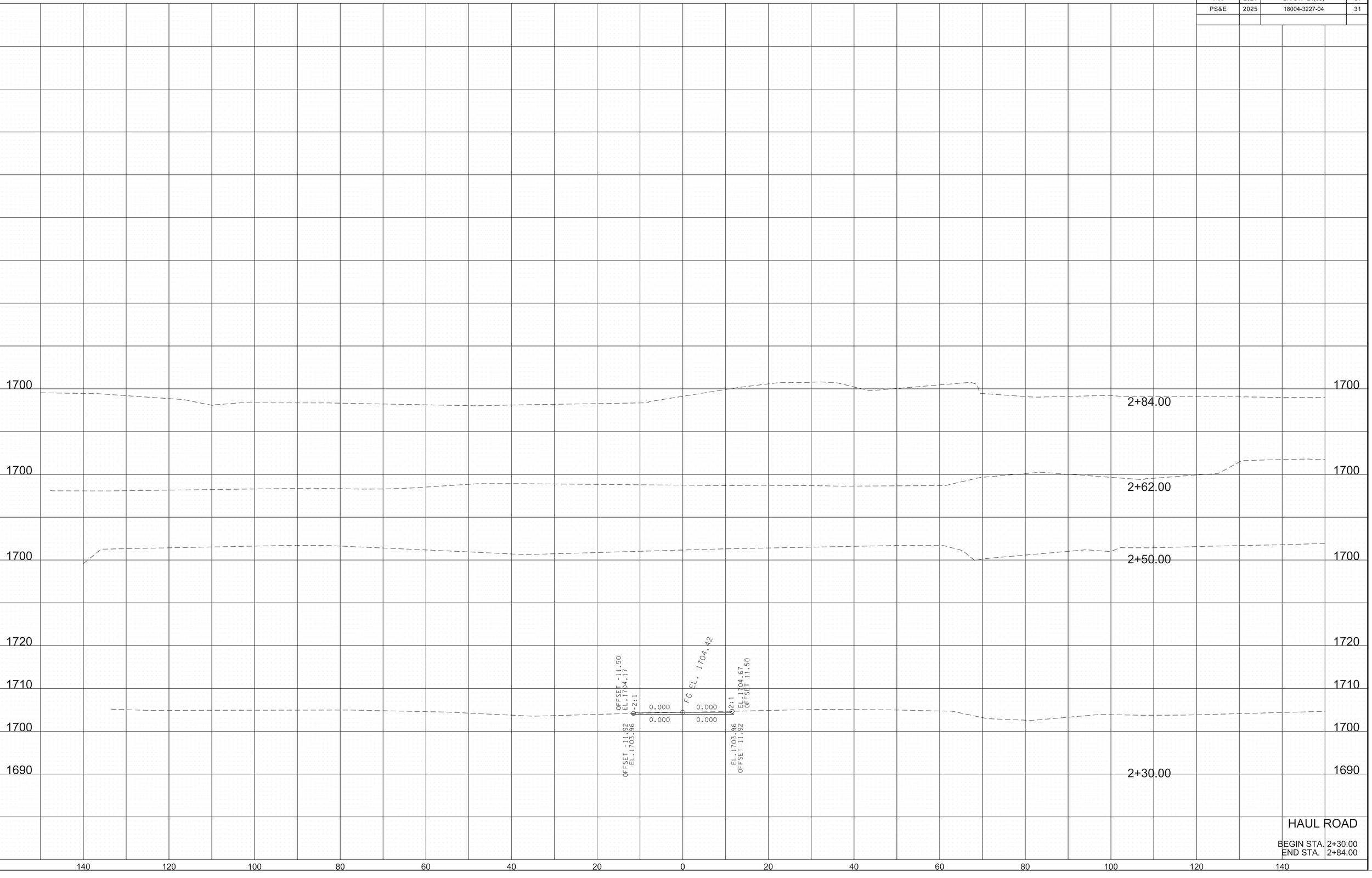
TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	30
PIH	2024	BR-STP-24(69)	31
PS&E	2025	18004-3227-04	31



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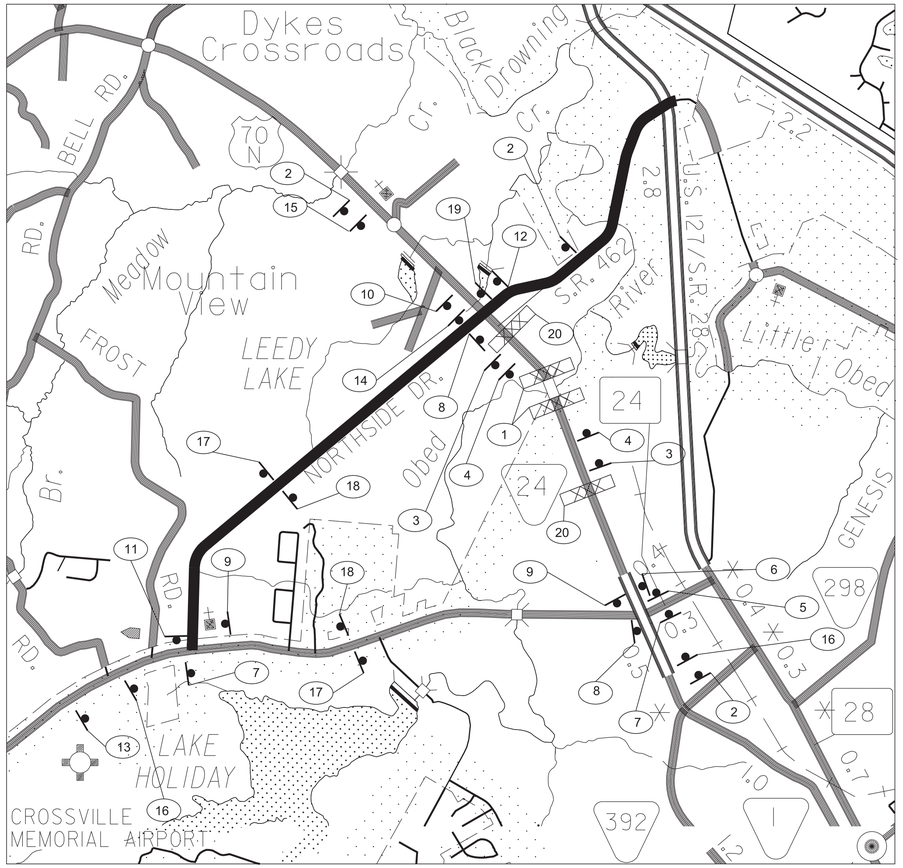


TRAFFIC CONTROL LEGEND	
SYMBOL	ITEM
	TEMPORARY BARRICADE (TYPE III)
	SIGNS (CONSTRUCTION)

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	BR-STP-24(69)	T1
PS&E	2025	18004-3227-04	T1

* 1	BRIDGE OUT	R11-2 48" X 30"	
2	DETOUR 1500 FT	W20-2 36" X 36"	
3	ROAD CLOSED 1000 FT	W20-3 36" X 36"	
4	ROAD CLOSED 500 FT	W20-3 36" X 36"	
5	BRIDGE OUT 1 MILE AHEAD LOCAL TRAFFIC ONLY / DETOUR	R11-3B 60" X 30" M4-10L 48" X 18"	
6	DETOUR / WEST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M6-3 21" X 15"	
7	DETOUR / WEST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M6-1L 21" X 15"	
8	END DETOUR	M4-8A 24" X 18"	
9	DETOUR / WEST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M6-1R 21" X 15"	
10	DETOUR / EAST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M6-1R 21" X 15"	
11	DETOUR / EAST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M6-1L 21" X 15"	
12	US 70 N CLOSED AT OBED RIVER	R11-4(MOD) 60" X 30"	
13	DETOUR AHEAD / 70N	W20-2 36" X 36" M1-4 30" X 24"	
14	BRIDGE OUT 2000 FT AHEAD LOCAL TRAFFIC ONLY / DETOUR	R11-3B 60" X 30" M4-10R 48" X 18"	
15	DETOUR / EAST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M5-1R 21" X 15"	
16	DETOUR / WEST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M5-1L 21" X 15"	
17	DETOUR / EAST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24"	
18	DETOUR / WEST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24"	
19	DETOUR / EAST / 70N	M4-8 24" X 12" M3-1 24" X 12" M1-4 30" X 24" M6-3 21" X 15"	
* 20	BRIDGE OUT LOCAL TRAFFIC ONLY	R11-3B 60" X 30"	

* TO BE MOUNTED ABOVE THE TEMPORARY BARRICADE (TYPE III)

TABULATED TRAFFIC CONTROL QUANTITIES

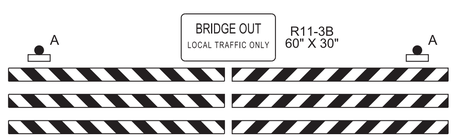
	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 18004-3227-04
	712-01	TRAFFIC CONTROL	LS	1
	712-05.01	WARNING LIGHTS (TYPE A)	EACH	16
	712-06	SIGNS (CONSTRUCTION)	S.F.	337
	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	96
1	713-16.01	CHANGEABLE MESSAGE SIGN UNIT	EACH	2

1. TO BE USED AS DIRECTED BY THE ENGINEER.

TRAFFIC CONTROL SIGN TABULATION

M.U.T.C.D. SIGN NO.	LEGEND	SIZE IN INCHES L	X	W	S.F.	NO. REQUIRED PHASE I	TOTAL NO. REQUIRED	ITEM NO. 712-06 S.F.	STANDARD DRAWING NO.	REMARKS
R11-2	BRIDGE OUT	48"	X	30"	10	2	2	20.00		
W20-2	DETOUR AHEAD	36"	X	36"	9	1	1	9.00		
W20-3	DETOUR AHEAD 1500 FT.	36"	X	36"	9	3	3	27.00		
W20-3	ROAD CLOSED 1000 FT.	36"	X	36"	9	2	2	18.00		
W20-3	ROAD CLOSED 500 FT.	36"	X	36"	9	2	2	18.00		
R11-3B	BRIDGE OUT, LOCAL TRAFFIC ONLY	60"	X	30"	13	4	4	50.00		
M4-10L	DETOUR ARROW, LEFT	48"	X	18"	6	1	1	6.00		
M4-10R	DETOUR ARROW, RIGHT	48"	X	18"	6	1	1	6.00		
M5-1R	ADVANCED ARROW 90 DEG RT	21"	X	15"	2	1	1	2.19		
M5-1L	ADVANCED ARROW 90 DEG LT	21"	X	15"	2	2	2	4.38		
M6-1R	RIGHT ARROW	21"	X	15"	2	3	3	6.56		
M6-1L	LEFT ARROW	21"	X	15"	2	3	3	6.56		
M6-3	STRAIGHT ARROW	21"	X	15"	2	2	2	4.38		
R11-4 (MOD)	US 70N CLOSED AT OBED RIVER	60"	X	30"	13	1	1	12.50		
M1-4	US 70N	30"	X	24"	5	16	16	80.00		
M4-8A	END DETOUR	24"	X	18"	3	2	2	6.00		
M4-8	DETOUR	24"	X	12"	2	15	15	30.00		
M3-1	WEST	24"	X	12"	2	9	9	18.00		
M3-1	EAST	24"	X	12"	2	6	6	12.00		
							TOTAL	337	S.F.	

TYPE III BARRICADE ROAD CLOSURE
w/ TYPE A
WARNING LIGHTS



TYPE III BARRICADE ROAD CLOSURE
w/ TYPE A
WARNING LIGHTS

SEALED BY

ANDREW WISNIEWSKI
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
0001.1997
STATE OF TENNESSEE

02-20-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS
N.T.S.

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THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

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PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

TENNESSEE DEPARTMENT OF TRANSPORTATION
JAMES K. POLK BUILDING, SUITE 1100
505 DEADERICK STREET
NASHVILLE, TN 37243
DAWOD BERWARY, P.E. NO. 119943

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

SHEET NAME	SHEET NO.
SIGNATURE SHEET	STRUCTURE-SIGN1
LAYOUT OF BRIDGE	U-95-539
GENERAL NOTES	U-95-540
ESTIMATED QUANTITIES	U-95-541
SUPERSTRUCTURE	U-95-543
SUPERSTRUCTURE DETAILS	U-95-544
SUPERSTRUCTURE DETAILS	U-95-545
SUPERSTRUCTURE DETAILS	U-95-546
PRESTRESSED BULB-TEE BEAM SPAN NO. 1 DETAILS	U-95-547
PRESTRESSED BULB-TEE BEAM SPAN NO. 2 DETAILS	U-95-548
ABUTMENT NO. 1	U-95-549
ABUTMENT NO. 1 DETAILS	U-95-550
ABUTMENT NO. 2	U-95-551
ABUTMENT NO. 2 DETAILS	U-95-552
PIER NO. 1	U-95-553
PIER NO. 1 DETAILS	U-95-554
BILL OF STEEL	U-95-556

YEAR	PROJECT NO.	SHEET NO.
2025	PS&E	STRUCTURE-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

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CONST. NO. 18004-3227-04

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

CUMBERLAND COUNTY

X281

STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE 15.37

CONTINUOUS, PRECAST,
PRESTRESSED CONCRETE
BULB-TEE WITH
COMPOSITE DECK SLAB

2 SPAN BRIDGE
SPAN NO. 1 = 101'-0"
SPAN NO. 2 = 137'-0"
TOTAL LENGTH = 238'-0"

44'-0" ROADWAY WITH
STD-1-1SS PARAPET

90°00'00" SKEW

LAYOUT DWG. NO.
U-95-539

ESTIMATED QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITIES	UNIT
202-04.01	REMOVAL OF STRUCTURES (EXISTING BRIDGE NO. 18-SR24-15.37)	1	L.S.
204-02.01	DRY EXCAVATION (BRIDGES)	137	C.Y.
204-03.01	WET EXCAVATION (BRIDGES)	44	C.Y.
204-04.01	ROCK EXCAVATION (BRIDGES)	200	C.Y.
204-05	ROCK DRILLING (BRIDGES)	62	L.F.
204-10.01	FOUNDATION PREPARATION (PIER NO. 1, STA. 59+22.00)	1	LS
303-01.02	GRANULAR BACKFILL (BRIDGES)	65	TON
604-01.32	CLASS A CONCRETE (LEVELING)	60	C.Y.
604-02.03	EPOXY COATED REINFORCING STEEL	83,816	LB.
604-03.01	CLASS A CONCRETE (BRIDGES)	194	C.Y.
604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	33,921	LB.
604-03.04	PAVEMENT @ BRIDGE ENDS	225	S.Y.
604-03.09	CLASS D CONCRETE (BRIDGE DECK)	324	C.Y.
604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	1,938	S.Y.
604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	1,306	S.Y.
615-01.12	PRESTRESSED CONCRETE BULB TEE BEAM (6" WEB) (BT-72)	1,168	L.F.
620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	554	L.F.
710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	151	L.F.
710-09.02	6" PIPE UNDERDRAIN	88	L.F.

LIST OF DRAWINGS

	DWG. NO.	LAST REV. DATE
SIGNATURE SHEET	STRUCTURE-SIGN1	
ESTIMATED BRIDGE QUANTITIES	B-1	
LAYOUT OF BRIDGE	U-95-539	
GENERAL NOTES	U-95-540	
ESTIMATED QUANTITIES	U-95-541	
FOUNDATION DATA	U-95-542	
SUPERSTRUCTURE	U-95-543	
SUPERSTRUCTURE DETAILS	U-95-544	
SUPERSTRUCTURE DETAILS	U-95-545	
SUPERSTRUCTURE DETAILS	U-95-546	
PRESTRESSED BULB-TEE BEAM SPAN NO. 1	U-95-547	
PRESTRESSED BULB-TEE BEAM SPAN NO. 2	U-95-548	
ABUTMENT NO. 1	U-95-549	
ABUTMENT NO. 1 DETAILS	U-95-550	
ABUTMENT NO. 2	U-95-551	
ABUTMENT NO. 2 DETAILS	U-95-552	
PIER NO. 1	U-95-553	
PIER NO. 1 DETAILS	U-95-554	
FINAL FOUNDATION DATA	U-95-555	
BILL OF STEEL	U-95-556	

LIST OF STANDARD DRAWINGS

	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-1SS	07-24-24
STEEL SLIDER PLATE ASSEMBLES FOR SINGLE SLOPE CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS	STD-1-2SS	05-31-24
REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS	STD-1-5	06-25-23
STANDARD PILE DETAILS	STD-5-1	
STANDARD SEISMIC DETAILS	STD-6-1	12-08-23
STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	06-05-23
MISCELLANEOUS ABUTMENT AND PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS	STD-10-2	06-05-23
STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR BULB-TEE BEAMS	STD-14-1	06-05-23

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED BRIDGE QUANTITIES

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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

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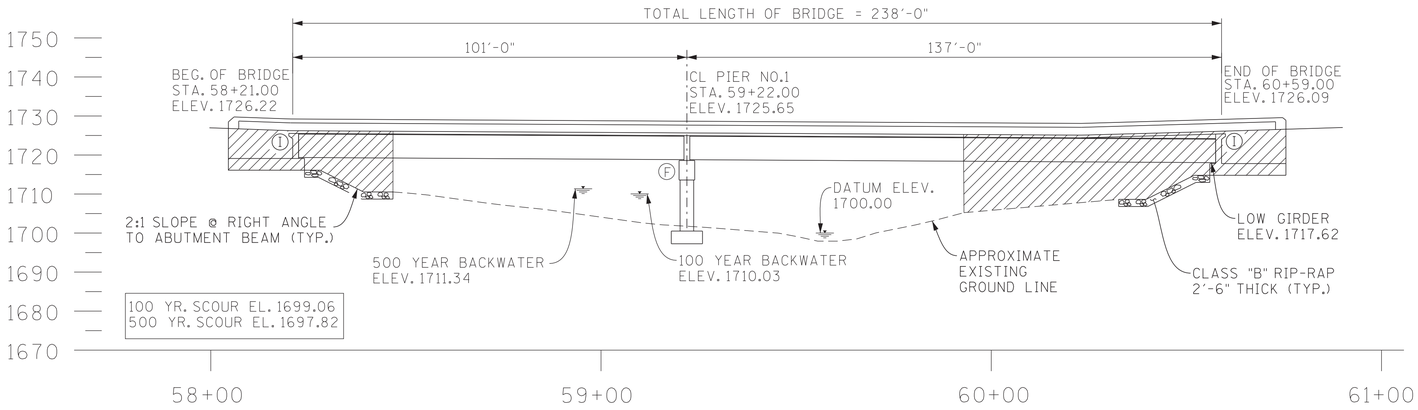
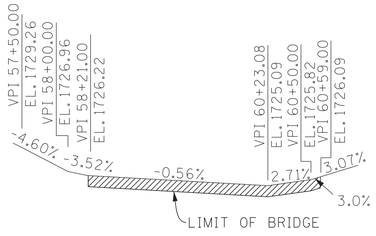


ELEVATION

(SCALE 1" = 20'-0")

Ⓘ DENOTES: INTEGRAL.
Ⓕ DENOTES: FIXED.
DENOTES: EXISTING BENTS.
DENOTES: AREA TO BE EXCAVATED AND PAID FOR AS A ROADWAY ITEM.



GRADE SKETCH

(STATE ROUTE 24)

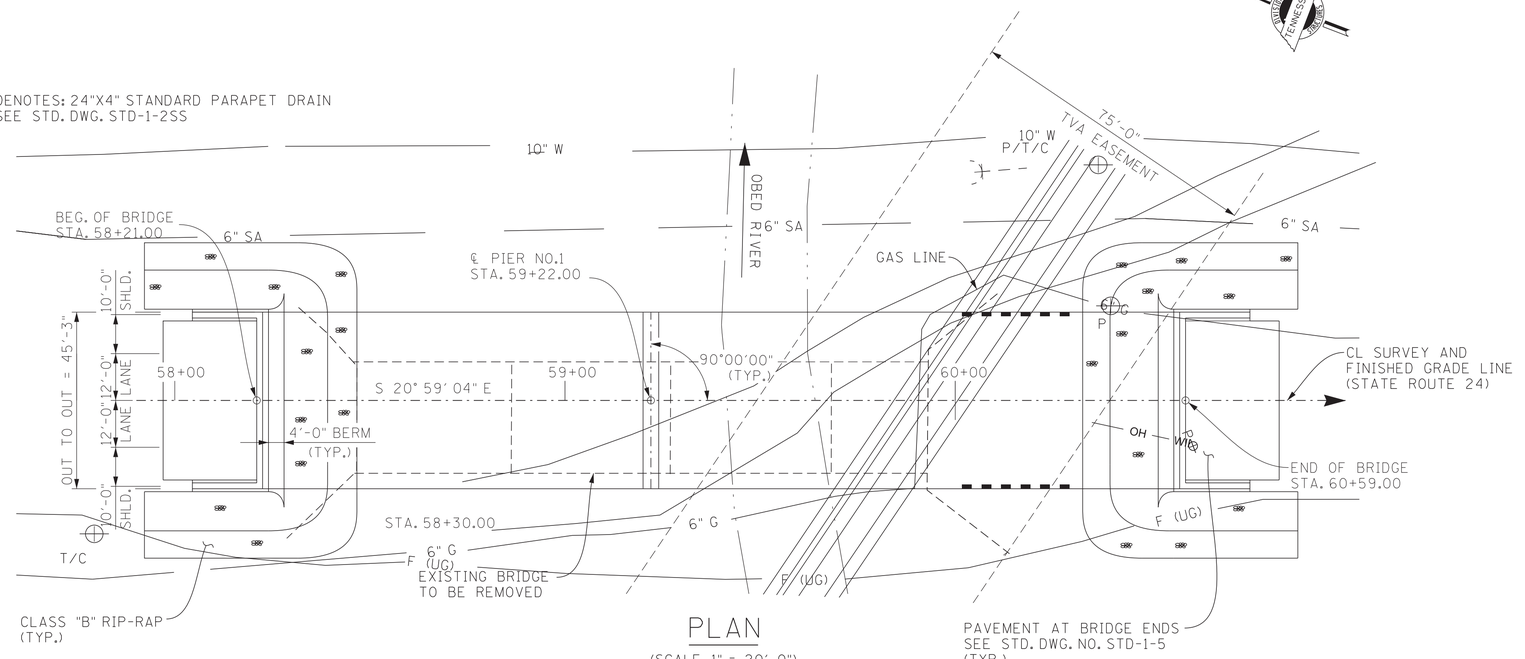
LIST OF DRAWINGS

	DWG. NO.	LAST REV. DATE
LAYOUT OF BRIDGE	U-95-539	--/--/--
GENERAL NOTES	U-95-540	--/--/--
ESTIMATED QUANTITIES	U-95-541	--/--/--
FOUNDATION DATA	U-95-542	--/--/--
SUPERSTRUCTURE	U-95-543	--/--/--
SUPERSTRUCTURE DETAILS	U-95-544	--/--/--
SUPERSTRUCTURE DETAILS	U-95-545	--/--/--
SUPERSTRUCTURE DETAILS	U-95-546	--/--/--
PRESTRESSED BULB-TEE BEAM SPAN NO. 1	U-95-547	--/--/--
PRESTRESSED BULB-TEE BEAM SPAN NO. 2	U-95-548	--/--/--
ABUTMENT NO. 1	U-95-549	--/--/--
ABUTMENT NO. 1 DETAILS	U-95-550	--/--/--
ABUTMENT NO. 2	U-95-551	--/--/--
ABUTMENT NO. 2 DETAILS	U-95-552	--/--/--
PIER NOS. 1	U-95-553	--/--/--
PIER NOS. 1 DETAILS	U-95-554	--/--/--
FINAL FOUNDATION DATA	U-95-555	--/--/--
BILL OF STEEL	U-95-556	--/--/--

LIST OF STANDARD DRAWINGS

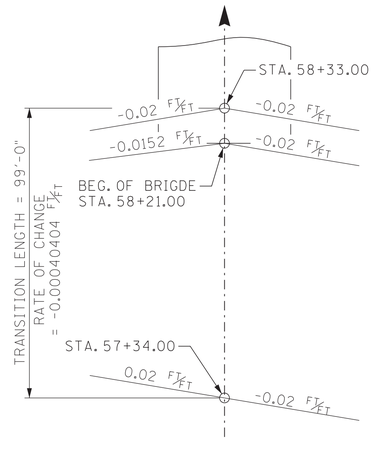
	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-1SS	07-24-24
STEEL SLIDER PLATE ASSEMBLIES FOR SINGLE SLOPE CONCRETE PARAPET AND PRIDGE DECK DRAIN DETAILS	STD-1-2SS	05-31-24
RINFORCED CONCRTE PAVEMENT AND BRIDGE ENDS	STD-1-5	06-05-23
STANDARD PILE DETAILS	STD-5-1	
STANDARD SEISMIC DETAILS	STD-6-1	12-08-23
STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	06-05-23
MISCELLANEOUS ABUTMENT ℄ PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS	STD-10-2	06-05-23
STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAILS FOR BULB-TEE BEAMS	STD-14-1	06-05-23

▬ DENOTES: 24"X4" STANDARD PARAPET DRAIN
SEE STD. DWG. STD-1-2SS



PLAN

(SCALE 1" = 20'-0")



TRANSITION SKETCH

(STATE ROUTE 24)

HYDRAULIC DATA

DRAINAGE AREA	13.79 SQ.MI.
DESIGN DISCHARGE (100YR)	2027 CFS
WATER AREA PROVIDED BELOW ELEV. 1710.03 FT	974.62 FT'
100 YR VELOCITY	2.08 FPS
100 YEAR BACKWATER	1.70 FT @ ELEV. 1710.03
ROADWAY OVERTOPPING ELEV.	1725.10
500 YR BACKWARTER ELEV.	1711.34

CURVE DATA

(STATE ROUTE 24)

PI	56+24.37
N	599,118.2052
E	2,250,229.6769
~	11° 25' 56" (RT)
D	4° 46' 28"
R	1,200.02
L	239.44
T	120.12

SE 0.061 FT/FT
DESIGN SPEED 45 MPH
TRANS. LENGTH 201.50'

PARAPET DRRAIN STATIONS FOR LEFT AND RIGHT SIDE OF BRIDGE:

STA. 60+03.00
STA. 60+08.00
STA. 60+13.00
STA. 60+18.00
STA. 60+23.00
STA. 60+28.00

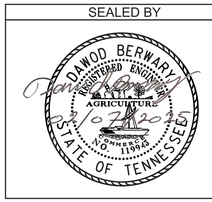
ANY EXCAVATION OF THE STREAM CHANNEL AREA SHALL BE SEPARATED FROM FLOWING WATER OR EXPECTED FLOW PATH AND PERFORMED DURING LOW CONDITION. THIS SHALL BE ACCOMPLISHED BY THE USE OF SHEET PILES, FLUMES, DIVERSION PIPE WITH SAND BAG DAM AT PIPE INLET, LINED DIVERSION CHANNEL WITH SAND BAG BERM, JERSEY BARRIERS, ETC. ANY EXCAVATION NOT DESIGNATED AS BRIDGE EXCAVATION 204-XX IS TO BE PAID FOR AS ROADWAY ITEM NUMBER 203-01 ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) AND FOOTNOTED "UNSUITABLE FOR ROADWAY FILL MATERIAL". OTHER ITEMS FOR EROSION CONTROL AND DIVERSION LIKE BUT NOT LIMITED TO THE ITEMS LISTED ABOVE ARE TO BE PAID AS A LUMP SUM FOR SEQUENCING FOR CONSTRUCTION IN THE DRY UNDER ITEM NUMBER 209-65.2X.

PIN NO.: 124053.00

DESIGN BY:	DAWOD BERWARY	DATE:	9-24
DRAWN BY:	B. ERVIN	DATE:	10-24
SUPERVISED BY:	STEELE/BERWARY	DATE:	10-24
CHECKED BY:	R. LEFEVRE/J. RAMSEY	DATE:	11-24

CORRECT
ENGINEER OF STRUCTURES

SEALED BY



2047 ADT = 8300
44'-0" ROADWAY WITH STD-1-1SS PARAPETS
DESIGN SPEED = 45 mph

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LAYOUT OF BRIDGE
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-539

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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2021 EDITION). [AND CURRENT AREMA SPECIFICATIONS EXCEPT AS MODIFIED ON THESE DRAWINGS.

DESIGN SPECIFICATIONS: 9TH EDITION (2020) AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS AND THE 2ND EDITION (2011) AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN WITH INTERIMS.

LOADING:

A. HL-93 LIVE LOADING
B. SEISMIC DESIGN CATEGORY "A" WITH A_S= 0.108, S_{DS}=0.232 S_{D1}=0.112, (1000 YEAR RETURN PERIOD).
C. DEAD LOAD INCLUDES 35 LB/SQ. FT. FOR FUTURE WEARING SURFACE.

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

BRIDGE DECKS: CLASS D CONCRETE FOR BRIDGE DECKS SHALL BE IN ACCORDANCE WITH SECTION 604 OF THE STANDARD SPECIFICATIONS.

BRIDGE DECK SURFACE FINISH: TO BE IN ACCORDANCE WITH METHOD 3 IN ARTICLE 604.22 OF THE STANDARD SPECIFICATIONS.

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS SHALL BE REMAIN-IN-PLACE STEEL. FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL. TEMPORARY ERECTION DIAPHRAGMS MUST BE USED AT THE ENDS OF PRECAST CONCRETE GIRDERS WHERE END DIAPHRAGMS, SUPPORT DIAPHRAGMS, OR ABUTMENT ENDWALLS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE STANDARD DRAWING STD-14-1 AND ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.

REINFORCING STEEL: SHALL BE ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE. SEE SECTIONS 604 AND 907 OF THE STANDARD SPECIFICATIONS

FOUNDATION PREPARATION: SEE SECTION 204 OF THE STANDARD SPECIFICATIONS. IF IT IS DETERMINED THAT COFFERDAMS ARE REQUIRED, THEY SHALL BE IN ACCORDANCE WITH SECTION 204.09 OF THE STANDARD SPECIFICATIONS.

SPREAD FOOTINGS FOR BENTS: FOOTINGS SHALL BE EMBEDDED 6 INCHES INTO SOUND ROCK. AS AN ALTERNATE, FOOTINGS MAY BE PLACED DIRECTLY ON CLEAN, SOUND ROCK WITH #8 BARS (1'-0" EMB., 1'-0" PROJ.) SPACED AT 2'-0" MAXIMUM GRID WITH A MAXIMUM EDGE DISTANCE TO THE OUTER BARS OF 1'-6" ALONG BOTH THE LENGTH AND WIDTH OF THE FOOTINGS. AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6' DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER OF STRUCTURES SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR BENT COLUMNS OR FOOTINGS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

ABUTMENTS ON FILL: THE FILLS AT THE ENDS OF THE BRIDGE SHALL BE IN PLACE AND THOROUGHLY COMPACTED BEFORE ANY ABUTMENT PILES ARE DRIVEN.

ABUTMENT SUPPORT: THE CONTRACTOR SHALL SUPPORT THE ABUTMENTS UNTIL THE SUPERSTRUCTURE IS IN PLACE, FALSEWORK HAS BEEN REMOVED, AND BACKFILLING HAS BEEN COMPLETED.

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

SLAB OVERHANGS: IT IS RECOMMENDED THAT SPACING OF OVERHANG BRACKETS FOR BEAMS NOT EXCEED 2'-0" CENTER-TO-CENTER.

UTILITIES: IT IS INTENDED THAT THE COST OF MATERIALS AND LABOR NECESSARY FOR THE COMPLETE INSTALLATION OF UTILITIES SHALL BE BORNE BY OTHERS AND SHALL NOT BE PAID FOR AS A PART OF THIS CONTRACT. THE CONTRACTOR SHALL COOPERATE WITH OTHERS IN THE INSTALLATION OF UTILITIES WITH NO ADDITIONAL COMPENSATION ALLOWED THE CONTRACTOR AS A RESULT.

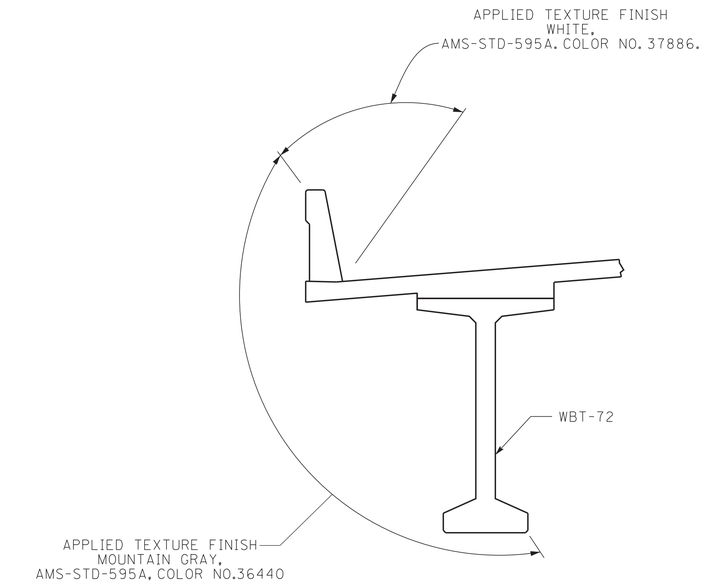
SHOP DRAWINGS: SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS.

PARAPET SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING STD-1-1SS. THE PARAPETS SHALL BE FORMED AND CAST PLUMB, NOT PERPENDICULAR TO THE SLAB. THE DIMENSIONS AT THE TRAFFIC FACE SHALL BE KEPT CONSTANT, WITH VARIATION DUE TO CROSS-SLOPE ACCOMMODATED AT THE REAR FACE.

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS" B" IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM NO. 709-05.05

VALUE ENGINEERING ALTERNATE BRIDGE DESIGN CRITERIA: ALTERNATE BRIDGE DESIGN PROPOSALS MAY NOT DIMINISH THE FUNCTIONAL OR STRUCTURAL EQUIVALENCY OF THE BRIDGE AND MUST MEET OR EXCEED THE CAPACITIES OF THE CONTRACT PLANS STRUCTURE AT ALL LIMIT STATES IN AASHTO TABLE 3.4.1-1. ADDITIONALLY, THE WATERWAY OPENING AND FLOOD CLEARANCES MAY NOT BE REDUCED.

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE BRIDGE SITE. THE APPLIED TEXTURE FINISH SHALL BE MEASURED AND PAID FOR UNDER ITEM NO. 604-04.01



APPLIED TEXTURE FINISH SKETCH

NOTE: IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH, ALL EXPOSED SURFACES OF THE WINGWALLS, ABUTMENT BEAMS, EXTERIOR PORTIONS OF THE ENDWALLS AND BENTS ARE TO RECEIVE AN APPLIED TEXTURE FINISH (MOUNTAIN GRAY, AMS-STD-595A, COLOR NO. 36440).

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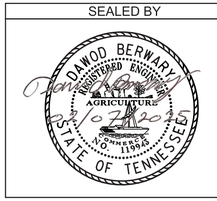

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: STEVEN STEELE DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-540

2/19/2025 8:36:05 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUT. NO. 1	PIER NO. 1	ABUT. NO. 2
2	202-04.01	REMOVAL OF STRUCTURES (EXISTING BRIDGE NO. 18-SR24-15.37)	L.S.	1				
3	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	137		111	16	10
3	204-03.01	WET EXCAVATION (BRIDGES)	C.Y.	44			44	
3	204-04.01	ROCK EXCAVATION (BRIDGES)	C.Y.	200		22	27	151
	204-05	ROCK DRILLING (BRIDGES)	L.F.	62		25	12	25
4	204-10.01	FOUNDATION PREPARATION (PIER NO. 1, STA 59+22.00)	LS	1				
11	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	65		32		33
	604-01.32	CLASS A CONCRETE (LEVELING)	C.Y.	60		30		30
	604-02.03	EPOXY COATED REINFORCING STEEL	LB.	83,816	79,481	2,072		2,263
10	604-03.01	CLASS A CONCRETE (BRIDGES)	C.Y.	194		64	60	70
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	33,921	933	7,165	17,995	7,828
1	604-03.04	PAVEMENT @ BRIDGE ENDS	S.Y.	225				
	604-03.09	CLASS D CONCRETE (BRIDGE DECK)	C.Y.	324	324			
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	1,938	1,641	70	153	74
	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	1,306				
7	615-01.12	PRESTRESSED CONCRETE BULB TEE BEAM (6" WEB)(BT-72)	L.F.	1,168				
5	620-05.01	CONC PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	554				
9	710-09.01	6" PERFORATED PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	151		74		77
	710-09.02	6" PIPE UNDERDRAIN	L.F.	88		43		45

ESTIMATED QUANTITIES NOTES

1) **NOTE:** PRIOR TO CONSTRUCTION OF THE PAVEMENT AT BRIDGE ENDS, THE CONTRACTOR SHALL SUBMIT A PROPOSED BILL OF STEEL TO THE ENGINEER FOR APPROVAL.

2) **NOTE:** LUMP SUM TO INCLUDE COMPLETE REMOVAL OF EXISTING BRIDGE NO. 18-SR024-15.37 APPROCHES TO BE REMOVED TO NATURAL GROUND BETWEEN STATIONS 58+21 AND 60+30. THE EXISTING BRIDGE IS A 4 SPAN CONCRETE CONTINUOUS TEE BEAMS, REINFORCED CONCRETE ABUTMENTS AND THREE PIERS. THE BRIDGE HAS 28'-0" WIDTH AND 149'-6" TOTAL LENGTH.

3) **NOTE:** EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND EXISTING GROUND AT PIER.

4) **NOTE:** SEE FOUNDATION PREPARATION NOTE ON GENERAL NOTES SHEET.

5) NOTE: COST OF 12 BRIDGE PARAPET DRAINS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PARAPET. SEE DRAWING NO. U-95-539.

6) **NOTE:** THE COST OF BITUMINOUS-FIBERBOARD AND ALL MISCELLANEOUS JOINT MATERIAL TO BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

7) **NOTE:** COST OF ELASTOMERIC PADS AND RUBBER BONDING CEMENT TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PRESTRESSED BEAM.

8) **NOTE:** INTERMEDIATE DIAPHRAGMS SHALL BE PAID FOR IN ACCORDANCE WITH STANDARD DRAWING STD-14-1.

9) **NOTE:** COST OF POLYETHYLENE SHEETING AND ALL MISCELLANEOUS ITEMS NECESSARY FOR INSTALLATION TO BE INCLUDED IN THE UNIT PRICE BID FOR PERFORATED PIPE.

10) **NOTE:** THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF 15 ANCHOR BOLT ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS A CONCRETE (BRIDGES), ITEM NO. 604-03.01.

11) **NOTE:** GRANULAR BACKFILL SHALL BE TYPE "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING STD-10-1.

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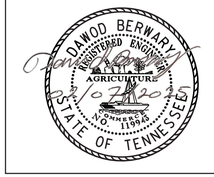

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DRAWN BY:	STEVEN STEELE	DATE:	10-24
SUPERVISED BY:	STEELE/BERWARY	DATE:	10-24
CHECKED BY:	R. LEFEVRE/J. RAMSEY	DATE:	11-24

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED QUANTITIES
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-541

2/19/2025 8:41:17 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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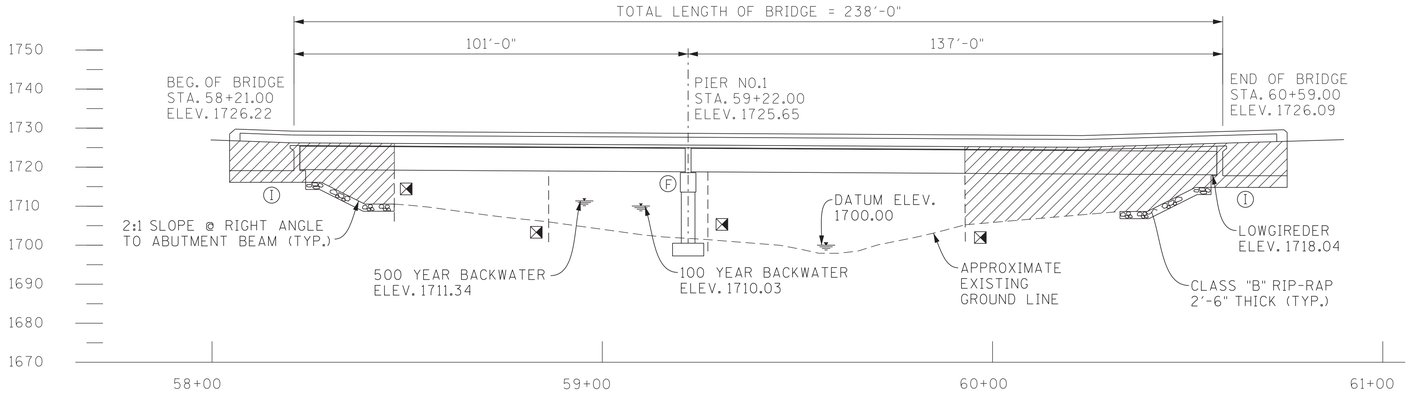
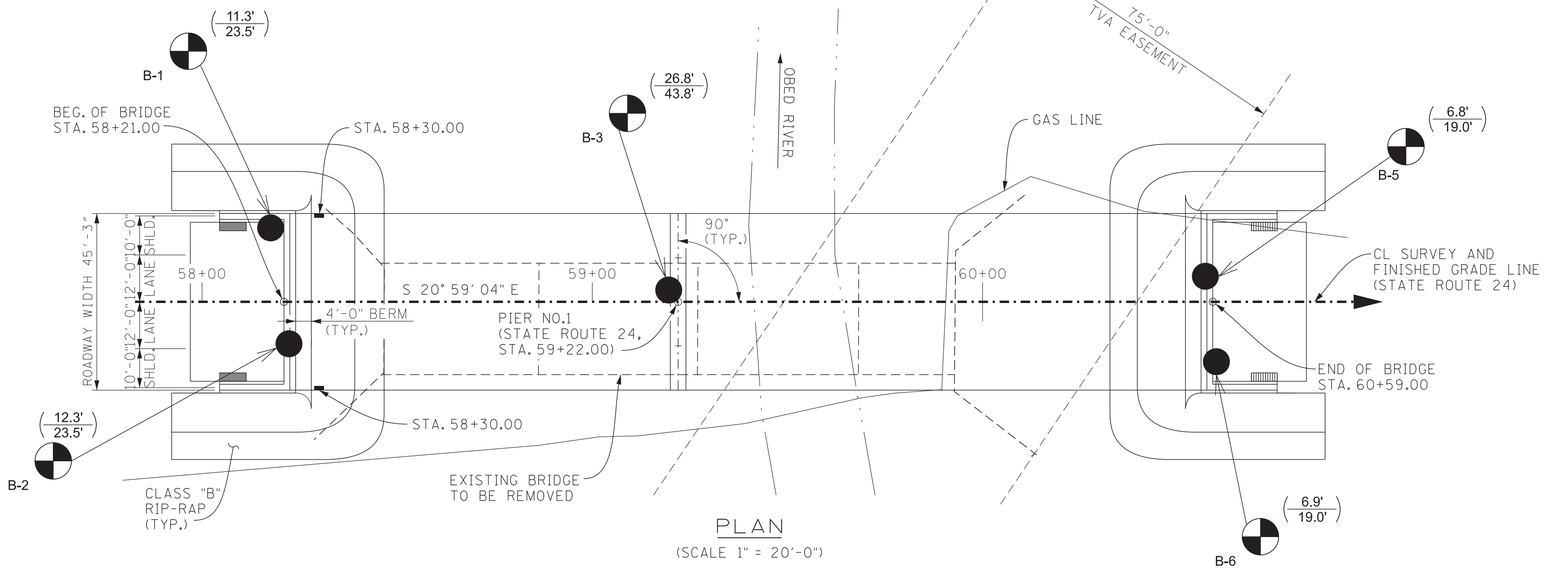


Ⓘ DENOTES: INTEGRAL.
Ⓕ DENOTES: FIXED.
⊠ DENOTES: EXISTING BENTS.
▨ DENOTES: AREA TO BE EXCAVATED AND PAID FOR AS A ROADWAY ITEM.

ELEVATION

(SCALE 1" = 20'-0")

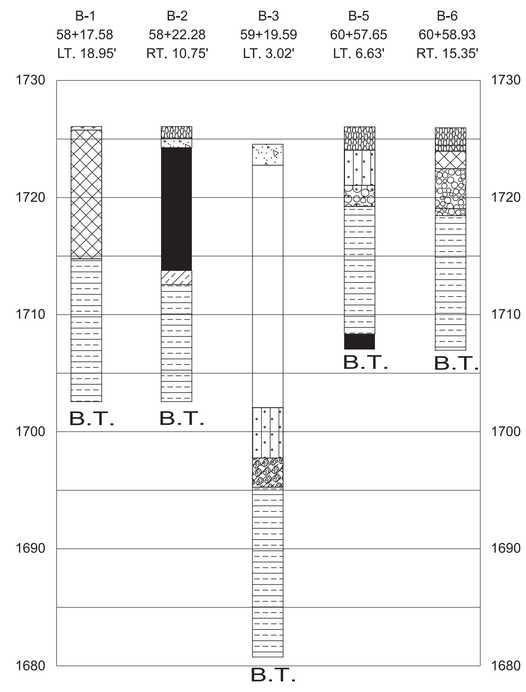


PLAN

(SCALE 1" = 20'-0")

BORING NO.	STATION	OFFSET	GROUND ELEVATION	ROCK ELEVATION	TOTAL DEPTH
B-1	58+17.58	LT. 18.95'	1726.07	1714.77	23.5'
B-2	58+22.28	RT. 10.75'	1726.07	1713.77	23.5'
B-3	59+19.59	LT. 3.02'	1724.56	1695.26	43.8'
B-5	60+57.65	LT. 6.63'	1726.04	1719.14	19.0'
B-6	60+58.93	RT. 15.35'	1725.96	1718.46	19.0'

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



LEGEND

- ASPHALT / BASESTONE
- CONCRETE
- TOPSOIL / GRASS ROOT DEBRIS
- AIR (SPACE BETWEEN BRIDGE DECK AND GROUND SURFACE)
- NO RECOVERY OR WASH-BORE THROUGH OVERBURDEN
- FILL
- SILTY SAND
- GRAVEL - WITH SAND / SILT
- BOULDER / COBBLE
- WEATHERED SANDSTONE
- SANDSTONE

B.T.= BORING TERMINATED

SEALED BY

LEGEND

(11.3' / 23.5') B-1 — BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)

NOTES

DESIGN SPECIFICATIONS: AASHTO LRFD 9TH EDITION 2020 WITH INTERIMS AND THE 2011 AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN 2ND EDITION WITH INTERIMS. SEISMIC CATEGORY "B" WITH AS= 0.152, SDS = 0.275, SD1 = 0.069 (1000 YEAR RETURN PERIOD).

NOTE: THIS DRAWING IS FOR FOUNDATION DATA ONLY AND NOT TO BE USED AS A LAYOUT.

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: B. ERVIN DATE: 11-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

2047 ADT = 8300
44'-0" ROADWAY WITH STD-1-1SS PARAPETS
DESIGN SPEED = 45 mph
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FOUNDATION DATA
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-542

2/19/2025 8:54:27 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
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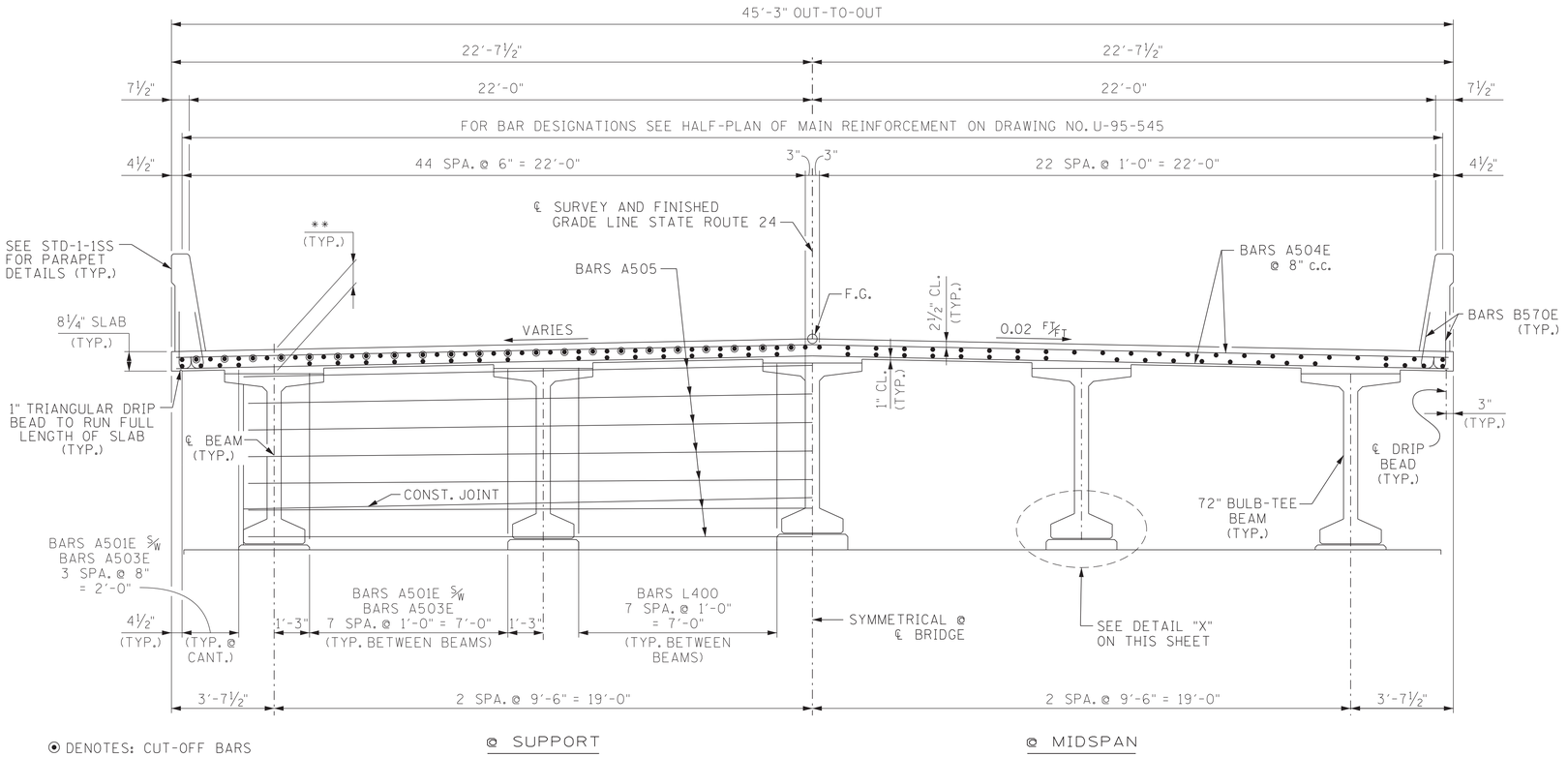


TYPICAL CROSS SECTION

(LOOKING FORWARD ON SURVEY)

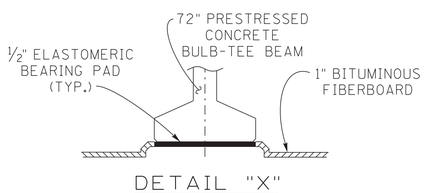
NOTE: NO PORTION OF THE PARAPETS SHALL BE POURED UNTIL THE ENTIRE DECK SLAB IS IN PLACE.

NOTE: WHEN POURING SLAB, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR PARAPET. THE PARAPET SHALL NOT BE POURED UNTIL THE SLAB IS POURED AND CURED.

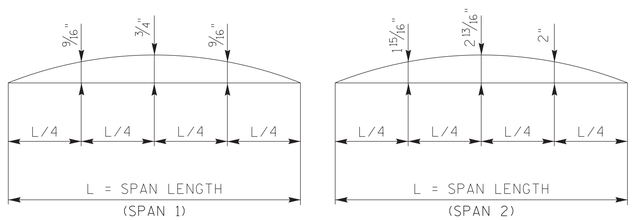
NOTE: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE BEAMS TO PREVENT DAMAGE DUE TO TWISTING OR OVERTURNING DURING ALL PHASES OF CONSTRUCTION. WHILE IT IS STRONGLY RECOMMENDED THAT BOTH THE TEMPORARY ERECTION DIAPHRAGMS AND THE PERMANENT INTERMEDIATE DIAPHRAGMS BE INSTALLED PRIOR TO PLACING ANY LOADS ON THE BEAMS, IT IS REQUIRED THAT ALL TEMPORARY ERECTION DIAPHRAGMS AND ALL PERMANENT INTERMEDIATE DIAPHRAGMS IN A SPAN BE FULLY INSTALLED PRIOR TO POURING ANY PORTION OF THE SLAB IN THAT SPAN.

NOTE: THE SUPPORT DIAPHRAGMS AT THE PIERS SHALL BE FORMED AND THE BOTTOM 15 INCHES POURED AS SOON AS POSSIBLE AFTER THE BEAMS HAVE BEEN SET. THE REMAINDER OF THE DIAPHRAGMS SHALL BE POURED CONCURRENTLY WITH THE DECK SLAB. THE BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE REMAINDER OF THE SUPPORT DIAPHRAGMS AND DECK SLAB. ALL DIAPHRAGM CONCRETE SHALL BE INCLUDED IN THE QUANTITY FOR CLASS D CONCRETE.

ANCHOR BOLTS AT BENTS: ANCHOR BOLT ASSEMBLIES AT BENTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING STD-6-1.



DETAIL "X"



DEAD LOAD CORRECTION CURVE

DEAD LOAD CORRECTION CURVE: THIS CURVE IS FOR DEAD LOAD SLAB AND ALL DEAD LOADS THAT ARE APPLIED AFTER SLAB IS IN PLACE AND SHOULD BE CORRECTED TO COMPENSATE FOR THE EFFECTS DUE TO VERTICAL CURVE.

ESTIMATED QUANTITIES

CLASS 'D' CONCRETE (BRIDGE DECK) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.	EPOXY COATED REINFORCING STEEL LBS.
324	933	79,481

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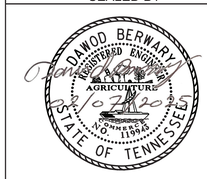

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: B. ERVIN DATE: 10-24
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-543

2/19/2025 8:38:46 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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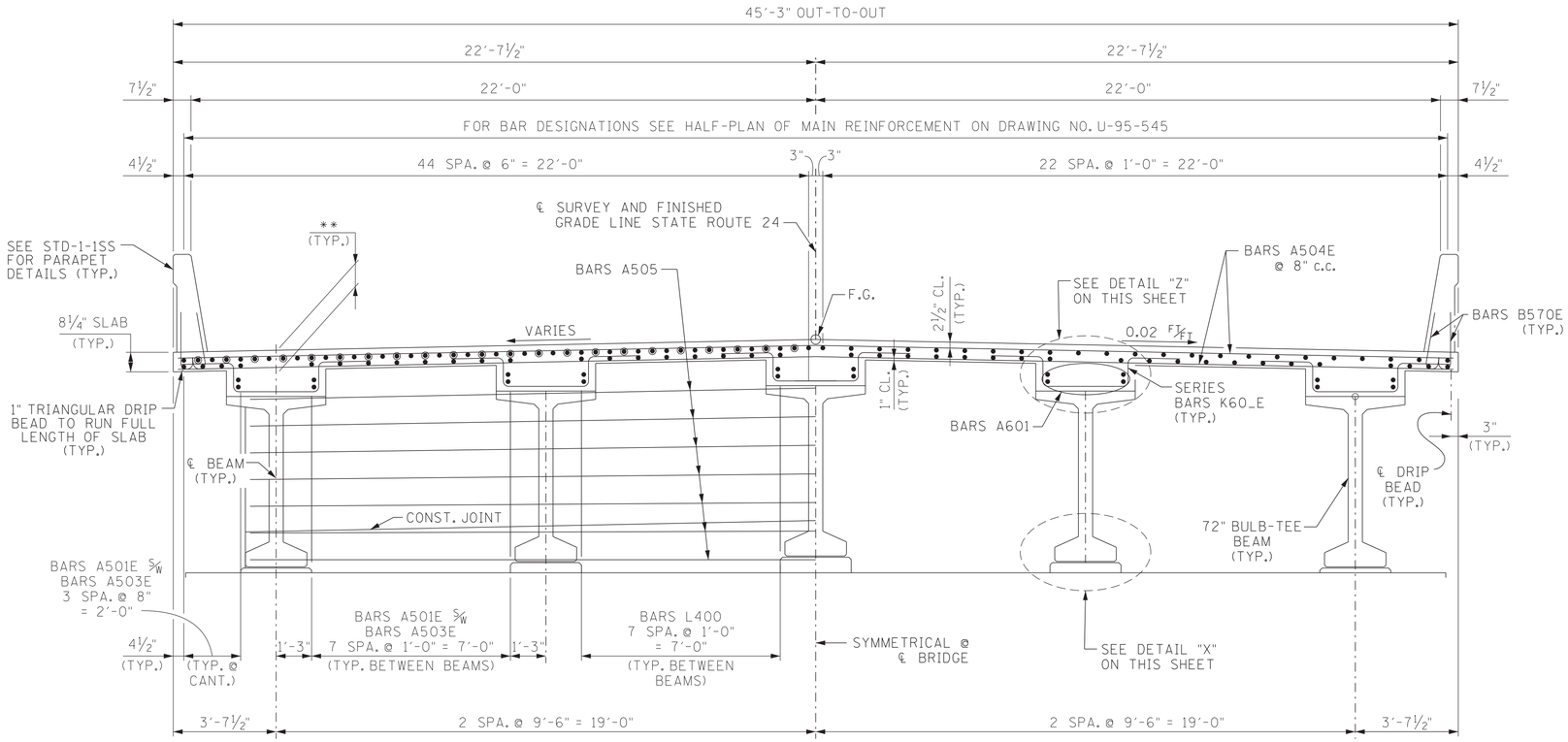
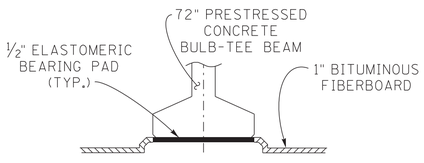


⊙ DENOTES: CUT-OFF BARS

** 10¼" @ STA. 58+19.50 TO STA. 60+23.08, VARIES FROM STA. 60+23.08 TO STA. 60+57.50

TYPICAL CROSS SECTION

(LOOKING FORWARD ON SURVEY @ STATION 60+23.08)



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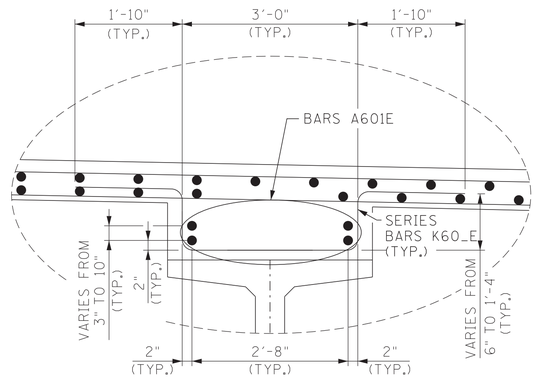

DETAIL "Z"

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-544

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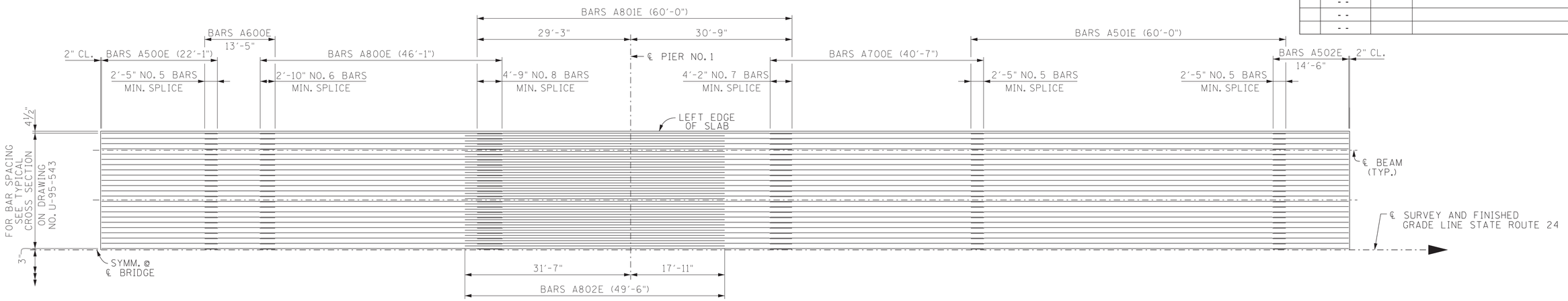
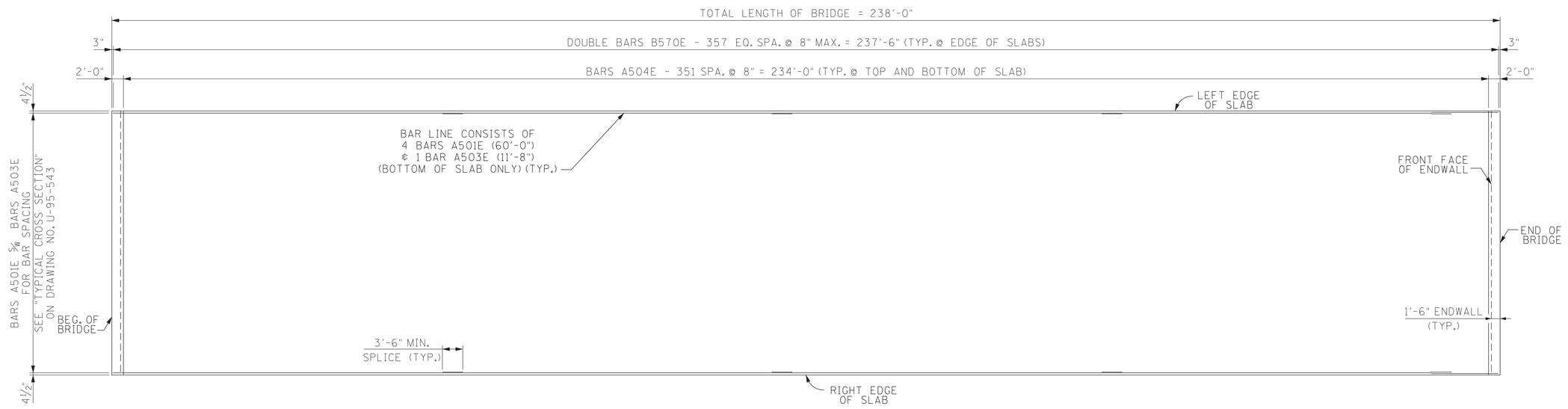
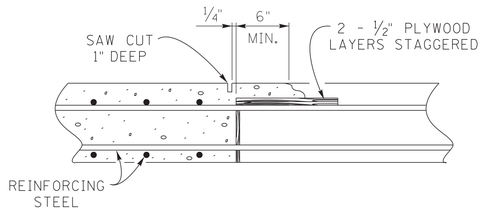


HALF-PLAN OF MAIN REINFORCEMENT



SLAB PLAN



SLAB CONSTRUCTION JOINT DETAIL

DECK CONCRETE POURING SEQUENCE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION SUBJECT TO THE FOLLOWING:

1) NO CONSTRUCTION JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT.
2) THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED TO WITHIN AT LEAST 15 FEET OF THE SUPPORTS EITHER PRIOR TO OR CONCURRENTLY WITH THE SLAB OVER AN INTERIOR SUPPORT.
3) ALL SLAB CONSTRUCTION JOINTS SHALL BE IN ACCORDANCE WITH THE SLAB CONSTRUCTION JOINT DETAILS SHOWN ON THIS SHEET.

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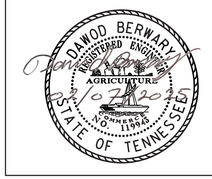

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-545

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: B. ERVIN DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

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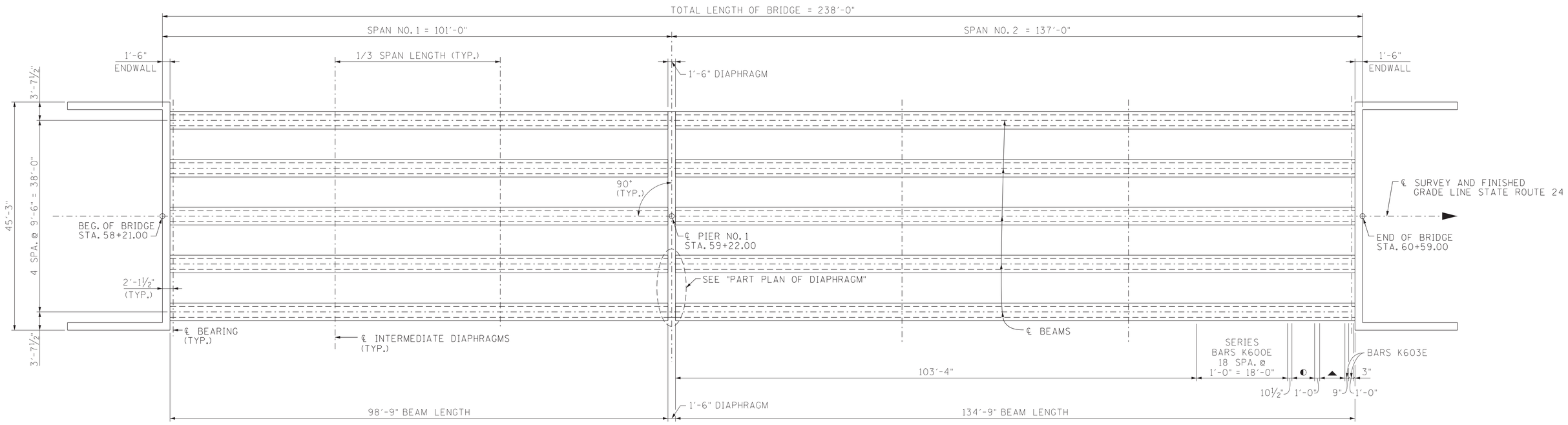
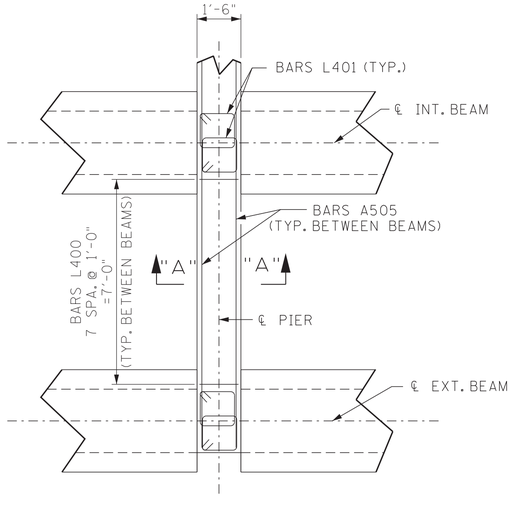


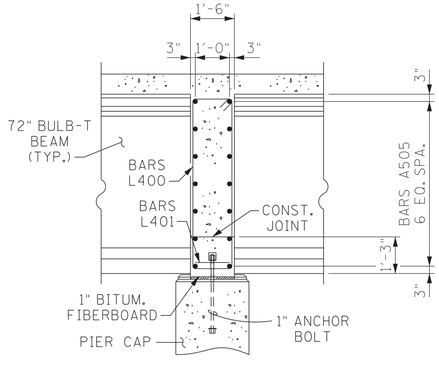
FRAMING PLAN

▲ DENOTES: SERIES BARS K602E 5 SPA. @ 1'-0" = 5'-0"

◐ DENOTES: SERIES BARS K601E 3 SPA. @ 1'-6" = 4'-6"



PART PLAN OF DIAPHRAGM



SECTION "A"-"A"

ANCHOR BOLTS AT BENTS: ANCHOR BOLT ASSEMBLIES AT BENTS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING STD-6-1.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-546

PIN NO.: 124053.00

DESIGN BY:	DAWOD BERWARY	DATE:	9-24
DRAWN BY:	B. ERVIN	DATE:	10-24
SUPERVISED BY:	STEELE/BERWARY	DATE:	10-24
CHECKED BY:	R. LEFEVRE/J. RAMSEY	DATE:	11-24

2/19/2025 8:44:55 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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	- -		
	- -		
	- -		
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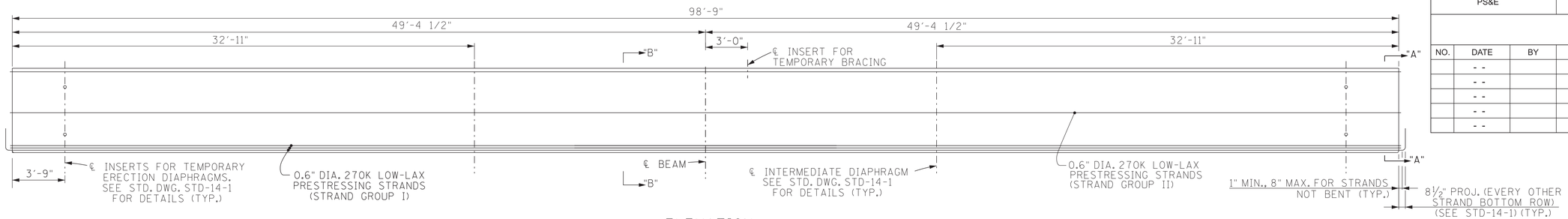
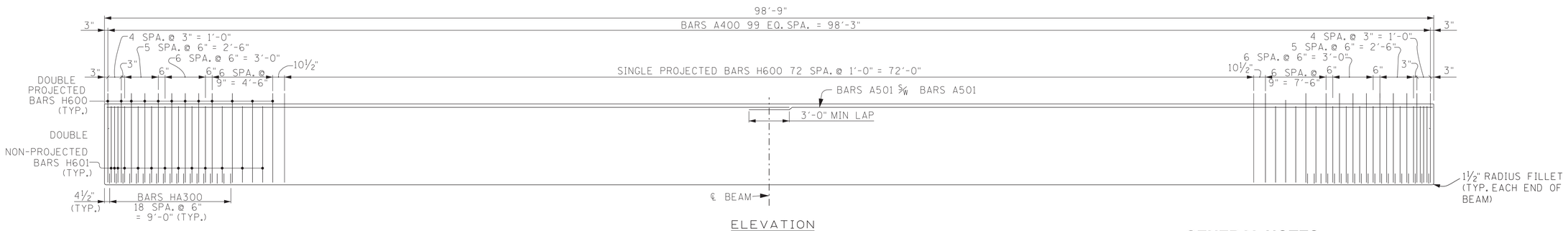


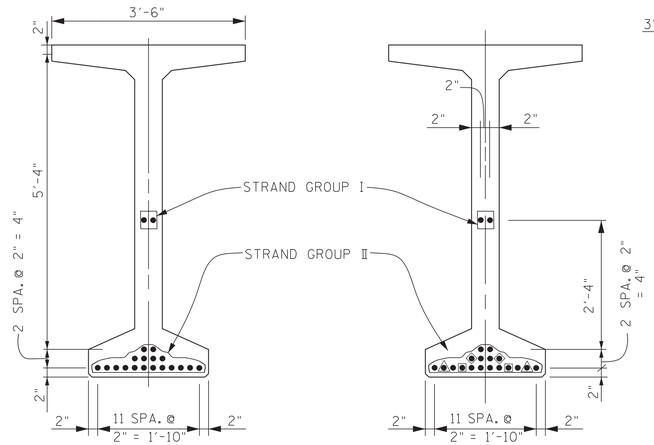
ELEVATION
(SHOWING PRESTRESSING STRANDS)



ELEVATION
(SHOWING STIRRUP REINFORCEMENT)

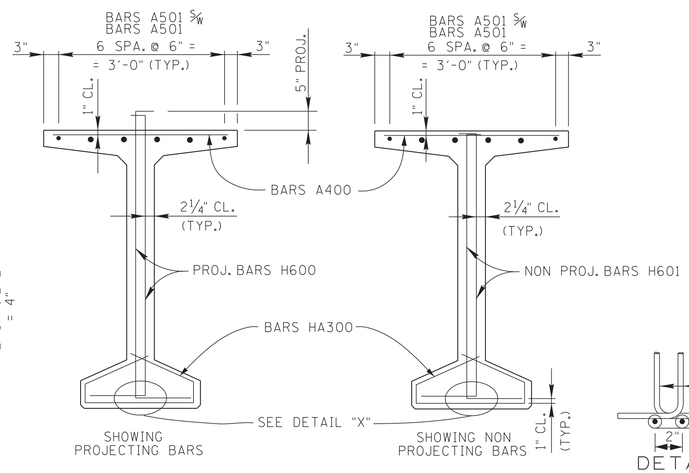
BILL OF STEEL
(BEAM NOS. 1-9)

BAR	SIZE	NO. REQ'D	LENGTH
A400	4	100	3'-2"
A500	5	12	5'-6"
A501	6	12	50'-9"
H600	6	121	7'-7"
H601	6	52	7'-1
HA300	3	38	4'-7"

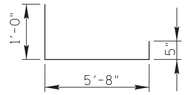


ELEVATION "B"-"B"
(SHOWING PRESTRESSED STRANDS AT MIDSPAN)
(30 STRANDS)

ELEVATION "A"-"A"
(SHOWING PRESTRESSED STRANDS AT ENDS)
(30 STRANDS)

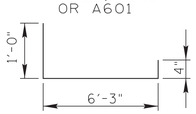


SECTION "C" - "C"

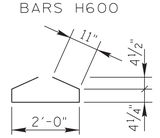


BARS H601

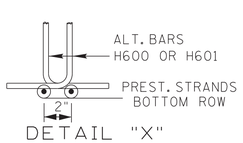
BARS A400, A500, A600 OR A601



BARS H600



BARS HA300



DETAIL "X"

GENERAL NOTES:

NOTE: SEE STD-14-1 FOR BULB-TEE BEAM STANDARD DETAILS AND NOTES.

NOTE: ALL BEAMS ARE BT-72.

NOTE: THE PRESTRESSED BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE SUPPORT DIAPHRAGMS EXCLUDING BOTTOM 15" AND DECK SLAB.

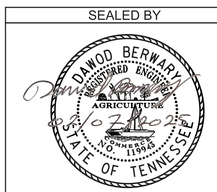
NOTE: THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 10,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 8,500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.

PRESTRESSING STRANDS: ALL STRANDS SHALL BE 6/10" DIAMETER, UNCOATED 7- WIRE STRANDS, ASTM A416 GRADE 270, LOW-LAX, A = 0.217 SQ. IN. PULLED TO 43,943 LBS. PER STRAND UNLESS OTHERWISE NOTED.

PRESTRESSED BEAM DESIGN DATA (PER BEAM):
LIVE LOAD DISTRIBUTION FACTOR: MOMENT = 0.874 LANES
SHEAR = 0.918 LANES
COMPOSITE DEAD LOAD: DC = 166 LB/FT
DW =300 LB/FT
COMPOSITE SLAB DESIGN STRENGTH: F 'C = 4000 PSI

DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

SEALED BY



ESTIMATED QUANTITIES (PER BEAM) (SEE TABLE OF DIMENSIONS AND QUANTITIES)		
PRESTRESSING STRANDS (LOW RELAXATION) LB.	CLASS "P" CONCRETE C.Y.	REINFORCING STEEL LB.
1,510	19	2,915

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: JERRY W. SIMPSON DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

♣ DENOTES: BREAK BOND 4'-0" FROM END OF BEAM
◉ DENOTES: BREAK BOND 7'-0" FROM END OF BEAM
◈ DENOTES: BREAK BOND 10'-0" FROM END OF BEAM

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESTRESSED BULB-TEE BEAM
SPAN NO. 1
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-547

2/19/2025 9:30:40 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
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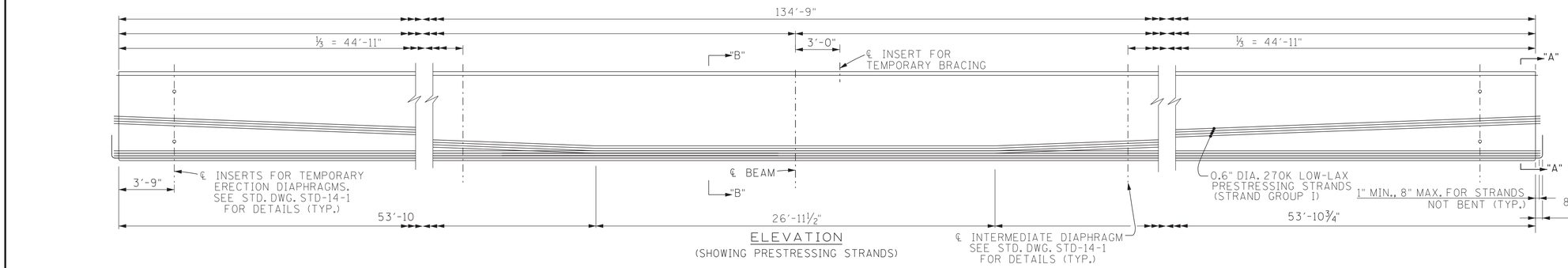
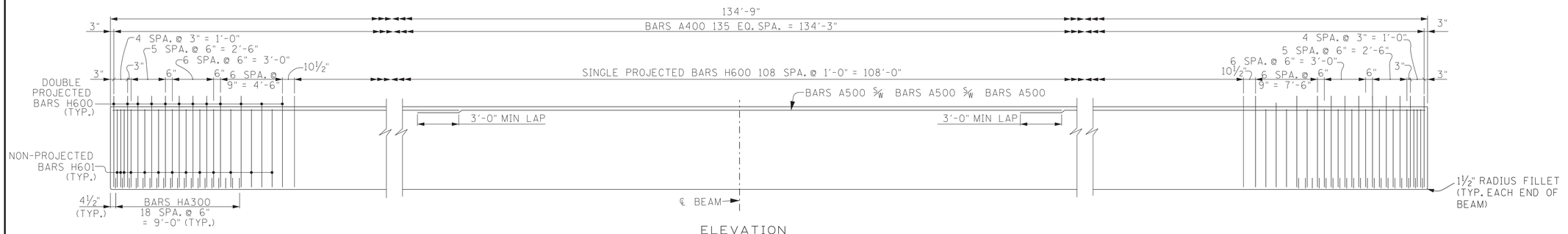


ELEVATION
(SHOWING PRESTRESSING STRANDS)



ELEVATION
(SHOWING STIRRUP REINFORCEMENT)

BILL OF STEEL

(BEAM SPAN NO 2)

BAR	SIZE	NO. REQ'D	LENGTH
A400	4	136	3'-2"
A500	5	12	5'-6"
A501	6	18	46'-10"
H600	6	157	7'-7"
H601	6	52	7'-1
HA300	3	38	4'-7"

GENERAL NOTES:

NOTE: SEE STD-14-1 FOR BULB-TEE BEAM STANDARD DETAILS AND NOTES.

NOTE: ALL BEAMS ARE BT-72.

NOTE: THE PRESTRESSED BEAMS SHALL ATTAIN AN AGE OF AT LEAST 90 DAYS PRIOR TO POURING THE SUPPORT DIAPHRAGMS EXCLUDING BOTTOM 15" AND DECK SLAB.

NOTE: THE CONCRETE FOR THIS CONSTRUCTION SHALL BE OF SUCH PROPERTIES AS TO ATTAIN A COMPRESSIVE STRENGTH OF NOT LESS THAN 10,000 PSI AT THE AGE OF 28 DAYS AND STRESS TRANSFER SHALL NOT BE MADE TO THE BRIDGE MEMBER UNTIL THE TEST SPECIMENS INDICATE THAT THE CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF AT LEAST 8,500 PSI. SEE GENERAL NOTES FOR CONCRETE FINISHING NOTE.

PRESTRESSING STRANDS: ALL STRANDS SHALL BE 6/10" DIAMETER, UNCOATED 7- WIRE STRANDS, ASTM A416 GRADE 270, LOW-LAX, A = 0.217 SQ. IN. PULLED TO 43,943 LBS. PER STRAND UNLESS OTHERWISE NOTED.

PRESTRESSED BEAM DESIGN DATA (PER BEAM):

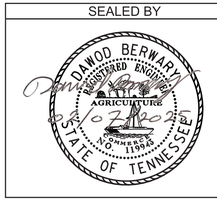
LIVE LOAD DISTRIBUTION FACTOR: MOMENT = 0.874 LANES
SHEAR = 0.918 LANES

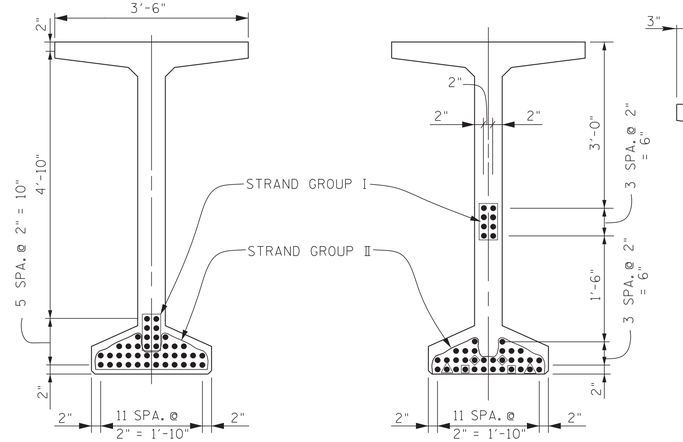
COMPOSITE DEAD LOAD: DC = 166 LB/FT
DW =300 LB/FT

COMPOSITE SLAB DESIGN STRENGTH: F 'C = 4000 PSI

DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

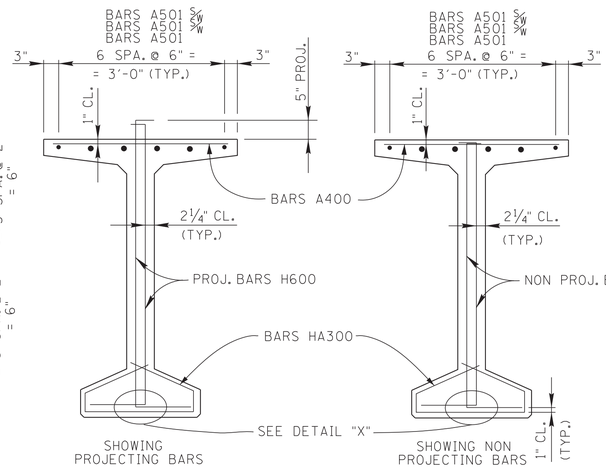
SEALED BY



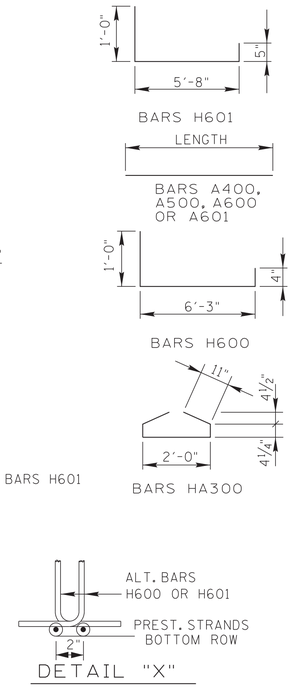


ELEVATION "B"-"B"
(SHOWING PRESTRESSED STRANDS AT MIDSPAN)
(30 STRANDS)

ELEVATION "A"-"A"
(SHOWING PRESTRESSED STRANDS AT ENDS)
(30 STRANDS)



SECTION "C" - "C"



DETAIL "X"

ESTIMATED QUANTITIES (PER BEAM) (SEE TABLE OF DIMENSIONS AND QUANTITIES)		
PRESTRESSING STRANDS (LOW RELAXATION) LB.	CLASS "P" CONCRETE C.Y.	REINFORCING STEEL LB.
4,055	26.6	3,668

PIN NO.: 124053.00

DESIGN BY:	DAWOD BERWARY	DATE: 9-24
DRAWN BY:	JERRY W. SIMPSON	DATE: 10-24
SUPERVISED BY:	STEELE/BERWARY	DATE: 10-24
CHECKED BY:	R. LEFEVRE/J. RAMSEY	DATE: 11-24

♣ DENOTES: BREAK BOND 4'-0" FROM END OF BEAM
◉ DENOTES: BREAK BOND 7'-0" FROM END OF BEAM
◈ DENOTES: BREAK BOND 10'-0" FROM END OF BEAM

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESTRESSED BULB-TEE BEAM SPAN NO. 2

STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-548

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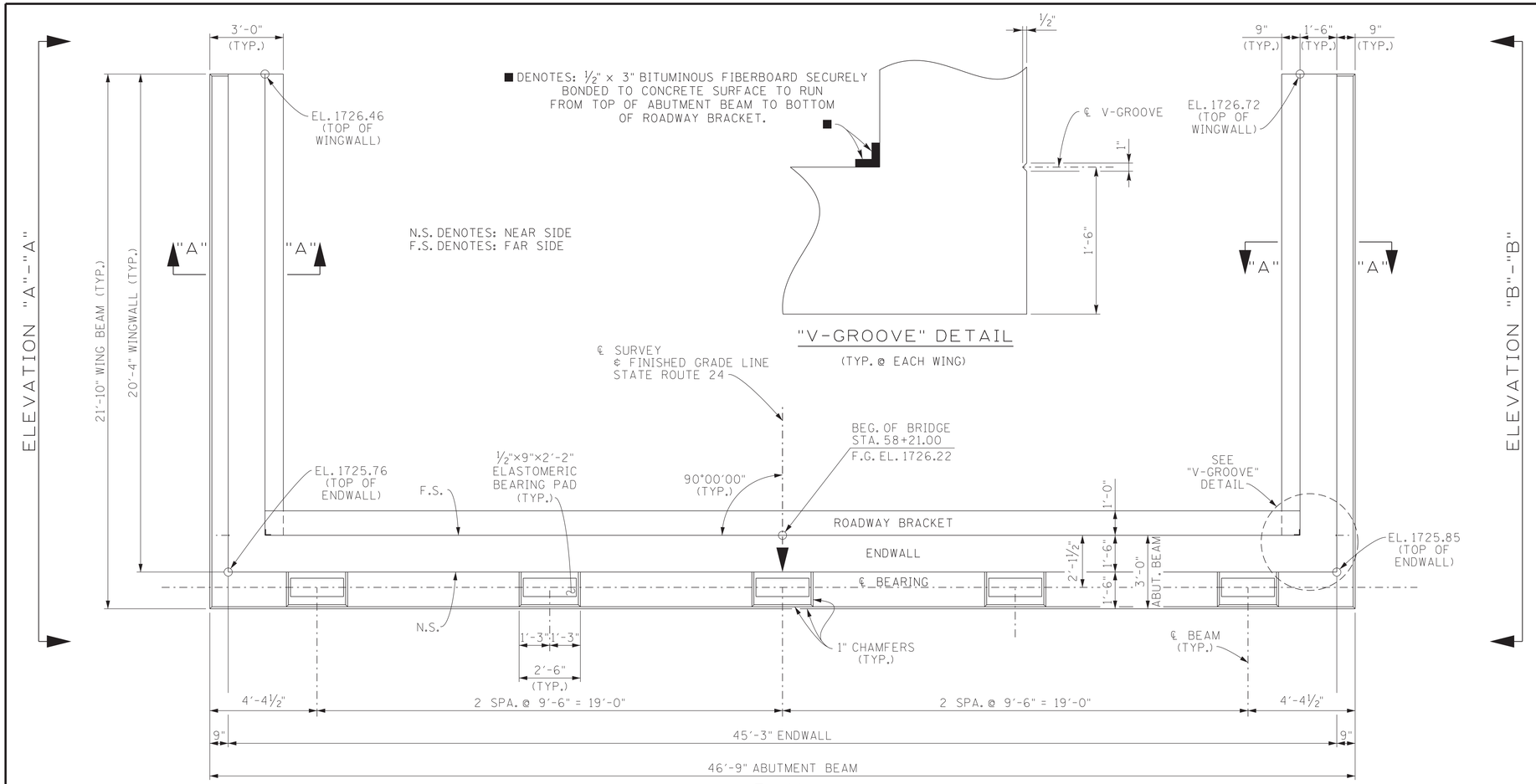
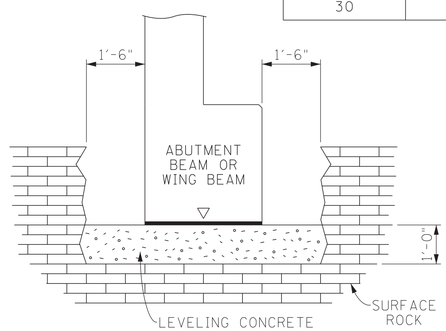


☆ DENOTES: RISER BLOCK TO BE REINFORCED. FOR DETAILS SEE RISER BLOCK REINFORCEMENT DETAILS ON DRAWING NO. U-95-550.



LIMITS OF LEVELING CONCRETE DETAILS

▽ DENOTES: TOP OF LEVELING CONCRETE SHALL HAVE A TROWEL FINISH, PLACE TWO (2) LAYERS OF TAR PAPER BETWEEN LEVELING CONCRETE AND ABUTMENT BEAM & WINGBEAMS. COST TO BE INCLUDED IN UNIT PRICE BID OF LEVELING CONCRETE, ITEM NO. 604-01.32.

CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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	- -		
	- -		
	- -		

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH THE ABUTMENT BEAM.

NOTE: RISER BLOCK BEARING SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. FOR DETAILS OF PARAPETS, SEE STD. DWG. STD-1-1SS.

NOTE: NOT LESS THAN HALF OF THE SLAB IN THE END SPANS SHALL BE POURED PRIOR TO, OR CONCURRENTLY WITH, PLACEMENT OF ANY PART OF THE ABUTMENT ENDWALLS. AT LEAST THE TOP 12 INCHES OF THE ENDWALLS SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.

NOTE: COST OF PARAPET AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PARAPET SYSTEM.

NOTE: THE CONTRACTOR SHALL SUPPORT THE ABUTMENT UNTIL THE SUPERSTRUCTURE IS IN PLACE, FALSEWORK HAS BEEN REMOVED, AND BACKFILLING HAS BEEN COMPLETED.

NOTE: FOR RISER BLOCK SLOPE DETAILS SEE DRAWING NO. U-95-550

ESTIMATED QUANTITIES

LEVELING CONCRETE C.Y.	CLASS 'A' CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.	EPOXY COATED REINFORCING STEEL LBS.
30	64	7,165	2,072

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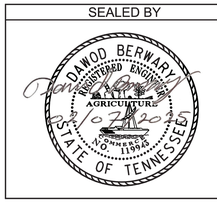

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-549

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: T. WISEMAN DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

2/19/2025 8:42:40 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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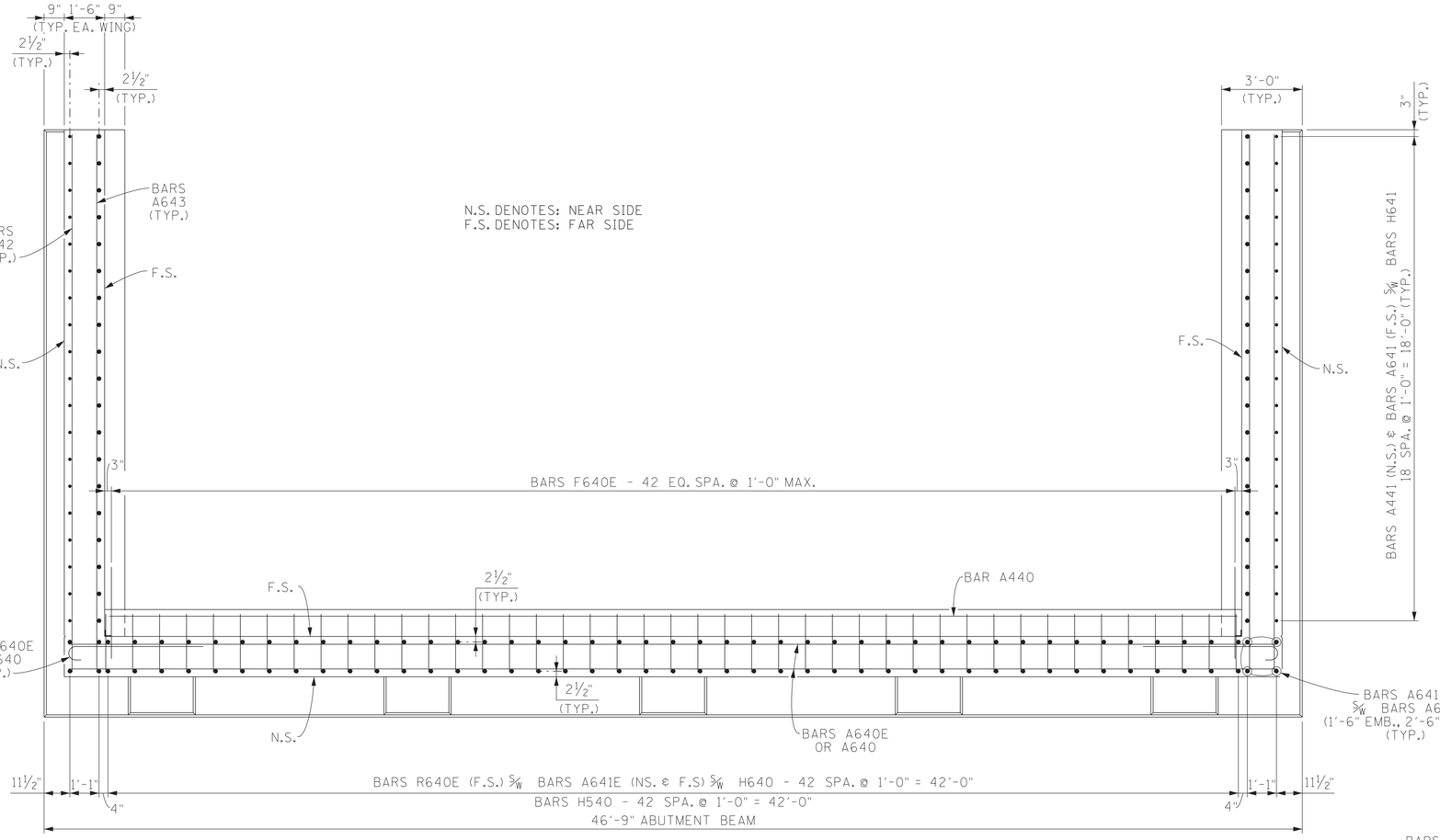
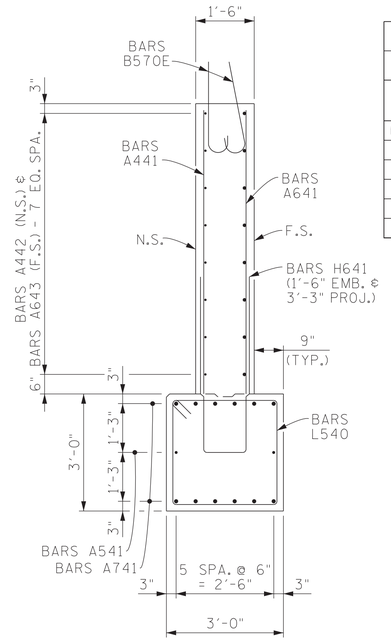
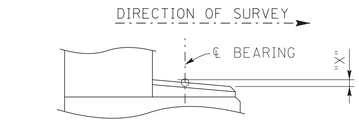
	- -		
	- -		
	- -		
	- -		



SECTION "C"-"C"

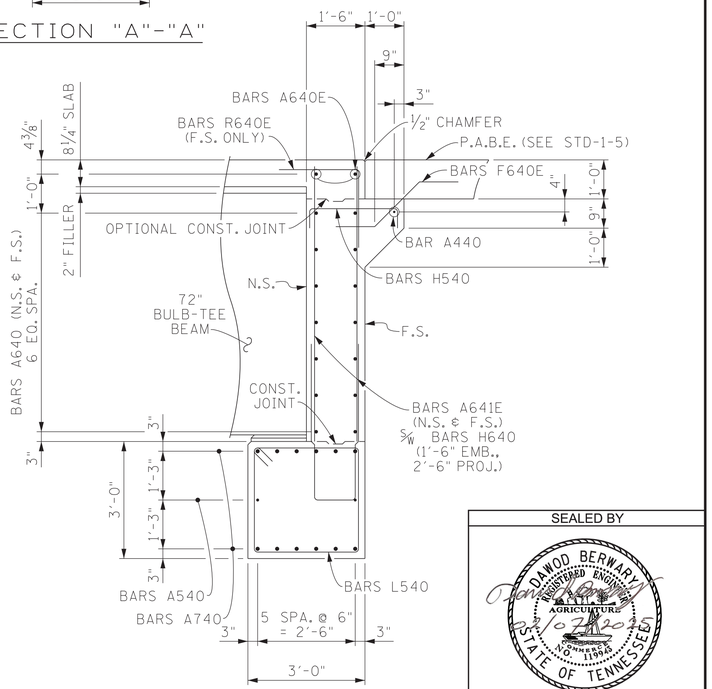


SECTION "A"-"A"

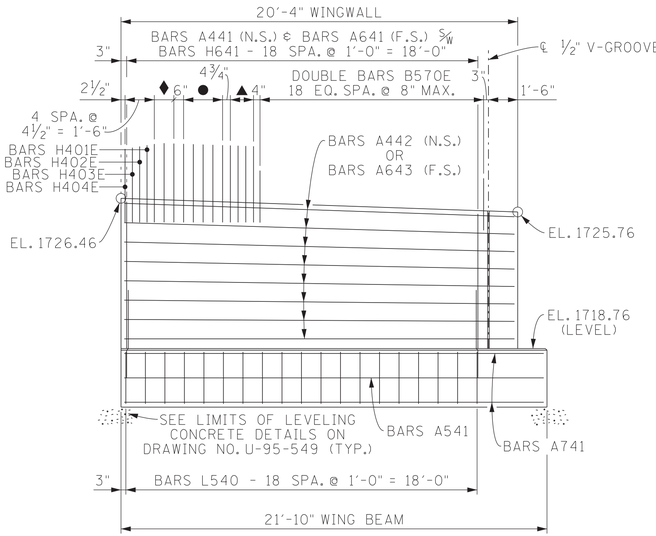


RISER BLOCK SLOPE DETAILS

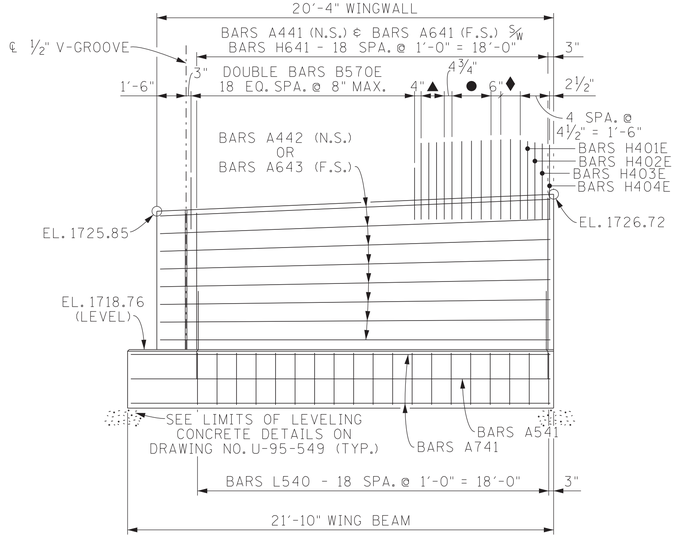
	"X"
RISER BLOCK "A"	1/16"
RISER BLOCK "B"	1/8"
RISER BLOCK "C"	1/8"
RISER BLOCK "D"	1/8"
RISER BLOCK "E"	1/8"



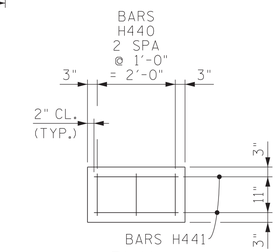
SECTION "B"-"B"



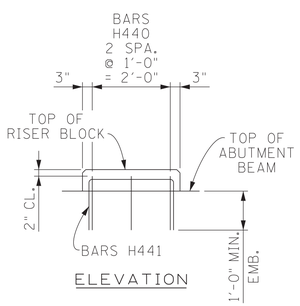
ELEVATION "A"-"A"



ELEVATION "B"-"B"



PLAN



ELEVATION

RISER BLOCK REINFORCEMENT DETAILS

SEALED BY

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: T. WISEMAN DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

♦ DENOTES: BARS H400E - 2 SPA. @ 6" = 1'-0"
● DENOTES: SERIES BARS HD401E - 4 SPA. @ 6" = 2'-0"
▲ DENOTES: SERIES BARS HD400E - 3 SPA. @ 4¾" = 1'-2¼"

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1 DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-550

2/19/2025 8:44:11 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

NOTE: RISER BLOCKS SHALL BE POURED MONOLITHICALLY WITH THE ABUTMENT BEAM.

NOTE: RISER BLOCK BEARING SURFACE TO CONFORM TO BOTTOM OF BEAM GRADE.

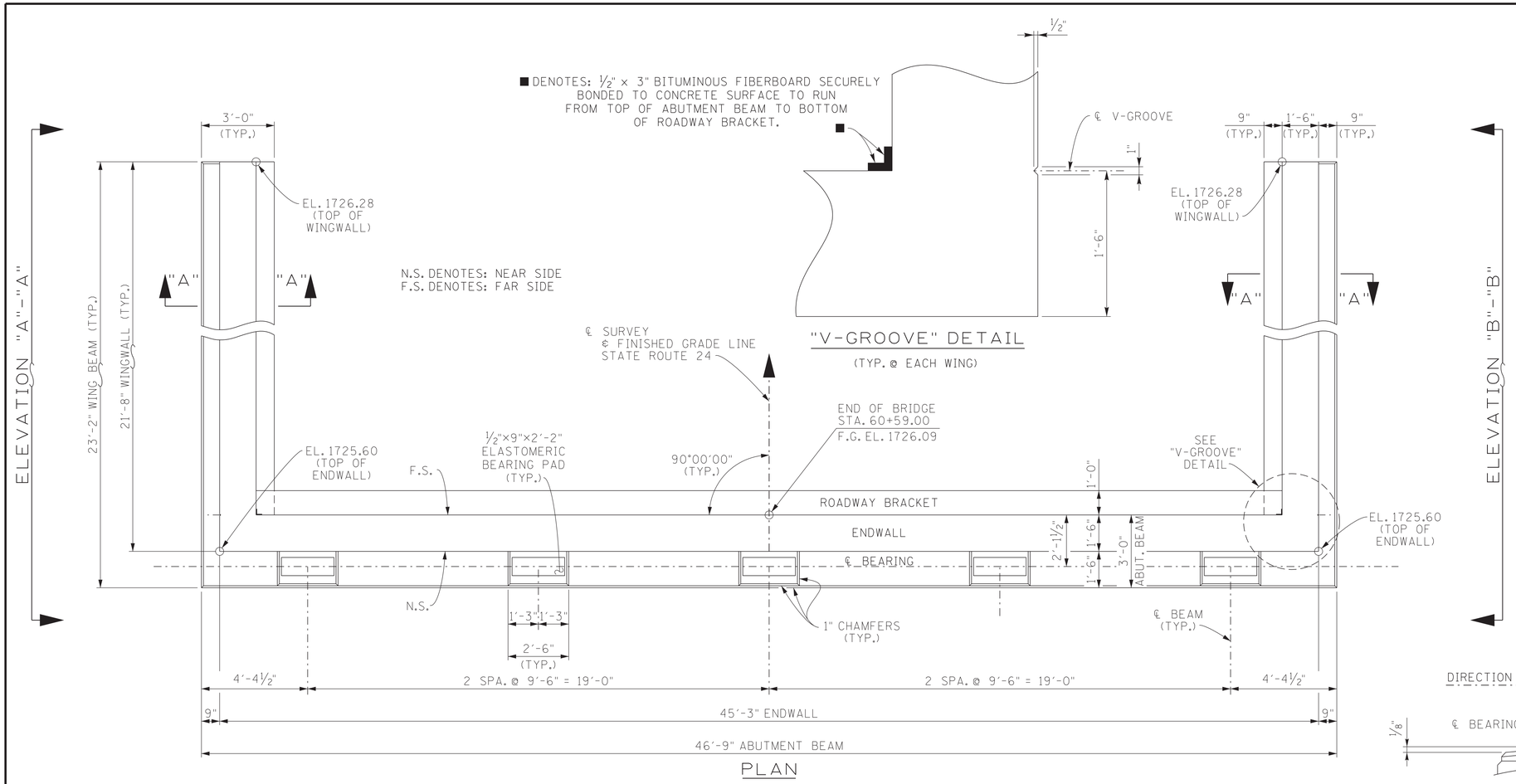
NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

NOTE: WHEN POURING WINGWALLS, PROVISIONS SHALL BE MADE FOR SETTING REINFORCING STEEL FOR WINGPOSTS AND PARAPETS. FOR DETAILS OF PARAPETS, SEE STD. DWG. STD-1-1SS.

NOTE: NOT LESS THAN HALF OF THE SLAB IN THE END SPANS SHALL BE POURED PRIOR TO, OR CONCURRENTLY WITH, PLACEMENT OF ANY PART OF THE ABUTMENT ENDWALLS. AT LEAST THE TOP 12 INCHES OF THE ENDWALLS SHALL BE POURED CONCURRENTLY WITH THE END OF SLAB.

NOTE: COST OF PARAPET AND POST IS TO BE INCLUDED IN THE UNIT PRICE BID FOR THE PARAPET SYSTEM.

NOTE: THE CONTRACTOR SHALL SUPPORT THE ABUTMENT UNTIL THE SUPERSTRUCTURE IS IN PLACE, FALSEWORK HAS BEEN REMOVED, AND BACKFILLING HAS BEEN COMPLETED.



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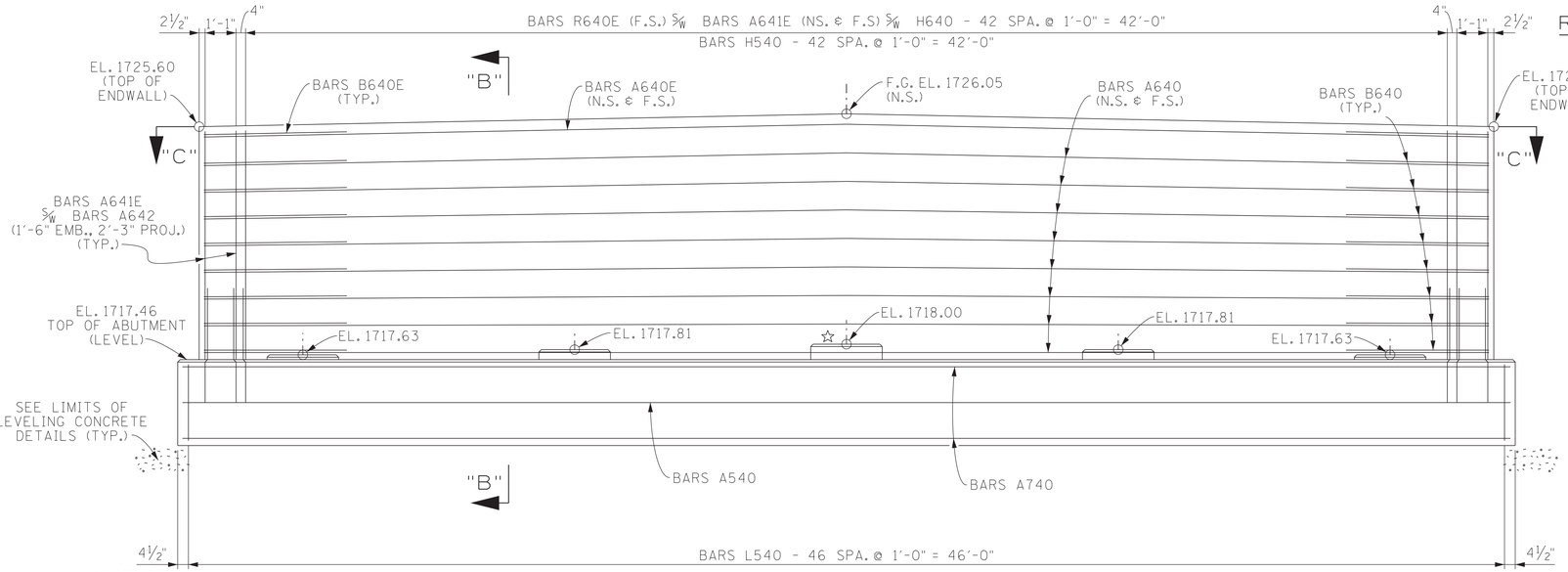
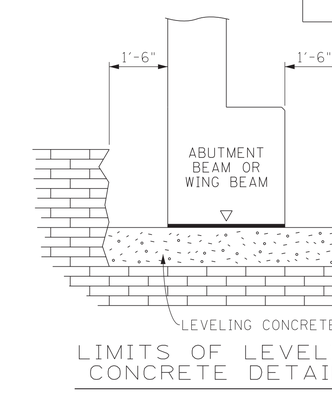


ELEVATION

(LOOKING FORWARD ON SURVEY)

☆ DENOTES: RISER BLOCK TO BE REINFORCED. FOR DETAILS SEE RISER BLOCK REINFORCEMENT DETAILS ON DRAWING NO. U-95-552.



RISER BLOCK SLOPE DETAIL

(TYP. EACH RISER)

ESTIMATED QUANTITIES

LEVELING CONCRETE C.Y.	CLASS 'A' CONCRETE (BRIDGES) C.Y.	STEEL BAR REINFORCEMENT (BRIDGES) LBS.	EPOXY COATED REINFORCING STEEL LBS.
30	71	7,828	2,264

LIMITS OF LEVELING CONCRETE DETAILS

▽ DENOTES: TOP OF LEVELING CONCRETE SHALL HAVE A TROWEL FINISH, PLACE TWO (2) LAYERS OF TAR PAPER BETWEEN LEVELING CONCRETE AND ABUTMENT BEAM & WINGBEAMS. COST TO BE INCLUDED IN UNIT PRICE BID OF LEVELING CONCRETE, ITEM NO. 604-01.32.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-551

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: T. WISEMAN DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

2/19/2025 8:45:09 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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	- -		
	- -		
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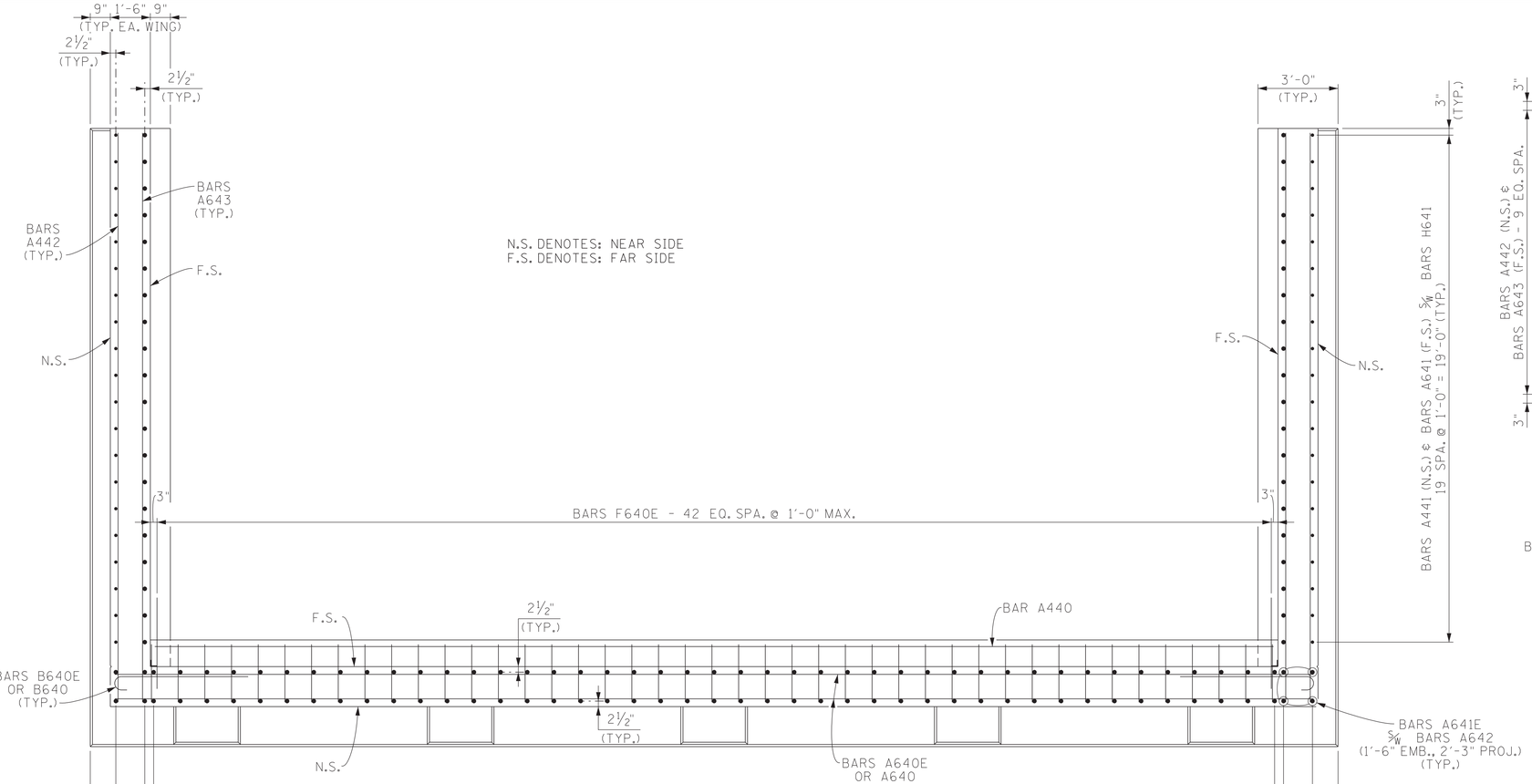
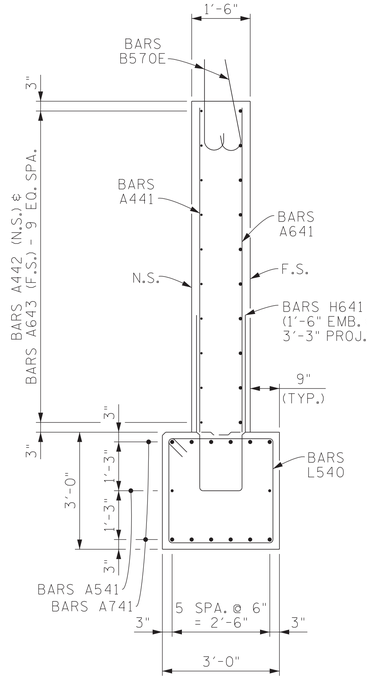
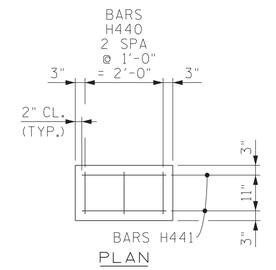


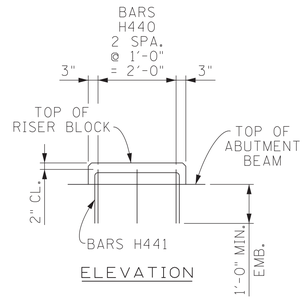
SECTION "C"-"C"



SECTION "A"-"A"



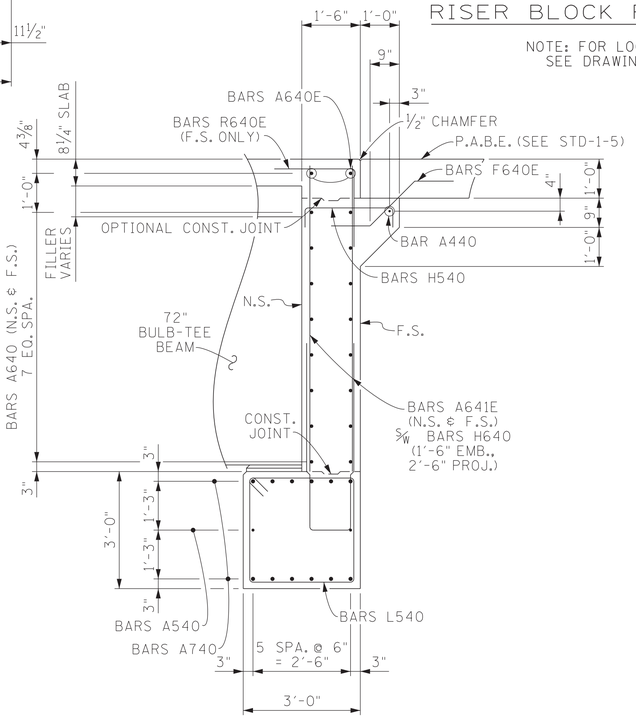
PLAN



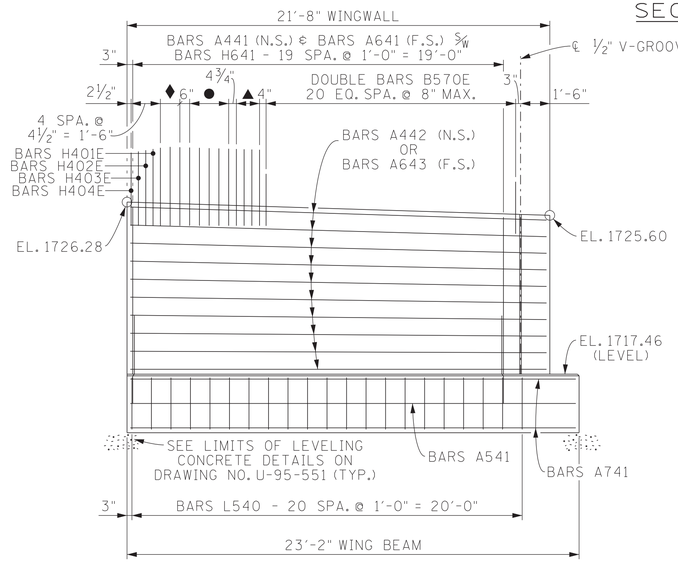
ELEVATION

RISER BLOCK REINFORCEMENT DETAILS

NOTE: FOR LOCATION OF REINFORCED RISERS, SEE DRAWING NO. U-95-551.



SECTION "B"-"B"



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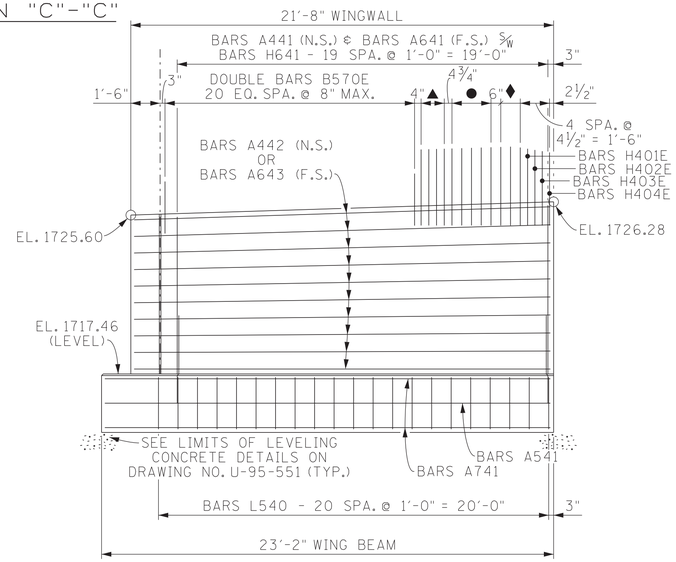
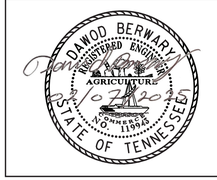


ELEVATION "B"-"B"

♦ DENOTES: BARS H400E - 2 SPA. @ 6" = 1'-0"
● DENOTES: SERIES BARS HD401E - 4 SPA. @ 6" = 2'-0"
▲ DENOTES: SERIES BARS HD400E - 3 SPA. @ 4¾" = 1'-2¼"

SEALED BY



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 2 DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-552

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: T. WISEMAN DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

2/19/2025 8:46:29 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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	- -		
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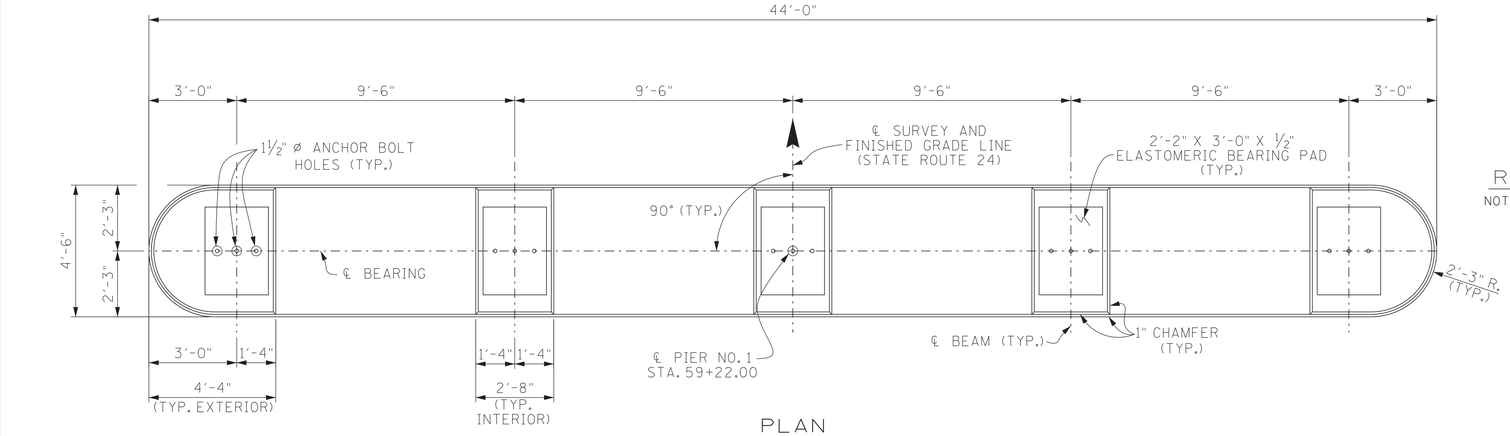
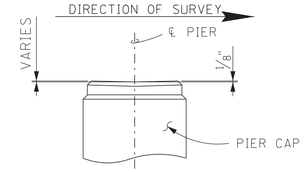


PLAN



RISER BLOCK SLOPE DETAIL

NOTE: RISER BLOCK BEARING SURFACE SHALL CONFORM TO BOTTOM OF BEAM GRADE.

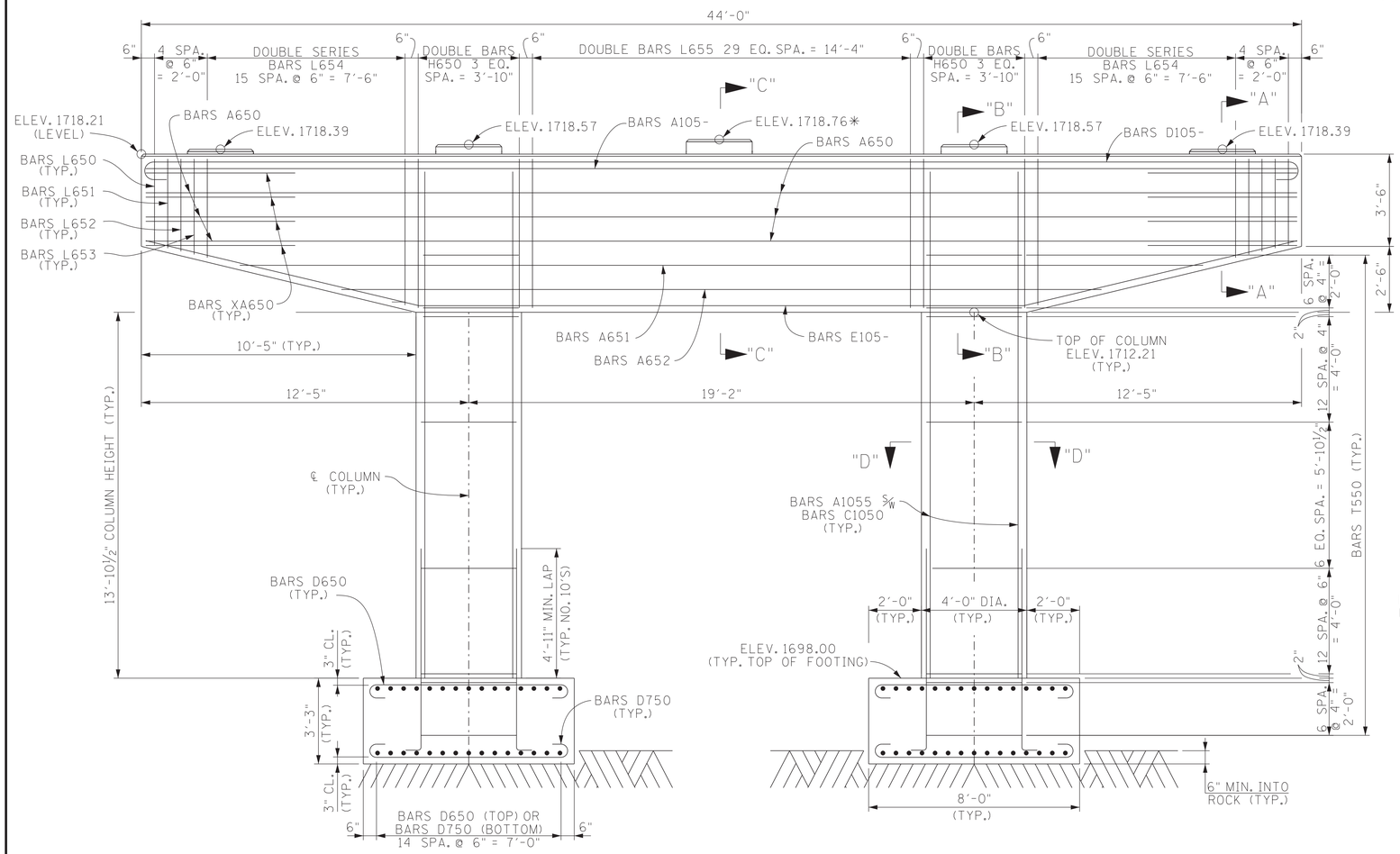
GENERAL NOTES

NOTE: WHEN POURING CAP BEAM, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS. SEE STANDARD DRAWING STD-6-1. BOLT PROJECTION 11".

NOTE: RISER BLOCKS TO BE POURED MONOLITHICALLY WITH PIER CAP.

NOTE: ELASTOMERIC PADS SHALL BE IN PLACE A MINIMUM OF ONE DAY BEFORE BEING DISTURBED BY SETTING BEAMS ON CONCRETE. PLACE RUBBER BONDING CEMENT IN SUCH A WAY THAT VISIBLE CONCRETE SURFACES WILL NOT BE STAINED.

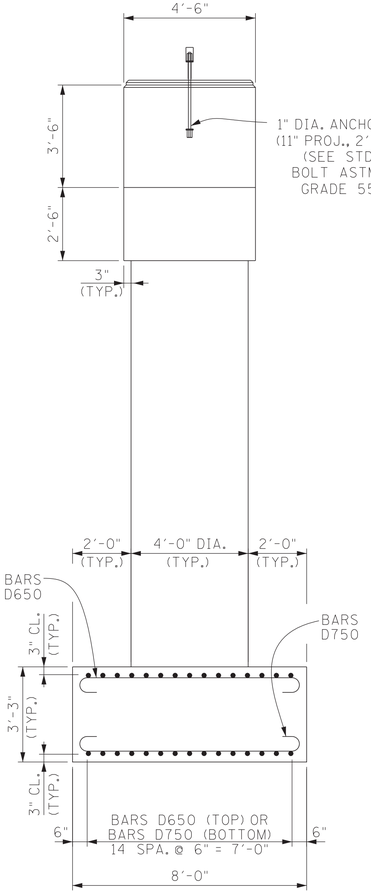
NOTE: COLUMN STEEL TO EXTEND 5'-4" INTO CAP BEAM.



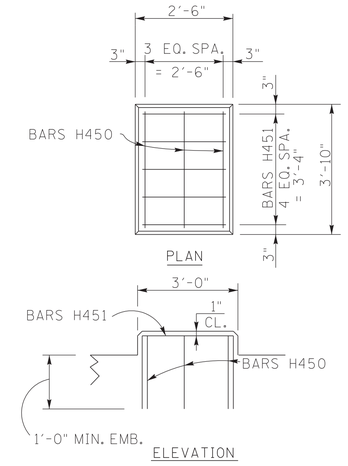
ELEVATION

(LOOKING FORWARD ON SURVEY)

*DENTOES: RISER TO BE REINFORCED, SEE DETAIL THIS SHEET



END ELEVATION



RISER BLOCK REINFORCING DETAIL

ESTIMATED QUANTITIES
PIER NO. 1

CLASS "A" CONCRETE (BRIDGES) C.Y.	REINFORCING STEEL (BRIDGES) LB.
60	17,995

SEALED BY

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: CHRIS STAPLER DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER NO. 1
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-553

2/19/2025 8:32:06 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
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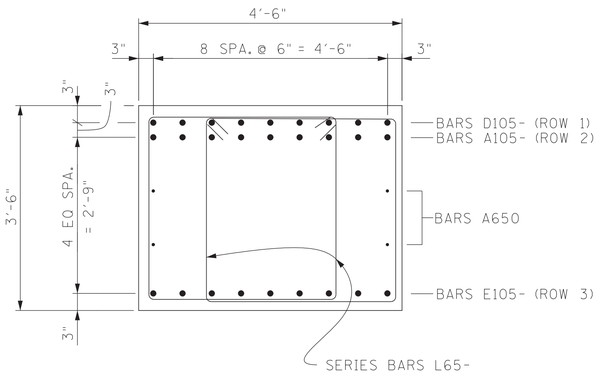

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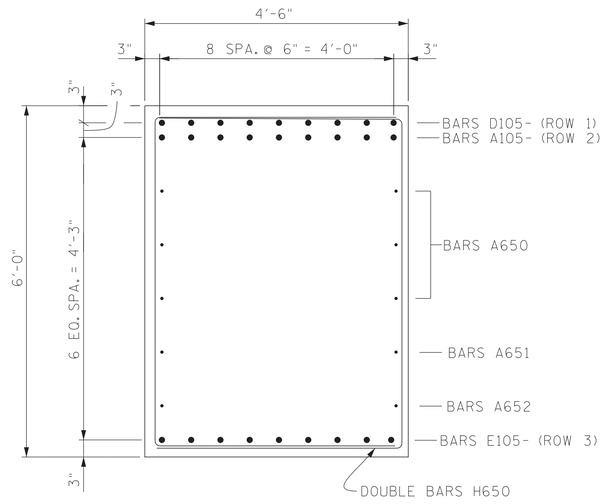
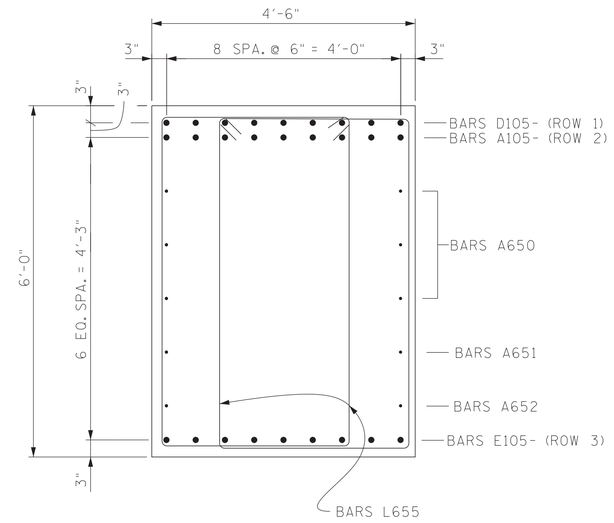
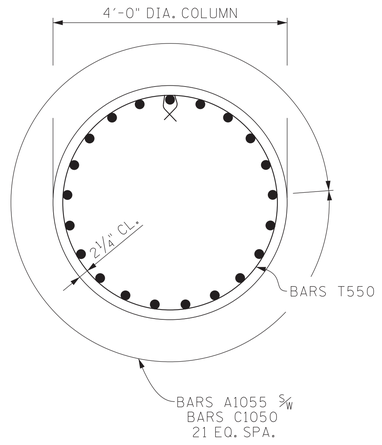


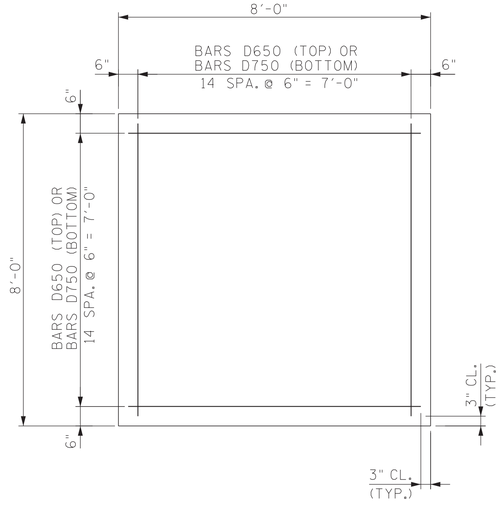
SECTION "B"-"B"



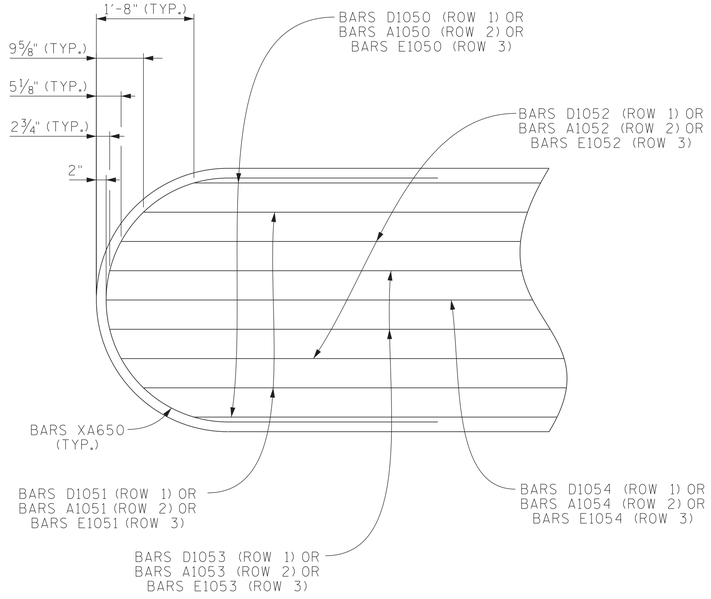
SECTION "C"-"C"



SECTION "D"-"D"

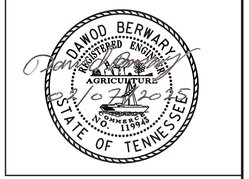


PLAN OF FOOTING



PARTIAL CAP REINFORCEMENT

SEALED BY



PIN NO.: 124053.00

DESIGN BY:	DAWOD BERWARY	DATE: 9-24
DRAWN BY:	CHRIS STAPLER	DATE: 10-24
SUPERVISED BY:	STEELE/BERWARY	DATE: 10-24
CHECKED BY:	R. LEFEVRE/J. RAMSEY	DATE: 11-24

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PIER NO. 1 DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-554

2/19/2025 8:37:34 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

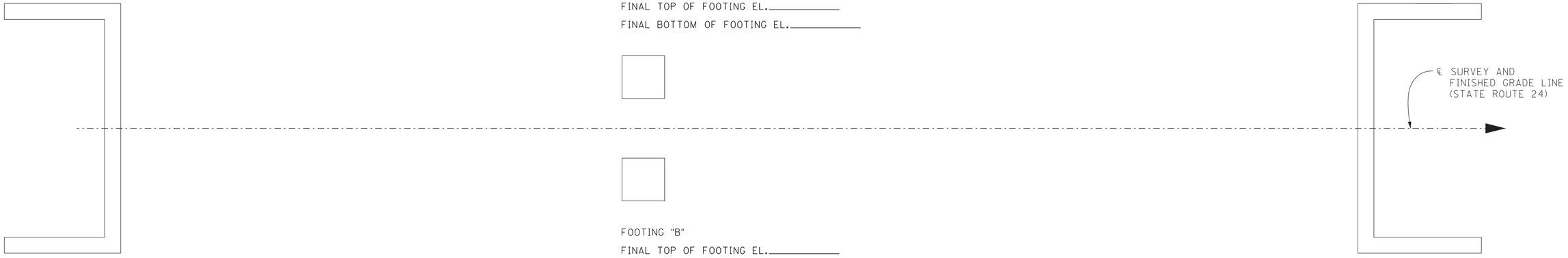
NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

ABUTMENT NO. 1
FINAL TOP OF ABUTMENT EL._____
FINAL BOTTOM OF ABUTMENT EL._____

FOOTING "A"
FINAL TOP OF FOOTING EL._____
FINAL BOTTOM OF FOOTING EL._____

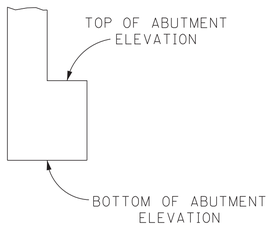
FOOTING "B"
FINAL TOP OF FOOTING EL._____
FINAL BOTTOM OF FOOTING EL._____

ABUTMENT NO. 2
FINAL TOP OF ABUTMENT EL._____
FINAL BOTTOM OF ABUTMENT EL._____

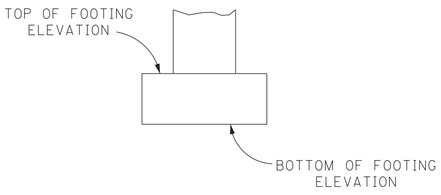


ABUTMENT NO. 1 BENT NO. 1 ABUTMENT NO. 2

PLAN



ABUTMENT DETAIL
(TYP. @ ABUTMENTS)



FOOTING DETAIL

SEALED BY

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: B. ERVIN DATE: 11-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
FINAL FOUNDATION DATA
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-555

2/19/2025 9:00:18 AM
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CONST. NO.: 18004-3227-04

PROJECT NO.	YEAR	SHEET NO.
PS&E	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
	- -		
	- -		
	- -		
	- -		
	- -		

SUPERSTRUCTURE

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A505	DIAPHRAGM	5	14					39'-10"
L400	DIAPHRAGM	4	32	1'-2"	5'-10"			14'-9"
L401	DIAPHRAGM	4	10	1'-2"	1'-2"			5'-5"

SUPERSTRUCTURE (EPOXY)

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A500E	SLAB	5	46					22'-1"
A501E	SLAB	5	206					60'-0"
A502E	SLAB	5	46					14'-6"
A503E	SLAB	5	40					11'-8"
A504E	SLAB	5	704					44'-11"
A600E	SLAB	6	46					13'-5"
A601E	FILLER	6	20					31'-3"
A700E	SLAB	7	46					40'-7"
A800E	SLAB	8	46					46'-1"
A801E	SLAB	8	46					60'-0"
A802E	SLAB	8	44					49'-6"
B570E	SLAB/PARAPET	5	1,432	2'-8"				3'-3"
SERIES								
K600E	FILLER	6	5	1'-10"	3'-0"	*		155'-0"
				*DIM. C VARIES FROM 6" TO 11 7/8"				
				IN INC. OF 5/16" (19 BARS)				
SERIES								
K601E	FILLER	6	5	1'-10"	3'-0"	*		35'-3"
				*DIM. C VARIES FROM 1'-0 3/16" TO				
				1'-1 5/8" IN INC. OF 1/2" (4 BARS)				
SERIES								
K602E	FILLER	6	5	1'-10"	3'-0"	*		54'-11"
				*DIM. C VARIES FROM 1'-2" TO				
				1'-3 13/16" IN INC. OF 3/8" (6 BARS)				
K603E	FILLER	6	10	1'-10"	3'-0"	1'-6"		9'-8"

ABUTMENT NO. 1

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A440	ROADWAY BRACKET	4	1					41'-11"
A441	WINGWALLS	4	38					6'-10"
A442	WINGWALLS	4	16					20'-0"
A540	ABUTMENT BEAM	5	2					46'-6"
A541	WING BEAMS	5	4					21'-6"
A640	ENDWALL	6	14					44'-11"
A641	WINGWALLS	6	38					6'-10"
A642	ENDWALL/ABUTMENT BEAM	6	8					4'-0"
A643	WINGWALLS	6	16					20'-0"
A740	ABUTMENT BEAM	7	12					46'-6"
A741	WING BEAMS	7	24					21'-6"
B640	ENDWALL	6	14	5'-0"				5'-8"
H440	RISER	4	3	1'-1"	1'-7"			4'-3"
H441	RISER	4	2	2'-2"	1'-7"			5'-4"
H540	ENDWALL/ROADWAY BRACKET	5	43	2'-2"	6"			3'-2"
H640	ENDWALL/ABUTMENT BEAM	6	43	1'-2"	4'-0"			9'-2"
H641	WINGWALLS/WING BEAMS	6	38	1'-2"	4'-9"			10'-8"
L540	ABUTMENT BEAM & WING BEAMS	5	85	2'-8"	2'-8"			11'-7"

ABUTMENT NO. 1 (EPOXY)

BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A640E	ENDWALL	6	2					44'-11"
A641E	ENDWALL/SLAB	6	94					6'-10"
B570E	WINGWALLS/PARAPET	5	76	2'-8"				3'-3"
B640E	ENDWALL	6	2	5'-0"				5'-8"
F640E	ROADWAY BRACKET/P.A.B.E.	6	43	1'-1"	1'-3"	1'-1"	1'-3"	4'-0"
H400E	WINGWALLS	4	6	10 1/2"	3'-11"			8'-9"
H401E	WINGWALLS	4	2	9 7/8"	3'-10"			8'-6"
H402E	WINGWALLS	4	2	8 3/4"	3'-9"			8'-3"
H403E	WINGWALLS	4	2	7 5/8"	3'-8"			8'-0"
H404E	WINGWALLS	4	2	6 1/2"	3'-7"			7'-9"
SERIES								
HD400E	WINGWALLS	4	2	*	3'-11"	4'-0"	9"	33'-3"
				*DIM. A VARIES FROM 3 3/4" TO 5 7/8"				
				IN INC. OF 11/16" (4 BARS)				
SERIES								
HD401E	WINGWALLS	4	2	*	3'-11"	4'-0"	9"	43'-0"
				*DIM. A VARIES FROM 6 1/2" TO 10"				
				IN INC. OF 7/8" (5 BARS)				
R640E	ENDWALL/SLAB	6	43	2'-0"	2'-0"			4'-0"

ABUTMENT NO. 2

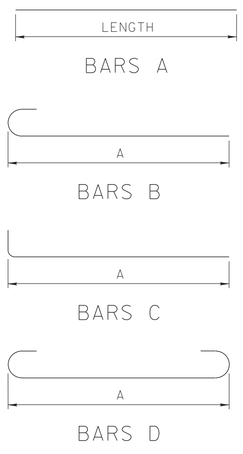
BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A440	ROADWAY BRACKET	4	1					41'-11"
A441	WINGWALLS	4	40					8'-0"
A442	WINGWALLS	4	20					21'-4"
A540	ABUTMENT BEAM	5	2					46'-6"
A541	WING BEAMS	5	4					22'-10"
A640	ENDWALL	6	16					44'-11"
A641	WINGWALLS	6	40					8'-0"
A642	ENDWALL/ABUTMENT BEAM	6	8					3'-9"
A643	WINGWALLS	6	20					21'-4"
A740	ABUTMENT BEAM	7	12					48'-6"
A741	WING BEAMS	7	24					22'-10"
B640	ENDWALL	6	16	5'-0"				5'-8"
H440	RISER	4	3	1'-1"	1'-7"			4'-3"
H441	RISER	4	2	2'-2"	1'-7"			5'-4"
H540	ENDWALL/ROADWAY BRACKET	5	43	2'-2"	6"			3'-2"
H640	ENDWALL/ABUTMENT BEAM	6	43	1'-2"	4'-0"			9'-2"
H641	WINGWALLS/WING BEAMS	6	40	1'-2"	4'-9"			10'-8"
L540	ABUTMENT BEAM & WING BEAMS	5	89	2'-8"	2'-8"			11'-7"

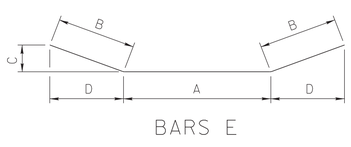
ABUTMENT NO. 2 (EPOXY)

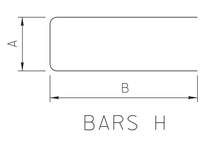
BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A640E	ENDWALL	6	2					44'-11"
A641E	ENDWALL/SLAB	6	94					8'-0"
B570E	WINGWALLS/PARAPET	5	84	2'-8"				3'-3"
B640E	ENDWALL	6	2	5'-0"				5'-8"
F640E	ROADWAY BRACKET/P.A.B.E.	6	43	1'-1"	1'-3"	1'-1"	1'-3"	4'-0"
H400E	WINGWALLS	4	6	10 1/2"	3'-11"			8'-9"
H401E	WINGWALLS	4	2	9 7/8"	3'-10"			8'-6"
H402E	WINGWALLS	4	2	8 3/4"	3'-9"			8'-3"
H403E	WINGWALLS	4	2	7 5/8"	3'-8"			8'-0"
H404E	WINGWALLS	4	2	6 1/2"	3'-7"			7'-9"
SERIES								
HD400E	WINGWALLS	4	2	*	3'-11"	4'-0"	9"	33'-3"
				*DIM. A VARIES FROM 3 3/4" TO 5 7/8"				
				IN INC. OF 11/16" (4 BARS)				
SERIES								
HD401E	WINGWALLS	4	2	*	3'-11"	4'-0"	9"	43'-0"
				*DIM. A VARIES FROM 6 1/2" TO 10"				
				IN INC. OF 7/8" (5 BARS)				
R640E	ENDWALL/SLAB	6	43	2'-0"	2'-0"			4'-0"

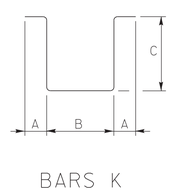
PIER NO. 1

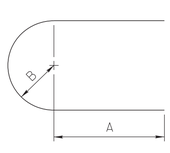
BARS	LOCATION	SIZE	NO. REQ'D.	BENDING DIMENSIONS A	B	C	D	LENGTH (FEET)
A650	CAP	6	6					40'-8"
A651	CAP	6	2					36'-6"
A652	CAP	6	2					28'-10"
A1050	CAP	10	2					40'-8"
A1051	CAP	10	2					42'-4"
A1052	CAP	10	2					43'-1"
A1053	CAP	10	2					43'-6"
A1054	CAP	10	1					43'-8"
A1055	CAP/COLUMN	10	42					19'-6"
C1050	COLUMN/FOOTING	10	42	7'-8"				9'-6"
D650	FOOTING	6	60	7'-6"				8'-10"
D750	FOOTING	7	60	7'-6"				9'-2"
D1050	CAP	10	2	40'-8"				43'-6"
D1051	CAP	10	2	42'-4"				45'-2"
D1052	CAP	10	2	43'-1"				45'-11"
D1053	CAP	10	2	43'-6"				46'-4"
D1054	CAP	10	1	43'-8"				46'-6"
E1050	CAP	10	2	22'-11 3/8"	9'-1 3/8"	2'-1 3/8"	8'-10 3/8"	41'-2"
E1051	CAP	10	2	22'-11 3/8"	10'-0"	2'-3 3/4"	9'-8 3/4"	42'-11"
E1052	CAP	10	2	22'-11 3/8"	10'-4 3/4"	2'-4 7/8"	10'-1 1/4"	43'-8"
E1053	CAP	10	2	22'-11 3/8"	10'-7"	2'-5 3/8"	10'-3 5/8"	44'-1"
E1054	CAP	10	1	11'-11 3/8"	10'-7 3/4"	2'-5 5/8"	10'-4 3/8"	44'-3"
H450	RISER	4	3	3'-6"	1'-7"			6'-8"
H451	RISER	4	5	2'-2"	1'-7"			5'-4"
H650	CAP	6	16	5'-8"	3'-8"			13'-0"
L650	CAP	6	2	2'-3 3/8"	3'-3 1/8"			11'-10"
L651	CAP	6	2	3'-4 1/8"	3'-4 5/8"			14'-2"
L652	CAP	6	2	3'-10 3/4"	3'-6"			15'-6"
L653	CAP	6	2	4'-1 5/8"	3'-7 1/2"			16'-3"
SERIES								
L654	CAP	6	4	4'-2"	*			275'-8"
				*DIM. VARIES FROM 3-9" TO 5'-6 1/2"				
				IN INC. OF 1 7/16" (16 BARS)				
L655	CAP	6	60	3'-2"	5'-8"			19'-0"
T550	CAP/COLUMN/FOOTING	5	90	3'-7 1/2"				12'-9"
XA650	CAP	6	8	2'-1"	3'-7"			13'-9"

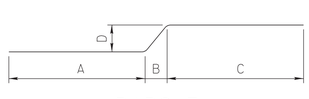


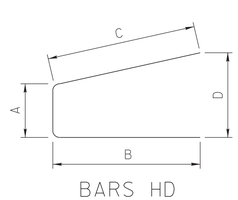


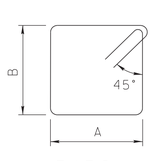


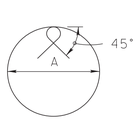












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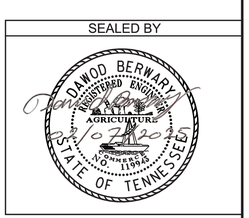


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BILL OF STEEL
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
LOG MILE: 15.37
CUMBERLAND COUNTY
2025

U-95-556

PIN NO.: 124053.00
DESIGN BY: DAWOD BERWARY DATE: 9-24
DRAWN BY: T. WISEMAN DATE: 10-24
SUPERVISED BY: STEELE/BERWARY DATE: 10-24
CHECKED BY: R. LEFEVRE/J. RAMSEY DATE: 11-24

2/19/2025 8:47:44 AM
P:\STRUCTURES\CADD_REGION_2\18-CUMBERLAND\18SR0240003\BRIDGE_DRAWINGS\18SR0240003BORDER.DGN

SCANNED

ESTIMATED BRIDGE QUANTITIES

ITEM NO.	DESCRIPTION	S.R. 24 OVER MEADOW CREEK	S.R. 24 OVER OBED RIVER	UNIT	TOTAL QUANTITY
602-10.06	STRUCTURAL STEEL	① 353	⑥ 882	LBS.	1,235
⚠1					
603-02.02	REPAINTING EXISTING STEEL STRUCTURES (18-SR24-15.36)	--	⑦ 1	L.S.	1
604-10.02	CONCRETE REPAIRS	③ 8	--	C.Y.	8
604-10.14	REMOVE EXISTING WEARING SURFACE	--	⑧ 1	L.S.	1
604-10.17	NON-PENETRATING CONCRETE SEALANT	④ 78	⑨ 102	S.Y.	180
604-10.18	REINFORCING STEEL (REPAIRS)	⑤ 961	⑩ 132	LBS.	1,093
604-10.30	BRIDGE DECK REPAIRS (FULL DEPTH OF SLAB)	--	⑪ 20	S.Y.	20
604-10.42	CONCRETE REPAIRS	--	⑫ 140	C.F.	140
604-10.50	BRIDGE DECK REPAIRS (PARTIAL DEPTH OF SLAB)	--	⑪ 140	S.Y.	140
604-10.54	CONCRETE REPAIRS	--	⑬ 34	S.F.	34
617-01	BRIDGE DECK SEALANT	--	⑭ 614	S.Y.	614
620-10.01	CONCRETE PARAPET (BRIDGERAIL REPLACEMENT)	--	⑮ 343	L.F.	343

FOOTNOTES: MEADOW CREEK

① INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE INSTALLATION OF TWENTY-FOUR (24) NEW STEEL BEARING STIFFENERS. SEE DETAILS AND NOTES ON DWG. NO. BR-10-53.

⚠1

③ INCLUDES ALL CONCRETE TO EXTEND EXISTING PIER CAPS AT PIERS NO. 1 AND NO. 3. SEE DETAILS ON DWG. NOS. BR-10-53 AND BR-10-54.

④ INCLUDES ALL LABOR AND EQUIPMENT NECESSARY FOR THE APPLICATION OF A NON-PENETRATING CONCRETE SEAL (APPROVED BY THE T.D.O.T. DIVISION OF MATERIALS AND TESTS) TO THE REPAIRED CAP SURFACES OF PIERS NO. 1 AND NO. 3. SEE DETAIL ON DWG. NO. BR-10-54.

⑤ INCLUDES EPOXY COATED REINFORCING STEEL REQUIRED FOR THE REPAIR OF PIERS NO. 1 AND NO. 3. SEE BILL OF STEEL ON DWG. NO. BR-10-54.

FOOTNOTES: OBED RIVER

⑥ INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE ATTACHMENT OF NEW MENDING PLATES TO THE DETERIORATED SECTIONS OF EXPOSED SUPPORT ANGLES AT PIERS. TWELVE (12) LOCATIONS. SEE DETAILS AND NOTES ON DWG. NO. BR-10-59.

⑦ INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR SURFACE PREPARATION AND PAINTING OF EXISTING STRUCTURAL STEEL ANGLE SUPPORT MEMBERS, FOR AN APPROXIMATE WEIGHT OF 1,800 LBS. SEE SURFACE PREPARATION AND PAINTING NOTES ON THIS SHEET.

⑧ INCLUDES COST OF ALL LABOR AND MATERIALS REQUIRED TO REMOVE AND DISPOSE OF THE EXISTING ASPHALT WEARING SURFACE (APPROX. DEPTH = 5¼" ±) WITHIN THE LIMITS OF THE BRIDGE.

⑨ INCLUDES ALL LABOR AND EQUIPMENT NECESSARY FOR THE APPLICATION OF A NON-PENETRATING CONCRETE SEAL (APPROVED BY THE T.D.O.T. DIVISION OF MATERIALS AND TESTS) TO THE CONCRETE SURFACES OF PIERS NO. 1 THRU NO. 3. SEE DETAIL ON DWG. NO. BR-10-58.

⑩ INCLUDES EPOXY COATED REINFORCING STEEL REQUIRED FOR THE REPAIR OF PIER CAPS. SEE BILL OF STEEL ON DWG. NO. BR-10-58.

⑪ INCLUDES ALL QUANTITIES FOR FULL OR PARTIAL DEPTH DECK REPAIRS AS SHOWN IN DETAIL ON DWG. NO. BR-10-57. ITEM NO. 604-10.30 AND 604-10.50 ARE CONTINGENCY ITEMS THAT MAY BE INCREASED, DECREASED, OR ELIMINATED AS DIRECTED BY THE ENGINEER.

⑫ INCLUDES ALL HIGH EARLY STRENGTH CONCRETE TO REPAIR CONCRETE DEFECTS ON DECK GIRDERS AND PIER CAPS. SEE DETAILS ON DWG. NO. BR-10-57 AND BR-10-59.

⑬ INCLUDES ALL HIGH EARLY STRENGTH CONCRETE TO REPAIR CONCRETE SURFACE DEFECTS ON SUBSTRUCTURE. SEE DETAILS ON DWG. NO. BR-10-58.

⑭ INCLUDES BRIDGE DECK SEALANT MEMBRANE TO BE PLACED IN THE NEW 3¼ INCH ASPHALT OVERLAY AND AT THE EXISTING JOINT REPAIR LOCATIONS. SEE BRIDGE DECK SEALANT DETAIL ON SHEET NO. 2A AND DWG. NO. BR-10-56.

⑮ INCLUDES ALL LABOR AND MATERIALS NECESSARY FOR THE REPLACEMENT OF EXISTING BRIDGERAIL WITH NEW JERSEY SHAPED CONCRETE PARAPET. SEE DWG. NO. BR-10-56 AND STD. DWG. NOS. BR-2-124, BR-2-125 AND BR-2-126.

DESIGNED BY R. LOVETT DATE 11/93
DRAWN BY G.L.GERTH, CAD/D DATE 11/93
SUPERVISED BY PETRONE DATE 11/93
CHECKED BY WILSON, PETRONE DATE 11/93

⚠1 SURFACE PREPARATION AND PAINTING NOTES

(APPLICABLE TO ALL STRUCTURAL STEEL)

SURFACE PREPARATION
(APPLICABLE TO ALL STRUCTURAL STEEL)

1) ANY OIL OR GREASE SHALL BE REMOVED BY MEANS OF SOLVENT CLEANING IN ACCORDANCE WITH SSPC-SPI. SOLVENTS SHALL BE SAFE AND BIODEGRADABLE.

2) A HAND OR POWER TOOL CLEANING, IN ACCORDANCE WITH TENNESSEE STANDARD SPECIFICATION, SUBSECTION 603.05 (a), SHALL BE APPLIED TO ALL AREAS THROUGHOUT THE BRIDGE THAT HAVE VISIBLE RUST OR EXPOSED STEEL. THE ENGINEER SHALL DESIGNATE ALL AREAS THAT ARE TO RECEIVE THE HAND OR POWER TOOL CLEANING. ALL HAND OR POWER TOOL CLEANING SHALL BE DONE TO THE COMPLETE SATISFACTION OF THE ENGINEER. ALL EXPOSED STRUCTURAL STEEL WITHIN THESE AREAS SHALL BE SPOT PRIMED IMMEDIATELY AFTER CLEANING.

PAINTING SYSTEM
(TO BE APPLIED OVER ALL STRUCTURAL STEEL)

THE PAINTING SYSTEM SHALL BE A HIGH PERFORMANCE, TWO COAT SYSTEM CONSISTING OF A TWO COMPONENT EPOXY MASTIC PRIMER AND A HIGH BUILD ALIPHATIC POLYURETHANE FINISH COAT. THE FINISH COAT SHALL COMPLY WITH TENNESSEE SPECIAL PROVISION NO. 603A, AND SHALL DISPLAY COMPATIBILITY WITH AND ADHESION TO THE CURED EPOXY MASTIC PRIMER WHEN APPLIED DIRECTLY OVER THE EPOXY MASTIC PRIMER IN ACCORDANCE WITH THE MANUFACTURERS CURRENT PRINTED INSTRUCTIONS. COLOR OF THE URETHANE FINISH COAT SHALL COMPLY WITH FEDERAL STANDARD NO. 595a, 24110 BRIGHT GREEN. SEE SECTIONS 603 AND 910 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION.

COATING SYSTEM DESCRIPTION
(TO BE APPLIED OVER ALL STRUCTURAL STEEL)

THE COATING SPECIFIED HEREIN SHALL BE APPLIED IN ORDER TO MEET THE FOLLOWING REQUIREMENTS:

1) SURFACE PREPARATION: (SEE NOTES ABOVE.)
   A. PRIMER: EPOXY MASTIC AT 4 MILS MINIMUM DRY FILM THICKNESS.
   B. FINISH: TWO COMPONENT HIGH BUILD ALIPHATIC POLYURETHANE AT 4 MILS MINIMUM DRY FILM THICKNESS.
2) PRODUCTS:
   A. FOR ACCEPTABLE BRANDS OF EPOXY MASTIC PRIMERS AND HIGH BUILD ALIPHATIC POLYURETHANE PAINTS SEE THE TENNESSEE DEPARTMENT OF TRANSPORTATION'S QUALIFIED PRODUCTS LIST FOR PAINT. THE HIGH BUILD ALIPHATIC POLYURETHANE SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION NO. 603A.
   B. ALL PRODUCTS USED IN THIS COATING SYSTEM, INCLUDING THINNERS, MUST BE SUPPLIED BY THE SAME MANUFACTURER.

APPLICATION

THE COATING APPLICATOR SHALL FOLLOW THE MANUFACTURERS PRINTED INSTRUCTIONS, AND SHALL HAVE THESE INSTRUCTIONS ON SITE DURING THE COURSE OF THE WORK.

CONTAINMENT

THE EXISTING PAINT SYSTEM CONTAINS BASIC LEAD SILICO CHROMATE PAINT WHICH HAS BEEN DESIGNATED AS A HAZARDOUS MATERIAL. THE CONTRACTOR SHALL CONTAIN AND DISPOSE OF ALL PAINT REMOVAL WASTE IN ACCORDANCE WITH SPECIAL PROVISION NO. 603B.

NOTE: OUR MAINTENANCE RECORDS INDICATE THIS BRIDGE WAS ORIGINALLY PAINTED WITH MATERIALS CONTAINING LEAD AND/OR CHROMATES AND THE CONTRACTOR IS REQUIRED TO PROCEED ACCORDINGLY TO TAKE ALL MANDATORY SAFEGUARDS PRESCRIBED BY STATE AND FEDERAL LAW FOR BOTH WORKER PROTECTION AND HAZARDOUS MATERIALS DISPOSAL.

PROJECT NO.	YEAR	SHEET NO.
18004-4311-04	1994	2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	1-19-94	TEQ	Rev. note, deleted est. qty. and note

GENERAL NOTES

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. (MARCH 1981 EDITION).

DESIGN SPECIFICATIONS: AASHTO 1992 EDITION WITH ADDENDA.

HIGH EARLY STRENGTH CONCRETE: THE MIX TO MEET THE REQUIREMENTS OF SPECIAL PROVISION NO. 604CX, CLASS "A", EXCEPT THE CEMENT CONTENT SHALL BE A MINIMUM OF 714 LBS., THE WATER CEMENT RATIO SHALL BE A MAXIMUM OF 0.40, NO FLY ASH REPLACEMENT WILL BE PERMITTED AND THE MINIMUM 28 DAY COMPRESSIVE STRENGTH SHALL BE 3,500 PSI. TRAFFIC SHALL NOT BE PERMITTED ON ANY OF THE REPAIR AREAS UNTIL TEST SPECIMENS ATTAIN A COMPRESSIVE STRENGTH OF 3,000 PSI MINIMUM AND THE CONCRETE HAS BEEN IN PLACE A MINIMUM OF TEN (10) DAYS.

SPECIAL NOTE: TO IMPROVE THE FLOWABILITY OF THE HIGH EARLY STRENGTH CONCRETE, THE CONTRACTOR MAY USE ADMIXTURES, (SUPERPLASTICIZERS) IN ACCORDANCE WITH SPECIAL PROVISION NO. 604CX. CONCRETE ADMIXTURES (SUPERPLASTICIZERS) USED SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION MATERIALS AND TEST DIVISION PRIOR TO USE. COARSE AGGREGATE FOR THE CONCRETE USED IN THE REPAIR AREAS SHALL BE SIZE 67 STONE.

CONCRETE CURING: ALL CONCRETE IN REPAIR AREAS TO BE CURED ACCORDING TO SPECIAL PROVISION NO. 604.

REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON BILL OF STEEL. SPACING DIMENSIONS ARE CENTER TO CENTER AND COVER DIMENSIONS ARE CLEAR DISTANCE UNLESS OTHERWISE NOTED. PLACING TOLERANCES ARE ±½" FOR SPACING AND -⅛" OR +⅜" FOR COVER. (THE SUFFIX "E" FOR BARS SO MARKED, DENOTES EPOXY COATED REINFORCEMENT). SEE SPECIAL PROVISION NO. 907A.

GROUTED BARS IN DRILLED HOLES: HORIZONTALLY DRILLED HOLES SHALL BE DRILLED ½" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH NON-SHRINK GROUT AND BAR DRIVEN TO ITS SEAT. VERTICALLY DRILLED HOLES SHALL BE DRILLED ¼" IN DIAMETER LARGER THAN THE BAR, CLEANED, PACKED WITH EPOXY GROUT AND BAR DRIVEN TO ITS SEAT. ALL GROUTING MATERIAL SHALL BE APPROVED BY T.D.O.T. MATERIALS AND TESTS.

NON-PAY ITEMS: ONLY ITEMS SHOWN ON THE PROPOSAL AS PAY ITEMS WILL BE PAID FOR. COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND INCIDENTALS FOR THE ENTIRE CONTRACT SHALL BE INCLUDED IN THE PRICE FOR PAY ITEMS.

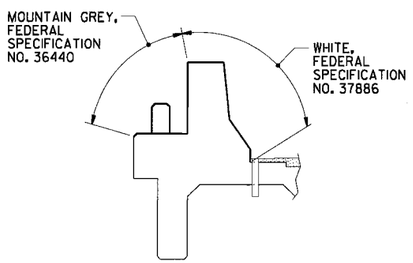
SPECIAL NOTE TO CONTRACTOR: CONTRACTOR SHALL USE EXTREME CARE AND TAKE ANY MEASURE NECESSARY TO INSURE THAT NO DEBRIS IS DROPPED INTO THE STREAM. ANY DEBRIS WHICH IS ALLOWED TO DROP ON THE BANKS BELOW THE BRIDGE SHALL NOT BE ALLOWED TO ENTER THE STREAM AND SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. COST OF REMOVING AND DISPOSING OF DEBRIS SHALL BE INCLUDED IN ITEMS BID ON.

STRUCTURAL STEEL: SHALL CONFORM TO AASHTO M 270 GRADE 36 (ASTM A709 GRADE 36) UNLESS OTHERWISE NOTED.

WELDING: ANSI/AASHTO/AWS D1.5-88 BRIDGE WELDING CODE AND SPECIAL PROVISION NO. 602.

BOLTS: SHALL BE HIGH TENSILE STRENGTH BOLTS (ASTM-A325), UNLESS OTHERWISE NOTED. SIZE TO BE AS NOTED ON PLANS.

PAINTING (ALL NEW WORK): ALL STRUCTURAL STEEL SHALL BE SHOP PAINTED. PAINT SHALL BE SYSTEM "B" INORGANIC ZINC PAINT SYSTEM, EXCEPT URETHANE FINISH COAT SHALL BE USED IN LIEU OF VINYL FINISH COAT. COLOR OF THE URETHANE FINISH SHALL COMPLY WITH FEDERAL STANDARD NO. 595a, 24110 GREEN. SEE SECTIONS 603 AND 910 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION. SEE SPECIAL PROVISION NO. 603A, REGARDING PAINTING.



TEXTURE COATING DETAIL

NOTE: COST OF TEXTURE COATING SHALL BE INCLUDED IN ITEM NO. 620-10.01, AND INCLUDES 10'-2" ENDPOSTS AS SHOWN ON STANDARD DWG. NO. BR-2-125.

NOTE: THE CONTRACTOR SHALL USE CONTAINMENT SCREENS OR OTHER MEASURES AS NECESSARY TO PREVENT ANY TEXTURE COATING FROM ENTERING THE ENVIRONMENT. CONTAINMENT MEASURES SHALL BE APPROVED BY THE ENGINEER AND COST SHALL BE INCLUDED IN ITEMS BID ON.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

GENERAL NOTES AND ESTIMATED QUANTITIES
S.R. 24 OVER MEADOW CREEK
BRIDGE NO. 18-SR24-14.07
S.R. 24 OVER OBED RIVER
BRIDGE NO. 18-SR24-15.36
CUMBERLAND COUNTY
1994

BR-10-52

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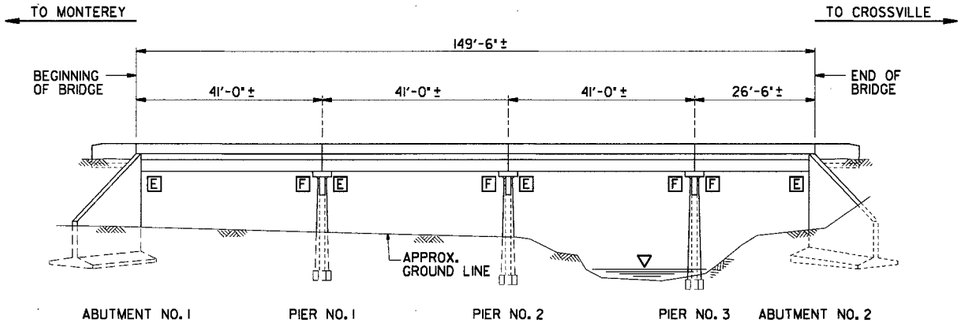
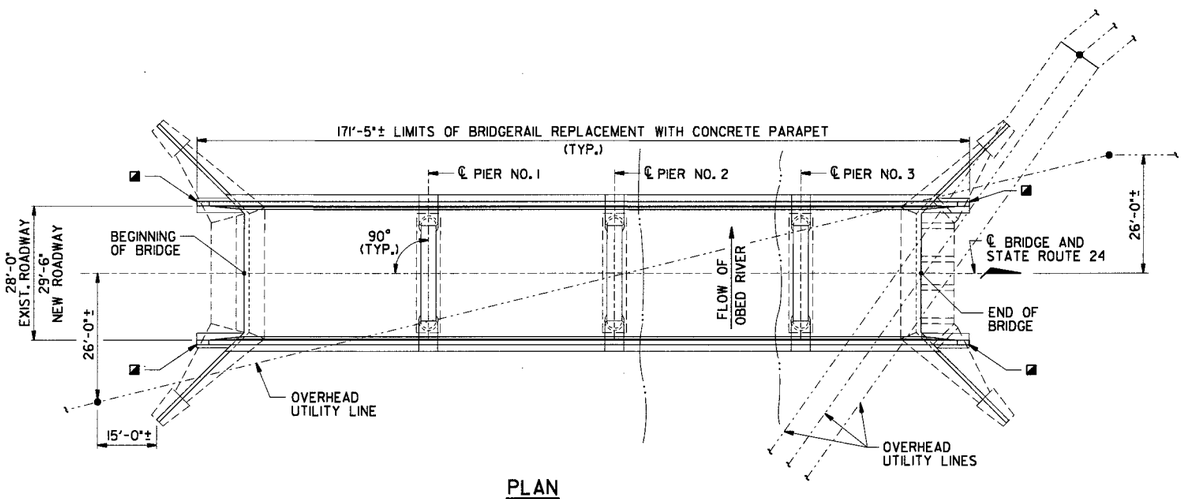


ELEVATION

E DENOTES: EXISTING EXPANSION SUPPORT CONDITION

F DENOTES: EXISTING FIXED SUPPORT CONDITION

NOTE: EXISTING AND PROPOSED EXPANSION SUPPORT CONDITIONS TO REMAIN THE SAME.



PLAN

◪ DENOTES: NEW 10'-2" CONCRETE PARAPET ENDPOST REQUIRED AT BRIDGE ENDS. SEE STANDARD DWG. NOS. BR-2-124, BR-2-125 AND BR-2-126.

GENERAL SCOPE OF WORK

1) REMOVE THE EXISTING 10¼" (±) ASPHALT OVERLAY IN PHASES FULL DEPTH FOR ENTIRE BRIDGE LENGTH AND PARTIAL DEPTH FOR A 200 FOOT TRANSITION LENGTH BEYOND EACH BRIDGE END. SEE SHEET 2A AND DWG. NO. BR-10-56.

2) CLEAN AND RESEAL EXISTING BITUMINOUS SLAB JOINTS AT PIERS NO. 1 THRU NO. 3 AS SHOWN IN DETAIL ON DWG. NO. BR-10-56.

3) REMOVE DETERIORATED CONCRETE AT EXISTING GIRDERS AND REPAIR WITH NEW HIGH EARLY STRENGTH CONCRETE AS SHOWN IN DETAIL ON DWG. NO. BR-10-57.

4) REPAIR EXISTING CONCRETE SURFACE DEFECTS AT SUBSTRUCTURE LOCATIONS AS SHOWN ON DWG NO. BR-10-58 AND BR-10-59.

5) REPAIR STRUCTURAL STEEL SUPPORT ANGLE AT PIER CANTILEVER PORTIONS OF PIERS NO. 1 THRU NO. 3 AS SHOWN ON DWG. NO. BR-10-59.

6) RECONSTRUCT CONCRETE SLAB IN AREAS OF PARTIAL AND FULL DEPTH DECK REPAIRS WITHIN LIMITS DESIGNATED BY THE ENGINEER AS SHOWN IN DETAIL ON DWG. NO. BR-10-57.

7) CLEAN EXISTING CONCRETE SURFACE OF PIERS NO. 1 THRU NO. 3 AND APPLY NON-PENETRATING CONCRETE SEAL WITHIN LIMITS SHOWN ON DWG. NO. BR-10-58.

8) EXTEND EXISTING BRIDGE DECK DRAINS AS SHOWN IN DETAIL ON DWG. NO. BR-10-56.

9) REMOVE EXISTING CONCRETE BRIDGERAIL AND REPLACE WITH NEW CONCRETE PARAPET WITH 10'-2" ENDPOSTS (TYPICAL EACH SIDE). SEE STANDARD DWG. NOS. BR-2-124, BR-2-125, BR-2-126 AND DWG. NO. BR-10-56.

10) REMOVE THE EXISTING GUARDRAIL AND INSTALL NEW METAL APPROACH GUARDRAIL ATTACHMENT AT ALL FOUR CORNERS OF THE EXISTING BRIDGE. FOR DETAILS SEE SHEET 2A, STANDARD DWG. NO. STD-12-1 AND S-GR-SERIES.

11) CONSTRUCT NEW ASPHALT BINDER COURSE AND NEW 3¼" ASPHALT OVERLAY WITH DECK SEALANT AS SHOWN ON SHEET NO. 2A.

DESIGNED BY	R. LOVETT	DATE	11/93
DRAWN BY	G.L.GERTH, CAD/D	DATE	11/93
SUPERVISED BY	PETRONE	DATE	11/93
CHECKED BY	WILSON, PETRONE	DATE	11/93

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DGN:\BR2\18004321204\BR10LAY.DGN

PROJECT NO.	YEAR	SHEET NO.
18004-4311-04	1994	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

LIST OF DRAWINGS

DWG. NO.	LAST REV. DATE	DRAWING
BR-10-55		LAYOUT OF BRIDGE TO BE REPAIRED
BR-10-52		GENERAL NOTES AND ESTIMATED QUANTITIES
BR-10-56		SUPERSTRUCTURE
BR-10-57		SUPERSTRUCTURE DETAILS
BR-10-58		PIER DETAILS
BR-10-59		PIER DETAILS

LIST OF STANDARD DRAWINGS

DWG. NO.	LAST REV. DATE	DRAWING
BR-2-124	11-16-92	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST
BR-2-125	11-16-92	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST
BR-2-126	11-16-92	DETAILS SHOWING REPLACEMENT OF EXISTING BRIDGERAIL SYSTEM WITH NEW JERSEY SHAPE CONCRETE PARAPET AND NEW 10'-2" ENDPOST
STD-12-1	9-01-91	GUARDRAIL ATTACHMENT AND TRANSITION DETAILS
S-GR-SERIES	VARIES	STANDARD GUARDRAIL DETAILS

*LIST OF REFERENCE DRAWINGS

DWG. NO.	DRAWING
A-0-3, A-0-4, A-0-12 A-3-152 THRU A-3-155	EXISTING BRIDGE DRAWINGS
G-14-24 THRU G-14-29	EXISTING BRIDGE WIDENINGS DRAWINGS

LIST OF SPECIAL PROVISIONS

NO.	LAST REV. DATE	REGARDING
100	**	REVISIONS AND ADDITIONS TO STANDARD SPECIFICATIONS
105A	**	APPROVAL OF SHOP DRAWINGS
209	**	PROJECT EROSION AND SILTATION CONTROL
602	**	SECTION 602 STEEL STRUCTURES
603A	**	PAINTING
604	**	CONCRETE STRUCTURES
604CX	**	CONTRACTOR - MIX DESIGN AND TESTING STRUCTURAL CONCRETE
907A	**	EPOXY COATED REINFORCING STEEL

* DENOTES: THESE DRAWINGS ARE TO BE PRINTED WITH PLANS.

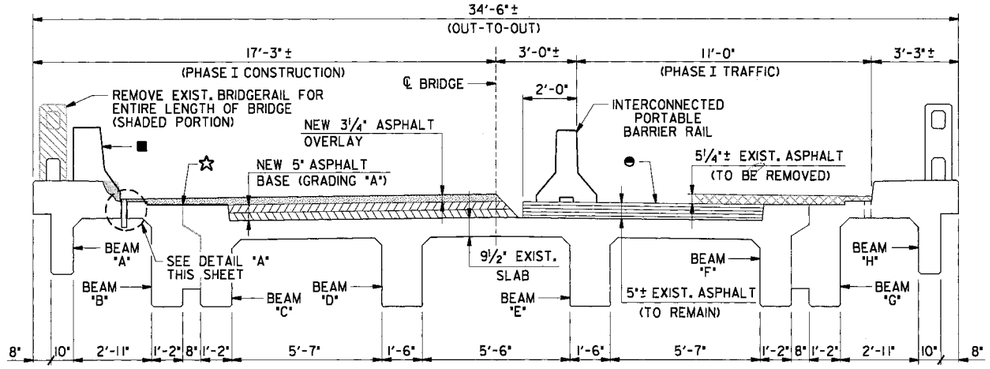
** DENOTES: CURRENT REVISION DATE, AS PER CONTRACT DOCUMENTS.

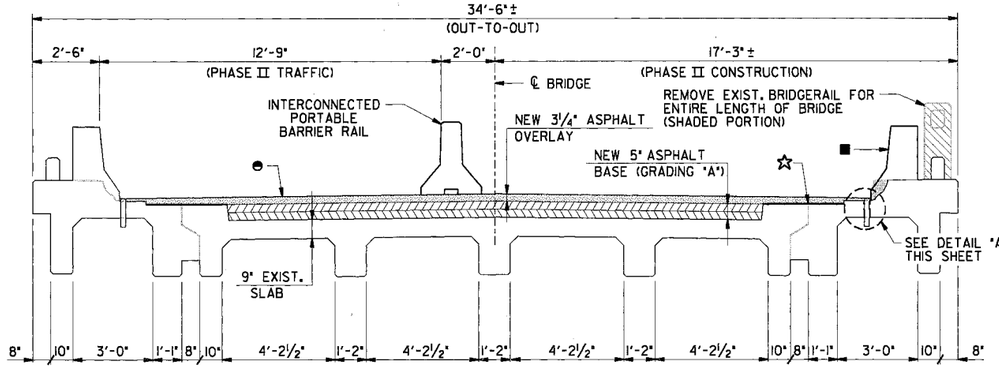
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

ROBIN LOVETT REGISTERED ENGINEER No. 022217 STATE OF TENNESSEE

LAYOUT OF BRIDGE TO BE REPAIRED
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE NO. 18-SR24-15.36
CUMBERLAND COUNTY
1994

BR-10-55





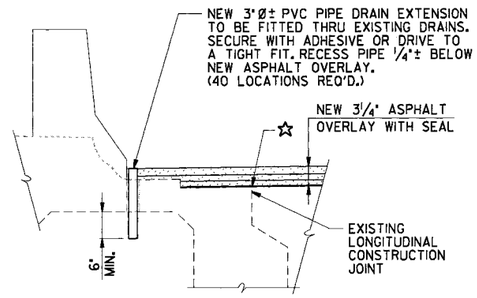
PROJECT NO.	YEAR	SHEET NO.
18004-4311-04	1994	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

PHASE I CONSTRUCTION

(SHOWN AT SPANS NO. 1 THRU NO. 3)



DETAIL "A"

NOTE: EXISTING DECK DRAINS LOCATED ADJACENT TO PIER CAPS (12 LOCATIONS) TO BE ELIMINATED BY FILLING EXISTING DRAIN VOID FULL DEPTH WITH NON-SHRINK GROUT. ALL WORK TO MEET THE FULL SATISFACTION OF THE ENGINEER.

NOTE: COST OF EXTENDING 40 EXISTING DECK DRAIN AS SHOWN AND ELIMINATING 12 EXISTING DECK DRAINS TO BE INCLUDED IN ITEM NO. 620-10.01, CONCRETE PARAPET, (BRIDGERAIL REPLACEMENT), L.F.

TYPICAL CROSS SECTIONS

(LOOKING FORWARD ON SURVEY)

● DENOTES: APPROXIMATE PHASED TRAFFIC RIDING SURFACE EXTENDING FULL LENGTH OF BRIDGE AND ROADWAY APPROACHES.

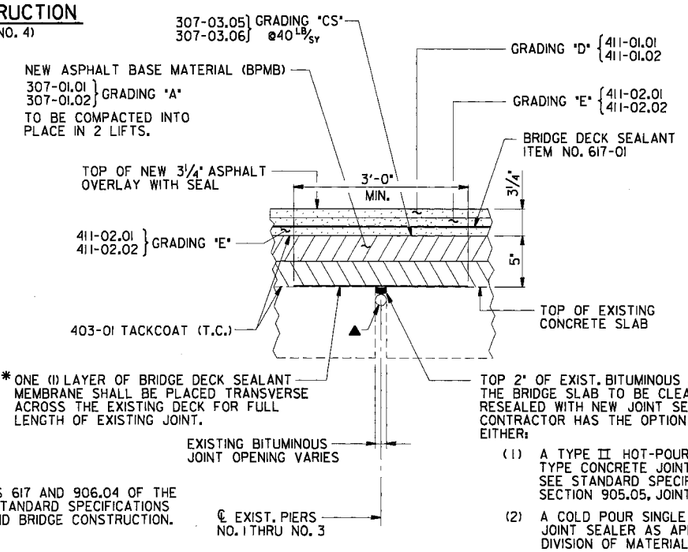
■ DENOTES: NEW CONCRETE PARAPET, SEE STD. DWG. NO. BR-2-124. REFER TO BRIDGE LAYOUT PLAN, DWG. NO. BR-10-55 FOR LIMITS OF BRIDGERAIL REPLACEMENT WITH CONCRETE PARAPET.

☆ DENOTES: ONE (1) LAYER OF BRIDGE DECK SEALANT MEMBRANE SHALL BE PLACED ATOP CONCRETE AT EXISTING LONGITUDINAL CONSTRUCTION JOINT AND SHALL EXTEND FOR THE FULL LENGTH OF BRIDGE. COST OF NEW BRIDGE DECK SEALANT MEMBRANE AND INSTALLATION AS SHOWN TO BE INCLUDED IN ITEM NO. 617-01, BRIDGE DECK SEALANT, S.Y.

NOTE: PRIOR TO CONSTRUCTING THE NEW CONCRETE PARAPET, THE TOP SURFACE OF THE EXISTING CURBS SHALL BE PREPARED BY REMOVING ALL SCALED AREAS DOWN TO SOUND CONCRETE.

PHASE II CONSTRUCTION

(SHOWN AT SPAN NO. 4)



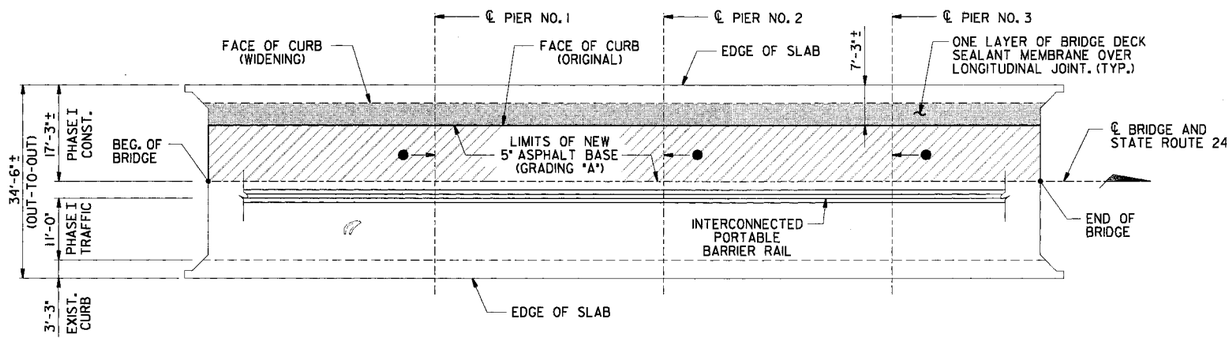
* DENOTES: SEE SECTIONS 617 AND 906.04 OF THE TENNESSEE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

EXISTING BITUMINOUS JOINT REPAIR DETAIL

▲ DENOTES: THE MOVEMENT GAP SHALL BE CAULKED WITH A BACKER ROD OF SUITABLE DIAMETER. THE ROD SHALL BE PLACED AT A DEPTH TO ENSURE THE CORRECT WIDTH/DEPTH RATIO OF THE NEW BRIDGE JOINT SEALER. BACKER ROD AND CAULK SHALL BE AS PER THE SEALER MANUFACTURER.

NOTE: COST OF CLEANING AND PREPARING EXISTING JOINT OPENING, NEW BRIDGE DECK SEALANT MEMBRANE AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE REPAIRS AS SHOWN TO BE INCLUDED IN ITEM NO. 617-01, BRIDGE DECK SEALANT, S.Y.

NOTE: THE JOINT SEALER SHALL EXTEND UP AND ACROSS THE CURB AREA TO THE OUTER EDGE OF THE CURB.



SLAB PLAN

(SHOWING PHASE I CONSTRUCTION. TYPICAL FOR PHASE II.)

● DENOTES: EXISTING BITUMINOUS EXPANSION JOINTS TO BE CLEANED AND SEALED IN ACCORDANCE WITH NOTES AND DETAIL SHOWN THIS SHEET.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE NO. 18-SR24-15.36
CUMBERLAND COUNTY
1994

DESIGNED BY	R. LOVETT	DATE 11/93
DRAWN BY	G.L.GERTH, CAD/D	DATE 11/93
SUPERVISED BY	PETRONE	DATE 11/93
CHECKED BY	WILSON, PETRONE	DATE 11/93

BR-10-56

SCANNED

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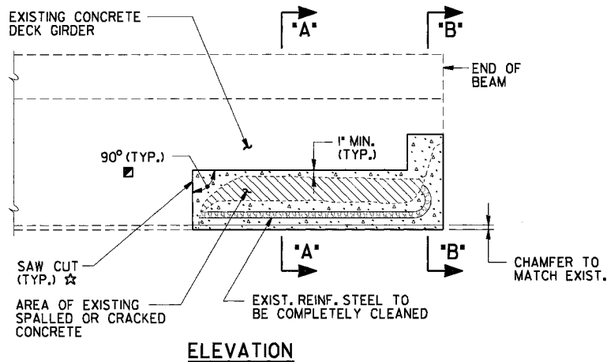
PROJECT NO.	YEAR	SHEET NO.
18004-4311-04	1994	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION

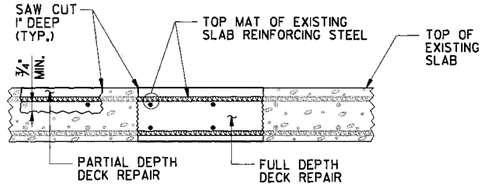
DETAIL SHOWING AREAS OF EXISTING SPALLED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

◒ DENOTES: LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.

◩ DENOTES: SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS.

☆ NOTE: SAW CUTS IN GIRDER STEMS SHALL BE MADE AS DEEP AS PRACTICABLE UP TO A MAXIMUM OF ONE INCH. EXTREME CAUTION SHALL BE TAKEN TO PREVENT DAMAGE TO EXISTING REINFORCEMENT. APPROXIMATE CLEARANCE TO REINFORCEMENT SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR PRIOR TO SAW CUTTING.

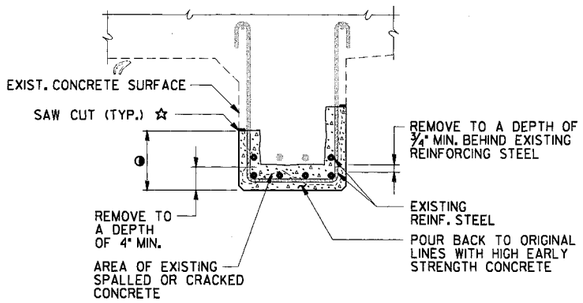
NOTE: PROVISIONS SHALL BE MADE DURING CONCRETE REMOVAL TO PROTECT THE EXISTING REINFORCING STEEL FROM DAMAGE. THE EXISTING REINFORCING STEEL SHALL BE COMPLETELY CLEANED, REALIGNED AND INCORPORATED INTO THE NEW CONSTRUCTION.



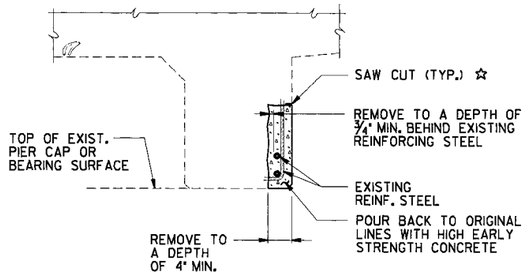
DETAIL SHOWING FULL AND PARTIAL DEPTH DECK REPAIR

NOTE: REMOVE CONCRETE IN ALL DELAMINATED AREAS TO A DEPTH OF ¾" BELOW THE TOP BAR OF THE TOP MAT OF REINFORCING STEEL. ALL REINFORCING STEEL IN AREAS OF DECK REPAIR SHALL BE COMPLETELY CLEANED. AREAS OF CONCRETE REMOVAL SHALL BE DESIGNATED BY PERSONNEL FROM HEADQUARTERS BRIDGE INSPECTION AND REPAIR OFFICE. DECK REPAIR WILL BE PAID FOR UNDER ITEM NO. 604-10.50, BRIDGE DECK REPAIR (PARTIAL DEPTH OF SLAB), AND ITEM NO. 604-10.30, BRIDGE DECK REPAIR (FULL DEPTH OF SLAB). DURING PARTIAL DEPTH REPAIRS, SHOULD DETERIORATED CONCRETE BE ENCOUNTERED WHICH APPEARS TO RUN FULL DEPTH IN THE SLAB, THE ENGINEER MAY DESIGNATE THESE AREAS TO BE REPAIRED UNDER ITEM NO. 604-10.30. POWER DRIVEN HAND TOOLS USED FOR REMOVAL OF UNSOUND CONCRETE IN MAKING PARTIAL DEPTH REPAIRS ARE SUBJECT TO THE FOLLOWING RESTRICTIONS: 1) PNEUMATIC HAMMERS HEAVIER THAN NOMINAL 35 POUND CLASS SHALL NOT BE USED; 2) CHIPPING HAMMERS OF THE 15 POUND CLASS SHALL BE USED TO REMOVE CONCRETE FROM BENEATH ANY REINFORCING STEEL.

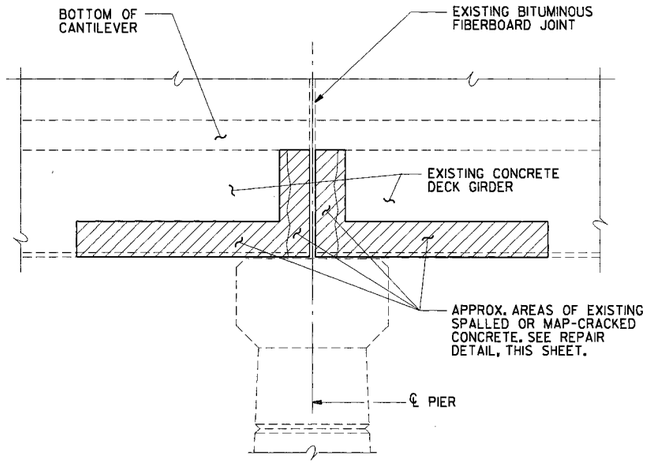
NOTE: ITEM NO. 604-10.30 AND 604-10.50 SHALL BE BID WITH THE CONTINGENCY THAT THESE ITEMS MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.



SECTION "A-A"



SECTION "B-B"



ELEVATION

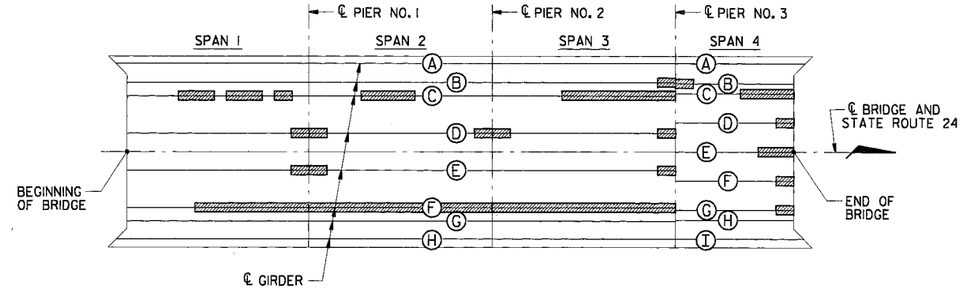
ESTIMATED GIRDER REPAIR

LOCATION OF REPAIR	ITEM NO. 604-10.42 C.F.
SPAN NO. 1	28
SPAN NO. 2	28
SPAN NO. 3	37
SPAN NO. 4	7

NOTE: THE COST OF REMOVING PORTIONS OF THE EXISTING CONCRETE WITHIN THE LIMITS SHOWN, SAW CUTTING, COMPLETELY CLEANING EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR AND ALL MISCELLANEOUS MATERIAL NECESSARY TO COMPLETE THE GIRDER REPAIRS AS SHOWN SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

NOTE: ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F. SHALL BE BID WITH THE CONTINGENCY THAT IT MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF THE STRUCTURE DURING REPAIRS TO THE GIRDERS. DETAILS OF ANY TEMPORARY SUPPORT SYSTEM OR FALSEWORK REQUIRED SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND SHALL MEET WITH THE FULL SATISFACTION OF THE ENGINEER BEFORE ANY GIRDER REPAIR IS BEGUN.



PLAN - GIRDER REPAIRS

▨ DENOTES: APPROXIMATE LOCATION OF GIRDER REPAIRS. SEE REPAIR DETAILS, THIS SHEET.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

SUPERSTRUCTURE DETAILS STATE ROUTE 24 OVER OBED RIVER BRIDGE NO. 18-SR24-15.36 CUMBERLAND COUNTY 1994

DESIGNED BY R. LOVETT DATE 11/93
DRAWN BY G. GERTH, CAD/D DATE 11/93
SUPERVISED BY PETRONE DATE 11/93
CHECKED BY WILSON, PETRONE DATE 11/93

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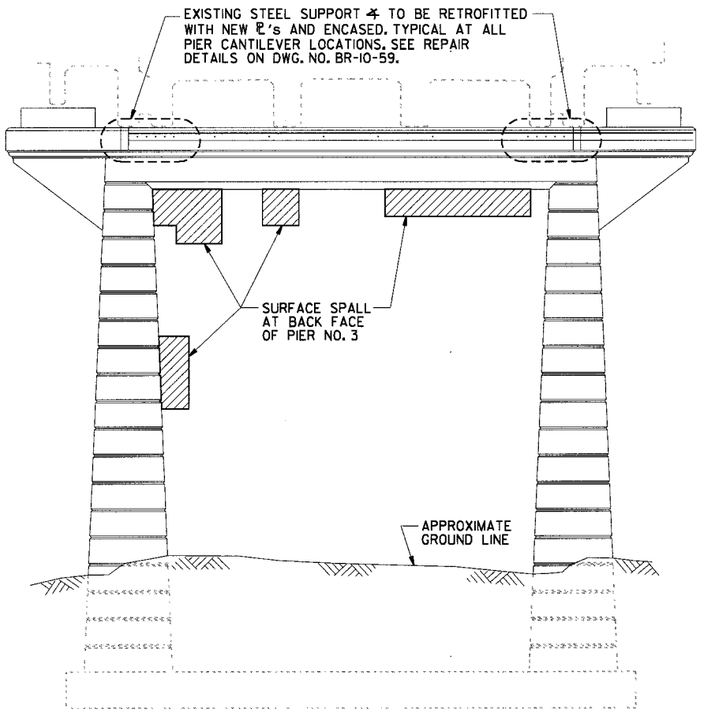
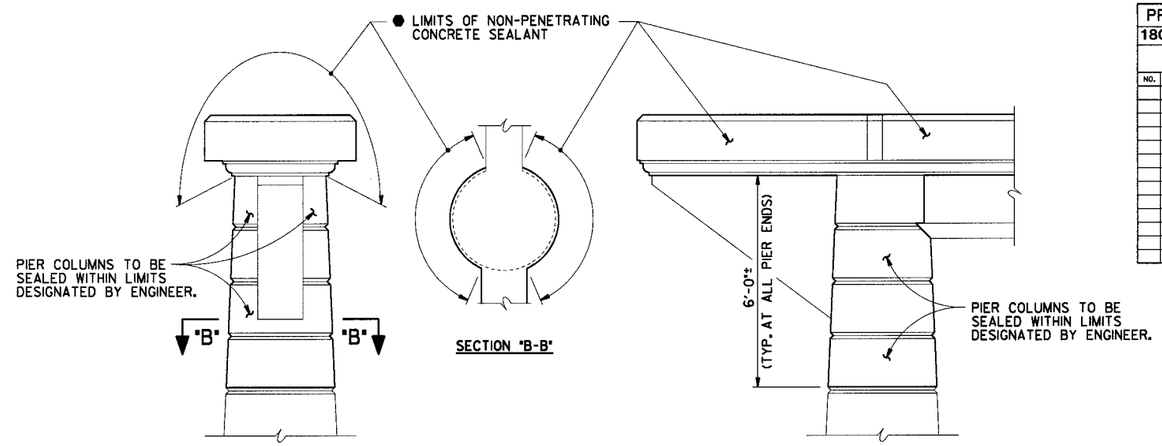


TYPICAL ELEVATION OF PIER

▨ DENOTES: AREAS OF EXISTING SPALLED CONCRETE TO BE REPAIRED. SURFACE SPALL REPAIRS TO BE PAID FOR UNDER ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F.



END ELEVATION

ELEVATION

PROJECT NO.	YEAR	SHEET NO.
18004-4311-04	1994	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

CONCRETE SEALANT DETAILS

● NOTE: BEFORE APPLYING ANY CONCRETE SEALER, ALL SURFACES TO BE SEALED SHALL BE COMPLETELY CLEANED OF ALL DEBRIS AND FOREIGN MATERIALS. THE SURFACE CONDITIONS OF THE CONCRETE TO BE SEALED SHALL MEET THE REQUIREMENTS OF THE SEALANT MANUFACTURER. THE THICKNESS OF THE CONCRETE SEAL SHALL BE AS RECOMMENDED BY THE SEALANT MANUFACTURER. ALL WORK MUST MEET WITH THE FULL SATISFACTION OF THE ENGINEER.

NOTE: NON-PENETRATING SEALANT SHALL BE APPLIED TO CONCRETE CAP SURFACES AFTER ALL REPAIR WORK TO PIER CAPS HAS BEEN ACCOMPLISHED.

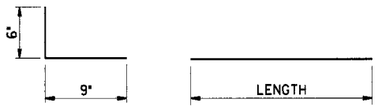
NOTE: THE ACCEPTABLE BRANDS OF CONCRETE SEALER SHALL BE APPROVED BY THE TENNESSEE DEPARTMENT OF TRANSPORTATION, DIVISION OF MATERIALS AND TEST. THE COLOR OF THE SEALER SHALL BE CLEAR OR SIMILAR TO THE COLOR OF THE EXISTING CONCRETE SURFACES TO BE SEALED.

NOTE: THE COST OF THE CONCRETE SEALER, COMPLETE AND IN PLACE, SHALL BE PAID FOR UNDER ITEM NO. 604-10.17, NON-PENETRATING CONCRETE SEAL, S.Y.

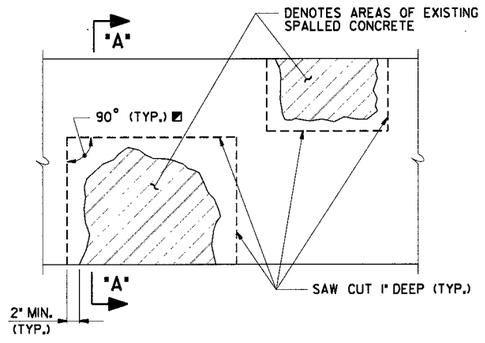
BILL OF STEEL

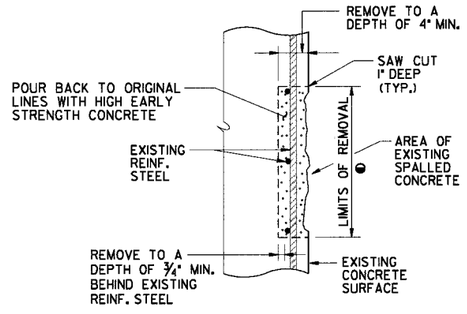
BAR	SIZE	NO. REQ'D.	LENGTH
A400E	4	24	5'-1"
CA400E	4	60	1'-3"

NOTE: ALL REINFORCING STEEL SHALL BE EPOXY COATED. THE COST OF EPOXY COATED REINFORCING STEEL TO BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.18, REINFORCING STEEL (REPAIRS), LBS.



BARS CA400E BARS A





SECTION "A-A"

DETAIL SHOWING AREAS OF EXISTING SPALLED CONCRETE SURFACES TO BE REMOVED AND REPAIRED

◓ DENOTES: LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.

◩ DENOTES: SAW CUT EXISTING CONCRETE SURFACES SO AS TO OBTAIN SQUARED CORNERS.

NOTE: THE COST OF REMOVING PORTIONS OF THE EXISTING CONCRETE WITHIN THE LIMITS SHOWN, SAW CUTTING, COMPLETELY CLEANING EXISTING REINFORCING STEEL, HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR AND ALL MISCELLANEOUS MATERIAL NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.54, CONCRETE REPAIRS, S.F.

SPECIAL NOTE: ALL VEGETATION ATTACHED TO EXISTING SUBSTRUCTURES SHALL BE REMOVED AND DISPOSED OF WITHIN LIMITS DESIGNATED BY THE ENGINEER. COST OF REMOVAL AND DISPOSAL SHALL BE INCLUDED IN OTHER ITEMS BID ON.

ESTIMATED REPAIRS

LOCATION OF REPAIR	☆ ITEM NO. 604-10.42 C.F.	ITEM NO. 604-10.54 S.F.
PIER NO. 1	14	--
PIER NO. 2	13	--
PIER NO. 3	13	34

☆ DENOTES: SEE REPAIR DETAILS ON DWG. NO. BR-10-59.

NOTE: ITEM NOS. 604-10.42 OR 604-10.54, CONCRETE REPAIRS, SHALL BE BID WITH THE CONTINGENCY THAT THESE ITEMS MAY BE INCREASED, DECREASED OR ELIMINATED AS DIRECTED BY THE ENGINEER.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIER DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE NO. 18-SR24-15.36
CUMBERLAND COUNTY
1994

DESIGNED BY R. LOVETT DATE 11/93
DRAWN BY G. GERTH, CAD/D DATE 11/93
SUPERVISED BY PETRONE DATE 11/93
CHECKED BY WILSON, PETRONE DATE 11/93

BR-10-58

28-OCT-1993 08:26
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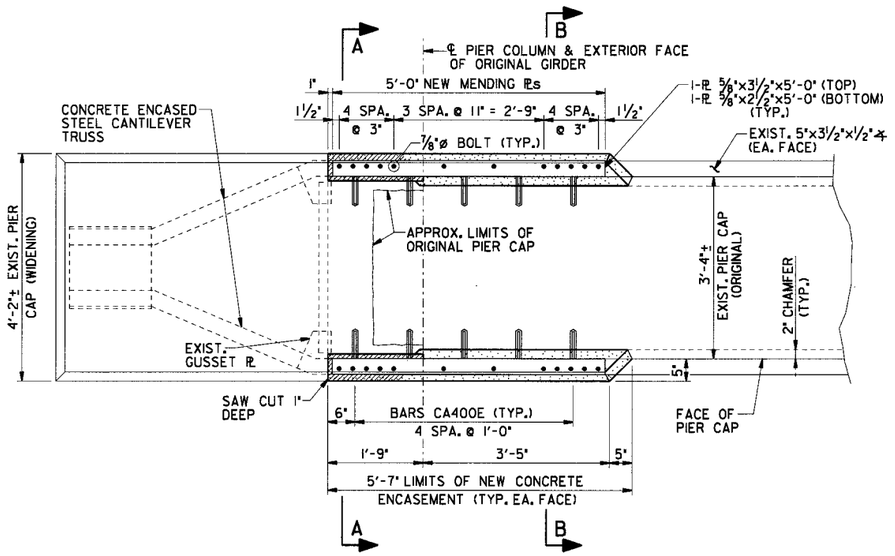
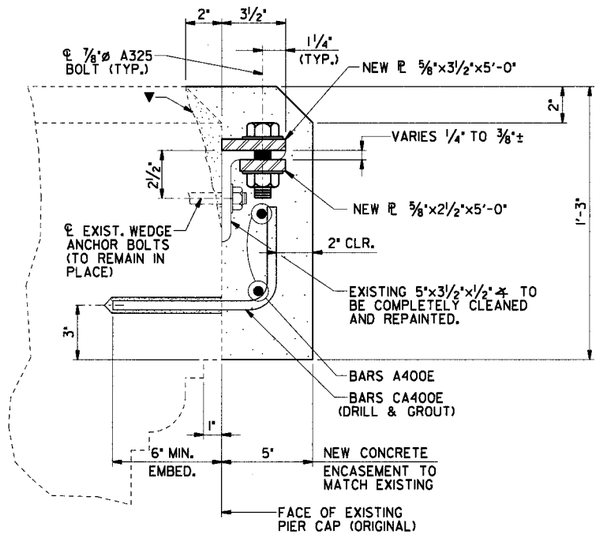


TYPICAL PLAN

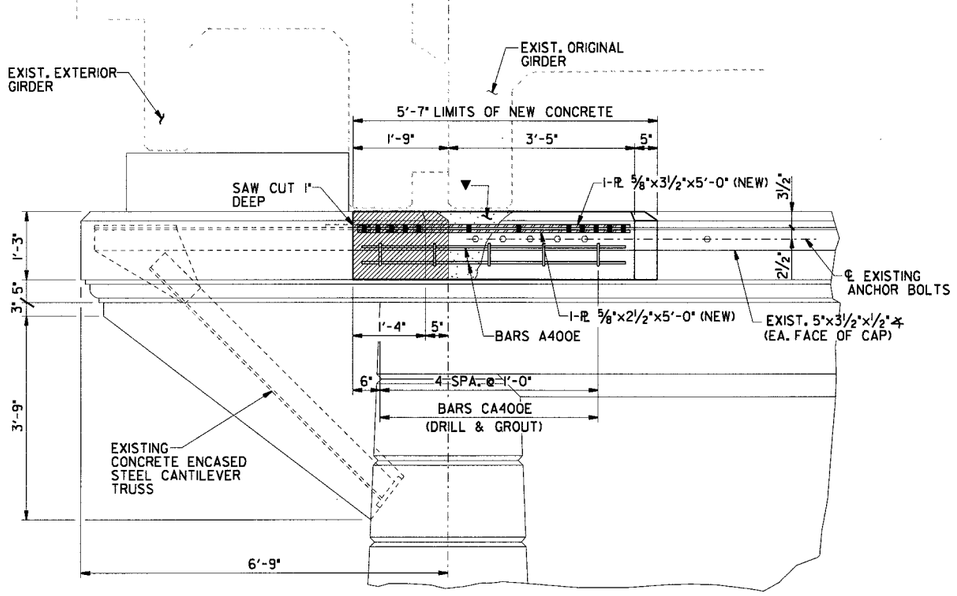
(SHOWING EXISTING ANGLE REPAIR)

▨ DENOTES: LIMITS OF CONCRETE CAP REMOVAL.



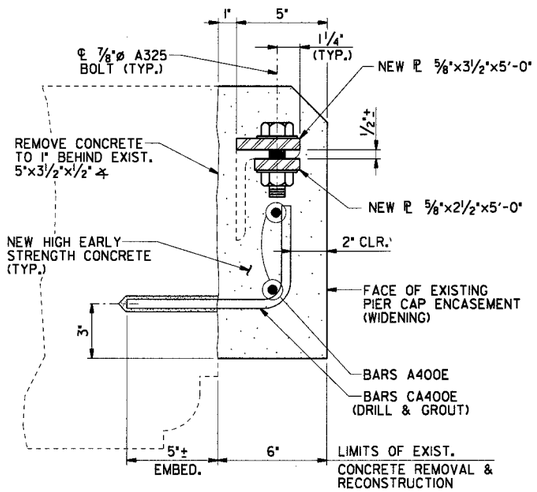
SECTION "B-B"

(SHOWN ℄ CAP ENCASEMENT EXTENSION)



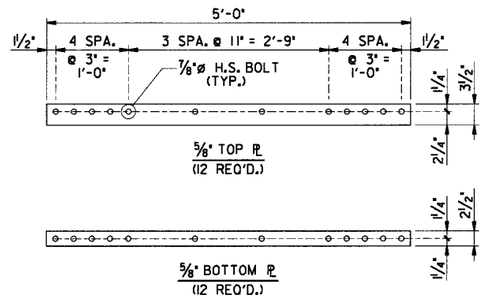
TYPICAL ELEVATION

(TYPICAL EACH FACE OF PIER)



SECTION "A-A"

(SHOWN ℄ EXIST. CAP ENCASEMENT)



MENDING PLATE DETAILS

(NOTE: HOLE SPACING TYPICAL EACH ℙ)

PROJECT NO.	YEAR	SHEET NO.
18004-4311-04	1994	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

NOTE: THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL MEMBER DIMENSIONS SHOWN FOR NEW STRUCTURAL STEEL MODIFICATIONS PRIOR TO STEEL FABRICATION.

NOTE: COST OF NEW STRUCTURAL STEEL PLATES, ⅞"ø HIGH STRENGTH BOLTS (ASTM-A325) WITH HEX NUTS AND WASHERS, DRILLING, AND ANY MISCELLANEOUS MATERIALS NECESSARY TO COMPLETE THE STRUCTURAL STEEL MODIFICATIONS TO BE INCLUDED IN ITEM NO. 602-10.06, STRUCTURAL STEEL, LBS.

NOTE: THE COST OF REMOVING PORTIONS OF THE EXISTING CONCRETE WITHIN THE LIMITS SHOWN, SAW CUTTING, HIGH EARLY STRENGTH CONCRETE, FORMING, LABOR AND ALL MISCELLANEOUS MATERIAL NECESSARY TO COMPLETE THE REPAIRS AS SHOWN SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 604-10.42, CONCRETE REPAIRS, C.F.

NOTE: ALL EXISTING STEEL ANGLE MEMBERS SHALL BE THOROUGHLY CLEANED TO REMOVE ALL RUST, FLAKING PAINT, ETC. PRIOR TO PLATE INSTALLATION. ALL WORK TO MEET THE FULL SATISFACTION OF THE ENGINEER.

NOTE: ALL BOLTS FOR REPAIR AREAS SHOWN TO BE ⅞"ø HIGH STRENGTH BOLTS - ASTM A325 IN 15/16 "ø HOLES. USE FILLER PLATES AS REQUIRED FOR FIT.

NOTE: ALL NEW STRUCTURAL STEEL SHALL RECEIVE A SHOP COAT OF INORGANIC ZINC PRIMER.

CONSTRUCTION PROCEDURE NOTE: THE CONTRACTOR SHALL REPAIR THE DETERIORATED STEEL ANGLE MEMBERS WITHIN PHASED CONSTRUCTION LIMITS SUCH THAT REPAIRS ARE MADE UNDER NO TRAFFIC LOADS. ALL ANGLE REPAIRS SHALL BE COMPLETED AND CONCRETE ENCASEMENT IN PLACE FOR ALL PIER ENDS UNDER PHASE I CONSTRUCTION LIMITS BEFORE STARTING REPAIRS ON THE OPPOSITE PIER ENDS.

NOTE: HOLES FOR GROUTED BARS SHALL BE DRILLED WITH A HIGH SPEED DRILL. THE DRILL BIT SHALL BE CAPABLE OF DRILLING THROUGH REINFORCING STEEL AS WELL AS CONCRETE.

▼ DENOTES: CHIP DETERIORATED SURFACE AREAS DOWN TO SOUND CONCRETE AND REPOUR MONOLITHICALLY WITH NEW CONCRETE ENCASEMENT. LIMITS AND LOCATION OF REPAIRS TO BE DESIGNATED BY THE ENGINEER.

DESIGNED BY	R. LOVETT	DATE	11/93
DRAWN BY	G.L.GERTH, CAD/D	DATE	11/93
SUPERVISED BY	PETRONE	DATE	11/93
CHECKED BY	WILSON, PETRONE	DATE	11/93

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

PIER DETAILS
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE NO. 18-SR24-15.36
CUMBERLAND COUNTY
1994

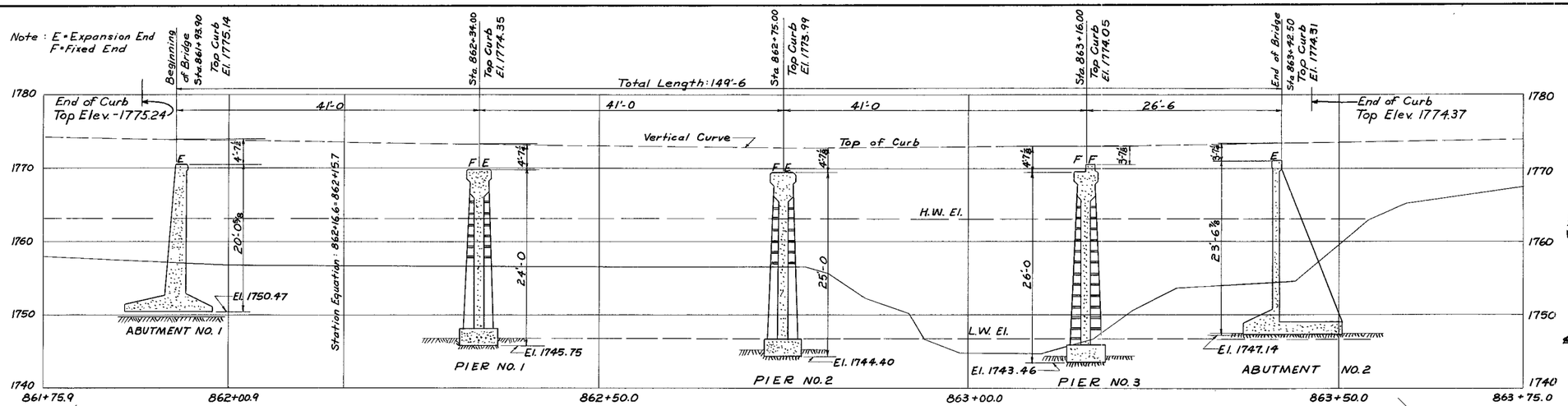
BR-10-59

20-OCT-1993 08:24
DS2:[000002]2192308PRI.DGN;1

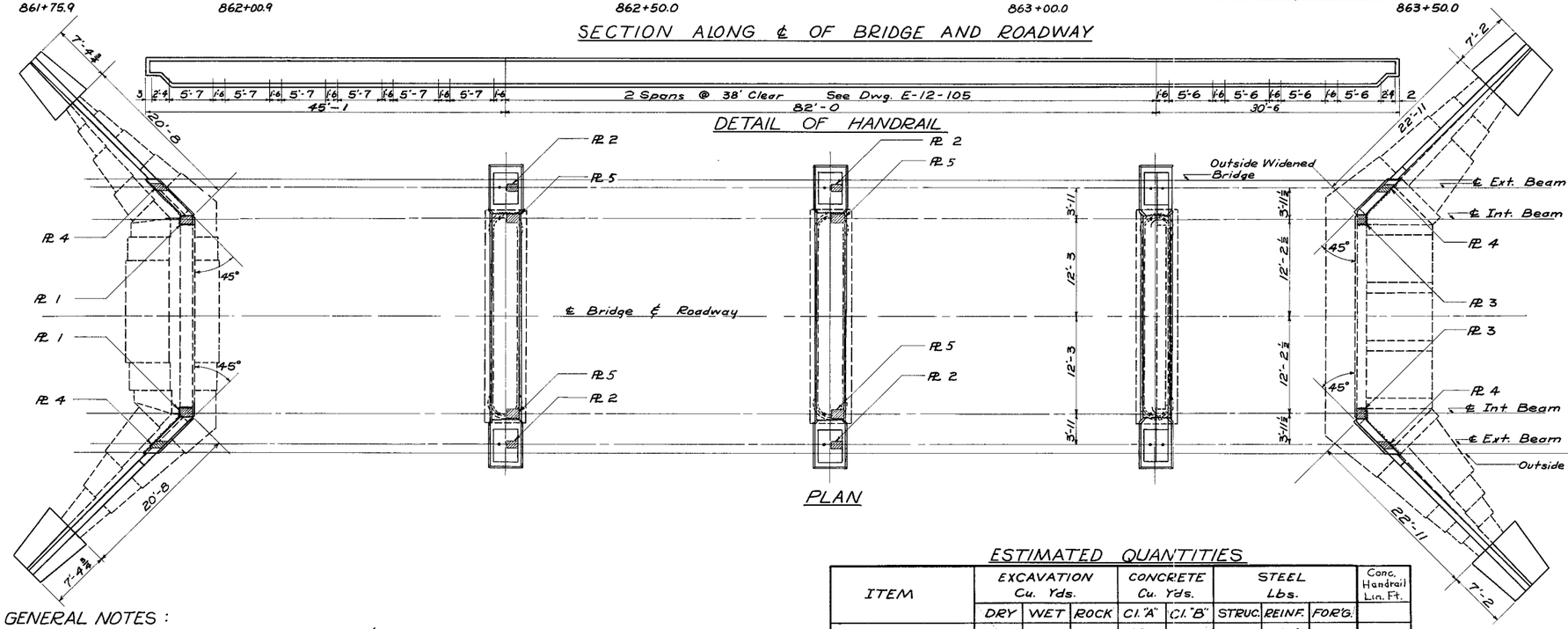
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19	17	25

F-347-1(4)

Note : E = Expansion End
F = Fixed End

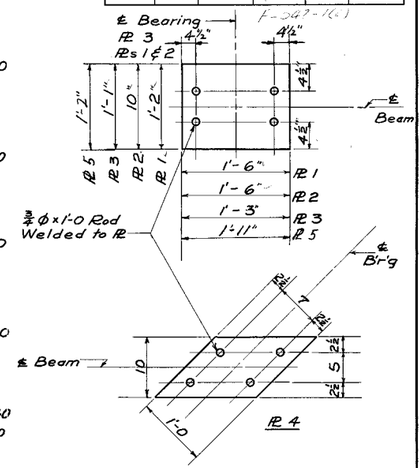


SECTION ALONG ℄ OF BRIDGE AND ROADWAY



PLAN

DETAIL OF HANDRAIL



EXPANSION PLATES

Required : 4 - Pl 1
8 - Pl 2
4 - Pl 3
4 - Pl 4 (as shown)
4 - Pl 4 (opp. hand)
8 - Pl 5

LIST OF DRAWINGS

TITLE		DR'WG.
Superstructure	24' Span	G-14-29
	38' Span	G-14-28
Railing		G-14-24 & E-12-105
Abutment No. 1		G-14-25
Abutment No. 2		G-14-26
Piers		G-14-27

GENERAL NOTES :

Specifications : Standard Specifications for Road & Bridge Construction of the Tennessee Dept. of Highways and Public Works.

Loading : H20-S16-44
Concrete : Class "A". Surfaces of old concrete against which new concrete is to be placed shall be thoroughly cleaned and wetted immediately before placing new concrete.
Reinforcing Steel : See Specifications
High Tensile Strength Bolts. See G-14-27.
Welding - See AWS Specifications
Joint Sealer: Class "B" Bridge Sealer. See Special Provisions
Forms and Finish : See Specifications.
Foundation : Rock - See Specifications.
Bituminous Wearing Surface : To be included in Roadway Quantities
Existing Structure : Shown in dashed lines is to remain in place unless otherwise shown or noted.

ESTIMATED QUANTITIES

ITEM	EXCAVATION Cu. Yds. DRY	WET	ROCK	CONCRETE Cu. Yds. Cl. "A"	Cl. "B"	STEEL Lbs. STRUC.	REINF.	FORG.	Conc. Handrail Lin. Ft.
Superstructure				141		1204	19,800		
Railing									
Abutment No. 1				12			696		
Pier No. 1				5		1734	422		
Pier No. 2				5		1734	422		
Pier No. 3				6		1734	430		
Abutment No. 2				17			1054		
Totals				186.0		6406	22824		315

* Refer to Drwg. E-12-105 for this steel. For the 38'-0 clear End Span, use steel as listed under 40'-0 clear End Span except that bars F shall be 5'-3; and bars G, 5'-9. For the 24'-0 clear End Span, use steel as listed under 28'-0 clear End Span except that bars F shall be 5'-1; and bars G, 5'-8.

Notes : Excavation To Be Included In The Cost Of Items Bid On.
The Cost Of The Following Items To Be Included In The Unit Price Bid For Class "A" Concrete: Removing Present Handrail, Parts Of Present Curb, Piers And Abutments As Indicated; Furnishing And Placing Expansion Bolts; Roadway Drains; Joint Materials.
Bituminous surfacing is included in the Roadway quantities.

28'-0" ROADWAY WITH SAFETY CURBS

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

WIDENING
BRIDGE AT STA. 861+93.90

CUMBERLAND CO.

LAYOUT

CORRECT Fred Gurne
BRIDGE ENGINEER

APPROVED [signature]
STATE HIGHWAY ENGINEER

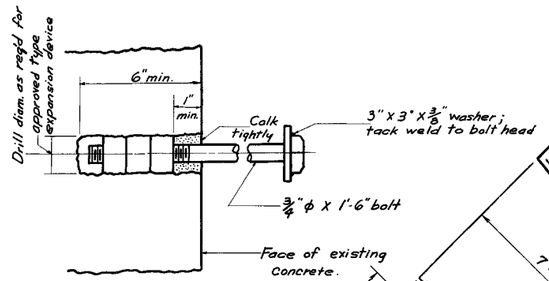
G-14-24

Revised: 7-24-62 General Notes & List of Drawings & Qts.
Revised: 6-21-62 Estimated Quantities

DESIGNED BY L.R.S. DATE
DRAWN BY DATE
TRACED BY H.L.E. DATE 6-2-54
CHECKED BY D.V.H. DATE 7-2-54

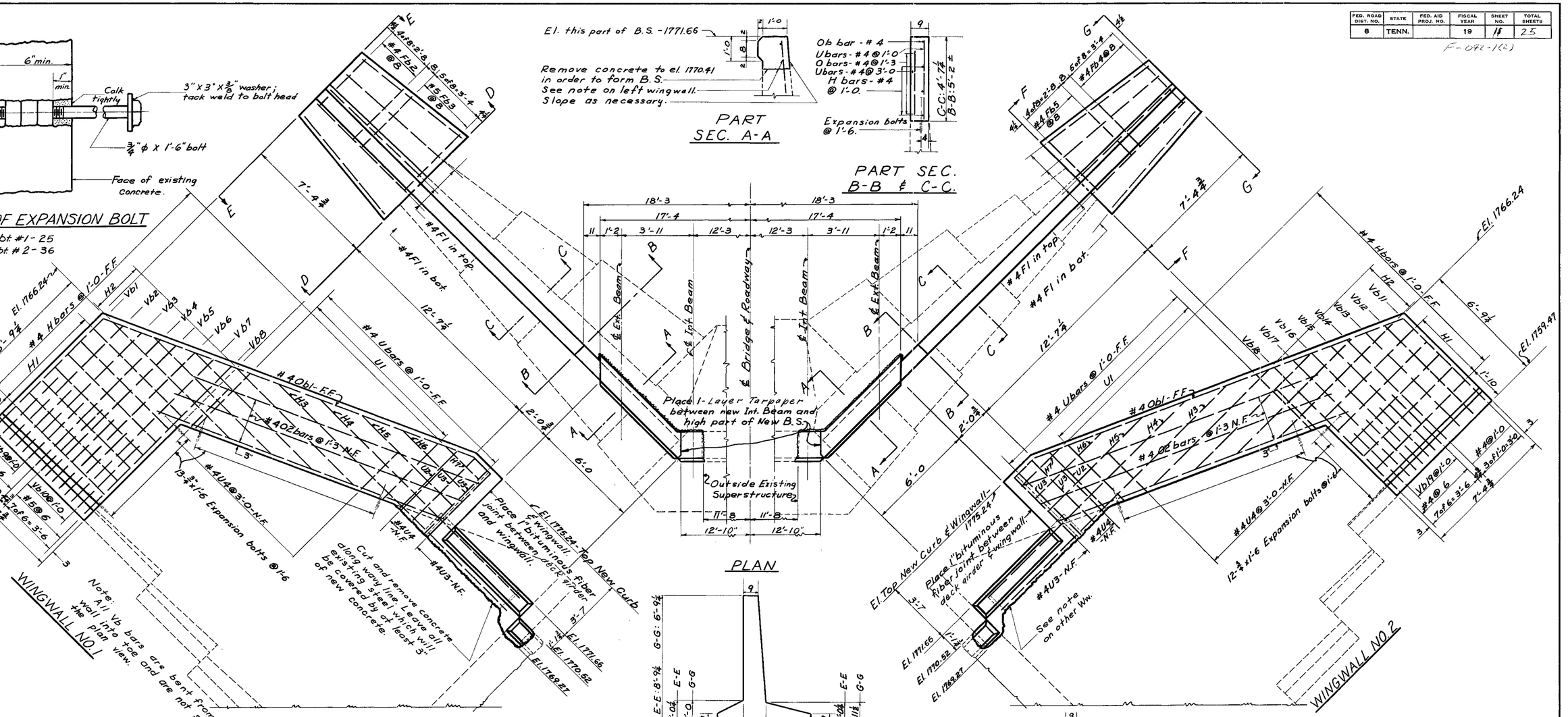
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19	15	25

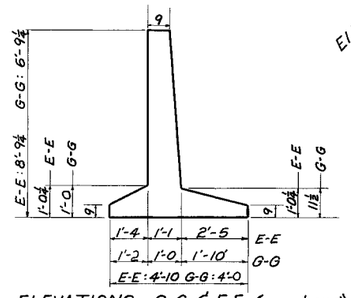
F-042-1(2)

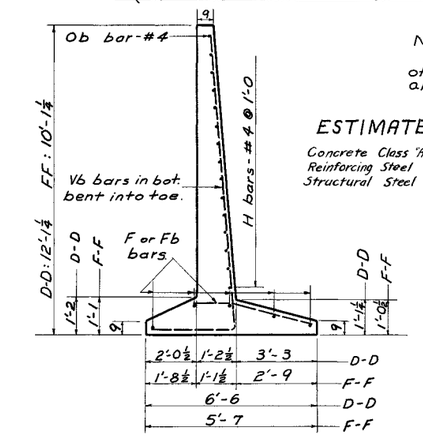


DETAIL OF EXPANSION BOLT

Req'd: Abt #1 - 25
Abt #2 - 36



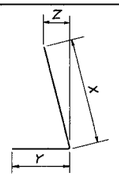




NOTE:
4" tile drains shall be provided thru extensions of wingwalls at lowest point to function effectively, and @ 5'-0 C.C.

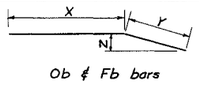
BILL OF STEEL FOR ADDITTIONS TO ABUTMENT NO. 1

BENT BARS



Vb bars

MARK	NO.	SIZE	LENGTH	X	Y	Z
Vb 1	1	4	10'-5	8'-5	2'-0	4
Vb 2	1	4	10'-11	8'-10	2'-1	4½
Vb 3	1	4	11'-6	9'-4	2'-2	5
Vb 4	1	4	12'-2	9'-10	2'-4	5
Vb 5	1	5	12'-7	10'-2	2'-5	5
Vb 6	1	5	13'-1	10'-7	2'-6	5½
Vb 7	1	5	13'-9	11'-1	2'-8	5½
Vb 8	1	5	14'-5	11'-7	2'-10	6
Vb 9	3	4	6'-4	4'-4	2'-0	2
Vb 10	4	5	7'-2	4'-10	2'-4	2½
Vb 11	1	4	7'-11	6'-5	1'-6	3



Ob & Fb bars

MARK	NO.	SIZE	LENGTH	X	Y	Z
Vb 12	1	4	8'-5	6'-10	1'-7	3½
Vb 13	1	4	9'-1	7'-4	1'-9	3½
Vb 14	1	4	9'-8	7'-10	1'-10	4
Vb 15	1	4	10'-2	8'-2	2'-0	4
Vb 16	1	4	10'-8	8'-7	2'-1	4½
Vb 17	1	4	11'-4	9'-1	2'-3	4½
Vb 18	1	4	12'-0	9'-7	2'-5	5
Vb 19	4	4	5'-10	3'-11	1'-11	2
Ob 1	2	4	22'-11	21'-8	1'-3	7
Fb 2	5	4	4'-1	2'-10	1'-3	3
Fb 3	6	5	4'-11	3'-4	1'-7	3½
Fb 4	6	4	3'-6	2'-3	1'-3	4
Fb 5	5	4	4'-0	2'-9	1'-3	4

STRAIGHT BARS

MARK	NO.	SIZE	LENGTH
Fl	10	4	7'-0
H1	12	4	7'-0
H2	8	4	9'-2
H3	2	4	17'-9
H4	2	4	15'-6
H5	2	4	7'-1
H6	2	4	4'-10
H7	2	4	2'-7
U1	22	4	4'-4
U2	2	4	4'-6
U3	6	4	4'-10
U4	10	4	3'-4
O2	6	4	17'-0

ESTIMATED QUANTITIES

Concrete Class "A"	12	Cu. Yds.
Reinforcing Steel	696	Lbs.
Structural Steel	129	Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

WIDENING
BRIDGE AT STA. 861+93.90
CUMBERLAND CO.
ABUTMENT NO. 1

DESIGNED BY L.R.S. DATE 1-12-54
DRAWN BY L.R.S. DATE 1-14-54
TRACED BY H.L.E. DATE 2-11-54
CHECKED BY D.V.H. DATE 7-2-54

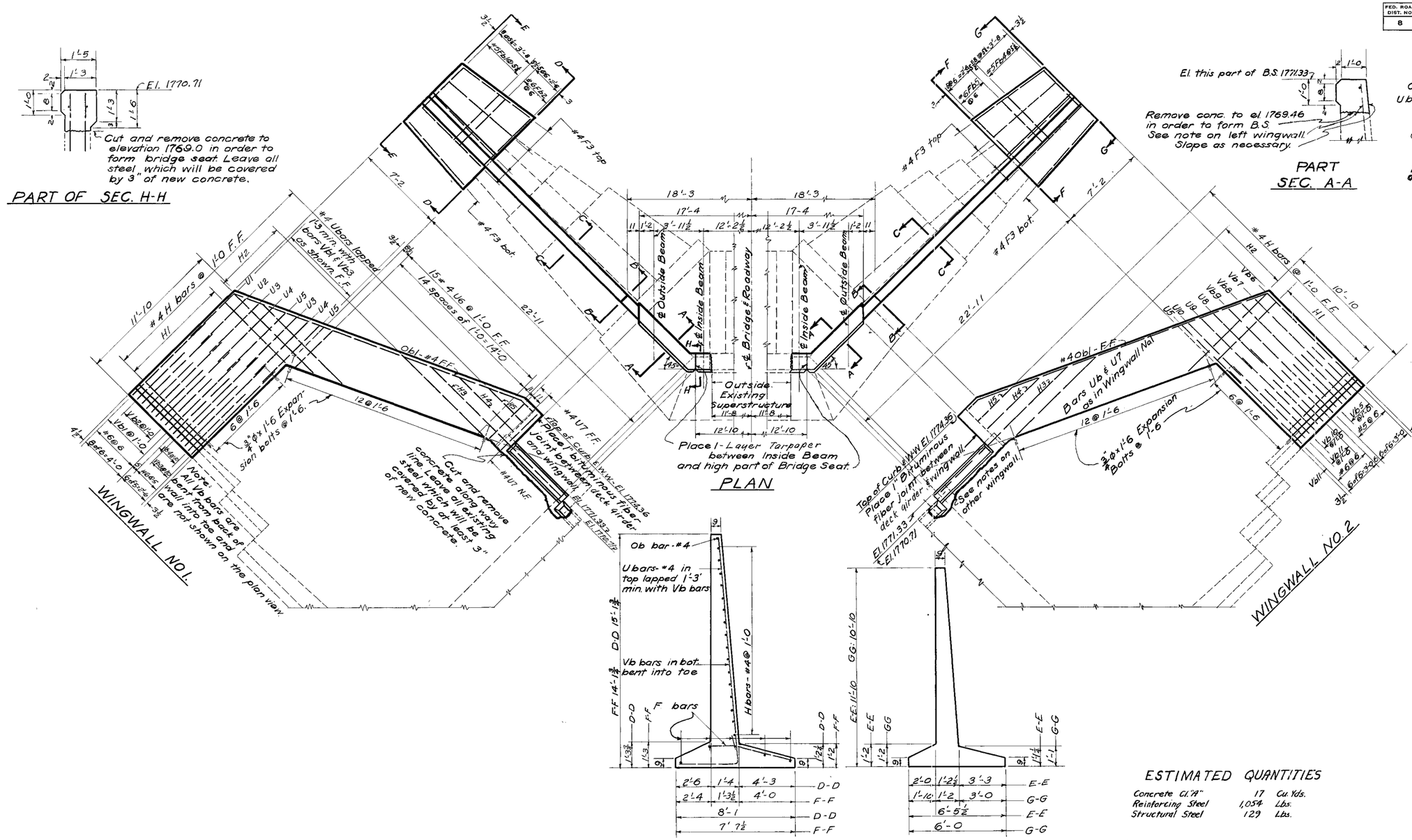
CORRECT: Fred Gurr, BRIDGE ENGINEER
APPROVED: Earle Long, STATE HIGHWAY ENGINEER

G-19-25

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19	12	25

F-042-1(2)

PART OF SEC. H-H



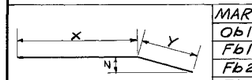
SECTIONS D-D & F-F (opp. hand) ELEVATIONS G-G & E-E (opp. hand)

ESTIMATED QUANTITIES

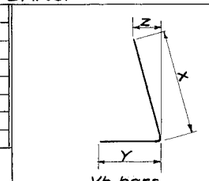
Concrete Cl. "A"	17	Cu. Yds.
Reinforcing Steel	1,054	Lbs.
Structural Steel	129	Lbs.

BILL OF STEEL FOR ADDITIONS TO ABUTMENT NO. 2

BENT BARS



MARK	NO	SIZE	LENGTH	X	Y	Z
Ob1	2	4	25'-8	24'-5	1'-3	7
Fb1	9	5	5'-3	3'-8	1'-7	5
Fb2	6	6	6'-3	4'-3	2'-0	6
Fb4	9	5	5'-1	3'-6	1'-7	5
Fb5	6	6	6'-0	4'-0	2'-0	6



MARK	NO.	SIZE	LENGTH	X	Y	Z
Vb1	5	6	10'-9	8'-0	2'-9	4
Vb2	4	6	8'-1	5'-3	2'-10	2 1/2
Vb3	3	6	12'-5	9'-3	3'-2	4 1/2
Vb4	3	6	9'-6	6'-4	3'-2	3
Vb5	3	5	7'-8	5'-0	2'-8	2 1/2
Vb6	1	5	13'-1	10'-6	2'-7	5 1/2
Vb7	1	5	13'-7	10'-11	2'-8	6
Vb8	1	5	14'-2	11'-5	2'-9	6
Vb9	1	5	14'-8	11'-10	2'-10	6 1/2
Vb10	3	6	8'-2	5'-4	2'-10	2 1/2
Vb11	4	6	11'-3	8'-4	2'-11	4

STRAIGHT BARS

MARK	NO.	SIZE	LENGTH	MARK	NO.	SIZE	LENGTH
U1	1	4	4'-9	H1	19	4	6'-9
U2	1	4	5'-2	H2	14	4	9'-0
U3	2	4	5'-8	H3	2	4	14'-0
U4	2	4	6'-1	H4	2	4	6'-0
U5	3	4	6'-7	H5	2	4	3'-8
U6	30	4	4'-4				
U7	6	4	4'-0	F3	10	4	6'-9
U8	1	4	5'-5				
U9	1	4	5'-11				
U10	1	4	6'-3				

DESIGNED BY LRS DATE 1-29-54
DRAWN BY LRS DATE 2-4-54
TRACED BY DWS DATE 3-26-54
CHECKED BY DVH DATE 7-2-54

Revised: 7-2-54

MICROFILMED

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

WIDENING
BRIDGE AT STA. 861+93.90

CUMBERLAND CO.

ABUTMENT NO. 2

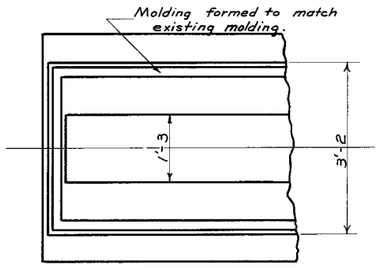
CORRECT: Fred Greene, BRIDGE ENGINEER
APPROVED: Lee D. Long, STATE HIGHWAY ENGINEER

G-14-26

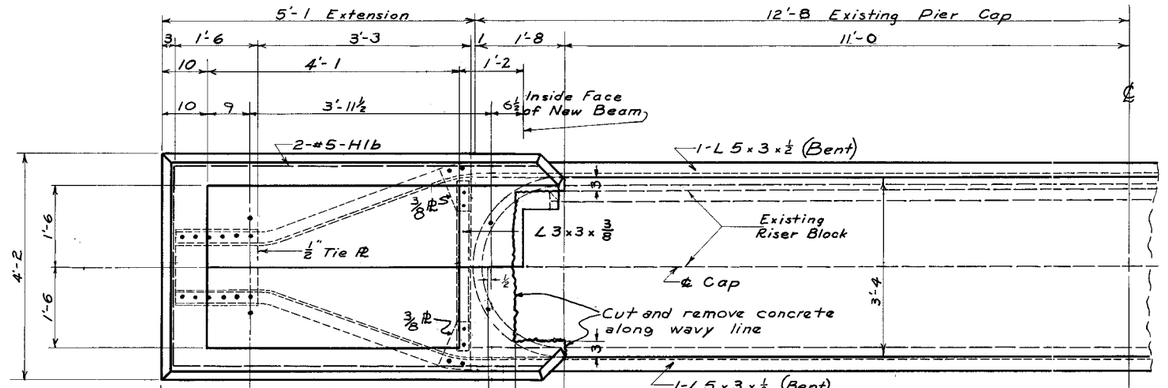
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19	13	25

& Present & Widened Bridge & Roadway

17'-9" F-042-1(2)

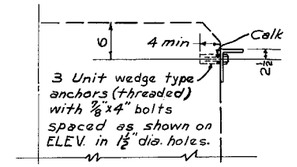


PART SECT. A-A



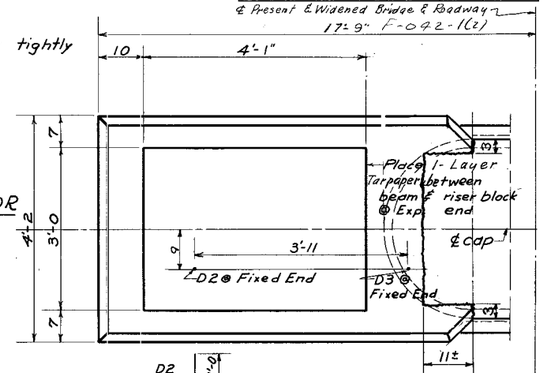
HALF PLAN - PIER No. 3

Note: Piers 1 & 2 differ from No. 3 only in riser blocks. See Detail Riser Block - Piers 1 & 2 this sheet.

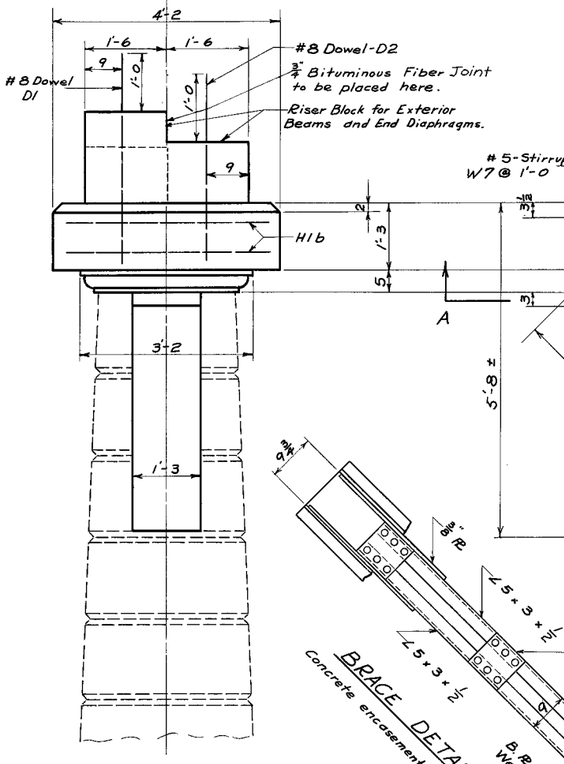


DETAIL MASONRY ANCHOR

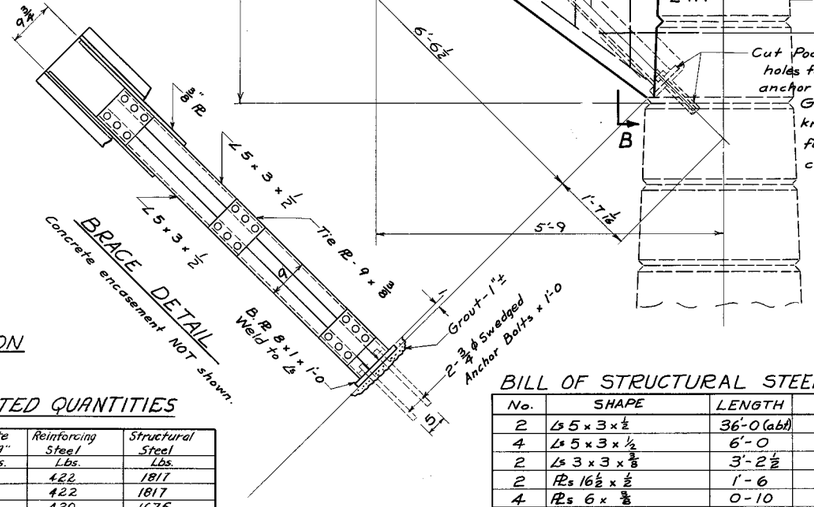
34 Required Per Pier



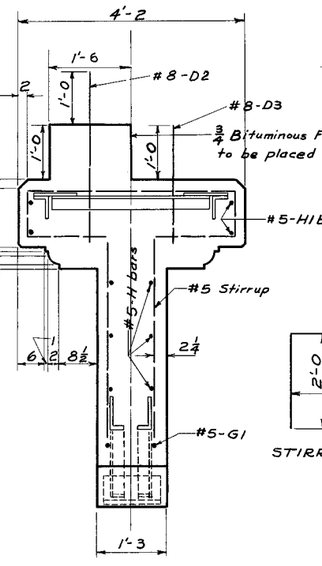
DETAIL RISER BLOCK-PIERS 1 & 2



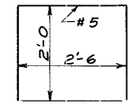
END ELEVATION PIER NO. 3



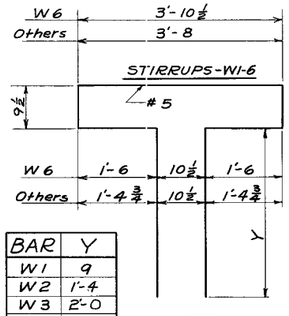
HALF ELEVATION PIER NO. 3



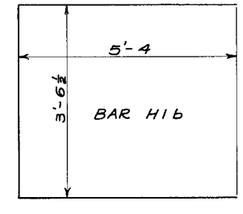
SECT. B-B PIER No. 3

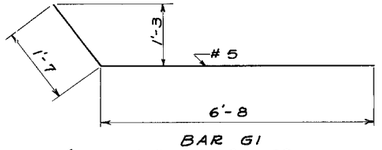


STIRRUP - W7



BAR	Y
W1	9
W2	1'-4
W3	2'-0
W4	2'-8
W5	3'-4
W6	4'-0





BAR G1

BILL OF REIN. STEEL PIER 3

MARK	No	SIZE	LENGTH	REMARKS
*D1	2	#8	3'-7	St.
*D2	4	#8	3'-1	St.
*D3	2	#8	2'-0	St.
H2	4	#5	4'-9	St.
H3	4	#5	3'-5	St.
H4	4	#5	2'-1	St.
H1b	4	#5	14'-3	Bent
G1	4	#5	8'-3	"
W7	8	#5	6'-6	"
W1	2	#5	9'-6	"
W2	2	#5	10'-8	"
W3	2	#5	12'-0	"
W4	2	#5	13'-4	"
W5	2	#5	14'-8	"
W6	2	#5	16'-6	"

Per pier: 20 Exp. Anchor Bolts ¾ ϕ x 1'-6 required

*For Piers 1 & 2 Use 2-D2 and 2-D3 @ Fixed End of Beam.

ESTIMATED QUANTITIES

Item	Concrete Class "A" Cu. Yds.	Reinforcing Steel Lbs.	Structural Steel Lbs.
Pier No. 1	5	422	1817
Pier No. 2	5	422	1817
Pier No. 3	6	430	1675

BILL OF STRUCTURAL STEEL (ONE PIER)*

No.	SHAPE	LENGTH	REMARKS
2	Ls 5 x 3 x ½	36'-0 (abt)	Bent
4	Ls 5 x 3 x ½	6'-0	
2	Ls 3 x 3 x ⅜	3'-2½	
2	Pls 16½ x ½	1'-6	
4	Pls 6 x ⅜	0-10	
6	Pls 9 x ⅜	0-9	
2	Pls 8 x 1	1'-0	
4	Pls 18 x ⅜	2'-3	Bevel Cuts
4	¾ ϕ Swedged Anch.	1'-0	With Nuts
34	⅞ ϕ Bolts & Masonry Anchors - Wedge Type		

*NOT including Expansion Plates. (See details sht. G-14-25

SPECIAL NOTES:

Shop connections may be made by riveting or welding and. Field connections may be made by riveting or ¾" ϕ High Tensile Strength Bolts, at the option of the contractor. Rivets shall be ¾" and holes ⅞" High Tensile Strength Bolts: See AASHO specifications Article 2.10.20 with amendments thereto.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

WIDENING
BRIDGE AT STA. 861+93.90
CUMBERLAND CO.
CANTILEVER PIERS

DESIGNED BY F.B.W. DATE 2-17-54
DRAWN BY F.B.W. DATE
TRACED BY H.L.E. DATE 4-20-54
CHECKED BY D.V.H. DATE 7-10-54

CORRECT Fred Greene BRIDGE ENGINEER

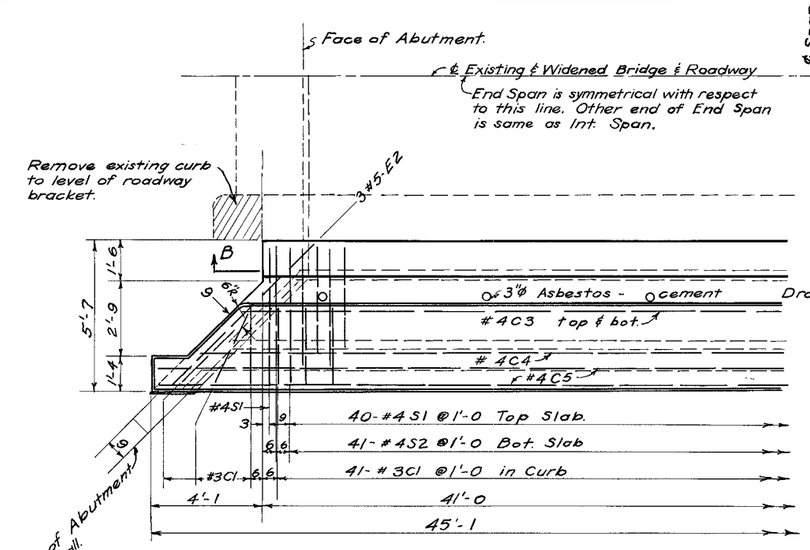
APPROVED Lee D. Long STATE HIGHWAY ENGINEER

G-14-27

Revised: 7-24-62 Struct. Steel Qty.
Revised: 6-21-62 Struct. Steel Qty.

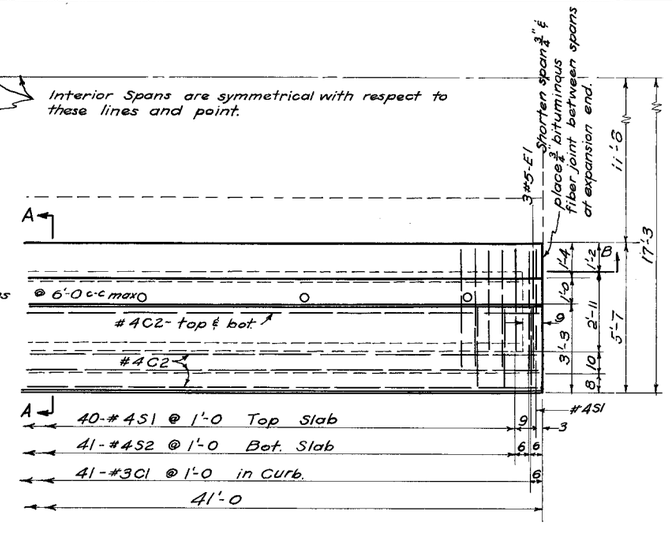
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19	#9	25

F-042-1(2)



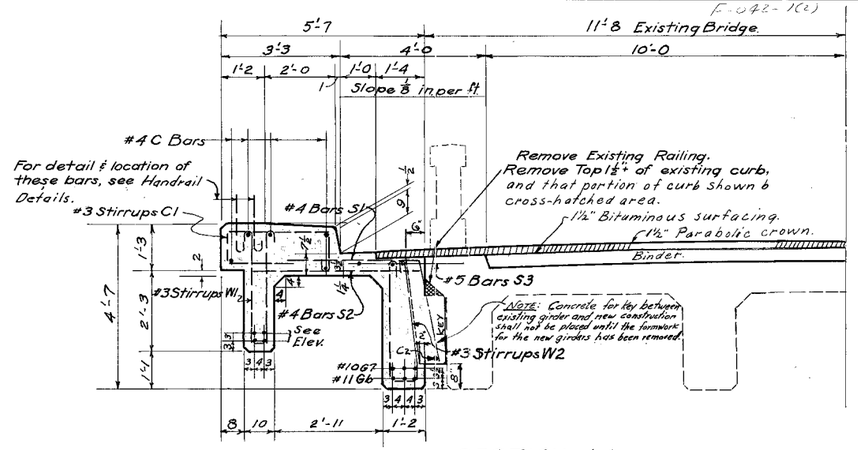
QUARTER PLAN - END SPAN

(Railing and some longitudinal steel not shown.)

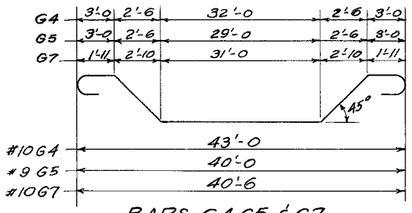


QUARTER PLAN - INTERIOR SPAN

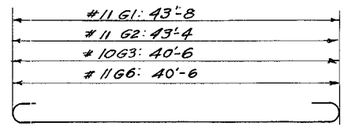
(Railing and some longitudinal steel not shown.)



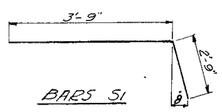
SECTION A-A



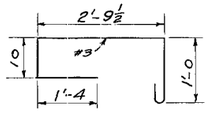
BARS G4, G5 & G7



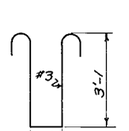
BARS G1, G2, G3 & G6.



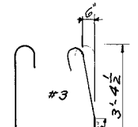
BARS S1



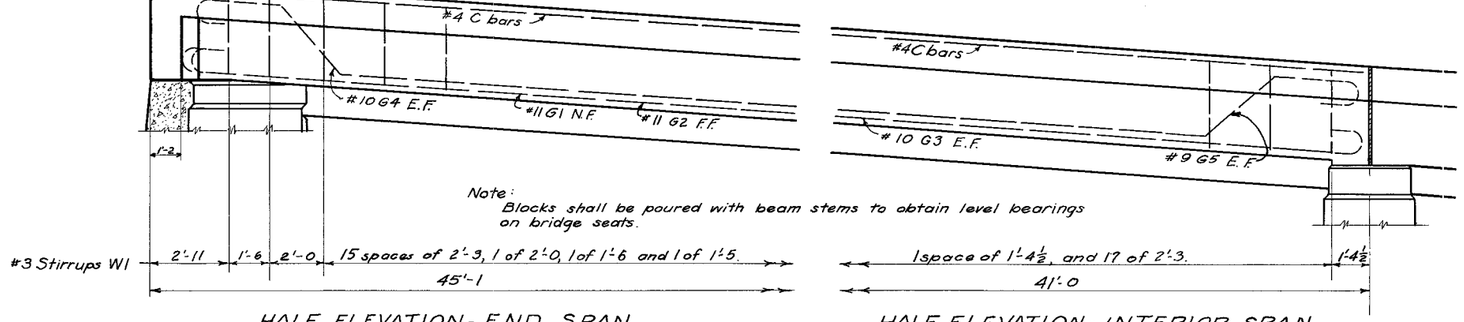
STIRRUP C1



STIRRUP W1



STIRRUP W2



HALF ELEVATION - END SPAN

(Railing and some steel not shown. Other half same as for Interior span except for steel.)

HALF ELEVATION - INTERIOR SPAN

(Railing and some steel not shown. Other half similar)

REIN. STEEL FOR ONE INT. SPAN				
MARK	NO.	SIZE	LENGTH	REMARKS
E1	12	5	4'-6	St.
S1	84	4	6'-6"	"
S2	82	4	4'-6	"
S3	6	5	40'-6	"
C1	82	3	6'-5	Bt.
C2	11	4	40'-6	St.
G3	4	10	43'-4	Bt.
G5	4	9	44'-11	"
G6	6	11	43'-8	"
G7	6	10	45'-8	"
W1	36	3	7'-6	"
W2	38	3	8'-4	"

Note:
For the End Span, make the following changes in Bill of Steel:

Substitute:	for:
6-#5 E2 - 7'-4	6-#5 E1
4-#4 C3 - 41'-3 2-#4 C4 - 42'-9 4-#4 C5 - 44'-7	10-#4 C2
2-#11 G1 - 46'-10 2-#11 G2 - 46'-6	4-#10G3
4-#10G4 - 47'-11	4-#9G5

Add:
6-#3 C1
4-#3 W1

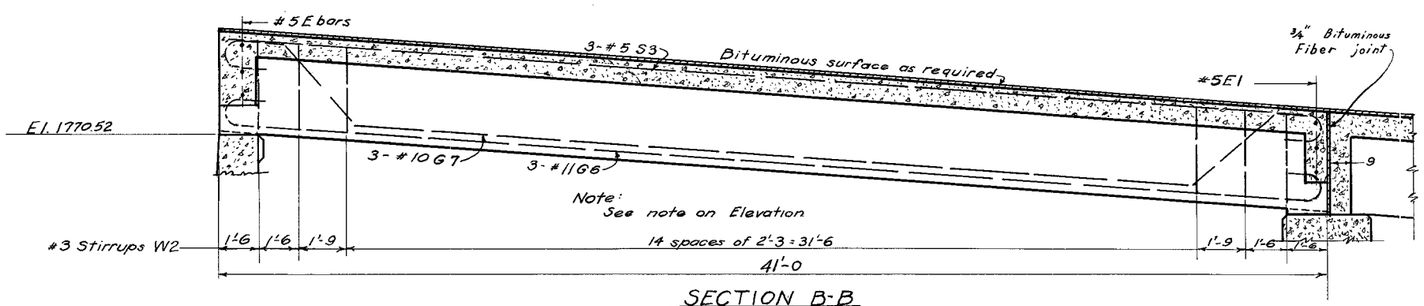
Notes:

For Detail at Expansion End see Sht. No. G-14-29

For curb elevations not shown, see Layout sht; Sht No. G-14-24

ESTIMATED QUANTITIES

ITEM	CONCRETE CURBS 'A' Cu. Yds.	REINFORCING STEEL Lbs.
ONE END SPAN	10.5	6,088
ONE INT. SPAN	39.0	5,569



SECTION B-B

(Same for Interior spans)

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

WIDENING

BRIDGE AT STA. 861+93.90

CUMBERLAND CO.

SUPERSTRUCTURE - 38' CL. SPAN

CORRECT Fred Gurne
BRIDGE ENGINEER

APPROVED Geo. DeLong
STATE HIGHWAY ENGINEER

G-14-28

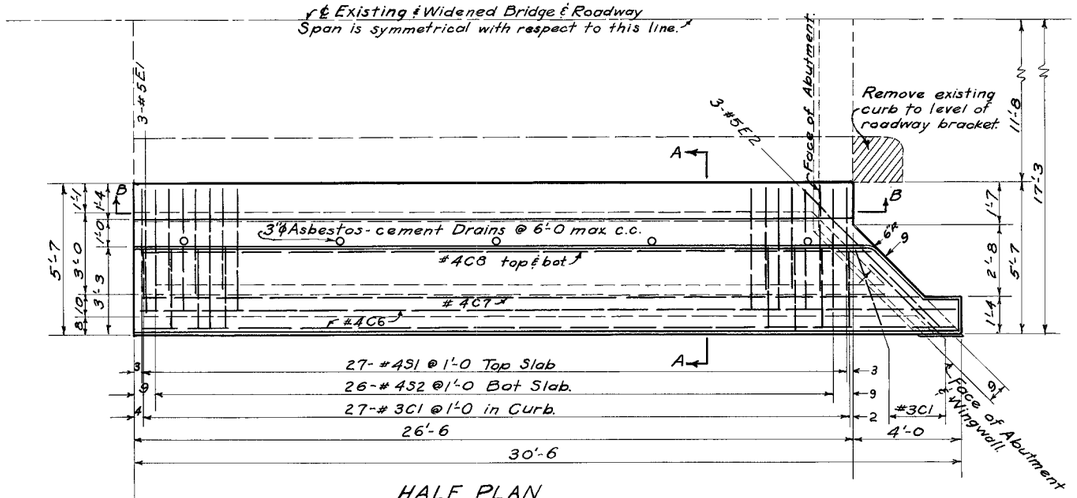
DESIGNED BY L.R.S. DATE 11-27-53
DRAWN BY L.R.S. DATE 12-17-53
TRACED BY D.W.S. DATE 1-1-54
CHECKED BY D.V.H. DATE 7-10-54

MICROFILMED

Revised: 7-24-62
Revised: 4-30-62 Note "A" Removed

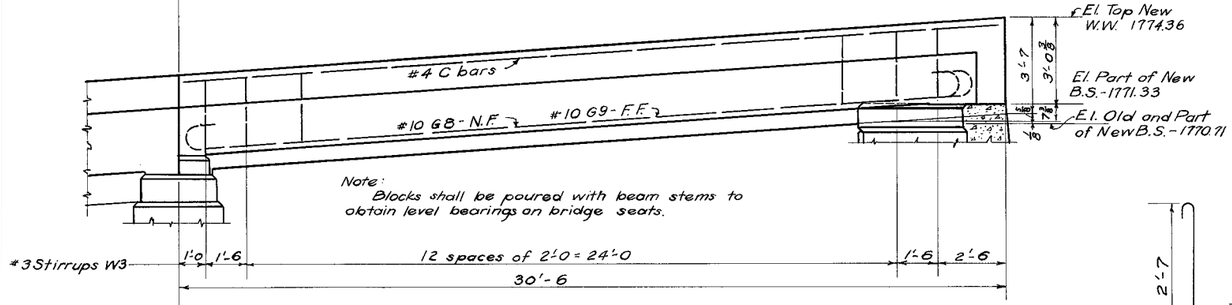
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19	28	25

F-042-1(2)



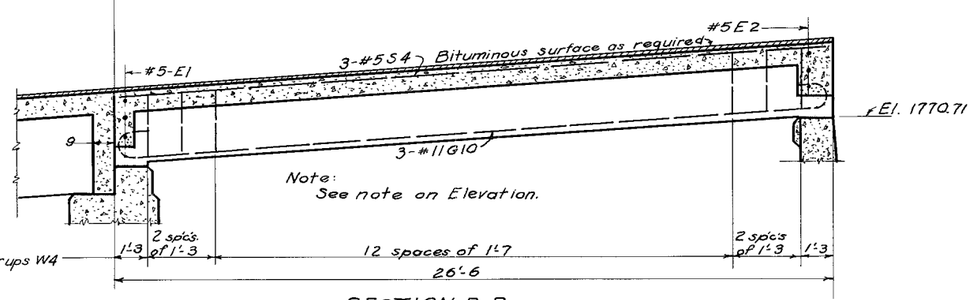
HALF PLAN

(Railing ℄ some longitudinal steel not shown.)

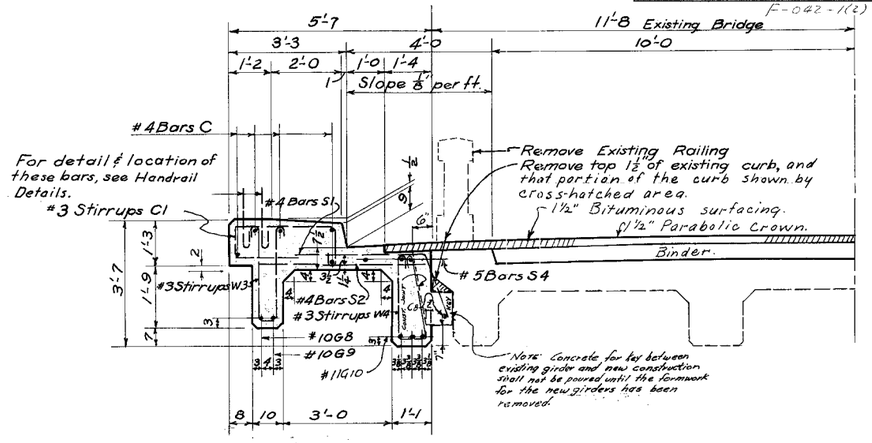


ELEVATION

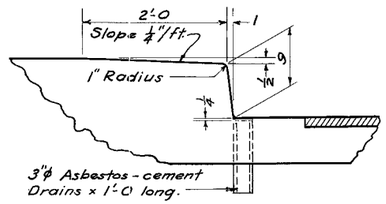
(Railing ℄ some longitudindl steel not shown)



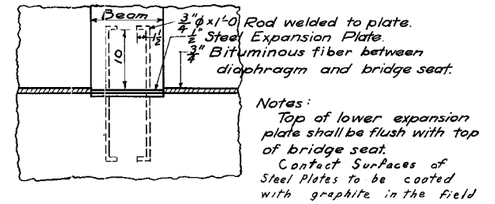
SECTION B-B



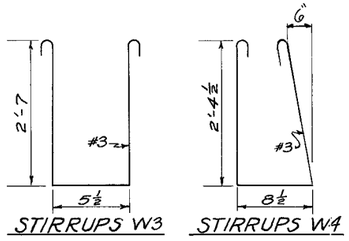
SECTION A-A



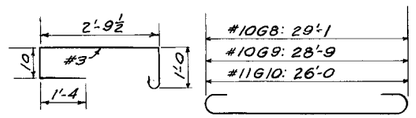
CURB DETAIL



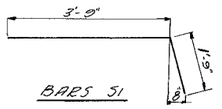
DETAIL AT EXPANSION END



STIRRUPS W3 STIRRUPS W4



STIRRUPS C1 BARS G8 G9 & G10



Notes:
For Railing Details, see Sheets No. G-14-24 & E-12-105
For curb elevations not shown, see Layout Sht., Sht. No. G-14-24

ESTIMATED QUANTITIES

ITEM	CONCRETE CLASS "A" CU. YDS	REINFORCING STEEL LBS
ONE END SPAN	22.6	2574

BILL OF REINFORCING STEEL

MARK	NO.	SIZE	LENGTH	REMARKS
E1	6	5	4'-6	St
E2	6	5	7'-4	"
S1	54	4	5'-6"	"
S2	52	4	4'-6	"
S4	6	5	26'-0	"
C6	4	4	30'-0	"
C7	2	4	28'-8	"
C8	5	4	27'-3	"
C1	58	3	6'-5	Bt
G8	2	10	31'-11	"
G9	2	10	31'-7	"
G10	6	11	29'-2	"
W3	30	3	6'-6	"
W4	34	3	6'-3	"

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

WIDENING
BRIDGE AT STA. 861+93.90
CUMBERLAND CO.
SUPERSTRUCTURE - 24' CL. END SPAN

DESIGNED BY L.R.S. DATE 12-23-53
DRAWN BY L.R.S. DATE 12-30-53
TRACED BY D.W.S. DATE 12-31-53
CHECKED BY D.V.H. DATE 7-10-54

CORRECT: Fred Grene, BRIDGE ENGINEER
APPROVED: Cecil G. Long, STATE HIGHWAY ENGINEER

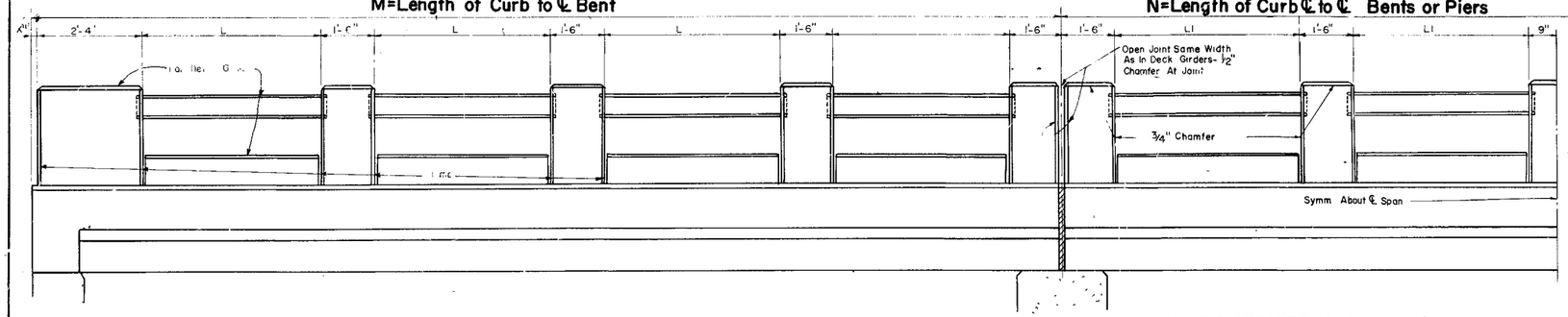
G-14-29

Revised: 7-24-62 Note "A" Removed
Revised: 4-30-62 Note "A"

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
3	TENN		9		

M=Length of Curb to ℄ Bent

N=Length of Curb ℄ to ℄ Bents or Piers



END SPAN — INTERMEDIATE SPAN

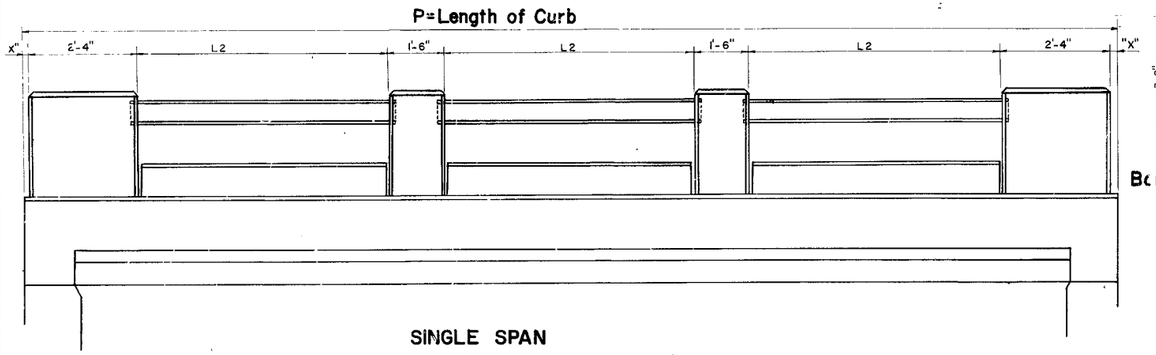
END SPAN

Clear Span Feet	Dimensions M	X	L	Reinforcing Steel Bars A ⅝"ø x 4'-2" NO	Bars B ½"ø x 6'-4" NO	Bars C ⅜"ø x 4'-4" NO	Bars D ½"ø x 4'-8" NO	Bars E ⅜"ø x 2'-6" NO	Bars F ½" ø NO	Bars F ½" ø Length	Bars G ½" ø NO	Bars G ½" ø Length	Quantities Concrete Class "A" Cu Yds	Reinf Steel Lbs
16	18'-6"	2"	2 @ 6'-6"	28	6	28	12	28	8	6'-2"	16	6'-8"	1.9	362
18	20'-6"	2"	3 @ 4'-6"	36	6	30	18	30	12	4'-2"	24	4'-8"	2.3	424
20	22'-6"	2"	3 @ 5'-2"	36	6	36	18	36	12	4'-10"	24	5'-4"	2.4	456
22	24'-6"	2"	3 @ 5'-10"	36	6	36	18	36	12	5'-6"	24	6'-0"	2.5	472
24	26'-6"	2"	3 @ 6'-6"	36	6	42	18	42	12	6'-2"	24	6'-8"	2.6	504
26	28'-6"	2"	4 @ 5'-0"	44	6	40	24	40	16	4'-8"	32	5'-2"	3.0	556
28	31'-0"	2"	4 @ 5'-7½"	44	6	48	24	48	16	5'-3"	32	5'-10"	3.1	597
30	33'-0"	2"	4 @ 6'-1½"	44	6	56	24	56	16	5'-9"	32	6'-4"	3.3	634
32	35'-0"	2"	4 @ 6'-7½"	44	6	56	24	56	16	6'-3"	32	6'-10"	3.4	650
34	37'-0"	2¼"	5 @ 5'-4¾"	52	6	60	30	60	20	5'-1"	40	5'-7"	3.7	718
36	39'-0"	2½"	5 @ 5'-9½"	52	6	60	30	60	20	5'-5"	40	6'-0"	3.8	734
38	41'-0"	2¾"	5 @ 6'-2¼"	52	6	70	30	70	20	5'-10"	40	6'-5"	4.0	777
40	43'-0"	2"	6 @ 5'-3"	60	6	72	36	72	24	4'-11"	48	5'-5"	4.3	838
50	53'-0"	2"	6 @ 6'-11"	60	6	84	36	84	24	6'-7"	48	7'-1"	4.9	950
60	63'-0"	2"	8 @ 6'-0¾"	76	6	96	48	96	32	5'-9"	64	6'-3"	6.0	1145

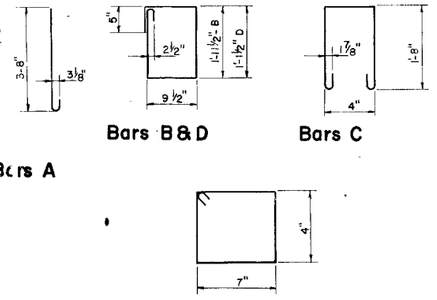
INTERMEDIATE SPAN

Clear Span Feet	Dimensions N	LI	Reinforcing Steel Bars A ⅝"ø x 4'-2" NO	Bars B ½"ø x 6'-4" NO	Bars C ⅜"ø x 4'-4" NO	Bars D ½"ø x 4'-8" NO	Bars E ⅜"ø x 2'-6" NO	Bars F ½" ø NO	Bars F ½" ø Length	Bars G ½" ø NO	Bars G ½" ø Length	Quantities Concrete Class "A" Cu Yds	Reinf Steel Lbs
16	18'-6"	2 @ 7'-0"	24	—	28	18	28	8	6'-8"	16	7'-2"	1.8	346
18	20'-6"	3 @ 4'-10"	32	—	30	24	30	12	4'-6"	24	5'-0"	2.2	408
20	22'-6"	3 @ 5'-6"	32	—	36	24	36	12	5'-2"	24	5'-8"	2.3	440
22	24'-6"	3 @ 6'-2"	32	—	42	24	42	12	5'-10"	24	6'-4"	2.4	472
24	26'-6"	3 @ 6'-10"	32	—	42	24	42	12	6'-6"	24	7'-0"	2.5	488
26	28'-6"	4 @ 5'-3"	40	—	48	30	48	16	4'-11"	32	5'-5"	2.9	561
28	31'-0"	4 @ 5'-10½"	40	—	48	30	48	16	5'-6"	32	6'-1"	3.0	581
30	33'-0"	4 @ 6'-4½"	40	—	56	30	56	16	6'-0"	32	6'-7"	3.2	618
32	35'-0"	4 @ 6'-10½"	40	—	56	30	56	16	6'-6"	32	7'-1"	3.3	634
34	37'-0"	4 @ 5'-7¼" 1 @ 5'-7"	48	—	60	36	60	20	5'-3"	40	5'-9"	3.6	701
36	39'-0"	5 @ 6'-0"	48	—	60	36	60	20	5'-8"	40	6'-2"	3.7	718
38	41'-0"	4 @ 6'-4¾" 1 @ 6'-5"	48	—	70	36	70	20	6'-1"	40	6'-7"	3.9	760
40	43'-0"	6 @ 5'-5"	56	—	72	42	72	24	5'-1"	48	5'-7"	4.2	822
50	53'-0"	6 @ 7'-1"	56	—	84	42	84	24	6'-9"	48	7'-3"	4.8	974
60	63'-0"	8 @ 6'-2¼"	72	—	96	54	96	32	5'-10"	64	6'-4"	5.9	1127

P=Length of Curb



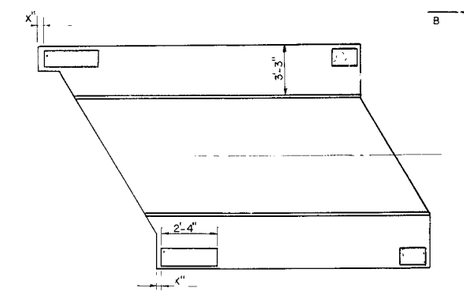
SINGLE SPAN



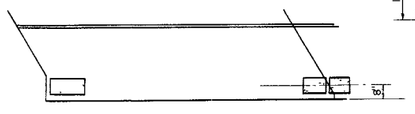
Bars A — Bars B & D — Bars C — Bars E

SINGLE SPAN

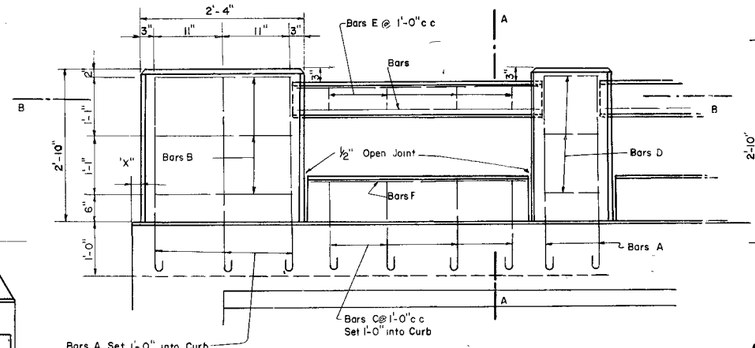
Clear Span Feet	Dimensions P	X	L2	Reinforcing Steel Bars A ⅝"ø x 4'-2" NO	Bars B ½"ø x 6'-4" NO	Bars C ⅜"ø x 4'-4" NO	Bars D ½"ø x 4'-8" NO	Bars E ⅜"ø x 2'-6" NO	Bars F ½" ø NO	Bars F ½" ø Length	Bars G ½" ø NO	Bars G ½" ø Length	Quantities Concrete Class "A" Cu Yds	Reinf. Steel Lbs
16	18'-6"	2"	2 @ 6'-0"	32	12	24	6	24	8	5'-8"	16	6'-2"	2.0	367
18	20'-6"	2"	3 @ 4'-2"	40	12	30	12	30	12	3'-10"	24	4'-4"	2.4	440
20	22'-6"	2"	3 @ 4'-10"	40	12	30	12	30	12	4'-6"	24	5'-0"	2.5	456
22	24'-6"	2"	3 @ 5'-6"	40	12	36	12	36	12	5'-2"	24	5'-8"	2.6	488
24	26'-6"	2"	3 @ 6'-2"	40	12	42	12	42	12	5'-10"	24	6'-4"	2.7	520
26	28'-6"	2"	3 @ 6'-10"	40	12	42	12	42	12	6'-6"	24	7'-0"	2.9	536
28	31'-0"	2"	4 @ 5'-4½"	48	12	48	18	48	16	5'-0"	32	5'-7"	3.2	613
30	33'-0"	2"	4 @ 5'-10½"	48	12	48	18	48	16	5'-6"	32	6'-1"	3.4	629
32	35'-0"	2"	4 @ 6'-4½"	48	12	56	18	56	16	6'-0"	32	6'-7"	3.5	666
34	37'-0"	2"	4 @ 6'-10½"	48	12	56	18	56	16	6'-6"	32	7'-1"	3.6	682
36	39'-0"	2½"	5 @ 5'-7"	56	12	60	24	60	20	5'-3"	40	5'-9"	4.0	719
38	41'-0"	2"	5 @ 6'-0"	56	12	60	24	60	20	5'-8"	40	6'-2"	4.1	766
40	43'-0"	2"	6 @ 5'-1"	64	12	60	30	60	24	4'-9"	48	5'-3"	4.4	823
50	53'-0"	2"	6 @ 6'-9"	64	12	84	30	84	24	6'-5"	48	6'-11"	5.0	966
60	63'-0"	2"	8 @ 5'-11¼"	80	12	96	42	96	32	5'-7"	64	6'-1"	6.1	1158



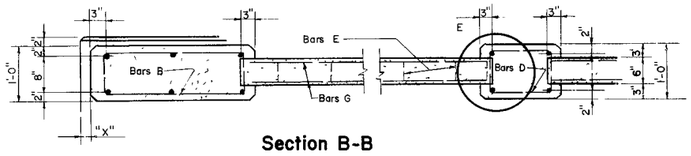
END POST on SKEWED DECK GIRDER
With Safety Curbs



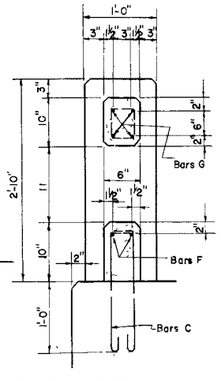
DECK GIRDER with SIDEWALK



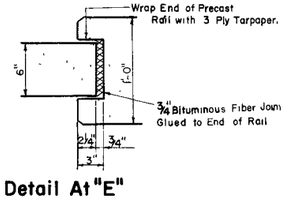
NOTE: When Curb Thickness is Shown 7", Bend Bars A & C into Curb



Section B-B



Section A-A

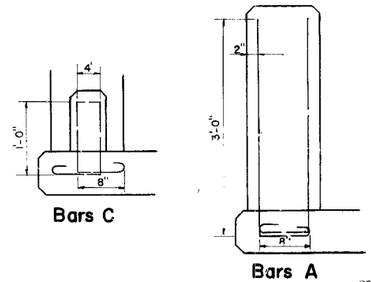


Detail At "E"

NOTE: Chamfer all Handrail Edges ½" Except as Shown at Split Rail Post

GENERAL NOTES:

Specifications Standard Road & Bridge Specifications of the Tennessee Department of Highways
Concrete To be Class "A"
Reinforcing Steel See Specification
Forms & Finish See Specifications



Bars C — Bars A

BAR DETAIL for "7" CURB

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
NASHVILLE

STANDARD CONCRETE HANDRAIL RAIL TYPE 1953

DESIGNED BY _____ DATE _____
DRAWN BY W.W. DATE 5-10-49
RETRACED BY Kelley & Skaggs DATE 3-7-62
CHECKED BY _____ DATE _____

CORRECT Fred Greve BRIDGE ENGINEER
APPROVED Cecil D Long STATE HIGHWAY ENGINEER

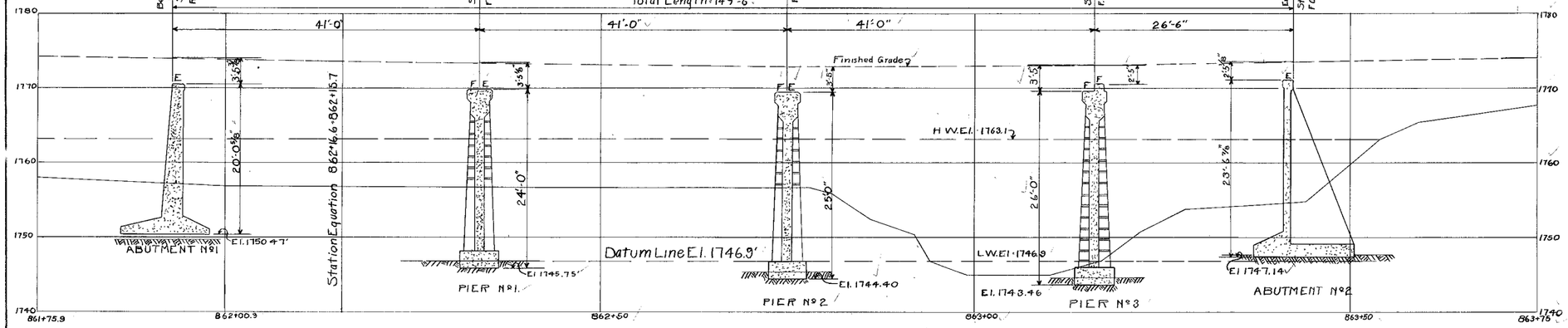
E-12-105

4 Revised 7-20-62.
3 Revised 3-27-61 Bend Details For Bars A & C
2 Revised for Chamfer 8-27-59
Rev for Removal of Grove in Rail Post
1 Revised: 10-8-56

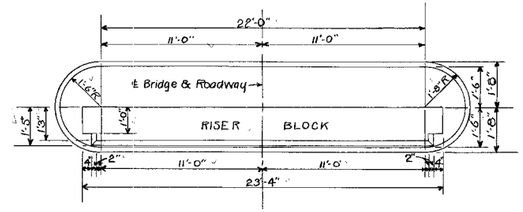
FED ROAD DIST. NO	STATE	FED AID PROJ No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19[illegible]	[illegible]	[illegible]

SA371-B

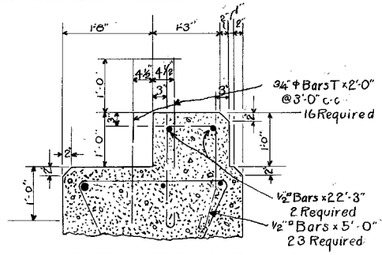
Note: E-Expansion End of F-Fixed End



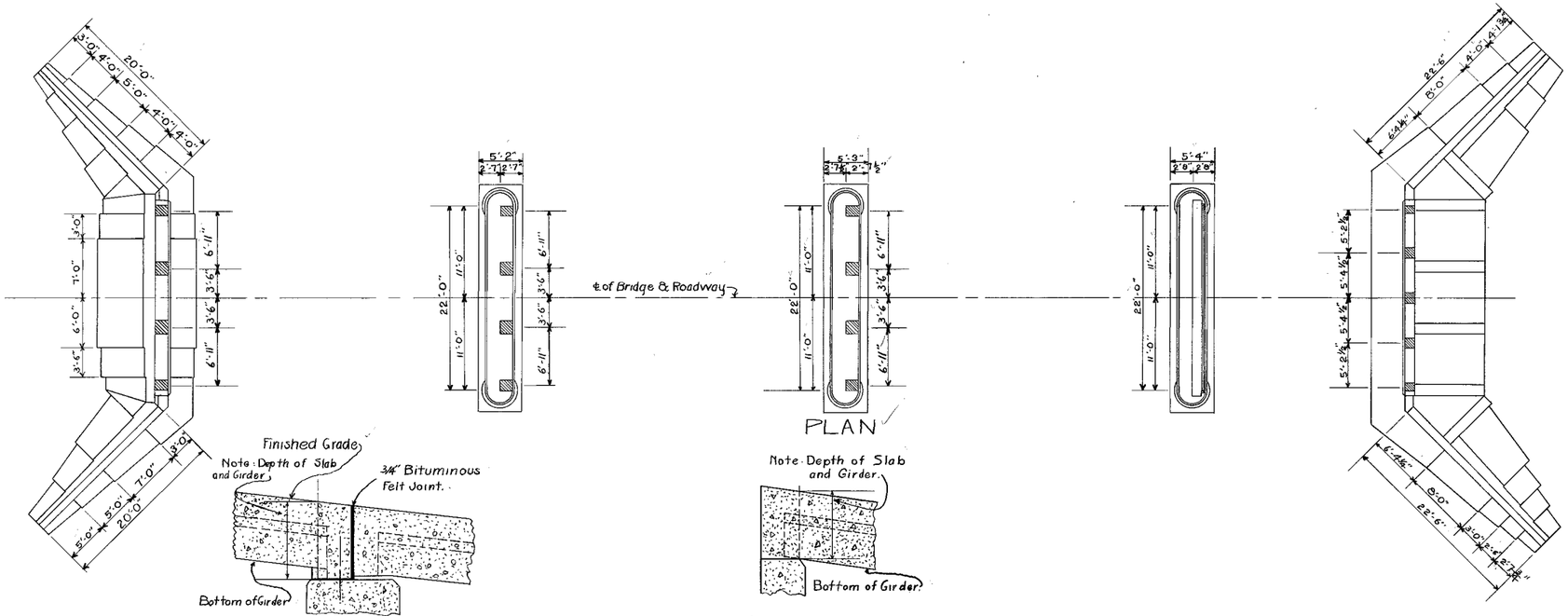
SECTION ALONG ℄ OF BRIDGE AND ROADWAY.



PLAN OF COPING OF PIER No 3
SHOWING RISER BLOCK DIMENSIONS



SECTION THRU COPING
PIER No 3.

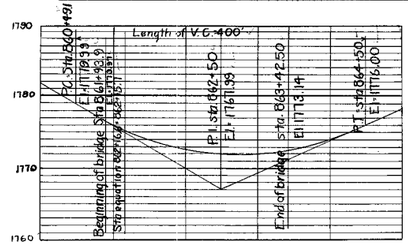


DETAIL AT PIERS
Showing blocks poured with beam stems to obtain level bearing.

DETAIL AT ABUTMENTS
Showing blocks poured with beam stems to obtain level bearings.

TABLE OF ESTIMATED QUANTITIES

ITEM	EXCAVATION Cu Yds.			CONCRETE		STEEL:	
				CLASS 'S'	CLASS 'A'	REINFORC:	STRUCT.
	Dry	Wet	Rock	Cu Yds.	Cu Yds	Lbs.	Lbs
SUPERSTRUCTURE	—	1	—	20.6	179.2	38690	1525
ABUTMENT No1	97	—	20	—	87.0	6341	
PIER No.1	169	10	5	—	49.0	8455	—
PIER No.2	160	90	8	—	51.0	2536	—
PIER No.3	6	22	6	—	64.3	2769	—
ABUTMENT No2	430	—	27	—	127.6	10719	—
TOTALS	862	32	66	20.6	548.1	64510	1525



SKETCH SHOWING LOCATION OF BRIDGE ON VERTICAL CURVE
ELEVATIONS GIVEN REFER TO FINISHED GRADE.

GENERAL NOTES.
Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete in Handrail to be Class 'S'
Concrete in remainder of structure to be Class 'A'.
Surfacing to be 2" of Class 'A' concrete poured monolithic, with girder slab.
Rock Foundation See Specifications
Forms & Finish: See Specifications.

SPECIAL NOTES
For detail of Handrail see drawing D-4-95 Standard Concrete Handrail.
For detail of Girders see drawings A-0-4 and A-0-3 Standard Concrete Bridges, Deck Girder Type.
3 spans @ 38'-0" clear and 1 span @ 24'-0" clear. 20'-0" roadway.
For detail of Abutment No 1 see drawings A-3-152 & A-3-153
For detail of Piers No 1, 2, & 3 see drawing A-0-12 Standard Concrete Piers, Dumbell Type, Type A.
L = 22'-0". Total Height Pier No 1 = 24'-0", Pier No 2 = 25'-0", Pier No 3 = 26'-0" see also details on this sheet for Pier No 3. 8-¾" ϕ Bars Required for each of Piers No 1 and 2, and 16-¾" ϕ Bars Required for Pier No 3.
For detail of Abutment No 2 see drawings A-3-154 & A-3-155.
Foundations of Piers No 1, 2, & 3 to be leveled off to elevations shown, either by excavating the rock or by filling in with class 'A' concrete.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

LAYOUT OF BRIDGE

AT
STA 861+93.90
CUMBERLAND CO.
1929

DESIGNED BY W. Odell DATE 6-13-29
DRAWN BY DATE
TRACED BY DATE 6-13-29
CHECKED BY DATE 6-13-29

CORRECT L. M. Erickson BRIDGE ENGINEER
APPROVED C. D. Gossett ASSISTANT STATE HIGHWAY ENGINEER

A-3-151

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19		

SA 371-B

PLAN.

FRONT ELEVATION

WINGWALL NO. 1

WINGWALL NO. 2

NOTE: Chamfer all exposed corners 3/4" as shown unless otherwise noted.

DESIGNED BY ..... DATE .....
DRAWN BY ..... DATE .....
TRACED BY A.B. Fuller DATE .....
CHECKED BY ..... DATE .....

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF ABUTMENT NO 1

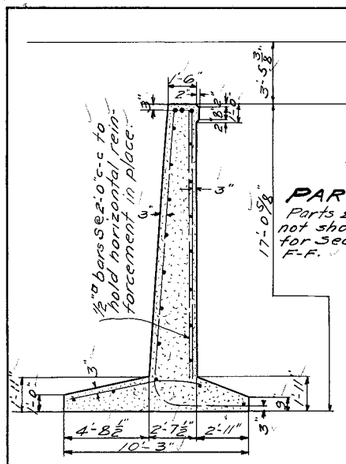
STA. 861+93.9
CUMBERLAND CO.
1929

CORRECT ..... BRIDGE ENGINEER
APPROVED ..... ASSISTANT STATE HIGHWAY ENGINEER

A-3-152

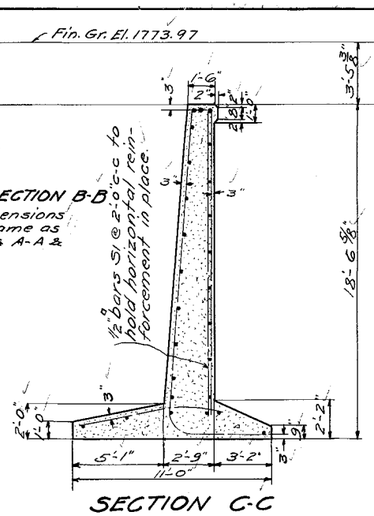
FED. ROAD DIST. NO.	STATE	FED. AID. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19		

SA371-B

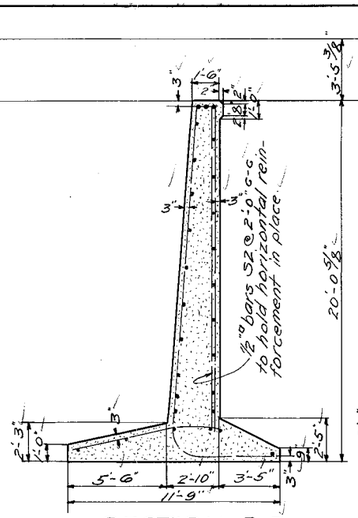


SECTION A-A

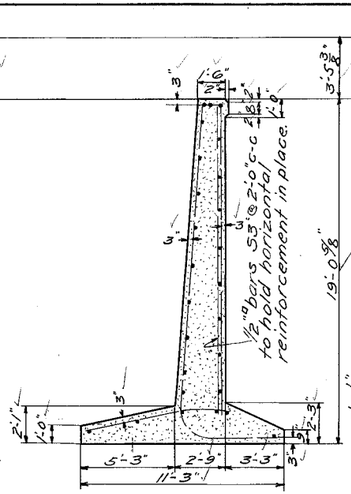
PART SECTION B-B
Parts & dimensions not shown same as for Sections A-A & F-F.



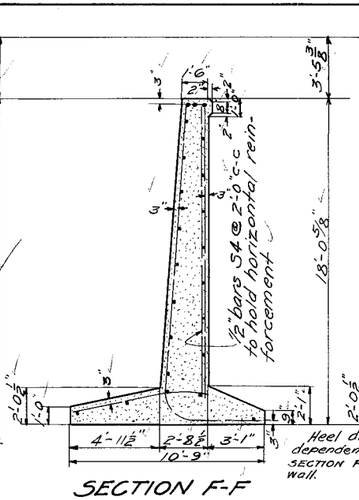
SECTION C-C



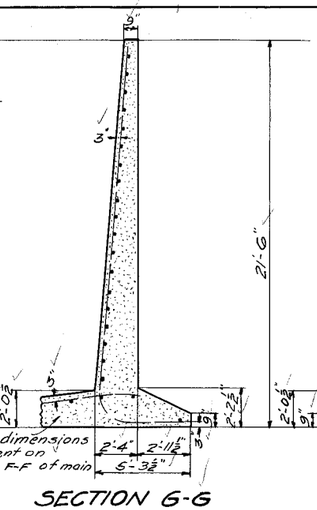
SECTION D-D



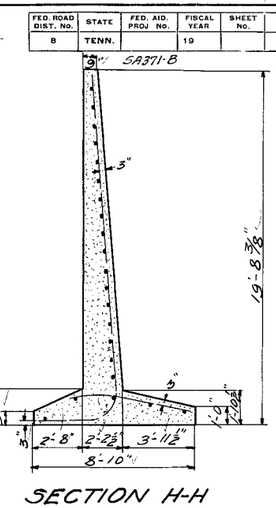
SECTION E-E



SECTION F-F



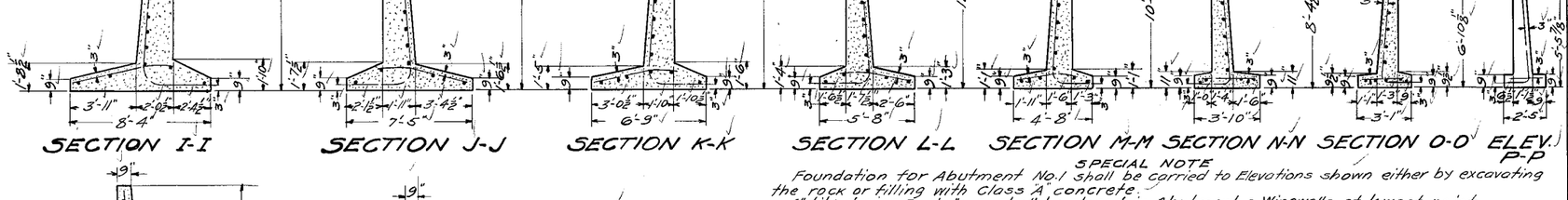
SECTION G-G



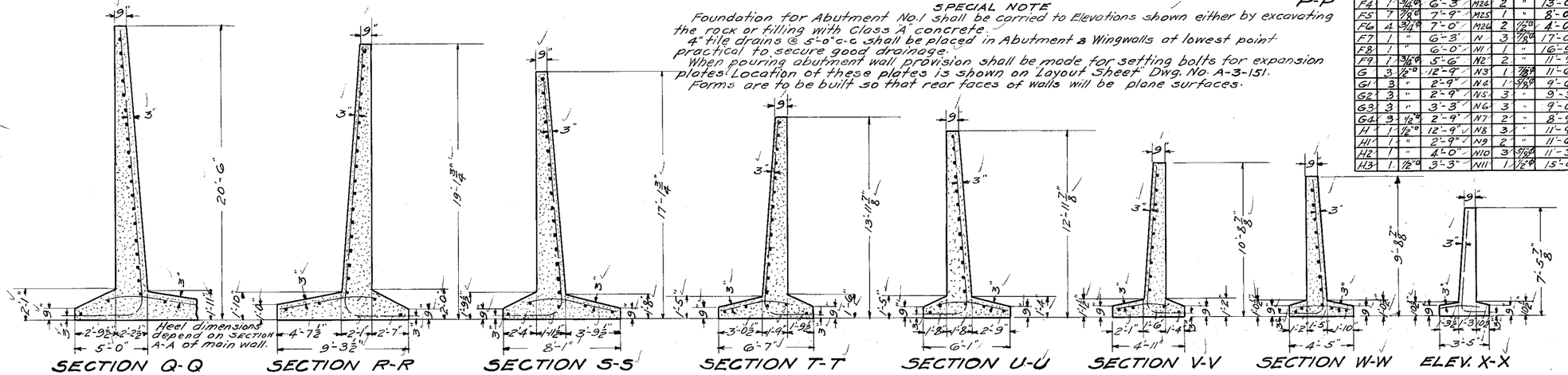
SECTION H-H

BILL OF STEEL

BAR	NO	SIZE	LENGTH	BAR	NO	SIZE	LENGTH	BAR	NO	SIZE	LENGTH	BAR	NO	SIZE	LENGTH	BAR	NO	SIZE	LENGTH
A	15	1"ø	13'-3"	H4	1	1/2"ø	4'-6"	N12	1	1/2"ø	14'-6"	08	1	1/2"ø	8'-3"	P22	3	5/8"ø	4'-9"
A1	3	"	13'-6"	K	6	1"ø	6'-0"	N13	1	"	14'-0"	09	1	"	8'-0"	P23	4	5/8"ø	4'-6"
A2	3	"	13'-0"	M	1	1/2"ø	1'-9"	N14	1	"	13'-6"	010	1	"	7'-6"	P24	3	1/2"ø	3'-3"
A3	4	1"ø	13'-6"	M1	1	"	4'-6"	N15	1	"	13'-3"	011	1	"	7'-3"	P25	1	"	3'-0"
A4	4	7/8"ø	12'-3"	M2	1	"	6'-9"	N16	1	"	12'-9"	012	1	"	10'-0"	P26	1	"	2'-6"
B	16	1"ø	20'-9"	M3	1	"	7'-6"	N17	3	"	6'-9"	013	1	"	9'-6"	P27	1	"	2'-3"
B1	3	1"ø	20'-0"	M4	1	"	10'-3"	N18	3	"	6'-6"	014	1	"	9'-0"	P28	1	1/2"ø	2'-0"
B2	3	1"ø	19'-6"	M5	1	"	12'-3"	N19	1	"	10'-9"	015	1	"	8'-6"	G	3	1/2"ø	2'-9"
B3	3	1"ø	20'-0"	M6	1	"	14'-3"	N20	1	"	10'-3"	016	1	"	8'-0"	G1	3	"	6'-9"
B4	4	7/8"ø	17'-3"	M7	1	"	16'-6"	N21	1	"	9'-6"	017	1	"	10'-3"	G2	3	"	4'-7"
C	16	1/2"ø	6'-0"	M8	1	"	19'-0"	N22	1	"	9'-0"	018	1	"	10'-6"	G3	3	"	4'-6"
C1	3	"	5'-6"	M9	7	"	20'-0"	N23	1	1/2"ø	8'-6"	019	1	"	9'-6"	G4	3	"	3'-9"
C2	2	"	5'-0"	M10	1	"	15'-0"	N24	3	7/8"ø	17'-3"	020	1	"	9'-3"	G5	3	"	3'-9"
C3	1	"	8'-6"	M11	1	"	10'-3"	N25	2	"	17'-0"	021	1	"	8'-9"	G6	3	"	4'-9"
C4	3	"	5'-0"	M12	1	"	3'-3"	N26	3	"	12'-0"	022	1	"	8'-3"	G7	3	"	3'-3"
C5	3	"	6'-0"	M13	1	"	2'-9"	N27	1	7/8"ø	11'-9"	023	1	"	8'-0"	G8	3	1/2"ø	2'-6"
C6	1	1/2"ø	10'-6"	M14	1	"	4'-6"	N28	2	5/8"ø	12'-0"	024	1	"	7'-6"				
D	3	3/4"ø	30'-3"	M15	1	"	6'-9"	N29	3	"	11'-9"	025	1	"	7'-0"	R	1	1/2"ø	5'-0"
E	15	1/2"ø	30'-5"	M16	1	"	8'-0"	N30	2	"	9'-6"	026	1	1/2"ø	6'-6"	R1	1	"	6'-9"
E1	2	"	24'-6"	M17	1	"	10'-3"	N31	3	5/8"ø	9'-3"	P	1	3/4"ø	5'-9"	R2	1	"	4'-6"
E2	2	"	19'-3"	M18	1	"	12'-6"	N32	1	"	9'-9"	P1	1	"	6'-3"	R3	1	"	4'-6"
E3	2	1/2"ø	12'-9"	M19	1	"	14'-9"	N33	2	"	9'-6"	P2	2	"	7'-0"	R4	1	"	5'-6"
F	26	7/8"ø	8'-3"	M20	1	"	17'-0"	N34	2	"	9'-3"	P3	2	3/4"ø	7'-6"	R5	1	"	4'-0"
F1	6	7/8"ø	8'-0"	M21	1	"	19'-0"	N35	2	"	7'-9"	P4	4	5/8"ø	5'-6"	R6	1	"	4'-9"
F2	5	3/4"ø	7'-3"	M22	5	"	20'-0"	N36	2	"	7'-6"	P5	3	"	5'-3"	R7	1	"	3'-9"
F3	1	"	6'-6"	M23	1	"	17'-0"	N37	1	3/8"ø	7'-3"	P6	5	5/8"ø	5'-0"	R8	1	1/2"ø	2'-6"
F4	1	3/4"ø	6'-3"	M24	2	"	13'-0"	N38	1	1/2"ø	11'-3"	P7	4	1/2"ø	4'-0"				
F5	7	7/8"ø	7'-9"	M25	1	"	8'-0"	N39	1	"	10'-6"	P8	4	"	3'-9"	S	2	1 1/2"ø	15'-0"
F6	4	3/4"ø	7'-0"	M26	2	1/2"ø	4'-0"	N40	1	"	10'-0"	P9	1	"	3'-6"	S1	2	"	17'-0"
F7	1	"	6'-3"	N	3	7/8"ø	17'-0"	N41	1	"	9'-6"	P10	1	"	3'-3"	S2	7	"	18'-0"
F8	1	"	6'-0"	N1	1	"	16'-9"	N42	1	"	7'-0"	P11	2	"	3'-0"	S3	2	"	17'-3"
F9	1	3/4"ø	5'-6"	N2	2	"	11'-9"	N43	1	"	6'-6"	P12	2	1/2"ø	2'-9"	S4	2	1/2"ø	16'-6"
G	3	1/2"ø	12'-9"	N3	1	7/8"ø	11'-6"	N44	1	1/2"ø	6'-0"	P13	1	3/4"ø	5'-0"				
G1	3	"	2'-9"	N4	1	5/8"ø	9'-6"	D	1	1/2"ø	9'-0"	P14	1	"	5'-9"				
G2	3	"	2'-9"	N5	3	"	9'-3"	D1	1	"	8'-6"	P15	1	"	6'-3"				
G3	3	"	3'-3"	N6	3	"	9'-0"	D2	1	"	8'-0"	P16	2	"	6'-9"				
G4	3	1/2"ø	2'-9"	N7	2	"	8'-9"	D3	1	"	7'-9"	P17	2	"	7'-3"				
H	1	1/2"ø	12'-9"	N8	3	"	11'-9"	D4	1	"	9'-9"	P18	1	3/4"ø	7'-6"				
H1	1	"	2'-9"	N9	2	"	11'-6"	D5	1	"	9'-6"	P19	2	5/8"ø	5'-9"				
H2	1	"	4'-0"	N10	3	5/8"ø	11'-3"	D6	1	"	9'-0"	P20	3	"	5'-6"				
H3	1	1/2"ø	3'-3"	N11	1	1/2"ø	15'-0"	D7	1	1/2"ø	8'-9"	P21	2	5/8"ø	5'-3"				



SECTION I-I SECTION J-J SECTION K-K SECTION L-L SECTION M-M SECTION N-N SECTION O-O ELEV. P-P



SECTION Q-Q SECTION R-R SECTION S-S SECTION T-T SECTION U-U SECTION V-V SECTION W-W ELEV. X-X

SPECIAL NOTE

Foundation for Abutment No.1 shall be carried to Elevations shown either by excavating the rock or filling with Class A concrete.
4" tile drains @ 5'-0" c-c shall be placed in Abutment & Wingwalls at lowest point practical to secure good drainage.
When pouring abutment wall provision shall be made for setting bolts for expansion plates. Location of these plates is shown on "Layout Sheet" Dwg. No. A-3-151.
Forms are to be built so that rear faces of walls will be plane surfaces.

GENERAL NOTES

Specifications: Standard Road & Bridge Specifications of the Tennessee Department of Highways & Public Works.
Concrete shall be Class A concrete.
Reinforcing steel: See Specifications.
Forms & Finish: See Specifications.

ESTIMATED QUANTITIES

Concrete Class A 87.0 Cu. Yds.
Reinforcing steel 6341 Lbs.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS

ABUTMENT NO.1

STA. 861+93.9
CUMBERLAND CO
1929

CORRECT L. N. Hamilton BRIDGE ENGINEER

APPROVED O. F. Goetz ASSISTANT STATE HIGHWAY ENGINEER

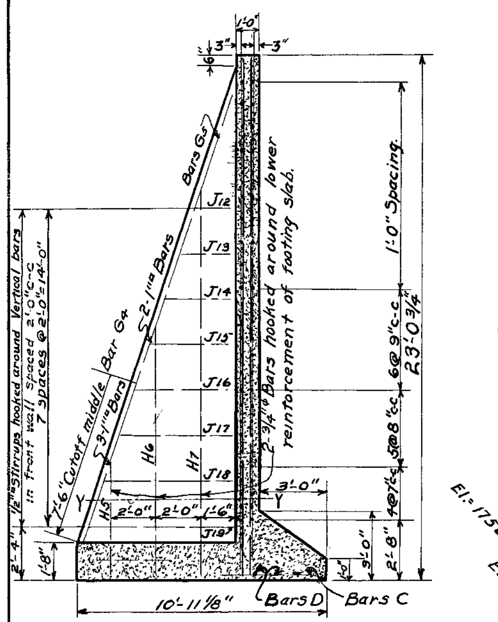
DESIGNED BY ..... DATE .....
DRAWN BY ..... DATE .....
TRACED BY ..... DATE 6-26-29
CHECKED BY ..... DATE .....

A-3-153

Traced W.T.S.K. 6/26/29

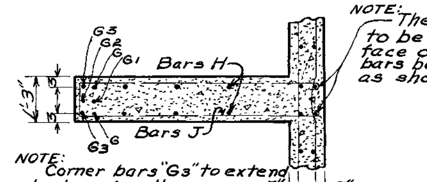
FED ROAD DIST. No	STATE	FED. AID. PROJ No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
8	TENN.		19		

SA371-B



SECTION B-B

NOTE: Section C-C Same as Section B-B but of opposite hand.

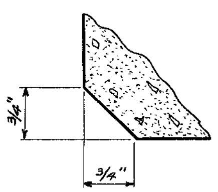


NOTE: These two vertical bars to be placed 3" from front face of wall and horizontal bars bent around them as shown.

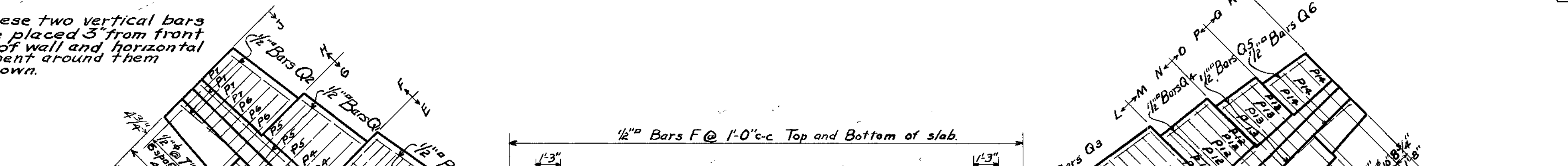
NOTE: Corner bars "G3" to extend to top of wall. All "G" bars (main reinforcement along inclined edge) to extend 40 diameters into footing slab.

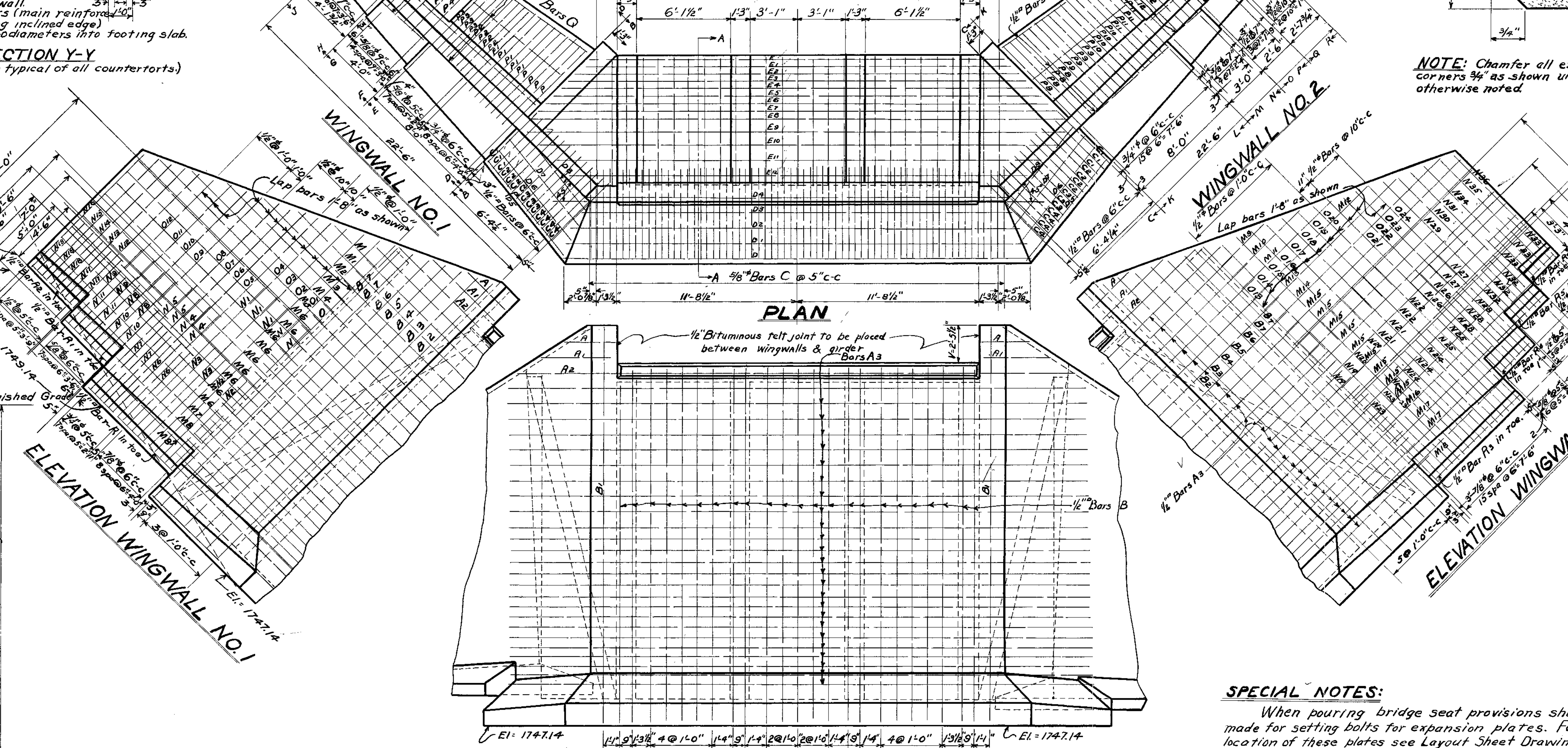
SECTION Y-Y

(This section typical of all counterforts.)



NOTE: Chamfer all exposed corners 3/4" as shown unless otherwise noted.



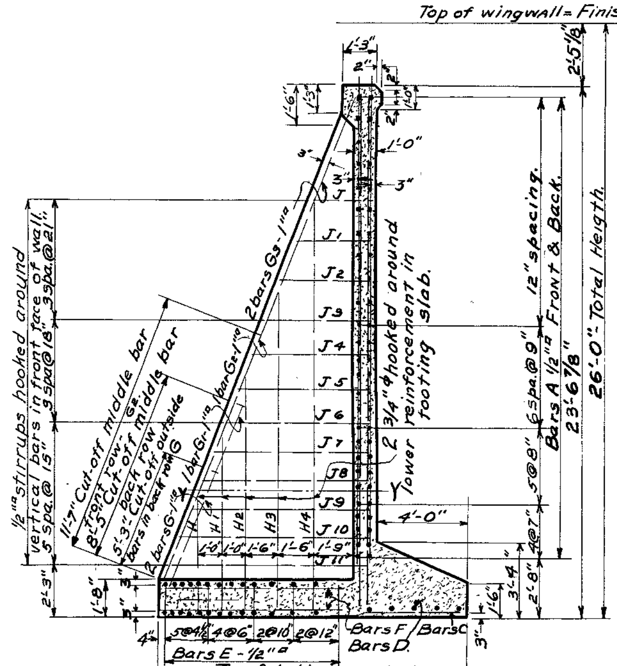


PLAN

ELEVATION WINGWALL NO. 1

ELEVATION WINGWALL NO. 2

ELEVATION



SECTION A-A

GENERAL NOTES:

Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be class "A."
Reinforcing Steel: See Specifications.
Forms and Finish: See Specifications.

SPECIAL NOTES:

When pouring bridge seat provisions shall be made for setting bolts for expansion plates. For the location of these plates see Layout Sheet Drawing A-3-15.

Foundations shall be carried to elevations shown either by excavating the rock or by filling in with Class "A" concrete.

4" Tile Drains shall be placed in Abutment and Wingwalls at lowest point practical for good drainage.

BILL OF STEEL

BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH	BAR	SIZE	NO	LENGTH	BAR	SIZE	NO.	LENGTH
A	1/2"□	4	3'-6"	E1	1/2"□	2	27'-9"	J	1/2"□	4	6'-6"	M7	1/2"□	1	11'-9"	N15	1/2"φ	1	12'-9"	O5	1/2"φ	1	10'-9"	P7	1/2"φ	4	3'-9"
A1	1/2"□	4	5'-0"	E2	"	2	28'-9"	J1	"	4	8'-0"	M8	"	2	7'-9"	N16	"	1	12'-3"	O6	"	1	10'-3"	P8	3/4"φ	4	7'-3"
A2	1/2"□	2	39'-0"	E3	"	2	29'-9"	J2	"	4	9'-3"	M9	"	1	4'-0"	N17	"	2	6'-9"	O7	"	1	10'-0"	P9	"	4	7'-0"
A3	1/2"□	50	41'-6"	E4	"	2	30'-6"	J3	"	4	10'-9"	M10	"	1	6'-3"	N18	1/2"φ	3	6'-6"	O8	"	1	9'-6"	P10	"	4	6'-9"
B	1/2"□	46	23'-0"	E5	"	2	31'-6"	J4	"	4	12'-3"	M11	"	1	8'-3"	N19	7/8"φ	2	17'-6"	O9	"	1	9'-6"	P11	3/4"φ	4	6'-6"
B1	"	4	25'-6"	E6	"	2	32'-6"	J5	"	4	13'-3"	M12	"	1	10'-6"	N20	"	2	17'-3"	O10	"	1	9'-3"	P12	5/8"φ	5	5'-3"
B2	"	4	25'-3"	E7	"	2	33'-6"	J6	"	4	14'-3"	M13	"	1	12'-9"	N21	"	2	17'-0"	O11	"	1	8'-9"	P13	1/2"φ	4	4'-3"
B3	"	4	24'-9"	E8	"	2	34'-6"	J7	"	4	15'-3"	M14	"	1	15'-0"	N22	"	2	16'-9"	O12	"	1	8'-3"	P14	1/2"φ	3	3'-6"
B4	"	4	24'-3"	E9	"	2	35'-0"	J8	"	4	16'-3"	M15	"	9	15'-9"	N23	"	3	12'-0"	O13	"	1	10'-3"	Q	1/2"□	3	7'-9"
B5	"	4	23'-9"	E10	"	2	33'-6"	J9	"	4	17'-3"	M16	"	1	13'-3"	N24	"	3	11'-9"	O14	"	1	10'-0"	Q1	"	3	3'-9"
B6	"	4	23'-3"	E11	"	2	31'-6"	J10	"	4	18'-3"	M17	"	2	10'-9"	N25	7/8"φ	2	11'-6"	O15	"	1	9'-6"	Q2	"	3	3'-9"
B7	1/2"□	8	22'-6"	E12	1/2"□	2	29'-6"	J11	"	4	19'-3"	M18	1/2"□	1	7'-9"	N26	5/8"φ	2	11'-9"	O16	"	1	9'-0"	Q4	"	3	2'-9"
C	5/8"φ	65	6'-0"	F	1/2"□	54	8'-3"	J12	"	2	6'-9"	N	7/8"φ	2	17'-3"	N27	"	2	11'-6"	O17	"	1	8'-6"	Q5	"	2	2'-3"
C1	1/2"□	6	4'-6"	G	1"□	8	8'-6"	J13	"	2	8'-3"	N1	"	3	17'-0"	N28	5/8"φ	3	9'-3"	O18	"	1	8'-0"	Q6	1/2"□	2	2'-3"
C2	"	8	4'-9"	G1	1"□	4	11'-6"	J14	"	2	9'-9"	N2	"	2	12'-0"	N29	1/2"φ	1	15'-3"	O19	"	1	7'-6"	R	1/2"□	1	7'-9"
C3	"	6	5'-0"	G2	1"□	4	15'-0"	J15	"	2	11'-0"	N3	7/8"φ	2	11'-9"	N30	"	1	14'-9"	O20	"	1	7'-0"	R1	"	1	3'-9"
C4	1/2"□	8	5'-3"	G3	1"□	8	26'-4"	J16	"	2	12'-3"	N4	3/4"φ	2	13'-0"	N31	"	1	14'-3"	O21	"	1	9'-3"	R2	"	1	3'-9"
D	1/2"□	1	30'-0"	G4	1"□	2	10'-9"	J17	"	2	13'-6"	N5	"	2	12'-9"	N32	"	3	7'-0"	O22	"	1	8'-9"	R3	"	1	7'-9"
D1	"	1	29'-3"	G5	1"□	4	25'-3"	J18	"	2	14'-9"	N6	"	2	10'-3"	N33	"	3	5'-0"	O23	"	1	8'-6"	R4	"	1	2'-9"
D2	"	1	28'-6"	H	3/4"□	8	6'-0"	J19	1/2"□	2	16'-6"	N7	3/4"φ	2	10'-0"	N34	"	1	12'-0"	O24	1/2"φ	1	8'-0"	R5	1/2"□	1	2'-3"
D3	"	1	27'-9"	H1	"	8	8'-3"	M	1/2"□	1	4'-0"	N8	5/8"φ	2	10'-0"	N35	"	1	11'-6"	P	3/4"φ	4	7'-0"	R6	1/2"□	1	2'-3"
D4	1/2"□	1	27'-0"	H2	"	8	10'-9"	M1	"	1	6'-3"	N9	"	2	9'-9"	N36	1/2"φ	1	11'-0"	P1	3/4"φ	5	6'-9"	Q3	1/2"□	3	7'-9"
D5	1/2"□	2	8'-0"	H3	"	8	14'-3"	M2	"	1	8'-6"	N10	"	2	7'-9"	O	1/2"φ	1	9'-6"	P2	5/8"φ	4	6'-0"				
D6	"	2	7'-9"	H4	"	8	18'-0"	M3	"	1	10'-9"	N11	5/8"φ	2	7'-6"	O1	"	1	9'-0"	P3	"	4	5'-9"				
D7	"	2	7'-3"	H5	"	4	5'-9"	M4	"	1	13'-0"	N12	1/2"φ	1	14'-3"	O2	"	1	8'-6"	P4	"	2	5'-3"				
D8	1/2"□	2	7'-0"	H6	"	4	11'-6"	M5	"	1	15'-0"	N13	"	1	13'-9"	O3	"	1	8'-0"	P5	5/8"φ	3	5'-0"				
E	1/2"□	2	26'-9"	H7	3/4"φ	4	17'-6"	M6	1/2"□	9	15'-9"	N14	1/2"φ	1	13'-3"	O4	1/2"φ	1	7'-6"	P6	1/2"φ	3	4'-0"				

DESIGNED BY .... DATE ....
DRAWN BY .... DATE ....
TRACED BY A.B. Fuller DATE ....
CHECKED BY .... DATE ....

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE

DETAILS OF
ABUTMENT NO 2

STA. 861+93.90
CUMBERLAND CO.
1929

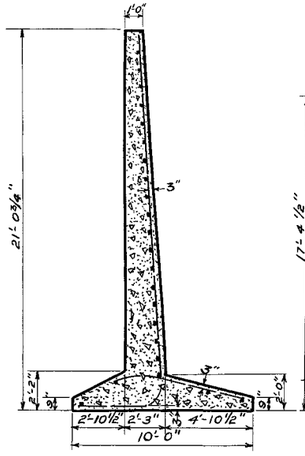
CORRECT L. W. Erickson
BRIDGE ENGINEER

APPROVED O. F. Goetz
ASSISTANT STATE HIGHWAY ENGINEER

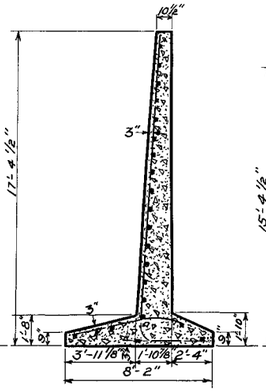
A-3-154

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.		19		

5A371-B



SECTION D-D



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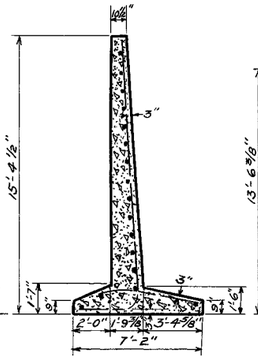

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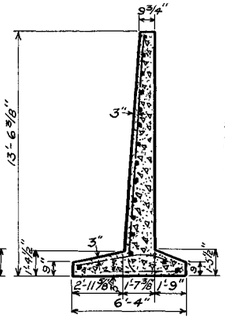

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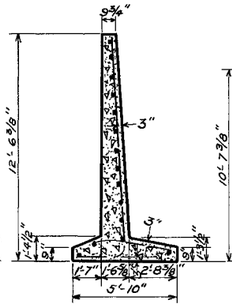

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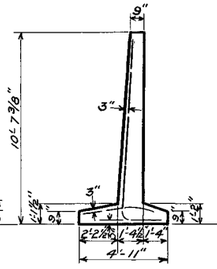
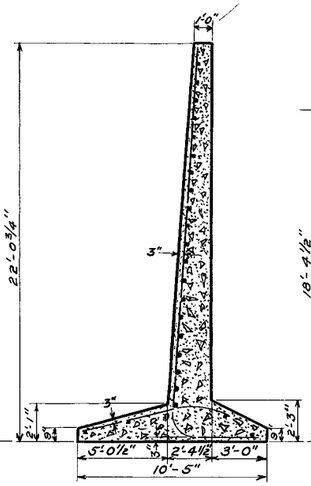


ELEVATION J-J



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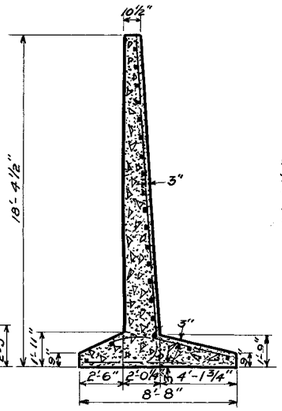

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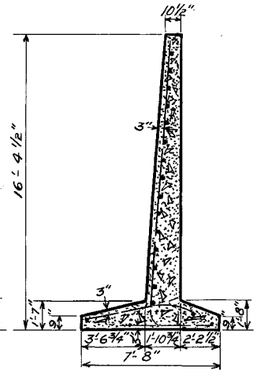

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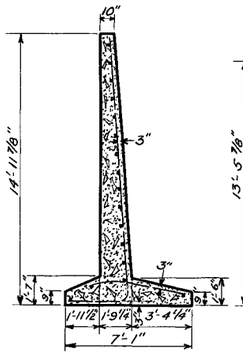

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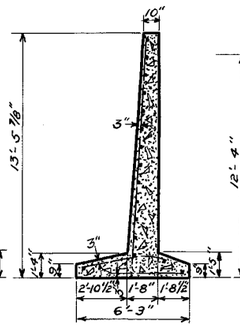

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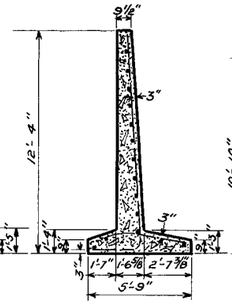

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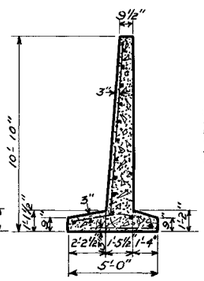

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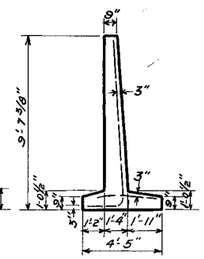


ELEVATION R-R.

ESTIMATED QUANTITIES:

Class "A" Concrete 127.6 Cu. Yds.

Reinforcing Steel 10,719 Lbs.

DESIGNED BY ..... DATE .....
DRAWN BY ..... DATE .....
TRACED BY ..... A.B. Fuller. DATE .....
CHECKED BY ..... DATE .....

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS
AND PUBLIC WORKS
NASHVILLE

DETAILS OF ABUTMENT NO 2

STA. 861+93.90
CUMBERLAND CO.
1929.

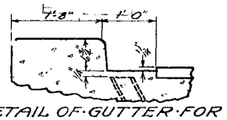
CORRECT L. N. Erickson
BRIDGE ENGINEER

APPROVED O. F. Goetz
ASSISTANT STATE HIGHWAY ENGINEER

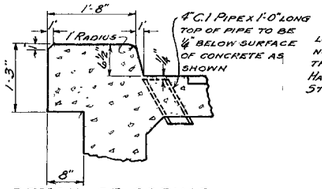
A-3-155

LAST REVISION 12-18-29

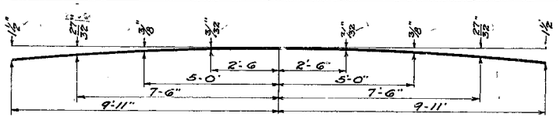
FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN.	[illegible]	[illegible]	[illegible]	[illegible]



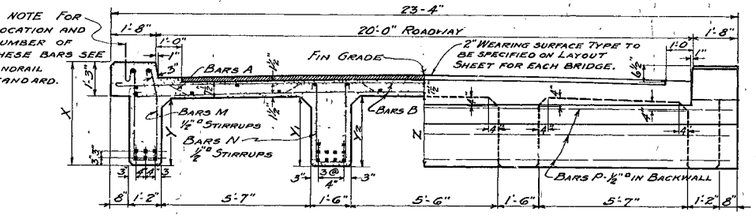
· DETAIL OF GUTTER FOR · BITUMINOUS SURFACE ·



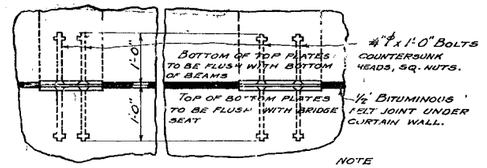
· DETAIL · OF · COPING · AND · ROADWAY · DRAIN ·



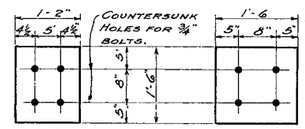
· DETAIL · OF · ROADWAY · TEMPLATE · FOR · GIRDERS ·



· HALF · SECTION · A-A · · HALF · END · ELEVATION ·



NOTE
16 gauge copper pls (same size as steel pls) shall be used between top & bottom expansion plates



Pl. 14"x½"x1'-6"
4 REQUIRED
· EXTERIOR · BEAMS ·

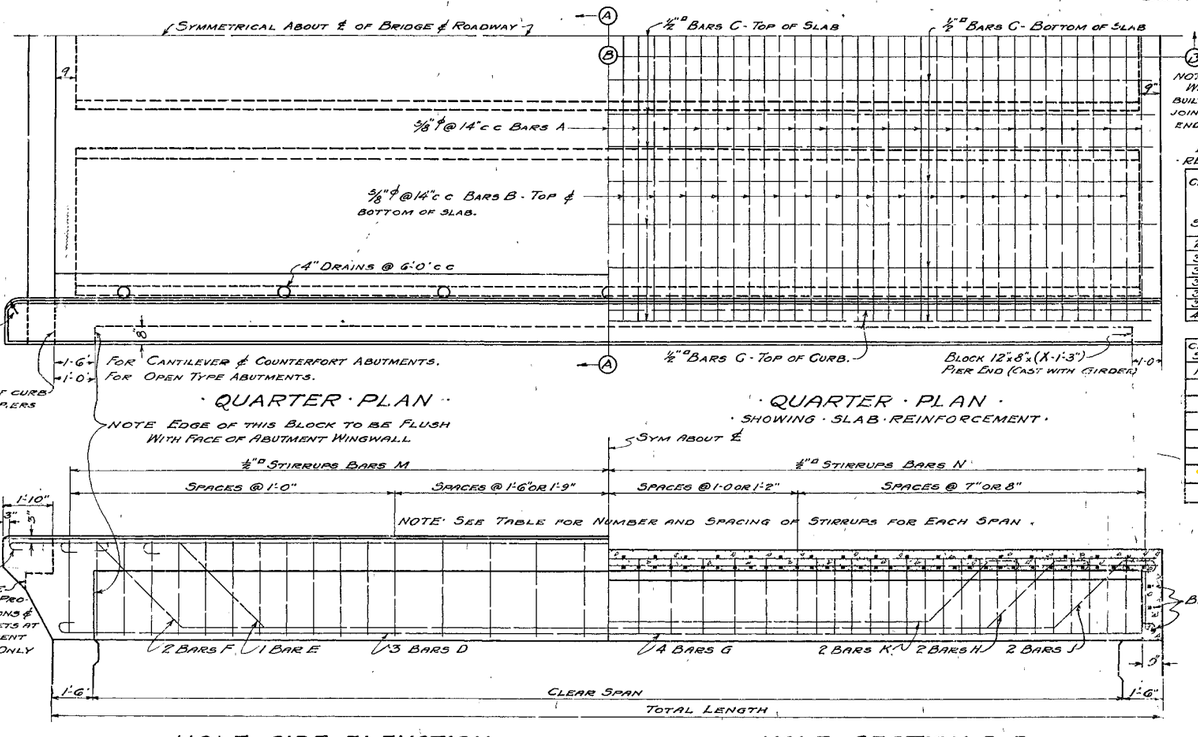
Pl. 18"x½"x1'-6"
· 4 REQUIRED ·
· INTERIOR · BEAMS ·

· DETAIL · AT · EXPANSION · END ·

· DIMENSIONS · AND · QUANTITIES · · INTERMEDIATE · SPANS · ONLY ·

CLEAR SPAN FEET	TOTAL LENGTH	DIMENSIONS X	Y	Y_1	Y_2	Z	STIRRUP SPACING EXTERIOR BEAM STIRRUPS M	INTERIOR BEAM STIRRUPS N	QUANTITIES CLASS A CONCRETE CU YDS	REINF. STEEL LBS.	STRUCT STEEL LBS.
28	31'-0"	3'-0"	1'-6½"	1'-9⅜"	1'-9⅞"	1'-9½"	9 SPA. @ 1'-0" 8 " " 1'-6 9 " " 1'-0	18 SPA @ 7" 9 " " 1'-0 18 " " 7"	32.5	7287	398
30	33'-0"	3'-2"	1'-10⅜"	1'-11⅛"	1'-11⅞"	1'-11½"	9 " " 1'-0 1 " " 1'-6 9 " " 1'-0	18 " " 7" 10 " " 1'-0" 18 " " 7"	35.7	7931	398
32	35'-0"	3'-4	2'-0⅛"	2'-1⅛"	2'-1⅜"	2'-1½"	9 " " 1'-0 10 " " 1'-6" 9 " " 1'-0	18 " " 7" 12 " " 1'-0 18 " " 7"	391	8530	398
34	37'-0"	3'-6"	2'-2⅜"	2'-3⅛"	2'-3⅜"	2'-3½"	9 " " 1'-0 12 " " 1'-6 9 " " 1'-0	18 " " 7" 14 " " 1'-0 18 " " 7"	426	9265	398
36	39'-0"	3'-8"	2'-4⅛"	2'-5⅛"	2'-5⅜"	2'-5½"	12 " " 1'-0 8 " " 1'-9 12 " " 1'-0	19 " " 8" 10 " " 1'-2" 19 " " 8	462	10032	398
~~38~~	~~41'-0"~~	~~3'-10~~	~~2'-6⅞~~	~~2'-7⅛~~	~~2'-7⅜~~	~~2'-7½~~	13 " " 1'-0 8 " " 1'-9 13 " " 1'-0	19 " " 8 12 " " 1'-2 19 " " 8	500	10582	398
40	43'-0"	4'-0"	2'-8⅝"	2'-9⅛"	2'-9⅜"	2'-9½"	13 " " 1'-0 9 " " 1'-9 13 " " 1'-0	20 " " 8" 13 " " 1'-2" 20 " " 8	539	11467	398

NOTE COST OF C.I. DRAINS AND OF ALL BITUMINOUS FELT JOINTS SHALL BE INCLUDED IN THE PRICE PER CU. YD OF CLASS "A" CONCRETE.



· HALF · SIDE · ELEVATION · · HALF · SECTION · B-B ·

· BILL · OF · STEEL · FOR · ONE · INTERMEDIATE · SPAN

CLEAR SPAN	BARS A ⅝" ø SLAB REINF		BARS B ⅝" ø SLAB REINF		BARS C ½" ø SLAB REINF		BARS D EXT. BEAMS			BARS E EXT. BEAMS			BARS F EXT. BEAMS			BARS G INT. BEAMS			BARS H INT. BEAMS			BARS J INT. BEAMS			BARS K INT. BEAMS			BARS M-½" ø STIRRUPS EXT. BEAM		BARS N ½" ø STIRRUPS INT. BEAM		BARS P-½" ø BACKWALL	
FEET	NO	LENGTH	NO	LENGTH	NO	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	LENGTH	NO	LENGTH	NO	LENGTH
28	27	24'-6"	52	22'-6"	21	30'-6"	6	⅛" ø	32'-4	2	⅛" ø	29'-9"	4	1" ø	34'-1"	8	⅛" ø	32'-4	4	⅛" ø	30'-5	4	⅛" ø	33'-11"	-	-	-	54	7'-0"	92	6'-2	6	23'-0"
30	27	24'-6"	56	22'-6	21	32'-6	6	⅛" ø	34'-1	2	1" ø	31'-4"	4	⅛" ø	36'-4"	8	⅛" ø	34'-6	4	⅛" ø	32'-2	4	⅛" ø	35'-10	-	-	-	56	7'-4"	94	6'-6	6	23'-0"
32	29	24'-6"	60	22'-6"	21	34'-6	6	⅛" ø	36'-6	2	1" ø	33'-2	4	1" ø	38'-4	8	⅛" ø	36'-6	4	⅛" ø	34'-5	4	⅛" ø	38'-0	-	-	-	58	7'-8"	98	6'-10'	6	23'-0"
34	31	24'-6"	64	22'-6	21	36'-6	6	⅛" ø	38'-4	2	⅛" ø	35'-3"	4	⅛" ø	40'-7"	8	⅛" ø	38'-6	4	⅛" ø	35'-10	4	⅛" ø	40'-4"	-	-	-	60	8'-0	102	7'-2'	6	23'-0"
36	33	24'-6"	68	22'-6	21	38'-6	6	⅛" ø	40'4	2	⅛" ø	36'-11"	4	⅛" ø	42'-11	8	⅛" ø	40'-6	4	⅛" ø	37'-9	4	⅛" ø	42'-5	-	-	-	66	8'-4'	98	7'-6	6	23'0
~~38~~	~~35~~	~~24'-6~~	~~68~~	~~22'-6~~	~~21~~	~~40'-6~~	~~6~~	~~⅛" ø~~	~~42'-6~~	~~2~~	~~⅛" ø~~	~~38'-9~~	~~4~~	~~⅛" ø~~	~~44'-11~~	~~8~~	~~⅛" ø~~	~~42'-6~~	~~4~~	~~⅛" ø~~	~~39'-7~~	~~4~~	~~⅛" ø~~	~~44'-7~~	-	-	-	70	8'-8	102	7'-10	6	23'-0
40	37	24'-6"	72	22'-6	21	42'-6	6	⅛" ø	44'-6	2	⅛" ø	40'-6	4	⅛" ø	47'-2	8	⅛" ø	44'-6	4	⅛" ø	41'-3	4	⅛" ø	46'-7"	2	1" ø	35'-6	72	9'-0	108	8'-2"	6	23'-0

NOTE FOR EACH END OF BRIDGE ADD 6 BARS 5-½" ø x 4'-0, 23 BARS T-½" ø x 2'-3" AND 1 BAR U-½" ø x 22'-3".

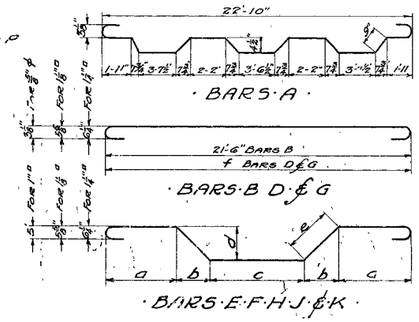
NOTE
When two or more spans are built, place a ¾" bituminous felt joint between spans at expansion ends

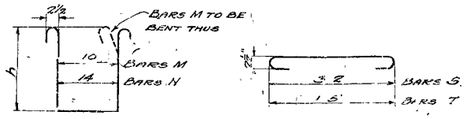
· ADDITIONAL · ESTIMATED QUANTITIES · REQUIRED AT EACH ABUTMENT ·

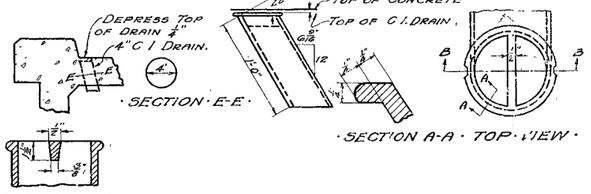
CLEAR SPAN	CURB PROJECTION BRACKET AND ADDITIONAL IN BLOCKS CONCRETE CU. YDS	STEEL LBS
28'-0"	1.4	83
30'-0	1.4	83
32'-0"	1.5	83
34'-0	1.6	83
36'-0	1.7	83
38'-0'	1.7	83
40'-0	1.8	83

· STEEL · BENDING · TABLE ·

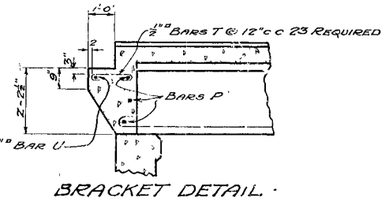
CLEAR SPAN	BARS D & G	BARS E					BARS F					BARS H					BARS J					BARS K					BARS M	BARS N
FEET	f	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e	h	h
28	30'-6"	1'-3"	2'-3"	19'-0	2'-3'	3'-2¼"	1'-3"	2'-3	23'-6	2'-3"	3'-2¼"	1'-3"	1'-8'	21'-4	1'-8"	2'-4⅛	1'-3"	1'-8'	24'-8	1'-8	2'-4⅛	-	-	-	-	-	2'-8"	2'-1"
30	32'-6"	1'-3"	2'-5"	20'-4	2'-5'	3'-5"	1'-3"	2'-5	25'-2	2'-5	3'-5	1'-3'	1'-10	22'-8	1'-10	2'-7⅛	1'-3"	1'-10	26'-4	1'-10	2'-7⅛	-	-	-	-	-	2'-10"	2'-3"
32	34'-6'	1'-3"	2'-7'	21'-8	2'-7	3'-7⅞	1'-3"	2'-7	26'-10	2'-7'	3'-7⅞	1'-3'	2'-0"	24'-0"	2'-0"	2'-10"	1'-3'	2'-0"	28'-0	2'-0	2'-10"	-	-	-	-	-	3'-0"	2'-5"
34	36'-6"	1'-3"	2'-9	23'-0	2'-9"	3'-10⅝"	1'-3'	2'-9"	28'-6	2'-9"	3'-10⅝"	1'-3'	2'-2'	25'-4	2'-2"	3'-0⅝"	1'-3"	2'-2	29'-8	2'-2'	3'-0⅝"	-	-	-	-	-	3'-7	2'-7"
36	38'-6'	1'-3"	2'-11"	24'-4"	2'-11'	4'-1½	1'-3	2'-11	30'-2	2'-11'	4'-1½	1'-3	2'-4	26'-8	2'-4	3'-3⅜"	1'-3'	2'-4	31'-4	2'-4	3'-3⅜"	-	-	-	-	-	3'-4	2'-9"
~~38~~	~~40'-6"~~	~~1'-3"~~	~~3'-1"~~	~~25'-8~~	~~3'-1"~~	~~4'-4⅜~~	~~1'-3~~	~~3'-1~~	~~31'-10~~	~~3'-1"~~	~~4'-4⅜~~	~~1'-3~~	~~2'-6~~	~~28'-0~~	~~2'-6~~	~~3'-6⅝~~	~~1'-3~~	~~2'-6~~	~~33'-0~~	~~2'-6~~	~~3'-6⅝~~	-	-	-	-	-	3'-6	2'-11
40	42'-6"	1'-3"	3'-3	27'-0	3'-3'	4'-7⅝"	1'-3	3'-3"	33'-6"	3'-3"	4'-7⅝"	1'-3"	2'-8	29'-4'	2'-8"	3'-9⅛"	1'-3"	2'-8"	34'-8'	2'-8'	3'-9⅛"	1'-3"	2'-5	24'-6	2'-5	3'-5'	3'-8'	3'-1"





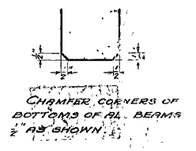


· DETAIL · OF · 4" CAST · IRON · DRAIN · PIPE ·



BRACKET DETAIL ·

General Notes
Specifications Standard Road & Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be Class "A".
Reinforcing Steel: See Specifications.
All Dimensions Relating to Reinforcement are to Centers of Bars.
Forms and Finish: See Specifications.



Chamfer corners of bottoms of all beams ¾" as shown.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
STANDARD

CONCRETE BRIDGES DECK GIRDER TYPE

SPANS 25' TO 40' "ROADWAY 20'-0"

1930

CORRECT. [signature] STATE HIGHWAY ENGINEER

SEE M-330-14

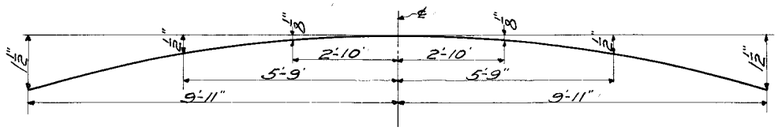
A-03

DESIGNED BY ..... DATE .....
DRAWN BY ..... DATE .....
TRACED BY Mady Zimmerman DATE April 1930
CHECKED BY ..... DATE .....

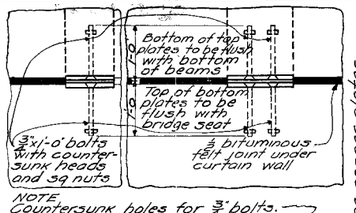
Revised Bracket Detail & Curb Projection 12-18-29
Revised 20158 to weight of Structural Steel for Copper Pls 1-17-29

FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
8	TENN	[illegible]	[illegible]	[illegible]	[illegible]

For number and location of these bars see handrail Standard



HALF SECTION A-A HALF END ELEVATION



DETAILS AT EXPANSION END

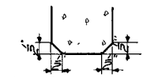
DIMENSIONS AND ESTIMATED QUANTITIES (INTERMEDIATE SPANS ONLY)

CLEAR SPAN FEET	TOTAL LENGTH	DIMENSIONS X	Y	Y1	Y2	Z	STIRRUP SPACING EXT BEAM STIRRUPS N	INT BEAM STIRRUPS N1	CTR BEAM STIRRUPS N2	QUANTITIES CONCRETE CLASS A CU.YDS	REINF STEEL LBS.	STRUCT STEEL LBS
16	18'-6"	2'-5"	1'-12"	1'-2⅝"	1'-2⅝"	1'-3"	3 @ 12 c-c 9 " 15 " 3 " 12 "	6 @ 12 c-c 12 " 10 " 6 " 8 "	8 @ 12 c-c 10 " 10 " 8 " 7 "	16.9	3490	331
18	20'-6"	2'-7"	1'-3½"	1'-4⅜"	1'-4⅝"	1'-5"	3 " 12 " 11 " 15 " 3 " 12 "	6 " 8" 14 " 10 " 6 " 8 "	8 " 7" 12 " 10 8 " 7	19.4	3880	331
20	22'-6"	2'-8"	1'-4½"	1'-5⅜"	1'-5⅝"	1'-6"	4 " 12 " 11 " 15 " 4 " 12 "	6 " 8 16 " 10 " 6 " 8	8 " 7" 12 " 10 10 " 7"	21.6	4449	331
22	24'-6"	2'-9"	1'-5½"	1'-6⅜"	1'-6⅝"	1'-7"	4 " 12 " 12 " 15 " 4 " 12 "	6 " 8 18 " 10 " 6 " 8 "	10 " 7" 14 " 10" 10 " 7"	23 9	5128	331
24	26'-6"	2'-10"	1'-6½"	1'-7⅜"	1'-7⅝"	1'-8"	4 " 12 " 14 " 15 " 4 " 12 "	6 " 8 21 " 10 6 " 8	10 " 7" 16 " 10 " 10 " 7"	26.2	5708	331
26	28'-6"	2'-11"	1'-7½"	1'-8⅜"	1'-8⅝"	1'-9"	4 " 12 " 16 " 15 " 4 " 12 "	6 " 8 25 " 10 6 " 8	11 " 7" 18 " 10 11 " 7	28.6	6389	331

NOTE The cost of C.I. Drains and bituminous felt joints shall be included in the price per cu yd of Class A concrete.

ADDITIONAL ESTIMATED QUANTITIES REQUIRED AT EACH ABUTMENT

CLEAR SPAN	CURB PROJECTION BRACKET AND ADDITIONAL IN BLOCK CONCRETE CLA. A CU.YDS	REINF STEEL LBS.
16'-0"	1.1	85
18'-0"	1.2	85
20'-0"	1.2	85
22'-0"	1.3	85
24'-0"	1.3	85
26'-0"	1.3	85

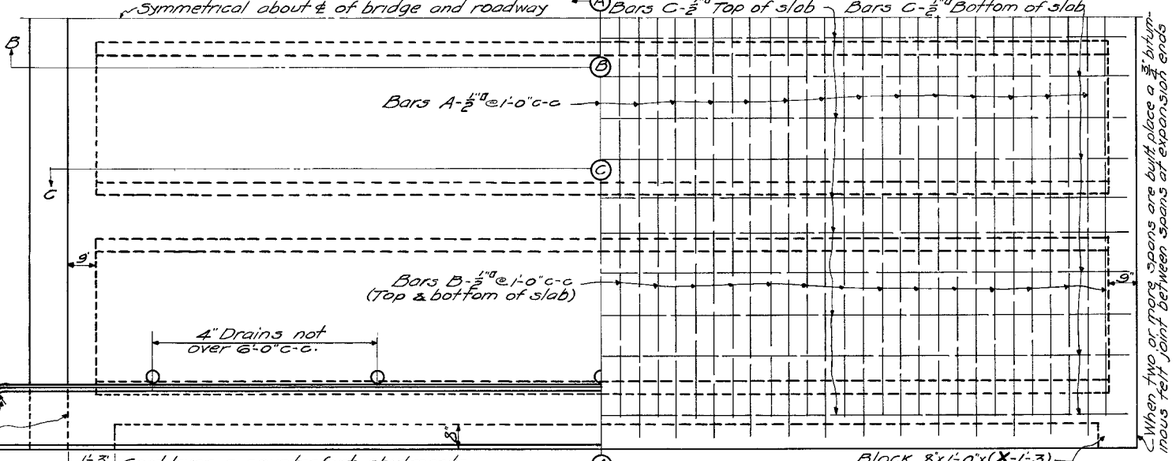


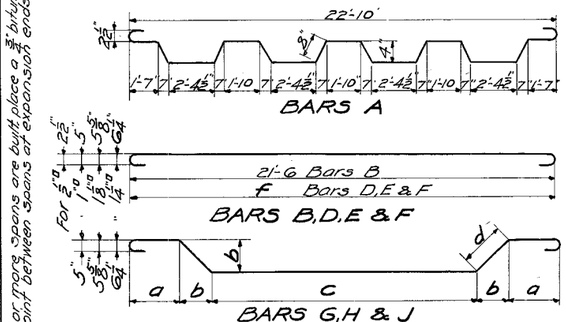
NOTE. Chamfer corners at bottom of all beams ½" as shown.

BILL OF STEEL

CLEAR SPAN	BARS A-½"@ SLAB REINF NO	LENGTH	BARS B-½"@ SLAB REINF NO	LENGTH	BARS C-½"@ SPACING BAR NO	LENGTH	BARS D EXT BEAMS REIN NO	SIZE	LENGTH	BARS D INT. BEAMS REIN NO	SIZE	LENGTH	BARS E CTR. BEAMS REIN NO	SIZE	LENGTH	BARS F EXT BEAMS REIN NO	SIZE	LENGTH	BARS G INT BEAMS REIN NO	SIZE	LENGTH	BARS H CTR BEAMS REIN NO	SIZE	LENGTH	BARS J STIRRUPS EXT BEAM NO	LENGTH	BARS N-½"@ STIRRUPS INT BEAM NO	LENGTH	BARS N1-½"@ STIRRUPS CTR BEAM NO	LENGTH	BARS N2-½"@ BACKWALL NO	LENGTH	BARS P-½"@
FEET	NO	LENGTH	NO	LENGTH	NO	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	SIZE	LENGTH	NO	LENGTH	NO	LENGTH	NO	LENGTH	NO	LENGTH	NO
16	17	24'-4"	36	22'-4"	26	18'-0"	4	7"@	19'-8"	6	7"@	19'-8"	3	12"@	19'-10"	2	7"@	21'-1"	4	7"@	20'-6"	2	7"@	20'-6"	32	5'-6"	50	4'-7"	27	4'-9"	6	23'-0"
18	19	24'-4"	40	22'-4"	26	20'-0"	4	7"	21'-8"	6	7"@	21'-8"	3	12"@	21'-10"	2	7"@	23'-2"	4	7"@	22'-3"	2	7"@	22'-3"	36	5'-10"	54	4'-11"	29	5'-1"	6	23'-0"
20	21	24'-4"	44	22'-4"	26	22'-0"	4	7"	23'-8"	6	7"@	23'-8"	3	12"@	23'-10"	2	7½"@	25'-5"	4	7½"@	24'-11"	2	7½"@	24'-11"	40	6'-0"	58	5'-1"	33	5'-3"	6	23'-0"
22	23	24'-4"	48	22'-4"	26	24'-0"	4	7½"@	25'-10"	6	7½"@	25'-10"	3	12"@	25'-10"	2	7½"@	27'-6"	4	7½"@	27'-0"	2	7½"@	27'-2"	42	6'-2"	62	5'-3"	35	5'-5"	6	23'-0"
24	25	24'-4"	52	22'-4"	26	26'-0"	4	7½"@	27'-10"	6	7½"@	28'-0"	3	12"@	28'-0"	2	7½"@	29'-3"	4	7½"@	28'-10"	2	7½"@	29'-0"	46	6'-4"	68	5'-5"	37	5'-7"	6	23'-0"
26	27	24'-4"	56	22'-4"	26	28'-0"	4	7½"@	30'-0"	6	7½"@	30'-0	3	12"@	30'-0"	2	7½"@	31'-10	4	7½"@	31'-1"	2	7½"@	31'-3"	50	6'-6"	72	5'-7"	41	5'-9"	6	23'-0"

NOTE: For each end of bridge add 6 Bars 5-½"x 4'-3", 23 Bars T-½"x 2'-3" and 1 Bar U-½"x 22'-3

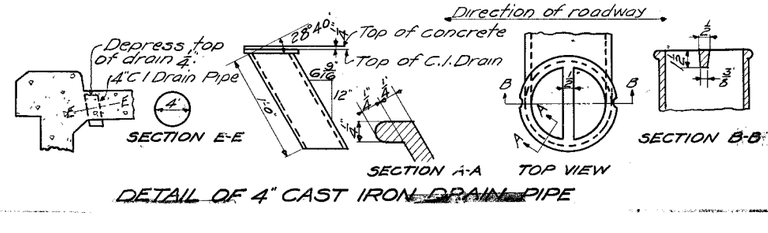


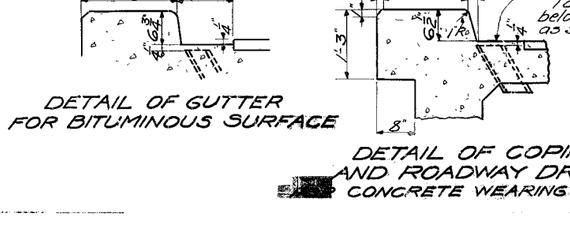


STEEL BENDING TABLE

CLEAR SPAN FEET	BARS D,E,F f	BARS J & H a	b	c	d	BARS G a	b	c	d	BARS N h	BARS N1 h	BARS N2 h
16	18'-0"	1'-0"	1'-0"	14'-0"	1'-5"	1'-0"	1'-8"	12'-8"	2'-4½"	2'-1"	1'-5⅜"	1'-6½"
18	20'-0"	1'-0"	1'-2"	15'-8"	1'-7⅜"	1'-0"	1'-10"	14'-4"	2'-7"	2'-3"	1'-7⅝"	1'-8⅜"
20	22'-0"	1'-0"	1'-3"	17'-6"	1'-9⅜"	1'-0"	1'-11"	16'-2"	2'-8⅜"	2'-4"	1'-9⅜"	1'-9⅜"
22	24'-0"	1'-0"	1'-4"	19'-4"	1'-10⅜"	1'-0"	2'-0"	18'-0"	2'-10"	2'-5"	1'-9⅜"	1'-10⅜"
24	26'-0"	1'-0"	1'-5"	21'-2"	2'-0"	1'-0"	2'-1"	19'-10"	2'-11½"	2'-6"	1'-10⅜"	1'-11⅜"
26	28'-0"	1'-0"	1'-6"	23'-0"	2'-1⅜"	1'-0"	2'-2"	21'-8"	3'-0⅜"	2'-7"	1'-11⅜"	2'-0⅜"

General Notes
Specifications Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works
Concrete shall be Class A
Reinforcing Steel - See Specifications
All dimensions relating to reinforcement are to centers of bars.
Forms and Finish - See Specifications





STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
STANDARD

CONCRETE BRIDGES DECK GIRDER TYPE

SPANS 16' TO 26' ROADWAY 20'-0"

1928

A-0-4

CORRECT: [illegible] BRIDGE ENGINEER

APPROVED: [illegible]

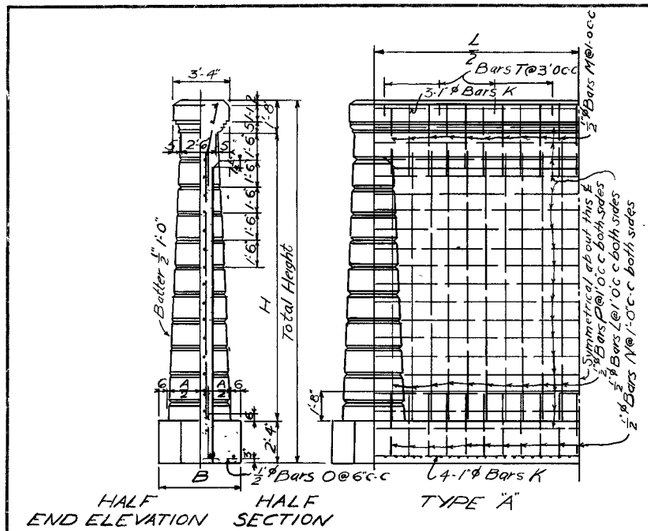
DESIGNED BY ..... DATE .....
DRAWN BY ..... E.W. Nilsson ..... DATE 4-16-28
RETRACED BY ..... Warner ..... DATE 1932
CHECKED BY ..... W. [illegible] ..... DATE 4-30-28

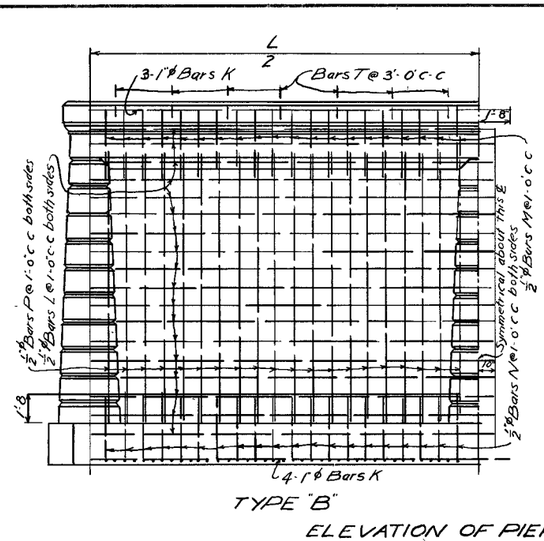
Added 16 lbs to weight of structural steel for copper p/s. 1-17-29

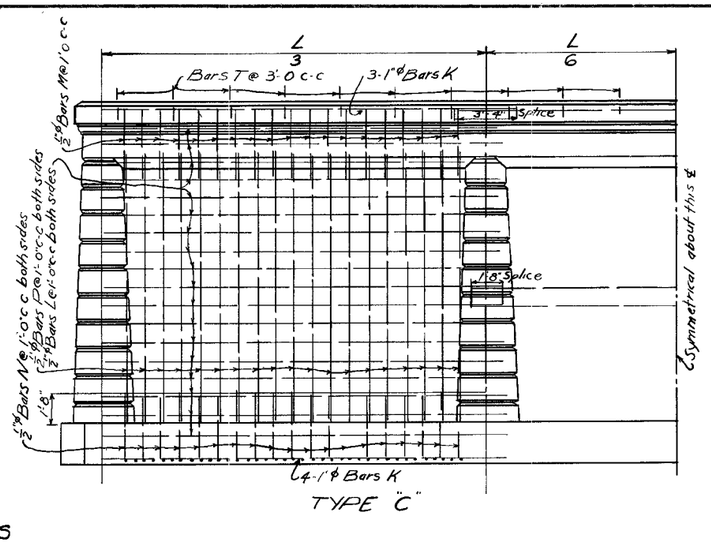
FED ROAD DIST NO	STATE	FED AID PROJ.
8	TENN	

16 176

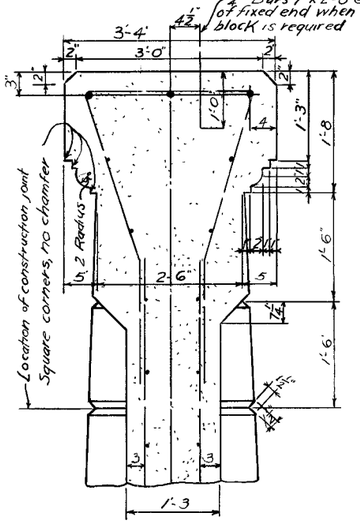
A-0-12-3-3-(12.)

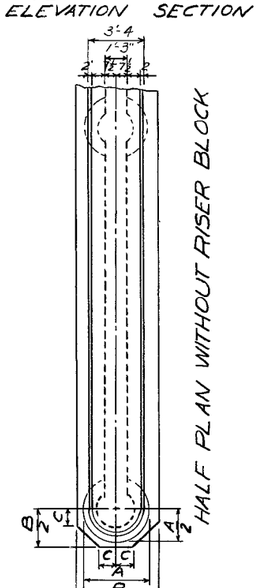






ELEVATION OF PIERS





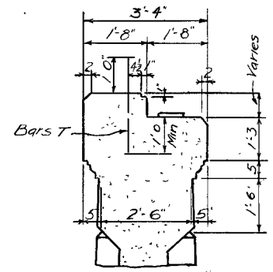


TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES

TOTAL HEIGHT	DIMENSIONS H	A	B	C	TYPE "A" BASED ON L = 22'-0" STEEL REINFORCEMENT BARS K-1"ϕ BARS L,M,N,O,P-½"ϕ BARS K,M,N	BARS L NO	BARS L LGTH	BARS O NO	BARS O LGTH	BARS P NO	BARS P LGTH	TOTAL QUANTITIES REINF LBS	TOTAL QUANTITIES CONC CU YDS	TYPE "B" BASED ON L = 42'-0" STEEL REINFORCEMENT BARS K-1"ϕ BARS L,M,N,O,P-½"ϕ BARS K,M,N	BARS L NO	BARS L LGTH	BARS O NO	BARS O LGTH	BARS P NO	BARS P LGTH	TOTAL QUANTITIES REINF LBS	TOTAL QUANTITIES CONC CU YDS	TYPE "C" BASED ON L = 60'-0" STEEL REINFORCEMENT BARS K-1"ϕ BARS L,M,N,O,P-½"ϕ BARS K,M,N	BARS L NO	BARS L LGTH	BARS O NO	BARS O LGTH	BARS P NO	BARS P LGTH	TOTAL QUANTITIES REINF LBS	TOTAL QUANTITIES CONC CU YDS	QUANTITIES PER FT LGTH SAME FOR ALL TYPES REINF LBS	QUANTITIES PER FT LGTH SAME FOR ALL TYPES CONC CU YDS	TOTAL HEIGHT
10'	6'	3'-0	4'-0	0'-10		16	22'-0	4	3'-6	42	5'-0	1185	23 44		32	22'-0	78	3'-6	80	5'-0	2347	42 08		48	21'-3	111	3'-6	114	5'-0	3392	58 91	551	909	10'
11'	7	3'-1	4'-1	0'-10		18	22'-0	4	3'-6	42	6'-0	1243	25 06		36	22'-0	78	3'-6	80	6'-0	2461	44 90		54	21'-3	111	3'-6	114	6'-0	3556	62 83	578	962	11'
12'	8	3'-2	4'-2	0'-10		20	22'-0	4	3'-6	42	7'-0	1302	26 70		40	22'-0	78	3'-6	80	7'-0	2576	47 76		60	21'-3	111	3'-6	114	7'-0	3720	66 79	606	1016	12'
13'	9'	3'-3	4'-3	0'-11		22	22'-0	4	3'-9	42	8'-0	1367	28 41		44	22'-0	78	3'-9	80	8'-0	2703	30 69		66	21'-3	111	3'-9	114	8'-0	3903	70 64	636	1069	13'
14'	10	3'-4	4'-4	0'-11		24	22'-0	4	3'-9	42	9'-0	1426	30 11		48	22'-0	78	3'-9	80	9'-0	2817	53 64		72	21'-3	111	3'-9	114	9'-0	4068	74 91	663	1123	14
15'	11'	3'-5	4'-5	0'-11		26	22'-0	4	3'-9	42	10'-0	1484	31 85		52	22'-0	78	3'-9	80	10'-0	2932	56 62		78	21'-3	111	3'-9	114	10'-0	4232	79 03	691	1176	15'
16'	12'	3'-6	4'-6	0'-11		28	22'-0	4	4'-0	42	11'-0	1550	33 61		56	22'-0	78	4'-0	80	11'-0	3059	59 64		84	21'-3	111	4'-0	114	11'-0	4415	83 21	721	1230	16
17	13'	3'-7	4'-7	0'-11		30	22'-0	4	4'-0	42	12'-0	1608	35 40		60	22'-0	78	4'-0	80	12'-0	3173	62 70		90	21'-3	111	4'-0	114	12'-0	4579	87 44	748	1283	17'
18	14'	3'-8	4'-8	1'-0		32	22'-0	4	4'-0	42	13'-0	1666	37 26		64	22'-0	78	4'-0	80	13'-0	3288	65 86		96	21'-3	111	4'-0	114	13'-0	4743	91 78	776	1337	18
19'	15'	3'-9	4'-9	1'-0		34	22'-0	4	4'-3	42	14'-0	1732	39 12		68	22'-0	78	4'-3	80	14'-0	3415	69 01		102	21'-3	111	4'-3	114	14'-0	4926	96 13	806	1390	19'
20	16'	3'-10	4'-10	1'-0		36	22'-0	4	4'-3	42	15'-0	1790	41 01		72	22'-0	78	4'-3	80	15'-0	3529	72 22		108	21'-3	111	4'-3	114	15'-0	5091	100 54	833	1444	20'
21'	17'	3'-11	4'-11	1'-0		38	22'-0	4	4'-3	42	16'-0	1849	42 93		76	22'-0	78	4'-3	80	16'-0	3644	75 47		114	21'-3	111	4'-3	114	16'-0	5255	105 02	861	1497	21
22	18'	4'-0	5'-0	1'-0		40	22'-0	4	4'-6	42	17'-0	1914	44 89		80	22'-0	78	4'-6	80	17'-0	3771	78 78		120	21'-3	111	4'-6	114	17'-0	5438	109 56	891	1551	22'
23'	19'	4'-1	5'-1	1'-1		42	22'-0	4	4'-6	42	18'-0	1973	46 33		84	22'-0	78	4'-6	80	18'-0	3885	82 17		126	21'-3	111	4'-6	114	18'-0	5602	114 21	918	1604	23'
24'	20'	4'-2	5'-2	1'-1		44	22'-0	4	4'-6	42	19'-0	2031	48 96		88	22'-0	78	4'-6	80	19'-0	4000	85 58		132	21'-3	111	4'-6	114	19'-0	5766	118 69	946	1658	24'
25'	21'	4'-3	5'-3	1'-1		46	22'-0	4	4'-9	42	20'-0	2097	51 03		92	22'-0	78	4'-9	80	20'-0	4127	89 05		138	21'-3	111	4'-9	114	20'-0	5930	123 64	976	1711	25'
26'	22'	4'-4	5'-4	1'-1		48	22'-0	4	4'-9	42	21'-0	2155	53 13		96	22'-0	78	4'-9	80	21'-0	4241	92 56		144	21'-3	111	4'-9	114	21'-0	6114	128 46	1003	1765	26
27'	23'	4'-5	5'-5	1'-1		50	22'-0	4	4'-9	42	22'-0	2214	55 28		100	22'-0	78	4'-9	80	22'-0	4355	96 13		150	21'-3	111	4'-9	114	22'-0	6278	133 35	1031	1818	27'
28'	24'	4'-6	5'-6	1'-2		52	22'-0	4	5'-0	42	23'-0	2279	57 51		104	22'-0	78	5'-0	80	23'-0	4483	99 81		156	21'-3	111	5'-0	114	23'-0	6461	138 36	1061	1872	28'
29'	25'	4'-7	5'-7	1'-2		54	22'-0	4	5'-0	42	24'-0	2338	59 74		108	22'-0	78	5'-0	80	24'-0	4597	103 50		162	21'-3	111	5'-0	114	24'-0	6625	143 41	1088	1925	29'
30'	26'	4'-8	5'-8	1'-2		56	22'-0	4	5'-0	42	25'-0	2396	62 01		112	22'-0	78	5'-0	80	25'-0	4711	107 25		168	21'-3	111	5'-0	114	25'-0	6789	148 53	1116	1979	30'
31'	27'	4'-9	5'-9	1'-2		58	22'-0	4	5'-3	42	26'-0	2462	64 31		116	22'-0	78	5'-3	80	26'-0	4839	111 05		174	21'-3	111	5'-3	114	26'-0	6973	153 73	1146	2032	31'
32'	28'	4'-10	5'-10	1'-2		60	22'-0	4	5'-3	42	27'-0	2520	66 67		120	22'-0	78	5'-3	80	27'-0	4953	114 92		180	21'-3	111	5'-3	114	27'-0	7137	159 01	1173	2086	32
33'	29'	4'-11	5'-11	1'-3		62	22'-0	4	5'-3	42	28'-0	2579	69 11		124	22'-0	78	5'-3	80	28'-0	5067	118 91		186	21'-3	111	5'-3	114	28'-0	7301	164 43	1201	2139	33'
34'	30'	5'-0	6'-0	1'-3		64	22'-0	4	5'-6	42	29'-0	2644	71 55		128	22'-0	78	5'-6	80	29'-0	5195	122 91		192	21'-3	111	5'-6	114	29'-0	7484	169 88	1231	2193	34'
35'	31'	5'-1	6'-1	1'-3		66	22'-0	4	5'-6	42	30'-0	2702	74 04		132	22'-0	78	5'-6	80	30'-0	5309	126 97		198	21'-3	111	5'-6	114	30'-0	7648	175 41	1258	2246	35'
36'	32'	5'-2	6'-2	1'-3		68	22'-0	4	5'-6	42	31'-0	2761	76 37		136	22'-0	78	5'-6	80	31'-0	5423	131 10		204	21'-3	111	5'-6	114	31'-0	7813	181 03	1286	2300	36'
37'	33'	5'-3	6'-3	1'-3		70	22'-0	4	5'-9	42	32'-0	2826	79 15		140	22'-0	78	5'-9	80	32'-0	5537	135 30		210	21'-3	111	5'-9	114	32'-0	7996	186 75	1316	2353	37'
38'	34'	5'-4	6'-4	1'-4		72	22'-0	4	5'-9	42	33'-0	2885	81 83		144	22'-0	78	5'-9	80	33'-0	5665	139 62		216	21'-3	111	5'-9	114	33'-0	8160	192 60	1343	2407	38'
39	35'	5'-5	6'-5	1'-4		74	22'-0	4	5'-9	42	34'-0	2943	84 51		148	22'-0	78	5'-9	80	34'-0	5779	143 96		222	21'-3	111	5'-9	114	34'-0	8324	198 50	1371	2460	39
40'	36'	5'-6	6'-6	1'-4		76	22'-0	4	6'-0	42	35'-0	3009	87 23		152	22'-0	78	6'-0	80	35'-0	5907	148 38		228	21'-3	111	6'-0	114	35'-0	8507	204 49	1401	2514	40'

For number of Bars T see Table below

TABLE FOR BARS T FOR ONE FIXED END

LENGTH L	NO
22'-0" TO 24'-0	8
24'-0" TO 27'-0	9
27'-0" TO 30'-0"	10
30'-0" TO 33'-0	11
33'-0" TO 36'-0	12
36'-0 TO 39'-0	13
39'-0 TO 42'-0"	14
42'-0 TO 45'-0"	15
45'-0 TO 48'-0"	16
48'-0" TO 51'-0"	17
51'-0 TO 54'-0	18
54'-0" TO 57'-0"	19
57'-0" TO 60'-0"	20

General Notes
Specifications Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works
Concrete shall be "A"
Reinforcing Steel: See Specifications
Forms and Finish: See Specifications
Rock Foundation: See Specifications

SPECIAL NOTES
Belt courses shall be spaced as shown They shall be formed by nailing triangular strips inside the forms The pouring of the concrete shall be stopped so that the construction joints between the successive lifts will be made on the apex of the bead as shown The bottom belt course shall be so located that the distance between it and the ground line or the LW elevation shall not exceed the spacing of the belt courses shown on the plan

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE
STANDARD

CONCRETE PIERS

DUMBELL TYPE
HEIGHTS 10' TO 40'
1937

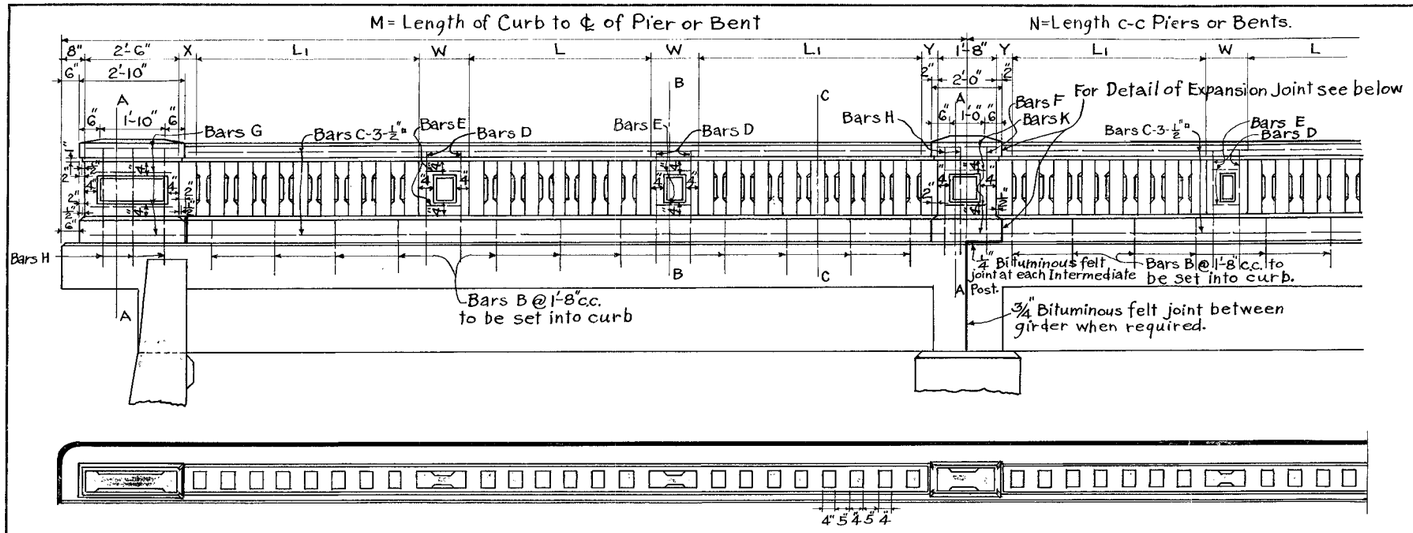
L W Baldwin

A-0-12

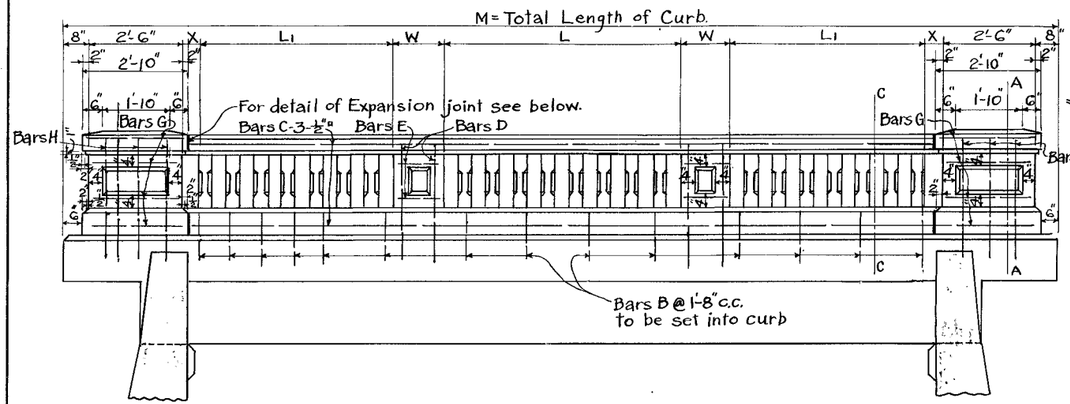
DESIGNED BY		DATE	
DRAWN BY		DATE	
RETRACED BY	R.E. Allen	DATE	6-12-82
CHECKED BY		DATE	

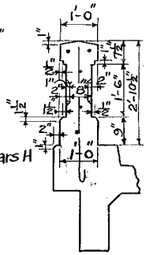
Rev 10/12/53 1"=10 2"=8
Revised 5/29/38 Concrete quantities for 25' Total Height L-22'0"
Revised 3-18-37

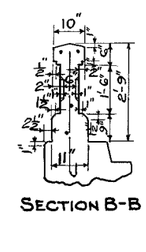
FED ROAD DIST NO	STATE	FED AID PROJ NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
8	TENN		19		

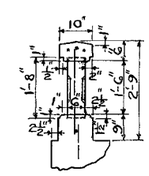


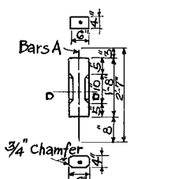
Detail of Rail for End Spans

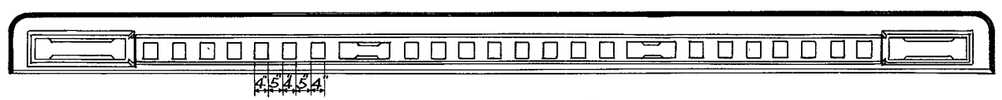




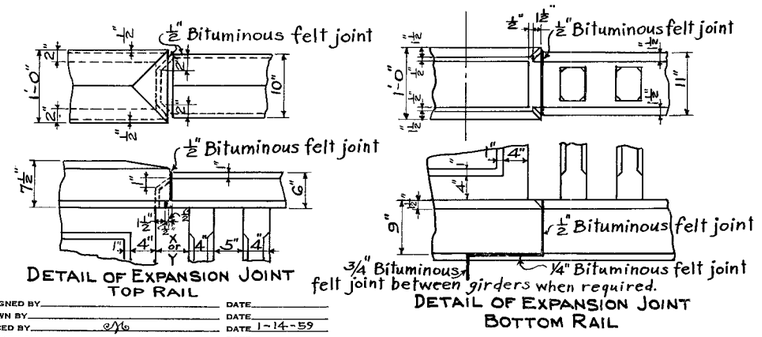








Detail of Single Span Structures



Detail of Expansion Joint Top Rail

Detail of Expansion Joint Bottom Rail

DESIGNED BY _____ DATE _____
DRAWN BY _____ DATE _____
RETRACED BY 2/16 DATE 1-14-59
CHECKED BY _____ DATE _____

50' & 60' Span added & Reinforcing Steel revised for new weights 7/3/31
Revised Special Note Added 2/6/29.

MICROFILMED

Table of Dimensions and Estimated Quantities for End Spans

Clear Span Feet	Dimensions M	X	Y	W	L1	L	Steel Reinforcement All Bars ½"a — Bars A No.	Bars A Length	Bars B No.	Bars B Length	Bars C No.	Bars C Length	Bars D No.	Bars D Length	Bars E No.	Bars E Length	Estimated Quant. Steel Lbs.*	Concrete Cu. Yds.*
12	16'-7"	5"	5"	1'-3"	2@5'-3"	—	28	2'-7"	16	2'-0"	6	12'-0"	4	4'-0"	4	1'-0"	168.8	1.620
14	18'-7"	5"	5"	1'-9"	2@6'-0"	—	32	2'-7"	16	2'-0"	6	14'-0"	4	4'-0"	4	1'-6"	189.8	1.886
16	20'-7"	5"	5"	1'-8"	2@3'-9"	1@4'-11"	32	2'-7"	18	2'-0"	6	16'-0"	8	4'-0"	8	1'-5"	221.8	2.152
18	22'-7"	5½"	5½"	1'-6"	2@4'-6"	1@5'-8"	38	2'-7"	20	2'-0"	6	18'-0"	8	4'-0"	8	1'-3"	247.7	2.419
20	24'-7"	5"	5"	1'-5"	2@5'-3"	1@6'-5"	44	2'-7"	24	2'-0"	6	20'-0"	8	4'-0"	8	1'-2"	277.7	2.685
22	26'-7"	5"	5"	1'-8"	2@6'-0"	1@6'-9"	48	2'-7"	24	2'-0"	6	22'-0"	8	4'-0"	8	1'-5"	298.6	2.951
24	28'-7"	5½"	5½"	1'-6"	2@6'-9"	1@7'-2"	54	2'-7"	30	2'-0"	6	24'-0"	8	4'-0"	8	1'-3"	331.3	3.217
26	30'-7"	5"	5"	1'-5"	2@7'-6"	1@7'-11"	60	2'-7"	30	2'-0"	6	26'-0"	8	4'-0"	8	1'-2"	354.4	3.483
28	32'-10"	4½"	4½"	1'-7"	2@6'-0"	2@5'-8"	60	2'-7"	32	2'-0"	6	28'-2"	12	4'-0"	12	1'-4"	388.5	3.782
30	34'-10"	4½"	4½"	1'-9"	2@6'-0"	2@6'-5"	64	2'-7"	32	2'-0"	6	30'-2"	12	4'-0"	12	1'-6"	409.4	4.048
32	36'-10"	4½"	4½"	1'-5"	2@6'-9"	2@7'-2"	72	2'-7"	40	2'-0"	12	17'-0"	12	4'-0"	12	1'-2"	457.3	4.314
34	38'-10"	4½"	4½"	1'-7"	2@7'-6"	2@7'-2"	76	2'-7"	40	2'-0"	12	18'-0"	12	4'-0"	12	1'-4"	478.1	4.581
36	40'-10"	4½"	4½"	1'-9"	2@7'-6"	2@7'-11"	80	2'-7"	40	2'-0"	12	19'-0"	12	4'-0"	12	1'-6"	499.1	4.847
38	42'-10"	5½"	5½"	1'-8"	2@6'-0"	3@6'-5"	80	2'-7"	40	2'-0"	12	20'-0"	16	4'-0"	16	1'-5"	527.3	5.113
40	44'-10"	4"	4"	1'-8"	2@6'-0"	3@7'-2"	86	2'-7"	40	2'-0"	12	21'-0"	16	4'-0"	16	1'-5"	560.6	5.379
50	54'-10"	4½"	4½"	1'-7"	2@6'-9"	4@7'-2"	108	2'-7"	48	2'-0"	12	26'-0"	20	4'-0"	20	1'-4"	682.6	6.722
60	64'-10"	4½"	4½"	1'-5"	2@6'-0"	5@7'-11"	132	2'-7"	66	2'-0"	12	31'-0"	24	4'-0"	24	1'-2"	833.3	8.053

Table of Dimensions and Estimated Quantities for Intermediate Spans

Clear Span Feet	Dimensions N	Y	W	L1	L	Steel Reinforcement All Bars ½"a — Bars A No.	Bars A Length	Bars B No.	Bars B Length	Bars C No.	Bars C Length	Bars D No.	Bars D Length	Bars E No.	Bars E Length	Estimated Quantities Steel Lbs.*	Concrete Cu. Yds.*
12	14'-6"	5"	1'-6"	2@5'-3"	—	28	2'-7"	16	2'-0"	6	12'-2"	4	4'-0"	4	1'-3"	170.5	1.653
14	16'-6"	5"	2'-0"	2@6'-0"	—	32	2'-7"	16	2'-0"	6	14'-2"	4	4'-0"	4	1'-9"	191.5	1.920
16	18'-6"	5"	1'-5"	2@4'-6"	1@4'-2"	34	2'-7"	18	2'-0"	6	16'-2"	8	4'-0"	8	1'-2"	225.4	2.185
18	20'-6"	5"	1'-8"	2@4'-6"	1@5'-8"	38	2'-7"	20	2'-0"	6	18'-2"	8	4'-0"	8	1'-5"	249.8	2.451
20	22'-6"	5½"	1'-6"	2@5'-3"	1@6'-5"	44	2'-7"	24	2'-0"	6	20'-2"	8	4'-0"	8	1'-3"	279.1	2.717
22	24'-6"	5"	1'-5"	2@6'-0"	1@7'-2"	50	2'-7"	26	2'-0"	6	22'-2"	8	4'-0"	8	1'-2"	305.6	2.983
24	26'-6"	5"	1'-8"	2@6'-9"	1@7'-2"	54	2'-7"	30	2'-0"	6	24'-2"	8	4'-0"	8	1'-5"	333.4	3.250
26	28'-6"	5½"	1'-6"	2@7'-6"	1@7'-11"	60	2'-7"	30	2'-0"	6	26'-2"	8	4'-0"	8	1'-3"	355.8	3.516
28	31'-0"	4½"	1'-9"	2@6'-0"	2@5'-8"	60	2'-7"	32	2'-0"	6	28'-8"	12	4'-0"	12	1'-6"	392.8	3.849
30	33'-0"	4½"	1'-11"	2@6'-0"	2@6'-5"	64	2'-7"	32	2'-0"	6	30'-8"	12	4'-0"	12	1'-8"	413.8	4.115
32	35'-0"	4½"	1'-7"	2@6'-9"	2@7'-2"	72	2'-7"	40	2'-0"	12	17'-2"	12	4'-0"	12	1'-4"	460.7	4.381
34	37'-0"	4½"	1'-9"	2@7'-6"	2@7'-2"	76	2'-7"	40	2'-0"	12	18'-2"	12	4'-0"	12	1'-6"	481.7	4.647
36	39'-0"	4½"	1'-11"	2@7'-6"	2@7'-11"	80	2'-7"	40	2'-0"	12	19'-2"	12	4'-0"	12	1'-8"	502.6	4.914
38	41'-0"	4½"	1'-10"	2@6'-0"	3@6'-5"	80	2'-7"	40	2'-0"	12	20'-2"	16	4'-0"	16	1'-7"	531.2	5.180
40	43'-0"	5"	1'-9"	2@6'-0"	3@7'-2"	86	2'-7"	46	2'-0"	12	21'-2"	16	4'-0"	16	1'-6"	564.0	5.446
50	53'-0"	5"	1'-8"	2@6'-9"	4@7'-2"	108	2'-7"	48	2'-0"	12	26'-2"	20	4'-0"	20	1'-5"	684.3	6.788
60	63'-0"	4½"	1'-6"	2@6'-0"	5@7'-11"	132	2'-7"	66	2'-0"	12	31'-2"	24	4'-0"	24	1'-3"	836.7	8.119

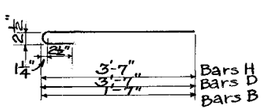
Table of Dimensions and Estimated Quantities for Rail on Single Span Structures

Clear Span Feet	Dimensions M	X	W	L1	L	Steel Reinforcement All Bars ½"a — Bars A No.	Bars A Length	Bars B No.	Bars B Length	Bars C No.	Bars C Length	Bars D No.	Bars D Length	Bars E No.	Bars E Length	Estimated Quant. Steel Lbs.*	Concrete Cu. Yds.*
12	18'-8"	5"	1'-0"	2@5'-3"	—	28	2'-7"	16	2'-0"	6	11'-8"	4	4'-0"	4	0'-9"	166.2	1.587
14	20'-8"	5"	1'-6"	2@6'-0"	—	32	2'-7"	16	2'-0"	6	13'-8"	4	4'-4"	4	1'-3"	187.1	1.853
16	22'-8"	5½"	1'-6"	2@3'-9"	1@4'-11"	32	2'-7"	18	2'-0"	6	15'-8"	8	4'-0"	8	1'-3"	218.9	2.119
18	24'-8"	5"	1'-5"	2@4'-6"	1@5'-8"	38	2'-7"	20	2'-0"	6	17'-8"	8	4'-0"	8	1'-2"	245.4	2.385
20	26'-8"	5½"	1'-3"	2@5'-3"	1@6'-5"	44	2'-7"	24	2'-0"	6	19'-8"	8	4'-0"	8	1'-0"	274.8	2.651
22	28'-8"	5½"	1'-6"	2@6'-0"	1@6'-5"	48	2'-7"	24	2'-0"	6	21-8	8	4'-0"	8	1'-3"	295.7	2.918
24	30'-8"	5"	1'-5"	2@6'-9"	1@7'-2"	54	2'-7"	30	2'-0"	6	23'-8"	8	4'-0"	8	1'-2"	329.1	3.184
26	32'-8"	5½"	1'-3"	2@7'-6"	1@7'-11"	60	2'-7"	30	2'-0"	6	25'-8"	8	4'-0"	8	1'-0"	351.6	3.450
28	34'-8"	4½"	1'-5"	2@6'-0"	2@5'-8"	60	2'-7"	32	2'-0"	6	27'-8"	12	4'-0"	12	1'-2"	384.2	3.716
30	36'-8"	4½"	1'-7"	2@6'0"	2@6'-5"	64	2'-7"	32	2'-0"	6	29'-8"	12	4'-0"	12	1'-4"	405.1	3.982
32	38'-8"	4½"	1'-3"	2@6'-9"	2@7'2"	72	2'-7"	40	2'-0"	12	16'-8"	12	4'-0"	12	1'-0"	452.1	4.243
34	40'-8"	4½"	1'-5"	2@7'-6"	2@7'2"	76	2'-7"	40	2'-0"	12	17'-8"	12	4'-0"	12	1'-2"	473.1	4.515
36	42'-8"	4½"	1'-7"	2@7'-6"	2@7'-11"	80	2'-7"	40	2'-0"	12	18'-8"	12	4'-0"	12	1'-4"	493.9	4.780
38	44'-8"	4½"	1'-7"	2@6'-0"	3@6'-5"	80	2'-7"	40	2'-0"	12	19'-8"	16	4'-0"	16	1'-4"	522.6	5.046
40	46'-8"	5"	1'-6"	2@6'-0"	3@7'-2"	86	2'-7"	46	2'-0"	12	20'-8"	16	4'-0"	16	1'-3"	555.4	5.312
50	56'-8"	4"	1'-6"	2@6'-9"	4@7'2	108	2'-7"	48	2'-0"	12	25'-8"	20	4'-0"	20	1'-3"	677.7	6.655
60	66'-8"	4½"	1'-4"	2@6'-0"	5@7'-11"	132	2'-7"	66	2'-0"	12	30'-8"	24	4'-0"	24	1'-1"	828.2	7.986

* See also quantities for rail posts.

Bill of Steel and Estimated Quantities for Two Rail Posts as Listed

Description	Mark	No.	Size	Length	Steel Lbs.	Concrete Cu. Yds.
Post at End of Span	G	10	½"a	2'-3"	39.5	.45
	H	6	½"a	4'-0"		
Intermediate Posts.	F	2	½"a	2'-6"	29.9	.32
	H	4	½"a	4'-0"		
	K	10	½"a	1'-5"		



General Notes:

Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be Class "S"
Reinforcing Steel: See Specifications.
Forms and Finish: See Specifications.

Spindles shall be precast in steel forms & shall not be handled for seven days after they have been poured. Top surfaces of spindles, as they lie in their molds, when cast in a horizontal position, shall be carefully floated to a true plane before the concrete obtains its permanent set.

SPECIAL NOTE:
Handrail to be built as detailed, no chamfer shall be used unless specifically shown.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD CONCRETE HANDRAIL

SPINDLE TYPE
FOR
SLAB AND GIRDER BRIDGES
1925

CORRECT Fred Green
BRIDGE ENGINEER
APPROVED C.A.D. Long
STATE HIGHWAY ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Robert Jowers

Digitally signed by Robert Jowers
Date: 2025.02.20 15:53:33 -06'00'

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED. THE SIGNATURE MUST BE VERIFIED ON THE ELECTRONIC DOCUMENTS.

TENNESSEE DEPARTMENT OF TRANSPORTATION
MATERIALS & TESTS DIVISION- GEOTECHNICAL ENGINEERING SECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243
ROBERT JOWERS, P.E. NO. 103066

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

SHEET NAME	SHEET NO.
SIGNATURE SHEET	GEOTECH-SIGN1
GEOTECHNICAL PLANS	G-1 to G-3

YEAR	PROJECT NO.	SHEET NO.
2025	18004-3227-04	GEOTECH-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

$$$$SYTIME$$$$$$$$
$$$$DGNSPEC$$$$$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	G-1

GEOTECHNICAL INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEET	GEOTECH-SIGN1
GEOTECHNICAL INDEX	G-1
GEOTECHNICAL NOTES	G-2
GEOTECHNICAL TYPICAL SECTIONS	G-3

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL INDEX

$$$$SYTIME$$$$$$$$
$$$$DGNSPEC$$$$$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	G-2

DEFINITION OF EARTHWORK TERMS

THE TERMS AND DEFINITIONS BELOW SHALL CHARACTERIZE THE MATERIAL TYPE THAT WILL BE ENCOUNTERED DURING EXCAVATION AND GRADING. SEE TYPE MATERIAL REFERENCE IN TYPICAL SECTIONS LEGEND.

A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, WATER OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT END EXCAVATORS/LOADERS.

B. SOLID ROCK MATERIAL

SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E. BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE-SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCK CUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE A PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP, OR OTHER ROCK AGGREGATE CONSTRUCTION PRODUCTS.

C. SOFT ROCK OR DEGRADABLE ROCK

THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH MODERATE TO HEAVY CRUSHING FORCES. FOR CONSTRUCTION PURPOSES THIS MATERIAL WOULD HAVE TO BE SUBJECTED TO RIPPING TYPE EQUIPMENT, HOE RAMS, OR RUGGED USE OF A LARGE BULLDOZER IN ORDER TO SEPARATE THE MATERIAL SUCH THAT IT CAN BE READILY LOADED INTO EARTH MOVING TRUCKS. THESE MATERIALS WOULD TYPICALLY BE SHALES, CLAYSTONES, SILTSTONES, WEATHERED SANDSTONES, WEATHERED SCHIST AND WEATHERED GNEISS.

D. TRANSITIONAL MATERIALS

THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C) OCCURRING IN EITHER NON-UNIFORM INTERBEDDED LAYERS OF THE ABOVE MATERIALS (I.E. SHALE MATERIAL WITH RELATIVELY THIN LAYERS OF SOLID ROCK SUCH AS HARD LIMESTONE) OR ERRATIC LOCALIZED CHANGES OF MATERIAL TYPES BOTH LATERALLY AND WITH DEPTH (SUCH AS A GEOLOGIC FORMATION RESULTING IN PINNACLED ROCK COLUMNS, FLOATING BOULDERS OR LENSES INTERCALATED WITH CLAY SOIL, A COMMON OCCURRENCE IN CERTAIN REGIONS OF TENNESSEE). FOR CONSTRUCTION PURPOSES, THIS MATERIAL MAY HAVE TO BE EXCAVATED USING A COMBINATION OF EXCAVATION METHODS SUCH AS BLASTING OF ROCK PINNACLES, LAYERS OR BOULDERS ALONG WITH A RIPPING OF WEATHERED ROCK AND EXCAVATING OF SOIL WITH TRACK HOES OR LOADERS ALL WITHIN A LOCALIZED AREA. THIS MATERIAL WOULD NOT BE SUITABLE FOR THE USE OF EXCAVATING PAN TYPE EQUIPMENT.

SEALED BY

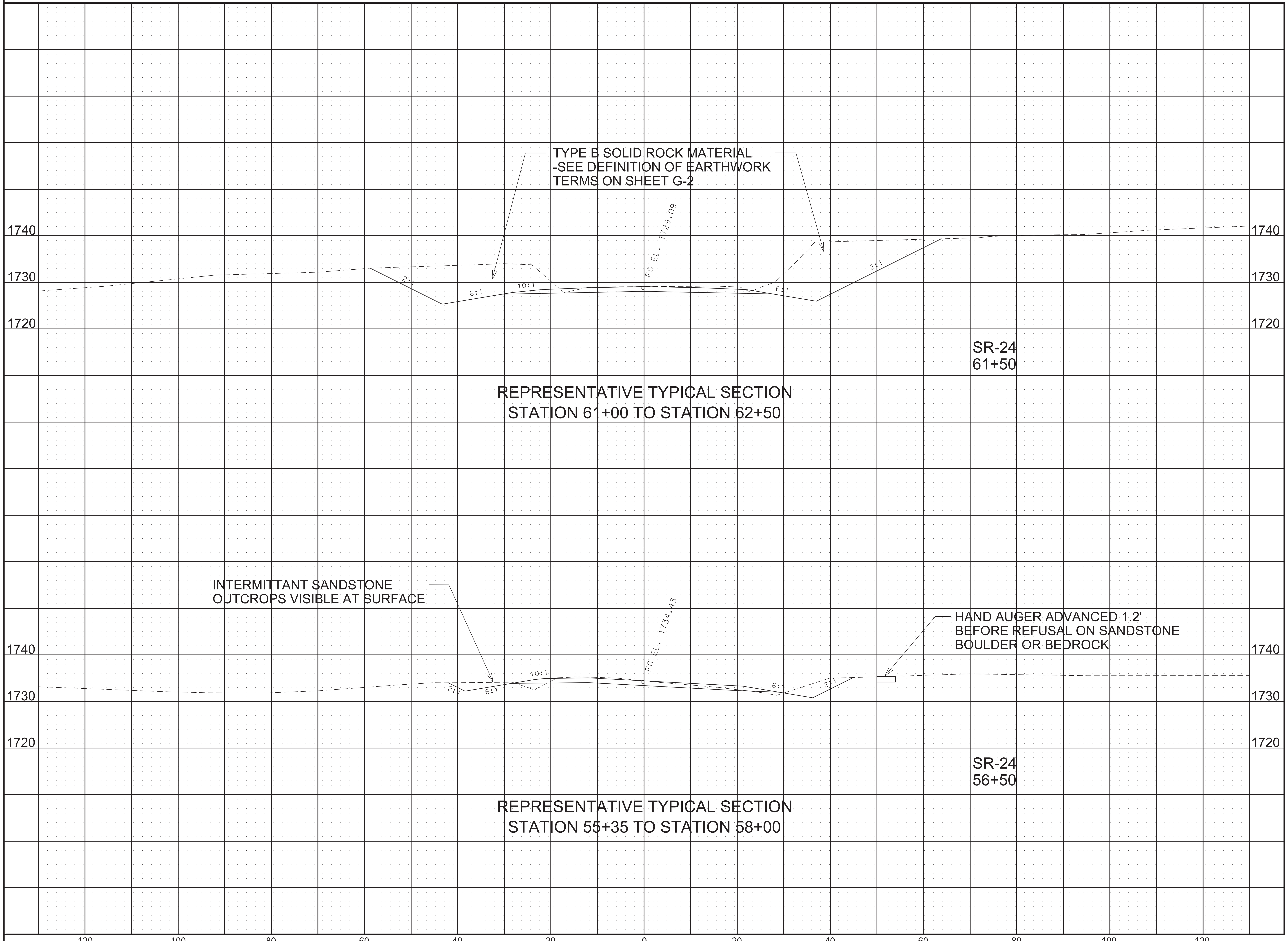
ROBERT JOWERS
REGISTERED ENGINEER
AGRICULTURE
CONTAINERCE
100 - 1020
STATE OF TENNESSEE
2025-02-20

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL NOTES

$$$$SYTIME$$$$$$$
$$$DGNSPEC$$$$$$$

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	G-3



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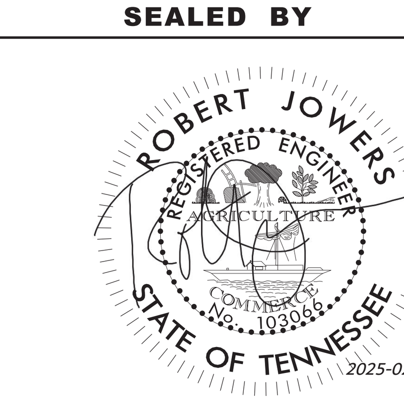

COORDINATES ARE NAD 83( ), ARE DATUM ADJUSTED BY THE FACTOR OF . AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID .

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL TYPICAL SECTIONS

$$$$SYTIME$$$$$$
$$$$DGNSPEC$$$

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	S-1
PS&E	2025	18004-3227-04	S-1

SWPPP INDEX OF SHEETS

DESCRIPTION	SHT.
1. SWPPP REQUIREMENTS (5.0.)	1
2. SITE DESCRIPTION (5.5.1.)	1
3. ORDER OF CONSTRUCTION ACTIVITIES (5.5.1.a)	1
4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION	1-2
5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (5.5.3.)	2-3
6. FLOCCULANTS (3.5.3.1.b)	3
7. UTILITY RELOCATION	3-4
8. MAINTENANCE AND INSPECTION	4
9. SITE ASSESSMENTS (5.5.3.8.)	4
10. STORMWATER MANAGEMENT (5.5.3.11.h)	4-5
11. NON-STORMWATER DISCHARGES (5.5.3.12.)	5
12. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (5.5.3.7.c, 6.1)	5-6
13. RECORD-KEEPING	5-7
14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.)	6
15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)	7
16. ENVIRONMENTAL PERMITS (1.5.2.)	7
17. OUTFALL TABLE (5.5.1.c, 6.4.1.e, 6.4.1.f)	8

NOTE: CITATIONS IN PARENTHESIS INDICATE SECTIONS OF THE CURRENT CGP.

1. SWPPP REQUIREMENTS (5.0.)

1.1. HAS THE SWPPP TEMPLATE BEEN PREPARED BY AN INDIVIDUAL THAT HAS THE FOLLOWING LICENSING AND/OR CERTIFICATIONS (5.2)?

☒ YES (CHECK ALL THAT APPLY BELOW) OR ☐ NO

- ☐ CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC)
- ☐ A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT
- ☒ HAS SUCCESSFULLY COMPLETED TDEC LEVEL II COURSE

1.2. DO THE EPSC PLANS INVOLVE STRUCTURAL DESIGN, HYDRAULIC, HYDROLOGIC OR OTHER ENGINEERING CALCULATIONS FOR EPSC STRUCTURAL MEASURES (E.G. SEDIMENT BASINS) (5.2.)? YES ☐ NO ☒

IF YES, HAVE THE EPSC PLANS BEEN PREPARED, STAMPED AND CERTIFIED BY A TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT? ☐ YES ☒ NO

1.3. DO THE PROJECT STORMWATER OUTFALLS DISCHARGE INTO THE FOLLOWING (6.4.1.)? ☐ YES (CHECK ALL THAT APPLY BELOW) ☒ NO

- ☐ WATERS WITH UNAVAILABLE PARAMETERS (303d FOR SILTATION)
- ☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

2. SITE DESCRIPTION (5.5.1.)

2.1. PROJECT LIMITS (5.5.1.f): REFER TO TITLE SHEET

2.2. TOTAL PROJECT AREA (5.5.1.b): 3.613 ACRES

2.3. TOTAL AREA TO BE DISTURBED (5.5.1.b): 3.016 ACRES

2.4. PROJECT DESCRIPTION (5.5.1.a):

TITLE: S.R. 24 (70 N) Bridge over Obed River L.M. 15.37 In Crossville (IA)
COUNTY: Cumberland
PIN: 124053.00

2.5. SITE MAP(S) (3.2.2.): REFER TO TITLE SHEET

2.6. DESCRIPTION OF EXISTING SITE TOPOGRAPHY (5.5.1.c): REFER TO EXISTING CONTOURS SHEET(S) 11, DRAINAGE MAP SHEET(S) 7, USGS QUAD MAP, AND THE OUTFALL TABLE IN SECTION 4.2.

2.7. MAJOR SOIL DISTURBING ACTIVITIES (5.5.1.a) (CHECK ALL THAT APPLY):

- ☒ CLEARING AND GRUBBING
- ☒ EXCAVATION
- ☒ CUTTING AND FILLING
- ☒ FINAL GRADING AND SHAPING
- ☒ UTILITIES
- ☐ OTHER (DESCRIBE): _____

2.8. NO MORE THAN 50 ACRES OF ACTIVE SOIL DISTURBANCE IS ALLOWED AT ANY TIME DURING THE CONSTRUCTION OF THE PROJECT.

2.9. ARE THERE ANY SEASONAL LIMITATIONS ON WORK? ☐ YES ☒ NO

IF YES, LIST THE CORRESPONDING PLAN SHEET: NA

2.10. WAS ROW FINALIZED PRIOR TO FEBRUARY 1, 2010 (4.1.2.2)?

☐ YES _____ (DATE) ☒ NO

IF ROW WAS FINALIZED PRIOR TO FEBRUARY 1, 2010, THIS PROJECT IS CONSIDERED A PRE-APPROVED SITE (4.1.2.2)

2.11. SOIL PROPERTIES (5.5.1.d, 5.5.3.3.d, 5.5.3.6.b).

SOIL PROPERTIES FOR THE PRIMARY SOILS ARE LISTED IN THE TABLE BELOW.

SOIL PROPERTIES			
PRIMARY SOIL NAME	HSG	% OF SITE	ERODIBILITY (k value)
Ramsey loam, 5 to 12 percent slopes	D	43.7	.37
Ramsey loam, 12 to 20 percent slopes	D	32.3	.37
Ramsey-Rock outcrop complex, 20 to 50 percent slopes	D	24	.43

2.12. IS ACID PRODUCING ROCK (APR) (i.e. PYRITE) LOCATED WITHIN THE PROJECT LIMITS? ☐ YES ☒ NO

2.12.1. IF YES TO SECTION 2.13, HAVE APR LOCATIONS BEEN IDENTIFIED WITHIN THE CONSTRUCTION PLANS AND/OR THE GEOTECHNICAL REPORT? ☐ YES ☒ NO; AND

2.12.2. IF YES TO SECTION 2.12.1, HAS A SPECIAL HANDLING PLAN AND/OR ADAPTIVE MANAGEMENT PLAN (AMP) BEEN PREPARED FOR THE PROJECT? ☐YES ☐ NO ☒ N/A (TDOT SP107L WILL BE APPLIED.)

2.13. PROJECT RUNOFF COEFFICIENTS AND AREA PERCENTAGES (5.5.3.6.a).

RUNOFF COEFFICIENTS FOR EXISTING CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	0.65	19.7	98	0.9
PERVIOUS	2.7	80.3	85	0.6
WEIGHTED CURVE NUMBER OR C-FACTOR =			87	0.64

RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS				
AREA TYPE	AREA(AC)	PERCENTAGE OF TOTAL AREA (%)	RUNOFF CN	C FACTOR
IMPERVIOUS	0.65	19.7	98	0.9
PERVIOUS	2.7	80.3	85	0.6
WEIGHTED CURVE NUMBER OR C-FACTOR =			87	0.65

3. ORDER OF CONSTRUCTION ACTIVITIES (5.5.1.a)

CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO: MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION. NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF THEIR OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE ENGINEER. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE ORDER OF CONSTRUCTION ACTIVITIES AND THE BASIC EPSC DEVICES DEPICTED ON THE EPSC PLAN CONTAINED WITHIN THE APPROVED SWPPP.

3.1. SPECIAL SEQUENCING REQUIREMENTS (SEE SHEETS NA)

3.2. INSTALL STABILIZED CONSTRUCTION EXITS.

3.3. INSTALL PERIMETER PROTECTION WHERE RUNOFF SHEET FLOWS FROM THE SITE.

3.4. INSTALL INITIAL EPSC MEASURES BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.

3.5. PERFORM CLEARING AND GRUBBING (NOT MORE THAN TWO WEEKS PRIOR TO GRADING OR EARTH-MOVING. REFER TO THE STABILIZATION PRACTICES BELOW.).

3.6. REMOVE AND STORE TOPSOIL.

3.7. STABILIZE DISTURBED AREAS WITHIN 2 WEEKS OF COMPLETING ANY STAGE AND/OR PHASE OF ACTIVITY (STEEP SLOPES SHALL BE STABILIZED WITHIN 1 WEEK AFTER CONSTRUCTION ACTIVITY HAS TEMPORARY OR PERMANENTLY CEASED).

3.8. INSTALL UTILITIES, STORM SEWERS, CULVERTS AND BRIDGE STRUCTURES.

3.9. INSTALL INLET AND CULVERT PROTECTION ONCE STRUCTURES ARE IN PLACE AND CAPABLE OF INTERCEPTING FLOW.

3.10. PERFORM FINAL GRADING AND INSTALL BASE STONE.

3.11. COMPLETE FINAL PAVING AND SEALING OF CONCRETE.

3.12. INSTALL TRAFFIC CONTROL AND PROTECTION DEVICES.

3.13. COMPLETE PERMANENT STABILIZATION (TOPSOIL, SEEDING, MULCH, EROSION CONTROL BLANKET, SOD, ETC.)

3.14. REMOVE TEMPORARY EROSION CONTROLS AND ACCUMULATED SEDIMENT FROM AREAS THAT HAVE ESTABLISHED AT LEAST 70 PERCENT UNIFORM PERMANENT VEGETATIVE COVER.

3.15. RE-STABILIZE AREAS DISTURBED BY REMOVAL ACTIVITIES.

4. STREAM, OUTFALL, WETLAND, TMDL AND ECOLOGY INFORMATION

4.1. STREAM INFORMATION (5.5.1.h, 5.5.1.i)

4.1.1. WILL CONSTRUCTION AND/OR EROSION PREVENTION AND SEDIMENT CONTROLS IMPACT ANY STREAMS WITHIN THE PROJECT LIMITS? ☒ YES ☐ NO

IF YES, THE IMPACT(S) HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE WATER QUALITY PERMITS.

4.1.2. HAVE ANY OF THE RECEIVING STATE WATERS LESS THAN OR EQUAL TO 1 FLOW MILE DOWN GRADIENT OF THE PROJECT LIMITS BEEN CLASSIFIED BY TDEC AS FOLLOWS (CHECK ALL THAT APPLY):

- ☐ 303d WITH UNAVAILABLE PARAMETERS FOR SILTATION
- ☐ EXCEPTIONAL TENNESSEE WATERS (ETW)

4.1.3. RECEIVING WATERS OF THE STATE (5.5.1.h, 5.5.1.j, 5.5.1.k).

RECEIVING WATERS OF THE STATE INFORMATION					
TDOT STATE WATER LABEL FROM EBR	NAME OF RECEIVING STATE WATER	303d WITH UNAVAILABLE PARAMETERS FOR SILTATION (YES OR NO)	ETW (YES OR NO)	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
STR-1 (Obed River)	Emory River	NO	NO	YES	YES
STR-2	Obed River	NO	NO	YES	YES
STR-3	Obed River	NO	NO	YES	YES

4.1.4. RECEIVING WATERS OF THE US (NON STATE WATERS) (4.1.2). LIST ANY FEATURE THAT IS IDENTIFIED AS A WET WEATHER CONVEYANCE (TDEC) AND IDENTIFIED AS WATERS OF THE US BY THE ARMY CORPS OF ENGINEERS.

WET WEATHER CONVEYANCES THAT ARE WATERS OF THE US		
TDOT STATE WATER LABEL FROM EBR	LOCATED WITHIN PROJECT LIMITS (YES OR NO)	LOCATED WITHIN ≤ 1 FLOW MILE DOWN GRADIENT OF PROJECT LIMITS (YES OR NO)
NA	NA	NA

4.1.5. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES REQUIRED FOR WATERS OF THE STATE? (5.5.1.l, 6.4.2.)

☐ YES ☒ NO

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	S-1
PS&E	2025	18004-3227-04	S-2

BUFFER ZONE REQUIREMENTS ARE NOT REQUIRED FOR PRE-APPROVED SITES (4.1.2.2.)

IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) _____.

IF YES, CHECK THE APPROPRIATE BOX BELOW FOR SIZE OF BUFFER.

☐ 60-FEET FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (ETW) (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 30-FEET).

A 60 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE 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. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 30-FEET FOR ALL OTHER STREAMS (AVERAGE WIDTH PER SIDE WITH A MINIMUM OF 15-FEET).

A 30 FOOT NATURAL WATER QUALITY RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STATE 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. IF THE CONSTRUCTION SITE ENCOMPASSES BOTH SIDES OF A STREAM, BUFFER AVERAGING CAN BE APPLIED TO BOTH SIDES, BUT MUST BE APPLIED INDEPENDENTLY.

☐ 15-FEET FOR ANY WET WEATHER CONVEYANCES IDENTIFIED AS WATERS OF THE US BY THE US ARMY CORPS OF ENGINEERS.

4.1.6. ARE THERE ANY WATER QUALITY RIPARIAN BUFFER ZONES NOT REQUIRED FOR STATE WATERS DUE TO A TDEC ARAP? (1.5.2.)
☒ YES ☐ NO

4.1.7. ARE THERE WATER QUALITY RIPARIAN BUFFER ZONE EXEMPTIONS? (4.1.2.1.) ☒ YES ☐ NO
IF YES, EXISTING CONDITIONS DESCRIPTION: existing roadways and utility lines

4.1.8. EVERY ATTEMPT SHOULD BE MADE FOR CONSTRUCTION ACTIVITIES TO NOT TAKE PLACE WITHIN THE WATER QUALITY RIPARIAN BUFFER ZONE AND FOR EXISTING FORESTED AREAS TO BE PRESERVED. (4.1.2., 6.4.2.)

4.1.9. BECAUSE OF HEAVY SEDIMENT LOAD ASSOCIATED WITH CONSTRUCTION SITE RUNOFF, WATER QUALITY RIPARIAN BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND SHOULD NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE WATER QUALITY RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA.

4.1.10. WHERE IT IS NOT PRACTICABLE TO MAINTAIN A FULL WATER QUALITY RIPARIAN BUFFER, BEST MANAGEMENT PRACTICES (BMPS) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MUST BE USED. A JUSTIFICATION FOR USE AND DESIGN EQUIVALENCY SHALL BE DOCUMENTED WITHIN THE SWPPP. THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS SHALL REVIEW AND APPROVE THIS REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE SITE PROCEEDS, UNLESS PREVIOUSLY EXEMPT IN THE NPDES CGP. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

4.2. OUTFALL INFORMATION

4.2.1. OUTFALL TABLE (5.5.1.c). SEE SWPPP SHEET S-8 FOR OUTFALL INFORMATION.

4.2.2. HAVE ALL OUTFALLS BEEN LABELED ON THE EPSC PLAN SHEETS (5.5.1.f)? ☒ YES ☐ NO

4.2.3. HAVE ALL OUTFALLS BEEN LABELED ON A USGS TOPOGRAPHIC MAP INCLUDED IN THE "DOCUMENTATION AND PERMITS" BINDER (3.2.2.)? ☒YES ☐ NO

4.2.4. WHERE POSSIBLE, HAS NON-PROJECT RUN-ON BEEN DIVERTED AROUND OR THROUGH THE PROJECT TO ELIMINATE CONTACT WITH DISTURBED AREAS OF THE PROJECT AND SEPARATE IT FROM PROJECT RUN-OFF THEREBY REDUCING THE DRAINAGE AREA OF TO THE OUTFALLS IN THIS AREA?
☒ YES ☐ NO ☐ N/A

4.2.5. ARE EQUIVALENT MEASURES BEING SUBSTITUTED FOR A SEDIMENT BASIN(S) OR SEDIMENT TRAP(S)? (5.5.3.5.)
☐ YES ☒ NO ☐ N/A

4.2.6. A SEDIMENT BASIN, OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF TEN ACRES OR MORE FOR AN OUTFALL(S) THAT DOES NOT DISCHARGE TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS (ETW). A TEMPORARY (OR PERMANENT) SEDIMENT BASIN OR EQUIVALENT CONTROL MEASURES THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A MINIMUM 2-YEAR/ 24-HOUR STORM EVENT, SHALL BE PROVIDED UNTIL PERMANENT STABILIZATION OF THE SITE. (5.5.3.5)

OR

OF FIVE ACRES OR MORE FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS OR EXCEPTIONAL TENNESSEE WATERS (ETW). A TEMPORARY (OR PERMANENT) SEDIMENT BASIN THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/ 24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL PERMANENT STABILIZATION OF THE SITE. (6.4.1.e).

ALL CALCULATIONS RELATED TO DRAINAGE AREAS, RUNOFF COEFFICIENTS, BASIN VOLUMES AND EQUIVALENT CONTROL MEASURES MUST BE PROVIDED IN THE SWPPP (5.5.3.5.)

4.2.7. A SEDIMENT TRAP, OR EQUIVALENT MEASURE(S) WILL BE PROVIDED FOR ANY OUTFALL IN A DRAINAGE AREA:

OF 3.5 - 4.9 ACRES FOR AN OUTFALL(S) THAT DISCHARGES TO A STATE STREAM WITH UNAVAILABLE PARAMETERS (303d SILTATION) OR EXCEPTIONAL TENNESSEE WATERS (ETW). A SEDIMENT TRAP THAT PROVIDES STORAGE FOR A CALCULATED VOLUME OF RUNOFF FROM A 5-YEAR/24-HOUR STORM EVENT AND RUNOFF FROM EACH ACRE DRAINED, OR EQUIVALENT CONTROL MEASURES, SHALL BE PROVIDED UNTIL PERMANENT STABILIZATION OF THE SITE. (6.4.1.f).

IN BOTH INSTANCES, THE ENVIRONMENTAL AND ROADWAY DESIGN DIVISIONS MAY BE CONTACTED TO REVIEW AND CONCUR WITH ANY REVISION OF THE SWPPP BEFORE DISTURBANCE OF THE OUTFALL PROCEEDS.

4.2.8. SEDIMENT STRUCTURES TREATING DRAINAGE AREAS IN EXCESS OF 25 ACRES REQUIRE A SITE-SPECIFIC DESIGN THAT ACCURATELY DEFINES THE SITE HYDROLOGY, SITE-SPECIFIC SEDIMENT LOADING, HYDRAULICS OF THE SITE, AND ADHERES TO ALL TENNESSEE EROSION AND SEDIMENT CONTROL HANDBOOK DESIGN RECOMMENDATIONS FOR SEDIMENT BASINS. (5.5.3.5.)

4.3. WETLAND INFORMATION

WILL CONSTRUCTION AND/OR EROSION AND SEDIMENT CONTROLS IMPACT ANY WETLANDS? ☐ YES ☒ NO

IF YES, THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND IN THE WATER QUALITY PERMITS.

WETLAND INFORMATION				
TDOT WETLAND LABEL	FROM STATION LT OR RT	TO STATION LT OR RT	TEMPORARY IMPACTS (AC)	PERMANENT IMPACTS (AC)
WTL-1	NA	NA	NA	NA

4.4. TOTAL MAXIMUM DAILY LOADS (TMDL) INFORMATION (1.3.j)

4.4.1. IS THIS PROJECT LOCATED IN A HUC-8 WATERSHED THAT MAINTAINS AN EPA APPROVED TMDL FOR SILTATION AND HABITAT ALTERATION?
☒YES ☐ NO

4.4.2. IF YES, IS THIS PROJECT LOCATED WITHIN A HUC-12 SUBWATERSHED WITH A WASTE LOAD ALLOCATION (WLA)?
☐ YES ☒ NO

4.4.3. IF YES, DOES THE PROJECT HAVE A DIRECT DISCHARGE TO A 303(d) LISTED STREAM FOR SILTATION?
☐ YES ☒ NO

IF YES, SWPPP INCORPORATES MEASURES OR CONTROLS CONSISTENT WITH THE ASSUMPTIONS AND REQUIREMENTS OF THE TMDL.

4.5. ECOLOGY INFORMATION (3.5.5.e)

DOES THE TDOT ENVIRONMENTAL BOUNDARIES REPORT SPECIFY SPECIAL NOTES TO BE ADDED TO THE PLAN SHEETS?
☐ YES ☒ NO
IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) NA.

4.6. ENVIRONMENTAL COMMITMENTS

ARE THERE ANY NOTES ON THE ENVIRONMENTAL COMMITMENT SHEET?
☐ YES ☒ NO
IF YES, THEY HAVE BEEN INCLUDED ON PLAN SHEET(S) NA.

5. EROSION PREVENTION AND SEDIMENT CONTROL (EPSC) MEASURES (5.5.3.)

5.1. EPSC MEASURES MUST BE DESIGNED, INSTALLED AND MAINTAINED TO CONTROL STORMWATER VOLUME AND VELOCITY WITHIN THE SITE TO MINIMIZE EROSION (4.1.1).

5.2. EPSC MEASURES MUST CONTROL STORMWATER DISCHARGES, INCLUDING BOTH PEAK FLOWS AND TOTAL STORMWATER VOLUME, TO MINIMIZE EROSION AT OUTLETS, STREAM CHANNELS, AND STREAM BANKS. (4.1.1)

5.3. HAVE THE CONTROL MEASURES BEEN DESIGNED PER THE SIZE AND SLOPE OF THE DISTURBED DRAINAGE AREA (5.5.3.5.)?
☒YES ☐ NO

5.4. THE CONTROL MEASURES HAVE, AT A MINIMUM, BEEN DESIGNED FOR THE 5-YEAR, 24 HOUR STORM EVENT (5.5.3.5., 6.4.1.b).

5.5. ARE THE LIMITS OF DISTURBANCE CLEARLY MARKED ON THE EPSC PLANS (5.5.1.f)? ☒ YES ☐ NO

5.6. AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.

5.7. UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES OR ROW/ EASEMENT LINE, WHICHEVER IS LESSER.

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

5.9. HAS A THREE STAGED EPSC PLAN BEEN PREPARED FOR THE PROJECT (5.5.2.)?
YES ☒ NO ☐
PLEASE NOTE THAT A THREE STAGED EPSC PLAN IS REQUIRED FOR ALL TDOT PROJECTS FOR WHICH AN NPDES PERMIT IS REQUIRED.

5.10. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT. HAVE STEEP SLOPES BEEN MINIMALLY DISTURBED AND/OR PROTECTED BY CONVEYING RUNOFF NON-EROSIVELY AROUND OR OVER THE SLOPE (5.5.3.4.) (10. "STEEP SLOPE")? ☒ YES ☐ NO ☐ N/A

5.11. THE STRUCTURAL EPSC MEASURES HAVE BEEN INCLUDED IN THE TOTAL PROJECT IMPACTS AND HAVE BEEN INCLUDED IN THE AQUATIC RESOURCE ALTERATION (ARAP) PERMIT OR SECTION 401 CERTIFICATION (5.5.1.h). REFER TO THE LIST OF APPLICABLE ENVIRONMENTAL PERMITS LOCATED ON SWPPP SHEET S-7. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

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5.12. THE EPSC CONTROL MEASURES LISTED IN THE QUANTITIES TABLE ON SHEET 10 HAVE BEEN SELECTED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES (5.1., 5.5.3.1.b, 5.5.3.5.).

5.13. EPSC MEASURES SHALL BE INSTALLED PER TDOT STANDARDS (i.e. STANDARD DRAWINGS) AND SHALL BE FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS.

5.14. EPSC MEASURES WILL NOT BE INSTALLED WITHIN A STREAM WITHOUT FIRST OBTAINING APPROVAL FROM THE PERMITS SECTION.

5.15. TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY, BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE A PRECIPITATION EVENT.

5.16. EPSC MEASURES LOCATED IN WOTUS (EPHEMERAL STREAMS) MUST BE CONSIDERED TEMPORARY AND SHALL BE REMOVED AT THE END OF CONSTRUCTION.

5.17. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFF-SITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED TO A LEVEL SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE SETTLED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT. SEDIMENT THAT MIGRATES INTO WATERS OF THE STATE/US SHALL NOT BE REMOVED WITHOUT GUIDANCE FROM TDOT ENVIRONMENTAL PERSONNEL.

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

5.19. THE QUANTITIES REQUIRED FOR STABILIZED CONSTRUCTION EXITS PER TDOT STANDARDS HAVE BEEN SPECIFIED ON SHEET 10 (5.5.3.1.j).

5.20. DISCHARGES FROM DEWATERING ACTIVITIES ARE PROHIBITED UNLESS MANAGED BY APPROPRIATE CONTROLS THAT PROVIDE THE LEVEL OF TREATMENT (FILTRATION) NECESSARY TO COMPLY WITH PERMIT REQUIREMENTS. (4.1.3.).

5.21. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT.

5.22. DISCHARGES FROM SEDIMENT BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE, WELL- VEGETATED AND/OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. (5.5.3.5.).

5.23. THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

5.24. WATER DISCHARGED FROM DEWATERING ACTIVITIES SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD WITHIN SETTLING BASINS UNTIL IT IS AT LEAST AS CLEAR AS THE RECEIVING WATERS.

5.25. DEWATERING STRUCTURES, SEDIMENT FILTER BAGS, SEDIMENT BASINS AND TRAPS SHALL NOT BE LOCATED CLOSER THAN 30 FEET (60 FEET DESIRABLE VEGETATIVE BUFFER) FOR WATERS WITH UNAVAILABLE PARAMETERS AND EXCEPTIONAL TENNESSEE WATERS (ETW) AND 15 FEET (30 FEET DESIRABLE VEGETATIVE BUFFER) FOR ALL OTHER FEATURES FROM THE TOP BANK OF A STREAM, WOTUS (EPHEMERAL), WETLAND OR OTHER NATURAL RESOURCE AND SHALL BE PROPERLY DESIGNED PER THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED.

5.26. STABILIZATION PRACTICES: PRE-CONSTRUCTION VEGETATIVE COVER WILL NOT BE DESTROYED, REMOVED OR DISTURBED MORE THAN 2 WEEKS PRIOR TO GRADING OR EARTH MOVING UNLESS THE AREA WILL BE SEEDED AND/OR MULCHED OR OTHER TEMPORARY COVER IS INSTALLED (5.5.3.5.f).

5.27. STABILIZATION MEASURES WILL BE INITIATED AS SOON AS POSSIBLE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED. TEMPORARY OR PERMANENT STABILIZATION WILL BE COMPLETED WITHIN 2 WEEKS AFTER ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED IN THAT AREA. PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE (5.5.3.4.).

5.28. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS. UNPACKED GRAVEL CONTAINING FINES (SILT AND CLAY SIZED PARTICLES) OR CRUSHER-RUN WILL NOT BE CONSIDERED A NON-ERODIBLE SURFACE

5.29. DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED, IF POSSIBLE.

5.30. STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 1 WEEK AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. (5.5.3.4.).

6. FLOCCULANTS (3.5.3.1.b)

IS ADDITIONAL PHYSICAL OR CHEMICAL TREATMENT OF STORMWATER RUNOFF NECESSARY (5.5.3.5.)? ☐ YES ☒ NO

IF YES, THE FOLLOWING NOTES APPLY:

6.1. ENSURE THE FLOCCULANT EMULSIONS AND POWDERS ARE OF THE ANIONIC TYPE (5.5.3.5.). AND MEET THE FOLLOWING REQUIREMENTS:

6.1.1. MEETS THE EPA AND FDA ACRYLAMIDE MONOMER LIMITS OF EQUAL TO OR GREATER THAN 0.005% ACRYLAMIDE MONOMER.

6.1.2. HAS A DENSITY OF 10% TO 55% BY WEIGHT AND A MOLECULAR WEIGHT OF 16 TO 24 MG/MOLE (MILLIGRAM PER MOLE).

6.1.3. MIXTURE IS NON-COMBUSTIBLE.

6.1.4. CONTAINS ONLY MANUFACTURER'S RECOMMENDED ADDITIVES.

6.2. FLOCCULANT SHALL BE MIXED AND APPLIED IN ACCORDANCE WITH ALL OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) MATERIAL SAFETY DATA SHEET REQUIREMENTS AND THE MANUFACTURER'S RECOMMENDATIONS FOR THE SPECIFIED USES CONFORMING TO ALL FEDERAL, STATE, AND LOCAL LAWS, RULES, AND REGULATIONS.

6.3. ALL VENDORS AND SUPPLIERS OF FLOCCULANT BLENDS SHALL PRESENT OR SUPPLY A WRITTEN TOXICITY REPORT WHICH VERIFIES ACCEPTABLE TOXICITY PARAMETERS WHICH MEET OR EXCEED THE EPS REQUIREMENTS FOR THE STATE AND FEDERAL WATER QUALITY STANDARDS. WHOLE EFFLUENT TESTING DOES NOT MEET THIS REQUIREMENT AS PRIMARY REACTIONS HAVE OCCURRED AND TOXIC POTENTIALS HAVE BEEN REDUCED. CATIONIC FORMS OF FLOCCULANTS ARE NOT ALLOWED UNDER THIS SECTION DUE TO HIGH LEVELS OF TOXICITY TO AQUATIC ORGANISMS. FLOCCULANT EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN WATERS DUE TO SURFACTANT TOXICITY. THE CONTRACTOR MUST SEEK THE APPROVAL OF THE EPSC DESIGN ENGINEER AND TDOT IF CHITOSAN IS PROPOSED FOR THIS PROJECT.

6.4. ALL VENDORS AND SUPPLIERS OF FLOCCULANT BLENDS SHALL SUPPLY WRITTEN "SITE SPECIFIC" TESTING RESULTS DEMONSTRATING A PERFORMANCE OF 95% OR GREATER REDUCTION OF NTU OR TSS FROM STORMWATER DISCHARGES.

6.5. EMULSION BATCHES SHALL BE MIXED FOLLOWING RECOMMENDATIONS OF THE TESTING LABORATORY THAT DETERMINES THE PROPER PRODUCT AND RATE TO MEET SITE REQUIREMENTS. APPLICATION METHODS SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA. EMULSIONS SHALL NEVER BE APPLIED DIRECTLY TO STORMWATER RUNOFF OR RIPARIAN BUFFERS.

6.6. FLOCCULANT POWDER MAY BE APPLIED BY A HAND OR MECHANICAL SPREADER. MIXING OF THE FLOCCULANT POWDER WITH DRY SILICA SAND WILL AID IN SPREADING.

6.7. PREMIXING OF FLOCCULANT POWDER INTO FERTILIZER, SEED, OR OTHER SOIL AMENDMENTS IS ALLOWED WHEN SPECIFIED IN THE DESIGN PLAN. APPLICATION METHOD SHALL ENSURE UNIFORM COVERAGE TO THE TARGET AREA.

6.8. FLOCCULANT LOGS OR BLOCKS SHALL BE APPLIED FOLLOWING SITE TESTING RESULTS TO ENSURE PROPER PLACEMENT AND PERFORMANCE AND SHALL MEET OR EXCEED STATE AND FEDERAL WATER QUALITY REQUIREMENTS.

6.9. DO NOT APPLY FLOCCULANTS DIRECTLY TO, OR WITHIN 60 FEET, OF ANY STREAMS, WETLANDS, OR OTHER NATURAL WATER RESOURCE LOCATED ON OR ADJACENT TO THE CONSTRUCTION SITE. DO NOT APPLY FLOCCULANTS DIRECTLY INTO WATERS CONTAINED WITHIN SEDIMENT PONDS OR TO SLOPES THAT PRODUCE RUNOFF DIRECTLY INTO A STREAM, WETLAND, OR OTHER NATURAL WATER RESOURCE. DO NOT APPLY FLOCCULANTS IMMEDIATELY AT A STORMWATER OUTFALL WHERE RUNOFF LEAVES THE PROJECT LIMITS.

7. UTILITY RELOCATION

ARE UTILITIES INCLUDED IN THE CONTRACT? ☒ YES ☐ NO

IF YES, THE FOLLOWING APPLY:

7.1. STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.

7.2. SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. ANY TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS, REMOVED AND STABILIZED BY THE END OF THE WORK DAY.

7.3. UTILITY CROSSINGS IN ENVIRONMENTAL FEATURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT STANDARDS AND NO WORK SHALL BE CONDUCTED IN FLOWING WATERS. ENVIRONMENTAL PERMITS APPLY TO UTILITIES IN THIS PROJECT. THE STATE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS.

7.4. IT IS THE RESPONSIBILITY OF THE STATE UTILITY CONTRACTOR TO PROTECT EXPOSED EARTH FROM EROSION AND TO PROVIDE FOR CONTAINMENT OF SEDIMENT THAT MAY RESULT FROM THEIR WORK. PRIOR TO BEGINNING WORK, ADEQUATE EPSC MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFF-SITE IN THE EVENT OF RAIN. DURING THE PROGRESSION OF THEIR WORK, EXPOSED EARTH AREAS SHALL BE STABILIZED AS SOON AS POSSIBLE TO PREVENT EROSION. AT NO TIME, SHALL EXPOSED EARTH RESULTING FROM THEIR OPERATIONS HAVE UNPROTECTED ACCESS TO FLOWING OFF-SITE AND ENTERING WATERS OF THE STATE/U.S.

7.5. FOR THE INSTALLATION OF BURIED UTILITIES (PIPES AND CABLES), TRENCHES SHALL BE BACKFILLED DAILY AS CONSTRUCTION PROCEEDS. BACKFILLED TRENCHES SHALL BE SEEDED AND MULCHED OR SODDED DAILY IF POSSIBLE, BUT NO LATER THAN FOURTEEN DAYS AFTER BEING BACKFILLED. ANY TEMPORARY SPOILS OF EXCAVATED EARTH SHALL BE LOCATED WITHIN TDOT EPSC MEASURES OR RECEIVE SEPARATE EPSC MEASURES. IF TRENCHES ARE NOT BACKFILLED OVERNIGHT, APPROPRIATE EPSC MEASURES WILL BE INSTALLED BY THE STATE UTILITY CONTRACTOR UNTIL THE TRENCH IS BACKFILLED.

7.6. IN REGARDS TO EPSC, TDEC REGULATIONS APPLY TO THE STATE UTILITY CONTRACTORS ON THIS PROJECT. THE STATE CONTRACTOR IS RESPONSIBLE FOR EPSC MEASURES RELATED TO UTILITY CONSTRUCTION INCLUDED IN THE STATE CONTRACT.

7.7. TRENCHES FORMED FOR THE INSTALLATION OF BURIED UTILITIES MAY CAUSE STORMWATER RUNOFF TO CONCENTRATE AT THE TRENCH LINE. ADDITIONAL EPSC MEASURES MAY BE REQUIRED TO BE INSTALLED AS APPROVED BY THE TDOT PROJECT ENGINEER.

7.8. FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EPSC MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH PERMANENT VEGETATIVE COVER.

7.9. THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE TDOT RESPONSIBLE PARTY.

7.10. THE UTILITY CONTRACTOR WILL PROVIDE APPROPRIATE EPSC MEASURES TO REPLACE ONSITE EPSC MEASURES REMOVED TO FACILITATE THE INSTALLATION OF UTILITIES. REPLACEMENT OF EPSC MEASURES WILL BE COORDINATED WITH THE TDOT ENGINEER BEFORE COMMENCING WORK.

7.11. FOR UTILITY CROSSINGS THAT UTILIZE HORIZONTAL DIRECTIONAL DRILLING THE FOLLOWING SHALL APPLY:

7.11.1. THE ENTRY AND EXIT POINTS SHALL BE AT LEAST 50 FEET FROM THE STREAM BANK OR WETLAND BOUNDARY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

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7.11.2. THE DEPTH OF BORE BELOW THE STREAMBED IS SUFFICIENT TO PREVENT RELEASE OF DRILLING FLUID, BASED ON THE PARENT MATERIAL.

7.11.3. A SITE-SPECIFIC CONTINGENCY AND CONTAINMENT PLAN FOR INADVERTENT RELEASE OF DRILLING FLUID SHALL BE ESTABLISHED PRIOR TO COMMENCEMENT OF WORK. THIS PLAN SHALL BE SUBMITTED TO THE TDOT PROJECT ENGINEER AND THE TDOT ENVIRONMENTAL DIVISION PERMITS AND/OR COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW AND APPROVAL.

8. MAINTENANCE AND INSPECTION

8.1. INSPECTION PRACTICES (5.5.3.9.)

8.1.1. PROJECT EPSC INSPECTORS AND ENGINEERS (INCLUDING TDOT STAFF, CONSULTANTS AND CONTRACTOR STAFF) RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE. AND/OR REPAIR OF EPSC MEASURES SHALL MEET ONE OF THE FOLLOWING REQUIREMENTS (5.5.3.10.):

8.1.1.1. SUCCESSFULLY COMPLETED THE TDOT EPSC INSPECTIONS TRAINING AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.1.2. SUCCESSFULLY COMPLETED THE TDEC "LEVEL I - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL" COURSE AND ANY RECERTIFICATION COURSES AS REQUIRED.

8.1.1.3. BE A CURRENT TN LICENSED PROFESSIONAL ENGINEER OR LANDSCAPE ARCHITECT.

8.1.1.4. BE A CURRENT CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC).

8.1.1.5. SUCCESSFULLY COMPLETED TDEC "LEVEL II – DESIGN PRINCIPLES FOR EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES" COURSE AND ANY RECERTIFICATION COURSE AS REQUIRED.

8.1.2. THE TDOT CONSTRUCTION ENGINEER (OR THEIR DULY AUTHORIZED REPRESENTATIVE) AND THE CONTRACTOR'S SITE SUPERINTENDENT ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT CONSTRUCTION ENGINEER OR THEIR DULY AUTHORIZED REPRESENTATIVE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.

8.1.3. THE INSPECTOR SHALL CONDUCT PRE-CONSTRUCTION INSPECTIONS TO VERIFY AREAS THAT ARE NOT TO BE DISTURBED HAVE BEEN MARKED IN THE SWPPP AND IN THE FIELD BEFORE LAND DISTURBANCE ACTIVITIES BEGIN AND INITIAL MEASURES HAVE BEEN INSTALLED (10 "INSPECTOR") (5.5.1.f).

8.1.4. EPSC CONTROLS SHALL BE INSPECTED TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT FORM AND THE TDEC CONSTRUCTION STORMWATER INSPECTION CERTIFICATION (TWICE-WEEKLY INSPECTIONS) FORM.

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

8.1.6. INSPECTIONS WILL BE CONDUCTED AT LEAST TWICE EVERY CALENDAR WEEK AND AT LEAST 72 HOURS APART (5.5.3.11.a). A CALENDAR WEEK IS DEFINED AS SUNDAY THROUGH SATURDAY. QUALITY ASSURANCE INSPECTIONS OF TDOT EPSC, NPDES AND WATER QUALITY PERMIT REQUIREMENTS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE.

8.1.7. THE FREQUENCY OF EPSC INSPECTIONS MAY BE REDUCED TO ONCE A MONTH WHERE SITES OR PORTIONS OF SITES HAVE BEEN TEMPORARILY STABILIZED UNTIL CONSTRUCTION ACTIVITIES RESUME WITH WRITTEN NOTIFICATION BY THE TDOT REGIONAL ENGINEER TO TDEC NASHVILLE CENTRAL OFFICE AND SUBSEQUENT TDEC APPROVAL. WRITTEN NOTIFICATION MUST INCLUDE THE INTENT TO CHANGE FREQUENCY AND JUSTIFICATION (5.5.3.11.a).

8.1.8. ALL DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN PERMANENTLY STABILIZED, AREAS USED FOR MATERIAL STORAGE THAT ARE EXPOSED TO PRECIPITATION, STRUCTURAL CONTROL MEASURES, AND LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE, AND EACH OUTFALL WILL BE INSPECTED (5.5.3.11.b).

8.1.9. THE INSPECTOR WILL OVERSEE THE REQUIREMENTS OF OTHER CONSTRUCTION-RELATED WATER QUALITY PERMITS (I.E. TDEC ARAP, USACE SECTION 404, AND TVA SECTION 26a PERMITS) FOR CONSTRUCTION ACTIVITIES AROUND WATERS OF THE STATE (10 "INSPECTOR").

8.1.10. THE SWPPP WILL BE REVISED AS NECESSARY BASED ON THE RESULTS OF THE INSPECTION. REVISION(S) WILL BE RECORDED WITHIN 1 WEEK OF THE INSPECTION. REVISION(S) WILL BE IMPLEMENTED WITHIN 2 WEEKS OF THE INSPECTION (5.5.3.11.e AND 5.5.3.11.f).

8.1.11. DOCUMENTATION OF INSPECTIONS WILL BE MAINTAINED ON SITE IN THE "DOCUMENTATION AND PERMITS" BINDER. REPORTS WILL BE SUBMITTED TO THE TDOT PROJECT ENGINEER PER THE CONTRACT.

8.1.12. THESE INSPECTION REQUIREMENTS DO NOT APPLY TO DEFINABLE AREAS OF THE SITE THAT HAVE MET PERMANENT STABILIZATION REQUIREMENTS AND HAVE BEEN NOTED IN THE SWPPP.

8.1.13. TRAINED CERTIFIED INSPECTORS SHALL COMPLETE INSPECTION TO THE BEST OF THEIR ABILITY. FALSIFYING INSPECTION RECORDS OR OTHER DOCUMENTATION OR FAILURE TO COMPLETE INSPECTION DOCUMENTATION SHALL RESULT IN A VIOLATION OF THIS PERMIT AND ANY OTHER APPLICABLE ACTS OR RULES (5.5.3.11.h).

8.2. DULY AUTHORIZED REPRESENTATIVE (8.7.3.)

THE PROJECT ENGINEER MAY DELEGATE AN INDIVIDUAL AND/OR CONSULTANT TO SIGN EPSC INSPECTIONS REPORTS. FOR SATISFYING SIGNATORY REQUIREMENTS FOR EPSC INSPECTION REPORTS, THE PROJECT ENGINEER AND NEWLY AUTHORIZED INDIVIDUAL ACCEPTING RESPONSIBILITY MUST COMPLETE AND SIGN THE TDOT CONSTRUCTION DIVISION EPSC DELEGATION OF AUTHORITY.

8.3. MAINTENANCE PRACTICES (5.1 AND 8.13.)

8.3.1. ALL CONTROLS WILL BE MAINTAINED IN GOOD AND EFFECTIVE OPERATING ORDER AND IN ACCORDANCE WITH TDOT STANDARD DRAWINGS AND GOOD ENGINEERING PRACTICES. (5.1. AND 5.5.3.1.b)

8.3.2. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR.

8.3.3. UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE, MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE 24-HOUR TIMEFRAME, WRITTEN DOCUMENTATION PROVIDED BY THE CONTRACTOR SHALL BE PLACED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION. (5.5.3.11.e).

8.3.4. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES (SEDIMENT TRAPS, SILT FENCE, SEDIMENT BASINS, OTHER CONTROLS, ETC.) WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). (5.5.3.1.d).

8.3.5. DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.

8.3.6. CHECK DAMS WILL BE INSPECTED FOR STABILITY. SEDIMENT WILL BE REMOVED WHEN DEPTH REACHES ONE-HALF (½) THE HEIGHT OF THE DAM.

8.3.7. SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS, DOES NOT MIGRATE INTO FEATURES REMOVED FROM, AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND/OR INTO WATERS OF THE STATE/U.S.

8.3.8. LITTER, CONSTRUCTION DEBRIS, AND CONSTRUCTION CHEMICALS EXPOSED TO STORMWATER WILL BE PICKED UP AND REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFF THE SITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EROSION CONTROL WILL BE REMOVED (5.5.3.7.a).

8.3.9. ALL SEEDED AREAS WILL BE CHECKED FOR BARE SPOTS, EROSION WASHOUTS, AND VIGOROUS GROWTH FREE OF SIGNIFICANT WEED INFESTATIONS.

9. SITE ASSESSMENTS (5.5.3.8.)

QUALITY ASSURANCE SITE ASSESSMENTS OF EROSION PREVENTION AND SEDIMENT CONTROLS SHALL BE PERFORMED PER THE TDOT ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE GUIDELINES.

10. STORMWATER MANAGEMENT (5.5.3.11.h)

10.1. STORMWATER MANAGEMENT WILL BE HANDLED BY TEMPORARY CONTROLS OUTLINED IN THIS SWPPP AND ANY PERMANENT CONTROLS NEEDED TO MEET PERMANENT STORMWATER MANAGEMENT NEEDS IN THE POST CONSTRUCTION PERIOD. PERMANENT CONTROLS WILL BE DEPICTED ON THE PLANS AND NOTED AS PERMANENT.

10.2. DESCRIBE ANY SPECIFIC POST-CONSTRUCTION MEASURES THAT WILL CONTROL VELOCITY, POLLUTANTS, AND/OR EROSION (5.5.3.6.c): NA

10.3. OTHER ITEMS NEEDING CONTROL (5.5.3.7.)

CONSTRUCTION MATERIALS: THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ LUMBER, GUARDRAIL, TRAFFIC CONTROL DEVICES
☒ CONCRETE WASHOUT
☒ PIPE CULVERTS (I.E. CONCRETE, CORRUGATED METAL, HDPE, ETC.)
☒ MINERAL AGGREGATES, ASPHALT
☒ EARTH
☒ LIQUID TRAFFIC STRIPING MATERIALS, PAINT
☒ ROCK
☒ CURING COMPOUND
☒ EXPLOSIVES
☐ OTHER _____

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

10.4. WASTE MATERIALS (5.5.3.7.c)

WASTE MATERIAL (EARTH, ROCK, ASPHALT, CONCRETE, ETC.) NOT REQUIRED FOR THE CONSTRUCTION OF THE PROJECT WILL BE DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE TDOT CONSTRUCTION CONTRACT AND FEDERAL AND STATE REGULATIONS. IMPACTS TO WATERS OF THE STATE/U.S. SHALL BE AVOIDED IF POSSIBLE. IF UNAVOIDABLE, THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS INCLUDING, BUT NOT LIMITED TO NPDES, AQUATIC RESOURCES ALTERATION PERMIT(S) CORPS OF ENGINEERS SECTION 404 PERMITS, AND TVA SECTION 26A PERMITS TO DISPOSE OF WASTE MATERIALS.

10.5. HAZARDOUS WASTE (5.5.3.7.c) (8.8)

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL WILL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S ON-SITE REPRESENTATIVE WILL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR WILL OBTAIN ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.

10.6. SANITARY WASTE (5.5.3.7.b)

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

10.7. OTHER MATERIALS

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THE FOLLOWING MATERIALS OR SUBSTANCES ARE EXPECTED TO BE PRESENT ON THE SITE DURING THE CONSTRUCTION PERIOD. (CHECK ALL THAT APPLY).

☒ FERTILIZERS AND LIME

☒ PESTICIDES AND/OR HERBICIDES

☒ DIESEL AND GASOLINE

☒ MACHINERY LUBRICANTS (OIL AND GREASE)

THESE MATERIALS WILL BE HANDLED AS NOTED IN THIS SWPPP.

11. NON-STORMWATER DISCHARGES (5.5.3.12.)

11.1. THE FOLLOWING NON-STORMWATER DISCHARGES ARE ANTICIPATED DURING THE CONSTRUCTION OF THIS PROJECT (CHECK ALL THAT APPLY):

☒ DEWATERING OF WORK AREAS OF COLLECTED STORMWATER AND GROUND WATER.

☒ WATERS USED TO WASH VEHICLES (OF DUST AND SOIL) WHERE DETERGENTS ARE NOT USED AND DETENTION AND/OR FILTERING IS PROVIDED BEFORE THE WATER LEAVES THE SITE.

☒ WATER USED TO CONTROL DUST. (3.5.3.1.n)

☐ POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHING FROM WHICH CHLORINE HAS BEEN REMOVED TO THE MAXIMUM EXTENT PRACTICABLE.

☒ UNCONTAMINATED GROUNDWATER OR SPRING WATER.

☒ FOUNDATION OR FOOTING DRAINS WHERE FLOWS ARE NOT CONTAMINATED WITH POLLUTANTS.

☐ OTHER: _____

11.2. ALL ALLOWABLE NON-STORMWATER DISCHARGES WILL BE DIRECTED TO STABLE DISCHARGE STRUCTURES PRIOR TO LEAVING THE SITE. FILTERING OR CHEMICAL TREATMENT MAY BE NECESSARY PRIOR TO DISCHARGE. ALL CHEMICAL TREATMENTS MUST BE APPLIED PER SECTION 6 FLOCCULANTS.

11.3. THE DESIGN OF ALL IMPACTED EPSC MEASURES RECEIVING FLOW FROM ALLOWABLE NON-STORMWATER DISCHARGES MUST BE DESIGNED TO HANDLE THE VOLUME OF THE NON-STORMWATER COMPONENT.

11.4. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS WILL NOT BE PERMITTED ON-SITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.

11.5. ARE ANY DISCHARGES ASSOCIATED WITH INDUSTRIAL (NON-CONSTRUCTION STORMWATER) ACTIVITY EXPECTED (5.5.1.g)?

☐ YES ☒ NO

IF YES, SPECIFY THE LOCATION OF THE ACTIVITY AND ITS PERMIT NUMBER: _____

12. SPILL PREVENTION, MANAGEMENT AND NOTIFICATION (5.5.3.7.c, 6.1)

12.1. SPILL PREVENTION (5.5.3.7.c)

12.1.1. CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ON-SITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE TANKS WITH AGGREGATE STORAGE CAPACITY IN EXCESS OF 1,320 GALLONS SHALL HAVE SECONDARY CONTAINMENT.

12.1.2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN AS REQUIRED BY TDOT SPECIAL PROVISION 107FP (REGARDING WATER QUALITY AND STORM WATER PERMITS) AND THE LAW PRIOR TO STORING 1320 GALLONS ON SITE.

12.1.3. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ON-SITE AND A COPY PROVIDED TO THE TDOT CONSTRUCTION ENGINEER.

12.2. MATERIAL MANAGEMENT

12.2.1. HOUSEKEEPING

ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ON-SITE BY THE CONTRACTOR. EXCEPT FOR BULK MATERIALS THE CONTRACTOR WILL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING WILL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WHEN POSSIBLE, ALL PRODUCTS WILL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFF SITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS WILL BE FOLLOWED. THE CONTRACTOR'S SITE SUPERINTENDENT WILL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL. DUST GENERATED WILL BE CONTROLLED IN AN ENVIRONMENTALLY SAFE MANNER. VEGETATION AREAS NOT ESSENTIAL TO THE CONSTRUCTION PROJECT WILL BE PRESERVED AND MAINTAINED AS NOTED ON THE PLANS.

12.2.2. HAZARDOUS MATERIALS

PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS UNLESS THE CONTAINER IS NOT RE-SEALABLE. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHEETS WILL BE RETAINED IN A SAFE PLACE TO RELAY IMPORTANT PRODUCT INFORMATION. IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S LABEL DIRECTIONS FOR DISPOSAL WILL BE FOLLOWED. MAINTENANCE AND REPAIR OF ALL EQUIPMENT AND VEHICLES INVOLVING OIL CHANGES, HYDRAULIC SYSTEM DRAIN DOWN, DE-GREASING OPERATIONS, FUEL TANK DRAIN DOWN AND REMOVAL, AND OTHER ACTIVITIES WHICH MAY RESULT IN THE ACCIDENTAL RELEASE OF CONTAMINANTS WILL BE CONDUCTED ON AN IMPERVIOUS SURFACE AND UNDER COVER DURING WET WEATHER TO PREVENT THE RELEASE OF CONTAMINANTS ONTO THE GROUND. WHEEL WASH WATER WILL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER WILL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM. POTENTIAL pH-MODIFYING MATERIALS SUCH AS: BULK CEMENT, CEMENT KILN DUST, FLY ASH, NEW CONCRETE WASHINGS AND CURING WATERS, CONCRETE PUMPING, AND MIXER WASHOUT WATERS WILL BE COLLECTED ON SITE AND MANAGED TO PREVENT CONTAMINATION OF STORMWATER RUNOFF.

12.3. PRODUCT SPECIFIC PRACTICES

12.3.1. PETROLEUM PRODUCTS: ALL ON-SITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED.

12.3.2. FERTILIZERS: FERTILIZERS WILL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED BY TDOT. ONCE APPLIED, FERTILIZERS WILL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER. FERTILIZERS WILL BE STORED IN AN ENCLOSED AREA UNDER COVER. THE CONTENTS OF PARTIALLY USED FERTILIZER BAGS WILL BE TRANSFERRED TO SEALABLE CONTAINERS TO AVOID SPILLS.

12.3.3. PAINTS: ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. THE EXCESS WILL BE DISPOSED OF PER THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.

12.3.4. CONCRETE TRUCKS: CONTRACTORS WILL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED AND NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. UPON COMPLETION OF CONSTRUCTION WASHOUT AREAS WILL BE PROPERLY STABILIZED.

12.4. SPILL MANAGEMENT

IN ADDITION TO THE PREVIOUS HOUSEKEEPING AND MANAGEMENT PRACTICES, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP IF NECESSARY:

12.4.1. ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANGE OF LEAKAGE AND SPILLS.

12.4.2. FOR ALL HAZARDOUS MATERIALS STORED ON SITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP WILL BE CLEARLY POSTED. SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.

12.4.3. APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT WILL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ON-SITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.

12.4.4. ALL SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.

12.4.5. THE CONTRACTOR'S RESPONSIBLE PARTY WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

12.4.6. IF SPILLS REPRESENT AN IMMINENT THREAT OF ESCAPING THE SITE AND ENTERING RECEIVING WATERS, PERSONNEL WILL RESPOND IMMEDIATELY TO CONTAIN THE RELEASE AND NOTIFY THE SUPERINTENDENT AFTER THE SITUATION HAS BEEN STABILIZED.

12.4.7. IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION WILL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR WILL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.

12.4.8. IF A SPILL OCCURS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR COMPLETING THE SPILL REPORTING FORM AND FOR REPORTING THE SPILL TO THE TDOT PROJECT RESPONSIBLE PARTY. ALL SPILLS MUST BE REPORTED TO THE APPROPRIATE AGENCY, AND MEASURES SHALL BE TAKEN IMMEDIATELY TO PREVENT THE POLLUTION OF WATERS OF THE STATE/U.S., INCLUDING GROUNDWATER, SHOULD A SPILL OCCUR.

12.5. SPILL NOTIFICATION (6.1)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO, OR MORE THAN A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD:

12.5.1. THE TDOT PROJECT ENGINEER IS RESPONSIBLE FOR NOTIFYING THE REGIONAL PROJECT DEVELOPMENT OFFICE (E.G. TRANSPORTATION ENVIRONMENTAL STUDIES SPECIALIST) AS SOON AS HE OR SHE HAS KNOWLEDGE OF THE DISCHARGE.

12.5.2. THE TDOT REGIONAL PROJECT DEVELOPMENT OFFICE WILL NOTIFY THE LOCAL TDEC ENVIRONMENTAL FIELD OFFICE AND ANY OTHER APPLICABLE REGULATORY AGENCIES WITHIN 24 HOURS OF THE SPILL.

12.5.3. IN ADDITION TO ANY FOLLOW UP NOTIFICATIONS REQUIRED BY FEDERAL LAW, A WRITTEN DESCRIPTION OF THE RELEASE, DATE OF RELEASE AND CIRCUMSTANCES LEADING TO THE RELEASE, WHAT ACTIONS WERE TAKEN TO MITIGATE EFFECTS OF THE RELEASE, AND STEPS TAKEN TO MINIMIZE THE CHANCE OF FUTURE OCCURRENCES WILL BE SUBMITTED TO THE APPROPRIATE TDEC ENVIRONMENTAL FIELD OFFICE WITHIN 2 WEEKS OF KNOWLEDGE OF THE RELEASE.

12.5.4. THE SWPPP MUST BE MODIFIED WITHIN 2 WEEKS OF KNOWLEDGE OF THE RELEASE PROVIDING A DESCRIPTION OF THE RELEASE, CIRCUMSTANCES LEADING TO THE RELEASE, AND THE DATE OF RELEASE. THE SWPPP WILL BE REVIEWED AND MODIFIED AS NECESSARY TO IDENTIFY MEASURES TO PREVENT THE REOCCURRENCE OF SUCH RELEASES AND TO RESPOND TO SUCH RELEASES.

13. RECORD-KEEPING

13.1. REQUIRED RECORDS

TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MAINTAIN AT THE SITE THE FOLLOWING RECORDS OF CONSTRUCTION ACTIVITIES (7.2.1.) (7.2.1.):

13.1.1. THE DATES WHEN MAJOR GRADING ACTIVITIES OCCUR.

13.1.2. THE DATES WHEN CONSTRUCTION ACTIVITIES TEMPORARILY OR PERMANENTLY CEASE ON A PORTION OF THE SITE.

13.1.3. THE DATES WHEN STABILIZATION MEASURES ARE INITIATED.

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13.1.4. RECORDS EPSC INSPECTION REPORTS AND CORRECTIVE MEASURES.

13.1.5. RECORDS OF QUALITY ASSURANCE SITE ASSESSMENTS.

13.1.6. COPY OF SITE EPSC INSPECTOR'S CERTIFICATION AND/OR LICENSING

13.1.7. A COPY OF ANY REGULATORY CORRESPONDENCE REGARDING THE EFFECTIVENESS OF THE SWPPP OR EPSC CONTROLS.

13.2. RAINFALL MONITORING PLAN (7.2.1.):

13.2.1. EQUIPMENT
AT A MINIMUM, THE CONTRACTOR WILL INSTALL A FENCE POST TYPE RAIN GAUGE TO MEASURE RAINFALL. THE STANDARD FENCE POST RAIN GAUGE WILL BE A WEDGE-SHAPED GAUGE THAT MEASURES UP TO 6 INCHES OF RAINFALL. AN ENGLISH SCALE WILL BE PROVIDED ON ONE FACE, WITH A METRIC SCALE ON THE OTHER FACE. GRADUATION WILL BE PERMANENTLY MOLDED IN DURABLE WEATHER-RESISTANT PLASTIC. THE MINIMUM GRADUATION WILL BE 0.01 INCH (OR 0.1MM). AN ALUMINUM BRACKET WITH SCREWS MAY BE USED TO MOUNT THE GAUGE ON A WOODEN SUPPORT.

13.2.2. LOCATION
THE RAIN GAUGE WILL BE LOCATED AT OR ALONG THE PROJECT SITE, AS DEFINED IN THE NOI OF THE NPDES PERMIT, IN AN OPEN AREA SUCH THAT THE MEASUREMENT WILL NOT BE INFLUENCED BY OUTSIDE FACTORS (I.E. OVERHANGS, GUTTER, TREES, ETC.). AT LEAST ONE RAIN GAUGE PER LINEAR MILE IS REQUIRED ALONG (AS MEASURED ALONG THE CENTERLINE OF THE PRIMARY ALIGNMENT) THE PROJECT WHERE CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING OR FILLING IS ACTIVELY PERFORMED, OR EXPOSED SOIL HAS NOT YET BEEN PERMANENTLY STABILIZED.

13.2.3. METHODS
RAINFALL MONITORING WILL BE INITIATED PRIOR TO CLEARING, GRUBBING, EXCAVATION, GRADING, CUTTING, OR FILLING, EXCEPT AS SUCH MINIMAL CLEARING MAY BE NECESSARY TO INSTALL A RAIN GAUGE IN AN OPEN AREA. THE RAIN GAUGE WILL BE CHECKED FOR OPERATIONAL SOUNDNESS DAILY (DURING NORMAL BUSINESS HOURS) IN WET TIMES AND WEEKLY IN DRY TIMES. GAUGES WILL BE REPAIRED OR REPLACED ON THE SAME DAY IF FOUND TO BE NON-OPERATIONAL OR MISSING.

13.2.4. EACH RAIN GAUGE WILL BE READ (FOR DETAILED RECORDS OF RAINFALL) AND EMPTIED AFTER EVERY RAINFALL EVENT OCCURRING ON THE PROJECT SITE AT APPROXIMATELY THE SAME TIME OF THE DAY (DURING NORMAL BUSINESS HOURS). DURING PERIODS OF DRY CONDITIONS, IT WILL NOT BE NECESSARY TO READ THE RAIN GAUGE EVERY DAY. IN LIEU OF THIS REQUIREMENT ON WEEKENDS AND ON STATE HOLIDAYS, THE RAIN GAUGES CAN BE EMPTIED THE NEXT BUSINESS DAY AND A REFERENCE SITE USED FOR A RECORD OF DAILY AMOUNT OF PRECIPITATION FOR THOSE DAYS. A REFERENCE SITE IS THE DOCUMENTATION FROM THE CLOSEST GAUGE WITHIN PROXIMITY OF THE PROJECT FROM A RECOGNIZED SOURCE SUCH AS THE NOAA NATIONAL WEATHER SERVICE.

13.2.5. DETAILED RECORDS WILL BE RECORDED OF RAINFALL EVENTS INCLUDE DATES, AMOUNTS OF RAINFALL, AND THE APPROXIMATE DURATION (OR THE STARTING AND ENDING TIMES). THE RAINFALL RECORDS SHALL BE RECORDED ON THE TDOT RAINFALL RECORD SHEET AND SHALL BE MAINTAINED IN THE "DOCUMENTATION AND PERMITS" BINDER.

13.2.6. IF THE RAINFALL EVENT IS STILL IN PROGRESS AT THE DAILY RECORDING TIME, THE GAUGE WILL BE EMPTIED AND THE RECORD WILL INDICATE THAT THE STORM EVENT WAS STILL IN PROGRESS.

13.2.7. RAIN GAUGE INFORMATION (DETAILED RECORDS), INCLUDING THE LOCATION OF THE NEAREST OUTFALL, WILL BE RECORDED ON THE EPSC INSPECTION REPORT FORMS AT THE TIME OF MEASUREMENT.

13.3. KEEPING PLANS CURRENT (5.4.)

13.3.1. THE EPSC PLAN IS TO SERVE AS AN INITIAL GUIDE FOR SITE PERSONNEL AS THE CONSTRUCTION PROCESS DEVELOPS. IT MUST BE AMENDED, MODIFIED, AND UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL REGULATORY OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.

13.3.2. THE STAGES DEPICTED WITHIN THE EPSC PLANS MAY NOT COINCIDE WITH THE ACTUAL STAGES OF CONSTRUCTION ESTABLISHED BY THE CONTRACTOR DURING CONSTRUCTION, THUS MODIFICATIONS WILL BE REQUIRED TO ENSURE THE EPSC PLAN IS MAINTAINED TO DEPICT CURRENT SITE CONDITIONS. IT SHOULD BE MAINTAINED SUCH THAT IT WILL ALWAYS REFLECT THE MEASURES THAT ARE INSTALLED DURING THE VARIOUS STAGES OF CONSTRUCTION. IT IS IMPRACTICAL TO DETERMINE ALL THE INTERMEDIATE STAGES OF CONSTRUCTION THAT WILL OCCUR, THUS THESE DOCUMENTS MUST BE UPDATED THROUGHOUT THE LIFE OF THE CONSTRUCTION PROJECT.

13.3.3. THE TDOT EPSC INSPECTOR OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL MODIFY AND UPDATE THE SWPPP WHEN ANY OF THE FOLLOWING CONDITIONS APPLY:

13.3.3.1. WHENEVER THERE IS A CHANGE IN THE SCOPE OF THE PROJECT THAT WOULD BE EXPECTED TO HAVE A SIGNIFICANT EFFECT ON THE DISCHARGE OF POLLUTANTS TO THE WATERS OF THE STATE AND WHICH HAS NOT OTHERWISE BEEN ADDRESSED IN THE SWPPP;

13.3.3.2. WHENEVER INSPECTIONS OR INVESTIGATIONS BY SITE OPERATORS, LOCAL, STATE, OR FEDERAL OFFICIALS INDICATE THE SWPPP IS PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANTS FROM CONSTRUCTION ACTIVITY SOURCES, OR IS OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY; WHERE LOCAL, STATE, OR FEDERAL OFFICIALS DETERMINE THAT THE SWPPP IS INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES, A COPY OF ANY CORRESPONDENCE TO THAT EFFECT MUST BE RETAINED IN THE SWPPP;

13.3.3.3. WHEN ANY NEW OPERATOR AND/OR SUB-OPERATOR IS ASSIGNED OR RELIEVED OF THEIR RESPONSIBILITY TO IMPLEMENT A PORTION OF THE SWPPP;

13.3.3.4. TO PREVENT A NEGATIVE IMPACT TO LEGALLY PROTECTED STATE OR FEDERALLY LISTED OR PROPOSED THREATENED OR ENDANGERED AQUATIC FAUNA;

13.3.3.5. WHEN THERE IS A CHANGE IN CHEMICAL TREATMENT METHODS INCLUDING: USE OF DIFFERENT TREATMENT CHEMICALS, DIFFERENT DOSAGE OR APPLICATION RATES OR A DIFFERENT AREA OF APPLICATION NOT SPECIFIED ON THE EPSC PLANS.

13.3.3.6. ALL SWPPP REVISION(S) SHALL BE RECORDED WITHIN 1 WEEK BY THE PROJECT EPSC INSPECTOR.

13.3.3.7. WHEN A TMDL IS DEVELOPED FOR THE RECEIVING WATERS FOR A POLLUTANT OF CONCERN (SILTATION AND/OR HABITAT ALTERATION), CONSTRUCTION SHALL NOTIFY THE PERMITS SECTION FOR PROPER COORDINATION.

13.4. MAKING PLANS ACCESSIBLE

13.4.1. TDOT WILL RETAIN A COPY OF THIS SWPPP (INCLUDING A COPY OF THE "DOCUMENTATION AND PERMITS" BINDER AT THE CONSTRUCTION SITE (OR OTHER LOCATION ACCESSIBLE TO TDEC AND THE PUBLIC) FROM THE DATE CONSTRUCTION COMMENCES TO THE DATE OF PERMANENT STABILIZATION. TDOT WILL HAVE A COPY OF THE SWPPP AVAILABLE AT THE LOCATION WHERE WORK IS OCCURRING ON-SITE FOR THE USE OF OPERATORS AND THOSE IDENTIFIED AS HAVING RESPONSIBILITIES UNDER THE SWPPP WHENEVER THEY ARE ON THE CONSTRUCTION SITE (7.2.).

13.4.2. PRIOR TO THE INITIATION OF LAND DISTURBING ACTIVITIES AND UNTIL THE SITE HAS MET THE PERMANENT STABILIZATION CRITERIA, TDOT OR THEIR DULY AUTHORIZED REPRESENTATIVE WILL POST A NOTICE NEAR THE MAIN ENTRANCE OF THE CONSTRUCTION SITE WITH THE FOLLOWING INFORMATION (5.3.4.) (7.2.1.):

13.4.2.1. A COPY OF THE NOTICE OF COVERAGE (NOC) WITH THE NPDES PERMIT NUMBER FOR THE PROJECT;

13.4.2.2. THE INDIVIDUAL NAME, COMPANY NAME, E-MAIL ADDRESS (IF APPLICABLE) AND TELEPHONE NUMBER OF THE LOCAL PROJECT SITE OWNER AND OPERATOR CONTACT;

13.4.2.3. A BRIEF DESCRIPTION OF THE PROJECT; AND

13.4.2.4. THE LOCATION OF THE SWPPP.

13.4.3. ALL INFORMATION DESCRIBED IN SECTION 13.4.2 MUST BE MAINTAINED IN LEGIBLE CONDITION. IF POSTING THIS INFORMATION NEAR A MAIN ENTRANCE IS INFEASIBLE DUE TO SAFETY CONCERNS, THE NOTICE SHALL BE POSTED IN A LOCAL BUILDING. THE NOTICE MUST BE PLACED IN A PUBLICLY ACCESSIBLE LOCATION WHERE CONSTRUCTION IS ACTIVELY UNDERWAY AND MOVED AS NECESSARY.

13.5. NOTICE OF TERMINATION (9.0.)

13.5.1. WHEN ALL STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES THAT ARE AUTHORIZED BY THE PERMIT ARE ELIMINATED BY PERMANENT STABILIZATION, THE TDOT REGIONAL ENGINEER WILL SUBMIT A NOTICE OF TERMINATION (NOT) THAT IS SIGNED IN ACCORDANCE WITH THE PERMIT TO THE TDEC CENTRAL OFFICE IN NASHVILLE, TN.

13.5.2. FOR THE PURPOSES OF THE CERTIFICATION REQUIRED BY THE NOT, THE ELIMINATION OF STORMWATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY MEANS THE

13.5.2.1. ALL EARTH-DISTURBING ACTIVITIES ON THE SITE ARE COMPLETED AND ALL DISTURBED SOILS AT THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL HAVE BEEN PERMANENTLY STABILIZED; AND

13.5.2.2. ALL CONSTRUCTION MATERIALS, WASTE AND WASTE HANDLING DEVICES, AND ALL EQUIPMENT, AND VEHICLES THAT WERE USED DURING CONSTRUCTION HAVE BEEN REMOVED AND PROPERLY DISPOSED; AND

13.5.2.3. ALL STORMWATER CONTROLS THAT WERE INSTALLED AND MAINTAINED DURING CONSTRUCTION, EXCEPT THOSE THAT ARE INTENDED FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE, HAVE BEEN REMOVED; AND

13.5.2.4. ALL POTENTIAL POLLUTANTS AND POLLUTANT GENERATING ACTIVITIES ASSOCIATED WITH CONSTRUCTION HAVE BEEN REMOVED; AND

13.5.2.5. THE PERMITTEE HAS IDENTIFIED WHO IS RESPONSIBLE FOR ONGOING MAINTENANCE OF ANY STORMWATER CONTROLS LEFT ON THE SITE FOR LONG-TERM USE FOLLOWING TERMINATION OF PERMIT COVERAGE; AND

13.5.2.6. TEMPORARY EPSC MEASURES HAVE BEEN OR WILL BE REMOVED AT AN APPROPRIATE TIME TO ENSURE PERMANENT STABILIZATION IS MAINTAINED; AND

13.5.2.7. ALL STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES FROM THE IDENTIFIED SITE THAT ARE AUTHORIZED BY A NPDES GENERAL PERMIT HAVE OTHERWISE BEEN ELIMINATED FROM THE PORTION OF THE CONSTRUCTION SITE WHERE THE OPERATOR HAD CONTROL.

13.6. RETENTION OF RECORDS (7.1.)

TDOT WILL RETAIN COPIES OF THE SWPPP, ALL REPORTS REQUIRED BY THE PERMIT, AND RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

14. <u>SITE WIDE/PRIMARY PERMITTEE CERTIFICATION</u> (<u>8.7.5.</u>)

I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED BY ME, OR UNDER MY DIRECTION OR SUPERVISION. THE SUBMITTED INFORMATION IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	S-1
PS&E	2025	18004-3227-04	S-7

Traci Smith

AUTHORIZED TDOT PERSONNEL SIGNATURE (5.3.3.)

Traci Smith

PRINTED NAME

TDOT Team Lead

TITLE

1/30/2025

DATE

15. SECONDARY PERMITTEE (OPERATOR) CERTIFICATION (8.7.6.)

I CERTIFY UNDER PENALTY OF LAW THAT I HAVE REVIEWED THIS DOCUMENT, ANY ATTACHMENTS, AND THE SWPPP REFERENCED ABOVE. BASED ON MY INQUIRY OF THE CONSTRUCTION SITE OWNER/DEVELOPER IDENTIFIED ABOVE AND/OR MY INQUIRY OF THE PERSON DIRECTLY RESPONSIBLE FOR ASSEMBLING THIS NOI AND SWPPP, I BELIEVE THE INFORMATION SUBMITTED IS ACCURATE. I AM AWARE THAT THIS NOI, IF APPROVED, MAKES THE ABOVE-DESCRIBED CONSTRUCTION ACTIVITY SUBJECT TO NPDES PERMIT NUMBER TNR100000, AND THAT CERTAIN OF MY ACTIVITIES ONSITE ARE THEREBY REGULATED. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS, AND FOR FAILURE TO COMPLY WITH THESE PERMIT REQUIREMENTS. AS SPECIFIED IN TENNESSEE CODE ANNOTATED SECTION 39-16-702(a)(4), THIS DECLARATION IS MADE UNDER PENALTY OF PERJURY.

AUTHORIZED CONTRACTOR PERSONNEL SIGNATURE (5.3.3.)

PRINTED NAME

TITLE

DATE

DATE

PERMIT	YES OR NO	PERMIT OR TRACKING NO.	EXPIRATION DATE*
TDEC ARAP	YES	NRS 24.146	Jan 10 2030
CORPS OF ENGINEERS (USACE)	YES	LRN-2024-00557	March 14 2026
TVA 26A			
TDEC CGP			
OTHER:			

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

16. ENVIRONMENTAL PERMITS (1.5.2.)

LIST ALL ENVIRONMENTAL PERMITS AND EXPIRATION DATES FOR PROJECT **(TO BE COMPLETED AT THE ENVIRONMENTAL PRECONSTRUCTION MEETING BY TDOT CONSTRUCTION OR THEIR DULY AUTHORIZED REPRESENTATIVE)**:

ENVIRONMENTAL PERMITS

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T.
DESIGN DIVISION

FILE NO.

TYPE	YEAR	PROJECT NO.	SHEET NO.
R.O.W.	2021	BR-STP-24(69)	S-1
PS&E	2025	18004-3227-04	S-8

17. OUTFALL TABLE (5.5.1.c, 6.4.1.e, 6.4.1.f)

OUTFALL LABEL	SUB OUT-FALL	STATION CL, LT OR RT	SLOPE WITHIN ROW (%)	STAGE 1 DRAINAGE AREA (AC)	STAGE 2 DRAINAGE AREA (AC)	STAGE 3 DRAINAGE AREA (AC)	SEDIMENT BASIN OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	SEDIMENT TRAP OR EQUIVALENT MEASURE(S) (YES, NO OR N/A)	RECEIVING RESOURCE (TDOT EBR LABEL) OR OTHER	COMMENTS
1		58+50	1.99	.550	.550	.550	NA	NA	Obed	
2		58+55	2.04	.430	.430	.430	NA	NA	Obed	
3		59+50	2.43	.350	.350	.350	NA	NA	Obed	
4		59+55	2.37	.840	.840	1.637	NA	NA	Obed	
5		63+30	5.20	.797	.797		NA	NA	Obed	

ALL UNUSED FIELDS WITHIN THE OUTFALL TABLE ARE TO BE SHADED, HATCHED, OR REMOVED TO INDICATE THEIR NON-USAGE.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

STORMWATER POLLUTION PREVENTION PLAN

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U1-1
		124053.00	

Index Of Sheets	
SHEET NAME	SHEET NUMBER
UTILITIES INDEX, UTILITIES OWNERS, GENERAL NOTES AND UTILITY SHEETS	U1-1 TO U1-4
CHARTER RELOCATION PLANS	U2-1 TO U2-5
COGENT RELOCATION PLANS	U3-1 TO U3-3
CROSSVILLE WATER RELOCATION PLANS	U4-1 TO U4-8
CROSSVILLE SEWER RELOCATION PLANS	U5-1 TO U5-6
MIDDLE TN NATURAL GAS RELOCATION PLANS	U6-3 TO U6-4
VOLUNTEER ELECTRIC COOPERATIVE RELOCATION PLANS	U8-1 TO U8-3
FRONTIER COMMUNICATIONS RELOCATION PLANS	NOT IN CONTRACT - MOVE AFTER VEC POLES
VOLFIRST/BEN LOMAND RELOCATION PLANS	NOT IN CONTRACT - MOVE AFTER VEC POLES

NOTE: SHEET U1-3 IS NOT USED

NOTE: SERIES U7 IS NOT USED

NOTE: FRONTIER AND VOLFIRST/BEN LOMAND ARE NOT IN-CONTRACT AND WILL NEED TO BE NOTIFIED ONCE NEW ELECTRIC POLES ARE IN PLACE AND READY FOR THEM TO RELOCATE TO; SEE SPECIAL NOTES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

CUMBERLAND COUNTY

STATE ROUTE 24 (US-70N) BRIDGE OVER OBED RIVER, LM 15.37 IN CROSSVILLE (IA) (TMA)

UTILITY OWNERS AND CONTACTS:

(MOVE-IN CONTRACT)
COMMUNICATIONS

CHARTER COMMUNICATIONS
851 S. WILLOW AVE, SUITE 206
COOKEVILLE, TN 38501

MR. MORGAN WILCHER
MORGAN.WILCHER@CHARTER.COM
(931) 239-9222

(MOVE-IN CONTRACT)
FIBER

COGENT
1594 HWY 73
MARIANNA, FL 32448

MR. CAMERON JERNIGAN
CJERNIGAN@COGENTCO.COM
(448) 234-3503

(MOVE-IN CONTRACT)
WATER
SEWER

CITY OF CROSSVILLE
392 N. MAIN ST
CROSSVILLE, TN 38555

MR. TIM BEGLEY
TIM.BEGLEY@CROSSVILLETN.GOV
(931) 456-6172

(MOVE-IN CONTRACT)
GAS

MIDDLE TENNESSEE NATURAL GAS
PO BOX 670
SMITHVILLE, TN 37166

MR. MATT STENNETT
MSTENNETT@MTNG.COM
(931) 754-3515

(MOVE-IN CONTRACT)
ELECTRIC

VOLUNTEER ENERGY COOPERATIVE
PO BOX 277
DECATUR, TN 37322

MR. MATTHEW TEAGUE
MTEAGUE@VEC.ORG
(423) 334-7040

(NO KNOWN CONFLICTS)
ELECTRIC

TENNESSEE VALLEY AUTHORITY
1101 MARKET ST, MR-4G
CHATTANOOGA, TN 37402

MR. STEPHEN WILLIAMS
SEWILLIAMS@TVA.GOV
(862) 255-6272

(NOT IN-CONTRACT MOVE AFTER VEC)
COMMUNICATIONS

FRONTIER COMMUNICATIONS
2104 W. EMORY RD
POWELL, TN 37849

MR. JIM HEATHERLY
JAMES.HEATHERLY@FTR.COM
(865) 236-5083

(NOT IN-CONTRACT MOVE AFTER VEC)
FIBER

VOLFIRST/BEN LOMAND
PO BOX 670
MCMINNVILLE, TN 37111

MR. RICHARD BOYD
RICHARDBOYD@BENLOMAND.ORG
(931) 668-6692

SPECIAL NOTES

SOME UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC.
AT 1-800-351-1111

CONTRACTOR SHALL GIVE THIRTY (30) DAYS NOTICE TO FRONTIER AND VOLFIRST/BEN LOMAND WHEN ELECTRIC POLES ARE IN PLACE AND READY FOR FRONTIER AND VOLFIRST/BEN LOMAND TO PERFORM ITS RELOCATION. IF THE RELOCATION IS NOT COMPLETED WITHIN SIXTY (60) DAYS AFTER NOTIFICATION, TDOT WILL BEGIN THE FINING PROCESS WITH FRONTIER AND VOLFIRST/BEN LOMAND FOR EACH DAY AFTER THE EXPIRATION OF THE SCHEDULE.

SEALED BY

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY
REFERENCE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U1-2
		124053.00	

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	18004-3227-04 QUANTITY
790-03.01	POLE 40FT CLASS 2 WOOD	EACH	3
790-03.03	POLE 40FT CLASS 4 WOOD	EACH	3
790-06.03	POLE 55FT CLASS 3 WOOD	EACH	1
790-22.13	1PH DEAD END 25KV	EACH	1
790-22.16	1PH DDE TANGENT 25KV	EACH	1
790-22.18	1PH SGL DEAD END XARM 25KV	EACH	1
790-26.02	3PH CROSSARM DBL LRG COND 25KV	EACH	1
790-26.17	3PH VERTICAL MED ANGLE 25KV	EACH	1
790-26.25	3PH CROSSARM DDE 25KV	EACH	1
790-26.26	3PH CROSSARM DEAD END 25KV	EACH	1
790-26.27	3PH CROSSARM DBL DDE 25KV	EACH	1
790-26.28	3PH DBL 10FT XARM DDE 25KV	EACH	1
790-26.29	3PH DDE UNBALANCED LOAD 25KV	EACH	1
790-26.38	3PH CROSSARM 10FT LRG COND 25KV	EACH	1
790-30.13	SECONDARY CONDUCTOR 2 AL TRIPLEX	LF	109
790-31.02	SERVICE ASSEMBLY-POLE TYPE	EACH	6
790-31.11	SERVICE CONDUCTOR 2 AL TRIPLEX	EACH	29
790-32.01	DOWN GUY - THROUGH BOLT TYPE	EACH	1
790-32.02	DOWN GUY - THROUGH BOLT TYPE HEAVY DUTY	EACH	1
790-32.06	DOWN GUY - INSULATED	EACH	13
790-32.23	GUY GUARD	EACH	13
790-33.18	ROCK ANCHOR GUY BOLT TYPE	EACH	13
790-40.03	OH COND 1/0 6/1 ACSR RAVEN	LF	3432
790-40.05	OH COND 3/0 6/1 ACSR PIGEON	LF	638
790-40.49	OH COND 795 37 AAC ARBUTUS	LF	1914
790-46.02	1PH TRANSFORMER CONV W/POLE MTD FUSE & LA	EACH	1
790-46.03	1PH TRANSFORMER CONV W/XARM MTD FUSE & LA	EACH	2
790-52.03	10KVA 1PH OH XFORMER 7.2KV 120/240	EACH	2
790-52.12	50KVA 1PH OH XFORMER 7.2KV DUAL VOLTAGE	EACH	1
790-59.06	GOAB SWITCH 25KV	EACH	1
790-69.09	GND-ASSY GND ROD WITH ALUMINUM	EACH	5
790-70.22	STREET LIGHT 70W LED	EACH	1
791-01.04	4IN STEEL GAS MAIN	LF	465
791-04.22	HDD 4IN STEEL PIPE - UNCONSOLIDATED	LF	700
791-06.31	CONNECT TO 2IN EX. STL MAIN W/STOPPLE	EA	2
791-06.32	CONNECT TO 4IN EX STL MAIN W/ STOPPLE	EA	2
791-09.04	REGULATOR STATION	EA	1
793-07.03	36 Fiber (Material Only)	LF	1300
793-11.27	Hand Hole 36IN X 60IN X 30IN	EA	2
793-14.12	1 1/4IN InnerDuct	LF	2200
793-16.04	Directional Bore 4 in/Flex Sleeve	LF	1100
795.12.08	REMOVE WATER METER	EA	1
795-03.05	6IN PVC WATER LINE	LF	400
795-03.07	10IN PVC WATER LINE	LF	450
795-06.30	CUT/CAP EXISTING LINES (ALL SIZES)	EA	3
795-07.03	6IN X 6IN TAPPING SLEEVE AND VALVE	EA	1
795-07.10	10IN X 10IN TAPPING SLEEVE AND VALVE	EA	2
795-08.04	6IN GATE VALVE ASSEMBLY	EA	1
795-08.06	10IN GATE VALVE ASSEMBLY	EA	3
795-09.01	3/4IN WATER SERVICE METER ASSEMBLY	EA	3
795-09.28	3/4IN COPPER SERVICE PIPE	LF	100
795-09.29	1IN COPPER SERVICE PIPE	LF	40
795-11.02	FIRE HYDRANT ASSEMBLY	EA	2
795-11.12	RETIRE IN PLACE EXISTING WATER MAIN	LF	832
795-13.05	CREEK CROSSING #1	LS	1
795-15.02	12IN STEEL CASING PIPE OPEN CUT METHOD	LF	100
795-15.25	16IN STEEL CASING PIPE OPEN CUT METHOD	LF	50

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	18004-3227-04 QUANTITY
797-09.46	CUT AND CAP 6IN FORCE MAIN	EA	1
798-05.02	FIBER OPTIC CABLE ENCLOSURE	EACH	8
798-05.03	FIBER OPTIC CABLE SPLICE	EACH	8
798-05.07	3/8 IN HIGH STRENGTH STEEL STRAND	L.F.	1260
798-06.13	FIBER OPTIC CABLE (12F)	L.F.	1260
798-06.13	FIBER OPTIC CABLE (48F)	L.F.	1260
798-06.13	FIBER OPTIC CABLE (96F)	L.F.	2520
798-06.48	FIBER STORAGE LOOP	EACH	8
798-08.02	TRANSFER CABLE / FIBER	EACH	1
798-09.01	REMOVE STEEL STRAND	L.F.	1236
798-09.03	REMOVE POLES, GUYS, ANCHORS	EACH	2
798-09.07	REMOVE FIBER OPTIC CABLE	L.F.	4997
798-09.08	REMOVE STRAND POLE FRAMING	EACH	6
798-11.31	POWER INSTALLED ANCHOR	EACH	4
798-11.41	DOWNGUY - WRAP TYPE	EACH	4
798-13.03	STRAND TANGENT ASSEMBLY	EACH	2
798-13.04	STRAND ANGLE ASSEMBLY	EACH	2
798-13.07	STRAND DOUBLE DEADEND ASSEMBLY	EACH	3
798-98.01	REMOVE WIRE	LF	6023
798-98.02	REMOVE POLES	EACH	8
798-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	EACH	54

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY QUANTITIES

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U1-4
		124053.00	

LEGEND:
- NEW INSTALLATION
- EXISTING TO REMAIN IN PLACE
- EXISTING TO BE REMOVED

4
TONY PAGE AND KARI PAGE,
HUSBAND AND WIFE

18004-3227-04
BEGIN PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

55

60

7
CUMBERLAND COUNTY

65

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

STR-1

PROPOSED CONST. ESMT.

FILL

CUT

P/T/C

APPROX.

PRES. R.O.W.

PROP. R.O.W.

EXIST. FENCE

R=1372.40'
L=512.90'

S 32° 25' 00" E

S 20° 59' 04" E

R=1372.40'
L=451.10'

18004-3227-04
END PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 65+55.00
N 598248.5498 E 2250563.2343

5
VONDA M. NEWBY AND
HUSBAND CHARLES R.
NEWBY

3
JAMES JOSEPH
MITCHELL

6
SHARON A. SHELLEY
& ROBIN L JONES

8
JOHN E. BARNWELL AND
TINA L. BARNWELL,
HUSBAND AND WIFE

9
DOROTHY L. LILLY

COORDINATES ARE NAD 83(2017), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00013 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID 12B.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

UTILITY REFERENCE

STA. 55+00 TO STA. 66+35.89
SCALE: 1"=50'

2/21/2025 2:34:24 PM
M:\Reg 2 ROW Utilities\Relocation Projects\CUMBERLAND\124053.00 BR-STP-24(69) BR OV OBED\Files\OBED\Filenet\Microstation Files\124053-00-ROW-Rev-01-17-24\U1-4.dgn

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	18004-3227-94	U2-01

CUMBERLAND COUNTY
PIN 124053.00

INDEX OF DRAWINGS

UX-01 TELECOMMUNICATIONS RELOCATION ESTIMATED QUANTITIES AND DRAWING INDEX
UX-02 TELECOMMUNICATIONS RELOCATION VICINITY MAP AND LEGEND
UX-03 TELECOMMUNICATIONS RELOCATION GENERAL NOTES
UX-04 TELECOMMUNICATIONS RELOCATION STA. 55+35 TO STA. 65+55
UX-05 TELECOMMUNICATIONS RELOCATION CONSTRUCTION DETAILS

ESTIMATED QUANTITIES

ITEM NO.	TDOT DESCRIPTION	UTILITY UNIT DESCRIPTION	UNIT	QUANTITY	PERCENT UTILITY	PERCENT PROJECT
798-05.02	FIBER OPTIC CABLE ENCLOSURE	ENC	EACH	8	0%	100%
798-05.03	FIBER OPTIC CABLE SPLICE		EACH	8	0%	100%
798-05.07	3/8 IN HIGH STRENGTH STEEL STRAND	3/8" STRAND	L.F.	1260	0%	100%
798-06.13	FIBER OPTIC CABLE (12F)	12F	L.F.	1260	0%	100%
798-06.13	FIBER OPTIC CABLE (48F)	48F	L.F.	1260	0%	100%
798-06.13	FIBER OPTIC CABLE (96F)	96F	L.F.	2520	0%	100%
798-06.48	FIBER STORAGE LOOP	LOOP	EACH	8	0%	100%
798-09.01	REMOVE STEEL STRAND		L.F.	1236	0%	100%
798-09.03	REMOVE POLES, GUYS, ANCHORS		EACH	2	0%	100%
798-09.07	REMOVE FIBER OPTIC CABLE		L.F.	4997	0%	100%
798-09.08	REMOVE STRAND POLE FRAMING		EACH	6	0%	100%
798-11.31	POWER INSTALLED ANCHOR	E1-2	EACH	4	0%	100%
798-11.41	DOWNGUY - WRAP TYPE	F3	EACH	4	0%	100%
798-13.03	STRAND TANGENT ASSEMBLY	SC	EACH	2	0%	100%
798-13.04	STRAND ANGLE ASSEMBLY	CSC	EACH	2	0%	100%
798-13.07	STRAND DOUBLE DEADEND ASSEMBLY	DDE	EACH	3	0%	100%

6

FOOTNOTE 6:
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL AND BONDING/GROUNDING.

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 100945
STATE OF TENNESSEE

02/20/2025

UTILITY INFORMATION
Charter Communications, LLC
17851 S. Willow Ave., Suite 206
Cookeville, TN 38501
CONTACT: Morgan Wilcher
PHONE: 931-739-9222
EMAIL: morgan.wilcher@charter.com

Charter COMMUNICATIONS®

JOB NUMBER:	29088.30
DESIGNED:	MAS
DRAWN:	MAS
CHECKED:	BBG
SCALE	N.T.S
DATE	02.12.2025

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

TELECOMMUNICATIONS RELOCATION
ESTIMATED QUANTITIES AND DRAWING INDEX

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-94	U2-02

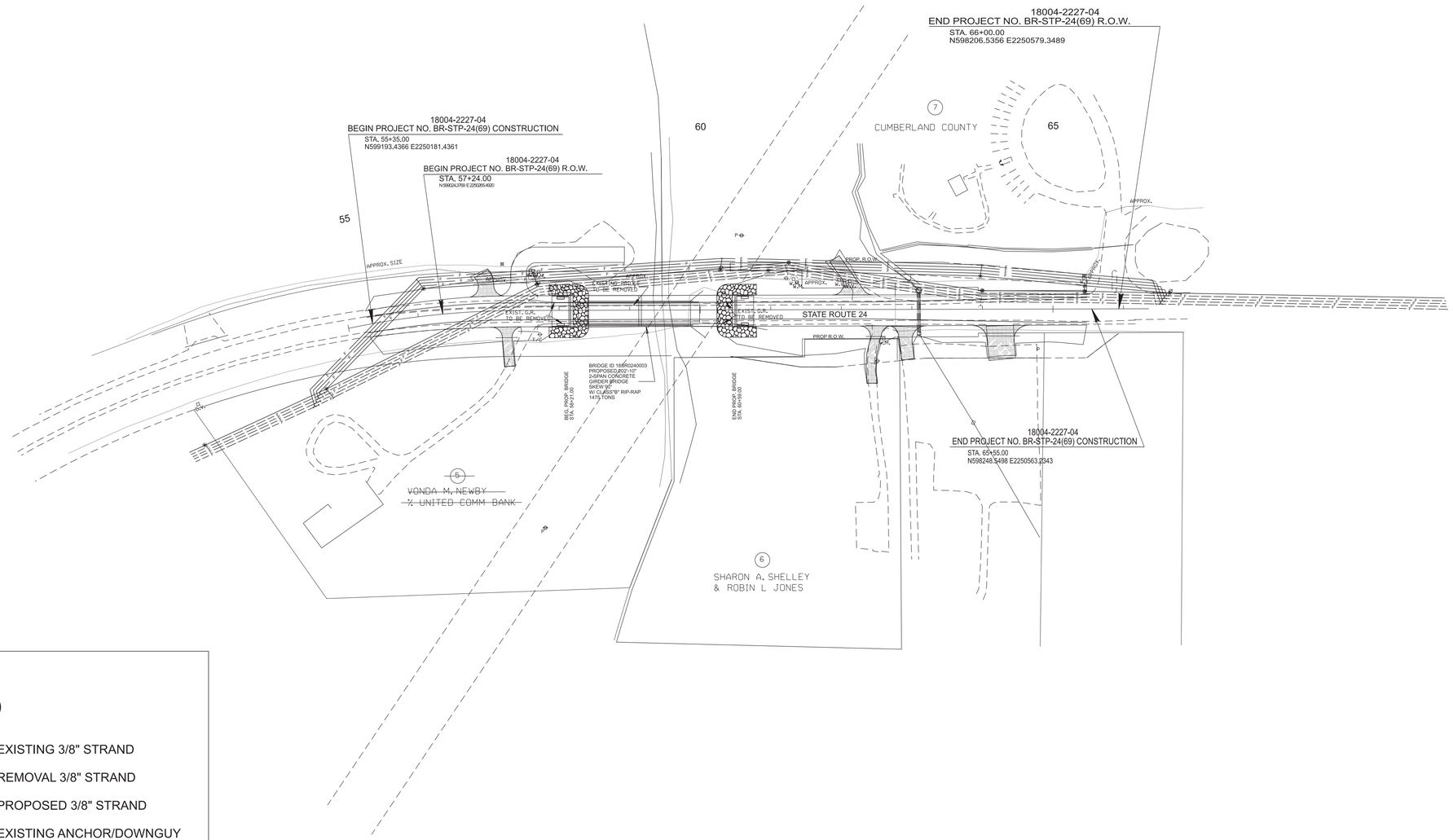
CUMBERLAND COUNTY
PIN 124053.00

CUMBERLAND COUNTY

S.R. 24 (70 N)

BRIDGE OVER OBED RIVER.

L.M 15.37 IN CROSSVILLE (IA)



LEGEND

- EXISTING 3/8" STRAND
- REMOVAL 3/8" STRAND
- PROPOSED 3/8" STRAND
- EXISTING ANCHOR/DOWNGUY
- REMOVAL ANCHOR/DOWNGUY
- REMOVAL POLE
- EXISTING POLE
- F (UG) — EXISTING FIBER
- F (UG) — REMOVAL FIBER
- F (UG) — PROPOSED FIBER
- PROPOSED SPLICE

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCIAL
NO. 100945
STATE OF TENNESSEE

02/20/2025

Charter COMMUNICATIONS®

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(865) 521-6777 (866) 539-7192

TELECOMMUNICATIONS RELOCATION
VICINTY MAP AND LEGEND

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2024	18004-3227-94	U2-03

CUMBERLAND COUNTY
PIN 124053.00

GENERAL CONSTRUCTION NOTES

1. THE FOLLOWING INFORMATION APPLIES TO THE UTILITY CONTRACTOR RESPONSIBLE FOR THE RELOCATION OF THE COMMUNICATION FACILITIES ALONG THIS PROJECT.

2. ANY DEVIATION OF THE CONDITIONS LISTED MUST BE APPROVED BY THE UTILITY PRIOR TO THE DEVIATION TAKING PLACE ON THE PROJECT. FAILURE BY THE UTILITY CONTRACTOR OR SUBCONTRACTORS TO FOLLOW THESE CONDITIONS AS LISTED WILL RESULT IN REFUSAL OF ACCEPTANCE BY THE UTILITY OWNER TO ACCEPT THE PROJECT AT ITS COMPLETION UNTIL SUCH TIME AS ANY DEFICIENCIES ARE CORRECTED TO THE SATISFACTION OF THE UTILITY.

3. ALL WORK SHALL BE DONE IN A SAFE, THOROUGH AND WORKMAN-LIKE MANNER IN ACCORDANCE WITH THE PLAN SHEETS, CONSTRUCTION DETAILS AND TECHNICAL SPECIFICATIONS AS WELL AS ANY AND ALL APPLICABLE SAFETY CODES, INCLUDING, BUT NOT LIMITED TO, THE NATIONAL ELECTRICAL SAFETY CODE (NESC), AND ANY OTHER STATE AND LOCAL CODES THAT ARE REQUIRED FOR THE TYPE OF UTILITY RELOCATION THAT IS BEING PERFORMED AS PART OF THIS CONTRACT.

4. THE UTILITY CONTRACTOR SHALL EXERCISE ALL STANDARD SAFETY PRACTICES WHEN WORKING AROUND ENERGIZED ELECTRICAL LINES (e.g. RUBBER GLOVES INSPECTIONS, GROUNDING OF LINES AND VEHICLES / EQUIPMENT, TOOL INSPECTIONS, ADEQUATE SUPERVISION, ETC.).

5. THE UTILITY CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR THE SAFETY OF ITS EMPLOYEES AND SHALL ENSURE THAT THEY ABIDE BY ALL STATE, FEDERAL AND LOCAL REGULATIONS REGARDING SAFE WORK PRACTICES. IF SUCH REGULATIONS ARE VIOLATED, THE UTILITY OWNER SHALL MAINTAIN THE RIGHT TO STOP WORK ON THEIR FACILITIES UNTIL SUCH CONDITIONS ARE CORRECTED.

6. IN GENERAL, THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS, METHODS, AND/OR INTEGRAL MATERIALS OUTLINED IN THE UTILITY CONSTRUCTION DRAWINGS AND THE TECHNICAL SPECIFICATIONS THAT ARE NECESSARY TO PROVIDE A COMPLETE AND FUNCTIONAL INSTALLATION OF THE UTILITY FACILITIES BEING RELOCATED.

7. UTILITY CONSTRUCTION DRAWINGS ARE INCLUDED AS PART OF THE DRAWING PACKET AND MUST BE ADHERED TO DURING ALL PHASES OF CONSTRUCTION.

8. ALL MATERIALS TO BE USED BY THE UTILITY CONTRACTOR ON THE PROJECT MUST BE NEW MATERIALS AND MUST BE APPROVED BY THE UTILITY OWNER PRIOR TO PURCHASE OR USE. A PROPOSED LIST OF MATERIALS SHALL BE SUBMITTED TO THE UTILITY OWNER AS NOTED IN THE TECHNICAL SPECIFICATIONS FOR THE PROJECT. NO MATERIAL SUBSTITUTIONS ARE ALLOWED WITHOUT THE PRIOR CONSENT OF THE UTILITY OWNER. STORAGE LOCATION OF MATERIALS ON THE PROJECT SITE MUST BE A SECURE ENVIRONMENT. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR ANY LOST, STOLEN OR DAMAGED MATERIALS ON THE PROJECT.

9. THE UTILITY CONTRACTOR IS REQUIRED TO MAINTAIN COMMUNICATION WITH THE UTILITY OWNER'S PROJECT REPRESENTATIVE USING TELEPHONE COMMUNICATIONS.

10. THE UTILITY CONTRACTOR IS TO PERFORM ALL REQUIRED WORK IN SUCH A MANNER AS TO NOT CAUSE UNINTENTIONAL OUTAGES TO THE CUSTOMERS ALONG THE PROJECT. ALL PLANNED OUTAGES MUST BE HANDLED IN ACCORDANCE WITH SECTION 01 1113 "SUMMARY OF WORK" IN THE CONSTRUCTION TECHNICAL SPECIFICATIONS. LARGE SCALE OUTAGES ARE NOT ALLOWED.

11. IF FIELD CONDITIONS ARISE WHICH PREVENT THE CONSTRUCTION ON THE PROJECT FROM PROCEEDING AS DESIGNED, THE UTILITY CONTRACTOR WILL COORDINATE WITH THE UTILITY OWNER / ENGINEER TO RESOLVE THE ISSUES SO THAT CONSTRUCTION CAN CONTINUE.

12. THE UTILITY CONTRACTOR SHALL COMPLY WITH ALL TDOT REGULATIONS, PERMITS AND TRAFFIC CONTROL GUIDELINES AS REQUIRED.

13. THE LOCATIONS OF EXISTING UTILITIES SHOWN WITHIN THESE DRAWINGS ARE BASED ON INFORMATION PROVIDED BY TDOT, AND SHALL BE VERIFIED BY THE UTILITY CONTRACTOR PRIOR TO CONSTRUCTION. THE UTILITY CONTRACTOR SHALL NOTIFY EACH UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES AND REQUEST THAT THE UTILITY OWNERS PROPERLY LOCATE AND MARK THEIR PERSPECTIVE UTILITY ON THE GROUND.

14. THE UTILITY CONTRACTOR SHALL REQUEST UTILITY LOCATIONS A MINIMUM OF THREE (3) BUSINESS DAYS PRIOR TO BEGINNING ANY CONSTRUCTION IN THE AREA OF THE UTILITIES IN QUESTION.

15. THE TDOT PRIME CONTRACTOR WILL BE RESPONSIBLE FOR ANY EXCAVATION WORK REQUIRED TO LOCATE EXISTING UNDERGROUND UTILITIES. THE PRIME CONTRACTOR IS ALSO REQUIRED TO NOTIFY ANY EXISTING UTILITY OWNER PRIOR TO DIGGING. IN THE EVENT THAT THERE IS ANY DAMAGE TO OR INTERRUPTION OF EXISTING FACILITIES, THE PRIME CONTRACTOR WILL BE RESPONSIBLE FOR ANY COST INCURRED FROM THE EVENT.

16. SOME EXISTING UTILITIES CAN BE LOCATED BY CALLING TENNESSEE ONE-CALL SYSTEMS, INC. AT "811".

17. THE UTILITY CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THE PROJECT. IN THE EVENT THAT SPECIAL EQUIPMENT IS REQUIRED TO WORK OVER AND AROUND EXISTING UTILITIES, THE UTILITY CONTRACTOR SHALL BE REQUIRED TO FURNISH THE EQUIPMENT NECESSARY TO COMPLETE THE WORK.

18. THE UTILITY CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY ITS EMPLOYEES IN AREAS OUTSIDE OF TDOT ROW ALONG THE LENGTH OF THE PROJECT. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR RESOLVING ALL COMPLAINTS THAT MAY ARISE FROM ITS ACTIVITIES, AND SHALL PROMPTLY REPORT SUCH COMPLAINTS TO THE UTILITY OWNER AS TO WHETHER OR NOT IT HAS BEEN RESOLVED.

19. GROUND AND AERIAL INSPECTION OF INSTALLED FACILITIES ONCE COMPLETED SHALL BE THE RESPONSIBILITY OF THE UTILITY CONTRACTOR. ANY CORRECTIONS THAT ARE REQUIRED SHALL BE DONE DURING THE CONSTRUCTION OF THE PROJECT AND VERIFIED BY THE UTILITY OWNER / ENGINEER. THE UTILITY OWNER WILL HAVE INSPECTORS ON-SITE TO VERIFY SAFETY AND QUALITY OF WORK IS CONSISTENT WITH UTILITY OWNER'S STANDARDS.

20. WHILE SOME WORK MAY ONLY BE REQUIRED "AROUND" OTHER UTILITY FACILITIES, SOME WORK MAY NEED TO BE DONE CONCURRENTLY WITH THE OPERATIONS OF OTHER UTILITY CONTRACTORS. IT IS THE RESPONSIBILITY OF THE TDOT PRIME CONTRACTOR TO ENSURE THAT ALL UTILITY COORDINATION BE ADDRESSED DURING THE CONSTRUCTION OF THE PROJECT.

21. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL FACILITIES INDICATED WITHIN THESE DRAWINGS AT "FINAL GRADE" AS SHOWN. ANY TEMPORARY INSTALLATIONS THAT ARE NOT SPECIFICALLY NOTED WITHIN THESE DRAWINGS AND THAT ARE NOT ADDRESSED AND COORDINATED PRIOR TO CONSTRUCTION OF THE PROJECT WILL BE THE RESPONSIBILITY OF THE TDOT PRIME CONTRACTOR.

22. CONSTRUCTION OF RELOCATED FACILITIES IS NOT CONSIDERED TO BE COMPLETE UNTIL THE UTILITY CONTRACTOR HAS ENERGIZED THE FACILITIES IN ACCORDANCE WITH UTILITY OWNER SPECIFICATIONS.

23. PERSONNEL CHANGES ARE TO BE KEPT TO A MINIMUM DURING THE CONSTRUCTION OF THE PROJECT AS TO REDUCE UNFAMILIAR PERSONNEL TO BE WORKING ON THE FACILITIES OF THE UTILITY OWNER.

24. THE TDOT PRIME CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF ALL UTILITY FACILITIES THAT ARE TO BE RELOCATED WITHIN THE PROJECT.

25. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY WORK OCCURRING OUTSIDE THE STATE RIGHT-OF-WAY, THE UTILITY CONTRACTOR SHALL SUBMIT A PROPOSED EROSION AND SEDIMENT CONTROL PLAN TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL PRIOR TO BEGINNING WORK.

26. THE DISTANCES THAT ARE SHOWN ON THE DRAWINGS ARE HORIZONTAL DISTANCES ONLY, AND DO NOT ALLOW FOR ANY CHANGES IN ELEVATION THAT EXIST ALONG THE PROJECT.

27. ALL ACTIVE AND PASSIVE EQUIPMENT SHALL BE PROVIDED BY THE UTILITY OWNER. THE LABOR COST, AND MINOR MATERIALS REQUIRED TO INSTALLL THESE UNITS SHALL BE INCLUDED IN THE BID FROM THE UTILITY CONTRACTOR.

28. LOCKNUTS SHALL BACK UP ALL NUTS ON THREADED BOLTS SUCH AS MACHINE BOLTS, ETC. EXISTENCE OF LOCKNUTS WILL BE CLOSELY EXAMINED BY THE UTILITY OWNER DURING CONSTRUCTION. BOLTS SHALL NOT EXTEND MORE THAN TWO (2) INCHES FROM NUTS.

29. ANCHORS THAT ARE TO BE RETIRED SHALL HAVE THE ROD UNSCREWED AND REMOVED, OR BE CUT OFF AT LEAST EIGHTEEN (18) INCHES BELOW FINAL GRADE.

30. THE UTILITY CONTRACTOR SHALL PROVIDE THE UTILITY OWNER WITH ONE (1) SET OF CLEAN, CLEARLY MARKED "AS-BUILT" DRAWINGS AT THE COMPLETION OF THE PROJECT. THESE DRAWINGS SHALL REFLECT ANY AND ALL CHANGES THAT WERE MADE TO THE FACILITIES DURING CONSTRUCTION.

31. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR REVIEWING ALL CONSTRUCTION DRAWINGS AND TECHNICAL SPECIFICATIONS FOR THE RELOCATION OF FACILITIES PRIOR TO BIDDING THE PROJECT. ANY QUESTIONS CONCERNING INFORMATION SHOWN IN THE CONTRACT DOCUMENTS SHALL BE ADDRESSED TO THE UTILITY OWNER / ENGINEER PRIOR TO BIDDING ON THE PROJECT.

32. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTING EACH REEL OF CABLE FOR THE PROJECT. ANY DAMAGE TO THE CABLE SHALL BE REMOVED AND SPLICED AS REQUIRED. ALL CABLES SHALL BE PROTECTED FROM EQUIPMENT OR VEHICLE TRAFFIC WHILE BEING INSTALLED.

33. ANY CUSTOMER OUTAGES FOR CUTOVER TO NEW CABLES MUST BE COORDINATED WITH AND SCHEDULED BY UTILITY OWNER. SCHEDULED CUSTOMER OUTAGES REQUIRE A MINIMUM OF 14 DAYS FOR NOTIFICATION.

02/20/2025

Charter COMMUNICATIONS®

JOB NUMBER:	29088.30
DESIGNED:	MAS
DRAWN:	MAS
CHECKED:	BBG
SCALE: N.T.S	DATE: 07.12.2024

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

TELECOMMUNICATIONS RELOCATION
GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-94	U2-04

CUMBERLAND COUNTY
PIN 124053.00

N

18004-3227-04
BEGIN PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-04
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

18004-2227-04
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

18004-3227-04
END PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 65+55.00
N 598248.5498 E 2250563.2343

55 60 65

STATE ROUTE 24

PROP R.O.W.

EXIST. G.R. TO BE REMOVED

EXISTING BRIDGE TO BE REMOVED

APPROX.

P1 P2 P3 P4 P5 P6 P7 PR1 PR2 PR3 PR4

INSTALL: DDE E1-2 F3

INSTALL: CSC E1-2 F3

REMOVE:CSC E1-2 F3

INSTALL: SC

INSTALL: F3 E1-2 CSC

INSTALL: DDE (2)E1-2 (2)F3 FOSS

REMOVE: SC

REMOVE: CSC E1-2 F3

REMOVE: SC

422'(I)

110'(I)

129'(I)

128'(I)

271'(I)

220'(I)

357'(R)

233'(R)

266'(R)

290'(R)

BRIDGE ID 18SR0240003
PROPOSED 202'-10"
2-SPAN CONCRETE
GIRDER BRIDGE
SKEW 96°
W/ CLASS"B" RIP-RAP
1475 TONS

BEG. PROP. BRIDGE
STA. 58+21.00

END PROP. BRIDGE
STA. 60+59.00

INSTALL: DDE F3 E1-2 FOS

REMOVE: SC

7 CUMBERLAND COUNTY

5 VONDA M. NEWBY
% UNITED COMM BANK

6 SHARON A. SHELLEY
& ROBIN L JONES

8 KENNETH F. FERGUSON

9 DOROTHY L. LILLY

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 100945
STATE OF TENNESSEE

02/20/2025

Charter COMMUNICATIONS®

JOB NUMBER:	29088.30
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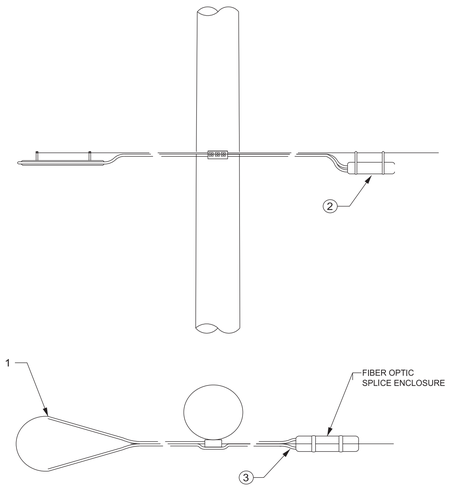
CHECKED:	BBG
SCALE: N.T.S	DATE: 02.12.2025

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

TELECOMMUNICATIONS RELOCATION
VICINITY MAP AND LEGEND

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-94	U2-05

CUMBERLAND COUNTY
PIN 124053.00

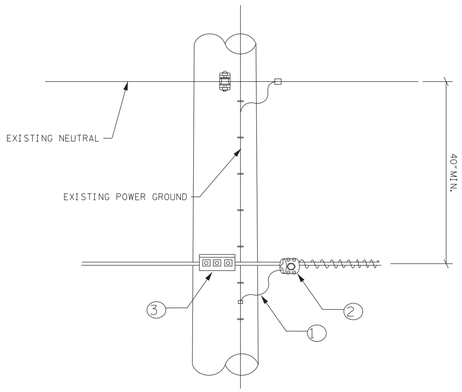


NOTES:

1. FIBEROPTIC STRAND STORAGE IS ANTEC* FIBERLOOP* MODEL FOSS-2.
2. STRAND STORAGE IS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

ID	QTY.	DESCRIPTION
1	1	ANTEC FIBERLOOP MODEL FOSS-2
2	1	FIBEROPTIC SPLICE ENCLOSURE
3	1	FIBER (LENGTH AND SIZE AS REQUIRED)

FIBEROPTIC STRAND STORAGE — ASSEMBLY: FOSS

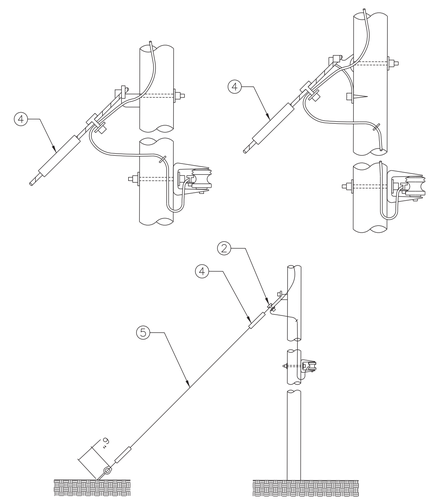


NOTES:

1. BOND AT EVERY GROUND, EXCEPT FOR AMPLIFIER AND LINE EXTENDER LOCATIONS.
2. GROUND WIRE MUST NOT EXTEND OUT OF THE END OF THE K-1 BONDING CLAMP.

ID	QTY.	DESCRIPTION
1	AS REQ'D	#6 GROUND WIRE (LENGTH AS REQUIRED)
2	1	K-1 BONDING CLAMP
3	1	3-BOLT SUSPENSION CLAMP ASSEMBLY

STRAIGHT LINE CONSTRUCTION WITH BOND — ASSEMBLY: BOND

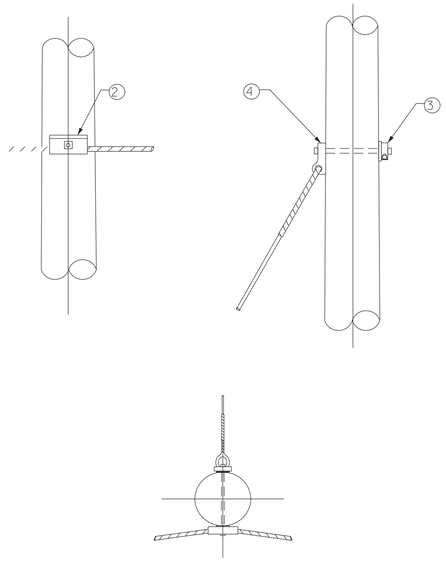


NOTES:

1. GCC15-S4R GUY INSULATOR INCLUDED FOR STEEL POLE ASSEMBLIES.
2. ALL GUY LEAD LENGTHS SHALL BE SET USING A 2:1 RATIO TO THE HEIGHT OF THE POLE UNLESS NOTED OTHERWISE.

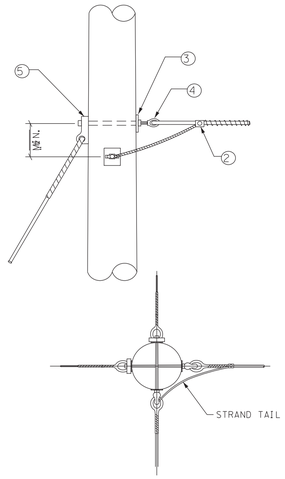
ID	QTY.	DESCRIPTION
1	1	POLE EYE ATTACHMENT #MGA-345N
2	1	GUY CLAMPS 3 BOLT
3	1	DEAD END GUY GRIP 3/8"
4	1	GUY FIBERGLASS STRAIN INSULATOR
5	1	GUY WIRE (LENGTH AS REQUIRED)

DOWN GUY 3/8" THRU BOLT TYPE — ASSEMBLY: E1-2



ID	QTY.	DESCRIPTION
1	2	2-1/4" SQUARE FLAT WASHER
2	1	CURVED SUSPENSION CLAMP
3	1	5/8"X REQ'D LENGTH MACHINE BOLT W/ LOCKNUT
4	1	GUYING BRACKET

CURVED CABLE SUSPENSION CLAMP — ASSEMBLY: CSC

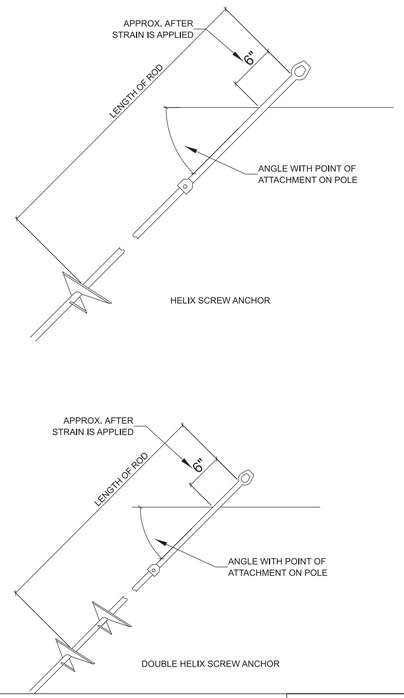


NOTES:

1. PERFORMED DEADEND MUST BE PROPER OVAL SHAPE AND FIT COMPLETELY INTO GUY STRAP.
2. IF BOND BETWEEN STRAND AND DOWN GUY IS REQUIRED BY SPECIFIC LOCAL INTERPRETATION, USE GUY TAIL AND K-2 BONDING CLAMP.

ID	QTY.	DESCRIPTION
1	AS REQ'D	#4 CU. GROUND WIRE (LENGTH AS REQUIRED)
2	1	K-2 BONDING CLAMP
3	2	5/8" x REQUIRED LENGTH MACHINE BOLT W/ LOCKNUT
4	2	THIMBLEYE NUT
5	2	GUYING BRACKET

DOUBLE DEADEND — ASSEMBLY: DDE



POWER INSTALLED 8" HELIX SCREW ANCHORS — ASSEMBLY: F1 & F2

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
POWERS
No. 100945
STATE OF TENNESSEE

02/20/2025

Charter COMMUNICATIONS®

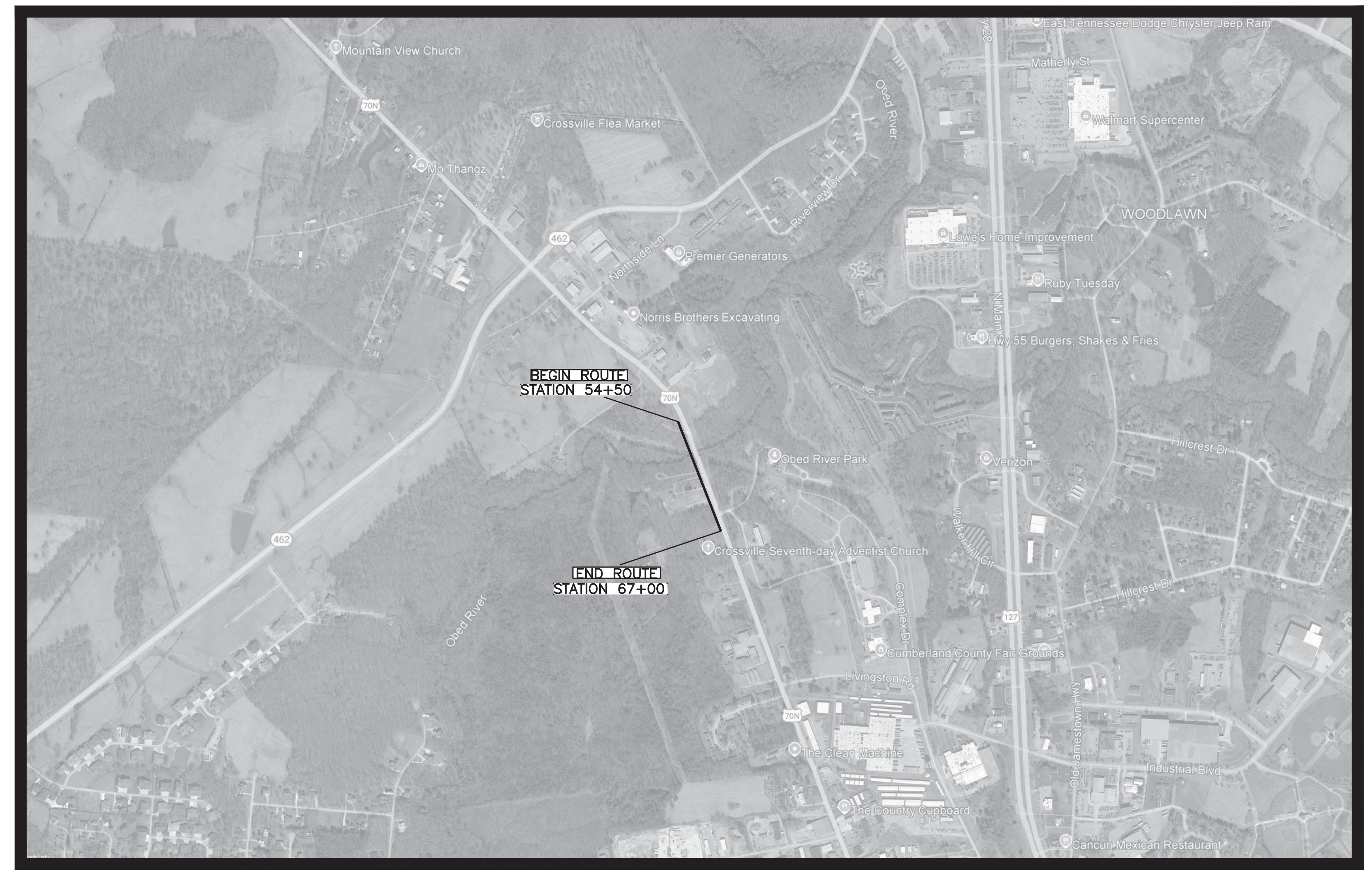
JOB NUMBER:	29088.30
DESIGNED:	MAS
DRAWN:	MAS
CHECKED:	BBG
SCALE	N.T.S
DATE	02.12.2025

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

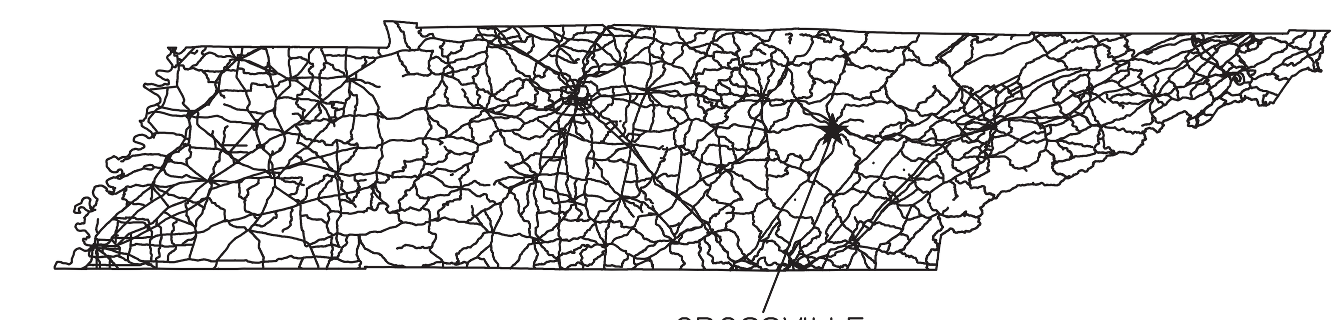
TELECOMMUNICATIONS RELOCATION
CONSTRUCTION DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U3-1
		PIN 124053.00	

OUTSIDE PLANT CONSTRUCTION
FIBER OPTIC CABLE ROUTE
CROSSVILLE, TN
CUMBERLAND COUNTY



LOCATION OF PROJECT

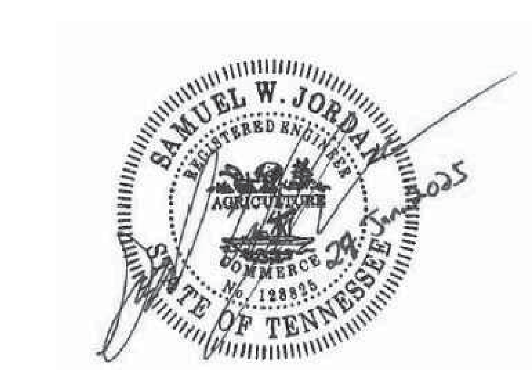


INDEX

1. COVER SHEET
2. FIBER ROUTE RECORD DRAWING

SPRINT OSP PROJECT # A2961029

CROSSVILLE TENNESSEE
PROPOSED BUILD



COORDINATES ARE NAD/83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00037 AND TIES TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

ESTIMATED UTILITY QUANTITIES				
TDOT ITEM NO.	DESCRIPTION	UNIT	18004-3227-04 QUANTITY	FOOTNOTE
793-07.16	12-96 FIBER (INSTALLATION ONLY)	L.F.	1100	
793-11.27	QUAZITE HAND HOLE 36IN X 60IN X 30IN	EACH	2	
793-14.12	1 1/4IN INNERDUCT	L.F.	2200	
793-16.04	DIRECTIONAL BORE 4IN/FLEX SLEEVE	L.F.	1100	

SPRINT DOES NOT WARRANT OR GUARANTEE IN ANY MANNER THE ACCURACY OF THIS MAP. ANY INTENDED EXCAVATION REQUIRES NOTIFICATION OF THE LOCAL "ONE CALL CENTER" OR CALL SPRINT'S CALL-BEFORE-YOU-DIG CENTER AT 1-800-521-0579, AT LEAST 72 HOURS PRIOR TO COMMENCING ACTIVITY.

CALL BEFORE YOU DIG 1-800-521-0579

72 HOURS NOTICE REQUIRED

Tennessee 811 Know what's below. Call before you dig.

COVER SHEET
SPRINT TELECOM
FIBER OPTIC ROUTE
RECORD DRAWING

SHEET 1 OF 2
SCALE: 1" = 50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U3-2
		PIN 124053.00	

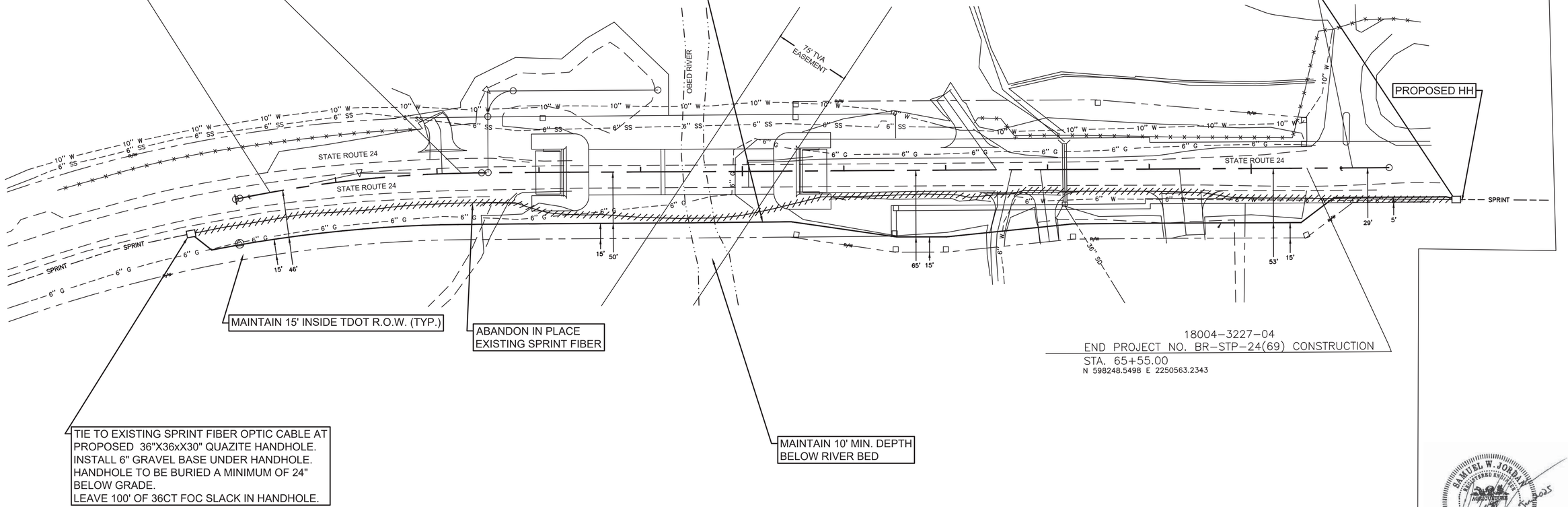
PLACE (1) 4" SDR11 HDPE
E/W (2) 1.25" SDR11 HDPE
E/W (1) 36CT FIBER CABLE AT 48" MINIMUM DEPTH
UNLESS OTHERWISE STATED

18004-3227-04
END PROJECT NO. BR-STP-24(69) R.O.W.
STA. 66+00.00
N 598206.5356 E 2250579.3489

TIE TO EXISTING SPRINT FIBER OPTIC CABLE AT
PROPOSED 36"X36xX30" QUAZITE HANDHOLE.
INSTALL 6" GRAVEL BASE UNDER HANDHOLE.
HANDHOLE TO BE BURIED A MINIMUM OF 24"
BELOW GRADE.
LEAVE 100' OF 36CT FOC SLACK IN HANDHOLE.

18004-3227-04
BEGIN PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-3227-04
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920



MAINTAIN 15' INSIDE TDOT R.O.W. (TYP.)

ABANDON IN PLACE
EXISTING SPRINT FIBER

MAINTAIN 10' MIN. DEPTH
BELOW RIVER BED

18004-3227-04
END PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 65+55.00
N 598248.5498 E 2250563.2343

TIE TO EXISTING SPRINT FIBER OPTIC CABLE AT
PROPOSED 36"X36xX30" QUAZITE HANDHOLE.
INSTALL 6" GRAVEL BASE UNDER HANDHOLE.
HANDHOLE TO BE BURIED A MINIMUM OF 24"
BELOW GRADE.
LEAVE 100' OF 36CT FOC SLACK IN HANDHOLE.

UTILITY LEGEND

ABANDON IN PLACE	
SPRINT	EXISTING TO REMAIN
	PROPOSED FIBER OPTIC LINE

ESTIMATED UTILITY QUANTITIES

TDOT ITEM NO.	DESCRIPTION	UNIT	18004-3227-04 QUANTITY	FOOTNOTE
793-07.16	12-96 FIBER (INSTALLATION ONLY)	L.F.	1100	
793-11.27	QUAZITE HAND HOLE 36IN X 60IN X 30IN	EACH	2	
793-14.12	1 1/4IN INNERDUCT	L.F.	2200	
793-16.04	DIRECTIONAL BORE 4IN/FLEX SLEEVE	L.F.	1100	

NOTE: COGENT COMMUNICATIONS TO SUPPLY FIBER OPTIC CABLE AND PERFORM SPLICING ON SITE.

SAMUEL W. JORDAN
REGISTERED ENGINEER
AGRICULTURE
No. 139855
STATE OF TENNESSEE
10-2-2025

COORDINATES ARE NAD/83 (2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00037 AND TIES TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988.

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72 HOURS NOTICE REQUIRED

Tennessee811 Know what's below. Call before you dig.

SITE PLAN
SPRINT TELECOM
FIBER OPTIC ROUTE
RECORD DRAWING

SHEET 2 OF 2
SCALE: 1" = 50'

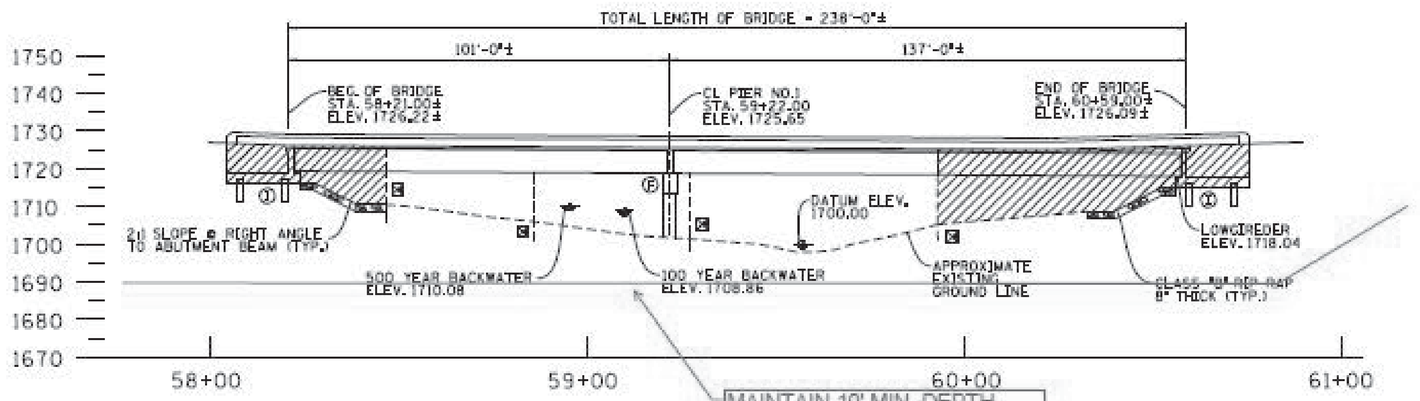
D1
1" = 50'

SPRINT RELOCATION PLANS

NORTH

GRAPHIC SCALE: 1" = 50'
50 0 50

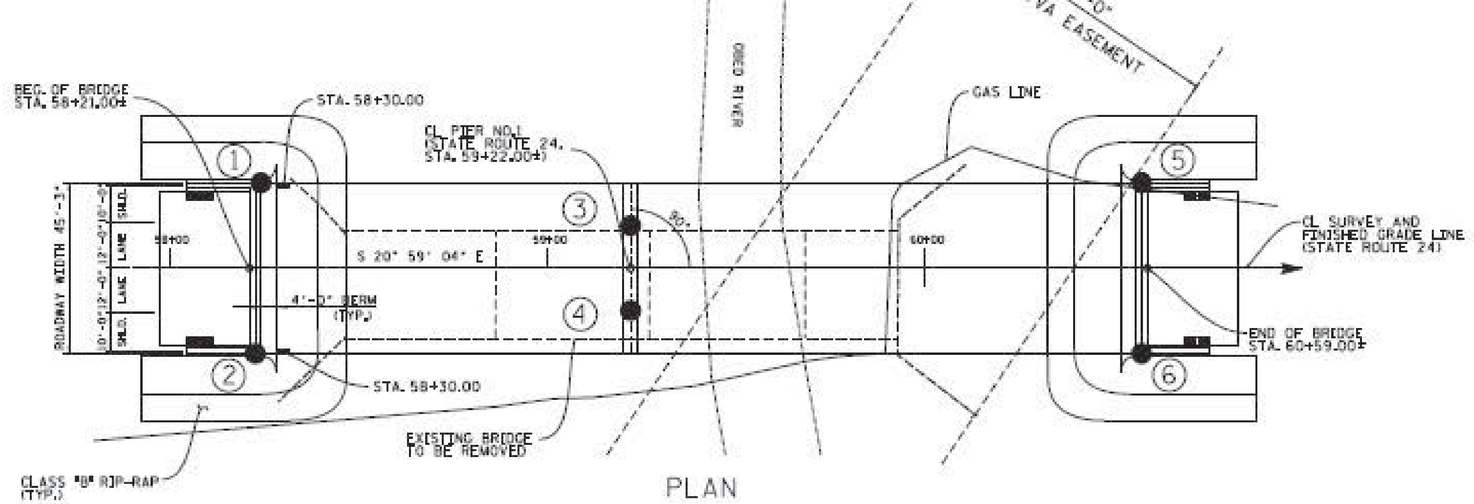
PIN NO. 124053.00



Ⓘ DENOTES: INTEGRAL.
Ⓕ DENOTES: FIXED.
DENOTES: EXISTING BENTS.
DENOTES: AREA TO BE EXCAVATED AND PAID FOR AS A ROADWAY ITEM.

ELEVATION

(SCALE 1" = 50'-0")



PLAN

(SCALE 1" = 50'-0")

BORING NO.	STATION OFFSET	OFFSET DISTANCE	NORTH	EAST	GROUND ELEVATION	ROCK ELEVATION
1	58+22.50	22.625 LEFT	N 598940	E 2250322		
2	58+22.50	22.625 RIGHT	N 598924	E 2250279		
3	59+22.00	11.271 LEFT	N 598843	E 2250347		
4	59+22.00	11.271 RIGHT	N 598835	E 2250326		
5	60+57.50	22.625 LEFT	N 598721	E 2250406		
6	60+57.50	22.625 RIGHT	N 598704	E 2250363		

NOTES

DESIGN SPECIFICATIONS: AASHTO LRFD 9TH EDITION 2020 WITH INTERIMS AND THE 2011 AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN 2ND EDITION WITH INTERIMS. SEISMIC CATEGORY "B" WITH AS= 0.152, SDS = 0.275, SD1 = 0.069 (1000 YEAR RETURN PERIOD).

REQUIRED

1) SUFFICIENT GROUND, ROCK, AND CORING INFORMATION FOR BRIDGE FOUNDATIONS.
2) APPROXIMATE EXISTING GROUND AND ROCK LINE.

NOTE: THIS DRAWING IS FOR FOUNDATION DATA ONLY AND NOT TO BE USED AS A LAYOUT.

P.E. NO. 18004-1227-94

PROJECT NO.	YEAR	SHEET NO.
BR-STP-24(69)	2024	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

BENCHMARKS

BM = CP-S03
STATION 54+95.87 (STATE ROUTE 24)
47.49' (RIGHT)
N 599204.2366
E 2250123.6681
EL. 1745.70'

BM = CP-STR627
STATION 59+75.43 (STATE ROUTE 24)
27.03' (RIGHT)
N 598780.0060
E 2250330.4400
EL. 1702.71'

BM = CP-STR632
STATION 60+25.40 (STATE ROUTE 24)
-90.98' (LEFT)
N 598775.6100
E 2250458.5270
EL. 1718.77'

2047 ADT = 8300
44'-0" ROADWAY WITH STD-1-ISS PARAPETS
DESIGN SPEED = 45 mph

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FOUNDATION DATA
STATE ROUTE 24
OVER
OBED RIVER
BRIDGE ID. NO. 18SR0240003
STATION 59+52.76
CUMBERLAND COUNTY
2024

DESIGNED BY RALPH ALSAFFAR DATE 08-21
DRAWN BY DATE
SUPERVISED BY DATE
CHECKED BY DATE

CORRECT
DIRECTOR OF STRUCTURES

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT		Project No. 1: 18008-2221-14 QUANTITY	% Utility Betterment	%Project Public	%Project Private	Amount Betterment
795-03.05	6IN PVC WATER LINE	LF		450	0.00%	100.00%	0.00%	
795-03.07	10IN PVC WATER LINE	LF		450	0.00%	100.00%	0.00%	
795-07.03	6IN X 6IN TAPPING SLEEVE AND VALVE	EA		1	0.00%	100.00%	0.00%	
795-07.10	10IN X 10IN TAPPING SLEEVE AND VALVE	EA		2	0.00%	100.00%	0.00%	
795-08.04	6IN GATE VALVE ASSEMBLY	EA		1	0.00%	100.00%	0.00%	
795-08.06	10IN GATE VALVE ASSEMBLY	EA		3	0.00%	100.00%	0.00%	
795-09.01	3/4IN WATER SERVICE METER ASSEMBLY	EA		3	0.00%	100.00%	0.00%	
795-09.28	3/4IN COPPER SERVICE PIPE	LF		100	0.00%	100.00%	0.00%	
795-09.29	1IN COPPER SERVICE PIPE	LF		40	0.00%	100.00%	0.00%	
795-11.02	FIRE HYDRANT ASSEMBLY	EA		2	0.00%	100.00%	0.00%	
795-13.05	CREEK CROSSING #1	LS		1	0.00%	100.00%	0.00%	
795-15.02	12IN STEEL CASING PIPE OPEN CUT METHOD	LF		100	0.00%	100.00%	0.00%	
795-15.25	16IN STEEL CASING PIPE OPEN CUT METHOD	LF		50	0.00%	100.00%	0.00%	
795-06.30	CUT/CAP EXISTING LINES (ALL SIZES)	EA		3	0.00%	100.00%	0.00%	

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-1
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTIONS
U4-1	INDEX OF SHEETS & ESTIMATED QUANTITIES
U4-2	LEGEND & GENERAL NOTES
U4-3	RIGHT OF WAY NOTES
U4-4	EXISTING CONDITIONS
U4-5	STA. 5+07.32 TO STA. 17+30.00
U4-6	WATER DETAILS
U4-7	WATER DETAILS
U4-8	ROAD CROSSINGS

City of Crossville
Mr. Tim Begley, Director of Engineering
City of Crossville
392 North Main Street
Crossville, Tennessee 38555-4232
Phone: (931) 456-6172
Fax: (931) 484-7713
Email: tim.begley@crossvilletn.gov

SEALED BY

JUSTIN S. EADE
REGISTERED ENGINEER
AGRICULTURE
ILLINOIS
STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

WATER
RELOCATION

INDEX OF SHEETS AND ESTIMATED QUANTITIES

SCALE: NTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

SYMBOLOGY AND LINESTYLES

EXISTING UTILITIES

6"W — 6"W	WATER
6"G — 6"G	GAS
6"SA — 6"SA	SEWER
6"FMS — 6"FMS	FORCE MAIN
C(UG) — C(UG)	CABLE (UG)
F(UG) — F(UG)	FIBER OPTIC (UG)
P/T — P/T	POWER/TELEPHONE
P — P	POWER
P(UG) — P(UG)	POWER (UG)
P/C — P/C	POWER/CABLE
P/TV — P/TV	POWER/TV
T/C — T/C	TELEPHONE/CABLE
T — T	TELEPHONE
T(UG) — T(UG)	TELEPHONE (UG)
TV(UG) — TV(UG)	TELEVISION (UG)
TV — TV	TELEVISION
⊠	FIRE HYDRANT
□ G.M.	GAS METER
□ G.V.	GAS VALVE
◎	MANHOLE
◎	SEWER MANHOLE
□ S.V.	SEWER VALVE
□ TEL. PED.	TELEPHONE PEDESTAL
⊖	POWER POLE
⊖	POWER POLE w/LIGHT
□ W.M.	WATER METER
□ W.V.	WATER VALVE

PROPOSED UTILITIES & MODIFICATIONS

6"W	PROPOSED WATER LINE
6"W RIP	EX. WATER LINE (RETIRED IN PLACE)
x—x— 6"W —x—x— 6"W —x—x— 6"W	EX. WATER LINE (TO BE REMOVED)
6"W	EX. WATER LINE (TO REMAIN)
⋈	PROPOSED WATER VALVE
▶	PROPOSED WATER REDUCER
■	PROPOSED WATER METER
●	PROPOSED HYDRANT

Project Notes

1. All materials, methods, and/or integral materials outlined in the utility specifications or drawings necessary to provide a complete and functional installation must be included in the Unit Price for the associated Utility Work item.

2. The contractor must maintain all services during the construction of the relocated facility. Any costs associated with installation of required temporary service lines due to the roadway construction sequence of work (i.e., cuts, fills, phasing, etc.) shall be included in the cost of the permanent utility items.

3. It shall be the responsibility of the Contractor to lay out all the facilities being relocated within the contract with regards to horizontal and vertical location..

4. For buried utilities, the contractor shall be required to provide to the Utility upon completion of the relocation work a set of as-built drawings for their records. These as-built drawings should be prepared as the installation progresses to ensure their accuracy.

5. Driveway, sidewalk and roadway temporary restoration shall be part of the in-place cost of placing the utility item within the ROW.

6. Any excavation of the stream channel area shall be separated from flowing water and accomplished during low flow conditions. This shall be accomplished by the use of flumes, lined diversion channel with sandbag berm, diversion pipe with sandbag dam at pipe inlet, or in some cases cofferdams. Alternatively, based on field conditions and contractor selection, the utility relocation may be accomplished using horizontal bore technology with no stream channel impacts.

7. All water lines shall be installed with a minimum cover of 36”, unless shown otherwise.

8. Contractor shall verify locations and depths of all existing utilities prior to beginning construction. Coordinates shown for connections to existing water lines are approximate.

9. Contractor shall verify locations and depths of all existing utilities prior to beginning road crossings and notify Engineer of any conflicts.

10. Contractor to coordinate location of “Service Connections” with the City of Crossville as well as any and all cuts & caps on existing service lines.

11. All 2” HDPE water line, Item #795-02.01 shall be used for “ 2” HDPE Casing Pipe Open Cut Method” installation.

12. Item #795-03.10 10” PVC Water Line shall be used as a casing pipe for 6” PVC Water Line where minimum distances with other utility lines or drainage line that cannot be maintained.

13. Elevations given for driveway/sideroads shall be maintained for entire width of the driveway/side road crossings.

14. HDPE water lines shall extend a minimum of 5’ past the end of casing.

NOTES FOR ESTIMATING COSTS OF BID ITEMS

WATER LINES
INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, MATERIALS, EQUIPMENT, EXCAVATION IN BOTH UNCONSOLIDATED AND ROCK, REMOVAL AND REPLACEMENT OF UNSUITABLE SOIL, ENVELOPE/BEDDING MATERIAL, BACKFILLING, FLOWABLE FILL, THRUST BLOCKING, CONCRETE DEADMAN, PIPE FUSION, TRACER WIRE, WARNING TAPE, APPURTENANCES, TEMPORARY/PERMANENT SHORING, MAINTAINING THE TRENCH, TESTING, FLUSHING, DISINFECTION, BACTERIOILOGICAL SAMPLING, TEMPORARY/PERMANENT SURFACE RESTORATION, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS.

INSTALLATION OF ALL FITTINGS USED IS TO BE INCLUDED IN THE BID PRICE OF THE PIPE. NO ADDITIONAL PAYMENT ITEM WILL BE SHOWN FOR FITTINGS.

HORIZONTAL DIRECTIONAL DRILLING
INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, AND TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO FLUID CONTAINMENT FOR COMPLETE HORIZONTAL DIRECTIONAL DRILLING INSTALLATION OF CASING PIPE OR UNCASED CARRIER PIPE IN BOTH UNCONSOLIDATED SOIL OR ROCK. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

CONNECTION TO EXISTING WATER LINE
INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR CONNECTING TO AN EXISTING WATER LINE INCLUDING TRAFFIC CONTROL.

TAPPING SLEEVES AND VALVES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO TAPPING SLEEVE, VALVE, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING AND RESTRAINT, TAP OF EXISTING LINE, AND TRAFFIC CONTROL.

WATER VALVES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO FITTINGS, VALVE, VALVE STEM EXTENSIONS, VALVE BOX AND COVER, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING, AND TRAFFIC CONTROL.

MISCELLANEOUS ASSEMBLIES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO MACHINERY, TOOLS OR APPARATUS NECESSARY FOR INSTALLATION OF ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS EXCEPT FOR SERVICE LINE WHICH IS PAID SEPERATELY FOR EACH FOOT INSTALLED.

WATER SERVICE LINES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION OF SERVICE LINE OR CASING FOR SERVICE LINE ON LONG SIDE AND SHORT SIDE OF MAIN.

LUMP SUM ITEMS
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION OF UNIT OR LUMP SUM ITEM AS SPECIFIED ON BID FORM..

REMOVAL
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR REMOVAL OF ITEM.

CASING PIPE - BORE AND JACK INSTALLATION
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, FITTINGS, TRACER WIRE, WARNING TAPE, UTILITY LINE MARKERS AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

CASING PIPE - OPEN CUT INSTALLATION
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, FITTINGS, TRACER WIRE, WARNING TAPE, UTILITY LINE MARKERS AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-2
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

SEALED BY

JUSTIN S. EADE — LICENSED ENGINEER — AGRICULTURE ENGINEERING — SUMMERTOWN — TENNESSEE — STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

WATER
RELOCATION

LEGEND AND GENERAL NOTES

SCALE: NTS

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO. ___

RIGHT-OF-WAY

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, ROADWAY DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(8) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

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

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106 NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111 WILL BE REQUIRED.

UTILITY OWNERS

CABLE:
CHARTER COMMUNICATIONS
38 WEST BROAD STREET
COOKEVILLE, TN 38501
CONTACT: MR. LESTER HAFFNER
OFFICE PHONE: 931 675 0406
FAX: 931 644 5705
Email: Leslie.haffner@charter.com

CABLE:
FIBER OPTICS: VOLFIRST
P.O. BOX 670
MCMINNVILLE, TN 37111
CONTACT: MR. RICHARD BOYD
OFFICE PHONE: 931 668 6692
FAX 931 668 7653
Email: Rboyd@blomed.net

ELECTRIC:
VOLUNTEER ENERGY COOPERATIVE
P.O. BOX 277
DECATUR, TN 37322
CONTACT: MR. MATTHEW TEAGUE
OFFICE PHONE: 423 334 7040
FAX 423 334 7005

WATER:
CITY OF CROSSVILLE
392 NORTH MAIN STREET
CROSSVILLE, TN 38555-4232
CONTACT: MR. TIM BEGLEY
OFFICE PHONE: 931 456 5680
FAX: 931 484 7713

GAS:
MIDDLE TENNESSEE NATURAL GAS
P.O. BOX 670
SMITHVILLE, TN 37166
CONTACT: MR. MATTHEW WHITAKER
OFFICE PHONE: 615 597 0513
FAX 615 597 6331

TELEPHONE:
FRONTIER/CITIZENS COMMUNICATIONS COMPANY
174 SPARTA HIGHWAY
CROSSVILLE, TN 38572
CONTACT: MR. JIM HEATHERLY
OFFICE PHONE: 865 947 8200

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-3
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

UTILITY

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS, AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE, AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN THREE (3) OR NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

DISTURBED AREA		
IN BETWEEN SLOPE LINES	2.009	(AC)
15 FOOT WIDE STRIP (OUTSIDE SLOPE LINES)	0.949	(AC)
TOTAL DISTURBED AREA	2.957	(AC)
TOTAL PROJECT AREA	3.306	(AC)

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 BOOK	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERMANENT	SLOPE	CONSTRUCTION (1)	AIR RIGHTS
~~1~~	~~FRED STOUT~~	~~87I~~	~~005.00~~	~~1493~~	~~692~~	~~1.010~~		~~1.010~~				~~1.010~~					
~~2~~	~~FRED STOUT~~	~~87I~~	~~006.00~~	~~1493~~	~~692~~	~~1.040~~		~~1.040~~				~~1.040~~					
~~3~~	~~JAMES JOSEPH MITCHELL~~	~~086~~	~~057.00~~	~~285~~	~~788~~		~~115.910~~	~~115.910~~					~~115.910~~				
4	TONY PAGE AND KARI PAGE, HUSBAND AND WIFE	087I A	015.00	1603	630	33.260		33.260				33.260				0.290	
~~5~~	~~VONDA M NEWBY AND HUSBAND CHARLES R NEWBY~~	~~087~~	~~053.00~~	~~1327~~	~~678~~		~~4.300~~	~~4.300~~					~~4.300~~				
6	SHARON A SHELLEY AND ROBIN L JONES	087	054.00	1236	1981		3.330	3.330		0.136	0.136		3.194				
7	CUMBERLAND COUNTY	087	59.00	1262	1312	67.030		67.030	0.349		0.349	66.681					
8	JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE	087	055.00	1669	1321		2.070	2.070		0.151	0.151		1.919				
9	DOROTHY L. LILLY	087	056.00	1300	1976		2.020	2.020		2864 S.F.	2864 S.F.		1.954				
ACQUISITION TOTALS (ACRES)										**0.702**						**0.290**	

(1) ESMT. NEEDED FOR HAUL ROAD.

SEALED BY

JUSTIN S. EADE — LICENSED PROFESSIONAL ENGINEER — AGRICULTURE — SUMNER — 119481 — STATE OF TENNESSEE

HUSSEY GAY BELL — Established 1958
4117 HILLSBORO PIKE, SUITE 206, NASHVILLE, TENNESSEE 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

WATER
RELOCATION

R.O.W. AND UTILITY NOTES, UTILITY OWNERS, & R.O.W. ACQUISITION

SCALE: NTS

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-4
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

N&C IN EDGE OF PAVEMENT

CP-3
N 599204.2366
E 2250123.6680
EL. 1745.70
ALUM. DISK ATOP 1" REBAR STAMPED "18-24-03"

27.2'WSW

48.3'ESE

88.4'N

CONC. ROW MARKER

N&C IN UTILITY POLE

TONY PAGE AND KARI PAGE, HUSBAND AND WIFE

3900 CEMETERY RD
SEBRING, FL 33870
087I-A-015.00
PB 8, PG 96, LT 1
ESMT 1342/1382
ROW 382/316
DB 1209/1657
32.98 AC. +/-

N

75.00'

7

CUMBERLAND COUNTY
COURTHOUSE BOX 4
CROSSVILLE, TN 38555
087-059.00
ESMT DB 1328/1909
DB 1262/1312
67.03 AC. +/-

PAVILLION

PAD

PAD

STR-2

STR-3

FIELD VERIFIED (TO REMAIN IN PLACE) 4'x3'x56' EX.CONC. BOX

INV-1736.03

CHAIN LINK

ASP.

24" CMP

INV-1737.66

WTL-1

INDST. PARK

ROCK WALL

MAINLINE STA. 66+35.90
N 598175.0179
E 2250592.2046

STR-1

OBED RIVER

SPUR-STR632

P/T/C

SPEED LIMIT

PAD

W.M.

T.B.R.

APPROX. W.V.

CHAIN LINK TO BE REMOVED

W.V. TO BE REMOVED

P/T/C

W.V.

P/T/C

10"W

GAS

GRV.

S 20° 59' 04" E

EXISTING BRIDGE TO BE REMOVED

APPROX. 18"CMP

GATE

GRAV.

CHAINLINK FENCE

SIGN

TRUCKS ENTERING HIGHWAY

INV-1730.47

INV-1728.68

MNT. VIEW

EXIST. G.R. TO BE REMOVED

EXIST. G.R. TO BE REMOVED

INV-1733.39
12CMP

15CMP

INV-1738.69

TO BE REMOVED

INV-1725.14

INV-1725.75

18CMP

WOOD

INV-1725.55

INV-1731.48

ROCK OUTCROP

SCHOOL ZONE

SCHOOL ZONE SPEED LIMIT

ROCK

ASP.

W.M.

P/T

ROCK RETWALL

TOP-1733.91
INV. IN-1723.91

CUMBERLAND EXTERMINATING

ASP.

CENTER LANE ONLY
BURIED FIBER (CABLE)

GRV.

TREE CITY U.S.A.

TOP-1739.38
INV. IN-1728.42
INV. OUT-1728.35

UGC

GAS

CP-3

T/C

P

P/T/C

ASP.

SIDEWALK

15-ROCK-RES

5

~~VONDA M. NEWBY AND HUSBAND CHARLES R. NEWBY~~

P O BOX 670
BLAIRSVILLE, GA 30514
087-053.00
ROW DB 397-513
DB 1327/678
4.30 AC. +/-

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2724 1947
DB 117 PG 108
RECORDS OF CUMBERLAND COUNTY OFFICE (APPROX. LOCATION)

STR-1

SEPTIC

1S-BR-RES

SW.

GARAGE

3

~~JAMES JOSEPH MITCHELL~~

2665 HWY 70 NORTH
CROSSVILLE, TN 38555
086-057.00
285/768
115.91 AC. +/-
ESMT DB 1100/705

6

SHARON A. SHELLEY
& ROBIN L JONES
96 ROBBINS NEST DR
CROSSVILLE, TN 38571
087-054.00
PB 5, PG 64, LT 17: OAKWOOD LAND SUBD
DB 1236, PG 1981
3.33 AC. +/-

8

JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE
P O BOX 1094
CROSSVILLE, TN 38557
WEST AVE 2415
087-055.00
PB 5, PG 64, LT 16
DB 217/243
2.07 AC. +/-

INV. OUT-1733.29

9

DOROTHY L. LILLY
308 MYERS AVE
BECKLEY, WV 25801
087-056.00
PB 5, PG 64, LT 15
DB 1300, PG 1976
2.02 AC. +/-

75.00'

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

CONTROL POINT TABLE

Point	North	East	Elevation	Station	Offset	Feature
S03	599204.2366	2250123.6681	1745.7000	54+95.87	47.4947	XCP
STR627	598780.0060	2250330.4400	1702.7110	59+75.43	27.0335	XSPUR
STR632	598775.6100	2250458.5270	1718.7740	60+25.40	-90.9843	XSPUR

SEALED BY

JUSTIN S. EADE
LICENSED PROFESSIONAL ENGINEER
AGRICULTURE COMMERCE
STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

WATER RELOCATION

EXISTING CONDITIONS

SCALE: 1" = 50'

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-5
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

N

18004-3227-04
BEGIN PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-04
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

18004-2227
END PROJECT NO. BR-STP-24
STA. 66+00.00
N 598206.5356 E 2250579.3489

55 60 65

POT 55+00.00

POT 2+87.81

PT 0+94.27

PROPOSED CONST. ESMT.

FILL

PC 0+55.00

S 20° 59' 04" E

28.0' R

N 69° 00' 56" E

60"-18" S.D. CUT

S 32° 25' 00" E

S 20° 59' 04" E

BRIDGE ID 18SR0240003
PROPOSED 202'-10"
2-SPAN CONCRETE
GIRDER BRIDGE
SKEW 90°
W/ CLASS"B" RIP-RAP
1475 TONS

BEG. PROP. BRIDGE STA. 58+21.00

END PROP. BRIDGE STA. 60+59.00

PT 57+43.69

POT 66+35.89

PROPOSED 10" PVC CLASS 250 WATER LINE NO.1

REMOVE EXISTING 4" MASTER METER

REMOVE EXISTING (2) 6" MASTER METERS

5'-6" INSIDE R.O.W. TYP.

STA. 00+00 - WL*1
N-598690.6520
E-2250461.3080
CONNECT TO EX. 10" WATER LINE
SEE DETAIL *3 - THIS SHEET
INSTALL :
TEST PORT TO BE DETERMINED BY ENGINEER/IN FIELD
10" TAPPING SLEEVE & VALVE
10" CUT & CAP

STA. 00+64 - WL*3
N-598475.9792
E-2250404.4441
INSTALL :
FIRE HYDRANT ASSEMBLY
ON PROPERTY LINE

INSTALL :
WATER SERVICE ASSEMBLY

PROPOSED 1" COPPER SERVICE LINE

PROPOSED 6" PVC CLASS 250
WATER LINE NO.3

STA. 00+00 - WL*2
STA. 00+00 - WL*3
N-598417.5995
E-2250430.9200
INSTALL :
6" TEE
6" GATE VALVE

END IMPACT STR-2
STA.62+68.00
-68.00

PROP. 20"-48" PIPE
STA.63+16.81
TYPE "A" EW
OUT. EL. 1722.12
SKEW 46°
SEE SHT.8

PROP. NO.3 7'X7' M.H.
STA. 63+16.80
TOP EL. 1734.43
IN. EL. 1722.79
OUT. EL. 1722.58

4'X3'X55' EX. CONC. BOX TO REMAIN IN PLACE
EXIST. CMP TO REMAIN IN PLACE
TOP EL. 1733.91
INV. EL. 1723.91

STREAM CROSSING *1
(OPEN CUT)
SEE CROSSING DETAIL
SHEET U3-7A
40 LF - 16" STEEL CASING
10' MIN FROM EDGE OF BANK
TOP OF CASING EL. 1716.00

STA. 02+44 - WL*1
N-598462.7218
E-2250548.5635
INSTALL :
10" TEE
3 - 10" GATE VALVES

TOP OF PIPE EL. 1732.00
2 FT. UNDER GAS LINE

ROAD CROSSING *1
TDOT STA. 63+50.00
SEE SHEET U3-8

PROPOSED 6" PVC CLASS 250
WATER LINE NO.2

INSTALL :
WATER SERVICE ASSEMBLY

STA. 04+34 - WL*1
N-598280.0103
E-2250600.8394
INSTALL :
FIRE HYDRANT ASSEMBLY

STA. 04+48 - WL*1
N-598266.8629
E-2250604.6010
SEE DETAIL *1 - THIS SHEET
INSTALL :
10" TAPPING SLEEVE & VALVE
10" CUT & CAP

STA. 03+82 - WL*2
N-598200.2982
E-2250548.1212
SEE DETAIL *2 - THIS SHEET
INSTALL :
6" TAPPING SLEEVE & VALVE
6" CUT & CAP

INDST. PARK

EX. 24" CMP

CUMBERLAND COUNTY
COURTHOUSE BOX 4
CROSSVILLE, TN 38555
087-059.00
ESMT DB 1328/1909
DB 1262/1312
67.03 AC. +/-

TONY PAGE AND KARI PAGE,
HUSBAND AND WIFE

3900 CEMETERY RD
SEBRING, FL 33870
087I-A-015.00
PB 8, PG 96, LT 1
ESMT 1342/1382
ROW 382/316
DB 1209/1657
32.98 AC. +/-

SHARON A. SHELLEY
& ROBIN L JONES
96 ROBBINS NEST DR
CROSSVILLE, TN 38571
087-054.00
PB 5, PG 64, LT 17: OAKWOOD LAND SUBD
DB 1236, PG 1981
3.33 AC. +/-

JOHN E. BARNWELL AND
TINA L. BARNWELL,
HUSBAND AND WIFE
P O BOX 1094
CROSSVILLE, TN 38557
WEST AVE 2415
087-055.00
PB 5, PG 64, LT 16
DB 217/243
2.07 AC. +/-

DOROTHY L. LILLY
308 MYERS AVE
BECKLEY, WV 25801
087-056.00
PB 5, PG 64, LT 15
DB 1300, PG 1976
2.02 AC. +/-

N&C IN EDGE OF PAVEMENT

CP-3
N 599204.2366
E 2250123.6680
EL. 1745.70
ALUM. DISK ATOP 1" REBAR STAMPED "18-24-03"

27.2' WSW

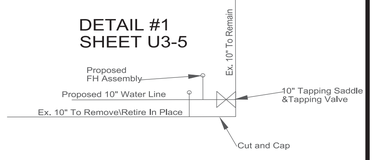
48.3' ESE

88.4' N

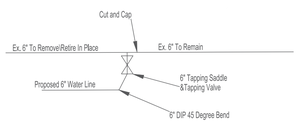
CONC. ROW MARKER

N&C IN UTILITY POLE

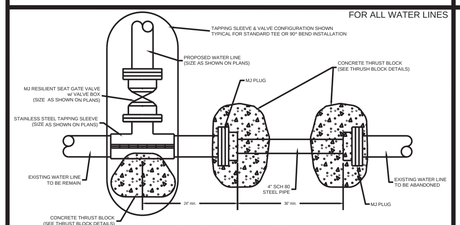
DETAIL #1
SHEET U3-5



DETAIL #2
SHEET U3-5



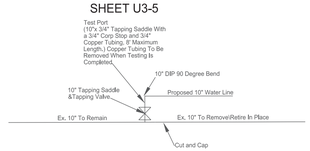
FOR ALL WATER LINES



CONNECTION TO EXISTING WATER LINE AND ABANDON DETAIL

NOT TO SCALE

DETAIL #3
SHEET U3-5



NOTE:
ALL ITEMS SHOWN SHALL BE INCLUDED IN PRICE OF CONNECTION TO EXISTING WATER LINE INCLUDING LABOR.

CONTROL POINT TABLE

Point	North	East	Elevation	Station	Offset	Feature
S03	599204.2366	2250123.6681	1745.7000	54+95.87	47.4947	XCP
STR627	598780.0060	2250330.4400	1702.7110	59+75.43	27.0335	XSPUR
STR632	598775.6100	2250458.5270	1718.7740	60+25.40	-90.9843	XSPUR

SEALED BY

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HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

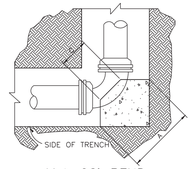
THE CITY OF
CROSSVILLE, TENNESSEE

WATER RELOCATION

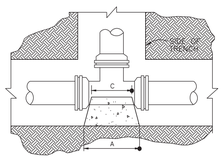
STA. 55+00 TO STA. 66+35.89

SCALE: 1" = 50'

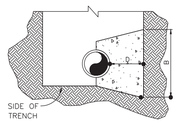
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---



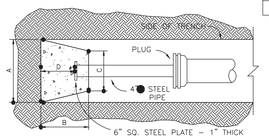
M.J. 90° BEND



M.J. TEE



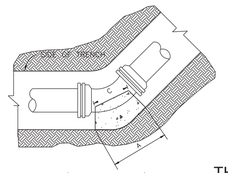
TYPICAL SECTION



M.J. PLUG

SIZE	TEE						
Main	2"- 6"	8" - 12"	8"- 10"	12"	12"	12"	18"
Branch	2"- 6"	2"- 6"	8"- 10"	2"- 6"	8"- 10"	12"	16"- 18"
A	26"	26"	43"	26"	43"	52"	70"
B	26"	26"	43"	26"	43"	52"	70"
C	12"	12"	12"	12"	12"	12"	30"
D	13"	13"	21"	13"	21"	26"	24"

PLUG							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	26"	26"	26"	34"	43"	52"	70"
B	26"	26"	26"	34"	43"	52"	70"
C	12"	12"	12"	12"	12"	12"	30"
D	11"	11"	11"	15"	22"	32"	32"



M.J. 45°- 22 1/2°- 11 1/4° BENDS

90° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	16"	16"	26"	33"	40"	50"	70"
B	16"	16"	24"	33"	40"	50"	70"
C	9"	9"	12"	12"	15"	16"	22"
D	8"	8"	12"	16"	20"	25"	24"

45° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	12"	12"	18"	24"	31"	37"	52"
B	12"	12"	18"	24"	31"	37"	52"
C	8"	8"	10"	12"	14"	16"	14"
D	6"	6"	9"	12"	15"	18"	18"

22-1/2° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	13"	18"	23"	26"	40"
B	9"	9"	13"	18"	23"	26"	40"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	6"	9"	11"	13"	16"

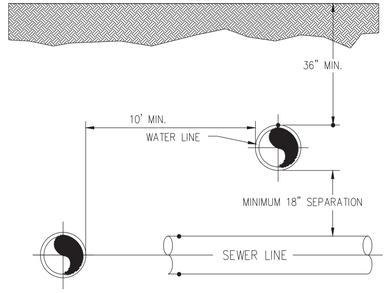
11-1/4° BEND							
SIZE	2"	4"	6"	8"	10"	12"	18"
A	9"	9"	11"	13"	16"	18"	30"
B	9"	9"	11"	13"	16"	18"	30"
C	8"	8"	10"	12"	14"	16"	15"
D	4"	4"	5"	6"	8"	9"	16"

NOTE: PIPE SHALL BE WRAPPED IN 5 MIL. PLASTIC WHERE THRUST BLOCKS ARE INSTALLED.

PLASTIC LINING SHALL NOT COVER OR IMPAIR THE FLOW OF WATER FROM THE WEEP HOLE ON A FIRE HYDRANT OR BLOW OFF HYDRANT ASSEMBLY.

THRUST BLOCK DETAILS & DIMENSIONS

NOTE: M.J. = MECHANICAL JOINT.
THRUST BLOCK TO BE POURED AGAINST UNDESTURBED EARTH.

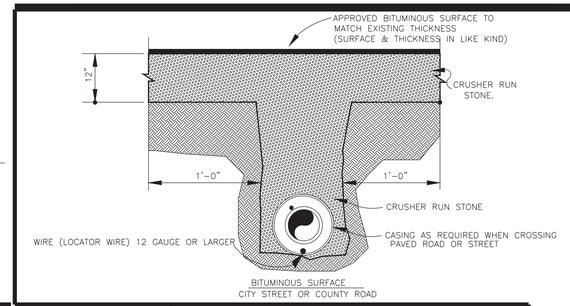


SEPARATION OF PIPED UTILITIES

NOT TO SCALE

NOTE:
1. **CLASS 250 PSI PIPE SHALL BE USED** UNLESS SPECIFIED OTHERWISE.
2. LOCATOR WIRE SHALL BE PLACED IN CASING WITH CARRIER PIPE.
3. TRENCHES SHALL BE OPENED SUFFICIENTLY TO ALLOW INSTALLATION AND REMOVAL OF CARRIER PIPE IN MANUFACTURED LENGHTS FROM EITHER END OF THE CASING PIPE.
4. SPACERS SHALL BE USED IN ALL CASINGS WHERE CARRIER PIPE IS 2" OR GREATER, SPACERS SHALL BE A MAXIMUM OF 7 FEET AND WITHIN 2' OF EACH BELL.APART WITH A MINIMUM 2 INCH SPACE BETWEEN THE CASING AND THE CARRIER PIPE.

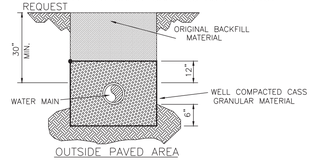
STEEL CASING SHALL BE USED IN ALL BORE AND JACK CROSSINGS, AND WHEN THE THE TOP OF THE CASING PIPE IS LESS THAN 24" BELOW ROAD SURFACE OR WHEN THE THE CASING SHALL BE INSTALLED GREATER THAN 7' DEEP FROM ROAD SURFACE.. STEEL CASING SHALL HAVE A MINIMUM CLEARANCE OF 2 INCHES BETWEEN CASING AND CARRIER PIPE. SPACERS SHALL BE INSTALLED NO MORE THAN 18" FROM EITHER END OF CASING.



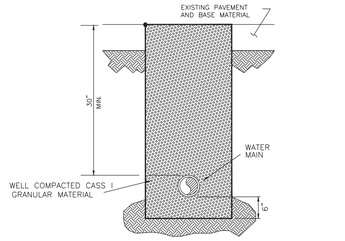
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-6
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

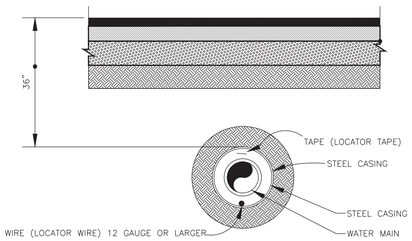
REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST



OUTSIDE PAVED AREA

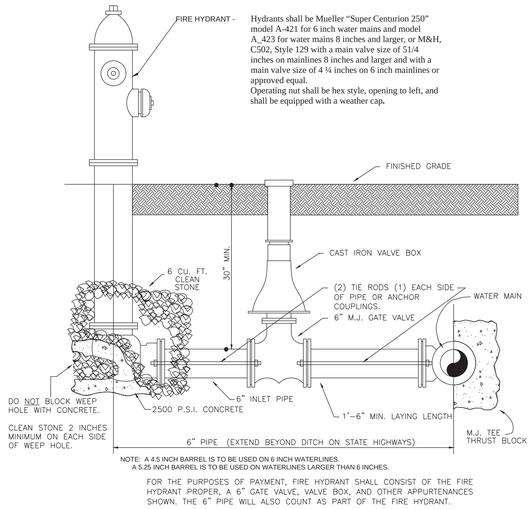


INSIDE PAVED AREA



BACKFILL

NOTE: METALIC LOCATOR TAPE LABELED
"WATER" TO BE PLACED IN TRENCH
6" - 8" ABOVE WATER MAIN
LOCATOR WIRE (12 GAUGE OR LARGER) TO BE PLACED IN BOTTOM OF DITCH.



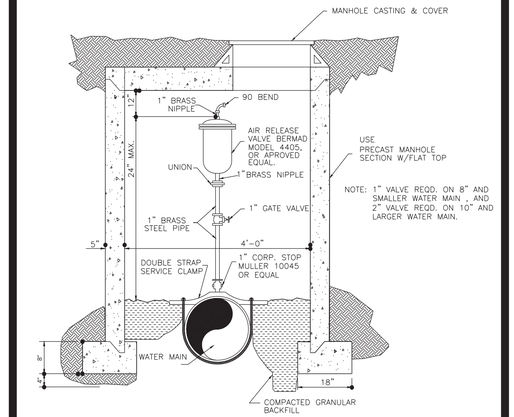
Hydrants shall be Mueller "Super Centurion 250" model A-421 for 6 inch water mains and model A_423 for water mains 8 inches and larger, or M&H, C502, Style 129 with a main valve size of 51/4 inches on mainlines 8 inches and larger and with a main valve size of 4 ¼ inches on 6 inch mainlines or approved equal.
Operating nut shall be hex style, opening to left, and shall be equipped with a weather cap.

NOTE: A 4.5 INCH BARREL IS TO BE USED ON 6 INCH WATERLINES.
A 5.25 INCH BARREL IS TO BE USED ON WATERLINES LARGER THAN 6 INCHES.

FOR THE PURPOSES OF PAYMENT, FIRE HYDRANT SHALL CONSIST OF THE FIRE HYDRANT PROPER, A 6" GATE VALVE, VALVE BOX, AND OTHER APPURTENANCES SHOWN. THE 6" PIPE WILL ALSO COUNT AS PART OF THE FIRE HYDRANT.

FIRE HYDRANT ASSEMBLY

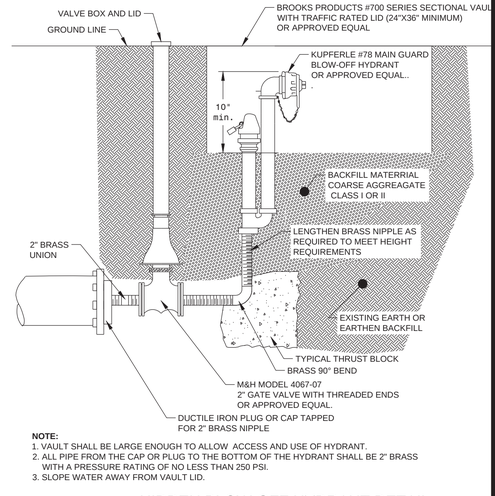
NOT TO SCALE



AIR RELEASE VALVE ASSEMBLY

AIR RELEASE VALVE ASSEMBLY

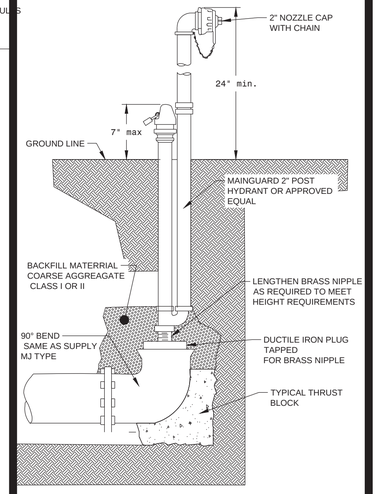
NOT TO SCALE



NOTE:
1. VAULT SHALL BE LARGE ENOUGH TO ALLOW ACCESS AND USE OF HYDRANT.
2. ALL PIPE FROM THE CAP OR PLUG TO THE BOTTOM OF THE HYDRANT SHALL BE 2" BRASS WITH A PRESSURE RATING OF NO LESS THAN 250 PSI.
3. SLOPE WATER AWAY FROM VAULT LID.

HIDDEN BLOW-OFF HYDRANT DETAIL

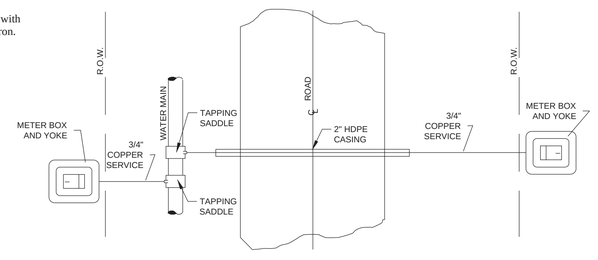
NOT TO SCALE



BLOW-OFF HYDRANT DETAIL

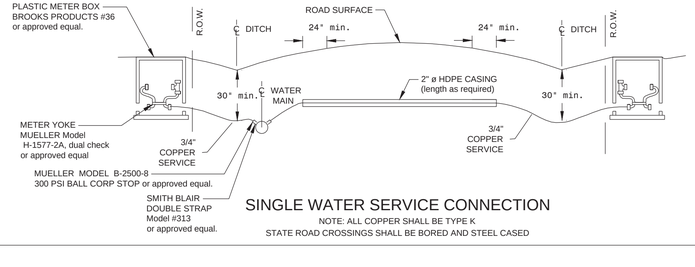
NOTE; DO NOT BLOCK WEEP HOLE WITH CONCRETE.

All meters shall be equipped with Radio Read Technology by Itron.



PLAN VIEW

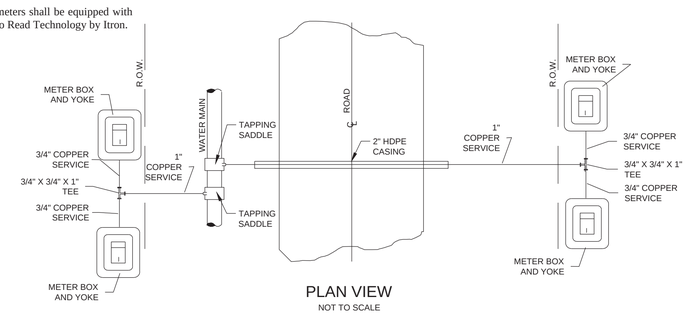
NOT TO SCALE



SINGLE WATER SERVICE CONNECTION

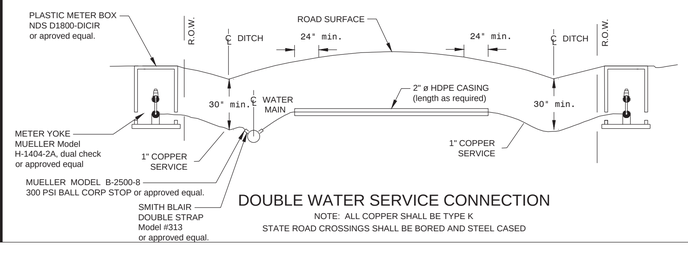
NOTE: ALL COPPER SHALL BE TYPE K
STATE ROAD CROSSINGS SHALL BE BORED AND STEEL CASED

All meters shall be equipped with Radio Read Technology by Itron.



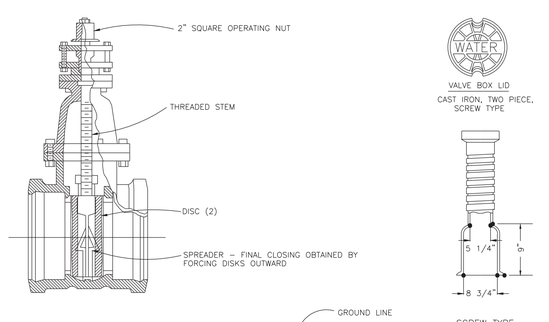
PLAN VIEW

NOT TO SCALE



DOUBLE WATER SERVICE CONNECTION

NOTE: ALL COPPER SHALL BE TYPE K
STATE ROAD CROSSINGS SHALL BE BORED AND STEEL CASED



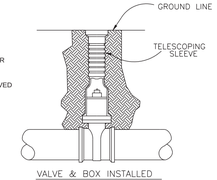
GATE VALVE SECTION

(CLOSED)

GATE VALVES SHALL BE (AWWA STANDARD 509) MUELLER OR APPROVED EQUAL

TAPPING SLEEVES SHALL BE MUELLER H-615 OR APPROVED EQUAL.

TAPPING VALVES SHALL BE MUELLER T-2360-16 OR APPROVED EQUAL FOR SIZES UP TO 12 INCHES MUELLER H-667 FOR 14 INCH THROUGH 24 INCH OR APPROVED EQUAL.



VALVE & BOX INSTALLED

SCREW TYPE VALVE BOX

Bouchard No. 8006, Roadway Type, Nashville Standard or approved equal. The cover shall be marked "WATER".

VALVE & VALVE BOX

NOT TO SCALE

NOTE: WHENEVER A WATER VALVE IS ADJACENT TO A TEE IN THE WATER LINE THE WATER VALVE SHALL BE ATTACHED TO THE TEE USING RODDING OR ALL THREAD.

SEALED BY

JUSTIN S. EADE
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COMMERCE
No. 119175
STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 HILLSBORO PIKE, SUITE 206, NASHVILLE, TENNESSEE 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

WATER RELOCATION

WATER DETAILS

SCALE: NTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

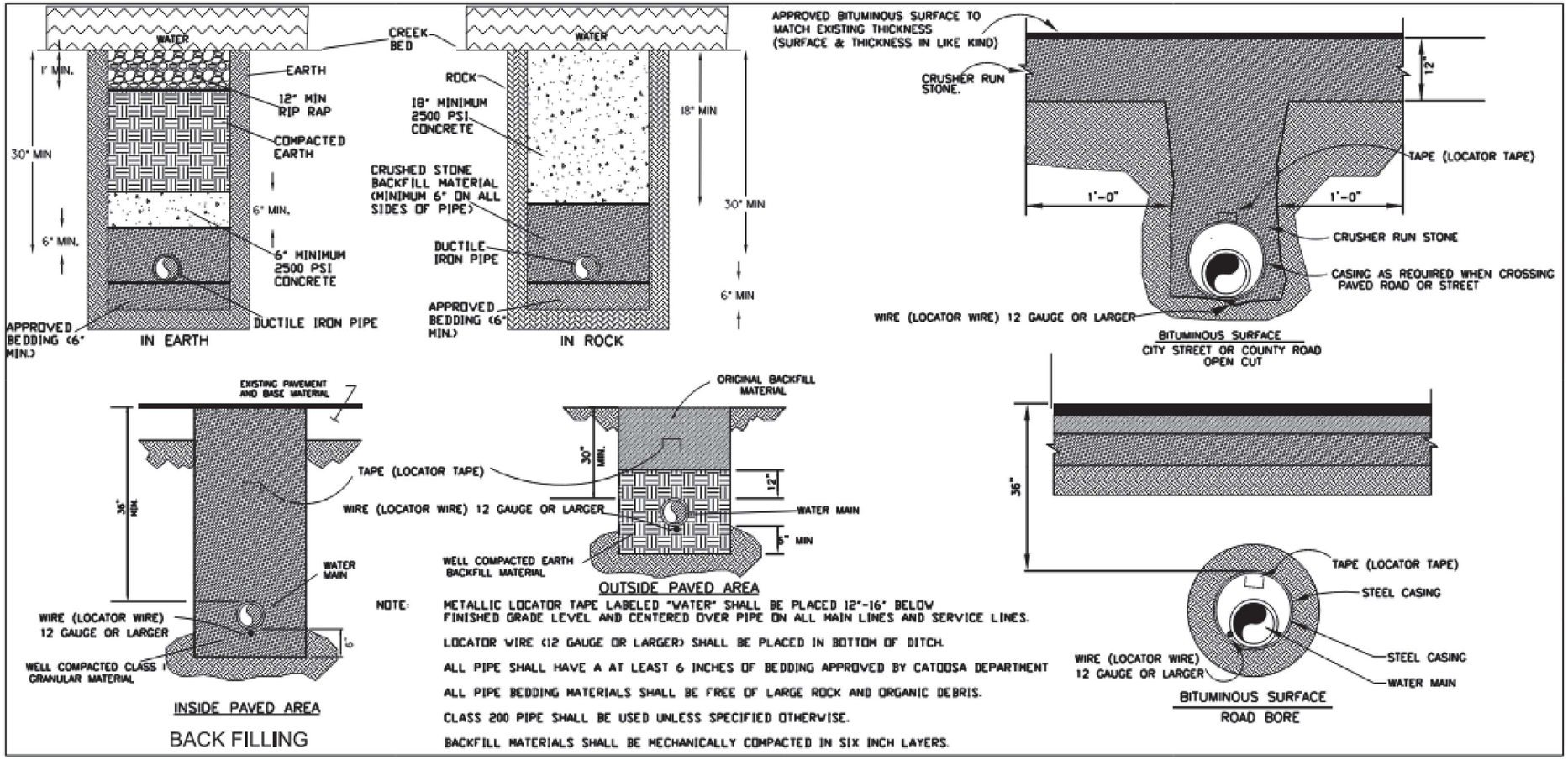
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-7
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

TYPICAL STREAM CROSSING

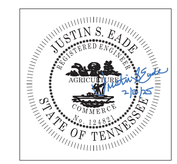
NO SCALE



BACK FILLING

NOTE:
1. METALLIC LOCATOR TAPE LABELED "WATER" SHALL BE PLACED 12"-16" BELOW FINISHED GRADE LEVEL AND CENTERED OVER PIPE ON ALL MAIN LINES AND SERVICE LINES.
2. LOCATOR WIRE (12 GAUGE OR LARGER) SHALL BE PLACED IN BOTTOM OF DITCH.
3. ALL PIPE SHALL HAVE A AT LEAST 6 INCHES OF BEDDING APPROVED BY CATOOSA DEPARTMENT
4. ALL PIPE BEDDING MATERIALS SHALL BE FREE OF LARGE ROCK AND ORGANIC DEBRIS.
5. CLASS 200 PIPE SHALL BE USED UNLESS SPECIFIED OTHERWISE.
6. BACKFILL MATERIALS SHALL BE MECHANICALLY COMPACTED IN SIX INCH LAYERS.

SEALED BY



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THE CITY OF
CROSSVILLE, TENNESSEE

WATER RELOCATION

WATER DETAILS

SCALE: NTS

TENNESSEE D.O.T.

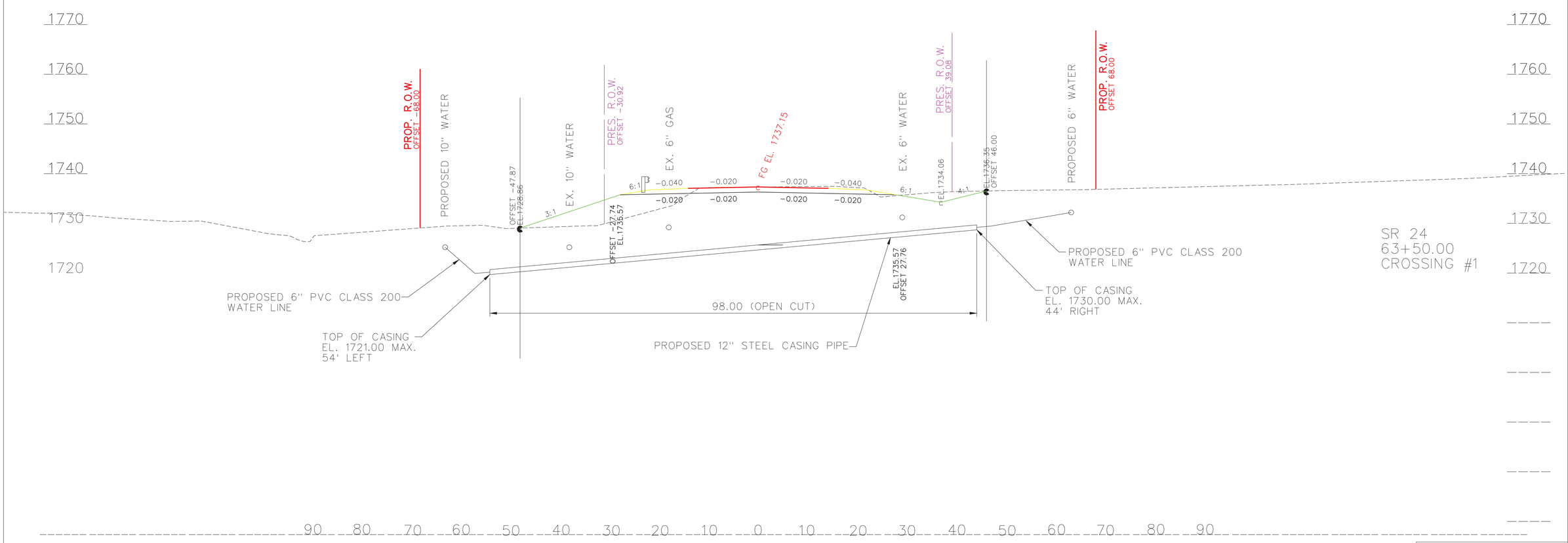
DESIGN DIVISION

FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U4-8
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST



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THE CITY OF
CROSSVILLE, TENNESSEE

WATER RELOCATION

ROAD CROSSING

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

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

ESTIMATED UTILITY QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	Project No. 1: 18002-3233-94 QUANTITY	% Utility Betterment	%Project Public	%Project Private	Amount Betterment
797-09.46	CUT AND CAP 6IN FORCE MAIN	EA		1	0.00%	100.00%	0.00%	$0.00

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U5-1
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

INDEX OF DRAWINGS

SHEET NO.	DESCRIPTIONS
U5-1	INDEX OF SHEETS & ESTIMATED QUANTITIES
U5-2	LEGEND & GENERAL NOTES
U5-3	RIGHT OF WAY NOTES
U5-4	EXISTING CONDITIONS
U5-5	STA. 5+07.32 TO STA. 17+30.00
U5-6	SEWER DETAILS

City of Crossville

Mr. Tim Begley, Director of Engineering
City of Crossville
392 North Main Street
Crossville, Tennessee 38555-4232
Phone: (931) 456-6172
Fax: (931) 484-7713
Email: tim.begley@crossvilletn.gov

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THE CITY OF
CROSSVILLE, TENNESSEE

SEWER
RELOCATION

INDEX OF SHEETS AND ESTIMATED QUANTITIES

SCALE: NTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

SYMBOLOGY AND LINESTYLES

EXISTING UTILITIES

6"W — 6"W	WATER
6"G — 6"G	GAS
6"SA — 6"SA	SEWER
6"FMS — 6"FMS	FORCE MAIN
C(UG) — C(UG)	CABLE (UG)
F(UG) — F(UG)	FIBER OPTIC (UG)
P/T — P/T	POWER/TELEPHONE
P — P	POWER
P(UG) — P(UG)	POWER (UG)
P/C — P/C	POWER/CABLE
P/TV — P/TV	POWER/TV
T/C — T/C	TELEPHONE/CABLE
T — T	TELEPHONE
T(UG) — T(UG)	TELEPHONE (UG)
TV(UG) — TV(UG)	TELEVISION (UG)
TV — TV	TELEVISION
⊠	FIRE HYDRANT
□ G.M.	GAS METER
□ G.V.	GAS VALVE
◎	MANHOLE
◎	SEWER MANHOLE
□ S.V.	SEWER VALVE
□ TEL. PED.	TELEPHONE PEDESTAL
⊖	POWER POLE
⊖	POWER POLE w/LIGHT
□ W.M.	WATER METER
□ W.V.	WATER VALVE

PROPOSED UTILITIES & MODIFICATIONS

6"W	PROPOSED WATER LINE
6"W RIP	EX. WATER LINE (RETIRED IN PLACE)
—x—x— 6"W —x—x— 6"W —x—x— 6"W	EX. WATER LINE (TO BE REMOVED)
6"W	EX. WATER LINE (TO REMAIN)
⋈	PROPOSED WATER VALVE
▶	PROPOSED WATER REDUCER
■	PROPOSED WATER METER
●	PROPOSED HYDRANT

Project Notes

1. All materials, methods, and/or integral materials outlined in the utility specifications or drawings necessary to provide a complete and functional installation must be included in the Unit Price for the associated Utility Work item.
2. The contractor must maintain all services during the construction of the relocated facility. Any costs associated with installation of required temporary service lines due to the roadway construction sequence of work (i.e., cuts, fills, phasing, etc.) shall be included in the cost of the permanent utility items.
3. It shall be the responsibility of the Contractor to lay out all the facilities being relocated within the contract with regards to horizontal and vertical location.
4. For buried utilities, the contractor shall be required to provide to the Utility upon completion of the relocation work a set of as-built drawings for their records. These as-built drawings should be prepared as the progresses to ensure their accuracy.
5. Driveway, sidewalk and roadway temporary restoration shall be part of the in-place cost of placing the utility item within the ROW.
6. Any excavation of the stream channel area shall be separated from flowing water and accomplished during low flow conditions. This shall be accomplished by the use of flumes, lined diversion channel with sandbag berm, diversion pipe with sandbag dam at pipe inlet, or in some cases cofferdams. Alternatively, based on field conditions and contractor selection, the utility relocation may be accomplished using horizontal bore technology with no stream channel impacts.
7. All sewer lines shall be installed with a minimum cover of 36",unless shown otherwise.
8. Coordinates and elevations shown for connections to existing sewer lines are approximate.
9. Contractor shall verify locations and depths of all existing utilities prior to beginning road crossings and notify Engineer of any conflicts.
10. Contractor to coordinate location of "Service Connections" with the City of Crossville.

NOTES FOR ESTIMATING COSTS OF BID ITEMS

SEWER LINES OR FORCE MAINS
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE EXCAVATION INCLUDING BUT NOT LIMITED TO BEDDING, BACKFILLING, FITTINGS, THRUST BLOCKING, PIPE FUSION, APPURTENANCES, FLOWABLE FILL, MAINTAINING THE TRENCH, TESTING, CHECK DAMS, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE FOR GRAVITY SEWER LINES OR FORCE MAINS AS SPECIFIED ON THE PLANS. DUCTILE IRON PIPE GRAVITY SEWER LINES SHALL BE EPOXY LINED.

INSTALLATION OF ALL FITTINGS USED IS TO BE INCLUDED IN THE BID PRICE OF THE PIPE. NO ADDITIONAL PAYMENT ITEM WILL BE SHOWN FOR FITTINGS.

HORIZONTAL DIRECTIONAL DRILLING
INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, AND TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO FLUID CONTAINMENT FOR COMPLETE HORIZONTAL DIRECTIONAL DRILLING INSTALLATION OF CASING PIPE OR UNCASED CARRIER PIPE IN BOTH UNCONSOLIDATED SOIL OR ROCK. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

CONNECTION TO EXISTING SEWER LINE, MANHOLE OR FORCE MAIN
INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR CONNECTING TO AN EXISTING FORCE MAIN, SEWER LINE, PUMP STATION, OR MANHOLE AS SPECIFIED ON PLANS, INCLUDING TRAFFIC CONTROL.

MANHOLES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY FOR INSTALLATION OF PRECAST MANHOLE BOTH PREFORMED BASE OR OPEN BOTTOM (DOGHOUSE), INCLUDING BUT NOT LIMITED TO VENT ASSEMBLY (WHERE REQUIRED), CRUSHED STONE, PIPE TO MANHOLE CONNECTORS, EXCAVATION, BACKFILL, BUTYL RESIN GASKET, MANHOLE STEPS, ASPHALTIC WATERPROOFING, FRAME AND COVER, AND TRAFFIC

SEWER OR FORCE MAIN VALVES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BOT NOT LIMITED TO VALVE, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, BLOCKING, AND TRAFFIC CONTROL.

MISCELLANEOUS VALVE ASSEMBLIES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT, INCLUDING BUT NOT LIMITED TO MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF ASSEMBLIES AS DESCRIBED AND DETAILED IN THE PLANS AND SPECS.

SEWER SERVICE LINES
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION OF SERVICE LINE OR CASING FOR SERVICE LINE INCLUDING TRAFFIC CONTROL.

POINT REPAIR
INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR INTERNAL OR EXTERNAL POINT REPAIRS AS SPECIFIED ON THE BID FORM.

RETIREMENT OR REMOVAL
INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR RETIRE IN PLACE OR REMOVE ITEMS AS SPECIFIED ON THE BID FORM INCLUDING TRAFFIC CONTROL.

CASING PIPE - BORE AND JACK INSTALLATION
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, ANY OTHER APPURTENANCE TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS, AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

MANHOLE ADJUSTMENT
INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR INCREASEING OR DECREASING HEIGHT OF MANHOLE TO FINISHED ROAD GRADE, INCLUDING BUT NOT LIMITED TO ADDITION OR REMOVAL OF BARREL SECTIONS OR FRAME RINGS AND ADJUSTMENTS TO FRAME AND COVER.

RETIRE IN PLACE MANHOLE
INCLUDES ALL LABOR, EQUIPMENT, DISPOSAL OF WASTE MATERIAL, DRILLING HOLES IN BASE FOR PROPER DRAINAGE, REMOVAL OF NECESSARY BARREL SECTIONS FOR PROPER GRADE AND STONE BACKFILL.

MANHOLE REHABILITATION
INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, FOR COMPLETE REHABILITATION OF MANHOLE BUT NOT LIMITED TO STRUCTURAL REPAIR, SEALING/COATING OF INTERIOR, AND TESTING.

CASING PIPE - OPEN CUT INSTALLATION
INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO CASING PIPE, PIPE SPACERS, CASING END SEALS, STONE BACKFILL, TEMPORARY PAVEMENT, AND ANY OTHER APPURTENANCE TO COMPLETE THE WORK AS SPECIFIED ON THE PLANS, AND TRAFFIC CONTROL. IF CASING PIPE HAS CARRIER PIPE, THE CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U5-2
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

SEALED BY

JUSTIN S. EADE — REGISTERED ENGINEER — AGRICULTURE COMMERCE — STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

SEWER RELOCATION

LEGEND AND GENERAL NOTES

SCALE: NTS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ___

RIGHT-OF-WAY

(1) IT IS INTENDED THAT ALL BUILDINGS AND/OR PORTIONS OF BUILDINGS THAT ARE WITHIN THE PROPOSED RIGHT-OF-WAY AND/OR EASEMENT LINES FOR THE PROJECT BE REMOVED THERE FROM IN THE PROCESS OF RIGHT-OF-WAY ACQUISITION. IF ANY SUCH BUILDINGS OR IMPROVEMENTS ARE NOT REMOVED IN THE COURSE OF RIGHT-OF-WAY ACQUISITION, THE CIVIL ENGINEERING MANAGER 2, ROADWAY DESIGN DIVISION IS TO BE NOTIFIED IN SUFFICIENT TIME TO PERMIT HAVING SUCH REMOVALS DESIGNATED AS A PART OF THE CONSTRUCTION CONTRACT.

(2) ALL RAMPS MUST CONFORM TO THE DEPARTMENT'S "POLICY ON FINANCING CONSTRUCTION OF PUBLIC ROAD INTERSECTIONS AND DRIVEWAYS ON HIGHWAY RESURFACING, RECONSTRUCTION AND CONSTRUCTION PROJECTS ON NEW LOCATIONS", THE MANUAL ON RULES AND REGULATIONS FOR CONSTRUCTING DRIVEWAYS ON STATE HIGHWAY RIGHT-OF-WAY, STANDARD DRAWING RP-R-1, AND OTHER ACCEPTED DESIGN AND SAFETY STANDARDS.

(3) EXISTING PAVED DRIVEWAY PER TRACT REMAINDER WILL BE REPLACED IN KIND TO A TOUCHDOWN POINT.

(4) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY EXCEEDS 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED TO A TOUCHDOWN POINT OR UNTIL THE GRADE IS LESS THAN 7 PERCENT.

(5) WHERE THE EXISTING DRIVEWAY IS UNPAVED AND THE PROPOSED DRIVEWAY IS LESS THAN 7 PERCENT IN GRADE, EACH DRIVEWAY WILL BE PAVED A SHOULDER WIDTH FROM THE EDGE OF PAVEMENT AND THE REMAINDER OF THAT DRIVEWAY REPLACED IN KIND TO A TOUCHDOWN POINT.

(6) ANY NECESSARY PAVING OF DRIVEWAYS WILL BE DONE DURING PAVING OPERATIONS ON THE MAIN ROADWAY.

(7) NEW DRIVEWAYS PROVIDED IN THE PLANS WILL BE PAVED BASED ON THE 7 PERCENT CRITERIA. THOSE 7 PERCENT OR STEEPER IN GRADE WILL BE PAVED AND THOSE FLATTER THAN 7 PERCENT WILL BE COVERED WITH BASE STONE.

(8) ON PROJECTS WITHOUT CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT AND TO CONSTRUCT ADDITIONAL DRIVEWAYS AND FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(2) UNLESS OTHERWISE NOTED, ALL UTILITY ADJUSTMENTS WILL BE PERFORMED BY THE UTILITY OR ITS REPRESENTATIVE. THE CONTRACTOR AND UTILITY OWNERS WILL BE REQUIRED TO COOPERATE WITH EACH OTHER IN ORDER TO EXPEDITE THE WORK REQUIRED BY THIS CONTRACT. ON CONTRACTS WHERE CONSTRUCTION STAKES, LINES, AND GRADES ARE CONTRACT ITEMS, THE CONTRACTOR WILL BE REQUIRED TO PROVIDE RIGHT-OF-WAY OR SLOPE STAKES, DITCH OR STREAM BED GRADES, OR OTHER ESSENTIAL SURVEY STAKING TO PREVENT CONFLICTS WITH THE HIGHWAY CONSTRUCTION. FREQUENTLY, THIS WILL BE REQUIRED AS THE FIRST ITEM OF WORK AND AT ANY LOCATION ON THE PROJECT DIRECTED BY THE ENGINEER.

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

(4) PRIOR TO SUBMITTING HIS BID, THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR CONTACTING OWNERS OF ALL AFFECTED UTILITIES IN ORDER TO DETERMINE THE EXTENT TO WHICH UTILITY RELOCATIONS AND/OR ADJUSTMENTS WILL HAVE UPON THE SCHEDULE OF WORK FOR THE PROJECT. WHILE SOME WORK MAY BE REQUIRED 'AROUND' UTILITY FACILITIES THAT WILL REMAIN IN PLACE, OTHER UTILITY FACILITIES MAY NEED TO BE ADJUSTED CONCURRENTLY WITH THE CONTRACTOR'S OPERATIONS. ADVANCE CLEAR CUTTING MAY BE REQUIRED BY THE ENGINEER AT ANY LOCATION WHERE CLEARING IS CALLED FOR IN THE SPECIFICATIONS AND CLEAR CUTTING IS NECESSARY FOR A UTILITY RELOCATION. ANY ADDITIONAL COST WILL BE INCLUDED IN THE UNIT PRICE BID FOR THE CLEARING ITEM SPECIFIED IN THE PLANS.

(5) THE CONTRACTOR SHALL NOTIFY EACH INDIVIDUAL UTILITY OWNER OF HIS PLAN OF OPERATION IN THE AREA OF THE UTILITIES. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY ON THE GROUND. THIS NOTIFICATION SHALL BE GIVEN AT LEAST THREE (3) BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY IN ACCORDANCE WITH TCA 65-31-106 NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC AT 1-800-351-1111 WILL BE REQUIRED.

UTILITY OWNERS

CABLE:
CHARTER COMMUNICATIONS
38 WEST BROAD STREET
COOKEVILLE, TN 38501
CONTACT: MR. LESTER HAFFNER
OFFICE PHONE: 931 675 0406
FAX: 931 644 5705
Email: Leslie.haffner@charter.com

ELECTRIC:
VOLUNTEER ENERGY COOPERATIVE
P.O. BOX 277
DECATUR, TN 37322
CONTACT: MR. MATTHEW TEAGUE
OFFICE PHONE: 423 334 7040
FAX 423 334 7005

GAS:
MIDDLE TENNESSEE NATURAL GAS
P.O. BOX 670
SMITHVILLE, TN 37166
CONTACT: MR. MATTHEW WHITAKER
OFFICE PHONE: 615 597 0513
FAX 615 597 6331

TELEPHONE:
FRONTIER/CITIZENS COMMUNICATIONS COMPANY
174 SPARTA HIGHWAY
CROSSVILLE, TN 38572
CONTACT: MR. JIM HEATHERLY
OFFICE PHONE: 865 947 8200

CABLE:
FIBER OPTICS: VOLFIRST
P.O. BOX 670
MCMINNVILLE, TN 37111
CONTACT: MR. RICHARD BOYD
OFFICE PHONE: 931 668 6692
FAX 931 668 7653
Email: Rboyd@blomed.net

WATER:
CITY OF CROSSVILLE
392 NORTH MAIN STREET
CROSSVILLE, TN 38555-4232
CONTACT: MR. TIM BEGLEY
OFFICE PHONE: 931 456 5680
FAX: 931 484 7713

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U5-3
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

UTILITY

(1) THE LOCATIONS OF UTILITIES SHOWN WITHIN THESE PLANS ARE APPROXIMATE ONLY. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES. ABOVE GRADE AND UNDERGROUND UTILITIES SHOWN WERE TAKEN FROM VISIBLE APPURTENANCES AT THE SITE, PUBLIC RECORDS, AND/OR MAPS PREPARED BY OTHERS. THEREFORE, RELIANCE UPON THE TYPE, SIZE, AND LOCATION OF UTILITIES SHOWN SHOULD BE DONE SO WITH THIS CIRCUMSTANCE CONSIDERED. DETAILED VERIFICATION OF EXISTENCE, LOCATION, AND DEPTH SHOULD ALSO BE MADE PRIOR TO ANY DECISION RELATIVE THERETO IS MADE. AVAILABILITY AND COST OF SERVICE SHOULD BE CONFIRMED WITH THE APPROPRIATE UTILITY COMPANY. IN TENNESSEE, IT IS A REQUIREMENT, PER "THE UNDERGROUND UTILITY DAMAGE PREVENTION ACT", THAT ANYONE WHO ENGAGES IN EXCAVATION MUST NOTIFY ALL KNOWN UNDERGROUND UTILITY OWNERS, NO LESS THAN THREE (3) OR NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO THE DATE OF THEIR INTENT TO EXCAVATE AND ALSO TO AVOID ANY POSSIBLE HAZARD OR CONFLICT. NOTIFICATION BY CALLING THE TENNESSEE ONE CALL SYSTEM, INC., AT 1-800-351-1111 AS REQUIRED BY TCA 65-31-106 WILL BE REQUIRED.

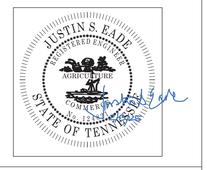
DISTURBED AREA		
IN BETWEEN SLOPE LINES	2.009	(AC)
15 FOOT WIDE STRIP (OUTSIDE SLOPE LINES)	0.949	(AC)
TOTAL DISTURBED AREA	2.957	(AC)
TOTAL PROJECT AREA	3.306	(AC)

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 BOOK	DEED DOCUMENT REFERENCE PAGE	LEFT	RIGHT	TOTAL	LEFT	RIGHT	TOTAL	LEFT	RIGHT	PERMANENT	SLOPE	CONSTRUCTION (1)	AIR RIGHTS
~~1~~	~~FRED STOUT~~	~~87I~~	~~005.00~~	~~1493~~	~~692~~	~~1.010~~		~~1.010~~				~~1.010~~					
~~2~~	~~FRED STOUT~~	~~87I~~	~~006.00~~	~~1493~~	~~692~~	~~1.040~~		~~1.040~~				~~1.040~~					
~~3~~	~~JAMES JOSEPH MITCHELL~~	~~086~~	~~057.00~~	~~285~~	~~788~~		~~115.910~~	~~115.910~~					~~115.910~~				
4	TONY PAGE AND KARI PAGE, HUSBAND AND WIFE	087I A	015.00	1603	630	33.260		33.260				33.260				0.290	
~~5~~	~~VONDA M NEWBY AND HUSBAND CHARLES R NEWBY~~	~~087~~	~~053.00~~	~~1327~~	~~678~~		~~4.300~~	~~4.300~~					~~4.300~~				
6	SHARON A SHELLEY AND ROBIN L JONES	087	054.00	1236	1981		3.330	3.330		0.136	0.136		3.194				
7	CUMBERLAND COUNTY	087	59.00	1262	1312	67.030		67.030	0.349		0.349	66.681					
8	JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE	087	055.00	1669	1321		2.070	2.070		0.151	0.151		1.919				
9	DOROTHY L. LILLY	087	056.00	1300	1976		2.020	2.020		2864 S.F.	2864 S.F.		1.954				
ACQUISITION TOTALS (ACRES)										0.702						0.290	

(1) ESMT. NEEDED FOR HAUL ROAD.

SEALED BY



HUSSEY GAY BELL
Established 1958
4117 HILLSBORO PIKE, SUITE 206, NASHVILLE, TENNESSEE 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

SEWER RELOCATION

R.O.W. AND UTILITY NOTES, UTILITY OWNERS, & R.O.W. AQUISITION

SCALE: NTS

TENNESSEE D.O.T.

DESIGN DIVISION

FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U5-4
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

N&C IN EDGE OF PAVEMENT

CP-3
N 599204.2366
E 2250123.6680
EL. 1745.70
ALUM. DISK ATOP 1" REBAR STAMPED "18-24-03"

27.2'WSW

48.3'ESE

88.4'N

CONC. ROW MARKER

N&C IN UTILITY POLE

TONY PAGE AND KARI PAGE, HUSBAND AND WIFE

3900 CEMETERY RD
SEBRING, FL 33870
087I-A-015.00
PB 8, PG 96, LT 1
ESMT 1342/1382
ROW 382/316
DB 1209/1657
32.98 AC. +/-

N

75.00'

7

CUMBERLAND COUNTY
COURTHOUSE BOX 4
CROSSVILLE, TN 38555
087-059.00
ESMT DB 1328/1909
DB 1262/1312
67.03 AC. +/-

PAVILLION

PAD

PAD

STR-2

STR-3

FIELD VERIFIED (TO REMAIN IN PLACE) 4'x3'x56' EX.CONC. BOX

INV-1736.03

CHAIN LINK

ASP.

24" CMP

INV-1737.66

WTL-1

INDST. PARK

MAINLINE STA. 66+35.90
N 598175.0179
E 2250592.2046

ROCK WALL

STR-1

OBED RIVER

SPUR-STR632

P/T/C

SPEED LIMIT

PAD

T.B.R.

APPROX. 6"FM

CHAIN LINK TO BE REMOVED

W.M.

APPROX. W.M.

W.V. TO BE REMOVED

P/T/C

W.V.

GRAVEL DRIVE

GATE

CHAINLINK FENCE

SIGN

TRUCKS ENTERING HIGHWAY

INV-1730.47

INV-1728.68

MNT. VIEW

EXISTING BRIDGE TO BE REMOVED

EXIST. G.R. TO BE REMOVED

18"CMP

INV-1725.14

INV-1725.75

18CMP

INV-1731.03

WOOD

INV-1725.55

CP-3

T/C

P/T/C

S 20° 59' 04" E

GRV.

INV-1733.39
12CMP

15CMP

INV-1738.69

TO BE REMOVED

SCHOOL ZONE

ROCK OUTCROP

INV-1731.48

SPUR-STR627

SCHOOL ZONE SPEED LIMIT

ROCK RETWALL

P/T

CUMBERLAND EXTERMINATING

TOP-1733.91
INV. IN-1733.81

ASP.

CENTER LANE ONLY
BURIED FIBER (CABLE)

GRV.

TREE CITY U.S.A.

TOP-1739.38
INV. IN-1728.42
INV. OUT-1728.35

INV. OUT-1733.29

SIDEWALK

ASP.

15-ROCK-RES

5

~~VONDA M. NEWBY AND HUSBAND CHARLES R. NEWBY~~

P O BOX 670
BLAIRSVILLE, GA 30514
087-053.00
ROW DB 397-513
DB 1327/678
4.30 AC. +/-

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2724 1947
DB 117 PG 108
RECORDS OF CUMBERLAND COUNTY OFFICE (APPROX. LOCATION)

STR-1

SEPTIC

1S-BR-RES

SW.

GARAGE

3

~~JAMES JOSEPH MITCHELL~~

2665 HWY 70 NORTH
CROSSVILLE, TN 38555
086-057.00
285/768
115.91 AC. +/-
ESMT DB 1100/705

6

SHARON A. SHELLEY
& ROBIN L JONES
96 ROBBINS NEST DR
CROSSVILLE, TN 38571
087-054.00
PB 5, PG 64, LT 17: OAKWOOD LAND SUBD
DB 1236, PG 1981
3.33 AC. +/-

8

JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE
P O BOX 1094
CROSSVILLE, TN 38557
WEST AVE 2415
087-055.00
PB 5, PG 64, LT 16
DB 217/243
2.07 AC. +/-

9

DOROTHY L. LILLY
308 MYERS AVE
BECKLEY, WV 25801
087-056.00
PB 5, PG 64, LT 15
DB 1300, PG 1976
2.02 AC. +/-

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

75.00'

CONTROL POINT TABLE

Point	North	East	Elevation	Station	Offset	Feature
S03	599204.2366	2250123.6681	1745.7000	54+95.87	47.4947	XCP
STR627	598780.0060	2250330.4400	1702.7110	59+75.43	27.0335	XSPUR
STR632	598775.6100	2250458.5270	1718.7740	60+25.40	-90.9843	XSPUR

SEALED BY

JUSTIN S. EADE
REGISTERED ENGINEER
AGRICULTURE
NUMBER 120142
STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

SEWER RELOCATION

EXISTING CONDITIONS

SCALE: 1" = 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U5-5
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

N

18004-3227-04
BEGIN PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 55+35.00
N 599193.4366 E 2250181.4361

18004-2227-04
BEGIN PROJECT NO. BR-STP-24(69) R.O.W.
STA. 57+24.00
N 599024.3769 E 2250265.4920

HAUL ROAD STA. 0+00.00=
S.R. 24 STA. 57+50.00
N 599000.1620
E 2250274.9527

18004-2227
END PROJECT NO. BR-STP-24
STA. 66+00.00
N 598206.5356 E 2250579.3489

55 60 65

POT 55+00.00
POT 2+87.81
PT 0+94.27
POT 66+35.89
PC 0+55.00
PT 57+43.69
BEG. PROP. BRIDGE STA. 58+21.00
END PROP. BRIDGE STA. 60+59.00

PROPOSED CONST. ESMT.
FILL
S 20° 59' 04" E
S 32° 25' 00" E
N 69° 00' 56" E
28.5R
60'-18" S.D. CUT
INSTALL 6" PLUG
PROP. STR632
PROP. STR627
STR-1
STR-2
STR-3
CREEK
CHANNEL
CUT
FILL
APPROX. T.B.R.
APPROX. E.B.R.
TYPE IN-LINE
PROP. G.R.
TYPE 13
TYPE 18
TO BE REMOVED
SCHOOL ZONE SPEED LIMIT
ROCK WALL
CHAIN LINK
SIGN
TRUCKS ENTERING HIGHWAY
INV-1725.75
INV-1725.14
INV-1733.39
INV-1737.66
INV-1736.05
INV. OUT-1733.29
EX. 24" CMP
15CMP
12CMP
18CMP
WTL-1
INDST. PARK
P/T/C
P/T
T/C
C.V.
GRV.
TREE CITY U.S.A.
TOP-1739.38
INV. IN-1728.42
INV. OUT-1728.35

BRIDGE ID 18SR0240003
PROPOSED 202'-10"
2-SPAN CONCRETE
GIRDER BRIDGE
SKEW 90°
W/ CLASS"B" RIP-RAP
1475 TONS

END IMPACT STR-2
STA.62+68.00
-68.00

PROP. 20"x48" PIPE
STA.63+16.81
TYPE "A" EW
OUT. EL. 1722.12
SKEW 46°
SEE SHT.8

FIELD VERIFIED
(TO REMAIN IN PLACE)
EX. 4'X3'X56' CONC. BOX

BEG.IMPACT STR-2
STA.63+16.66
-25.03'

PROP. NO. 3 7'X7' M.H.
STA. 63+16.81
TOP EL. 1734.43
IN. EL. 1722.79
OUT. EL. 1722.58
FILL

4'X3'X56'
EX. CONC. BOX
TO REMAIN IN PLACE
EXIST. C.B.
A TO BE REMOVED IN PLACE
TOP EL. 1733.91
INV. EL. 1723.91

EXISTING BRIDGE NO. 18-SR24-15.37 AND APPROACHES TO BE REMOVED TO NATURAL GROUND BETWEEN STA. 58+24.32 AND 60+16.57.

75.00'

T.V.A. EASEMENT SHEET 5 OF US-TVA DRAWING LW-2724 1947
DB 1100, PG 705
RECORDS OF CUMBERLAND COUNTY
(APPROX. LOCATION)

CP-3
N 599204.2366
E 2250123.6680
EL. 1745.70
ALUM. DISK ATOP 1" REBAR
STAMPED "18-24-03"
27.2' WSW
48.3'ESE
88.4'N
CONC. ROW MARKER
N&C IN EDGE OF PAVEMENT
N&C IN UTILITY POLE

TONY PAGE AND KARI PAGE,
HUSBAND AND WIFE
3900 CEMETERY RD
SEBRING, FL 33870
087I-A-015.00
PB 8, PG 96, LT 1
ESMT 1342/1382
ROW 382/316
DB 1209/1657
32.98 AC. +/-

5
VONDA M. NEWBY AND HUSBAND CHARLES R. NEWBY
P O BOX 670
BLAIRSVILLE, GA 30514
087-053.00
ROW DB 397-513
DB 1327/678
4.30 AC. +/-

3
JAMES JOSEPH MITCHELL
2665 HWY 70 NORTH
CROSSVILLE, TN 38555
086-057.00
285/768
115.91 AC. +/-
ESMT DB 1100/705

6
SHARON A. SHELLEY
& ROBIN L JONES
96 ROBBINS NEST DR
CROSSVILLE, TN 38571
087-054.00
PB 5, PG 64, LT 17: OAKWOOD LAND SUBD
DB 1236, PG 1981
3.33 AC. +/-

7
CUMBERLAND COUNTY
COURTHOUSE BOX 4
CROSSVILLE, TN 38555
087-059.00
ESMT DB 1328/1909
DB 1262/1312
67.03 AC. +/-

8
JOHN E. BARNWELL AND TINA L. BARNWELL, HUSBAND AND WIFE
P O BOX 1094
CROSSVILLE, TN 38557
WEST AVE 2415
087-055.00
PB 5, PG 64, LT 16
DB 217/243
2.07 AC. +/-

9
DOROTHY L. LILLY
308 MYERS AVE
BECKLEY, WV 25801
087-056.00
PB 5, PG 64, LT 15
DB 1300, PG 1976
2.02 AC. +/-

1S-ROCK-RES
1S-BR-RES
SEPTIC
GARAGE
SIDEWALK
PAVILLION
PAD
SW.

MAINLINE STA. 66+35.90
N 598173.0179
E 2250992.2046

18004-3227-04
END PROJECT NO. BR-STP-24(69) CONSTRUCTION
STA. 65+55.00
N 598248.5498 E 2250563.2343

CONTROL POINT TABLE

Point	North	East	Elevation	Station	Offset	Feature
S03	599204.2366	2250123.6681	1745.7000	54+95.87	47.4947	XCP
STR627	598780.0060	2250330.4400	1702.7110	59+75.43	27.0335	XSPUR
STR632	598775.6100	2250458.5270	1718.7740	60+25.40	-90.9843	XSPUR

SEALED BY

JUSTIN S. EADE
LICENSED LANDSCAPE ARCHITECT
AGRICULTURE
LANDSCAPE
ARCHITECTURE
STATE OF TENNESSEE

HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

SEWER RELOCATION

STA. 55+00 TO STA. 66+35.89

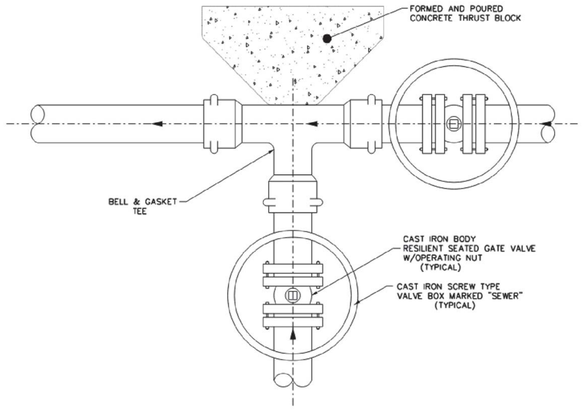
SCALE: 1" = 50'

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO. ---

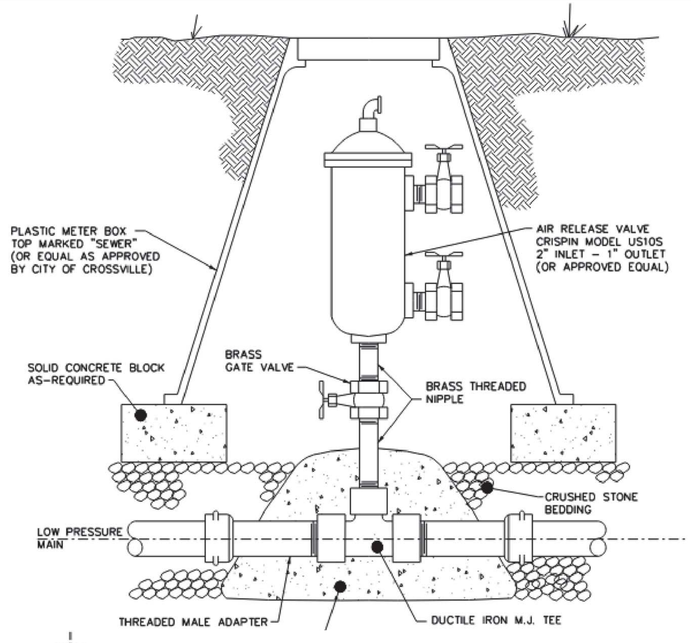
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U5-6
		PIN	
		124053.00	

REV 08-07-23: SHEET CHANGES AS PER TDOT REQUEST

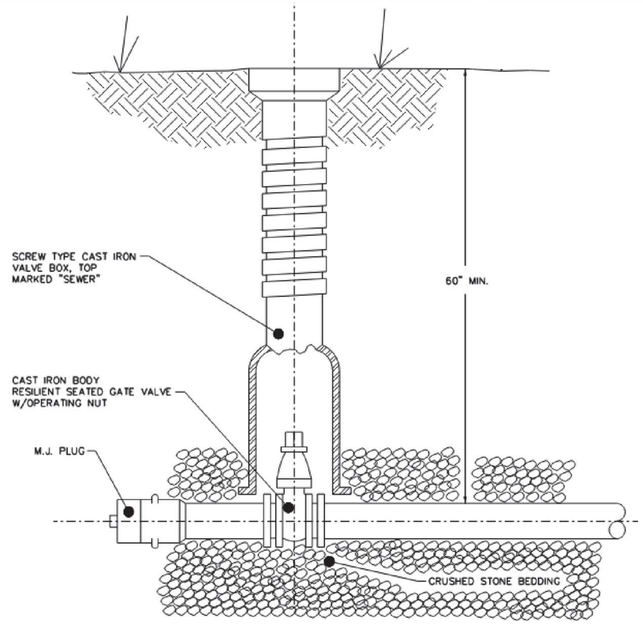
REV 01-17-24: SHEET CHANGES AS PER TDOT REQUEST

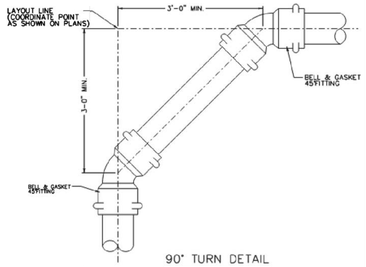


TYPICAL JUNCTION CONNECTION
NO SCALE



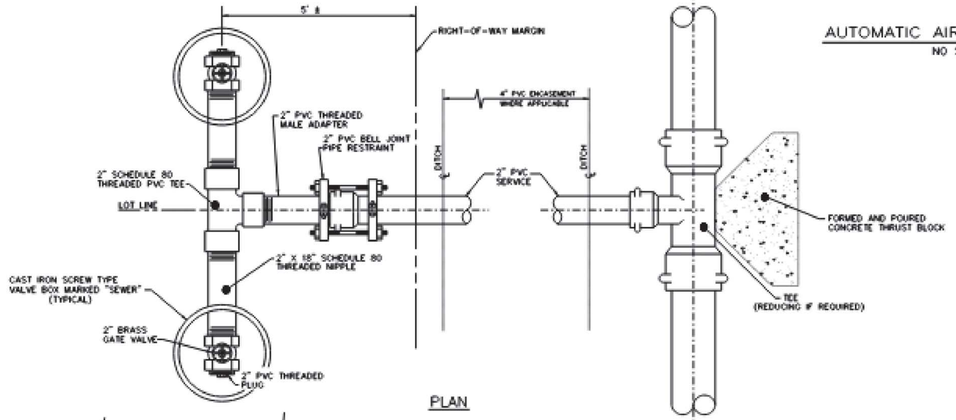
AUTOMATIC AIR RELEASE VALVE
NO SCALE



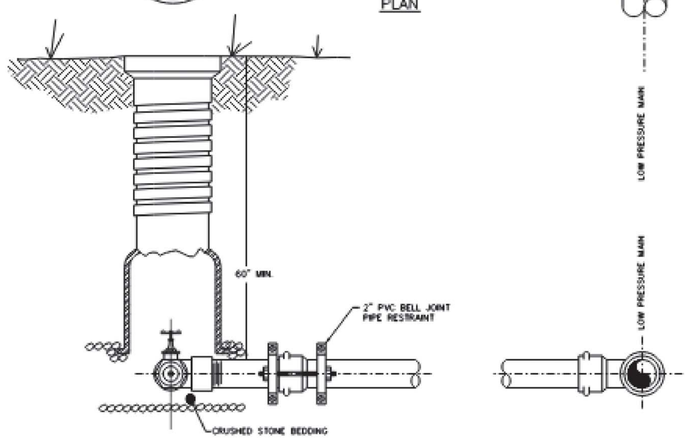


90° TURN DETAIL
NOT TO SCALE

NOTE:
1. **CLASS 200 PSI PIPE SHALL BE USED** UNLESS SPECIFIED OTHERWISE.
2. LOCATOR WIRE SHALL BE PLACED IN CASING WITH CARRIER PIPE.
3. TRENCHES SHALL BE OPENED SUFFICIENTLY TO ALLOW INSTALLATION AND REMOVAL OF CARRIER PIPE IN MANUFACTURED LENGTHS FROM BOTH ENDS OF CASING PIPE.
4. SPACERS SHALL BE USED IN ALL CASINGS. SPACERS SHALL BE A MAXIMUM OF 7 FEET APART WITH A MINIMUM 2 INCH SPACE BETWEEN THE CASING AND THE CARRIER PIPE.
5. STEEL CASING SHALL BE USED IN ALL ROAD OR PAVED DRIVEWAY CROSSINGS UNLESS SPECIFIED OTHERWISE. STEEL CASING SHALL HAVE A MINIMUM CLEARANCE OF 2 INCHES BETWEEN CASING AND CARRIER PIPE. SPACERS SHALL BE INSTALLED NO MORE THAN 18" FROM EITHER END OF CASING.
6. ALL FITTINGS TO BE DUCTILE IRON.



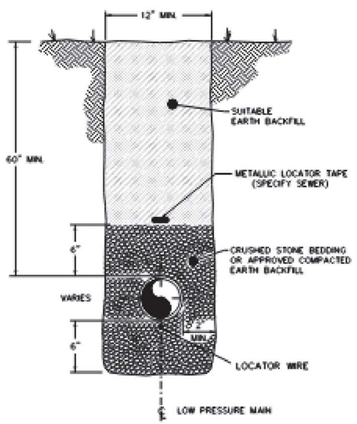
PLAN



SECTION

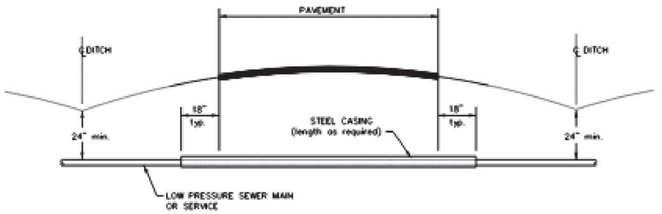
TYPICAL CONNECT LATERAL TO SEWER LINE

NOTE: 1. DOUBLE LOT CONNECTION SHOWN. FOR SINGLE SERVICE CONNECTION ELIMINATE TEE AND PROVIDE ONE GATE VALVE, PLUG AND VALVE BOX
2. ALL SERVICES EXTENDING UNDER ROADWAYS SHALL BE ENCASED.



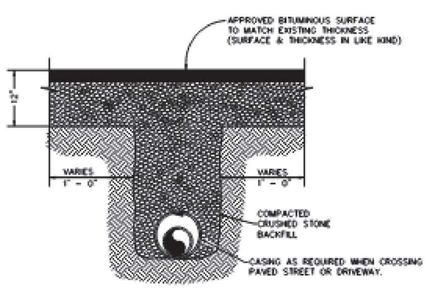
TYPICAL BEDDING DETAIL

NOTE: METALLIC LOCATOR TAPE (SEWER) TO BE INSTALLED IN TRENCH 6" - 8" ABOVE SEWER LINE.



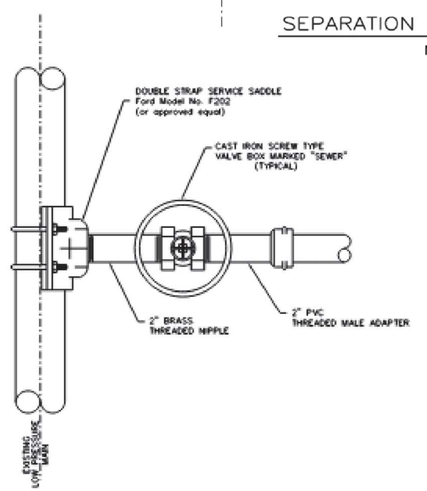
TYPICAL CITY - COUNTY ROAD CROSSING

NOTE: STATE ROAD CROSSINGS SHALL BE BORED AND STEEL CASED

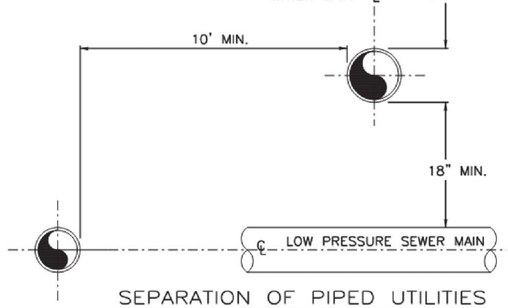


BITUMINOUS SURFACE
CITY STREET OR COUNTY ROAD

PAVEMENT REPLACEMENT BACKFILL
STATE ROAD CROSSINGS ARE TO BE BORED & CASED

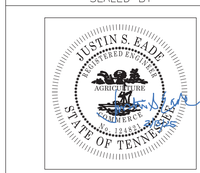


SERVICE CONNECTION TO EXISTING MAIN
NO SCALE



SEPARATION OF PIPED UTILITIES
NO SCALE

SEALED BY



HUSSEY GAY BELL
Established 1958
4117 Hillsboro Pike, Suite 206, Nashville, Tennessee 37215 / 615.460.7515

THE CITY OF
CROSSVILLE, TENNESSEE

SEWER RELOCATION

SEWER DETAILS

SCALE: NTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2025	18004-3227-04	U6-3
		BR-STP-24(69)	

02/06/25: UPDATED CONSTRUCTION YEAR AND PROJECT NUMBER

Utility Relocation Notes for Utility Relocations Within TDOT Contracts

1. Rain water which collects in the utility trench shall be pumped into a temporary dewatering structure or filter bag.
2. Silt fence to be installed on the downstream side of all stockpiled soil. Trenching across wet weather conveyances to be done during no flow conditions and stabilized by the end of the work day.
3. Utility crossings for perennial streams shall be constructed in accordance with TDOT Standards, and no work shall be conducted in flowing waters. Tennessee Department of Environment and Conservation (TDEC) Regulations apply to the Utilities in this project in regard to Erosion Control as well as all Water Quality Permits received. The Utility Contractor shall comply with all requirements of the Water Quality Permits and the Storm Water Pollution Prevention Plan. The Utility Contractor is only responsible for erosion control measures for utility construction that is included in the State contract work.
4. It is the responsibility of the Utility Contractor to protect from erosion exposed earth resulting from his operations and to provide for containment of sediment that may result from his work. Prior to beginning work, adequate measures must be in place to trap any sediment that may travel off-site in the event of rain. During the progression of his work, exposed earth areas shall be stabilized as soon as possible to prevent erosion. At no time shall exposed earth resulting from his operations have unprotected access to flowing off-site and becoming waters of the State.
5. For the installation of buried utilities (pipes and cables), trenches shall be backfilled daily as construction proceeds. Backfilled trenches shall be seeded and mulched or sodded daily if possible but no later than 7 days after backfilled. Any temporary spoil pile of excavated earth shall be located within the installed TDOT Right-Of-Way erosion control measures or receive separate erosion control measures from the approved TDOT standard drawings. If trenches are not backfilled overnight, appropriate erosion control measures will be installed by the Utility Contractor until such time the trench is backfilled.
6. Trenches formed for the installation of buried utilities may cause storm water runoff to concentrate at the trenchline. If this is anticipated additional erosion control measures (such as check dams, hay bales, EC blankets) shall be installed from the approved TDOT standard drawings.
7. For the installation of underground utilities outside of the highway Right-Of-Way, additional temporary erosion prevention and sediment control measures shall be installed prior to clearing (trenching and associated blasting) in those areas necessary to prevent sediment from leaving the construction area. These erosion prevention and sediment control measures shall remain until the backfilled trench is stabilized with final vegetative cover.
8. The contractor shall restore all affected wet weather conveyances to the existing topographic conditions (as required by the State Engineer).
9. The Utility Contractor will provide appropriate erosion control measure to replace in-place erosion control measures removed to facilitate the installation of utilities. Replacement erosions control measures will be coordinated with the State Engineer before commencing work.

Middle Tennessee Natural Gas Main Contact:
Matt Stennett
Vice President - Engineering
931-754-3515
mstennett@mtng.com

ESTIMATED UTILITY QUANTITIES

ESTIMATED UTILITY QUANTITIES

TDOT Item No.	Item Description	Qty	%Public	%Private	Footnote
791-01.04	4IN STEEL GAS MAIN	465	100	0	1
791-04.22	HDD 4IN STEEL PIPE - UNCONSOLIDATED	700	100	0	2
791-06.31	CONNECT TO 2IN EX. STL MAIN W/STOPPLE	2	100	0	4
791-06.32	CONNECT TO 4IN EX STL MAIN W/ STOPPLE	2	100	0	4
791-09.04	REGULATOR STATION	1	100	0	4

FOOTNOTE 1: INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING, FLOWABLE FILL, TEMPORARY PAVEMENT IN OR OUT OF ROW, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWPPP, COUPLINGS, FITTINGS, PIPE FUSION, APPURTENANCES, MAINTAINING THE TRENCH, PURGE POINT INSTALLATION, TESTING BY UTILITY SPECIFICATIONS TO INCLUDE BUT NOT LIMITED TO AIR, NITROGEN, HYDROSTATIC OR X-RAY, DEW POINT OR DRYING, AND ANY OTHER LABOR OR MATERIAL REQUIRED TO COMPLETE THE WORK AS SPECIFIED IN THE PLANS.

FOOTNOTE 2: INCLUDES ALL MATERIALS, LABOR, EQUIPMENT, AND TRAFFIC CONTROL, INCLUDING BUT NOT LIMITED TO FLUID CONTAINMENT FOR COMPLETE HORIZONTAL DIRECTIONAL DRILLING INSTALLATION OF CASING PIPE OR CARRIER PIPE

FOOTNOTE 4: INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY FOR CONNECTING TO EXISTING GAS LINE INCLUDING TRAFFIC CONTROL.

UTILITIES INDEX

SHEET NAME	SHEET NUMBER
ESTIMATED QUANTITIES & ENVIRONMENTAL NOTES	3
BEGINNING OF PROJECT TO END OF PROJECT	4

LEGEND

- EXISTING GAS PIPE TO REMAIN IN PLACE
- EXISTING GAS PIPE TO BE ABANDONED IN PLACE
- PROPOSED NEW GAS PIPE
- TDOT PROPOSED RCP & BOX CULVERTS

MATTHEW C. STENNETT — LICENSED PROFESSIONAL ENGINEER — AGRICULTURE — COMMERCE — NO. 112458 — STATE OF TENNESSEE — 12/12/24

MIDDLE TENNESSEE NATURAL GAS UTILITY DISTRICT
WWW.MTNG.COM

GAS LINE RELOCATION PLANS

ITEM LIST AND ENVIRONMENTAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
CONST.	2025	18004-3227-04	U6-4
		BR-STP-24(69)	

02/06/25: UPDATED CONSTRUCTION YEAR AND PROJECT NUMBER

N

4
J. REED FAMILY LLC

55

60

65

7
CUMBERLAND COUNTY

75.00'

EXISTING 4' STEEL TO BE PURGED, CUT, CAPPED, & ABANDONED IN PLACE

TIE NEW 4' STEEL TO EXISTING 4' STEEL WITH MUELLER H-17261 BOTTOM OUT LINE STOPPER FITTING (OR EQUIVALENT)

BEG. PVMT & SHLDR TRANS. LT. STA. 55+35.00 PVMT OFFSET -10.27' SHLDR OFFSET -19.44

END PVMT & SHLDR TRANS LT. STA. 58+45.00 PVMT OFFSET -12.00' SHLDR OFFSET -22.00'

PROPOSED CONST. ESMT.

HAUL ROAD STA. 57+00

160' TRANSITION

TRUCKS ENTERING HIGHWAY

EXISTING 4' STEEL TO REMAIN IN PLACE

CUT

EXISTING BRIDGE TO BE REMOVED

STATE ROUTE 24

BRIDGE ID 18SR0240003
PROPOSED 202'-10"
2-SPAN CONCRETE GIRDER BRIDGE
SKEW 90°
W/ CLASS"B" RIP-RAP
1475 TONS

LIMIT OF CONST. 0+78.00

STA. 57+30.00
14' PVT. DR.
32'-18" S.D. REQD.

INSTALL 2' INSIDE ROW TO AVOID FUTURE GUARD RAIL

BEG. PVMT & SHLDR TRANS. LT. STA. 58+45.00 PVMT OFFSET -12.05' SHLDR OFFSET 18.56'

END PVMT & SHLDR TRANS RT. STA. 58+45.00 PVMT OFFSET -12.00' SHLDR OFFSET -22.00'

SHLDR TRANS.

INSTALL 1,165' 4' STEEL OPEN TRENCH 10'± INSIDE ROW WITH 3' MINIMUM COVER EXCEPT WHERE NOTED

EXISTING 3/4" SERVICE TO REMAIN IN PLACE; LOCATION APPROXIMATE & NEEDS TO BE LOCATED IN FIELD

5
~~VONDA M. NEWBY~~
~~% UNITED COMM BANK~~

3
~~JAMES JOSEPH MITCHELL~~

EXISTING BRIDGE TO BE REMOVED STA. 58+24.32 ±

75.00'

PRESENT SHEET 5 OF US-TVA DRAWING LW-2724 1947

DB 1107 PG 1094 RECORDS OFFICE CUMBERLAND COUNTY

LOCATE 36' STEEL DRAINAGE PIPE AND INSTALL NEW 4' STEEL WITH 1' MINIMUM SEPARATION

LIMIT OF CONST. STA. 0+90.00

PROP. R.O.W.

SPEED LIMIT

CUT

INSTALL WITH 6' MINIMUM COVER TO AVOID FUTURE ROADWAY CUT

INSTALL WITH 5' MINIMUM COVER TO AVOID FUTURE DRIVEWAY CUT

INSTALL 700' NEW 4' STEEL BY BORE UNDER RIVER WITH 6' MINIMUM COVER BETWEEN RIVER BOTTOM AND TOP OF PIPE

INSTALL WITH 4' MINIMUM COVER TO AVOID FUTURE DRIVEWAY CUT

BEG. PVMT & SHLDR TRANS. RT. STA. 62+50.00 PVMT OFFSET 22.00'

6
SHARON A. SHELLEY & ROBIN L JONES

8
KENNETH F. FERGUSON

9
DOROTHY L. LILLY

PROP. 20'x48" PIPE
STA.63+16.81
TYPE "A" EW.
OUT. EL. 1722.12
SKEW 46°
SEE SHT.8

255' TRANSITION

TIE NEW 4' STEEL TO EXISTING 4' STEEL WITH MUELLER H-17261 BOTTOM OUT LINE STOPPER FITTING (OR EQUIVALENT)

END PVMT & SHLDR TRANS LT. STA. 65+05.00 PVMT OFFSET -17.33 SHLDR OFFSET -21.59'

EXISTING 4' STEEL TO REMAIN IN PLACE

EX. 24" CMP

1 MH

PROP. NO. 3.7'X7' M.H.
STA. 63+16.81
TOP EL. 1734.43
IN EL. 1722.79'
OUT. EL. 1722.58

INSTALL 50' BY BORE UNDERNEATH EXISTING ROADWAY

4'X3'X56' EX. CONC. BOX TO REMAIN IN PLACE

EXIST. C.B. TO REMAIN IN PLACE
TOP EL. 1733.91
INV. EL. 1723.91

SCHOOL ZONE SPEED LIMIT

PROP. R.O.W.

LIMIT OF CONST. STA. 0+70.00

LIMIT OF CONST. STA. 1+05.00

STA. 64+30.00
38' BUS. ENT.
32'-18" S.D. REQD.

LIMIT OF CONST. STA. 0+65.00

EXISTING 2' STEEL TO BE PURGED, CUT, CAPPED, & ABANDONED IN PLACE

EXISTING 2' STEEL TO REMAIN IN PLACE

TIE NEW 4' STEEL TO EXISTING 2' STEEL WITH 2" TAP TEE, EFV, AND FARM TAP REGULATOR STATION

255' TRANSITION

BEG. PVMT & SHLDR TRANS. RT. STA. 62+50.00 PVMT OFFSET 22.00'

END PVMT & SHLDR TRANS. RT. STA. 65+05.00 PVMT OFFSET 17.60' SHLDR OFFSET 21.60'

ORDER OF OPERATIONS:

INSTALL NEW MAINS, PRESSURIZE BOTH OLD AND NEW MAINS, THEN RECONNECT INDIVIDUAL SERVICE LINES BEFORE DEPRESSURIZING MAINS TO BE ABANDONED.

COORDINATE WITH MTNG PERSONNEL TO RE-LIGHT INDIVIDUAL CUSTOMERS AS REQUIRED.

MATTHEW C. STENNETT
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
COMMERCE
No. 112468
STATE OF TENNESSEE
9/27/24

MIDDLE TENNESSEE NATURAL GAS UTILITY DISTRICT
WWW.MTNG.COM

GAS LINE RELOCATION PLANS

BEG. PROJECT TO STA.127+00

SCALE: 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U8-1
		PIN	
		124053.00	

UTILITIES INDEX

	SHEET NO.
ESTIMATED QUANTITIES	U8-1
REMOVAL QUANTITIES	U8-2
TDOT PLANS SHEET 4	U8-3

ESTIMATED UTILITY QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	% UTILITY BETTERMENT	% PROJECT PUBLIC	% PROJECT PRIVATE
790-03.01	POLE 40FT CLASS 2 WOOD	EACH	3	0.00%	67.00%	33.00%
790-03.03	POLE 40FT CLASS 4 WOOD	EACH	3	0.00%	67.00%	33.00%
790-06.03	POLE 55FT CLASS 3 WOOD	EACH	1	0.00%	67.00%	33.00%
790-22.13	1Ø DEAD END 25KV	EACH	1	0.00%	67.00%	33.00%
790-22.16	1Ø DDE TANGENT 25KV	EACH	1	0.00%	67.00%	33.00%
790-22.18	1Ø SGL DEAD END XARM 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.02	3Ø CROSSARM DBL LRG COND 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.17	3Ø VERTICAL MED ANGLE 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.25	3Ø CROSSARM DDE 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.26	3Ø CROSSARM DEAD END 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.27	3Ø CROSSARM DBL DDE 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.28	3Ø DBL 10FT XARM DDE 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.29	3Ø DDE UNBALANCED LOAD 25KV	EACH	1	0.00%	67.00%	33.00%
790-26.38	3Ø CROSSARM 10FT LRG COND 25KV	EACH	1	0.00%	67.00%	33.00%
790-30.13	SECONDARY CONDUCTOR 2 AL TRIPLEX	LF	109	0.00%	67.00%	33.00%
790-31.02	SERVICE ASSEMBLY-POLE TYPE	EACH	6	0.00%	67.00%	33.00%
790-31.11	SERVICE CONDUCTOR 2 AL TRIPLEX	LF	29	0.00%	67.00%	33.00%
790-32.01	DOWN GUY - THROUGH BOLT TYPE	EACH	1	0.00%	67.00%	33.00%
790-32.02	DOWN GUY - THROUGH BOLT TYPE HEAVY DUTY	EACH	1	0.00%	67.00%	33.00%
790-32.06	DOWN GUY - INSULATED	EACH	13	0.00%	67.00%	33.00%
790-32.23	GUY GUARD	EACH	13	0.00%	67.00%	33.00%
790-33.18	ROCK ANCHOR GUY BOLT TYPE	EACH	13	0.00%	67.00%	33.00%
790-40.03	OH COND 1/0 6/1 ACSR RAVEN	LF	3,432	0.00%	67.00%	33.00%
790-40.05	OH COND 3/0 6/1 ACSR PIGEON	LF	638	0.00%	67.00%	33.00%
790-40.49	OH COND 795 37 AAC ARBUTUS	LF	1,914	0.00%	67.00%	33.00%
790-46.02	1Ø TRANSFORMER CONV W/POLE MTD FUSE & LA	EACH	1	0.00%	67.00%	33.00%
790-46.03	1Ø TRANSFORMER CONV W/XARM MTD FUSE & LA	EACH	2	0.00%	67.00%	33.00%
790-52.03	10KVA 1Ø OH XFORMER 7.2KV 120/240	EACH	2	0.00%	67.00%	33.00%
790-52.12	50KVA 1Ø OH XFORMER 7.2KV DUAL VOLTAGE	EACH	1	0.00%	67.00%	33.00%
790-59.06	GOAB SWITCH 25KV	EACH	1	0.00%	67.00%	33.00%
790-69.09	GND-ASSY GND ROD WITH ALUMINUM	EACH	5	0.00%	67.00%	33.00%
790-70.22	STREET LIGHT 70W LED	EACH	1	0.00%	67.00%	33.00%
790-98.01	REMOVE WIRE	LF	6,818	0.00%	67.00%	33.00%
790-98.02	REMOVE POLES	EACH	9	0.00%	67.00%	33.00%
790-98.03	REMOVE FRAMING/ASSOCIATED APPARATUS	EACH	56	0.00%	67.00%	33.00%
798-08.02	TRANSFER CABLE / FIBER	EACH	1	0.00%	67.00%	33.00%

VOLUNTEER ENERGY COOPERATIVE
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LARRY O. LARGENT
REGISTERED ENGINEER
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STATE OF TENNESSEE
7-11-2024

VEC
VOLUNTEER ENERGY COOPERATIVE

VOLUNTEER ENERGY COOPERATIVE

ELECTRIC RELOCATION

ESTIMATED QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U8-2
		PIN	
		124053.00	

ESTIMATED REMOVAL QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
790-98.01	**REMOVE WIRE**		
	1/0ACSR	LF	2,372
	2AT-W	LF	100
	3/0ACSR	LF	638
	336AAC	LF	2,709
	4ACSR	LF	886
	6DUP-W	LF	91
	K2AT-W	LF	22
790-98.02			
	REMOVE POLES		
	30-2	EACH	1
	30-7	EACH	1
	35-6	EACH	1
	40-2	EACH	2
	40-5	EACH	2
	45-3	EACH	2

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
790-98.03	**REMOVE FRAMING/ASSOCIATED APPARATUS**		
	240V1.5KVA	EACH	1
	240V25KVA	EACH	2
	240V50KVA	EACH	1
	2AT	EACH	1
	6DUP	EACH	1
	A3	EACH	1
	A5-2	EACH	1
	BR-6	EACH	1
	BR-8	EACH	1
	BSL-10H70	EACH	1
	BSL-4A	EACH	1
	C1-2	EACH	2
	C2-2	EACH	1
	C7-2	EACH	1
	C7LESS	EACH	1
	C8-2	EACH	1
	E1-5	EACH	5

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
790-98.03	**REMOVE FRAMING/ASSOCIATED APPARATUS**		
	E1-5G	EACH	1
	E3-10	EACH	5
	F5-3	EACH	5
	G105B	EACH	1
	G106A	EACH	2
	K11	EACH	2
	K11-2	EACH	1
	K11LESS	EACH	1
	K11N	EACH	2
	K2AT	EACH	1
	M2-11A	EACH	4
	M26-5	EACH	1
	M5-6	EACH	3
	VA5	EACH	1
	VC1-1	EACH	1
	VC2	EACH	1
	VM3-3M	EACH	1

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LARRY O. LARSEN
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7-16-2024

VEC
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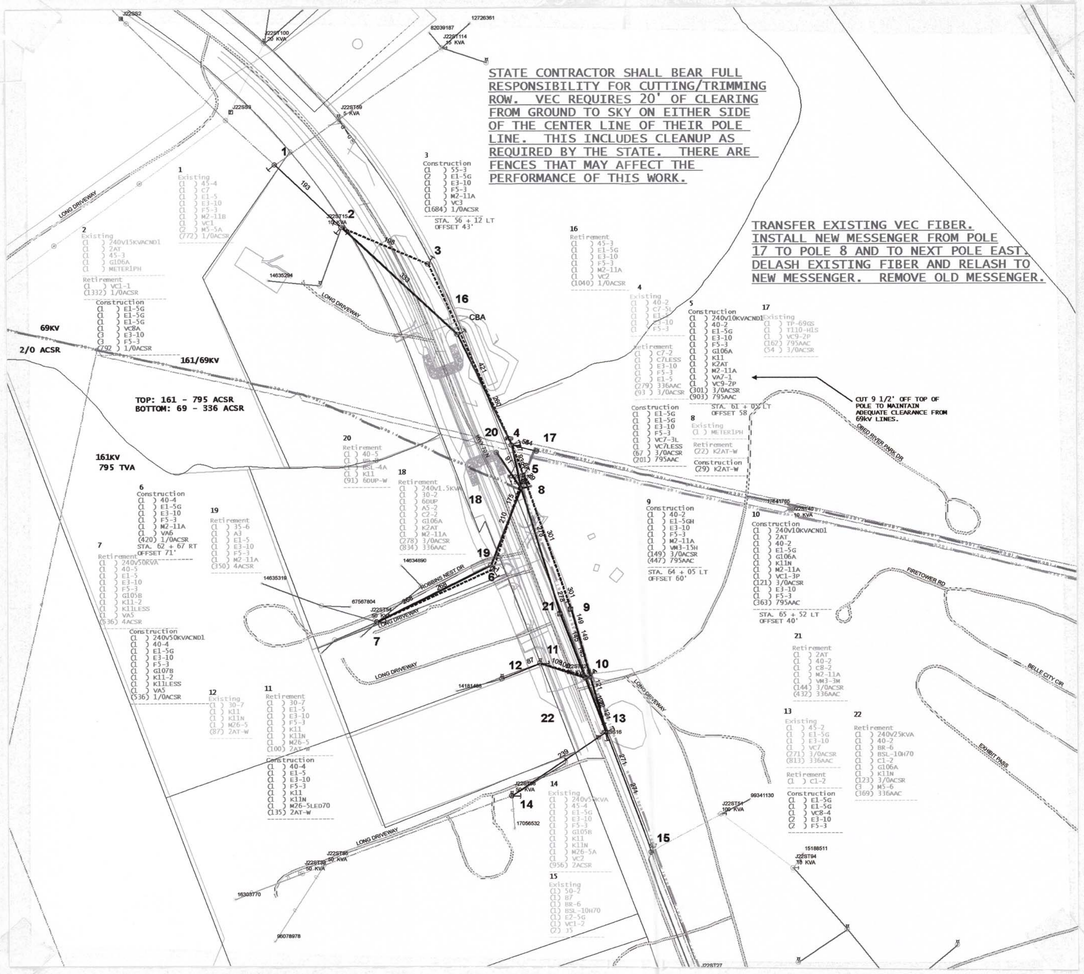
VOLUNTEER ENERGY COOPERATIVE

ELECTRIC RELOCATION

REMOVAL QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	18004-3227-04	U8-3
		PIN	
		124053.00	



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7-11-2024

VEC
VOLUNTEER ENERGY COOPERATIVE

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ELECTRIC RELOCATION