THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

John Stiles Digitally signed by John Stiles
Date: 2025.07.16 15:27:24-04'00'

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

GRESHAM SMITH
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TN 37922
JOHN SHAPPARD STILES, 115028

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, 1A1 |
| STANDARD TRAFFIC DESIGN AND STRUCTURE DRAWINGS | 1A2 |
| PROJECT COMMITMENTS | 1B |
| ESTIMATED ROADWAY QUANTITIES | 2, 2-1 |
| TYPICAL SECTIONS AND PAVEMENT SCHEDULE | 2B, 2B1 – 2B3 |
| GENERAL NOTES | 2C, 2C1 |
| SPECIAL NOTES | 2D |
| ENVIRONMENTAL NOTES | 2E |
| TABULATED QUANTITIES | 2F, 2F1 |
| RIGHT-OF-WAY NOTES, UTILITY NOTES, AND UTILITY OWNERS | 3 |
| PROPERTY MAP AND RIGHT-OF-WAY ACQUISITION TABLE | 3A |
| PRESENT LAYOUT | 4 |
| RIGHT-OF-WAY DETAILS | 4A |
| PROPOSED LAYOUT | 4B |
| DRAINAGE LAYOUT | 4C |
| PROPOSED PROFILE | 4D |
| SIDE ROADS PROFILE(S) | 5 |
| HAUL ROADS PROFILE(S) | 6 |
| PRIVATE DRIVE, BUSINESS, AND FIELD ENTRANCE PROFILE(S) | 7 |
| DRAINAGE MAP(S) | 8 |
| EROSION PREVENTION AND SEDIMENT CONTROL PLANS | 9 – 15 |
| SIGNING AND PAVEMENT MARKING PLAN AND SIGN SCHEDULE | 16 |
| ROADWAY CROSS SECTIONS | 17 – 34 |
| SIDE ROAD CROSS SECTIONS | 35 – 36 |
| HAUL ROAD CROSS SECTIONS | 37 – 41 |
| RAILROAD CROSS SECTIONS | 42 – 43 |
| TRAFFIC CONTROL PLANS | T1 – T7 |

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

| YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|
| 2025 | BR-STP-320(10) | ROADWAY-SIGN1 |
| | | |
| | | |
| | | |

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# SIGNATURE SHEET

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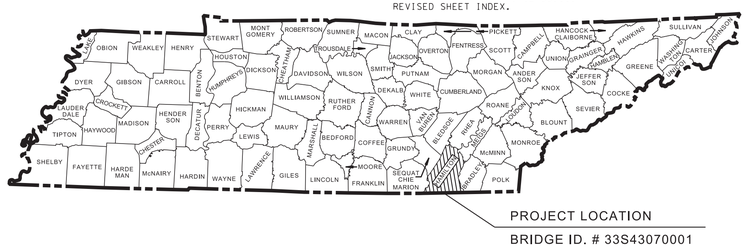
PS&E Index Of Sheets
SEE SHEET NO. 1A

# STATE OF TENNESSEE
# DEPARTMENT OF TRANSPORTATION
# BUREAU OF ENGINEERING

| DOES THIS PROJECT QUALIFY FOR UTILITY CHAPTER 86 | (YES) | NO |
|---|---|---|
| WORK ZONE SIGNIFICANCE DETERMINATION | | |
| SIGNIFICANT | (YES) | NO |

| TENN. | YEAR | SHEET NO. |
|---|---|---|
| | 2025 | 1 |
| FED. AID PROJ. NO. | BR-STP-320(10) | |
| STATE PROJ. NO. | 33057-3228-94 | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.
UPDATED COMMISSIONER AND CHIEF ENGINEER
REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO STA. 12+35.11.
REVISED SHEET INDEX.




# HAMILTON COUNTY

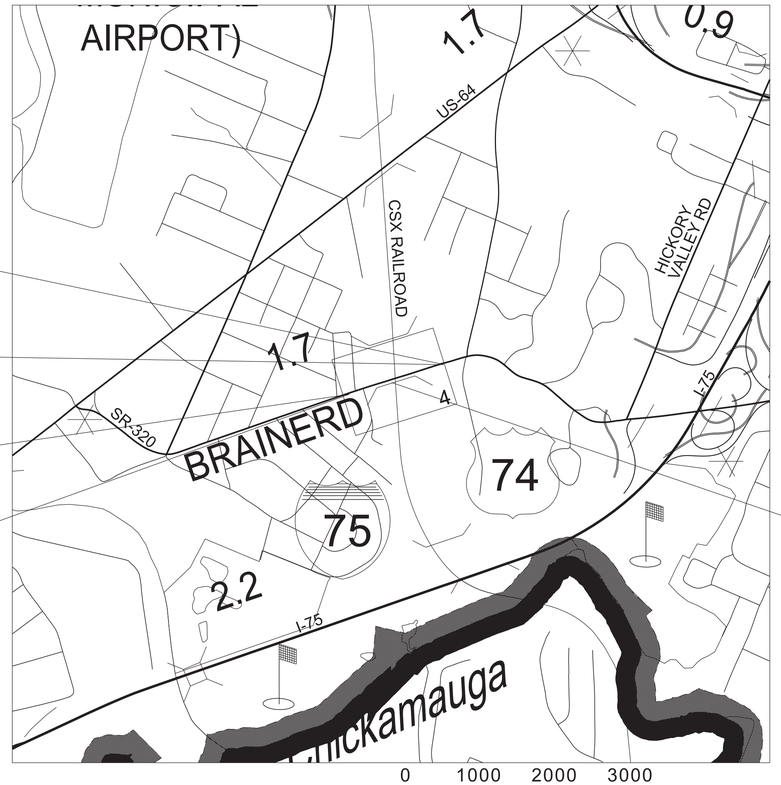
S.R. 320 (EAST BRAINERD RD.),
BRIDGE OVER CSX R/R,
L.M. 0.86 IN CHATTANOOGA (IA)

PS&E

GRADE, DRAIN, BRIDGE, PAVING, GUARDRAIL, SIGNS, WALLS, PAVEMENT MARKING

STATE HIGHWAY NO. 320

NO EXCLUSIONS




SCALE: 1"= 1000'

END PROJECT NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJECT NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250578.3546 E 2211035.3765

BEGIN PROJECT NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250192.3251 E 2209811.2463

BEGIN PROJECT NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

CSXT MP 0WA 124.80
DOT# 350030G

| | |
|---|---|
| R.O.W. LENGTH | 0.248 MILES |
| ROADWAY LENGTH | 0.216 MILES |
| BRIDGE LENGTH | 0.031 MILES |
| PROJECT LENGTH | 0.247 MILES |

SEALED BY
JOHN S. STILES
REGISTERED ENGINEER
KY
AGRICULTURE
7/16/2025

APPROVED:
WILL REID, CHIEF ENGINEER

DATE:

APPROVED:
WILL REID, 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 PROJECT MANAGER: ROB HOWARD
DESIGNED BY : GRESHAM SMITH
DESIGNER : JOHN S. STILES, P.E. CHECKED BY PATRICK FIVEASH, P.E.
P.E. NO. 33057-3228-94 STET
PIN NO. 124076.00

SR-320

| SURVEY 02-13-19 | TRAFFIC DATA | |
|---|---|---|
| 11/11/19 UPDATED | ADT (2025) | 15,780 |
| 06/22/21 UPDATED | ADT (2045) | 17,360 |
| 08/03/21 UPDATED | DHV (2045) | 11% |
| 07/12/22 UPDATED | D | 65 - 35 |
| 07/18/22 UPDATED | T (AADT) | 2 % |
| 09/07/22 UPDATED | T (DHV) | 1 % |
| 07/26/23 UPDATED | V | 40 MPH |
| 12/13/23 UPDATED | | |
| 10/14/24 UPDATED | | |

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

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 1A |
| PS&E | 2025 | BR-STP-320(10) | 1A |
| | | | |
| | | | |

# ROADWAY INDEX


| SHEET NAME | SHEET NO. |
|---|---|
| SIGNATURE SHEETS | ROADWAY-SIGN1 |
| TITLE SHEET | 1 |
| ROADWAY INDEX AND STANDARD ROADWAY DRAWINGS | 1A |
| STANDARD ROADWAY DRAWINGS | 1A1 |
| STANDARD STRUCTURE AND TRAFFIC DESIGN DRAWINGS | 1A2 |
| PROJECT COMMITMENTS | 1B |
| ESTIMATED ROADWAY QUANTITIES | 2, 2-1 |
| TYPICAL SECTIONS AND PAVEMENT SCHEDULE | 2B, 2B1 – 2B3 |
| GENERAL NOTES | 2C, 2C1 |
| SPECIAL NOTES | 2D |
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| DRAINAGE MAP | 8 |
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| HAUL ROAD CROSS SECTIONS | 37 – 41 |
| RAILROAD CROSS SECTIONS | 43 – 43 |
| TRAFFIC CONTROL PLANS | T1 – T7 |
| BRIDGE PLANS | B-1 |
| GEOTECHNICAL PLANS | G-1 |
| RETAINING WALL PLANS | R-1 |
| STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PLANS | S-1 – S-8 |
| UTILITIES PLANS | U1–1 |


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

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

| DWG. | REV. | DESCRIPTION |
|---|---|---|
| RD-TP-1 | 10-01-24 | STANDARD ROADWAY DRAWINGS TITLE SHEET |
| RD-A-1 | 02-20-20 | STANDARD ABBREVIATIONS A THROUGH L |
| RD-A-2 | | STANDARD ABBREVIATIONS M THROUGH Z |
| RD-L-1 | 02-20-20 | STANDARD LEGEND |
| RD-L-1A | | STANDARD LEGEND |
| RD-L-2 | 02-20-20 | STANDARD LEGEND FOR UTILITY INSTALLATIONS |

# STANDARD ROADWAY DRAWINGS

| DWG. | REV. | DESCRIPTION |
|---|---|---|
| RD-L-5 | 07-30-24 | STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL |
| RD-L-6 | 02-20-20 | STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL |
| RD-L-7 | 02-20-20 | STANDARD LEGEND FOR EROSION PREVENTION AND SEDIMENT CONTROL |

### 10-101.00 STANDARDS ROADWAY DRAWINGS

| | | |
|---|---|---|
| RD11-SE-1 | | TRANSITION AND CROSS SLOPE DETAILS |
| RD11-SE-2 | | SUPERELEVATION TRANSITION DETAILS FOR UNDIVIDED ROADWAYS |
| RD11-SE-2A | | SUPERELEVATION TRANSITION SECTIONS FOR UNDIVIDED ROADWAYS |
| RD11-TS-6 | | TYPICAL CURB & GUTTER SECTIONS WITH SHOULDERS AND WITH GRASS STRIPS |
| RD11-TS-6A | | TYPICAL CURB & GUTTER SECTIONS WITHOUT SHOULDERS AND WITH GRASS STRIPS |
| RD11-TS-6B | | TYPICAL CURB AND GUTTER SECTIONS WITH SHOULDERS AND WITHOUT GRASS STRIPS |
| RD11-LR-1 | | MINIMUM RUNOFF LENGTHS (LR) FOR URBAN HIGHWAYS |
| RD11-S-11 | | DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT |
| RD11-S-11A | | ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION |
| RD11-SD-1 | | INTERSECTION SIGHT DISTANCE DESIGN AND GENERAL NOTES |
| RD11-SD-2 | | INTERSECTION SIGHT DISTANCE LANDSCAPE AND OBSTRUCTION |
| RD11-SD-3 | | INTERSECTION SIGHT DISTANCE 2-LANE ROADWAYS |
| RD-UD-3 | 01-09-24 | UNDERDRAIN DETAILS |

### 10-102.00 PIPE CULVERTS, ENDWALLS, AND ENERGY DISSIPATERS

| | | |
|---|---|---|
| D-PB-1 | 03-01-23 | STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION |
| D-PE-4 | 06-28-19 | STRAIGHT CONCRETE ENDWALLS (PIPE SIZES 18" TO 30") |

### 10-103.00 CATCH BASINS AND MANHOLES

| | | |
|---|---|---|
| D-CB-12P | 02-20-20 | STANDARD PRECAST RECTANGULAR CONCRETE NO.12 CATCH BASIN |
| D-CB-12RA | 01-28-22 | STANDARD PRECAST 48" CIRCULAR NO. 12 CATCH BASIN FOR USE WITH 6" VERTICAL CURB |
| D-CB-12RB | 02-20-20 | STANDARD PRECAST 60" AND 72" CIRCULAR NO. 12 CATCH BASIN FOR USE WITH 6" VERTICAL CURB |
| D-CB-14P | 02-20-20 | STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN |
| D-CB-99 | 02-20-20 | MISCELLANEOUS DETAILS FOR RECTANGULAR STRUCTURES |
| D-CB-99R | 01-28-22 | MISCELLANEOUS DETAILS FOR ROUND STRUCTURES |
| D-CB-99RA | 10-29-21 | BILL OF STEEL FOR ROUND CATCH BASIN LIDS |
| D-CB-99RB | 02-20-20 | ROUND JUNCTION BOX SPRING DRAIN BOX |
| D-CBB-12A | 06-28-19 | TYPE ‘B’ CAST IRON FRAME, GRATE & VERTICAL INLET DETAILS FOR NOS. 10, 12, 14, 16 & 17 TYPE CATCH BASINS |
| D-CBB-12D | 07-07-23 | TYPE "B" CAST IRON FRAME, GRATE & CURB HOOD DETAILS FOR NOS. 12, 14, 16 & 17 TYPE CATCH BASINS |
| D-RL-1 | | ROUND LID DETAILS FOR SINGLE CURB AND WALL INLET |
| D-RL-2 | | ROUND LID DETAILS FOR DOUBLE CURB AND WALL INLET |
| D-RS-1 | | PRECAST ROUND STRUCTURES (48” THRU 120”) |
| D-RS-2 | | PRECAST ROUND STRUCTURES REINFORCEMENT DETAILS |
| D-RS-3 | | MISCELLANEOUS DETAILS FOR ROUND STRUCTURES |

### 10-104.00 ROADWAY, PAVEMENT APPURTENANCES, AND FENCES

| | | |
|---|---|---|
| RP-J-9 | 05-01-20 | CONTRACTION AND CONSTRUCTION JOINTS FOR CONCRETE PAVEMENT |
| RP-J-15 | 05-01-20 | LONGITUDINAL CONTRACTION AND CONSTRUCTION JOINTS |
| RP-J-23 | 01-28-22 | CONCRETE PAVEMENT REPAIR DETAILS |
| RP-J-24 | 05-01-20 | CONCRETE PAVEMENT SPALL AND RANDOM CRACK REPAIR DETAILS |
| RP-J-25 | 05-01-20 | CONCRETE PAVEMENT JOINT REPAIR DETAILS |
| RP-D-16 | 04-01-25 | DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS |
| RP-VC-10 | 03-04-21 | VERTICAL CONCRETE CURB AND CURB AND GUTTER (FOR 8” TO 12” GUTTER DEPTH) |
| W-CIP-1 | 05-01-20 | ROADWAY FEATURES AT CAST IN PLACE RETAINING WALL |
| W-MSE-1 | 05-01-20 | ROADWAY FEATURES FOR MSE SEGMENTAL PRECAST FACING RETAINING WALL |
| W-MSE-2 | 05-01-20 | ROADWAY FEATURES FOR MSE MODULAR BLOCK FACING RETAINING WALL |
| S-RP-2 | 06-28-19 | STANDARD CONCRETE RIGHT-OF-WAY MARKERS |

### 10-105.00 MULTIMODAL

| | | |
|---|---|---|
| CR-GN-1 | | GENERAL NOTES CURB RAMP |
| CR- GN-2 | | CURB RAMP NUMBERING |
| CR-DWS-1 | | DETECTABLE WARNING SURFACE DETAIL |
| CR-CRT-1 | | CURB RAMP TYPES |
| CR-GTL-1 | | GUTTER TRANSITION LAYOUT |
| CR-GTL-2 | | GUTTER TRANSITION LAYOUT |
| CR-40 | | MONO-DIRECTIONAL SINGLE CROSSWALK CURB RAMP DETAILS |
| MM-VPR-1 | | VEHICLE AND PEDESTRIAN SAFETY RAIL |
| MM-SW-1 | 07-07-23 | DETAILS FOR CONCRETE SIDEWALKS |
| MM-TS-2 | 06-15-21 | LATERAL OFFSETS FOR SIDEWALK AND SHARED USE PATH |

### 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-6 | 07-30-24 | SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE |
| S-CC-1 | 10-01-24 | CRASH CUSHION |
| S-GR31-1 | 03-13-25 | GUARDRAIL DETAILS |
| S-GR31-1A | 06-28-19 | GUARDRAIL AND BLOCK-OUT DETAILS |

**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE
7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

PS&E INDEX AND STANDARD ROADWAY DRAWINGS

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 1A1 |
| PS&E | 2025 | BR-STP-320(10) | 1A1 |
| | | | |
| | | | |

| DWG. | REV. | DESCRIPTION |
|---|---|---|
| S-GR31-1B | | GUARDRAIL FASTENING HARDWARE |
| S-GR31-1C | 07-07-23 | GUARDRAIL GENERAL NOTES AND POST DETAILS |
| S-GR1-1D | 03-01-23 | GUARDRAIL POST PLACEMENT IN ROCK |
| S-GRC-4 | 01-30-25 | GUARDRAIL CONNECTION TO BRIDGE RAILING CONCRETE PARAPET |
| S-GRC-5 | 02-28-20 | GUARDRAIL CONNECTION TO BRIDGE ENDS (TRAILING ENDS) |
| S-GRS-1 | 06-15-21 | SPECIAL CASE LONG SPAN GUARDRAIL 1 POST, 2 OR 3 POSTS OMITTED |
| 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-GRT-3 | 06-28-19 | TYPE 21 GUARDRAIL END TERMINAL |
| S-GRA-3 | 01-09-24 | TYPE 13 GUARDRAIL ANCHOR |
| **10-107.00** | | **EROSION PREVENTION AND SEDIMENT CONTROL** |
| EC-STR-3C | 03-01-23 | SILT FENCE WITH WIRE BACKING |
| EC-STR-3E | 04-01-08 | SILT FENCE FABRIC JOINING DETAILS |
| EC-STR-27 | 08-01-12 | TEMPORARY SLOPE DRAIN AND BERM |
| EC-STR-34 | 05-04-22 | EROSION CONTROL BLANKET FOR SLOPE INSTALLATION |
| EC-STR-37 | 06-10-14 | SEDIMENT TUBE |
| EC-STR-6 | 11-30-20 | ROCK CHECK DAM |
| EC-STR-6A | 05-06-16 | ENHANCED ROCK CHECK DAM |
| EC-STR-19 | 04-01-08 | CATCH BASIN PROTECTION |
| EC-STR-39A | 08-01-12 | CURB INLET PROTECTION TYPE 3 & 4 |
| EC-STR-25 | 08-01-12 | TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD |
| EC-STR-36 | 05-04-22 | TURF REINFORCEMENT MAT FOR CHANNEL INSTALLATION |

**SEALED BY**

JOHN S. STYLES
REGISTERED ENGINEER
XVI
AGRICULTURE
TN

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# STANDARD ROADWAY DRAWINGS

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 1A2 |
| PS&E | 2025 | BR-STP-320(10) | 1A2 |
| | | | |
| | | | |

# STANDARD TRAFFIC DESIGN DRAWINGS

| DWG. | REV. | DESCRIPTION |
|---|---|---|
| **10-200.00 SIGN** | | |
| T-S-8 | 07-15-91 | HIGHWAY SHIELDS USED ON STATE NUMBERED ROUTES AND ARROWS |
| 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 | I-BEAM BREAK-AWAY LARGE SIGN SUPPORT DETAILS |
| T-S-16 | 07-02-15 | GROUND MOUNTED ROADSIDE SIGN PLACEMENT DETAILS |
| 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 |
| **10-204.00 DESIGN - TRAFFIC CONTROL** | | |
| T-M-1 | 01-24-25 | DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS |
| T-M-2 | 01-24-25 | DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS |
| T-M-4 | 01-24-25 | STANDARD INTERSECTION PAVEMENT MARKINGS |
| T-WZ-10 | 03-26-25 | ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS |
| T-WZ-16 | 03-26-25 | LANE SHIFT FOR DIVIDED HIGHWAYS AND FREEWAYS |
| T-WZ-55 | 03-26-25 | SIDEWALK TRAFFIC CONTROL |
| T-WZ-PBR1 | 03-26-25 | INTERCONNECTED PORTABLE BARRIER RAIL |
| T-WZ-PBR2 | 03-26-25 | DETAILS FOR WORK ZONE CHANNELIZATION DEVICES |
| T-WZ-PCB1 | 03-26-25 | 10 FOOT PORTABLE CONCRETE BARRIER RAIL |
| T-WZ-PCB2 | 03-26-25 | 20 FOOT PORTABLE CONCRETE BARRIER RAIL |
| T-WZ-PCB2A | 03-26-25 | 20 FOOT PORTABLE CONCRETE BARRIER RAIL STIFFENER TUBE |
| T-WZ-PCB3 | 03-26-25 | PORTABLE CONCRETE BARRIER RAIL DETAILS |
| T-WZ-PCB4 | 03-26-25 | PORTABLE CONCRETE BARRIER RAIL ANCHOR PIN DETAILS |

# STANDARD STRUCTURE DRAWINGS

| DWG. | REV. | DESCRIPTION |
|---|---|---|
| **10-300.00 NEW STRUCTURES** | | |
| STD-2-1 | 11-01-10 | BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL |
| STD-8-5 | 05-10-21 | STANDARD PROTECTIVE FENCE DETAILS |
| STD-10-2 | 06-05-23 | MISC. ABUTMENT & PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS |
| STD-11-1 | 04-15-20 | BRIDGE RAILING CONCRETE PARAPET WITH STRUCTURAL TUBING |

**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

STANDARD
TRAFFIC DESIGN
AND STRUCTURE
DRAWINGS

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 1B |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 1B |
| PS&E | 2025 | BR-STP-320(10) | 1B |
| | | | |

## PROJECT COMMITMENTS

| COMMITMENT ID | SOURCE DIVISON | DESCRIPTION | STA. / LOCATION |
|---|---|---|---|
| EDHS001 | ENVIRONMENTAL DIVISION, HISTORIC | THE HISTORIC PROPERTY (ELBERT LONG JUNIOR HIGH SCHOOL) LOCATED ON PARCEL 12 SHALL NOT BE USED AS A STAGING AREA FOR CONSTRUCTION. | STA. 61+20.81 |
| EDHZ001 | ENVIRONMENTAL DIVISION, HAZARDOUS MATERIALS | AN ASBESTOS CONTAINING MATERIAL (ACM) SURVEY WAS CONDUCTED ON BRIDGE NO. 33S43070001, SR-320 OVER CSX R/R LM 0.86 (33-SR320-00.86). 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 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2021) SECTION 107.08 D AND 202.03). | BRIDGE NO. 33S43070001 |
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**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

PROJECT COMMITMENTS

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2 |
| PS&E | 2025 | BR-STP-320(10) | 2 |
| | | | |
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## ESTIMATED ROADWAY QUANTITIES

| | ITEM NO. | DESCRIPTION | UNIT | QUANTITY 33057-3228-94 |
|---|---|---|---|---|
| | 105-01 | CONSTRUCTION STAKES, LINES AND GRADES | LS | 1 |
| | 201-01 | CLEARING AND GRUBBING | LS | 1 |
| (1)(2) | 202-01.50 | REMOVAL OF STRUCTURES AND OBSTRUCTIONS | EACH | 1 |
| (2)(3) | 202-02.01 | REMOVAL OF PIPE (18" RCP, STA. 50+49 BENHAM DRIVE) | L.F. | 105 |
| (4) | 202-03 | REMOVAL OF RIGID PAVEMENT, SIDEWALK, ETC. | S.Y. | 465 |
| (5) | 202-03.01 | REMOVAL OF ASPHALT PAVEMENT | S.Y. | 1610 |
| (6) | 202-08.10 | REMOVAL OF CURB (CONCRETE CURB) | L.F. | 1695 |
| (7)(8) | 203-01 | ROAD AND DRAINAGE EXCAVATION (UNCLASSIFIED) | C.Y. | 5017 |
| (9) | 203-02.01 | BORROW EXCAVATION (GRADED SOLID ROCK) | TON | 350 |
| (8) | 203-03 | BORROW EXCAVATION (UNCLASSIFIED) | C.Y. | 6150 |
| | 203-04 | PLACING AND SPREADING TOPSOIL | C.Y. | 483 |
| (10) | 203-06 | WATER | M.G. | 16 |
| | 203-07 | FURNISHING & SPREADING TOPSOIL | C.Y. | 1002 |
| (11) | 203-10.15 | WASTE MATERIAL | C.Y. | 207 |
| (12)(13) | 203-50 | CONSTRUCTION OF HAUL ROAD | LS | 1 |
| (14) | 209-02.04 | 10" TEMPORARY SLOPE DRAIN | L.F. | 71 |
| | 209-05 | SEDIMENT REMOVAL | C.Y. | 116 |
| (15)(16) | 209-08.02 | TEMPORARY SILT FENCE (WITH BACKING) | L.F. | 3532 |
| (15)(16) | 209-08.07 | ROCK CHECK DAM | EACH | 3 |
| (15)(16) | 209-08.08 | ENHANCED ROCK CHECK DAM | EACH | 5 |
| (15)(16) | 209-09.43 | CURB INLET PROTECTION (TYPE 4) | EACH | 17 |
| (15)(16) | 209-40.33 | CATCH BASIN PROTECTION (TYPE D) | EACH | 13 |
| | 303-01 | MINERAL AGGREGATE, TYPE A BASE, GRADING D | TON | 2692 |
| (17) | 303-10.04 | MINERAL AGGREGATE (SIZE 57) | TON | 346 |
| (9) | 303-10.07 | NO. 4 STONE | TON | 70 |
| | 307-01.21 | ASP. CONC. MIX (PG70-22)(BPMB-HM) GR. A-S | TON | 453 |
| | 307-02.01 | ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING A | TON | 490 |
| | 307-02.08 | ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING B-M2 | TON | 446 |
| | 402-01 | BITUMINOUS MATERIAL FOR PRIME COAT (PC) | TON | 4 |
| (18) | 402-02 | AGGREGATE FOR COVER MATERIAL (PC) | TON | 15 |
| | 403-01 | BITUMINOUS MATERIAL FOR TACK COAT (TC) | TON | 5 |
| | 407-20.05 | SAW CUTTING ASPHALT PAVEMENT | L.F. | 766 |
| | 411-02.10 | ACS MIX(PG70-22) GRADING D | TON | 239 |
| | 415-01.02 | COLD PLANING BITUMINOUS PAVEMENT | S.Y. | 731 |
| (19) | 502-03.13 | CONCRETE PAVEMENT REMOVAL | S.Y. | 152 |
| (20) | 502-04.01 | SAWING CONCRETE PAVEMENT (FULL DEPTH) | L.F. | 147 |
| (21)(22) | 604-07.01 | RETAINING WALL (WALL C) | S.F. | 3355 |
| (14)(47) | 607-03.02 | 18" CONCRETE PIPE CULVERT (CLASS III) | L.F. | 1155 |
| | 611-07.01 | CLASS "A" CONCRETE (PIPE ENDWALLS) | C.Y. | 1 |
| | 611-07.02 | STEEL BAR REINFORCEMENT | LB. | 45 |
| (23) | 611-09.01 | ADJUSTMENT OF EXISTING CATCH BASIN | EACH | 1 |
| | 611-12.01 | CATCH BASINS, TYPE 12, 0' - 4' DEPTH | EACH | 4 |
| | 611-12.02 | CATCH BASINS, TYPE 12, > 4' - 8' DEPTH | EACH | 4 |
| | 611-12.04 | CATCH BASINS, TYPE 12, > 12' - 16' DEPTH | EACH | 2 |
| | 611-14.02 | CATCH BASINS, TYPE 14, > 4' - 8' DEPTH | EACH | 2 |
| | 701-01.01 | CONCRETE SIDEWALK (4") | S.F. | 9316 |
| | 701-02 | CONCRETE DRIVEWAY | S.F. | 1391 |
| | 701-02.03 | CONCRETE CURB RAMP | S.F. | 207 |
| (24) | 702-01 | CONCRETE CURB | C.Y. | 2 |
| (25) | 702-03 | CONCRETE COMBINED CURB & GUTTER | C.Y. | 112 |
| | 705-06.10 | GR TERMINAL TRAILING END (TYPE 13) MASH TL-3 | EACH | 2 |
| | 705-06.20 | TANGENT ENERGY ABSORBING TERM MASH TL-3 | EACH | 1 |
| | 705-06.25 | THRIE BEAM BRIDGE TRANSITION MASH TL-3 | EACH | 4 |
| | 705-06.27 | THRIE BEAM 38IN VEHICLE & PEDESTRIAN SAFETY RAIL MASH TL-3 | L.F. | 890 |
| | 705-06.30 | GR TERMINAL (ENERGY ABSORBING) MASH TL-2 | EACH | 1 |
| | 706-01 | GUARDRAIL REMOVED | L.F. | 1293 |
| (26) | 707-02.11 | CHAIN-LINK FENCE (6 FOOT) (VINYL COATED) | L.F. | 190 |
| (26) | 707-02.12 | END & CORNER POST ASSEMBLIES (6' VINYL COATED) | EACH | 5 |
| (27) | 707-06.01 | REMOVAL OF FENCE (VARIOUS) | L.F. | 795 |
| | 708-02.01 | MARKERS (CONCRETE R.O.W. POSTS) | EACH | 11 |
| (28) | 709-05.05 | MACHINED RIP-RAP (CLASS A-3) | TON | 100 |

## ESTIMATED ROADWAY QUANTITIES

| | ITEM NO. | DESCRIPTION | UNIT | QUANTITY 33057-3228-94 |
|---|---|---|---|---|
| (29) | 709-05.06 | MACHINED RIP-RAP (CLASS A-1) | TON | 18 |
| | 710-02 | AGGREGATE UNDERDRAINS (WITH PIPE) | L.F. | 1755 |
| | 712-01 | TRAFFIC CONTROL | LS | 1 |
| | 712-02.02 | INTERCONNECTED PORTABLE BARRIER RAIL | L.F. | 2240 |
| (30) | 712-02.47 | BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL | L.F. | 440 |
| | 712-02.60 | TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3) | EACH | 10 |
| | 712-04.01 | FLEXIBLE DRUMS (CHANNELIZING) | EACH | 50 |
| | 712-04.50 | BARRIER RAIL DELINEATOR | EACH | 268 |
| | 712-05.01 | WARNING LIGHTS (TYPE A) | EACH | 76 |
| (31) | 712-06 | SIGNS (CONSTRUCTION) | S.F. | 911 |
| | 712-07.02 | TEMPORARY BARRICADES (TYPE II) | L.F. | 12 |
| | 712-07.03 | TEMPORARY BARRICADES (TYPE III) | L.F. | 144 |
| | 712-09.02 | REMOVABLE PAVEMENT MARKING (8" BARRIER LINE) | L.F. | 424 |
| | 712-09.08 | REMOVABLE PAVEMENT MARKING (6" LINE) | L.F. | 1029 |
| (48) | 713-01.01 | CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS) | C.Y. | 2 |
| (48) | 713-01.02 | STEEL BAR REINFORCEMENT (FOUNDATION FOR SIGN SUPPORTS) | LB. | 361 |
| | 713-02.21 | SIGN POST DELINEATION ENHANCEMENT | L.F. | 12 |
| (48) | 713-06 | STEEL I-BEAMS & WF-BEAMS(BREAKAWAY) SIGN SUPPORTS | LB. | 955 |
| | 713-11.01 | "U" SECTION STEEL POSTS | LB. | 38 |
| | 713-11.02 | PERFORATED/KNOCKOUT SQUARE TUBE POST | LB. | 85 |
| | 713-13.03 | FLAT SHEET ALUMINUM SIGNS (0.100" THICK) | S.F. | 32 |
| (48) | 713-14 | EXTRUDED ALUMINUM PANEL SIGNS | S.F. | 112 |
| (32) | 713-15 | REMOVAL OF SIGNS, POSTS AND FOOTINGS | LS | 1 |
| | 713-16.01 | CHANGEABLE MESSAGE SIGN UNIT | EACH | 3 |
| (33) | 713-16.50 | REMOVE AND REPLACE SIGN (EXISTING STREET NAME SIGNS) | EACH | 2 |
| (34) | 716-01.21 | SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR)(1 COLOR) | EACH | 21 |
| | 716-01.30 | REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER | EACH | 15 |
| | 716-02.04 | PLASTIC PAVEMENT MARKING (CHANNELIZATION STRIPING) | S.Y. | 5 |
| (35) | 716-02.05 | PLASTIC PAVEMENT MARKING (STOP LINE) | L.F. | 23 |
| (35) | 716-02.09 | PLASTIC PAVEMENT MARKING (LONGITUDINAL CROSS-WALK) | L.F. | 76 |
| | 716-05.02 | PAINTED PAVEMENT MARKING (8" BARRIER LINE) | L.F. | 2305 |
| | 716-05.20 | PAINTED PAVEMENT MARKING (6" LINE) | L.M. | 1.71 |
| (36)(37) | 716-08.30 | HYDROBLAST REMOVAL OF PAVEMENT MARKING (LINE) | L.M. | 1.13 |
| (38) | 716-09.83 | CONTRAST PAVEMENT MARKING 6" | L.F. | 847 |
| (39) | 716-12.02 | ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE) | L.M. | 0.81 |
| | 717-01 | MOBILIZATION | LS | 1 |
| (17) | 740-07.04 | GEOGRID REINFORCEMENT TYPE 2 | S.Y. | 524 |
| (16)(40)(41) | 740-10.03 | GEOTEXTILE (TYPE III)(EROSION CONTROL) | S.Y. | 223 |
| (42) | 740-10.04 | GEOTEXTILE (TYPE IV)(STABILIZATION) | S.Y. | 762 |
| (15)(16) | 740-11.02 | TEMPORARY SEDIMENT TUBE 12IN | L.F. | 1616 |
| (15)(16)(43) | 801-01 | SEEDING (WITH MULCH) | UNIT | 7 |
| (15)(16)(43) | 801-01.07 | TEMPORARY SEEDING (WITH MULCH) | UNIT | 160 |
| (15,16)(43,44) | 801-02 | SEEDING (WITHOUT MULCH) | UNIT | 45 |
| (15)(16)(45) | 801-03 | WATER (SEEDING & SODDING) | M.G. | 9 |
| (15)(16) | 803-01 | SODDING (NEW SOD) | S.Y. | 4325 |
| (15)(16)(46) | 805-01.01 | TURF REINFORCEMENT MAT (CLASS I) | S.Y. | 392 |
| (15)(16) | 805-12.02 | EROSION CONTROL BLANKET (TYPE II) | S.Y. | 3581 |

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JOHN S. STILES
REGISTERED ENGINEER
KY
AGRICULTURE

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# ESTIMATED ROADWAY QUANTITIES

SHEET 1 OF 2

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## FOOTNOTES

(1) INCLUDES REMOVAL OF A CATCH BASIN ON BENHAM DRIVE.
(2) SALVAGE SHALL BECOME THE PROPERTY OF THE CONTRACTOR
(3) INCLUDES REMOVAL OF 18" RCP ON BENHAM DRIVE.
(4) INCLUDES REMOVAL OF CONCRETE SIDEWALK ALONG E BRAINERD ROAD
(5) INCLUDES REMOVAL OF EXISTING ASPHALT PAVEMENT OUTSIDE OF THE MILL AND OVERLAY AREAS.
(6) INCLUDES REMOVAL OF CONCRETE POST CURB AND SLOPING CONCRETE CURB WITHIN THE PROJECT LIMITS AND AS DIRECTED BY THE ENGINEER.
(7) INCLUDES 15 C.Y. FOR TEMPORARY CONSTRUCTION EXITS AND 229 C.Y. FOR CONSTRUCTION OF THE TEMPORARY BERMS.
(8) THE CONTRACTOR'S ATTENTION IS DRAWN TO THE PHASING OF WORK AND TRAFFIC CONTROL. A MAJORITY OF THE FILL FOR THIS PROJECT WILL BE REQUIRED AT THE BEGINNING OF THE PROJECT TO CONSTRUCT NEW APPROACHES FOR THE RELOCATED BRIDGE AND A MAJORITY OF THE CUT WILL BE PERFORMED AFTER TRAFFIC HAS BEEN SWITCHED TO THE NEW ALIGNMENT. THE BORROW ITEM NO. 203-03 HAS BEEN ADJUSTED TO REFLECT THIS.
(9) QUANTITY TO BE USED AT THE DISCRETION OF THE ENGINEER TO STABILIZE SOFT SUBGRADE AREAS.
(10) INCLUDES 16 THOUSAND GALLONS FOR USE IN EARTHWORK.
(11) THIS ITEM INCLUDES THE EXCAVATION OF POTENTIALLY CONTAMINED SOILS ON CSXT RIGHT-OF-WAY TO REMOVE EXISTING PORTIONS OF THE BRIDGE FOUNDATIONS AND FOR THE SLOPE PAVING AT ABUTMENT NO. 1 THAT IS NOT INCLUDED IN THE BRIDGE PLANS. THE CONTRACTOR SHALL COORDINATE WITH CSXT TO SCHEDULE TESTING OF THE MATERIAL BY A CSXT CONSULTANT. BASED ON TESTING RESULTS, CSXT WILL MAKE A DETERMINATION OF WHERE ANY SPOILS NEED TO BE WASTED. ALL COST ASSOCIATED WITH EXCAVATION, TRANSPORT, DISPOSAL, AND COORDINATION WITH CSX AND THEIR CONSULTANT SHALL BE INCLUDED IN THE COST OF THIS ITEM. THE AMOUNT OF EXCAVATION REQUIRED ON CSX RIGHT-OF-WAY HAS BEEN ESTIMATED AND IS SHOWN IN THE EARTHWORK TABULATED QUANTITIES BLOCK ON SHEET 2F. FOR DISPOSAL OF THE EXCESS CSXT MATERIAL, SEE THE CSXT SOIL AND WATER MANAGEMENT POLICY CONTAINED WITHIN THE CSXT PUBLIC PROJECT MANUAL.
(12) ITEM NUMBER 203-50 SHALL INCLUDE GEOTEXTILE (TYPE IV), BORROW EXCAVATION GRADED SOLID ROCK), OR MACHINED RIP-RAP (CLASS A-1, CLASS B, OR CLASS C), AND MINERAL AGGREGATE (SIZE 57) AS SHOWN ON SHEET 2F1. THE TABULATED HAUL ROAD QUANTITIES INCLUDE AN ADDITIONAL TEN (10) PERCENT IN THE STONE ITEM FOR MAINTENANCE OF THE HAUL ROADS DURING CONSTRUCTION. THIS ITEM NUMBER SHALL ALSO INCLUDE ANY SHORING THAT WILL BE REQUIRED FOR EITHER HAUL ROAD. HAUL ROAD #2 SHALL ALSO INCLUDE STEEL PLATE(S) THAT ARE TO BE INSTALLED OVER EXISTING CENTURYLINK/LUMEN FIBER LINE TO PROVIDE ADDITIONAL SUPPORT AND PROTECTION, THE TEMPORARY DRAINAGE DITCH. PRICE FOR THIS ITEM SHALL ALSO INCLUDE REMOVAL OF BOTH HAUL ROADS ONCE WORK IS COMPLETE.
(13) IF THE HAUL ROAD IS CONSTRUCTED IN A DRY OR UNSATURATED AREA, BORROW EXCAVATION (GRADED SOLID ROCK) SHALL BE USED. IF THE HAUL ROAD IS CONSTRUCTED IN WATER OR IN AN AREA WITHIN THE FLOOD PLAIN, MACHINED RIP-RAP (CLASS A-1, CLASS B OR CLASS C) SHALL BE USED IN PLACE OF BORROW EXCAVATION. AN ADDITIONAL TEN (10) PERCENT FOR MINERAL AGGREGATE IS INCLUDED IN ITEM 203-50. THE ADDITIONAL TEN (10) PERCENT IS FOR THE MAINTENANCE OF THE HAUL ROAD DUE TO INCLEMENT WEATHER EVENTS OUTSIDE THE CONTRACTOR'S CONTROL.
(14) THE BEDDING MATERIAL SHALL BE INCLUDED IN THE COST OF THE PROPOSED PIPE CULVERT.
(15) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(16) ALL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
(17) FOR USE WITH PAVEMENT AT BRIDGE ENDS PER STANDARD DRAWING STD-10-2.
(18) ITEM TO BE USED AS DIRECTED BY THE ENGINEER.
(19) INCLUDES REMOVAL OF EXISTING CONCRETE PAVEMENT AT DRIVEWAY AT STA. 14+11.29
(20) INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT TO SAWCUT EXISTING DRIVEWAY AT STA. 14+11.29.

## FOOTNOTES

(21) ALL COST OF BUILDING AND INSTALLING THE RETAINING WALLS, INCLUDING FOUNDATION PREPARATION, BACKFILLING AND EXCAVATION, SHALL BE INCLUDED IN THE SQUARE FOOTAGE COST OF THE RETAINING WALLS. QUANTITES FOR FOUNDATION PREPARATION, BACKFILL AND EXCAVATION ARE REFLECTED IN THE END AREA CALCULATIONS ON CROSS SECTIONS AND IN GRADING QUANTITY ROADWAY ITEM 203-01, ROAD AND DRAINAGE EXCAVATION (C.Y.). FOR FURTHER INFORMATION ON RETAINING WALLS SEE R-SERIES SHEETS.
(22) CONCRETE PARAPET IS LOCATED ON RETAINING WALL C AND IS NOT INCLUDED IN THE COST OF THE RETAINING WALL.
(23) INLCUDES ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO ADJUST EXISTING CATCH BASINS AS NEEDED. INCLUDES, BUT MAY NOT BE LIMITED TO: CORING EXISTING STRUCTURES TO ACCEPT NEW PIPES, REPOURING PORTIONS OR ENTIRE DRAINAGE STRUCTURES, AND ADJUSTING EXISTING STRUCTURE LIDS, CASTINGS, OR GRATES TO PROPOSED ELEVATIONS.
(24) INCLUDES APPROXIMATELY 0.5 C.Y. FOR 6" DETACHED CONCRETE CURB AT DRIVEWAY AT STA. 25+36.54 AND APPROXIMATELY 1.5 C.Y. FOR 6" DETACHED CONCRETE CURB AT THE APARTMENT COMPLEX AT STA. 21+52.01. SEE STANDARD DRAWING RP-VC-10.
(25) VERTICAL DEPTH OF GUTTER = 8"
(26) FENCE AND POSTS SHALL BE BLACK IN COLOR AND SHALL INCLUDE 3 STRANDS OF BARBED WIRE MOUNTED AT THE TOP OF THE FENCE TO MATCH THE EXISTING.
(27) INCLUDES REMOVAL OF 151 L.F. OF PLAIN CHAIN-LINK FENCE, 303 L.F. OF WOOD FENCE WITH BRICK POSTS, 341 L.F. OF 6' BLACK VINYL COATED CHAIN LINK FENCE WITH BARBED WIRE, AND ANY OTHER FENCE AS DIRECTED BY THE ENGINEER.
(28) INCLUDES 100 TONS FOR USE WITH TEMPORARY CONSTRUCTION EXITS.
(29) INCLUDES 18 TONS FOR CONSTRUCTION OF SLOPE DRAIN RIP-RAP BASINS
(30) INCLUDES ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO MOUNT PORTABLE BARRIER RAIL ON THE PROPOSED BRIDGE DECK FOR TRAFFIC CONTROL.
(31) ITEM SHALL INCLUDE BUT IS NOT LIMITED TO ALL CONSTRUCTIONS SIGNS AS SHOWN ON SHEET T3 AND THE TRAFFIC CONTROL LAYOUTS.
(32) INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO REMOVE ANY EXISTING SIGNS WITHIN THE PROJECT LIMITS AND AS DIRECTED BY THE ENGINEER.
(33) INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO REMOVE THE EXISTING STREET NAME SIGNS AND RESET THE ORIGINAL SIGNS AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
(34) SNOWPLOWABLE MARKER REFLECTORS SHALL BE YELLOW IN COLOR.
(35) CONTRACTOR MAY ELECT TO SUBSTITUTE PREFORMED PLASTIC FOR THERMOPLASTIC. PREFORMED PLASTIC SHALL BE PAID FOR AT THE SAME UNIT PRICE AS BID FOR THERMOPLASTIC.
(36) ITEM TO BE USED FOR REMOVING CONFLICTING TRAFFIC CONTROL PAVEMENT MARKINGS ON EXISTING OR INTERMEDIATE PAVEMENT COURSES. NO HYDROBLASTING SHALL BE ALLOWED ON THE FINAL ASPHALT SURFACE COURSE.
(37) INCLUDES 2,311 L.F. OF REMOVAL OF EXISTING PAVEMENT MARKINGS FOR PHASE 2 OF TRAFFIC CONTROL AND 5,985 L.F. OF REMOVAL OF TEMPORARY MARKINGS FOR PHASE 3 OF TRAFFIC CONTROL.
(38) TO BE USED ON CONCRETE SURFACE OF BRIDGE AND APPROACHES.
(39) CONTRACTOR SHALL USE THE EXTRUDED OR RIBBON METHOD FOR APPLICATION.
(40) INCLUDES 172 SY FOR TEMPORARY CONSTRUCTION EXITS AND 51 SY FOR SLOPE DRAINS.
(41) GEOTEXTILE SHALL BE PLACED UNDER ALL RIP-RAP.
(42) INCLUDES 500 S.Y. TO BE USED AT THE DISCRETION OF THE ENGINEER TO STABILIZE SOFT SUBGRADE AREAS AND 262 S.Y. FOR USE WITH PAVEMENT AT BRIDGE ENDS.
(43) THE COST OF 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.
(44) INCLUDES 4 UNITS FOR USE WITH THE SPECIAL DITCH FROM STA. 16+50.00 TO 17+78.32.
(45) INCLUDES 9 THOUSAND GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL
(46) FOR USE TO STABILIZE THE SPECIAL DITCH FROM STA. 16+50.00 TO 17+78.32
(47) LINE ITEM ALSO INCLUDES ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO INSTALL STEEL ROAD PLATES AND/OR COLD MIX ASPHALT, IF NEEDED, FOR ROAD CROSSINGS.
(48) FOR PROJECT INFORMATION SIGNS AND TN 511 (SMARTWAY) SIGNS. SEE STD. DWG T-S-9 AND T-S-13. QUANTITIES CALCULATED USING TYPE 5 FOOTINGS, 7 FT 0 IN CLEAR MOUNTING HEIGHT, AND S4 X 7.7 I-BEAM POSTS.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2-1 |
| PS&E | 2025 | BR-STP-320(10) | 2-1 |
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7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# ESTIMATED ROADWAY QUANTITIES

SHEET 2 OF 2

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 2B |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2B |
| PS&E | 2025 | BR-STP-320(10) | 2B |
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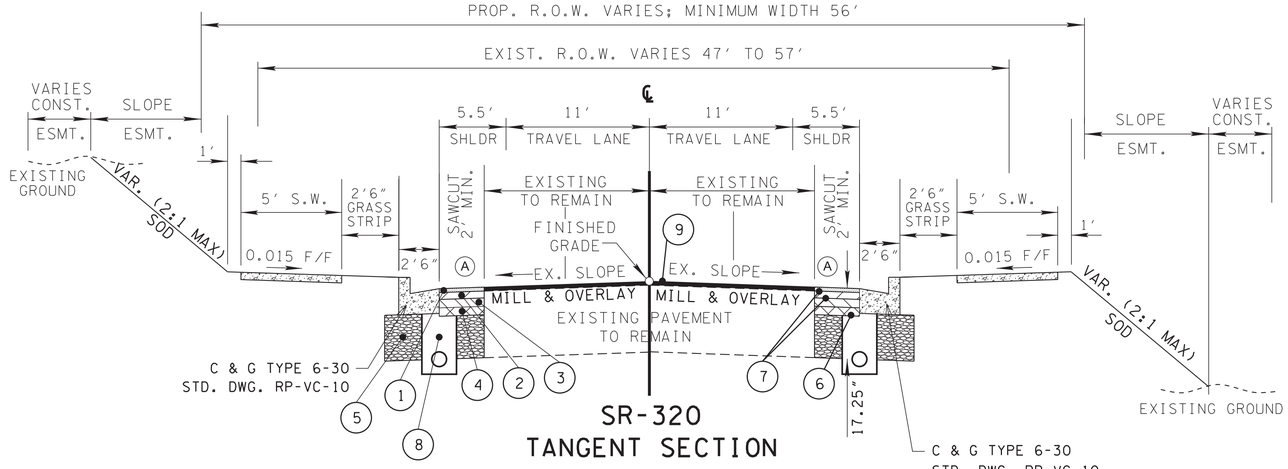
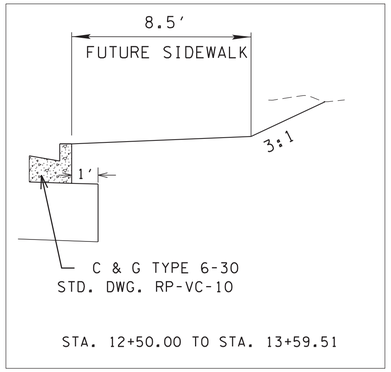
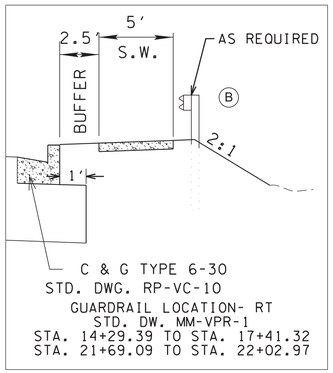
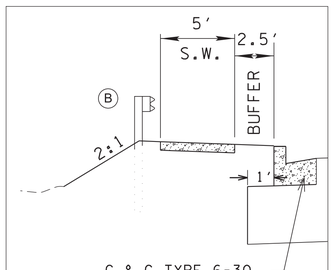
REVISION 12/11/2023:
REVISED PAVEMENT DEPTHS AND LAYERS PER PAVEMENT DESIGN REVISION.

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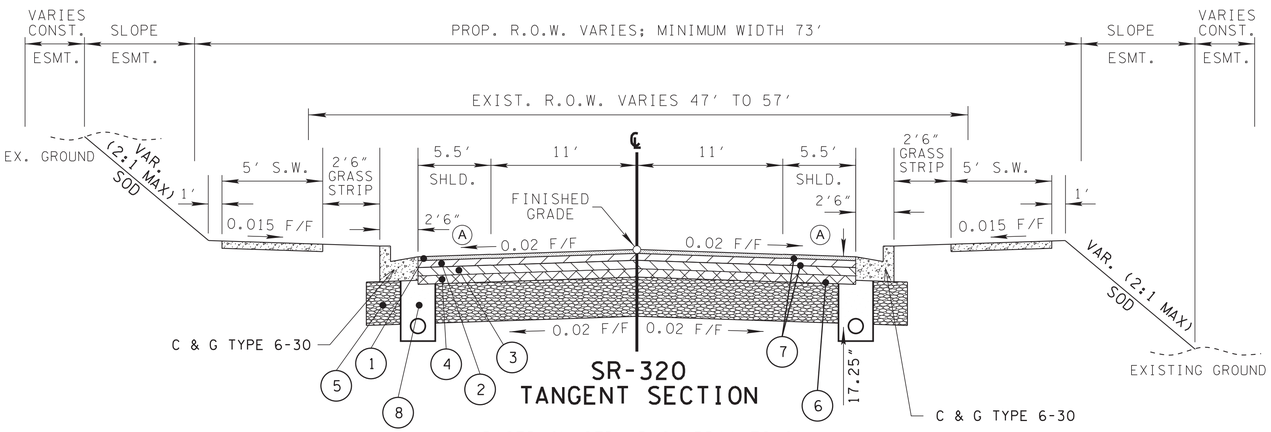
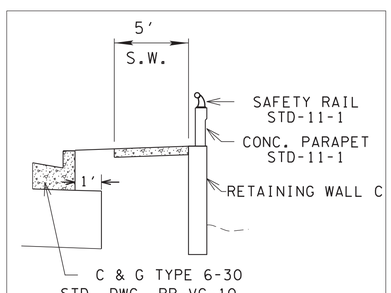
|---|---|
| (A) | THE SLOPES OF THE SHOULDER AND ROADWAY PAVEMENT SHALL NOT EXCEED AN ALGEBRAIC DIFFERENCE OF 0.07. |
| (B) | THE FACE OF THE PROPOSED GUARDRAIL SHALL BE A MINIMUM OF 8'-0" FROM THE BACK OF CURB AND GUTTER PER STANDARD DRAWING S-PL-6. |




**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE
7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# TYPICAL SECTIONS

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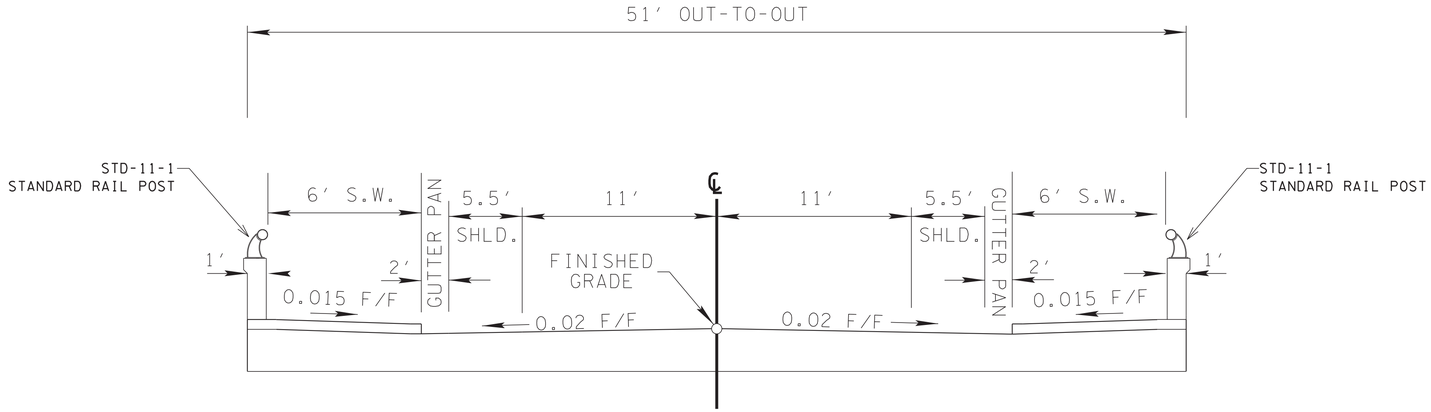
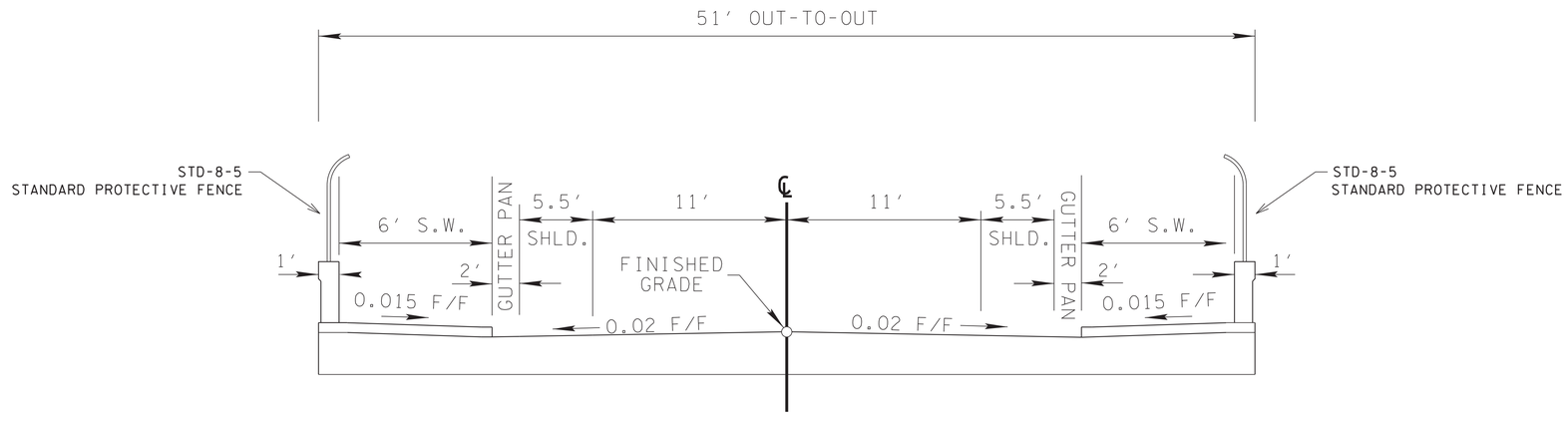
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 2B1 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2B1 |
| PS&E | 2025 | BR-STP-320(10) | 2B1 |
| | | | |




# TANGENT SECTION
# BRIDGE

(BASED ON STD. DWG. RD11-TS-6B)
STA. 17+46.00 TO STA. 17+91.00
STA. 18+64.00 TO STA. 19+09.00




# TANGENT SECTION
# BRIDGE

(BASED ON STD. DWG. RD11-TS-6B)
STA. 17+91.00 TO 18+64.00

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# TYPICAL SECTIONS

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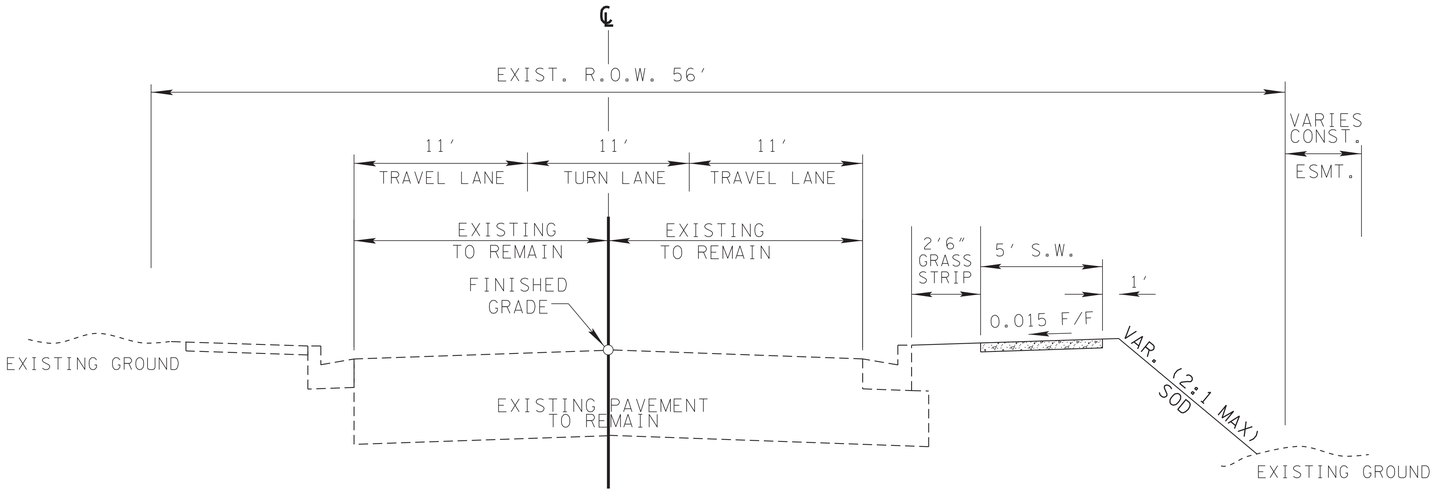
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 2B2 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2B2 |
| PS&E | 2025 | BR-STP-320(10) | 2B2 |
| | | | |




# SR-320
# TANGENT SECTION

(BASED ON STD. DWG. RD11-TS-6A)
STA. 22+83.61 TO STA. 25+55.53

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JOHN S. STILES
REGISTERED ENGINEER
XVI
AGRICULTURE
7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

## TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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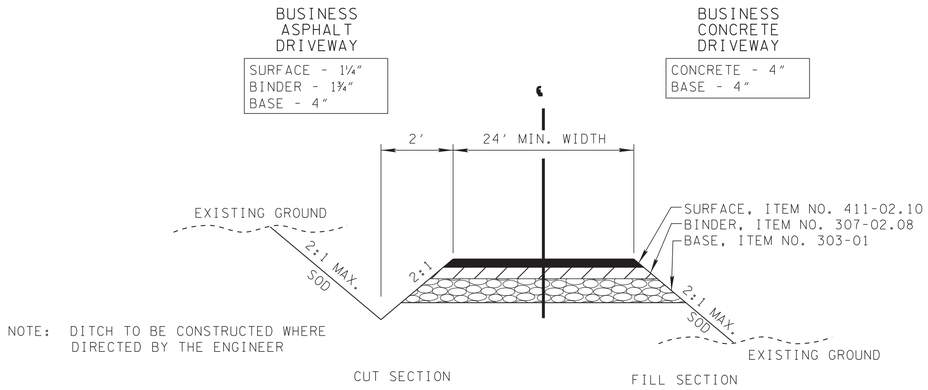
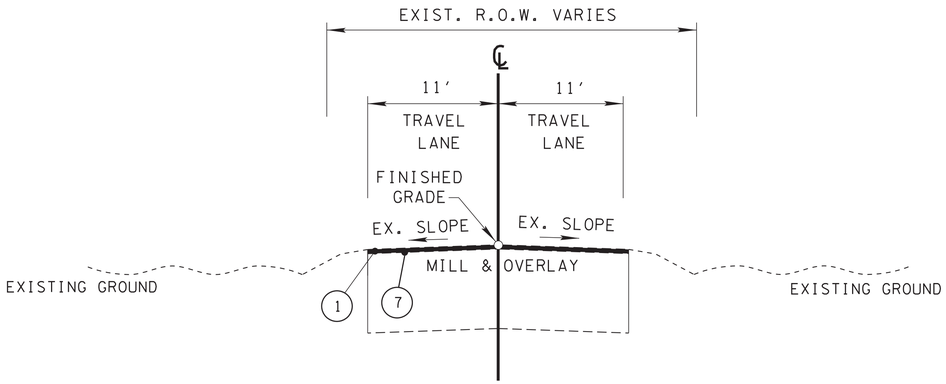
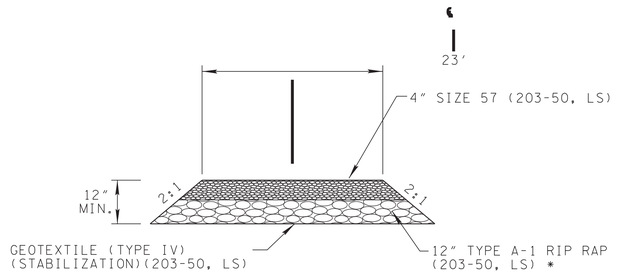


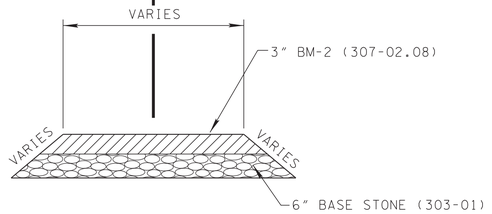

## TYPICAL SECTION
PRIVATE DRIVE TO BUSINESS




## TANGENT SECTION
BENHAM DRIVE STA. 50+00.00 TO STA. 50+53.92
PROSPERITY LANE STA. 100+00.00 TO STA. 100+42.03




## TYPICAL SECTION
HAUL ROAD

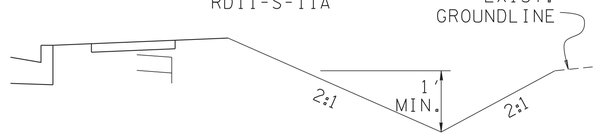



## TYPICAL SECTION
TEMPORARY PAVEMENT

*NOTE: IF CONSTRUCTION IN AREAS THAT ARE EITHER DRY OR UNSATURATED, HAUL ROAD SHALL BE CONSTRUCTED OF BORROW EXCAVATION (GRADED SOLID ROCK). IF CONSTRUCTED IN WATER OR IN AN AREA WITHIN THE FLOODPLAIN IN THE CASE OF A 5 YEAR STORM EVENT, ONE OF THE FOLLOWING MATERIALS SHALL BE USED IN LIEU OF BORROW EXCAVATION (GRADED SOLID ROCK):
- MACHINED RIP RAP (CLASS A-1)
- MACHINED RIP RAP (CLASS B)
- MACHINED RIP RAP (CLASS C)

## SPECIAL DITCH DETAIL NO. 1

FOR DETAILS NOT SHOWN SEE STD DWG NO. RD11-S-11A




PROP. RT. "V" BOTTOM
TRM TYPE I STA. 16+50.00 TO STA. 17+78.32

## PROPOSED PAVEMENT SCHEDULE

| | |
|---|---|
| (1) SURFACE @ 1.25"± THICK (APPROX. 132.5 LBS./S.Y.)<br>411-02.10 ACS MIX (PG70-22)GR "D" | (5) BASE STONE @ 8"± THICK<br>303-01 MINERAL AGGREGATE TYPE "A" BASE, GRADING "D" |
| (2) BINDER "B-M2" @ 2"± THICK (APPROX 226 LBS./S.Y.)<br>307-02.08 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING "B-M2" | (6) PRIME COAT<br>402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) 0.30 - 0.35 GAL./S.Y.<br>402-02 AGGREGATE FOR COVER MATERIAL (PC) 8-12 LB./S.Y. |
| (3) BASE "A" @ 3"± THICK (APPROX. 460 LBS./S.Y.)*<br>307-02.01 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING "A" | (7) TACK COAT @ 0.05-0.10 GAL./S.Y.<br>403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)<br>SEE 403.05 FOR DETERMINING APPLICATION RATE IN THE FIELD. |
| (4) BASE "A-S" @ 3"± THICK (APPROX. 460 LBS./S.Y.)*<br>307-01.21 ASPHALT CONCRETE MIX (PG70-22)(BPMB-HM) GRADING "A-S" | (8) AGGREGATE UNDERDRAIN DETAIL "A"<br>710-02 AGGREGATE UNDERDRAINS (WITH PIPE) |
| (9) MILL AND OVERLAY 1.25"<br>415-01.02 COLD PLANING BITUMINOUS PAVEMENT, SEE #1 FOR OVERLAY INFORMATION | |

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 2B2 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2B3 |
| PS&E | 2025 | BR-STP-320(10) | 2B3 |
| | | | |

REVISION 12/11/2023:
REVISED PAVEMENT SCHEDULE PER PAVEMENT DESIGN REVISION. REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+75.00 TO STA. 50+53.92. REVISED STATION LIMITS ON SPECIAL DITCH DETAIL.

SEALED BY

JOHN S. STYLES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# TYPICAL SECTIONS AND PAVEMENT SCHEDULE

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# 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.

(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.

(3) ITEM NO. 803-01 SHALL BE USED ON SLOPES 3:1 OR STEEPER AND OTHER AREAS AS INDICATED IN THE PLANS THAT ARE INACCESSIBLE FOR MOWING.

(4) ITEM NO. 801-01, SEEDING (WITH MULCH), SHALL BE USED WHERE EROSION CONTROL BLANKET OR SOD ARE NOT APPLIED.

(5) ITEM NO. 801-02, SEEDING (WITHOUT MULCH) AND EROSION CONTROL BLANKET, SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS AS WELL AS LOCATIONS DIRECTED BY THE ENGINEER.

## 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.

(2) 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.

(3) 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, STORM SEWERS, ALL OTHER CULVERTS AND MINOR STRUCTURE(S) WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE.

(3) CULVERT EXCAVATION FOR CONCRETE BOX OR SLAB TYPE CULVERTS OR BRIDGES WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT THE COST WILL BE INCLUDED IN THE COST OF OTHER ITEMS.

(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, SLAB OR BOX) 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.

(6) DURING CONSTRUCTION OF DRAINAGE STRUCTURES ALL COST ASSOCIATED WITH MAINTAINING THE FLOW OF WATER AND TRAFFIC, AT THESE STRUCTURES, DURING THE PHASED CONSTRUCTION OF THIS PROJECT ARE TO BE INCLUDED IN THE UNIT PRICE OF THE DRAINAGE STRUCTURES AND TRAFFIC CONTROL ITEMS.

## FENCING

(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

### TEMPORARY PAVEMENT MARKINGS ON INTERMEDIATE LAYERS

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

## FINAL PAVEMENT MARKING

(2) 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

(3) THE PAVEMENT MARKING ON THE LANE SHIFTS FOR CENTERLINE AND EDGELINES WILL BE INSTALLED AND MAINTAINED TO THE SAME STANDARDS AS FOR PERMANENT MARKINGS ON THE MAIN ROADWAY. THESE MARKINGS SHALL BE IN PLACE PRIOR TO ALLOWING TRAFFIC ONTO THE PAVEMENT. THESE PAVEMENT MARKINGS WILL BE MEASURED AND PAID FOR UNDER ITEM NO. 712-09.02, REMOVABLE PAVEMENT MARKING (8” BARRIER LINE), L.F., 712-09.08 REMOVABLE PAVEMENT MARKING (6” LINE), L.F., 716-05.02, PAINTED PAVEMENT MARKING (8” BARRIER LINE), L.F., AND 716-05.20, PAINTED PAVEMENT MARKING (6IN LINE), L.M.

(4) BEFORE OPENING THE LANE SHIFTS 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 BE MEASURED AND PAID FOR UNDER ITEM NO. 716-08.30, HYDROBLAST REMOVAL OF PAVEMENT MARKING L.M. AND 716-01.30, REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER, EACH.

## SNOWPLOWABLE REFLECTIVE PAVEMENT MARKERS

(5) 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.

(2) THE CONTRACTOR SHALL BE REQUIRED TO COLD PLANE AND PAVE IN THE DIRECTION OF TRAFFIC.

## RESURFACING

(3) WHERE DIRECTED BY THE TDOT ENGINEER, THE CONTRACTOR SHALL BE REQUIRED TO SHAPE PUBLIC SIDE ROADS, BUSINESS ENTRANCES, AND PRIVATE DRIVES, AS WELL AS CLEANING OF EXISTING DRAINS BEFORE PLACING MATERIALS. ALL COSTS ARE TO BE INCLUDED IN THE PRICE BID FOR OTHER ITEMS OF CONSTRUCTION.

(4) ON CURB AND GUTTER SECTIONS, PUBLIC ROAD INTERSECTIONS SHALL BE RESURFACED TO THE END OF RADIUS. A SATISFACTORY TRANSITION FROM THE NEW PAVEMENT TO THE EXISTING GRADE OF THE INTERSECTING PUBLIC ROAD SHALL BE PROVIDED.

(5) ON URBAN TYPICAL SECTIONS, (CURB AND GUTTER), RESIDENTIAL DRIVEWAYS AND BUSINESS ENTRANCES SHALL HAVE A MINIMUM WIDTH OF MATERIAL NOT LESS THAN ONE FOOT USED IN THE TRANSITION TO FEATHER THE PAVEMENT EDGE.

(6) IN ALL CASES, THE LENGTH OF THE PAVEMENT TRANSITION, THE THICKNESS AND WIDTH OF THE RESURFACING AND ANY ADDITIONAL PAVEMENT MATERIALS SHALL BE AS DIRECTED BY THE TDOT ENGINEER.

## SIGNING

(1) 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.

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

(3) 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.

(4) 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.

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

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2C |
| PS&E | 2025 | BR-STP-320(10) | 2C |
| | | | |
| | | | |

SEALED BY

JOHN S. STYLES
REGISTERED ENGINEER
No. 121
AGRICULTURE
7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2C1 |
| PS&E | 2025 | BR-STP-320(10) | 2C1 |
| | | | |
| | | | |

(6) 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.

(7) 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.

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

(9) 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.

(10) AFTER THE PERMANENT SIGN LOCATIONS HAVE BEEN STAKED, THERE SHALL BE A FIELD INSPECTION AND APPROVAL BY THE ONSTRUCTION FIELD OFFICE. PAYMENT FOR LOCATION AND STAKING SHOULD BE INCLUDED IN THE BID PRICE FOR OTHER ITEMS OF CONSTRUCTION. ANY RELOCATION REQUIRED, DUE TO THE SIGN NOT BEING INSTALLED IN THE CORRECT LOCATION, WILL BE DONE AT THE CONTRACTOR'S EXPENSE.

## 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.

**SEALED BY**

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# GENERAL NOTES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2D |
| PS&E | 2025 | BR-STP-320(10) | 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.

## RETAINING WALLS

(1) THE (RIGHT-OF-WAY/EASEMENT) BETWEEN STATION 19+33.00 TO STATION 21+68.47 SHALL REMAIN CLEAR FOR THE CONSTRUCTION OF THE RETAINING WALL. NO UTILITY LINES MAY BE PLACED THERE WITHOUT APPROVAL FROM STRUCTURES DIVISION.

(2) THE OPTIONS FOR RETAINING WALL TYPES SHALL BE LIMITED TO THE APPROVED ALTERNATIVES AS SPECIFIED ON THE RETAINING WALL SHEET(S).

(4) ALL COST OF BUILDING, INSTALLING AND BACKFILLING THE RETAINING WALL, INCLUDING GRANULAR BACKFILL, GEOTEXTILE FABRIC (TYPE IV), LEVELING PAD, AMD MOMENT SLAB, SHALL BE INCLUDED IN THE COST OF THE RETAINING WALL. COSTS FOR EXCAVATION OF THE WALL SHALL BE INCLUDED IN ITEM NO. 203-01, ROAD AND DRAINAGE EXCAVATION PER CUBIC YARD. END AREAS FOR EXCAVATION FOR THE WALL SHALL BE INCLUDED IN END AREA TOTALS ON CROSS-SECTIONS.

## HISTORICAL

(1) THE CONTRACTOR WILL BE RESPONSIBLE FOR REMOVING AND COORDINATING WITH THE TDOT REGIONAL SIGN SHOP FOR STORING HISTORIC MARKER(S). AT THE TIME THE MARKER(S) IS TAKEN DOWN, LINDA WYNN WITH THE TENNESSEE HISTORICAL COMMISSION SHOULD BE NOTIFIED AT (615)-770-1093. AT THE END OF CONSTRUCTION, MARKER(S) WILL BE RESET BY THE SIGN SHOP AT THE DIRECTION OF THE REGIONAL TRAFFIC ENGINEER. IF THE MARKER CANNOT BE RESET OUTSIDE OF THE CLEAR ZONE, THE REGIONAL TRAFFIC ENGINEER WILL CONTACT THE TENNESSEE HISTORIC COMMISSION AND RETURN THE MARKER(S).

## MULTIMODAL

(1) DURING CONSTRUCTION, IF THE CONSTRUCTION SUPERVISOR IDENTIFIES CURB RAMP LOCATIONS WITHIN THE PROJECT LIMITS WHERE THE TDOT ROADWAY STANDARDS CANNOT BE USED DUE TO SITE LIMITATIONS, A SKETCH OR PICTURE, SHOWING EXISTING CONDITIONS AS WELL AS PROPOSED MODIFICATIONS SHOULD BE SUBMITTED TO THE REGIONAL PROJECT DEVELOPMENT OFFICE THREE WEEKS PRIOR TO THE BEGINNING OF CURB RAMP CONSTRUCTION. THE OFFICE WILL REVIEW AND EVALUATE THE LOCATIONS TO DEVELOP PROPER CURB RAMP DESIGN THAT WILL MEET REGULATIONS.

## RAILROAD

(1) ALL SUBSTRUCTURE UNITS WITHIN CSXT ROW SHALL BE CUT OFF A MINIMUM OF 3'-0" BELOW THE FINISHED GRADE, THE DITCH LINE INVERT, OR AS OTHERWISE DIRECTED BY THE ENGINEER.

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2E |
| PS&E | 2025 | BR-STP-320(10) | 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.

### ENVIRONMENTAL

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

## 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) PROJECT TO INCLUDE SITE GRADING, CONSTRUCTION OF HAUL ROADS, TEMPORARY PAVING AND STRIPING, INSTALLATION OF DRAINAGE STRUCTURES AND PIPES, RETAINING WALL CONSTRUCTION, CONCRETE DRIVEWAY AND SIDEWALKS, CURB AND GUTTER, BRIDGE REMOVAL AND INSTALLATION, GUARDRAIL REMOVAL AND INSTALLATION, FINAL PAVING, SIGN INSTALLATION, AND PERMANENT STRIPING.

SEALED BY

JOHN S. STATES
REGISTERED ENGINEER
XVI
AGRICULTURE

7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL NOTES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 2F |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2F |
| PS&E | 2025 | BR-STP-320(10) | 2F |
| | | | |

REVISION 12/11/2023: REVISED CATCH BASINS, STORM DRAINAGE ENDWALLS, STORM DRAINAGE PIPES, AND RIGHT OF WAY MARKERS TABULATED QUANTITIES.

## PAVEMENT QUANTITIES

| LOCATION (ROADWAY) | TYPE - GRADE - PAY ITEM (TON) | | | | | | | | COLD PLANING (S.Y.) |
|---|---|---|---|---|---|---|---|---|---|
| | MINERAL AGG. | BITUMINOUS PLANT MIX BASE (HOT MIX) | | | PRIME COAT | | TACK COAT | ASPHALTIC CONCRETE SURFACE (HOT MIX) | |
| | D | A-S | A | B-M2 | | | | D | |
| | 303-01 | 307-01.21 | 307-02.01 | 307-02.08 | 402-01 | 402-02 | 403-01 | 411-02.10 | 415-01.02 |
| SR-320 (FULL DEPTH) | 1408.0 | 453.0 | 490.0 | 321.0 | 4.0 | 15.0 | 3.0 | 188.0 | |
| SR-320 (MILL AND OVERLAY) | | | | | | | 1.0 | 49.0 | 731.0 |
| TRACT 5 LOT REPAIRS | 369.0 | | | | | | | | |
| TEMPORARY PAVEMENT | 270.0 | | | 123.0 | | | | | |
| DRIVEWAYS | 43.0 | | | 2.0 | | | 1.0 | 2.0 | |
| CURB AND GUTTER AGGREGATE | 339.0 | | | | | | | | |
| SIDEWALK AND CURB RAMPS | 263.0 | | | | | | | | |
| TOTALS | 2692.0 | 453.0 | 490.0 | 446.0 | 4.0 | 15.0 | 5.0 | 239.0 | 731.0 |

## RIGHT OF WAY MARKERS

| SHEET NO. | ITEM #: 708-02.01 QUANTITIES | | | |
|---|---|---|---|---|
| | "A" | "B" | "C" | TOTALS |
| 4A | 8 | 1 | 2 | 11 |
| | | | | |
| TOTALS | 8 | 1 | 2 | 11 |

## ESTIMATED GRADING QUANTITIES

| | DESCRIPTION | UNADJUSTED VOLUMES (CY) EXC. | UNADJUSTED VOLUMES (CY) EMB. | ADJUSTED VOLUMES (CY) EXC. |
|---|---|---|---|---|
| | MAINLINE | 1308 | 4372 | 1047 |
| | BRIDGE ABUTMENT | 0 | 448 | 0 |
| (1) | HAUL ROADS | 3454 | 1330 | 2764 |
| | PAVEMENT | 772 | 0 | 618 |
| | EPSC | 244 | 0 | 196 |
| (2) | BRIDGE EXCAVATION (WITHIN RR ROW) | 207 | 0 | 166 |
| (3) | BRIDGE EXCAVATION (OUTSIDE RR ROW) | 2210 | 0 | 1768 |
| | TOPSOIL (EMB.) | 386 | | |
| | TOPSOIL (EXC.) | 97 | | |
| | TOPSOIL TOTALS (SEE TOPSOIL TABLE) | | | |

| ROCK (C.Y.) | | TOTALS (C.Y.) | | | | |
|---|---|---|---|---|---|---|
| EXC. | EMB. | EXC. (UNCL.) | EMB. (UNCL.) | EXC (COMMON) | EXC. (AVAIL.) | EXC. (ADJ.) |
| 0 | 0 | 5017 | 6150 | 5017 | 3555 | 2844 |

BALANCE SUMMARY

SHRINK = 20 % SWELL = 20 %

| | | |
|---|---|---|
| EMB. | | EXC. |
| 6150 | VS. | -2844 |
| AVAILABLE | = | 3306 |
| BORROW MATERIAL | = | **3968** |
| | | ***SEE NOTE 4** |

(1) NOT INCLUDED IN EARTHWORK QUANTITIES, ALL TO BE INCLUDED IN LUMP SUM OF HAUL ROADS ITEM NO. 203-50.
(2) INCLUDES EXCAVATION FOR REMOVAL OF EXISTING PIERS AND FOR ABUTMENT NO. 1 SLOPE PAVING WITHIN LIMITS OF RAILROAD ROW AND NOT INCLUDED IN THE BRIDGE PLANS. CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF TESTING WITH CSX AND THEIR CONSULTANT AND CSX WILL MAKE A DETERMINATION WHERE ANY SPOILS NEED TO BE WASTED.
(3) INCLUDES EXCAVATION FOR PROPOSED ABUTMENT NO. 1, BENT NO. 1, AND ABUTMENT #2 THAT IS NOT INCLUDED IN THE BRIDGE PLANS. AREA CAN BE SEEN AS HATCHED AREA ON BRIDGE SHEETS U-95-425 AND U-95-430
(4) CONTRACTORS ATTENTION IS BROUGHT TO THE EARTHWORK BALANCE ON THE PROJECT. A MAJORITY OF THE EXCAVATION MATERIAL WILL NOT BE AVAILABLE FOR USE UNTIL AFTER THE FIRST HALF OF THE BRIDGE IS COMPLETE AND TRAFFIC IS SHIFTED. THE BORROW EXCAVATION LINE ITEM NO. 203-03 HAS BEEN ADJUSTED TO INCORPORATE ALL 6,150 C.Y. OF EMBANKMENT REQUIRED FOR THE PROJECT.

## 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. |
|---|---|---|---|---|---|---|---|
| 80188 | 97 | 386 | 483 | 1485 | 483 | 1002 | 0 |

## SPECIAL DITCHES

| ROADWAY | STATION FROM | STATION TO | SIDE | DETAIL NO. | CONFIGURATION FORE (H/V) | CONFIGURATION BOTTOM WIDTH (FT.) | CONFIGURATION BACK (H/V) | TYPE | HEIGHT (FT.) | SEEDING W/O MULCH 801-02 (UNITS) | TURF REINF. MAT 805-01.01 (S.Y.) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SR-320 | 16+50.00 | 17+72.81 | RT | 1 | 2:1 | V | 2:1 | TURF REINF. MAT | 1 | 3.5 | 392 |
| | | | | | | | | | | | |
| TOTALS | | | | | | | | | | 4 | 392 |

## PROPOSED GUARDRAIL

| SHEET NO. | LOCATION | SIDE LT | SIDE RT | STATIONS FROM | STATIONS TO | GUARDRAIL THRIE BEAM BRIDGE TRAN. MASH TL-3 (20.65') 705-06.25 (EACH) | GUARDRAIL THRIE BEAM 38IN VEH. & PED. SAFETY RAIL MASH TL3 705-06.27 (L.F.) | TERMINAL ANCHORS TYPE 13 MASH TL3 (9.375') 705-06.10 (EACH) | TERMINAL ANCHORS TYPE 21 MASH TL2 (21.875') 705-06.30 (EACH) | TERMINAL ANCHORS TYPE 38 MASH TL3 (46.875') 705-06.20 (EACH) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4B | SR-320 | | X | 14+19.24 | 17+41.32 | 1 | 274.44 | | 1 | | |
| 4B | SR-320 | X | | 14+41.76 | 17+51.00 | 1 | 300.31 | 1 | | | |
| 4B | SR-320 | X | | 19+14.94 | 22+60.47 | 1 | 299.60 | | | 1 | |
| 4B | SR-320 | | X | 21+68.47 | 22+33.24 | 1 | 15.47 | 1 | | | |
| TOTALS | | | | | | 4 | 890 | 2 | 1 | 1 | |

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JOHN S. STILES REGISTERED ENGINEER AGRICULTURE
7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 2F |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 2F1 |
| PS&E | 2025 | BR-STP-320(10) | 2F1 |
| | | | |

## CATCH BASINS

| SHEET NO. | LOCATION | STATION | OFFSET (FT.) | DRAINAGE CODE | GRATE/TOP ELEV. | STRUCTURE TYPE | INSIDE DIMENSION | DEPTH (FT.) | STANDARD DRAWINGS | TYPE 12 C.B. 611-12.01 0' - 4' | TYPE 12 C.B. 611-12.02 4' - 8' | TYPE 12 C.B. 611-12.04 12' - 16' | TYPE 14 C.B. 611-14.02 4' - 8' | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4B/4C | SR320-33 | 14+26.00 | 18.5 | 2 | 700.13 | #14 | 8X3 | 5.53 | D-CB-14P | | | | 1 | |
| 4B/4C | SR320-33 | 13+58.00 | 18 | 2A | 701.61 | #12 | 4X3 | 4.00 | D-CB-12P | 1 | | | | |
| 4B/4C | SR320-33 | 14+38.29 | -18.5 | 3 | 700.27 | #14 | 8X3 | 4.27 | D-CB-14P | | | | 1 | |
| 4B/4C | SR320-33 | 14+70.00 | -18.5 | 3A | 700.60 | #12 | 4X3 | 5.00 | D-CB-12P | | 1 | | | |
| 4B/4C | SR320-33 | 13+58.00 | -18.5 | 3B | 701.74 | #12 | 4X3 | 4.54 | D-CB-12P | | 1 | | | |
| 4B/4C | SR320-33 | 16+50.00 | -18.5 | 4 | 708.19 | #12 | 4' DIA | 13.69 | D-CB-12RA | | | 1 | | |
| 4B/4C | SR320-33 | 16+49.97 | 18.5 | 5 | 708.19 | #12 | 4' DIA | 15.21 | D-CB-12RA | | | 1 | | |
| 4B/4C | SR320-33 | 20+50.00 | -18.5 | 6 | 707.59 | #12 | 4X3 | 3.90 | D-CB-12P | 1 | | | | |
| 4B/4C | SR320-33 | 20+50.00 | 18.5 | 7 | 707.59 | #12 | 4X3 | 3.90 | D-CB-12P | 1 | | | | |
| 4B/4C | SR320-33 | 22+50.00 | -19.5 | 8 | 698.76 | #12 | 4X3 | 4.24 | D-CB-12P | | 1 | | | |
| 4B/4C | SR320-33 | 22+50.00 | 20.5 | 9 | 698.76 | #12 | 4X3 | 3.90 | D-CB-12P | 1 | | | | |
| 4B/4C | SR320-33 | 13+72.78 | 48.2 | 10 | 700.10 | #12 | 5' DIA | 5.05 | D-CB-12RB | | 1 | | | |
| | | | | | | | | | | | | | | |
| TOTALS | | | | | | | | | | 4 | 4 | 2 | 2 | |

## STORM DRAINAGE ENDWALLS

| LOCATION | STATION | OFFSET (FT.) | DRAINAGE CODE | STRUCTURE TYPE | STANDARD DRAWING | CLASS "A" CONCRETE 611-07.01 (C.Y.) | STEEL BAR REINFORCING 611-07.02 (LB.) |
|---|---|---|---|---|---|---|---|
| SR320-33 | 16+50.00 | 54.59 | EW-11 | 18-ST | D-PE-4 | 1 | 45 |
| TOTALS | | | | | | 1 | 45 |

## HAUL ROAD QUANTITIES

| LOCATION (ROADWAY) | MINERAL AGGREGATE (SIZE 57) (TON) | GEOTEXTILE (TYPE IV) (STABILIZATION) (S.Y.) | MACHINED RIP-RAP (CLASS A-1) (TON) | ROAD AND DRAINAGE EXC. (C.Y.) | ROAD AND DRAINAGE EMB. (C.Y.) | REMARKS |
|---|---|---|---|---|---|---|
| HAUL ROAD #1 | 176.3 | 874.2 | 509.9 | 1265.0 | 21.0 | |
| HAUL ROAD #2 | 214.5 | 1040.3 | 606.8 | 2189.0 | 1309.0 | |
| TOTALS | 391.0 | 1915.0 | 1117.0 | 3454.0 | 1330.0 | ALL QUANTITIES TO BE INCLUDED WITH ITEM NO. 203-50, LS |

## STORM DRAINAGE PIPES

| SHEET NO. | FROM CODE | FROM OUTLET ELEV. | TO CODE | TO INLET ELEV. | % GRADE | RCP CLASS III 607-03.02 18" (L.F.) |
|---|---|---|---|---|---|---|
| 4B/4C | 3A | 695.60 | 4 | 694.67 | 0.49 | 181 |
| 4B/4C | 3 | 696.00 | 3A | 695.77 | 0.52 | 38 |
| 4B/4C | 3B | 697.20 | 3 | 696.17 | 1.11 | 87 |
| 4B/4C | 2A | 697.61 | 3B | 697.37 | 0.63 | 35 |
| 4B/4C | 10 | 695.05 | 2 | 694.77 | 0.46 | 57 |
| 4B/4C | 4 | 694.50 | 5 | 694.00 | 1.35 | 32 |
| 4B/4C | 2 | 694.60 | 5 | 693.15 | 0.62 | 224 |
| 4B/4C | 6 | 703.69 | 8 | 695.03 | 4.29 | 198 |
| 4B/4C | 8 | 694.52 | EX-CB | 694.32 | 0.48 | 39 |
| 4B/4C | 7 | 703.69 | 9 | 695.03 | 4.37 | 194 |
| 4B/4C | 9 | 694.86 | 8 | 694.69 | 0.45 | 35 |
| 4B/4C | 5 | 692.98 | EW-11 | 692.80 | 0.49 | 35 |
| | | | | | | |
| TOTALS | | | | | | 1155 |

## SIGN REMOVAL

| ROADWAY | STATION | OFFSET | SIGN TYPE | REMARKS |
|---|---|---|---|---|
| S.R. 320 | 12+62.03 | -23.46 | NO PARKING ANY TIME | |
| PROSPERITY LANE | 100+33.06 | -11.51 | STOP SIGN | |
| PROSPERITY LANE | 100+29.36 | 15.14 | STREET NAME SIGNS | TO BE REMOVED AND RESET |
| S.R. 320 | 13+65.43 | 26.87 | STREET NAME SIGNS | TO BE REMOVED AND RESET |
| BENHAM DRIVE | 50+50.98 | -15.26 | STOP SIGN | |
| S.R. 320 | 17+65.75 | -2.47 | OBJECT MARKER | |
| S.R. 320 | 18+94.40 | -4.01 | OBJECT MARKER | |
| S.R. 320 | 19+05.76 | -39.32 | OBJECT MARKER | |
| S.R. 320 | 20+13.09 | 31.50 | PETROLEUM PIPELINE MARKER | TO BE REMOVED AND RESET AS NEEDED. COORDINATE WITH PIPELINE OWNER. |

## CURB RAMP TABULATION

| ROADWAY: MAINLINE | ROADWAY: INTERSECTING | LOCATION: STATION or LOG MILE (L.M.) | LOCATION: LEFT | LOCATION: MEDIAN | LOCATION: RIGHT | QUADRANT: N. | QUADRANT: S. | QUADRANT: E. | QUADRANT: W. | SIGNALIZED YES / NO | STANDARD DRAWING NO. | CURB RAMP (NEW) ITEM NO. 701-02.03 S.F. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| S.R. 320 | PROSPERITY LANE | 12+60.00 | X | | | X | | | X | NO | CR-40 | 42.2 | |
| S.R. 320 | PROSPERITY LANE | 13+10.00 | X | | | X | | X | | NO | CR-40 | 42.2 | |
| S.R. 320 | BENHAM DRIVE | 13+65.00 | | | X | | X | | X | NO | CR-40 | 57.3 | |
| S.R. 320 | BENHAM DRIVE | 14+11.00 | | | X | | X | X | | NO | CR-40 | 64.5 | |
| | | | | | | | | | | | TOTAL | 207 | |

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
XVI
AGRICULTURE

7/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TABULATED QUANTITIES

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## RIGHT-OF-WAY

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

(2) 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.

(3) 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.

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

(5) TRACT REMAINDERS NOT HAVING AN EXISTING DRIVEWAY WILL BE PROVIDED ONE 50-FOOT OPENING IN THE ACCESS CONTROL FENCE AND A DRIVEWAY WILL BE CONSTRUCTED UNLESS ACCESS IS PROVIDED FROM AN INTERSECTING ROAD OR BASED ON PHYSICAL CONDITIONS AND/OR CONFLICTS WITH OTHER DESIGN CONSIDERATIONS WHICH PREVENT AN ACCESS OPENING. PAVING OF THESE NEW DRIVEWAYS WILL BE IN ACCORDANCE TO THE 7 PERCENT CRITERIA PREVIOUSLY MENTIONED FOR EXISTING DRIVEWAYS.

(6) 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.

(7) ON PROJECTS WITH CURB AND GUTTER THAT ARE ON STATE ROUTES, IT WILL BE THE RESPONSIBILITY OF THE OWNER TO SECURE A PERMIT. AFTER THE PERMIT HAS BEEN GRANTED, THE DEPARTMENT WILL CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE THROUGH THE CURB AND SIDEWALK, PROVIDED THE CURB AND SIDEWALK HAVE NOT BEEN CONSTRUCTED. IT WILL BE THE RESPONSIBILITY OF THE PROPERTY OWNER TO CONSTRUCT THE DRIVEWAY OR FIELD ENTRANCE FROM BACK OF SIDEWALK TO TOUCHDOWN POINT FOR ANY ADDITIONAL DRIVEWAYS OR FIELD ENTRANCES OTHER THAN THOSE PROVIDED IN THE PLANS.

(8) EASEMENT REQUIRED FOR THE RAILROAD CROSSING IS TO BE OBTAINED BY THE UTILITIES ENGINEER BY PROVISIONS CONTAINED IN THE CROSSING AGREEMENT NEGOTIATED WITH THE RAILROAD.

## 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.

## RAILROAD

(6) ALL WORK ON, OVER, UNDER, OR ADJACENT TO CSXT RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE CSXT SPECIAL PROVISIONS, WHICH CAN BE FOUND WITHIN THE CSSXT PUBLIC PROJECTS MANUAL, AVAILABLE AT: https://www.csx.com/index.cfm/library/files/about-us/property/public-project-manual/

(7) NO WORK SHALL TAKE PLACE WIHTIN 50 FEET OF THE CENTERLINE OF THE CSXT TRACK WITHOUT A RAILROAD FLAGMAN BEING PRESENT. PROVIDE THE CSXT FIELD REPRESENTATIVE WITH AT LEAST NINETY (90) BUSINESS DAYS ADVANCE NOTICE OF BEGINNING WORK WITHIN THIS AREA TO ALLOW FOR THE SCHEDULING OF THE RAILROAD FLAGMAN. REFERENCE THE CSX PUBLIC PROJECTS MANUAL FOR ANY ADDITIONAL GUIDANCE.

(8) CONSTRUCTION CLEARANCES SHALL BE SUBJECT TO APPROVAL BY CSXT. TYPICALLY, REDUCTION IN CLEARANCE FOR CONSTRUCTION IS NOT PERMITTED.

(9) CONTRACTOR SHALL MAINTAIN ALL DITCHES AND DRAINAGE STRUCTURES FREE OF SILT OR OTHER OBSTRUCTIONS THAT MAY RESULT FROM THEIR OPERATIONS. CONTRACTOR, UPON COMPLETION OF THE PROJECT, SHALL LEAVE CSXT PROPERTY IN NEAT CONDITION, SATISFACTORY TO THE CSXT REPRESENTATIVE.

(10) THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN A GEOTEXTILE FABRIC BALLAST PROTECTION SYSTEM TO PREVENT DEBRIS AND FINES FROM FOULING THE BALLAST. THE BALLAST PROTECTION SYSTEM SHALL EXTEND 25' BEYOND THE OUTER LIMITS OF THE BRIDGE ON BOTH SIDES.

(11) THE CONTRACTOR MAY NOT USE CSXT RIGHT-OF-WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION WITHOUT PRIOR APPROVAL FROM CSXT.

(12) CSXT SHALL BE FURNISHED AS-BUILT DRAWINGS SHOWING ACTUAL MINIMUM HORIZONTAL AND VERTICAL CLEARANCES FOR ALL TRACK(S) AS CONSTRUCTED PRIOR TO PROJECT COMPLETION AND CLOSE-OUT.

(13) THE CONTRACTOR SHALL REFERENCE THE CSXT CONSTRUCTION SUBMISSION CRITERIA FOR CONSTRUCTION RELATED SUBMITTAL REQUIREMENTS WHILE WORKING ON, OVER, UNDER OR ADJACENT TO CSXT RIGHT-OF-WAY. THE CONSTRUCTION SUBMISSION CRITERIA CAN VE FOUND WITHIN THE PUBLIC PROJECT MANUAL. THE CONTRACTOR(S) IS REQUIRED TO SUBMIT A DETAILED WORK PLAN FOR REVIEW AND APPROVAL BY CSXT, INCLUDING BUT NOT LIMITED TO THE BELOW ITEMS:

- a. ACCESS MEANS AND METHODS
- b. EMERGENCY ACTION PLAN
- c. GENERAL MEANS AND METHODS
- d. STAMPED FOUNDATION INSTALLATION/PILE INSTALLATION
- e. STAMPED GIRDER ERECTION AND STABILIZATION
- f. STAMPED MVC CALCULATIONS
- g. OVERHANG FLASE WORK WITH CALCULATIONS
- h. PROTECTIVE FENCING INSTALLATION
- i. STAMPED EXISTING BRIDGE DEMOLITION
- j. EXCAVATION SPOILS AND HANDLING
- k. CLEARING AND GRUBBING
- l. RIGHT OF WAY RESTORATION
- m. CONSTRUCTION SCHEDULE AND UPDATES

(14) THE CONTRACTOR SHALL NOTIFY AND COORDINATE THEIR WORK WITH THE ON-SITE CSXT REPRESENTATIVE.

(15) "ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

(16) ALL SOILS EXCAVATED WITHIN CSX'S RAILROAD RIGHT-OF-WAY SHALL REMAIN ON CSX'S RIGHT-OF-WAY. FOR ANY EXCAVATED SOIL THAT REQURIES OFF-SITE DISPOSAL, THE LICENSEE IS REQUIRED TO USE ONLY CSX APPROVED LABORATORIES, TRANSPORTERS, AND DISPOSAL FACILITY THAT ARE IN COMPLIANCE WITH ALL APPLICABLE ENVIRONMENTAL LAWS AND CSX'S POLICIES AND PROCEDURES. SOIL RESULTING FROM EXCAVATION OUTSIDE OF CSX'S RAILRAOD RIGHT-OF-WAY OR RAILROAD OWNED PROPERTY SHALL NOT BE BROUGHT ONTO CSX'S PROPERTY AND THEREFORE MUST BE STORED OFF CSX PROPERTY. CSXT SHALL NOT INCUR ANY COSTS RELATED TO THE DISPOSAL OF SOILS GENERATED DUE TO CONSTRUCTION ACTIVITY RELATED TO THIS PROJECT. FOR THE CSXT SOIL AND WATER MANAGEMENT POLICY, PLEASE SEE THE CSXT PUBLIC PROJECT MANUAL LOCATED HERE: https://www.csx.com/index.cfm/library/files/about-us/property/public-project-manual/

(17) RAILROAD INSURANCE IS REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES ON CSXT RIGHT OF WAY. SUBMIT RAILROAD INSURANCE TO CSXT AT INSURANCEDOCUMENTS@CSX.COM FOR CSXT REVIEW AN APPROVAL WORK WILL NOT BE ALLOWED WITHIN THE CSXT RIGHT OF WAY WITHOUT THE INSURANCE APPROVAL FROM CSXT AND A RAILROAD FLAGMAN CANNOT BE SCHEDULED. NOTE APPROVAL OF INSURANCE CAN TAKE UP TO 30 TO 45 DAYS.

(18) THE ENGINEER SHALL BE KEPT AWARE OF THE CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL PROVIDE TIMELY COMMUNICATION TO THE ENGINEER WHEN SCHEDULING THE WORK SUCH THAT THE ENGINEER MAY BE PRESENT DURING THE WORK. THE CONTRACTOR'S SCHEDULE SHALL NOT DICTATE THE WORK PLAN REVIEW SCHEDULE, AND FLAGGING SHALL NOT BE SCHEDULED PRIOR TO RECEIPT OF AN ACCEPTED WORK PLAN.

## UTILITY OWNERS

**ELECTRIC:**

**ELECTRIC POWER BOARD OF CHATTANOOGA**

PO BOX 182255

CHATTANOOGA, TN 37422

CONTACT: MR. ADAM NORWOOD

EMAIL: norwoodaw@epb.net

OFFICE PHONE: 423 483 3305

**RAILROAD:**

**CSX RAILROAD**

1590 MARIETTA BLVD. NW

ATLANTA, GA 30318

CONTACT: TODD ALLTON, PROJECT MANAGER II – PUBLIC PROJECTS

EMAIL: Todd_Allton@csx.com

OFFICE PHONE: 404 350 5134

**GAS:**

**CHATTANOOGA GAS COMPANY (SOUTHERN CO-ATLANTA)**

PO BOX 4569

ATLANTA, GA 30302-4569

CONTACT: MR. BRANDON STEPHENS

EMAIL: bstephen@southernco.com

OFFICE PHONE: 404 584 3915

FAX: 404 584 4187

**TELEPHONE:**

**CENTURYLINK/LUMEN**

2530 PERIMETER PLACE DRIVE

NASHVILLE, TN 37214

CONTACT: N/A

EMAIL: relocations@centurylink.com

OFFICE PHONE: 615 263 1128

**TELEPHONE:**

**MCI / VERIZON BUSINESS GROUP**

603 WAREHOUSE PARK LANE

KNOXVILLE, TN 37932

CONTACT: MR. MIKE STANLEY

OFFICE PHONE: 615 428 4943

Email: stanley.m.majka@verizon.com

**RAILROAD:**

**INSURANCE RISK MANAGEMENT (STV)**

CONTACT: KELLY WISELY

EMAIL: Kelly.wisely@stvinc.com

PHONE:

**SEWER:**

**CITY OF CHATTANOOGA**

1250 MARKET STREET, SUITE 2100

CHATTANOOGA, TN 37402-2713

CONTACT: MR. DENNIS MALONE

EMAIL: dmalone@chattanooga.gov

OFFICE PHONE: 423 643 6188

**RAILROAD:**

**CSX RAILROAD**

500 WATER STREET, HQ BLDG., 13TH FLOOR

JACKSONVILLE, FL 32202

CONTACT WILL ROSEBOROUGH, DIRECTOR PROJECT DEVELOPMENT

EMAIL: Will_Roseborough@csx.com

OFFICE PHONE: 904 359 1048

CELL PHONE: 904 738 9667

**TELEPHONE:**

**BELLSOUTH DBA AT&T**

300 E MARTIN LUTHER KING BOULEVARD, 5TH FLOOR

CHATTANOOGA, TN 37403

CONTACT: MR. JOE PERREL

EMAIL: Jp1389@att.com

OFFICE PHONE: 423 266 1566

MOBILE: 423 488 2825

**WATER:**

**TENNESSEE AMERICAN WATER COMPANY**

1500 RIVERSIDE DRIVE

CHATTANOOGA, TN 37406

CONTACT: MRS. KRISTEN WHEELER

EMAIL: Kristen.wheeler@amwater.com

OFFICE PHONE: 423 704 9555

**GAS:**

**KINDER MORGAN/PLANTATION PIPELINE COMPANY**

569 BROOKWOOD VILLAGE STE 479

BIRMINGHAM, AL 35209

CONTACT MR. MICHAEL RAY

OFFICE PHONE 205 325 3580

EMAIL: Michael_Ray@kindermorgan.com

**RAILROAD:**

**FLAGGING REQUEST (STV)**

CONTACT: BEN HUDSON – CONST. MANAGER

EMAIL: Benjamin.Hudson@stvinc.com

CELL PHONE: 931 434 7083

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 3 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 3 |
| PS&E | 2025 | BR-STP-320(10) | 3 |
| | | | |

REVISION 12/11/2023: REVISED RAILROAD NOTES.

**SEALED BY**

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

RIGHT-OF-WAY NOTES, UTILITY NOTES, RAILROAD NOTES AND UTILITY OWNERS

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 3A |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 3A |
| PS&E | 2025 | BR-STP-320(10) | 3A |
| | | | |

REVISION 09/13/2022: UPDATED EX ROW LINES ON TRACTS 3, 10, 11, 12 AND 21. REVISED OWNER TRACT 14. REVISED PROPOSED ROW TRACTS 3, 10, 11 AND 12.

REVISION 06/07/2023: REVISED CONSTRUCTION EASEMENT FROM 15' TO 10' ON TRACT 3 FROM STA. 13+00 TO STA. 13+85. REVISED CONSTRUCTION EASEMENT ON TRACTS 11 & 13. REVISED R.O.W. ACQUISITION TABLE. REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

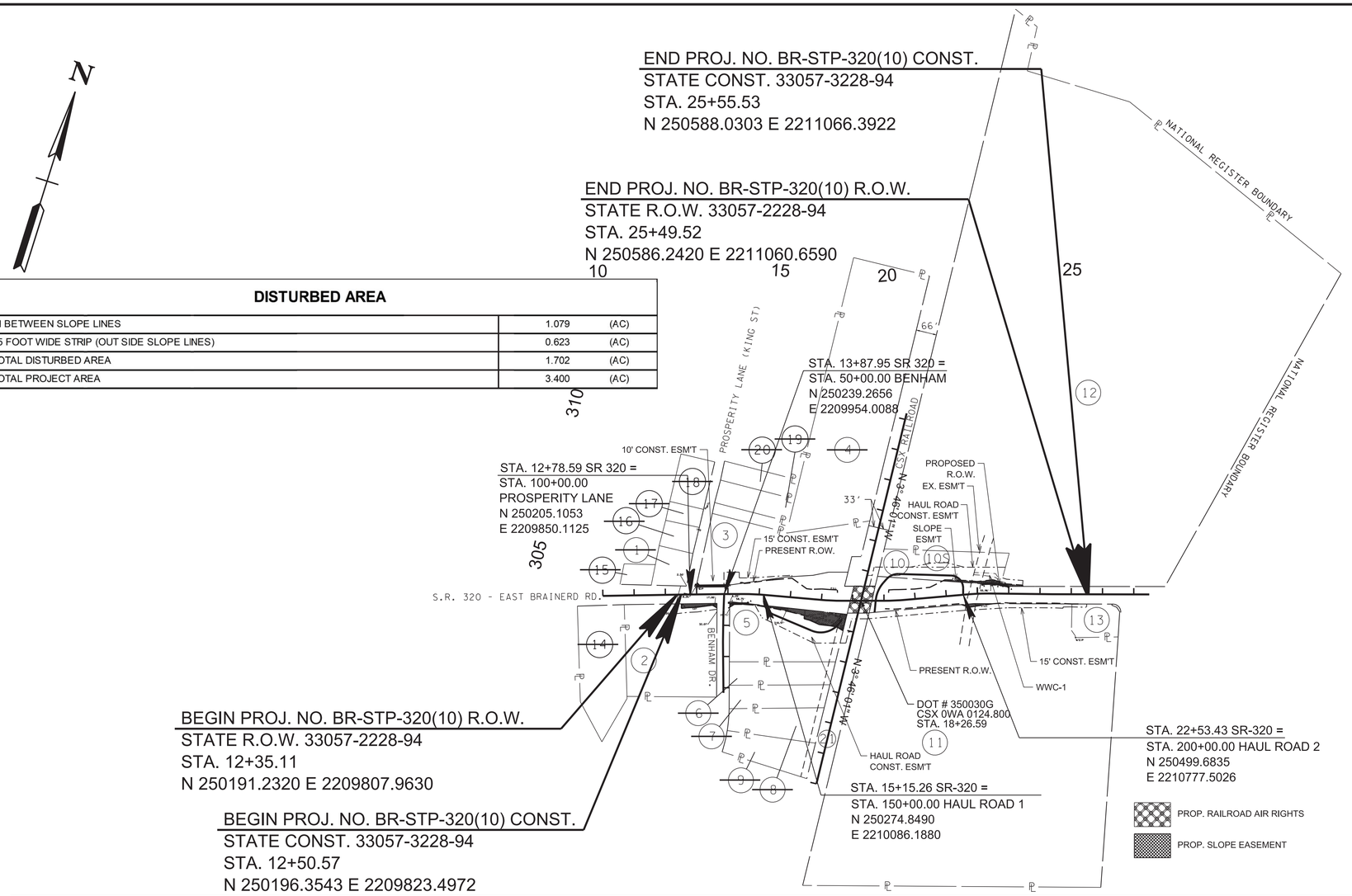
REVISION 06/30/2023: REMOVED THE EXISTING RAILROAD EASEMENT AROUND THE AREA OF THE BRIDGE. ADDED PROPOSED SLOPE EASEMENT AND DRAINAGE EASEMENT TO LEGEND.

REVISION 11/14/2023: REVISED TRACT 21 OWNER TO STATE OF GEORGIA.

REVISION 12/11/2023: REMOVED ACQUISITION FROM TRACT 1, REVISED PROJECT R.O.W. LIMTS FROM STA. 12+37.67 TO STA. 12+35.11, CROSSED THROUGH TRACTS 1 AND 15, REVISED SLOPE EASEMENT ON TRACT 2, REMOVED DRAINAGE EASEMENT ON TRACT 2, REVISED CONSTRUCTION AND SLOPE EASEMENT ON TRACT 3, REMOVED DRAINAGE EASEMENT ON TRACT 5, REVISED CONSTRUCTION AND SLOPE EASEMENTS ON TRACT 5, REVISED CONSTRUCTION EASEMENT ON TRACT 10, CREATED TRACT 10S, REVISED CONSTRUCTION EASEMENT ON TRACT 11, REVISED HAUL ROAD 1 AND HAUL ROAD 2 ALIGNMENTS, AND REVISED R.O.W. ACQUISITION TABLE.

REVISION 01/09/2024: REVISED CONSTRUCTION EASEMENT AREA IN R.O.W. ACQUISITION TABLE ON TRACT 21, AND SLOPE AND CONSTRUCTION EASEMENT AREA ON TRACT 3.

REVISION 02/23/2024: REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.




| DISTURBED AREA | | |
|---|---|---|
| IN BETWEEN SLOPE LINES | 1.079 | (AC) |
| 15 FOOT WIDE STRIP (OUT SIDE SLOPE LINES) | 0.623 | (AC) |
| TOTAL DISTURBED AREA | 1.702 | (AC) |
| TOTAL PROJECT AREA | 3.400 | (AC) |

PROP. RAILROAD AIR RIGHTS

PROP. SLOPE EASEMENT

THE AGREEMENT REQUIRED FOR THE RAILROAD CROSSING WILL BE OBTAINED BY THE ROW DIVISION'S UTILITY OFFICE RAILROAD COORDINATOR THROUGH NEGOTIATIONS AND SPECIAL PROVISIONS WITH THE RAILROAD.

CONSTRUCTION EASEMENTS ARE FOR WORKING AREA AND EROSION CONTROL.

| 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 DRAINAGE | SLOPE | CONSTRUCTION | AIR RIGHTS |
| | | | | BOOK | PAGE | | | | | | | | | | | | |
| ~~1~~ | ~~John Q. Tran~~ | ~~158H D~~ | ~~10~~ | ~~7079~~ | ~~742~~ | ~~0.290~~ | | ~~0.290~~ | | | | ~~0.290~~ | | | | | |
| 2 | Trustees of Brainerd Hills Presbyterian Church | 158H M | 1 | 10961 | 467 | | 1.900 | 1.900 | | | | | 1.900 | | 1208 S.F. | 2098 S.F. | |
| 3 | PS Southeast One, Inc. | 158H D | 11 | 10904 | 225 | 1.982 | | 1.982 | 464 S.F. | | 464 S.F. | 1.971 | | | 164 S.F. | 3565 S.F. | |
| ~~4~~ | ~~PS Southeast One, Inc.~~ | ~~158H D~~ | ~~19~~ | ~~10904~~ | ~~225~~ | ~~5.110~~ | | ~~5.110~~ | | | | ~~5.110~~ | | | | | |
| 5 | Timothy E. and Dawn L. Bankston | 158G A | 9 | 9836 | 218 | | 1.423 | 1.423 | | 178 S.F. | 178 S.F. | | 1.419 | | 0.163 | 0.344 | |
| ~~6~~ | ~~Lovisa A. Massey~~ | ~~158G A~~ | ~~8~~ | ~~4897~~ | ~~691~~ | | ~~0.564~~ | ~~0.564~~ | | | | | ~~0.564~~ | | | | |
| ~~7~~ | ~~William C. Ruffner, II~~ | ~~158G A~~ | ~~7~~ | ~~11194~~ | ~~770~~ | | ~~0.533~~ | ~~0.533~~ | | | | | ~~0.533~~ | | | | |
| ~~8~~ | ~~Tani C. and Priscilla B. Allen~~ | ~~158G A~~ | ~~6~~ | ~~2167~~ | ~~417~~ | | ~~0.623~~ | ~~0.623~~ | | | | | ~~0.623~~ | | | | |
| ~~9~~ | ~~John Q. Tran~~ | ~~158G A~~ | ~~5~~ | ~~5881~~ | ~~807~~ | | ~~0.607~~ | ~~0.607~~ | | | | | ~~0.607~~ | | | | |
| 10 | Susanne C. Phillips | 158B C | 40 | 11027 | 160 | 0.875 | | 0.875 | 97 S.F. | | 97 S.F. | 0.873 | | | 1341 S.F. | 0.365 | |
| 11 | Mid-Amerca Apartments, L.P. | 158G B | 2 | 7271 | 383 | | 17.705 | 17.705 | | | | | 17.705 | | 572 S.F. | 0.233 | |
| 12 | Hamilton County, Tennessee Board of Education | 158B C | 39 | 5167 | 673 | 35.430 | | 35.430 | 65 S.F. | | 65 S.F. | 35.429 | | | 428 S.F. | 1014 S.F. | |
| 13 | Donald L. Oakes | 158G | 2.01 | 10991 | 643 | | 0.360 | 0.360 | | | | | 0.360 | | | 480 S.F. | |
| ~~14~~ | ~~Battery Heights Apartment Company~~ | ~~158H~~ | ~~14~~ | ~~5411~~ | ~~287~~ | | ~~1.270~~ | ~~1.270~~ | | | | | ~~1.270~~ | | | | |
| ~~15~~ | ~~Ashley J. Loprinzo~~ | ~~158H~~ | ~~1~~ | ~~9975~~ | ~~824~~ | ~~0.152~~ | | ~~0.152~~ | | | | ~~0.152~~ | | | | | |
| ~~16~~ | ~~John Q. Tran~~ | ~~158H~~ | ~~9~~ | ~~9720~~ | ~~448~~ | ~~0.215~~ | | ~~0.215~~ | | | | ~~0.215~~ | | | | | |
| ~~17~~ | ~~Julia Barker~~ | ~~158H~~ | ~~8~~ | ~~3892~~ | ~~457~~ | ~~0.154~~ | | ~~0.154~~ | | | | ~~0.154~~ | | | | | |
| ~~18~~ | ~~Julia E. Barker~~ | ~~158H~~ | ~~7~~ | ~~4405~~ | ~~492~~ | ~~0.398~~ | | ~~0.398~~ | | | | ~~0.398~~ | | | | | |
| ~~19~~ | ~~Woodmen of the World Lodge 6 TRS~~ | ~~158H~~ | ~~12~~ | ~~8440~~ | ~~106~~ | ~~0.421~~ | | ~~0.421~~ | | | | ~~0.421~~ | | | | | |
| ~~20~~ | ~~Mark Cordell~~ | ~~158H~~ | ~~13.01~~ | ~~9235~~ | ~~393~~ | ~~0.352~~ | | ~~0.352~~ | | | | ~~0.352~~ | | | | | |
| 21 | STATE OF GEORGIA | | | D | 375 | | | | | | | | | | | 3806 S.F. | 2229 S.F. |
| 10S | Susanne C. Phillips | 158B C | 40 | 11027 | 160 | 0.873 | | 0.873 | | | | 0.873 | | | | 1509 S.F. | |
| ACQUISITION TOTALS (ACRES) | | | | | | | | | 804 S.F. | | | | | | 0.248 | 1.228 | 2229 S.F. |

**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
KY
AGRICULTURE

7/16/2025

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

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# PROPERTY MAP AND RIGHT-OF-WAY ACQUISITION TABLE

SCALE: 1"=200'

7/16/2025 11:37:39 AM
R:\14335605101Work\01CAD\HT320-3A.sht

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

CURVE SR320-33-1
PI 14+84.53
N 250,268.2218
E 2,210,046.1444
Δ 5° 00′ 00″ (RT)
D 7° 31′ 09″
R 762.00
L 66.50
T 33.27
SE N.C.
DESIGN SPEED 40 MPH

CURVE SR320-33-2
PI 17+31.18
N 250,321.3889
E 2,210,287.0316
Δ 5° 00′ 00″ (LT)
D 7° 31′ 09″
R 762.00
L 66.50
T 33.27
SE N.C.
DESIGN SPEED 40 MPH

CURVE SR320-33-3
PI 19+34.37
N 250,382.3217
E 2,210,480.9179
Δ 5° 00′ 00″ (LT)
D 7° 31′ 09″
R 762.00
L 66.50
T 33.27
SE N.C.
DESIGN SPEED 40 MPH

CURVE SR320-33-4
PI 22+04.95
N 250,485.6509
E 2,210,731.0383
Δ 5° 38′ 30″ (RT)
D 7° 31′ 09″
R 762.00
L 75.03
T 37.55
SE N.C.
DESIGN SPEED 40 MPH

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

CURVE HAUL33-2-1
PI 200+60.39
N 250,523.8610
E 2,210,665.9777
Δ 88° 18′ 43″ (LT)
D 143° 14′ 22″
R 40.00
L 61.65
T 38.84
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

CP-S30
N 250247.2636
E 2209916.7005
EL. 701.99
ALUM. DISK
33-320-30

CP-S4
N 250502.8983
E 2210720.3934
EL. 699.98
IRON PIN AND CAP

CP-S5
N 250566.4294
E 2210864.6691
EL. 700.61
IRON PIN AND CAP

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

EXIST. CONC. BEAM BRIDGE
37' WIDE, 117' LONG

BRIDGE ID
33543070001

BEGIN PROPOSED BRIDGE
STA. 17+46.00

END PROPOSED BRIDGE
STA. 19+09.00

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

CP-S8
N 250329.9171
E 2210444.5913
EL. 685.83
PK NAIL

CP-S9
N 250226.9527
E 2210313.0612
EL. 696.10
IRON PIN AND CAP

DOT # 350030G
CSX 0WA 0124.800
SR 320 STA. 18+26.59

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

CP-S7
N 250411.6812
E 2210725.8765
EL. 696.96
PK NAIL

CP-S6
N 250459.2557
E 2210856.0039
EL. 699.09
PK NAIL

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

PROP. RAILROAD AIR RIGHTS

SLOPE EASEMENT

Ⓐ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
TOP ELEV - 691.07
STA: 21+78.45
OFF: 26.27

Ⓑ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
TOP ELEV-692.07
STA: 21+93.21
OFF: -19.976

Ⓒ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
EXPOSED IN DITCH
TOP ELEV-690.75
STA: 22+05.24
OFF: -59.97

THE AGREEMENT REQUIRED FOR THE RAILROAD CROSSING WILL BE OBTAINED BY THE ROW DIVISION'S UTILITY OFFICE RAILROAD COORDINATOR THROUGH NEGOTIATIONS AND SPECIAL PROVISIONS WITH THE RAILROAD.

CURVE BENHAM33-1
PI 51+18.82
N 250,124.7374
E 2,209,985.6549
Δ 2° 33′ 27″ (LT)
D 1° 54′ 35″
R 3,000.00
L 133.92
T 66.97
SE EXIST.
DESIGN SPEED 25 MPH

CURVE HAUL33-2-3
PI 203+41.71
N 250,397.1358
E 2,210,416.0225
Δ 35° 43′ 53″ (LT)
D 57° 17′ 45″
R 100.00
L 62.36
T 32.23
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

CURVE HAUL33-2-2
PI 203+00.78
N 250,472.8287
E 2,210,486.8363
Δ 21° 16′ 42″ (RT)
D 57° 17′ 45″
R 100.00
L 37.14
T 18.79
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

CURVE HAUL33-1-1
PI 150+50.09
N 250,227.0601
E 2,210,091.2066
Δ 67° 09′ 03″ (LT)
D 114° 35′ 30″
R 50.00
L 58.60
T 33.19
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

CURVE HAUL33-1-2
PI 202+79.99
N 250,204.6810
E 2,210,327.8265
Δ 87° 53′ 34″ (LT)
D 76° 23′ 40″
R 75.00
L 115.05
T 72.29
SE 0.000 FT/FT
DESIGN SPEED 00 MPH
TRANS. LENGTH 000

CONTROL POINTS

| POINT | NORTH | EAST | ELEV. | STATION | OFFSET |
|---|---|---|---|---|---|
| S4 | 250502.8983 | 2210720.3934 | 699.98 | 19+60.24 | 20.08′ (LT) |
| S5 | 250566.4294 | 2210864.6691 | 700.61 | 21+16.39 | 38.69′ (LT) |
| S6 | 250459.2557 | 2210856.0039 | 699.09 | 20+77.11 | 61.40′ (RT) |
| S7 | 250411.6812 | 2210725.8765 | 696.96 | 19+37.61 | 68.45′ (RT) |
| S8 | 250329.9171 | 2210444.5913 | 685.83 | 16+45.15 | 60.60′ (RT) |
| S9 | 250226.9527 | 2210313.0612 | 696.10 | 14+88.80 | 119.40′ (RT) |
| S30 | 250247.2636 | 2209916.7005 | 701.99 | 11+17.01 | 19.25′ (LT) |
| S31 | 250282.1759 | 2210160.0042 | 704.56 | 13+59.34 | 20.82′ (RT) |

NOTE: ALL OFFSETS ARE REFERENCED TO SR 320

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 4 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 4 |
| PS&E | 2025 | BR-STP-320(10) | 4 |
| | | | |

REVISION 09/13/2022: UPDATED SURVEY WITH ADDITIONAL FEATURES ON TRACTS 5, 10, 12 , 13.
UPDATED EX. ROW LINES ON TRACTS 3, 10, 11 AND 21.
REVISED OWNER TRACT 14.

REVISION 06/07/2023:
ADDED CALLOUT TO NOT DISTURB CARD READER AND BOLLARDS AND TO NOT DISTURB CONCRETE PAD. REVISED CONSTRUCTION EASEMENT ON TRACT 3 FROM 15′ TO 10′ FROM STA. 13+00 TO STA. 13+85.
ADDED CALLOUTS TO NOT DISTURB SIGN ON TRACT 11 & TO NOT DISTURB SIGN AND LANDSCAPING ON TRACT 13. REVISED CONSTRUCTION EASEMENT ON TRACTS 11 & 13. REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023:
REMOVED THE EXISTING RAILROAD EASEMENT AROUND THE AREA OF THE BRIDGE.

REVISION 11/14/2023:
REVISED TRACT 21 OWNER TO STATE OF GEORGIA

REVISION 12/11/2023:
REMOVED ACQUISITION FROM TRACT 1, REVISED PROJECT R.O.W. LIMTS FROM STA. 12+37.67 TO STA. 12+35.11, CROSSED THROUGH TRACTS 1 AND 15, REVISED SLOPE EASEMENT ON TRACT 2, REMOVED DRAINAGE EASEMENT ON TRACT 2, REVISED CONSTRUCTION AND SLOPE EASEMENT ON TRACT 3, REMOVED DRAINAGE EASEMENT ON TRACT 5, REVISED CONSTRUCTION EASEMENT ON TRACT 10, CREATED TRACT 10-S, REVISED CONSTRUCTION EASEMENT ON TRACT 11, REVISED HAUL ROAD 1 AND HAUL ROAD 2 ALIGNMENTS, AND REVISED R.O.W. ACQUISITION TABLE.

REVISION 02/23/2024:
REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

REVISION 03/20/2024:
REMOVED FENCE REPLACEMENT ON TRACT 3.

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
KY
AGRICULTURE
7/16/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PRESENT LAYOUT

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:38:15 AM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 4A |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 4A |
| PS&E | 2025 | BR-STP-320(10) | 4A |
| | | | |

REVISION 09/13/2022: UPDATED EX ROW LINES ON TRACTS 3, 10, 11, 12, AND 21. REVISED OWNER TRACT 14. REVISED PROPOSED ROW TRACTS 3, 10, 11 AND 12.

REVISION 12/6/2022: UPDATED ROW CALLS TRACT 1.

REVISION 06/07/2023: REVISED CONSTRUCTION EASEMENT ON TRACT 3 FROM 15' TO 10' FROM STA. 13+00 TO STA. 13+85. REVISED DRIVEWAY CONSTRUCTION EASEMENT TABLE. REVISED CONSTRUCTION EASEMENT ON TRACTS 11 & 13 AND UPDATED LABELS. REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023: REMOVED THE EXISTING RAILROAD EASEMENT AROUND THE AREA OF THE BRIDGE.

REVISION 11/14/2023: REVISED TRACT OWNER TO STATE OF GEORGIA.

REVISION 12/11/2023: REMOVED ACQUISITION FROM TRACT 1, REVISED PROJECT R.O.W. LIMTS FROM STA. 12+37.67 TO STA. 12+35.11, CROSSED THROUGH TRACTS 1 AND 15, REVISED SLOPE EASEMENT ON TRACT 2, REMOVED DRAINAGE EASEMENT ON TRACT 2, REVISED CONSTRUCTION AND SLOPE EASEMENT ON TRACT 3, REMOVED DRAINAGE EASEMENT ON TRACT 5, REVISED CONSTRUCTION AND SLOPE EASEMENTS ON TRACT 5, REVISED CONSTRUCTION EASEMENT ON TRACT 10, CREATED TRACT 10S, REVISED CONSTRUCTION EASEMENT ON TRACT 11, REVISED HAUL ROAD 1 AND HAUL ROAD 2 ALIGNMENTS, AND REVISED R.O.W. ACQUISITION TABLE.

REVISION 02/23/2024: REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

REVISION 02/29/2024: ADDED STATION, OFFSET, BEARING AND DISTANCES TO PROPOSED ROW AND EASEMENT LINEWORK. ADDED R.O.W. STATIONS, OFFSETS, BEARINGS AND DISTANCES TABLE. UPDATED CSX CONSTRUCTION EASEMENT TABLE. REMOVED DRIVEWAY CONSTRUCTION EASEMENT TABLE FOR TRACT 3.

REVISION 03/07/2024: REVISED R.O.W. DISTANCE CALLOUT BETWEEN POINT G AND POINT H ON TRACT 21.

REVISION 03/20/2024: ADDED LABEL PRESENT & PROPOSED R.O.W. ALONG TRACT 3. LABELED SLOPE EASEMENT ON TRACT 3 AND ADDED TRACT 3 SLOPE EASEMENT TABLE.

**SEALED BY**

JOHN S. SIVES
REGISTERED ENGINEER
No. 121
AGRICULTURE
TN

7/16/2025

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

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# RIGHT OF WAY DETAILS

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROA
N 250274.8490
E 2210076.1880

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2936
E 2209968.3703

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

DOT # 350030G
CSX 0WA 0124.800
SR 320 STA. 18+26.59

CP-S30
N 250247.2636
E 2209916.7005
EL. 701.99
ALUM. DISK
33-320-30

CP-S4
N 250502.8983
E 2210720.3934
EL. 699.98
IRON PIN AND CAP

CP-S5
N 250566.4294
E 2210864.6691
EL. 700.61
IRON PIN AND CAP

CP-S31
N 250282.1759
E 2210160.0042
EL. 704.56
ALUM. DISK
33-320-31

CP-S8
N 250329.9171
E 2210444.5913
EL. 685.83
PK NAIL

CP-S9
N 250226.9527
E 2210313.0612
EL. 696.10
IRON PIN AND CAP

CP-S7
N 250411.6812
E 2210725.8765
EL. 696.96
PK NAIL

CP-S6
N 250459.2557
E 2210856.0039
EL. 699.09
PK NAIL

PROP. RAILROAD AIR RIGHTS

SLOPE EASEMENT

| TRACT 5 AND CSX CONSTRUCTION EASEMENT TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | FROM-TO | BEARING | DISTANCE |
| Ⓐ | 14+88.19 | 34.71 | Ⓐ-Ⓑ | S 46° 36' 03" E | 45.87' |
| Ⓑ | 15+15.03 | 73.21 | Ⓑ-Ⓒ | N 81° 19' 26" W | 184.50' |
| Ⓒ | 16+87.40 | 139.70 | Ⓒ-Ⓓ | N 72° 33' 45" E | 84.37' |
| Ⓓ | 17+60.43 | 135.38 | Ⓓ-Ⓔ | N 72° 33' 45" E | 18.48' |
| Ⓔ | 17+78.20 | 135.37 | | | |

| R.O.W. STATIONS, OFFSETS, BEARINGS AND DISTANCES TABLE | | | | | |
|---|---|---|---|---|---|
| POINT | STATION | OFFSET | FROM-TO | BEARING | DISTANCE |
| Ⓕ | 17+82.04 | 43.40 | Ⓕ-Ⓖ | N 03° 48' 23" W | 4.01 |
| Ⓖ | 17+82.98 | 39.50 | Ⓖ-Ⓛ | N 72° 33' 10" E | 69.26 |
| Ⓗ | 17+90.83 | 7.17 | Ⓗ-Ⓘ | S 72° 48' 20" W | 69.21 |
| Ⓘ | 18+60.04 | 7.47 | Ⓘ-Ⓚ | N 05° 07' 01" W | 55.12 |
| Ⓙ | 18+04.07 | -46.49 | Ⓙ-Ⓝ | N 72° 38' 44" E | 49.71 |
| Ⓚ | 18+71.81 | -46.38 | Ⓝ-Ⓚ | N 72° 38' 44" E | 18.03 |
| Ⓛ | 18+52.24 | 39.50 | Ⓛ-Ⓜ | N 03° 45' 20" W | 0.90 |
| Ⓜ | 18+52.45 | 38.63 | Ⓜ-Ⓘ | N 03° 45' 20" W | 32.07 |
| Ⓝ | 18+53.78 | -46.41 | Ⓙ-Ⓚ | N 72° 38' 44" E | 67.75 |
| Ⓞ | 18+79.56 | -78.20 | Ⓓ-Ⓕ | S 03° 48' 23" E | 94.64 |
| Ⓟ | 18+86.72 | -107.65 | Ⓚ-Ⓞ | N 03° 46' 03" W | 32.75 |
| Ⓠ | 19+00.90 | -165.89 | Ⓟ-Ⓠ | N 03° 46' 03" W | 30.31 |
| Ⓡ | 17+49.10 | 195.50 | Ⓟ-Ⓠ | N 03° 46' 03" W | 59.95 |
| | | | Ⓓ-Ⓡ | S 03° 48' 23" E | 61.68 |

| CONTROL POINTS | | | | | |
|---|---|---|---|---|---|
| POINT | NORTH | EAST | ELEV. | STATION | OFFSET |
| S4 | 250502.8983 | 2210720.3934 | 699.98 | 19+60.24 | 20.08' (LT) |
| S5 | 250566.4294 | 2210864.6691 | 700.61 | 21+16.39 | 38.69' (LT) |
| S6 | 250459.2557 | 2210856.0039 | 699.09 | 20+77.11 | 61.40' (RT) |
| S7 | 250411.6812 | 2210725.8765 | 696.96 | 19+37.61 | 68.45' (RT) |
| S8 | 250329.9171 | 2210444.5913 | 685.83 | 16+45.15 | 60.60' (RT) |
| S9 | 250226.9527 | 2210313.0612 | 696.10 | 14+88.80 | 119.40' (RT) |
| S30 | 250247.2636 | 2209916.7005 | 701.99 | 11+17.01 | 19.25' (LT) |
| S31 | 250282.1759 | 2210160.0042 | 704.56 | 13+59.34 | 20.82' (RT) |

NOTE: ALL OFFSETS ARE REFERENCED TO SR 320

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 4B |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 4B |
| PS&E | 2025 | BR-STP-320(10) | 4B |
| | | | |

REVISION 08/09/2022: REVISED END WALL C STA/OFFSET LABEL.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMTS FROM STA. 12+37.67 TO STA. 12+35.11, REVISED HAUL ROAD 1 AND HAUL ROAD 2 ALIGNMENTS, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+67.76 TO STA. 50+53.92, AND REMOVED RETAINING WALLS "A" & "B".

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105
SEE PROFILE ON SHEET 5

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

15 20 25

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

PROSPERITY LANE (KING ST)
N 18° 04' 18" W 120.5'
R = 20'
CURB RAMP STD. DWG. CR-40
EX. WALL TO REMAIN
BEGIN C&G STA. 12+50.57 OFF -18.18'
N 71° 35' 11" E
24'
R=20'
BEGIN MILL & OVERLAY STA. 12+50.57
BEGIN C&G STA. 12+50.57 OFF 18.50'
R=15'
CURB RAMP STD. DWG. CR-40
END C&G STA. 13+74.87 OFF 53.36
END FULL DEPTH SECTION STA. 50+53.92
*3 - AT BEGINNING OF CURB ON SR-320 PROVIDE A 10' TRANSITION FROM LOWERED TO FULL HEIGHT CURB.
BENHAM DR. S 18° 00' 15" E
LIMIT OF CONST. STA. 1+60.00 30' BUSINESS DR. (CONC.) RP-D-16 STA. 14+11.29
BEGIN C&G STA. 12+98.18 OFF -39.25'
CURB RAMP STD. DWG. CR-40
BEGIN FULL DEPTH SECTION STA. 13+45.00
N 71° 47' 58" E
N 72° 33' 13" E
S.R. 320 - EAST BROADWAY RD.
TYPE 21
BEGIN GUARDRAIL STA. 14+19.24
BEGIN C&G STA. 14+00.38 OFF 45.26'
BEGIN GUARDRAIL STA. 14+41.76
END GUARDRAIL STA. 17+31.89 OFF -25.96
C&G TYPE 6-30
2'6" GRASS BUFFER
5' SIDEWALK
TYPE 13
5' SIDEWALK
BEGIN PROPOSED BRIDGE STA. 17+46.00
BEGIN TRANSITION STA. 17+15.85
PROP. CONCRETE BEAM BRIDGE 49' WIDE 163' LONG
END C&G BEGIN 2' SHOULDER STA. 17+49.26 OFF -16.50
N 77° 33' 13" E
C&G TYPE 6-30
N 72° 33' 13" E
BEGIN TRANSITION STA. 17+27.57
S 84° 35' 50" E
HAUL ROAD 1
TRM-1 V-DITCH
N 72° 33' 45" E
END GUARDRAIL STA. 17+21.33 OFF 25.70
END C&G BEGIN 2' SHOULDER STA. 17+42.88 OFF 16.50
6' SIDEWALK
DOT #350030G
CSX 0WA 0124.800
SR 320 STA. 18+26.59
N 3° 46' 01" W
33'
33'
CSXT ROW
CSX RAILROAD
CSXT ROW
CSXT ROW
N 3° 46' 01" W
66'
33'
33'
CSXT ROW
S 23° 51' 26" W
END 2' SHOULDER BEGIN C&G STA. 19+12.87 OFF -16.50
BEGIN GUARDRAIL STA. 19+52.42 OFF -25.85
END TRANSITION STA. 19+50.14
END FULL DEPTH SECTION STA. 22+06.00
TEMP 4' BOTTOM TRAP DITCH SEE HAUL ROAD 2 CROSS SECTIONS
END GUARDRAIL STA. 22+60.47
TIE TO EX. SIDEWALK STA. 22+82.28 OFF -25.18'
END MILL & OVERLAY TIE TO EX. C&G STA. 22+82.27 OFF -19.50'
STA. 21+67.40 OFF. 16.50 LT.
104' TRANSITION
STA. 22+51.15 OFF. 17.50 LT.
S 74° 14' 30" W
HAUL ROAD 2
2'6" GRASS BUFFER
C&G TYPE 6-30
5' SIDEWALK
WWC-1
R = 750'
TYPE 38
STA. 19+67.52 OFF 28.69
N 67° 33' 13" E
N 73° 11' 43" E
N 72° 40' 26" E
TYPE 13
STA. 21+46.84 OFF 28.69
END RETAINING WALL C STA. 21+68.47 OFF 27.31
R = 750'
R = 25'
2'6" GRASS BUFFER
PROP. RETAINING WALL
5' SIDEWALK
C&G TYPE 6-30
BEGIN RETAINING WALL C STA. 19+33.00 OFF 27.00
BEGIN GUARDRAIL STA. 21+68.47
TIE TO EX. STRIPING
END GUARDRAIL STA. 22+33.24
6" DETACHED CONC. CURB
PROP. 5' SIDEWALK
END MILL & OVERLAY TIE TO EX. C&G STA. 22+83.61 OFF 20.50'
BEGIN TRANSITION STA. 24+97.74
LIMIT OF CONST. STA. 1+31.50 26' BUSINESS DR. (ASPH.) RP-D-16 STA. 25+36.54
TIE TO EX. SIDEWALK STA. 25+55.53 OFF 25.00'
END PROPOSED BRIDGE STA. 19+09.00
END TRANSITION STA. 19+20.45
END 2' SHOULDER BEGIN C&G STA. 19+05.30 OFF 16.50
STA. 21+46.84 OFF. 16.50 RT.
104' TRANSITION
STA. 22+50.96 OFF. 18.50 RT.
LIMIT OF CONSTRUCTION HAUL ROAD 2 STA. 204+10.56 N 250327.6940 E 2210430.6240

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700
SEE PROFILE ON SHEET 5

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

SEE SHEET 4C FOR DRAINAGE LAYOUT

DETACHED CURB LAYOUT:
*1 - BEGIN 6" DETACHED CURB STA. 21+52.01 OFF. 35.66
*2 - END 6" DETACHED CURB STA. 21+88.57 OFF. 41.88
SEE STANDARD DWG RP-VC-10.

BRIDGE PROTECTIVE FENCE LAYOUT:
*3 - BEGIN STANDARD PROTECTIVE FENCE STA. 17+91.00
*4 - END STANDARD PROTECTIVE FENCE STA. 18+64.00
SEE STD. DWG. STD-8-5, TYPICAL SECTIONS ON SHEET 2B, AND BRIDGE PLANS FOR MORE INFORMATION.

GRADED SOLID ROCK LAYOUT:
*5 - GRADED SOLID ROCK AREA STA. 16+00.00 OFF. 26.96 RT
*6 - GRADED SOLID ROCK AREA STA. 16+00.00 OFF. 34.83 RT
*7 - GRADED SOLID ROCK AREA STA. 17+42.87 OFF. 25.98 RT
*8 - GRADED SOLID ROCK AREA STA. 17+42.87 OFF. 33.86 RT
SEE GEOTECHNICAL G-SERIES SHEETS FOR MORE INFORMATION.

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JOHN S. STYLES
REGISTERED ENGINEER
No. 114
AGRICULTURE
7/16/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PROPOSED LAYOUT

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:38:33 AM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 4C |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 4C |
| PS&E | 2025 | BR-STP-320(10) | 4C |
| | | | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMTS FROM STA. 12+37.67 TO STA. 12+35.11, REVISED HAUL ROAD 1 AND HAUL ROAD 2 ALIGNMENTS, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+67.76 TO STA. 50+53.92, REVISED STORM DRAINAGE STRUCTURES AND PIPES, AND REMOVED RETAINING WALLS "A" & "B".

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

SEE PROFILE ON SHEET 5

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

15 20 25

66'
33'
33'
CSXT ROW
CSXT ROW
N 3°46'01"W

PROSPERITY LANE (KING ST)
N 8° 04' 18" W

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

3 #14 GT. EL. 700.27 IN. EL. 696.17 OUT.EL. 696.00
3B #12 GT. EL. 701.74 IN. EL. 697.37 OUT.EL. 697.20
3A #12 GT. EL. 700.60 IN. EL. 695.77 OUT.EL. 695.60
4 #12 GT. EL. 708.19 IN. EL. 694.67 OUT.EL. 694.50
6 #12 GT. EL. 707.59 OUT.EL. 703.69
8 #12 GT. EL. 698.76 IN. EL. 695.03 IN. EL. 694.69 OUT.EL. 694.52
2A #12 GT. EL. 701.61 OUT.EL. 697.61
2 #14 GT. EL. 700.13 IN. EL. 694.77 OUT.EL. 694.60
10 #12 GT. EL. 700.10 IN. EL. 695.26 OUT.EL. 695.05
5 #12 GT. EL. 708.19 IN.EL. 693.15 IN.EL. 694.00 OUT.EL. 692.98
11 EW INV. 692.80
7 #12 GT. EL. 707.59 OUT.EL. 703.69
9 #12 GT. EL. 698.76 IN. EL. 695.03 OUT.EL. 694.86

TEMP 4' BOTTOM TRAP DITCH SEE HAUL ROAD 2 CROSS SECTIONS

HAUL ROAD 2
S 74° 14' 30" W
S 23° 51' 26" W
N 26° 40' W
N 67° 33' 13" E
N 72° 33' 13" E
N 73° 11' 43" E
N 72° 40' 26" E
N 71° 35' 11" E
N 71° 47' 58" E
N 72° 33' 13" E
N 77° 33' 13" E
S 17° 27' 27" E
S 15° 26' 47" E
S 18° 04' 15" E
BENHAM DR.

TYPE 13
TYPE 38
TYPE 21
TYPE 13
18" ST
18" RCP
EX. 24" TO REMAIN
TIE TO EX. CATCH BASIN IN. EL. 694.32
EX. 15" TO REMAIN
EX. CATCH BASIN TO REMAIN
WWC-1
S.R. 320 - EAST BROADWAY RD.

S 84° 35' 50" E
HAUL ROAD 1
TRM-1 V-DITCH
N 72° 33' 45" E
BEGIN SPECIAL DITCH (TRM-1) STA. 16+50.00 OFF 57.63
END SPECIAL DITCH (TRM-I) STA. 17+72.81 OFF 81.44
BREAK POINT SPECIAL DITCH STA. 16+67.43 OFF. 61.36

DOT #350030G
CSX OWA 0124.800
SR 320 STA. 18+26.59

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700
SEE PROFILE ON SHEET 5

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

N 3°46'01"W
33'
33'
CSXT ROW
CSX RAILROAD
CSXT ROW

**SEALED BY**

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REGISTERED ENGINEER
XVI
AGRICULTURE
7/16/2025

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# DRAINAGE LAYOUT

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:38:39 AM
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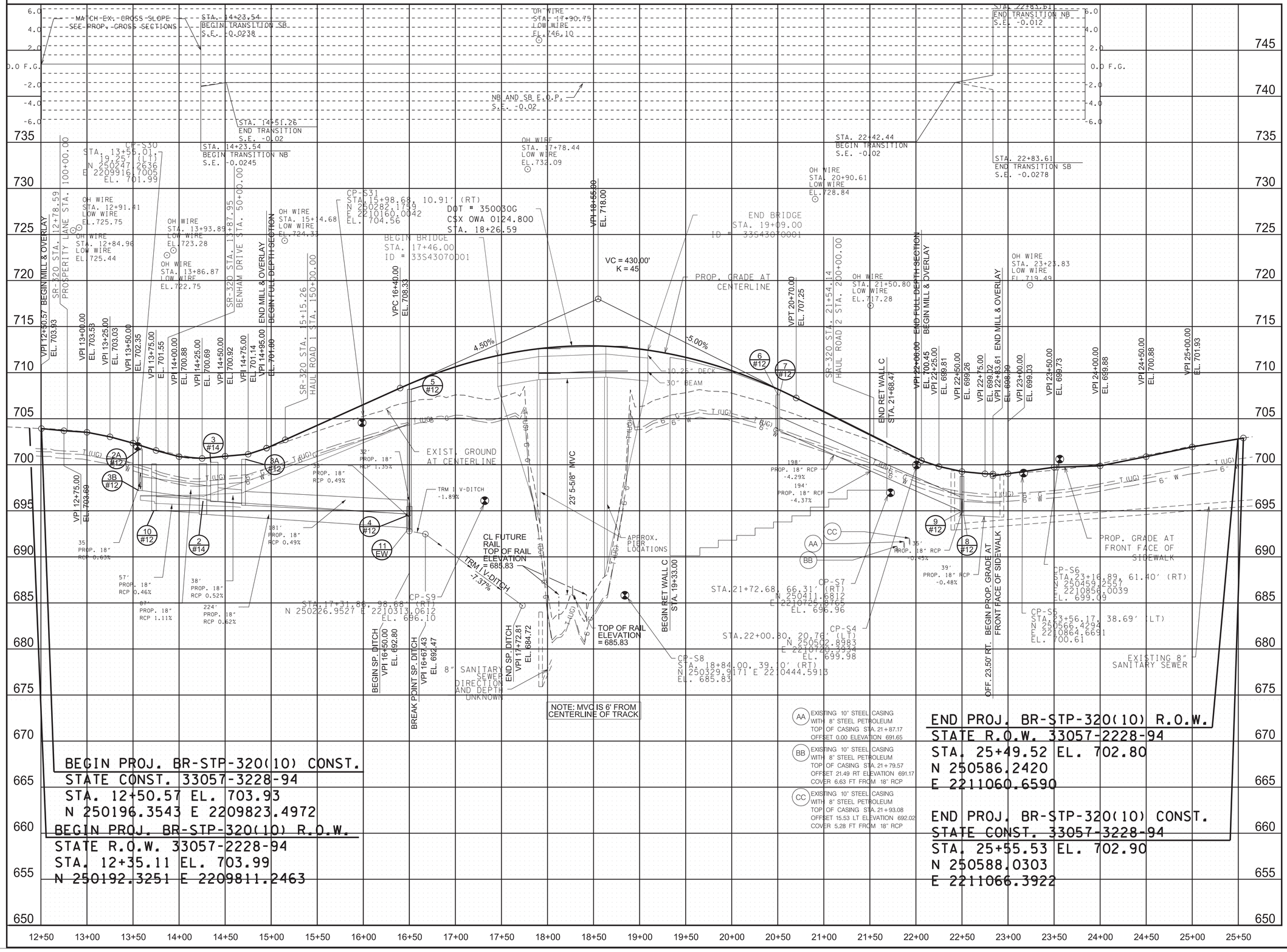
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 4D |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 4D |
| PS&E | 2025 | BR-STP-320(10) | 4D |
| | | | |

REVISION 08/09/2022: REVISED WALL B BEGIN AND END STATION LABELS.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52 AND LABELED ELEVATION.

REVISION 06/30/2023:
ADDED NOTE FOR MVC.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO STA. 12+35.11, REMOVED RETAINING WALLS "A" AND "B", AND REVISED STORM DRAINAGE PIPES AND STRUCTURES.

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# PROPOSED PROFILE

STA.12+50.57 TO STA.25+55.53

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

7/16/2025 11:38:58 AM
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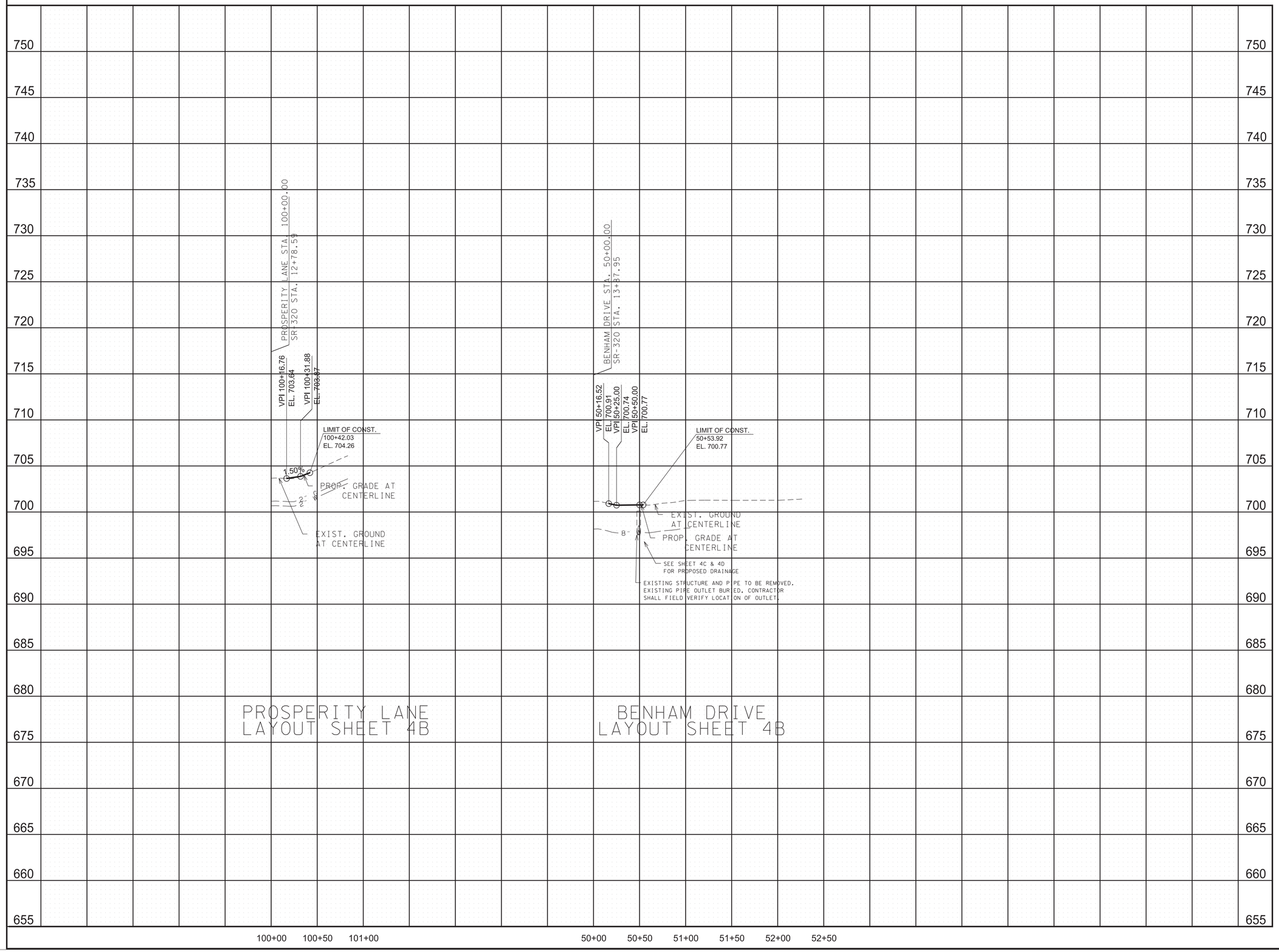
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 5 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 5 |
| PS&E | 2025 | BR-STP-320(10) | 5 |
| | | | |

REVISION 12/11/2023
REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE.




PROSPERITY LANE
LAYOUT SHEET 4B

BENHAM DRIVE
LAYOUT SHEET 4B

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AGRICULTURE

7/16/2025

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# SIDE ROAD PROFILES

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

7/16/2025 11:39:00 AM
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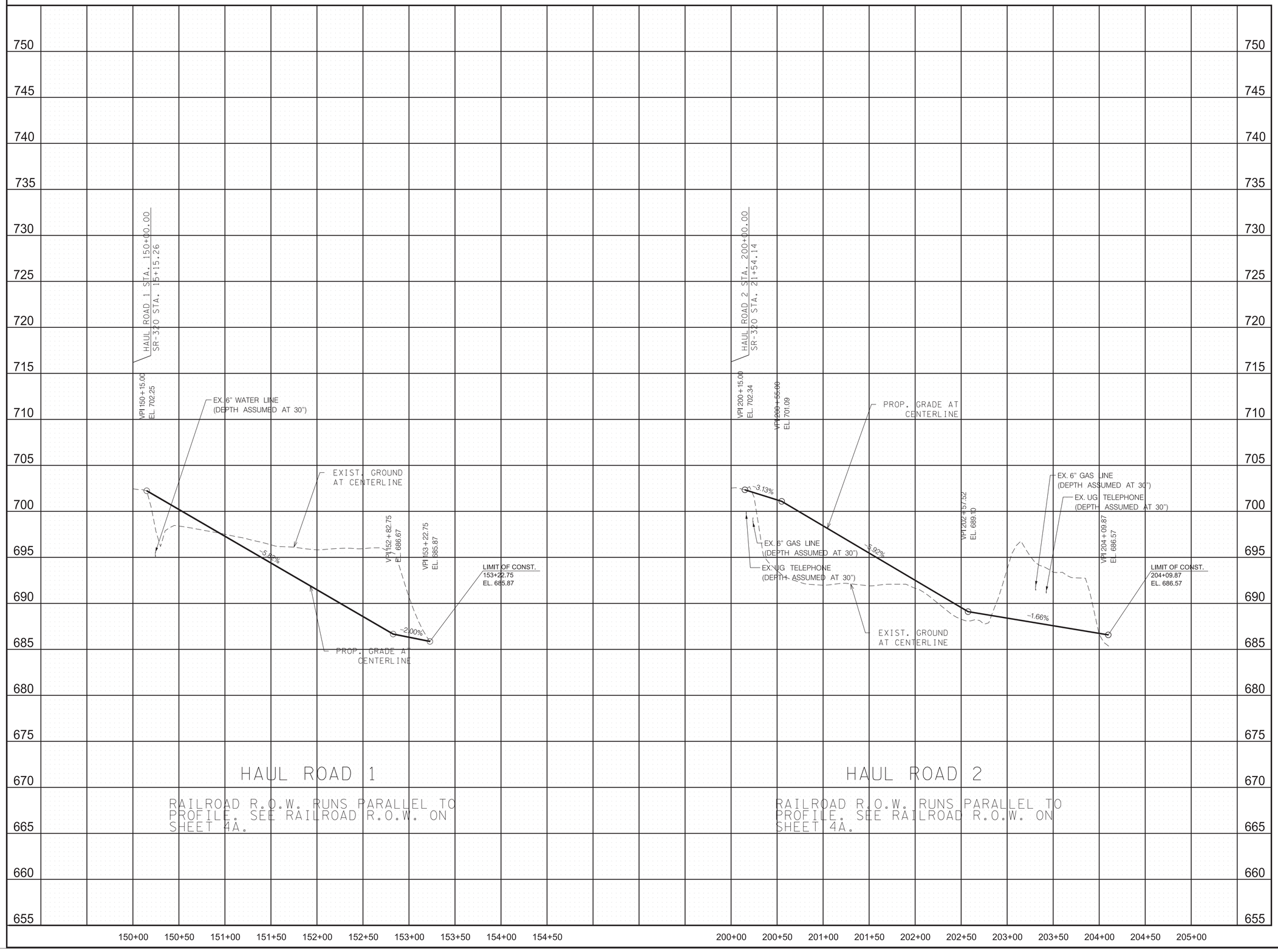
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 6 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 6 |
| PS&E | 2025 | BR-STP-320(10) | 6 |
| | | | |

REVISION 12/11/2023: REVISED HAUL ROAD 1 AND HAUL ROAD 2 PROFILES.

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XVI
AGRICULTURE

7/16/2025

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# HAUL ROAD PROFILES

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

7/16/2025 11:39:02 AM
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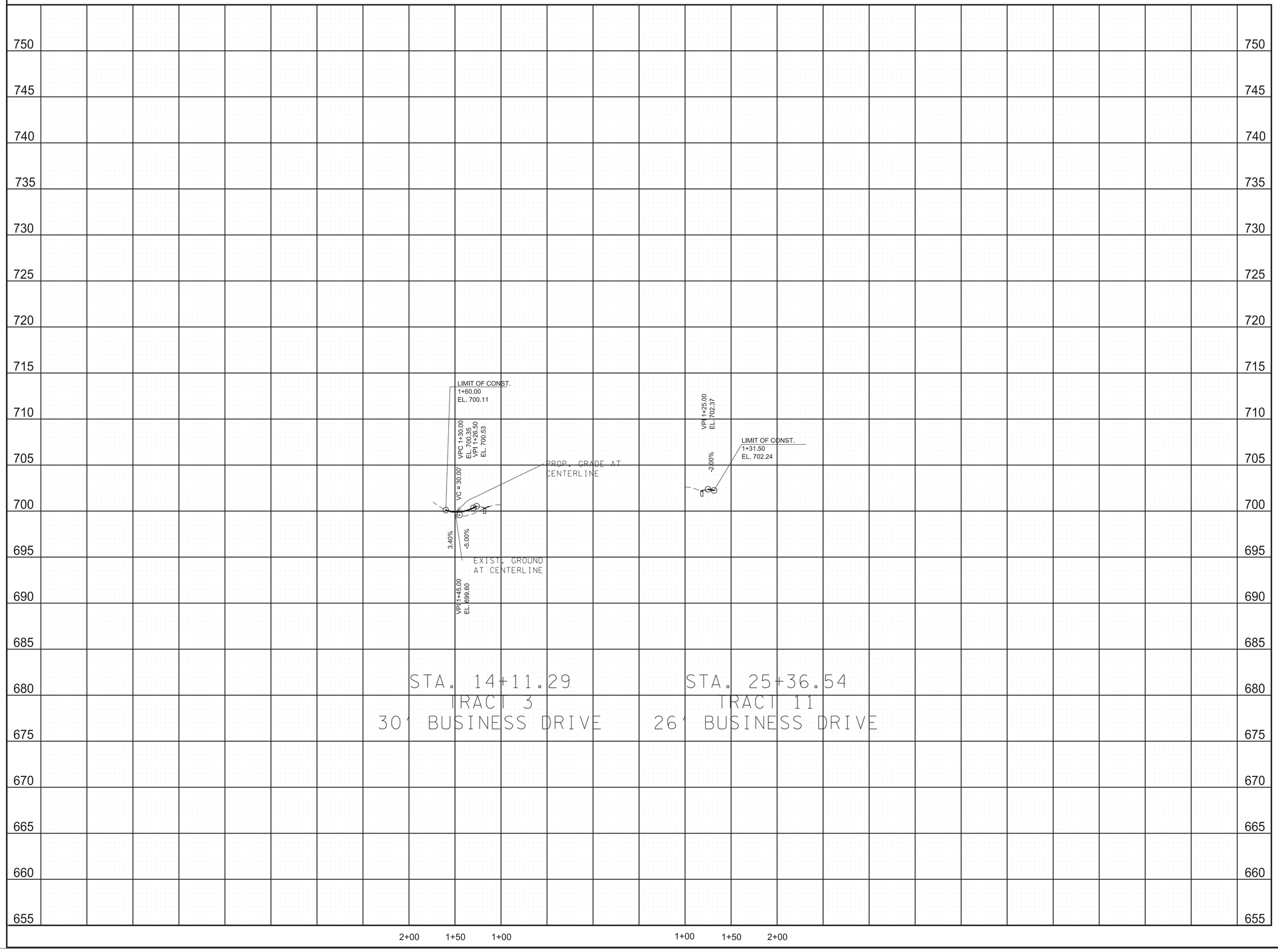
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 7 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 7 |
| PS&E | 2025 | BR-STP-320(10) | 7 |
| | | | |

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JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# PRIVATE DRIVE, BUSINESS, AND FIELD ENTRANCE PROFILES

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

7/16/2025 11:39:14 AM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 8 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 8 |
| PS&E | 2025 | BR-STP-320(10) | 8 |
| | | | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO 12+35.11, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE, REVISED HAUL ROAD 1 AND 2 ALIGNMENTS, REMOVED CROSS DRAINS AT HAUL ROADS.

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

HAUL ROAD 2

HAUL ROAD 1

WWC - 1

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# DRAINAGE MAP

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 9 |
| PS&E | 2025 | BR-STP-320(10) | 9 |
| | | | |
| | | | |

## SUBSECTION 3 – EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

## EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

### INSPECTION, MAINTENANCE & REPAIR

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

### GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

(2) 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.

(3) 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.

(4) 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.

(5) 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.

(6) 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.

(7) 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.

(8) 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.

(9) 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.

(10) 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.

(11) 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.

(12) 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.

(13) 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.

## SUBSECTION 4 – EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

## EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

### RAILROAD ENVIRONMENTAL

(1) THE CONTRACTOR SHALL MAINTAIN A COMPLETE AND COMPREHENSIVE EPSC PLAN AND SWPPP TO PREVENT ROADWAY AND/OR CONSTRUCTION SEDIMENT OR DEBRIS AND ANY PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, PAINTS OR COATINGS ETC. FROM FALLING ONTO THE RAILROAD'S RIGHT-OF-WAY AND/OR FROM ENTERING THE DRAINAGE DITCHES OR DRAINAGE STRUCTURES OF THE RAILROAD, AND ANY SEDIMENT OR DEBRIS OR PETROLEUM BASED PRODUCTS OR CHLORINATED SOLVENTS, ETC. THAT DO ENTER SUCH DRAINAGE AREAS OF THE RAILROAD'S RIGHT-OF-WAY ARE TO BE REMOVED IN ACCORDANCE WITH RULES SET FORTH BY CSX RAILROAD AND AT THE CONTRACTOR'S EXPENSE.

**SEALED BY**

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# EROSION PREVENTION AND SEDIMENT CONTROL NOTES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 10 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 10 |
| PS&E | 2025 | BR-STP-320(10) | 10 |
| | | | |

## TABULATED EPSC QUANTITIES

| | ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|---|
| (1) | 203-01 | ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED) | C.Y. | 244 |
| | 209-02.04 | 10" TEMPORARY SLOPE DRAIN | L.F. | 71 |
| | 209-05 | SEDIMENT REMOVAL | C.Y. | 116 |
| (2) | 209-08.02 | TEMPORARY SILT FENCE (WITH BACKING) | L.F. | 3532 |
| | 209-08.07 | ROCK CHECK DAM | EACH | 3 |
| | 209-08.08 | ENHANCED ROCK CHECK DAM | EACH | 5 |
| | 209-09.43 | CURB INLET PROTECTION (TYPE 4) | EACH | 17 |
| | 209-40.33 | CATCH BASIN PROTECTION (TYPE D) | EACH | 13 |
| (3) | 709-05.05 | MACHINED RIP-RAP (CLASS A-3) | TON | 100 |
| (4) | 709-05.06 | MACHINED RIP-RAP (CLASS A-1) | TON | 18 |
| (5) | 740-10.03 | GEOTEXTILE (TYPE III)(EROSION CONTROL) | S.Y. | 223 |
| | 740-11.02 | TEMPORARY SEDIMENT TUBE 12IN | L.F. | 1616 |
| | 801-01 | SEEDING (WITH MULCH) | UNIT | 7 |
| | 801-01.07 | TEMPORARY SEEDING (WITH MULCH) | UNIT | 160 |
| (6) | 801-02 | SEEDING (WITHOUT MULCH) | UNIT | 45 |
| (7) | 801-03 | WATER (SEEDING & SODDING) | M.G. | 9 |
| | 803-01 | SODDING (NEW SOD) | S.Y. | 4325 |
| (8) | 805-01.01 | TURF REINFORCEMENT MAT (CLASS I) | S.Y. | 392 |
| | 805-12.02 | EROSION CONTROL BLANKET (TYPE II) | S.Y. | 3581 |

## TABULATED EPSC QUANTITIES FOOTNOTES

(1) INCLUDES 15 C.Y. FOR TEMPORARY CONSTRUCTION EXITS AND 229 C.Y. FOR CONSTRUCTION OF THE TEMPORARY BERMS

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

(3) INCLUDES 100 TONS FOR USE IN TEMPORARY CONSTRUCTION EXITS

(4) INCLUDES 18 TONS FOR CONSTRUCTION OF SLOPE DRAIN RIP-RAP BASINS.

(5) GEOTEXTILE TO BE PLACED UNDER ALL RIP-RAP

(6) INCLUDES 4 UNITS FOR USE WITH THE SPECIAL DITCH FROM STA. 16+50.00 TO 17+78.32.

(7) INCLUDES 9 THOUSAND GALLONS FOR EROSION AND SEDIMENT CONTROL

(8) FOR USE TO STABILIZE THE SPECIAL DITCH FROM STA. 16+50.00 TO 17+78.32

**OUTFALL TABLE**

| OUTFALL | SUB-OUTFALL | STATION CL, LT OR RT | SLOPE WITHIN ROW (%) | DRAINAGE AREA (ACRES) | | | | | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| | | | | STAGE 1 | STAGE 1A | STAGE 2 | STAGE 3 | STAGE 4 | |
| 1 | | 17+68.76 RT | 16.5% | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | 1.25 ACRES VIA SUBOUTFALLS 1.30 ACRES ARE OFFSITE |
| | 1A | 13+73.09 RT | 8.3% | 0.31 | 0.31 | 0.07 | 0.07 | 0.07 | |
| | 1B | 13+58.00 RT | 7.1% | | 0.24 | 0.24 | 0.24 | 0.24 | |
| | 1C | 13+58.00 LT | 2.7% | | | 0.10 | 0.10 | 0.10 | |
| | 1D | 14+38.10 LT | 3.5% | | | 0.37 | 0.37 | 0.37 | |
| | 1E | 14+70.00 LT | 4.8% | | | 0.10 | 0.10 | 0.10 | |
| | 1F | 16+50.00 LT | 3.6% | | | 0.11 | 0.11 | 0.11 | |
| | 1G | 14+26.00 RT | 4.9% | | | | 0.15 | 0.15 | |
| | 1H | 16+49.97 RT | 3.6% | | | | 0.11 | 0.11 | |
| 2 | | 16+53.30 LT | 17.5% | 0.51 | 0.51 | | | | |
| 3 | | 22+93.78 LT | 0.7% | 1.02 | 0.74 | 1.00 | 1.26 | 1.26 | 1.26 ACRES VIA SUBOUTFALLS |
| | 3A | 23+21.48 LT | 1.3% | 0.02 | 0.02 | 0.02 | 0.02 | 0.02 | |
| | 3B | 23+48.35 LT | 5.9% | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | |
| | 3C | 22+97.78 RT | 3.2% | 0.32 | 0.20 | 0.20 | 0.20 | 0.20 | |
| | 3D | 25+89.02 RT | 4.1% | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | |
| | 3E | 22+50.00 RT | 5.4% | | | | 0.13 | 0.13 | |
| | 3F | 20+44.91 RT | 3.7% | | | | 0.13 | 0.13 | |
| | 3G | 22+50.00 RT | 5.2% | | | 0.13 | 0.13 | 0.13 | |
| | 3H | 20+50.00 LT | 3.4% | | | 0.13 | 0.13 | 0.13 | |

* ALL STATIONS ARE ALONG STATE ROUTE 320 UNLESS NOTED OTHERWISE.

** ALL OUTFALLS DRAIN TO THE RAILROAD R.O.W. AND THEN TO SOUTH CHICKAMAUGA CREEK

### EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

| SYMBOL | ITEM | STD. DWG. |
|---|---|---|
| ✱ SFB✱ SFB✱ SFB✱ | SILT FENCE WITH WIRE BACKING | EC-STR-3C |
| | ROCK CHECK DAM (V-DITCH) | EC-STR-6 |
| | ENHANCED ROCK CHECK DAM (V-DITCH) | EC-STR-6A |
| D | CATCH BASIN PROTECTION (TYPE D) | EC-STR-19 |
| TCE | TEMPORARY CONSTRUCTION EXIT | EC-STR-25 |
| | TEMPORARY SLOPE DRAIN WITH TEMPORARY BERM | EC-STR-27 |
| ✱✱TUBE 12"✱✱TUBE 12"✱✱ | 12 INCH SEDIMENT TUBE | EC-STR-37 |
| 4 | CURB INLET PROTECTION (TYPE 4) | EC-STR-39A |
| | EROSION CONTROL BLANKET | EC-STR-34 |
| | TURF REINFORCEMENT MAT | EC-STR-36 |
| | SODDING (NEW SOD) | N/A |

FOOTNOTES:

1) ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SUBSECTION OF 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
2) A J-HOOK SHALL BE USED TO END SILT FENCE ON CONTOUR.

**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
XV
AGRICULTURE
TN

7/16/2025

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# EROSION PREVENTION & SEDIMENT CONTROL (EPSC) LEGEND & TABULATION

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N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

ALL EPSC MEASURES ARE TO REMAIN OUTSIDE OF RAILROAD ROW.

AT NO TIME SHALL ORANGE BARRIER FENCE OR SILT FENCE BE PLACED CLOSER THAN 15' FROM THE CENTERLINE OF THE TRACK.

EXISTING CONTOURS SHOWN ON STAGE 1

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 11 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 11 |
| PS&E | 2025 | BR-STP-320(10) | 11 |
| | | | |

REVISION 09/13/2022: UPDATED EX AND PROPOSED ROW LINES ON TRACTS 3, 10, 11, 12 AND 21.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023:
ADDED NOTE FOR SILT FENCE AROUND RAILROAD TRACKS.

REVISION 12/11/2023:
REVISED EROSION CONTROL DEVICES AND STORM WATER OUTFALLS.

REVISION 02/23/2024:
REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

CONSTRUCTION EASEMENT

10' CONST. EASEMENT

PROP. SLOPE EASEMENT

PROPOSED R.O.W.

PROPOSED SLOPE EASEMENT

HAUL ROAD 2

HAUL ROAD 1

BRIDGE TO 33S4307000

EXIST. RAILROAD CLASS A

DITCH CHECKS

OUT - 1

OUT - 1A

OUT - 2

OUT - 3

OUT - 3A

OUT - 3B

OUT - 3C

OUT - 3D

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

PROP. RAILROAD AIR RIGHTS

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

EPSC STAGE 1:
SILT FENCE WITH BACKING WILL BE PLACED AROUND THE PROJECT LIMITS AND SEDIMENT TUBE DITCH CHECKS WILL BE PLACED ALONG EITHER SIDE OF THE WEST BRIDGE APPROACH. TEMPORARY CULVERTS WILL BE PLACED UNDER EACH OF THE HAUL ROADS TO MAINTAIN SITE DRAINAGE. TEMPORARY CONSTRUCTION EXITS WILL BE PUT IN PLACE FOR EACH HAUL ROAD ENTRANCE/EXIT. ROCK CHECK DAMS WILL BE INSTALLED AND CURB INLET PROTECTION WILL BE PUT IN PLACE FOR EXISTING DRAINAGE STRUCTURES.

CLEARING & GRUBBING STAGE

**SEALED BY**

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# EROSION PREVENTION AND SEDIMENT CONTROL PLANS STAGE 1

STA.12+50.57 TO STA.25+55.53

SCALE: 1"= 50'

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N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

ALL EPSC MEASURES ARE TO REMAIN OUTSIDE OF RAILROAD ROW.

AT NO TIME SHALL ORANGE BARRIER FENCE OR SILT FENCE BE PLACED CLOSER THAN 15' FROM THE CENTERLINE OF THE TRACK.

EXISTING CONTOURS SHOWN ON STAGE 1A

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 12 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 12 |
| PS&E | 2025 | BR-STP-320(10) | 12 |
| | | | |

REVISION 09/13/2022: UPDATED EX AND PROPOSED ROW LINES ON TRACTS 3, 10, 11, 12 AND 21.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023:
ADDED NOTE FOR SILT FENCE AROUND RAILROAD TRACKS.

REVISION 12/11/2023:
REVISED EROSION CONTROL DEVICES AND STORM WATER OUTFALLS.

REVISION 02/23/2024:
REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

DITCH CHECKS

CONSTRUCTION EASEMENT

10' CONST. EASEMENT

PROP. SLOPE EASEMENT

PROPOSED R.O.W.

PROPOSED SLOPE EASEMENT

BRIDGE TO 33S4307000

HAUL ROAD 2

HAUL ROAD 1

S.R. 320 EAST BRANNERD RD.

OUT - 1

OUT - 1A

OUT - 1B

OUT - 2

OUT - 3

OUT - 3A

OUT - 3B

OUT - 3C

OUT - 3D

BENHAM DR. S 18° 00' 15" E

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

PROP. RAILROAD AIR RIGHTS

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

EPSC STAGE 1A:
TEMPORARY BERM AND SLOPE DRAIN WILL BE INSTALLED ON THE SOUTHWESTERN BRIDGE APPROACH SLOPE. ROCK CHECK DAMS TO BE INSTALLED IN SPECIAL DITCH
CATCH BASIN PROTECTION WILL BE INSTALLED FOR CB 2B AND 10 (OUTFALLS 1A AND 1B).

INTERMEDIATE GRADING STAGE

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# EROSION PREVENTION AND SEDIMENT CONTROL PLANS STAGE 1A

STA.12+50.57 TO STA.25+55.53

SCALE: 1"= 50'

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N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

ALL EPSC MEASURES ARE TO REMAIN OUTSIDE OF RAILROAD ROW.

AT NO TIME SHALL ORANGE BARRIER FENCE OR SILT FENCE BE PLACED CLOSER THAN 15' FROM THE CENTERLINE OF THE TRACK.

PROPOSED CONTOURS SHOWN ON STAGE 2

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 13 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 13 |
| PS&E | 2025 | BR-STP-320(10) | 13 |
| | | | |

REVISION 09/13/2022: UPDATED EX AND PROPOSED ROW LINES ON TRACTS 3, 10, 11, 12 AND 21.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023:
ADDED NOTE FOR SILT FENCE AROUND RAILROAD TRACKS.

REVISION 12/11/2023:
REVISED EROSION CONTROL DEVICES AND STORM WATER OUTFALLS.

REVISION 02/23/2024:
REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

BRIDGE ID - 33S4307001

HAUL ROAD 2

HAUL ROAD 1

10" SLOPE DRAIN

OUT - 1A
OUT - 1B
OUT - 1C
OUT - 1D
OUT - 1E
OUT - 1F
OUT - 1
OUT - 3H
OUT - 3A
OUT - 3B
OUT - 3
OUT - 3G
OUT - 3C
OUT - 3D

PROSPERITY LANE (KNOX SIDE)

BENHAM DR S 18° 00' 15" E

CSX RAILROAD

N 18° 00' 15" W

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

PROP. RAILROAD AIR RIGHTS

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

EPSC STAGE 2:
TEMPORARY BERMS AND SLOPE DRAINS TO BE INSTALLED ON THE NORTHERN SIDE OF THE ROADWAY WITH THE CONSTRUCTION OF NEW SLOPES.
CATCH BASIN PROTECTION TO BE INSTALLED WITH INSTSALLATION OF CATCH BASINS 3B, 3, 3A, 4, 6, AND 8 (OUTFALLS 1C, 1D, 1E, 1F, 3J, AND 3H).

INTERMEDIATE GRADING STAGE

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# EROSION PREVENTION AND SEDIMENT CONTROL PLANS STAGE 2

STA.12+50.57 TO STA.25+55.53

SCALE: 1"= 50'

7/16/2025 11:41:57 AM
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N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

ALL EPSC MEASURES ARE TO REMAIN OUTSIDE OF RAILROAD ROW.

AT NO TIME SHALL ORANGE BARRIER FENCE OR SILT FENCE BE PLACED CLOSER THAN 15' FROM THE CENTERLINE OF THE TRACK.

PROPOSED CONTOURS SHOWN ON STAGE 3

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 14 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 14 |
| PS&E | 2025 | BR-STP-320(10) | 14 |
| | | | |

REVISION 09/13/2022: UPDATED EX AND PROPOSED ROW LINES ON TRACTS 3, 10, 11, 12 AND 21.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023:
ADDED NOTE FOR SILT FENCE AROUND RAILROAD TRACKS.

REVISION 12/11/2023:
REVISED EROSION CONTROL DEVICES AND STORM WATER OUTFALLS.

REVISION 02/23/2024:
REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

OUT - 1A
OUT - 1B
OUT - 1C
OUT - 1D
OUT - 1E
OUT - 1F
OUT - 1G
OUT - 1H
OUT - 1
OUT - 3A
OUT - 3B
OUT - 3H
OUT - 3
OUT - 3G
OUT - 3F
OUT - 3E
OUT - 3C
OUT - 3D

HAUL ROAD 1
HAUL ROAD 2
10' SLOPE
EX. RAIL ROAD

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

PROP. RAILROAD AIR RIGHTS

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

EPSC STAGE 3:
CATCH BASIN PROTECTION TO BE REPLACED WITH CURB INLET PROTECTION ON CATCH BASINS 3B, 3, 3A, 4, 6, AND 8 (OUTFALLS 1C, 1D, 1E, 1F, 3J, AND 3H).
CATCH BASIN PROTECTION TO BE INSTALLED ON CB 2, 5, 7, AND 9 (OUTFALLS 1G, 1H, 3G, AND 3F).

INTERMEDIATE GRADING STAGE

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE
7/16/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# EROSION PREVENTION AND SEDIMENT CONTROL PLANS STAGE 3

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:42:20 AM
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N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

ALL EPSC MEASURES ARE TO REMAIN OUTSIDE OF RAILROAD ROW.

AT NO TIME SHALL ORANGE BARRIER FENCE OR SILT FENCE BE PLACED CLOSER THAN 15' FROM THE CENTERLINE OF THE TRACK.

EROSION CONTROL BLANKET
TURF REINFORCEMENT MAT
SODDING (NEW SOD)
*AREAS WITHOUT A PATTERN TO BE STABILIZED WITH SEED AND MULCH

PROPOSED CONTOURS SHOWN ON STAGE 4

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

15 20 25

OUT - 1A, OUT - 1B, OUT - 1C, OUT - 1D, OUT - 1E, OUT - 1F, OUT - 1G, OUT - 1H, OUT - 1, OUT - 3A, OUT - 3B, OUT - 3, OUT - 3H, OUT - 3F, OUT - 3G, OUT - 3E, OUT - 3C, OUT - 3D

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

HAUL ROAD 2
HAUL ROAD 1
EX. RAIL ROAD
TRM FOR SP. DITCH

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

PROP. RAILROAD AIR RIGHTS

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

EPSC STAGE 4:
TEMPORARY CULVERTS, BERMS, SLOPE DRAINS, AND HAUL ROADS WILL BE REMOVED.
NEW SILT FENCE TO BE INSTALLED AT SLOPE LIMITS AFTER REMOVAL OF HAUL ROAD 2.
CATCH BASIN PROTECTION WILL BE SWAPPED OUT FOR CURB INLET PROTECTION FOR ALL NEW DRAINAGE STRUCTURES.

FINAL CONSTRUCTION STAGE

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 15 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 15 |
| PS&E | 2025 | BR-STP-320(10) | 15 |
| | | | |

REVISION 09/13/2022: UPDATED EX AND PROPOSED ROW LINES ON TRACTS 3, 10, 11, 12 AND 21.

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 06/30/2023:
ADDED NOTE FOR SILT FENCE AROUND RAILROAD TRACKS.

REVISION 12/11/2023:
REVISED EROSION CONTROL DEVICES AND STORM WATER OUTFALLS.

REVISION 02/23/2024:
REVISED AIR RIGHTS AREA AND PATTERNING ON TRACT 21.

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE

7/16/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# EROSION PREVENTION AND SEDIMENT CONTROL PLANS STAGE 4

STA.12+50.57 TO STA.25+55.53

SCALE: 1"= 50'

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 16 |
| PS&E | 2025 | BR-STP-320(10) | 16 |
| | | | |
| | | | |

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

SIGNING AND STRIPING NOTES:

1. SIGN POST DELINEATION ENHANCEMENT TO BE INSTALLED ON PROPOSED STOP SIGN POSTS.

2. CONTRACTOR SHALL MAKE EVERY EFFORT TO PROTECT THE EXISTING STREET NAME SIGNS AND POSTS UNTIL THEY CAN BE PLACED AT THEIR PROPOSED LOCATIONS.

3. STRIPING ACROSS THE BRIDGE SHALL BE CONTRAST PAVEMENT MARKING PAID FOR UNDER 716-09.83 CONTRAST MARKING 6" PAID BY THE LINEAR FOOT (L.F.) FOR THE BLACK AND 716-12.02 ENHANCED FLATLINE THERMO PVMT MRKNG (6IN LINE) PAID BY THE LINEAR MILE (L.M.) FOR WHITE AND YELLOW.

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

15 20 25

R1-1 36"X36" (SEE NOTE 3)

STOP (1)

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

PROSPERITY LANE (KING ST)

N 18° 04' 18" W 129.5'

(•1) PROPOSED CURB RAMP, STANDARD DRAWING CR-4O

24" STOP BAR
10' CROSSWALK

PROSPERITY LN 200
E BRAINERD RD 6400

RELOCATED STREET NAME SIGN

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

24" STOP BAR
10' CROSSWALK

NO PARKING ANY TIME

RELOCATED NO PARKING SIGN

N 71° 35' 11" E
N 71° 47' 58" E
N 72° 33' 13" E
S.R. 320 - EAST BRAINERD RD.
N 77° 33' 13" E
N 72° 33' 13" E
N 67° 33' 13" E
N 73° 11' 43" E
N 72° 40' 26" E

24'
11'
11'
11'
11'
11'
17.5'
18.5'

TIE 6" DYSL TO EX. STRIPING
TIE 6' SSWL TO EX. STRIPING
6" SSWL
RELOCATED STREET NAME SIGN
22.5'

STOP (2)
R1-1 36"X36" (SEE NOTE 3)

BRAINERD HILLS
BRAINERD RD 6400
BENHAM DR 100

BENHAM DR S 18° 0' 15" E

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700
SEE PROFILE ON SHEET 5

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

LIMITS OF CONTRAST PAVEMENT MARKINGS
CONTRAST 6" SSWL
6" SSWL
6" DSYL
CONTRAST 6" SSWL
CONTRAST 6" DSYL
6" SSWL
EX. SIGN TO BE FIELD VERIFIED AND RELOCATED
TIE 6" SSWL TO EX. STRIPING
LIMITS OF CONTRAST PAVEMENT MARKINGS

S1-1 36"X36" (3) WITH W16-9PS 24"X12"
AHEAD

(4) S5-2 24"X30"
END SCHOOL ZONE

TIE 6" DSYL TO EX. STRIPING
REPLACE EXISTING CHANNELIZATION STRIPING AS NEEDED.
TIE 6" SSWL TO EX. STRIPING

CSXT ROW
66'
33'
33'
N 3° 46' 01" W
CSX RAILROAD
DOT #350030G
CSX OWA 0124.800
SR 320 STA. 18+26.59

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

THE FOLLOWING STANDARD DRAWINGS APPLY UNLESS OTHERWISE NOTED:
FLAT SHEET (T-S SERIES 10, 12, 16, 17, 19, 20);
EXTRUDED PANEL (T-S SERIES 6, 9, 13, 14);

| SIGN NO | LEGEND | | SIZE | | SIGN FACE | | | STEEL DESIGN (BREAK-AWAY) | | MINIMUM VERTICAL CLEARANCE |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | LENGTH | HEIGHT | COPY | BACKGROUND | MATERIAL | SUPPORT TYPE | SUPPORT LENGTH | |
| 1<br>2 | STOP | R1-1 | 36" | 36" | WHITE (REF.) | RED (REF.) | 0.100" | P8 | 13'-0" | 7'-0" |
| 3 | | S1-1 | 36" | 36" | BLACK | FLOUR. YELLOW-GREEN | 0.100" | P8 | 13'-0" | 7'-0" |
| | AHEAD | W16-9PS | 24" | 12" | BLACK | FL. YLW-GREEN | 0.100" | | | |
| 4 | END SCHOOL ZONE | S5-2 | 24" | 30" | BLACK | WHITE (REF.) | 0.100" | U6 | 13' - 0" | 7'-0" |

SEALED BY

JOHN S. STILES
REGISTERED ENGINEER
AGRICULTURE
7/16/2025

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# SIGNING AND PAVEMENT MARKING PLANS AND SIGN SCHEDULE

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:43:04 AM
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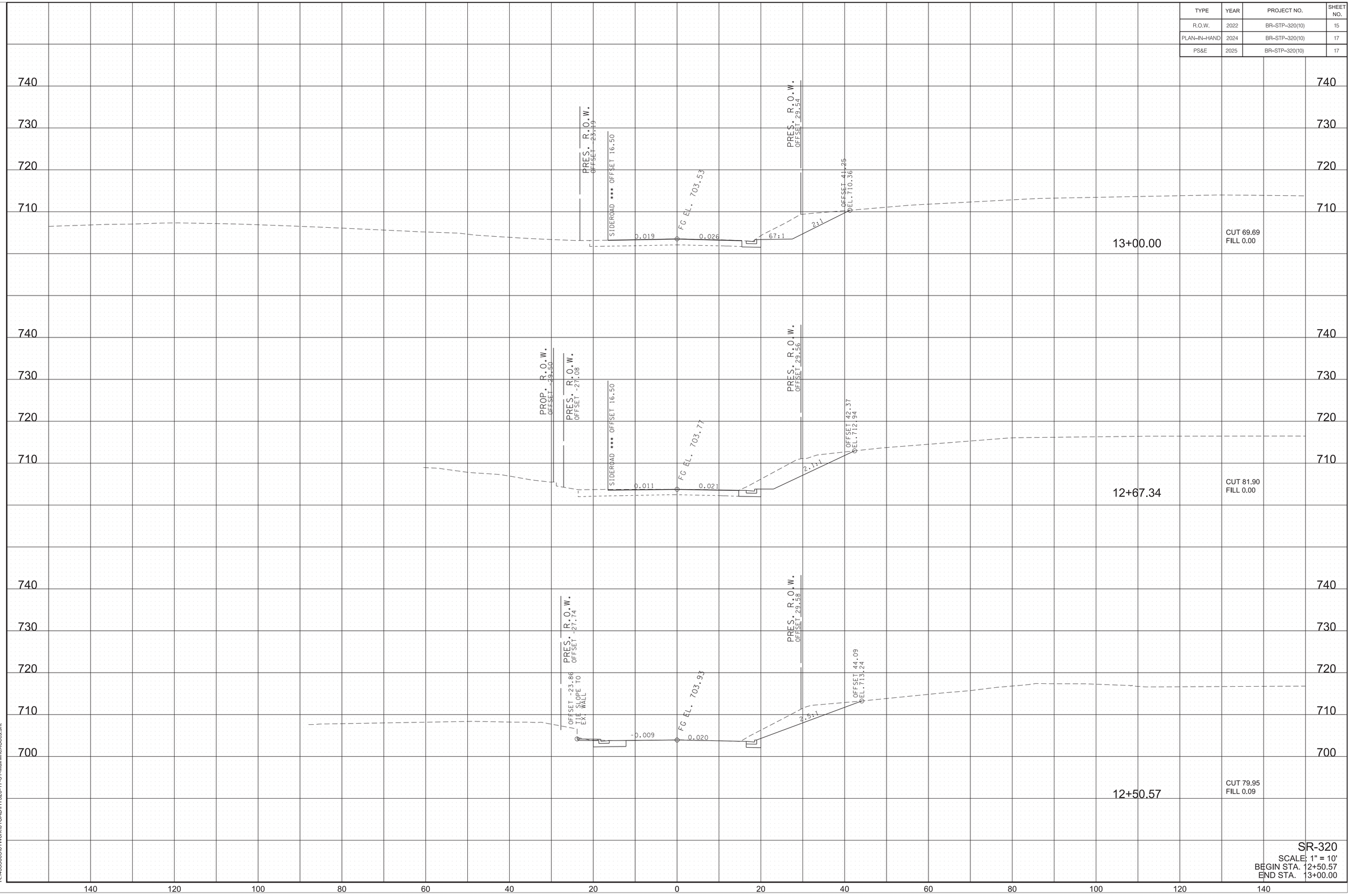
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 15 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 17 |
| PS&E | 2025 | BR-STP-320(10) | 17 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 12+50.57
END STA. 13+00.00

7/16/2025 11:43:16 AM
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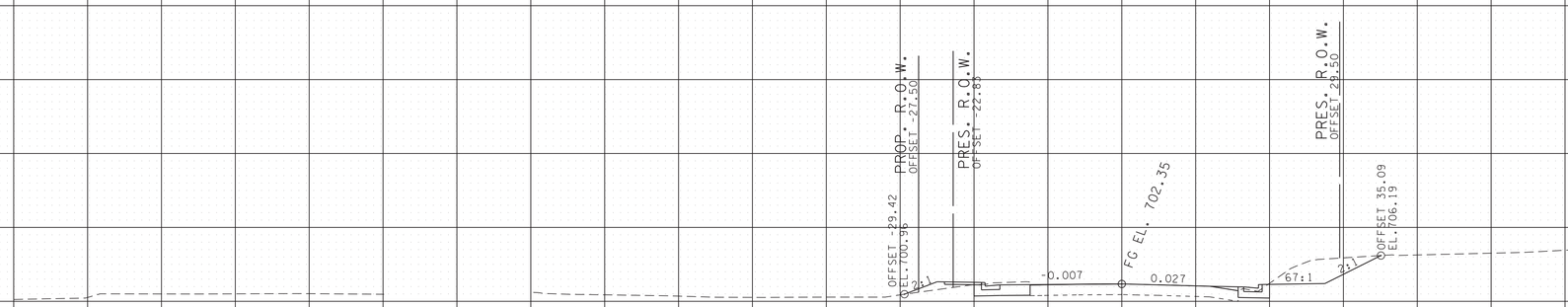
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 16 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 18 |
| PS&E | 2025 | BR-STP-320(10) | 18 |




13+50.00

CUT 47.22
FILL 4.43

730 720 710 700 690 680 670 660 650 640 630 620 610 600 590 580 570

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

SR-320
SCALE: 1" = 10'
BEGIN STA. 13+50.00
END STA. 13+50.00

7/16/2025 11:43:18 AM
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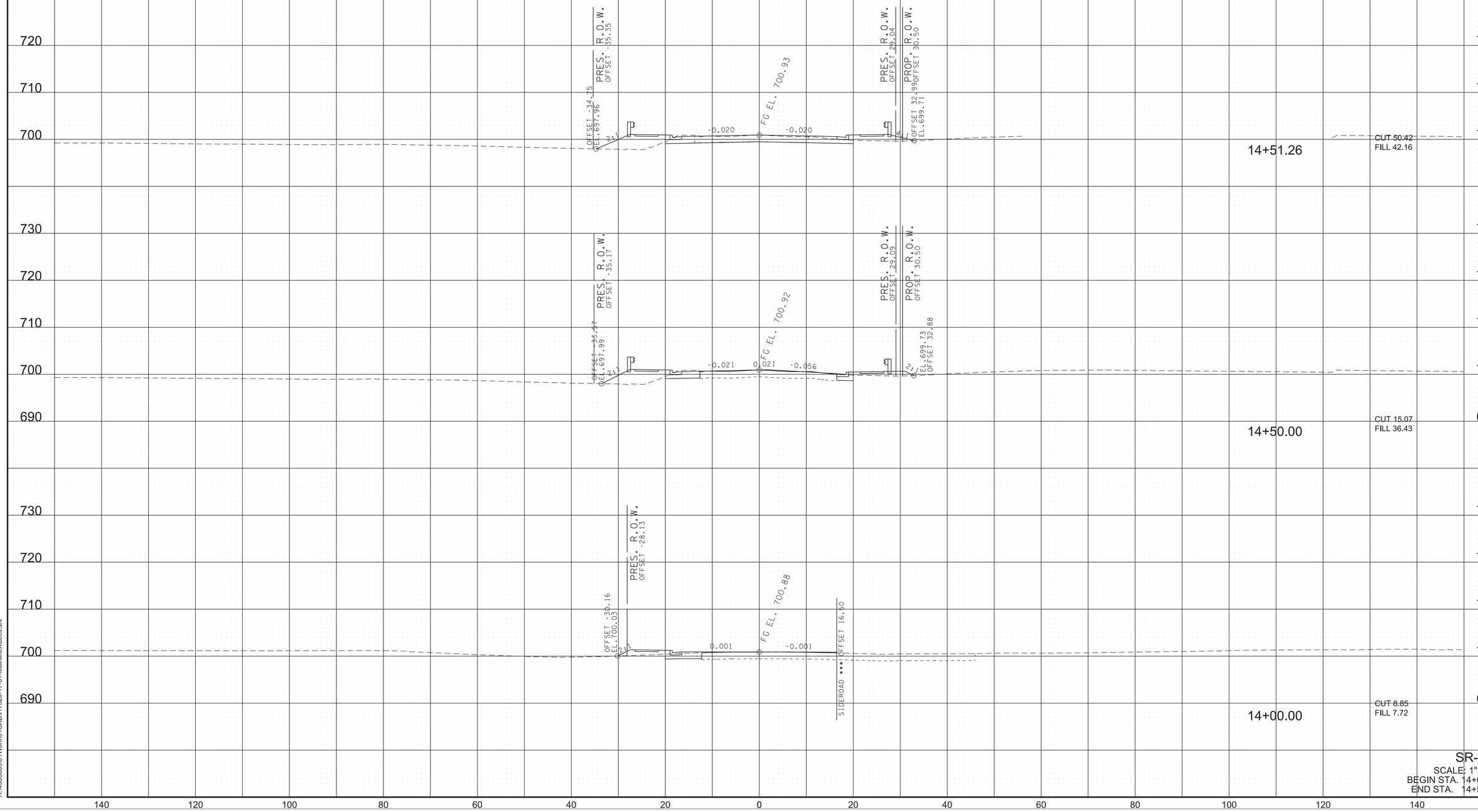
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 17 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 19 |
| PS&E | 2025 | BR-STP-320(10) | 19 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 14+00.00
END STA. 14+51.26

7/16/2025 11:43:19 AM
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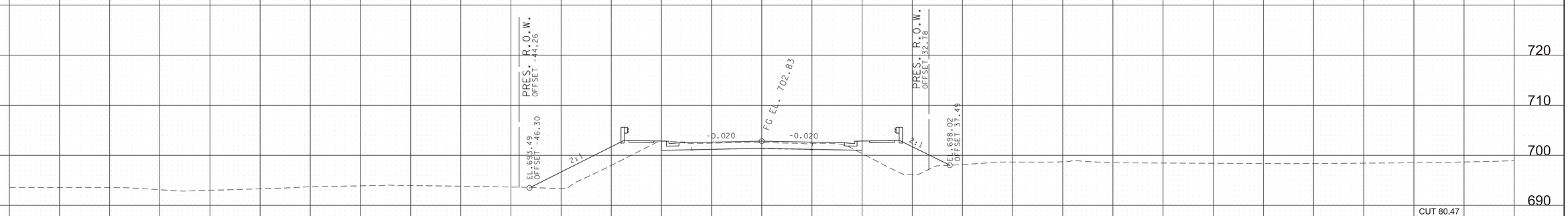
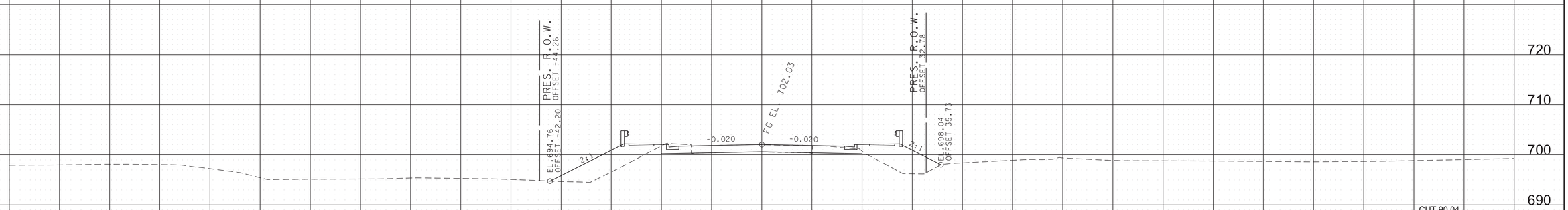
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 18 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 20 |
| PS&E | 2025 | BR-STP-320(10) | 20 |



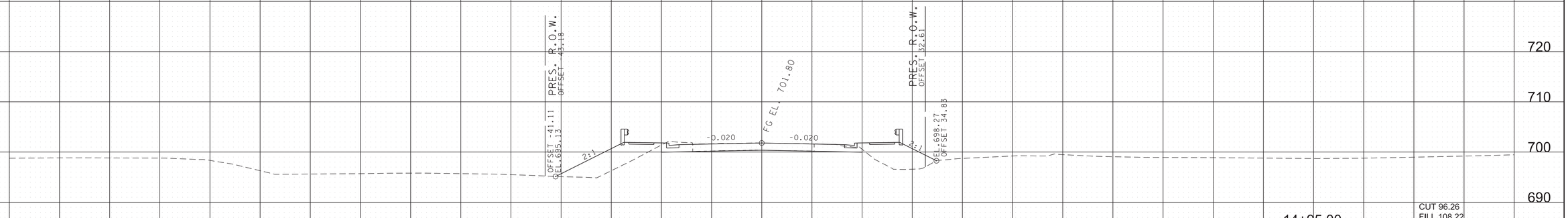

15+17.76

CUT 80.47
FILL 135.00




15+00.00

CUT 90.04
FILL 114.72




14+95.00

CUT 96.26
FILL 108.22

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

SR-320
SCALE: 1" = 10'
BEGIN STA. 14+95.00
END STA. 15+17.76

7/16/2025 11:43:20 AM
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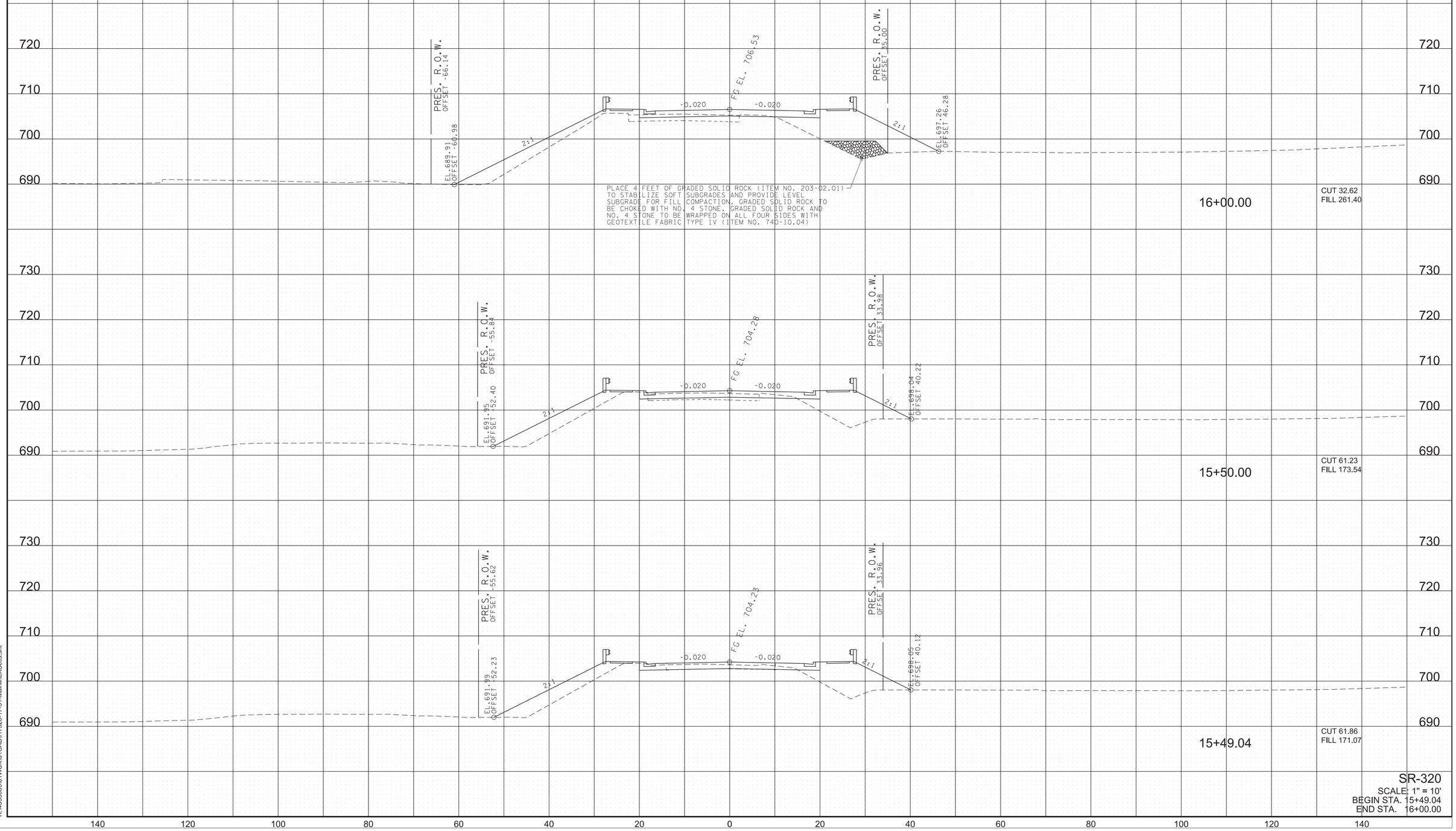
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 19 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 21 |
| PS&E | 2025 | BR-STP-320(10) | 21 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 15+49.04
END STA. 16+00.00

7/16/2025 11:43:21 AM
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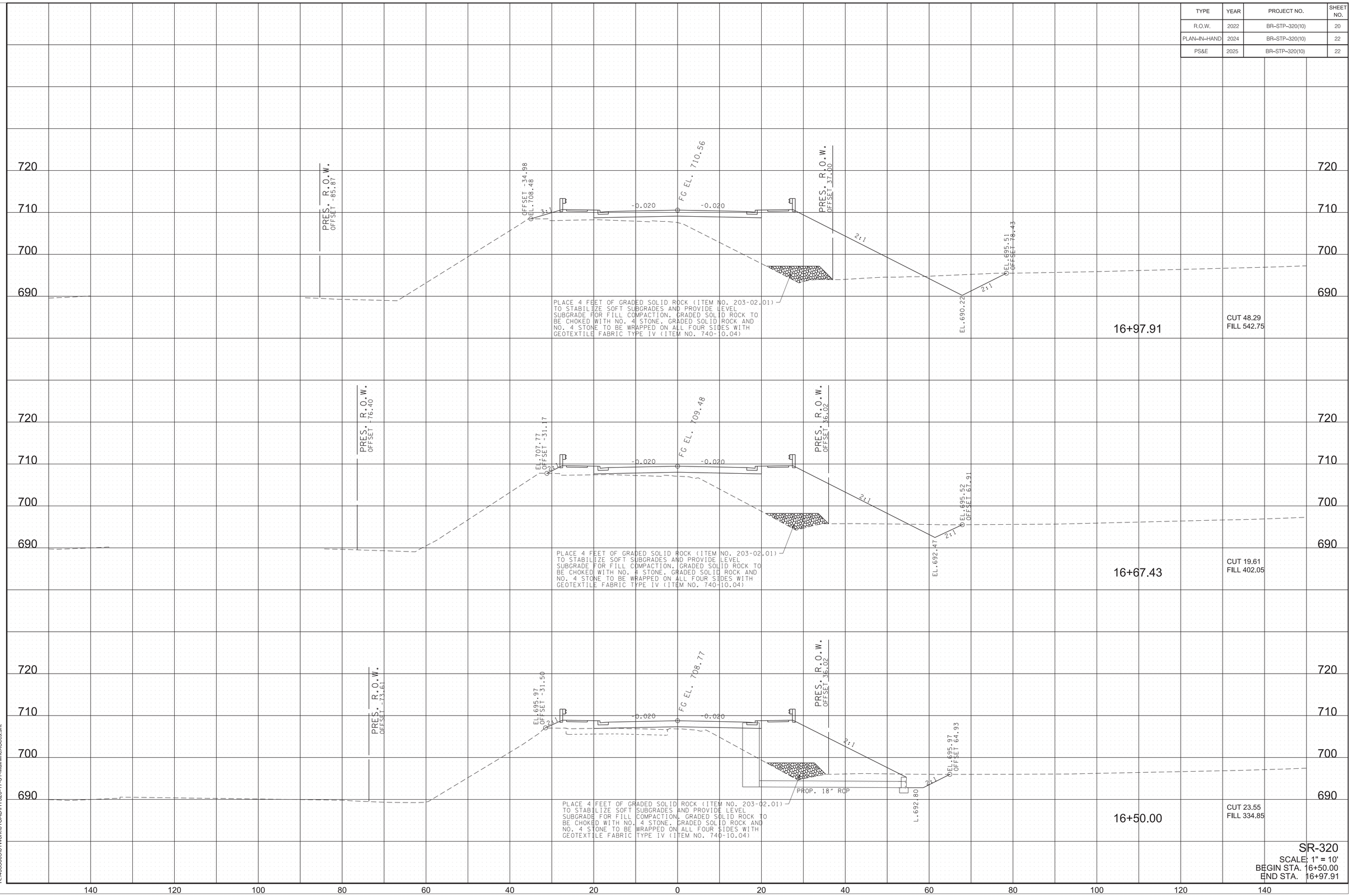
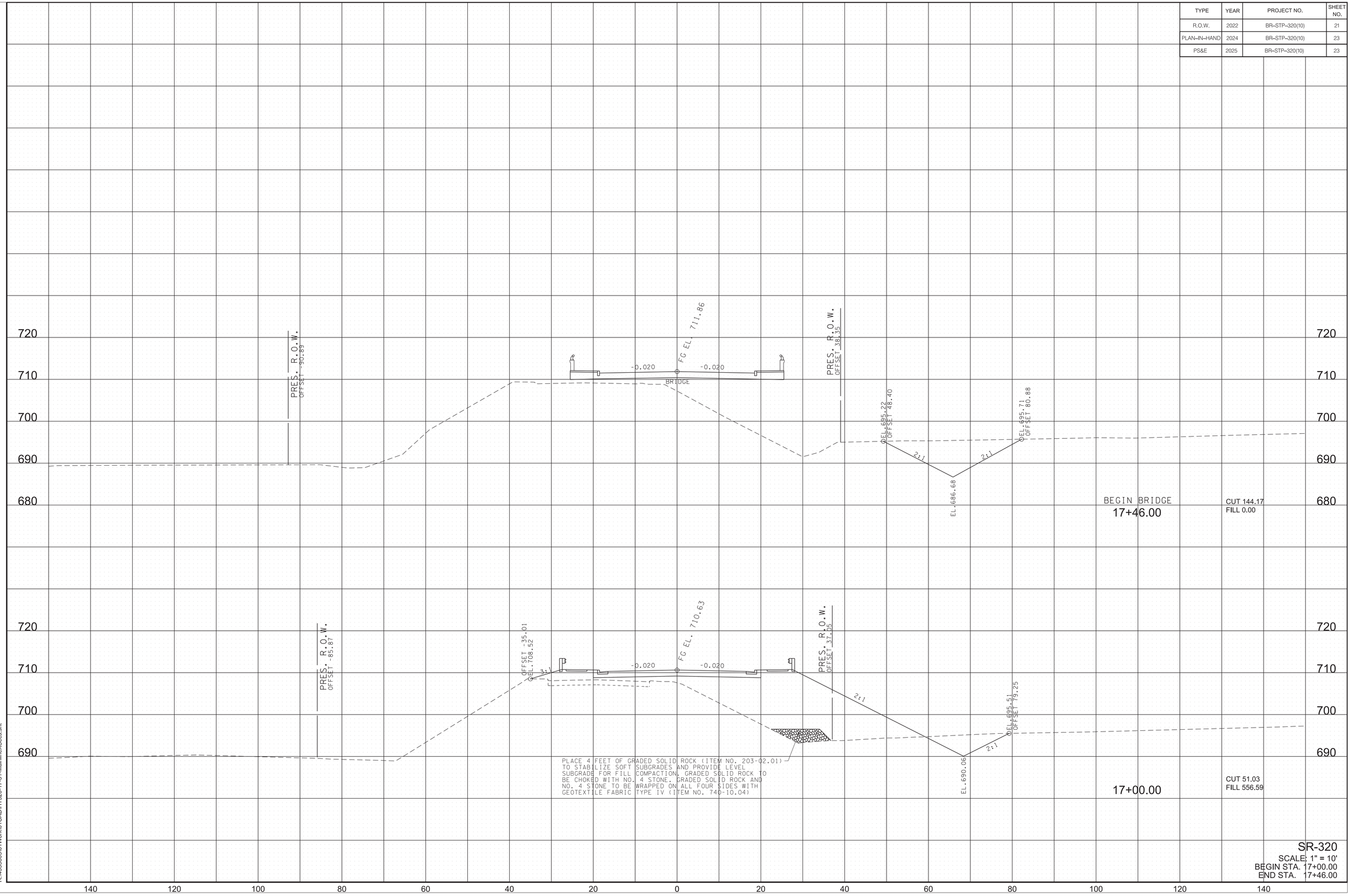
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 20 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 22 |
| PS&E | 2025 | BR-STP-320(10) | 22 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 16+50.00
END STA. 16+97.91

7/16/2025 11:43:22 AM
R:\433560\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

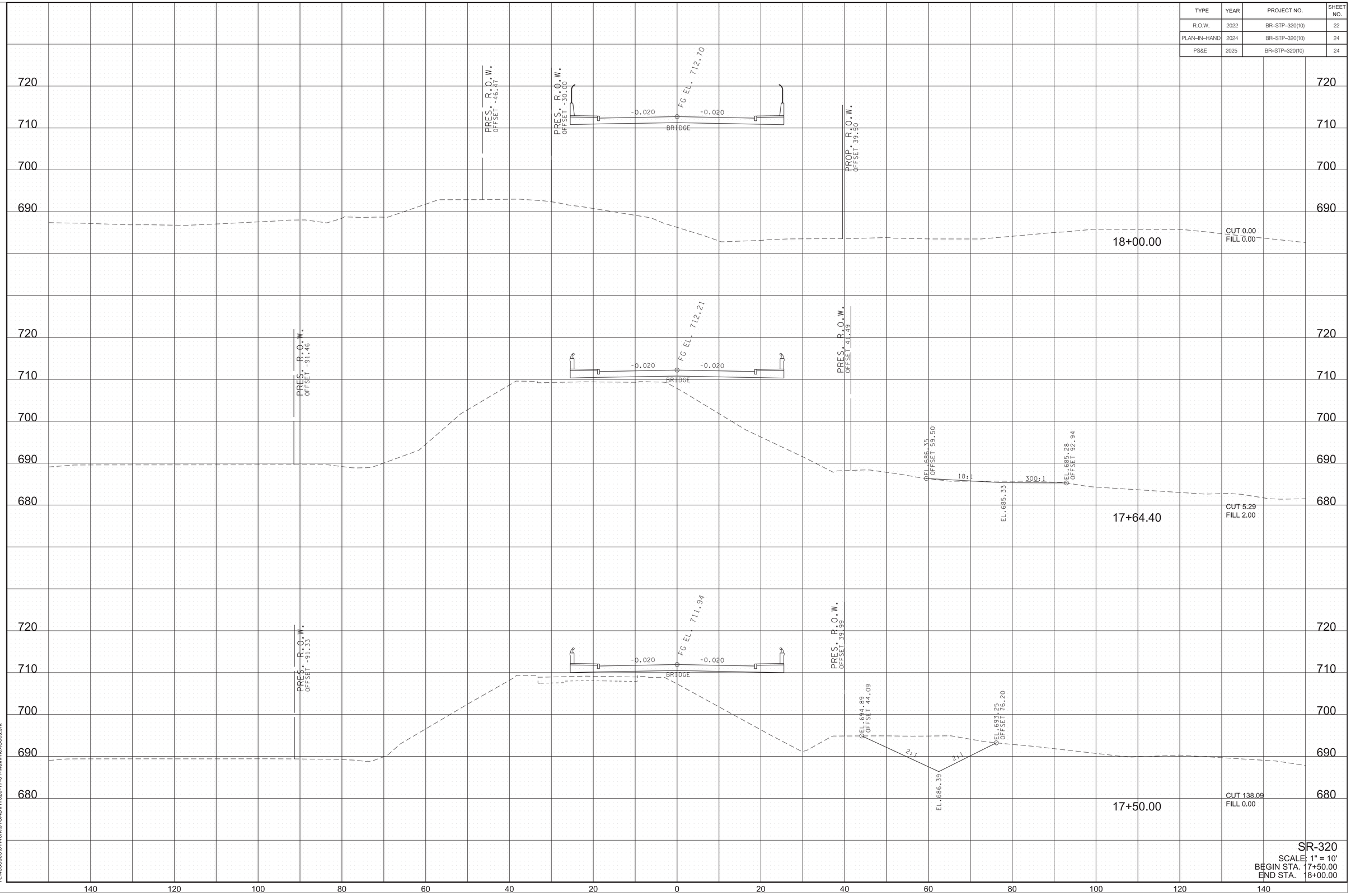
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 21 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 23 |
| PS&E | 2025 | BR-STP-320(10) | 23 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 17+00.00
END STA. 17+46.00

7/16/2025 11:43:23 AM
R:\433560\501\Work\01CAD\HT320-17-31+MainlineXSecs.sht

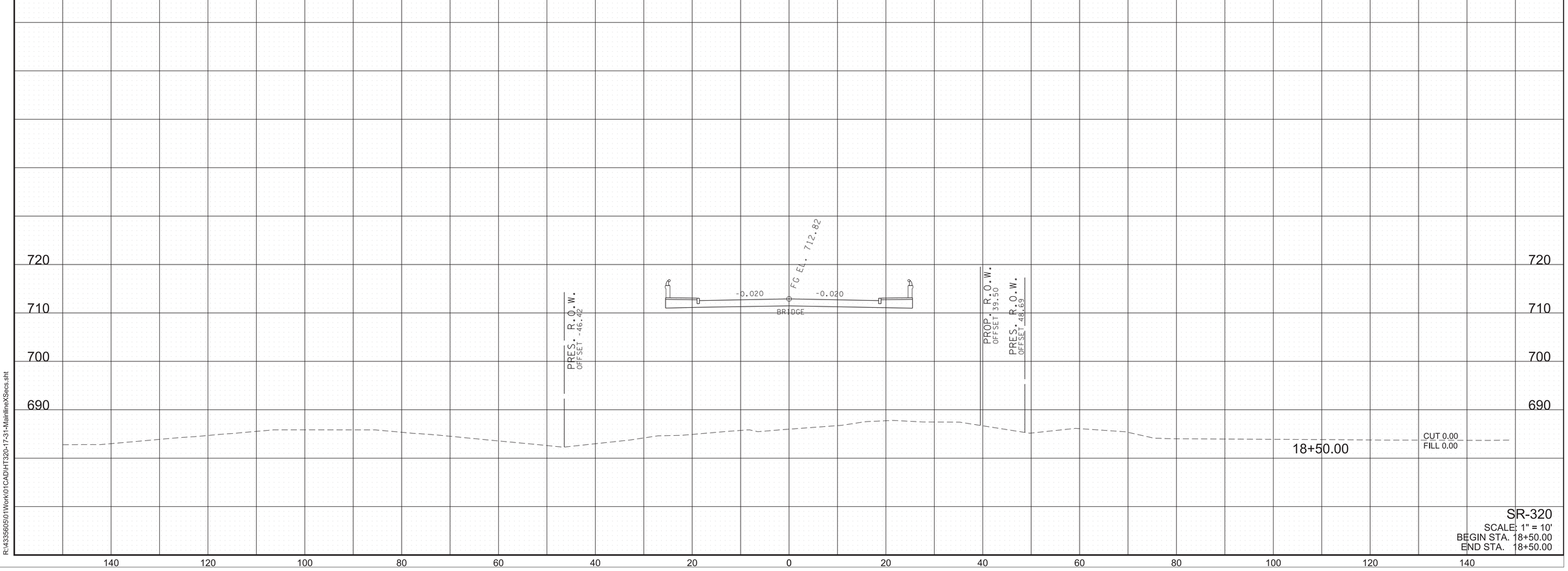
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 22 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 24 |
| PS&E | 2025 | BR-STP-320(10) | 24 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 17+50.00
END STA. 18+00.00

7/16/2025 11:43:24 AM
R:\43356\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

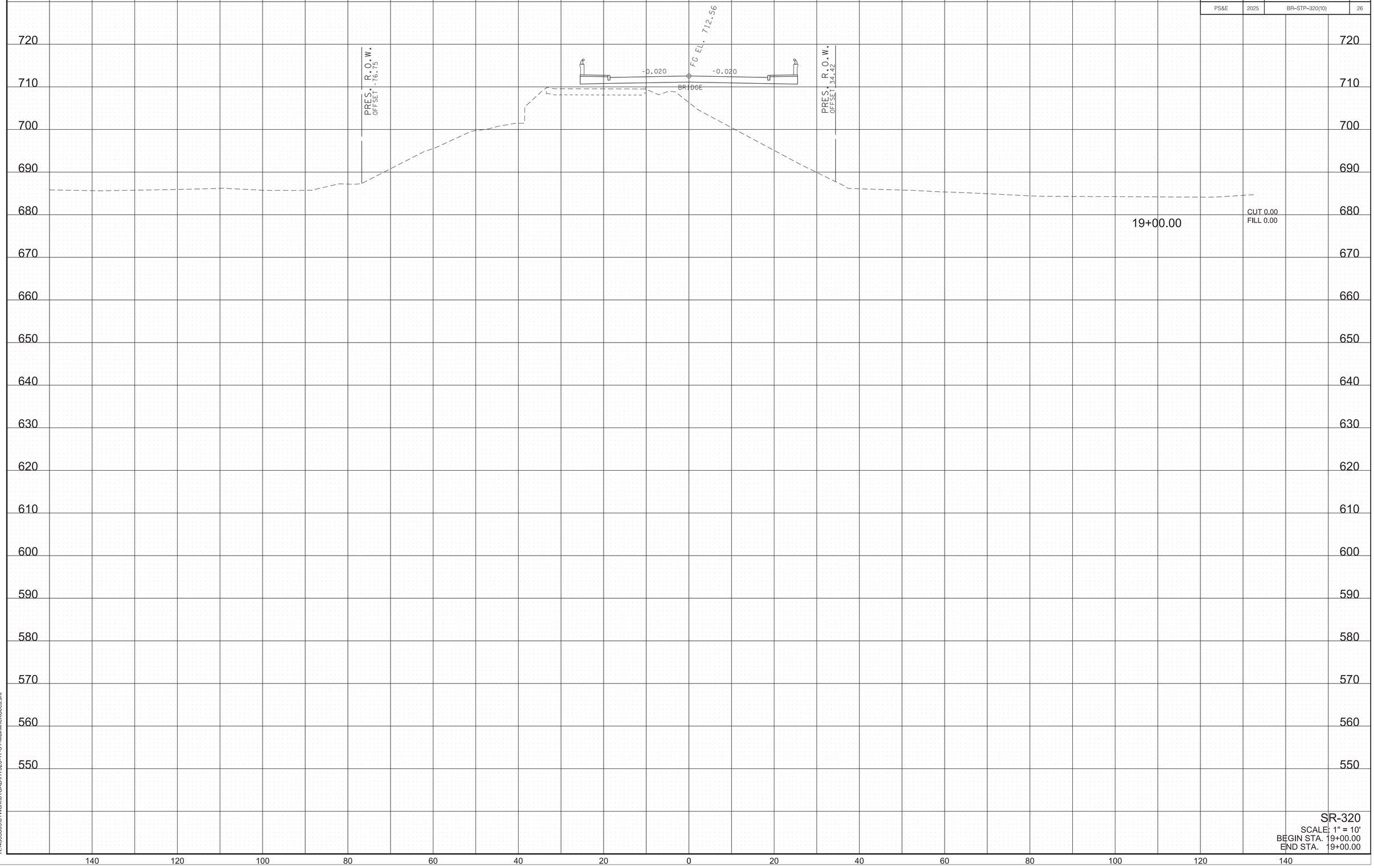
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 23 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 25 |
| PS&E | 2025 | BR-STP-320(10) | 25 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 18+50.00
END STA. 18+50.00

7/16/2025 11:43:25 AM
R:\43356\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

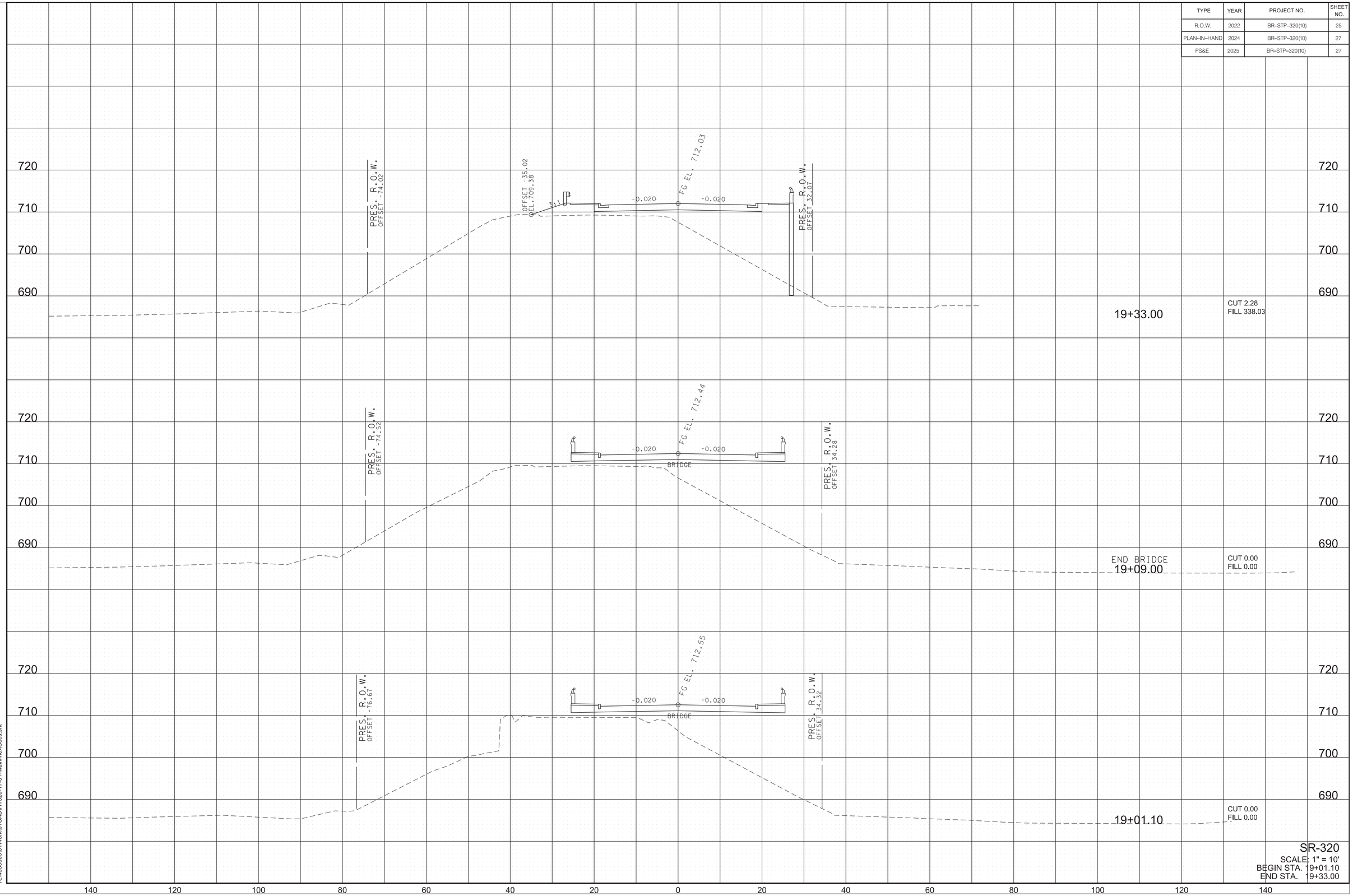
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 24 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 26 |
| PS&E | 2025 | BR-STP-320(10) | 26 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 19+00.00
END STA. 19+00.00

7/16/2025 11:43:26 AM
R:\43356\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

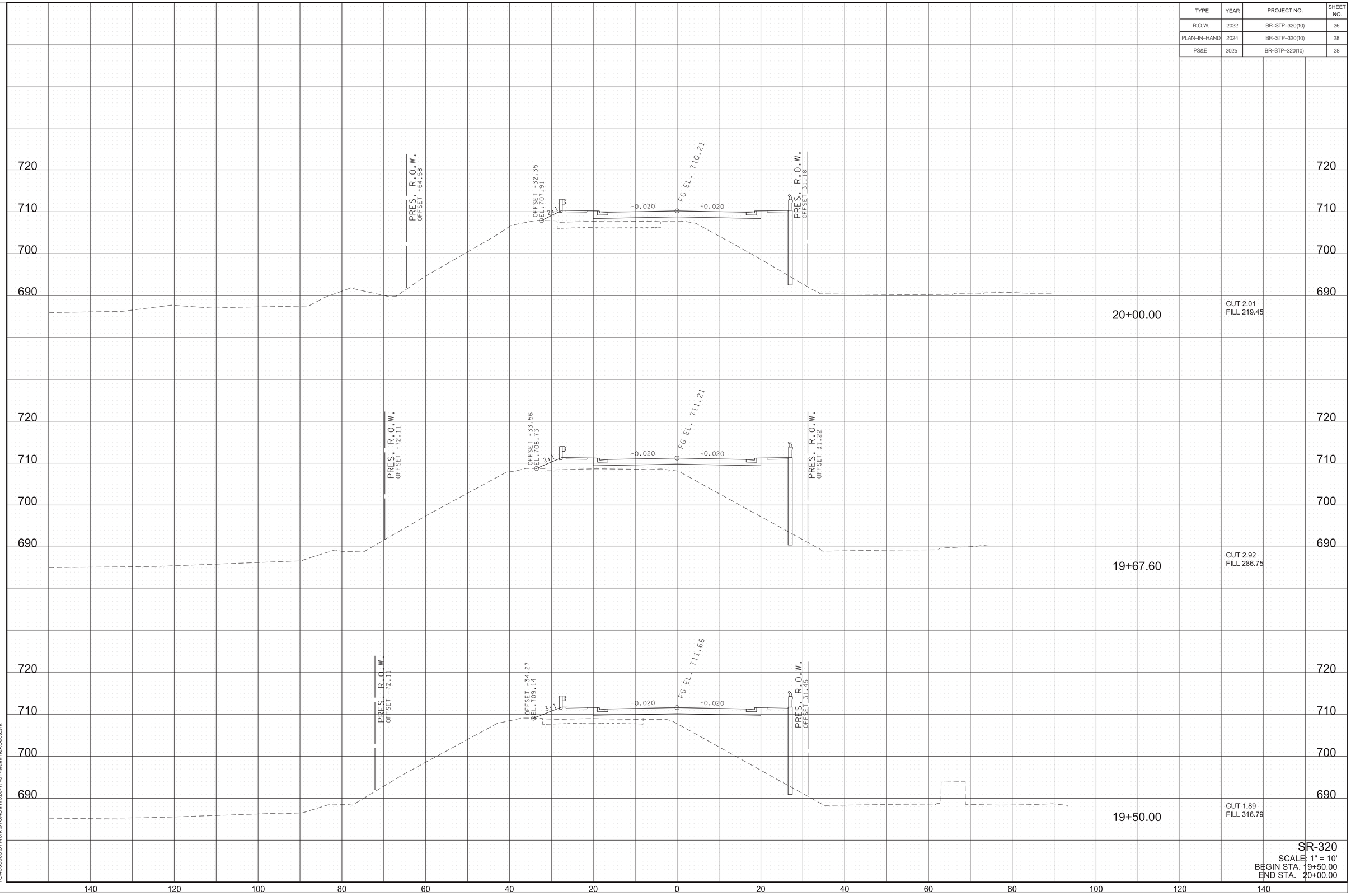
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 25 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 27 |
| PS&E | 2025 | BR-STP-320(10) | 27 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 19+01.10
END STA. 19+33.00

7/16/2025 11:43:27 AM
R:\43356\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

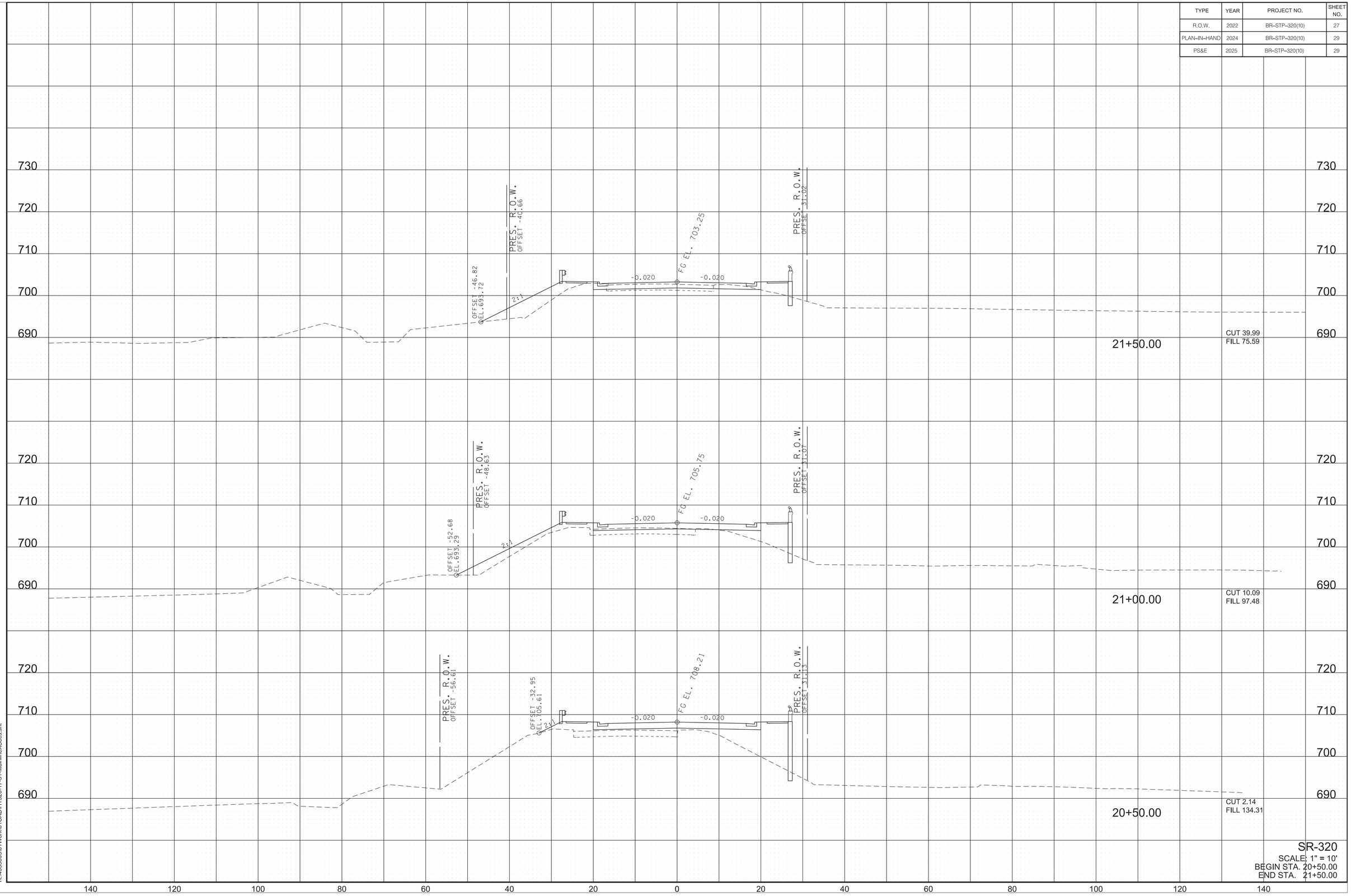
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 26 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 28 |
| PS&E | 2025 | BR-STP-320(10) | 28 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 19+50.00
END STA. 20+00.00

7/16/2025 11:43:29 AM
R:\43356\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

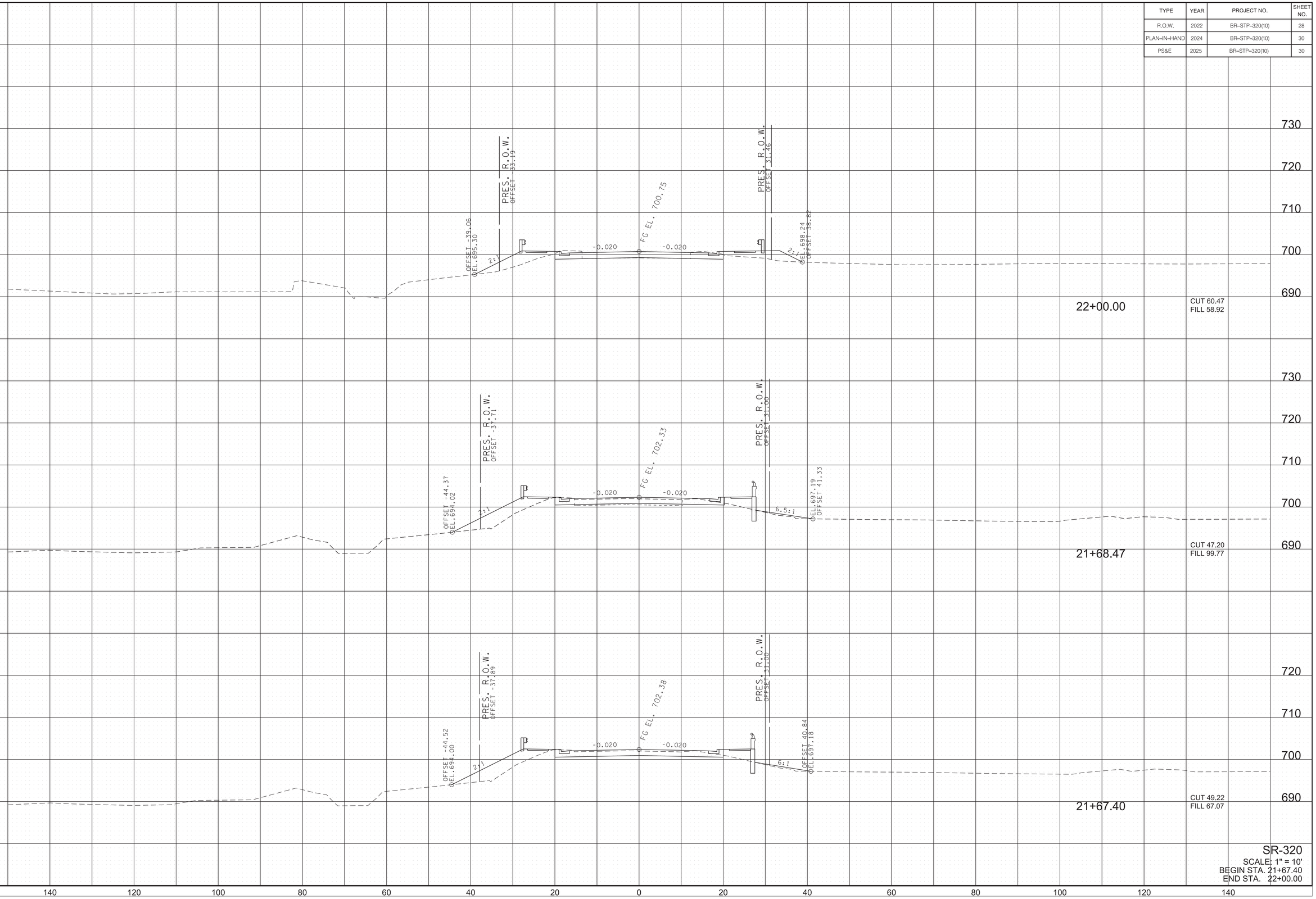
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 27 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 29 |
| PS&E | 2025 | BR-STP-320(10) | 29 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 20+50.00
END STA. 21+50.00

7/16/2025 11:43:30 AM
R:\433560\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

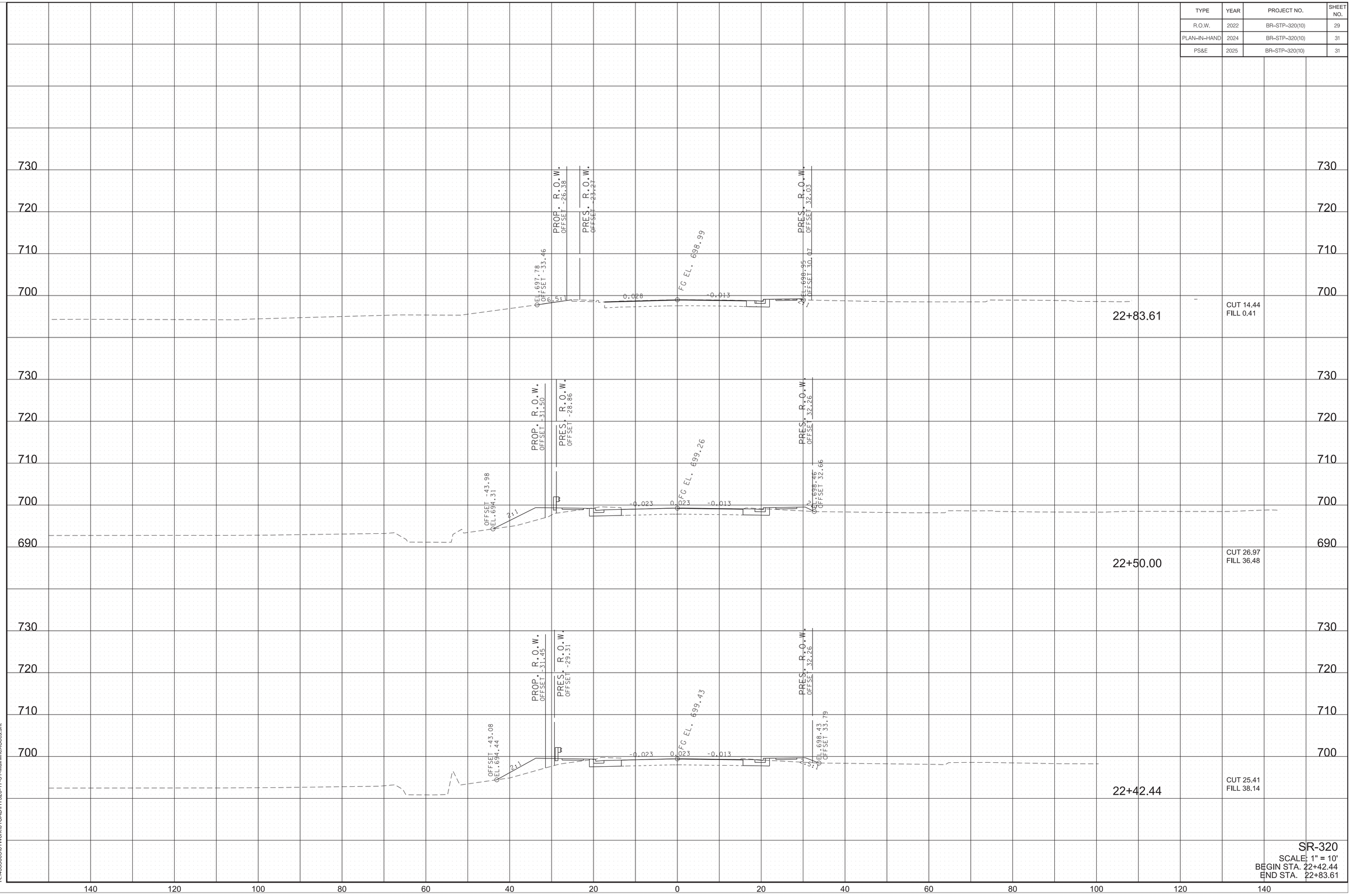
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 28 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 30 |
| PS&E | 2025 | BR-STP-320(10) | 30 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 21+67.40
END STA. 22+00.00

7/16/2025 11:43:31 AM
R:\433560\5\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 29 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 31 |
| PS&E | 2025 | BR-STP-320(10) | 31 |




SR-320
SCALE: 1" = 10'
BEGIN STA. 22+42.44
END STA. 22+83.61

7/16/2025 11:43:32 AM
R:\433560\05\01\Work\01CAD\HT320-17-31-MainlineXSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 30 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 32 |
| PS&E | 2025 | BR-STP-320(10) | 32 |

730
720
710
700

PRES. R.O.W.
OFFSET -24.46

PRES. R.O.W.
OFFSET 31.24

PROJ. 700.13
OFFSET 28.77

24+00.00

CUT 2.15
FILL 0.00

730
720
710
700

PRES. R.O.W.
OFFSET -23.95

PRES. R.O.W.
OFFSET 31.58

PROJ. 699.63
OFFSET 29.27

23+50.00

CUT 1.82
FILL 0.17

730
720
710
700

PRES. R.O.W.
OFFSET -23.44

PRES. R.O.W.
OFFSET 31.92

PROJ. 698.87
OFFSET 29.84

23+00.00

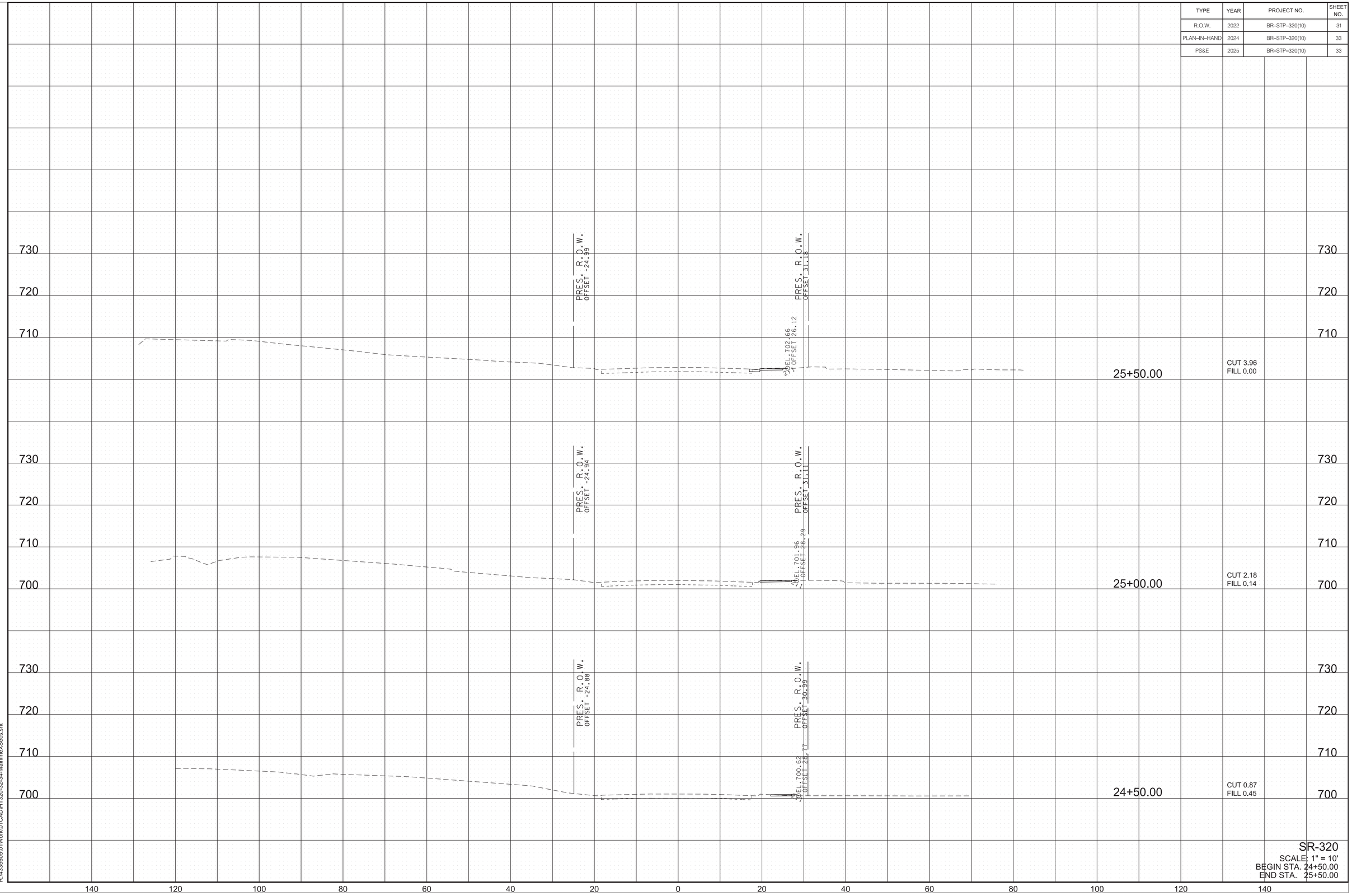
CUT 1.32
FILL 0.26

140 120 100 80 60 40 20 0 20 40 60 80 100 120 140

SR-320
SCALE: 1" = 10'
BEGIN STA. 23+00.00
END STA. 24+00.00

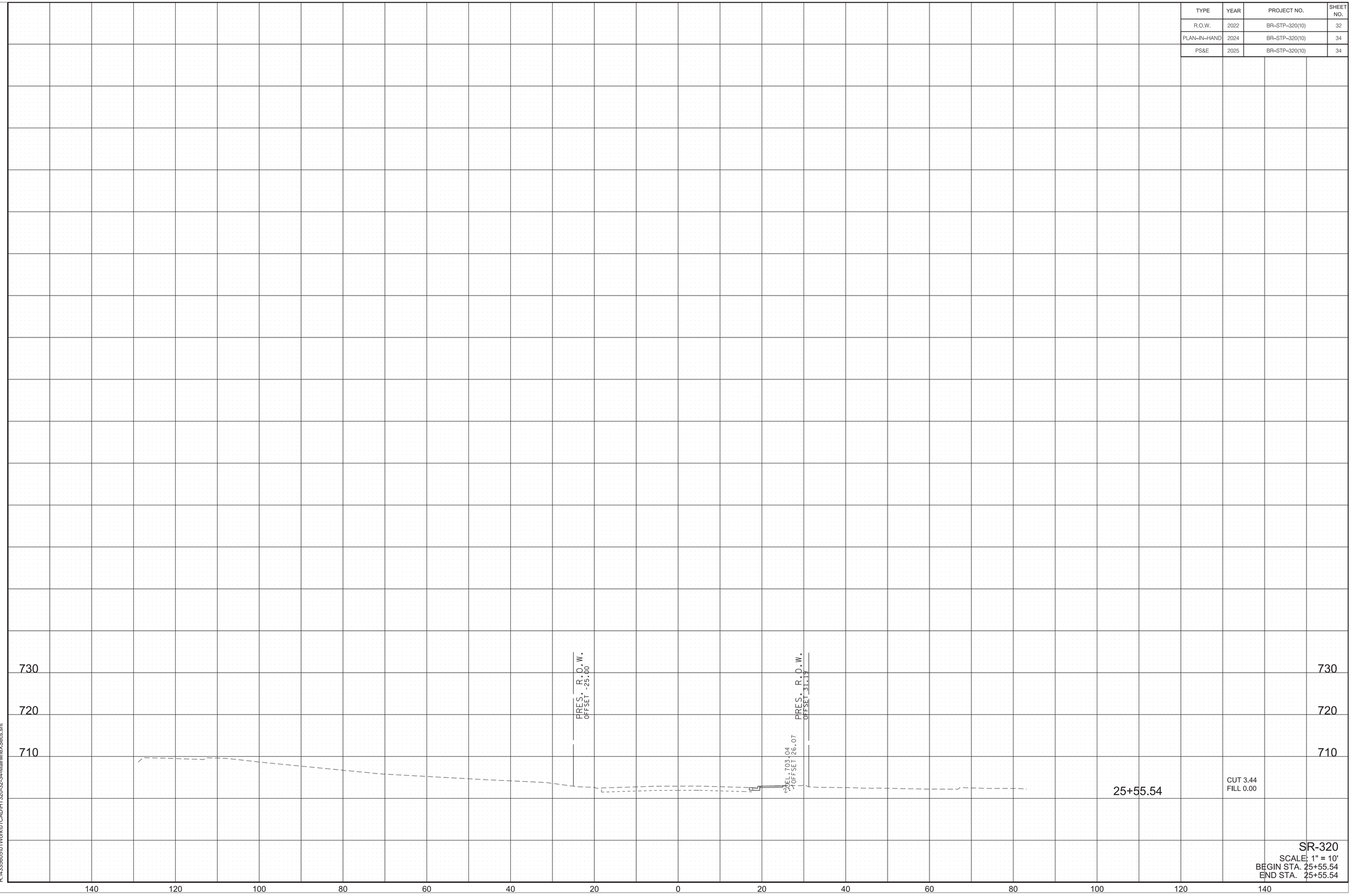
7/16/2025 11:43:36 AM
R:\433560\05\01\Work\01CAD\HT320-32-34-MainlineXSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 31 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 33 |
| PS&E | 2025 | BR-STP-320(10) | 33 |



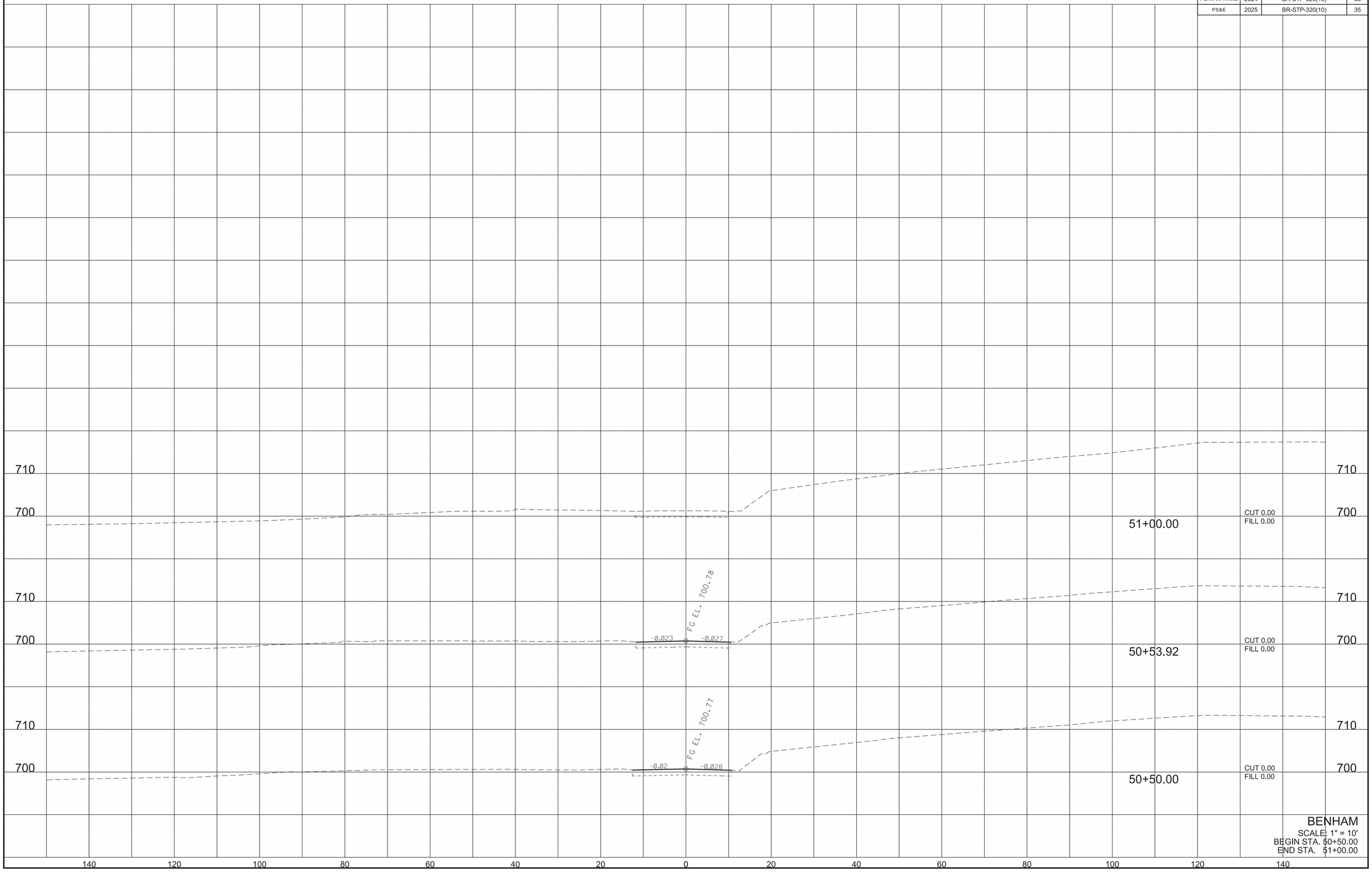

7/16/2025 11:43:37 AM
R:\43356\05\01\Work\01CAD\HT320-32-34-MainlineXSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 32 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 34 |
| PS&E | 2025 | BR-STP-320(10) | 34 |




7/16/2025 11:43:38 AM
R:\43356\05\01\Work\01CAD\HT320-32-34-MainlineXSecs.sht

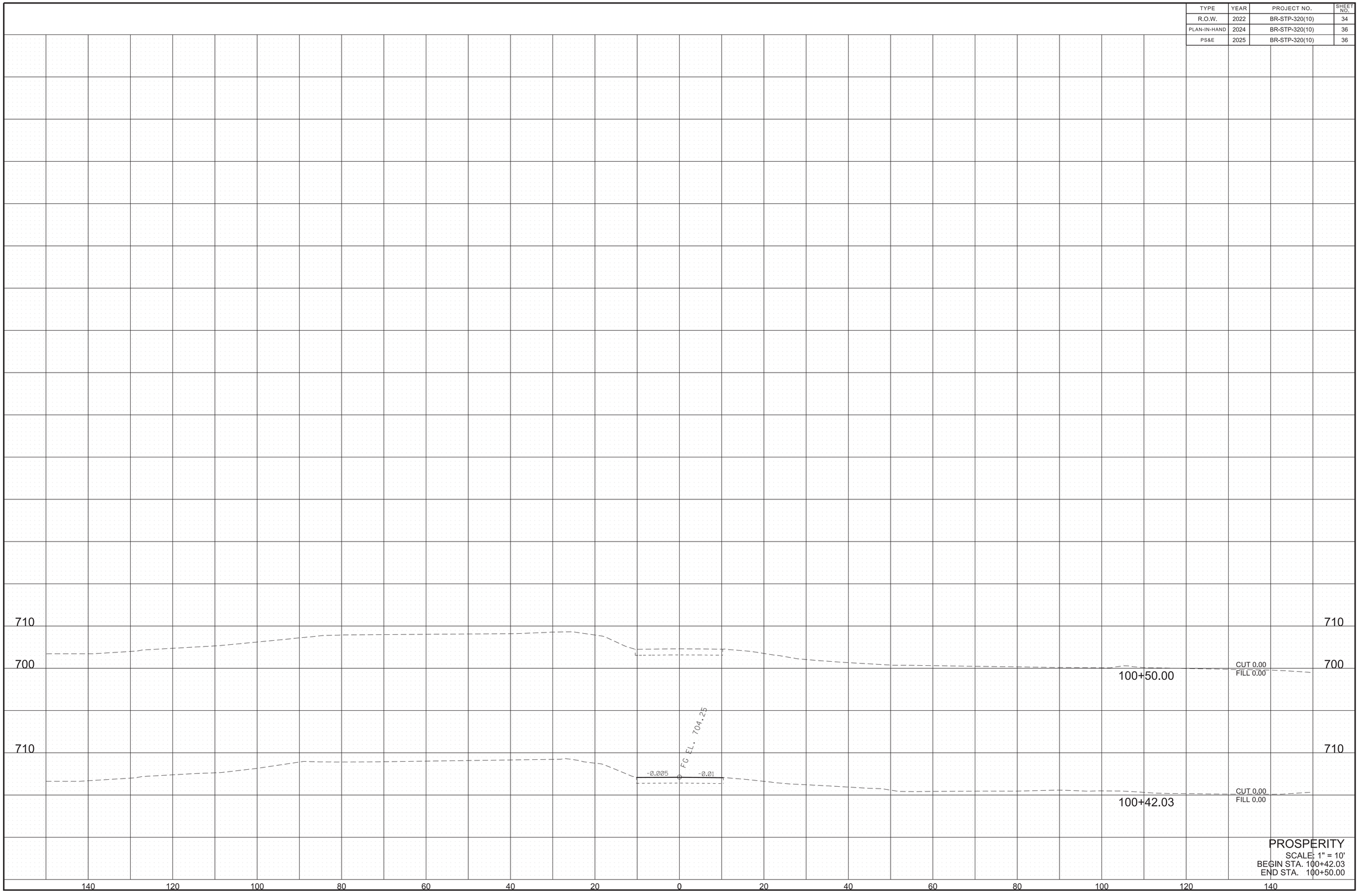
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 33 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 35 |
| PS&E | 2025 | BR-STP-320(10) | 35 |




BENHAM
SCALE: 1" = 10'
BEGIN STA. 50+50.00
END STA. 51+00.00

7/16/2025 11:43:42 AM
R:\4335605\01Work\01CAD\HT320-35-BenhamDrXSecs.sht

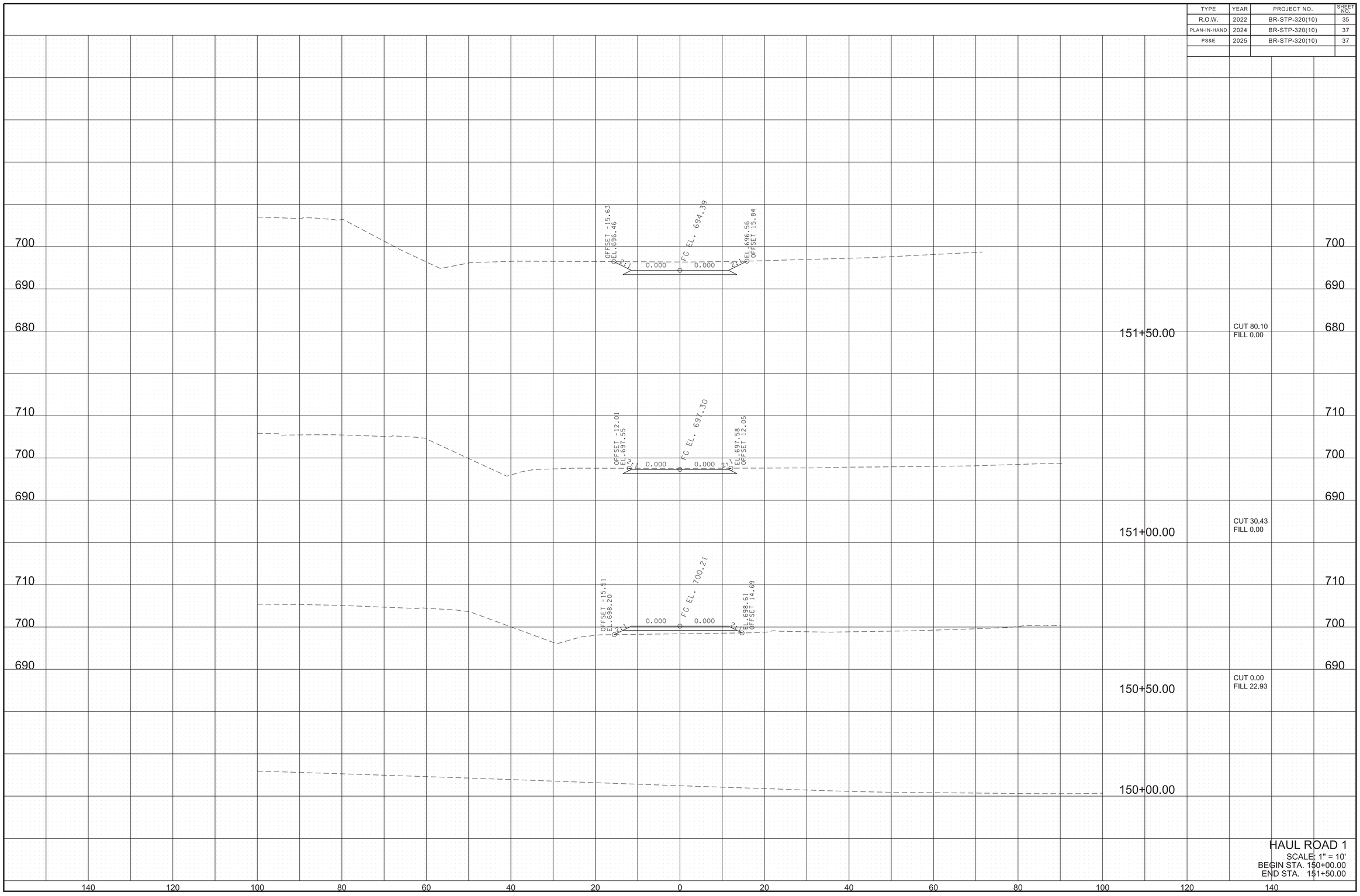
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 34 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 36 |
| PS&E | 2025 | BR-STP-320(10) | 36 |




PROSPERITY
SCALE: 1" = 10'
BEGIN STA. 100+42.03
END STA. 100+50.00

7/16/2025 11:43:47 AM
R:\4335605\01Work\01CAD\HT320-36-ProsperityLnXSecs.sht

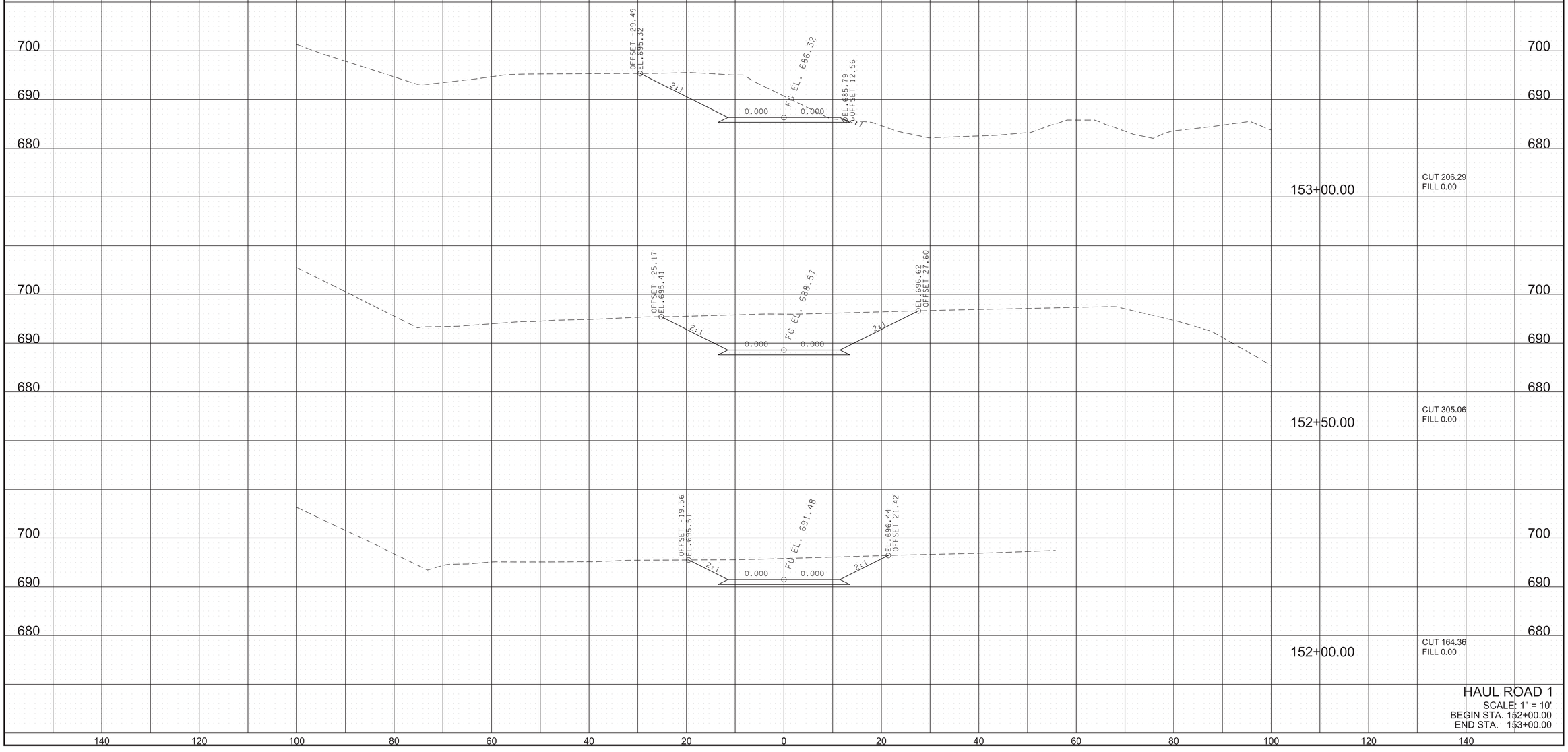
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 35 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 37 |
| PS&E | 2025 | BR-STP-320(10) | 37 |
| | | | |




HAUL ROAD 1
SCALE: 1" = 10'
BEGIN STA. 150+00.00
END STA. 151+50.00

7/16/2025 11:43:53 AM
R:\433605\01Work\01CAD\HT320-37-38-HaulRoad1XSecs.sht

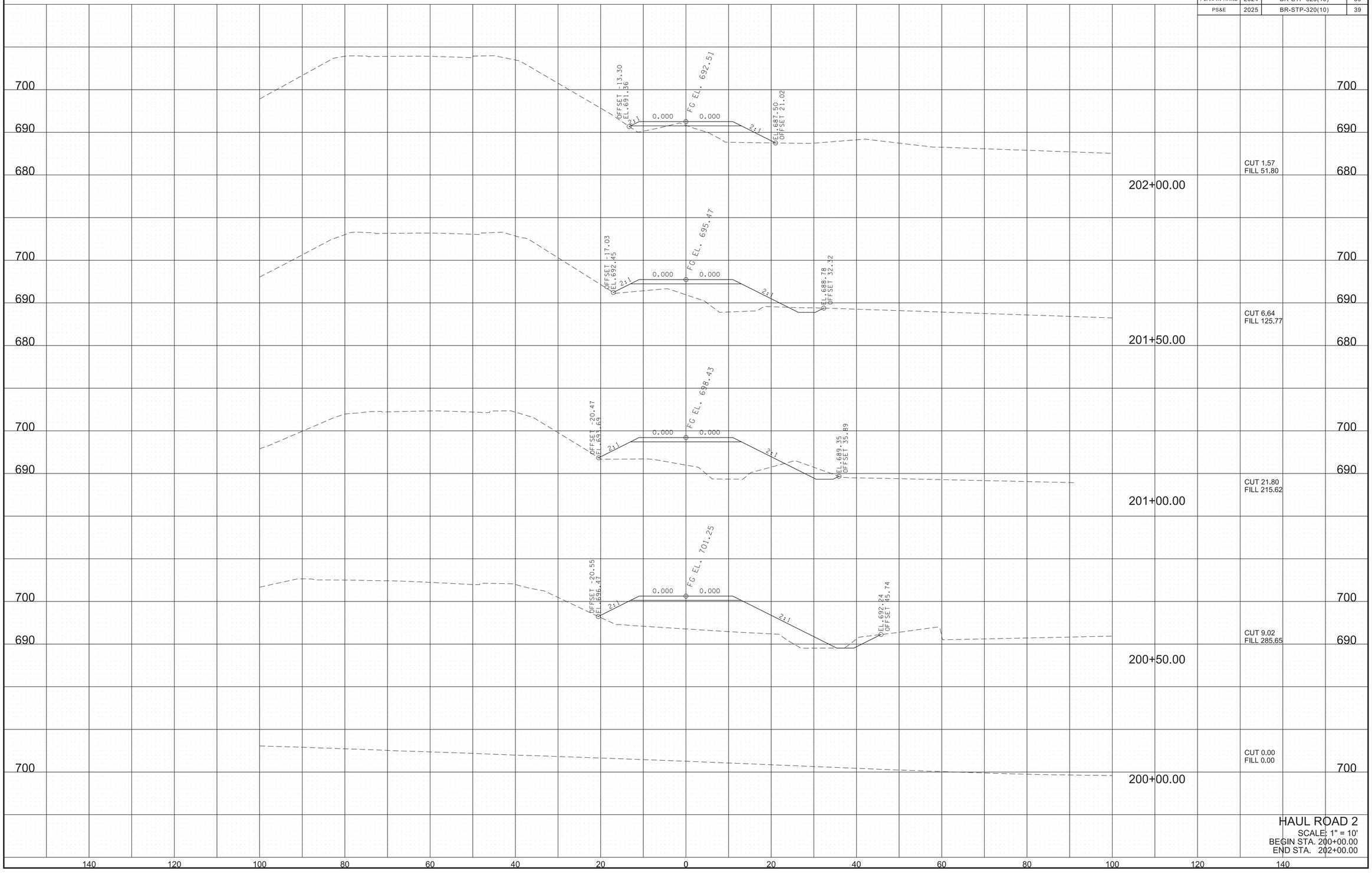
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 36 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 38 |
| PS&E | 2025 | BR-STP-320(10) | 38 |
| | | | |




HAUL ROAD 1
SCALE: 1" = 10'
BEGIN STA. 152+00.00
END STA. 153+00.00

7/16/2025 11:43:54 AM
R:\433560\01Work\01CAD\HT320-37-38-HaulRoad1XSecs.sht

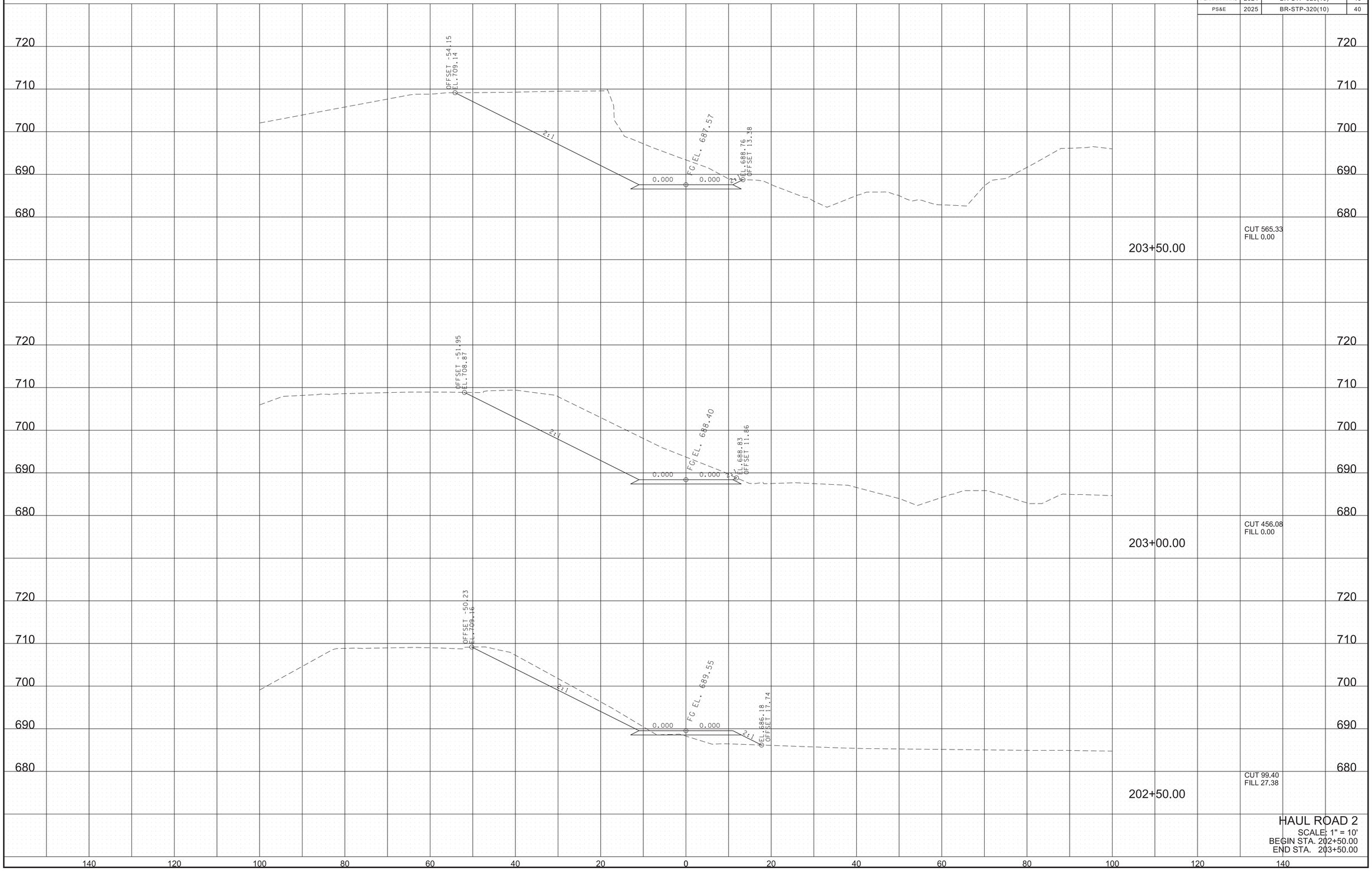
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 37 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 39 |
| PS&E | 2025 | BR-STP-320(10) | 39 |




HAUL ROAD 2
SCALE: 1" = 10'
BEGIN STA. 200+00.00
END STA. 202+00.00

7/16/2025 11:44:01 AM
R:\4335605\01Work\01CAD\HT320-39-41-HaulRoad2XSecs.sht

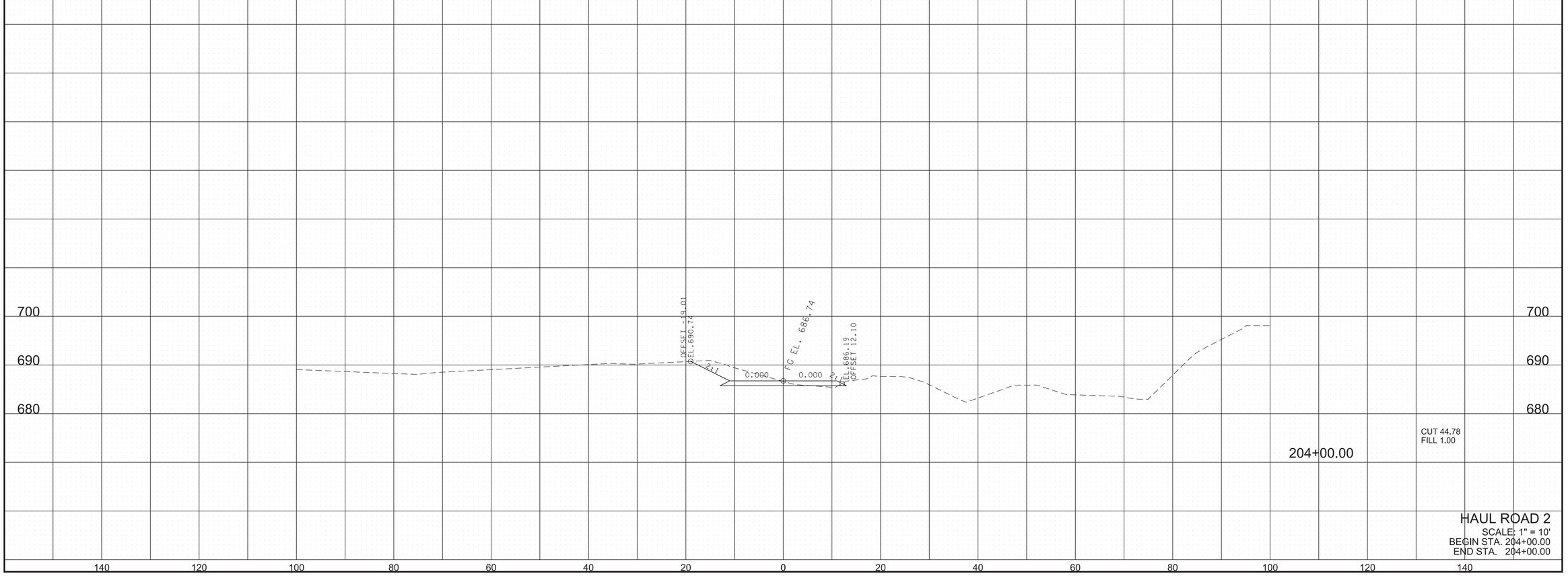
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 38 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 40 |
| PS&E | 2025 | BR-STP-320(10) | 40 |




HAUL ROAD 2
SCALE: 1" = 10'
BEGIN STA. 202+50.00
END STA. 203+50.00

7/16/2025 11:44:02 AM
R:\4335605\01Work\01CAD\HT320-39-41-HaulRoad2XSecs.sht

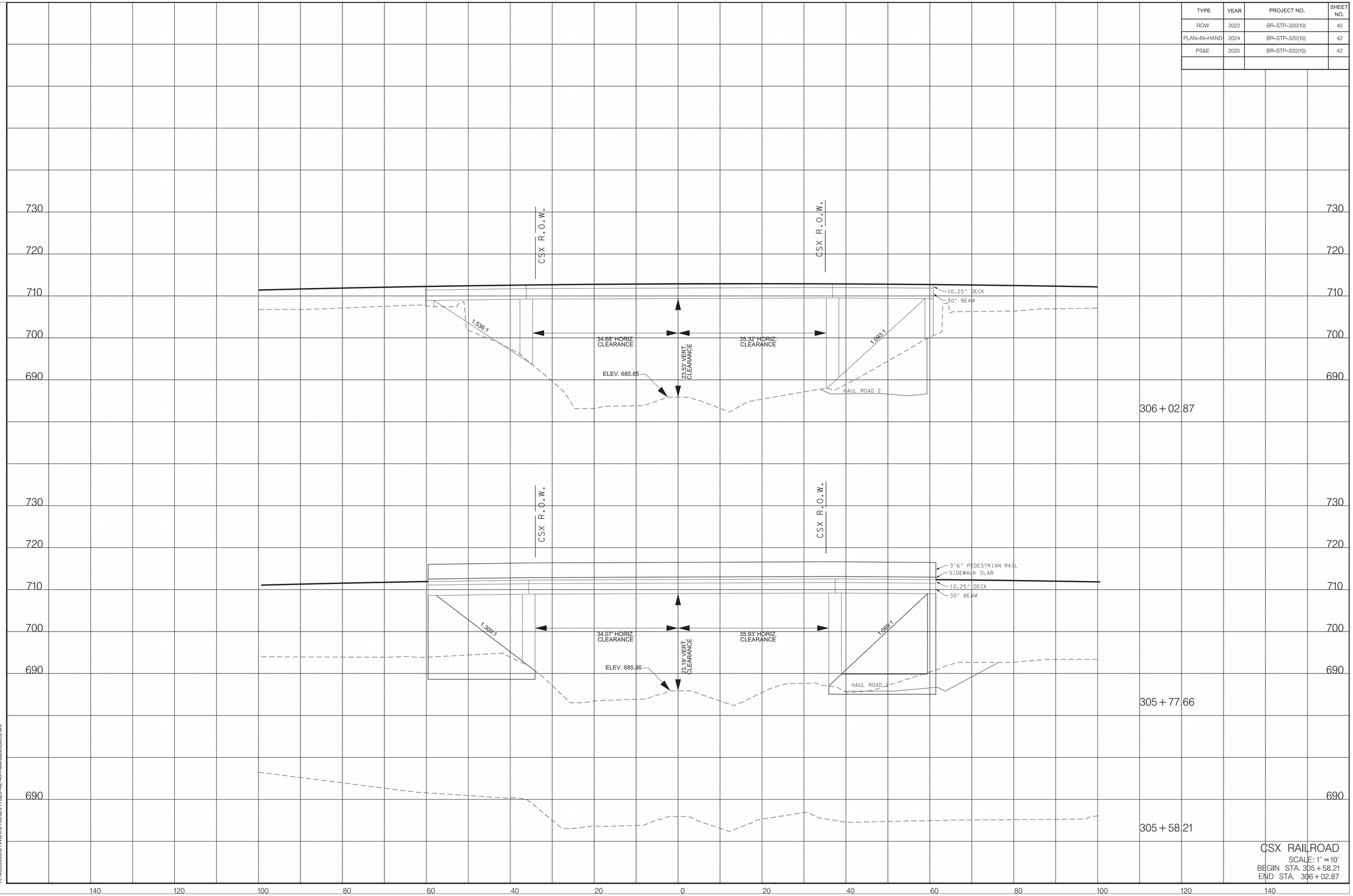
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| R.O.W. | 2022 | BR-STP-320(10) | 39 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 41 |
| PS&E | 2025 | BR-STP-320(10) | 41 |




HAUL ROAD 2
SCALE: 1" = 10'
BEGIN STA. 204+00.00
END STA. 204+00.00

7/16/2025 11:44:03 AM
R:\4335605\01Work\01CAD\HT320-39-41-HaulRoad2XSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 40 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 42 |
| PS&E | 2025 | BR-STP-320(10) | 42 |
| | | | |




CSX RAILROAD

SCALE: 1" = 10'

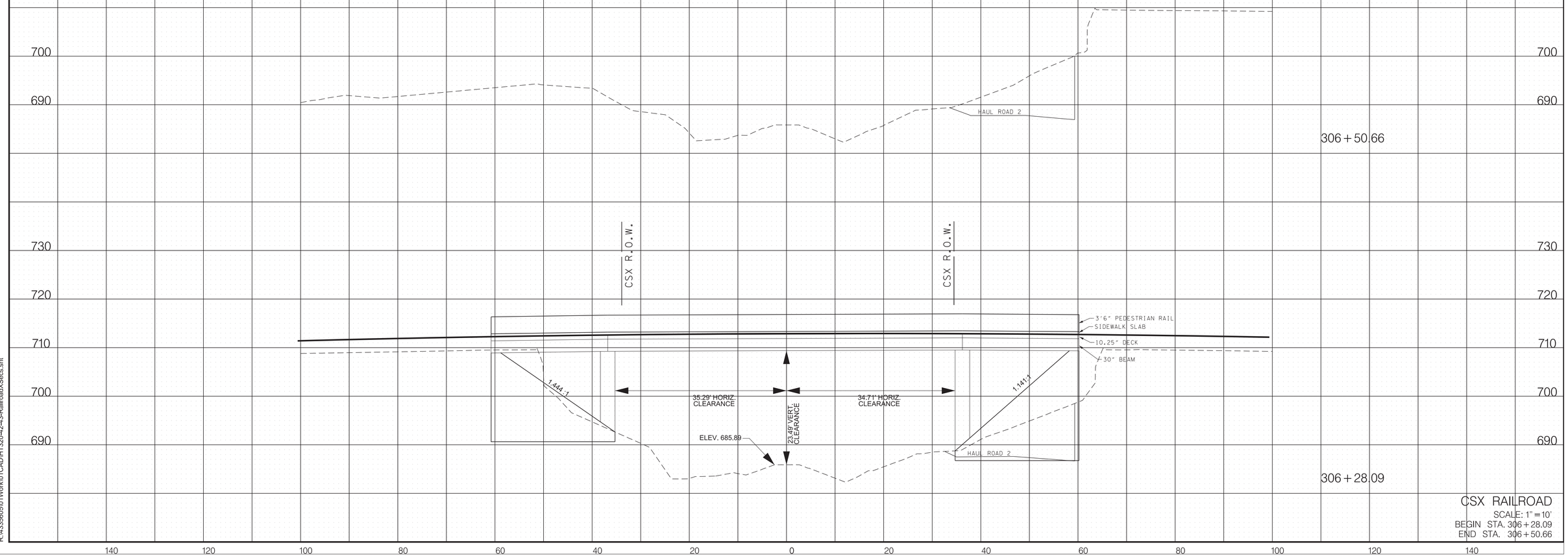
BEGIN STA. 305+58.21

END STA. 306+02.87

7/16/2025 11:44:08 AM

R:\43356\05\01\Work\01CAD\HT320-42-43-RailroadXSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | 41 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | 43 |
| PS&E | 2025 | BR-STP-320(10) | 43 |
| | | | |




CSX RAILROAD
SCALE: 1" = 10'
BEGIN STA. 306 + 28.09
END STA. 306 + 50.66

7/16/2025 11:44:09 AM
R:\43356\05\01\Work\01CAD\HT320-42-43-RailroadXSecs.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | T1 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T1 |
| PS&E | 2025 | BR-STP-320(10) | T1 |
| | | | |

# PAVEMENT EDGE DROP-OFF TRAFFIC CONTROL NOTES

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

1. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 0.75 INCH AND NOT EXCEEDING 1.75 INCHES:

   a. WARNING SIGNS, UNEVEN LANES (W8-11) AND/OR SHOULDER DROP-OFF WITH PLAQUE (W8-17 AND W8-17P), SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

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

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

   d. WHEN THE DIFFERENCE IN ELEVATION IS BETWEEN THE TRAFFIC LANE BEING UTILIZED BY TRAFFIC AND SHOULDER THE DIFFERENCE IN ELEVATION SHALL BE ELIMINATED WITHIN SEVEN WORKDAYS AFTER THE CONDITION IS CREATED.

2. DIFFERENCES IN ELEVATION BETWEEN ADJACENT ROADWAY ELEMENTS GREATER THAN 1.75 INCHES AND NOT EXCEEDING 6 INCHES, TRAFFIC IS NOT TO BE ALLOWED TO TRAVERSE THIS DIFFERENCE IN ELEVATION.

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

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

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

   b. IF THE DIFFERENCE IN ELEVATION IS ELIMINATED OR DECREASED TO 2 INCHES OR LESS BY THE END OF EACH WORKDAY, CONES MAY BE USED DURING DAYLIGHT HOURS IN LIEU OF DRUMS, BARRICADES OR OTHER APPROVED PROTECTIVE DEVICES MENTIONED IN PARAGRAPH a, PROVIDED WARNING SIGNS ARE ERECTED. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

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

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

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

   a. THE CONTRACTOR SHALL ACCOMPLISH SEPARATION BY DRUMS, BARRICADES OR OTHER APPROVED DEVICES IN ACCORDANCE WITH THE FOLLOWING:

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

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

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

   b. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a, AND CONSTRUCT A STONE WEDGE WITH A 4:1 SLOPE, OR FLATTER, TO ELIMINATE THE VERTICAL OFFSET IF THE LOWER ELEVATION IS AT OR BELOW SUBGRADE AT THE END OF EACH DAY.

   c. THE CONTRACTOR SHALL PROVIDE DRUMS, BARRICADES OR OTHER APPROVED SEPARATION DEVICES AS SPECIFIED IN PARAGRAPH a AND IF THE LOWER ELEVATION IS BASE STONE OR ASPHALT PAVEMENT, PLACEMENT OF SUBSEQUENT LAYERS OF PAVEMENT MUST BEGIN THE NEXT WORK DAY AND PROGRESS CONTINUOUSLY UNTIL THE DIFFERENCE IN ELEVATION IS ELIMINATED OR REDUCED TO SIX INCHES OR LESS.

   d. THE CONTRACTOR SHALL PROVIDE SEPARATION BY PORTABLE BARRIER RAIL.

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

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

   SEPARATION WILL BE PROVIDED BY USE OF PORTABLE BARRIER RAIL.

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

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

1. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 3/4 INCH AND NOT EXCEEDING 2 INCHES.

   a. WARNING SIGNS (UNEVEN LANES AND/OR SHOULDER DROP-OFF) SHALL BE PLACED IN ADVANCE OF AND THROUGHOUT THE EXPOSED AREA. MAXIMUM SPACING BETWEEN SIGNS SHALL BE 2,000 FEET WITH A MINIMUM OF 2 SIGNS PER EXPOSED AREA. WHERE UNEVEN PAVEMENT IS ENCOUNTERED, SIGNS SHALL BE PLACED ON EACH SIDE OF THE ROADWAY.

2. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 2 INCHES AND NOT EXCEEDING 6 INCHES:

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

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

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

3. IF THE DIFFERENCE IN ELEVATION IS WITHIN 8 FEET OF THE NEAREST TRAFFIC LANE WITH DIFFERENCE IN ELEVATION GREATER THAN 6 INCHES:

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

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

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

   b. ELIMINATE VERTICAL OFFSET BY CONSTRUCTING A STONE WEDGE OR GRADING TO A 4:1 SLOPE, OR FLATTER, OR USE PORTABLE BARRIER RAIL.

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

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

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

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

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

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

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

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

PAVEMENT DROP-OFF NOTES

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T2 |
| PS&E | 2025 | BR-STP-320(10) | T2 |
| | | | |
| | | | |

## TABULATED TRAFFIC CONTROL QUANTITIES

| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|
| 712-02.02 | INTERCONNECTED PORTABLE BARRIER RAIL | L.F. | 2240 |
| 712-02.47 | BRIDGE MOUNTED INTERCONNECTED PORTABLE BARRIER RAIL | L.F. | 440 |
| 712-02.60 | TEMPORARY WORK ZONE CRASH CUSHION (MASH TL-3) | EACH | 10 |
| 712-04.01 | FLEXIBLE DRUMS (CHANNELIZING) | EACH | 50 |
| 712-04.50 | BARRIER RAIL DELINEATOR | EACH | 268 |
| 712-05.01 | WARNING LIGHTS (TYPE A) | EACH | 76 |
| 712-06 | SIGNS (CONSTRUCTION) | S.F. | 911 |
| 712-07.02 | TEMPORARY BARRICADES (TYPE II) | L.F. | 12 |
| 712-07.03 | TEMPORARY BARRICADES (TYPE III) | L.F. | 144 |
| 712-09.02 | REMOVABLE PAVEMENT MARKING (8" BARRIER LINE) | L.F. | 424 |
| 712-09.08 | REMOVABLE PAVEMENT MARKING (6" LINE) | L.F. | 1029 |
| 713-01.01 | CLASS A CONCRETE (FOUNDATION FOR SIGN SUPPORTS) | C.Y. | 2 |
| 713-01.02 | STEEL BAR REINFORCEMENT (FOUNDATION FOR SIGN SUPPORTS) | LB. | 361 |
| 713-06 | STEEL I-BEAMS & WF-BEAMS (BREAKAWAY) SIGN SUPPORT | LB. | 955 |
| 713-14 | EXTRUDED ALUMINUM PANEL SIGNS | S.F. | 112 |
| 713-16.01 | CHANGEABLE MESSAGE SIGN UNIT | EACH | 3 |
| 716-05.02 | PAINTED PAVEMENT MARKING (8" BARRIER LINE) | L.F. | 2305 |
| 716-05.20 | PAINTED PAVEMENT MARKING (6" LINE) | L.M. | 1.71 |
| 716-08.30 | HYDROBLAST REMOVAL OF PAVEMENT MARKING (LINE) | L.M. | 1.13 |

## TRAFFIC CONTROL SIGN TABULATION

| M.U.T.C.D. SIGN NO. | LEGEND | SIZE IN INCHES L | | W | S.F. | TOTAL NO. REQUIRED | ITEM NO. 712-06 S.F. | ITEM NO. 713-14 S.F. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|
| G20-2 | END ROAD WORK | 48" | X | 24" | 8.0 | 4 | 32.00 | | |
| G20-5aP | WORK ZONE PLAQUE | 24" | X | 18" | 3.0 | 4 | 12.00 | | |
| M4-10L | DETOUR ARROW (LEFT) | 24" | X | 12" | 2.0 | 1 | 2.00 | | |
| M4-10R | DETOUR ARROW (RIGHT) | 24" | X | 12" | 2.0 | 1 | 2.00 | | |
| M4-8 | DETOUR PLAQUE | 24" | X | 12" | 2.0 | 36 | 72.00 | | |
| M4-8 | DETOUR (W/THRU ARROW) | 30" | X | 24" | 5.0 | 8 | 40.00 | | |
| M4-8A | END DETOUR | 24" | X | 18" | 3.0 | 2 | 6.00 | | |
| M4-9L | DETOUR W/ARROW (LEFT) | 30" | X | 24" | 5.0 | 3 | 15.00 | | |
| M4-9L | DETOUR ADVANCE LEFT TURN ARROW | 30" | X | 24" | 5.0 | 1 | 5.00 | | |
| M4-9R | DETOUR W/ARROW (RIGHT) | 30" | X | 24" | 5.0 | 3 | 15.00 | | |
| M4-9R | DETOUR ADVANCE RIGHT TURN ARROW | 30" | X | 24" | 5.0 | 3 | 15.00 | | |
| M6-2P | DIRECTIONAL ARROW (DIAGONAL LEFT) | 21" | X | 15" | 2.2 | 1 | 2.19 | | |
| M6-2P | DIRECTIONAL ARROW (ADVANCE DIAGONAL LEFT) | 21" | X | 15" | 2.2 | 1 | 2.19 | | |
| M6-2P | DIRECTIONAL ARROW (DIAGONAL RIGHT) | 21" | X | 15" | 2.2 | 7 | 15.31 | | |
| M6-2P | DIRECTIONAL ARROW (ADVANCE DIAGONAL RIGHT) | 21" | X | 15" | 2.2 | 7 | 15.31 | | |
| R11-2 | ROAD CLOSED | 48" | X | 30" | 10.0 | 2 | 20.00 | | |
| R11-3A | ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY | 60" | X | 30" | 12.5 | 2 | 25.00 | | |
| R11-4 | ROAD CLOSED TO THRU TRAFFIC | 60" | X | 30" | 12.5 | 2 | 25.00 | | |
| R2-1 | SPEED LIMIT SIGN (30 MPH) | 24" | X | 30" | 5.0 | 2 | 10.00 | | |
| R9-9 | SIDEWALK CLOSED | 24" | X | 12" | 2.0 | 2 | 4.00 | | |
| TN-6E | TENNESSEE STATE ROUTE PLAQUE | 30" | X | 24" | 5.0 | 38 | 190.00 | | |
| W1-6L | ARROW (LEFT) | 48" | X | 24" | 8.0 | 1 | 8.00 | | |
| W1-6R | ARROW (RIGHT) | 48" | X | 24" | 8.0 | 1 | 8.00 | | |
| W20-1 | ROAD WORK 500 FT | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| W20-1 | ROAD WORK 1000 FT | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| W20-1 | ROAD WORK 1/2 MILE | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| W20-1 | ROAD WORK AHEAD | 36" | X | 36" | 9.0 | 2 | 18.00 | | |
| W20-2 | DETOUR 1000 FT | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| W20-3F | ROAD CLOSED 1000 FT | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| W20-3F | ROAD CLOSED 500 FT | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| W20-4 | ONE LANE ROAD AHEAD | 48" | X | 48" | 16.0 | 2 | 32.00 | | FOR USE DURING FLAGGING OPERATIONS |
| W20-7 | FLAGGER SYMBOL | 48" | X | 48" | 16.0 | 2 | 32.00 | | FOR USE DURING FLAGGING OPERATIONS |
| W24-1 | DOUBLE REVERSE CURVE (1 LANE) (RIGHT) | 48" | X | 48" | 16.0 | 1 | 16.00 | | |
| W24-1 | DOUBLE REVERSE CURVE (1 LANE) (LEFT) | 48" | X | 48" | 16.0 | 1 | 16.00 | | |
| W3-4 | BE PREPARED TO STOP | 48" | X | 48" | 16.0 | 2 | 32.00 | | FOR USE DURING FLAGGING OPERATIONS |
| W3-5 | REDUCED SPEED AHEAD (30 MPH) | 48" | X | 48" | 16.0 | 2 | 32.00 | | |
| I2-5 | PROJECT INFORMATION SIGNS | 108" | X | 48" | 36.0 | 2 | | 72.00 | |
| D12-5 | TENNESSEE 511 (SMARTWAY) SIGNS | 48" | X | 60" | 20.0 | 2 | | 40.00 | |
| | | | | | TOTAL S.F. | | 911 | 112 | |

## TRAFFIC CONTROL LEGEND

| SYMBOL | ITEM |
|---|---|
| | WORK ZONE |
| | FLEXIBLE DRUMS (CHANNELIZING) |
| | TEMPORARY WORK ZONE CRASH CUSHION |
| | INTERCONNECTED PORTABLE BARRIER RAIL |
| | TRAFFIC FLOW |
| | SIGN (CONSTRUCTION) |
| | TEMPORARY BARRICADE (TYPE III) |
| | FLEXIBLE DRUMS (CHANNELIZING) |
| A | WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING) |

## TRAFFIC CONTROL - SPECIAL NOTES

1. THE TRAFFIC CONTROL PLAN IS TO SERVE AS A GUIDE ONLY. THIS PLAN DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF INSTALLING TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.)
2. IF ADDITIONAL SIGNS ARE DEEMED NECESSARY BY THE ENGINEER, THEY SHALL BE FURNISHED AND INSTALLED AT THE BID PRICE FOR ITEM NO. 712-06 SIGNS (CONSTRUCTION) S.F.
3. NO LESS THAN SEVEN (7) DAYS PRIOR TO THE CLOSURE OF ANY ROADS, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING INDIVIDUALS OR AGENCIES COMPLETELY DESCRIBING THE AFFECTED ROADS AND APPROXIMATE DURATION OF THE CONSTRUCTION: THE 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
   (6) LOCAL ROAD MUNICIPALITIES- CITY OF CHATTANOOGA & HAMILTON COUNTY
   (7) LOCAL MEDIA
4. WHEN AN ELEVEN (11) FOOT LANE CAN NOT BE MAINTAINED IN EACH DIRECTION, CONTRACTOR TO UTILIZE A FLAGGER
5. PROSPERITY LANE AND BUSINESS DRIVEWAYS TO REMAIN OPEN AT ALL TIMES DURING CONSTRUCTION. CLOSURE OF SR-320 (E BRAINERD RD) FOR BRIDGE BEAM INSTALLATION TO BE LIMITED TO NIGHTLY CLOSURES 10 PM - 6 AM FOR A WEEK IN EACH PHASE.
6. HYDROBLASTING OF PAVEMENT MARKING HAS BEEN INCLUDED FOR REMOVAL OF CONFLICTING PAVEMENT MARKINGS ON EXISTING AND INTERMEDIATE SURFACE COURSES. NO HYDROBLASTING SHALL BE ALLOWED ON THE FINAL ASPHALT SURFACE COURSE.

## TRAFFIC CONTROL - PHASING NOTES

SEE TRAFFIC CONTROL TYPICAL SECTIONS ON SHEET T2A AND PHASING NOTES ON SHEETS T4 THRU T7.

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# TRAFFIC CONTROL NOTES, LEGEND, AND TABULATION

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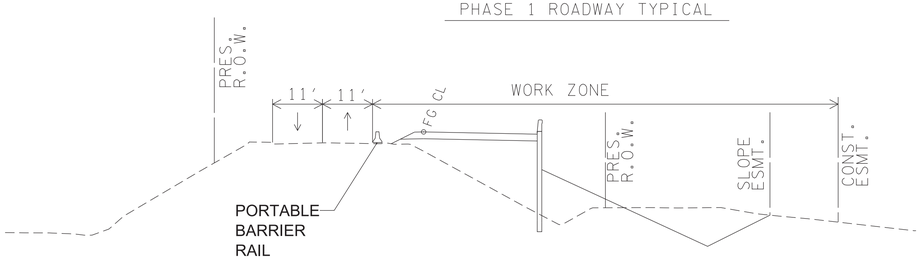
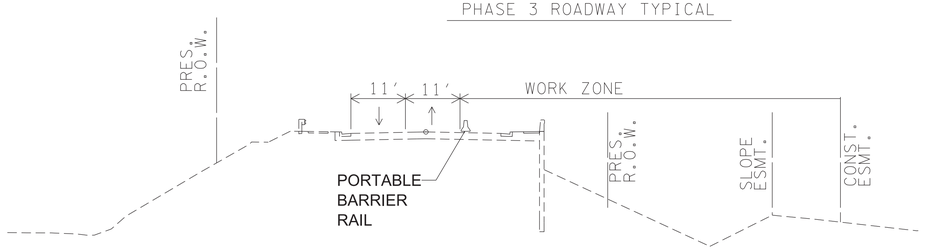
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | T2A |
| ------- | ---- | ---------- | ----- |
| ------- | ---- | ---------- | ----- |
| ------- | ---- | ---------- | ----- |

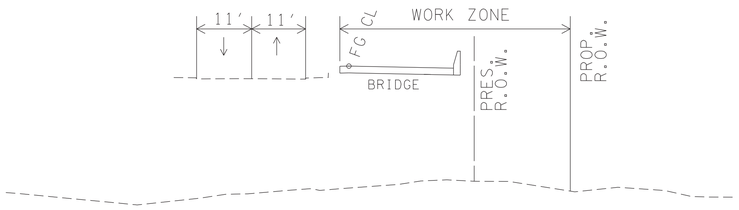
## PHASE 1 ROADWAY TYPICAL



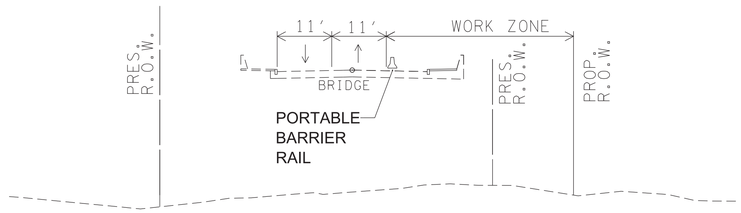

## PHASE 3 ROADWAY TYPICAL



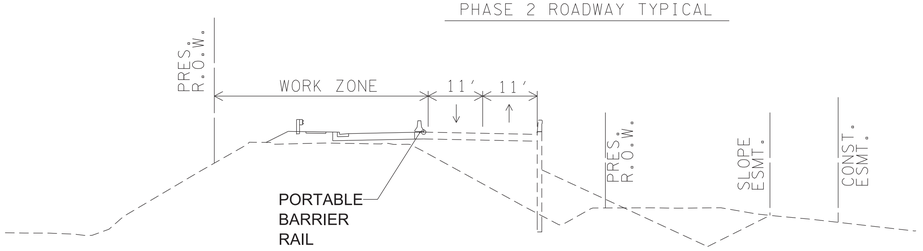

## PHASE 1 BRIDGE TYPICAL



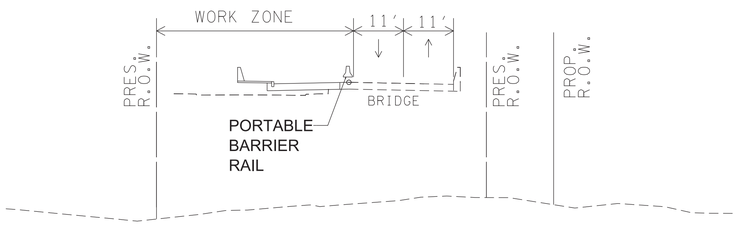

## PHASE 3 BRIDGE TYPICAL




## PHASE 2 ROADWAY TYPICAL




## PHASE 2 BRIDGE TYPICAL

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**DEPARTMENT OF TRANSPORTATION**

# TRAFFIC CONTROL TYPICAL SECTIONS

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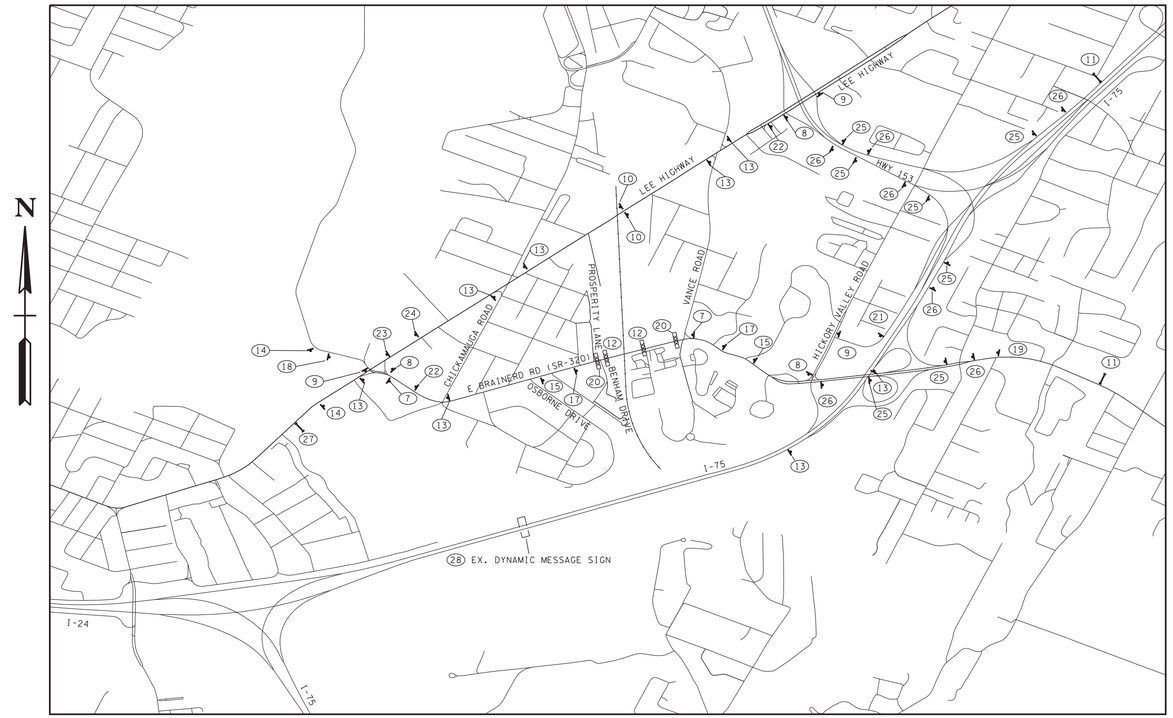
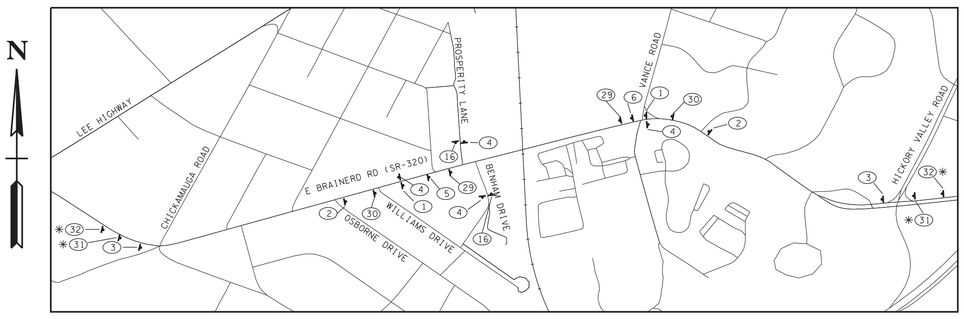
## SR-320 DETOUR SIGNING FOR WEEKEND/NIGHT CLOSURES USING STATE ROUTES, N.T.S.




## ROAD WORK ADVANCE SIGNING N.T.S.




*PROJECT INFORMATION AND TN 511 SIGNS TO BE INSTALLED 300 FT BEFORE PROJECT ADVANCE WARNING SIGNAGE AND HAVE 300 FT SPACING BETWEEN THE SIGNS.

### MOBILE MESSAGE UNITS:

11: SR 320W
CLOSED AT RR (1ST MESSAGE)
FOLLOW DETOUR (2ND MESSAGE)

27: SR 320E
CLOSED AT RR (1ST MESSAGE)
FOLLOW DETOUR (2ND MESSAGE)

### 28 UTILIZE I-75 NORTH DMS SIGN:

SR 320 WEST
CLOSED AT VANCE RD

USE EXIT 4
FOLLOW DETOUR

*MESSAGE ONLY NEEDED DURING WEEKEND/NIGHT CLOSURES

### DETOUR PLAN NOTES:

1. DETOUR SIGNS WILL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

2. TYPE III BARRICADES AT VANCE ROAD/ PREMIER DRIVE SHALL BE STAGGERED TO ALLOW LOCAL TRAFFIC TO ACCESS PROPERTIES ON EAST END OF THE PROJECT.

1 ROAD WORK 500 FT — W20-1, 48" X 48"

2 ROAD WORK 1000 FT — W20-1, 48" X 48"

3 ROAD WORK 1/2 MILE — W20-1, 48" X 48"

4 END ROAD WORK — G20-2, 48" X 24"

5 W24-1, 48" X 48"

6 W24-1, 48" X 48"

*SIGNS #5 & #6 TO BE INSTALLED IN TRAFFIC CONTROL PHASE 1A AND REMAIN UNTIL END OF PROJECT.

7 END DETOUR — M4-8A, 24" X 18"

8 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; DETOUR — M4-9R, 30" X 24"

31 320 E BRAINERD RD BRIDGE REPLACEMENT OVER CSX
COMPLETION SPRING 2027
TN Dept of Transportation

PROJECT INFORMATION SIGNS
I2-5 108" X 48" (9' X 4')

9 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; DETOUR — M4-9L, 30" X 24"

10 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"

11 27 CHANGEABLE MESSAGE SIGN UNIT

12 ROAD CLOSED — R11-2, 48"X30"
TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS

32 SmartWay TDOT — TRAVEL INFO CALL 511

TN 511 SIGNS
D12-5 48" X 60" (4' X 5')

13 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; DETOUR — M4-8, 30" X 24"

14 DETOUR 1000 FT — W20-2, 48" X 48"; 320 Tennessee — TN-6e, 30" X 24"

15 ROAD CLOSED 1000 FT — W20-3F, 48" X 48"

16 ROAD WORK AHEAD — W20-1, 36" X 36"

17 ROAD CLOSED 500 FT — W20-3F, 48" X 48"

18 ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3a, 60" X 30"; DETOUR — M4-10L, 24" X 12"

19 ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY — R11-3a, 60" X 30"; DETOUR — M4-10R, 24" X 12"

20 ROAD CLOSED TO THRU TRAFFIC — R11-4, 60" X 30"
TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS

21 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; M4-9L, 30" X 24"

22 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; M4-9R, 30" X 24"

23 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; M6-2P, 21" X 15"

24 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; M6-2P, 21" X 15"

25 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; M6-2P, 21" X 15"

26 DETOUR — M4-8, 24" X 12"; 320 Tennessee — TN-6e, 30" X 24"; M6-2P, 21" X 15"

29 WORK ZONE — G20-5aP, 24" X 18"; SPEED LIMIT 30 — R2-1, 24" X 30"

30 WORK ZONE — G20-5aP, 24" X 18"; SPEED LIMIT 30 — W3-5, 48" X 48"

SPEED LIMIT TO BE REDUCED IN PHASE 1 AND REMAIN AT 30 MPH UNTIL THE PROJECT IS COMPLETE. SPEED LIMIT REDUCTION SIGN TO BE INSTALLED 100 FT BEFORE WORK ZONE AND SPEED REDUCTION SIGN TO BE INSTALLED 500 FT BEFORE WORK ZONE SPEED LIMIT SIGN.

### SIGN LAYOUT FOR FLAGGING:

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | T2 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T3 |
| PS&E | 2025 | BR-STP-320(10) | T3 |
| | | | |

SEALED BY

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

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# ADVANCE SIGN AND DETOUR SIGN LAYOUT

SCALE: N.T.S.

7/16/2025 11:45:59 AM
R:\433560\01Work\01CAD\HT320-T3.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | T3 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T4 |
| PS&E | 2025 | BR-STP-320(10) | T4 |
| | | | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO 12+35.11, REVISED HAUL ROAD 1 AND 2 ALIGNMENTS, REVISED WORK ZONE SHADING, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+67.76 TO STA. 50+53.92.

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

PHASE 1 NOTES:
1. RE-STRIPE S.R. 320 WITHIN PROJECT LIMITS TO "FRESHEN UP" MARKINGS AND ENSURE DELINEATION OF LANES FOR TRAFFIC CONTROL. QUANTITY FOR THIS WORK HAS BEEN INCLUDED IN ITEM NO. 716-05.20 PAINTED PAVEMENT MARKING (6" LINE). INSTALL PROJECT INFORMATION AND TN 511 (SMARTWAY) SIGNS AS SHOWN ON SHEET T3.

2. INSTALL BARRIER RAIL ALONG SOUTH SIDE OF PROJECT AND DELINEATE WITH 8" PAINTED BARRIER LINE, CONSTRUCT HAUL ROAD 1 AND 2, PERFORM INITIAL GRADING WORK ON SOUTH SIDE OF PROJECT, CONSTRUCT RETAINING WALL "C" AND CONSTRUCT BRIDGE FOUNDATIONS AND SUPPORTS AND SOUTHERN HALF OF SUPERSTRUCTURE.

3. INSTALL STORM SEWER ON SOUTH SIDE OF PROJECT. CB-2, CB-5, CB-7, CB-8, CB-9, CB-10 AND EW-11 TO BE INSTALLED IN THIS PHASE. ROAD CROSSINGS TO BE COMPLETED UNDER FLAGGING W/USE OF STEEL PLATES OR DURING NIGHT/WEEKEND CLOSURES FOR BRIDGE WORK.

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

SIDEWALK CLOSED
A
TYPE II BARRICADE w/ TYPE A WARNING LIGHT

SIDEWALK CLOSED
A
TYPE II BARRICADE w/ TYPE A WARNING LIGHT

8" SSWL (PAINTED PVMT MARKING) BARRIER LINE FOR BARRIER RAIL

BRIDGE ID 33S43070001

PROSPERITY LANE (KING ST)

N 8° 04' 18" W

N 3° 46' 01" W

N 71° 35' 11" E

N 71° 47' 58" E

N 72° 33' 13" E

S.R. 320 - EAST BROADWAY BLVD.

N 77° 33' 13" E

N 72° 33' 13" E

S 17° 26' 47" E

18" ST

S 64° 35' 50" E

HAUL ROAD 1

N 72° 33' 45" E

S 74° 14' 30" W

HAUL ROAD 2

S 23° 51' 29" W

NWC - 1

N 17° 26' 47" W

N 67° 33' 13" E

S 14° 52' 27" E

N 73° 11' 43" E

N 72° 40' 26" E

24" ST

BENHAM DR.

S 18° 00' 15" E

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

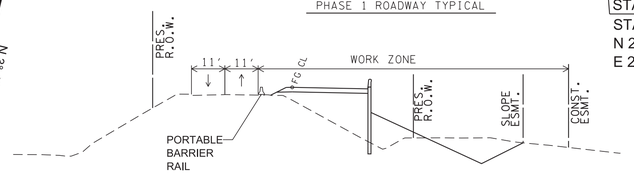
STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

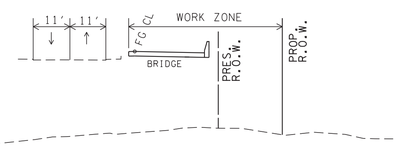
BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

PHASE 1 ROADWAY TYPICAL




PHASE 1 BRIDGE TYPICAL




WORK ZONE

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL PHASE 1

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:46:22 AM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | T4 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T5 |
| PS&E | 2025 | BR-STP-320(10) | T5 |
| | | | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO 12+35.11, REVISED HAUL ROAD 1 AND 2 ALIGNMENTS, REVISED WORK ZONE SHADING, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+67.76 TO STA. 50+53.92.

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

ROAD CLOSED TO THRU TRAFFIC R11-4 60" X 30"

TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS

BARRICADES TO BE STAGGERED TO ALLOW ACCESS TO LOCAL BUSINESSES AND HOMES.

SIDEWALK CLOSED

TYPE II BARRICADE w/ TYPE A WARNING LIGHT

ROAD CLOSED R11-2 48" X 30"

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

PROSPERITY LANE (KING ST)

N 8° 04' 18" W

N 3° 46' 01" W

N 71° 35' 11" E

N 71° 47' 58" E

N 72° 33' 13" E

S 15° 26' 47" E

S 18° 00' 15" E

S 74° 24' 47" E

N 77° 33' 13" E

N 72° 33' 13" E

S 17° 52' 27" E

S 84° 35' 50" E
HAUL ROAD 1

N 72° 33' 45" E

S 23° 51' 26" W

S 74° 14' 30" W
HAUL ROAD 2

N 17° 26' 30" W

N 67° 33' 13" E

WWC-1

N 73° 11' 43" E

N 72° 40' 26" E

S.R. 320 - EAST BRAINERD RD.

18" ST

24" ST

15" ST

20

15

20

25

50

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

TEMPORARY PAVEMENT

PHASE 1A NOTES:
1. PHASE 1A IS SHOWN FOR THE INSTALL OF TEMPORARY PAVEMENT WEDGES.SEE SHEET T6 FOR BARRIER RAIL LOCATIONS.
2. PHASE 1A TO BE COMPLETED UNDER ROAD CLOSURE. SEE DETOUR PLAN ON SHEET T3.

SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL PHASE 1A

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:46:43 AM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | T5 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T6 |
| PS&E | 2025 | BR-STP-320(10) | T6 |
| | | | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO 12+35.11, REVISED HAUL ROAD 1 AND 2 ALIGNMENTS, REVISED WORK ZONE SHADING, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+67.76 TO STA. 50+53.92.

N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

PHASE 2 NOTES:
1. INSTALL BARRIER RAIL AND TEMPORARY STRIPING BEFORE SWITCHING TRAFFIC TO NEW LAYOUT. UTILIZE REMOVABLE PAVEMENT MARKINGS ON BRIDGE SURFACE.

2. INSTALL DRAINAGE ON NORTH SIDE OF PROJECT, CB-2A, CB-3, CB-3A, CB-3B, CB-4 AND CB-6. PERFORM EXCAVATION AND EMBANKMENT ON NORTH SIDE OF PROJECT CONSTRUCT REMAINING PORTION OF BRIDGE, AND SIDEWALK ON NORTH SIDE OF PROJECT. REMOVE HAUL ROAD 2 ONCE THIS PHASE IS COMPLETE.

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

W1-6R
48" X 24"
TYPE III BARRICADE w/ TYPE A WARNING LIGHTS

TEMPORARY PAVEMENT

WORK ZONE

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

SIDEWALK CLOSED
TYPE II BARRICADE w/ TYPE A WARNING LIGHT

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

8" SSWL (REMOVABLE PVMT MARKING) BARRIER LINE FOR BARRIER RAIL

8" SSWL (PAINTED PVMT MARKING) BARRIER LINE FOR BARRIER RAIL

8" SSWL (PAINTED PVMT MARKING) BARRIER LINE FOR BARRIER RAIL

PROSPERITY LANE (KING ST)

N 8° 04' 18" W

N 71° 47' 58" E

N 71° 35' 11" E

N 72° 33' 13" E

N 77° 33' 13" E

N 72° 33' 13" E

N 67° 33' 13" E

N 72° 40' 26" E

N 73° 11' 43" E

S.R. 320 - EAST BRAINERD RD.

S 74° 14' 30" W

S 23° 51' 20" W

HAUL ROAD 2

N 3° 46' 01" W

TYPE 13

TYPE 21

TYPE 38

18" ST

15" ST

EXISTING STORM SEWER TO REMAIN

6" SSWL (PAINTED PVMT MRKNG)

6" SSWL (PAINTED PVMT MRKNG)

OPENING IN BARRIER RAIL FOR DRIVEWAY

S 15° 26' 47" E

S 84° 35' 50" E

HAUL ROAD 1

N 72° 33' 45" E

S 18° 00' 13" E

6" DSYL (PAINTED PVMT MRKNG)

6" SSWL (PAINTED PVMT MRKNG)

6" (REMOVABLE PVMT MARKING)

8" SSWL (PAINTED PVMT MARKING) BARRIER LINE FOR BARRIER RAIL

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

W1-6L
48" X 24"
TYPE III BARRICADE w/ TYPE A WARNING LIGHTS

SIDEWALK CLOSED
TYPE II BARRICADE w/ TYPE A WARNING LIGHT

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

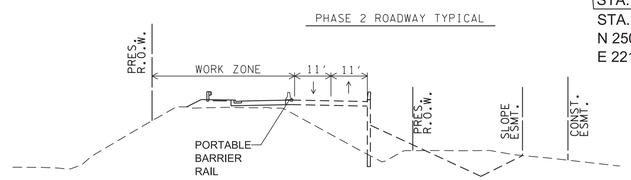
LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

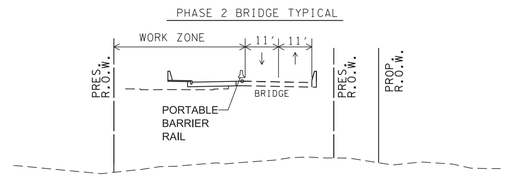
BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

PHASE 2 ROADWAY TYPICAL




PHASE 2 BRIDGE TYPICAL

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL PHASE 2

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

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N

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

PHASE 3 NOTES:
1. SHIFT TRAFFIC TO NORTH SIDE OF BRIDGE, MOVE BARRIER RAIL, HYDROBLAST CONFLICTING PAVEMENT MARKINGS, AND INSTALL TEMPORARY PAVEMENT MARKINGS. OPEN SIDEWALK ON NORTH SIDE OF PROJECT.

2. CONSTRUCT SIDEWALK AND SLOPES ON SOUTH SIDE OF THE PROJECT AND CONSTRUCT SIDEWALK ON SOUTH SIDE OF BRIDGE.

3. REMOVE HAUL ROAD 1 AND COMPLETE GRADING AND PAVING WORK AT BENHAM DRIVE.

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| ROW | 2022 | BR-STP-320(10) | T6 |
| PLAN-IN-HAND | 2024 | BR-STP-320(10) | T7 |
| PS&E | 2025 | BR-STP-320(10) | T7 |
| | | | |

REVISION 06/07/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 25+23.04 TO STA. 25+49.52.

REVISION 12/11/2023:
REVISED PROJECT R.O.W. LIMITS FROM STA. 12+37.67 TO 12+35.11, REVISED HAUL ROAD 1 AND 2 ALIGNMENTS, REVISED WORK ZONE SHADING, REVISED LIMITS OF CONSTRUCTION ON BENHAM DRIVE FROM STA. 51+67.76 TO STA. 50+53.92.

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

WORK ZONE

WORK ON BENHAM DRIVE TO BE COMPLETED UNDER FLAGGING

6" DSYL (PAINTED PVMT MRKNG)

6" SSWL (PAINTED PVMT MRKNG)

BRIDGE ID
33543070001

HAUL ROAD 2

TYPE 13

TYPE 21

TYPE 38

WWC-1

N 71° 35' 11" E

N 71° 47' 58" E

N 72° 33' 13" E

N 77° 33' 13" E

N 67° 33' 13" E

N 73° 11' 43" E

N 72° 40' 26" E

S 74° 14' 30" W

S 23° 51' 26" W

N 47° 26' 40" W

R=1432.39'

R=1382.39'

SR 320 - EAST BROAD RD

PROSPERITY LANE (KING ST)

N 8° 04' 18" W

BENHAM DR

S 18° 00' 13" E

S 84° 35' 50" E

HAUL ROAD 1

N 72° 33' 45" E

N 3° 46' 01" W

SIDEWALK CLOSED
R9-9
24" x 12"
A
TYPE II BARRICADE w/ TYPE A WARNING LIGHT

SIDEWALK CLOSED
R9-9
24" x 12"
A
TYPE II BARRICADE w/ TYPE A WARNING LIGHT

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

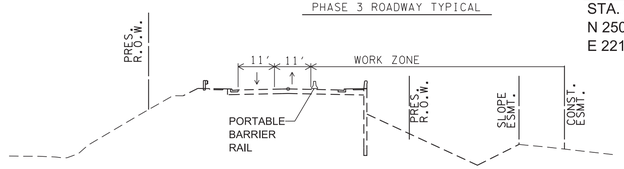
STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

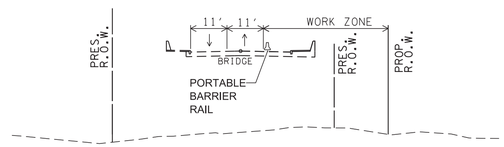
BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

PHASE 3 ROADWAY TYPICAL




PHASE 3 BRIDGE TYPICAL

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# TRAFFIC CONTROL PHASE 3

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

7/16/2025 11:47:29 AM
R:\433560501\Work\01CAD\HT320-T7.sht

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Robert LeFevre

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TENNESSEE DEPARTMENT OF TRANSPORTATION
JAMES K. POLK BUILDING, SUITE 1100
505 DEADERICK STREET
NASHVILLE, TN 37243
SCOTT A. STEPP, P.E. NO. 111216

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

| YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|
| 2025 | BR-STP-320(10) | STRUCTURE-SIGN2 |
| | | |
| | | |
| | | |

## SHEET NAME — SHEET NO.

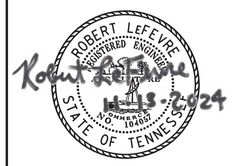
SIGNATURE SHEET .....STRUCTURE-SIGN2

**BRIDGE NO. 1: STATE ROUTE 320 OVER CSX RAILROAD**

LAYOUT OF BRIDGE .....U-95-425
INDEX OF DRAWINGS .....U-95-426
GENERAL NOTES .....U-95-427
RAILROAD NOTES .....U-95-428
ESTIMATED QUANTITIES .....U-95-429
SUPERSTRUCTURE .....U-95-432
SUPERSTRUCTURE DETAILS .....U-95-433
SUPERSTRUCTURE DETAILS .....U-95-434
PHASING SEQUENCE DETAILS .....U-95-435
PRESTRESSED BOX-BEAM DETAILS SPANS 1 AND 3 .....U-95-436
PRESTRESSED BOX-BEAM DETAILS SPAN 2 .....U-95-437
ABUTMENT NO. 1 .....U-95-438
ABUTMENT NO. 1 DETAILS .....U-95-439
ABUTMENT NO. 1 DETAILS .....U-95-440
ABUTMENT NO. 1 DETAILS .....U-95-441
ABUTMENT NO. 1 DETAILS .....U-95-442
ABUTMENT NO. 2 .....U-95-443
ABUTMENT NO. 2 DETAILS .....U-95-444
ABUTMENT NO. 2 DETAILS .....U-95-445
ABUTMENT NO. 2 DETAILS .....U-95-446
ABUTMENT NO. 2 DETAILS .....U-95-447
BENT NO. 1 .....U-95-448
BENT NO. 1 DETAILS .....U-95-449
BENT NO. 2 .....U-95-450
BENT NO. 2 DETAILS .....U-95-451
BILL OF STEEL .....U-95-454
BILL OF STEEL .....U-95-455

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# SIGNATURE SHEET

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TENNESSEE DEPARTMENT OF TRANSPORTATION
JAMES K. POLK BUILDING, SUITE 1100
505 DEADERICK STREET
NASHVILLE, TN 37243
ROBERT LeFEVRE, P.E. NO. 104057

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-95-425 |
| INDEX OF DRAWINGS | U-95-426 |
| GENERAL NOTES | U-95-427 |
| ESTIMATED QUANTITIES | U-95-429 |
| SUPERSTRUCTURE | U-95-432 |
| SUPERSTRUCTURE DETAILS | U-95-433 |
| SUPERSTRUCTURE DETAILS | U-95-434 |
| SUPERSTRUCTURE DETAILS | U-95-435 |
| PRESTRESSED BOX-BEAM DETAILS SPANS 1 AND 3 | U-95-436 |
| PRESTRESSED BOX-BEAM DETAILS SPANS 2 | U-95-437 |
| ABUTMENT NO. 1 | U-95-438 |
| ABUTMENT NO. 1 DETAILS | U-95-439 |
| ABUTMENT NO. 1 DETAILS | U-95-440 |
| ABUTMENT NO. 1 DETAILS | U-95-441 |
| ABUTMENT NO. 1 DETAILS | U-95-442 |
| ABUTMENT NO. 2 | U-95-443 |
| ABUTMENT NO. 2 DETAILS | U-95-444 |
| ABUTMENT NO. 2 DETAILS | U-95-445 |
| ABUTMENT NO. 2 DETAILS | U-95-446 |
| ABUTMENT NO. 2 DETAILS | U-95-447 |
| BENT NO. 1 | U-95-448 |
| BENT NOS. 1 DETAILS | U-95-449 |
| BENT NO. 2 | U-95-450 |
| BENT NOS. 2 DETAILS | U-95-451 |
| BILL OF STEEL | U-95-454 |
| BILL OF STEEL | U-95-455 |


| YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|
| 2025 | BR-STP-320(10) | STRUCTURE-SIGN1 |
| | | |
| | | |
| | | |

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# SIGNATURE SHEET

11/12/2024 10:44:58 AM
P:\STRUCTURES\BRIDGE_DESIGN\REGION_2\33-HAMILTON\124076.00\BRIDGES\33S43070001\BRIDGE_CADD\11-12-2024\08-02-2024\33SR43070001ASIG.DGN

060118500018182.SHT

CONSTRUCTION NO. 33057-3228-94

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| | 2025 | | B-1 |
| | | | |
| | | | |
| | | | |

1 05-20-25 JM GENERAL REVISIONS

| X181 | MISC |
|---|---|
| STATE ROUTE 320<br>OVER<br>CSX RAILROAD<br>STA. 18+27.50<br><br>CONTINUOUS PRECAST<br>PRESTRESSED CONCRETE<br>24" X 36" BOX-BEAM<br>WITH COMPOSITE<br>CONCRETE DECK SLAB<br><br>3 SPAN BRIDGE<br>TOTAL LENGTH = 163'-0"<br><br>37'-2" ROADWAY WITH<br>2-6'-0" SIDEWALKS<br>AND STD-11-1<br>BRIDGERAILS<br><br>76°20'00" SKEW<br><br>LAYOUT DRAWING NO.<br>U-95-425 | PARAPET RAIL<br>ON TOP OF<br>RETAINING WALL<br><br>WALL LOCATION:<br><br>RETAINING WALL "C"<br><br>STA. 19+33.00 - RT<br><br>** SEE RETAINING WALL **<br>CONCEPTUAL DRAWINGS<br>FOR MORE DETAILS |

## ESTIMATED QUANTITIES

| ITEM NO. | DESCRIPTION | UNIT | TOTAL | QUANTITY | QUANTITY |
|---|---|---|---|---|---|
| 202-04.01 | REMOVAL OF STRUCTURES (BR. NO. 33-SR320-0.86) | L.S. | 1 | 1 | |
| 204-02.01 | DRY EXCAVATION (BRIDGES) | C.Y. | 2,024 | 2,024 | |
| 303-01.02 | GRANULAR BACKFILL (BRIDGES) | TON | 1,985 | 1,985 | |
| 604-02.03 | EPOXY COATED REINFORCING STEEL | LB | 92,655 | 92,655 | |
| 604-03.01 | CLASS 'A' CONCRETE (BRIDGES) | C.Y. | 831 | 831 | |
| 604-03.02 | STEEL BAR REINFORCEMENT (BRIDGES) | LB. | 165,612 | 165,612 | |
| 604-03.04 | PAVEMENT AT BRIDGE ENDS | S.Y. | 262 | 262 | |
| 604-03.09 | CLASS 'D' CONCRETE (BRIDGE DECK) | C.Y. | 247 | 247 | |
| 604-04.01 | APPLIED TEXTURE FINISH (NEW STRUCTURES) | S.Y. | 1,413 | 1,413 | |
| 604-04.41 | THREE STAR STATE EMBLEM | EA. | 4 | 4 | |
| 604-05.31 | BRIDGE DECK GROOVING (MECHANICAL) | S.Y. | 825 | 825 | |
| 606-03.03 | STEEL PILES (12 INCH) | L.F. | 3,249 | 3,249 | |
| 606-03.06 | PILE TIPS (STEEL PILES, 12 INCH) | EACH | 191 | 191 | |
| 610-10.45 | DECK DRAINS (GRATE TYPE 2) | EA. | 4 | 4 | |
| 615-02.19 | PRESTRESSED CONCRETE BOX BEAM (24" X 36") | L.F. | 1,412 | 1,412 | |
| 617-02 | BRIDGE DECK CRACK SEAL | L.F. | 211 | 211 | |
| 617-05 | SEALANT (HMWM) | GAL. | 3 | 3 | |
| 620-05 | CONCRETE PARAPET WITH STRUCTURAL TUBING | L.F. | 677 | 440 | 237 |
| 621-05.01 | TEMPORARY SHORING | S.F. | 1,200 | 1,200 | |
| 707-07.01 | CHAIN-LINK FENCE (BRIDGES) | S.F. | 1,168 | 1,168 | |
| 709-04 | REINFORCED CONCRETE SLOPE PAVEMENT | C.Y. | 31 | 31 | |
| 710-09.01 | 6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM | L.F. | 135 | 135 | |
| 710-09.02 | 6" PIPE UNDERDRAIN | L.F. | 50 | 50 | |

## LIST OF DRAWINGS

| | DWG. NO. | LAST REV. DATE |
|---|---|---|
| SIGNATURE SHEET | STRUCTURE-SIGN1 | |
| SIGNATURE SHEET | STRUCTURE-SIGN2 | |
| BRIDGE DRAWINGS AND ESTIMATED BRIDGE QUANTITIES | B-1 | 5-20-2025 |
| LAYOUT OF BRIDGE | U-95-425 | 5-20-2025 |
| INDEX OF DRAWINGS | U-95-426 | 5-20-2025 |
| GENERAL NOTES | U-95-427 | 5-20-2025 |
| RAILROAD NOTES | U-95-428 | 5-20-2025 |
| ESTIMATED QUANTITIES | U-95-429 | 5-20-2025 |
| FOUNDATION DATA | U-95-430 | 5-20-2025 |
| FOUNDATION DATA | U-95-431 | 5-20-2025 |
| SUPERSTRUCTURE | U-95-432 | 5-20-2025 |
| SUPERSTRUCTURE DETAILS | U-95-433 | 5-20-2025 |
| SUPERSTRUCTURE DETAILS | U-95-434 | 5-20-2025 |
| PHASING SEQUENCE DETAILS | U-95-435 | 5-20-2025 |
| PRESTRESSED BOX-BEAM DETAILS SPANS 1 AND 3 | U-95-436 | 5-20-2025 |
| PRESTRESSED BOX-BEAM DETAILS SPAN 2 | U-95-437 | 5-20-2025 |
| ABUTMENT NO. 1 | U-95-438 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-439 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-440 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-441 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-442 | 5-20-2025 |
| ABUTMENT NO. 2 | U-95-443 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-444 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-445 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-446 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-447 | 5-20-2025 |
| BENT NO. 1 | U-95-448 | 5-20-2025 |
| BENT NO. 1 DETAILS | U-95-449 | 5-20-2025 |
| BENT NO. 2 | U-95-450 | 5-20-2025 |
| BENT NO. 2 DETAILS | U-95-451 | 5-20-2025 |
| FINAL FOUNDATION DATA | U-95-452 | 5-20-2025 |
| FINAL FOUNDATION DATA | U-95-453 | 5-20-2025 |
| BILL OF STEEL | U-95-454 | 5-20-2025 |
| BILL OF STEEL | U-95-455 | 5-20-2025 |

## LIST OF STANDARD DRAWINGS

| | DWG. NO. | LAST REV. DATE |
|---|---|---|
| STEEL SLIDER PLATE ASSEMBLIES FOR SINGLE SLOPE CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS | STD-1-2SS | 5-31-24 |
| REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS | STD-1-5 | 6-05-23 |
| BRIDGE END DRAIN DETAILS 2'x8'-7" & 4'x8'-7" WITH PAVEMENT AT BRIDGE ENDS | STD-1-6 | 5-10-21 |
| BRIDGE END DRAIN DETAILS 2'x8'-7" & 4'x8'-7" WITH PAVEMENT AT BRIDGE ENDS | STD-1-7 | 5-10-21 |
| BRIDGE END DRAIN DETAILS 2'x8'-7" WITH PAVEMENT AT BRIDGE ENDS | STD-1-8 | 5-10-21 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS | STD-4-1 | 4-08-05 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA | STD-4-2 | 4-08-05 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS | STD-4-3 | 3-02-02 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS | STD-4-4 | 6-10-96 |
| STANDARD PILE DETAILS | STD-5-1 | |
| STANDARD SEISMIC DETAILS | STD-6-1 | 12-08-23 |
| STANDARD SEISMIC DETAILS | STD-6-2 | 11-07-94 |
| STANDARD PROTECTIVE FENCE DETAIL | STD-8-5 | 5-10-21 |
| TRI-STAR STATE EMBLEM FINISH DETAILS | STD-8-6 | 10-03-18 |
| REINF. BAR SUPPORT DETAILS FOR CONC. SLABS | STD-9-1 | 10-07-08 |
| MISCELLANEOUS ABUTMENT & DRAINAGE DETAILS | STD-10-1 | 6-05-23 |
| MISCELLANEOUS ABUTMENT AND PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS | STD-10-2 | 6-05-23 |
| BRIDGE RAILING WITH STRUCTURAL TUBING | STD-11-1 | 4-15-20 |
| STD. DETAILS FOR PRESTRESSED BOX BEAMS | STD-14-3 | 3-6-24 |
| SLOPE PROTECTION | RD11-SA-1 | 1-09-24 |

## LIST OF SPECIAL PROVISIONS

| | PROV. NO. | LAST REV. DATE |
|---|---|---|
| REPAIR OF BRIDGE DECK CRACKS | .604CR | 02-08-21 |

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS

BRIDGE DWGS AND EST. BRIDGE QUANTITIES

JASON MILLER 05-25

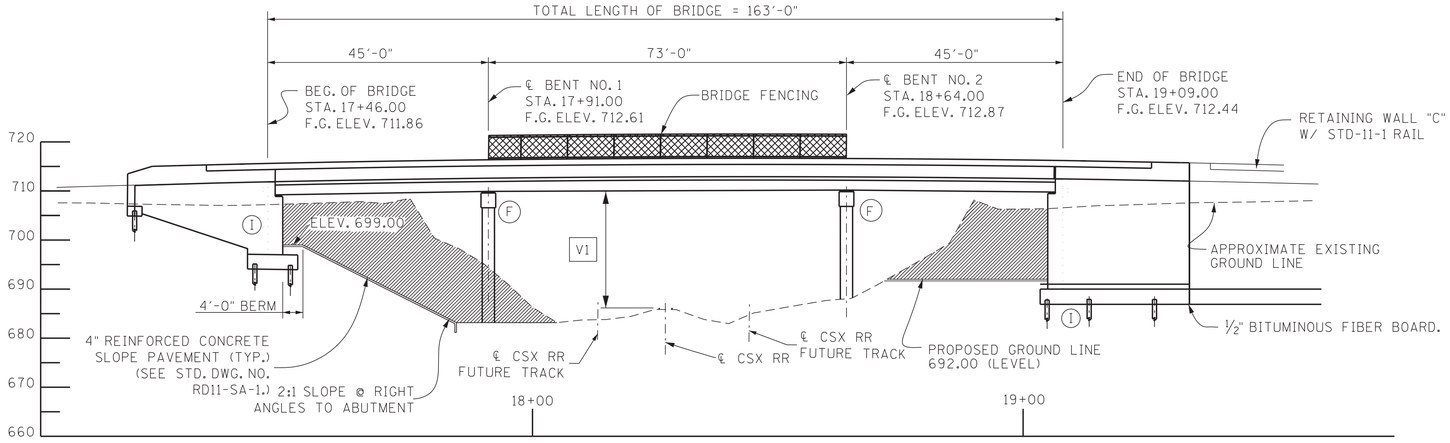
PIN NO. 124076.00

PE. NO. 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 5-20-25 | JM | GENERAL REVISIONS |




▨ DENOTES: EXCAVATION TO BE PAID FOR UNDER ROADWAY ITEM NO. 203-01

(I) DENOTES: INTEGRAL

(F) DENOTES: FIXED

## ELEVATION

(SCALE 1" = 10'-0")

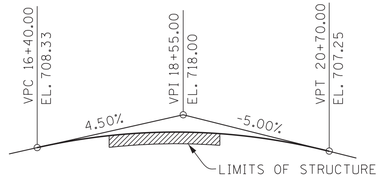
NOTE: ELEVATION VIEW IS PROJECTED FROM PLAN VIEW BELOW. DIMENSIONS MAY NOT BE THE SAME AS THE NOTED SCALE.

[V1] DENOTES: ACTUAL MINIMUM VERTICAL CLEARANCE =23'-5⅜"
STA. 17+99.10 SR320 (24'-2" RT.)
STA. 305+72.89 CSX RR. (21'-0" LT.)
T.O.R. ELEV. 685.86'
6' OFFSET FROM FUTURE TRACK
REQUIRED MINIMUM VERTICAL CLEARANCE =23'-0"

## CURVE DATA

CURVE SR320-33-2
PI 17+31.18
N 250,321.3889
E 2,210,287.0316
▲ 5° 00' 00" (LT)
D 7° 31' 09"
R 762.00
L 66.50
T 33.27
SE N.C.
DESIGN SPEED 40 MPH

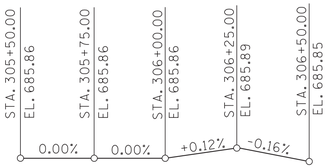
CURVE SR320-33-3
PI 19+34.37
N 250,382.3217
E 2,210,480.9179
▲ 5° 00' 00" (LT)
D 7° 31' 09"
R 762.00
L 66.50
T 33.27
SE N.C.
DESIGN SPEED 40 MPH




VC = 430.00'

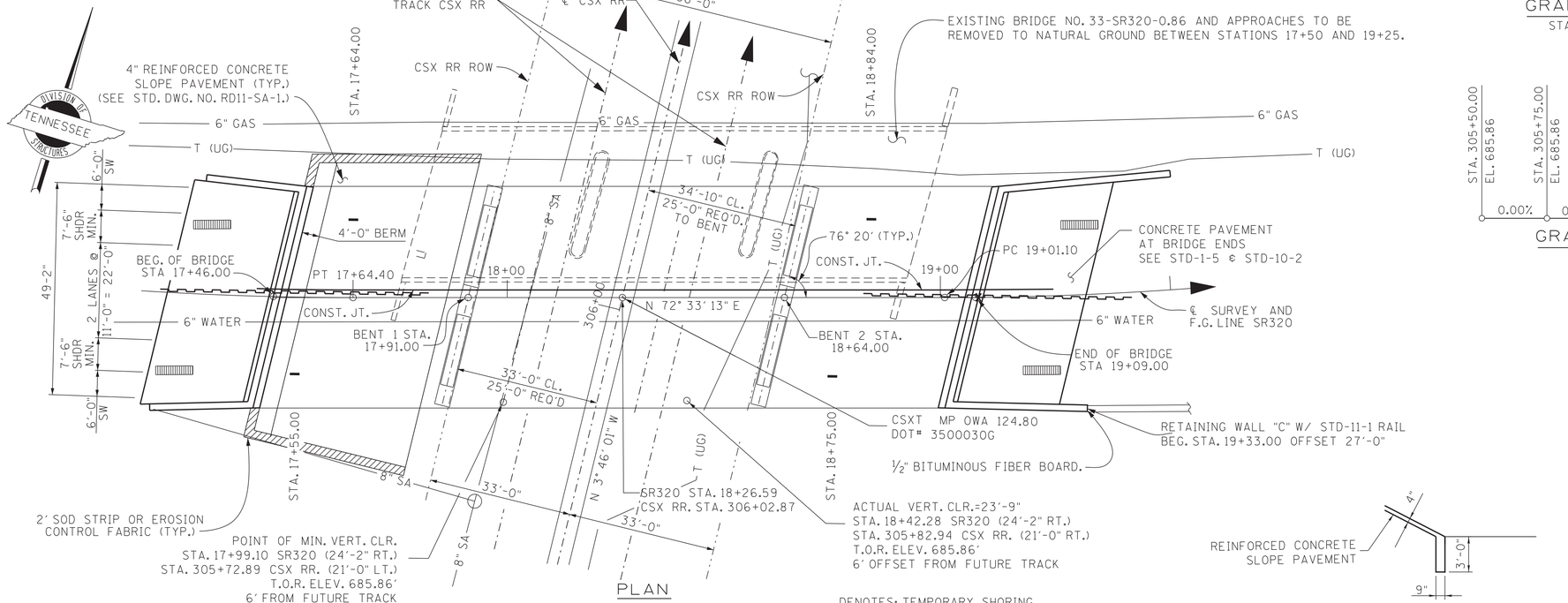
## GRADE SKETCH

STATE ROUTE 320




## GRADE SKETCH

CSX RAILROAD TOP OF RAIL




▬ DENOTES: DECK DRAINS - TYPE 2 GRATE DRAINS. SEE STD-1-2SS

▭ DENOTES: 2'-0" X 8'-7" END OF BRIDGE DRAIN SEE STD. DWGS. STD-1-6, 7, & 8

## PLAN

(SCALE 1" = 10'-0")

DENOTES: TEMPORARY SHORING (TO BE PAID FOR UNDER ITEM NO. 621-05.01)




## PAVEMENT DETAIL AT ROADWAY DITCH

2042 ADT = 17,180
37'-0" ROADWAY WITH 2-6'-0" SIDEWALKS AND STD-11-1 RAILS
DESIGN SPEED: 40 MPH

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# ⚠1 LAYOUT OF BRIDGE STATE ROUTE 320 OVER CSX RAILROAD BRIDGE ID NO. 33S43070001 STA. 18+27.50 HAMILTON COUNTY 2025

| | | |
|---|---|---|
| DESIGNED BY | JASON MILLER | DATE 9-20 |
| DRAWN BY | JERRY W. SIMPSON | DATE 10-20 |
| SUPERVISED BY | PAUL MILLER | DATE 9-20 |
| CHECKED BY | PAUL MILLER | DATE 1-21 |

CORRECT _____ ENGINEER OF STRUCTURES

U-95-425

$$$$SYTIME$$$$$$$
$$$$DGNSPEC$$$$$$$

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

## LIST OF DRAWINGS


| | DWG. NO. | LAST REV. DATE |
|---|---|---|
| LAYOUT OF BRIDGE | U-95-425 | 5-20-2025 |
| INDEX OF DRAWINGS | U-95-426 | 5-20-2025 |
| GENERAL NOTES | U-95-427 | 5-20-2025 |
| RAILROAD NOTES | U-95-428 | 5-20-2025 |
| ESTIMATED QUANTITIES | U-95-429 | 5-20-2025 |
| FOUNDATION DATA | U-95-430 | 5-20-2025 |
| FOUNDATION DATA | U-95-431 | 5-20-2025 |
| SUPERSTRUCTURE | U-95-432 | 5-20-2025 |
| SUPERSTRUCTURE DETAILS | U-95-433 | 5-20-2025 |
| SUPERSTRUCTURE DETAILS | U-95-434 | 5-20-2025 |
| PHASING SEQUENCE DETAILS | U-95-435 | 5-20-2025 |
| PRESTRESSED BOX-BEAM DETAILS SPANS 1 AND 3 | U-95-436 | 5-20-2025 |
| PRESTRESSED BOX-BEAM DETAILS SPAN 2 | U-95-437 | 5-20-2025 |
| ABUTMENT NO. 1 | U-95-438 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-439 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-440 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-441 | 5-20-2025 |
| ABUTMENT NO. 1 DETAILS | U-95-442 | 5-20-2025 |
| ABUTMENT NO. 2 | U-95-443 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-444 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-445 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-446 | 5-20-2025 |
| ABUTMENT NO. 2 DETAILS | U-95-447 | 5-20-2025 |
| BENT NO. 1 | U-95-448 | 5-20-2025 |
| BENT NO. 1 DETAILS | U-95-449 | 5-20-2025 |
| BENT NO. 2 | U-95-450 | 5-20-2025 |
| BENT NO. 2 DETAILS | U-95-451 | 5-20-2025 |
| FINAL FOUNDATION DATA | U-95-452 | 5-20-2025 |
| FINAL FOUNDATION DATA | U-95-453 | 5-20-2025 |
| BILL OF STEEL | U-95-454 | 5-20-2025 |
| BILL OF STEEL | U-95-455 | 5-20-2025 |


## LIST OF STANDARD DRAWINGS


| | DWG. NO. | LAST REV. DATE |
|---|---|---|
| STEEL SLIDER PLATE ASSEMBLIES FOR SINGLE SLOPE CONCRETE PARAPET AND BRIDGE DECK DRAIN DETAILS | STD-1-2SS | 5-31-24 |
| REINFORCED CONCRETE PAVEMENT AT BRIDGE ENDS | STD-1-5 | 6-05-23 |
| BRIDGE END DRAIN DETAILS 2'x8'-7" & 4'x8'-7" WITH PAVEMENT AT BRIDGE ENDS | STD-1-6 | 5-10-21 |
| BRIDGE END DRAIN DETAILS 2'x8'-7" & 4'x8'-7" WITH PAVEMENT AT BRIDGE ENDS | STD-1-7 | 5-10-21 |
| BRIDGE END DRAIN DETAILS 2'x8'-7" WITH PAVEMENT AT BRIDGE ENDS | STD-1-8 | 5-10-21 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS | STD-4-1 | 4-08-05 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA | STD-4-2 | 4-08-05 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS | STD-4-3 | 3-02-02 |
| STD. PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS | STD-4-4 | 6-10-96 |
| STANDARD PILE DETAILS | STD-5-1 | |
| STANDARD SEISMIC DETAILS | STD-6-1 | 12-08-23 |
| STANDARD PROTECTIVE FENCE DETAIL | STD-8-5 | 5-10-21 |
| TRI-STAR STATE EMBLEM FINISH DETAILS | STD-8-6 | 10-03-18 |
| REINF. BAR SUPPORT DETAILS FOR CONC. SLABS | STD-9-1 | 10-07-08 |
| MISCELLANEOUS ABUTMENT & DRAINAGE DETAILS | STD-10-1 | 6-05-23 |
| MISCELLANEOUS ABUTMENT AND PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS | STD-10-2 | 6-05-23 |
| BRIDGE RAILING WITH STRUCTURAL TUBING | STD-11-1 | 4-15-20 |
| STD. DETAILS FOR PRESTRESSED BOX BEAMS | STD-14-3 | 3-6-24 |
| SLOPE PROTECTION | RD11-SA-1 | 1-09-24 |


## LIST OF SPECIAL PROVISIONS


| | PROV. NO. | LAST REV. DATE |
|---|---|---|
| REPAIR OF BRIDGE DECK CRACKS | .604CR | 02-08-21 |


ROBERT LEFEVRE
REGISTERED ENGINEER
AGRICULTURE
NUMBER 121697
STATE OF TENNESSEE

Robert Lefevre 5/12/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

INDEX OF DRAWINGS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-426

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: ROBERT LEFEVRE DATE: 12/15/2023

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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
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| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
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| 1 | 05-20-2025 | JM | GENERAL REVISION |
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# GENERAL NOTES

CONSTRUCTION SPECIFICATIONS: TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (JANUARY 1, 2021 EDITION).

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 AS= .143 , SDS= .261, SD1=0.070, (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 MAY BE EITHER REMAIN-IN-PLACE STEEL OR PRECAST, PRESTRESSED CONCRETE PANELS. IN EITHER CASE, FORMS SHALL BATTACHED 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 DRAWINGS STD-4-1 THRU 4, STD-14-3, 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.

END-BEARING STEEL PILES AT BENTS: FOUNDATIONS FOR BENTS SHALL BE EXCAVATED TO THE BOTTOM OF FOOTING ELEVATIONS SHOWN. ROD SOUNDINGS SHALL THEN BE MADE AS DIRECTED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER OF STRUCTURES WILL DECIDE IF PILES WILL BE USED OR THE FOOTINGS LOWERED TO ROCK. COST OF ROD SOUNDINGS TO BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS. NO REINFORCING STEEL FOR BENT COLUMNS OR FOOTINGS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

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

END-BEARING STEEL PILES: TO BE 12X53 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 135 TONS FOR THE BENTS AND 135 TONS FOR THE ABUTMENTS. ALL PILES SHALL BE ASTM A709 GRADE 50 STEEL.

PILE TIPS: PILES SHALL BE EQUIPPED WITH CAST STEEL POINTS. ALSO, SEE STANDARD DRAWING STD-5-1 FOR ADDITIONAL NOTES.

RAILROAD CROSSING: THE CONTRACTOR SHALL CONDUCT HIS WORK SO AS TO PROTECT THE RAILROAD TRACKS AND PROPERTIES FROM ANY DAMAGE. THE WORK SHALL BE DONE IN ACCORDANCE WITH REGULATIONS STIPULATED BY CSX RAILROAD SO AS TO MAINTAIN CLEARANCE AND NOT INTERRUPT TRAFFIC.

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.

PROTECTIVE FENCE: RAILROAD PROTECTIVE FENCE IS REQUIRED TO BE BUILT IN ACCORDANCE WITH STANDARD DRAWING STD-8-5. DIMENSION "H" AS SHOWN ON STANDARD DRAWING STD-8-5 SHALL BE 8'-0".

PARAPET SYSTEM: BUILD PARAPETS ACCORDING TO STANDARD DRAWING STD-11-1. 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.

SLOPE PAVEMENT: PAVE SLOPES AND EXPOSED EARTH UNDER BRIDGE WITH A 4" THICK CONCRETE SLAB REINFORCED WITH 6 X 6 D4.5 X D4.5 WELDED WIRE REINFORCEMENT. THE WELDED WIRE REINFORCEMENT SHALL BE PLACED AT ONE-HALF THE DEPTH OF THE SLAB AND EXTEND TO WITHIN 3" OF ITS EDGE WITH A 1'-0" LAP REQUIRED ON ALL SHEETS. THE COST OF THE WELDED WIRE REINFORCEMENT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 709-04, REINFORCED CONCRETE SLOPE PAVEMENT. ONE-HALF INCH PREMOLDED EXPANSION JOINTS WITHOUT LOAD TRANSFERS SHALL BE FORMED AROUND ALL STRUCTURES AND FEATURES PROJECTING THROUGH, IN, OR AGAINST THE SLAB. THE SLAB SHALL BE GROOVED PARALLEL WITH AND AT RIGHT ANGLES TO THE UNDER-ROADWAY CENTERLINE AT 6'-0" SPACING IN EACH DIRECTION. DEPTH OF GROOVE SHALL NOT BE LESS THAN 1". SEE STD. DWG. NO. RD11-SA-1 FOR LIMITS OF SLOPE PROTECTION.

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. FOR GRADE SEPARATIONS, THE HORIZONTAL CLEARANCES MAY NOT BE REDUCED, NOR MAY THE VERTICAL CLEARANCES BE LESS THAN THE MINIMUM ACCEPTABLE FOR THE TYPE FACILITY CROSSED.

REQUIREMENTS AND RESTRICTIONS FOR PHASE CONSTRUCTION

A. THE PHASE CONSTRUCTION SEQUENCE MAY PROHIBIT THE EXTRACTION OF SOME SHEET PILING. ALL COSTS ASSOCIATED WITH SHEET PILING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

B. THE LOCATION OF LONGITUDINAL CONSTRUCTION JOINTS SHALL NOT BE CHANGED TO ACCOMMODATE STAY-IN-PLACE DECK FORMS.

C. NO SHEET PILES OR BEARING PILES MAY BE DRIVEN FROM THE EXISTING OR PROPOSED STRUCTURE.

D. 2 - 11'-0" TRAFFIC LANES SHALL BE MAINTAINED AT ALL TIMES.

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.

TEXTURE FINISH: IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH, ALL EXPOSED SURFACES OF THE WINGWALLS, ABUTMENT BEAMS, BENTS, AND EXTERIOR PORTIONS OF THE ENDWALLS SHALL RECEIVE AN APPLIED TEXTURE FINISH, (GRAY, AMS-STD-595A, COLOR NO. 36440). SEE APPLIED TEXTURE FINISH SKETCH SHEET U-95-429.

ROBERT LEFEVRE
REGISTERED ENGINEER
AGRICULTURE
No. 104857
STATE OF TENNESSEE

Robert LeFevre 12/15/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-427

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CONST. NO.: 33057-3228-94

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# RAILROAD GENERAL NOTES

1) ALL WORK ON, OVER, UNDER, OR ADJACENT TO CSXT RIGHT-OF-WAY SHALL BE DONE IN ACCORDANCE WITH THE CSXT SPECIAL PROVISIONS, WHICH CAN BE FOUND WITHIN THE CSXT PUBLIC PROJECTS MANUAL, AVAILABLE AT HTTPS://WWW.CSX.COM/INDEX.CFM/LIBRARY/FILES/ABOUT-US/PROPERTY/PUBLIC-PROJECT-MANUAL/.

2) NO WORK SHALL TAKE PLACE WITHIN 50 FEET OF THE CENTERLINE OF THE CSXT TRACK WITHOUT A RAILROAD FLAGMAN BEING PRESENT PROVIDE THE CSXT FIELD REPRESENTATIVE WITH AT LEAST THIRTY (30) BUSINESS DAYS ADVANCE NOTICE OF BEGINNING WORK WITHIN THIS AREA TO ALLOW FOR THE SCHEDULING OF THE RAILROAD FLAGMAN.

3) THE ENGINEER SHALL BE KEPT AWARE OF THE CONSTRUCTION SCHEDULE. THE CONTRACTOR SHALL PROVIDE TIMELY COMMUNICATION TO THE ENGINEER WHEN SCHEDULING THE WORK SUCH THAT THE ENGINEER MAY BE PRESENT DURING THE WORK. THE CONTRACTOR'S SCHEDULE SHALL NOT DICTATE THE WORK PLAN REVIEW SCHEDULE, AND FLAGGING SHALL NOT BE SCHEDULED PRIOR TO RECEIPT OF AN ACCEPTED WORK PLAN.

4) CONSTRUCTION CLEARANCES SHALL BE SUBJECT TO APPROVAL BY CSXT. TYPICALLY, REDUCTION IN CLEARANCE FOR CONSTRUCTION IS NOT PERMITTED.

5) CONTRACTOR SHALL MAINTAIN ALL DITCHES AND DRAINAGE STRUCTURES FREE OF SILT OR OTHER OBSTRUCTIONS THAT MAY RESULT FROM THEIR OPERATIONS. CONTRACTOR, UPON COMPLETION OF THE PROJECT, SHALL LEAVE CSXT PROPERTY IN A NEAT CONDITION, SATISFACTORY TO THE CSXT REPRESENTATIVE.

6) THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN A GEOTEXTILE FABRIC BALLAST PROTECTION SYSTEM TO PREVENT DEBRIS AND FINES FROM FOULING THE BALLAST. THE BALLAST PROTECTION SYSTEM SHALL EXTEND 25' BEYOND THE OUTER LIMITS OF THE BRIDGE ON BOTH SIDES.

7) THE CONTRACTOR MAY NOT USE CSXT RIGHT-OF-WAY FOR STORAGE OF MATERIALS OR EQUIPMENT DURING CONSTRUCTION WITHOUT PRIOR APPROVAL FROM CSXT.

8) CSXT SHALL BE FURNISHED AS-BUILT DRAWINGS SHOWING ACTUAL CLEARANCES AS CONSTRUCTED PRIOR TO PROJECT COMPLETION AND CLOSE-OUT.

9) THE CONTRACTOR SHALL REFERENCE THE CSXT CONSTRUCTION SUBMISSION CRITERIA FOR CONSTRUCTION RELATED SUBMITTAL REQUIREMENTS WHILE WORKING ON, OVER OR ADJACENT TO CSXT RIGHT-OF-WAY. THE CONSTRUCTION SUBMISSION CRITERIA CAN BE FOUND WITHIN THE PUBLIC PROJECT MANUAL. THE CONTRACTOR(S) IS REQUIRED TO SUBMIT A DETAILED WORK PLAN FOR REVIEW AND APPROVAL BY CSXT, INCLUDING BUT NOT LIMITED TO THE BELOW ITEMS:

A) ACCESS MEANS AND METHODS
B) EMERGENCY ACTION PLAN
C) GENERAL MEANS AND METHODS
D) STAMPED FOUNDATION INSTALLATION/PILE INSTALLATION
E) STAMPED GIRDER ERECTION AND STABLIZATION
F) STAMPED MVC CALCULATIONS
G) OVERHANG FALSE WORK WITH CALCULATIONS
H) PROTECTIVE FENCING INSTALLATION
I) STAMPED EXISTING BRIDGE DEMOLITION
J) EXCAVATION SPOILS & HANDLING
K) CLEARING AND GRUBBING
L) RIGHT OF WAY RESTORATION
M) CONSTRUCTION SCHEDULE & UPDATE

10) THE CONTRACTOR SHALL NOTIFY AND COORDINATE THEIR WORK WITH THE ON-SITE CSXT REPRESENTATIVE.

11) "ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATION LINES. THE CONTRACTOR SHALL CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FOR THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED FOR THE CONTRACTOR. THE CONTRACTOR SHALL AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, THE LINE SHALL BE POTHOLED MANUALLY WITH CAREFUL HAND EXCAVATION BY THE CONTRACTOR AND PROTECTED BY THE CONTRACTOR DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

12) ALL SOILS EXCAVATED WITHIN CSXT'S RAILROAD RIGHT-OF-WAY SHALL REMAIN ON CSXT'S RIGHT-OF-WAY. FOR ANY EXCAVATED SOIL THAT REQUIRES OFF-SITE DISPOSAL, THE LICENSEE IS REQUIRED TO USE ONLY CSXT APPROVED LABORATORIES, TRANSPORTERS, AND DISPOSAL FACILITY THAT ARE IN COMPLIANCE WITH ALL APPLICABLE ENVIRONMENTAL LAWS AND CSXT'S POLICIES AND PROCEDURES. SOIL RESULTING FROM EXCAVATION OUTSIDE OF CSXT'S RAILROAD RIGHT-OF-WAY OR RAILROAD OWNED PROPERTY SHALL NOT BE BROUGHT ONTO CSXT'S PROPERTY AND THEREFORE MUST BE STORED OFF CSXT PROPERTY. CSXT SHALL NOT INCUR ANY COSTS RELATED TO THE DISPOSAL OF SOILS GENERATED DUE TO CONSTRUCTION ACTIVITY RELATED TO THIS PROJECT. FOR THE CSXT SOIL AND WATER MANAGEMENT POLICY, PLEASE SEE THE CSXT PUBLIC PROJECT MANUAL LOCATED HERE: HTTPS://WWW.CSX.COM/INDEX.CFM/LIBRARY/FILES/ABOUT-US/PROPERTY/PUBLIC-PROJECT-MANUAL/

13) RAIROAD INSURANCE IS REQUIRED PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES ON CSXT RIGHT OF WAY. SUBMIT RAILROAD INSURANCE TO CSXT AT INSURANCEDOCUMENTS@CSX.COM FOR CSXT REVIEW AN APPROVAL WORK WILL NOT BE ALLOWED WITHIN THE CSXT RIGHT OF WAY WITHOUT THE INSURANCE APPROVAL FROM CSXT AND A RAILROAD FLAGMAN CANNOT BE SCHEDULED. NOTE APROVAL INSURANCE CAN TAKE UP TO 30 TO 45 DAYS.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

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RAILROAD NOTES
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-428

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| 1 | 05-20-2025 | JM | GENERAL REVISION |
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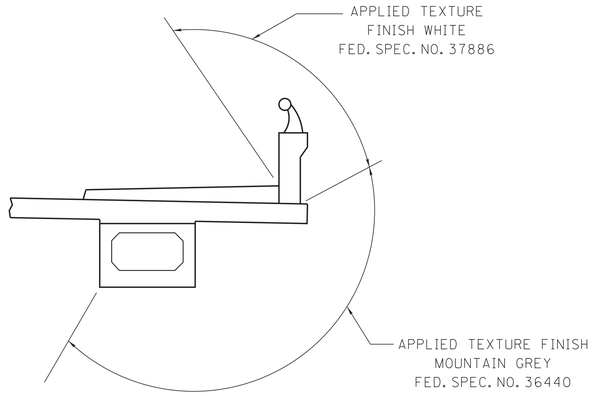
## ESTIMATED QUANTITIES

| | ITEM NO. | DESCRIPTION | UNIT | TOTAL | SUPERSTRUCTURE | ABUTMENT 1 | BENT 1 | BENT 2 | ABUTMENT 2 |
|---|---|---|---|---|---|---|---|---|---|
| (2)(12) | 202-04.01 | REMOVAL OF STRUCTURES (BR. NO. 33-SR320-0.86) | L.S. | 1 | | | | | |
| (3) | 204-02.01 | DRY EXCAVATION (BRIDGES) | C.Y. | 2,024 | | 716 | 125 | 125 | 1,058 |
| (9) | 303-01.02 | GRANULAR BACKFILL (BRIDGES) | TON | 1,985 | | 555 | | | 1,430 |
| (8) | 604-02.03 | EPOXY COATED REINFORCING STEEL | LB | 92,655 | 84,930 | 3,762 | | | 3,963 |
| (7) | 604-03.01 | CLASS 'A' CONCRETE (BRIDGES) | C.Y. | 831 | | 185 | 172 | 156 | 318 |
| (8) | 604-03.02 | STEEL BAR REINFORCEMENT (BRIDGES) | LB. | 165,612 | 1,107 | 29,346 | 43,177 | 38,725 | 53,257 |
| (1) | 604-03.04 | PAVEMENT AT BRIDGE ENDS | S.Y. | 262 | | | | | |
| | 604-03.09 | CLASS 'D' CONCRETE (BRIDGE DECK) | C.Y. | 247 | 247 | | | | |
| | 604-04.01 | APPLIED TEXTURE FINISH (NEW STRUCTURES) | S.Y. | 1,413 | | | | | |
| | 604-04.41 | THREE STAR STATE EMBLEM | EA. | 4 | | 2 | | | 2 |
| | 604-05.31 | BRIDGE DECK GROOVING (MECHANICAL) | S.Y. | 825 | 825 | | | | |
| (13) | 606-03.03 | STEEL PILES (12 INCH) | L.F. | 3,249 | | 927 | 262 | 311 | 1,749 |
| (10) | 606-03.06 | PILE TIPS (STEEL PILES, 12 INCH) | EACH | 191 | | 46 | 28 | 28 | 89 |
| | 610-10.45 | DECK DRAINS (GRATE TYPE 2) | EA. | 4 | | | | | |
| (5) | 615-02.19 | PRESTRESSED CONCRETE BOX BEAM (24" X 36") | L.F. | 1,412 | | | | | |
| (11) | 617-02 | BRIDGE DECK CRACK SEAL | L.F. | 211 | | | | | |
| (11) | 617-05 | SEALANT (HMWM) | GAL. | 3 | | | | | |
| (4) | 620-05 | CONCRETE PARAPET WITH STRUCTURAL TUBING | L.F. | 440 | | | | | |
| | 621-05.01 | TEMPORARY SHORING | S.F. | 1,200 | | | | | |
| | 707-07.01 | CHAIN-LINK FENCE (BRIDGES) | S.F. | 1168 | | | | | |
| | 709-04 | REINFORCED CONCRETE SLOPE PAVEMENT | C.Y. | 31 | | | | | |
| (6) | 710-09.01 | 6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM | L.F. | 135 | | 54 | | | 81 |
| | 710-09.02 | 6" PIPE UNDERDRAIN | L.F. | 50 | | 30 | | | 20 |




## APPLIED TEXTURE FINISH SKETCH

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

## 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 (3 SPANS AT 39' SIMPLY SUPPORTED CONCRETE DECK BEAM BRIDGE WITH CONCRETE SUBSTRUCTURE. 36'-4" OUT-TO-OUT, BRIDGE ID NO. 33S43070001. EXISTING LAYOUT AND TYPICAL SECTION DWG. NO'S B-7-67 AND B-2-130.

(3) NOTE: EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS 1, 2 AND BENT 1 AND EXISTING GROUND AT BENT 2.

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

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

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

(7) NOTE: THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF 54 ANCHOR BOLT ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS A CONCRETE (BRIDGES), ITEM NO. 604-03.01.

(8) NOTE: MECHANICAL BAR SPLICERS MUST BE ON THE TDOT QUALIFIED PRODUCTS LIST 27. THE BAR SPLICERS SHALL MEET AASHTO LRFD SPECIFICATIONS FOR MECHANICAL CONNECTION. WHEN EPOXY COATING IS REQUIRED, THE EXPOSED THREADS SHALL BE REPAIRED AFTER SPLICING ACCORDING TO SECTION 907 OF THE STANDARD SPECIFICATIONS. THE COST OF FURNISHING THE BAR SPLICERS, (AND EPOXY COATING WHEN REQUIRED) INCLUDING ALL LABOR AND MATERIALS NECESSARY FOR COMPLETE INSTALLATION, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM NO. 604-02.03 AND ITEM NO. 604-03.02.

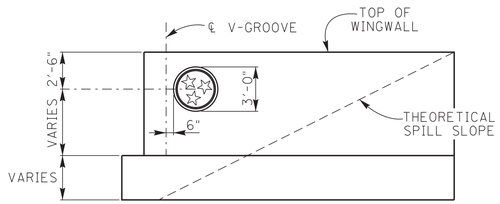
(9) NOTE: GRANULAR BACKFILL SHALL BE TYPE "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING STD-10-1.

(10) NOTE: THE UNIT PRICE BID FOR THE CAST STEEL POINTS SHALL INCLUDE FURNISHING AND INSTALLATION TO THE PILES.

(11) NOTE: INCLUDES ALL COSTS FOR INSTALLING THE BRIDGE DECK CRACK SEALER (HMWM) INCLUDING CRACK PREPARATION, CLEANING, LABOR, AND ALL MISCELLANEOUS MATERIALS REQUIRED TO SEAL THE LONGITUDINAL CONSTRUCTION JOINT ACCORDING TO SPECIAL PROVISION 604CR AND MANUFACTURERS' SPECIFICATIONS. CRACK SEALING SHALL BE DONE AT THE END OF CONSTRUCTION TO ALLOW SHRINKAGE OF DECK CONCRETE CAUSING THE CRACK TO OCCUR.

(12) NOTE: ALL SUBSTRUCTURE UNITS WITHIN CSXT ROW SHALL BE CUT OFF A MINIMUM OF 3'-0" BELOW THE FINISHED GRADE. THE DITCH LINE INVERT, OR AS OTHERWISE DIRECTED BY THE ENGINEER.

(13) NOTE: THE COST OF DRILLING THE HOLES IN THE TOP OF THE PILES TO BE INCLUDED IN THE COST OF THE PILES.




TRI-STAR TREATMENT
AT ABUTMENT WINGWALL
(TYP. AT EACH WINGWALL)

ROBERT LEFEVRE
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
10485
5/20/2025

STATE OF TENNESSEE
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# ESTIMATED QUANTITIES
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
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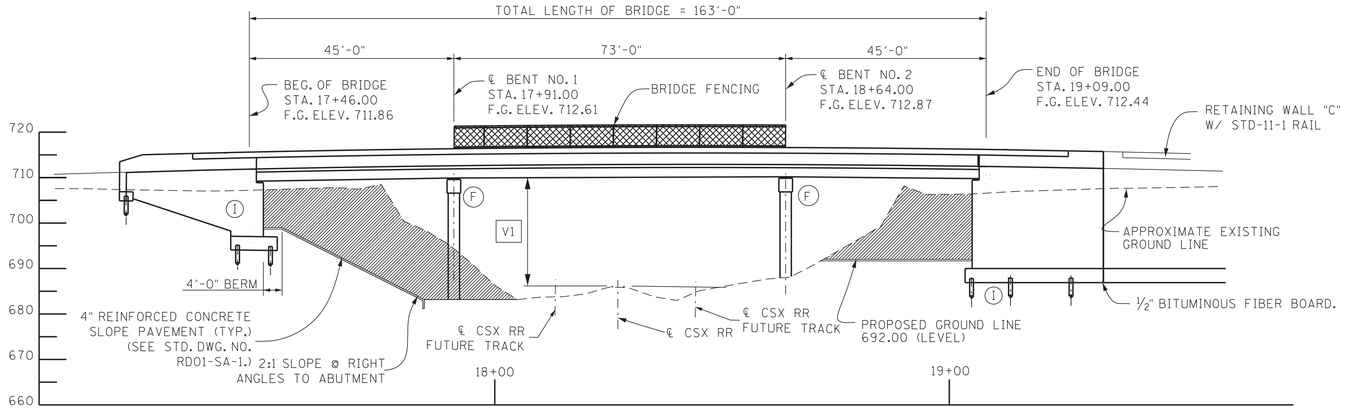


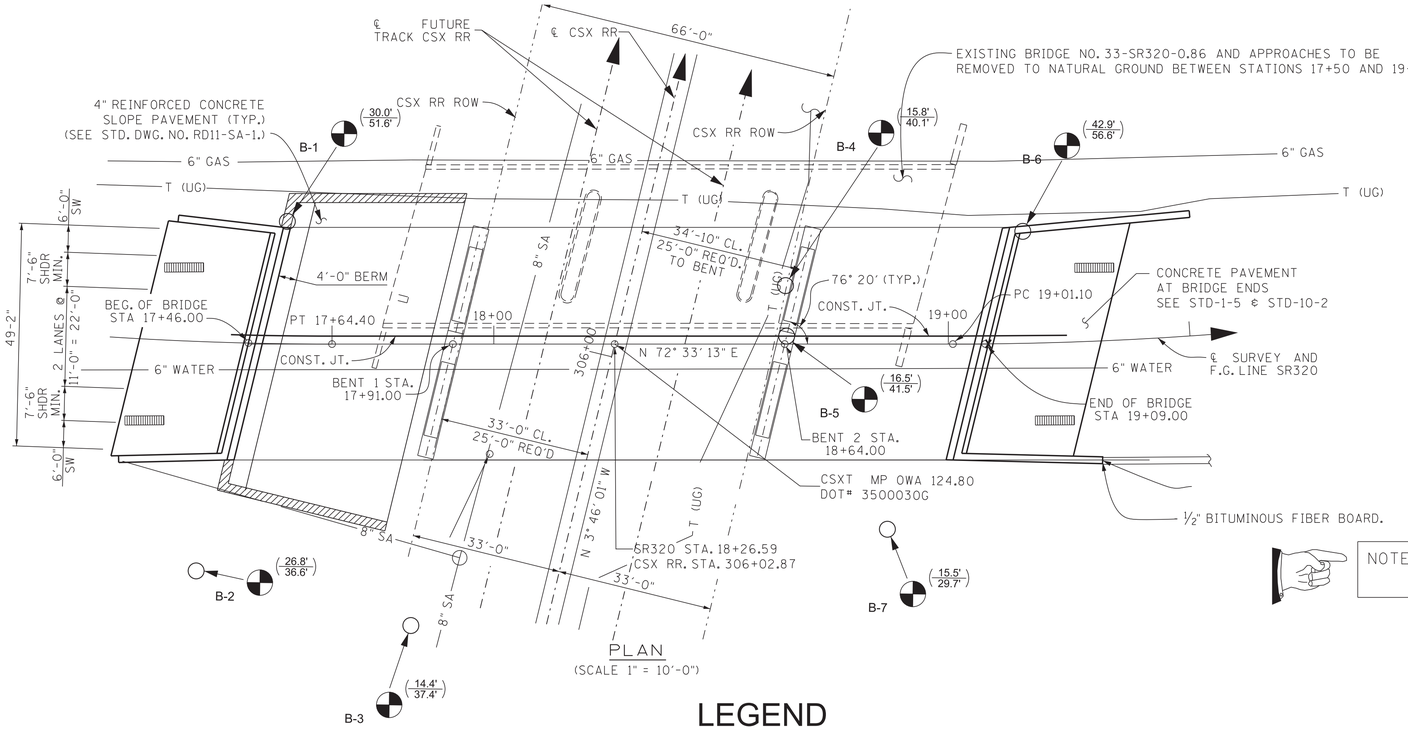

▨ DENOTES: EXCAVATION TO BE PAID FOR UNDER ROADWAY ITEM NO. 203-01

(I) DENOTES: INTEGRAL

(F) DENOTES: FIXED

## ELEVATION

(SCALE 1" = 10'-0")




## PLAN

(SCALE 1" = 10'-0")

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

## LEGEND

B-1 (24.5' / 70.3') — BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)

PIN NO.: 124076.00

| | | |
|---|---|---|
| DESIGN BY: | JASON MILLER | DATE: 12/15/2023 |
| DRAWN BY: | JASON MILLER | DATE: 12/15/2023 |
| SUPERVISED BY: | ROBERT LEFEVRE | DATE: 12/15/2023 |
| CHECKED BY: | | DATE: |

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# FOUNDATION DATA
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
# 2025

U-95-430

5/20/2025 11:42:31 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
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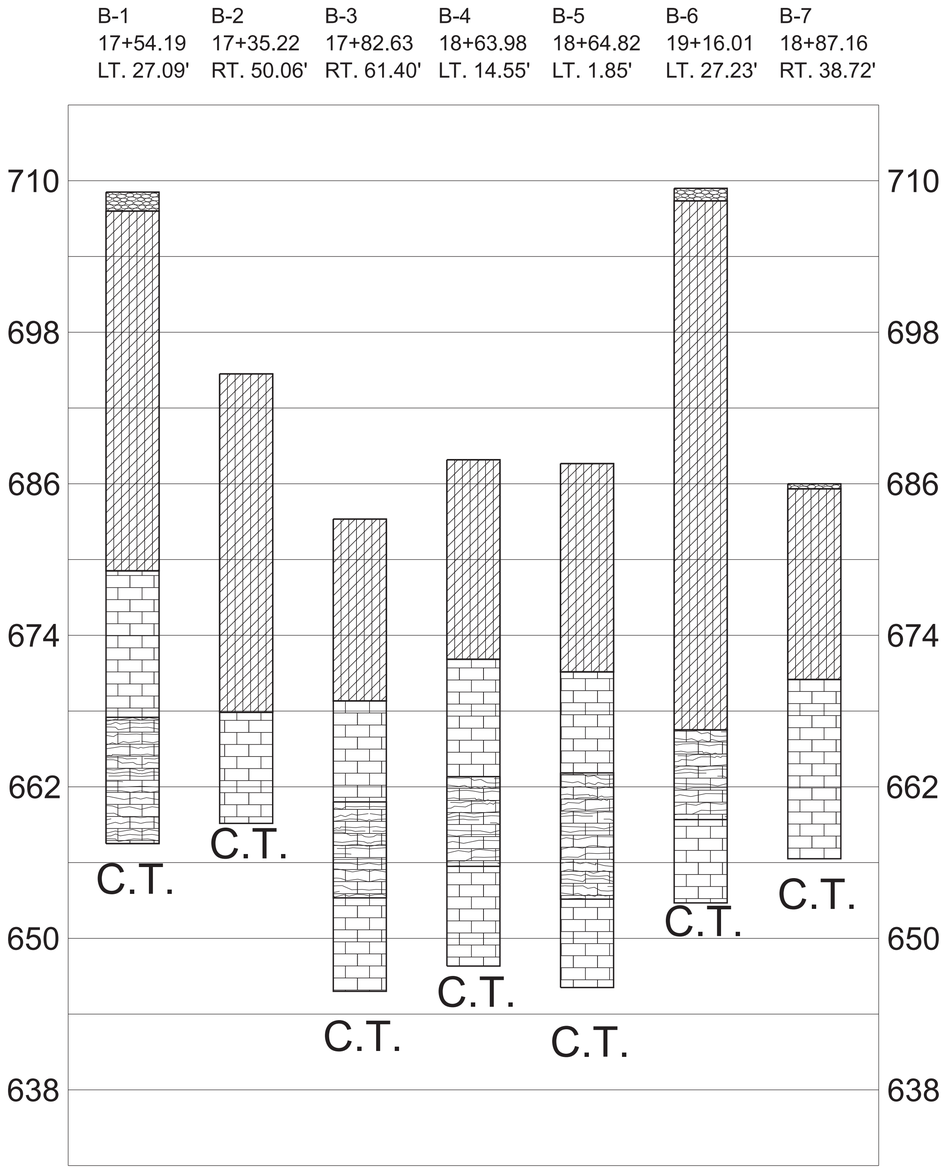


| BORING NO. | STATION | OFFSET | GROUND ELEVATION | ROCK ELEVATION | TOTAL DEPTH |
|---|---|---|---|---|---|
| 1 | 17+54.19 | LT. 27.09' | 709.07 | 679.07 | 51.6' |
| 2 | 17+35.22 | RT. 50.06' | 694.70 | 667.9 | 36.6' |
| 3 | 17+82.63 | RT. 61.40' | 683.21 | 668.81 | 37.4' |
| 4 | 18+63.98 | LT. 14.55' | 687.93 | 672.13 | 40.1' |
| 5 | 18+64.82 | LT. 1.85' | 687.58 | 671.08 | 41.5' |
| 6 | 19+16.01 | LT. 27.23' | 709.41 | 666.51 | 56.6' |
| 7 | 18+87.16 | RT. 38.72' | 685.98 | 670.48 | 29.7' |

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

LEGEND

- ASPHALT
- SILTY CLAY
- LIMESTONE
- SHALY LIMESTONE

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# FOUNDATION DATA
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-431

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: DATE:

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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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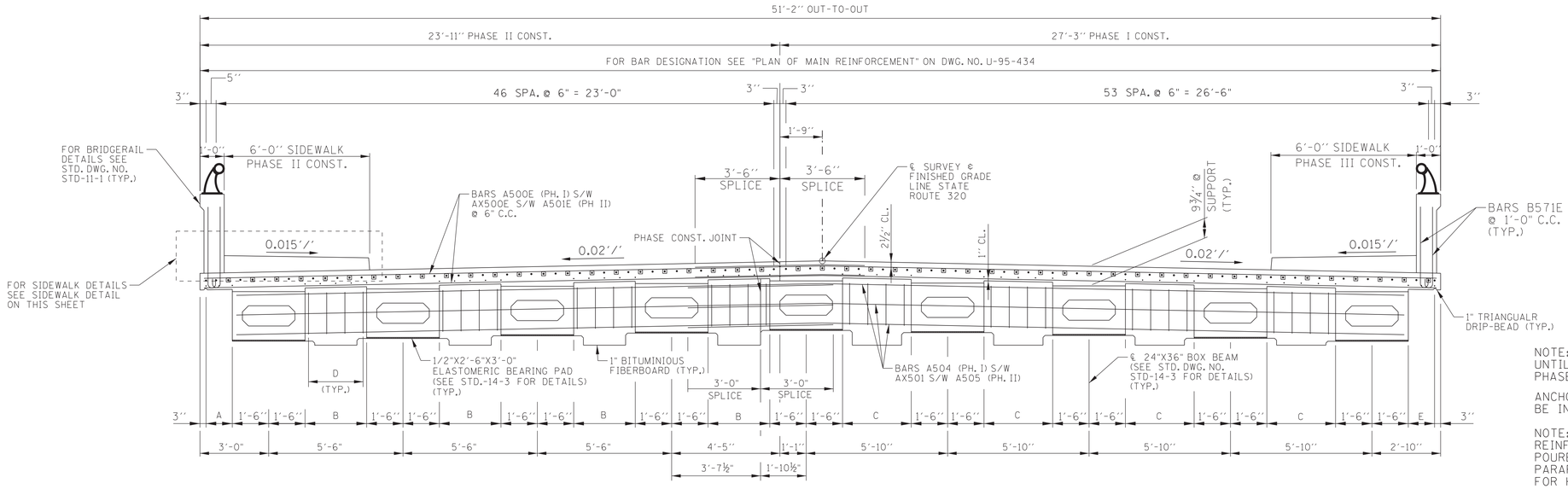



⊗ DENOTES CUT-OFF BARS

NOTE: MECHANICAL BAR SPLICES REQUIRED FOR PHASING.

A DENOTES: BARS A502E S/W BARS A502E S/W BARS A503E 2 SPA. @ 7½" =1'-3"

B DENOTES: BARS A502E S/W BARS A502E S/W BARS A503E 4 SPA. @ 7½" = 2'-6"

C DENOTES: BARS A502E S/W BARS A502E S.W BARS A503E 4 SPA. @ 8½" = 2'-10"

D DENOTES: BARS L400 3 SPA. @ 9" = 2'-3" (TYP. BETWEEN BEAMS)

E DENOTES: BARS A502E S/W BARS A502E S/W BARS A503E 2 SPA. @ 6½" =1'-1"

## TYPICAL CROSS-SECTION

(LOOKING FORWARD ON SURVEY)

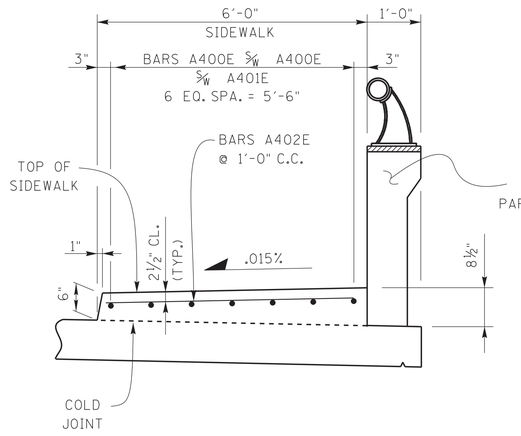
NOTE: NO PORTION OF THE CURBS OR PARAPETS SHALL BE POURED UNTIL THE ENTIRE DECK SLAB IS IN PLACE, UNLESS REQUIRED FOR PHASED CONSTRUCTION.

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

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. WHEN POURING PARAPET, PROVISIONS SHALL BE MADE FOR SETTING ANCHOR BOLTS FOR HANDRAILS. ALSO SEE STD. DWG. NO. STD-11-1.

NOTE: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR SUPPORTING THE BEAMS TO PREVENT DAMAGE DUE TO TWISTING OR OVERTURNING DURING ALL PHASES OF CONSTRUCTION. IT IS STRONGLY RECOMMENDED THAT THE TEMPORARY ERECTION DIAPHRAGMS BE INSTALLED PRIOR TO PLACING ANY LOADS ON THE BEAMS. HOWEVER, TEMPORARY ERECTION DIAPHRAGMS MUST BE IN PLACE IN THE SPAN AT THE TIME THE SLAB IS POURED IN SAID SPAN.

NOTE: THE SUPPORT DIAPHRAGMS AT THE BENTS 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.




FOR DEAILS OF CONCRETE PARAPET WITH STRUCTURAL TUBING SEE STD. DWG. STD-11-1

## SIDEWALK DETAIL

(TYP. EACH SIDEWALK)

(FOR CLARITY, OTHER SLAB AND PAPAPET REINFORCEMENT NOT SHOWN.)

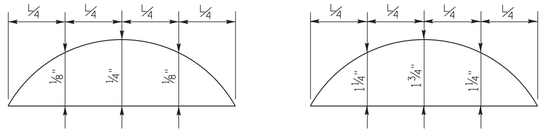
NOTE: SIDEWALKS TO EXTEND ALONG PAVEMENT AT BRIDGE ENDS. ALL SIDEWALK CONCRETE SHALL BE INCLUDED IN THE QUANTITY FOR ITEM 604-03.01 CLASS 'A' CONCRETE (BRIDGES)

NOTE: NO PORTION OF THE SIDEWALK SHALL BE POURED UNTIL THE ENTIRE PARAPET IS IN PLACE. THE LEFT LANE SIDEWALK SHALL BE POURED IN PHASE II, THE RIGHT LANE SIDEWALK SHALL BE POURED IN PHASE III.

PARAPET TO BE CONSTRUCTED IN ACCORDANCE WITH STD-11-1, EXCEPT AS MODIFIED AT LEFT. CLASS "A" CONCRETE QUANTITY INCREASES 0.021 C.Y. PER L.F. PER RAIL.

NOTE: SPLICE LENGTH = 2'-11" FOR NO. 4 EPOXY BARS IN SIDEWALK.

| ESTIMATED QUANTITIES | | |
|---|---|---|
| CONCRETE CLASS "D" (BRIDGE DECK) C.Y. | EPOXY COATED REINFORCING STEEL LB. | REINFORC-ING STEEL L.B. |
| 247 | 84930 | 1107 |




SPANS 1 ℄ 3 SPANS 2

## DEAD LOAD CORRECTION CURVE

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

IF PRESTRESSED DECK PANELS ARE USED AND THE BEAMS ARE PROFILED AFTER PANELS ARE IN PLACE, REDUCE THE DEAD LOAD CORRECTION VALUES SHOWN BY 25%.

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE 104681 STATE OF TENNESSEE

5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# SUPERSTRUCTURE STATE ROUTE 320 OVER CSX RAILROAD BRIDGE ID NO. 33S43070001 STA. 18+27.50 LOG MILE 0.86 HAMILTON COUNTY 2025

U-95-432

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

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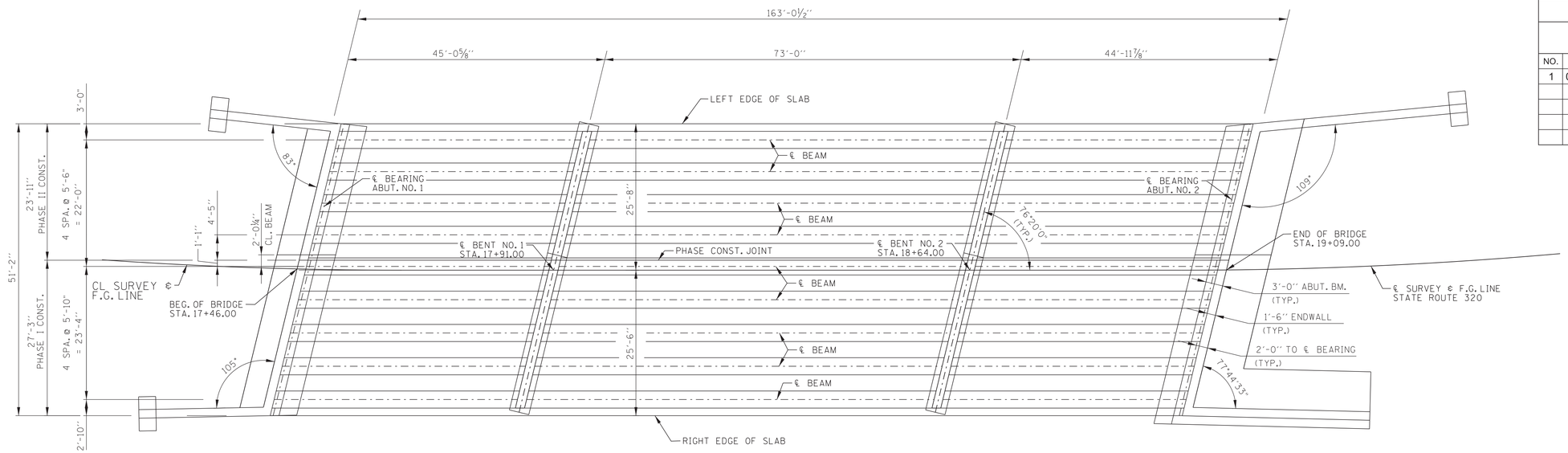
CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

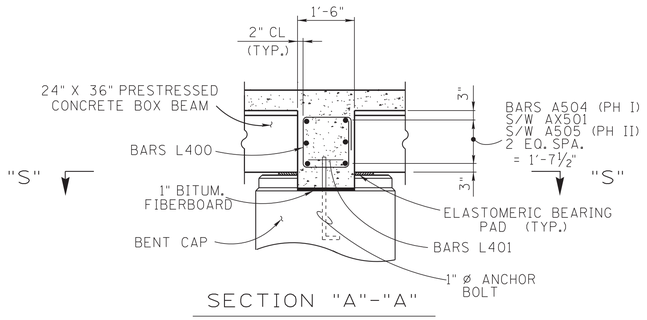
REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

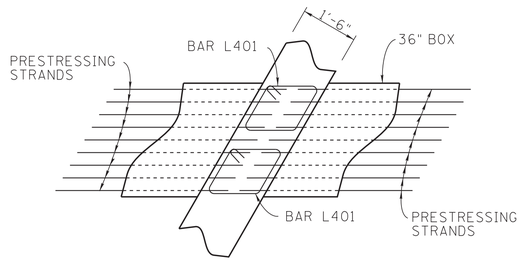



# FRAMING PLAN

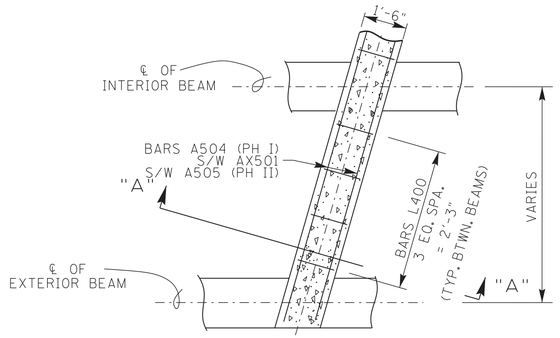
NOTE: BRIDGE TO BE CONSTRUCTED STRAIGHT. THE EDGES OF SLAB TO BE PARALLEL TO THE TANGENT FROM BEGINNING TO END OF BRIDGE.




SECTION "A"-"A"




SECTION "S"-"S"




PART-PLAN OF DIAPHRAGM

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE No. 104855 STATE OF TENNESSEE

Robert LeFevre 05/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

# SUPERSTRUCTURE DETAILS
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
# 2025

U-95-433

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

5/20/2025 12:21:30 PM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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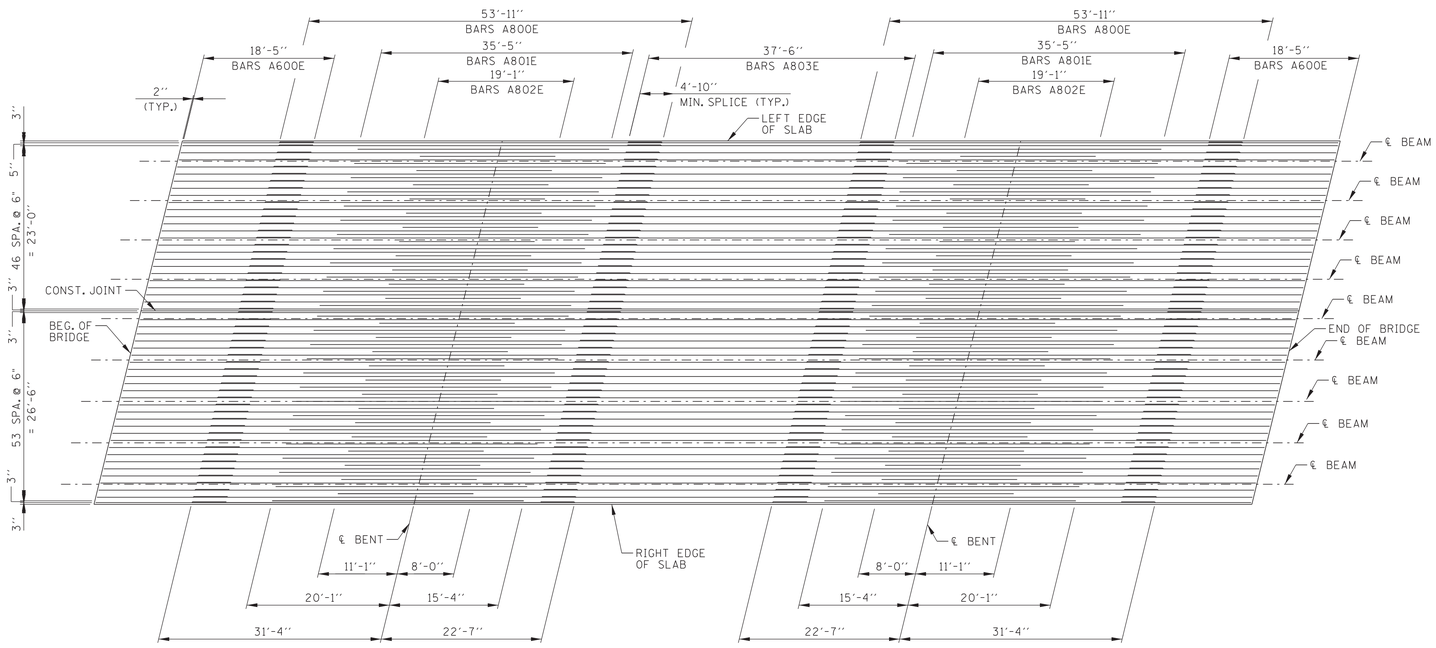
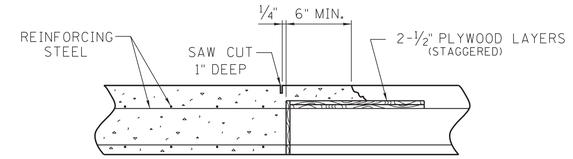
| | - - | | |
| | - - | | |

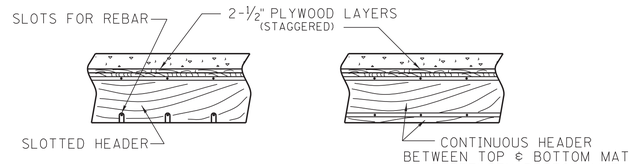



PLAN OF MAIN REINFORCEMENT

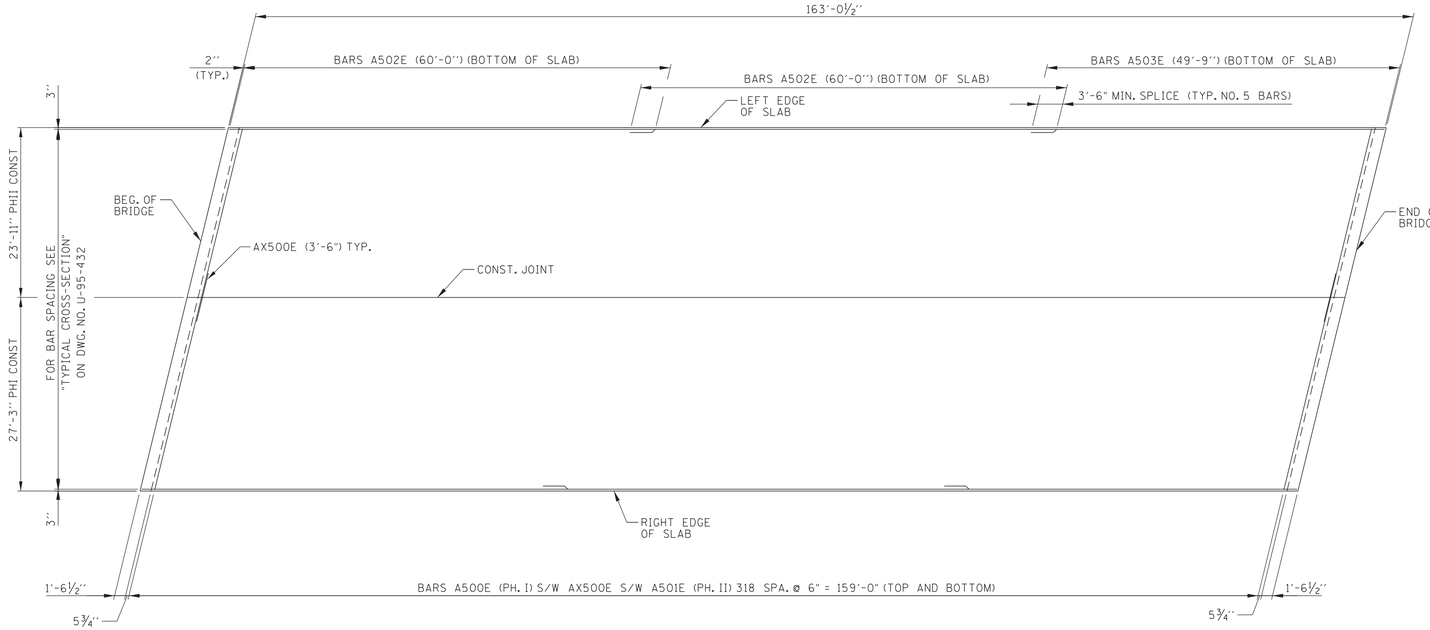
DECK CONCRETE POURING SEQUENCE: SLAB CONSTRUCTION JOINTS MAY BE LOCATED AT THE CONTRACTOR'S OPTION SUBJECT TO THE FOLLOWING:
1. NO CONSTRUCTION JOINT MAY BE LOCATED CLOSER THAN 10 FEET OR FURTHER THAN 15 FEET FROM AN INTERIOR SUPPORT.
2. THE SLAB IN THE MIDDLE SECTION OF BOTH ADJACENT SPANS MUST BE POURED 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 DETAIL SHOWN BELOW.




SLAB CONSTRUCTION JOINT DETAIL




ALTERNATE HEADER DETAILS




SLAB PLAN

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE NUMBER 120607 STATE OF TENNESSEE

Robert LeFevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# SUPERSTRUCTURE DETAILS
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
# 2025

U-95-434

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

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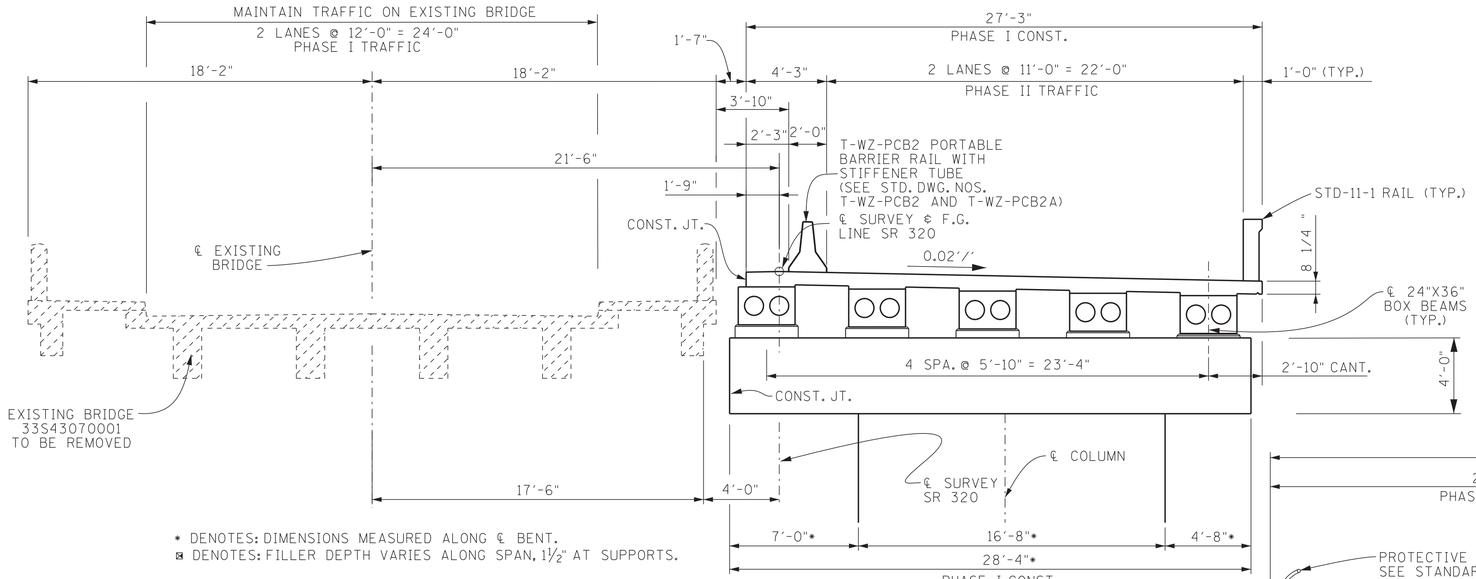
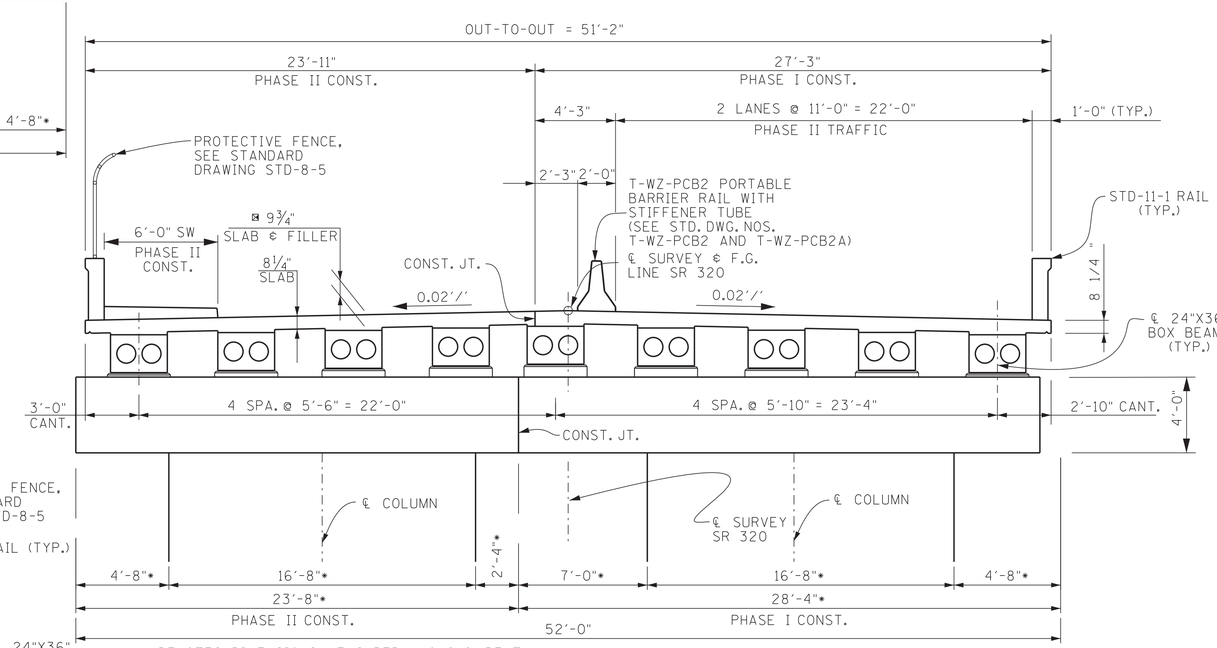



* DENOTES: DIMENSIONS MEASURED ALONG ℄ BENT.
◙ DENOTES: FILLER DEPTH VARIES ALONG SPAN, 1½" AT SUPPORTS.

## PHASE I CROSS-SECTION

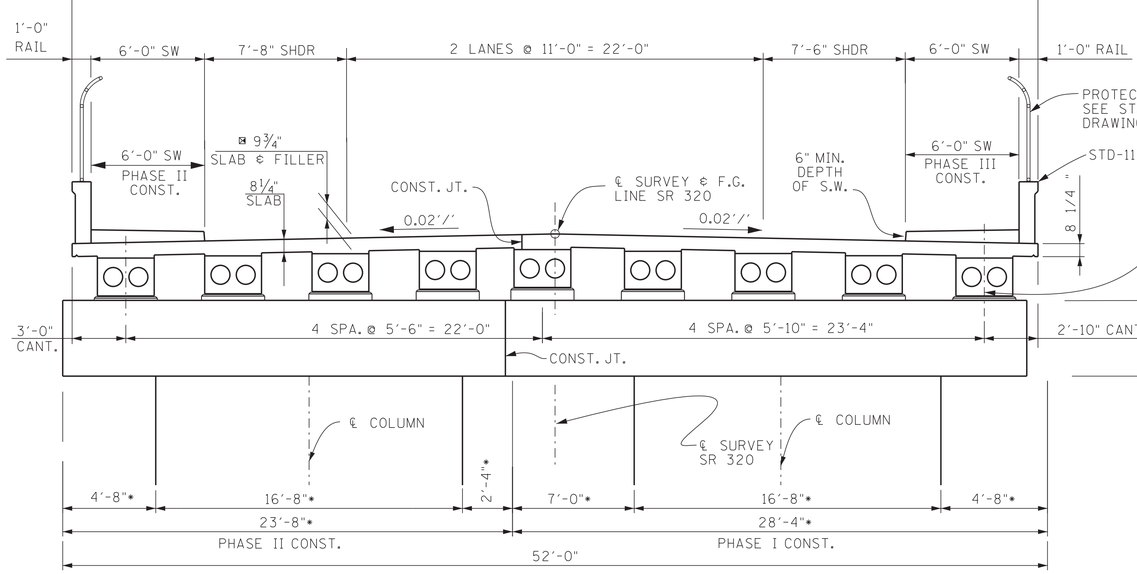
(LOOKING FORWARD ON SURVEY)




* DENOTES: DIMENSIONS MEASURED ALONG ℄ BENT.
◙ DENOTES: FILLER DEPTH VARIES ALONG SPAN, 1½" AT SUPPORTS.

## PHASE II CROSS-SECTION

(LOOKING FORWARD ON SURVEY)




* DENOTES: DIMENSIONS MEASURED ALONG ℄ BENT.
◙ DENOTES: FILLER DEPTH VARIES ALONG SPAN, 1½" AT SUPPORTS.

## PHASE III CROSS-SECTION

(LOOKING FORWARD ON SURVEY)

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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| | - - | | |
| | - - | | |

ROBERT LEFEVRE — REGISTERED ENGINEER — AGRICULTURE — No. 119488 — STATE OF TENNESSEE
Robert Lefevre 12 DEC 2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

# PHASING SEQUENCE DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-435

5/20/2025 11:39:34 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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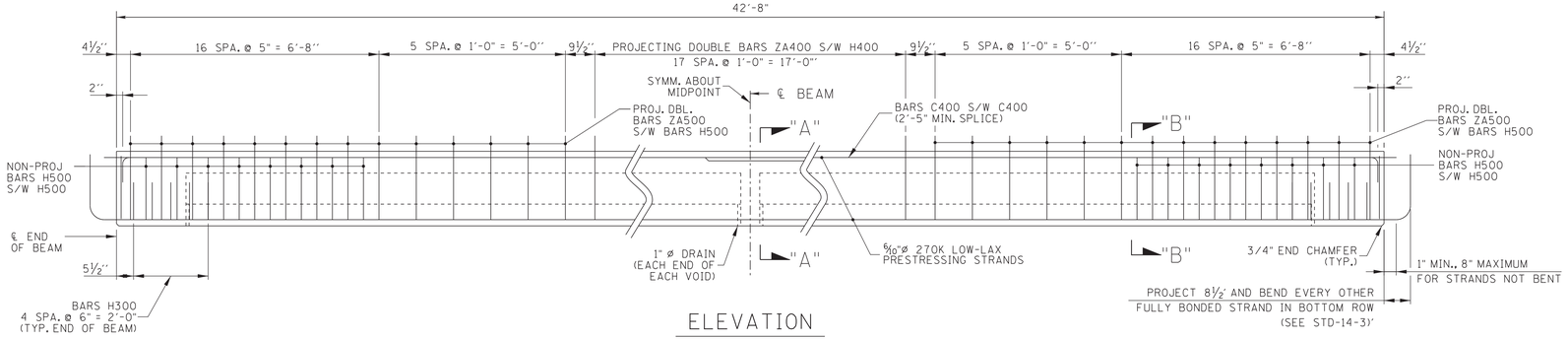


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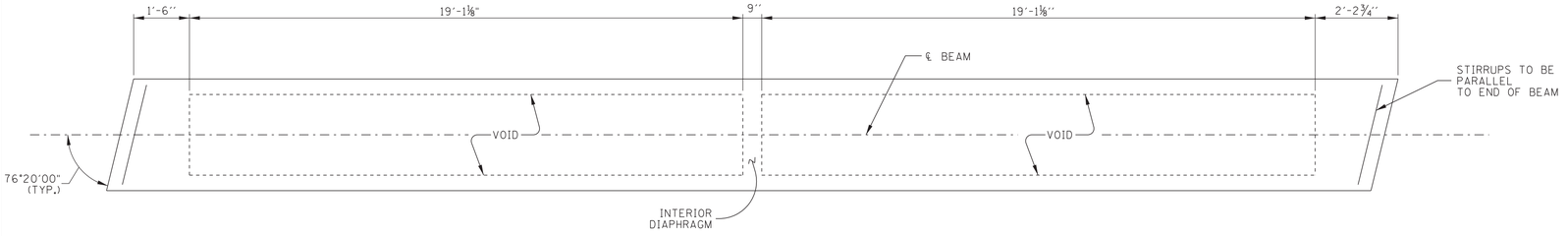



PLAN

## BEAM NOTES

NOTE: SEE STD-14-3 FOR BOX BEAM STANDARD DETAILS, NOTES AND REINFORCING.

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 10000 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 6600 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 FACTORS: 0.590 LANES FOR MOMENT
0.645 LANES FOR SHEAR

COMPOSITE DEAD LOAD: DC = 245 LB/FT
DW = 191 LB/FT

COMPOSITE DESIGN SLAB (fc'= 4000 PSI)

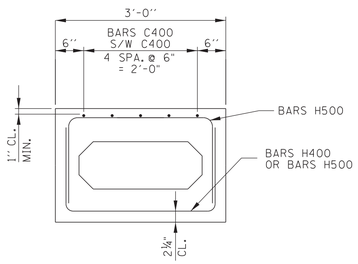
NOTE: DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

## BILL OF STEEL
(PER BEAM)

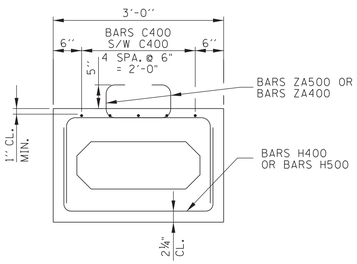
| BAR | SIZE | NO. REQ'D. | LENGTH |
|---|---|---|---|
| A300 | 3 | 2 | 42'-4" |
| A500 | 5 | 8 | 5'-6" |
| A501 | 5 | 6 | 2'-9" |
| A502 | 5 | 8 | 1'-8" |
| C400 | 4 | 10 | 23'-1" |
| H300 | 3 | 10 | 4'-11" |
| H400 | 4 | 18 | 5'-11½" |
| H500 | 5 | 60 | 5'-11½" |
| ZA400 | 4 | 36 | 3'-11" |
| ZA500 | 5 | 56 | 3'-11" |

## ESTIMATED QUANTITIES - PER BEAM

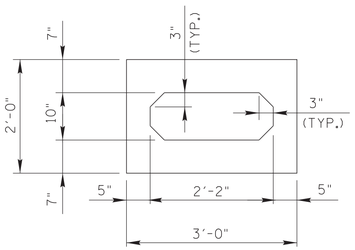
| NO. BEAMS REQ'D | PRESTRESSING STRANDS (LOW RELAXATION) LB. | CLASS "A" CONCRETE C.Y. | REINFORCING STEEL LB. |
|---|---|---|---|
| 18 | 403 | 7.11 | 1049 |



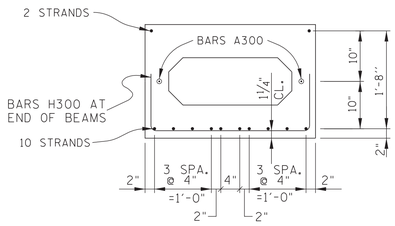

SECTION "B-B"
SHOWING NON-PROJECTING BARS




SECTION "B-B"
SHOWING PROJECTING BARS




SECTION SHOWING PROPERTIES




SECTION "A"-"A"
SHOWING PRESTRESSING STRANDS

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE No. 119405 STATE OF TENNESSEE
5/21/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PRESTRESSED BOX-BEAM DETAILS
SPANS 1 AND 3
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-436

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

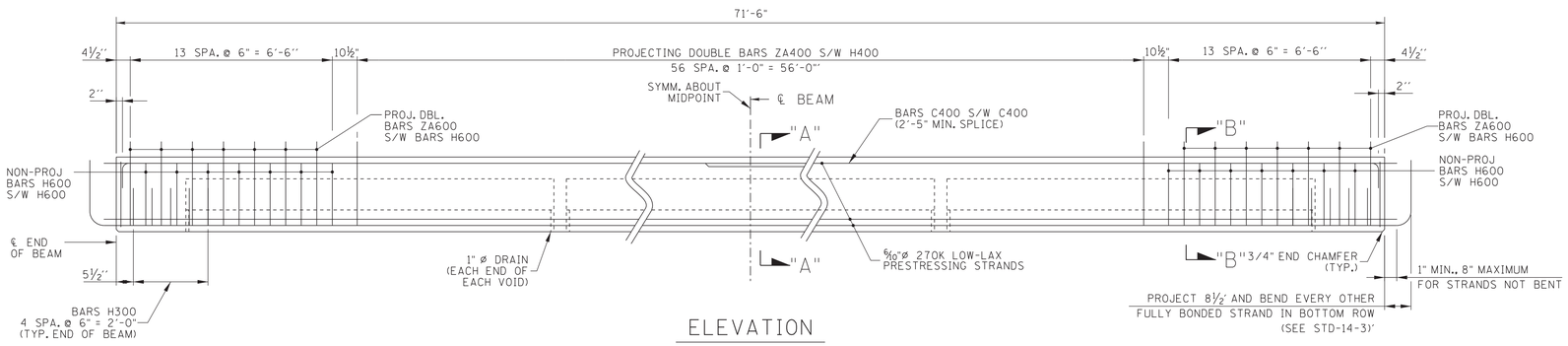
5/20/2025 11:10:37 AM
C:\USERS\JJ02319\ONEDRIVE - TENNESSEE\DESKTOP\DAILY WORK\HAMILTON\124076.00\DESIGN_JM\DETAILS\SHEETS\33S43070001BM1.SHT

CONST. NO.: 33057-3228-94

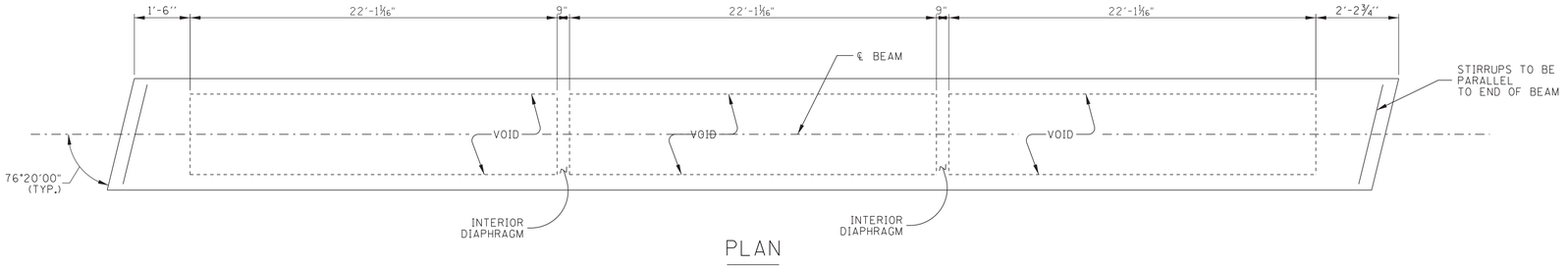
| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

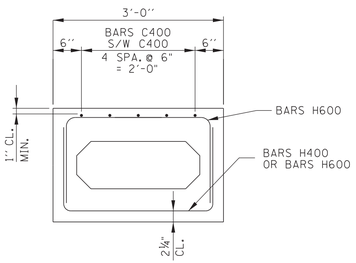
| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |



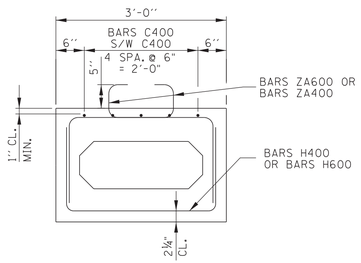

ELEVATION



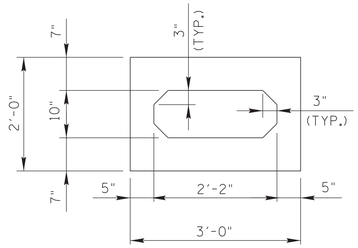

PLAN



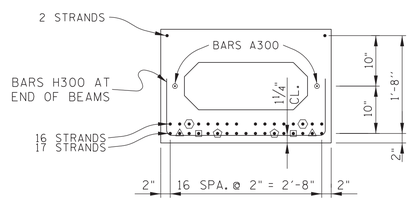

SECTION "B-B"
SHOWING NON-PROJECTING BARS




SECTION "B-B"
SHOWING PROJECTING BARS




SECTION SHOWING PROPERTIES




SECTION "A"-"A"
SHOWING PRESTRESSING STRANDS

## BEAM NOTES

NOTE: SEE STD-14-3 FOR BOX BEAM STANDARD DETAILS, NOTES AND REINFORCING.

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 10000 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 6600 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 FACTORS: 0.590 LANES FOR MOMENT
0.645 LANES FOR SHEAR

COMPOSITE DEAD LOAD: DC = 247 LB/FT
DW = 191 LB/FT

COMPOSITE DESIGN SLAB (fc'= 4000 PSI)

NOTE: DOWNWARD DEFLECTION UNDER TOTAL DL IS NOT ALLOWED.

## BILL OF STEEL
(PER BEAM)

| BAR | SIZE | NO. REQ'D. | LENGTH |
|---|---|---|---|
| A300 | 3 | 4 | 36'-10" |
| A500 | 5 | 8 | 5'-6" |
| A501 | 5 | 6 | 2'-9" |
| A502 | 5 | 8 | 1'-8" |
| C400 | 4 | 10 | 37'-6" |
| H300 | 3 | 10 | 4'-11" |
| H400 | 4 | 57 | 5'-11½" |
| H600 | 6 | 42 | 5'-11½" |
| ZA400 | 4 | 114 | 3'-11" |
| ZA600 | 6 | 28 | 3'-11" |

## ESTIMATED QUANTITIES - PER BEAM

| NO. BEAMS REQ'D | PRESTRESSING STRANDS (LOW RELAXATION) LB. | CLASS "A" CONCRETE C.Y. | REINFORCING STEEL LB. |
|---|---|---|---|
| 9 | 1909 | 11.77 | 1468 |

▲ DENOTES: BOND BREAK 20'-0" FROM END.
▣ DENOTES: BOND BREAK 14'-0" FROM END.
✿ DENOTES: BOND BREAK 8'-0" FROM END.
⊙ DENOTES: BOND BREAK 4'-0" FROM END.

ROBERT LEFEVRE REGISTERED ENGINEER STATE OF TENNESSEE AGRICULTURE NO. 109460

Robert W. LeFevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# PRESTRESSED BOX-BEAM DETAILS
SPAN 2
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-437

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

5/20/2025 11:14:11 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
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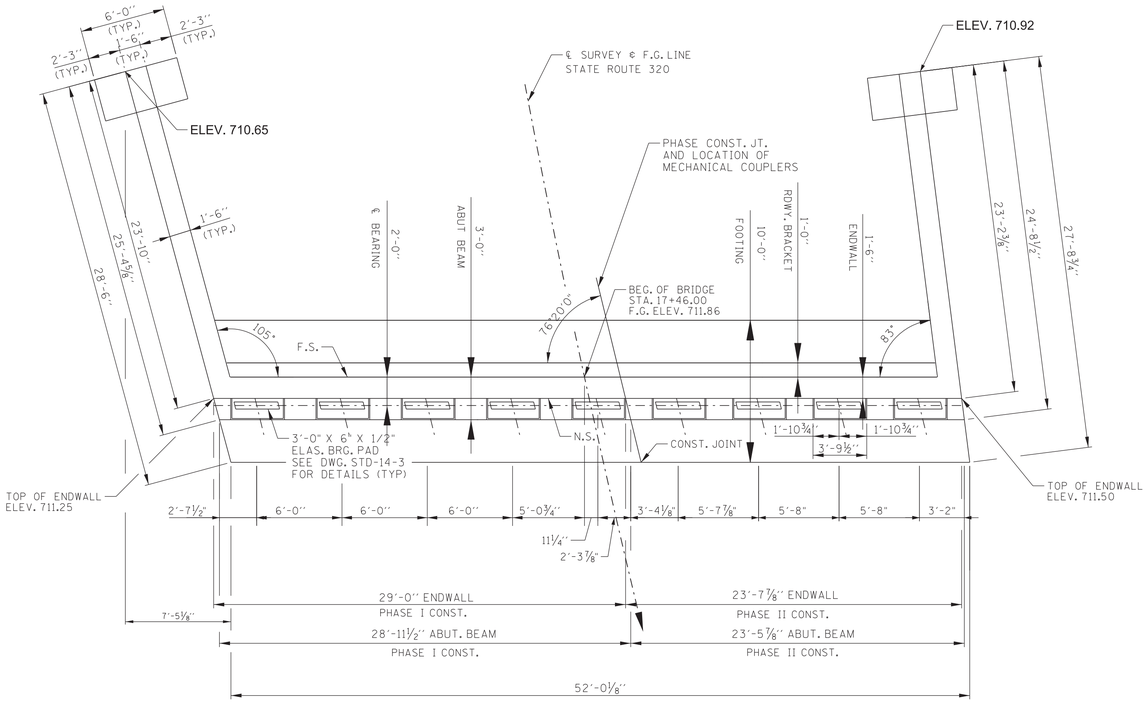
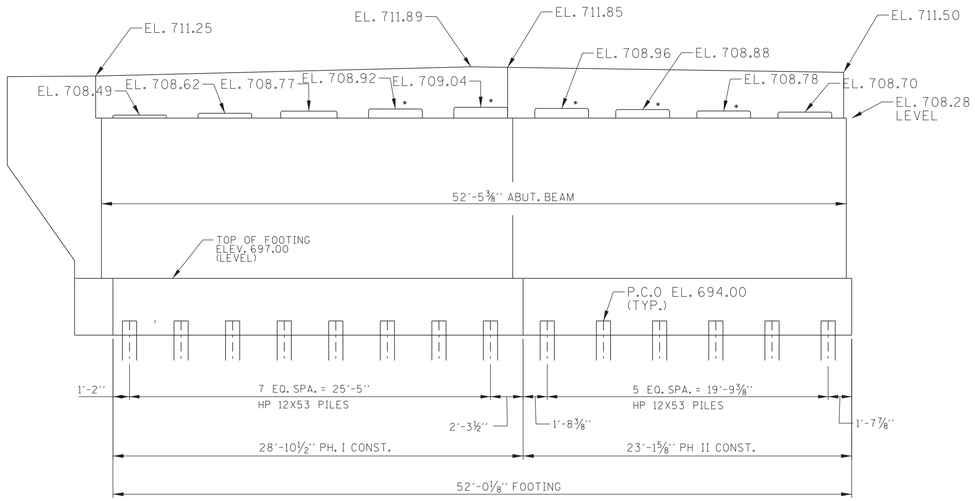
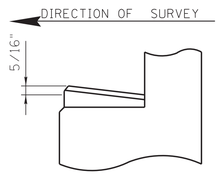



PLAN



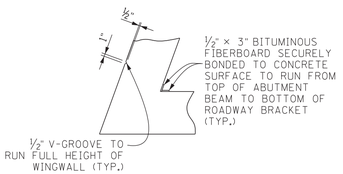

ELEVATION

* DENOTES: RISER BLOCKS TO BE REINFORCED.
SEE RISER BLOCK REINFORCING DETAIL ON SHEET U-95-439.




RISER BLOCK SLOPE DETAIL

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




V-GROOVE DETAIL

## GENERAL NOTES

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

**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 WINGPOSTS AND PARAPETS, SEE STD. DWG. NO. STD-11-1.

**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:** SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.

**NOTE:** WINGBEAM PILES SHALL BE DRIVEN TO THE PLANS TIP ELEVATION OR REFUSAL. SEISMIC ATTACHMENT IS NOT REQUIRED FOR WINGBEAM PILES.

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

| ESTIMATED QUANTITIES | | |
|---|---|---|
| CONCRETE CLASS "A" C.Y. | EPOXY COATED REINFORCING STEEL LB. | REINFORC-ING STEEL L.B. |
| 185 | 3762 | 29346 |

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ABUTMENT NO. 1
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-438

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

5/20/2025 10:18:36 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
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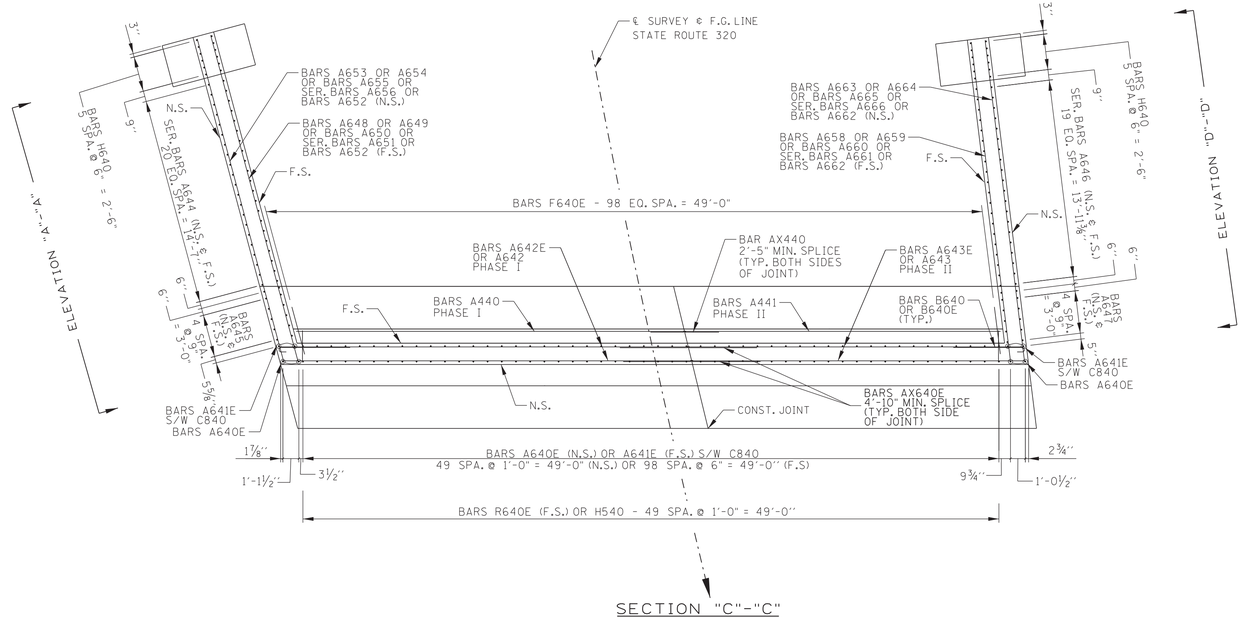
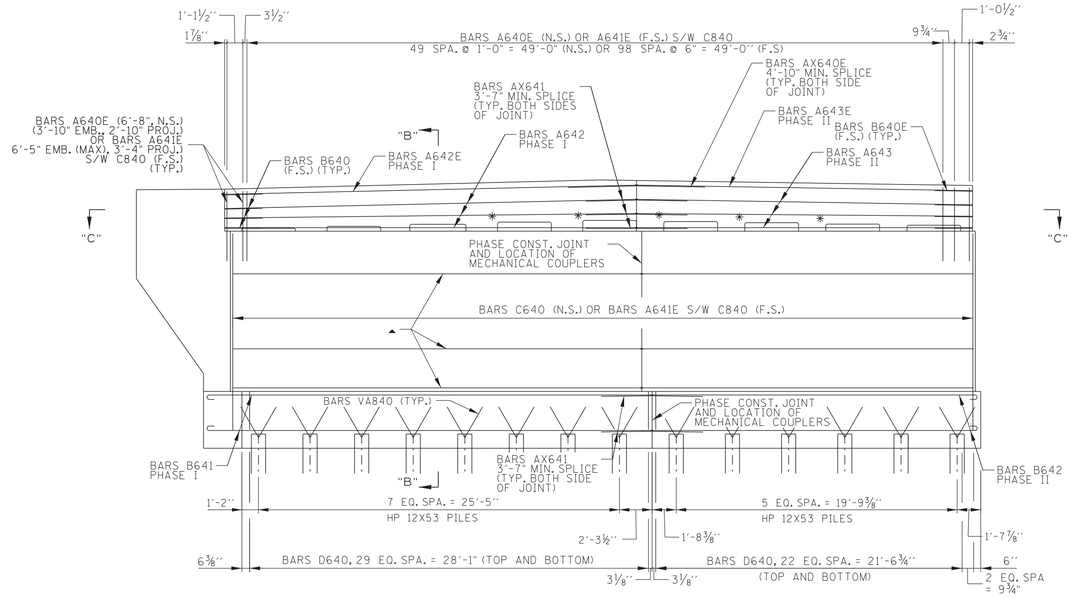
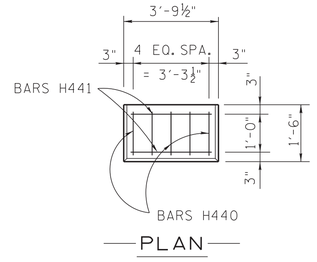


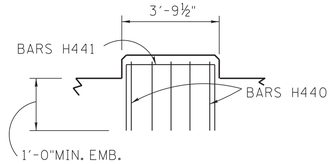

✱ DENOTES: RISER BLOCKS TO BE REINFORCED

▲ A LINE OF STIRRUPS CONSISTS OF: 12 BARS L640, 1 BAR LA640, 1 BAR LA641
1 BAR HA640, 1 BAR HA641, 6 BARS YB640

ELEVATION
(SHOWING REINFORCING STEEL)
(LOOKING FORWARD ON SURVEY)




PLAN




ELEVATION

RISER BLOCK
REINFORCING DETAIL

ROBERT LEFEVRE
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE

Robert Lefevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1 ABUTMENT NO. 1 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-439

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

5/20/2025 10:21:56 AM
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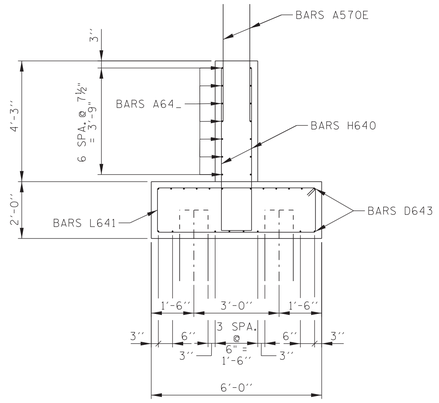
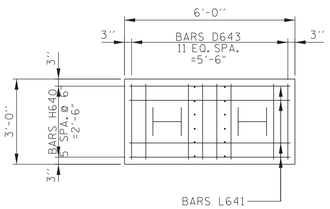
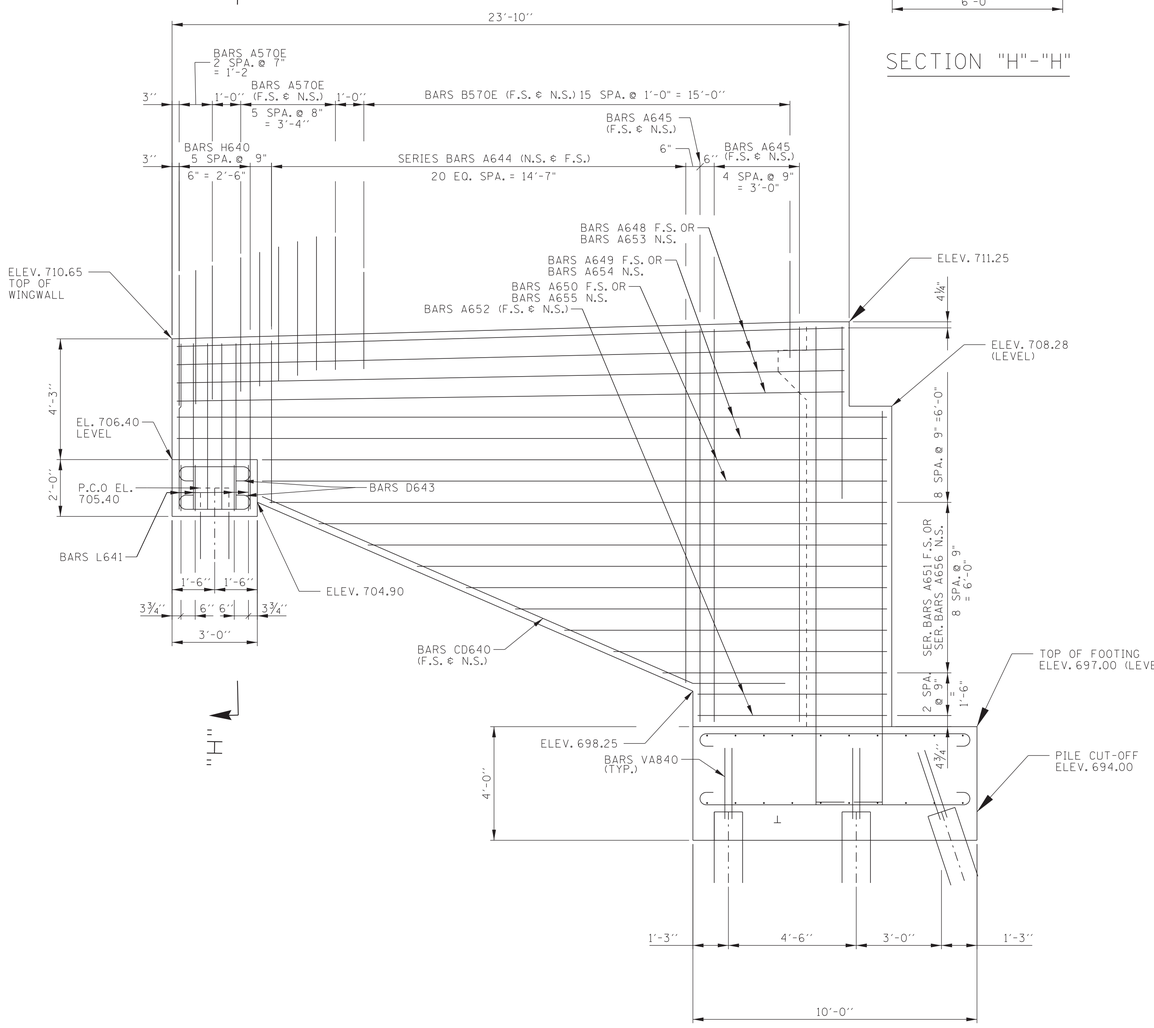


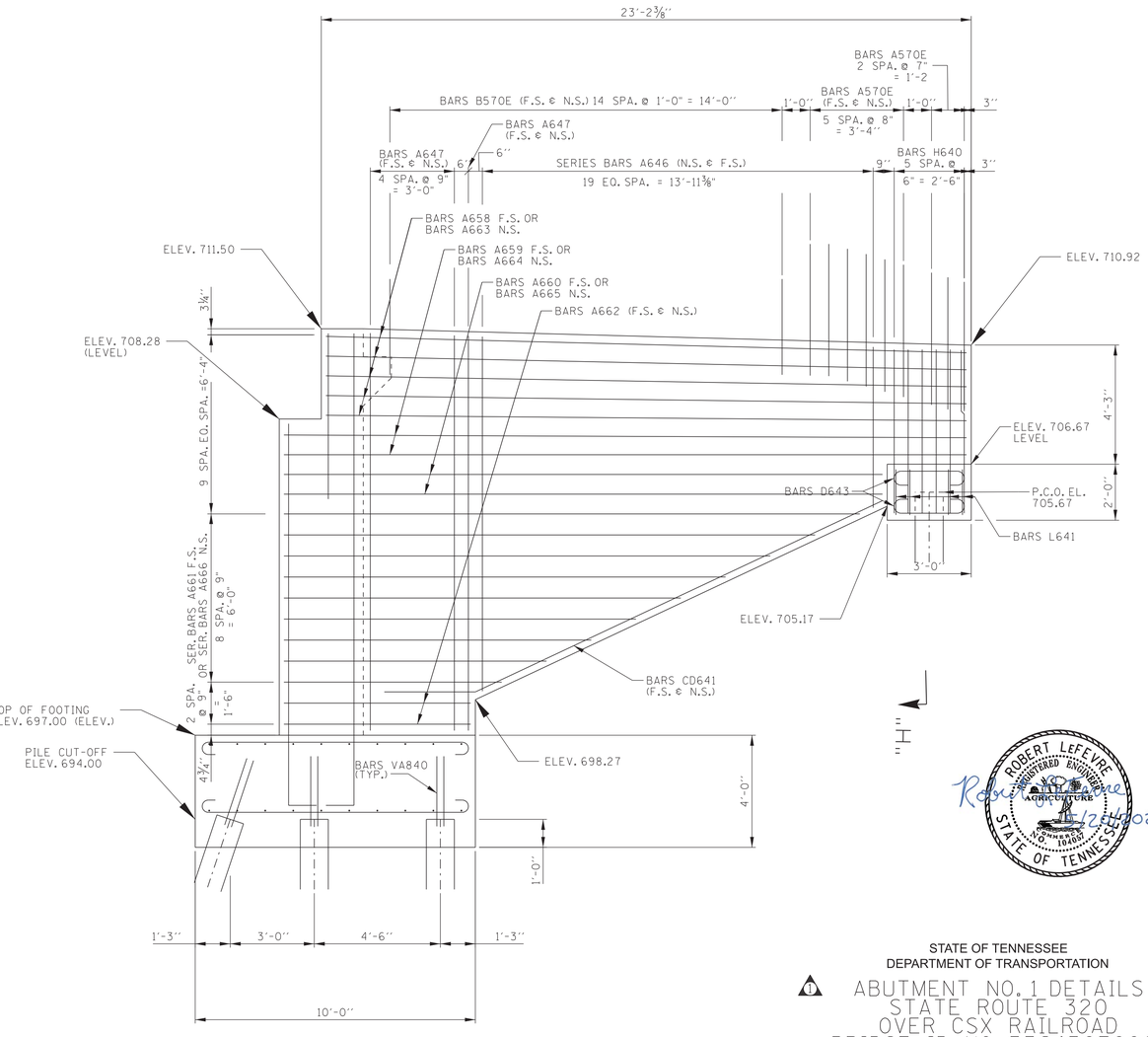

SECTION "H"-"H"




PLAN OF WINGWALL FOOTING




ELEVATION "A"-"A"




ELEVATION "D"-"D"

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE NO. 104081 STATE OF TENNESSEE
5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1 ABUTMENT NO. 1 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-440

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/01/2024

5/20/2025 10:38:59 AM
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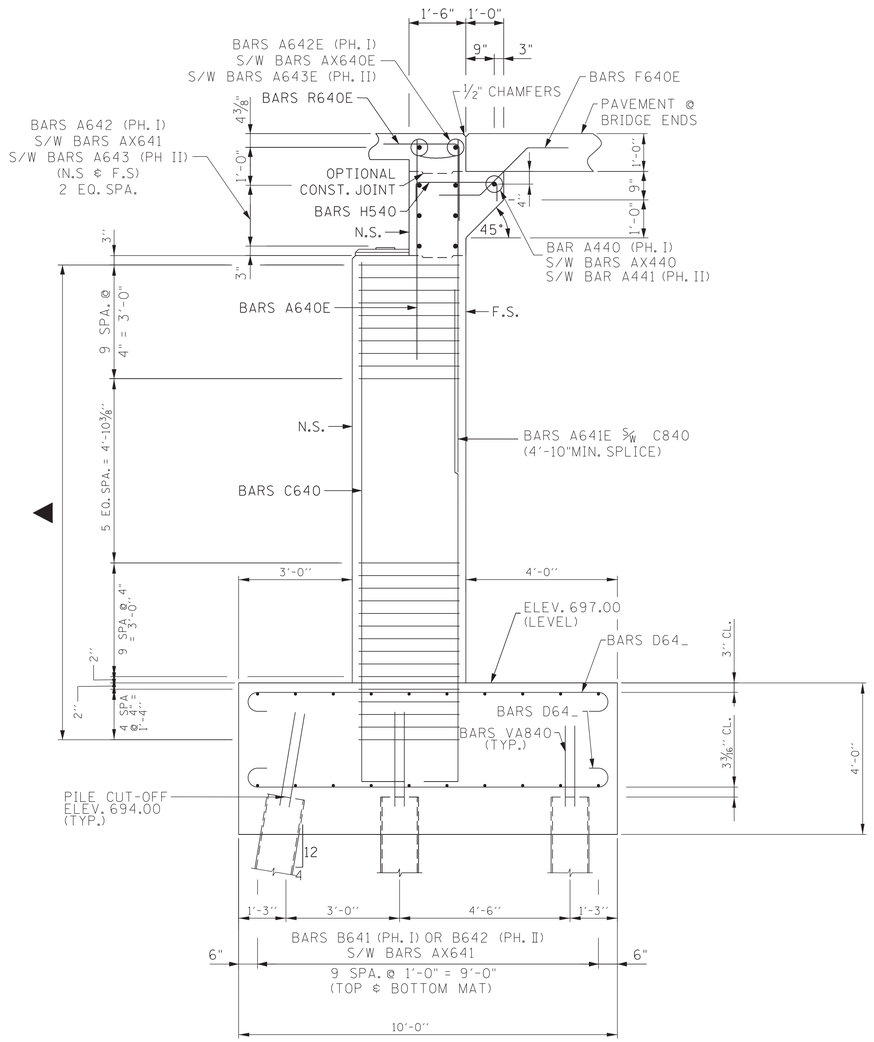
CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

▲ A LINE OF STIRRUPS CONSISTS OF: 12 BARS L640, 1 BAR LA640, 1 BAR LA641, 6 BARS YB640, 1 BAR HA640 (PH. I) AND 1 BAR HA641 (PH. II). FOR BAR DESIGNATIONS SEE SECTION "C"-"C" ON DRAWING NO. U-95-442.




SECTION "B"-"B"

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/01/2024

Robert LeFevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

▲1 ABUTMENT NO. 1 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-441

5/20/2025 10:30:05 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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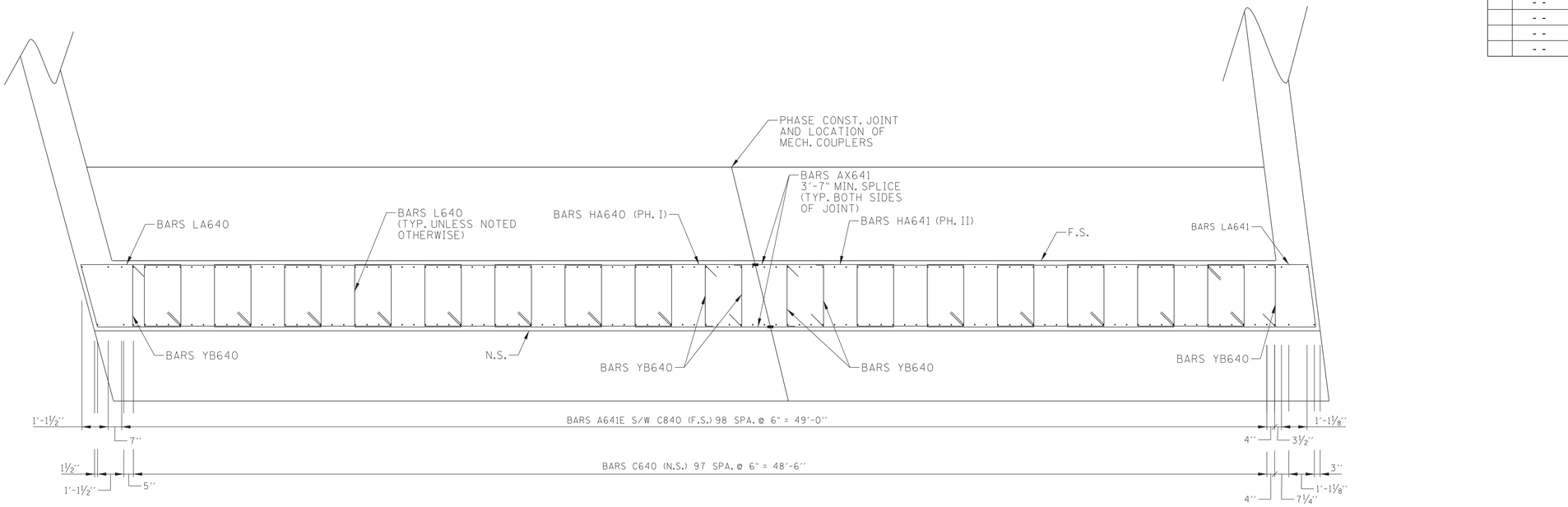
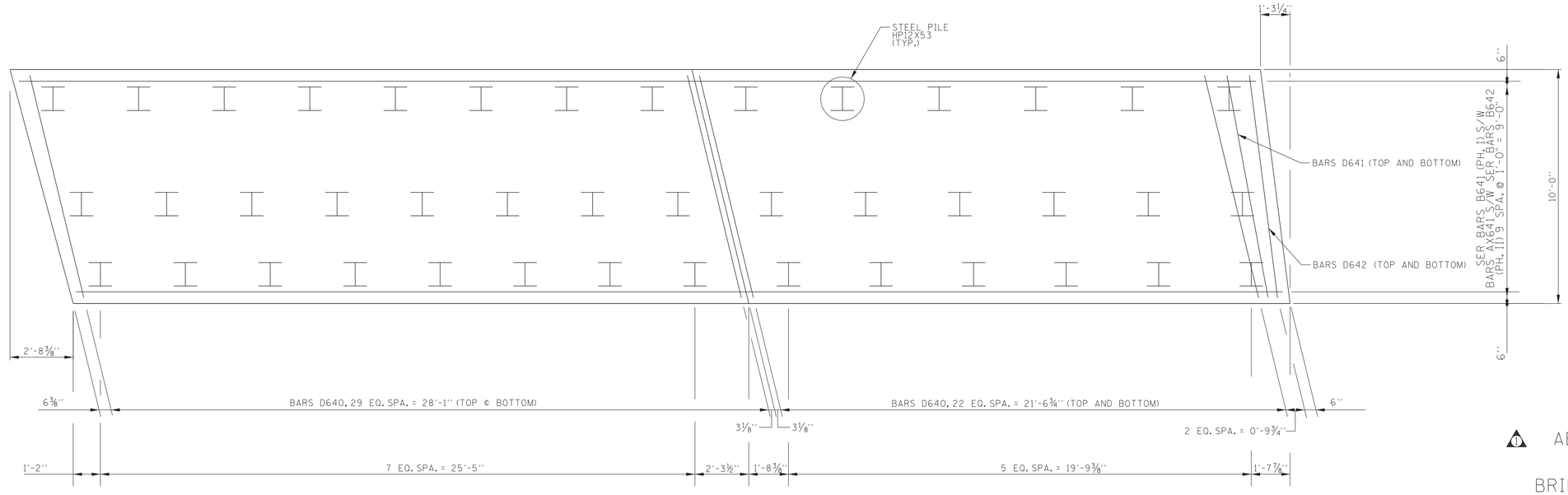



## SECTION "C"-"C"




## FOOTING DETAIL

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/01/2024

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE No. 119401 STATE OF TENNESSEE
5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1 ABUTMENT NO. 1 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-442

5/20/2025 10:33:39 AM
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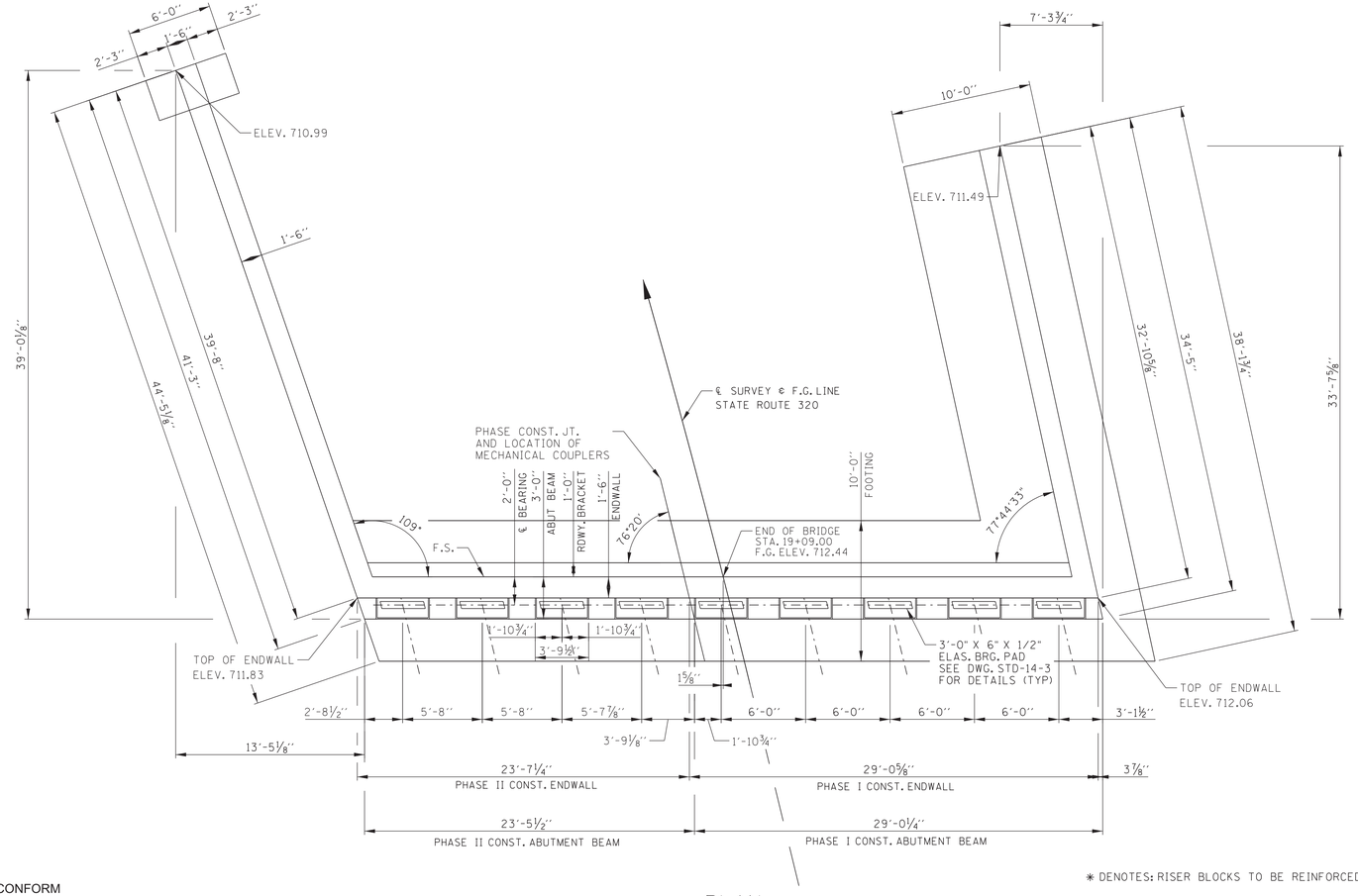
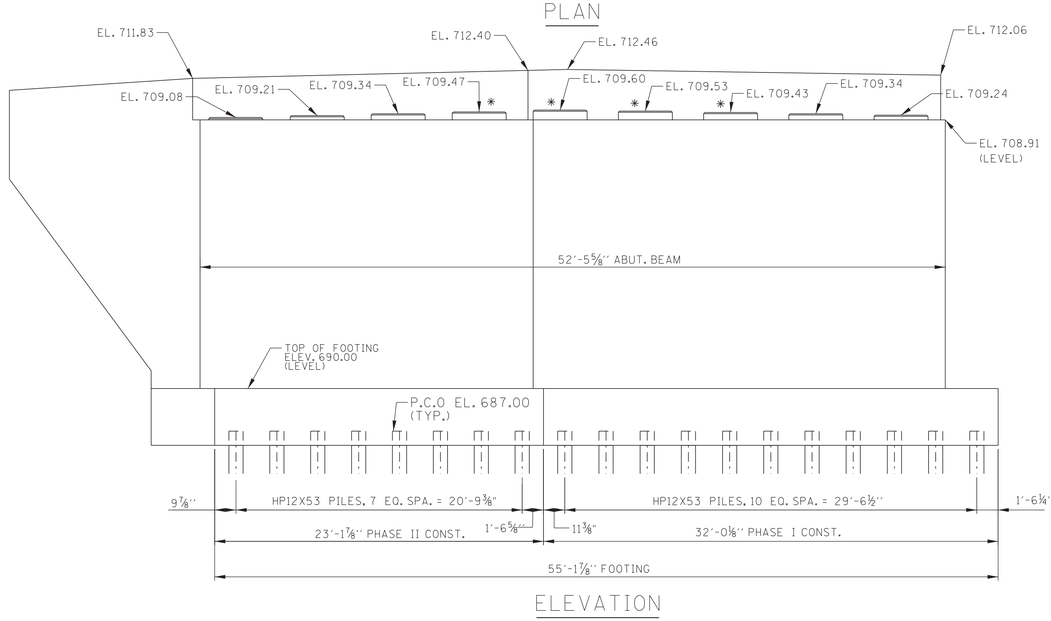
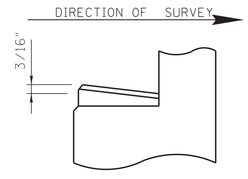



✳ DENOTES: RISER BLOCKS TO BE REINFORCED

PLAN

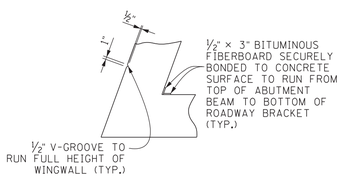



ELEVATION




RISER BLOCK SLOPE DETAIL

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




V-GROOVE DETAIL

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
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## GENERAL NOTES

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

**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 WINGPOSTS AND PARAPETS, SEE STD. DWG. NO. STD-11-1.

**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:** SEE STANDARD DRAWING STD-6-1 FOR PILE DETAILS AND NOTES.

**NOTE:** WINGBEAM PILES SHALL BE DRIVEN TO THE PLANS TIP ELEVATION OR REFUSAL. SEISMIC ATTACHMENT IS NOT REQUIRED FOR WINGBEAM PILES.

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

| ESTIMATED QUANTITIES | | |
|---|---|---|
| CONCRETE CLASS "A" C.Y. | EPOXY COATED REINFORCING STEEL LB. | REINFORCING STEEL L.B. |
| 318 | 3963 | 53257 |

Robert LeFevre 11/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

ABUTMENT 2
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-443

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/31/2024

5/20/2025 10:44:12 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
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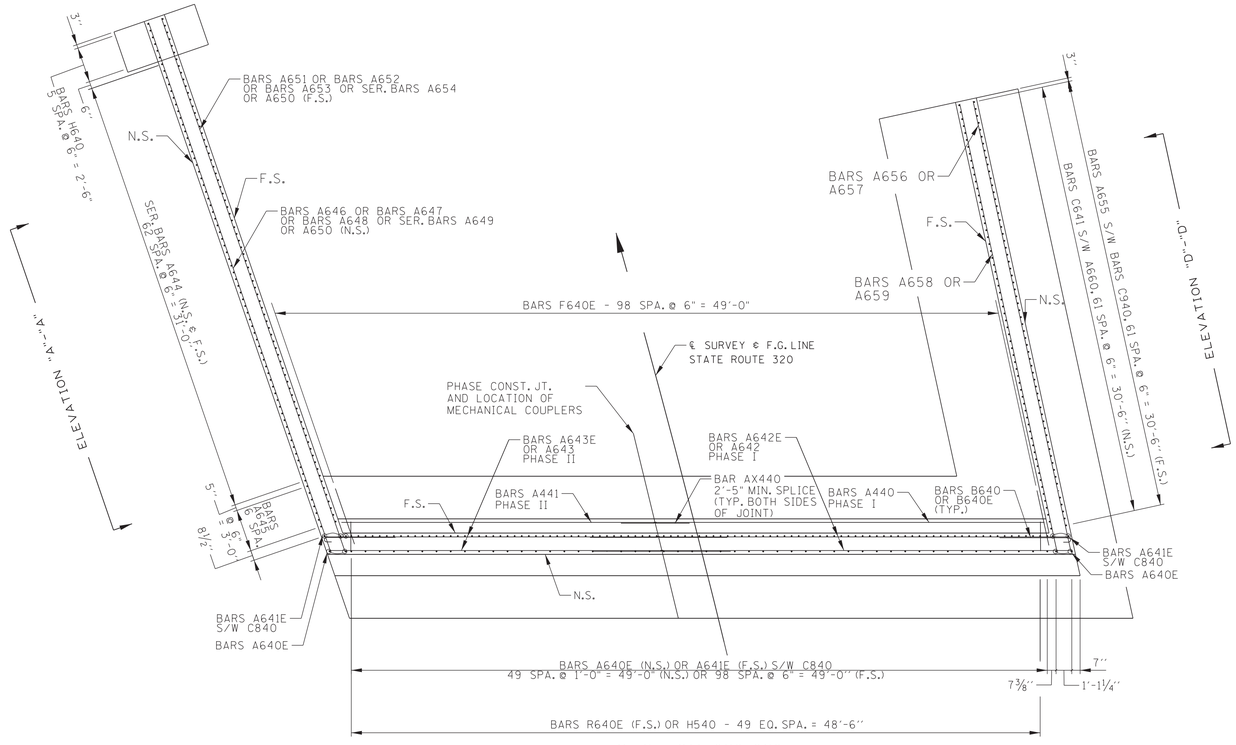
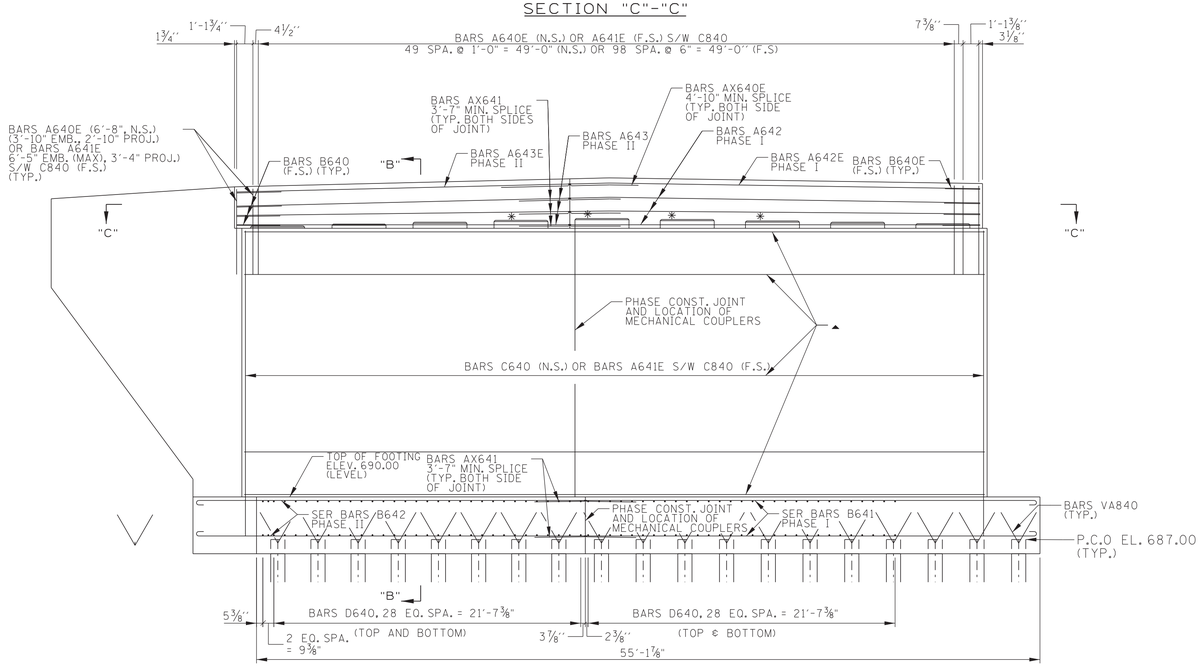
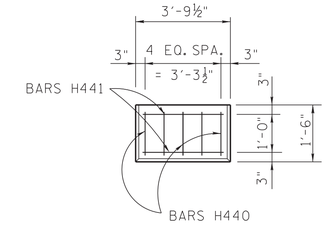
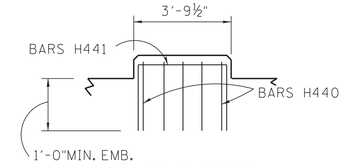



SECTION "C"-"C"




PLAN




ELEVATION

PLAN OF RISER BLOCK REINFORCING

ROBERT LEFEVRE REGISTERED ENGINEER STATE OF TENNESSEE DEPARTMENT OF AGRICULTURE COMMISSION NO. 104001

Robert Lefevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# ABUTMENT NO. 2 DETAILS
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
# 2025

U-95-444

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/31/2024

✱ DENOTES: RISER BLOCKS TO BE REINFORCED

▲ A LINE OF STIRRUPS CONSISTS OF: 12 BARS L640, 1 BAR LA640, 1 BAR LA641 1 BAR HA640, 1 BAR HA641, 2 BARS YB640

ELEVATION
(SHOWING REINFORCING STEEL)
(LOOKING FORWARD ON SURVEY)

5/20/2025 10:46:52 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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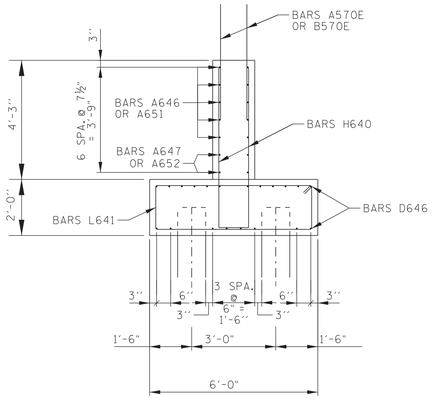
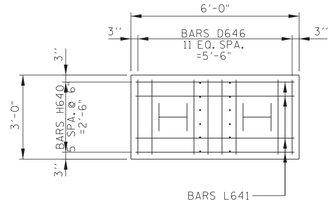
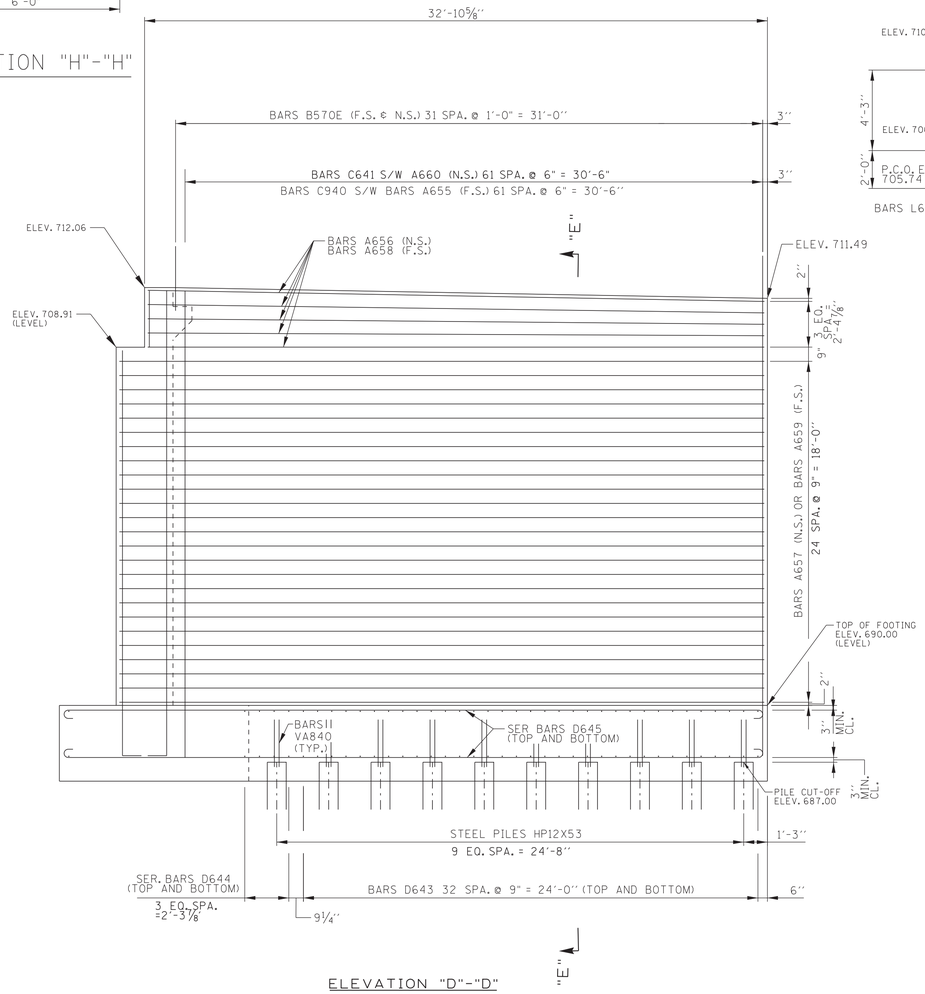


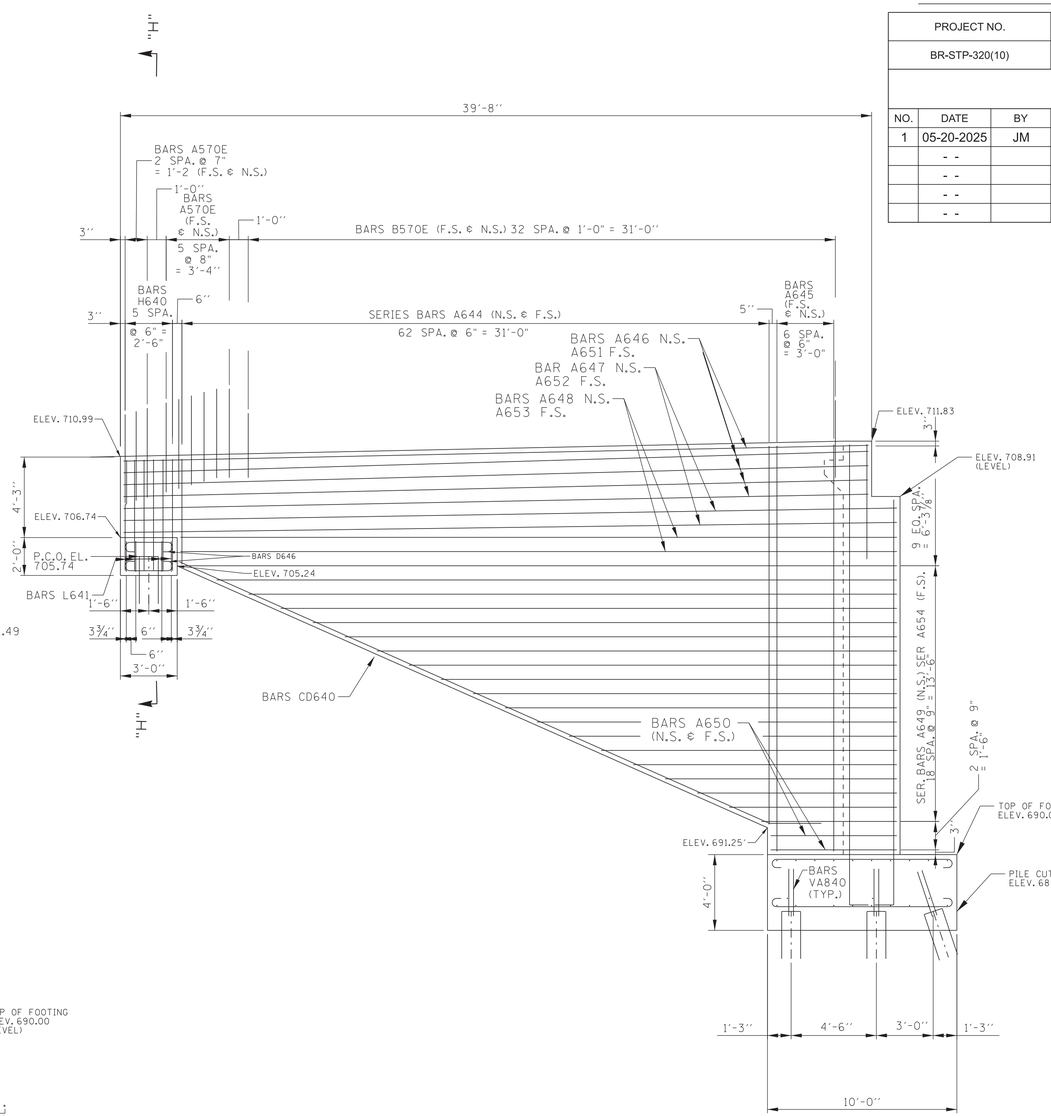

SECTION "H"-"H"




PLAN OF WINGWALL FOOTING




ELEVATION "D"-"D"




ELEVATION "A"-"A"

Robert Lefevre 12/15/2023

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# ABUTMENT NO. 2 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-445

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/312024

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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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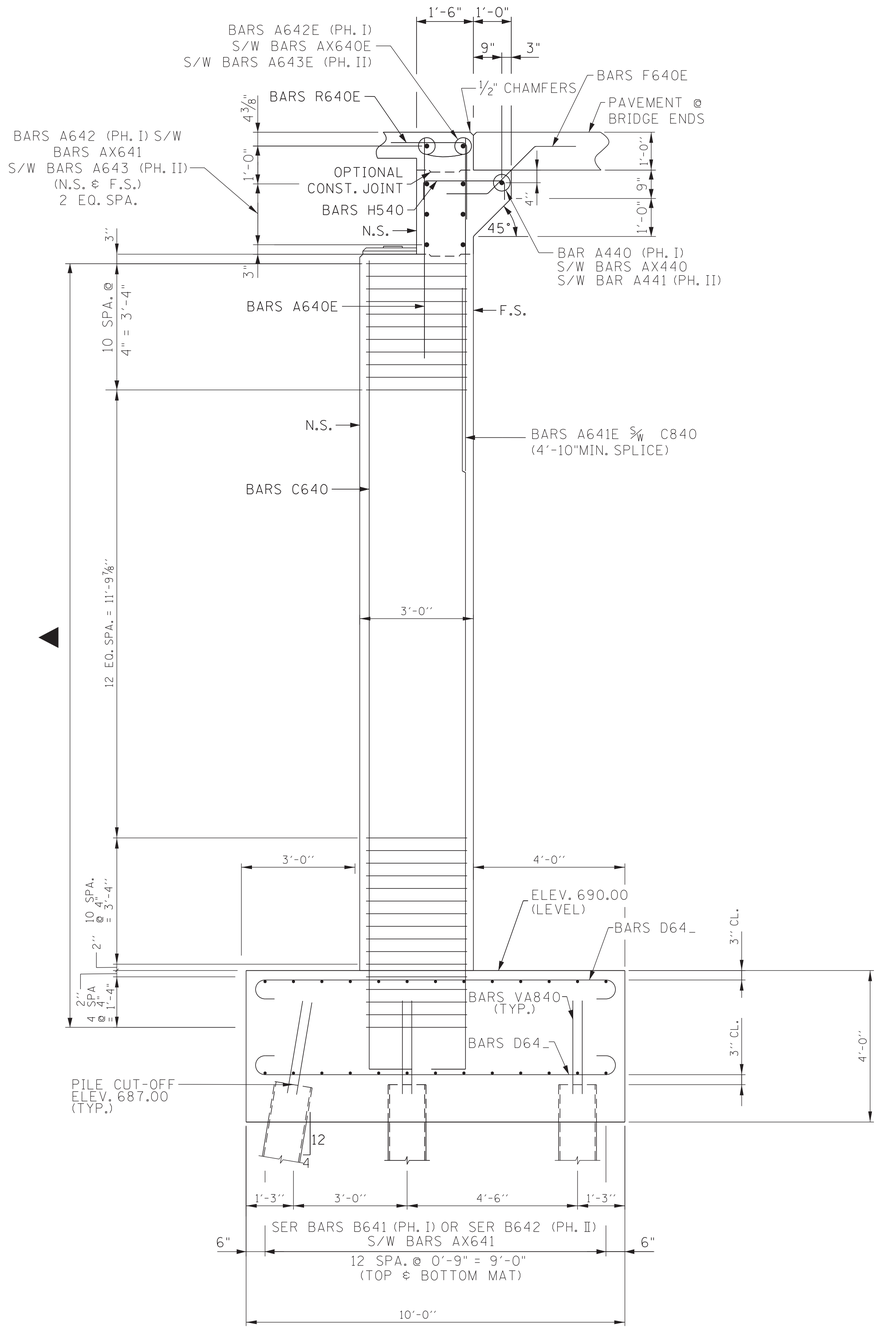
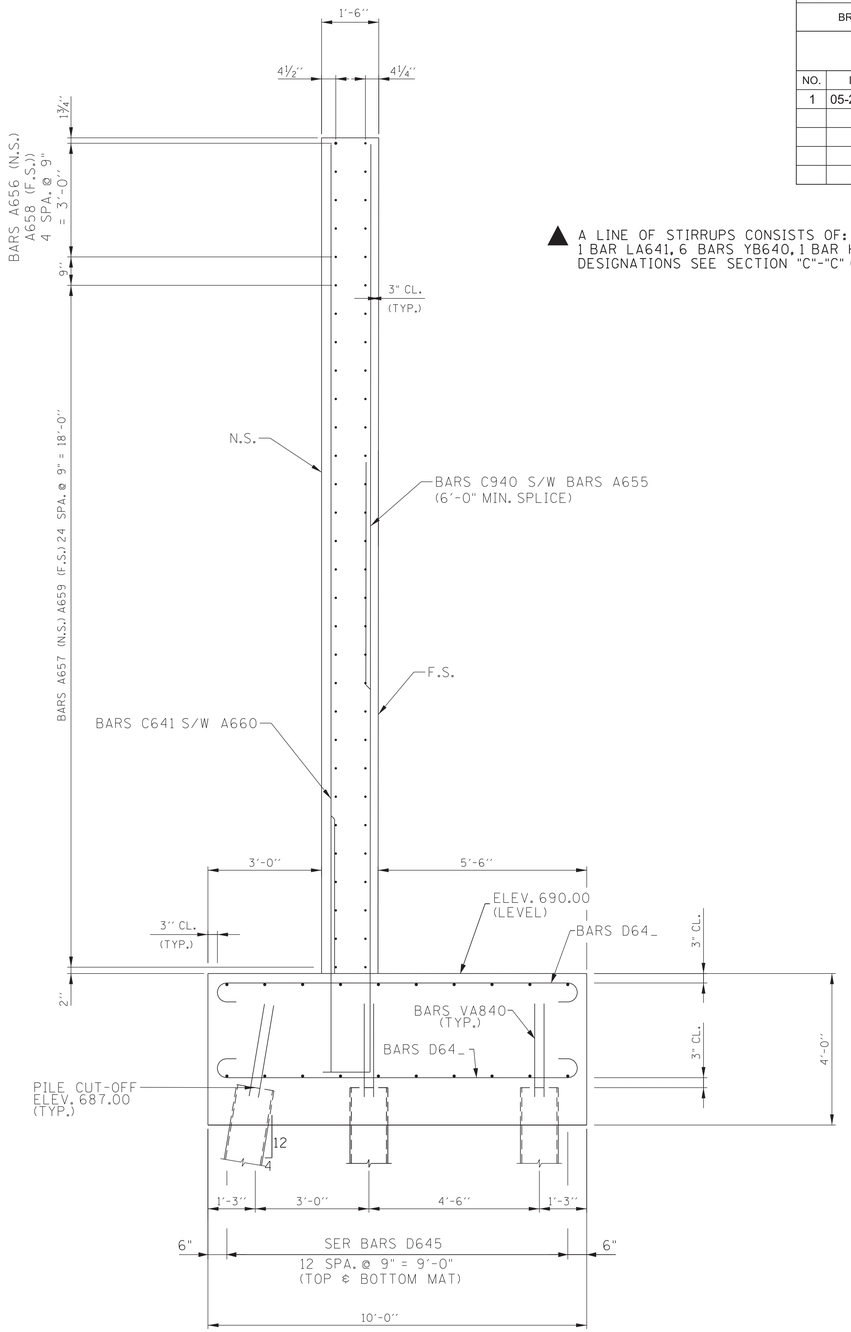



SECTION "B"-"B"




SECTION "E"-"E"

▲ A LINE OF STIRRUPS CONSISTS OF: 12 BARS L640, 1 BAR LA640 S/W BARS AX641, 1 BAR LA641, 6 BARS YB640, 1 BAR HA640 (PH. I) AND 1 BAR HA641 (PH. II). FOR BAR DESIGNATIONS SEE SECTION "C"-"C" ON DRAWING NO. U-95-447.

ROBERT LEFEVRE
REGISTERED ENGINEER
STATE OF TENNESSEE
DEPARTMENT OF AGRICULTURE
No. 124076
STATE OF TENNESSEE
Robert Lefevre 10/21/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# ABUTMENT NO. 2 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-446

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/31/2024

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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

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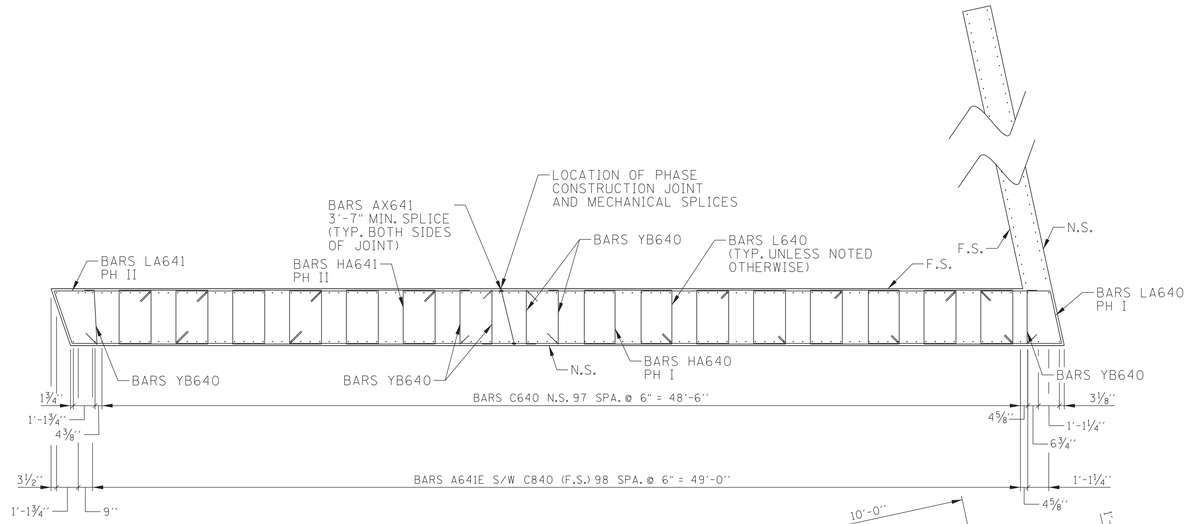


SECTION "C"-"C"

FOOTING DETAIL

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/31/2024

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE NUMBER 104057 STATE OF TENNESSEE
Robert Lefevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1 ABUTMENT NO. 2 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-447

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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
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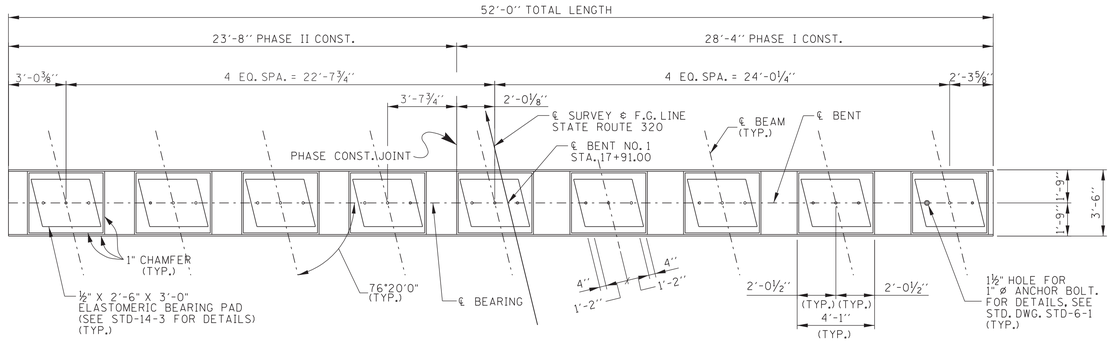
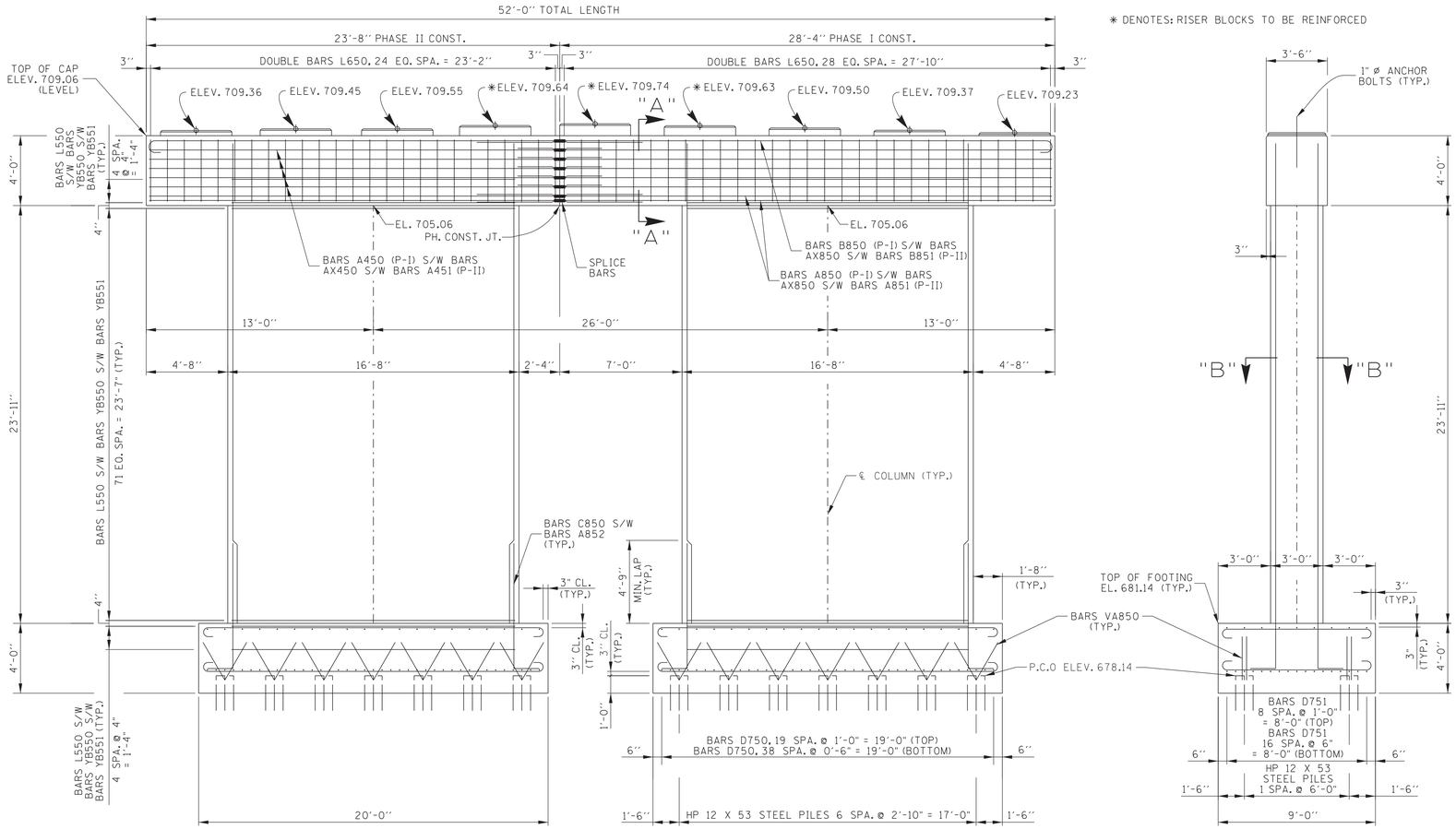
## GENERAL NOTES

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 SHALL BE POURED MONOLITHICALLY WITH BENT CAP.
NOTE: RISER BLOCK BEARING SURFACES SHALL CONFORM TO BOTTOM OF BEAM GRADE.
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 SHALL EXTEND 3'-7" INTO BENT CAP. SEE DRAWING NO. U-95-449 FOR SECTION "A" - "A" AND "B" - "B".
P-I: DENOTES PHASE I
P-II: DENOTES PHASE II
MECHANICAL COUPLERS REQUIRED




PLAN



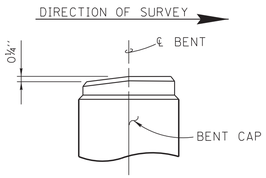

ELEVATION

* DENOTES: RISER BLOCKS TO BE REINFORCED

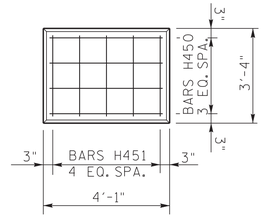



PROFILE

DIRECTION OF SURVEY




## RISER BLOCK SLOPE DETAIL

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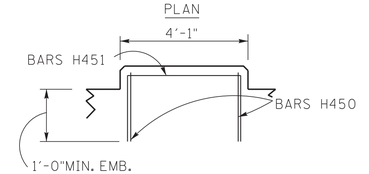


ELEVATION

## RISER BLOCK REINF. DETAIL

| ESTIMATED QUANTITIES | |
|---|---|
| CLASS "A" CONCRETE (BRIDGES) C.Y. | REINFORCING STEEL (BRIDGES) L.B. |
| 172 | 43177 |

ROBERT LEFEVRE — REGISTERED ENGINEER — No. 116147 — STATE OF TENNESSEE
5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

# BENT NO. 1
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
# 2025

U-95-448

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/30/2024

5/20/2025 11:17:32 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

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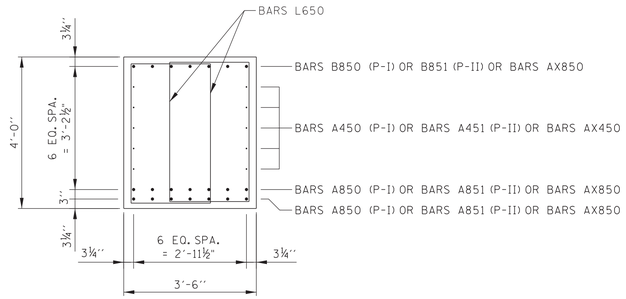
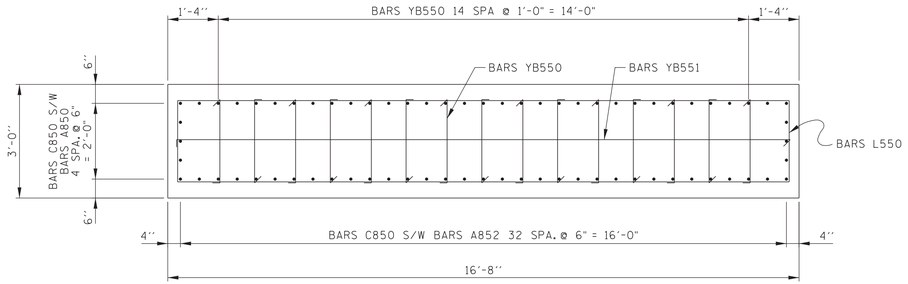



SECTION "A" - "A"

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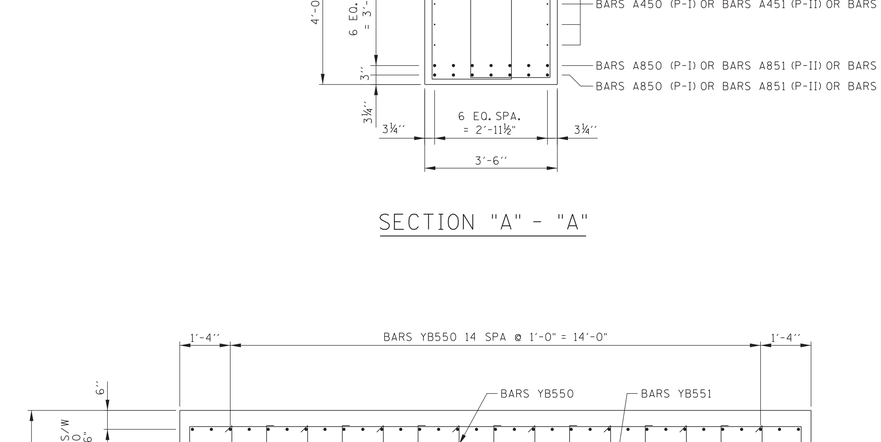
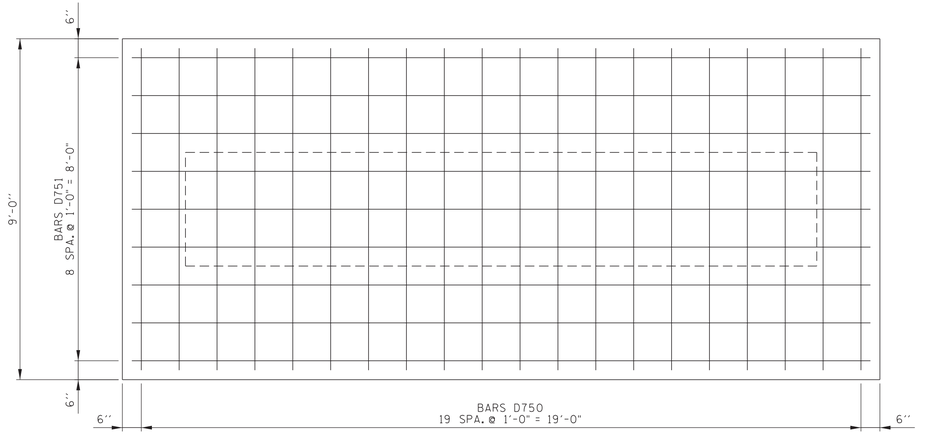
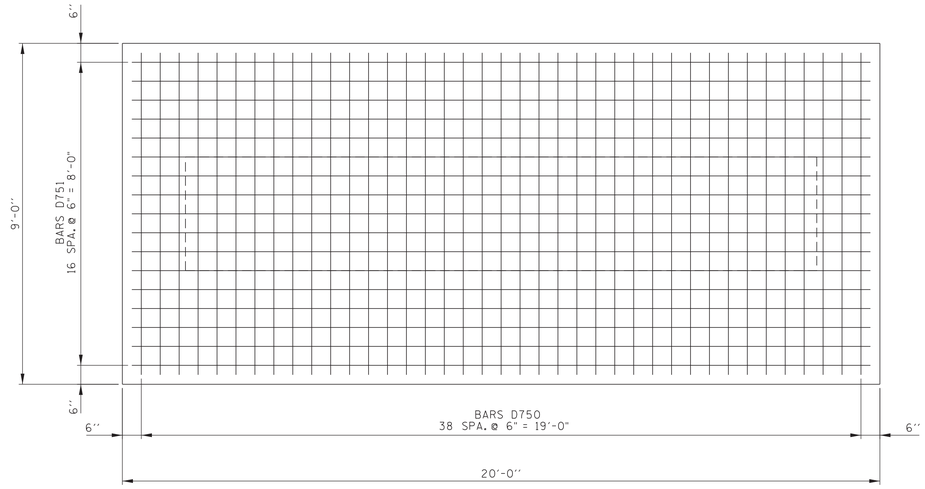



PLAN OF FOOTING
(SHOWING PILE SPACING)




PLAN OF FOOTING
(SHOWING REINFORCEMENT @ TOP MAT)




PLAN OF FOOTING
(SHOWING REINFORCEMENT @ BOTTOM MAT)

ROBERT LEFEVRE
REGISTERED ENGINEER
STATE OF TENNESSEE
DEPARTMENT OF AGRICULTURE
Robert Lefevre 05/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BENT 1 DETAILS
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-449

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/30/2024

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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
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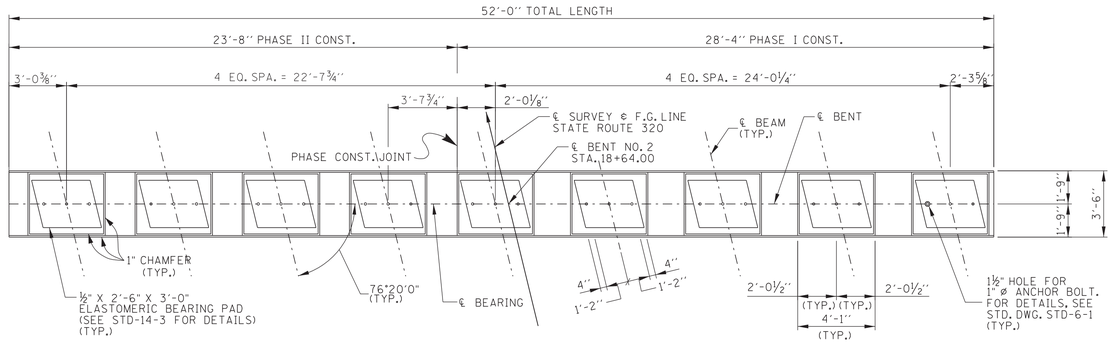
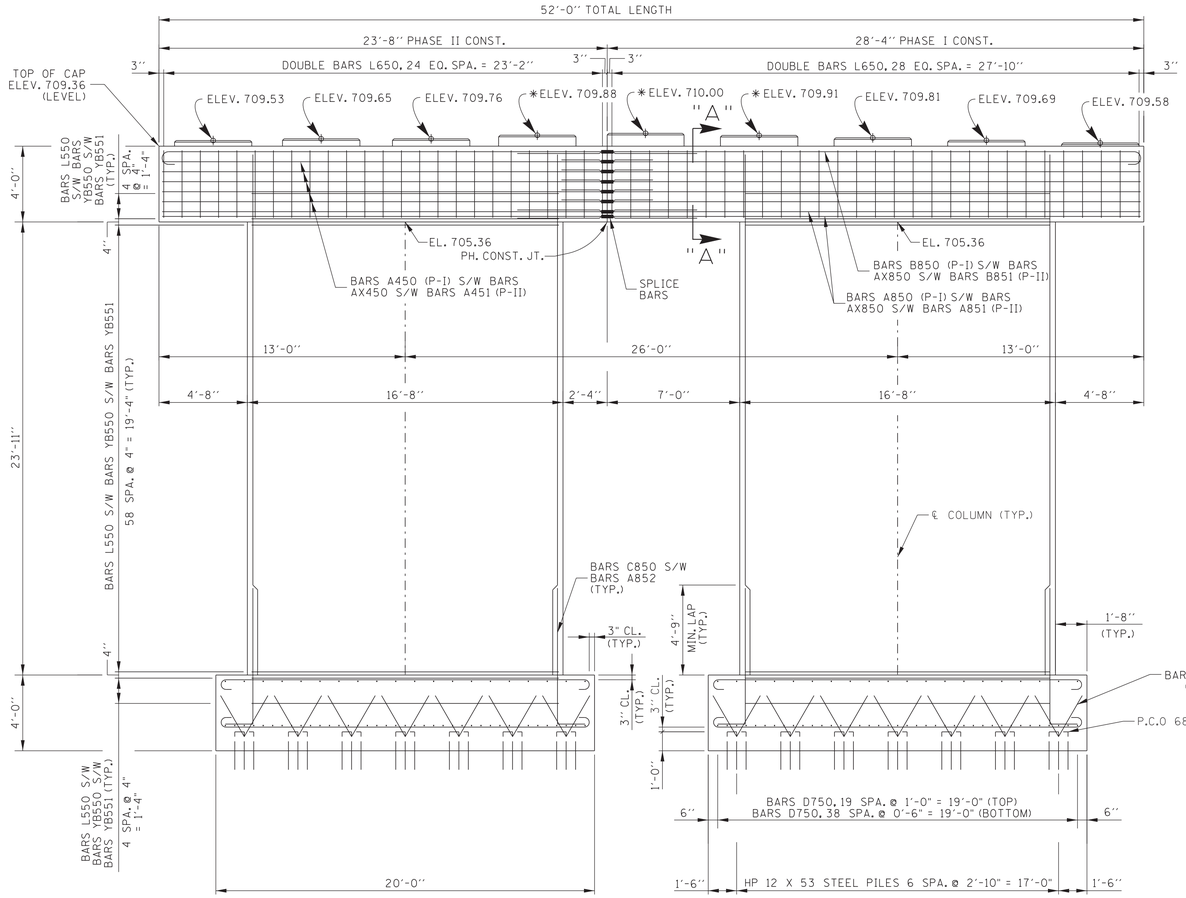
| | - - | | |

## 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 SHALL BE POURED MONOLITHICALLY WITH BENT CAP.
NOTE: RISER BLOCK BEARING SURFACES SHALL CONFORM TO BOTTOM OF BEAM GRADE.
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 SHALL EXTEND 3'-7" INTO BENT CAP.
SEE DRAWING NO. U-95-451 FOR SECTION "A" - "A" AND "B" - "B".
P-I: DENOTES PHASE I
P-II: DENOTES PHASE II
MECHANICAL COUPLERS REQUIRED

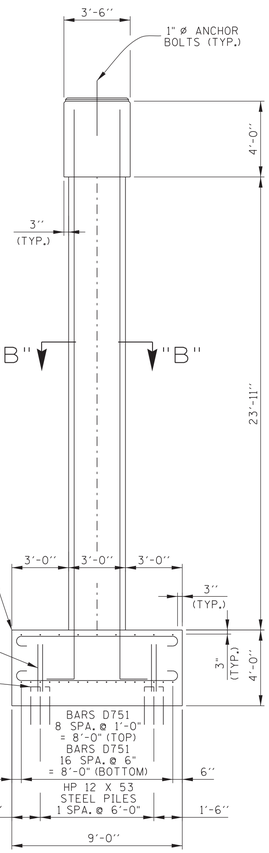



PLAN



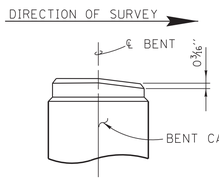

ELEVATION

* DENOTES: RISER BLOCKS TO BE REINFORCED

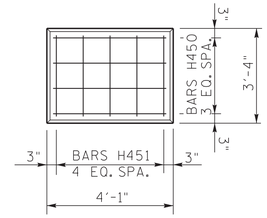



PROFILE

DIRECTION OF SURVEY




## RISER BLOCK SLOPE DETAIL




PLAN




ELEVATION

## RISER BLOCK REINF. DETAIL

| ESTIMATED QUANTITIES | |
|---|---|
| CLASS "A" CONCRETE (BRIDGES) C.Y. | REINFORCING STEEL (BRIDGES) L.B. |
| 156 | 38725 |

ROBERT LEFEVRE REGISTERED ENGINEER AGRICULTURE TENNESSEE STATE OF TENNESSEE
5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

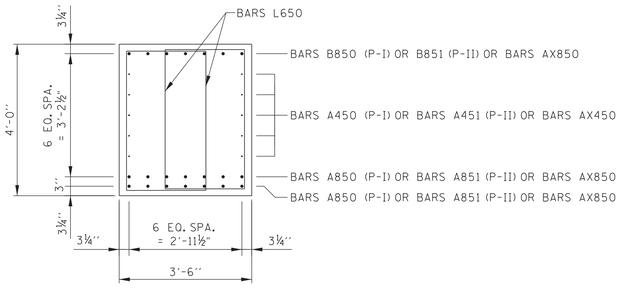
1

BENT 2
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-450

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/30/2024

5/20/2025 11:25:02 AM
C:\USERS\J02319\ONEDRIVE - TENNESSEE\DESKTOP\DAILY WORK\HAMILTON\124076.00\DESIGN_JM\DETAILS\SHEETS\33S43070001BNT2.SHT

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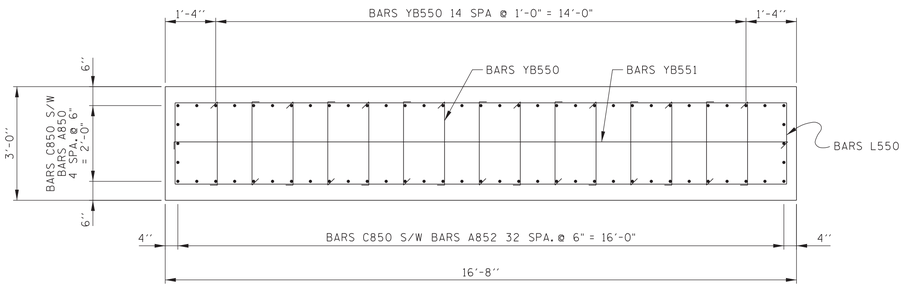
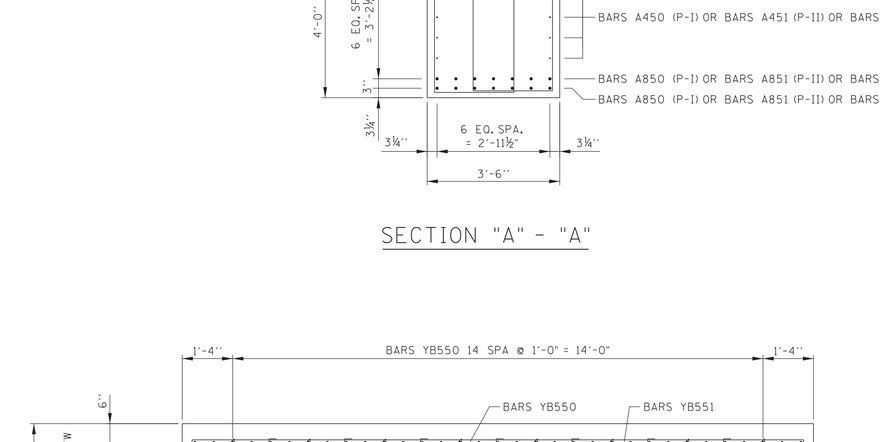
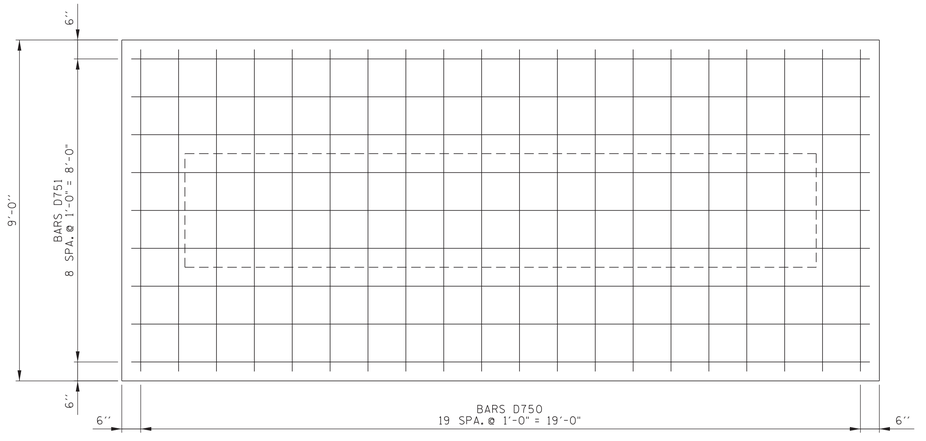


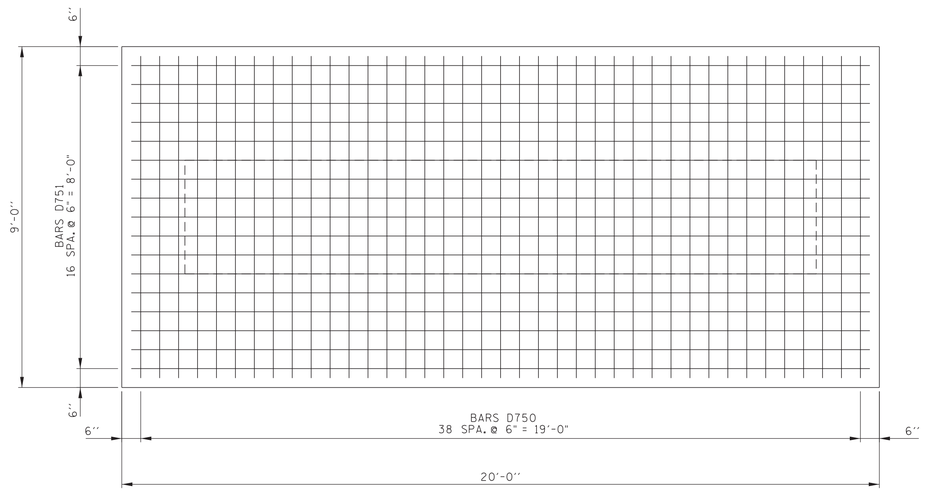

SECTION "B" - "B"




PLAN OF FOOTING
(SHOWING PILE SPACING)




PLAN OF FOOTING
(SHOWING REINFORCEMENT @ TOP MAT)




PLAN OF FOOTING
(SHOWING REINFORCEMENT @ BOTTOM MAT)

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

ROBERT LEFEVRE
REGISTERED ENGINEER
AGRICULTURE
No. 120051
STATE OF TENNESSEE
Robert Lefevre 5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

# BENT 2 DETAILS
# STATE ROUTE 320
# OVER CSX RAILROAD
# BRIDGE ID NO. 33S43070001
# STA. 18+27.50
# LOG MILE 0.86
# HAMILTON COUNTY
# 2025

U-95-451

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/30/2024

5/20/2025 11:27:43 AM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

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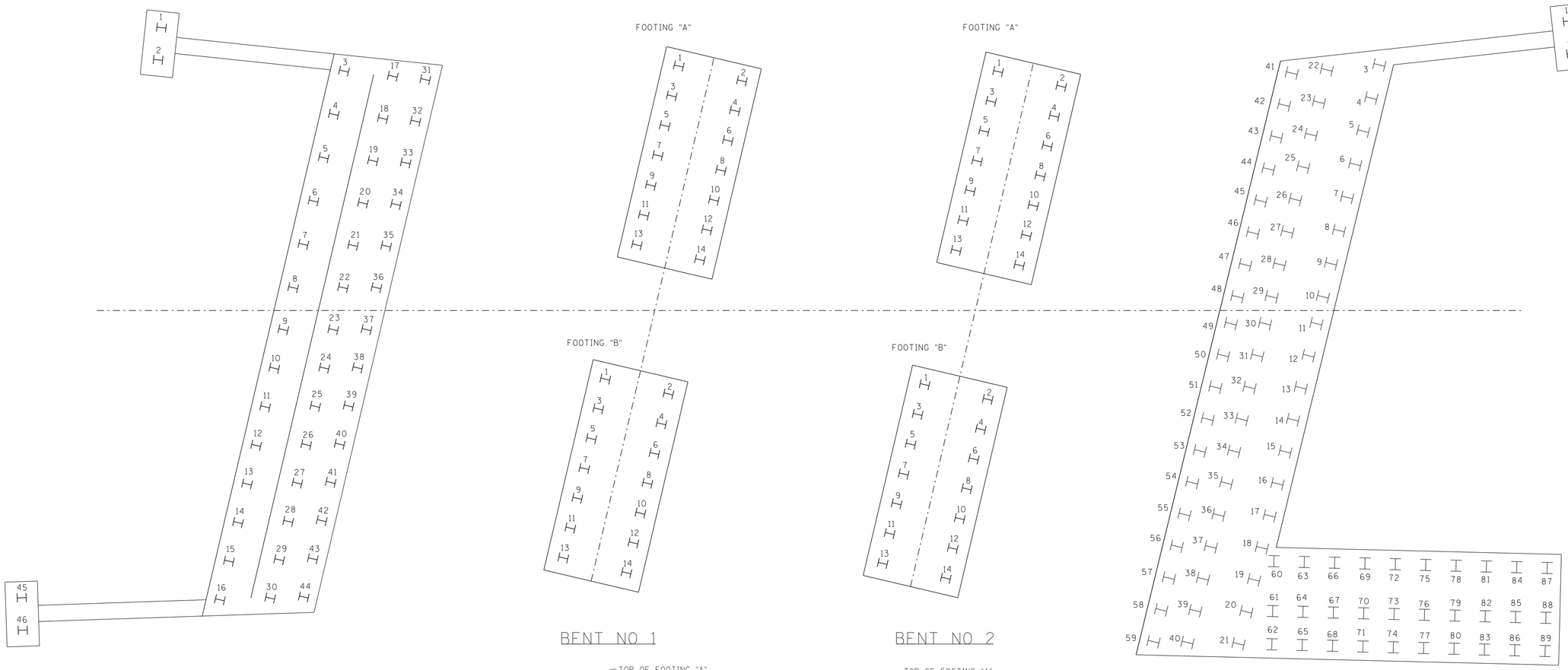
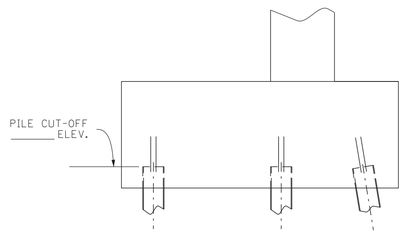
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |




BENT NO 1

BENT NO 2

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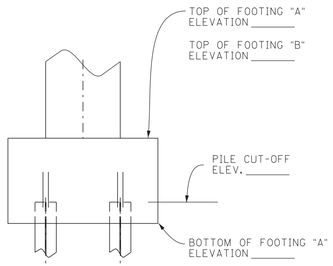
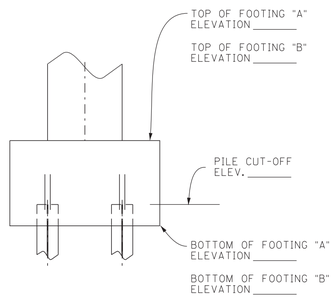



BENT NO. 1

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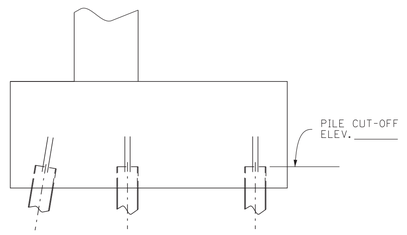


ABUTMENT NO. 2

| | | |
|---|---|---|
| PIN NO.: | 124076.00 | |
| DESIGN BY: | JASON MILLER | DATE: 12/15/2023 |
| DRAWN BY: | JASON MILLER | DATE: 12/15/2023 |
| SUPERVISED BY: | ROBERT LEFEVRE | DATE: 12/15/2023 |
| CHECKED BY: | TERI JOHNSON | DATE: 09/30/2024 |

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# FINAL FOUNDATION DATA
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-452

5/20/2025 11:47:06 AM
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# TABLE OF PILE DATA

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT NO. 1 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | |
| | | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| ABUTMENT NO. 1 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | |
| | | 41 | 42 | 43 | 44 | 45 | 46 | | | | | | | | | | | | | | |
| ABUTMENT NO. 1 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | |

| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BENT NO. 1 | FOOTING "A" | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | |
| | | PILE TIP ELEV. | | | | | | | | | | | | | | |
| | | IN PLACE PILE LENGTH | | | | | | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | FOOTING "B" | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | |
| | | PILE TIP ELEV. | | | | | | | | | | | | | | |
| | | IN PLACE PILE LENGTH | | | | | | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| BENT NO. 2 | FOOTING "A" | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | |
| | | PILE TIP ELEV. | | | | | | | | | | | | | | |
| | | IN PLACE PILE LENGTH | | | | | | | | | | | | | | |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | FOOTING "B" | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | |
| | | PILE TIP ELEV. | | | | | | | | | | | | | | |
| | | IN PLACE PILE LENGTH | | | | | | | | | | | | | | |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ABUTMENT NO. 2 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | | | | |
| | | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 |
| ABUTMENT NO. 2 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | | | | |
| | | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 |
| ABUTMENT NO. 2 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | | | | |
| | | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | | | |
| ABUTMENT NO. 2 | PILE CUT-OFF ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | PILE TIP ELEV. | | | | | | | | | | | | | | | | | | | | | | | |
| | IN PLACE PILE LENGTH | | | | | | | | | | | | | | | | | | | | | | | |

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 09/30/2024

NOTE TO CONTRACTOR AND CONSTRUCTION OFFICE:
THE BLANKS ON THIS SHEET ARE TO BE FILLED IN BY THE CONSTRUCTION OFFICE AND/OR FIELD ENGINEER GIVING AS BUILT CONDITIONS. AFTER COMPLETION IT IS TO BE SENT TO THE DIVISION OF STRUCTURES TO BECOME PART OF FINAL BRIDGE DOCUMENTS.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

FINAL FOUNDATION DATA
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-453

5/20/2025 12:07:50 PM
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CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

## SUPERSTRUCTURE (EPOXY COATED)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A400E | SIDEWALK | 4 | 98 | | | | | 30'-0" |
| A401E | SIDEWALK | 4 | 14 | | | | | 23'-8" |
| A402E | SIDEWALK | 4 | 430 | | | | | 5'-8" |
| A500E | SLAB | 5 | 638 | | | | | 27'-10" |
| A501E | SLAB | 5 | 638 | | | | | 24'-5" |
| A502E | SLAB | 5 | 92 | | | | | 60'-0" |
| A503E | SLAB | 5 | 46 | | | | | 49'-9" |
| A600E | SLAB | 6 | 106 | | | | | 18'-5" |
| A800E | SLAB | 8 | 106 | | | | | 53'-11" |
| A801E | SLAB | 8 | 52 | | | | | 35'-5" |
| A802E | SLAB | 8 | 48 | | | | | 19'-1" |
| A803E | SLAB | 8 | 53 | | | | | 37'-6" |
| AX500E | SLAB | 5 | 1276 | | | | | 3'-6" |
| B571E | RAIL | 5 | 656 | 3'-4" | | | | 3'-11" |

## SUPERSTRUCTURE (REGULAR)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A504 | DIAPHRAGM | 5 | 12 | | | | | 27'-2" |
| A505 | DIAPHRAGM | 5 | 12 | | | | | 22'-4" |
| L400 | DIAPHRAGM | 4 | 64 | 1'-2" | 1'-9" | | | 6'-7" |
| L401 | DIAPHRAGM | 4 | 36 | 1'-2" | 1'-2" | | | 5'-5" |
| AX501 | DIAPHRAGM | 5 | 24 | | | | | 3'-0" |

## ABUTMENT NO. 1 (EPOXY COATED)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A570E | WING/RAIL | 5 | 36 | | | | | 4'-10" |
| A640E | ENDWALL | 6 | 54 | | | | | 6'-8" |
| A641E | ENDWALL | 6 | 103 | | | | | 9'-2" |
| A642E | ENDWALL PH. I | 6 | 2 | | | | | 28'-10" |
| A643E | ENDWALL PH. II | 6 | 2 | | | | | 23'-6" |
| AX640E | ENDWALL | 6 | 4 | | | | | 4'-10" |
| B570E | WING/RAIL | 5 | 62 | 3'-4" | | | | 3'-11" |
| B640E | ENDWALL | 6 | 2 | 5'-0" | | | | 5'-8" |
| F640E | RD BRKT/PABE | 6 | 99 | 1'-1" | 1'-3" | 1'-1" | 1'-3" | 4'-0" |
| R640E | EW/SLAB | 6 | 50 | 4'-10" | 2'-9" | | | 7'-7" |

## ABUTMENT NO. 1 (REGULAR))

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A440 | RD BRKT PH I | 4 | 1 | | | | | 27'-4" |
| A441 | RD BRKT PH II | 4 | 1 | | | | | 22'-3" |
| A642 | ENDWALL PH I | 6 | 6 | | | | | 28'-10" |
| A643 | ENDWALL PH II | 6 | 6 | | | | | 23'-6" |
| SER | | | | | | | | |
| A644 | WINGWALL | 6 | 2 | • DIM VARIES FROM 12'-5" TO 5'-8" IN INC. OF 4 1/16" (21 BARS) | | | | 189'-11" |
| A645 | WINGWALL | 6 | 12 | | | | | 13'-9" |
| SER | | | | | | | | |
| A646 | WINGWALL | 6 | 2 | • DIM VARIES FROM 12'-7" TO 5'-8" IN INC. OF 4 3/8" (20 BARS) | | | | 182'-6" |
| A647 | WINGWALL | 6 | 12 | | | | | 14'-2" |
| A648 | WINGWALL | 6 | 4 | | | | | 23'-10" |
| A649 | WINGWALL | 6 | 2 | | | | | 25'-4" |
| A650 | WINGWALL | 6 | 2 | | | | | 22'-4" |
| SER | | | | | | | | |
| A651 | WINGWALL | 6 | 1 | • DIM VARIES FROM 22'-1" TO 8'-2" IN INC. OF 1'-8 7/8" (9 BARS) | | | | 136'-2" |
| A652 | WINGWALL | 6 | 4 | | | | | 6'-11" |
| A653 | WINGWALL | 6 | 4 | | | | | 23'-7" |
| A654 | WINGWALL | 6 | 2 | | | | | 25'-1" |
| A655 | WINGWALL | 6 | 2 | | | | | 22'-1" |

## ABUTMENT NO. 1 (REGULAR, CONT'D)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| SER | | | | | | | | |
| A656 | WINGWALL | 6 | 1 | • DIM VARIES FROM 21'-10" TO 8'-2" IN INC. OF 1'-8 1/2" (9 BARS) | | | | 135'-0" |
| A657 | | | | BAR OMITTED | | | | |
| A658 | WINGWALL | 6 | 5 | | | | | 22'-8" |
| A659 | WINGWALL | 6 | 2 | | | | | 24'-2" |
| A660 | WINGWALL | 6 | 2 | | | | | 21'-2" |
| SER | | | | | | | | |
| A661 | WINGWALL | 6 | 1 | • DIM VARIES FROM 23'-4" TO 7'-9" IN INC. OF 1'-11 3/8" (9 BARS) | | | | 139'-11" |
| A662 | WINGWALL | 6 | 4 | | | | | 6'-8" |
| A663 | WINGWALL | 6 | 5 | | | | | 22'-10" |
| A664 | WINGWALL | 6 | 2 | | | | | 24'-4" |
| A665 | WINGWALL | 6 | 2 | | | | | 21'-4" |
| SER | | | | | | | | |
| A666 | WINGWALL | 6 | 1 | • DIM VARIES FROM 20'-6" TO 7'-9" IN INC. OF 1'-7 1/8" (9 BARS) | | | | 127'-2" |
| AX440 | RDWY. BRKT. | 4 | 2 | | | | | 2'-5" |
| AX641 | EW/A BM/FOOT | 6 | 168 | | | | | 3'-7" |
| B640 | ENDWALL | 6 | 6 | 5'-0" | | | | 5'-8" |
| SER | | | | | | | | |
| B641 | FOOTING PH I | 6 | 2 | • DIM VARIES FROM 28'-10" TO 28'-7" IN INC. OF 5/16" (10 BARS) | | | | 293'-9" |
| SER | | | | | | | | |
| B642 | FOOTING PH II | 6 | 2 | • DIM VARIES FROM 24'-0" TO 22'-11" IN INC. OF 1 7/16" (10 BARS) | | | | 241'-3" |
| C640 | ABUT BM/FOOT | 6 | 103 | 13'-8" | | | | 14'-8" |
| C840 | ABUT BM/FOOT | 8 | 104 | 13'-8" | | | | 15'-0" |
| CD640 | WINGWALL | 6 | 2 | 16'-6" | 3'-3" | 2'-11" | | 19'-9" |
| CD641 | WINGWALL | 6 | 2 | 16'-0" | 3'-3" | 2'-11" | | 19'-3" |
| D640 | FOOTING | 6 | 106 | 9'-9" | | | | 11'-1" |
| D641 | FOOTING | 6 | 2 | 9'-8" | | | | 11'-0" |
| D642 | FOOTING | 6 | 2 | 9'-7" | | | | 10'-11" |

## ABUTMENT NO. 1 (REGULAR, CONT'D)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| D643 | WING FOOTING | 6 | 40 | 2'-6" | | | | 3'-10" |
| H440 | RISER BLOCK | 4 | 25 | 1'-2" | 1'-9" | | | 4'-8" |
| H441 | RISER BLOCK | 4 | 10 | 3'-5" | 1'-9" | | | 6'-11" |
| H540 | EW/RDWY BKT | 5 | 50 | 2'-2" | 6" | | | 3'-2" |
| H640 | WING/FOOT | 6 | 12 | 1'-2" | 5'-9" | | | 12'-8" |
| L640 | ABUT BM/FOOT | 6 | 348 | 4'-9" | 2'-8" | | | 16'-2" |
| L641 | WING FOOTING | 6 | 8 | 5'-8" | 1'-8" | | | 16'-0" |
| LA640 | ABUT BM/FOOT | 6 | 29 | 4'-5" | 2'-8" | 3'-9" | | 14'-11" |
| LA641 | ABUT BM/FOOT | 6 | 29 | 4'-9" | 2'-8" | 4'-5" | | 15'-10" |
| YB640 | ABUT BM/FOOT | 6 | 174 | 2'-8" | 1'-0" | | | 4'-4" |
| HA640 | ABUT BM/FOOT | 6 | 29 | 2'-8" | 5'-3" | 5'-11" | | 13'-10" |
| HA641 | ABUT BM/FOOT | 6 | 29 | 2'-8" | 5'-4" | 6'-0" | | 14'-0" |
| VA840 | ABUT BM | 8 | 84 | 2'-6" | | | | 5'-0" |

## ABUTMENT NO. 2 (EPOXY)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A570E | WING/RAIL | 5 | 18 | | | | | 4'-10" |
| A640E | ENDWALL | 6 | 54 | | | | | 6'-8" |
| A641E | ENDWALL | 6 | 104 | | | | | 9'-2" |
| A642E | ENDWALL PH. I | 6 | 2 | | | | | 28'-10" |
| A643E | ENDWALL PH. II | 6 | 2 | | | | | 23'-6" |
| AX640E | ENDWALL | 6 | 4 | | | | | 4'-10" |
| B570E | WING/RAIL | 5 | 130 | 3'-4" | | | | 3'-11" |
| B640E | ENDWALL | 6 | 2 | 5'-0" | | | | 5'-8" |
| F640E | RD BRKT/PABE | 6 | 99 | 1'-1" | 1'-3" | 1'-1" | 1'-3" | 4'-0" |
| R640E | EW/SLAB | 6 | 50 | 4'-10" | 2'-9" | | | 7'-7" |

## REINFORCING STEEL CODE

| TYPE | SIZE | SERIES |
|---|---|---|
| A | 5 | 06 |

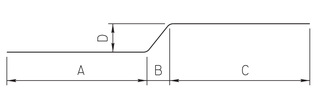
NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE OUTSIDE TO OUTSIDE OF BAR. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY, EXCEPT AS NOTED.

NOTE: THE SUFFIX E FOR BARS SO MARKED DENOTES EPOXY COATED REINFORCEMENT.

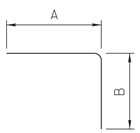
BARS A

BARS AX

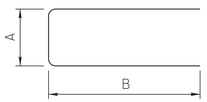
BARS B



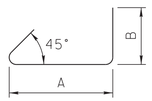
BARS F



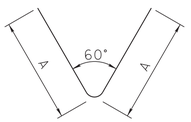
BARS R



BARS H



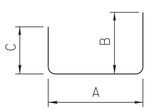
BARS YB



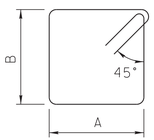
BARS VA

BARS C

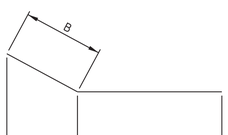
BARS D



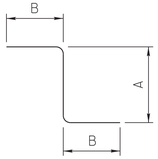
BARS HA



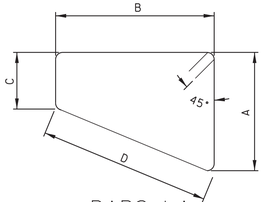
BARS L



BARS CD



BARS Z



BARS LA

Robert LeFevre 12/15/2023

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

1

# BILL OF STEEL
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

U-95-454

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/31/2024

5/20/2025 11:30:30 AM
C:\USERS\JJ02319\ONEDRIVE - TENNESSEE\DESKTOP\DAILY WORK\HAMILTON\124076.00\DESIGN_JM\DETAILS\SHEETS\33S43070001BOS.SHT

## ABUTMENT NO. 2 (REGULAR)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A440 | RD BRKT PH I | 4 | 1 | | | | | 27'-5" |
| A441 | RD BRKT PH II | 4 | 1 | | | | | 22'-0" |
| | | | | | | | | |
| A642 | ENDWALL PH I | 6 | 6 | | | | | 28'-10" |
| A643 | ENDWALL PH II | 6 | 6 | | | | | 23'-5" |
| SER | | | | | | | | |
| A644 | WINGWALL | 6 | 2 | • | | | | 800'-8" |
| | | | | • DIM VARIES FROM 19'-11" TO | | | | |
| | | | | 5'-6" IN INC OF 2¾" (63 BARS) | | | | |
| A645 | WINGWALL | 6 | 14 | | | | | 21'-5" |
| A646 | WINGWALL | 6 | 5 | | | | | 39'-5" |
| A647 | WINGWALL | 6 | 2 | | | | | 41'-0" |
| A648 | WINGWALL | 6 | 2 | | | | | 38'-0" |
| SER | | | | | | | | |
| A649 | WINGWALL | 6 | 1 | • | | | | 430'-8" |
| | | | | • DIM VARIES FROM 37'-9" TO | | | | |
| | | | | 7'-7" IN INC OF 1'-8⅛" (19 BARS) | | | | |
| A650 | WINGWALL | 6 | 4 | | | | | 7'-1" |
| A651 | WINGWALL | 6 | 5 | | | | | 39'-9" |
| A652 | WINGWALL | 6 | 2 | | | | | 41'-4" |
| A653 | WINGWALL | 6 | 2 | | | | | 38'-4" |
| SER | | | | | | | | |
| A654 | WINGWALL | 6 | 1 | • | | | | 433'-10" |
| | | | | • DIM VARIES FROM 38'-1" TO | | | | |
| | | | | 7'-7" IN INC OF 1'-8 5/16" (19 BARS) | | | | |
| A655 | WINGWALL | 6 | 62 | | | | | 14'-4" |
| A656 | WINGWALL | 6 | 5 | | | | | 32'-6" |
| A657 | WINGWALL | 6 | 25 | | | | | 34'-0" |
| A658 | WINGWALL | 6 | 5 | | | | | 32'-3" |
| A659 | WINGWALL | 6 | 25 | | | | | 33'-10" |
| A660 | WINGWALL | 6 | 62 | | | | | 21'-4" |
| | | | | | | | | |
| AX440 | RD BRKT | 4 | 2 | | | | | 2'-5" |
| | | | | | | | | |
| AX641 | CONST JT | 6 | 196 | | | | | 3'-7" |
| | | | | | | | | |
| B640 | ENDWALL | 6 | 6 | 5'-0' | | | | 5'-8' |
| SER | | | | | | | | |
| B641 | FOOTING | 6 | 2 | • | | | | 423'-1" |
| | | | | • DIM VARIES FROM 32'-0" TO | | | | |
| | | | | 31'-9" IN INC OF ⅛" (13 BARS) | | | | |
| SER | | | | | | | | |
| B642 | FOOTING | 6 | 2 | • | | | | 312'-7" |
| | | | | • DIM VARIES FROM 23'-10" TO | | | | |
| | | | | 22'-11" IN INC OF 15/16" (13 BARS) | | | | |
| C640 | ABUT BM/FOOT | 6 | 103 | 21'-6" | | | | 22'-6" |

## ABUTMENT NO. 2 (REGULAR, CONT'D)

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| C641 | WING BM/FOOT | 6 | 62 | 6'-11" | | | | 7'-11" |
| | | | | | | | | |
| C840 | ABUT BM/FOOT | 8 | 104 | 21'-6" | | | | 22'-10" |
| | | | | | | | | |
| C940 | WING BM/FOOT | 9 | 62 | 16'-3" | | | | 17'-10" |
| | | | | | | | | |
| CD640 | WINGWALL | 6 | 2 | 34'-0" | 2'-9" | 2'-6" | | 36'-9" |
| | | | | | | | | |
| D640 | FOOTING | 6 | 116 | 9'-9" | | | | 11'-1" |
| D641 | FOOTING | 6 | 2 | 9'-11" | | | | 11'-3" |
| D642 | FOOTING | 6 | 2 | 10'-1" | | | | 11'-5" |
| D643 | FOOTING | 6 | 66 | 9'-6" | | | | 10'-10" |
| SER | | | | | | | | |
| D644 | FOOTING | 6 | 2 | • | | | | 43'-8" |
| | | | | • DIM VARIES FROM 9'-8" TO | | | | |
| | | | | 9'-6" IN INC OF 1 1/16" (4 BARS) | | | | |
| SER | | | | | | | | |
| D645 | FOOTING | 6 | 2 | • | | | | 492'-5" |
| | | | | • DIM VARIES FROM 37'-6" TO | | | | |
| | | | | 35'-7" IN INC OF 1 15/16" (13 BARS) | | | | |
| D646 | WING FOOT | 6 | 20 | 2'-6" | | | | 3'-10" |
| | | | | | | | | |
| H540 | EW/BRACKET | 5 | 50 | 2'-2" | 6" | | | 3'-2" |
| | | | | | | | | |
| H640 | WING FOOT | 6 | 6 | 1'-2" | 5'-9" | | | 12'-8" |
| | | | | | | | | |
| HA640 | AB BM/FOOT | 6 | 38 | 2'-8" | 6'-0" | 5'-4" | | 14'-0" |
| HA641 | AB BM/FOOT | 6 | 38 | 2'-8" | 5'-10" | 5'-2" | | 13'-8" |
| | | | | | | | | |
| L640 | AB BM/FOOT | 6 | 456 | 2'-8" | 4'-8" | | | 16'-0" |
| L641 | WING FOOT | 6 | 4 | 5'-8" | 1'-8" | | | 16'-0" |
| | | | | | | | | |
| LA640 | AB BM/FOOT | 6 | 38 | 4'-3" | 2'-8" | 3'-8" | | 14'-8" |
| LA641 | AB BM/FOOT | 6 | 38 | 5'-2" | 2'-8" | 4'-2" | | 16'-3" |
| | | | | | | | | |
| YB640 | AB BM/FOOT | 6 | 228 | 2'-8" | 1'-0" | | | 4'-4" |
| | | | | | | | | |
| H440 | RISER BLOCK | 4 | 20 | 1'-2" | 1'-9" | | | 4'-8" |
| H441 | RISER BLOCK | 4 | 8 | 3'-5" | 1'-9" | | | 6'-11" |
| | | | | | | | | |
| VA840 | ABUT. BEAM | 8 | 174 | 2'-6" | | | | 5'-0" |

## BENT NO. 1

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A450 | CAP | 4 | 10 | | | | | 28'-2" |
| A451 | CAP | 4 | 10 | | | | | 23'-6" |
| | | | | | | | | |
| A850 | CAP | 8 | 14 | | | | | 28'-2" |
| A851 | CAP | 8 | 14 | | | | | 23'-6" |
| A852 | COLUMN | 8 | 144 | | | | | 27'-6" |
| | | | | | | | | |
| B850 | CAP | 8 | 7 | 28'-2" | | | | 29'-1" |
| B851 | CAP | 8 | 7 | 23'-6" | | | | 24'-5" |
| | | | | | | | | |
| C850 | COL./FOOTING | 8 | 144 | 7'-4" | | | | 8'-8" |
| | | | | | | | | |
| D750 | FOOTING | 7 | 118 | 8'-6" | | | | 10'-2" |
| D751 | FOOTING | 7 | 52 | 19'-6" | | | | 21'-2" |
| | | | | | | | | |
| H450 | RISER | 4 | 12 | 3'-9" | 1'-0" | | | 5'-9" |
| H451 | RISER | 4 | 15 | 3'-0" | 1'-0" | | | 5'-0" |
| | | | | | | | | |
| L550 | COLUMN | 5 | 164 | 16'-3" | 2'-3" | | | 37'-11" |
| | | | | | | | | |
| L650 | CAP | 6 | 108 | 2'-2" | 3'-8" | | | 13'-0" |
| | | | | | | | | |
| AX450 | CAP CONST. JT. | 4 | 20 | | | | | 2'-5" |
| | | | | | | | | |
| AX850 | CAP CONST. JT. | 8 | 42 | | | | | 4'-9" |
| | | | | | | | | |
| YB550 | CAP/COL./FOOT. | 5 | 2460 | 2'-3" | 0'-6" | | | 3'-3" |
| YB551 | CAP/COL./FOOT. | 5 | 164 | 16'-3" | 0'-6" | | | 17'-3" |
| | | | | | | | | |
| VA850 | FOOT. | 8 | 56 | 2'-6" | | | | 5'-0" |

## BENT NO. 2

| BAR | LOCATION | SIZE | NO. REQ'D | BENDING DIMENSIONS A | B | C | D | LENGTH |
|---|---|---|---|---|---|---|---|---|
| A450 | CAP | 4 | 10 | | | | | 28'-2" |
| A451 | CAP | 4 | 10 | | | | | 23'-6" |
| | | | | | | | | |
| A850 | CAP | 8 | 14 | | | | | 28'-2" |
| A851 | CAP | 8 | 14 | | | | | 23'-6" |
| A852 | COLUMN | 8 | 144 | | | | | 23'-3" |
| | | | | | | | | |
| B850 | CAP | 8 | 7 | 28'-2" | | | | 29'-1" |
| B851 | CAP | 8 | 7 | 23'-6" | | | | 24'-5" |
| | | | | | | | | |
| C850 | COL./FOOTING | 8 | 144 | 7'-4" | | | | 8'-8" |
| | | | | | | | | |
| D750 | FOOTING | 7 | 118 | 8'-6" | | | | 10'-2" |
| D751 | FOOTING | 7 | 52 | 19'-6" | | | | 21'-2" |
| | | | | | | | | |
| H450 | RISER | 4 | 12 | 3'-9" | 1'-0" | | | 5'-9" |
| H451 | RISER | 4 | 15 | 3'-0" | 1'-0" | | | 5'-0" |
| | | | | | | | | |
| L550 | COLUMN | 5 | 138 | 16'-3" | 2'-3" | | | 37'-11" |
| | | | | | | | | |
| L650 | CAP | 6 | 108 | 2'-2" | 3'-8" | | | 13'-0" |
| | | | | | | | | |
| AX450 | CAP CONST. JT. | 4 | 20 | | | | | 2'-5" |
| | | | | | | | | |
| AX850 | CAP CONST. JT. | 8 | 42 | | | | | 4'-9" |
| | | | | | | | | |
| YB550 | CAP/COL./FOOT. | 5 | 2070 | 2'-3" | 0'-6" | | | 3'-3" |
| YB551 | CAP/COL./FOOT. | 5 | 138 | 16'-3" | 0'-6" | | | 17'-3" |
| | | | | | | | | |
| VA850 | FOOT. | 8 | 56 | 2'-6" | | | | 5'-0" |

CONST. NO.: 33057-3228-94

| PROJECT NO. | YEAR | SHEET NO. |
|---|---|---|
| BR-STP-320(10) | 2025 | |

REVISIONS

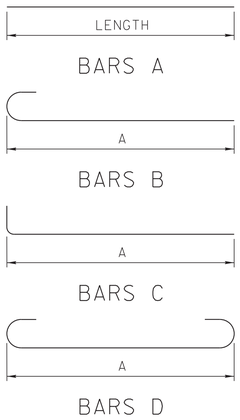
| NO. | DATE | BY | BRIEF DESCRIPTION |
|---|---|---|---|
| 1 | 05-20-2025 | JM | GENERAL REVISION |
| | - - | | |
| | - - | | |
| | - - | | |
| | - - | | |

## REINFORCING STEEL CODE

| TYPE | SIZE | SERIES |
|---|---|---|
| A | 5 | 06 |

NOTE: DIMENSIONS SHOWN ON THIS SHEET ARE OUTSIDE TO OUTSIDE OF BAR. STANDARD C.R.S.I. HOOK DETAILS SHALL APPLY, EXCEPT AS NOTED.

NOTE: THE SUFFIX E FOR BARS SO MARKED DENOTES EPOXY COATED REINFORCEMENT.




ROBERT LEFEVRE REGISTERED ENGINEER LICENSE NO. 120146 STATE OF TENNESSEE

5/20/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

BILL OF STEEL
STATE ROUTE 320
OVER CSX RAILROAD
BRIDGE ID NO. 33S43070001
STA. 18+27.50
LOG MILE 0.86
HAMILTON COUNTY
2025

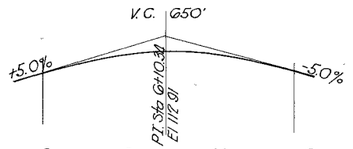
U-95-455

PIN NO.: 124076.00
DESIGN BY: JASON MILLER DATE: 12/15/2023
DRAWN BY: JASON MILLER DATE: 12/15/2023
SUPERVISED BY: ROBERT LEFEVRE DATE: 12/15/2023
CHECKED BY: TERI JOHNSON DATE: 10/31/2024

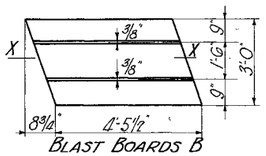
5/20/2025 11:33:13 AM
C:\USERS\JJ02319\ONEDRIVE - TENNESSEE\DESKTOP\DAILY WORK\HAMILTON\124076.00\DESIGN_JM\DETAILS\SHEETS\33S43070001BOS2.SHT

| FED ROAD DIST. NO. | STATE | FED AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | TENN. | 473 A | 19 | 5 | 15 |

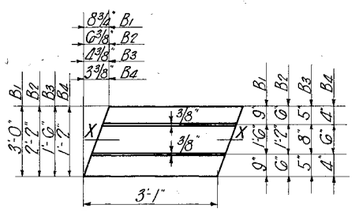
E = Expansion End
F = Fixed End



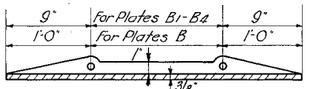

SKETCH SHOWING VERTICAL CURVE
ELEVATION REFERS TO FINISHED GRADE



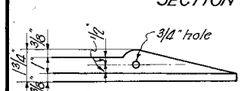

BLAST BOARDS B
@ REQUIRED




BLAST BOARDS B1-B4
REQUIRED 4 - B1
4 - B2
8 - B3
4 - B4

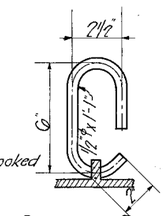



SECTION X-X

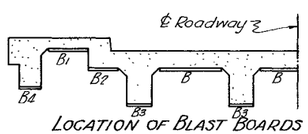



DETAIL

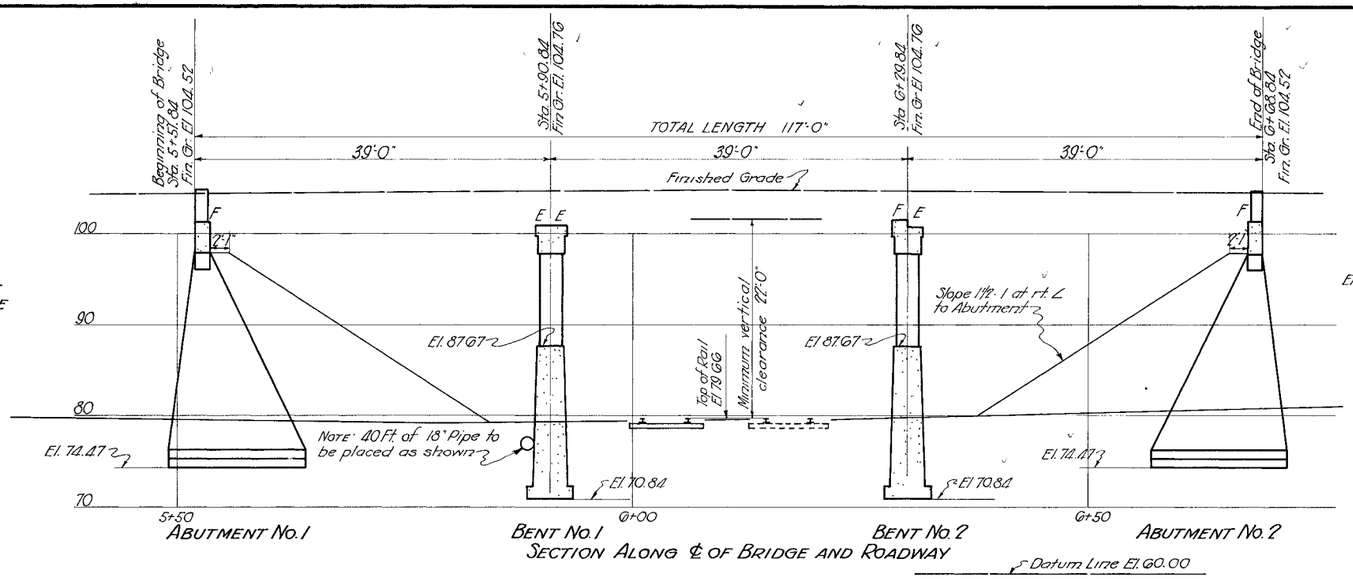
NOTE: Blast boards shall be centered over tracks and suspended with 1/2" ϕ hooked bars, as detailed.



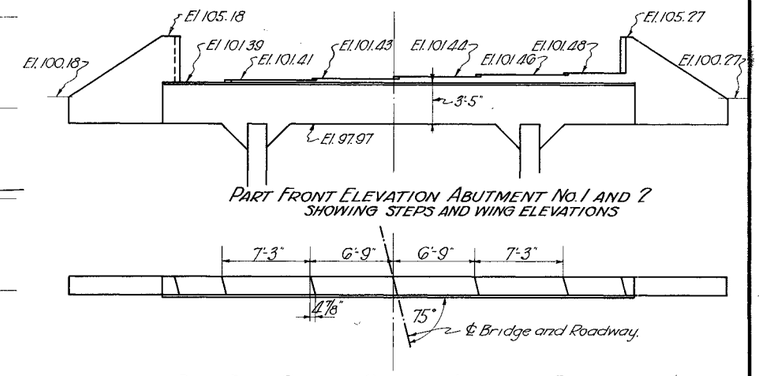

DETAIL OF BLAST BOARD HANGER
104 REQUIRED




LOCATION OF BLAST BOARDS

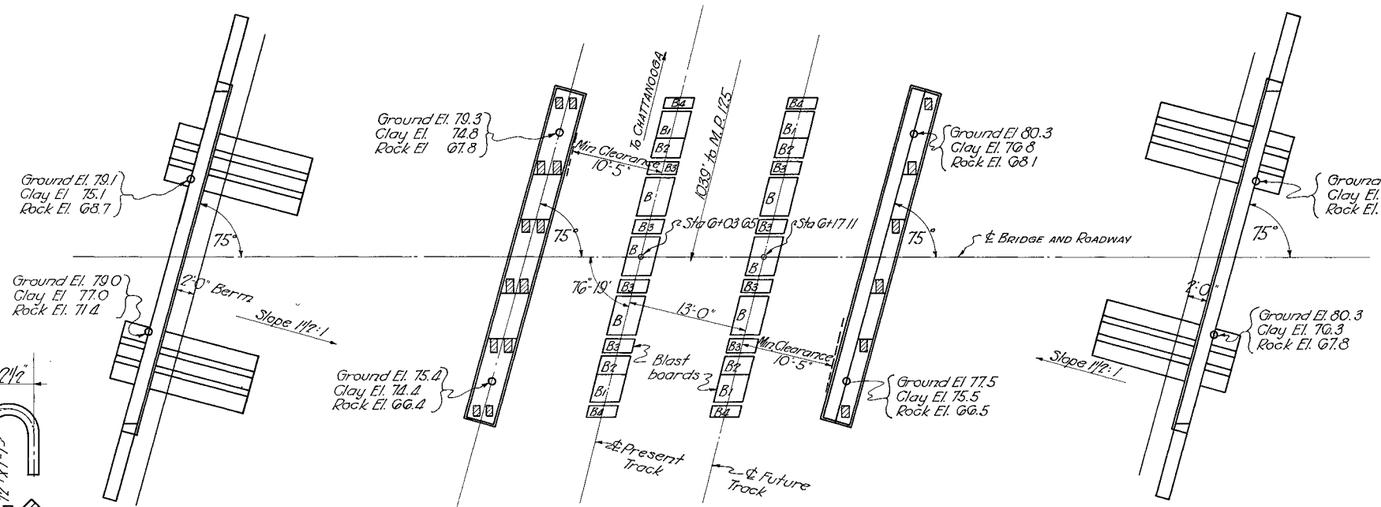



SECTION ALONG ℄ OF BRIDGE AND ROADWAY
Datum Line El. 60.00




PART FRONT ELEVATION ABUTMENT No. 1 AND 2
SHOWING STEPS AND WING ELEVATIONS

PART PLAN SHOWING STEPS IN ABUTMENT BRIDGE SEATS




PLAN

## SPECIAL NOTE:

The contractor shall so conduct his work as to protect the Railway Tracks and Properties from any damage.
The work shall be done in accordance with the regulations stipulated by the N.C. and St. L R.R. so as to maintain clearances and not to interrupt traffic.

## LIST OF DRAWINGS:

| | |
|---|---|
| For Details of Handrail see Dwg. See also note below | B-2-129 |
| For Details of Concrete Deck Girders see Dwg | B-2-130 |
| For Skewed Slab Plan see Dwg. | B-G-28 |
| For Details of Abutment 1 and 2 see Dwg. See also Details on this Sheet | B-G-29 |
| For Details of Bents 1 and 2 see Dwg. | B-7-68 |
| For Details of Blast Board see this Sheet | |

ROADWAY 24'-0" AND 2-5'-0" SIDEWALKS

NOTE: All C.I. Drains to be omitted on this Bridge
HANDRAIL NOTE:
Spans 1 and 3: "a" = 3 1/2"; make W = 1'-6 1/2"

## ESTIMATED QUANTITIES

| | Dry Excavation Cu. Yds. | Concrete Cu. Yds. Class "S" | Concrete Cu. Yds. Class "A" | Concrete Cu. Yds. Class "B" | Steel Pounds Reinforcing | Steel Pounds Structural |
|---|---|---|---|---|---|---|
| Superstructure | – | 16.3 | – | – | 1950 | – |
| Deck Girders | – | – | 209.7 | – | 45123 * | 9384 ** |
| Abutment No. 1 | 59 | – | 44.4 | – | 5291 | – |
| Bent No. 1 | 78 | – | 20.0 | 59.7 | 3647 | – |
| Bent No. 2 | 87 | – | 20.9 | 59.7 | 3697 | – |
| Abutment No. 2 | 76 | – | 44.4 | – | 5291 | – |
| TOTALS | 300 | 16.3 | 339.4 | 118.4 | 64999 | 9384 |

* Includes Weight of Hangers
** Includes Expansion Device over Bent 1 and weight of C.I. Blast Boards.

40 Ft. of 18" Pipe required

## GENERAL NOTES:

Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete in Handrail to be "Class "S"; Class "B" in Bents below El 87.67, Class "A" in remainder of Structure.
Reinforcing Steel: See Specifications
Forms and Finish: See Specifications
Cast Iron: See Specifications

WEIGHTS: Cast Iron Blast Boards 3081 Lbs.
Hangers 761 Lbs.
Weight of C.I. Blast boards is included in weight of Structural Steel in Table of Estimated Quantities.
Weight of Hangers is included in weight of Reinforcing Steel For Deck Girders.

DETAILS OF CAST IRON BLAST BOARDS

DESIGNED BY _____ DATE _____
DRAWN BY H. Schurman DATE 4-29-36
TRACED BY _____ DATE 5/4/36
CHECKED BY _____ DATE Sept. 36

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

# LAYOUT

OF N.C. & ST. L. R.R. OVERHEAD CROSSING
STA. 5+51.84
HAMILTON CO
1936

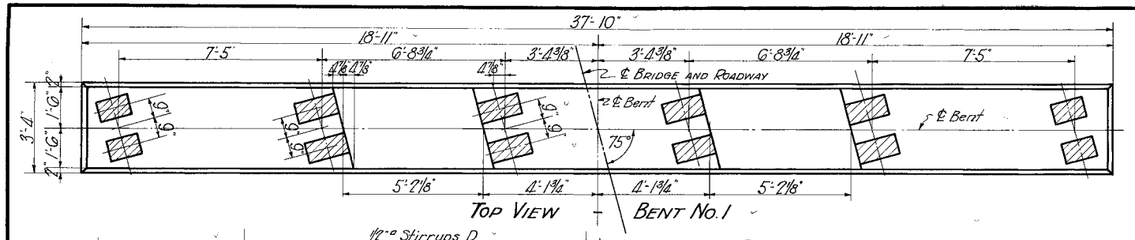
CORRECT L. W. Swanson BRIDGE ENGINEER
APPROVED O. F. Goetz STATE HIGHWAY ENGINEER

B-7-67

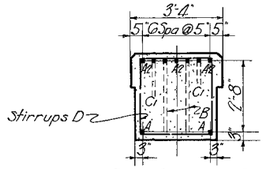
MICROFILMED

POST 12621—300—7-36

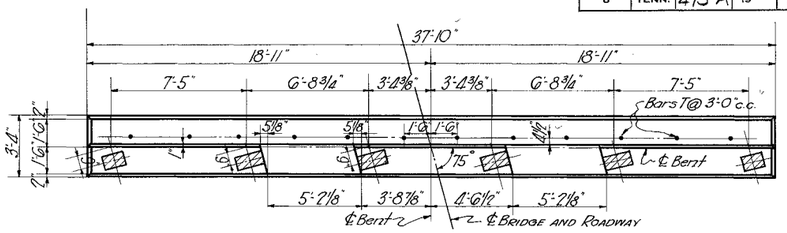
| FED ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | TENN. | 473-A | 19 | 6 | 15 |



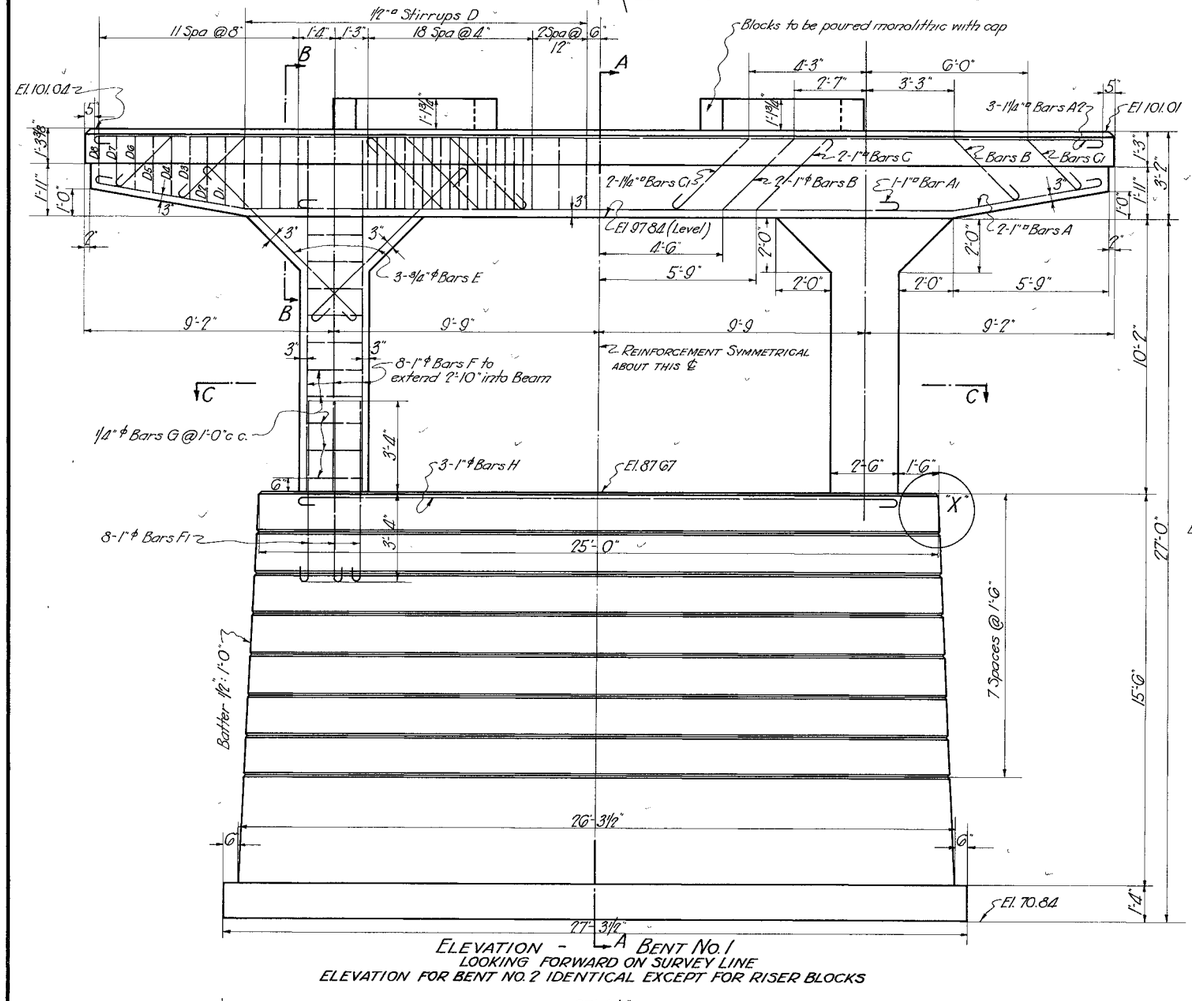

TOP VIEW — BENT NO. 1



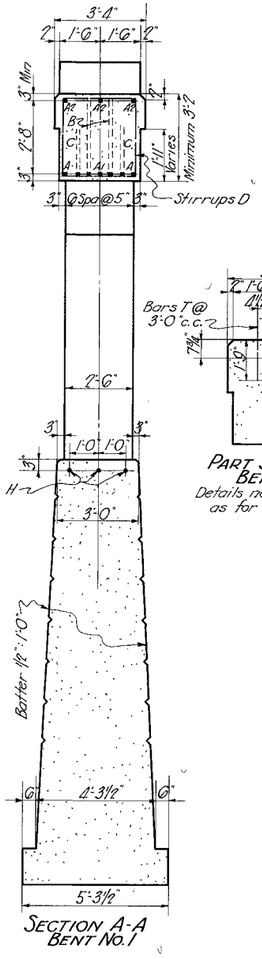

PART SECTION B-B



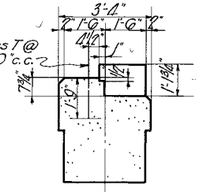

TOP VIEW - BENT NO. 2



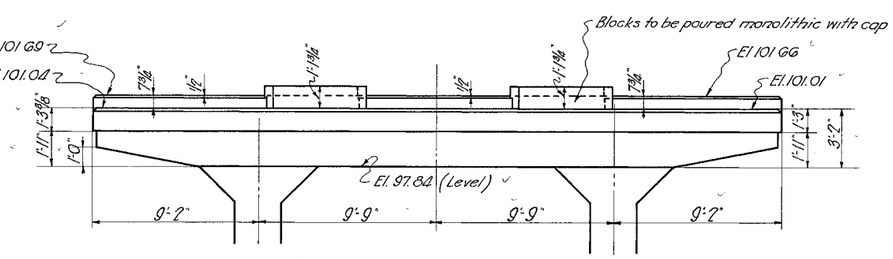

ELEVATION - A BENT NO. 1
LOOKING FORWARD ON SURVEY LINE
ELEVATION FOR BENT NO. 2 IDENTICAL EXCEPT FOR RISER BLOCKS



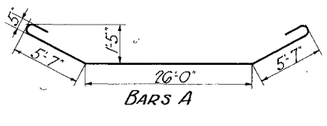

SECTION A-A BENT NO. 1



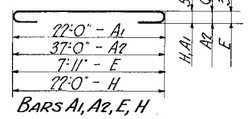

PART SECTION A-A BENT NO. 2
Details not shown same as for Bent No. 1



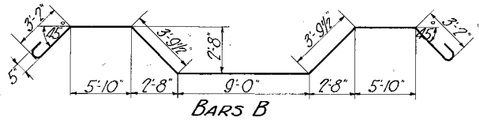

PART ELEVATION - BENT NO. 2
LOOKING BACK ON SURVEY LINE
FOR REMAINDER OF BENT AND DETAILS NOT SHOWN SEE ELEVATION OF BENT NO. 1



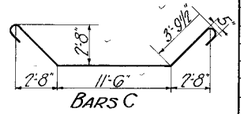

BARS A



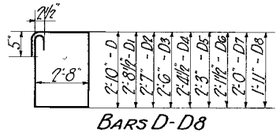

BARS A1, A2, E, H



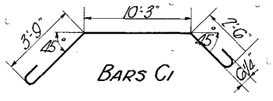

BARS B




BARS C

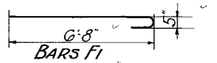



BARS D-D8




BARS C1

BARS G

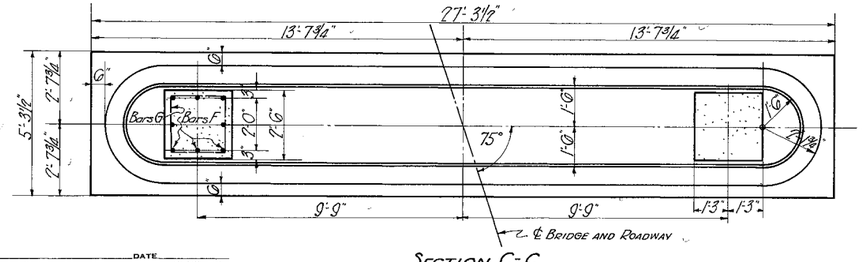



BARS F1

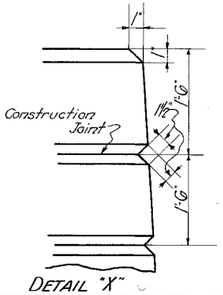
BILL OF STEEL
FOR BENTS 1 AND 2
FOR ONE BENT

| Bar | No | Size | Length |
|---|---|---|---|
| A | 2 | 1" □ | 38'-10" |
| A1 | 1 | 1" □ | 23'-8" |
| A2 | 3 | 1 1/4" ø | 39'-0" |
| B | 2 | 1" ø | 36'-3" |
| C | 2 | 1" □ | 20'-9" |
| C1 | 4 | 1 1/2" ø | 18'-6" |
| D | 50 | 1/2" ø | 11'-10" |
| D1 | 2 | " | 11'-7" |
| D2 | 2 | " | 11'-4" |
| D3 | 2 | " | 11'-2" |
| D4 | 2 | " | 10'-11" |
| D5 | 2 | " | 10'-8" |
| D6 | 2 | " | 10'-5" |
| D7 | 2 | " | 10'-2" |
| D8 | 2 | 1/2" ø | 10'-0" |
| E | 12 | 3/4" ø | 9'-3" |
| F | 16 | 1" ø | 13'-0" |
| F1 | 16 | 1" ø | 7'-6" |
| G | 20 | 1/2" ø | 9'-0" |
| H | 3 | 1" ø | 23'-8" |

For Bent 2 add 12 - 3/4" ø x 2'-9" Bars T




SECTION C-C




DETAIL "X"

NOTE: When pouring bridge seat, provision shall be made for setting bolts for bearing plates. Location of plates is shown on this Sheet.

NOTE:
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 so arranged that the construction joints between successive lifts will be made at the apex of the bead as shown.

ESTIMATED QUANTITIES

| | Concrete Cu Yds. Class "A" | Concrete Cu Yds. Class "B" | Reinforcing Steel - Pounds |
|---|---|---|---|
| BENT No. 1 | 20.0 | 59.2 | 3647 |
| BENT No. 2 | 20.9 | 59.2 | 3697 |

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

DETAILS OF
# BENTS NO. 1 AND 2
FOR BRIDGE AT
STA. 5+51.84
HAMILTON CO.
1936

CORRECT L. W. Erickson BRIDGE ENGINEER
APPROVED O. J. Goetz STATE HIGHWAY ENGINEER

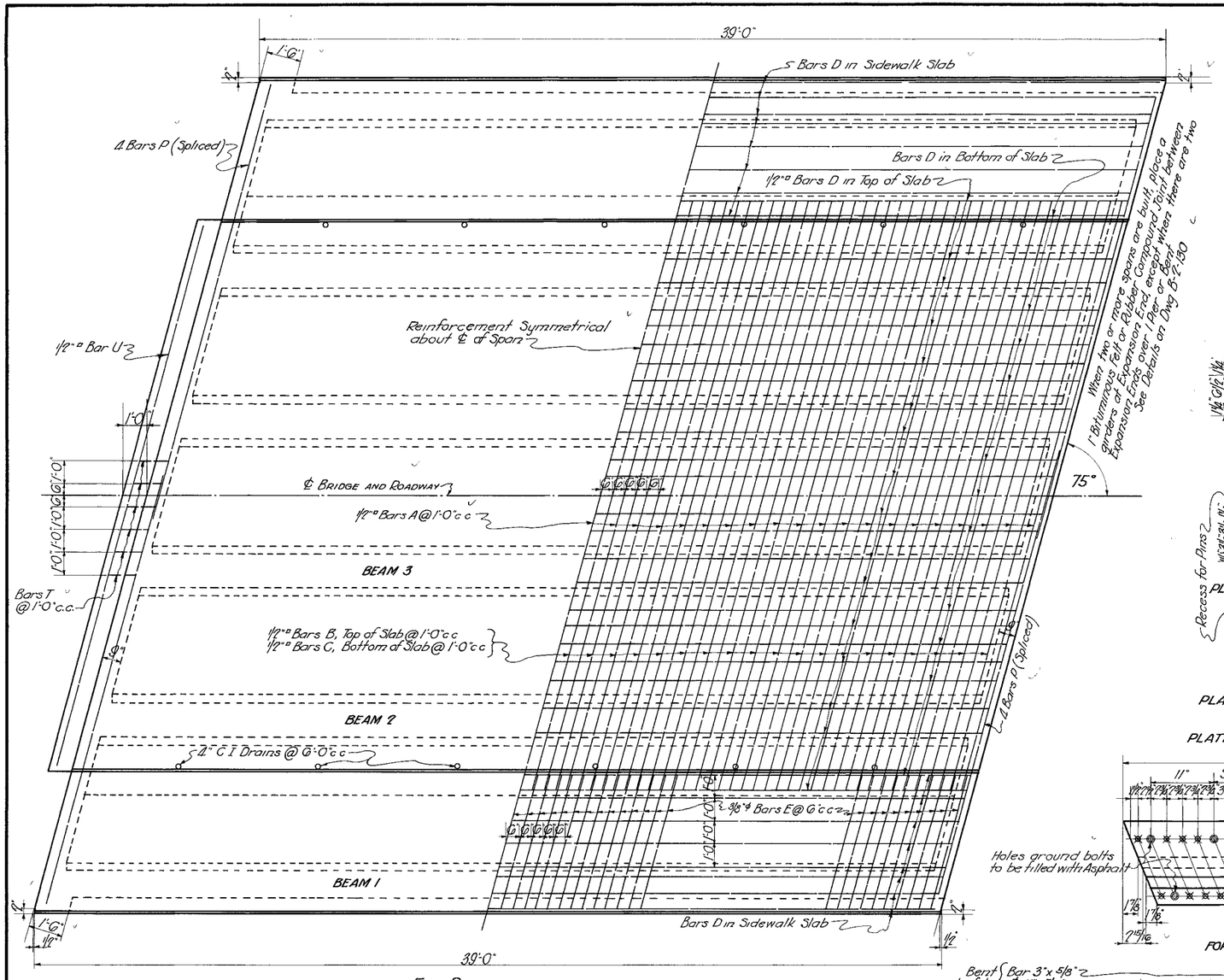
B-7-68

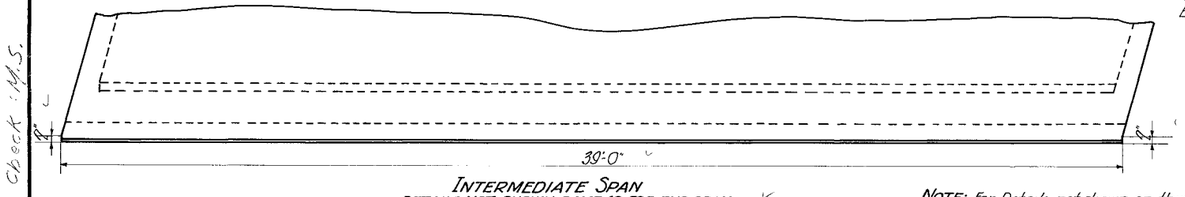
DESIGNED BY
DRAWN BY W.F.S. M. Schurmann DATE 4-24-36
TRACED BY W.F.S. DATE 5-1-36
CHECKED BY Wilson Lakeland DATE Apr. 36

PROOF PLANED

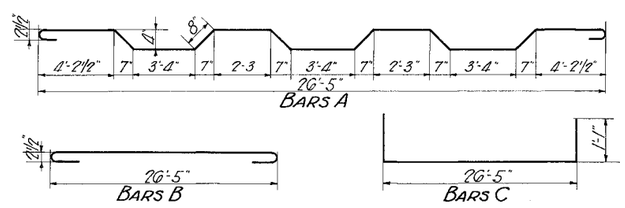
POST 12621—300—2-36

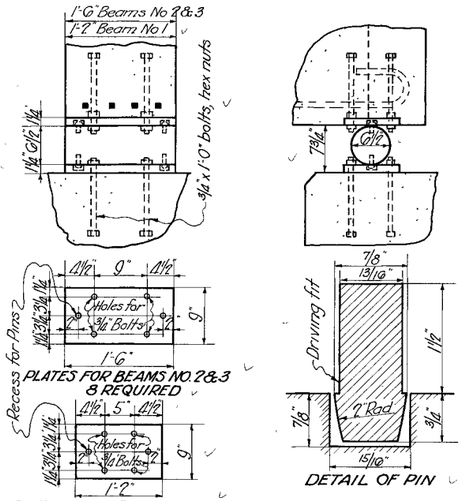
| FED ROAD DIST NO | STATE | FED AID PROJ NO | FISCAL YEAR | SHEET NO | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | TENN. | 47:-A | 19 | 7 | 15 |



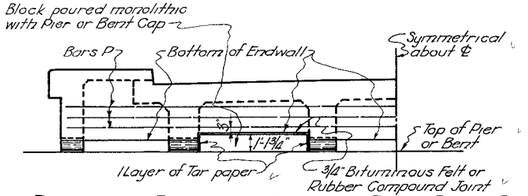

INTERMEDIATE SPAN
DETAILS NOT SHOWN SAME AS FOR END SPAN



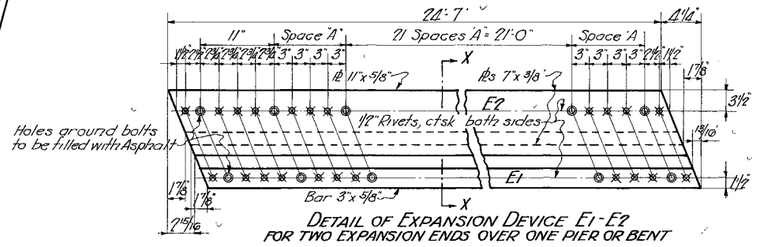




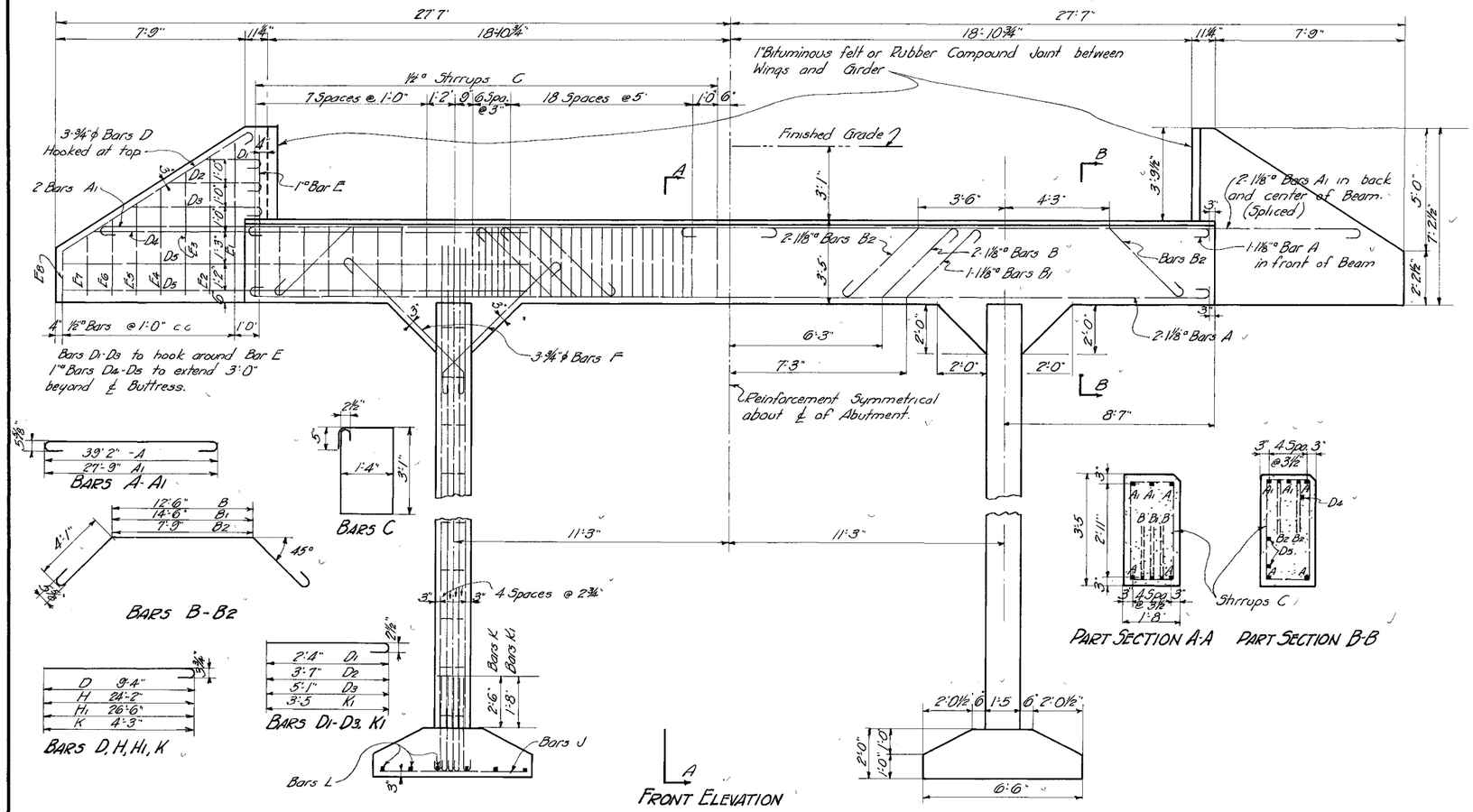


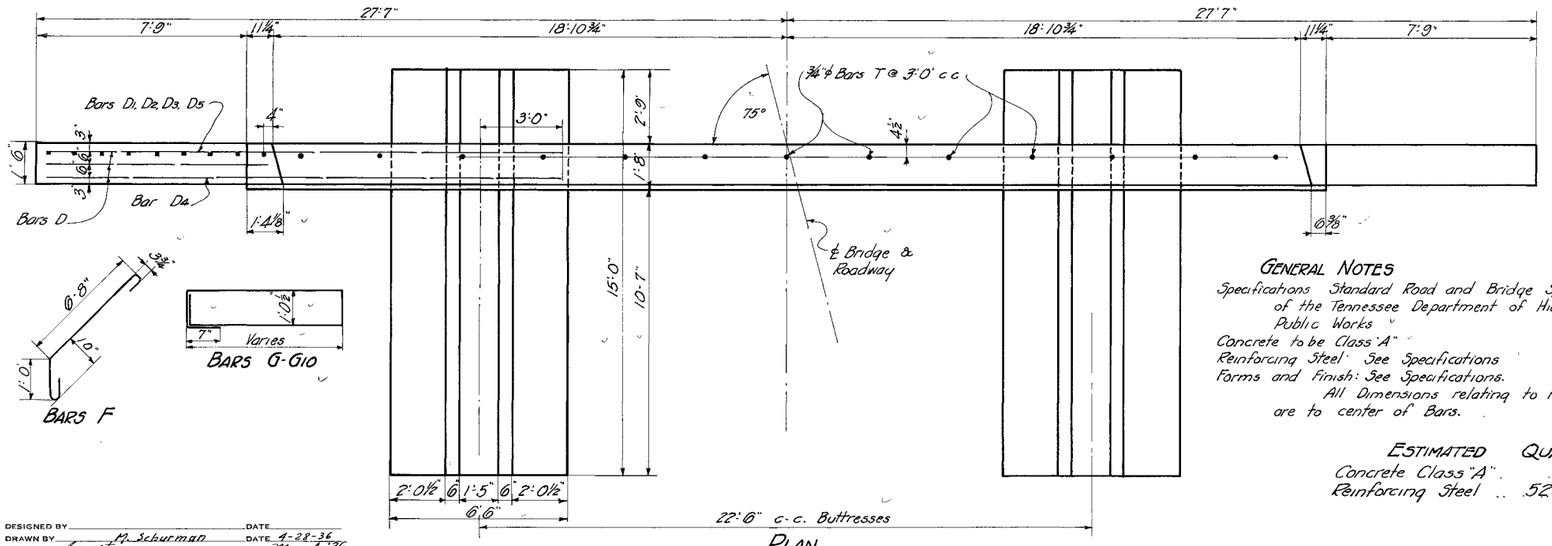

ELEVATION OF ENDWALL FOR EXPANSION END ON PIER OR BENT
FOR FIXED END SEE DWG. B-2-130

DETAILS OF ROLLER BEARINGS
PLATES TO BE CAST STEEL OR STRUCTURAL STEEL


24'-7"
4½"
11"
Space 'A'
21 Spaces A = 21'-0"
Space 'A'
3" 3" 3" 

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | TENN. | 473-A | 19 | 8 | 15 |




## GENERAL NOTES

Specifications Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works

Concrete to be Class "A"

Reinforcing Steel: See Specifications

Forms and Finish: See Specifications.

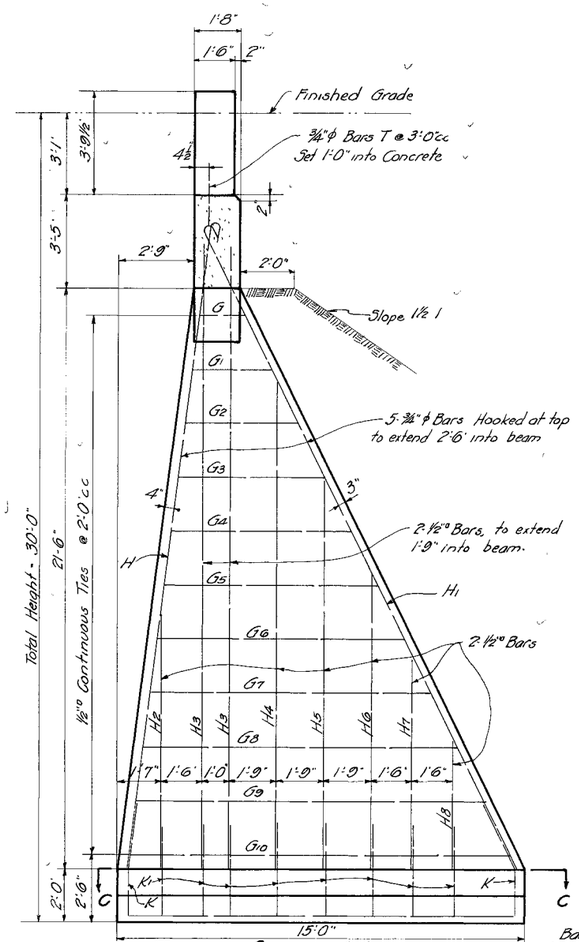
All Dimensions relating to reinforcement are to center of Bars.

## ESTIMATED QUANTITIES

| | | |
|---|---|---|
| Concrete Class "A" | 44.3 | Cu. Yds. |
| Reinforcing Steel | 5291 | Lbs. |

## BILL OF STEEL

| BAR | No | SIZE | LENGTH |
|---|---|---|---|
| A | 3 | 1⅛" ϕ | 41'0" |
| A1 | 4 | " | 39'7" |
| B | 2 | " | 22'6" |
| B1 | 1 | " | 24'6" |
| B2 | 4 | 1⅛" ϕ | 17'9" |
| C | 68 | ½" ϕ | 9'8" |
| D | 6 | ¾" ϕ | 10'0" |
| D1 | 2 | ½" ϕ | 2'9" |
| D2 | 2 | " | 4'0" |
| D3 | 2 | ½" ϕ | 5'6" |
| D4 | 2 | 1" ϕ | 17'9" |
| D5 | 4 | 1" ϕ | 10'0" |
| E | 2 | 1" ϕ | 6'9" |
| E1 | 2 | ½" ϕ | 6'6" |
| E2 | 2 | " | 5'9" |
| E3 | 2 | " | 5'0" |
| E4 | 2 | " | 4'6" |
| E5 | 2 | " | 3'9" |
| E6 | 2 | " | 3'3" |
| E7 | 2 | " | 2'6" |
| E8 | 2 | ½" ϕ | 2'0" |
| F | 12 | ¾" ϕ | 9'0" |
| G | 2 | ½" ϕ | 7'3" |
| G1 | 2 | " | 9'9" |
| G2 | 2 | " | 12'3" |
| G3 | 2 | " | 14'8" |
| G4 | 2 | " | 17'2" |
| G5 | 2 | " | 19'8" |
| G6 | 2 | " | 22'2" |
| G7 | 2 | " | 24'7" |
| G8 | 2 | " | 27'1" |
| G9 | 2 | " | 29'7" |
| G10 | 2 | ½" ϕ | 32'1" |
| H | 10 | ¾" ϕ | 24'10" |
| H1 | 10 | ¾" ϕ | 27'2" |
| H2 | 4 | ½" ϕ | 8'6" |
| H3 | 8 | " | 23'3" |
| H4 | 4 | " | 18'0" |
| H5 | 4 | " | 14'6" |
| H6 | 4 | " | 10'9" |
| H7 | 4 | " | 7'9" |
| H8 | 4 | ½" ϕ | 4'9" |
| J | 60 | ½" ϕ | 6'0" |
| K | 20 | ¾" ϕ | 4'11" |
| K1 | 32 | ½" ϕ | 3'10" |
| L | 12 | ½" ϕ | 14'6" |
| T | 13 | ¾" ϕ | 2'0" |




STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

# CONCRETE ABUTMENT

OPEN TYPE

TOTAL HEIGHT 30'0" 36'0" CONCRETE GIRDERS
ROADWAY 24'0" 2-5'0" SIDEWALKS
SKEW 75° LT.
1936

Max. Ground-pressure 5200 #/sq.ft.

CORRECT L. W. Kriddlan
BRIDGE ENGINEER

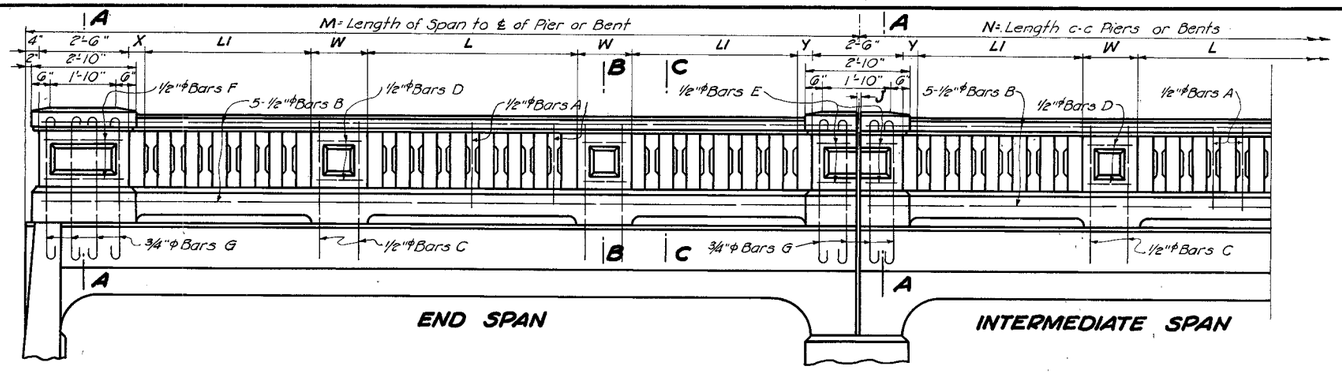
APPROVED O. J. Goetz
STATE HIGHWAY ENGINEER

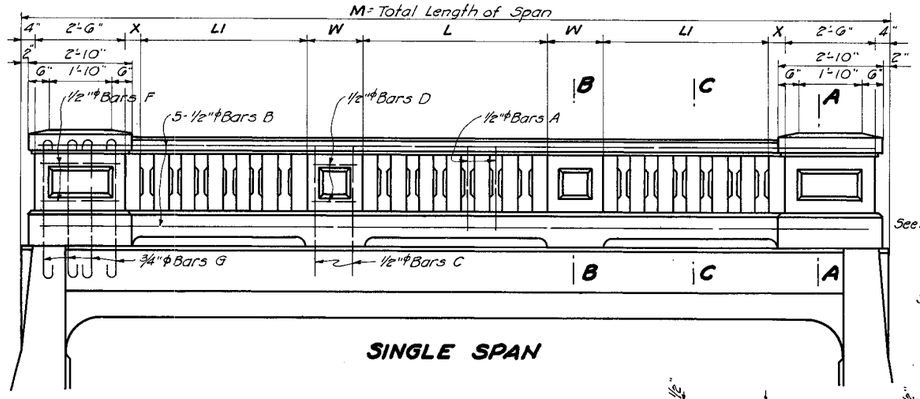
B-6-29

DESIGNED BY _____ DATE _____
DRAWN BY M. Schurman DATE 4-28-36
TRACED BY [illegible] DATE May 2-36
CHECKED BY [illegible] DATE 4-29-36

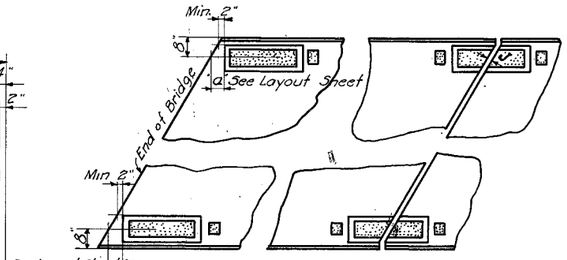
MICROFILMED

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | TENN. | | 19 37 | 178 | |



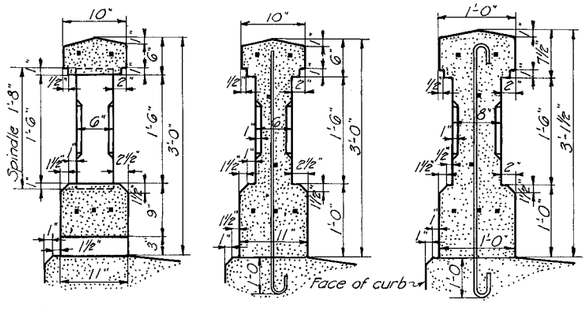

SINGLE SPAN



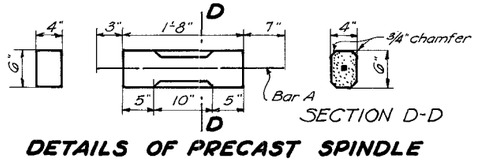

SKETCH SHOWING LOCATION OF END POSTS AND OPEN JOINTS IN INTERMEDIATE POSTS FOR SKEWED BRIDGES

SEE ALSO DETAILS ON LAYOUT SHEET FOR EACH BRIDGE

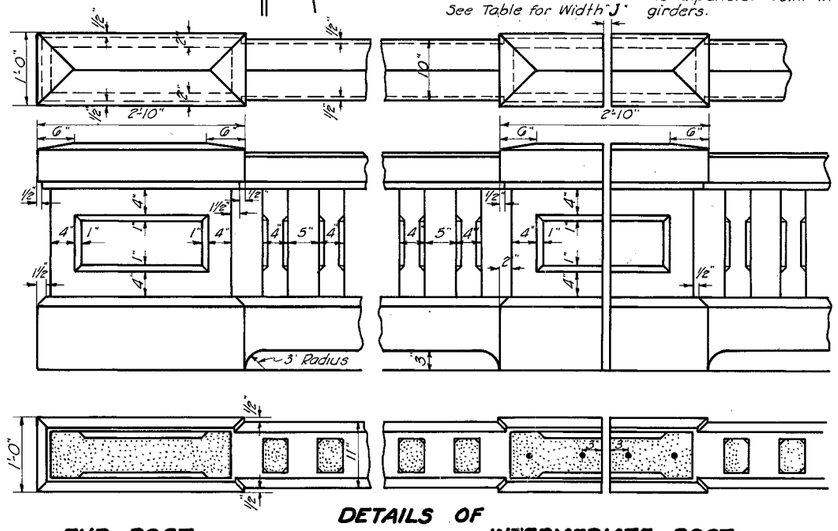
NOTE: Open Joint in handrail posts shall be placed over the Expansion Joint in the girders.




SECTION C-C SECTION B-B SECTION A-A




DETAILS OF PRECAST SPINDLE




DETAILS OF INTERMEDIATE POST

## END POST SPECIAL NOTE

Spindles shall be precast in steel forms and 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.

Handrail to be built as detailed. No chamfer shall be used unless specifically shown.

## TABLE OF DIMENSIONS AND ESTIMATED QUANTITIES

### END SPAN

| CLEAR SPAN FT. | DIMENSIONS M | X | Y | W | LI | L | STEEL REINFORCEMENT – ALL BARS ½"ϕ BARS A NO. | BARS A LENGTH | BARS B NO. | BARS B LENGTH | BARS C NO. | BARS C LENGTH | BARS D NO. | BARS D LENGTH | ESTIMATED QUANTITIES STEEL LB. * | CONCRETE CU. YDS. * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 18'-6" | 5" | 5" | 1'-7" | 2 @ 6'-0" | – | 32 | 2'-6" | 10 | 18'-0" | 4 | 4'-3" | 4 | 1'-4" | 1920 | 1.91 |
| 18 | 20'-6" | 5" | 5" | 1'-7" | 2 @ 3'-9" | 1 @ 4'-11" | 32 | 2'-6" | 10 | 20'-0" | 8 | 4'-3" | 8 | 1'-4" | 2208 | 2.20 |
| 20 | 22'-6" | 5" | 5" | 1'-10" | 2 @ 4'-6" | 1 @ 4'-11" | 36 | 2'-6" | 10 | 22'-0" | 8 | 4'-3" | 8 | 1'-7" | 2425 | 2.47 |
| 22 | 24'-6" | 5⅛" | 5⅛" | 1'-8" | 2 @ 5'-3" | 1 @ 5'-8" | 42 | 2'-6" | 10 | 24'-0" | 8 | 4'-3" | 8 | 1'-5" | 2654 | 2.74 |
| 24 | 26'-6" | 5" | 5" | 1'-7" | 2 @ 6'-0" | 1 @ 6'-5" | 48 | 2'-6" | 10 | 26'-0" | 8 | 4'-3" | 8 | 1'-4" | 2888 | 3.00 |
| 26 | 28'-6" | 4⅛" | 4⅛" | 1'-9" | 2 @ 6'-9" | 1 @ 7'-2" | 54 | 2'-6" | 10 | 28'-0" | 8 | 4'-3" | 8 | 1'-3" | 3121 | 3.26 |
| 28 | 31'-0" | 5" | 5" | 1'-7" | 2 @ 7'-6" | 1 @ 7'-11" | 60 | 2'-6" | 10 | 30'-6" | 8 | 4'-3" | 8 | 1'-4" | 3398 | 3.60 |
| 30 | 33'-0" | 5" | 5" | 1'-7" | 2 @ 6'-0" | 2 @ 5'-8" | 60 | 2'-6" | 10 | 32'-6" | 12 | 4'-3" | 12 | 1'-4" | 3685 | 3.89 |
| 32 | 35'-0" | 5" | 5" | 1'-9" | 2 @ 6'-0" | 2 @ 6'-5" | 64 | 2'-6" | 10 | 34'-6" | 12 | 4'-3" | 12 | 1'-6" | 3903 | 4.17 |
| 34 | 37'-0" | 5" | 5" | 1'-5" | 2 @ 6'-9" | 2 @ 7'-2" | 72 | 2'-6" | 10 | 36'-6" | 12 | 4'-3" | 12 | 1'-2" | 4148 | 4.42 |
| 36 | 39'-0" | 5" | 5" | 1'-7" | 2 @ 7'-6" | 2 @ 7'-2" | 76 | 2'-6" | 10 | 38'-6" | 12 | 4'-3" | 12 | 1'-4" | 4366 | 4.69 |
| 38 | 41'-0" | 5⅛" | 5⅛" | 1'-9" | 2 @ 6'-0" | 3 @ 5'-8" | 74 | 2'-6" | 20 | 21'-0" | 16 | 4'-3" | 16 | 1'-6" | 4739 | 5.00 |
| 40 | 43'-0" | 5" | 5" | 1'-8⅛" | 2 @ 6'-0" | 3 @ 6'-5" | 80 | 2'-6" | 20 | 22'-0" | 16 | 4'-3" | 16 | 1'-6" | 4977 | 5.26 |
| 50 | 53'-0" | 4⅛" | 4⅛" | 1'-6" | 2 @ 7'-6" | 4 @ 6'-5" | 104 | 2'-6" | 20 | 27'-0" | 20 | 4'-3" | 20 | 1'-3" | 6188 | 6.60 |
| 60 | 63'-0" | 5" | 5" | 1'-5½" | 2 @ 6'-9" | 5 @ 7'-2" | 120 | 2'-6" | 20 | 32'-0" | 24 | 4'-3" | 24 | 1'-3" | 7391 | 7.96 |

### INTERMEDIATE SPAN

| CLEAR SPAN FT. | DIMENSIONS N | Y | W | LI | L | STEEL REINFORCEMENT – ALL BARS ½"ϕ BARS A NO | BARS A LENGTH | BARS B NO | BARS B LENGTH | BARS C NO | BARS C LENGTH | BARS D NO | BARS D LENGTH | ESTIMATED QUANTITIES STEEL LBS. * | CONCRETE CU. YDS.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 18'-6" | 5" | 1'-8" | 2 @ 6'-9" | – | 36 | 2'-6" | 10 | 18'-0" | 4 | 4'-3" | 4 | 1'-5" | 1990 | 2.12 |
| 18 | 20'-6" | 4⅛" | 1'-8" | 2 @ 4'-6" | 1 @ 4'-11" | 36 | 2'-6" | 10 | 20'-0" | 8 | 4'-3" | 8 | 1'-5" | 2280 | 2.41 |
| 20 | 22'-6" | 5" | 1'-6" | 2 @ 5'-3" | 1 @ 5'-8" | 42 | 2'-6" | 10 | 22'-0" | 8 | 4'-3" | 8 | 1'-3" | 2509 | 2.67 |
| 22 | 24'-6" | 4⅛" | 1'-5" | 2 @ 6'-0" | 1 @ 6'-5" | 48 | 2'-6" | 10 | 24'-0" | 8 | 4'-3" | 8 | 1'-2" | 2743 | 2.94 |
| 24 | 26'-6" | 4⅛" | 1'-8" | 2 @ 6'-9" | 1 @ 6'-5" | 52 | 2'-6" | 10 | 26'-0" | 8 | 4'-3" | 8 | 1'-5" | 2960 | 3.21 |
| 26 | 28'-6" | 5" | 1'-6" | 2 @ 7'-6" | 1 @ 7'-2" | 58 | 2'-6" | 10 | 28'-0" | 8 | 4'-3" | 8 | 1'-3" | 3189 | 3.47 |
| 28 | 31'-0" | 5⅛" | 1'-5" | 2 @ 6'-0" | 2 @ 5'-8" | 60 | 2'-6" | 10 | 30'-6" | 12 | 4'-3" | 12 | 1'-2" | 3536 | 3.83 |
| 30 | 33'-0" | 5⅛" | 1'-7" | 2 @ 6'-0" | 2 @ 6'-5" | 64 | 2'-6" | 10 | 32'-6" | 12 | 4'-3" | 12 | 1'-4" | 3753 | 4.10 |
| 32 | 35'-0" | 5⅛" | 1'-9" | 2 @ 6'-9" | 2 @ 6'-5" | 68 | 2'-6" | 10 | 34'-6" | 12 | 4'-3" | 12 | 1'-6" | 3971 | 4.38 |
| 34 | 37'-0" | 5⅛" | 1'-5" | 2 @ 7'-6" | 2 @ 7'-2" | 76 | 2'-6" | 10 | 36'-6" | 12 | 4'-3" | 12 | 1'-2" | 4216 | 4.63 |
| 36 | 39'-0" | 5⅛" | 1'-7" | 2 @ 7'-6" | 2 @ 7'-11" | 80 | 2'-6" | 10 | 38'-6" | 12 | 4'-3" | 12 | 1'-4" | 4433 | 4.90 |
| 38 | 41'-0" | 5⅛" | 1'-7" | 2 @ 6'-0" | 3 @ 6'-5" | 80 | 2'-6" | 20 | 21'-0" | 16 | 4'-3" | 16 | 1'-4" | 4823 | 5.20 |
| 40 | 43'-0" | 5" | 1'-6⅛" | 2 @ 6'-0" | 3 @ 7'-2" | 80 | 2'-6" | 20 | 22'-0" | 16 | 4'-3" | 16 | 1'-4" | 5061 | 5.46 |
| 50 | 53'-0" | 5" | 1'-6" | 2 @ 6'-9" | 4 @ 7'-2" | 108 | 2'-6" | 20 | 27'-0" | 20 | 4'-3" | 20 | 1'-3" | 6256 | 6.82 |
| 60 | 63'-0" | 5½" | 1'-5½" | 2 @ 7'-6" | 5 @ 7'-2" | 130 | 2'-6" | 20 | 32'-0" | 24 | 4'-3" | 24 | 1'-3" | 7459 | 8.17 |

### SINGLE SPAN

| CLEAR SPAN FT. | DIMENSIONS M | X | W | LI | LI | L | STEEL REINFORCEMENT – ALL BARS ½"ϕ BARS A NO | BARS A LENGTH | BARS B NO | BARS B LENGTH | BARS C NO | BARS C LENGTH | BARS D NO | BARS D LENGTH | ESTIMATED QUANTITIES STEEL LBS * | CONCRETE CU. YDS.* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 | 18'-6" | 5" | 1'-6" | 2 @ 5'-3" | – | – | 28 | 2'-6" | 10 | 17'-9" | 4 | 4'-3" | 4 | 1'-3" | 1833 | 1.99 |
| 18 | 20'-6" | 5" | 2'-0" | 2 @ 6'-0" | – | – | 32 | 2'-6" | 10 | 19'-9" | 4 | 4'-3" | 4 | 1'-9" | 2050 | 1.97 |
| 20 | 22'-6" | 5⅛" | 1'-9" | 2 @ 3'-9" | 1 @ 4'-11" | – | 32 | 2'-6" | 10 | 21'-9" | 8 | 4'-3" | 8 | 1'-6" | 2336 | 2.20 |
| 22 | 24'-6" | 5" | 1'-8" | 2 @ 4'-6" | 1 @ 5'-8" | – | 38 | 2'-6" | 10 | 23'-9" | 8 | 4'-3" | 8 | 1'-5" | 2569 | 2.52 |
| 24 | 26'-6" | 5⅛" | 1'-6" | 2 @ 5'-3" | 1 @ 6'-5" | – | 44 | 2'-6" | 10 | 25'-9" | 8 | 4'-3" | 8 | 1'-3" | 2798 | 2.79 |
| 26 | 28'-6" | 5⅛" | 1'-9" | 2 @ 6'-0" | 1 @ 6'-5" | – | 48 | 2'-6" | 10 | 27'-9" | 8 | 4'-3" | 8 | 1'-6" | 3016 | 3.06 |
| 28 | 31'-0" | 5" | 1'-11" | 2 @ 6'-9" | 1 @ 7'-2" | – | 54 | 2'-6" | 10 | 30'-3" | 8 | 4'-3" | 8 | 1'-8" | 3297 | 3.40 |
| 30 | 33'-0" | 5⅛" | 1'-9" | 2 @ 7'-6" | 1 @ 7'-11" | – | 60 | 2'-6" | 10 | 32'-3" | 8 | 4'-3" | 8 | 1'-6" | 3526 | 3.66 |
| 32 | 35'-0" | 4⅛" | 1'-9" | 2 @ 6'-0" | 2 @ 5'-8" | – | 60 | 2'-6" | 10 | 34'-3" | 12 | 4'-3" | 12 | 1'-6" | 3918 | 3.96 |
| 34 | 37'-0" | 4⅛" | 1'-11" | 2 @ 6'-0" | 2 @ 6'-5" | – | 64 | 2'-6" | 10 | 36'-3" | 12 | 4'-3" | 12 | 1'-8" | 4036 | 4.23 |
| 36 | 39'-0" | 4⅛" | 1'-7" | 2 @ 6'-9" | 2 @ 7'-2" | – | 72 | 2'-6" | 10 | 38'-3" | 12 | 4'-3" | 12 | 1'-4" | 4281 | 4.43 |
| 38 | 41'-0" | 4⅛" | 1'-9" | 2 @ 7'-6" | 2 @ 7'-2" | – | 76 | 2'-6" | 20 | 21'-0" | 12 | 4'-3" | 12 | 1'-6" | 4617 | 4.75 |
| 40 | 43'-0" | 5" | 1'-10⅛" | 2 @ 6'-0" | 3 @ 5'-8" | – | 74 | 2'-6" | 20 | 22'-0" | 16 | 4'-3" | 16 | 1'-8" | 4894 | 5.06 |
| 50 | 53'-0" | 4⅛" | 1'-11⅛" | 2 @ 7'-6" | 3 @ 7'-11" | – | 100 | 2'-6" | 20 | 27'-0" | 16 | 4'-3" | 16 | 1'-9" | 6026 | 6.40 |
| 60 | 63'-0" | 4⅛" | 1'-5½" | 2 @ 6'-0" | 5 @ 7'-2" | – | 122 | 2'-6" | 20 | 32'-0" | 24 | 4'-3" | 24 | 1'-3" | 7323 | 7.75 |

*See also Quantities for Rail Posts.

### TABLE FOR WIDTH "J" OF OPEN JOINT IN HANDRAIL POST

| SPANS | 16'-26' | 28'-60' |
|---|---|---|
| 1 EXPANSION END ON PIER OR BENT | ¾" | 1" |
| 2 EXPANSION ENDS ON PIER OR BENT | 1" | 1½" |
| 2 FIXED ENDS ON PIER OR BENT | ¾" | 1" |

### BILL OF STEEL AND ESTIMATED QUANTITIES FOR TWO RAIL POSTS AS LISTED

| DESCRIPTION | REINFORCING STEEL BAR | NO | SIZE | LENGTH | STEEL LBS. | CONCRETE CU. YDS. |
|---|---|---|---|---|---|---|
| POST AT END OF BRIDGE | F | 4 | ½"ϕ | 2'-3" | 70.0 | 0.50 |
| | G | 8 | ¾"ϕ | 5'-3" | | |
| INTERMEDIATE POST | E | 6 | ½"ϕ | 1'-0" | 69.3 | 0.50 |
| | G | 8 | ¾"ϕ | 5'-3" | | |

## GENERAL NOTES

Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete shall be Class "S". The aggregates shall be free from lignite.
Reinforcing Steel: See Specifications.
Forms and Finish: See Specifications.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

# CONCRETE HANDRAIL

SPINDLE TYPE
FOR SLAB AND GIRDER BRIDGES WITH SIDEWALKS
1935

CORRECT

B - 2 - 129

DESIGNED BY _____ DATE _____
DRAWN BY W. S. DATE 3 Jul. 35
RETRACED BY E.W. Compton DATE 4-26-41
CHECKED BY _____ DATE _____

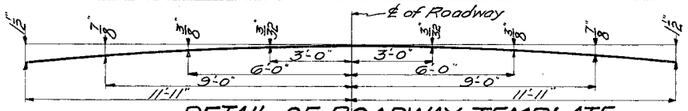
Revised 2/12/43 - 16"ϕ bars changed to 12"ϕ Bars
Revised 9-17-38

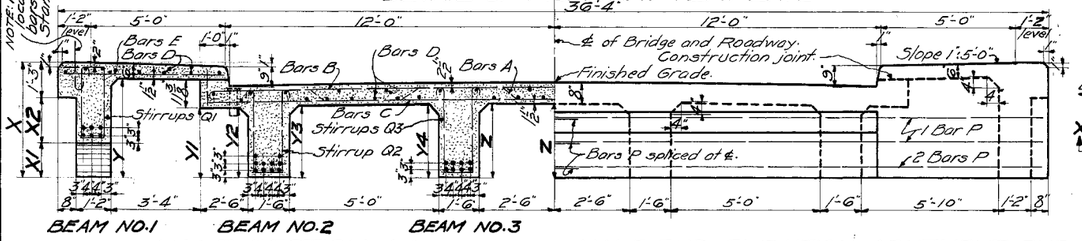
Last Revision 5-17-40

| FED. ROAD DIST. NO. | STATE | FED. AID PROJ. NO. | FISCAL YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|
| 8 | TENN. | [illegible] | 1941 | 15 | 31 |

NOTE: For number and location of these bars see typical Stirrup Details

## DETAIL OF ROADWAY TEMPLATE

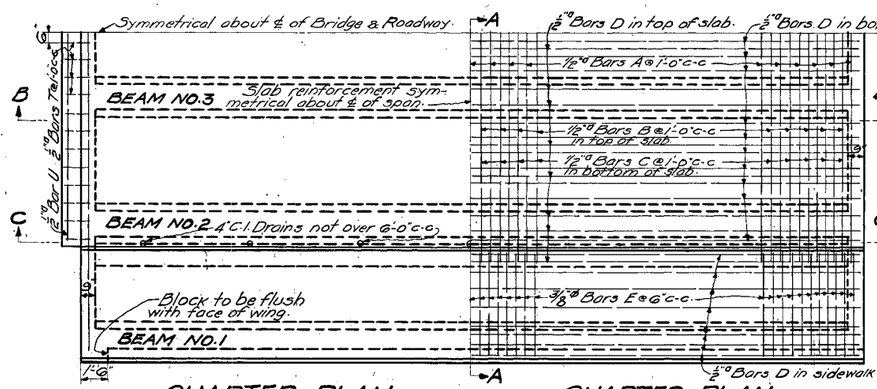



BEAM NO.1 BEAM NO.2 BEAM NO.3

## HALF SECTION A-A

## HALF END ELEVATION-ABUTMENT END

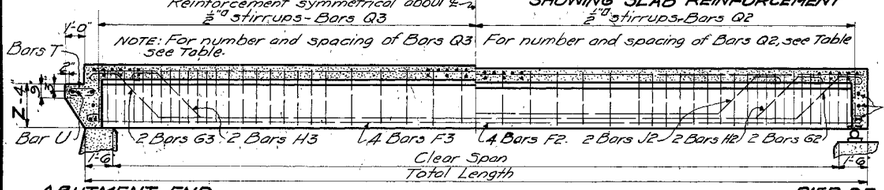



## QUARTER PLAN

Reinforcement symmetrical about ℄

## QUARTER PLAN SHOWING SLAB REINFORCEMENT

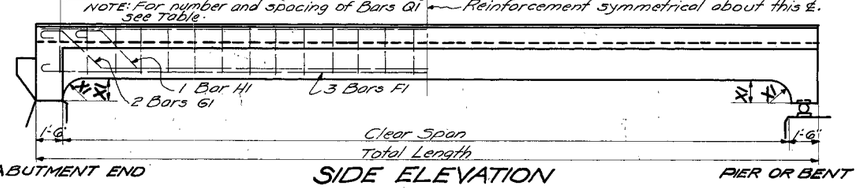
½"ø Stirrups - Bars Q3 ½"ø Stirrups - Bars Q2




ABUTMENT END PIER OR BENT

## HALF SECTION B-B

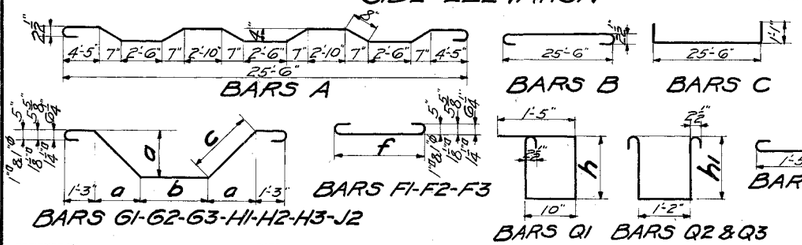
½"ø Stirrups - Bars Q1




ABUTMENT END PIER OR BENT

## HALF SECTION C-C

## SIDE ELEVATION

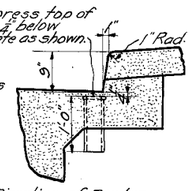



BENDING DETAILS

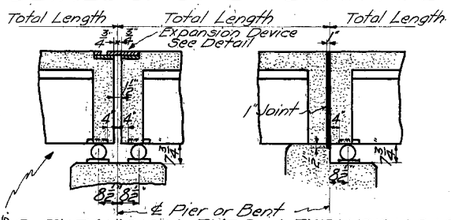
DESIGNED BY _____ DATE _____
DRAWN BY W.S. DATE 8-24-35
RETRACED BY Starnes DATE 5-21-40
CHECKED BY W.T.S.C. DATE 9-16-35

Revised: 5-17-40

## DETAILS OF CURB & DRAIN PIPE

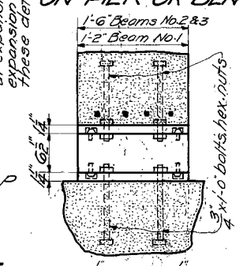



NOTE: Chamfer bottom corners of all beams ¾" as shown.

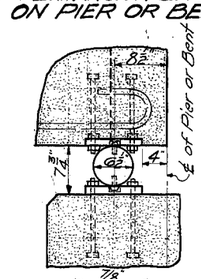



2 EXPANSION ENDS 1 EXPANSION & 1 FIXED END
ON PIER OR BENT ON PIER OR BENT

NOTE: When two or more spans are built, place a continuous felt or rubber compound joint at expansion ends except when there are two expansion ends over one pier or bent. See these details.




PLATES FOR BEAM NO.1
4 REQUIRED

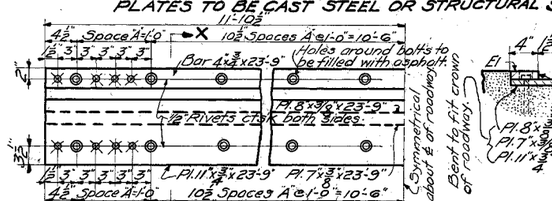



ROLLERS TO BE FORGED AND ANNEALED.

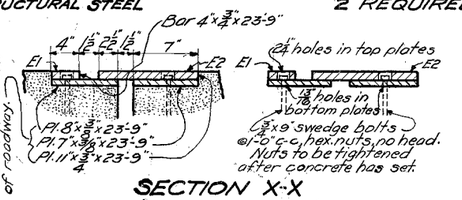
## DETAIL OF PIN

## DETAILS OF ROLLER BEARINGS

PLATES TO BE CAST STEEL OR STRUCTURAL STEEL



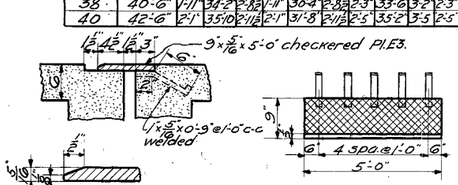

DETAILS OF ROADWAY EXPANSION DEVICE E1-E2
FOR TWO EXPANSION ENDS OVER PIER OR BENT




SECTION X-X

## DETAILS OF SIDEWALK EXPANSION DEVICE E3

2 REQUIRED




DETAIL AT END OF PL. E3

WEIGHT OF EXPANSION DEVICES E1-E2-E3
1513 LBS.
OF STRUCTURAL STEEL

## ADDITIONAL ESTIMATED QUANTITIES REQUIRED AT EACH ABUTMENT

| CLEAR SPAN FEET | CONCRETE CLASS A CU. YDS. | REINF. STEEL LBS. |
|---|---|---|
| 28 | | |
| 30 | 1.3 | 67 |
| 32 | 1.3 | 67 |
| 34 | | |
| 36 | | |
| 38 | 1.5 | 67 |
| 40 | 1.6 | 67 |

## DIMENSIONS AND ESTIMATED QUANTITIES FOR ONE INTERMEDIATE SPAN

| CLEAR SPAN FEET | TOTAL LENGTH | DIMENSIONS X | X1 | X2 | Y | Y1 | Y2 | Y3 | Y4 | Z | STIRRUP SPACING BEAM NO.1 BARS Q1 | BEAM NO.2 BARS Q2 | BEAM NO.3 BARS Q3 | QUANTITIES CONCRETE CLASS A CU.YDS. | REINF. STEEL LBS. | STRUCT. STEEL LBS. * |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | 31'-0" | | | | | | | | | | | | | | | |
| 30 | 33'-0" | 3'-5½" | 1'-3½" | 0'-11" | 2'-11¼" | 1'-11⅜" | 1'-11¾" | 2'-0¼" | 2'-0¾" | 2'-1" | 25 SPA. @ 1'-3" | 10 SPA. @ 1'-0", 9 SPA. @ 1'-3", 6 SPA. @ 1'-6" | 10 SPA. @ 1'-0", 9 SPA. @ 1'-3", 7 SPA. @ 1'-6" | 55.0 | 11750 | 728 |
| 32 | 35'-0" | 3'-6½" | 1'-3½" | 1'-0" | 3'-0¼" | 2'-0⅜" | 2'-0¾" | 2'-1¼" | 2'-1¾" | 2'-2" | 27 SPA. @ 1'-3" | 10 SPA. @ 1'-0", 9 SPA. @ 1'-3", 10 SPA. @ 1'-6", 7 SPA. @ 1'-7" | 9 SPA. @ 1'-3", 10 SPA. @ 1'-6", 9 SPA. @ 1'-7" | 59.0 | 13147 | 728 |
| 34 | 37'-0" | | | | | | | | | | | | | | | |
| 36 | 39'-0" | 3'-9½" | 1'-2½" | 1'-4" | 3'-3¼" | 2'-3⅜" | 2'-3¾" | 2'-4¼" | 2'-4¾" | 2'-5" | 25 SPA. @ 1'-6" | 12 SPA. @ 1'-6", 10 SPA. @ 1'-7", 3 SPA. @ 1'-8" | 12 SPA. @ 1'-6", 10 SPA. @ 1'-7", 3 SPA. @ 1'-8" | | 15157 | 728 |
| 38 | 41'-0" | 3'-11½" | 1'-2½" | 1'-6" | 3'-5¼" | 2'-5⅜" | 2'-5¾" | 2'-6¼" | 2'-6¾" | 2'-7" | 27 SPA. @ 1'-6" | 12 SPA. @ 1'-6", 10 SPA. @ 1'-7", 5 SPA. @ 1'-8" | 12 SPA. @ 1'-6", 10 SPA. @ 1'-7", 5 SPA. @ 1'-8" | 74.7 | 16295 | 728 |
| 40 | 43'-0" | 4'-1½" | 1'-2½" | 1'-8" | 3'-7¼" | 2'-7⅜" | 2'-7¾" | 2'-8¼" | 2'-8¾" | 2'-9" | 28 SPA. @ 1'-6" | 12 SPA. @ 1'-6", 10 SPA. @ 1'-7", 6 SPA. @ 1'-8" | 12 SPA. @ 1'-6", 10 SPA. @ 1'-7", 6 SPA. @ 1'-8" | 80.6 | 17535 | 728 |

NOTE: Cost of 4" C.I. Drains and Expansion Joints to be included in the price per Cu. Yd. of Class A Concrete.
* Weight of Expansion Devices E1 to E3 NOT included in the above structural steel quantities.

WEIGHT OF STEEL FORGINGS 945 LBS.

## BILL OF STEEL FOR ONE INTERMEDIATE SPAN

| CLEAR SPAN | BARS A SLAB REINF. NO | SIZE | LGTH | BARS B SLAB REINF. NO | SIZE | LGTH | BARS C SLAB REINF. NO | SIZE | LGTH | BARS D SLAB REINF. NO | SIZE | LGTH | BARS E S.W. REINF. NO | SIZE | LGTH | BARS F1 BEAM NO.1 NO | SIZE | LGTH | BARS G1 BEAM NO.1 NO | SIZE | LGTH | BARS H1 BEAM NO.1 NO | SIZE | LGTH | BARS F2 BEAM NO.2 NO | SIZE | LGTH | BARS G2 BEAM NO.2 NO | SIZE | LGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEET | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 33 | ½"ø | 26'-10 | 32 | ½"ø | 26'-4 | 32 | ½"ø | 27'-8 | 52 | ½"ø | 32'-6 | 30 | ⅜"ø | 5'-9 | 6 | ⅛"ø | 34'-4 | 4 | 1"ø | 35'-3 | - | - | - | 8 | ¼"ø | 34'-6 | 4 | ⅛"ø | 35'-9 |
| 32 | 35 | ½"ø | 26'-10 | 34 | ½"ø | 26'-4 | 34 | ½"ø | 27'-8 | 52 | - | 34'-6 | 38 | ⅜"ø | 5'-9 | 6 | ⅛"ø | 36'-4 | 4 | 1⅛"ø | 37'-6 | - | - | - | 8 | ¼"ø | 36'-6 | 4 | ¼"ø | 38'-0 |
| 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 39 | ½"ø | 26'-10 | 38 | ½"ø | 26'-4 | 38 | ½"ø | 27'-8 | 52 | - | 38'-6 | 54 | ⅜"ø | 5'-9 | 6 | ⅛"ø | 40'-4 | 4 | 1"ø | 41'-7 | 2 | 1"ø | 38'-1 | 8 | ¼"ø | 40'-6 | 4 | ¼"ø | 42'-3 |
| 38 | 41 | ½"ø | 26'-10 | 40 | ½"ø | 26'-4 | 40 | ½"ø | 27'-8 | 52 | - | 40'-6 | 162 | ⅜"ø | 5'-9 | 6 | ⅛"ø | 42'-4 | 4 | 1"ø | 43'-9 | 2 | 1⅛"ø | 40'-1 | 8 | ¼"ø | 42'-6 | 4 | ¼"ø | 44'-1 |
| 40 | 43 | ½"ø | 26'-10 | 42 | ½"ø | 26'-4 | 42 | ½"ø | 27'-8 | 52 | ½"ø | 42'-6 | 70 | ⅜"ø | 5'-9 | 6 | ⅛"ø | 44'-4 | 4 | 1⅛"ø | 46'-1 | 2 | 1⅛"ø | 41'-11 | 8 | ¼"ø | 44'-6 | 4 | ¼"ø | 46'-6 |

| CLEAR SPAN | BARS H2 BEAM NO.2 NO | SIZE | LGTH | BARS J2 BEAM NO.2 NO | SIZE | LGTH | BARS F3 BEAM NO.3 NO | SIZE | LGTH | BARS G3 BEAM NO.3 NO | SIZE | LGTH | BARS H3 BEAM NO.3 NO | SIZE | LGTH | BARS Q1 BEAM NO.1 NO | SIZE | LGTH | BARS Q2 BEAM NO.2 NO | SIZE | LGTH | BARS Q3 BEAM NO.3 NO | SIZE | LGTH | BARS P BACKWALL NO | SIZE | LGTH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEET | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 4 | ⅛"ø | 32'-3" | - | - | - | 8 | ½"ø | 34'-6 | 4 | 1"ø | 35'-8 | 4 | 1"ø | 35'-0 | 52 | ½"ø | 6'-4" | 76 | ½"ø | 6'-7" | 72 | ⅝"ø | 6'-9" | 16 | ⅝"ø | 18'-9" |
| 32 | 4 | ½"ø | 34'-4" | - | - | - | 8 | ¼" | 36'-6 | 4 | 1⅛"ø | 37'-11 | 4 | 1"ø | 33'-11 | 56 | ½"ø | 6'-6 | 80 | ½"ø | 6'-9 | 72 | ⅝"ø | 6'-11 | 16 | ⅝"ø | 18'-9" |
| 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 4 | ½"ø | 37'-11" | 4 | 1"ø | 33'-4 | 8 | ½"ø | 40'-6 | 4 | 1½"ø | 42'-4 | 4 | 1"ø | 37'-8 | 52 | ½"ø | 7'-2" | 98 | ½"ø | 7'-5 | 82 | ⅝"ø | 7'-5 | 16 | ⅝"ø | 18'-9" |
| 38 | 4 | ½"ø | 39'-10 | 4 | 1"ø | 34'-10 | 8 | ½"ø | 42'-6 | 4 | 1½"ø | 44'-5 | 4 | 1⅛"ø | 39'-7 | 56 | ½"ø | 7'-6 | 98 | ½"ø | 7'-7 | 80 | ⅝"ø | 7'-9 | 16 | ⅝"ø | 18'-9" |
| 40 | 4 | ½"ø | 41'-8 | 4 | 1"ø | 36'-4 | 8 | ½"ø | 44'-6 | 4 | 1½"ø | 46'-7 | 4 | 1½"ø | 41'-7 | 58 | ½"ø | 7'-10 | 100 | ½"ø | 7'-11 | 80 | ⅝"ø | 8'-1" | 16 | ⅝"ø | 18'-9" |

NOTE: For each abutment end add 24-½"ø Bars T x 2'-3" and 1-½"ø Bar U x 23'-6".

## STEEL BENDING TABLE

| CLEAR SPAN | BARS F1-F2-F3 | BARS G1 | | | BARS H1 | | | BARS G2 | | | BARS H2 | | | BARS J2 | | | BARS G3 | | | BARS H3 | | | BARS Q1 | BARS Q2 | BARS Q3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FEET | f | a | b | c | a | b | c | a | b | c | a | b | c | a | b | c | a | b | c | a | b | c | h | h1 | h1 |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 30 | 32'-6" | 1'-4" | 27'-4"/102 | | - | - | - | 1'-9" | 26'-6 | 2'-5½" | 1'-9" | 23'-0" | 2'-6" | - | - | - | 1'-10" | 28'-4 | 2'-7" | 1'-10" | 22'-8 | 2'-7" | 1'-10" | 2'-3½" | 2'-4½" |
| 32 | 34'-6" | 1'-5" | 29'-2" | 2'-0" | - | - | - | 1'-10" | 28'-4 | 2'-7" | 1'-10" | 24'-8 | 2'-7" | - | - | - | 1'-11" | 28'-2 | 2'-8½" | 1'-11" | 24'-4 | 2'-8½" | 1'-11" | 2'-4½" | 2'-5½" |
| 34 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36 | 38'-6" | 1'-9" | 32'-6 | 2'-5½" | 1'-9" | 29'-0" | 2'-5½" | 2'-1" | 31'-10 | 2'-11½" | 2'-1" | 27'-8 | 2'-11½" | 1'-10 | 24'-0 | 2'-7" | 2'-2" | 31'-8 | 3'-4" | 2'-2" | 27'-4 | 3'-4" | 2'-3" | 2'-7½" | 2'-8¼" |
| 38 | 40'-6" | 1'-11" | 34'-2" | 2'-8½" | 1'-11" | 30'-4" | 2'-8½" | 2'-3" | 33'-6 | 3'-2" | 2'-3" | 29'-0 | 3'-2" | 2'-0 | 25'-0 | 2'-10 | 2'-4" | 33'-4 | 3'-5½" | 2'-4" | 28'-8 | 3'-5½" | 2'-5" | 2'-9¾" | 2'-10¼" |
| 40 | 42'-6" | 2'-1" | 35'-10 | 2'-11½" | 2'-1" | 31'-8 | 2'-11½" | 2'-5" | 35'-2 | 3'-5" | 2'-5" | 30'-4 | 3'-5" | 2'-2" | 26'-0 | 3'-0½" | 2'-6" | 35'-0 | 3'-6½" | 2'-6" | 30'-0 | 3'-6½" | 2'-7" | 2'-11¾" | 3'-0¾" |

General Notes
Specifications: Standard Road and Bridge Specifications of the Tennessee Department of Highways and Public Works.
Concrete to be Class A.
Reinforcing Steel: See Specifications.
Forms and Finish: See Specifications.

STATE OF TENNESSEE
DEPARTMENT OF HIGHWAYS AND PUBLIC WORKS
NASHVILLE

STANDARD

# CONCRETE BRIDGES

DECK GIRDER TYPE
ROADWAY 24'-0" 2-5'-0" SIDEWALKS
SPANS 28'-40'
1935

CORRECT L. W. Brinkley BRIDGE ENGINEER
APPROVED J. W. Bradley STATE HIGHWAY ENGINEER

B-2-130

RECEIVED

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

David Grass

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TENNESSEE DEPARTMENT OF TRANSPORTATION
MATERIALS & TESTS DIVISION- GEOTECHNICAL ENGINEERING SECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243
TRAVIS W. SMITH, P.E. NO. 113851

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 SHEETS | G2 – G5 |

| YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|
| 2025 | BR-STP-320(10) | GEOTECH-SIGN1 |
| | | |
| | | |
| | | |

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# SIGNATURE SHEET

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | G1 |
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# GEOTECHNICAL INDEX

| SHEET NAME | SHEET NO. |
|---|---|
| SIGNATURE SHEET | GEOTECH-SIGN1 |
| GEOTECHNICAL INDEX | G1 |
| GEOTECHNICAL NOTES AND TABLE QUANTITIES | G2 |
| GEOTECHNICAL BORING LAYOUT | G3 |
| GEOTECHNICAL BORING PROFILE | G4 |
| GEOTECHNICAL TYPICAL SECTIONS | G5 |

STATE OF TENNESSEE
DEPARTMENT OF
TRANSPORTATION

GEOTECHNICAL

INDEX

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | G2 |
| | | | |
| | | | |
| | | | |

NOTES

SITE PREPARATION

1. STABILIZATION WITH GRADED SOLID ROCK WILL BE REQUIRED BETWEEN STATION 16+00 AND 17+42.88 RIGHT OF THE CENTERLINE IN LOW-LYING AREAS AND WET-WEATHER CONVEYANCES. THE GRADED SOLID ROCK SHALL BE CHOKED WITH NO. 4 STONE. THE GRADED SOLID ROCK AND NO. 4 STONE SHALL BE WRAPPED WITH TYPE IV GEOTEXTILE FABRIC PER NOTE 6 BELOW.

SLOPES

2. CUT AND COMPACTED FILL SLOPES SHALL HAVE A MAXIMUM SLOPE INCLINATION OF 2 HORIZONTAL TO 1 VERTICAL (2H:1V).
3. VEGETATION SHALL BE ESTABLISHED AS QUICKLY AS POSSIBLE ON SLOPES TO PREVENT EROSION. EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH TDOT GUIDELINES.
4. SHOULD SHALLOW SLUMPS OR SLIDES OCCUR, THEY SHALL BE REPAIRED PROMPTLY TO PREVENT FURTHER SLOPE EROSION. REPAIR CAN TYPICALLY BE ACCOMPLISHED BY REMOVING THE SLIDE MATERIAL, EXCAVATING A BENCH WITHIN THE FAILURE ZONE, AND BACKFILLING THE FAILURE ZONE WITH GRADED SOLID ROCK.
5. CONSTRUCTION MAY DISCLOSE THE PRESENCE OF SEEPS OR SPRINGS, OR DOWN-SLOPE DIPPING OF THE SOIL PROFILE. THESE CONDITIONS, IF PRESENT, CAN HAVE A SIGNIFICANT AFFECT ON SLOPE STABILITY. IF SEEPAGE, SLICKENSIDED ZONES, DOWN-SLOPE DIPPING, OR OTHER UNFAVORABLE GEOLOGIC CONDITIONS ARE ENCOUNTERED IN CUT SLOPES AT THE TIME OF CONSTRUCTION, THE GEOTECHNICAL ENGINEER SHALL BE CONTACTED TO OBSERVE THE CUT SLOPE AND PROVIDE RECOMMENDATIONS FOR CORRECTIVE MEASURES.

GRADED SOLID ROCK AND NO. 4 STONE

6. PLACEMENT OF GRADED SOLID ROCK AND NO. 4 STONE FOR SUBGRADE STABILIZATION SHALL BEGIN WITH THE INSTALLATION OF A TYPE IV GEOTEXTILE FABRIC ON SUBGRADES TO SEPARATE THE EXPOSED SOIL AND THE GRADED SOLID ROCK WHERE THEY WOULD BE IN CONTACT. POSITIVE DRAINAGE SHALL BE PROVIDED ALONG THE BASE OF THE AREA TO BE STABILIZED BY GRADING THE SLOPE AWAY FROM THE STABILIZATION AREA PRIOR TO PLACEMENT OF THE GEOTEXTILE FABRIC. THE SIDES OF THE GRADED SOLID ROCK SHALL BE PLACED AT A SLOPE NO STEEPER THAN 1.5H:1V. AFTER THE GRADED SOLID ROCK HAS BEEN PLACED, A ONE FOOT THICK INTERVAL OF NO. 4 STONE SHALL BE PLACED ON TOP OF THE GRADED SOLID ROCK TO CHOKE VOIDS IN THE GRADED SOLID ROCK. THE GRADED SOLID ROCK AND NO. 4 STONE SHALL BE FULLY WRAPPED WITH TYPE IV GEOTEXTILE FABRIC, EXCEPT WHERE THE ROCK AND STONE ARE PLANNED TO BE EXPOSED.

GEOTEXTILE

7. THE GEOTEXTILE SHALL BE PLACED LOOSELY, WITH NO WRINKLES OR FOLDS, IN DIRECT CONTACT WITH THE GROUND. THE GEOTEXTILE SHALL BE LAID IN STRIPS PERPENDICULAR TO THE CENTERLINE OF THE ROADWAY AND, AT ALL TIMES, MAINTAIN A MINIMUM OVERLAP OF TWO FEET BETWEEN ADJACENT STRIPS. IN ALL CASES THE OVERLAP OF SUCCESSIVE SHEETS SHALL PLACE THE UP SLOPE SHEET ON TOP OF THE DOWN SLOPE SHEET. THE FABRIC SHOULD BE SECURED TO THE SLOPE BY WEIGHING OR PINNING BACK THE FABRIC.

   THE SEAMS OF EACH STRIP OF FABRIC SHALL BE SEWN USING EITHER A STANDARD "J" SEAM, FLAT SEAM, OR "BUTTERFLY" SEAM (SEE DIAGRAMS ON THIS SHEET). ALL SEAMS SHALL BE EXPOSED WITH THE SEAM SUCH THAT ALL SEAMS CAN BE INSPECTED AND REPAIRS EASILY MADE SHOULD A FAULTY SEAM BE ENCOUNTERED. IF STAPLES ARE CHOSEN FOR THE SEAMS, STAPLES SHALL BE SPACED IN INTERVALS NO GREATER THAN ONE FOOT. ADDITIONALLY, REGARDLESS OF THE SEAM TYPE SELECTED. THE DURABILITY OF THE SEAM SHALL BE THE SAME AS THAT OF THE GEOTEXTILE. NO ALTERNATE SEAMING METHODS EXCEPT THOSE LISTED ABOVE ARE TO BE USED UNLESS SUCH METHOD HAS MET ALL THE REQUIREMENTS FOR INCLUSION ON THE QPL LIST FOR THAT SPECIFIC APPLICATION AND HAS RECEIVED APPROVAL FOR USE PRIOR TO THE CONTRACT LETTING.

   AGGREGATE SHALL BE PLACED CAREFULLY ONTO THE GEOTEXTILE TO PREVENT DAMAGE. WHEN A PORTION OF THE TEXTILE IS DAMAGED EITHER REPLACE THE ENTIRE STRIP(S) THAT ARE DAMAGED OR PATCH WITH TEXTILE OVERLAPPING ON ALL SIDES A MINIMUM OF ONE FOOT. CONSTRUCTION VEHICLES SHALL NEVER BE DRIVEN DIRECTLY ONTO THE GEOTEXTILE.

   STORAGE AND HANDLING OF THE GEOTEXTILE SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

DEFINITION OF TERMS USED FOR EARTHWORK GRADING CALCULATIONS (SECTION 4-203.02)

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. THIS MATERIAL WOULD HAVE A SHRINK FACTOR OF 10 PERCENT AS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES.

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. THIS MATERIAL WOULD HAVE A SIGNIFICANT SWELL FACTOR AS GIVEN IN SWELL FACTORS SHOWN IN SECTION 2-145.10 OF THE DESIGN GUIDELINES OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEERING SECTION OF THE MATERIALS AND TESTS DIVISION.

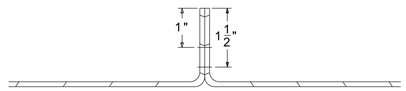
C. SOFT ROCK OR DEGRADABLE ROCK
THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH 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. THIS MATERIAL WOULD HAVE A RELATIVELY SMALL SHRINK OR SWELL FACTOR DEPENDING ON THE TYPE MATERIAL AND THE DEGREE OF WEATHERING, DISINTEGRATION, OR DEGRADATION.

D. TRANSITIONAL MATERIALS
THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C AS DEFINED IN SECTION 4-203.02) 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.

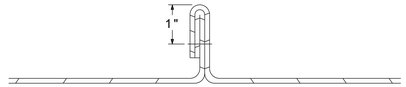
| | ESTIMATED SOILS SHEET QUANTITIES | | | |
|---|---|---|---|---|
| | ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
| ①② | 203-02.01 | BORROW EXCAVATION (GRADED SOLID ROCK) | TON | 350 |
| ①② | 303-10.07 | NO. 4 STONE | TON | 70 |
| ①② | 740-10.04 | GEOTEXTILE (TYPE IV) (STABILIZATION) | S.Y. | 500 |

① THESE QUANTITIES ARE TO BE USED AT THE DISCRETION OF THE ENGINEER TO STABILIZE SOFT SUBGRADE AREAS.

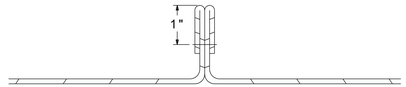
② FOR BIDDING PURPOSES, THESE QUANTITIES ARE INCLUDED IN THE SHEET 2 SERIES.




FLAT OR PRAYER SEAM
TYPE SSd-1




J SEAM
TYPE SSn-1




BUTTERFLY SEAM
TYPE SSa-1

TYPES OF SEAMS

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TRANSPORTATION

GEOTECHNICAL
NOTES &
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
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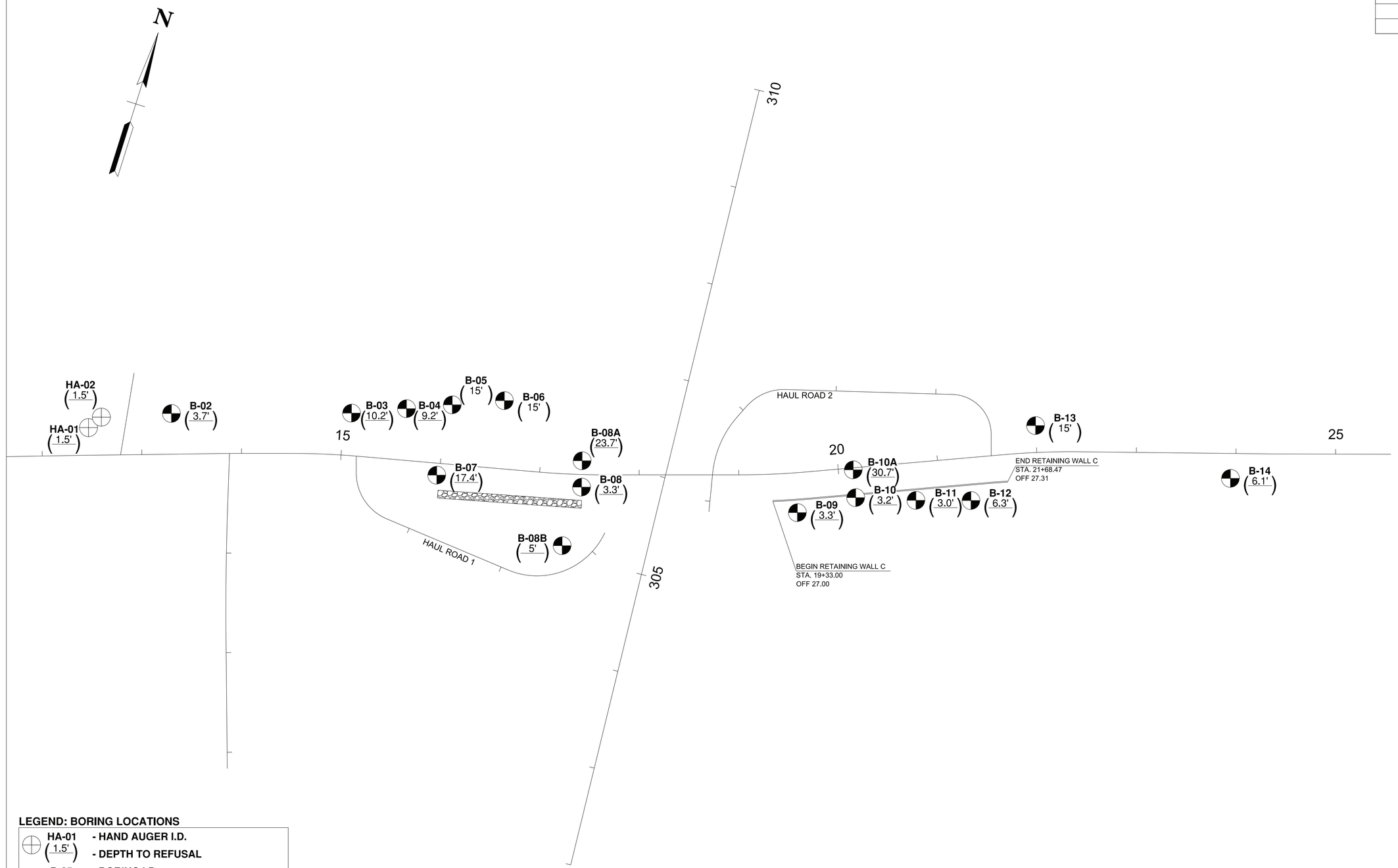


**LEGEND: BORING LOCATIONS**

| | |
|---|---|
| HA-01 (1.5') | - HAND AUGER I.D. - DEPTH TO REFUSAL |
| B-25 (24.5') | - BORING I.D. - DEPTH TO REFUSAL |
| B-25 (24.5') | - BORING I.D. - TERMINATION DEPTH (NO REFUSAL) |
| | - GRADED SOLID ROCK |

SEALED BY

DAVID MICHAEL GRASS
REGISTERED ENGINEER
AGRICULTURE
No. 115409
STATE OF TENNESSEE

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

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# GEOTECHNICAL BORING LAYOUT

STA.11+63.98 TO STA.25+55.53
SCALE: 1"= 50'

GES No. 3302521 / PIN 124076.00

3/31/2025 8:24:46 AM
T:\Chattanooga-1810\Projects\2021\215097_TDOT_SR 320 over CSX Railroad\1 - Soils and Geology Report\FINAL - Revised\CAD\124076.00-SoilsSht03.dgn

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | G4 |
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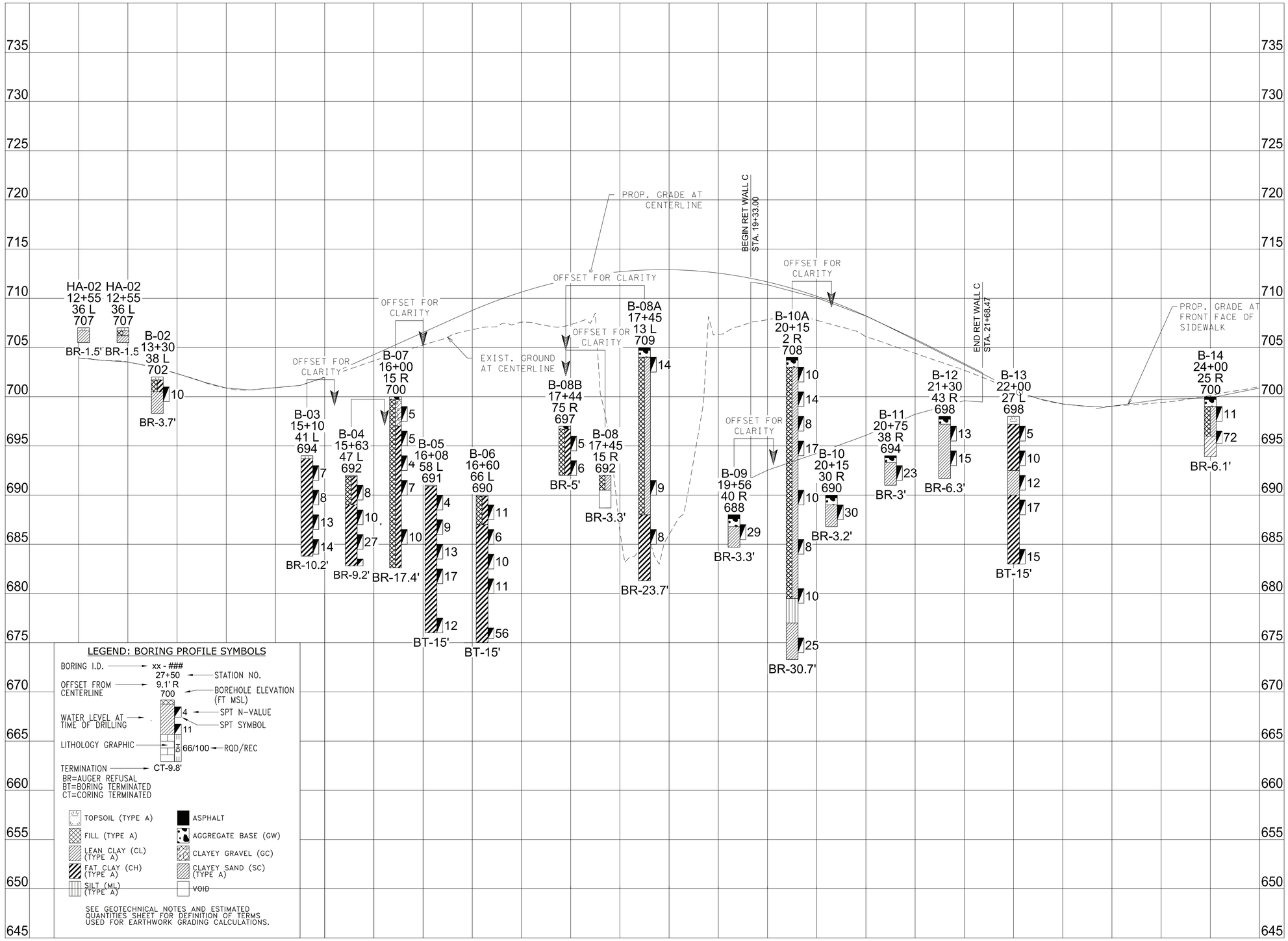


SEALED BY

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# GEOTECHNICAL BORING PROFILE

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

GES No. 3302521 / PIN 124076.00

3/20/2025 4:43:42 PM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | G5 |
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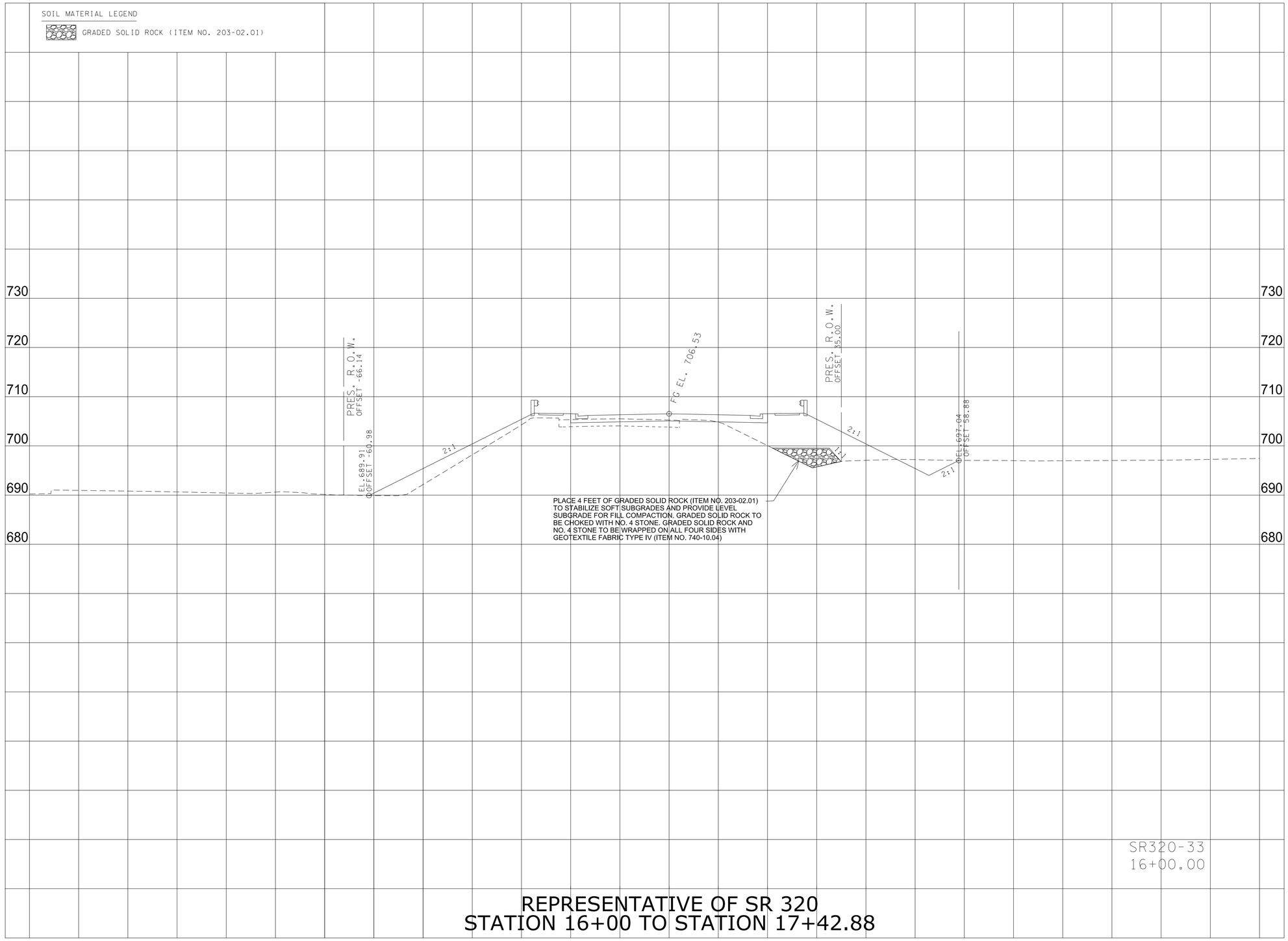
SOIL MATERIAL LEGEND

GRADED SOLID ROCK (ITEM NO. 203-02.01)




REPRESENTATIVE OF SR 320
STATION 16+00 TO STATION 17+42.88

SEALED BY

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**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# GEOTECHNICAL TYPICAL SECTIONS

STATION 16+00
SCALE: 1"=10'

GES No. 3302521 / PIN 124076.00

3/20/2025 9:12:36 AM
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | R1 |
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# RETAINING WALL INDEX

## SHEET NAME — SHEET NO.


RETAINING WALL INDEX.....R1

RETAINING WALL DESIGN NOTES & REQUIREMENTS.....R2

RETAINING WALL TYPICAL DETAILS.....R3

RETAINING WALL GEOMETRIC LAYOUT AND SOIL PROFILE.....R4


$$$$SYTIME$$$$$$

$$$$DGNSPEC$$$$$$

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | R2 |
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# ACCEPTABLE WALL TYPES

MECHANICALLY STABILIZED EARTH (MSE) WALL - SEGMENTAL PRECAST
MECHANICALLY STABILIZED EARTH (MSE) WALL - MODULAR BLOCK

## RETAINING WALL DESIGN NOTES

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

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

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN:

- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020

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

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

THE WALL DESIGNER SHALL UTILIZE THE GEOTECHNICAL PARAMETERS AND RESISTANCE FACTORS AS PROVIDED FOR EACH PROJECT RETAINING WALL ON THE "RETAINING WALL DETAIL" SHEET(S) TO PREPARE AND SUBMIT DESIGN CALCULATIONS. LOAD FACTORS AND OTHER PERTINENT DESIGN REQUIREMENTS PROVIDED IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS SHALL BE USED FOR NON-MSE WALLS AND PUBLICATION FHWA-NHI-10-024/FHWA FEC 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPE, NOVEMBER 2009 FOR MSE WALLS.

- CALCULATIONS FOR BOTH INTERNAL AND EXTERNAL STABILITY (SLIDING, ECCENTRICITY, AND BEARING CAPACITY-GLOBAL STABILITY AND SETTLEMENT BEING THE EXCEPTIONS) SHALL BE PROVIDED FOR EACH CRITICAL WALL SECTION WHICH DEMONSTRATES THE REQUIRED CAPACITY TO DEMAND RATIO OF 1.0 IS MET UTILIZING THE DESIGN PARAMETERS PROVIDED. FOR MSE WALLS, THE WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL REQUIREMENTS. THE WALL DESIGNER/CONTRACTOR PLANS MUST INCLUDE ANY FOUNDATION IMPROVEMENTS AS REQUIRED HEREIN ON THE WALL DESIGNER/CONTRACTOR'S WALL ELEVATION VIEWS AND ANY CROSS-SECTIONAL DETAIL DRAWINGS.

- UNLESS OTHERWISE STATED, THE WALL DESIGNER CAN ASSUME THAT MINIMUM GLOBAL STABILITY AND SETTLEMENT CRITERIA IS ACHIEVED WITH A WALL DESIGN MEETING OTHER MINIMUM EXTERNAL STABILITY REQUIREMENTS AND ASSUMING WALL FOUNDATION BEARING IMPROVEMENTS ARE MET. WHILE THE WALL DESIGNER'S DESIGN MUST DEMONSTRATE COMPLIANCE WITH EXTERNAL STABILITY REQUIREMENTS AS DISCUSSED ABOVE, THE WALL DESIGNER PROVIDES CERTIFICATION (BY SIGNING AND STAMPING BY PROFESSIONAL ENGINEER REGISTERED IN STATE OF TENNESSEE) OF THE WALLS, PLANS, AND CALCULATIONS "FOR INTERNAL STABILITY ONLY".

- LOAD COMBINATIONS STRENGTH I, EXTREME EVENT I, AND EXTREME EVENT II SHALL BE EVALUATED AS GIVEN IN AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS. FOR MSE WALLS, LOAD COMBINATIONS STRENGTH I, EXTREME EVENT 1, AND EXTREME EVENT II AS GIVEN IN TABLE 4-1 OF PUBLICATION FHWA-NHI-10-024/FHWA GE 011, DESIGN AND CONSTRUCTION OF MECHANICALLY STABILIZED EARTH WALLS AND REINFORCED SOIL SLOPES, NOVEMBER 2009 FOR MSE WALLS SHALL BE EVALUATED.

## NOTE REGARDING CONSTRUCTION SLOPES

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

## TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

| DESCRIPTION | MSE WALLS |
|---|---|
| DESIGN LIFE | 75 YEARS |

SEISMIC ACCELERATION COEFFICIENTS

| | |
|---|---|
| As | 0.143 |
| $S_{DS}$ | 0.261 |
| $S_{D1}$ | 0.070 |

EFFECTIVE (DRAINED) FRICTION ANGLE

| | |
|---|---|
| RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL | 28 ° |
| RETAINED BACKFILL-SELECT BACKFILL | 34 ° TO MAX 40 ° |
| REINFORCED BACKFILL | 34 ° TO MAX 40 ° |

UNIT WEIGHT

| | |
|---|---|
| UNCLASSIFIED SITE OR BORROW SOIL | 120 POUNDS PER CUBIC FOOT |
| SELECT BACKFILL MATERIAL | VARIES |

DESIGN BASIS

| | |
|---|---|
| COEFFICIENT OF SLIDING FRICTION | SEE TABLE 2 |
| NOMINAL BEARING RESISTANCE | SEE TABLE 2 |
| MINIMUM LENGTH OF SOIL REINFORCEMENT, L | GREATER OF 8-FT OR 0.7H OR AS SPECIFIED ON THE PLANS |
| LIMITING ECCENTRICITY | L/4 (SOIL), 3L/8 (ROCK) |

RESISTANCE FACTORS

| | |
|---|---|
| SLIDING-STATIC | 1.0 |
| SLIDING-COMBINED STATIC+EARTHQUAKE | 1.0 |
| BEARING-STATIC | 0.65 |
| BEARING-COMBINED STATIC+EARTHQUAKE | 0.9 |

| PULLOUT RESISTANCE OF METALLIC REINFORCEMENT | |
|---|---|
| STATIC | |
| -STEEL STRIP REINFORCEMENTS | 0.90 |
| -STEEL GRID REINFORCEMENTS | 0.90 |
| COMBINED STATIC/EARTHQUAKE | |
| -STEEL STRIP REINFORCEMENTS | 1.20 |
| -STEEL GRID REINFORCEMENTS | 1.20 |

| PULLOUT RESISTANCE OF GEOSYNTHETIC REINFORCEMENT | |
|---|---|
| STATIC | |
| -GEOTEXTILES AND GEOGRIDS | 0.70 |
| -GEOSTRIP REINFORCEMENTS | 0.70 |
| COMBINED STATIC/EARTHQUAKE | |
| -GEOTEXTILES AND GEOGRIDS | 1.00 |
| -GEOSTRIP REINFORCEMENTS | 1.00 |

| TENSILE RESISTANCE OF METALLIC REINFORCEMENTS AND CONNECTORS | |
|---|---|
| STATIC | |
| -STRIP REINFORCEMENT | 0.75 |
| -GRID REINFORCEMENT | 0.65 |
| COMBINED STATIC/EARTHQUAKE | |
| -STRIP REINFORCEMENT | 1.00 |
| -GRID REINFORCEMENT | 0.85 |

| TENSILE RESISTANCE OF GEOSYNTHETIC REINFORCEMENTS AND CONNECTORS | |
|---|---|
| STATIC | |
| -GEOTEXTILE AND GEOGRID REINFORCEMENTS | 0.80 |
| -GEOSTRIP REINFORCEMENTS | 0.55 |
| COMBINED STATIC/EARTHQUAKE | |
| -GEOTEXTILE AND GEOGRID REINFORCEMENTS | 1.00 |
| -GEOSTRIP REINFORCEMENTS | 1.00 |

### NOTES FOR TABLE 1

| NO. | NOTE |
|---|---|
| 1 | A MAXIMUM FRICTION ANGLE OF 34 DEGREES CAN BE ASSUMED FOR MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1. MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. A HIGHER FRICTION ANGLE THAN 34 DEGREES CAN BE UTILIZED IF THE CONTRACTOR SUBMITS INDEPENDENT TESTING AND IT IS VERIFIED BY TDOT. HOWEVER, IN NO CASE SHALL THE FRICTION ANGLE FOR ANALYSIS EXCEED 40-DEGREES. INDEPENDENT TESTING MUST BE VERIFIED ANNUALLY. |
| 1A | SELECT BACKFILL UNIT WEIGHT TO BE DETERMINED BY CONTRACTOR/DESIGNER DEPENDING ON ACTUAL BACKFILL MATERIAL USED. SELECT BACKFILL IS DEFINED AS MATERIAL MEETING SPECIFICATIONS IN SECTION F, PART 1. MATERIALS OF TENNESSEE DEPARTMENT OF TRANSPORTATION SPECIAL PROVISION 624 REGARDING RETAINING WALLS. IN ORDER TO UTILIZE Φ FOR SELECT BACKFILL DESIGN, SELECT BACKFILL MUST BE PLACED FOR A MINIMUM ZONE FORMED BY A 1:1 SLOPE FROM 2 FEET BEHIND THE BOTTOM OF BACK OF WALL FOOTING OR REINFORCED SOIL ZONE FOR MSE WALLS UP TO FINISHED GRADE. |
| 2 | H IS DESIGN HEIGHT OF THE WALL AND IS DEFINED AS THE DIFFERENCE IN ELEVATION BETWEEN THE FINISHED GRADE AT THE TOP OF THE WALL AND THE TOP OF LEVELING PAD OR BOTTOM OF FOOTING FOR NON-MSE WALLS. THE TOP OF THE LEVELING PAD SHALL ALWAYS BE BELOW THE MINIMUM EMBEDMENT REFERENCE LINE AS INDICATED ON THE PLANS FOR THAT LOCATION. THE LENGTH OF THE SOIL REINFORCEMENT, L, IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT. IN CASE OF GRID TYPE REINFORCEMENTS THE LENGTH OF THE SOIL REINFORCEMENT IS MEASURED FROM THE BACKFACE OF THE WALL FACING UNIT TO THE LAST FULL TRANSVERSE MEMBER. FOR MODULAR BLOCKFACING UNITS, THE TOTAL LENGTH OF THE REINFORCEMENT, Br AS MEASURED FROM THE FRONT FACE OF THE WALL IS THE LENGTH L AS DEFINED ABOVE PLUS THE WIDTH OF THE MODULAR BLOCK UNIT (THE HORIZONTAL DIMENSION OF THE BLOCK UNIT MEASURED PERPENDICULAR TO THE WALL FACE). |
| 2A | WALL DESIGNER MUST ADJUST THE REINFORCEMENT LENGTHS BEYOND THOSE MINIMUM REQUIRED LENGTHS, IF REQUIRED, TO MEET BOTH INTERNAL AND EXTERNAL STABILITY REQUIREMENTS. MINIMUM REINFORCEMENT LENGTHS MAY BE REQUIRED FOR GLOBAL STABILITY. THIS REQUIREMENT WILL BE SHOWN IN THE PLANS. |
| 2B | ALL DESIGN SECTION REINFORCEMENT LENGTHS SHALL BE EQUAL. |
| 3 | PASSIVE RESISTANCE SHALL NOT BE CONSIDERED IN EVALUATION OF SLIDING RESISTANCE. NO SHEAR KEYS NOR DOWELS WILL BE PERMITTED. |
| 4 | FOR ALL LIMIT STATES, THE DESIGN LOADING FOR THE MSE RETAINING WALL SYSTEM SHALL NOT EXCEED THE FACTORED GENERAL AND LOCAL BEARING RESISTANCE SPECIFIED IN TABLES 2 OR 3. |

## TABLE 2-FOUNDATION PARAMETERS AND REQUIREMENTS FOR MSE WALLS

| SR 320 STATION LIMITS | FOUNDATION (REINFORCED ZONE) BEARING CONDITION REQUIREMENT | NOMINAL BEARING RESISTANCE (psf) | COEFFICIENT OF SLIDING FRICTION |
|---|---|---|---|
| 19+33.00 TO 21+68.47 | STIFF CLAY | 8,450 | 0.5 |

## OTHER DESIGN REQUIREMENTS

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

ALL WALL ELEMENTS SHALL BE WITHIN TDOT ROW.

ALL CONSTRUCTION MUST STAY WITHIN TDOT ROW AND CONSTRUCTION EASEMENT.

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

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

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

IF REQUIRED, THE RETAINING WALL REINFORCED ZONE MUST BE CONSTRUCTED WITH ALLOWANCES MADE TO ENABLE THE PILES FOR THE ABUTMENTS TO BE DRIVEN (SONOTUBE, ETC).

FOR MSE WALLS, A MINIMUM HORIZONTAL BENCH 4 FEET WIDE AS MEASURED FROM THE FACE SHALL BE PROVIDED IN FRONT OF WALLS FOUNDED ON SLOPES WITH A MINIMUM EMBEDMENT DEPTH OF 3 FEET. THE BENCH MAY BE FORMED OR THE SLOPE CONTINUED ABOVE THAT LEVEL. SEE ARTICLE 11.10.2.2, AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020 AND INTERIMS. ALTERNATIVELY, THE EMBEDMENT DEPTH MAY BE INCREASED TO 5 FEET TO SATISFY THE REQUIREMENTS.

THE MINIMUM REINFORCEMENT LENGTH SHOULD BE 0.9 TIMES THE WALL HEIGHT, WHERE THE WALL HEIGHT IS MEASURED FROM THE TOP OF THE LEVELING PAD TO FINISHED GRADE AT THE TOP OF THE WALL.
THE LATERAL DEFLECTION AT THE TOP OF THE WALL SHALL BE LIMITED TO 1/8" PER FOOT OF HEIGHT.

THE ALLOWABLE LATERAL DEFLECTION OF PILE SUPPORT WALL. MEASURED AT THE PILE HEAD, SHALL BE :
0.75" FOR SERVICE LIMIT STATE
3.00" FOR EXTREME LIMIT STATE

**STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION**

# RETAINING WALL GEOTECHNICAL DESIGN NOTES & REQUIREMENTS

$$$$SYTIME$$$$$$$
$$$$DGNSPEC$$$$$$$

GES No. 3302521 / PIN 124076.00

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | R3 |
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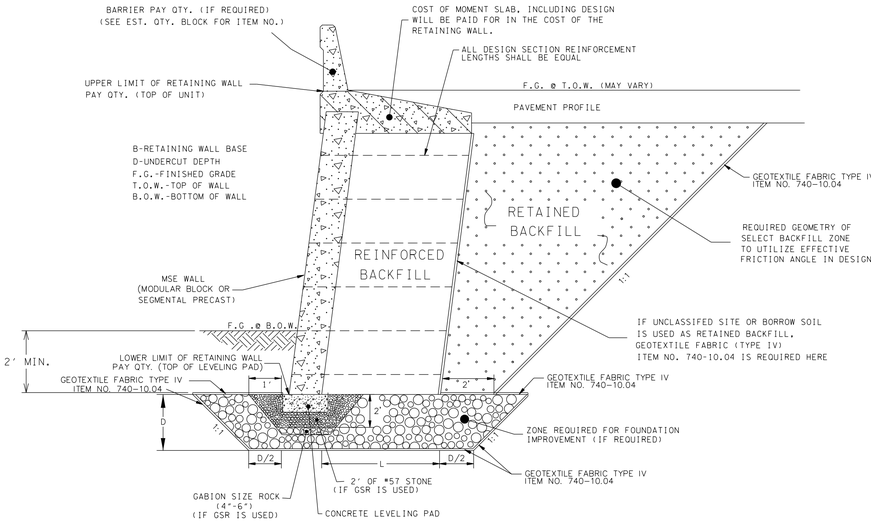


TYPICAL DETAIL

MSE WALL – MODULAR BLOCK\SEGMENTAL PRECAST

BARRIER REQUIRED

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

RETAINING WALL TYPICAL DETAILS

GES No. 3302521 / PIN 124076.00

$$$$SYTIME$$$$$$

$$$$DGNSPEC$$$$$$

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | R4 |
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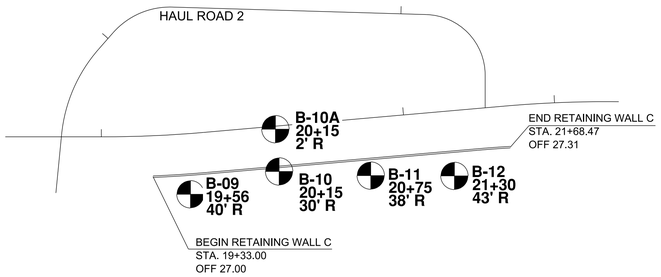
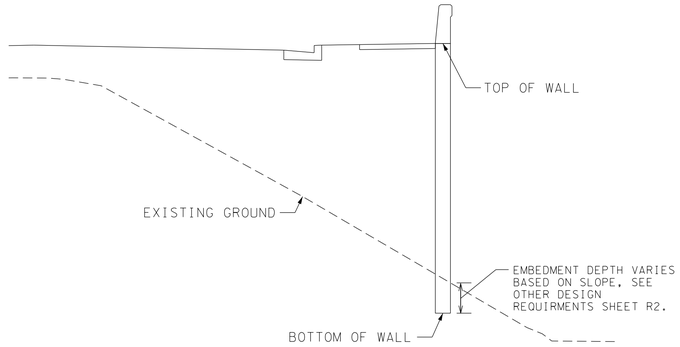
## LEGEND: BORING LOCATIONS

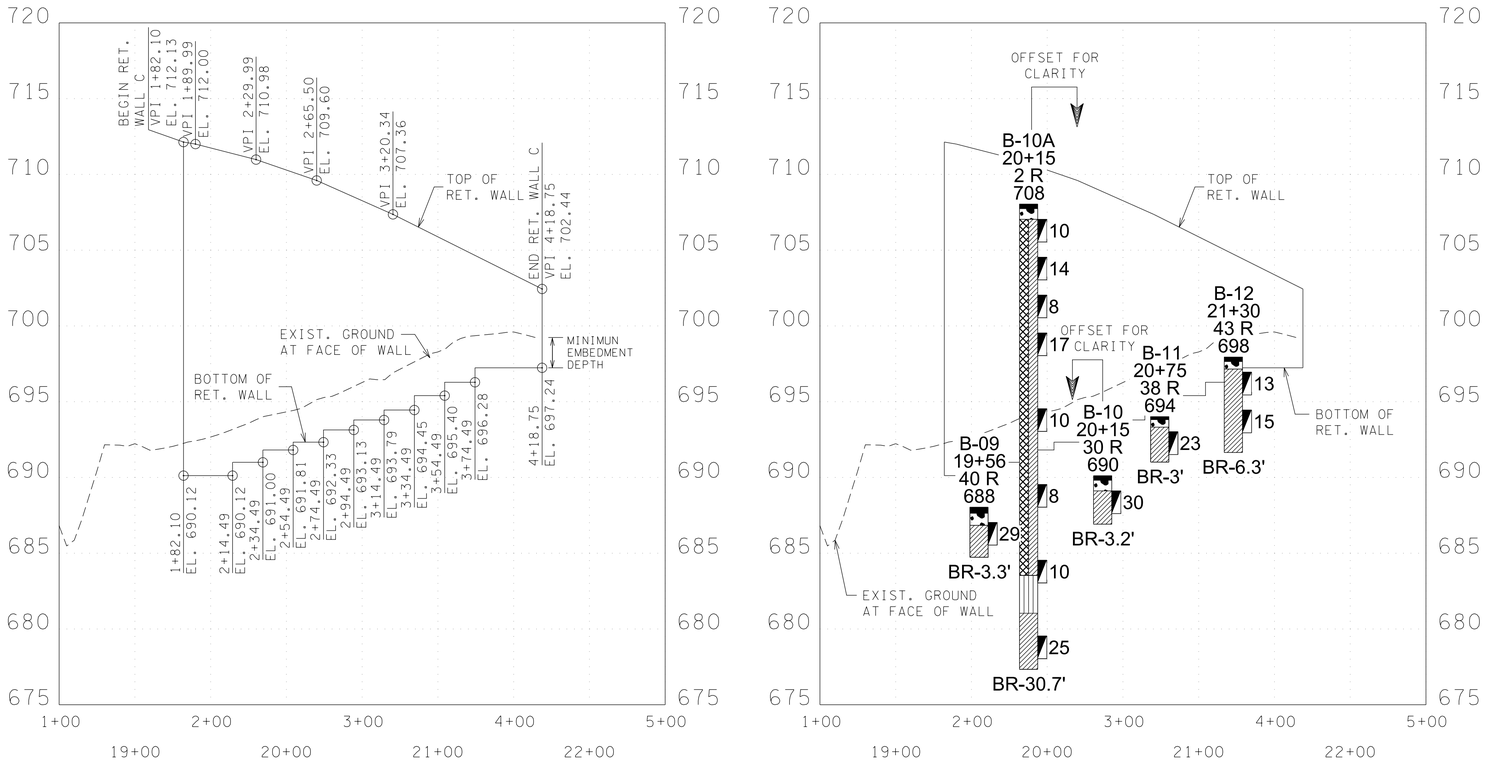
xx- ## - BORING ID
24+62 - STATION NUMBER
33' R - OFFSET




RETAINING WALL C
SR 320 STA 19+33.00 TO 21+68.47




TYPICAL SECTION
SR 320 STA 20+00.00



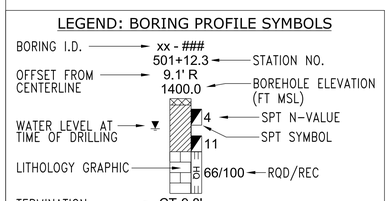




RETAINING WALL C PROFILE
SR 320 STA 19+33.00 TO 21+68.47

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

### LEGEND: BORING PROFILE SYMBOLS




SEE GEOTECHNICAL NOTES AND ESTIMATED QUANTITIES SHEET FOR DEFINITION OF TERMS USED FOR EARTHWORK GRADING CALCULATIONS.

GES No. 3302521 / PIN 124076.00

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# RETAINING WALL C

## GEOMETRIC LAYOUT & SOIL PROFILE

2/26/2025 10:25:52 AM
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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| P.E. | 2022 | 33057-0228-94 | |
| PS&E | 2025 | 33057-3228-94 | S-1 |

## SWPPP INDEX OF SHEETS


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|---|---|
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| 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 | 6-7 |
| 14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION (8.7.5.) | 7 |
| 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): 1.702 ACRES

2.3. TOTAL AREA TO BE DISTURBED (5.5.1.b): 3.400 ACRES

2.4. PROJECT DESCRIPTION (5.5.1.a):

TITLE: SR-320 EAST BRAINERD ROAD-(BRIDGE REPLACEMENT
COUNTY: HAMILTON
PIN: 124076.00

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, 12, 13, 14, 15, DRAINAGE MAP SHEET(S) 8, 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: _____

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) |
| ARENTS | - | 57.6 | 1.8 |
| COLBERT-URBAN LAND COMPLEX, 2 - 12 PERCENT SLOPES | D | 29.8 | 0.9 |
| TUPELO SILT LOAM, 0 TO 3 PERCENT SLOPES | C/D | 12.6 | 0.4 |
| TOTALS FOR AREA OF INTEREST | | 100.0 % | 3.1 |

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, EXISTING ROADWAY/EVEVATED BRIDGE, DRIVWAY ENTRANCE | 1.1 | 100 | | 0.8 |
| PERVIOUS | 0 | 0 | | 0.7 |
| | | | | |
| WEIGHTED CURVE NUMBER OR C-FACTOR = 100 | | | | |

| RUNOFF COEFFICIENTS FOR POST-CONSTRUCTION CONDITIONS | | | | |
|---|---|---|---|---|
| AREA TYPE | AREA(AC) | PERCENTAGE OF TOTAL AREA (%) | RUNOFF CN | C FACTOR |
| IMPERVIOUS: ELEVATED BRIDGE, DRIVEWAY ENTRANCE | 1.1 | 32.4 | | 0.8 |
| PERVIOUS: SLOPES, GRASSY/TREES AREAS, HAUL ROADS | 2.3 | 67.6 | | 0.7 |
| | | | | |
| WEIGHTED CURVE NUMBER OR C-FACTOR = 100 | | | | |

**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 (10, 11, 12, 13, 14, 15)

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) |
| WWC-1 | South Chickamauga | 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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# STORMWATER POLLUTION PREVENTION PLAN

TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| P.E. | 2022 | 33057-0228-94 | |
| PS&E | 2025 | 33057-3228-94 | S-2 |

| 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) |
| WWC-1 | YES | YES |
| | | |
| | | |

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

**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:_____

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 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) |
| N/A | N/A | N/A | N/A | N/A |
| | | | | |

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) _.

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) 1B.

**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 2-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.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# STORMWATER POLLUTION PREVENTION PLAN

| TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO. |
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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
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| P.E. | 2022 | 33057-0228-94 | |
| PS&E | 2025 | 33057-3228-94 | S-3 |

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 7. ALL PERMITS WILL BE MAINTAINED ON SITE WITHIN THE "DOCUMENTATION AND PERMITS" BINDER.

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

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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.

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): CLEARING & GRUBBING, SODS SLOPES, SILT FENCE, SEDIMENT TUBES, ROCK CHECK DAM

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.

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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

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

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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.

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

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TENNESSEE D.O.T. | DESIGN DIVISION | FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| P.E. | 2022 | 33057-0228-94 | |
| PS&E | 2025 | 33057-3228-94 | S-7 |

NOTICE OF INTENT FOR THE PROJECT FOR A PERIOD OF AT LEAST THREE (3) YEARS FROM THE DATE THE NOT WAS FILED.

**14. SITE WIDE/PRIMARY PERMITTEE CERTIFICATION** (8.7.5.)

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.

E. Scott Medlin Digitally signed by Scott Medlin Date: 2024.08.23 16:04:32 -04'00'

AUTHORIZED TDOT PERSONNEL SIGNATURE (5.3.3.)

SCOTT MEDLIN

PRINTED NAME

TDOT MANAGER

TITLE

23 AUG 2024

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

**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 | | | |
|---|---|---|---|
| **PERMIT** | **YES OR NO** | **PERMIT OR TRACKING NO.** | **EXPIRATION DATE*** |
| **TDEC ARAP** | | | |
| **CORPS OF ENGINEERS (USACE)** | | | |
| **TVA 26A** | | | |
| **TDEC CGP** | | | |
| **OTHER:** | | | |

*THE TDOT ENVIRONMENTAL DIVISION MUST BE NOTIFIED SIX MONTHS PRIOR TO PERMIT EXPIRATION DATE.

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| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| P.E. | 2022 | 33057-0228-94 | |
| PS&E | 2025 | 33057-3228-94 | 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 1A DRAINAGE AREA (AC) | STAGE 2 DRAINAGE AREA (AC) | STAGE 3 DRAINAGE AREA (AC) | STAGE 4 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OUT-1 | - | STA 17+68.76, RT | 16.5 | 2.25 | 2.25 | 2.25 | 2.25 | 2.25 | NO | NO | S. CHICKAMAUGA CREEK | - |
| - | OUT-1A | STA 13+73.09, RT | 8.3 | 0.31 | 0.31 | 0.07 | 0.07 | 0.07 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1B | STA 13+58, RT | 7.1 | - | 0.24 | 0.24 | 0.24 | 0.24 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1C | STA 13+58, LT | 2.7 | - | - | 0.1 | 0.1 | 0.1 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1D | STA 14+38.10, LT | 3.5 | - | - | 0.37 | 0.37 | 0.37 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1E | STA 14+70, LT | 4.8 | - | - | 0.1 | 0.1 | 0.1 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1F | STA 16+50, LT | 3.6 | - | - | 0.11 | 0.11 | 0.11 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1G | STA 14+26, RT | 4.9 | - | - | - | 0.15 | 0.15 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-1H | STA 16+49.97, RT | 3.6 | - | - | - | 0.11 | 0.11 | NO | NO | S. CHICKAMAUGA CREEK | --- |
| OUT-2 | - | STA 16+53.30, LT | 17.5 | 0.51 | 0.51 | - | - | - | NO | NO | S. CHICKAMAUGA CREEK | -- |
| OUT-3 | - | STA 22+93.78, LT | 0.7 | 1.02 | 0.74 | 1.0 | 1.26 | 1.26 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3A | STA 23+21.48, LT | 1.3 | 002 | 0.02 | 0.02 | 0.02 | 0.02 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3B | STA 23+48.35, LT | 5.9 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3C | STA 22+97.78, RT | 3.2 | 0.32 | 0.20 | 0.20 | 0.20 | 0.20 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3D | STA 25+89.02, RT | 4.1 | 0.21 | 0.21 | 0.21 | 0.21 | 0.21 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3E | STA 25+50, RT | 5.4 | - | - | - | 0.13 | 0.13 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3F | STA 22+44.91, RT | 3.7 | - | - | - | 0.13 | 0.13 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| - | OUT-3G | STA 22+50, RT | 5.2 | - | - | 0.13 | 0.13 | 0.13 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| -- | OUT-3H | STA 20+50, LT | 3.4 | - | - | 0.13 | 0.13 | 0.13 | NO | NO | S. CHICKAMAUGA CREEK | -- |
| | | | | | | | | | | | | --- |
| | | | | | | | | | | | | --- |
| | | | | | | | | | | | | - |

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 | BR-STP-320(10) | U1-1 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

# STATE OF TENNESSEE
# DEPARTMENT OF TRANSPORTATION
# BUREAU OF ENGINEERING

# HAMILTON COUNTY

SR-320 (EAST BRAINERD RD),
BRIDGE OVER CSX RAILROAD,
LM 0.86

| INDEX OF SHEETS | |
|---|---|
| **SHEET NAME** | **SHEET NUMBER** |
| UTILITY INDEX, UTILITY OWNERS, AND UTILITY REFERENCE | U1 |
| NOT USED | U2 |
| NOT USED | U3 |
| ELECTRIC POWER BOARD (ELECTRIC) | U4 |
| ELECTRIC POWER BOARD (FIBER) | U5 |
| AT&T | U6 |
| CHATTANOOGA GAS | U7 |

| | | | | | |
|---|---|---|---|---|---|
| TELEPHONE: | **AT&T**<br>300 E ML KING BLVD.<br>CHATTANOOGA, TN 37403<br>CONTACT: JOE PERREL<br>EMAIL: JP1389@ATT.COM<br>PHONE: (423) 488-2825<br>(MOVE - IN CONTRACT) | GAS: | **KINDER MORGAN**<br>1001 LOUISIANA ST., SUITE 1000<br>HOUSTON, TX 77002<br>CONTACT: DENIS CHEGE<br>EMAIL:<br>DENIS_CHEGE@KINDERMORGAN.COM<br>PHONE: (713) 420-2032<br>(NO CONFLICT) | GAS: | **CHATTANOOGA GAS COMPANY (SOUTHERN COMPANY - ATLANTA)**<br>30 IVAN ALLEN JR. BLVD. NW<br>ATLANTA, GA 30308<br>CONTACT: BRANDON STEPHENS<br>EMAIL:<br>BSTEPHEN@SOUTHERNCO.COM<br>PHONE: (404) 584-3915<br>(MOVE - IN CONTRACT) |
| SANITARY SEWER: | **CITY OF CHATTANOOGA**<br>455 MOCCASIN BEND RD.<br>CHATTANOOGA, TN 37455<br>CONTACT: MATTHEW SNYDER<br>EMAIL:<br>MSNYDER@CHATTANOOGA.GOV<br>PHONE: (423) 643-7403<br>(NO CONFLICT) | FIBER OPTIC: | **LUMEN**<br>100 CENTURYLINK DRIVE<br>MONROE, LA 71203<br>CONTACT: JARRETT PAINTER<br>EMAIL:<br>JARRETT.J.PAINTER@LUMEN.COM<br>PHONE: (423) 914-0830<br>(NO CONFLICT) | WATER: | **TENNESSEE AMERICAN WATER**<br>1500 RIVERSIDE DRIVE<br>CHATTANOOGA, TN 37406<br>CONTACT: GRADY STOUT<br>EMAIL:<br>GRADY.STOUT@AMWATER.COM<br>PHONE: (423) 771-4713<br>(NO RESPONSE - MOVE PRIOR) |
| ELECTRIC: | **ELECTRIC POWER BOARD (EPB)**<br>10 WEST M.L. KING BLVD.<br>CHATTANOOGA, TN 37402<br>CONTACT: ADAM NORWOOD<br>EMAIL: NORWOODAW@EPB.NET<br>PHONE: (423) 805-8376<br>(MOVE - IN CONTRACT) | FIBER OPTIC: | **ELECTRIC POWER BOARD (EPB)**<br>10 WEST M.L. KING BLVD.<br>CHATTANOOGA, TN 37402<br>CONTACT: ADAM NORWOOD<br>EMAIL: NORWOODAW@EPB.NET<br>PHONE: (423) 805-8376<br>(MOVE - IN CONTRACT) | FIBER OPTIC: | **MCI/VERIZON BUSINESS GROUP**<br>603 WAREHOUSE PARK LANE<br>KNOXVILLE, TN 37932<br>CONTACT: MIKE STANLEY<br>EMAIL:<br>STANLEY.M.MAJKA@VERIZON.COM<br>PHONE: (615) 428-4943<br>(NO RESPONSE - MOVE PRIOR) |

## LEGEND

PROPOSED POWER

EXISTING POWER

PROPOSED UNDERGROUND/ AERIAL TELEPHONE — T (UG) — / — T —

EXISTING UNDERGROUND/ AERIAL TELEPHONE — T (UG) — / — T —

PROPOSED UNDERGROUND/ AERIAL FIBER — F (UG) — / — F —

EXISTING UNDERGROUND/ AERIAL FIBER — F (UG) — / — F —

PROPOSED GAS — G —

EXISTING GAS — G —

## SPECIAL NOTES

SOME UTILITIES CAN BE LOCATED BY CALLING THE
TENNESSEE ONE CALL SYSTEM, INC
AT 1-800-351-1111

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

## UTILITY REFERENCE

5/30/2025 8:17:41 AM
W:\22-12-2607 CU1026 WO1 SR 320 (E BRAINERD RD) BRIDGE OVER CSX RR\3_CAD\Production\Cover_Sheet_U1-1.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U1-2 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

## ESTIMATED UTILITY QUANTITIES

| ITEM NO. | DESCRIPTION | UNIT | 33057-3228-94 QUANTITY |
|---|---|---|---|
| 701-01.01 | CONCRETE SIDEWALK (4 ") | S.F. | 75 |
| 702-03.00 | CONCRETE COMBINED CURB & GUTTER | C.Y. | 1 |
| 790-03.03 | POLE 40FT CLASS 4 WOOD | Each | 1 |
| 790-04.04 | POLE 45FT CLASS 4 WOOD | Each | 1 |
| 790-05.02 | POLE 50FT CLASS 2 WOOD | Each | 3 |
| 790-05.08 | POLE 50FT CLASS H2 METAL | Each | 1 |
| 790-06.01 | POLE 55FT CLASS 1 WOOD | Each | 1 |
| 790-07.01 | POLE 60FT CLASS 1 WOOD | Each | 3 |
| 790-08.06 | POLE 65FT CLASS H4 METAL | Each | 1 |
| 790-12.07 | POLE 85FT CLASS H4 METAL | Each | 2 |
| 790-21.08 | 1PH DEADEND 15KV | Each | 1 |
| 790-21.09 | 1PH PRIMARY TAP 15KV | Each | 1 |
| 790-23.07 | 2PH CROSSARM CONST DEADEND (SGL) 15KV | Each | 2 |
| 790-25.07 | 3PH CROSSARM DBL LRG COND 15KV | Each | 2 |
| 790-25.08 | 3PH CROSSARM SGL LRG COND 15KV | Each | 2 |
| 790-25.24 | 3PH CROSSARM DDE LRG COND 15KV | Each | 1 |
| 790-25.27 | 3PH CROSSARM DDE 10FT ARMS LRG COND 15KV | Each | 2 |
| 790-25.30 | 3PH CROSSARM DBL 10FT LRG COND 15KV | Each | 1 |
| 790-30.06 | SECONDARY CONDUCTOR 6 AL DUPLEX | LF | 481 |
| 790-31.02 | SERVICE ASSEMBLY-POLE TYPE | Each | 9 |
| 790-31.20 | SERVICE CONDUCTOR 1/0 AL QPLEX | LF | 62 |
| 790-32.02 | DOWN GUY - THROUGH BOLT TYPE HEAVY DUTY | Each | 3 |
| 790-32.06 | DOWN GUY - INSULATED | Each | 3 |
| 790-32.07 | OH GUY - THROUGH BOLT TYPE | Each | 4 |
| 790-32.23 | GUY GUARD | Each | 6 |
| 790-33.31 | SCREW TYPE ANCHOR 23,000LB (F1-5D-P) | Each | 6 |
| 790-36.06 | TRANSFER LIGHT | Each | 1 |
| 790-36.12 | TRANSFER EXISTING 3PH TRANSFORMER/RECLOSER | Each | 1 |
| 790-36.14 | TRANSFER CONDUCTOR | EACH | 9 |
| 790-40.03 | OH COND 1/0 6/1 ACSR RAVEN | LF | 796 |
| 790-40.39 | OH COND 4/0 7 AAC OXLIP | LF | 4468 |
| 790-43.53 | 1PH PRIMARY RISER W/ 3IN CONDUIT | Each | 1 |
| 790-46.03 | 1PH TRANSFORMER CONV W/XARM MTD FUSE & LA | Each | 1 |
| 790-60.01 | 1PH FUSE CUTOUT XARM MOUNT 15KV | Each | 5 |
| 790-64.12 | SEC MTG 3PH 120/208 V (4 WIRE GRD WYE) | Each | 1 |
| 790-65.03 | LIGHTNING ARRESTER ARM MTD 9 KV | Each | 3 |
| 790-68.01 | POLE GROUND ROD TYPE | Each | 4 |
| 790-68.02 | POLE GROUND PLATE TYPE | Each | 5 |
| 790-69.11 | GROUND - GROUND ROD FOR ST POLE | Each | 4 |
| 790-69.32 | ARM PIN | Each | 18 |
| 790-69.41 | EXTENSION LINK - EPOXY - 8FT | Each | 4 |
| 790-71.04 | DBL ARM LINE POST INS NO OHGW 46Kv MAX | Each | 2 |
| 790-74.31 | FIBER TANGENT ASSM | EACH | 5 |
| 790-74.32 | FIBER DEADEND ASSM | EACH | 1 |
| 790-74.33 | FIBER DOUBLE DEADEND ASSM | EACH | 2 |
| 790-98.01 | REMOVE WIRE | LF | 6326 |
| 790-98.02 | REMOVE POLES | Each | 9 |
| 790-98.03 | REMOVE FRAMING/ ASSOCIATED APPARATUS | Each | 43 |
| 790-98.03 | REMOVE FRAMING/ASSOCIATED APPARATUS | EACH | 17 |
| 790-98.20 | TREE AND BRUSH REMOVAL OFF ROW | LS | 1 |
| 791-02.02 | 2IN MEDIUM-DENSITY POLYETHYLENE GAS MAIN | L.F. | 195 |
| 791-02.05 | 6IN MEDIUM-DENSITY POLYETHYLENE GAS MAIN | L.F. | 1080 |
| 791-04.05 | HDD 6IN POLYETHYLENE PIPE-UNCONSOLIDATED | L.F. | 400 |
| 791-05.14 | BORE/JACK 10 IN STEEL CASING PIPE - UNCON | L.F. | 300 |
| 791-06.09 | CONNECT TO 1-1/4IN EXISTING STEEL MAIN EACH | EACH | 1 |
| 791-06.12 | CONNECT TO 6IN EXISTING STEEL MAIN | EACH | 2 |
| 791-07.03 | 6IN POLYETHYLENE GAS VALVE ASSEMBLY | EACH | 2 |

## ESTIMATED UTILITY QUANTITIES

| ITEM NO. | DESCRIPTION | UNIT | 33057-3228-94 QUANTITY |
|---|---|---|---|
| 793-01.05 | POLE 35FT CLASS 2 WOOD | EA | 1 |
| 793-01.12 | POLE 40FT CLASS 4 WOOD | EA | 2 |
| 793-01.41 | ANCHOR 1IN | EACH | 9 |
| 793-11.20 | HANDHOLE 30INX48IN | EACH | 1 |
| 793-12.21 | DIG SPLICE PIT (15 LF) | EACH | 2 |
| 793-13.17 | 2 DUCT FORMATION @ 36IN DEPTH | L.F. | 150 |
| 793-14.02 | CONCRETE ENCASEMENT PER DUCT | L.F. | 300 |
| 793-14.10 | 4IN CORE DRILL INTO MANHOLE | EACH | 2 |
| 793-14.12 | 1 1/4IN INNERDUCT | L.F. | 450 |
| 793-16.01 | MH (RETIRE/REMOVE/GRAVEL BACKFILL) | EACH | 3 |
| 793-97.01 | RESTORE ASPHALT | S.Y. | 100 |
| 793-98.04 | REMOVE POLES ALL SIZES | EACH | 10 |
| 798-05.27 | COMMUNICATION ASSEMBLY (BOND) | EACH | 4 |
| 798-05.29 | COMMUNICATION ASSEMBLY (CSC) | EACH | 5 |
| 798-05.32 | COMMUNICATION ASSEMBLY (DDE) | EACH | 2 |
| 798-05.33 | COMMUNICATION ASSEMBLY (DE) | EACH | 6 |
| 798-05.34 | COMMUNICATION ASSEMBLY (E1-2) | EACH | 7 |
| 798-05.35 | COMMUNICATION ASSEMBLY (E2-2) | EACH | 3 |
| 798-05.37 | COMMUNICATION ASSEMBLY (F2&F3) | EACH | 1 |
| 798-05.52 | COMMUNICATION ASSEMBLY (LOOP) | EACH | 1 |
| 798-05.54 | COMMUNICATION ASSEMBLY (SVC) | EACH | 8 |
| 798-05.59 | 5/16IN HS STEEL STRAND | L.F. | 1378 |
| 798-06.90 | 18"/15 DEG FIBERGLASS STANDOFF BRACKET | EACH | 1 |
| 798-08.01 | RISER | EACH | 2 |
| 798-08.04 | TRANSFER COMMUNICATION ASSY (SVC) | EACH | 1 |
| 798-08.06 | TRANSFER FIBEROPTIC CABLE (LOOPS INCLUDED) | EACH | 18 |
| 798-08.07 | TRANSFER SVC DROP | EACH | 8 |
| 798-09.01 | REMOVE STEEL STRAND | L.F. | 1402 |
| 798-09.03 | REMOVE POLES, GUYS, ANCHORS | EACH | 4 |
| 798-09.08 | REMOVE STRAND POLE FRAMING | EACH | 25 |

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# UTILITY QUANTITIES

5/30/2025 8:17:58 AM
W:\22-12-2607 CU1026 WO1 SR 320 (E BRAINERD RD) BRIDGE OVER CSX RR\3_CAD\Production\U1-2.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U1-3 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

THIS SHEET INTENTIONALLY LEFT BLANK

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

# UTILITY REFERENCE

5/30/2025 8:18:25 AM
W:\22-12-2607 CU1026 WO1 SR 320 (E BRAINERD RD) BRIDGE OVER CSX RR\3_CAD\Production\U1-3.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U1-4 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

Ⓐ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
TOP ELEV - 691.07
STA: 21+78.45
OFF: 26.27

Ⓑ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
TOP ELEV-692.07
STA: 21+93.21
OFF: -19.976

Ⓒ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
EXPOSED IN DITCH
TOP ELEV-690.75
STA: 22+05.24
OFF: -59.97

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

**STATE OF TENNESSEE**
**DEPARTMENT OF TRANSPORTATION**

# UTILITY REFERENCE

STA.12+50.57 TO STA.25+55.53
SCALE: 1"= 50'

5/30/2025 8:18:26 AM
W:\22-12-2607 CU1026 WO1 SR 320 (E BRAINERD RD) BRIDGE OVER CSX RR\3_CAD\Production\U1-4.sht

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-01 |
| | | | |
| | | | |
| | | | |

33057-3228-94

HAMILTON COUNTY
PIN #124076.00

INDEX OF DRAWINGS


U4-01 ESTIMATED QUANTITIES AND DRAWING INDEX
U4-02 VICINITY MAP AND LEGEND
U4-03 GENERAL NOTES
U4-04 ELECTRIC UTILITY RELOCATION STA. 12+50.57 TO STA. 25+55.53
U4-05 POLE LOCATIONS AND CONDUCTOR INSTALLS
U4-06 CONSTRUCTION DETAILS
U4-07 CONSTRUCTION DETAILS
U4-08 CONSTRUCTION DETAILS


**ESTIMATED QUANTITIES**

| | ITEM NO. | TDOT DESCRIPTION | UTILITY UNIT DESCRIPTION | UNIT | QUANTITY | PERCENT UTILITY | PERCENT PROJECT |
|---|---|---|---|---|---|---|---|
| ① | 790-03.03 | POLE 40FT CLASS 4 WOOD | 40-4 WP | EACH | 1 | 0% | 100% |
| | 790-04.04 | POLE 45FT CLASS 4 WOOD | 45-4 WP | EACH | 1 | 0% | 100% |
| | 790-05.02 | POLE 50FT CLASS 2 WOOD | 50-2 WP | EACH | 3 | 0% | 100% |
| | 790-05.08 | POLE 50FT CLASS H2 METAL | 50-H2 SP | EACH | 1 | 0% | 100% |
| | 790-06.01 | POLE 55FT CLASS 1 WOOD | 55-1 WP | EACH | 1 | 0% | 100% |
| | 790-07.01 | POLE 60FT CLASS 1 WOOD | 60-1 WP | EACH | 3 | 0% | 100% |
| | 790-08.06 | POLE 65FT CLASS H4 METAL | 65-H4 SP | EACH | 1 | 0% | 100% |
| | 790-12.07 | POLE 85FT CLASS H4 METAL | 85-H4 SP | EACH | 2 | 0% | 100% |
| ② | 790-21.08 | 1PH DEADEND 15KV | A5 | EACH | 1 | 0% | 100% |
| | 790-21.09 | 1PH PRIMARY TAP 15KV | A5-2 | EACH | 1 | 0% | 100% |
| | 790-23.07 | 2PH CROSSARM CONST DEADEND (SGL) 15KV | B7C | EACH | 2 | 0% | 100% |
| | 790-25.07 | 3PH CROSSARM DBL LRG COND 15KV | C1-3CL | EACH | 2 | 0% | 100% |
| | 790-25.08 | 3PH CROSSARM SGL LRG COND 15KV | C1-2CL | EACH | 2 | 0% | 100% |
| | 790-25.24 | 3PH CROSSARM DDE LRG COND 15KV | C8C | EACH | 1 | 0% | 100% |
| | 790-25.27 | 3PH CROSSARM DDE 10FT ARMS LRG COND 15KV | C8C-F-10 | EACH | 2 | 0% | 100% |
| | 790-25.30 | 3PH CROSSARM DBL 10FT LRG COND 15KV | C2-2CL | EACH | 1 | 0% | 100% |
| | 790-30.06 | SECONDARY CONDUCTOR 6 AL DUPLEX | #6 DUPLEX | LF | 481 | 0% | 100% |
| | 790-31.20 | SERVICE CONDUCTOR 1/0 AI QPLEX | QUADRUPLEX | LF | 62 | 0% | 100% |
| | 790-31.02 | SERVICE ASSEMBLY-POLE TYPE | K7 | EACH | 9 | 0% | 100% |
| | 790-32.02 | DOWN GUY - THROUGH BOLT TYPE HEAVY DUTY | E1-2T | EACH | 3 | 0% | 100% |
| | 790-32.06 | DOWN GUY - INSULATED | E1-2F | EACH | 3 | 0% | 100% |
| | 790-32.07 | OH GUY - THROUGH BOLT TYPE | E2-2T | EACH | 4 | 0% | 100% |
| | 790-32.23 | GUY GUARD | E3-10P | EACH | 6 | 0% | 100% |
| | 790-33.31 | SCREW TYPE ANCHOR 23,000LB (F1-5D-P) | FP-2 | EACH | 6 | 0% | 100% |
| ③ | 790-36.06 | TRANSFER LIGHT | TRANSFER LT | EACH | 1 | 0% | 100% |
| | 790-36.12 | TRANSFER EXISTING 3PH TRANSFORMER/RECLOSER | TRANSFER G311-15 | EACH | 1 | 0% | 100% |
| | 790-40.03 | OH COND 1/0 6/1 ACSR RAVEN | 1/0 ACSR | LF | 796 | 0% | 100% |
| | 790-40.39 | OH COND 4/0 7 AAC OXLIP | 4/0 AAC | LF | 4468 | 0% | 100% |
| ③④ | 790-43.53 | 1PH PRIMARY RISER W/ 3IN CONDUIT | TRANSFER UM-2R | EACH | 1 | 0% | 100% |
| | 790-46.03 | 1PH TRANSFORMER CONV W/XARM MTD FUSE & LA | G13-15 | EACH | 1 | 0% | 100% |
| | 790-60.01 | 1PH FUSE CUTOUT XARM MOUNT 15KV | M5-9C | EACH | 5 | 0% | 100% |
| ③⑤ | 790-64.12 | SEC MTG 3PH 120/208 V (4 WIRE GRD WYE) | TRANSFER INSTR METER | EACH | 1 | 0% | 100% |
| | 790-65.03 | LIGHTNING ARRESTER ARM MTD 9 KV | M5-6C | EACH | 3 | 0% | 100% |
| | 790-68.01 | POLE GROUND ROD TYPE | M2-11R | EACH | 4 | 0% | 100% |
| | 790-68.02 | POLE GROUND PLATE TYPE | M2-12B | EACH | 5 | 0% | 100% |
| | 790-69.11 | GROUND - GROUND ROD FOR ST POLE | GROUND ROD | EACH | 4 | 0% | 100% |
| | 790-69.32 | ARM PIN | M5-5S | EACH | 18 | 0% | 100% |
| | 790-69.41 | EXTENSION LINK - EPOXY - 8FT | EF | EACH | 4 | 0% | 100% |
| | 790-71.04 | DBL ARM LINE POST INS NO OHGW 46Kv MAX | T2 | EACH | 2 | 0% | 100% |
| ⑥ | 790-98.01 | REMOVE WIRE | REMOVE WIRE | LF | 6326 | 0% | 100% |
| ⑦ | 790-98.02 | REMOVE POLES | REMOVE POLES | EACH | 9 | 0% | 100% |
| ⑧ | 790-98.03 | REMOVE FRAMING/ ASSOCIATED APPARATUS | REMOVE FRAMING | EACH | 43 | 0% | 100% |
| | 790-98.20 | TREE AND BRUSH REMOVAL OFF ROW | TREE TRIMMING | LS | 1 | 0% | 100% |

FOOTNOTES:

1. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, DIGGING HOLE, SETTING POLE, FILLING HOLE, BLASTING, AND NUMBERING POLE.
2. ASSEMBLIES OF SIMILAR CONSTRUCTION BUT DIFFERING ONLY IN USE OF EPOXY VS. PORCELAIN INSULATORS OR FIBERGLASS VS. WOOD CROSSARMS OR LACK OF NEUTRAL ASSEMBLY SHOULD BE GROUPED WITHIN THE SAME ITEM.
3. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT FOR COMPLETE TRANSFER TO MAKE UP A COMPLETE UNIT.
4. TRANSFER SINGLE PHASE PRIMARY RISER.
5. TRANSFER THREE PHASE SECONDARY INSTRUMENT METER.
6. INCLUDES DROP WIRE, OH GUYS, MAIN LINE WIRE.
7. INCLUDES MAINLINE POLES, SERVICE POLES, STUB POLES.
8. INCLUDES CROSSARMS, TRANSFORMERS, SWITCHES, ETC.

UTILITY INFORMATION


ELECTRIC POWER BOARD OF CHATTANOOGA
10 WEST M.L. KING BLVD.
CHATTANOOGA, TENNESSEE 37402
CONTACT: BRAD SMITH
PHONE: 423 648 3324
EMAIL: SMITHJB@EPB.NET


JEFF L. MEADOW
REGISTERED ENGINEER
AGRICULTURE
No. 123035
STATE OF TENNESSEE

05/01/2025

ELECTRIC POWER BOARD
OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.15 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | 1"=50' |
| DATE | 01.21.2025 |


Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


ELECTRIC UTILITY RELOCATION
ESTIMATED QUANTITIES

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-02 |
| | | | |
| | | | |
| | | | |

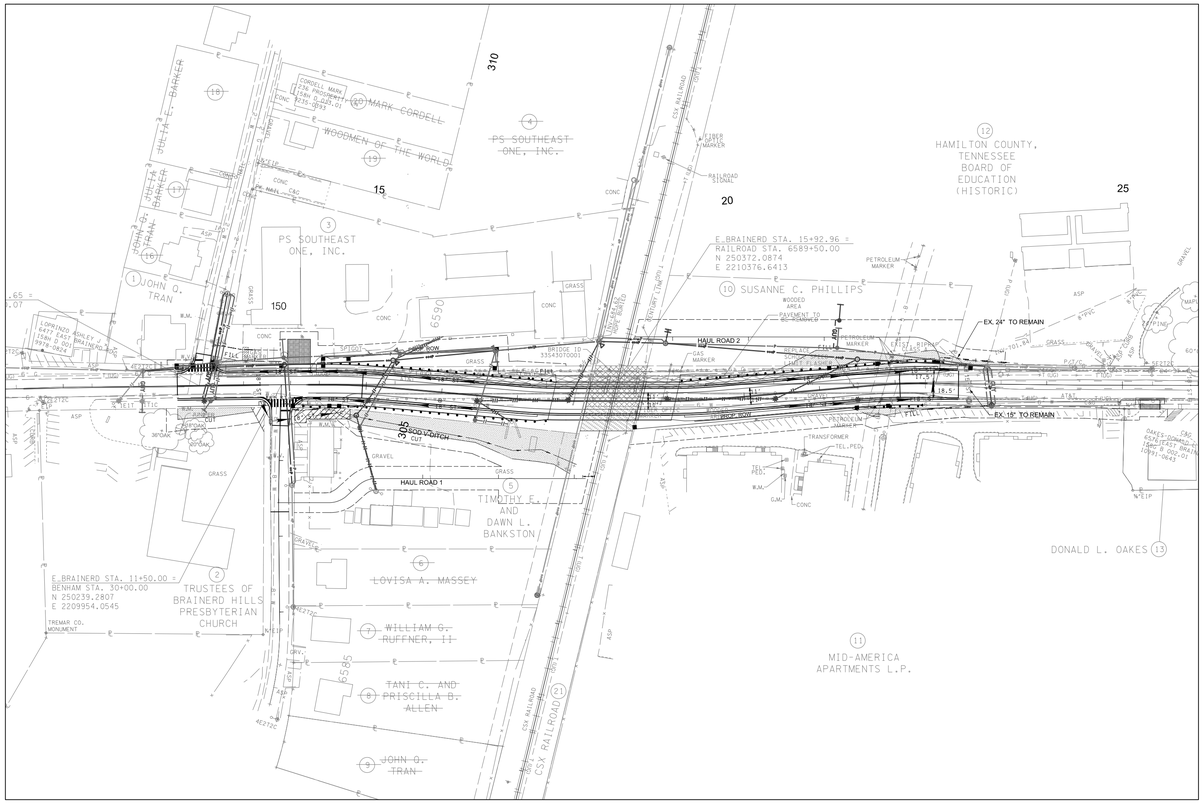
33057-3228-94

HAMILTON COUNTY
PIN #124076.00

# HAMILTON COUNTY

## (EAST BRAINERD RD.) BRIDGE OVER CSX R/R (LM 0.86) IN CHATTANOOGA (IA) ROUTE SR-320

## U4-04




## LEGEND

| | | | | | |
|---|---|---|---|---|---|
| +P | EXISTING/REMOVAL 1-PHASE POWER | III | PROPOSED TRIPLEX | | EXISTING/REMOVAL ANCHOR |
| -- P | PROPOSED 1-PHASE POWER | ○ | EXISTING/REMOVAL POWER POLE | | PROPOSED ANCHOR |
| +++P | EXISTING/REMOVAL 3-PHASE POWER | ● | PROPOSED POWER POLE | | |
| ---P | PROPOSED 3-PHASE POWER | ⊙ | REPLACE IN-PLACE POLE | | |
| --II-----II-----II--- | EXISTING/REMOVAL DUPLEX | ✳ | EXISTING/REMOVAL POLE (BY OTHERS) | | |
| —II——II——II— | PROPOSED DUPLEX | △ | EXISTING/REMOVAL TRANSFORMER | | |
| -----III----- | EXISTING/REMOVAL TRIPLEX | ▲ | PROPOSED TRANSFORMER | | |

JEFF L. MEADOW
REGISTERED ENGINEER
AGRICULTURE
No. 32
STATE OF TENNESSEE
05-01-2025

## ELECTRIC POWER BOARD OF CHATTANOOGA

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Gresham Smith
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SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


ELECTRIC UTILITY RELOCATION
VICINITY MAP AND LEGEND

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-03 |
| | | | |
| | | | |
| | | | |

33057-3228-94 HAMILTON COUNTY
PIN #124076.00

# GENERAL CONSTRUCTION NOTES

1. THE FOLLOWING INFORMATION APPLIES TO THE UTILITY CONTRACTOR RESPONSIBLE FOR THE RELOCATION OF THE ELECTRICAL FACILITIES ALONG THIS PROJECT, AS WELL AS THE CONTRACTOR RESPONSIBLE FOR THE CLEARING/CUTTING OF REQUIRED AREAS OUTSIDE OF THE TDOT RIGHT-OF-WAY WHEN REQUIRED FOR THE INSTALLATION OF THE ELECTRICAL 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 IT'S 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 ON ENERGIZED ELECTRICAL LINES (e.g, RUBBER GOODS 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. THE ELECTRICAL FACILITIES ALONG THIS PROJECT OPERATE AT A NOMINAL PHASE-TO-PHASE VOLTAGE RATING OF 12.47KV AND 46KV. ALL WORK DONE BY THE UTILITY CONTRACTOR ON THE 12KV SYSTEM IS TO BE PERFORMED WHILE THE EXISTING FACILITIES ARE ENERGIZED, REQUIRING THE UTILITY CONTRACTOR TO USE PROPER HOT LINE WORKING TECHNIQUES. CONTRACTOR TO COORDINATE AND SCHEDULE 46KV CLEARANCES. THE UTILITY OPERATES A 24-HOUR/365-DAY CONTROL CENTER THROUGH WHICH THE UTILITY CONTRACTOR SHALL COORDINATE ALL REQUESTS FOR CAUTION ORDERS AND CLEARANCE REQUESTS FOR TRANSFORMERS OR TAPS.

8. UTILITY CONSTRUCTION DRAWINGS ARE INCLUDED AS PART OF THE DRAWING PACKET AND MUST BE ADHERED TO DURING ALL PHASES OF CONSTRUCTION.

9. 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.

10. THE UTILITY CONTRACTOR IS REQUIRED TO MAINTAIN COMMUNICATION WITH THE UTILITY OWNER'S CONTROL CENTER USING TELEPHONE COMMUNICATIONS. THE UTILITY CONTRACTOR MUST CONTACT THE CONTROL CENTER BY 5PM (EST) THE DAY BEFORE THEY BEGIN WORK ON THE PROJECT IN ORDER TO OBTAIN ANY CAUTION ORDERS AND TO INFORM THE UTILITY WHAT PORTION OF THE WORK IS GOING TO BE DONE. CAUTION ORDERS MUST BE RELEASED AT THE END OF EACH WORKDAY.

11. 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 1113E "SUMMARY OF WORK" IN THE CONSTRUCTION TECHNICAL SPECIFICATIONS. LARGE SCALE OUTAGES ARE NOT ALLOWED.

12. 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.

13. TO DECREASE THE POTENTIAL FOR OUTAGES, THE UTILITY CONTRACTOR SHALL NOT HAVE MORE THAN ONE (1) MILE OF ELECTRICAL LINE LAID OUT UNDERCONSTRUCTION WITH TEMPORARY LAYOUT ARMS AT ANY ONE TIME.

14. THE UTILITY CONTRACTOR SHALL COMPLY WITH ALL TDOT REGULATIONS, PERMITS AND TRAFFIC CONTROL GUIDELINES AS REQUIRED.

15. 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.

16. 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.

17. 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.

18. SOME EXISTING UTILITIES CAN BE LOCATED BY CALLING TENNESSEE ONE-CALL SYSTEMS, INC. AT "811".

19. 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.

20. 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.

21. 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.

22. 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.

23. 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.

24. CONSTRUCTION OF RELOCATED FACILITIES IS NOT CONSIDERED TO BE COMPLETE UNTIL THE UTILITY CONTRACTOR HAS ENERGIZED THE LINES AT THE FINAL OPERATING VOLTAGE IN ACCORDANCE WITH EPB SPECIFICATIONS.

25. 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.

26. THE TDOT PRIME CONTRACTOR IS RESPONSIBLE FOR THE LAYOUT OF ALL UTILITY FACILITIES THAT ARE TO BE RELOCATED WITHIN THE PROJECT.

27. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY WORK OCCURING 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.

28. 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.

29. ALL OIL-FILLED EQUIPMENT, INCLUDING RECLOSERS AND TRANSFORMERS, 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. LEAKING OIL-FILLED EQUIPMENT WILL BE PLACED IN HAZARDOUS MATERIAL BAGS UNTIL THE UTILITY OWNER CAN PICK THE EQUIPMENT UP FROM THE PROJECT SITE.

30. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT ALL TANGENT STRUCTURES ARE PROPERLY ALIGNED AFTER SETTING ANGLE POLES OR STRUCTURES. AT JUNCTION POLES AND OTHER CONTROL LOCATIONS, THE PROPOSED POLE LOCATION SHALL NOT BE FARTHER THAN TWENTY-FOUR (24) INCHES FROM THE EXISTING POLE WITHOUT APPROVAL FROM THE UTILITY OWNER. THE UTILITY CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE BACK AND/OR FORWARD SPAN TANGENT POLE ALIGNMENT.

31. POLE DRILLING IS TO BE INCLUDED IN THE LABOR AND MATERIAL COST FOR THE POLE.

32. THE UTILITY CONTRACTOR IS RESPONSIBLE FOR CHECKING AND ENSURING THE PROPER PHASE ROTATION OF ALL THREE-PHASE MOTORS, ALONG WITH VOLTAGE AND PHASING TO OTHER LOADS, BEFORE AND AFTER CONSTRUCTION OF NEW FACILITIES. THE UTILITY CONTRACTOR SHALL MAINTAIN EXISTING PHASE CONNECTIONS FOR ALL CONDUCTORS, TRANSFORMERS, ETC. UNLESS OTHERWISE INDICATED ON THE DRAWINGS OR WITH THE CONSENT OF THE UTILITY OWNER / ENGINEER.

33. LOCKNUTS SHALL BACK UP ALL NUTS ON THREADED BOLTS SUCH AS MACHINE BOLTS, DOUBLE ARMING BOLTS, UPSET BOLTS, INSULATOR PINS, 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.

34. BULLDOG TYPE GRIPS SHALL NOT BE USED FOR PULLING DOWNGUYS.

35. THE UTILITY CONTRACTOR SHALL INSTALL ALL DOWNGUYS AT LENGTHS AS INDICATED ON THE DRAWINGS UNLESS OTHERWISE DISCUSSED WITH AND APPROVED BY THE UTILITY OWNER / ENGINEER.

36. THE UTILITY CONTRACTOR SHALL INSTALL FIBERGLASS INSULATOR GUYLINKS ON ALL DOWNGUYS WITHIN TWO (2) FEET OF PRIMARY CONDUCTORS.

37. WHEN WOOD POLES ARE BEING UTILITIZED, THE UTILITY CONTRACTOR MUST INSPECT AND TEST ALL POLES BEFORE CLIMBING.

38. 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.

39. ALL GROUND RODS TO BE REMOVED SHALL BE PULLED, NOT CUT OFF.

40. ALL MOUNTING HARDWARE REQUIRED FOR INSTALLING NEW TRANSFORMERS SHALL BE INCLUDED IN THE UNIT FOR THE TRANSFORMER AS INDICATED BY THE TDOT STANDARD ITEM NUMBER FOR THOSE UNITS. IN ADDITION, THE UTILITY CONTRACTOR WILL BE REQUIRED TO CHANGE OUT ALL EXISTING PORCELIAN LIGHTNING ARRESTORS WITH POLYMER ARRESTORS.

41. GUY MARKERS ARE TO BE INSTALLED ON ALL NEW AND EXISTING-TO-REMAIN DOWN GUYS REQUIRED FOR THE PROJECT.

42. CONDUCTOR SPLICING SHALL BE KEPT TO A MINIMUM. THERE SHALL BE NO MORE THAN ONE SPLICE PER SPAN PER CONDUCTOR, AND NO SPLICES ARE ALLOWED CLOSER THAN TEN (10) FEET FROM ANY SUPPORT.

43. THE DESIGN ENGINEER WILL PROVIDE ALL STAKING DATA, DESIGN TENSION AND SAG DATA AS REQUIRED.

44. THE UTILITY CONTRACTOR SHALL COORDINATE WITH THE UTILITY OWNER AND/OR DESIGN ENGINEER FOR VERIFICATION OF ALL POLE STAKING LOCATIONS PRIOR TO ANY POLE INSTALLATION ON THE PROJECT.

45. THE UTILITY CONTRACTOR SHALL PROVIDE THE UTILTY 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.

46. 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.

47. ALL INSTALLED POLES SHALL HAVE A POLE TAG TO EPB SPECIFICATIONS WITH AN ASSIGNED POLE NUMBER ON THE TAG AFFIXED TO THE POLE. COORDINATE WITH EPB ON POLE TAGGING.

48. ALL WOOD POLES SHALL HAVE "SOFT" CCA TREATMENT DENOTED AS CCA-ET OR CCA CLAW.

49. ALL PRIMARY AND SECONDARY CONDUCTORS, CONNECTORS, JUMPERS, ETC. SHALL BE THOROUGHLY WIRE BRUSH CLEANED OF FOREIGN MATTER. AN OXIDATION INHIBITOR, AS APPROVED BY THE UTILITY OWNER, SHALL BE APPLIED TO WIRE ENDS. CONDUCTOR SHALL BE LAID STRAIGHT BEFORE CONNECTING AND/OR INSTALLING ANY CONNECTOR OR CLAMP.

50. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR INSPECTING EACH REEL OF CONDUCTOR FOR THE PROJECT. ANY DAMAGE TO THE CONDUCTOR SHALL BE REMOVED AND SPLICED AS REQUIRED. ALL CONDUCTOR SHALL BE PROTECTED FROM EQUIPMENT OR VEHICLE TRAFFIC WHILE BEING INSTALLED.

51. ROLLERS AND BLOCKS SHALL BE INSPECTED PRIOR TO INSTALLATION OF CONDUCTOR TO PREVENT BINDING OR ANY OTHER DAMAGE DURING STRINGING.

# CLEARING AND TRIMMING

1. UTILITY CONTRACTOR SHALL PROVIDE ALL NECESSARY TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CUT, TRIM, AND/OR REMOVE REQUIRED TREES IN AREAS OUTSIDE OF TDOT RIGHT-OF-WAY AS INDICATED ON THE DRAWINGS. DEBRIS RESULTING FROM SUCH WORK SHALL BE DISPOSED OF DAILY FROM THE PROJECT SITE. DEBRIS SHALL INCLUDE BUT NOT BE LIMITED TO BRUSH, WOOD, LIMBS, LOGS AND LEAVES.

2. UTILITY CONTRACTOR SHALL PERFORM ALL WORK TO THE SATISFACTION OF THE UTILITY OWNER AND IN ACCORDANCE WITH ALL FEDERAL, STATE, COUNTY, MUNICIPAL AND OTHER LOCAL LAWS, ORDINANCES, RULES AND REGULATIONS APPLICABLE TO THE WORK BEING PERFORMED, AS WELL AS WITH THE AMERICAN NATIONAL STANDARDS INSTITUTE Z133.1 AND A300.

3. TREE TRIMMING SHALL BE DONE IN ACCORDANCE WITH THE UTILITY OWNER'S VEGETATION MANAGEMENT CONTRACTOR POLICY MANUAL. A REPRESENTATIVE OF THE VEGETATION MANAGEMENT DEPARTMENT FOR EPB WILL BE AVAILABLE TO ASSIST AND PROVIDE DETAILED INFORMATION.

4. ALL GROWTH SHALL BE CLEARED WITHIN THREE (3) FEET OF ALL SERVICE CONDUCTORS WITH THE USE OF LATERAL PRUNING ONLY, UNLESS OTHERWISE INSTRUCTED BY THE UTILITY OWNER.

5. ALL STRUCTRES SHALL BE CLEARED WITHIN A TEN (10) FOOT RADIUS OF THE STRUCTURE. ALL DOWN GUYS, ANCHORS, SPAN GUYS, ETC. SHALL BE CLEARED WITHIN A FIVE (5) FOOT RADIUS OF THE STRUCTURE.

6. FOR ALL TREES THAT ARE CUT, THE UTILITY CONTRACTOR SHALL ENSURE THAT THE TREES ARE CUT FLUSH WITH THE GROUND.

7. UTILITY CONTRACTOR SHALL PERFORM ALL WORK IN A REASONABLE, SAFE AND SECURE FASHION TO COMPLY, AT A MINIMUM, WITH ALL SAFETY AND SECURITY REQUIREMENTS OF ALL GOVERNMENT AUTHORITIES AND TO PERFORM THE WORK IN SUCH A MATTER AS TO PREVENT ACCIDENTS TO THE PUBLIC OR ANY DAMAGE TO PROPERTY.

8. ALL WORK IS TO BE DONE WHILE THE FACILITIES ARE ENERGIZED, AND THEREFORE, THE UTILITY CONTRACTOR SHALL GUARD AGAINST INTERFERENCE WITH THE NORMAL OPERATION OF THE ELECTRICAL FACILITIES TO ENSURE THERE IS NO DAMAGE TO ENERGIZED CIRCUITS.

9. THE UTILITY OWNER WILL PROVIDE A REPRESENTATIVE OF THE VEGETATION MANAGEMENT DEPARTMENT FOR EPB TO SUPERVISE ANY NECESSARY TREE TRIMMING, IN ORDER TO ENSURE THAT THE WORK IS BEING DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY OWNER AS WELL AS THE CUSTOMERS THAT ARE AFFECTED.

10. UTILITY CONTRACTOR SHAL BE REQUIRED TO MEET WITH THE ARBORIST ASSIGNED TO THE PROJECT BY THE UTILITY OWNER FOR THE FACILITIES THAT ARE BEING RELOCATED PRIOR TO ANY TREE TRIMMING OFF OF STATE RIGHT-OF-WAY ALONG THE PROJECT.

# CAUTION AND LINE CLEARANCE ORDERS

1. ALL CAUTION ORDERS SHALL BE REQUESTED AND ISSUED THROUGH THE UTILITY OWNER'S CONTROL CENTER BY CALLING THE CONTROL CENTER. EPB TO PROVIDE THE CALL CENTER PRIVATE # TO THE UTILITY CONTRACTOR FOR THE PROJECT.

2. CAUTION ORDERS WILL ONLY BE ISSUED FROM AN EPB CONTROL CENTER EMPLOYEE. ALL CREW SUPERVISORS AND TEAM LEADS WILL NEED TO ATTEND EPB CAUTION AND CLEARANCES TRAINING TO BE CONDUCTED BY EPB.

3. UTILITY CONTRACTOR SHALL PROIVDE THE FOLLOWING INFORMATION WHEN REQUESTING A CAUTION ORDER:
   - -NAME OF EMPLOYEE IN-CHARGE
   - -COMPANY NAME
   - -CELL PHONE NUMBER
   - -POLE NUMBER

4. ONCE THE CAUTION ORDER IS REQUESTED, THE UTILITY CONTRACTOR SHALL VERIFY TO THE CONTROL CENTER THAT THE INFORMATION PROVIDED IS CORRECT. ONCE THE INFORMATION IS VERIFIED, THE CONTROL CENTER WILL PROCESS THE CAUTION ORDER. THE CONTROL CENTER WILL THEN PROVIDE THE CONTRACTOR WITH A CAUTION ORDER NUMBER. THE UTILITY CONTRACTOR MUST CONFIRM RECEIPT OF THE NUMBER BEFORE THE PROCESS IS COMPLETE.

5. WHEN A CAUTION ORDER IS RELEASED, THE UTILITY CONTRACTOR SHALL CONTACT THE CONTROL CENTER VIA TELEPHONE AND USING THEIR VEHICLE NUMBER FOR CONFIRMATION. THE UTILITY CONTRACTOR MUST REQUEST RELEASE OF THE CAUTION ORDER BY PROVIDING THE CONTROL CENTER THE NUMBER ASSIGNED TO THE CAUTION ORDER, AND THAT THE POLE TOP IS BACK IN THE NORMAL POSITION WITH THE TAG REMOVED. ONCE THE CONTROL CENTER VERIFIES ALL OF THE INFORMATION, THEY WILL PROCESS THE RELEASE OF THE CAUTION ORDER. ONCE THE CAUTION ORDER IS RELEASED, THE UTILITY CONTRACTOR MUST ACKNOWLEDGE AND CONFIRM THE RELEASE.

6. CAUTION ORDERS MUST BE RELEASED WHEN CREWS LEAVE THE WORK LOCATION DURING LUNCH BREAK LASTING MORE THAN ONE (1) HOUR.

7. NO CAUTION ORDERS CAN BE EXTENDED BEYOND ONE WORKING DAY.

8. IN THE EVENT OF INCLIMATE WEATHER, THE CONTROL CENTER WILL CONTACT THE UTILITY CONTRACTOR AND REQUEST THE RELEASE OF ANY CAUTION ORDERS THAT ARE IN EFFECT. IF THREE (3) ATTEMPTS ARE MADE TO CONTACT THE UTILITY CONTRACTOR, AND THEY FAIL TO RESPOND, THE UTILTY'S OPERATIONS SUPERVISOR WILL BE NOTIFIED IMMEDIATELY.

9. LINE CLEARANCE ORDERS WILL BE ISSUED TO A DESIGNATED UTILITY CONTRACTOR REPRESENTATIVE. CLOSE COMMUNICATION AND COORDINATION WITH THIS EPB EMPLOYEE IS CRITICAL. ALL LINE CLEARANCE ORDERS WILL BE ASSIGNED A NUMBER AND WILL FOLLOW THE SAME GUIDELINES FOR RELEASE AS CAUTION ORDERS.

10. ALL DISTRIBUTION AND TRANSMISSION LINE CLEARANCE ORDERS MUST BE REQUESTED THREE (3) WORKING DAYS PRIOR TO THE DAY THEY ARE NEEDED.

JEFF L. MEADOW
REGISTERED ENGINEER
AGRICULTURE
COMPLETE
No. 23035
STATE OF TENNESSEE
01-21-2025

ELECTRIC POWER BOARD
OF CHATTANOOGA

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Gresham Smith
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ELECTRIC UTILITY RELOCATION
GENERAL NOTES

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-04 |
| | | | |
| | | | |
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33057-3228-94

HAMILTON COUNTY
PIN #124076.00

EXISTING: 45'-2 WP
Y1610
REMOVE: 75'-2 WP,T1, C2-2,G13-15, A5-2,M5-9
INSTALL: 85'-H4 SP, C8C-F-10,A5-2,T2, (6)M5-5S,(3)M5-6C,M5-9C, GROUND ROD
INSTALL: 55'-1 WP, C1-2CL,B7C,(2)M5-9C, E1-2F,FP-2,E3-10P,M2-11R
INSTALL: 60'-1 WP,C1-2CL, K7,M2-11R
REMOVE: 60'-2 WP, C2,(2)E1-2T,(2)FX-2
INSTALL: 65'-H4 SP,C8C-F-10, (6)M5-5S,GROUND ROD
INSTALL:50'-2 WP,C1-3CL,B7C, (2)K7,(2)M5-9C,E2-2T,EF,M2-11R
Y1209
REMOVE: 50'-2 WP,C8, (4)M5-5,M5-2,B7,(2)M5-9, SIDEWALK GUY,FX-2, LED ST. LT,(2)K7
REMOVE: 50'-4 WP,C1, 200W HPS LT TRANSFER: G310-15, INSTR. METER TO NEW P3
REMOVE: 50'-4 WP,C1 INSTALL: 60'-1WP, C1-3CL,G13-15,K7,M2-11R, E1-2F,E3-10P,FP-2
REMOVE: 50'-4 WP,C1,B7, E2-2T,(3)K7,(2)M5-9
EXISTING: 50'-2 WP
INSTALL: E2-2T,EF
HAUL ROAD 2
TEMP INSTALL: 50'-2 WP, E2-2T,EF,E1-2T,FP-2, E3-10P,M2-12B
INSTALL: 60'-1 WP, C2-2CL,E1-2F, FP-2,E3-10P,M2-12B
REMOVE: 60'-4 WP,C1, K7,200W HPS LT
EXISTING: 50'-4 WP, UG PRI RISER, TO REMAIN
REMOVE: C1 INSTALL: C8C,(6)M5-5S, E2-2T,EF
EXISTING: 35'-4 WP
EXISTING: 45'-4 WP
EX. 24" TO REMAIN
EX. 15" TO REMAIN
Y1073
Y1074
Y1110
Y1076
Y1077
Y1078
Y1079
Y1081
Y2003
Y2206
X8002
Y1474
Y1090
Y1326
Y1475
Y1476
Y1477
Y1478
Y2154
P1
P2
P3
P4
P5
P6
P7
P8
P1-1
P3-1
P4-1
P5-1
P7-1T
EXISTING: 40' WP ATT, E1-2T,FX-1, 200W HPS ST LT.
EXISTING: 35'-4 WP (ATT) INSTALL: E1-2T,FP-2,E3-10P
REMOVE: 40'-4 WP, E1-2T,FX-1, TRANSFER: 210W LED ST LT TO NEW P1-1
INSTALL: 40'-4 WP, E1-2T,FP-2,E3-10P, K7,M2-12B
INSTALL: 45'-4 WP, (2)K7,M2-12B
40'-4 WP ATT
40'-2 WP ATT
SOD V-DITCH
INSTALL: 50'-2 WP, (2)K7,M2-12B
REMOVE: 30'-4 WP
HAUL ROAD 1
EXISTING: 45'-4 WP,B7
REMOVE: 45'-CONC,A5 TRANSFER: UM-2R
INSTALL: 50'-H2 SP (SET 9.5' DEEP),A5, GROUND ROD
REMOVE: 70'-2 WP,T1 INSTALL: 85'-H4 SP, T2,GROUND ROD
EXISTING: 40'-4 WP
PROP. ROW
CSX RAILROAD
CENTURY LINK (UG)
FIBER OPTIC MARKER
RAILROAD SIGNAL
PETROLEUM MARKER
GAS MARKER
TRANSFORMER
TEL.PED.
BRIDGE ID 33S43070001
CORDELL MARK 236 PROSPERITY 158H D 003.01 CONC 9235-0393
LOPRINZO ASH 6477 EAST 158H D 001 9978-0824
TREMAR CO. MONUMENT ¾"EIP
CP-S4 N 250502.8983 E 2210720.3934 EL. 699.98 IRON PIN AND CAP
CP-S5 N 250566.4294 E 2210864.6691 EL. 700.61 IRON PIN AND CAP
CP-S6 N 250459.2557 E 2210856.0039 EL. 699.09 PK NAIL
CP-S7 N 250411.6812 E 2210725.8765 EL. 696.96 PK NAIL
CP-S8 N 250329.9171 E 2210444.5913 EL. 685.83 PK NAIL
CP-S9 N 250226.9527 E 2210313.0612 EL. 696.10 IRON PIN AND CAP
E_BRAINERD STA. 15+92.96 = RAILROAD STA. 6589+50.00 N 250372.0874 E 2210376.6413
E_BRAINERD STA. 11+50.00 = BENHAM STA. 30+00.00 N 250239.2807 E 2209954.0545
OAKES-DONALD LT 65/76 (EAST BRAINERD) 158G B 002.01 10991-0643
TOP-692.48 INV-688.81
TOP-690.18 INV-684.54
INV-685.09
INV-685.19
TOP-707.02 INV-700.44
INV-684.62 TOP BURIED
15
20
25
150
305
310
66'

NOTES:

1. INSTALL MAIN LINE NEUTRAL 5' BELOW THE DISTRIBUTION ARM.

2. FOR ALL NEW STEEL POLES, BACKFILL WITH 57 STONE UNLESS SPECIFIED.

JEFF L. MEADOW
REGISTERED ENGINEER
AGRICULTURE
COMMISSION NO. 23035
STATE OF TENNESSEE
01-21-2025

# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.13 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | 1"=50' |
| DATE | 01.21.2025 |

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

ELECTRIC UTILITY RELOCATION
STA. 12+50.57 TO STA. 25+55.53

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-05 |
| | | | |
| | | | |
| | | | |

33057-3228-94

HAMILTON COUNTY
PIN #124076.00

## INSTALLATION POLE LOCATIONS

| POLE NO. | POLE COORDINATES | | INSIDE ANCHOR COORDINATES | | OUTSIDE ANCHOR COORDINATES | |
|---|---|---|---|---|---|---|
| | NORTHING | EASTING | NORTHING | EASTING | NORTHING | EASTING |
| ATT POLE | | | | | 250149.24 | 2209789.72 |
| P1 | 250242.03 | 2209863.66 | | | | |
| P1-1 | 250190.57 | 2209871.37 | | | 250176.40 | 2209866.88 |
| P2 | 250274.31 | 2209946.01 | | | 250296.70 | 2209937.37 |
| P3 | 250325.18 | 2210090.97 | | | | |
| P3-1 | 250216.49 | 2210069.27 | | | | |
| P4 | | | | | 250352.76 | 2210215.35 |
| P4-1 | 250271.37 | 2210211.87 | | | | |
| P7 | 250505.71 | 2210639.38 | | | 250531.03 | 2210633.47 |
| P7-1T | 250541.04 | 2210631.14 | | | 250561.49 | 2210626.37 |
| P8 | 250492.79 | 2210857.02 | | | | |

## CONDUCTOR INSTALLS

| SHEET NUMBER(S) | FROM | TO | WIRE SIZE | CIRCUIT LENGTH (LF) | TOTAL LENGTH (LF) |
|---|---|---|---|---|---|
| U4-04 | Y1073 | P5 | 3 - 4/0 AAC PRIMARY | 603 | 1,809 |
| | | | 1 - 4/0 AAC NEUTRAL | | 603 |
| | P1 | Y1209 | 1 - 1/0 ACSR PRIMARY | 92 | 92 |
| | | | 1 - 1/0 ACSR NEUTRAL | | 92 |
| | P1 | Y1209 | #6 DUPLEX | | 92 |
| | P1 | P1-1 | #6 DUPLEX | | 52 |
| | P2 | Y1269 | 2 - 1/0 ACSR PRIMARY | 168 | 336 |
| | | | 1 - 1/0 ACSR NEUTRAL | | 168 |
| | P3 | P3-2 | #6 DUPLEX | | 203 |
| | P4 | P4-1 | #6 DUPELX | | 95 |
| | P4-1 | BILLBOARD | #6 DUPLEX | | 44 |
| | P5 | P6 | 3 - 4/0 AAC PRIMARY | 88 | 264 |
| | | | 1 - 4/0 AAC NEUTRAL | | 88 |
| | P6 | Y2003 | 3 - 4/0 AAC PRIMARY | 426 | 1,278 |
| | | | 1 - 4/0 AAC NEUTRAL | | 426 |
| | Y2003 | P8 | 1 - 1/0 ACSR PRIMARY | 54 | 54 |
| | | | 1 - 1/0 ACSR NEUTRAL | | 54 |

JEFF L. MEADOW
REGISTERED ENGINEER
AGRICULTURE
No. 23025
STATE OF TENNESSEE

05 / 01 / 2025

ELECTRIC POWER BOARD
OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.15 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | DATE |
| 1"=50' | 01.21.2025 |

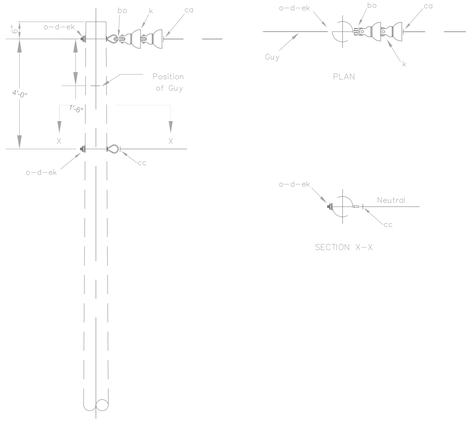
Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

ELECTRIC UTILITY RELOCATION
POLE LOCATIONS AND CONDUCTOR INSTALLS

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-06 |
| | | | |
| | | | |
| | | | |

33057-3228-94

HAMILTON COUNTY
PIN #124076.00




NOTES:
1- Specify items "ca" and "cc" from standard drawings AC-10, AC-11, CU-5, and CU-6.
2- Maximum longitudinal load is lesser of 5000 lbs. per conductor or neutral attachment strength.
3- Specify use of polymer suspension insulator in lieu of porcelain suspension insulator by adding the subscript "P" to the standard number.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| d | 2 | 2 | Washer, Square, Curved, 3" x 3", with 11/16" Hole |
| k | 2 | 3 | Insulator, Suspension, 6" (2- 5 3/4" x 10" may be substituted for 25kV) |
| o | 3 | 3 | Bolt, Oval Eye, 5/8" x Required Length |
| p | – | – | Connectors, As Required |
| aa | 1 | 1 | Nut, Oval Eye, 5/8" |
| av | – | – | Jumpers and Leads, As Required |
| bo | 1 | 1 | Shackle, Anchor |
| ca | – | – | Deadend Assembly, Primary (See Note 1) |
| cc | – | – | Deadend Assembly, Neutral (See Note 1) |
| ek | 2 | 2 | Locknut, 5/8" |

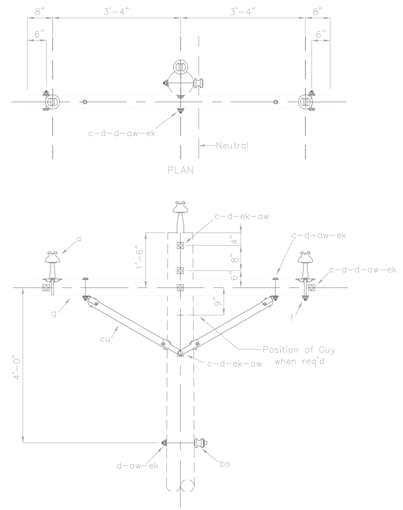
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

PRIMARY, SINGLE-PHASE
TAP ASSEMBLY

RUS EQUIVALENT:
15kV: A5-2
25kV: VA5.2

DWG. No.
15kV: A5-2
25kV: VA5-2

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- This construction required for all conductors having a breaking strength of more than 4500 pounds.
2- Maximum transverse load is 500 lbs. per conductor

| QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|
| 3 | 3 | Insulator, Pin Type |
| 1 | 1 | Pin, Pole Top, 20" |
| 2 | 2 | Bolt, Machine, 1/2" x Required Length |
| 6 | 6 | Bolt, Machine, 5/8" x Required Length |
| 2 | 2 | Washer, 1 3/8" Square With 9/16" Hole |
| 1 | 1 | Crossarm, 3 5/8" x 4 5/8" x 8'-0" |
| 2 | 2 | Washer, Spring, 1/2" |
| 7 | 7 | Washer, Spring, 5/8" |
| 1 | 1 | Bolt, Single Upset, Insulated, 5/8" x Required Length |
| 1 | 1 | Brace, Wood, 60" Span |
| 2 | 2 | Locknut, 1/2" |
| 7 | 7 | Locknut, 5/8" |

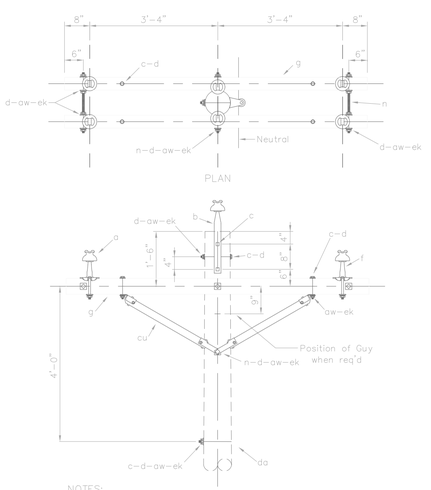
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

CROSSARM CONSTRUCTION
THREE-PHASE, LARGE CONDUCTOR
TANGENT STRUCTURE, SINGLE LINE ARM

RUS EQUIVALENT:
15kV: C1-2
25kV: VC1.11L

DWG. No.
15kV: C1-2CL
25kV: VC1-2CL

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- This construction required for all conductors having a breaking strength of more than 4500 pounds.
2- Maximum transverse load is 1000 lbs. per conductor
3- If pole top brackets are used with 25kV construction, gain both sides of pole top and maintain 2 inches minimum clearance between pole top insulators.
4- 25kV offset pole top pins may be used in lieu of two standard 25kV pole top pins, two pole top brackets, and two pipe spacers.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| a | 6 | 6 | Insulator, Pin Type |
| b | 2 | 2 | Pin, Pole Top, 20" (See Notes 3 and 4) |
| c | 4 | 4 | Bolt, Machine, 1/2" x Required Length |
| c | 4 | 4 | Bolt, Machine, 5/8" x Required Length |
| d | 4 | 4 | Washer, 1 3/8" Square With 9/16" Hole |
| d | 15 | 15 | Washer, 2 1/4" Square With 11/16" Hole |
| f | 4 | 4 | Pin, Crossarm, Steel, Clamp Type |
| g | 2 | 2 | Crossarm, 3 5/8" x 4 5/8" x 8'-0" |
| n | 4 | 4 | Bolt, Double Arming, 5/8" x Required Length |
| aw | 4 | 4 | Washer, Spring, 1/2" |
| aw | 11 | 11 | Washer, Spring, 5/8" |
| cs | – | 2 | Bracket, Pole Top, 1/4" x 3" (See Notes 3 and 4) |
| cu | 2 | 2 | Brace, Wood, 60" Span |
| da | 1 | 1 | Bracket, Rigid Clevis, Insulated |
| dl | 2 | 2 | Pipe Spacer, 3/4" dia. x 1 1/2" (See Notes 3 and 4) |
| ek | 16 | 16 | Locknut, 3/8" |
| ek | 4 | 4 | Locknut, 1/2" |

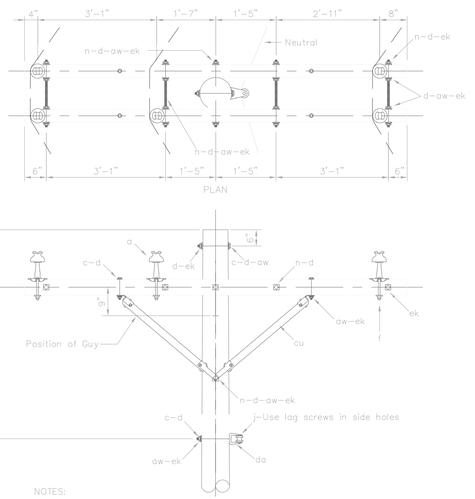
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

CROSSARM CONSTRUCTION
THREE-PHASE, LARGE CONDUCTOR
SMALL ANGLE STRUCTURE, DOUBLE LINE ARM

RUS EQUIVALENT:
15kV: C1-3
25kV: VC2.21L

DWG. No.
15kV: C1-3CL
25kV: VC1-3CL

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- Side groove of insulator must always be larger than the overall diameter of conductor including armor rods when required.
2- Center phase wire or neutral wire may be located on the opposite side of the pole where necessary to avoid crossing of wires in midspan.
3- This construction required for all conductors having a breaking strength of more than 4500 pounds.
4- If transverse load exceeds 2000 lbs per conductor, use vertical construction.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| a | 6 | 6 | Insulator, Pin Type |
| c | 4 | 4 | Bolt, Machine, 1/2" x Required Length |
| c | 2 | 2 | Bolt, Machine, 5/8" x Required Length |
| d | 4 | 4 | Washer, Round, 1 3/8" with 9/16" Hole |
| d | 23 | 23 | Washer, 2 1/4" Square with 11/16" Hole |
| f | 6 | 6 | Pin, Crossarm, Steel Clamp Type |
| g | 2 | 2 | Crossarm, 3 5/8" x 4 5/8" x 10'-0" |
| j | 2 | 2 | Screw, Lag, 1/2" x 4" |
| n | 6 | 6 | Bolt, Double Arming, 5/8" x Required Length |
| aw | 4 | 4 | Washer, Spring, 1/2" |
| aw | 14 | 14 | Washer, Spring, 5/8" |
| cu | 2 | 2 | Brace, Wood, 60" |
| da | 1 | 1 | Bracket, Rigid Clevis, Insulated |
| ek | 4 | 4 | Locknut, 1/2" |
| ek | 22 | 22 | Locknut, 5/8" |

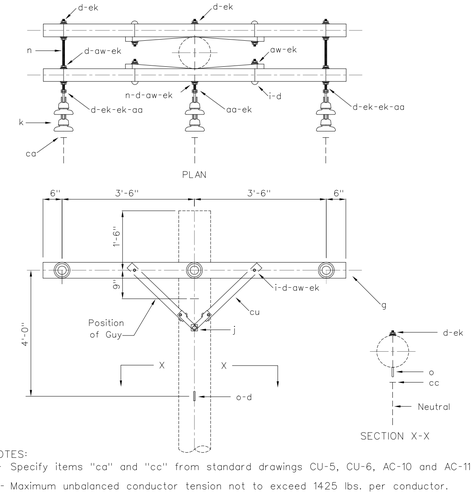
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

CROSSARM CONSTRUCTION
THREE-PHASE, LARGE CONDUCTOR
ANGLE STRUCTURE, DOUBLE LINE ARM

RUS EQUIVALENT:
15kV: C2-2
25kV: VC2.52L

DWG. No.
15kV: C2-2CL
25kV: VC2-2CL

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- Specify items "ca" and "cc" from standard drawings CU-5, CU-6, AC-10 and AC-11.
2- Maximum unbalanced conductor tension not to exceed 1425 lbs. per conductor.
3- Not recommended for conductors with breaking strength greater than 3000 lbs. Limits may be exceeded with proper guying.
4- For 25kV add extension link to middle phase.
5- Specify use of polymer suspension insulator in lieu of porcelain suspension by adding the subscript "P" to the standard number.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| d | 4 | 4 | Washer, Round, Galvanized, 3/8" |
| d | 11 | 11 | Washer, 2 1/4" Square with 11/16" Hole |
| d | 1 | 1 | Washer, Square, Curved, 3" x 3", with 11/16" Hole (Neutral) |
| g | 2 | 2 | Crossarm, 3 5/8" x 4 5/8" x 8'-0" |
| i | 4 | 4 | Bolt, Carriage, 3/8" x 5" |
| j | 2 | 2 | Screw, Lag, 1/2" x 4" |
| k | 6 | 9 | Insulator, Suspension, 6" (6- 5 3/4" x 10" may be substituted for 25kV) |
| n | 3 | 3 | Bolt, Double Arming, 5/8" x Required Length |
| o | 1 | 1 | Bolt, Oval Eye, 5/8" x Required Length |
| aa | 3 | 3 | Nut, Oval Eye, 5/8" |
| aw | 4 | 4 | Washer, Spring, 3/8" |
| aw | 6 | 6 | Washer, Spring, 5/8" |
| ca | - | - | Deadend Assembly, Primary (See Note 1) |
| cc | - | - | Deadend Assembly, Neutral (See Note 1) |
| cu | 4 | 4 | Brace, Wood, 28" |
| ek | 4 | 4 | Locknut, 3/8" |
| ek | 14 | 14 | Locknut, 5/8" |
| eu | - | 1 | Link, Extension, Insulated (25kV Only) |

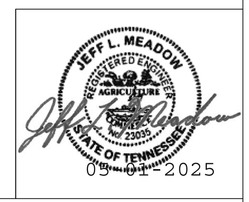
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

CROSSARM CONSTRUCTION
PRIMARY, THREE-PHASE, SINGLE DEADEND STRUCTURE
DOUBLE LINE ARM

RUS EQUIVALENT:
15kV: C7
25kV: VC5.21

DWG. No.
15kV: C7C
25kV: VC7C

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




09-01-2025

# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.15 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | DATE |
| 1"=50' | 01.21.2025 |

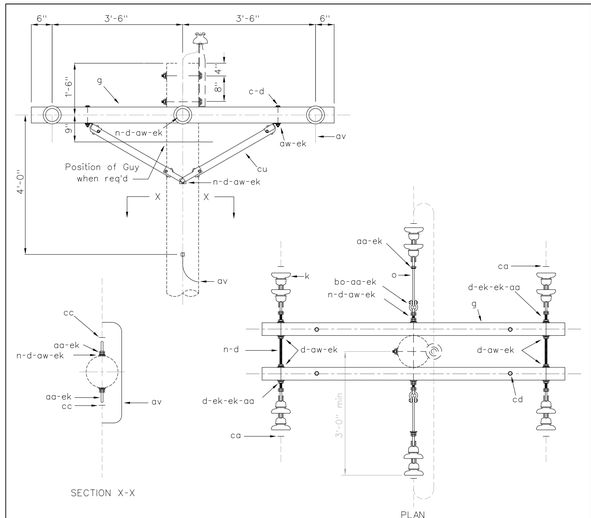

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


ELECTRIC UTILITY RELOCATION
CONSTRUCTION DETAILS

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-07 |
| | | | |
| | | | |
| | | | |

33057-3228-94

HAMILTON COUNTY
PIN #124076.00




NOTES:
1- Specify items "ca" and "cc" from standard drawings CU-5, CU-6, AC-10 and AC-11.
2- Maximum unbalanced conductor tension not to exceed 1425 lbs. per conductor.
3- Specify use of polymer suspension insulator in lieu of porcelain suspension by adding the subscript "P" to the standard number.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| c | 4 | 4 | Bolt, Machine, 1/2" x Required Length |
| d | 4 | 4 | Washer, 1 3/8" Square with 9/16" Hole |
| d | 12 | 12 | Washer, 2 1/4" Square with 11/16" Hole |
| d | 2 | 2 | Washer, Square, Curved, 3" x 3", with 11/16" Hole |
| q | 2 | 2 | Crossarm, 3 5/8" x 4 5/8" x 8'-0" |
| k | 12 | 18 | Insulator, Suspension, 6" (12- 5 3/4" x 10" may be substituted for 25kV) |
| n | 5 | 5 | Bolt, Double Arming, 5/8" x Required Length |
| o | 2 | 2 | Bolt, Oval Eye, 5/8" x Required Length |
| P | - | - | Connectors, As Required |
| oo | 10 | 10 | Nut, Oval Eye, 5/8" |
| av | - | - | Jumpers and Leads, As Required |
| aw | 4 | 4 | Washer, Spring, 1/2" |
| aw | 8 | 8 | Washer, Spring, 5/8" |
| bo | 2 | 2 | Shackle, Anchor |
| ca | - | - | Deadend Assembly, Primary (See Note 1) |
| cc | - | - | Deadend Assembly, Neutral (See Note 1) |
| cu | 2 | 2 | Brace, Wood, 60" |
| ek | 4 | 4 | Locknut, 1/2" |
| ek | 24 | 24 | Locknut, 5/8" |

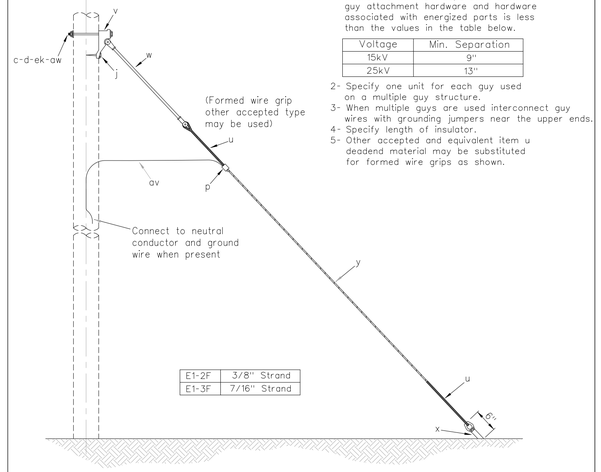
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

CROSSARM CONSTRUCTION
PRIMARY, THREE-PHASE, DOUBLE DEADEND STRUCTURE
DOUBLE LINE ARM

RUS EQUIVALENT:
15kV: C8
25kV: VC6.21

DWG. No.
15kV: C8C
25kV: VC8C

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




| | |
|---|---|
| E1-2F | 3/8" Strand |
| E1-3F | 7/16" Strand |

NOTES:
1- This guy with strain insulator is to be used where the minimum separation between guy attachment hardware and hardware associated with energized parts is less than the values in the table below.

| Voltage | Min. Separation |
|---|---|
| 15kV | 9" |
| 25kV | 13" |

2- Specify one unit for each guy used on a multiple guy structure.
3- When multiple guys are used interconnect guy wires with grounding jumpers near the upper ends.
4- Specify length of insulator.
5- Other accepted and equivalent item u deadend material may be substituted for formed wire grips as shown.

NOTES:
1-Maximum unbalanced tension not to exceed 2000 lbs. per conductor.
2-Use fiberglass strain insulators at pole for guying.
3-This configuration may be used with other material assemblies.
4-Use guying assemblies to balance tensions.
5-Not recommended for turning angles on this type of structure.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| c | 1 | 1 | Bolt, Machine, 5/8" x Required Length |
| d | 1 | 1 | Washer, Curved, Square, 3" |
| j | 1 | 1 | Screw, Lag, 1/2" x 4" |
| P | - | - | Connectors, As Required |
| u | 2 | 2 | Formed Wire Grip, Size As Required |
| v | 1 | 1 | Guy Attachment, Pole Eye, Plate Type |
| w | 1 | 1 | Insulator, Fiberglass, Strain |
| x | 1 | 1 | Rod Anchor, Thimble Eye |
| y | - | - | Guy Wire, As Required |
| av | 1 | 1 | Jumper, #6 S.D. Copper or Equivalent |
| aw | 1 | 1 | Washer, Spring, 5/8" |
| ek | 1 | 1 | Locknut, 5/8" |

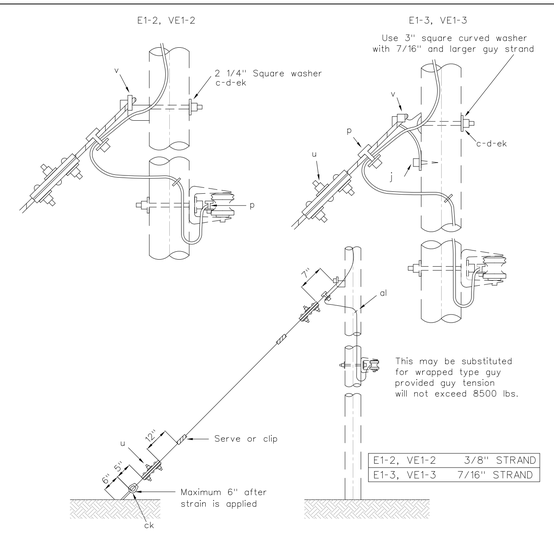
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

NARROW PROFILE CONSTRUCTION,
INSULATED SINGLE DOWN GUY ASSEMBLY

RUS EQUIVALENT:
E1-2F
E1-3F

DWG. No.
E1-2F
E1-3F

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




| | |
|---|---|
| E1-2, VE1-2 | 3/8" STRAND |
| E1-3, VE1-3 | 7/16" STRAND |

NOTES:
1- Other accepted and equivalent dead-end material may be substituted for 3-bolt clamps.

| ITEM | QUANTITY E1-2 | QUANTITY E1-3 | DESCRIPTION |
|---|---|---|---|
| c | 1 | 1 | Bolt, machine, 5/8" x Req'd Length |
| d | 1 | - | Washer, 2 1/4" Square With 11/16" Hole |
| d | - | 1 | Washer, Curved, 3" Sq. x 1/4" With 11/166" Hole, As Req'd |
| j | - | - | Screw, Lag, 1/2" x 4", As Required |
| P | - | - | Connectors, As Req'd |
| u | 2 | 2 | Clamp, Guy, 3-Bolt |
| v | 1 | - | Guy Attachment (5200 lbs.) |
| v | - | 1 | Guy Attachment, Heavy Duty (8500 lbs.) |
| y | 1 | - | 3/8" Guy Strand, Length As Req'd |
| y | - | 1 | 7/16" Guy Strand, Length As Req'd |
| ck | 1 | 1 | Clamp, Bonding, Guy |
| ek | 2 | 2 | Locknut, 5/8" |

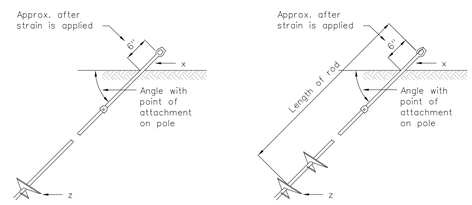
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

SINGLE DOWN GUY
THROUGH BOLT TYPE

RUS EQUIVALENT:
15kV: E1-2, E1-3
25kV: VE1-2, VE1-3

DWG. No.
E1-2T
E1-3T

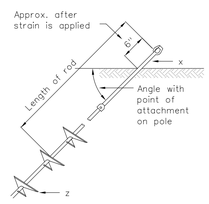
| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




FP-1
SERVICE SCREW ANCHOR ASSEMBLY




FP-2
POWER INSTALLED HELIX SCREW ANCHOR




FP-3
POWER INSTALLED DOUBLE HELIX SCREW ANCHOR

NOTES:
1- Use the number of 3 1/2' or 7' extension needed to reach the depth where maximum holding power is obtained.

| ITEM | QUANTITY F1-1S | QUANTITY F1-2S | QUANTITY F1-3S | DESCRIPTION |
|---|---|---|---|---|
| x | 1 | 1 | 1 | Anchor Shaft, size as Req'd |
| z | 1 | - | - | Helix Hub, Size as Req'd., Single Blade |
| z | - | 1 | - | Helix Hub, Size as Req'd., Double Blade |
| z | - | - | 1 | Helix Hub, Size as Req'd., Triple Blade |
| | * | * | * | Extension Rod, 3'-6"- Additional Extension Rods 3'-6" and 7'-0" Lengths as Required. |

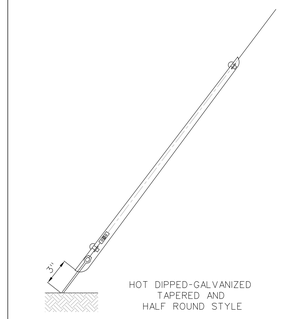
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

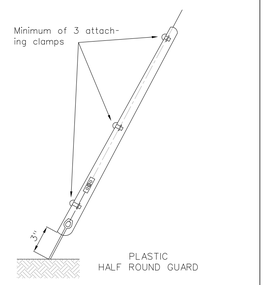
POWER INSTALLED
SCREW ANCHORS

RUS EQUIVALENT:
F1-1S to F1-3S

DWG. No.
FP-1 to FP-3

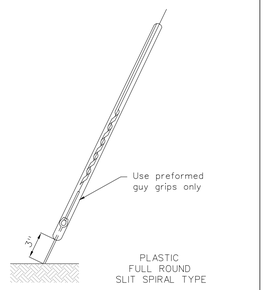
| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- Guy guards shall be no less than 8 feet long.
2- Visibility of colored plastic guards can be improved by use of color or color patterns which provide contrast with the surroundings.
3- Guards for sidewalk guys should be full round type or installed so that mounting clamps will not come in contact with pedestrians.
4- Guards shall be installed so that anchor rod eye is covered.

DESIGNATE
E3-10G (Galvanized)
E3-10P (Plastic)



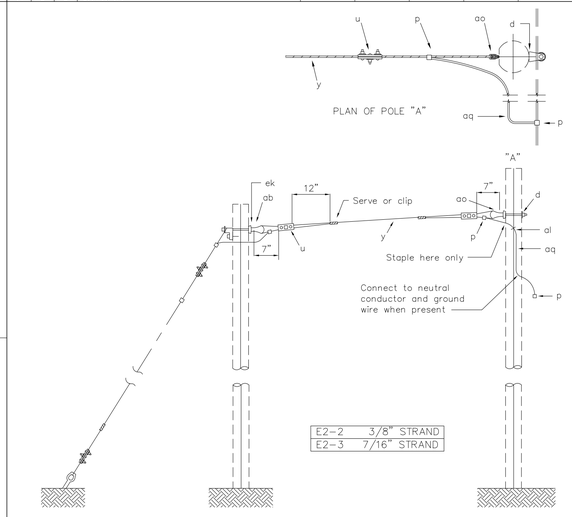

TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

GUY GUARDS

RUS EQUIVALENT:
E3-10

DWG. No.
E3-10P

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- Other accepted and equivalent items of deadend material may be substituted for the 3-bolt clamp shown.

| ITEM | QUANTITY E2-2 | QUANTITY E2-3 | DESCRIPTION |
|---|---|---|---|
| d | 1 | 1 | Washer, Curved, 3" Sq. x 5/16" With 11/16" Hole |
| P | * | * | Connectors As Req'd |
| u | 2 | 2 | Clamp, Guy, 3-Bolt, 6" Heavy Duty |
| y | 1 | - | 3/8" Guy Strand, Length As Req'd |
| y | - | 1 | 7/16" Guy Strand, Length As Req'd |
| ab | 1 | 1 | Nut, Thimble Eye, 5/8" |
| ao | 1 | 1 | Bolt, Thimble Eye, 5/8" x Req'd Length |
| aq | 1 | 1 | Jumpers, #6 S.D. or Equiv. |
| ek | * | * | Locknut, 5/8", As Req'd |

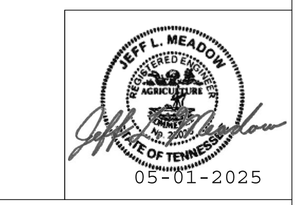
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

SINGLE OVERHEAD GUY
THROUGH BOLT TYPE

RUS EQUIVALENT:
15kV: E2-2, E2-3

DWG. No.
E2-2T
E2-3T

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




05-01-2025

# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.15 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | 1"=50' |
| DATE | 01.21.2025 |

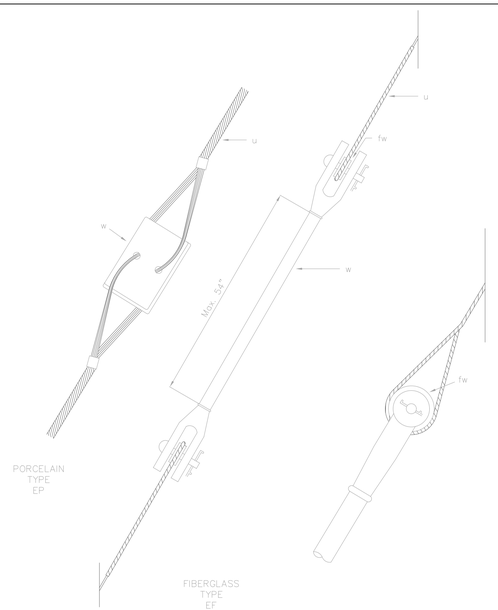

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


ELECTRIC UTILITY RELOCATION
CONSTRUCTION DETAILS

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-08 |
| | | | |
| | | | |
| | | | |

33057-3228-94

HAMILTON COUNTY
PIN #124076.00




NOTES:
1- Other accepted and equivalent item "u" deadend material may be substituted for preformed deadends.

| ITEM | QUANTITY EF | QUANTITY EP | DESCRIPTION |
|---|---|---|---|
| u | 2 | 2 | Deadend, Preformed, Heavy Duty |
| w | 1 | - | |
| w | - | 1 | Insulator, Guy, Strain Type, Fiberglass (21,000 min) |
| fw | - | 2 | Sheave, Roller |

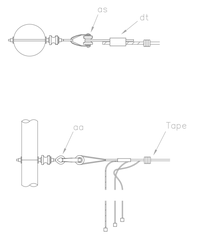
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

GUY STRAIN INSULATORS

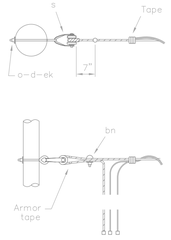
RUS EQUIVALENT:
NONE

DWG. No.
EF
EP

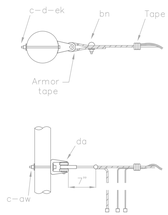
| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




K5




K6




K7

NOTES:
1- This type construction should be used for 3 or 4 conductor service cables with bare A.C.S.R. neutral.
2- Wedge and preformed service deadends may be substituted for deadends shown.
3- Groove diameter of insulators- 1 3/4" minimum for loop deadends.

| ITEM | DESCRIPTION |
|---|---|
| c | Bolt, Machine, 5/8" x req'd length |
| d | Washer, Square, 2 1/4" x 2 1/4", With 11/16" Hole |
| o | Bolt, Eye, 5/8" x req'd length |
| s | Clevis, Secondary, Swinging, Insulated |
| aa | Nut, Oval Eye, 5/8" |
| as | Clevis, Service, Swinging Insulated |
| bn | Clamp, Loop Deadend |
| da | Clevis, Square, Insulated |
| dt | Service Deadend, Wedge Clamp Type |
| ek | Locknut, 5/8" |

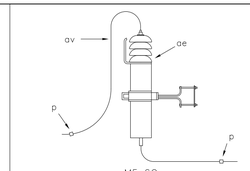
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

SERVICE ASSEMBLIES
ALUMINUM WEATHER PROOF
POLE ATTACHMENTS

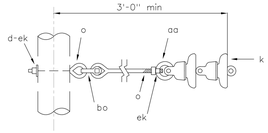
RUS EQUIVALENT:
15kV: K11C, K14C, K15C
25kV: K1.2, K1.4

DWG. No.
K5 TO K7

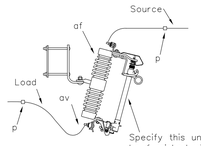
| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




M5-6C

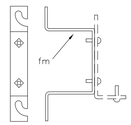



M5-8S

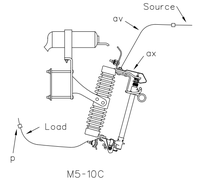



M5-9C

Specify this unit to be furnished with fuse tube or switch blade.




M5-9PB




M5-10C

| ITEM | DESCRIPTION | QUANTITY M5-6C | M5-8S | M5-9C | M5-9PB | M5-10C |
|---|---|---|---|---|---|---|
| d | Washer, 2 1/4" Square With 11/16" Hole | | 1 | | | |
| k | Insulator, Suspension, 6" | | 2* | | | |
| o | Bolt, Oval Eye, 5/8" x Req'd Length | | 2 | | | |
| P | Connector | 1 | | 2 | | 2 |
| aa | Nut, Oval Eye, 5/8" | | 1 | | | |
| ae | Lightning Arrester | 1 | | | | |
| af | Cutout, Single Shot | | | 1 | | |
| av | Jumper and Leads, As Req'd | 1 | | 2 | | 2 |
| ax | Cutout and Arrester Combination | | | | | 1 |
| bo | Shackle, Anchor | | 1 | | | |
| ek | Locknut, 5/8" | | 2 | | | |
| fm | Bracket, Arrester and Pothead Extension | | | | 1 | |

* For 25kV operation, use 3-6" suspension insulators.



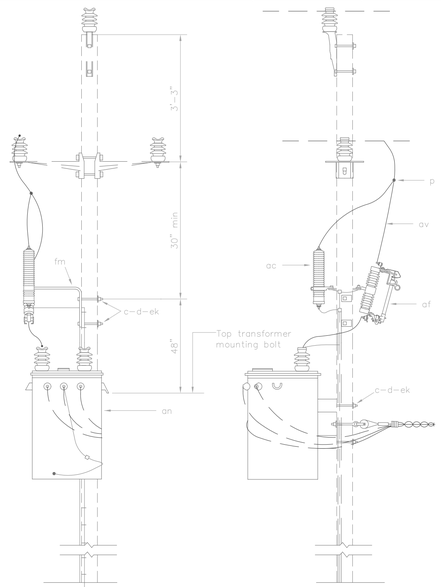
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

MISCELLANEOUS
PRIMARY ASSEMBLIES

RUS EQUIVALENT:
M5-1 TO M5-26

DWG. No.
M5

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




NOTES:
1- Bond transformer neutral to system ground.
2- Refer to connection details for transformer wiring schematics.
3- CSP transformers may be mounted at 45° to the line.

| ITEM | QUANTITY | DESCRIPTION |
|---|---|---|
| c | 4 | Bolt, Machine, 5/8" x Req'd Length |
| d | 4 | Washer, 2 1/4" Square With 11/16" Hole |
| P | * | Connectors As Req'd |
| ae | 1 | Surge Arrester |
| af | 1 | Fused Cutout |
| an | 1 | Transformer, Voltage and kVA as Req'd |
| av | * | Jumpers, Stranded, As Req'd |
| ek | 4 | Locknut, 5/8" |
| fm | 1 | Bracket, Combination Cutout and Arrester |

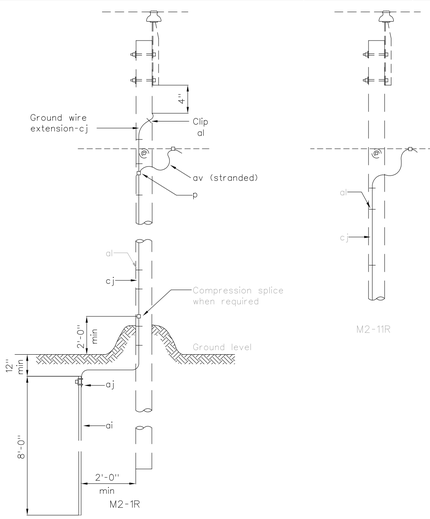
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

SINGLE PHASE TRANSFORMER
INSTALLED ON THREE PHASE
NARROW PROFILE CONSTRUCTION

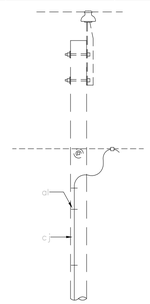
RUS EQUIVALENT:
NONE

DWG. No.
G13-KVA

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




M2-1R




M2-11R

NOTES:
1- Ground wire to be located on same side as neutral conductor and in quadrant opposite climbing space or pole top pin.
2- Staples on ground wire shall be 2'-0" apart, except for a distance of 8'-0" above ground and 8'-0" from top of pole, where they shall be 6" apart.
3- Ground wire to clear all hardware by 2" minimum, and shall be stapled to maintain this position.
4- Ground wire moulding may be installed at discretion of owner.

| ITEM | QUANTITY M2-1 | QUANTITY M2-11 | DESCRIPTION |
|---|---|---|---|
| P | 2 | 1 | Connectors, Compression |
| ai | 1 | 1 | Rod, Ground 5/8" diameter 8'-0" |
| aj | 1 | 1 | Clamp, Ground Rod |
| al | * | * | Staples, Ground Wire, as req'd |
| ai | 1 | - | Ground Wire Clip |
| cj | * | * | Ground wire, #6 S.D. Copper or Equiv., Length As Req'd |
| cj | 1 | 1 | Ground Wire Extension |
| av | 1 | - | Jumper, #6 S.D. Copper or Equiv., Length As Req'd |

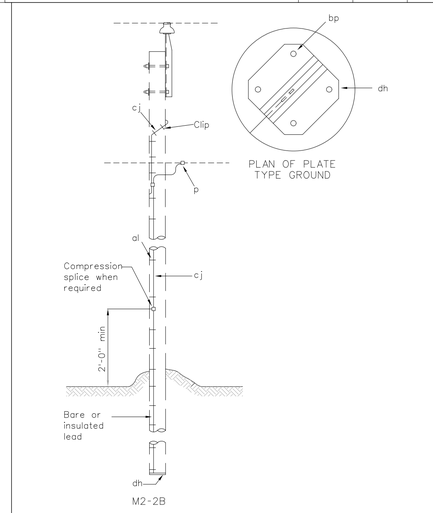
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

GROUNDING ASSEMBLY
GROUND ROD TYPE

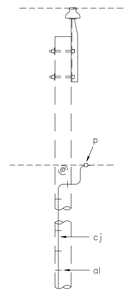
RUS EQUIVALENT:
15kV - M2-1, M2-11
25kV - ht.1

DWG. No.
M2-1R
M2-11R

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |




M2-2B




M2-12B

NOTES:
1- Ground wire to be located on same side as neutral conductor and in quadrant opposite climbing space or pole top pin.
2- Staples on ground wire shall be 2'-0" apart, except for a distance of 8'-0" above ground and 8'-0" from top of pole where they shall be 6" apart.
3- Ground wire to clear all hardware by 2" minimum and shall be stapled to maintain this position.
4- Ground wire moulding may be installed at the discretion of the owner.

| ITEM | QUANTITY 15kV | QUANTITY 25kV | DESCRIPTION |
|---|---|---|---|
| P | * | * | Connectors As Req'd |
| al | * | * | Staples, Ground Wire, As Req'd |
| al | * | * | Ground Wire Clip |
| bp | 4 | 4 | Nails, Galvanized, 1" Roofing |
| cj | * | * | Jumper, #6 S.D. Copper or Equiv., Length As Req'd |
| cj | 1 | - | Ground Wire Extension, #6 S.D. Copper or Equiv. |
| dh | 1 | - | Butt Type Grounding Plate |
| dh | - | 1 | Grounding Plate, Galvanized Steel, With Insulated Copper Lead |

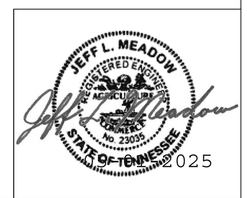
TENNESSEE VALLEY PUBLIC POWER ASSOCIATION

GROUNDING ASSEMBLY
BUTT AND PLATE TYPE

RUS EQUIVALENT:
15kV - M2-2, M2-12
25kV - P2.1

DWG. No.
M2-2B
M2-12B

| DATE | REVISION | DATE | REVISION |
|---|---|---|---|
| | | | |

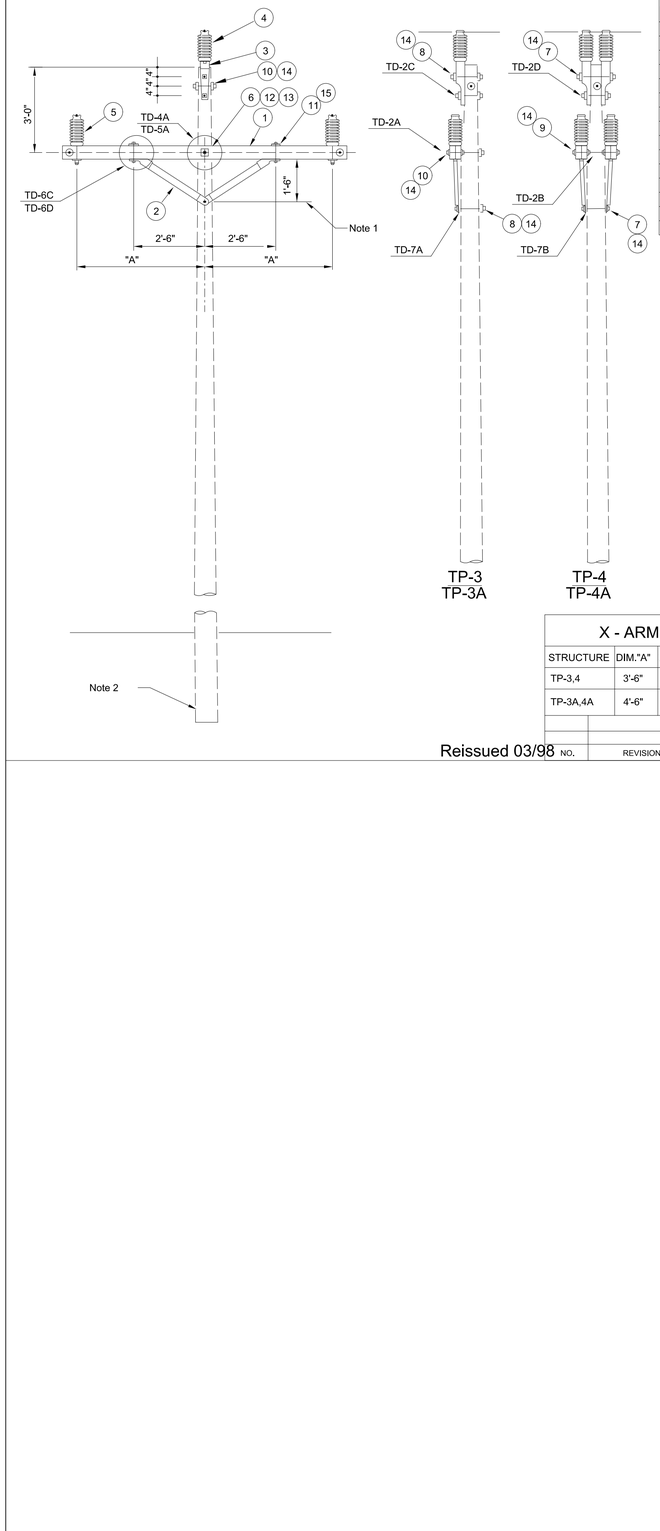



# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.15 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | DATE |
| 1"=50' | 01.21.2025 |

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

ELECTRIC UTILITY RELOCATION
CONSTRUCTION DETAILS




| DWG. REF. | TP- 3, 3A | TP- 4, 4A | LIST OF MATERIALS DESCRIPTION | ITEM | DET. | CODE No. |
|---|---|---|---|---|---|---|
| 1 | 1 | 2 | X-Arm,4-1/8"x5-1/8"(see table below) | | TCD-6,10 | |
| 2 | 1pr. | 2pr. | Brace, X-Arm, 60"/18" | cu | | |
| 3 | 1 | 2 | Bracket, Pole Top | eb | | |
| 4 | 1 | 2 | Insulator, Post Type, w/short mtg. hdwr | ea | | |
| 5 | 2 | 4 | Insulator, Post Type, w/long mtg. hdwr | ea | | |
| 6 | 1 | 1 | 3/4" Bolt, Machine, by req'd length | c | | |
| 7 | – | 3 | 5/8" Bolt, Machine, by req'd length | c | | |
| 8 | 3 | – | 5/8" Bolt, Machine, w/Washer Nut | c | | |
| 9 | – | 2 | 5/8" Bolt, Double Arm'g, w/4 Washer Nuts | n | | |
| 10 | 3 | 1 | 5/8" Bolt, Washer Head, w/Washer Nut | c | | |
| 11 | 2 | 4 | 1/2" Bolt, Washer Head, by req'd l. | c | | |
| 12 | 2 | 2 | Washer, Flat, 2-1/4"sq x3/16",13/16"h. | d | | |
| 13 | 1 | 1 | 3/4" Locknut, MF Type | ek | | |
| 14 | 6 | 12 | 5/8" Locknut, MF Type | ek | | |
| 15 | 2 | 4 | 1/2" Locknut, MF Type | ek | | |

NOTES:

1. Field drilled holes shall be thoroughly treated.
2. The following materials are to be specified separately on plan and profile drawings and staking sheets: POLE AND FOUNDATION UNITS.

## X - ARMS

| STRUCTURE | DIM."A" | X-ARM# | DET. |
|---|---|---|---|
| TP-3,4 | 3'-6" | 13 | TCD-6 |
| TP-3A,4A | 4'-6" | 20 | TCD-10 |

| NO. | REVISION | DATE |
|---|---|---|
| | | |

Reissued 03/98

Aug., 1986

TRANSMISSION LINE STRUCTURE

TANGENT LINE POST
(46 kV MAXIMUM)

TP-3,3A,4,4A

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U4-08 |
| | | | |
| | | | |
| | | | |

33057-3228-94

HAMILTON COUNTY
PIN #124076.00

ELECTRIC POWER BOARD
OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.15 |
| DESIGNED: | JLM |
| DRAWN: | MAV |
| CHECKED: | JEB |
| SCALE | DATE |
| 1"=50' | 01.21.2025 |

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 120
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

ELECTRIC UTILITY RELOCATION
CONSTRUCTION DETAILS

INDEX OF DRAWINGS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U5-02 TELECOMMUNICATIONS RELOCATION VICINITY MAP AND LEGEND
U5-03 TELECOMMUNICATIONS RELOCATION GENERAL NOTES
U5-04 TELECOMMUNICATIONS RELOCATION STA. 12+50.57 TO STA. 25+55.53
U5-05 TELECOMMUNICATIONS RELOCATION CONSTRUCTION DETAILS
U5-06 TELECOMMUNICATIONS RELOCATION CONSTRUCTION DETAILS
U5-07 TELECOMMUNICATIONS RELOCATION CONSTRUCTION DETAILS


| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-01 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

HAMILTON COUNTY

| | ITEM NO. | TDOT DESCRIPTION | UTILITY UNIT DESCRIPTION | UNIT | QUANTITY | PERCENT UTILITY | PERCENT PROJECT |
|---|---|---|---|---|---|---|---|
| | 790-36.14 | TRANSFER CONDUCTOR | | EACH | 9 | 0% | 100% |
| | 790-74.31 | FIBER TANGENT ASSM | SUS/SUSA | EACH | 5 | 0% | 100% |
| | 790-74.32 | FIBER DEADEND ASSM | DE | EACH | 1 | 0% | 100% |
| | 790-74.33 | FIBER DOUBLE DEADEND ASSM | DDE | EACH | 2 | 0% | 100% |
| (1) | 790-98.03 | REMOVE FRAMING/ASSOCIATED APPARATUS | | EACH | 17 | 0% | 100% |
| | 798-05.27 | COMMUNICATION ASSEMBLY(BOND) | SUS | EACH | 4 | 0% | 100% |
| | 798-05.29 | COMMUNICATION ASSEMBLY(CSC) | SUSA | EACH | 5 | 0% | 100% |
| | 798-05.32 | COMMUNICATION ASSEMBLY(DDE) | DDE | EACH | 2 | 0% | 100% |
| | 798-05.33 | COMMUNICATION ASSEMBLY(DE) | DE | EACH | 6 | 0% | 100% |
| | 798-05.34 | COMMUNICATION ASSEMBLY(E1-2) | DG | EACH | 7 | 0% | 100% |
| | 798-05.35 | COMMUNICATION ASSEMBLY(E2-2) | OHG | EACH | 3 | 0% | 100% |
| (2) | 798-05.37 | COMMUNICATION ASSEMBLY(F2&F3) | 24M ANC | EACH | 1 | 0% | 100% |
| | 798-05.52 | COMMUNICATION ASSEMBLY(LOOP) | LOOP | EACH | 1 | 0% | 100% |
| | 798-05.54 | COMMUNICATION ASSEMBLY(SVC) | J-HOOK | EACH | 8 | 0% | 100% |
| | 798-05.59 | 5/16IN HS STEEL STRAND | STRAND | L.F. | 1378 | 0% | 100% |
| | 798-08.01 | RISER | U-GUARD | EACH | 2 | 0% | 100% |
| | 798-08.04 | TRANSFER COMMUNICATION ASSY (SVC) | NAP | EACH | 1 | 0% | 100% |
| | 798-08.06 | TRANSFER FIBEROPTIC CABLE (LOOPS INCLUDED) | | EACH | 18 | 0% | 100% |
| | 798-08.07 | TRANSFER SVC DROP | | EACH | 8 | 0% | 100% |
| | 798-09.01 | REMOVE STEEL STRAND | | L.F. | 1402 | 0% | 100% |
| | 798-09.03 | REMOVE POLES, GUYS, ANCHORS | | EACH | 4 | 0% | 100% |
| | 798-09.08 | REMOVE STRAND POLE FRAMING | | EACH | 25 | 0% | 100% |
| (3) | 798-06.90 | 18"/15 DEG FIBERGLASS STANDOFF BRACKET | EXT | EACH | 1 | 0% | 100% |

FOOTNOTES:

1. INCLUDES ALL ATTACHING ASSEMBLIES.
2. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, AND BONDING/GROUNDING.
3. INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT WHEN PLACING 18" FIBERGLASS STANDOFF BRACKET.

05/28/2025

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 100945
STATE OF TENNESSEE

ELECTRIC POWER BOARD
OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE | DATE |
| NONE | 05.28.2025 |


Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


TELECOMMUNICATION RELOCATION
ESTIMATED QUANTITIES AND DRAWING INDEX

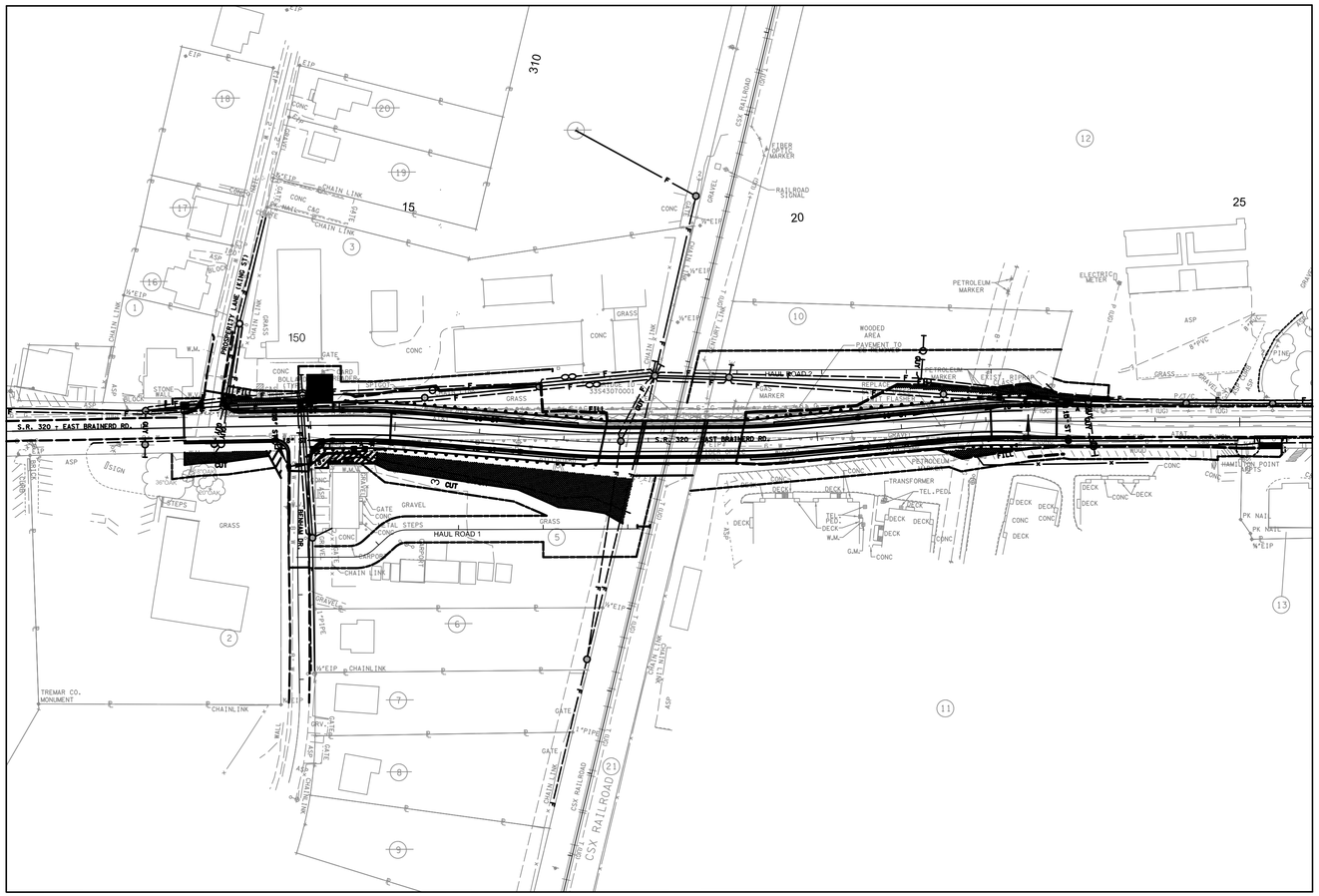
| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-02 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

HAMILTON COUNTY

# HAMILTON COUNTY

## (EAST BRAINERD RD.) BRIDGE OVER CSX R/R (LM 0.86) IN CHATTANOOGA (IA) ROUTE SR-320

N




## LEGEND

| | | | |
|---|---|---|---|
| F | EXISTING FIBEROPTIC CABLE | | EXISTING POLE |
| | EXISTING STRAND | | REMOVAL POLE |
| | REMOVAL STRAND | | EXISTING 24M ANC |
| | PROPOSED STRAND | | REMOVAL 24M ANC |
| GUY | EXISTING OVERHEAD GUY | | PROPOSED 24M ANC |
| GUY | REMOVAL OVERHEAD GUY | | EXISTING 24M ANC/ PROPOSED DOWN GUY |
| GUY | PROPOSED OVERHEAD GUY | | TEMPORARY 24M ANC/ TEMPORARY DOWN GUY |
| GUY | TEMPORARY OVERHEAD GUY | | |
| | EXISTING LOOP | | EXISTING NAP |

05/28/2025

GREGORY K. POSTON
REGISTERED ENGINEER
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COMMERCE
No. 100945
STATE OF TENNESSEE

ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE: NTS | DATE: 05.28.2025 |


Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


TELECOMMUNICATION RELOCATION
VICINITY MAP AND LEGEND

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-03 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

HAMILTON COUNTY

# 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. THE UTILITY CONTRACTOR SHALL INSTALL FIBERGLASS INSULATOR GUYLINKS ON ALL DOWNGUYS WITHIN TWO (2) FEET OF PRIMARY CONDUCTORS.

30. 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.

31. 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.

32. 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.

33. 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.

34. 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.

05/28/2025

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 100945
STATE OF TENNESSEE

ELECTRIC POWER BOARD
OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE | DATE |
| NONE | 05.28.2025 |

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

TELECOMMUNICATION RELOCATION
GENERAL NOTES

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-04 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

HAMILTON COUNTY

N

S.R. 320 - EAST BRAINERD RD.

PROP. ROW

HAUL ROAD 1

HAUL ROAD 2

PROSPERITY LANE (KING ST)

BENHAM DR.

CSX RAILROAD

12 HAMILTON COUNTY, TENNESSEE BOARD OF EDUCATION (HISTORIC)

10 SUSANNE C. PHILLIPS

5 TIMOTHY E. AND DAWN L. BANKSTON

6 LOVISA A. MASSEY

2 TRUSTEES OF BRAINERD HILLS PRESBYTERIAN CHURCH

7 WILLIAM G. RUFFNER, II

8 TANI C. AND PRISCILLA B. ALLEN

13 DONALD L. OAKES

21 CSX RAILROAD

18 JULIA E. BARKER

17 JULIA BARKER

16 JOHN O. TRAN

20 MARK CORDELL

19 WOODMEN OF THE WORLD

3 PS SOUTHEAST ONE, INC.

1

15

20

25

150

305

310

Y1209 Y1073 Y1074 Y1075 Y1076 Y1077 Y1078 Y1078R Y1079 Y1079R Y1081 Y1081R Y1081T-1 Y1072 Y1074.1 Y1074.1R Y1074R Y1075R Y1076R Y1077R Y1476R Y1269 Y1147 Y2003 Y2154 Y2154R

INSTALL: ADSS:SUSA,DE, U-GUARD SNL:SUSA,OHG, JHOOK REMOVE:(3)SUS, JHOOK NOTE:TRANSITION LEGACY FIBER IN POWER SPACE TO COMMUNICATION SPACE AT THIS POLE.

INSTALL:STRAND TRANSFER: SNL:12F

INSTALL: ADSS:SUS SNL:SUS,DE, OHG,JHOOK

INSTALL: SNL:DDE,JHOOK REMOVE: DDE,JHOOK

INSTALL:STRAND TRANSFER:ADSS:288F SNL:144F,96F,48F

INSTALL: ADSS:SUS SNL:SUS,DE,DG, JHOOK TRANSFER: NAP

REMOVE: (3)SUS,DE,DG, JHOOK

INSTALL: ADSS:SUS,EXT SNL:SUS,JHOOK,

INSTALL:STRAND TRANSFER: ADSS:288F SNL:144F,96F

INSTALL: ADSS:DDE SNL:SUS,JHOOK REMOVE: (2)DDE,SUS, JHOOK

INSTALL: SNL:SUS,DG REMOVE:(2)SUS

INSTALL:STRAND TRANSFER: SNL:144F,96F

INSTALL: TEMP:SNL:DE, DG

INSTALL: SNL:SUSA,DG TEMP:OHG

INSTALL: SNL:SUSA,U-GUARD REMOVE:(2)SUS NOTE:LEGACY FIBER TO BE TRANSTIONED BACK INTO POWER SPACE. EPB TO MOVE THE LINE AT A LATER DATE.

INSTALL: SNL:DE,DG

REMOVE:DE NOTE:NO DOWNGUY AT LOCATION TO BE REMOVED.

REMOVE: (3)SUS,DE,OHG

INSTALL:DE, DG

INSTALL: SNL:DDE,JHOOK REMOVE:SUS,JHOOK

INSTALL:STRAND TRANSFER:SNL:48F

REMOVE: (3)SUS,JHOOK

REMOVE: ADSS: DDE,DE NOTE:NO DOWNGUY AT LOCATION TO BE REMOVED.

INSTALL: ADSS:SUS REMOVE:SUS

TRANSFER: ADSS:288F

INSTALL: ADSS:DDE, SNL:SUSA,DG, 24M,JHOOK REMOVE:DDE,OHG, (2)SUSA,DG, JHOOK

NOTE:FIBER TO MAINTAIN MIINIMUM OF 18'0" OF CLEARANCE FROM HIGHEST POINT OF HIGHWAY, PER NESC 19A NCAC 02E .0421

REMOVE: (2)SUS

INSTALL:DE NOTE:POLE TO BE SET IN GROUND 9.5 FEET NO DOWN GUY NEEDED.

REMOVE:DE, DG

FIBER RELOCATION NOTES:

CONTRACTOR TO COORDINATE WITH EPB AND CONTRACTOR FOR POWER INSTALLATION INVOLVING THE BOTTOM ADSS FIBER CABLE TRANSFER TO THE COMMUNICATION SPACE. THIS EXISTING ADSS FIBER WILL BE OVERLASHED TO THE NEW 5/16" STRAND THAT THE EXISTING FIBER IN THE COMMUNICATION SPACE WILL TRANSFER AND OVERLASH TO.

| | |
|---|---|
| Y1074 | SECONDARY CROSSING FOR STREETLIGHT ACROSS S.R. 320. |
| Y1075 | NEUTRAL CROSSING S.R. 320. |
| Y1076 | COMMUNICATION SPACE STRAND AND LASH ATTACHMENT DROPS UNDER THE CABLE ATTACHMENT GOING TO POLE POLE Y107 AND CONTINUING AS THE SECOND COMMUNICATION ATTACHMENT TO POLE Y1079. |
| Y1078 | SECONDARY DROP CROSSING S.R. 320. |
| Y1081 | SECONDARY AND SUSPENSION SCHOOL TRAFFIC SIGN CROSSING S.R. 320. |
| Y2003 | SECONDARY CROSSING S.R. 320. |

CONSTRUCTION NOTES:

1.) ALL EXISTING FACILITIES TO BE TRANSFERRED TO NEW ALIGNMENT. ANY NECESSARY TEMPORARY WORK NEEDED TO ENSURE THE TRANSFER MUST BE COORDINATED WITH THE UTILITY OWNER.

2.) THIS JOB IS IN CONJUNCTION WITH U SERIES 4 POLES TO BE PLACED/REMOVED BY EPB. PLEASE SEE PLAN SET FROM U SERIES 4.

3.) CONTRACTOR TO COORDINATE WITH EPB PROJECT ENGINEER FOR PURCHASE AND SUPPLY OF MATERIALS FROM EPB.

4.) ALL FIBER STRAND & RELATED MATERIALS AND CONSTRUCTION PRACTICES TO MEET OR EXCEED CURRENT BELLCORE STANDARD SR-1421.

5.) EPB TO PROVIDE FIBER CABLES,FIBER DROPS, DISTRIBUTION ENCLOSURES AND ALL SPLICING THAT IS INVOLVED WITH EPB FACILITIES.

6.) ANCHORS TO BE PLACED BY EPB ELECTRICAL EXCEPT FOR ANCHOR AT POLE Y1075 PLEASE SEE U4 PRINT SET FOR DETAILS.

7.) POWER SPACE AND COMMUNICATIONS SPACE ATTACHMENTS WILL BE CONSTRUCTED ON THIS PROJECT. ADSS POWER SPACE MATERIALS WILL BE FIRST IN ATTACHMENT CALLOUTS AND COMMUNICATIONS SPACE MATERIALS WILL BE CALLED OUT SECOND TO AVOID CONFUSION. MATERIALS WILL BE REFLECTED PER THE T-DOT ITEM NUMBERS ON SHEET U5-01.

8.) ALL FIBER TO BE TRANSFERRED TO NEW POLE LINE. SLACK ON 48F TO BE PULLED 2 SPANS BACK FROM WHERE SCOPE OF WORK STARTS AND ALSO PULLED FROM LOOP AT POLE Y1075,TO NEW ALIGNMENT. ANY NECESSARY TEMPORARY

Know what's below. Call 811 before you dig.

05/28/2025

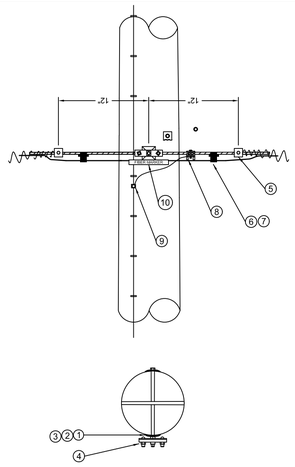
GREGORY K. POSTON REGISTERED ENGINEER AGRICULTURE POWELL TENNESSEE NO. 100945 STATE OF TENNESSEE

# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE | 1"=50' |
| DATE | 05.28.2025 |

Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192

TELECOMMUNICATION RELOCATION
STA. 12+50.57 TO STA. 25+55.53




GENERAL NOTES:

1. MAXIMUM LINE ANGLE 10°.

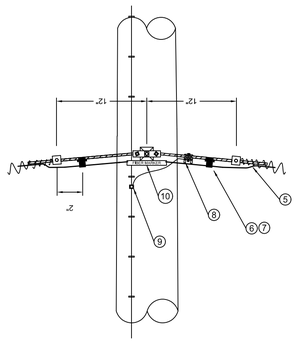
2. THE END OF ALL MACHINE OR EYE BOLTS MUST NOT EXTEND MORE THAN 1-1/2" BEYOND THE NUT.

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 1 | BOLT, MACHINE, GALVANIZED, SHSN, 5/8" x 12" |
| 2 | 2 | NUT, SQUARE, 5/8" |
| 3 | 2 | WASHER, CURVED, 3" SQ, 11/16" HOLE, MALLEABLE IRON |
| 4 | 1 | CLAMP, B, SUSPENSION, 11/16" x 15/16" HOLE |
| 5 | 2 | D LASHING WIRE CLAMP, GALVANIZED |
| 6 | 2 | SPACER CABLE, 1/2" BELL TYPE |
| 7 | 2 | LASHED CABLE SUPPORT STRAPS, STAINLESS STEEL 16" |
| 8 | 1 | CONNECTOR |
| 9 | 1 | CONNECTOR, SIZE AS REQUIRED |
| 10 | 1 | PLP FIBER OPTIC MARKER, ORANGE |

| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

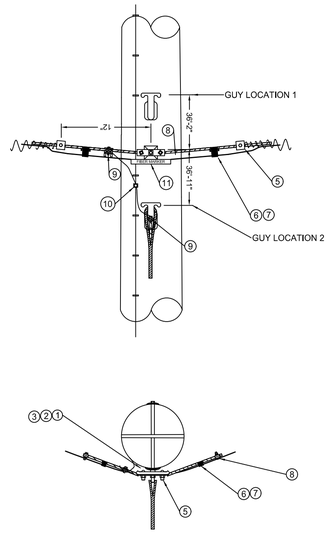
| STRAIGHT LINE ATTACHMENT 0° TO 10° | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. 1 | SUS |




| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

| CORNER ATTACHMENT 10° TO 50° INSIDE CORNER | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. 1 | SUSA |




| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

| CORNER ATTACHMENT 10° TO 50° REVERSE CORNER | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. 2 | SUSA |

INSIDE CORNER

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 1 | WASHER, CURVED, 4"SQ, 13/16" HOLE, MEALEABLE IRON |
| 2 | 2 | NUT, LOCKNUT, 3/4" |
| 3 | 1 | BOLT, MACHINE, GALVANIZED, 3/4" x REQUIRED LENGTH |
| 4 | 1 | ATTACHMENT, GUY, MALLEABLE IRON, 'C' GUY HOOK |
| 5 | 1 | CLAMP B, CORNER, SUSPENSION |
| 6 | 2 | SPACER CABLE, 1/2" BELL TYPE |
| 7 | 2 | LASHED CABLE SUPPORT STRAPS, STAINLESS STEEL 16" |
| 8 | 2 | D LASHING WIRE CLAMP, GALVANIZED |
| 9 | 1 | CONNECTOR |
| 10 | 1 | CONNECTOR, SIZE AS REQUIRED |
| 11 | 1 | PLP FIBER OPTIC MARKER, ORANGE |

REVERSE CORNER

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 3 | WASHER, CURVED, 4"SQ, 13/16" HOLE, MEALEABLE IRON |
| 2 | 3 | NUT, LOCKNUT, 3/4" |
| 3 | 2 | BOLT, MACHINE, GALVANIZED, 3/4" x REQUIRED LENGTH |
| 4 | 1 | ATTACHMENT, GUY, MALLEABLE IRON, 'C' GUY HOOK |
| 5 | 1 | CLAMP B, CORNER, SUSPENSION |
| 6 | 2 | SPACER CABLE, 1/2" BELL TYPE |
| 7 | 2 | LASHED CABLE SUPPORT STRAPS, STAINLESS STEEL 16" |
| 8 | 2 | D LASHING WIRE CLAMP, GALVANIZED |
| 9 | 2 | CONNECTOR |
| 10 | 1 | CONNECTOR, SIZE AS REQUIRED |
| 11 | 1 | PLP FIBER OPTIC MARKER, ORANGE |

GENERAL NOTES:

1. CABLE BEND RADIUS TO BE DETERMINED.

2. USE 'C' GUY HOOKS ONLY ON WOOD STRUCTURES. SUBSTITUTE ON STEEL OR CONCRETE STRUCTURES.

3. ALL GUYS MUST BE TENSIONED PRIOR TO PLACING STRAND.

4. THE END OF ALL MACHINE OR EYE BOLYS MUST NOT EXTEND MORE THAN 1-1/2" BEYOND THE NUT.

5. ALL STRAND HARDWARE MOUNTED ON SEPERATE BOLT MUST BE BONDED TOGETHER AND TO THE VERTICAL GROUND, IF EXISTING. DO NOT BOND TO ANY PART OF A STANDVISE OR PREFORMED DEADEND.

6. TAIL OF THE GUY WIRE/STRAND MUST NOT EXTEND BEYOND OUTSIDE THE BAIL OF TERMINATING DEVICE.

| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

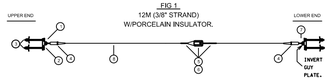
APPROVED:

| CORNER ATTACHMENT 10° TO 50° REVERSE CORNER | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. 3 | SUSA |

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-05 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

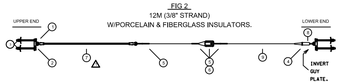
HAMILTON COUNTY

FIG 1
12M (3/8" STRAND)
W/PORCELAIN INSULATOR.




| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 2 | ATTACHMENTS-GUY-POLE EYE PLATE | I0424 | DGS12P |
| 2 | 4 | BOLT-MACH-GALV-SHSN-3/4"X14" | I0641 | -OR- |
| 3 | 4 | WASHER-CURVED-4"SQ-13/16" HOLE-MALLEABLE IRON | I0333 | TGS12P |
| 4 | 2 | DEADEND-AUTOMATIC-BAIL RIGID-3/8" STEEL STRAND | I0405 | |
| 5 | 2 | DEADEND-PREFORMED-GUY,STEEL STRAND 3/8" | I0454 | |
| 6 | 1 | INSL-GUY STRAIN-12000 LBS- 4" PORC-BROWN OR GRAY | I0142 | |
| 7 | 2 | CLEVIS-SHACKLE-ANCHOR 1/2" | I0429A | |
| 8 | △ | WIRE-GUY-GALV,STEEL-3/8" (7) STRAND (12M) | I0822 | |

FIG 2
12M (3/8" STRAND)
W/PORCELAIN & FIBERGLASS INSULATORS.




| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 2 | ATTACHMENTS-GUY-POLE EYE PLATE | I0424 | DGS12P |
| 2 | 4 | BOLT-MACH-GALV-SHSN-3/4"X14" | I0641 | -OR- |
| 3 | 4 | WASHER-CURVED-4"SQ-13/16" HOLE-MALLEABLE IRON | I0333 | TGS12P |
| 4 | 1 | DEADEND-AUTOMATIC-BAIL RIGID-3/8" STEEL STRAND | I0405 | |
| 5 | 3 | DEADEND-PREFORMED-GUY,STEEL STRAND 3/8" | I0454 | |
| 6 | 1 | INSL-GUY STRAIN-12000 LBS- 4" PORC-BROWN OR GRAY | I0142 | |
| 7 | 1 | INSL-GUY STRAIN-21000 LBS- 54" FIBERGLASS | I0860 | |
| 8 | 1 | CLEVIS-SHACKLE-ANCHOR 1/2" | I0429A | |
| 9 | △ | WIRE-GUY-GALV,STEEL-3/8" (7) STRAND (12M) | I0822 | |

△ GENERAL NOTES

1. TO SPECIFY ADDITIONAL LINKS USE:
   DIG54WF8, TIG54WF8 FOR 54" FG LINKS.
   DIG144WF8,TIG144WF8 FOR 144" LINKS.

   THESE ASSEMBLES FOR ADDITIONAL LINKS INCLUDE THE FIGURE 8 STEEL LINK (ITEM I0370) USED TO CONNECT FG LINKS TOGETHER.

   FOR GUIDELINES IN SPECIFYING OR INSTALLING GUY INSULATORS SEE DWGS A-4538 AND A-4539.

   FOR FIGURE 2 ASSEMBLY WITH 144" LINK (INSTEAD OF 54") SPECIFY: DGD12PFL -OR- DGS12PFL.

2. USE 3/4" BOLTS WHEN ATTACHING ANY GUY HOOK OR POLE EYE PLATE TO POLE.

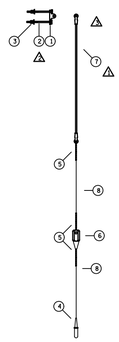
3. DO NOT PLACE ANY FG LINKS IN A BIND. USE EITHER A SHACKLE CLEVIS (ITEM I0429A) OR A DOUBLE 90° CLEVIS (ITEM I0345) TO CONNECT FG LINK TO POLE EYE PLATE (ITEM I0424), AS NEEDED.

4. SPECIFY THE LENGTH OF THE SPAN GUY WHEN USING THIS ASSEMBLY.

| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

| STANDARD GUY ASSEMBLY 12M (3/8") GALV, SPAN GUY | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. A-3093 | OH-GUY |




△ SEE GENERAL NOTES

| ⇶ | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 1 | ATTACHMENTS-GUY-POLE EYE PLATE | I0424 | DGD12PF |
| 2 | 2 | BOLT-MACH-GALV-SHSN-3/4"X14" | I0641 | -OR- |
| 3 | 2 | WASHER-CURVED-4"SQ-13/16" HOLE-MALLEABLE IRON | I0333 | TGD12PF |
| 4 | 1 | DEADEND-AUTOMATIC-BAIL RIGID-3/8" STEEL STRAND | I0405 | |
| 5 | 3 | DEADEND-PREFORMED-GUY,STEEL STRAND 3/8" | I0454 | |
| 6 | 1 | INSL-GUY STRAIN-12000 LBS- 4" PORC-BROWN OR GRAY | I0142 | |
| 7 | 1 | INSL-GUY STRAIN-21000 LBS- 54" FIBERGLASS | I0860 | |
| 8 | 38 | WIRE-GUY-GALV,STEEL-3/8" (7) STRAND (12M) | I0822 | |

(55' OF GUY WIRE IN TGD12PF)

△ GENERAL NOTES

1. TO SPECIFY ADDITIONAL LINKS USE:
   DIG54WF8, TIG54WF8 FOR 54" FG LINKS.
   DIG144WF8,TIG144WF8 FOR 144" LINKS.

   THESE ASSEMBLIES FOR ADDITIONAL LINKS INCLUDE THE FIGURE 8 STEEL LINKS (ITEM I0370) USED TO CONNECT FG LINKS TOGETHER.

   FOR GUIDELINES IN SPECIFYING OR INSTALLING GUY INSULATORS SEE DWGS A-4538 AND A-4539.

   FOR FIGURE 2 ASSEMBLY WITH 144" LINK (INSTEAD OF 54") SPECIFY: DGD12PFL -OR- TGD12PFL.

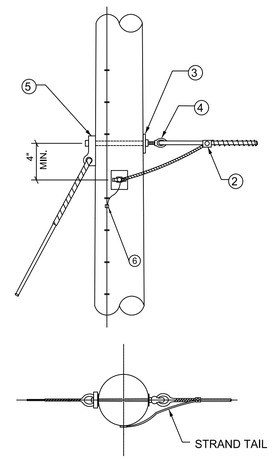
2. USE 3/4" BOLTS WHEN ATTACHING ANY GUY HOOK OR POLE EYE PLATE TO POLE.

3. DO NOT PLACE ANY FG LINKS IN A BIND. USE EITHER A SHACKLE CLEVIS (ITEM I0429A) OR A DOUBLE 90° CLEVIS (ITEM I0345) TO CONNECT FG LINK TO POLE EYE PLATE (ITEM I0424), AS NEEDED.

| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

| STANDARD GUY ASSEMBLY 12M (3/8") GALV, DOWN GUY | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. A-3090 | DG |




NOTES:

1. PREFORMED DEADEND MUST BE PROPER OVAL SHAPE AND FIT COMPLETELY INTO GUY STRAP.

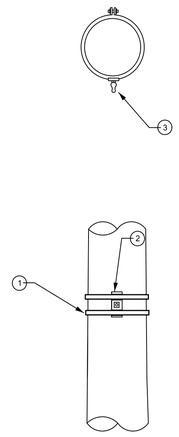
2. IF BOND BETWEEN STRAND AND DOWN GUY IS REQUIRED BY SPECIFIC LOCAL INTERPRETATION USE GUY TAIL AND K-2 BONDING CLAMP.

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | AS REQ'D | #4 CU. GROUND WIRE (LENGTH AS REQUIRED) |
| 2 | 1 | K-2 BONDING CLAMP |
| 3 | 1 | 5/8" x REQUIRED LENGTH MACHINE BOLT W/ LOCKNUT |
| 4 | 1 | THIMBLEYE NUT |
| 5 | 1 | GUYING BRACKET |
| 6 | 1 | CONNECTOR, SIZE AS REQUIRED |

| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

| STRAND DEADEND | | | FIBER STANDARDS & DESIGN | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. | DE |




NOTE:

1. EYE NUT NOT USED FOR SUS OR SUSA ASSEMBLY.

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | | STAINLESS DOUBLE BANDING WITH BUCKLES |
| 2 | 1 | STAINLESS MOUNTING BRACKET, HEAVY DUTY, 3/4" BOLT |
| 3 | 1 | EYE NUT, 3/4" |

| NO | DATE | BY | REVISION |
|---|---|---|---|
| | | | |

APPROVED:

| COMM ATTACHMENT POLE BAND TYPE | | | COMM ATTACHMENT | |
|---|---|---|---|---|
| DATE | DRAWN BY | CHECKED BY | NO. | J-HOOK-BAND |

05/28/2025

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 100943
STATE OF TENNESSEE

# ELECTRIC POWER BOARD OF CHATTANOOGA

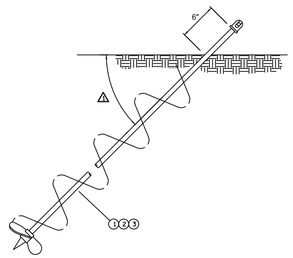
| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE: NTS | DATE: 05.28.2025 |


Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


TELECOMMUNICATION RELOCATION
CONSTRUCTION DETAILS

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-06 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

HAMILTON COUNTY




△ GENERAL NOTES:

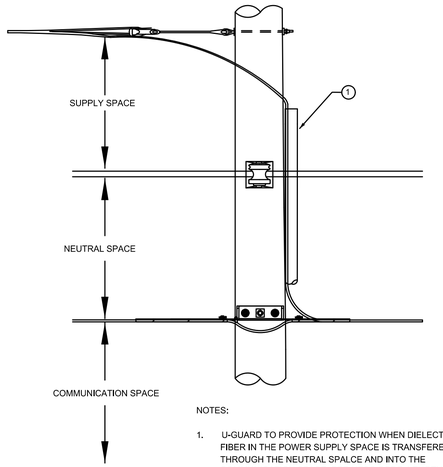
1. THIS ANGLE DETERMINED BY ATTACHMENT POINT OF GUY ON POLE. ANCHOR ROD SHOULD BE INLINE WITH GUY WIRE.

BILL OF MATERIAL

| | SIZE 12M | 24M | 36M | DESCRIPTION | ITEM |
|---|---|---|---|---|---|
| 1 | 1 | | | ANCHOR - SCREW TYPE - 8" DIA. WITH 7' X 7'-0" TWINEYE ROD | I0833A |
| | | | | 12MLB, 12,000# RATING IN CLASS 5 SOIL | |
| 2 | | 1 | | ANCHOR - SCREW TYPE - 14" DIA. WITH 1" X 7'-0" TRIPLEYE ROD | I0890 |
| | | | | 24MLB, 24,000LB RATING IN CLASS 5 SOIL | |
| 3 | | | 1 | ANCHOR - SCREW TYPE - 10" & 12" DOUBLE WITH TRIPLEYE ADAPTER | I0891 |
| | | | | 36MLB, 36,000LB RATING IN CLASS 5 SOIL | |

| | | | | | |
|---|---|---|---|---|---|
| | | | | ANCHOR ASSEMBLIES 12M, 24M, 36M ANCHORS | |
| NO | DATE | BY | REVISION | | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | NO. A-3090 / 12M,24M, 36M |

FIBER STANDARDS & DESIGN



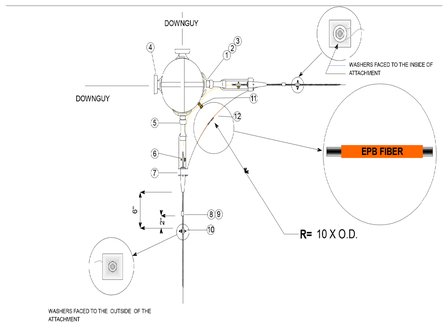

NOTES:

1. U-GUARD TO PROVIDE PROTECTION WHEN DIELECTRIC FIBER IN THE POWER SUPPLY SPACE IS TRANSFERED THROUGH THE NEUTRAL SPALCE AND INTO THE COMMUNICATION SPACE, PER NESC CODE, LENGTH OF U-GUARD CAN VARY BY POLE, PER POLE ATTACHMENT HEIGHTS.

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 1 | MOLD-2"PVC U-GUARD 10' LENGTH PE2UG10ST |

| | | | | | |
|---|---|---|---|---|---|
| | | | | U-GUARD | |
| | DATE | BY | REVISION | | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | NO. / U-GUARD |

FIBER STANDARDS & DESIGN




△ SEE GENERAL NOTES

| | | | | | |
|---|---|---|---|---|---|
| | | | | ARMORED FIBER OPTIC CABLE DOUBLE DEADEND | |
| REV. | REVISION | DATE | BY | Scale: 1" = 1'-0" | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | 1 OF 2 SHEETS |

BILL OF MATERIAL

| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 2 | WASHER-CURVED-4" SQ-13/16"-HOLE-MALLEABLE-IRON | I0333 | |
| 2 | 2 | NUT-LOCKNUT-¾" | I0391 | |
| 3 | 2 | BOLT-MACH-GALV-¾"X14" | I0641 | |
| 4 | 2 | ATTACHMENT-GUY-MALLABLE IRON "C" GUY HOOK | | |
| 5 | 2 | NUT-THIMBLE EYE ¾" "C SERIES" | | |
| 6 | 2 | ***CONNECTOR-BLACKBURN-K1 NOT APPROVED*** | | |
| 7 | 2 | DEADEND-AUTOMATIC-5/16" GUY WIRE | I0404 | |
| 8 | 2 | SPACER-CABLE-½" BELL TYPE | | |
| 9 | 2 | LASHED-CABLE SUPPORTS STRAPS- STAINLESS STEEL 16" | | |
| 10 | 2 | D LASHING WIRE CLAMP-GALVANIZED | | |
| 11 | 1 | CONNECTOR- TYPE- CONTINGENT UPON GROUND CONDUCTOR SIZE & TYPE | SPECIFY | |
| 12 | 1 | PLP FIBER OPTIC MARKER, ORANGE | | |
| 13 | 2 | DEADEND-PREFORMED-GUY-STEEL STRAND 5/16" | I0453 | |

△ GENERAL NOTES

1. CABLE BEND RADIUS TO BE DETERMINED
2. USE "C" GUY HOOKS ONLY ON WOOD STRUCTURES (ITEM 4) SUBSTITUTE BAND ON STEEL OR CONCRETE STRUCTURES
3. ALL GUYS MUST BE TENSIONED PRIOR TO PLACING STRAND
4. ALL STRAND HARDWARE MOUNTED ON SEPARATE BOLT MUST BE BONDED TOGETHER AND TO THE VERTICAL GROUND, IF EXISTING. DO NOT BOND TO ANY PART OF A STANDVISE OR PREFORMED DEADEND
5. TAIL OF THE GUY WIRE / STRAND MUST NOT EXTENDED BEYOND OUTSIDE THE BAIL OF TERMINATING DEVICE

| | | | | | |
|---|---|---|---|---|---|
| | | | | ARMORED FIBER OPTIC CABLE DOUBLE DEADEND | |
| REV. | REVISION | DATE | BY | Scale: 1" = 1'-0" | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | 2 OF 2 SHEETS |

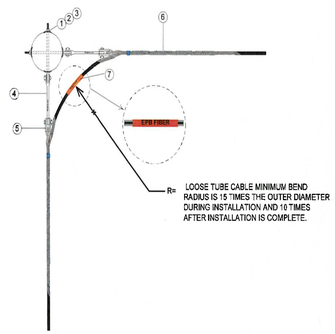
BILL OF MATERIAL

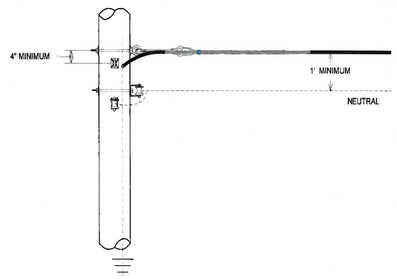
| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 2 | BOLT-EYE-OVAL 5/8"X14" | I0691 | FTFSDDA |
| 2 | 4 | WASHER-CURVED-3"SQ-11/16"HOLE-MALLEABLE IRON | I0336 | |
| 3 | 2 | NUT-SQUARE-5/8" | I0346 | |
| 4 | 2 | LINK-EXTENSION-14" DUCTILE IRON 15,000 LBS | | |
| 5 | 2 | CLEVIS-THIMBLE-LARGE FOR PREFORMED DEADENDS | | |
| 6 | 2 | FIBER OPTIC CABLE-DEADEND-PREFORM ADSS (RANGE---- -----) | SPECIFY | |
| 7 | 1 | PLP FIBER OPTIC MARKER, RED (TRANSMISSION) | - | |

△ GENERAL NOTES

1. IF FOC DEADEND IS OVER 600' OR A "CRITICAL CROSSING SPAN" SUBSTITUTE NUMBER 6 WITH A MEDIUM TENSION DEADEND
2. THE END OF ALL MACHINE OR EYE BOLTS MUST NOT EXTEND MORE THAN 1-½" BEYOND THE NUT
3. ADSS LOOSE TUBE CABLE MINIMUM BEND RADIUS IS 15 TIMES THE OUTER DIAMETER DURING INSTALLATION AND 10 TIMES AFTER INSTALLATION IS COMPLETE.

| | | | | | |
|---|---|---|---|---|---|
| | | | | ADSS FIBER OPTIC DOUBLE DEADEND | |
| REV. | REVISION | DATE | BY | Scale: 1/2" = 1'-0" | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | NO. A-5877 / 1 of 2 SHEETS |




△ SEE GENERAL NOTES

| | | | | | |
|---|---|---|---|---|---|
| | | | | ADSS FIBER OPTIC DOUBLE DEADEND | |
| REV. | REVISION | DATE | BY | Scale: 1/2" = 1'-0" | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | NO. A-5877 / 2 of 2 SHEETS |

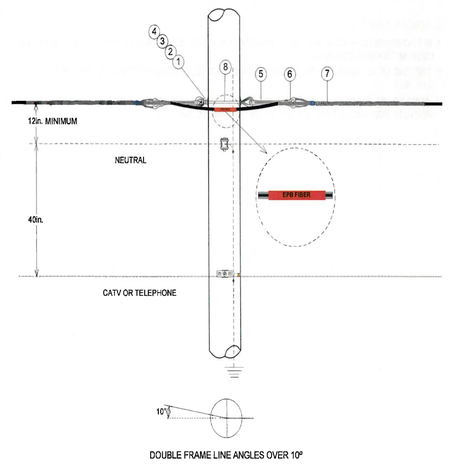
BILL OF MATERIAL

| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 1 | BOLT-EYE-OVAL 5/8"X14" | I0691 | |
| 2 | 2 | WASHER-CURVED-3"SQ-11/16"HOLE-MALLEABLE IRON | I0336 | |
| 3 | 2 | NUT-SQUARE-5/8" | I0346 | |
| 4 | 1 | NUT-THIMBLE EYE 5/8" | I0324 | |
| 5 | 2 | LINK-EXTENSION-14" DUCTILE IRON 15,000 LBS | | |
| 6 | 2 | CLEVIS-THIMBLE-LARGE FOR PREFORMED DEADENDS | I0348 | |
| 7 | 2 | FIBER OPTIC CABLE-DEADEND-PREFORM ADSS (RANGE---- -----) | SPECIFY | |
| 8 | 1 | PLP FIBER OPTIC MARKER, RED (TRANSMISSION) | | |

△ GENERAL NOTES

1. IF FOC DEADEND IS OVER 600' OR A "CRITICAL CROSSING SPAN" SUBSTITUTE ITEM 7 WITH A MEDIUM TENSION DEADEND
2. DOUBLE FRAME ATTACHMENT IF LINE ANGLE IS OVER 10°

| | | | | | |
|---|---|---|---|---|---|
| | | | | ADSS FIBER OPTIC CABLE IN-LINE DOUBLE DEADEND *LIMITED TENSION DEADEND* | |
| REV. | REVISION | DATE | BY | Scale: 1/2" = 1'-0" | |
| APPROVED: | | | | DATE / DRAWN BY / CHECKED BY | NO. A-5946 / 1 of 2 SHEETS |




DOUBLE FRAME LINE ANGLES OVER 10°

△ SEE GENERAL NOTES

| | | | | | |
|---|---|---|---|---|---|
| | | | | ADSS FIBER OPTIC CABLE IN-LINE DOUBLE DEADEND *LIMITED TENSION DEADEND* | |
| REV. | REVISION | DATE | BY | Scale: 1/2" = 1'-0" | |
| APPROVED | | | | DATE / DRAWN BY / CHECKED BY | NO. A-5946 / 2 of 2 SHEETS |

05/28/2025

GREGORY K. POSTON REGISTERED ENGINEER AGRICULTURE COMMERCE No. 100945 STATE OF TENNESSEE

# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE: NTS | DATE: 05.28.2025 |


Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


TELECOMMUNICATION RELOCATION CONSTRUCTION DETAILS

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U5-07 |
| | | 33057-3228-94 | |
| | | 124076.00 | |
| | | | |

HAMILTON COUNTY

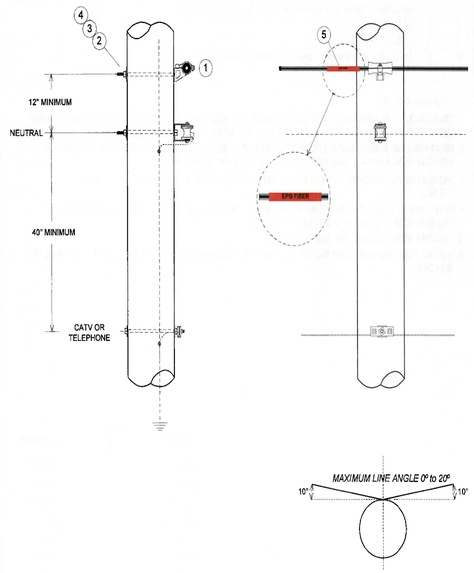
BILL OF MATERIAL

| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 1 | AFL TRUNION ASSEMBLY ATGM -(TBD) | SPECIFY | FTFST |
| 2 | 1 | BOLT-MACH-GALV-SHSN-5/8"X12" | I5088 | |
| 3 | 1 | WASHER-CURVED-3" 11/16" HOLE MALLEABLE IRON | I0336 | |
| 4 | 1 | NUT-SQUARE-5/8" | I0346 | |
| 5 | 1 | FIBER OPTIC MARKER | | |

△ GENERAL NOTES

1. TRUNION MAY BE USED AS A STRINGING DEVICE BY REMOVING BUSHING INSERTS. MAXIMUM LINE ANGLE FOR STRINGING IS 15° (7.5° PER SIDE). AMOUNT OF STRUCTURES MUST NOT EXCEED 30.
2. MAXIMUM LINE ANGLE INSTALLED (HORIZONTAL PLANE) 20°-10° *PER SIDE. MAXIMUM SAG ANGLE INSTALLED (VERTICAL PLANE) 20° - 10°* .
3. THE END OF ALL MACHINE OR EYE BOLTS MUST NOT EXTEND MORE THAN 1-½" BEYOND THE NUT.
4. MATCH THE ACTUAL CABLE DIAMETER WITH THE COLOR CODE OR DIAMETER RANGE IMPRINTED ON TRUNION INSERT FROM THE CHART LISTED BELOW.
5. RECOMMENDED TORQUE: 3/8" BOLT – 15 lbf-ft.
6. SLOT PROVIDED ON THE SIDE OF THE TRUNION WILL ACCEPT 1-¼" STAINLESS STEEL BANDING FOR MOUNTING TO STEEL OR CONCRETE STRUCTURES.

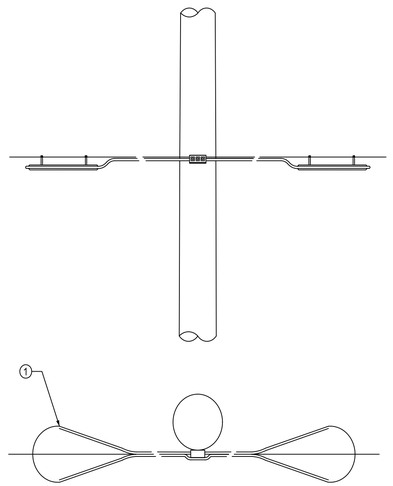
| CATALOG NUMBER | CABLE DIAMETER RANGE | COLOR CODE |
|---|---|---|
| ATGN420/474 | .420-.474 | BLACK |
| ATGN475/525 | .475-.525 | BLUE |
| ATGN526/575 | .526-.575 | ORANGE |
| ATGN576/625 | .576-.625 | BROWN |
| ATGN626/725 | .626-.725 | GREEN |
| ATGN726/775 | .726-.775 | RED |
| ATGN776/825 | .776-.825 | PURPLE |
| ATGN826/875 | .826-.875 | YELLOW |
| ATGN876/925 | .876-.925 | PINK |
| ATGN960/1045 | .960-1.045 | GRAY |




△ SEE GENERAL NOTES

| ADSS FIBER OPTIC SUPPORT CLAMP<br>I ANGENT / TRUNION ASSEMBLY<br>MAXIMUM SPAN LENGTH 600ft. LINE ANGLE LESS THAN 20° | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| REV. | REVISION | DATE | BY | Scale: 3/4" = 1'-0" | | | | |
| APPROVED | | | | DATE 11/7/2006 | DRAWN BY GAP | CHECKED BY | NO. A-5875 | 1 of 2 SHEETS |

| ADSS FIBER OPTIC SUPPORT CLAMP<br>TANGENT / TRUNION ASSEMBLY<br>MAXIMUM SPAN LENGTH 600ft. LINE ANGLE LESS THAN 20° | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| REV. | REVISION | DATE | BY | Scale: 3/4" = 1'-0" | | | | |
| APPROVED | | | | DATE 11/7/2006 | DRAWN BY GAP | CHECKED BY | NO. A-5875 | 2 of 2 SHEETS |

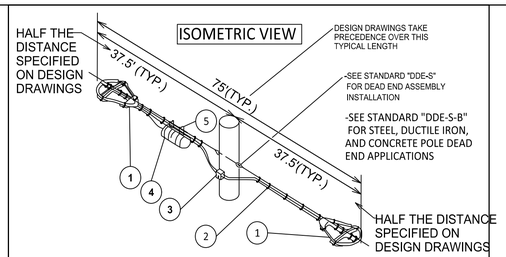


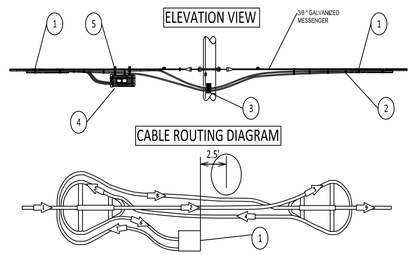

NOTE:

1. STORAGE LOOP IS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 1 | FIBERLOOP |
| 2 | | FIBER (LENGTH AND SIZE AS REQUIRED) |

| NO | DATE | BY | REVISION | FIBER OPTIC STORAGE LOOP | | | FIBER STANDARDS & DESIGN | | |
|---|---|---|---|---|---|---|---|---|---|
| APPROVED: | | | | DATE | DRAWN BY | CHECKED BY | NO. | LOOP | |




| ID | QTY. | DESCRIPTION |
|---|---|---|
| 1 | 2 | AERIAL SLACK STORAGE DEVICE |
| 2 | ∞ | CABLE TIES |
| 3 | 1 | UNI-GROUP CABLE GUIDE |
| 4 | 1 | DOME CLOSURE |
| 5 | 2 | STRAND OFFSET MOUNTING BRACKET |

| NO | DATE | BY | REVISION | FIBER SPLICE ENCLOSURE WITH AERIAL SLACK LOOP | | | FIBER STANDARDS & DESIGN | | |
|---|---|---|---|---|---|---|---|---|---|
| APPROVED: | | | | DATE | DRAWN BY | CHECKED BY | NO. | LOOP | |

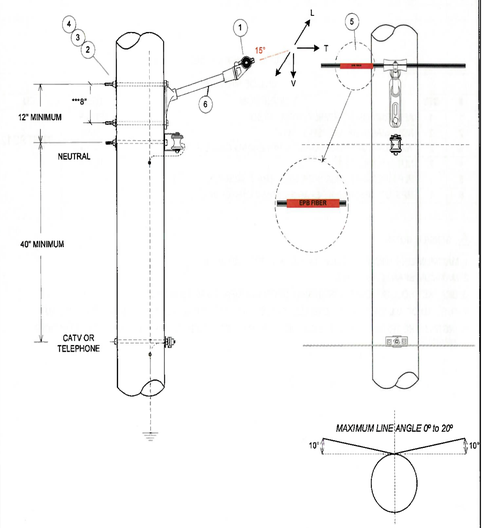
BILL OF MATERIAL

| # | QTY | DESCRIPTION | ITEM | CU |
|---|---|---|---|---|
| 1 | 1 | AFL TRUNION ASSEMBLY ATGM – (TBD) | SPECIFY | FTFSTSA |
| 2 | 2 | BOLT-MACH-GALV-SHSN-5/8"X12" | I0588 | |
| 3 | 2 | WASHER-CURVED-3" SQ-11/16" HOLE-MALLEABLE IRON | I0336 | |
| 4 | 2 | NUT-SQUARE-5/8" | I0346 | |
| 5 | 1 | FIBER OPTIC MARKER | | |
| 6 | 1 | MPS 18" / 15° STANDOFF BRACKET (MPS G1MDA118AF) | | |

△ GENERAL NOTES

1. TRUNION MAY BE USED AS A STRINGING DEVICE BY REMOVING BUSHING INSERTS. MAXIMUM LINE ANGLE FOR STRINGING IS 15° (7.5° PER SIDE). AMOUNT OF STRUCTURES MUST NOT EXCEED 30.
2. MAXIMUM LINE ANGLE INSTALLED (HORIZONTAL PLANE) 20°-10° *PER SIDE. MAXIMUM SAG ANGLE INSTALLED (VERTICAL PLANE) 20° - 10°* . MAXIMUM SPAN LENGTH TBD
3. THE END OF ALL MACHINE OR EYE BOLTS MUST NOT EXTEND MORE THAN 1-½" BEYOND THE NUT.
4. MATCH THE ACTUAL CABLE DIAMETER WITH THE COLOR CODE OR DIAMETER RANGE IMPRINTED ON TRUNION INSERT FROM THE CHART LISTED BELOW.
5. RECOMMENDED TORQUE: 3/8" BOLT – 15 lbf-ft.
6. INSTALL THE TRUNION WITH THE 5/8" HEX NUT AND LOCK WASHER SUPPLIED WITH THE STANDOFF BRACKET

| CATALOG NUMBER | CABLE DIAMETER RANGE | COLOR CODE |
|---|---|---|
| ATGN420/474 | .420-.474 | BLACK |
| ATGN475/525 | .475-.525 | BLUE |
| ATGN526/575 | .526-.575 | ORANGE |
| ATGN576/625 | .576-.625 | BROWN |
| ATGN626/725 | .626-.725 | GREEN |
| ATGN726/775 | .726-.775 | RED |
| ATGN776/825 | .776-.825 | PURPLE |
| ATGN826/875 | .826-.875 | YELLOW |
| ATGN876/925 | .876-.925 | PINK |
| ATGN960/1045 | .960-1.045 | GRAY |




△ SEE GENERAL NOTES

*** HOLE SPACING CONTINGENT UPON MANUFACTURES DESIGN

| MINIMUM ULTIMATE LOAD (lbs) | | |
|---|---|---|
| L=1200 | V=1200 | T=1500 |

| SINGLE FOC ATTACHMENT<br>18"/ 15°FIBERGLASS STANDOFF BRACKET | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| REV. | REVISION | DATE | BY | Scale: 3/4" = 1'-0" | | | | |
| APPROVED | | | | DATE 11/7/2006 | DRAWN BY GAP | CHECKED BY | NO. A-5942 | 1 of 2 SHEETS |

| SINGLE ADSS FOC ATTACHMENT<br>18"/ 15° FIBERGLASS STANDOFF BRACKET | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| REV. | REVISION | DATE | BY | Scale: 3/4" = 1'-0" | | | | |
| APPROVED | | | | DATE 11/7/2006 | DRAWN BY GAP | CHECKED BY | NO. A-5942 | 2 of 2 SHEET |

05/28/2025

GREGORY K. POSTON
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
NO. 100943
STATE OF TENNESSEE

# ELECTRIC POWER BOARD OF CHATTANOOGA

| | |
|---|---|
| JOB NUMBER: | 42027.16 |
| DESIGNED: | BBG |
| DRAWN: | DRB |
| CHECKED: | GKP |
| SCALE | NTS |
| DATE | 05.28.2025 |


Gresham Smith
2095 LAKESIDE CENTRE WAY
SUITE 210
KNOXVILLE, TENNESSEE 37922
(865) 521-6777 (866) 539-7192


TELECOMMUNICATION RELOCATION CONSTRUCTION DETAILS

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U6-1 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

SR-320 EAST BRAINERD RD HAMILTON

# UTILITIES INDEX


| SHEET NAME | SHEET NUMBER |
|---|---|
| ESTIMATED UTILITY QUANTITIES | U6-1 |
| SPECIAL CONDITIONS | U6-2 |
| TDOT STANDARD UTILITY NOTES | U6-3 |
| UTILITY RELOCATION STA. 12+50.57 TO STA. 25+55.53 | U6-4 |
| UTILITY RELOCATION DETAILS | U6-5 |


## LEGEND:

- TEMPORARY LOCATION (BLUE)
- EXISTING TO REMAIN (ORANGE)
- EXISTING TO BE REMOVED OR RETIRED (GREEN)
- NEW INSTALLATION (RED)
- T (UG) — NEW AT&T UNDERGROUND CABLE (DIRECT BURIED)
- T — NEW AT&T OVERHEAD LINE
- T — NEW AT&T SERVICE DROP
- OHG — NEW OVERHEAD GUY
- T (UG) — EXISTING AT&T UNDERGROUND CABLE TO REMAIN
- T — EXISTING AT&T OVERHEAD LINE TO REMAIN
- T — EXISTING AT&T SERVICE DROP TO REMAIN
- OHG — EXISTING OVERHEAD GUY TO REMAIN
- T (UG) — EXISTING AT&T UNDERGROUND CABLE TO BE REMOVED OR RETIRED
- T — EXISTING AT&T OVERHEAD LINE TO BE REMOVED OR RETIRED
- T — EXISTING AT&T SERVICE DROP TO BE REMOVED OR RETIRED
- OHG — EXISTING OVERHEAD GUY TO BE REMOVED/RETIRED
- EXISTING AT&T POLE TO REMAIN
- EXISTING AT&T POLE TO BE REMOVED OR RETIRED
- NEW INSTALLATION OF AT&T POLE
- NEW INSTALLATION OF AT&T POLE WITH GUY WIRE
- EXISTING AT&T GUY WIRE TO REMAIN
- EXISTING AT&T GUY WIRE TO BE REMOVED
- NEW INSTALLATION OF AT&T GUY WIRE
- TEMPORARY AT&T GUY WIRE
- EXISTING ELECTRIC UTILITY POLE TO REMAIN
- EXISTING ELECTRIC UTILITY POLE TO BE REMOVED OR RETIRED
- NEW INSTALLATION OF ELECTRIC UTILITY POLE
- EXISTING AT&T PUSH BRACING TO REMAIN
- EXISTING AT&T PUSH BRACING TO BE REMOVED
- NEW AT&T PUSH BRACING
- TELE EXISTING AT&T PULL BOX TO REMAIN
- TELE EXISTING AT&T PULL BOX TO BE REMOVED OR RETIRED
- TELE NEW INSTALLATION OF AT&T PULL BOX
- NEW INSTALLATION OF AT&T MANHOLE
- NEW INSTALLATION OF AT&T HANDHOLE

## UTILITY COMPANY CONTACT

AT&T TENNESSEE
300 E. MARTIN LUTHER KING BOULEVARD
CHATTANOOGA, TN. 37403
JOE PERREL
423-488-2825
EMAIL: JP1389@ATT.COM

**ESTIMATED UTILITY QUANTITIES**

| | | | | Project No. 1: 33057-3228-94 |
|---|---|---|---|---|
| | ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
| | 793-97.01 | RESTORE ASPHALT | S.Y. | 100 |
| | 701-01.01 | CONCRETE SIDEWALK (4 ") | S.F. | 75 |
| | 702-03.00 | CONCRETE COMBINED CURB & GUTTER | C.Y. | 1 |
| 1 | 793-01.05 | POLE 35FT CLASS 2 WOOD | EA | 1 |
| 1 | 793-01.12 | POLE 40FT CLASS 4 WOOD | EA | 2 |
| 2 | 793-01.41 | ANCHOR 1IN | EACH | 9 |
| 3 | 793-11.20 | HANDHOLE 30INX48IN | EACH | 1 |
| 4 | 793-12.21 | DIG SPLICE PIT (15 LF) | EACH | 2 |
| 5 | 793-13.17 | 2 DUCT FORMATION @ 36IN DEPTH | L.F. | 150 |
| 6 | 793-14.02 | CONCRETE ENCASEMENT PER DUCT | L.F. | 300 |
| 7 | 793-14.10 | 4IN CORE DRILL INTO MANHOLE | EACH | 2 |
| 8 | 793-14.12 | 1 1/4IN INNERDUCT | L.F. | 450 |
| 9 | 793-16.01 | MH (RETIRE/REMOVE/GRAVEL BACKFILL) | EACH | 3 |
| 10 | 793-98.04 | REMOVE POLES ALL SIZES | EACH | 10 |

1 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING, BUT NOT LIMITED TO BUTT WRAP, MGNV, GROUND ROD, DIG HOLE, TAMP, BLASTING AND NUMBER POLE.

2 INCLUDES ALL MATERIALS, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO DIGGING HOLE, BLASTING OR MECHANICALLY INSERTING INTO GROUND, BONDING/GROUNDING.

3 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO

4 INCLUDES SETUP, BACKFILL, FACILITY LOCATE

5 SPACERS, COUPLINGS, BENDS, OPENING TRENCH, BACKFILL PER SPECS, SURFACE RESTORATION OF ALL CROSSINGS TO TDOT STANDARDS, SETUP, TRAFFIC CONTROL.

6 ALL DUCT FORMATIONS

7 INCLUDES PIPE, SETUP, CABLE LOCATION, AND BORING

8 INCLUDES ALL MATERIALS, LABOR AND EQUIPMENT INCLUDING BUT NOT LIMITED TO SETUP, TRAFFIC CONTROL, RODDING DUCT AND PULLING IN INNERDUCT.

9 INCLUDES ALL LABOR INCLUDING TRAFFIC CONTROL AND SETUP, REMOVAL OF LID AND COLLARS, BACKFILL WITH GRAVEL.

10 INCLUDES TRAFFIC CONTROL, LABOR AND EQUIPMENT

## GENERAL NOTES:

1. ALL PLACEMENT OF DUCT BANKS TO BE AT 36" DEPTH TO FINAL GRADE IN CUTS, 36" DEPTH TO CURRENT GRADE IN FILLS.
2. PROVIDE CABLE MARKERS EVERY 500' AND IN-LINE OF SIGHT FROM EACH MARKER. ADD MARKERS AT ALL ROAD CROSSINGS.
3. SEE DETAIL SHEETS FOR MANHOLE SPECIFICATIONS.
4. RETURN TO AT&T EXISTING MANHOLE FRAME/COVERS REMOVED. BACKFILL MANHOLES ACCORDING TO T.D.O.T. REQUIREMENTS.
5. COORDINATE CROSSINGS WITH EXISTING AND PROPOSED UTILITIES TO SET FINAL GRADE FOR DUCT BANKS.
6. GROUND BED LOCATIONS AS SPECIFIED.
7. SURVEY INFORMATION IN THESE DRAWINGS ARE FROM OTHERS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATIONS OF ALL EXISTING UTILITIES. ANY UTILITIES NOT SHOWN ON THESE DRAWINGS ARE ALSO THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGES TO, AND FOR PROTECTION OF ALL EXISTING UTILITIES.

SEALED BY

ANDREW J. CLARK
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
5-30-2025
STATE OF TENNESSEE


BARGE DESIGN SOLUTIONS
520 West Summit Hill Drive // Suite 1202 // Knoxville, Tennessee 37902
PHONE (865) 637-2810 // FAX (865) 673-8554
BARGE DESIGN PROJECT NO. 32119-95


AT&T TENNESSEE

ESTIMATED UTILITY QUANTITIES

SCALE: NONE

5/30/2025
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TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U6-2 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

SR-320 EAST BRAINERD RD HAMILTON

## AT&T SPECIAL CONDITIONS AND ADDITIONAL BREAKDOWN OF TIME

1. IF ALL OTHER SECTIONS OF AT&T'S WORK IS READY AT THE SAME TIME, THEN 150 DAYS IS NEEDED TO COMPLETE THE PROJECT. TO HELP KEEP THE PROJECT MOVING FORWARD, AT&T AGREES TO WORK SECTIONS OF PLACEMENT AND CUTOVER AS THEY BECOME AVAILABLE AS LONG AS THEY CAN LOGISTICALLY BE WORKED, AND DO NOT PLACE ADDITIONAL COSTS ON AT&T OR CAUSE ANY SAFETY CONCERNS. AT&T ALSO AGREES TO EVALUATE AND WORK WITH THE STATE CONTRACTOR IF THERE ARE TEMPORARY RELOCATIONS THAT ARE NEEDED. THESE TEMPORARY RELOCATIONS WILL HAVE THEIR OWN SCHEDULE OF CALENDAR DAYS AND MAY BE 100% REIMBURSABLE IN ADDITION TO ANY CHAPTER 86 REIMBURSEMENTS.

2. BY BREAKING IT DOWN INTO SECTIONS, EACH SECTION HAS ITS OWN MOBILIZATION AND MATERIAL ORDERING TIME. THE SPECIAL CONDITIONS APPLY TO EACH SECTION INDIVIDUALLY; HOWEVER, ADDITIONAL CLARIFICATION WILL BE INCLUDED IN EACH SECTION.

3. THE CONSTRUCTION SCHEDULE LISTED INCLUDES STANDARD MATERIAL ORDERING INTERVALS, PROJECTED WORKLOADS AT THE TIME OF CONSTRUCTION, ESTIMATED WORK CONTENT, AND LIMITED DELAYS DUE TO WEATHER OR CUSTOMER RELEASES FOR SCHEDULED SERVICE INTERRUPTIONS. COMPLETION OF WORK IS ALSO CONTINGENT ON NATIONAL OR STATE EMERGENCY ORDERS WHICH CAN RESTRICT TELECOMMUNICATIONS WORK.

4. THE CONSTRUCTION SCHEDULE LISTED CANNOT BE IMPLEMENTED UNTIL AT&T HAS BEEN NOTIFIED IN WRITING BY TDOT AND/OR THE STATE CONTRACTOR THAT ALL AT&T ITEMS INCLUDED IN THE STATE CONTRACT HAVE BEEN PLACED, ALL POWER COMPANY POLES HAVE BEEN SET, AND ALL OTHER OVERHEAD UTILITIES HAVE BEEN TRANSFERRED DUE TO SAFETY REGULATIONS AND POTENTIAL CONSTRUCTION CONFLICTS.

5. ALL SCHEDULES/SECTIONS ARE BASED ON AT&T BEING ABLE TO GET APPROVAL FROM TDOT FOR USE OF THE DIMINIMIS FOR THOSE ITEMS THAT CANNOT BE OBTAINED USING FHWA/BUY AMERICA APPROVED STEEL. ANY DELAYS ON APPROVAL OF THESE ITEMS WILL CAUSE AN EQUAL DELAY ON AT&T'S SCHEDULE.

6. ANY CHANGES THAT THE STATE'S CONTRACTOR MAKES TO THE PLANS PROVIDED TO THEM BY TDOT MAY CAUSE A REDESIGN TO AT&T'S PLANS. AT&T WILL REQUIRE TIME TO EVALUATE AND MAKE CHANGES IF NECESSARY. THESE CHANGES WILL HAVE TO BE APPROVED BY TDOT THROUGH A FORMAL STAMPED REDESIGN AND WILL REQUIRE ADDITIONAL TIME ON THE SCHEDULE. AT&T'S TIME WILL NOT START UNTIL AFTER THE DESIGN CHANGES AND ALL OTHER SPECIAL CONDITIONS HAVE BEEN APPROVED/COMPLETED.

7. AT&T CAN MOVE OVERHEAD LINES IN SOME INSTANCES BEFORE OTHER COMMUNICATION COMPANIES; HOWEVER, THIS COULD CAUSE ADDITIONAL TIME DELAYS AND COSTS TO AT&T AND TO THOSE OTHER COMPANIES. THESE COSTS MAY BE SUBJECT TO THE PARAGRAPH ABOVE.

8. WHEN REFERRING TO "ALL" POWER COMPANY POLES OR "ALL" OTHER OVERHEAD UTILITIES, IT IS ONLY REFERRING TO THOSE POLES THAT HAVE AN IMPACT ON AT&T'S RELOCATION.

9. THIS SCHEDULE IS ALSO DEPENDENT ON AT&T HAVING ACCESS TO ALL OF ITS EXISTING FACILITIES UNTIL SUCH TIME AS THEY ARE NO LONGER IN SERVICE AND ARE READY TO BE RETIRED. EXISTING MANHOLE LIDS MAY REQUIRE RAISING TO MAINTAIN ACCESSIBILITY UNTIL IT CAN BE RETIRED.

10. AT&T MUST BE CONSULTED PRIOR TO CONTRACTOR REVISING SUGGESTED TDOT TRAFFIC CONTROL PHASING.

SEALED BY

ANDREW J. CLARK
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
5-30-2025
STATE OF TENNESSEE

BARGE DESIGN SOLUTIONS
520 West Summit Hill Drive // Suite 1202 // Knoxville, Tennessee 37902
PHONE (865) 637-2810 // FAX (865) 673-8554

BARGE DESIGN PROJECT NO. 32119-95

AT&T TENNESSEE

# SPECIAL CONDITIONS

SCALE: NONE

5/30/2025
F:\32\32119\32119S5\04_CAD\ELEC\B Date Const\PLOT\32119S5_U6-2.sht

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U6-3 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

SR-320 EAST BRAINERD RD HAMILTON

## TDOT STANDARD GENERAL NOTES:

1. EXCEPT FOR EROSION SEDIMENT CONTROL ITEMS, NO ROADWAY OR BRIDGE ITEMS SHALL BE UTILIZED TO COMPENSATE FOR WORK METHODS OR MATERIALS ASSOCIATED WITH AND/OR SPECIFIED FOR THE UTILITY INSTALLATION, EVEN THOUGH THE SAME OR SIMILAR ROADWAY OR BRIDGE MATERIALS MAY HAVE BEEN CALLED FOR IN THE UTILITY SPECIFICATIONS OR DRAWINGS.

2. 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.

3. 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.

4. IT SHALL BE THE RESPONSIBILITY OF THE PRIME CONTRACTOR'S SURVEYOR TO LAY OUT ALL THE FACILITIES BEING RELOCATED WITHIN THE CONTRACT.

5. FOR BURIED UTILITIES, THE PRIME CONTRACTOR OR SUBCONTRACTOR SHALL BE REQUIRED TO PROVIDE TO THE UTILITY UPON COMPLETION OF THE UTILITY'S RELOCATION WORK A SET OF AS-BUILT DRAWINGS FOR THEIR RECORDS. THESE AS-BUILT DRAWINGS SHOULD BE PREPARED AS THE JOB PROGRESSES TO ENSURE THEIR ACCURACY.

6. WHERE EROSION CONTROL MEASURES ARE NEEDED FOR THE UTILITY RELOCATION WORK OCCURRING INSIDE OR OUTSIDE STATE RIGHT-OF-WAY, THE CONTRACTOR SHALL SUBMIT TO THE TDOT PROJECT SUPERVISOR FOR APPROVAL A PROPOSED EROSION AND SEDIMENT CONTROL PLAN PRIOR TO BEGINNING THE WORK. TDOT APPROVAL MUST BE RECEIVED BEFORE THE EROSION CONTROL PAY ITEMS FOR ROADWAY CONSTRUCTION CAN BE USED FOR ANY ADDITIONAL EROSION CONTROL MEASURES REQUIRED FOR THE UTILITY RELOCATION WORK.

7. DRIVEWAY, SIDEWALK AND ROADWAY TEMPORARY RESTORATION SHALL BE PART OF THE IN-PLACE COST OF PLACING THE UTILITY ITEM WITHIN THE ROW.

8. 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 BORE TECHNOLOGY WITH NO STREAM CHANNEL IMPACTS.

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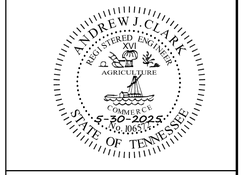



BARGE
DESIGN SOLUTIONS
520 West Summit Hill Drive // Suite 1202 // Knoxville, Tennessee 37902
PHONE (865) 637-2810 // FAX (865) 673-8554

BARGE DESIGN PROJECT NO. 32119-95

AT&T
TENNESSEE

TDOT STANDARD
UTILITY NOTES

5/30/2025
F:\32\32119\32119595\04_CAD\ELEC\B Date Const\PLOT\32119595_U6-3.sht

TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U6-4 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

SR-320 EAST BRAINERD RD HAMILTON

LIMIT OF CONSTRUCTION
PROSPERITY STA. 100+42.03
N 250246.7235
E 2209844.2105

END PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 25+55.53
N 250588.0303 E 2211066.3922

END PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 25+49.52
N 250586.2420
E 2211060.6590

STA. 13+87.95 SR 320 =
STA. 50+00.00 BENHAM
N 250239.2656
E 2209954.0088

OFF SITE AERIAL CONNECTION 200 LF AT UNDERGROUND MANHOLE BY AT&T FORCES

STA. 12+78.59 SR 320 =
STA. 100+00.00
PROSPERITY LANE
N 250205.1053
E 2209850.1125

HAUL ROAD 2

HAUL ROAD 1

TEMPORARY AT&T ANCHOR

(2) 4" DUCT RESTORE SIDEWALK, CURB AND GUTTER, AND ASPHALT FROM DUCT PLACEMENT

REPLACE HANDHOLE IN PROPOSED SIDEWALK WITH ADA COMPLIANT LID

SPLICE PIT - COORDINATE WITH RETAINING WALL CONSTRUCTION

(2) 4" DUCT CONCRETE ENCASED - COORDINATE DEPTH WITH RETAINING WALL CONSTRUCTION

DOT # 350030G
CSX 0WA 0124.800
SR 320 STA. 18+26.59

LIMIT OF CONSTRUCTION
HAUL ROAD 2 STA. 204+10.56
N 250327.6940 E 2210430.6240

PROP. RAILROAD AIR RIGHTS

STA. 21+54.14 SR-320 =
STA. 200+00.00 HAUL ROAD 2
N 250466.2530
E 2210684.0820

STA. 15+15.26 SR-320 =
STA. 150+00.00 HAUL ROAD 1
N 250274.8490
E 2210076.1880

LIMIT OF CONSTRUCTION
BENHAM STA. 50+53.92
N 250187.2940
E 2209968.3700

LIMIT OF CONSTRUCTION
HAUL ROAD 1 STA.153+22.75
N 250276.3520
E 2210337.2750

BEGIN PROJ. NO. BR-STP-320(10) CONST.
STATE CONST. 33057-3228-94
STA. 12+50.57
N 250196.3543 E 2209823.4972

BEGIN PROJ. NO. BR-STP-320(10) R.O.W.
STATE R.O.W. 33057-2228-94
STA. 12+35.11
N 250191.2320 E 2209807.9630

Ⓐ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
TOP ELEV - 691.07
STA: 21+78.45
OFF: 26.27

Ⓑ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
TOP ELEV-692.07
STA: 21+93.21
OFF: -19.976

Ⓒ GAS LINE SUE-A POINT
8" STEEL PETROLEUM IN
10" STEEL CASING
EXPOSED IN DITCH
TOP ELEV-690.75
STA: 22+05.24
OFF: -59.97

SEALED BY

ANDREW J. CLARK
REGISTERED ENGINEER
Andrew J. Clark
1-30-2025
STATE OF TENNESSEE

BARGE DESIGN SOLUTIONS
520 West Summit Hill Drive // Suite 1202 // Knoxville, Tennessee 37902
PHONE (865) 637-2810 // FAX (865) 673-4554
BARGE DESIGN PROJECT NO. 32119-95

AT&T TENNESSEE

# UTILITY RELOCATION

STA. 12+50.57 TO STA. 25+55.53

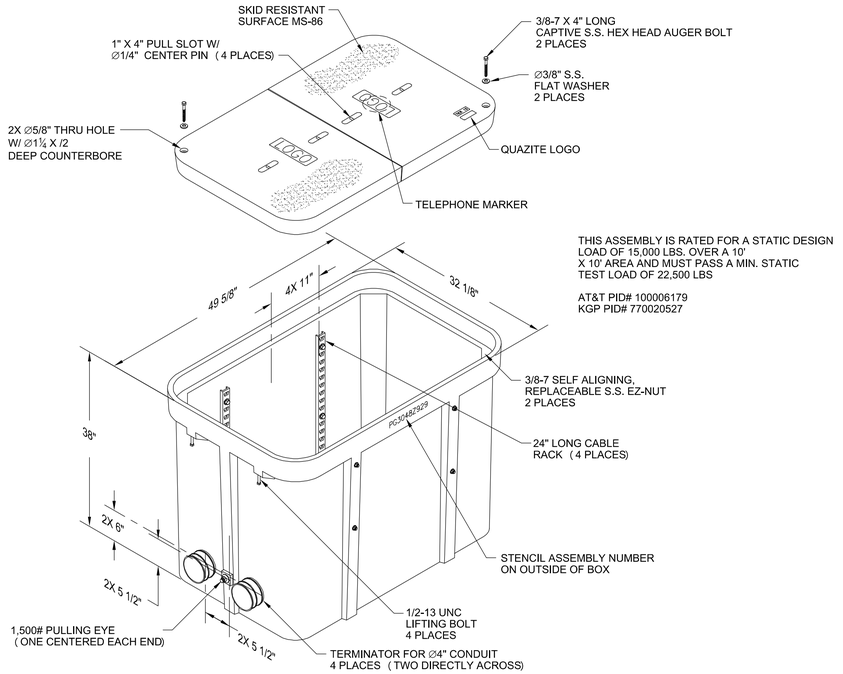
SCALE: 1"= 50'

1/30/2025
F:\32\32119\32119951\04_CAD\ELEC\B Date Const\PLOT\32119951_U6-4.sht

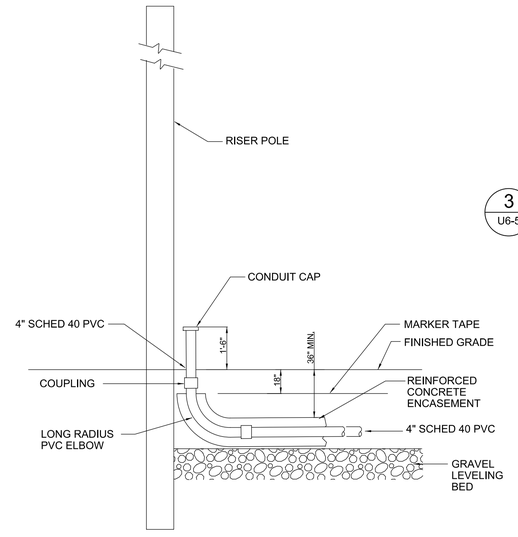
TENNESSEE D.O.T.
DESIGN DIVISION
FILE NO.

| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| PS&E | 2025 | BR-STP-320(10) | U6-5 |
| | | 33057-3228-94 | |
| | | PIN # 124076.00 | |
| | | | |

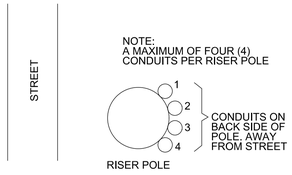
SR-320 EAST BRAINERD RD HAMILTON



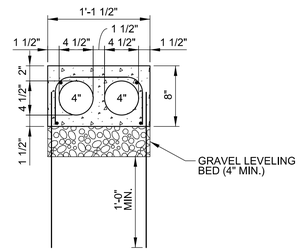

1 U6-5 TYPICAL 30"x48"x36" HANDHOLE
SCALE: N.T.S.




2 U6-5 RISER POLE
SCALE: N.T.S.



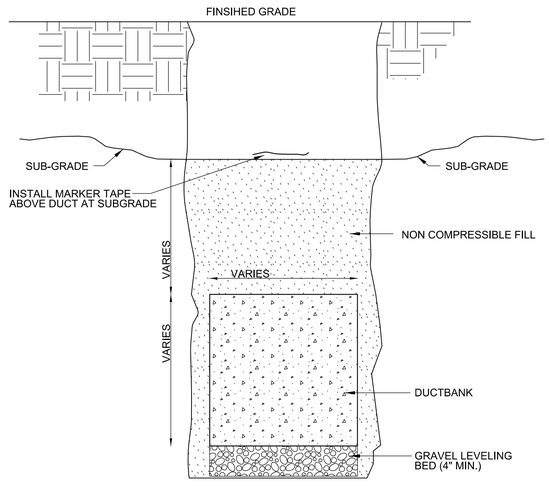

3 U6-5 CONDUIT ARRANGEMENT
SCALE: N.T.S.




4 U6-5 TYPICAL DUCTBANK SECTION 1x2
SCALE: N.T.S.

NOTE:

ORIENTATION OF DUCTS REPRESENTED BY DETAIL 4 MAY BE EITHER VERTICAL OR HORIZONTAL PROVIDED COVER IS MAINTAINED.




5 U6-5 TYPICAL DUCTBANK TRENCH
SCALE: N.T.S.

## TYPICAL DUCTBANK NOTES:

1. CONTRACTOR SHALL FURNISH AND INSTALL STEEL REINFORCED CONCRETE ENCASED DUCTBANK AS PER DETAILS.
2. DUCTBANK REINFORCING SHALL BE (4) - #5 REINFORCING STEEL EXTENDING THE ENTIRE LENGTH OF DUCTLINE AND SHALL BE INSTALLED USING BASE & INTERMEDIATE SPACERS THAT PROVIDE SEPARATION SHOWN IN SECTIONS WITH (2) - #5 REINFORCING STEEL TIE-DOWNS & (1) #3 REINFORCING STEEL STIRRUP AT 5'-0" INTERVALS. THE DUCTLINE SHALL BE INSTALLED ON A LEVEL BED OF GRAVEL 4" MIN. DEPTH.
3. CONCRETE DUCTBANK MUST BE VIBRATED TO ELIMINATE AIR POCKETS AS PER AT&T. CONCRETE TO BE 2500 PSI CONCRETE.
4. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN ON THESE DRAWINGS ARE APPROXIMATE. THE EXACT LOCATIONS SHALL BE DETERMINED IN THE FIELD BY CONTACTING THE UTILITY COMPANIES INVOLVED.
5. PROVIDE ALL NECESSARY PROTECTIVE MEASURES TO SAFEGUARD THE EXISTING UTILITIES FROM DAMAGE DURING THE CONSTRUCTION OF THIS PROJECT. FURNISH ANY SPECIAL EQUIPMENT REQUIRED TO WORK OVER AND AROUND THE UTILITIES.
6. PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL CONTACT THE UTILITY OWNERS TO NOTIFY THEM OF WORK IN THE AREA AND REQUEST THEM TO PROPERLY LOCATE THEIR RESPECTIVE UTILITY. NOTIFICATION SHALL BE GIVEN AT LEAST THREE BUSINESS DAYS PRIOR TO COMMENCEMENT OF OPERATIONS AROUND THE UTILITY.
7. UTILITIES CAN BE LOCATED BY CALLING THE TENNESSEE ONE CALL SYSTEM, AT 811.
8. DUCTBANK DESIGN AND SAFETY FOR DUCTBANK CONSTRUCTION IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL CONFORM WITH ALL APPLICABLE LOCAL, STATE, NATIONAL CODES, OSHA REGULATIONS, AND AUTHORITIES HAVING JURISDICTION.
9. THE STONE BEDDING AND BACKFILL SHALL BE DONE IN STRICT COMPLIANCE WITH TENNESSEE DEPT. OF TRANSPORTATION STANDARDS, AND THE PROJECT SPECIFICATIONS.
10. CONDUIT SHALL BE SCHEDULE 40 PVC. FURNISH AND INSTALL 1 1/4" MULTI CELL INNER DUCT AS INDICATED.

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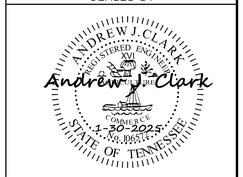


BARGE DESIGN SOLUTIONS
520 West Summit Hill Drive // Suite 1202 // Knoxville, Tennessee 37902
PHONE (865) 637-2810 // FAX (865) 673-8554
BARGE DESIGN PROJECT NO. 32119-95

AT&T TENNESSEE

UTILITY RELOCATION DETAILS

SCALE: NONE

1/30/2025
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# UTILITIES INDEX

| SHEET NAME | SHEET NUMBER |
|---|---|
| ESTIMATED QUANTITIES | U-7 |
| GAS RELOCATION | U-7.1 |

## ESTIMATED UTILITY QUANTITIES

| FN. | ITEM NO. | DESCRIPTION | UNIT | Project No.1: QUANTITY | % Utility | %Project |
|---|---|---|---|---|---|---|
| 1 | 791-02.02 | 2IN MEDIUM-DENSITY POLYETHYLENE GAS MAIN | L.F. | 195 | | |
| 1 | 791-02.05 | 6IN MEDIUM-DENSITY POLYETHYLENE GAS MAIN | L.F. | 1,080 | | |
| 2 | 791-04.05 | HDD 6IN POLYETHYLENE PIPE-UNCONSOLIDATED | L.F. | 400 | | |
| 4 | 791-06.09 | CONNECT TO 1-1/4IN EXISTING STEEL MAIN | EACH | 1 | | |
| 4 | 791-06.12 | CONNECT TO 6IN EXISTING STEEL MAIN | EACH | 2 | | |
| 5 | 791-07.03 | 6IN POLYETHYLENE GAS VALVE ASSEMBLY | EACH | 2 | | |
| 6 | 791-05.14 | BORE/JACK 10 IN STEEL CASING PIPE - UNCON | EACH | 300 | | |

FOOTNOTES

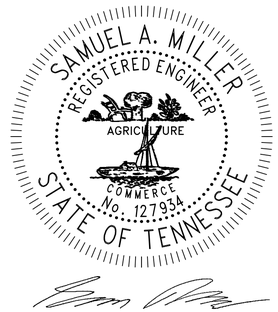
1. INCLUDES ALL MATERIALS INCLUDING SAND/STONE BEDDING. FLOWABLE FILL, TEMPORARY PACEMENT IN OR OUT OF ROW, LABOR, EQUIPMENT FOR COMPLETE INSTALLATION OF PIPE INCLUDING BUT NOT LIMITED TO TRAFFIC CONTROL, EXCAVATION INCLUDING DIRT/ROCK, BACKFILLING, CREEK CROSSINGS PER SWAPP, COUPLINGS, FITTINGS, PIPE 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 ON THE PLANS.
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.
3. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR BORE & JACK OF GAS LINE CASING PIPE INCLUDING BUT NOT LIMITED TO ENTRY AND EXIT PITS, B&J EQUIPMENT AND TRAFFIC CONTROL. CARRIER PIPE SHALL BE PAID AT THE OPEN CUT ITEM PRICE.
4. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT, NECESSARY FOR CONNECTING TO EXISTING GAS LINE INCLUDING TRAFFIC CONTROL.
5. INCLUDES TRANSITION FITTINGS, VALVES, VALVE BOX, BOX ADJUSTMENT, VALVE BOX COLLAR, VALVE MARKER, EXCAVATION, BEDDING, BACKFILL, COUPLINGS, FUSION TEES, TAP OF EXISTING LINE, AND ALL OTHER NECESSAR MATERIALS AND LABOR FOR COMPLETE INSTALLATION OF ASSEMBLY INCLUDING TRAFFIC CONTROL.
6. INCLUDES ALL MATERIALS, PARTS, LABOR, EQUIPMENT, MACHINERY, TOOLS, OR APPARATUS NECESSARY FOR INSTALLATION OF GAS SERVICE ASSEMBLIES AS DESCRIBED IN THE PLANS AND SPECS. INSTALLATION FOR LONG SIDE AND SHORT SIDE APPLICATIONS. SERVICE PIPIE SHALL BE PAID PER LINEAR FOOT INSTALLED.
7. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR COMPLETE INSTALLATION OF INDIVIDUAL ITEM SPECIFIED ON BID FORM AND UTILITY SPECIFICATIONS.
8. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR REMOVAL OF ITEM.
9. INCLUDES ALL MATERIALS, LABOR, AND EQUIPMENT FOR RETIREMENT OF ITEM INCLUDING STABLIZING THE ITEM OF PLANT PER UTILITY SPECIFICATIONS


CHATTANOOGA GAS COMPANY
TEN PEACHTREE PLACE 4TH FLOOR
ATLANTA, GA 30309
BRANDON STEPHENS
404-584-3192
BSTEPHEN@SOUTHERNCO.COM
BENNIE KINSEY - TRANSMISSION
423-490-4294
BKINSEY@SOUTHERNCO.COM
TULIO SOTO - DISTRIBUTION
423-490-4234
TSOTO@SOUTHERNCO.COM


| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2025 | BR-STP-320(10) | U-7 |
| | | | |
| | | | |
| | | | |

SR 320 (EAST BRAINERD RD) BRIDGE OVER CSX RAILROAD HAMILTON

33057-3228-94
PIN # 124076.00




CHATTANOOGA GAS COMPANY

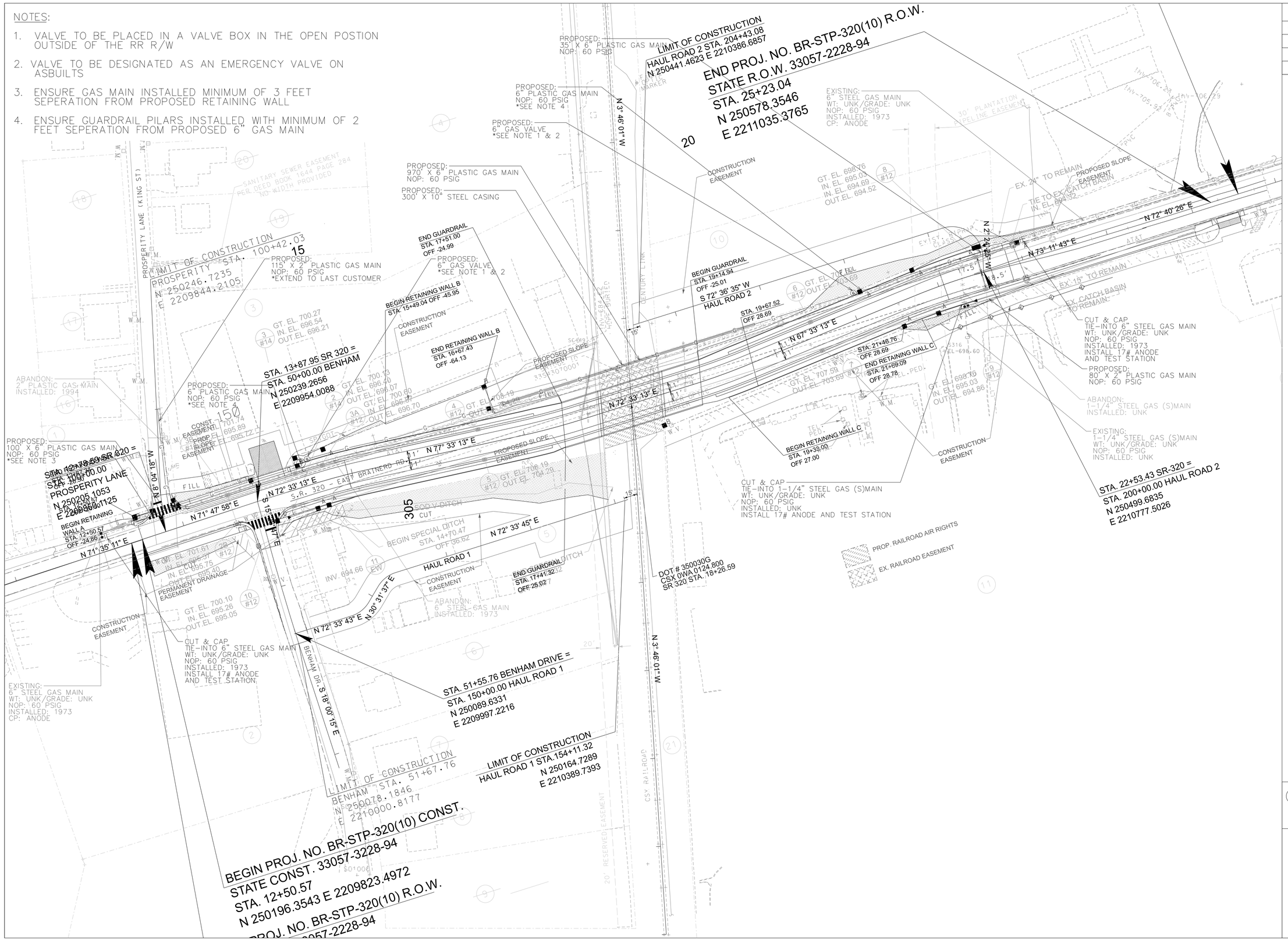
ESTIMATED QUANTITIES

ENTIRE PROJECT

SCALE: 1"=50'

NOTES:

1. VALVE TO BE PLACED IN A VALVE BOX IN THE OPEN POSTION OUTSIDE OF THE RR R/W
2. VALVE TO BE DESIGNATED AS AN EMERGENCY VALVE ON ASBUILTS
3. ENSURE GAS MAIN INSTALLED MINIMUM OF 3 FEET SEPERATION FROM PROPOSED RETAINING WALL
4. ENSURE GUARDRAIL PILARS INSTALLED WITH MINIMUM OF 2 FEET SEPERATION FROM PROPOSED 6" GAS MAIN




| TYPE | YEAR | PROJECT NO. | SHEET NO. |
|---|---|---|---|
| CONST. | 2025 | BR-STP-320(10) | U-7.1 |
| | | | |
| | | | |
| | | | |

SR 320 (EAST BRAINERD RD) BRIDGE OVER CSX RAILROAD
HAMILTON
33057-3228-94
PIN # 124076.00

SAMUEL A. MILLER
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 127934
STATE OF TENNESSEE

CHATTANOOGA GAS COMPANY

# GAS RELOCATION

ENTIRE PROJECT
SCALE: 1"=50'