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JACOBS ENGINEERING
1999 BRYAN ST
DALLAS, TX 75201
EDWARD J. PULTORAK, P.E. NO. 125259

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

12/16/2024
\$FILEL\$

Index Of Sheets

SEE SHEET 1A FOR INDEX

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

RUTHERFORD COUNTY

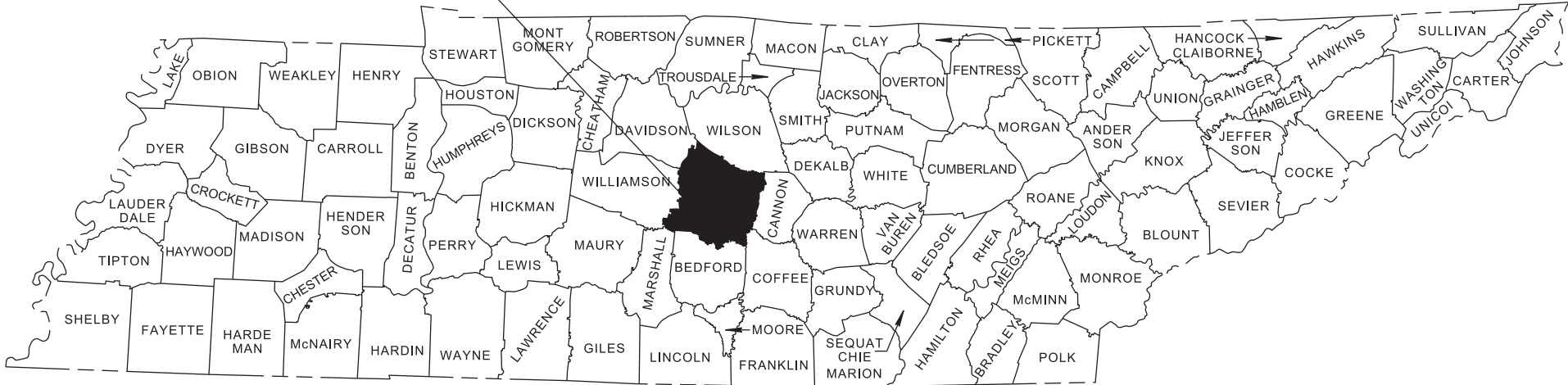
INTERSTATE 24
INTERCHANGE I-24 AT JOE B. JACKSON PARKWAY (EXIT 84)

PS&E
(LIGHTING)

STATE HIGHWAY NO. (N/A) F.A.H.S. NO. 24

PROJECT LOCATION

BRIDGE ID. # 75100240033



NO EXCLUSIONS

75100-3125-54
BEGIN PROJECT NO. STP-M-I-24-1(136) PS&E
STA. 1011+50.00 INTERSTATE 24
N 530801.4320 E 1857115.1020

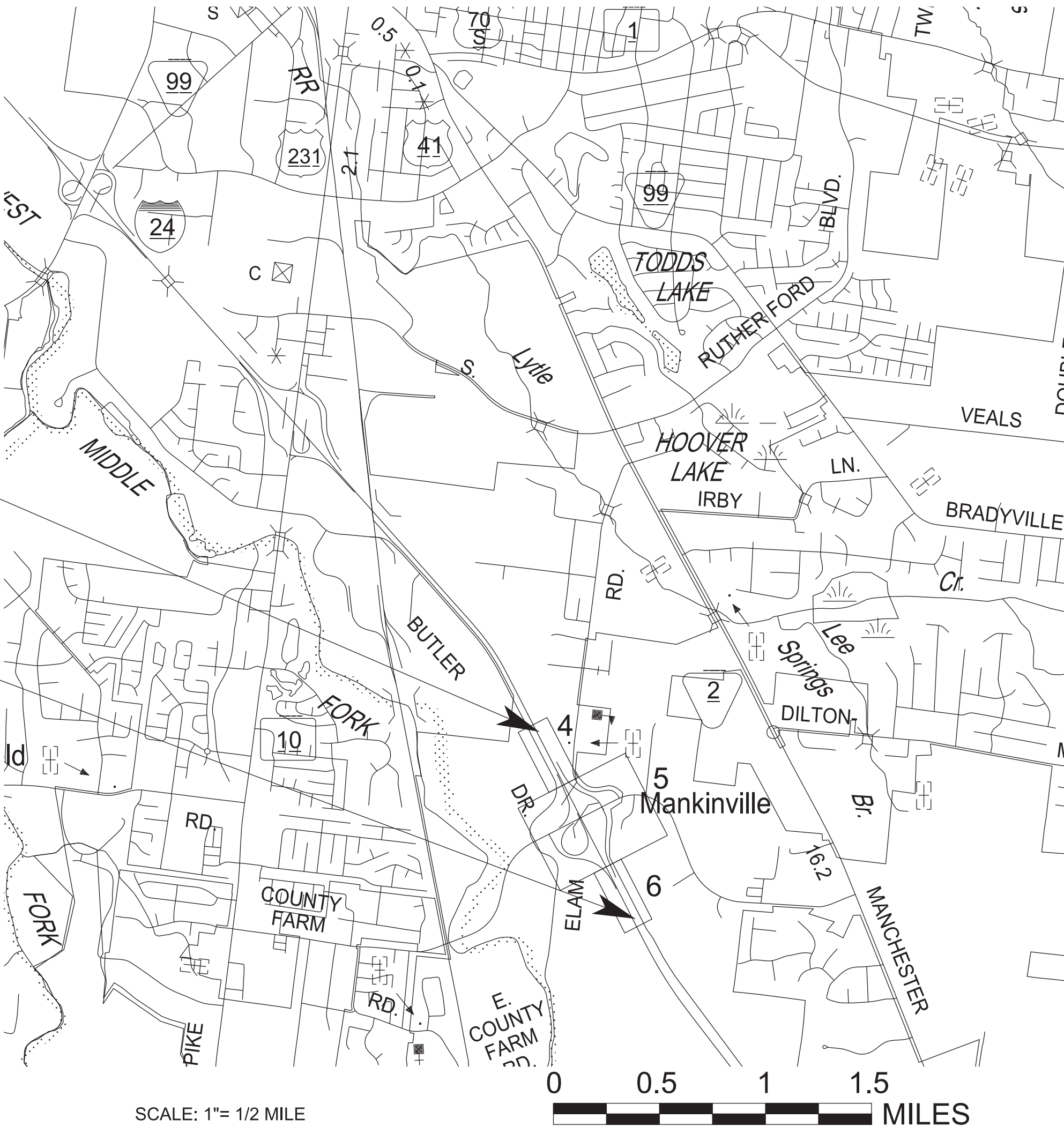
75100-3125-54
END PROJECT NO. STP-M-I-24-1(136) PS&E
STA. 1063+80.00 INTERSTATE 24
N 526150.2909 E 1859506.7090

SPECIAL NOTES

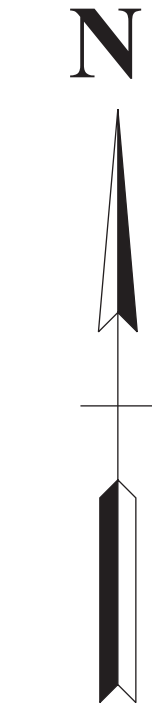
PROPOSALS MAY BE REJECTED BY THE COMMISSIONER IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

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

TDOT C.E. MANAGER 1: SCOTT PATE, P.E.
DESIGNED BY : JACOBS ENGINEERING GROUP INC.
DESIGNER : EDWARD J. PULTORAK, P.E., PTOE CHECKED BY AMIN SALMAN, PE, EDD
P.E. NO. 75100-1125-54 (DESIGN)
PIN NO. 131055.00



R.O.W. LENGTH 0.000 MILES
ROADWAY LENGTH 0.990 MILES
BRIDGE LENGTH 0.000 MILES
BOX BRIDGE LENGTH 0.000 MILES
PROJECT LENGTH 0.990 MILES

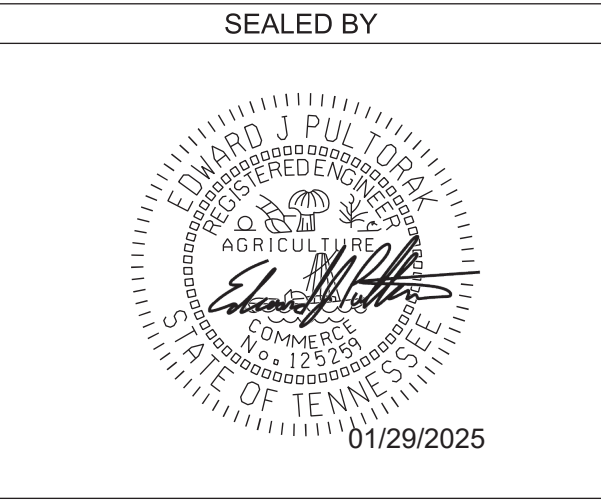


I-24

SURVEY 06/01/23	TRAFFIC DATA	
-----	ADT (2024)	51,000
-----	ADT (2044)	65,030
-----	DHV (2024)	5,493
-----	D	55 - 45
-----	T (ADT)	31 %
-----	T (DHV)	21 %
-----	V	70 MPH

COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00007 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID G2012BU7.

TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.	STP-M-I-24-1(136)	
STATE PROJ. NO.	75100-3125-54	



APPROVED: WILL REID, CHIEF ENGINEER

DATE:

APPROVED: HOWARD H. ELEY, COMMISSIONER

U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED:	DATE
DIVISION ADMINISTRATOR	

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PS&E INDEX OF SHEETS

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SIGNATURE SHEET	SIGN-1
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NOTE: THE ALPHABETICAL LETTERS “I”, “O” & “Q” ARE NOT USED IN THE NUMBERING OF SHEETS.	

STANDARD ROADWAY DRAWINGS

DWG.	REV.	DESCRIPTION
10-100.00 STANDARD ROADWAY TITLE SHEET, ABBREVIATIONS, AND LEGENDS		
RD-A-1	02-20-20	STANDARD ABBREVIATIONS A THROUGH L
RD-A-2		STANDARD ABBREVIATIONS M THROUGH Z
RD-L-1	02-20-20	STANDARD LEGEND
RD-L-1A		STANDARD LEGEND
RD-L-2	02-20-20	STANDARD LEGEND FOR UTILITY INSTALLATIONS
RD-L-3	03-01-23	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
RD-L-4	02-20-20	STANDARD LEGEND FOR SIGNALIZATION AND LIGHTING
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
10-104.00 ROADWAY, PAVEMENT APPURTENANCES, AND FENCES		
S-F-1	03-01-23	HIGH VISIBILITY FENCE
10-107.00 DESIGN - TRAFFIC CONTROL		
T-WZ-10	04-02-12	ADVANCE ROAD WORK SIGNING ON HIGHWAYS AND FREEWAYS
T-WZ-18	07-07-23	SHOULDER CLOSURE DETAIL FOR FREEWAYS AND DIVIDED HIGHWAYS
T-WZ-FAB1		FLASHING YELLOW ARROW BOARD
10-108.00 EROSION PREVENTION AND SEDIMENT CONTROL		
EC-STR-3B	06-15-21	SILT FENCE
EC-STR-3C	03-01-23	SILT FENCE WITH WIRE BACKING
EC-STR-3E	04-01-08	SILT FENCE FABRIC JOINING DETAILS
EC-STR-8	06-10-14	FILTER SOCK
EC-STR-25	08-01-12	TEMPORARY CULVERT CROSSING, CONSTRUCTION EXIT, CONSTRUCTION FORD
EC-STR-27	08-01-12	TEMPORARY SLOPE DRAIN AND BERM
EC-STR-37	06-10-14	SEDIMENT TUBE

STANDARD STRUCTURE DRAWINGS

NEW STRUCTURES

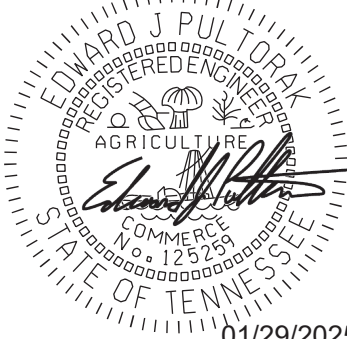
STD-8-4	SIGN, LUMINAIRE, AND TRAFFIC SIGNAL SUPPORTS
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STANDARD TRAFFIC OPERATIONS DRAWINGS

DWG.	REV.	DESCRIPTION
LIGHTING AND UTILITY POLES		
T-L-1	09-12-23	STANDARD LIGHTING FOUNDATION DETAILS
T-L-1TM		STANDARD LIGHTING DETAILS TENON MOUNTED OFFSET LIGHTING SUPPORTS
T-L-3	04-15-96	STANDARD LIGHTING DETAILS PULL BOXES
T-L-4	05-25-11	STANDARD LIGHTING DETAILS CONDUITS, CABLE INSTALLATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	1A
PS&E	2025	STP-M-I-24-1(136)	1A

SEALED BY



01/29/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX
AND STANDARD
DRAWINGS

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ESTIMATED ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 75100-0125-54
105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	40
209-02.03	8" TEMPORARY SLOPE DRAIN	L.F.	1320
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	4525
209-08.09	FILTER SOCK CHECK DAM	EACH	1
209-09.01	SANDBAGS	BAG	198
209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	13175
707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	4625
709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	70
712-01	TRAFFIC CONTROL	LS	1
712-06	SIGNS (CONSTRUCTION)	S.F.	505
712-08.03	ARROW BOARD (TYPE C)	EACH	2
714-03	DIRECTIONAL BORED CONDUIT	L.F.	1530
714-03.01	DIRECT BURIAL CONDUIT (2" PVC, SCHEDULE 40)	L.F.	17480
714-04.01	CONDUIT (STRUCTURES - 1" RGS)	L.F.	300
714-05.04	PULL BOXES (TYPE C)	EACH	31
714-06.04	CABLE (1/C # 8 AWG)	L.F.	2250
714-06.05	CABLE (1/C # 6 AWG)	L.F.	46014
714-06.06	CABLE (1/C # 4 AWG)	L.F.	7566
714-06.08	CABLE (1/C # 8 BARE)	L.F.	750
714-06.09	CABLE (1/C # 6 BARE)	L.F.	15338
714-06.10	CABLE (1/C # 4 BARE)	L.F.	2522
714-06.11	CABLE (1/C # 2/0 AWG)	L.F.	120
714-06.12	CABLE (1/C # 2/0 BARE)	L.F.	40
714-06.13	CABLE (1/C # 3/0 AWG)	L.F.	1650
714-06.14	CABLE (1/C # 3/0 BARE)	L.F.	550
714-08.09	LIGHT STANDARDS (OFFSET POLES-44' M.H.)	EACH	23
714-08.10	LIGHT STANDARDS (HIGHMAST POLES 150' M.H.)	EACH	2
714-08.11	LIGHT STANDARDS (HIGHMAST POLES 100' M.H.)	EACH	8
714-08.23	FOUNDATION (ONLY) FOR LIGHT STANDARDS	EACH	23
714-08.40	FOUNDATION FOR LIGHT STANDARDS - HIGH MAST (100' & 150' M.H.)	EACH	10
714-09.10	LUMINAIRES (206W LED OFFSET LIGHT)	EACH	23
714-09.11	LUMINAIRES (295W LED HIGH MAST)	EACH	88
714-09.12	LUMINAIRES (72W LED UNDERPASS)	EACH	4
714-12.01	CONTROL CENTER (NO. 1)	LS	1
714-12.02	CONTROL CENTER (NO. 2)	LS	1
714-25.01	ELECTRICAL CONNECTION (CONTROL CENTER NO. 1)	LS	1
714-25.02	ELECTRICAL CONNECTION (CONTROL CENTER NO. 2)	LS	1
717-01	MOBILIZATION	LS	1
740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	120
740-11.01	TEMPORARY SEDIMENT TUBE 8IN	L.F.	930
801-01	SEEDING (WITH MULCH)	UNIT	25
801-03	WATER (SEEDING & SODDING)	M.G.	3

PAY ITEM FOOTNOTES

- (1) ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SECTION 209.07 OF THE STANDARDS SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
- (2) METHOD OF INSTALLATION SHALL BE DIRECTIONAL BORING METHOD ONLY. CONDUIT SHALL BE SHEDULE 80 PVC. INCLUDES 2-2" CONDUITS AT EACH DIRECTIONAL BORE CROSSING. ONE (1) CONDUIT SHALL BE SPARE. INCLUDES THE COST OF THE PULL WIRE IN THE SPARE CONDUIT.
- (3) SHALL BE CLASS 'A' CONCRETE FOUNDATION, SEE TDOT STD. DWG. T-L-1 AND STD-8-4. COSTS ASSOCIATED WITH THE FOUNDATION SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE. THE DESIGN OF THE HIGH-MAST LIGHT STANDARD FOUNDATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. SEE STANDARD DRAWING T-L-1.
- (4) OFFSET ROADWAY LUMINAIRE SHALL BE 206W HOLOPHANE MONGOOSE LED (MGLED): MGLEDM, P5 40K MVOLT, WR, UN, GRSD. LUMINAIRE SHALL BE BALLASTED FOR 240 VOLT OPERATION. INCLUDES THE COST OF THE 7 PIN LED COMPLIANT PHOTOCELL.
- (5) HIGH MAST LUMINAIRE SHALL BE 295W HOLOPHANE LED ROADWAY: HMLED4, PK2, 40K, MVOLT (240V), AW (AREA WIDE), PR7. TOTAL LUMENS = 43,659. LUMINAIRE SHALL BE BALLASTED FOR 240 VOLT OPERATION. INCLUDES THE COST OF THE 7 PIN LED COMPLIANT PHOTOCELL.
- (6) UNDERPASS LUMINAIRE SHALL BE 72W HOLOPHANE LED WALLPACK LIGHTING: W4GLED, 20C1000, 40K, MVOLT (120V), SPD, PR7, GYSDP. TOTAL LUMENS = 6,495. LUMINAIRE SHALL BE BALLASTED FOR 120 VOLT OPERATION. INCLUDES THE COST OF THE 7 PIN LED COMPLIANT PHOTOCELL.
- (7) THE CONTRACTOR SHALL CONTACT THE LOCAL UTILITY TO OBTAIN THE ESTIMATE FOR ANY CHARGES BY THE UTILITY FOR PROVIDING ELECTRICAL SERVICE TO THE CONTROL CENTER(S). THESE CHARGES SHALL BE INCLUDED IN THE BID FOR THIS ITEM. INCLUDES THE COST OF THE CONCRETE PAD(S), 100 AMP DISCONNECT, METER, AND THE STEEL CONDUIT RISER ASSEMBLY. ALSO, INCLUDES THE COST TO FURNISH AND INSTALL TRANSFORMER AS REQUIRED, AND ALL APPURTENANCES REQUIRED FOR THE COMPLETE INSTALLATION.
- (8) INCLUDES THREE (3) THOUSAND GALLONS FOR EROSION PREVENTION AND SEDIMENT CONTROL
- (9) FOR GROUNDING.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	2
PS&E	2025	STP-M-I-24-1(136)	2

SEALED BY



01/29/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED
ROADWAY
QUANTITIES

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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

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

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.

SIGNING

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

TRAFFIC CONTROL DIRECTIONAL SIGNING

- (1) ON ALL ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL UTILIZE ALL EXISTING DIRECTIONAL SIGNING FOR AS LONG AS POSSIBLE. THESE EXISTING SIGNS CAN BE MOVED USING TEMPORARY SUPPORTS AS NEEDED. AS SOON AS THESE EXISTING DIRECTIONAL SIGNS COME DOWN PERMANENTLY, THE CONTRACTOR SHALL HAVE UP AT LEAST ONE NEW TEMPORARY “ADVANCE GUIDE SIGN” AND ONE NEW TEMPORARY “EXIT DIRECTIONAL SIGN” AT ALL EXIT RAMPS. THESE SIGNS ARE TO BE MAINTAINED WITHIN CLEAR VIEW OF THE PUBLIC ON THE RIGHT SIDE OF THE HIGHWAY AND SHALL BE REPLACED IF DAMAGED, DURING ALL PHASES OF CONSTRUCTION, AS DIRECTED BY THE ENGINEER.
- (2) THE SIZE OF THESE NEW TEMPORARY SIGNS WILL BE DETERMINED BY THE MESSAGE. THE MESSAGE SHALL BE THE SAME AS THE EXISTING SIGN THAT THESE NEW TEMPORARY SIGNS WILL BE REPLACING. THE LETTER SIZE SHALL BE A MINIMUM OF 8 INCH, “D” UPPER CASE LETTER. THE DIRECTIONAL ARROW WILL BE A “B” ARROW AT A 45 DEGREE ANGLE (SAME ANGLE AS THE EXISTING ARROW). THE MATERIAL SHALL BE 0.100 INCH SHEET ALUMINUM; THE COLOR SHALL BE A REFLECTIVE GREEN BACKGROUND WITH REFLECTIVE WHITE COPY.
- (3) ALL WORK AND MATERIAL TO MAKE THESE NEW TEMPORARY DIRECTIONAL SIGNS ALONG WITH ADEQUATE SUPPORTS AND TO MOVE THEM AS NEEDED DURING EACH PHASE OF CONSTRUCTION WILL BE PAID FOR UNDER ITEM NO. (A) , AS DIRECTED BY THE ENGINEER.
- (4) SOME OF THESE DIRECTIONAL SIGNS WILL NEED AN INTERSTATE, U.S., OR A STATE HIGHWAY SHIELD, A CARDINAL DIRECTION, AND A DIRECTION ARROW TO ACCOMPANY THE DIRECTIONAL SIGN. THESE SIGNS SHALL BE MOUNTED BELOW THE DIRECTIONAL SIGN.
- (5) ALL EXISTING “EMERGENCY REFERENCE MARKERS” AND “HOSPITAL SIGNS” SHALL BE MAINTAINED WITHIN FULL VIEW OF THE MOTORING PUBLIC THROUGHOUT ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING AND TEMPORARY SUPPORTS SHALL BE PAID FOR UNDER ITEM NO. (B) .

- (6) WHEN “LOGO” SIGNS ARE ON ACCESS CONTROLLED AND INTERSTATE RECONSTRUCTION AND NEW CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE TO THE DEPARTMENT FOR THE REIMBURSEMENT OF THE SIGN FACE IF IT IS DAMAGED. ALL WORK IN MOVING THESE “LOGO” SIGNS AND THE TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. (C) , AS DIRECTED BY THE ENGINEER. THE SUPPORTS FOR THE FINAL LOCATION OF THESE SIGNS WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.
- (7) WHEN EXISTING “TOURIST ORIENTED DIRECTIONAL SIGNS” (TODS) ARE ON NON-ACCESS CONTROLLED CONSTRUCTION PROJECTS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING THESE SIGNS IN FULL VIEW TO THE MOTORING PUBLIC DURING ALL PHASES OF CONSTRUCTION. ALL WORK IN MOVING THESE “TODS” AND TEMPORARY SUPPORTS ARE TO BE PAID FOR UNDER ITEM NO. (D) , AS DIRECTED BY THE ENGINEER. NEW SUPPORTS AND SIGN FACE FOR FINAL LOCATION WILL BE PAID FOR UNDER OTHER ITEMS OF CONSTRUCTION.

CONSTRUCTION WORK ZONE & TRAFFIC CONTROL

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

LIGHTING

- (1) INSTALLATION AND MATERIALS SHALL COMPLY WITH SECTIONS 714 AND 917 OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 1, 2021 AND WITH THE LATEST REVISIONS TO THE NATIONAL ELECTRIC CODE, NFPA 70.
- (2) ALL WIRING SHALL BE CONCEALED UNDERGROUND IN 2-INCH SCHEDULE 40 PVC RIGID CONDUIT.
- (3) THE GROUND WIRE SHALL BE RUN INSIDE CONDUIT WITHIN STRUCTURES, SHALL BE COLORED GREEN AND HAVE THW INSULATION.
- (4) EXISTING FOUNDATIONS TO BE REMOVED A MINIMUM OF SIX INCHES BELOW GRADE.
- (5) ALL INCIDENTAL EQUIPMENT AND MATERIAL REQUIRED FOR THE SUCCESSFUL EXECUTION OF THIS WORK SHALL BE FURNISHED IN 714 ITEMS WHETHER SPECIFICALLY NOTED OR NOT.
- (6) LIGHT STANDARDS SHALL BE ROUND TAPERED POLES. LENGTH SHALL BE DETERMINED BY REQUIRED MOUNTING HEIGHT.
- (7) STANDARDS SHALL BE DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRST EDITION (2015) OF THE LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORT FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS.
- (8) STANDARDS SHALL BE DESIGNED FOR 120-MPH BASIC WIND SPEED AND SHALL SUPPORT A 44-POUND LUMINAIRE.
- (9) ALL NEW ROADWAY LIGHT STANDARDS SHALL BE MOUNTED ON BASES WITH ACCESS DOOR. TRANSFORMER BASES SHALL MEET AASHTO SPECIFICATIONS AND HAVE FHWA APPROVAL. STANDARDS SHALL BE ALUMINUM WITH TRANSFORMER BASES.

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PIH	2024	STP-M-I-24-1(136)	2C
PS&E	2025	STP-M-I-24-1(136)	2C

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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SPECIAL NOTES

HIGH MAST CONSTRUCTION SPECIFICATIONS

HIGH MAST POLE

- (1) THE POLES SHALL BE ROUND TAPERED STEEL POLES DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE FIRST EDITION (2015) OF THE LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS PUBLISHED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, EXCEPT AS FURTHER PROVIDED HEREIN.
- (2) POLES SHALL BE DESIGNED FOR 120 MPH BASIC WIND SPEED. THE DESIGN SHALL SUPPORT THE NUMBER AND TYPE OF LUMINAIRES AND MOUNTING HEAD SPECIFIED IN THE PLANS.
- (3) MATERIAL USED IN THE MANUFACTURE OF STEEL HIGH MAST POLES SHALL BE:

(A) ASTM A-572 GRADE 60 HIGH STRENGTH STEEL.

(B) POLES SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A-123

(C) ANCHOR BOLTS SHALL CONFORM TO ASTM F1554, GRADE 55 AND ANCHOR BOLT NUTS SHALL CONFORM TO ASTM A-563.

(D) ANCHOR BOLTS SHALL BE THREADED ON END (LOWER THREADING IS FOR A PLATE NUT ATTACHMENT).

(E) ANCHOR BOLTS SHALL BE GALVANIZED ON THE THREADED ENDS A MINIMUM OF 10".

(F) ANCHOR BOLTS AND ANCHOR BOLT NUTS SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-123.

(G) AN ANCHOR BOLT CAGING METHOD TO MECHANICALLY ALIGN ANCHOR BOLTS SHALL BE PROVIDED. NO WELDING OF ANCHOR BOLTS SHALL BE PERMITTED.
- (4) FABRICATION AND WELDING OF THESE POLES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AWS 01.1 SPECIFICATION.

(A) ALL WELDS SHALL BE INSPECTED ACCORDING TO THE AWS STANDARDS SECTION 6, USING DYE PENETRANT OR MAGNETIC PARTICLE INSPECTIONS.

(B) THE FIRST WELDED JOINT OF EACH FULL PENETRATION TRANSVERSE WELD FOR EACH ORDER SHALL BE NONDESTRUCTIVELY EXAMINED TO VERIFY THE PREPARATION, PRECUDURES, MAINTENANCE OF UNIFORMITY, AND THAT THE WELD IS OF REQUIRED QUALITY.

(C) LONGITUDINAL SEAM WELDS SHALL HAVE A MINIMUM OF 60% PENETRATION AND SHALL BE VERIFIED BY POLISHING, ETCHING AND EXAMINING A TRIMMING CUT-OFF FROM SELECTED MALE TUBE ENDS.

(D) THE FEMALE TUBE ENDS IN THE AREA OF TELESCOPING JOINTS SHALL BE WELDED BOTH INSIDE AND OUTSIDE TO ENSURE THE INTEGRITY OF THE WELD.

(E) NO TRANSVERSE WELDING SHALL BE PERMITTED TO SECURE OVERLAPPING TELESCOPING JOINTS.
- (5) EACH POLE SHALL BE FURNISHED WITH A TOP MOUNTING TENON TO ACCEPT THE LUMINAIRE MOUNTING DEVICE.
- (6) THE POLE, NEAR THE BASE, SHALL HAVE A HANDHOLE OPENING 10" WIDE BY 20" HIGH TO RECEIVE THE MOUNTING HEAD LOWERING MECHANISM. HANDHOLE MUST BE OVAL IN SHAPE.

(A) THE OPENING SHALL BE REINFORCED ON THE INSIDE WITH A STEEL SLEEVE. THE SLEEVE SHALL HAVE SUFFICIENT THICKNESS AND LENGTH TO REPLACE THE EQUIVALENT STRENGTH OF THE TUBE SECTION LOST BY THE 10" BY 20" OPENING.

(B) A MOUNTING PLATE FOR ATTACHING THE LOWERING MECHANISM SHALL BE ATTACHED TO THE REINFORCING SLEEVE AND BE ACCESSIBLE THROUGH THE HANDHOLE.

(C) EACH POLE SHALL HAVE A HANDHOLE COVER, ATTACHED BY FOUR STAINLESS HEX BOLTS.

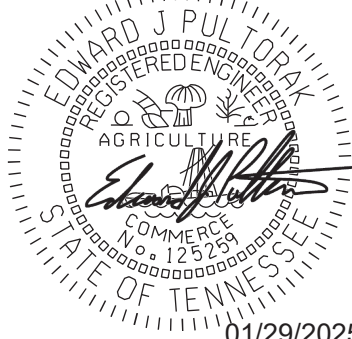
- (7) EACH POLE SHALL BE PROVIDED WITH A MEANS FOR GROUNDING CONSISTING OF A ½" UNC-2 NUT WELDED TO THE INSIDE OF THE POLE.
- (8) ONLY QUALIFIED MANUFACTURERS WILL MANUFACTURE THE SPECIFIED POLES. RESPONSIBILITY FOR COMPLIANCE WITH THE SPECIFICATIONS REMAINS WITH THE CONTRACTOR. MANUFACTURER WILL SUPPLY A CERTIFICATE OF COMPLIANCE TO SPECIFICATION BY AN INDEPENDENT TESTING LABORATORY HIRED BY THE MANUFACTURER AND APPROVED BY THE STATE.

HIGH MAST LUMINAIRE LOWERING SYSTEM

- (9) THE LOWERING SYSTEM SHALL CONSIST OF A HEAD FRAME, A LUMIAIRE RING, AND A WINCH AND HOISTING ASSEMBLY. THE HEAD FRAME SHALL BE GALVANIZED STEEL CONSTRUCTION, AND SHALL ATTACH TO THE POLE BY MEANS OF A SLILP-FITTER AND SET SCREWS. THE HEAD FRAME SHALL BE EQUIPPED WITH SIX CABLE SHEAVES GROVVED TO THE EXACT DIAMETER OF THE HOIST CABLES. THE HOIST CABLES SHALL BE STAINLESS STEEL, 7 X 18 STRANDED AIRCRAFT CABLES, 3/16" DIAMETER.
- (10) A POWER CABLE SHEAVE SHALL BE PROVIDED AND SHALL BE EQUIPPED WITH "KEEPER" DEVICES TO PREVENT THE CABLE FROM JUMPING THE GROOVE DURING OPERATION.
- (11) THREE LATCHING DEVICES SHALL BE PROVIDED IN THE HEAD FRAME TO SUPPORT THE LUMINAIRE RING ASSEMBLY WHEN THE LOWERING DEVICE IS NOT IN OPERATION. THE LATCHES SHALL ALTERNATELY LATCH AND UNLATH UPON SUCCESSIVE ACTUATIONS OF RAISING THE LUMINAIRE RING. EACH LATCH SHALL BE EQUIPPED WITH A FLAG TO INDICATE THE LATCHED-UNLATCHED POSITIONS. ALL COMPONENTS OF THE LATCH MECHANISM MUST BE SERVICEABLE FROM THE GROUND WHEN THE RING IS LOWERED. A BOTTOM LATCHING DEVICE IS NOT ACCEPTABLE.
- (12) THE LUMINAIRE RING SHALL BE GALVANIZED STEEL CHANNEL CONSTRUCTION WITH 2" NPS GALVANIZED PIPE MOUNTING ARMS FOR LUMINAIRES. THE RING SHALL BE PREWIRED WITH TYPE ST. 105 DEGREE C, 600V CABLE TO A MAIN TERMINAL BLOCK MOUNTED WITHIN A WHEATHERPROOF HOUSING. A WEATHERTIGHT TWISTLOCK POWER PLUG AND RECETACLE, NEMA L8-20R CONFIGURATION, SHALL BE PROVIDED ON THE RING FOR TESTING THE LUMINAIRES WHILE IN THE LOWERED POSITION.
- (13) WHERE LUMINAIRES ARE PLACED ON ONE SIDE OF THE RING ONLY, A COUNTER-BALANCING DEVICE OR DEVICES SHALL BE FURNISHED AND INSTALLED TO INSURE EVEN WEIGHT DISTRIBUTION AROUND THE RING AND PROPER OPERATION OF THE RING DURING RAISING AND LOWERING.
- (14) THE WINCH SHALL BE A WROM GEAR, SELF-LCOKING TYPE, DESIGNED FOR HAND OPERATION OR FOR OPERATION BY A ½" HEAVY DUTY REVERSING DRILL MOTOR. TWO (2) PORTABLE HAND CRANKS SHALL BE FURNISHED TO THE ENGINEER.
- (15) ONE COMPLETE ASSEMBLY OF A PORTABLE POWER UNIT CONSISTING OF A ½" HEAVY DUTY REVERSING DRILL MOTOR, A TORQUE-LIMITING SLIP CLUTCH, REMOVE CONTROL UNIT WITH A MINIMUM 25' CORD (AS REQUIRED BY THE UTILITY) SHALL RUN AT 480 VOLTS FOR THE WINCH DRIVE.
- (16) A ¼" STAINLESS STEEL 7 X 19 AIRCRAFT CABLE SHALL BE PROVIDED ON THE WINCH. A NON-AUTOMATIC CIRCUIT BREAKER DISCONNECT AND A MATCHING NEMA L8-20P PLUG AND RECEPTACLE SHALL BE FURNISHED IN THE BASE OF THE POLE.
- (17) THE NEMA L8-20P PLUG SHALL BE A FOUR PRONG PLUG (3 – HOT LEGS, 1- NEUTRAL AND 1-GROUND) RATED AT 60A. THE PLUG SHALL HANDLE THE MAXIMUM POSSIBLE LOAD (12 – 1130W LUMINAIRE SYSTEM, WITH EACH LGIHT WIRED TO THREE PHASES ALTERNATING BETWEEN PHASES A, B AND C).
- (18) ACCEPTABLE LOWERING DEVICES ARE MANUFACTURED BY GENERAL ELECTRIC, HOLOPHANE, MILLERBERND, EAGLE AND QUALITY LIGHTING.
- (19) ALL HIGH MAST COMPONENTS INCLUDED IN THIS SPECIFICATION SHALL BE INCLUDED FOR PAYMENT UNDER THE BID ITEM COST FOR THE HIGH MAST POLE.
- (20) THE DRILL MOTOR CORD SHALL BE A MINIMUM OF 25 TO 30 FT LONG. CONTRACTOR TO ENSURE THE CORD IS LONG ENOUGH FOR OPERATOR SAFETY.

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SPECIAL NOTES
HIGH MAST NOTES
AND SPECIFICATIONS

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SPECIAL NOTES (CONT.)

HIGH MAST LED

- (1) DISTRIBUTION: AREA WIDE
LAMP WATTAGE: NOT TO EXCEED 295 WATTS

HIGH MAST LED LUMINAIRE SPECIFICATIONS

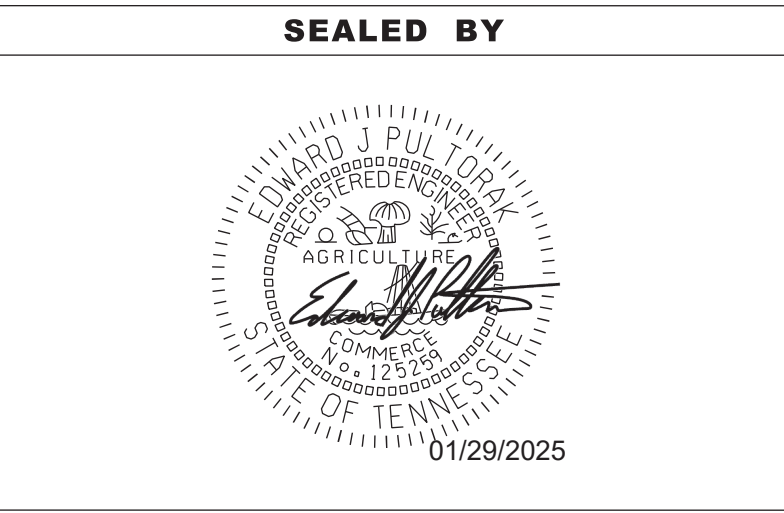
- (2) THE LUMINAIRE SHALL BE LISTED BY A NATIONAL RECOGNIZED TESTING LABORATORY (NRTL) AS DEFINED BY THE U.S. DEPARTMENT OF LABOR. THE TESTING LABORATORY MUST BE LISTED BY OSHA IN ITS SCOPE OF RECOGNITION FOR THE APPLICABLE TESTS BEING CONDUCTED AS REQUIRED BY THIS SPECIFICATION. A LIST OF RECOGNIZED TESTING LABS FOR PRODUCTS SOLD IN THE UNITED STATES MAY BE FOUND ON THE U.S. DEPARTMENT OF LABOR'S WEBSITE: HTTP://WWW.OSHA.GOV/
- (3) THE LUMINAIRE SHALL BE LISTED AND LABELED BY A NRTL OR CSA AS BEING IN COMPLIANCE WITH UL 1598 AND SUITABLE FOR USE IN WET LOCATIONS.
- (4) KEY COMPONENTS INCLUDING LED DRIVERS, LED LIGHT SOURCES, AND SURGE PROTECTION DEVICES SHALL BE ROHS COMPLIANT.
- (5) SHALL HAVE AN INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) 529 INGRESS PROTECTION (IP) RATING OF IP 65 OR GREATER.
- (6) SHALL BE IN COMPLIANCE WITH ELECTRO MAGNETIC INTERFERENCE (EMI) REQUIREMENTS AS DEFINED BY FCC 47 SUB PART 15; CISPR15, CISPR22 CLASS A (120VMIN), EN61000-3-2, -3-3, -4-4, -4-5.
- (7) SHALL BE TESTED ACCORDING TO THE MOST CURRENT VERSION OF ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) LM-79.
- (8) SHALL HAVE LUMEN MAINTENANCE MEASURED IN ACCORDANCE THE MOST CURRENT VERSION OF ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) LM-80.
- (9) SHALL HAVE LONG TERM LUMEN MAINTENANCE DOCUMENTED ACCORDING TO THE MOST CURRENT VERSION OF ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) TM-21.
- (10) THE FIXTURE SHALL HAVE A DIECAST ALUMINUM HOUSING.
- (11) THE LUMINAIRE FINISH SHALL BE CORROSION RESISTANT WITH A POLYESTER POWDERCOAT OF 2.5 MIL NOMINAL THICKNESS. FINISH SHALL PASS PER ASTM D1654 AFTER 3000 HOURS OF TESTING PER ASTM B117.
- (12) ALL HARDWARE ON THE EXTERIOR OF THE HOUSING INCLUDING COVER AND LATCH SHALL BE STAINLESS STEEL, ZINC OR STEEL WITH ZINC ALLOY ELECTROPLATE AND CHROMATE TOP COAT.
- (13) THE LUMINAIRE SHALL BE EASY TO OPEN WHEN PROPERLY MOUNTED AND SHALL HAVE READILY ACCESSIBLE INTERNAL PARTS. ACCESS TO ALL INTERNAL PARTS REQUIRING REPLACEMENT SHALL NOT REQUIRE TOOLS (I.E. "TOOL-LESS ENTRY").
- (14) THE LUMINAIRE SHALL HAVE A VIBRATION RATING OF 3G PER THE AMERICAN NATIONAL STANDARD (ANSI) IEEE C136.31, TABLE 2 ROADWAY LIGHTING EQUIPMENT -LUMINAIRE VIBRATION FOR BOTH NORMAL APPLICATIONS AND BRIDGE AND OVERPASS APPLICATIONS.
- (15) THE LUMINAIRE SHALL BE DESIGNED TO ALLOW WATER SHEDDING.
- (16) THE LUMINAIRE SHALL HAVE A PASSIVE COOLING METHOD SHALL BE EMPLOYED TO MANAGE THERMAL OUTPUT OF LED LIGHT ENGINE AND POWER SUPPLY.
- (17) THE LUMINAIRE SHALL HAVE A LABEL PER ANSI C136.22 THAT STATES OPERATING VOLTAGE AND CURRENT RANGE. THE LABEL MUST BE CLEARLY VISIBLE ON THE INSIDE OF THE HOUSING.
- (18) THE LUMINAIRE SHALL FULLY OPERATE IN A TEMPERATURE RANGE OF -40 DEGREED C UP TO 40 DEGREES C (-40 DEGREES F TO 104 DEGREES F).
- (19) THE LUMINAIRE SHALL HAVE AN INTEGRAL POWER SUPPLY (ELECTRONIC DRIVER). THE POWER SUPPLY SHALL NOT HAVE A MANUAL, FIELD-ADJUSTABLE SETTING FOR CURRENT OUTPUT.
- (20) THE LUMINAIRE SHALL HAVE A POWER SUPPLY (ELECTRONIC DRIVER) THAT WILL OPERATE ON A 277/480 VOLT AT 60 HERTZ.

- (21) THE LUMINAIRE SHALL HAVE A POWER SUPPLY (ELECTRONIC DRIVER) THAT HAS A POWER FACTOR OF .90 OR GREATER AT FULL LOAD.
- (22) THE LUMINAIRE SHALL HAVE A POWER SUPPLY (ELECTRONIC DRIVER) THAT HAS TOTAL HARMONIC DISTORTION OF 20% OR LESS AT FULL LOAD.
- (23) THE LUMINAIRE SHALL HAVE POWER SUPPLY (ELECTRONIC DRIVER) OUTPUT RIPPLE OF LESS THAN 10%.
- (24) THE LUMINAIRE SHALL HAVE POWER SUPPLY (ELECTRONIC DRIVER) WITH A RATED LIFE OF 100,000 HOURS WITH A LUMINAIRE OPERATED AT AN AMBIENT TEMPERATURE OF 25°C (77°F).
- (25) THE LUMINAIRE SHALL HAVE AN ISOLATED POWER SUPPLY (ELECTRONIC DRIVER) OUTPUT.
- (26) THE LUMINAIRE SHALL HAVE A POWER SUPPLY (ELECTRONIC DRIVER) THAT HAS THERMAL OVERLOAD PROTECTION.
- (27) THE LUMINAIRE SHALL HAVE A POWER SUPPLY (ELECTRONIC DRIVER) THAT IS SELF-LIMITED SHORT CIRCUIT PROTECTED AND OVER LOAD PROTECTED.
- (28) THE LUMINAIRE SHALL NOT USE ANY ACTIVE THERMAL CUTBACK, SUCH AS IN ORDER TO ACHIEVE A HIGHER THERMAL PERFORMANCE.
- (29) THE LUMINAIRE SHALL HAVE A POWER SUPPLY (ELECTRONIC DRIVER) THAT IS TERMINATED WITH QUICK DISCONNECT WIRE HARNESSSES FOR EASY MAINTENANCE. WIRE NUT TERMINATION IS NOT ACCEPTABLE.
- (30) THE LUMINAIRE SHALL HAVE A TERMINAL BLOCK FOR TERMINATING WIRING TO THE LUMINAIRE. THE TERMINAL BLOCK SHALL BE A 3 STATION, TUNNEL LUG TERMINAL BOARD THAT WILL ACCOMMODATE #6 THRU #18 AWG POLE WIRE.
- (31) FIXTURE SHALL HAVE A SURGE PROTECTION THAT MEETS 10KV/5KA PER ANSI/IEEEC62.41.
- (32) THE LUMINAIRE SHALL HAVE LIFE RATING ON ALL ELECTRICAL COMPONENTS OF 100,000 HOURS OR GREATER WHEN OPERATED AT FULL LUMEN OUTPUT AT 25 DEGREES C.
- (33) ALL LED COMPONENTS SHALL BE L70 RATED WHEN OPERATED IN A LUMINAIRE AT 25 DEGREES C (77 DEGREES F) AT 100,000 HOURS.
- (34) ELECTRICAL COMPONENTS SHALL BE PROTECTED PER ANSI/IEEESTANDARD C62.41, FOR CLASS C APPLICATIONS.
- (35) THE LED SHALL FULLY OPERATE IN A TEMPERATURE RANGE -40 DEGREES C TO 40 DEGREES C (-40 DEGREES F TO 104 DEGREES F).
- (36) THE LED SHALL LOSE NO MORE THAN A 15% OPTICAL INTENSITY OF INITIAL DELIVERED LUMENS DUE TO THERMAL LOADING WHEN OPERATED AT 25°C (77°F).
- (37) THE LED SHALL DELIVER AN AVERAGE 80% OF INITIAL DELIVERED LUMENS AFTER 70,000 HOURS OF OPERATION WHEN OPERATED AT 25°C (77°F).
- (38) THE LED SHALL HAVE A RATED LIFE OF 100,000 HOURS WHEN OPERATED AT 25°C (77°F).
- (39) THE LED SHALL HAVE A MINIMUM LUMINAIRE EFFICACY OF 80 LUMENS/WATT.
- (40) THE CORRELATED COLOR TEMPERATURE (CCT) SHALL BE 4000K WITH A VARIANCE OF 250K, WHITE, THAT CONFORMS TO LM-79. THE CORRELATED COLOR REMPERATURE (CCT) SHALL BE 4000K WITH A VARIANCE OF 250K, WHITE, THAT CONFORMS TO LM-79 (HIGH MAST ONLY).
- (41) THE MINIMUM COLOR RENDERING INDEX (CRI) SHALL NOT BE LESS THAN 70.
- (42) THE OPTICS SHALL HAVE A COMPLETELY SEALED OPTICAL SYSTEM.
- (43) THE OPTICAL SYSTEM SHALL HAVE A (IEC)(IP) RATING OF 66 OR GREATER.
- (44) THE OPTICS SHALL HAVE AN ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) BACKLIGHT, UPLIGHT AND GLARE (BUG) RATING AS FOLLOWS:
- (A) BACKLIGHT RATING SHALL NOT EXCEED 3
- (B) UPLIGHT RATING SHALL NOT EXCEED 0;
- (C) GLARE RATING SHALL NOT EXCEED 4

- (45) THE LIGHT LOSS FACTOR (LLF) SHALL BE CALCULATED FOR EACH FIXTURE AS FOLLOWS:
- LLF = LLD X LDD
- LAMP LUMEN DEPRECIATION FACTOR (LLD) SHALL BE SPECIFIED PERCENTAGE OF LED LUMEN MAINTENANCE AT
- 70,000 HOURS AT 25°C (77°F) FROM THE TM-21 REPORT. THIS LLD SHOULD BE ACCORDING TO LM-80 AND TM-21 REPORTS. THIS REPORT SHALL BE SUBMITTED FOR VERIFICATION.
- LUMINAIRE DIRT DEPRECIATION (LDD) = .9
- (46) THE TM-21 REPORT MUST SHOW THE DRIVE CURRENT USED FOR THE SUBMITTED LUMINAIRE. THE REPORT CAN SHOW A LARGER DRIVE CURRENT TO REPRESENT A WORST CASE SCENARIO.
- (47) THE LUMEN MAINTENANCE LIFE L80 FROM THE TM-21 REPORT MUST NOT BE BELOW 80% AT 70,000 HOURS AT 25°C (77°F).
- (48) THE MANUFACTURER SHALL PROVIDE CERTIFIED TEST LABORATORIES IES PHOTOMETRICS WHICH VERIFY LIGHT LEVELS. PRODUCT SUBMITTAL SHALL BE ACCOMPANIED BY IES TM-21 COMPLIANT TEST REPORTS FROM A CALIPER QUALIFIED OR NVLAP ACCREDITED TESTING LABORATORY FOR THE SPECIFIC MODEL BEING SUBMITTED.
- (49) WARRANTY: THE MANUFACTURER SHALL ENSURE THAT THE LED LUMINAIRES HAVE A MINIMUM STANDARD WARRANTY OF 10 YEARS FOR ALL PARTS, MATERIALS, PAINT FINISH, AND SHIPPING (BOTH WAYS) REQUIRED TO REPAIR OR REPLACE THE LUMINAIRE. THE WARRANTY SHALL BEGIN UPON THE DATE THE LUMINAIRE IS RECEIVED. THE WARRANTY SHALL BE TRANSFERABLE.
- (50) THE WARRANTY SHALL COVER ALL FAILURES INCLUDING:
- (A) FAILURE IN LUMINAIRE LED, HOUSING, WIRING, CONNECTIONS, AND DRIVERS.
- (B) MORE THAN 10 PERCENT DECREASE IN LUMEN OUTPUT.
- (C) SIGNIFICANT CHANGE IN LIGHT OUTPUT COLOR.
- (51) TECHNICAL SUPPORT DURING THE WARRANTY PERIOD SHALL BE AVAILABLE FROM THE MANUFACTURER VIA TELEPHON WITHIN 24 HOURS OF THE TIME THE CALL IS MADE, AND THIS SUPPORT SHALL BE MADE AVAILABLE FROM FACTORY CERTIFIED PERSONNEL OR FACTORY CERTIFIED INSTALLERS AT NO ADDITIONAL CHARGE TO THE DEPARTMENT.
- (52) MINIMUM REQUIRED SUBMITTALS:
- (A) LUMINAIRE SPECIFICATION SHEET.
- (B) LED DRIVER SPECIFICATION SHEET.
- (C) LM-79 LUMINAIRE PHOTOMETRIC REPORT.
- (D) THE VENDOR MUST SUBMIT LM-79 IN-SITU TEST DATA TO CONFIRM THERMAL OPERATING TEMPERATURES OF THE LUMINAIRE.
- (E) LM-80 LUMEN MAINTENANCE REPORT.
- (F) TM-21 CALCULATIONS AS DEFINED.
- (G) BACKLIGHT, UPLIGHT, GLARE (BUG) RATING OF THE LUMINAIRE.
- (H) WRITTEN PRODUCT WARRANTY.
- (I) CERTIFIED TEST LAB IES PHOTOMETRIC REPORTS.
- (J) INCLUDING IES ELECTRONIC FILE.
- (K) INCLUDING INTENSITY AND CHROMATICITY DATA.
- (L) INSTRUCTIONS FOR INSTALLATION AND MAINTENANCE.

- (53) THE LUMINAIRE SHALL BE EQUIPPED WITH A SHORTING CAP AND A 7-PIN PHOTOCONTROL RECEPTACLE THAT MEETS ANSI 2013 STANDARD C136.41

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STATE OF TENNESSEE
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SPECIAL NOTES
HIGH MAST NOTES
AND SPECIFICATIONS

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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

- (20) 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

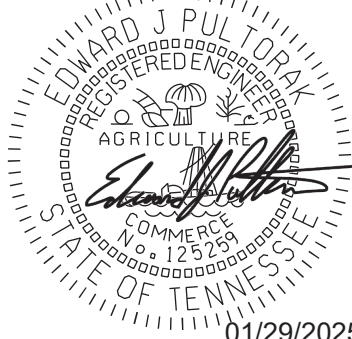
- (2) STAFF FROM THE TDOT ENVIRONMENTAL DIVISION OR A DESIGNEE SHALL ADVISE THE CONTRACTOR DURING THE PRE-CONSTRUCTION MEETING WHEN ENVIRONMENTAL DIVISION PERSONNEL OR A DESIGNATED CONSULTANT WILL NEED TO BE ONSITE FOR WORK BEING DONE WHICH COULD AFFECT WATERS OF THE STATE/U.S. OR SPECIES.
- (3) STAFF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

SCOPE OF WORK

- (6) INSTALLATION OF INTERCHANGE LIGHTING AT I-24 AND JOE B. JACKSON PARKWAY INTERCHANGE. THIS INCLUDES HIGH MAST LIGHTS FOR THE MAJORITY OF THE INTERCHANGE, OFFSET LIGHTING AT THE OFF-RAMP DIVERGE AND THE ON-RAMP MERGE, AND UNDERPASS LIGHTING ON THE BRIDGE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	2E
PS&E	2025	STP-M-I-24-1(136)	2E

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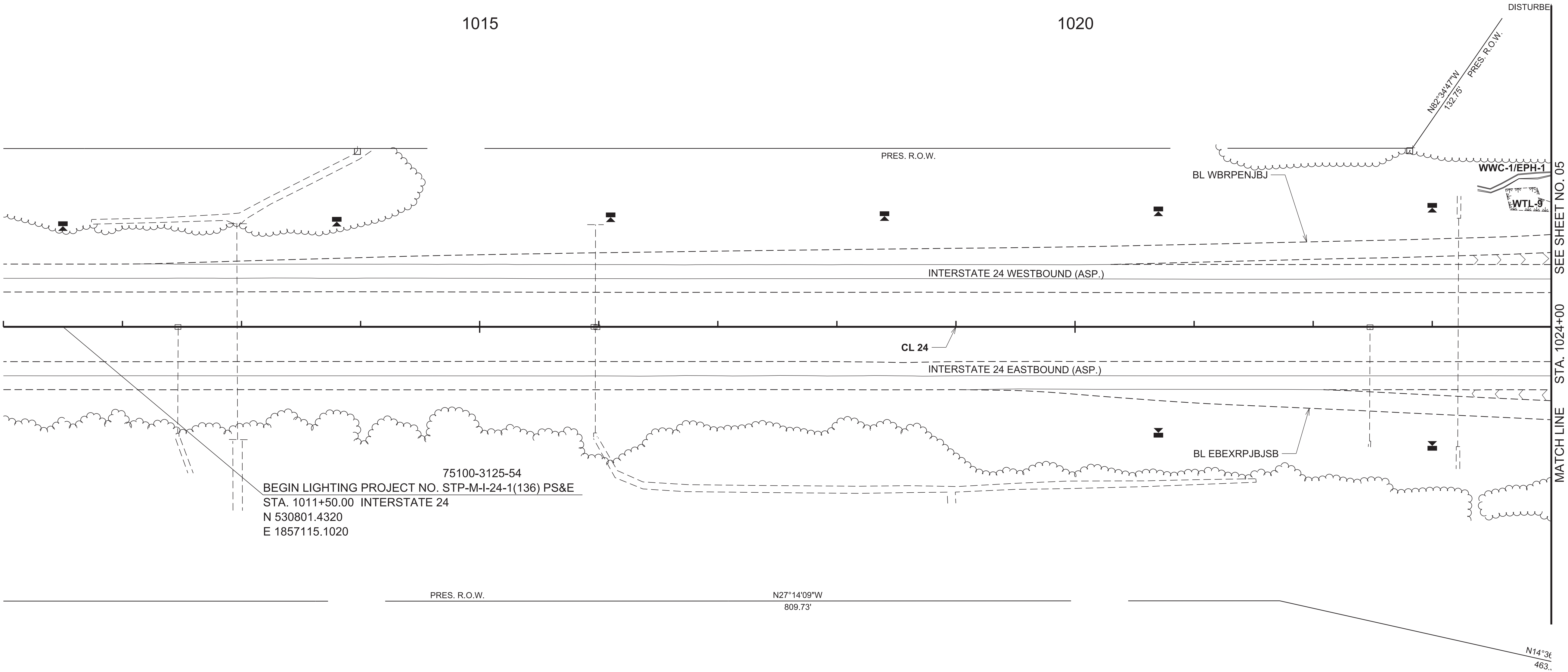
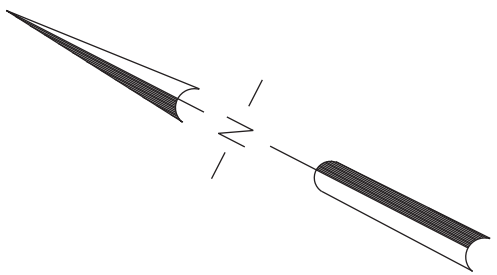
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL
NOTES

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THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-9 AND WWC1/EPH-1 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	5
PIH	2024	STP-M-I-24-1(136)	4
PS&E	2025	STP-M-I-24-1(136)	4



SEALED BY

EDWARD J. PU TORAK
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
COMMERCIAL
STATE OF TENNESSEE
01/29/2025

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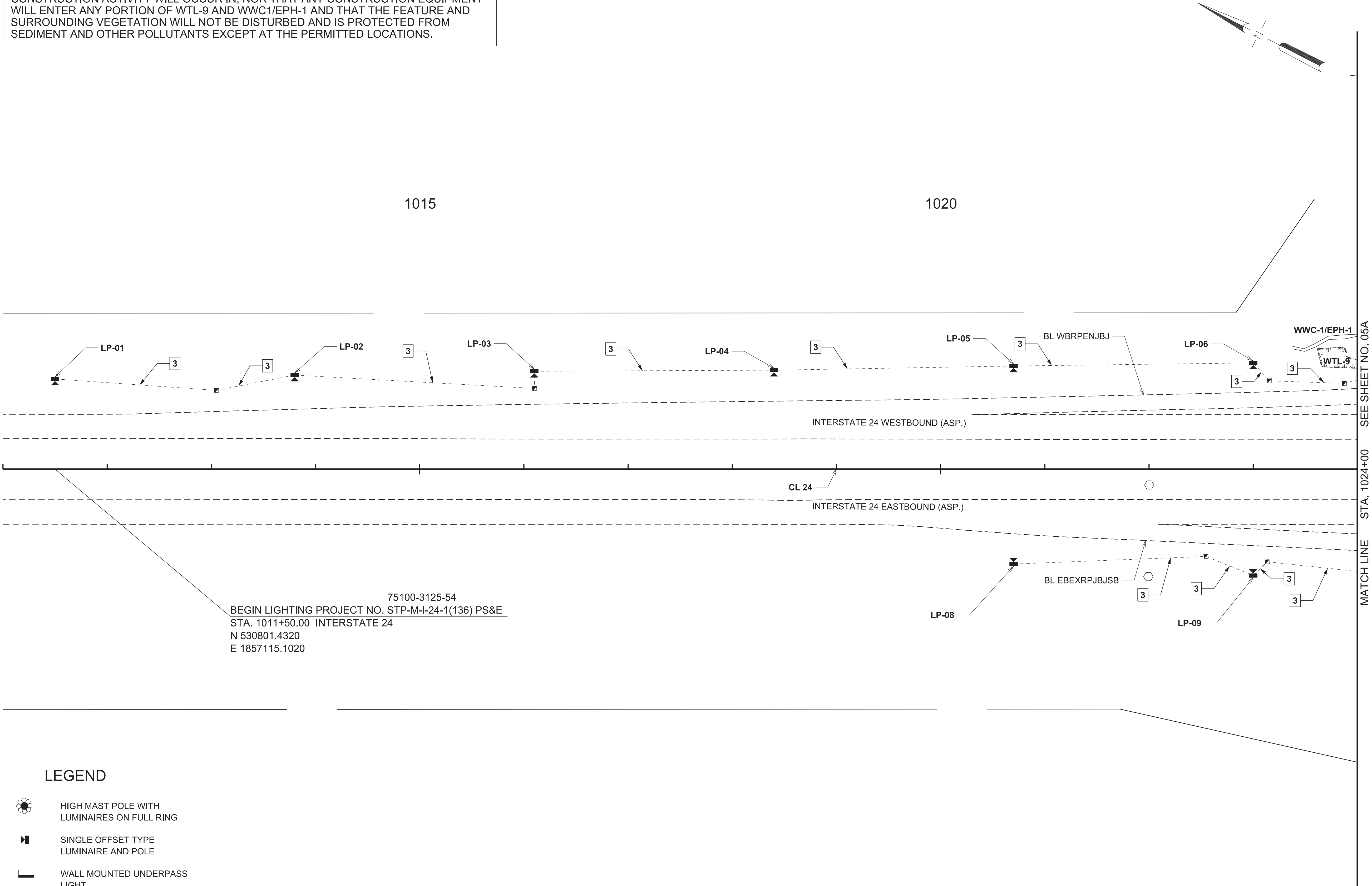
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT
LAYOUT

STA.1011+50 TO STA.1024+00
SCALE: 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	5A
PIH	2024	STP-M-I-24-1(136)	4A
PS&E	2025	STP-M-I-24-1(136)	4A

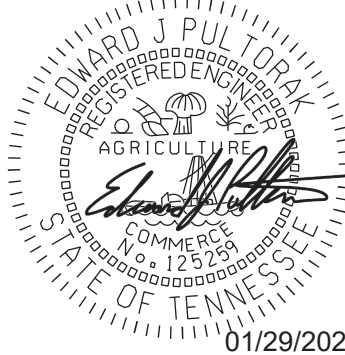
THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-9 AND WWC1/EPH-1 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.



LEGEND

- HIGH MAST POLE WITH LUMINAIRES ON FULL RING
- SINGLE OFFSET TYPE LUMINAIRE AND POLE
- WALL MOUNTED UNDERPASS LIGHT
- PULL BOX (TYPE C)
- LIGHTING CONTROL CENTER
- JACK OR BORED CONDUIT WITH PULL BOXES
- JUNCTION BOX

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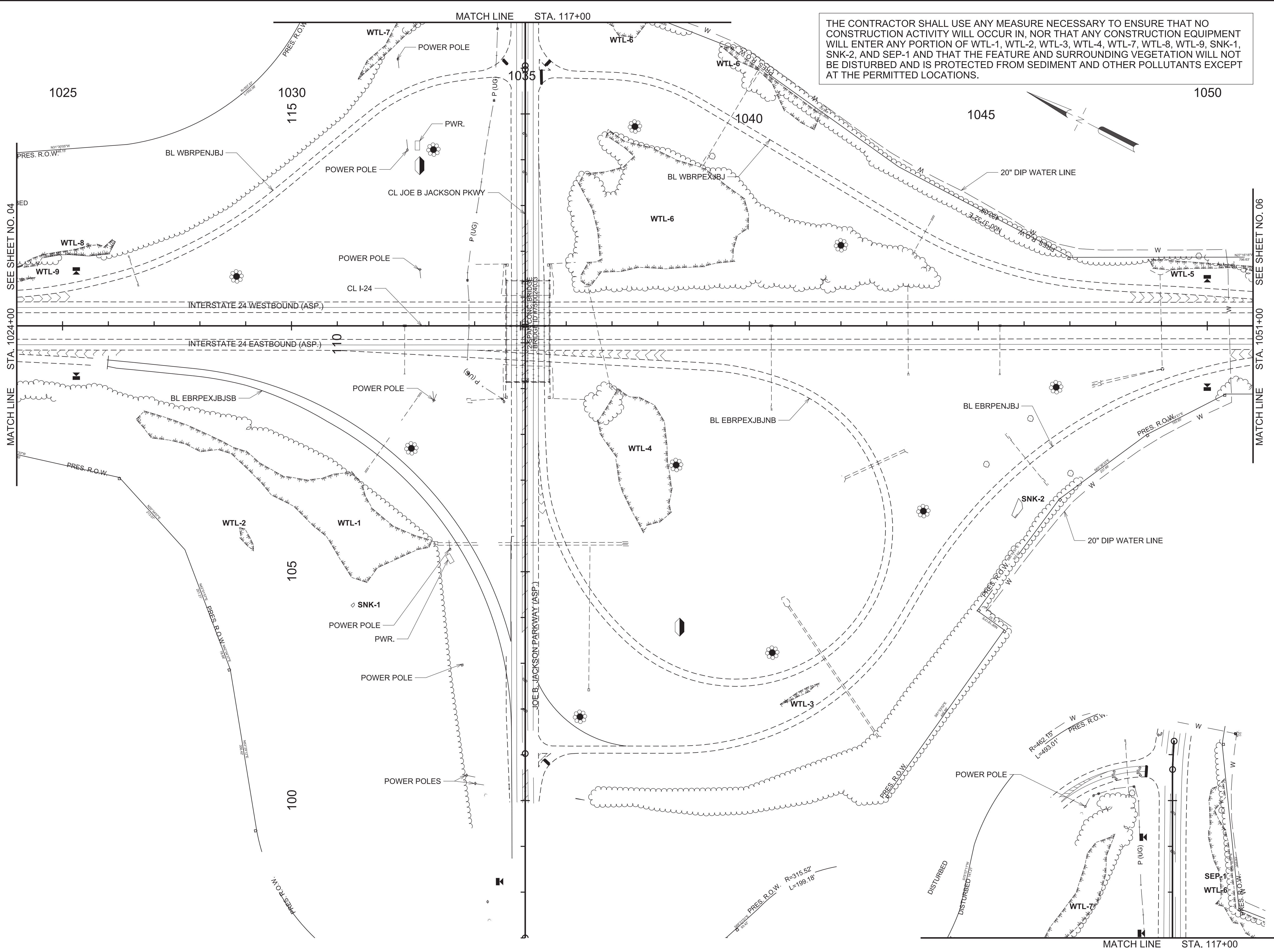
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING
LAYOUT

STA.1011+50 TO STA.1024+00
SCALE: 1"=50'

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THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-1, WTL-2, WTL-3, WTL-4, WTL-7, WTL-8, WTL-9, SNK-1, SNK-2, AND SEP-1 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	6
PIH	2024	STP-M-I-24-1(136)	5
PS&E	2025	STP-M-I-24-1(136)	5

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STATE OF TENNESSEE
01/29/2025

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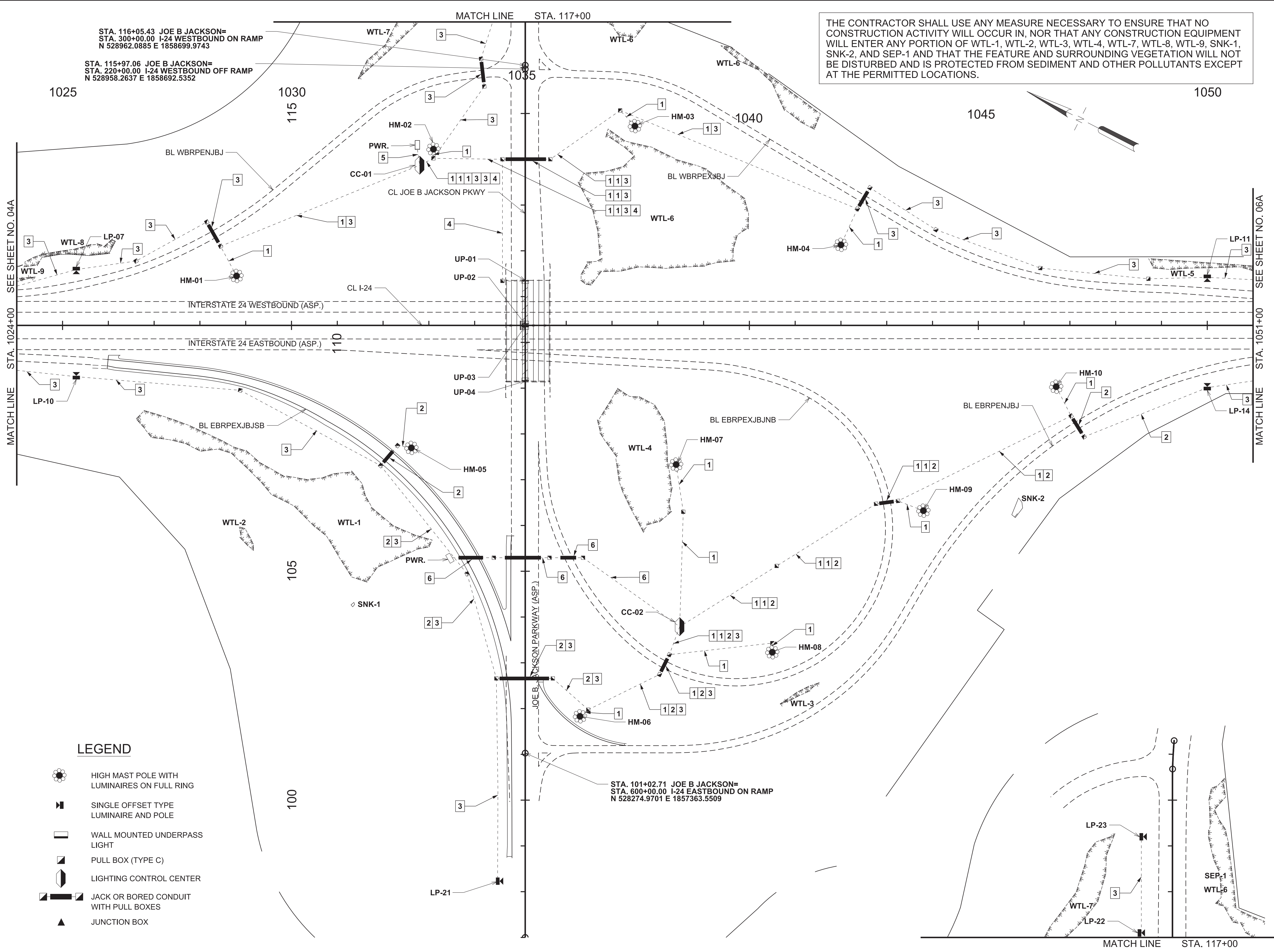
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT
LAYOUT

STA.1024+00 TO STA.1051+00
SCALE: 1"=100'

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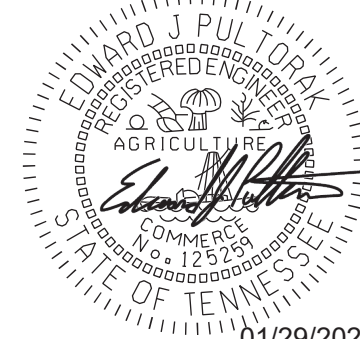
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TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	6A
PIH	2024	STP-M-I-24-1(136)	5A
PS&E	2025	STP-M-I-24-1(136)	5A

LEGEND

- HIGH MAST POLE WITH LUMINAIRES ON FULL RING
- SINGLE OFFSET TYPE LUMINAIRE AND POLE
- WALL MOUNTED UNDERPASS LIGHT
- PULL BOX (TYPE C)
- LIGHTING CONTROL CENTER
- JACK OR BORED CONDUIT WITH PULL BOXES
- JUNCTION BOX

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

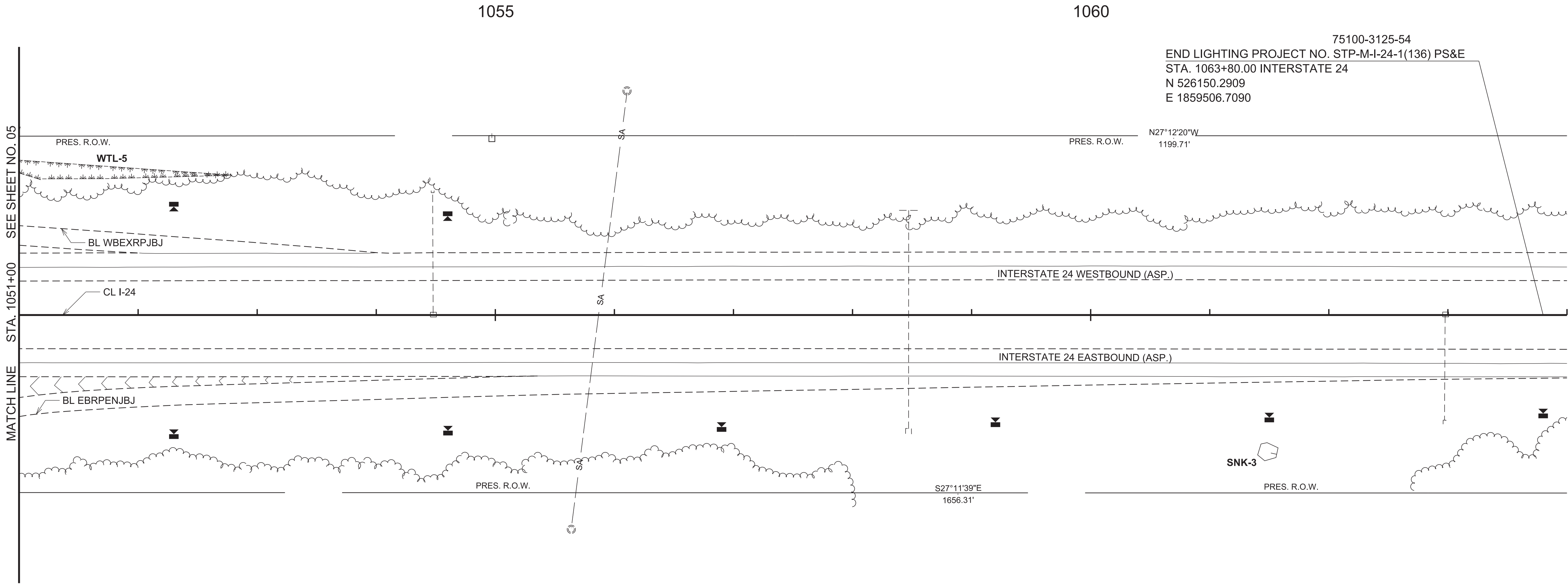
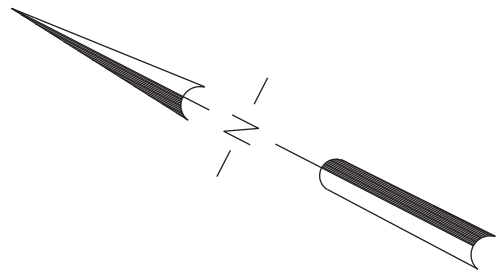
PROPOSED LIGHTING LAYOUT

STA.1024+00 TO STA.1051+00
SCALE: 1"=100'

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THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-5 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	7
PIH	2024	STP-M-I-24-1(136)	6
PS&E	2025	STP-M-I-24-1(136)	6



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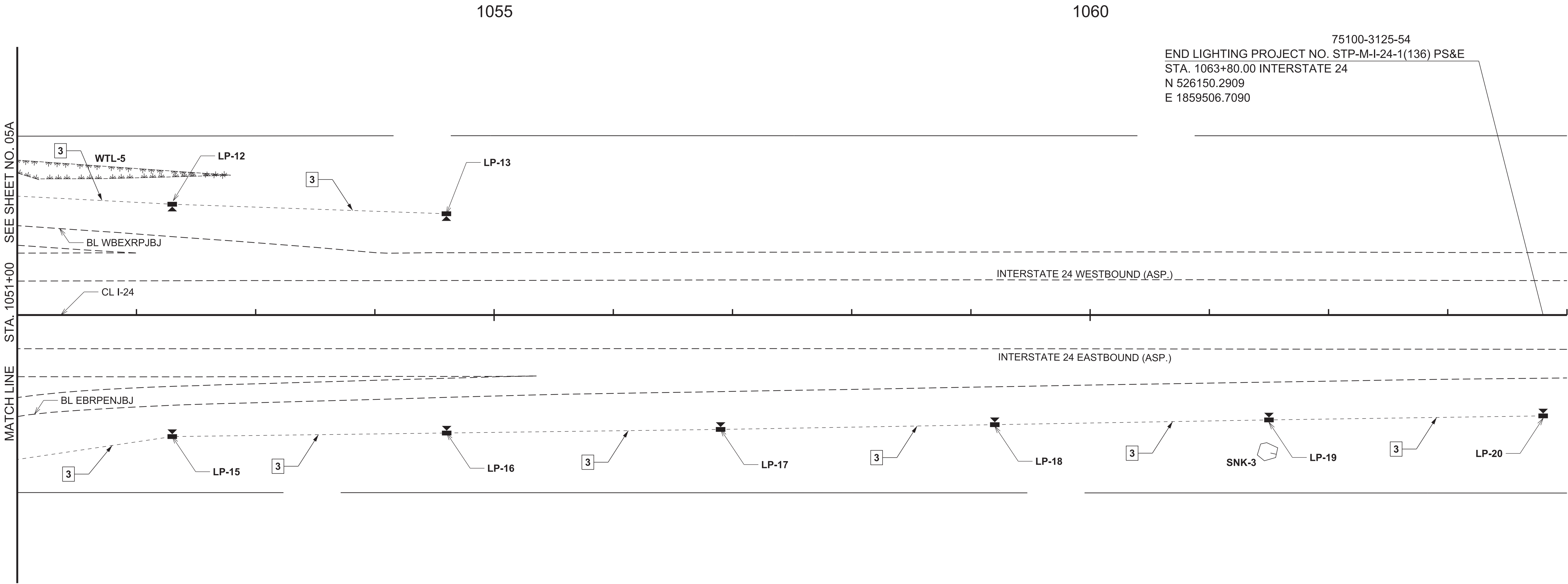
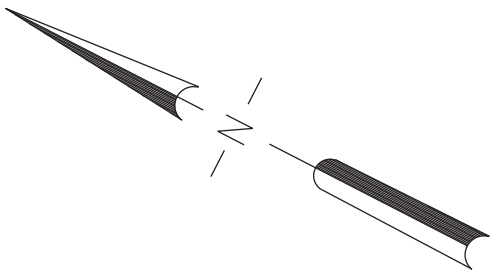
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRESENT
LAYOUT

STA.1051+00 TO STA.1063+80
SCALE: 1"=50'

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	7A
PIH	2024	STP-M-I-24-1(136)	6A
PS&E	2025	STP-M-I-24-1(136)	6A

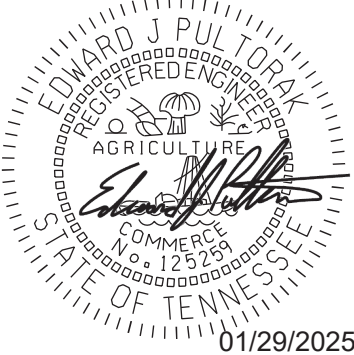
THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-5 AND SNK-3 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.



LEGEND

- HIGH MAST POLE WITH LUMINAIRES ON FULL RING
- SINGLE OFFSET TYPE LUMINAIRE AND POLE
- WALL MOUNTED UNDERPASS LIGHT
- PULL BOX (TYPE C)
- LIGHTING CONTROL CENTER
- JACK OR BORED CONDUIT WITH PULL BOXES
- JUNCTION BOX

SEALED BY



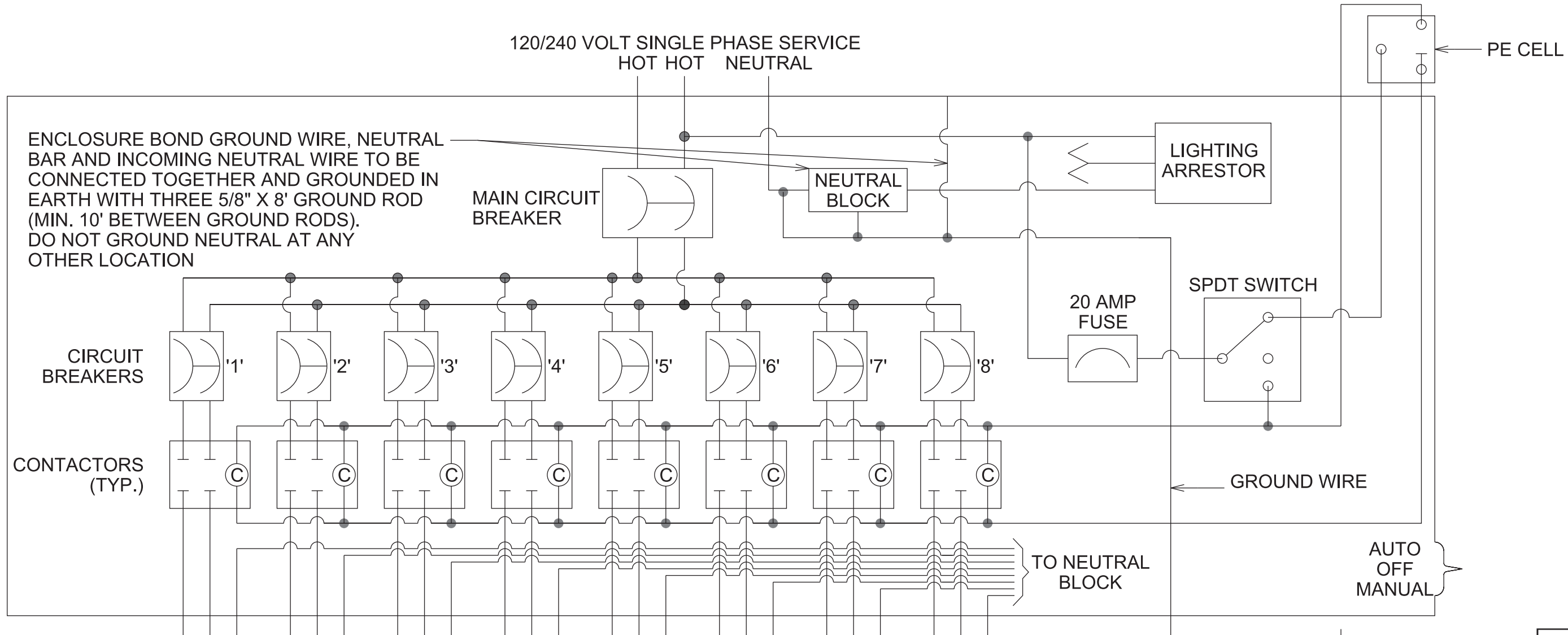
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LIGHTING
LAYOUT

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SCALE: 1"=50'

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LIGHTING CONTROL CENTERS WIRING SCHEMATIC

(FOR CIRCUIT BREAKER SIZE REFER TO CONTROL CENTER SCHEDULE)

THREE (3) 5/8" X 8" CU.
WELD GROUND ROD
(MIN. 10' APART)

GROUND WIRE TO BE
RUN IN TRENCH WITH
LIGHTING SYSTEM CIRCUITS

NOTES

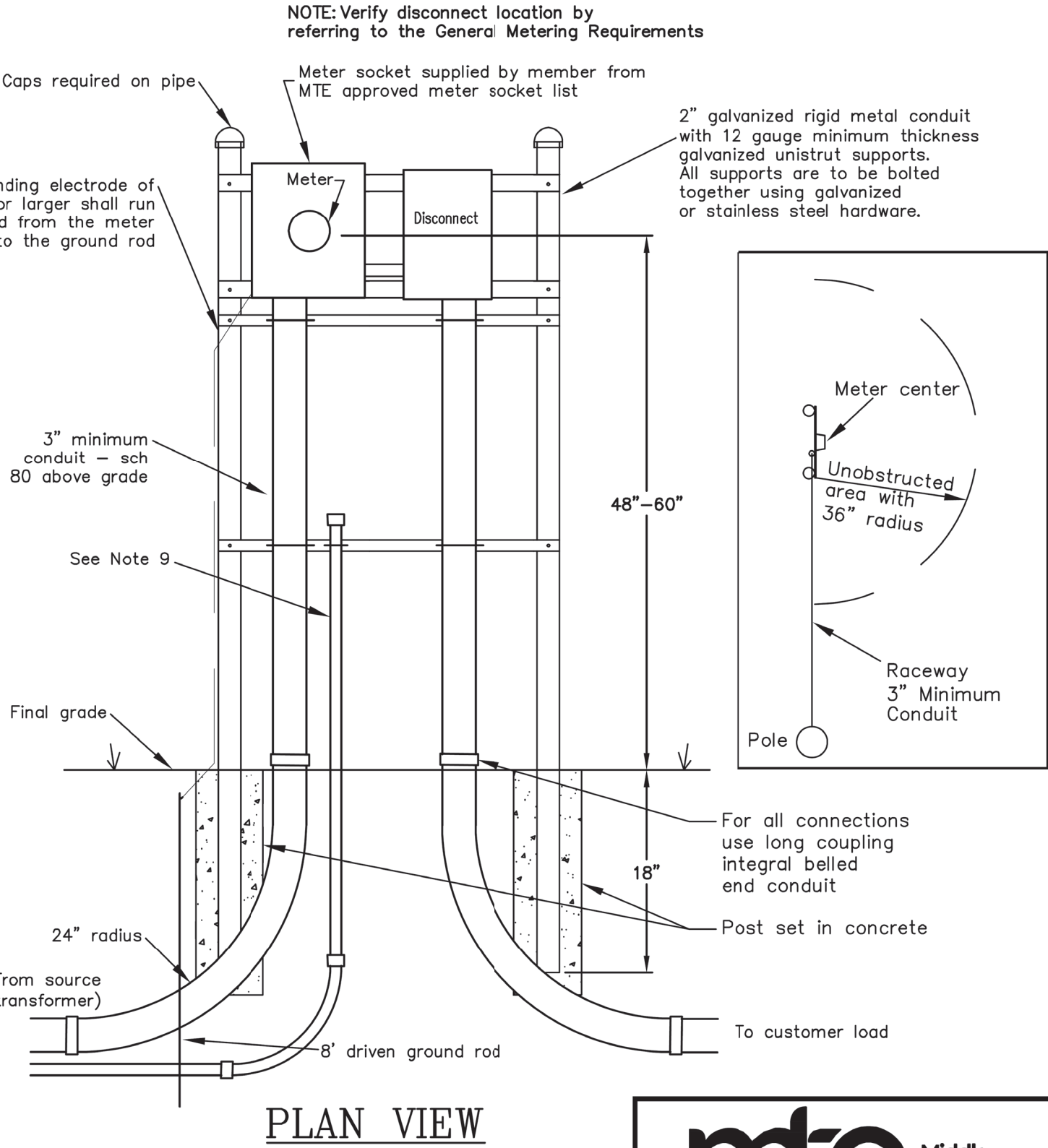
- CONTRACTOR IS RESPONSIBLE FOR ALL MATERIAL AND INSTALLATION UP TO AND INCLUDING WEATHERHEAD.
- CONTRACTOR TO COORDINATE FINAL LOCATION OF CONTROL CENTERS WITH MIDDLE TENNESSEE ELECTRIC (MTE) AND THE ENGINEER.
- CONTRACTOR SHALL INSTALL A 125 AMP DISCONNECT FOR EACH CONTROL CENTER AS DIRECTED BY THE ENGINEER AND MIDDLE TENNESSEE ELECTRIC.
- FOR ELECTRICAL SERVICE CONNECTION, CONTACT: CHRIS BARNES, WITH MTE, AT (615) 494-0428.
- THE LIGHTING SYSTEM SHALL OPERATE ON A THREE WIRE FEED WITH ALTERNATING CONSECUTIVE LIGHTS ON EACH OF THE TWO PHASES. PHASE "A" IS TERMINATED AT ONE OF THE TWO POLES OF THE BREAKER SWITCH AND PHASE "B" IS TERMINATED ON THE OTHER POLE. THE NEUTRAL IS COMMON TO EACH PHASE. THE LAST SPAN OF WIRE IN A CIRCUIT CAN BE 2-WIRE (PLUS BARE COPPER WIRE).
- LIGHTING SYSTEM SHALL BE 120/240 VOLT SINGLE PHASE SERVICE. LUMINAIRES SHALL HAVE 120/240 VOLT OPERATION.
- CONTRACTOR SHALL BALANCE LOADS ON EACH CIRCUIT.
- THE CONTROL CABINET SHALL BE INSTALLED IN SUCH A MANNER AS TO MAINTAIN A STANDING WORKING HEIGHT. PERSONNEL WORKING ON THE CABINET SHALL BE ABLE TO WORK ON THE CABINET WHILE STANDING.

CONTROL CENTER SCHEDULE																
CONTROL CENTER NO.	MAIN CIRCUIT BREAKER (AMPS)	BRANCH CIRCUIT BREAKER (AMPS)										BASELINE	STATION	OFFSET (FT)	SIDE	SHEET NO.
		CIR.1	CIR.2	CIR.3	CIR.4	CIR.5	CIR.6	CIR.7	CIR.8	CIR.9 (SPARE)	CIR.10					
CC1	175	2P/15	2P/15	2P/15	2P/15	1P/10	2P/15	2P/15	2P/15	2P/20	N/A	I-24	1033+10.00	385.00	LT	05A
CC2	200	2P/20	2P/15	2P/20	2P/15	2P/15	2P/15	2P/15	2P/15	2P/20	N/A	I-24	1038+50.00	660.00	RT	05A

Notes:

*Be sure to call Tennessee One Call before digging or opening ditches: 1-800-351-1111 or 811
* Underground Inspection 1-877-886-8362

- MTE will furnish and install the following materials at the service pole:
 - Conduit up the service pole, to include all related hardware.
 - Service conductor from transformer to meter pedestal.
- Member will open ditch from service pole or junction box to meter location with the following specifications:
 - Where ditch length will exceed 150 ft. see MTE engineering representative prior to opening ditch
 - Hand-dig ditch when within 5 ft. of transformer.
 - Depth sufficient to bed conduit with service conductors 24 in. below final grade.
 - Where impractical to obtain 24 in. depth, see a MTE engineering representative.
 - Member will backfill ditch after inspection by MTE (call 877-886-8362 or visit www.MTE.com to fill out an online request)
- Continuous raceway from transformer to meter base will be furnished and installed by member to the following specifications:
 - Conduit size is to be 3 inch as specified below with appropriate fittings and/or bushings as required. For all conduit connections use long, (6" minimum) integral belled end conduit.
 - Raceway below grade/between elbows is to be schedule 40 electrical PVC or schedule 80 electrical PVC conduit.
 - Elbows are to be schedule 80 electrical PVC with a sweeping radius of 24 inches.
 - Conduit extending from meter base to one foot below grade is to be schedule 80 electrical PVC
 - Where junction box (not shown) is present at service pole, see a MTE engineering representative for specifications.
 - A polyvinyl, non rot or mildew proof, pull string with a minimum breaking strength of 200 pounds is to be installed inside the raceway.
 - Under certain loading and/or density conditions, an alternate sized conduit may be used with the approval of MTE district office engineering representative.
- Service conductors see "General Service Conductor Requirements"
- The bottom of a weatherproof, UL listed, multi-circuit disconnect shall be located no less than 2 ft. above grade.
- For information about conductors, conduit and grounding, refer to National Electric Code.
- See General Metering Requirements for additional metering information.
- The location of free standing meter centers (FSMC) shall be at the sole discretion of MTE engineering with the following constraints:
 - When a FSMC is served from a pole/overhead feed, the FSMC should be a minimum of 10' from the utility pole.
 - When a FSMC is placed in a residential development, the power source should originate from a pull box, not a pole.
- Install 1" comm. conduit as indicated. Strap conduit to first cross member, install appropriate cap on conduit.



mte Middle Tennessee Electric

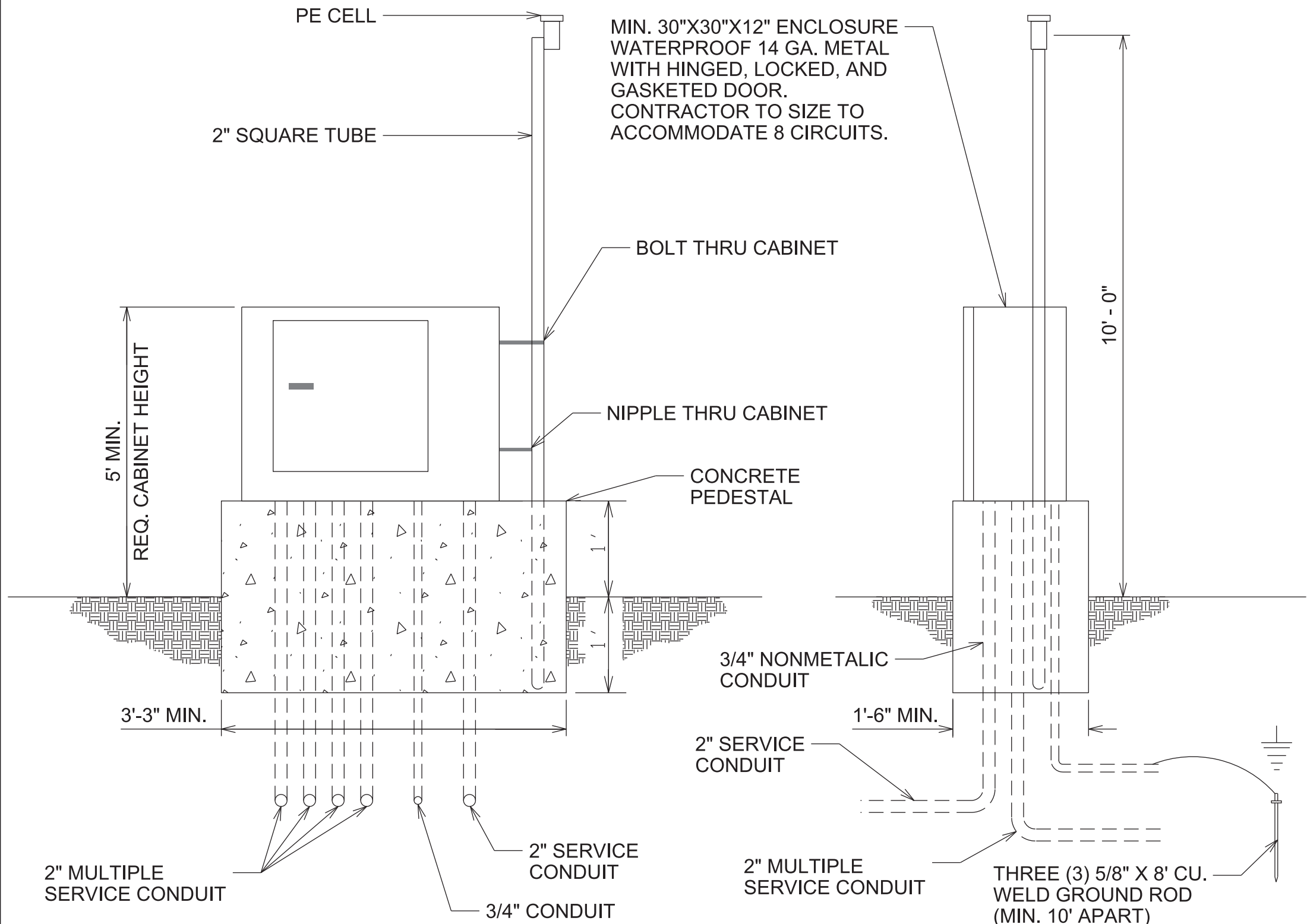
FREE STANDING METER CENTER

DRAWING NUMBER: FSMC-2

REVISED DATE: JAN. 2, 2023

SCALE: NONE

SHEET: 1 OF 1



PAD MOUNTED CONTROLLER CONSTRUCTION DETAIL

N.T.S.

TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	3
PIH	2024	STP-M-I-24-1(136)	7
PS&E	2025	STP-M-I-24-1(136)	7

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DEPARTMENT OF TRANSPORTATION

CONTROL CENTER
AND
POWER SUPPLY
DETAILS

FRAME MOUNTED CONTROLLER CONSTRUCTION DETAIL BY MIDDLE TENNESSEE ELECTRIC (MTE)

SEE MTE UNDERGROUND INSTALLATION GUIDE FOR ADDITIONAL INFORMATION

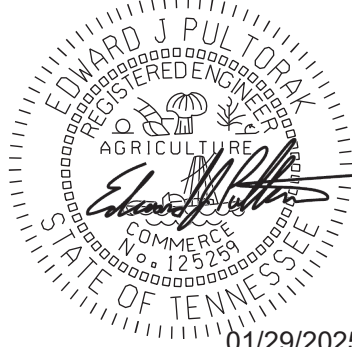
TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	4
PIH	2024	STP-M-I-24-1(136)	8
PS&E	2025	STP-M-I-24-1(136)	8

PROPOSED LED OFFSET LIGHT POLE SCHEDULE														
LIGHT POLE NUMBER	SHEET NO.	MOUNTING HEIGHT (FT)	LAMP WATTAGE (LED)	TILT ANGLE (DEG)	NO. LAMPS	VOLTAGE	CONTROL CENTER NO.	CIRCUIT NO.	BASELINE	STATION	OFFSET (FT)	SIDE	NORTHING	EASTING
LP-01	L-1	40	206	20	1	240	1	6	I-24	1011+50.00	86.58	LT	530841.0227	1857192.0968
LP-02	L-1	40	206	20	1	240	1	6	I-24	1013+80.00	90.30	LT	530638.1834	1857300.5869
LP-03	L-1	40	206	20	1	240	1	6	I-24	1016+10.00	94.00	LT	530435.3303	1857409.0501
LP-04	L-1	40	206	20	1	240	1	6	I-24	1018+40.00	95.00	LT	530231.2441	1857515.1153
LP-05	L-1	40	206	20	1	240	1	6	I-24	1020+70.00	99.00	LT	530028.5296	1857623.8484
LP-06	L-1	40	206	20	1	240	1	6	I-24	1023+00.00	102.00	LT	529825.3581	1857731.6921
LP-07	L-2	40	206	20	1	240	1	6	I-24	1025+30.00	122.00	LT	529629.9603	1857854.6544
LP-08	L-1	40	206	20	1	240	2	7	I-24	1020+70.00	91.00	RT	529941.6454	1857454.8776
LP-09	L-1	40	206	20	1	240	2	7	I-24	1023+00.00	102.00	RT	529732.0717	1857550.2709
LP-10	L-2	40	206	20	1	240	2	7	I-24	1025+30.00	111.98	RT	529522.9555	1857646.5535
LP-11	L-2	40	206	20	1	240	1	7	I-24	1050+00.00	105.00	LT	527425.5670	1858969.0327
LP-12	L-3	40	206	20	1	240	1	7	I-24	1052+30.00	93.00	LT	527215.5360	1859063.5367
LP-13	L-3	40	206	20	1	240	1	7	I-24	1054+60.00	85.00	LT	527007.3342	1859161.5979
LP-14	L-2	40	206	20	1	240	2	8	I-24	1050+00.00	136.00	RT	527315.3610	1858754.7067
LP-15	L-3	40	206	20	1	240	2	8	I-24	1052+30.00	102.00	RT	527126.3635	1858890.1203
LP-16	L-3	40	206	20	1	240	2	8	I-24	1054+60.00	99.00	RT	526922.9993	1858998.0663
LP-17	L-3	40	206	20	1	240	2	8	I-24	1056+90.00	96.00	RT	526720.0219	1859105.8069
LP-18	L-3	40	206	20	1	240	2	8	I-24	1059+20.00	92.00	RT	526517.3076	1859214.5400
LP-19	L-3	40	206	20	1	240	2	8	I-24	1061+50.00	88.02	RT	526314.5840	1859323.2553
LP-20	L-3	40	206	20	1	240	2	8	I-24	1063+80.00	84.64	RT	526111.5881	1859431.4408
LP-21	L-2	40	206	20	1	240	2	7	Joe B Jackson Pkwy	98+23.00	60.00	LT	528200.4353	1857087.3640
LP-22	L-2	40	206	20	1	240	1	8	Joe B Jackson Pkwy	117+10.00	68.00	LT	529073.9379	1858760.0544
LP-23	L-2	40	206	20	1	240	1	8	Joe B Jackson Pkwy	119+20.00	68.00	LT	529166.4029	1858948.6445

PROPOSED LED HIGH MAST LIGHT POLE SCHEDULE													
LIGHT POLE NUMBER	SHEET NO.	MOUNTING HEIGHT (FT)	LAMP WATTAGE (LED)	NO. LAMPS	VOLTAGE	CONTROL CENTER NO.	CIRCUIT NO.	BASELINE	STATION	OFFSET (FT)	SIDE	NORTHING	EASTING
HM-01	L-2	100	295	8	240	1	1	I-24	1028+80.00	108.00	LT	529312.2964	1858002.2540
HM-02	L-2	100	295	8	240	1	2	I-24	1033+10.00	385.00	LT	529056.5572	1858445.2286
HM-03	L-2	100	295	8	240	1	3	I-24	1037+50.00	435.42	LT	528688.3118	1858691.2719
HM-04	L-2	100	295	8	240	1	4	I-24	1042+00.00	176.00	LT	528169.4899	1858666.3455
HM-05	L-2	150	295	12	240	2	1	I-24	1032+61.00	268.00	RT	528800.9552	1857842.8454
HM-06	L-2	100	295	8	240	2	2	I-24	1036+30.00	854.00	RT	528205.3974	1857489.6932
HM-07	L-2	150	295	12	240	2	3	I-24	1038+40.00	304.00	RT	528270.1477	1858074.8490
HM-08	L-2	100	295	8	240	2	4	I-24	1040+50.00	714.00	RT	527895.9032	1857806.2581
HM-09	L-2	100	295	8	240	2	5	I-24	1043+80.00	404.74	RT	527743.8486	1858232.1946
HM-10	L-2	100	295	8	240	2	6	I-24	1046+70.00	134.00	RT	527609.7511	1858605.5809

PROPOSED LED UNDERPASS LUMINAIRE SCHEDULE														
LIGHT POLE NUMBER	SHEET NO.	MOUNTING HEIGHT (FT)	LAMP WATTAGE (LED)	TILT ANGLE (DEG)	NO. LAMPS	VOLTAGE	CONTROL CENTER NO.	CIRCUIT NO.	BASELINE	STATION	OFFSET (FT)	SIDE	NORTHING	EASTING
UP-1	L-2	16	72	0	1	120	1	5	I-24	1035+10.48	98.37	LT	528747.1886	1858282.0009
UP-2	L-2	16	72	0	1	120	1	5	I-24	1035+10.48	2.48	LT	528703.3427	1858196.7220
UP-3	L-2	16	72	0	1	120	1	5	I-24	1035+10.48	1.79	RT	528701.3889	1858192.9220
UP-4	L-2	16	72	0	1	120	1	5	I-24	1035+10.48	121.62	RT	528646.5978	1858086.3550

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DEPARTMENT OF TRANSPORTATION

LIGHTING
DETAILS

SHEET 1 OF 3
(POLE DATA)

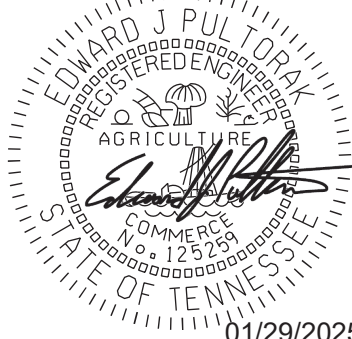
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	9
PS&E	2025	STP-M-I-24-1(136)	9

WIRING AND CONDUIT SCHEDULE										
RUN NO.	POLE NO. TO POLE NO.			1- 2" DIRECT BURIAL CONDUIT LENGTH (FT)	1- 2" DIRECTIONAL BORED CROSSING LENGTH (FT)	1-1" RGS CONDUIT STRAPPED UNDER BRIDGE DECK (FT)	CABLE LENGTH (FT)	CONTROL CENTER NO.	CIRCUIT NO.	NO. & SIZE OF WIRE
1	CC1	TO	HM-01	550	0		550	1	1	3 @ #6 AWG 1 @ #6 BARE
	CC1	TO	HM-02	60	0		60	1	2	
	CC1	TO	HM-03	420	100		520	1	3	
	CC1	TO	HM-04	990	100		1090	1	4	
	CC2	TO	HM-06	280	40		320	2	2	
	CC2	TO	HM-07	355	0		355	2	3	
	CC2	TO	HM-08	311	0		311	2	4	
	CC2	TO	HM-09	570	50		620	2	5	
	CC2	TO	HM-10	1080	50		1130	2	6	
2	CC2	TO	HM-05	912	220		1132	2	1	3 @ #4 AWG 1 @ #4 BARE
	CC2	TO	LP-14	1290	100		1390	2	8	
3	CC1	TO	LP-01 - LP-07	2160	50		2210	1	6	3 @ #6 AWG 1 @ #6 BARE
	CC2	TO	LP-08 - LP-10	2492	160		2652	2	7	
	CC1	TO	LP-11 - LP-13	2230	150		2380	1	7	
	LP-14	TO	LP-15 - LP-20	1380			1380	2	8	
	CC2	TO	LP-21	1120	50		1170	2	7	
	CC1	TO	LP-22 & LP-23	540	50	.	590	1	8	
4	CC1	TO	UP-01 - UP-04	450		300	750	1	5	3 @ #8 AWG 1 @ #8 BARE
5	PWR.	TO	CC1	40			40	1	N/A	3 @ #2/0 AWG 1 @ #2/0 BARE
6	PWR.	TO	CC2	380	170		550	2	N/A	3 @ #3/0 AWG 1 @ #3/0 BARE

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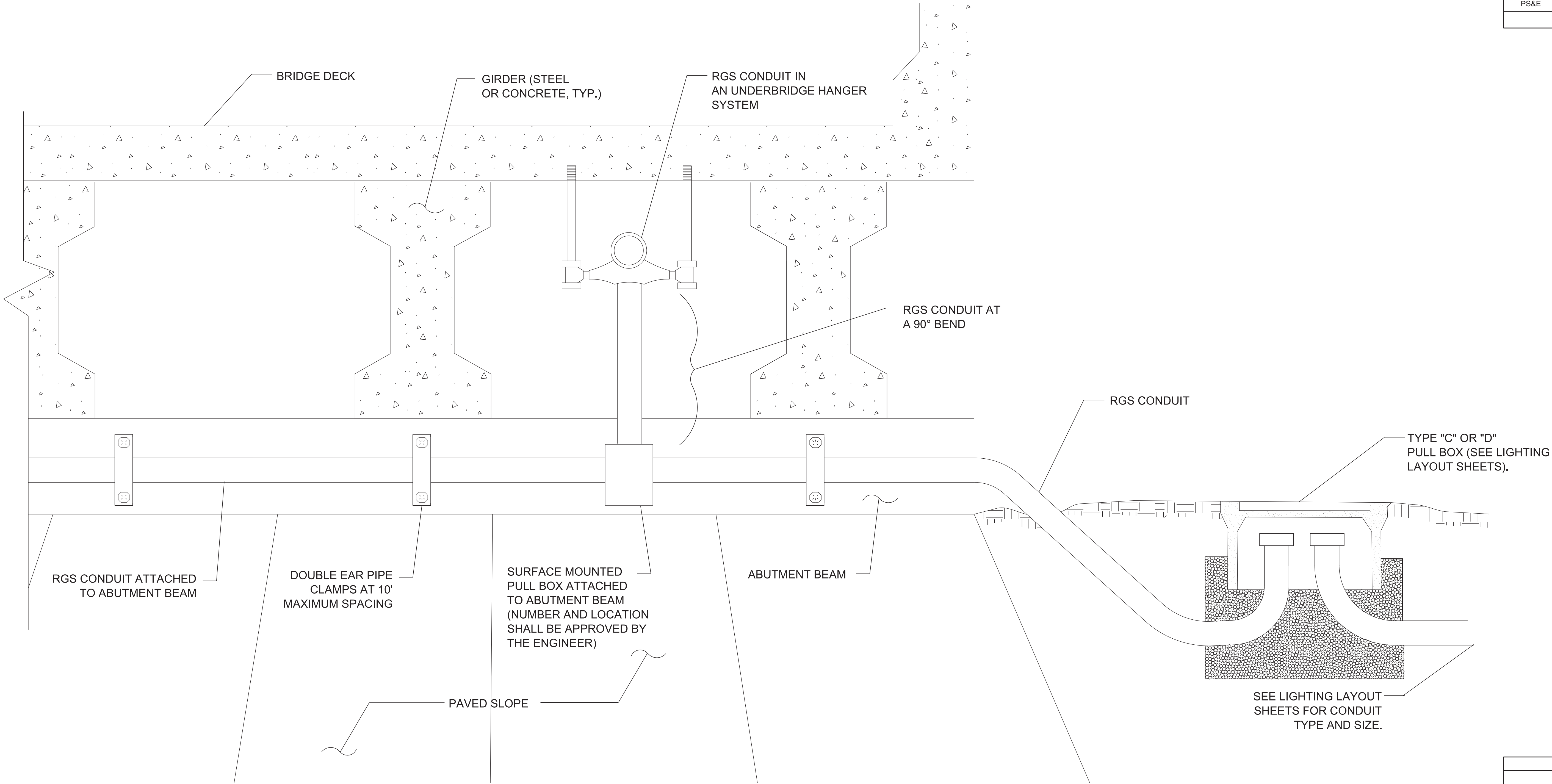
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

LIGHTING
DETAILS

SHEET 2 OF 3
(WIRING DATA)

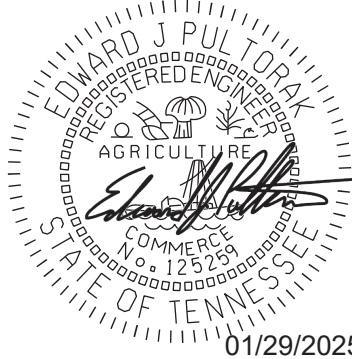
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	10
PS&E	2025	STP-M-I-24-1(136)	10



CONDUIT TRANSITIONING OUT OF UNDERBRIDGE HANGER SYSTEM AND ATTACHED ON ABUTMENT BEAM AND/OR INTO EARTH TRENCH
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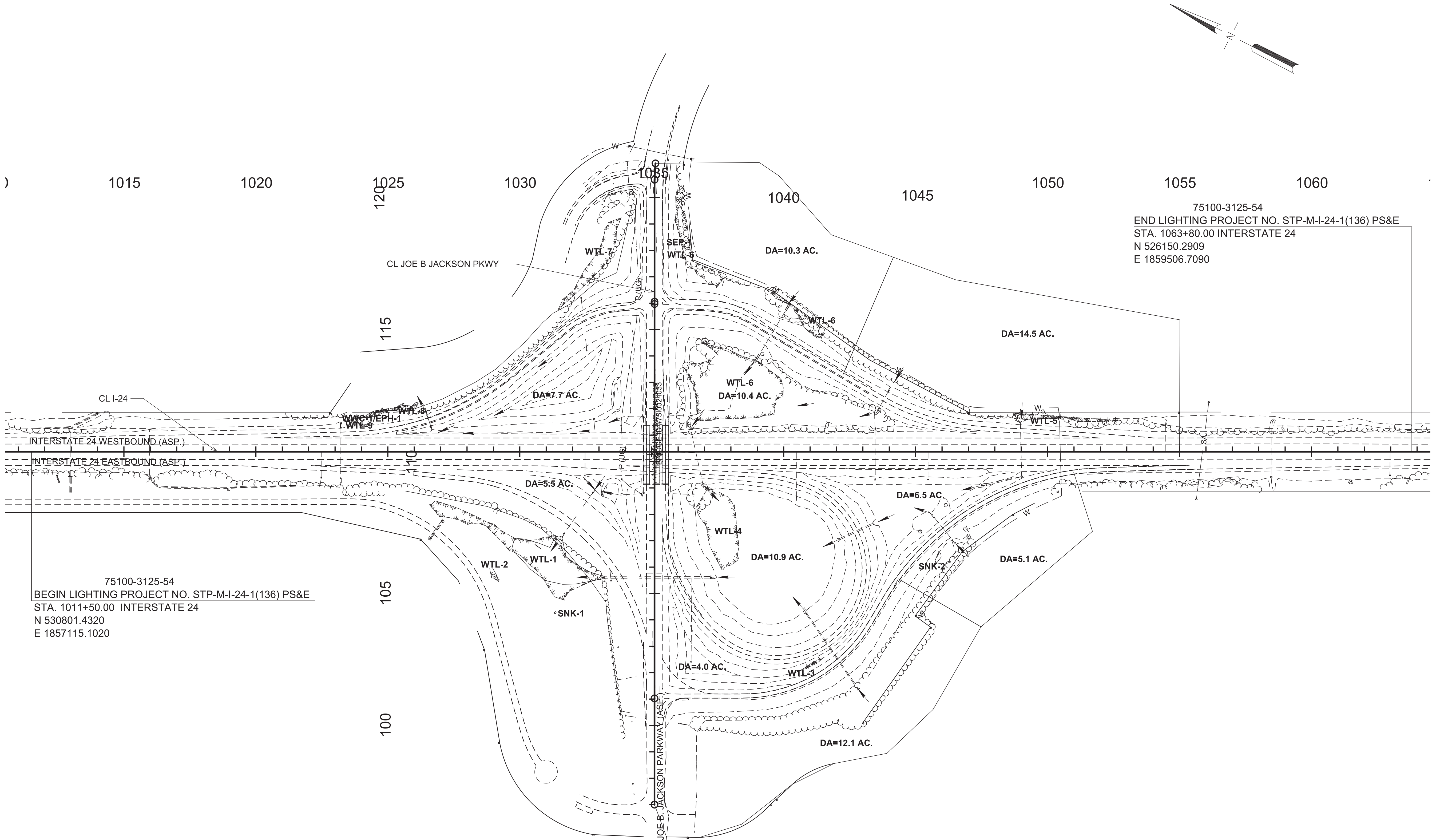
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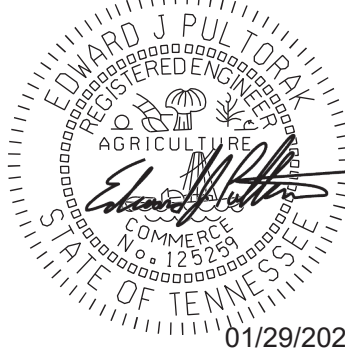
LIGHTING
DETAILS

SHEET 3 OF 3
(UNDERPASS CONDUITS)

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	11
PS&E	2025	STP-M-I-24-1(136)	11



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

DRAINAGE
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SUBSECTION 3 – EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

DISTURBED AREA

- (1) IF DISTURBED ACREAGE IS EQUAL TO ONE ACRE OR MORE, PLEASE CONTACT TDOT ENVIRONMENTAL DIVISION, PERMITS SECTION AS SOON AS POSSIBLE BECAUSE AN NPDES PERMIT WILL BE REQUIRED.
- (2) AREAS TO BE UNDISTURBED SHALL BE CLEARLY MARKED IN THE FIELD BEFORE CONSTRUCTION ACTIVITIES BEGIN.
- (3) UNLESS OTHERWISE NOTED IN THE PLANS, THE CONTRACTOR SHALL NOT CLEAR/DISTURB ANY AREA BEYOND 15 FEET FROM SLOPE LINES.
- (4) PRE-CONSTRUCTION VEGETATIVE GROUND COVER SHALL NOT BE DESTROYED, REMOVED OR DISTURBED (I.E. CLEARING AND GRUBBING INITIATED) MORE THAN 14 CALENDAR DAYS PRIOR TO GRADING OR EARTH MOVING ACTIVITIES UNLESS THE AREA IS MULCHED, SEEDED WITH MULCH, OR OTHER TEMPORARY COVER IS APPLIED.
- (5) CLEARING, GRUBBING, AND OTHER DISTURBANCE TO RIPARIAN VEGETATION SHALL BE LIMITED TO THE MINIMUM NECESSARY FOR SLOPE CONSTRUCTION AND EQUIPMENT OPERATIONS. EXISTING VEGETATION, INCLUDING STREAM AND WETLAND BUFFERS (UNLESS PERMITTED), SHOULD BE PRESERVED TO THE MAXIMUM EXTENT POSSIBLE. UNNECESSARY VEGETATION REMOVAL IS PROHIBITED.

SEDIMENT CONTROL

- (6) EPSC MEASURES SHALL BE INSTALLED AND FUNCTIONAL PRIOR TO ANY EARTH MOVING OPERATIONS AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- (7) TEMPORARY EPSC MEASURES MAY BE REMOVED AT THE BEGINNING OF THE WORKDAY BUT MUST BE REINSTALLED AT THE END OF THE WORKDAY OR BEFORE/DURING A PRECIPITATION EVENT.
- (8) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT THE OFFSITE MIGRATION OR DEPOSIT OF SEDIMENT OFF THE PROJECT LIMITS (E.G. R.O.W., EASEMENTS, ETC.), INTO WATERS OF THE STATE/U.S., OR ONTO ROADWAYS USED BY THE GENERAL PUBLIC. IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFFSITE ACCUMULATIONS OF SEDIMENT THAT HAVE NOT REACHED A STREAM MUST BE REMOVED AT A FREQUENCY SUFFICIENT TO MINIMIZE OFFSITE IMPACTS (E.G., FUGITIVE SEDIMENT THAT HAS ESCAPED THE CONSTRUCTION SITE AND HAS COLLECTED IN A STREET MUST BE REMOVED SO THAT IT IS NOT SUBSEQUENTLY WASHED INTO STORM SEWERS AND STREAMS BY THE NEXT RAIN AND/OR SO THAT IT DOES NOT POSE A SAFETY HAZARD TO USERS OF PUBLIC STREETS). ARRANGEMENTS CONCERNING REMOVAL OF SEDIMENT ON ADJOINING PROPERTY MUST BE NEGOTIATED WITH THE ADJOINING PROPERTY OWNER BEFORE REMOVAL OF SEDIMENT.
- (9) OFFSITE VEHICLE TRACKING OF SEDIMENTS AND THE GENERATION OF DUST SHALL BE MINIMIZED. A STABILIZED CONSTRUCTION EXIT (A POINT OF ENTRANCE/EXIT TO THE CONSTRUCTION PROJECT) SHALL BE PROVIDED TO REDUCE THE TRACKING OF MUD AND DIRT ONTO PUBLIC ROADS BY CONSTRUCTION VEHICLES.
- (10) THE DEWATERING OF WORK AREAS, TRENCHES, FOUNDATIONS, EXCAVATIONS, ETC. THAT HAVE COLLECTED STORMWATER, WATER FROM VEHICLE WASH AREAS, OR GROUNDWATER SHALL BE EITHER HELD IN SETTLING BASINS OR TREATED BY FILTRATION AND/OR CHEMICAL TREATMENT PRIOR TO ITS DISCHARGE. ALL PHYSICAL AND/OR CHEMICAL TREATMENT WILL BE APPLIED IN ACCORDANCE WITH THE MANUFACTURER’S GUIDELINES AND FULLY DESCRIBED IN THE EPSC PLANS. WATER DISCHARGED SHALL NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITHIN THE RECEIVING NATURAL RESOURCE. WATER MUST BE HELD IN SETTLING BASINS UNTIL AT LEAST AS CLEAR AS THE RECEIVING WATERS. SETTLING BASINS SHALL NOT BE LOCATED CLOSER THAN 20 FEET FROM THE TOP BANK OF A STREAM. SETTLING BASINS AND SEDIMENT TRAPS SHALL BE PROPERLY DESIGNED ACCORDING TO THE SIZE OF THE DRAINAGE AREAS OR VOLUME OF WATER TO BE TREATED. TREATED WATER MUST BE DISCHARGED THROUGH A PIPE OR WELL-VEGETATED OR LINED CHANNEL, SO THAT THE DISCHARGE DOES NOT CAUSE EROSION OR SEDIMENT TRANSPORT. DISCHARGES FROM BASINS AND IMPOUNDMENTS SHALL UTILIZE OUTLET STRUCTURES THAT ONLY WITHDRAW WATER FROM NEAR THE SURFACE OF THE BASIN OR IMPOUNDMENT. DISCHARGES MUST NOT CAUSE AN OBJECTIONABLE COLOR CONTRAST WITH THE RECEIVING STREAM.

INSPECTION, MAINTENANCE & REPAIR

- (12) THE TDOT CONSTRUCTION SUPERVISOR (OR THEIR DESIGNEE) AND THE CONTRACTOR'S RESPONSIBLE PARTY ARE RESPONSIBLE FOR INSPECTIONS. MAINTENANCE AND REPAIR ACTIVITIES ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE TDOT CONSTRUCTION SUPERVISOR OR THEIR DESIGNEE SHALL COMPLETE THE EPSC INSPECTION REPORTS AND DISTRIBUTE COPIES PER THE CONTRACT.
- (13) TDOT CONSULTANTS AND CONTRACTOR STAFF RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE, AND/OR REPAIR OF EPSC MEASURES SHALL SUCCESSFULLY COMPLETE THE TDEC “LEVEL 1 - FUNDAMENTALS OF EROSION PREVENTION AND SEDIMENT CONTROL FOR CONSTRUCTION SITES” COURSE AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION. TDOT STAFF AND SUPERVISORS RESPONSIBLE FOR THE INSPECTION, IMPLEMENTATION, MAINTENANCE, AND/OR REPAIR OF EPSC MEASURES SHALL SUCCESSFULLY COMPLETE THE TDOT “FUNDAMENTALS OF EROSION AND SEDIMENT CONTROL” CLASS AND ANY REFRESHER COURSES AS REQUIRED TO MAINTAIN CERTIFICATION.
- (14) EPSC CONTROLS SHALL BE INSPECTED ACCORDING TO PERMIT REQUIREMENTS TO VERIFY MEASURES HAVE BEEN INSTALLED AND MAINTAINED IN ACCORDANCE WITH TDOT STANDARD DRAWINGS, SPECIFICATIONS, AND GOOD ENGINEERING PRACTICES. EPSC INSPECTIONS SHALL BE DOCUMENTED ON THE TDOT EPSC INSPECTION REPORT.
- (15) DISCHARGE POINTS SHALL BE INSPECTED TO ASCERTAIN WHETHER EPSC MEASURES ARE EFFECTIVE IN PREVENTING EROSION AND CONTROLLING SEDIMENT INCLUDING SIGNIFICANT IMPACTS TO SURROUNDING NATURAL RESOURCES AND ADJACENT PROPERTY OWNERS. WHERE DISCHARGE LOCATIONS ARE INACCESSIBLE, NEARBY DOWN GRADIENT LOCATIONS SHALL BE INSPECTED. LOCATIONS WHERE VEHICLES ENTER AND EXIT THE SITE SHALL BE INSPECTED FOR EVIDENCE OF OFFSITE ROADWAY SEDIMENT TRACKING.
- (16) UPON CONCLUSION OF THE INSPECTIONS, EPSC MEASURES FOUND TO BE INEFFECTIVE SHALL BE REPAIRED, REPLACED, OR MODIFIED BEFORE THE NEXT RAIN EVENT, IF POSSIBLE, BUT IN NO CASE MORE THAN 24 HOURS AFTER THE INSPECTION OR WHEN THE CONDITION IS IDENTIFIED. IF THE REPAIR, REPLACEMENT OR MODIFICATION IS NOT PRACTICAL WITHIN THE 24 HOUR TIMEFRAME, WRITTEN DOCUMENTATION SHALL BE PROVIDED IN THE FIELD DIARY AND EPSC INSPECTION REPORT. AN ESTIMATED REPAIR, REPLACEMENT OR MODIFICATION SCHEDULE SHALL BE DOCUMENTED WITHIN 24 HOURS AFTER IDENTIFICATION.
- (17) INSPECTION, REPAIR, AND MAINTENANCE OF EPSC MEASURES SHALL BE PERFORMED ON A REGULAR BASIS. SEDIMENT SHALL BE REMOVED FROM SEDIMENT CONTROL STRUCTURES WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY FIFTY PERCENT (50%). DURING SEDIMENT REMOVAL, THE CONTRACTOR SHALL TAKE STEPS TO ENSURE THAT STRUCTURAL COMPONENTS OF EPSC MEASURES ARE NOT DAMAGED AND THUS MADE INEFFECTIVE. IF DAMAGE DOES OCCUR, THE CONTRACTOR SHALL REPAIR THE EPSC MEASURES AT THE CONTRACTOR'S OWN EXPENSE.
- (18) THE EPSC PLAN SHALL BE UPDATED WHENEVER EPSC INSPECTIONS INDICATE, OR WHERE STATE OR FEDERAL OFFICIALS DETERMINE EPSC MEASURES ARE PROVING INEFFECTIVE IN ELIMINATING OR SIGNIFICANTLY MINIMIZING POLLUTANT SOURCES OR ARE OTHERWISE NOT ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH THE CONSTRUCTION ACTIVITY.
- (19) SEDIMENT REMOVED FROM SEDIMENT CONTROL STRUCTURES SHALL BE PLACED AND TREATED IN A MANNER SO THAT THE SEDIMENT IS CONTAINED WITHIN THE PROJECT LIMITS AND DOES NOT MIGRATE ONTO ADJACENT PROPERTIES AND INTO WATERS OF THE STATE/U.S. COST FOR THIS TREATMENT SHALL BE INCLUDED IN PRICE BID FOR ITEM NO. 209-05 SEDIMENT REMOVAL, C.Y.

EROSION PREVENTION

- (20) CONSTRUCTION SHALL BE SEQUENCED AND STAGED TO MINIMIZE THE EXPOSURE TIME OF GRADED OR DENUDED SOIL AREAS, PRESERVE TOPSOIL, AND MINIMIZE SOIL COMPACTION.
- (21) THE ACCEPTED EPSC PLAN SHALL REQUIRE THAT EPSC MEASURES BE IN PLACE BEFORE CLEARING, GRUBBING, EXCAVATION, GRADING, CULVERT OR BRIDGE CONSTRUCTION, CUTTING, FILLING, OR ANY OTHER EARTHWORK OCCURS, EXCEPT AS SUCH WORK MAY BE NECESSARY TO INSTALL EPSC MEASURES.
- (22) NO WORK SHALL BE STARTED UNTIL THE CONTRACTOR'S PLAN FOR THE STAGING OF OPERATIONS, INCLUDING THE PLAN FOR STAGING OF TEMPORARY AND PERMANENT EPSC MEASURES, HAS BEEN ACCEPTED BY THE TDOT RESPONSIBLE PARTY. THE CONTRACTOR'S EPSC PLAN SHALL INCORPORATE AND SUPPLEMENT, AS ACCEPTABLE, THE BASIC EPSC DEVICES ON THE EPSC PLAN.

- (23) TEMPORARY STABILIZATION SHALL BE INITIATED WITHIN 14 CALENDAR DAYS WHEN CONSTRUCTION ACTIVITIES ON A PORTION OF THE SITE ARE TEMPORARILY CEASED AND EARTH DISTURBING ACTIVITIES WILL NOT RESUME UNTIL AFTER 14 CALENDAR DAYS. PERMANENT STABILIZATION MEASURES IN DISTURBED AREAS SHALL BE INITIATED WITHIN 14 CALENDAR DAYS AFTER FINAL GRADING OF ANY PHASE OF CONSTRUCTION.
- (24) STEEP SLOPES SHALL BE TEMPORARILY STABILIZED NOT LATER THAN 7 DAYS AFTER CONSTRUCTION ACTIVITY ON THE SLOPE HAS TEMPORARILY OR PERMANENTLY CEASED. STEEP SLOPES ARE DEFINED AS A NATURAL OR CREATED SLOPE OF 35% GRADE OR GREATER REGARDLESS OF HEIGHT.
- (25) PERMANENT STABILIZATION WILL REPLACE TEMPORARY MEASURES AS SOON AS PRACTICABLE. PRIORITY SHALL BE GIVEN TO FINISHING OPERATIONS AND PERMANENT EPSC MEASURES OVER TEMPORARY EPSC MEASURES ON ALL PROJECTS.
- (26) TEMPORARY OR PERMANENT STABILIZATION MUST BE FREE OF FINES (SILT AND CLAY SIZED PARTICLES). UNPACKED GRAVEL CONTAINING FINES OR CRUSHER-RUN WILL NOT BE CONSIDERED SUFFICIENT STABILIZATION.
- (27) DELAYING THE PLANTING OF COVER VEGETATION UNTIL WINTER MONTHS OR DRY MONTHS SHOULD BE AVOIDED.

PERMITS, PLANS & RECORDS

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

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

- (29) THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN A PROACTIVE METHOD TO PREVENT LITTER AND CONSTRUCTION WASTES FROM ENTERING WATERS OF THE STATE/U.S. THESE MATERIALS SHALL BE REMOVED FROM STORMWATER EXPOSURE PRIOR TO ANTICIPATED STORM EVENTS OR BEFORE BEING CARRIED OFFSITE BY WIND, OR OTHERWISE PREVENTED FROM BECOMING A POLLUTANT SOURCE FOR STORMWATER DISCHARGES. AFTER USE, MATERIALS USED FOR EPSC SHALL BE REMOVED FROM THE SITE.
- (30) THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO ENSURE THAT PETROLEUM PRODUCTS OR OTHER CHEMICAL POLLUTANTS ARE PREVENTED FROM ENTERING WATERS OF THE STATE/U.S. ALL EQUIPMENT REFUELING, SERVICING, AND STAGING AREAS SHALL COMPLY WITH ALL LOCAL, STATE, AND FEDERAL LAWS, RULES, REGULATIONS, AND ORDINANCES, INCLUDING THOSE OF THE NATIONAL FIRE PROTECTION ASSOCIATION. APPROPRIATE CONTAINMENT MEASURES FOR THESE AREAS SHALL BE USED.
- (31) CONTRACTORS SHALL PROVIDE DESIGNATED TRUCK WASHOUT AREAS ON THE SITE. THESE AREAS MUST BE SELF CONTAINED, NOT CONNECTED TO ANY STORMWATER OUTLET OF THE SITE, AND PROPERLY SIGNED. WASH DOWN OR WASTE DISCHARGE OF CONCRETE TRUCKS SHALL NOT BE PERMITTED ONSITE UNLESS PROPER SETTLEMENT AREAS HAVE BEEN PROVIDED IN ACCORDANCE WITH BOTH STATE AND FEDERAL REGULATIONS.
- (32) WHEEL WASH WATER SHALL BE COLLECTED AND ALLOWED TO SETTLE OUT SUSPENDED SOLIDS PRIOR TO DISCHARGE. WHEEL WASH WATER SHALL NOT BE DISCHARGED DIRECTLY INTO ANY STORMWATER SYSTEM OR STORMWATER TREATMENT SYSTEM.
- (33) IF PORTABLE SANITARY FACILITIES ARE PROVIDED ON CONSTRUCTION SITES, SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS IN A TIMELY MANNER BY A LICENSED WASTE MANAGEMENT CONTRACTOR OR AS REQUIRED BY ANY REGULATIONS. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF SANITARY WASTE.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	12
PS&E	2025	STP-M-I-24-1(136)	12

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION &
SEDIMENT CONTROL (EPSC)
NOTES
SHEET 1 OF 2

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- (34)

ONLY CONSTRUCTION PRODUCTS NEEDED SHALL BE STORED ONSITE BY THE CONTRACTOR. THE CONTRACTOR SHALL STORE ALL MATERIALS UNDER COVER AND IN APPROPRIATE CONTAINERS. PRODUCTS MUST BE STORED IN ORIGINAL CONTAINERS AND LABELED. MATERIAL MIXING SHALL BE CONDUCTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CONTRACTOR'S RESPONSIBLE PARTY SHALL INSPECT MATERIALS STORAGE AREAS REGULARLY TO ENSURE PROPER USE AND DISPOSAL.
- (35)

WHEN POSSIBLE, ALL PRODUCTS SHALL BE USED COMPLETELY BEFORE PROPERLY DISPOSING OF THE CONTAINER OFFSITE. THE MANUFACTURER'S DIRECTIONS FOR DISPOSAL OF MATERIALS AND CONTAINERS SHALL BE FOLLOWED.
- (36)

ALL PAINT CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT SHALL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS AND APPLICABLE STATE AND LOCAL REGULATIONS.
- (37)

ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN A MANNER WHICH IS COMPLIANT WITH LOCAL OR STATE REGULATIONS. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES, AND THE INDIVIDUAL DESIGNATED AS THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS TO DISPOSE OF HAZARDOUS MATERIAL.
- (38)

OPEN BURNING IS PROHIBITED UNLESS IT IS SPECIFICALLY ALLOWED BY LAW. IF ALLOWED, NATURAL VEGETATION, TREES, AND UNTREATED LUMBER SHALL BE THE ONLY MATERIALS THAT CAN BE OPEN BURNED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL APPLICABLE STATE AND LOCAL PERMITS PRIOR TO ANY BURNING.
- (39)

DISPOSAL OF ONSITE VEGETATION AND TREES BY CHIPPING THEM INTO MULCH IS PREFERABLE TO OPEN BURNING. THIS MULCH MAY BE USED AS AN ONSITE SOIL STABILIZATION MEASURE WHERE APPROPRIATE.
- (40)

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

SUPPORT ACTIVITIES

- (41)

IF OFFSITE BORROW AND WASTE AREAS BECOME NECESSARY DURING THE LIFE OF THE PROJECT, THIS SUPPORT ACTIVITY SHALL BE ADDRESSED PER THE TDOT WASTE AND BORROW MANUAL.
- (42)

MATERIALS AND STAGING AREAS SHALL BE LOCATED IN NON-WETLAND AREAS AND ABOVE THE 100-YEAR, FEDERAL EMERGENCY MANAGEMENT AGENCY FLOODPLAIN.
- (43)

IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY EPSC PLANS FOR THE MATERIAL AND STAGING AREAS TO THE ENVIRONMENTAL DIVISION COMPLIANCE AND FIELD SERVICES OFFICE FOR REVIEW.

SPILL PREVENTION, MANAGEMENT & NOTIFICATION

- (44)

ALL ONSITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE AND SPILLS.
- (45)

FOR ALL HAZARDOUS MATERIALS STORED ONSITE, THE MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEAN UP SHALL BE CLEARLY POSTED. SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATIONS OF THE INFORMATION AND CLEANUP SUPPLIES.
- (46)

APPROPRIATE CLEANUP MATERIALS AND EQUIPMENT SHALL BE MAINTAINED BY THE CONTRACTOR IN THE MATERIALS STORAGE AREA ONSITE AND UNDER COVER. SPILL RESPONSE EQUIPMENT SHALL BE INSPECTED AND MAINTAINED BY THE CONTRACTOR AS NECESSARY TO REPLACE ANY MATERIALS USED IN SPILL RESPONSE ACTIVITIES.
- (47)

ALL SPILLS SHALL BE CLEANED IMMEDIATELY AFTER DISCOVERY AND THE MATERIALS DISPOSED OF PROPERLY. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
- (48)

THE CONTRACTOR'S RESPONSIBLE PARTY SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT THE SITE SUPERINTENDENT HAS HAD APPROPRIATE TRAINING FOR HAZARDOUS MATERIALS HANDLING, SPILL MANAGEMENT, AND CLEANUP.

- (49)

IF AN OIL SHEEN IS OBSERVED ON SURFACE WATER (E.G. SETTLING PONDS, DETENTION PONDS, SWALES), ACTION SHALL BE TAKEN IMMEDIATELY TO REMOVE THE MATERIAL CAUSING THE SHEEN. THE CONTRACTOR SHALL USE APPROPRIATE MATERIALS TO CONTAIN AND ABSORB THE SPILL. THE SOURCE OF THE OIL SHEEN WILL ALSO BE IDENTIFIED AND REMOVED OR REPAIRED AS NECESSARY TO PREVENT FURTHER RELEASES.
- (50)

FERTILIZERS SHALL BE APPLIED ONLY IN THE AMOUNTS SPECIFIED. ONCE APPLIED, FERTILIZERS SHALL BE WORKED INTO THE SOIL TO LIMIT THE EXPOSURE TO STORMWATER.
- (51)

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.
- (52)

WHERE A RELEASE CONTAINING A HAZARDOUS SUBSTANCE IN AN AMOUNT EQUAL TO OR IN EXCESS OF A REPORTABLE QUANTITY ESTABLISHED UNDER EITHER 40 CFR 117 OR 40 CFR 302 OCCURS DURING A 24 HOUR PERIOD, SEE THE LATEST TENNESSEE GENERAL PERMIT NO. TNR100000 STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES SECTION 5.1 FOR REPORTING REQUIREMENTS.
- (53)

CONTRACTOR'S BULK FUEL AND PETROLEUM PRODUCTS STORED ONSITE OR ADJACENT TO THE R.O.W. IN ABOVE GROUND STORAGE CONTAINERS WITH A COMBINED CAPACITY OF 1320 GALLONS OR MORE SHALL HAVE SECONDARY CONTAINMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SPILL PREVENTION CONTROL AND COUNTERMEASURE (SPCC) PLAN FOR THE BULK STORAGE AND BE SOLELY RESPONSIBLE FOR OBTAINING ANY NECESSARY LOCAL, STATE, AND FEDERAL PERMITS. THE SPCC PLAN AND/OR PERMITS SHALL BE KEPT ONSITE AND A COPY PROVIDED TO THE TDOT PROJECT RESPONSIBLE PARTY PRIOR TO STORING 1320 GALLONS ON SITE.

STREAMS, WETLANDS & BUFFER ZONES

- (54)

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

SUBSECTION 4 – EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL SPECIAL NOTES

STREAMS, WETLANDS & BUFFER ZONES

- (1)

FOR PROJECTS THAT DISCHARGE INTO KNOWN EXCEPTIONAL TENNESSEE WATERS OR WATERS IMPAIRED BY SILTATION, A 60 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM WITH THIS DESIGNATION SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 60 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 30 FEET AT ANY MEASURED LOCATION.
- (2)

A 30 FOOT NATURAL RIPARIAN BUFFER ZONE ADJACENT TO AND ON BOTH SIDES OF THE RECEIVING STREAM SHALL BE PRESERVED TO THE MAXIMUM EXTENT PRACTICABLE DURING CONSTRUCTION ACTIVITIES AT THE SITE. THE 30 FOOT CRITERION FOR THE WIDTH OF THE BUFFER ZONE CAN BE ESTABLISHED ON AN AVERAGE WIDTH BASIS AT A PROJECT, AS LONG AS THE MINIMUM WIDTH OF THE BUFFER ZONE IS MORE THAN 15 FEET AT ANY MEASURED LOCATION. EVERY ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES.
- (3)

BUFFER ZONES ARE NOT SEDIMENT CONTROL MEASURES AND MUST NOT BE RELIED UPON AS PRIMARY SEDIMENT CONTROL MEASURES. THE RIPARIAN BUFFER ZONE SHALL BE ESTABLISHED BETWEEN THE TOP OF THE STREAM BANK AND THE DISTURBED CONSTRUCTION AREA. EVERY

ATTEMPT SHALL BE MADE FOR CONSTRUCTION ACTIVITIES NOT TO TAKE PLACE WITHIN THE BUFFER ZONES. BEST MANAGEMENT PRACTICES (BMPs) PROVIDING EQUIVALENT PROTECTION AS THE NATURAL RIPARIAN ZONE MAY BE USED. WHERE ISSUED, ARAP/401 REQUIREMENTS WILL PREVAIL IF IN CONFLICT WITH THESE BUFFER ZONE REQUIREMENTS.

NPDES

UTILITY RELOCATION

- (5)

STORMWATER WHICH COLLECTS IN THE UTILITY TRENCH SHALL BE PUMPED INTO A DEWATERING STRUCTURE OR SEDIMENT FILTER BAG AND TREATED PRIOR TO DISCHARGE.
- (6)

SILT FENCE SHALL BE INSTALLED ON THE DOWNGRADIENT SIDE OF STOCKPILED SOIL. TRENCHING ACROSS WET WEATHER CONVEYANCES SHALL BE DONE DURING DRY CONDITIONS AND STABILIZED BY THE END OF THE WORK DAY.
- (7)

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.
- (8)

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 MEASURES MUST BE IN PLACE TO TRAP ANY SEDIMENT THAT MAY TRAVEL OFFSITE 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 OFFSITE AND ENTERING WATERS OF THE STATE/U.S.
- (9)

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 SEVEN 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 SUCH TIME AS THE TRENCH IS BACKFILLED.
- (10)

IN REGARD 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.
- (11)

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 RESPONSIBLE PARTY.
- (12)

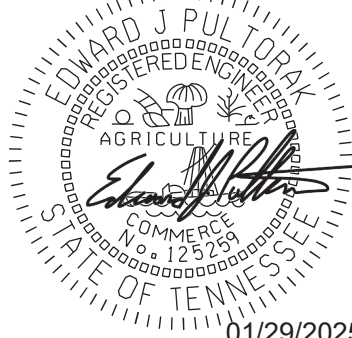
FOR THE INSTALLATION OF UNDERGROUND UTILITIES OUTSIDE OF THE TDOT RIGHT-OF-WAY, EPSC MEASURES SHALL BE INSTALLED PRIOR TO CLEARING (TRENCHING AND ASSOCIATED BLASTING) IN THOSE AREAS NECESSARY TO PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA. THESE EPSC MEASURES SHALL REMAIN UNTIL THE BACKFILLED TRENCH IS STABILIZED WITH FINAL VEGETATIVE COVER.
- (13)

THE UTILITY CONTRACTOR SHALL RESTORE ALL AFFECTED WET WEATHER CONVEYANCES TO THE EXISTING TOPOGRAPHIC CONDITIONS AS APPROVED BY THE TDOT RESPONSIBLE PARTY.

(14) 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 RESPONSIBLE PARTY BEFORE COMMENCING WORK.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	13
PS&E	2025	STP-M-I-24-1(136)	13

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COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00007 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID G2012BU7.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION &
SEDIMENT CONTROL (EPSC)
NOTES
SHEET 2 OF 2

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	14
PS&E	2025	STP-M-I-24-1(136)	14

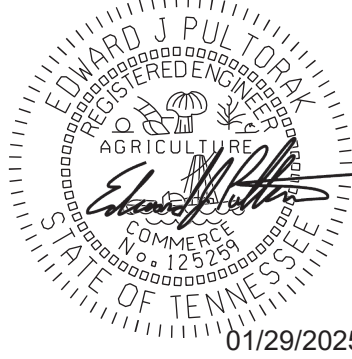
TABULATED EPSC QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY 75100-0125-54
(1) 203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	40
(1) 209-02.03	8" TEMPORARY SLOPE DRAIN	L.F.	1320
(1) 209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	L.F.	4525
(1) 209-08.09	FILTER SOCK CHECK DAM	EACH	1
(1) 209-09.01	SANDBAGS	BAG	198
(1) 209-20.03	POLYETHYLENE SHEETING (6 MIL. MINIMUM)	S.Y.	13175
(1) 707-08.11	HIGH-VISIBILITY CONSTRUCTION FENCE	L.F.	4625
(1) 709-05.05	MACHINED RIP-RAP (CLASS A-3)	TON	70
(1) 740-10.03	GEOTEXTILE (TYPE III) (EROSION CONTROL)	S.Y.	120
(1) 740-11.01	TEMPORARY SEDIMENT TUBE 8IN	L.F.	930
801-01	SEEDING (WITH MULCH)	UNIT	25
801-03	WATER (SEEDING & SODDING)	M.G.	3

FOOTNOTES

- (1)
- ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER. SEE SECTION 209.07 OF THE STANDARDS SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND		
SYMBOL	ITEM	STD. DWG.
* SF * SF * SF *	SILT FENCE	EC-STR-3B
* SFB * SFB * SFB *	SILT FENCE WITH WIRE BACKING	EC-STR-3C
** TUBE 8" ** TUBE 8" **	8 INCH SEDIMENT TUBE	EC-STR-37
* HVF * HVF *	HIGH VISIBILITY FENCE	S-F-1
** SOCK 8" ** SOCK 8" **	8 INCH FILTER SOCK	EC-STR-8
<div><div></div><div>TCE</div></div>	TEMPORARY CONSTRUCTION EXIT	EC-STR-25

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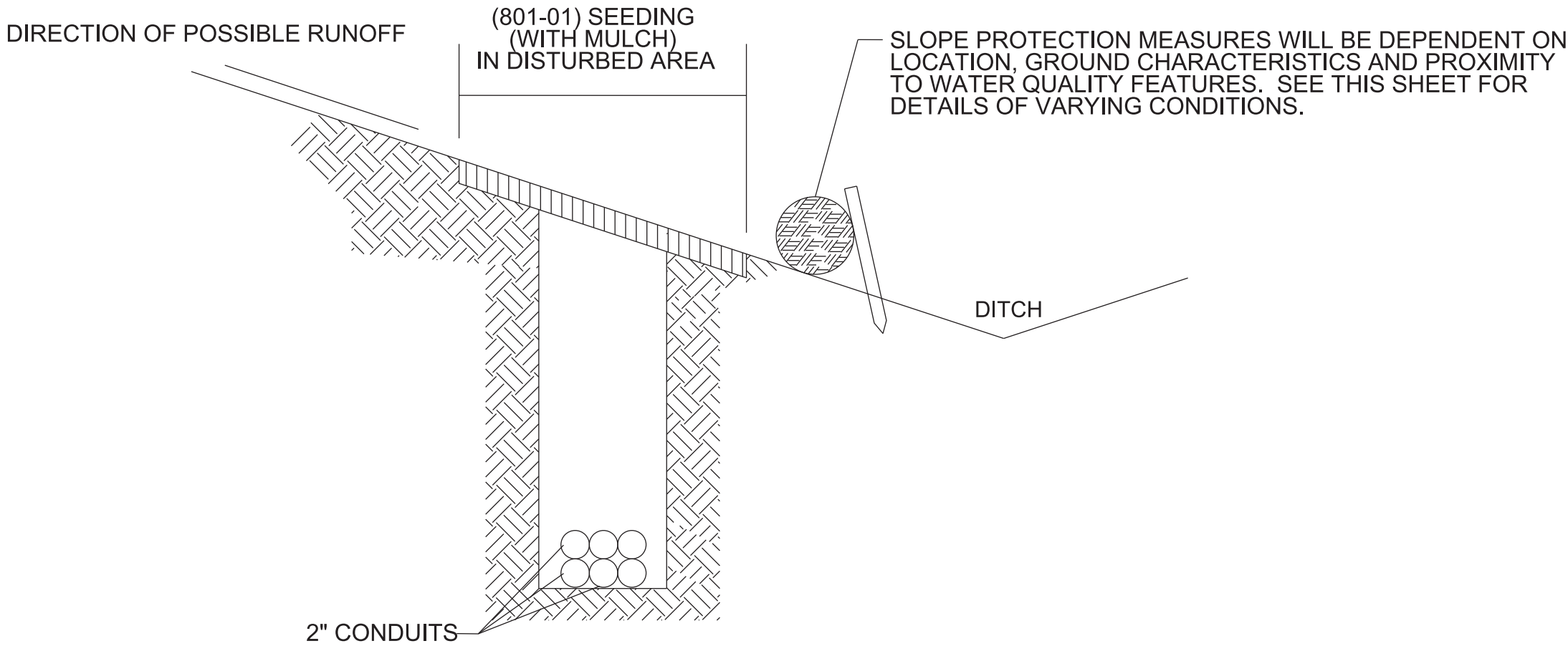
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

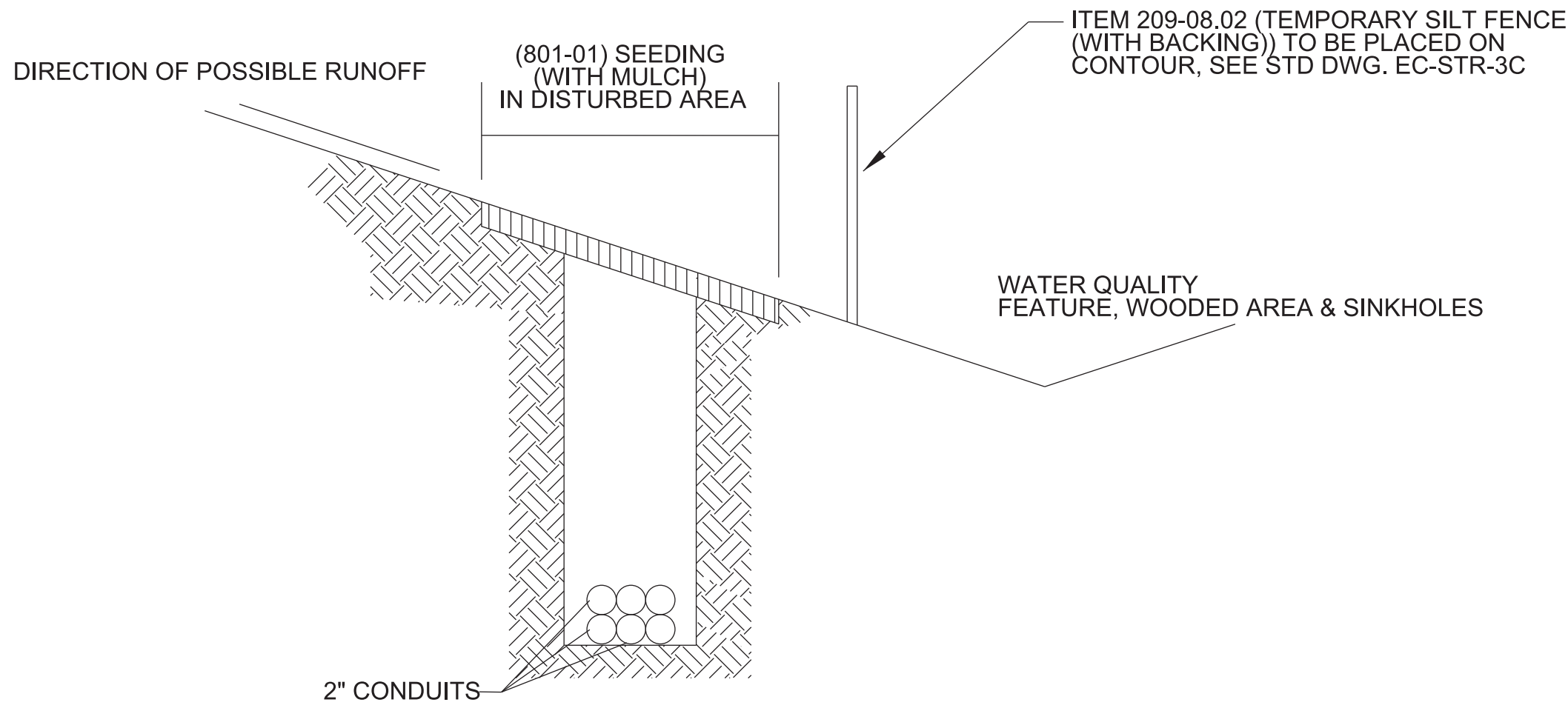
EROSION PREVENTION & SEDIMENT CONTROL (EPSC)
LEGEND & TABULATION

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	15
PS&E	2025	STP-M-I-24-1(136)	15



EROSION PREVENTION AND SEDIMENT CONTROL MEASURES
EARTH TRENCHING OF LIGHTING POWER CONDUITS
N.T.S.



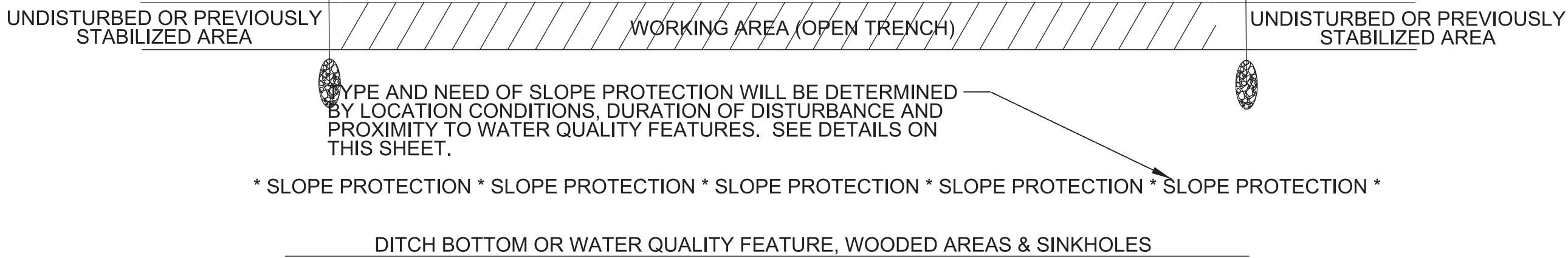
EROSION PREVENTION AND SEDIMENT CONTROL MEASURES
EARTH TRENCHING OF LIGHTING POWER CONDUITS
ADJACENT TO WATER QUALITY FEATURES, WOODED AREAS & SINKHOLES
N.T.S.

NOTES:

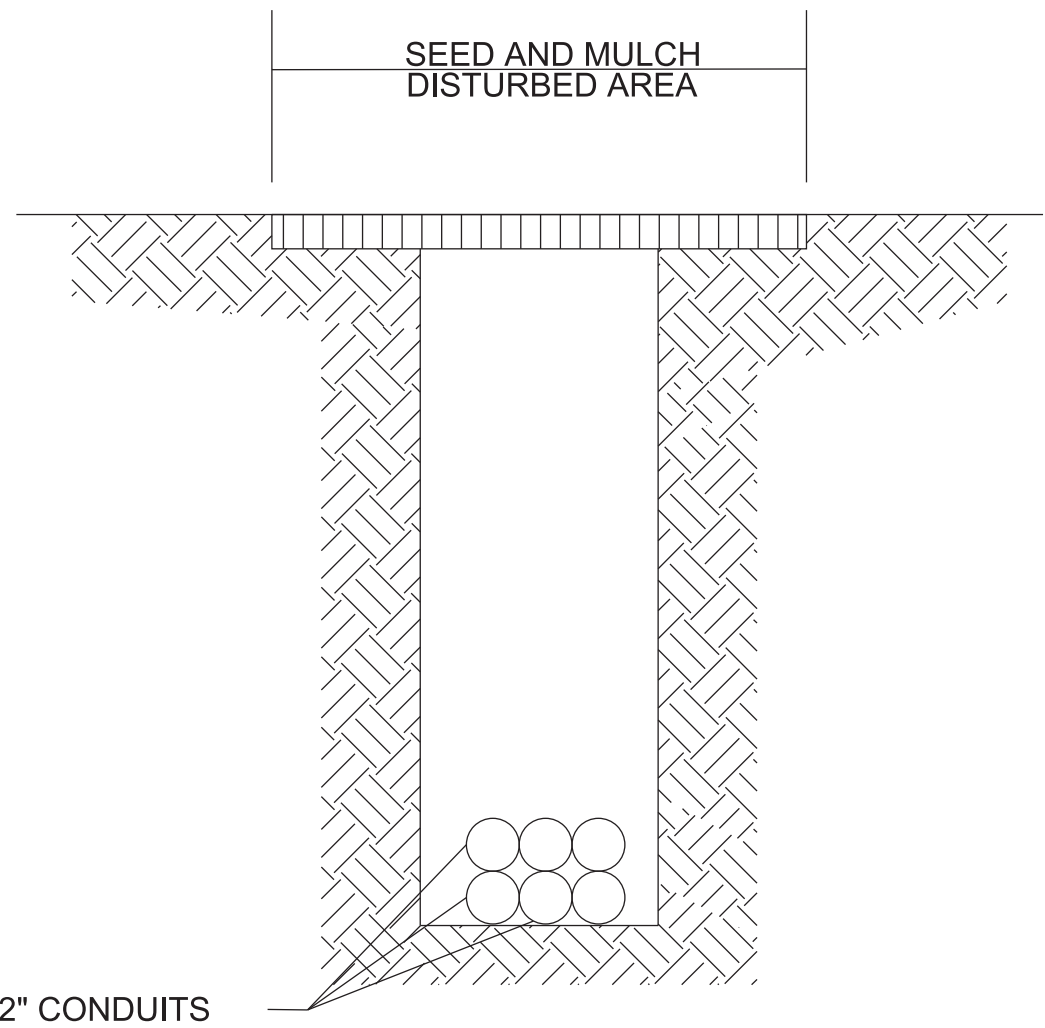
1. EROSION CONTROL DEVICES SHALL BE IN PLACE BEFORE AREA IS DISTURBED AND SHALL REMAIN IN PLACE UNTIL LOCATION IS PERMANENTLY STABILIZED.
2. THESE TYPICAL DETAILS WILL BE USED AT THE DISCRETION OF THE ENGINEER BASED ON THE LOCATION AND DURATION OF THE DISTURBED AREAS. IF THE TRENCH IS IN A LOCATION WHERE RUNOFF IS NOT AN ISSUE, THE LOCATION MAY NOT REQUIRE THE USE OF THESE TEMPORARY EROSION CONTROL MEASURES, BUT WILL STILL REQUIRE (801-01) SEEDING (WITH MULCH) FOR PERMANENT STABILIZATION.
3. EXCAVATED MATERIAL THAT IS NOT REQUIRED FOR BACKFILL SHALL BE REMOVED IMMEDIATELY AFTER EXCAVATION.
4. ALL OPEN TRENCHES SHALL BE BACKFILLED IMMEDIATELY AFTER CONDUIT INSTALLATION AND STABILIZED WITH (801-01) SEEDING (WITH MULCH) OVER THE ENTIRETY OF THE DISTURBED AREA.
5. IF CONDUIT IS PLOWED, THE NEED FOR (801-01) SEEDING (WITH MULCH) WILL BE DETERMINED BY THE ENGINEER BASED ON THE AREA DISTURBED.
6. NO MORE THAN ONE (1) ACRE MAY BE DISTURBED PER SITE AND NO MORE THAN THREE (3) SITES MAY BE DISTURBED AT ONE TIME. A SITE IS CONSIDERED DISTURBED UNTIL SUCH TIME AS BACKFILLING AND STABILIZATION HAS BEEN INSTALLED.

TEMPORARY BERM (SEE STD. DWG. EC-STR-27)
LOCATIONS AND NEED AT THE DISCRETION OF
THE ENGINEER

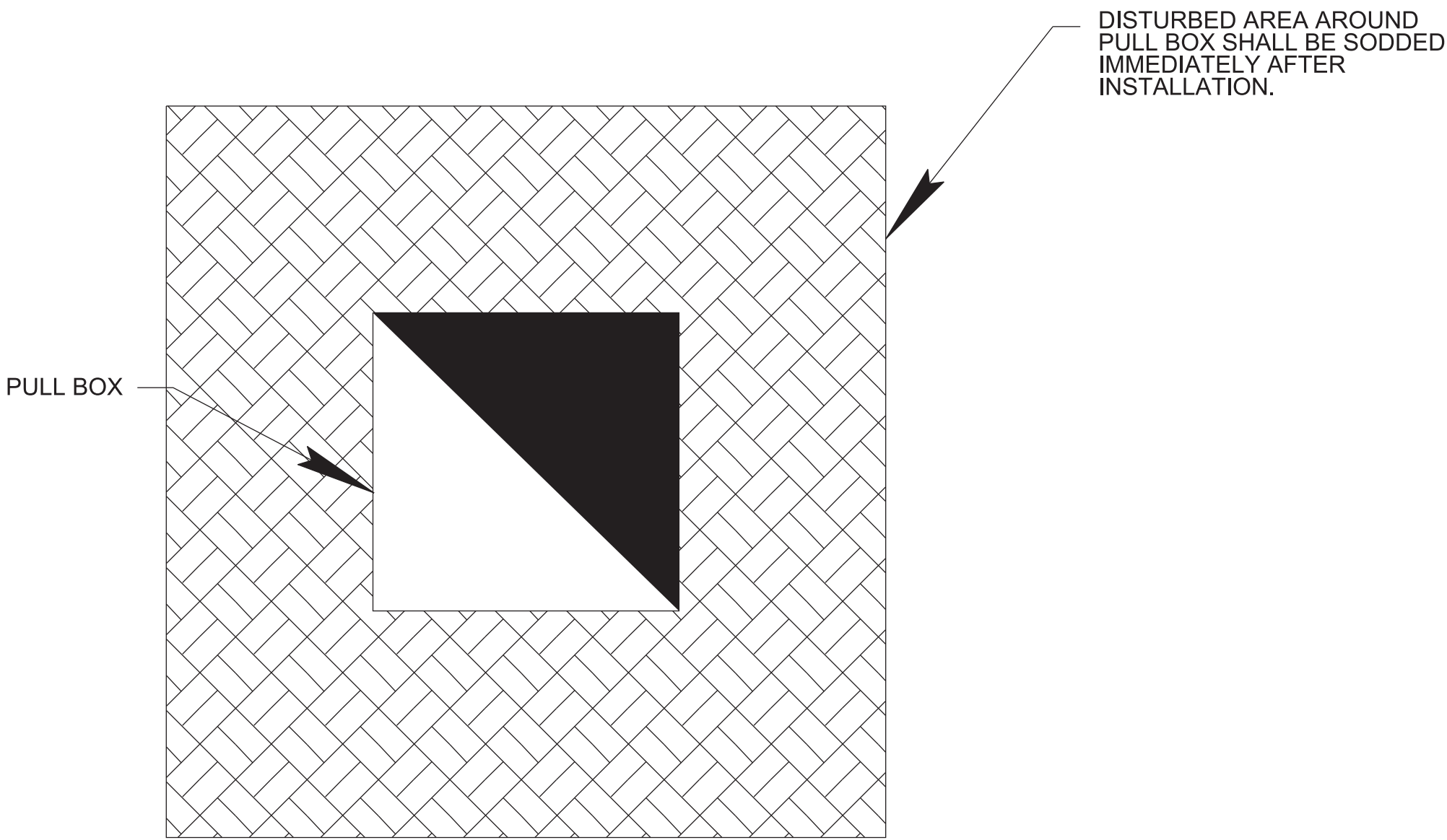
ITEM 209-02.03 (8" TEMPORARY SLOPE DRAIN)
TO BE USED AT THE DISCRETION
OF THE ENGINEER



EROSION PREVENTION AND SEDIMENT CONTROL MEASURES
EARTH TRENCHING OF LIGHTING POWER CONDUITS
PLAN VIEW FOR DIVERSIONARY MEASURES



EROSION CONTROL FOR
TYPICAL TRENCH CONFIGURATION
FOR LIGHTING POWER
CONDUITS IN EARTH
N.T.S.



EROSION CONTROL
AT PULL BOX
(TYPICAL)

UPON COMPLETION OF SITE WORK ALL AREAS SHALL BE SODDED

SEALED BY

EDWARD J. PU I TOK
REGISTERED PROFESSIONAL ENGINEER
AGRICULTURE
COMMERCIAL
TENN. REG. NO. 12569
01/29/2025
STATE OF TENNESSEE

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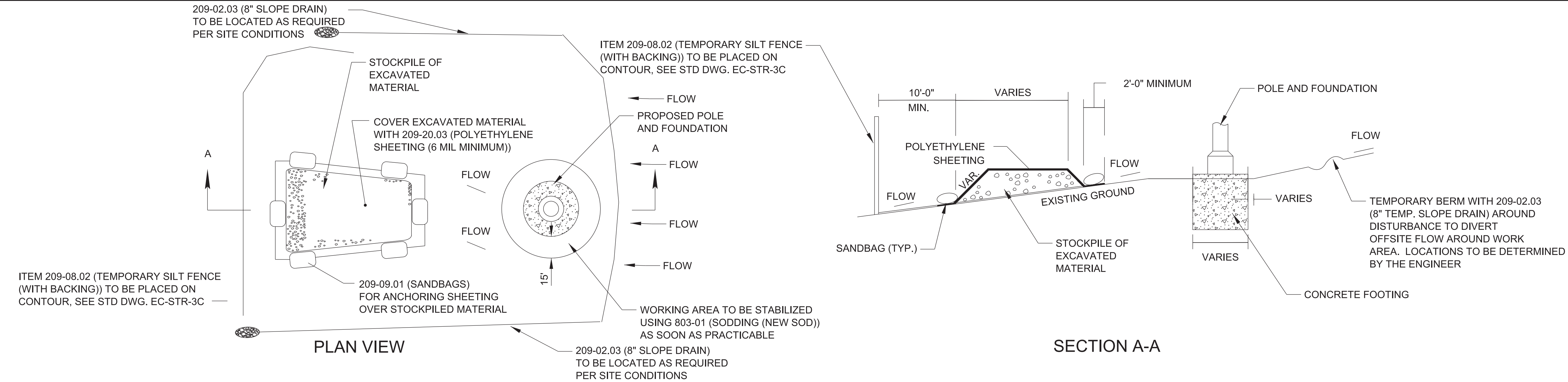
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION &
SEDIMENT CONTROL (EPSC)
CONDUIT DETAILS

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	16
PS&E	2025	STP-M-I-24-1(136)	16



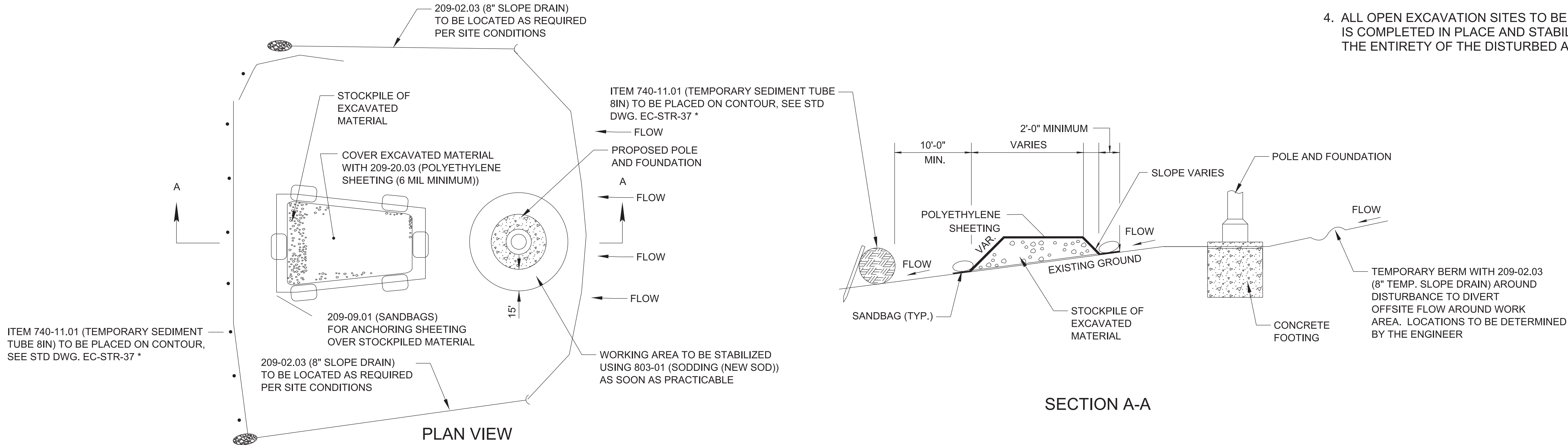
APPROXIMATE QUANTITIES (PER EACH OFFSET/MAST ARM LIGHT POLE)			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	LINEAR FEET	20
209-09.01	SANDBAGS	BAG	6
209-20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE FEET	225

APPROXIMATE QUANTITIES (PER EACH HIGH MAST LIGHT POLE)			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
209-08.02	TEMPORARY SILT FENCE (WITH BACKING)	LINEAR FEET	45
209-09.01	SANDBAGS	BAG	6
209-20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	SQUARE FEET	800

EROSION PREVENTION AND SEDIMENT CONTROL MEASURES
EXCAVATION OF FOUNDATIONS AND STOCKPILE OF EXCAVATED MATERIALS
ADJACENT TO WATER QUALITY FEATURES

NOTES:

1. EROSION CONTROL DEVICES SHALL BE PLACED BEFORE AREA IS DISTURBED, STOCKPILE SHALL BE PROTECTED AS SOON AS PRACTICABLE. ALL DEVICES SHALL REMAIN IN PLACE UNTIL LOCATION IS PERMANENTLY STABILIZED.
2. THESE TYPICAL DETAILS WILL BE USED AT THE DISCRETION OF THE ENGINEER BASED ON THE LOCATION AND DURATION OF THE DISTURBED AREAS. IF THE FOUNDATION IS IN A LOCATION WHERE RUNOFF IS NOT AN ISSUE, THE LOCATION MAY NOT REQUIRE THE USE OF THESE TEMPORARY EROSION CONTROL MEASURES, BUT WILL STILL REQUIRE (803-01) SODDING (NEW SOD) FOR PERMANENT STABILIZATION.
3. EXCAVATED MATERIAL THAT IS NOT REQUIRED FOR BACKFILL SHALL BE REMOVED IMMEDIATELY AFTER EXCAVATION.
4. ALL OPEN EXCAVATION SITES TO BE BACKFILLED IMMEDIATELY AFTER FOUNDATION IS COMPLETED IN PLACE AND STABILIZED WITH (803-01) SODDING (NEW SOD) OVER THE ENTIRETY OF THE DISTURBED AREA.

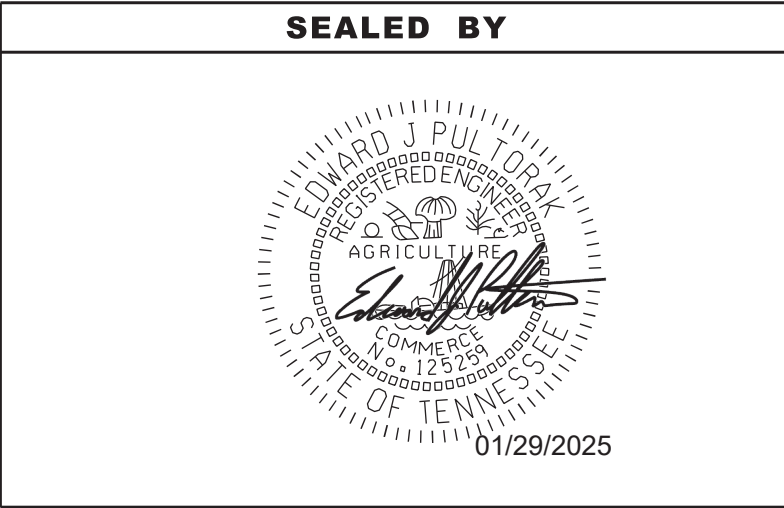


APPROXIMATE QUANTITIES (PER EACH OFFSET/MAST ARM LIGHT POLE)			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
209-09.01	SANDBAGS	BAG	6
209-20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	S.F.	225
*740-11.01	SEDIMENT TUBE (8 INCH)	L.F.	30

APPROXIMATE QUANTITIES (PER EACH HIGH MAST LIGHT POLE)			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
209-09.01	SANDBAGS	BAG	6
209-20.03	POLYETHYLENE SHEETING (6 MIL MINIMUM)	S.F.	800
*740-11.01	SEDIMENT TUBE (8 INCH)	L.F.	30

*FILTER SOCK (8 INCH) (209-03.20) MAY BE USED AS AN ALTERNATE AT THE DISCRETION OF THE ENGINEER. SEE STD. DWG. EC-STR-8 FOR FURTHER DETAILS.

EROSION PREVENTION AND SEDIMENT CONTROL MEASURES
EXCAVATION OF FOUNDATIONS AND STOCKPILE OF EXCAVATED MATERIALS



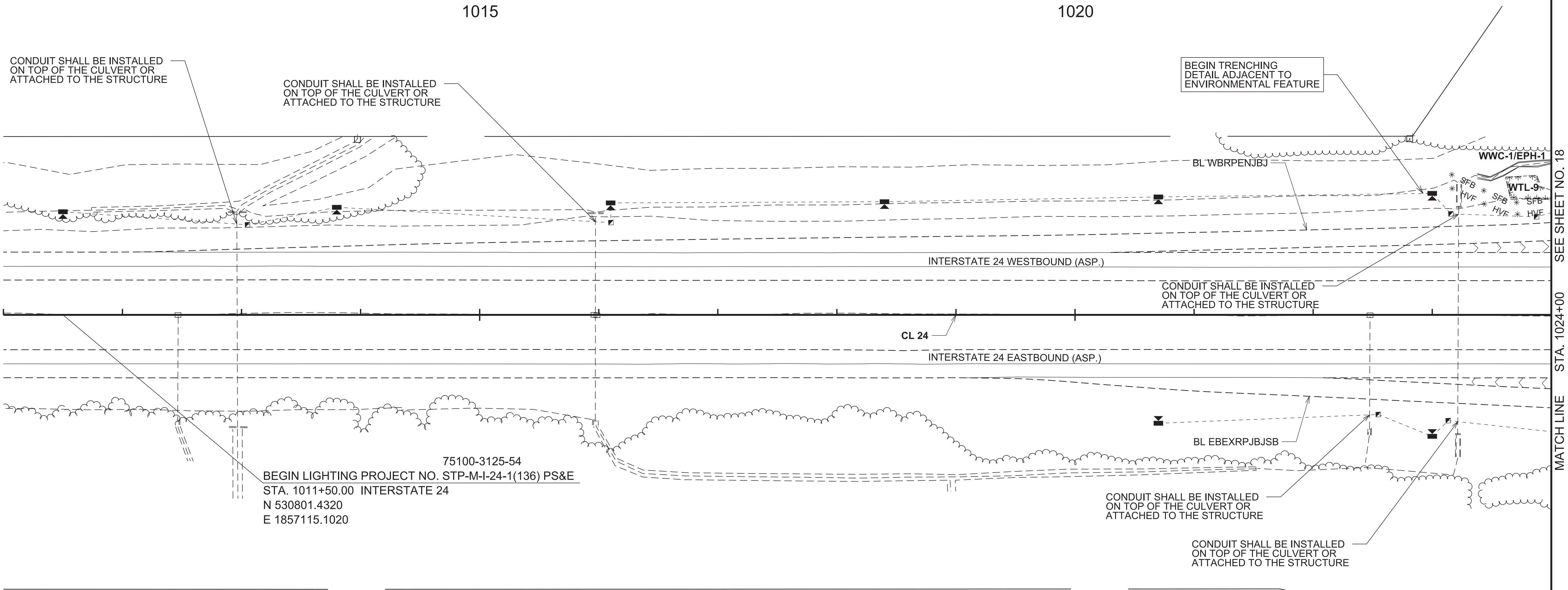
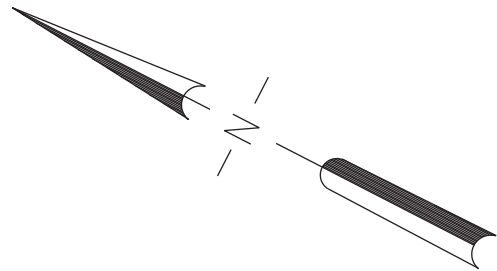
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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION &
SEDIMENT CONTROL (EPSC)
LIGHTING TYPICAL DETAILS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	17
PS&E	2025	STP-M-I-24-1(136)	17

THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-9 AND WWC1/EPH-1 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

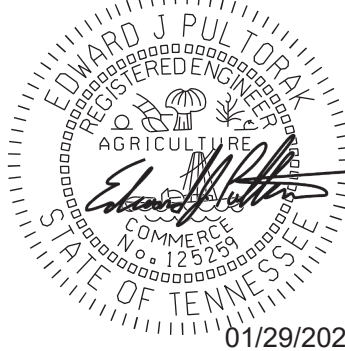


EPSC STAGES

STAGE 1 & 2: EROSION CONTROL DEVICES SHALL BE INSTALLED AT ALL OUTFALLS AND ALONG ENVIRONMENTAL FEATURES BEFORE CONSTRUCTION/CLEARING AND GRUBBING ACTIVITIES. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE EARTH MOVEMENT AROUND PROPOSED STRUCTURES (POLES/FOOTERS, CONTROL CENTERS, PULLBOXES, ETC.). IN AREAS THAT ARE TO BE TRENCHED (CONDUIT INSTALLATION) AND NOT LOCATED ADJACENT TO ENVIROMENTAL FEATURES OR OUTFALLS. EROSION CONTROL DEVICES SHALL BE PLACED IMMEDIATELY AFTER AREA IS DISTURBED.

STAGE 3: EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL LOCATION IS STABILIZED WITH FINAL VEGETATION.

SEALED BY



COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00007 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID G2012BU7.

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION &
SEDIMENT CONTROL (EPSC)
PLANS

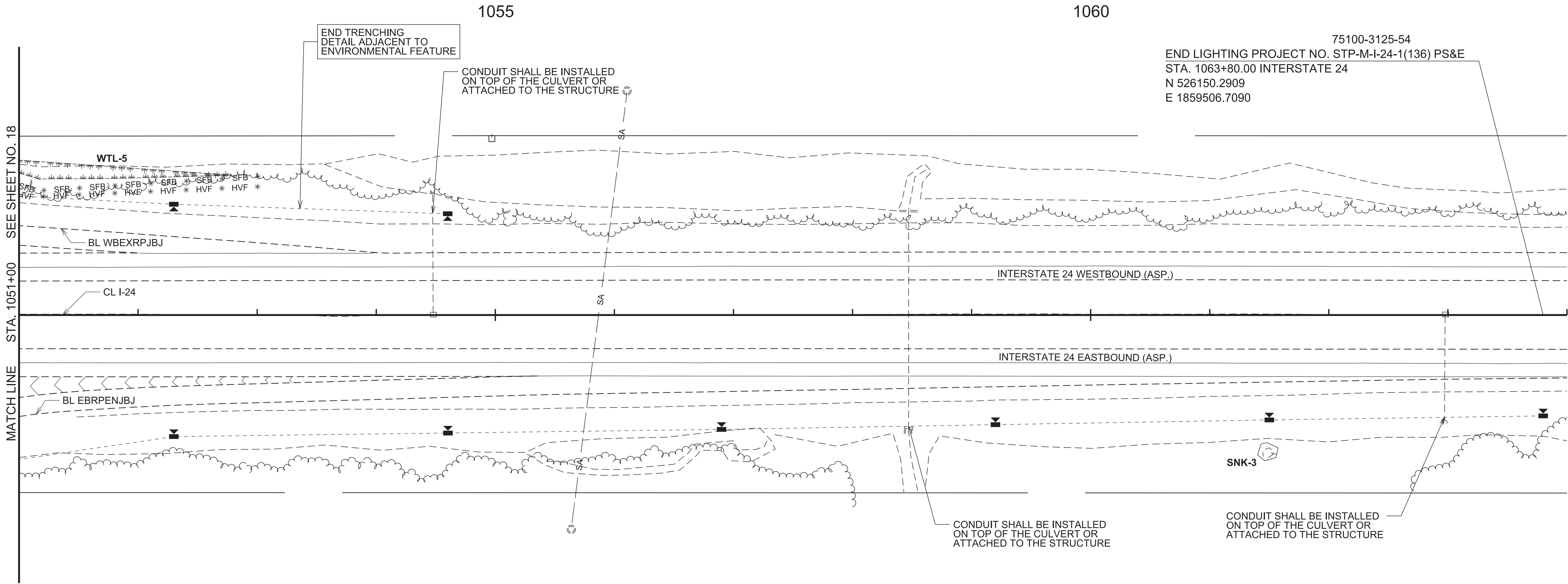
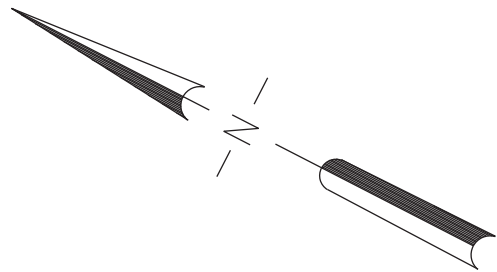
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THE CONTRACTOR SHALL USE ANY MEASURE NECESSARY TO ENSURE THAT NO CONSTRUCTION ACTIVITY WILL OCCUR IN, NOR THAT ANY CONSTRUCTION EQUIPMENT WILL ENTER ANY PORTION OF WTL-5 AND THAT THE FEATURE AND SURROUNDING VEGETATION WILL NOT BE DISTURBED AND IS PROTECTED FROM SEDIMENT AND OTHER POLLUTANTS EXCEPT AT THE PERMITTED LOCATIONS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PIH	2024	STP-M-I-24-1(136)	19
PS&E	2025	STP-M-I-24-1(136)	19



EPSC STAGES

STAGE 1 & 2: EROSION CONTROL DEVICES SHALL BE INSTALLED AT ALL OUTFALLS AND ALONG ENVIRONMENTAL FEATURES BEFORE CONSTRUCTION/CLEARING AND GRUBBING ACTIVITIES. EROSION CONTROL DEVICES SHALL BE INSTALLED PRIOR TO THE EARTH MOVEMENT AROUND PROPOSED STRUCTURES (POLES/FOOTERS, CONTROL CENTERS, PULLBOXES, ETC.). IN AREAS THAT ARE TO BE TRENCHED (CONDUIT INSTALLATION) AND NOT LOCATED ADJACENT TO ENVIROMENTAL FEATURES OR OUTFALLS. EROSION CONTROL DEVICES SHALL BE PLACED IMMEDIATELY AFTER AREA IS DISTURBED.

STAGE 3: EROSION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL LOCATION IS STABILIZED WITH FINAL VEGETATION.

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COORDINATES ARE NAD 83(2011), ARE DATUM ADJUSTED BY THE FACTOR OF 1.00007 AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID G2012BU7.

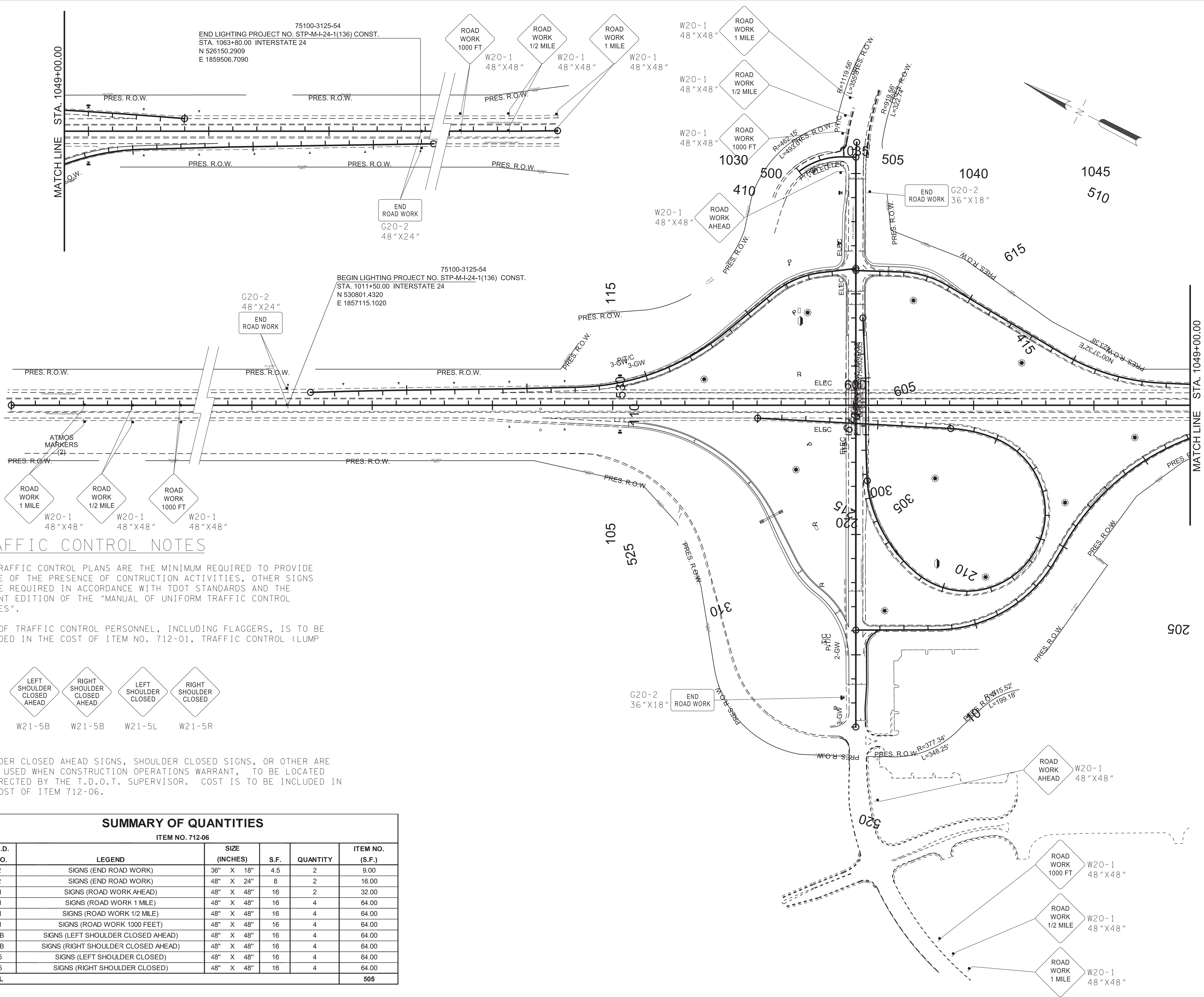
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EROSION PREVENTION &
SEDIMENT CONTROL (EPSC)
PLANS

STA.1051+00 TO STA.1063+80
SCALE: 1"=50'

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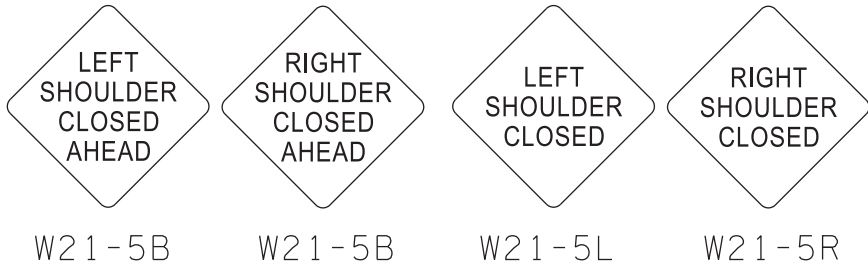
TYPE	YEAR	PROJECT NO.	SHEET NO.
FUNC.	2024	STP-M-I-24-1(136)	T-1
PIH	2024	STP-M-I-24-1(136)	T-1
PS&E	2025	STP-M-I-24-1(136)	T-1



TRAFFIC CONTROL NOTES

THE TRAFFIC CONTROL PLANS ARE THE MINIMUM REQUIRED TO PROVIDE NOTICE OF THE PRESENCE OF CONSTRUCTION ACTIVITIES. OTHER SIGNS MAY BE REQUIRED IN ACCORDANCE WITH TDOT STANDARDS AND THE CURRENT EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

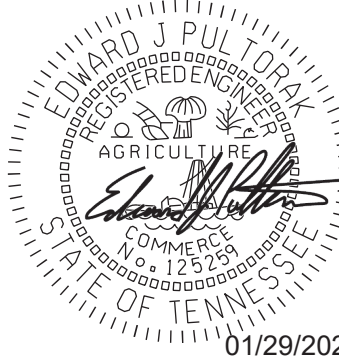
COST OF TRAFFIC CONTROL PERSONNEL, INCLUDING FLAGGERS, IS TO BE INCLUDED IN THE COST OF ITEM NO. 712-01, TRAFFIC CONTROL (LUMP SUM).



SHOULDER CLOSED AHEAD SIGNS, SHOULDER CLOSED SIGNS, OR OTHER ARE TO BE USED WHEN CONSTRUCTION OPERATIONS WARRANT, TO BE LOCATED AS DIRECTED BY THE T.D.O.T. SUPERVISOR. COST IS TO BE INCLUDED IN THE COST OF ITEM 712-06.

SUMMARY OF QUANTITIES					
ITEM NO. 712-06					
M.U.T.C.D. SIGN NO.	LEGEND	SIZE (INCHES)	S.F.	QUANTITY	ITEM NO. (S.F.)
G20-2	SIGNS (END ROAD WORK)	36" X 18"	4.5	2	9.00
G20-2	SIGNS (END ROAD WORK)	48" X 24"	8	2	16.00
W20-1	SIGNS (ROAD WORK AHEAD)	48" X 48"	16	2	32.00
W20-1	SIGNS (ROAD WORK 1 MILE)	48" X 48"	16	4	64.00
W20-1	SIGNS (ROAD WORK 1/2 MILE)	48" X 48"	16	4	64.00
W20-1	SIGNS (ROAD WORK 1000 FEET)	48" X 48"	16	4	64.00
W21-5B	SIGNS (LEFT SHOULDER CLOSED AHEAD)	48" X 48"	16	4	64.00
W21-5B	SIGNS (RIGHT SHOULDER CLOSED AHEAD)	48" X 48"	16	4	64.00
W21-5	SIGNS (LEFT SHOULDER CLOSED)	48" X 48"	16	4	64.00
W21-5	SIGNS (RIGHT SHOULDER CLOSED)	48" X 48"	16	4	64.00
TOTAL					505

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DEPARTMENT OF TRANSPORTATION

TRAFFIC
CONTROL
PLANS
STA.1011+50 TO STA.1063+80
SCALE: 1"=200'

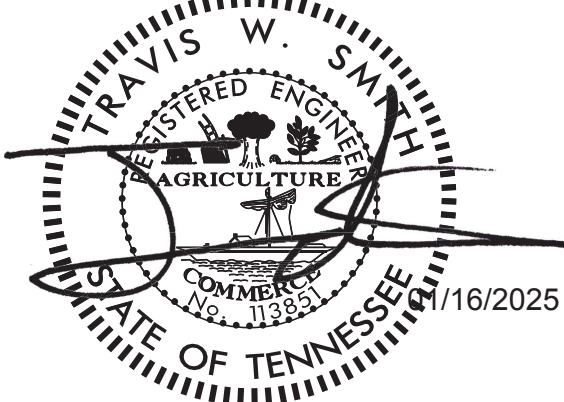
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GEOTECHNICAL INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEET	GEOTECH-SIGN1
GEOTECHNICAL INDEX.....	G-1
GEOTECHNICAL NOTES AND ESTIMATED QUANTITIES SHEET.....	G-2
GEOTECHNICAL BORING LAYOUT FOR HIGH-MAST LIGHTING	G-3
HIGH-MAST LIGHTING SOIL AND ROCK PARAMETERS	G-4
GEOTECHNICAL BORING LAYOUTS	G-5, G-9, G-13, G-20, G-23, G-24
GEOTECHNICAL BORING PROFILES	G-6 – G-8, G-10 – G-12, G-14 – G-19, G-21, G-22, G-25

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-1

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1/16/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
INDEX

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DEFINITION OF EARTHWORK TERMS

THE TERMS AND DEFINITIONS BELOW SHALL CHARACTERIZE THE MATERIAL TYPE THAT WILL BE ENCOUNTERED DURING EXCAVATION AND GRADING. SEE TYPE MATERIAL REFERENCE IN TYPICAL SECTIONS LEGEND.

A. SOIL MATERIAL

SOIL MATERIAL IS MATERIAL THAT IS PREDOMINANTLY MADE UP OF NATURALLY OCCURRING MINERAL PARTICLES WHICH ARE FAIRLY READILY SEPARATED INTO RELATIVELY SMALL PIECES, AND IN WHICH THE MASS MAY CONTAIN AIR, WATER OR ORGANIC MATERIALS. THIS MATERIAL MAY CONTAIN ROCK PIECES IN THE FORM OF DISCONNECTED SLABS, LENSES, OR BOULDERS OF LESS THAN APPROXIMATELY 0.5 CUBIC YARDS. THE MAIN SOIL GROUPS CONSIST OF CLAY, SILT, SAND, GRAVEL, COBBLES, BOULDERS (LESS THAN 0.5 CUBIC YARD VOLUME) OR A COMBINATION OF ANY OF THE CONSTITUENTS. FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY BE CONSIDERED TO BE EXCAVATABLE BY CONVENTIONAL EXCAVATION MACHINERY SUCH AS PANS, TRACK HOES, OR FRONT-END EXCAVATORS/LOADERS.

B. SOLID ROCK MATERIAL

SOLID ROCK MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES SO FIRMLY BONDED TOGETHER THAT RELATIVELY GREAT EFFORT IS REQUIRED TO SEPARATE THE PARTICLES (I.E. BLASTING OR HEAVY CRUSHING FORCES). FOR CONSTRUCTION PURPOSES, THIS MATERIAL WOULD TYPICALLY HAVE TO BE BLASTED TO SEPARATE INTO PIECES SMALL ENOUGH TO LOAD AND TRANSPORT ON EARTH MOVING TRUCKS AND WHICH WHEN SUBJECTED TO PROPER PRE-SPLIT AND PRODUCTION BLASTING WOULD RESULT IN A UNIFORM STABLE ROCK CUT FACE. NOTE THAT THIS MATERIAL WOULD NOT BY DEFINITION NECESSARILY BE A PROVEN SOURCE OF ANY ROCK TYPE AGGREGATE SUCH AS SOLID ROCK, GRADED SOLID ROCK, RIP RAP, OR OTHER ROCK AGGREGATE CONSTRUCTION PRODUCTS.

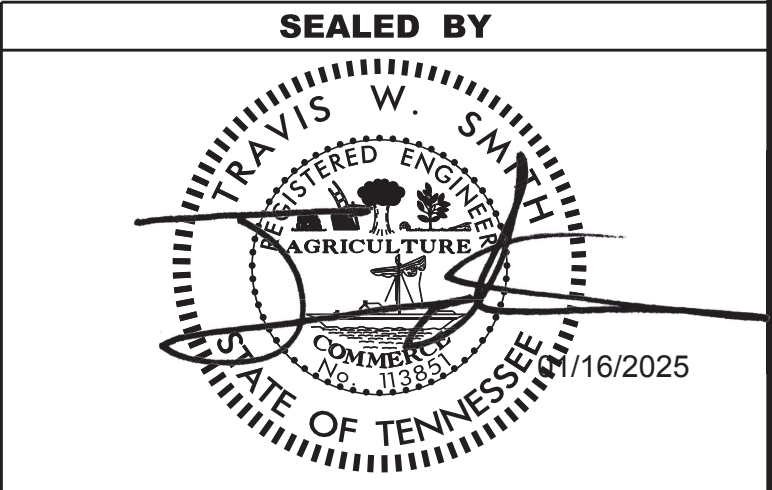
C. SOFT ROCK OR DEGRADABLE ROCK

THIS MATERIAL IS THAT NATURALLY OCCURRING MATERIAL COMPOSED OF MINERAL PARTICLES THAT ARE SO FIRMLY BONDED SUCH THAT THEY ARE NOT FAIRLY READILY SEPARATED INTO SMALL PIECES YET HAS SUCH RELATIVELY LOW BONDING STRENGTH THAT WOULD ALLOW FOR SEPARATING INTO SMALL PIECES THROUGH MODERATE TO HEAVY CRUSHING FORCES. FOR CONSTRUCTION PURPOSES THIS MATERIAL WOULD HAVE TO BE SUBJECTED TO RIPPING TYPE EQUIPMENT, HOE RAMS, OR RUGGED USE OF A LARGE BULLDOZER IN ORDER TO SEPARATE THE MATERIAL SUCH THAT IT CAN BE READILY LOADED INTO EARTH MOVING TRUCKS. THESE MATERIALS WOULD TYPICALLY BE SHALES, CLAYSTONES, SILTSTONES, WEATHERED SANDSTONES, WEATHERED SCHIST AND WEATHERED GNEISS.

D. TRANSITIONAL MATERIALS

THIS MATERIAL IS THAT MATERIAL COMPRISED OF A COMBINATION OF SOIL AND ROCK (MATERIALS A, B, AND C) OCCURRING IN EITHER NON-UNIFORM INTERBEDDED LAYERS OF THE ABOVE MATERIALS (I.E. SHALE MATERIAL WITH RELATIVELY THIN LAYERS OF SOLID ROCK SUCH AS HARD LIMESTONE) OR ERRATIC LOCALIZED CHANGES OF MATERIAL TYPES BOTH Laterally AND WITH DEPTH (SUCH AS A GEOLOGIC FORMATION RESULTING IN PINNACLED ROCK COLUMNS, FLOATING BOULDERS OR LENSES INTERCALATED WITH CLAY SOIL, A COMMON OCCURRENCE IN CERTAIN REGIONS OF TENNESSEE). FOR CONSTRUCTION PURPOSES, THIS MATERIAL MAY HAVE TO BE EXCAVATED USING A COMBINATION OF EXCAVATION METHODS SUCH AS BLASTING OF ROCK PINNACLES, LAYERS OR BOULDERS ALONG WITH A RIPPING OF WEATHERED ROCK AND EXCAVATING OF SOIL WITH TRACK HOES OR LOADERS ALL WITHIN A LOCALIZED AREA. THIS MATERIAL WOULD NOT BE SUITABLE FOR THE USE OF EXCAVATING PAN TYPE EQUIPMENT.

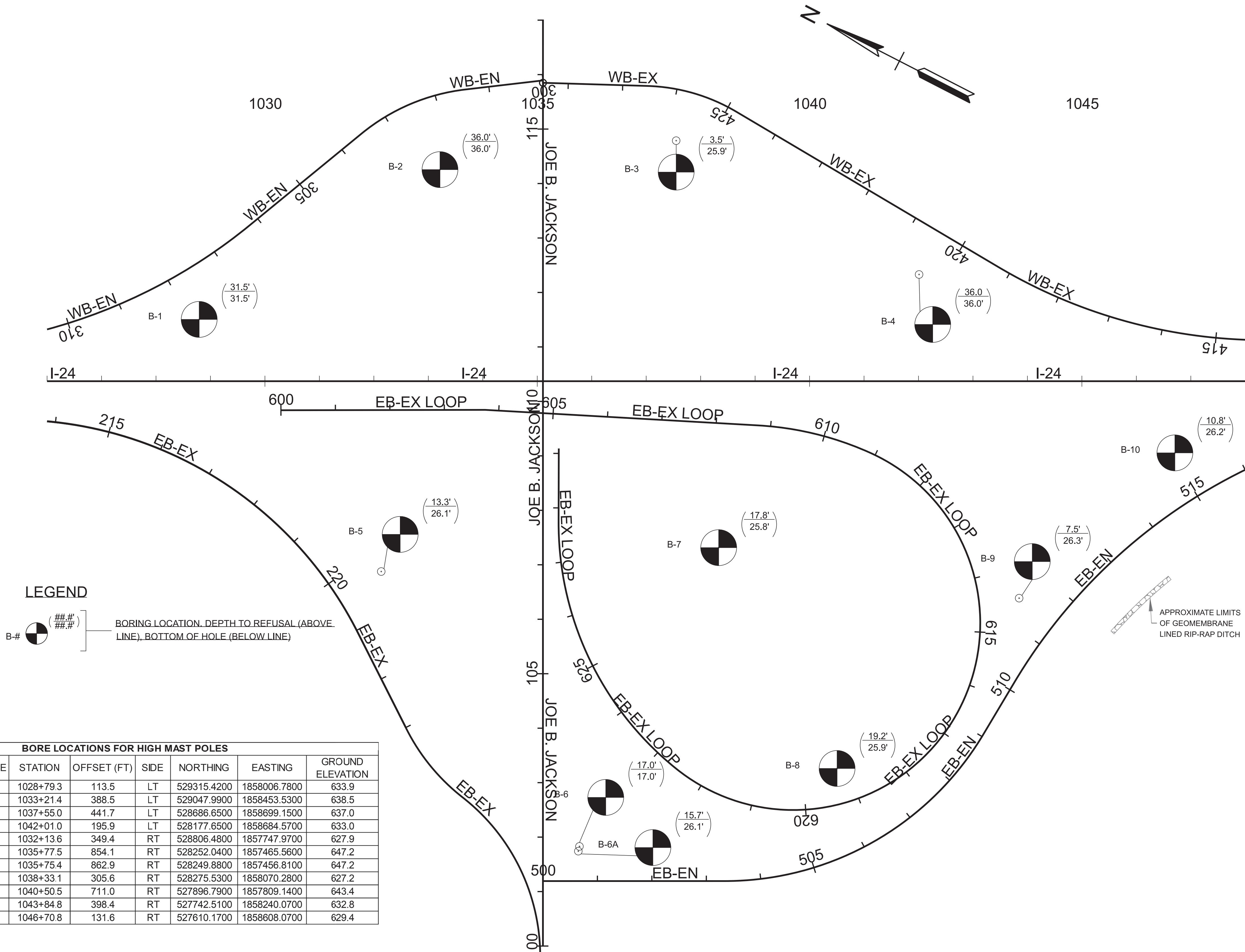
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-2



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
NOTES &
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-3



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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING LAYOUT
FOR HIGH-MAST
LIGHTING

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-4

HIGH-MAST LIGHTING TOWER 1: BOREHOLE B-HM-1																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _s (PCI)*	ROCK ELASTIC MODULUS, E _v (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	9.5	633.9	624.4	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	CLAY	9.5	31.5	624.4	602.4	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA

*POUNDS PER CUBIC INCH

HIGH-MAST LIGHTING TOWER 2: BOREHOLE B-HM-2																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _s (PCI*)	ROCK ELASTIC MODULUS, E _v (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	12.0	638.5	626.5	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	CLAY	12.0	36.0	626.5	602.5	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA

*POUNDS PER CUBIC INCH

HIGH-MAST LIGHTING TOWER 3: BOREHOLE B-HM-3																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _S (PCI)**	ROCK ELASTIC MODULUS, E _v (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	3.5	637.0	633.5	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	LIMESTONE	3.5	4.5	633.5	632.5	160	NA	NA	NA	NA	0.001	NA	1300	0.23	10	166.1	41.2
3	MUD SEAM	4.5	5.1	632.5	631.9	100	250	NA	25	18	0.020	30	NA	NA	NA	NA	NA
4	LIMESTONE	5.1	6.4	631.9	630.6	160	NA	NA	NA	NA	0.001	NA	1300	0.23	10	62.3	41.2
5	MUD SEAM	6.4	19.4	630.6	617.6	100	250	NA	25	18	0.020	30	NA	NA	NA	NA	NA
6	LIMESTONE	19.4	25.9	617.6	611.1	160	NA	NA	NA	NA	0.001	NA	2200	0.23	10	799.6	41.2

*POUNDS PER CUBIC INCH

**CONCRETE WILL CONTROL AT 30.3 KSF FOR 3 KSI CONCRETE OR 34.9 KSF FOR 4 KSI CONCRETE

HIGH-MAST LIGHTING TOWER 4: BOREHOLE B-HM-4																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _s (PCI)*	ROCK ELASTIC MODULUS, E _v (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	14.5	633.0	618.5	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	CLAY	15.5	36.0	617.5	597.0	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA

*POUNDS PER CUBIC INCH

HIGH-MAST LIGHTING TOWER 5: BOREHOLE B-HM-5																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS				ROCK RESISTANCE PARAMETERS		
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _S (PCI)*	ROCK ELASTIC MODULUS, E _v (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	13.3	627.9	614.6	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	LIMESTONE	13.3	21.1	614.6	606.8	160	NA	NA	NA	NA	0.001	NA	550	0.23	10	321.4	46
3	MUD SEAM	21.1	24.6	606.8	603.3	100	250	NA	25	18	0.020	30	NA	NA	NA	NA	NA
4	LIMESTONE	24.6	26.1	603.3	601.8	160	NA	NA	NA	NA	0.001	NA	100	0.23	10	98.5	30.9

*POUNDS PER CUBIC INCH

**CONCRETE WILL CONTROL AT 30.3 KSF FOR 3 KSI CONCRETE OR 34.9 KSF FOR 4 KSI CONCRETE

HIGH-MAST LIGHTING TOWER 6: BOREHOLE B-HM-6A																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _S (PCI)*	ROCK ELASTIC MODULUS, E _v (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	15.7	647.2	631.5	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	LIMESTONE	15.7	16.1	631.5	631.1	160	NA	NA	NA	NA	0.001	NA	250	0.23	10	304.6	25.8
3	MUD SEAM	16.1	17.4	631.1	629.8	100	250	NA	25	18	0.020	30	NA	NA	NA	NA	NA
4	LIMESTONE	17.4	26.1	629.8	621.1	160	NA	NA	NA	NA	0.001	NA	550	0.23	10	233.2	25.8

*POUNDS PER CUBIC INCH

**CONCRETE WILL CONTROL AT 30.3 KSF FOR 3 KSI CONCRETE OR 34.9 KSF FOR 4 KSI CONCRETE

HIGH-MAST LIGHTING TOWER 7: BOREHOLE B-HM-7																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _s (PCI)*	ROCK ELASTIC MODULUS, E _u (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	17.8	627.2	609.4	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	LIMESTONE	17.8	25.8	609.4	601.4	160	NA	NA	NA	NA	0.001	NA	750	0.23	10	302.9	34.1

*POUNDS PER CUBIC INCH

**CONCRETE WILL CONTROL AT 30.3 KSF FOR 3 KSI CONCRETE OR 34.9 KSF FOR 4 KSI CONCRETE

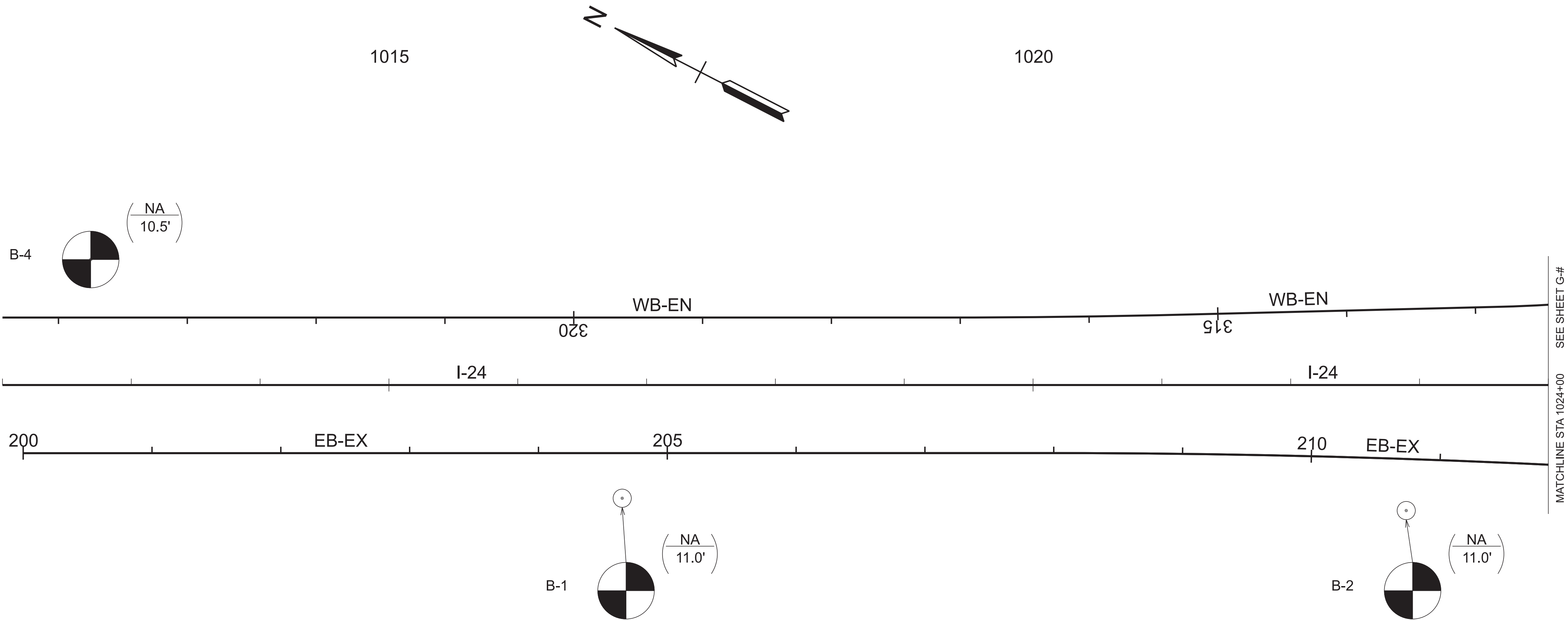
HIGH-MAST LIGHTING TOWER 8: BOREHOLE B-HM-8																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _s (PCI)*	ROCK ELASTIC MODULUS, E _u (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	12.5	643.4	630.9	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
2	CLAY	12.5	19.2	630.9	624.2	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	NA
3	LIMESTONE	19.2	25.9	624.2	617.5	160	NA	NA	NA	NA	0.001	NA	500	0.23	10	242.7	30.9

*POUNDS PER CUBIC INCH

**CONCRETE WILL CONTROL AT 30.3 KSF FOR 3 KSI CONCRETE OR 34.9 KSF FOR 4 KSI CONCRETE

HIGH-MAST LIGHTING TOWER 9: BOREHOLE B-HM-9																	
ZONE	SOIL / ROCK TYPES	DEPTH (FT)				TOTAL UNIT WEIGHT (pcf)	SHEAR STRENGTH PARAMETERS				LATERAL LOAD PARAMETERS					ROCK RESISTANCE PARAMETERS	
		SURFACE		ELEVATION			UNDRAINED (SHORT-TERM)		DRAINED (LONG-TERM)		STRAIN, E ₅₀	SOIL MODULUS, K _s (PCI)*	ROCK ELASTIC MODULUS, E _u (KSI)	ROCK POISSON'S RATIO	ROCK MATERIAL INDEX, M	NOMINAL BEARING (KSF)	NOMINAL SIDE (KSF)**
		FROM	TO	FROM	TO		COHESION (PSF)	φ (DEGREE)	COHESION (PSF)	φ (DEGREE)							
1	CLAY	0.0	7.5	625.8	625.3	120	1000	NA	100	22	0.007	500	NA	NA	NA	NA	
2	LIMESTONE	7.5	26.3	632.8	606.5	160	NA	NA	NA	NA	0.001	NA	2200	0.23	10	951.3	

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-5



LEGEND

- B-# BORING LOCATION. DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)
- B-# BORING LOCATION WITH DEPTH TO REFUSAL
- B-# BORING LOCATION TERMINATION DEPTH (NO REFUSAL)

SEALED BY

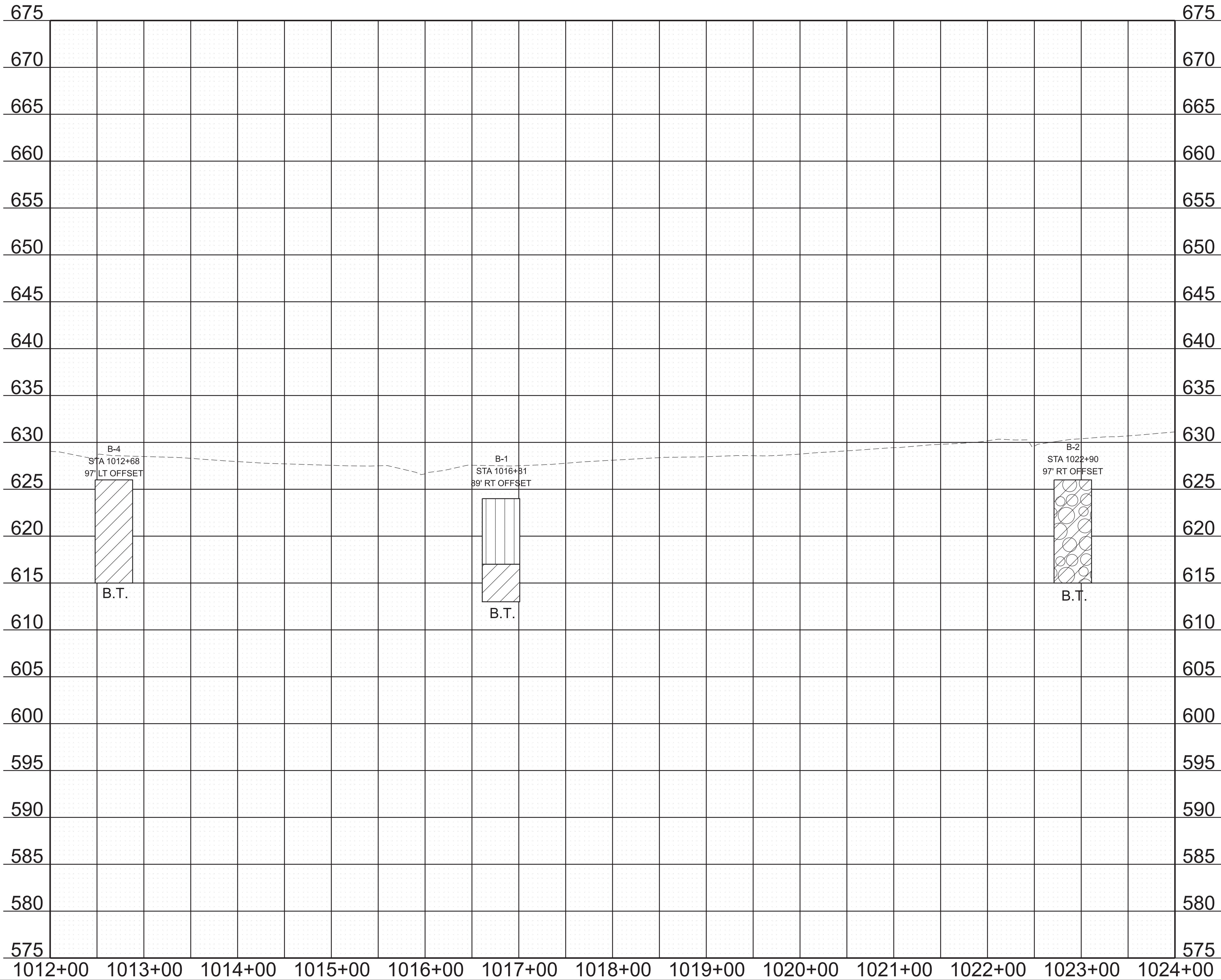
TRAVIS W. SMITH
REGISTERED ENGINEER
AGRICULTURE
COMMERCIAL
STATE OF TENNESSEE
116/2025

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING
LAYOUT

1/15/2025 11:00:24 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055.00-RUTHERFORD\131055.00-PROFILE-GEST\509224.DGN

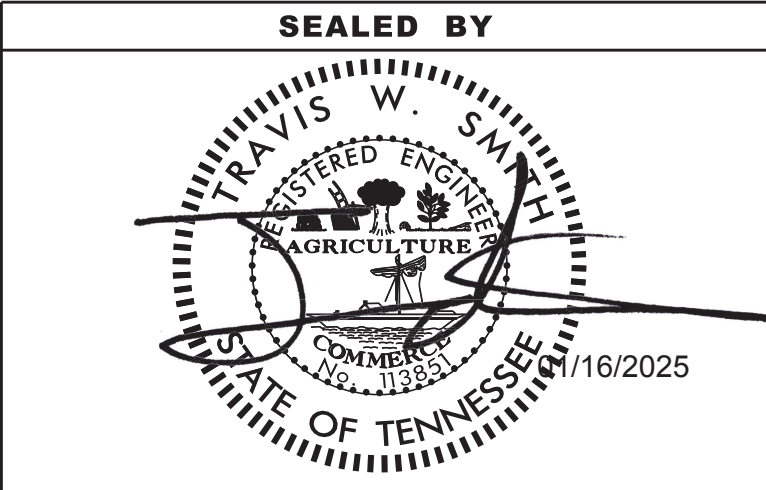


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-6

LEGEND

- SILT (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- GRAVELLY CLAY (TYPE A MATERIAL)

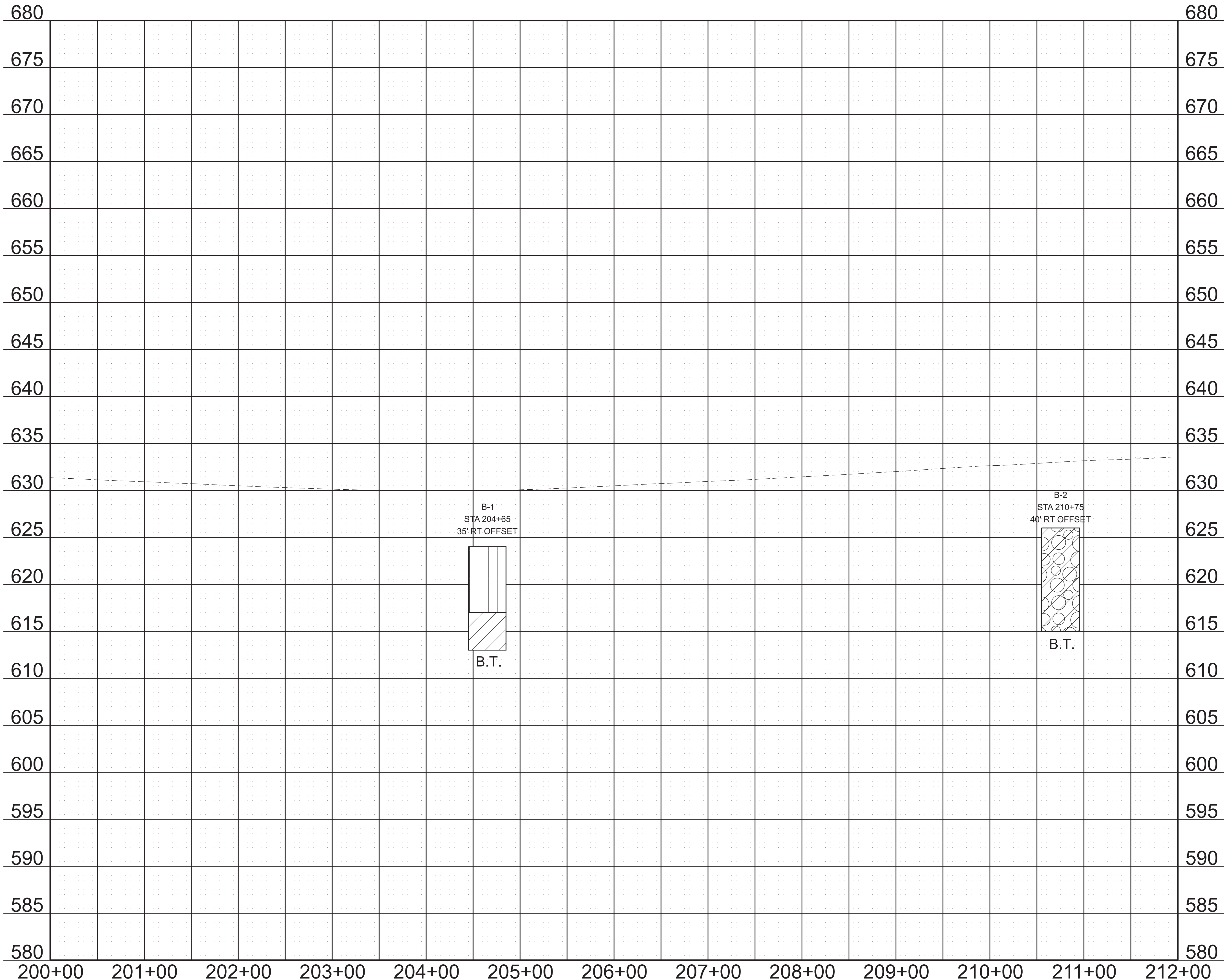
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON GEOTECHNICAL NOTES AND EST. QTYS. SHEET.
B.T.= BORING TERMINATED



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE
I-24
STA. 1012+00.00 TO STA. 1024+00.00
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

1/15/2025 11:00:25 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055-00-RUTHERFORD\131055-00-PROFILE-GEST\509224.DGN

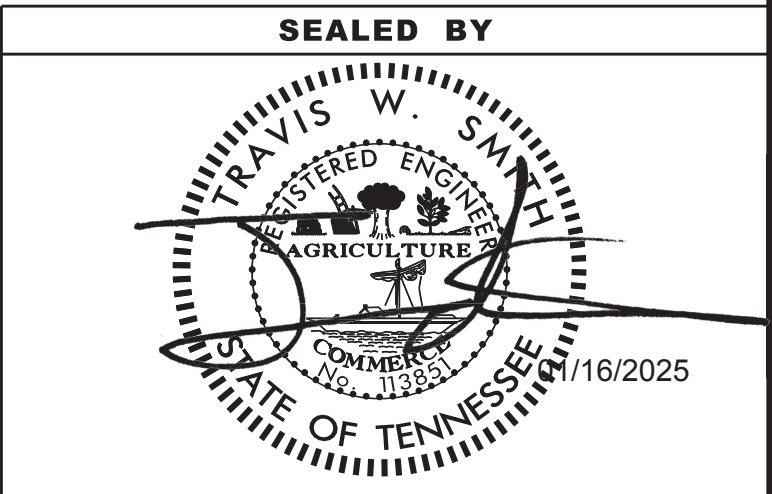


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-7

LEGEND

- SILT (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- GRAVELLY CLAY (TYPE A MATERIAL)

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



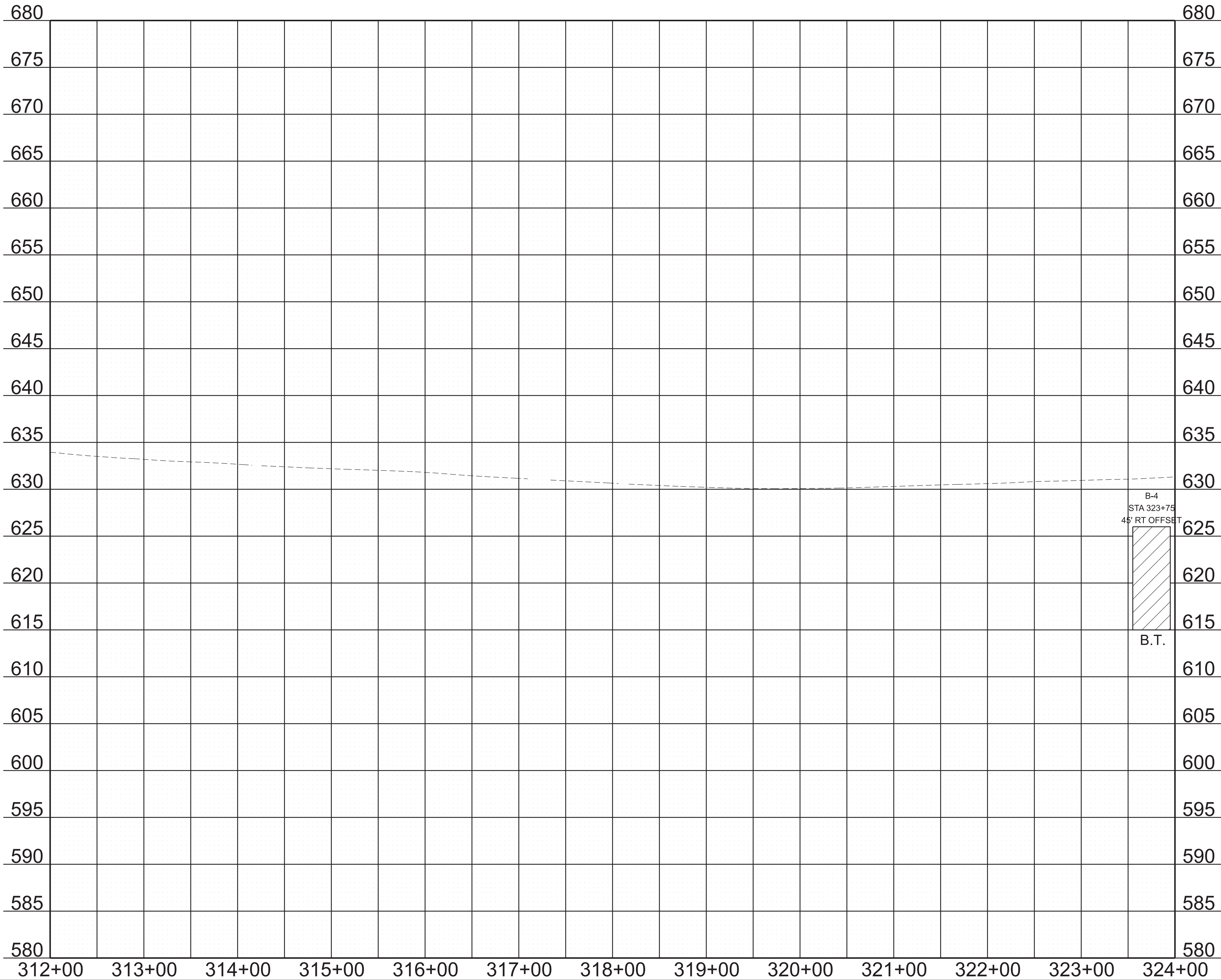
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

EB-EX
STA. 200+00.00 TO STA. 212+00.00


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1" = 5' VERT.

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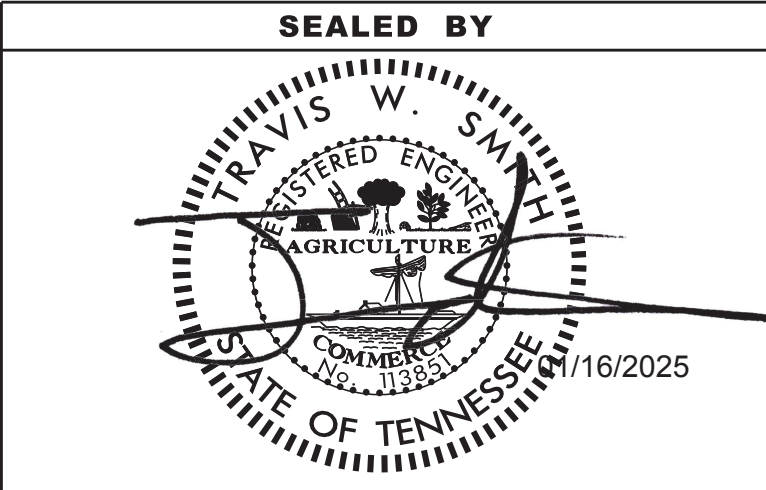
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-8

LEGEND

 FAT CLAY
(TYPE A MATERIAL)

TYPE MATERIAL-SEE DEFINITION
OF EARTHWORK TERMS ON
GEOTECHNICAL NOTES AND EST.
QTYS. SHEET.

B.T.= BORING TERMINATED



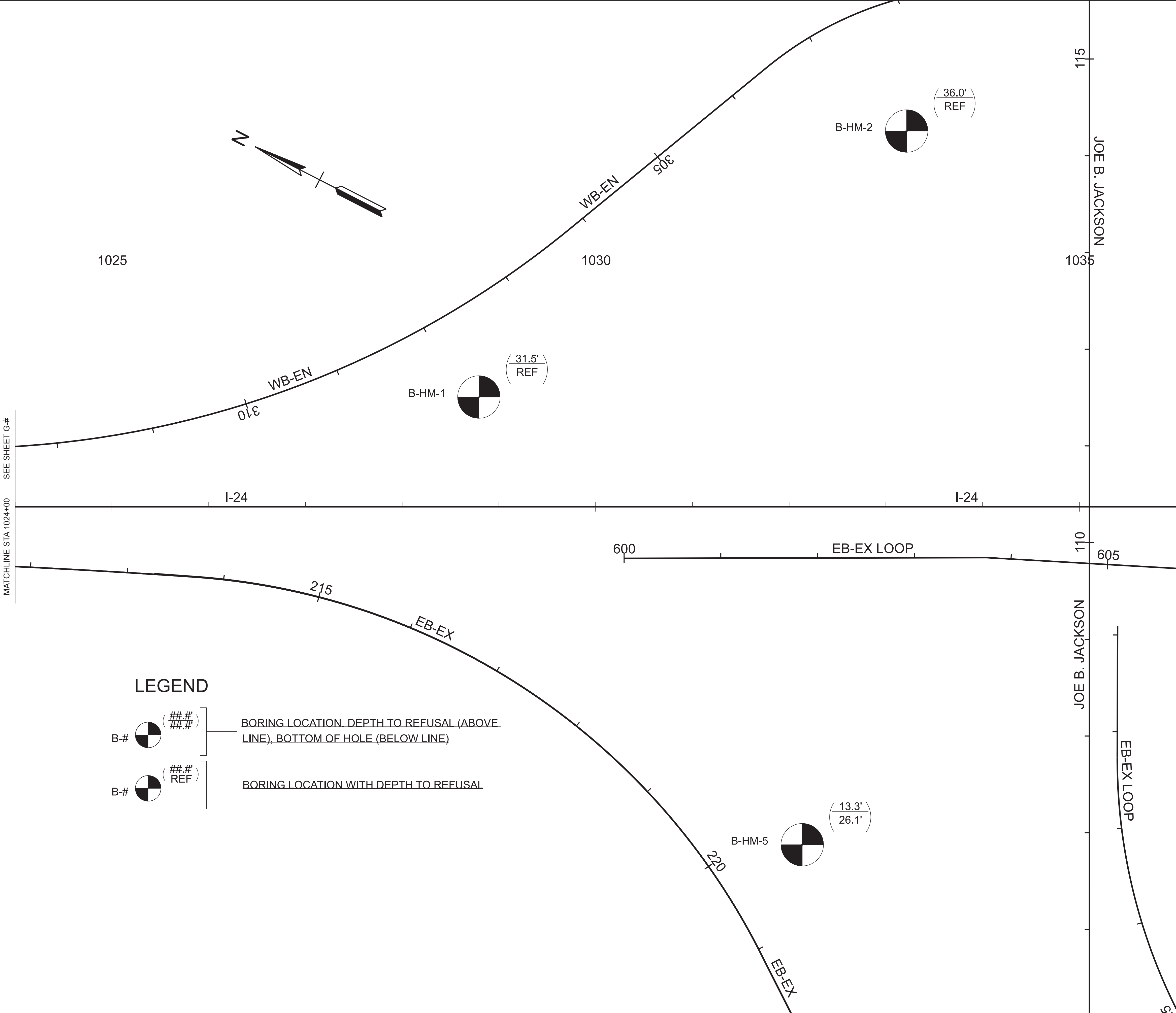
**STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION**

**GEOTECHNICAL
BORING PROFILE**

WB-EN
STA. 312+00.00 TO STA. 324+00.00

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

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-9



LEGEND

- B-#

(###'#')

(###'#')

— BORING LOCATION, DEPTH TO REFUSAL (ABOVE LINE), BOTTOM OF HOLE (BELOW LINE)
- B-#

(###'#')

(REF)

— BORING LOCATION WITH DEPTH TO REFUSAL

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REGISTERED ENGINEER

AGRICULTURE

COMMERCIAL

STATE OF TENNESSEE

1/16/2025

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STATE OF TENNESSEE

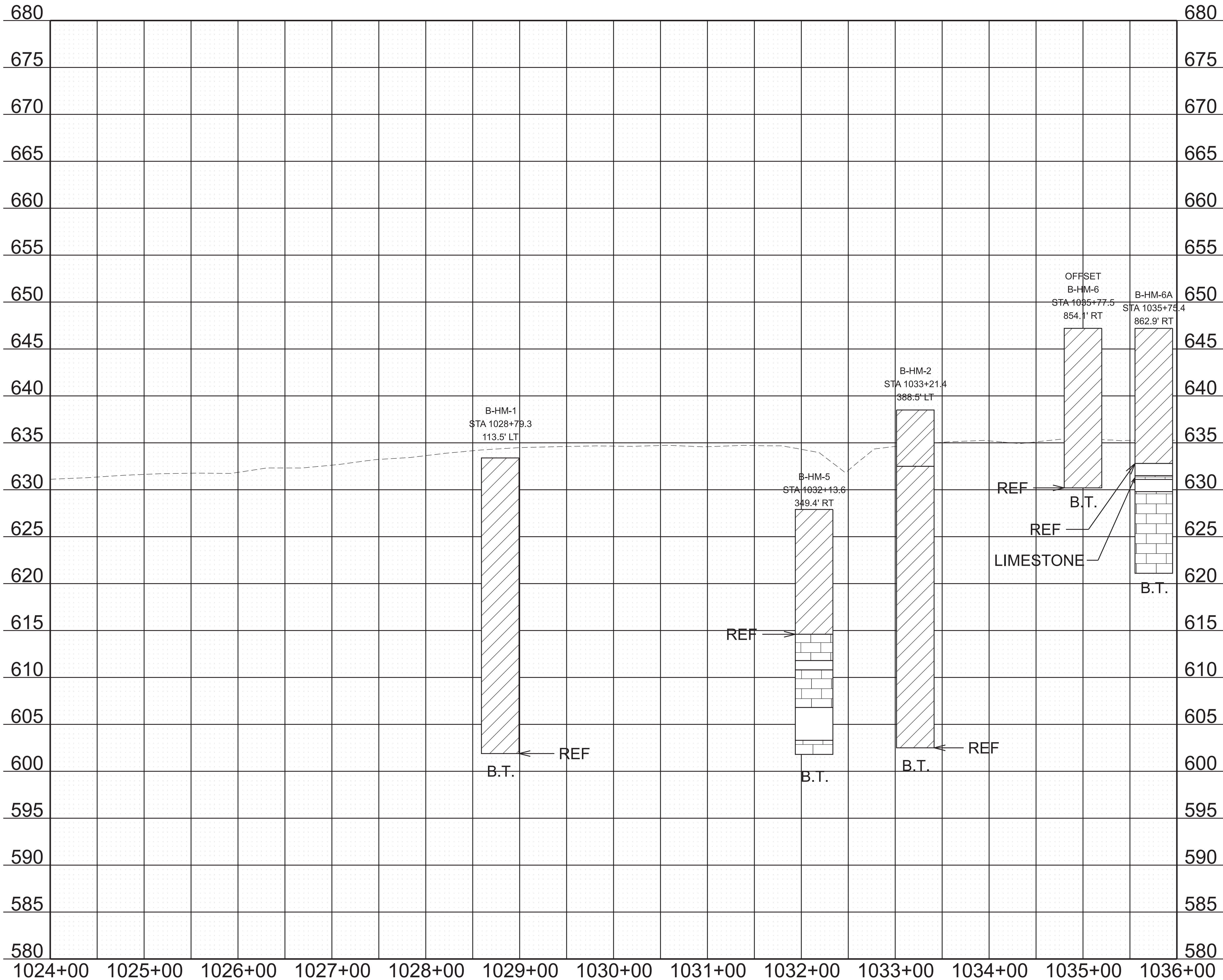
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL

BORING

LAYOUT

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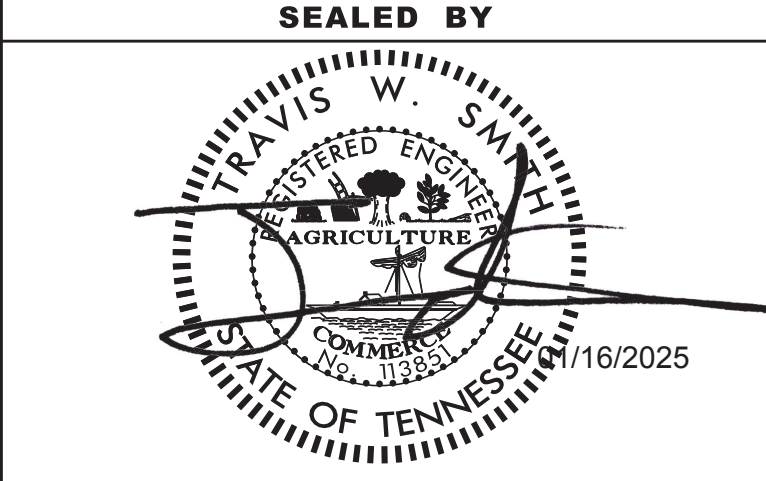


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-10

LEGEND

- LEAN CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- MUD SEAM
- LIMESTONE (TYPE B MATERIAL)

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



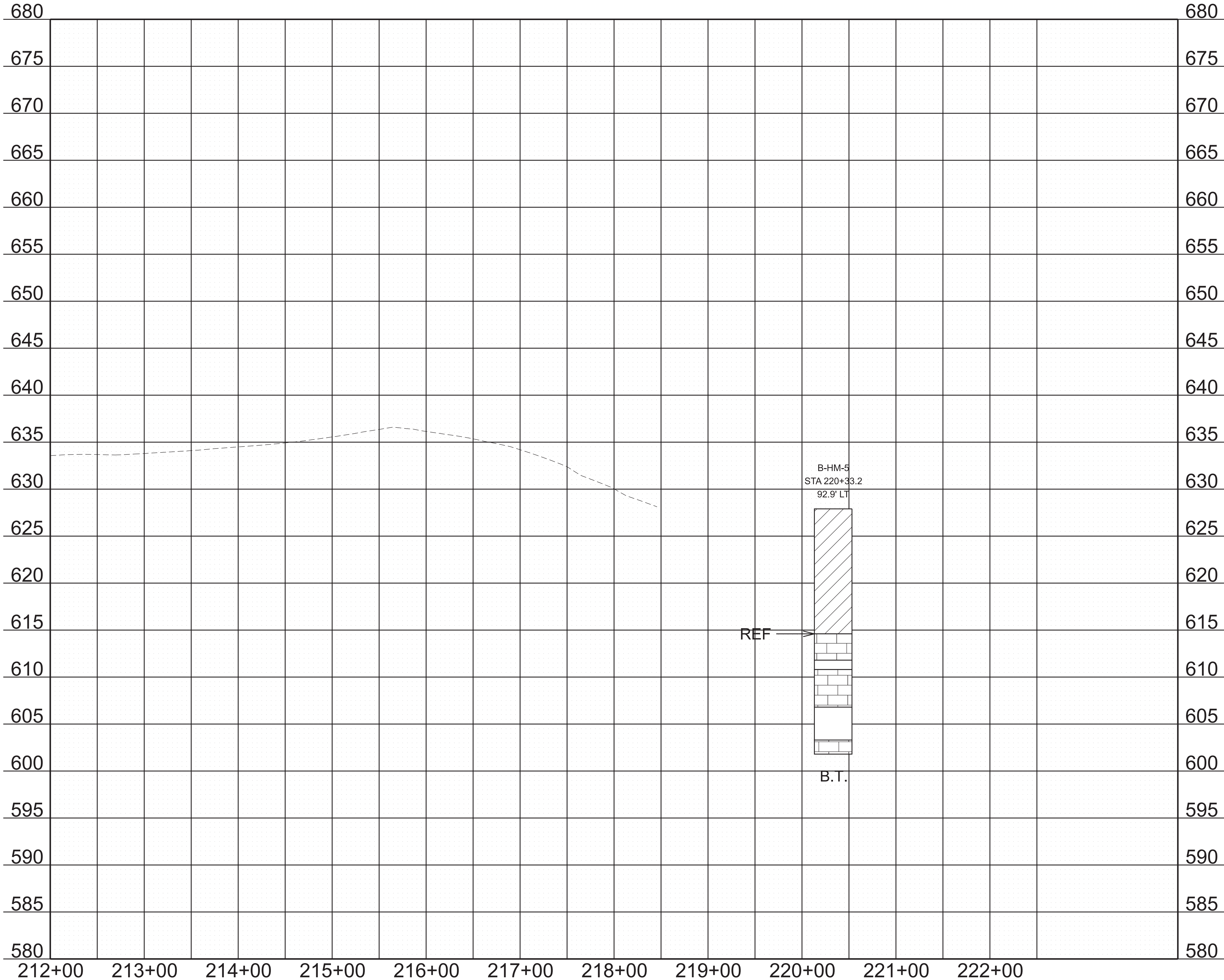
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

I-24
STA. 1024+00.00 TO STA. 1036+00.00

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

1/15/2025 11:00:28 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055.00-RUTHERFORD\131055.00-PROFILE-GEST\509224.DGN

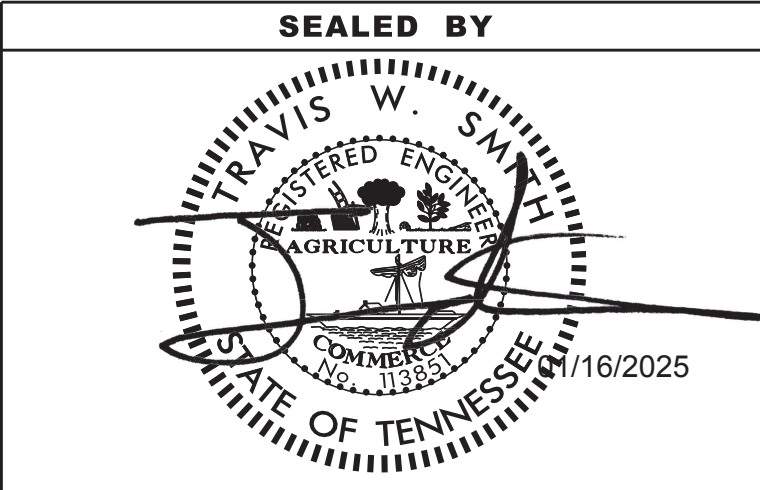


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-11

LEGEND

- FAT CLAY (TYPE A MATERIAL)
- MUD SEAM
- LIMESTONE (TYPE B MATERIAL)

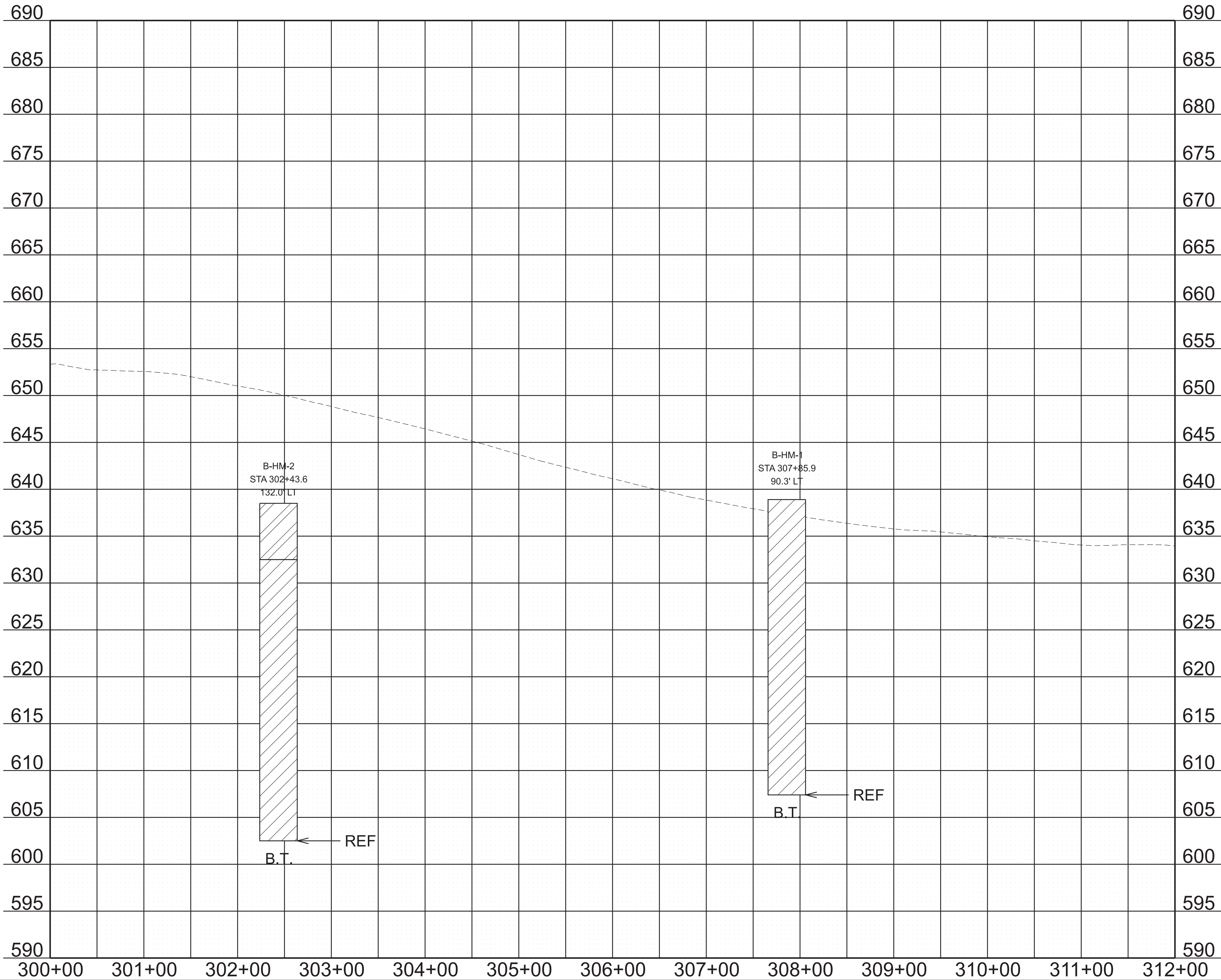
TYPE MATERIAL-SEE DEFINITION OF EARTHWORK TERMS ON GEOTECHNICAL NOTES AND EST. QTYS. SHEET.
REF = AUGER REFUSAL
B.T.= BORING TERMINATED



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE
EB-EX
STA. 212+00.00 TO STA. 224+00.00
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

1/15/2025 11:00:28 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055.00-RUTHERFORD\131055.00-PROFILE-GEST\509224.DGN

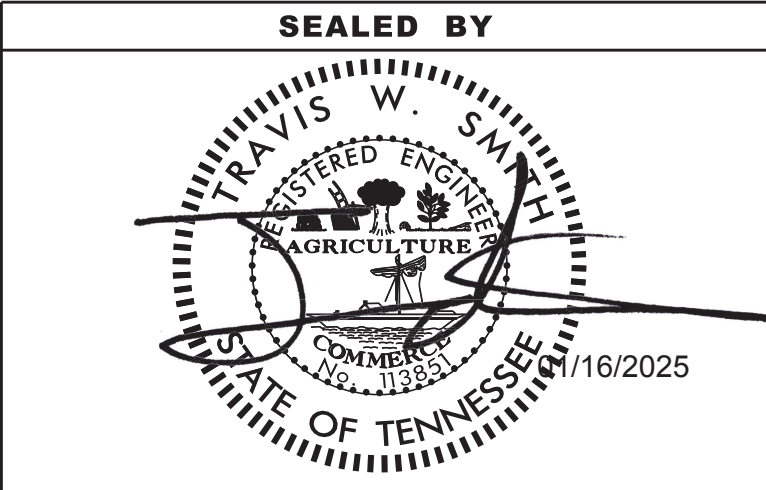


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-12

LEGEND

- LEAN CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)

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



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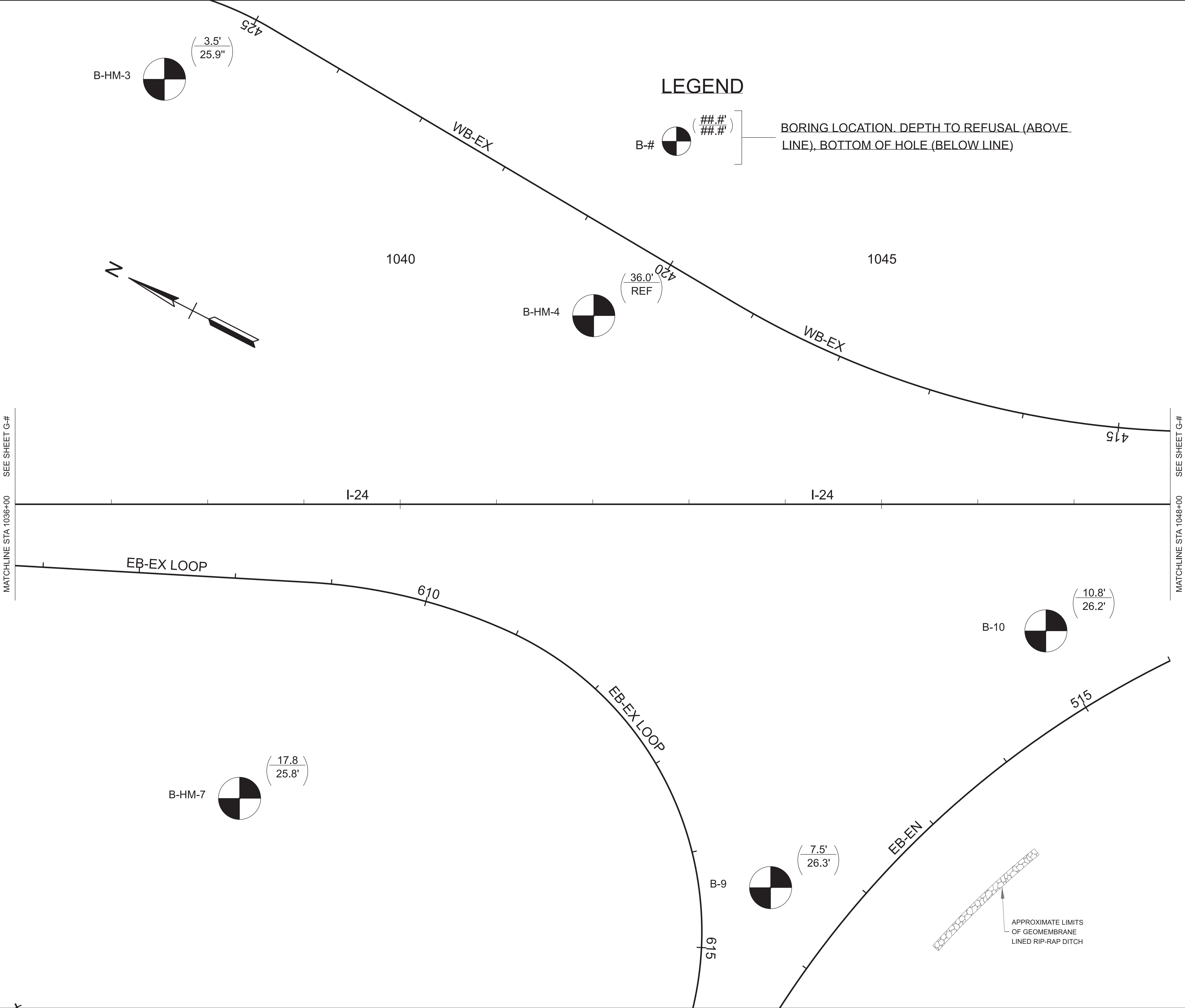
GEOTECHNICAL
BORING PROFILE

WB-EN
STA. 300+00.00 TO STA. 312+00.00

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

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-13



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1/16/2025

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STATE OF TENNESSEE

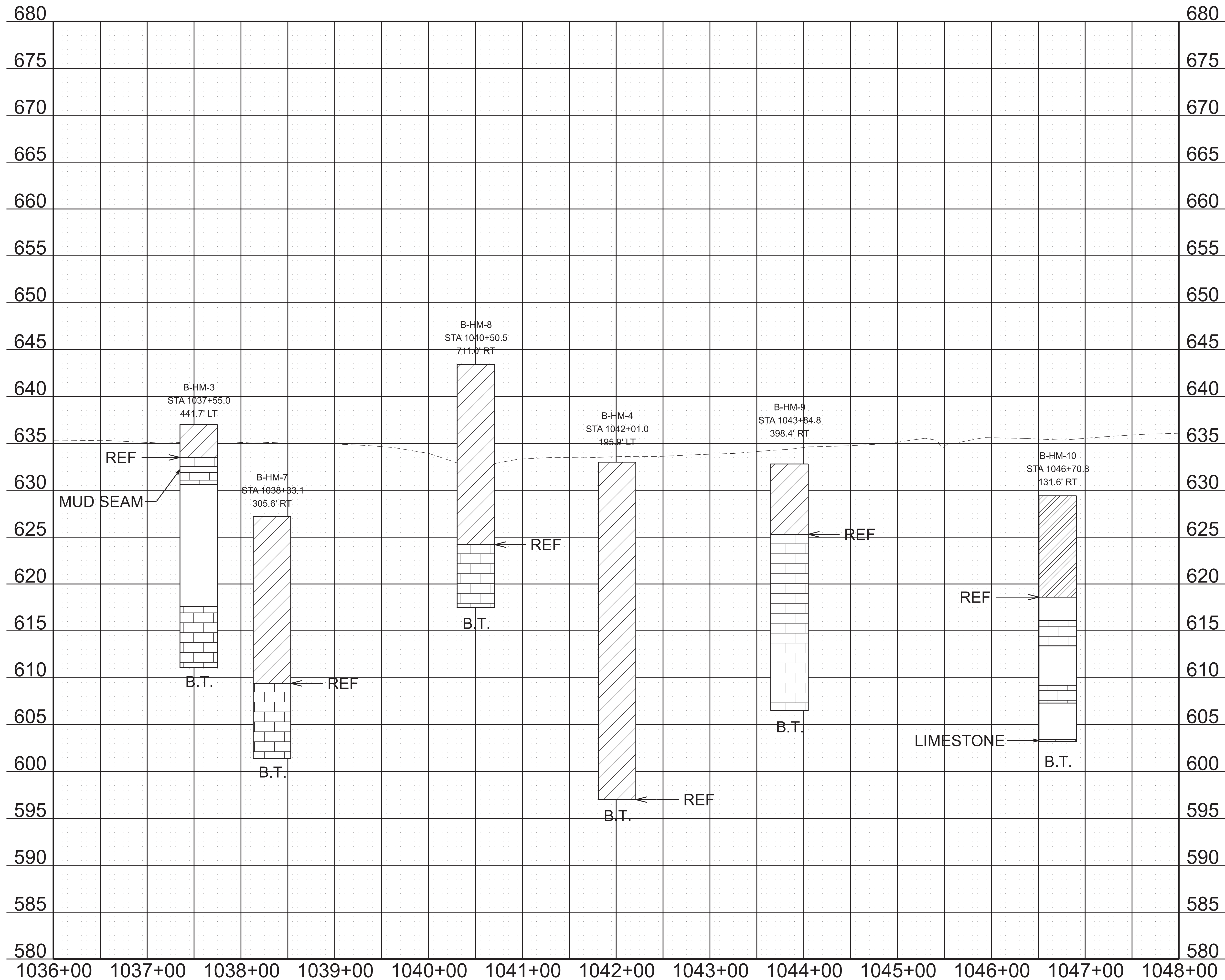
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL

BORING

LAYOUT

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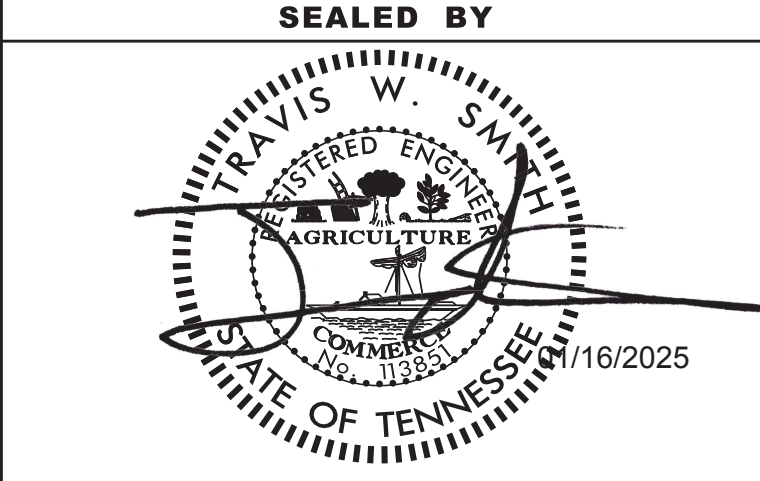


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-14

LEGEND

- LEAN CLAY (TYPE A MATERIAL)
- FAT CLAY (TYPE A MATERIAL)
- MUD SEAM
- LIMESTONE (TYPE B MATERIAL)

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



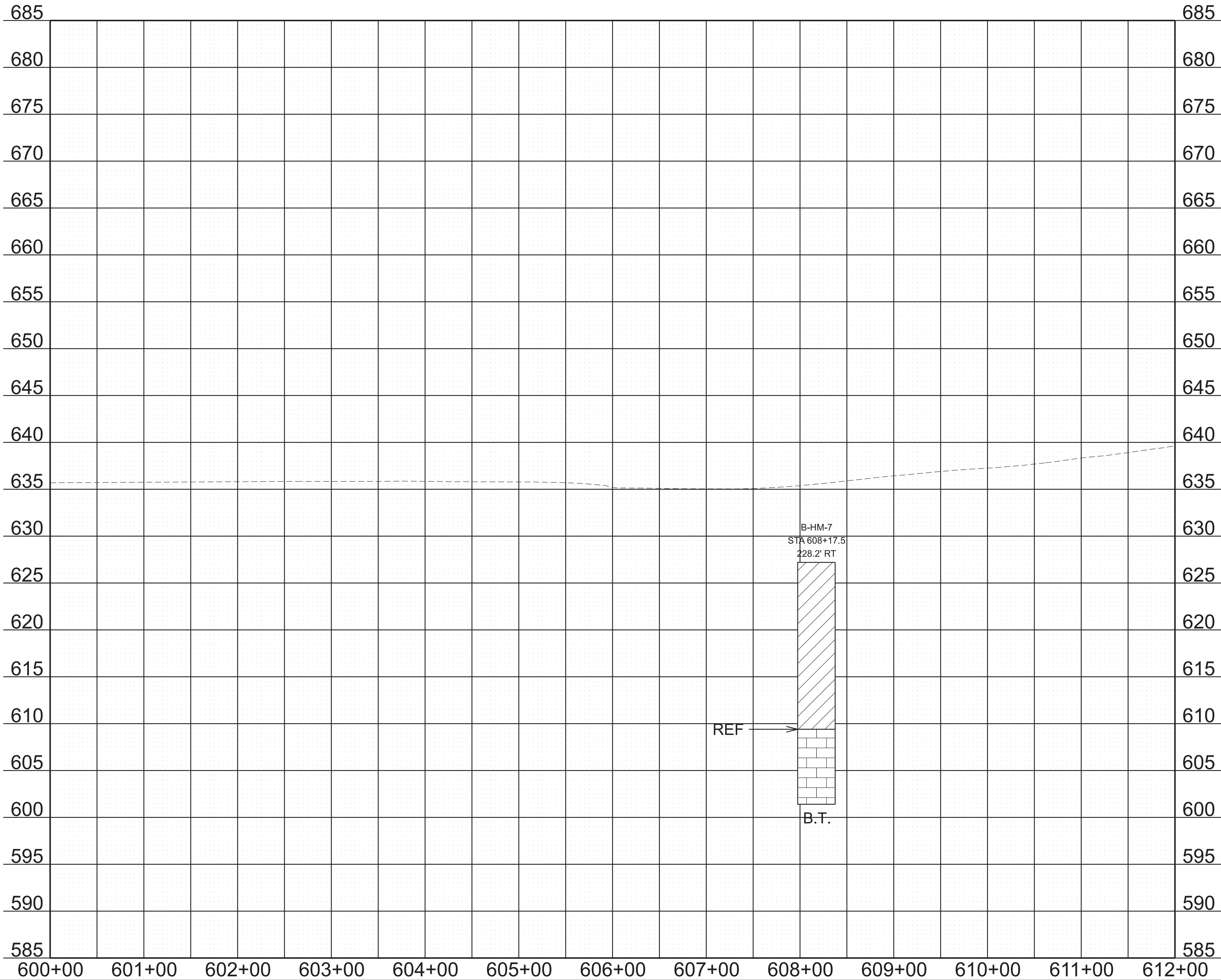
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

I-24
STA. 1036+00.00 TO STA. 1048+00.00

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

1/15/2025 11:00:31 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055.00-RUTHERFORD\IDGN\131055-00-PROFILE-GE5T509224.DGN

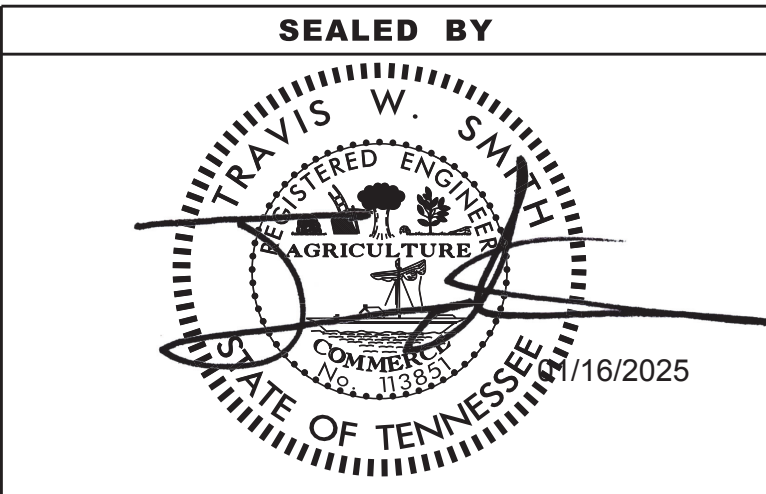


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-15

LEGEND

- FAT CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

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



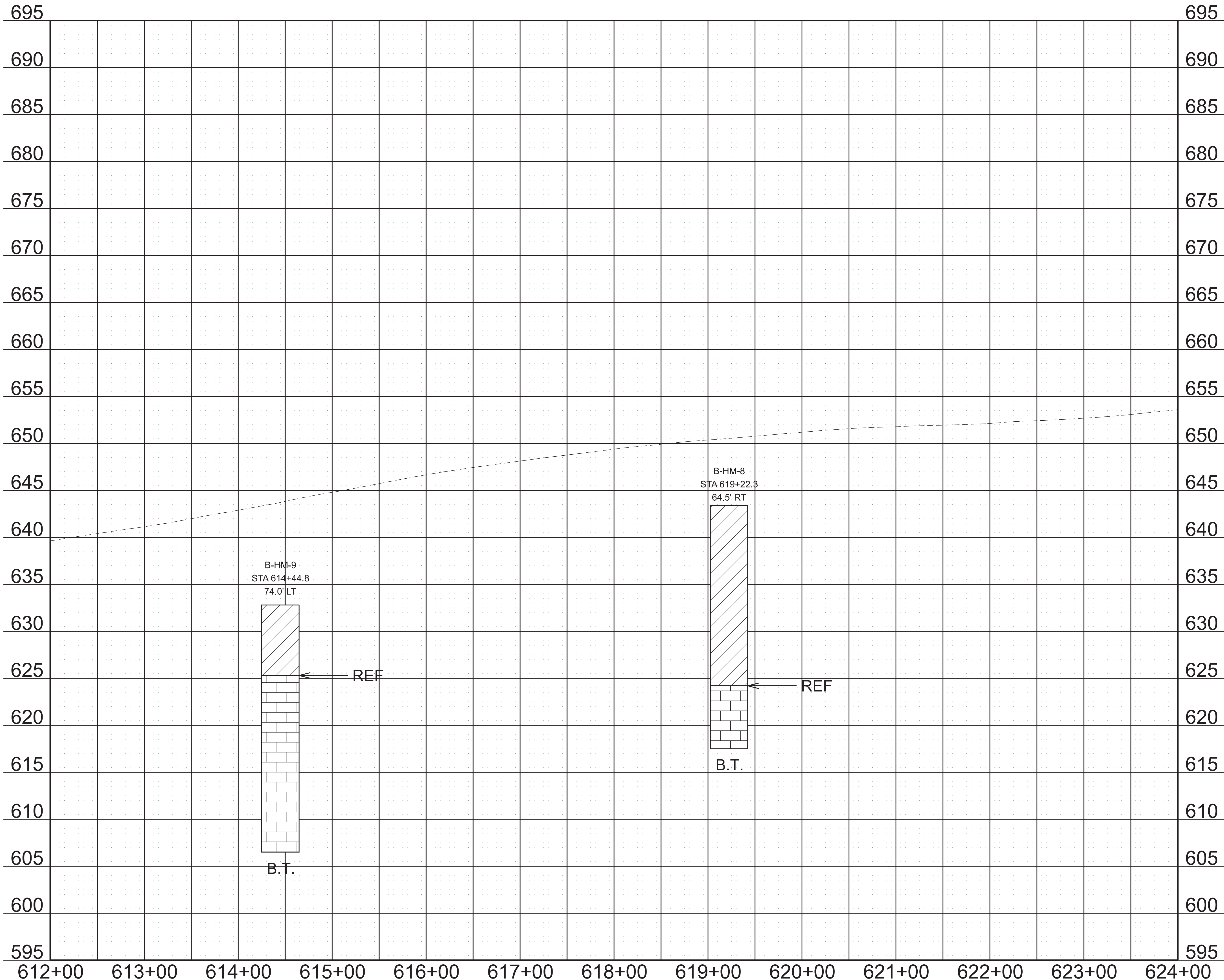
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

EB-EX LOOP
STA. 600+00.00 TO STA. 612+00.00

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

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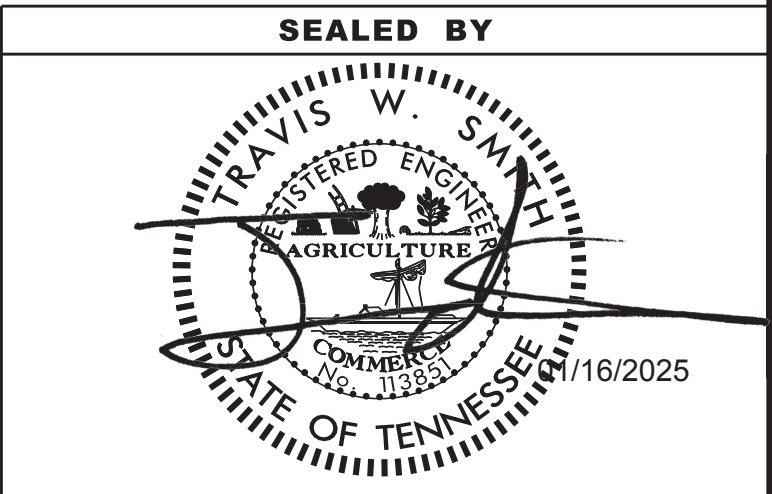


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-16

LEGEND

- FAT CLAY (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

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



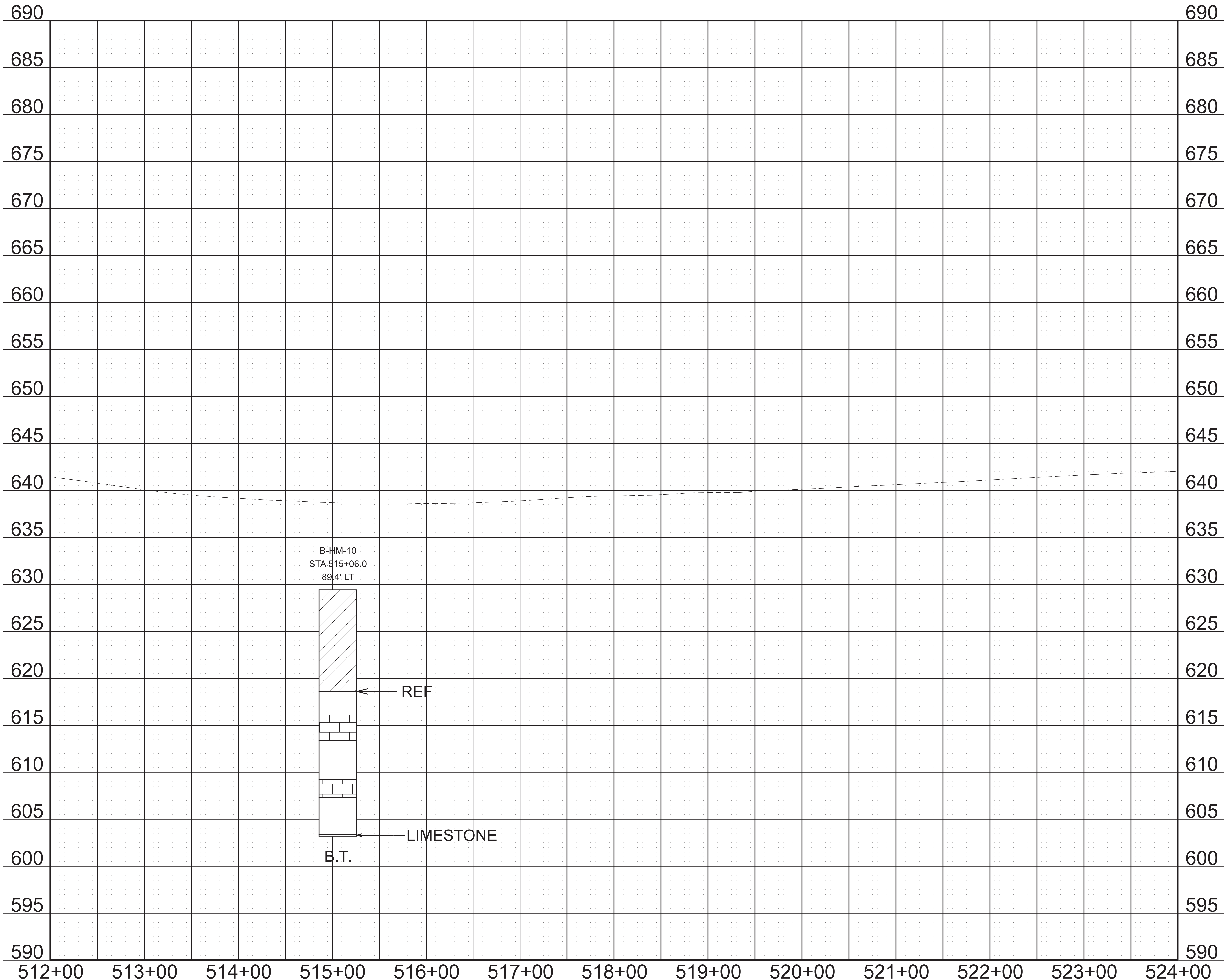
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

EB-EX LOOP
STA. 612+00.00 TO STA. 624+00.00

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

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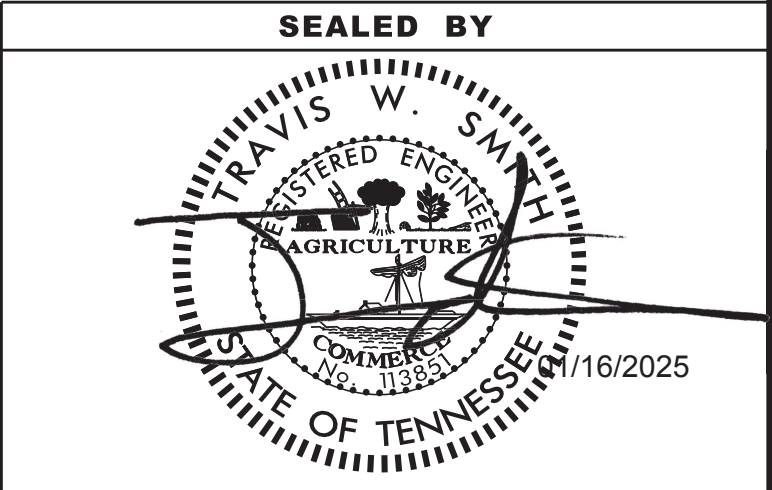


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-17

LEGEND

- LEAN CLAY (TYPE A MATERIAL)
- MUD SEAM
- LIMESTONE (TYPE B MATERIAL)

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



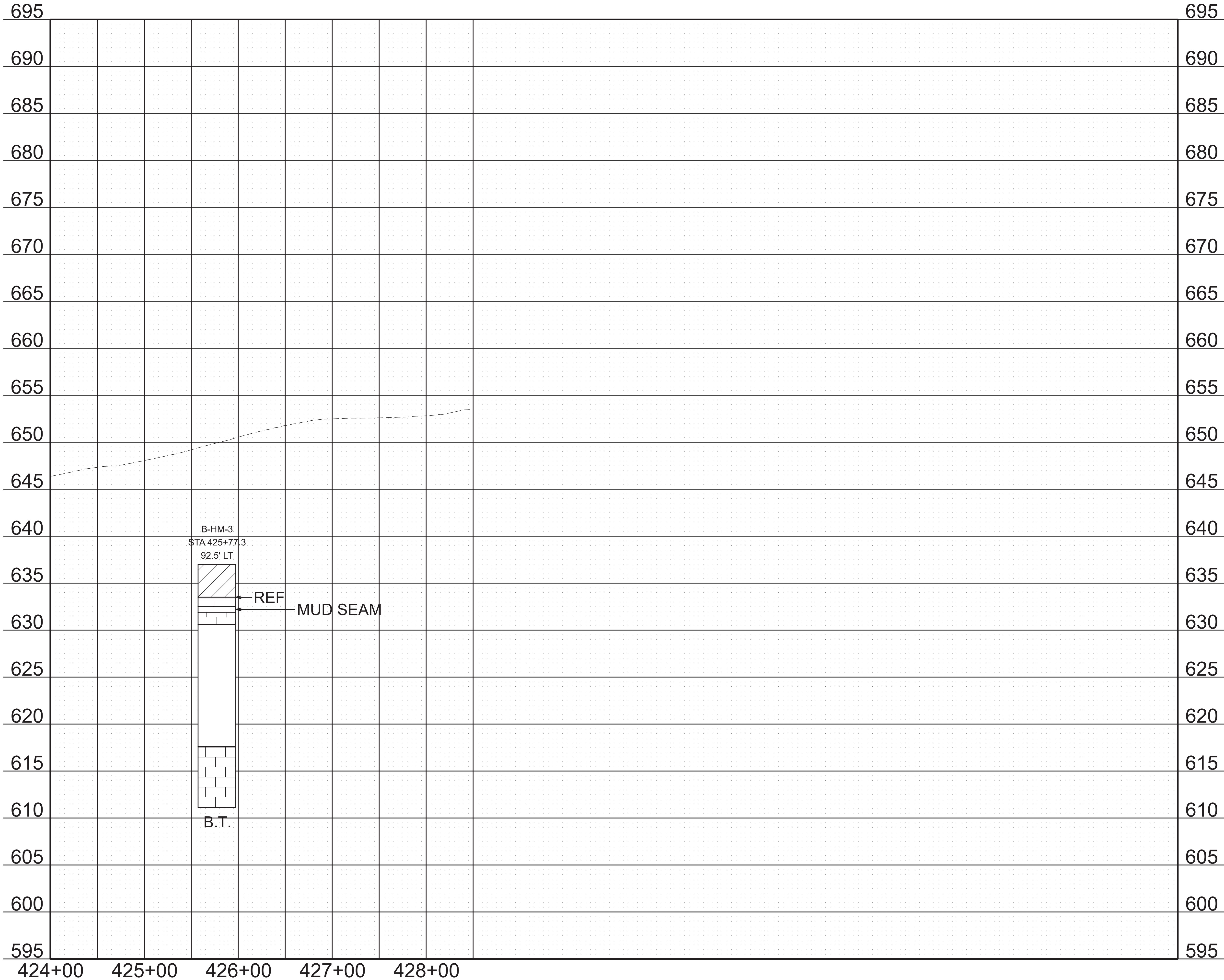
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

EB-EN
STA. 512+00.00 TO STA. 524+00.00

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

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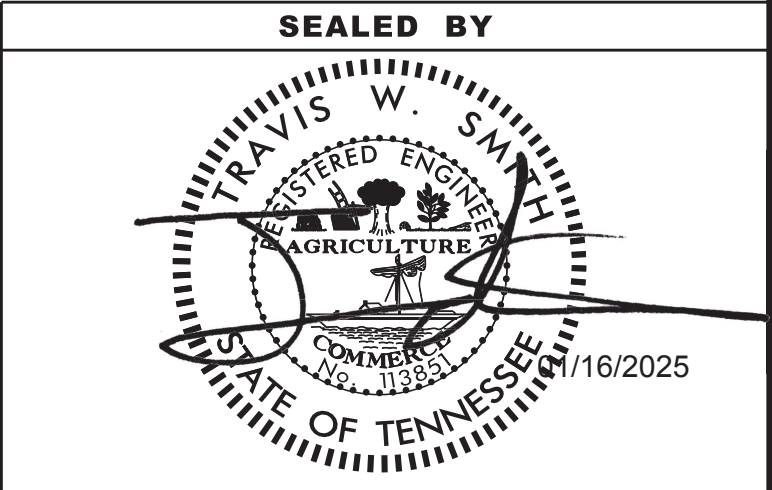


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-18

LEGEND

- FAT CLAY (TYPE A MATERIAL)
- MUD SEAM
- LIMESTONE (TYPE B MATERIAL)

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



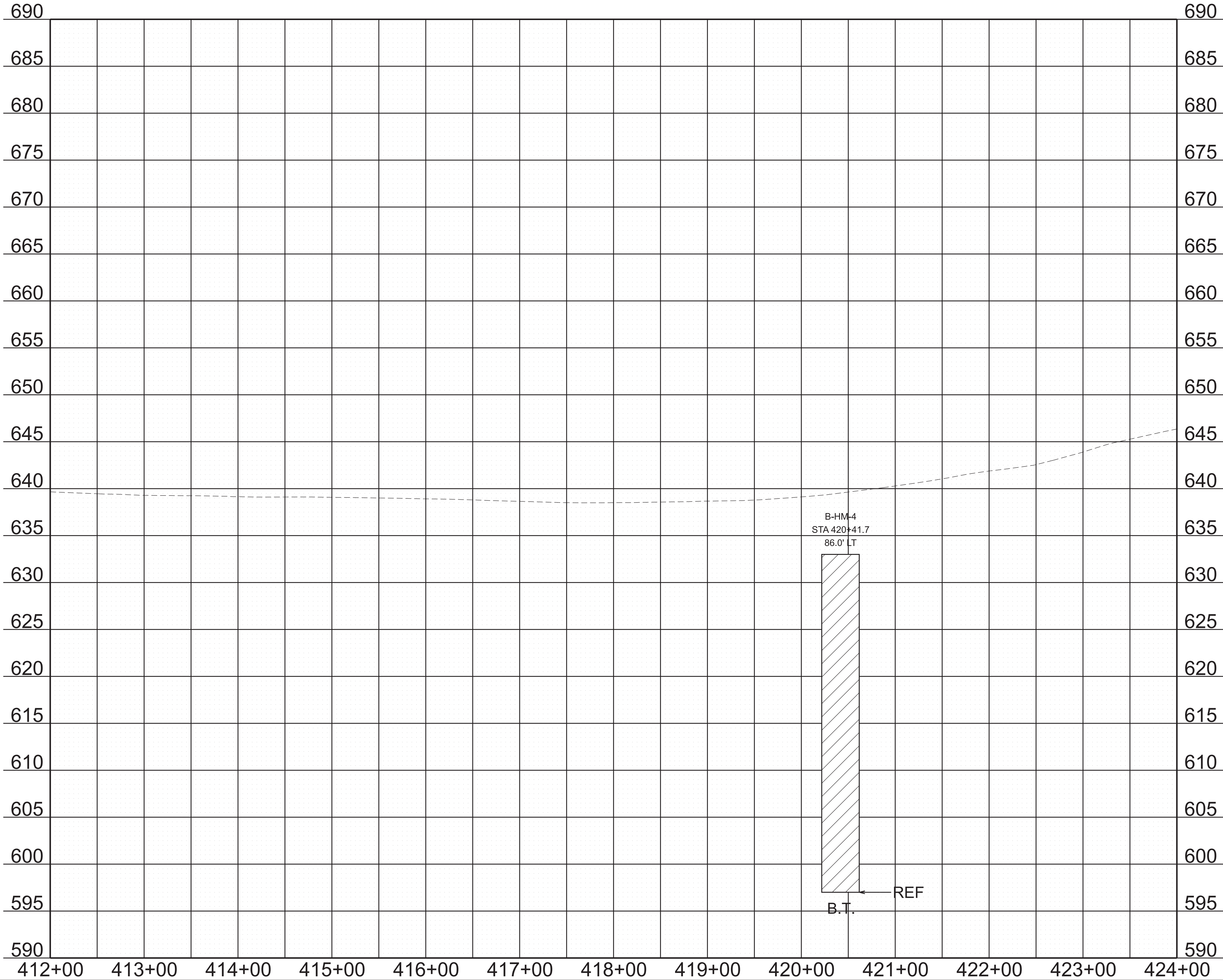
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

WB-EX
STA. 424+00.00 TO STA. 436+00.00


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

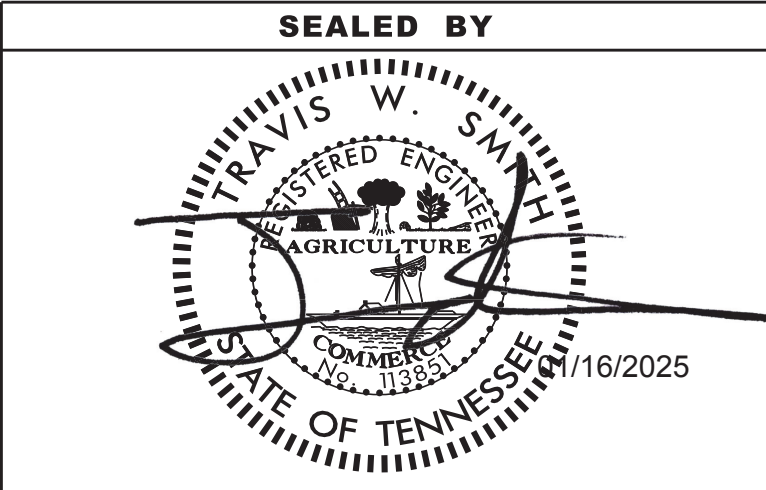
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-19

LEGEND

 FAT CLAY
(TYPE A MATERIAL)
TYPE MATERIAL-SEE DEFINITION
OF EARTHWORK TERMS ON
GEOTECHNICAL NOTES AND EST.
QTYS. SHEET.
REF = AUGER REFUSAL
B.T.= BORING TERMINATED



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

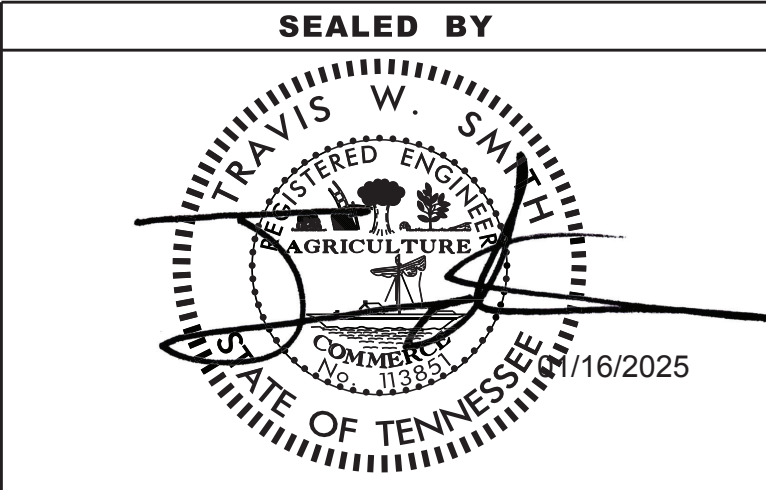
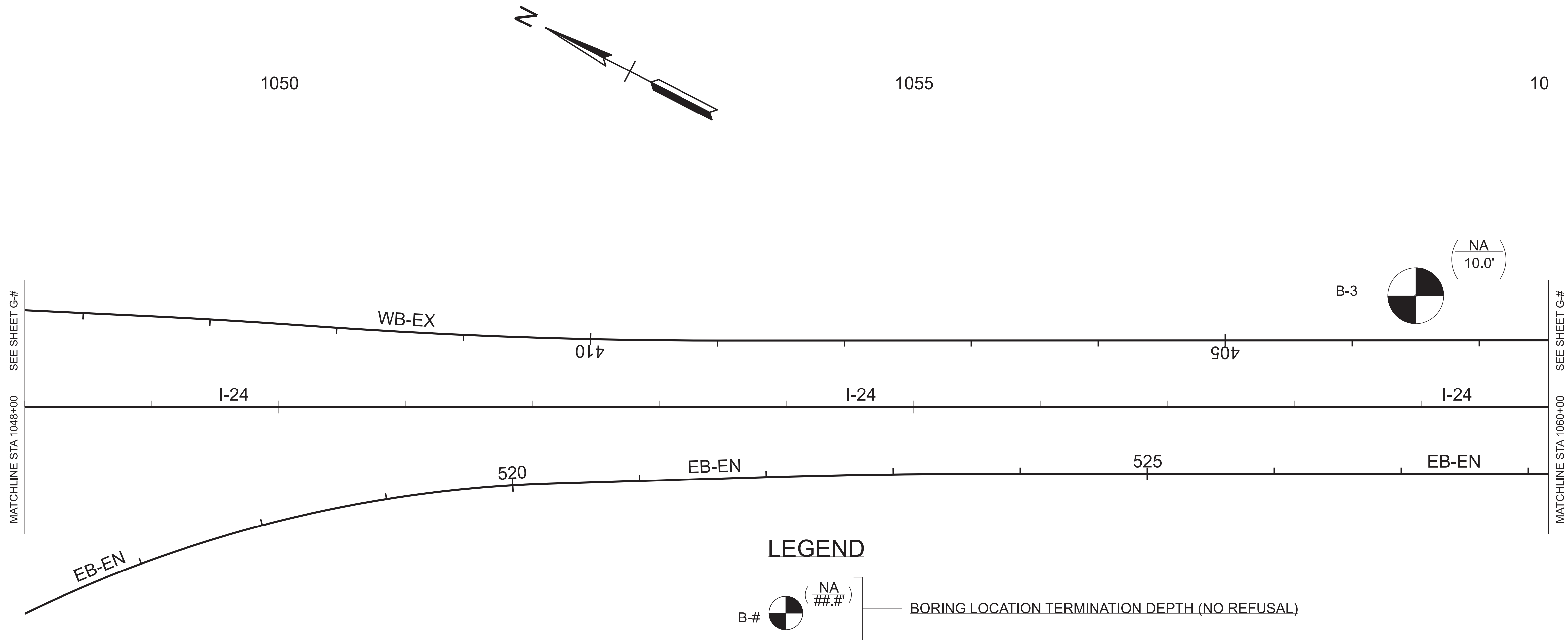
GEOTECHNICAL
BORING PROFILE

WB-EX
STA. 412+00.00 TO STA. 424+00.00

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

1/15/2025 11:00:33 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055.00-RUTHERFORD\131055-00-LAYOUT-GES7509224.DGN

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-20

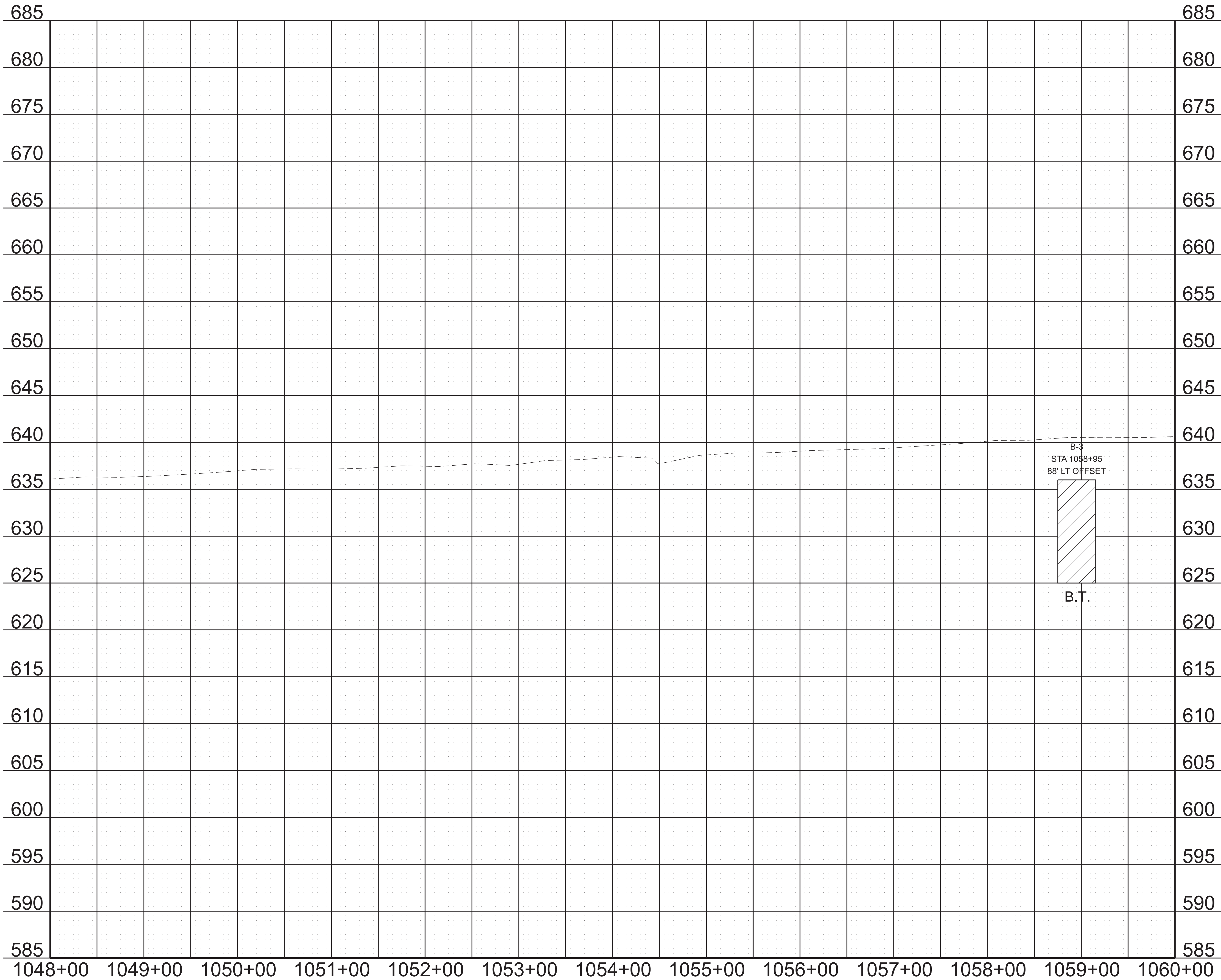


COORDINATES ARE NAD 83(), ARE DATUM ADJUSTED BY THE FACTOR OF AND TIED TO THE TGRN. ALL ELEVATIONS ARE REFERENCED TO THE NAVD 1988 WITH GEOID .

STATE OF TENNESSEE
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
GEOTECHNICAL
BORING
LAYOUT

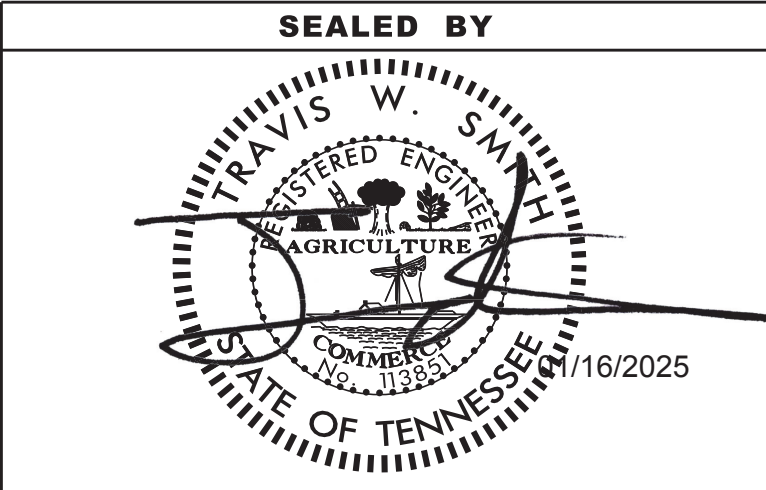
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-21

LEGEND

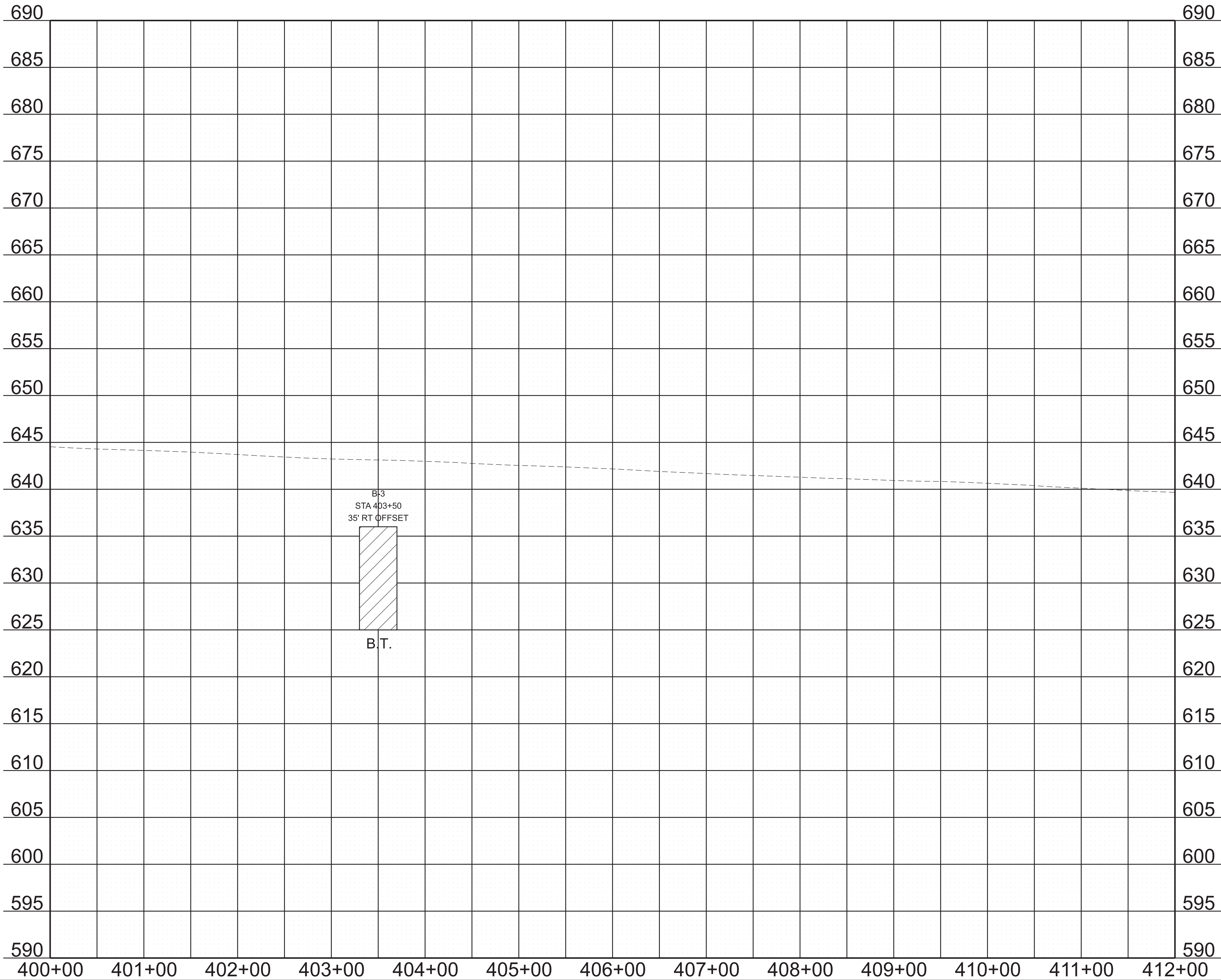
 FAT CLAY
(TYPE A MATERIAL)
TYPE MATERIAL-SEE DEFINITION
OF EARTHWORK TERMS ON
GEOTECHNICAL NOTES AND EST.
QTYS. SHEET.
B.T.= BORING TERMINATED



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
GEOTECHNICAL
BORING PROFILE
I-24
STA. 1048+00.00 TO STA. 1060+00.00
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

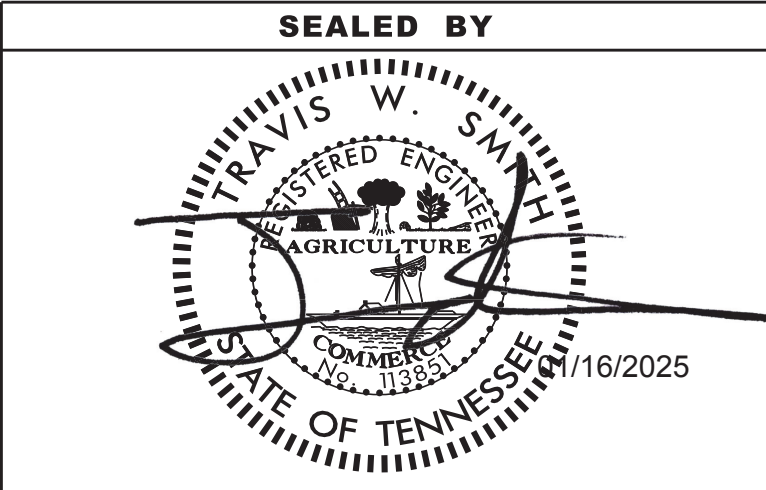
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-22

LEGEND

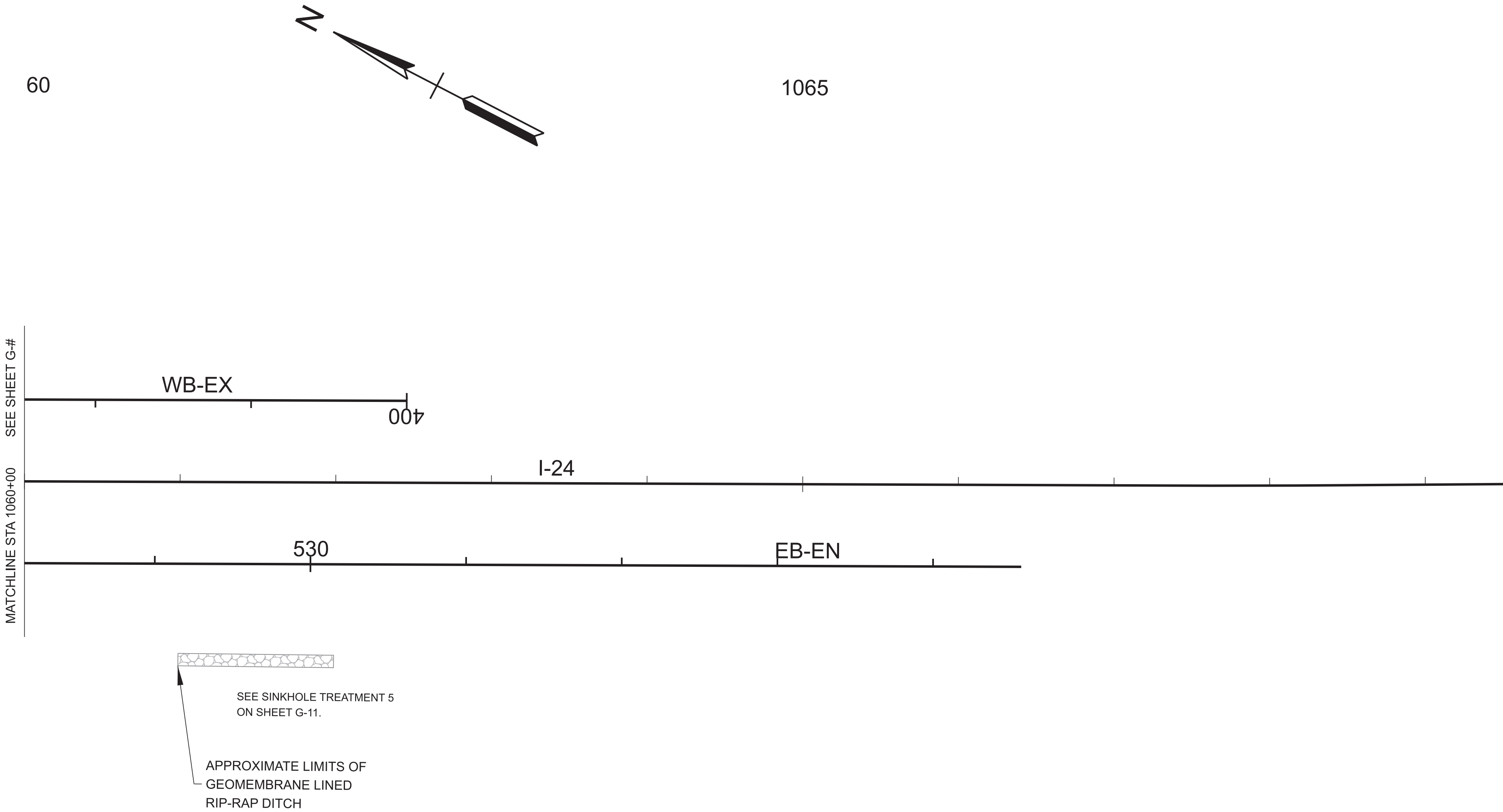
 FAT CLAY
(TYPE A MATERIAL)
TYPE MATERIAL-SEE DEFINITION
OF EARTHWORK TERMS ON
GEOTECHNICAL NOTES AND EST.
QTYS. SHEET.
B.T.= BORING TERMINATED



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE
WB-EX
STA. 400+00.00 TO STA. 412+00.00
SCALE: 1" = 50' HORIZ.
1" = 5' VERT.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-23



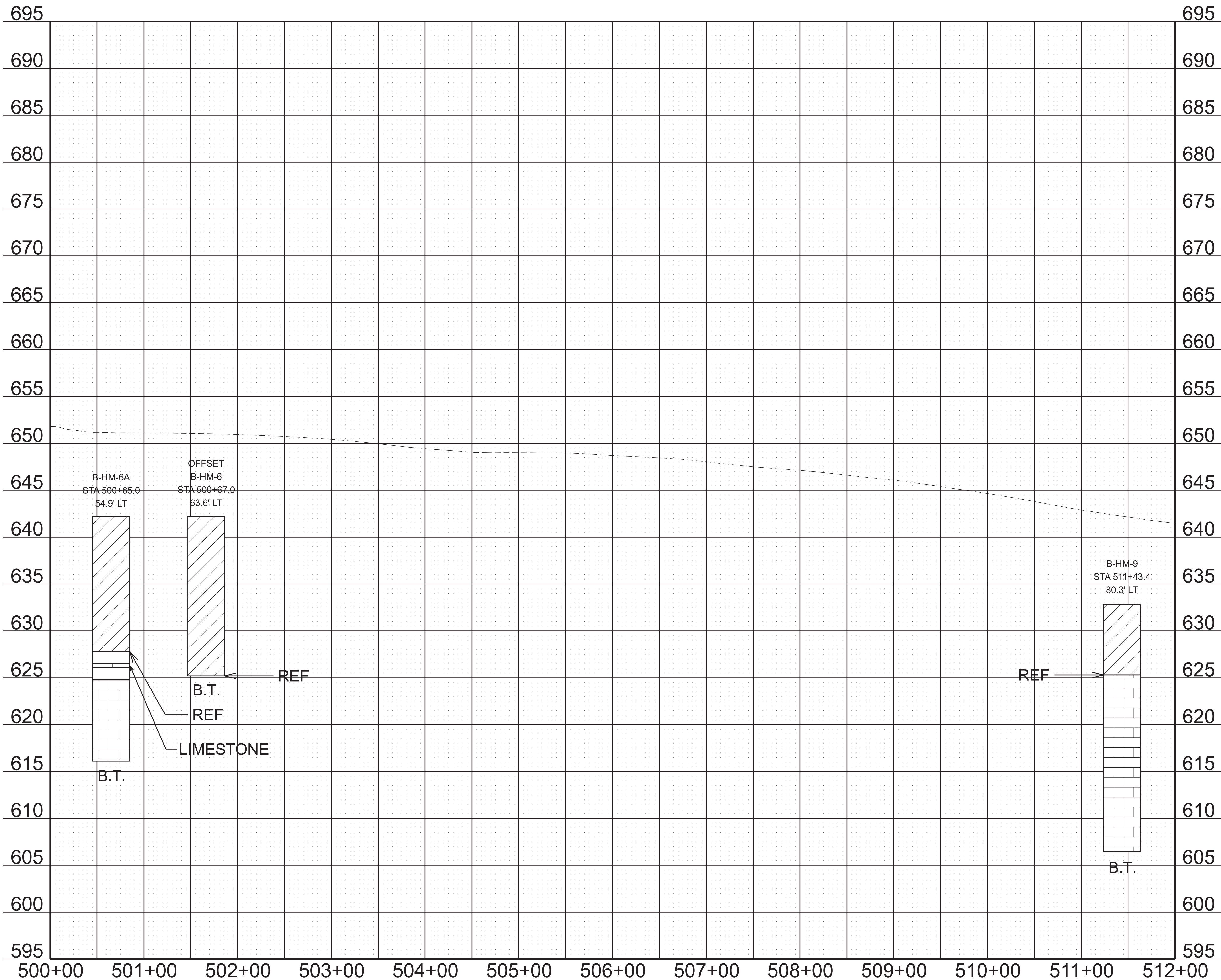
SEALED BY

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

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING
LAYOUT

1/15/2025 11:00:37 AM C:\PROGRAMDATA\BENTLEY\OPENROADS DESIGNER CE 10.12\CONFIGURATION\WORKSPACES\TDOT_STANDARD\WORKSETS\131055-00-RUTHERFORD\DGN\131055-00-PROFILE-GE5T509224.DGN

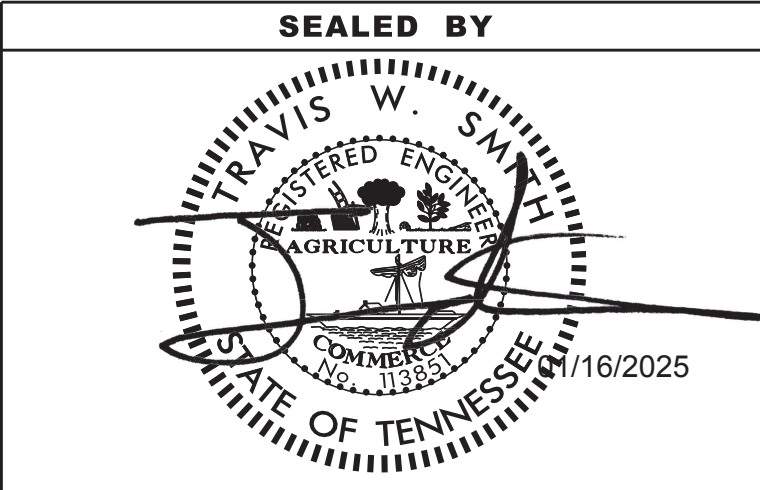


TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	STP-M-I-24-1(136)	G-25

LEGEND

- FAT CLAY (TYPE A MATERIAL)
- MUD SEAM
- LIMESTONE (TYPE B MATERIAL)

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



STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING PROFILE

EB-EN
STA. 500+00.00 TO STA. 512+00.00

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

TENN.	YEAR	SHEET NO.
	2025	U1-1
FED. AID PROJ. NO.	STP-M-I-24-1(136)	
STATE PROJ. NO.	75100-3125-54	

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

RUTHERFORD COUNTY

INTERSTATE 24
INTERCHANGE I-24 AT JOE B. JACKSON PARKWAY (EXIT 84)

STATE HIGHWAY NO. (N/A) F.A.H.S NO.24

THERE ARE NO UTILITIES IN CONFLICT WITH THIS PROJECT.

STANDARD LEGEND

EXISTING UTILITIES	
POWER	_____ P _____
TELEPHONE	_____ T _____
WATER	_____ W _____
CABLE TV	_____ C _____
SANITARY SEWER	_____ SA _____
UNDERGROUND TELEPHONE	_____ T (UG) _____
GAS	_____ G _____
FORCE MAIN SEWER	_____ FMS _____
UNDERGROUND POWER	_____ P (UG) _____
UNDERGROUND FIBER OPTIC	_____ F (UG) _____

PROPOSED UTILITIES & MODIFICATIONS	
POWER	_____ P _____
UNDERGROUND POWER	_____ P (UG) _____
TELEPHONE	_____ T _____
WATER	_____ W _____
CABLE TV	_____ C _____
SANITARY SEWER	_____ SA _____
UNDERGROUND TELEPHONE	_____ T (UG) _____
GAS	_____ G _____
FORCE MAIN SEWER	_____ FMS _____
UNDERGROUND FIBER OPTIC	_____ F (UG) _____
EX. WATER LINE (RETIRED IN PLACE)	_____ - 6" W RIP - _____
EX. GAS LINE (RETIRED IN PLACE)	_____ - 8" G RIP - _____
EX. SEWER LINE (RETIRED IN PLACE)	_____ - 8" FMS RIP - _____
EX. TELEPHONE LINE (RETIRED IN PLACE)	_____ - T(UG) RIP - _____

POWER POLE	
TELEPHONE POLE	
POWER/TELEPHONE POLE	
MANHOLE	
WATER METER	
WATER VALVE	
LIGHT POLE	
POWER POLE	
TELEPHONE POLE	
WATER METER	
	RETIRE
	RETIRE IN PLACE

SPECIAL NOTES

SOME UTILITIES CAN BE LOCATED BY CALLING THE
TENNESSEE ONE CALL SYSTEM, INC.
AT 1-800-351-1111

UTILITY OWNERS AND CONTACTS:

<p>ELECTRIC: MTEMC 555 NEW SALEM ROAD MURFREESBORO, TN, 37129 CHRIS BARNES CHRISBARNES@MTE.COM O: 615-494-0428</p>	<p>PHONE: AT&T 116 SOUTH CANNON AVENUE MURFREESBORO, TN 37129 KENNETH LEE KORNEGAY KK4096@ATT.COM O: 615-848-2082 C:615-631-7221</p>	<p>WATER: CONSOLIDATED UTILITY DIST. 709 NEW SALEM HWY. MURFREESBORO, TN 37129 JAMIE SAIN JSAIN@CUDRC.COM O: 615-225-3338</p>
<p>CABLE: COMCAST 660 MAINSTREAM DRIVE NASHVILLE, TN 37728 KATELYN GROSS KATELYN_GROSS@COMCAST.COM C: 615-961-2453</p>	<p>GAS: ATMOS ENERGY CORP. 810 CRESCENT CENTER DR, S-600 FRANKLIN, TN 37067 TAYLOR SANDERS TAYLORS.SANDERS@ATMOSENERGY.COM O: 615-927-1596</p>	<p>FIBER: XO COMMUNICATIONS 101 MOLLOY ST., SUITE 300 NASHVILLE, TN, 37201 ERIC HAGA ERIC.HAGA@VERIZON.COM O: 615-777-7727 C:615-289-8280</p>

NOTE TO CONTRACTORS	UNDERGROUND UTILITIES NOTE	NOTE TO CONTRACTORS
CONTRACTOR TO FOLLOW ALL ADA RULES PERTAINING TO SIDEWALKS	ALL UNDERGROUND UTILITIES MUST BE DIRECTIONAL BORED UNDER ALL STREAMS IDENTIFIED IN THE PLANS	DIRECTIONAL BORING MUST BE PLACED A MINIMUM OF 50' AWAY FROM STREAM BANKS