THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Nicholas Kniazewycz Nicholas Kniazewycz 2025.06.06 11:38:28 -05'00'

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TENNESSEE DEPARTMENT OF TRANSPORTATION
6601 CENTENNIAL BLVD.
BUILDING A , 2nd FLOOR
NASHVILLE, TN 37243
NICK KNIAZEWYCZ, P.E. NO. 126392

6-6-25

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

SHEET NAME	SHEET NO.
SIGNATURE SHEETS	ROADWAY-SIGN1
TITLE SHEET	1
ROADWAY INDEX AND STANDARD DRAWINGS	1A
STANDARD TRAFFIC DESIGN DRAWINGS	1A1
ESTIMATED ROADWAY QUANTITIES	2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE	2B
GENERAL NOTES	2C
SPECIAL NOTES, UTILITY NOTES, & UTILITY OWNERS	2D
ENVIRONMENTAL NOTES	2E
PROPOSED LAYOUT	3
EROSION PREVENTION AND SEDIMENT CONTROL PLANS	4 - 7
TRAFFIC CONTROL PLANS	T1 – T3

YEAR	PROJECT NO.	SHEET NO.
2025	PROT-141(48)	ROADWAY-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

Index Of Sheets
SEE SHEET NO. 1A

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BUREAU OF ENGINEERING

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

TENN.	YEAR	SHEET NO.
	2025	1
FED. AID PROJ. NO.	PROT-141(48)	
STATE PROJ. NO.	80S141-F3-006	

SMITH COUNTY

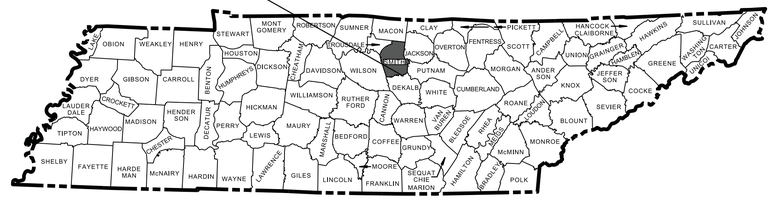
STATE ROUTE 141
FROM NEAR LM 14.69 - LM 14.77
(MARCH 2025 SEVERE WEATHER)

PS&E

EMERGENCY SLOPE REPAIR

STATE HIGHWAY NO. 141 F.A.H.S. NO. N/A

PROJECT LOCATION



80S141-F3-006
BEGIN PROJECT NO. PROT-141(48) CONSTRUCTION

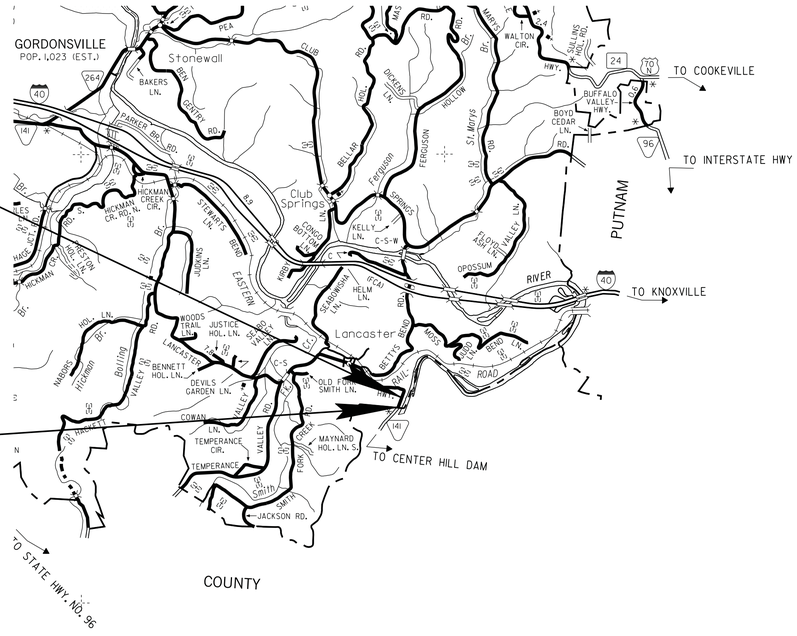
L.M. 14.685

N 650664.0180 E 2014963.0920

80S141-F3-006
END PROJECT NO. PROT-141(48) CONSTRUCTION

L.M. 14.770

N 650260.7380 E 2014778.2590



N

NO EXCLUSIONS

ROAD TO BE CLOSED DURING CONSTRUCTION

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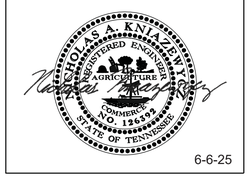

6-6-25

APPROVED:

WILL REID, DEPUTY COMMISSIONER / CHIEF ENGINEER

DATE:

APPROVED:

HOWARD H. ELEY, DEPUTY GOVERNOR & COMMISSIONER

SPECIAL NOTES

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

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

TDOT ROADWAY DESIGN MANAGER : ASO HAWRAMI, P.E.

DESIGNER : KONRAD BECK, P.E. CHECKED BY : CAYLIE MARVEL

P.E. NO. 80S141-S1-006 (DESIGN)

PIN NO. 136242.04

SCALE: 1"= 1 MILE

0 1 2 3 MILE

R.O.W. LENGTH	0.000 MILES
ROADWAY LENGTH	0.085 MILES
BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES
BOX BRIDGE LENGTH	0.000 MILES ▲
PROJECT LENGTH	0.085 MILES

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

TRAFFIC DATA	
ADT (2025)	324
POSTED SPEED	40 MPH

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	1A

ROADWAY INDEX

SHEET NAME	SHEET NO.
SIGNATURE SHEETS	ROADWAY-SIGN1
TITLE SHEET	1
ROADWAY INDEX AND STANDARD DRAWINGS	1A
STANDARD TRAFFIC DESIGN DRAWINGS	1A1
ESTIMATED ROADWAY QUANTITIES	2
TYPICAL SECTIONS AND PAVEMENT SCHEDULE	2B
GENERAL NOTES	2C
SPECIAL NOTES, UTILITY NOTES, & UTILITY OWNERS	2D
ENVIRONMENTAL NOTES	2E
PROPOSED LAYOUT	3
EROSION PREVENTION AND SEDIMENT CONTROL PLANS	4 - 7
TRAFFIC CONTROL PLANS	T1 – T3
GEOTECHNICAL PLANS	G-1
RETAINING WALL PLANS	R-1

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-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
10-102.00		**PIPE CULVERTS AND ENDWALLS**
D-PB-1	03-01-23	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PB-2	03-01-23	STANDARD DETAILS FOR FLEXIBLE PIPE INSTALLATION
D-PB-3	11-30-20	INDUCED TRENCH SOIL EMBANKMENT FOR PIPE CULVERT INSTALLATION
D-PB-4	01-09-24	PIPE COLLAR DETAILS
D-PG-3	06-28-19	FERROUS AND ALUMINUM CORRUGATED METAL PIPE
10-106.00		**SAFETY DESIGN AND GUARDRAILS**
S-CZ-1	06-28-19	CLEAR ZONE CRITERIA
S-PL-1	03-01-23	SAFETY PLAN FOR BARRIER LENGTH OF NEED
S-PL-6	07-30-24	SAFETY PLAN SAFETY HARDWARE PLACEMENT ON OUTSIDE EDGE
S-GR31-1	06-15-21	GUARDRAIL DETAILS
S-GR31-1A	06-28-19	GUARDRAIL AND BLOCK-OUT DETAILS
S-GR31-1B		GUARDRAIL FASTENING HARDWARE
S-GR31-1C	07-07-23	GUARDRAIL GENERAL NOTES AND POST DETAILS
S-GR31-1D	03-01-23	GUARDRAIL POST PLACEMENT IN ROCK
S-GRT-2R	06-28-19	EARTH PAD FOR TYPE 38 AND TYPE 21 TERMINAL (RETROFIT)
S-GRT-3	06-28-19	TYPE 21 GUARDRAIL END TERMINAL
10-107.00		**EROSION PREVENTION AND SEDIMENT CONTROL**
EC-STR-37	06-10-14	SEDIMENT TUBE
EC-STR-19	04-01-08	CATCH BASIN PROTECTION

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DEPARTMENT OF TRANSPORTATION

ROADWAY INDEX AND STANDARD DRAWINGS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	1A1

STANDARD TRAFFIC DESIGN DRAWINGS

DWG.	REV.	DESCRIPTION
10-204.00		**DESIGN - TRAFFIC CONTROL**
T-M-1	01-24-25	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-16	01-24-25	RUMBLE STRIPE INSTALLATION LAYOUT
T-M-16A	01-24-25	RUMBLE STRIPE DETAILS FOR EDGE OF PAVEMENT AND CENTERLINE

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DEPARTMENT OF TRANSPORTATION

STANDARD
TRAFFIC DESIGN
DRAWINGS

ESTIMATED ROADWAY QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY 80S141-F3-006
	105-01	CONSTRUCTION STAKES, LINES AND GRADES	LS	1
(1)(10)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	43750
(1)(2)	209-05	SEDIMENT REMOVAL	C.Y.	5
(2)(8)	209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	2
	303-01	MINERAL AGGREGATE, TYPE A BASE, GRADING D	TON	250
	307-01.01	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A	TON	95
	307-01.08	ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING B-M2	TON	63
	402-01	BITUMINOUS MATERIAL FOR PRIME COAT (PC)	TON	1
	402-02	AGGREGATE FOR COVER MATERIAL (PC)	TON	3
	403-01	BITUMINOUS MATERIAL FOR TACK COAT (TC)	TON	0.6
(9)	411-01.10	ACS MIX(PG64-22) GRADING D	TON	75
	411-12.04	SCORING FOR RUMBLE STRIPE (NON-CONTINUOUS) (4IN WIDTH)	L.M.	0.2
	415-01.01	COLD PLANING BITUMINOUS PAVEMENT	TON	37
(3)	607-03.30	18" PIPE CULVERT	L.F.	34
	611-42.01	CATCH BASINS, TYPE 42, 0' - 4' DEPTH	EACH	1
	611-42.02	CATCH BASINS, TYPE 42, > 4' - 8' DEPTH	EACH	1
(4)	705-04.10	EARTH PAD FOR GUARD RAIL END TREATMENT	EACH	2
	705-06.01	W BEAM GR (TYPE 2) MASH TL3	L.F.	300
	705-06.30	GR TERMINAL (ENERGY ABSORBING) MASH TL2	EACH	2
	709-05.09	MACHINED RIP-RAP (CLASS C)	TON	438
(5)	712-01	TRAFFIC CONTROL	LS	1
(6)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	4
(6)	712-06	SIGNS (CONSTRUCTION)	S.F.	283
(6)	712-07.03	TEMPORARY BARRICADES (TYPE III)	L.F.	35
	716-01.21	SNOWPLOWABLE RAISED PAVEMENT MARKERS (BI-DIR) (1 COLOR)	EACH	6
	716-01.30	REMOVAL OF SNOWPLOWABLE REFLECTIVE MARKER	EACH	6
(7)	716-05.20	PAINTED PAVEMENT MARKING (6" LINE)	L.M.	0.4
	717-01	MOBILIZATION	LS	1
(2)(8)	740-11.03	TEMPORARY SEDIMENT TUBE 18IN	L.F.	450

FOOTNOTES

(1) TO BE USED AS DIRECTED BY THE ENGINEER.
(2) ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.
(3) TO BE USED TO REPLACE EXISTING 18" PIPE.
(4) TO BE CONSTRUCTED OF AGGREGATE.
(5) THE CONTRACTOR SHALL COMPLY WITH SECTION 712 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION REGARDING TEMPORARY TRAFFIC CONTROL AND THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
(6) BID PRICE TO INCLUDE ONLY THE COST OF MAINTAINING EXISTING TRAFFIC CONTROL MEASURES.
(7) TO BE USED FOR CENTERLINE AND EDGE LINE STRIPING.
(8) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.
(9) INCLUDES 2 TONS TO BE USED FOR DRIVEWAY.
(10) SEE GEOTECH SHEETS FOR DETAILS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	2

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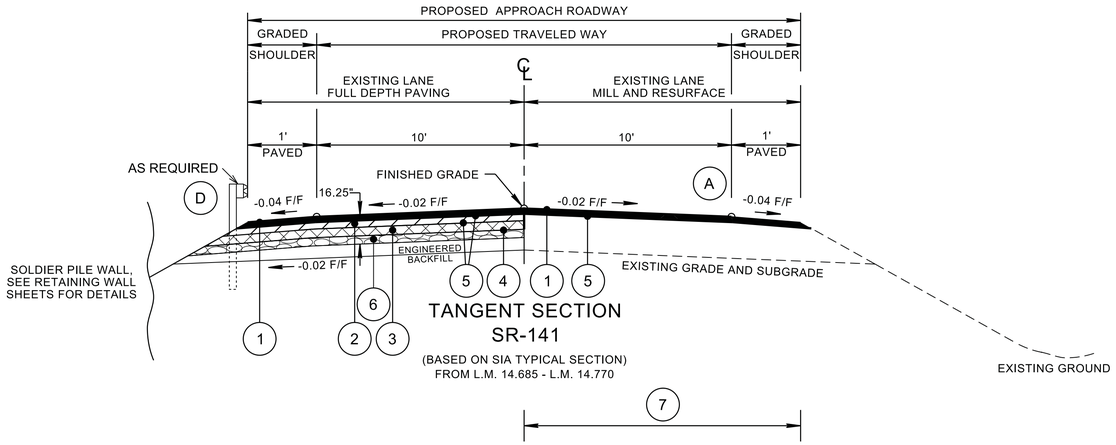
STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ESTIMATED ROADWAY QUANTITIES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	2B



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

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

PROPOSED PAVEMENT SCHEDULE

(1) BIT. SURFACE AT 1.25" THICK @ 132.5 LBS/SQ YD
411-01.10 ASPHALT CEMENT (PG64-22)(ACS) GRADING "D"

(2) BITUMINOUS BINDER AT 2.0" THICK @ 226 LBS/SQ YD
307-01.08 ASPHALT CONCRETE MIX (PG64-22)(BPMB-HM) GRADING "B-M2"

(3) BASE @ 3" THICK (APPROX. 345.0 LBS/S.Y.)
307-01.01 ASPHALT CONCRETE MIX (PG64-22) (BPMB-HM) GRADING A (TON)

(4) PRIME COAT
402-01 BITUMINOUS MATERIAL FOR PRIME COAT (PC) @ 0.30-0.35 GAL/SQ YD
402-02 AGGREGATE FOR COVER MATERIAL (PC) AT 8-12 LBS/SQ YD

(5) TACK COAT
403-01 BITUMINOUS MATERIAL FOR TACK COAT (TC)
SEE 403.05 FOR DETERMINING APPLICATION RATE IN THE FIELD.

(6) MINERAL AGGREGATE BASE AT 10" THICK
303-01 MINERAL AGGREGATE TYPE "A" BASE GRADING "D"

(7) COLD PLANING @ 1.25" THICK
415-01.01 COLD PLANING BITUMINOUS PAVEMENT (TON)

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DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS AND PAVEMENT SCHEDULE

02-JUN-2025 09:08
\\TDOT03NAS002.tdot.state.tn.us\03Shared\SURVEY\DESIGN\PIN 136242.04 Smith Co SR 141 Slope Failure\002B - Typical Sections and Pavement Schedule.dgn

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.

GUARDRAIL

(2) THE PROPOSED GUARDRAIL, INCLUDING ANY ANCHOR SYSTEM, SHALL BE INSTALLED QUICKLY TO MINIMIZE TRAFFIC EXPOSURE TO ANY HAZARD. NO PAYMENT WILL BE MADE FOR A SECTION OF PROPOSED GUARDRAIL, INCLUDING ANCHORS, UNTIL IT IS COMPLETE IN PLACE.

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

DRAINAGE

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

(2) EXCAVATION FOR 607-03.30 WILL NOT BE MEASURED AND PAID FOR DIRECTLY, BUT WILL BE INCLUDED IN THE PRICE BID PER LINEAR FOOT OF PIPE (CHOOSE THE APPLICABLE ITEM(S) FROM THE FOLLOWING: PIPE CULVERTS, STORM SEWERS, CONDUITS, ALL OTHER CULVERTS AND MINOR STRUCTURES).

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

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

MISCELLANEOUS

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

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

ROAD CLOSURE

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

PAVEMENT MARKINGS

FINAL PAVEMENT MARKING

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

SNOWPLOWABLE REFLECTIVE PAVEMENT MARKERS

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

PAVEMENT

PAVING

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

(3) THE CONTRACTOR SHALL ATTACH A DEVICE TO THE SCREED OF THE PAVER SUCH THAT MATERIAL IS CONFINED AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A CONSOLIDATED WEDGE-SHAPE PAVEMENT EDGE OF APPROXIMATELY 25 TO 30 DEGREES AS IT LEAVES THE PAVER (MEASURED FROM A LINE PARALLEL TO THE PAVEMENT SURFACE.) THE DEVICE SHALL MEET THE REQUIREMENTS THAT ARE CURRENTLY SET FORTH IN SPECIAL PROVISION 407SE.

SIGNING

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

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. WHERE THERE IS INSUFFICIENT RIGHT-OF-WAY TO PROVIDE FOR THIS REQUIRED SETBACK, THE CONTRACTOR SHALL DETERMINE THE ALTERNATE LOCATIONS AND REQUEST THE ENGINEER'S APPROVAL TO USE THEM.

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

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

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

(9) THE CONTRACTOR SHALL BE RESPONSIBLE FOR STAKING CONSTRUCTION SIGNS. THE COST OF THIS WORK SHALL BE INCLUDED IN ITEM NO. 712-06, SIGNS (CONSTRUCTION), S.F.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	2C

SEALED BY

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	2D

SPECIAL NOTES

GRADING

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

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

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

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

RETAINING WALLS

(1) THE (RIGHT-OF-WAY/EASEMENT) BETWEEN LOG MILE 14.685 TO LOG MILE 14.770 SHALL REMAIN CLEAR FOR THE CONSTRUCTION OF THE RETAINING WALL. NO UTILITY LINES MAY BE PLACED THERE WITHOUT APPROVAL FROM STRUCTURES DIVISION.

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

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

UTILITY

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

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

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

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

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

(6) CONTRACTOR SHALL CONTACT SMITH COUNTY UTILITY WATER PLANT TO COORDINATE WORK. THE PLANT MAY NEED TO BE SHUT DOWN IN THE EVENT OF EXCESS SILTATION. CALL 615-735-0795 OR EMAIL SMITHWATERPLANT@DTCCOM.NET.

UTILITY OWNERS (UPDATED 5-20-25)

TELEPHONE:
AT&T
116 SOUTH CANON AVENUE
MURFREESBORO, TN 37129
CONTACT: KENNETH LEE KORNEGAY
OFFICE PHONE: 615-848-2082
CELL PHONE: 615-631-7221
EMAIL: kk4096@att.com

DTC COMMUNICATIONS
111 HIGH ST.
ALEXANDRIA, TN 37012
CONTACT: BRENT ADCOCK
OFFICE PHONE: 615-464-2801
CELL PHONE: 800-367-4274
EMAIL: mbadcock@staff-dtc.com

ELECTRIC:
UPPER CUMBERLAND ELECTRIC MEMBERSHIP CORP.
138 GORDONSVILLE HIGHWAY
CARTHAGE, TN 37030
CONTACT: RICHARD MCCLANAHAN
OFFICE PHONE: 615-735-2940 EXT. 235
EMAIL: rmcclanahan@ucemc.com

GAS:
MIDDLE TENNESSEE NATURAL GAS
1030 W. BROAD STREET
SMITHVILLE, TN 37166
CONTACT: MATT STENNETT, PE
OFFICE PHONE: 615-597-0515
CELL PHONE: 931-239-9111
EMAIL: mstennett@mtng.com

CONTACT: HELEN MORSE
OFFICE PHONE: 931-754-3516
EMAIL: hmorse@mtng.com

WATER/SEWER
SMITH UTILITY DISTRICT
136 S. MAIN STREET
CARTHAGE, TN 37030
CONTACT: MACK GANN
OFFICE PHONE: 615-735-2793
EMAIL: smithwaterplant@dtc.net
EMAIL: smithud@dtccom.net
OFFICE PHONE: 615-735-2793
CELL PHONE: 615-516-5333

WATER:
DEKALB UTILITY DISTRICT
191 TIGER DR.
SMITHVILLE, TN 37166
CONTACT: JON FOUTCH
OFFICE PHONE: 615-597-6490
EMAIL: dekalbutility@dtccom.net

SEALED BY

NICHOLAS A. KNIAZEWYCZ — REGISTERED ENGINEER — AGRICULTURE — COMMERCE — NO. 125537 — STATE OF TENNESSEE

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SPECIAL NOTES,
UTILITY NOTES,
& UTILITY OWNERS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	2E

ENVIRONMENTAL NOTES

SUBSECTION 1 – ENVIRONMENTAL GENERAL NOTES

ENVIRONMENTAL GENERAL NOTES

NATURAL RESOURCES

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

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

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

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

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

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

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

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

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

SPECIES

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

(11) SHOULD CLIFF SWALLOW OR BARN SWALLOW NESTS, EGGS, OR BIRDS (YOUNG AND ADULTS) BE PRESENT, THE CONTRACTOR SHALL CONTACT THE REGIONAL ECOLOGY OFFICE TO DETERMINE IF SEASONAL RESTRICTIONS WILL BE NECESSARY. GENERALLY, BIRDS, NESTS, AND EGGS MAY NOT BE DISTURBED BETWEEN APRIL 15 AND JULY 31. FROM AUGUST 1 TO APRIL 14, NESTS CAN BE REMOVED OR DESTROYED SO LONG AS BIRDS OR EGGS ARE NOT PRESENT, AND MEASURES IMPLEMENTED TO PREVENT FUTURE NEST BUILDING AT THE SITE (I.E., CLOSING OFF AREA USING NETTING).

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

PERMITS, PLANS & RECORDS

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

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

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

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

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

SUPPORT ACTIVITIES

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

ENVIRONMENTAL

(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) EMERGENCY SLOPE REPAIR, EXCAVATION, WALL CONSTRUCTION,, GUARDRAIL, PAVING, STRIPING, TRAFFIC CONTROL.

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STATE OF TENNESSEE

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

ENVIRONMENTAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	3

LEGEND

	PAVEMENT LIMITS
	SLOPE REPAIR AND WALL

L.M. 14.685

34' OF 18" PIPE

TYPE 42 AREA DRAIN

272 FEET

L.M. 14.770

CONTRACTOR SHALL CONTACT SMITH COUNTY UTILITY WATER PLANT TO COORDINATE WORK. THE PLANT MAY NEED TO BE SHUT DOWN IN THE EVENT OF EXCESS SILTATION. CALL 615-735-0795 OR EMAIL SMITHWATERPLANT@DTCCOM.NET.

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SEALED BY

THOMAS A. KNIAZEW YN
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COMMERCE
NO. 126192
STATE OF TENNESSEE

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PROPOSED LAYOUT

L.M. 14.685 TO L.M. 14.770
NOT TO SCALE

02-JUN-2025 09:09
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	4

EPSC NOTES

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.

SEALED BY

NICHOLAS A. KNIAZEWYCZ
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NO. 125592
STATE OF TENNESSEE

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

EPSC SPECIAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	5

EPSC NOTES

SUBSECTION 3 – EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

EROSION PREVENTION AND SEDIMENT CONTROL GENERAL NOTES

GOOD HOUSEKEEPING MEASURES & WASTE DISPOSAL

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

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

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

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

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

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

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

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

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

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

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

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

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.

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.

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DEPARTMENT OF TRANSPORTATION

EPSC SPECIAL NOTES

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	6

TABULATED EPSC QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	STAGE I QUANTITY	STAGE II QUANTITY	STAGE III QUANTITY	TOTAL QUANTITY
(1)(2)	209-05	SEDIMENT REMOVAL	C.Y.	5	5	5	5
(2)(8)	209-40.34	CATCH BASIN PROTECTION (TYPE E)	EACH	2	2	2	2
(2)(8)	740-11.03	TEMPORARY SEDIMENT TUBE 18IN	L.F.	450	450	450	450

EROSION PREVENTION AND SEDIMENT CONTROL LEGEND

SYMBOL	ITEM	STD. DWG.
✖✖TUBE 18"✖✖TUBE 18"✖✖	18 INCH SEDIMENT TUBE	EC-STR-37
□ (E)	CATCH BASIN PROTECTION (TYPE E)	EC-STR-19

EPSC FOOTNOTES

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

(2) ALL EROSION PREVENTION AND SEDIMENT CONTROL QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER.

(8) SEE SUBSECTION 209.07 OF THE STANDARD SPECIFICATIONS FOR MAINTENANCE REPLACEMENT.

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EROSION PREVENTION & SEDIMENT CONTROL (EPSC) LEGEND & TABULATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	7

ALL EPSC MEASURES ARE TO BE REMOVED WHEN STABILIZATION IS FINALIZED.

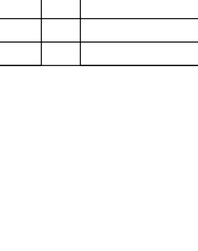
LEGEND

	PAVEMENT LIMITS
	SLOPE REPAIR AND WALL

L.M. 14.685

272 FEET

L.M. 14.770



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EROSION PREVENTION & SEDIMENT CONTROL (EPSC) PLANS
L.M. 14.685 TO L.M. 14.770
NOT TO SCALE

STAGE 1: CLEARING AND GRUBBING	STAGE 2: INTERMEDIATE GRADING	STAGE 3: FINAL CONSTRUCTION

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	T1

TRAFFIC CONTROL SIGN TABULATION

M.U.T.C.D. SIGN NO.	LEGEND	SIZE IN INCHES L	X	W	S.F.	TOTAL NO. REQUIRED	ITEM NO. 712-06 S.F.	STANDARD DRAWING NO.	REMARKS
R11-2	ROAD CLOSED	48"	X	30"	10	2	20.00		
M3-2	EAST	24"	X	12"	2	10	20.00		
M3-4	WEST	24"	X	12"	2	13	26.00		
M1-5.3	141	30"	X	24"	5	23	115.00		
M4-8	DETOUR	24"	X	12"	2	23	46.00		
M4-8A	END DETOUR	24"	X	18"	3	2	6.00		
M5-1R	RIGHT TURN AHEAD SYMBOL	21"	X	15"	2	6	13.13		
M5-1L	LEFT TURN AHEAD SYMBOL	21"	X	15"	2	3	6.56		
M6-1R	RIGHT TURN SYMBOL	21"	X	15"	2	6	13.13		
M6-1L	LEFT TURN SYMBOL	21"	X	15"	2	4	8.75		
M6-3	DIRECTIONAL ARROW AHEAD SYMBOL	21"	X	15"	2	4	8.75		
						TOTAL	283	S.F.	

TRAFFIC CONTROL LEGEND

SYMBOL	ITEM
	WORK ZONE
	TEMPORARY BARRICADE (TYPE III)
A	WARNING LIGHT (TYPE A) (LOW-INTENSITY FLASHING)
	SIGN (CONSTRUCTION)

CONTRACTOR TO MAINTAIN EXISTING DETOUR DURING CONSTRUCTION.

PHASING NOTES:
ROAD TO REMAIN CLOSED UNTIL CONSTRUCTION IS COMPLETED.
CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE DRIVES THROUGHOUT CONSTRUCTION.

TABULATED TRAFFIC CONTROL QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY PROT-141(48)
(5)	712-01	TRAFFIC CONTROL	LS	1
(6)	712-05.01	WARNING LIGHTS (TYPE A)	EACH	4
(6)	712-06	SIGNS (CONSTRUCTION)	S.F.	283

TRAFFIC CONTROL FOOTNOTES

(5) THE CONTRACTOR SHALL COMPLY WITH SECTION 712 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION REGARDING TEMPORARY TRAFFIC CONTROL AND THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

(6) BID PRICE TO INCLUDE ONLY THE COST OF MAINTAINING EXISTING TRAFFIC CONTROL MEASURES.

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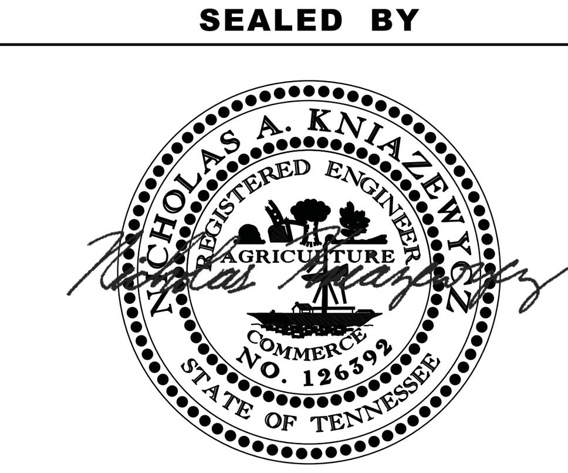


6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

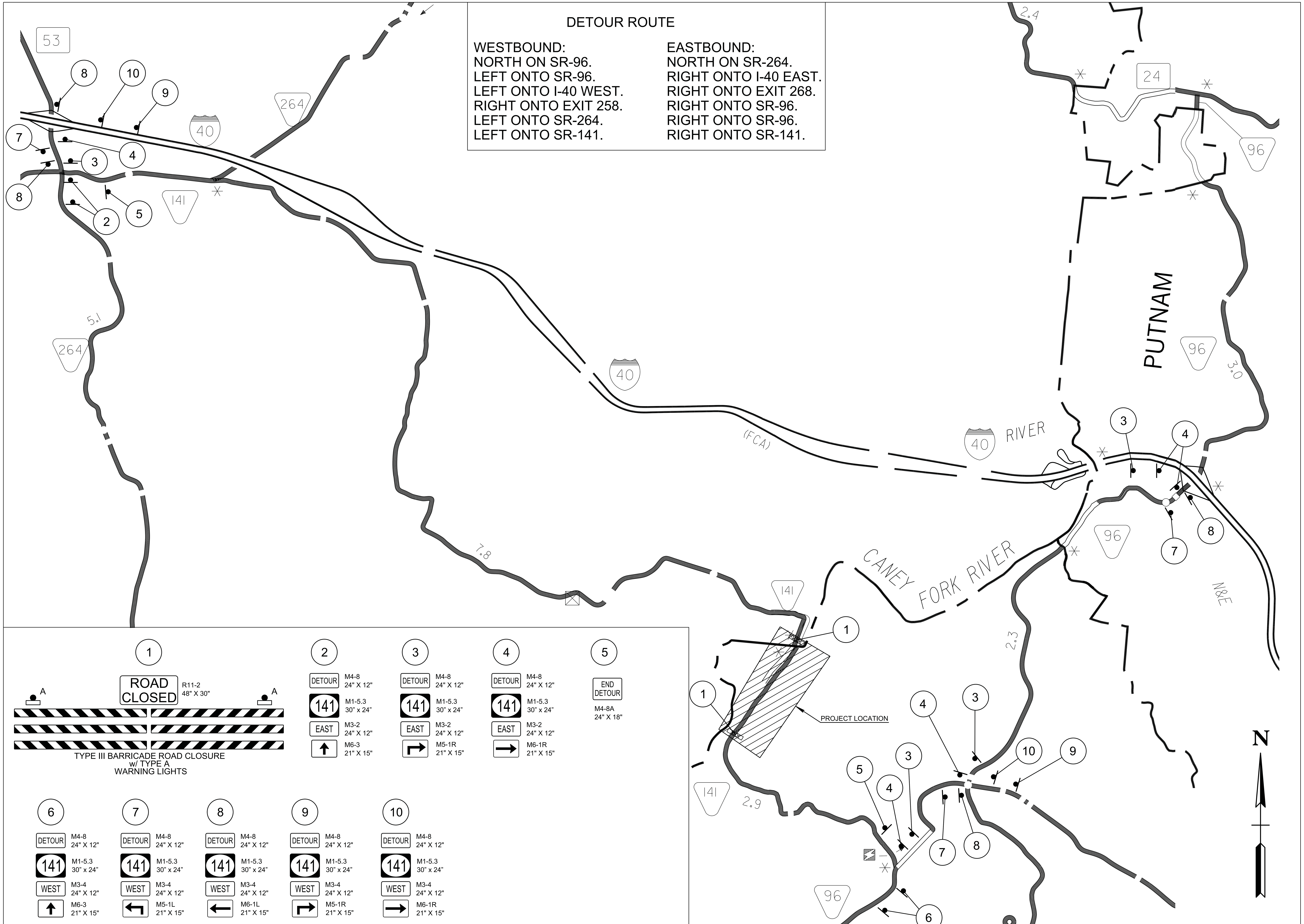
TRAFFIC CONTROL PHASING NOTES, LEGEND AND TABULATION

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	T2

DETOUR ROUTE

WESTBOUND:
NORTH ON SR-96.
LEFT ONTO SR-96.
LEFT ONTO I-40 WEST.
RIGHT ONTO EXIT 258.
LEFT ONTO SR-264.
LEFT ONTO SR-141.

EASTBOUND:
NORTH ON SR-264.
RIGHT ONTO I-40 EAST.
RIGHT ONTO EXIT 268.
RIGHT ONTO SR-96.
RIGHT ONTO SR-96.
RIGHT ONTO SR-141.



1 — ROAD CLOSED, R11-2, 48" X 30"; TYPE III BARRICADE ROAD CLOSURE w/ TYPE A WARNING LIGHTS (A, A)

2 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; EAST M3-2 24" X 12"; M6-3 21" X 15"

3 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; EAST M3-2 24" X 12"; M5-1R 21" X 15"

4 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; EAST M3-2 24" X 12"; M6-1R 21" X 15"

5 — END DETOUR M4-8A 24" X 18"

6 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; WEST M3-4 24" X 12"; M6-3 21" X 15"

7 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; WEST M3-4 24" X 12"; M5-1L 21" X 15"

8 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; WEST M3-4 24" X 12"; M6-1L 21" X 15"

9 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; WEST M3-4 24" X 12"; M5-1R 21" X 15"

10 — DETOUR M4-8 24" X 12"; 141 M1-5.3 30" x 24"; WEST M3-4 24" X 12"; M6-1R 21" X 15"

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NICHOLAS A. KNIAZEWYCZ, REGISTERED ENGINEER, AGRICULTURE COMMERCE, NO. 126393, STATE OF TENNESSEE

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

SCALE: 1"=1980'

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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	T3

LEGEND

WORK ZONE

ROAD CLOSED
R11-2
48" X 30"

A

A

TYPE III BARRICADE ROAD CLOSURE
W/ TYPE A
WARNING LIGHTS

34' OF 18" PIPE

TYPE 42 AREA DRAIN

L.M. 14.685

L.M. 14.770

N

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STATE OF TENNESSEE

6-6-25

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL PLANS

L.M. 14.685 TO L.M. 14.770
NOT TO SCALE

02-JUN-2025 09:10
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THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Besmir Zenelaku
Digitally signed by Besmir Zenelaku
Date: 2025.06.09 09:23:30 -05'00'

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TENNESSEE DEPARTMENT OF TRANSPORTATION
MATERIALS & TESTS DIVISION-GEOTECHNICAL ENGINEERING SECTION
6601 CENTENNIAL BLVD.
NASHVILLE, TN 37243
BESMIR ZENELAKU, P.E. NO. 124664

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

SHEET NAME	SHEET NO.
SIGNATURE SHEETS	GEOTECH-SIGN1
GEOTECHNICAL PLANS	G-1 – G-4

YEAR	PROJECT NO.	SHEET NO.
2025	PROT-141(48)	GEOTECH-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	G-1

GEOTECHNICAL INDEX

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REGISTERED ENGINEER
AGRICULTURE
COMMERCE
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
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TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	G-2

DEFINITION OF EARTHWORK TERMS

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

A. SOIL MATERIAL

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

B. SOLID ROCK MATERIAL

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

C. SOFT ROCK OR DEGRADABLE ROCK

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

D. TRANSITIONAL MATERIALS

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

TABULATED GEOTECH QUANTITIES

	ITEM NO.	DESCRIPTION	UNIT	QUANTITY
(1) (2) (3)	203-01	ROAD & DRAINAGE EXCAVATION (UNCLASSIFIED)	C.Y.	43,750

FOOTNOTES:

(1) QUANTITIY ESTIMATES ARE TABULATED WITH LIMITED SURVEY AND GEOTECHNICAL EXPLORATION. FINAL QUANTITIES SHALL BE DETERMINED BY IN FIELD ENGINEER. ALL QUANTITIES MAY BE GREATER THAN OR LESS THAN PROVIDED.

(2) COSTS FOR EXCAVATION OF THE WALL SHALL BE INCLUDED.

(3) FOR BIDDING PURPOSES, THESE QUANTITES ARE INCLUDED IN THE SHEET 2 SERIES.

SPECIAL NOTES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSING THE EXCAVATED SLIDE MATERIAL IN ACCORDANCE WITH THE TDOT POLICIES AND REGULATIONS.

DETAILED DESIGN FOR THE RETAINING WALLS AND RETAINING WALL VERTICAL ELEMENTS, IF UTILIZED, SHALL BE FURNISHED BE THE CONTRACTOR AND APPROVED BY THE TDOT GEOTECHNICAL OFFICE.

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
NOTES &
EST. QTYS.

NOTE:
BORING LOCATIONS ARE BASED ON FIELD MEASEUREMENTS.

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	G-3

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STATE OF TENNESSEE

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DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL
BORING
LAYOUT

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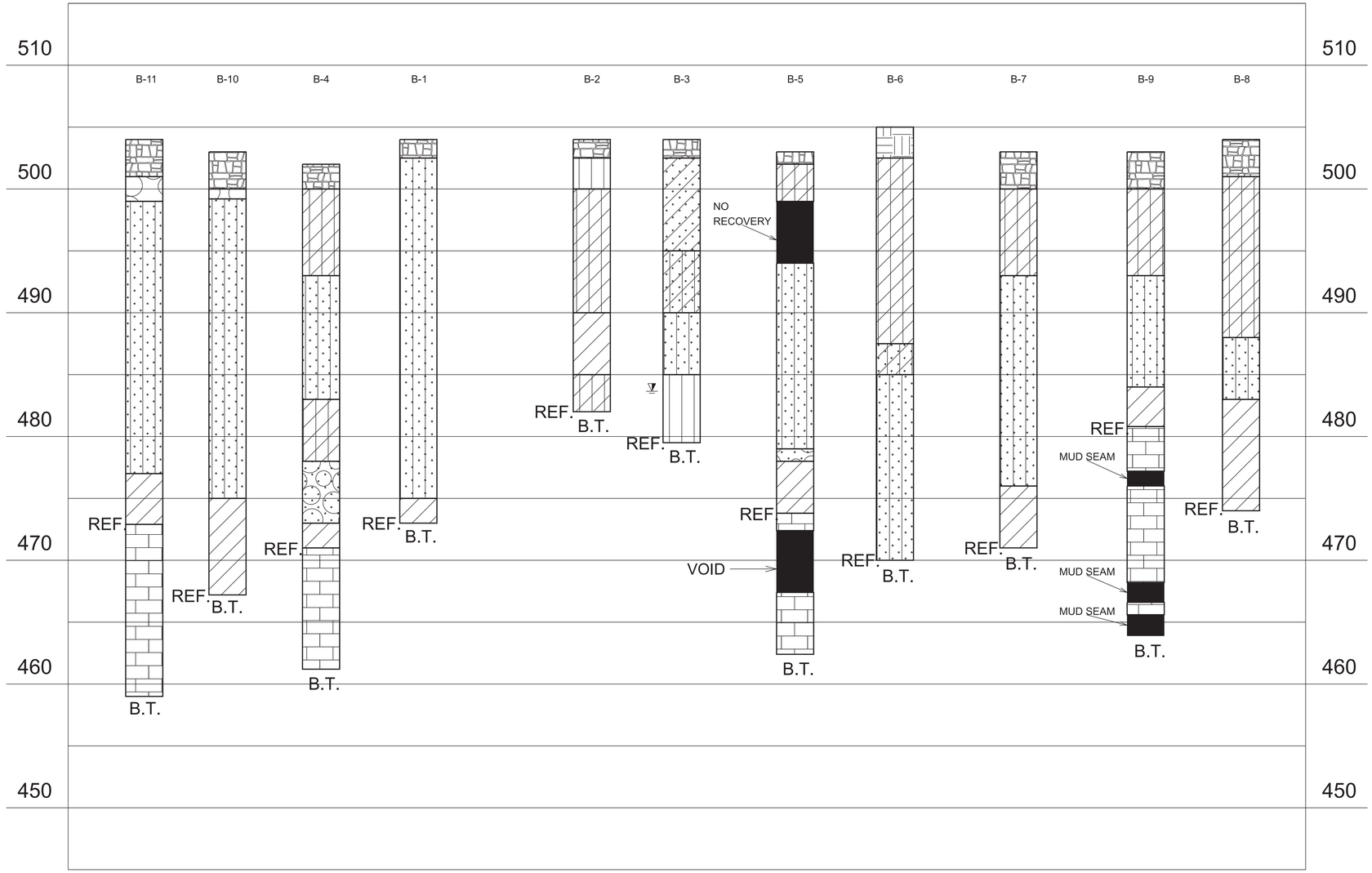
TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	G-4

NOTE: ALL ELEVATIONS ARE APPROXIMATE.



LEGEND

- ASHPAULT / BASE
- TOPSOIL / GRAVEL DRIVEWAY
- NO RECOVERY / MUD SEAM / VOID
- CLAY (TYPE A MATERIAL)
- SAND (TYPE A MATERIAL)
- SILT (TYPE A MATERIAL)
- GRAVEL (TYPE A MATERIAL)
- SANDY SILTY CLAY (TYPE A MATERIAL)
- SILTY CLAY (TYPE A MATERIAL)
- SANDY SILT (TYPE A MATERIAL)
- SANDY GRAVEL (TYPE A MATERIAL)
- LIMESTONE (TYPE B MATERIAL)

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

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STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL BORING PROFILE

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TYPE	YEAR	PROJECT NO.	SHEET NO.
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ACCEPTABLE WALL TYPES

SOLDIER PILE AND LAGGING WALL (UNANCHORED)

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

RETAINING WALL DESIGN NOTES

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

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

THIS WALL SHALL BE DESIGNED IN ACCORDANCE WITH LRFD DESIGN PROCEDURES AND REQUIREMENTS AS DESCRIBED IN:

- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 2020
- PUBLICATION FHWA-IF-99-015/FHWA GEC 004 GROUND ANCHORS AND ANCHORED SYSTEMS, JUNE 1999

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

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

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

NOTE REGARDING CONSTRUCTION SLOPES

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

AASHTO LRFD SECTION 3.10.3.1 - SITE CLASS DEFINITION

SITE CLASS D

TABLE 1-DESIGN REQUIREMENTS AND PARAMETERS

DESCRIPTION	SOLDIER PILE AND LAGGING WALLS WITH ANCHORS	NOTE *
DESIGN LIFE	75 YEARS	
SEISMIC ACCELERATION COEFFICIENTS		
As	0.114	
S_{DS}	0.273	
S_{D1}	0.163	
EFFECTIVE (DRAINED) FRICTION ANGLE		
RETAINED BACKFILL-UNCLASSIFIED SITE OR BORROW SOIL	SEE TABLE 2A & 2B	
RETAINED BACKFILL-SELECT BACKFILL	SEE TABLE 2A & 2B	
UNIT WEIGHT		
UNCLASSIFIED SITE OR BORROW SOIL	SEE TABLE 2A & 2B	
SELECT BACKFILL MATERIAL	SEE TABLE 2A & 2B	
RESISTANCE FACTORS		
FLEXURAL CAPACITY OF VERTICAL ELEMENTS	0.90	
PASSIVE RESISTANCE OF VERTICAL ELEMENTS	0.75	
RESISTANCE FACTORS OF A SINGLE DRIVEN PILE STATIC ANALYSIS METHODS		
SIDE BEARING RESISTANCE AND END BEARING: CLAY AND MIXED SOILS		
α-METHOD (TOMLINSON, 1987; SKEMPTON, 1951)	0.35	
β-METHOD (ESRIG & KIRBY, 1997; SKEMPTON 1951)	0.25	
λ-METHOD (VIJAYVERGIYA & FOCHT, 1972; SKEMPTON 1951)	0.40	
SIDE BEARING RESISTANCE AND END BEARING: SAND		
NORDLUND/THURMAND METHOD (HANNIGAN ET AL, 2005	0.45	
SPT-METHOD (MEYERHOF)	0.30	
CPT-METHOD (SCHMERTMANN)	0.50	
END BEARING IN ROCK (CANADIAN GEOTECH SOCIETY)	0.45	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE ALL SOILS AND ROCK	1.0	
RESISTANCE FACTORS OF A SINGLE DRILLED PILE/SHAFT		
SIDE RESISTANCE IN CLAY α-METHOD (BROWN ET AL., 2010)	0.45	
TIP RESISTANCE IN CLAY TOTAL STRESS (BROWN ET AL., 2010)	0.40	
SIDE RESISTANCE IN SAND β-METHOD (BROWN ET AL., 2010)	0.55	
TIP RESISTANCE IN SAND BROWN ET AL. (2010)	0.50	
SIDE RESISTANCE IN COHESIVE INTERMEDIATE GEOMATERIALS (IGMs) BROWN ET AL. (2010)	0.60	
TIP RESISTANCE IN COHESIVE INTERMEDIATE GEOMATERIALS (IGMs) BROWN ET AL, (2010)	0.55	
SIDE RESISTANCE IN ROCK KULHAWY ET AL. (2005), BROWN ET AL. (2010)	0.55	
CARTER AND KULHAWY (1988)	0.50	
TIP RESISTANCE IN ROCK CANADIAN GEOTECH. SOCIETY (1985), BROWN ET AL. (2010)	0.50	
LATERAL GEOTECHNICAL RESISTANCE OF A SINGLE PILE/SHAFT ALL MATERIALS	1.0	

TABLE 2A-DESIGN PARAMETERS FOR SOLDIER PILE & LAGGING WALL UNANCHORED

STATION LIMITS	ELEVATION INTERVAL	MATERIAL	FRICTION ANGLE (DEGREES)	COHESION (PSF)	UNIT WEIGHT (PCF)
LM 14.64 TO LM 14.77	TOP OF WALL TO TOP OF GROUND	SILTY SAND WITH CLAY (COHESIVELESS SOIL)	24	0	100
LM 14.64 TO LM 14.77	TOP OF GROUND TO TOP OF ROCK	SANDY SILT WITH CLAY (COHESIVE SOIL)	18	0	115
LM 14.64 TO LM 14.77	TOP OF ROCK TO PILE TIP	HARD LIMESTONE (ROCK)	45	NA	160

TABLE 2B-RESISTANCE PARAMETERS FOR SOLDIER PILE & LAGGING WALL UNANCHORED

STATION LIMITS	ELEVATION INTERVAL	MATERIAL	MINIMUM PILE EMBEDMENT (FEET)	S_m - SHEAR STRENGTH OF ROCK MASS FOR PILE ROCK SOCKET (KSF)
LM 14.64 TO LM 14.77	TOP OF WALL TO TOP OF GROUND	SILTY SAND WITH CLAY (COHESIVELESS SOIL)	NA	NA
LM 14.64 TO LM 14.77	TOP OF GROUND TO TOP OF ROCK	SANDY SILT WITH CLAY (COHESIVE SOIL)	NA	NA
LM 14.64 TO LM 14.77	TOP OF ROCK TO PILE TIP	HARD LIMESTONE (ROCK)	8	8.5

OTHER DESIGN REQUIREMENTS

NO VALUE ENGINEERING IS ALLOWED.

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

BECAUSE OF CONSTRUCTION PHASING AND THE TRAFFIC CONTROL PLAN, THIS WALL MUST BE PHASE CONSTRUCTED. TEMPORARY SHORING, OTHER THAN SHEET PILING, SHALL BE REQUIRED.

ALL WALL ELEMENTS SHALL BE WITHIN TDOT ROW.

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

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

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

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

THE RETAINING WALL SHALL BE CONSTRUCTED USING "TOP-DOWN" CONSTRUCTION METHODS ONLY. DUE TO ADJACENT FEATURES, NO CONSTRUCTION EXCAVATION BEHIND THE WALL WILL BE PERMITTED, REGARDLESS OF AVAILABLE ROW, SLOPE EASEMENT, OR CONSTRUCTION EASEMENT.

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

EACH SOLDIER PILE SHALL BE SOCKETED INTO ADEQUATE ROCK OR CONTINUOUS ROCK A MINIMUM OF 8.0 FEET. THE ANNULAR SPACE SHALL BE FILLED WITH CLASS A CONCRETE TO THE TOP OF THE ROCK ELEVATION. THE COST OF CONCRETE AND DRILLING SHALL BE INCLUDED IN THE UNIT PRICE OF THE RETAINING WALL.

EACH ROCK SOCKET SHALL HAVE A MINIMUM DIAMETER OF 2.5 FEET.

ASSUME DRILLING THROUGH SANDY SILTY CLAY SOIL AND LIMESTONE REQUIRED FOR INSTALLATION OF SOLDIER PILES.

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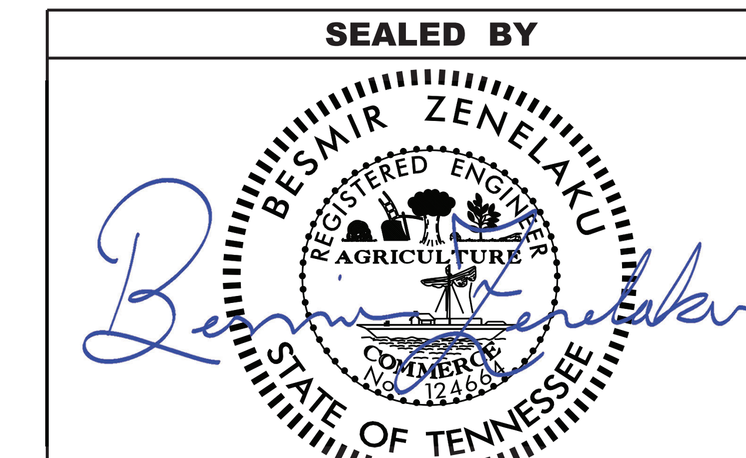
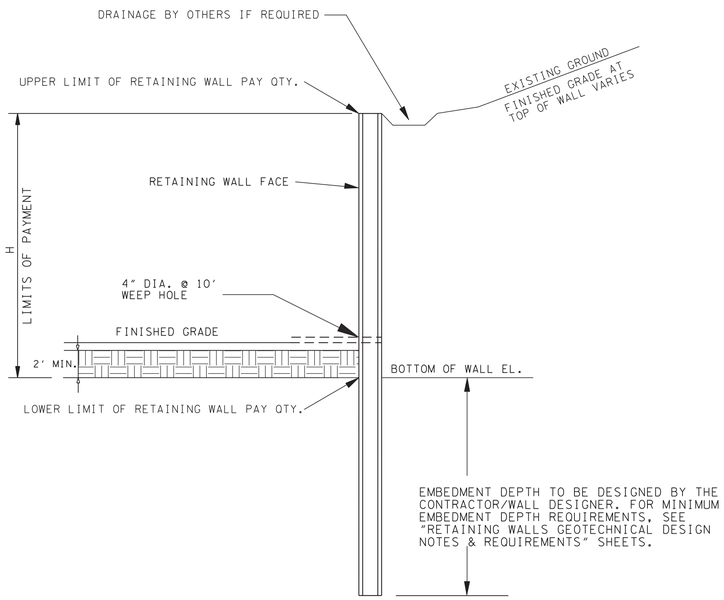


STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALLS
GEOTECHNICAL
DESIGN NOTES &
REQUIREMENTS

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	PROT-141(48)	R-2



TYPICAL DETAIL

SOLDIER PILE AND LAGGING WALL (UNANCHORED)

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL
TYPICAL DETAIL

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THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

Henry Pate
Digitally signed by Henry Pate
Date: 2025.06.02 16:28:14 -05'00'

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

NEEL-SCHAFFER INC.
210 25TH AVENUE NORTH, SUITE 800
NASHVILLE, TN 37203
WILLIAM HENRY PATE, P.E. 17389

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

YEAR	PROJECT NO.	SHEET NO.
2025	80S141-F3-006	RETWALL-SIGN1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

TYPE	YEAR	PROJECT NO.	SHEET NO.
PS&E	2025	80S141-F3-006	R-1

LIST OF DRAWINGS

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GENERAL NOTES	R-2	
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PRECAST PANEL DETAILS	R-7	
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STANDARD NAME	DATE LAST REVISED
STD-5-1 STANDARD PILE DETAILS	

LIST OF SPECIAL PROVISIONS

PROVISION NAME		DATE LAST REVISED
204 DC	DRILLED CAISSONS	08/24/2022
624	RETAINING WALLS	10/07/2024

ESTIMATED QUANTITIES

	ITEM NO	DESCRIPTION	QTY	U.M.
	204-02.10	DRILLED CAISSON - EARTH (2'-6" DIA.)	469	L.F.
	204-02.20	DRILLED CAISSON - ROCK (2'-6" DIA.)	280	L.F.
	303-10.01	MINERAL AGGREGATE (SIZE 57)	1,872	TON
(1)	602-01	STRUCTURAL STEEL	182,028	LB.
	604-01.01	CLASS A CONCRETE (ROADWAY)	136	C.Y.
	604-01.02	STEEL BAR REINFORCEMENT (ROADWAY)	5,074	LB.
(2)	604-03.74	CLASS X CONCRETE	132	C.Y.
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	544	S.Y.

(1) ITEM INCLUDES 35 W21X132 PILES, AVERAGE LEGNTH OF 39.4'

(2) ITEM INCLUDES COST OF WEEP HOLES, CORK, ASHLAR FORMLINER FINISH AND LIFTING ANCHORS FOR PANEL INSTALLATION

WILLIAM H. PATE
REGISTERED ENGINEER
AGRICULTURE COMMERCE
No. 017589
STATE OF TENNESSEE
06-02-2025

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

INDEX OF DRAWINGS AND ESTIMATED QUANTITIES

U-62-220

GENERAL NOTES:

SPECIFICATIONS:

STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (JANUARY 1, 2021)

DESIGN SPECIFICATIONS:

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS 9TH EDITION 2020

CONCRETE:

TO BE CLASS "X", f'c = 4,000 PSI FOR PANELS
TO BE CLASS "A", f'c = 3,000 PSI UNLESS OTHERWISE NOTED.

REINFORCING STEEL:

SHALL BE ASTM A615 GRADE 60 UNLESS OTHERWISE NOTED. SEE SECTION 604 AND 907 OF THE STANDARD SPECIFICATIONS.

STRUCTURAL STEEL:

ALL PILES SHALL BE ASTM A709 GRADE 50 STEEL.

PILES:

SHALL BE W21X132 UNLESS OTHERWISE NOTED IN DESIGN CHART. ALL PILES SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM STANDARD SPECIFICATION A123. SPLICING OF SOLDIER PILES WILL BE RESTRICTED BUT MAY BE ALLOWED DEPENDING ON LOCATION IF APPROVED BY THE ENGINEER.

ENGINEER APPROVED PILE SPLICING LOCATIONS SHALL FOLLOW SPLICING DETAILS IN TDOT STANDARD DRAWING STD-5-1.

WELDING:

SHALL CONFORM TO AASHTO/AWS D1.5M/D1.5:2020 BRIDGE WELDING CODE AND SECTION 602 OF THE TDOT STANDARD SPECIFICATIONS.

NOTE:

THE CONTRACTOR SHALL PROVIDE 100% CONVENTIONAL FALL PROTECTION FOR WORKERS INSTALLING PANELS OR DECKING ABOVE 15 FEET.

FINISHING CONCRETE SURFACES:

CONCRETE FINISH SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE TENNESSEE STANDARD SPECIFICATIONS. A CLASS I FINISH FOLLOWED BY AN APPLIED TEXTURE FINISH SHALL BE USED IN LIEU OF A CLASS II FINISH. NO TEXTURE FINISH SHALL BE APPLIED PRIOR TO COMPLETION OF PAVING AND HAULING OPERATIONS AT THE SITE. ALL EXPOSED SURFACES OF THE RETAINING WALL SHALL HAVE AN ASHLAR STONE FINISH AND THE COLOR SHALL BE MOUNTAIN GRAY (FEDERAL SPECIFICATION NO. 36440, FEDERAL COLOR STANDARD 595B).

SOLDIER PILE WALL DESIGN DATA:

INPLACE UNDERLYING MATERIAL:
ANGLE OF INTERNAL FRICTION = 18°
UNIT WEIGHT OF MATERIAL = 115 PCF
COHESION = 0 PSF
UNDRAINED SHEAR STRENGTH, Su = N/A

WALL LOADING: (SELECT BACKFILL)
ANGLE OF INTERNAL FRICTION = 40°
UNIT WEIGHT OF MATERIAL = 110 PCF

NOTE:

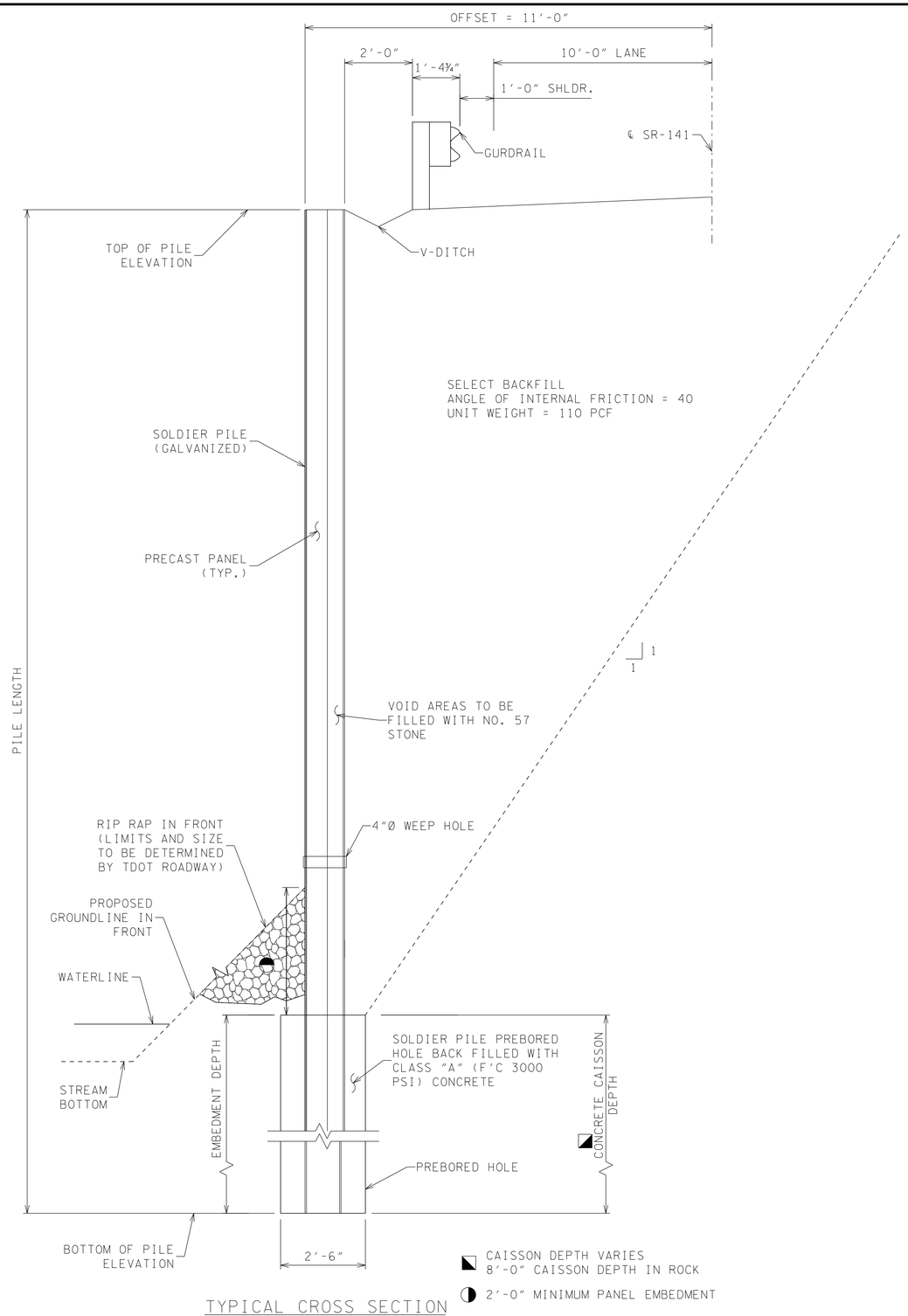
FOR FURTHER INSTALLATION AND MATERIAL REQUIREMENTS SEE SPECIAL PROVISIONS 624.

OTHER DESIGN REQUIREMENTS:

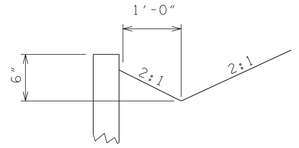
THE WALL SHALL HAVE A DRAINAGE GUTTER AT THE TOP DESIGNED TO CARRY SURFACE RUNOFF TO EITHER OR BOTH ENDS OF WALLS.

4"Ø WEEP HOLES SHALL BE PLACED IN THE BOTTOM MOST PANEL ALONG THE FACE OF WALL. 6" ABOVE GROUNDLINE

SOLDIER PILES SHALL BE SOCKETED INTO ROCK A MINIMUM OF 8'-0".



TYPICAL CROSS SECTION
NOT TO SCALE
(SEE INDIVIDUAL WALL INFORMATION FOR DIMENSIONS AND LOCATIONS)



V-DITCH DETAIL
SHOWING V-DITCH AT TOP OF WALL
NOT TO SCALE

CONST. NO: 80S141-F3-006

PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-2

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

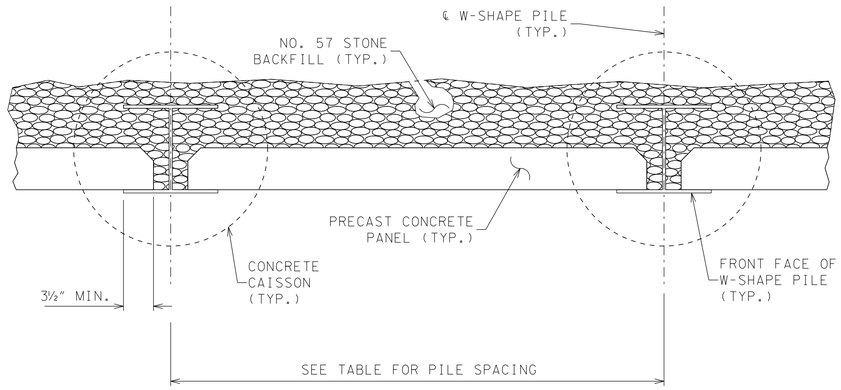
GENERAL NOTES

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025

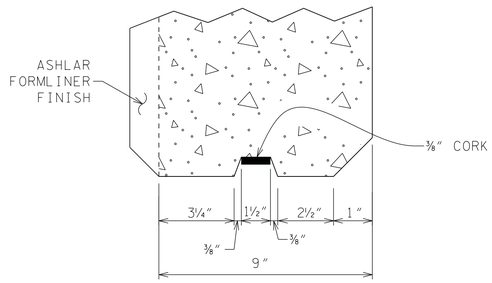
U-62-221



TYPICAL SECTION THRU PRECAST PANEL

NOT TO SCALE

NOTE: UNITS ARE SHOWN IN IMPERIAL UNLESS OTHERWISE NOTED.

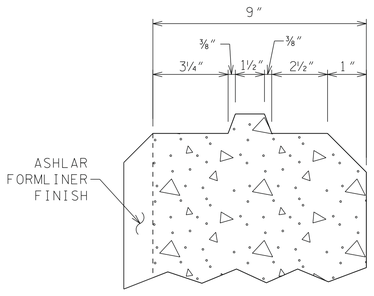


PANEL KEY WAY DETAIL

SHOWING DETAIL FOR BOTTOM OF PANEL

NOT TO SCALE

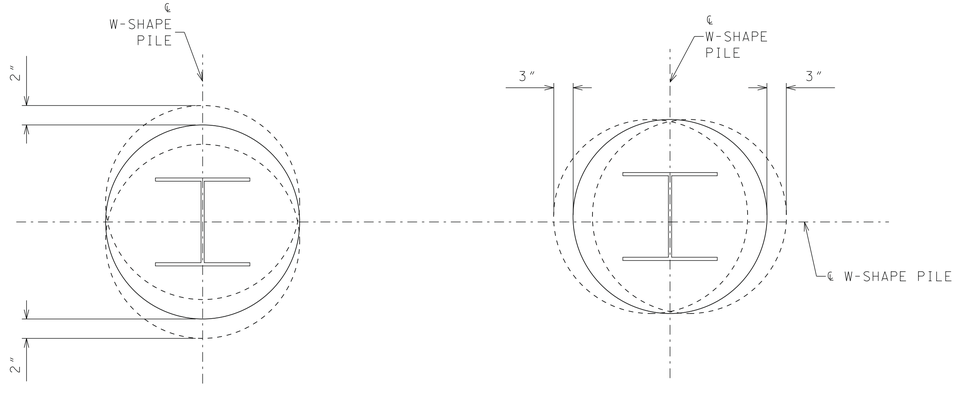
NOTE: THE TOP OF THE TOP AND THE BOTTOM OF THE BOTTOM OF THE PRECAST PANELS SHALL BE CAST WITHOUT THE KEY WAY.



PANEL KEY WAY DETAIL

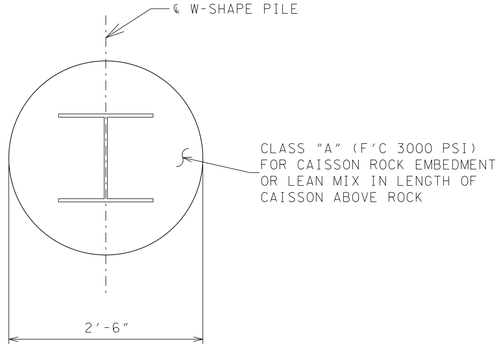
SHOWING DETAIL FOR TOP OF PANEL

NOT TO SCALE



CONCRETE CAISSON TOLERANCES

NOT TO SCALE



CONCRETE CAISSON

NOT TO SCALE

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	WHP	DATE	05/2025

CONST. NO: 80S141-F3-006

PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-3

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

STATE OF TENNESSEE

DEPARTMENT OF TRANSPORTATION

SOLDER PILE WALL TYPICAL DETAILS

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

U-62-222

CONST. NO: 80S141-F3-006

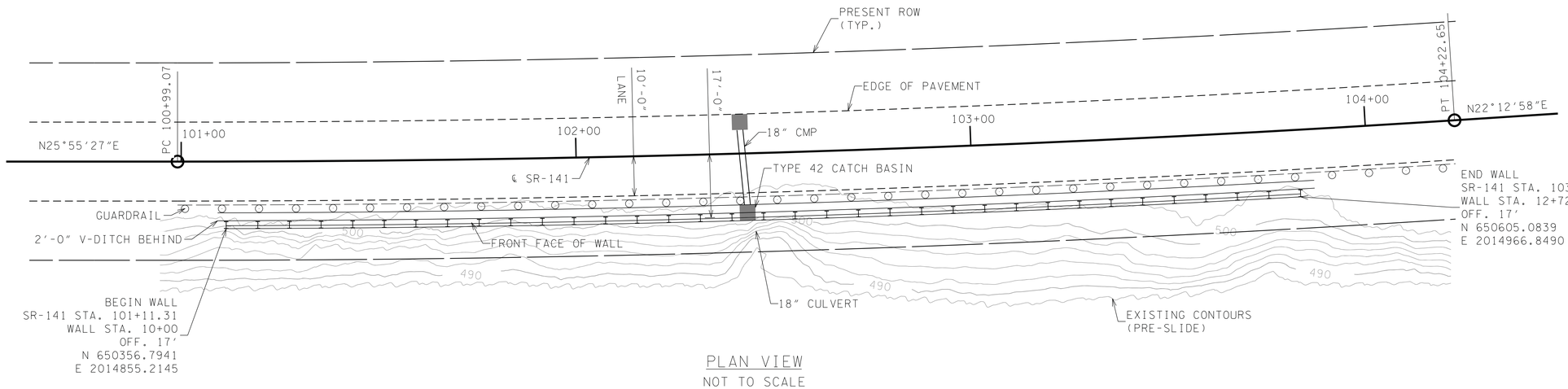
PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-4

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

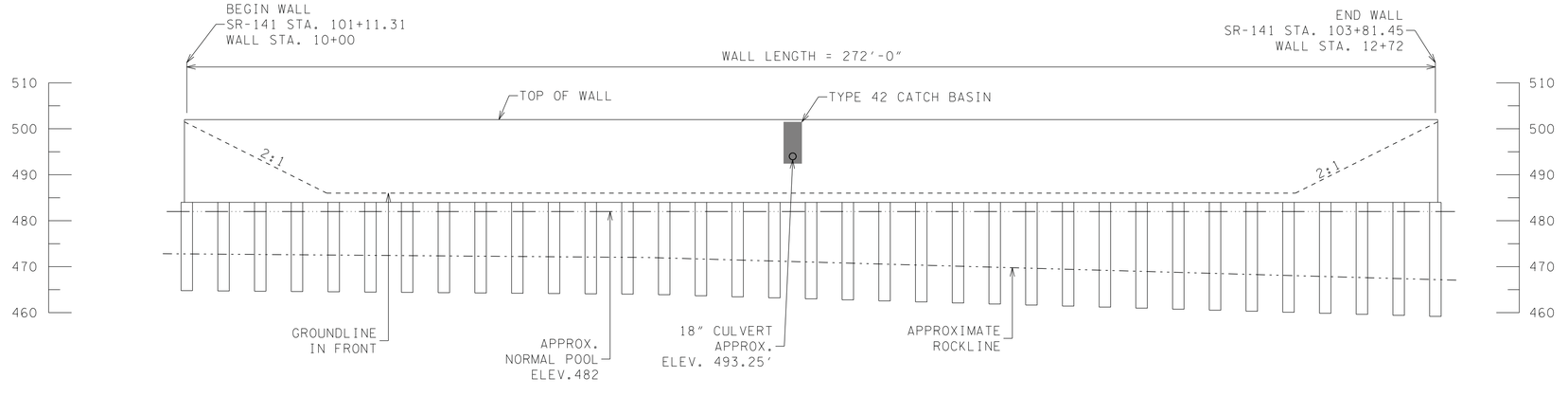
NOTES:

1. NO SURVEY WAS CONDUCTED TO LAYOUT WALL. CURVE AND ROADWAY INFORMATION ARE BEST FIT BASED ON VEXCEL2023 DATA.
2. WALL LOCATION SHALL BE FIELD VERIFIED PRIOR TO DRILLING CAISSONS
3. ROCKLINE SHOWN IS BASED ON REFUSAL ON ROCK OR BROKEN BEDROCK. IF ROCKLINE IS NOT FOUND, OR DEEPER THAN EXPECTED, CONTACT ENGINEER PRIOR TO INSTALLING PILES.



CURVE DC101
PI 102+60.92
N 650,497.4633
E 2,014,901.2049
Δ 3° 42' 29" (LT)
D 1° 08' 45"
R 5,000.00
L 323.58
T 161.85

PLAN VIEW
NOT TO SCALE



ELEVATION VIEW
NOT TO SCALE

WILLIAM H. PATE
REGISTERED ENGINEER
SIGNATURE
COMMERCE
No. 017589
STATE OF TENNESSEE
06-02-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

RETAINING WALL PLAN AND ELEVATION

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

U-62-223

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025

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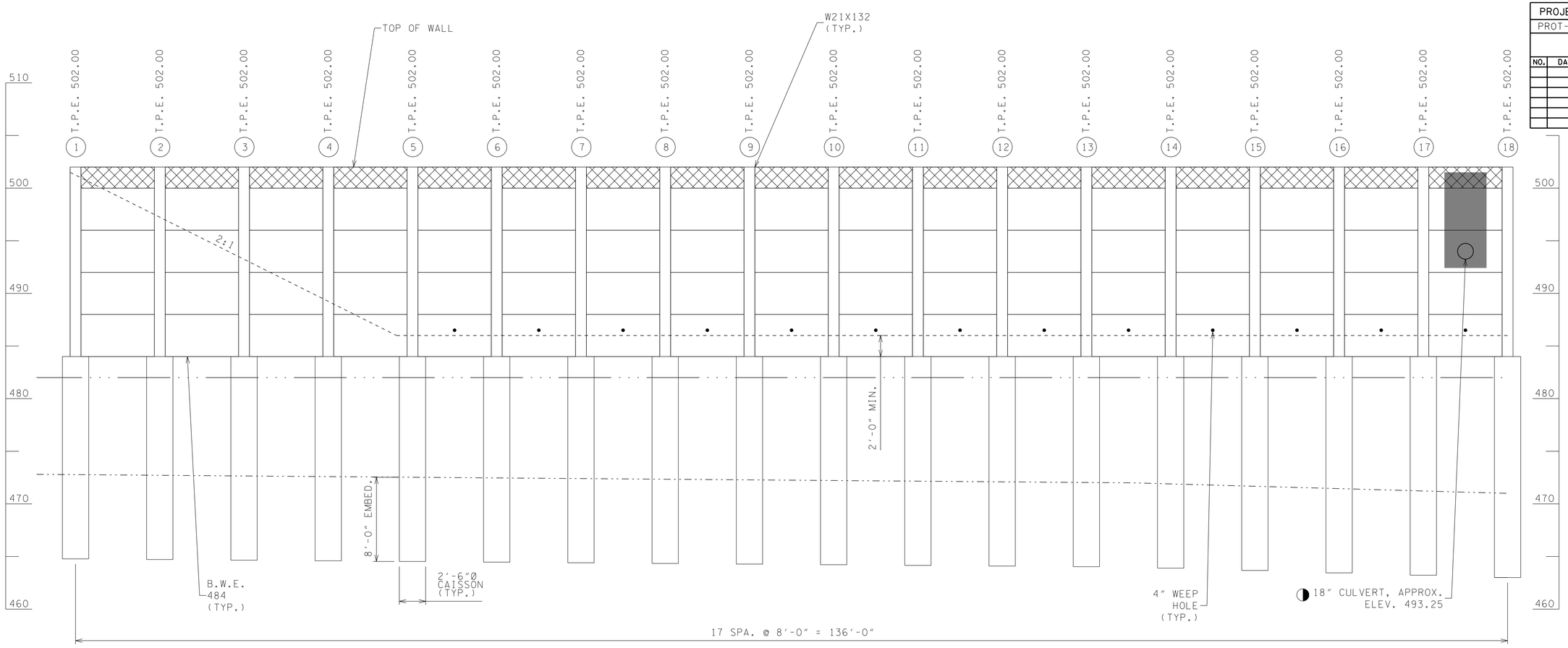
CONST. NO: 80S141-F3-006

PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-5

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION VIEW
FRONT FACE OF WALL
NOT TO SCALE

CULVERT SHALL BE FIELD LOCATED PRIOR TO WALL CONSTRUCTION TO VERIFY NO CONFLICT WITH THE PROPOSED PILE LOCATIONS.
SEE PIPE PROTRUSION DETAIL THIS SHEET
SEE ROADWAY PLANS FOR ANY DETAILS NOT SHOWN

LEGEND

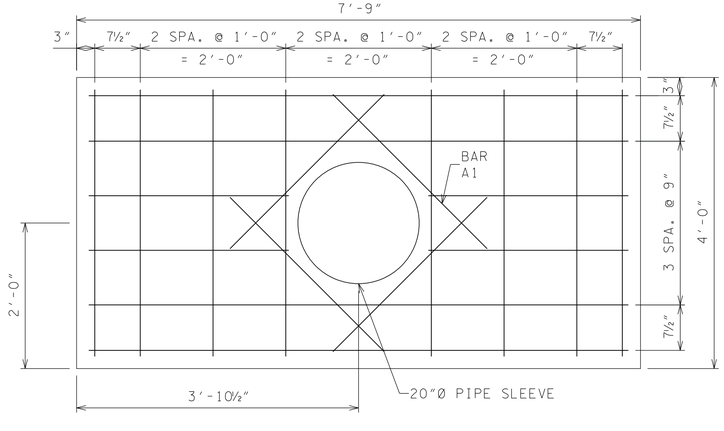
- 2'-0" PANEL
- 4'-0"PANEL
- (49) PILE NUMBERING
- PROPOSED GROUNDLINE IN FRONT
- APPROX. ROCKLINE
- WATERLINE (EL.482)

TPE DENOTES: TOP PILE ELEVATION

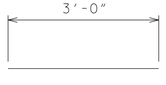
BWE DENOTES: BOTTOM WALL ELEVATION

PIN NO: 136242.04

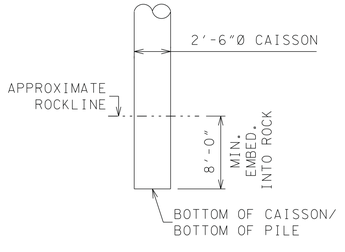
DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025



PIPE PROTRUSION DETAIL
1 PANEL TO HAVE WEEP HOLES
NOT TO SCALE



BAR A1
NOT TO SCALE



TYPICAL EMBEDMENT DETAIL
TYPICAL EVERY CAISSON
NOT TO SCALE

NOTE: FOR ANY PANEL DETAILS NOT SHOWN SEE DWG. U-62-226

WILLIAM H. PATE
REGISTERED ENGINEER
LICENSE NO. 117589
STATE OF TENNESSEE
06-02-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PANEL LAYOUT (1 OF 2)

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

U-62-224

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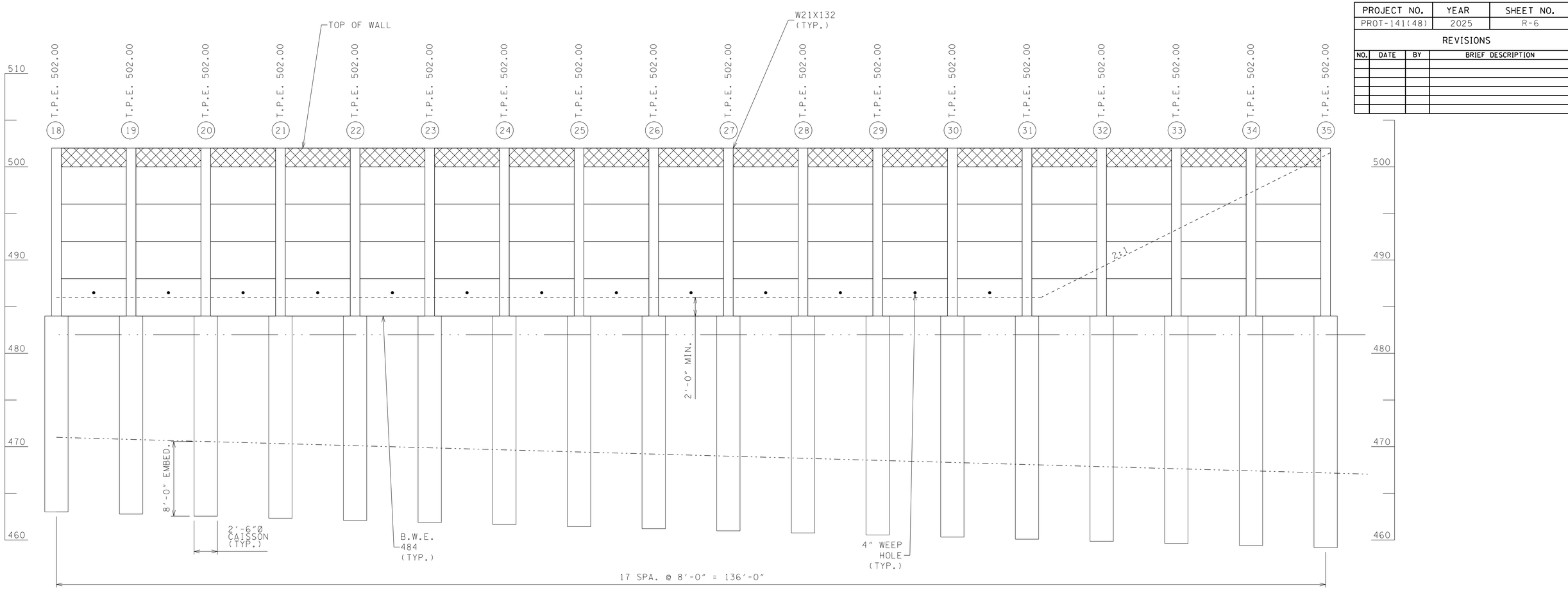
CONST. NO: 80S141-F3-006

PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-6

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION VIEW
FRONT FACE OF WALL
NOT TO SCALE

LEGEND

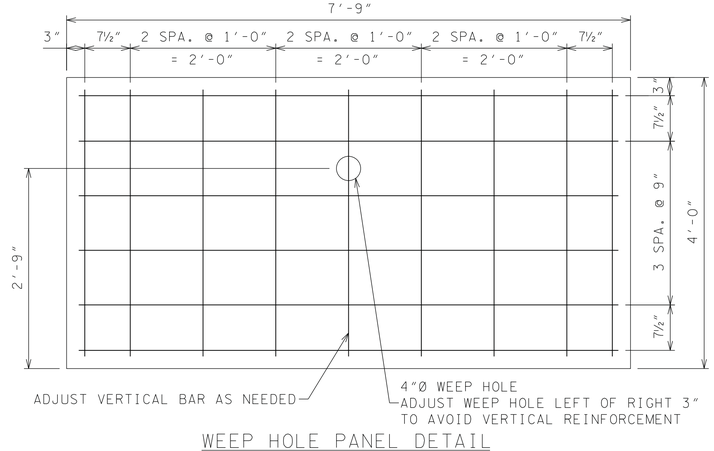
- 2'-0" PANEL
- 4'-0"PANEL
- (49) PILE NUMBERING
- PROPOSED GROUNDLINE IN FRONT
- APPROX. ROCKLINE
- WATERLINE (EL.482)

TPE DENOTES: TOP PILE ELEVATION

BWE DENOTES: BOTTOM WALL ELEVATION

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025



WEEP HOLE PANEL DETAIL
26 PANELS TO HAVE WEEP HOLES
NOT TO SCALE

NOTE: FOR ANY PANEL DETAILS NOT SHOWN SEE DWG. U-62-226

WILLIAM H. PATE
REGISTERED ENGINEER
LICENSE NUMBER
COMMERCE
No. 017589
STATE OF TENNESSEE
06-02-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PANEL LAYOUT (2 OF 2)

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

U-62-225

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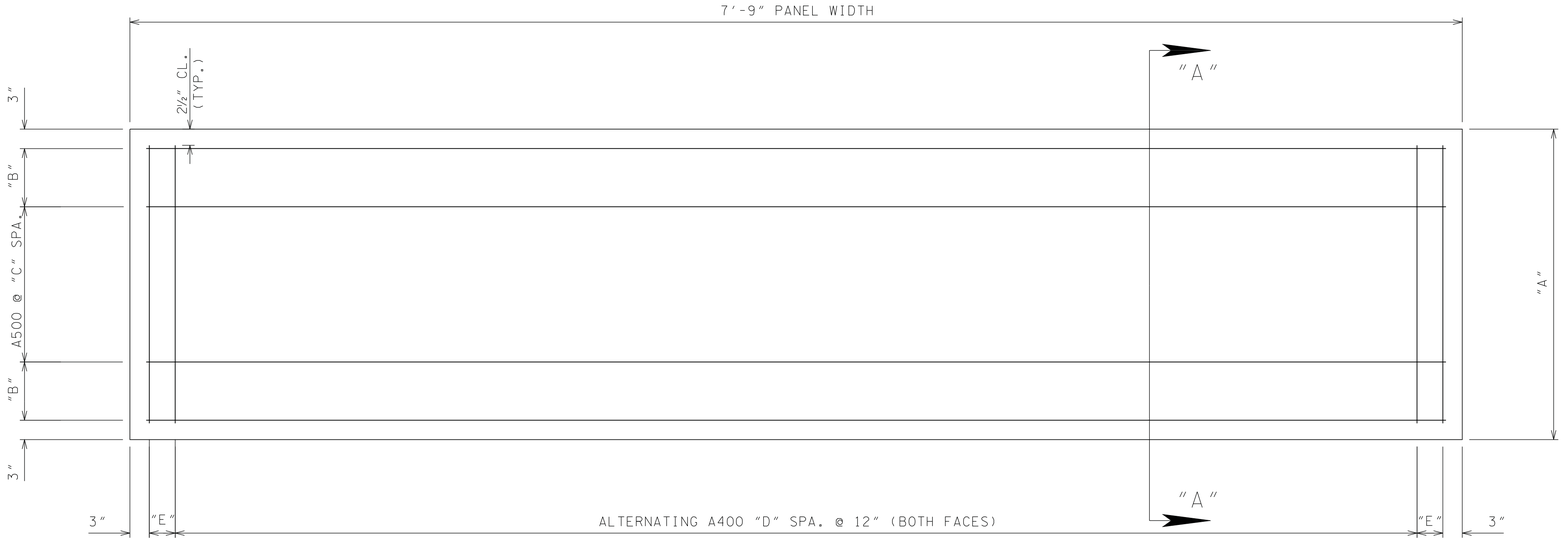
CONST. NO: 80S141-F3-006

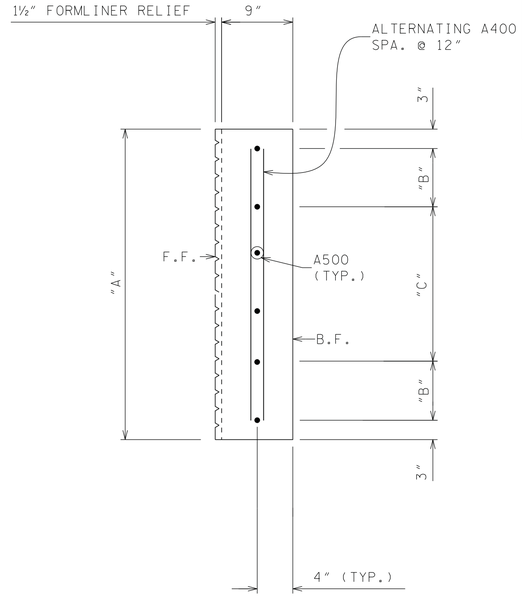
PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-7

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

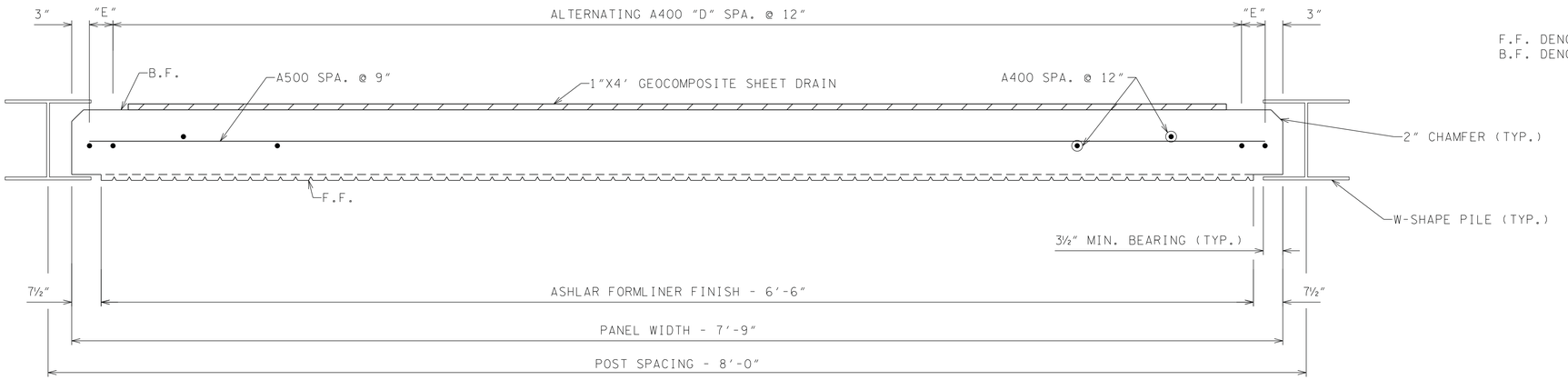


ELEVATION VIEW
NOT TO SCALE



SECTION "A"-"A"
NOT TO SCALE

F.F. DENOTES FRONT FACE (EXPOSED FACE)
B.F. DENOTES BACK FACE



PLAN VIEW
NOT TO SCALE

PANEL DIMENSIONS								
DIM. "A" HEIGHT OF PANEL (FT.)	TOTAL NO. BARS A500	DIM. "B" A500 (B.F.) (IN.)	DIM "C" A500 (B.F.) (IN.)	POST SPACING	PANEL WIDTH	ASHLAR FORMLINER FINISH	NUMER OF SPACING "D"	DIM "E" (IN.)
2	3	0	2 SPA. @ 9	8'-0"	7'-9"	6'-6"	6	7.5"
4	6	7.5	3 SPA. @ 9	8'-0"	7'-9"	6'-6"	6	7.5"

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025

WILLIAM H. PATE
REGISTERED ENGINEER
SIGNATURE
06-02-2025
COMMERCE
No. 017589
STATE OF TENNESSEE

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PRECAST PANEL DETAILS

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

U-62-226

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CONST. NO: 80S141-F3-006

PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-8

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION

PILE INFORMATION

PILE NO.	WALL STATION	SR-141 STATION	OFFSET (FT)	ELEV. TOP OF PILE (FT)	ELEV. BOTTOM OF PANEL (FT)	ELEV. BOTTOM OF PILE (FT)	PILE LENGTH (FT)	PILE SIZE	APPROX. ROCKLINE ELEV.	CAISSON DEPTH (FT)
1	10+00	101+11.31	17.00	502.00	484.00	464.77	37.23	W21x132	472.77	19.23
2	10+08	101+19.29	17.00	502.00	484.00	464.71	37.29	W21x132	472.71	19.29
3	10+16	101+27.27	17.00	502.00	484.00	464.65	37.35	W21x132	472.65	19.35
4	10+24	101+35.25	17.00	502.00	484.00	464.59	37.41	W21x132	472.59	19.41
5	10+32	101+43.23	17.00	502.00	484.00	464.53	37.47	W21x132	472.53	19.47
6	10+40	101+51.21	17.00	502.00	484.00	464.46	37.54	W21x132	472.46	19.54
7	10+48	101+59.19	17.00	502.00	484.00	464.40	37.60	W21x132	472.40	19.60
8	10+56	101+67.17	17.00	502.00	484.00	464.34	37.66	W21x132	472.34	19.66
9	10+64	101+75.15	17.00	502.00	484.00	464.28	37.72	W21x132	472.28	19.72
10	10+72	101+83.14	17.00	502.00	484.00	464.22	37.78	W21x132	472.22	19.78
11	10+80	101+91.12	17.00	502.00	484.00	464.15	37.85	W21x132	472.15	19.85
12	10+88	101+99.10	17.00	502.00	484.00	464.09	37.91	W21x132	472.09	19.91
13	10+96	102+07.08	17.00	502.00	484.00	464.03	37.97	W21x132	472.03	19.97
14	11+04	102+15.06	17.00	502.00	484.00	463.89	38.11	W21x132	471.89	20.11
15	11+12	102+23.04	17.00	502.00	484.00	463.67	38.33	W21x132	471.67	20.33
16	11+20	102+31.02	17.00	502.00	484.00	463.45	38.55	W21x132	471.45	20.55
17	11+28	102+39.01	17.00	502.00	484.00	463.22	38.78	W21x132	471.22	20.78
18	11+36	102+46.99	17.00	502.00	484.00	463.00	39.00	W21x132	471.00	21.00
19	11+44	102+54.97	17.00	502.00	484.00	462.77	39.23	W21x132	470.77	21.23
20	11+52	102+62.95	17.00	502.00	484.00	462.55	39.45	W21x132	470.55	21.45
21	11+60	102+70.93	17.00	502.00	484.00	462.32	39.68	W21x132	470.32	21.68
22	11+68	102+78.91	17.00	502.00	484.00	462.10	39.90	W21x132	470.10	21.90
23	11+76	102+86.89	17.00	502.00	484.00	461.87	40.13	W21x132	469.87	22.13
24	11+84	102+94.87	17.00	502.00	484.00	461.65	40.35	W21x132	469.65	22.35
25	11+92	103+02.85	17.00	502.00	484.00	461.43	40.57	W21x132	469.43	22.57
26	12+00	103+10.83	17.00	502.00	484.00	461.20	40.80	W21x132	469.20	22.80
27	12+08	103+18.81	17.00	502.00	484.00	460.98	41.02	W21x132	468.98	23.02
28	12+16	103+26.80	17.00	502.00	484.00	460.75	41.25	W21x132	468.75	23.25
29	12+24	103+34.78	17.00	502.00	484.00	460.53	41.47	W21x132	468.53	23.47
30	12+32	103+42.76	17.00	502.00	484.00	460.30	41.70	W21x132	468.30	23.70
31	12+40	103+50.74	17.00	502.00	484.00	460.08	41.92	W21x132	468.08	23.92
32	12+48	103+58.72	17.00	502.00	484.00	459.85	42.15	W21x132	467.85	24.15
33	12+56	103+66.70	17.00	502.00	484.00	459.63	42.37	W21x132	467.63	24.37
34	12+64	103+74.68	17.00	502.00	484.00	459.41	42.59	W21x132	467.41	24.59
35	12+72	103+82.66	17.00	502.00	484.00	459.18	42.82	W21x132	467.18	24.82

WALL LOCATION SHALL BE FIELD VERIFIED PRIOR TO DRILLING CAISSONS

WILLIAM H. PATE
REGISTERED ENGINEER
SIGNATURE
COMMERCE
No. 017589
STATE OF TENNESSEE
06-02-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PILE INFORMATION

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

U-62-227

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025

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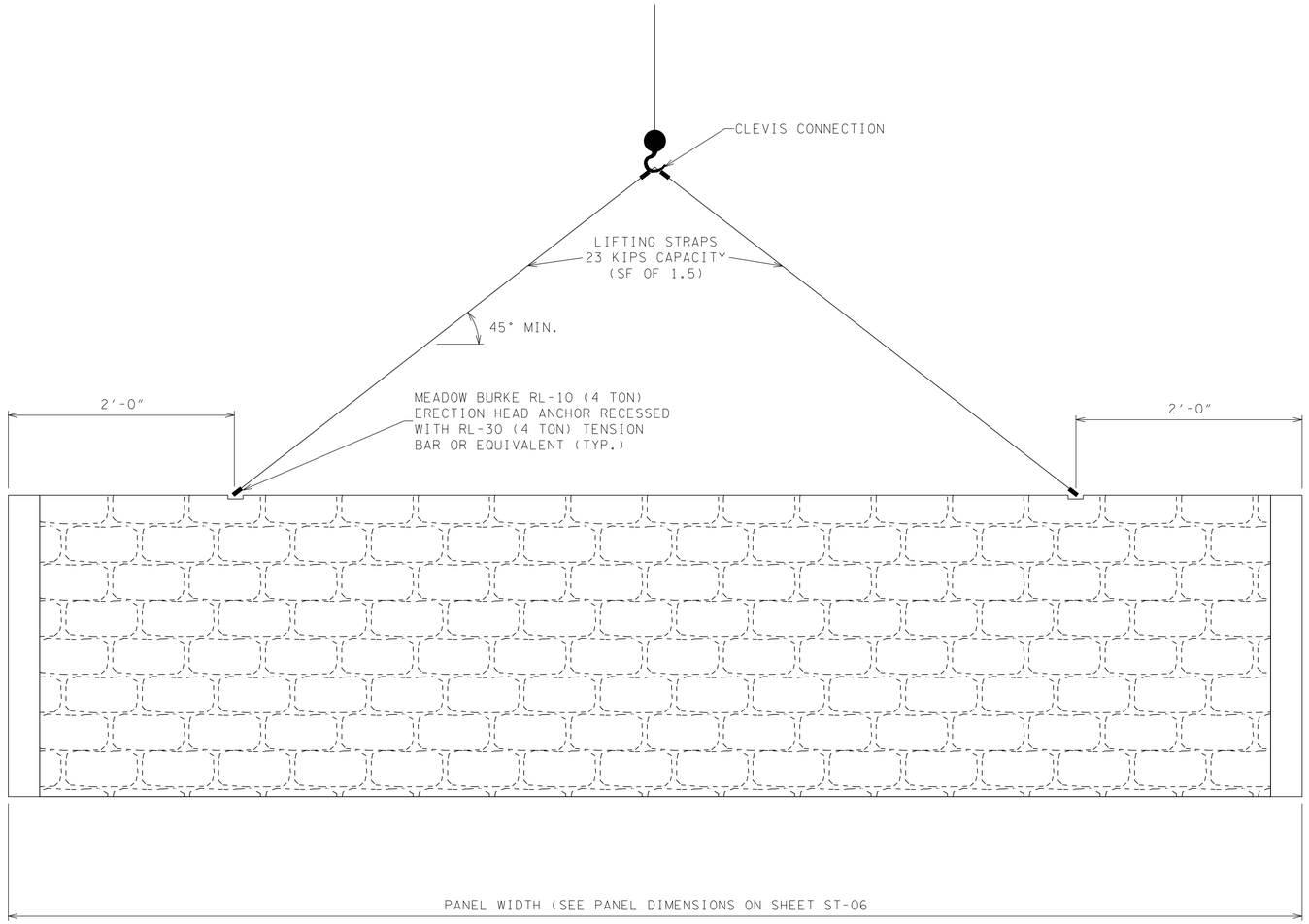
CONST. NO: 80S141-F3-006

PROJECT NO.	YEAR	SHEET NO.
PROT-141(48)	2025	R-9

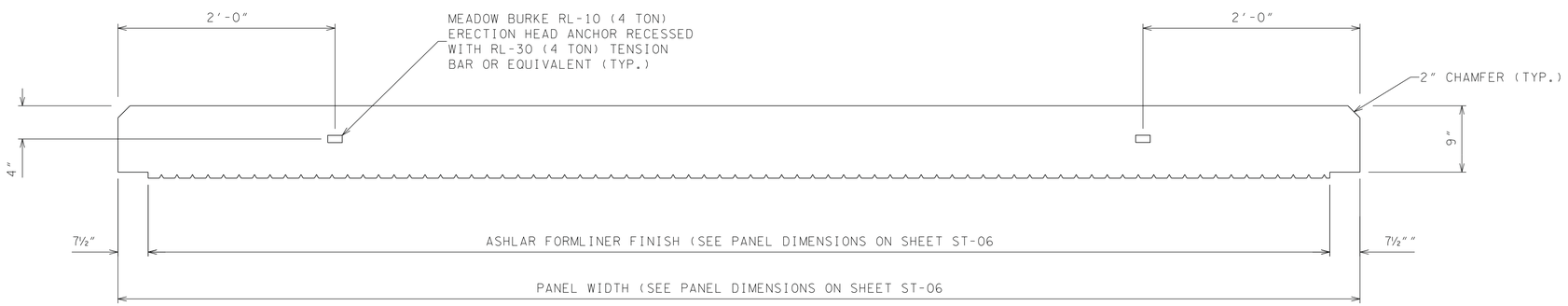
REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION



ELEVATION VIEW
NOT TO SCALE

MAX. PANEL WEIGHT = 4000 POUNDS



PLAN VIEW
NOT TO SCALE

WILLIAM H. PATE
REGISTERED ENGINEER
CERTIFICATE
COMMERCE
No. 017389
STATE OF TENNESSEE
06-02-2025

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

PANEL LIFTING DETAILS

SR-141 LM 14.640 TO LM 14.770
ALONG CANEY FORK RIVER
SMITH COUNTY
2025

PIN NO: 136242.04

DESIGNED BY	WHP	DATE	05/2025
DRAWN BY	KDF	DATE	05/2025
SUPERVISED BY	MB	DATE	05/2025
CHECKED BY	KDF	DATE	05/2025

U-62-228

6/2/2025 4:10:33 PM \\reel-schaffer.com\Files\NS\Admin\NS\TN\Nashville\Proposals\2025\26 Smith County Emergency Wall replacement\DGN\Wall\R9 PanelLifting Detail.dgn