THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY:

John Eric Slayton
2025.06.24 15:32:08 -05'00'

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TENNESSEE DEPARTMENT OF TRANSPORTATION
JAMES K. POLK BUILDING, SUITE 1100
505 DEADERICK STREET
NASHVILLE, TN 37243
JOHN ERIC SLAYTON, P.E. NO. 113320

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

GENERAL NOTES AND ESTIMATED QUANTITIES U-97-934

YEAR	PROJECT NO.	SHEET NO.
2025		STRUCTURE-SIGN2

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

06-24-25

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

CONST. NO.: 17005-3220-04

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

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	06-23-25	JES	ADDED STD-8-5
	- -		
	- -		
	- -		
	- -		

LIST OF DRAWINGS

	DWG. NO.	LAST REV. DATE
SIGNATURE SHEET	STRUCTURE-SIGN1	__-__-__
SIGNATURE SHEET	STRUCTURE-SIGN2	06-23-25
INDEX OF DRAWINGS	B-1	06-23-25
LAYOUT OF BRIDGE	U-97-933	__-__-__
GENERAL NOTES AND ESTIMATED QUANTITIES	U-97-934	06-23-25
FOUNDATION DATA	U-97-935	__-__-__
SUPERSTURCTURE	U-97-936	__-__-__
SUPERSTURCTURE DETAILS	U-97-937	__-__-__
SUPERSTURCTURE DETAILS	U-97-938	__-__-__
PRESTRESSED I-BEAM DETAILS (SPAN NO. 1 AND NO. 3)	U-97-939	__-__-__
PRESTRESSED I-BEAM DETAILS (SPAN NO. 2)	U-97-940	__-__-__
ABUTMENT NO. 1	U-97-941	__-__-__
ABUTMENT NO. 1 DETAILS	U-97-942	__-__-__
ABUTMENT NO. 1 DETAILS	U-97-943	__-__-__
ABUTMENT NO. 2	U-97-944	__-__-__
ABUTMENT NO. 2 DETAILS	U-97-945	__-__-__
ABUTMENT NO. 2 DETAILS	U-97-946	__-__-__
BENT NO. 1	U-97-947	__-__-__
BENT NO. 2	U-97-948	__-__-__
BENT NO. 1 AND NO. 2 DETAILS	U-97-949	__-__-__
FINAL FOUNDATION DATA	U-97-950	__-__-__
BILL OF STEEL	U-97-951	__-__-__
BILL OF STEEL	U-97-952	__-__-__

LIST OF STANDARD DRAWINGS

(1)

	DWG. NO.	LAST REV. DATE
BRIDGE RAILING SINGLE SLOPE CONCRETE PARAPET	STD-1-1SS	07-24-24
PAVEMENT AT BRIDGE ENDS	STD-1-5	06-05-23
STANDARD PRECAST, PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-1	04-08-05
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS DESIGN CRITERIA	STD-4-2	04-08-05
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS GENERAL DETAILS	STD-4-3	03-02-02
STANDARD PRECAST PRESTRESSED BRIDGE DECK PANELS CONSTRUCTION DETAILS	STD-4-4	06-10-96
STANDARD PILE DETAILS	STD-5-1	
STANDARD PILE DETAILS	STD-5-2	
STANDARD SEISMIC DETAILS	STD-6-1	12-08-23
STANDARD SEISMIC DETAILS	STD-6-2	11-07-94
STANDARD PROTECTIVE FENCE DETAILS	STD-8-5	05-10-21
STANDARD REINFORCING BAR SUPPORT DETAILS FOR CONCRETE SLABS	STD-9-1	10-07-08
MISCELLANEOUS ABUTMENT AND DRAINAGE DETAILS	STD-10-1	06-05-23
MISC. ABUTMENT AND PAVEMENT AT BRIDGE ENDS BACKFILL DETAILS	STD-10-2	06-05-23
STANDARD FLUME DETAILS	STD-10-3	01-10-24
STANDARD DETAILS AND INTERMEDIATE DIAPHRAGM DETAIL FOR I-BEAM	STD-14-2	03-06-24
SAFETY APPROACH TO UNDERPASSES GRADING DESIGN AND SLOPE PROTECTION	RD11-SA-1	01-09-24

PIN NO.:	128574.00		
DESIGN BY:	U. PATEL	DATE:	09/2021
DRAWN BY:	B. ERVIN	DATE:	05/2022
SUPERVISED BY:	STEELE/SHIKE	DATE:	05/2022
CHECKED BY:	J. SHOULDERS	DATE:	09/2021

CORRECT
ENGINEER OF STRUCTURES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
INDEX OF DRAWINGS
STATE ROUTE 76
OVER
PRIVATE RAIL SPUR
BRIDGE ID. NO. 17SR0760015
STATION 41+31.00
CROCKETT COUNTY
2025

CONST. NO.: 17005-3220-04

PROJECT NO.	YEAR	SHEET NO.
- -	2025	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	06-23-25	JES	REVISED FENCE S.F. QUANTITY
	- -		
	- -		
	- -		
	- -		

GENERAL NOTES

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

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

LOADING:

A. HL-93 LIVE LOADING

B. SEISMIC DESIGN CATEGORY C WITH A_S= 0.355, S_{DS}= 0.763, S_{D1}= 0.333, (1000 YEAR RETURN PERIOD).

C. DEAD LOAD INCLUDES 35 LB/SQ. FT. FOR FUTURE WEARING SURFACE.

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

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

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

BRIDGE DECK FORMS: BRIDGE DECK FORMS FOR CONCRETE DECKS SHALL BE CONSTRUCTED USING EITHER REMOVABLE FORMS OR PERMANENT FORMS. PERMANENT FORMS MAY BE EITHER REMAIN-IN-PLACE STEEL OR PRECAST, PRESTRESSED CONCRETE PANELS. IN EITHER CASE, FORMS SHALL BE ATTACHED BY MEANS OTHER THAN WELDING TO MAIN STRUCTURAL MEMBERS OR REINFORCING STEEL. TEMPORARY ERECTION DIAPHRAGMS MUST BE USED AT THE ENDS OF PRECAST CONCRETE GIRDERS WHERE END DIAPHRAGMS, SUPPORT DIAPHRAGMS, OR ABUTMENT ENDWALLS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE STANDARD DRAWINGS STD-4-1 THRU 4, STD-14-2, AND ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.

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

BENT EXCAVATION: ALL FILL SHALL BE IN PLACE PRIOR TO EXCAVATING FOR BENT FOOTINGS. AFTER CONSTRUCTING THE BENT, EXTREME CARE SHALL BE TAKEN WHEN BACKFILLING SO AS NOT TO DAMAGE OR MISALIGN THE BENT.

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

FRICTION PILES: TO BE SIZE 1 PRECAST CONCRETE PILES. AFTER EXCAVATION TO THE PROPOSED FOOTING ELEVATIONS, A TEST PILE SHALL BE DRIVEN AT EACH SUBSTRUCTURE AT THE LOCATION DESIGNATED ON DRAWING NO. U-97-950. A LOAD TEST WILL THEN BE APPLIED TO THE TEST PILE IN ABUTMENT NO.1. FROM THE RESULTS OF THE LOAD TEST, THE ENGINEER OF STRUCTURES WILL DETERMINE THE REQUIRED LENGTH OF THE PRODUCTION PILES AND MINIMUM REQUIRED BEARING. FOR PILE DESIGN LOADS AND CUT-OFF ELEVATIONS, SEE TABLE ON THIS SHEET.
THE CONTRACTOR SHALL INSTALL PILING SUCH THAT ALL THE FOLLOWING REQUIREMENTS ARE MET. THE TIP ELEVATION FOR ALL TEST PILES AND PRODUCTION PILES SHALL BE EQUAL TO OR BELOW THE MINIMUM PILE TIP ELEVATION SHOWN ON THE PLANS. IN ADDITION, TEST PILES TO BE LOAD TESTED SHALL BE INSTALLED TO AT LEAST THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH. ALL OTHER TEST PILES SHALL BE INSTALLED TO AT LEAST 1.5 TIMES THE SPECIFIED BEARING SHOWN ON THE PLANS OR FULL LENGTH. ALL PRODUCTION PILES SHALL BE INSTALLED FULL LENGTH UNLESS EXCESSIVELY HARD DRIVING WHICH MIGHT DAMAGE THE PILES IS ENCOUNTERED. IF THE PRODUCTION PILES DO NOT ACHIEVE THE MINIMUM REQUIRED BEARING, THE ENGINEER OF STRUCTURES WILL DETERMINE IF ADDITIONAL PILES ARE REQUIRED.
IN THE EVENT THAT DRIVING THE TEST PILE TO AT LEAST THE MINIMUM TIP ELEVATION OR DRIVING THE PRODUCTION PILE FULL LENGTH MIGHT DAMAGE THE PILE BECAUSE OF EXCESSIVELY HARD DRIVING, THE CONTRACTOR SHALL USE OTHER METHODS APPROVED BY THE ENGINEER FOR INSTALLING THE PILES SUCH AS JETTING OR PRE-DRILLING HOLES. HOWEVER, ALL PILES MUST BE DRIVEN BY HAMMER FOR THE LAST FEW FEET OF PENETRATION. NO MEASUREMENT FOR PAYMENT WILL BE MADE FOR PRE-DRILLING HOLES OR FOR JETTING PILING TO OBTAIN THE REQUIRED PILE PENETRATION.
THE PILE LOAD TEST SHALL BE A QUICK LOAD TEST CONDUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS. THE PILE LOAD TEST APPARATUS FOR APPLYING LOADS AND MEASURING MOVEMENT SHALL MEET THE REQUIREMENTS OF ASTM D1143, STANDARD TEST METHODS FOR DEEP FOUNDATION ELEMENTS UNDER STATIC AXIAL COMPRESSIVE LOAD. WHEN INSUFFICIENT CLEARANCE IS AVAILABLE WITHIN AN EXCAVATION, THE CLEARANCE REQUIREMENTS IN ARTICLE 9.1.1 MAY BE REDUCED, BUT ONLY WITH PRIOR APPROVAL OF THE ENGINEER.

ALTERNATE FRICTION PILES: THE CONTRACTOR MAY USE AN ALTERNATE PILE TYPE OR SIZE FROM THAT SHOWN ON THE PLANS PROVIDED THE SUBSTITUTION MEETS MINIMUM DESIGN STANDARDS AND SPECIFICATIONS AND IS APPROVED BY THE ENGINEER.

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

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

SHOP DRAWINGS: SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS.

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

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

MACHINED RIP-RAP: MACHINED RIP-RAP FOR SLOPE PROTECTION SHALL BE 2" TO 6" IN SIZE UNIFORMLY GRADED AND MEET THE REQUIREMENTS OF SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM NO. 709-05.05.

VALUE ENGINEERING ALTERNATE BRIDGE DESIGN CRITERIA: ALTERNATE BRIDGE DESIGN PROPOSALS MAY NOT DIMINISH THE FUNCTIONAL OR STRUCTURAL EQUIVALENCY OF THE BRIDGE AND MUST MEET OR EXCEED THE CAPACITIES OF THE CONTRACT PLANS STRUCTURE AT ALL LIMIT STATES IN AASHTO TABLE 3.4.1-1. ADDITIONALLY, THE WATERWAY OPENING AND FLOOD CLEARANCES MAY NOT BE REDUCED. FOR GRADE SEPARATIONS, THE HORIZONTAL CLEARANCES MAY NOT BE REDUCED, NOR MAY THE VERTICAL CLEARANCES BE LESS THAN THE MINIMUM ACCEPTABLE FOR THE TYPE FACILITY CROSSED.

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

ESTIMATED QUANTITIES (1)

	ITEM NO.	DESCRIPTION	UNIT	TOTAL	SUPERSTRUCTURE	ABUTMENT 1	BENT NO. 1	BENT NO. 2	ABUTMENT 2
(2)	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	408		92	112	112	92
(8)	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	36		18			18
	604-02.03	EPOXY COATED REINFORCING STEEL	LB.	70,607	66,907	1,850			1,850
(6)	604-03.01	CLASS 'A' CONCRETE (BRIDGES)	C.Y.	330		60	105	105	60
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	58,532	2,115	6,729	21,507	21,452	6,729
(1)	604-03.04	PAVEMENT @ BRIDGE ENDS	S.Y.	204	204				
	604-03.09	CLASS 'D' CONCRETE (BRIDGE DECK)	C.Y.	235	235				
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	1,153	795	33	146	146	33
	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	1,050	1,050				
	606-09.01	TEST PILES (PRECAST CONCRETE, SIZE 1)	L.F.	230		65	50	50	65
	606-09.02	LOADING TEST (PRECAST CONCRETE, SIZE 1)	EACH	1		1			
	606-09.03	PRECAST CONCRETE PILES (SIZE 1)	L.F.	3,070		495	1,040	1,040	495
(7)	606-12.01	PILE ANCHORAGE SYSTEM (SEISMIC)	EACH	70		8	27	27	8
(4)	615-01.03	PRESTRESSED CONCRETE I-BEAM (TYPE III)	L.F.	998	998				
	620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	472	472				
	707-07.01	CHAIN LINK FENCE (BRIDGES)	S.F.	775	775				
(5)	710-09.01	6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	146		73			73
	710-09.02	6" PIPE UNDERDRAIN	L.F.	32		16			16

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

(2) NOTE: EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND BENTS.

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

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

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

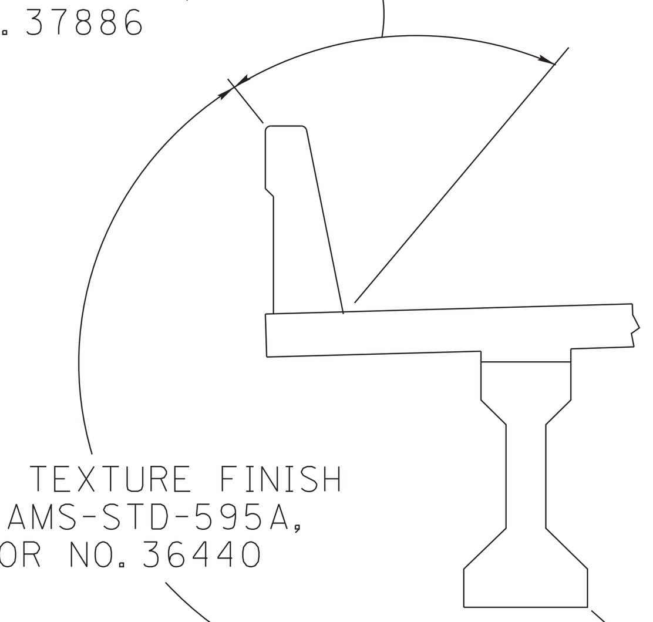
(6) NOTE: THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF 22 ANCHOR BOLT ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE (BRIDGE) ITEM NO. 604-03.01.

(7) NOTE: COST OF PREPARATION OF THE TOP OF PILE AND SEISMIC REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 606-12.01. SEE STANDARD DRAWING STD-6-1 FOR DETAILS. THE PILE AND TEST PILE LENGTHS SHOWN ON THE PLANS DO NOT INCLUDE THE 2 FEET REQUIRED SEISMIC ATTACHMENT.

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

PILE DATA TABLE

LOCATION	DESIGN LOAD (TONS)	TEST PILE CUT-OFF ELEV. (FT.)	ESTIMATED PILE LENGTH (FT.)	TEST PILE LENGTH (FT.)	MINIMUM PILE TIP ELEVATION
ABUTMENT NO. 1	90	372.40	55	65	320
BENT NO. 1	87	339.00	40	50	
BENT NO. 2	87	339.00	40	50	
ABUTMENT NO. 2	90	371.23	55	65	320



TYPICAL AT CANTILEVER

APPLIED TEXTURE FINISH SKETCH

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

JOHN ERIC SLAYTON, Registered Engineer, STATE OF TENNESSEE, No. 113320
6/24/25

PIN NO.: 128574.00
DESIGN BY: U. PATEL DATE: 09/2021
DRAWN BY: B. ERVIN DATE: 05/2022
SUPERVISED BY: STEELE/SHIKE DATE: 05/2022
CHECKED BY: J. SHOULDERS DATE: 09/2021

CORRECT ______ ENGINEER OF STRUCTURES

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
BRIDGE GENERAL NOTES
STATE ROUTE 76
OVER
PRIVATE RAIL SPUR
BRIDGE ID. NO. 17SR0760015
STATION 41+31.00
CROCKETT COUNTY
2025

U-097-934

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$$$$DGNSPEC$$$