GN102OR1.DGN

GENERAL NOTES

SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION (MARCH 1, 2006 EDITION).

LOADING: HL-93 LIVE LOADING, SEISMIC CATEGORY A WITH AS = 0.127, SDS = 0.295, SD1 = 0.098, (1000 YEAR RETURN PERIOD). DEAD LOAD INCLUDES 35 LB/FT² FOR FUTURE WEARING SURFACE.

DESIGN SPECIFICATIONS: AASHTO LRFD FIFTH EDITION 2010, WITH ADDENDA, AND THE 2009 AASHTO GUIDE SPECIFICATIONS FOR LRFD SEISMIC BRIDGE DESIGN, EDITION 1 (WITH INTERIMS.)

CONCRETE: TO BE CLASS "A" (CAST IN PLACE) f′c = 3,000 psi EXCEPT AS NOTED OTHERWISE.

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 NOTE "C" 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 BACKWALLS ARE TO BE POURED CONCURRENTLY WITH THE DECK AND SHALL BE PROVIDED ELSEWHERE IN ACCORDANCE WITH THE SPECIFICATIONS TO PREVENT GIRDER ROTATION. SEE STANDARD DRAWINGS STD-4-1 THRU 4, STD-14-1 AND ARTICLE 604.05 OF THE STANDARD SPECIFICATIONS.

SPECIAL NOTE - FOOTING FOR BENTS: AFTER EXCAVATION TO ROCK FOR FOOTING HAS BEEN COMPLETED, HOLES 6′ DEEP SHALL BE DRILLED AT POINTS DESIGNATED BY THE ENGINEER. FROM THE RESULTS OBTAINED, THE ENGINEER SHALL DETERMINE THE FINAL FOOTING ELEVATIONS. NO REINFORCING STEEL FOR BENT COLUMNS SHALL BE ORDERED UNTIL FINAL FOOTING ELEVATIONS HAVE BEEN DETERMINED.

PILES: TO BE HP10 × 42 DRIVEN TO REFUSAL ON ROCK OR A MINIMUM BEARING OF 55 TONS FOR THE ABUTMENTS.

BRIDGE RAIL SYSTEM: BUILD BRIDGE RAILINGS ACCORDING TO STANDARD DRAWING STD-1-1SS. THE RAILING 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.

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

SHOP DRAWINGS: SEE SECTION 105.02 OF THE STANDARD SPECIFICATIONS.

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 FOR ROAD AND BRIDGE CONSTRUCTION AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM 709-05.05 - TON

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

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

RIP-RAP: MACHINED RIP-RAP SHALL BE CLASS "B" IN ACCORDANCE WITH SECTION 709 OF THE STANDARD SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR UNDER ROADWAY ITEM 709-05.08.

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

FINISHING CONCRETE SURFACES: CONCRETE FINISHING SHALL BE IN ACCORDANCE WITH SECTION 604.21 OF THE TENNESSEE STANDARD SPECIFICATION. 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.

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 BOTH THE SERVICE LEVEL AND ULTIMATE CAPACITIES OF THE CONTRACT PLANS STRUCTURE. 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.

SLAB OVERHANGS SUPPORTED BY BULB-TEE BEAMS: IT IS RECOMMENDED THAT SPACING OF OVERHANG BRACKETS FOR BULB-TEE BEAMS NOT EXCEED 2′-0" CENTER TO CENTER.

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

CONST. NO.	36001-3290-14	
PROJECT NO.	YEAR	SHEET NO.
NHE-15(108)	2012	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	9/25/14	DJS	REV. REMOVAL NOTE

ESTIMATED QUANTITIES

					LEFT LANE						RIGHT LANE					
NOTE	ITEM NO.	DESCRIPTION	UNIT	GRAND TOTAL	TOTAL	SUPERSTRUCTURE	ABUTMENT NO. 1	BENT NO. 1	BENT NO. 2	ABUTMENT NO. 2	TOTAL	SUPERSTRUCTURE	ABUTMENT NO. 1	BENT NO. 1	BENT NO. 2	ABUTMENT NO. 2
(10)	202-04.01	REMOVAL OF STRUCTURES (EXISTING BRIDGE NO. 36-SR15-17.87)	L.S.	1												
(2)	204-02.01	DRY EXCAVATION (BRIDGES)	C.Y.	498	238		84	18	53	83	260		84	40	53	83
(2)	204-03.01	WET EXCAVATION (BRIDGES)	C.Y.	300	169			66	103		131			28	103	
(2)	204-04.01	ROCK EXCAVATION (BRIDGES)	C.Y.	36	18			9	9		18			9	9	
	204-05	ROCK DRILLING (BRIDGES)	L.F.	144	72			36	36		72			36	36	
(11)	204-10.01	FOUNDATION PREPARATION (BENT NO. 1 LT. LN., STA. 591+00.25)	L.S.	1	1			1								
(11)	204-10.02	FOUNDATION PREPARATION (BENT NO. 2 LT. LN., STA. 591+99.75)	L.S.	1	1				1							
(11)	204-10.03	FOUNDATION PREPARATION (BENT NO. 1 RT. LN., STA. 591+00.25)	L.S.	1							1			1		
(11)	204-10.04	FOUNDATION PREPARATION (BENT NO. 2 RT. LN., STA. 591+99.75)	L.S.	1							1				1	
(8)	303-01.02	GRANULAR BACKFILL (BRIDGES)	TON	68	34		17			17	34		17			17
	604-02.03	EPOXY COATED REINFORCING STEEL	LB.	207,498	103,749	100,477	1,636			1,636	103,749	100,477	1,636			1,636
(7)	604-03.01	CLASS 'A' CONCRETE (BRIDGES)	C.Y.	594	298		52	97	98	51	296		52	95	98	51
	604-03.02	STEEL BAR REINFORCEMENT (BRIDGES)	LB.	107,842	54,167	1,459	5,683	20,580	20,762	5,683	53,675	1,459	5,683	20,088	20,762	5,683
(1)	604-03.04	PAVEMENT AT BRIDGE ENDS	S.Y.	430	215						215					
	604-03.09	CLASS 'D' CONCRETE (BRIDGE DECK)	C.Y.	766	383	383					383	383				
	604-04.01	APPLIED TEXTURE FINISH (NEW STRUCTURES)	S.Y.	3,216	1,609	1,212	39	162	157	39	1,607	1,212	38	162	157	38
	604-05.31	BRIDGE DECK GROOVING (MECHANICAL)	S.Y.	3,004	1,502						1,502					
	606-02.03	STEEL PILES (10 INCH)	L.F.	1,555	775		385			390	780		370			410
(12)	606-02.06	PILE TIPS (STEEL PILES, 10 INCH)	EA.	40	20		10			10	20		10			10
(5)(4)	615-01.10	PRESTRESSED CONCRETE BULB-TEE BEAM (6" WEB) (BT-54)	L.F.	2,940	1,470						1,470					
(9)	620-05.01	CONCRETE PARAPET SINGLE SLOPE (STD-1-1SS)	L.F.	1,326	663						663					
(6)	710-09.01	6" PERF. PIPE WITH VERTICAL DRAIN SYSTEM	L.F.	264	132		66			66	132		66			66
	710-09.02	6" PIPE UNDERDRAIN	L.F.	70	36		18			18	34		17			17

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

(2) NOTE: EXCAVATION BASED ON FINAL PROFILE AT ABUTMENTS AND EXISTING GROUND AT 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: INTERMEDIATE DIAPHRAGMS SHALL BE PAID FOR IN ACCORDANCE WITH STANDARD DRAWING STD-14-1.

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

(7) NOTE: THE COST OF ALL MATERIALS AND LABOR NECESSARY FOR THE INSTALLATION OF 76 ANCHOR BOLT ASSEMBLIES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CLASS "A" CONCRETE (BRIDGES), ITEM NO. 604-03.01.

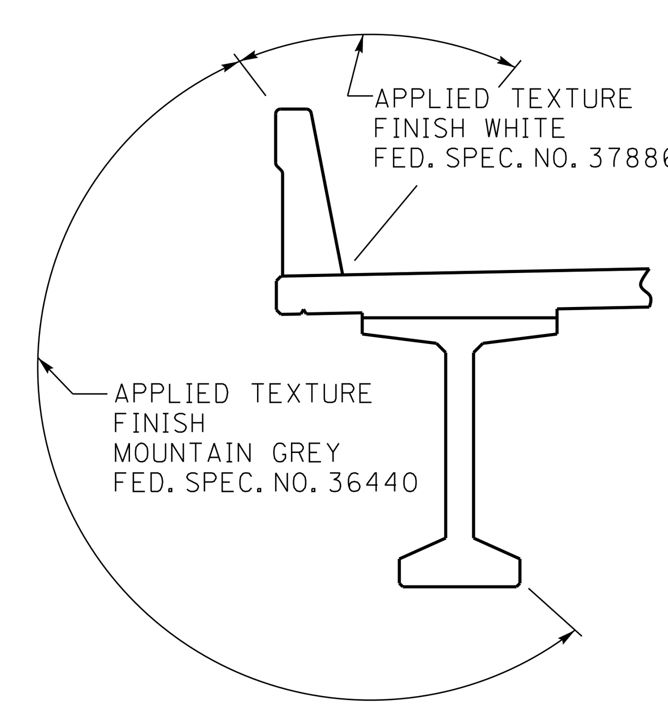
(8) NOTE: GRANULAR BACKFILL SHALL BE CLASS "A" GRADING "D" MATERIAL. SEE STANDARD DRAWING STD-10-1.

(9) NOTE: COST OF 4 BRIDGE DECK DRAINS TO BE INCLUDED IN THE UNIT PRICE FOR THE PARAPET.

△1 (10) NOTE: LUMP SUM: TO INCLUDE COMPLETE REMOVAL OF EXISTING BRIDGE NO. 36-SR15-17.87 TO NATURAL GROUNDLINE BETWEEN STA. 590+65.00 AND STA. 591+85.00. EXISTING BRIDGE IS 114′-0" LONG, 34′-0" WIDE AND CONSISTS OF 4 SPANS OF CONCRETE TEE BEAMS WITH CONCRETE SUBSTRUCTURE. TDOT MAINTENANCE WILL REVIEW AND RECLAIM ANY SALVAGEABLE ITEMS ON EXISTING STRUCTURES. COORDINATION WITH REGION 4 BRIDGE REPAIR (731-935-0247) SHOULD BE MADE PRIOR TO BRIDGE REMOVAL.

(11) NOTE: SEE FOUNDATION PREPARATION NOTE THIS SHEET.

(12) NOTE: THE UNIT PRICE BID FOR THE CAST STEEL POINTS SHALL INCLUDE FURNISHING AND INSTALLATION TO PILES.



APPLIED TEXTURE FINISH SKETCH

NOTE: IN ADDITION TO THE SURFACES SHOWN IN THE APPLIED TEXTURE FINISH SKETCH ALL EXPOSED SURFACES OF WINGWALLS, ABUTMENT BEAMS, BENTS AND EXTERIOR PORTIONS OF ENDWALLS ARE TO RECEIVE AN APPLIED TEXTURE FINISH (MOUNTAIN GREY, FED. SPEC. NO. 36440).

BRIDGE NO. 1

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES AND ESTIMATED QUANTITIES
STATE ROUTE 15
OVER
SMITH FORK CREEK
STATION 591+50.00
LOG MILE 17.87
HARDIN COUNTY
2012

KATHLEEN D. MCLAUGHLIN — STATE OF TENNESSEE — Registered Engineer — AGRICULTURE COMMERCE — No. 101334 — 9/29/2014

CORRECT [signature] ENGINEER OF STRUCTURES

DESIGNED BY	D. SHIKE	DATE	9-10
DRAWN BY	P. MOSHER	DATE	10-11
SUPERVISED BY	MBC/KDM	DATE	10-11
CHECKED BY	DJS	DATE	1-12

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U-52-94