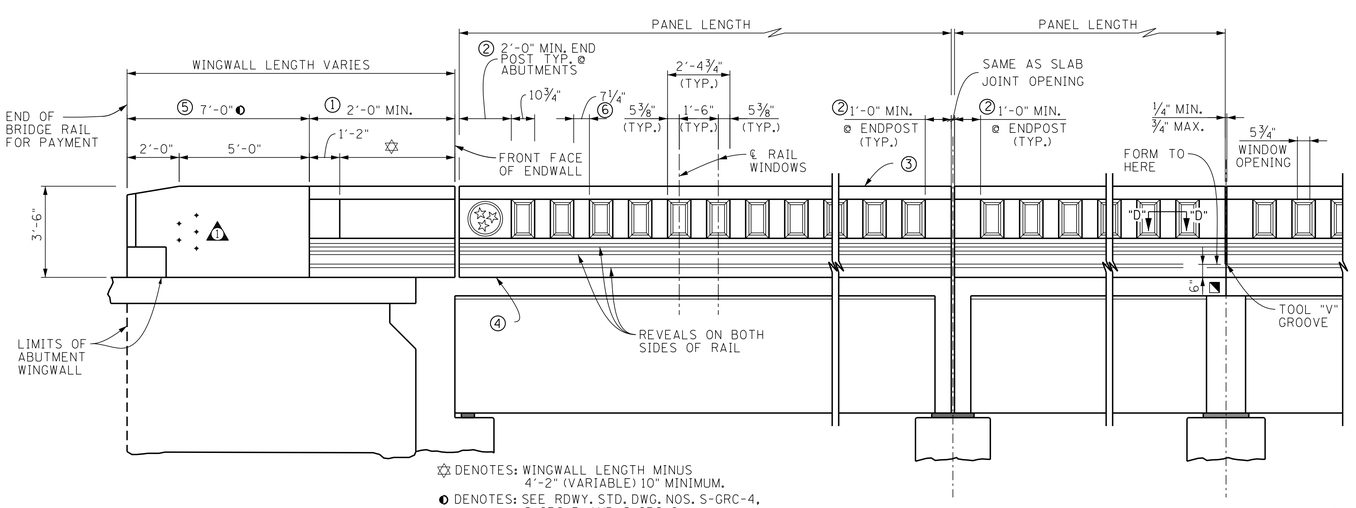
STD-11-4.DGN



✡ DENOTES: WINGWALL LENGTH MINUS 4'-2" (VARIABLE) 10" MINIMUM.

◐ DENOTES: SEE RDWY. STD. DWG. NOS. S-GRC-4, S-GRC-5 AND S-GRC-6.

AT ABUTMENTS

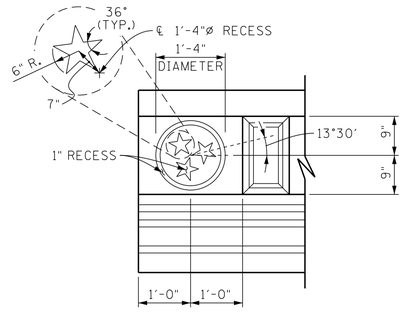
AT BENTS WITH SLAB EXPANSION JOINTS

AT BENTS WITHOUT SLAB EXPANSION JOINTS

◥ DENOTES: INCREASE 3" FOR STRUCTURES WITH AN OVERLAY.

RAIL ELEVATION

(SIDEWALK NOT SHOWN)



STATE SEAL DETAIL

(SEAL TO BE ON BOTH FACES OF RAIL)

PROJECT NO.	YEAR	SHEET NO.
	2019	

REVISIONS

NO.	DATE	BY	BRIEF DESCRIPTION
1	8-30-19	JHW	REVISED GUARDRAIL INSERT SPACING

ESTIMATED QUANTITIES

	ITEMS	CLASS "A" CONCRETE C.Y. (PER FOOT)	REINFORCING STEEL LB. (PER FOOT)
①	ONE WINGWALL PARAPET	0.4667	49.8
②	ONE RAIL ENDPOST	0.3591	24.8
③	TOP OF RAIL	0.0933	5.3
④	BOTTOM OF RAIL	0.2328	12.1

ESTIMATED QUANTITIES

	ITEMS	CLASS "A" CONCRETE C.Y. (TOTAL PER UNIT)	REINFORCING STEEL LB. (TOTAL PER UNIT)
⑤	ONE PARAPET ENDPOST	1.72	105.2
⑥	ONE RAIL POST	0.1215	15.3

SEE RAIL ELEVATION ON THIS SHEET FOR CORRESPONDING NUMBERED LOCATIONS OF ESTIMATED QUANTITY LOCATIONS.

GENERAL NOTES:

1) SPECIFICATIONS: STANDARD ROAD AND BRIDGE SPECIFICATIONS OF THE TENNESSEE DEPARTMENT OF TRANSPORTATION CURRENT EDITION.

2) DESIGN SPECIFICATIONS: AASHTO CURRENT EDITION WITH ADDENDA.

3) CONCRETE: TO BE CLASS "A",f'c = 3,000 psi. SEE STANDARD SPECIFICATIONS SECTION 604 - CONCRETE STRUCTURES.

4) REINFORCING STEEL: TO BE ASTM A615 GRADE 60. STANDARD CRSI HOOK DETAILS APPLY UNLESS OTHERWISE NOTED ON THE BILL OF STEEL. SPACING DIMENSIONS ARE CENTER TO CENTER UNLESS OTHERWISE NOTED ON DETAIL DRAWINGS. ALL STEEL TO BE EPOXY COATED. COST TO BE INCLUDED IN UNIT PRICE BID FOR RAIL.

5) 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.

6) PAYMENT FOR CONCRETE RAIL SHALL BE BASED ON LINEAR FEET FROM END OF ENDPOST TO END OF ENDPOST.

7) RAILING SHALL NOT BE CONSTRUCTED ON ANY STRUCTURE UNTIL THE ENTIRE BRIDGE DECK HAS BEEN POURED AND ALL FALSEWORK HAS BEEN STRUCK.

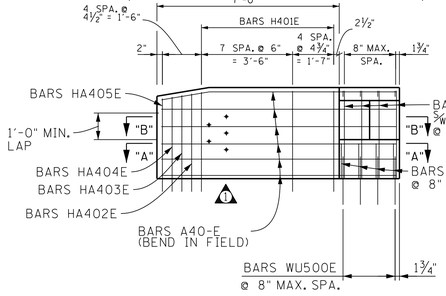
8) BASIS OF PAYMENT: ALL MISCELLANEOUS ITEMS, LABOR, MATERIALS, TOOLS AND INCIDENTALS FOR CONSTRUCTING THE ENTIRE CONCRETE RAIL SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 620-05.02.

9) PRIOR TO CONSTRUCTING THE RAIL SYSTEM, SHOP DRAWINGS CONTAINING THE ENTIRE RAIL IN ELEVATION VIEW AND BILL OF STEEL SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

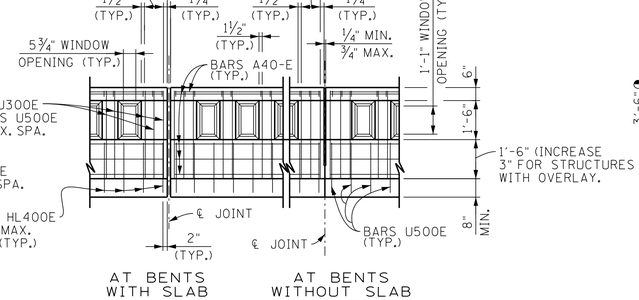
10) OPEN JOINTS OR CONSTRUCTION JOINTS WILL BE REQUIRED AS SHOWN ON THIS SHEET OR AS MODIFIED ON CONTRACT DRAWINGS.

11) A ¾"×4" FLAT DUMBBELL OR FLAT RIBBED P.V.C. (POLYVINYL CHLORIDE) WATERSTOP. WATERSTOP MUST BE CONTINUOUS ENTIRE LENGTH OF PARAPET. RUBBER WATERSTOP MUST BE FACTORY OR FIELD VULCANIZED OR CEMENT SPLICED WITH THE AID OF REMOLDED JUNCTIONS, AND/OR UNIONS. SEE "ON BRIDGE SLAB AT POST" DETAIL ON STD. DWG. NO. STD-14-4A FOR WATERSTOP LOCATION.

12) AVERAGE WEIGHT OF RAILING WITH NO OVERLAY IS 560 LBS. PER L.F..



AT ABUTMENTS

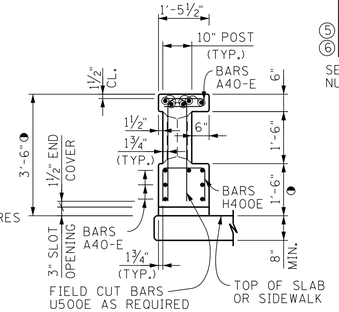


AT BENTS WITH SLAB EXPANSION JOINTS

AT BENTS WITHOUT SLAB EXPANSION JOINTS

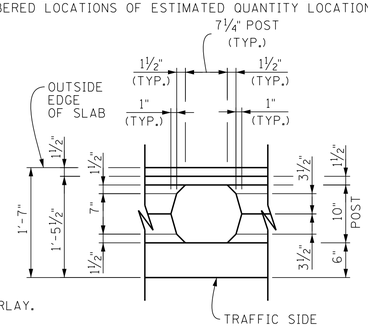
RAIL ELEVATION

(SIDEWALK NOT SHOWN)

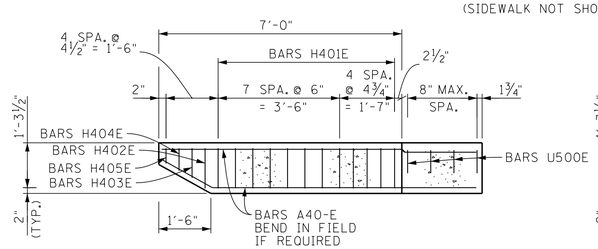


SECTION "S"-"S"

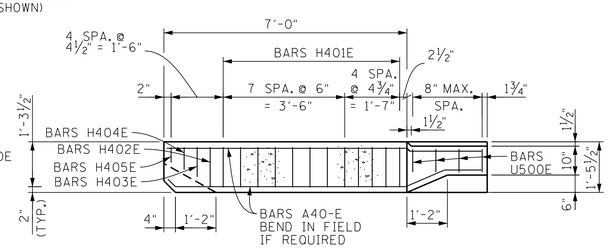
◐ DENOTES: ADD 3" FOR STRUCTURES WITH OVERLAY.



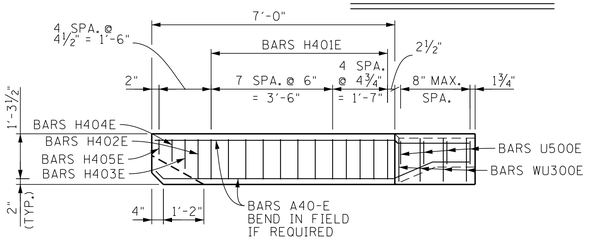
SECTION "D"-"D"



SECTION "A"-"A"



SECTION "B"-"B"



VIEW "C"-"C"

THE PERFORMANCE OF THE BRIDGE PARAPET HAS BEEN SUCCESSFULLY EVALUATED UNDER MASH 2016 TL-5 (SEE TTI REPORT 469468-2-1) AND CAN BE USED FOR DESIGN SPEEDS OF 50 MPH AND GREATER. THE WINGPOST HAS BEEN SUCCESSFULLY EVALUATED UNDER MASH TL-4 (SEE REPORT TRB 2672(39) 41-51).

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION

CONCRETE CLASSIC RAIL (42" TALL) 2019

DESIGNED BY _____ DATE _____
DRAWN BY KEVIN MARTINKO DATE 05-19
SUPERVISED BY _____ DATE _____
CHECKED BY _____ DATE _____

CORRECT _____ ENGINEER OF STRUCTURES

STD-11-4

1/10/2020 2:22:22 PM P:\Structures\StandardDocuments\StandardDrawings\STD-11-4\STD-11-4.dgn