

NOTES

THE BARRIER RAIL IN EACH SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

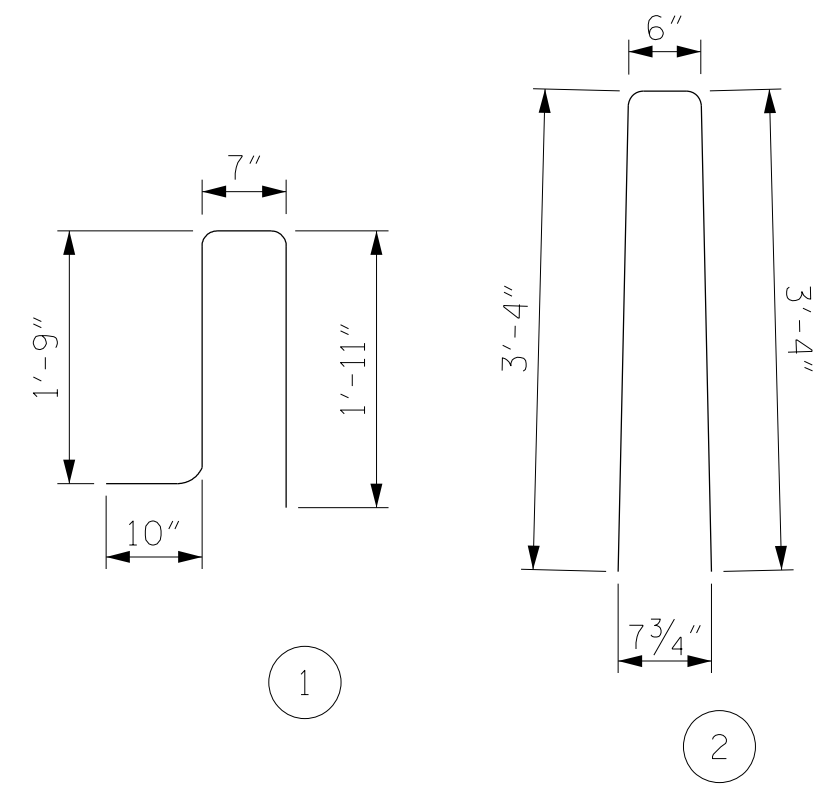
WHEN FOAM JOINT SEAL IS REQUIRED, THE JOINT IN THE DECK SHALL BE SAWED PRIOR TO THE CASTING OF VERTICAL CONCRETE BARRIER RAIL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #5 S3 & S4 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. THE YIELD LOAD FOR THE #5 S3 & S4 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS, THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 20 FEET IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 10 FEET IN LENGTH.

BAR TYPES

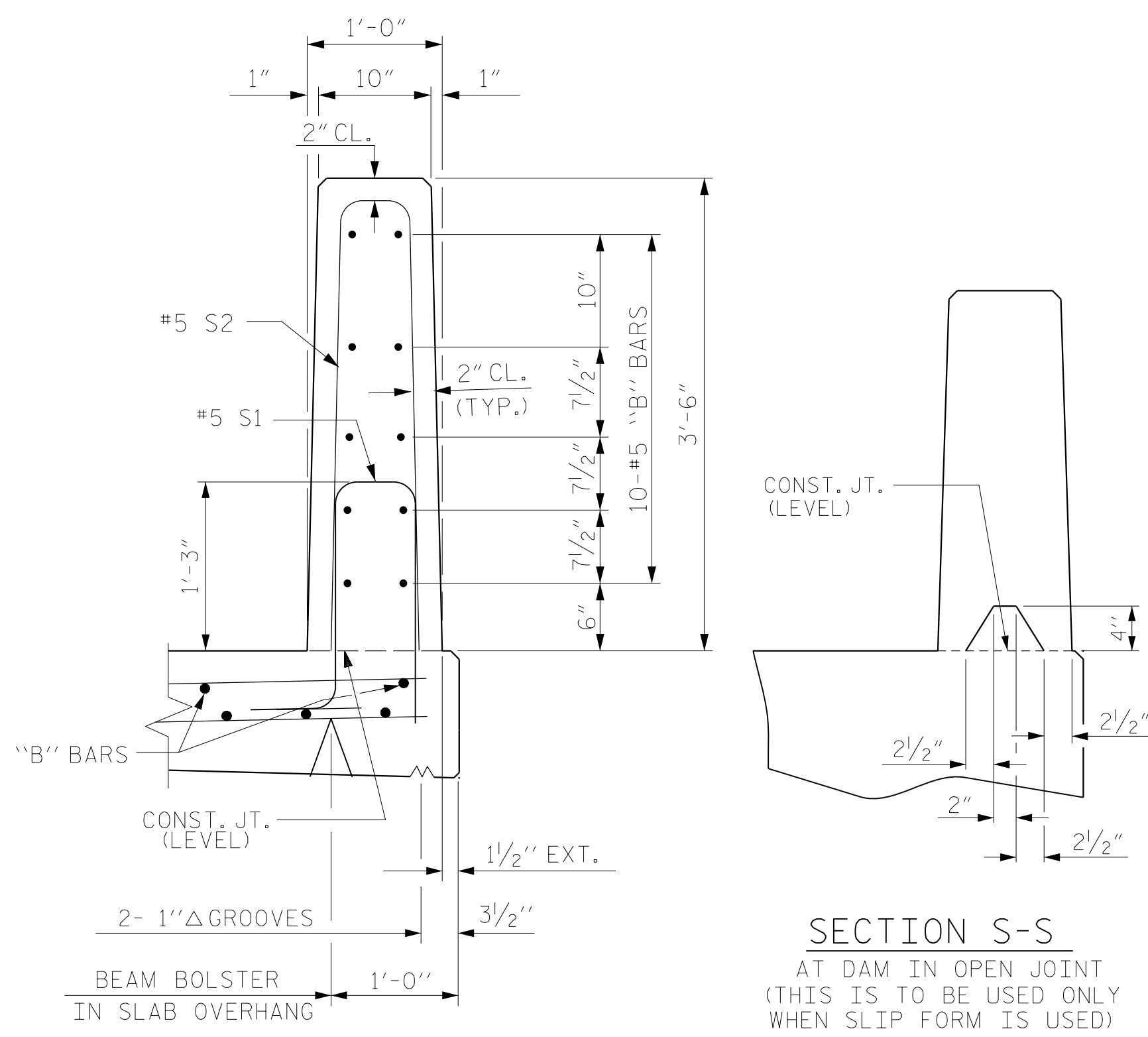


ALL BAR DIMENSIONS ARE OUT TO OUT

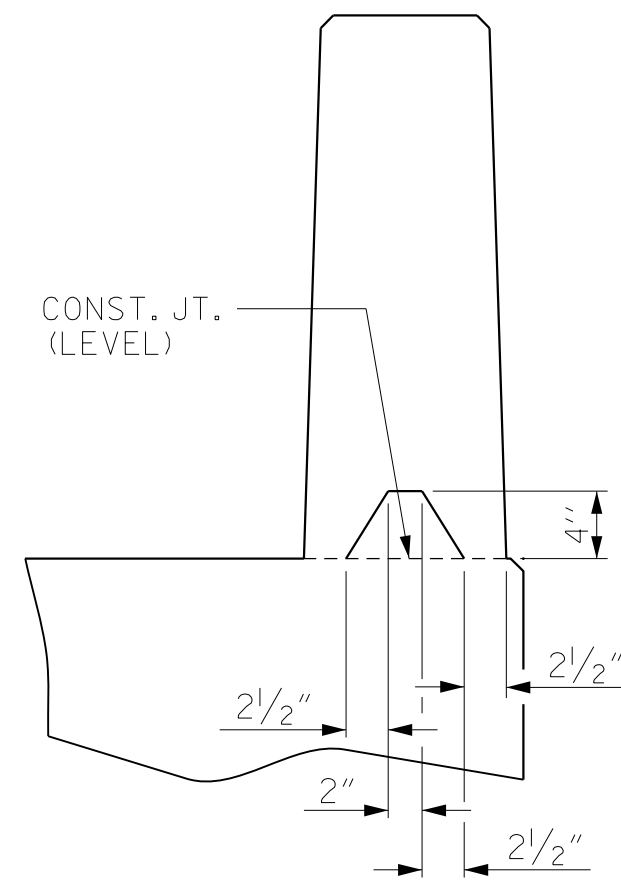
BILL OF MATERIAL

FOR VERTICAL CONCRETE BARRIER RAIL ONLY						
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	
* B1	120	#5	STR	29'-7"	3703	
* B2	10	#5	STR	15'-5"	161	
* B3	10	#5	STR	15'-11"	166	
* B4	10	#5	STR	14'-8"	153	
* B5	10	#5	STR	14'-5"	150	
* S1	415	#5	1	5'-1"	2200	
* S2	415	#5	2	7'-2"	3102	
* S3	16	#5	STR	4'-0"	67	
* S4	32	#5	STR	3'-6"	117	

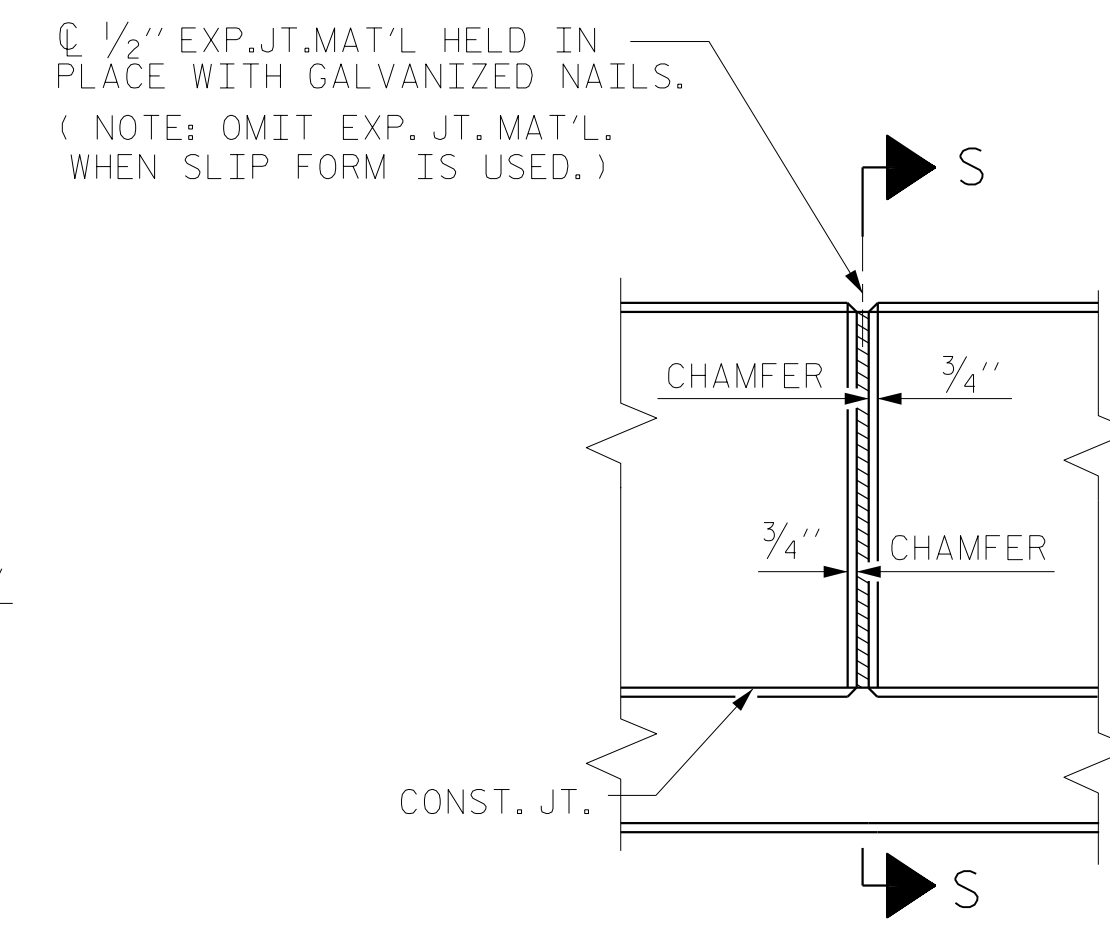
* EPOXY COATED REINFORCING STEEL	9819 LBS.
CLASS AA CONCRETE	50.2 CU. YDS.
VERTICAL CONCRETE BARRIER RAIL	422.9 LIN. FT.



SECTION THRU RAIL

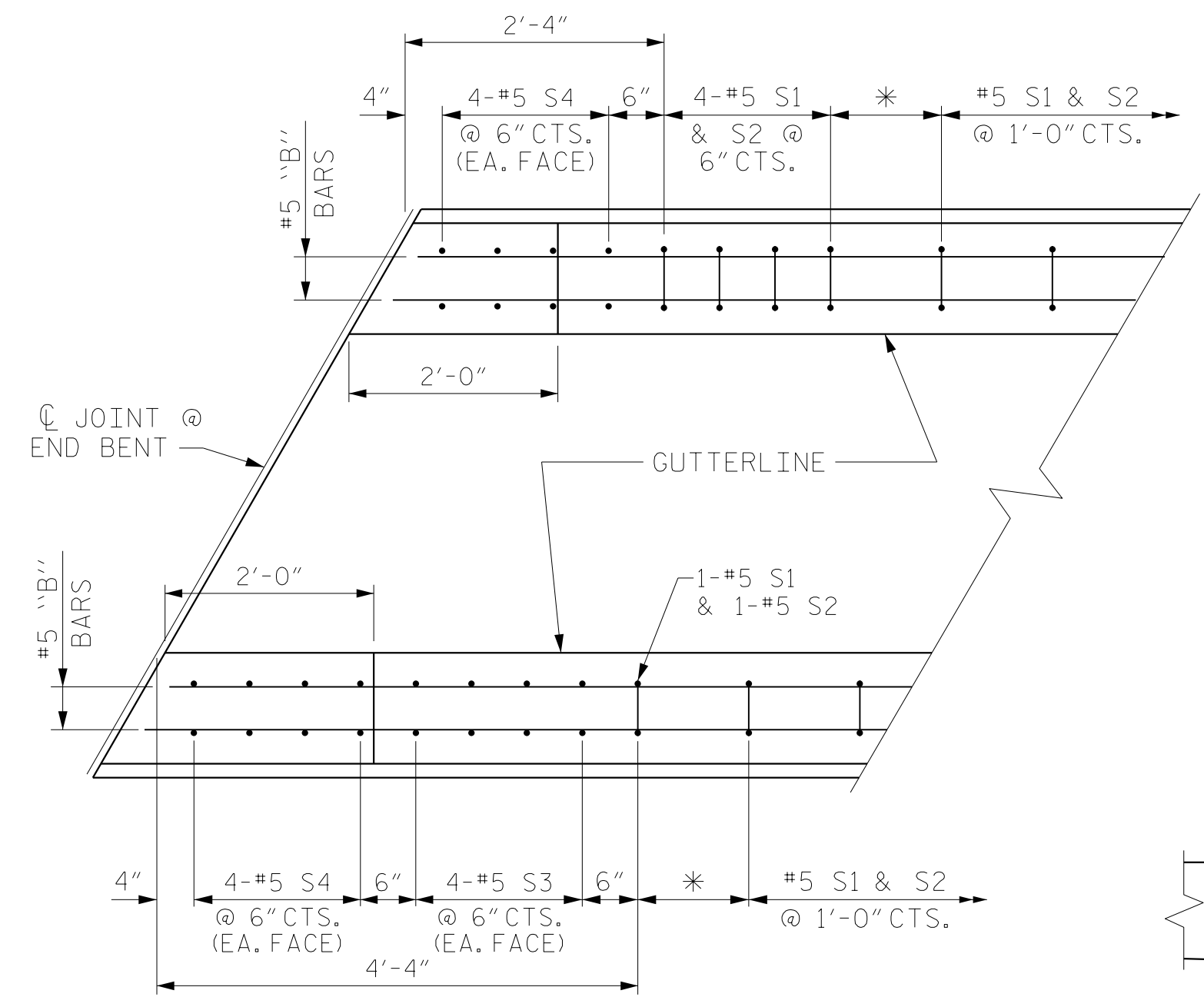


SECTION S-S AT DAM IN OPEN JOINT (THIS IS TO BE USED ONLY WHEN SLIP FORM IS USED)



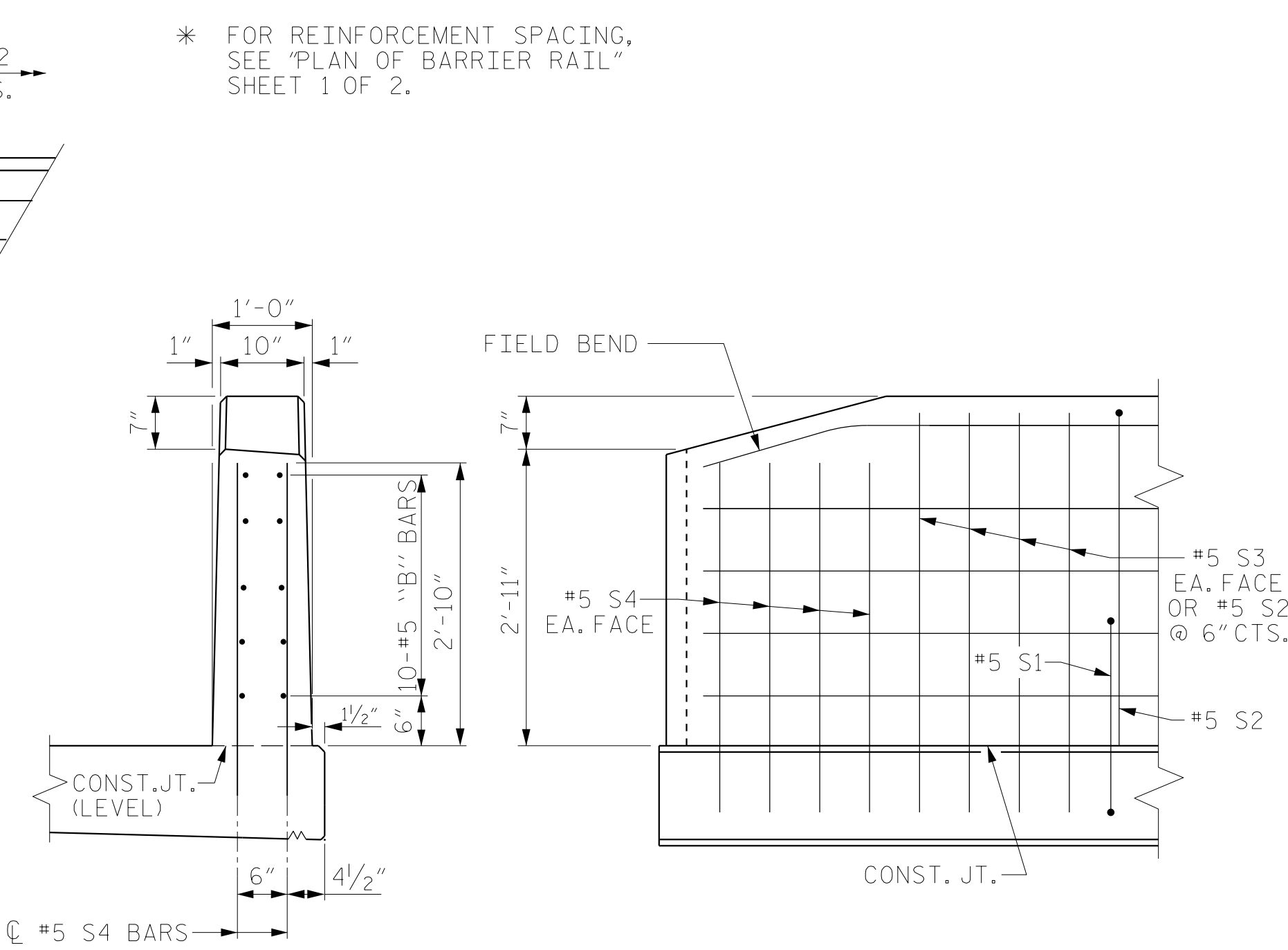
ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS



PLAN

PLAN SHOWN TANGENT FOR CLARITY DIMENSIONS SHOWN ARE ALONG ARC LENGTH



END VIEW

SIDE VIEW

END OF RAIL DETAILS

FOR ADHESIVE ANCHORING AT SAWED JOINTS

PROJECT NO. R-2707C
CLEVELAND COUNTY
STATION: 29+07.16 -Y2-

SHEET 2 OF 2

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD					
VERTICAL CONCRETE BARRIER RAIL					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

SHEET NO.	
S3-22	TOTAL SHEETS
36	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

ASSEMBLED BY :	MKO	DATE :	11/2016
CHECKED BY :	JMR	DATE :	12/2016
DRAWN BY :	MAA 5/10	REV. 10/1/11	MAA/GM
CHECKED BY :	GM 5/10	REV. 12/5/11	MAA/GM
		REV. 6/13	MAA/GM