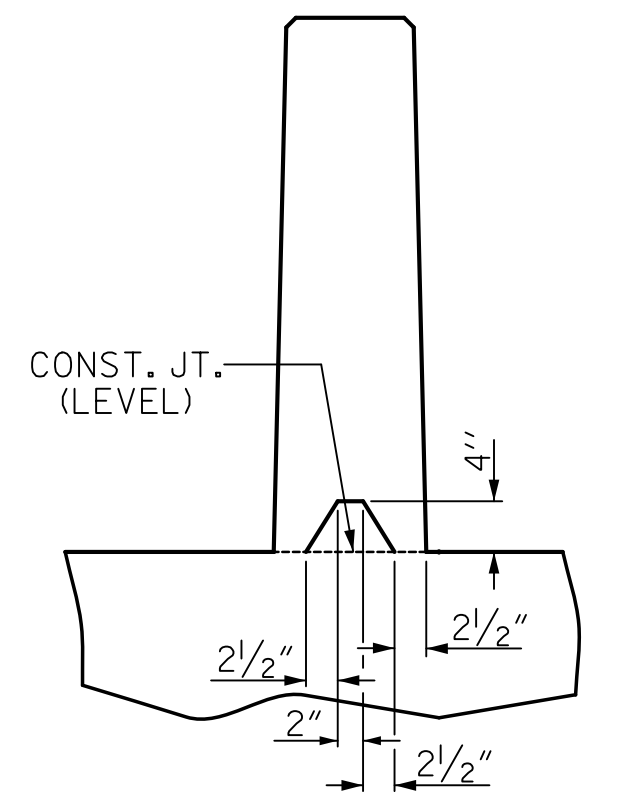
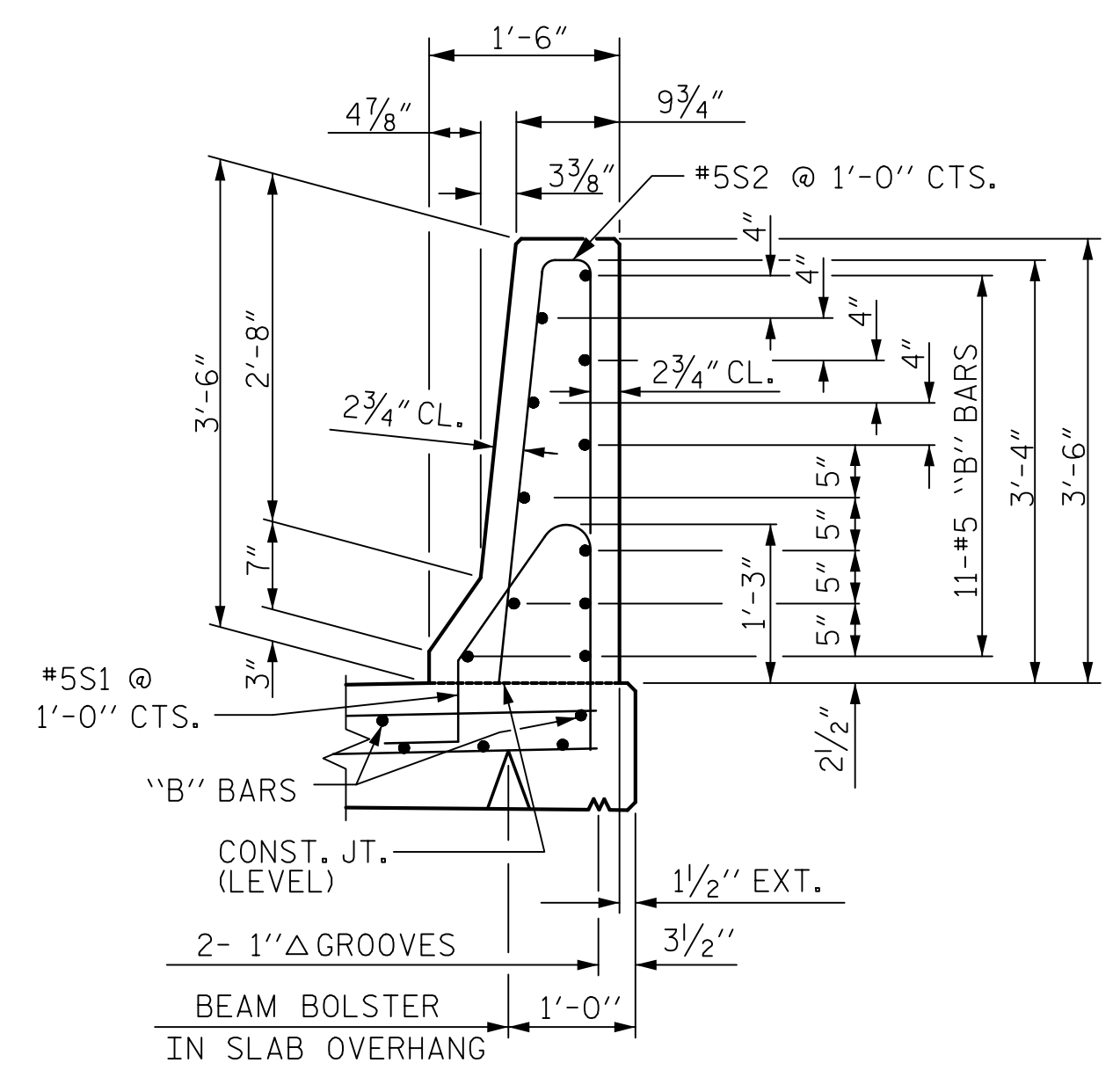


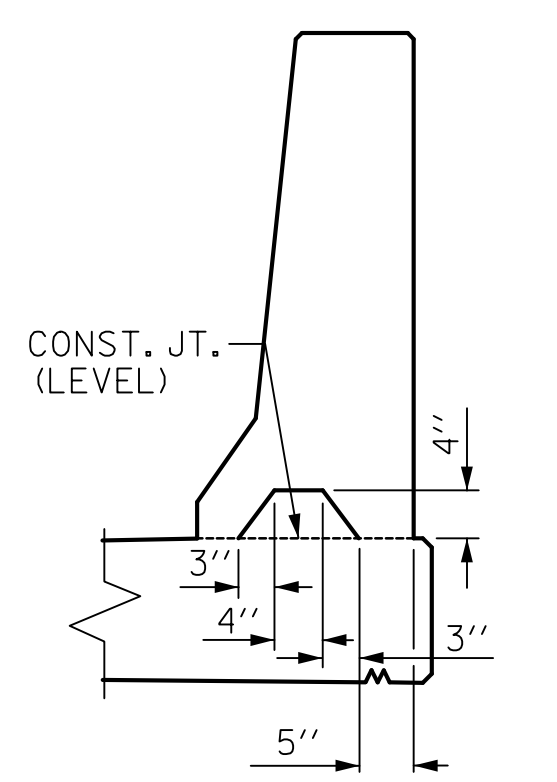
SECTION THRU VERTICAL RAIL
LOOKING UPSTATION LEFT



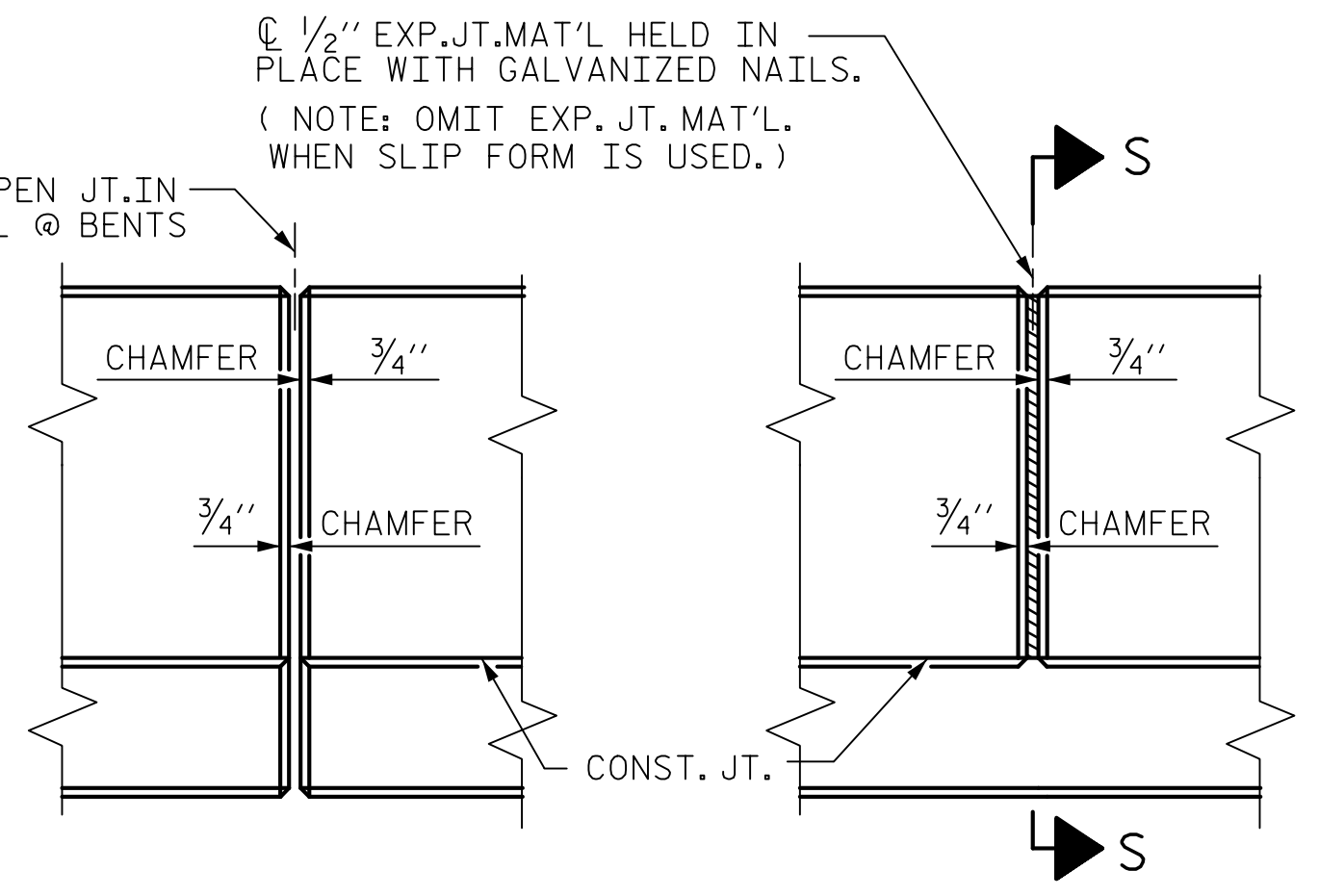
SECTION S-S
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY
WHEN SLIP FORM IS USED)



SECTION THRU BARRIER 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

NOTES

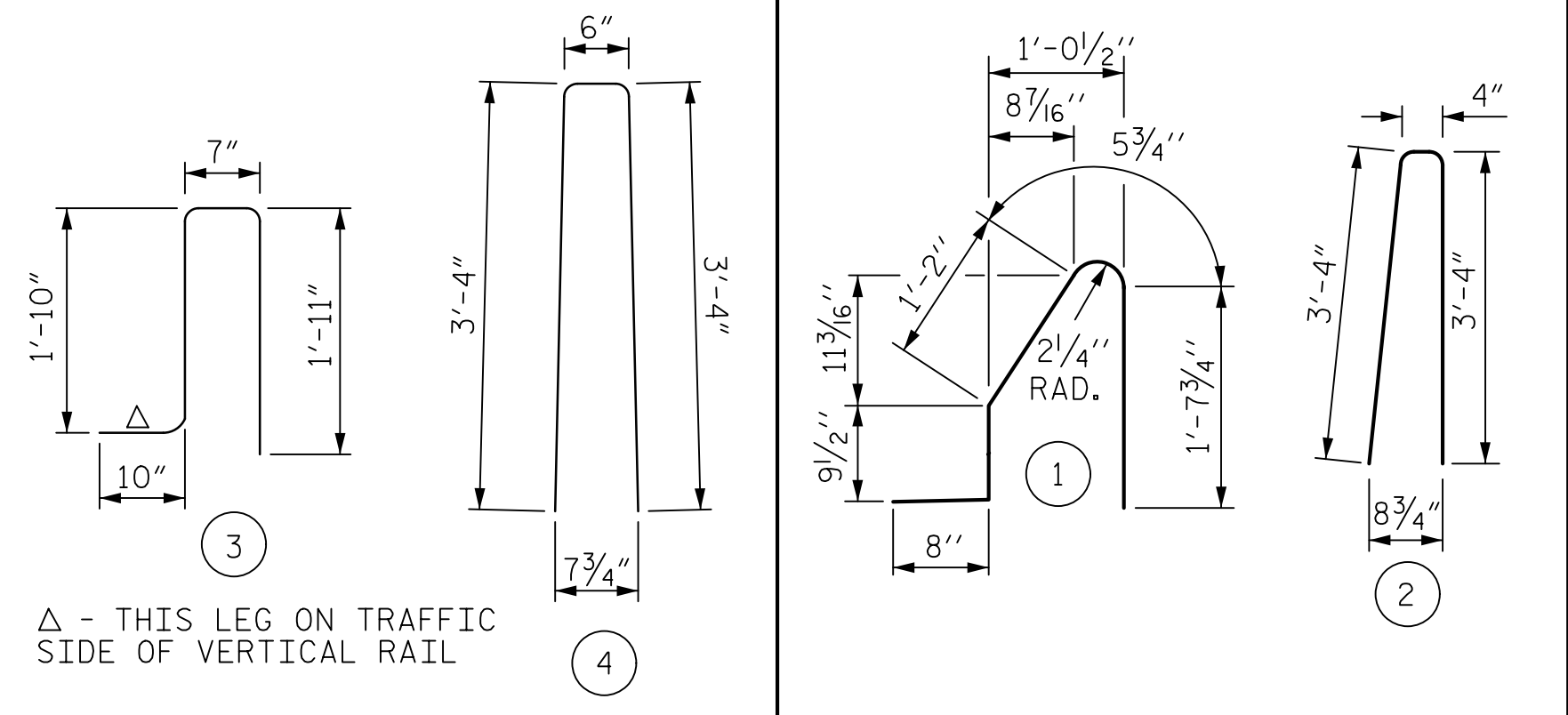
THE BARRIER RAIL AND VERTICAL RAIL IN EACH SPAN SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

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.

THE #5S1, #5S2, #5S3 AND #5S4 BARS MAY BE SHIFTED SLIGHTLY IN ORDER TO MAINTAIN A 2" MINIMUM CLEARANCE TO THE 1/2" EXPANSION JOINT MATERIAL IN THE BARRIER AND VERTICAL RAIL.

BAR TYPES



ALL BAR DIMENSIONS ARE OUT TO OUT

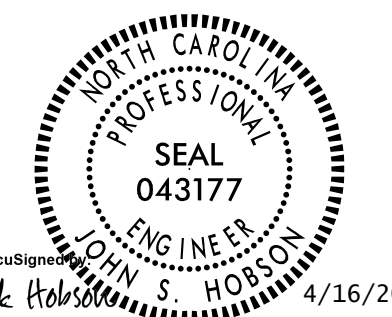
BILL OF MATERIAL

FOR VERTICAL CONCRETE BARRIER RAIL ONLY						FOR CONCRETE BARRIER RAIL ONLY					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	40	#5	STR	25'-3"	1053	* B1	44	#5	STR	25'-3"	1159
* B2	80	#5	STR	25'-8"	2142	* B2	88	#5	STR	25'-8"	2356
* S3	312	#5	3	5'-2"	1681	* S1	312	#5	1	4'-9"	1546
* S4	312	#5	4	7'-2"	2332	* S2	312	#5	2	7'-0"	2278
* EPOXY COATED REINFORCING STEEL 7208 LBS.						* EPOXY COATED REINFORCING STEEL 7339 LBS.					
CLASS AA CONCRETE 37.0 CU. YDS.						CLASS AA CONCRETE 42.2 CU. YDS.					
VERTICAL CONCRETE BARRIER RAIL 310.6 LIN. FT.						CONCRETE BARRIER RAIL 310.6 LIN. FT.					

QUANTITIES FOR BARRIER RAILS ON THE APPROACH SLABS ARE NOT INCLUDED IN THESE BILL OF MATERIALS. FOR QUANTITIES ON APPROACH SLABS, SEE APPROACH SLAB SHEETS.



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PROJECT NO. R-4707
GUILFORD COUNTY
STATION: 41+39.51 -Y-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
SUPERSTRUCTURE
CONCRETE
BARRIER RAILS

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS
2			4			39

DRAWN BY : J.A. LEE DATE : 11/07/18
CHECKED BY : J.S. HOBSON DATE : 2/12/19
DESIGN ENGINEER OF RECORD : J.S. HOBSON DATE : 02/07/20

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED