

**NOTES**

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

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

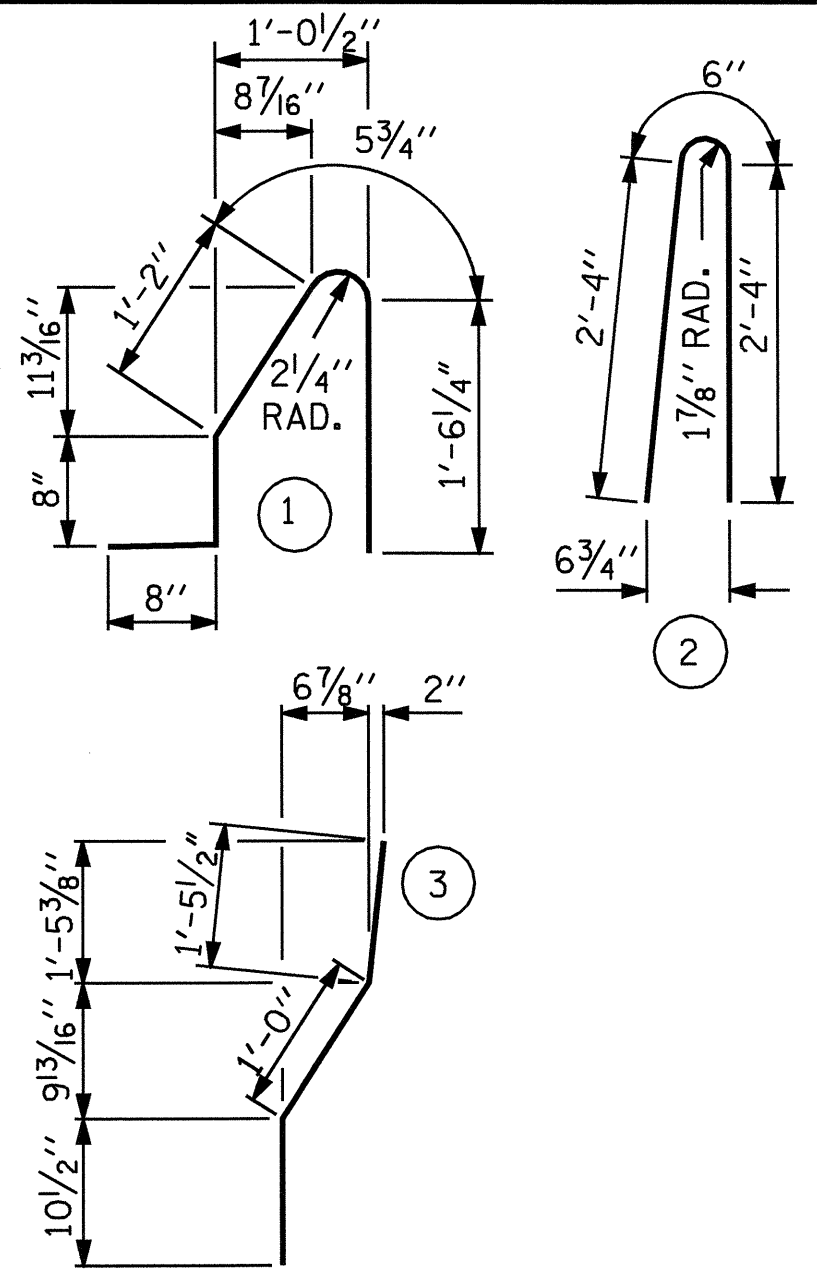
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #5 S3 AND #5 S4 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. FOR ADHESIVELY ANCHORED ANCHOR BOLTS OR DOWELS, SEE SPECIAL PROVISIONS. THE YIELD LOAD FOR THE #5 S3 AND #5 S4 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

VERTICAL 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 #5 S1 AND #5 S2 BARS MAY BE SHIFTED SLIGHTLY AS NECESSARY TO PROVIDE 2" CLEARANCE TO THE 1/2" EXPANSION JOINT.

**BAR TYPES**

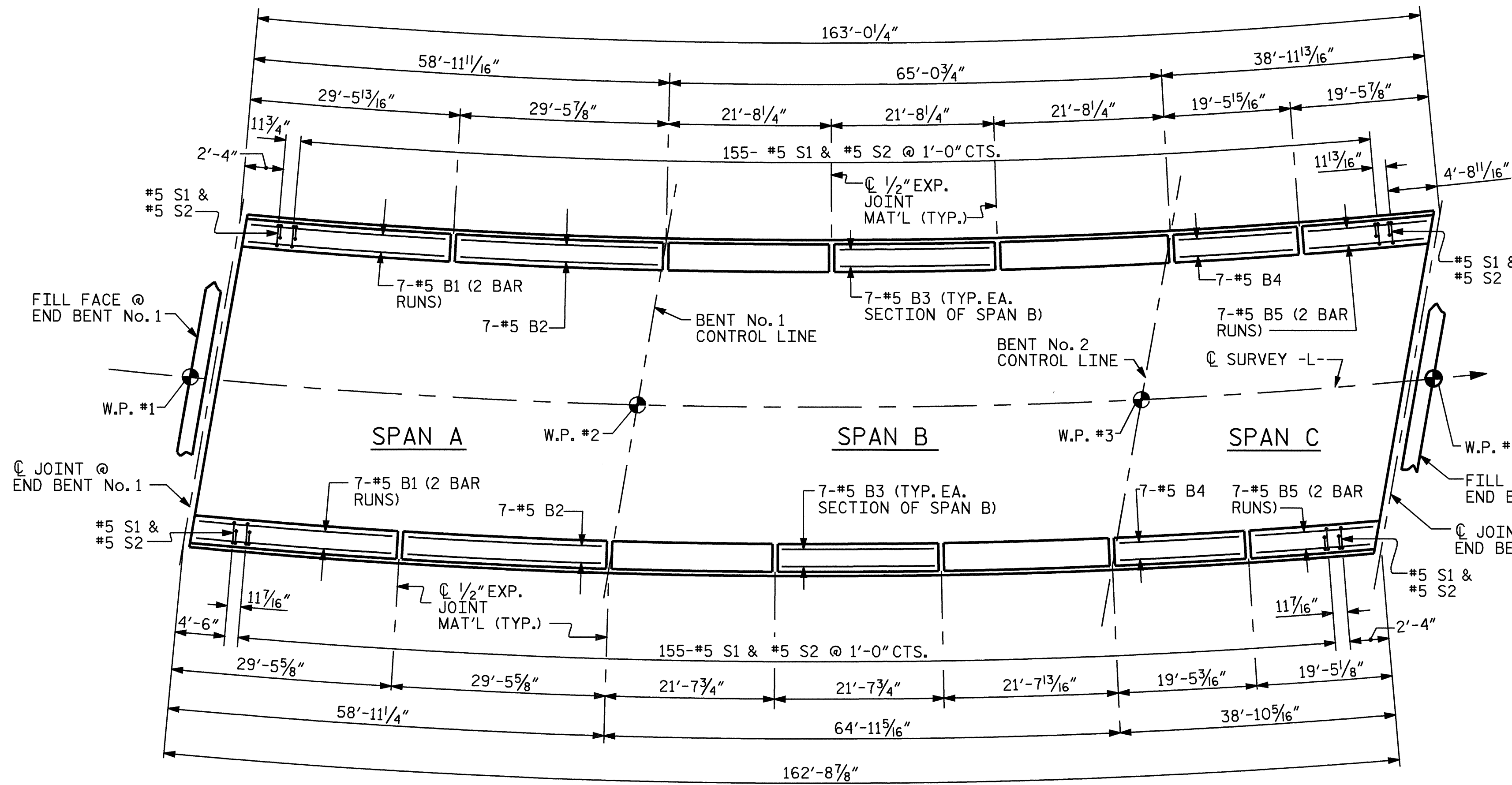


ALL BAR DIMENSIONS ARE OUT TO OUT

**BILL OF MATERIAL**

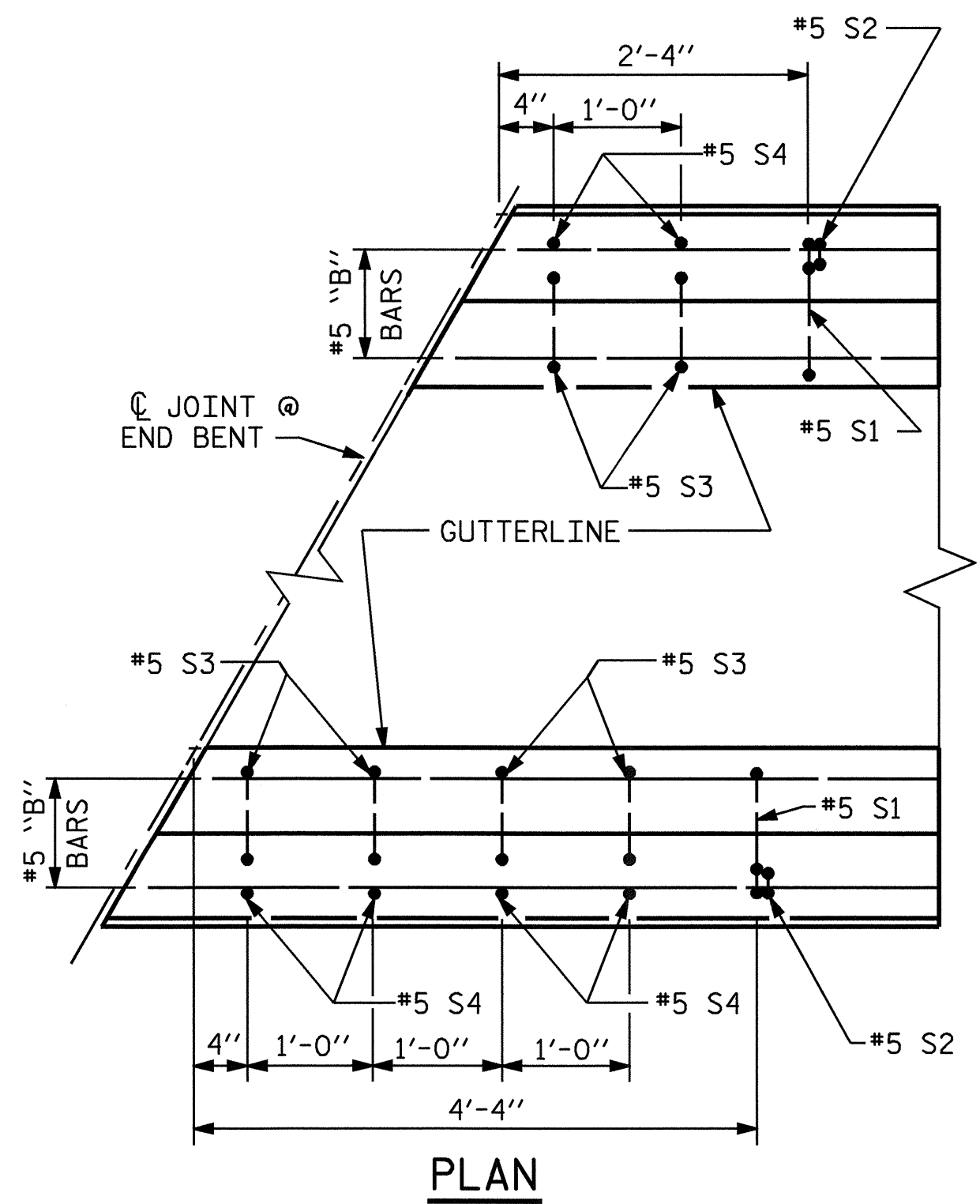
FOR CONCRETE BARRIER RAIL ONLY

BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
*S1	314	#5	1	4'-6"	1474
*S2	314	#5	2	5'-2"	1,692
*S3	12	#5	3	3'-4"	42
*S4	12	#5	STR	3'-2"	40
*B1	28	#5	STR	16'-3"	475
*B2	14	#5	STR	29'-0"	423
*B3	42	#5	STR	21'-3"	931
*B4	14	#5	STR	19'-0"	277
*B5	28	#5	STR	11'-3"	329
* EPOXY COATED REINFORCING STEEL				5,683	LBS.
CLASS AA CONCRETE				32.7	CU. YDS.
CONCRETE BARRIER RAIL				325.76	LIN. FT.

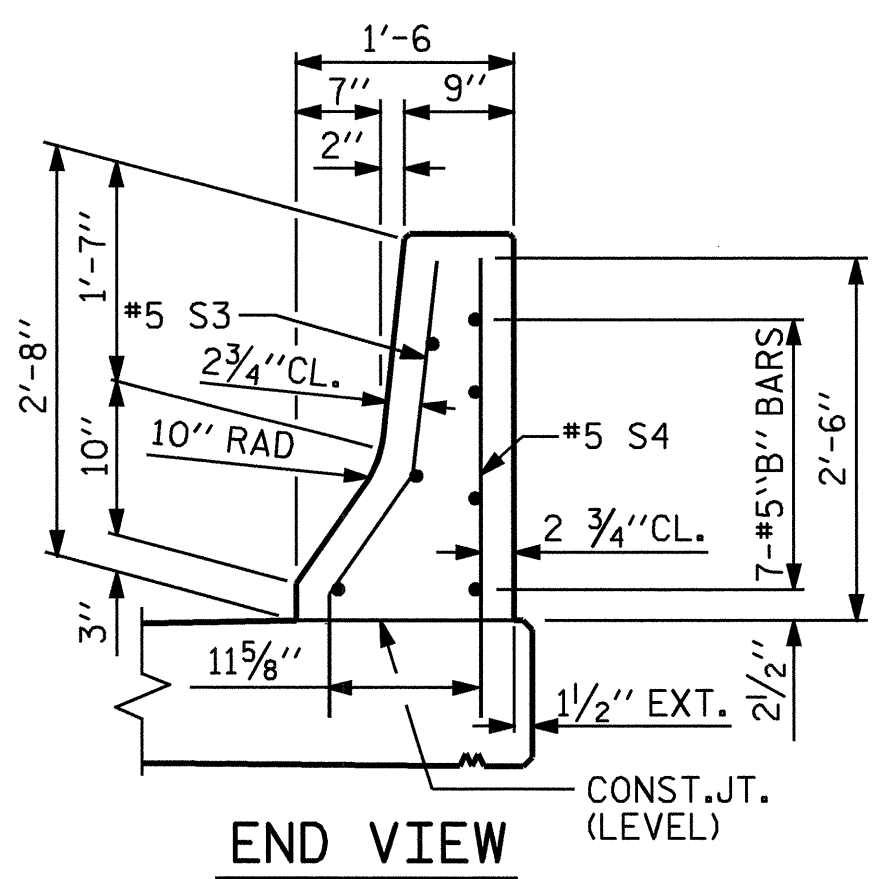


**PLAN**

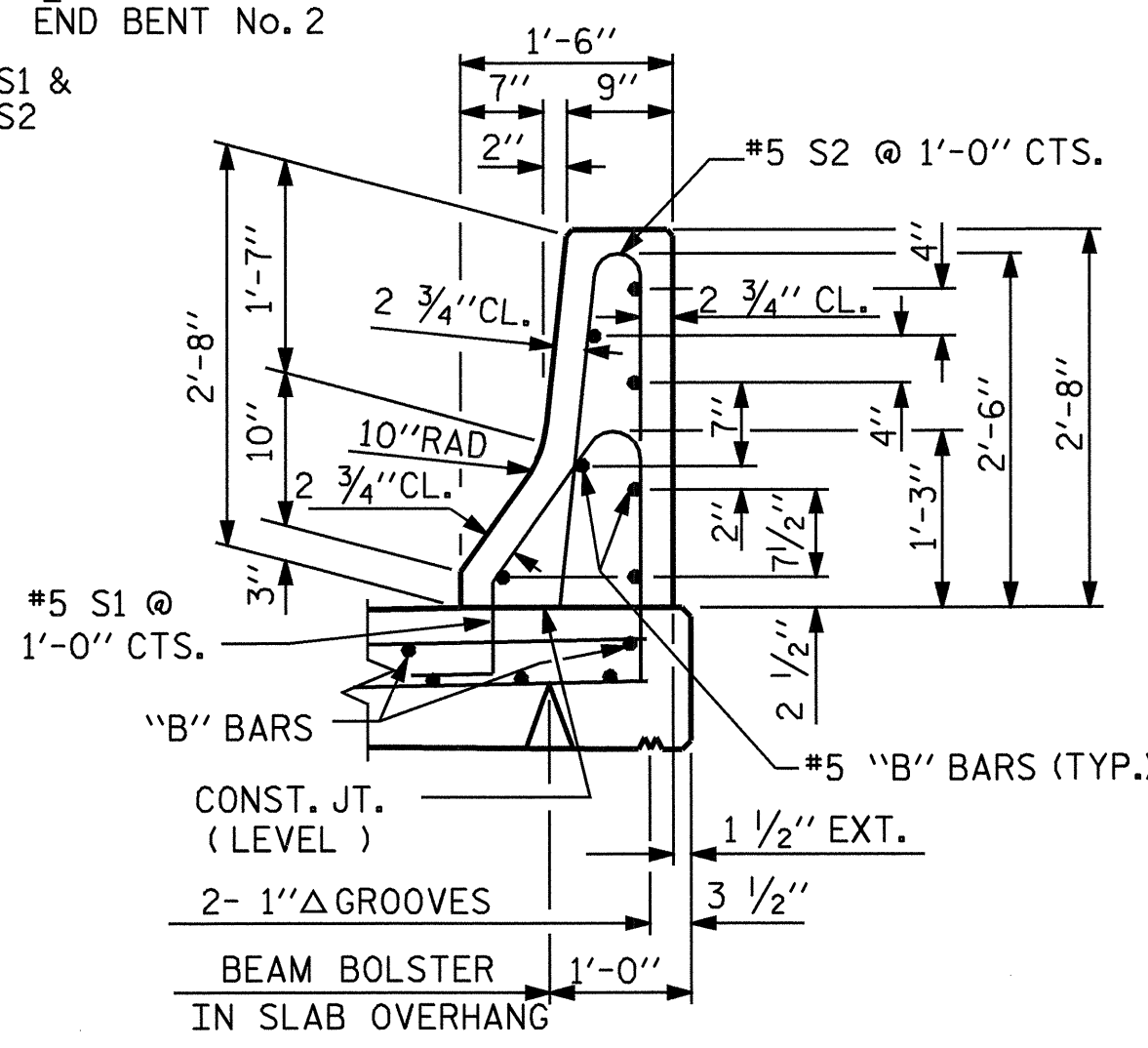
DIMENSIONS FOR BARRIER RAIL SECTIONS ARE TAKEN ALONG THE OUTSIDE FACE OF BARRIER RAIL ALONG ARC.



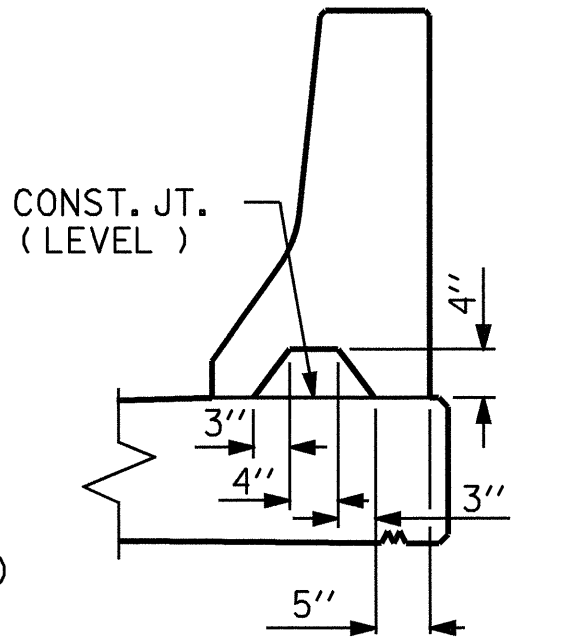
**PLAN**



**END VIEW**

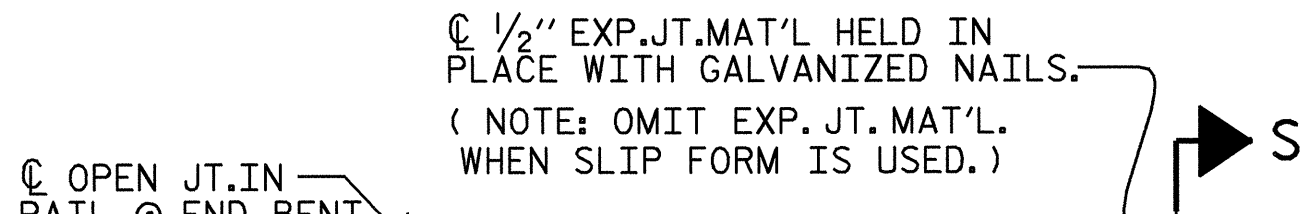


**SECTION THRU RAIL**

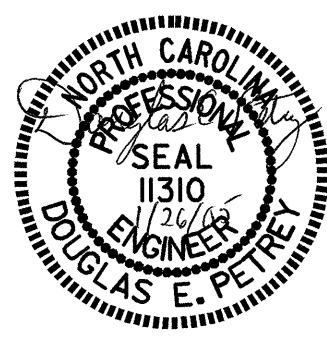


**SECTION S-S**

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



**ELEVATION AT EXPANSION JOINTS BARRIER RAIL DETAILS**



ASSEMBLED BY: A.R.CHESSON DATE: 6-04  
 CHECKED BY: B.N.GRADY DATE: 8-04  
 DRAWN BY: ARB 5/87 REV. 8/16/99 RWW/LJS  
 CHECKED BY: SJD 9/87 REV. 10/17/00 RWW/LJS  
 REV. 5/7/03R RWW/JTE

**END OF RAIL DETAILS FOR ADHESIVE ANCHORING AT SAWED JOINTS**

26-JAN-2005 11:21 W:\squadw\B3694\chesson\microstation\B3694\_sd.br\_01.dgn achesson

PROJECT NO. B-3694  
ROCKINGHAM COUNTY  
 STATION: 17+27.50 -L-

STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**STANDARD CONCRETE BARRIER RAIL**

OCTOBER 1987

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-16
1			3			TOTAL SHEETS
2			4			36

STD. NO. CBRI