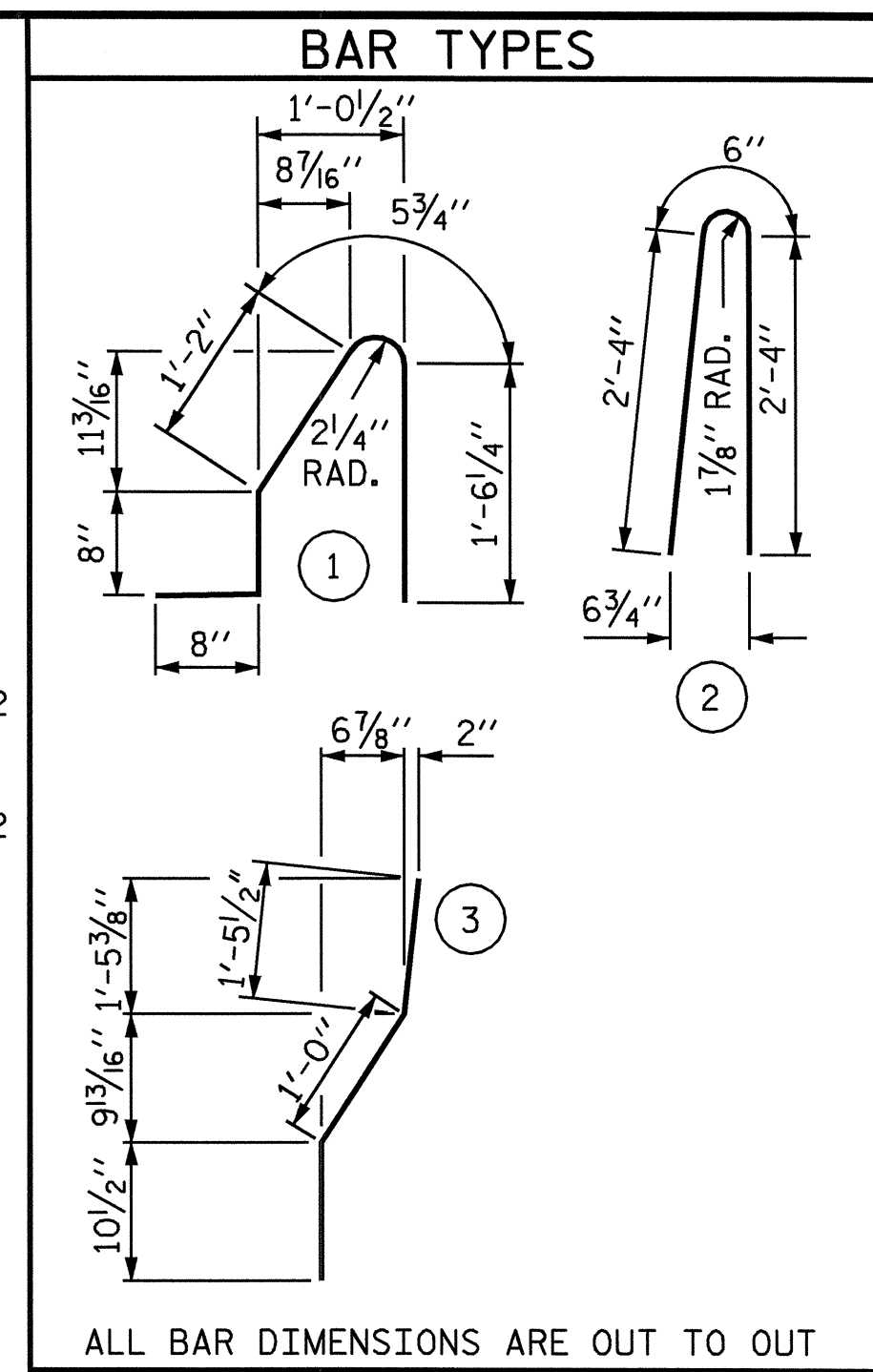


PLAN OF BARRIER RAIL



ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL					
FOR CONCRETE BARRIER RAIL ONLY					
BAR NO.	SIZE	TYPE	LENGTH	WEIGHT	
* B1	56	#5 STR	20'-6"	1197	
* B2	56	#5 STR	20'-7"	1202	
* B3	42	#5 STR	22'-7"	989	
* S1	464	#5	1 4'-6"	2178	
* S2	464	#5	2 5'-2"	2500	
* S3	12	#5	3 3'-4"	42	
* S4	12	#5	3 3'-2"	40	
* EPOXY COATED REINFORCING STEEL				8148 LBS.	
CLASS AA CONCRETE				47.4 CU. YDS.	
CONCRETE BARRIER RAIL				473.50 LIN. FT.	

NOTES:

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

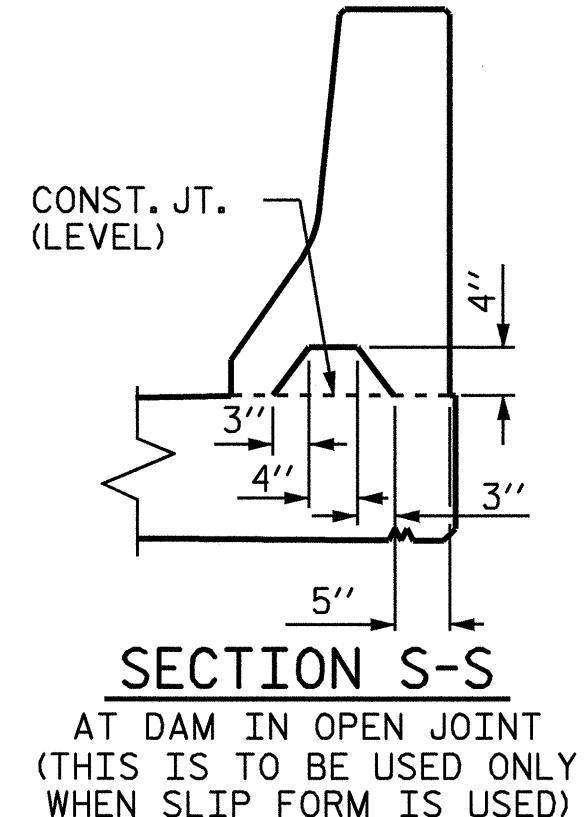
WHEN EVAZOTE JOINT SEAL IS REQUIRED, THE JOINT IN THE DECK SHALL BE SAWED PRIOR TO THE CASTING OF BARRIER RAIL.

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

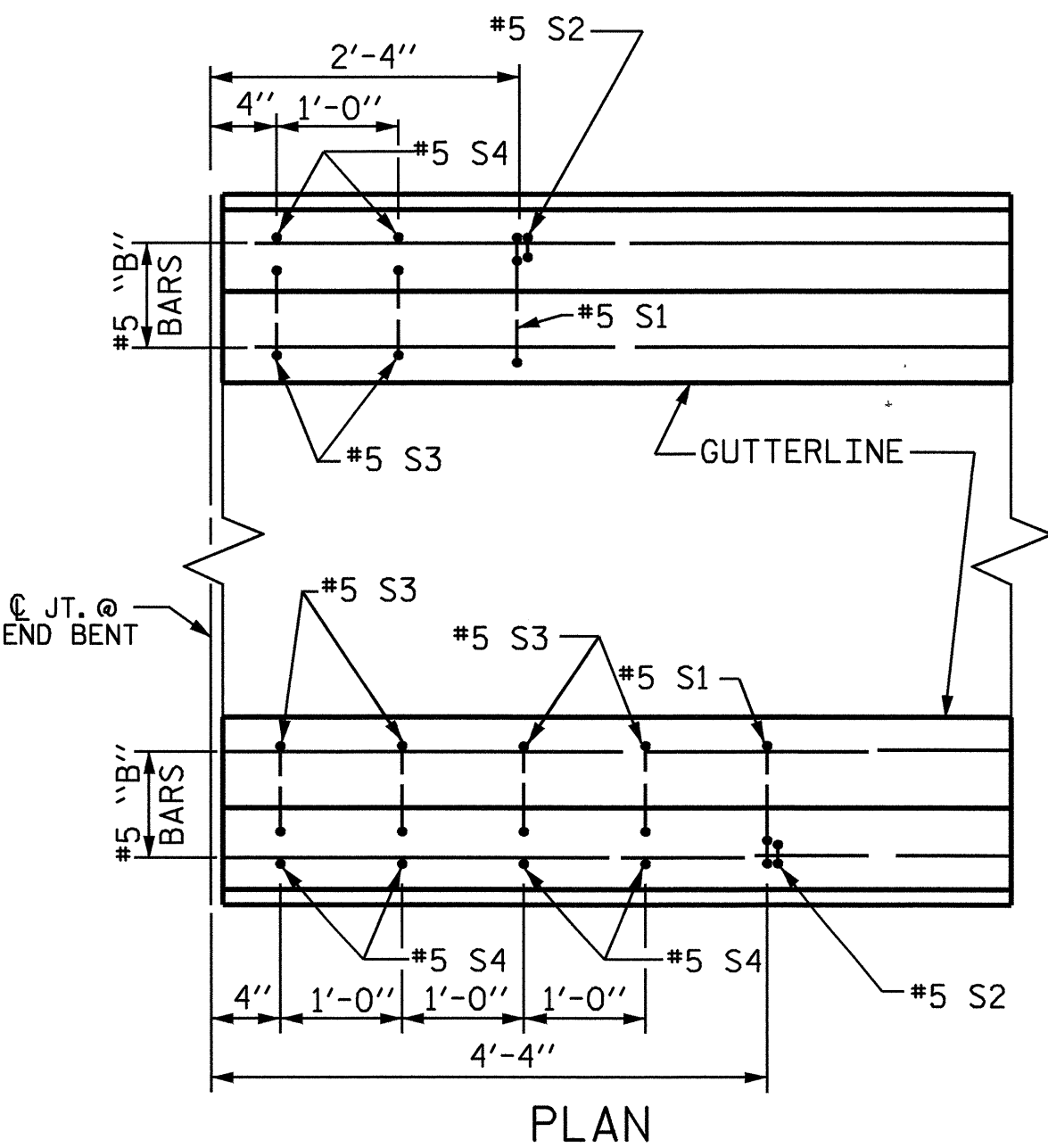
THE #5 "S" BARS MAY BE SHIFTED SLIGHTLY IN ORDER TO MAINTAIN A 2" MINIMUM CLEARANCE TO THE 1/2" EXPANSION JOINT MATERIAL IN THE BARRIER RAIL.

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.

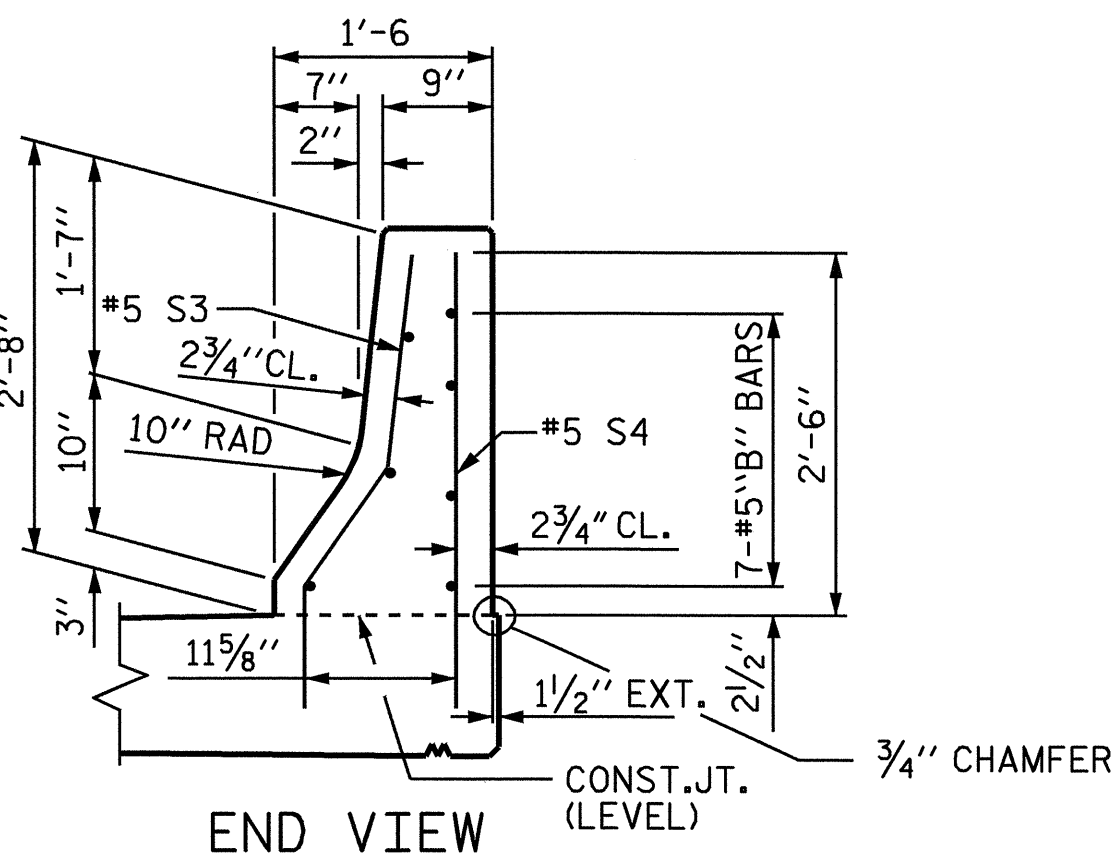
VERTICAL GROOVED CONTRACTION JOINTS, 1/2" IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. THE CONTRACTION JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE CONTRACTION 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.



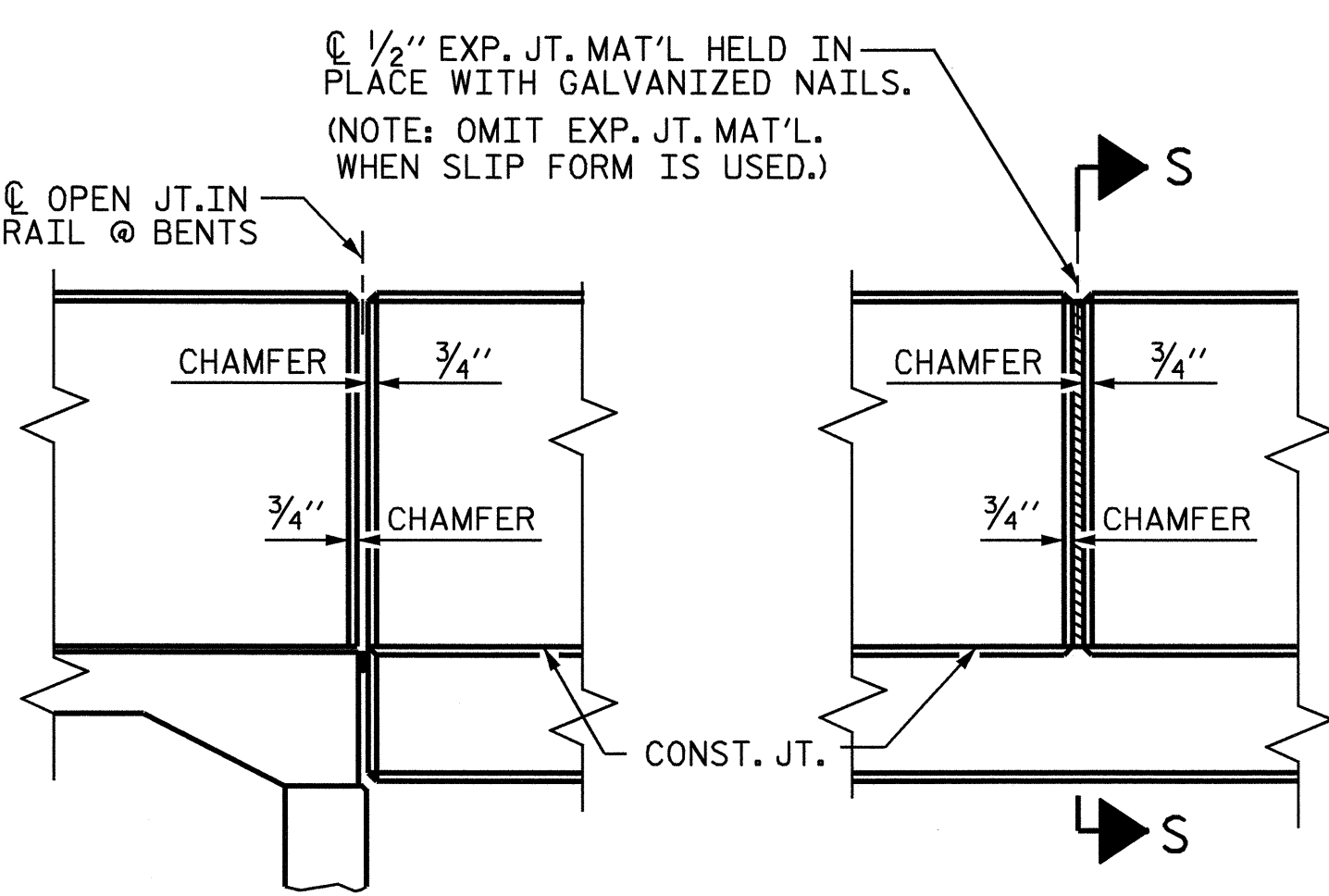
SECTION S-S
AT DAM IN OPEN JOINT
(THIS IS TO BE USED ONLY
WHEN SLIP FORM IS USED)



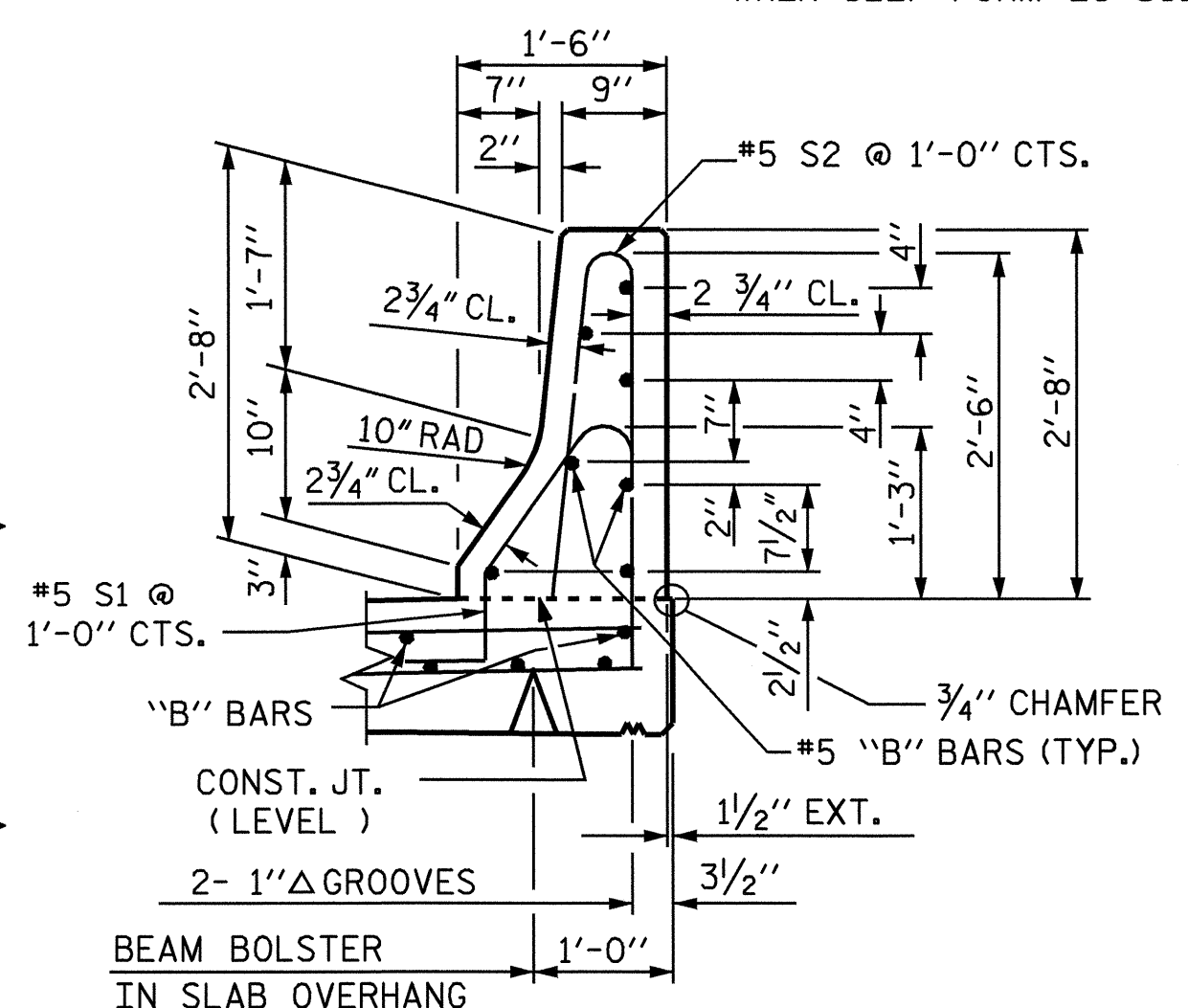
END OF RAIL DETAILS
FOR ADHESIVE ANCHORING AT SAWED JOINTS



END VIEW



ELEVATION AT EXPANSION JOINTS



SECTION THRU RAIL

BARRIER RAIL DETAILS



PROJECT NO. B-3690
RANDOLPH COUNTY
STATION: 17+41.00 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
STANDARD CONCRETE BARRIER RAIL					
OCTOBER 1987					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		
					SHEET NO. S-18
					TOTAL SHEETS 37

ASSEMBLED BY : M. ALLEN DATE : 7/03
CHECKED BY : P.C. BREWER DATE : 8/03
DRAWN BY : ARB 5/87 REV. 8/16/99 RWW/LES
CHECKED BY : SJD 9/87 REV. 10/17/00 RWW/LES
REV. 5/17/03 RWW/JTE