

BILL OF MATERIAL					
FOR CONCRETE BARRIER RAIL ONLY					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	28	#16	STR	4160	181
* B2	126	#16	STR	7300	1428
* B3	28	#16	STR	3660	159
* S1	522	#16	1	1440	1167
* S2	522	#16	2	1580	1280
* S3	12	#16	3	1020	18
* S4	12	#16	STR	960	18
* EPOXY COATED REINFORCING STEEL					4251 kg
CLASS AA CONCRETE					37.8 CU. METER
CONCRETE BARRIER RAIL					160.140 METERS

ALL BAR DIMENSIONS ARE OUT TO OUT

NOTES

THE BARRIER RAIL IN A CONTINUOUS UNIT SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 20.7 MPa.

THE JOINT IN THE DECK SHALL BE SAWS PRIOR TO THE CASTING OF BARRIER RAIL.

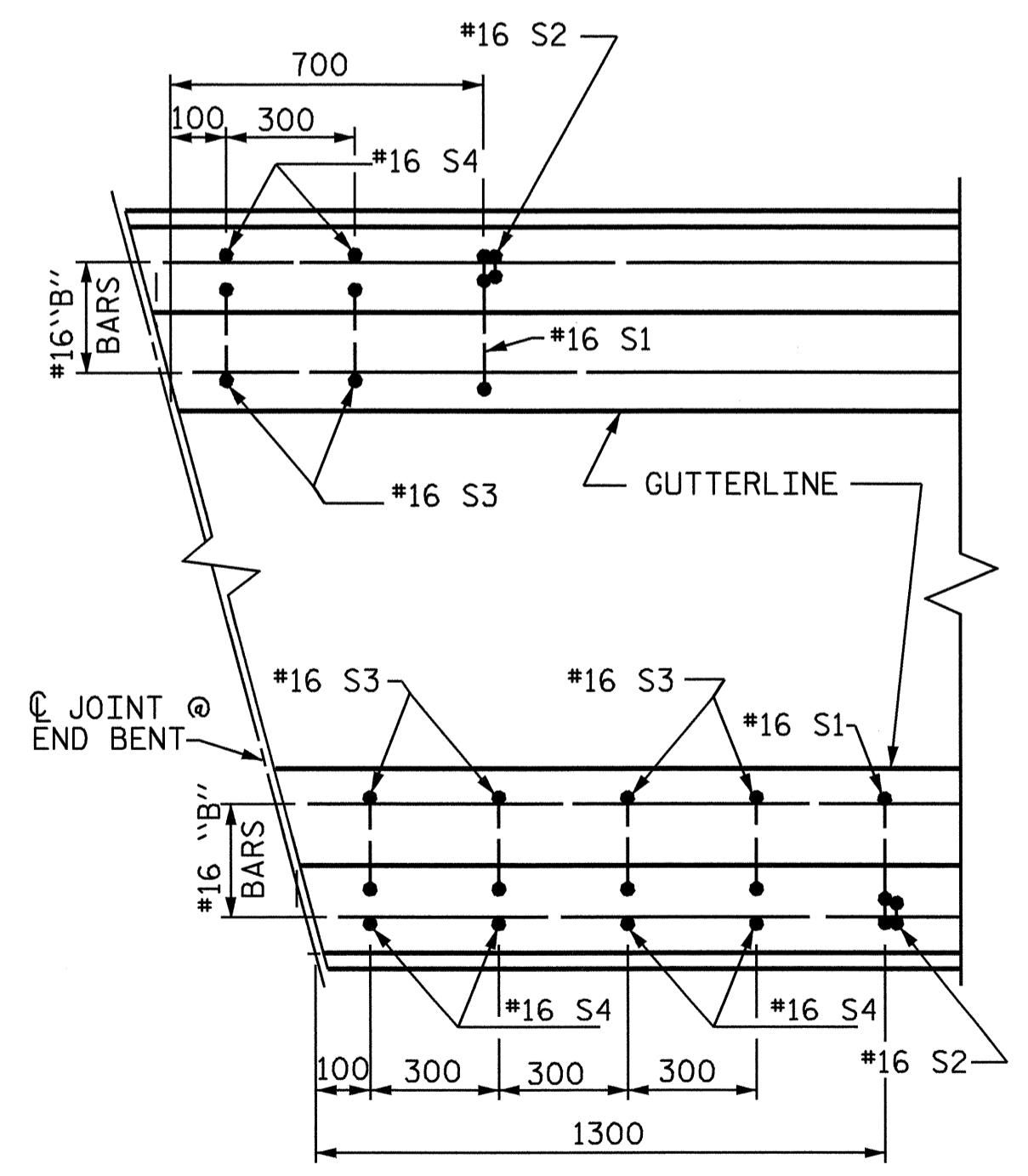
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #16S3 AND #16S4 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 #16 S3 AND #16 S4 BARS IS 82.7 kN. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

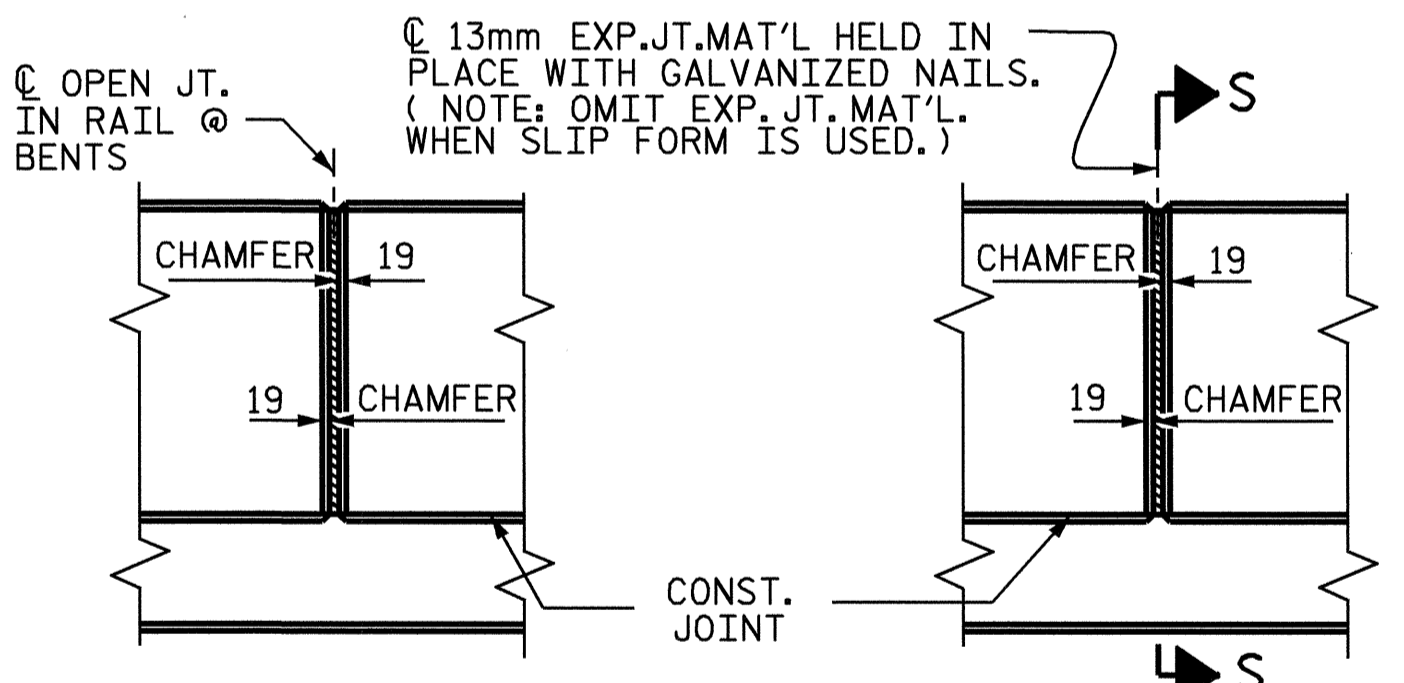
VERTICAL GROOVED CONTRACTION JOINTS, 12mm IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 6.1m IN LENGTH AND NO JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 3.5m IN LENGTH.

PLAN OF BARRIER RAIL

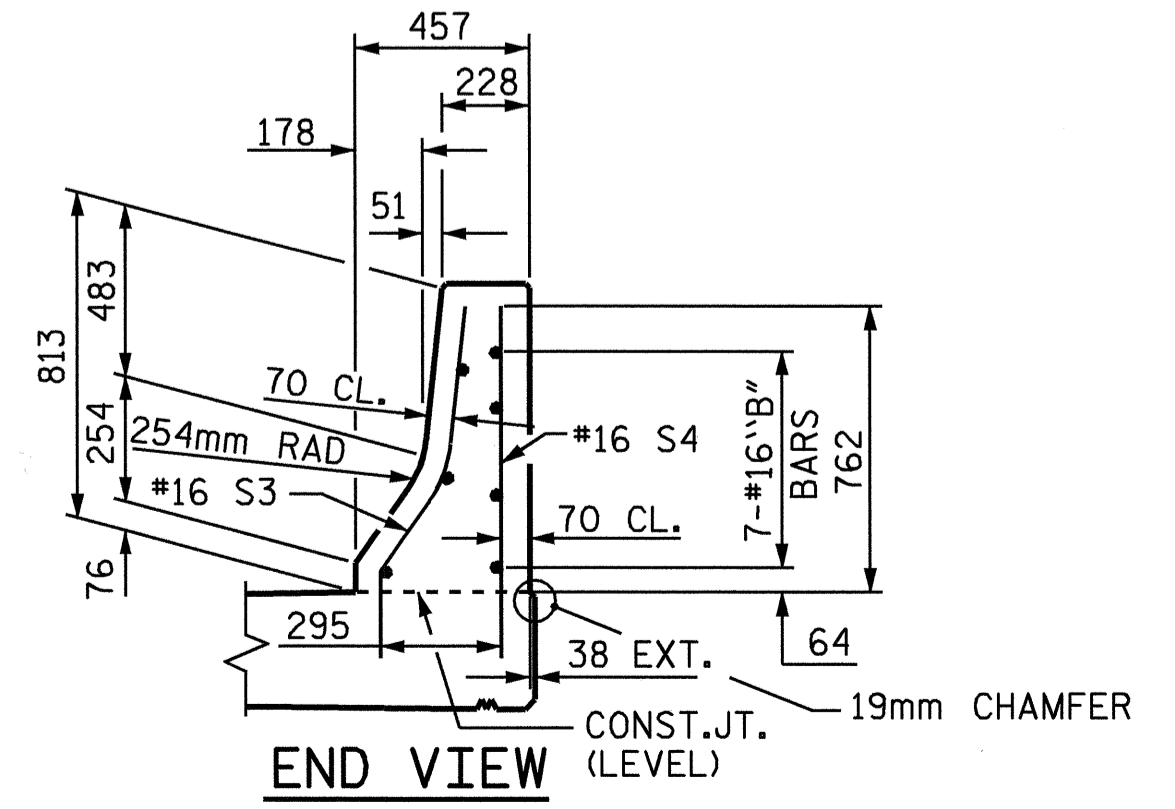
** SEE PLAN FOR END OF BARRIER RAIL FOR ADDITIONAL "S" BARS NOT SHOWN IN PLAN.



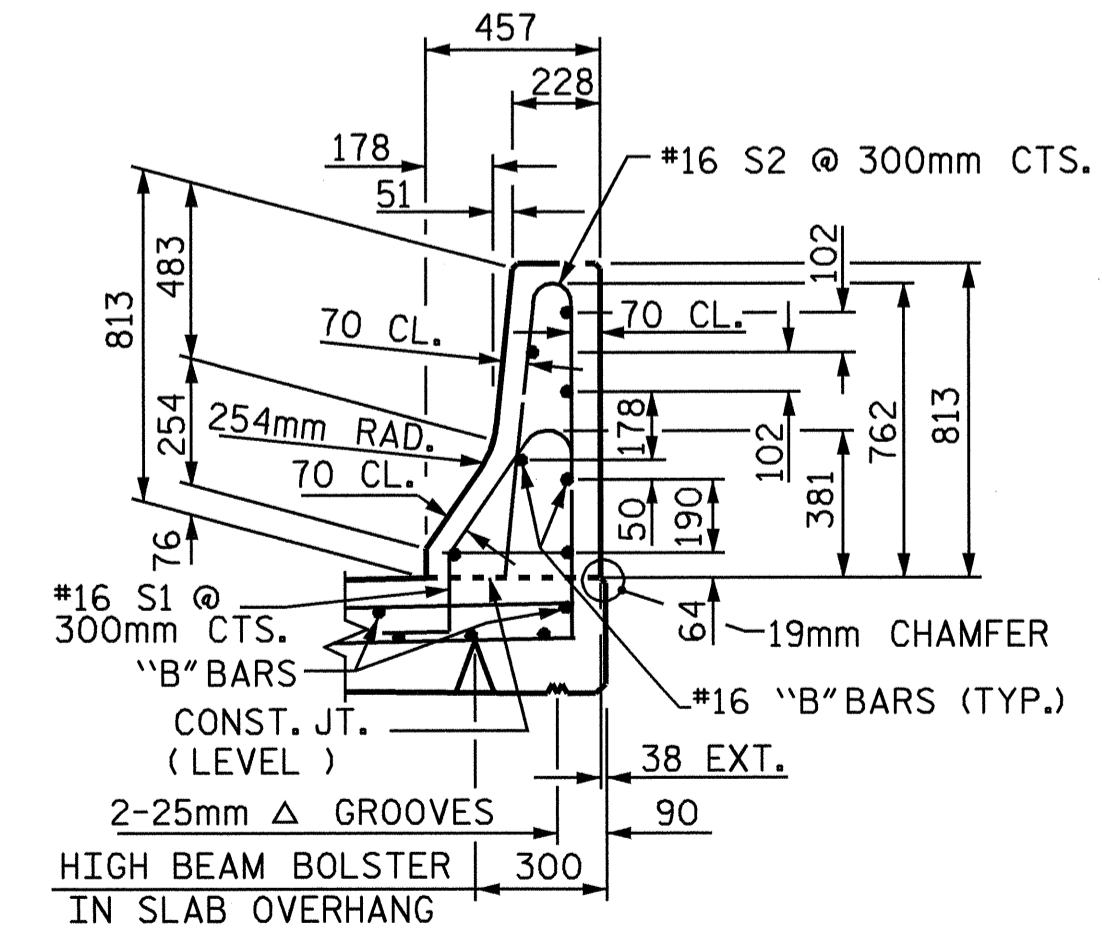
PLAN FOR END OF BARRIER RAIL
END BENT 1 SHOWN, END BENT 2 SIMILAR.



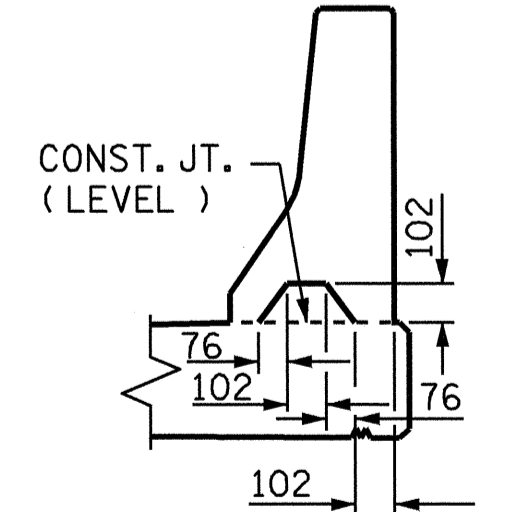
ELEVATION AT EXPANSION JOINTS
BARRIER RAIL DETAILS



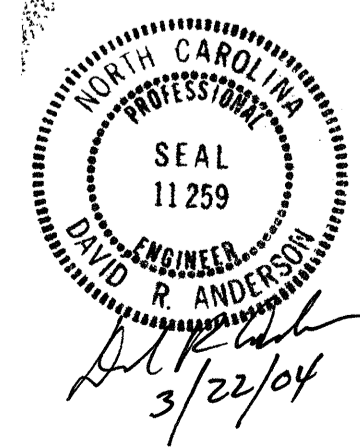
END VIEW
(LEVEL)



SECTION THRU RAIL



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



PROJECT NO. R-513C
ROBESON COUNTY
STATION: 271+08.001 -L-

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

STANDARD CONCRETE BARRIER RAIL

REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

TOTAL SHEETS: 312

ASSEMBLED BY : N. Q. TRAN	DATE : MAY- 2001
CHECKED BY : T. A. WALTER	DATE : 8/02
DRAWN BY : ARB 5/87	REV. 7/17/98 RWW/LES
CHECKED BY : SJD 9/87	REV. 8/16/99 RWW/LES
	REV. 10/17/00 RWW/LES

BARRIER RAIL - END OF RAIL DETAILS