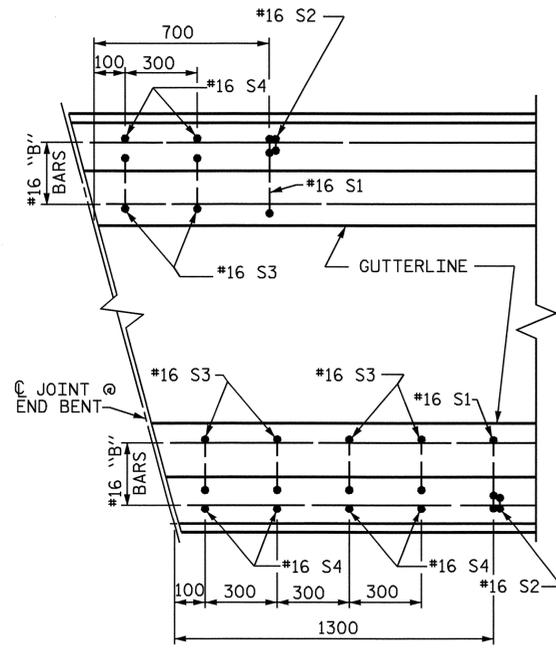
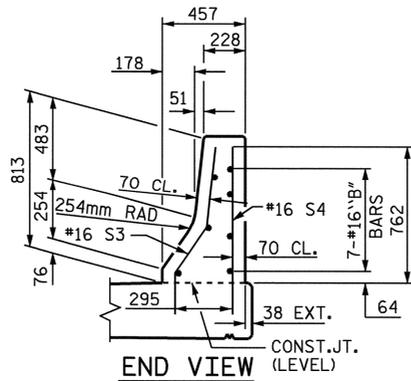


**PLAN**

\* ARC DIMENSION ALONG OUTSIDE EDGE OF SUPERSTRUCTURE



**PLAN**  
(END BENT #1 SHOWN, END BENT #2 SIMILAR)



**END VIEW**  
(CONST. JT. (LEVEL))

**END OF RAIL DETAILS**

FOR ADHESIVE ANCHORING AT SAWS JOINTS

**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 20.7 MPa.

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

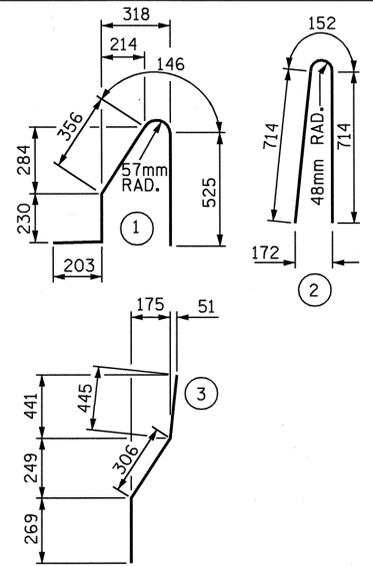
ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

THE #16 S3 AND #16 S4 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWS 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. 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 6.1m IN LENGTH AND NO CONTRACTION JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 3.5m IN LENGTH.

#16 S1 AND #16 S2 MAY BE SHIFTED SLIGHTLY AS NECESSARY TO MAINTAIN 50mm COVER AT 13mm EXPANSION JOINTS IN RAIL.

**BAR TYPES**



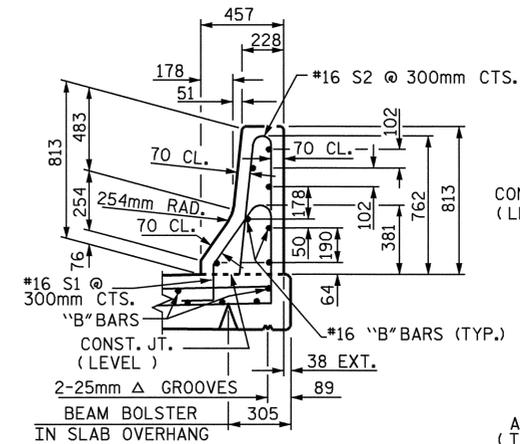
ALL BAR DIMENSIONS ARE OUT TO OUT

**BILL OF MATERIAL**

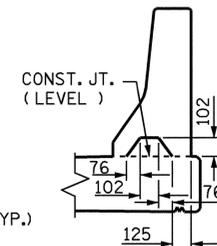
FOR CONCRETE BARRIER RAIL ONLY

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	70	#16	STR	8220	893
* S1	268	#16	1	1460	607
* S2	268	#16	2	1580	657
* S3	12	#16	3	1020	19
* S4	12	#16	STR	960	18

* EPOXY COATED REINFORCING STEEL	2194 kg
CLASS AA CONCRETE	21.0 CU. METER
CONCRETE BARRIER RAIL	83.575 METERS



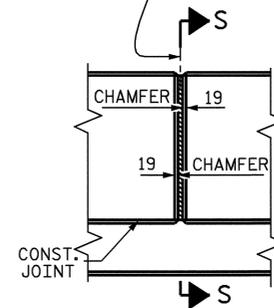
**SECTION THRU RAIL**



**SECTION S-S**

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

@ 13mm EXP. JT. MAT'L HELD IN PLACE WITH GALVANIZED NAILS. (NOTE: OMIT EXP. JT. MAT'L. WHEN SLIP FORM IS USED.)



**ELEVATION AT EXPANSION JOINTS**  
**BARRIER RAIL DETAILS**

ASSEMBLED BY : T.L. AVERETTE	DATE : 08-03
CHECKED BY : M.M. PARSONS	DATE : 09-03
DRAWN BY : ARB 5/87	REV. 8/16/99 RWW/LES
CHECKED BY : SJD 9/87	REV. 10/17/00 RWW/LES
	REV. 5/7/03R RWW/JTE

PROJECT NO. R-2206C  
LINCOLN-CATAWBA COUNTY  
STATION: 237+97.199 -L-

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD  
CONCRETE  
BARRIER RAIL  
RIGHT LANE

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			5-240
2			4			374-