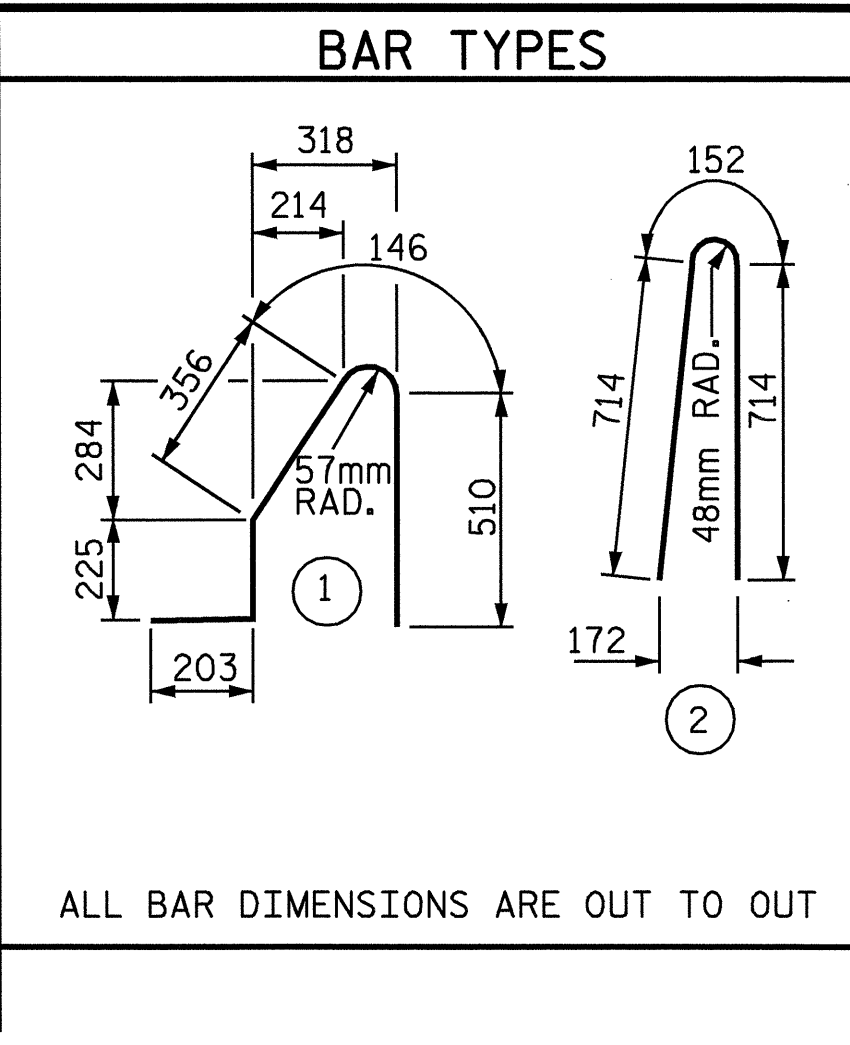


BILL OF MATERIAL					
FOR CONCRETE BARRIER RAIL ONLY					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	56	#16	STR	4720	410
* B2	56	#16	STR	8280	720
* S1	334	#16	1	1440	746
* S2	334	#16	2	1580	819
* EPOXY COATED REINFORCING STEEL				2695 kg	
CLASS AA CONCRETE				25.2 CU. METER	
CONCRETE BARRIER RAIL 100.644 METERS					



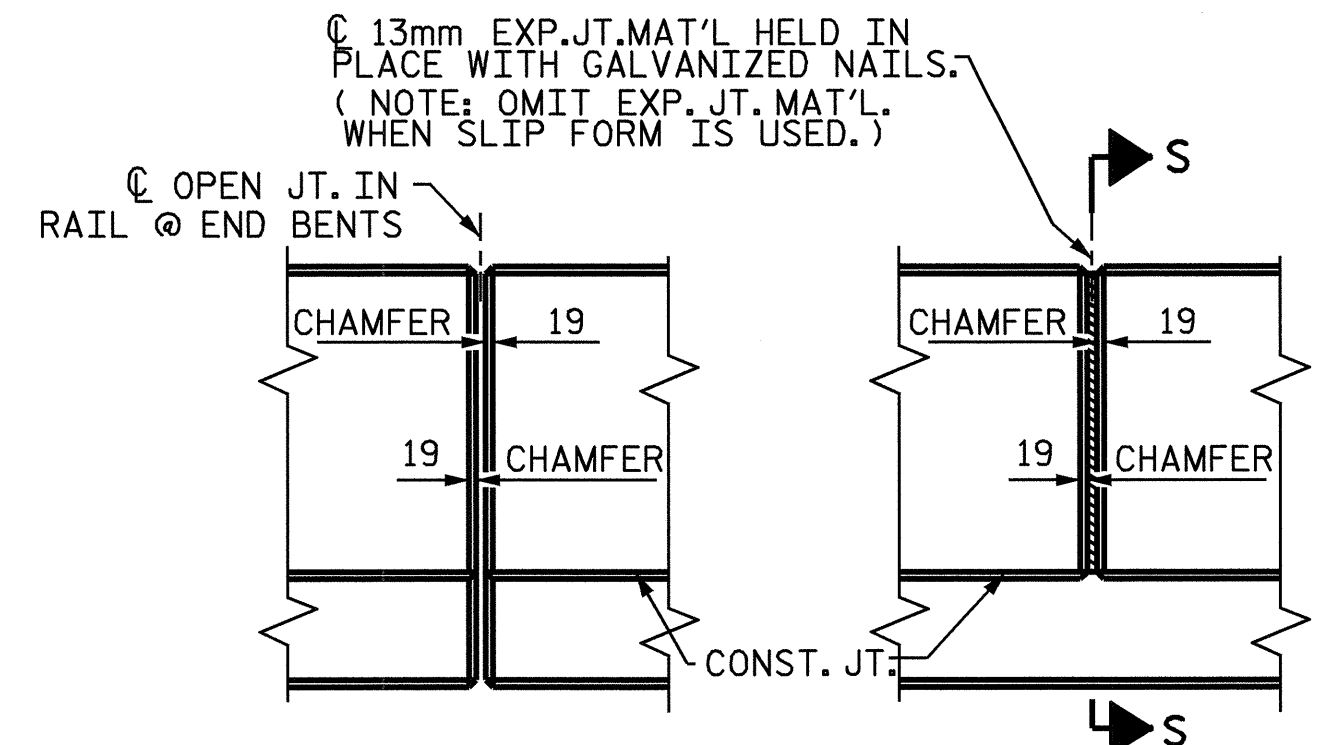
**NOTES**

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

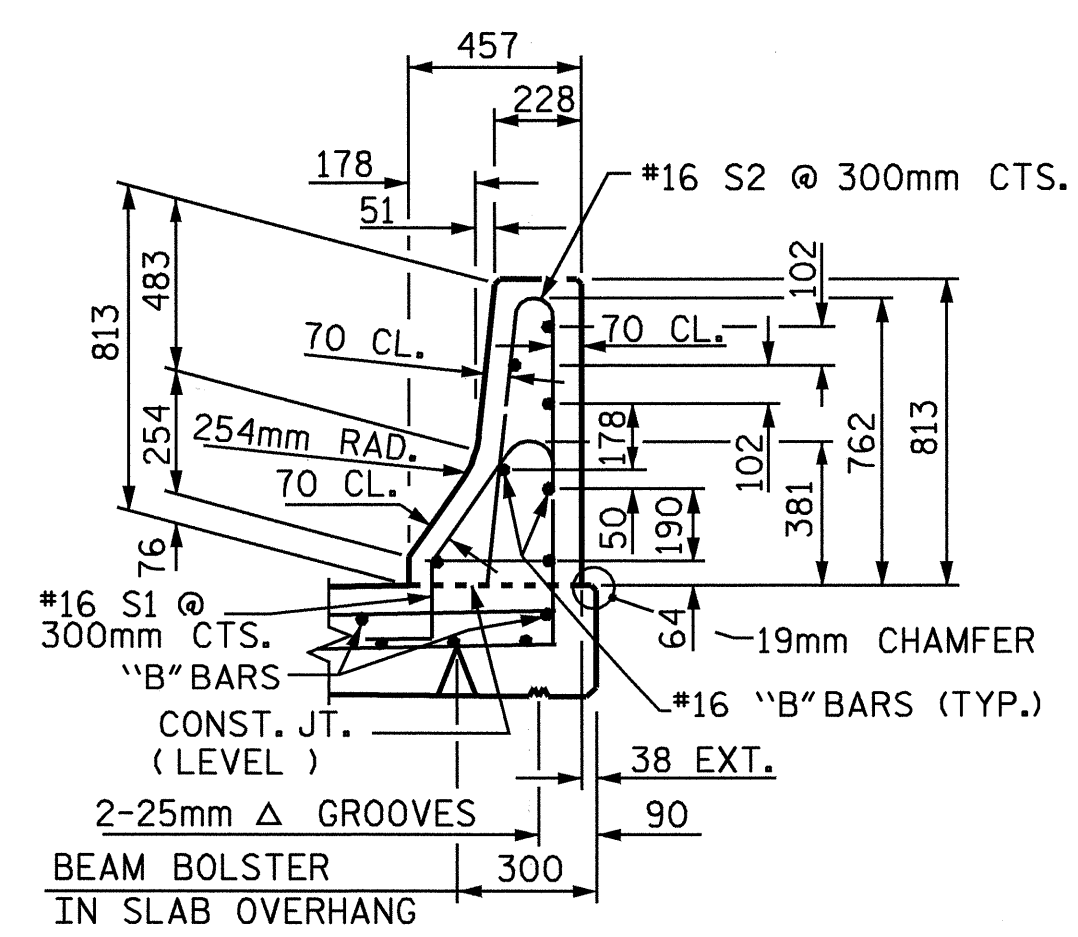
VERTICAL GROOVED CONTRACTION JOINTS, 12mm IN DEPTH, SHALL BE TOOLED IN ALL EXPOSED FACES OF THE BARRIER RAIL AND IN ACCORDANCE WITH ARTICLE 825-10(B) OF THE STANDARD SPECIFICATIONS. A JOINT SHALL BE LOCATED AT EACH THIRD POINT BETWEEN BARRIER RAIL EXPANSION JOINTS. ONLY ONE JOINT IS REQUIRED AT MIDPOINT OF BARRIER RAIL SEGMENTS LESS THAN 6.100m IN LENGTH AND NO JOINTS ARE REQUIRED FOR THOSE SEGMENTS LESS THAN 3.500m IN LENGTH.

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.

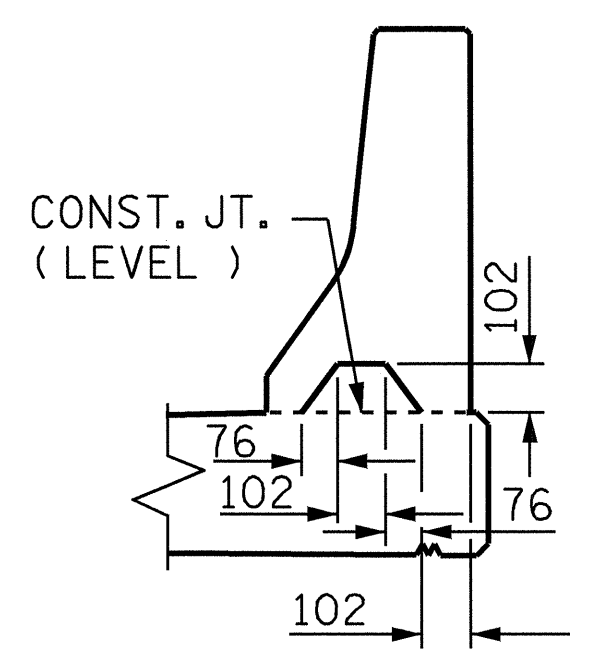
**PLAN OF BARRIER RAIL**



**ELEVATION AT EXPANSION JOINTS  
BARRIER RAIL DETAILS**

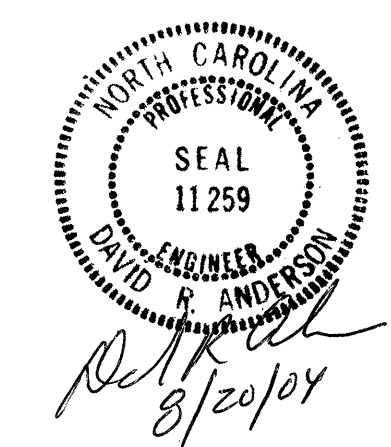


**SECTION THRU RAIL**



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

PROJECT NO. R-513BA  
ROBESON COUNTY  
 STATION: 138+30.800 -L-



STATE OF NORTH CAROLINA  
 DEPARTMENT OF TRANSPORTATION  
 RALEIGH

**SUPERSTRUCTURE  
 CONCRETE BARRIER RAIL  
 (LEFT LANE)**

DRAWN BY: N. Q. TRAN DATE: JUN. 2003  
 CHECKED BY: T. A. WALTER DATE: 4-14-04

REVISIONS						SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:	5-132	
1			3			TOTAL SHEETS	
2			4			172	