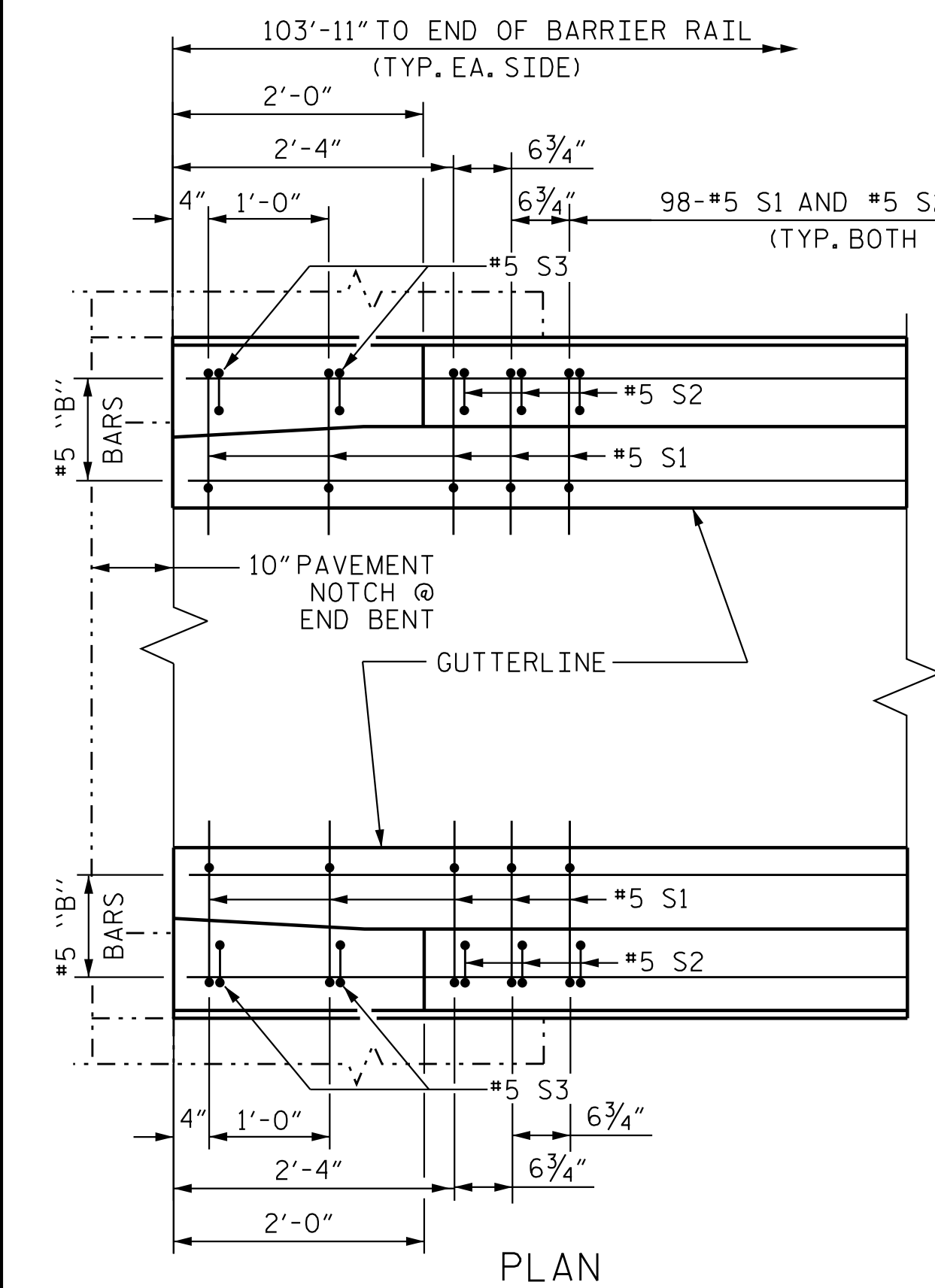
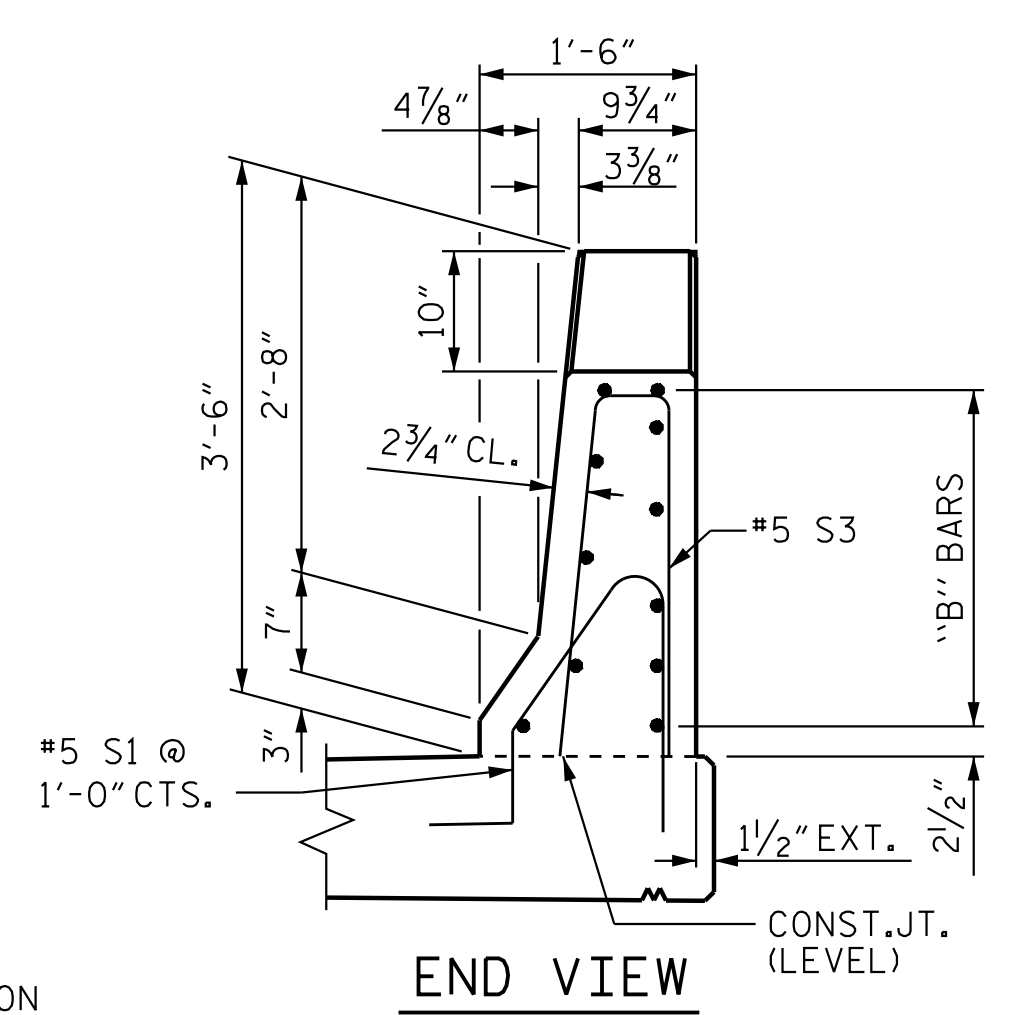


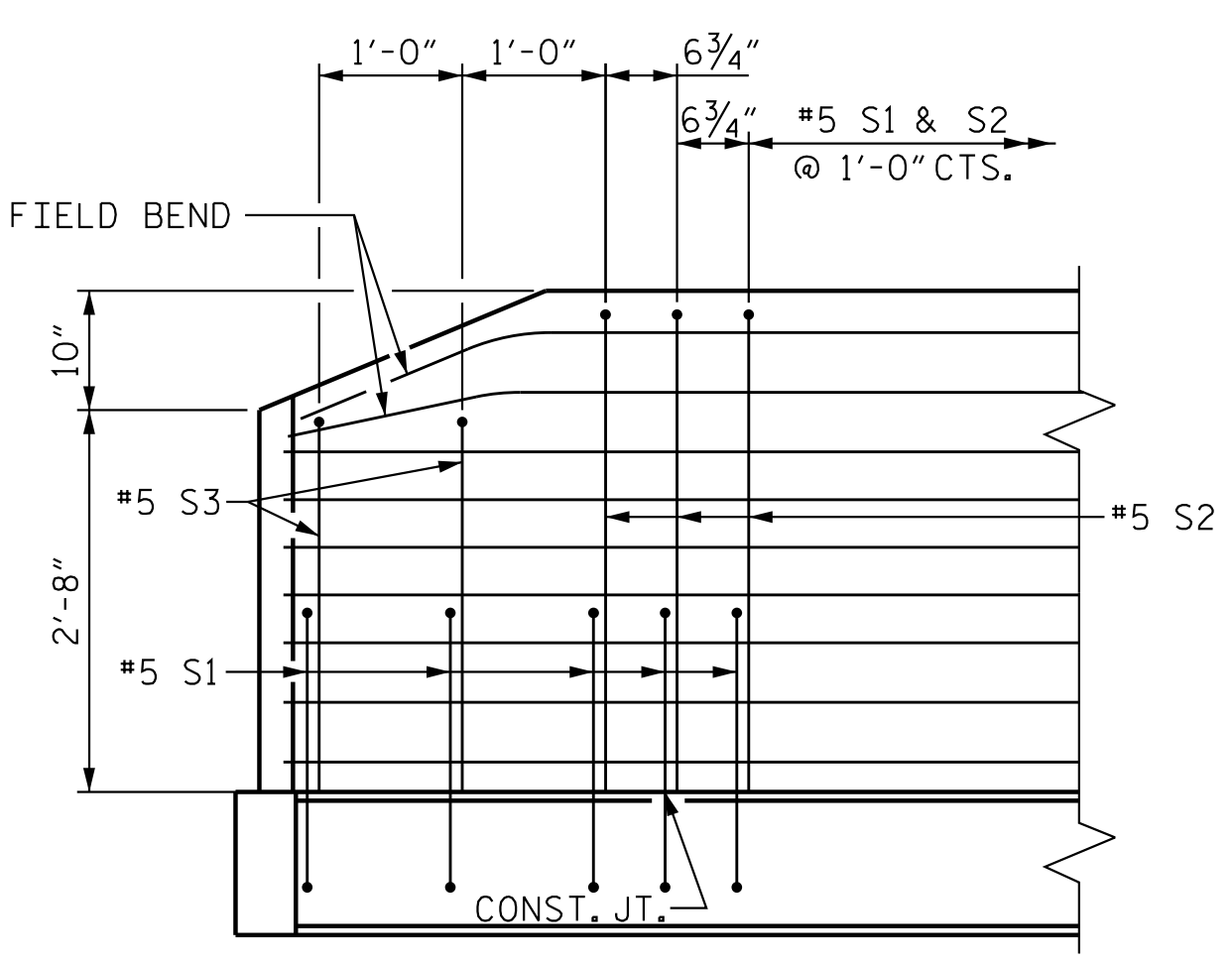
BARRIER RAIL PLAN



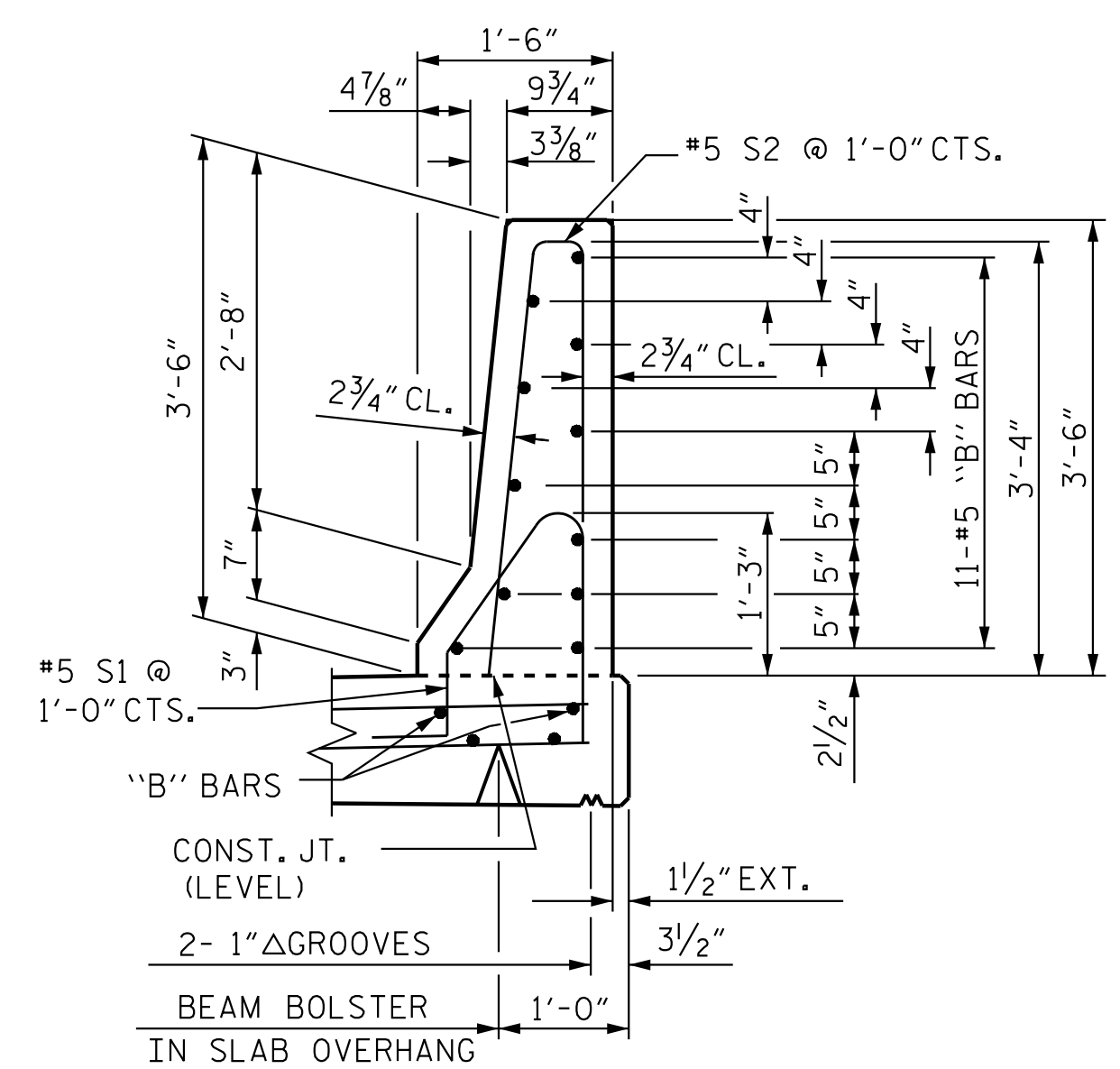
DETAIL @ END BENT



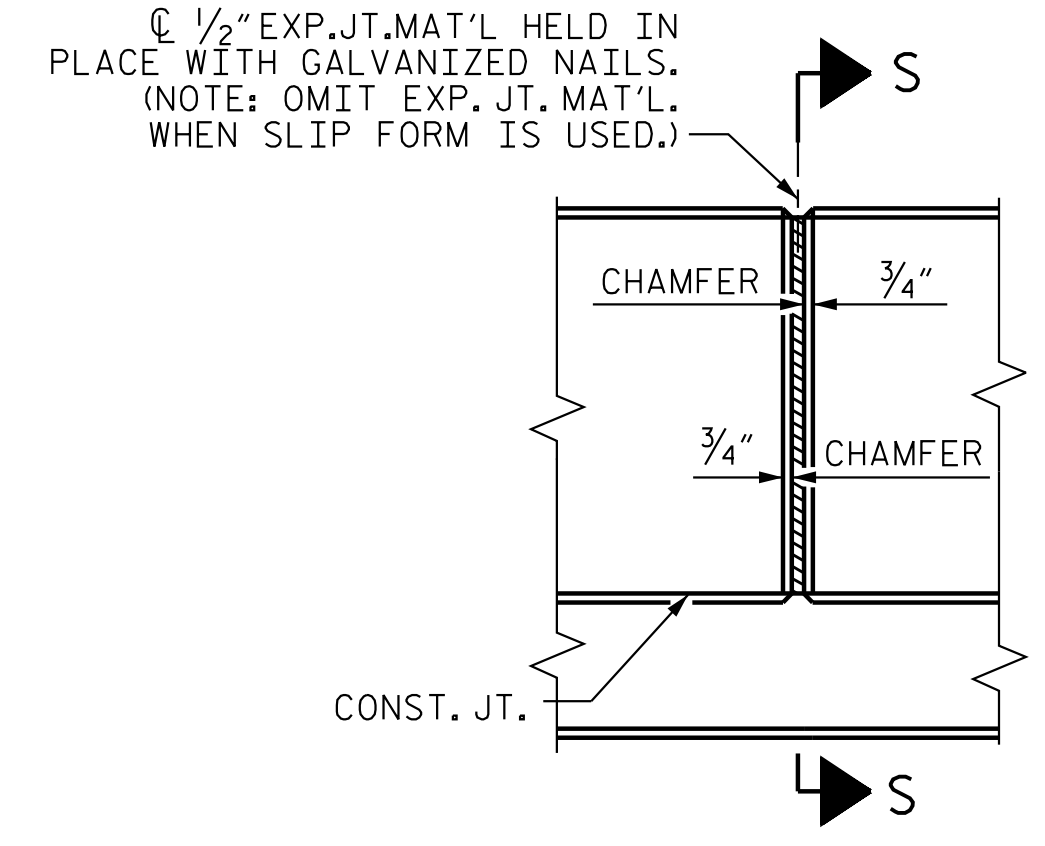
END VIEW



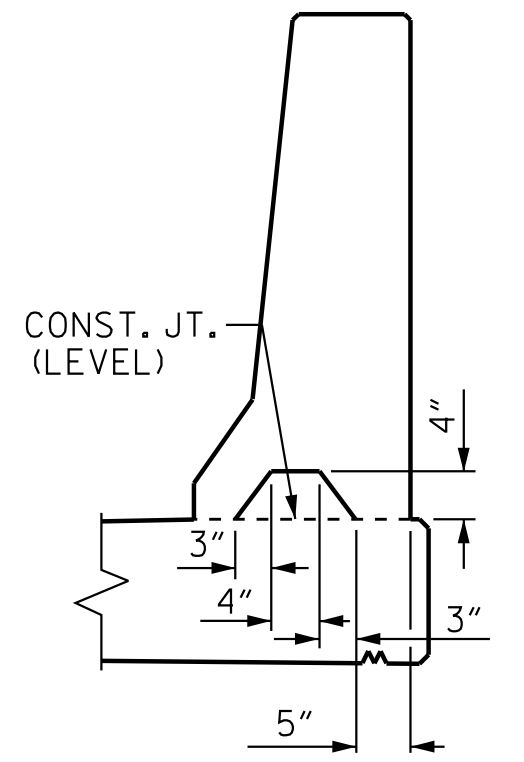
SIDE VIEW



SECTION THRU RAIL



ELEVATION AT EXPANSION JOINTS



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

NOTES

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

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

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

**BAR TYPES**

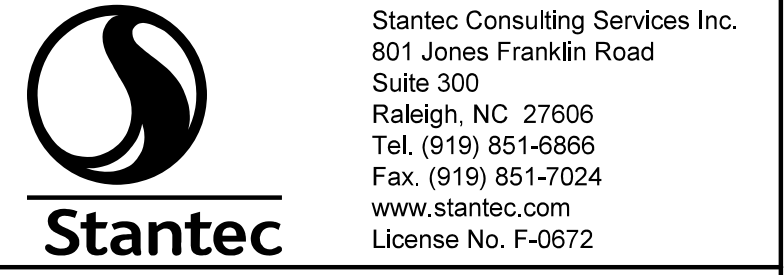
ALL BAR DIMENSIONS ARE OUT TO OUT

**BILL OF MATERIAL**  
FOR CONCRETE BARRIER RAIL ONLY

BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	44	#5	STR	29'-7"	1358
* B2	44	#5	STR	21'-6"	987
* S1	212	#5	1	4'-9"	1050
* S2	204	#5	2	7'-0"	1489
* S3	8	#5	2	5'-6"	46

\* EPOXY COATED REINFORCING STEEL 4,930 LBS.  
CLASS AA CONCRETE 28.2 CU. YDS.  
CONCRETE BARRIER RAIL 207.83 LIN. FT.

4/21/2023 jHagenbush 4/21/2023



Stantec Consulting Services Inc.  
801 Jones Franklin Road  
Suite 300  
Raleigh, NC 27606  
Tel. (919) 851-6866  
Fax. (919) 851-7024  
www.stantec.com  
License No. F-0672

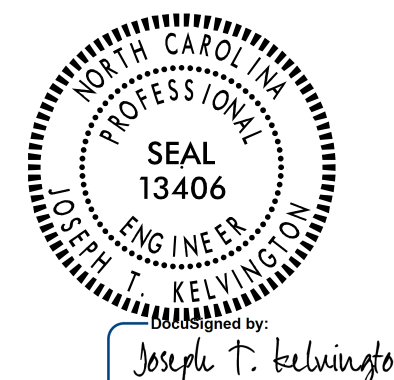
ASSEMBLED BY: J.E. HAGENBUSH DATE: 12/01/22  
CHECKED BY: J.T. KELVINGTON DATE: 12/05/22

DRAWN BY: ARB 5/87  
CHECKED BY: SJD 9/87

REV. 7/12  
REV. 6/13  
REV. 12/17

MAA/GM  
MAA/GM  
MAA/GM

DESIGN ENGINEER  
OF RECORD: J.T. KELVINGTON DATE: 04/21/23



DOCUMENT NOT CONSIDERED  
FINAL UNLESS ALL  
SIGNATURES COMPLETED

PROJECT NO. R-2707D  
CLEVELAND COUNTY  
STATION: 810+00.00 -L-

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH

STANDARD  
CONCRETE  
BARRIER RAIL

(RL)

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S9-17
1			3			TOTAL SHEETS
2			4			30

STR. #9 STD. NO. CBR1