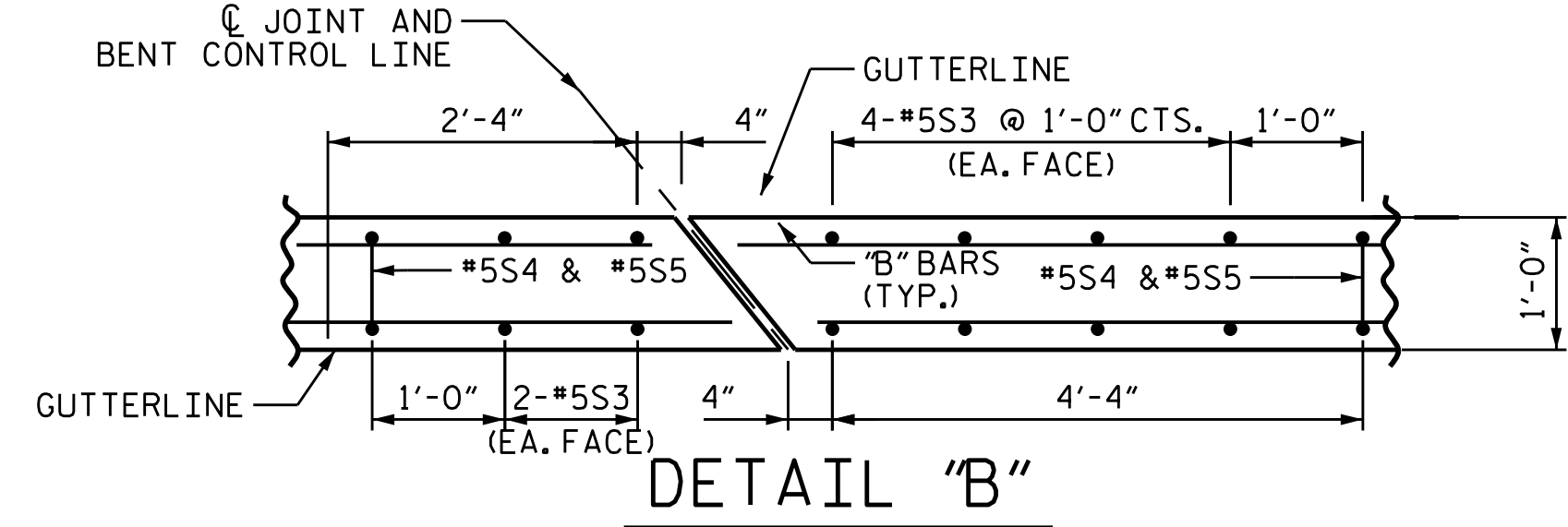


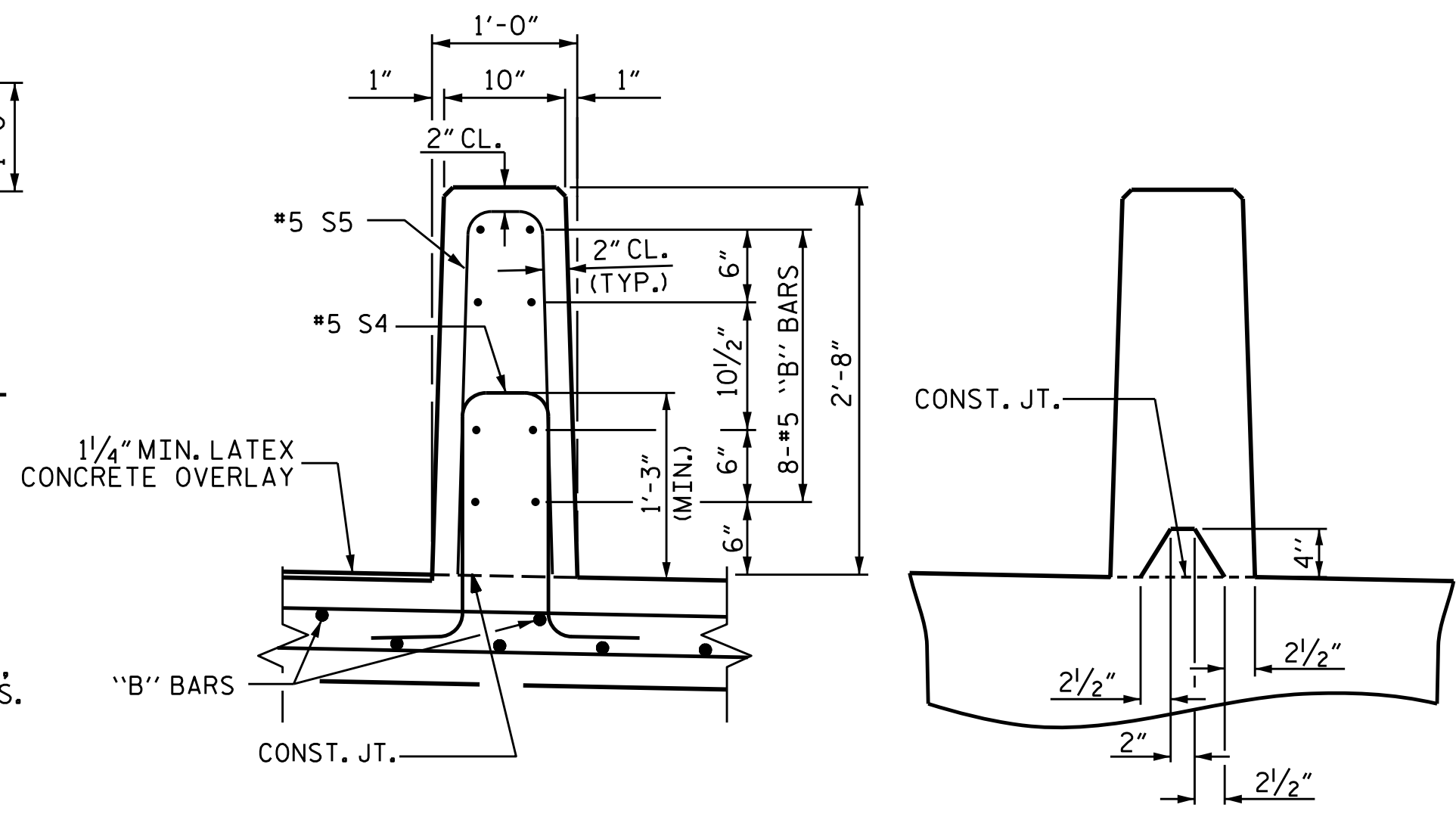
PLAN

FOR CONCRETE PARAPET DETAILS, SEE CONCRETE PARAPET SHEET.

MIN. LAP SPLICE LENGTH FOR #5 "B" BARS = 3'-1"



DETAIL "B"

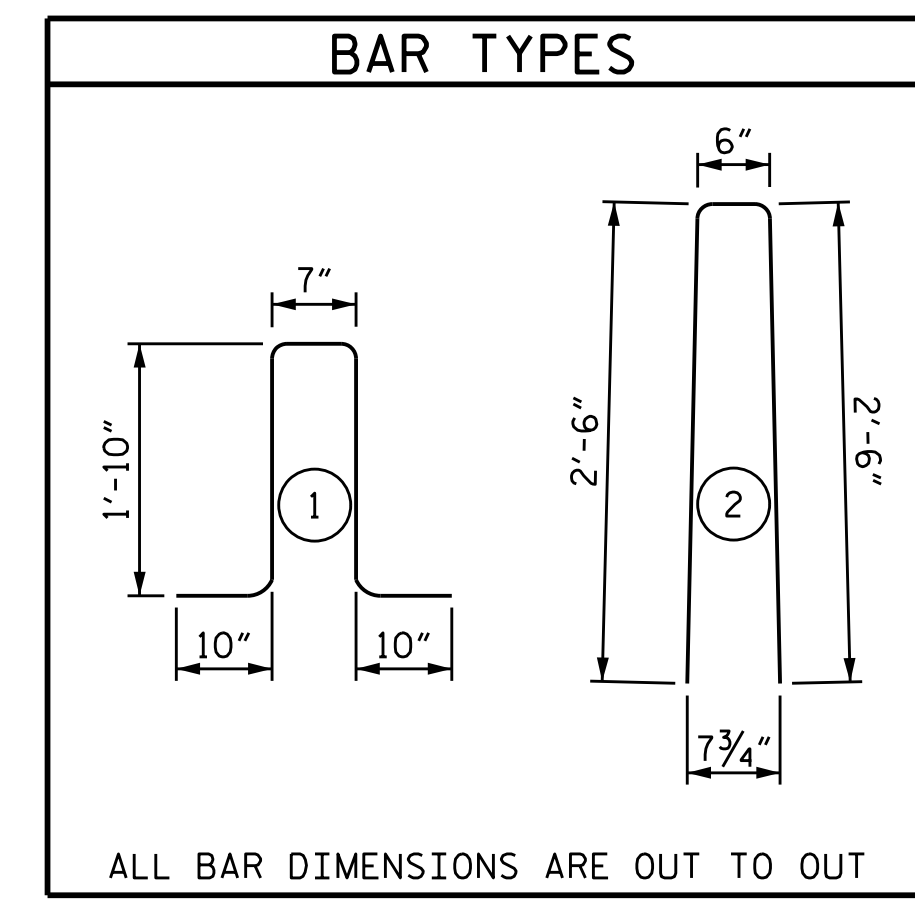


SECTION THRU RAIL

BRIDGE DECK SHOWN; APPROACH SLAB SIMILAR

SECTION S-S

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



BAR TYPES

ALL BAR DIMENSIONS ARE OUT TO OUT

BILL OF MATERIAL					
FOR VERTICAL CONCRETE BARRIER RAIL ONLY					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
* B1	16	#5	STR	14'-8"	245
* B2	32	#5	STR	10'-10"	362
* B3	96	#5	STR	15'-6"	1552
* B4	32	#5	STR	11'-9"	392
* S3	60	#5	STR	3'-0"	188
* S4	161	#5	1	5'-11"	994
* S5	161	#5	2	5'-6"	924
* S6	16	#5	STR	3'-6"	58
* EPOXY COATED REINFORCING STEEL					4,715 LBS.
CLASS AA CONCRETE					24.0 CU. YDS.
VERTICAL CONCRETE BARRIER RAIL					265.6 LIN. FT.

NOTES

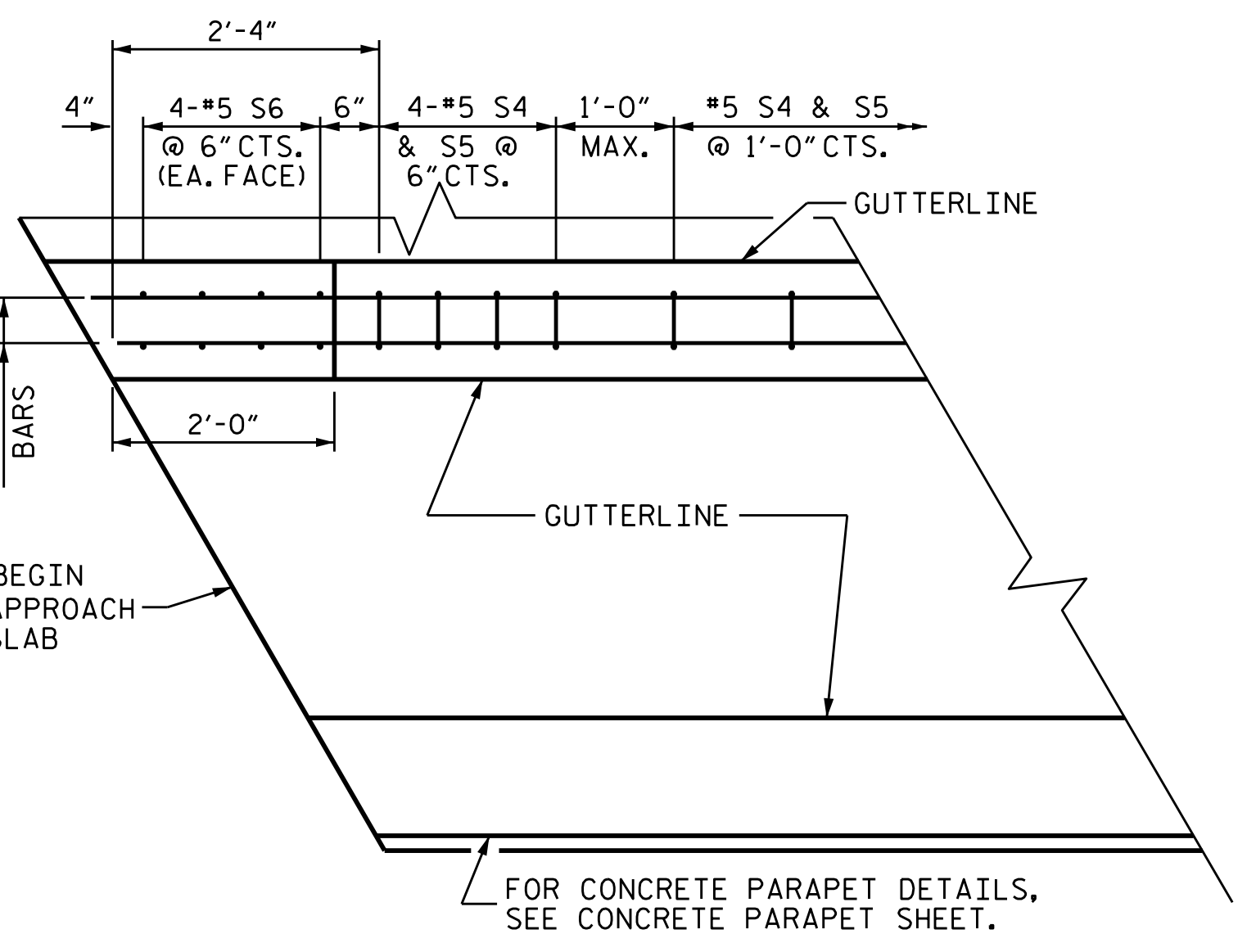
THE BARRIER RAIL IN EACH SPAN AND APPROACH SLAB SHALL NOT BE CAST UNTIL ALL SLAB CONCRETE IN THAT SPAN/SLAB HAS BEEN CAST AND HAS REACHED A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI.

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

ALL REINFORCING STEEL IN BARRIER RAILS SHALL BE EPOXY COATED.

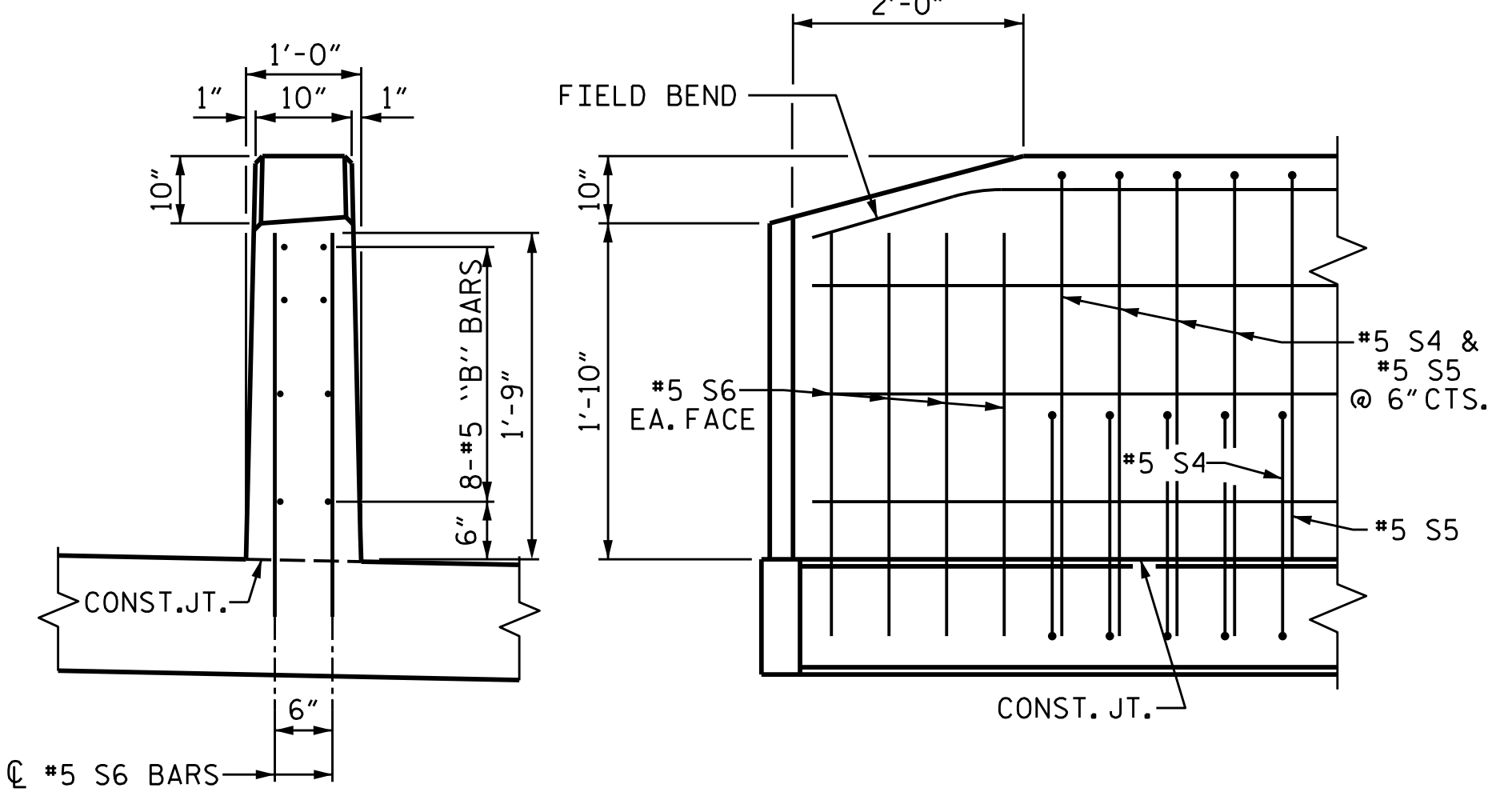
THE #5 S3 & S6 BARS SHALL BE INSTALLED, USING AN ADHESIVE ANCHORING SYSTEM, AFTER SAWING THE JOINT. THE YIELD LOAD FOR THE #5 S3 & S6 BARS IS 18.6 KIPS. FIELD TESTING FOR THE ADHESIVE BONDING SYSTEM IS NOT REQUIRED.

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.



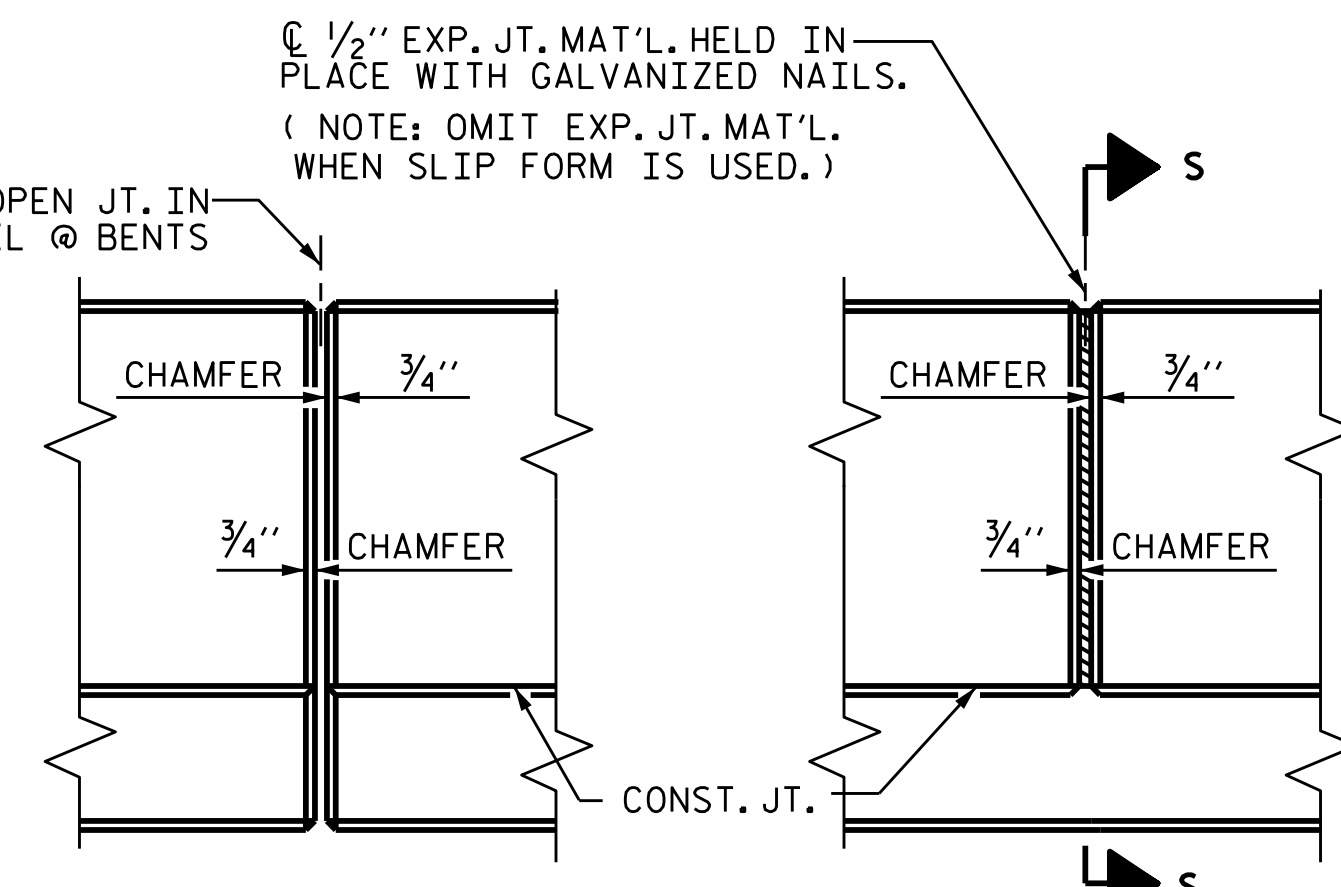
PLAN

FOR CONCRETE PARAPET DETAILS, SEE CONCRETE PARAPET SHEET.



END VIEW

SIDE VIEW



ELEVATION AT EXPANSION JOINTS

BARRIER RAIL DETAILS

PROJECT NO. U-4424
EDGEcombe COUNTY
STATION: 66+24.84 -L-

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION RALEIGH					
VERTICAL CONCRETE BARRIER RAIL					
SHEET NO. S-24					
TOTAL SHEETS 37					
REVISIONS					
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

3/28/2023 4:\188771-06 NCDOT NC 111U-4424\Structures\Drawings\401_049_U4424_SML.BR_024.dgn

DESIGNED BY: J. WHEATLEY DATE: MAR 2023
DRAWN BY: J. WHEATLEY DATE: MAR 2023
CHECKED BY: T. KIRSCHBAUM DATE: MAR 2023
DESIGN ENGINEER OF RECORD: T. HARRIS DATE: MAR 2023

END OF RAIL DETAILS

FOR ADHESIVE ANCHORING AT SAWED JOINTS