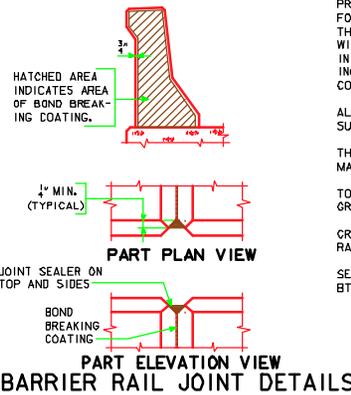
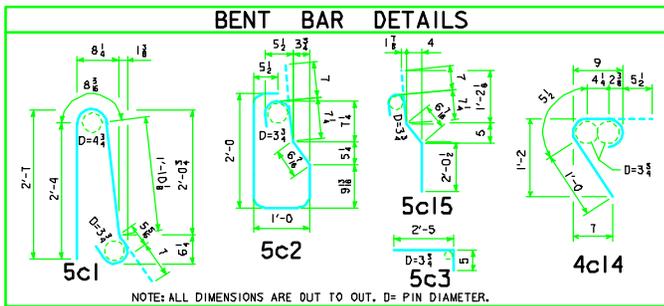


SECTION		REINFORCING BAR LIST* (ONE BRIDGE - TWO BARRIER RAILS)		222'-0"		232'-0"		242'-0"		252'-0"		262'-0"							
		BAR	LOCATION	NO.	LENGTH	NO.	LENGTH												
EPOXY COATED	STANDARD SECTION	5c1	VERTICAL	470	5'-11"	2,900	490	5'-11"	3,024	510	5'-11"	3,147	530	5'-11"	3,270	550	5'-11"	3,394	
		5c2	VERTICAL	450	6'-0"	2,816	470	6'-0"	2,941	490	6'-0"	3,066	510	6'-0"	3,192	530	6'-0"	3,317	
		5c3	VERTICAL	20	2'-10"	59	20	2'-10"	59	20	2'-10"	59	20	2'-10"	59	20	2'-10"	59	
		4c14	VERTICAL	410	2'-6"	785	490	2'-6"	818	510	2'-6"	851	530	2'-6"	885	550	2'-6"	919	
		5c15	VERTICAL	20	3'-10"	80	20	3'-10"	80	20	3'-10"	80	20	3'-10"	80	20	3'-10"	80	
END SECTION	BARRIER RAIL END SECTIONS	5d1	LONGITUDINAL	154	35'-5"	5,689	154	36'-10"	5,916	154	38'-3"	6,144	154	39'-8"	6,371	176	36'-3"	6,654	
		BARRIER RAIL END SECTIONS 4 AT 425			1,700		1,700		1,700		1,700		1,700		1,700		1,700		
REINFORCING STEEL - EPOXY COATED (LB)				14,029		14,538		15,047		15,557		16,123							

CONCRETE PLACEMENT QUANTITIES - C.Y.		(ONE BRIDGE - TWO BARRIER RAILS)				
LOCATION	BEAM SERIES	222'-0"	232'-0"	242'-0"	252'-0"	262'-0"
	STANDARD SECTION *25' @ 0.1114 C.Y. PER FT.	BTD110	52.4	54.6	56.8	59.0
BARRIER RAIL END SECTION 4 @ 0.66	BTD110	2.6	2.6	2.6	2.6	2.6
TOTAL C.Y.		55.0	57.2	59.4	61.6	63.9

GENERAL DATA		(ONE BRIDGE - TWO BARRIER RAILS)				
ITEM	BEAM SERIES	222'-0"	232'-0"	242'-0"	252'-0"	262'-0"
	LENGTH OF STANDARD BARRIER RAIL SECTION	BTD110	225'-0"	245'-0"	255'-0"	265'-0"
NUMBER OF 1'-0" SPACES FOR 5c1, 5c2 & 4c14 BAR SPACING	BTD110	224	234	244	254	264
LENGTH END TO END OF BARRIER RAIL	BTD110	249	259	269	279	289
BID LENGTH IN LINEAL FEET OF CONCRETE BARRIER RAIL	BTD110	498.0	518.0	538.0	558.0	578.0

- ① THESE VALUES TO BE USED FOR ALL SKEWS
- ② ONE BRIDGE - ALL SKEWS



### BARRIER RAIL NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR IS TO BE 2" UNLESS OTHERWISE NOTED OR SHOWN.

THE PERMISSIBLE CONSTRUCTION JOINTS ARE TO BE PLACED BETWEEN VERTICAL BARS AT A MINIMUM SPACING OF 20 FEET. CONSTRUCTION JOINT CONTACT SURFACES ARE TO BE COATED WITH AN APPROVED BOND BREAKER.

COST OF THE JOINT SEALER AND BOND BREAKER SHALL BE CONSIDERED INCIDENTAL TO OTHER CONSTRUCTION.

ALL BARRIER RAIL REINFORCING STEEL IS TO BE EPOXY COATED.

THE CONCRETE BARRIER RAIL IS TO BE BID ON A LINEAL FOOT BASIS. THE NUMBER OF LINEAL FEET OF BARRIER RAIL INSTALLED WILL BE PAID FOR AT THE CONTRACT PRICE PER LINEAL FOOT BASED ON PLAN QUANTITIES. PRICE BID FOR CONCRETE BARRIER RAILING SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, EXCLUDING REINFORCING STEEL, AND ALL OF THE EQUIPMENT AND LABOR REQUIRED TO ERECT THE RAIL IN ACCORDANCE WITH THESE PLANS AND CURRENT SPECIFICATIONS. IF CONDUIT IS REQUIRED IN THIS PLAN THE RIGID STEEL CONDUIT, JUNCTION BOXES AND FITTINGS INCLUDING LABOR AND ANY ADDITIONAL WORK TO DO THE INSTALLATION IS CONSIDERED INCIDENTAL TO THE COST OF THE RAILING.

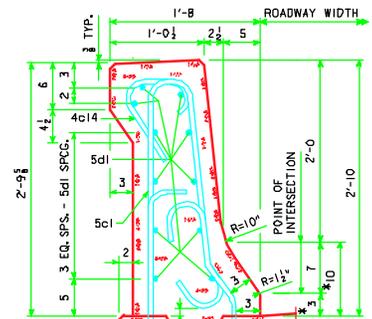
ALL BARRIER RAIL REINFORCING STEEL IS TO BE INCLUDED WITH THE SUPERSTRUCTURE REINFORCING STEEL.

THE JOINT SEALER SHALL BE LIGHT GRAY NONSAG LATEX CAULKING SEALER MARKETED FOR OUTDOOR USE. NO TESTING OR CERTIFICATION IS REQUIRED.

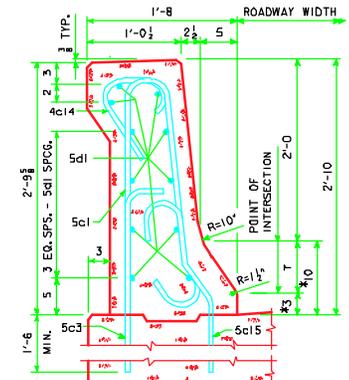
TOP OF THE BARRIER RAIL IS TO BE PARALLEL TO THE THEORETICAL  $\bar{C}$  GRADE.

CROSS SECTIONAL AREA OF THE STANDARD SECTION OF THE BARRIER RAIL = 3.01 SQUARE FEET.

SEE BT30-AS1-04 FOR SURFACE FINISH REQUIREMENTS FOR BARRIERS, AND BT30-GD3-04 FOR CONCRETE SEALER COATING NOTES.

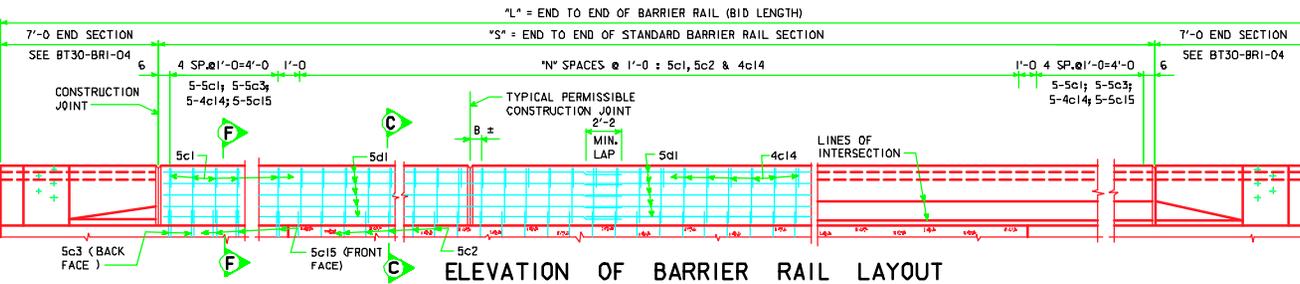


PART SECTION C-C



PART SECTION F-F  
RUSTICATION NOT SHOWN

\* DENOTES THE MAXIMUM VALUE FOR THIS DIMENSION. THIS DIMENSION MAY VARY DUE TO CONSTRUCTION INACCURACIES.



LATEST REVISION DATE	APPROVED BY BRIDGE ENGINEER	Iowa Department of Transportation Highway Division	
		STANDARD DESIGN - 30' ROADWAY, 2 SPAN BRIDGES	
		PRETENSIONED PRESTRESSED BULB TEE CONCRETE BEAM BRIDGES	
		ALL SPANS	JULY, 2004
		AESTHETIC BARRIER RAIL DETAILS	BT30-BR2-04