REINFORCING BAR LIST*
(ONE BRIDGE - TWO BARRIER RAILS)

	SECTION	BAR	LOCATION	SHAPE	℄-℄ ABUT. BRG	222'-0			232'-0			242'-0			252'-0			262'-0		
		BEAM SERIES				BTDII0			BTDII5			BTDI20			BTDI25			BTDI30		
					NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT
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		470	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
		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
	END SECTION		BARRIER RAIL END SECTIONS 4 AT 425				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. ①
(ONE BRIDGE - TWO BARRIER RAILS)

LOCATION	℄-℄ ABUTMENT BEARING	222'-0	232'-0	242'-0	252'-0	262'-0
	BEAM SERIES	BTDII0	BTDII5	BTDI20	BTDI25	BTDI30
STANDARD SECTION "25" @ 0.1114 C.Y. PER FT.		52.4	54.6	56.8	59.0	61.3
BARRIER RAIL END SECTION 4 @ 0.66		2.6	2.6	2.6	2.6	2.6
TOTAL C.Y.		55.0	57.2	59.4	61.6	63.9

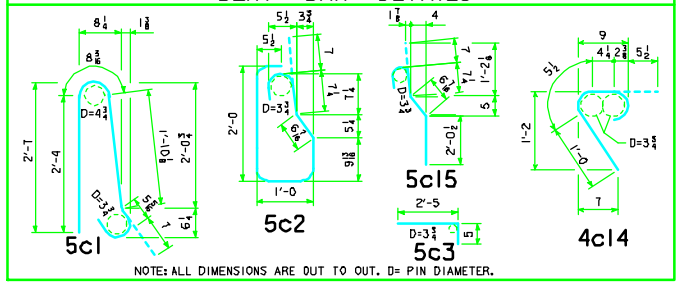
GENERAL DATA

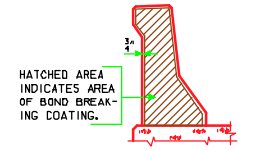
		℄-℄ ABUTMENT BEARING	222'-0	232'-0	242'-0	252'-0	262'-0
		BEAM SERIES	BTDII0	BTDII5	BTDI20	BTDI25	BTDI30
LENGTH OF STANDARD BARRIER RAIL SECTION	S		235'-0	245'-0	255'-0	265'-0	275'-0
NUMBER OF 1'-0 SPACES FOR 5c1, 5c2 & 4c14 BAR SPACING	N		224	234	244	254	264
LENGTH END TO END OF BARRIER RAIL	L		249	259	269	279	289
BID LENGTH IN LINEAL FEET OF CONCRETE BARRIER RAIL	②		498.0	518.0	538.0	558.0	578.0

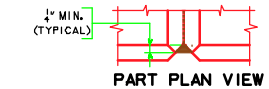
① THESE VALUES TO BE USED FOR ALL SKEWS

② ONE BRIDGE - ALL SKEWS

BENT BAR DETAILS







PART PLAN VIEW

PART ELEVATION VIEW

BARRIER RAIL JOINT DETAILS

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.

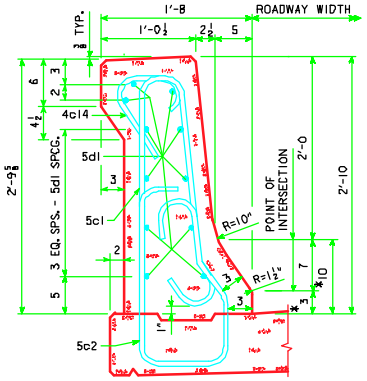
ALL BARRIER RAIL REINFORCING STEEL IS TO BE INCLUDED WITH THE SUPERSTRUCTURE REINFORCING STEEL.

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

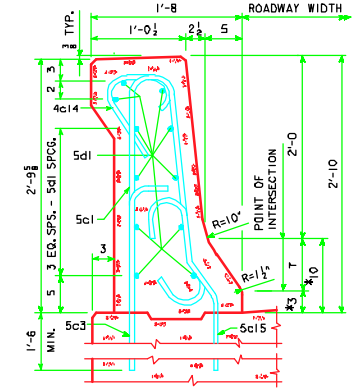
TOP OF THE BARRIER RAIL IS TO BE PARALLEL TO THE THEORETICAL ℄ GRADE.

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

SEE BT40-AS1-04 FOR SURFACE FINISH REQUIREMENTS FOR BARRIERS, AND BT40-GD3-04 FOR CONCRETE SEALER COATING NOTES.

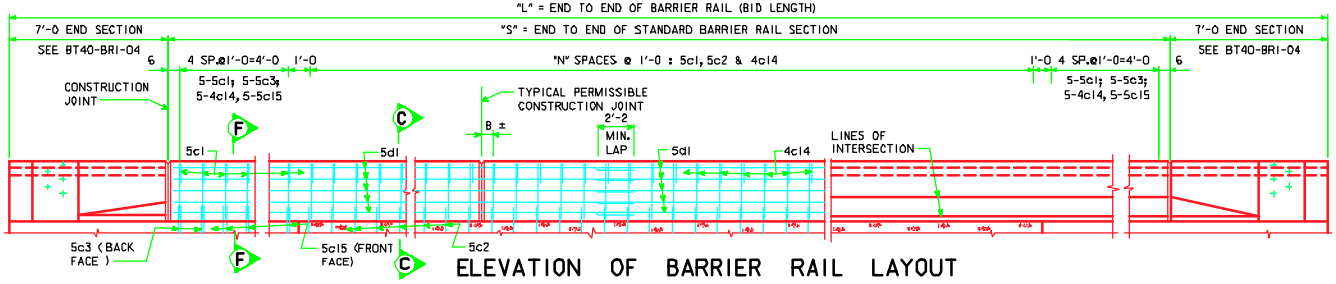


PART SECTION C-C



PART SECTION F-F
RUSTICATION NOT SHOWN

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



ELEVATION OF BARRIER RAIL LAYOUT

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 2 SPAN BRIDGES

PRETENSIONED PRESTRESSED BULB TEE CONCRETE BEAM BRIDGES

ALL SPANS

JULY, 2004

AESTHETIC BARRIER RAIL DETAILS

BT40-BR2-04

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