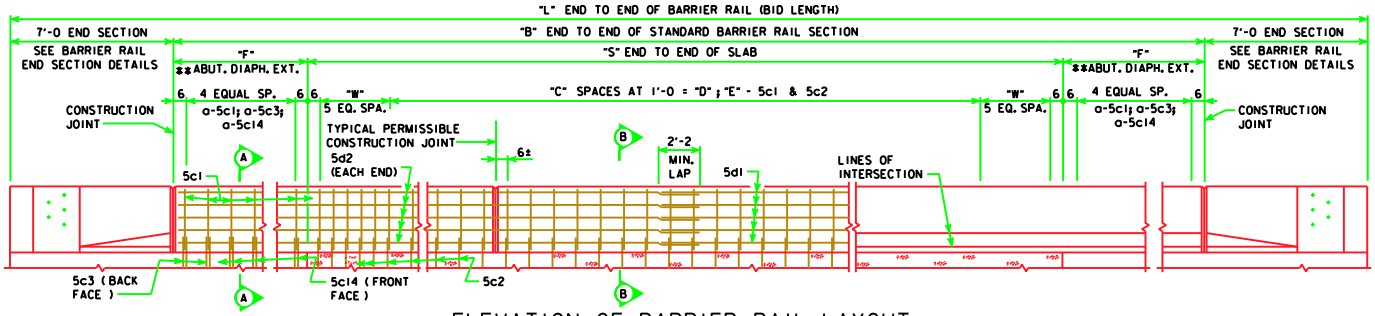
TABLE OF BARRIER RAIL DIMENSIONS AND NUMBERS

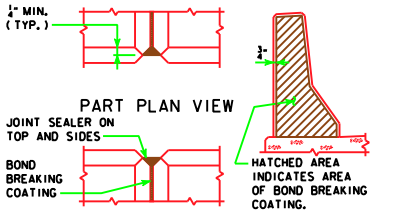
℄-℄ ABUT. BRG		138'-10			151'-4			163'-10			176'-4			℄-℄ ABUT. BRG
SKEW		0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°	SKEW
DIMENSION OR NUMBER	L (FT.-IN.)	155'-10	155'-11 1/4	156'-3 5/8	168'-4	168'-5 1/4	168'-9 5/8	180'-10	180'-11 1/4	181'-3 5/8	193'-4	193'-5 1/4	193'-9 5/8	L (FT.-IN.)
	B (FT.-IN.)	141'-10	141'-11 1/4	142'-3 5/8	154'-4	154'-5 1/4	154'-9 5/8	166'-10	166'-11 1/4	167'-3 5/8	179'-4	179'-5 1/4	179'-9 5/8	B (FT.-IN.)
	S (FT.-IN.)	141'-10	141'-11 1/4	142'-3 5/8	154'-4	154'-5 1/4	154'-9 5/8	166'-10	166'-11 1/4	167'-3 5/8	179'-4	179'-5 1/4	179'-9 5/8	S (FT.-IN.)
	C	133	133	133	145	145	145	158	158	158	170	170	170	C
	D (FT.-IN.)	133'-0	133'-0	133'-0	145'-0	145'-0	145'-0	158'-0	158'-0	158'-0	170'-0	170'-0	170'-0	D (FT.-IN.)
	E	134	134	134	146	146	146	159	159	159	171	171	171	E
	F (FT.-IN.)	0	0	0	0	0	0	0	0	0	0	0	0	F (FT.-IN.)
	W (FT.-IN.)	3'-11	3'-11 5/8	4'-1 3/4	4'-2	4'-2 3/8	4'-4 3/4	3'-11	3'-11 5/8	4'-1 3/4	4'-2	4'-2 3/8	4'-4 3/4	W (FT.-IN.)
	a	0	0	0	0	0	0	0	0	0	0	0	0	a

TABLE OF BARRIER RAIL DIMENSIONS AND NUMBERS

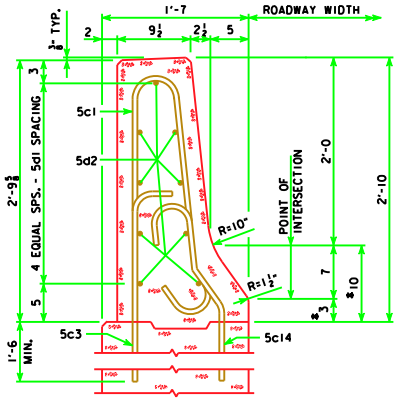
℄-℄ ABUT. BRG		188'-10			201'-4			213'-10			226'-4			243'-0			℄-℄ ABUT. BRG
SKEW		0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°	0°	15°	30°	SKEW
DIMENSION OR NUMBER	L (FT.-IN.)	205'-10	205'-11 1/4	206'-3 5/8	228'-4	228'-4	228'-4	240'-10	240'-10	240'-10	253'-4	253'-4	253'-4	270'-0	270'-0	270'-0	L (FT.-IN.)
	B (FT.-IN.)	191'-10	191'-11 1/4	192'-3 5/8	214'-4	214'-4	214'-4	226'-10	226'-10	226'-10	239'-4	239'-4	239'-4	256'-0	256'-0	256'-0	B (FT.-IN.)
	S (FT.-IN.)	191'-10	191'-11 1/4	192'-3 5/8	204'-4	204'-5 1/4	204'-9 5/8	216'-10	216'-11 1/4	217'-3 5/8	229'-4	229'-5 1/4	229'-9 5/8	246'-0	246'-1 1/4	246'-5 5/8	S (FT.-IN.)
	C	183	183	183	195	195	195	208	208	208	220	220	220	237	237	237	C
	D (FT.-IN.)	183'-0	183'-0	183'-0	195'-0	195'-0	195'-0	208'-0	208'-0	208'-0	220'-0	220'-0	220'-0	237'-0	237'-0	237'-0	D (FT.-IN.)
	E	184	184	184	196	196	196	209	209	209	221	221	221	238	238	238	E
	F (FT.-IN.)	0	0	0	5'-0	4'-11 3/8	4'-9 1/4	5'-0	4'-11 3/8	4'-9 1/4	5'-0	4'-11 3/8	4'-9 1/4	5'-0	4'-11 3/8	4'-9 1/4	F (FT.-IN.)
	W (FT.-IN.)	3'-11	3'-11 5/8	4'-1 3/4	4'-2	4'-2 3/8	4'-4 3/4	3'-11	3'-11 5/8	4'-1 3/4	4'-2	4'-2 3/8	4'-4 3/4	4'-0	4'-0 5/8	4'-2 3/4	W (FT.-IN.)
	a	0	0	0	5	5	5	5	5	5	5	5	5	5	5	5	a



ELEVATION OF BARRIER RAIL LAYOUT

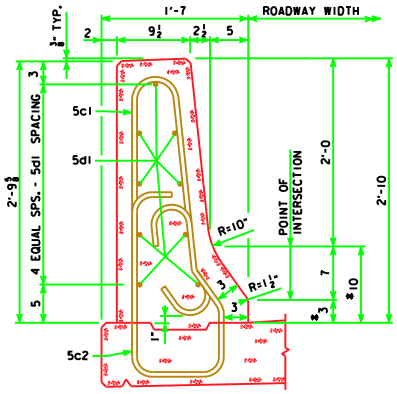


BARRIER RAIL JOINT DETAILS



PART SECTION A-A

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



PART SECTION B-B

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.

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 = 2.84 SQUARE FEET.

CONCRETE BARRIER RAILS PLACED USING THE SLIPFORM METHOD WILL REQUIRE THE USE OF A CLASS BR CONCRETE IN ACCORDANCE WITH ARTICLE 2513.03B OF THE STANDARD SPECIFICATION. CAST-IN-PLACE BARRIER RAILS SHALL USE CLASS C MIX. CLASS D CONCRETE IS NOT PERMITTED FOR CONCRETE BARRIER RAILS (CAST-IN-PLACE OR SLIPFORMED METHOD).

** APPLIES TO 201'-4, 213'-10, 226'-4 & 243'-0 BRIDGES ONLY.

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 44' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

HL93 SUPERSTRUCTURE MARCH, 2007 HS25 SUBSTRUCTURE

BARRIER RAIL DETAILS
SHEET 1 OF 3

H44-32-07