

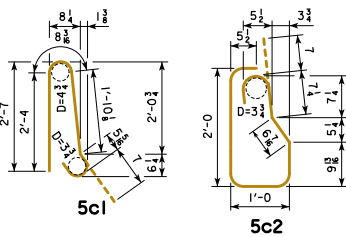
EPOXY REINF. STEEL-TWO BARRIER RAILS - 0°, 10°, 20° AND 30° SKEW

BRIDGE LENGTH				160'-0		180'-0		200'-0		220'-0		240'-0		260'-0		280'-0		300'-0		320'-0										
SECTION	BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT									
STANDARD SECTION	5c1	VERTICAL	A	326	5'-11	2012	366	5'-11	2259	406	5'-11	2506	446	5'-11	2752	486	5'-11	2999	526	5'-11	3246	606	5'-11	3740	646	5'-11	3987			
	5c2	VERTICAL	B	326	6'-0	2040	366	6'-0	2290	406	6'-0	2541	446	6'-0	2791	486	6'-0	3041	526	6'-0	3292	566	6'-0	3542	606	6'-0	3792	646	6'-0	4043
	5d1	LONGITUDINAL	C	90	34'-5	3231	108	32'-4	3642	108	35'-8	4018	126	33'-9	4435	126	36'-8	4819	144	34'-10	5232	144	37'-4	5607	162	35'-8	6026	162	38'-0	6421
	4 END SECTIONS @ 458 LB						1832			1832			1832			1832			1832			1832			1832			1832		
(INCLUDE WITH SUPERSTRUCTURE REINFORCING)				TOTAL (LB.)	9,115		TOTAL (LB.)	10,023		TOTAL (LB.)	10,897		TOTAL (LB.)	11,810		TOTAL (LB.)	12,691		TOTAL (LB.)	13,602		TOTAL (LB.)	14,474		TOTAL (LB.)	15,390		TOTAL (LB.)	16,283	

EPOXY REINF. STEEL-TWO BARRIER RAILS - 45° SKEW

BRIDGE LENGTH				160'-0		180'-0		200'-0		220'-0		240'-0		260'-0		280'-0		300'-0		320'-0										
SECTION	BAR	LOCATION	SHAPE	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT									
STANDARD SECTION	5c1	VERTICAL	A	328	5'-11	2024	368	5'-11	2271	408	5'-11	2518	448	5'-11	2765	488	5'-11	3011	528	5'-11	3258	568	5'-11	3505	608	5'-11	3752	648	5'-11	3999
	5c2	VERTICAL	B	328	6'-0	2053	368	6'-0	2303	408	6'-0	2553	448	6'-0	2804	488	6'-0	3054	528	6'-0	3304	568	6'-0	3555	608	6'-0	3805	648	6'-0	4055
	5d1	LONGITUDINAL	C	90	34'-7	3246	108	32'-7	3671	108	35'-11	4046	126	34'-0	4469	126	36'-10	4841	144	35'-0	5257	144	37'-6	5633	162	35'-10	6055	162	38'-1	6435
	4 END SECTIONS @ 458 LB						1832			1832			1832			1832			1832			1832			1832			1832		
(INCLUDE WITH SUPERSTRUCTURE REINFORCING)				TOTAL (LB.)	9,155		TOTAL (LB.)	10,077		TOTAL (LB.)	10,949		TOTAL (LB.)	11,870		TOTAL (LB.)	12,738		TOTAL (LB.)	13,651		TOTAL (LB.)	14,525		TOTAL (LB.)	15,444		TOTAL (LB.)	16,321	

BENT BAR DETAILS



NOTE:
ALL DIMENSIONS ARE OUT TO OUT.
D = PIN DIAMETER.

CONCRETE PLACEMENT SUMMARY

BRIDGE LENGTH		160'-0	180'-0	200'-0	220'-0	240'-0	260'-0	280'-0	300'-0	320'-0
STANDARD SECTION *	2 X B @ 0.1052 CU.YD. PER FT.	34.6	38.8	43.0	47.2	51.4	55.6	59.8	64.0	68.2
END SECTION	4 @ 0.65 CU.YD.	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
TOTAL (CU. YD.)		37.2	41.4	45.6	49.8	54.0	58.2	62.4	66.6	70.8

* SEE RS40-087-10 FOR DIMENSION "B".
CONCRETE QUANTITIES SHOWN ARE
BASED ON 45° SKEW BID LENGTHS.

CONCRETE BARRIER RAIL QUANTITIES

BRIDGE LENGTH		UNIT	160'-0	180'-0	200'-0	220'-0	240'-0	260'-0	280'-0	300'-0	320'-0
CONCRETE BARRIER RAILING	0° SKEW	L.F.	354.0	394.0	434.0	474.0	514.0	554.0	594.0	634.0	674.0
CONCRETE BARRIER RAILING	10° SKEW	L.F.	354.1	394.1	434.1	474.1	514.1	554.1	594.1	634.1	674.1
CONCRETE BARRIER RAILING	20° SKEW	L.F.	354.4	394.4	434.4	474.4	514.4	554.4	594.4	634.4	674.4
CONCRETE BARRIER RAILING	30° SKEW	L.F.	354.9	394.9	434.9	474.9	514.9	554.9	594.9	634.9	674.9
CONCRETE BARRIER RAILING	45° SKEW	L.F.	356.5	396.5	436.5	476.5	516.5	556.5	596.5	636.5	676.5

LATEST REVISION DATE

Thomas E. Mc Donnell
APPROVED BY BRIDGE ENGINEER

IOWA DOT Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

**BARRIER RAIL DETAILS
SHEET 4**

RS40-090-10