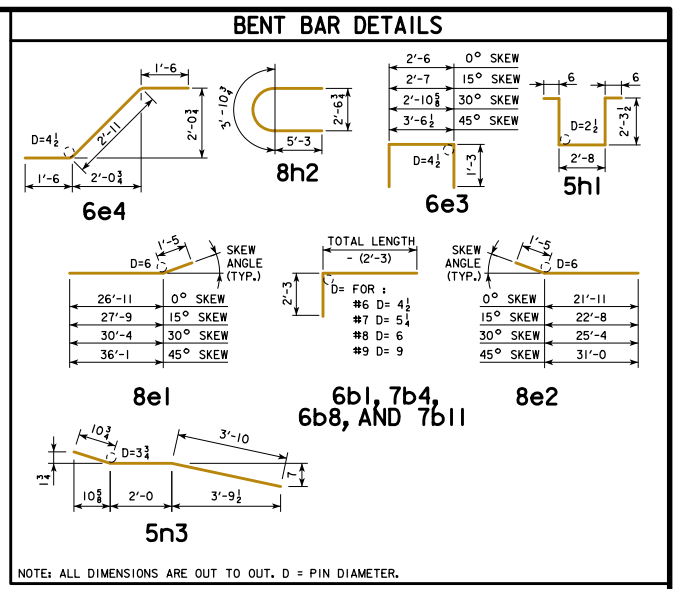


REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J44-14 STANDARDS INSTEAD OF J44-06 STANDARDS.  
 REVISED 03-2016 - REVISION FOR ADDITION OF PAVING NOTCH BAR 8u1 IN ESTIMATED QUANTITIES TABLE.  
 REVISED 04-2016 - REVISION TO INCLUDE PAVING NOTCH BAR 8u1 WEIGHT IN ESTIMATED QUANTITIES TABLE.

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 140' BRIDGE															
LOCATION	SKEW	SHAPE	0°		15°		30°		45°						
			BAR NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			9a1	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015
SLAB LONGITUDINAL BOTTOM			10a2	58	48'-6	12,105	58	48'-6	12,105	58	48'-6	12,105	58	48'-6	12,105
SLAB LONGITUDINAL BOTTOM			9a3	58	43'-9	8628	58	43'-9	8628	58	43'-9	8628	58	43'-9	8628
SLAB LONGITUDINAL BOTTOM			10a4	58	35'-3	8798	58	35'-3	8798	58	35'-3	8798	58	35'-3	8798
SLAB LONGITUDINAL BOTTOM			9a5	29	43'-0	4240	29	43'-0	4240	29	43'-0	4240	29	43'-0	4240
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132	8	41'-7	1132
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a7	8	13'-0	354	8	13'-0	354	8	13'-0	354	8	13'-0	354
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a8	4	52'-8	717	4	52'-8	717	4	52'-8	717	4	52'-8	717
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a9	8	34'-3	932	8	34'-3	932	8	34'-3	932	8	34'-3	932
SLAB LONGITUDINAL BOTTOM, AT RAIL			10a10	4	33'-0	568	4	33'-0	568	4	33'-0	568	4	33'-0	568
SLAB LONGITUDINAL TOP			6b1	58	7'-9	676	58	7'-9	676	58	7'-9	676	58	7'-9	676
SLAB LONGITUDINAL TOP			11b2	58	26'-0	8013	58	26'-0	8013	58	26'-0	8013	58	26'-0	8013
SLAB LONGITUDINAL TOP			11b3	58	31'-9	9784	58	31'-9	9784	58	31'-9	9784	58	31'-9	9784
SLAB LONGITUDINAL TOP			7b4	58	25'-6	3024	58	25'-6	3024	58	25'-6	3024	58	25'-6	3024
SLAB LONGITUDINAL TOP			11b5	58	29'-0	8937	58	29'-0	8937	58	29'-0	8937	58	29'-0	8937
SLAB LONGITUDINAL TOP			6b6	29	34'-4	1496	29	34'-4	1496	29	34'-4	1496	29	34'-4	1496
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	32'-9	394	8	32'-9	394	8	32'-9	394	8	32'-9	394
SLAB LONGITUDINAL TOP, AT RAIL			11b9	8	34'-0	1446	8	34'-0	1446	8	34'-0	1446	8	34'-0	1446
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	25'-6	154	4	25'-6	154	4	25'-6	154	4	25'-6	154
SLAB LONGITUDINAL TOP, AT RAIL			7b11	8	38'-3	626	8	38'-3	626	8	38'-3	626	8	38'-3	626
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	24'-3	1031	8	24'-3	1031	8	24'-3	1031	8	24'-3	1031
SLAB TRANSVERSE BOTTOM			6c1	137	25'-5	5231	137	26'-4	5419	126	25'-5	4811	116	25'-5	4429
SLAB TRANSVERSE BOTTOM			6c2	137	23'-3	4785	137	24'-1	4956	128	23'-3	4470	119	23'-3	4156
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	-	14	VARIES	303	22	VARIES	485
SLAB TRANSVERSE ENDS, BOTTOM			6c4	-	-	-	-	-	-	12	VARIES	255	22	VARIES	458
SLAB TRANSVERSE ENDS, BOTTOM			6c5	-	-	-	-	-	-	12	VARIES	208	20	VARIES	366
SLAB TRANSVERSE ENDS, BOTTOM			6c6	-	-	-	-	-	-	12	VARIES	227	19	VARIES	376
SLAB TRANSVERSE TOP			5d1	137	25'-9	3680	137	26'-8	3811	126	25'-9	3385	116	25'-9	3116
SLAB TRANSVERSE TOP			5d2	137	23'-3	3323	137	24'-1	3442	128	23'-3	3104	119	23'-3	2886
SLAB TRANSVERSE ENDS, TOP			5d3	-	-	-	-	-	-	14	VARIES	210	22	VARIES	337
SLAB TRANSVERSE ENDS, TOP			5d4	-	-	-	-	-	-	12	VARIES	177	22	VARIES	318
SLAB TRANSVERSE ENDS, TOP			5d5	-	-	-	-	-	-	12	VARIES	144	20	VARIES	254
SLAB TRANSVERSE ENDS, TOP			5d6	-	-	-	-	-	-	12	VARIES	158	19	VARIES	261
SLAB, TRANSVERSE AT ABUTMENT			8e1	18	28'-4	1362	18	29'-2	1402	18	31'-9	1526	18	37'-6	1803
SLAB, TRANSVERSE AT ABUTMENT			8e2	18	23'-4	1122	18	24'-1	1158	18	26'-9	1286	18	32'-5	1558
SLAB, HAIRPINS, AT ABUTMENT			6e3	100	5'-0	751	100	5'-1	764	100	5'-5	814	100	6'-1	914
SLAB, DIAGONALS, AT ABUTMENT			6e4	100	5'-11	889	100	5'-11	889	100	5'-11	889	100	5'-11	889
PIER CAP HOOPS			5h1	64	8'-3	551	64	8'-3	551	96	8'-3	827	96	8'-3	827
PIER CAP ENDS			8h2	4	14'-5	154	4	14'-5	154	4	14'-5	154	4	14'-5	154
PIER CAP, BOTTOM LONGITUDINAL			8h3	8	27'-5	586	8	28'-8	613	8	31'-8	677	8	37'-10	809
PIER CAP, BOTTOM LONGITUDINAL			8h4	8	21'-11	469	8	22'-4	478	8	24'-6	524	8	29'-8	634
PIER CAP, TOP LONGITUDINAL			8h5	4	28'-2	301	4	29'-6	316	4	32'-8	349	4	38'-11	416
PIER CAP, TOP LONGITUDINAL			8h6	4	23'-5	251	4	23'-11	256	4	26'-3	281	4	31'-6	337
TOP OF SLAB, TRANSVERSE, AT RAIL			5j1	272	8'-6	2412	272	8'-6	2412	266	8'-6	2359	264	8'-6	2341
WING, VERTICAL			5m1	40	4'-5	185	40	4'-5	185	40	4'-5	185	40	4'-5	185
WING, HORIZONTAL BACK FACE			5n1	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167
WING, HORIZONTAL TRAFFIC FACE			5n3	24	6'-9	169	24	6'-9	169	24	6'-9	169	24	6'-9	169
SUB EPOXY COATED TOTAL - LBS.						105,458			106,212			106,729			107,715
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-14						5483			5483			5483			5483
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-14						5953			5953			5953			5953
EPOXY COATED RAIL TOTAL - LBS.						110,941			111,695			112,212			113,198
WITH MONOLITHIC PIER CAP						111,411			112,165			112,682			113,668
WITH BARRIER RAIL						108,629			109,327			109,400			110,021
EPOXY COATED RAIL TOTAL - LBS.						109,099			109,797			109,870			110,491
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED						3119			3104			3104			3104
WITH BARRIER RAIL						3119			3119			3119			3119
WITH OPEN RAIL						3104			3104			3104			3104
STAINLESS STEEL RAIL TOTAL - LBS.						3104			3104			3104			3104

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 140' BRIDGE									
ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
WITH BARRIER RAIL		490.8	491.9	495.3	502.8	484.5	485.3	488.0	493.9
REINF. STEEL EPOXY COATED		110,941	111,695	112,212	113,198	108,629	109,327	109,400	110,021
REINF. STEEL STAINLESS STEEL		3364	3364	3364	3364	3364	3364	3364	3364
CONCRETE BARRIER OR OPEN RAIL		302.0	302.2	302.9	304.5	302.0	302.2	302.9	304.5
WITH OPEN RAIL		490.6	491.6	495.0	502.5	484.2	485.0	487.7	493.6
REINF. STEEL EPOXY COATED		111,411	112,165	112,682	113,668	109,099	109,797	109,870	110,491
REINF. STEEL STAINLESS STEEL		3349	3349	3349	3349	3349	3349	3349	3349

\* INCLUDES 4 WINGS @ 0.68 C.Y. EACH; EXCLUDES RAIL CONCRETE.  
 Δ INCLUDES ABUTMENT PAVING NOTCH BAR WEIGHT.



STAINLESS STEEL REINFORCING FOR SUPERSTRUCTURE - BRIDGE					
LOCATION	ALL SKEWS		BAR NO.	LENGTH	WEIGHT
	SHAPE	NO.			
ABUTMENT PAVING NOTCH BAR	8u1	44	2'-1	245	
8u1 BARS SHALL BE PAID FOR UNDER THE BID ITEM "REINFORCING STEEL, STAINLESS STEEL".					WEIGHT = LBS.

NOTES:  
 ALL BARRIER RAIL REINFORCING STEEL IS TO BE EITHER EPOXY COATED OR STAINLESS STEEL AS SHOWN OR NOTED. THE STAINLESS STEEL REINFORCING STEEL SHALL BE DEFORMED BAR GRADE 60 MEETING THE REQUIREMENTS OF MATERIALS I.M.452.

ALL OTHER REINFORCING STEEL IS TO BE EPOXY COATED.

THE TRANSVERSE REBARS ARE DETAILED WITH A SPLICE LAP. AT THE CONTRACTOR'S OPTION, THIS LAP MAY BE ELIMINATED BY FURNISHING FULL LENGTH BARS WITH NO REDUCTION IN PAY WEIGHT FOR SAME.

LATEST REVISION DATE 04-2016  APPROVED BY BRIDGE ENGINEER <i>Thomas E. M. Donnell</i>	<b>IOWA DOT</b> Highway Division
	STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES
	<b>CONTINUOUS CONCRETE SLAB BRIDGES</b>
	JULY, 2014
<b>SUPERSTRUCTURE DETAILS</b> 140'-0 BRIDGE	<b>J44-17-14</b>