

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J44-14 STANDARDS INSTEAD OF J44-06 STANDARDS.

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 140' BRIDGE

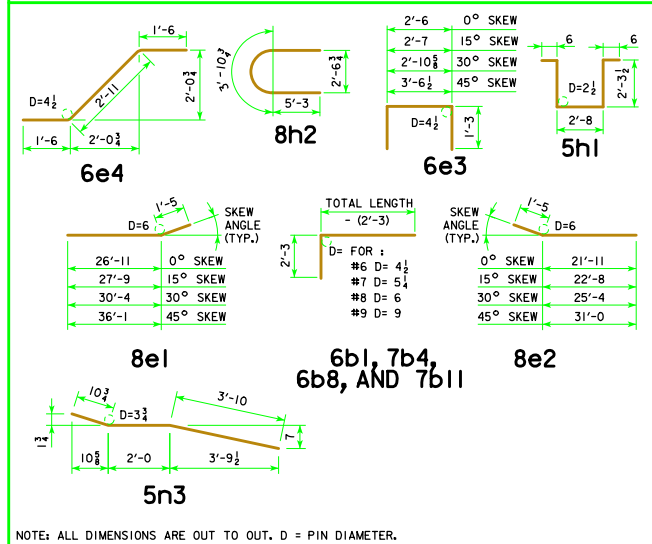
LOCATION	SKEW	SHAPE	0°				15°				30°				45°				
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		
SLAB LONGITUDINAL BOTTOM			9a1	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015	58	30'-6	6015	
SLAB LONGITUDINAL BOTTOM			10a2	58	48'-6	12,105	58	48'-6	12,105	58	48'-6	12,105	58	48'-6	12,105	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	58	43'-9	8628	
SLAB LONGITUDINAL BOTTOM			10a4	58	35'-3	8798	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	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	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	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	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	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	4	33'-0	568	
SLAB LONGITUDINAL TOP			6b1	58	7'-9	676	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	58	26'-0	8013	
SLAB LONGITUDINAL TOP			11b3	58	31'-9	9784	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	58	25'-6	3024	
SLAB LONGITUDINAL TOP			11b5	58	29'-0	8937	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	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	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	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	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	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	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				
EPOXY COATED RAIL TOTAL - LBS. NON-MONOLITHIC PIER CAP						108,629			109,327			109,400			110,021				
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			109,099			109,797			109,870			110,491				
STAINLESS STEEL RAIL TOTAL - LBS.						3119			3119			3119			3119				
			WITH OPEN RAIL			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																			
*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	490.8	491.9	495.3	502.8	484.5	485.3	488.0	493.9										
REINF. STEEL EPOXY COATED	LBS.	110,941	111,695	112,212	113,198	108,629	109,327	109,400	110,021										
REINF. STEEL STAINLESS STEEL	LBS.	3119	3119	3119	3119	3119	3119	3119	3119										
CONCRETE BARRIER OR OPEN RAIL	LIN. FT.	302.0	302.2	302.9	304.5	302.0	302.2	302.9	304.5										
WITH OPEN RAIL																			
*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	490.6	491.6	495.0	502.5	484.2	485.0	487.7	493.6										
REINF. STEEL EPOXY COATED	LBS.	111,411	112,165	112,682	113,668	109,099	109,797	109,870	110,491										
REINF. STEEL STAINLESS STEEL	LBS.	3104	3104	3104	3104	3104	3104	3104	3104										

* INCLUDES 4 WINGS @ 0.68 C.Y. EACH; EXCLUDES RAIL CONCRETE.

BENT BAR DETAILS



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.

09-14
LATEST REVISION DATE
Thomas E. M. Donnell
APPROVED BY BRIDGE ENGINEER

IOWA DOT Highway Division
STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES
**CONTINUOUS CONCRETE
SLAB BRIDGES**
JULY, 2014

**SUPERSTRUCTURE DETAILS
140'-0 BRIDGE**

J44-17-14