

**BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 150' BRIDGE**

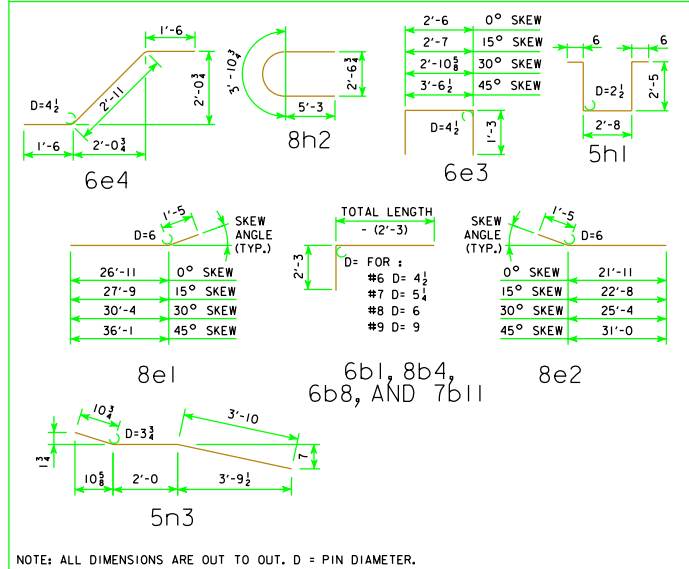
LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			10a1	58	32'-9"	8174	58	32'-9"	8174	58	32'-9"	8174	58	32'-9"	8174	58	32'-9"	8174
SLAB LONGITUDINAL BOTTOM			10a2	58	51'-6"	12,854	58	51'-6"	12,854	58	51'-6"	12,854	58	51'-6"	12,854	58	51'-6"	12,854
SLAB LONGITUDINAL BOTTOM			10a3	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			9a4	58	36'-3"	7149	58	36'-3"	7149	58	36'-3"	7149	58	36'-3"	7149	58	36'-3"	7149
SLAB LONGITUDINAL BOTTOM			9a5	29	45'-0"	4437	29	45'-0"	4437	29	45'-0"	4437	29	45'-0"	4437	29	45'-0"	4437
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	44'-7"	1213	8	44'-7"	1213	8	44'-7"	1213	8	44'-7"	1213	8	44'-7"	1213
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	56'-8"	771	4	56'-8"	771	4	56'-8"	771	4	56'-8"	771	4	56'-8"	771
SLAB LONGITUDINAL BOTTOM, AT RAIL			10a9	8	37'-6"	1291	8	37'-6"	1291	8	37'-6"	1291	8	37'-6"	1291	8	37'-6"	1291
SLAB LONGITUDINAL BOTTOM, AT RAIL			10a10	4	35'-0"	603	4	35'-0"	603	4	35'-0"	603	4	35'-0"	603	4	35'-0"	603
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	32'-9"	10,093	58	32'-9"	10,093	58	32'-9"	10,093	58	32'-9"	10,093	58	32'-9"	10,093
SLAB LONGITUDINAL TOP			11b3	58	28'-6"	8783	58	28'-6"	8783	58	28'-6"	8783	58	28'-6"	8783	58	28'-6"	8783
SLAB LONGITUDINAL TOP			8b4	58	33'-2"	5137	58	33'-2"	5137	58	33'-2"	5137	58	33'-2"	5137	58	33'-2"	5137
SLAB LONGITUDINAL TOP			11b5	58	30'-0"	9245	58	30'-0"	9245	58	30'-0"	9245	58	30'-0"	9245	58	30'-0"	9245
SLAB LONGITUDINAL TOP			6b6	29	37'-4"	1627	29	37'-4"	1627	29	37'-4"	1627	29	37'-4"	1627	29	37'-4"	1627
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	35'-0"	421	8	35'-0"	421	8	35'-0"	421	8	35'-0"	421	8	35'-0"	421
SLAB LONGITUDINAL TOP, AT RAIL			11b9	8	35'-6"	1509	8	35'-6"	1509	8	35'-6"	1509	8	35'-6"	1509	8	35'-6"	1509
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	28'-0"	169	4	28'-0"	169	4	28'-0"	169	4	28'-0"	169	4	28'-0"	169
SLAB LONGITUDINAL TOP, AT RAIL			7b11	8	40'-9"	667	8	40'-9"	667	8	40'-9"	667	8	40'-9"	667	8	40'-9"	667
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	25'-6"	1084	8	25'-6"	1084	8	25'-6"	1084	8	25'-6"	1084	8	25'-6"	1084
SLAB TRANSVERSE BOTTOM			6c1	147	25'-5"	5612	147	26'-4"	5815	136	25'-5"	5192	126	25'-5"	4811			
SLAB TRANSVERSE BOTTOM			6c2	147	23'-3"	5134	147	24'-1"	5318	138	23'-3"	4820	129	23'-3"	4505			
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	14	VARIABLES	303	22	VARIABLES	485				
SLAB TRANSVERSE ENDS, BOTTOM			6c4	-	-	-	-	-	12	VARIABLES	255	22	VARIABLES	458				
SLAB TRANSVERSE ENDS, BOTTOM			6c5	-	-	-	-	-	12	VARIABLES	208	20	VARIABLES	366				
SLAB TRANSVERSE ENDS, BOTTOM			6c6	-	-	-	-	-	12	VARIABLES	227	19	VARIABLES	376				
SLAB TRANSVERSE TOP			5d1	147	25'-9"	3949	147	26'-8"	4089	136	25'-9"	3653	126	25'-9"	3385			
SLAB TRANSVERSE TOP			5d2	147	23'-3"	3565	147	24'-1"	3693	138	23'-3"	3347	129	23'-3"	3129			
SLAB TRANSVERSE ENDS, TOP			5d3	-	-	-	-	-	14	VARIABLES	210	22	VARIABLES	337				
SLAB TRANSVERSE ENDS, TOP			5d4	-	-	-	-	-	12	VARIABLES	177	22	VARIABLES	318				
SLAB TRANSVERSE ENDS, TOP			5d5	-	-	-	-	-	12	VARIABLES	144	20	VARIABLES	254				
SLAB TRANSVERSE ENDS, TOP			5d6	-	-	-	-	-	12	VARIABLES	158	19	VARIABLES	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	68	8'-6"	603	68	8'-6"	603	68	8'-6"	603	102	8'-6"	905			
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	292	8'-6"	2589	292	8'-6"	2589	286	8'-6"	2536	284	8'-6"	2518			
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 TOTAL - LBS.						116,220			117,020			117,216			118,505			
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-06						9161			9161			9161			9161			
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-06						9605			9605			9605			9605			
TOTAL - LBS.						125,381			126,181			126,377			127,666			
		WITH MONOLITHIC PIER CAP				125,825			126,625			126,821			128,110			
		WITH BARRIER RAIL				123,017			123,761			123,789			124,411			
		WITH NON-MONOLITHIC PIER CAP				123,461			124,205			124,233			124,855			
		WITH OPEN RAIL																

**ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 150' BRIDGE**

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		555.7	556.7	560.1	567.4	549.3	550.1	552.8	558.5
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		125,381	126,181	126,377	127,666	123,017	123,761	123,789	124,411
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		322.0	322.2	322.9	324.5	322.0	322.2	322.9	324.5
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		555.4	556.4	559.8	567.1	549.0	549.8	552.5	558.2
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		125,825	126,625	126,821	128,110	123,461	124,205	124,233	124,855

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

**BENT BAR DETAILS**



NOTES:  
 ALL REINFORCING STEEL SHALL 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.

07-09 LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 <b>Iowa Department of Transportation</b> Highway Division
		STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES <b>CONTINUOUS CONCRETE</b> <b>SLAB BRIDGES</b> NOVEMBER, 2006
		SUPERSTRUCTURE DETAILS 150'-0 BRIDGE

REVISED 07-09 - OPEN RAIL REINF. QTY'S. CHANGED WHICH CHANGED TOTAL REINF. QTY'S.