

BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 120' BRIDGE

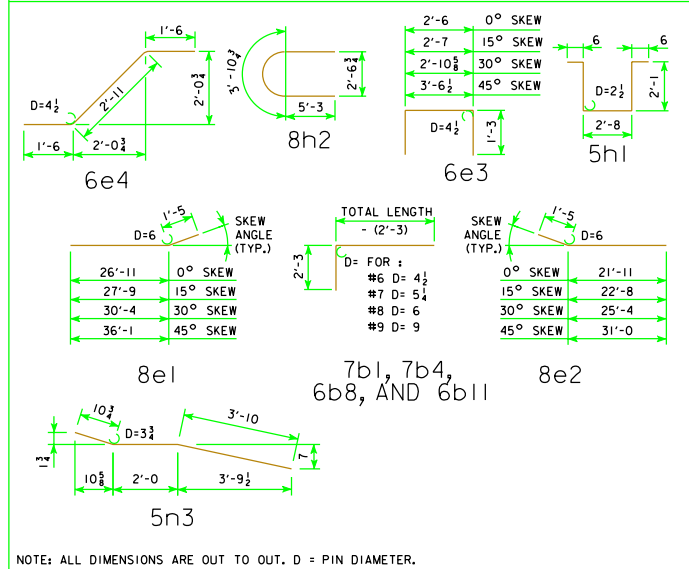
LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			9a1	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325	58	27'-0	5325
SLAB LONGITUDINAL BOTTOM			9a2	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135	58	41'-3	8135
SLAB LONGITUDINAL BOTTOM			9a3	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642	58	38'-9	7642
SLAB LONGITUDINAL BOTTOM			8a4	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530	58	29'-3	4530
SLAB LONGITUDINAL BOTTOM			9a5	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599	29	36'-6	3599
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a6	8	36'-1	982	8	36'-1	982	8	36'-1	982	8	36'-1	982	8	36'-1	982
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a7	8	12'-0	327	8	12'-0	327	8	12'-0	327	8	12'-0	327	8	12'-0	327
SLAB LONGITUDINAL BOTTOM, AT RAIL			9a8	4	45'-8	622	4	45'-8	622	4	45'-8	622	4	45'-8	622	4	45'-8	622
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a9	8	25'-6	545	8	25'-6	545	8	25'-6	545	8	25'-6	545	8	25'-6	545
SLAB LONGITUDINAL BOTTOM, AT RAIL			8a10	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273	4	25'-6	273
SLAB LONGITUDINAL TOP			7b1	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067	58	9'-0	1067
SLAB LONGITUDINAL TOP			10b2	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363	58	29'-6	7363
SLAB LONGITUDINAL TOP			10b3	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677
SLAB LONGITUDINAL TOP			7b4	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757	58	23'-3	2757
SLAB LONGITUDINAL TOP			11b5	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322	58	30'-3	9322
SLAB LONGITUDINAL TOP			6b6	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235	29	28'-4	1235
SLAB LONGITUDINAL TOP, AT RAIL			6b8	8	29'-0	349	8	29'-0	349	8	29'-0	349	8	29'-0	349	8	29'-0	349
SLAB LONGITUDINAL TOP, AT RAIL			10b9	8	29'-0	999	8	29'-0	999	8	29'-0	999	8	29'-0	999	8	29'-0	999
SLAB LONGITUDINAL TOP, AT RAIL			6b10	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139	4	23'-0	139
SLAB LONGITUDINAL TOP, AT RAIL			6b11	8	31'-6	379	8	31'-6	379	8	31'-6	379	8	31'-6	379	8	31'-6	379
SLAB LONGITUDINAL TOP, AT RAIL			11b12	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978
SLAB TRANSVERSE BOTTOM			6c1	117	25'-5	4467	117	26'-4	4628	106	25'-5	4047	96	25'-5	3665			
SLAB TRANSVERSE BOTTOM			6c2	117	23'-3	4086	117	24'-1	4233	108	23'-3	3772	99	23'-3	3458			
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	117	25'-9	3143	117	26'-8	3255	106	25'-9	2847	96	25'-9	2579			
SLAB TRANSVERSE TOP			5d2	117	23'-3	2838	117	24'-1	2939	108	23'-3	2619	99	23'-3	2401			
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	78	7'-10	638	78	7'-10	638	78	7'-10	638	104	7'-10	850			
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	232	8'-6	2057	232	8'-6	2057	226	8'-6	2004	224	8'-6	1986			
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.						86,880			87,546			87,875			89,074			
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-06						7536			7536			7536			7536			
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-06						8061			8061			8061			8061			
TOTAL - LBS.			WITH MONOLITHIC PIER CAP			94,416			95,082			95,411			96,610			
			WITH OPEN RAIL			94,941			95,607			95,936			97,135			
TOTAL - LBS.			WITH NON-MONOLITHIC PIER CAP			92,017			92,627			92,788			93,410			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			92,542			93,152			93,313			93,935			

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 120' BRIDGE

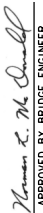

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP			
		0°	15°	30°	45°	0°	15°	30°	45°
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		382.7	383.8	387.3	395.1	376.3	377.2	380.0	386.2
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		94,416	95,082	95,411	96,610	92,017	92,627	92,788	93,410
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		262.0	262.2	262.9	264.5	262.0	262.2	262.9	264.5
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		382.5	383.5	387.1	394.9	376.1	376.9	379.8	386.0
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		94,941	95,607	95,936	97,135	92,542	93,152	93,313	93,935

* 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.

LATEST REVISION DATE	 APPROVED BY BRIDGE ENGINEER	 Iowa Department of Transportation Highway Division
		STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES CONTINUOUS CONCRETE SLAB BRIDGES NOVEMBER, 2006
		SUPERSTRUCTURE DETAILS 120'-0 BRIDGE

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