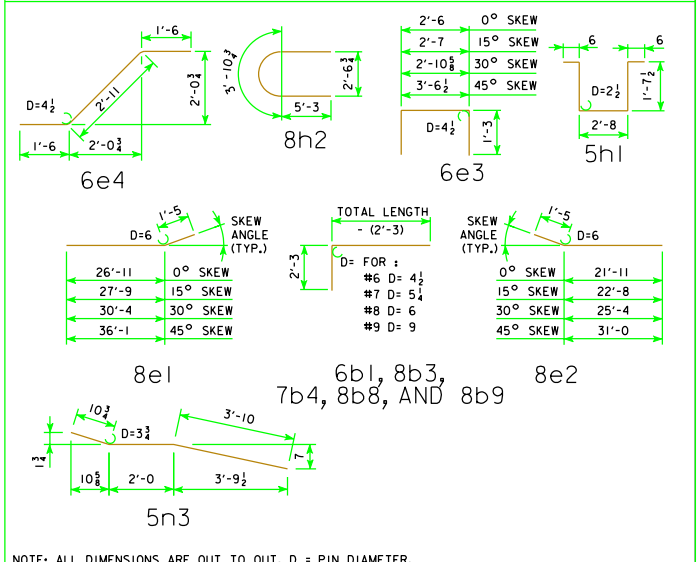


BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 70' BRIDGE

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		7a1	58	16'-0	1897	58	16'-0	1897	58	16'-0	1897	58	16'-0	1897	58	16'-0	1897	
SLAB LONGITUDINAL BOTTOM		8a2	58	25'-0	3872	58	25'-0	3872	58	25'-0	3872	58	25'-0	3872	58	25'-0	3872	
SLAB LONGITUDINAL BOTTOM		7a3	58	24'-3	2875	58	24'-3	2875	58	24'-3	2875	58	24'-3	2875	58	24'-3	2875	
SLAB LONGITUDINAL BOTTOM		8a4	58	20'-9	3214	58	20'-9	3214	58	20'-9	3214	58	20'-9	3214	58	20'-9	3214	
SLAB LONGITUDINAL BOTTOM		7a5	29	22'-0	1305	29	22'-0	1305	29	22'-0	1305	29	22'-0	1305	29	22'-0	1305	
SLAB LONGITUDINAL BOTTOM, AT RAIL		7a6	8	24'-9	405	8	24'-9	405	8	24'-9	405	8	24'-9	405	8	24'-9	405	
SLAB LONGITUDINAL BOTTOM, AT RAIL		7a7	4	27'-4	224	4	27'-4	224	4	27'-4	224	4	27'-4	224	4	27'-4	224	
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a8	8	18'-3	390	8	18'-3	390	8	18'-3	390	8	18'-3	390	8	18'-3	390	
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	4	23'-6	251	4	23'-6	251	4	23'-6	251	4	23'-6	251	4	23'-6	251	
SLAB LONGITUDINAL TOP		6b1	58	9'-0	785	58	9'-0	785	58	9'-0	785	58	9'-0	785	58	9'-0	785	
SLAB LONGITUDINAL TOP		8b2	58	18'-3	2827	58	18'-3	2827	58	18'-3	2827	58	18'-3	2827	58	18'-3	2827	
SLAB LONGITUDINAL TOP		8b3	58	27'-6	4259	58	27'-6	4259	58	27'-6	4259	58	27'-6	4259	58	27'-6	4259	
SLAB LONGITUDINAL TOP		7b4	58	22'-3	2638	58	22'-3	2638	58	22'-3	2638	58	22'-3	2638	58	22'-3	2638	
SLAB LONGITUDINAL TOP		8b5	58	12'-6	1936	58	12'-6	1936	58	12'-6	1936	58	12'-6	1936	58	12'-6	1936	
SLAB LONGITUDINAL TOP		6b6	29	20'-4	886	29	20'-4	886	29	20'-4	886	29	20'-4	886	29	20'-4	886	
SLAB LONGITUDINAL TOP, AT RAIL		8b8	8	40'-0	855	8	40'-0	855	8	40'-0	855	8	40'-0	855	8	40'-0	855	
SLAB LONGITUDINAL TOP, AT RAIL		8b9	8	30'-0	641	8	30'-0	641	8	30'-0	641	8	30'-0	641	8	30'-0	641	
SLAB TRANSVERSE BOTTOM		6c1	67	25'-5	2558	67	26'-4	2650	56	25'-5	2138	46	25'-5	1757				
SLAB TRANSVERSE BOTTOM		6c2	67	23'-3	2340	67	24'-1	2424	58	23'-3	2026	49	23'-3	1712				
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	67	25'-9	1800	67	26'-8	1864	56	25'-9	1505	46	25'-9	1236				
SLAB TRANSVERSE TOP		5d2	67	23'-3	1625	67	24'-1	1683	58	23'-3	1407	49	23'-3	1189				
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	72	6'-11	520	72	6'-11	520	90	6'-11	650	108	6'-11	780				
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	132	8'-6	1171	132	8'-6	1171	126	8'-6	1118	124	8'-6	1100				
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.					45,680			46,123			46,807			47,924				
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-06					4957			4957			4957			4957				
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-06					5100			5100			5100			5100				
TOTAL - LBS.		WITH MONOLITHIC PIER CAP			50,637			51,080			51,764			52,881				
		WITH OPEN RAIL			50,780			51,223			51,907			53,024				
TOTAL - LBS.		WITH NON-MONOLITHIC PIER CAP			48,356			48,743			49,129			49,751				
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			48,499			48,886			49,272			49,894				

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.

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 70' 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.		183.4	184.5	188.4	196.8	177.0	177.9	181.1	187.9
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		50,637	51,080	51,764	52,881	48,356	48,743	49,129	49,751
CONCRETE BARRIER OR OPEN RAIL LIN. FT.		162.0	162.2	162.9	164.5	162.0	162.2	162.9	164.5
WITH *STRUCTURAL CONCRETE (BRIDGE) C.Y.		183.3	184.4	188.3	196.7	176.9	177.8	180.9	187.8
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		50,780	51,223	51,907	53,024	48,499	48,886	49,272	49,894

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

07-09 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 70'-0 BRIDGE

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