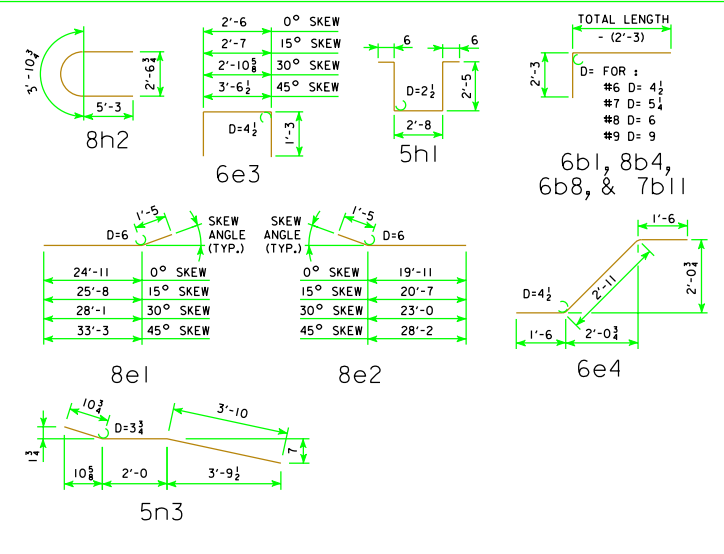


BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 150' BRIDGE

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			10o1	53	32'-9	7469	53	32'-9	7469	53	32'-9	7469	53	32'-9	7469	53	32'-9	7469
SLAB LONGITUDINAL BOTTOM			10o2	53	51'-6	11,746	53	51'-6	11,746	53	51'-6	11,746	53	51'-6	11,746	53	51'-6	11,746
SLAB LONGITUDINAL BOTTOM			10o3	53	48'-6	11,061	53	48'-6	11,061	53	48'-6	11,061	53	48'-6	11,061	53	48'-6	11,061
SLAB LONGITUDINAL BOTTOM			9o4	52	36'-3	6,409	52	36'-3	6,409	52	36'-3	6,409	52	36'-3	6,409	52	36'-3	6,409
SLAB LONGITUDINAL BOTTOM			9o5	26	45'-0	3,978	26	45'-0	3,978	26	45'-0	3,978	26	45'-0	3,978	26	45'-0	3,978
SLAB LONGITUDINAL BOTTOM, AT RAIL			9o6	8	44'-7	1,213	8	44'-7	1,213	8	44'-7	1,213	8	44'-7	1,213	8	44'-7	1,213
SLAB LONGITUDINAL BOTTOM, AT RAIL			9o7	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			9o8	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			10o9	8	37'-6	1,291	8	37'-6	1,291	8	37'-6	1,291	8	37'-6	1,291	8	37'-6	1,291
SLAB LONGITUDINAL BOTTOM, AT RAIL			10o10	4	35'-0	603	4	35'-0	603	4	35'-0	603	4	35'-0	603	4	35'-0	603
SLAB LONGITUDINAL TOP			6b1	53	7'-9	617	53	7'-9	617	53	7'-9	617	53	7'-9	617	53	7'-9	617
SLAB LONGITUDINAL TOP			11b2	53	32'-9	9,223	53	32'-9	9,223	53	32'-9	9,223	53	32'-9	9,223	53	32'-9	9,223
SLAB LONGITUDINAL TOP			11b3	53	28'-6	8,026	53	28'-6	8,026	53	28'-6	8,026	53	28'-6	8,026	53	28'-6	8,026
SLAB LONGITUDINAL TOP			8b4	53	33'-2	4,694	53	33'-2	4,694	53	33'-2	4,694	53	33'-2	4,694	53	33'-2	4,694
SLAB LONGITUDINAL TOP			11b5	52	30'-0	8,289	52	30'-0	8,289	52	30'-0	8,289	52	30'-0	8,289	52	30'-0	8,289
SLAB LONGITUDINAL TOP			6b6	26	37'-4	1,458	26	37'-4	1,458	26	37'-4	1,458	26	37'-4	1,458	26	37'-4	1,458
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	1,509	8	35'-6	1,509	8	35'-6	1,509	8	35'-6	1,509	8	35'-6	1,509
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	1,084	8	25'-6	1,084	8	25'-6	1,084	8	25'-6	1,084	8	25'-6	1,084
SLAB TRANSVERSE BOTTOM			6c1	147	23'-5	5,171	147	24'-3	5,355	138	23'-5	4,854	128	23'-5	4,502			
SLAB TRANSVERSE BOTTOM			6c2	147	21'-3	4,692	147	22'-0	4,858	139	21'-3	4,437	131	21'-3	4,182			
SLAB TRANSVERSE ENDS, BOTTOM			6c3	-	-	-	-	-	-	12	VARIES	223	20	VARIES	411			
SLAB TRANSVERSE ENDS, BOTTOM			6c4	-	-	-	-	-	-	11	VARIES	219	20	VARIES	386			
SLAB TRANSVERSE ENDS, BOTTOM			6c5	-	-	-	-	-	-	11	VARIES	176	18	VARIES	302			
SLAB TRANSVERSE ENDS, BOTTOM			6c6	-	-	-	-	-	-	11	VARIES	190	17	VARIES	311			
SLAB TRANSVERSE TOP			5d1	147	23'-9	3,642	147	24'-7	3,770	139	23'-9	3,444	128	23'-9	3,171			
SLAB TRANSVERSE TOP			5d2	147	21'-3	3,259	147	22'-0	3,374	139	21'-3	3,081	131	21'-3	2,904			
SLAB TRANSVERSE ENDS, TOP			5d3	-	-	-	-	-	-	12	VARIES	155	20	VARIES	286			
SLAB TRANSVERSE ENDS, TOP			5d4	-	-	-	-	-	-	11	VARIES	152	20	VARIES	268			
SLAB TRANSVERSE ENDS, TOP			5d5	-	-	-	-	-	-	11	VARIES	122	18	VARIES	210			
SLAB TRANSVERSE ENDS, TOP			5d6	-	-	-	-	-	-	11	VARIES	132	17	VARIES	216			
SLAB, TRANSVERSE AT ABUTMENT			8e1	18	26'-4	1,266	18	27'-1	1,302	18	29'-6	1,418	18	34'-8	1,667			
SLAB, TRANSVERSE AT ABUTMENT			8e2	18	21'-4	1,026	18	22'-0	1,058	18	24'-5	1,174	18	29'-7	1,422			
SLAB, HAIRPINS, AT ABUTMENT			6e3	92	5'-0	691	92	5'-1	703	92	5'-5	749	92	6'-1	841			
SLAB, DIAGONALS, AT ABUTMENT			6e4	92	5'-11	818	92	5'-11	818	92	5'-11	818	92	5'-11	818			
PIER CAP HOOPS			5h1	60	8'-6	532	60	8'-6	532	60	8'-6	532	60	8'-6	532			
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	25'-5	543	8	26'-7	568	8	29'-4	627	8	35'-0	748			
PIER CAP, BOTTOM LONGITUDINAL			8h4	8	19'-11	426	8	20'-3	433	8	22'-2	474	8	26'-10	574			
PIER CAP, TOP LONGITUDINAL			8h5	4	26'-2	280	4	27'-5	293	4	30'-4	324	4	36'-1	386			
PIER CAP, TOP LONGITUDINAL			8h6	4	21'-5	229	4	21'-10	234	4	23'-11	256	4	28'-8	307			
TOP OF SLAB, TRANSVERSE, AT RAIL			5j1	292	8'-6	2,589	292	8'-6	2,589	282	8'-6	2,501	276	8'-6	2,447			
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.						106,891			107,614			107,785			108,884			
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-06						9161			9161			9161			9161			
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-06						9605			9605			9605			9605			
TOTAL - LBS.			WITH MONOLITHIC PIER CAP			116,052			116,775			116,946			118,045			
			WITH OPEN RAIL			116,496			117,219			117,390			118,489			
TOTAL - LBS.			WITH NON-MONOLITHIC PIER CAP			113,888			114,561			114,579			115,078			
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL			114,332			115,005			115,023			115,522			

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 - 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.		508.8	509.8	512.8	519.5	502.8	503.5	505.9	511.1
BARRIER RAIL REINFORCING STEEL EPOXY COATED LBS.		116,052	116,775	116,946	118,045	113,888	114,561	114,579	115,078
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.		508.6	509.5	512.5	519.2	502.5	503.2	505.6	510.8
OPEN RAIL REINFORCING STEEL EPOXY COATED LBS.		116,496	117,219	117,390	118,489	114,332	115,005	115,023	115,522

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

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE
SLAB BRIDGES

NOVEMBER, 2006

APPROVED BY BRIDGE ENGINEER

SUPERSTRUCTURE DETAILS
150'-0 BRIDGE

J40-19-06

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