BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 110' BRIDGE

LOCATION \ SKEW	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		8a1	53	24'-3	3432	53	24'-3	3432	53	24'-3	3432	53	24'-3	3432
SLAB LONGITUDINAL BOTTOM		9a2	53	38'-3	6893	53	38'-3	6893	53	38'-3	6893	53	38'-3	6893
SLAB LONGITUDINAL BOTTOM		8a3	53	34'-3	4847	53	34'-3	4847	53	34'-3	4847	53	34'-3	4847
SLAB LONGITUDINAL BOTTOM		9a4	52	31'-9	5614	52	31'-9	5614	52	31'-9	5614	52	31'-9	5614
SLAB LONGITUDINAL BOTTOM		8a5	26	41'-0	2847	26	41'-0	2847	26	41'-0	2847	26	41'-0	2847
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a6	8	39'-3	1068	8	39'-3	1068	8	39'-3	1068	8	39'-3	1068
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a7	4	42'-8	581	4	42'-8	581	4	42'-8	581	4	42'-8	581
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a8	8	23'-9	508	8	23'-9	508	8	23'-9	508	8	23'-9	508
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	4	24'-0	257	4	24'-0	257	4	24'-0	257	4	24'-0	257
SLAB LONGITUDINAL TOP		8b1	53	13'-0	1840	53	13'-0	1840	53	13'-0	1840	53	13'-0	1840
SLAB LONGITUDINAL TOP		10b2	53	28'-4	6462	53	28'-4	6462	53	28'-4	6462	53	28'-4	6462
SLAB LONGITUDINAL TOP		10b3	53	25'-7	5835	53	25'-7	5835	53	25'-7	5835	53	25'-7	5835
SLAB LONGITUDINAL TOP		7b4	53	21'-5	2321	53	21'-5	2321	53	21'-5	2321	53	21'-5	2321
SLAB LONGITUDINAL TOP		10b5	52	26'-6	5930	52	26'-6	5930	52	26'-6	5930	52	26'-6	5930
SLAB LONGITUDINAL TOP		6b6	26	27'-4	1068	26	27'-4	1068	26	27'-4	1068	26	27'-4	1068
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	26'-9	322	8	26'-9	322	8	26'-9	322	8	26'-9	322
SLAB LONGITUDINAL TOP, AT RAIL		10b9	8	27'-3	939	8	27'-3	939	8	27'-3	939	8	27'-3	939
SLAB LONGITUDINAL TOP, AT RAIL		6b10	4	21'-0	127	4	21'-0	127	4	21'-0	127	4	21'-0	127
SLAB LONGITUDINAL TOP, AT RAIL		6b11	8	30'-3	364	8	30'-3	364	8	30'-3	364	8	30'-3	364
SLAB LONGITUDINAL TOP, AT RAIL		10b12	8	19'-6	672	8	19'-6	672	8	19'-6	672	8	19'-6	672
SLAB TRANSVERSE BOTTOM		6c1	107	23'-5	3764	107	24'-3	3898	98	23'-5	3447	88	23'-5	3096
SLAB TRANSVERSE BOTTOM		6c2	107	21'-3	3416	107	22'-0	3536	99	21'-3	3160	91	21'-3	2905
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	107	23'-9	2651	107	24'-7	2744	98	23'-9	2428	88	23'-9	2180
SLAB TRANSVERSE TOP		5d2	107	21'-3	2372	107	22'-0	2456	99	21'-3	2195	91	21'-3	2017
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	1266	18	27'-1	1302	18	29'-6	1418	18	34'-8	1667
SLAB, TRANSVERSE AT ABUTMENT		8e2	18	21'-4	1026	18	22'-0	1058	18	24'-5	1174	18	29'-7	1422
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	66	7'-7	523	66	7'-7	523	88	7'-7	697	88	7'-7	697
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	212	8'-6	1880	212	8'-6	1880	202	8'-6	1791	196	8'-6	1738
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.					72,487			73,048			73,529			74,388
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-06					6962			6962			6962			6962
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-06					7261			7261			7261			7261
TOTAL - LBS.	WITH MONOLITHIC PIER CAP	WITH BARRIER RAIL			79,449			80,010			80,491			81,350
		WITH OPEN RAIL			79,748			80,309			80,790			81,649
TOTAL - LBS.	WITH NON-MONOLITHIC PIER CAP	WITH BARRIER RAIL			77,294			77,805			77,959			78,484
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			77,593			78,104			78,258			78,783

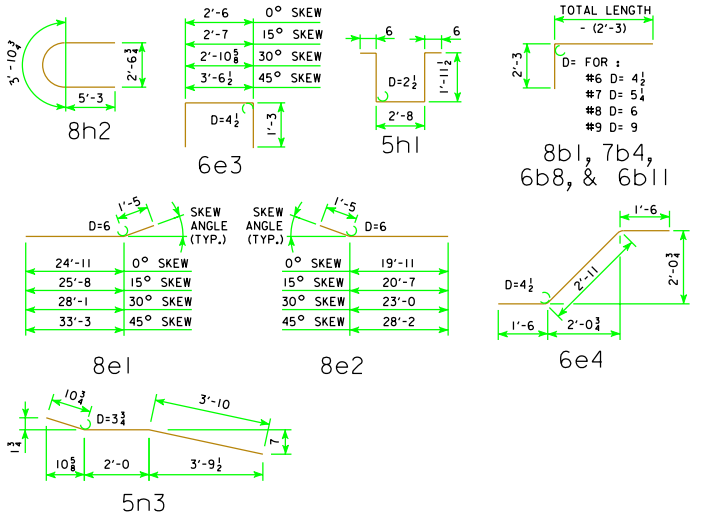
ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 110' BRIDGE

ITEM		SKEW	WITH MONOLITHIC PIER CAP 0°	15°	30°	45°	WITH NON-MONOLITHIC PIER CAP 0°	15°	30°	45°
WITH BARRIER RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	302.5	303.5	306.8	314.0	296.4	297.2	299.9	305.6
	REINFORCING STEEL EPOXY COATED	LBS.	79,449	80,010	80,491	81,350	77,294	77,805	77,959	78,484
CONCRETE BARRIER OR OPEN RAIL		LIN. FT.	242.0	242.2	242.9	244.5	242.0	242.2	242.9	244.5
WITH OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	302.3	303.2	306.6	313.8	296.2	297.0	299.7	305.4
	REINFORCING STEEL EPOXY COATED	LBS.	79,748	80,309	80,790	81,649	77,593	78,104	78,258	78,783

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

REVISED 07-09 - OPEN RAIL REINF. QTYS. CHANGED WHICH CHANGED TOTAL REINF. QTYS.

BENT BAR DETAILS



NOTE: ALL DIMENSIONS ARE OUT TO OUT. D = PIN DIAMETER.

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

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

SUPERSTRUCTURE DETAILS
110'-0 BRIDGE

J40-11-06