BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 110' BRIDGE

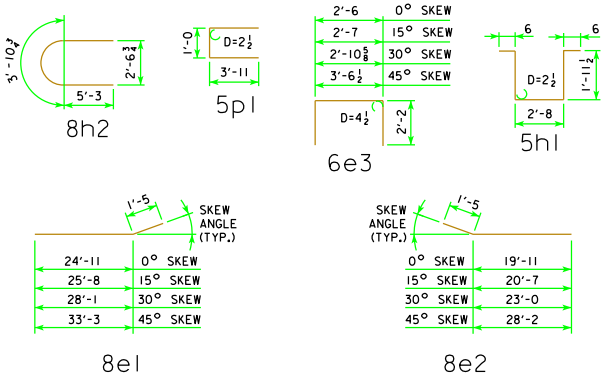
LOCATION	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		8a1	53	25'-4	3585	53	25'-4	3585	53	25'-4	3585	53	25'-4	3585
SLAB LONGITUDINAL BOTTOM		9a2	53	38'-3	6893	53	38'-3	6893	53	38'-3	6893	53	38'-3	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	32'-10	5805	52	32'-10	5805	52	32'-10	5805	52	32'-10	5805
SLAB LONGITUDINAL BOTTOM		8a5	26	41'-0	2846	26	41'-0	2846	26	41'-0	2846	26	41'-0	2846
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a6	8	40'-4	1097	8	40'-4	1097	8	40'-4	1097	8	40'-4	1097
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a7	4	42'-8	580	4	42'-8	580	4	42'-8	580	4	42'-8	580
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a8	8	24'-10	530	8	24'-10	530	8	24'-10	530	8	24'-10	530
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	4	24'-0	256	4	24'-0	256	4	24'-0	256	4	24'-0	256
SLAB LONGITUDINAL TOP		8b1	53	11'-10	1675	53	11'-10	1675	53	11'-10	1675	53	11'-10	1675
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	20'-3	2194	53	20'-3	2194	53	20'-3	2194	53	20'-3	2194
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	1067	26	27'-4	1067	26	27'-4	1067	26	27'-4	1067
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	25'-7	307	8	25'-7	307	8	25'-7	307	8	25'-7	307
SLAB LONGITUDINAL TOP, AT RAIL		10b9	8	27'-3	938	8	27'-3	938	8	27'-3	938	8	27'-3	938
SLAB LONGITUDINAL TOP, AT RAIL		6b10	4	21'-0	126	4	21'-0	126	4	21'-0	126	4	21'-0	126
SLAB LONGITUDINAL TOP, AT RAIL		6b11	8	29'-1	349	8	29'-1	349	8	29'-1	349	8	29'-1	349
SLAB LONGITUDINAL TOP, AT RAIL		10b12	8	19'-6	671	8	19'-6	671	8	19'-6	671	8	19'-6	671
SLAB TRANSVERSE BOTTOM		6c1	107	23'-5	3763	107	24'-3	3897	100	23'-5	3517	92	23'-5	3236
SLAB TRANSVERSE BOTTOM		6c2	107	21'-3	3415	107	22'-0	3536	101	21'-3	3224	94	21'-3	3000
SLAB TRANSVERSE ENDS, BOTTOM		6c3	-	-	-	-	-	-	11	VARIES	226	18	VARIES	386
SLAB TRANSVERSE ENDS, BOTTOM		6c4	-	-	-	-	-	-	10	VARIES	219	18	VARIES	363
SLAB TRANSVERSE ENDS, BOTTOM		6c5	-	-	-	-	-	-	10	VARIES	180	17	VARIES	288
SLAB TRANSVERSE ENDS, BOTTOM		6c6	-	-	-	-	-	-	10	VARIES	193	16	VARIES	319
SLAB TRANSVERSE TOP		5d1	107	23'-9	2651	107	24'-7	2744	100	23'-9	2477	92	23'-9	2279
SLAB TRANSVERSE TOP		5d2	107	21'-3	2372	107	22'-0	2455	101	21'-3	2239	94	21'-3	2083
SLAB TRANSVERSE ENDS, TOP		5d3	-	-	-	-	-	-	11	VARIES	157	18	VARIES	268
SLAB TRANSVERSE ENDS, TOP		5d4	-	-	-	-	-	-	10	VARIES	152	18	VARIES	252
SLAB TRANSVERSE ENDS, TOP		5d5	-	-	-	-	-	-	10	VARIES	125	17	VARIES	200
SLAB TRANSVERSE ENDS, TOP		5d6	-	-	-	-	-	-	10	VARIES	134	16	VARIES	222
SLAB, TRANSVERSE AT ABUTMENT		8e1	20	26'-4	1406	20	27'-1	1446	20	29'-6	1575	20	34'-8	1851
SLAB, TRANSVERSE AT ABUTMENT		8e2	20	21'-4	1139	20	22'-0	1175	20	24'-5	1304	20	29'-7	1580
SLAB, HAIRPINS, AT ABUTMENT		6e3	92	6'-10	944	92	6'-11	956	92	7'-3	1002	92	7'-11	1094
PIER CAP HOOPS		5h1	66	7'-7	522	66	7'-7	522	88	7'-7	696	88	7'-7	696
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	425	8	20'-3	433	8	22'-2	473	8	26'-10	573
PIER CAP, TOP LONGITUDINAL		8h5	4	26'-2	279	4	27'-5	293	4	30'-4	324	4	36'-1	385
PIER CAP, TOP LONGITUDINAL		8h6	4	21'-5	229	4	21'-10	233	4	23'-11	255	4	28'-8	306
TOP OF SLAB, TRANSVERSE, AT RAIL		5j1	212	8'-6	1879	212	8'-6	1879	206	8'-6	1826	204	8'-6	1809
WING, VERTICAL		5m1-4	32	SHOWN	117	32	SHOWN	117	32	SHOWN	117	32	SHOWN	117
WING, HORIZONTAL		5n1	24	6'-8	167	24	6'-8	167	24	6'-8	167	24	6'-8	167
PAVING SUPPORT, TRANSVERSE		5p1	40	8'-10	369	42	8'-10	387	46	8'-10	424	56	8'-10	516
PAVING SUPPORT LONGITUDINAL		5p3	6	22'-9	142	6	24'-0	150	6	26'-5	165	6	31'-9	199
PAVING SUPPORT LONGITUDINAL		5p4	6	20'-0	125	6	20'-9	130	6	23'-1	144	6	28'-3	177
SUB TOTAL - LBS.					72,634			73,235			74,089			75,261
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-06					6654			6654			6654			6654
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-06					6838			6838			6838			6838
TOTAL - LBS.	WITH MONOLITHIC PIER CAP	WITH BARRIER RAIL			79,288			79,889			80,743			81,915
		WITH OPEN RAIL			79,472			80,073			80,927			82,099
TOTAL - LBS.	WITH NON-MONOLITHIC PIER CAP	WITH BARRIER RAIL			77,136			77,686			78,214			79,053
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			77,320			77,870			78,398			79,237

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.	313.2	314.6	319.2	329.2	307.2	308.4	312.3	320.8
	REINFORCING STEEL EPOXY COATED	LBS.	79,288	79,889	80,743	81,915	77,136	77,686	78,214	79,053
	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.	313.0	314.4	319.0	329.0	307.0	308.2	312.1	320.6
	REINFORCING STEEL EPOXY COATED	LBS.	79,472	80,073	80,927	82,099	77,320	77,870	78,398	79,237

* INCLUDES 4 WINGS @ 0.71 C.Y. EACH; EXCLUDES RAIL CONCRETE.

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.

REVISED 12-07 - OPEN RAIL REINFORCING QUANTITY CHANGED

12-07
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