BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 120' BRIDGE

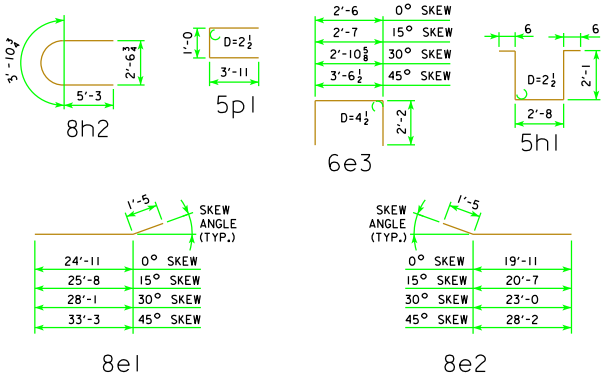
LOCATION	SHAPE	0° BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		9a1	53	28'-1	5061	53	28'-1	5061	53	28'-1	5061	53	28'-1	5061
SLAB LONGITUDINAL BOTTOM		9a2	53	41'-3	7433	53	41'-3	7433	53	41'-3	7433	53	41'-3	7433
SLAB LONGITUDINAL BOTTOM		9a3	53	38'-9	6983	53	38'-9	6983	53	38'-9	6983	53	38'-9	6983
SLAB LONGITUDINAL BOTTOM		8a4	52	30'-4	4211	52	30'-4	4211	52	30'-4	4211	52	30'-4	4211
SLAB LONGITUDINAL BOTTOM		9a5	26	36'-6	3227	26	36'-6	3227	26	36'-6	3227	26	36'-6	3227
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a6	8	37'-2	1011	8	37'-2	1011	8	37'-2	1011	8	37'-2	1011
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a7	8	12'-0	326	8	12'-0	326	8	12'-0	326	8	12'-0	326
SLAB LONGITUDINAL BOTTOM, AT RAIL		9a8	4	45'-8	621	4	45'-8	621	4	45'-8	621	4	45'-8	621
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	8	26'-7	568	8	26'-7	568	8	26'-7	568	8	26'-7	568
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a10	4	25'-6	272	4	25'-6	272	4	25'-6	272	4	25'-6	272
SLAB LONGITUDINAL TOP		7b1	53	7'-10	849	53	7'-10	849	53	7'-10	849	53	7'-10	849
SLAB LONGITUDINAL TOP		10b2	53	29'-6	6728	53	29'-6	6728	53	29'-6	6728	53	29'-6	6728
SLAB LONGITUDINAL TOP		10b3	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101	53	26'-9	6101
SLAB LONGITUDINAL TOP		7b4	53	22'-1	2392	53	22'-1	2392	53	22'-1	2392	53	22'-1	2392
SLAB LONGITUDINAL TOP		11b5	52	30'-3	8357	52	30'-3	8357	52	30'-3	8357	52	30'-3	8357
SLAB LONGITUDINAL TOP		6b6	26	28'-4	1106	26	28'-4	1106	26	28'-4	1106	26	28'-4	1106
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	27'-10	334	8	27'-10	334	8	27'-10	334	8	27'-10	334
SLAB LONGITUDINAL TOP, AT RAIL		10b9	8	29'-0	998	8	29'-0	998	8	29'-0	998	8	29'-0	998
SLAB LONGITUDINAL TOP, AT RAIL		6b10	4	23'-0	138	4	23'-0	138	4	23'-0	138	4	23'-0	138
SLAB LONGITUDINAL TOP, AT RAIL		6b11	8	30'-4	364	8	30'-4	364	8	30'-4	364	8	30'-4	364
SLAB LONGITUDINAL TOP, AT RAIL		11b12	8	23'-0	978	8	23'-0	978	8	23'-0	978	8	23'-0	978
SLAB TRANSVERSE BOTTOM		6c1	117	23'-5	4115	117	24'-3	4262	110	23'-5	3869	102	23'-5	3588
SLAB TRANSVERSE BOTTOM		6c2	117	21'-3	3734	117	22'-0	3866	111	21'-3	3543	104	21'-3	3319
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	117	23'-9	2898	117	24'-7	3000	110	23'-9	2725	102	23'-9	2527
SLAB TRANSVERSE TOP		5d2	117	21'-3	2593	117	22'-0	2685	111	21'-3	2460	104	21'-3	2305
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	72	7'-10	588	72	7'-10	588	72	7'-10	588	96	7'-10	784
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	232	8'-6	2057	232	8'-6	2057	226	8'-6	2004	224	8'-6	1986
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.					80,082			80,725			81,364			82,732
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-06					7228			7228			7228			7228
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-06					7638			7638			7638			7638
TOTAL - LBS. WITH MONOLITHIC PIER CAP	WITH BARRIER RAIL				87,310			87,953			88,592			89,960
	WITH OPEN RAIL				87,720			88,363			89,002			90,370
TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP	WITH BARRIER RAIL				85,092			85,684			86,171			87,010
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED	WITH OPEN RAIL				85,502			86,094			86,581			87,420

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 120' 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.	361.3	362.6	367.1	377.0	355.3	356.4	360.2	368.6
	REINFORCING STEEL EPOXY COATED	LBS.	87,310	87,953	88,592	89,960	85,092	85,684	86,171	87,010
	CONCRETE BARRIER OR OPEN RAIL	LIN. FT.	262.0	262.2	262.9	264.5	262.0	262.2	262.9	264.5
WITH OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	361.1	362.4	366.9	376.7	355.0	356.2	360.0	368.3
	REINFORCING STEEL EPOXY COATED	LBS.	87,720	88,363	89,002	90,370	85,502	86,094	86,581	87,420

* 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
120'-0 BRIDGE

J40-13-06