BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 100' BRIDGE

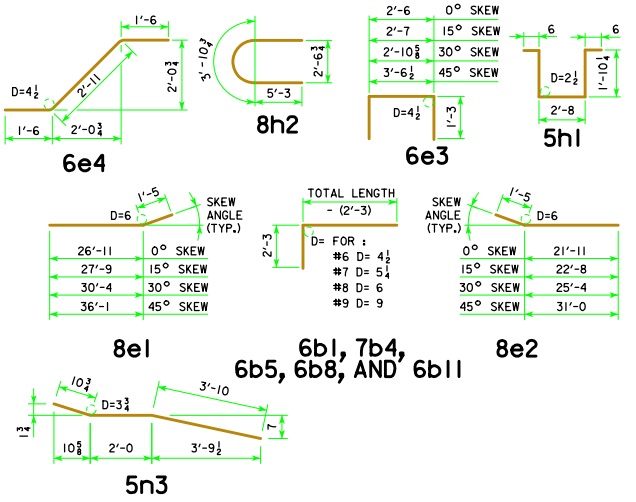
LOCATION	SHAPE	BAR	0° NO.	0° LENGTH	0° WEIGHT	15° NO.	15° LENGTH	15° WEIGHT	30° NO.	30° LENGTH	30° WEIGHT	45° NO.	45° LENGTH	45° WEIGHT
SLAB LONGITUDINAL BOTTOM		8a1	58	22'-3	3446	58	22'-3	3446	58	22'-3	3446	58	22'-3	3446
SLAB LONGITUDINAL BOTTOM		8a2	58	33'-6	5188	58	33'-6	5188	58	33'-6	5188	58	33'-6	5188
SLAB LONGITUDINAL BOTTOM		8a3	58	31'-6	4879	58	31'-6	4879	58	31'-6	4879	58	31'-6	4879
SLAB LONGITUDINAL BOTTOM		9a4	58	28'-9	5670	58	28'-9	5670	58	28'-9	5670	58	28'-9	5670
SLAB LONGITUDINAL BOTTOM		9a5	29	32'-0	3156	29	32'-0	3156	29	32'-0	3156	29	32'-0	3156
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a6	8	35'-9	764	8	35'-9	764	8	35'-9	764	8	35'-9	764
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a7	4	37'-4	399	4	37'-4	399	4	37'-4	399	4	37'-4	399
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a8	8	25'-0	534	8	25'-0	534	8	25'-0	534	8	25'-0	534
SLAB LONGITUDINAL BOTTOM, AT RAIL		8a9	4	22'-6	241	4	22'-6	241	4	22'-6	241	4	22'-6	241
SLAB LONGITUDINAL TOP		6b1	58	7'-0	610	58	7'-0	610	58	7'-0	610	58	7'-0	610
SLAB LONGITUDINAL TOP		10b2	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677	58	26'-9	6677
SLAB LONGITUDINAL TOP		10b3	58	27'-6	6864	58	27'-6	6864	58	27'-6	6864	58	27'-6	6864
SLAB LONGITUDINAL TOP		7b4	58	16'-6	1957	58	16'-6	1957	58	16'-6	1957	58	16'-6	1957
SLAB LONGITUDINAL TOP		6b5	58	13'-9	1198	58	13'-9	1198	58	13'-9	1198	58	13'-9	1198
SLAB LONGITUDINAL TOP		9b6	58	22'-9	4487	58	22'-9	4487	58	22'-9	4487	58	22'-9	4487
SLAB LONGITUDINAL TOP		6b7	29	26'-10	1169	29	26'-10	1169	29	26'-10	1169	29	26'-10	1169
SLAB LONGITUDINAL TOP, AT RAIL		6b8	8	25'-6	307	8	25'-6	307	8	25'-6	307	8	25'-6	307
SLAB LONGITUDINAL TOP, AT RAIL		9b9	8	23'-6	640	8	23'-6	640	8	23'-6	640	8	23'-6	640
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	27'-6	331	8	27'-6	331	8	27'-6	331	8	27'-6	331
SLAB LONGITUDINAL TOP, AT RAIL		10b12	8	19'-0	655	8	19'-0	655	8	19'-0	655	8	19'-0	655
SLAB TRANSVERSE BOTTOM		6c1	97	25'-5	3704	97	26'-4	3837	86	25'-5	3284	76	25'-5	2902
SLAB TRANSVERSE BOTTOM		6c2	97	23'-3	3388	97	24'-1	3509	88	23'-3	3074	79	23'-3	2759
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	97	25'-9	2606	97	26'-8	2698	86	25'-9	2310	76	25'-9	2042
SLAB TRANSVERSE TOP		5d2	97	23'-3	2353	97	24'-1	2437	88	23'-3	2134	79	23'-3	1916
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	66	7'-5	511	66	7'-5	511	88	7'-5	681	110	7'-5	851
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	192	8'-6	1703	192	8'-6	1703	186	8'-6	1649	184	8'-6	1631
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 EPOXY COATED TOTAL - LBS.					69,970			70,545			71,134			72,291
BARRIER RAIL - SEE LIST ON RAIL SHEET J44-46-14					4194			4194			4194			4194
OPEN RAIL - SEE LIST ON RAIL SHEET J44-49-14					4446			4446			4446			4446
EPOXY COATED RAIL TOTAL - LBS. WITH MONOLITHIC PIER CAP		WITH BARRIER RAIL			74,164			74,739			75,328			76,485
		WITH OPEN RAIL			74,416			74,991			75,580			76,737
EPOXY COATED RAIL TOTAL - LBS. WITH NON-MONOLITHIC PIER CAP		WITH BARRIER RAIL			71,892			72,411			72,662			73,284
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED		WITH OPEN RAIL			72,144			72,663			72,914			73,536
STAINLESS STEEL RAIL TOTAL - LBS.		WITH BARRIER RAIL			2267			2267			2267			2267
		WITH OPEN RAIL			2348			2348			2348			2348

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 100' 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.	289.2	290.2	293.9	302.0	282.8	283.6	286.6	293.1
	REINF. STEEL EPOXY COATED	LBS.	74,164	74,739	75,328	76,485	71,892	72,411	72,662	73,284
	REINF. STEEL STAINLESS STEEL	LBS.	2267	2267	2267	2267	2267	2267	2267	2267
CONCRETE BARRIER OR OPEN RAIL		LIN. FT.	222.0	222.2	222.9	224.5	222.0	222.2	222.9	224.5
WITH OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	289.0	290.1	293.8	301.8	282.6	283.5	286.4	292.9
	REINF. STEEL EPOXY COATED	LBS.	74,416	74,991	75,580	76,737	72,144	72,663	72,914	73,536
	REINF. STEEL STAINLESS STEEL	LBS.	2348	2348	2348	2348	2348	2348	2348	2348

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

BENT BAR DETAILS



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

NOTES:

ALL BARRIER RAIL REINFORCING STEEL IS TO BE EITHER EPOXY COATED OR STAINLESS STEEL AS SHOWN OR NOTED. THE STAINLESS STEEL REINFORCING STEEL SHALL BE DEFORMED BAR GRADE 60 MEETING THE REQUIREMENTS OF MATERIALS I.M.452.

ALL OTHER REINFORCING STEEL IS TO 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 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J44-14 STANDARDS INSTEAD OF J44-06 STANDARDS.

09-14
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

IOWADOT Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

JULY, 2014

SUPERSTRUCTURE DETAILS 100'-0 BRIDGE

J44-09-14