

REVISED 09-14 - CHANGED REFERENCE TO THE BARRIER RAIL & OPEN RAIL TO THE J40-14 STANDARDS INSTEAD OF J40-06 STANDARDS.

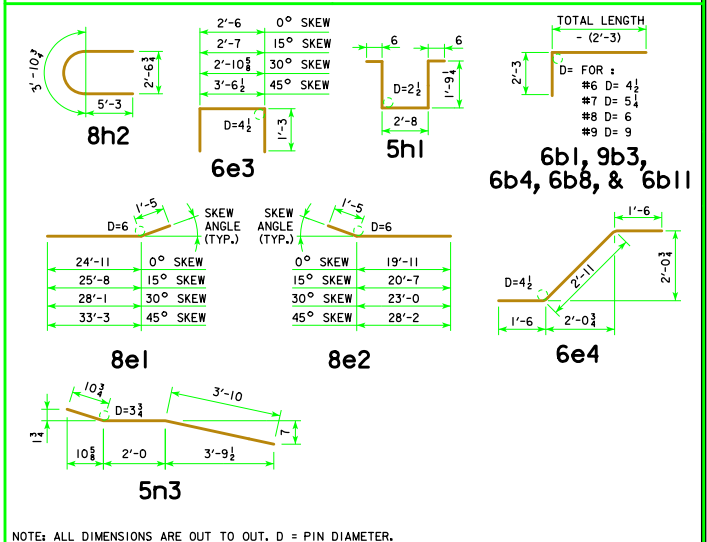
BILL OF REINFORCING STEEL FOR SUPERSTRUCTURE - 90' BRIDGE

LOCATION	SKEW	SHAPE	0°				15°				30°				45°			
			BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT		BAR NO.	LENGTH	WEIGHT	
SLAB LONGITUDINAL BOTTOM			801	53	20'-0	2831	53	20'-0	2831	53	20'-0	2831	53	20'-0	2831	53	20'-0	2831
SLAB LONGITUDINAL BOTTOM			802	53	30'-3	4281	53	30'-3	4281	53	30'-3	4281	53	30'-3	4281	53	30'-3	4281
SLAB LONGITUDINAL BOTTOM			803	53	28'-6	4034	53	28'-6	4034	53	28'-6	4034	53	28'-6	4034	53	28'-6	4034
SLAB LONGITUDINAL BOTTOM			804	56	25'-6	3541	52	25'-6	3541	52	25'-6	3541	52	25'-6	3541	52	25'-6	3541
SLAB LONGITUDINAL BOTTOM			805	26	28'-0	1944	26	28'-0	1944	26	28'-0	1944	26	28'-0	1944	26	28'-0	1944
SLAB LONGITUDINAL BOTTOM, AT RAIL			806	8	32'-3	689	8	32'-3	689	8	32'-3	689	8	32'-3	689	8	32'-3	689
SLAB LONGITUDINAL BOTTOM, AT RAIL			807	4	34'-4	367	4	34'-4	367	4	34'-4	367	4	34'-4	367	4	34'-4	367
SLAB LONGITUDINAL BOTTOM, AT RAIL			808	8	22'-9	486	8	22'-9	486	8	22'-9	486	8	22'-9	486	8	22'-9	486
SLAB LONGITUDINAL BOTTOM, AT RAIL			809	4	21'-0	225	4	21'-0	225	4	21'-0	225	4	21'-0	225	4	21'-0	225
SLAB LONGITUDINAL TOP			601	53	8'-0	637	53	8'-0	637	53	8'-0	637	53	8'-0	637	53	8'-0	637
SLAB LONGITUDINAL TOP			902	53	22'-9	4100	53	22'-9	4100	53	22'-9	4100	53	22'-9	4100	53	22'-9	4100
SLAB LONGITUDINAL TOP			903	53	35'-0	6307	53	35'-0	6307	53	35'-0	6307	53	35'-0	6307	53	35'-0	6307
SLAB LONGITUDINAL TOP			604	52	13'-0	1016	52	13'-0	1016	52	13'-0	1016	52	13'-0	1016	52	13'-0	1016
SLAB LONGITUDINAL TOP			905	52	27'-6	4862	52	27'-6	4862	52	27'-6	4862	52	27'-6	4862	52	27'-6	4862
SLAB LONGITUDINAL TOP			606	26	16'-10	658	26	16'-10	658	26	16'-10	658	26	16'-10	658	26	16'-10	658
SLAB LONGITUDINAL TOP, AT RAIL			608	8	26'-0	313	8	26'-0	313	8	26'-0	313	8	26'-0	313	8	26'-0	313
SLAB LONGITUDINAL TOP, AT RAIL			909	8	19'-6	531	8	19'-6	531	8	19'-6	531	8	19'-6	531	8	19'-6	531
SLAB LONGITUDINAL TOP, AT RAIL			610	4	18'-0	109	4	18'-0	109	4	18'-0	109	4	18'-0	109	4	18'-0	109
SLAB LONGITUDINAL TOP, AT RAIL			611	8	28'-6	343	8	28'-6	343	8	28'-6	343	8	28'-6	343	8	28'-6	343
SLAB LONGITUDINAL TOP, AT RAIL			10012	8	13'-3	457	8	13'-3	457	8	13'-3	457	8	13'-3	457	8	13'-3	457
SLAB TRANSVERSE BOTTOM			601	87	23'-5	3060	87	24'-3	3169	78	23'-5	2744	68	23'-5	2392			
SLAB TRANSVERSE BOTTOM			602	87	21'-3	2777	87	22'-0	2875	79	21'-3	2522	71	21'-3	2267			
SLAB TRANSVERSE ENDS, BOTTOM			603	-	-	-	-	-	-	12	VARIES	223	20	VARIES	411			
SLAB TRANSVERSE ENDS, BOTTOM			604	-	-	-	-	-	-	11	VARIES	219	20	VARIES	386			
SLAB TRANSVERSE ENDS, BOTTOM			605	-	-	-	-	-	-	11	VARIES	176	18	VARIES	302			
SLAB TRANSVERSE ENDS, BOTTOM			606	-	-	-	-	-	-	11	VARIES	190	17	VARIES	311			
SLAB TRANSVERSE TOP			501	87	23'-9	2156	87	24'-7	2231	78	23'-9	1933	68	23'-9	1685			
SLAB TRANSVERSE TOP			502	87	21'-3	1929	87	22'-0	1997	79	21'-3	1751	71	21'-3	1574			
SLAB TRANSVERSE ENDS, TOP			503	-	-	-	-	-	-	12	VARIES	155	20	VARIES	286			
SLAB TRANSVERSE ENDS, TOP			504	-	-	-	-	-	-	11	VARIES	152	20	VARIES	268			
SLAB TRANSVERSE ENDS, TOP			505	-	-	-	-	-	-	11	VARIES	122	18	VARIES	210			
SLAB TRANSVERSE ENDS, TOP			506	-	-	-	-	-	-	11	VARIES	132	17	VARIES	216			
SLAB, TRANSVERSE AT ABUTMENT			801	18	26'-4	1266	18	27'-1	1302	18	29'-6	1418	18	34'-8	1667			
SLAB, TRANSVERSE AT ABUTMENT			802	18	21'-4	1026	18	22'-0	1058	18	24'-5	1174	18	29'-7	1422			
SLAB, HAIRPINS, AT ABUTMENT			603	92	5'-0	691	92	5'-1	703	92	5'-5	749	92	6'-1	841			
SLAB, DIAGONALS, AT ABUTMENT			604	92	5'-11	818	92	5'-11	818	92	5'-11	818	92	5'-11	818			
PIER CAP HOOPS			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	172	8'-6	1525	172	8'-6	1525	162	8'-6	1437	156	8'-6	1384			
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.					55,677		56,157		56,547		57,678							
BARRIER RAIL - SEE LIST ON RAIL SHEET J40-46-14					3882		3882		3882		3882							
OPEN RAIL - SEE LIST ON RAIL SHEET J40-49-14					4121		4121		4121		4121							
EPOXY COATED RAIL TOTAL - LBS.			WITH MONOLITHIC PIER CAP	WITH BARRIER RAIL	59,559		60,039		60,429		61,560							
			WITH OPEN RAIL	WITH BARRIER RAIL	59,798		60,278		60,668		61,799							
EPOXY COATED RAIL TOTAL - LBS.			WITH BARRIER RAIL	WITH BARRIER RAIL	57,382		57,812		58,049		58,574							
SAME AS ABOVE EXCEPT ALL "h" BARS DELETED			WITH OPEN RAIL	WITH OPEN RAIL	57,621		58,051		58,288		58,813							
STAINLESS STEEL RAIL TOTAL - LBS.			WITH BARRIER RAIL	WITH BARRIER RAIL	2068		2068		2068		2068							
			WITH OPEN RAIL	WITH OPEN RAIL	2209		2209		2209		2209							

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE - 90' BRIDGE

ITEM	SKEW	WITH MONOLITHIC PIER CAP				WITH NON-MONOLITHIC PIER CAP				
		0°	15°	30°	45°	0°	15°	30°	45°	
WITH BARRIER RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	227.1	228.1	231.5	239.0	221.0	221.8	224.6	230.6
	REINF. STEEL EPOXY COATED	LBS.	59,559	60,039	60,429	61,560	57,382	57,812	58,049	58,574
	REINF. STEEL STAINLESS STEEL	LBS.	2068	2068	2068	2068	2068	2068	2068	2068
CONCRETE BARRIER OR OPEN RAIL	CONCRETE BARRIER OR OPEN RAIL	LIN. FT.	202.0	202.2	202.9	204.5	202.0	202.2	202.9	204.5
WITH OPEN RAIL	*STRUCTURAL CONCRETE (BRIDGE)	C.Y.	226.9	227.9	231.3	238.8	220.8	221.7	224.4	230.4
	REINF. STEEL EPOXY COATED	LBS.	59,798	60,278	60,668	61,799	57,621	58,051	58,288	58,813
	REINF. STEEL STAINLESS STEEL	LBS.	2209	2209	2209	2209	2209	2209	2209	2209

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

BENT BAR DETAILS


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.

 09-14
LATEST REVISION DATE
Approved by BRIDGE ENGINEER
M. E. ...

IOWA DOT Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

JULY, 2014

**SUPERSTRUCTURE DETAILS
90'-0 BRIDGE**
J40-07-14