BILL OF REINFORCING STEEL - ONE ABUTMENT - 0° SKEW

MARK	LOCATION	SHAPE	LENGTH	70'-0 NO.	70'-0 WEIGHT	80'-0 NO.	80'-0 WEIGHT	90'-0 NO.	90'-0 WEIGHT	100'-0 NO.	100'-0 WEIGHT	110'-0 NO.	110'-0 WEIGHT	120'-0 NO.	120'-0 WEIGHT	130'-0 NO.	130'-0 WEIGHT	140'-0 NO.	140'-0 WEIGHT	150'-0 NO.	150'-0 WEIGHT
5p2	PAVING SUPPORT TRANSVERSE		9'-4	22	214	22	214	22	214	22	214	22	214	22	214	22	214	22	214	22	214
4p5	PAVING SUPPORT TRANSVERSE		1'-11	22	28	22	28	22	28	22	28	22	28	22	28	22	28	22	28	22	28
5p6	PAVING SUPPORT LONGITUDINAL		24'-8	2	51	2	51	2	51	2	51	2	51	2	51	2	51	2	51	2	51
5p7	PAVING SUPPORT LONGITUDINAL		22'-0	2	46	2	46	2	46	2	46	2	46	2	46	2	46	2	46	2	46
8r1	ABUTMENT FOOTING LONGITUDINAL		28'-4	7	530	7	530	7	530	7	530	7	530	7	530	7	530	7	530	7	530
8r2	ABUTMENT FOOTING LONGITUDINAL		23'-4	7	436	7	436	7	436	7	436	7	436	7	436	7	436	7	436	7	436
5s1	ABUTMENT FOOTING HOOPS		11'-0	40	459	40	459	44	505	37	425	37	425	40	459	43	493	34	390	36	413
6t1	FOOTING TO SLAB DOWELS		3'-11	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588
*5u1	WING LONGITUDINAL		6'-8	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83
*2	PILE SPIRAL		38'-6	10	64	10	64	11	71	12	77	12	77	13	84	14	90	16	103	17	109
	SPIRAL SPACERS, L 7/8 x 7/8 x 1/8 x 0.70		1'-10	20	26	20	26	22	28	24	31	24	31	26	33	28	36	32	41	34	44
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2525		2525		2580		2509		2509		2552		2595		2510		2542

BILL OF REINFORCING STEEL - ONE ABUTMENT - 15° SKEW

MARK	LOCATION	SHAPE	LENGTH	70'-0 NO.	70'-0 WEIGHT	80'-0 NO.	80'-0 WEIGHT	90'-0 NO.	90'-0 WEIGHT	100'-0 NO.	100'-0 WEIGHT	110'-0 NO.	110'-0 WEIGHT	120'-0 NO.	120'-0 WEIGHT	130'-0 NO.	130'-0 WEIGHT	140'-0 NO.	140'-0 WEIGHT	150'-0 NO.	150'-0 WEIGHT
5p2	PAVING SUPPORT TRANSVERSE		9'-4	23	224	23	224	23	224	23	224	23	224	23	224	23	224	23	224	23	224
4p5	PAVING SUPPORT TRANSVERSE		1'-11	23	29	23	29	23	29	23	29	23	29	23	29	23	29	23	29	23	29
5p6	PAVING SUPPORT LONGITUDINAL		25'-6	2	53	2	53	2	53	2	53	2	53	2	53	2	53	2	53	2	53
5p7	PAVING SUPPORT LONGITUDINAL		22'-9	2	47	2	47	2	47	2	47	2	47	2	47	2	47	2	47	2	47
8r1	ABUTMENT FOOTING LONGITUDINAL		29'-2	7	545	7	545	7	545	7	545	7	545	7	545	7	545	7	545	7	545
8r2	ABUTMENT FOOTING LONGITUDINAL		24'-1	7	450	7	450	7	450	7	450	7	450	7	450	7	450	7	450	7	450
5s1	ABUTMENT FOOTING HOOPS		11'-0	45	516	40	459	40	459	44	505	36	413	36	413	39	447	30	344	32	367
5s2	ABUTMENT FOOTING HOOPS		11'-3	4	47	4	47	4	47	4	47	4	47	4	47	4	47	4	47	4	47
6t1	FOOTING TO SLAB DOWELS		3'-11	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588
*5u1	WING LONGITUDINAL		6'-8	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83
*2	PILE SPIRAL		38'-6	10	64	11	71	11	71	12	77	13	84	13	84	14	90	16	103	17	109
	SPIRAL SPACERS, L 7/8 x 7/8 x 1/8 x 0.70		1'-10	20	26	22	28	22	28	24	31	26	33	26	33	28	36	32	41	34	44
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2672		2624		2624		2679		2596		2596		2639		2554		2586

BILL OF REINFORCING STEEL - ONE ABUTMENT - 30° SKEW

MARK	LOCATION	SHAPE	LENGTH	70'-0 NO.	70'-0 WEIGHT	80'-0 NO.	80'-0 WEIGHT	90'-0 NO.	90'-0 WEIGHT	100'-0 NO.	100'-0 WEIGHT	110'-0 NO.	110'-0 WEIGHT	120'-0 NO.	120'-0 WEIGHT	130'-0 NO.	130'-0 WEIGHT	140'-0 NO.	140'-0 WEIGHT	150'-0 NO.	150'-0 WEIGHT
5p2	PAVING SUPPORT TRANSVERSE		9'-4	25	243	25	243	25	243	25	243	25	243	25	243	25	243	25	243	25	243
4p5	PAVING SUPPORT TRANSVERSE		1'-11	25	32	25	32	25	32	25	32	25	32	25	32	25	32	25	32	25	32
5p6	PAVING SUPPORT LONGITUDINAL		28'-2	2	59	2	59	2	59	2	59	2	59	2	59	2	59	2	59	2	59
5p7	PAVING SUPPORT LONGITUDINAL		25'-5	2	53	2	53	2	53	2	53	2	53	2	53	2	53	2	53	2	53
8r1	ABUTMENT FOOTING LONGITUDINAL		31'-9	7	593	7	593	7	593	7	593	7	593	7	593	7	593	7	593	7	593
8r2	ABUTMENT FOOTING LONGITUDINAL		26'-9	7	500	7	500	7	500	7	500	7	500	7	500	7	500	7	500	7	500
5s1	ABUTMENT FOOTING HOOPS		11'-0	45	516	50	574	44	505	44	505	48	551	39	447	42	482	48	551	34	390
5s2	ABUTMENT FOOTING HOOPS		11'-11	4	50	4	50	4	50	4	50	4	50	4	50	4	50	4	50	4	50
6t1	FOOTING TO SLAB DOWELS		3'-11	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588
*5u1	WING LONGITUDINAL		6'-8	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83
*2	PILE SPIRAL		38'-6	10	64	11	71	12	77	12	77	13	84	14	90	15	96	17	109	18	116
	SPIRAL SPACERS, L 7/8 x 7/8 x 1/8 x 0.70		1'-10	20	26	22	28	24	31	24	31	26	33	28	36	30	39	34	44	36	46
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2807		2874		2814		2814		2869		2774		2818		2905		2753

BILL OF REINFORCING STEEL - ONE ABUTMENT - 45° SKEW

MARK	LOCATION	SHAPE	LENGTH	70'-0 NO.	70'-0 WEIGHT	80'-0 NO.	80'-0 WEIGHT	90'-0 NO.	90'-0 WEIGHT	100'-0 NO.	100'-0 WEIGHT	110'-0 NO.	110'-0 WEIGHT	120'-0 NO.	120'-0 WEIGHT	130'-0 NO.	130'-0 WEIGHT	140'-0 NO.	140'-0 WEIGHT	150'-0 NO.	150'-0 WEIGHT
5p2	PAVING SUPPORT TRANSVERSE		9'-4	31	302	31	302	31	302	31	302	31	302	31	302	31	302	31	302	31	302
4p5	PAVING SUPPORT TRANSVERSE		1'-11	31	40	31	40	31	40	31	40	31	40	31	40	31	40	31	40	31	40
5p6	PAVING SUPPORT LONGITUDINAL		33'-10	2	71	2	71	2	71	2	71	2	71	2	71	2	71	2	71	2	71
5p7	PAVING SUPPORT LONGITUDINAL		31'-1	2	65	2	65	2	65	2	65	2	65	2	65	2	65	2	65	2	65
8r1	ABUTMENT FOOTING LONGITUDINAL		37'-6	7	701	7	701	7	701	7	701	7	701	7	701	7	701	7	701	7	701
8r2	ABUTMENT FOOTING LONGITUDINAL		32'-5	7	606	7	606	7	606	7	606	7	606	7	606	7	606	7	606	7	606
5s1	ABUTMENT FOOTING HOOPS		11'-0	55	631	60	688	52	597	52	597	56	642	60	688	60	688	51	585	54	620
5s2	ABUTMENT FOOTING HOOPS		13'-6	4	56	4	56	4	56	4	56	4	56	4	56	4	56	4	56	4	56
6t1	FOOTING TO SLAB DOWELS		3'-11	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588	100	588
*5u1	WING LONGITUDINAL		6'-8	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83	12	83
*2	PILE SPIRAL		38'-6	12	77	13	84	14	90	14	90	15	96	16	103	16	103	18	116	19	122
	SPIRAL SPACERS, L 7/8 x 7/8 x 1/8 x 0.70		1'-10	24	31	26	33	28	36	28	36	30	39	32	41	32	41	36	46	38	49
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					3251		3317		3235		3235		3289		3344		3344		3259		3303

* SEE SHEET J44-20-06 FOR SPACING

NOTE: THE PILE SPIRALS AND SPIRAL SPACERS ARE TO BE NON-COATED REINFORCING BUT MAY BE EPOXY COATED AT THE CONTRACTORS OPTION AND EXPENSE.

ESTIMATED QUANTITIES - ONE ABUT. - 0° SKEW

LOCATION	UNIT	QUANTITY 70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	16.9	16.9	16.9	16.8	16.8	16.8	16.7	16.6	16.5
REINFORCING STEEL EPOXY COATED	LBS.	2525	2525	2580	2509	2509	2552	2595	2510	2542
WOOD PILES (TREATED)	NO.	10	10	11	12	12	13	14	16	17
PREBORE HOLES	FT.	-	-	-	-	-	-	-	160	170

ESTIMATED QUANTITIES - ONE ABUT. - 15° SKEW

LOCATION	UNIT	QUANTITY 70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	17.6	17.5	17.5	17.5	17.4	17.4	17.3	17.2	17.2
REINFORCING STEEL EPOXY COATED	LBS.	2672	2624	2624	2679	2596	2596	2639	2554	2586
WOOD PILES (TREATED)	NO.	10	11	11	12	13	13	14	16	17
PREBORE HOLES	FT.	-	-	-	-	-	-	-	160	170

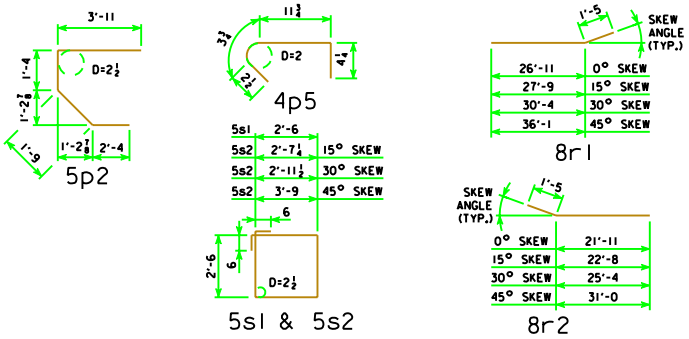
ESTIMATED QUANTITIES - ONE ABUT. - 30° SKEW

LOCATION	UNIT	QUANTITY 70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	19.7	19.6	19.5	19.5	19.5	19.4	19.4	19.2	19.2
REINFORCING STEEL EPOXY COATED	LBS.	2807	2874	2814	2814	2869	2774	2818	2905	2753
WOOD PILES (TREATED)	NO.	10	11	12	12	13	14	15	17	18
PREBORE HOLES	FT.	-	-	-	-	-	-	-	170	180

ESTIMATED QUANTITIES - ONE ABUT. - 45° SKEW

LOCATION	UNIT	QUANTITY 70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
BRIDGE LENGTH		70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	24.1	24.0	24.0	24.0	23.9	23.9	23.9	23.7	23.7
REINFORCING STEEL EPOXY COATED	LBS.	3251	3317	3235	3235	3289	3344	3344	3259	3303
WOOD PILES (TREATED)	NO.	12	13	14	14	15	16	16	18	19
PREBORE HOLES	FT.	-	-	-	-	-	-	-	180	190

BENT BAR DETAILS



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

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 44' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

ABUTMENT DETAILS
TIMBER PILING

J44-38-06