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
8r1	ABUTMENT FOOTING LONGITUDINAL		26'-4	7	492	7	492	7	492	7	492	7	492	7	492	7	492	7	492	7	492
8r2	ABUTMENT FOOTING LONGITUDINAL		21'-4	7	399	7	399	7	399	7	399	7	399	7	399	7	399	7	399	7	399
5s1	ABUTMENT FOOTING HOOPS		11'-0	40	459	40	459	34	390	34	390	37	425	40	459	40	459	32	367	34	390
6t1	FOOTING TO SLAB DOWELS		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	10	64	10	64	11	71	11	71	12	77	13	84	13	84	15	96	16	103
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	30	39	30	39	33	43	33	43	36	47	39	50	39	50	45	58	48	62
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2184		2184		2126		2126		2171		2215		2215		2143		2177

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
8r1	ABUTMENT FOOTING LONGITUDINAL		27'-2	7	508	7	508	7	508	7	508	7	508	7	508	7	508	7	508	7	508
8r2	ABUTMENT FOOTING LONGITUDINAL		22'-1	7	413	7	413	7	413	7	413	7	413	7	413	7	413	7	413	7	413
5s1	ABUTMENT FOOTING HOOPS		11'-0	36	413	36	413	40	459	40	459	33	379	36	413	36	413	28	321	30	344
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		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	10	64	10	64	11	71	11	71	12	77	13	84	13	84	15	96	16	103
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	30	39	30	39	33	43	33	43	36	47	39	50	39	50	45	58	48	62
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2215		2215		2272		2272		2202		2246		2246		2174		2208

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
8r1	ABUTMENT FOOTING LONGITUDINAL		29'-6	7	551	7	551	7	551	7	551	7	551	7	551	7	551	7	551	7	551
8r2	ABUTMENT FOOTING LONGITUDINAL		24'-5	7	456	7	456	7	456	7	456	7	456	7	456	7	456	7	456	7	456
5s1	ABUTMENT FOOTING HOOPS		11'-0	45	516	40	459	40	459	44	505	44	505	36	413	39	447	30	344	32	367
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		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	10	64	11	71	11	71	12	77	12	77	13	84	14	90	16	103	17	109
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	30	39	33	43	33	43	36	47	36	47	39	50	42	54	48	62	51	66
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2407		2361		2361		2417		2417		2335		2379		2297		2330

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
8r1	ABUTMENT FOOTING LONGITUDINAL		34'-8	7	648	7	648	7	648	7	648	7	648	7	648	7	648	7	648	7	648
8r2	ABUTMENT FOOTING LONGITUDINAL		29'-7	7	553	7	553	7	553	7	553	7	553	7	553	7	553	7	553	7	553
5s1	ABUTMENT FOOTING HOOPS		11'-0	50	574	50	574	55	631	48	551	48	551	52	597	42	482	48	551	48	551
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		5'-0	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345	46	345
6t2	FOOTING TO SLAB DOWELS		5'-7	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386	46	386
#2	PILE SPIRAL		38'-6	11	71	11	71	12	77	13	84	13	84	14	90	15	96	17	109	17	109
	SPIRAL SPACERS - L $\frac{7}{8}$ X $\frac{7}{8}$ X $\frac{1}{8}$ X 0.70		1'-10	33	43	33	43	36	47	39	50	39	50	42	54	45	58	51	66	51	66
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2676		2676		2743		2673		2673		2729		2624		2714		2714

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

REVISED 07-09 - CONCRETE QUANTITIES CHANGED.

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										
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	13.8	13.8	13.8	13.8	13.7	13.6	13.6	13.5	13.5
REINFORCING STEEL EPOXY COATED	LBS.	2184	2184	2126	2126	2171	2215	2215	2143	2177
WOOD PILES (TREATED)	NO.	10	10	11	11	12	13	13	15	16
PREBORE HOLES	FT.	-	-	-	-	-	-	-	150	160

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										
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	14.3	14.3	14.3	14.3	14.2	14.1	14.1	14.0	14.0
REINFORCING STEEL EPOXY COATED	LBS.	2215	2215	2272	2272	2202	2246	2246	2174	2208
WOOD PILES (TREATED)	NO.	10	10	11	11	12	13	13	15	16
PREBORE HOLES	FT.	-	-	-	-	-	-	-	150	160

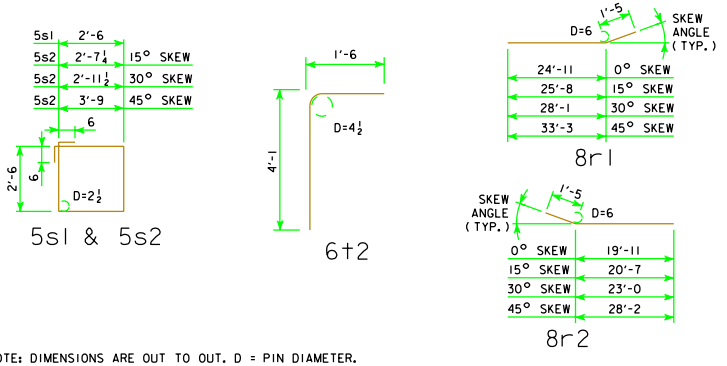
ESTIMATED QUANTITIES - ONE ABUT. - 30° SKEW

LOCATION	UNIT	QUANTITY 70'-0	80'-0	90'-0	100'-0	110'-0	120'-0	130'-0	140'-0	150'-0
BRIDGE LENGTH										
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	16.0	16.0	16.0	15.9	15.9	15.8	15.8	15.7	15.6
REINFORCING STEEL EPOXY COATED	LBS.	2407	2361	2361	2417	2417	2335	2379	2297	2330
WOOD PILES (TREATED)	NO.	10	11	11	12	12	13	14	16	17
PREBORE HOLES	FT.	-	-	-	-	-	-	-	160	170

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										
STRUCTURAL CONCRETE (BRIDGE)	C.Y.	19.7	19.7	19.7	19.6	19.6	19.6	19.5	19.4	19.4
REINFORCING STEEL EPOXY COATED	LBS.	2676	2676	2743	2673	2673	2729	2624	2714	2714
WOOD PILES (TREATED)	NO.	11	11	12	13	13	14	15	17	17
PREBORE HOLES	FT.	-	-	-	-	-	-	-	170	170

BENT BAR DETAILS



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

07-09
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

ABUTMENT DETAILS
TIMBER PILING

J40-38-06