BILL OF REINFORCING STEEL - ONE ABUTMENT - 0° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	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	39	447	39	447	39	447	39	447	40	459	40	459	40	459	39	447	36	413
5p2	PAVING SUPPORT TRANSVERSE		9'-4	20	195	20	195	20	195	20	195	20	195	20	195	20	195	20	195	20	195
4p5	PAVING SUPPORT TRANSVERSE		1'-11	20	26	20	26	20	26	20	26	20	26	20	26	20	26	20	26	20	26
5p6	PAVING SUPPORT LONGITUDINAL		22'-8	2	47	2	47	2	47	2	47	2	47	2	47	2	47	2	47	2	47
5p7	PAVING SUPPORT LONGITUDINAL		20'-0	2	42	2	42	2	42	2	42	2	42	2	42	2	42	2	42	2	42
6t1	FOOTING TO SLAB DOWELS		3'-11	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541
*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	6	39	6	39	6	39	6	39	7	45	7	45	7	45	8	51	9	58
	SPIRAL SPACERS - L 7/8 X 7/8 X 1/8 X 0.70		1'-10	12	15	12	15	12	15	12	15	14	18	14	18	14	18	16	21	18	23
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2326		2326		2326		2326		2347		2347		2347		2344		2319

BILL OF REINFORCING STEEL - ONE ABUTMENT - 15° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT
8r1	ABUTMENT FOOTING LONGITUDINAL		27'-1	7	506	7	506	7	506	7	506	7	506	7	506	7	506	7	506	7	506
8r2	ABUTMENT FOOTING LONGITUDINAL		22'-0	7	411	7	411	7	411	7	411	7	411	7	411	7	411	7	411	7	411
5s1	ABUTMENT FOOTING HOOPS		11'-0	36	413	36	413	36	413	36	413	36	413	36	413	36	413	40	459	40	459
5s2	ABUTMENT FOOTING HOOPS		11'-3	4	47	4	47	4	47	4	47	4	47	4	47	4	47	4	47	4	47
5p2	PAVING SUPPORT TRANSVERSE		9'-4	21	204	21	204	21	204	21	204	21	204	21	204	21	204	21	204	21	204
4p5	PAVING SUPPORT TRANSVERSE		1'-11	21	27	21	27	21	27	21	27	21	27	21	27	21	27	21	27	21	27
5p6	PAVING SUPPORT LONGITUDINAL		23'-5	2	49	2	49	2	49	2	49	2	49	2	49	2	49	2	49	2	49
5p7	PAVING SUPPORT LONGITUDINAL		20'-8	2	43	2	43	2	43	2	43	2	43	2	43	2	43	2	43	2	43
6t1	FOOTING TO SLAB DOWELS		3'-11	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541
*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	7	45	7	45	7	45	7	45	7	45	7	45	7	45	9	58	9	58
	SPIRAL SPACERS - L 7/8 X 7/8 X 1/8 X 0.70		1'-10	14	18	14	18	14	18	14	18	14	18	14	18	14	18	18	23	18	23
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2387		2387		2387		2387		2387		2387		2387		2451		2451

BILL OF REINFORCING STEEL - ONE ABUTMENT - 30° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	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	42	482	42	482	42	482	42	482	42	482	42	482	40	459	40	459	40	459
5s2	ABUTMENT FOOTING HOOPS		11'-11	4	50	4	50	4	50	4	50	4	50	4	50	4	50	4	50	4	50
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'-10	2	54	2	54	2	54	2	54	2	54	2	54	2	54	2	54	2	54
5p7	PAVING SUPPORT LONGITUDINAL		23'-1	2	48	2	48	2	48	2	48	2	48	2	48	2	48	2	48	2	48
6t1	FOOTING TO SLAB DOWELS		3'-11	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541
*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	7	45	7	45	7	45	7	45	7	45	7	45	9	58	9	58	9	58
	SPIRAL SPACERS - L 7/8 X 7/8 X 1/8 X 0.70		1'-10	14	18	14	18	14	18	14	18	14	18	14	18	18	23	18	23	18	23
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					2581		2581		2581		2581		2581		2581		2576		2576		2576

BILL OF REINFORCING STEEL - ONE ABUTMENT - 45° SKEW

BRIDGE LENGTH				70'-0		80'-0		90'-0		100'-0		110'-0		120'-0		130'-0		140'-0		150'-0	
MARK	LOCATION	SHAPE	LENGTH	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	WEIGHT	NO.	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	56	642	56	642	54	620	54	620	50	574	50	574	55	631	52	597	52	597
5s2	ABUTMENT FOOTING HOOPS		13'-6	4	56	4	56	4	56	4	56	4	56	4	56	4	56	4	56	4	56
5p2	PAVING SUPPORT TRANSVERSE		9'-4	28	273	28	273	28	273	28	273	28	273	28	273	28	273	28	273	28	273
4p5	PAVING SUPPORT TRANSVERSE		1'-11	28	36	28	36	28	36	28	36	28	36	28	36	28	36	28	36	28	36
5p6	PAVING SUPPORT LONGITUDINAL		31'-0	2	65	2	65	2	65	2	65	2	65	2	65	2	65	2	65	2	65
5p7	PAVING SUPPORT LONGITUDINAL		28'-3	2	59	2	59	2	59	2	59	2	59	2	59	2	59	2	59	2	59
6t1	FOOTING TO SLAB DOWELS		3'-11	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541	92	541
*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	9	58	9	58	10	64	10	64	11	71	11	71	12	77	14	90	14	90
	SPIRAL SPACERS - L 7/8 X 7/8 X 1/8 X 0.70		1'-10	18	23	18	23	20	26	20	26	22	28	22	28	24	31	28	36	28	36
REINFORCING STEEL EPOXY COATED - TOTAL (LBS.)					3037		3037		3024		3024		2987		2987		3053		3037		3037

* SEE SHEET J40-20-06 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								
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.	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0	16.0
REINFORCING STEEL EPOXY COATED	LBS.	2326	2326	2326	2326	2347	2347	2347	2344	2319
STEEL PILING HP 10 X 42	NO.	6	6	6	6	7	7	7	8	9
PREBORE HOLES	FT.	-	-	-	-	-	-	-	80	90

ESTIMATED QUANTITIES - ONE ABUT. - 15° SKEW

LOCATION	UNIT	QUANTITY								
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.	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6	16.6
REINFORCING STEEL EPOXY COATED	LBS.	2387	2387	2387	2387	2387	2387	2387	2451	2451
STEEL PILING HP 10 X 42	NO.	7	7	7	7	7	7	7	9	9
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	90

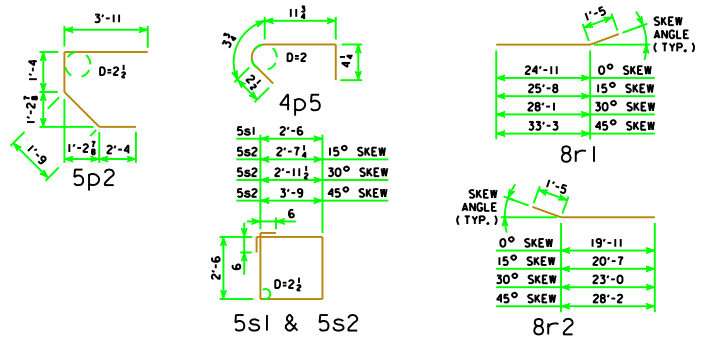
ESTIMATED QUANTITIES - ONE ABUT. - 30° SKEW

LOCATION	UNIT	QUANTITY								
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.	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5
REINFORCING STEEL EPOXY COATED	LBS.	2581	2581	2581	2581	2581	2581	2576	2576	2576
STEEL PILING HP 10 X 42	NO.	7	7	7	7	7	7	9	9	9
PREBORE HOLES	FT.	-	-	-	-	-	-	-	90	90

ESTIMATED QUANTITIES - ONE ABUT. - 45° SKEW

LOCATION	UNIT	QUANTITY								
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.	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7	22.7
REINFORCING STEEL EPOXY COATED	LBS.	3037	3037	3024	3024	2987	2987	3053	3037	3037
STEEL PILING HP 10 X 42	NO.	9	9	10	10	11	11	12	14	14
PREBORE HOLES	FT.	-	-	-	-	-	-	-	140	140

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 - 40' ROADWAY, 3 SPAN BRIDGES

CONTINUOUS CONCRETE SLAB BRIDGES

NOVEMBER, 2006

ABUTMENT DETAILS
STEEL PILING

J40-44-06