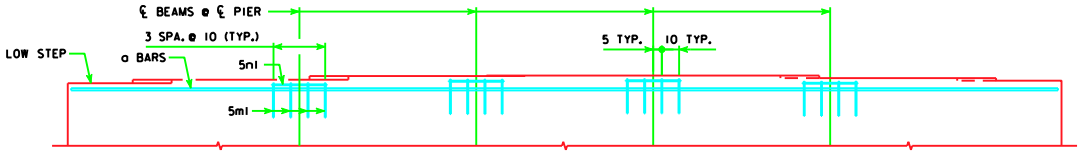
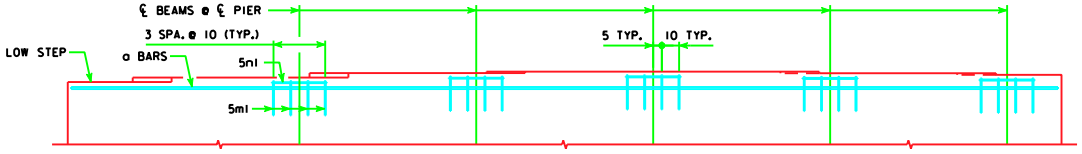


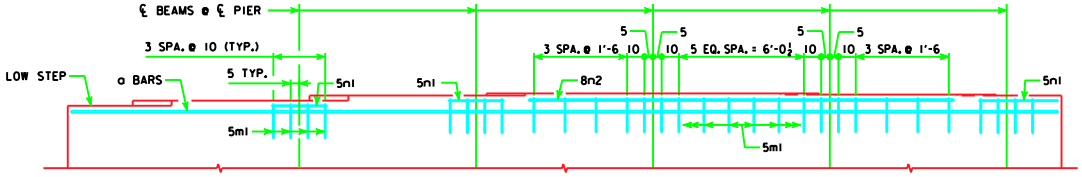
PART ELEVATION VIEW OF PIER CAP

GRADE (G): G <= 0.6%



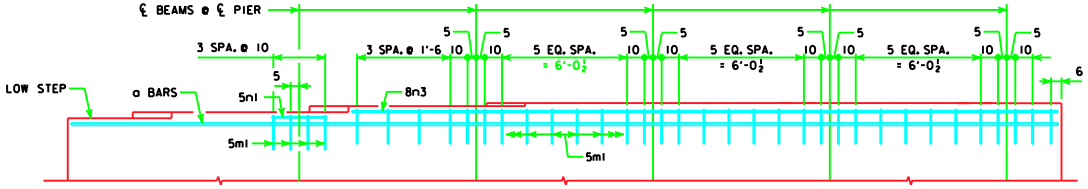
PART ELEVATION VIEW OF PIER CAP

GRADE (G): 0.6% < G <= 1.6%



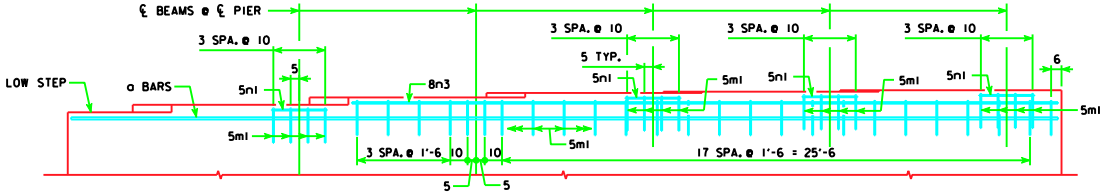
PART ELEVATION VIEW OF PIER CAP

GRADE (G): 1.6% < G <= 2.3%



PART ELEVATION VIEW OF PIER CAP

GRADE (G): 2.3% < G <= 3.4%



PART ELEVATION VIEW OF PIER CAP

GRADE (G): 3.4% < G <= 5.0%

STEP REINFORCING BAR LIST
ONE TEE PIER

			G <= 0.6%			0.6% < G <= 1.6%			1.6% < G <= 2.3%			2.3% < G <= 3.4%			3.4% < G <= 5.0%		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
5ml	6'-10		16	5	114	20	5	143	30	5	214	36	5	257	41	5	292
5n1	2'-8		16	5	45	20	5	56	12	5	33	4	5	11	16	5	45
8n2	22'-4		--	--	--	--	--	--	4	8	239	--	--	--	--	--	--
*8n3	VARIES		--	--	--	--	--	--	--	--	--	4	8	373	4	8	373
TOTAL (LB.)					159			199			486			641			710

G = GRADE (%)

*8n3 BARS VARY FROM 34'-2 TO 35'-9

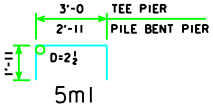
STEP REINFORCING BAR LIST
ONE PILE BENT PIER

			G <= 0.6%			0.6% < G <= 1.6%			1.6% < G <= 2.3%			2.3% < G <= 3.4%			3.4% < G <= 5.0%		
BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
5ml	6'-9		16	5	113	20	5	141	30	5	211	36	5	253	41	5	289
5n1	2'-8		16	5	45	20	5	56	12	5	33	4	5	11	16	5	45
8n2	22'-4		--	--	--	--	--	--	4	8	239	--	--	--	--	--	--
*8n3	VARIES		--	--	--	--	--	--	--	--	--	4	8	373	4	8	373
TOTAL (LB.)					158			197			483			637			707

G = GRADE (%)

*8n3 BARS VARY FROM 34'-2 TO 35'-9

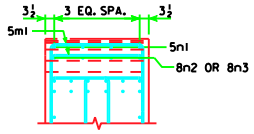
BENT BAR DETAILS



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

NOTES:

THE TABLE BELOW LISTS THE ADDITIONAL CONCRETE VOLUME REQUIRED IN EACH ABUTMENT FOOTING/PIER CAP BASED ON THE ROADWAY GRADE AT EACH ABUTMENT FOOTING/PIER CAP. ADDITIONAL CONCRETE SHOULD BE ADDED TO THE PLANS FOR EACH ABUTMENT FOOTING/PIER CAP THAT HAS 0.5 CU. YDS. OR MORE OF ADDITIONAL CONCRETE. VALUES SHOULD BE EXCLUDED FOR SCENARIOS THAT HAVE LESS THAN 0.5 CU. YDS. OF ADDITIONAL CONCRETE PER SUBSTRUCTURE UNIT. VALUES MAY BE INTERPOLATED FOR GRADES BETWEEN THE VALUES SHOWN IN THE TABLE.



TYPICAL SECTION

ADDITIONAL CONCRETE VOLUME PER SUBSTRUCTURE UNIT (C.Y.)

	ROADWAY GRADE AT SUBSTRUCTURE UNIT				
	1%	2%	3%	4%	5%
EACH ABUTMENT FOOTING					
A, B BEAMS	-----	1.0	1.6	2.2	2.8
C BEAMS	-----	1.2	1.9	2.6	3.3
EACH TEE PIER CAP - ALL BEAMS	0.5	1.1	1.7	2.4	3.1
EACH PILE BENT PIER - ALL BEAMS	--	1.1	1.7	2.4	3.1

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, THREE SPAN BRIDGE

PRETENSIONED PRESTRESSED CONCRETE BEAM BRIDGES

HL93 SUPERSTRUCTURE DECEMBER, 2006 HS25 SUBSTRUCTURE

ADDITIONAL QUANTITIES
30° SKEW

H40-24-06