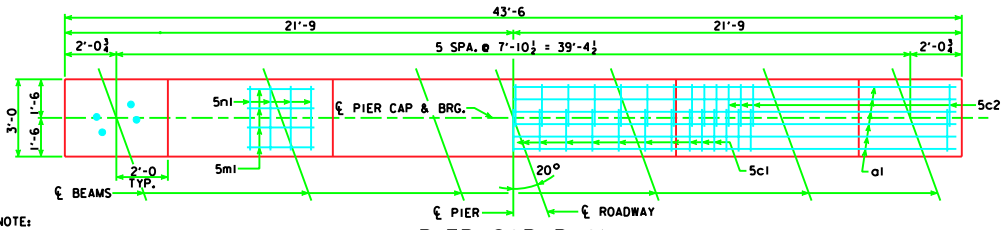
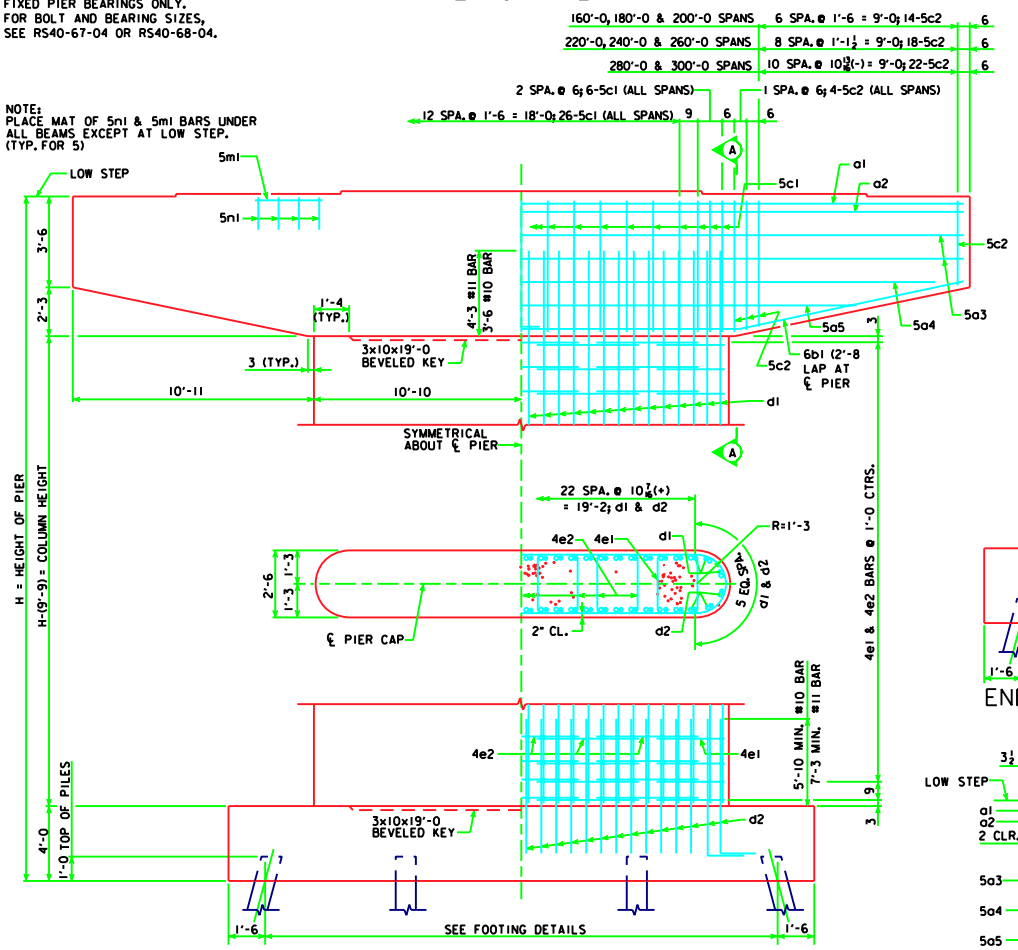


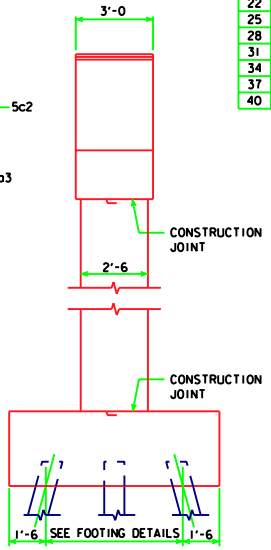
PIER CAP PLAN

NOTE:
ANCHOR BOLTS REQUIRED FOR FIXED PIER BEARINGS ONLY.
FOR BOLT AND BEARING SIZES, SEE RS40-67-04 OR RS40-68-04.

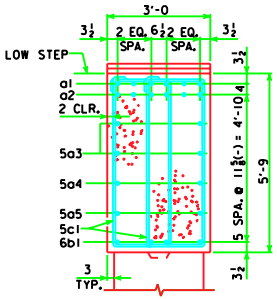


PIER ELEVATION

STEP NOTE:
THE HEIGHT OF THE STEPS ON THE BRIDGE SEAT IS EQUAL TO THE DIFFERENCE IN ELEVATIONS OF THE TOP OF SLAB AT ADJACENT BEAMS ALONG ℄ PIER.



END ELEVATION



SECTION A-A

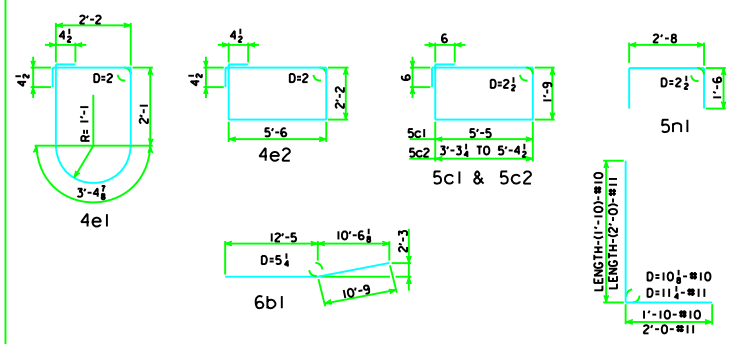
ONE CAP

	℄-℄ ABUT. BEARINGS			160'-0			180'-0			200'-0			220'-0			240'-0			260'-0			280'-0			300'-0		
	BAR	LENGTH	SHAPE	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT	NO.	SIZE	WEIGHT
REINFORCING STEEL	a1	43'-2		6	8	692	6	9	881	6	9	881	6	9	881	6	10	1114	6	10	1114	6	10	1114	6	11	1376
	a2	43'-2		6	8	692	6	8	692	6	9	881	6	9	881	6	9	881	6	10	1114	6	10	1114	6	10	1114
	a3	43'-2		4	5	180	4	5	180	4	5	180	4	5	180	4	5	180	4	5	180	4	5	180	4	5	180
	a4	41'-6		2	5	87	2	5	87	2	5	87	2	5	87	2	5	87	2	5	87	2	5	87	2	5	87
	a5	32'-3		2	5	67	2	5	67	2	5	67	2	5	67	2	5	67	2	5	67	2	5	67	2	5	67
	b1	23'-2		8	6	278	8	6	278	8	6	278	8	6	278	8	6	278	8	6	278	8	6	278	8	6	278
	c1	15'-4		38	5	608	38	5	608	38	5	608	38	5	608	38	5	608	38	5	608	38	5	608	38	5	608
	c2	VARIES		36	5	506	36	5	506	36	5	506	44	5	615	44	5	615	44	5	615	52	5	723	52	5	723
	n1	5'-8		20	5	118	20	5	118	20	5	118	20	5	118	20	5	118	20	5	118	20	5	118	20	5	118
	m1	2'-10		20	5	59	20	5	59	20	5	59	20	5	59	20	5	59	20	5	59	20	5	59	20	5	59
	TOTAL LB.					3287			3476			3665			3774			4007			4240			4348			4610
STRUCTURAL CONCRETE (C.Y.)				26.0			26.0			26.0			26.0			26.0			26.0			26.0			26.0		

ONE COLUMN

H IN FEET	COLUMN HEIGHT	STRUCTURAL CONCRETE C.Y.	REINFORCING STEEL: d1 BAR NO.	d1 BAR SIZE	d1 BAR LENGTH	d1 BAR WEIGHT	d2 BAR NO.	d2 BAR SIZE	d2 BAR LENGTH	d2 BAR WEIGHT	4e1 BAR NO.	4e1 BAR SIZE	4e1 BAR LENGTH	4e1 BAR WEIGHT	4e2 BAR NO.	4e2 BAR SIZE	4e2 BAR LENGTH	4e2 BAR WEIGHT	TOTAL WEIGHT LB.
16	6'-3	12.2	-	-	-	-	54	10	14'-6	3369	14	4	10'-6	98	35	4	16'-1	376	3843
19	9'-3	18.1	-	-	-	-	54	10	17'-6	4066	20	4	10'-6	140	50	4	16'-1	537	4743
22	12'-3	24.0	54	10	15'-9	3660	54	10	10'-7	2459	26	4	10'-6	182	65	4	16'-1	698	6999
25	15'-3	29.8	54	10	18'-9	4357	54	10	10'-7	2459	32	4	10'-6	224	80	4	16'-1	859	7899
28	18'-3	35.7	54	11	22'-6	6455	54	11	12'-2	3491	38	4	10'-6	267	95	4	16'-1	1021	11,234
31	21'-3	41.6	54	11	25'-6	7316	54	11	12'-2	3491	44	4	10'-6	309	110	4	16'-1	1182	12,298
34	24'-3	47.4	54	11	28'-6	8177	54	11	12'-2	3491	50	4	10'-6	351	125	4	16'-1	1343	13,362
37	27'-3	53.3	54	11	31'-6	9047	54	11	12'-2	3491	56	4	10'-6	393	140	4	16'-1	1504	14,425
40	30'-3	59.2	54	11	34'-6	9898	54	11	12'-2	3491	62	4	10'-6	435	155	4	16'-1	1665	15,489

BENT BAR DETAILS



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

NOTE:
CAP STRUCTURAL CONCRETE QUANTITIES BASED ON 1¾ INCH STEP HEIGHT.

07-06
LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

FEBRUARY, 2004

T PIER 20° SKEW
CAP & COLUMN DETAILS

RS40-13-04

REVISION - 07-06 - KEYWAY SIZE CHANGED.