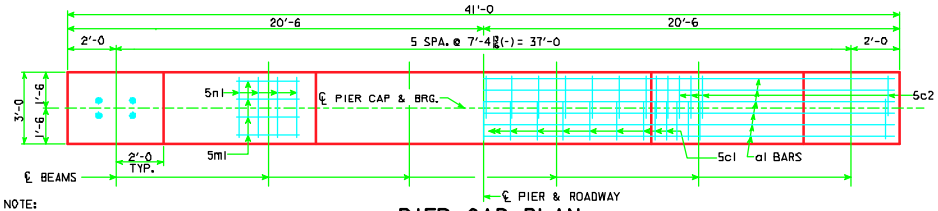
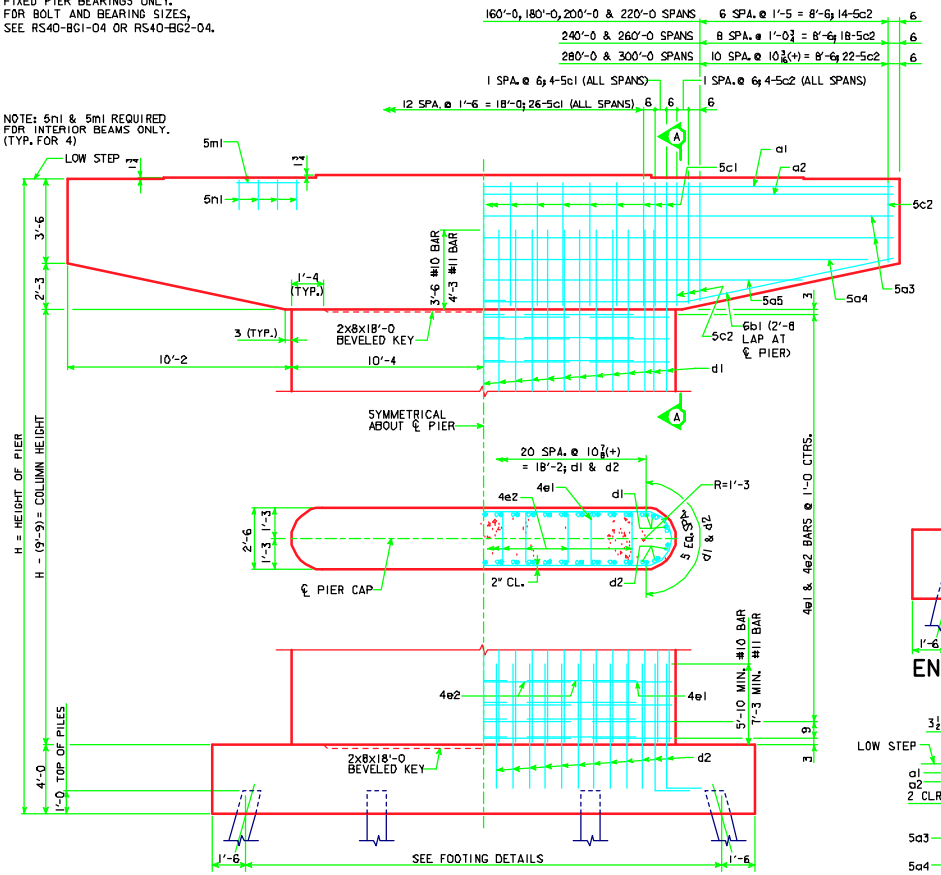


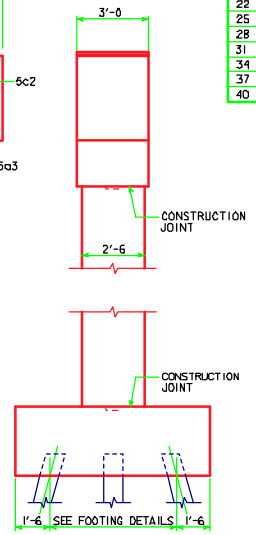
NOTE:
ANCHOR BOLTS REQUIRED FOR FIXED PIER BEARINGS ONLY.
FOR BOLT AND BEARING SIZES, SEE RS40-BG1-04 OR RS40-BG2-04.

PIER CAP PLAN

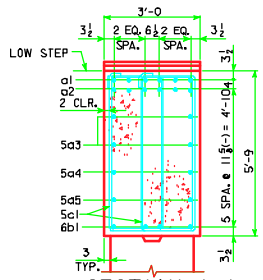


PIER ELEVATION

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

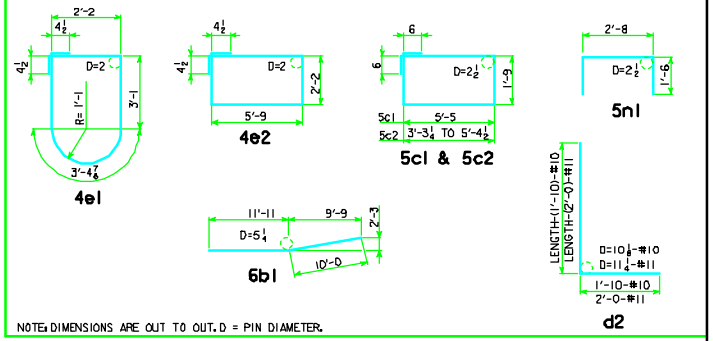
ONE CAP

REINFORCING STEEL	℄-℄ 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
a1	40'-8		6	8	651	6	8	651	6	9	830	6	9	830	6	9	830	6	10	1050	6	10	1050	6	10	1050
a2	40'-8		6	7	499	6	8	651	6	8	651	6	9	830	6	9	830	6	9	830	6	10	1050	6	10	1050
a3	40'-8		4	5	170	4	5	170	4	5	170	4	5	170	4	5	170	4	5	170	4	5	170	4	5	170
a4	38'-9		2	5	81	2	5	81	2	5	81	2	5	81	2	5	81	2	5	81	2	5	81	2	5	81
a5	30'-1		2	5	63	2	5	63	2	5	63	2	5	63	2	5	63	2	5	63	2	5	63	2	5	63
b1	21'-11		8	6	263	8	6	263	8	6	263	8	6	263	8	6	263	8	6	263	8	6	263	8	6	263
c1	15'-4		34	5	544	34	5	544	34	5	544	34	5	544	34	5	544	34	5	544	34	5	544	34	5	544
c2	VARIES		36	5	504	36	5	504	36	5	504	36	5	504	44	5	615	44	5	615	52	5	720	52	5	720
n1	5'-8		16	5	95	16	5	95	16	5	95	16	5	95	16	5	95	16	5	95	16	5	95	16	5	95
m1	2'-10		16	5	47	16	5	47	16	5	47	16	5	47	16	5	47	16	5	47	16	5	47	16	5	47
TOTAL LB.					2917			3069			3248			3427			3538			3758			4083			4083
STRUCTURAL CONCRETE (C.Y.)			24.5			24.5			24.5			24.5			24.5			24.5			24.5			24.5		

ONE COLUMN

H IN FEET	COLUMN HEIGHT	STRUCTURAL CONCRETE C.Y.	REINFORCING STEEL: d1 BAR				d2 BAR				4e1 BAR				4e2 BAR				TOTAL WEIGHT LB.
			NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT	NO.	SIZE	LENGTH	WEIGHT	
16	6'-3	11.7	-	-	-	-	50	10	14'-6	3120	14	4	12'-6	117	28	4	16'-7	310	3547
19	9'-3	17.2	-	-	-	-	50	10	17'-6	3765	20	4	12'-6	167	40	4	16'-7	443	4315
22	12'-3	22.8	50	10	15'-9	3389	50	10	10'-7	2277	26	4	12'-6	217	52	4	16'-7	576	6459
25	15'-3	28.4	50	10	18'-9	4044	50	10	10'-7	2277	32	4	12'-6	267	64	4	16'-7	709	7287
28	18'-3	34.0	50	11	22'-6	5977	50	11	12'-2	3232	38	4	12'-6	317	76	4	16'-7	842	10,368
31	21'-3	39.6	50	11	25'-6	6774	50	11	12'-2	3232	44	4	12'-6	367	88	4	16'-7	975	11,348
34	24'-3	45.2	50	11	28'-6	7571	50	11	12'-2	3232	50	4	12'-6	418	100	4	16'-7	1108	12,329
37	27'-3	50.8	50	11	31'-6	8368	50	11	12'-2	3232	56	4	12'-6	468	112	4	16'-7	1241	13,309
40	30'-3	56.4	50	11	34'-6	9165	50	11	12'-2	3232	62	4	12'-6	518	124	4	16'-7	1374	14,289

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

ROLLED STEEL BEAM BRIDGES

FEBRUARY, 2004

T PIER 0° SKEW
CAP & COLUMN DETAILS

RS40-PRI-04