REINFORCING BAR LIST

NON-COATED REINFORCING

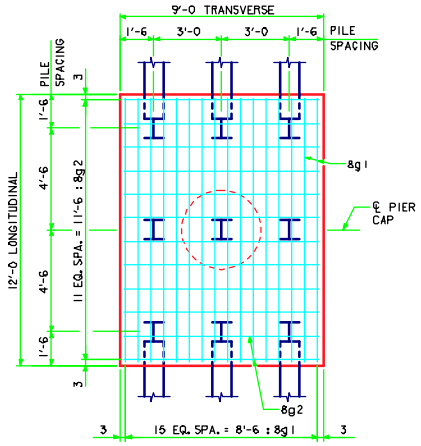
BAR	LOCATION	SHAPE	222'-0 BTD110 19'-0 NO.	LENGTH	WEIGHT	222'-0 22'-0 NO.	LENGTH	WEIGHT	222'-0 25'-0 NO.	LENGTH	WEIGHT
8d1	CAP, LONGITUDINAL, TOP		10	44'-6	1,188	10	44'-6	1,188	10	44'-6	1,188
5a2	CAP, LONGITUDINAL, SIDES		10	VARIES	410	10	VARIES	410	10	VARIES	410
5a3	CAP, CANTILEVER - END		14	5'-9	84	14	5'-9	84	14	5'-9	84
9b1	CAP, LONGITUDINAL, BOT.		8	37'-2	1,011	8	37'-2	1,011	8	37'-2	1,011
7b2	CAP, LONGITUDINAL, BOT., ENDS		8	9'-11	162	8	9'-11	162	8	9'-11	162
5c1	CAP, STIRRUP		68	14'-6	1,028	68	14'-6	1,028	68	14'-6	1,028
5c2	CAP, STIRRUP, CANTILEVER, ENDS		16	VARIES	144	16	VARIES	144	16	VARIES	144
9d1	COLUMN, VERTICAL		42	21'-9	3,106	42	24'-9	3,534	48	27'-9	4,529
10d1	COLUMN, VERTICAL		--	--	--	--	--	--	--	--	--
9d2	FOOTING TO COLUMN DOWEL		42	9'-2	1,309	42	9'-2	1,309	48	9'-2	1,496
10d2	FOOTING TO COLUMN DOWEL		--	--	--	--	--	--	--	--	--
5f1	FOOTING, LONGITUDINAL, TOP		27	11'-6	324	27	11'-6	324	27	11'-6	324
5f2	FOOTING, TRANSVERSE, TOP		36	8'-6	319	36	8'-6	319	36	8'-6	319
8g1	FOOTING, LONGITUDINAL, BOTTOM		48	11'-6	1,474	48	11'-6	1,474	48	11'-6	1,474
8g2	FOOTING, TRANSVERSE, BOTTOM		36	8'-6	817	36	8'-6	817	36	8'-6	817
5m1	STEP, LONGITUDINAL		16	3'-2	53	16	3'-2	53	16	3'-2	53
5n1	STEP, TRANSVERSE		16	6'-6	108	16	6'-6	108	16	6'-6	108
	#4 COLUMN SPIRAL		3	203'-9	408	3	232'-1	465	3	260'-4	522
	SPIRAL SPACERS, L $\frac{7}{8} \times \frac{7}{8} \times \frac{1}{8} \times 0.75$		12	19'-0	171	12	22'-0	198	12	25'-0	225
	REINFORCING STEEL - NON-EPOXY COATED (LB)				12,116			12,628			13,894

BAR	LOCATION	232'-0 BTD115 19'-0 NO.	LENGTH	WEIGHT	232'-0 22'-0 NO.	LENGTH	WEIGHT	232'-0 25'-0 NO.	LENGTH	WEIGHT
8d1	CAP, LONGITUDINAL, TOP	10	44'-6	1,188	10	44'-6	1,188	10	44'-6	1,188
5a2	CAP, LONGITUDINAL, SIDES	10	VARIES	410	10	VARIES	410	10	VARIES	410
5a3	CAP, CANTILEVER - END	14	5'-9	84	14	5'-9	84	14	5'-9	84
9b1	CAP, LONGITUDINAL, BOT.	8	37'-2	1,011	8	37'-2	1,011	8	37'-2	1,011
7b2	CAP, LONGITUDINAL, BOT., ENDS	8	9'-11	162	8	9'-11	162	8	9'-11	162
5c1	CAP, STIRRUP	68	14'-6	1,028	68	14'-6	1,028	68	14'-6	1,028
5c2	CAP, STIRRUP, CANTILEVER, ENDS	16	VARIES	144	16	VARIES	144	16	VARIES	144
9d1	COLUMN, VERTICAL	42	21'-9	3,106	42	24'-9	3,534	48	27'-9	4,529
10d1	COLUMN, VERTICAL	--	--	--	--	--	--	--	--	--
9d2	FOOTING TO COLUMN DOWEL	42	9'-2	1,309	42	9'-2	1,309	48	9'-2	1,496
10d2	FOOTING TO COLUMN DOWEL	--	--	--	--	--	--	--	--	--
5f1	FOOTING, LONGITUDINAL, TOP	27	11'-6	324	27	11'-6	324	27	11'-6	324
5f2	FOOTING, TRANSVERSE, TOP	36	8'-6	319	36	8'-6	319	36	8'-6	319
8g1	FOOTING, LONGITUDINAL, BOTTOM	48	11'-6	1,474	48	11'-6	1,474	48	11'-6	1,474
8g2	FOOTING, TRANSVERSE, BOTTOM	36	8'-6	817	36	8'-6	817	36	8'-6	817
5m1	STEP, LONGITUDINAL	16	3'-2	53	16	3'-2	53	16	3'-2	53
5n1	STEP, TRANSVERSE	16	6'-6	108	16	6'-6	108	16	6'-6	108
	#4 COLUMN SPIRAL	3	232'-1	465	3	260'-4	522	3	203'-9	408
	SPIRAL SPACERS, L $\frac{7}{8} \times \frac{7}{8} \times \frac{1}{8} \times 0.75$	12	22'-0	198	12	25'-0	225	12	19'-0	171
	REINFORCING STEEL - NON-EPOXY COATED (LB)			12,116			12,628			13,894

BAR	LOCATION	242'-0 BTD120 19'-0 NO.	LENGTH	WEIGHT	242'-0 22'-0 NO.	LENGTH	WEIGHT	242'-0 25'-0 NO.	LENGTH	WEIGHT
8d1	CAP, LONGITUDINAL, TOP	10	44'-6	1,188	10	44'-6	1,188	10	44'-6	1,188
5a2	CAP, LONGITUDINAL, SIDES	10	VARIES	410	10	VARIES	410	10	VARIES	410
5a3	CAP, CANTILEVER - END	14	5'-9	84	14	5'-9	84	14	5'-9	84
9b1	CAP, LONGITUDINAL, BOT.	8	37'-2	1,011	8	37'-2	1,011	8	37'-2	1,011
7b2	CAP, LONGITUDINAL, BOT., ENDS	8	9'-11	162	8	9'-11	162	8	9'-11	162
5c1	CAP, STIRRUP	68	14'-6	1,028	68	14'-6	1,028	68	14'-6	1,028
5c2	CAP, STIRRUP, CANTILEVER, ENDS	16	VARIES	144	16	VARIES	144	16	VARIES	144
9d1	COLUMN, VERTICAL	42	21'-9	3,106	42	24'-9	3,534	48	27'-9	4,529
10d1	COLUMN, VERTICAL	--	--	--	--	--	--	--	--	--
9d2	FOOTING TO COLUMN DOWEL	42	9'-2	1,309	42	9'-2	1,309	48	9'-2	1,496
10d2	FOOTING TO COLUMN DOWEL	--	--	--	--	--	--	--	--	--
5f1	FOOTING, LONGITUDINAL, TOP	27	11'-6	324	27	11'-6	324	27	11'-6	324
5f2	FOOTING, TRANSVERSE, TOP	36	8'-6	319	36	8'-6	319	36	8'-6	319
8g1	FOOTING, LONGITUDINAL, BOTTOM	48	11'-6	1,474	48	11'-6	1,474	48	11'-6	1,474
8g2	FOOTING, TRANSVERSE, BOTTOM	36	8'-6	817	36	8'-6	817	36	8'-6	817
5m1	STEP, LONGITUDINAL	16	3'-2	53	16	3'-2	53	16	3'-2	53
5n1	STEP, TRANSVERSE	16	6'-6	108	16	6'-6	108	16	6'-6	108
	#4 COLUMN SPIRAL	3	203'-9	408	3	232'-1	465	3	260'-4	522
	SPIRAL SPACERS, L $\frac{7}{8} \times \frac{7}{8} \times \frac{1}{8} \times 0.75$	12	19'-0	171	12	22'-0	198	12	25'-0	225
	REINFORCING STEEL - NON-EPOXY COATED (LB)			12,116			12,628			13,894

STRUCTURAL CONCRETE QUANTITIES (CU. YDS.)	222'-0 BTD110	232'-0 BTD115	242'-0 BTD120
CAP	31.6	31.6	31.6
COLUMNS	20.3	23.5	26.7
FOOTINGS	48.0	48.0	48.0
TOTAL	99.9	103.1	106.3
NO. OF PILES, DRIVE STEEL BEARING, HP 10x57 (1)	27	27	27
NO. OF PILES, FURNISH STEEL BEARING, HP 10x57 (1)	27	27	27
DESIGN BEARING (TONS)	48	48	48

(1) THIS QUANTITY REPRESENTS THE NUMBER OF PILES. PILE LENGTH SHALL BE DETERMINED BASED ON SOIL INFORMATION AND TO BE INCLUDED ON THE "ESTIMATED PROJECT QUANTITIES" SHEET.



FOOTING PLAN FOR 110', 115' & 120' SPANS

(ONLY BOTTOM REINFORCING SHOWN)

PIER NOTES:

MINIMUM CLEAR DISTANCE FROM FACE OF CONCRETE TO NEAR REINFORCING BAR SHALL BE 2 INCHES UNLESS OTHERWISE NOTED OR SHOWN.

THE d2 FOOTING TO COLUMN DOWELS ARE TO BE IN PLACE BEFORE FOOTING CONCRETE IS PLACED.

THE SPIRAL REINFORCING MAY BE SPLICED BY LAPPING 2'-2. THE LENGTH OF THE SPIRAL SHOWN DOES NOT INCLUDE THE LAPPED LENGTH OF THE SPLICES. THE COST OF THE LAPS AT SPLICES IS TO BE INCLUDED IN THE PRICE BID FOR OTHER REINFORCEMENT.

SPIRAL REINFORCING IS TO BE NO. 4 BAR WITH 3'-0 OUTSIDE DIAMETER, 1'-0 PITCH WITH 4 EQUALLY SPACED L $\frac{7}{8} \times \frac{7}{8} \times \frac{1}{8}$ SPACERS PUNCHED TO HOLD SPIRALS. SPIRALS ARE TO HAVE $1\frac{1}{2}$ EXTRA TURNS AT TOP AND BOTTOM OF COLUMNS.

CLASS 20 EXCAVATION SHALL BE CALCULATED AND SHALL BE INCLUDED ON THE "ESTIMATED PROJECT QUANTITIES" SHEET.

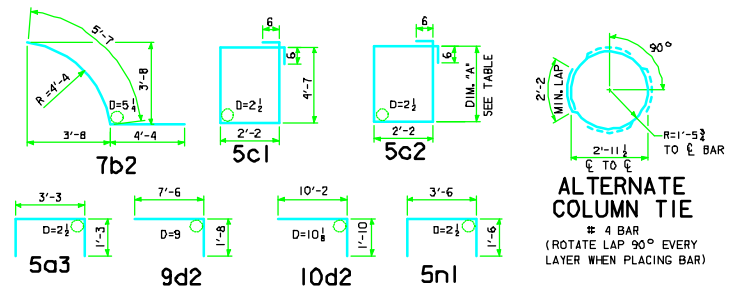
PILE DIMENSIONS SHOWN ARE AT THE BOTTOM OF THE FOOTING. BATTER PILES 1:4 IN DIRECTION SHOWN.

SEE BT40-AS1-04 FOR RUSTICATION DETAILS.

VARIABLE BARS

BAR	SETS	DIM. "A"	TOTAL LENGTH
5a2	1 SET OF 2	--	37'-4
5a2	1 SET OF 2	--	37'-10
5a2	1 SET OF 2	--	38'-8
5a2	1 SET OF 2	--	40'-0
5a2	1 SET OF 2	--	42'-6
5c2	1 SET OF 4	0'-11	7'-2
5c2	1 SET OF 4	1'-3	7'-10
5c2	1 SET OF 4	1'-9	8'-10
5c2	1 SET OF 4	2'-8	10'-8

BENT BAR DETAILS



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

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 2 SPAN BRIDGES

PRETENSIONED PRESTRESSED BULB TEE CONCRETE BEAM BRIDGES

110'-0, 115'-0, 120'-0 SPANS — JULY, 2004

PIER FOOTING & PIER BAR LISTS
ALL SKEWS

BT40-PR5-04