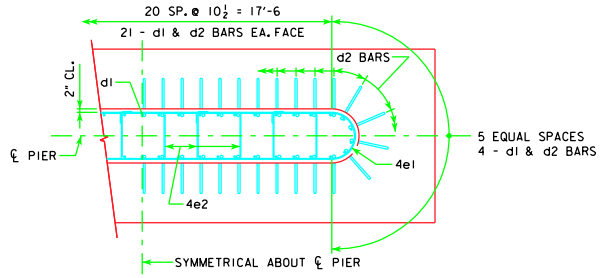
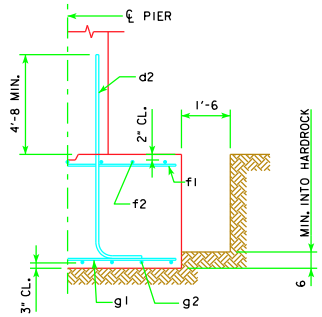
| H IN FT. | ℄ - ℄ ABUT. BRG. | FOOTING SIZE |
|---|---|---|
| 16 TO 18 | 160'-0 | 4' x 8' x 26' |
| | 180'-0 | |
| | 200'-0 | 4' x 8' x 28' |
| | 220'-0 | 4' x 9' x 28' |
| | 240'-0 | |
| | 260'-0 | 4' x 9' x 30' |
| | 280'-0 | 4' x 10' x 30' |
| | 300'-0 | |
| | 320'-0 | |
| | 340'-0 | 4' x 10' x 32' |
| 19 TO 21 | 160'-0 | 4' x 8' x 26' |
| | 180'-0 | 4' x 8' x 28' |
| | 200'-0 | |
| | 220'-0 | 4' x 9' x 28' |
| | 240'-0 | |
| | 260'-0 | 4' x 9' x 30' |
| | 280'-0 | 4' x 10' x 30' |
| | 300'-0 | |
| | 320'-0 | 4' x 10' x 32' |
| | 340'-0 | |
| 22 TO 24 | 160'-0 | 4' x 8' x 26' |
| | 180'-0 | 4' x 8' x 28' |
| | 200'-0 | |
| | 220'-0 | 4' x 9' x 28' |
| | 240'-0 | 4' x 9' x 30' |
| | 260'-0 | |
| | 280'-0 | 4' x 10' x 30' |
| | 300'-0 | |
| | 320'-0 | 4' x 10' x 32' |
| | 340'-0 | 4' x 11' x 32' |
| 25 TO 27 | 160'-0 | 4' x 8' x 28' |
| | 180'-0 | |
| | 200'-0 | 4' x 9' x 28' |
| | 220'-0 | |
| | 240'-0 | 4' x 9' x 30' |
| | 260'-0 | 4' x 10' x 30' |
| | 280'-0 | |
| | 300'-0 | 4' x 10' x 32' |
| | 320'-0 | |
| | 340'-0 | 4' x 11' x 32' |
| 28 TO 30 | 160'-0 | 4' x 8' x 28' |
| | 180'-0 | |
| | 200'-0 | 4' x 9' x 28' |
| | 220'-0 | |
| | 240'-0 | 4' x 9' x 30' |
| | 260'-0 | 4' x 10' x 30' |
| | 280'-0 | |
| | 300'-0 | 4' x 10' x 32' |
| | 320'-0 | |
| | 340'-0 | 4' x 11' x 32' |
| 31 TO 33 | 160'-0 | 4' x 8' x 28' |
| | 180'-0 | 4' x 9' x 28' |
| | 200'-0 | |
| | 220'-0 | 4' x 9' x 30' |
| | 240'-0 | |
| | 260'-0 | 4' x 10' x 30' |
| | 280'-0 | |
| | 300'-0 | 4' x 10' x 32' |
| | 320'-0 | 4' x 11' x 32' |
| | 340'-0 | |
| 34 TO 36 | 160'-0 | 4' x 8' x 28' |
| | 180'-0 | 4' x 9' x 28' |
| | 200'-0 | |
| | 220'-0 | 4' x 9' x 30' |
| | 240'-0 | 4' x 10' x 30' |
| | 260'-0 | |
| | 280'-0 | 4' x 10' x 32' |
| | 300'-0 | |
| | 320'-0 | 4' x 11' x 32' |
| | 340'-0 | |

| H IN FT. | ℄ - ℄ ABUT. BRG. | FOOTING SIZE |
|---|---|---|
| 37 TO 40 | 160'-0 | 4' x 9' x 28' |
| | 180'-0 | |
| | 200'-0 | 4' x 9' x 30' |
| | 220'-0 | |
| | 240'-0 | 4' x 10' x 30' |
| | 260'-0 | |
| | 280'-0 | 4' x 10' x 32' |
| | 300'-0 | 4' x 11' x 32' |
| | 320'-0 | |
| | 340'-0 | |

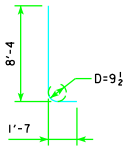
| FOOTING SIZE | REINFORCING STEEL (ONE FOOTING) | | | | | STRUCTURAL CONCRETE (CY) |
|---|---|---|---|---|---|---|
| | BAR | NO., SIZE & SPACING | LENGTH | WEIGHT (LB.) | TOTAL WEIGHT (LB.) | |
| 4' x 8' x 26' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 2793 | 30.8 |
| | f1 | 26 - #5 @ 1'-0 | 7'-8 | 208 | | |
| | f2 | 8 - #5 @ 1'-0 | 25'-8 | 214 | | |
| | g1 | 26 - #6 @ 1'-0 | 7'-8 | 299 | | |
| | g2 | 10 - #6 @ 0'-10 | 25'-8 | 386 | | |
| 4' x 8' x 28' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 3202 | 33.2 |
| | f1 | 28 - #5 @ 1'-0 | 7'-8 | 224 | | |
| | f2 | 8 - #5 @ 1'-0 | 27'-8 | 231 | | |
| | g1 | 28 - #6 @ 1'-0 | 7'-8 | 322 | | |
| | g2 | 10 - #8 @ 0'-10 | 27'-8 | 739 | | |
| 4' x 9' x 28' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 3455 | 37.3 |
| | f1 | 28 - #5 @ 1'-0 | 8'-8 | 253 | | |
| | f2 | 9 - #5 @ 1'-0 | 27'-8 | 260 | | |
| | g1 | 34 - #6 @ 0'-10 | 8'-8 | 443 | | |
| | g2 | 11 - #8 @ 0'-10 | 27'-8 | 813 | | |
| 4' x 9' x 30' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 4028 | 40.0 |
| | f1 | 30 - #5 @ 1'-0 | 8'-8 | 271 | | |
| | f2 | 9 - #5 @ 1'-0 | 29'-8 | 278 | | |
| | g1 | 37 - #6 @ 0'-9½ | 8'-8 | 482 | | |
| | g2 | 13 - #9 @ 0'-8½ | 29'-8 | 1311 | | |
| 4' x 10' x 30' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 4362 | 44.4 |
| | f1 | 30 - #5 @ 1'-0 | 9'-8 | 302 | | |
| | f2 | 10 - #5 @ 1'-0 | 29'-8 | 309 | | |
| | g1 | 45 - #6 @ 0'-8 | 9'-8 | 653 | | |
| | g2 | 14 - #9 @ 0'-8½ | 29'-8 | 1412 | | |
| 4' x 10' x 32' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 4866 | 47.4 |
| | f1 | 32 - #5 @ 1'-0 | 9'-8 | 323 | | |
| | f2 | 10 - #5 @ 1'-0 | 31'-8 | 330 | | |
| | g1 | 48 - #6 @ 0'-8 | 9'-8 | 697 | | |
| | g2 | 17 - #9 @ 0'-7 | 31'-8 | 1830 | | |
| 4' x 11' x 32' | d2 | 50 - #9 AS SHOWN | 9'-11 | 1686 | 5452 | 52.1 |
| | f1 | 32 - #5 @ 1'-0 | 10'-8 | 356 | | |
| | f2 | 11 - #5 @ 1'-0 | 31'-8 | 363 | | |
| | g1 | 46 - #7 @ 0'-8 | 10'-8 | 1003 | | |
| | g2 | 15 - #10 @ 0'-9 | 31'-8 | 2044 | | |




d2 BAR LAYOUT
(SEE SECTION A-A ON SHEET RS40-116-10.)




TYPICAL SECTION




d2

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

## FOOTING NOTES:

THESE SPREAD FOOTINGS ARE DESIGNED AND DETAILED TO BE USED WITH THE CAP AND COLUMN DETAILS OF THE TEE PIERS AS SHOWN ON SHEET RS40-116-10.

THESE SPREAD FOOTINGS SHALL EXTEND AT LEAST 6 INCHES INTO SUITABLE FOUNDATION ROCK AND THE LAST 6 INCHES OF ROCK EXCAVATION SHALL BE TO NEAT LINES OF MASONRY. THE FOUNDATION ROCK SHALL HAVE A MINIMUM LRFD NOMINAL BEARING RESISTANCE OF 30 kips PER SQUARE FOOT (ALLOWABLE BEARING VALUE OF AT LEAST 5 TONS PER SQUARE FOOT).

LATEST REVISION DATE

APPROVED BY BRIDGE ENGINEER

Iowa Department of Transportation
Highway Division

STANDARD DESIGN - 40' ROADWAY, 3 SPAN BRIDGES

ROLLED STEEL BEAM BRIDGES

JUNE, 2010

TEE PIER - SPREAD FOOTINGS
0° SKEW - SHEET 1

RS40-124-10