

| TYPE | CASE | BEARING AND B' (ksf) | VERTICAL WALL HEIGHT |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|------|----------------------|----------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|--|--|--|--|--|--|--|--|--|--|--|--|--|
|      |      |                      | 5'                   | 6'   | 7'   | 8'   | 9'   | 10'  | 11'  | 12'  | 13'  | 14'  | 15'  | 16'  | 17'  | 18'  | 19'  | 20'  | 21'  | 22'  | 23'  | 24'  | 25'  | 26'  | 27'  | 28'  | 29'  | 30'  | 31'  | 32'  | 33' | 34' | 35' | 36' |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A    | I    | qu                   | 1.4                  | 1.6  | 1.8  | 2.0  | 2.1  | 2.4  | 2.6  | 2.9  | 3.2  | 3.5  | 3.8  | 4.1  | 4.4  | 4.8  | 5.2  | 5.6  | 6.1  | 6.6  | 7.1  | 7.7] |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   | 13.2                 | 13.2 | 13.2 | 13.2 | 13.1 | 12.9 | 12.7 | 12.4 | 12.1 | 11.9 | 11.6 | 11.4 | 11.1 | 10.8 | 10.5 | 10.2 | 9.9  | 9.6  | 9.3  | 9.0  |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   | 1.8                  | 1.9  | 2.1  | 2.3  | 2.5  | 2.7  | 2.9] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   | 13.2                 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.1 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B    | I    | qu                   |                      |      |      |      | 2.2  | 2.4  | 2.5  | 2.7  | 2.9  | 3.2  | 3.4  | 3.6  | 3.9  | 4.1  | 4.4  | 4.7  | 5.0  | 5.3  | 5.6  | 5.9  | 6.3  | 6.6  | 7.0] |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                      |      |      |      | 19.3 | 19.3 | 19.3 | 19.3 | 19.2 | 19.0 | 18.8 | 18.6 | 18.4 | 18.2 | 18.0 | 17.8 | 17.6 | 17.4 | 17.2 | 16.9 | 16.7 | 16.5 | 16.2 |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   |                      |      |      |      | 3.0  | 3.1  | 3.3  | 3.5  | 3.6  | 3.9  | 4.1  | 4.3  | 4.5  | 4.8  | 5.1  | 5.5] |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                      |      |      |      | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.1 | 18.8 | 18.4 |      |      |      |      |      |      |      |      |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C    | I    | qu                   |                      |      |      |      |      |      |      |      |      |      |      |      | 3.7  | 3.9  | 4.1  | 4.4  | 4.6  | 4.9  | 5.2  | 5.4  | 5.7  | 6.0  | 6.3  | 6.6  | 6.9  | 7.2  | 7.5] |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                      |      |      |      |      |      |      |      |      |      |      |      |      | 25.2 | 25.1 | 25.0 | 24.8 | 24.7 | 24.5 | 24.4 | 24.2 | 24.0 | 23.9 | 23.7 | 23.5 | 23.3 | 23.1 | 22.9 |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   |                      |      |      |      |      |      |      |      |      |      |      |      |      | 5.0  | 5.2  | 5.4  | 5.6  | 5.8  | 6.0  | 6.2  | 6.5  | 6.8  | 7.2  | 7.5] |      |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                      |      |      |      |      |      |      |      |      |      |      |      |      | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.4 | 25.1 | 24.8 | 24.5 |      |      |      |     |     |     |     |  |  |  |  |  |  |  |  |  |  |  |  |  |

| TYPE | CASE | BEARING AND B' (ksf) | 1:6 BATTERED WALL HEIGHT |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|------|------|----------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|
|      |      |                      | 5'                       | 6'   | 7'   | 8'   | 9'   | 10'  | 11'  | 12'  | 13'  | 14'  | 15'  | 16'  | 17'  | 18'  | 19'  | 20'  | 21'  | 22'  | 23'  | 24'  | 25'  | 26'  | 27'  | 28'  | 29'  | 30'  | 31'  | 32'  | 33'  | 34'  | 35'  | 36'  |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
| A    | I    | qu                   | 1.4                      | 1.5  | 1.7  | 1.9  | 2.1  | 2.3  | 2.4  | 2.6  | 2.8  | 3.0  | 3.2  | 3.4  | 3.6  | 3.8  | 4.1  | 4.3  | 4.6  | 4.9  | 5.2  | 5.5  | 5.8  | 6.1  | 6.4  | 6.8  | 7.1  | 7.6  | 8.2] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   | 13.2                     | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.0 | 12.9 | 12.8 | 12.6 | 12.5 | 12.3 | 12.1 | 11.9 | 11.8 | 11.6 | 11.4 | 11.2 | 8.2  | 7.8  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   | 1.8                      | 1.9  | 2.1  | 2.2  | 2.4  | 2.6  | 2.8  | 3.0  | 3.2] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   | 13.2                     | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
| B    | I    | qu                   |                          |      |      |      | 2.0  | 2.2  | 2.4  | 2.6  | 2.7  | 2.9  | 3.1  | 3.3  | 3.5  | 3.7  | 3.9  | 4.1  | 4.3  | 4.5  | 4.7  | 4.9  | 5.2  | 5.4  | 5.6  | 5.8  | 6.0  | 6.2  | 6.5  | 6.8  | 7.0  | 7.3  | 7.6  | 7.8] |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.2 | 19.0 | 18.9 | 18.8 | 18.7 | 18.5 |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   |                          |      |      |      | 2.9  | 3.0  | 3.2  | 3.3  | 3.5  | 3.7  | 3.9  | 4.1  | 4.3  | 4.5  | 4.7  | 4.9  | 5.2  | 5.4  | 5.6] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
| C    | I    | qu                   |                          |      |      |      |      |      |      |      |      |      |      |      | 3.4  | 3.6  | 3.8  | 4.0  | 4.2  | 4.4  | 4.6  | 4.8  | 5.1  | 5.3  | 5.5  | 5.7  | 5.9  | 6.2  | 6.4  | 6.6  | 6.9  | 7.1  | 7.3  | 7.5] |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      |      |      |      |      |      |      |      |      |      | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   |                          |      |      |      |      |      |      |      |      |      |      |      |      | 4.7  | 4.9  | 5.1  | 5.3  | 5.5  | 5.7  | 5.9  | 6.1  | 6.3  | 6.5  | 6.8  | 7.0  | 7.3  | 7.5  | 7.7  | 8.0  | 8.3] |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      |      |      |      |      |      |      |      |      |      | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |  |  |  |  |  |  |  |  |  |  |  |  |

| TYPE | CASE | BEARING AND B' (ksf) | 1:4 BATTERED WALL HEIGHT |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|------|----------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|      |      |                      | 5'                       | 6'   | 7'   | 8'   | 9'   | 10'  | 11'  | 12'  | 13'  | 14'  | 15'  | 16'  | 17'  | 18'  | 19'  | 20'  | 21'  | 22'  | 23'  | 24'  | 25'  | 26'  | 27'  | 28'  | 29'  | 30'  | 31'  | 32'  | 33'  | 34'  | 35'  | 36'  |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A    | I    | qu                   | 1.3                      | 1.5  | 1.6  | 1.9  | 2.0  | 2.2  | 2.4  | 2.6  | 2.8  | 3.0  | 3.1  | 3.3  | 3.5  | 3.7  | 3.9  | 4.1  | 4.3  | 4.5  | 4.7  | 4.9  | 5.1  | 5.3  | 5.5  | 5.7  | 5.9  | 6.2  | 6.5  | 6.7  | 7.0] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   | 13.2                     | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   | 1.9                      | 1.9  | 2.1  | 2.2  | 2.4  | 2.6  | 2.8  | 3.0  | 3.2  | 3.4  | 3.6] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   | 13.2                     | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 | 13.2 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| B    | I    | qu                   |                          |      |      |      | 2.0  | 2.1  | 2.3  | 2.5  | 2.7  | 2.8  | 3.0  | 3.2  | 3.4  | 3.6  | 3.8  | 4.0  | 4.2  | 4.4  | 4.6  | 4.8  | 5.0  | 5.2  | 5.4  | 5.6  | 5.8  | 6.0  | 6.2  | 6.4  | 6.6  | 6.9  | 7.1  | 7.3] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   |                          |      |      |      | 2.8  | 2.9  | 3.1  | 3.3  | 3.4  | 3.6  | 3.8  | 4.0  | 4.2  | 4.4  | 4.6  | 4.8  | 5.0  | 5.2  | 5.4  | 5.6  | 5.9] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 | 19.3 |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| C    | I    | qu                   |                          |      |      |      |      |      |      |      |      |      |      |      | 3.3  | 3.5  | 3.7  | 3.9  | 4.1  | 4.3  | 4.5  | 4.7  | 4.9  | 5.1  | 5.3  | 5.6  | 5.8  | 6.0  | 6.2  | 6.4  | 6.6  | 6.9  | 7.1  | 7.3] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      |      |      |      |      |      |      |      |      |      | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      | II   | qu                   |                          |      |      |      |      |      |      |      |      |      |      |      |      | 4.5  | 4.7  | 4.9  | 5.1  | 5.3  | 5.5  | 5.7  | 5.9  | 6.1  | 6.3  | 6.5  | 6.8  | 7.0  | 7.2  | 7.4  | 7.7  | 7.9  | 8.1  | 8.4  | 8.6] |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
|      |      | B'                   |                          |      |      |      |      |      |      |      |      |      |      |      |      | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 | 25.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |

**DESIGN FOOTNOTE:**

- Nominal soil bearing resistance, design lateral loads, settlement and overall slope stability shall be determined by analysis based on a foundation site investigation. Walls shall not be founded on unimproved original ground with nominal bearing resistance less than 3 ksf.

**LEGEND:**

- B' - EFFECTIVE FOOTING WIDTH (ft)
- qu - GROSS FACTORED BEARING STRESS (ksf)
- ] - INDICATES MAXIMUM ALLOWABLE WALL HEIGHT FOR PARTICULAR WALL TYPE AND PARTICULAR LOADING CASE.
- y = 4 AND 6 FOR BATTERED

|      |        |       |                          |           |              |
|------|--------|-------|--------------------------|-----------|--------------|
| DIST | COUNTY | ROUTE | POST MILES TOTAL PROJECT | SHEET NO. | TOTAL SHEETS |
|      |        |       |                          |           |              |

*Kathryn Orlewil*  
REGISTERED/CIVIL ENGINEER

October 30, 2015  
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFIC