

Table S1. Dataset.

| Soil (%) | Cement (%) | Lime (%) | LL (%) | PL (%) | PI (%) | USCS | MDD (kN/m ³) | OMC (%) | UCS (kN/m ²) | Work |
|----------|------------|----------|--------|--------|--------|------|--------------------------|---------|--------------------------|--|
| 100 | 0 | 0 | 49 | 24 | 25 | CL | 1670 | 20 | 55.31 | (Aytekin and Nas 1998) |
| 93 | 0 | 7 | 37 | 33.5 | 3.5 | ML | 1720 | 18.3 | 351.67 | |
| 85 | 0 | 15 | 38 | 34.3 | 3.7 | ML | 1640 | 21.3 | 369.42 | |
| 70 | 0 | 30 | 38.4 | 32 | 6.4 | ML | 1590 | 22.8 | 461.89 | |
| 93 | 7 | 0 | 40 | 34.1 | 5.9 | ML | 1720 | 17 | 1803.44 | |
| 85 | 15 | 0 | 41 | 35.9 | 5.1 | ML | 1740 | 17.5 | 2284.95 | |
| 70 | 30 | 0 | 39 | 32.2 | 6.8 | ML | 1770 | 18 | 3297 | |
| 100 | 0 | 0 | 44.5 | 35 | 9.5 | ML | 1420 | 29 | 69.43 | |
| 93 | 0 | 7 | 46.5 | 42.3 | 4.2 | ML | 1480 | 22.8 | 1305.27 | |
| 85 | 0 | 15 | 47 | 39 | 8 | ML | 1470 | 26.3 | 1147.38 | |
| 70 | 0 | 30 | 48 | 42 | 6 | ML | 1390 | 28.8 | 1090.5 | |
| 93 | 7 | 0 | 48 | 40.3 | 7.7 | ML | 1560 | 22.5 | 609.97 | |
| 85 | 15 | 0 | 49 | 40.7 | 8.3 | ML | 1530 | 26.3 | 2545.81 | |
| 70 | 30 | 0 | 46 | 41 | 5 | ML | 1500 | 30 | 3936.39 | |
| 100 | 0 | 0 | 84 | 40 | 44 | MH | 1290 | 36 | 87.08 | |
| 70 | 30 | 0 | 57 | 41.5 | 15.5 | MH | 1390 | 36.8 | 2076.95 | |
| 100 | 0 | 0 | 77 | 45 | 32 | MH | 1410 | 29 | 360 | (Bell 1989) |
| 96 | 0 | 4 | 102 | 47 | 55 | MH | 1353 | 31 | 1180 | |
| 100 | 0 | 0 | 60 | 37 | 23 | MH | 1400 | 31 | 520 | |
| 92 | 0 | 8 | 73 | 43 | 30 | MH | 1340 | 35 | 3400 | |
| 100 | 0 | 0 | 86 | 54 | 32 | MH | 1220 | 22 | 85 | |
| 94 | 0 | 6 | 80 | 58 | 22 | MH | 1200 | 33 | 180 | |
| 100 | 0 | 0 | 84.8 | 32.78 | 52.02 | CH | 1407 | 28.3 | 55.6 | (Harichane et al. 2010; 2011) |
| 96 | 0 | 4 | 78.73 | 57.26 | 21.47 | MH | 1346 | 30.4 | 1032.2 | |
| 92 | 0 | 8 | 78.16 | 58.24 | 19.92 | MH | 1315 | 31.1 | 1050.7 | |
| 100 | 0 | 0 | 47.79 | 23.23 | 24.56 | CL | 1723 | 15.3 | 222.5 | |
| 96 | 0 | 4 | 58.97 | 36.34 | 22.63 | MH | 1672 | 17.8 | 692.2 | |
| 92 | 0 | 8 | 57.03 | 37.35 | 19.68 | MH | 1652 | 17.4 | 716.9 | |
| 100 | 0 | 0 | 86 | 37 | 49 | CH | 1290 | 36.5 | 149 | (Hasan et al. 2016) |
| 100 | 0 | 0 | 84 | 26 | 58 | CH | 1353 | 29.83 | 190 | (Phanikumar and Ramanjaneya Raju 2020) |
| 100 | 0 | 0 | 75 | 28 | 47 | CH | 1406 | 31.82 | 663 | |
| 97 | 0 | 3 | 54 | 24 | 30 | CH | 1564 | 19.9 | 1100 | (Siddique and Hossain 2011) |
| 94 | 0 | 6 | 53 | 28 | 25 | CH | 1538 | 23.8 | 1820 | |
| 91 | 0 | 9 | 54 | 32 | 22 | MH | 1504 | 25.6 | 1930 | |

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|----|---|----|----|----|----|-------|------|------|------|---------------------|
| 88 | 0 | 12 | 57 | 37 | 20 | MH | 1472 | 27.7 | 2300 | (Burroughs 2001) |
| 85 | 0 | 15 | 59 | 40 | 19 | MH | 1438 | 29.9 | 2650 | |
| 97 | 3 | 0 | 18 | 14 | 4 | ML | 2080 | 8.5 | 4400 | |
| 94 | 6 | 0 | 18 | 14 | 4 | ML | 2080 | 8.5 | 4400 | |
| 94 | 4 | 2 | 19 | 14 | 5 | CL-ML | 1960 | 7.8 | 2540 | |
| 95 | 5 | 0 | 19 | 14 | 5 | CL-ML | 1960 | 7.8 | 2540 | |
| 94 | 4 | 2 | 20 | 20 | 0 | ML | 1890 | 7.3 | 3200 | |
| 95 | 5 | 0 | 20 | 20 | 0 | ML | 1890 | 7.3 | 3200 | |
| 95 | 5 | 0 | 20 | 19 | 1 | ML | 1650 | 8.3 | 1900 | |
| 96 | 4 | 0 | 20 | 19 | 1 | ML | 1650 | 8.3 | 1900 | |
| 96 | 4 | 0 | 21 | 17 | 4 | ML | 2080 | 8.5 | 4700 | |
| 94 | 6 | 0 | 21 | 17 | 4 | ML | 2080 | 8.5 | 4700 | |
| 96 | 4 | 0 | 22 | 22 | 0 | ML | 2200 | 8.7 | 3900 | |
| 95 | 5 | 0 | 22 | 17 | 5 | CL-ML | 2120 | 8.4 | 4200 | |
| 94 | 6 | 0 | 22 | 17 | 5 | CL-ML | 2120 | 8.4 | 4200 | |
| 94 | 6 | 0 | 22 | 19 | 3 | ML | 1720 | 9.9 | 2950 | |
| 95 | 5 | 0 | 22 | 19 | 3 | ML | 1720 | 9.9 | 2950 | |
| 94 | 6 | 0 | 22 | 19 | 3 | ML | 1920 | 11.4 | 2700 | |
| 94 | 4 | 2 | 22 | 19 | 3 | ML | 1920 | 11.4 | 2700 | |
| 92 | 4 | 4 | 23 | 18 | 5 | CL-ML | 1900 | 10 | 3100 | |
| 95 | 5 | 0 | 23 | 18 | 5 | CL-ML | 1900 | 10 | 3100 | |
| 94 | 4 | 2 | 23 | 15 | 8 | CL | 1830 | 13.5 | 1800 | |
| 94 | 3 | 3 | 23 | 15 | 8 | CL | 1830 | 13.5 | 1800 | |
| 90 | 6 | 4 | 23 | 18 | 5 | CL-ML | 2000 | 11.5 | 2900 | |
| 94 | 4 | 2 | 23 | 18 | 5 | CL-ML | 2000 | 11.5 | 2900 | |
| 94 | 6 | 0 | 23 | 18 | 5 | CL-ML | 2000 | 11.5 | 2900 | |
| 94 | 6 | 0 | 23 | 18 | 5 | CL-ML | 2000 | 11.5 | 2900 | |
| 94 | 2 | 4 | 23 | 22 | 1 | ML | 1730 | 9.8 | 1100 | |
| 94 | 6 | 0 | 23 | 22 | 1 | ML | 1730 | 9.9 | 1100 | |
| 96 | 4 | 0 | 24 | 20 | 4 | ML | 2000 | 7.7 | 4100 | |
| 94 | 6 | 0 | 24 | 20 | 4 | ML | 2000 | 7.7 | 4100 | |
| 94 | 6 | 0 | 24 | 21 | 3 | ML | 1750 | 10.8 | 2300 | |
| 94 | 4 | 2 | 24 | 21 | 3 | ML | 1750 | 10.8 | 2300 | |
| 95 | 0 | 5 | 25 | 12 | 13 | CL | 1670 | 10.1 | 1860 | |
| 94 | 0 | 6 | 25 | 12 | 13 | CL | 1670 | 10.1 | 1860 | |
| 94 | 6 | 0 | 25 | 12 | 13 | CL | 1670 | 10.1 | 2700 | |
| 95 | 5 | 0 | 25 | 21 | 4 | ML | 1980 | 7.9 | 4100 | |
| 94 | 6 | 0 | 25 | 21 | 4 | ML | 1980 | 7.9 | 4100 | |
| 94 | 3 | 3 | 26 | 19 | 7 | CL | 1860 | 12.7 | 2300 | |
| 95 | 5 | 0 | 26 | 19 | 7 | CL | 1860 | 12.7 | 2300 | |
| 94 | 3 | 3 | 27 | 16 | 11 | CL | 1930 | 8.7 | 2050 | |

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|----|---|---|----|----|----|----|------|------|------|
| 94 | 2 | 4 | 27 | 16 | 11 | CL | 1930 | 8.7 | 2050 |
| 94 | 2 | 4 | 27 | 24 | 3 | ML | 1450 | 16.3 | 1200 |
| 94 | 4 | 2 | 27 | 24 | 3 | ML | 1450 | 16.3 | 1200 |
| 96 | 2 | 2 | 28 | 19 | 9 | CL | 2150 | 6 | 3300 |
| 94 | 4 | 2 | 28 | 19 | 9 | CL | 2150 | 6 | 3300 |
| 93 | 5 | 2 | 28 | 19 | 9 | CL | 1840 | 12.8 | 2930 |
| 92 | 4 | 4 | 28 | 19 | 9 | CL | 1840 | 12.8 | 2930 |
| 94 | 4 | 2 | 29 | 16 | 13 | CL | 2010 | 9.7 | 2000 |
| 96 | 0 | 4 | 29 | 16 | 13 | CL | 2010 | 9.7 | 2000 |
| 94 | 4 | 2 | 29 | 20 | 9 | CL | 1610 | 12.6 | 2000 |
| 94 | 6 | 0 | 29 | 20 | 9 | CL | 1610 | 12.6 | 2000 |
| 94 | 6 | 0 | 29 | 20 | 9 | CL | 1610 | 12.6 | 2050 |
| 95 | 0 | 5 | 29 | 12 | 17 | CL | 1990 | 12.3 | 2960 |
| 94 | 6 | 0 | 29 | 12 | 17 | CL | 1990 | 12.3 | 2960 |
| 94 | 0 | 6 | 29 | 18 | 11 | CL | 1900 | 10.1 | 4600 |
| 94 | 4 | 2 | 29 | 18 | 11 | CL | 1900 | 10.1 | 4600 |
| 95 | 5 | 0 | 29 | 22 | 7 | CL | 1970 | 8.1 | 3250 |
| 94 | 6 | 0 | 29 | 22 | 7 | CL | 1970 | 8.1 | 3250 |
| 94 | 6 | 0 | 29 | 14 | 15 | CL | 1690 | 11.4 | 2200 |
| 92 | 2 | 6 | 29 | 12 | 17 | CL | 2090 | 11.2 | 1820 |
| 94 | 6 | 0 | 29 | 12 | 17 | CL | 2090 | 11.2 | 1820 |
| 96 | 0 | 4 | 29 | 14 | 15 | CL | 1690 | 11.4 | 2620 |
| 94 | 4 | 2 | 29 | 22 | 7 | CL | 1780 | 18.5 | 2200 |
| 96 | 4 | 0 | 29 | 22 | 7 | CL | 1780 | 18.5 | 2200 |
| 92 | 4 | 4 | 30 | 18 | 12 | CL | 1970 | 10.1 | 3000 |
| 96 | 0 | 4 | 30 | 18 | 12 | CL | 1970 | 10.1 | 3000 |
| 92 | 2 | 6 | 30 | 14 | 16 | CL | 1830 | 9.4 | 3000 |
| 94 | 4 | 2 | 30 | 14 | 16 | CL | 1830 | 9.4 | 3000 |
| 95 | 5 | 0 | 31 | 25 | 6 | ML | 1940 | 7.3 | 3800 |
| 94 | 6 | 0 | 31 | 25 | 6 | ML | 1940 | 7.3 | 3800 |
| 95 | 0 | 5 | 31 | 14 | 17 | CL | 2120 | 8.8 | 3900 |
| 94 | 6 | 0 | 31 | 14 | 17 | CL | 2120 | 8.8 | 3900 |
| 92 | 2 | 6 | 32 | 17 | 15 | CL | 1820 | 6.9 | 2950 |
| 94 | 6 | 0 | 32 | 17 | 15 | CL | 1820 | 6.9 | 2950 |
| 97 | 0 | 3 | 32 | 12 | 20 | CL | 1960 | 8.2 | 1930 |
| 94 | 6 | 0 | 32 | 12 | 20 | CL | 1960 | 8.2 | 1930 |
| 94 | 3 | 3 | 32 | 24 | 8 | ML | 1920 | 9.3 | 2150 |
| 95 | 5 | 0 | 32 | 24 | 8 | ML | 1920 | 9.3 | 2150 |
| 97 | 0 | 3 | 32 | 17 | 15 | CL | 1950 | 13 | 3100 |
| 92 | 4 | 4 | 32 | 17 | 15 | CL | 1950 | 13 | 3100 |
| 94 | 0 | 6 | 32 | 13 | 19 | CL | 1690 | 8.8 | 1980 |

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|----|---|---|------|----|------|----|------|------|------|
| 94 | 4 | 2 | 32 | 13 | 19 | CL | 1690 | 8.8 | 1980 |
| 94 | 0 | 6 | 33 | 12 | 21 | CL | 1810 | 16 | 2450 |
| 92 | 6 | 2 | 33 | 12 | 21 | CL | 1810 | 16 | 2450 |
| 95 | 0 | 5 | 33.5 | 18 | 15.5 | CL | 1700 | 5.4 | 2010 |
| 94 | 6 | 0 | 33.5 | 18 | 15.5 | CL | 1700 | 5.4 | 2010 |
| 94 | 3 | 3 | 35 | 27 | 8 | ML | 2210 | 8.2 | 4200 |
| 96 | 4 | 0 | 35 | 27 | 8 | ML | 2210 | 8.2 | 4200 |
| 94 | 4 | 2 | 35 | 15 | 20 | CL | 1650 | 11.7 | 1600 |
| 95 | 0 | 5 | 35 | 15 | 20 | CL | 1650 | 11.7 | 2300 |
| 94 | 6 | 0 | 35 | 15 | 20 | CL | 1650 | 11.7 | 2300 |
| 94 | 6 | 0 | 35 | 21 | 14 | CL | 2100 | 8 | 2270 |
| 95 | 0 | 5 | 35 | 21 | 14 | CL | 2100 | 8 | 2270 |
| 94 | 4 | 2 | 35 | 29 | 6 | ML | 2040 | 8.8 | 3210 |
| 95 | 5 | 0 | 35 | 29 | 6 | ML | 2040 | 8.8 | 3210 |
| 94 | 6 | 0 | 35 | 17 | 18 | CL | 1890 | 10.9 | 2870 |
| 94 | 0 | 6 | 36 | 17 | 19 | CL | 1900 | 7 | 2800 |
| 94 | 6 | 0 | 36 | 17 | 19 | CL | 1900 | 7 | 2800 |
| 94 | 6 | 0 | 36 | 17 | 19 | CL | 2150 | 7 | 2900 |
| 95 | 0 | 5 | 36.4 | 19 | 17.4 | CL | 1920 | 9.4 | 2020 |
| 94 | 6 | 0 | 36.4 | 19 | 17.4 | CL | 1920 | 9.4 | 2020 |
| 92 | 2 | 6 | 37 | 16 | 21 | CL | 1900 | 12.4 | 4900 |
| 92 | 6 | 2 | 37 | 16 | 21 | CL | 1900 | 12.4 | 4900 |
| 94 | 4 | 2 | 37 | 14 | 23 | CL | 1470 | 10.6 | 1500 |
| 94 | 0 | 6 | 38 | 23 | 15 | CL | 1930 | 7.9 | 2000 |
| 94 | 6 | 0 | 38 | 23 | 15 | CL | 1930 | 7.9 | 2000 |
| 96 | 0 | 4 | 38 | 17 | 21 | CL | 1820 | 10.5 | 1880 |
| 94 | 6 | 0 | 38 | 17 | 21 | CL | 1820 | 10.5 | 1880 |
| 94 | 4 | 2 | 38 | 17 | 21 | CL | 1780 | 9.1 | 2300 |
| 94 | 6 | 0 | 39 | 25 | 14 | CL | 1860 | 12 | 3000 |
| 92 | 2 | 6 | 40 | 20 | 20 | CL | 1980 | 7.1 | 1610 |
| 94 | 6 | 0 | 40 | 20 | 20 | CL | 1980 | 7.1 | 1610 |
| 94 | 6 | 0 | 40 | 15 | 25 | CL | 1970 | 9.2 | 3980 |
| 94 | 4 | 2 | 40 | 18 | 22 | CL | 1920 | 7.8 | 2990 |
| 94 | 4 | 2 | 40 | 17 | 23 | CL | 1780 | 10.9 | 2300 |
| 96 | 0 | 4 | 41 | 21 | 20 | CL | 1700 | 19 | 1690 |
| 94 | 6 | 0 | 41 | 21 | 20 | CL | 1700 | 19 | 1690 |
| 95 | 0 | 5 | 42 | 23 | 19 | CL | 1440 | 9.3 | 2300 |
| 94 | 6 | 0 | 42 | 23 | 19 | CL | 1440 | 9.3 | 2300 |
| 94 | 6 | 0 | 42 | 20 | 22 | CL | 1860 | 9.7 | 2790 |
| 92 | 6 | 2 | 42 | 15 | 27 | CL | 1980 | 12.2 | 2960 |
| 94 | 6 | 0 | 43.3 | 15 | 28.3 | CL | 1760 | 16.5 | 1820 |

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|-----|---|---|-------|------|-------|----|------|------|--------|-----------------------------------|
| 94 | 6 | 0 | 44 | 22 | 22 | CL | 2010 | 8.7 | 3200 | |
| 94 | 4 | 2 | 44 | 18 | 26 | CL | 1790 | 8.9 | 2250 | |
| 94 | 6 | 0 | 45 | 12 | 33 | CL | 1760 | 14.8 | 1980 | |
| 94 | 4 | 2 | 45 | 26 | 19 | CL | 1820 | 10.5 | 1750 | |
| 92 | 2 | 6 | 45 | 26 | 19 | CL | 1820 | 10.5 | 2450 | |
| 94 | 2 | 4 | 45 | 26 | 19 | CL | 1820 | 10.5 | 2450 | |
| 94 | 4 | 2 | 45 | 27 | 18 | ML | 1820 | 12.5 | 1900 | |
| 93 | 5 | 2 | 45 | 27 | 18 | ML | 1820 | 12.5 | 4100 | |
| 92 | 2 | 6 | 45 | 27 | 18 | ML | 1820 | 12.5 | 4100 | |
| 94 | 6 | 0 | 46 | 16 | 30 | CL | 1520 | 14.8 | 1800 | |
| 92 | 4 | 4 | 46 | 16 | 30 | CL | 1520 | 14.8 | 1820 | |
| 94 | 2 | 4 | 50 | 15 | 35 | CH | 1940 | 10.2 | 3000 | |
| 94 | 6 | 0 | 51 | 25 | 26 | CH | 2150 | 7.9 | 4020 | |
| 94 | 6 | 0 | 52 | 34 | 18 | MH | 2010 | 8.7 | 5400 | |
| 94 | 6 | 0 | 55 | 20 | 35 | CH | 1520 | 14 | 1200 | |
| 94 | 6 | 0 | 55 | 23 | 32 | CH | 1550 | 15.5 | 1570 | |
| 94 | 6 | 0 | 55 | 30 | 25 | MH | 1870 | 16 | 3300 | |
| 94 | 6 | 0 | 57 | 36 | 21 | MH | 2100 | 9 | 3400 | |
| 94 | 0 | 6 | 58 | 16 | 42 | CH | 1600 | 22.7 | 1350 | |
| 94 | 2 | 4 | 65 | 14 | 51 | CH | 1600 | 20 | 1500 | |
| 94 | 0 | 6 | 66 | 24 | 42 | CH | 1520 | 28 | 1250 | |
| 94 | 4 | 2 | 72 | 23 | 49 | CH | 1600 | 11.2 | 1300 | |
| 94 | 4 | 2 | 72 | 23 | 49 | CH | 1600 | 11.2 | 1500 | |
| 94 | 4 | 2 | 73 | 25 | 48 | CH | 1590 | 16 | 1700 | |
| 94 | 6 | 0 | 73 | 25 | 48 | CH | 1590 | 16 | 1900 | |
| 94 | 2 | 4 | 89 | 19 | 70 | CH | 1510 | 25.5 | 1400 | |
| 100 | 0 | 0 | 42.25 | 19.3 | 22.95 | CL | 1720 | 14.5 | 1025 | (Workie and Alam 2019) |
| 98 | 0 | 2 | 37.11 | 20.6 | 16.51 | CL | 1730 | 15.1 | 1120 | |
| 96 | 0 | 4 | 31.78 | 21 | 10.78 | CL | 1750 | 13.8 | 1154 | |
| 100 | 0 | 0 | 39 | 18 | 21 | CL | 1772 | 16.5 | 193.05 | (Solanki, Khoury, and Zaman 2009) |
| 100 | 0 | 0 | 37 | 26 | 11 | ML | 1632 | 23 | 165.47 | |
| 100 | 0 | 0 | 58 | 29 | 29 | CH | 1661 | 20.3 | 206.84 | |

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