**Table 7. Estimated soil properties significant to engineering**

| Series | Map Unit Symbol | Depth to Season High Water Table | Bedrock | Depth from Surface (Typical profile) | USDA Texture |
|---|---|---|---|---|---|
| Albrights | AbB, AbC, AcB, AcC | 1.5 - 3 | >5 | 0 - 6 | Silt loam |
| | | | | 6 - 27 | Loam, Clay loam |
| | | | | 27 - 60 | Channery loam |
| Allegheny | AlB | >6 | >6 | 0 - 11 | Silt loam |
| | | | | 11 - 33 | Silt loam, Clay loam |
| | | | | 33 - 60 | Gravelly loam |
| Andover | AnB | 0 - 0.5 | 4 - >20 | 0 - 10 | Channery loam |
| | | | | 10 - 23 | Channery loam, channery clay loam |
| | | | | 23 - 60 | Gravelly clay loam, gravelly sandy clay loam |
| Armagh | ArA, ArB | 0 - 0.5 | 3.5 - 6 | 0 - 8 | Silt loam |
| | | | | 8 - 38 | Silty clay loam, shaly silty clay loam |
| | | | | 38 - 44 | Shaly loam |
| | | | | 44 | Shale bedrock (weathered). |
| Atkins | At | 0 - 0.5 | > 6 | 0 - 7 | Silt loam |
| | | | | 7 - 44 | Silty clay loam, loam, clay loam, gravelly loam |
| | | | | 44 - 61 | Gravelly loam, gravelly sandy loam |
| Basher | Ba | 1.5 - 3 | >6 | 0 - 33 | Loam |
| | | | | 33 - 60 | Very gravelly loam |
| *Berks | BkB,BkC,BkD,BlD,BMF | > 6 | 1.5 - 3.5 | 0 - 10 | Shaly silt loam |
| | (For Weikert part of BMF, see Weikert series) | | | 10 - 24 | Very shaly silt loam |
| | | | | 24 | Shale bedrock (weathered). |
| Brinkerton | BrA,BrB, BrC, BsB | 0 - 0.5 | >5 | 0 - 9 | Silt loam |
| | | | | 9 - 21 | Silt loam, silty clay loam |
| | | | | 21 - 62 | Shaly silt loam |
| Buchanan | BtB,BuB,BuC,BxB,BxD | 1.5 - 3 | >5 | 0 - 15 | Channery loam |
| | | | | 15 - 27 | Channery loam |
| | | | | 27 - 60 | Channery loam |
| Calvin | Mapped only with Leck Kill | > 6 | 1.5 - 3.5 | 0 - 7 | Channery loam |
| | | | | 7 - 35 | Channery loam |
| | | | | 35 - 39 | Very channery loam |
| | | | | 39 | Siltstone bedrock (weathered). |
| Carlisle | CA | 0 | > 6 | 0 - 111 | Muck |
| | | | | 111 - 118 | Silt loam |
| Cavode | CdA,CdB | 0.5 - 1.5 | 3.5 - 6 | 0 - 7 | Silt loam |
| | | | | 7 - 36 | Silty clay loam |
| | | | | 36-52 | Shaly silty clay loam |
| | | | | 52 | Shale bedrock (weathered) |
| Chagrin | Ch | >3 | >6 | 0 - 14 | Silt loam |
| | | | | 14 - 41 | Silt loam, loam |
| | | | | 41 - 60 | Silt loam |
| Clarksburg | CkA, CkB | 1.5 - 3 | >5 | 0 - 14 | Silt loam |
| | | | | 14 - 35 | Silt loam, silty clay loam |
| | | | | 35 - 48 | Silty clay loam |
| | | | | 48 - 63 | Channery silty clay loam |
| Clymer | CIB, CIC, CvB, CvD | >6 | >5 | 0 - 10 | Sandy loam |

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**Table 7. Estimated soil properties significant to engineering**

| | | | | | |
|---|---|---|---|---|---|
| | | | | 10 - 28 | Channery sandy loam |
| | | | | 28 - 81 | Channery sandy loam, very channery sandy loam |
| Dekalb | Mapped only with Hazelton | > 6 | 1.5 - 3.5 | 0 - 9 | Channery sandy loam |
| | | | | 9 - 36 | Very channery sandy loam, very channery loamy |
| | | | | 36 | Sandstone bedrock |
| Dunning | Du | 0 | >6 | 0 - 15 | Silty clay loam |
| | | | | 15 - 66 | Silty clay, silty clay loam |
| Edom | EdB, EdC, EdD | >6 | 3.5 - 6 | 0 - 7 | Silt loam |
| | | | | 7 - 29 | Silty clay loam, clay |
| | | | | 29 - 47 | Very shaly silty clay |
| Ernest | ErB,ErC,ErD,EvB,EvD | 1.5 - 3 | >5 | 0 - 8 | Channery silt loam |
| | | | | 8 - 26 | Channery silt loam, silty clay loam |
| | | | | 26 - 80 | Channery silty clay loam, loam |
| Gilpin | GlB, GlC, GlD | >6 | 1.5 - 3 | 0 - 9 | Channery silt loam |
| | | | | 9 - 22 | Channery loam |
| | | | | 22 - 32 | Very channery loam |
| Hagerstown | HaA,HaB,HaC,HcB,HcC,HcD | | | 32 | Shale bedrock (weathered) |
| | | >6 | 3.5 - 7 | 0 - 8 | Silt loam |
| | | | | 8 - 45 | Silty clay, clay, silty clay loam |
| | | | | 45 - 75 | Clay loam |
| | | | | 75 | Limestone bedrock |
| *Hazelton | HhB,HhC,HhD,HSB,HSD,HTF | >6 | 3.5 - 7 | 0 - 8 | Channery sandy loam |
| | (For Dekalb part of HTF, see Dekalb series.) | | | 8 - 35 | Channery sandy loam, very channery sandy loam |
| | | | | 35 - 60 | Very channery sandy loam |
| Hublersburg | HuA,HuB,HuC,HuD | >6 | >5 | 0 - 9 | Silt loam |
| | | | | 9 - 54 | Silty clay loam, silty clay |
| | | | | 54 - 70 | Cherty silty clay, cherty silty clay loam |
| Laidig | LaB,LaC,LaD,LcB,LcD,LDF | >6 | >6 | 0 - 12 | Channery loam |
| | | | | 12 - 40 | Channery loam |
| | | | | 40 - 74 | Channery loam |
| *Leck Kill | LkB,LkC,LkD,LlB,LlD,LMF | >6 | 3.5 - 6 | 0 - 8 | Channery silt loam |
| | (For Calvin part of LMF, see Calvin series.) | | | 8 - 31 | Channery silt loam |
| | | | | 31 - 82 | Very channery silt loam, very flaggy loam |
| Leetonia | LtB,LvB,LvC | >6 | 3.5 - 5 | 0 - 13 | Flaggy loamy sand |
| | | | | 13 - 28 | Flaggy loamy sand |
| | | | | 28 - 46 | Very flaggy loamy sand |
| | | | | 46 | Sandstone bedrock |
| Leetonia variant | LvB, LvC | >6 | 0 - 12 | 0 - 12 | Sand |
| | | | | 12 - 60 | Loamy sand, sandy loam |
| Lindside | Lx | 1.5 - 3 | >6 | 0 - 11 | Silt loam |
| | | | | 11 - 41 | Silt loam, silty clay loam |
| | | | | 41 - 60 | Loam |
| Markes | MaB | 0 - 0.5 | 1.5 - 3.5 | 0 - 9 | Silt loam |
| | | | | 9 - 29 | Shaly silt loam, very shaly silt loam |
| | | | | 29 | Shale bedrock (weathered) |
| Meckesville | MeB,MeC,MkB,MkD | >6 | >6 | 0 - 7 | Silt loam |
| | | | | 7 - 28 | Heavy silt loam |
| | | | | 28 - 80 | Channery silt loam, very channery silt loam |
| Melvin | Mm | 0 - 0.5 | >6 | 0 - 52 | Silt loam, silty clay loam |

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**Table 7. Estimated soil properties significant to engineering**

| | | | | | |
|---|---|---|---|---|---|
| | | | | 52 - 60 | Loam |
| Millheim | MnB,MnC,MnD | >6 | 3.5 - 6 | 0 - 9 | Silt loam |
| | | | | 9 - 34 | Silty clay |
| | | | | 34 - 42 | Silty clay |
| | | | | 42 | Shale bedrock (weathered) |
| Monongahela | MoB | 1.5 - 3 | >6 | 0 - 9 | Silt loam |
| | | | | 9 - 29 | Silty clay loam |
| | | | | 29 - 60 | Gravelly clay loam |
| Morrison | MrB, MrC, Mrd, MsB, MsD, MTF | >6 | >6 | 0 - 14 | Loamy sand, sandy loam |
| | | | | 14 - 53 | Sandy loam, channery sandy clay loam |
| | | | | 53 - 74 | Channery sandy loam |
| Murrill | MuA,MuB,MuC,MuD,MvB,MvD | >6 | >6 | 0 - 11 | Channery silt loam |
| | | | | 11 - 41 | Channery loam, channery clay loam |
| | | | | 41 - 67 | Clay |
| Nolin | No | >3 | >6 | 0 - 9 | Silt loam |
| | | | | 9 - 78 | Silt loam, silty clay loam |
| *Opequon | OhB,OhC,OhD,ORF,OxB,OxD | >6 | 1 - 1.5 | 0 - 9 | Silty clay loam |
| (For Hagerstown part of OhB,OhC, OhD and ORF see Hagerstown series) | | | | 9 - 17 | Silty clay |
| (Rock outcrop part of OxB and OxD, not rated because it is areas of exposed bedrock.) | | | | 17 | Fracture limestone bedrock |
| *Philo | Ph,Pk | 1.5 - 3 | >6 | 0 - 13 | Loam |
| | (For Atkins part of Pk, see Atkins series.) | | | 13 - 36 | Loam |
| | | | | 36 - 62 | Gravelly loam |
| Pope | Po | >3 | >6 | 0 - 10 | Loam |
| | | | | 10 - 38 | Loam |
| | | | | 38 - 60 | Gravelly sandy loam |
| Purdy | Pu | 0 - 0.5 | >6 | 0 - 6 | Silt loam |
| | | | | 6 - 45 | Silty clay loam, silty clay |
| | | | | 45 - 62 | Silty clay |
| Rayne | RaB | >6 | 3.5 - 6 | 0 - 6 | Silt loam |
| | | | | 6 - 40 | Shaly silty clay loam |
| | | | | 40 - 60 | Very shaly silt loam |
| Rubble land | Ru | Too Variable to Rate (On site investigation required.) | | | |
| Strip mines | Sm | Too Variable to Rate (On site investigation required.) | | | |
| Tyler | Ty | 0.5 - 1.5 | >6 | 0 - 11 | Silt loam |
| | | | | 11 - 44 | Heavy silt loam, silty clay loam |
| | | | | 44 - 60 | Clay loam, loamy sand |
| Ungers | UmB,UmC,UmD,UnB,UnD | >6 | 3.5 - 6.5 | 0 - 6 | Channery loam |
| | | | | 6 - 31 | Channery loam, sandy clay loam, channery sandy |
| | | | | 31 - 61 | Very channery sandy loam |
| *Urban land | URB | Too Variable to Rate.(On site investigation required.) | | | |
| | | (For Hagerstown part, see Hagerstown series.) | | | |
| Vanderlip | VaC | >6 | >8 | 0 - 22 | Loamy sand |
| | | | | 22 - 60 | Channery sandy loam |
| Weikert | WeC,WeD | >6 | 1 - 1.5 | 0 - 7 | Shaly silt loam, very shaly silt loam |
| | | | | 7 - 17 | Very shaly silt loam |
| | | | | 17 | Fracture shale bedrock |
| Wharton | WhA,WhB,WhC | 1.5 - 3 | 3.5 ->6 | 0 - 12 | Silt loam |
| | | | | 12 - 49 | Silty clay loam, clay loam, shaly clay loam |
| | | | | 49 - 74 | Shaly clay loam |

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**Table 7. Estimated soil properties significant to engineering**

| | | | | | |
|---|---|---|---|---|---|
| Wyoming | Wy | >3 | >6 | 0 - 13 | Gravelly sandy loam |
| | | | | 13 - 64 | Very gravelly sandy loam |

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**Table 7. Estimated soil properties significant to engineering**

| Classification | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Unified** | **AASHTO** | **Coarse Fraction > 3 in.** | **No. 4 (4.7mm)** | **No. 10 (2.0mm)** | **No. 40 (0.42mm)** | **No. 200 (0.073mm)** | **Permeability** |
| ML,CL,or CL-ML | A-4 or A-6 | 0 - 10 | 80 - 100 | 80 - 95 | 70 - 90 | 55 - 80 | 0.6 - 2.0 |
| ML,CL,or CL-ML,SM,SC or SM-SC | A-4 or A-6 | 5 - 20 | 80 - 100 | 70-100 | 65 - 90 | 40 - 80 | 0.6 - 2.0 |
| ML,CL,SM, SC, GM, or GC | A-4, A-2, A-6 | 5 - 20 | 70 - 100 | 60 - 90 | 50 - 80 | 30 - 75 | 0.2 - 0.6 |
| ML, CL, or CL-ML | A-4 | | 90 - 100 | 90 - 100 | 70 - 100 | 55 - 90 | 2.0 - 6.0 |
| ML,CL,CL-ML, SM,SC, or SM-SC | A-4 or A-6 | 0 - 5 | 90 - 100 | 80 - 100 | 65-95 | 40-75 | 0.6 - 2.0 |
| SM,SC,GM,GC,ML, or CL | A-2,A-4,A-1, or A-6 | 0 - 5 | 70 - 90 | 55 - 90 | 45 - 65 | 20 - 55 | 0.6 - 2.0 |
| ML,CL,Cl-ML,SM,SC,or SM-SC | A-4 | 0 - 10 | 80 - 95 | 70 - 90 | 65 - 85 | 45 - 46 | 0.6 - 2.0 |
| SM,SC,SM-Sc,ML,CL, or CL-ML | A-4, A-2, or A-6 | 0 - 15 | 80 - 95 | 65 - 90 | 65 - 85 | 30 - 60 | 0.2 - 2.0 |
| SM,SC,or SM-SC | A-4, A-2, or A-6 | 0 - 25 | 80 - 95 | 65 - 90 | 60 - 85 | 30 - 50 | 0.06 - 0.2 |
| ML or CL | A-4 or A-6 | 0 - 5 | 95 - 100 | 90 - 100 | 80 - 95 | 75 - 85 | 0.6 - 2.0 |
| ML, CL, MH, or CH | A-7, A-6, A-4, or A-5 | 0 - 10 | 85 - 95 | 75 - 90 | 70 - 85 | 65 - 85 | 0.06 - 0.02 |
| GM, GC, SM, or SC | A-2, A-4, A-6, or A-7 | 0 - 20 | 65 - 85 | 20 - 75 | 20 - 60 | 20 - 45 | 0.06 - 0.6 |
| | | | | | | | |
| ML,CL, or CL-ML | A-4, A-6, A-7, or A-5 | | 90 - 100 | 90 - 100 | 80 - 100 | 60 - 95 | 0.6 - 2.0 |
| ML,CL, or CL-ML | A-6, A-4, A-7, or A-5 | 0 - 5 | 85 - 100 | 80 - 100 | 70 - 90 | 50 - 85 | 0.06 - 0.6 |
| ML, Cl, SM, SC, GM, or GC | A-2, A-4, A-5, or A-6 | 0 - 10 | 60 - 95 | 55 - 95 | 50 - 80 | 30 - 80 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-4 | 0 - 5 | 80 - 100 | 70 - 100 | 60 - 100 | 55 - 95 | 0.6 - 2.0 |
| SM, SC, G, GC, ML, or CL | A-4 or A-2 | 0 - 25 | 45 - 95 | 40 - 90 | 40 - 80 | 35 - 75 | 0.6 - 2.0 |
| SM, SC, GM, GC, ML, or CL | A-4 or A-2 | 0 - 20 | 50 - 80 | 45 - 70 | 40 - 60 | 30 - 55 | 2.0 - 6.0 |
| GM, GC, GM-GC,SM,SC, or SM-SC | A-2 or A--1 | 0 - 40 | 40 - 65 | 30 - 55 | 25 - 45 | 20 - 35 | 2.0 - 6.0 |
| | | | | | | | |
| ML or CL | A-4, A-6, A-5, or A-7 | 0 - 10 | 90 - 100 | 90 - 100 | 85 - 100 | 80 - 100 | 0.6 - 6.0 |
| ML or CL | A-4, A-6, A-5, or A-7 | 0 - 10 | 90 - 100 | 90 - 100 | 85 - 100 | 70 - 100 | 0.6 - 2.0 |
| ML,CL,GM,GC,SM, or SC | A-4, A-6, A-5, or A-7 | 0 - 15 | 70 - 95 | 45 - 95 | 40 - 90 | 35 - 85 | 0.06 - 0.2 |
| ML,CL,CL-ML,SM,SC, or SM-SC | A-4 or A-6 | 0 - 10 | 85 - 100 | 75 - 100 | 60 - 80 | 45 - 75 | 0.6 - 2.0 |
| ML,CL,CL-ML,SM,SC, or SM-SC | A-4 or A-6 | 5 - 15 | 85 - 100 | 60 - 100 | 55 - 80 | 45 - 75 | 0.6 - 2.0 |
| SM,SC,GM,GC,ML, or CL | A-4, A-6, or A-2 | 5 - 15 | 65 - 85 | 30 - 80 | 25 - 60 | 25 - 60 | 0.06 - 0.2 |
| ML,CL,GM,GC,SM, or SC | A-4 or A-6 | 5 - 10 | 70 - 85 | 65 - 80 | 40 - 75 | 35 - 65 | 2.0 - 6.0 |
| GM,GC,SM,SC,ML, or CL | A-2, A-1, A-4, or A-6 | 5 - 10 | 45 - 80 | 40 - 75 | 34 - 70 | 25 - 55 | 2.0 - 6.0 |
| GM,GC,SM,SC,GW-GM,or SW-SM | A-2, A-1, A-4, or A-6 | 10 - 20 | 30 - 70 | 25 - 65 | 20 - 50 | 10 - 40 | 2.0 - 6.0 |
| | | | | | | | |
| Pt | | | | | | | 2.0 - 6.0 |
| ML,CL, or CL-ML | A-4 or A-6 | | 100 | 90 - 100 | 80 - 1-- | 75 - 95 | 0.06 - 0.2 |
| ML,CL, or CL-ML | A-4, A-6, A-7, or A-5 | | 90 - 100 | 85 - 100 | 80 - 95 | 75 - 95 | 0.6 - 2.0 |
| ML,CL, or CL-ML | A-4, A-6, A-7, or A-5 | | 85 - 100 | 80 - 100 | 80 - 95 | 70 - 95 | 0.06 - 0.2 |
| ML,CL, SM, SC, GM, or GC | A-4, A-6, A-7, or A-5 | 0 - 15 | 65 - 90 | 55 - 85 | 50 - 80 | 40 - 75 | 0.06 - 0.2 |
| | | | | | | | |
| ML, CL, or CL-ML | A-4 | | 95 - 100 | 80 - 100 | 75 - 100 | 70 - 90 | 0.6 - 2.0 |
| ML, CL, or CL-ML, SM, SC, or SM-SC | A-4 | | 90 - 100 | 80 - 100 | 75 - 90 | 45 - 80 | 0.6 - 2.0 |
| ML, CL, or CL-ML, SM, SC, or SM-SC | A-4 | | 85 - 100 | 80 - 100 | 70 - 85 | 40 - 75 | 0.6 - 6.0 |
| ML, CL, or CL-ML | A-4, A-6, A-7, or A-5 | 0 - 5 | 95 - 100 | 90 - 100 | 80 - 95 | 65 - 90 | 0.6 - 2.0 |
| CL, ML, or CL-ML | A-4, A-6, A-7, or A-5 | 0 - 10 | 80 - 100 | 75 - 100 | 70 - 95 | 55 - 85 | 0.6 - 2.00 |
| ML, CL, CL-ML, SM, SC, or SM-SC+G71 | A-4, A-6, A-7, or A-5 | 0 - 15 | 75 - 100 | 65 - 100 | 60 - 95 | 45 - 85 | 0.06 - 0.2 |
| ML, CL, GM, GC, SM, or SC | A-4, A-6, A-7, or A-2 | 5 - 20 | 50 - 100 | 25 - 100 | 20 - 95 | 15 - 90 | 0.06 - 0.6 |
| GM, GC, SM, SC, ML, or CL | A-4 or A-2 | 0 - 15 | 60 - 85 | 60 - 80 | 45 - 75 | 30 - 65 | 2.0 - 6.0 |

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**Table 7. Estimated soil properties significant to engineering**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GM, GC, SM, SC, ML, or CL | A-4 or A-2 | 5 - 20 | 60 - 85 | 55 - 75 | 40 - 65 | 30 - 55 | 2,0 - 6.0 |
| GM, GC, SM, SC, ML, or CL | A-2, A-1, or A-4 | 10 - 30 | 40 - 75 | 25 - 70 | 20 - 60 | 10 - 45 | 2.0 - 6.0 |
| GM or SM | A-2, A-4, A-1 | 10 - 50 | 45 - 80 | 40 - 75 | 30 - 60 | 15 - 50 | 2.0 - 6.0 |
| GM, SM, GW-GM, or SW-SM | A-1 or A-2 | 10 - 50 | 30 - 65 | 25 - 60 | 15 - 45 | 5 - 35 | 2.0 - 6.0 |
| | | | | | | | |
| ML, CL, or CL-ML | A-4, A-6, A-7, or A-5 | | 100 | 95 - 100 | 90 - 100 | 85 - 100 | 0.2 - 2.0 |
| CL, MH, CH, or MH-Ch | A-7 | | 95 - 100 | 95 - 100 | 90 - 100 | 85 - 100 | 0.06 - 0.2 |
| ML, CL, or CL-ML | A-4, A-6, A-7, or A-5 | | 85 - 100 | 80 - 100 | 75 - 95 | 70 - 90 | 0.6 - 2.0 |
| ML, CL, CL-ML, MH, CH, or MH-CH | A-7 or A-6 | 0 - 10 | 75 - 95 | 65 - 90 | 65 - 85 | 55 - 85 | 0.6 - 2.0 |
| GM, GC, SM, SC, ML, or CL | A-4, A-6, A-2, or A-7 | 5 - 20 | 30 - 80 | 20 - 70 | 15 - 60 | 15 - 55 | 0.6 - 2.0 |
| ML,CL, or CL-ML | A-4 or A-6 | 0 - 15 | 85 - 100 | 80 - 100 | 75 - 95 | 70 - 95 | 0.6 - 2.0 |
| ML,CL, or CL-ML | A-4, A-6, A-7, or A-5 | 0 - 15 | 85 - 100 | 80 - 100 | 75 - 95 | 70 - 95 | 0.6 - 2.0 |
| ML, CL, SM, SC, GM, or GC | A-4, A-6, A-7, or A-5 | 5 - 20 | 70 - 95 | 60 - 90 | 55 - 85 | 45 - 80 | 0.06 - 0.6 |
| ML, CL, or CL-ML | A-4 or A-6 | 0 - 10 | 75 - 95 | 70 - 90 | 65 - 85 | 55 - 80 | 0.6 - 2.0 |
| ML, CL, GM, GC, SM, or SC | A-4 or A-6 | 0 - 20 | 60 - 85 | 55 - 85 | 45 - 75 | 40 - 70 | 0.6 - 2.0 |
| GM, GC, or GM-GC | A-1, A-2, or A-4 | 5 - 30 | 30 - 55 | 25 - 50 | 20 - 45 | 15 - 40 | 0.6 - 2.0 |
| | | | | | | | |
| ML,CL,or CL-ML | A-4, A-6, A-7, or A-5 | 0 - 5 | 85 - 100 | 80 - 100 | 80 - 100 | 75 - 100 | 0.6 - 2.0 |
| ML,CL,CL-ML, MH, CH, or MH-CH | A-6 or A-7 | 0 - 5 | 90 - 100 | 80 - 100 | 75 - 100 | 70 - 100 | 0.6 - 2.0 |
| ML,CL,CL-ML, MH, CH, or MH-CH | A-6 or A-7 | 0 - 5 | 85 - 100 | 80 - 100 | 75 - 100 | 70 - 100 | 0.6 - 2.0 |
| | | | | | | | |
| SM,SM-SC,GM,GM-GC,ML, or CL-ML | A-4 | 10 - 15 | 60 - 85 | 50 - 80 | 50 - 70 | 35 - 55 | 2.0 - 6.0 |
| SM,SM-SC,GM,GM-GC,ML, or CL-ML | A-2,A-1,or A-4 | 0 - 50 | 60 - 85 | 55 - 80 | 50 - 70 | 20 - 55 | 2.0 ->6.0 |
| SM,GM, GW-GM, or SW-SM | A-2 or A-1 | 10 - 40 | 35 - 70 | 25 - 60 | 15 - 45 | 5 - 35 | 2.0 ->6.0 |
| ML,CL,or CL-ML | A-4 or A-6 | | 95 - 100 | 80 - 10 | 80 - 100 | 75 - 95 | 0.6 - 0.20 |
| ML, CL, CL-ML, MH, CH, or MH-CH | A-6 or A-7 | 0 - 5 | 75 - 100 | 70 - 100 | 70 - 95 | 55 - 85 | 0.6 - 2.0 |
| ML, CL, CL-ML, MH, CH, or MH-CH | A-6 or A-7 | 0 - 5 | 85 - 100 | 70 - 95 | 65 - 95 | 60 - 85 | 0.6 - 2.0 |
| GM,GC,SM,SC,ML, or CL | A-4 or A-6 | 5 - 25 | 65 - 90 | 55 - 80 | 50 - 80 | 35 - 70 | 0.6 - 6.0 |
| GM,GC,GM-GC,SM,SC, or SM-SC | A-2,A-1,A-4, or A-6 | 5 - 10 | 70 - 95 | 60 - 85 | 40 - 75 | 20 - 45 | 0.6 - 2.0 |
| GM,GC,GM-GC,SM,SC, or SM-SC | A-1, A-2, A-4, or A-6 | 5 - 40 | 60 - 85 | 45 - 80 | 40 - 60 | 15 - 40 | 0.2 - 0.6 |
| ML,CL,GM,GC,SM, or SC | A-4 | 0 - 10 | 65 - 95 | 60 - 90 | 55 - 85 | 45 - 80 | 2.0 - 6.0 |
| ML, CL, GM, GC, SM, or SC | A-4 or A-6 | 0 - 10 | 60 - 90 | 50 - 85 | 45 - 80 | 40 - 70 | 2.0 - 6.0 |
| GM, GC, GC-GM, SM, SC, or SM-SC | A-2, A-1, or A-4 | 0 - 20 | 30 - 70 | 20 - 65 | 15 - 55 | 15 -40 | 2.0 - 6.0 |
| SM, SW-SM,GM, or GW-GM | A-1, A-2, or A-3 | 35 - 50 | 45 - 85 | 35 - 70 | 20 - 55 | 5 - 20 | 2.0 - 6.0 |
| SM, SW-SM,GM, or GW-GM | A-1, A-2, or A-3 | 35 - 50 | 45 - 85 | 35 - 70 | 20 - 55 | 5 - 20 | 2.0 - 6.0 |
| GW,GM,GW-GM,SW,SM, or SW-SM | A-1 | 30 - 40 | 45 - 60 | 35 - 50 | 20 - 35 | 2 - 15 | >6.0 |
| | | | | | | | |
| SM or SW-SM | A-2 | 0 - 10 | 90 - 100 | 80 - 100 | 65 - 100 | 10 - 35 | >6.0 |
| SM or SW-SM | A-2 | 0 - 30 | 90 - 100` | 70 - 100 | 65 - 100 | 10 - 25 | >6.0 |
| ML, CL, or CL-ML | A-4, A_6, A-7, or A-5 | | 100 | 95 - 100 | 90 - 100 | 70 - 95 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-4, A_6, A-7, or A-5 | | 100 | 95 - 100 | 85 - 100 | 60 - 95 | 0.6 - 2.0 |
| ML, CL, CL-ML, SM, SC, or SM-SC | A-4, A-6, A-2, or A-7 | | 95 - 100 | 85 - 100 | 60 - 95 | 30 - 95 | 0.6 - 6.0 |
| ML, CL, or CL-ML | A-4 or A-6 | | 90 - 100 | 60 - 100 | 60 - 100 | 55 - 95 | 0.6 - 2.0 |
| GM,GC,GM-GC, SM,SC, or SM-SC | A-2, A-1, A-4, or A-6 | 0 - 10 | 35 - 75 | 25 - 55 | 20 - 50 | 15 - 45 | 0.06 - 0.2 |
| | | | | | | | |
| ML, CL, or CL-ML | A-4 | 0 - 10 | 80 - 100 | 75 - 95 | 70 - 85 | 55 - 70 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-4 or A-6 | 0 - 15 | 65 - 100 | 65 - 95 | 60 - 90 | 55 - 70 | 0.6 - 2.0 |
| GM, GC, SM, SC, ML, or CL | A-4 or A-2 | 0 - 40 | 45 - 95 | 40 - 90 | 35 - 85 | 30 - 65 | 0.2 - 0.6 |
| ML, CL, or CL-ML | A-4 or A-6 | | 95 -100 | 90 - 100 | 80 - 100 | 65 - 95 | 0.6 - 2.0 |

*An asterisk in the first column indicates that at least one mapping unit of that series is made up of two or more kinds of soil.

**Table 7. Estimated soil properties significant to engineering**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ML, CL, or CL-ML | A-4 or A-6 | | 85 - 100 | 80 - 100 | 70 - 100 | 60 - 95 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-4 or A-6 | | 85 - 100 | 70 - 100 | 70 - 100 | 65 - 100 | 0.6 - 6.0 |
| ML,CL,CL-ML, MH, CH, or MH-CH | A-6,A-7,A-4, or A-5 | | 75 - 100 | 65 - 100 | 65 - 100 | 60 - 100 | 0.6 - 2.0 |
| ML,CL,CL-ML, MH, CH, or MH-CH,SC | A-6,A-7,A-5, or A-4 | | 70 - 100 | 50 - 100 | 50 - 100 | 45 - 100 | 0.6 - 2.0 |
| | | | | | | | |
| ML,CL,or CL-ML | A-4, A-6, A-5, or A-7 | 0 - 5 | 90 - 100 | 85 - 100 | 75 - 100 | 60 - 90 | 0.6 - 2.0 |
| ML,CL,or CL-ML | A-4, A-6, A-7, or A-5 | 0 - 10 | 90 - 100 | 85 - 100 | 80 - 100 | 70 - 90 | 0.6 - 2.0 |
| ML, CL, CL-ML, SM, SC, or SM-SC | A-4, A-6, A-7, or A-5 | 0 - 10 | 80 - 100 | 70 - 100 | 65 - 90 | 45 - 85 | 0.2 - 0.6 |
| SM,SM-SC,ML, CL, or CL-ML | A-2 or A-4 | 0 - 5 | 95 - 100 | 90 - 100 | 60 - 80 | 25 - 55 | 2.0 - 6.0 |
| SM,SM-SC,ML, CL, or CL-ML | A-2 or A-4 | 0 - 10 | 80 - 100 | 70 - 100 | 55 - 80 | 25 - 55 | 2.0 - 6.0 |
| SM, SC, or SM-SC | A-2 or A-4 | 0 - 15 | 80 - 100 | 70 - 100 | 55 - 80 | 10 - 45 | 2.0 - 6.0 |
| ML, CL, GM, GC, SM, or SC | A-4 or A-6 | 0 - 5 | 60 - 80 | 55 - 70 | 40 - 65 | 40 - 65 | 0.6 - 2.0 |
| ML,CL, CL-ML,MH,CH, or MH-Ch | A-4 or A-6 | 0 - 15 | 65 - 85 | 60 - 80 | 55 - 75 | 50 - 65 | 0.6 - 2.0 |
| CH, MH, MH-CH,ML,CL, or CL-ML | A-4,A-5,A-6, or A-7 | | 95 - 100 | 95 - 100 | 60 - 100 | 60 - 100 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-4 or A-6 | | 100 | 95 - 100 | 90 - 100 | 80 - 100 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-4 or A-6 | | 100 | 95 - 100 | 85 - 100 | 75 - 100 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-6, A-4, A-7, or A-5 | 0 - 5 | 85 - 100 | 80 - 100 | 80 - 100 | 75 - 90 | 0.6 - 2.0 |
| Ch, MH, MH-CH, CL, or CL-ML | A-7 or A-6 | 0 - 10 | 80 -10 | 70 - 100 | 70 - 100 | 65 - 95 | 0.6 - 2.0 |
| | | | | | | | |
| ML,CL, or CL-ML | A-4 | 0 - 10 | 95 - 100 | 80 - 100 | 70 - 90 | 55 - 80 | 0.6 - 2.0 |
| ML,CL,CL-ML,SM,SC, or SM-SC | A-4 | 0 - 10 | 95 - 100 | 80 - 100 | 70 - 90 | 45 - 80 | 0.6 - 2.0 |
| ML,CL,SM,SC,GM, or GC | A-2 or A-4 | 0 - 10 | 60 - 95 | 50 - 90 | 40 - 80 | 30 - 75 | 2.0 - 6.0 |
| ML or CL-ML | A-4 | 0 - 5 | 85 - 100 | 80 - 100 | 65 - 85 | 50 - 65 | 2.0 - 6.0 |
| ML, CL-ML, SM, or SM-SC | A-4 | 0 - 5 | 75 - 100 | 60 - 10 | 55 - 80 | 40 - 60 | 2.0 - 6.0 |
| SM, SM-SC, GM, or GM-GC | A-2, A-1, or A-4 | 0 - 5 | 50 - 80 | 45 - 75 | 35 - 55 | 20 - 45 | 2.0 - 6.0 |
| ML, CL, or CL-ML | A-4,A-5,A-6, or A-7 | | 95 - 100 | 90 - 100 | 90 - 100 | 90 - 100 | 0.6 - 2.0 |
| CL, ML, or CL-ML | A-4, A-6, A-7, or A-5 | | 95 - 100 | 90 - 100 | 85 - 100 | 75 - 95 | 0.06 - 0.2 |
| ML, CL, or CL-ML | A-4, A-6, A-5, or A-7 | 0 - 10 | 95 - 100 | 90 - 100 | 85 - 95 | 70 - 95 | 0.06 - 0.2 |
| ML,CL,or CL-ML | A-4 or A-6 | 0 - 5 | 85 - 100 | 80 - 90 | 70 - 85 | 60 - 80 | 0.6 - 2.0 |
| ML,CL,GM,GC,SM, or SC | A-4,A-6, or A-7 | 0 - 10 | 60 - 95 | 50 - 85 | 40 - 85 | 35 - 60 | 0.6 - 2.0 |
| GM, GC, SM, SC, ML, or CL | A-2,A-4,A-1, or A-6 | 0 - 50 | 40 - 90 | 30 - 80 | 30 - 70 | 20 - 60 | 0.6 - 2.0 |
| | | | | | | | |
| ML, CL, or CL-ML | A-4 | | 95 - 100 | 90 - 100 | 90 - 100 | 85 - 100 | 0.6 - 2.0 |
| ML, CL, or CL-ML | A-6,A-7,A-4, or A-5 | | 95 - 100 | 90 - 100 | 85 - 100 | 75 - 90 | 0.06 - 0.2 |
| ML,CL,CL-ML,SM,SC, or SM-SC | A-4,A-6,A-7, or A-5 | | 90 - 100 | 85 - 100 | 75 - 95 | 45 - 80 | 0.06 - 2.0 |
| SM,SC,GM,GC,ML, or CL | A-4 or A-2 | 0 - 10 | 65 - 95 | 60 - 90 | 45 - 70 | 30 - 55 | 0.6 - 2.0 |
| SM,SC,GM,GC,ML, or CL | A-2 or A-4 | 0 - 10 | 60 - 95 | 55 - 90 | 40 - 70 | 25 - 55 | 0.6 - 2.0 |
| GM,GC,GM-GC,SM,SC, or SM-SC | A-1 or A-2 | 0 - 15 | 55 - 85 | 25 - 50 | 20 - 40 | 15 - 30 | 2.0 - 6.0 |
| | | | | | | | |
| SM | A-2 or A-1 | 0 - 5 | 65 - 100 | 45 - 95 | 25 - 55 | 15 - 25 | >6.0 |
| SM, SW, SW-SM,GM, or GW-GM | A-2,A-3,or A-1 | 0 - 10 | 45 - 100 | 25 - 100 | 15 - 75 | 2 - 30 | >6.0 |
| GM,GC,SM,SC,ML, or CL | A-1, A-2, or A-4 | 0 - 10 | 40 - 70 | 35 - 70 | 25 - 65 | 20 - 55 | 2.0 - 6.0 |
| GM,GC,GW-GM,SM,SC, or SW-SM | A-1 or A-2 | 0 - 20 | 15 - 60 | 10 - 45 | 5 - 35 | 5 - 35 | 2.0 - 6.0 |
| | | | | | | | |
| ML,CL,or CL-ML | A-4,A-6,A-7, or A-5 | 0 - 5 | 95 - 100 | 90 - 100 | 80 - 95 | 70 - 95 | 0.6 - 2.0 |
| ML,CL,CL-ML, or MH-CH | A-7,A-6,A-4, or A-5 | 0 - 10 | 80 - 100 | 75 - 100 | 70 - 95 | 60 - 90 | 0.2 - 0.6 |
| ML,CL,GM,GC,SM, or SC | A-4,A-6,A-7,or A-5 | 0 - 20 | 60 - 100 | 50 - 100 | 45 - 95 | 40 - 90 | 0.2 - 0.6 |

*An asterisk in the first column indicates that at least one mapping unit of that series is made up of two or more kinds of soil.

**Table 7. Estimated soil properties significant to engineering**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SM, SW-SM,GM, or GW-GM | A-1 or A-2 | 0 - 10 | 40 - 80 | 30 - 60 | 10 - 50 | 10 - 35 | >6.0 |
| SM,SW-SM,GM, or GW-GM | A-1 or A-2 | 0 - 20 | 40 - 65 | 25 - 60 | 5 - 50 | 5 - 20 | >6.0 |

*An asterisk in the first column indicates that at least one mapping unit of that series is made up of two or more kinds of soil.

**Table 7. Estimated soil properties significant to engineering**

| Available Water Capacity | Reaction | Optimum Moisture for Compaction | Maximum Dry Density | Shrink swell potential | Corrosivity Uncoated steel | Corrosivity Concrete |
|---|---|---|---|---|---|---|
| 0.16 - 0.20 | 4.0 - 5.5 | | | Low | High | High |
| 0.09 - 0.14 | 4.0 - 5.5 | 12 - 19 | 101 - 118 | Low | High | High |
| 0.06 - 0.10 | 4.5 - 6.5 | 10 - 16 | 110 - 124 | Low | High | High |
| 0.15 - 0.22 | 4.0 - 5.5 | | | Low | High | High |
| 0.13 - 0.18 | 4.0 - 5.5 | 10 - 16 | 110 - 124 | Low | Moderate | High |
| 0.10 - 0.17 | 4.0 - 5.5 | 8 - 14 | 114 - 128 | Low | Low | High |
| 0.12 - 0.20 | 4.5 - 5.5 | | | Low | High | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 12 - 18 | 106 - 120 | Low | High | High |
| 0.06 - 0.10 | 4.5 - 5.5 | 10 - 15 | 112 - 124 | Low | High | High |
| 0.18 - 0.22 | 4.5 - 5.5 | | | Low | High | High |
| 0.10 - 0.14 | 4.5 - 5.5 | 14 - 20 | 102 - 115 | Moderate | High | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 14 - 20 | 102 - 115 | Moderate | High | High |
| | | | | | | |
| 0.14 - 0.22 | 4.5 - 5.5 | | | Low | High | High |
| 0.14 - 0.18 | 4.5 - 5.5 | 12 - 18 | 106 - 118 | Low | High | High |
| 0.08 - 0.18 | 4.5 - 5.5 | 10 -15 | 112 - 124 | Low | High | High |
| 0.14 - 0.18 | 4.5 - 6.0 | 12 - 17 | 106 - 118 | Low | Moderate | Moderate |
| 0.10 - 0.12 | 5.1 - 6.0 | 10 - 16 | 110 - 124 | Low | Moderate | Moderate |
| 0.08 - 0.12 | 4.5 - 5.5 | | | Low | Low | High |
| 0.04 - 0.08 | 4.5 - 5.5 | 9 - 15 | 112 - 125 | Low | Low | High |
| | | | | | | |
| 0.18 -0.24 | 4.5 - 6.0 | | | Moderate | High | Moderate |
| 0.14 - 0.18 | 4.5 - 6.0 | 14 - 20 | 102 - 115 | Moderate | High | Moderate |
| 0.08 - 0.12 | 4.5 - 6.0 | 12 - 17 | 106 - 118 | Moderate | High | Moderate |
| 0.18 - 0.24 | 4.0 - 5.5 | | | Low | Moderate | High |
| 0.12 - 0.18 | 4.0 - 5.5 | 12 -16 | 110 - 120 | Low | Moderate | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 10 - 14 | 114 - 124 | Low | Moderate | High |
| 0.10 - 0.14 | 4.5 - 5.5 | | | Low | Low | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 10 - 16 | 110 - 124 | Low | Low | High |
| 0.06 - 0.10 | 4.5 - 5.5 | 10 - 15 | 110 - 125 | Low | Low | High |
| | | | | | | |
| 0.20 - 0.30 | 4.5 - 5.5 | | | High | High | High |
| 0.10 - 0.14 | 4.5 - 6.5 | 12 - 18 | 106 - 118 | Low | High | Moderate |
| 0.18 - 0.22 | 4.5 - 5.5 | | | Low | High | High |
| 0.10 - 0.14 | 4.5 - 5.5 | 15 - 20 | 100 - 112 | Moderate | High | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 12 - 18 | 106 - 118 | Moderate | High | High |
| | | | | | | |
| 0.15 - 0.19 | 5.6 - 7.3 | | | Low | Low | Low |
| 0.13 - 0.17 | 5.6 - 7.3 | 10 - 16 | 110 - 120 | Low | Low | Low |
| 0.10 - 0.16 | 5.6 - 7.3 | 9 - 14 | 114 - 125 | Low | Low | Low |
| 0.14 - 0.20 | 5.1 - 6.5 | | | Low | Moderate | Moderate |
| 0.12 - 0.18 | 5.1 - 6.5 | 18 - 24 | 95 - 107 | Moderate | High | Moderate |
| 0.06 - 0.12 | 5.1 - 6.5 | 14 - 19 | 105 - 115 | Moderate | High | Moderate |
| 0.08 - 0.12 | 4.5 - 5.5 | 12 - 17 | 106 12- | Moderate | High | High |
| 0.10 - 0.16 | 4.0 - 5.5 | | | Low | Low | High |

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**Table 7. Estimated soil properties significant to engineering**

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.10 - 0.12 | 4.9 - 5.5 | 9 - 14 | 114 - 125 | Low | Low | High |
| 0.04 - 0.08 | 4.0 - 5.5 | 8 - 12 | 118 - 128 | Low | Low | High |
| 0.10 - 0.12 | 4.0 - 5.5 | | | Low | Low | High |
| 0.04 - 0.08 | 4.0 - 5.5 | 8 - 12 | 118 - 125 | Low | Low | High |
| | | | | | | |
| 0.19 - 0.23 | 5.6 - 7.8 | | | Moderate | High | Moderate |
| 0.14 - 0.18 | 5.6 - 7.8 | 15 - 23 | 97 - 112 | Moderate | High | Moderate |
| 0.14 - 0.20 | 5.1 - 7.8 | | | Low | Moderate | Low |
| 0.10 - 0.14 | 5.1 - 7.8 | 22 - 28 | 90 - 104 | Moderate | High | Low |
| 0.04 - 0.08 | 5.6 - 7.8 | 15 - 22 | 98 - 112 | Moderate | High | Low |
| 0.14 - 0.20 | 4.5 - 5.5 | | | Low | Moderate | High |
| 0.12 - 0.16 | 4.5 - 5.5 | 14 - 19 | 105 - 114 | Moderate | High | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 12 - 17 | 10 - 120 | Moderate | High | High |
| 0.12 - 0.18 | 4.0 - 5.5 | | | Low | Low | High |
| 0.10 - 0.16 | 4.0 - 5.5 | 12 - 17 | 106 - 118 | Low | Low | High |
| 0.06 - 0.10 | 4.0 - 5.5 | 11 - 15 | 112 - 122 | Low | Low | High |
| | | | | | | |
| 0.16 - 0.20 | 5.1 - 7.3 | | | Low | Moderate | Low |
| 0.12 - 0.14 | 5.1 - 7.3 | 18 - 26 | 90 - 107 | Moderate | High | Low |
| 0.10 - 0.14 | 5.1 - 7.3 | 18 - 26 | 90 - 107 | Moderate | High | Low |
| | | | | | | |
| 0.10 - 0.16 | 4.0 - 5.5 | | | Low | Low | High |
| 0.06 - 0.10 | 4.0 - 5.5 | 8 - 12 | 118 - 128 | Low | Low | High |
| 0.04 - 0.08 | 4.0 - 5.5 | 8 - 12 | 118 - 128 | Low | Low | High |
| 0.16 - 0.20 | 5.1 - 6.5 | | | Low | Moderate | Moderate |
| 0.12 - 0.16 | 5.1 - 6.5 | 16 - 24 | 95 - 112 | Moderate | High | Moderate |
| 0.12 - 0.16 | 5.1 - 6.5 | 17 - 25 | 93 - 110 | Moderate | High | Moderate |
| 0.08 - 0.12 | 4.5 - 5.5 | | | Low | Moderate | High |
| 0.09 - 0.12 | 4.5 - 5.5 | 12 - 18 | 106 - 120 | Low | Moderate | High |
| 0.06 -0.10 | 4.5 - 5.5 | 12 - 18 | 106 - 120 | Low | Moderate | High |
| 0.14 - 0.20 | 4.5 - 6.0 | | | Low | Low | Moderate |
| 0.12 - 0.16 | 4.5 - 6.0 | 11 - 16 | 110 - 112 | Low | Low | Moderate |
| 0.04 - 0.08 | 4.5 - 6.0 | 9 - 14 | 114 - 126 | Low | Low | Moderate |
| 0.03 - 0.05 | 4.0 - 5.0 | | | Low | Moderate | High |
| 0.03 - 0.05 | 4.0 - 5.0 | 8 - 13 | 114 - 128 | Low | Low | High |
| 0.02 - 0.03 | 4.0 - 5.0 | 8 - 12 | 116 - 128 | Low | Low | High |
| | | | | | | |
| 0.02 - 0.05 | 4.0 - 5.0 | | | Low | Low | High |
| 0.02 - 0.03 | 4.0 - 5.0 | 8 - 12 | 112 - 128 | Low | Low | High |
| 0.18 - 0.26 | 5.6 - 6.5 | | | Low | Moderate | Moderate |
| 0.18 - 0.22 | 5.6 - 6.5 | 14 - 18 | 106 - 114 | Low | High | Moderate |
| 0.12 - 0.18 | 5.6 - 6.5 | 12 - 16 | 110 - 118 | Low | Moderate | Moderate |
| 0.14 - 0.18 | 4.5 - 6.0 | | | Low | High | Moderate |
| 0.08 - 0.12 | 4.5 - 6.0 | 14 - 19 | 104 - 114 | Moderate | High | Moderate |
| | | | | | | |
| 0.14 - 0.18 | 4.0 - 5.0 | | | Low | Low | High |
| 0.12 - 0.14 | 4.0 - 5.0 | 12 - 18 | 106 - 118 | Low | Low | High |
| 0.08 - 0.12 | 4.0 - 5.0 | 11 - 16 | 110 - 122 | Low | Moderate | High |
| 0.18 - 0.23 | 6.1 - 7.8 | 16 - 20 | 100 - 110 | Low | High | |

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**Table 7. Estimated soil properties significant to engineering**

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.12 - 0.18 | 6.1 - 7.8 | 14 - 20 | 100 - 114 | Low | High | Low |
| 0.14 - 0.18 | 4.5 - 6.5 | | | Moderate | Moderate | Moderate |
| 0.08 - 0.12 | 4.5 - 7.3 | 20 - 28 | 90 - 102 | Moderate | High | Moderate |
| 0.06 - 0.12 | 5.6 - 7.3 | 20 - 30 | 88 - 102 | Moderate | High | Moderate |
| | | | | | | |
| 0.18 - 0.24 | 4.5 - 5.5 | | | Low | Moderate | High |
| 0.14 - 0.18 | 4.5 - 5.5 | 14 - 18 | 106 - 115 | Low | High | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 12 - 16 | 110 - 120 | Low | High | High |
| 0.12 - 0.16 | 4.0 - 5.5 | | | Low | Low | High |
| 0.08 - 0.10 | 4.0 - 6.0 | 10 - 15 | 112 - 124 | Low | Low | High |
| 0.06 - 0.10 | 5.1 - 6.0 | 9 - 13 | 115 - 126 | Low | Low | Moderate |
| 0.12 - 0.16 | 4.5 - 5.5 | | | Low | Moderate | High |
| 0.10 -0.14 | 4.5 - 5.5 | 13 - 19 | 104 - 115 | Low | Moderate | High |
| 0.08 - 0.12 | 4.5 - 5.5 | 18 - 26 | 88 - 106 | Low | High | High |
| 0.18 - 0.23 | 5.6 - 7.3 | | | Low | Low | Moderate |
| 0.18 - 0.23 | 5.6 - 7.3 | 15 - 20 | 100 - 115 | Low | Moderate | Moderate |
| 0.16 - 0.20 | 5.6 - 7.3 | | | Moderate | Moderate | Low |
| 0.12 - 0.16 | 5.6 - 7.3 | 16 - 25 | 88 - 112 | High | High | Low |
| | | | | | | |
| 0.12 - 0.20 | 4.5 - 6.0 | | | Low | Moderate | High |
| 0.12 - 0.20 | 4.5 - 6.0 | 10 - 16 | 110 - 124 | Low | Moderate | High |
| 0.06 - 0.10 | 4.5 - 6.0 | 8 - 12 | 115 - 125 | Low | Moderate | High |
| 0.12 - 0.16 | 4.0 - 5.5 | | | Low | Low | High |
| 0.12 - 0.16 | 4.0 - 5.5 | 10 - 14 | 110 - 120 | Low | Low | High |
| 0.06 - 0.10 | 4.0 - 5.5 | 8 - 12 | 118 - 128 | Low | Low | High |
| 0.18 - 0.24 | 4.0 - 5.5 | | | Moderate | High | High |
| 0.12 - 0.16 | 4.0 - 5.5 | 16 - 22 | 98 - 110 | Moderate | High | High |
| 0.10 - 0.14 | 4.0 - 5.5 | 14 - 20 | 100 - 114 | Moderate | High | High |
| 0.14 - 0.18 | 4.5 - 5.5 | | | Low | Low | High |
| 0.12 - 0.16 | 4.5 - 5.5 | 14 - 18 | 106 - 114 | Low | Moderate | High |
| 0.10 - 0.16 | 4.5 - 5.5 | 12 - 16 | 110 - 118 | Low | Low | High |
| | | | | | | |
| 0.18 - 0.22 | 4.0 - 5.5 | | | Low | High | High |
| 0.10 - 0.14 | 4.0 - 5.5 | 14 - 20 | 100 - 114 | Moderate | High | High |
| 0.10 - 0.14 | 4.0 - 5.5 | 12 - 16 | 106 - 118 | Moderate | High | High |
| 0.10 - 0.16 | 4.0 - 5.5 | | | Low | Low | High |
| 0.10 - 0.14 | 4.0 - 5.5 | 9 - 14 | 114 - 125 | Low | Moderate | High |
| 0.06 - 0.12 | 4.0 - 5.5 | 8 - 12 | 118 - 128 | Low | Low | High |
| | | | | | | |
| 0.08 - 0.12 | 4.5 - 6.0 | 8 - 13 | 114 - 128 | Low | Low | High |
| 0.06 - 0.10 | 4.5 - 6.0 | 8 - 13 | 114 - 128 | Low | Low | High |
| 0.08 - 0.14 | 4.5 - 5.5 | | | Low | Low | High |
| 0.04 - 0.08 | 4.5 - 5.5 | 10 - 14 | 114 - 124 | Low | Low | High |
| | | | | | | |
| 0.16 - 0.20 | 4.5 - 5.5 | | | Low | Moderate | High |
| 0.12 - 0.16 | 4.5 - 5.5 | 16 - 22 | 98 - 100 | Moderate | High | High |
| 0.08 - 0.12 | 4.0 - 5.0 | 14 - 18 | 106 - 114 | Moderate | High | High |

*An asterisk in the first column indicates that at least one mapping unit of that series is made up of two or more kinds of soil.

**Table 7. Estimated soil properties significant to engineering**

| | | | | | | |
|---|---|---|---|---|---|---|
| 0.06 - 0.10 | 4.0 - 6.0 | | | Low | Low | High |
| 0.04 - 0.06 | 4.0 - 6.0 | 8 - 12 | 118 - 128 | Low | Low | High |

*An asterisk in the first column indicates that at least one mapping unit of that series is made up of two or more kinds of soil.