

Soil Type	Depth Ranges		Total Unit Weight (kN / m <sup>3</sup> )	Undrained <sup>(3)</sup>		Drained <sup>(4)</sup>	
	Top of Stratum (m)	Bottom of Stratum (m)		Cohesion, C (kN / m <sup>2</sup> )	Friction Angle, $\phi$ (deg)	Cohesion, C (kN / m <sup>2</sup> )	Friction Angle, $\phi$ (deg)
Fill – Sandy Loam with Slag and Cinders	0	0.6 to 1.2	18.1	0	28	0	28
Soft to Medium Stiff Clay Loam	0.6 to 1.2	1.8 to 2.4 <sup>(1)</sup>	18.1	71.8	0	9.6	25
Stiff to Hard Clay Loam <sup>(2)</sup>	1.8 to 2.4 <sup>(1)</sup>	4.0 to 7.3	18.9	143.6	0	9.6	28
Stiff to Hard Clay <sup>(2)</sup>	2.4 to 4.0	3.7 to 7.3	18.9	119.7	0	9.6	25
Stiff to Hard Loam	4.9 to 7.3	9.1 to 12.2	20.4	191.5	0	4.8	32

Notes: (1) Medium stiff clay loam extends to a depth of 4.6 m below grade.

(2) Clay loam and clay strata are interbedded. See specific soil boring logs for details of stratifications at specific locations.

(3) Undrained strength parameters estimated from unconfined compression tests and calibrated penetrometer tests.

(4) Drained strength parameters estimated from approximate correlations with Plasticity Index.

### SOIL PARAMETERS FOR SOIL NAILED WALL DESIGN

Figure 68-6C