

Temporary Shoring 3 at FWD Abutment

Soil Properties Based off of Boring B-001-O-24

Top of Wall Elevation = 939.987 ft
 Bottom of Wall Elevation = 928 ft
 Water Table Elevation = 923.8 ft
 H (design) = 11.99 ft
 Su = psf (Conservative)
 Gamma = 125 pcf
 Backslope Angle = 0
 Piling Spacing S = 0 ft
 ka1 = 0.42173
 ka2 = 0.42173
 Water Density = 62.4 pcf
 Surcharge Load Equivalent Height = 2

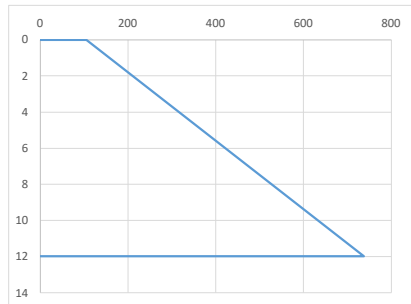
AASHTO LRFD Load Factors

Reference Tbl. 3.4.1-1 & 3.4.1-2

Limit State	EH	LL	WA
Service I	1.00	1.00	1.00
Strength I	1.50	1.75	1.00

Load Pressure Calculations

Limit State	Depth Below Head (ft)	EH	LL	WA	
Top of Wall	0.00	0.00	105.43	0.00	psf
Water Table	16.19	853.32	105.43	0.00	psf
Bottom of Wall	11.99	631.91	105.43	0.00	psf



PYWALL Unifromly Distributed Load (LL Surcharge) Inputs

Location	Service I Min (lbs/in)	Strength I Max (lbs/in)
Top of Wall	250.00	291.67
Bottom of Wall	250.00	291.67

Note: Pywall uses a active earth modification factor, for service case it is 1 but for strength case it is 1.5 and it multiplies surcharge load by 1.5 by default so to get around this in strength case surcharge load needs to be multiplied by 1.75/1.5.

SOIL LAYER SETUP FOR PYWALL

No	Type	Depth at Top of the Layer	Depth at Bottom of Layer	Friction angle ϕ	Unit Weight	Cohesive Strength	K (py) (pcf)	E50	Pressure coefficient
1	Stiff Clay W/O Free	0.19	6.19	24.00	124.00	750	80	0.015	0.421730222
2	Sand (Reese)	6.19	11.99	28.00	110.00	-	25	-	0.421730222
3	Sand (Reese)	11.99	24.38	28.00	110.00	-	25	-	-
5	Stiff Clay With Free Water	24.38	33.69	-	126.00	1500	350	0.010	-
7	Stiff Clay With Free Water	33.69	38.69	-	131.00	4500	1500	0.004	-

PYWALL results

SHEET PILE

SECTION = PZ 27
 Depth = 36 ft
 Service Level Deflection = 3.215 in
 Strength Level Deflection = 7.721 in

< OK 3.5961 in

Max Strength I Moment Above Excavation Line = 33.49167 kip-ft
 Max Strength I Moment Below Excavation Line = 124.1667 kip-ft
 Max Strength I Shear = 15.150 kips

< OK 169.88 k-ft
 < OK 169.88 k-ft
 < OK 87 kips (LRFD Section 6.10.9.2)