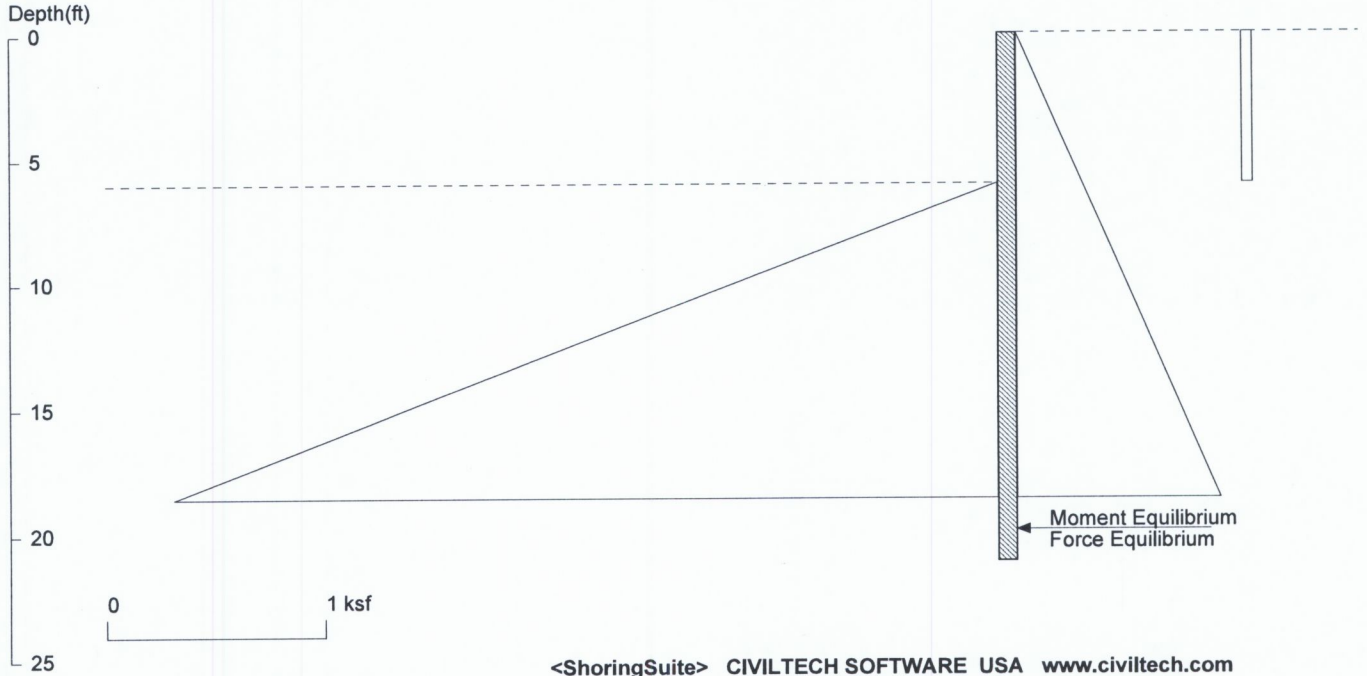


6800 - 96th Ave SE, MI

6-ft Permanent Soldier Pile Wall



Licensed to 4324324234 3424343 Date: 8/20/2018
 File: Z:\Projects\2017 Projects\17-014 6800 - 96th Avenue SE, MI\Report\6-ft Perm Driven Soldier Pile Wall.sh8
 Wall Height=6.0 Pile Diameter=0.7 Pile Spacing=6.0 Wall Type: 3. Soldier Pile, Driving

PILE LENGTH: Min. Embedment=15.05 Min. Pile Length=21.05 *USE 25'*
 MOMENT IN PILE: Max. Moment=49.79 per Pile Spacing=6.0 at Depth=12.79

PILE SELECTION:

Request Min. Section Modulus = 18.1 in³/pile=296.70 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66
W8X35 has Section Modulus = 31.2 in³/pile=511.27 cm³/pile. It is greater than Min. Requirements!
 Top Deflection = 0.79(in) based on E (ksi)=29000.00 and I (in⁴)/pile=127.0

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

Z1	P1	Z2	P2	Slope
0	0	6	0.300	0.05
6	0.3	99	4.950	0.05
0	0.048	6	0.048	0

Active Pressure
seismic Pressure

PASSIVE PRESSURES:

Z1	P1	Z2	P2	Slope
6	0	99	27.900	0.3

ACTIVE SPACING:

No.	Z depth	Spacing
1	0.00	<u>6.00</u>
2	6.00	0.67

6-ft Spacing

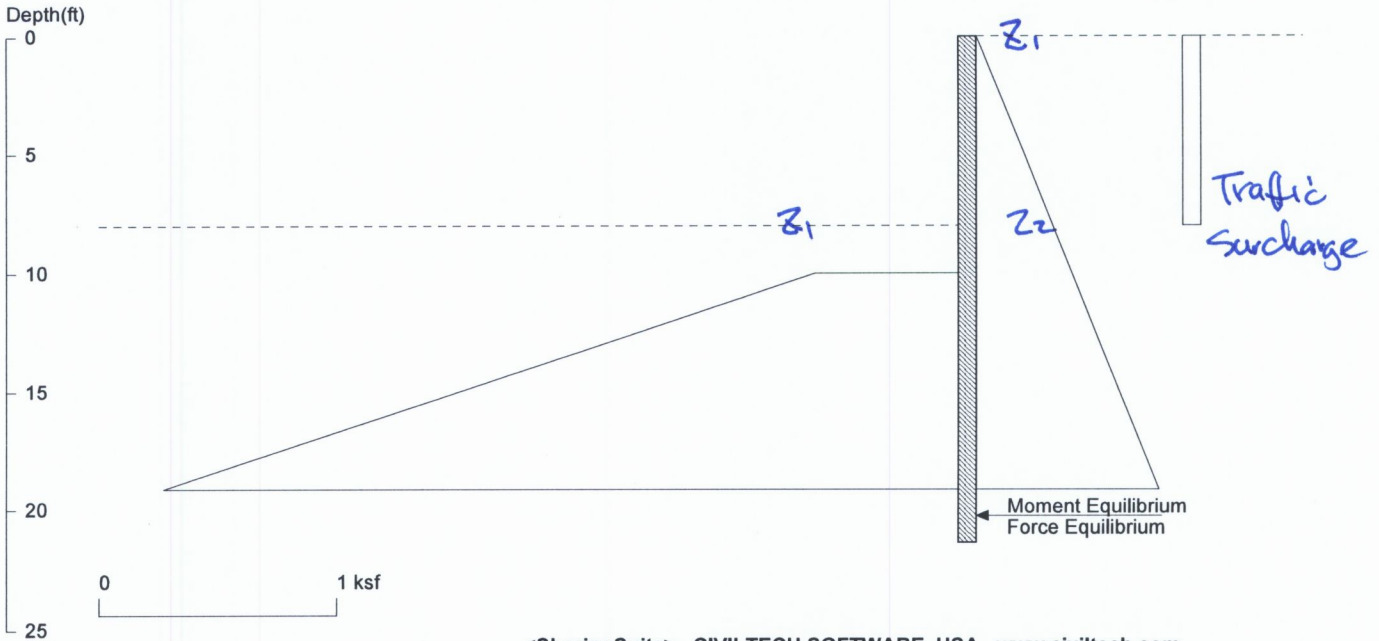
PASSIVE SPACING:

No.	Z depth	Spacing
1	6.00	1.34 → <i>2D</i>

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

6800 - 96th Ave SE, MI

8-ft Perm Soldier Pile Wall - Static



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 File: C:\Temp\17-014 6800 - 96th Avenue SE, MI\Shoring Design\8-ft Perm Driven Soldier Pile Wall - Seismic.sh8

Wall Height=8.0 Pile Diameter=0.7 Pile Spacing=4.0 Wall Type: 3. Soldier Pile, Driving

PILE LENGTH: Min. Embedment=13.34 Min. Pile Length=21.34 use 25'
 MOMENT IN PILE: Max. Moment=57.14 per Pile Spacing=4.0 at Depth=13.89

PILE SELECTION:
 Request Min. Section Modulus = 20.8 in³/pile=340.48 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66
 W8X35 has Section Modulus = 31.2 in³/pile=511.27 cm³/pile. It is greater than Min. Requirements!
 Top Deflection = 1.05(in) based on E (ksi)=29000.00 and I (in⁴)/pile=127.0

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

Z1	P1	Z2	P2	Slope
0	0	8	0.320	0.04
8	0.32	99	3.960	0.04
0	0.075	8	0.075	0

} Active Earth Pressure
 → Traffic Surcharge

PASSIVE PRESSURES:

Z1	P1	Z2	P2	Slope
10	0.6	99	27.300	0.3

→ Passive Pressure

ACTIVE SPACING:

No.	Z depth	Spacing
1	0.00	4.00
2	8.00	0.67

→ 4' OC spacings

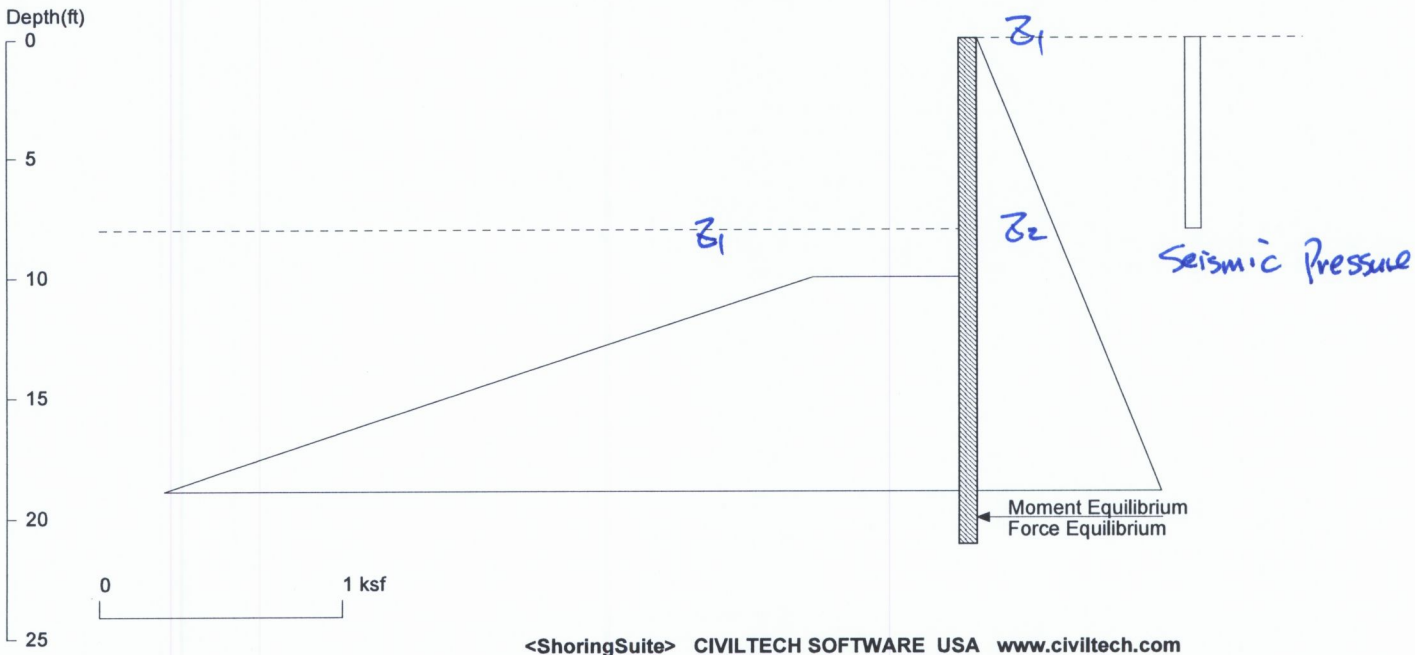
PASSIVE SPACING:

No.	Z depth	Spacing
1	8.00	2.01

→ 3D

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in

6800 - 96th Ave SE, MI 8-ft Perm Soldier Pile Wall - Seismic



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Licensed to 4324324234 3424343 Date: 8/22/2018
 File: Z:\Projects\2017 Projects\17-014 6800 - 96th Avenue SE, MI\Shoring Design\8-ft Perm Driven Soldier Pile Wall - Seisi
 Wall Height=8.0 Pile Diameter=0.7 Pile Spacing=4.0 Wall Type: 3. Soldier Pile, Driving

PILE LENGTH: Min. Embedment=13.07 Min. Pile Length=21.07 *USE 25'*
 MOMENT IN PILE: Max. Moment=53.68 per Pile Spacing=4.0 at Depth=13.77

PILE SELECTION:
 Request Min. Section Modulus = 19.5 in³/pile=319.85 cm³/pile, Fy= 50 ksi = 345 MPa, Fb/Fy=0.66
 W8X35 has Section Modulus = 31.2 in³/pile=511.27 cm³/pile. It is greater than Min. Requirements!
 Top Deflection = 0.97(in) based on E (ksi)=29000.00 and I (in⁴)/pile=127.0

DRIVING PRESSURES (ACTIVE, WATER, & SURCHARGE):

Z1	P1	Z2	P2	Slope
0	0	8	0.320	0.04 } Active Earth Pressure
8	0.32	99	3.960	0.04
0	0.064	8	0.064	0 → seismic Pressure

PASSIVE PRESSURES:

Z1	P1	Z2	P2	Slope
10	0.6	99	27.30	0.3 → Passive Pressure

ACTIVE SPACING:

No.	Z depth	Spacing
1	0.00	4.00 → 4' OC spacing
2	8.00	0.67

PASSIVE SPACING:

No.	Z depth	Spacing
1	8.00	2.01 → 3D

UNITS: Width, Spacing, Diameter, Length, and Depth - ft; Force - kip; Moment - kip-ft
 Friction, Bearing, and Pressure - ksf; Pres. Slope - kip/ft³; Deflection - in