

Name	F _{hor} [lbf/ft]	App.Pt. z [ft]	F _{vert} [lbf/ft]	App.Pt. x [ft]	Design coefficient
Earthquake - soil wedge	22.6	-2.26	0.0	4.05	1.000
Weight - earth wedge	0.0	-6.48	77.7	3.20	1.000
Earthquake - soil wedge	8.5	-6.48	0.0	3.20	1.000
Weight - earth wedge	0.0	-9.11	4.0	2.88	1.000
Earthquake - soil wedge	0.4	-9.11	0.0	2.88	1.000
Earthquake - soil wedge	0.0	-10.50	0.0	2.81	1.000
Active pressure	1866.0	-3.30	1899.4	4.16	1.000
Earthq.- act.pressure	501.3	-6.97	405.0	3.47	1.000
Roadway	203.1	-3.51	153.2	4.09	1.000

Verification of block No. 1

Check for overturning stability

Resisting moment $M_{res} = 18983.4$ lbfft/ft

Overturning moment $M_{ovr} = 12405.1$ lbfft/ft

Safety factor = 1.53 > 1.00

Joint for overturning stability is SATISFACTORY

Check for slip

Resisting horizontal force $H_{res} = 3830.71$ lbf/ft

Active horizontal force $H_{act} = 3014.54$ lbf/ft

Safety factor = 1.27 > 1.00

Joint for verification is SATISFACTORY

Bearing capacity of foundation soil (Stage of construction 2)

Design load acting at the center of footing bottom

No.	Moment [lbfft/ft]	Norm. force [lbf/ft]	Shear Force [lbf/ft]	Eccentricity [-]	Stress [psf]
1	11667.8	8187.68	3436.62	0.238	2599.3

Service load acting at the center of footing bottom

No.	Moment [lbfft/ft]	Norm. force [lbf/ft]	Shear Force [lbf/ft]
1	11667.8	8187.68	3436.62

Verification of foundation soil

Stress in the footing bottom : rectangle

Eccentricity verification

Max. eccentricity of normal force $e = 0.238$

Maximum allowable eccentricity $e_{alw} = 0.333$

Eccentricity of the normal force is SATISFACTORY

Verification of bearing capacity

Max. stress at footing bottom $\sigma = 2599.3$ psf

Bearing capacity of foundation soil $R_d = 6000.0$ psf

Safety factor = 2.31 > 1.00