Terrain profile

Terrain behind construction has the slope 1: 4.01 (slope angle is 14.00 °).
Embankment height is 0.75 ft, embankment length is 3.00 ft.

Water influence

Ground water table is located below the structure.

Input surface surcharges

No.	Surcharge new	Surcharge change	Action	Mag.1 [lbf/ft²]	Mag.2 [lbf/ft²]	Ord.x x [ft]	Length l [ft]	Depth z [ft]
1	Yes		permanent	125.00		5.00	30.00	on terrain

No.	Name
1	Parking Lot

Resistance on front face of the structure

Resistance on front face of the structure: at rest
Soil on front face of the structure - Lean Clay
Soil thickness in front of structure h = 2.30 ft
Soil slope in front of structure β = -18.40 °

Settings of the stage of construction

Design situation : permanent
Reduction of soil/soil friction angle : do not reduce

Verification No. 1 (Stage of construction 1)

Forces acting on construction

Name	F_{hor} [lbf/ft]	App.Pt. z [ft]	F_{vert} [lbf/ft]	App.Pt. x [ft]	Design coefficient
Weight - wall	0.0	-3.18	3530.6	2.57	1.000
FF resistance	-138.4	-0.77	0.2	-0.25	1.000
Weight - earth wedge	0.0	-1.31	28.2	5.67	1.000
Weight - earth wedge	0.0	-4.13	451.6	4.10	1.000
Weight - earth wedge	0.0	-8.40	132.9	2.43	1.000
Active pressure	1516.7	-2.96	1760.6	4.97	1.000
Parking Lot	173.8	-3.26	181.0	4.77	1.000

Verification of complete wall

Check for overturning stability
Resisting moment M_{res} = 21030.9 lbfft/ft
Overturning moment M_{ovr} = 4956.5 lbfft/ft

Safety factor = 4.24 > 1.50
Wall for overturning is SATISFACTORY

Check for slip
Resisting horizontal force H_{res} = 3505.06 lbf/ft
Active horizontal force H_{act} = 1552.02 lbf/ft

Safety factor = 2.26 > 1.50
Wall for slip is SATISFACTORY

Overall check - WALL is SATISFACTORY