QuickWall 9.0 - RETAINING WALL ANALYSIS AND DESIGN

Job ID :
Job Description : Designed By :

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S U M M A R Y O F R E S U L T S
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DIMENSIONS:

Stem Height	= 14.00 ft.	Heel Length	= 6.00 ft.
Stem Thick. @ Top	= 12.00 in.	Toe Length	= 1.50 ft.
Stem Thick. @ Base	= 12.00 in.	Total Ftg. Width, B	= 8.50 ft.
Footing Thickness	= 14.00 in.	Key Depth	= 0.00 ft.
		Key Width	= 0.00 ft.

ANALYSIS RESULTS:

Max Brg Press. @ Toe	= 2,933 psf.	Sliding Force	= 5,447 Lb
@ Heel	= 703 psf.	Resisting Force	= 8,282 Lb
Allowable Brg. Press.	= 3,000 psf.	F.O.S.	= 1.52
Resultant Loc From C.L.	= 0.87 ft.	Overturn. Moment	= 29,009 ft-lb
Kern Point Loc., B/6	= 1.42 ft.	Resisting Moment	= 81,265 ft-lb
Limit Resultant To Mid 1/3?	= Yes	F.O.S.	= 2.80

DESIGN RESULTS: Design Method, Stem: USD, ACI 318-14 (Concrete)
Ftg.: Ultimate Strength ACI 318-14

	d (in.)	Mu (ft-k)	Vu (kip)	Phi Vn (kip)	As Flex. (in^2)	As Min. (in^2)	As T+S (in^2)
Stem :	9.50	36.97	7.49	10.81	0.932	0.380	0.496
Toe :	10.50	4.20	2.39	11.95	0.089	0.119	0.302
Heel :	11.50	36.81	6.14	13.09	0.747	0.460	0.302
Key :	0.00	0.00	0.00	0.00	0.000	0.000	0.000

Notes: 1. Stem moments are positive if they cause tension on the soil face.
Negative if they cause tension on the outside face.
Stem shear is positive to the left as measured on a section cut below the top of wall.

2. Heel moments are positive if they cause tension in the top of the footing. Heel shear is positive up as measured on a section cut to the right of the end of the heel.

3. Toe moments are positive if they cause tension in the bottom of the footing. Toe shear is positive up as measured on a section cut to the left of the end of the toe.