

# ReCon Series 50 Standard Design Charts

## Geogrid Reinforced Walls

- Assumes an allowable geogrid reinforcement design strength of 1550 lbs. / ft. Check with ReCon for Grid types that have been tested for pull-out connection.

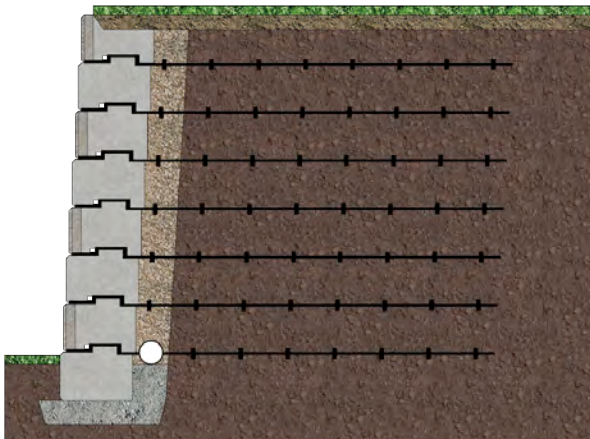
- 3.6° Batter
- No Slope
- No Surcharge

Geogrid Walls		Wall Elevation																	
Soil Phi Angle	Wall Height (ft.)		1.33'	2.67'	4.00'	5.33'	6.67'	8.00'	9.33'	10.67'	12.00'	13.33'	14.67'	16.00'	17.33'	18.66'			
26°	8.00	Grid Length	8'	n/a	8'	n/a	8'												
	9.33		n/a	9'	n/a	9'	n/a	9'											
	10.66		10'	n/a	10'	n/a	10'	n/a	10'										
	12.00		10'	10'	n/a	10'	n/a	10'	n/a	10'									
	13.33		11'	11'	11'	n/a	11'	n/a	11'	n/a	11'								
	14.66		12'	12'	12'	12'	n/a	12'	n/a	12'	n/a	12'							
	16.00		13'	13'	13'	13'	13'	n/a	13'	n/a	13'	n/a	13'						
	17.33		13'	13'	13'	13'	13'	13'	n/a	13'	n/a	13'	n/a	13'	n/a	13'			
	18.66		14'	14'	14'	14'	14'	14'	14'	n/a	14'	n/a	14'	n/a	14'	n/a	14'		
	20.00		15'	15'	15'	15'	15'	15'	15'	15'	15'	n/a	15'	n/a	15'	n/a	15'	n/a	15'
30°	8.00	Grid Length	7'	n/a	7'	n/a	7'												
	9.33		n/a	8'	n/a	8'	n/a	8'											
	10.66		8'	n/a	8'	n/a	8'	n/a	8'										
	12.00		n/a	9'	n/a	9'	n/a	9'	n/a	9'									
	13.33		10'	n/a	10'	n/a	10'	n/a	10'	n/a	10'								
	14.66		10'	10'	n/a	10'	n/a	10'	n/a	10'	n/a	10'							
	16.00		11'	11'	11'	n/a	11'	n/a	11'	n/a	11'	n/a	11'						
	17.33		12'	12'	12'	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'					
	18.66		13'	13'	13'	13'	13'	n/a	13'	n/a	13'	n/a	13'	n/a	13'	n/a	13'		
	20.00		13'	13'	13'	13'	13'	13'	n/a	13'	n/a	13'	n/a	13'	n/a	13'	n/a	13'	n/a
34°	8.00	Grid Length	6'	n/a	6'	n/a	6'												
	9.33		n/a	7'	n/a	7'	n/a	7'											
	10.66		8'	n/a	8'	n/a	8'	n/a	8'										
	12.00		n/a	8'	n/a	8'	n/a	8'	n/a	8'									
	13.33		9'	n/a	9'	n/a	9'	n/a	9'	n/a	9'								
	14.66		n/a	9'	n/a	9'	n/a	9'	n/a	9'	n/a	9'							
	16.00		10'	n/a	10'	n/a	10'	n/a	10'	n/a	10'	n/a	10'						
	17.33		n/a	11'	n/a	11'	n/a	11'	n/a	11'	n/a	11'	n/a	11'					
	18.66		12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'		
	20.00		12'	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a

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**Notes:**

- Minimum factors of safety for overturning, sliding and bearing are 1.5, 1.5 and 2.0 respectively. Global stability has not been addressed in this chart.
- The information in the above chart assumes that the soil phi angle is the same for both the foundation and the retained soils.
- Design as per NCMA standards / Design Manual for Segmental Retaining Walls (2nd Ed) with the exception that the soil pressure is derived using a Rankine Analysis.
- The information in the above chart assumes that the retained soil has a weight of 120 pcf.
- Installation shall follow ReCon Installation Instructions and any additional instruction or guidance provided as a part of the final engineered stamped and site specific plans.



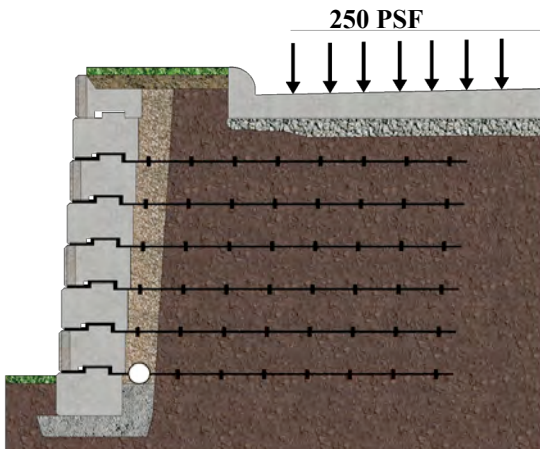
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## Geogrid Reinforced Walls

• Assumes an allowable geogrid reinforcement design strength of 1550 lbs. / ft. Check with ReCon for Grid types that have been tested for pull-out connection.

• 3.6° Batter  
• 250 PSF Surcharge  
(3' behind wall face)

Geogrid Walls		Wall Elevation																	
Soil Phi Angle	Wall Height (ft.)		1.33'	2.67'	4.00'	5.33'	6.67'	8.00'	9.33'	10.67'	12.00'	13.33'	14.67'	16.00'	17.33'	18.66'			
<b>26°</b>	8.00	Grid Length	10'	n/a	10'	n/a	10'												
	9.33		10'	10'	n/a	10'	n/a	10'											
	10.66		11'	11'	11'	n/a	11'	n/a	11'										
	12.00		12'	12'	12'	12'	n/a	12'	n/a	12'									
	13.33		13'	13'	13'	13'	13'	n/a	13'	n/a	13'								
	14.66		13'	13'	13'	13'	13'	13'	n/a	13'	n/a	13'							
	16.00		14'	14'	14'	14'	14'	14'	14'	n/a	14'	n/a	14'						
	17.33		15'	15'	15'	15'	15'	15'	15'	15'	n/a	15'	n/a	15'					
	18.66		16'	16'	16'	16'	16'	16'	16'	16'	16'	n/a	16'	n/a	16'				
	20.00		17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	17'	n/a	17'	n/a	17'	n/a	17'
<b>30°</b>	8.00	Grid Length	8'	n/a	8'	n/a	8'												
	9.33		n/a	8'	n/a	8'	n/a	8'											
	10.66		9'	n/a	9'	n/a	9'	n/a	9'										
	12.00		10'	10'	n/a	10'	n/a	10'	n/a	10'									
	13.33		11'	11'	11'	n/a	11'	n/a	11'	n/a	11'								
	14.66		11'	11'	11'	11'	n/a	11'	n/a	11'	n/a	11'							
	16.00		12'	12'	12'	12'	12'	n/a	12'	n/a	12'	n/a	12'						
	17.33		13'	13'	13'	13'	13'	13'	n/a	13'	n/a	13'	n/a	13'					
	18.66		13'	13'	13'	13'	13'	13'	13'	n/a	13'	n/a	13'	n/a	13'	n/a	13'		
	20.00		14'	14'	14'	14'	14'	14'	14'	14'	n/a	14'	n/a	14'	n/a	14'	n/a	14'	n/a
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**Notes:**

1. Minimum factors of safety for overturning, sliding and bearing are 1.5, 1.5 and 2.0 respectively. Global stability has not been addressed in this chart.
2. The information in the above chart assumes that the soil phi angle is the same for both the foundation and the retained soils.
3. Design as per NCMA standards / Design Manual for Segmental Retaining Walls (2nd Ed) with the exception that the soil pressure is derived using a Rankine Analysis.
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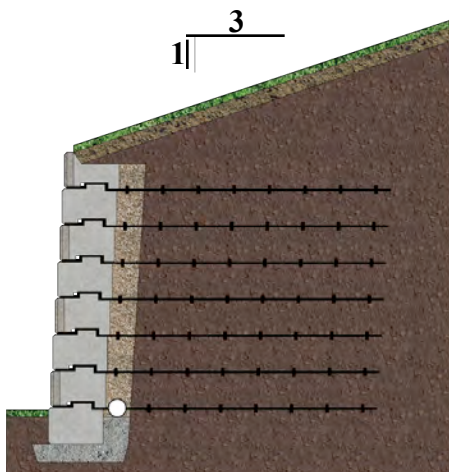
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- 3.6° Batter
- 3:1 Slope
- No Surcharge

Geogrid Walls		Wall Elevation																	
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	14.66		17'	17'	17'	17'	17'	17'	n/a	17'	n/a	17'							
	16.00		20'	20'	20'	20'	20'	20'	20'	n/a	20'	n/a	20'						
	17.33		22'	22'	22'	22'	22'	22'	22'	22'	n/a	22'	n/a	22'					
	18.66		25'	25'	25'	25'	25'	25'	25'	25'	25'	n/a	25'	n/a	25'				
	20.00		27'	27'	27'	27'	27'	27'	27'	27'	27'	27'	27'	27'	n/a	27'	n/a	27'	n/a
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	20.00		12'	12'	12'	12'	12'	12'	12'	12'	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'
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	18.66		12'	12'	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'				
	20.00		12'	12'	12'	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a	12'	n/a



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