

**CHART FOR MIRAFI MIRAGRID**

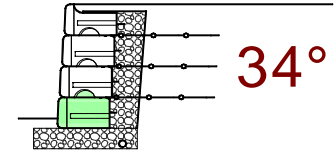
**18" HIGH BOTTOM BLOCK**

**Well Graded Sand, Sand and Gravel - Internal Angle of Friction ( $\phi$ ) = 34°**

**Load Condition A - No Back Slope, No Surcharge**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)														Est. Geogrid Qty. (Syd/Lf of Wall)							
			VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	3XT	2 <sup>nd</sup> Grid		
3' 0"	6"	6"	VP	None																	0.00	0.00		
4' 6"	6"	6"	VP	None																		0.00	0.00	
6' 0"	6"	6"	VP	1.5	3	4.5																1.28	0.00	
			GT	3XT	3XT	3XT																		
			L	5	5	6																		
7' 6"	6"	6"	VP	1.5	3	4.5	6															1.89	0.00	
			GT	3XT	3XT	3XT	3XT																	
			L	5	5	6	7																	
9' 0"	6"	1' 0"	VP	1.5	3	4.5	6	7.5															2.83	0.00
			GT	3XT	3XT	3XT	3XT	3XT																
			L	6	6	6	7	8																
10' 6"	6"	1' 0"	VP	1.5	3	4.5	6	7.5	9														3.89	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT															
			L	7	7	7	7	8	8															
12' 0"	7"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5													5.17	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT														
			L	8	8	8	8	8	8	9														
13' 6"	8"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12												6.78	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT													
			L	9	9	9	9	9	9	9	10													
15' 0"	9"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5											7.83	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT												
			L	9	9	9	9	9	9	9	10	11												
16' 6"	10"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15										9.78	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT											
			L	10	10	10	10	10	10	10	10	11	12											
18' 0"	11"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5									10.89	1.06
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT										
			L	11	11	11	11	11	11	11	11	11	11	12										
19' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18								13.17	1.17
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT									
			L	12	12	12	12	12	12	12	12	12	12	13	14									
21' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5							15.67	1.28
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT								
			L	13	13	13	13	13	13	13	13	13	13	13	14	15								

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Other Notes:

- Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf.
- Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- Designs are in general accordance with NCMA's [Design Manual for Segmental Retaining Walls](#) (3rd ed.).
- Global stability has not been addressed in these charts.
- The wall design shall address both internal and external drainage and shall be evaluated by the Professional Engineer who is responsible for the final wall design.
- Backfill material to be compacted to 95% standard proctor.
- All Redi-Rock™ International Wall System Specifications are to be followed.

**CHART FOR MIRAFI MIRAGRID**

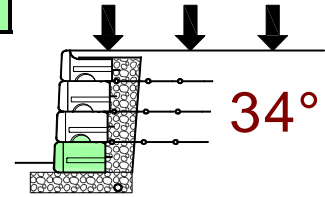
**18" HIGH BOTTOM BLOCK**

**Well Graded Sand, Sand and Gravel - Internal Angle of Friction ( $\phi$ ) = 34°**

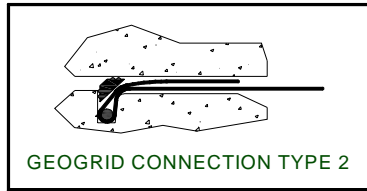
**Load Condition B - No Back Slope, 250psf Live Load Surchage**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)															Est. Geogrid Qty. (Syd/Lf of Wall)			
			VP	L	VP	L	VP	L	VP	L	VP	L	VP	L	VP	L	VP	L	3XT	2 <sup>nd</sup> Grid	
3' 0"	6"	6"	VP	1.5																0.39	0.00
4' 6"	6"	6"	VP	1.5																0.78	0.00
6' 0"	6"	6"	VP	1.5	3	4.5														1.28	0.00
7' 6"	6"	6"	VP	1.5	3	4.5	6													2.00	0.00
9' 0"	6"	1' 0"	VP	1.5	3	4.5	6	7.5												2.83	0.00
10' 6"	6"	1' 0"	VP	1.5	3	4.5	6	7.5	9											4.00	0.00
12' 0"	7"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5										5.28	0.00
13' 6"	8"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12									6.89	0.00
15' 0"	9"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5								7.00	0.83
16' 6"	10"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15							8.83	0.94
18' 0"	11"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5						10.89	1.06
19' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18					13.17	1.17
21' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5				15.67	1.28



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**Other Notes:**

- Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf.
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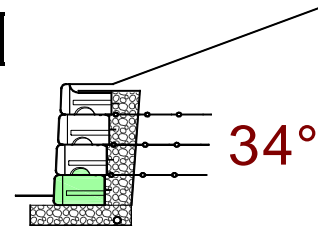
**18" HIGH BOTTOM BLOCK**

**Well Graded Sand, Sand and Gravel - Internal Angle of Friction ( $\phi$ ) = 34°**

**Load Condition C - 2.5:1 Back Slope, No Surcharge**

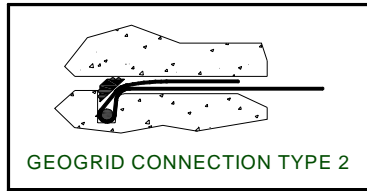
**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



**34°**

Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)														Est. Geogrid Qty. (Syd/Lf of Wall)						
			VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	3XT	2 <sup>nd</sup> Grid	
3' 0"	6"	6"	VP	None																	0.00	0.00	
4' 6"	6"	6"	VP	1.5	3																0.67	0.00	
6' 0"	6"	6"	GT	3XT	3XT																		
			L	4	5																		
7' 6"	6"	6"	VP	1.5	3	4.5	6																
			L	5	5	7	8																
9' 0"	6"	1' 0"	GT	3XT	3XT	3XT	3XT																
			L	6	6	7	8	9															
10' 6"	6"	1' 0"	VP	1.5	3	4.5	6	7.5	9														
			L	7	7	7	8	9	10														
12' 0"	7"	1' 0"	GT	3XT	3XT	3XT	3XT	3XT	3XT														
			L	8	8	8	8	9	10	11													
13' 6"	8"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12												
			L	9	9	9	9	9	10	11	12												
15' 0"	9"	1' 0"	GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT												
			L	9	9	9	9	9	10	11	12	13											
16' 6"	10"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15										
			L	10	10	10	10	10	10	11	12	13	14										
18' 0"	11"	1' 0"	GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT										
			L	11	11	11	11	11	11	11	11	12	13	14	15								
19' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18								
			L	12	12	12	12	12	12	12	12	12	13	14	15	17							
21' 0"	1' 0"	1' 0"	GT	8XT	8XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT								
			L	13	13	13	13	13	13	13	13	13	13	13	14	15	17	18					



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**Other Notes:**

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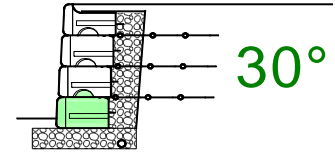
**18" HIGH BOTTOM BLOCK**

**Silty Sand, Fine to Medium Sand - Internal Angle of Friction ( $\phi$ ) = 30°**

**Load Condition A - No Back Slope, No Surcharge**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)																Est. Geogrid Qty. (Syd/Lf of Wall)												
			VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	3XT	2 <sup>nd</sup> Grid									
3' 0"	6"	6"	VP	None																	0.00	0.00									
4' 6"	6"	6"	VP	None																		0.00	0.00								
6' 0"	6"	6"	VP	1.5	3	4.5																1.28	0.00								
			GT	3XT	3XT	3XT																									
			L	5	5	6																									
7' 6"	6"	6"	VP	1.5	3	4.5	6																1.89	0.00							
			GT	3XT	3XT	3XT	3XT																								
			L	5	5	6	7																								
9' 0"	6"	1' 0"	VP	1.5	3	4.5	6	7.5																2.83	0.00						
			GT	3XT	3XT	3XT	3XT	3XT																							
			L	6	6	6	7	8																							
10' 6"	6"	1' 0"	VP	1.5	3	4.5	6	7.5	9																4.00	0.00					
			GT	3XT	3XT	3XT	3XT	3XT	3XT																						
			L	7	7	7	7	8	9																						
12' 0"	7"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5															5.39	0.00					
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT																					
			L	8	8	8	8	8	9	10																					
13' 6"	8"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12															7.00	0.00				
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT																				
			L	9	9	9	9	9	9	10	11																				
15' 0"	9"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5															7.44	0.83			
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT																			
			L	9	9	9	9	9	10	10	11	12																			
16' 6"	10"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15														9.17	0.94			
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT																		
			L	10	10	10	10	10	10	10	11	12	13																		
18' 0"	11"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5														11.22	1.06		
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT																	
			L	11	11	11	11	11	11	11	11	12	13	14																	
19' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18														13.50	1.17	
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT																
			L	12	12	12	12	12	12	12	12	12	13	14	15																
21' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5														16.00	1.28
			GT	8XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT															
			L	13	13	13	13	13	13	13	13	13	13	13	14	15	16														

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Other Notes:

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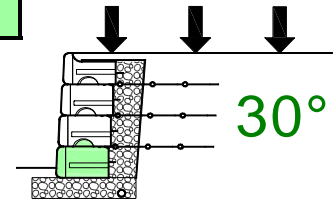
**18" HIGH BOTTOM BLOCK**

**Silty Sand, Fine to Medium Sand - Internal Angle of Friction ( $\phi$ ) = 30°**

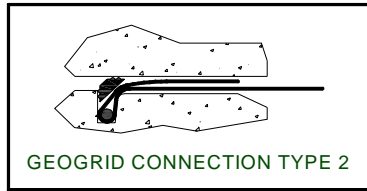
**Load Condition B - No Back Slope, 250psf Live Load Surcharge**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)																Est. Geogrid Qty. (Syd/Lf of Wall)				
			VP	L	GT	VP	L	GT	VP	L	GT	VP	L	GT	VP	L	GT	VP	L	GT	3XT	2 <sup>nd</sup> Grid	
3' 0"	6"	6"	VP	1.5																		0.50	0.00
4' 6"	6"	6"	VP	1.5																		0.89	0.00
6' 0"	6"	6"	VP	1.5	3	4.5																1.39	0.00
7' 6"	6"	6"	VP	1.5	3	4.5	6															2.00	0.00
9' 0"	6"	1' 0"	VP	1.5	3	4.5	6	7.5														2.94	0.00
10' 6"	6"	1' 0"	VP	1.5	3	4.5	6	7.5	9													4.11	0.00
12' 0"	7"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5												4.78	0.72
13' 6"	8"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12											6.39	0.83
15' 0"	9"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5										7.44	0.83
16' 6"	10"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15									9.28	0.94
18' 0"	11"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5								11.33	1.06
19' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18							13.61	1.17
21' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5						14.83	2.56



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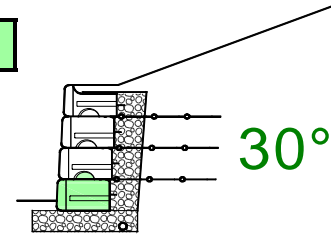
**18" HIGH BOTTOM BLOCK**

**Silty Sand, Fine to Medium Sand - Internal Angle of Friction ( $\phi$ ) = 30°**

**Load Condition C - 2.5:1 Back Slope, No Surcharge**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)																Est. Geogrid Qty. (Syd/Lf of Wall)					
			VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	VP	GT	L	3XT	2 <sup>nd</sup> Grid		
3' 0"	6"	6"	VP	None																		0.00	0.00	
4' 6"	6"	6"	VP	1.5	3																	0.89	0.00	
			GT	3XT	3XT																			
			L	5	6																			
6' 0"	6"	6"	VP	1.5	3	4.5																1.50	0.00	
			GT	3XT	3XT	3XT																		
			L	5	6	7																		
7' 6"	6"	6"	VP	1.5	3	4.5	6															2.44	0.00	
			GT	3XT	3XT	3XT	3XT																	
			L	6	6	7	9																	
9' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5														3.39	0.00	
			GT	3XT	3XT	3XT	3XT	3XT																
			L	6	6	7	9	10																
10' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9													4.28	0.72	
			GT	5XT	3XT	3XT	3XT	3XT	3XT															
			L	8	8	8	9	10	11															
12' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5												6.11	0.94	
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT														
			L	10	10	10	10	10	11	13														
13' 6"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12											7.17	0.83	
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT													
			L	9	9	9	9	10	11	13	14													
15' 0"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5										10.00	1.17	
			GT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT												
			L	12	12	12	12	12	12	13	14	15												
16' 6"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15									11.00	2.56	
			GT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT											
			L	13	13	13	13	13	13	13	14	15	17											
18' 0"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5								12.00	4.17	
			GT	10XT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT										
			L	14	14	14	14	14	14	14	14	15	17	18										
19' 6"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18							13.56	6.44	
			GT	10XT	10XT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT									
			L	16	16	16	16	16	16	16	16	16	17	18	19									
21' 0"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5						14.44	8.61	
			GT	10XT	10XT	10XT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT								
			L	17	17	17	17	17	17	17	17	17	17	18	19	20								

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**Other Notes:**

- Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf.
- Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- Designs are in general accordance with NCMA's [Design Manual for Segmental Retaining Walls](#) (3rd ed.).
- Global stability has not been addressed in these charts.
- The wall design shall address both internal and external drainage and shall be evaluated by the Professional Engineer who is responsible for the final wall design.
- Backfill material to be compacted to 95% standard proctor.
- All Redi-Rock™ International Wall System Specifications are to be followed.

**CHART FOR MIRAFI MIRAGRID**

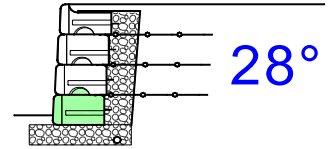
**18" HIGH BOTTOM BLOCK**

**Silty Sand, Clayey Sand - Internal Angle of Friction ( $\phi$ ) = 28°**

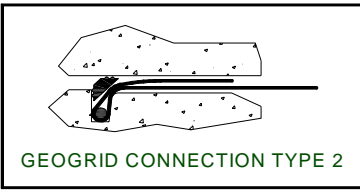
**Load Condition A - No Back Slope, No Surcharge**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)													Est. Geogrid Qty. (Syd/Lf of Wall)			
			VP	GT	L												3XT	2 <sup>nd</sup> Grid	
3' 0"	6"	6"	VP	None														0.00	0.00
4' 6"	6"	6"	VP	None														0.00	0.00
6' 0"	6"	6"	VP	1.5	3	4.5												1.28	0.00
			GT	3XT	3XT	3XT													
			L	5	5	6													
7' 6"	6"	6"	VP	1.5	3	4.5	6											1.89	0.00
			GT	3XT	3XT	3XT	3XT												
			L	5	5	6	7												
9' 0"	6"	1' 0"	VP	1.5	3	4.5	6	7.5										2.83	0.00
			GT	3XT	3XT	3XT	3XT	3XT											
			L	6	6	6	7	8											
10' 6"	6"	1' 0"	VP	1.5	3	4.5	6	7.5	9									4.00	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT										
			L	7	7	7	7	8	9										
12' 0"	7"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5								5.39	0.00
			GT	3XT	3XT	3XT	3XT	3XT	3XT	3XT									
			L	8	8	8	8	8	9	10									
13' 6"	8"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12							6.17	0.83
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT								
			L	9	9	9	9	9	9	10	11								
15' 0"	9"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5						7.33	0.83
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT							
			L	9	9	9	9	9	9	10	11	12							
16' 6"	10"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15					9.17	0.94
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT						
			L	10	10	10	10	10	10	10	10	11	12	13					
18' 0"	11"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5				11.22	1.06
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT					
			L	11	11	11	11	11	11	11	11	11	12	13	14				
19' 6"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18			13.50	1.17
			GT	8XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT				
			L	12	12	12	12	12	12	12	12	12	12	13	14	15			
21' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5		14.72	2.56
			GT	8XT	8XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT			
			L	13	13	13	13	13	13	13	13	13	13	13	14	15	16		



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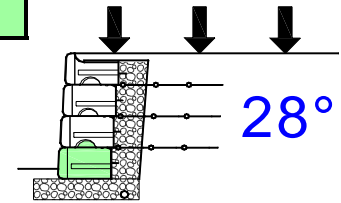
**Other Notes:**

- Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf.
- Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls (3rd ed.).
- Global stability has not been addressed in these charts.
- The wall design shall address both internal and external drainage and shall be evaluated by the Professional Engineer who is responsible for the final wall design.
- Backfill material to be compacted to 95% standard proctor.
- All Redi-Rock™ International Wall System Specifications are to be followed.

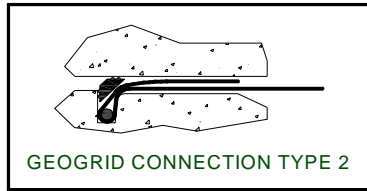
**CHART FOR MIRAFI MIRAGRID**

**18" HIGH BOTTOM BLOCK**

**Silty Sand, Clayey Sand - Internal Angle of Friction ( $\phi$ ) = 28°**  
**Load Condition B - No Back Slope, 250psf Live Load Surcharge**  
**Geogrid Walls - 21" Wide Geoconnector Blocks**  
**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)															Est. Geogrid Qty. (Syd/Lf of Wall)					
			VP	L	GT	VP	L	GT	VP	L	GT	VP	L	GT	VP	L	GT	VP	L	GT	3XT	2 <sup>nd</sup> Grid	
3' 0"	6"	6"	VP	1.5																		0.61	0.00
4' 6"	6"	6"	VP	1.5		3																1.11	0.00
6' 0"	6"	6"	VP	1.5		3	4.5															1.72	0.00
7' 6"	6"	6"	VP	1.5		3	4.5	6														2.44	0.00
9' 0"	6"	1' 0"	VP	1.5		3	4.5	6	7.5													3.28	0.00
10' 6"	6"	1' 0"	VP	1.5		3	4.5	6	7.5	9												3.67	0.00
12' 0"	7"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5											5.11	0.72
13' 6"	8"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5	12										6.61	0.83
15' 0"	9"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5	12	13.5									7.78	0.83
16' 6"	10"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5	12	13.5	15								9.72	0.94
18' 0"	11"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5	12	13.5	15	16.5							11.78	1.06
19' 6"	1' 0"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18						12.89	2.33
21' 0"	1' 0"	1' 0"	VP	1.5		3	4.5	6	7.5	9	10.5	12	13.5	15	16.5	18	19.5					14.67	4.17



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**Other Notes:**

- Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf.
- Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- Designs are in general accordance with NCMA's [Design Manual for Segmental Retaining Walls](#) (3rd ed.).
- Global stability has not been addressed in these charts.
- The wall design shall address both internal and external drainage and shall be evaluated by the Professional Engineer who is responsible for the final wall design.
- Backfill material to be compacted to 95% standard proctor.
- All Redi-Rock™ International Wall System Specifications are to be followed.

**CHART FOR MIRAFI MIRAGRID**

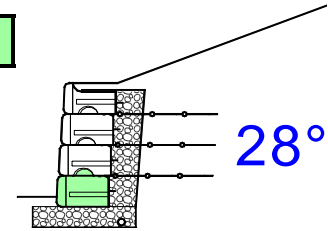
**18" HIGH BOTTOM BLOCK**

**Silty Sand, Clayey Sand - Internal Angle of Friction ( $\phi$ ) = 28°**

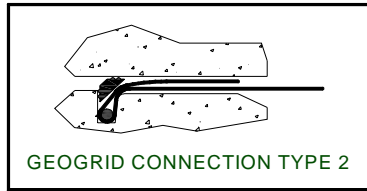
**Load Condition C - 2.5:1 Back Slope, No Surcharge**

**Geogrid Walls - 21" Wide Geoconnector Blocks**

**Geogrid Connection Type 2**



Wall Height	Bury Depth	Level Pad	Geogrid Vertical Placement (VP), Grid Type (GT), and Lengths (L) (Dimensions Measured in Feet from Face of Block)													Est. Geogrid Qty. (Syd/Lf of Wall)			
			VP	GT	L												3XT	2 <sup>nd</sup> Grid	
3' 0"	6"	6"	VP	None														0.00	0.00
4' 6"	6"	6"	VP	1.5	3													1.22	0.00
			GT	3XT	3XT														
6' 0"	1' 0"	6"	VP	1.5	3	4.5												1.94	0.00
			GT	3XT	3XT	3XT													
7' 6"	1' 0"	6"	VP	1.5	3	4.5	6											3.00	0.00
			GT	3XT	3XT	3XT	3XT												
9' 0"	1' 0"	1' 0"	VP	1.5	3	4.5	6	7.5										3.89	0.94
			GT	5XT	3XT	3XT	3XT	3XT											
10' 6"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9									5.06	0.94
			GT	5XT	3XT	3XT	3XT	3XT	3XT										
12' 0"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5								7.22	1.17
			GT	5XT	3XT	3XT	3XT	3XT	3XT	3XT									
13' 6"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12							10.50	1.50
			GT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT							
15' 0"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5						12.83	3.67
			GT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT						
16' 6"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15					14.39	6.17
			GT	10XT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT					
18' 0"	1' 6"	1' 0"	VP	1.5	3	4.5	6	7.5	9	10.5	12	13.5	15	16.5				15.94	9.11
			GT	10XT	10XT	10XT	10XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT	3XT				
			VP															0.00	0.00
			GT															0.00	0.00



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**Other Notes:**

- Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf.
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