

# Dense Well-Graded Sand, Sand and Gravel

with an Internal Angle of Friction ( $\phi$ ) = 34°

• Soil Reinforced with Mirafi Miragrid

• Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

· No Surcharge, No Back Slope, No Front Slope

Wall Heapt	Wall	Leveling Pad	Paraweb	GEOGRID	LAYOUT	r Each Laver						Approx.	Approx. Paraweb
ft (m)	Depth	Depth	Length/Hook	Vertical	Placement (V.	P.) of Geogrid	Layers Measu	red Up From S	Top of Leveling	g Pad	ft (m) ft (m)	syd/LF wall	ft/LF wall
n (m)			n (my	Geogria	Lengin Measu	irea ironi ine E	SACK OF THE BIO	LKS			n (ny	(sq m/m wall)	(m/m wall)
0 - 6.0 (0 - 1.83)	See G	ravity Charts		-									
7.0 (2.13)	0.5 (0.15)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	2XT 1.0 (0.30) 3.0 (0.91)	2XT 3.0 (0.91) 3.0 (0.91)	2XT 5.0 (1.52) 4.0 (1.22)					1.1 (3.05)	18.3 (18.27)
8.0 (2.44)	0.5 (0.15)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	2XT 1.0 (0.30) 3.5 (1.07)	2XT 3.5 (1.07) 3.5 (1.07)	2XT 6.0 (1.83) 4.5 (1.37)					1.3 (3.51)	20.9 (20.88)
9.0 (2.74)	0.5 (0.15)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	2XT 1.0 (0.30) 4.0 (1.22)	2XT 3.0 (0.91) 4.0 (1.22)	2XT 5.0 (1.52) 4.0 (1.22)	2XT 7.0 (2.13) 5.0 (1.52)				1.9 (5.18)	23.5 (23.49)
10.0 (3.05)	0.5 (0.15)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	3XT 1.0 (0.30) 5.0 (1.52)	3XT 3.0 (0.91) 5.0 (1.52)	3XT 5.5 (1.68) 5.0 (1.52)	3XT 8.0 (2.44) 5.5 (1.68)				2.3 (6.25)	26.1 (26.10)
11.0 (3.35)	0.67 (0.20)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	3XT 1.5 (0.46) 5.5 (1.68)	3XT 4.0 (1.22) 5.5 (1.68)	3XT 6.5 (1.98) 5.5 (1.68)	3XT 9.0 (2.74) 6.0 (1.83)				2.5 (6.86)	28.7 (28.71)
12.0 (3.66)	0.67 (0.20)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	3XT 1.0 (0.30) 6.0 (1.83)	3XT 3.0 (0.91) 6.0 (1.83)	3XT 5.0 (1.52) 6.0 (1.83)	3XT 7.5 (2.29) 6.0 (1.83)	3XT 10.0 (3.05) 6.5 (1.98)			3.4 (9.30)	31.3 (31.32)
13.0 (3.96)	0.75 (0.23)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	3XT 1.0 (0.30) 6.5 (1.98)	3XT 3.0 (0.91) 6.5 (1.98)	3XT 5.5 (1.68) 6.5 (1.98)	3XT 8.0 (2.44) 6.5 (1.98)	3XT 10.5 (3.20) 6.5 (1.98)			3.6 (9.91)	33.9 (33.93)
14.0 (4.27)	0.75 (0.23)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	3XT 1.0 (0.30) 7.0 (2.13)	3XT 3.0 (0.91) 7.0 (2.13)	3XT 5.0 (1.52) 7.0 (2.13)	3XT 7.0 (2.13) 7.0 (2.13)	3XT 9.5 (2.90) 7.0 (2.13)	3XT 12.0 (3.66) 7.5 (2.29)		4.7 (12.95)	36.5 (36.54)
15.0 (4.57)	0.75 (0.23)	0.5 (0.15)	9.0 (2.74)	Type V. P. Length	3XT 1.0 (0.30) 8.0 (2.44)	3XT 3.5 (1.07) 8.0 (2.44)	3XT 6.0 (1.83) 8.0 (2.44)	3XT 8.5 (2.59) 8.0 (2.44)	3XT 11.0 (3.35) 8.0 (2.44)	3XT 13.5 (4.11) 8.0 (2.44)		5.3 (14.63)	39.2 (39.15)
	Wall h	eights greate	r than 15.0' <mark>(4.</mark>	57 m) are ad	chievable.								

NOTES: The above chart was prepared by Rosetta<sup>®</sup> Hardscapes LLC for estimating and conceptual design purposes only. All information is believed to be true and accurate, however, Rosetta<sup>®</sup> Hardscapes LLC assumes no responsibility for the use of these design charts for actual construction. Determination of the suitability of each chart is the sole responsibility of the user. Final designs for construction purposes must be performed by a registered

Professional Engineer using the actual conditions of the proposed site. 1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

- 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 <u>Design Manual for Segmental Retaining Walls (2nd ed.)</u>.
- 4. Global stability has not been addressed in these charts.
- 5. 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 Rosetta<sup>®</sup> Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta<sup>®</sup> block must be connected into the reinforced soil mass with individual Paraweb<sup>®</sup> geosynthetic straps.

The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta<sup>®</sup> blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta® blocks have two galvanized lift hooks and require two straps per block

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



NO BACK SLOPE

BEHIND BLOCKS. SEE TYPICAL DETAILS)

(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

SCHEMATIC STRAP/GRID LAYOUT

- · Geogrid Placed Flush to Back of Blocks
- Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)
- Geotextile Fabric and Stone Required
- Behind Blocks (Not Shown For Clarity)



### Dense Well-Graded Sand, Sand and Gravel

with an Internal Angle of Friction ( $\phi$ ) = 34°

• Soil Reinforced with Mirafi Miragrid

Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

• 100 psf (4,79 kPa) Live Load Surcharge, No Back Slope, No Front Slope

100 por (	I Wall Leveling Paraweb GEOGRID LAYOUT Anton Stope												
Wall	Wall	Leveling	Paraweb	GEOGRID	LAYOUT	- , ,						Approx.	Approx.
Heght	Bury	Pad	30 Strap	Grid Ty	be Specified to	r Each Layer						Geogrid	Paraweb
ft (m)	Depth	Depth	Length/Hook	Vertical	Placement (V.	P.) of Geogrid	Layers Measu	red Up From .	Top of Leveling	g Pad	π (m) π (m)	syd/LF wall	ft/LF wall
п (m)	п (т)	n (m)	n (m)	Geogria	Length Measu	ured from the E	Back of the Blo	cks			n (m)	(sq m/m wall)	(m/m wall)
0 5 0	5 a a C	rouitu Charta											
(0 - 5.0)	See G	ravity Charts											
(0 1.02)				Type	2XT	2XT							
6.0	0.5	0.5	11.0	V. P.	1.5 (0.46)	4.0 (1.22)						0.7	19.1
(1.83)	(0.15)	(0.15)	(3.35)	Length	3.0 (0.91)	3.5 (1.07)						(1.98)	(19.14)
				Туре	2XT	2XT	2XT						
7.0	0.5	0.5	11.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)					1.1	22.3
(2.13)	(0.15)	(0.15)	(3.35)	Length	3.0 (0.91)	3.0 (0.91)	4.0 (1.22)					(3.05)	(22.33)
8.0	0.5	0.5	11.0	Type V D	2XI 1.0 (0.20)	2XI 25 (107)	2XI 6.0 (1.02)					1.2	25 F
0.0	(0.15)	(0.15)	(3 35)	v. e. Lenath	3.5 (1.07)	3.5 (1.07)	0.0 (1.03) 45 (1.37)					(3.51)	(25.5)
(2.11)	(0.10)	(0.10)	(0.00)	Type	2XT	2XT	2XT	2XT				(0.01)	(20.02)
9.0	0.5	0.5	11.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)				1.9	28.7
(2.74)	(0.15)	(0.15)	(3.35)	Length	4.0 (1.22)	4.0 (1.22)	4.0 (1.22)	5.0 (1.52)				(5.18)	(28.71)
				Туре	3XT	3XT	3XT	3XT					
10.0	0.5	0.5	11.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)				2.3	31.9
(3.05)	(0.15)	(0.15)	(3.35)	Length	5.0 (1.52)	5.0 (1.52)	5.0 (1.52)	5.5 (1.68)				(6.25)	(31.90)
11.0	0.67	0.5	11.0	iype V D	3XI 15 (0.46)	3XI 4.0 (1.22)	3XI 45 (100)	3XI 0.0 (2.74)				2.5	25.1
(3.35)	(0.20)	(0.15)	(3.35)	v. r. Lenath	5.5 (1.68)	5.5 (1.68)	5.5 (1.68)	6.0 (1.83)				(6.86)	(35.09)
(0.00)	(0.20)	(0	(5155)	Туре	3XT	3XT	3XT	3XT	3XT			(0.00)	(00.01)
12.0	0.67	0.5	11.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.5 (2.29)	10.0 (3.05)			3.4	38.3
(3.66)	(0.20)	(0.15)	(3.35)	Length	6.0 (1.83)	6.0 <b>(1.83)</b>	6.0 (1.83)	6.0 (1.83)	6.5 (1.98)			(9.30)	(38.28)
				Туре	3XT	3XT	3XT	3XT	3XT	3XT			
13.0	0.75	0.5	11.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)	9.0 (2.74)	11.0 (3.35)		4.4	41.5
(3.96)	(0.23)	(0.15)	(3.35)	Length	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	7.0 (2.13)		(12.04)	(41.47)
14.0	0.75	0.5	11.0	Type V D	3XI 1.0 (0.20)	3/1	3XI 5.0 (1.52)	3XI 70 (212)	381	381		4.7	44.7
(4.27)	(0.23)	(0.15)	(3.35)	v. r. Lenath	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.5 (2.29)		(12.95)	(44.66)
		(* */	(****)	Туре	3XT	3XT	3XT	3XT	3XT	3XT			( /
15.0	0.75	0.5	11.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)	10.5 (3.20)	13.0 (3.96)		5.3	47.9
(4.57)	(0.23)	(0.15)	(3.35)	Length	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)		(14.63)	(47.85)
	l		-	-							•		
	Wall h	eights greate	er than 15.0' (4.	57 m) are a	chievable.								

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- Unit weight of 28°, 30°, 34° and 40° soils as sumed to be 120pcf (18.9 kN/m3).
   Unitimum 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 <u>Design Manual for Segmental Retaining Walls (2nd ed.)</u>.
- 4. Global stability has not been addressed in these charts.

5. 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

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta® block must be connected into the reinforced soil mass with individual Paraweb® geosynthetic straps.

The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta® blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta<sup>®</sup> blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

- · Geogrid Placed Flush to Back of Blocks Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)

Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)

February 26, 2008

100 psf (4.79 kPa)

GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

BEHIND BLOCKS, SEE TYPICAL DETAILS)



### Dense Well-Graded Sand, Sand and Gravel

with an Internal Angle of Friction ( $\phi$ ) = 34°

• Soil Reinforced with Mirafi Miragrid

 Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap • 250 psf (11.96 kPa) Live Load Surcharge, No Back Slope, No Front Slope

200 051 (	o psi (11.70 ki d) Live Lodu Suichaige, no back Sidpe, no Front Sidpe												
Wall	Wall	Leveling	Paraweb	GEOGRID	LAYOUT							Approx.	Approx.
Heaht	Burv	Pad	30 Strap	Grid Tv	pe Specified fo	r Each Laver						Geoarid	Paraweb
3	Denth	Denth	Lenath/Hook	Vertical	' Placement (V	P) of Geoarid	Lavers Measu	red I In From	Ton of Levelin	a Pad	ft (m)	svd/LE wall	ft/I F wall
ft (m)	ft (m)	ft (m)	ft (m)	Geogric	Longth Measu	ured from the P	Pack of the Ric	rea op monn : cke		97.00	ft (m)	(sa m/m wall)	(m/m wall)
	(	(	(	Geogra	i Lengin weasi	lieu ii uini iine L	DALK UI IIIE DIU	LNS				(Sy III/III Wall)	(III/III Wall)
0 2 0	Analyz	o Ac Cravity	Wall										
(0 - 0.91)	Analyz	e As Glavity	waii										
(0 0.71)			<b>1</b>	Type	2XT	2XT							
4.0	0.5	0.5	13.0	VP	1.0 (0.30)	3.0 (0.91)						0.7	15.1
(1.22)	(0.15)	(0.15)	(3.96)	l enath	3.0 (0.91)	3.0 (0.91)						(1.83)	(15.08)
()	()	()	()	Type	2XT	2XT						(	()
5.0	0.5	0.5	13.0	V P	1.0 (0.30)	3.5 (1.07)						0.7	18.9
(1.52)	(0.15)	(0.15)	(3.96)	Lenath	3.0 (0.91)	3.5 (1.07)						(1.98)	(18.85)
	<b>N N</b>	(* * * /	(* /	Type	2XT	2XT						X -7	
6.0	0.5	0.5	13.0	V. P.	1.5 (0.46)	4.0 (1.22)						0.7	22.6
(1.83)	(0.15)	(0.15)	(3.96)	Length	3.0 (0.91)	3.5 (1.07)						(1.98)	(22.62)
	. ,			Type	2XT	2XT	2XT						. ,
7.0	0.5	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)					1.1	26.4
(2.13)	(0.15)	(0.15)	(3.96)	Length	3.0 (0.91)	3.0 (0.91)	4.0 (1.22)					(3.05)	(26.39)
				Туре	2XT	2XT	2XT						. ,
8.0	0.5	0.5	13.0	V. P.	1.0 (0.30)	3.5 (1.07)	6.0 (1.83)					1.3	30.2
(2.44)	(0.15)	(0.15)	(3.96)	Length	3.5 (1.07)	3.5 (1.07)	4.5 (1.37)					(3.51)	(30.16)
				Туре	2XT	2XT	2XT	2XT					
9.0	0.5	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)				1.9	33.9
(2.74)	(0.15)	(0.15)	(3.96)	Length	4.0 (1.22)	4.0 (1.22)	4.0 (1.22)	5.0 (1.52)				(5.18)	(33.93)
				Туре	3XT	3XT	3XT	3XT					
10.0	0.5	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)				2.3	37.7
(3.05)	(0.15)	(0.15)	(3.96)	Length	5.0 (1.52)	5.0 (1.52)	5.0 (1.52)	5.5 (1.68)				(6.25)	(37.70)
				Туре	3XT	3XT	3XT	3XT					
11.0	0.67	0.5	13.0	V. P.	1.5 (0.46)	4.0 (1.22)	6.5 (1.98)	9.0 (2.74)				2.5	41.5
(3.35)	(0.20)	(0.15)	(3.96)	Length	5.5 (1.68)	5.5 (1.68)	5.5 (1.68)	6.0 (1.83)				(6.86)	(41.47)
				Туре	3XT	3XT	3XT	3XT	3XT				
12.0	0.67	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.5 (2.29)	10.0 (3.05)			3.4	45.2
(3.66)	(0.20)	(0.15)	(3.96)	Length	6.0 (1.83)	6.0 (1.83)	6.0 (1.83)	6.0 (1.83)	6.5 (1.98)			(9.30)	(45.24)
				Type	3X I	3X I	3X I	3X I	3X I	3X I			
13.0	0.75	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)	9.0 (2.74)	11.0 (3.35)		4.7	49.0
(3.96)	(0.23)	(0.15)	(3.96)	Length	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)		(12.80)	(49.01)
14.0	0.75	0.5	12.0	Type	3X1	3X1	3XI	3XI	3X1	3X1		4.7	52.0
(4.27)	0.75	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)	9.5 (2.90)	12.0 (3.66)		4./	52.8
(4.27)	(0.23)	(0.15)	(3.90)	Lengin	7.U (2.13)	7.U (2.13)	1.U (2.13)	1.U (2.13)	7.0 (Z.13)	7.5 (2.29) 2VT		(12.95)	(32.78)
15.0	0.75	0.5	12.0	iype	3X1	3XI 20 (001)	3XI د د (1 (0)	3XI	3XI 10 E (2 20)	3X1		E 2	E4 4
(4.57)	0.75	0.5	(3.06)	v. P. Lonath	8.0 (2.44)	3.0 (0.91)	0.0 (1.08) 80 (2.44)	0.U (2.44) 8.0 (2.44)	80 (2.44)	80 (2.44)		0.3 (14.63)	0.00 (56 55)
(4.37)	(0.23)	(0.13)	(3.70)	Lengui	0.0 (Z.44)	0.0 (Z.44)	0.0 (2.44)	0.0 (2.44)	0.0 (Z.44)	0.0 (Z.44)		(14.03)	(00.00)

Wall heights greater than 15.0' (4.57 m) are achievable.

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1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

2. Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.

3. Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls (2nd ed.).

4. Global stability has not been addressed in these charts.

5. 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.

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta<sup>®</sup> block must be connected into the reinforced soil mass with individual Paraweb<sup>®</sup> geosynthetic straps. The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta® blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta® blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

- Geogrid Placed Flush to Back of Blocks · Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between

Geogrid and Strap (Typ., All Levels) Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)

February 26, 2008

250 psf (11.96 kPa)

GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

BEHIND BLOCKS, SEE TYPICAL DETAILS)



# Dense Well-Graded Sand, Sand and Gravel

with an Internal Angle of Friction ( $\phi$ ) = 34°

• Soil Reinforced with Mirafi Miragrid

• Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap



GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

• 1:2.5 (21.8°) Back Slope, NoSurcharge, No Front Slope

Wall	Wall	Leveling	Paraweb	GEOGRID	LAYOUT							Approx.	Approx.
Heght	Bury	Pad	30 Strap	Grid Typ	be Specified for	r Each Layer						Geogrid	Paraweb
5	Denth	Denth	Length/Hook	Vertical	, Placement (V.	P ) of Geoarid	Lavers Measu	red I In From	Ton of Levelin	n Pad	ft (m)	svd/LE wall	ft/I F wall
ft (m)	ft (m)	ft (m)	ft (m)	Geogria	Lenath Measu	ired from the F	Rack of the Rio	rea op monn : cks	rop or zevening	<i>y i uu</i>	ft (m)	(sa m/m wall)	(m/m wall)
	14.2	1.1.2		Ocognu	Lengarmease			UKJ				(Sy min wan)	(III/III Wally
0.50	See C	ravity Charts											
(0 - 1 52)	500 0												
(0 1102)			ſ	Type	2XT	2XT							
6.0	0.5	0.5	12.0	V P	15 (0.46)	40 (1 22)						0.8	20.9
(1.83)	(0.15)	(0.15)	(3.66)	l enath	3.0 (0.91)	4.0 (1.22)						(2.13)	(20.88)
()	()	()	()	Type	2XT	2XT	2XT					()	()
7.0	0.5	0.5	12.0	V. P.	1.0 (0.30)	3.5 (1.07)	6.0 (1.83)					1.3	24.4
(2.13)	(0.15)	(0.15)	(3.66)	Length	3.0 (0.91)	3.5 (1.07)	5.0 (1.52)					(3.51)	(24.36)
. ,	. ,			Туре	2XT	2XT	2XT					. ,	. ,
8.0	0.5	0.5	12.0	V. P.	1.0 (0.30)	3.5 (1.07)	6.0 (1.83)					1.3	27.8
(2.44)	(0.15)	(0.15)	(3.66)	Length	3.5 (1.07)	3.5 (1.07)	5.0 (1.52)					(3.66)	(27.84)
				Туре	2XT	2XT	2XT	2XT					
9.0	0.5	0.5	12.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)				2.1	31.3
(2.74)	(0.15)	(0.15)	(3.66)	Length	4.0 (1.22)	4.0 (1.22)	4.5 (1.37)	6.5 (1.98)				(5.79)	(31.32)
				Туре	3XT	3XT	3XT	3XT					
10.0	0.5	0.5	12.0	V. P.	1.0 (0.30)	3.5 (1.07)	6.0 (1.83)	8.5 (2.59)				2.6	34.8
(3.05)	(0.15)	(0.15)	(3.66)	Length	5.5 (1.68)	5.5 (1.68)	5.5 (1.68)	6.5 (1.98)				(7.01)	(34.80)
				Туре	3XT	3XT	3XT	3XT					
11.0	0.67	0.5	12.0	V. P.	1.5 (0.46)	4.0 (1.22)	6.5 (1.98)	9.0 (2.74)				2.9	38.3
(3.35)	(0.20)	(0.15)	(3.66)	Length	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	7.0 (2.13)	0.4			(8.08)	(38.28)
12.0	0.7	0.5	12.0	Type	3XI 1.0 (0.20)	3XI 2 F (1 07)	3XI (0.(1.02)	3XI 0 F (2 F0)	3XI 11.0 (2.25)			4.0	41.0
12.0	0.07	0.5	12.0	V. P. Longth	1.0 (0.30)	3.5 (1.07)	0.0 (1.83)	8.3 (2.39) 7.0 (2.12)				4.0	41.8
(3.00)	(0.20)	(0.13)	(3.00)	Typo	2VT	2VT	2VT	2VT	2VT	2VT		(10.77)	(41.70)
13.0	0.75	0.5	12.0	I ype V D	1.0 (0.30)	3.0 (0.01)	5.0 (1.52)	7.0 (2.13)	0 0 (2 7/1)	11 0 (2 25)		5.1	45.2
(3.96)	(0.23)	(0.15)	(3.66)	l enath	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	8.0 (2.44)		(13.87)	(45.24)
()	()	()	()	Type	3XT	3XT	3XT	3XT	3XT	3XT		()	(
14.0	0.75	0.5	12.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)	10.5 (3.20)	13.0 (3.96)		5.5	48.7
(4.27)	(0.23)	(0.15)	(3.66)	Length	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	9.5 (2.90)		(15.09)	(48.72)
				Туре	3XT	3XT	3XT	3XT	3XT	3XT			
15.0	0.75	0.5	12.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)	10.5 (3.20)	13.0 (3.96)		6.3	52.2
(4.57)	(0.23)	(0.15)	(3.66)	Length	9.5 (2.90)	9.5 (2.90)	9.5 (2.90)	9.5 (2.90)	9.5 (2.90)	9.5 (2.90)		(17.37)	(52.20)
	Wall b	einhts areato	r than 15 0' (4 P	57 m) are a	hievable								
	vvaili	eignis greate	1 mail 15.0 (4.0	or inj are a	snievable.								

**NOTES:** The above chart was prepared by Rosetta<sup>®</sup> Hardscapes LLC for estimating and conceptual design purposes only. All information is believed to be true and accurate, however, Rosetta<sup>®</sup> Hardscapes LLC assumes no responsibility for the use of these design charts for actual construction. Determination of the suitability of each chart is the sole responsibility of the user. <u>Final designs for construction purposes must be performed by a registered</u> <u>Professional Engineer</u> using the actual conditions of the proposed site.

1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

- 2. Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- 3. Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls (2nd ed.).

4. Global stability has not been addressed in these charts.

5. 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.

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta<sup>®</sup> block must be connected into the reinforced soil mass with individual Paraweb<sup>®</sup> geosynthetic straps. The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta<sup>®</sup> blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta<sup>®</sup> blocks have two galvanized lift hooks and require two straps per block.

 Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

- Geogrid Placed Flush to Back of Blocks
- Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
   Compacted Soil Between
- Geogrid and Strap (Typ., All Levels) • Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)



### Silty Sand, Fine to Medium Sand with an Internal Angle of Friction ( $\phi$ ) = 30°

• Soil Reinforced with Mirafi Miragrid

• Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

NO BACK SLOPE

(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

• No Surcha	No Surcharge, No Back Slope, No Front Slope													
Wall	Wall	Leveling	Paraweb	GEOGRID	LAYOUT							Approx.	Approx.	
Heght	Bury	Pad	30 Strap	Grid Typ	ne Specified for	r Each Layer						Geogrid	Paraweb	
<i>a</i> ( )	Depth	Depth	Length/Hook	Vertical	Placement (V.I	P.) of Geogrid	Layers Measu	red Up From T	Top of Leveling	g Pad	ft (m)	syd/LF wall	ft/LF wall	
rt (m)	π (m)	π (m)	π (m)	Geogrid	Length Measu	ired from the E	Back of the Blo	cks			rt (m)	(sq m/m wall)	(m/m wall)	
0-60	See G	ravity Charts												
(0 - 1.83)	0000	any onano												
				Туре	2XT	2XT	2XT							
7.0 (2.13)	0.5	0.5	13.0	V. P. Lenath	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)					1.1 (3.05)	26.4	
(2.13)	(0.13)	(0.13)	(3.70)	Tvpe	2XT	2XT	2XT					(3.03)	(20.37)	
8.0	0.5	0.5	13.0	V. P.	1.0 (0.30)	3.5 (1.07)	6.0 <b>(1.83)</b>					1.4	30.2	
(2.44)	(0.15)	(0.15)	(3.96)	Length	4.0 (1.22)	4.0 (1.22)	4.5 (1.37)	0.17				(3.81)	(30.16)	
0.0	0.5	0.5	13.0	Type V P	2XI 1.0 (0.20)	2XI 3.0 (0.01)	2XI 5.0 (1.52)	2XI 7.0 (2.12)				21	33.0	
(2.74)	(0.15)	(0.15)	(3.96)	Length	4.5 (1.37)		(5.79)	(33.93)						
				Туре	3XT	3XT	3XT	3XT						
10.0	0.5	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)				2.3	37.7	
(3.05)	(0.15)	(0.15)	(3.96)	Length	5.0 (1.52) 2VT	5.0 (1.52) 2VT	5.0 (1.52) 2VT	6.0 (1.83) 2VT				(6.40)	(37.70)	
11.0	0.67	0.5	13.0	V. P.	1.5 (0.46)	4.0 (1.22)	6.5 (1.98)	9.0 (2.74)				2.9	41.5	
(3.35)	(0.20)	(0.15)	(3.96)	Length	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)				(7.92)	(41.47)	
				Туре	3XT	3XT	3XT	3XT	3XT					
12.0	0.67	0.5	13.0	V. P. Lenath	1.0 (0.30) 7.0 (2.13)	3.0 (0.91) 7.0 (2.13)	5.0 (1.52)	7.5 (2.29)	10.0 (3.05)			3.9	45.2 (45.24)	
(0.00)	(0.20)	(0.10)	(0.70)	Tvpe	3XT	3XT	3XT	3XT	3XT			(10.07)	(10.2.1)	
13.0	0.75	0.5	13.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)	10.5 (3.20)			4.2	49.0	
(3.96)	(0.23)	(0.15)	(3.96)	Length	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	0)/T		(11.43)	(49.01)	
14.0	0.75	0.5	13.0	Type V P	3XI 10 (030)	3XI 30 (001)	3XI 5.0 (1.52)	3XI 70 (2.13)	3XI 05 (200)	3XI 12.0 (3.66)		5.2	52.8	
(4.27)	(0.23)	(0.15)	(3.96)	Length	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)		(14.63)	(52.78)	
				Туре	3XT	3XT	3XT	3XT	3XT	3XT				
15.0	0.75	0.5	13.0	V. P.	1.0 (0.30)	3.5 (1.07)	6.0 (1.83)	8.5 (2.59)	11.0 (3.35)	13.5 (4.11)		6.0	56.6	
(4.57)	(0.23)	(0.15)	(3.90)	Lengin	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)		(10.40)	(00.00)	
	Wall heights greater than 15.0' (4.57 m) are achievable.													

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- 2. Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- 3. Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls (2nd ed.).
- 4. Global stability has not been addressed in these charts

5. 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
- 6. Backfill material to be compacted to 95% standard proctor.

All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta® block must be connected into the reinforced soil mass with individual Paraweb® geosynthetic straps.

The straps are to be wrapped around the galvanized lift hook on the back of the block. 9. The 6" and 12" high Rosetta<sup>®</sup> blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta<sup>®</sup> blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

- · Geogrid Placed Flush to Back of Blocks
- Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)
- · Geotextile Fabric and Stone Required Behind Blocks (Not Shown For Clarity)



#### Silty Sand, Fine to Medium Sand

#### with an Internal Angle of Friction ( $\phi$ ) = 30°

• Soil Reinforced with Mirafi Miragrid

• Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

• 100 psf (4.79 kPa) Live Load Surcharge, No Back Slope, No Front Slope

Wall	Wall         Leveling         Paraweb         GEOGRID LAYOUT         Approx.												
Heaht	Bury	Pad	30 Stran	GLOGRID Grid Tv	ne Snecified fo	r Fach Laver						Geogrid	Paraweh
rieght	Denth	Denth	Length/Hook	Vertical	Placement /\/	P) of Geogrid	Lavers Measi	red I In From	Ton of Levelin	n Pad	ft (m)	svd/l E wall	ft/I F wall
ft (m)	ft (m)	ft (m)	ft (m)	Geogrid	Tacement (v. Lenath Measi	vred from the P	Back of the Blo	cks	TOP OF LEVENIN	y i au	ft (m)	(sa m/m wall)	(m/m wall)
				<u>g</u>								(	(
0 - 4.0	See G	ravity Charts											
(0 - 1.22)													
5.0	0.5	0.5	1/ 0	Туре	2XT	2XT						0.7	
5.0	0.5	0.5	16.0	V. P. Longth	1.0 (0.30)	3.5 (1.07)						0.7	23.2
(1.52)	(0.13)	(0.13)	(4.00)	Type	2XT	2XT						(1.70)	(23.20)
6.0	0.5	0.5	16.0	V. P.	1.5 (0.46)	4.0 (1.22)						0.8	27.8
(1.83)	(0.15)	(0.15)	(4.88)	Length	3.0 (0.91)	4.0 (1.22)						(2.13)	(27.84)
				Туре	2XT	2XT	2XT						
7.0	0.5	0.5	16.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)					1.2	32.5
(2.13)	(0.15)	(0.15)	(4.88)	Length	3.0 (0.91)	3.0 (0.91)			(3.20)	(32.48)			
8.0	0.5	0.5	16.0	iype V D	2XI 1.0 (0.30)	2.5 (1.07)	2XI 60 (1.83)					14	37.1
(2.44)	(0.15)	(0.15)	(4.88)	Length	4.0 (1.22)	4.0 (1.22)	5.0 (1.52)					(3.96)	(37.12)
. ,	. ,	. ,	. ,	Туре	2XT	2XT	2XT	2XT					
9.0	0.5	0.5	16.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)				2.1	41.8
(2.74)	(0.15)	(0.15)	(4.88)	Length	4.5 (1.37)	4.5 (1.37)	4.5 (1.37)	5.5 (1.68)				(5.79)	(41.76)
10.0	0.5	0.5	1/ 0	Туре	3XT	3XT	3XT	3XT					
(3.05)	0.5	0.5	(4.88)	V. P. Lenath	1.0 (0.30) 5.0 (1.52)	3.0 (0.91) 5.0 (1.52)	5.5 (1.68)	8.0 (2.44)				2.3	46.4
(3.03)	(0.13)	(0.13)	(4.00)	Type	3XT	3XT	3XT	3XT				(0.40)	(10.10)
11.0	0.67	0.5	16.0	V. P.	1.5 (0.46)	4.0 (1.22)	6.5 (1.98)	9.0 (2.74)				2.9	51.0
(3.35)	(0.20)	(0.15)	(4.88)	Length	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)				(7.92)	(51.04)
				Туре	3XT	3XT	3XT	3XT	3XT				
12.0	0.67	0.5	16.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.5 (2.29)	10.0 (3.05)			3.9	55.7
(3.66)	(0.20)	(0.15)	(4.88)	Length	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13) 2VT	7.5 (2.29)	2VT		(10.82)	(55.68)
13.0	0.75	0.5	16.0	Type V P	3.0 (0.30)	30 (0 91)	3XI 50 (152)	3XI 70 (213)	3XI 90 (274)	381		51	60.3
(3.96)	(0.23)	(0.15)	(4.88)	Length	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	8.0 (2.44)		(13.87)	(60.32)
	. ,	. ,		Туре	3XT	3XT	3XT	3XT	3XT	3XT			
14.0	0.75	0.5	16.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)	9.5 (2.90)	12.0 (3.66)		5.4	65.0
(4.27)	(0.23)	(0.15)	(4.88)	Length	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	9.0 (2.74)		(14.94)	(64.96)
45.0	0.75	0.5	1/ 0	Туре	3XT	3XT	3XT	3XT	3XT	3XT		( )	
(4 57)	0.75	0.5	(4.88)	V. P. Lenath	9.0 (2.74)	3.0 (0.91)	5.5 (1.68) 9.0 (2.74)	8.0 (2.44)	9.0 (2.74)	9.0 (2.74)		6.0 (16.46)	69.6
(1.07)	(0.20)	(0.10)	(1.00)	Longui	7.0 (2.74)	7.0 (2.74)	7.0 (2.74)	(2.74)	7.0 (2.74)	7.0 (2.74)		(10.10)	(07.00)
	wall h	eignts greate	r (14.9	bi m) are a	chievable.								

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Professional Engineer who is responsible for the final wall design.

6. Backfill material to be compacted to 95% standard proctor.

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SCHEMATIC STRAP/GRID LAYOUT

- Geogrid Placed Flush to Back of Blocks
- Strap Wrapped Around Lift Hook on Block
   Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)
- Geotextile Fabric and Strap (Typ., All Levels)

Geotextile Fabric and Stone Required Behind Blocks (Not Shown For Clarity)

February 26, 2008

100 psf (4.79 kPa)

(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED BEHIND BLOCKS, SEE TYPICAL DETAILS)



#### Silty Sand, Fine to Medium Sand

with an Internal Angle of Friction ( $\phi$ ) = 30°

• Soil Reinforced with Mirafi Miragrid

Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap
 250 psf (11.96 kPa) Live Load Surcharge, No Back Slope, No Front Slope

	250 psf
2.01 (0.01)	(11.96 kPa)
3.0" (0.91 m)	
	(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED
04040	BEHIND BLOCKS, SEE TYPICAL DETAILS)

Paraweb GEOGRID LAYOUT Wall Leveling Wall Approx. Approx. 30 Strap Grid Type Specified for Each Layer Heght Bury Pad Geogrid Paraweb Depth Depth Lenath/Hook Vertical Placement (V.P.) of Geogrid Layers Measured Up From Top of Leveling Pad ft (m) svd/LF wall ft/I F wall ft (m) ft (m) ft (m) ft (m) Geogrid Length Measured from the Back of the Blocks ft (m) (sq m/m wall) (m/m wall) Analyze As Gravity Wall 0 - 3.0 (0 - 0.91 2XT 2XT Туре 1.0 (0.30) 0.5 20.0 V. P. 3.0 (0.91) 4.0 0.5 0.8 23.2 (1.22) (0.15) (0.15) (6.10) Length 3.0 (0.91) 4.0 (1.22) (2.13) (23.20) Туре 2XT 2XT 5.0 0.5 0.5 20.0 V. P. 29.0 1.0 (0.30) 3.5 (1.07) 0.8 (1.52) (0.15) (0.15) (6.10) 3.0 (0.91) 4.5 (1.37) (2.29) (29.00) Lenath Туре 2XT 2XT 0.5 0.5 20.0 1.5 (0.46) 6.0 V. P. 4.0 (1.22) 0.8 34.8 (1.83)(0.15)(0.15)(6.10)Lenatl 3.0 (0.91) 4.5 (1.37) (2.29)(34.80)2XT 2XT 2XT Туре 0.5 3.0 (0.91) 40.6 7.0 0.5 20.0 V.P. 1.0 (0.30) 5.0 (1.52) 1.2 3.0 (0.91) (2.13)(0.15) (0.15)(6.10) Length 3.0 (0.91) 5.0 (1.52 (3.35) (40.60) 2XT 2XT Туре 2XT 8.0 0.5 0.5 20.0 V.P. 1.0 (0.30) 3.5 (1.07) 6.0 (1.83) 1.5 46.4 (2.44) (0.15) (0.15) (6.10) Length 4.0 (1.22) 4.0 (1.22) 5.5 (1.68) (4.11) (46.40) 2XT 2XT Туре 2XT 2XT 5.0 (1.52) 7.0 (2.13) 9.0 0.5 0.5 20.0 VΡ 1.0 (0.30) 3.0 (0.91) 22 522 (2.74) (0.15) (0.15) (6.10) Lenath 4.5 (1.37) 4.5 (1.37) 4.5 (1.37) 6.0 (1.83 (5.94) (52.20) 3XT 3XT Туре 3XT 3XT 3.0 (0.91) 0.5 0.5 20.0 8.0 (2.44) 10.0 V. P. 1.0 (0.30) 5.5 (1.68) 2.4 58.0 (3.05) (0.15) (0.15) (6.10) Lenath 5.0 (1.52) 5.0 (1.52) 5.0 (1.52) 7.0 (2.13) (6.71) (58.00) Туре 3XT 3XT 3XT 3XT 11.0 0.67 0.5 20.0 V.P. 1.5 (0.46) 4.0 (1.22) 6.5 (1.98) 9.0 (2.74) 3.0 63.8 (3.35) (0.20)(0.15) (6.10) 6.5 (1.98) 6.5 (1.98) 6.5 (1.98) 7.5 (2.29) (8.23) (63.80)l enath 3XT 3XT 3XT Туре 3XT 3XT 12.0 0.67 0.5 20.0 V.P. 1.0 (0.30) 3.0 (0.91) 5.0 (1.52) 7.5 (2.29) 10.0 (3.05) 4.0 69.6 (0.20)(0.15) (6.10) 7.0 (2.13) 7.0 (2.13) 7.0 (2.13) 7.0 (2.13) 8.0 (2.44) (10.97)(69.60) (3.66)Length 3XT 3X1 3XT Туре 3XT 3XT 3XT 0.75 0.5 9.0 (2.74) 11.0 (3.35) 13.0 20.0 V. P. 1.0 (0.30) 3.0 (0.91) 5.0 (1.52) 7.0 (2.13) 51 75.4 (3.96) (0.23)(0.15) (6.10) 7.5 (2.29) 7.5 (2.29) 7.5 (2.29) (14.02) (75.40) 7.5 (2.29) 7.5 (2.29) 8.5 (2.59) Lenath 3XT 3XT 3XT Туре 3XT 3X1 3X 14.0 0.75 0.5 20.0 V. P. 1.0 (0.30) 3.0 (0.91) 5.0 (1.52) 7.0 (2.13) 9.5 (2.90) 12.0 (3.66) 5.4 81.2 (0.23)(0.15) 8.0 (2.44) 8.0 (2.44) 8.0 (2.44) 8.0 (2.44) 9.0 (2.74) (14.94) (81.20) (4.27)(6.10) 8.0 (2.44) Lenath Туре 3XT 3XT 3XT 3XT 3X1 3XT 15.0 0.75 0.5 20.0 V. P. 1.0 (0.30) 3.0 (0.91) 5.5 (1.68) 8.0 (2.44) 10.5 (3.20) 13.0 (3.96) 6.1 87.0 9.0 (2.74) 9.0 (2.74) 9.0 (2.74) 9.0 (2.74) 9.0 (2.74) (16.76) (4.57) (0.23)(0.15) (6.10) Length 10.0 (3.05 (87.00) Wall heights greater than 15.0' (4.57 m) are achievable

<u>NOTES:</u> The above chart was prepared by Rosetta<sup>®</sup> Hardscapes LLC for estimating and conceptual design purposes only. All information is believed to be true and accurate, however, Rosetta<sup>®</sup> Hardscapes LLC assumes no responsibility for the use of these design charts for actual construction. Determination of the suitability of each chart is the sole responsibility of the user. <u>Final designs for construction purposes must be performed by a registered</u> Professional Engineer using the actual conditions of the proposed site.

1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

- 2. Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- 3. Designs are in general accordance with NCMA's *Design Manual for Segmental Retaining Walls (2nd ed.)*.
- Global stability has not been addressed in these charts.
   The wall decign shall address both internal and external drainage and chall be evaluated and external drainage.

5. 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. 6. Backfill material to be compacted to 95% standard proctor.
- All Rosetta<sup>®</sup> Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta<sup>®</sup> block must be connected into the reinforced soil mass with individual Paraweb<sup>®</sup> geosynthetic straps. The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6 and 12° high Rosetta<sup>®</sup> blocks have one galvanized lift hook and require one strap per block. The 18° high and 24° high Rosetta<sup>®</sup> blocks have two galvanized lift hooks and require two straps per block.

Deraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

- Geogrid Placed Flush to Back of Blocks
   Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)
- Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)



#### Silty Sand, Fine to Medium Sand

with an Internal Angle of Friction ( $\phi$ ) = 30°

• Soil Reinforced with Mirafi Miragrid

• Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

\_1 2.5 1000

• 1.2.5 (21.8°) Back Slope NoSurcharge No Front Slope

	(GEOTEXTIL	E FABRIC A	ND DRAINSTONE	REQUIRED
111 (AAA)	BEHIND BLO	CKS, SEE T	YPICAL DETAILS	)

Wall Heght	Wall Bury	Leveling Pad	Paraweb 30 Strap	GEOGRID <i>Grid Ty</i>	LAYOUT	r Each Layer						Approx. <i>Geogrid</i>	Approx. <i>Paraweb</i>
ft (m)	Depth ft (m)	Depth <i>ft (m)</i>	Length/Hook	Vertical Geogria	, Placement (V. Length Measu	P.) of Geogria ured from the L	Layers Measu Back of the Blo	ured Up From ocks	Top of Levelinุ	g Pad	ft (m) ft (m)	syd/LF wall (sq m/m wall)	ft/LF wall (m/m wall)
0 - 4.0 (0 - 1.22)	See G	ravity Charts											
5.0 (1.52)	0.5 (0.15)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	2XT 1.5 (0.46) 4.0 (1.22)	2XT 3.5 (1.07) 4.0 (1.22)						0.9 (2.44)	26.1 (26.10)
6.0 (1.83)	0.5 (0.15)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	2XT 1.5 (0.46) 5.0 (1.52)	2XT 4.0 (1.22) 5.0 (1.52)						1.1 (3.05)	31.3 (31.32)
7.0 (2.13)	0.5 (0.15)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	2XT 1.0 (0.30) 7.0 (2.13)	2XT 3.5 (1.07) 7.0 (2.13)	2XT 6.0 (1.83) 7.0 (2.13)					2.3 (6.40)	36.5 (36.54)
8.0 (2.44)	0.5 (0.15)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	2XT 1.0 (0.30) 8.5 (2.59)	2XT 3.5 (1.07) 8.5 (2.59)		2.8 (7.77)	41.8 (41.76)				
9.0 (2.74)	0.5 (0.15)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	2XT 1.0 (0.30) 9.5 (2.90)	2XT 3.0 (0.91) 9.5 (2.90)	2XT 5.5 (1.68) 9.5 (2.90)	2XT 8.0 (2.44) 9.5 (2.90)				4.2 (11.58)	47.0 (46.98)
10.0 (3.05)	0.5 (0.15)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	3XT 1.0 (0.30) 11.5 (3.51)	3XT 3.5 (1.07) 11.5 (3.51)	3XT 6.0 (1.83) 11.5 (3.51)	3XT 8.5 (2.59) 11.5 (3.51)				5.1 (14.02)	52.2 (52.20)
11.0 (3.35)	0.67 (0.20)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	3XT 1.0 (0.30) 12.0 (3.66)	3XT 3.0 (0.91) 12.0 (3.66)	3XT 5.0 (1.52) 12.0 (3.66)	3XT 7.5 (2.29) 12.0 (3.66)	3XT 10.0 (3.05) 12.0 (3.66)			6.7 (18.29)	57.4 (57.42)
12.0 (3.66)	0.67 (0.20)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	3XT 1.0 (0.30) 13.0 (3.96)	3XT 3.0 (0.91) 13.0 (3.96)	3XT 5.0 (1.52) 13.0 (3.96)	3XT 7.0 (2.13) 13.0 (3.96)	3XT 9.0 (2.74) 13.0 (3.96)	3XT 11.0 (3.35) 13.0 (3.96)		8.7 (23.77)	62.6 (62.64)
13.0 (3.96)	0.75 (0.23)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	3XT 1.0 (0.30) 13.5 (4.11)	3XT 3.0 (0.91) 13.5 (4.11)	3XT 5.0 (1.52) 13.5 (4.11)	3XT 7.0 (2.13) 13.5 (4.11)	3XT 9.0 (2.74) 13.5 (4.11)	3XT 11.0 (3.35) 13.5 (4.11)		9.0 (24.69)	67.9 (67.86)
14.0 (4.27)	0.75 (0.23)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	3XT 0.5 (0.15) 13.5 (4.11)	3XT 2.0 (0.61) 13.5 (4.11)	3XT 3.5 (1.07) 13.5 (4.11)	3XT 5.5 (1.68) 13.5 (4.11)	3XT 8.0 (2.44) 13.5 (4.11)	3XT 10.5 (3.20) 13.5 (4.11)	3XT 13.0 (3.96) 13.5 (4.11)	10.5 (28.80)	73.1 (73.08)
15.0 (4.57)	0.75 (0.23)	0.5 (0.15)	18.0 (5.49)	Type V. P. Length	3XT 0.5 (0.15) 14.5 (4.42)	3XT 2.0 (0.61) 14.5 (4.42)	3XT 3.5 (1.07) 14.5 (4.42)	3XT 5.5 (1.68) 14.5 (4.42)	3XT 8.0 (2.44) 14.5 (4.42)	3XT 10.5 (3.20) 14.5 (4.42)	3XT 13.0 (3.96) 14.5 (4.42)	11.3 (30.94)	78.3 (78.30)
	Wall h	eights greate	r than 15.0' <mark>(4.</mark> 5	57 m) are a	chievable.								

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1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

- 2. Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- 3. Designs are in general accordance with NCMA's Design Manual for Segmental Retaining Walls (2nd ed.).
- 4. Global stability has not been addressed in these charts

5. 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.

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta<sup>®</sup> block must be connected into the reinforced soil mass with individual Paraweb<sup>®</sup> geosynthetic straps. The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta® blocks have one galvanized lift hook and require one strap per block. The 18" high and

24" high Rosetta® blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks



SCHEMATIC STRAP/GRID LAYOUT

Geogrid Placed Flush to Back of Blocks

- · Strap Wrapped Around Lift Hook on Block Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)

· Geotextile Fabric and Stone Required Behind Blocks (Not Shown For Clarity)



### Silty Sand, Clayey Sand with an Internal Angle of Friction ( $\phi$ ) = 28°

• Soil Reinforced with Mirafi Miragrid

· Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

NO BACK SLOPE

(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

BEHIND BLOCKS, SEE TYPICAL DETAILS)

• No Surcharge, No Back Slope, No Front Slope

Wall	Wall	Leveling	Paraweb	, GEOGRID	LAYOUT		Approx.	Approx.					
Heght	Bury	Pad	30 Strap	Grid Typ	pe Specified for	r Each Layer						Geogrid	Paraweb
	Depth	Depth	Length/Hook	Vertical	Placement (V.	P.) of Geogrid	Layers Measu	red Up From	Top of Leveling	g Pad	ft (m)	syd/LF wall	ft/LF wall
ft (m)	ft (m)	ft (m)	ft (m)	Geogrid	Length Measu	ired from the E	Back of the Blo	cks			ft (m)	(sq m/m wall)	(m/m wall)
0 5 0	Soo C	ravity Charts											
(0 - 1.52)	366 0	ravity crians											
				Туре	2XT	2XT							
6.0	0.5	0.5	15.0	V. P.	1.5 (0.46)	4.0 (1.22)						0.8	26.1
(1.03)	(0.13)	(0.15)	(4.37)	Type	2XT	2XT	2XT					(2.13)	(20.10)
7.0	0.5	0.5	15.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)					1.2	30.5
(2.13)	(0.15)	(0.15)	(4.57)	Length	3.0 (0.91)	3.0 (0.91)	4.5 (1.37)					(3.20)	(30.45)
	0.5	0.5	45.0	Туре	2XT	2XT	2XT						04.0
8.0	0.5	0.5	(4 57)	V. P. Lenath	1.0 (0.30)			1.4	34.8 (34.80)				
(2.11)	(0.10)	(0.10)	(1.07)	Type	2XT			(0.70)	(01.00)				
9.0	0.5	0.5	15.0	V. P.	1.0 (0.30)			2.1	39.2				
(2.74)	(0.15)	(0.15)	(4.57)	Length	4.5 (1.37)	4.5 (1.37)	4.5 (1.37)	5.5 (1.68)				(5.79)	(39.15)
10.0	0.50	0.5	15.0	lype V P	3XI 10 (030)	3XI 30 (091)	3XI 55 (168)	3X1 80 (244)				2.2	13.5
(3.05)	(0.15)	(0.15)	(4.57)	Length	5.0 (1.52)	5.0 (0.71)	5.0 (1.52)	6.0 (1.83)				(6.40)	(43.50)
				Туре	3XT	3XT	3XT	3XT					
11.0	0.67	0.5	15.0	V. P.	1.5 (0.46)	4.0 (1.22)	6.5 (1.98)	9.0 (2.74)				2.9	47.9
(3.35)	(0.20)	(0.15)	(4.57)	Length	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	7.0 (2.13) 2VT	2VT			(8.08)	(47.85)
12.0	0.67	0.5	15.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.5 (2.29)	10.0 (3.05)			3.9	52.2
(3.66)	(0.20)	(0.15)	(4.57)	Length	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.5 (2.29)			(10.82)	(52.20)
				Туре	3XT	3XT	3XT	3XT	3XT				
13.0	0.75	0.5	15.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)	10.5 (3.20)			4.2	56.6
(3.90)	(0.23)	(0.15)	(4.57)	Type	3XT	3XT	3XT	3XT	3XT	3XT		(11.50)	(50.55)
14.0	0.75	0.5	15.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)	9.5 (2.90)	12.0 (3.66)		5.4	60.9
(4.27)	(0.23)	(0.15)	(4.57)	Length	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.5 (2.59)		(14.78)	(60.90)
15.0	0.75	0.5	15.0	Туре	3XT	3XT	3XT	3XT	3XT	3XT		( 0	(5.2
(4.57)	0.75	(0.15)	(4.57)	v. P. Lenath	9.0 (2.74)	3.0 (0.91) 9.0 (2.74)	5.5 (1.68) 9.0 (2.74)	8.0 (2.44) 9.0 (2.74)	9.0 (2.74)	13.0 (3.96) 9.0 (2.74)		6.0 (16.46)	65.3 (65.25)
()	()	(/	()			()	()						
	Mall												
	waiin	eignts greate	a man 15.0 (4.5	or m) are ad	lievable.								

NOTES: The above chart was prepared by Rosetta<sup>®</sup> Hardscapes LLC for estimating and conceptual design purposes only. All information is believed to be true and accurate, however, Rosetta<sup>®</sup> Hardscapes LLC assumes no responsibility for the use of these design charts for actual construction. Determination of the suitability of each chart is the sole responsibility of the user. Final designs for construction purposes must be performed by a registered Professional Engineer using the actual conditions of the proposed site.
Professional Engineer using the actual conditions of the proposed site.
I. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).
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 (2nd ed.)*.
Global stability has not been addressed in these charts.

5. 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.

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta<sup>®</sup> Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta<sup>®</sup> block must be connected into the reinforced soil mass with individual Paraweb<sup>®</sup> geosynthetic straps.

The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta® blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta® blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

· Geogrid Placed Flush to Back of Blocks

- Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between

Geogrid and Strap (Typ., All Levels) · Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)



#### Silty Sand, Clayey Sand

with an Internal Angle of Friction ( $\phi$ ) = 28°

• Soil Reinforced with Mirafi Miragrid

Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

• 100 psf (4	Upst (4.79 kPa) Live Load Surcharge, No Back Slope, No Front Slope															
Wall	Wall	Leveling	Paraweb	GEOGRID	LAYOUT							Approx.	Approx.			
Heght	Bury	Pad	30 Strap	Grid Ty	pe Specified fo	r Each Layer						Geogrid	Paraweb			
	Depth	Depth	Length/Hook	Vertical	Placement (V.	P.) of Geogrid	Layers Measu	Ired Up From	Top of Levelin	g Pad	ft (m)	syd/LF wall	ft/LF wall			
ft (m)	ft (m)	ft (m)	ft (m)	Geogric	l Length Measu	ired from the E	Back of the Blo	ocks			ft (m)	(sq m/m wall)	(m/m wall)			
0 4 0	500 C	rouity Charte														
(0 - 1.22)	See G	avily Charls														
<u> </u>				Туре	2XT	2XT										
5.0	0.5	0.5	18.0	V. P.	1.0 (0.30)	3.5 (1.07)						0.8	26.1			
(1.52)	(0.15)	(0.15)	(5.49)	Length	3.0 (0.91)	4.0 (1.22)						(2.13)	(26.10)			
6.0	0.5	0.5	18.0	Type V P	2XI 15 (0.46)	2XI 4.0 (1.22)						0.8	21.2			
(1.83)	(0.15)	(0.15)	(5.49)	v.r. Length	3.0 (0.40)	4.0 (1.22)						(2.29)	(31.32)			
. ,	. ,	. ,	. ,	Туре	2XT	2XT	2XT						. ,			
7.0	0.5	0.5	18.0	V. P.	1.0 (0.30)		1.2	36.5								
(2.13)	(0.15)	(0.15)	(5.49)	Length	3.0 (0.91)		(3.20)	(36.54)								
8.0	0.5	0.5	18.0	lype V P	e 2XT											
(2.44)	(0.15)	(0.15)	(5.49)	Length	4.0 (1.22)	4.0 (1.22)	5.5 (1.68)					(4.11)	(41.76)			
. ,	. ,	. ,		Туре	2XT	2XT	2XT	2XT								
9.0	0.5	0.5	18.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)				2.2	47.0			
(2.74)	(0.15)	(0.15)	(5.49)	Length	4.5 (1.37)	4.5 (1.37)	4.5 (1.37)	6.0 (1.83)				(5.94)	(46.98)			
10.0	0.5	0.5	10.0	Type V D	3XI 10 (020)	3XI 20 (001)	3XI 55 (160)	3XI 90 (244)				2.4	52.2			
(3.05)	(0.15)	(0.15)	(5.49)	v.r. Length	5.0 (1.52)	5.0 (0.71)	5.0 (1.52)	6.5 (1.98)				(6.55)	(52.20)			
. ,	. ,	. ,		Туре	3XT	3XT	3XT	3XT					. ,			
11.0	0.67	0.5	18.0	V. P.	1.5 (0.46)	4.0 (1.22)	6.5 <b>(1.98)</b>	9.0 (2.74)				3.0	57.4			
(3.35)	(0.20)	(0.15)	(5.49)	Length	6.5 (1.98)	6.5 (1.98)	6.5 (1.98)	7.5 (2.29)	0.17			(8.23)	(57.42)			
12.0	0.67	0.5	10.0	Type V D	3XI 10 (020)	3XI 20 (001)	3XI 5.0 (1.52)	3XI 75 (2.20)	3X I 10.0 (2.05)			4.0	62.6			
(3.66)	(0.20)	(0.15)	(5.49)	Length	7.0 (2.13)	7.0 (2.13)	7.0 (2.13)	7.0 (2.23)	8.0 (2.44)			(10.97)	(62.64)			
				Туре	3XT	3XT	3XT	3XT	3XT	3XT						
13.0	0.75	0.5	18.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.0 (1.52)	7.0 (2.13)	9.0 (2.74)	11.0 (3.35)		5.1	67.9			
(3.96)	(0.23)	(0.15)	(5.49)	Length	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	7.5 (2.29)	8.5 (2.59)		(14.02)	(67.86)			
14.0	0.75	0.5	18.0	Type V P	10 (0 30)	30 (0.91)	3XI 50 (152)	7.0 (2.13)	3XI 95 (290)	371		54	73.1			
(4.27)	(0.23)	(0.15)	(5.49)	Length	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	8.0 (2.44)	9.0 (2.74)		(14.94)	(73.08)			
				Туре	3XT	3XT	3XT	3XT	3XT	3XT						
15.0	0.75	0.5	18.0	V. P.	1.0 (0.30)	3.0 (0.91)	5.5 (1.68)	8.0 (2.44)	10.5 (3.20)	13.0 (3.96)		6.1	78.3			
(4.57)	(0.23)	(0.15)	(5.49)	Length	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)	9.0 (2.74)	10.0 (3.05)		(16.76)	(78.30)			
			-						•	•						
	Wall h	eights greate	r than 15.0' (4.	57 m) are a	chievable.											

<u>NOTES:</u> The above chart was prepared by Rosetta<sup>®</sup> Hardscapes LLC for estimating and conceptual design purposes only. All information is believed to be true and accurate, however, Rosetta<sup>®</sup> Hardscapes LLC assumes no responsibility for the use of these design charts for actual construction. Determination of the suitability of each chart is the sole responsibility of the user. <u>Final designs for construction purposes must be performed by a registered</u> <u>Professional Engineer</u> using the actual conditions of the proposed site.

1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

- Minimum factors of safety are 1.5 for sliding, 2.0 for overturning and 2.0 for bearing capacity.
- 3. Designs are in general accordance with NCMA's *Design Manual for Segmental Retaining Walls (2nd ed.)*.
- 4. Global stability has not been addressed in these charts.

5. 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.

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta® block must be connected into the reinforced soil mass with individual Paraweb® geosynthetic straps.

The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta<sup>®</sup> blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta<sup>®</sup> blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks.



SCHEMATIC STRAP/GRID LAYOUT

- Geogrid Placed Flush to Back of Blocks
- Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)

Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)

February 26, 2008

100 psf (4.79 kPa)

GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED



# Silty Sand, Clayey Sand

#### with an Internal Angle of Friction ( $\phi$ ) = 28°

• Soil Reinforced with Mirafi Miragrid

· Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap • 250 psf (11.96 kPa) Live Load Surcharge, No Back Slope, No Front Slope

Wall Heght <i>ft (m)</i>	Wall Bury Depth ft (m)	Leveling Pad Depth <i>ft (m)</i>	Paraweb 30 Strap Length/Hook <i>ft (m)</i>	GEOGRID Grid Typ Vertical Geogrid	LAYOUT De Specified for Placement (V. Length Measu	r Each Layer P.) of Geogrid ıred from the E	Layers Measu Back of the Blo	ired Up From T	Top of Leveling	g Pad	ft (m) ft (m)	Approx. Geogrid syd/LF wall (sq m/m wall)	Approx. Paraweb ft/LF wall (m/m wall)
0 - 3.0 (0 - 0.91)	Analyz	e As Gravity	Wall	•									
4.0 (1.22)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	2XT 1.0 (0.30) 3.0 (0.91)	2XT 3.0 (0.91) 4.5 (1.37)						0.8 (2.29)	27.8 (27.84)
5.0 (1.52)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	2XT 1.0 (0.30) 3.0 (0.91)	2XT 3.5 (1.07) 5.0 (1.52)						0.9 (2.44)	34.8 (34.80)
6.0 (1.83)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	2XT 1.5 (0.46) 3.0 (0.91)	2XT 4.0 (1.22) 5.0 (1.52)						0.9 (2.44)	41.8 (41.76)
7.0 (2.13)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	2XT 1.0 (0.30) 3.0 (0.91)	2XT 3.0 (0.91) 3.5 (1.07)	2XT 5.0 (1.52) 5.5 (1.68)					1.3 (3.66)	48.7 (48.72)
8.0 (2.44)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	2XT 1.0 (0.30) 4.0 (1.22)	2XT 3.5 (1.07) 4.0 (1.22)	2XT 6.0 (1.83) 6.5 (1.98)					1.6 (4.42)	55.7 (55.68)
9.0 (2.74)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	2XT 1.0 (0.30) 4.5 (1.37)	2XT 3.0 (0.91) 4.5 (1.37)	2XT 5.0 (1.52) 4.5 (1.37)	2XT 7.0 (2.13) 6.5 (1.98)				2.2 (6.10)	62.6 (62.64)
10.0 (3.05)	0.5 (0.15)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	3XT 1.0 (0.30) 5.5 (1.68)	3XT 3.0 (0.91) 5.5 (1.68)	3XT 5.5 (1.68) 5.5 (1.68)	3XT 8.0 (2.44) 7.5 (2.29)				2.7 (7.32)	69.6 (69.60)
11.0 (3.35)	0.67 (0.20)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	3XT 1.0 (0.30) 6.5 (1.98)	3XT 3.0 (0.91) 6.5 (1.98)	3XT 5.0 (1.52) 6.5 (1.98)	3XT 7.0 (2.13) 6.5 (1.98)	3XT 9.0 (2.74) 8.0 (2.44)			3.8 (10.36)	76.6 (76.56)
12.0 (3.66)	0.67 (0.20)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	3XT 1.0 (0.30) 7.5 (2.29)	3XT 3.0 (0.91) 7.5 (2.29)	3XT 5.0 (1.52) 7.5 (2.29)	3XT 7.5 (2.29) 7.5 (2.29)	3XT 10.0 (3.05) 9.0 (2.74)			4.3 (11.89)	83.5 (83.52)
13.0 (3.96)	0.75 (0.23)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	3XT 1.0 (0.30) 8.0 (2.44)	3XT 3.0 (0.91) 8.0 (2.44)	3XT 5.0 (1.52) 8.0 (2.44)	3XT 7.0 (2.13) 8.0 (2.44)	3XT 9.0 (2.74) 8.0 (2.44)	3XT 11.0 (3.35) 9.0 (2.74)		5.4 (14.94)	90.5 (90.48)
14.0 (4.27)	0.75 (0.23)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	3XT 1.0 (0.30) 9.0 (2.74)	3XT 3.0 (0.91) 9.0 (2.74)	3XT 5.0 (1.52) 9.0 (2.74)	3XT 7.0 (2.13) 9.0 (2.74)	3XT 9.5 (2.90) 9.0 (2.74)	3XT 12.0 (3.66) 10.0 (3.05)		6.1 (16.76)	97.4 (97.44)
15.0 (4.57)	0.75 (0.23)	0.5 (0.15)	24.0 (7.32)	Type V. P. Length	3XT 0.5 (0.15) 9.0 (2.74)	3XT 2.0 (0.61) 9.0 (2.74)	3XT 3.5 (1.07) 9.0 (2.74)	3XT 5.5 (1.68) 9.0 (2.74)	3XT 8.0 (2.44) 9.0 (2.74)	3XT 10.5 (3.20) 9.0 (2.74)	3XT 13.0 (3.96) 10.5 (3.20)	7.2 (19.66)	104.4 (104.40)
	Wall h	eights greate	r than 15.0' (4.	57 m) are ad	hievable.								

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- 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 <u>Design Manual for Segmental Retaining Walls (2nd ed.)</u>.
- 4. Global stability has not been addressed in these charts.

5. 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.
- 6. Backfill material to be compacted to 95% standard proctor.
- 7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta® block must be connected into the reinforced soil mass with individual Paraweb® geosynthetic straps

The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta® blocks have one galvanized lift hook and require one strap per block. The 18" high and

24" high Rosetta® blocks have two galvanized lift hooks and require two straps per block. 10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks



250 psf (11.96 kPa)

(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED

BEHIND BLOCKS, SEE TYPICAL DETAILS)

3.0' (0.91 m) MIN. SETBACK

SCHEMATIC STRAP/GRID LAYOUT • Geogrid Placed Flush to Back of Blocks

- Strap Wrapped Around Lift Hook on Block
- Maintain 3" of Compacted Soil Between
- Geogrid and Strap (Typ., All Levels)
- · Geotextile Fabric and Stone Required
- Behind Blocks (Not Shown For Clarity)



#### Silty Sand, Clayey Sand

with an Internal Angle of Friction ( $\phi$ ) = 28°

• Soil Reinforced with Mirafi Miragrid

· Facing Blocks Connected to Reinforced Soil Mass with Paraweb Geosynthetic Strap

• 1:2.5 (21.8°) Back Slope, NoSurcharge, No Front Slope



(GEOTEXTILE FABRIC AND DRAINSTONE REQUIRED BEHIND BLOCKS, SEE TYPICAL DETAILS)

Wall Heght	Wall Bury Depth	Leveling Pad Depth	Paraweb 30 Strap Length/Hook	Paraweb       GEOGRID LAYOUT         30 Strap       Grid Type Specified for Each Layer         .ength/Hook       Vertical Placement (V.P.) of Geogrid Layers Measured Up From Top of Leveling Pad       ft (m)									Approx. Paraweb ft/LF wall
п (m) 0 - 4.0 (0 - 1.22)	It (m)       It (m)       Geogrid Length Measured from the Back of the Blocks       It (m)         See Gravity Charts       See Gravity Charts       It (m)										(sq m/m wall)	(m/m wall)	
5.0 (1.52)	0.5 (0.15)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	2XT 1.5 (0.46) 3.5 (1.07)	2XT 3.5 (1.07) 4.5 (1.37)						0.9 (2.44)	30.5 (30.45)
6.0 (1.83)	0.5 (0.15)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	2XT 1.5 (0.46) 5.0 (1.52)	2XT 4.0 (1.22) 5.0 (1.52)						1.1 (3.05)	36.5 (36.54)
7.0 (2.13)	0.5 (0.15)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	2XT 1.5 (0.46) 9.0 (2.74)	2XT 3.5 (1.07) 9.0 (2.74)	2XT 6.0 (1.83) 9.0 (2.74)					3.0 (8.23)	42.6 (42.63)
8.0 (2.44)	0.5 (0.15)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	2XT 1.0 (0.30) 14.5 (4.42)	2XT 3.5 (1.07) 14.5 (4.42)	2XT 6.0 (1.83) 14.5 (4.42)					4.8 (13.26)	48.7 (48.72)
9.0 (2.74)	0.5 (0.15)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	2XT 1.0 (0.30) 15.0 (4.57)	2XT 3.0 (0.91) 15.0 (4.57)	2XT 5.5 (1.68) 15.0 (4.57)	2XT 8.0 (2.44) 15.0 (4.57)				6.7 (18.29)	54.8 (54.81)
10.0 (3.05)	0.5 (0.15)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	3XT 0.5 (0.15) 16.0 (4.88)	3XT 3.0 (0.91) 16.0 (4.88)	3XT 5.5 (1.68) 16.0 (4.88)	3XT 8.0 (2.44) 16.0 (4.88)				7.1 (19.51)	60.9 (60.90)
11.0 (3.35)	0.67 (0.20)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	3XT 0.5 (0.15) 16.0 (4.88)	3XT 2.5 (0.76) 16.0 (4.88)	3XT 4.5 (1.37) 16.0 (4.88)	3XT 6.5 (1.98) 16.0 (4.88)	3XT 9.0 (2.74) 16.0 (4.88)			8.9 (24.38)	67.0 (66.99)
12.0 (3.66)	0.67 (0.20)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	3XT 0.5 (0.15) 16.0 (4.88)	3XT 2.0 (0.61) 16.0 (4.88)	3XT 3.5 (1.07) 16.0 (4.88)	3XT 5.5 (1.68) 16.0 (4.88)	3XT 7.5 (2.29) 16.0 (4.88)	3XT 10.0 (3.05) 16.0 (4.88)		10.7 (29.26)	73.1 (73.08)
13.0 (3.96)	0.75 (0.23)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	3XT 0.5 (0.15) 17.5 (5.33)	3XT 2.0 (0.61) 17.5 (5.33)	3XT 3.5 (1.07) 17.5 (5.33)	3XT 6.0 (1.83) 17.5 (5.33)	3XT 8.5 (2.59) 17.5 (5.33)	3XT 11.0 (3.35) 17.5 (5.33)		11.7 (32.00)	79.2 (79.17)
14.0 (4.27)	0.75 (0.23)	0.5 (0.15)	21.0 (6.40)	Type V. P. Length	3XT 0.5 (0.15) 18.0 (5.49)	3XT 2.0 (0.61) 18.0 (5.49)	3XT 3.5 (1.07) 18.0 (5.49)	3XT 5.5 (1.68) 18.0 (5.49)	3XT 8.0 (2.44) 18.0 (5.49)	3XT 10.5 (3.20) 18.0 (5.49)	3XT 13.0 (3.96) 18.0 (5.49)	14.0 (38.40)	85.3 (85.26)
	Wall heights greater than 14.0 (4.27 m) are achievable.												

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1. Unit weight of 28°, 30°, 34° and 40° soils is assumed to be 120pcf (18.9 kN/m3).

- 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 (2nd ed.)*.
- Global stability has not been addressed in these charts.

5. 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.

6. Backfill material to be compacted to 95% standard proctor.

7. All Rosetta® Hardscapes LLC Wall System Specifications are to be followed.

8. Each Rosetta® block must be connected into the reinforced soil mass with individual Paraweb® geosynthetic straps.

The straps are to be wrapped around the galvanized lift hook on the back of the block.

9. The 6" and 12" high Rosetta® blocks have one galvanized lift hook and require one strap per block. The 18" high and 24" high Rosetta® blocks have two galvanized lift hooks and require two straps per block.

10. Paraweb strap length in chart is total length. Since the strap is looped around the lift hook, the strap extends half the total distance behind the blocks



SCHEMATIC STRAP/GRID LAYOUT

Geogrid Placed Flush to Back of Blocks
 Strap Wrapped Around Lift Hook on Block

- Maintain 3" of Compacted Soil Between Geogrid and Strap (Typ., All Levels)

· Geotextile Fabric and Stone Required

Behind Blocks (Not Shown For Clarity)