

Offered by: Sitework, Erosion &  
Seeding Supply Company 209 Cane  
Creek Rd, Fletcher NC 28732  
828-654-8990 PH -  
www.sesscompany.com

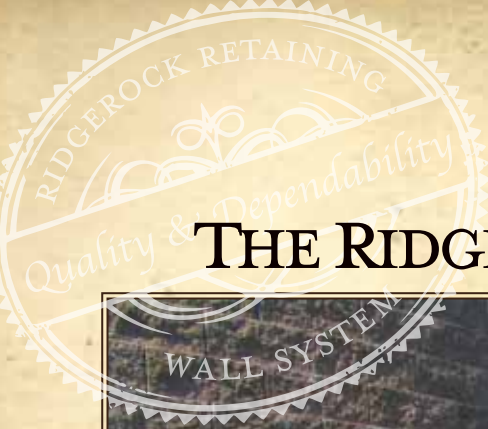


**RidgeRock**

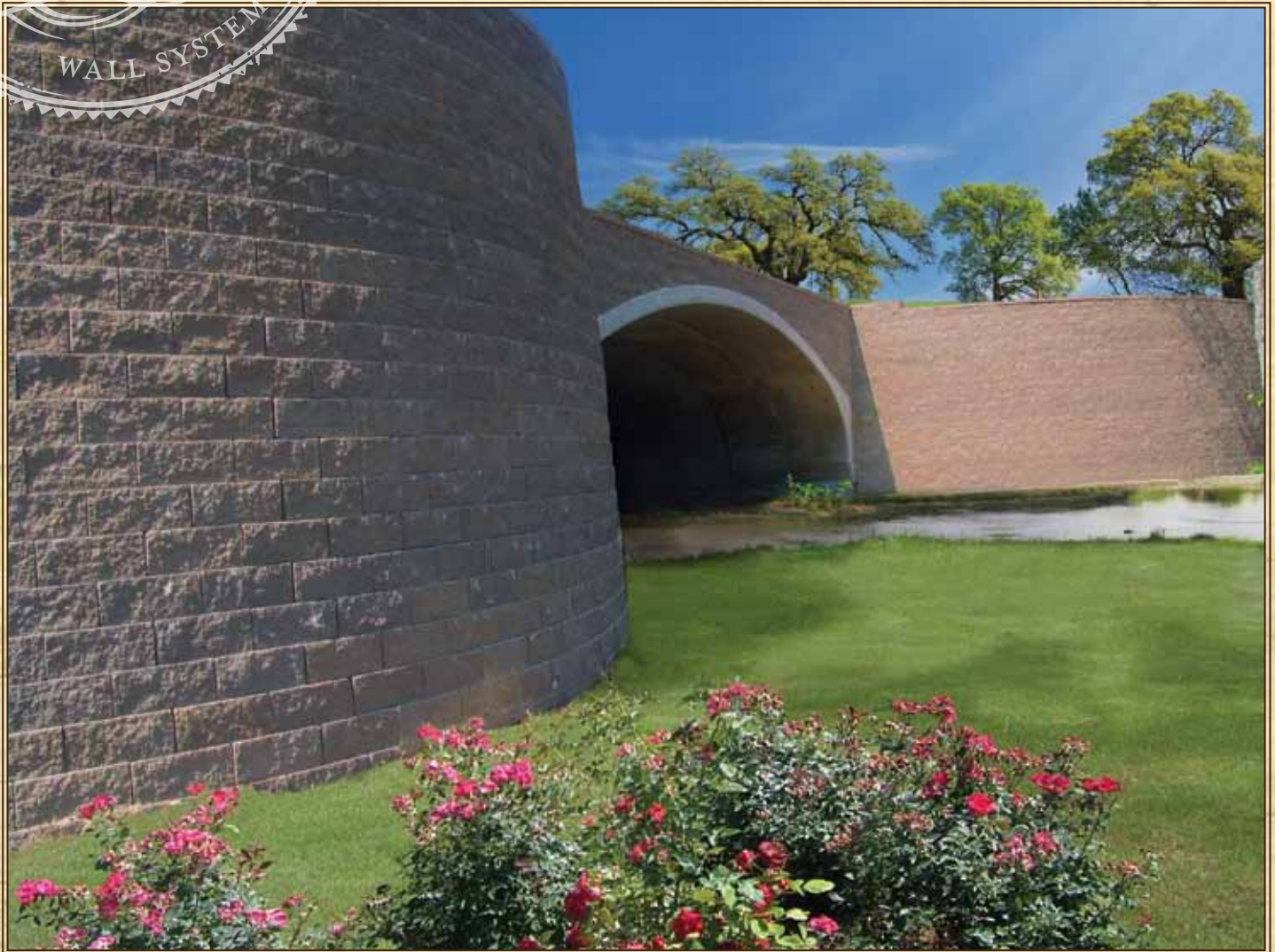
THE ENGINEERED SEGMENTAL RETAINING WALL SYSTEM







# Welcome to THE RIDGEROCK RETAINING WALL SYSTEM



The RidgeRock Retaining Wall System was patented and introduced to the marketplace more than a decade ago. Since its debut, the RidgeRock unit has been a preferred retaining wall product for many contractors. Through advancements in technology and design throughout its existence, the RidgeRock unit has continued to evolve and is now the preferred product of contractors throughout the country.

The RidgeRock Retaining Wall System is the latest advancement in soil retention technology. The RidgeRock system is universal in design and can be used to construct walls from 1 foot to over 60 feet in height. The patented design of the RidgeRock unit incorporates an integral concrete shear key to provide block-to-block shear resistance while the open core design allows drainage stone containment for superior

geogrid connection strength and drainage capabilities. The integrated concrete shear key provides dependable block-to-block shear resistance without the need for cumbersome, often omitted, clips or pins.

Designed for aesthetics and functionality, the RidgeRock engineered segmental retaining wall system gives your project an attractive and cost effective option that complements any natural landscape. RidgeRock is available in varying colors\* and in a straight face or beveled face design. With all RidgeRock has to offer, you have the freedom to create curves, terraces, corners and other complex designs with ease. You are sure to find the perfect solution for your project.

\*Available colors and styles vary by region. Please contact your local RidgeRock representative for available options.





# The Advantages of RidgeRock

## INTEGRAL SHEAR KEY SYSTEM

Incorporated in each RidgeRock unit is an integral user friendly concrete shear key for positive block-to-block shear. Located on the bottom of each unit, the incorporation of the shear mechanism into the block eliminates the needs for pins or clips that can be easily forgotten or misplaced.

## FLEXIBLE WING POSITIONING SYSTEM

The latest advancement in the RidgeRock product line is the inclusion of the Flexible Wing Positioning System (FWPS). The positioning wings, located on either side of the RidgeRock units, provide additional shear resistance between the integral shear key and the underlying course of block while allowing flexibility in block positioning for easy installation of curved walls.

## CHIP-AWAY SHEAR KEY

The integral shear key includes a molded groove to provide easy removal of a predetermined portion of the shear key. Removal of this portion of the shear key allows the construction of walls with a near vertical setback when space is at a premium.

## OPTIONS IN APPEARANCE

RidgeRock is available in beveled face to offer increased shadowing effects or in straight face for clean lines. A variety of color options are available at most locations\*.

## PROVEN SUCCESS

Engineers, architects, municipalities and homeowners have trusted the strength and dependability of RidgeRock for over a decade. RidgeRock can be found in thousands of projects across the country. From 2 ft. planter walls to 60+ ft. commercial walls, trust RidgeRock retaining walls block after block.

\*Available colors and styles vary by region. Please contact your local RidgeRock representative for available options.



### STRAIGHT FACE

Dimensions: 8"h x 12"d x 18"w

Weight: 79 lbs each\*\*

Coverage: 1 sq. ft. per unit

Setback: 1/2" to 1/8" (modified) per course



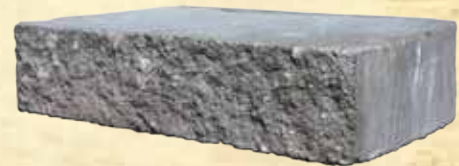
### BEVELED FACE

Dimensions: 8"h x 12"d x 18"w

Weight: 78 lbs each\*\*

Coverage: 1 sq. ft. per unit

Setback: 1/2" to 1/8" (modified) per course



### CAP UNIT

Dimensions: 4"h x 12"d x 18"w

Weight: 65 lbs each\*\*

Coverage: 1/2 sq. ft. per unit

\*\* Weight and other dimensions may vary by location. Please contact your local RidgeRock representative for information.









# Installation Steps

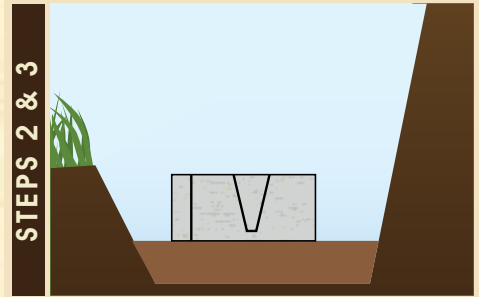
## STEP 1 BASE COURSE PREPARATION

Beginning at the point of lowest elevation, excavate a trench the length of the wall that will accommodate a minimum of 6" of base material and 6" of block embedment. As a rule of thumb for level areas, 1" of block should be embedded for every 8 ft. of wall with a minimum of 6" embedded below grade. If your wall is placed on a slope, check with a local design engineer for requirements. The width of the trench should be a minimum of 24" and your trench depth will vary with wall embedment requirements.



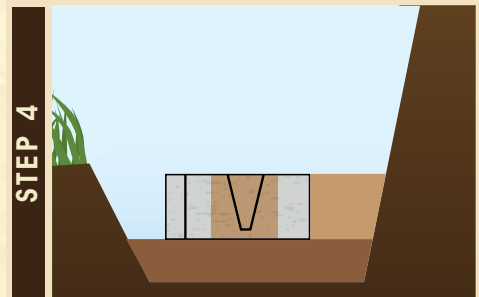
## STEP 2 LEVELING PAD INSTALLATION

Place and compact a minimum of 6" of base material to 95% of Standard Proctor. Base material should consist of 1/2" to 3/4" washed stone or crushed road base. This material will vary from region to region.



## STEP 3 BASE COURSE INSTALLATION

Place the base course of block end-to-end and use a string line along the back of the block to align straight walls. Center the blocks on the pad to allow a minimum of 6" of pad in front of and behind the blocks. Using a 4 ft. level, level the blocks from side-to-side and front-to-back. Level across 3 full blocks to ensure level from block-to-block. Use a rubber mallet to seat the blocks into the leveling pad rather than attempting to push small amounts of material under the blocks.

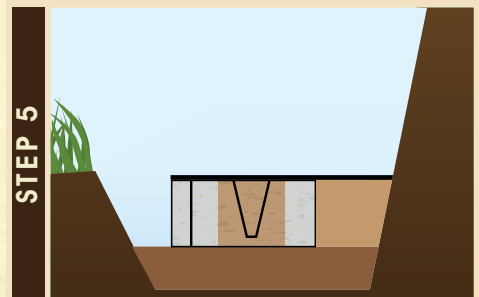


## STEP 4 CORE & DRAINAGE FILL

Place 1/2" to 3/4" clean aggregate within the cores, the area between blocks and a minimum of 12" behind the back of the blocks. Fill 1 block course at a time as wall construction proceeds.

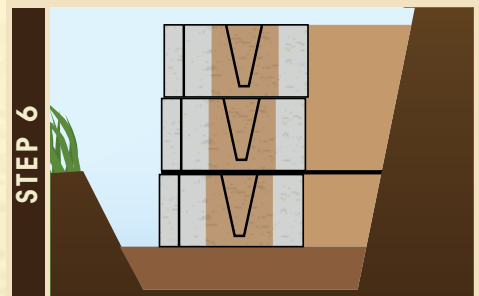
## STEP 5 GEOGRID PLACEMENT

Level the drainage stone with the top of the block and ensure fill dirt has been placed and compacted to this same elevation. Clean all debris from the top of the block course. Cut the proper length and install with the strength direction of the geogrid perpendicular to the wall face. The strength direction is normally the roll direction, but check with the geogrid manufacturer for clarification. Extend geogrid to the front of the block. Place next course of RidgeRock on wall in a running bond configuration to hold geogrid in place. Pull geogrid taut from the back, removing any wrinkles. Pin or stake to hold in place while placing fill. Place and compact infill soils leaving 12" behind blocks for drainage fill. Place and compact drainage fill inside and 12" behind blocks.



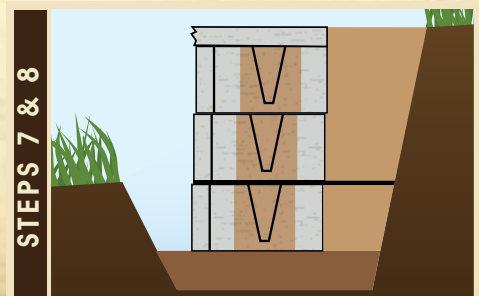
## STEP 6 SUCCESSIVE COURSE INSTALLATION

Prior to adding successive courses, the block should be swept free of debris. Starting in the center of the wall, center the block in a running bond pattern and pull it forward until the Shear Key engages the positioning Wings. Place backfill material in maximum 12" loose lifts and compact to 95% of standard proctor leaving 12" of space behind the block for drainage fill. Place drainage fill behind and in blocks 1 course at a time and compact. Only hand operated compaction equipment such as a vibrating plate compactor should be used within 3 ft. of the back of the block. Continue with successive courses, placing geogrid as required by design until full height is reached.



## STEP 7 CAPPING THE WALL

Top caps are 4" in height and should be placed with the split edge forward. Adhere top caps with construction adhesive specifically manufactured for masonry use. Cap styles may vary by region. Check with your local representative for options.



## STEP 8 TOP OF WALL STEPPING

Where steps must occur in the top of the wall to follow finished grades, double capping at each step can be used to provide a finished appearance.

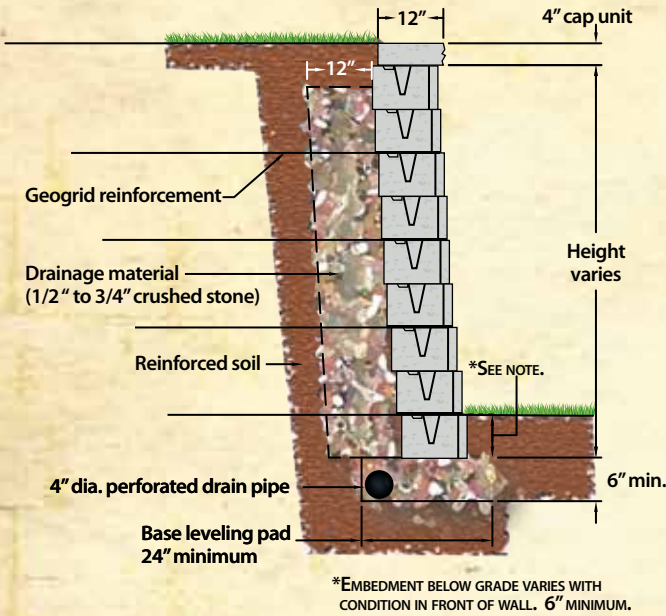
## INSTALLATION NOTES

These application steps are applicable to most situations. However, special design considerations must be given in some instances to ensure hydrostatic forces do not develop and that conditions behind of and in front of the wall are handled correctly. These instances include but are not limited to ponding water, sloping grades, surcharge conditions, fences and guardrails, tiered walls, driveways and roads, groundwater, culverts, bridges, drainage structures and streams or creeks.



# Design Charts and Details

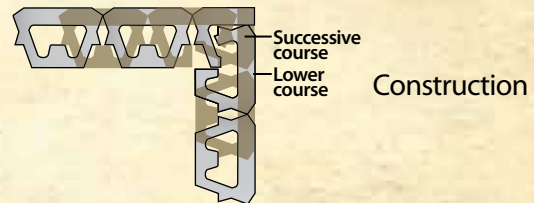
## REINFORCED WALL DETAIL



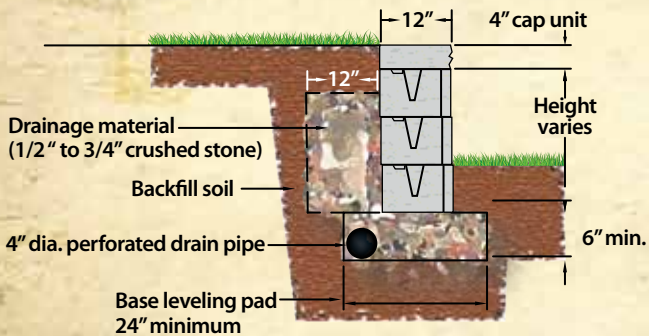
## GRAVITY WALLS (Maximum Unreinforced Wall Height)

	NEAR VERTICAL		3.58° +/- BATTER	
	Level Fill	3H:1V Slope	Level Fill	3H:1V Slope
Sand/Gravel Φ=34°	2'-8"	2'-0"	3'-4"	2'-8"
Silty Sand Φ=30°	2'-8"	2'-0"	2'-8"	2'-0"
Silt/Clean Clay Φ=26°	2'-0"	2'-0"	2'-0"	2'-0"

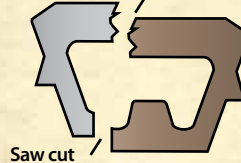
## CORNER DETAIL



## NEAR VERTICAL DETAIL (0.9° BATTER)



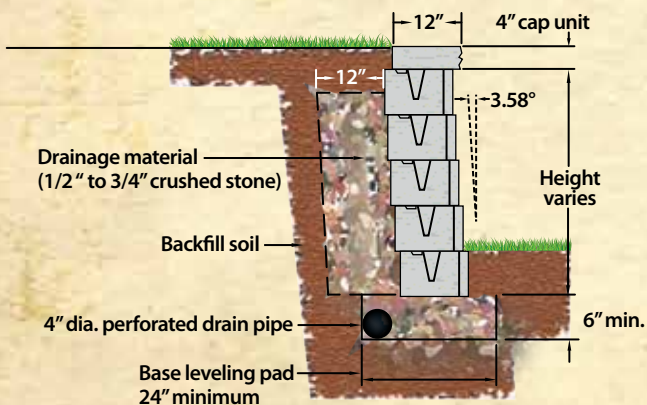
Split with chisel and hammer



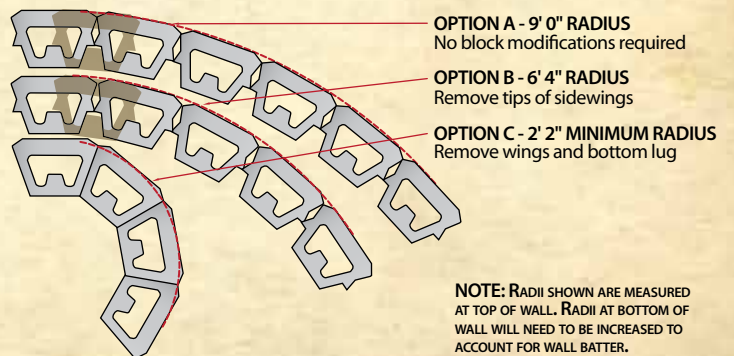
Corner Block Creation

NOTE: PREFABRICATED CORNER UNITS MAY ALSO BE AVAILABLE IN SOME LOCATIONS.

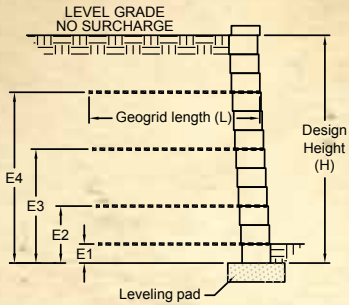
## SETBACK DETAIL (3.58° BATTER)



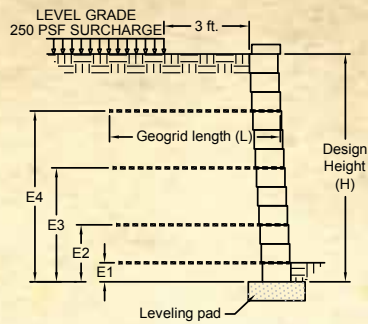
## RADIUS DETAIL



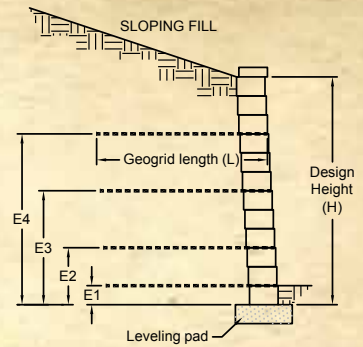




**CASE 1**



**CASE 2**



**CASE 3**

**DESIGN ASSUMPTIONS & NOTES**

- Design charts are applicable only to soils possessing an angle of internal friction (PHI) of 26°, 30° and 34° and a moist unit weight of 120 lbs./cu.ft. For other soil types consult a local design engineer.
- It is assumed that wall construction is in accordance with RidgeRock specifications and industry standards. All backfill soils are assumed compacted to 95% of standard proctor and placed in maximum 8" compacted lifts.
- Gravity wall calculations assume no sloping fill or surcharges within a distance of 2 times the wall height behind the wall.
- Gravity wall calculations assume the use of free draining 1/2" to 3/4" stone for the leveling pad and 12" behind the facing units.
- Unreinforced heights may be increased with the use of additional drainage aggregate in some cases. Contact RidgeRock Retaining Walls Inc. or a qualified engineer for more information.
- The geogrid charts are provided for setback construction only. Setback construction is a wall built with a 1/2" positive setback per course of block. For near vertical construction consult the RidgeRock website for design charts or a qualified engineer for geogrid requirements.
- Geogrid lengths shown are measured from the face of the block to the tails of the geogrid.
- Wall heights shown in the design charts are measured from the top of the leveling pad to the top of the top most 8" block course.
- Design charts provide geogrid requirements in 2 ft. wall height increments. Judgment will be required when interpolating between these heights.
- Geogrid charts are based on the use of GridLok 270 coated polyester geogrid with a design strength (LTDS) of 1475 lb/ft. per the NCMA Design Manual for Segmental Retaining Walls, 3rd Edition. Information on other specific geogrid is available through the manufacturer.
- Information provided in the design charts is for informational purposes only. A qualified engineer should be consulted for final wall design purposes. RidgeRock Retaining Walls Inc. accepts no liability for the improper use of these charts.

**Silt/Lean Clay:  $\Phi=26^\circ$   $\gamma=120$  pcf**

**Case 1, Level fill, No loading**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	5.0	2					
6	5.5	2	4				
8	7.0	2	4	6			
10	8.0	0.67	2	4	6	8	
12	9.5	0.67	2	4	6	8	10

**Case 2, Level fill, 250 psf surcharge**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	5.0	0.67	2				
6	7.0	2	4				
8	8.5	0.67	2	4	6		
10	10.0	0.67	2	4	6	8	
12	11.5	0.67	2	4	6	8	10

**Case 3, 3H:1V Sloping fill**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	5.5	2					
6	6.5	2	4				
8	8.0	0.67	2	4	6		
10	10.0	0.67	2	4	6	8	
12	11.5	0.67	2	4	6	8	10

**Silty Sand:  $\Phi=30^\circ$   $\gamma=120$  pcf**

**Case 1, Level fill, No loading**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	5.0	2	4				
8	6.0	2	4	6			
10	7.5	2	4	6	8		
12	8.5	0.67	2	4	6	8	10

**Case 2, Level fill, 250 psf surcharge**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.5	0.67	2				
6	6.0	2	4				
8	7.0	2	4	6			
10	8.5	0.67	2	4	6	8	
12	10.0	0.67	2	4	6	8	10

**Case 3, 3H:1V Sloping fill**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.5	2					
6	5.5	2	4				
8	7.0	2	4	6			
10	9.0	0.67	2	4	6	8	
12	10.5	0.67	2	4	6	8	10

**Sand/Gravel:  $\Phi=34^\circ$   $\gamma=120$  pcf**

**Case 1, Level fill, No loading**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	4.5	2	4				
8	6.0	2	4	6			
10	7.0	2	4	6	8		
12	8.0	2	4	6	8	10	

**Case 2, Level fill, 250 psf surcharge**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.5	2					
6	5.0	2	4				
8	6.5	2	4	6			
10	7.5	2	4	6	8		
12	8.5	0.67	2	4	6	8	10

**Case 3, 2H:1V Sloping fill**

Design Height (ft.)	Geogrid Length (ft.)	Geogrid Elevations (Feet above base)					
		E-1	E-2	E-3	E-4	E-5	E-6
4	4.0	2					
6	5.5	2	4				
8	7.0	2	4	6			
10	9.0	0.67	2	4	6	8	
12	10.5	0.67	2	4	6	8	10





# The RidgeRock Family of Products

## RIDGEROCK II

With the same flexibility in design and including the same Flexible Wing Positioning System as its larger RidgeRock predecessor, RidgeRock II is a popular choice for all of your retaining wall needs.



## BELGADO

When you are looking for something on a grander scale, look to the Belgado retaining wall system. This system offers a multi-piece appearance with variegated colors for a prestigious and luxurious finish.

## RIDGESCAPE

In a word...GREEN! The RidgeScape reinforced earth system is perfect for those areas where the desired finished appearance is not one of concrete or stone but where level space is still at a premium. Vegetated after construction, this system allows near vertical construction without sacrificing a natural, eco-friendly appearance.



Call your local RidgeRock representative to learn more about how RidgeRock Retaining Walls can meet your most challenging site development and landscaping needs.

Distributed by:



Offered by: Sitework, Erosion & Seeding Supply Company 209 Cane Creek Rd, Fletcher NC 28732  
828-654-8990 PH -  
[www.sesscompany.com](http://www.sesscompany.com)