

6 HIGHLAND STONE® FREE STANDING WALL

PRODUCT DETAILS

- Available in three different face lengths for a random look
- Can be used for straight or curved walls
- Use as seating areas, borders and courtyards
- Can be used for walls up to 3 feet high, including buried course
- Columns or pilasters constructed with the pillar units can be built up to 6 feet high, including buried course
- Minimum radius using all three units: 3.75 feet
- Maximum straight wall length between design elements: 10 feet
- Structural design elements include jog, 90° corner, column, pilaster or 7-foot radius at least 11 feet long



Provide more seating in a small patio with a Highland Stone® Free Standing Wall. See page 13 for more information about capping a column.

6
INCH

Approximate Dimensions*



LARGE

Front, 6" x 18" x 9"
Back, 6" x 16" x 9"



MEDIUM

Front, 6" x 12" x 9"
Back, 6" x 10" x 9"



SMALL

Front, 6" x 6" x 9"
Back, 6" x 4" x 9"

Approximate Weight*

70 lbs.

45 lbs.

20 lbs.

Coverage

.71 sq. ft.

.46 sq. ft.

.21 sq. ft.

ACCESSORIES

Approximate Dimensions*



COLUMN

6" x 18" x 9"



EXTRA LARGE CAP

Front, 3" x 18" x 13"
Back, 3" x 12" x 13"

Approximate Weight*

75 lbs.

44 lbs.

Coverage

.75 sq. ft.

.31 sq. ft.

*Actual dimensions and weights may vary from these approximate dimensions and weights due to variations in manufacturing processes. Specifications may change without notice. See your Anchor representative for details, color options, block dimensions and additional information.

ESTIMATING FORMULAS

For project material estimating, use the formulas listed in each step.

1 WALL ESTIMATING

Straight Walls

Determine the square footage of the exposed wall. Exposed wall is length (L) x height (H) = square feet (SF). $SF \div 1.4 = \#$ units of each size for exposed wall.

$$SF \div 1.4 = \# \text{ units of each size for exposed wall}$$

Curved Walls

The buried course of a curve requires the same kind of blocks as used in the pattern above ground. The square footage of the inside radius is slightly less than the square footage of the outside radius. When estimating, measure the outside wall face. Square footage (SF), including base course, \div by 1.5.

$$SF \div 1.5 = \# \text{ units of each size}$$

2 BURIED BASE UNIT ESTIMATING

Use the large units for the buried base when building straight walls. Divide the wall length (L) by 1.4 to determine the number of large units needed for the base of a straight wall.

$$L \div 1.4 = \# \text{ large units for buried base}$$

3 COLUMN QUANTITY ESTIMATING

Estimate the quantity needed for a column by multiplying the height (H) in feet, including the buried course, x 8.

$$H \times 8 = \# \text{ units per column}$$

4 CAP ESTIMATING

Convert wall length to inches. Wall length (L) x 12 = L in inches (LI). The cap factor (CF) = cap front inches + cap back inches \div 2.

$$LI \times CF = \# \text{ caps for wall}$$

For curved walls, add 10 percent. If you are using wall caps for the column, multiply the number of caps needed per column by the number of columns you are building.

5 WALL LEVELING PAD AGGREGATE ESTIMATING

Leveling pad material is a compactible base material of ¾-inch minus (with fines). The leveling pad extends at least 6 inches in front of and behind the wall units and is at least 6 inches deep after compaction. [Wall length in feet (L) x leveling pad width in feet (W) x leveling pad depth in feet (D)] \div 27 x 1.1 = cubic yards (CY). $CY \times 1.6 =$ tons.

$$(L \times W \times D) \div 27 \times 1.1 = CY$$

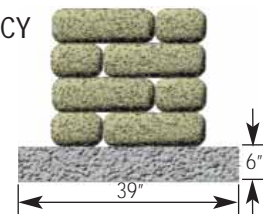
$$CY \times 1.6 = \text{tons}$$

6 COLUMN OR PILASTER LEVELING PAD AGGREGATE ESTIMATING

Leveling pad material is a compactible base material of ¾-inch minus (with fines). The leveling pad for a 27- x 27-inch column or pilaster is 39 inches square and at least 6 inches deep after compaction.

$$(L \times W \times D) \div 27 \times 1.1 = CY$$

$$CY \times 1.6 = \text{tons}$$



PROJECT ESTIMATING EXAMPLE

The project is a 25-foot-long straight wall that is 2.5 feet high. There are three columns that are 3 feet high.

1 STRAIGHT EXPOSED WALL UNITS

$$25' L \times 2' H = 50 SF \div 1.4 = 36 \text{ large, medium and small units for exposed wall}$$

2 BURIED BASE UNITS

$$25' L \div 1.4 = 18 \text{ large units for buried base}$$

TOTAL WALL UNITS NEEDED

Large:

| | |
|----------------------|-----------|
| Buried base units | 18 |
| + Exposed wall units | 36 |
| <u>Total units</u> | <u>54</u> |

| | |
|--------|----|
| Medium | 36 |
| Small | 36 |

3 COLUMN UNITS

$$3' \times 8 = 24 \text{ column units per column}$$

| | |
|--------------------------------------|-----------|
| Total column units needed per column | 24 |
| x Number of columns | 3 |
| <u>Total column units</u> | <u>72</u> |

4 CAP UNITS

LI example: $25' \times 12 = 300$
 CF example: $18'' + 12'' = 30'' \div 2 = 15$
 Project example: $300 \div 15 = 20 \text{ caps for wall}$

5 WALL LEVELING PAD AGGREGATE

$$25' L \times 1.75' W \times .5' D \div 27 \times 1.1 = .9 CY$$

$$.9 CY \times 1.6 = 1.5 \text{ tons}$$

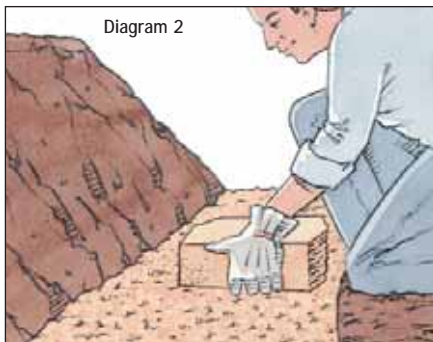
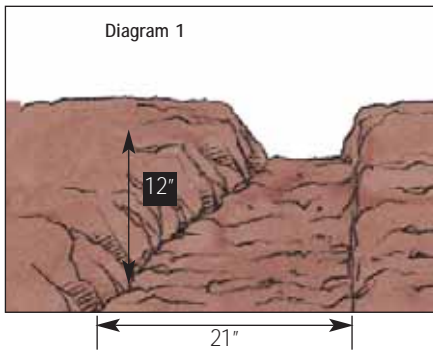
6 COLUMN/PILASTER LEVELING PAD AGGREGATE

$$3.25' \times 3.25' \times .5' = 5.28 \div 27 \times 1.1 = .22 CY$$

aggregate per column. $1.6 \times .22 = .35 \text{ tons of leveling pad aggregate per column}$

| | |
|-----------------------|------------|
| Tons per column | .35 |
| x Number of columns | 3 |
| <u>Tons aggregate</u> | <u>1.1</u> |

HIGHLAND STONE® FREE STANDING WALL INSTALLATION INSTRUCTIONS



PREPARE LEVELING PAD

Excavate for the leveling pad. The trench should be a minimum of 21 inches wide and should be 6 inches deeper than the block. *See Diagram 1.*

Create a leveling pad of compacted base material that extends a minimum of 6 inches in front of and 6 inches behind the wall units. This pad should also be at least 6 inches deep after compaction.

BASE COURSE

Once the pad is compact and level, begin placing the units. Center the units on the pad. The ends of the units should be in contact. The base course must be buried below grade and should be included when calculating total wall height. *See Diagram 2.*



Base Course

It's easiest to build the base course for a straight wall out of large Free Standing Wall units.

BUILDING THE WALL

Units can be placed in any order to form an aesthetically pleasing layout. The simplest is one that incorporates large, medium and small units. The units should be installed so the ends are in complete contact with each other. Remember to keep the wall on bond by placing units in a staggered relationship to the course beneath. Repeat this process to complete the wall. Remember to glue the top two courses and caps in place with a concrete adhesive.



Next Course

ENDING A WALL

Split a large unit into pieces sized as needed. Do not use pieces smaller than 6 inches wide. If needed, cut the second-to-last piece and make the last piece the appropriate size. Smaller pieces should be glued into place with a concrete adhesive. After splitting the end piece, use a hammer and chisel to create a rounded appearance to match the manufactured split blocks.



Wall End

Split

CAPPING A WALL

See page 24 for details about capping a wall.



A Highland Stone® Free Standing Wall provides additional poolside seating when entertaining.

STRUCTURAL DESIGN ELEMENTS

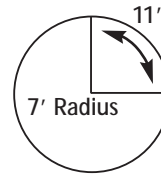
Structural design elements must be used if a free standing wall is more than 10 feet long. Structural design elements include:

- 7-foot radius for 11 feet
- Jog
- 90° corner
- Column
- Pilaster

Construction details for columns and pilasters are on pages 10 through 13.

CURVED WALLS

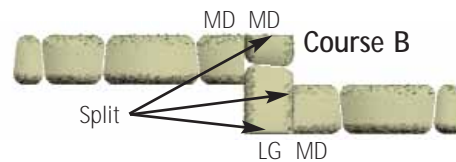
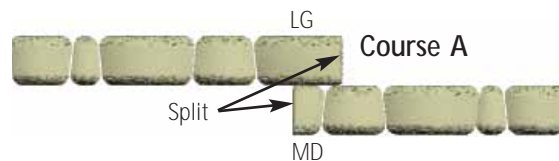
Add stability and a natural flow to walls with curves. While units can be turned somewhat, it may be necessary to make cuts with a concrete saw or splitter. As a rule, the smaller the units, the tighter the radius. Conversely, the larger the units, the larger the radius. Use approximately the same number of units for each course. The approximate minimum radius the system can turn, using all three pieces without cutting, is 3.75 feet measured to the outside face of the wall.



A radius of 7 feet or less is considered a design element if it is one quarter of the circumference of the circle which would be made by that radius (11 feet of a circle with a 7-foot radius).



For a curved wall, use all three unit sizes.

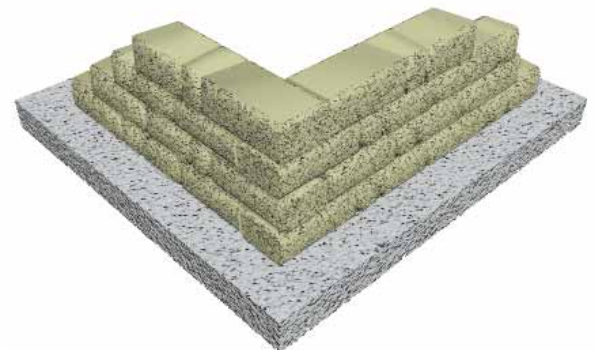
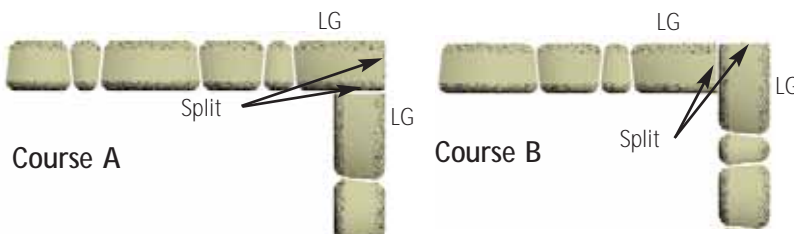


FREE STANDING WALL JOG



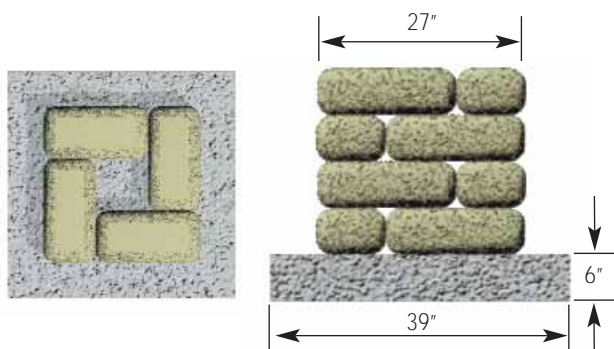
Jogs are used to break up straight lines and add stability to walls. Split units as needed. Use hammer and chisel to round split faces. Glue all courses of jog with a concrete adhesive.

90° CORNER



To create a 90° corner in a straight wall, make a third side to a large unit by splitting it to the appropriate dimension. Use only large units to assure connecting units are on bond. Alternate the direction the units face with each course. Round the split ends with a hammer and chisel. Glue all corner courses with a concrete adhesive.

FREE STANDING WALL CONSTRUCTION DETAILS

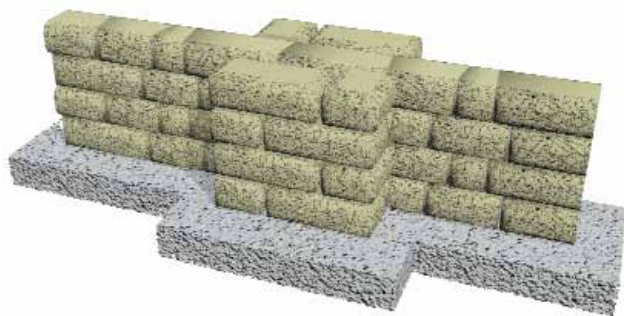


COLUMNS

When used with a free standing wall, a column increases wall stability. Placing fixtures on columns is also a great way to incorporate lighting. Columns can be located in the middle or at the end of a wall. The open space in the center of a column permits reinforcement or electrical wiring if needed. The column leveling pad should extend 6 inches beyond each column edge and be at least 6 inches deep after compaction.

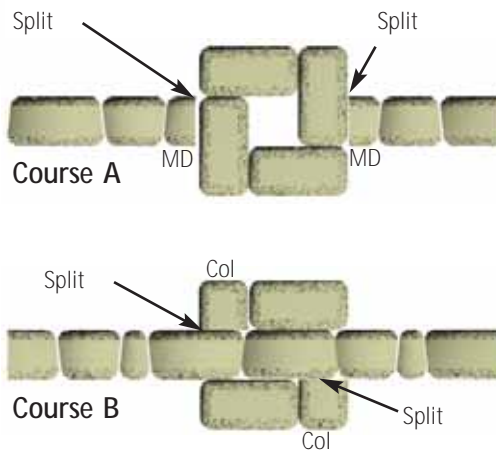
COLUMN AT END OF WALL

To build columns at the end of a wall, cut one column unit in half for the second, fourth and additional even-numbered courses. Stack column units in a rotating pattern for each course so that the bond is staggered. One column unit half is used every two courses. Glue each course of column units with a concrete adhesive. Integrate wall into column as shown to increase stability.



WALL THROUGH COLUMN

On the first course, use complete column units to start the column and cut the wall units to fit. On the second course, cut two column units in half to fill in the corners. Continue construction by alternating courses. Glue all column courses with a concrete adhesive.



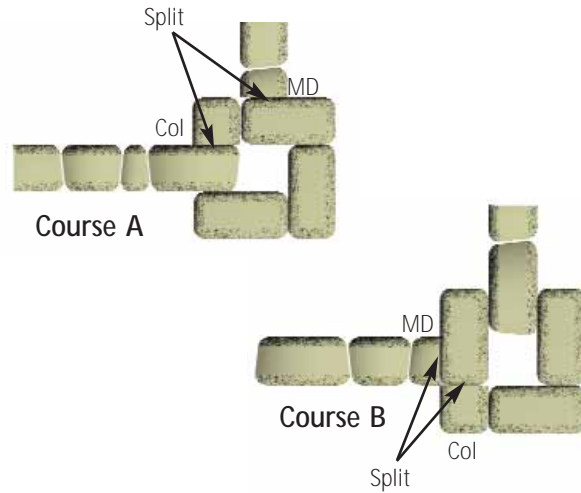
A Highland Stone® Free Standing Wall with columns is a great way to enclose an outdoor room and provide support for a privacy screen and pergola.

90° CORNER AT COLUMN

Frequently, a 90° turn is made at a column. To build this column, cut one column unit per course. Stack column units in a rotating pattern for each course. Glue each course of units with a concrete adhesive.

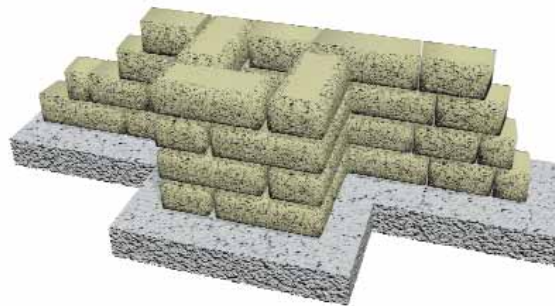
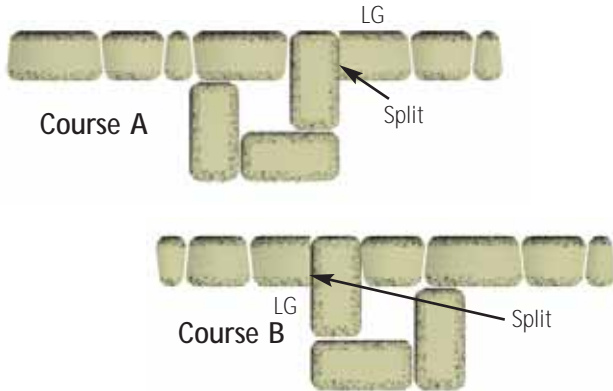


Separate parking from plantings with a Highland Stone® Free Standing Wall. Step a wall up or down at the column.



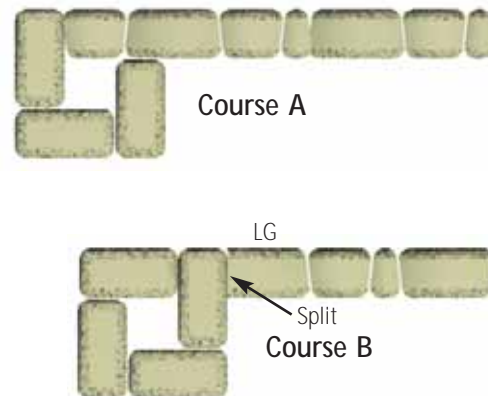
PILASTER IN RUNNING WALL

Pilasters add stability and elegance to a wall. They are located on one side of a wall. To build a pilaster, stack column units in a rotating pattern for each course. Cut wall units as indicated. Glue each course of units in the pilaster with a concrete adhesive.



PILASTER AT END OF WALL

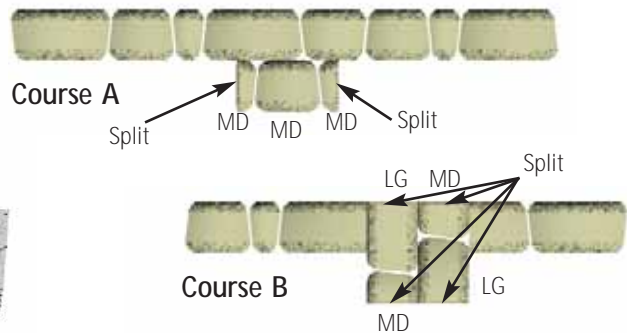
To build a pilaster at the end of a wall, stack three column units as shown for the base course. For the second course, use pillar units, stacking in a rotating pattern. Glue each course of units in the pilaster with concrete adhesive.



Tip: For information on capping a wall, see page 24.

SMALL PILASTER IN WALL

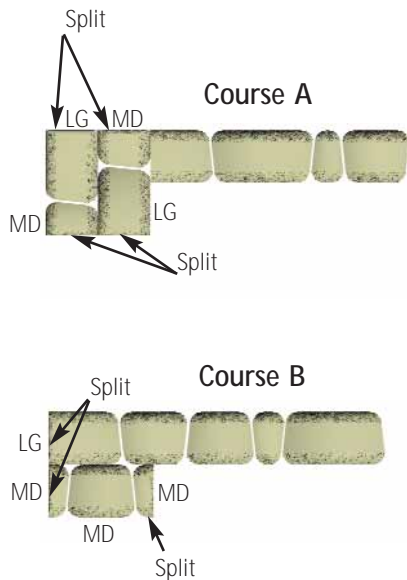
There are times when a pilaster of a different size is needed. To build a smaller pilaster in the running wall, you will need to split a medium unit for the first course. Split the unit so that the pieces, combined with another medium unit, equal 18 inches. Place the units parallel to the wall on the prepared leveling pad. For the second course, split a large and medium unit so that they equal 18 inches. Split a second set of large and medium units to make a second 18-inch section. Insert these units perpendicular to the wall as shown. Glue all courses. Round the split ends with a hammer and chisel.



SMALL PILASTER AT END OF WALL

To build a smaller pilaster at the end of a running free standing wall, you will need to split 4 units for the first course. Split a large and small unit so they equal 18 inches. Split a second set of units to make a second 18-inch section. Insert the unit sets perpendicular to the wall on the prepared leveling pad.

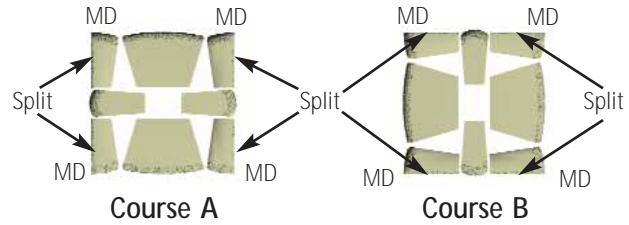
For the second course, center a medium unit over the pilaster base units as shown. Split another unit so that the bond on the course below is staggered. Round the split ends with a hammer and chisel. Glue all pilaster units with a concrete adhesive.



COLUMN WITH LARGE HIGHLAND STONE® RETAINING WALL UNITS



To build a 30-inch column, split two medium wall units in half. Stack column units in a rotating pattern for each course. Glue each course of units with a concrete adhesive. Round the split ends with a hammer and chisel. For more information about Highland Stone retaining wall products, see page 14.



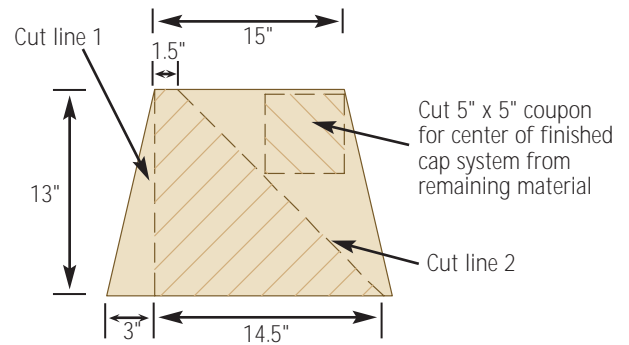
CAPPING A COLUMN

There are numerous ways to cap a column. You can use cap units, single-piece units or natural stone. Here are some options.

Using an Extra Large Cap

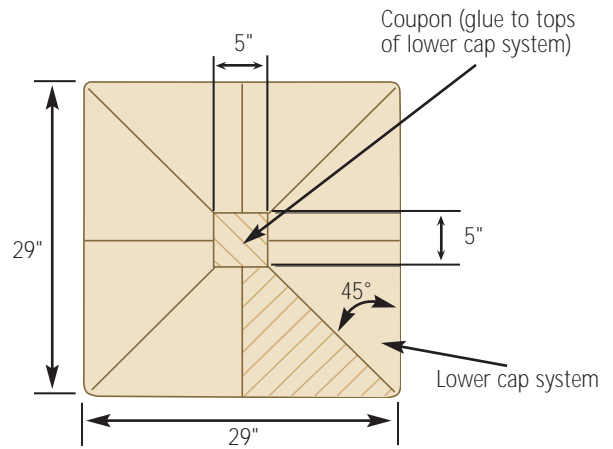
This capping treatment requires 8 extra large trapezoidal cap units. (For other cap dimensions, please contact your dealer for specific instructions.) Each unit is cut as shown. Top with the 5-inch square coupon. Use concrete adhesive to glue all pieces when cap is complete.

EXTRA LARGE CAP

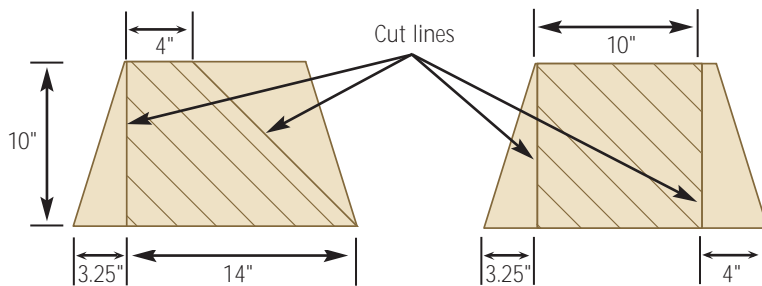


Using a Large Cap

This capping treatment requires 8 large trapezoidal cap units. Each unit is cut as shown. Top with the 10-inch square coupon. Use concrete adhesive to glue all pieces when cap is complete.

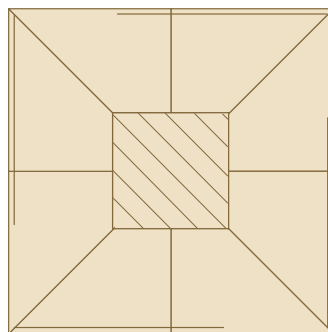
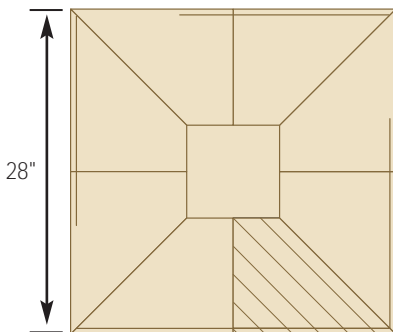


LARGE CAP



Cap Placement

Coupon

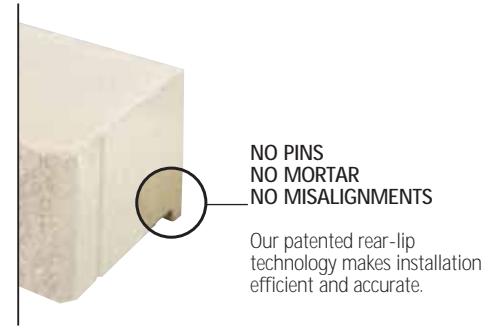


Lights are the perfect way to top off a column. Drill a hole in the coupon and run wiring through the hollow column core.

14 HIGHLAND STONE® RETAINING WALL SYSTEM

PRODUCT DETAILS

- Available in two heights and three face lengths
- Can be used for gravity walls up to 4 feet high, including buried course
- Taller walls can be built with geosynthetic reinforcement when designed by a qualified engineer
- Minimum outside radius, measured on the top course to the back of the units: 4 feet*
- Minimum inside radius, measured on the base course to the front of the units: 8 feet*



3 INCH



| | LARGE | MEDIUM | SMALL |
|--------------------------|-----------------|-----------------|----------------|
| Approximate Dimensions** | 3" x 18" x 11½" | 3" x 12" x 11½" | 3" x 6" x 11½" |
| Approximate Weight** | 41 lbs. | 28 lbs. | 14 lbs. |
| Coverage | .375 sq. ft. | .25 sq. ft. | .125 sq. ft. |
| Setback/Batter | ¼" / 10.6° | ¼" / 10.6° | ¼" / 10.6° |

6 INCH



| | LARGE*** | MEDIUM | SMALL |
|--------------------------|----------------|----------------|---------------|
| Approximate Dimensions** | 6" x 18" x 12" | 6" x 12" x 12" | 6" x 6" x 12" |
| Approximate Weight** | 73 lbs. | 59 lbs. | 30 lbs. |
| Coverage | .75 sq. ft. | .50 sq. ft. | .25 sq. ft. |
| Setback/Batter | 1½" / 10.6° | 1½" / 10.6° | 1½" / 10.6° |

ACCESSORIES***



| | CAP | JUMPER | STEP |
|--------------------------|---|-----------------|----------------|
| Approximate Dimensions** | Front, 3" x 18" x 13" Back, 3" x 12" x 13" | 12" x 6" x 13¼" | 6" x 16" x 12" |
| Approximate Weight** | 44 lbs. | 48 lbs. | 85 lbs. |
| Coverage | 1.25 linear ft. | .50 sq. ft. | .67 sq. ft. |
| Setback/Batter | | 1½" / 10.6° | |

*May vary depending on the installation pattern.

**Actual dimensions and weights may vary from these approximate dimensions and weights due to variations in manufacturing processes.

Specifications may change without notice. See your Anchor representative for details, color options, block dimensions and additional information.

***Large unit features a partial core. Specifications may vary by region.

****Availability may vary by region.

ESTIMATING FORMULAS

For project material estimating, use the formulas listed in each step.

- 1 EXPOSED WALL UNIT ESTIMATING**
 Determine the square footage of the exposed wall:
 Exposed wall length (L) x height (H) = square feet (SF).
 6-INCH UNITS USED ALONE
 $SF \div 1.5 = \# \text{ units each size}$
 3-INCH UNITS USED ALONE
 $SF \div .75 = \# \text{ units each size}$
 3- AND 6-INCH UNITS COMBINED
 $SF \div 2.25 = \# \text{ units each size}$
- 2 BURIED BASE UNIT ESTIMATING**
 Build buried base course using 6-inch large units.
 Determine the length (L) of the base in feet.
 $L \div 1.5 = \# \text{ 6-inch large units}$
- 3 CAP ESTIMATING**
 Convert wall length (L) to inches: $L \times 12 = L$ in inches (LI). Cap factor (CF) = cap front inches + cap back inches $\div 2$.
 For curved wall, add 10%.
 $LI \div CF = \# \text{ caps}$
- 4 FILTER FABRIC ESTIMATING**
 Non-woven, 4- to 6-ounce filter fabric.
 Determine the SF of total wall.
 $SF \div 9 = \text{square yards fabric}$
- 5 LEVELING PAD AGGREGATE ESTIMATING**
 Leveling pad aggregate is a compactible base material of ¾-inch minus (with fines). The leveling pad is a minimum of 6 inches in front of and behind the wall units and 6 inches deep after compaction. Wall length (L) in feet $\div 27 \times 1.1 =$ cubic yards (CY). $CY \times 1.6 =$ tons.
 $L \div 27 \times 1.1 = CY$
 $CY \times 1.6 = \text{tons}$
- 6 DRAINAGE AGGREGATE ESTIMATING**
 Drainage aggregate is clear 1-inch crushed stone (with no fines). The drainage column extends 12 inches behind the wall units. Wall length (L) in feet x total wall height (H) in feet = SF $\div 27 \times 1.1 =$ cubic yards (CY). $CY \times 1.6 =$ tons.
 $SF \div 27 \times 1.1 = CY$
 $CY \times 1.6 = \text{tons}$
- 7 GEOSYNTHETIC REINFORCEMENT ESTIMATING**
 See reinforcement estimating charts on pages 39 to 41 for variations in soil and site conditions.

PROJECT ESTIMATING EXAMPLE

The wall is 50 feet long and 4 feet high, built with 3- and 6-inch units combined. There is no toe or crest slope, and the soils are clean sand and gravel.

- 1 EXPOSED WALL UNITS**
 $50' L \times 3.5' H = 175 SF \div 2.25 = 78 \text{ units of each size}$
- 2 BURIED BASE UNITS**
 $50' L \div 1.5 = 34 \text{ 6-inch-high large units}$

TOTAL UNITS REQUIRED

| | |
|-------------------|------------|
| 6-inch-high units | |
| Large units | 78 |
| Base | 34 |
| <u>Total</u> | <u>112</u> |

| | |
|--------------|----|
| Medium units | 78 |
| Small units | 78 |

| | |
|----------------------|----|
| 3-inch-high units | |
| Large, medium, small | 78 |
- 3 CAP UNITS**
LI example: $50' L \times 12" = 600"$
CF example: $18" + 12" = 30" \div 2 = 15$
Project example: $600" \div 15 = 40 \text{ caps needed}$
- 4 FILTER FABRIC**
 $50' L \times 4' H = 200 SF \div 9 = 23 \text{ square yards fabric needed}$
- 5 LEVELING PAD AGGREGATE**
 $50' L \div 27 = 1.85 \times 1.1 = 2.1 CY \times 1.6 = 3.3 \text{ tons needed}$
- 6 DRAINAGE AGGREGATE**
 $50' L \times 4' H = 200 SF \div 27 \times 1.1 = 8.15 CY \times 1.6 = 13.1 \text{ tons needed}$
- 7 GEOSYNTHETIC REINFORCEMENT**
 See reinforcement estimating charts on pages 39 to 41 for variations in soil and site conditions.



The combination of Highland Stone® 3- and 6-inch units and the jumper unit provide a variety of design options. Turn to page 16 for new installation patterns.

HIGHLAND STONE® RETAINING WALL PATTERNS

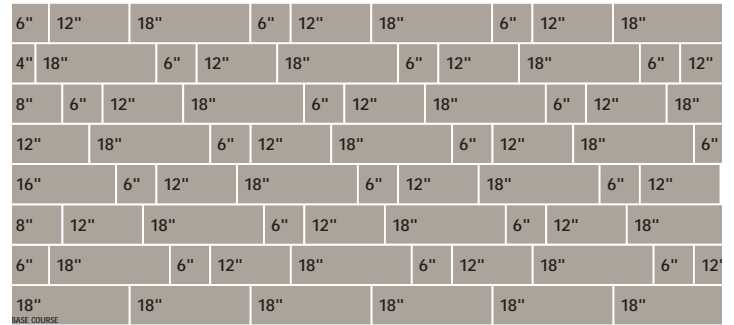
WHEN TO USE A PATTERN

You can install the Highland Stone® system in a random pattern using any combination of units. Just avoid vertical lines that span more than 1 foot in height.

If you are building a wall without geosynthetic reinforcement, use a pattern for inspiration or follow a pattern exactly. Pleasing random patterns can be built using an equal number of 3- and 6-inch-high blocks or using an equal square footage of blocks in each size. The estimating formulas on page 15 are based on using an equal number of blocks of each size in each height.

When building a wall that includes geosynthetic reinforcement, using a pattern at the appropriate spacing eliminates the need to cut the grid. When using a pattern, begin at one edge laying the blocks as indicated. Install at least one repeat of the pattern to establish the pattern before proceeding to the next course.

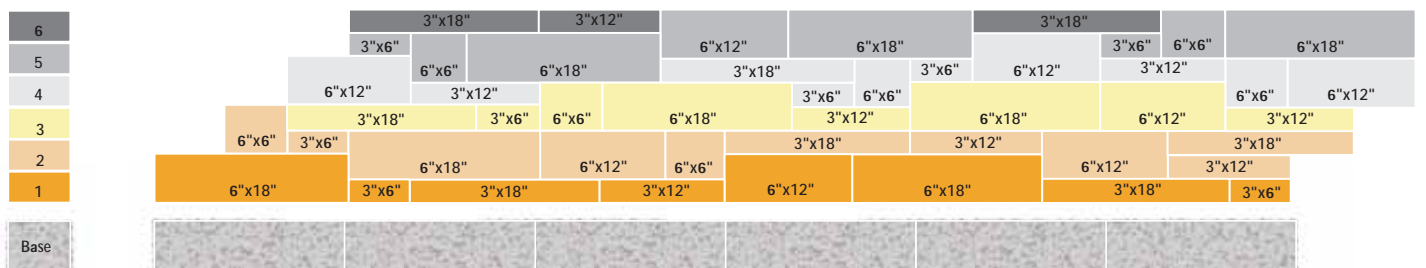
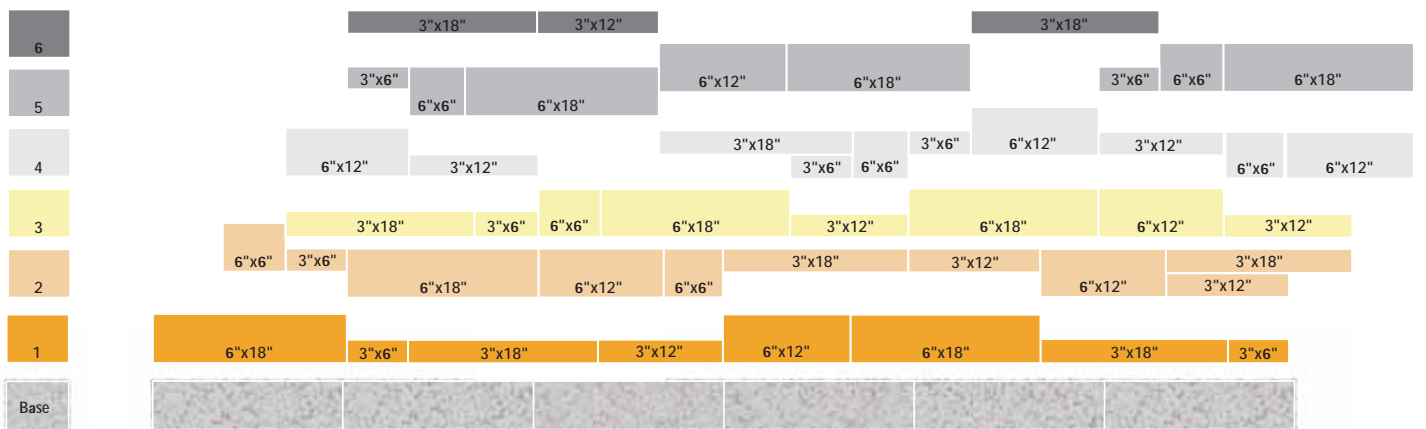
HIGHLAND STONE 6-INCH BLOCK PATTERN



HIGHLAND STONE 3- AND 6-INCH BLOCK COMBINATION PATTERNS

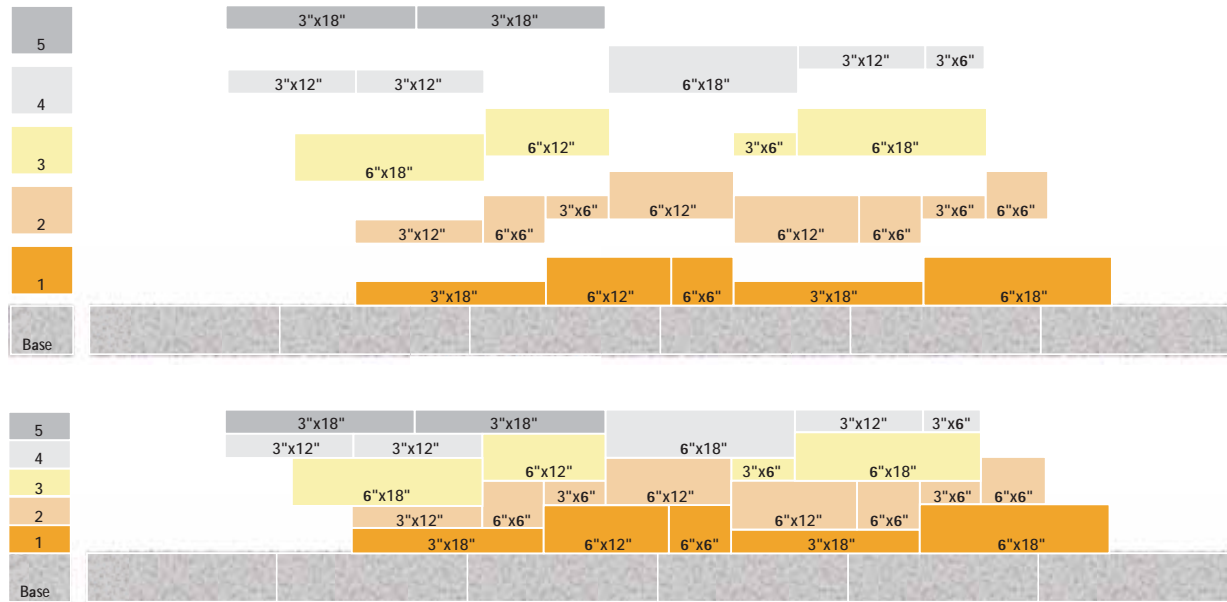
24-INCH BY 9-FOOT PATTERN

This illustrates a 24-inch-high by 9-foot-long repeating pattern. When your plan requires reinforcement, this pattern is ideal because it eliminates cutting.



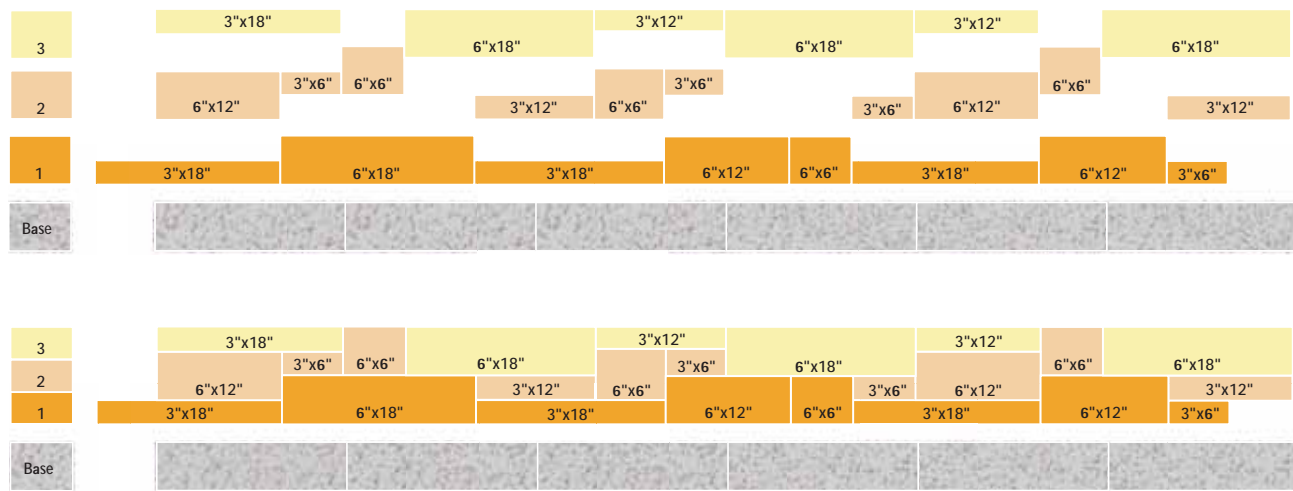
18-INCH BY 6-FOOT PATTERN

This illustrates an 18-inch-high by 6-foot-long repeating pattern. When your plan requires reinforcement, this pattern is ideal because it eliminates cutting.



12-INCH BY 9-FOOT PATTERN

This illustrates a 12-inch-high by 9-foot-long repeating pattern. When your plan requires reinforcement, this pattern is ideal because it eliminates cutting.



CUTTING GRID

Grid can be cut if needed. See page 38 for more information about cutting grid.

PRODUCT DETAILS

- Available in straight- or beveled-face styles
- Can be used for building gravity walls up to 4 feet high, including buried course
- Taller walls can be built with geosynthetic reinforcement when designed by a qualified engineer
- Minimum outside radius: straight face, 4 feet; beveled face, 2 feet
- Minimum inside radius: straight face, 8 feet; beveled face, 4 feet
- ICC-evaluated



**NO PINS
NO MORTAR
NO MISALIGNMENTS**

Our patented rear-lip technology makes installation efficient and accurate.



STRAIGHT FACE*

BEVELED FACE*

Approximate Dimensions**

6" x 17¼" x 12"

6" x 15½" x 12"

Approximate Weight**

72 lbs.

68 lbs.

Coverage

.72 sq. ft.

.67 sq. ft.

**6
INCH**



LARGE CAP

EXTRA LARGE CAP

STEP

Approximate Dimensions**

Front, 3" x 17¼" x 10"

Front, 3" x 18" x 13"

6" x 16" x 12"

Back, 3" x 12" x 10"

Back, 3" x 12" x 13"

Approximate Weight**

32 lbs.

44 lbs.

85 lbs.

ACCESSORIES

*Unit has a partial core. Specifications may vary by region.

**Actual dimensions and weights may vary from these approximate dimensions and weights due to variations in manufacturing processes. Specifications may change without notice. See your Anchor representative for details, color options, block dimensions and additional information.



Diamond® units were used to build a snug sunken patio.

ESTIMATING FORMULAS

For project material estimating, use the formulas listed in each step.

1 WALL UNIT ESTIMATING

Determine the square footage of the total wall, including buried base course. Wall square footage (SF) = length (L) x height (H).

Beveled Face

$$SF \times 1.5 = \# \text{ units}$$

Straight Face

$$SF \times 1.4 = \# \text{ units}$$

2 CAP ESTIMATING

Convert wall length (L) to inches: $L \times 12 = L$ in inches (LI). Cap factor (CF) = cap front inches + cap back inches $\div 2$. (Additional caps will be needed for elevation changes and curves.)

$$LI \div CF = \# \text{ caps}$$

3 LEVELING PAD AGGREGATE ESTIMATING

Leveling pad aggregate is a compactible base material of $\frac{3}{4}$ -inch minus (with fines). The leveling pad extends at least 6 inches in front of and behind the wall units and is at least 6 inches deep after compaction. Wall length in feet (L) $\div 27 \times 1.1$ = cubic yards (CY). $CY \times 1.6$ = tons.

$$L \div 27 \times 1.1 = CY$$

$$CY \times 1.6 = \text{tons}$$

4 DRAINAGE AGGREGATE ESTIMATING

Drainage aggregate is clear, 1-inch crushed stone (with no fines). The drainage column extends 12 inches behind the wall units. Wall length (L) x total wall height (H) = square feet (SF) $\div 27 \times 1.1$ = cubic yards (CY). $CY \times 1.6$ = tons.

$$SF \div 27 \times 1.1 = CY$$

$$CY \times 1.6 = \text{tons}$$

5 GEOSYNTHETIC REINFORCEMENT ESTIMATING

See pages 39 to 41. Choose the appropriate estimating chart based on your project conditions.

PROJECT ESTIMATING EXAMPLE

Total wall is 50 feet long and 4 feet high. The product is beveled-face units. There is no toe or crest slope, and soils are clean sand and gravel.

1 TOTAL WALL UNITS

$$50' L \times 4' H = 200 SF \times 1.5 = 300 \text{ units}$$

2 CAP UNITS

$$LI \text{ example: } 50' L \times 12" = 600$$

$$CF \text{ example: } 17.25" + 12" = 29.25" \div 2 = 14.6$$

$$Project \text{ example: } 600 \div 14.6 = 42 \text{ caps}$$

3 LEVELING PAD AGGREGATE

$$50' L \div 27 = 1.85 \times 1.1 = 2.1 CY \times 1.6 = 3.4 \text{ tons needed}$$

4 DRAINAGE AGGREGATE

$$50' L \times 4' H = 200 SF \div 27 \times 1.1 = 8.15 CY \times 1.6 = 13 \text{ tons needed}$$

5 GEOSYNTHETIC REINFORCEMENT

See reinforcement estimating charts on pages 39 to 41 for variations in soil and site conditions.

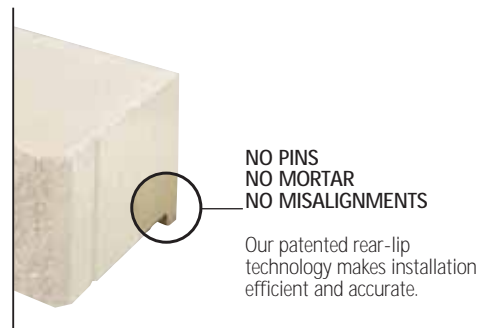


Expand the front yard and provide access using Diamond® wall and step units.

20 | DIAMOND PRO™ RETAINING WALL SYSTEM

PRODUCT DETAILS

- Available in three face styles: Stone Cut™ straight and beveled
- Stone Cut available in three face lengths
- Can be used to build gravity walls, including buried course, up to 3 feet, 4 inches high
- Taller walls can be built with geosynthetic reinforcement when designed by a qualified engineer
- ICC-evaluated



8
INCH



LARGE



MEDIUM



SMALL

STONE CUT™
FACE

| | | | |
|-------------------------|--|----------------|---------------|
| Approximate Dimensions* | 8" x 18" x 12" | 8" x 11" x 12" | 8" x 7" x 12" |
| Approximate Weight* | 77 lbs. | 45 lbs. | 34 lbs. |
| Coverage | 1.0 sq. ft. | .601 sq. ft. | .379 sq. ft. |
| Setback/Batter | 1" / 7.13° | 1" / 7.13° | 1" / 7.13° |
| Minimum Radius | Varies depending on the block pattern used. Minimum inside radius 4'. Minimum outside radius 7'. | | |

BEVELED
AND
STRAIGHT
FACE



BEVELED FACE



STRAIGHT FACE

| | | |
|-------------------------|----------------|----------------|
| Approximate Dimensions* | 8" x 18" x 12" | 8" x 18" x 12" |
| Approximate Weight* | 72 lbs. | 74 lbs. |
| Coverage | 1.0 sq. ft. | 1.0 sq. ft. |
| Setback/Batter | 1" / 7.13° | 1" / 7.13° |
| Inside Radius | 4' | 6' |
| Outside Radius | 4' | 4' |

ACCESSORIES



CAP



CORNER

| | | |
|-------------------------|------------------------|---------------|
| Approximate Dimensions* | Front, 4" x 17¼" x 10" | 8" x 18" x 9" |
| | Back, 4" x 10" x 10" | 8" x 18" x 9" |
| Approximate Weight* | 40 lbs. | 101 lbs. |
| Coverage | .41 sq. ft. | .75 sq. ft. |

DIAMOND PRO™ STONE CUT™ FACE INSTALLATION PATTERN

| | | | | | | |
|---|----|----|----|----|----|-----|
| C | 11 | 18 | 7 | 11 | 18 | 7 |
| C | 7 | 11 | 18 | 7 | 11 | 9** |
| C | 18 | 11 | 7 | 18 | 11 | 7 |
| C | 11 | 7 | 18 | 11 | 7 | 9** |

This is one of many random patterns that can be created with 3-piece Diamond Pro™ Stone Cut™. Virtually any configuration will work, provided you maintain a good running bond between courses.

**Partial unit. 'C' represents a corner unit.

*Actual dimensions and weights may vary from these approximate dimensions and weights due to the manufacturing process. Specifications may change without notice. See your Anchor representative for details, color options, block dimensions and additional information.

ESTIMATING FORMULAS

For project material estimating, use the formulas listed in each step.

1 WALL UNIT ESTIMATING

Choose the wall unit formula based on the face style.

STRAIGHT AND BEVELED WALL UNIT ESTIMATING

Determine the square footage of the *total* wall, including buried course. Square footage (SF) of total wall is length (L) x height (H). If using straight or beveled, skip to step 3.

$$SF \times 1 = \# \text{ of units}$$

EXPOSED WALL UNITS – ESTIMATING STONE CUT™ FACE

Determine the square footage of the *exposed* wall. Square footage (SF) of exposed wall is length (L) x height (H).

$$SF \div 2 = \# \text{ units of each size}$$

2 BURIED BASE UNIT ESTIMATING – STONE CUT FACE

Build buried base course using large units. Determine the length (L) of the base in feet.

$$L \div 1.5 = \# \text{ large units for buried base}$$

3 CAP ESTIMATING

Convert wall length (L) to inches: $L \times 12 = L$ in inches (LI). Cap factor (CF) = cap front inches + cap back inches $\div 2$.

$$LI \div CF = \# \text{ caps}$$

4 LEVELING PAD AGGREGATE ESTIMATING

Leveling pad material is a compactible base material of $\frac{3}{4}$ -inch minus (with fines). The leveling pad extends at least 6 inches in front of and at least 6 inches behind the wall units and is at least 6 inches deep after compaction. Wall length in feet (L) $\div 27 \times 1.1 =$ cubic yards (CY). $CY \times 1.6 =$ tons.

$$L \div 27 \times 1.1 = CY$$

$$CY \times 1.6 = \text{tons}$$

5 DRAINAGE AGGREGATE ESTIMATING

Drainage aggregate is clear $\frac{3}{4}$ - to 1-inch crushed stone (without fines). The drainage column extends a minimum of 12 inches behind the wall units. Wall length (L) x total wall height (H) = square feet (SF) $\div 16.4 =$ tons.

$$SF \div 16.4 = \text{tons}$$

6 CORE FILL AGGREGATE ESTIMATING

Calculate the square feet (SF) of the total wall.
 $SF \div 35 =$ tons

7 GEOSYNTHETIC REINFORCEMENT ESTIMATING

See pages 42 to 44 for charts. Choose the appropriate estimating chart based on your project conditions.

PROJECT ESTIMATING EXAMPLE

The wall is 100 feet long and 8 feet high, including buried course. It is built using the Stone Cut 3-piece system. There is no toe or crest slope, and the soils are clean sand and gravel.

1 EXPOSED WALL UNITS

$$100' L \times 7.33' H = 733 SF \div 2 = \underline{367}$$

large, medium and small Stone Cut units needed

2 BURIED BASE UNITS

$$100' L \div 1.5 = \underline{67}$$

large units for the buried course

TOTAL UNITS REQUIRED

| | | |
|-------------|--------------|------------|
| Large units | Wall | 367 |
| | Base | 67 |
| | <u>Total</u> | <u>434</u> |

| | |
|--------------|-----|
| Medium units | 367 |
| Small units | 367 |

3 CAP UNITS

$$CF \text{ example: } 17.25" + 10" = 27.25" \div 2 = \underline{13.7}$$

$$L \text{ example: } 100' \times 12" = \underline{1,200}$$

$$Project \text{ example: } 1,200 \div 13.7 = \underline{88} \text{ caps}$$

4 LEVELING PAD AGGREGATE

$$100' L \div 27 \times 1.1 = \underline{4.1} CY \times 1.6 = \underline{6.6} \text{ tons}$$

5 DRAINAGE AGGREGATE

$$800 SF \div 16.4 = \underline{49} \text{ tons}$$

6 CORE FILL AGGREGATE

$$800 SF \div 35 = \underline{23} \text{ tons}$$

7 GEOSYNTHETIC REINFORCEMENT ESTIMATING

See pages 42 to 44 for charts. Choose the appropriate estimating chart based on your project conditions.