

CAST STONE WALL™ TECHNICAL INSTALLATION GUIDE











# CAST STONE WALL™ TECHNICAL INSTALLATION GUIDE

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			Stone Wall and Cast St Face Shells, Ac	one Wall irondack
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# SINGLE SIDED CAST STONE WALL™









Aspen, Random Face



Birch, Random Face



Breckenridge, Mixed Face







	STRETCHER	CORNER	STRETCHER—REDUCED QTY PALLET
SIZE (LxD)	16" x 12"	16" x 8"	16" x 12"
SF PER CUBE	40	16	24
PCS PER CUBE	60	24	36
LBS PER PIECE	50	34	50
LBS PER CUBE	3,000	850	1800

#### NOTE

Single Sided Cast Stone Wall comes in 2 cube configurations: Full Face which contains all straight 6x16 faces and Random Face which contains a mix of random joint faces. Full and Random Face units can be combined in a wall.

- Each Cast Stone Wall unit is .67 square face feet
- Maximum reinforced wall height is 8 feet under ideal conditions

# SINGLE SIDED CAST STONE WALL INSTALLATION GUIDE

#### CALCULATE MATERIALS NEEDED

Refer to the Single Sided Cast Stone Wall Calculator.

# PREPARE THE FOOTING

Dig a trench 24" wide and a minimum of 12" below grade. Make sure the soil at the bottom of the trench is well compacted to prevent settling. In heavy or clay soils for best results, wrap the footer trench in a "U" shape configuration with geotextile. This will preserve the stone base over time and keep it from migrating into the clay soil. Using a vibratory plate compactor install 6" of modified stone in two 3" layers making sure the surface of the last layer is smooth and level. Tip: Add a uniform 1" layer of sand or stone screenings on top of the footing to make the base course easier to level.

INSTALL THE BASE COURSE USING TERRACE WALL $^{\text{\tiny M}}$  Install Terrace Wall as the base course by placing the units, lip side up, on the prepared base.

Level the Terrace Wall base course units from front to back and side-to-side using a dead blow hammer and level. Use a string line along the back of the block to verify straightness.

Note: Core fill all units with #57 (1-1/4", 3/4" and 1/2") or #67 (3/4") clean stone. Crushed or recycled concrete is NOT suitable for this purpose.

# **BACKFILL THE UNITS**

Backfill at least 12" behind each layer of Cast Stone Wall with #57 (1-1/4", 3/4" and 1/2") or #67 (3/4") clean stone (for drainage) with soil behind the drainage stone. All disturbed areas behind the units must be filled and compacted. Tip: One ton of 3/4" clean stone will core fill and backfill about 21 Cast Stone Wall blocks.

#### **INSTALLING ADDITIONAL COURSES**

Place the next and additional courses of Cast Stone Wall in such a fashion that each block bridges two units below in a running bond pattern. Cast Stone Wall is intended to be built as a vertical wall system. Use a level against the back of the blocks to determine vertical alignment from course to course. Use a high strength, flexible concrete adhesive to bond every course to the one below including the Terrace Wall base course. EP Henry recommends the use of Techniseal Structure Bond Adhesive. Backfill each course as the wall is being built and fill the block cores with #57 (1-1/4", 3/4" and 1/2") or #67 (3/4") clean stone.

#### CAP THE WALL

Cut caps with a diamond blade saw to fit, as needed. Attach the wall cap block with a high strength, flexible concrete adhesive.

ADDITIONAL TIPS: BUILDING 90° CORNERS Full Face and Random Face 8"x6"x16" units with a finished end are available for 90° corners.

CONSTRUCTING CURVED OR SERPENTINE WALLS The tapered shape of Cast Stone Wall makes it easy to create curved walls without any additional work.

#### **CONSTRUCTING STEPS**

Attractive steps, in either straight or semi-circular designs, are easy to build with Cast Stone Wall units. The block units are used for the risers, with the block caps or another material, such as Bullnose Pavers, used for the tread. Use the Step Filler block in step applications where the product will not be visible.

NOTE: THESE INSTRUCTIONS ARE MEANT AS A GENERAL GUIDELINE FOR WALLS UNDER IDEAL CONDITIONS, AND ASSUMING NO SLOPES OR SURCHARGES. SITE-SPECIFIC CONDITIONS MAY WARRANT ADDITIONAL INSTALLATION REQUIREMENTS.

# SINGLE SIDED CAST STONE WALL CALCULATOR

								WALL L	ENGTH							
		1'4"	2'8"	4'0"	5'4"	6'8"	8'0"	9'4"	10'8"	12'0"	13'4"	14'8"	16'0"	17'4"	18'8"	20'0"
	6"	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
l	1'0"	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
\	1'6"	3	6	9	12	15	18	21	24	27	30	33	36	39	42	45
EIG	2'0"	4	8	12	16	20	24	28	32	36	40	44	48	52	56	60
<del>=</del>	2'6"	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75
<del> </del>	3'0"	6	12	18	24	30	36	42	48	54	60	66	72	78	84	90
≥	CAPS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Maximum unreinforced wall height is 30" (5 courses).

Stretcher Unit Size: 12"Dx6"Hx16"W Weight: Approx. 50 lbs.

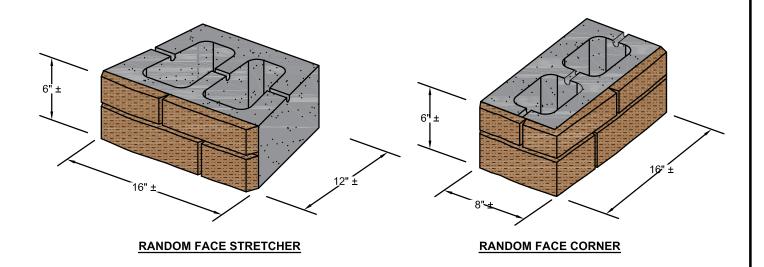
Corner Unit Size: 8"Dx6"Hx16"W Weight: Approx. 34 lbs.

14" Double Sided Devonstone Cap: 36" x 14" x 2" Weight: 80 lbs.

- 1. CAST STONE WALL COMES IN A RANDOM MIX OF PROFILES IN 2 CUBE OFFERINGS: CAST STONE WALL FULL FACE IS ALL STRAIGHT. 6X16 FACES AND CAST STONE WALL RANDOM FACE HAS RANDOM JOINT FACES.
- 2. CORES AND VOIDS SHALL BE FILLED WITH A #57 CLEAN STONE MEETING THE FOLLOWING GRADATION:

SIEVE SIZE:	% PASSING:
1"	100 - 95
1/2"	100 - 25
No.4	0 - 10
No.8	0 - 5

- 3. ALL BASE UNITS SHALL BE TERRACE WALL STRETCHER UNITS AND SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 6".
- 4. HIGH STRENGTH CONCRETE ADHESIVE SHALL BE USED BETWEEN UNITS ON EACH SUCCESSIVE COURSE BEGINNING AT THE TOP OF THE BASE UNITS.



4



TITLE:

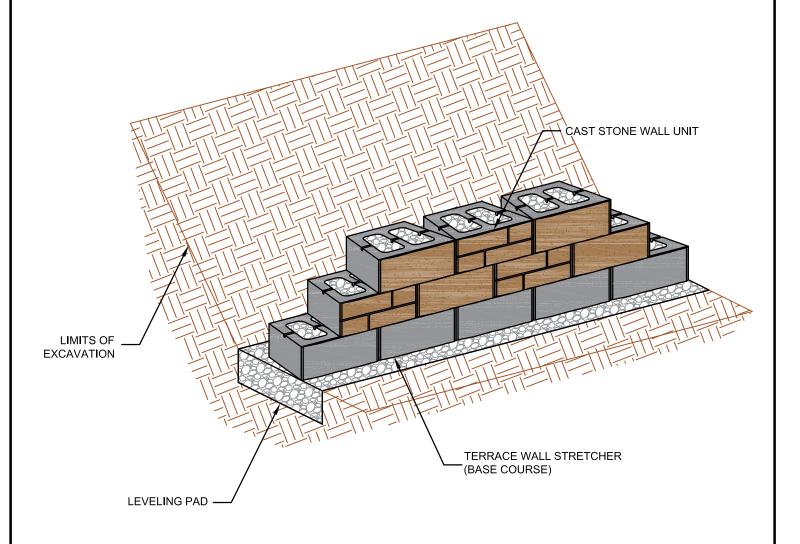
CAST STONE WALL TYPICAL UNIT DETAIL

SCALE:

1. THE LEVELING PAD SHALL BE CONSTRUCTED OF DGA OR CLEAN #57 STONE MEETING THE FOLLOWING GRADATION:

SIEVE SIZE:	<u>% PASSING:</u>
1"	100 - 95
1/2"	100 - 25
No.4	0 - 10
No.8	0 - 5

- 2. THE BASE FOUNDATION SHALL BE APPROVED BY THE SITE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE LEVELING PAD.
- 3. ALL BASE BLOCKS SHALL BE TERRACE WALL STRETCHER UNITS.



**EPHENRY**®

201 Park Ave. Woodbury, NJ 08096 (800)-444-3679 www.ephenry.com TITLE:

CAST STONE WALL BASE LEVELING PAD ISOMETRIC

SCALE:

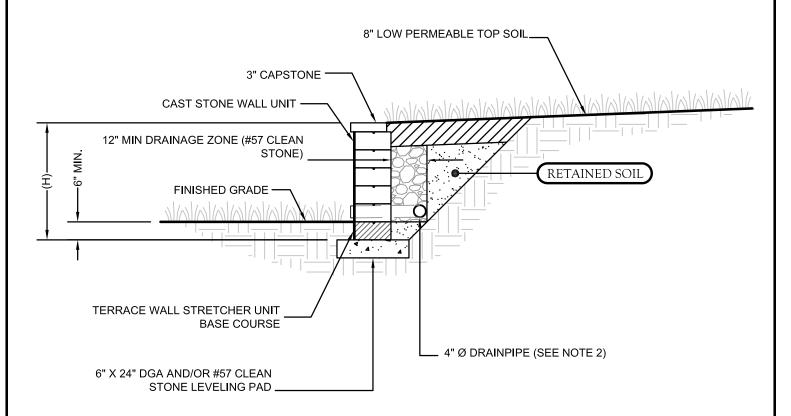
NOT TO SCALE

b

- 1. FOUNDATION SOILS SHALL BE PREPARED PER THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS PRIOR TO CONSTRUCTION.
- OUTLET 4" MINIMUM DRAIN PIPE THROUGH THE WALL FACE OR INTO ONSITE DRAINAGE.
- 3. CAST STONE WALL UNIT COREFILL AND 12" DRAINAGE ZONE SHALL BE FILLED WITH #57 CLEAN STONE MEETING THE FOLLOWING GRADATION:

SIEVE SIZE:	% PASSING
1"	100 - 95
1/2"	100 - 25
No.4	0 - 10
No.8	0 - 5

- 4. ALL BASE UNITS SHALL BE TERRACE STRETCHER UNITS AND SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 6".
- 5. HIGH STRENGTH CONCRETE ADHESIVE SHALL BE USED BETWEEN UNITS ON EACH SUCCESSIVE COURSE BEGINNING AT THE TOP OF THE BASE UNITS.



# TYPICAL GRAVITY WALL SECTION

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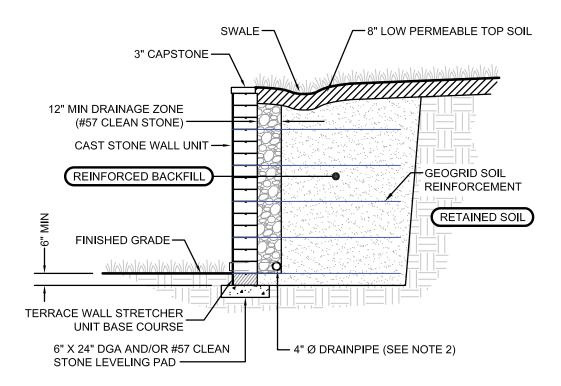
CAST STONE WALL TYPICAL GRAVITY WALL SECTION

SCALE:

- 1. FOUNDATION SOILS SHALL BE PREPARED PER THE GEOTECHNICAL ENGINEERS RECOMMENDATIONS PRIOR TO CONSTRUCTION.
- OUTLET 4" MINIMUM DRAIN PIPE THROUGH THE WALL FACE OR INTO ONSITE DRAINAGE.
- CAST STONE WALL UNIT COREFILL AND 12" DRAINAGE ZONE SHALL BE FILLED WITH #57 CLEAN STONE MEETING THE FOLLOWING GRADATION:

SIEVE SIZE:	% PASSING:
1"	100 - 95
1/2"	100 - 25
No.4	0 - 10
No.8	0 - 5

- 4. ALL BASE UNITS SHALL BE TERRACE STRETCHER UNITS AND SHALL HAVE A MINIMUM EMBEDMENT DEPTH OF 6".
- 5. HIGH STRENGTH CONCRETE ADHESIVE SHALL BE USED BETWEEN UNITS ON EACH SUCCESSIVE COURSE BEGINNING AT THE TOP OF THE BASE UNITS.
- 6. CONSULT WITH LOCAL CODE OFFICIAL FOR WALLS GREATER THAN 4 FEET.



# TYPICAL REINFORCED WALL SECTION



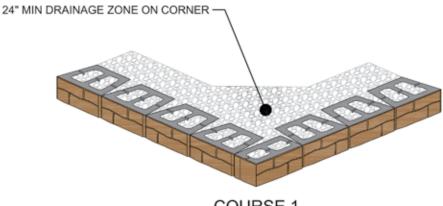
201 Park Ave. Woodbury, NJ 08096 (800)-444-3679 www.ephenry.com TITLE:

LE: CAST STONE WALL
TYPICAL REINFORCED WALL SECTION

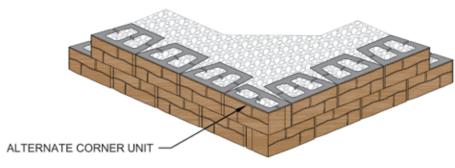
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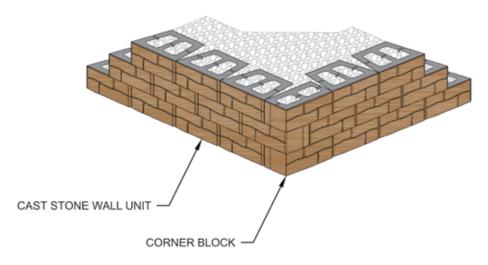
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# COURSE 1



# COURSE 2



# COURSE 3

# NOTES:

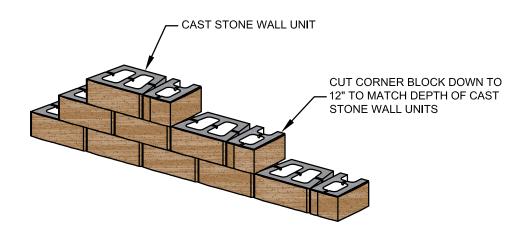
HIGH STRENGTH CONCRETE ADHESIVE SHALL BE USED BETWEEN UNITS ON EACH SUCCESSIVE COURSE BEGINNING AT THE TOP OF THE BASE UNITS.

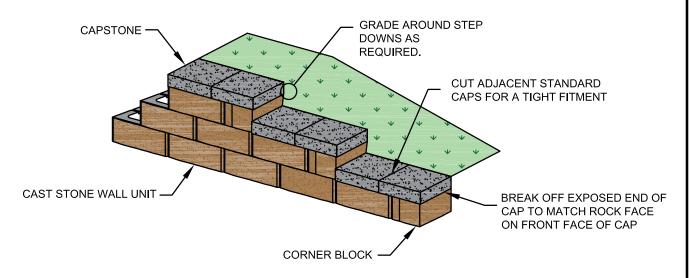
**EPHENRY**®

TITLE:

CAST STONE WALL CORNER INSTALLATION

SCALE:





# END CAP INSTALLATION AT WALL STEP



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CAST STONE WALL TOP OF WALL STEPPING DETAIL

SCALE:

NOT TO SCALE

TITLE:

# SOIL FRICTION ANGLE GRID CHART | 27°

	Exposed	Total	No. of			Laye	er Numl	oer - Pla	ace Gric	l at Elev	ation E	i (ft)
For grid estimating purposes only	Height H', (ft)	Height H, (ft)	Cast Stone Courses	Grid Layers	Length L, (ft)	1	2	3	4	5	6	7
Case 1 with φ = 27 degrees	1.8	2.3	4	1	4.0	1.0						
NO SURCHARGE	2.3	2.8	5	1	4.0	1.0						
NO SLOPE AT TOP OF WALL	2.8	3.3	6	2	4.0	1.0	2.0					
	3.3	3.8	7	2	4.0	1.0	2.5					
	3.8	4.3	8	2	4.0	1.0	2.5					
REINFORCED SOIL	4.3	4.8	9	3	5.0	1.0	2.5	3.5				
REINFORCED SOIL  Φ = 27 DEGREES γ = 120 pcf  γ = 120 pcf	4.8 5.3	5.3 5.8	10	3 3	5.0 5.0	1.0	2.5	3.5				
× = Z	5.8	6.3	11 12	4	6.0	1.0 1.0	2.5 2.5	4.0 4.0	5.0			
I I A	6.3	6.8	13	4	6.0	1.0	2.5	4.0	5.0			
MIRAGRID 2XT	6.8	7.3	14	4	7.0	1.0	2.5	4.0	5.5			
<del>                                  </del>	7.3	7.8	15	5	7.0	1.0	2.5	4.0	5.5	6.5		
<u> E   </u>	7.8	8.3	16	5	7.0	1.0	2.5	4.0	5.5	6.5		
FOUNDATION SOIL $\Phi$ = 27 DEGREES $\gamma$ = 120 pcf	8.3	8.8	17	5	7.5	1.0	2.5	4.0	5.5	7.0		
Case 2 with φ = 27 degrees	1.8	2.3	4	1	5.0	0.5						
SURCHARGE FROM ROADWAY OR PARKING	2.3	2.8	5	2	5.0	0.5	1.5					
NO SLOPE AT TOP OF WALL q = 250psf	2.8	3.3	6	2	5.5	1.0	2.0					
	3.3	3.8	7	2	5.5	1.0	2.0					
	3.8	4.3	8	2	6.5	1.0	2.5					
REINFORCED SOIL	4.3	4.8	9	3	6.5	1.0	2.5	3.5				
1	4.8	5.3	10	3	7.5	1.0	2.5	4.0				
$\Phi$ = 27 DEGREES $\gamma$ = 120 pcf $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$ $\frac{1}{2}$	5.3 5.8	5.8 6.3	11 12	3 4	7.5 7.5	1.0 1.0	2.5 2.5	4.0 4.0	5.0			
	6.3	6.8	13	4	8.5	1.0	2.5	4.0	5.5			
MIRAGRID 2XT	6.8	7.3	14	4	8.5	1.0	2.5	4.0	5.5			
<del>        E</del> 2	7.3	7.8	15	5	9.0	1.0	2.5	4.0	5.5	6.5		
<u> Ε</u> 1 <u></u>	7.8	8.3	16	5	9.0	1.0	2.5	4.0	5.5	6.5		
FOUNDATION SOIL $\Phi$ = 27 DEGREES $\gamma$ = 120 pcf	8.3	8.8	17	5	9.5	1.0	2.5	4.0	5.5	7.0		
Case 3 with φ = 27 degrees	1.8	2.3	4	1	4.0	1.0						
NO SURCHARGE	2.3	2.8	5	1	4.0	1.0						
3:1 MAX SLOPE AT TOP OF WALL	2.8	3.3	6	2	4.0	1.0	2.0					
BACKFILL JOB DE LA DE LA DE LA DEL LA	3.3	3.8	7	2	4.5	1.0	2.5					
Sout.	3.8	4.3	8	2	4.5	1.0	2.5					
	4.3	4.8	9	3	6.0	1.0	2.5	3.5				
REINFORCED SOIL  WELAINED SOIL  DEGREES A=150 bct	4.8 5.3	5.8 6.3	11* 12*	3	6.0 7.0	1.0	2.5 2.5	4.0	5.0			
H   Φ = 27 DEGREES γ = 120 pcf	5.3	6.8	13*	4	7.0 7.0	1.0 1.0	2.5	4.0 4.0	5.0			
	6.3	7.3	14*	4	8.5	1.0	2.5	4.0	5.5			
	6.8	7.8	15*	4	8.5	1.0	2.5	4.0	5.5	6.5		
MIRAGRID 2XT E <sub>2</sub>	7.3	8.3	16*	5	8.5	1.0	2.5	4.0	5.5	6.5		
E <sub>1</sub>   -2	7.8	8.8	17*	5	9.0	1.0	2.5	4.0	5.5	7.0		
FOUNDATION SOIL Φ = 27 DEGREES γ = 120 pcf	*R	i EQUIRES TWO	) FULL COUR	SES BURIE	D_							

- Information presented in this chart is to be used for preliminary design and estimating purposes. Final design should be performed by a Professional Engineer qualified in both geotechnical engineering and segmental retaining
- 2. This estimating chart is applicable to sites where soil conditions meet the following minimum criteria: Angle of Internal Friction,  $\phi > 27^\circ$  and moist unit weight,  $\gamma = 120$  pcf. Typical for low plasticity silts meeting the following USCS classification: ML or coarser.
- 3. Design charts prepared for use with EP Henry's Cast Stone Wall block system with Mirafi's type 2XT reinforcing geogrids. Grids MUST extend to the front face of the block.
- 4. Definitions:

- Definitions.

  H = total height, in feet
  L = length of Mirafi 2XT required, in feet
  φ = angle of internal friction, degrees
  γ = moist unit weight, pounds per cubic foot
  Ei = elevation of grid layer from bottom of wall, in feet
- 5. These charts do not reflect any provisions for global tability or other analyses, which may be related to site-specific conditions including relief of excess hydrostatic pressures due to groundwater or springs. All these conditions should be checked and evaluated as appropriate, using site specific soil and subsurface conditions, as well as any special loading criteria.
- 6. Design Minimum Factors of Safety: 1.5 for reinforcement

- pullout, 1.5 for external sliding, 2.0 for overturning, and 2.0  $\,$ for bearing.
- 7. All walls shall be supported on an aggregate leveling pad and shall have adequate drainage provisions in accordance with EP Henry's standard specification guidelines.
- 8. To the best of our knowledge, the information presented in this design chart is complete and accurate. However, EP Henry Corporation cannot assume any liability or accept any responsibility for the accuracy or completeness of this information. Further, EP Henry Corporation cannot assume any liability for damages arising from claims in which construction proceeded without final design drawings prepared by a Professional Engineer registered in the State of construction specializing in both geotechnical engineering and segmental retaining wall design.

# 30° | SOIL FRICTION ANGLE GRID CHART

	Exposed				Layer Number - Place Grid at Elevation Ei (ft)							
For grid estimating purposes only	Height H', (ft)	Height H, (ft)	Cast Stone Courses	Grid Layers	Length L, (ft)	1	2	3	4	5	6	7
Case 1 with φ = 30 degrees	2.3	2.8	5	1	4.0	1.0						
NO SURCHARGE	2.8	3.3	6	2	4.0	1.0	2.0					
NO SLOPE AT TOP OF WALL	3.3	3.8	7	2	4.0	1.0	2.5					
	3.8	4.3	8	2	4.0	1.0	2.5					
	4.3	4.8	9	3	4.5	1.0	2.5	3.5				
REINFORCED SOIΓ  Φ = 30 DEGREES λ = 150 bct  γ = 120 pcf  γ = 120 pcf	4.8 5.3	5.3 5.8	10 11	3	4.5 5.5	1.0 1.0	2.5 2.5	3.5 4.0				
ψ ή φ = 30 DEGREES y = 120 pcf	5.8	6.3	12	4	5.5	1.0	2.5	4.0	5.0			
Φ = 3	6.3	6.8	13	4	5.5	1.0	2.5	4.0	5.0			
	6.8	7.3	14	4	6.5	1.0	2.5	4.0	5.5			
MIRAGRID 2XT	7.3	7.8	15	5	6.5	1.0	2.5	4.0	5.5	6.5		
	7.8	8.3	16	5	6.5	1.0	2.5	4.0	5.5	6.5		
	8.3	8.8	17	5	7.0	1.0	2.5	4.0	5.5	7.0		
FOUNDATION SOIL Φ = 30 DEGREES γ = 120 pcf	8.3	8.8	17	5	7.5	1.0	2.5	4.0	5.5	7.0		
Case 2 with φ = 30 degrees	1.8	2.3	4	1	4.0	0.5						
SURCHARGE FROM ROADWAY OR PARKING	2.3	2.8	5	2	4.0	0.5	1.5					
NO SLOPE AT TOP OF WALL q = 250psf	2.8	3.3	6	2	4.5	1.0	2.0					
	3.3	3.8	7	2	4.5	1.0	2.0					
_ S	3.8	4.3	8	2	5.5	1.0	2.5	2.5				
REINFORCED SOIL SO	4.3	4.8	9 10	3	5.5	1.0	2.5	3.5				
REINFORCED SOIL	4.8 5.3	5.3 5.8	10	3	5.5 6.5	1.0 1.0	2.5 2.5	3.5 4.0				
H	5.8	6.3	12	4	6.5	1.0	2.5	4.0	5.0			
	6.3	6.8	13	4	6.5	1.0	2.5	4.0	5.0			
MIRAGRID 2XT	6.8	7.3	14	4	7.5	1.0	2.5	4.0	5.5			
<del>                                </del>	7.3	7.8	15	5	7.5	1.0	2.5	4.0	5.5	6.5		
E <sub>1</sub>	7.8	8.3	16	5	7.5	1.0	2.5	4.0	5.5	6.5		
FOUNDATION SOIL Φ = 30 DEGREES γ = 120 pcf	8.3	8.8	17	5	8.0	1.0	2.5	4.0	5.5	7.0		
Case 3 with φ = 30 degrees	1.8	2.3	4	1	4.0	1.0						
NO SURCHARGE	2.3	2.8	5	1	4.0	1.0						
3:1 MAX SLOPE AT TOP OF WALL	2.8	3.3	6	2	4.0	1.0	2.0					
BACKFILL = 50 d	3.3	3.8	7	2	4.5	1.0	2.5					
· · · · · · · · · · · · · · · · · · ·	3.8	4.3	8	2	4.5	1.0	2.5	2.5				
ES SS	4.3	4.8	9	3	6.0	1.0	2.5	3.5				
REINFORCED SOIL  H  Φ = 30 DEGREES γ = 120 pcf	4.8	5.8 6.3	11 12	3	6.0 7.0	1.0 1.0	2.5 2.5	4.0	E 0			
H H Φ=30 DEGREES γ=120 pcf	5.3 5.8	6.8	13	4   4	7.0	1.0	2.5	4.0	5.0 5.0			
<del>                                  </del>	6.3	7.3	14	4	7.0	1.0	2.5	4.0	5.5			
	6.8	7.8	15	5	8.0	1.0	2.5	4.0	5.5	6.5		
MIRAGRID 2XT E <sub>2</sub>	7.3	8.3	16	5	8.0	1.0	2.5	4.0	5.5	6.5		
<u>                                      </u>	7.8	8.8	17	5	8.0	1.0	2.5	4.0	5.5	7.0		
FOUNDATION SOIL $\Phi$ = 30 DEGREES $\gamma$ = 120 pcf		ı EQUIRES TWO	) FULL COUR:	SES BURIE	D .							

#### NOTES:

- 1. Information presented in this chart is to be used for preliminary design and estimating purposes. Final design should be performed by a Professional Engineer qualified in both geotechnical engineering and segmental retaining wall design.
- 2. This estimating chart is applicable to sites where soil conditions meet the following minimum criteria: Angle of Internal Friction, φ > 30° and moist unit weight, γ = 120pcf. Typical for low plasticity silts meeting the following USCS classification: ML or coarser.
- 3. Design charts prepared for use with EP Henry's Cast Stone Wall block system with Mirafi's type 2XT reinforcing geogrids. Grids MUST extend to the front face of the block.

- 4. Definitions:
  - H' = exposed height, in feet H = total height, in feet L = length of Mirafi 2XT required, in feet

  - $\phi$  = angle of internal friction, degrees
  - γ = moist unit weight, pounds per cubic foot
  - Ei = elevation of grid layer from bottom of wall, in feet
- 5. These charts do not reflect any provisions for global stability or other analyses, which may be related to site-specific conditions including relief of excess hydrostatic pressures due to groundwater or springs. All these conditions should be checked and evaluated as appropriate, using site specific soil and subsurface conditions, as well as any special loading criteria.
- 6. Design Minimum Factors of Safety: 1.5 for reinforcement

- pullout, 1.5 for external sliding, 2.0 for overturning, and 2.0 for bearing.
- **7.** All walls shall be supported on an aggregate leveling pad and shall have adequate drainage provisions in accordance with EP Henry's standard specification guidelines.
- 8. To the best of our knowledge, the information presented in this design chart is complete and accurate. However, EP Henry Corporation cannot assume any liability or accept any responsibility for the accuracy or completeness of this information. Further, EP Henry Corporation cannot assume any liability for damages arising from claims in which construction proceeded without final design drawings prepared by a Professional Engineer registered in the State of construction specializing in both geotechnical engineering and segmental retaining wall design.

# SOIL FRICTION ANGLE GRID CHART | 32°

	Exposed	Total	Cast Grid I		Laye	yer Number - Place Grid at Elevation Ei (ft)						
For grid estimating purposes only	Height H', (ft)	Height H, (ft)	Cast Stone Courses	Grid Layers	Length L, (ft)	1	2	3	4	5	6	7
Case 1 with φ = 32 degrees	2.3	2.8	5	1	4.0	1.5						
NO SURCHARGE	2.8	3.3	6	1	4.0	1.5						
NO SLOPE AT TOP OF WALL	3.3	3.8	7	2	4.0	1.5	2.5					
	3.8	4.3	8	2	4.0	1.5	3.0					
	4.3	4.8	9	2	4.0	1.5	3.0					
REINFORCED SOIL  Φ = 32 DEGREES γ = 120 pcf  γ = 120 pcf	4.8	5.3	10	3	5.0	1.5	3.0	4.0				
H, H = 0 = 32 DEGREES	5.3	5.8	11	3	5.0	1.5	3.0	4.5				
X = 3 3 3 2 2 2 3 3 2 3 3 3 3 3 3 3 3 3 3	5.8 6.3	6.3 6.8	12 13	3 4	5.0 6.0	1.5 1.5	3.0	4.5 4.5	5.5			
	6.8	7.3	14	4	6.0	1.5	3.0	4.5	6.0			
MIRAGRID 2XT	7.3	7.3 7.8	15	4	6.0	1.5	3.0	4.5	6.0			
<del>                                </del>	7.8	8.3	16	5	7.0	1.5	3.0	4.5	6.0	7.0		
E <sub>1</sub>	8.3	8.8	17	5	7.0 7.0	1.5	3.0	4.5	6.0	7.5		
FOUNDATION SOIL $\Phi$ = 32 DEGREES $\gamma$ = 120 pcf	8.3	8.8	17	5	7.5	1.0	2.5	4.0	5.5	7.0		
Case 2 with φ = 32 degrees	1.8	2.3	4	1	4.0	1.0						
SURCHARGE FROM ROADWAY OR PARKING	2.3	2.8	5	1	4.0	1.0						
NO SLOPE AT TOP OF WALL q = 250psf	2.8	3.3	6	2	4.0	1.0	2.0					
	3.3	3.8	7	2	4.0	1.0	2.0					
	3.8	4.3	8	2	5.0	1.0	2.5					
REINFORCED SOIL	4.3	4.8	9	3	5.0	1.0	2.5	3.5				
7	4.8	5.3	10	3	5.0	1.0	2.5	3.5				
Φ = 32 DEGREES γ = 120 pcf	5.3 5.8	5.8 6.3	11 12	3	6.0 6.0	1.0 1.0	2.5 2.5	4.0 4.0	5.0			
₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩ ₩	6.3	6.8	13	4	6.0	1.0	2.5	4.0	5.0			
MIDACOID DVT	6.8	7.3	14	4	7.0	1.0	2.5	4.0	5.5			
MIRAGRID 2XT E <sub>2</sub>	7.3	7.8	15	5	7.0	1.0	2.5	4.0	5.5	6.5		
	7.8	8.3	16	5	7.0	1.0	2.5	4.0	5.5	6.5		
FOUNDATION SOIL Φ = 32 DEGREES γ = 120 pcf	8.3	8.8	17	5	8.0	1.0	2.5	4.0	5.5	7.0		
Case 3 with φ = 32 degrees	1.8	2.3	4	1	4.0	1.0						
NO SURCHARGE	2.3	2.8	5	1	4.0	1.5						
3:1 MAX SLOPE AT TOP OF WALL	2.8	3.3	6	1	4.0	1.5						
BACKFILL 302	3.3	3.8	7	2	4.0	1.5	2.5					
Oolt 7 = 12	3.8	4.3	8	2	4.0	1.5	2.5					
	4.3	4.8	9	2	5.5	1.5	3.0	4.0				
REINFORCED SOIL  H  Φ = 32 DEGREES γ = 120 pcf	4.8	5.8	11	3	5.5	1.5	3.0	4.0				
H	5.3 5.8	6.3 6.8	12 13	3	6.5 6.5	1.5 1.5	3.0	4.5 4.5	5.5			
	6.3	7.3	13	4	6.5 6.5	1.5	3.0	4.5	5.5			
	6.8	7.3	15	4	7.0	1.5	3.0	4.5	6.0			
MIRAGRID 2XT E <sub>2</sub>	7.3	8.3	16	5	8.0	1.5	3.0	4.5	6.0	7.0		
	7.8	8.8	17	5	8.0	1.5	3.0	4.5	6.0	7.5		
FOUNDATION SOIL $\Phi$ = 32 DEGREES $\gamma$ = 120 pcf		i EQUIRES TWO	) FULL COUR:	SES BURIE	D_							

#### NOTES:

- 1. Information presented in this chart is to be used for preliminary design and estimating purposes. Final design should be performed by a Professional Engineer qualified in both geotechnical engineering and segmental retaining
- 2. This estimating chart is applicable to sites where soil conditions meet the following minimum criteria: Angle of Internal Friction,  $\phi > 32^\circ$  and moist unit weight,  $\gamma = 120$  pcf. Typical for low plasticity silts meeting the following USCS classification: ML or coarser.
- 3. Design charts prepared for use with EP Henry's Cast Stone Wall block system with Mirafi's type 2XT reinforcing geogrids. Grids MUST extend to the front face of the block.

- 4. Definitions:
  - H' = exposed height, in feet H = total height, in feet

  - L = length of Mirafi 2XT required, in feet
  - $\phi$  = angle of internal friction, degrees
  - = moist unit weight, pounds per cubic foot γ = moist unit weight, pounds per capic root.
    Ei = elevation of grid layer from bottom of wall, in feet
- 5. These charts do not reflect any provisions for global stability or other analyses, which may be related to site-specific conditions including relief of excess hydrostatic pressures due to groundwater or springs. All these conditions should be checked and evaluated as appropriate, using site specific soil and subsurface conditions, as well as any special loading criteria.
- 6. Design Minimum Factors of Safety: 1.5 for reinforcement

- pullout, 1.5 for external sliding, 2.0 for overturning, and 2.0 for bearing.
- 7. All walls shall be supported on an aggregate leveling pad and shall have adequate drainage provisions in accordance with EP Henry's standard specification guidelines.
- 8. To the best of our knowledge, the information presented in this design chart is complete and accurate. However, EP Henry Corporation cannot assume any liability or accept any responsibility for the accuracy or completeness of this information. Further, EP Henry Corporation cannot assume any liability for damages arising from claims in which construction proceeded without final design drawings prepared by a Professional Engineer registered in the State of construction specializing in both geotechnical engineering and segmental retaining wall design.

# DOUBLE SIDED CAST STONE WALL











16" Double Sided Cast Stone Wall is now available in Full Face Pallet — same cubing as 16" Random Face

Aspen, Random Face

All units are 6" high.







D/C CACT CTONE WALL		-	•	C DEDUCED OTV DA
D/S CAST STONE WALL	Α	В	C	C REDUCED QTY PA
SIZE (LxD)	6" x 7"±	10" x 7"±	16" x 7"±	16" x 7"±
SF PER CUBE	Ç	9	30	15
PCS PER CUBE	27	27	90	45
LBS PER PIECE	12	22	39	39
LBS PER CUBE	93	32	3,444	1,728



Breckenridge, Mixed Face



В	С	C REDUCED QTY PALLET	D/S CAST STONE WALL TERMINATION	Α	В	
" x 7"±	16" x 7"±	16" x 7"±	SIZE (LxD)	8" x 8"	16" x 6"	
	30	15	PCS PER CUBE	24	24	
27	0.0	45				_

Birch, Random Face

TOTAL LBS PER CUBE

1,544

2-Piece
Comer Unit

# NOTES

A & B Stretcher sold together in one cube and A & B Corner sold together in one cube.

 $\pm\,\mbox{Depth}$  will vary due to the random thickness of the face shell

- 6" unit = .25 sf
- 10" unit = .42 sf

# DOUBLE SIDED CAST STONE WALL INSTALLATION GUIDE

#### **GENERAL INSTALLATION GUIDELINES:**

Recommended maximum height: 4 courses (24") exposed not including cap. Install all courses of Double Sided Cast Stone Wall block with a gap of 1" separating the back of the blocks of the opposing walls.

High strength concrete adhesive is required between every course and the cap. EP Henry recommends the use of Techniseal Structure Bond Adhesive. The 10" and 6" units will allow construction of radius walls with virtually no cuts.

#### CALCULATE MATERIAL NEEDED

Double Sided Cast Stone Wall™ is sold by the square foot. Calculate the total square feet of Double Sided Cast Stone Wall™ needed by multiplying the length times the exposed height for one side of the wall.

Double Sided Cast Stone Wall™ has its own Footer Block which is sold by the piece. Calculate the number of units needed by dividing the length of the wall in feet by 1.30 (decimal equivalent of 15 5/8").

#### PREPARE THE FOOTING

Dig a trench 24" wide and 10" below finished grade. Make sure the soil at the bottom of the trench is well compacted to prevent settling. In heavy or clay soils for best results, wrap the footer trench in a "U" shape configuration with geotextile. This will preserve the stone base over time and keep it from migrating into the clay soil. Using a vibratory plate compactor, install 6" of dense graded aggregate (modified stone) or clean #57 stone in two 3" lifts making sure the surface of the last lift is smooth and level.

Tip: If using dense graded aggregate or modified stone: add a 1" layer of concrete sand or stone screenings on top of the footing as a leveling agent for the footer course.

# INSTALLING THE FOOTER COURSE BLOCK Install the Double Sided Cast Stone Wall™ Footer Block™ by placing the units tightly together on the prepared base.

Align the units so the long dimension of the Double Sided Cast Stone Wall Footer Block™ runs parallel to the length of the footer trench. Level the units from front-to-back and side-to-side using a dead blow hammer and level. Radius construction will require the base course block to be spread apart (the gap should not exceed 4") and/or to be cut and trimmed accordingly using a diamond blade saw.

# INSTALLING DOUBLE SIDED CAST STONE WALL

Install the first course of Double Sided Cast Stone Wall™ block with the face of the unit overhanging the footer block while maintaining a gap of 1" separating the back of the blocks of the opposing walls. The face of the block on top of the course of Double Sided Cast Stone Wall Footer Block™ will overhang the footer block by about 1". Check to make sure all units are level front-to-back, side-to-side and wall-to-wall. Install courses whenever possible so that each block spans the two units below it in a running bond pattern. Avoid having a vertical line extend more than two courses of block. Install additional courses starting at the

corner and working toward the other end. Do not start at both corners and try to meet in the middle. Install the faces of the blocks flush to avoid gaps and to keep the continuity of the stone face on both sides of the wall. It is necessary to bond all the courses of block, the footer block, and the cap together. To achieve structural stability, beads of high strength, flexible concrete adhesive must be run between each course staying 1"-2" behind the face of the block. EP Henry recommends the use of Techniseal Structure Bond Adhesive.



**BLOCK ALIGNMENT** 

CAUTION: DRY SAWING OR GRINDING OF CONCRETE PRODUCTS MAY RESULT IN THE RELEASE OF RESPIRABLE CRYSTALLINE QUARTZ. PROLONGED EXPOSURE TO RESPIRABLE CRYSTALLINE QUARTZ MAY CAUSE DELAYED (CHRONIC) LUNG INJURY (SILICOSIS). THE USE OF A NIOSH-APPROVED RESPIRATOR AND TIGHT-FITTING GOGGLES ARE RECOMMENDED WHEN SAWING OR GRINDING OPERATIONS ARE IN PROGRESS.

# DOUBLE SIDED CAST STONE WALL INSTALLATION GUIDE

# TERMINATING THE WALL

Double Sided Cast Stone Wall™ corners are manufactured in two unit sizes—8"x8" (A) and 16"x6" (B)— to readily terminate the wall. At the termination point of the wall place the long and short corner units back-to-back as opposing pairs to create the end of the wall. (See photo at right.) Alternate the position of the corner units on each successive course to maintain a running bond pattern. When terminating the wall make sure that the corner units overlap the two corner blocks beneath them maintaining a running bond.

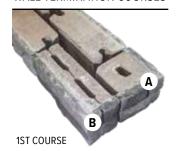
# **BUILDING 90° CORNERS**

To build 90° corners install a Double Sided Cast Stone Wall™ "A" corner unit at the spot where one wall will terminate and the return wall begins. Work off of the "A" Corner unit using the 16" stretcher units. For each successive course of block alternate the position of the "A" Corner unit (see below). It is recommended to start construction at the corner and work out from that point. This insures virtually no cut pieces at the corner which means better structural stability and a cleaner overall appearance. Use a high-strength flexible concrete adhesive on all Double Sided Cast Stone Wall™ units when constructing the 90° corner.

# CAPPING THE WALL

After laying the last course of wall block, install the wall cap units using a high strength, flexible concrete adhesive applied to both sides of the wall. The cap units should be installed following the contour of the wall and with a uniform overhang on both sides. If needed, use a shim to eliminate any minor variations in height between the wall caps. The EP Henry Double Sided Cast Stone Wall™ cap options can be installed by alternating the units front-to-back to cap a straight wall or by marrying the angles of the cap to conform to the wall's radius. Cutting the cap units may be necessary depending on the radius. All of the cap options have available finished end units for terminating the wall.

# WALL TERMINATION COURSES







NOTE: DOUBLE SIDED CAST STONE WALL™ MAY ALSO BE TERMINATED BY BUILDING A COLUMN AT THE END OF THE WALL USING SINGLE SIDED CAST STONE WALL™ CORNER UNITS WITH THE COLUMN CAP.



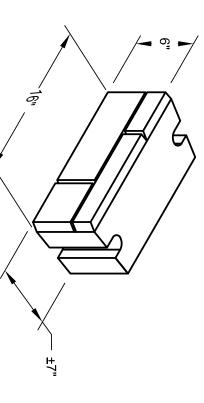




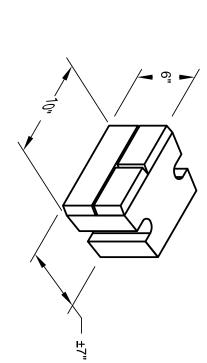
# DOUBLE SIDED CAST STONE WALL CALCULATOR

WALL LENGTH		1'4"	2'8"	4'0"	5'4"	6'8"	8'0"	9'8"	10'8"	12'	13'4"	14'8"	16'	17'4"	18'8"	20'	21'4"	22'8"	24'
		HEIGHTS BELOW ARE IN SQUARE FEET (SQ. FT.)																	
WALL HEIGHT	6" = 1 course	.66	1.3	2	2.7	3.3	4	4.7	5.3	6	6.7	7.3	8	8.7	9.3	10	10.7	11.3	12
	1' = 2 courses	1.3	2.6	4	5.4	6.6	8	9.4	10.6	12	13.4	14.6	16	17.4	18.6	20	21.4	22.6	24
	1'6" = 3 courses	2	3.9	6	8.1	9.9	12	14.1	15.9	18	20.1	21.9	24	26.1	27.9	30	32.1	33.9	36
	2' = 4 courses	2.7	5.9	8	10.8	13.2	16	18.8	21.2	24	26.8	29.2	32	34.8	37.2	40	42.8	45.2	48

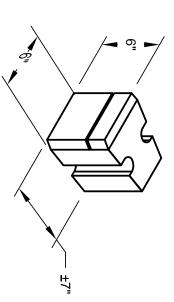
To calculate the number of 16" stretcher units needed for both sides of the wall, using the chart above, multiply the square footage required by 3. For a wall 1'6" high and 16' long, you would need 72 stretchers (1.5 x 16 = 24 sf; 24 sf x 3 = 72 Double Sided Cast Stone Wall Stretchers needed)

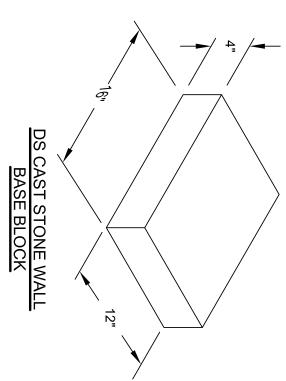


DS CAST STONE WALL 16" UNIT



DS CAST STONE WALL 10" UNIT





DS CAST STONE WALL
6" UNIT

NOTE: ALL BASE COURSE UNITS SHALL BE DOUBLE-SIDED CAST STONE WALL BASE BLOCK

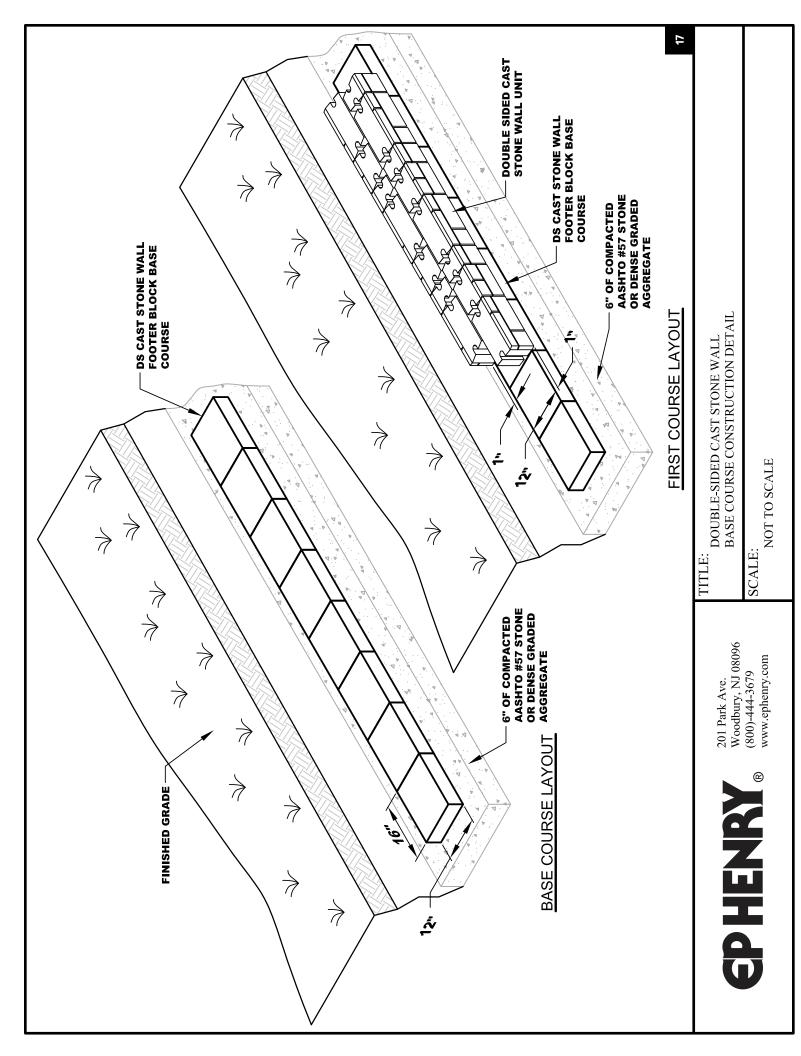
DOUBLE-SIDED CAST STONE WALL TYPICAL UNIT DETAIL

SCALE:

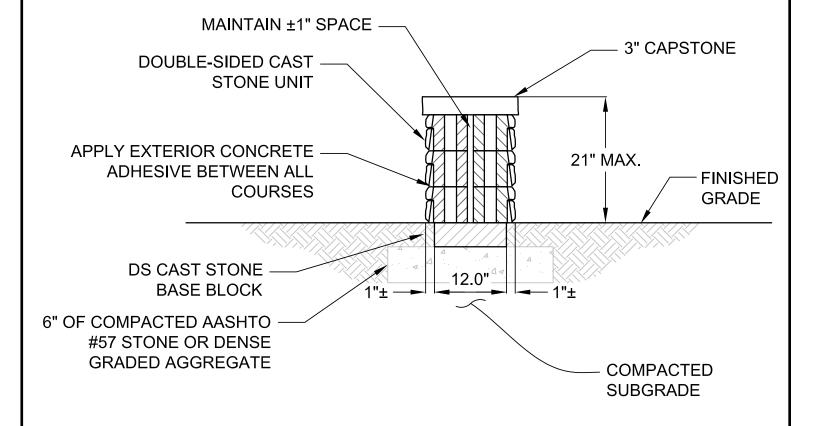
NOT TO SCALE

CP HENRY

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- 1. MAXIMUM 21" FREE STANDING WALL HEIGHT (NOT INCLUDING BURIED FOOTER BLOCK).
- 2. USE HIGH-STRENGTH CONCRETE ADHESIVE ON EACH BLOCK-TO-BLOCK CONTACT SURFACE AT EVERY SUCCESSIVE COURSE.
- 3. ENSURE UNITS ARE INSTALLED LEVEL FRONT-TO-BACK AND SIDE-TO-SIDE.
- 4. MAINTAIN ±1" SPACE BETWEEN BACK-TO-BACK UNITS.



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TITLE:

DOUBLE-SIDED CAST STONE WALL FREE-STANDING WALL SECTION

SCALE:



DS CAST STONE BASE BLOCK (TYP.)

REPEAT COURSE 1 PATTERN ISOMETRIC VIEW

**COURSE 2 PATTERN** ISOMETRIC VIEW

AASHTO #57 STONE OR DENSE GRADED AGGREGATE (TYP.) 6" OF COMPACTED

> **COURSE 1 PATTERN ISOMETRIC VIEW**

6"(W)x16"(L)x8"(H) 7"(W)x16"(L)x6"(H) 7"(W)x10"(L)x6"(H) 7"(W)x6"(L)x6"(H)

**BLOCK ID TABLE** 

В ⋖

8"(W)x8"(L)x8"(H)

CORNER B CORNER A

- EP HENRY'S DS CAST STONE WALL "CORNER B" UNIT

- EP HENRY'S DS CAST STONE WALL "CORNER A" UNIT

REPEAT COURSE 1 PATTERN COURSE 2 PATTERN **PLAN VIEW** 

COURSE 1 PATTERN

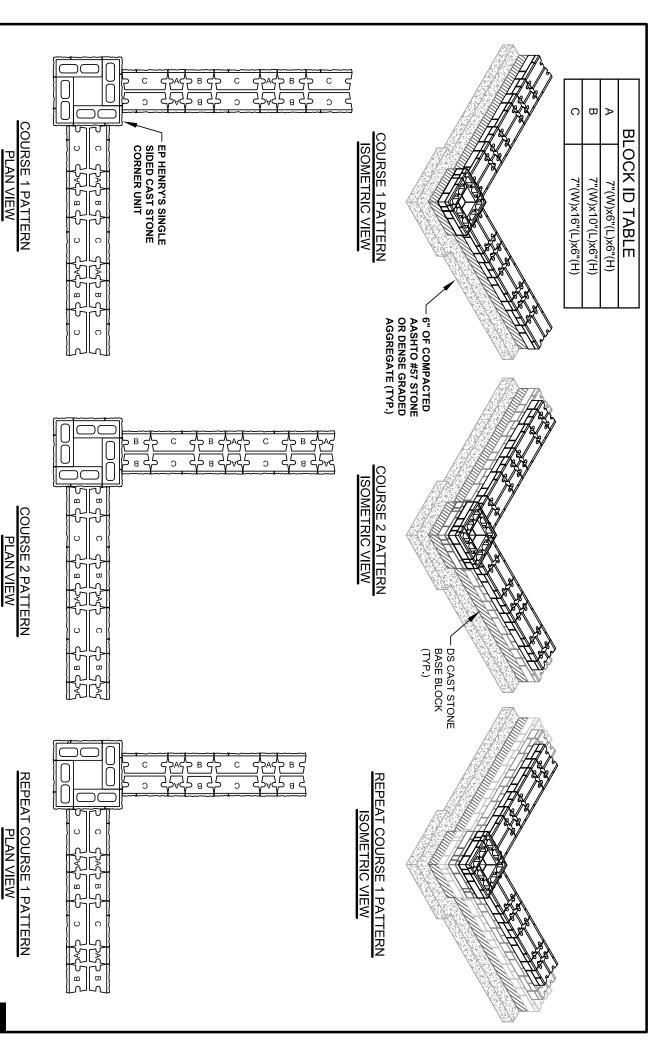
**PLAN VIEW** 

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DOUBLE-SIDED CAST STONE WALL END-WALL CONSTRUCTION DETAIL

NOT TO SCALE SCALE:







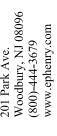
Woodbury, NJ 08096 (800)-444-3679 www.ephenry.com 201 Park Ave.

TITLE: COLUMN CORNER CONSTRUCTION DETAIL DOUBLE-SIDED CAST STONE WALL

20

SCALE:



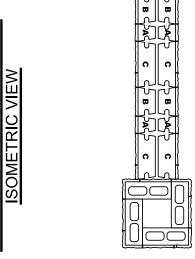


**EPHENRY** 

201 Park Ave.

DOUBLE-SIDED CAST STONE WALL COLUMN CORNER SINGLE WALL CONSTRUCTION DETAIL

NOT TO SCALE



# REPEAT COURSE 1 PATTERN

COURSE 2 PATTERN ISOMETRIC VIEW

AASHTO #57 STONE OR DENSE GRADED AGGREGATE (TYP.) 6" OF COMPACTED

COURSE 1 PATTERN

**ISOMETRIC VIEW** 

- EP HENRY'S SINGLE SIDED CAST STONE CORNER UNIT

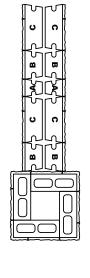
7"(W)x10"(L)x6"(H) 7"(W)x16"(L)x6"(H)

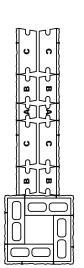
**⊿**|⊠

7"(W)x6"(L)x6"(H)

**BLOCK ID TABLE** 

DS CAST STONE BASE BLOCK (TYP.)



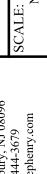




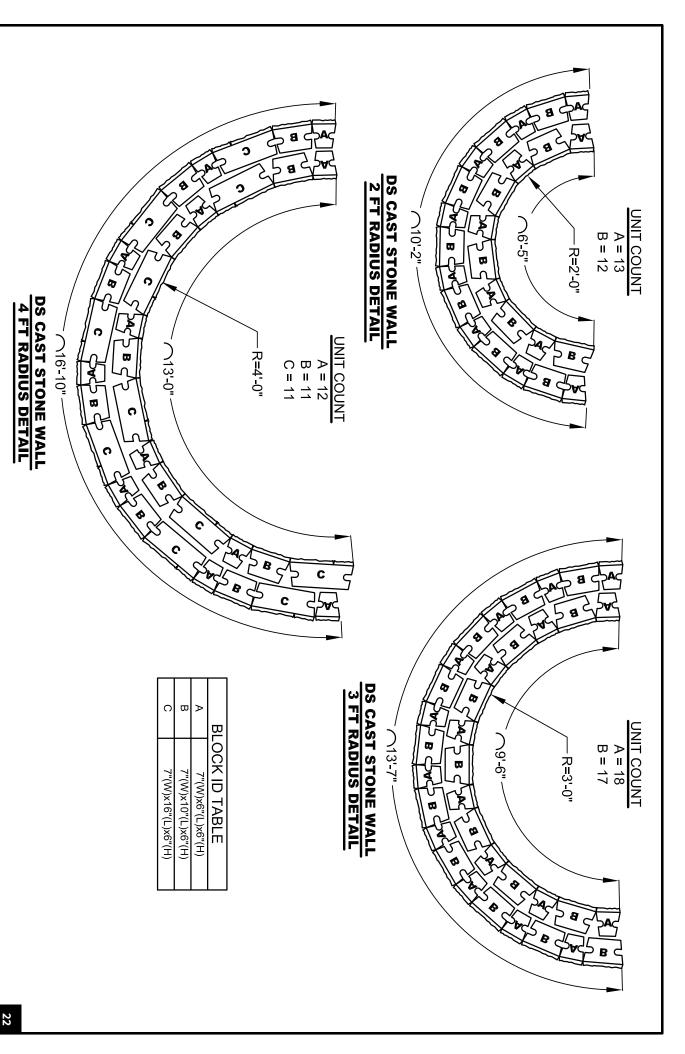
COURSE 1 PATTERN

PLAN VIEW









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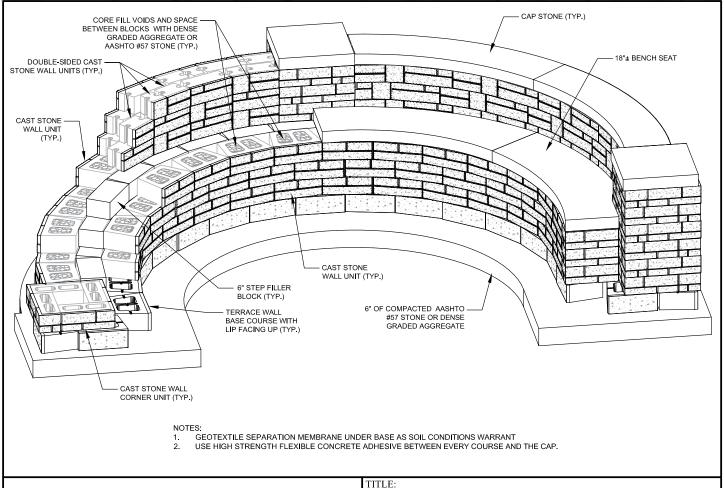
TITLE:

DOUBLE-SIDED CAST STONE WALL RADIUS DETAIL

SCALE:

# SPECIAL APPLICATIONS





SCALE:

NOT TO SCALE

201 Park Ave.

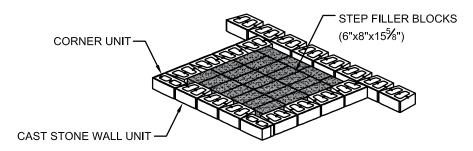
Woodbury, NJ 08096 (800)-444-3679

www.ephenry.com

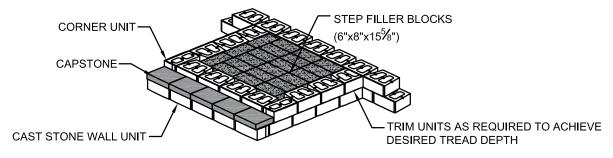
**EPHENRY**®

CAST STONE WALL SEATING WALL CONSTRUCTION DETAIL

# STAGE 1

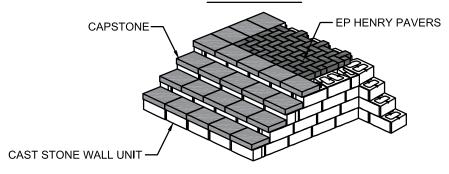


# STAGE 2



# STAGE 3 CORNER UNIT STEP FILLER BLOCKS (6"x8"x15%") CAPSTONE

# STAGE 4



# NOTES:

CAST STONE WALL UNIT

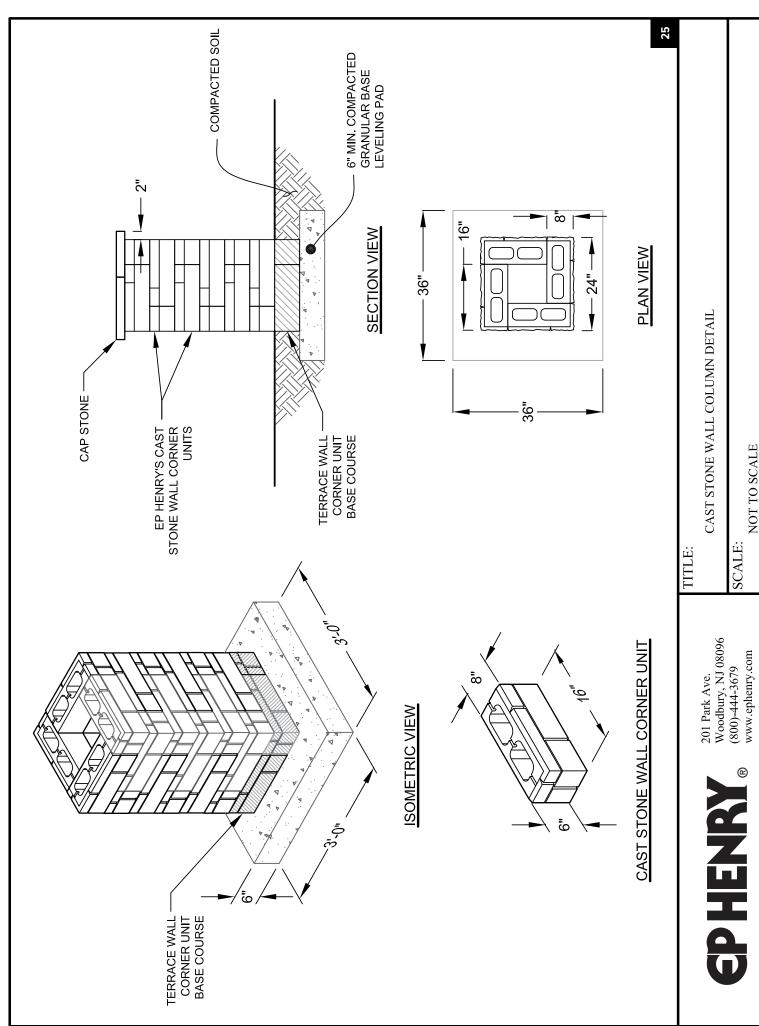
- 1. HIGH STRENGTH CONCRETE ADHESIVE SHALL BE USED BETWEEN UNITS ON EACH SUCCESSIVE COURSE BEGINNING AT THE TOP OF THE BASE UNITS.
- 2. STANDARD BASE COURSE & FOOTER PREPARATION REQUIRED.



201 Park Ave. Woodbury, NJ 08096 (800)-444-3679 www.ephenry.com TITLE:

CAST STONE WALL
TYPICAL STEP INSTALLATION

SCALE:

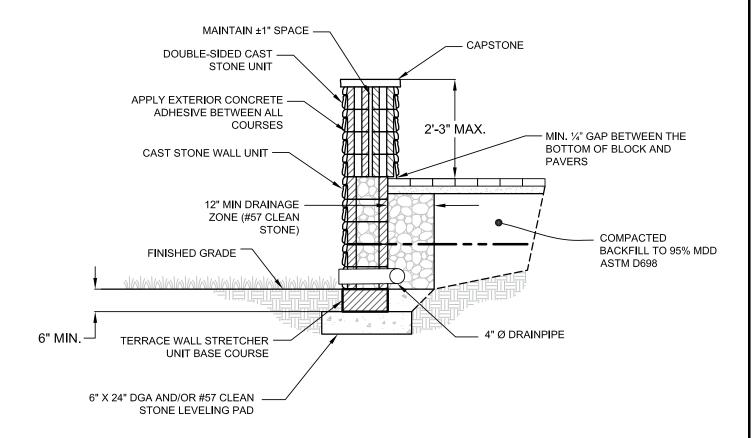


CAST STONE WALL COLUMN DETAIL

NOT TO SCALE

**SPHENRY** 

SCALE:



IF RETAINING WALL IS 30" OR MORE IN HEIGHT OF SINGLE-SIDED WALL CHECK W/LOCAL CODE OFFICIALS FOR FALL PROTECTION REQUIREMENTS.



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TITLE:

CAST STONE WALL WITH FREE-STANDING DS CAST STONE SITTING WALL SECTION

SCALE:

# CAST STONE WALL FIRE PIT KIT





Adirondack, Full Face



Aspen, Random Face



Birch, Random Face



Breckenridge, Mixed Face

# Fire Pit Kit Includes:

- 54 Wall Block
- 4 Caps
- Copper Bowl
- 36" Diameter Grate for Wood Burning
- 24" Diameter Grate for Cooking
- Poker
- Retractable Metal Mesh Dome
- Installation Guide (also available at www.ephenry.com)



CAP: Bluestone



CAP: Brownstone

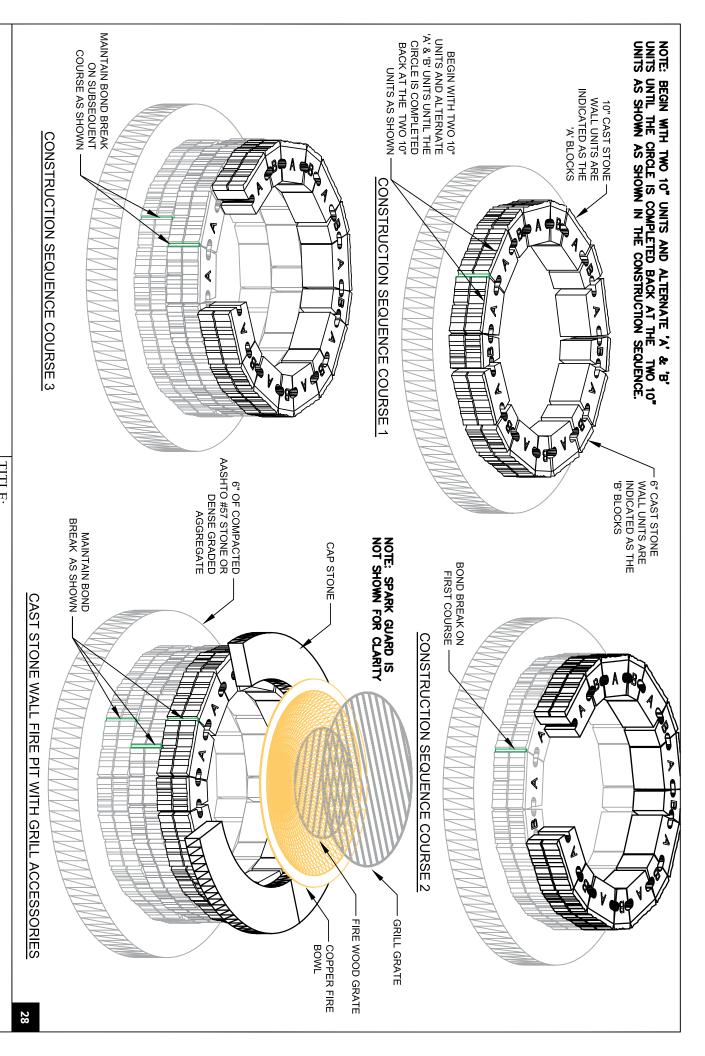
# FIRE PIT KIT

PCS PER CUBE LBS PER PIECE TOTAL LBS PER CUBE 27/EA 10" & 6" UNITS 22/12 1,126

**NEW FOR 2018!** 

**CAST STONE WALL SQUARE FIRE PIT KIT**Visit ephenry.com for more details.

**IMPORTANT NOTE:** BLOCK ARE NOT FIRE-RATED. DO NOT BURN FIRES WITHOUT THE PROTECTIVE BOWL OR ANOTHER FIRE-RATED INSERT. DO NOT OVERFILL THE BOWL; FIREWOOD SHOULD BE CONTAINED WITHIN THE CLOSED SPARK SCREEN.

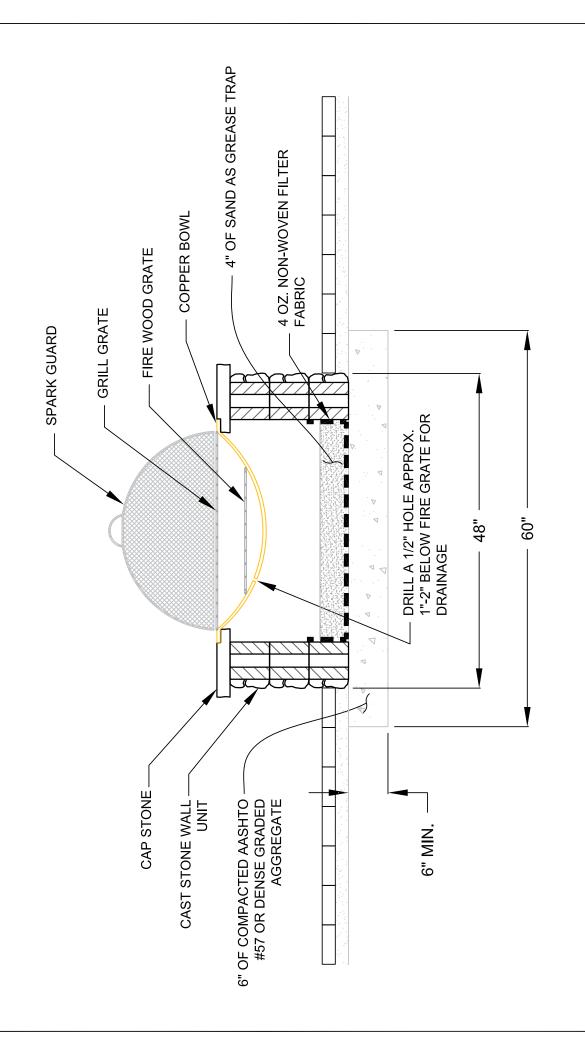


CP HEVR

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SCALE:

CAST STONE WALL FIRE PIT INSTALLATION DETAIL



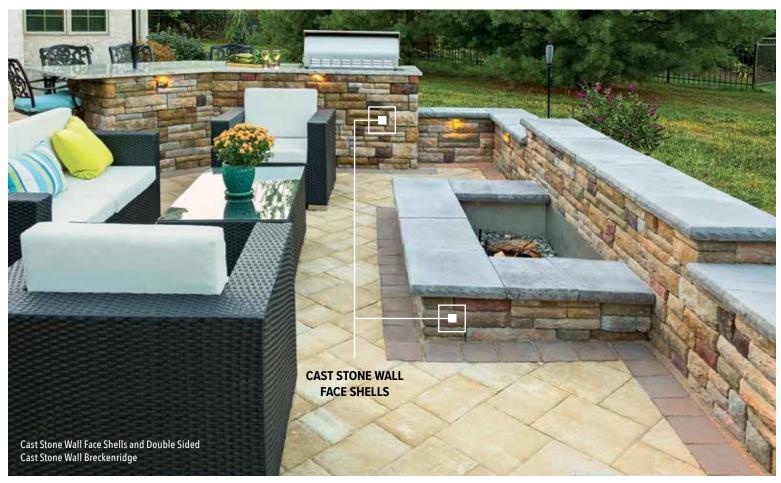


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CAST STONE WALL FIRE PIT CROSS-SECTION

SCALE:

# CAST STONE WALL FACE SHELLS









Aspen, Random Face



Birch, Random Face



Breckenridge, Mixed Face

STRETCHER	CORNER
12	8 LF
18	_
6.6	_
119	110*
	12 18 6.6

<sup>•</sup> Face Shell Stretchers and Corners available in Random and Full Face Styles



Stretcher



Corner

# FREQUENTLY ASKED QUESTIONS

#### **GENERAL**

# Q: Is Cast Stone Wall a wetcast or a drycast concrete product?

A: Cast Stone Wall combines wet and dry-cast technologies in one product.

# Q: Will the wall faces come off of the Cast Stone Wall block?

**A:** Cast Stone Wall is manufactured with a patented process that creates a monolithic block. Cast Stone Wall units have been through rigorous freeze/thaw testing and Cast Stone Wall comes with a 50 year warranty.

# Q: How many colors are in the Cast Stone Wall product line?

**A:** At the time this catalog was printed, Cast Stone Wall is available in the following multi-blend colors: Adirondack, Aspen, Birch, Breckenridge and, while supplies last, Durango.

#### Q: What are the face dimensions of Cast Stone Wall?

**A:** Both Single and Double Sided Cast Stone Wall block have faces 6"H x 16"L - 0.67 SF of wall face. Double Sided Cast Stone Wall is also available in a pallet containing both 6"H x 6"L and 6"H x 10"L units.

# Q: I've noticed pieces of various sizes on a Cast Stone Wall. Is there a pattern to put them all together?

A: One of the key features of the Cast Stone Wall System is that many blocks contain random faces, meaning that one 6" x 16" block will have the appearance of being multiple pieces. Full Face units are







also available in both Single and Double Sided Cast Stone Wall. With scores of different face styles and the ability to mix Random and Full Face cubes on any Cast Stone Wall project, the Cast Stone Wall System allows you to create stunning, natural-looking walls.

# Q: Do the block have a distinct top and bottom?

**A:** Neither Single nor Double Sided Cast Stone Wall block have a distinct top or bottom, allowing for flexibility in design and installation.

#### Q: Should Cast Stone Wall be installed with a batter?

A: Both Single and Double Sided Cast Stone Wall are meant to be installed vertically with no setback.

# Q: Does Cast Stone Wall use a connection system?

**A:** Both Single and Double Sided Cast Stone Wall are gravity systems. Use a high-strength concrete adhesive between courses of block, including the buried base course and cap. EP Henry recommends the use of Techniseal Structure Bond Adhesive.

# Q: The project that I'm quoting requires quantities that are less than a full pallet. Any solution?

A: Reduced Quantity Pallets are available for both Single and Double Sided Cast Stone Wall.

# Q: I'd love to cover the ugly foundation walls on my project with a veneer that looks like Cast Stone Wall. Do you have a product that I can use?

**A:** Cast Stone Wall Face Shells – flats and corners – are available that will perfectly match your wall.



# SINGLE SIDED CAST STONE WALL

# Q: What is the maximum wall height for Single Sided Cast Stone Wall?

**A:** The maximum unreinforced wall height is 30" (including buried course) under ideal conditions. Beyond 30", geogrid reinforcement should be used. Maximum reinforced wall height is 8 feet (including buried course(s)). Design charts showing geogrid placement are available from EP Henry. These cannot be used in lieu of sealed engineering drawings, where required.

# Q: What kind of base do I need for my Single Sided Cast Stone Wall when used in a retaining wall application?

**A:** As with other segmental retaining wall systems, a base of 4-6" of well compacted modified stone or # 57 clean stone is required.

# Q: What should I use as a base course for my Single Sided Cast Stone Wall?

**A:** All retaining walls require a buried first course to secure the toe of the wall. EP Henry recommends the use of a Terrace Wall block for the buried course.

# Q: Do I need to core fill my Single Sided Cast Stone Wall?

**A:** Core fill all units with #57 (1-1/4", 3/4" and 1/2") or #67 (3/4") clean stone. Crushed or recycled concrete is NOT suitable for this purpose.

# Q: What is the smallest wall radius that can be constructed using a 16" Single Sided Cast Stone Wall block?

A: The smallest radius that can be created using a 16" long block is 22" (measured from the back of block)

#### Q: What cap should be used on my Single Sided Cast Stone Wall?

**A:** Because of Cast Stone Wall's beautiful natural stone look, our wetcast Double Sided Devonstone Caps are recommended.

# Q: How do I build a 90° corner in my wall using Single Sided Cast Stone Wall?

**A:** Full Face and Random Face 8" x 6" x 16" rectangular units with a finished end are available for 90° corners.



# Q: How do I build a pier using Single Sided Cast Stone Wall Corners?

**A:** Use Full Face and/or Random Face 8" x 6" x 16" corner units to build piers. The open space in the center of the finished pier will be approximately 8" x 8".

# Q: Can I build steps using the Single Sided Cast Stone Wall System?

**A:** Attractive steps, in either straight or semi-circular designs, are easy to build with Cast Stone Wall units. The block units are used for the risers, with the caps or pavers used for the tread. Use Step Filler block in step applications where the product will not be visible.











2-Piece Corner Unit

# **DOUBLE SIDED CAST STONE WALL**

# Q: Does the Double Sided Cast Stone Wall block have a face on two sides?

A: No. The system is designed for you to construct two walls back to back, with a 1" gap between the walls.

# Q: Why is there a 1" gap between the walls?

**A:** The 1" gap facilitates any curves that might be required in the wall. Wall termination block will only work properly if there is a 1" gap between the walls.

# Q: How wide will a finished Double Sided Cast Stone Wall be?

A: Properly constructed, a finished Double Sided Cast Stone Wall will be approximately 14" Deep (including the 1" gap)

# Q: Does Double Sided Cast Stone Wall come in Full Face configurations?

A: Yes, Double Sided Cast Stone Wall is available in both Random and Full Face units.

# Q: What is the maximum wall height for Double Sided Cast Stone Wall?

**A:** Double Sided Cast Stone Wall is designed for free-standing double sided wall applications only with a maximum height of four courses (not including the footer block).

# Q: Can I use Double Sided Cast Stone Wall as a retaining wall?

A: Double Sided Cast Stone Wall is not meant to be used as a garden wall, landscape wall or retaining wall.

# Q: What are the 6" and 10" long units for?

A: Use the pallets containing the 6" and 10" long block whenever tight curves or serpentine walls are needed. Alternating 6"L and 10"L units allows you to construct a wall with a 17" inside radius. The 6"/10" pallet of Double Sided Cast Stone Wall contains 9 SF, enough to cover a 2 foot high double sided wall 4½ feet long.

# Q: Why are the pallets with the 6" and 10" long units more expensive than the pallets with all 16" stretchers?

**A:** Two block vs. one block are required for every 16" of wall length. More labor and machine time are required to manufacture two blocks.

# Q: What should I use as a base course for my Double Sided Cast Stone Wall?

**A:** Use the Cast Stone Wall Footer Block as a foundation for Double Sided Cast Stone Wall. Blocks are 11-5/8"W x 4"H x 15-5/8" L. Footer Block is designed to be installed with the 15-5/8" dimension across the depth of the wall, supporting both sides. Estimate 1 block for every 1' of wall.

# Q: How do Double Sided Cast Stone Wall wall terminations work?

A: Double Sided Cast Stone Wall™ terminations are sold in pairs of two different sized block — 6"W x 6"H x 16"L and 8"W x 6"H x 8"L. Place the long and short corner units back-to-back as opposing pairs to create the end of the wall. Alternate the position of the corner units on each successive course to maintain a running bond pattern. Use the Double Sided Cast Stone Wall Corners to make 90° turns in your wall, where required.



# Q: What cap should be used on my Double Sided Cast Stone Wall?

**A:** Because of Double Sided Cast Stone Wall's beautiful natural stone look, our 16" Double Sided Devonstone Caps are recommended to cap the wall. These caps are available in a trapezoid shaped unit and an end cap with 90° corner.

# **CAST STONE WALL FIRE PITS**

# Q: How do I build a Fire Pit with Cast Stone Wall?

A: EP Henry offers a Cast Stone Wall Fire Pit Kit which includes wall block, wall caps, copper bowl. 2 grates, screen and fire poker. Twenty seven 10"L block (9 per course) and twenty-four 6"L block (8 per course) are used to build the fire pit. There will be three extra 6" blocks when the Fire Pit is fully constructed. The Cast Stone Wall Fire Pit Kit is available in all stock Cast Stone Wall colors.



It's best to start construction by drawing a 34" diameter circle where the fire pit will go. A nail in the center with a 17" string and marking tool works great. Begin each ring by placing two 10" block side by side and then alternating 6" and 10" units to complete the circle. Build subsequent rings in the same fashion, making sure to stagger the bond between courses to prevent vertical seams.

# Q: What are the finished dimensions of the Cast Stone Wall Fire Pit?

A: The finished Cast Stone Wall Fire Pit will be 18" (3 courses) with a 47" outside diameter and 34" inside diameter.



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