



CONSTRUCTION GUIDE



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Table of Contents



Straight Applications	3
Inside Corners.....	5
Outside Corners	6
Steps	7
Pillars & Lights	8
Barbecue Enclosure.....	9
Engineered Profiles.....	10
Planters & Handrail Cross Sections.....	20



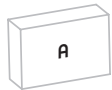
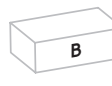
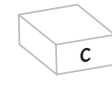

Straight Applications	11
Inside Corners.....	13
Outside Corners	14
Steps	15
Creating a Circular Wall	16
Pillars & Lights	18
Engineered Profiles.....	19
Planters & Handrail Cross Section	20



Straight Applications

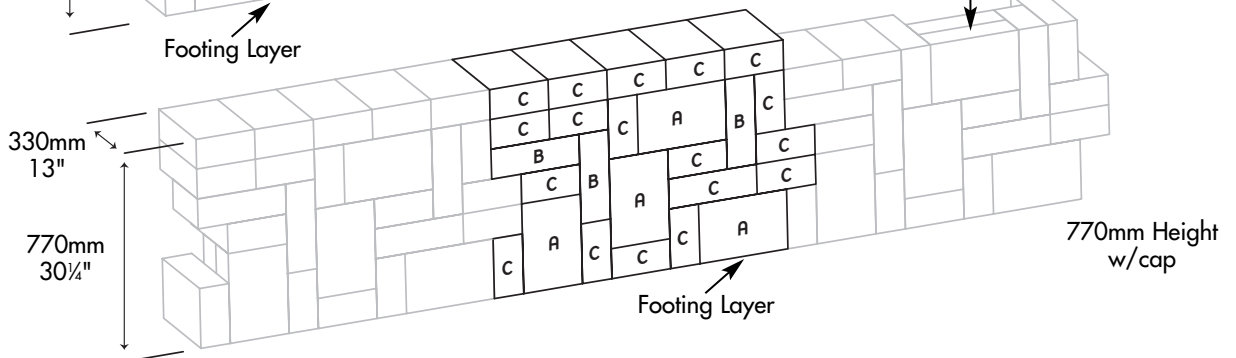
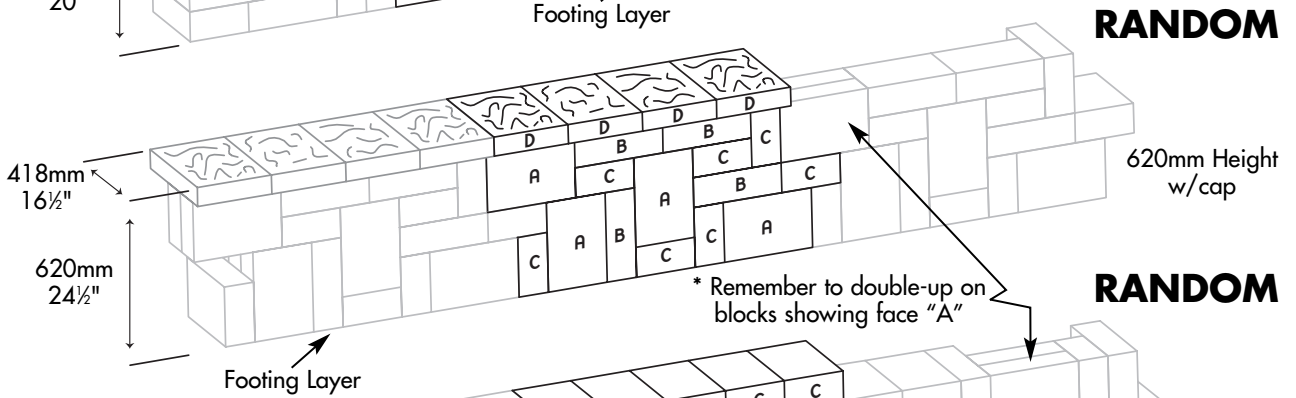
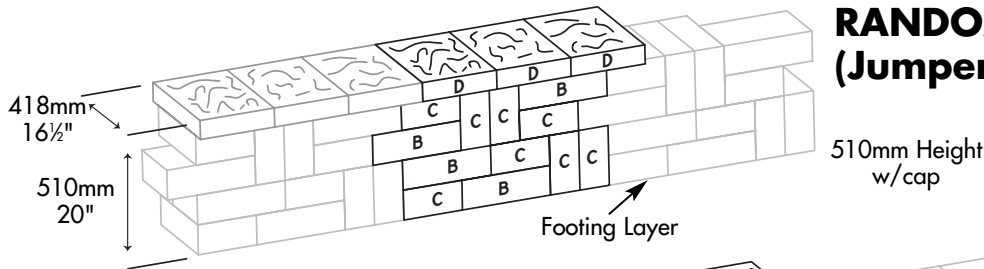
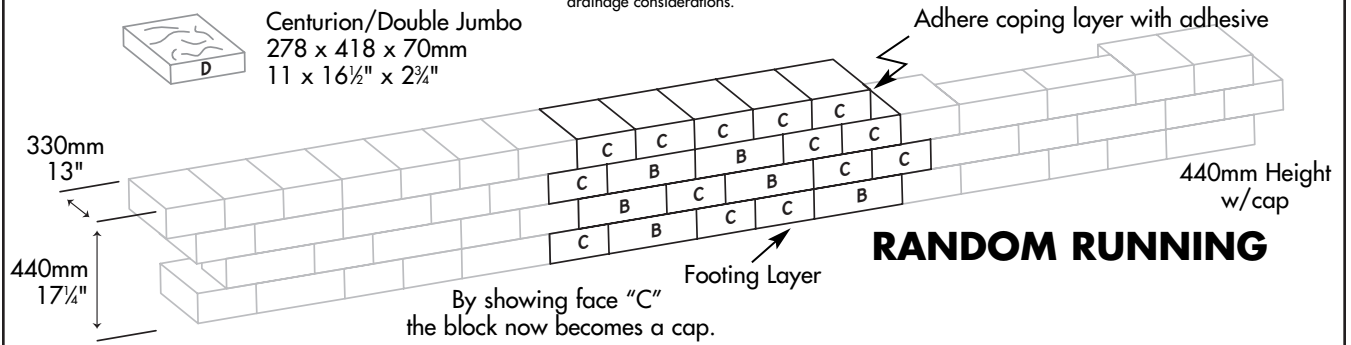


CASTLEROK Units

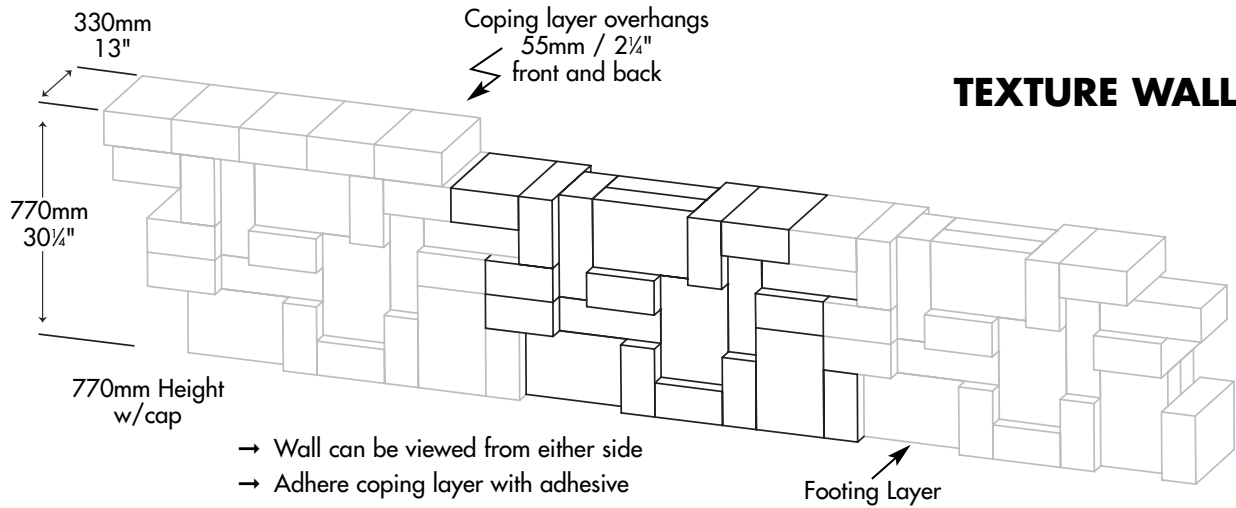
-  **A** 330 x 220mm
13" x 8⁵/₈"
-  **B** 330 x 110mm
13" x 4³/₈"
Optional smooth or textured face
-  **C** 110 x 220mm
4³/₈" x 8⁵/₈"
-  **Centurion/Double Jumbo**
278 x 418 x 70mm
11 x 16¹/₂" x 2³/₄"

Construction Notes:

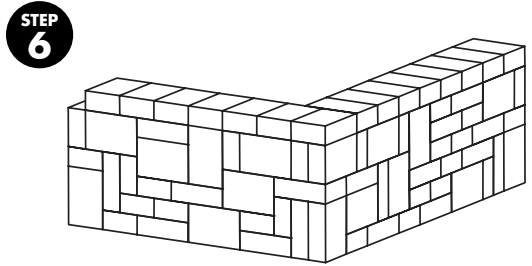
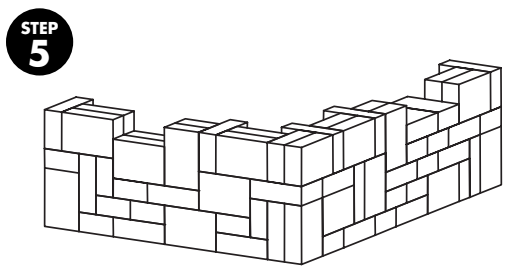
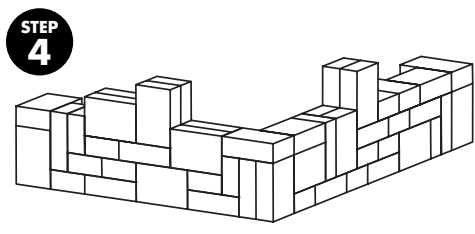
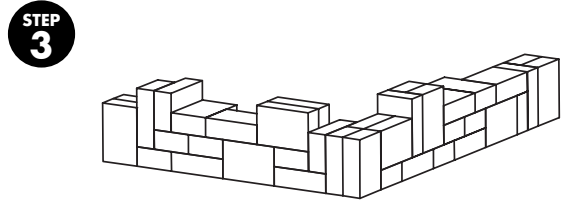
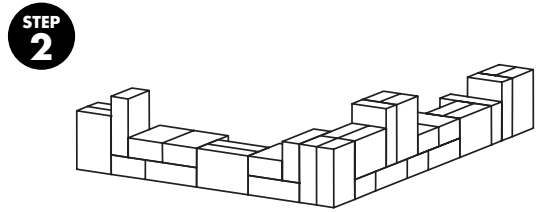
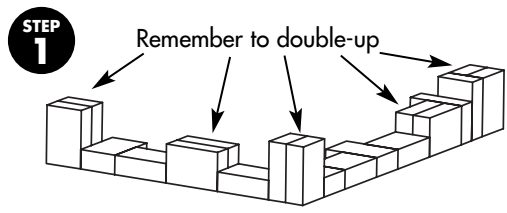
1. Existing soil subgrade should be compacted before foundation installation.
2. Foundation must be provided using compacted granular aggregate material.
3. Foundation thickness should be minimum 150mm (6").
4. Foundation width should extend minimum 75mm (3") in front and behind bottom course of wall units.
5. Drainage tile - 100mm (4") diameter - should be provided behind the bottom course of the wall if area is to be backfilled. Tile should daylight beyond the extents of the wall or thru the wall face to ensure drainage.
6. Place successive units to the desired grade. Backfill the wall with free draining granular material at every 150mm (6") and compact with a vibratory plate tamper.
7. Coping layer must be adhered with concrete adhesive, butyl tape or equivalent.
8. All designs show total wall height. To promote stability, walls should have bottom course(s) buried to a depth of 100mm - 150mm (4" - 6") depending on total height.
9. Stagger joints wherever possible to provide more stability and improved appearance in the wall face.
10. Geotextile fabric should be used to prevent backfill materials from migrating through the wall face.
11. Wherever possible, wall installation should start at lowest grade elevation to eliminate creep and avoid drainage considerations.



Straight Applications



CONSTRUCTION EXAMPLE



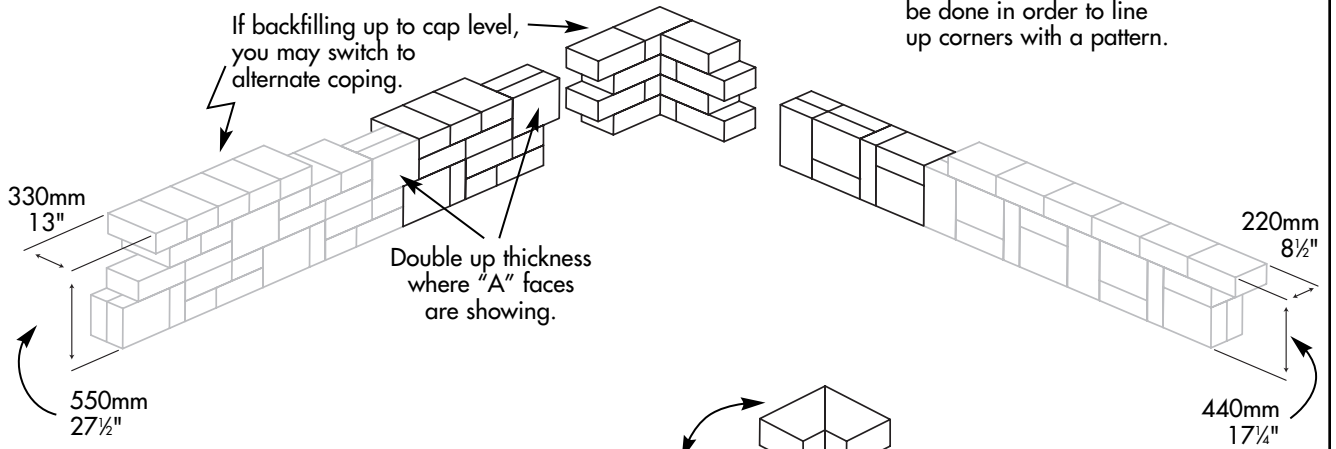
770mm Height
w/cap



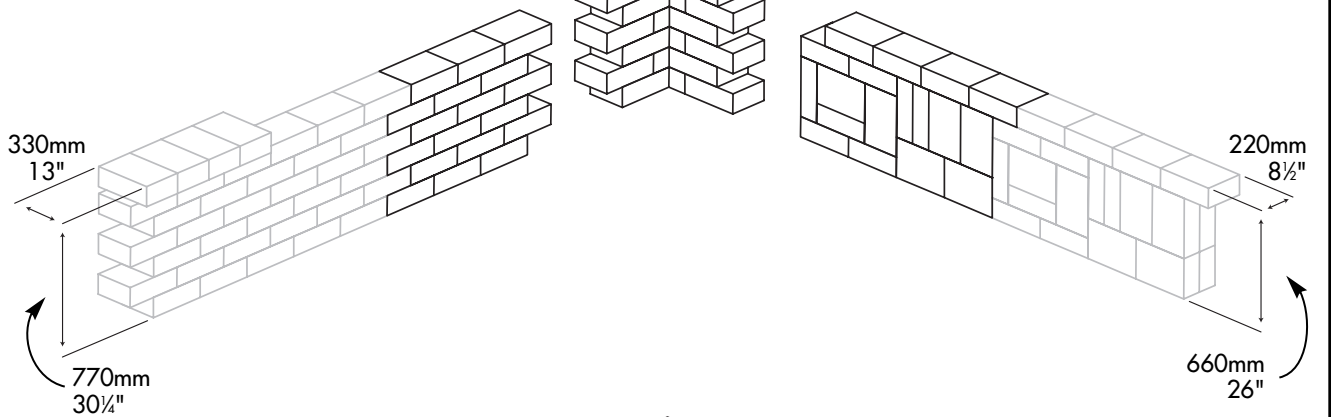
Inside Corners



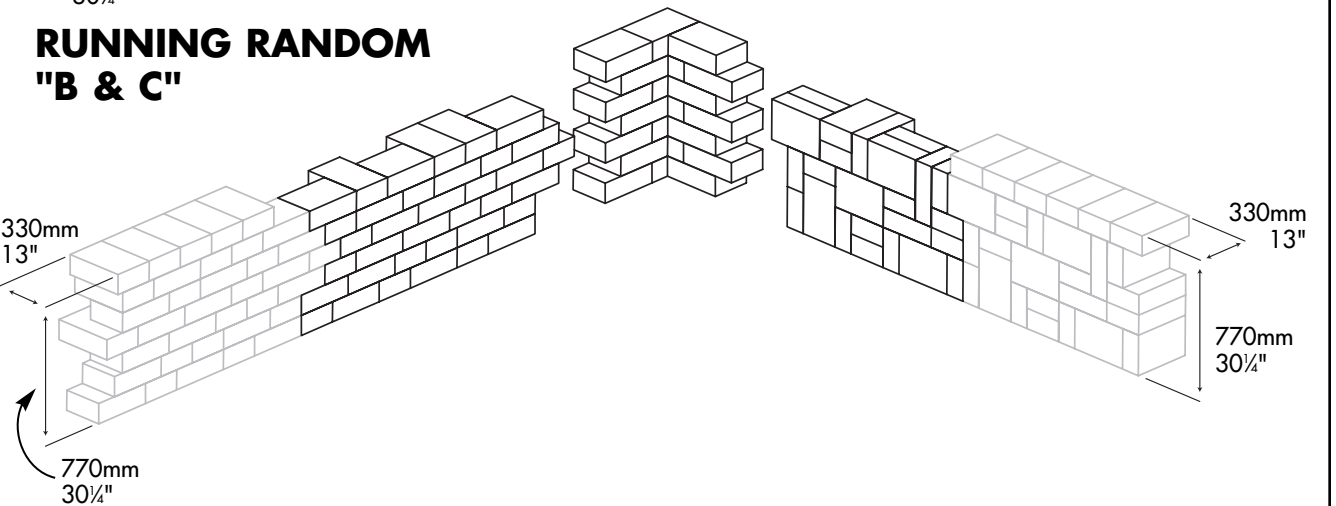
RANDOM



RUNNING-BOND "B"

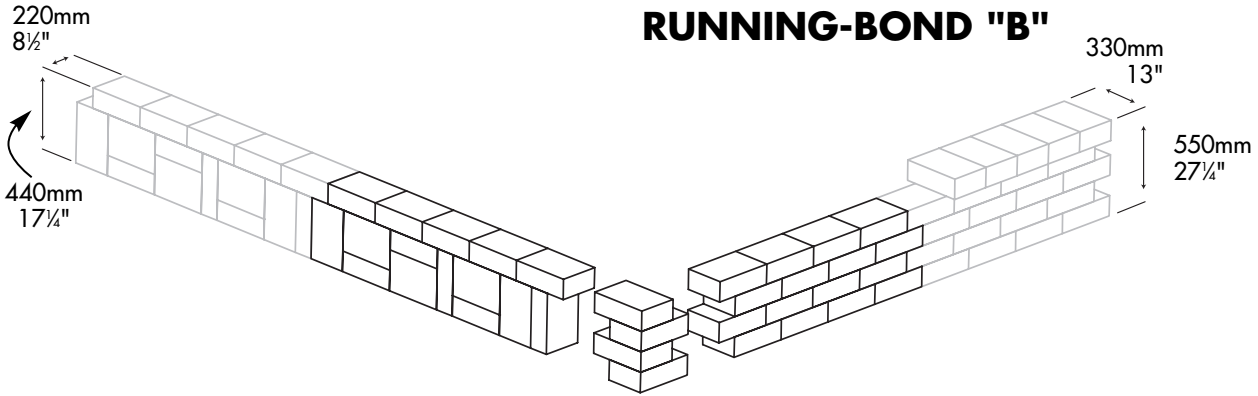


RUNNING RANDOM "B & C"



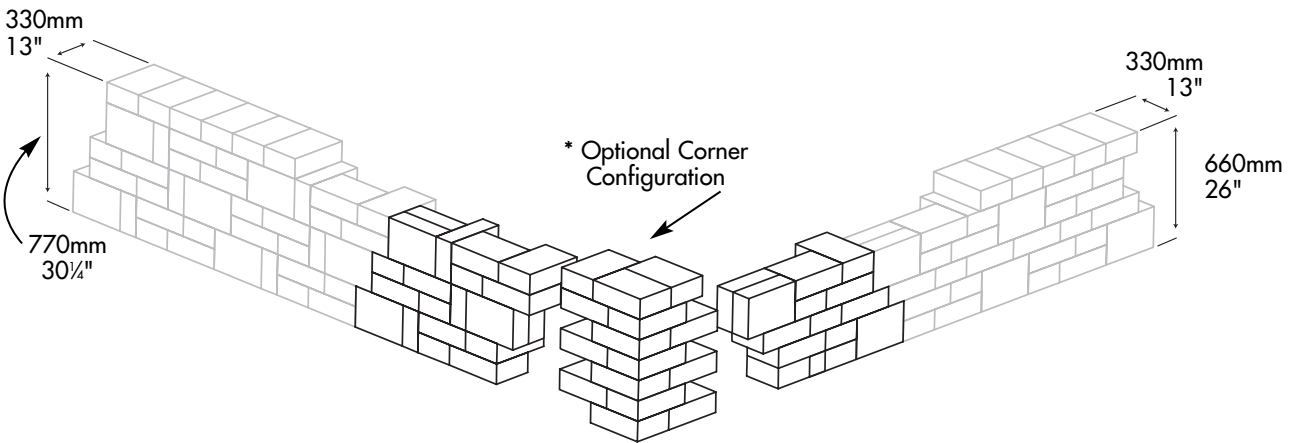


RANDOM "A&B"

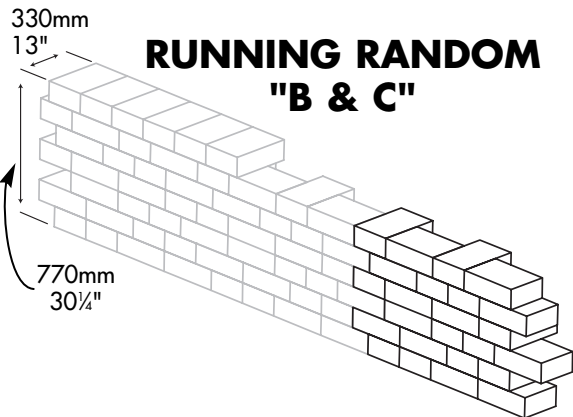


RUNNING-BOND "B"

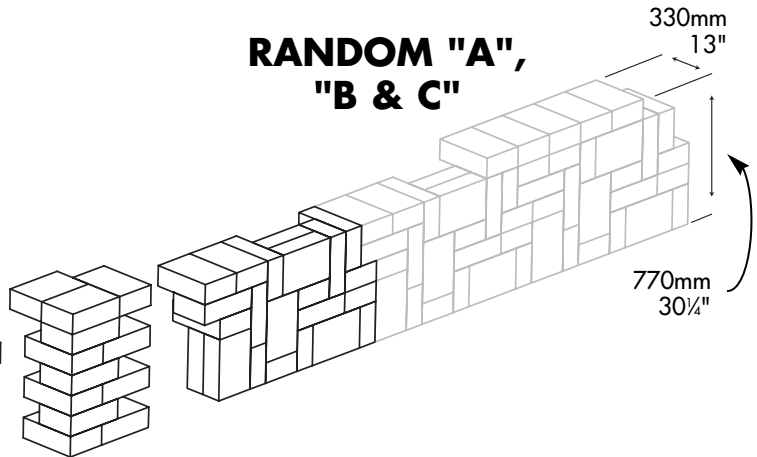
RANDOM "A, B & C"



RUNNING RANDOM "B & C"



RANDOM "A", "B & C"

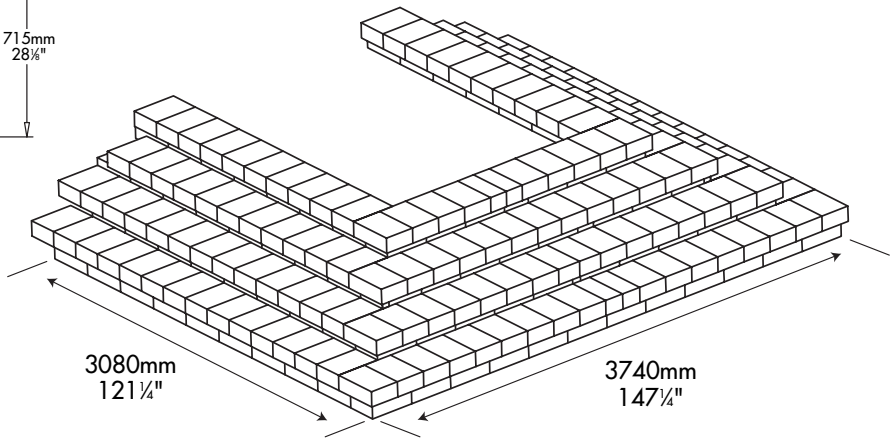
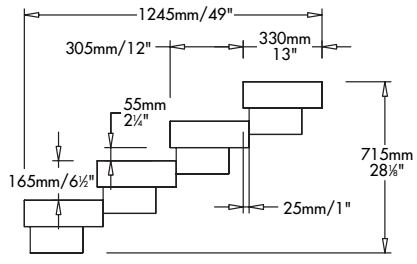


Construction Notes:

1. Alternate corner units to avoid running lines.
2. Some work will need to be done in order to line up corners with a pattern.

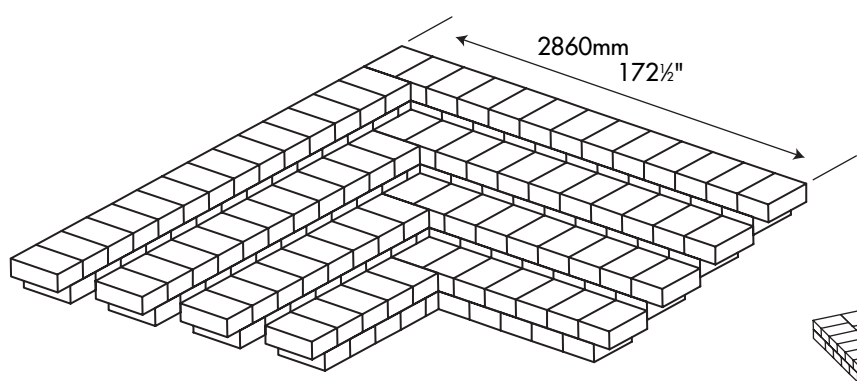
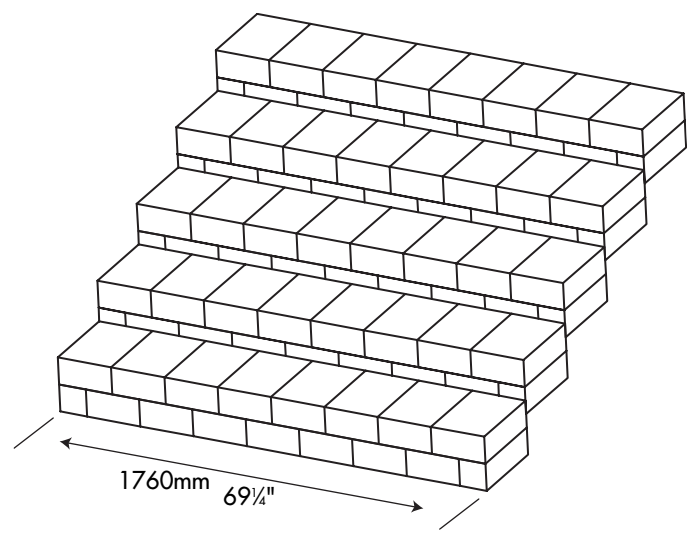
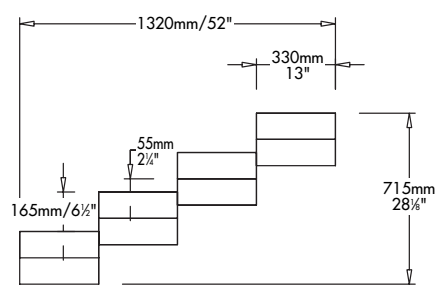


Steps

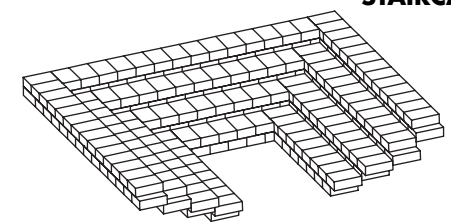


Construction Notes:

1. Adhere top step with concrete adhesive.
2. Alternate corner direction to avoid running lines.
3. Start at lowest grade elevation to eliminate creep and avoid drainage considerations.
4. Handrails not required for "Pyramid" style steps.
5. Creates a 165mm (6 1/2") riser and a 330mm (13") tread.
6. Units are simply installed one behind the next.
7. Backfill and compact behind each layer as it is installed.
8. Use only sides "B" & "C". (Face "A" should be facing upward).
9. Filter cloth should be used behind stairs to stabilize backfill material.

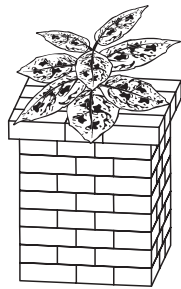
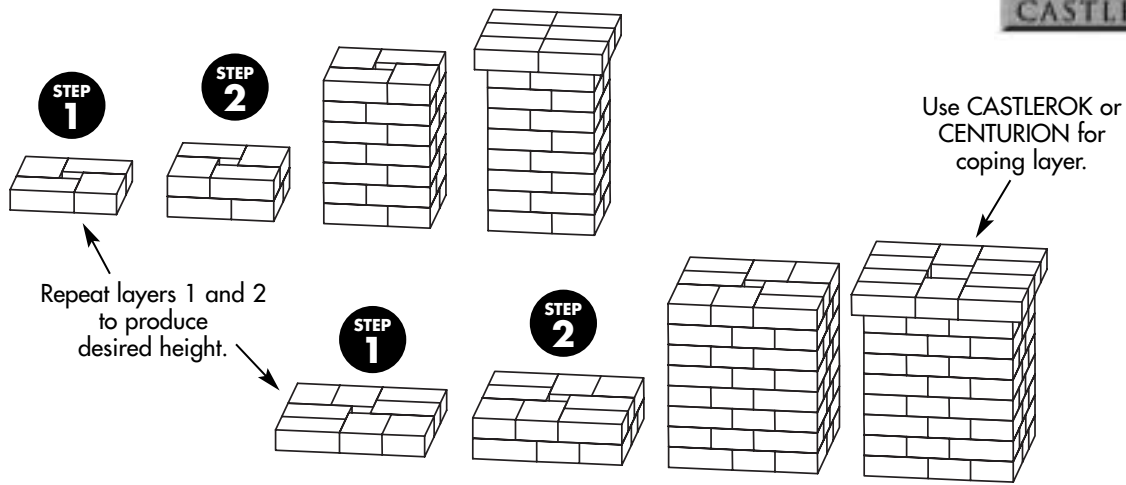


OPTIONAL WRAP-AROUND STAIRCASE

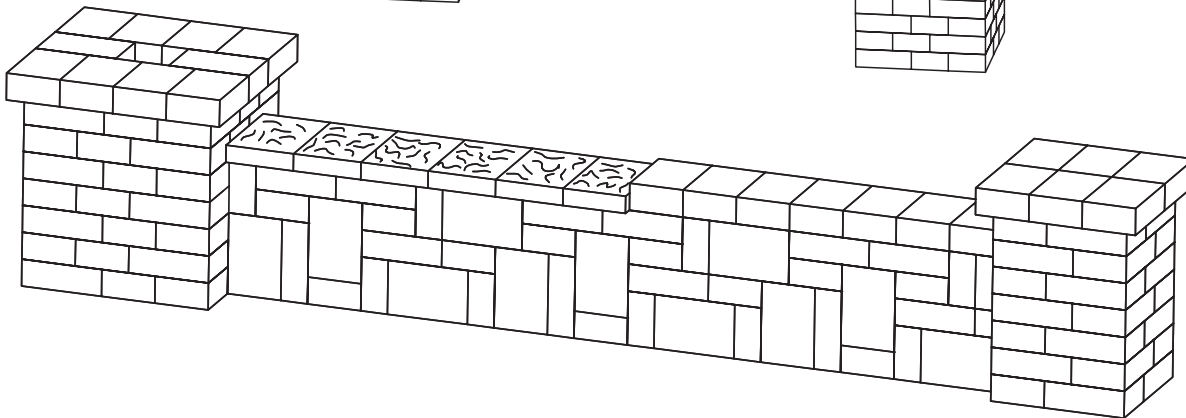
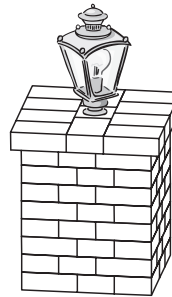


Stair pattern simply continues around lower lefthand corner.

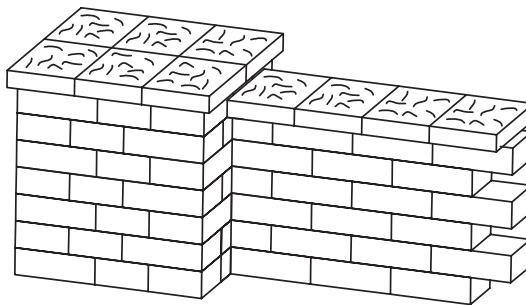




OPTIONAL PLANTER OR LIGHT BASE
 Make sure electrical work is laid before modules are constructed.



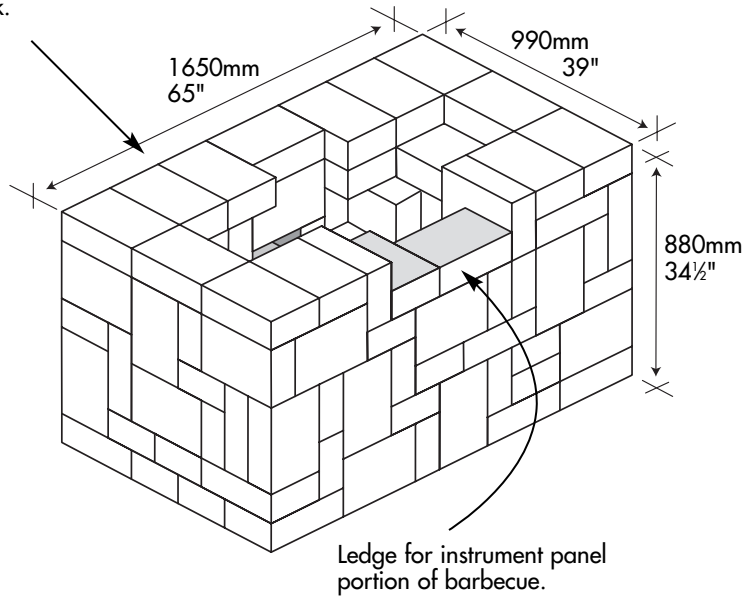
- Either interlock wall with pillar, or bring wall up to the edge of the pillar.
- Cap to have 55 mm (2¼") overhang front and back.
- May use alternative pattern between pillars.
- Ensure solid footing before construction to provide structural support.



Barbecue Enclosure

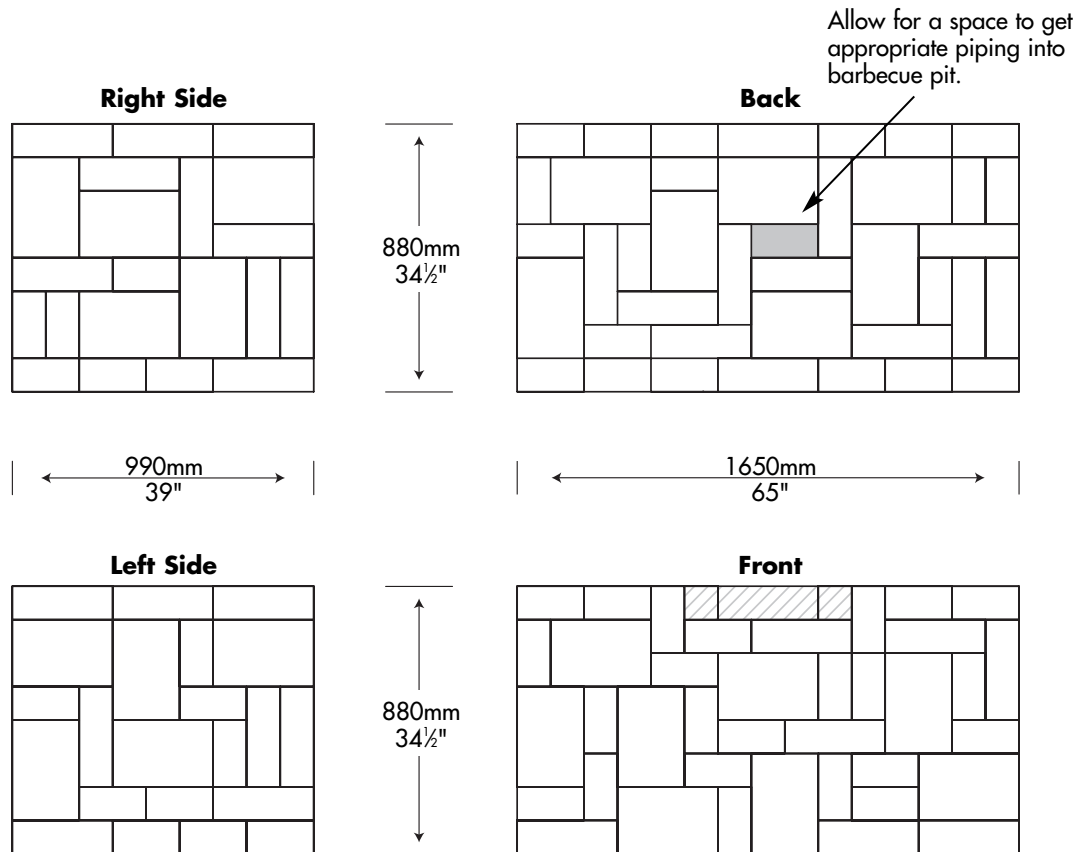


OPTION:
Leave space at
back for optional
tank.

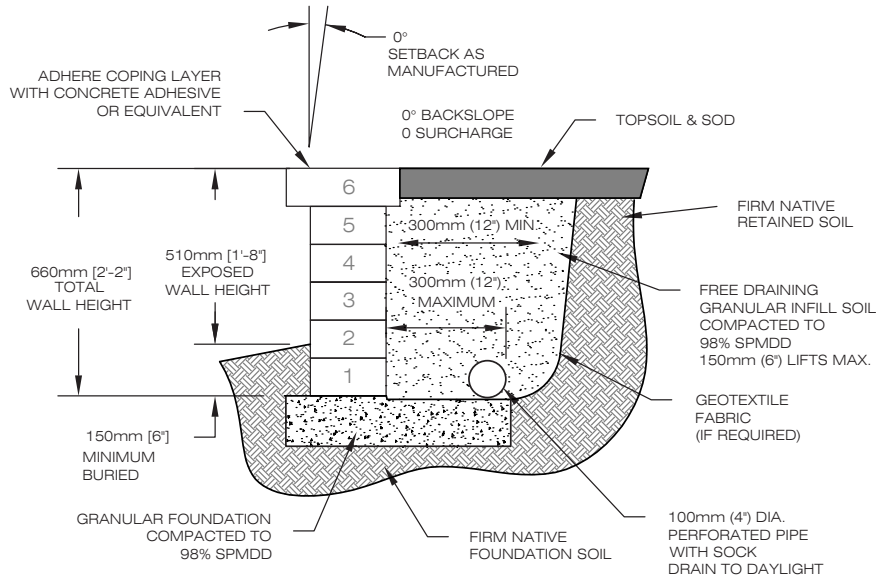


BARBECUE PIT

Designed for a barbecue with
dimensions of 1210 x 330mm
(47½" x 13").



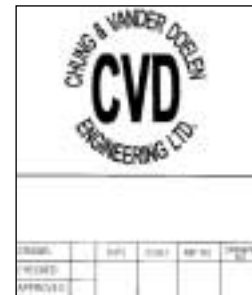
MAXIMUM WALL HEIGHTS (without Geogrid Reinforcing)



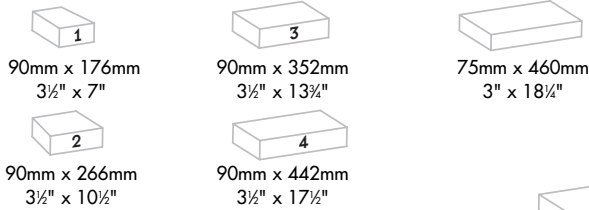
CASTLEROK
Total Wall Height - 660 mm (2 ft. - 2 in.)

NOTES

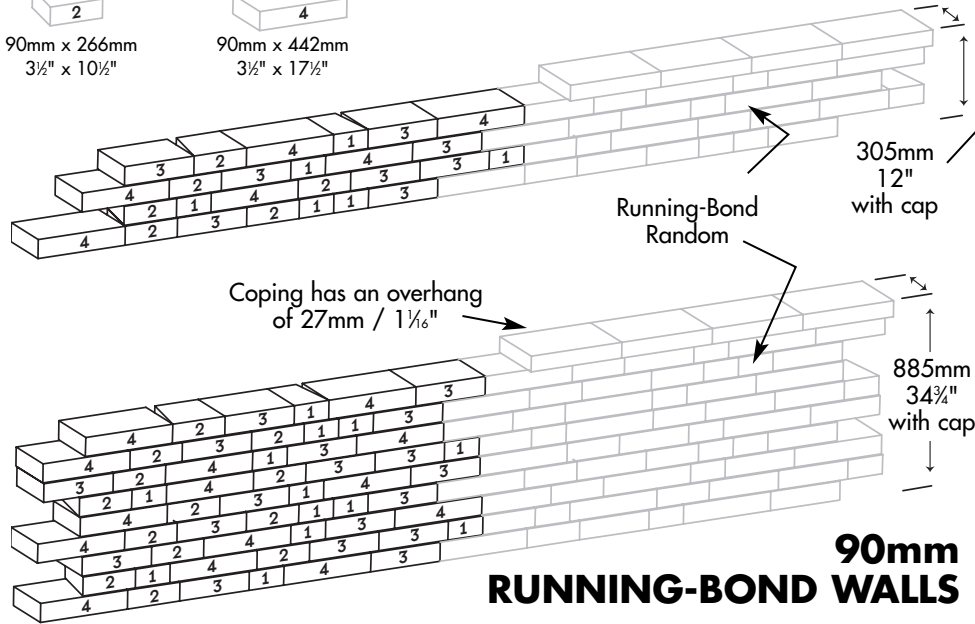
- 1) Footing to be excavated to at least 300mm below finished grade at the front of wall.
- 2) Excavation should be wide enough to provide a suitable width behind the wall for reinforcing (if req'd.) and backfill.
- 3) Subgrade should be firm native soil, dry and stable. Consult a soils engineer if in doubt.
- 4) Place Granular A stone, or equivalent crushed materials, within footing excavation in maximum 150mm thick layers. Compact each layer to provide a firm base.
- 5) Install a 100mm diameter perforated drain pipe with sock adjacent to the rear of the footing unit. Daylight the pipe at the end or through the face of the wall to allow drainage.
- 6) Place successive units to the desired grade. Backfill the wall with free draining granular material at every 150mm (6") and compact with a vibratory plate tamper.
- 7) These walls have a built-in setback of 0 degrees.
- 8) The top of the wall must be graded to direct surface water away from the wall or over the top of the wall.
- 9) Coping layer should be adhered with concrete adhesive, butyl tape or equivalent.
- 10) For certain applications, adhesive should be applied on every layer to create a more structurally sound wall.
- 11) Greater wall heights can be attained with the use of geogrid reinforcement. Consult a soils engineer for design.
- 12) Terraced walls can be used to obtain greater overall retention height.



Straight Applications

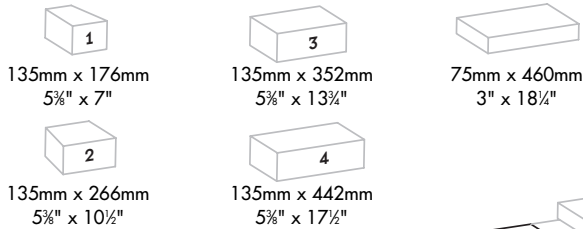


90mm UNITS
 Setback = 12mm / ½"
 Depth = 260mm / 10¼"
 Height = 90mm / 3½"

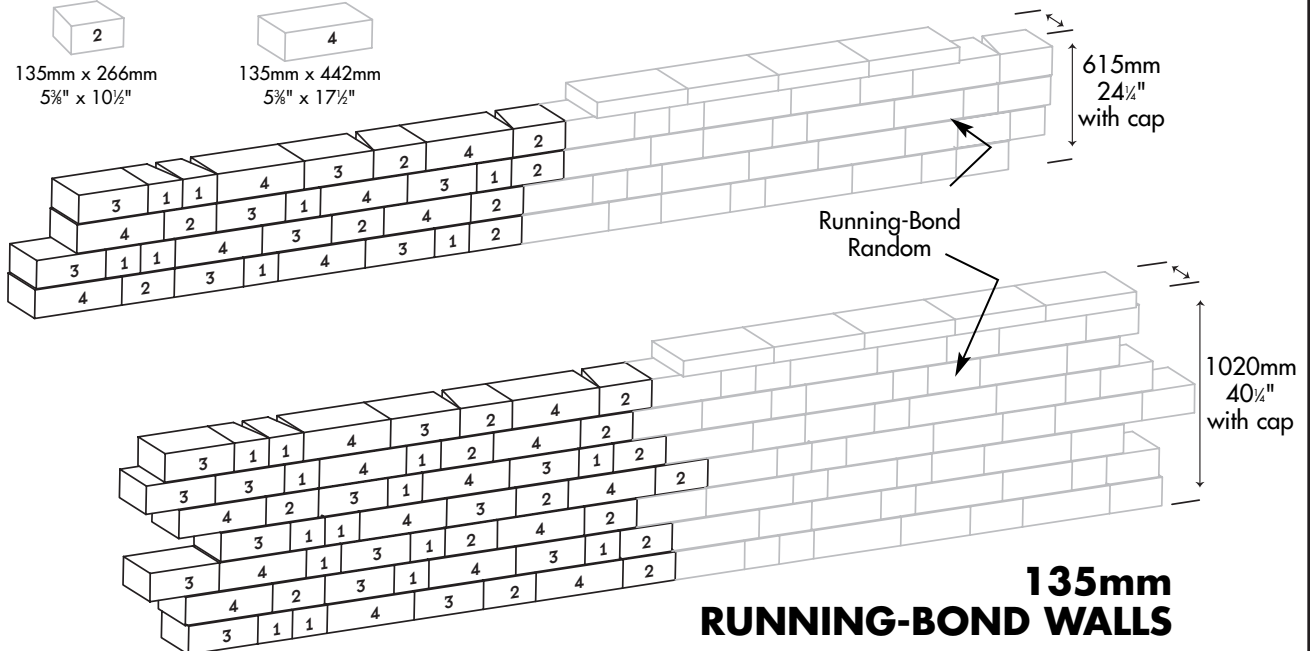


Construction Notes:

1. Stagger joints to create a lock between layers.
2. Use Fieldstone Coping as cap units.
3. Units 1 & 2 are tapered. When building straight walls there will be gaps along the rear face of the wall where these units are used.
4. Wall has a natural 7.6° setback.
5. Setback dimensions for each layer.
 90mm units: 12mm (½")
 135mm units: 18mm (⅙").
6. Geotextile fabric may be used to prevent backfill materials from migrating through the wall face.
7. Coping layer should be adhered with concrete adhesive.
8. Place successive units to the desired grade. Backfill the wall with free draining granular material at every 150mm (6") and compact with a vibratory plate tamper.
9. Geogrid reinforcement may be used to create higher walls.



135mm UNITS
 Setback = 18mm / 11/16"
 Depth = 260mm / 10¼"
 Height = 135mm / 5⅝"



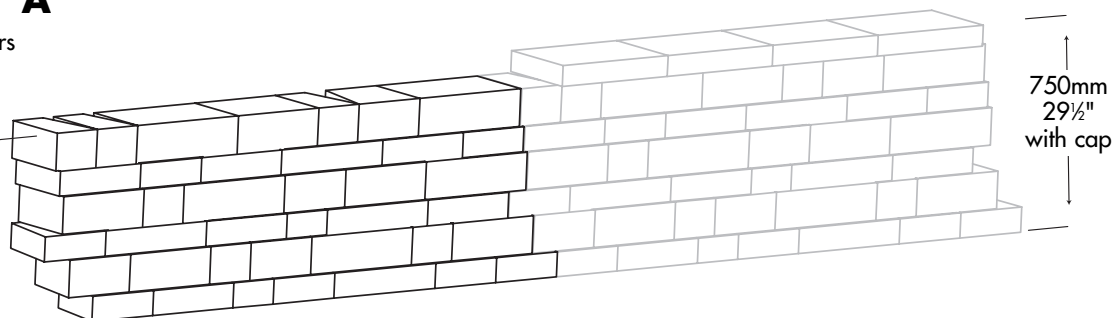
Straight Applications



COMBO "A"

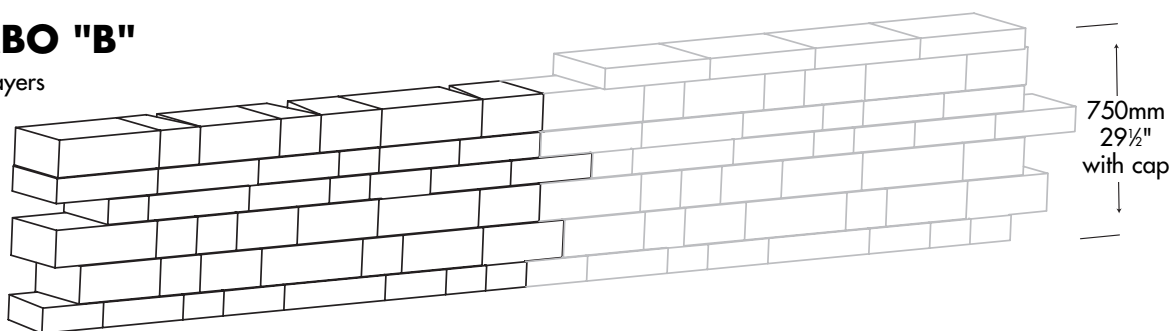
Alternating layers

Layers are
260mm
thick.



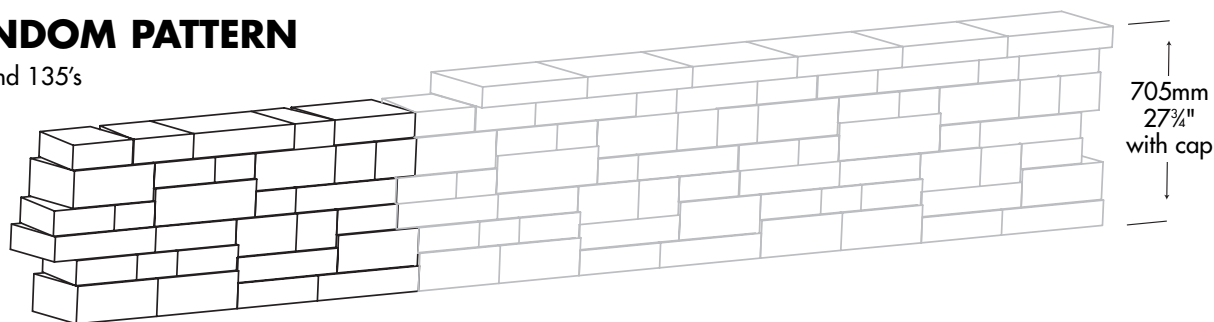
COMBO "B"

Double layers



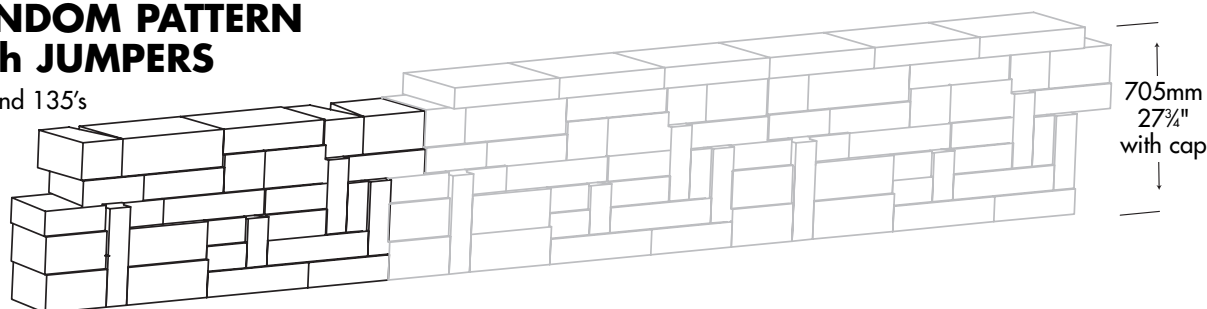
RANDOM PATTERN

90's and 135's



RANDOM PATTERN with JUMPERS

90's and 135's



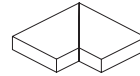
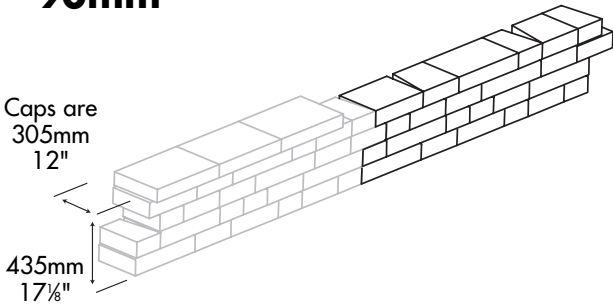
Inside Corners



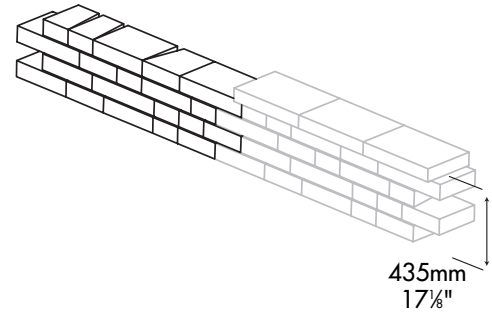
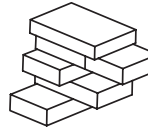
RUNNING RANDOM 90mm

Caps are
305mm
12"

435mm
17 $\frac{1}{8}$ "

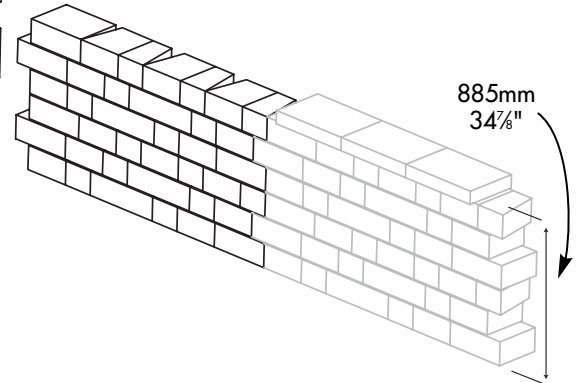
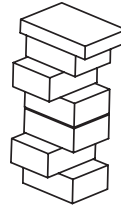
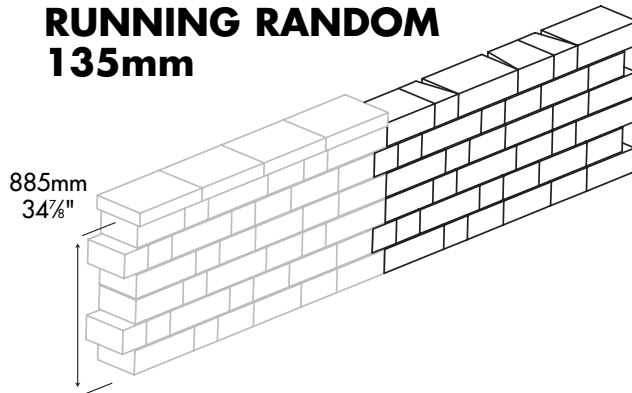


OPTION:
create a mitred corner
by cutting with a
concrete saw.



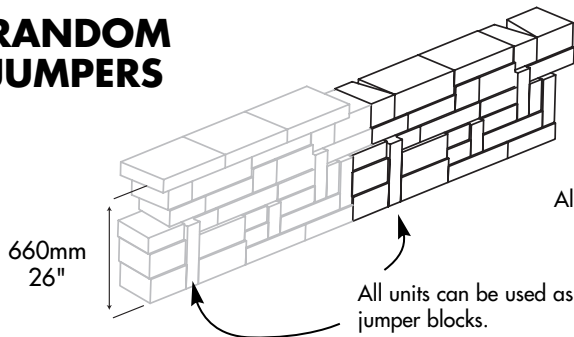
RUNNING RANDOM 135mm

885mm
34 $\frac{7}{8}$ "



RANDOM JUMPERS

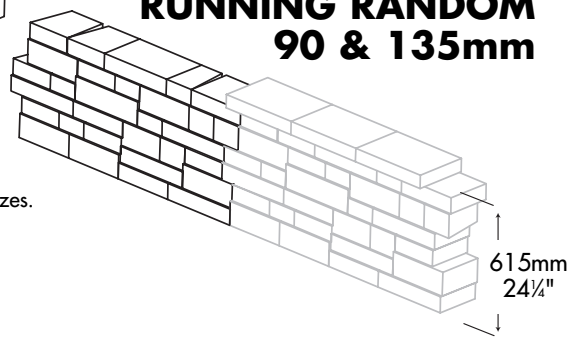
660mm
26"



All units. Both sizes.

All units can be used as
jumper blocks.

RUNNING RANDOM 90 & 135mm



Construction Notes:

1. Corners will require some work in getting them to work themselves into the pattern.
2. Use larger units (3 and 4) for stability.
3. Always stagger the joints.
4. Alternate overlap of corner units.
5. It may be necessary to remove a portion of each unit's tail to overlap properly.
6. Other corner combinations are possible.
7. Specific location of units must be determined on site to match corners to each wall pattern.



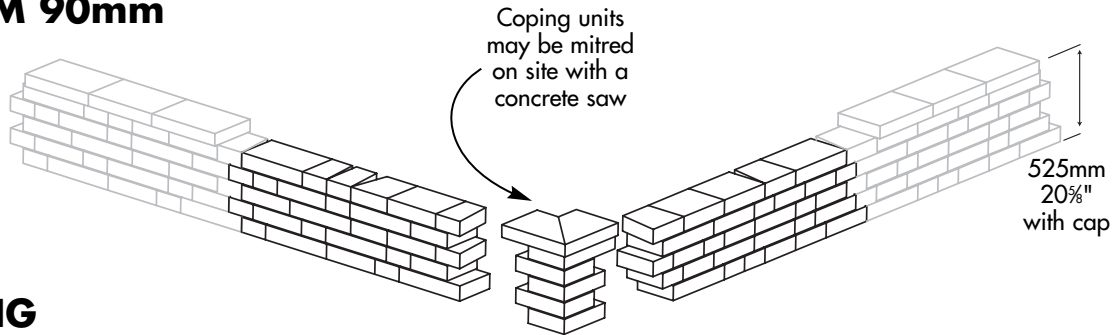
Outside Corners



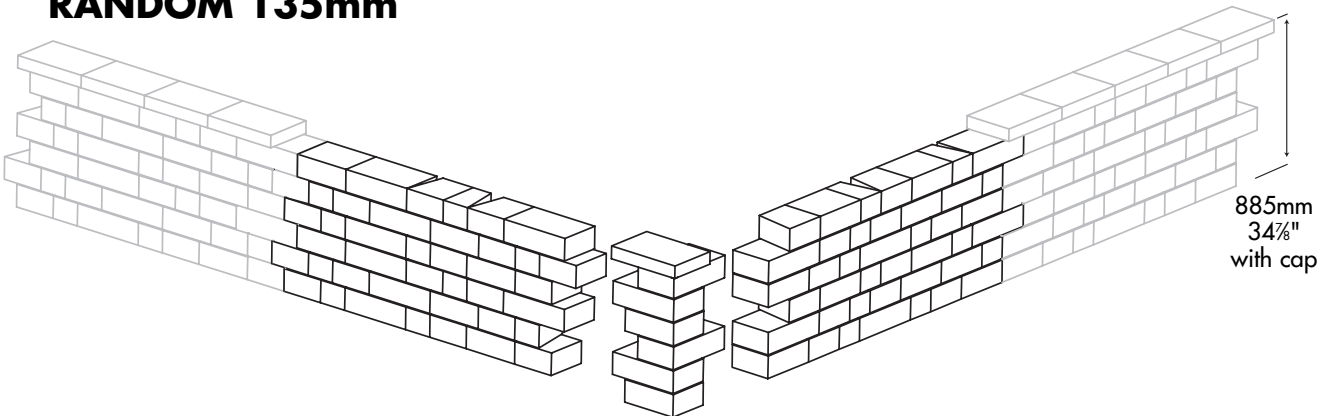
Construction Notes:

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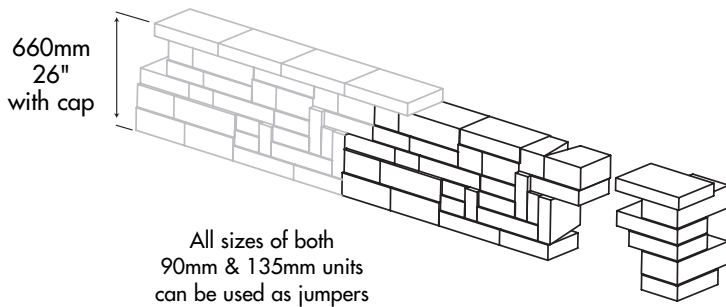
RUNNING RANDOM 90mm



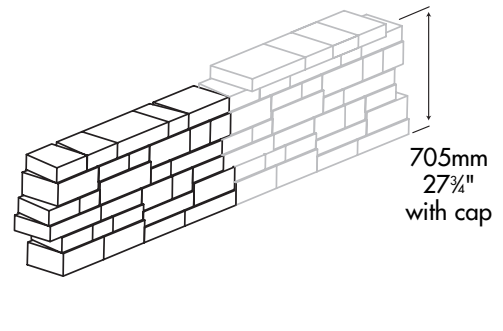
RUNNING RANDOM 135mm



RANDOM JUMPERS



RUNNING RANDOM 90 & 135mm

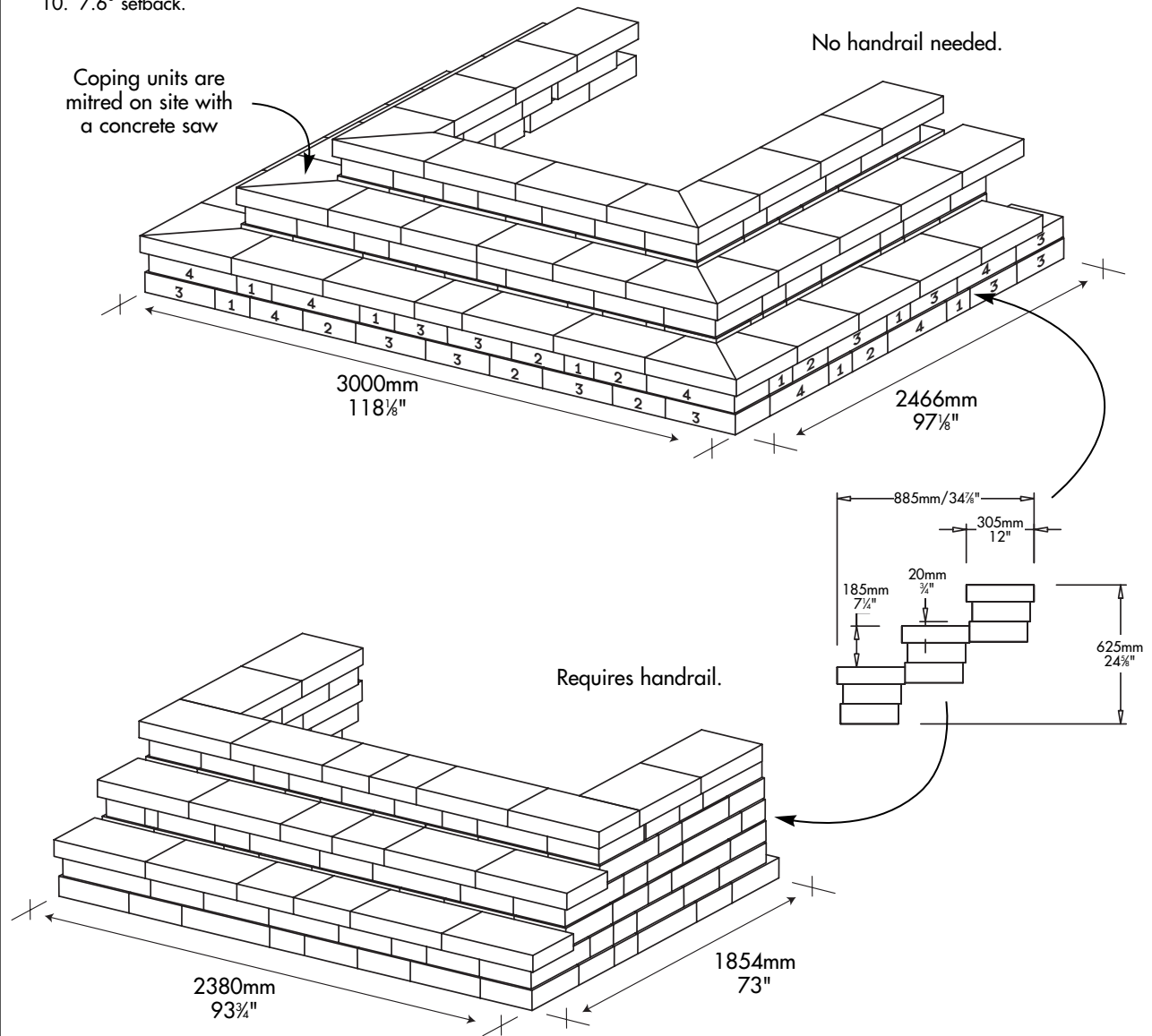


Steps



Construction Notes:

1. Create stairs with the 90mm units.
2. Stair riser is 185mm / 7¼"; tread is 305mm / 12".
3. Distribute cut pieces evenly across width of each step.
4. More steps could be added (using the same pattern) by increasing dimensions at the bottom in both directions.
5. Backfill and compact as each step is built.
6. Adhere each coping unit to previous layer using concrete adhesive.
7. It may be necessary to remove a portion of each unit's tail to overlap properly at corner locations.
8. Coping units will overhang 27mm / 1⅛".
9. Corners are made using only units 3 and 4.
10. 7.6° setback.



Create a Circular Wall...



This wall uses 90mm units, but you can create this same wall using 135mm units.

345mm high wall
13½"

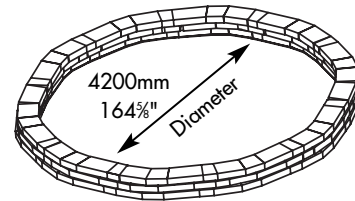
RADIUS of
2100mm
82½"

Construction Notes:

1. Created using ALL four units.
2. Units 3 and 4 must be split along the taper line to create angled edge.
3. Place units to create the desired radius with appropriate setback and overhang on each layer.
4. Tails must be partially removed in order to create desired turning radius.
5. Use Fieldstone Coping units as cap.
6. Note: as layers are added the radius becomes SMALLER due to each unit's setback.

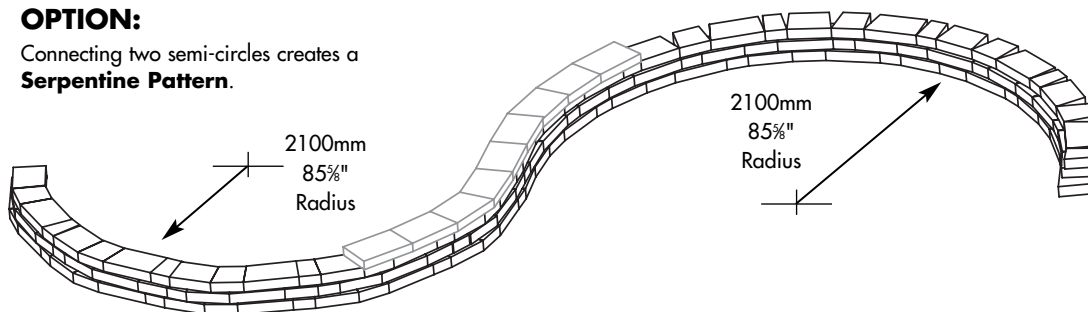
7. Make sure all tapered edges are placed side to side to create tightest possible radius.
8. Other radius dimensions can be created by leaving gaps along the rear face of the wall

OPTIONAL PLANTER RING



OPTION:

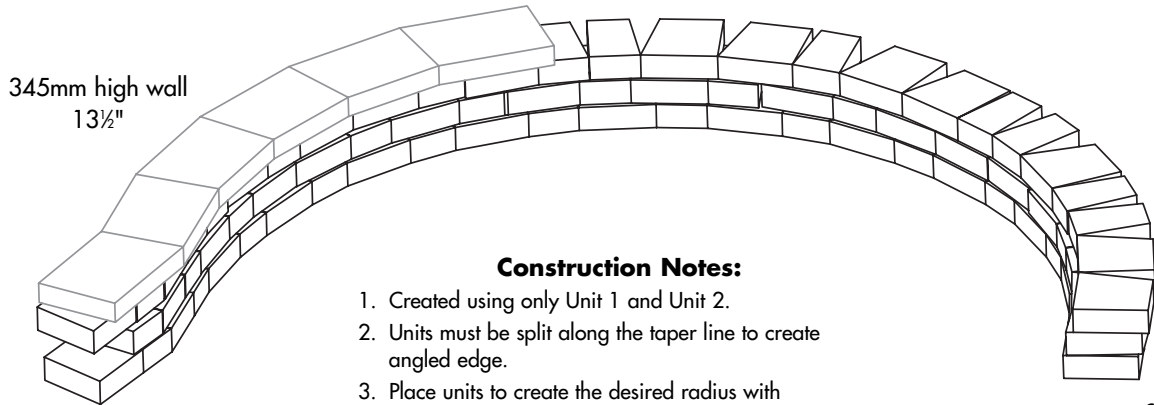
Connecting two semi-circles creates a **Serpentine Pattern**.



...Attain a Smaller Radius



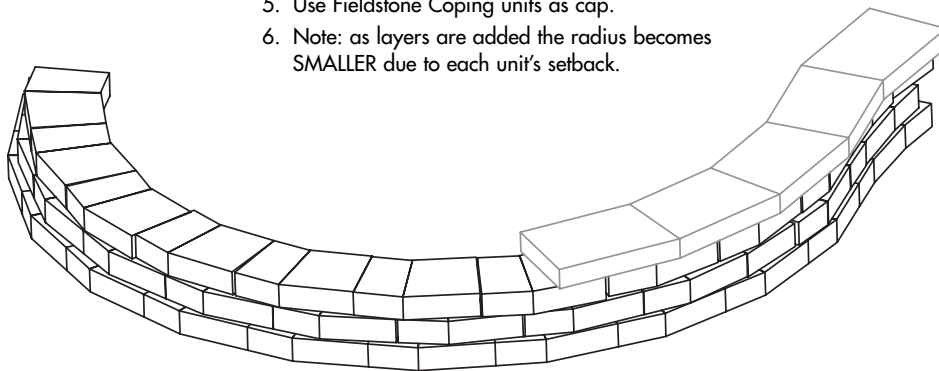
This wall uses 90mm units, but you can create this same wall using 135mm units.



Construction Notes:

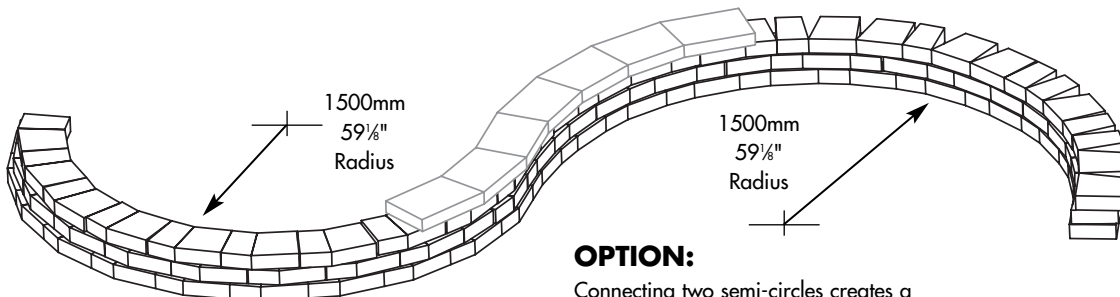
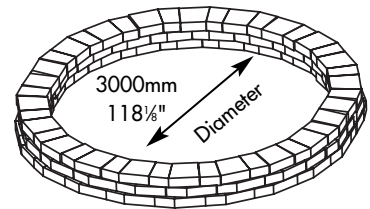
1. Created using only Unit 1 and Unit 2.
2. Units must be split along the taper line to create angled edge.
3. Place units to create the desired radius with appropriate setback and overhang on each layer.
4. Tails must be partially removed in order to create desired turning radius.
5. Use Fieldstone Coping units as cap.
6. Note: as layers are added the radius becomes SMALLER due to each unit's setback.

RADIUS of
1500mm
59 1/8"



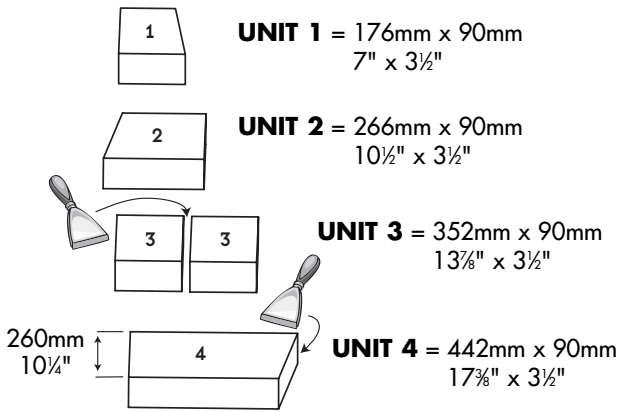
7. Make sure all tapered edges are placed side to side to create tightest possible radius.
8. Other radius dimensions can be created by leaving gaps along the rear face of the wall

OPTIONAL PLANTER RING

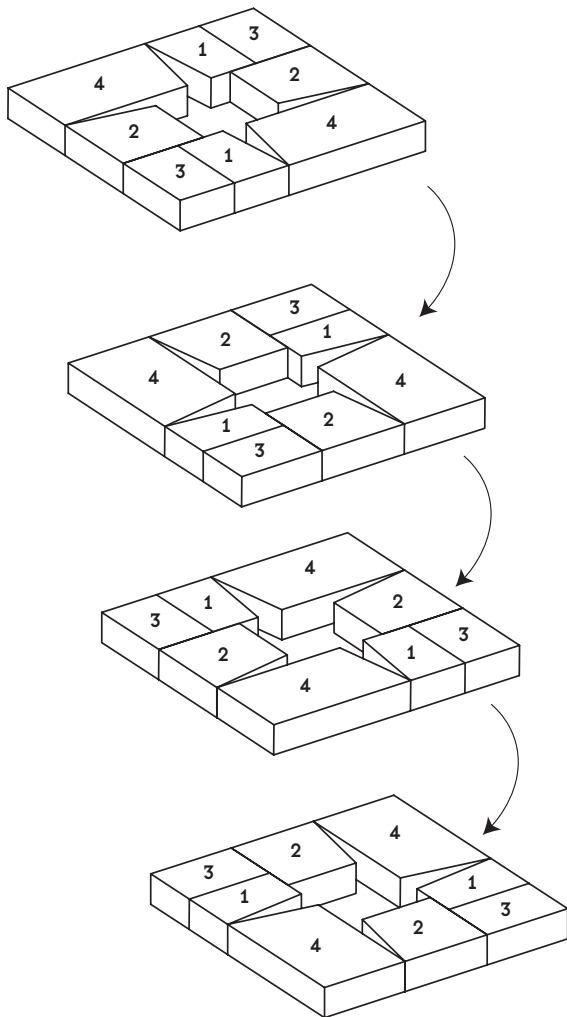


OPTION:
Connecting two semi-circles creates a
Serpentine Pattern.





- All units are 260mm / 10¼" deep
- Possible to use 135mm units as well.

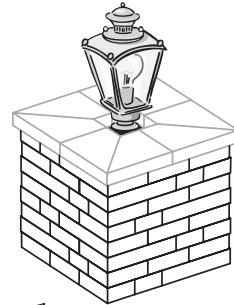


* Repeat layers until desired height is achieved.

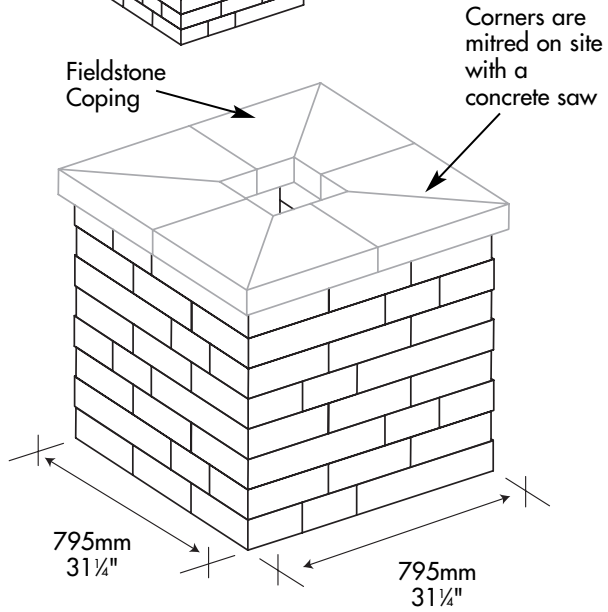
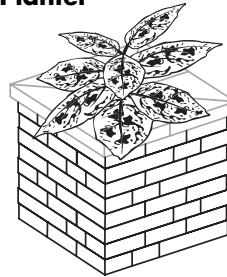
Construction Notes:

1. Coping layer should be adhered with concrete adhesive.
2. Stagger joints wherever possible to provide more stability and improved appearance in the wall face.
3. Ensure solid footing before construction to provide structural support.
4. Geotextile fabric should be used for the planter to prevent backfill materials from migrating through the wall face.
5. Make sure wiring is laid before pillar is constructed.

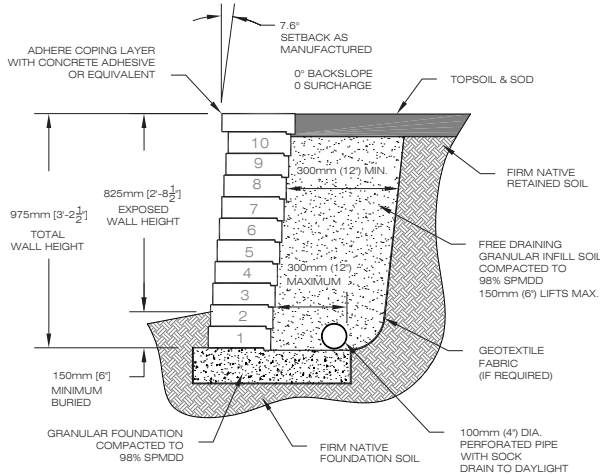
Light



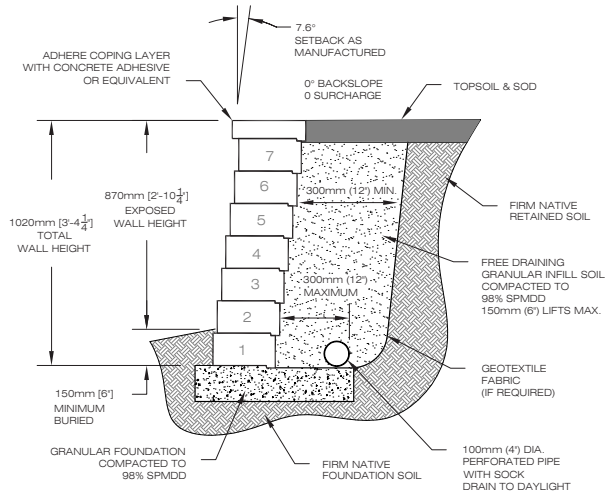
Planter



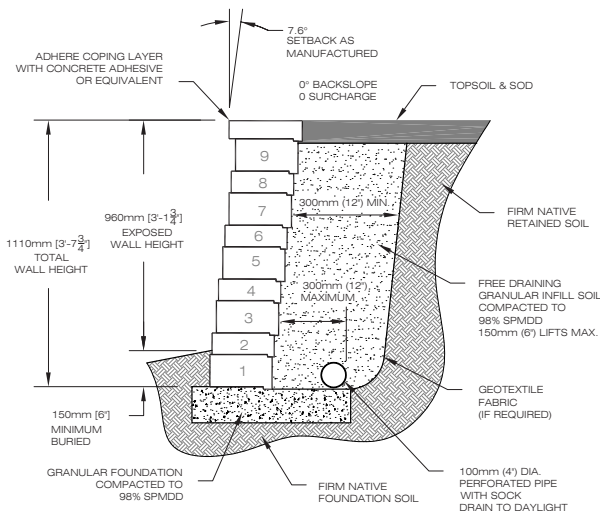
Engineered Profiles



FIELDSTONE 90
Total Wall Height - 975 mm (3 ft. - 2 1/2 in.)



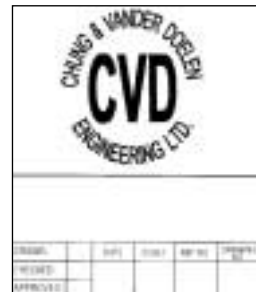
FIELDSTONE 135
Total Wall Height - 1020 mm (3 ft. - 4 1/4 in.)



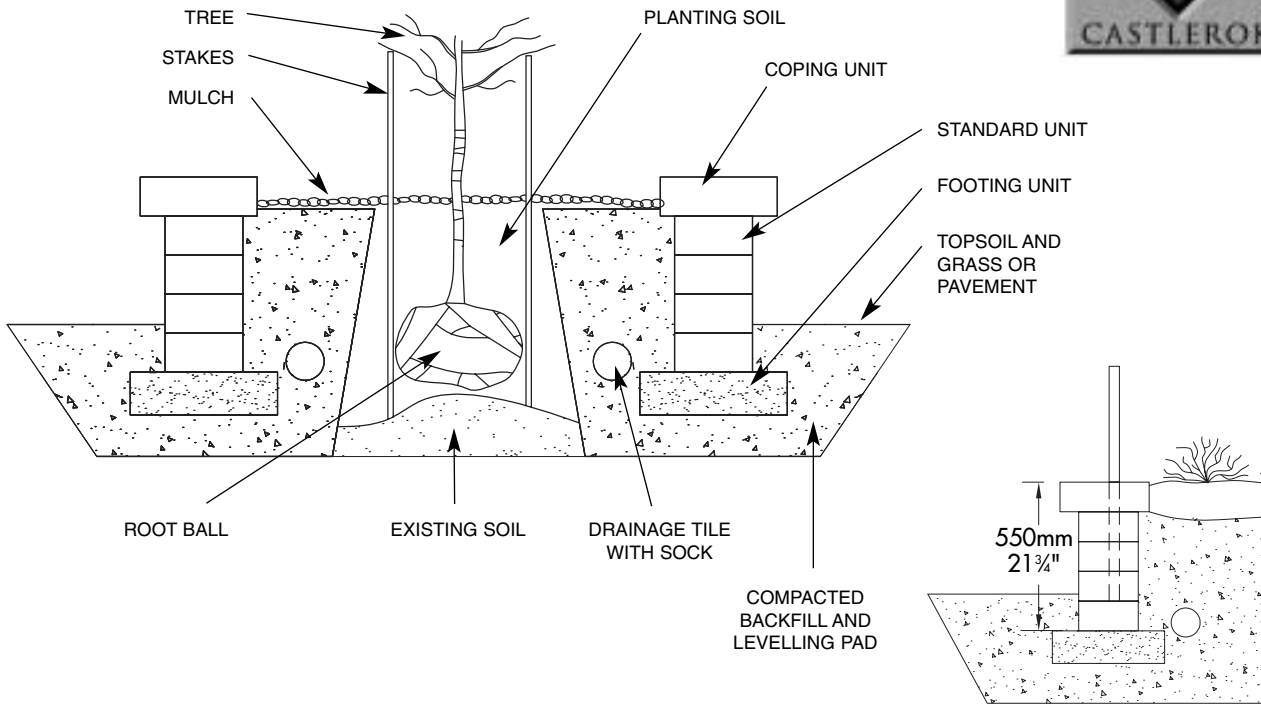
FIELDSTONE 90 & 135
Total Wall Height - 1110 mm (3 ft. - 7 3/8 in.)

NOTES

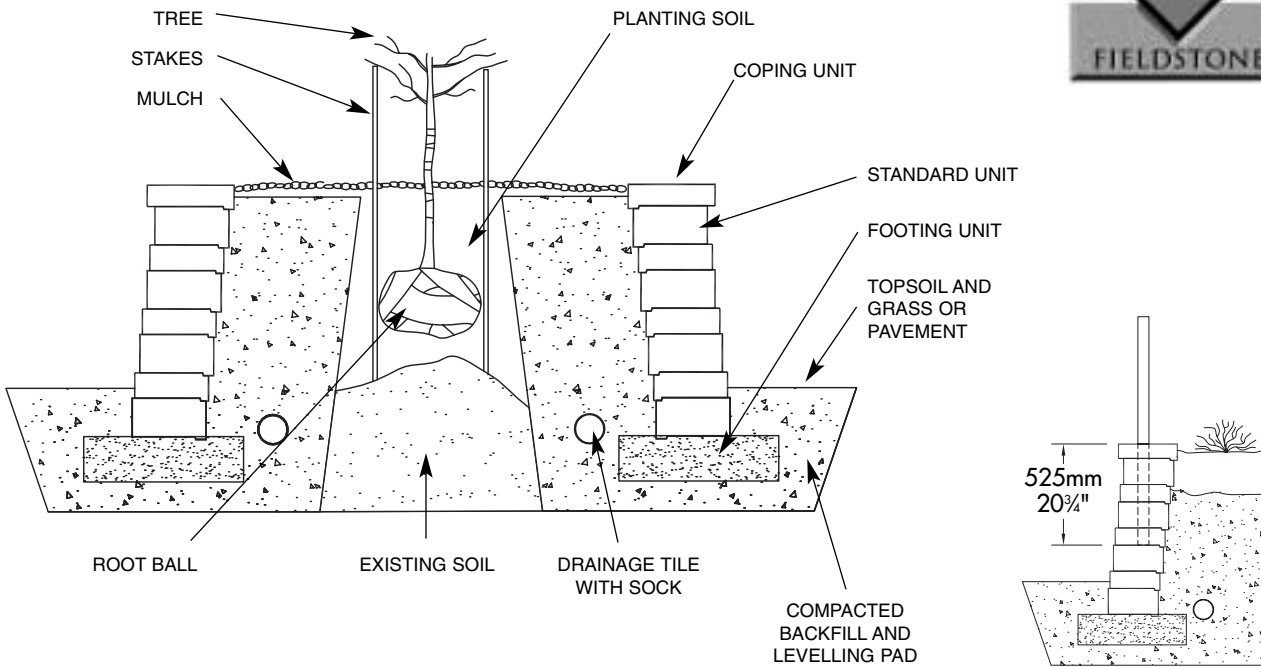
- 1) Footing to be excavated to at least 300mm below finished grade at the front of wall.
- 2) Excavation should be wide enough to provide a suitable width behind the wall for reinforcing (if req'd.) and backfill.
- 3) Subgrade should be firm native soil, dry and stable. Consult a soils engineer if in doubt.
- 4) Place Granular A stone, or equivalent crushed materials, within footing excavation in maximum 150mm thick layers. Compact each layer to provide a firm base.
- 5) Install a 100mm diameter perforated drain pipe with sock adjacent to the rear of the footing unit. Daylight the pipe at the end or through the face of the wall to allow drainage.
- 6) Place successive units to the desired grade. Backfill the wall with free draining granular material at every 150mm (6") and compact with a vibratory plate tamper.
- 7) These walls have a built-in setback of 7.6° degrees.
- 8) The top of the wall must be graded to direct surface water away from the wall or over the top of the wall.
- 9) Coping layer should be adhered with concrete adhesive, butyl tape or equivalent.
- 10) Greater wall heights can be attained with the use of geogrid reinforcement. Consult a soils engineer for design.
- 11) Terraced walls can be used to obtain greater overall retention height.



Castlerok Planters



Fieldstone Planters



Printed in Canada LP 09/03