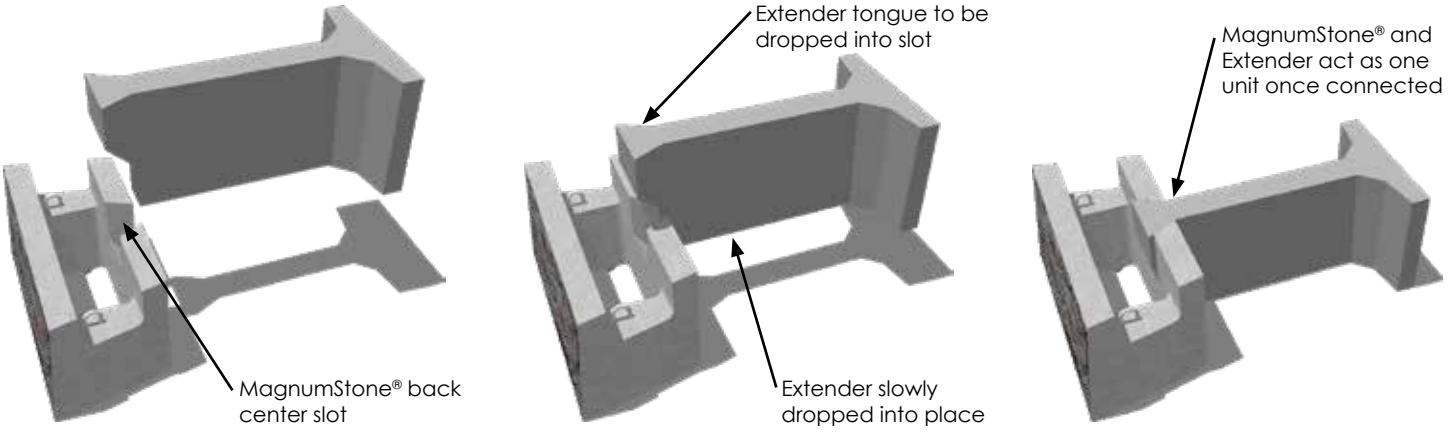
GRAVITY WALL
INSTALLATION USING EXTENDERS

GRAVITY WALL: INSTALLATION USING EXTENDERS

NOTE: The user is responsible for the final design and use of the MagnumStone® products. All drawings, illustrations, and text are accurate to the best of our knowledge but a qualified engineer shall do the analysis and structural design for all aspects of the segmental retaining wall project. The sole responsibility of the suitability of the products or information in this manual lies with the user.

EXTENDER TO BLOCK INSTALLATION

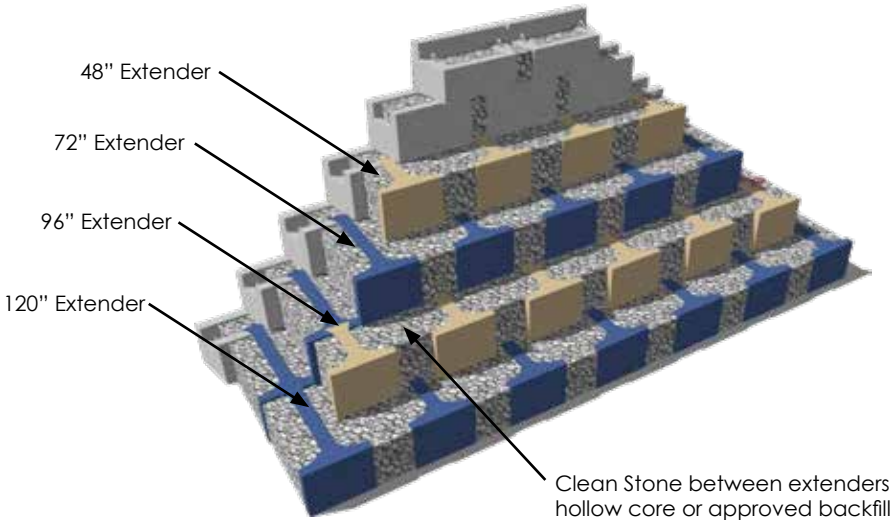
After the MagnumStone® block has been laid in it's appropriate place the Extender unit is slowly dropped into the back center slot. Once connected, the MagnumStone® and Extender will act as one unit and be secured with back fill materials and compaction.

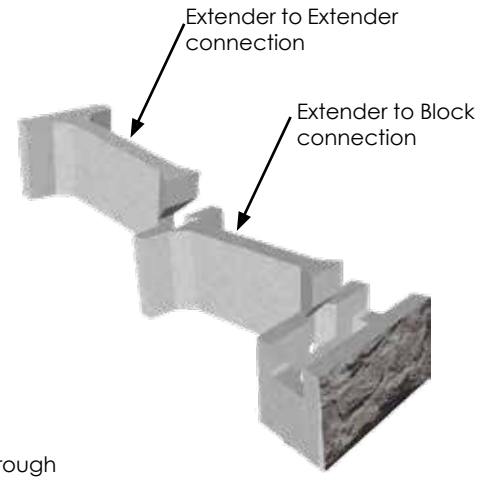


EXTENDER TO EXTENDER INSTALLATION

MagnumStone® extenders can be used in any combination of standard lengths. The design will be based on what is best suited for the soils and loads. MagnumStone® engineering design software will allow the user to choose what is best suited for the project.

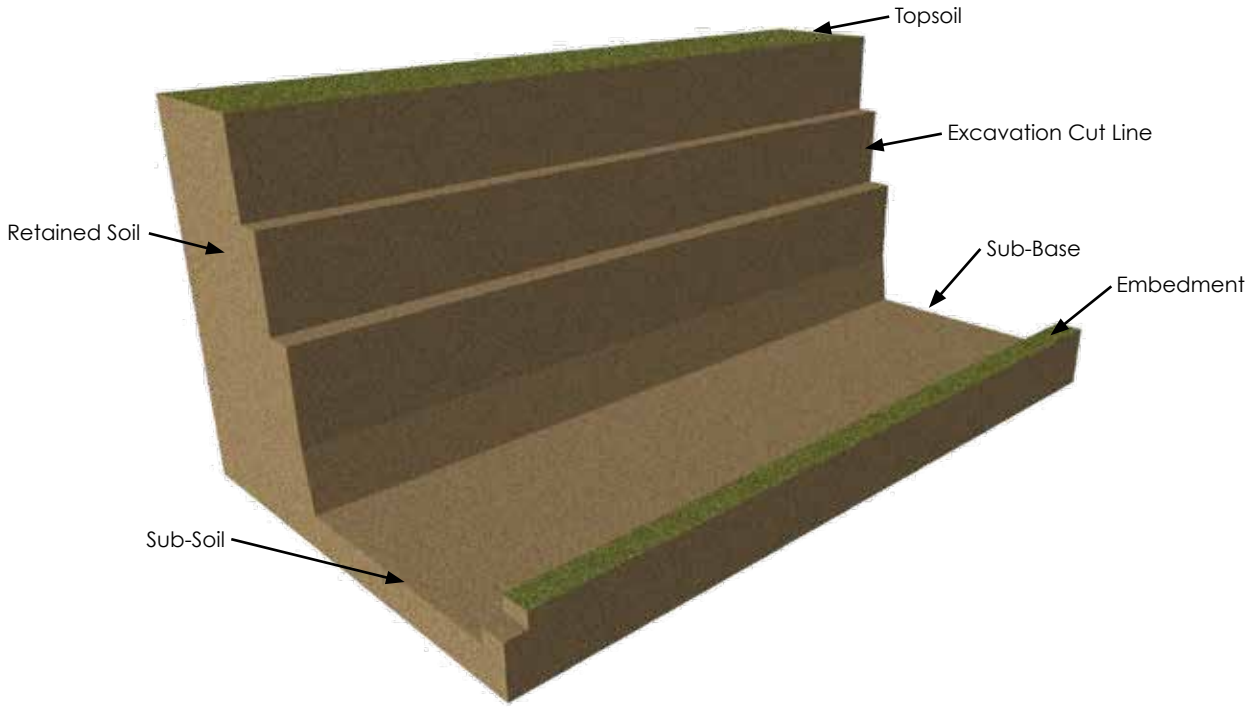
Once a back fill is chosen the contractor can backfill and compact around the extender units. Typically a free draining material clean stone or approved material will be used.





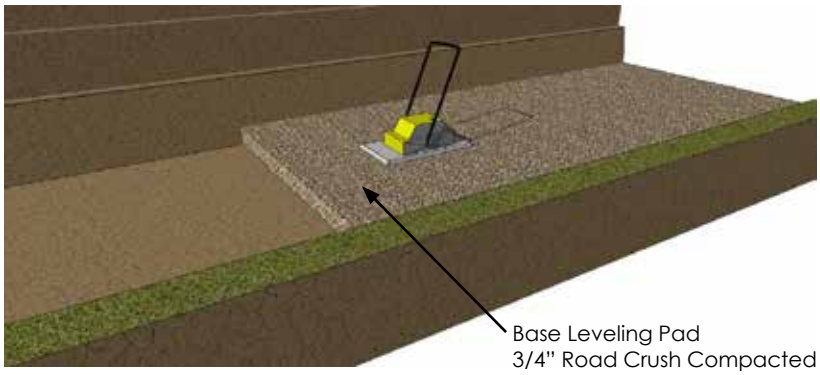
GRAVITY RETAINING WALL INSTALLATION

Excavation:
Follow proper procedures for excavation cut lines and slopes etc. Consult your local Engineer for a proper design and soils testing/analysis.

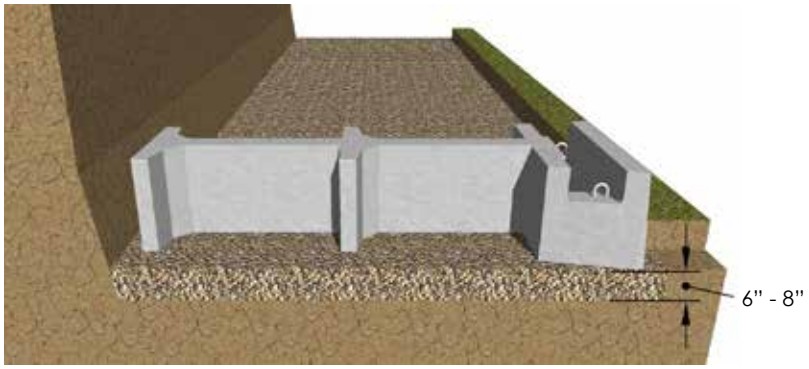


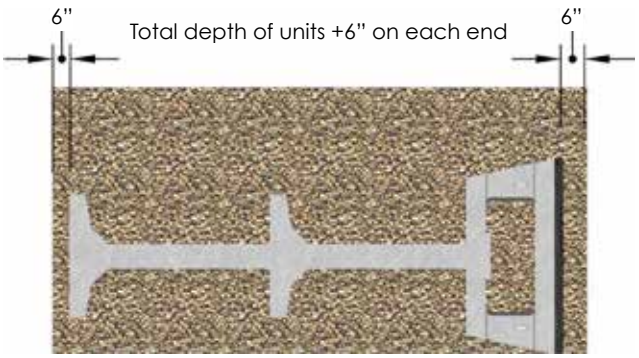
Base Preparation:
The width of the base leveling pad should be the depth of the block and or extender(s) on the first course plus 6" front and back.

Example for a standard unit:
24" + 6"(front) + 6"(back) = 48" total



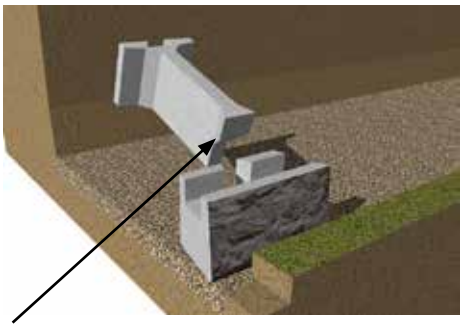
Base material should be a 3/4" road crush or equivalent. The depth of the leveling pad should be minimum of 6" thick compacted to 95% standard proctor density. Soil separating fabrics may be used between the sub-base and leveling pad.



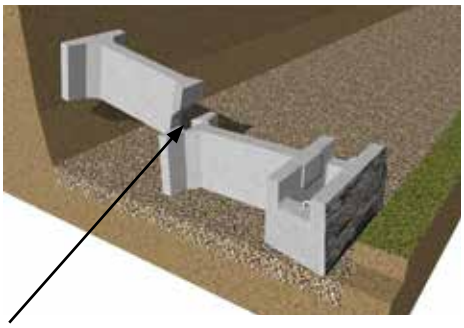


Block & Extender Installation:
Install the MagnumStone® base block on the leveling pad. The base block should not have the lugs on the bottom. Ensure that the blocks are level front to back and side to side.

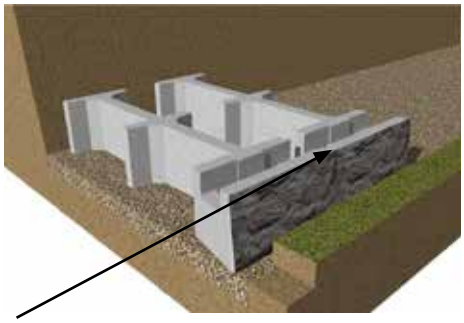
Place the tongue of the extender block inside the groove of the MagnumStone® block. If extender to extender blocks are required, place them in the same manner as the previous ensuring that the blocks stay level and true.



Extender to Block tongue and groove connection



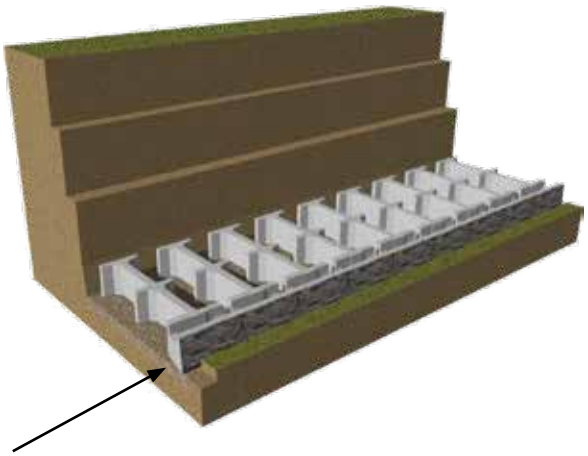
Extender to Extender tongue and groove connection



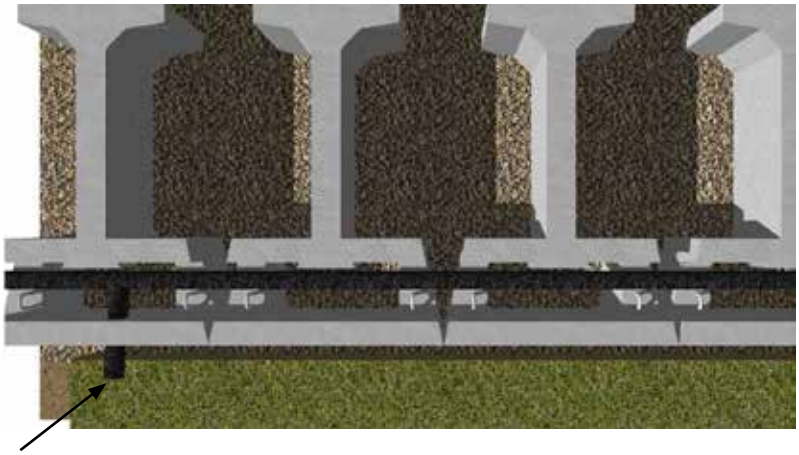
Place the next row of blocks level and aligned front to back and side to side

Backfill Block & Extender Units:
Backfill the MagnumStone® blocks and extender units with a clear crush gravel (#57 Stone) slightly above the units. Run a plate vibratory compactor over the stones and units allowing them to settle in the hollow cores. Sweep any excess stones off the top of the units and blocks.

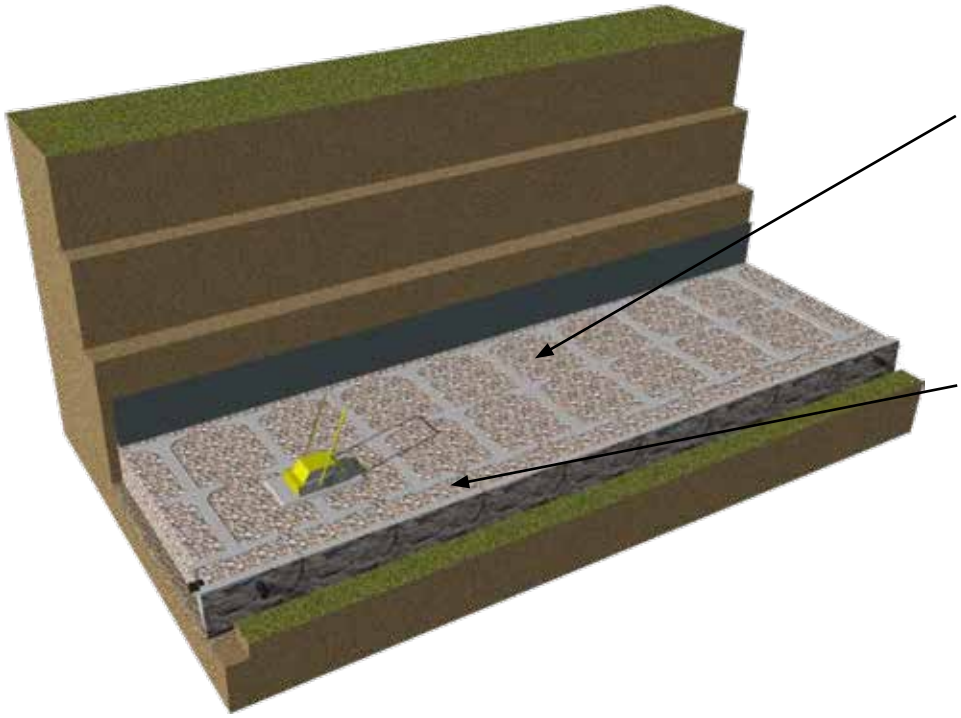
Drainage:



Finish laying the block and extenders.

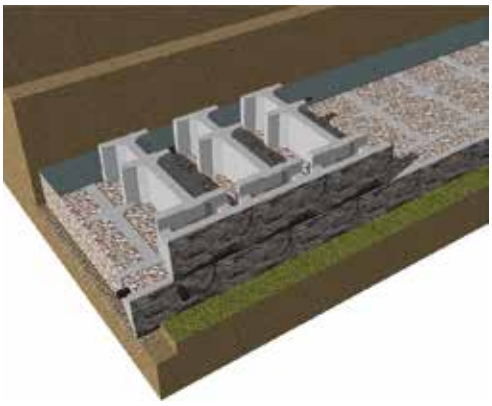


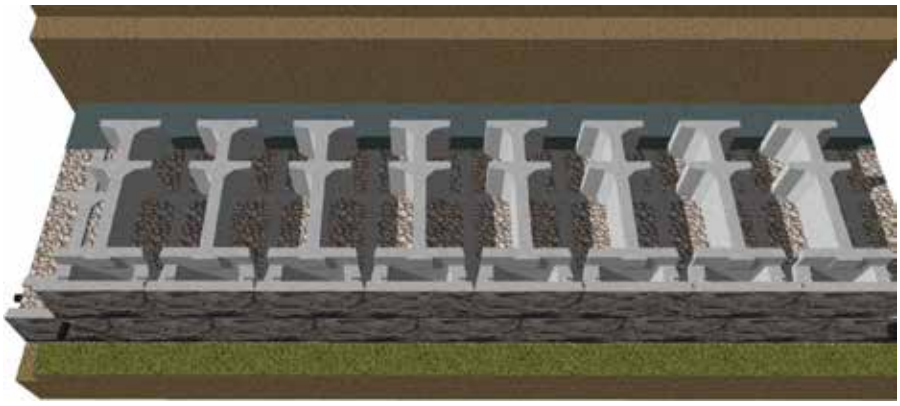
4" perforated drain pipe that daylights to front of wall a minimum of every 35 feet.



Back fill the hollow cores of the block and between extender units with clean stone or approved backfill.

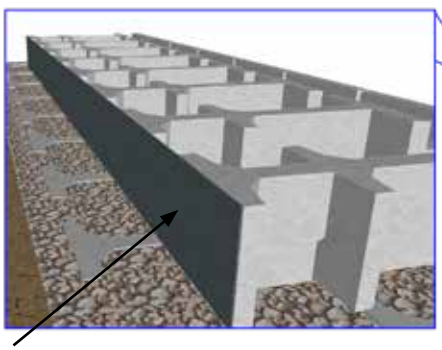
Install the drain gravel slightly above the blocks and compact with a plate vibratory compactor. Sweep access rock and debris off the blocks before installing the next course.



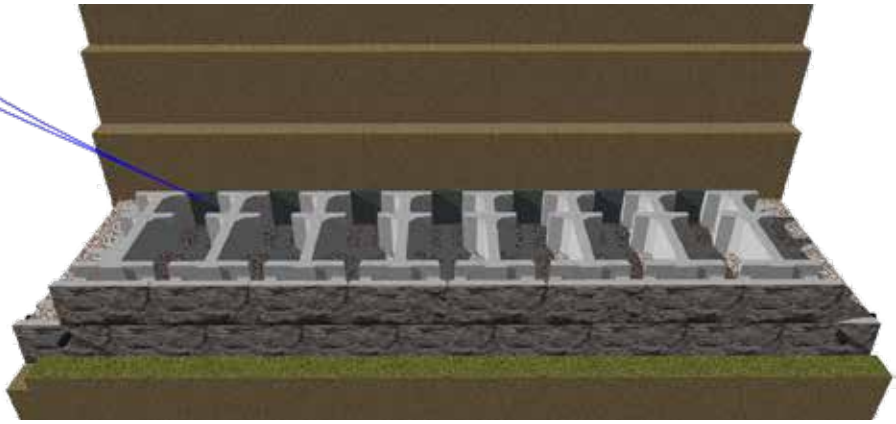


Lay the next row on a running bond pattern with the SecureLugs connected in the hollow cores of the blocks below. Complete the second row installation ensuring everything is level.

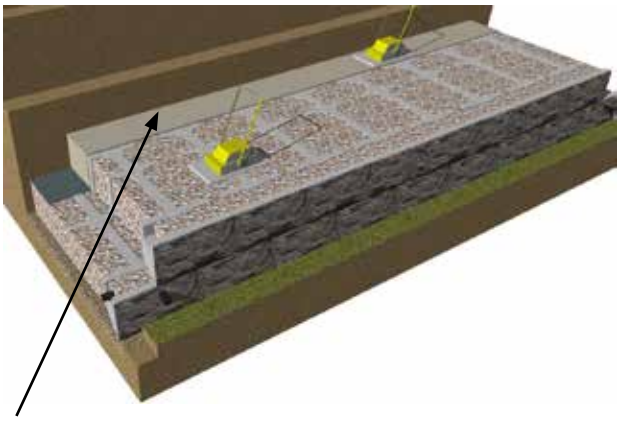
Soil Separation Fabric:
Install a soil separating fabric to separate the fines and compacted backfill material from the drainage aggregate. The filter fabric can be installed directly behind the extender units.



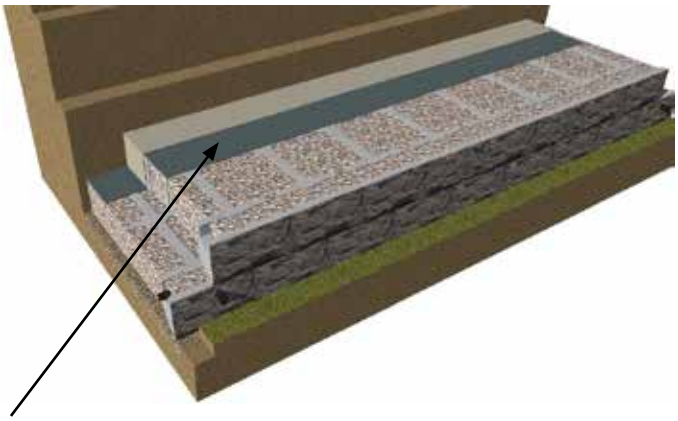
Filter fabric installed at the back of the extender units



Compaction:
Once the blocks have been placed and leveled compact the approved backfill materials.

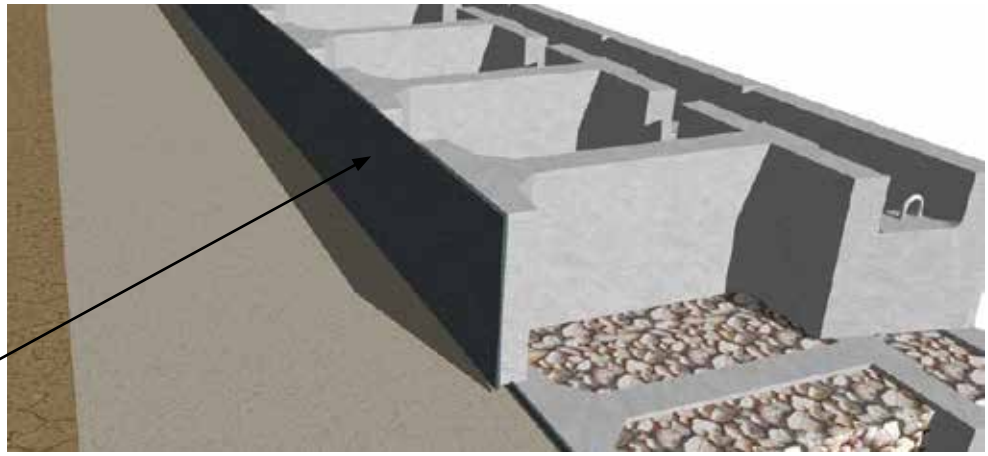


Compact the approved backfill material behind the filter fabric



Filter fabric wrapped around clean gravel to stop fines from migrating

Installation Overview:
Ensure that proper installation procedures and techniques are being used while installing each course. The blocks should installed and leveled front to back and side to side.

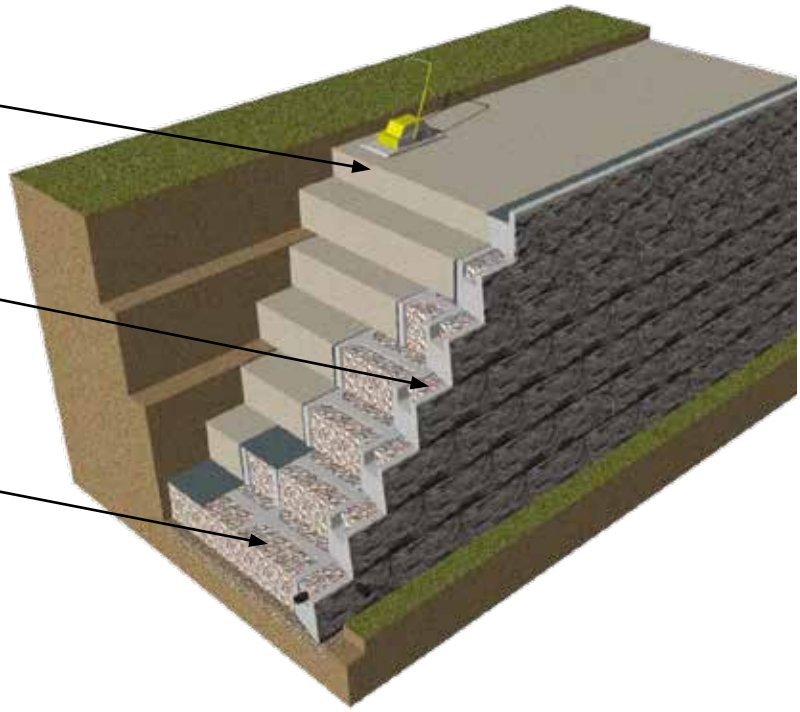


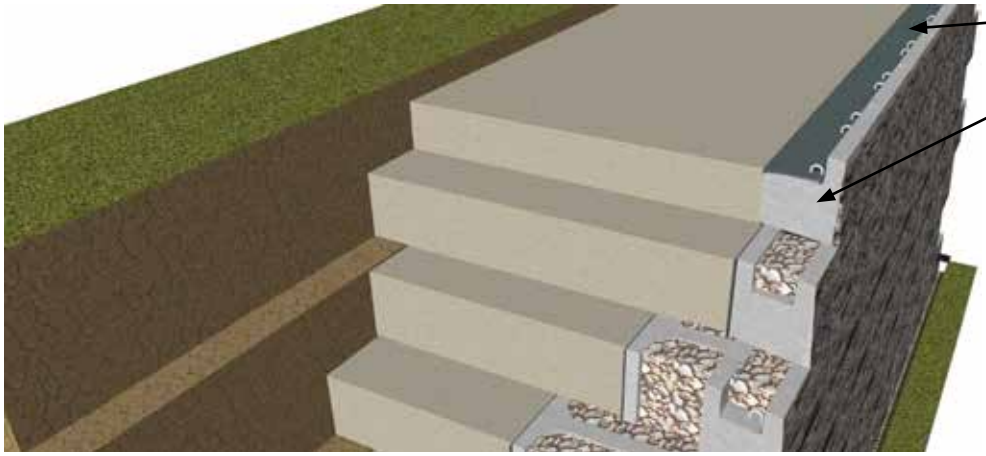
Filter fabric placed behind extender units

Approved compacted backfill

Drainage through hollow core

Clean Stone or approved backfill materials between extender units and inside hollow cores

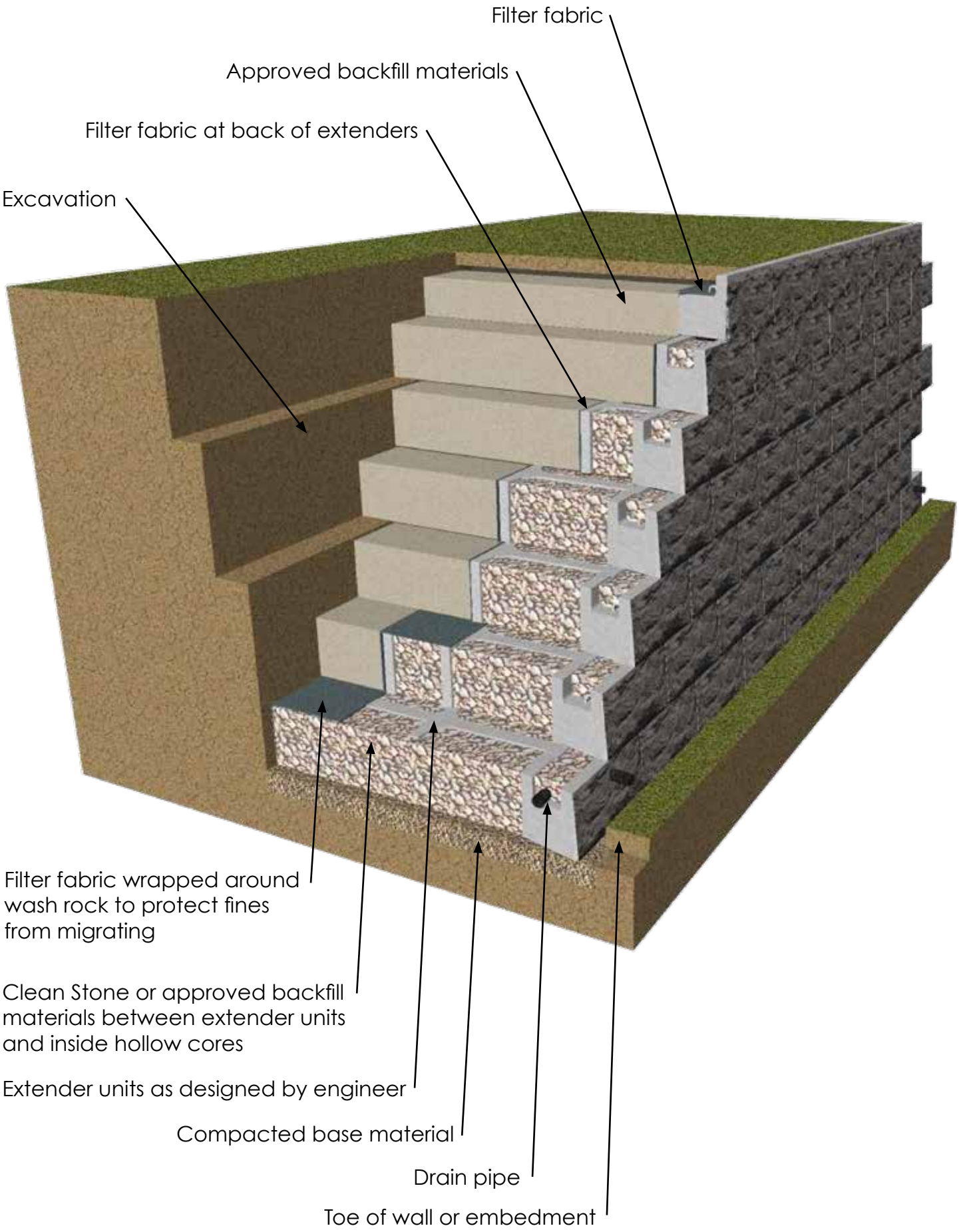




Filter Fabric

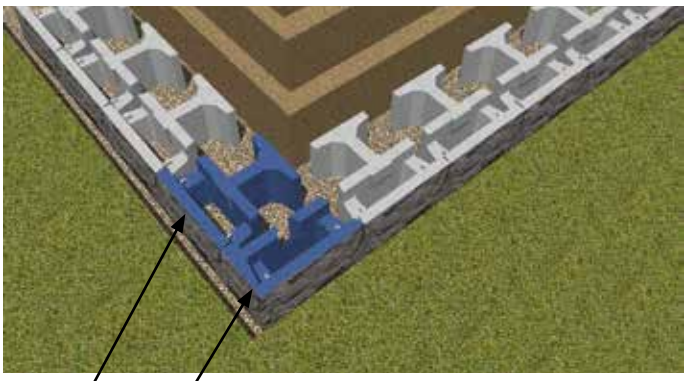
MagnumStone Top Unit

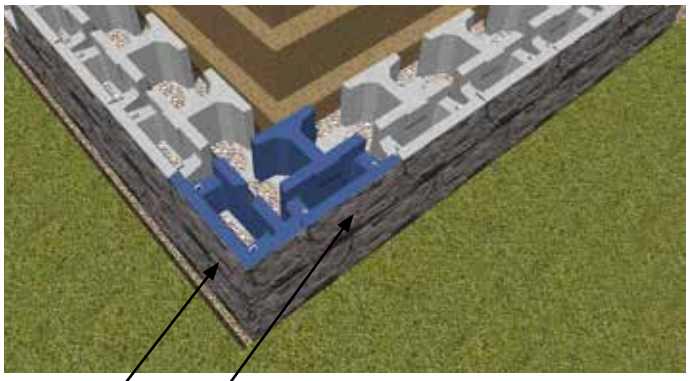
Typical Completed Cross Section:



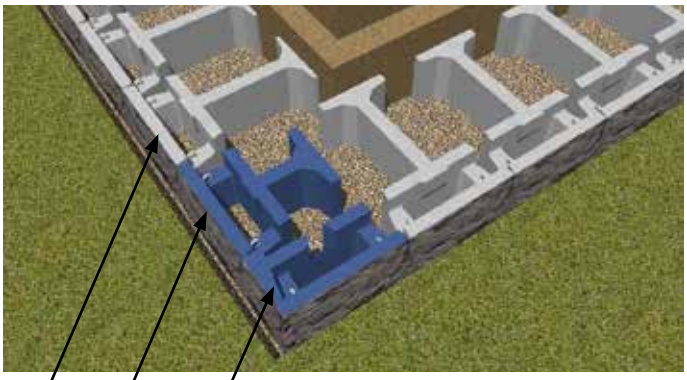
Curves & Corners:
Curves and corners in retaining walls are unavoidable. With the MagnumStone gravity system we have developed a solution that fits any situation.

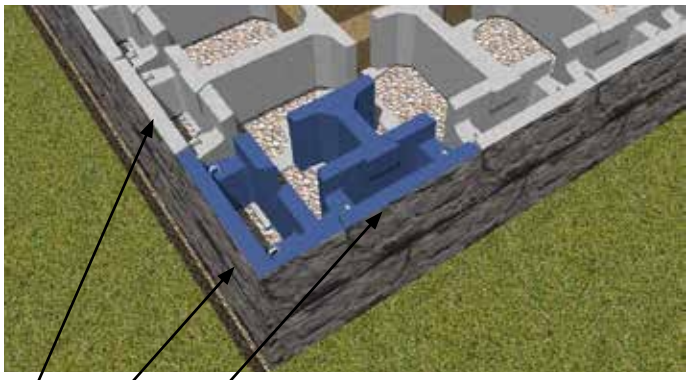
48" Extender Outside Corner:



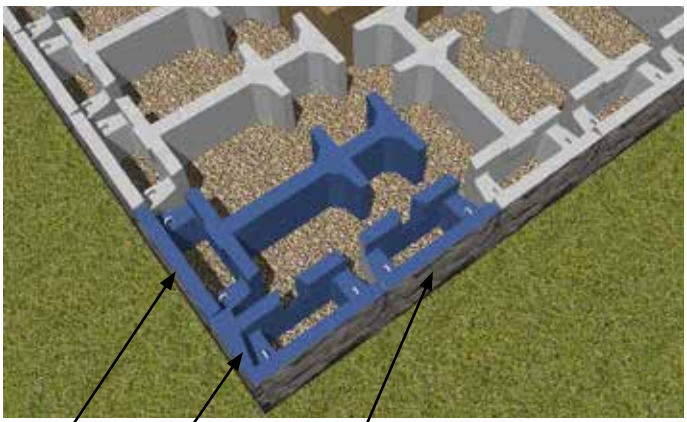


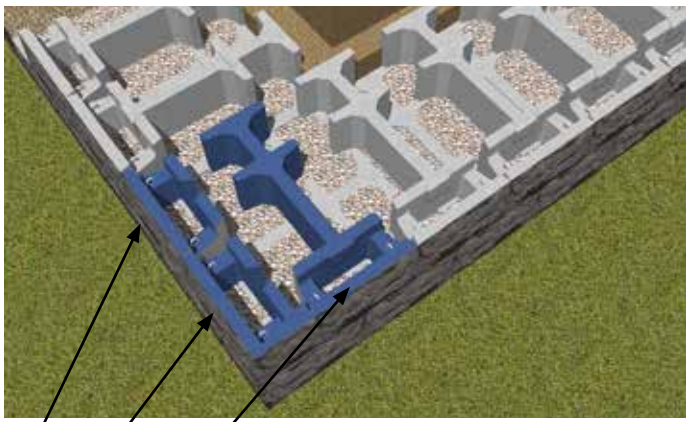
72" Extender Outside Corner:



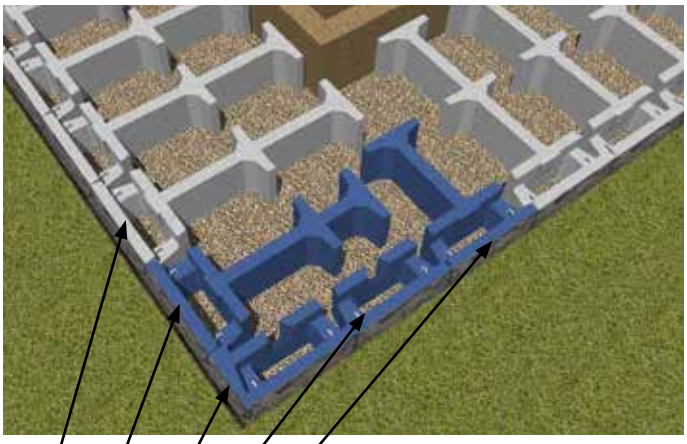


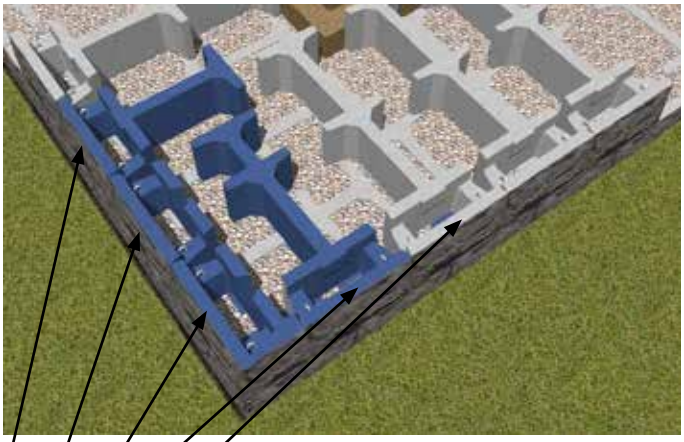
96" Extender Outside Corner:



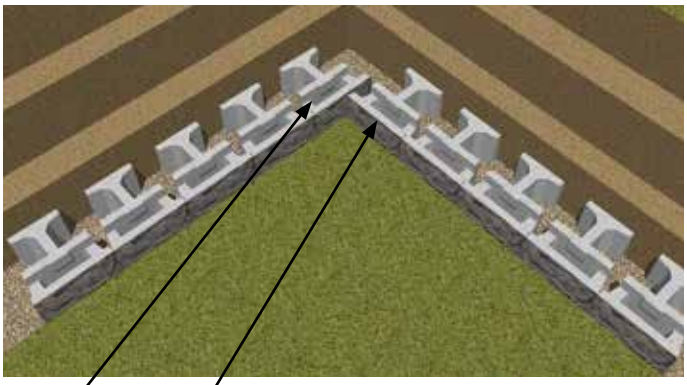


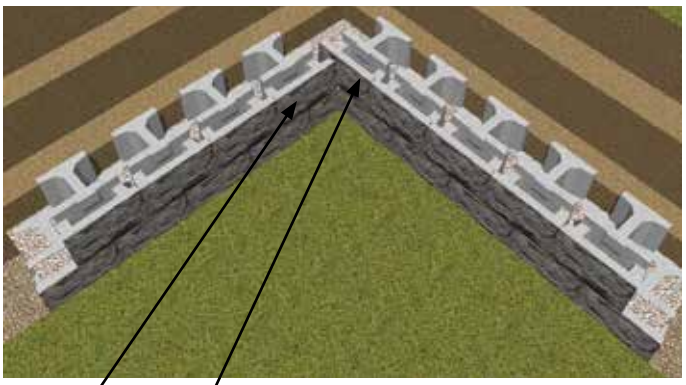
120” Extender Outside Corner:



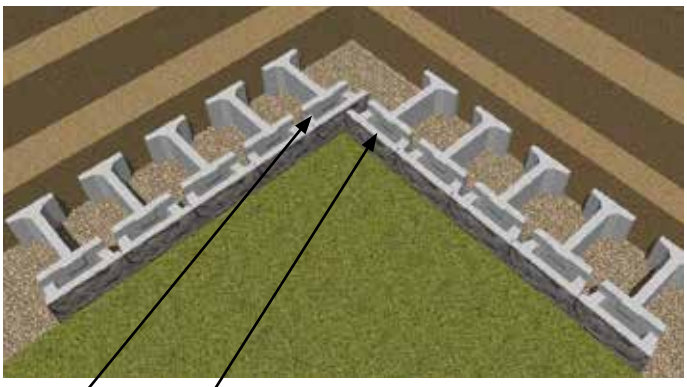


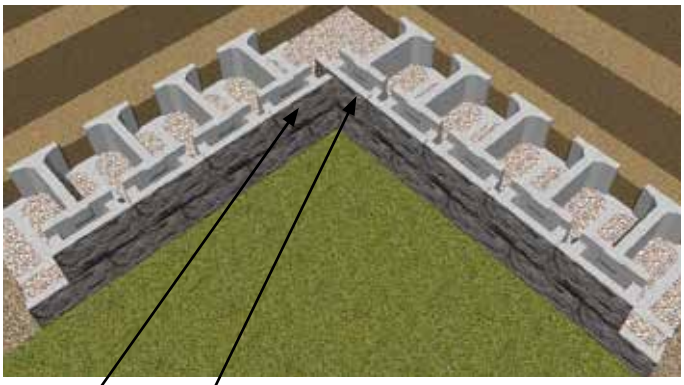
48” Extender Inside Corner:



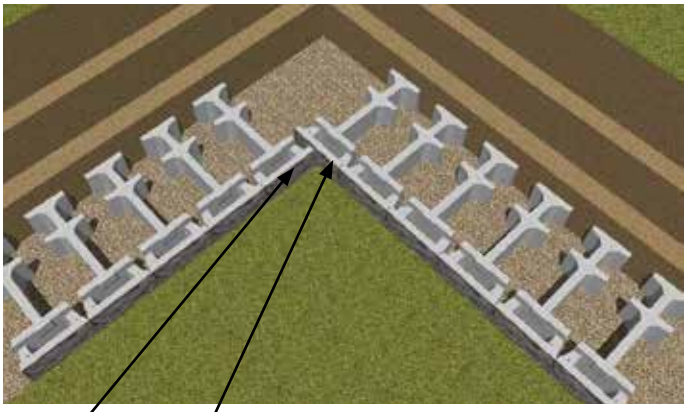


72” Extender Inside Corner:



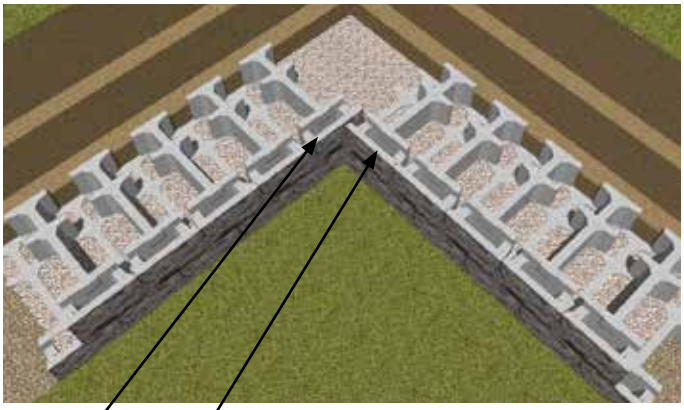


96” Extender Inside Corner:



96” Extender & Base Block
(in middle of adjacent block)

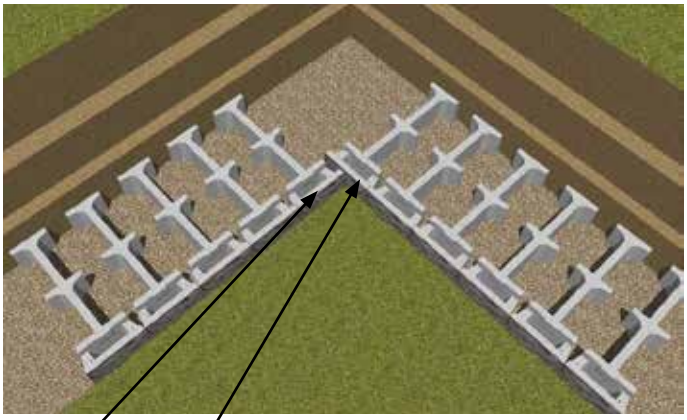
96” Extender & Base Block



96” Extender & Standard Block

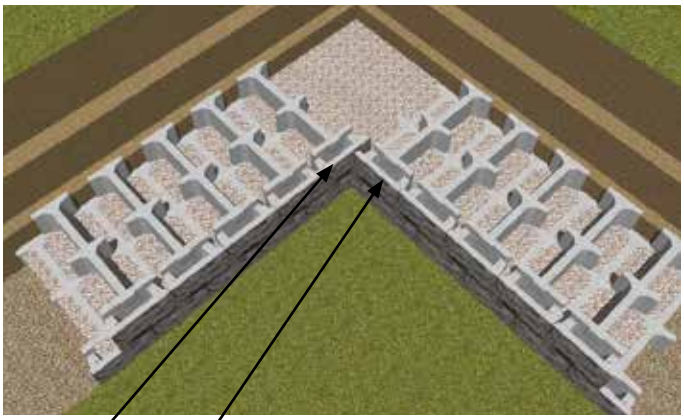
96” Extender & Standard Block
(in middle of adjacent block)

120” Extender Inside Corner:



120” Extender & Base Block
(in middle of adjacent block)

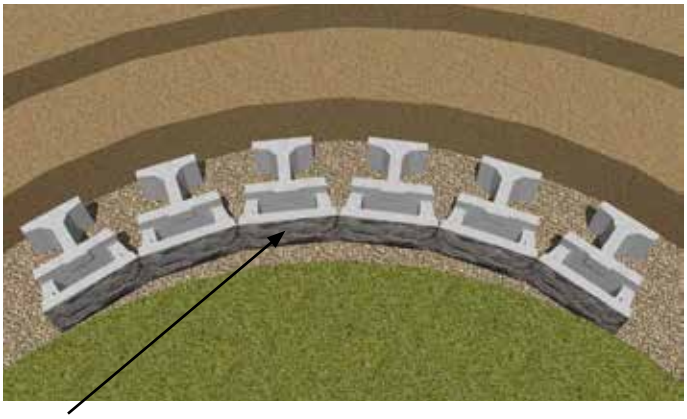
120” Extender & Base Block



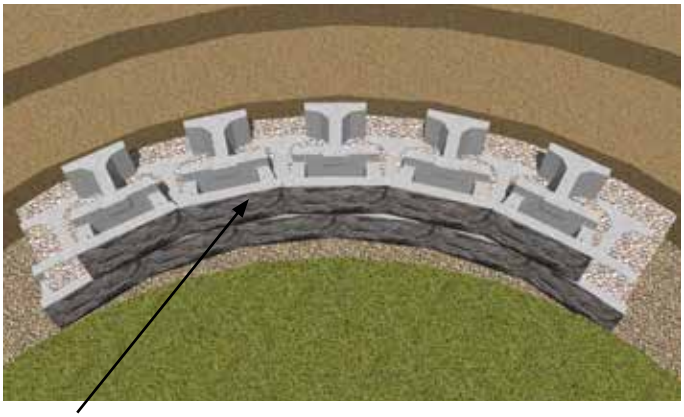
120” Extender & Standard Block

120” Extender & Standard Block
(in middle of adjacent block)

48” Extender Inside Curve:

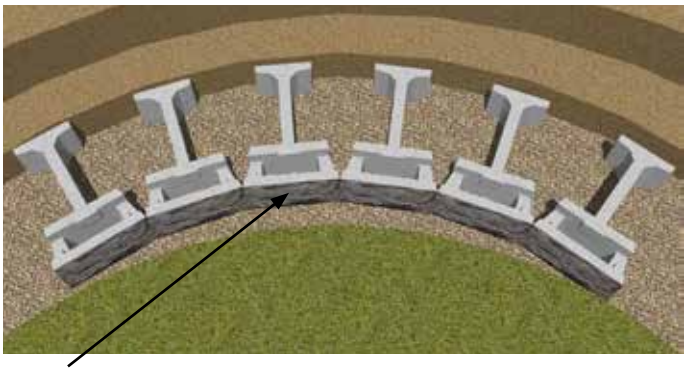


48” Extender & Base Block

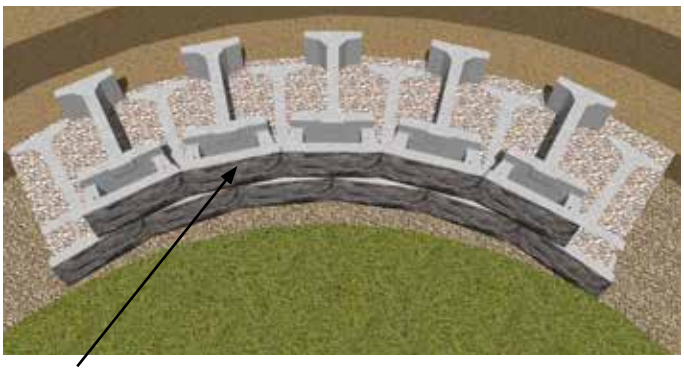


48” Extender & Standard Block

72” Extender Inside Curve:

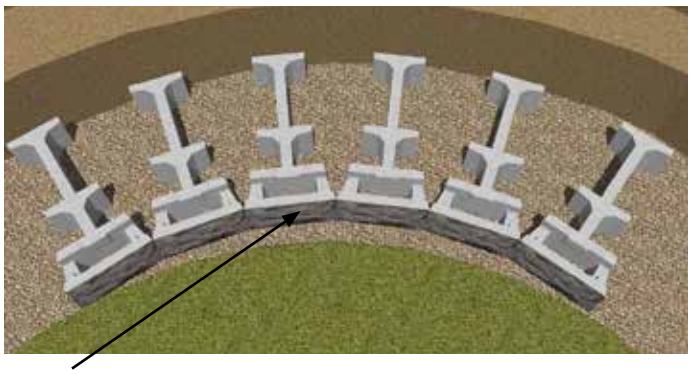


72” Extender & Base Block



72” Extender & Standard Block

96” Extender Inside Curve:



96” Extender & Base Block

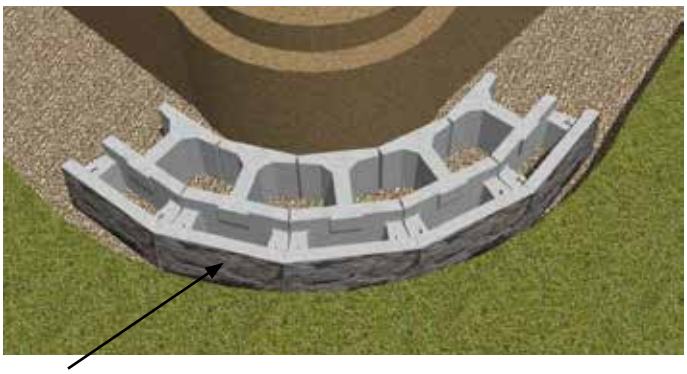
96” Extender & Standard Block

120” Extender Inside Curve:

120” Extender & Base Block

120” Extender & Standard Block

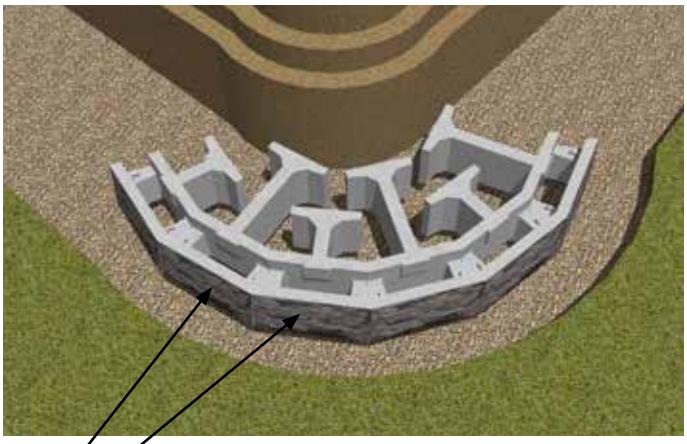
48” Extender Outside Curve:



48” Extender & Base Block

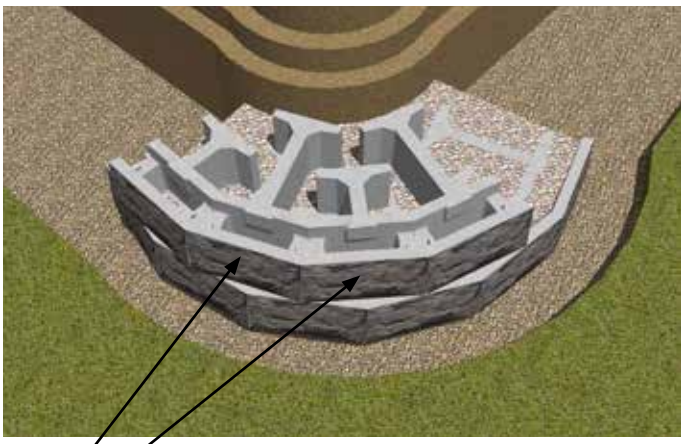
48” Extender & Standard Block

72” Extender Outside Curve:



48” Extender & Base Block

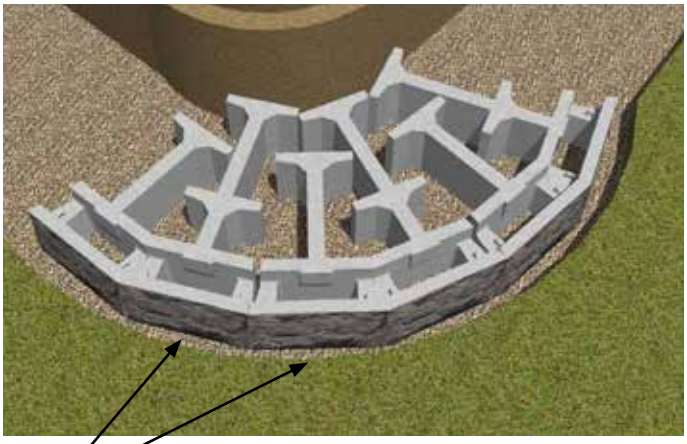
72” Extender & Base Block



48” Extender & Standard Block

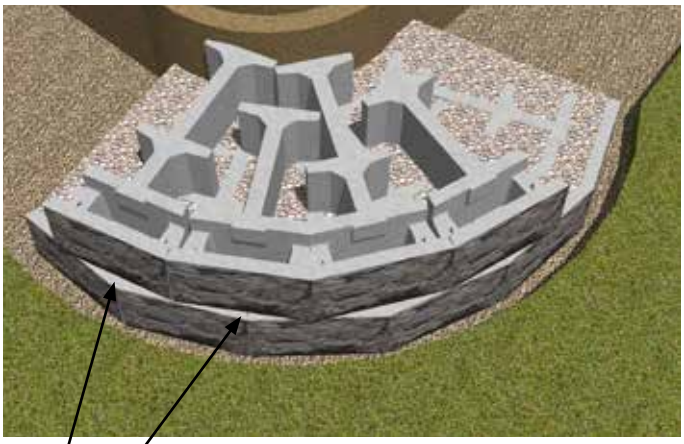
72” Extender & Standard Block

96” Extender Outside Curve:



72” Extender & Base Block

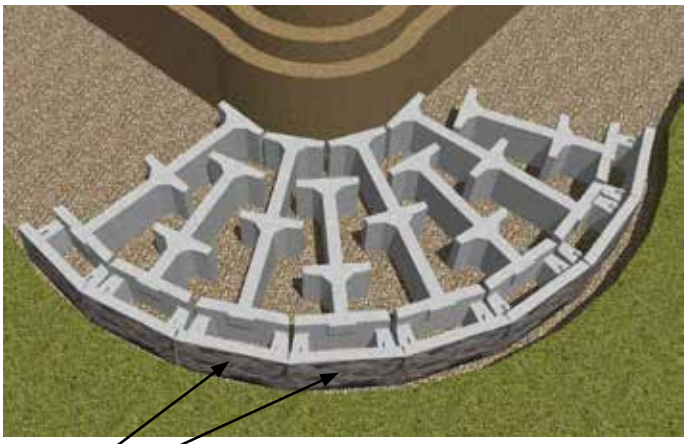
96” Extender & Base Block



72” Extender & Standard Block

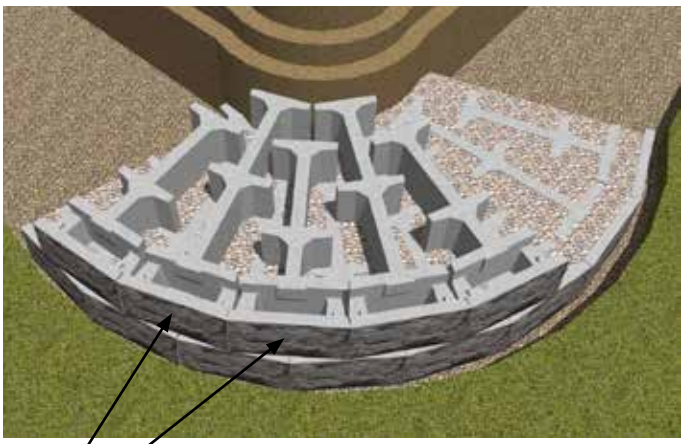
96” Extender & Standard Block

120” Extender Outside Curve:



96” Extender & Base Block

120” Extender & Base Block



96” Extender & Standard Block

120” Extender & Standard Block