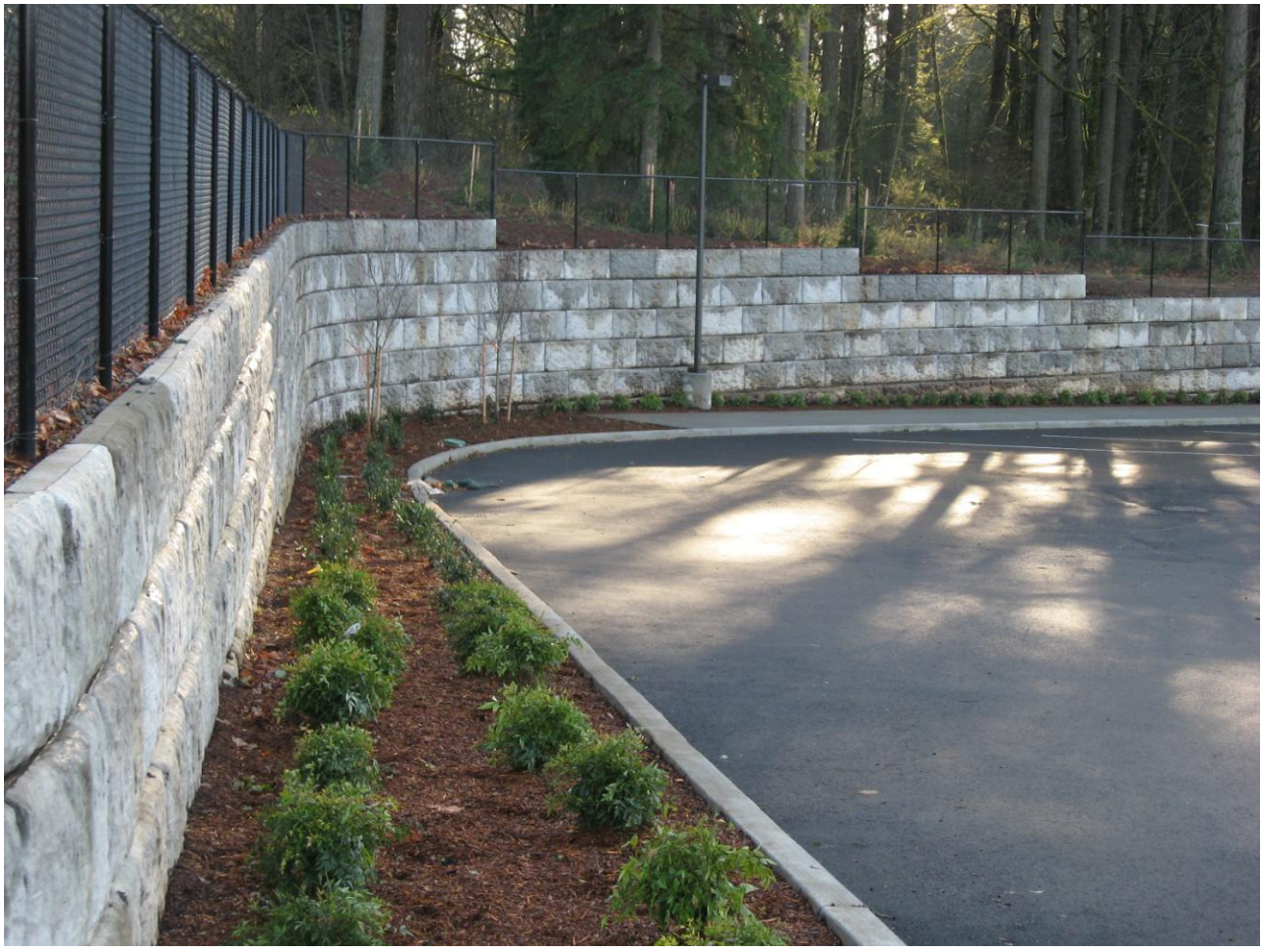
STONE TERRA
WALL SYSTEM



FIELD CONSTRUCTION MANUAL

PRIOR TO CONSTRUCTION

Review the following information prior to installing the StoneTerra Wall System®.

Checklist:

□ Permits / Engineering - Most walls require a permit from local municipality and possibly engineering including calculations. Check with the local building department for codes and regulations.

□ Proper Equipment - In addition to using the right machines to place the blocks, the following hand tools will be useful.

1. Transit- to lay out a level base.
2. Shovels and rakes- for use by the base prep person.
3. A broom- to clean the keyways before placing the next layer.
4. One or more 5 foot pry bars- for jostling the blocks into position.
5. Level

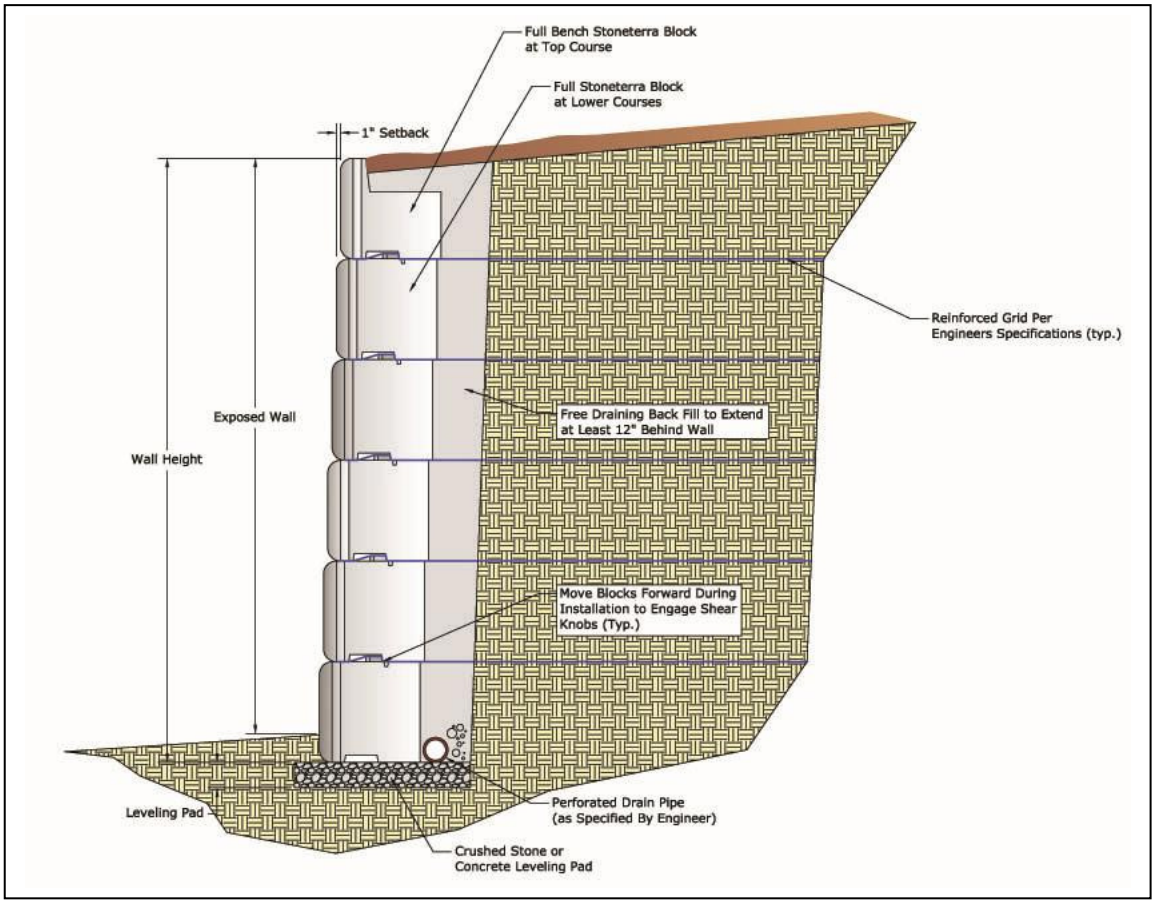
□ Safety Factors - Installation should follow all applicable regulations. Proper PPE and rigging is a must.

1. Never stand underneath a block.
2. Avoid getting any part of the body between pinch points while installing blocks (either between two blocks or between a block and the open excavation).
3. Always inspect rigging for lifting the block. replace all worn or broken parts. Do not use inferior, inadequate or unapproved devices.

□ Field Installation Drawings - A project layout is typically available that aids in placing block correctly. Review of the drawing will speed installation and avoid field errors.

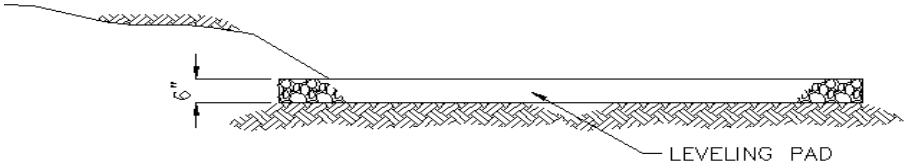
EXCAVATION

Confirm location and elevation of walls. Width of excavation should allow for width of wall base and drainpipe. Note: all excavation should follow applicable (WISHA or OSHA) guidelines. If the wall steps up one block in height, the base blocks should be installed at the lowest level in order to establish grade and face location of the second level.



BASE PREPARATION

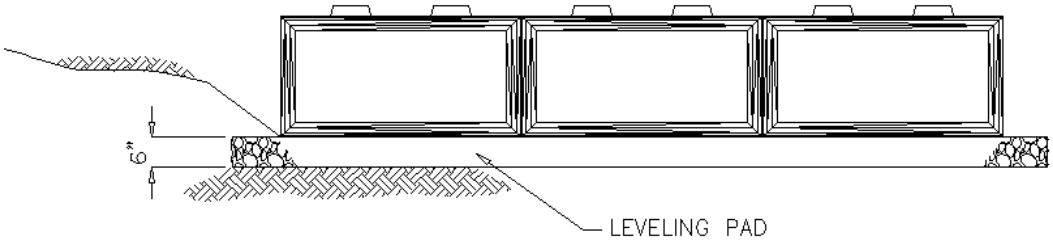
Consult engineer's wall design for a base material specification including type, width, depth and compaction.
It is recommended to start at lowest wall level. Locate the front face of the wall and run a string line one-inch in front of the face - two-inches above the base. Make sure the base material is well compacted - test if necessary, typically minimum 95% maximum density using a standard proctor test. After compacting, screed off base material, fill in low spots, and screed again. Repeat procedure as necessary to achieve firm, compacted base.
Do not disturb string line. It is best to prepare the entire base before setting the blocks.



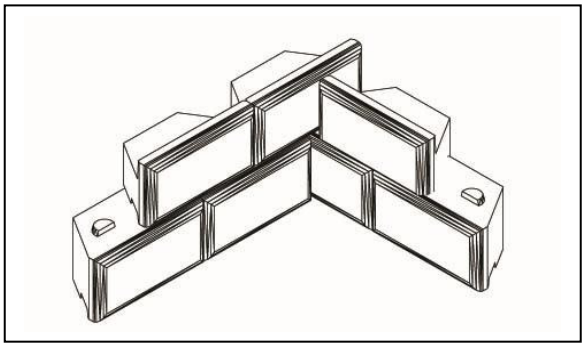
In certain cases, a concrete leveling pad may be required. This pad should be constructed in accordance with engineers plans and requirements.

SETTING BLOCKS

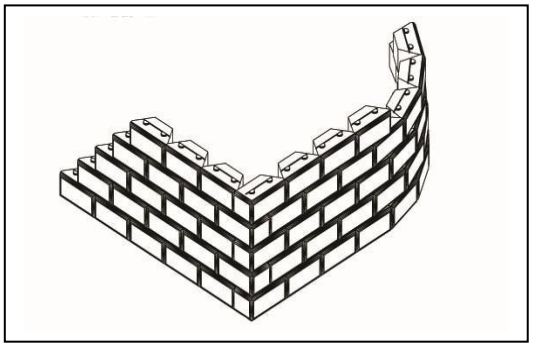
Before placing blocks, make sure the top and bottom surfaces of the respective blocks are clean. At one end of the wall, or at one end of the lowest base elevation, start the wall. At the start of the wall, mark a line perpendicular to the face of the wall. This line will help place the first block square to the wall face. Place the first block one inch from the string line. Set the next block beside the first block, taking care to align the face. Make minor adjustments to the blocks using a pry bar.



Walls with 90 degree corners and those with curves can be made quite easily. The minimum radius of curvature necessary for curved walls is 8 feet. Corner blocks with textured ends are used to create outside 90 degree angles. Additional information is available by visiting www.stoneterra.net. Construction should begin at the corner and proceed away in both directions.



Inside 90 Degree

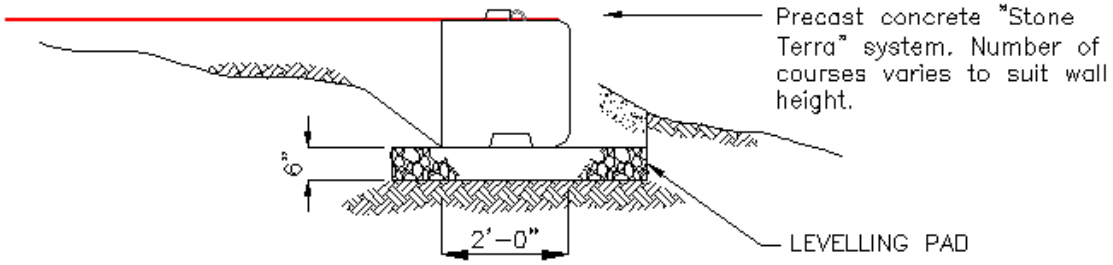


Outside 90 Degree

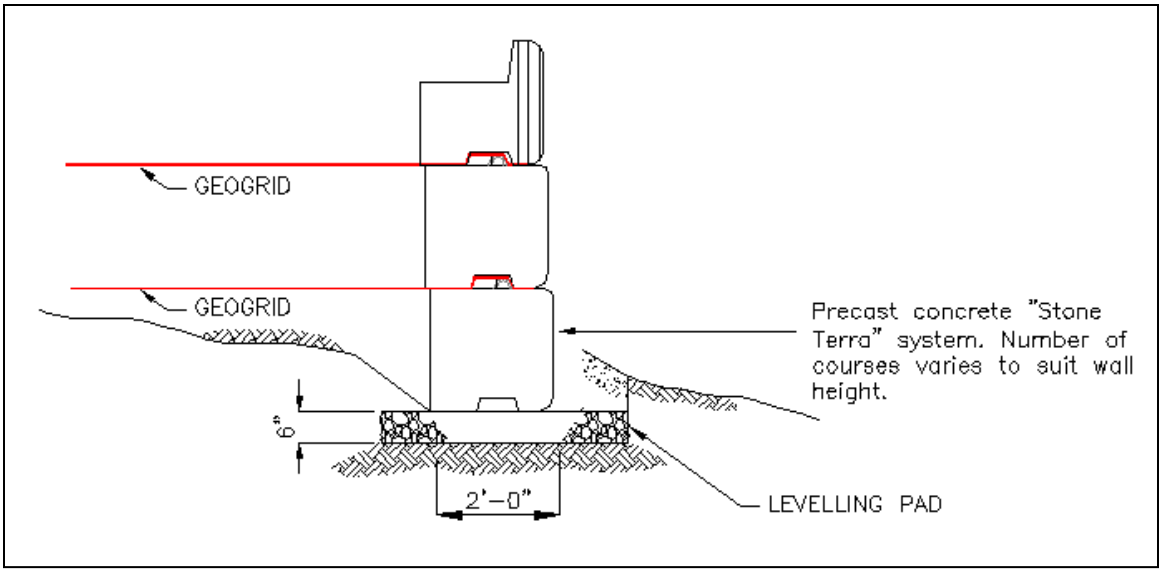
GEOGRID

Mechanically Stabilized Earth (MSE) walls are walls which have geogrid material sandwiched between each row of block. A maximum of two courses can be built before the wall must be backfilled. Start with the base course and lay the specified geogrid over the keyway of the blocks so that the grid reaches the face of the block, and covers the male keyway. Place the upper block over the grid, locking it into place. Once the wall is built to two blocks high, stop the block stacking process and begin backfilling the wall. Make sure drain pipe, filter fabric, and drain

mats (if required) are installed before backfilling. Flip the geogrid forward over the face of the wall to get it out of the way and fill the wall with the specified backfill material, so that the material is level with the top of the first course of block. Compact backfill material to specified compaction.



Flip the geogrid back over the wall so that it covers the compacted backfill material. The geogrid should lay level over the compacted backfill (not at any discernable angle). Pull the grid taut and stake it to hold it in place as you begin to backfill over it. Fill to the top of the second course of blocks, compacting as necessary. When finished, you will have two courses of block with a layer of grid between, a 4' high wall, and you will be ready for the next layer of grid.. Continue building in 4' lifts, alternating grid and block, until maximum wall height is reached. NOTE: You will now being laying down two layers of grid for every two layers of block.

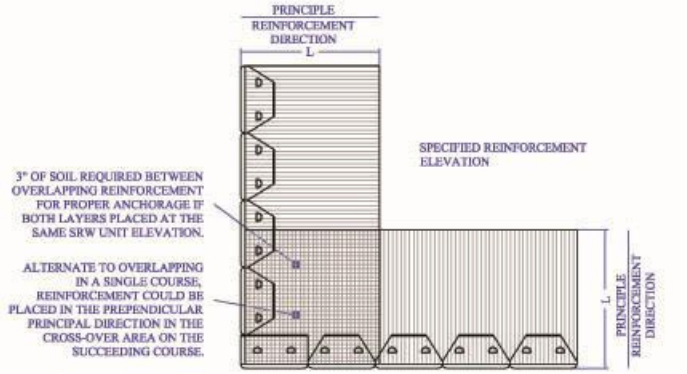


Do not set any more than 25-ft to 30-ft of blocks along the length of base starting on the second row.

NOTE: Take care to align the grid properly to the wall so that the strength direction of the grid is perpendicular to the wall face. Generally, the grid will be rolled back from the blocks (behind the face of the wall) and cut to the proper reinforcement length. ***In other words, grid cannot be rolled along the length of the wall, parallel to the wall face.*** Check with your grid manufacturer if you are unsure about proper grid installation.

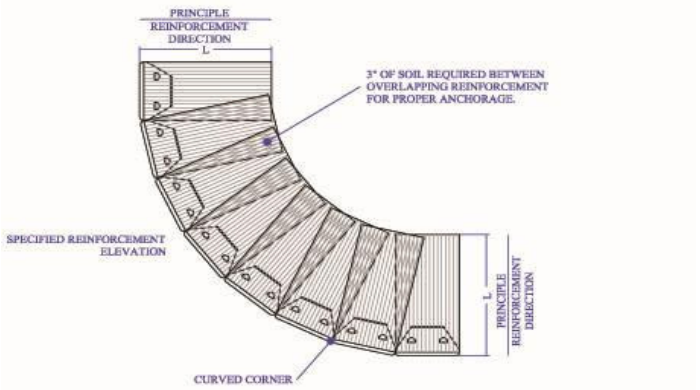
SQUARED CORNER

STONETERRA -OUTSIDE 90°CORNER

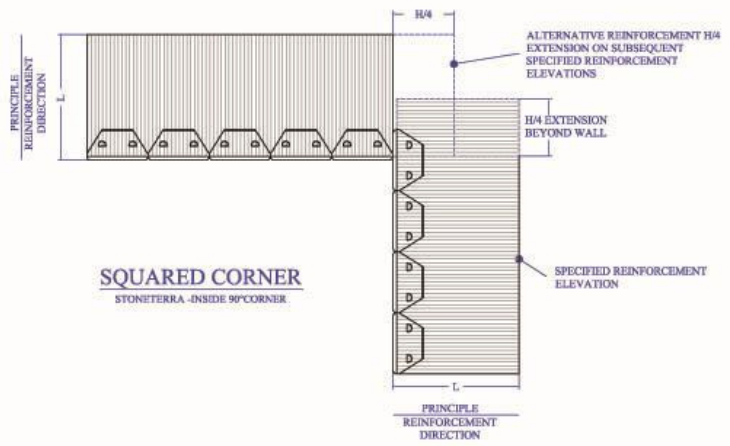


SERPENTINE CURVES & 90° RADIUS CORNER

STONETERRA -OUTSIDE CORNER



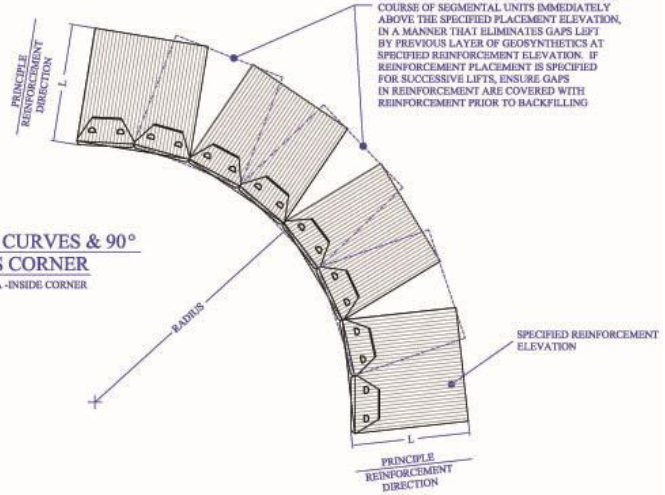
NOTE:
ALTERNATE PLACEMENT OF
REINFORCEMENT EXTENSION
ON SPECIFIED REINFORCEMENT
ELEVATIONS



SQUARED CORNER

STONETERRA -INSIDE 90°CORNER

TO COMPLETE PLACEMENT OF REINFORCEMENT
FOR A SPECIFIED PLACEMENT ELEVATION,
PLACE ADDITIONAL REINFORCEMENT ON NEXT
COURSE OF SEGMENTAL UNITS IMMEDIATELY
ABOVE THE SPECIFIED PLACEMENT ELEVATION,
IN A MANNER THAT ELIMINATES GAPS LEFT
BY PREVIOUS LAYER OF GEOSYNTHETICS AT
SPECIFIED REINFORCEMENT ELEVATION. IF
REINFORCEMENT PLACEMENT IS SPECIFIED
FOR SUCCESSIVE LIFTS, ENSURE GAPS
IN REINFORCEMENT ARE COVERED WITH
REINFORCEMENT PRIOR TO BACKFILLING



SERPENTINE CURVES & 90° RADIUS CORNER

STONETERRA -INSIDE CORNER

Finishing Wall

An optional step is to place filter fabric on top of the last row of block extending over the backfill and drain zone. This prevents fines from landscaping material contaminating the drain rock and migrating through the wall face.

Final grading is done on the top and bottom of the wall to ensure proper water movement and prevention of erosion. A swale can be created to prevent water from flowing over the wall face.

Any fencing required should be installed per plans and in accordance with engineers specification.