

Part 1-Retaining Wall General

Work Included:

All labor and material for the furnishing and installing of exterior stone landscaping wall.

Related Work:

Masonry Contractor shall include building into the masonry equipment and materials furnished through other divisions such as site drain pipes or brackets and anchors as shown on plans to provide a complete job.

System Description:

Stone walls for landscaping purposes comprised of naturally occurring quarried stone laid dry or set in cement mortar. Structural requirements for walls supporting applied loads such as lateral soil loads or loads from other structures shall be as shown on the plans.

Shop Drawings:

Provide shop drawings of any cut stone components for approval prior to fabrication.

Samples:

Provide samples of adequate size and quantity to represent the full range of color, texture, and other naturally occurring characteristics of the stone for approval.

Delivery, Storage, and Handling:

1. Stone shall be delivered on pallets.
2. General Contractor shall provide a dry, stable roadway for stone delivery truck and equipment for removing loaded pallets from truck.
3. Pallets shall be placed on level ground and shall not be stacked.
4. Contractor shall provide tarpaulin covering during inclement weather.

Site Conditions:

Stone Walls should be constructed on a stable compacted base as specified on the plans. Walls shall not be placed on frozen or muddy soil base. Before commencing with work, tarpaulins shall be provided to protect newly laid masonry from damage by inclement weather. This protection shall be placed and removed as required. Ambient temperature shall be 40 degrees or above while masonry is being erected. When ambient temperature falls below 50 degrees the mortar mixing water and that used for wetting down stone shall be heated.

Part 2-Retaining Wall Products

VIEW OUR LANDSCAPE 8" DRYWALL & COBBLE PRODUCTS ONLINE

Mortar Mix: ASTM C-270-73 Type M

Sand: ASTM C144-70

Anchors and Ties: Stone ties should be zinc-coated metal ASTM A-153 or stainless steel.

Visit www.kruckowskistone.com for Material Testing Results

Part 3-Retaining Wall Execution

BUILDING CODE REQUIREMENTS

Building code requirements vary from area to area.

Check with local authorities for building code requirements in your area.

INSPECTION:

Before commencing, verify that base material or structure complies with specifications on the plans. If stone is to be laid against a structure backer, verify that backing is plumb and that all bearing surfaces are level. For mortar laid walls, base must extend below frost line. For dry laid walls base may not be required to extend below frost-verify with supervising Architect.

PREPARATION-MORTAR LAID

Footing

- a. A level concrete footing is required down to the frost line.
- b. For a 12" thick wall pour footing 8" thick by 24" wide.
- c. Install 12" concrete block to just below grade.
- d. At grade install 8" concrete blocks leaving a 4" shelf to install the stone add.
- e. Anchoring stones, ties, anchors etc. must be cleaned of loose rust, ice or foreign matter before incorporating into the walls.
- f. Provide minimum one tie per 2 square feet of wall surface area.

- g. Maximum spacing between adjacent ties shall be 16" vertically and 12" on center horizontally.
- h. Ties should be embedded in horizontal joints 2" minimum.
- i. Drain tiles should be placed in coarse gravel at the back of the wall and weep holes of rust free pipe should be used throughout the wall to let out water that could accumulate behind the wall.

Installation

- 1. Stone wall shall be erected plumb and true to lines.
- 2. Lay with completely filled mortar joints.
- 3. Do not furrow bed joints.

Pattern

- 1. Lay stone in random order taking care to avoid vertical joints by overlapping each joint with the stone above.
- 2. Distribute the color range of the stone evenly throughout the work area.

Jointing Work

Where fresh masonry joins partially set masonry.

- 1. Remove loose stone and mortar.
- 2. Stop off horizontal run of masonry by raking back 1/2 the length of stone in each course.
- 3. Tooothing is not permitted.

Joints

Lay stone with no more than 1/2" mortar joint.

Tool joints when "thumb print" hard with a round jointer, slightly larger than width of joint.

Rake joint and brush smooth with flexible paint brush.

Trowel-point or concave-tool exterior joints below grade.

Flush cut joints are not tooled.

Retempering mortar is not permitted.

Weep Holes

- 1. Provide additional weep holes in head of joints of first course immediately above flashing with sash cord in joint at 24" o.c. maximum.
- 2. Protect weep holes and area above flashing from mortar droppings.

Sealant Recesses

- 1. Provide open joint 3/4" deep, and 1/4" to 3/8" wide.

Sealant Recesses

- 1. Provide open joint 3/4" deep, and 1/4" to 3/8" wide, where masonry meets doors, windows and other exterior openings.

Expansion Joints

- 1. Provide joints as shown on plans.
- 2. Keep joint clean and free of debris.

Cleaning

- 1. Cut out and repoint any defective joints.
- 2. Do not use cleaning agents on stonework. Clean stone with stiff brush and clean water only.
- 3. Contractor shall clean site of mortar droppings and stone chips, etc.

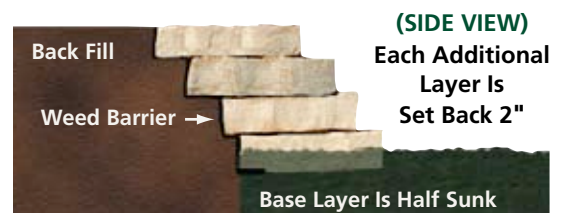
INSTALLATION-DRY LAID WALLS

Preparing the Base

- a. Sub-base shall be virgin or compacted soil.
- b. Provide minimum 3-4" deep compacted gravel base.
- c. Drain tiles should be placed in coarse gravel at the back of the wall.
- d. Install heavy landscape fabric below the first course of stone and at the back of the wall.

Dry Laying the Stone

- a. Because natural stone varies in thickness, sort the stone in piles to like thicknesses
- b. Start in corner use thickest and longest stones for first course-first course should be installed below grade.
- c. Make sure first course is level, install subsequent layers making sure to setback each additional course 2" (batter), or 2" back every 2 feet high.
- d. Make sure each course is level, you may need to shim-add soil under the stone to make level.



- e. Continue laying stones until the desired height is achieved.
- f. Backfill and compact with native soil.
- g. Finish the top of the wall with flat stones and keep it level. The top pieces should also be fit together very tightly.

