

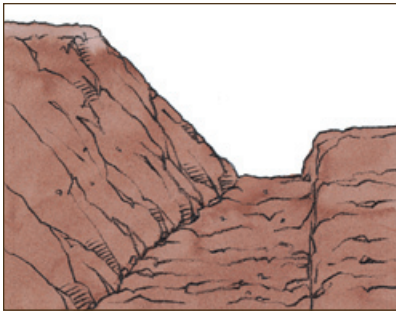
**INSTALLATION INSTRUCTIONS**


Diagram 1—Excavation

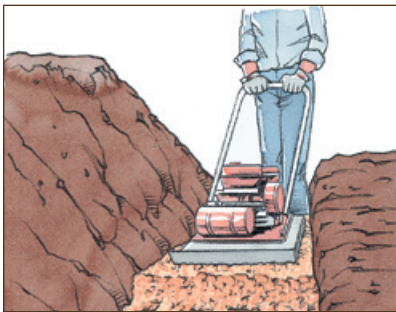


Diagram 2—Leveling Pad

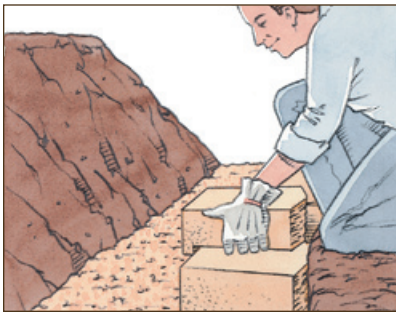


Diagram 3—Second Course

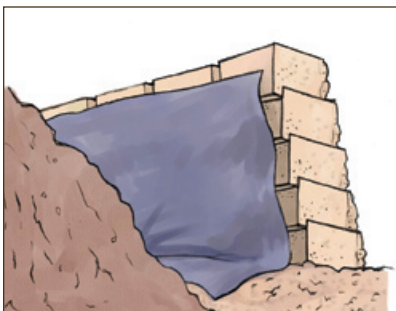


Diagram 4—Filter Fabric

**1 STAKE OUT THE WALL**

- Have a surveyor stake out the wall's placement. Verify the locations with the project supervisor.

**2 EXCAVATION**

- Excavate for the leveling pad to the lines and grades shown on the approved plans and excavate enough soil behind the wall for the reinforcement material. The trench for the leveling pad should be a minimum width of 24 inches and 12 inches deep. See *Diagram 1*.

**3 LEVELING PAD**

- An aggregate leveling pad is made of a good compactible base material of  $\frac{3}{4}$ -inch minus with fines.
- The pad must extend 6 inches in front and behind the first course of block, and be at least 6 inches deep after compaction.
- Compact the aggregate and make sure it's level. See *Diagram 2*.

**4 BASE COURSE**

- This is the most important step in the construction process. Bury the base course of block.
- Begin laying block at the lowest elevation of the wall.
- Remove the rear lip of the block by hitting from the back so that it will lie flat on the leveling pad.
- Place first block and level, front to back and side to side; lay subsequent blocks in same manner.
- Place the blocks side by side, flush against each other, and make sure the blocks are in full contact with the leveling pad.
- If the wall site is on an incline, don't slope the blocks; step them up so they remain consistently level.
- Use stringline along back edge of block to check for proper alignment.
- For the Highland Stone wall system, use the largest unit, the 18-inch-wide unit, for the base course.

**5 CONSTRUCTION OF THE NEXT COURSE**

- Clean any debris off the top of the blocks.
- Place the second course of blocks on the base course while maintaining running bond and pull each block forward as far as possible to ensure the correct setback. See *Diagram 3*.
- Backfill with drainage aggregate directly behind the block and add soil fill behind the aggregate.
- Compact the backfill before the next course is laid.
- Self-propelled compaction equipment should not be used within 4 feet of the face of the wall.
- With Diamond products, you'll need partial units to stay on bond. A masonry saw is recommended for partial units. Use safety glasses and other protective equipment when cutting.
- You can install the Highland Stone system using any combination of units.
- Keep the wall bond by placing units in a staggered relationship to the course beneath.
- For best results, use a filter fabric, which should be placed directly behind the wall extending from the bottom of the base course to the middle of the top course. This will minimize material coming through the rough-hewn face texture of the Highland Stone. See *Diagram 4*.

**6 DRAINAGE DESIGN**

- Each project is unique. The grades on your site will determine what level to install the drain tile.
- Place the drain tile as low as possible behind the wall so water drains down and away from the wall into a storm drain, or to an area lower than the wall. See *Diagram 5*.
- Fill in the area behind the blocks with drainage aggregate, at least 12 inches from the wall.
- You may need to place and backfill several courses to achieve the proper drainage level.

## INSTALLATION INSTRUCTIONS

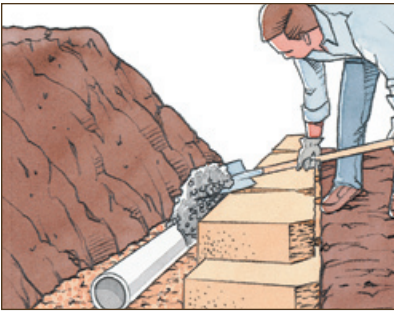


Diagram 5—Drainage Tile

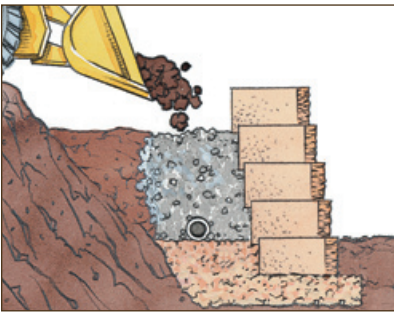


Diagram 6—Drainage Aggregate

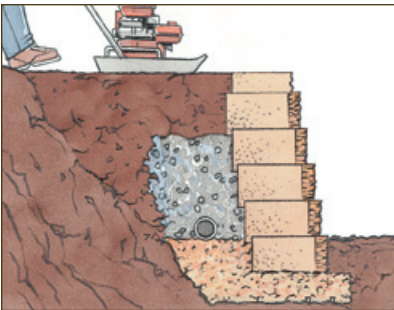


Diagram 7—Compaction

- The drain tile outlet pipes should be spaced not more than every 50 feet and at low points of the wall. In order for the drainage aggregate to function properly, it must keep clear of regular soil fill.

- A minimum of 6 inches of backfill is required prior to operating vehicles on the reinforcement. And remember, avoid sudden turning or braking. See *Diagram 7*.

### 7 COMPACTION

- Shovel the in-fill soil behind the drainage aggregate and compact the in-fill with a hand-operated compactor. See *Diagrams 6 and 7*.
- Make sure the aggregate is level with or slightly below the top of the base course.
- Place soil in front of base course and compact. Base course should be buried.
- Continue to fill and compact.

### 8 REINFORCEMENT (If Required)

- Geosynthetic reinforcement is recommended for walls taller than 4 feet or walls situated in poor soils, supporting a driveway, etc. Consult an engineer for design assistance.
- Check your wall construction plan for which courses will need reinforcement.
- Clean any debris off the top layer of blocks.
- Measure and cut the reinforcement to the design length in the plans.
- The reinforcement has a design strength direction, which must be laid perpendicular to the wall.
- Place the front edge of the material on the top course, 2 inches from the face of the block.
- Apply the next course of blocks to secure it in place.
- To keep it from wrinkling, pull the reinforcement taut and pin the back edge in place with stakes or staples.
- Add drainage aggregate behind the blocks then add the in-fill soil and compact it. See *Diagram 6*.
- Remember - place the front edge of the reinforcement on top of the block, making sure it's within 2 inches of the face of the block. Correct placement ensures that you maximize the connection strength and keep the batter consistent.

### 9 FINISH GRADE AND SURFACE DRAINAGE

- Protect your wall with a finished grade at the top and bottom.
- To ensure proper water drainage away from the wall, use 6 inches of soil with low permeability. This will minimize water seeping into the soil and drainage aggregate behind the wall.

### 10 SITE CLEANING AND RESTORATION

- Brush off the wall and pick up any debris left from the construction process.
- Notify the job superintendent in writing that the construction of the wall is complete and the project is ready for final inspection and acceptance.
- Planting vegetation in front and on top of the wall will help reduce the chance of erosion.

**SAFETY NOTE:** Always use appropriate equipment, including safety glasses or goggles and respirators, when splitting, cutting or hammering units. Glue caps in place with concrete adhesive.

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WIDHS 06/09