

# Installation Basics: Retaining Wall

## Retaining Wall Installation Basics

### Step 1 – Site Preparation

Stake out the project with tall stakes. Place an accurate, level string-line at the estimated final wall height and mark the stake with a pencil. Measure down in 4 in. wall increments to determine placement of the first course. Tall walls require the first course to be BURIED. Small walls, three courses or less, require the first course to be partially buried (approx. 3 in.).



### Step 2 – Excavation

The thickness of your “base material” is dependent on whether your wall is defined as a tall wall (4 to 7 courses), or a short wall (3 courses or less). Consequently, your depth of excavation will vary for the two different projects. All walls require a 12 in. wide trench. For small walls, dig this trench 3 in. deep. Dig your trench to 7 in. if your wall is a tall wall. Firmly pack the floor of this trench with a compactor or hand tamp.



### Step 3 – Base Preparation

For your small wall, simply add 1 in. of coarse sand to the bottom of the trench for leveling. For your tall wall, you'll need a rigid base. Pack in 4 in. of a DRY sand and portland cement mixture (one shovel of Portland to six shovels of sand, well blended). This will “set up” if it gets wet. Local granular road base is fine if it is available.



### Step 4 – Leveling

Level the surface in both directions with a carpenter's level. Replace a level stringline where the top of your first course will be.



See FAQs on this CD for grade change projects.

### Step 5 – Laying Stones

Always begin at the lowest point of the wall. Position the wall stones side-by-side, lip down on the prepared base. Level each stone in both directions with a torpedo level. Verify each placement with your string-line. Once the base course is complete, continue assembling additional courses by positioning the stones in a staggered pattern to the course beneath. Pull each forward to secure. For small walls, backfill in 4 in. layers with your native or bedding soil.



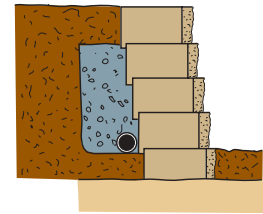
For tall walls, use a clean granular backfill like fine gravel or pea gravel at a 6 in. thickness behind the wall. Some of these walls may require a French drain behind the second course of wall stones. **TIP:** A landscape fabric placed directly behind the wall will prevent fine soil particles from washing through to the front of the stones.

### Step 6 – Cutting Stones

When building your wall, you may need partial stones. To split a stone, use a hammer and a chisel to score the unit on ALL sides. (Several stones on a pallet have a groove down the center of the back of the stone to make splitting into halves easier). Pound the chisel on the score line until it breaks. This function is best performed on a hard surface such as a sidewalk. **Always use protective eyewear when splitting stones.**



## Typical Cross Section (Non-Reinforced Walls)



Pavestone manufactures retaining wall products with “no slump” concrete mix. Made under extreme pressure and high frequency vibrations, Pavestone wall products have a compressive strength equal to or greater than an average 3,500 psi and an average water absorption maximum of 7%.

### Equipment List

- Gloves & Safety Glasses
- Shovel
- Tape measure
- Mini Sledge
- Mallet
- Chisel
- Carpenter's level
- Nylon mason's string
- Pencil
- Hand Tamp
- Portland Cement
- String Level
- Stakes
- Torpedo Level

### Optional

- Wheelbarrow
- Circular cut-off saw with masonry blade
- Plate Compactor
- **PVESTONE** Paver Sand
- Backfill: Gravel (3/4" free draining aggregate without fines)

**Attention:** The installation instructions shown are not comprehensive. Please consult your retailer for complete excavating, base preparation, and installation directions to meet your specific requirements. Be sure to use all safety equipment required.

**Colors in concrete products may vary from pallet to pallet. Please purchase your project all at one time.**