

How to Install Retaining Walls

Call 811, Common Ground Alliance, a minimum of 2 to 3 days before starting your project to have utilities marked.

STEP 1. Stake Out/Remove Sod – Lay out the wall using stakes with a string line or a garden hose to mark the location of the back of the wall. Use the information below to determine the size of the trench needed, and then dig.

Trench width should be twice the depth (front to back) of the block. *Example:* For block that is 7 in deep, make the trench 14 in wide.

Trench depth:

- For walls under 24 in high (including the base course), make the trench deep enough to bury half of the block of the first course plus 4 in of compacted base material. *Example:* for 4-in-high block, dig a trench 6 in deep.
- For walls over 24 in high (including the base course), make the trench deep enough to bury a full block of the first course plus 6 in of base material. *Example:* for 6-in-high block, dig a trench 12 in deep.

If your property slopes, start the trench at the lowest point and step the trench up or down as necessary.

STEP 2. Add and Compact Paver Base – Remove loose soil and firmly compact the soil with a tamper. Add a 2- to 3-in layer of base material in the bottom of the trench; rake and firmly compact. Use a carpenter's level to ensure a uniform, level surface. Check level every few feet. Add more base material and repeat until appropriate base depth is achieved.

STEP 3. Lay and Level Blocks – Use a hammer and chisel to remove the rear lips from all blocks for the first course. Position the individual blocks side by side on the prepared base so that front edges of the block are touching and the back edge aligns with the string line. Level block in both directions. Begin next course by laying a block with the rear lip facing down in a staggered relationship to the course beneath.

Each block lip should be in contact with the block below. Check each course for level before continuing and make adjustments with a rubber mallet. Repeat the process until you reach the desired wall height. To make a curve, use a hammer to remove edges of block lip.

STEP 4. Add Drainage Aggregate – Place filter fabric directly behind the wall extending from the bottom of the base course to the middle of the top course. As you build each course, fill behind block with drainage aggregate that extends at least 6 in behind the wall. Compact aggregate with tamper.

STEP 5. Cutting Blocks – You may need to cut or split blocks for your project.

Always wear eye protection when cutting or splitting blocks.

- To split a block: Use a hammer and chisel to score the block on all sides. Pound the chisel on the score line until the block splits.
- To cut a block: Use a circular saw with a masonry blade.
- To make a 90-degree mitered corner: Use a circular saw with a masonry blade. Cut a 45-degree angle on two blocks. Glue cut sides together with exterior-grade concrete adhesive so the two faces form the finished outside corner.

STEP 6. Mark and Cut Cap – To cap the wall, slide the cap forward so the cap overhangs the face of the wall approximately 1 in.

For capping curves, trim the caps to follow the radius of the wall. Place a cap at the beginning of the curve, skip a space and place the next cap in the third position. Rest a cap on top of the original two, aligning the face with the adjacent caps. Mark the bottom of the cap along the edges (as shown in Step 6). Use a circular saw or tub saw with a masonry blade to cut the marked cap.

On a 90-degree corner, two caps need to be saw-cut to achieve a 45-degree mitered corner. At the end of the wall, cut the cap so the manufactured edge is exposed and the cut edge is against the next cap.

STEP 7. Glue Cap – Use an exterior-grade concrete construction adhesive to secure the caps.



Steps

Step 1.

Step 2.

Step 3.

Step 4.

Step 5.

Step 6.

Step 7.



Tools