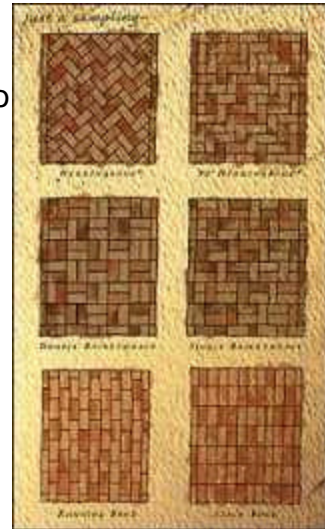


## Brick Paver: Paths, Patios & More

Creating features of paving brick around your home is easier than you might think. They are as affordable as they are beautiful, and as enduring as ever. And, thanks to recent product introductions, simpler than ever to install, for those with the inclination and energy to take on rewarding personal projects at home.

### About Paving Brick

Unlike the brick used to build houses and walls, paving brick has no holes. Typically, it's available in three sizes - 35/8"x 75/8" for mortared applications, 33/4"x 71/2" and popular 4"x8" (both bonded) for sand-based applications. Paving which uses mortar, has a familiar, traditional appearance, yet, it can be vulnerable to cracking resulting from ground shifts below the surface if the foundation is compromised. The no-mortar, sand-based technique for paving with brick, with its relative ease and relatively lower cost of installation, has increased in popularity in recent years, partly because it appeals to those who wish to make such home improvements themselves. Both types of installation are extremely durable and can last for decades.



Pavers also come in two thicknesses: 1 1/2", commonly used for pedestrian situations, and 2 1/4" typically used for heavier pedestrian and traffic/load conditions.

With the increase in sand-based installation, brickmakers are producing styles which make these installations as elegant as ones using mortar while basically eliminating the problem of edge chipping. These pavers, with edges that are either beveled or "relieved" (made slightly irregular with a handmade look), also tend to emphasize and enhance the pattern in which brick are laid.

### Step 1: Preparing Your Site

The first step in a sand-based installation is to remove enough soil to allow for 3-4" of "crusher-run" gravel (about 8" for a driveway), 1"-1 1/2" of "concrete" sand or stone screenings, and the thickness of your selected pavers. The excavated area should extend about 6" beyond the area you plan to pave to provide an adequate foundation and allow for proper drainage.



### Step 2: Compacting the Sub-Soil

After excavation is complete, the exposed sub-soil needs to be compacted, either by using a vibrating plate compactor (available from most equipment rental shops), or allowing the area to stand through several rains or soakings with a hose.

### Step 3: Gravel & Drainage

Following soil compaction, it's time to add the gravel. Although it may not be necessary for small or low-traffic areas, gravel will help keep your paved area level for years. (When in doubt about this or any other detail of installation, we suggest that you consult with a landscaping professional.) For proper drainage, you will want to slope the excavated site about 1/4" per foot (1" every 4') without exceeding 1/2" per foot.



### Step 4: Edging

Edging, which can be done before or after laying the pavers, is necessary to hold a "no-mortar" installation in place. It can consist of a run of bricks on-edge, trowel-finished concrete with backfill soil, or increasingly popular continuous plastic or metal retainers. If your selected pattern or plan involves a lot of brick cutting, edging is more easily and accurately accomplished afterwards.

### Step 5: Bedding Sand and Screeding

Don't be tempted to compensate for an improperly compacted or unlevel sub-soil (or sub-base) condition in this step. Such a seemingly "innocent" adjustment will ultimately result in an uneven surface and unwanted settling. Make sure the sub-surface is properly prepared. Next, place two parallel lengths of 1" pipe on the gravel approximately 6' apart (to serve as runners). Cover the sub-base with sand (or stone screenings) to a depth of 1 1/2" or less. The bedding sand or screenings need to be screeded (the process of leveling this surface using a long straight edge), so pull a 2"x4" across the sand atop the 2 pipes, removing any excess.



Don't worry about any voids in the sand's surface, including those caused by the pipes. These can simply be hand-filled and troweled smooth as you lay your bricks. Work from freshly screeded sand, and avoid walking on your leveled surface. If rain threatens before this work is completed, remember to keep your sand dry, using a plastic cover.



## Step 6: Laying Your Brick

With your pattern chosen (suggested patterns are shown on the next page) begin laying brick from any convenient corner. If your paving is adjacent to a solid structure (such as a wall), you'll want to work out from there. Set the pavers lightly on the sand, never pressing them or hammering them in. Remember to stop 6" short of the originally excavated area to allow edging and drainage to extend beyond. Every 4' or so, use a perpendicular string line to check your progress. If pavers are "lagging" behind the desired pattern, carefully insert a small screw driver and work them forward until they are in proper alignment. If bricks run slightly ahead of the pattern, use a rubber mallet to nudge them into place. Careful hand-setting should ensure an adequate fit prior to final tamping.



## A Word About Cutting Brick

Obviously, it's easier if you choose a pattern which minimizes or eliminates cutting. If necessary, however, brick can be roughcut using a broad blade chisel and a hammer. For finer cuts, a brick splitter or power saw with a masonry diamond blade (available at most equipment rental shops) will do the job.

## Step 7: The Final Details

Sweep the pavers, and then, using a vibratory plate compactor (or, if you've used square-edged brick, a hand tamp or rubber mallet), work from the perimeter inward, going over the surface at least twice with 2"-4" overlaps each pass, until the surface is level to your satisfaction.



Next, spread a thin layer of jointing sand and use a stiff-bristle "street" broom to sweep and tamp it into the joints until they are filled. After sweeping, run the compactor across the surface a final time. If cracks open up, sweep additional sand to fill them. Finish by sweeping away the remaining sand, backfill around the perimeter with top soil and sod or seed. Don't forget to water your plantings!

