



Installation Guide for Bella Stone Interlocking Pavers



Beyond Beautiful

Bella Stone Interlocking Pavers™ are beautiful and easy to install. The many styles, shapes, and rich colors create distinctive patios, walks, driveways, and pool decks that will bring you years of enjoyment.

Most paving skills are within your reach. Simply follow the steps we have shown. We've even included some helpful hints that the professionals use. With a little effort and determination, you can achieve beautiful do-it-yourself results. Let's get started!

1 Planning

Careful planning is essential to ensure your project goes smoothly. Start by reviewing our **Bella Stone Interlocking Pavers** catalog for ideas. It will help you visualize what your project might look like in relation to your home and site amenities. Then sketch out a few designs on graph paper. When you have finished your plan, finalize all of the dimensions and note any existing structures, such as your home, stairs, or other paved areas.

While you probably have a pretty good idea of the style and color pavers you want, visit one of our **Bella Stone Interlocking Pavers Authorized Dealer** in your area to make your final selection from actual product samples. Show them your sketch and discuss the shape and pattern you'd like to use, keeping in mind that some shapes and laying patterns require less cutting than others. They will help you determine the proper amount of pavers, edge restraints, sand, gravel, and other materials you'll need. Most likely you will need to have the materials delivered to your site.

The pavers, sand, and gravel are heavy, so delivery makes sense. You should select a convenient and safe location where the materials can be placed.

You will need the following tools and equipment:

- *Gloves • Mason's Line • Tape Measure*
- *Push Broom • Wood Stakes • Rubber Mallet*
- *Shovel • Garden Rake • Wheelbarrow*
- *String Level • Marking Crayon • Steel Rake*
- *24" Carpenter's Square • Safety Glasses*
- *2 pcs 1" o.d. conduit pipe x 8' long (screed pipe)*
- *1 pc 2" x 4" x 8' kiln-dried lumber (screed board)*

In addition, you will need a tamper or plate compactor and a guillotine cutter or masonry saw to cut some of the pavers.

2 Preparing

Before starting excavation, contact Dig Safe or Call Before You Dig and request that they mark all underground cables or pipes. These services are usually free, but may require up to 72 hours notice. Begin by marking out the area to be paved. Use a garden hose to layout free-form curves. A circle is marked out from a stake at the center point. Using a string line cut to the length of the radius desired, mark the arc with chalk. Be sure to allow an additional 6" on each side of the pavement (except where the pavers abut a wall, foundation, or existing curb) for drainage and edge restraints.

Set a series of stakes along the perimeter and connect them with string. It is important to establish a 90° corner as a starting point. A simple technique uses the 3-4-5 triangle method. From the corner stake, measure 3' across the bottom and 4' up the side, adjusting them until the distance of the diagonal line is exactly 5' long. A 24" carpenter's square also can be used. You also will need to establish a 90° corner when setting the edging and laying the pavers.

3 Excavating

If you have a large area to excavate, you may wish to hire a contractor. They can haul away and dispose of the excavated material. For smaller areas, a shovel and some hard work will get the job done. Remove grass, loam, roots, and large rocks. Use a flat shovel or spade to skim off the last couple of inches to avoid disturbing the subgrade soil. Remember, you'll need to excavate 6" beyond the final dimensions of the pavement to install the edge restraints.

The depth of the excavation will depend on the project and soil conditions. The base under the pavers must be sufficiently thick to support loads in order to avoid rutting over time. The chart shown will give you an idea of how deep you'll need to dig. If you have good draining granular soils, such as gravel, you can use less base material than if you have poor soils, such as clay. Granular soil feels gritty between your fingers, while clay soils feel slick, especially when wet.

Determine the elevation of your finished pavement - it should be approximately 1/4" above the surrounding area to allow for lock-up over time. The pavement must be sloped 1/4" per foot to provide drainage. This slope is established at the subgrade level by pulling string lines across the width of the excavated area and leveling them using a line level. On the side you wish to slope towards, move the lines down 1/4" for every foot that the pavement is wide. For example, if the area is 4' wide, lower the string 1". Measure the distance between the subgrade and the string lines - the excavated depth should be uniform across the width of the slope.

4 Installing the Base

The key to a successful pavement is the base installation - it is the most important step of your project. In addition to the proper thickness, the base must be placed in lifts and thoroughly compacted, otherwise settlement may occur. The base material should be a coarse, granular gravel consisting of a proportioned gradation of sand and stone. We recommend **1 1/2" processed gravel, 3/4" crusher run, or dense-graded gravel.**

Project

- Walkway/Patio 4" to 6" thick
- Pool Deck* 6" to 8" thick
- Driveway 8" to 12" thick
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Excavation Depth Base Thickness

Tip: Since the string lines must be removed in order to compact the subgrade, mark their position on the stakes, which should be left in place. You'll need to reset these lines for other steps of the installation.

For every 100 square feet (sf) of area, you will need the following amount of base materials for the thickness shown:

- 4" thick - 2 tons • 6" thick - 3 tons
- 8" thick - 4 tons • 12" thick - 6 tons

You must compact the subgrade soil at the bottom of the excavated area with a plate compactor, or for small jobs, a hand tamper, in order to create a firm and stable foundation for the base. As an alternative, consider renting a Pounder from your **Bella Stone Pavers Authorized Dealer**. It's similar to a hand tamper, but does a much better job and is easier to use.

5

Installing Edge Restraints

Unless the pavers are up against an existing curb or a foundation, it is important to install edge restraints around the entire perimeter. This keeps the pavers in position and helps prevent them from tipping or spreading apart.

While various types of edging materials can be used, we recommend Snap Edge. Few other edging systems can match its performance and it is easy to install and will not rot or rust. Place the edging directly on the compacted base



and secure in place by driving the 10" spikes every 2' into the pre-drilled holes. Pave Edge Flexible can be used for straight or curved sections. Be sure that all corners that are to be square are exactly 90°. Use the

3-4-5 triangle method described in

Step 2.

Wet, but do not saturate the base with water as you compact. When it cannot be compacted further, add the next layer of gravel and compact.

Take your time - do not rush this step! Continue to add and compact material until the top of the base is approximately 2 3/4" to 3" below the height of the finished pavement. Verify this by resetting the string lines to the final elevation and measuring the distance - the depth should be uniform throughout.

The remaining space is for the 1" sand bed and concrete pavers after they have been compacted into place. If necessary, add or delete base material to bring it to the desired slope and grade, and compact it well.

To ensure adequate compaction, you will need to install the base in lifts (layers). If you will be using a hand-tamper, spread an even layer of gravel about 2" thick. If using a plate compactor, you can spread the gravel in 3" to 4" layers.



6

Placing the Sand Bed

Before the pavers can be placed, a setting bed of washed concrete sand must be installed and leveled. This process is known as screeding. Although commonly used, we do not recommend stone dust because it packs too tightly and can get spongy if it becomes saturated with water.

Place the steel pipes on the compacted base parallel to each other about 4' to 6' apart. At several intervals, run a string line set at the height of the finished elevation across the pipes.



The top of the pipes should be 1 3/4" to 2" below the line. If necessary, adjust the height by putting a handful of sand under each end of the pipe if too low or by trimming the base if too high.

Cover the pipes and space between them with concrete sand. Level the sand by pulling the 2" x 4" screed board along the top of the pipes. Fill any low spots with sand and rescreen. Move the pipes forward, fill the voids with sand and repeat the process until the entire sand bed is installed. Do not step on, compact, or allow the sand to become wet once it has been screeded. An important note - you should only screed the area that will be covered with concrete pavers on that same day.

Tip: If the area to be paved is wider than your screed board, carefully remove the screed pipe closest to the edge, place it on the opposite side of the pipe left in place and repeat the screeding process.

For every 100 sf of pavers, approximately 1 ton of concrete sand is required for bedding and jointing when the sand is screeded to 1" thick.

7

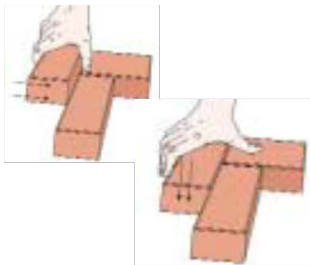
Laying the Pavers

Most Bella Stone Pavers can be installed in a variety of laying patterns. The most popular are running bond, herringbone, and basket weave. Some shapes feature unique patterns, while others offer virtually unlimited design possibilities. We've shown some of the most popular patterns for our shapes on our website www.BellaStonePavers.com

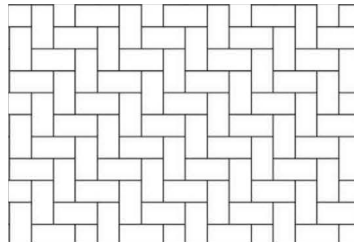
As pavers are not set in mortar or concrete, you can work at your own pace. Follow the directions carefully, but if you make a mistake, don't panic! Simply remove the pavers

to correct the error and pick up where you left off.

It is important to start your paver installation along a straight edge or from a 90° corner, even with a curved layout. Begin placing the pavers on the screeded sand bed along a straight line in the pattern you have chosen. Install the pavers "hand-tight" so that the joints between the pavers are about 1/8" wide. With circles and fans, joint spacing may vary. We mold our pavers with "spacers" on the sides of most of our shapes to assist in proper joint spacing. Using the "touch and drop" method, grasp a paver between your thumb and fingers. Touch the bottom half against the sides of the previously placed pavers and release your grip, guiding the paver to drop down directly onto the sand. Do not slide the paver across the sand.



Herringbone is the most common and strongest pattern to lay.



Our traditional pavers with chamfered edges should be placed with chamfers facing up. Always select pavers from different layers and from several cubes at a time and to ensure even distribution of inherent color shades when installing. Proceed from one starting point only. The first several rows are the most important for keeping the lines of the pattern straight. Once you have established the pattern, placing the pavers will become easy. Every couple of feet, pull string lines over the joints to maintain pattern lines.

You should work off the pavers as they are installed, keeping a foot or so back from the laying edge. If you are installing pavers on a slope, always start at the bottom and work uphill. Periodically check your row alignment by running a string line along the front edge of the leading row, making sure that each paver touches the string. If adjustment is needed, wedge the pavers into the proper position using a screwdriver or tap them with a wood block and mallet. Install any remaining edge restraints at this time. For pavements that will have curves, continue the pattern to just beyond the width of the pavement. Mark and cut the pavers along the perimeter to accommodate the curve.

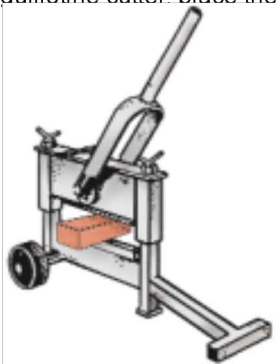
Refer to our website BellaStonePavers.com for the shape you are using. Screed only enough sand for the setting bed that allows you to comfortably place the pavers within arm's reach. As the diameter of the circle increases, you will be able to work off of it to place additional pavers. Another method is to place half of the circle first, then install the remaining half by working from the previously installed area.

Add a professional touch to your pavement by using Bella Holland, Bella CobbleStone or Bella Vista Pavers as a soldier or sailor course along the outside edges to finish the border. This technique works well with almost any style of paver and pavement shape, including curves, by "framing" the pavement for a neat finished appearance.

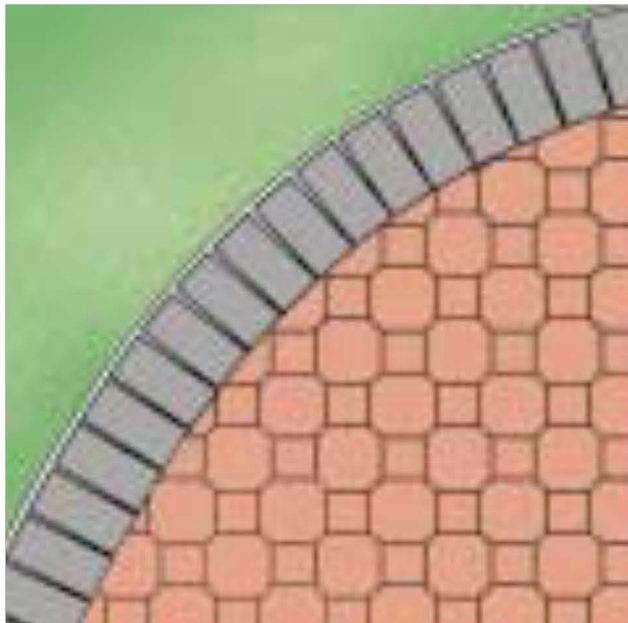


8 Cutting the Pavers

You will need to cut some of the pavers to fit neatly along the edges of the pavement. Measure and mark the pavers to be cut with a marking crayon (it is best to cut the paver about 1/4" less than the actual dimension). Always cut the paver in the shortest direction for a neat cut. Don't be too concerned if a cut is not perfect. Jointing sand will fill the gaps. If using a guillotine cutter, place the paver under the center of the blade. Push the handle down using a quick, forceful motion. When using a masonry saw, cut under the center of the blade, using just enough pressure to allow the blade to do the work.



When cutting pavers, exercise caution and **always use safety glasses, gloves, a dust mask, and when using a masonry saw, hearing protection.**



9 Compacting the Pavers

After all of the pavers have been installed and the edge restraints securely set, sweep the surface clean of any debris and tamp the pavers into the bedding sand using a plate compactor. Do not compact within three feet of an unrestrained edge. Adjust the speed of the machine so that it runs with a high vibration, but at a low amplitude (jumping motion). Make two or three passes at 90° angles to each other. Spread sand into the joints, and compact again. It is okay to leave a thin layer of sand on the surface as you compact. If any of the pavers become damaged, remove them



by placing two large screwdrivers in the joints on opposite sides of the paver and pry and rock it straight up. Tamp the replacement pavers into place with the plate compactor.

If you have not used SandLock, you will need to spread additional sand over the paver surface and sweep back and forth until the joints are full. Allowing sand to dry prior to sweeping will make filling the joints easier. The plate compactor also can be used to vibrate sand into the joints. Keep a small amount of sand on hand to re-fill any joints, if needed, after a few weeks. To finish the job, sweep the pavers clean and hose the surface down with water. Complete your landscaping by adding sod or plantings as desired.

Congratulations!

You should feel a real sense of accomplishment! Your new walkway, patio, pool deck, or driveway is ready to use and will provide you with a durable and attractive pavement that you will enjoy for many years to come.

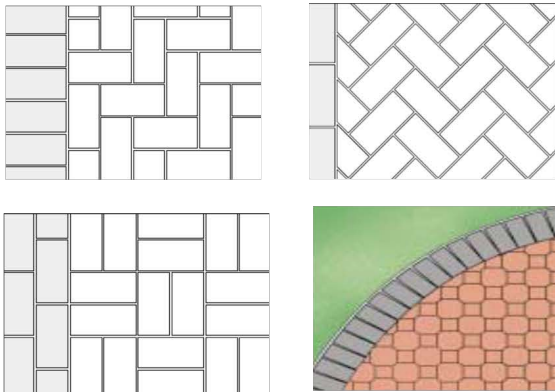
10 Border Courses

Although any Interlocking paver can be used as a border course, the most popular choice for border courses are traditional 4x8 units, although other paver shapes also may be used.

4" x 8" Soldier Course 3 pieces per lineal foot

4" x 8" Sailor Course 1 1/2 pieces per lineal foot

8" x 8" Soldier Course 1 1/2 pieces per lineal foot



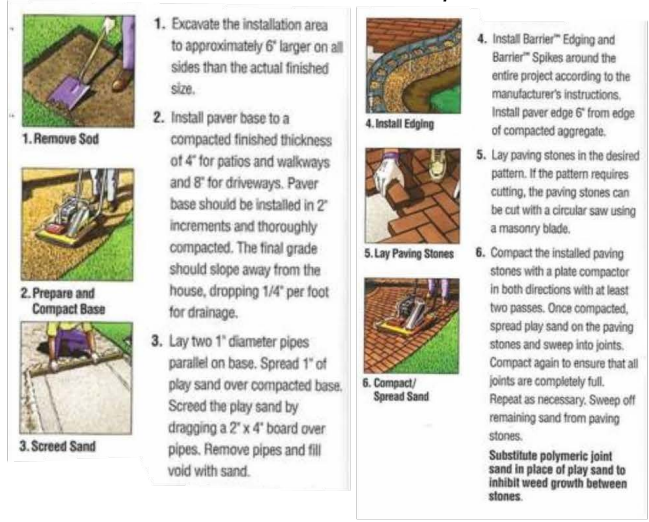
Bella Stone Interlocking Pavers by Building Products Corp. features a wide array of attractive pavers with shapes that can create engaging patterns and designs that no other paving material can match!

The color, pattern, shape, and visual texture of our concrete pavers are all important elements in the design of picturesque pavements that add charm, vitality, and ambiance to any landscape setting. Most shapes can be installed in a number of patterns. Choose from classic 45° or 90° herringbone, elegant basket weaves, traditional running bonds, dramatic circles, fans, or sweeping curves. Some pavers, such as Bella Vista Stone have shapes that lend themselves to patterns specific to their geometry. Other styles can be installed in virtually unlimited patterns and combinations. Any of the patterns are suitable for walkways, patios, and pool decks. While running bonds and basket weaves may be used for residential driveways, herringbone patterns provide the greatest degree of interlock. Stack bond patterns should be utilized only for foot traffic.



Authorized Dealer:

Bella Stone Interlocking Pavers DO-IT-YOURSELF Installation Re-Cap



For more information
visit us online at
BellaStonePavers.com