

1. Provide Proper Drainage

It is important to provide two types of drainage; surface and sub-surface. For surface drainage, the surface of the pavement should slope at least $3/8$ " per foot. The surface of your Tuscan pavement will be slightly irregular and water will not flow across it as easily as over a very smooth pavement. In order to do this properly, the subgrade, the base, and the setting bed should all slope the same.

In addition, sub-surface drainage should be provided, as well. First, the setting bed must be a type of sand that will allow water to migrate easily through it, both downward away from the pavers above, and laterally along the slope of the base to drainage devices at the low edge. Sands that are too fine will hold water and not allow the pavement to dry out well.

There are several ways to design sub-surface drainage. One is to use an open graded crushed stone for the base, which will allow easy drainage through open spaces between stones. Another is to provide pipes downward through the base into open gravel below that can collect water. Another is to provide "French drains" or gravel ditches that can collect water from the setting bed. Contact Redland Brick's Technical Service Department for more information.

TIP: Most projects look better with a border enclosing the pattern. Use 6x6, 6x9, or 4x8 pavers along the project edges.

2. Use String Lines to Keep Your Patterns Straight and Square

Start by measuring five or six of each size paver from the shipment. Select pavers that represent the variety of colors. Their measurements will vary. This is normal for the Tuscan Collection "old world" look.

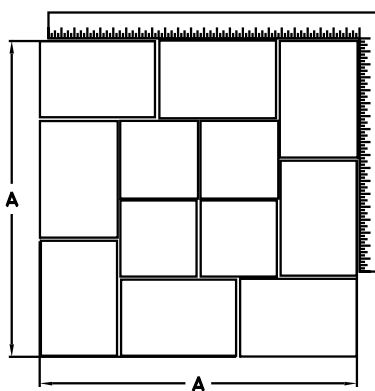


Figure 1

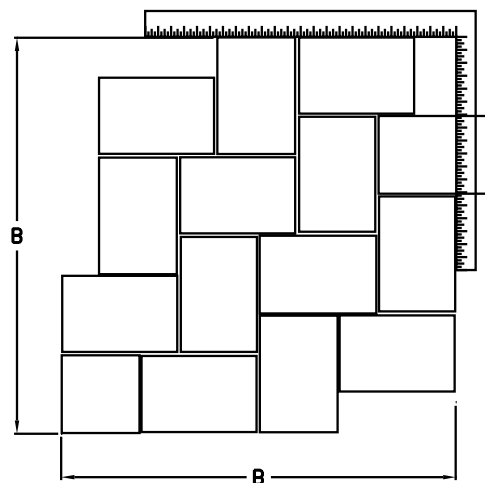


Figure 2

With these measurements in mind, now select enough pavers to lay out a typical pattern that you will use, at least 4 pavers long – the more the better, but not more than 48". See **Figure 1** and **Figure 2**. Do not use any of the smallest pavers. Make certain the joints between units are at least $1/8$ ". Align the pattern so that the pieces fit properly and the pattern is square. In the examples shown, the pavers should be arranged by adjusting joints so that both dimensions "A" are the same, or both dimensions "B" are the same.

In the example of **Figure 1**, let's say that measurement A is $24\ 1/2$ ". Add $3/16$ " to this number, and set your string lines at every $24\ 11/16$ " in both directions across the whole project; do not forget to allow for the border. You should do this **AFTER** you have screeded the sand setting bed.

TIP: Don't spread and screed any more setting bed than you will cover that day because the exposed sand may be disturbed overnight.

3. Consider Leaving the Edging Adjustable on One or More Sides of the Project

Use the paver and pattern measurements obtained in the previous step to estimate the location of the edgings. Don't forget to include the border that you will use. Choose your starting edge(s) and install the edging permanently. Then measure to the other borders so that cutting pavers along the edges will be minimized. If you have done your measuring well, for short distances, say under 8 feet, you may install the edging permanently. But for long distances, you should plan for the patterns to grow slightly from what you anticipate. Install the edging temporarily an inch or so away from the measured position. Now, place and screed the sand setting bed. **Do not compact the sand.** When your work gets close to this edge, say 4 feet or so, re-measure for the final edge position and move the edging into its final placement. You will have to re-work the sand along the edging.

4. Use Two Different Sands

The setting bed should be an open-graded coarse sand, such as ASTM C33 Concrete Sand. This sand is not suitable for sweeping into the joints. The jointing sand should be a finer sand, such as ASTM C144 Masonry Sand. Some "play sands" are suitable. Jointing sands are not appropriate for setting beds.

5. Follow Proper Compaction Procedures

Lay the pavers on a 1-inch sand setting bed that has not been compacted. As you work, you will be adjusting every paver for alignment and for height. String lines are great tools for both. The same string lines used for alignment can be adjusted to follow the grade of the finished pavement. The pavers will vary slightly in thickness. Use a rubber mallet to tamp the pavers level as you go. If necessary, you can adjust the setting bed as you go to keep the pavers level with their neighboring pavers. For most projects, you will use the rubber mallet to compact the pavers into place when laying is complete. For large projects, you may want to consider a vibrating plate compactor. The plate must have a rubber mat – no steel plate should ever come in contact with the pavement.

Step 1 – Spread jointing sand over the pavers with a push broom. Sweep diagonally to the joints to get the sand to settle into the joint spaces.

Step 2 (if using a rubber mallet) – Leave some sand on the surface. Tamp every paver several times. This will settle sand into the joints from above, as well as force some bedding sand up into joints. You can use a "bench brush" to sweep more sand into joints as you progress, or come back later with the push broom.

Step 2 (if using a compactor) – Sweep all of the excess sand away from where you will use the compactor. Too much sand between the compactor and the pavers can damage the surface of the pavers.

Step 3 (if using a compactor) – Compact the area, keeping the compactor moving. Don't ever stay in one spot. Move in a spiral motion, and cover the area twice. You will see that the sand has disappeared deeper into the joints.

Step 4 – Repeat steps 1–2 for the rubber mallet technique. For the compactor, repeat steps 1–3 (except cover the area only once). Sweep more sand into the joints as necessary.

TIP: If pavers chip or break, you are using the wrong compactor! Either find a better one, or use the rubber mallet technique.