

Outdoor Porcelain Pavers

Installation Guide

tilebar

tilebar.com
888.541.3840





Installing Pavers

Make sure all your tools and materials—substrate, tile, thin set, and grout—are compatible with each other. Today's adhesives and mortars are warranted for most substrates. **Inspect all your materials before getting started.**

Substrate Preparation

An installation is only as good as the foundation it rests on. Exterior pavers can be installed on a few different types of systems. Preparation is the key to ensuring your installation lasts a long time.

Layout

Take accurate measurements of the space and develop a layout plan. To be sure the final look will meet your expectations, dry-lay your tile or create a mockup to confirm your layout and grout joint size. Locate all cuts and adjust layout as necessary. Confirm the final layout, cuts, joints, and overall look.

Use proper equipment to cut your tiles (wet saw, drill bits, snap cutter, or grinder). Be sure to follow all safety precautions and protections recommended by the manufacturer. Blend tile materials to ensure consistency throughout the project area. With larger tiles, waste factor is high, and more material may be needed.

Tilebar Tech Tip:

- **NEVER** compact porcelain pavers with a plate compactor.
- **ALWAYS** pre-compact and strike off your bedding course before installing your porcelain pavers in sand-set installations.

- **NEVER** install porcelain pavers without the required 3/16 inch (4mm) spacing between them. Porcelain pavers should never be installed with porcelain-to-porcelain contact.

Installation Methods and Uses

1. Sand Set Over Compacted Road Base

This common method is most popular in areas where pavers are installed close together to create a fully paved effect. *For pedestrian foot traffic only.*

2. Dry Installation on Gravel

This common method is another popular option for areas where pavers are installed close together to create a fully paved effect, but it also offers better drainage. It's also known as Permeable Over Open Graded Aggregate Installation. *For pedestrian foot traffic only.*

3. Dry Installation on Grass

This steppingstone method is perfect for installing pavers in grassy or landscaped areas where a walkway is needed. *For pedestrian foot traffic only.*

4. Mortar Installation

This method is preferred when there is heavier pedestrian traffic, or you do not want tiles to move or shift. It's also known as Cementitious Adhesive Overlay, Concrete Base Installation. *For light vehicle traffic when combined with a reinforced concrete slab and the right setting materials.*

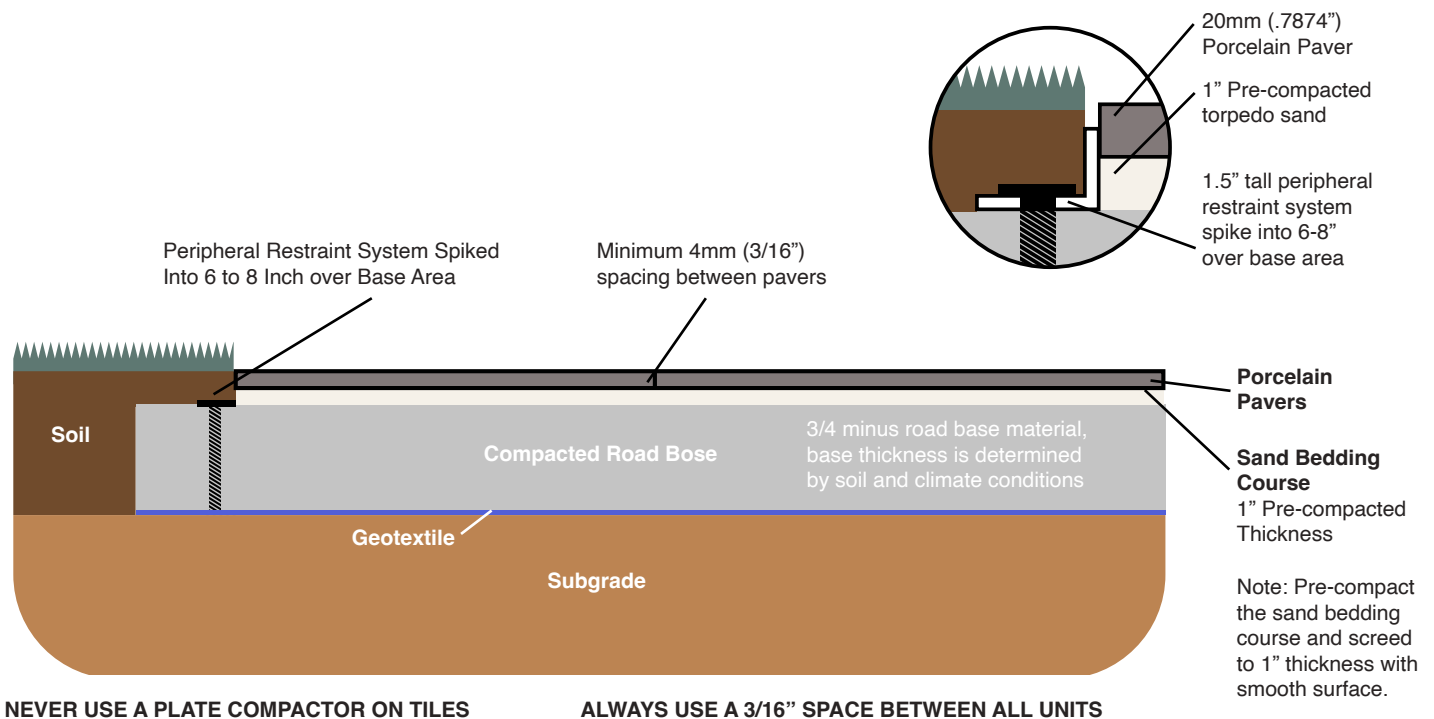
5. Pedestal Installation

This method requires the use of a pedestal system over a concrete substrate or properly engineered roof. It is a good option for hiding systems and correcting level changes. *For pedestrian foot traffic only.*

Installation Notes

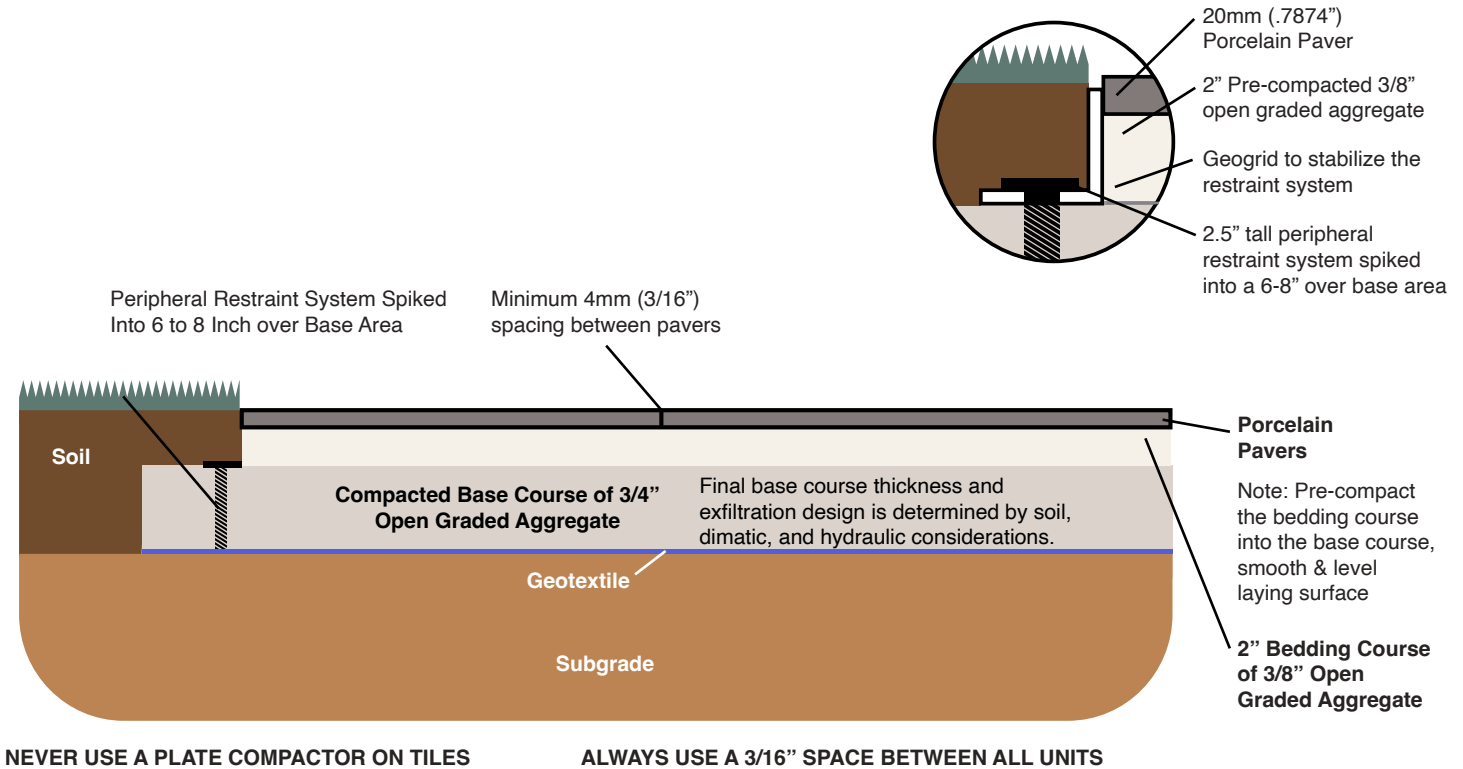
1. Sand Set Over Compacted Road Base

- Refer to the detailed diagram.
- Base material should extend 6 to 8 inches beyond the edge of the pavement.
- Optimum depth for compacted road base is 4 inches; sand beds: 1 inch.
- The required edge restraint system is low-profile, with a height of 1.5 inches as shown.
- Be certain that pavement is constructed with a 1.5 to 2-degree slope and is pitched away from any building.
- Install 3/16-inch (4mm) plastic spacers at all joints and corners of the installed pavers.



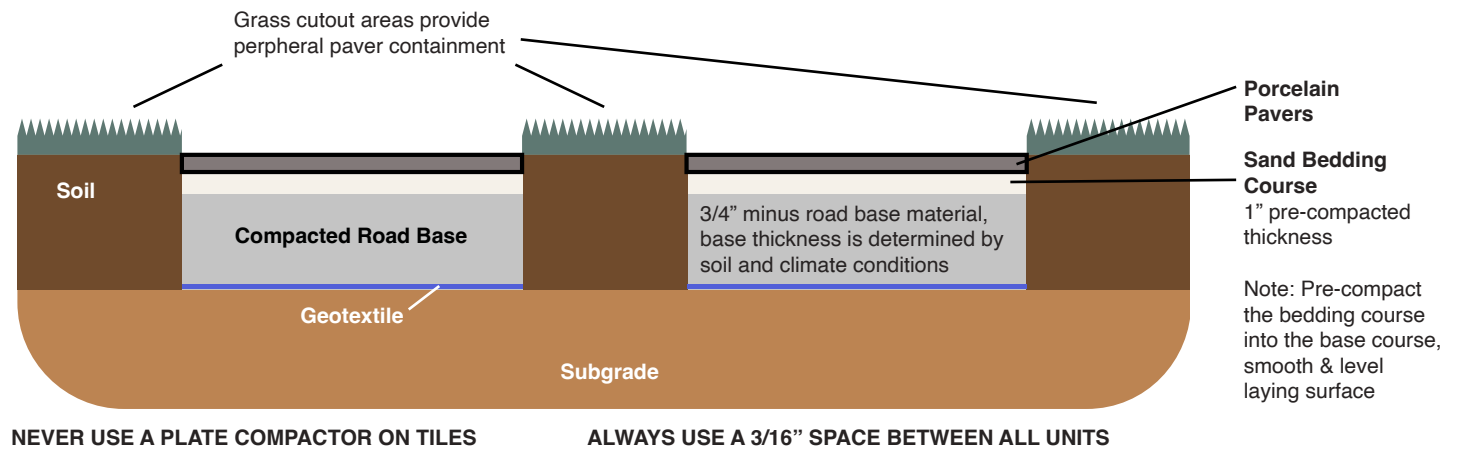
2. Dry Installation on Gravel

- Refer to the detailed diagram.
- The required edge restraint system for this installation has a height of 2 ½ inches, as shown.
- Follow manufacturer’s recommendations to maintain the performance of edge restraints in permeable applications.
- Be sure that pavement is constructed with a 2-degree slope and is pitched away from any building.
- Install 3/16-inch (4mm) spacers between all pavers.



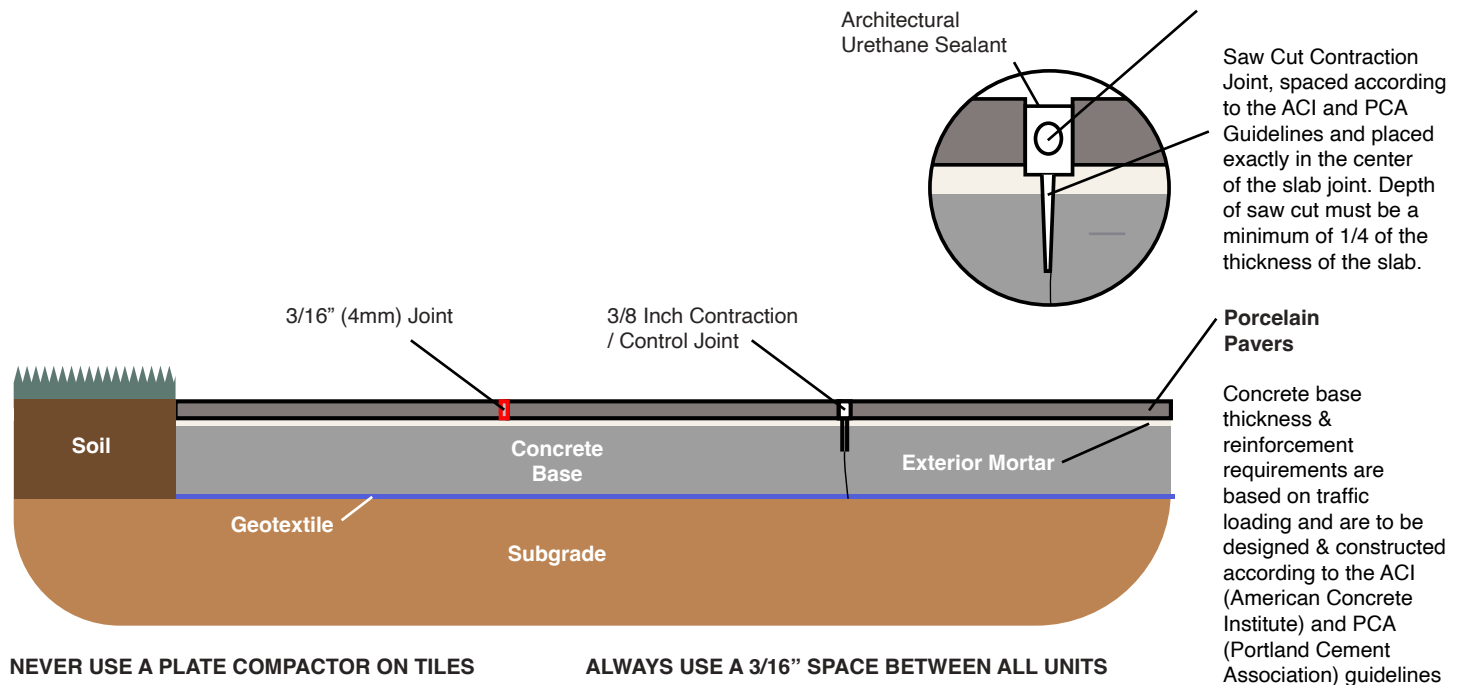
3. Dry Installation on Grass

- Refer to the detailed diagram.
- Cut out grass for the paver area.
- Optimum depth for compacted road base is 4 inches; sand beds: 1 inch.
- No edge restraint system or grout is required for this installation.



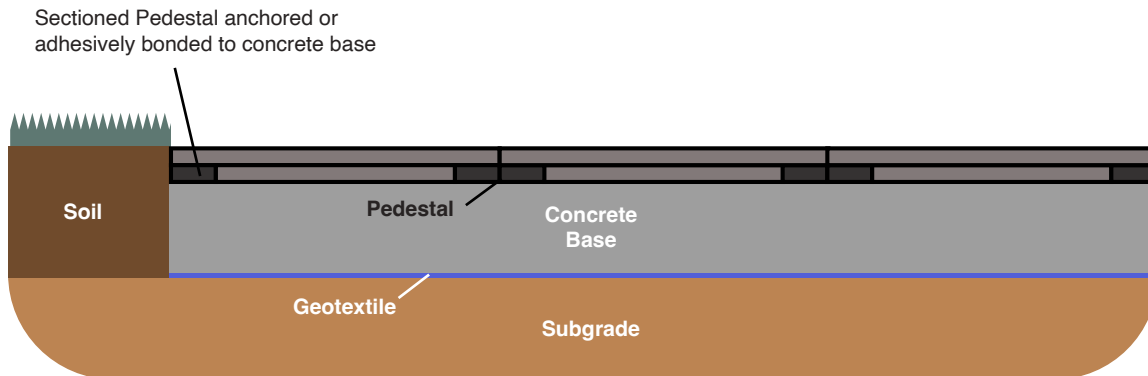
4. Mortar Installation

- Refer to the detailed diagram.
- Be certain that pavement is constructed with a 2-degree slope and is pitched away from any building.
- For concrete foundation slabs that are not large enough to require contraction/control joints, a minimum 3/16-inch (4mm) grout joint is acceptable. For larger concrete foundation slabs that do require contraction/control joints, these joints should be 3/8-inch; use a flexible sealant.
- All contraction/control joints should be in the joint line of installed pavers and not beneath a paver. Caution: If a porcelain paver is installed over a control joint, the paver will reflect any crack along the contraction/control joint beneath it.



5. Pedestal Installation

- Refer to the detailed diagram and pedestal manufacturer's directions.
- Be certain your concrete slab is smooth, even across the surface and is constructed with a 2-degree slope and is pitched away from any building.
- Be certain plastic pedestal supports are installed at all corners of the installed pavers, noting this system may need more support in other places as well.
- To ensure the sustainability of this installation method (whether on a roof or concrete), a consultation with an engineer is strongly recommended.



NEVER USE A PLATE COMPACTOR ON TILES

ALWAYS USE A 3/16" SPACE BETWEEN ALL UNITS

Joint In-filling Information

When porcelain pavers are installed as sand-set or permeable aggregate installations, you may fill the 3/16-inch (4mm) paver joints with:

Sand

Dry traditional sand is swept into the open joints until they are filled. Excess sand should be swept off the pavement. Keep in mind that sand joints may in time have to be re-sanded as wind and rain can cause erosion.

Cement-blended sand

Dry cement blended sand (typically 3 parts sand to 1 part cement) is swept into the open joints until they are filled. Excess cement-blended sand is swept off the pavement. It is extremely important that all the excess sand and dust be swept from the surface, as any residual dust or sand can stain the surface. A blower can be used for final dust removal. After joints are filled and the surface is clean, the pavement is misted with water to activate the cement and the curing of the mixture.

Polymeric sand

Polymeric sand is a manufactured sand that is blended with polymers, so it hardens when subjected to moisture. The sand is swept into the open joints until they are filled. Like cement-blended sand, it is extremely important that all excess sand and dust be swept from the surface, as any residual dust or sand can stain the surface. After joints are filled and the surface is clean, the pavement is misted with water to activate the polymer and curing of the mixture.

Grout Notes for Mortar Installations

Grout can make or break a new tile project. A great grout job can aesthetically enhance the project, while a poor one can undermine even the best work. First choose the appropriate grout joint size; remember smaller is not always better. The grout joint size depends on how consistent the edge of your tile is. The recommended paver joint is 3/16 inch.

Install Overview

- Mix the grout according to instructions.
- Remove spacers as needed.
- Use a grout float at a 45-degree angle to press in and fill all the grout joints.
- Cut the grout off the top of the tile using the grout float, dragging it at a 90-degree angle diagonally across the tile as you would a squeegee.
- Once the joints are filled, dress them with a sponge or scrub pad.
- After 15 to 20 minutes, wipe again with a clean sponge and clean water and let cure.
- After the grout has dried, there will be a haze that can be buffed with dry cloth.
- Limit use until fully cured, usually 24 hours.

Tilebar Tech Tip:

- *Use clean water, A LOT!*
- *Do not get too far ahead. Clean in a timely manner what you just grouted.*
- *Watch the weather! Exterior installations can be tricky because of temperature swings.*
- *Clean sponge often, typically one swipe, flip the sponge over and one swipe, then rinse the sponge clean. Repeat.*
- *Make sure the joints do not have dust or debris in them. Also, any thin set that has squeezed up needs to be removed.*
- *All installations need movement joints. Use a color-matched acrylic or silicone sealant to provide movement protection. Movement joints are for all transitions, base, inside and outside corners.*
- *Keep the project area clean. Even the lightest dust could permanently stain any uncured grout joints.*

Cleaning and Sealing

Keeping an installation looking new is not as difficult as you may think. Regular cleaning of the area with a neutral PH non-acidic cleaner should do the job. There are harsher cleaners available, but use them carefully and follow all instructions. Always do a test area in a non-visible place and make sure that the product chosen is appropriate for exterior use.

Tilebar Tech Tip:

- *Follow all instructions closely.*
- *The more the area is used the more often it will have to be cleaned and sealed.*
- *If an acidic cleaner is chosen, make sure you protect adjacent materials.*