



GRAND FLAGSTONE

FEATURES

- 15 unique shapes replicate large, irregular flagstone with natural stone texture
- Fast installations with easy-to-install pattern
- Uniform thickness to create comfortable end result
- High strength concrete means long term durability
- Multiple natural color blends available

Notes:

*Colors & product availability vary by region.

PALLET



Dimensions: 42 x 42 x 24 in (1067 x 1067 x 610 mm)
 Weight: ±2,000 lb (±907 kg) (inc. pallet)
 Coverage: 90 sq ft (27.4 sq m) (assumes 3/8 in (10 mm) joint)
 Layers Per Pallet: 8 (random assortment of layers)



LAYER: 1 L x W x H
 Dimensions: 42 x 38 x 1.75 in (1067 x 965 x 44.5 mm)
 Weight: ±245 lb (±111 kg)



LAYER: 2
 Dimensions: 42 x 38 x 1.75 in (1067 x 965 x 44.5 mm)
 Weight: ±245 lb (111± kg)



LAYER: 3
 Dimensions: 42 x 38 x 1.75 in (1067 x 965 x 44.5 mm)
 Weight: ±245 lb (±111 kg)



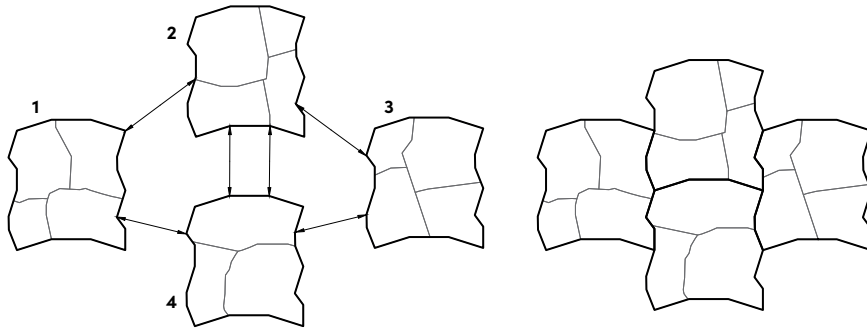
LAYER: 4
 Dimensions: 42 x 38 x 1.75 in (1067 x 965 x 44.5 mm)
 Weight: ±245 lb (±111 kg)

GRAND FLAGSTONE

INTERLOCKING LAYERS

COMMON POINTS

PROPER PLACEMENT

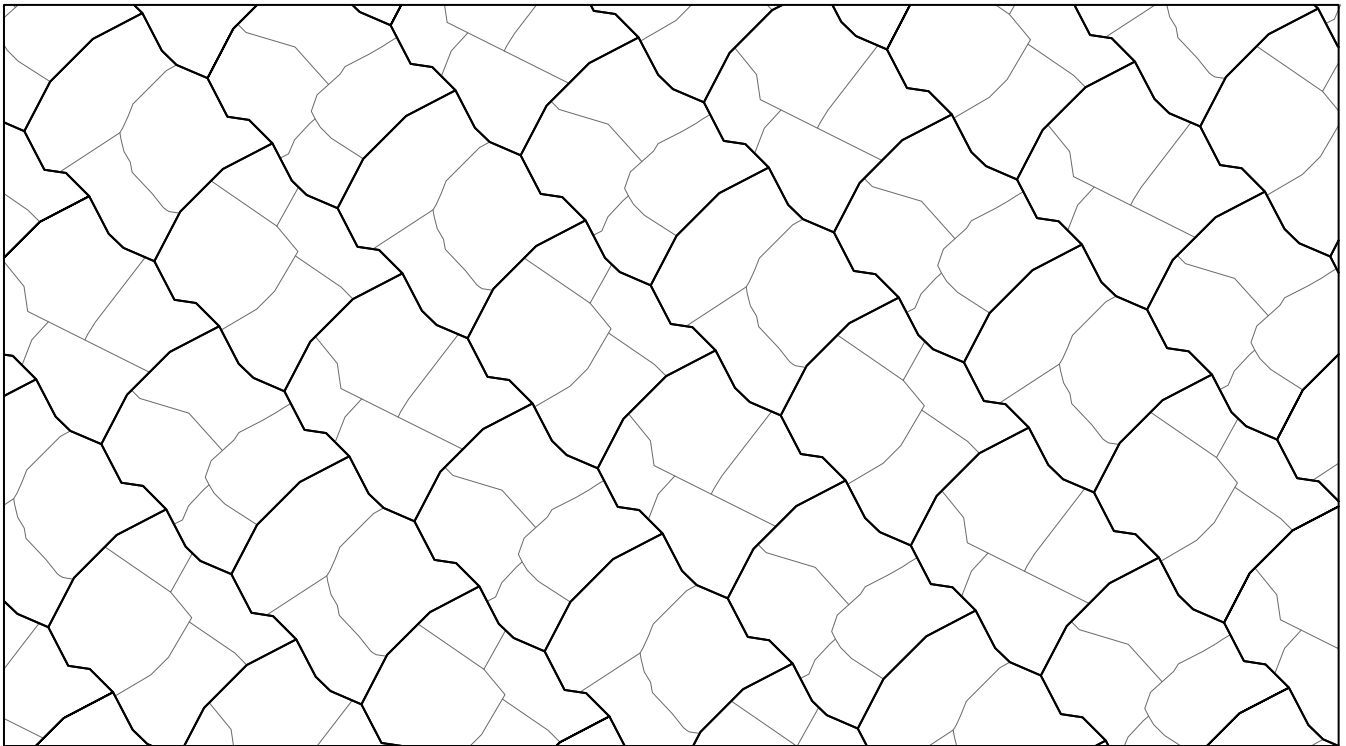


Note: Outside dimensions of each layer are identical to all other layers, allowing any layer to be substituted anywhere in the pattern.

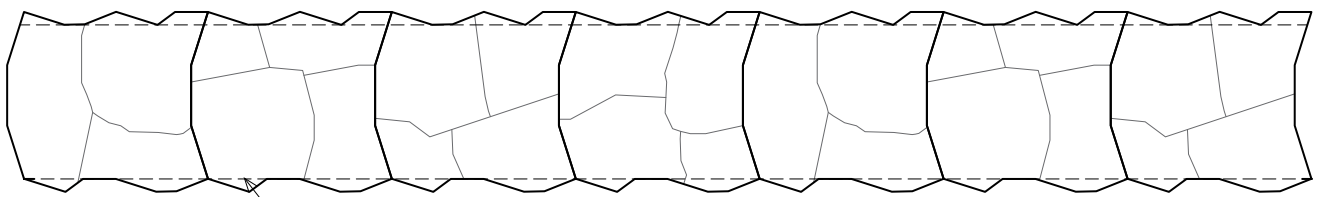
± 3/8 in (± 10 mm) joints (typical)

PATTERNS

PATIO



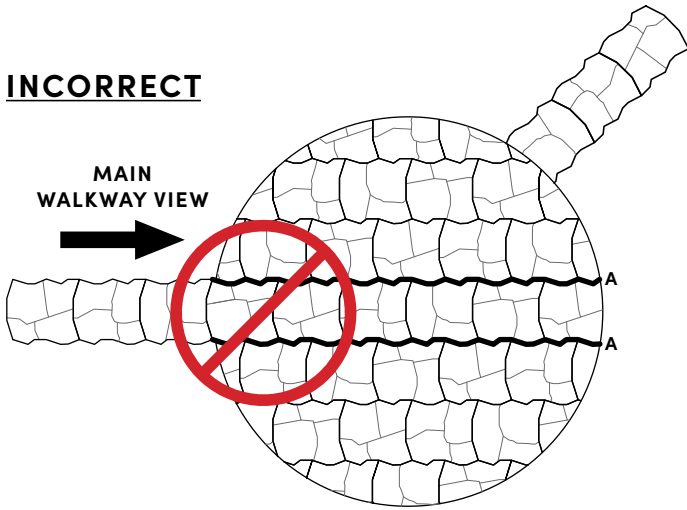
WALKWAY



Leave jagged edge or trim to provide smooth edge (optional)

LAYOUT ORIENTATION

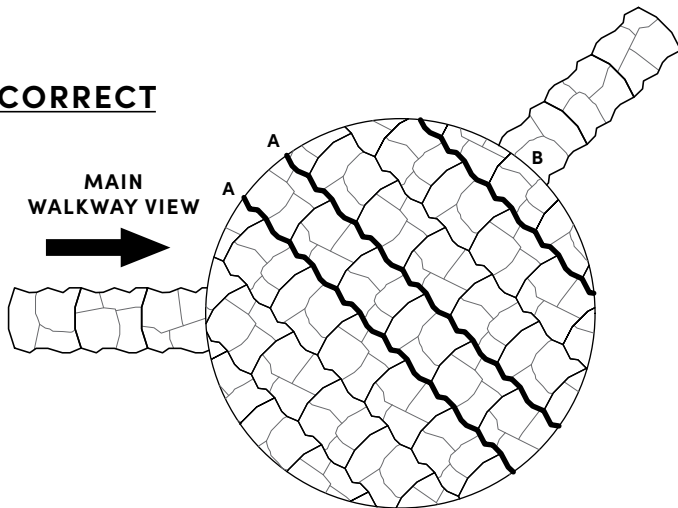
INCORRECT



Layout orientation is important with Grand Flagstone. Due to the nature of the interlocking sets of slabs, there are long, unbroken joints between rows. Often, the irregular nature of the Grand Flagstone limits how noticeable these unbroken joints are in the finished project. However, the lines become slightly more noticeable when you are looking parallel to the unbroken joints than when you are looking at them on an angle. To limit this effect, Grand Flagstone layers should be laid at a 45° angle from the most common viewing angle. This viewing angle would most likely be a patio entrance or step location.

A. Long, unbroken lines caused by seam between layers

CORRECT



A. Long, unbroken lines caused by seam between layers oriented at 45° angle from main view

B. Long, unbroken lines caused by seam between layers oriented as close to 45° angle from secondary view as possible.

PROCEDURE FOR INSTALLING CRACKED PIECES



Individual pieces of Grand Flagstone can crack either during delivery to the job or during on-site handling prior to placement. Typically less than 5% of the pieces will crack. There are two methods to deal with cracked pieces.

The first method is to use the cracked pieces to fill in around the perimeter of the project where there is always a need for small pieces.

The second method is to use the cracked pieces to enhance the layout pattern. Since Grand Flagstone is designed to create an irregular flagstone walking surface, an extra crack simply provides another joint line in the Grand Flagstone pattern. Place the cracked pieces next to each other with a 3/8 in (10 mm) joint between them. The joint is filled with polymeric jointing sand just like all the other joints. If necessary, the cracked pieces may need to be trimmed to create a smoother edge or provide a larger joint to match all the other joints in your project.

- Trim broken edges if needed
- Install pieces with typical 3/8 in (10 mm) joint

INSTALLATION GUIDE

BEDDING SAND INSTALLATION

Using screed rails on the compacted granular base, apply bedding sand at a maximum thickness of 1 in (25 mm). By using a screed board along the top of the screed rails, the bedding sand will level evenly. Bedding sand should be compacted since Grand Flagstone slabs should not be compacted after installation.

FLAGSTONE INSTALLATION

- Begin by laying the individual pieces of Grand Flagstone on the screeded bedding material according to your detailed project plan.
- Separate individual pieces approximately 3/8 in (10 mm) from each other. When units are set with a 3/8 in (10 mm) gap, a full pallet will produce 90 sq ft (8.36 sq m) of coverage.
- Cut units as needed to finish edges.
- **Note: To ensure proper color distribution, mix layers from several bundles at one time.**

JOINT SAND INSTALLATION

Once the flagstone pieces are installed, fill all joints with jointing sand suitable for large joints. Sweep the sand into the joints between flagstones until the joints are completely filled. Follow the jointing sand manufacturer's recommendations for wetting the sand. You may need to repeat this process with more dry sand in a few days to completely fill the joints between individual slabs.

CAUTION: Grand Flagstone slabs should not be compacted after installation.

INTERLOCKING LAYERS

Grand Flagstone has been designed so each layer of slabs on a pallet is an interlocking set. Each interlocking set, or layer, of slabs has been designed to interlock with all other layers.

OTHER CONSIDERATIONS

You may want to apply a sealer to protect the flagstone slabs from spills and stains. Always use a high quality sealer specifically formulated for wet-cast concrete.

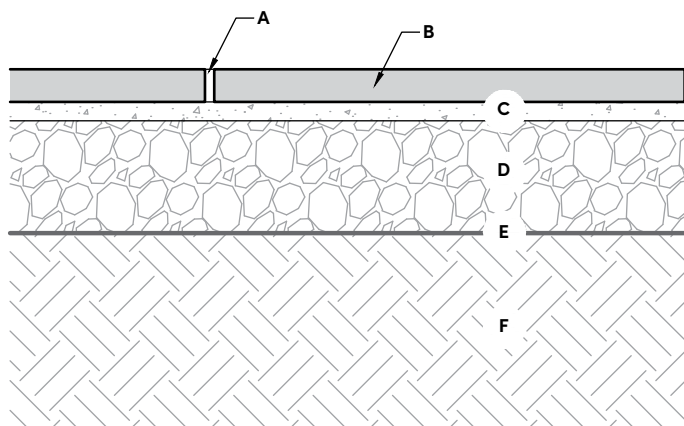
Not suitable for vehicular traffic

GENERAL NOTES FOR DETAILS

This page shows a typical detail for Grand Flagstone.

- This drawing is for preliminary reference only (not for final construction).
- **Final designs for construction must be prepared by a registered professional engineer using the actual conditions of the proposed site and loads.**
- Block size and placement shown are for reference only, individual blocks vary with installation pattern.
- Section shown is the minimum recommendation for pedestrian loading. Projects with heavier traffic or sites with poor soil conditions may require thicker gravel base, concrete curb edge restraint, and/or sand subbase.
- Provide adequate surface drainage to prevent ponded water.

TYPICAL RESIDENTIAL INSTALLATION



- A. Polymeric jointing sand between slabs (3/8 in (9.5 mm) thick)
- B. Grand Flagstone Slabs (1.75 in (45 mm) thick)
- C. Coarse bedding sand (1 in (25 mm) thick)
- D. Compacted gravel base (6 in (150 mm) thick)
- E. Woven geotextile (optional)
- F. Suitable, compacted subgrade

BASIC SLAB & PAVER INSTALLATION NOTES FOR:

- Grand Flagstone
- Dimensional Flagstone
- 24 x 24 Flagstone
- Miros
- New Mission
- Old Mission
- Amaro
- Bordo
- Superior Steppers

Refer to product pages for specific information and details pertaining to individual products.

Thank you for your interest in installing our paving products. You will find that these products truly combine the look of natural stone with the efficiency and consistency of concrete pavers.

SAFETY

Make safety your top priority when installing our paving products. Before starting your project, be sure to address the following points:

Contact your local utility marking service prior to making any excavation. Be sure to follow all governmental safety regulations.

Always wear the appropriate personal protective equipment (PPE) including gloves, steel toed boots, safety glasses, hearing protection, respiratory protection, and any other needed safety gear.

Flagstone and Miros slabs are heavy. Utilize mechanical installation when possible. Follow proper lifting techniques to avoid back injury. Also, use two people to set larger pieces.

PROJECT PLANNING

The first step in installing our paving products is to plan your project. Paver layout and placement is important to insure a functional and good looking installation. Remember, Flagstone products are suitable for pedestrian loading only (patios, walkways, etc.) and will not support the load of a vehicle. Mission and Amaro Pavers are suitable for vehicular loading.

FOR THE MOST NATURAL APPEARANCE, MIX AND INSTALL PRODUCTS FROM MULTIPLE PALLETS SIMULTANEOUSLY. THIS WILL CREATE A MORE BLENDED, NATURAL LOOK.

EXCAVATION AND BASE PREPARATION

Once you are ready to start construction, you will need to lay out the project area. Mark out the area of the installation with marking paint. Mark a second line 12 in (305 mm) outside of the first line that indicates the area to be excavated. This over-excavation will allow for proper base installation.

Excavate to the required depth and grade for the installation of the specific paving product you are installing (see cross sections for minimum recommended excavation depths). Once the excavation depth has been established, compact the sub-grade well using a vibratory plate compactor. At this point, Rosetta Hardscapes recommends laying a woven geotextile down before applying any granular base materials.

PERMEABLE INSTALLATIONS: Unless specified, avoid compaction of existing sub-grade soils if installing a permeable pavement.

PLACE THE COMPACTED GRAVEL BASE

For standard paver and flagstone installations, begin by spreading half of granular base material in the excavation. **(Note: Lifts should not exceed 6 in (150 mm) in thickness.)** Compact this first lift to 98% standard proctor using a vibratory plate compactor and adding water as needed. Add the second lift of granular material and compact in the same manner as the first. For permeable paver installations, install open-graded sub-base and base course material as specified in the project drawings.

KEY POINT: When installing granular base materials, be sure to consider proper grades to prevent water from standing on the surface and make sure water is directed away from building structures.

PAVER INSTALLATION

Bedding material requirements and paver installation vary by product type. Please see the following product specific installation instructions and tips for more details on paver installation.

ADDITIONAL INSTALLATION NOTES FOR:

- New Mission
- Old Mission
- Amaro

Refer to product pages for specific information and details pertaining to individual products.

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INSTALLATION NOTES

The following guidelines are based on minimum recommendations from the ICPI (Interlocking Concrete Pavement Institute). For an in-depth overview of the design and installation of interlocking concrete pavements and permeable pavements, please visit their website at icpi.org. Paver cross-sections and details shown are based on pedestrian or residential drive loadings with normal site conditions. Foundation, gravel base, and drainage details will need to be addressed if poor soil conditions or commercial or industrial vehicular loadings will be present.

EDGE RESTRAINT

Before installing pavers or bedding material, ensure proper paver edge restraint has been installed. Edge restraint should consist of a precast or cast-in-place concrete curb. For pedestrian loads or residential drives, plastic or metal edging strips fastened to the compacted base below with metal spikes are an acceptable alternative.

BEDDING MATERIAL

For standard paver installation (non-permeable applications), apply bedding sand at a maximum thickness of 1 in (25mm) on top of the compacted granular base. Level bedding sand evenly by using a screed board along the top of the screed rails. Do not bed pavers in sand for permeable paver installations. Instead, bed pavers in 2 in (50 mm) of ASTM #8 aggregate.

PAVER INSTALLATION

Begin by laying the individual pavers on screeded bedding material according to your detailed project plan.

- Push pavers together so the spacer bars butt tight and cut units as needed to finish edges.
- To ensure proper color distribution, mix layers from several bundles at one time.
- Once installed, set pavers in bedding material by compacting with a plate compactor equipped with a urethane pad (to avoid damage to the paver surface). Compaction should proceed in overlapping rows such that each area is crossed at least twice by the compactor in two perpendicular directions. Note that pavements should be filled and compacted to within 6 ft (1.8 m) of the laying surface at the end of each work day.
- KEY POINT: Pavers will settle slightly (1/4 in - 3/8 in) (6.4 - 9.5 mm) during compaction. Final grade of base and bedding material should be adjusted to account for this settlement. Take special care where pavers abut existing site features such as other pavements.

CAUTION: A urethane pad must be used with the plate compactor to avoid damage to pavers.

JOINT SAND

Fill all joints with jointing sand for standard paver installations or appropriate aggregate for permeable installations. Sweep joint filler material into the joints between pavers until the joints are completely filled. After the joints are filled, carefully sweep pavers clean before compacting. Loose joint material could damage the surface of the pavers during compaction. Top off joints if joint material settles during compaction and re-compact if necessary.

OTHER CONSIDERATIONS

You may want to apply a sealer to protect the pavers from spills and stains. Always use a high quality sealer specifically formulated for wet-cast concrete.

When snowplowing Mission and Amaro Pavers, a poly cutting edge must be used to avoid marking the surface of the pavers.

Do not use de-icing salts on Mission and Amaro Pavers. Use of de-icing salts can damage the surface.