GRAND FLAGSTONE
Installation

ROSETTA®
THE LOOK AND FEEL OF NATURE



Thank you for your interest in installing Grand Flagstone by Rosetta. You will find that this product truly combines beautiful look of natural flagstone with the efficiency and consistency of concrete pavers. The following guide lays out proper installation techniques for Grand Flagstone, as well as providing helpful tips for a fast, enjoyable installation.

1. SAFETY

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

- Contact your local utility marking service prior to making any excavation.
- Always wear the appropriate personal protective equipment (PPE) including the following: gloves, steel toed boots, safety glasses, hearing protection (when cutting slabs), and any other needed safety gear.
- Grand Flagstones are heavy. Follow proper lifting techniques to avoid back injury. Also, use two people to set the larger pieces.
- Be sure to follow all governmental safety regulations.

2. PLANNING AND PROJECT LAYOUT

The first step in installing Grand Flagstone is to plan your project. Slab layout and placement is important to insure a functional and good looking project. This guide presents several items for you to consider when planning your project. Remember, Grand Flagstone is suitable for pedestrian loading only (patios, walkways, ect), and will not support the load of a vehicle.

Once you have planned your project, you will need to lay out the project area. Mark out the area of the installation with marking paint. Mark a second line 12" outside of the first line. This second line indicates the area to be excavated. This over excavation will allow for proper base installation.

3. EXCAVATION AND BASE PREPARATION

The excavation depth required for the installation of Grand Flagstone is a minimum of 8.75" (218 mm).
Once the excavation depth has been established, compact the sub-grade to 95% standard proctor using a plate tamper.

At this point, you have the option to lay a woven geo-textile down before applying any granular base materials. This geo-textile will serve to keep separation between the compacted gravel base and sub-grade soils. It is also useful when you have weak sub-grade soils.

4. PLACE THE COMPACTED GRAVEL BASE

Begin by spreading granular base material in the excavated area using the first of two 3" (75mm) lifts.

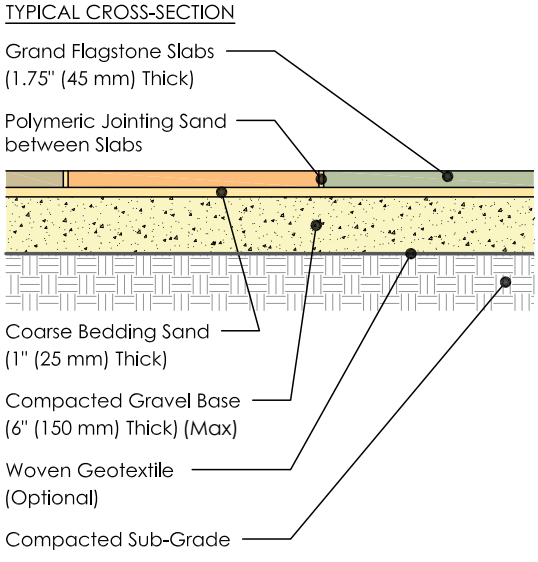
Compact the first 3" (75 mm) lift to 95% standard proctor using water as needed and a plate tamper.

Add the second lift of 3" (75 mm) granular material to make a total of 6" (150 mm) of granular material.

Compact the second 3" (75 mm) lift of granular material using water as needed and a plate tamper to 95% standard proctor.

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.

TYPICAL CROSS-SECTION



5. INSTALLATION OF BEDDING SAND

Using screed rails on the compacted granular base apply bedding sand at a maximum thickness of 1" (25 mm). By using a screed board along the top of the screed rails the bedding sand will level evenly.

6. PLACE GRAND FLAGSTONE

Begin laying the individual pieces of Grand Flagstone on the screeded bedding sand according to your detailed project plan.

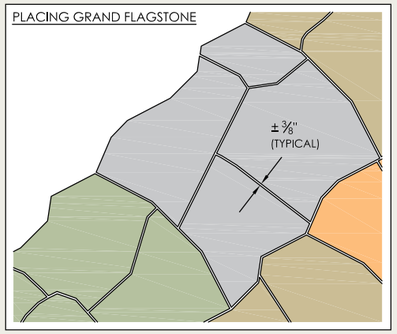
Separate individual pieces approximately 3/8" (10 mm) from each other. When pieces are set with this gap, a full pallet will produce 90 square feet (8.36 m2/) of coverage.

To ensure proper color distribution, take layers from several bundles at one time. Cut units as needed to finish edges.

Do not compact Grand Flagstone once product has been laid.

Once the Grand Flagstone pieces are installed, fill all joints with a 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.

PLACING GRAND FLAGSTONE



You may also want to apply a sealer to protect the Flagstone slabs from spills and stains. Always use a high quality sealer specifically formulated for wetcast concrete.

THINGS TO CONSIDER WHEN PLANNING YOUR PROJECT

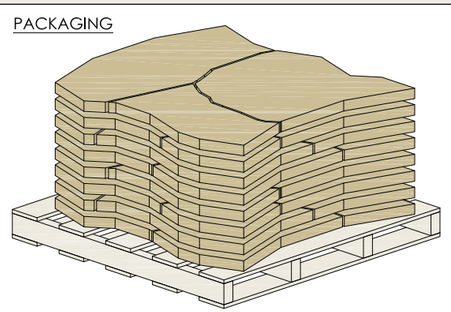
Grand Flagstone has been designed to allow for quick and easy installation. Consider the following items when you are planning your project.

GRAND FLAGSTONE PACKAGING

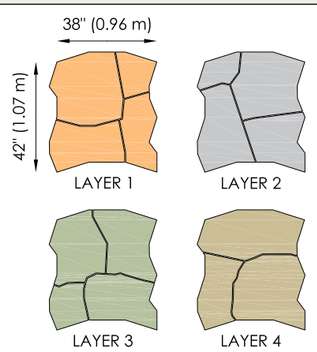
Grand Flagstone is palletized in layers of slabs. Each layer has the same outside dimensions as every other layer, allowing them to be used anywhere in the layout pattern.

A standard pallet consists of 8 layers of slabs and weighs 2,000 lb (980 kg). When placed with a 3/8" (10 mm) wide joint, each full pallet produces 90 square feet (8.36 m2/) of coverage.

PACKAGING



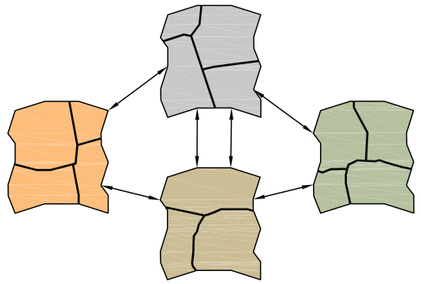
Random assortment of layers provided on each pallet.
Exact proportion of layers may vary.



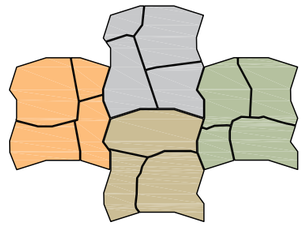
INTERLOCKING LAYERS

Each layer of Grand Flagstone slabs on a pallet is an interlocking set. Each interlocking set, or layer, of slabs will also interlock with all other layers.

COMMON POINTS FOR INTERLOCKING LAYERS



PROPERLY PLACED INTERLOCKING LAYERS



***NOTE*: Layers shown below are for reference only. Any layer fits with any other layer. Blend layers randomly. For optimal color blends, mix layers from multiple pallets**

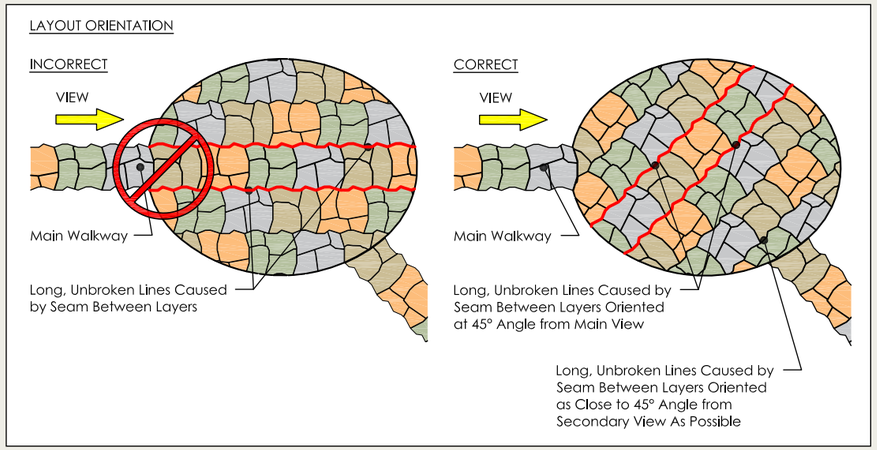
LAYOUT ORIENTATION

Layout orientation is important with Grand Flagstone. Due to the interlocking nature of the sets of slabs, there is a long, unbroken joint 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 pronounced 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 degree angle from the most common viewing point. This viewing point would most likely be a patio entrance or step location.

If there is a secondary walkway or viewing point, align the Grand Flagstone layers so the rows are as close to 45 degree angle from the secondary viewing point as possible.

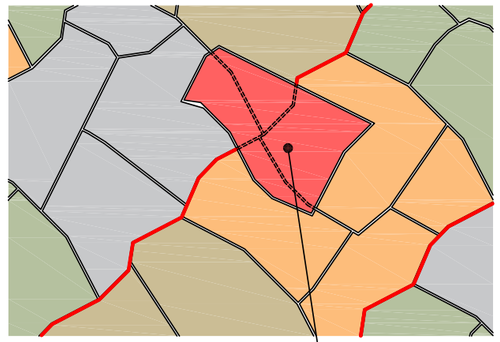
LAYOUT ORIENTATION



REDUCING LONG, UNBROKEN LINES IN THE LAYOUT PATTERN

Long, unbroken lines can be reduced by placing a single piece of Grand Flagstone between interlocking sets of slabs. Follow these simple steps:

1. Start by placing the interlocking slabs.
2. Place a new piece of Grand Flagstone over the interlocking slabs, making sure to straddle the joint you want to break-up.
3. Mark the outline of the new slab. Remember to include approximately 3/8" (10 mm) outside the new slab for a joint.
4. Remove the new slab, sawcut the original slabs, and remove the small pieces which have been cut.
5. Place the new slab in the space you just created.



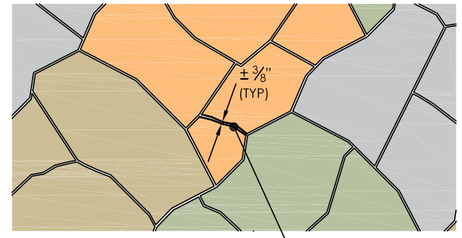
PROCEDURE FOR INSTALLING CRACKED PIECES:

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 edge 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" (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.

INSTALLING CRACKED PIECES



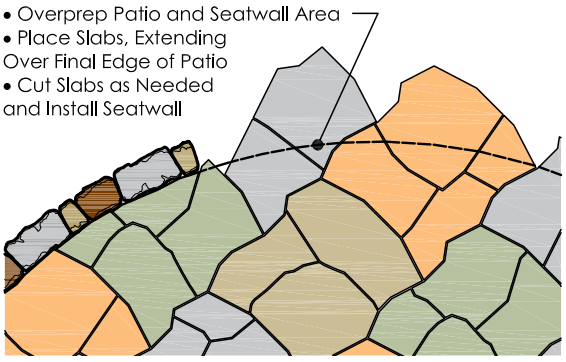
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OVERLAPPING CONSTRUCTION

In some instances it is easier to lay the Grand Flagstone patio and then trim for installation of other features. A typical example is the installation of a freestanding Belvedere seat wall around the edge of a Grand Flagstone patio. The steps are as follows:

1. Prep the area for the patio and seat wall. Remember to excavate any extra depth for the wall embedment and stone leveling pad.
2. Build the Grand Flagstone patio. Allow individual pieces to overhang the desired edge of the finished area.
3. Mark the wall location, cut and remove the Flagstone pieces, and then install the seat wall.

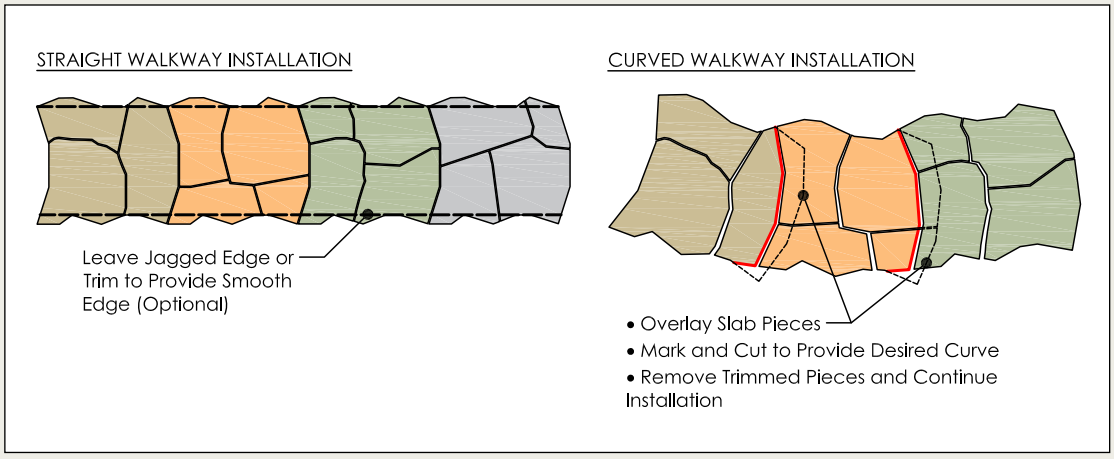


MAKING A WALKWAY

Grand Flagstone is designed for fast, simple installation of a walkway. The individual layers interlock on the ends, providing fast construction of an irregular pattern.

The layers of slabs are installed in the long direction. A full pallet of Grand Flagstone will produce a 38" (0.96 m) wide by 28'-0" (8.53 m) long walkway.

A slight curve can be made in a walkway by setting the individual pieces so there is a larger gap on one side of the piece than on the other. For a more pronounced curve, cut the pieces to fit. (See sketch.)



The edges of the slabs can be left as is to provide an irregular edge which will move in and out slightly. If a smooth edge is desired, sawcut the individual pieces as needed.

MAKING A RIGHT ANGLE TURN IN A WALKWAY

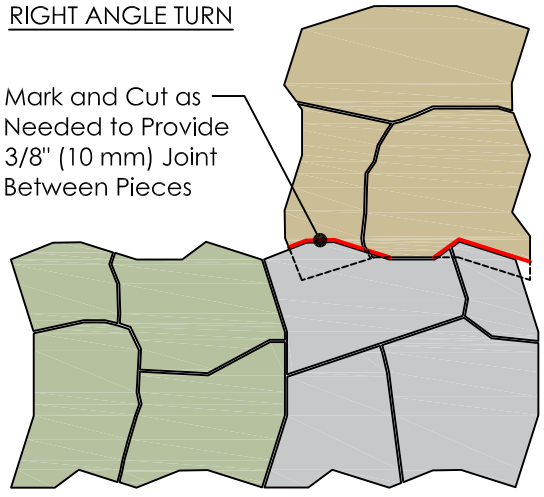
Right angle turns are simple to make with Grand Flagstone.

1. Begin by constructing a standard walkway. Start construction at the turn or measure carefully to insure that you will be at the end of a layer of slabs when you reach the turn.

2. Place the next layer at 90° (or whatever angle you would like to turn) and mark the outside edges of the previous layer.

3. Sawcut the individual pieces so they will fit together properly.

4. Continue with construction of the walkway in the new direction.



Thanks again for your interest in installing Grand Flagstone by Rosetta. We wish you good success in the creation of your own, beautiful, flagstone project.