



on **FRAMING INSTALLATION**: GX01, GX02, GX03

This installation method is used to place the GratedeX® Outdoor Flooring System® over traditional joist framing as an elevated deck supporting either gauged stone/tile or pavers.

1. PLAN AND LAYOUT DECKING SHAPE

There are no size or shape limitations when using this product. If this is a new application although, plan the surface layout based on the finished stone/tile size and joint spacing to minimize cutting and waste. Recommended stone/tile spacing is 1/8". Minimum spacing is 1/16".

>>>**NOTE FOR PAVERS**: When using pavers, no spacing is recommended.

2. DETERMINE EDGE AND TRIM DETAIL

Determine which trim detail will be used (see EDGE DETAIL information). In addition, determine if the decking will have a finished fascia beyond the PT framing (i.e. finished wood, stone or composite). All finished fascia must be placed prior to installing the decking surface unless the fascia is to be used to retain or cover the edge of the underlayment and finished surface. This step will help determine the finished decking size as noted in Step 1 and proper framing centers to support the 48"x48" GratedeX® underlayment panels.

3. BUILD STRUCTURAL FRAMING

When using gauged stone/tile, the GratedeX® decking system weighs 8-10 lbs. per square foot. Design and build the supporting structural framing following standard building code requirements (see PRODUCT SPECS for detailed notes). No special considerations are required due to the light-weight nature of the GratedeX® system. Framing material can be PT lumber or other suitable material. The maximum joist spacing is 24" O.C. A 16" O.C. joist spacing creates a stiffer decking surface. *Consult with a licensed structural engineer for specific site considerations.*

>>>**NOTE FOR PAVERS**: ALL PAVER APPLICATIONS WILL REQUIRE LARGER FRAMING MEMBERS. *Consult with a licensed structural engineer for specific site considerations.*

4. COVER FRAMING WITH WATERPROOFING

In wet climates, when using PT wood framing material, cover all finished surfaces with a waterproofing tap to protect the top of the framing surface. Follow manufacture's recommendations. The waterproofing tap should be at least 25-45 mils. thick. The material should lap the sides of the framing member a minimum of 3/4".

5. PLACE GratedeX® UNDERLAYMENT PANELS

The GratedeX® underlayment panel measures 48"x48". The panels must be placed with the correct side up. Product label on panel edge has an arrow, "THIS SIDE UP". Confirm the correct up position by placing a Bite-Tite® fastener into one of the open cells; it should drop into the cell without force. In addition, place the panel so that the spacing dimension of the cut bars is perpendicular to the joist spacing dimension (i.e. 24" O.C. joist should have the 24" cutting channel placed in the opposite direction of the joist layout.) Any creative shape can be constructed, but designing around the 48"x48" dimension will reduce waste. The GratedeX® underlayment panel can be cut with a segmented wet/dry diamond blade on a skill saw or a carbide-grit jigsaw blade. Cutting channels are provided to cut the panel at 24" and 16", leaving a solid edge on all pieces. If rough edges remain, sand smooth with a sanding disc mounted to a grinder. Wear eye, nose and mouth protection during these operations. The panel

can be cut in any shape without reducing structural integrity. Maintain squared corners at all times. Panels are rigid and will not flex to meet inaccurate alignments. All GratedeX® underlayment panel joints must be supported by joist framing. No blocking is required at panel joints perpendicular to framing. Weld-Tite® adhesive can be purchased separately and used to bond these panel edges for added strength. Offsetting panel joints will increase structural integrity. The sides of cut panels with hanging, open bars should be placed to the outside or trimmed flush to the next solid bar. Seal exposed cut pieces with a 2-part resin or spray sealer (see Affiliate Links on the web site).

6. SET ALL Bite-Tite® FASTENERS

Set all Bite-Tite® SS fasteners into the open pockets of the GratedeX® underlayment panel; maximum 24" O.C. (see on FRAMING DETAILS for placement locations). Drop the fastener into panel cell adjacent to a framing member. Insert 3" SS screw and tighten to a loose fit. With a finish hammer (no framing hammers), set the fastener flush to the surface of the GratedeX® panel by tapping the toothed ends of the fastener. Complete the SS screw set to snug. The fastener will now be imbedded into the fiberglass.

7. FASTEN GratedeX® FIBERGLASS PANELS

Place the first panel in position being sure of its correct alignment. All other panels will be squared and aligned to this panel. Secure the GratedeX® underlayment panel to the framing using the 3" SS screws. Continue until all panels are fastened to the framing.

>>>**NOTE IF GLUING WITH Weld-Tite® ADHESIVE:** The Weld-Tite® adhesive can be used to add additional strength to the GratedeX® underlayment by bonding all adjoining panels to each other. Begin by preparing to glue and screw the next panel. Space the panel joint 1/4". Apply a 1/8"-1/4" bead of Weld-Tite® adhesive into the entire length of the panel joint. This material can be dispensed using a 10.3 oz. caulking gun. Join the two surfaces. Be sure the top of the joint surfaces are flush (\pm) 1/32". Secure the GratedeX® underlayment panel to the framing using the 3" SS screws. Wipe smooth any Weld-Tite® adhesive that has squeezed out of the panel joint. Weld-Tite® adhesive has approximately a 5-10 minute working time and a 10-20 minute set time at 70°. The adhesive will cure inside of the mixing tip if not consistently used within the time constraints described. Continue this process until all GratedeX® structural fiberglass panels are fully secured to the framing.

8. PLACE METAL TRIM

All visibly exposed and cut edges of the GratedeX® underlayment panels should be flashed with metal trim. Use any stock "L" flashing that measures a minimum 1-1/2"x1"; available from most building centers in black, brown, gray, white, galvanized. Cut to length and dry fit in position. Overlap metal trim joints a minimum of 1/2". If the metal has an oil residue, clean the gluing surface with a dry rag or denatured alcohol. Apply a bead of Hold-Tite® adhesive to the metal trim. This material can be dispensed using a 20 oz. sausage gun. Apply one fat bead along the inside angle of the trim and set in position with a firm squeeze to ensure proper contact and uniform alignment. UN CUT EDGES DO NOT NEED TO BE COVERED. Cover only for aesthetic reasons.

>>>**NOTE IF USING Hold-Tite® CS ADHESIVE SHEETS:** If trimming with metal, cut the extra CS adhesive sheet into 3/4" wide strips. Place several pieces along the inside of the metal that will contact the face of the GratedeX® underlayment panel. Material bonds on contact so be sure of placement.

9. PLACE GratedeX® SURFACE MATERIAL

Based on tile size and pattern, determine the best layout and starting point. Tiles can be laid in any pattern orientation or across panel joints. Predetermine where cut edges will be located. The best visual presentation is achieved with full tiles on the perimeter edges unless there is a planned border pattern. Minimum recommended cut size is 4"x4" or 16 sq". Maintain visually straight joint lines using the GratedeX® panel grid as a guide, a metal straight edge, or tile spacers. The back of the tiles and the GratedeX® panel surface must be clean and dry. Remove any loose material or debris with a brush or damp rag. Apply the adhesive (see specific adhesive instructions below). Continue the setting process until the tiled surface is complete. Maintain uniform joint spacing throughout. Standard spacing between tiles is 1/8". Spacing should not be less than 1/16" or greater than 1/4". Wet cut pieces should be towel dried and then air-dried for 2-5 minutes before applying adhesive. All joints are left open to allow

moisture to drain off of the finished deck. If sealing the surface, wait 7-10 days to ensure a full cure of the Hold-Tite® TA adhesive. No waiting required for the Hold-Tite® CS adhesive.

>>>>**STONE/TILE with Hold-Tite® TA Trowelable Adhesive:** Prepare to apply the Hold-Tite® adhesive using a 20 sausage gun. Apply adhesive in a continuous ribbon to the back of the stone/tile. Hold the adhesive back 1/8" from the finished edge of the tile. Once applied, set the dispenser aside. Using a 3/16" v-notched metal trowel, spread the adhesive to cover the entire back of the tile to form a continuous web of material. The **4-20 oz. sausages provided for each GratedeX® panel will cover the 48"x48"/16sq' area.** The adhesive will skin over within 30 minutes. If this occurs it will result in a faulty bond. Replace with fresh material before setting. Place the tile onto the fiberglass panel in a single vertical motion, lowering the tile into its position. **DO NOT PLACE THE TILE AND THEN SLIDE IT HORIZONTALLY.** This method will remove all of the adhesive. Once placed in position, apply "light" hand pressure to ensure full contact with the GratedeX® underlayment panel. Too much pressure will displace the adhesive and weaken the bond. **IMPORTANT:** Some natural stones will have uneven back surfaces. Material should not be used that is out of spec or additional adhesive may be required and a faulty installation may occur. Tiles that do not sit flat or rock when dry set on a flat surface will have the same condition when fully set. Tiles with this condition should not be used. The adhesive is not intended to be a leveling material. If the tile is placed incorrectly, it can be removed with minimal difficulty for up to 1 hour. After this point, prying could cause the tile to crack or displace and break the bond of adjoining tiles. The finished surface can handle light traffic after 24 hours. The product is fully cured in 7-10 days. Warmer temperatures accelerate the curing process. Any Hold-Tite® TA adhesive that comes in contact with any finished surface can be cleaned with Mineral Spirits while wet or sometimes rubbed off when cured.

>>>>**STONE/TILE with Hold-Tite® CS Contact Sheet:** This material is pre-cut to fit a standard 16"x16" gauged stone or manufactured tile (actual size: 15 3/4" x 15 3/4"). If using small stone/tile, pre-cut the adhesive sheet with scissors or a utility knife before removing the backing. Peel the backing half way on one side of the adhesive sheet. Place the Hold-Tite® CS (15 1/2" x 15 1/2") onto the back of the stone/tile holding it back 1/8" from the edge. Maintain a square alignment with the stone/tile edge and roll out smoothly peeling the backing sheet while pressing with a roller or raze to ensure full contact with the stone/tile. Be sure there are no bubbles or ridges in the adhesive. Remove the backing from the second side of the Hold-Tite® CS adhesive sheet. Be sure of the exact position of the stone/tile to be placed. This material bonds on contact and cannot be removed and reused. Place the stone/tile and press firmly to ensure full contact. This material can be walked on immediately. No cure time is required.

>>>>**PAVERS Dry-Laid:** Begin by placing perimeter pavers to form a curb. Use the Hold-Tite® TA to bond pavers in place. **NOTE: THIS IS NOT INCLUDED WITH THE PACKAGE AND MUST BE PURCHASED SEPARATELY.** Apply adhesive to the bottom of the paver and trowel with a 3/16" v-notch trowel. Place onto the GratedeX® underlayment. Apply light pressure to ensure bond. Continue the same steps to complete the edge curb placing a small dab of adhesive to the adjoining but ends of the curb pavers. Follow all other instructions for using the Hold-Tite® TA adhesive above. Once the paver curb is complete, place all inside pavers. Place a 6 oz. construction fabric over the entire surface of the GratedeX® underlayment. This is an optional sound deadening technique. Continue to place all pavers. No sand fill is required.

TOOLS NEEDED

- A segmented wet/dry diamond blade and a skill saw if cutting the GratedeX® underlayment
- A 20 oz. sausage gun if using the Hold-Tite® TA adhesive; one if using the Hold-Tite® CS adhesive
- A 10.3 oz caulking gun if using the Weld-Tite® adhesive
- A small hammer to set the Bite-Tite® fasteners flush with the GratedeX® underlayment surface
- A cordless drill/screw gun to drive the 3" SS screws into the framing
- Atlas style tight fitting, tight grip rubber gloves and cleaning rags
- Tools to cut stone or tile