All surfaces must be structurally sound, clean, dry and free from contaminants that would prevent a good bond. Newly prepared concrete must be cured for 28 days and then troweled smooth and textured to a fine broom finish. Existing surfaces must be scarified and leveled, and all defects must be repaired. Glossy or painted surfaces must be sanded, stripped and cleaned of waxes, dirt and other contaminants. Ambient temperature, surfaces and materials should be 50 – 100 degrees F (10 – 38 degrees C) for 72 hours.

Building Codes:
Installation must comply with the requirements of all applicable local, state and federal code jurisdictions. Stone panels should only be applied to structurally sound surfaces incorporating good building practices. Please note that the assistance of a professional contractor or engineer may be needed to evaluate your installation or the soundness of your installation back-up wall. A contractor or engineer can also provide important information regarding local building codes, seismic building codes, institutional building codes and installations.

Cementitious Surfaces:
Concrete or plaster must be fully cured and must accept water penetration. Test by sprinkling water on various areas of the substrate. If water penetrates, then a good bond can be achieved; if water beads, surface contaminants are present, and loss of adhesion may occur. Contaminants should be mechanically removed before installation. Concrete must be free of efflorescence and not subject to hydrostatic pressure.

<table>
<thead>
<tr>
<th>Align International Panels</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>6” x 24” x 3/8” ~ 1 ¼”</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>1SF = 13 - 14 lbs.</td>
</tr>
<tr>
<td>Square panel</td>
<td>1 panel = 1 SF</td>
</tr>
<tr>
<td>Stepped panel</td>
<td>1 panel = .94 SF</td>
</tr>
<tr>
<td>Corner panel</td>
<td>1 panel = .75 SF</td>
</tr>
</tbody>
</table>

Plywood Substrates:
Plywood substrates must be structurally sound and must meet all local building codes and ANSI deflection requirements.

WonderBoard Backerboard:
As an alternative to an additional layer of plywood, WonderBoard backerboard may be used.

Waterproofing Membrane (ANSI 118.10):
Follow the waterproof membrane manufacturer’s recommendations.

Waterproofing Membrane for Interior Change of Plane and Commercial Applications:
Follow the waterproof membrane manufacturer’s recommendations.

Recommended Tools & Materials

- Polymer Modified Mortar
- Safety Glasses
- Dust Mask
- Gloves
- Grout Bag
- Stapler
- Pneumatic Stapler or Screw Gun
- Metal Shears
- Utility Knife
- Measuring Tape
- Level
- Concrete Hoe
- Wheel Barrow
- Chalk Line
- Plumb Bob
- Circular Saw with Carbide or Diamond Tip Blade
- Wet Saw with Carbide or Diamond Tip Blade
- Masonry Hammer
- Masonry Trowel
- Finishing Trowel
- Tuck Pointer
- Whisk Broom
- Buckets
- Sponge
- Water
Install Corner Pieces First
Start from the bottom and work up. The corner pieces come in 8½" and 14⁵/₈" lengths (as pairs). Alternate these in opposite directions on the corner.

Setting Stepped Panels
Stepped panels are designed to interlock together like puzzle pieces. Panel “B” interlocks into Panel “A”. (see drawing)

Hot/Dry Applications (wetting the substrate)
Under certain conditions, the substrate may need to be wetted. If the stone panel is being installed onto a very hot/dry surface or in a hot/dry climate, the wall surface should be wet to prevent excessive absorption of moisture from the mortar. This can be done by spraying water on the wall surface.

Cold Weather Applications
Project installations should be protected from temperatures below freezing so the mortar may set up properly as recommended in section “2101.3 Cold-weather construction” of the International Building Code.

Curing
Allow to cure 24 hours before filling joints with Pointing Mortar, depending upon temperature and humidity.

Cleaning
After 36 hours, it is suggested to clean the stone panels. There are many different cleaning agents specific to application requirements and desired results. Use of the cleaning agent must comply with all instructions provided by the cleaning agent manufacturer, and the cleaning agent method must be performed on a separate mock-up sample wall panel not less than 4 feet by 4 feet prior to approval by the buyer. County Materials accepts no responsibility or liability for the use of cleaning agents on natural stone masonry products.

Sealing
Stone is a natural product that “breaths”. It does absorb oil, water and other substances that are in contact with the stone. A sealer application may not be required on stone masonry products but is an option. There are many different sealing agents specific to application requirements and desired results. Use of the sealing agent must comply with all instructions provided by the sealing agent manufacturer, and the sealing agent method must be performed on a separate mock-up sample wall panel not less than 4 feet by 4 feet prior to approval by the buyer. County Materials accepts no responsibility or liability for the use of sealers on stone masonry products.

Setting Material
The industry recommends using a pre-blended polymer-modified mortar as a setting material for natural stone panels. Use of a polymer-modified mortar must comply with all instructions provided by the mortar manufacturer, and the mortar method must be performed on a separate mock-up sample wall panel not less than 4 feet by 4 feet prior to approval by the buyer. County Materials accepts no responsibility or liability for the use of polymer-modified mortar with natural stone masonry products.

Expansion Joints
Expansion joints, control joints and cold joints should never be bridged with setting material. They must be brought through the finished masonry work and filled with an approved elastomeric sealant.

Stone Panel Preparation
Always make sure that the back of each stone panel is clean and free from stone dust. This can easily be done by wiping the back of the panel with a damp rag. Cutting stone panels will create dust and should be worked on outside. Clean the back of all panels after cutting them. If you cut stone panels with a wet saw, make sure that the back of the panel is dry before installation. It is also recommended to lay out the stone panels to make sure that the pattern and color will meet your project needs. Make sure you pull from multiple boxes at a time to insure proper color blending. This applies to flats and corners.

Application
Use a properly sized notch trowel to ensure proper coverage behind the stone veneer panel. Using the flat side of the trowel, apply a skim coat of mortar to the surface. With the notched side of the trowel held at a 45 degree angle, apply additional mortar to the surface, combing in one direction. Press the stone veneer panel firmly into place in a perpendicular motion across ridges, moving back and forth. The perpendicular motion flattens ridges and closes valleys, allowing maximum coverage. Back buttering is advised. Adjust the masonry promptly and beat it in with a rubber mallet. Periodically check the back to ensure proper adhesive coverage. Do not spread more material than can be covered within 10 minutes or while material has a wet tack (sticky to the touch). If the material has skinned over (not sticky), re-comb with the notch trowel; if too dry, remove and replace the dry material with fresh material. Material in the bucket will remain workable for approximately 2 hours.

Coverage

<table>
<thead>
<tr>
<th>Trowel Size</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>½” x ½” x ½”</td>
<td>43-48 sq. ft.</td>
</tr>
<tr>
<td>(13 x 13 x 13 mm) Square notch</td>
<td>(4.4-4.5 M²)</td>
</tr>
<tr>
<td>¾” x 9/16” x 3/8”</td>
<td>34-38 sq. ft.</td>
</tr>
<tr>
<td>(19 x 14 x 9.5 mm) U notch</td>
<td>(3.2 – 3.5 M²)</td>
</tr>
</tbody>
</table>
Align International Installation Guide for Wall Panels

Installation on Various Substrates

Stone panels can be field applied, using traditional tile set methods, to a variety of interior and exterior substrates such as cementitious backer board and plywood, concrete, concrete unit masonry and gypsum sheathing. Stone panels should be installed according to the Tile Council of America standards, ANSI standards and local building codes.
Installation on Various Substrates

(continued from page 3)