

ZEE SECTION ATTACHMENT STEEL STUD FRAMING OR FURRING CONSTRUCTION WITH ACCESS FROM PANEL SIDE ONLY

INSTALLING MATERIALS

- No. 10 Hex-Head Tek Screws
- Glazier's horseshoe shaped shims 1/16 inch & 1/8 inch & 1/4 inch thickness x 2 1/2" long minimum.
- Spray bottles with 25% dish soap, 75% water.
- Zee Sections provided by SPI.
- Masking Tape

RECOMMENDED TOOLS

- Screw Gun(s)
- Drill with bits
- 48" Level & 24" Level
- Snips or Linesman Pliers to cut out shims
- Circular Saw with dry cut diamond tipped blade
- Screw Drivers (to pry panels when shimming)
- Dead Blow Hammer
- Small Paint Brush to clean debris from Zee's

FRAMING CONSTRUCTION

Steel stud or furring framing must be designed and installed for maximum deflection limited to $L/240$, and to not exceed allowable stresses. Lateral support and bridging members must be installed. This system does not provide lateral support for stud framing.

Framing must be erected plumb and true. The maximum variation from a true plane should not exceed 1/8 inch in 10 feet. Defects must be corrected prior to proceeding with panel installation.

Framing members must be located according to shop drawings prepared or approved by the stone panel installing contractor. These drawings must account for panel joint locations in order to provide adequate attachment for each panel. The maximum variation from shop drawing dimensions should not exceed 1/8 inch in 10 feet.

JOBSITE STORAGE

Panels must be stored in a clean dry area, free from contamination. When removed from the packaging crate, they must be placed on a shock absorbent support such as expanded polystyrene for edge protection.

It is recommended that panels be placed so that identification numbers are easily readable when they are removed from the crates. This will minimize the amount of time required to search for panels as they are needed for installing. Reduced handling will also reduce labor cost and the possibility of edge damage caused by bumping and dropping panels.

StoneLite™ Stone Panels are durable and impact resistant. However, the natural stone facing is easily chipped at edges and the face surfaces of softer stones can be marred. Softer stones including limestones and marbles can be stained by dirt, mud and other contaminants.

STAGING

Material handling labor is a very important factor for the installer to consider. The majority of installation labor is used for moving panels from the delivered pallet/crate to the final location on the building.

It is strongly recommended that panels should be staged in advance and moved to their appropriate locations to minimize labor during installation. The first panel needed should be located on the outside of an upright sloping rack. All panels should be arranged in the order needed for installing.

INSTALLING

NOTE: The following suggested instructions are intended for vertical wall panels only. If a horizontal soffit or sill is included, modifications to these instructions will be necessary. **The location for the Zee sections will be specified on the shop drawings.**

1. Following the shop drawings, measure the wall to determine exact panel locations and mark the positions of panel edges at the base of the wall. Check vertical panel edge locations relative to framing locations for assurance that Zee sections will have framing support.

Use a laser or level to establish a fixed elevation for the total construction area. From that elevation, mark on the framing, or existing wall, the exact location of all bottom panel lower edges. The shop drawings will indicate the location of the Zee's from the bottom of the panel.

Using a transit or laser, check the elevation for alignment to find the most outward point(s). This will determine the installing "plane" and the amount of shimming required. Drop a string line (piano wire is recommended for this) from the top of the elevation to the bottom of the elevation. This string line should be set at least 2" from the most outward point of the elevation. This will be your reference line from where you will measure back from to establish the plane for all of the Zee sections sections and panel faces.

2. Drop a plumb line at the location where installing will begin. Position the vertical edge of the Zee sections section at the beginning vertical edge as indicated by shop drawings, flush with the line. Clamp the Zee sections in place, then screw attach the Zee sections to the framing, through the groove in the section, at each end and at 24" o.c. maximum or as

specified by Stone Panels Inc. shop drawings. Excess Zee length should be cut off and used where possible.

3. Use a "story-pole" to locate Zee sections above the bottom row of extrusions. Zee sections will be located near the top and near the bottom of every horizontal panel joint and spaced at a maximum of 24" o.c. or as shown on the shop drawings. Set Zee sections using string lines or a laser to achieve a flat plane. Locate horseshoe shims between the Zee sections and the backup as necessary to obtain a flat plane. Clamp the Zee sections in place, then screw attach Zee sections through the groove in the section, at each end and at 24" o.c. maximum or as specified by Stone Panels Inc. shop drawings. Excess Zee section length should be cut off and used where possible.
4. Spray Zee sections on wall with soapy water or rub a small bar of soap over them for lubrication to assist with panel installation. Set panels above and against the Zee sections, then slide them down so that the section on the panel engages with the section on the wall. On polished or honed stones, suction cups are very helpful in handling the panels. If the panel has a slight amount of bow, it will be necessary to flatten or support it until the Zee section engagement is complete.
5. Installation may progress horizontally or vertically depending on how the panels have been staged. Continue applying a small amount of soap film onto sections for lubrication and to assist with engagement. Careful attention should be paid to properly align panel joints as the panels are installed. It may be desirable to leave shims in the joints until they are caulked to ensure that the panels do not move.

CAULKING EXTERIOR JOINTS

NOTE: NOTE: It is recommended that testing should be conducted by the sealant manufacturer for assurance that neither sealant nor primer will "bleed" into the stone and cause staining. Allow 8 to 12 weeks for this testing.

1. At caulk joints around panel perimeters push round open-cell polyurethane foam backer rod between panels well into the joint to expose the veneer stone edge plus approximately 3/16 inch width of honeycomb. This should provide for approximately 3/8 inch bond width of sealant to panel, and a 1/4 inch sealant thickness at the center of the joint width.

(CAUTION: Open cell backer rod must be used with stone panels. Closed cell backer rod can emit gas into the joint when the coating is scratched by the honeycomb causing the caulking to bubble at the surface.)

2. Apply primer if recommended by the sealant manufacturer. This primer attaches itself to the stone edge surface, and the sealant then adheres to the primer. Primer will not stick to a dirty surface and it is not a substitute for cleaning.

(CAUTION: Primers are moisture sensitive and will deteriorate quickly when exposed to moisture. They should be purchased in pint containers and stored with caps tightly closed. When exposed to moisture, they form a cloudy white precipitate and must be discarded.)

3. Pour only a ten-minute supply of primer into clean container, then replace the cap on the primer can. Dip a clean, dry, lint-free cloth into the primer and gently wipe a thin film onto the stone edge surface.

(CAUTION: Application of a thick layer of primer can cause severe loss of adhesion between the sealant and primer. A powdery white film will form on the surface if too much primer has been applied. This film must be removed with a clean, dry, lint free cloth.)

4. Allow primer to dry. The surface is now ready for application of sealant. If the sealant can not be applied immediately, the surface must be protected to avoid contamination.
5. Some sealant cannot be completely removed from some stone. It may be necessary for adjacent surfaces to be carefully masked or taped to prevent sealant from getting on the surface.
6. Sealant should be applied in a continuous operation from a caulking gun. A positive pressure, adequate to fill the entire joint width, should be used. This can be done by "pushing" the sealant bead ahead of the application nozzle. Within 10 minutes after application, tool sealant into the joint. This spreads the sealant against the back-up material and the joint surfaces to obtain compaction to the panel edges. This also fills voids in the aluminum honeycomb and provides a secure bond to the honeycomb.

Do not use liquid tooling aids such as water, soap or alcohol. These materials may interfere with the curing or adhesion of the sealant.

It is critical that the sealant fills the entire joint of cavity and that it firmly contacts the panel surfaces. If this is not done, poor adhesion will result and sealant performance will be weakened.

Avoid the technique of scraping off excess sealant, which pulls sealant out of the joint and prevents bond to the panel edges.

7. Masking or taping must be removed within ten minutes after tooling. If a solvent will be used for cleaning, consult Stone Panels, Inc. for recommendations to avoid staining the stone surface and/or adversely affecting the sealant.