

ENDURAWAL

Exterior veneer finish system

New Building code requirements vary and it is suggested that you check with local authorities to determine requirements for your area. Carefully read all installation instructions before proceeding with installation. Observe all safety precautions.

The installation information in this manual is a guide for the builder to use in conjunction with FULLERTON installation drawings (if required) supplied with the veneer panels. This manual is designed to help plan and organize the project by establishing an installation sequence.

Panels referred to in this guide must be installed by qualified personnel and in accordance with the manufacturer's instructions. FULLERTON FINISH SYSTEMS will provide training for the installation and handling of the panels at no charge at their plant in Sand Springs, Oklahoma (918) 246-9995. Field assistance is available upon request by Fullerton at a minimal charge.

HANDLING AND STORAGE

Panel pallets or crates will arrive on flat bed trailers or LTL trucks. If panels arrive without a tarp or stretch wrap protective cover, it should be noted on the driver's freight bill. Note any panel damage on the freight bill and file a claim if needed.

Caution should be taken when unloading from shipping vehicles as each crate can weigh up to 3800#. A maximum of 30 panels will be included in one crate with each panel weighing approximately 115# based on a standard 4x8 sheet.

Panels should be unloaded as pallets or crates and not as individual pieces. Store pallets and/or crates on a suitable flat surface above grade after removal from shipping vehicle. See fig. 1

Individual pieces should be carried vertically to avoid excessive flex and possible damage. When transporting in the horizontal position additional care should be taken to ensure proper support is provided under the finish sheet to prevent droop and possible damage.

CAUTION
WHEN REMOVING BANDING AND OPENING CRATE THE MATERIAL INSIDE CAN FALL FORWARD IF NOT STORED PROPERLY. PALLET SHOULD BE FLAT OR TILTED TO THE REAR

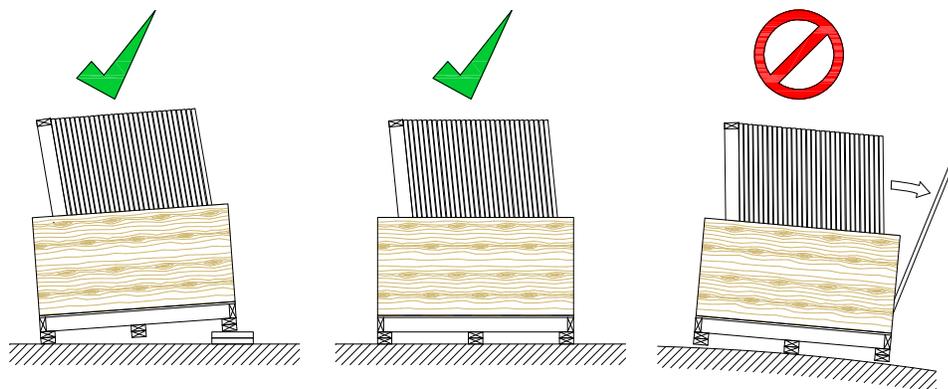


Fig. 1 – Crate Storage

Do NOT remove rear support framing.

Do Leave min one side of crate attached to support framing

SURFACE PREPERATION

Inspect the areas where panels will be installed. Determine that the framing will be sufficient to accept proper fastening needed for panel application. A minimum $\frac{7}{16}$ " OSB or $\frac{1}{2}$ " plywood sheathing is required if fastening directly to substrate. Verify that the appropriate weather barrier, flashing and caulking have been installed, or that they will be as part of your installation package. Check to ensure that walls are plumb and square and identify any defects or protrusions. Contact the builder, registered design professional or contractor to correct any deficiencies before you proceed.

BEFORE YOU BEGIN

1. Before doing anything, review the Fullerton shop drawings (if supplied) that came with your panels. Get familiar with all the details and sections. These drawings will best illustrate how veneer panels are attached and joints are caulked.
2. Decide on which elevation to begin the panel installation process. Typically the rear is a good place to start as you may hide any mistakes that may occur while getting familiar with the panel installation.
3. Only place enough panels to the side of the project currently being worked on. Minimizing the amount of times the panels are moved will reduce the possibility of damage. Refer to the Fullerton shop drawings (if supplied) for schedule, quantity and identification markers. Identification markers are provided on the drawings for proper placement of each panel.
4. Determine if you have the correct fasteners need for the project. See the fastener section of this manual for additional information.

INSTALLATION

Preparation

1. Install flashings, weather barriers and seal exterior wall surface prior to beginning panel installation. If panels are to be installed directly onto metal there must be bond breaker tape installed at panel joints for proper caulk performance.
2. Ensure that a straight, level, horizontal reference line has been established to follow during installation.
3. Panels should be installed one row at a time working upward toward the designated height.

Corners

1. Work should begin with installation of pre-fabricated corner panels or with standard panels that will butt or miter into the corners. This is typically the most visual location and the corners should not be cut unless absolutely necessary. Refer to fig. 2,3,4 for corner detail.

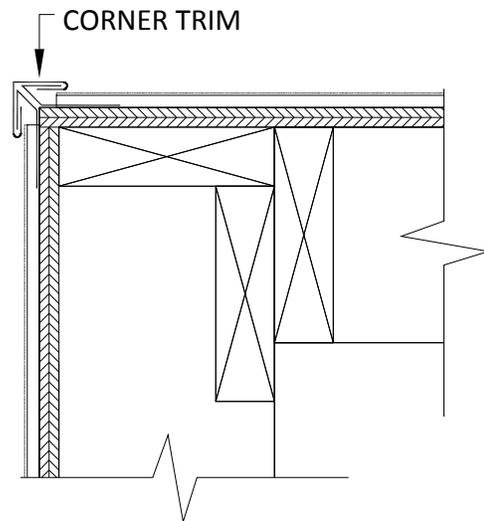


Fig. 2 - Outside Corner (Flashed)

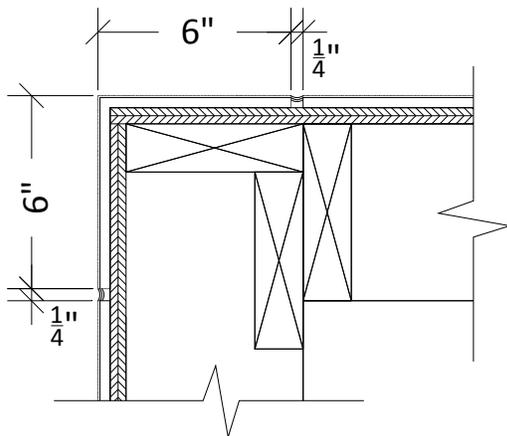


Fig. 3 - Outside Corner (Pre-Made)

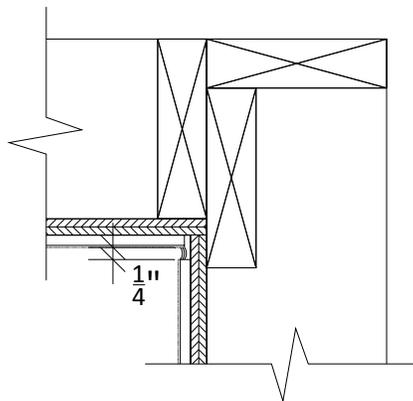


Fig. 4 - Inside Corner
(Overlap direction may vary)

2. Identify the corner and install panels to the left and right side if applicable. If only one outside corner is available, start install at that location. Install panels as shown on the Fullerton shop drawings or as shown in this manual.

Panels

1. Continue installation with the intermediate panels filling the space in-between corner panels. Special care should be taken with the planning and the installation of these panels. To provide the best overall look, measure the distance between corner panels and decide if the final panel install will provide the look required. Ensure that you have provided the correct spacing between panel edges. See fig. 5 – 5.2

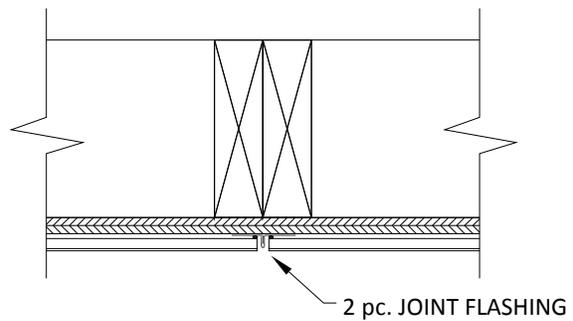


Fig. 5 - Vertical Panel Joint

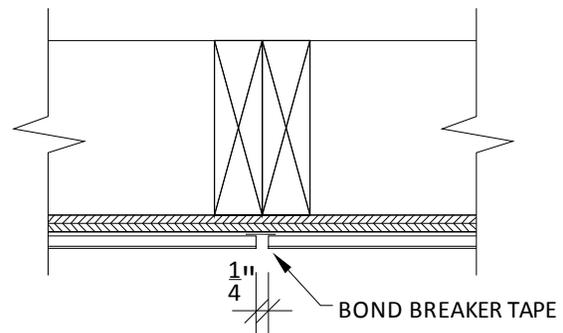


Fig 5.1 – Caulk Joint w/ Bond Breaker Tape

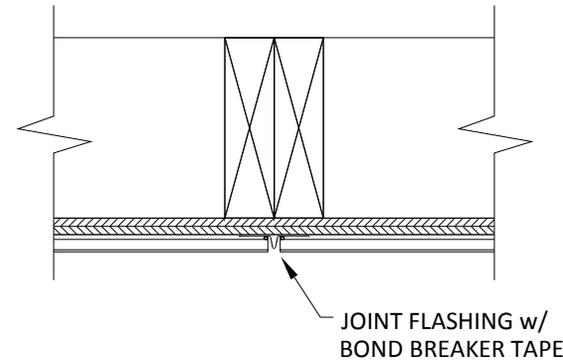


Fig. 5.2 – Flashed Joint w/ Bond Breaker Tape

2. By planning you should be able to avoid visually unpleasant joints.
3. Cutting panels should be completed on a stable surface with proper support members for the panels. Allowing the material to droop or sag will result in damage to the product. Cutting should be performed with the product facing down while using a circular saw to prevent chipping. When marking the cut location care should be taken to ensure that the resulting cut is visually acceptable. Cutting can also be performed using a grinder if preferred. Below are possible types of equipment

- a. Circular saw w/ dry cut diamond blade
- b. 4" handheld grinder w/ dry cut diamond blade

Note: dust produced by cutting should be removed as soon as possible to avoid damage to the product.

Fasteners

Mechanical fasteners are required for proper installation of panels. To determine the proper fasteners the base material will need to be identified. It is suggested that you consult with your local design professional to ensure that the wall structure will be able to accept the additional weight of the panels. Below is a list of fasteners typically used during installation.

Wood Fastener

#6x 1 5/8" trim head square drive with needle point

Metal Fastener

#6 x 1 3/8" trim head square drive with drill point

Masonry Fastener

3/16" x 1 3/4" Philips head (Tapcon)

Note that the above fasteners are used for a general guide, your project may require specific fasteners. Please consult a Fullerton representative with any questions.

Fastening

1. Place required panel into position following all guidelines to ensure proper installation.
2. Ensuring that there are proper attachment points at fastener locations. See fig. 6-6.4 for typical wall type construction.

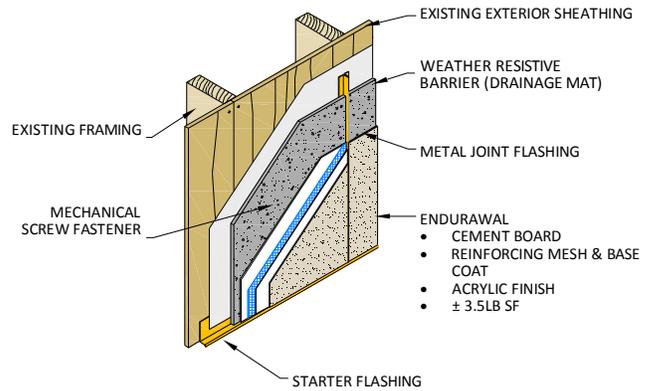


Fig. 6 – Standard Wall Construction

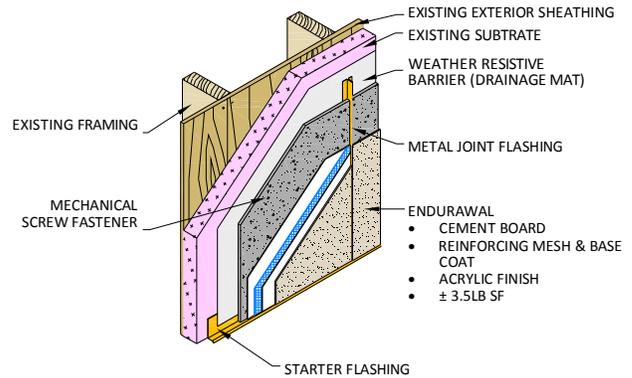


Fig. 6.1 – Standard Wall with Rigid Insulation

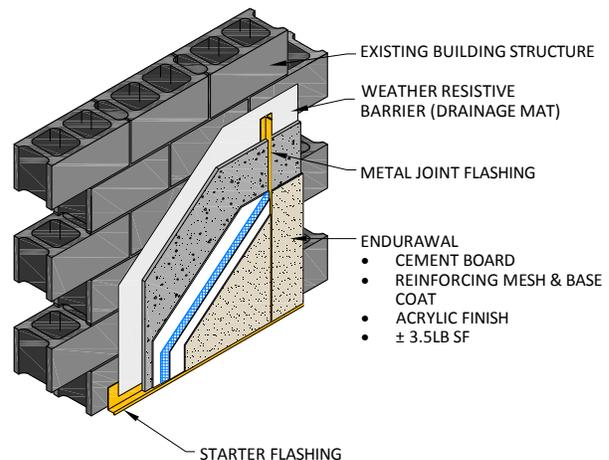


Fig. 6.2 – Block Wall No Furring

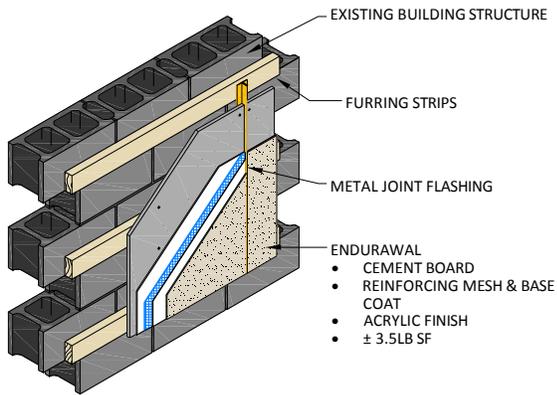


Fig. 6.3 – Block Wall with Furring

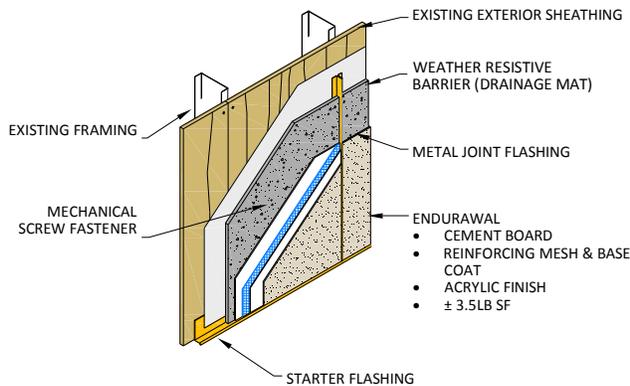


Fig. 6.4 – Light Gauge Metal Stud Wall

3. Fastener spacing is typically 12" on center along all edges of the panel and 16" on center throughout the middle of the panel. To ensure that the edges do not become damaged fasteners should remain a minimum 3/4" from panel edges. See fig. 7
4. Pre-drill holes into panel with 1/8" masonry bit. It may be required to relieve the surface with a countersink bit at fastener locations to flush the fastener head with the face of the panel surface. The type of fastener used will determine if a countersink is needed.

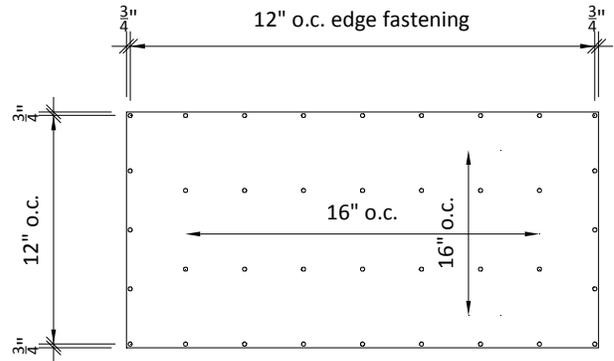


Fig. 7 - Fastener Spacing Diagram

5. Once finished with the first level of panel installation continue to the second level. Installation will be the same as the first level. Caution should be taken as your height of installation increases as the panels are very heavy. If necessary equipment can be utilized to help during the installation. It is the responsibility of the installer to determine the proper use and attachments of panels to such equipment. (Fullerton can suggest types and uses of equipment if requested) Be sure to allow for horizontal joint spacing unless noted otherwise. See fig. 8

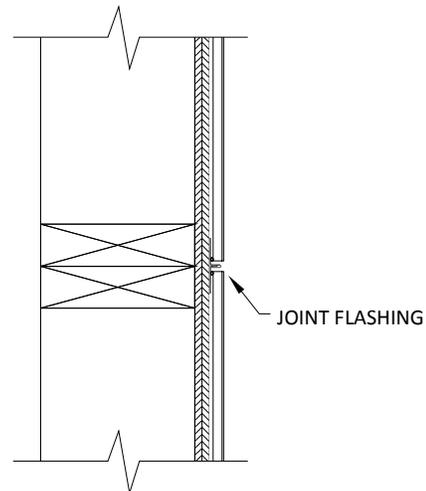


Fig. 8 – Horizontal Panel Joint Spacing

CAULKING

After installation of all panels caulking should be performed to seal all edges.

CLEANING

After installation of panels and installation of caulking the finished exterior should be washed to remove any loose or foreign materials produced during installation. The use of a standard water hose should be enough to clean the surface. If there are any stains on the exterior surface that cannot be removed with standard water pressures please consult a Fullerton representative.