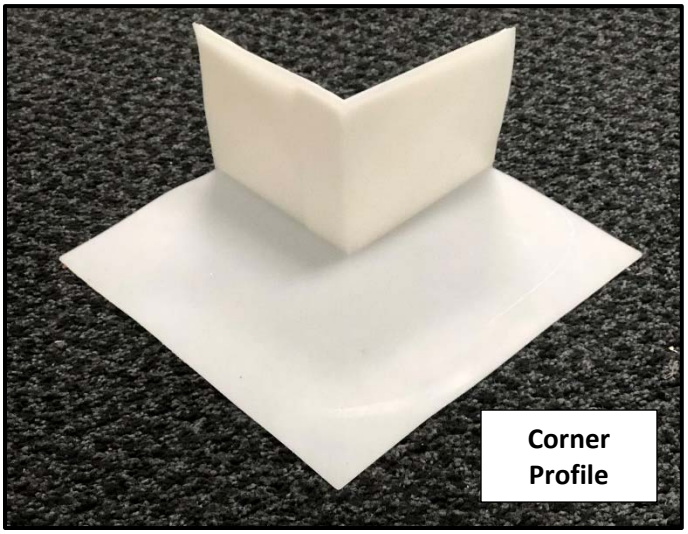
What is Pecora XL-Span?

The Pecora XL-Span is a **pre-formed silicone transition membrane** that utilizes a translucent high-molecular weight, 100% silicone composition. XL-Span Pre-Formed Silicone Transition Membrane is extruded to create a flat, ribbed profile which is designed to create an airtight transition seal between curtainwalls and the building envelope. These flat profiles are provided in a ribbed configuration in order to control adhesive thickness and maintain a consistent sealant configuration. XL-Span Pre-Formed Silicone Transition Membrane may also be a flashing material as well as a transition membrane from below grade or roofing membranes to façade air barrier system. XL-Span comes in 50-foot rolls and 4-, 6-, and 9-inch-wide sections. The **Pecora AVB Silicone Sealant/Adhesive** is utilized as the pre-formed XL -Span membrane adhesive. The AVB Silicone Sealant is a single component, 100% silicone sealant specifically designed to adhere without primer to a wide array of low surface energy air barrier components as well as common building substrates.

XL-Span Pre-Formed Corners are available allowing for a less labor-intensive application when transitioning curtain wall or window frames to exterior sheathing or masonry surfaces. Standard pre-formed corners are available in 4 and 6-inch options. Custom shapes are also available. Consult Pecora Technical Services for details regarding custom orders.



Why use Pecora XL-Span?

A continuous air, moisture vapor, and water-resistant barrier is key when considering building envelope performance and durability. Exterior glazing and window systems, curtain wall systems, storefront systems, louvers, and door frames must connect and seal to adjoining opaque building façade components to prevent air, moisture vapor and water infiltration or exfiltration. As building codes and regulations become more stringent, most buildings leverage some type of air barrier system to ensure energy efficient building envelopes. The creation of a continuous monolithic membrane remains a key factor to the success of any air barrier system which typically includes challenges in connecting dissimilar components and materials. Pecora offers the XL-Span Pre-Formed Transition System — an approach to assured continuity of the window or curtain wall system to the opaque air, vapor, and water barrier systems — which utilizes Pecora's XL-Span 100% Silicone Extruded Transition Membrane and AVB Silicone Sealant as the adhesive. **When incorporated into the building envelope, the XL-Span Pre-Formed Transition Membrane System allows for a continual air and water tight transition seal between dissimilar materials, curtain wall, and window systems.**

Where to Use Pecora XL-Span?

Pecora XL-Span Preformed Transition Membrane is recommended for use in the following applications:

- As a weather seal spanning wide joints (>2")
- As a weather seal spanning undersized joints (<1/4") where dynamic joint movement may occur.
- As a weather seal spanning dissimilar building substrates such as roof- and foundation-to-wall transitions.
- As a field-applied flashing material in rough window openings
- In-shop or field-applied as a weather seal in aluminum mullion assemblies within storefronts and curtainwalls.
- Skylight leak repair
- Other applications as approved by Pecora Technical Services.

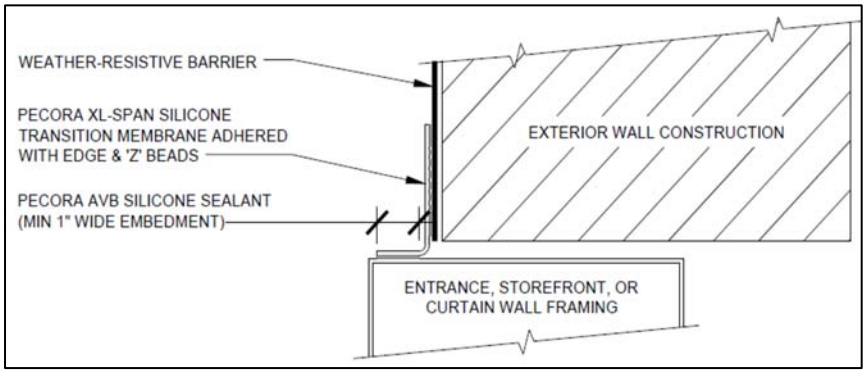
How to apply Pecora XL-Span?

Silicone Adhesive

Pecora XL-Span must be applied to the substrate using a silicone-based adhesive. Pecora's standard adhesive recommendation is the **AVB Silicone Sealant/Adhesive** which is specifically designed to adhere to air and vapor barrier materials and most common building substrates. Alternative Pecora silicone products may be substituted and must be approved by Pecora Technical Services.

Pecora AVB Silicone Sealant/Adhesive does not require priming on most air and vapor barrier components and common building substates. All substrates to receive the AVB Silicone Sealant/Adhesive should be clean and dry at time of application. Consult Pecora Technical Bulletin #166 for specific surface preparation recommendations for air and vapor barrier components. It is highly recommended that pre-construction adhesion testing is conducted in order to determine adequate adhesion is being achieved on representative substrates. This may be achieved via field and/or laboratory testing.

XL-Span application type will determine how to apply the silicone adhesive to the substrates. When used as a flashing, the silicone adhesive is generally applied in a "Z" pattern across the field of the substrate to form a continuous seal. For spanning wide or undersized joints, generally two parallel beads of silicone adhesive, one applied to each substrate, are extruded onto the substrates. For pre-formed corners, a single bead may be used to form a continuous seal. **For all XL-Span applications, the silicone adhesive bead size will range from ¼" to ½" in diameter in order to create a minimum ½" wide continuous seal when the XL-Span membrane is firmly pressed into place by hand or roller (preferred).**



Field Installations

Most XL-Span installations are performed in the field. The following guidelines will cover applying all XL-Span flat profile sizes including 4, 6 and 9-inch wide membranes.

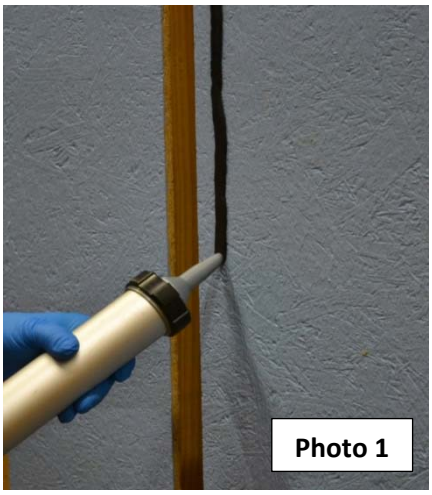


Photo 1

1. **Clean all surfaces to receive the silicone adhesive.**
    a. Non-porous substrates: Clean with isopropyl alcohol using the two-cloth method.
    b. Porous substrates: Clean by brushing the substrate surface with a coarse, natural bristle brush or comparable. Brush to remove all loose dust and contaminates.

2. **Apply continuous beads of AVB Silicone Sealant/Adhesive** on each side of joint to receive the XL Span extrusion. Each bead should range from ¼" to ½" in diameter. (See photo 1)
    a. Set appropriately sized XL-Span membrane into place centered over the joint, seam or transition. Membrane should be lapped a minimum 1" onto each substrate. (See photo 2)
    b. Dissimilar substrates may be treated one side at a time in order to obtain a neat and clean application.
    c. For dynamic joint conditions and if the joint width allows, a **"bellows"** type installation is recommended by tucking the center of the membrane slightly into the joint opening in order to create a concave profile. This installation method will reduce the stress placed on the membrane and adhesive when the joint expansion occurs during low ambient temperatures.

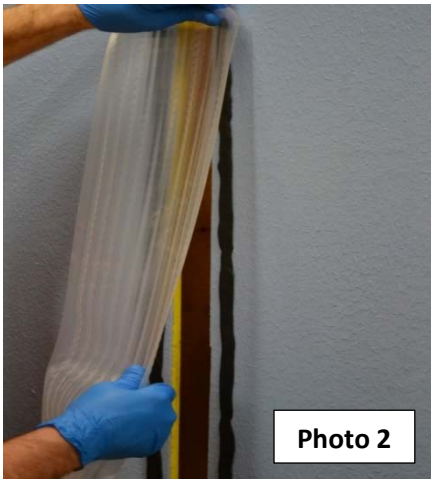


Photo 2

3. **Firmly press membrane into place wetting out the adhesive to create a minimum ½" wide continuous seal.** This may be achieved by hand and/or by use of a roller and will ensure intimate contact with substrate surface. (see Photo 3, 4)


Photo 3

Membrane set in place on one side of joint and ready for tooling.

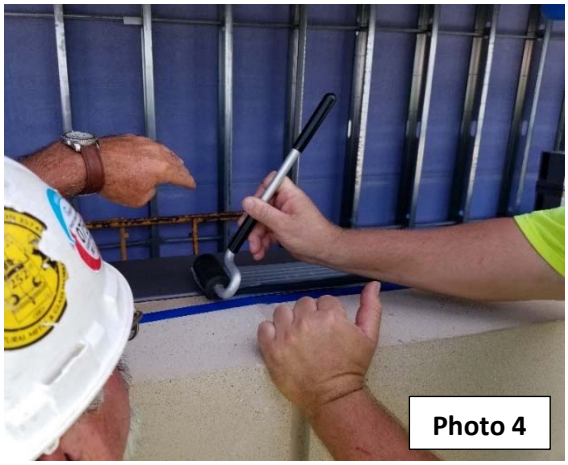


Photo 4

Wetting out adhesive with roller.

4. **Tool any wet silicone adhesive** that may have squeezed out past XL Span edge during installation with a flat tool. Remove tape, if used.

Field Installations (cont.)

Window to Wall Transitions

Pecora XL-Span flat profiles may be successfully used to wrap and seal rough window openings in a variety of sheathing and masonry construction types. The following guidelines will apply:

- All XL-Span membrane profiles and AVB Silicone Adhesive should be installed in accordance with the installation guideline as outlined on page 3 of this guide.
- Select the proper width in the XL Span profile to allow for the minimum one-inch bite onto surfaces to be connected. Take any bellows creation into account.
- The XL-Span is generally applied to the wall substrate first, typically to the previously installed air barrier, then the window mullion or flange.
- XL-Span application should start from the sill and continue up the window opening taking care to properly lap the membrane over the previously applied XL Span to ensure the shingle effect lapping method is utilized.
    - XL-Span flat profiles will need to be cut and wrapped at corners mullion corners when not utilizing pre-formed corners. It is recommended that a “dry run” is performed without the liquid adhesive to determine the required cutting and shaping method necessary to successfully wrap the corners whilemaintaining the shingling concept throughout.
- Begin the installation by applying a continuous bead/s AVB Silicone Adhesive to wall surface followed by the window mullion at sill location.
- Embed the appropriately sized XL-Span profile into the adhesive and firmly press into place. Preferred method is to utilize a roller.
- Continue the installation procedure by next addressing the window mullion jambs ensuring the shingle effect is utilized.
- The final step is to address the window head. Cut and wrap the XL-Span around the corners as needed to properly seal the window head condition.

A step-by-step photographic illustration of a typical window to wall transition installation is depicted on pages 5 - 8 of this manual.

Splicing Guidelines

- Always utilize the “shingle” effect when lapping/splicing sections of the XL-Span membrane in vertical applications. Avoid reverse lapping as this may result in areas of potential water infiltration.
- A minimum membrane overlap of 1” is required when splicing.
- Pecora AVB Silicone Sealant/Adhesive is used to join all splices.
- All lapping of membrane in window to wall transition applications should be at least 10 inches from the corners.

XL-Span Preformed Corners

XL-Span Preformed Corners are available allowing for a less labor-intensive application when transitioning curtain wall or window frames to exterior sheathing surfaces.

- Preformed corners should be installed to ensure the shingle effect lapping method is utilized.
- Reverse lapping should be avoided. Sill corners should be installed first.
- The Pecora AVB Silicone Adhesive is used as the liquid adhesive when applying preformed corners. The AVB Silicone adhesive must be used when splicing the preformed corners to the XL-Span flat profiles.

Window Frame to Wall Transition Installation Sequence Example (from left to right)

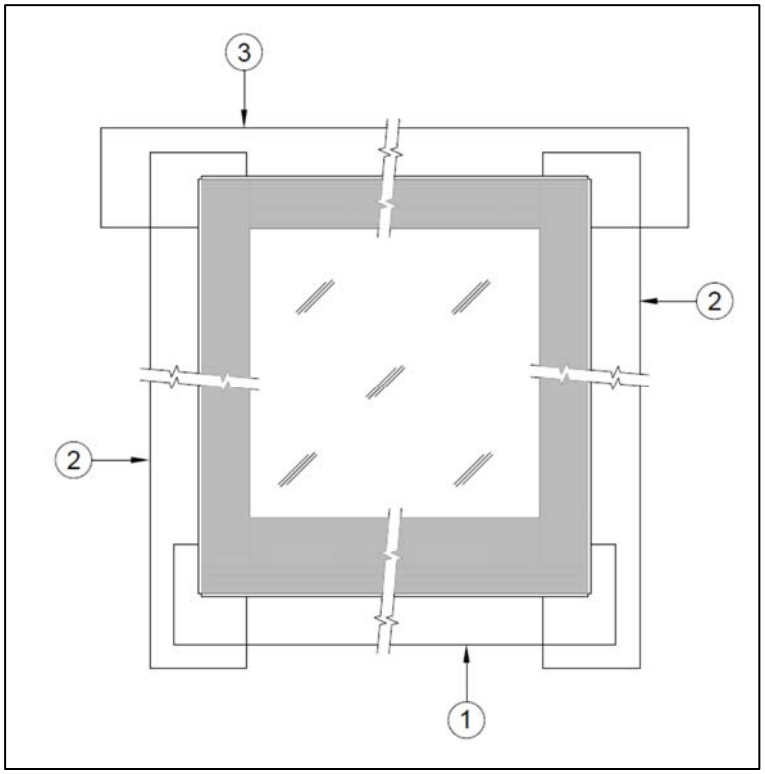
Step 1: Cleaning substrates

Step 2: Apply XL-Span and AVB Silicone Adhesive at window sill curtainwall mullion condition.

Step 3: Apply XL-Span and AVB Silicone Adhesive at jamb curtainwall mullion condition.

Step 4: Apply XL-Span and AVB Silicone Adhesive at head curtainwall mullion condition.

Typical XL-Span Installation Illustrations

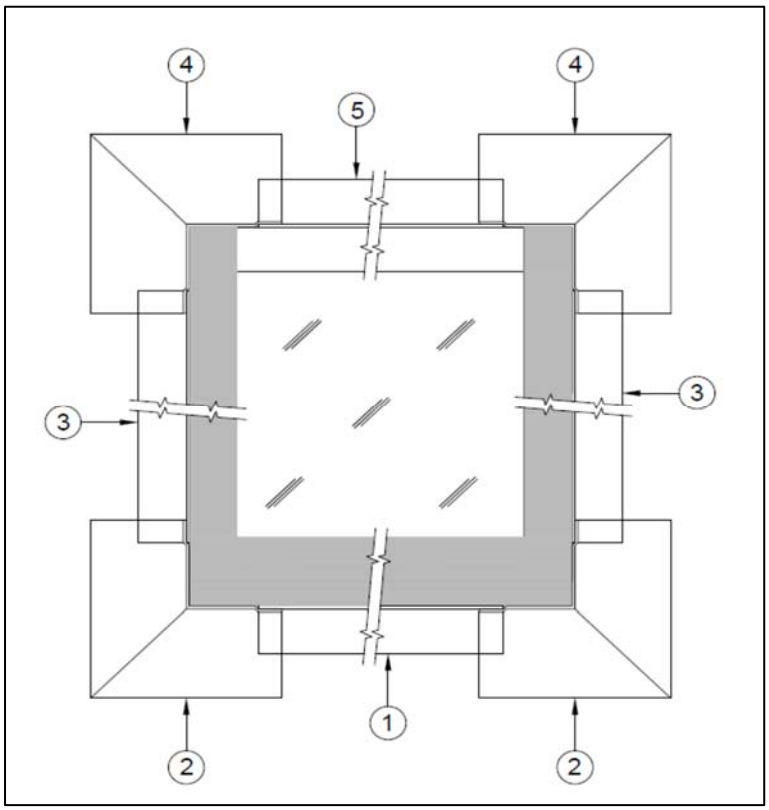


XL-Span flat profiles / lapped

1: Sill condition / one continuous flat profile cut and lapped at corner

2: Jam condition / one continuous flat profile cut and lapped at corner

3: Head condition / one continuous flat profile cut and lapped at corner



XL-Span flat profiles / preformed corners

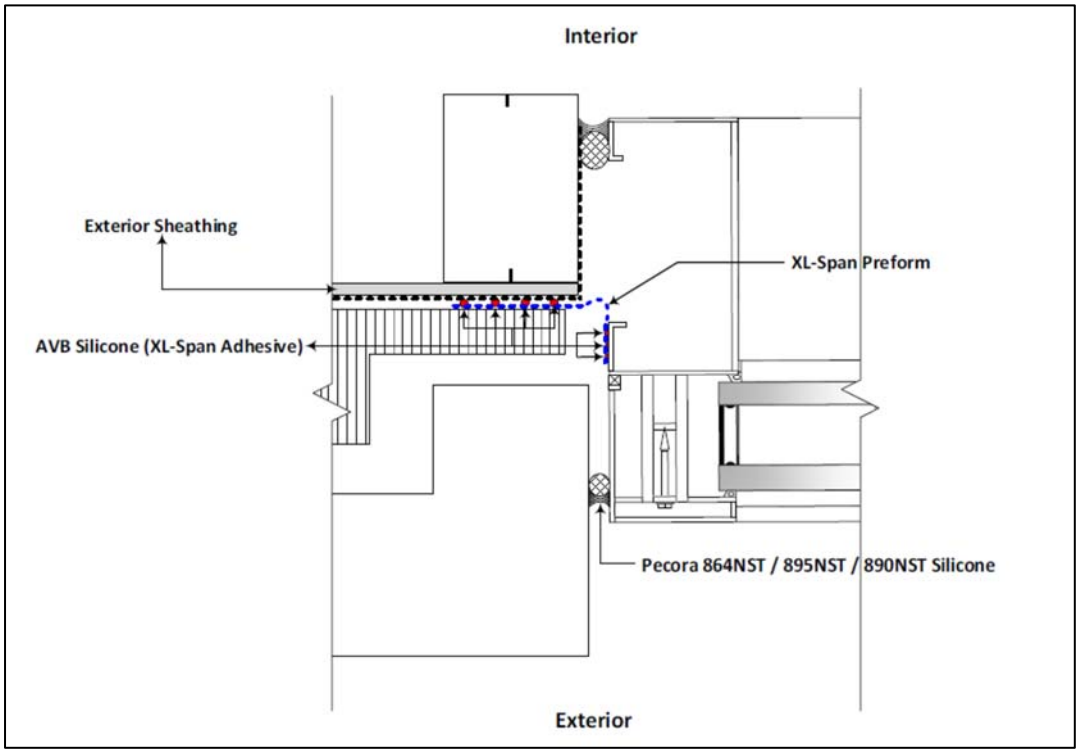
1: Sill condition / flat profile
2: Sill condition / preformed corners

3: Jamb condition / flat profile

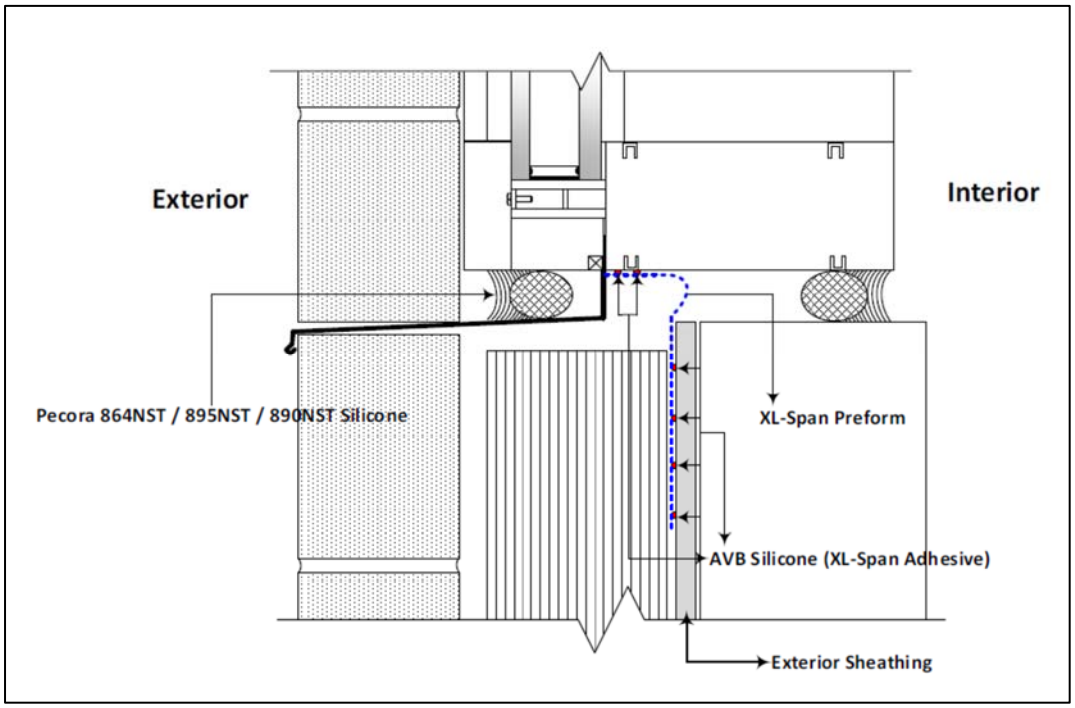
4: Head condition / preformed corners
5: Head condition / flat profile

Typical XL-Span Installation Details

Detail #1 –Jamb Condition / Mullion



Detail #2 – Sill Condition / Mullion



Typical XL-Span Installation Details (cont.)

Detail #3 – Head Condition / Mullion