

# **Structural Mullion Installation Instructions Classic Vinyl Enclosure System**

Harvey Industries, Inc.

## **Important Notes:**

Read completely before beginning installation.

The number of mounting brackets is determined by the Design  
Pressure (DP) rating required for specific job sites.

Detailed views are not drawn to scale

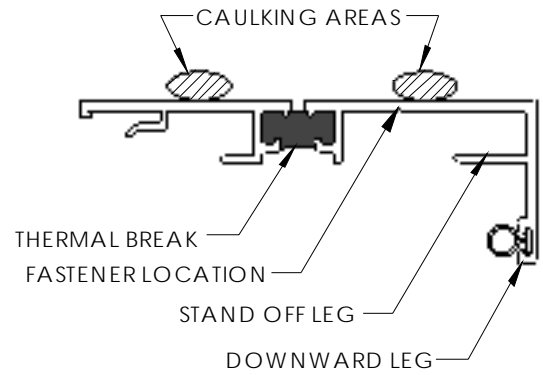
Wear safety glasses while cutting and installing Structural Mullion

If using pressure treated lumber use a spacer material or another  
barrier to prevent direct contact with System 3 Extrusions,  
mounting brackets, and structural mullion extrusion

## Structural Mullion Installation Guide

### 1. System 3 Head and Side Jamb Installation

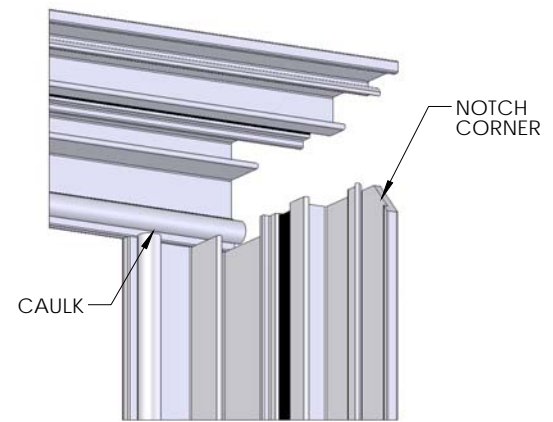
- 1.1. Cut the header extrusion to fit between the opening side jambs. Caulk as shown in **Detail 1.0**.
- 1.2. Fasten with ¼" X 1 ¼" TEK screws provided located 3" in from the corners then every 16" – 20".
- 1.3. Cut the side jambs to size using the downward leg to the base as the length.
- 1.4. Cut a ¼" notch off inward top corner of side jambs as shown in **Detail 1.1**.
- 1.5. Caulk as shown in **Detail 1.0**.
- 1.6. Fasten with ¼" X 1 ¼" TEK screws provided located 3" in from the corners then every 16" – 20".
- 1.7. Caulk corners as shown in **Detail 1.1**.



DETAIL 1.0: HEAD / JAMB SEALING LOCATIONS

### 2. Mark Mullion Locations

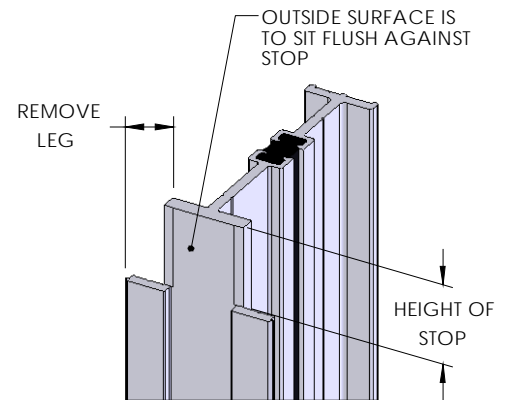
- 2.1. Mark the sill at a distance equal to {left window width + ¾"} from the left jamb.
- 2.2. If there is another mullion in the opening, measure from the first centerline to the right, {next window width + 1 ¼"}. Mark the sill. This will be the centerline for the second mullion.
- 2.3. Repeat steps 2.1 – 2.2 until the centerlines for all the mullions have been marked.
- 2.4. As a check step measure from the last centerline, {last window width + ¾"}. This should bring you to the right side jamb for the opening. If this measurement is not correct recheck the centerline locations.



DETAIL 1.1: CORNER NOTCH

### 3. Flat Sill Openings: Mullion Cut Lengths

- 3.1. With a flat sill opening, square cut the mullion to fit snug into the opening on the centerline.
- 3.2. With a sloped sill opening, square cut the mullion at the head. The sill cut should match the sloped sill angle and fit snug into the opening.
- 3.3. If there are blind stops, a notch will have to be made to the top of the mullion extrusion so the windows can sit flush against the stop. See detail 3.0. The exterior vinyl cover should be cut to the opening height minus the head stop height.
- 3.4. If there is a stool cap, the aluminum cover and the interior vinyl cover should be cut to the opening height minus the stool cap height.
- 3.5. Verify the extrusions will fit correctly into the opening and repeat steps 3.1 to 3.4 for each centerline marked on the sill.



DETAIL 3.0: HEAD NOTCH

## Structural Mullion Installation Guide

### 4. Sill Mounting Bracket Installation

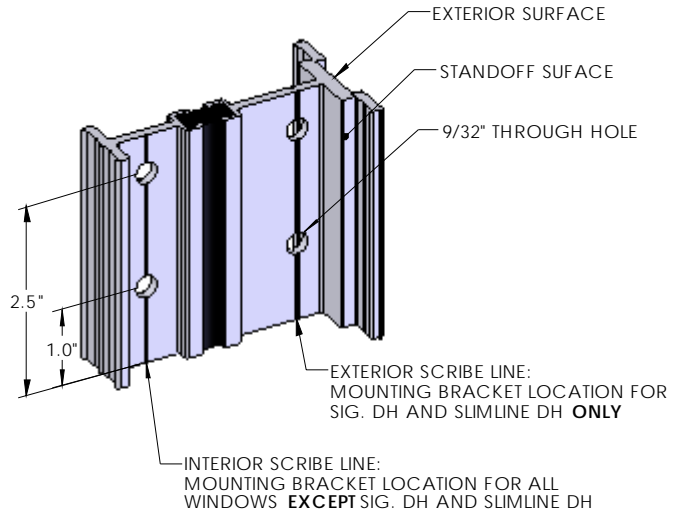
4.1. Signature DH and Slimline DH with mechanical frame windows use the exterior scribe line of the mullion extrusion to install the mounting brackets to the sill. All other vinyl windows use the interior scribe line. See **Detail 4.0**.

4.2. If using the interior scribe line or the opening has a flat sill, pre-drill the bolt locations per **Detail 4.0** using a 9/32" bit. If there is a sloped sill, place mullion extrusion into the opening plumb on the centerline. Note that the outside surface of the window will be resting on the 3.25" Reference Surface, as shown in **Detail 4.1**. This surface needs to be 3.25" away from where the inside surface of the window will be located or 3.25" away from the stool cap. The inside surface of the mullion extrusion should not rest against the stool cap. Place short leg of bracket against the mullion scribe line and with the inner edge of the long leg resting on the sill, mark two hole locations on the scribe line. Drill using a 9/32" bit.

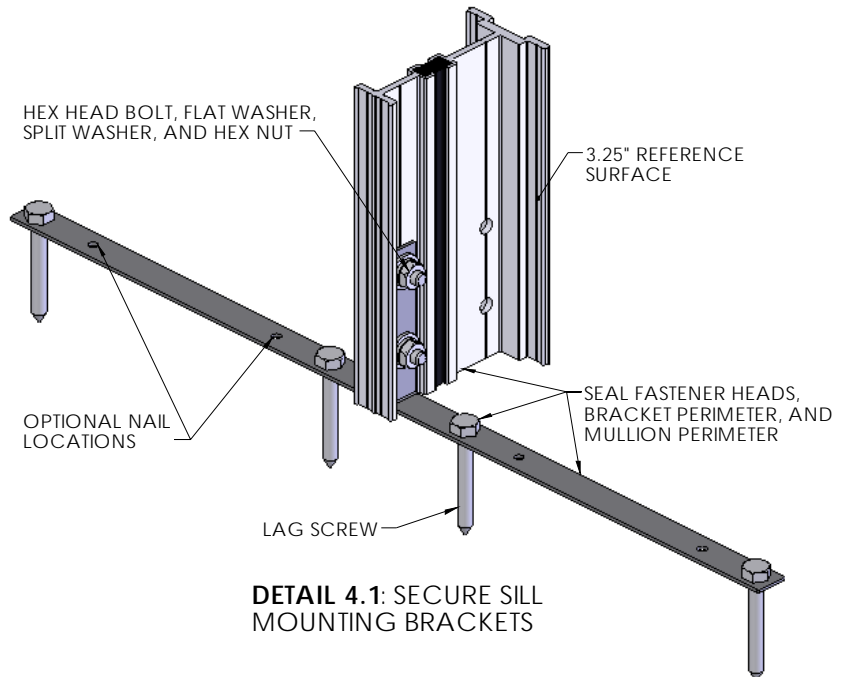
4.3. Depending on the DP rating required for the opening, secure one or two brackets to the mullion extrusion using the 1/4-20 x 3/4" galvanized hex head bolt and 2 flat washers on one side and a flat washer, split washer, and hex nut on the other.

4.4. Position the mullion into the opening as stated in 4.2 and secure to the opening by using 2, 1/4" x 2" lag screws per bracket. The optional nail locations can be used to help secure the assembly into the opening while installing the lag screws. See **Detail 4.1**.

4.5. Seal all cut edges of the mullion extrusion, fastener heads, and perimeter of bracket.



**DETAIL 4.0: BRACKET HOLE LOCATIONS**



**DETAIL 4.1: SECURE SILL MOUNTING BRACKETS**

## Structural Mullion Installation Guide

### 5. Head Mounting Bracket Installation

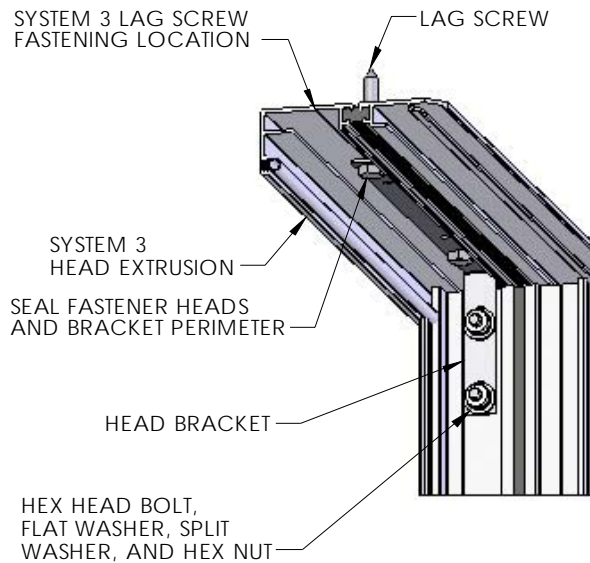
5.1. Position the bracket centered on the scribe line of the head extrusion and against the mullion extrusion. Position the two such that the mullion extrusion is plumb. Mark and drill 2 holes into the mullion extrusion. See **Detail 5.0**.

5.2. Depending on the DP rating required for the opening, secure one or two brackets to the mullion extrusion using the 1/4-20 x 3/4" galvanized hex head bolt and 2 flat washers on one side and a flat washer, split washer, and hex nut on the other side.

5.3. Verify that the extrusion is plumb then secure the mullion extrusion to the opening by using 2, 1/4" x 2" lag screws per bracket. Drill a 9/32" clearance hole through only the aluminum System 3 Head and not the framing. It is important to **NOT** drill into the framing with the clearance hole bit because it will reduce the holding power of the lag screw. Install lag screws through the bracket and into the head.

5.4. Seal all cut edges of the mullion extrusion, fastener heads, and perimeter of bracket.

5.5. Repeat sections 4 and 5 for all mullions to be installed in the opening.



**DETAIL 5.0: SECURE HEAD MOUNTING BRACKETS**

### 6. Install System 3 Subsill Extrusion

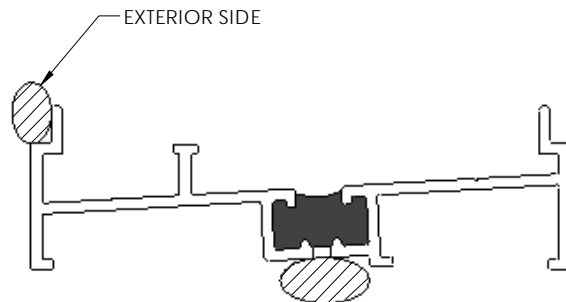
6.1. Measure and cut the distance from the standoff legs of the side jamb receptor to the standoff surface of the mullion extrusion. See **Details 1.0 and 4.0**.

6.2. Caulk bottom location shown in **Detail 6.0**.

6.3. Fasten with 1/4" X 1 3/4" TEK screws provided located 3" in the corners then every 16" – 20". Make sure the exterior surface is facing out and pressed against the weather-stripping before fastening.

6.4. Caulk any gaps existing between the extrusions and the opening frame.

6.5. Repeat steps 6.1 – 6.4 for remaining openings.



**DETAIL 6.0: SYSTEM 3 SUBSILL CAULKING AREA**

### 7. Install all exterior vinyl covers

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### 8. Caulk Opening

- 8.1. Apply a continuous bead of caulking along all surfaces that will sit against the window, following the scribe lines on the mullion extrusion and any blind stops. See **Detail 7.0**. Caulk the exterior side of the subsill shown in **Detail 6.0**.

### 9. Window Installation

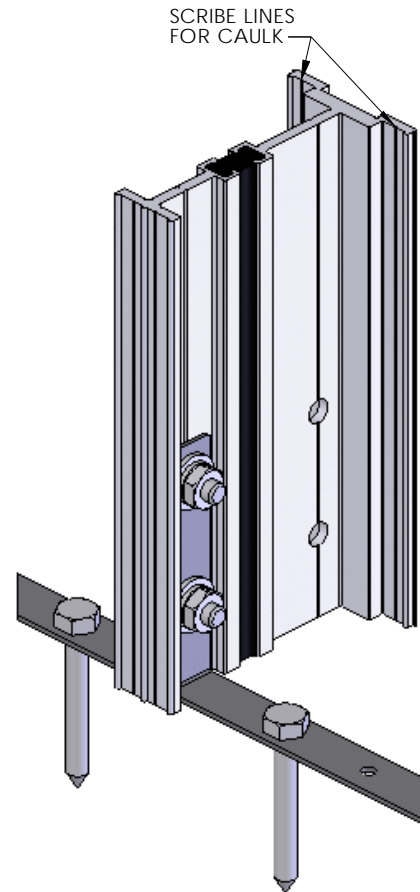
- 9.1. Caulk the scribe lines that are located on the aluminum cover. See **Detail 8.0**.
- 9.2. Starting from the left, install the left window into its' opening by tilting the appropriate window into opening making sure it sits over the legs of the subsill.
- 9.3. Place the adjoining window into its' opening.
- 9.4. Place the aluminum cover against the mullion extrusion.
- 9.5. Secure the cover using #8 x 3/4" Tek screws through the holes provided in the cover. Use a fastener in each hole.

### 10. Install all covers

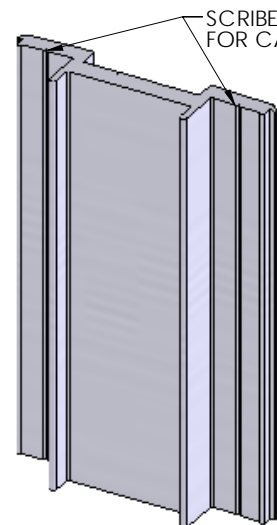
- 10.1. Install snap covers using a rubber mallet or block of wood. Install header piece first then sides. Make sure they are locked into place completely. Once in place they are hard to remove.
- 10.2. Install all interior vinyl mullion covers.

### 11. Secure Windows

- 11.1. Starting from the left, use the standard wood installation screws supplied with the window to secure the left side jamb to the opening. Remember to keep the window centered in the opening.
- 11.2. Using the lower right installation screw location of the window install the specified installation Tek screw.
- 11.3. Do not use the upper installation screw location. Place a plug into the installation screw location. A 3/8" hole is required for the plug.
- 11.4. Measure down 1" directly below the upper right installation screw location and pre-drill a 1/8" installation screw hole. In some applications a 3/8" clearance hole will be necessary to recess the installation screw head or to install the 3/8" hole plug. Reference **Detail 9.0**.
- 11.5. Install the specified installation Tek screw.
- 11.6. Move to the adjoining window. Use the top installation hole locations to install



**DETAIL 7.0: THERMAL BREAK EXTRUSION CAULKING LOCATIONS**

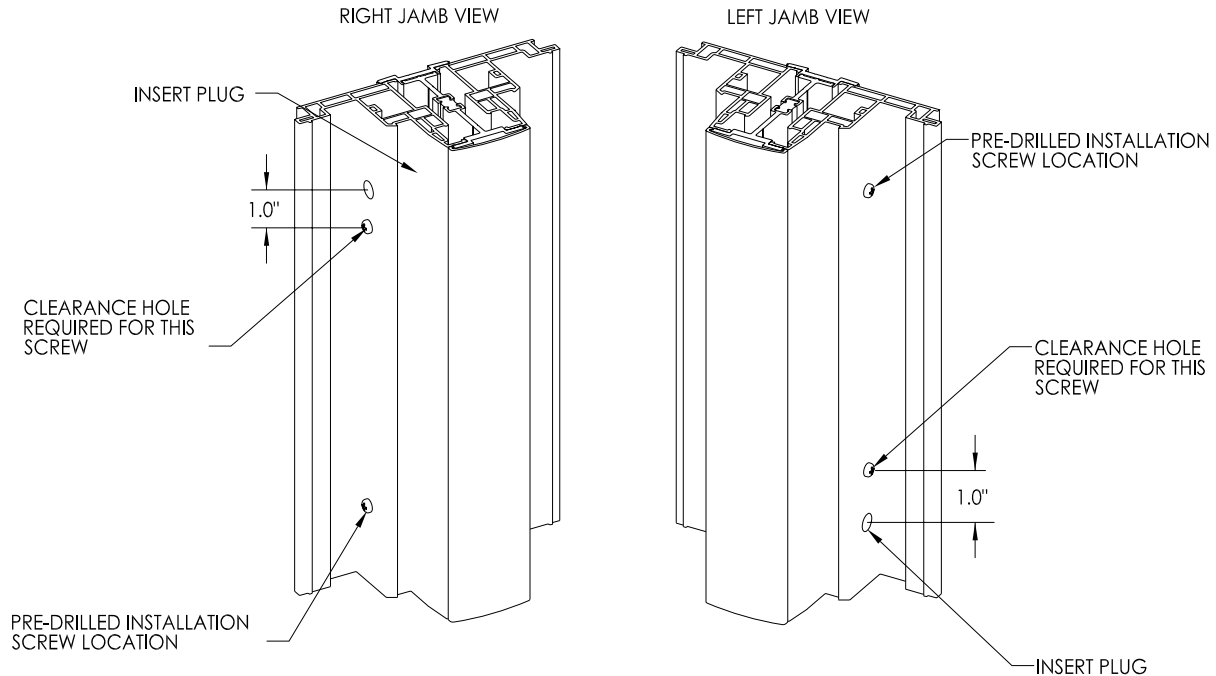


**DETAIL 8.0: ALUMINUM COVER CAULKING LOCATIONS**

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the specified installation Tek screws.

- 11.7. Place plugs into the lower installation screw holes.
- 11.8. Measure up 1" directly above the lower installation screw holes and pre-drill a 1/8" installation screw hole. In some applications a 3/8" clearance hole will be necessary. If the right jamb is next to the wood opening no additional clearance holes on the right side need to be drilled and the wood screws may be used.
- 11.9. If additional windows are to be installed, alternate the pre-drill locations from the top to bottom as more windows are installed. This alternating is required so the installation screws do not hit each other and bind during installation. This also allows the installation screws to securely fasten to the mullion.

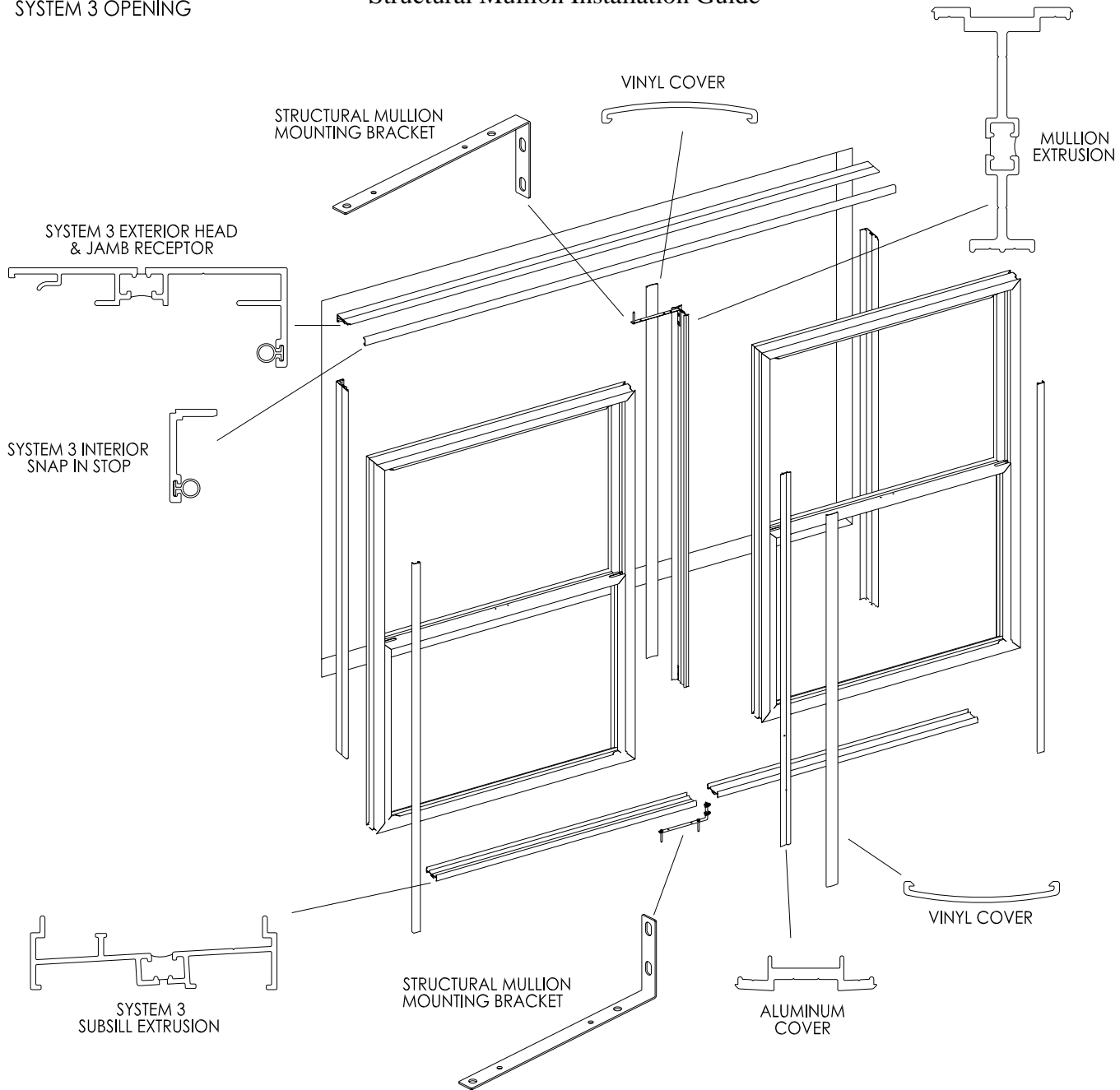


**DETAIL 9.0 : WINDOW INSTALLATION SCREW LOCATION**

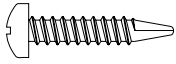
- 11.10. Repeat sections 8.0 – 11.0 for remaining openings

SYSTEM 3 OPENING

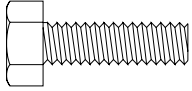
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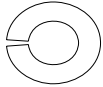
## Structural Mullion Installation Guide



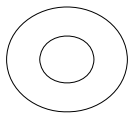
#8 X 3/4" PH PAN HEAD TEK  
Secure Aluminum Cover to Thermal Break Assembly



1/4-20 X 3/4" HEX HEAD GALVANIZED BOLT  
Secure Mounting Bracket to Thermal Break Assembly



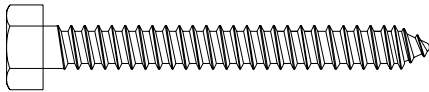
1/4" GALVANIZED SPLIT WASHER  
Secure Mounting Bracket to Thermal Break Assembly



1/4" GALVANIZED FLAT WASHER  
Secure Mounting Bracket to Thermal Break Assembly



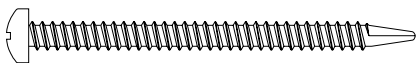
1/4" GALVANIZED HEX NUT  
Secure Mounting Bracket to Thermal Break Assembly



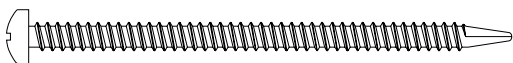
1/4" X 2" GALVANIZED HEX HEAD LAG SCREW  
Secure Mounting Bracket to Opening



#8 X 1 1/2" PH PAN HEAD TEK  
Installation Screw for: Acoustical DH, Classic Proweld DH,  
Signature DH, Slimline DH, Slimline Proweld DH



#8 X 2" PH PAN HEAD TEK  
Installation Screw for: Acoustical Picture Window, Acoustical  
Rolling Window, Vinyl Hopper



#8 X 2 1/2" PH PAN HEAD TEK  
Installation Screw for: Vinyl Awning, Vinyl Casement