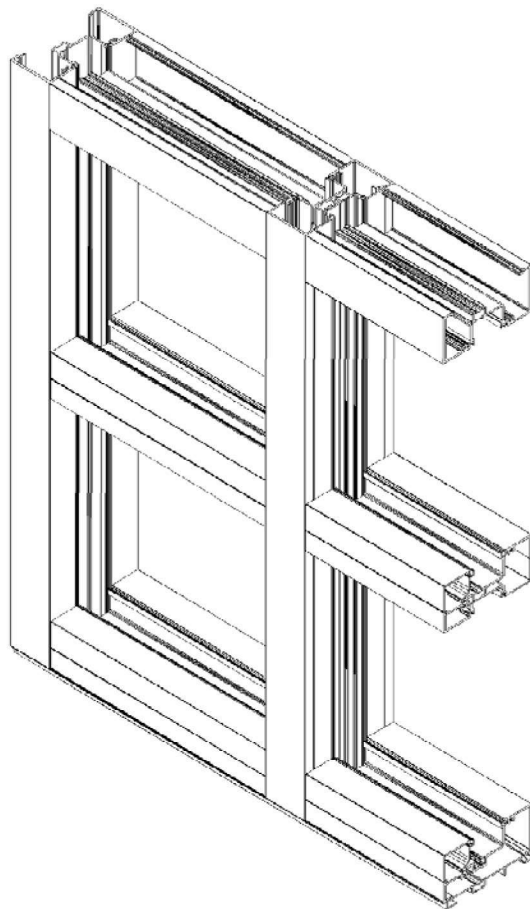




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## STOREFRONT INSTALLATION INSTRUCTIONS FOR SCREW SPLINE ASSEMBLY








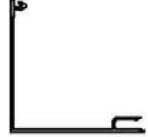



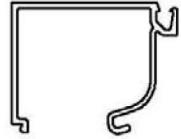

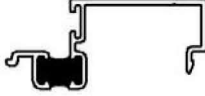



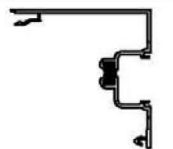
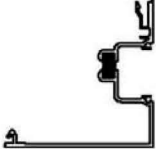
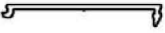
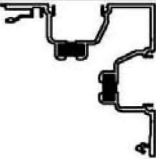
# THERMAL WINDOWS STOREFRONT SYSTEM

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**THERMAL BARRIER SERIES 2" X 4 1/2" FLUSH GLAZED  
EXTRUSION PARTS LIST**

DESCRIPTION		PART NO.	DESCRIPTION		PART NO.
	Sill	SF1850T		2-pc Compensating Receptor	SF2481T
	Sill Flashing	SF1833T		No Pocket Corner Half	SF461
	Horizontal	SF1851T		Compensating Receptor Face	SF311
	Mullion Pocket Filler	SF1854T		Glass Stop	SF1853
	Head/ Jamb/ Mullion	SF1857T		Snap-In Doorstop	SF1870
	Male Mullion Half	SF1859T		Heavy Wall Mullion	SF1878T
	Female Mullion Half	SF1860T		One Pocket Corner	SF1868T
	One Pocket Corner Half	SF1864T		Snap-In Pocket Filler	SF1863
	2-Pocket Corner	SF1865T			

# INSTALLATION INSTRUCTIONS

## GENERAL NOTES

### HANDLING, STORAGE AND PROTECTION OF ALUMINUM:

The following precautions are recommended to protect the material against damage. Following these precautions will help ensure early acceptance of your products and workmanship.

- ✓ **Handle Carefully:** All aluminum materials at job site must be stored in a safe place well removed from possible damage by other trades. Cardboard wrapped or paper interleaved materials must be kept dry. Discoloration or staining of the aluminum can occur if the wrapping materials become wet or damp.
- ✓ **Check Arriving Materials:** Check for quantity and keep records of where various materials are stored.
- ✓ **Keep Material Away From Water, Mud and Spray:** Prevent cement plaster or other materials from damaging the finish.
- ✓ **Protect the Materials After Installation:** Protect frame with polyethylene or canvas splatter screen. Cement, plaster, terrazzo, other alkaline solutions and acid based materials used to clean masonry are harmful to the finish. ***If any of these materials come in contact with the aluminum, immediately remove with water and mild soap.***

### GENERAL INSTALLATION NOTES:

- ✓ All materials shall be securely anchored in place to a straight, plumb and level condition without distortion.
- ✓ Check SHOP DRAWINGS, INSTALLATION INSTRUCTIONS, and GLAZING INSTRUCTIONS to become thoroughly familiar with the project.
- ✓ All work should start from established benchmarks and column center lines established by the architect and general contractor.
- ✓ Sealants must be compatible with all materials with which they have contact, including other sealant surfaces. Consult with sealant manufacturer for recommendations relative to shelf life, compatibility, priming, tooling, adhesion, etc.
- ✓ Drainage areas must be kept clean at all times. TWI cannot accept responsibility for improper drainage.
- ✓ After a representative amount of the storefront system has been glazed (500 square feet) and the sealant has cured, a water hose test should be conducted in accordance with AAMA 501.2 specifications to check the installation.
- ✓ Final cleaning of exposed aluminum surfaces should be done in accordance with AAMA 609.1 for anodized aluminum and 610.1 for painted aluminum.
- ✓ For assembly, use #12 x 1" screws PPH T-A-Z-P (from Alloy Fastener), part #121PPZ.

# STOREFRONT ASSEMBLY

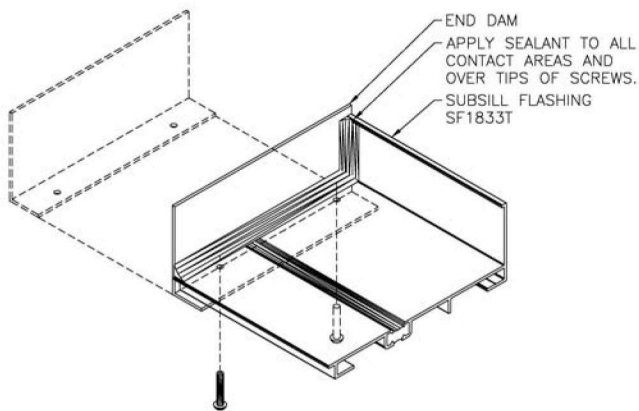
## FABRICATION AND SCREW SPLINE ASSEMBLY

### Opening

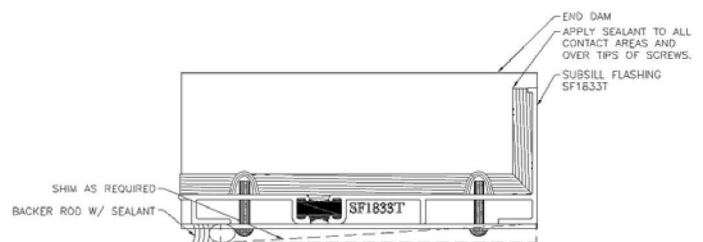
1. To determine frame width and height, measure rough opening and allow 1/4" minimum clearance for sealant and shimming around perimeter of frame.
2. To accommodate for additional materials, include the following guidelines:
  - a. Allow an **additional 3/8" clearance** when using **Sub Sill SF 1833** which is required for all exterior frames.
  - b. Allow an **additional 3/8" clearance** when using optional **Compensating Receptor Base SF 2481** and **Drive Clip 311**.

### Sill Application

1. Cut Sub Sill SF1833 to overall frame width plus **1/4"**. At both sides of entrance locations, cut sub sill **1/8"** longer than frame width. End Dams must be fastened and applied with sealant to each end of sub sill before installation of sill. Apply sealant to end dam contact areas. Use Screws, #12 x 1" PPH T-A-Z-P (from Alloy Fastener), Part #121PPZ to firmly secure End Dams. See Figure 1a and 2b.

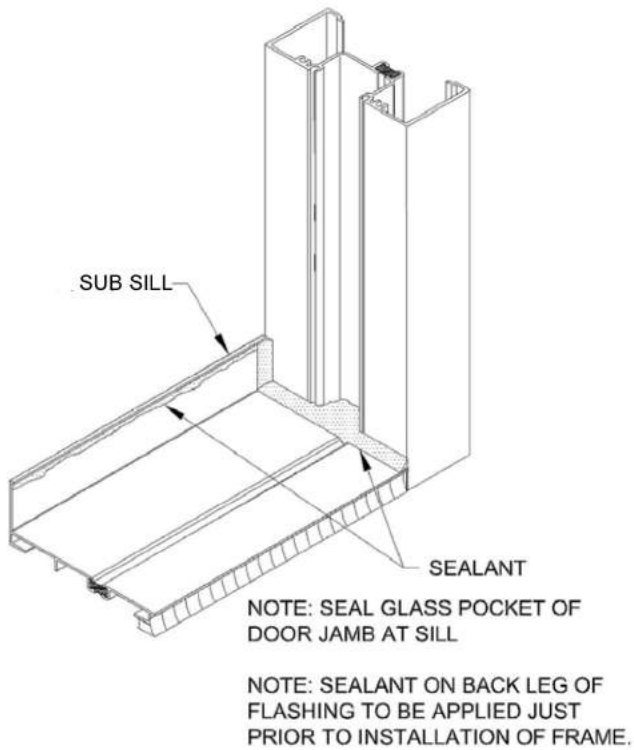


**Fig. 1A**

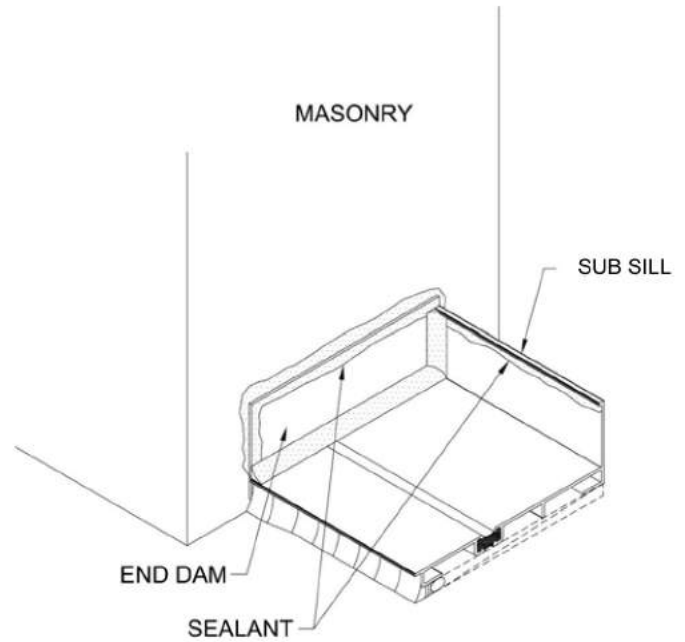


**Fig. 1B**

2. Be sure sub sill is tightly butted against door jamb (no clearance) and sealant is tooled into joints and over screw tips. See Figures 2A and 2B.



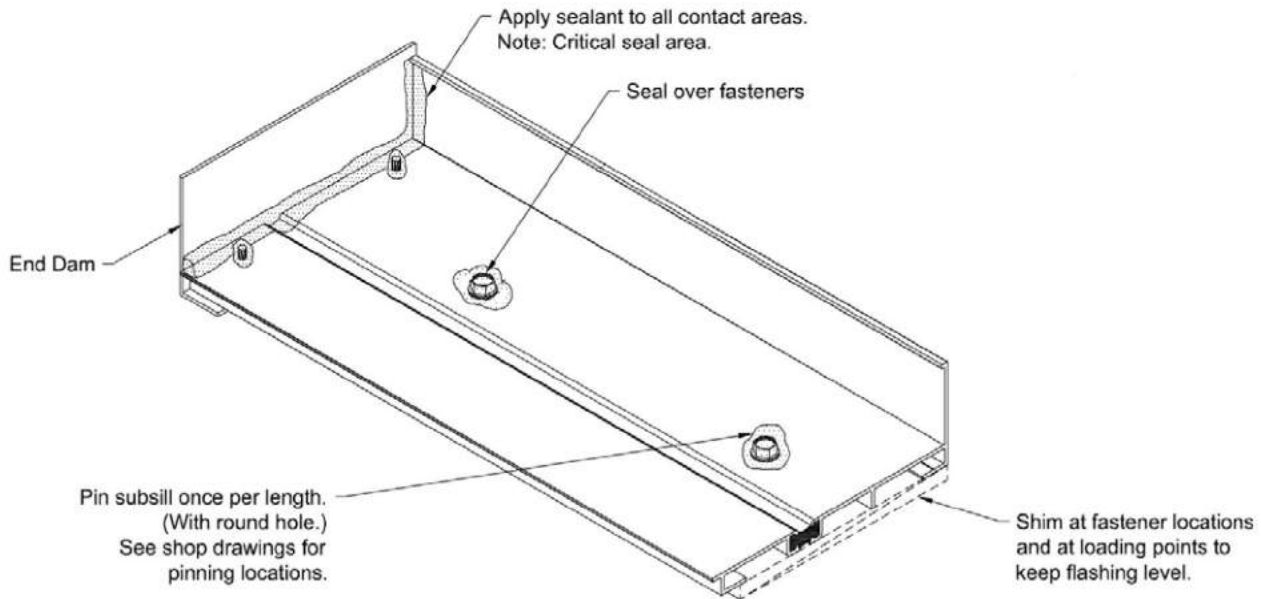
**Fig. 2A**



**Fig. 2B**

3. Set sub sill into a bed of sealant, shimmed as required for leveling, and anchored to a solid structure by fastening seal screws through sealant to prevent leakage. Locate screws 6" each side of vertical and 16" O. C. or as project engineer requires. Holes for screws should be elongated laterally to allow for frame movement. Pin sub sill to structure at one point only per cut length. See Figure 3 (page 7).

**Fig. 3** End Dam TWI-ED and Sub Sill SF1833.

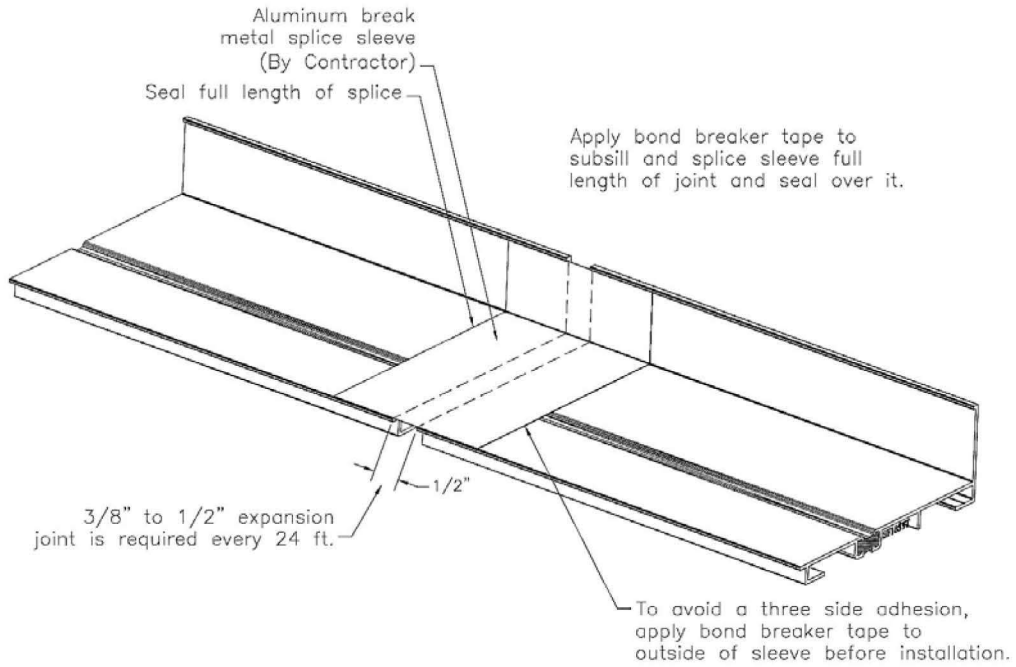


**Fig. 3**

**NOTE: See shop drawings for proper location of pinned connections.** Sub Sill should be shimmed at fastener locations, underneath verticals and at setting block locations. Seal all joints and over heads of fasteners.

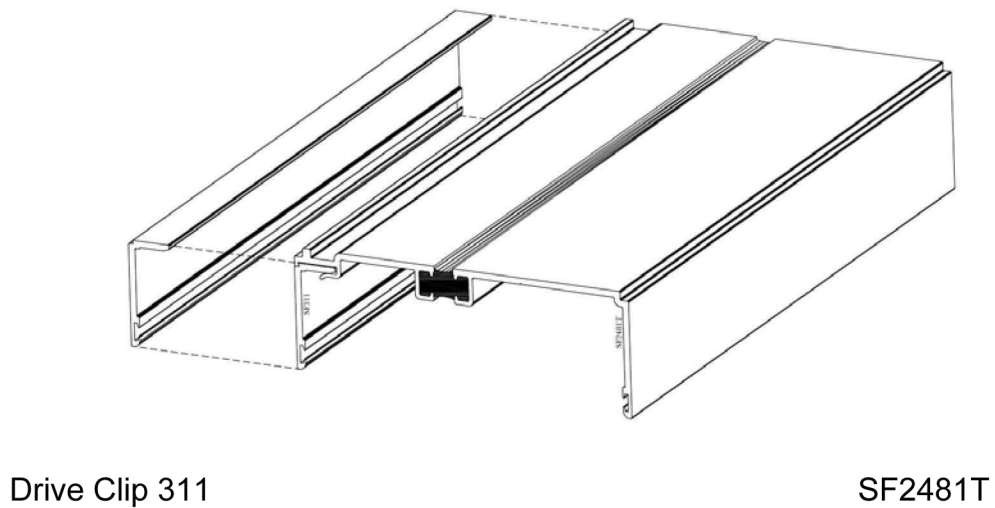
4. Wedge shims tightly between end dams and jamb substrate on each end prior to installing frame panels. These shims will prevent the end dams from dislodging while frame panels are being installed.
5. Seal sub sill where sill butts against door jamb. **NOTE:** End of sub sill that butts against door jamb cannot be dammed (no clearance allowed). Special care should be taken to control water infiltration at this point. See Figure 2, page 5.

6. Splice as required. Aluminum break metal splice sleeves are required at splice joints. Leave a 3/8" to 1/2" gap at the splice. See Figure 4.



**Fig. 4**

7. If applicable, anchor Compensating Receptor Base SF 2481/311 to structure. See Figure 5.

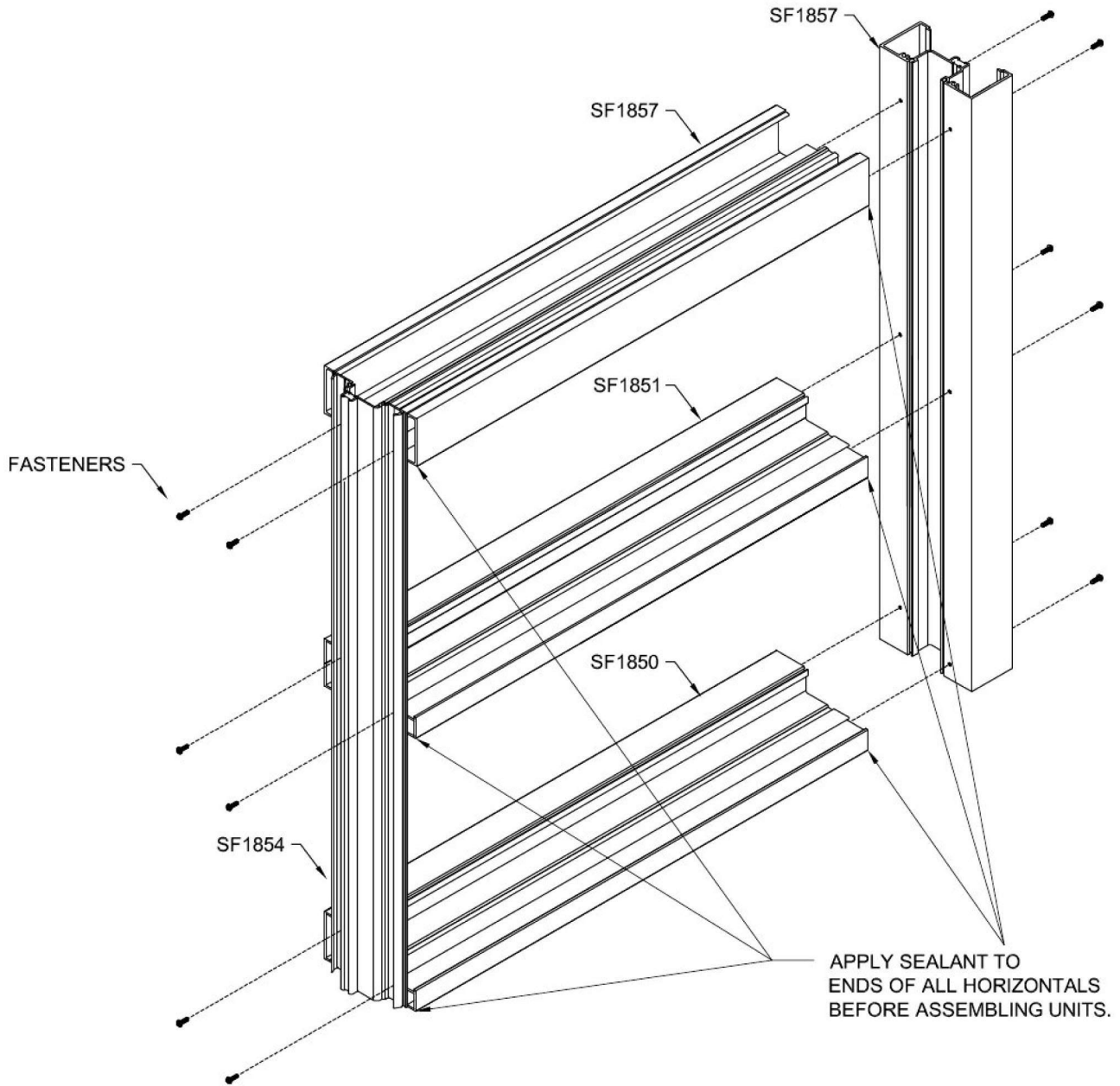


**Fig. 5**



## Frame Assembly

1. Cut horizontals and verticals to length allowing the horizontals to butt to the verticals. Verticals always run through. See Figure 6.



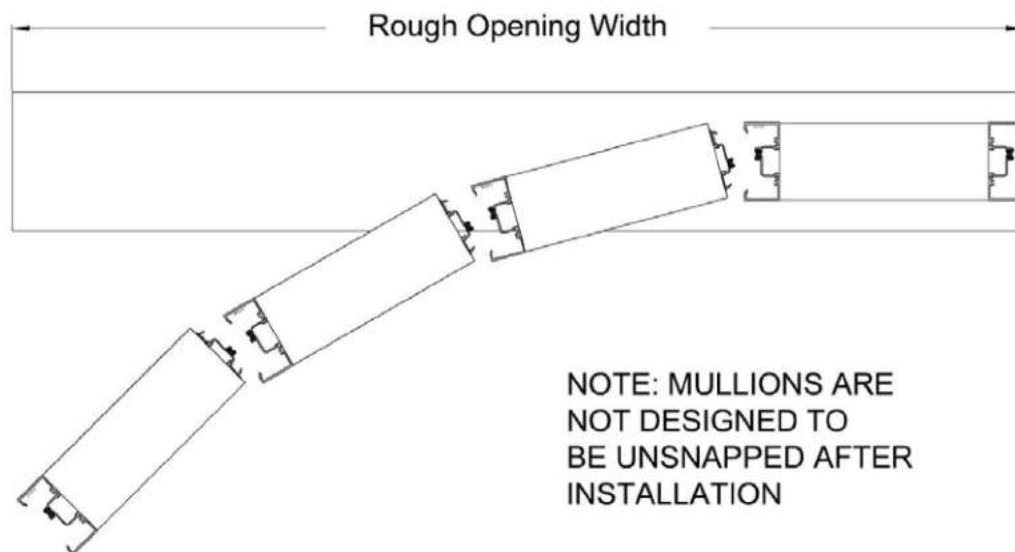
**Fig. 6**



3. Apply sealant to edge of all horizontal members before assembly and fasten to verticals. Never allow two shallow pockets to face each other.
4. Remove all debris from sub sill to prevent clogging weep holes prior to installing panels.

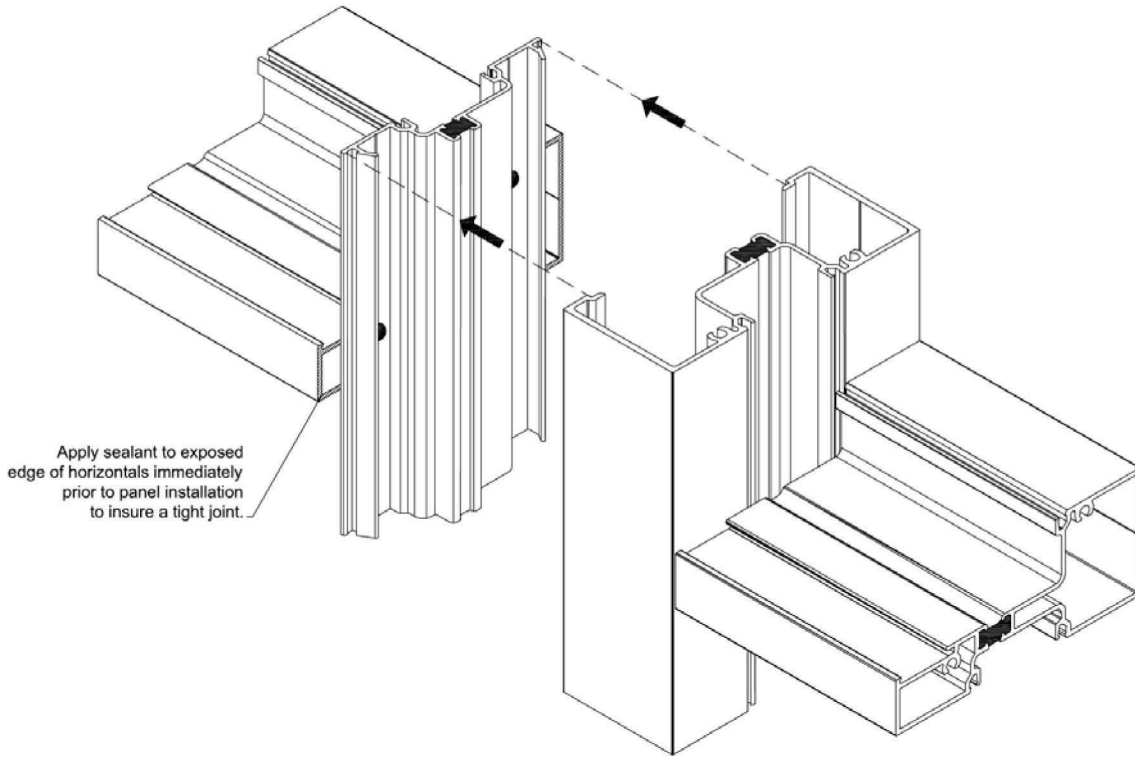
### Installation of Panels

1. If installing panels with an entrance, always start installation with panel adjacent to door entrance. If there is no entrance, start at one jamb and work toward the other.
2. Apply sealant to back leg of the sub sill and install first panel. Set storefront framing into place. Panel must be pushed against sub sill upturned back leg and sealed. Level and shim first panel accurately. **NOTE:** Do not seal between sill and sub sill. It must be left open for drainage.
3. Plumb and shim unit and fasten it to a solid structure at base. Locate header fasteners 6" each side of verticals and no more than 16" or as required by project engineer. Secure all points into solid structure. Seal screw heads.
4. Install remainder of panels, one by one, snapping them together. See Figure 8.

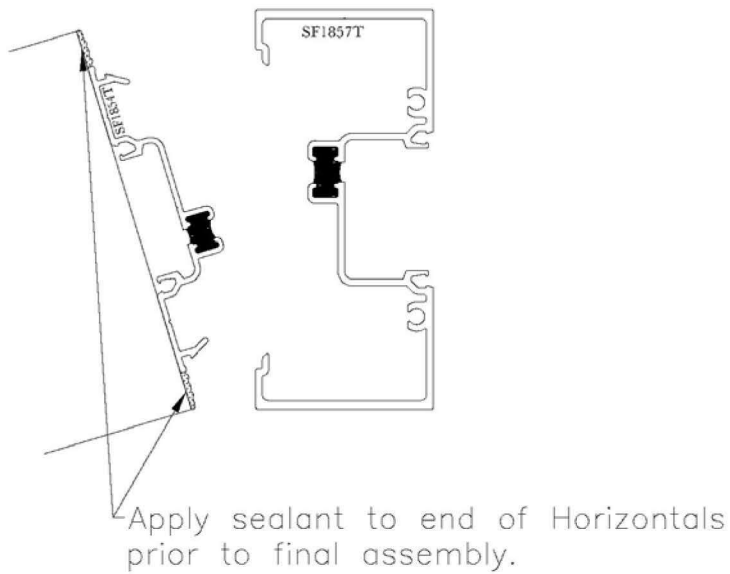


**Fig. 8**

5. **IMPORTANT:** Apply sealant to the horizontal member at the point of contact with the vertical mullion prior to assembly of frame units. Then snap into place. See Figures 9A and 9B.

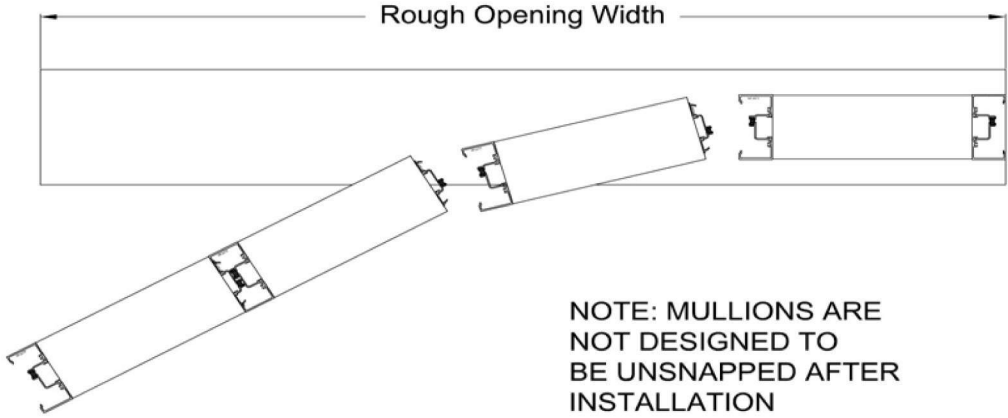


**Fig. 9A**



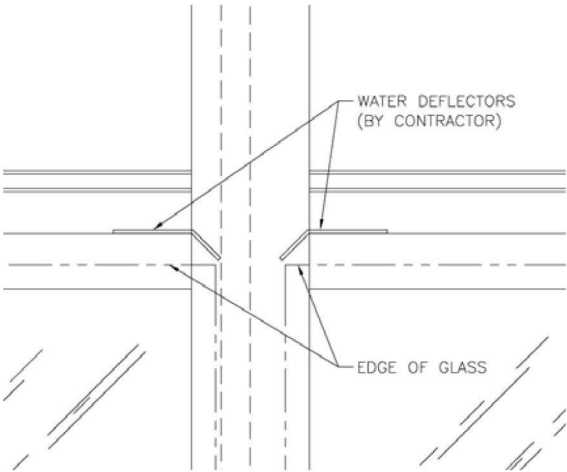
**Fig. 9B**

**NOTE:** The last two panels may be required to be installed together as a unit to fit into opening. See Figure 10.

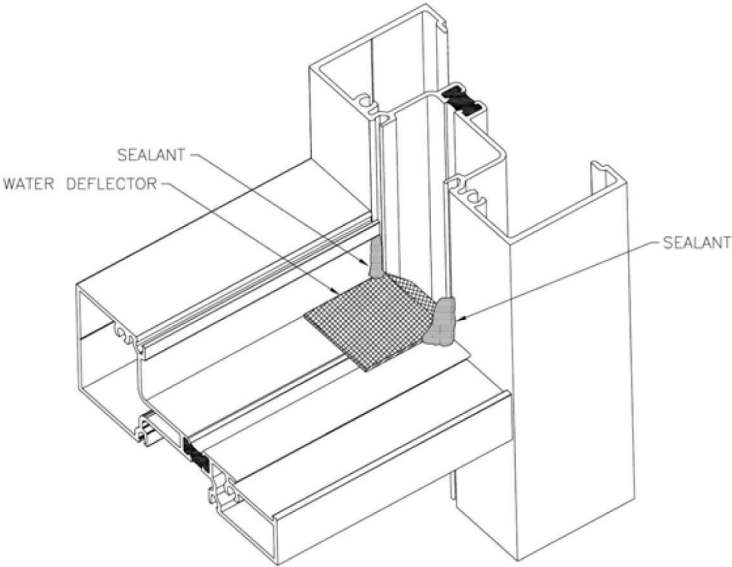


**Fig. 10**

- 6. Clean the surfaces of the horizontals where you will install water deflectors. Apply sealant on top corner's edge of intermediate horizontals for water deflectors. Place water deflectors on sealant as shown in Figure 11A and B, then apply sealant around water deflector. Be sure there is a gap between the water deflector and the inside wall of the mullion to allow water to flow down past the I.G. unit. See Figures 11A and 11B.



**Fig. 11A**



**Fig. 11B**

## OUTSIDE GLAZING

1. Cut glazing gaskets to size. Glazing gasket should be 1/8" longer per foot of aluminum member to allow for shrinkage.
2. Clean inside pockets of horizontals and verticals before the installation of glazing gaskets.
3. Apply sealant into gasket reglets of the horizontals and verticals and seal the edges of the water deflectors only on the flat side of the horizontal. **DO NOT** allow any of the sealant to get into the pocket of the verticals in order to allow the system to drain. Install interior glazing gasket first. Vertical gaskets runs through Horizontal gaskets. Start at corners and work toward center. Set the corners of the glazing gaskets in sealant and join corners tightly to avoid leakage. See Figures 12A and 12B.

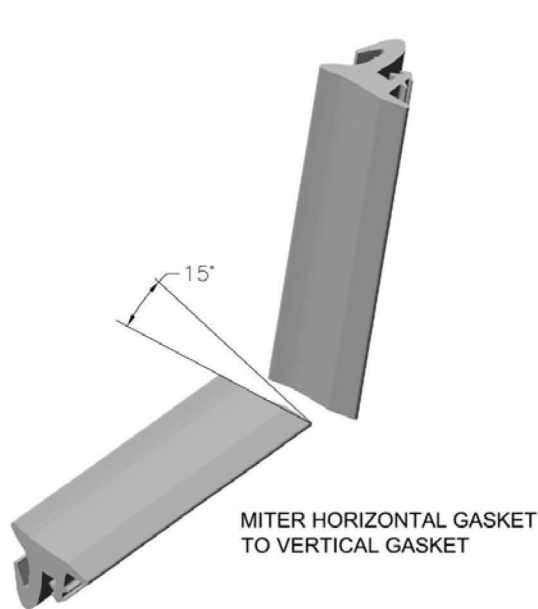


Fig. 12A

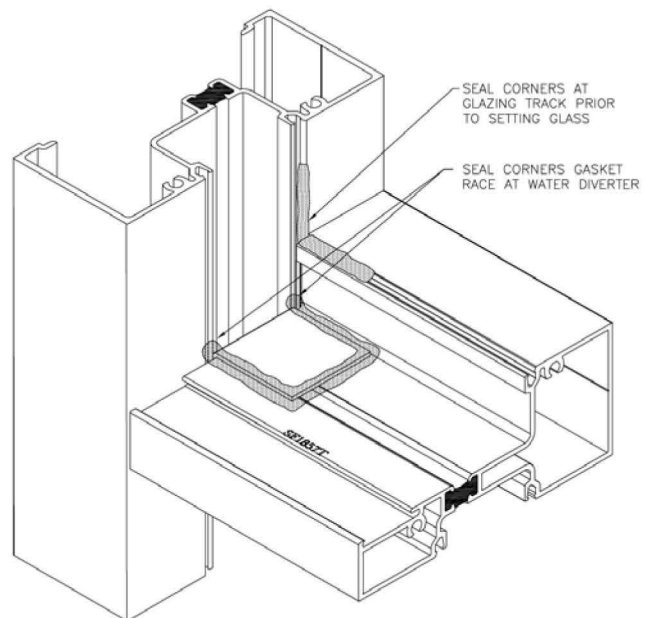
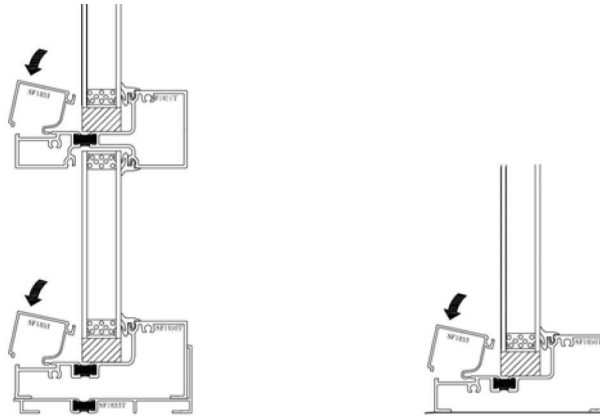


Fig. 12B

4. Install glass panel.
5. Raise glass panel into position and install setting blocks at approximate 1/4 points, 2 per lite. Press glass panel against Interior gasket.

6. Snap in Glass Stop SF 1853 and then press exterior glazing gasket into position. Be sure to seal the ends of the glazing gaskets at the corners. See Figure 13.

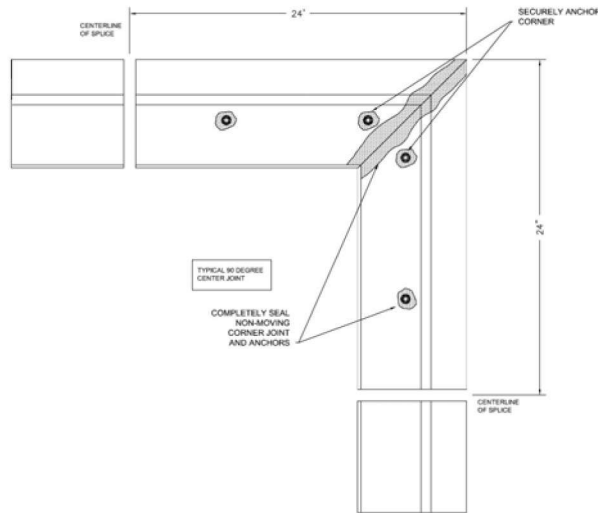


**Fig. 13**

7. In areas that experience shifts or high vibrations use "W" side block to prevent glass from shifting in the opening. The block should be installed deep into glass pocket of the vertical at center point or as recommended by glass manufacturer.

### CORNERS

1. Miter two 12" sections of sub sill to correct angle See Figure 14.

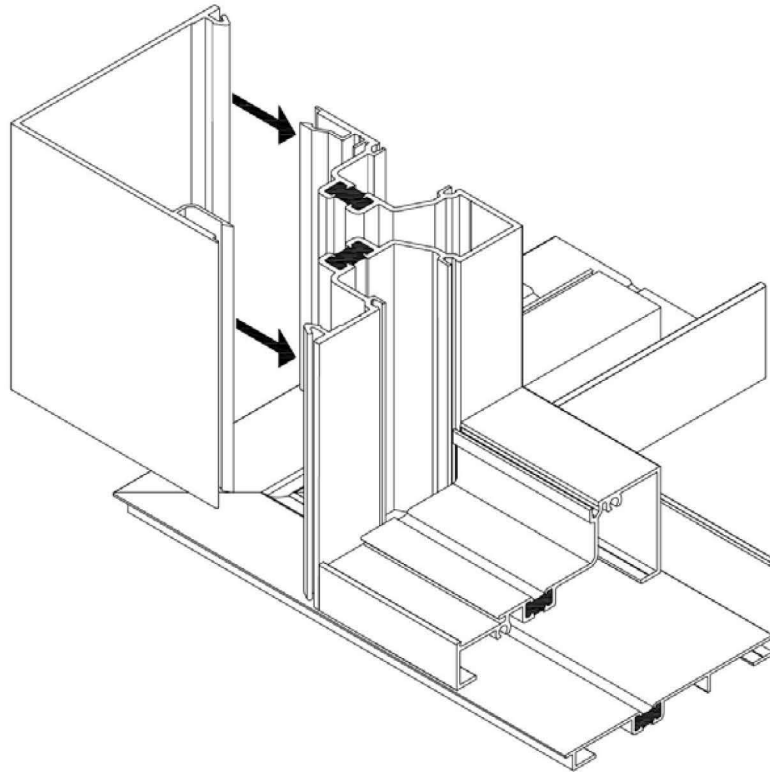


**Fig. 14**

2. Set mitered joint in a bed of sealant and securely anchor corner into place with a tight joint. Pin anchors close to corners to ensure a secure corner. (See Figure 14, page 15.)

3. Completely seal mitered joint and anchors.
4. Use standard splice joint at point 12" from corner. Always secure sub sill into solid structure (See Figure 4, page 8)
5. Use the same preparations as are required for the standard Vertical installation for the One Pocket Corner Half (SF 1864) and the One Pocket Corner (SF 1868). Apply sealant to end of horizontals then secure SF 1864 to horizontals See Figure 15.

### Corner Trim



### Glazing of Half Corner Post

**Fig. 15**

6. Apply sealant to ends of Horizontals and attach horizontals to One Pocket Corner SF 1868.
7. Snap SF 1868 into SF 1868 when securing the next section.