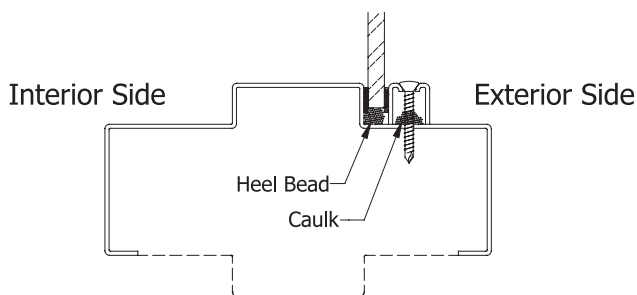


Guidelines for Glazing of Hollow Metal Transoms, Sidelights and Windows

1. Hollow metal transoms, sidelights and windows are an excellent choice at exterior locations. Proper application of sealing methods commonly used with other window systems will result in excellent performance. In addition, hollow metal is a superior solution for security, durability, thermal transfer, wind load, and seismic performance.
2. Hollow metal shall be manufactured in compliance with HMMA Guide Specifications and TechNotes HMMA-820 TN02-03, Continuously Welded Frames. It should be noted that a continuously welded assembly alone does not ensure a watertight condition. *Whenever possible, it is strongly recommended that glazing material be installed on the exterior rabbet of the frame assembly, which will help act as a deterrent to water penetration.*
3. The Hollow Metal manufacturer does not control the installation of their product or application of perimeter caulking, joint sealants, or glazing materials. This work should be specified in the Installation / Glass / Glazing / Caulking section of the specifications.
4. These are recommended guidelines for the prevention of air and water infiltration for exterior hollow metal. A primary source of leakage is the interface of the wall and the hollow metal frame. The contractor must ensure proper flashing and sealant procedures are followed as specified in the contract documents. The glazing installer must also follow proper caulking methods during installation of glazing, panels, and/or operable window units. To ensure that glazing, panels, and/or operable window units are sealed properly, these are to be installed in the field.
5. The attached figures and accompanying text show methods successfully tested to the following standards: ASTM E283, Air Infiltration, ASTM E331, Static Water Penetration, and AAMA 501.1, Dynamic Water Penetration.
6. The sealant tested was Corning 795 silicone. It is the responsibility of the general contractor to ensure that this or an equivalent sealant is used. Silicone sealant cannot be painted. Colored silicone sealants are available.

Removable Glass Stop on Exterior Side (Preferred Method)



Removable Stop Exterior Side

Figure 1A

1. Space between edge of glass and steel frame shall receive a continuous heel bead of sealant. Care shall be taken to ensure adhesion of sealant to glass edge and steel frame as shown in Figure 1A.
2. At the same time as the heel bead is applied, the rabbet area at all joints shall be caulked. Caulking shall be a continuous homogeneous bead from the heel bead to the face of the frame as shown in Figure 1B.

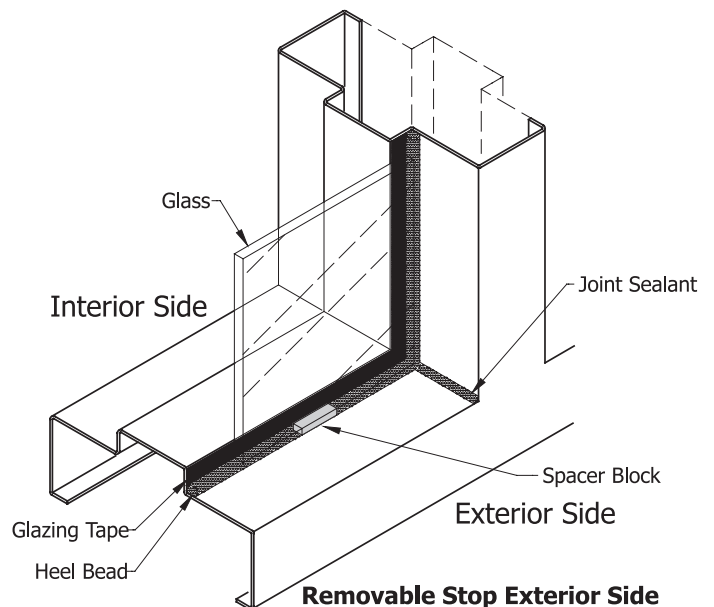
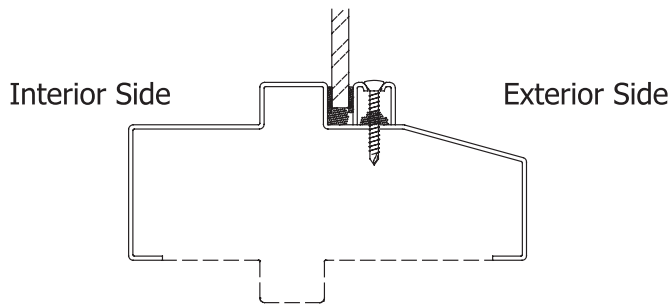


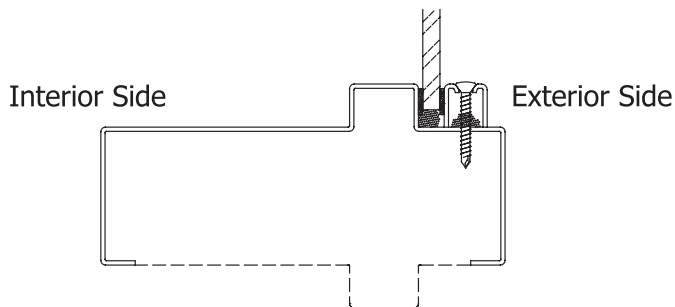
Figure 1B

3. Care shall be taken to ensure that each piece of removable glass stop channel is reinstalled at the same location and direction. This will ensure that glass stop screws go back into the original holes.
4. Prior to reinstalling glass stop screws, caulk threads as shown in Figure 1A.
5. It is recommended that horizontal mullions and sills be sloped to shed water or formed with a smaller rabbet dimension at the exterior side to minimize exposed surface areas as shown in Figure 1C, 1D.



**Optional Horizontal Mullion
or
Sill Section**

Figure 1C

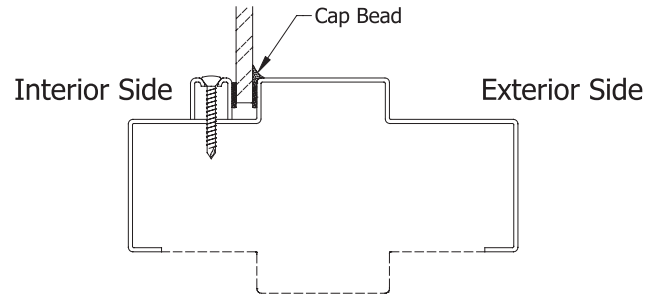


Optional Frame Member Section

Figure 1D

Removable Stop on Interior Side:

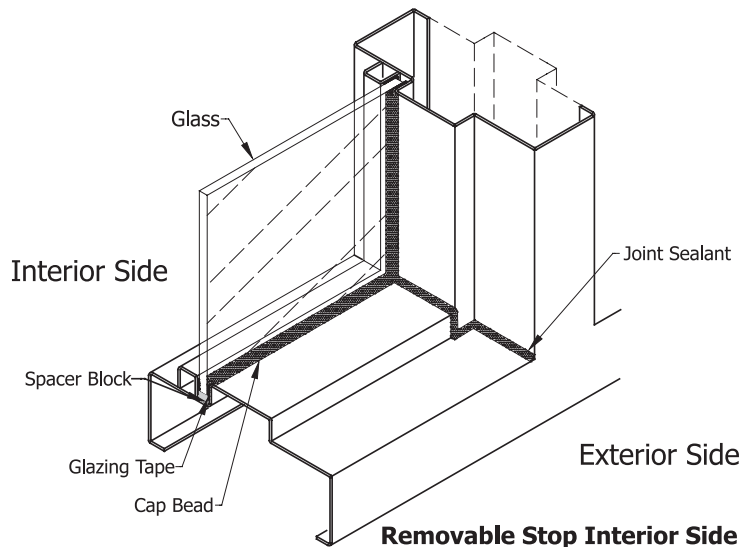
1. Whenever possible, it is strongly recommended that the glazing material be installed on the exterior rabbet of the frame assembly, which will act as a deterrent to water penetration. However when glazing on the interior side is required we recommend the following steps be taken.
2. Continuous cap bead around perimeter of glass on exterior side as shown in Figure 2A.



Removable Stop Interior Side

Figure 2A

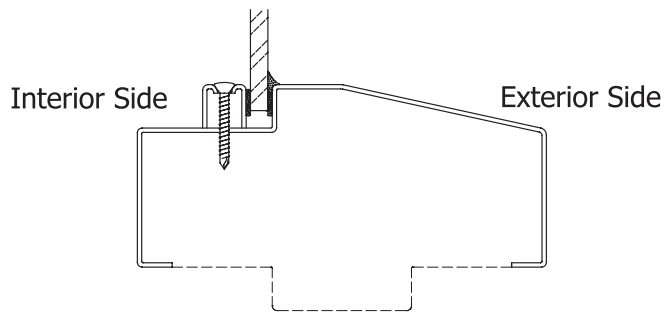
3. At the same time as the cap bead is applied, the soffit, stop and rabbet area at all joints shall be caulked. Caulking shall be a continuous homogeneous bead from the cap bead to the face of the frame as shown in Figure 2B.



Removable Stop Interior Side

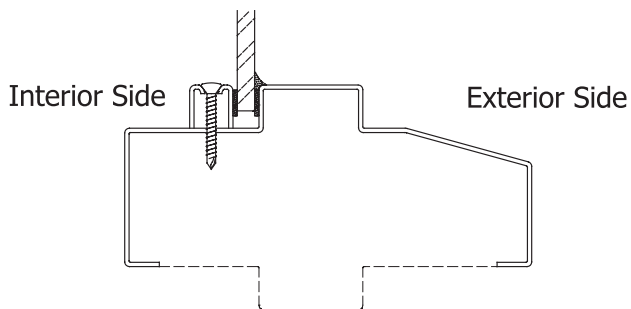
Figure 2B

- It is recommended that horizontal mullions and sills be sloped to shed water as shown in Figure 2C, 2D.



**Optional Horizontal Mullion
or Sill Section**

Figure 2C



**Optional Horizontal Mullion
or Sill Section**

Figure 2D

Sill Condition at Floor:

- Sill channel shall be continuously sealed as shown in Figure 3A and 3B.

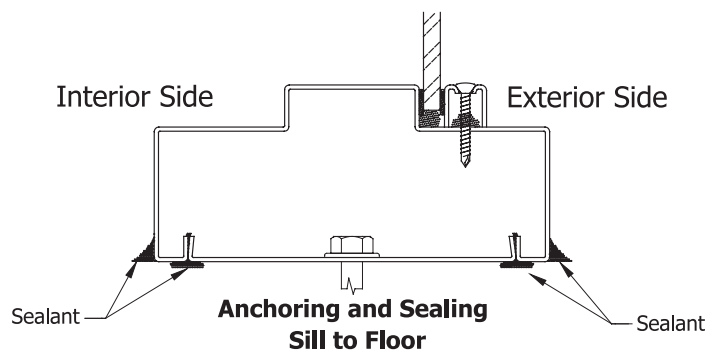


Figure 3A

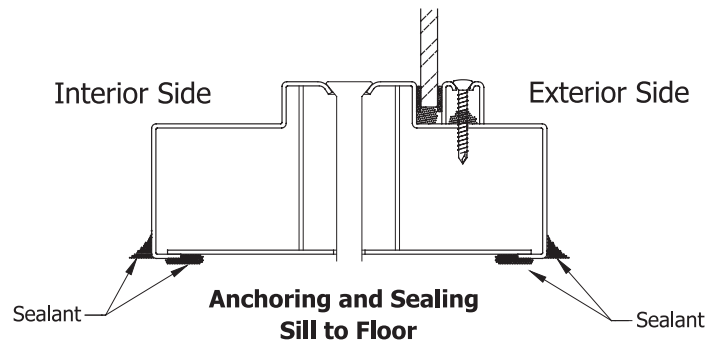


Figure 3B

- All vertical frame members shall be continuously sealed around profile at floor as shown in Figure 3C.

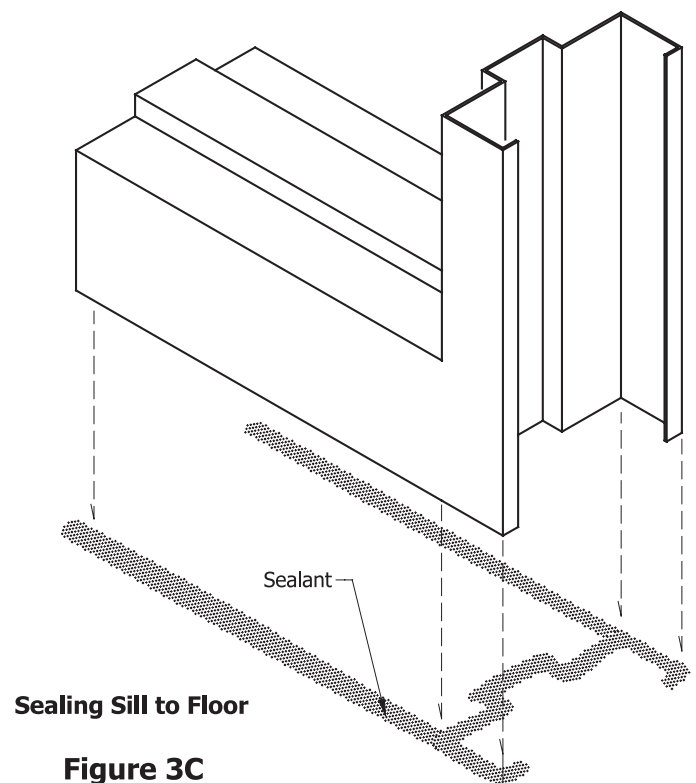
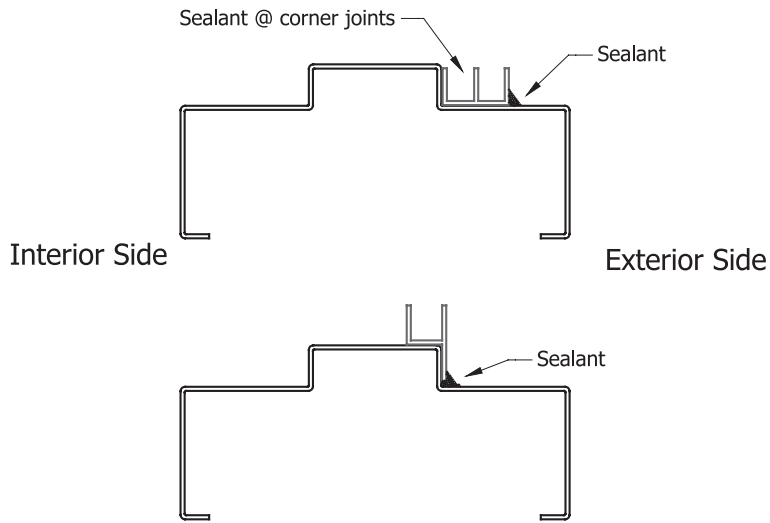


Figure 3C

Operable Window Inserts

1. All exposed seams shall be continuously sealed as shown in Figure 4.
2. Water shall not be permitted to weep onto the hollow metal frame members at an area that has not been sealed.



Operable Window Inserts

Figure 4