


## Guidelines for selecting and installing storefront systems

By Kevin Haynes

As building professionals know, water infiltration through storefront systems can cause expensive damage to buildings. Unfortunately, many storefront systems on the market today are susceptible to water infiltration over the top of partial-height flashing or where fasteners penetrate the sill

flashing. Improved designs are available to better protect against a range of water sources, including wind-driven rain or sprinkler heads located near the storefront elevations. Following are key issues to be aware of when selecting and installing storefront systems. Note, the accompanying figures demonstrate Vitro

America's Classic Line Architectural Aluminum Storefront System, as an example. The system uses the DOW 795 sealant. 

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### 1. Sill flashing design

A quality installation starts with the design of the storefront system, and the most critical component is the sill flashing. This is often overlooked when considering the complete design.

A well designed extruded aluminum sill flashing should incorporate a full-height interior leg with a C-shaped receiver slot at the top designed to accept a continuous line of sealant. The full height is important because in a heavy rainstorm, water can quickly flood the shorter interior leg on the sill flashing, increasing the possibility of water infiltration.

### 2. Full-height end dams

Full-height dams should be installed at each end of the sill flashing. End dams are an effective way to channel water out to the exterior of the storefront system. See Figure 1.

### 3. Blind seals

Many storefront systems do not offer a sill section that allows for direct attachment to the substrate. In these cases, a blind seal is required as shown in Figure 2. In some cases, the installer will attempt to avoid a blind seal by attaching the sill to the back of the sill flashing leg. Both methods depicted in Figure 2 should be avoided.

To eliminate blind seals, the sill flashing and sill members in improved storefront systems are designed to allow direct structural anchor attachment to the substrate with one hole in the framing. Each structural anchor is then cap sealed and inspected prior to installing the glass within the sill section. See Figure 3.

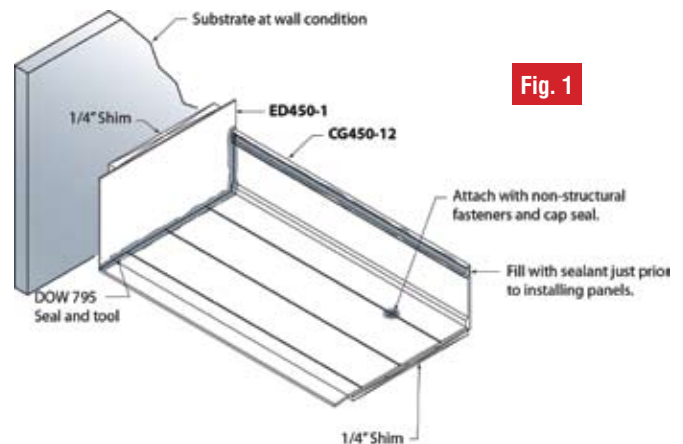


Fig. 1

Fig. 2

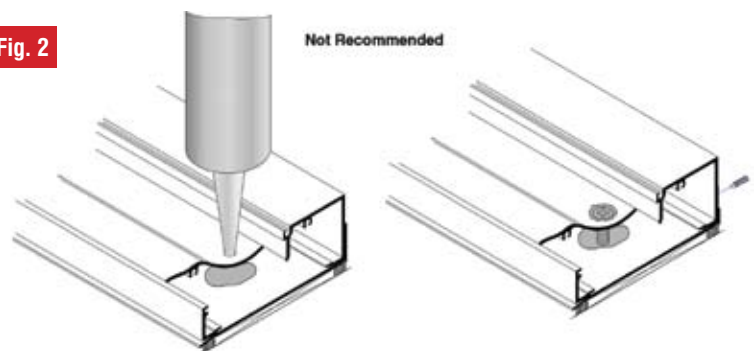
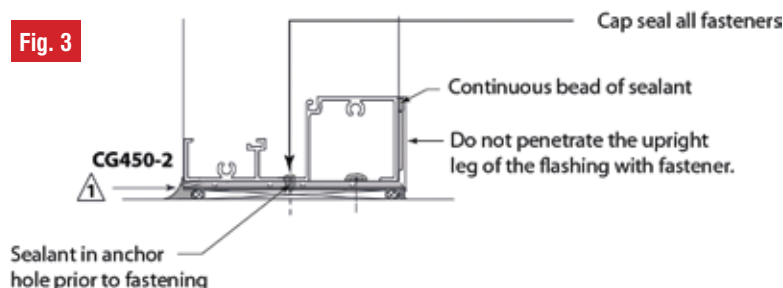
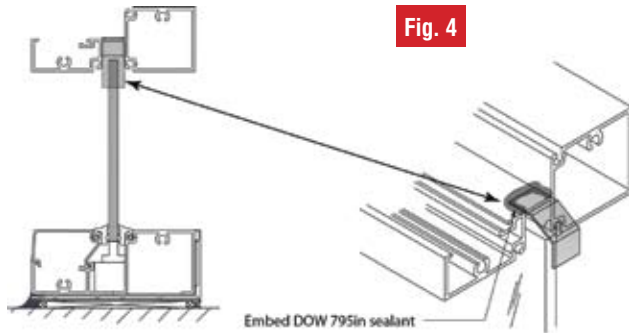


Fig. 3



#### 4. Water deflectors

Water deflectors should be installed at each end of intermediate horizontal members to channel water down the vertical mullions, which helps ensure proper internal drainage.



#### 5. Gaskets

Glazing gaskets are prone to shrink over time and pull away from the corners. To remedy this, the gasket length should be oversized to account for eventual shrinkage. After the gaskets are sized and installed, lift them as shown in Figure 5 and seal with DOW 795 sealant.

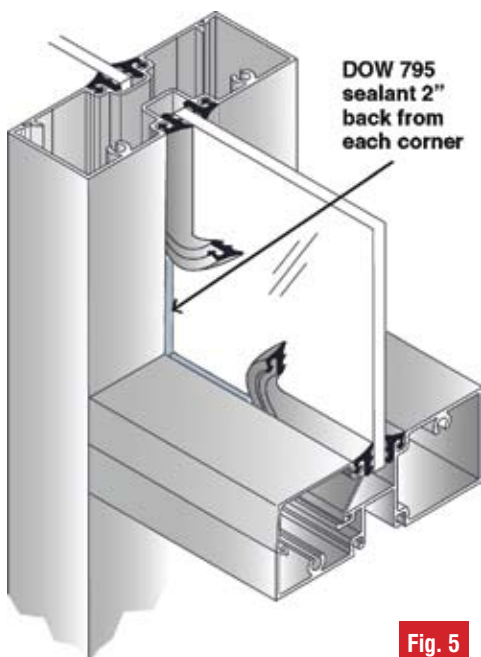


Fig. 5



Paying close attention to the system selected and how it is sealed during installation can provide peace of mind for the building owner and contract glazier. Pictured, Vitro America's Classic Line Architectural Aluminum Storefront System.

## Ten tips for storefront installations

1. Always follow the manufacturer's installation instructions.
2. Install frames level and plumb.
3. Ensure proper tolerances between the frame and substrate.
4. Secure frames properly to the structure to resist dynamic forces of shear, tension and compression.
5. Remove all debris from glazing pockets before completing the installation.
6. Double check for proper sill flashing installation, including anchoring the systems and installing end dams.
7. Pay careful attention to placement and sealing of gaskets, including sealing gasket corners.
8. Install water diverters at the ends of each intermediate horizontal member.
9. Center the glass in the daylight opening and install the proper setting blocks.
10. Focus on craftsmanship. It is better to take the time up front than to deal with expensive call-backs.