WEB BASED CORE APPLICATION SPECIFIC INSTALLATION INFORMATION AND METHODS

Installation Application Variations: Frame-In Frame-Out

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STANDARDS AND PRACTICES

Replacement and Retrofit Variations: Frame-In vs. Frame-Out; Wall Constructions; and Window Frame Materials

There are many wall constructions (wood frame, masonry, and concrete block) along with vinyl, wood, and metal windows that are to be removed, and vinyl, wood, composite and metal windows to be mounted as replacement.

These variations require individual considerations when removing the old windows; such as whether you leave the old frame in place, or remove it completely.

These wall construction and window frame materials also impact how you remove the old window, how you install the new windows, and how you flash and seal the opening to prevent air and water infiltration.

It's important how you install so you can preserve the in-lab performance of the new product when placed in-service. With all these variations, the basic approach is the same.

What needs to be decided first is whether the new window mounts against the old window frame, preserving the existing weather barrier interfaces already established between the left-in place window and the wall; or does the new window go into an opening where the old frame is gone and all the weather barriers need to be re-constructed.

The following shows examples of different approaches - with the common goal of proper weather management.

NOTE: All drawings are not necessarily to scale or representative of any particular window type or opening. They are for guidance. Actual situations and products may vary.

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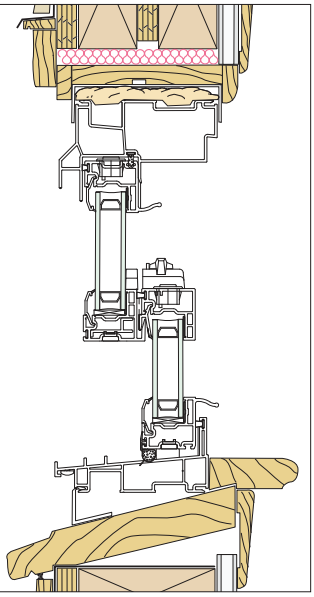
WOOD WINDOW
Frame In and Frame Out

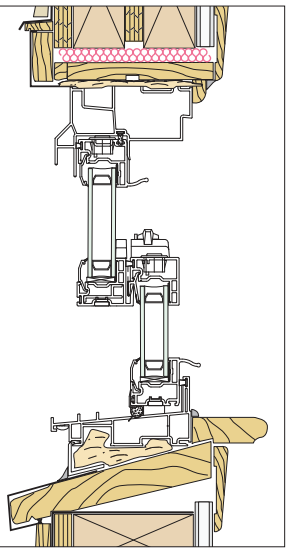
Frame In - A

Blind Stop (Inside-Out)
Basic sash pocket replacement. The Operating Sash and balance system (Ropes, Pulleys, and Weights) are disconnected and removed to inside (or aluminum track/spring). The New window is installed into the sash pocket from the interior (head expander as needed) with optional wrap of exterior trim.



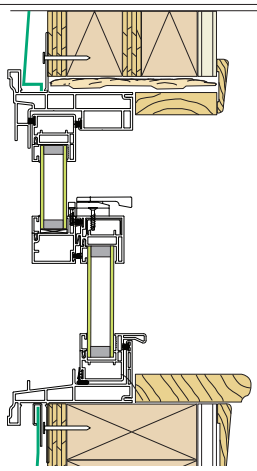
Frame In - B

Interior Stop (Outside-In)
Operating Sash removed from exterior by trimming down blindstop. Operating balances, ropes, pulleys, tracks removed to outside. Interior stop left-in-place. Window installed from exterior, against inside stop with full exterior wrap to cover exterior stop.



Frame Out (Integral J-Channel)

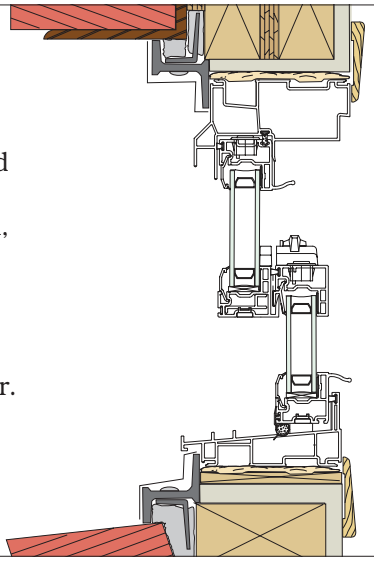
Rough Opening
Brick mold, old frame & sash pocket removed. Sheathing revealed to width of casing. New, finned window installed with new brick mold exterior casing over new fin to butt siding. Interior trimmed as needed. The Integral J-Channel can allow re-application of the siding and create effective water management.



STEEL WINDOW
Windows set in Concrete, Stucco or Masonry

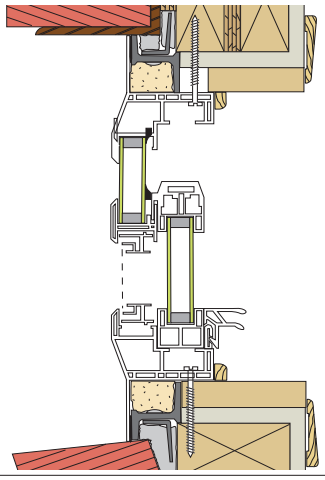
Frame-In A

Butt to old frame from Interior
Removal of operating sash, mulls and glazed panels. New, box frame window is installed, butted to old frame. Aluminum Capping is applied to finish weather seal the exterior. Sealant is used to seal the interior.



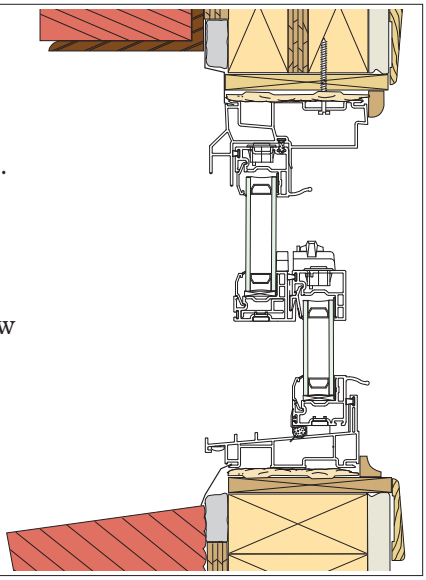
Frame-In B

Butt to old Frame from Exterior
Removal of operating sash, mulls and glazed panels. Sill, jambs and header blocked. New, frontal flange window is installed with flange against old frame and trimmed interior.



Frame-Out

Remove Old Frame Totally.
Old steel window is completely removed. Disturbed rough opening is repaired and cellular pvc buck mounted, sealed then wrapped to receive new box frame window. It is installed with snap trim or pvc trim to interior and exterior - as needed.



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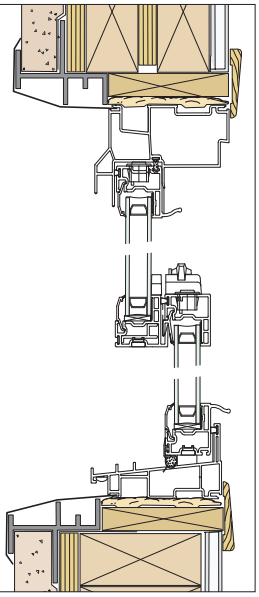
ALUMINUM WINDOW
Frame In

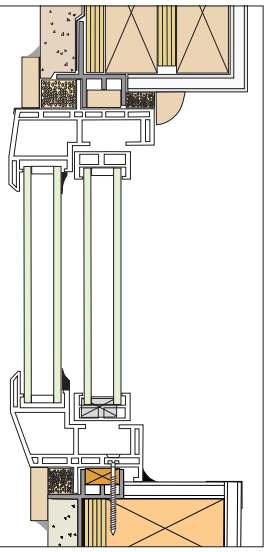
Box Frame

Aluminum Frame-In.
Operating Sash(es) removed, mullion and fixed glass panel (if included) removed to leave old frame. New Box Frame Window installed to left-in-place jambs, sill and header - capping or trimming exterior.



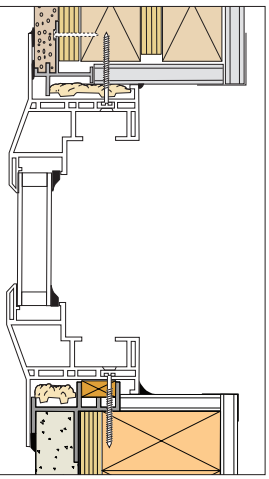
1/2 inch Fin

Using Nailing Fin
Operating Sash(es) removed, mullion and fixed glass panel (if included) removed to leave old frame. The New Window with integral 1/2" fin is installed to blocked old frame at jambs, sill and header with either pvc liner or wrapped frame.



Jump Frame

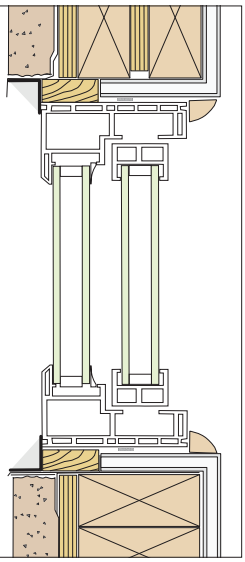
Using 1 inch Frontal Flange
All operating sash, mulls and glazed panels removed. Wide frontal flanged window installed inside old frame, with flange covering outside trim. Aluminum or pvc Drip Cap should be made and installed along top flange to prevent water penetration behind flanges and into the cavity.



ALUMINUM WINDOW
Frame Out

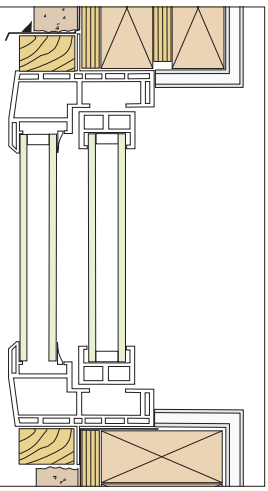
Pry-Out

Aluminum Frame-Out
Sash, mulls and glazed panels removed. Old frame pried and cut out. Box Frame window installed with either snap-trim to interior and exterior, fabricated blind stop, or installed pvc liner.



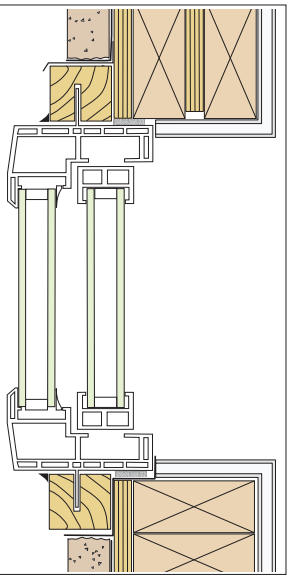
Cut-Back

Fin Mount
Siding cut back to reveal old window fin. Old window removed, fin and all. New finned window installed with new brick mold style exterior casing over new fin to butt siding. Interior trimmed as needed.



Cut-Back & Kerf

Kerfed Wood Moulding
To fill space left by an old window with 2-1/4" frame depth with new 3-1/4" window, siding is cut back to expose old window fin. Old window is removed. Brick mold style exterior trim is kerfed with groove that fits over new window fin to move new window towards exterior.



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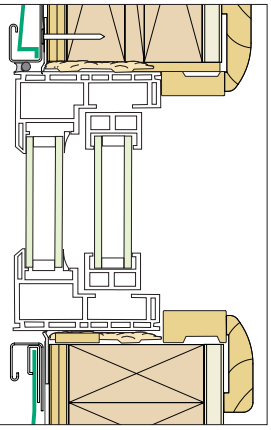
FIN MOUNTED WINDOW
Frame Cut-Out

Box Frame

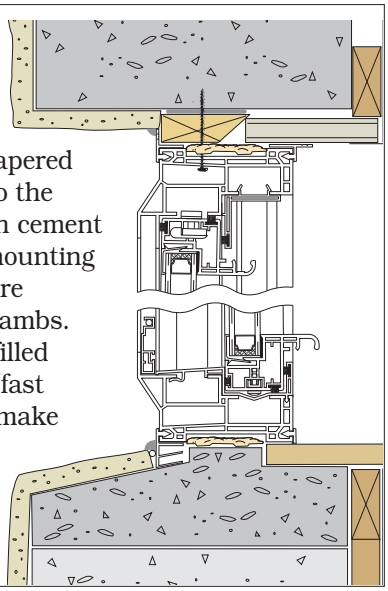
Mounting Fin Cutout.
Sawsall cuts through nailing fin of old window on all 4-sides. The fin remains are left in place. A block is used to make an interior “stop” and the new window is installed from the outside against the stop. Backer Rod and sealant, J-Channel or capping is installed to seal the outside.



CBS METAL WINDOW
Windows set in Concrete Block Stucco Wall

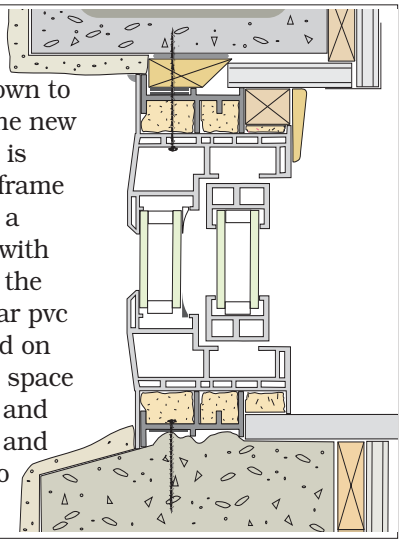
Frame-Out

Wood Buck Surround
The old frame is removed, exposing the wall gap between the stucco coating and the interior. Tapered wood bucks are fastened to the underlying block walls with cement nails to provide a secure mounting surface. The wood bucks are applied along header and jambs. Any gap in the sill can be filled with quick-set compound (fast drying leveling cement) to make sure a level surface is provided for the sill buck, unless it’s a pre-formed sill with taper.



Frame-In

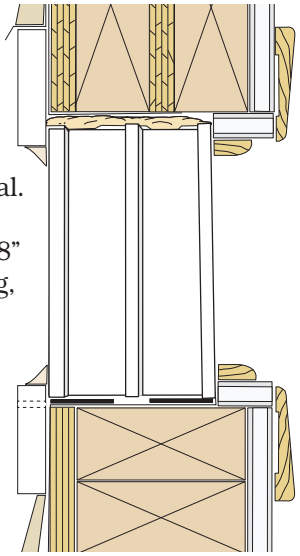
Butt to old frame from Exterior
All panels are removed down to the left-in-place frame. The new window, unequal legged, is mounted against the old frame from the outside to make a weathertight installation with the new window covering the old frame. Wood or cellular pvc trim blocks can be applied on the inside to level out the space between the new window and the old sheetrock return, and allow trim to be applied to finish the install.



UNIVERSAL FIN WINDOW REPLACEMENT
Box Frame Pocket Install

Box Frame

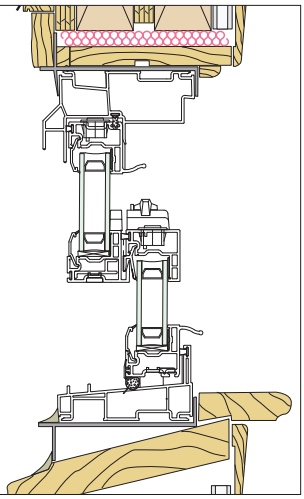
Creating Blindstop
Rather than saws-all cuts around old window to leave the fin in place, removing old trim and siding to expose the old finned window allows full removal. Replacing the removed trim and/or siding with new trim, 3/8” wider, to project into the opening, creates a “blindstop” allowing a Pocket Install from the inside. Using shims under the window and cap nails to secure the sill flashing in place provides proper, functional drainage.



OPENING LINER

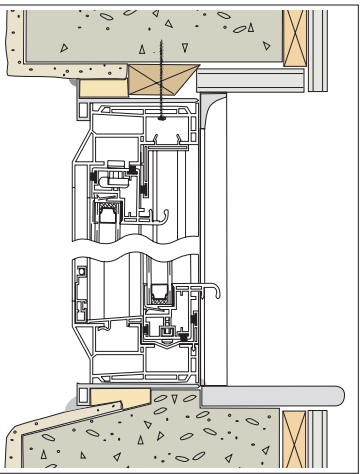
Wood Frame-In or Frame-Out

Wood Openings
Whether the old window frame is left in or removed, a pvc liner works like a receptor system. The liner can be installed plumb and square with all weather barriers re-established. Then the new window is installed into the liner weather tight.



Concrete Frame-In

Masonry Openings
When windows are installed into masonry openings of block and stucco, removal leaves a mess that’s difficult to make weather tight. A rigid liner system overcomes the destruction of removal and allows a good performing installation.



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