Criteria for Proper Installation of Vinyl Replacement Windows

CRITERIA 1- Each Installation shall be in accordance with the Window Manufacturer's published Installation recommendations and AWDI Certified Installation Procedures.

Benefit- Each window has been designed to be a complete machine, able to perform in your home as near to the tested standards as possible. The manufacturer must enable the installer to correctly install the product to complete the total, functional, window system. Quality manufacturers who are sure of their product will publish complete instructions, and are glad to do so.

CRITERIA 2- Each window shall be installed plumb, level, and square.

Benefit- A square and level window allows the close tolerances in the sash and frame design to work properly, keeping out the weather but operating smoothly. The old opening may be out of square due to deterioration, and an improperly fitted window may take on the distorted shape of the opening and not operate correctly or safely, and will more quickly wear out.

CRITERIA 3- If removed or broken, the Installation shall include the replacement of the inside stops with new, non-finger joint, mitered and puttied stops.

Benefit– Interior stops are the last barrier to air infiltration and blend the new installation to the home's interior. Properly installed, new stops of aluminum snap-trim, new wood mouldings, or pre-shaped vinyl look better and work better.

CRITERIA 4- The exterior should be freshly capped with finished aluminum or pre-extruded vinyl shapes. They shall be "pressure-capped over the sill angle (if used), over the old sill and blind-stops, or they will be used to form new capping. All capping will touch the window frame.

Benefit– Capping protects against further erosion of the window opening and preserves the integrity of the weather barrier. Pressure capping assures that the more the wind blows, the tighter the seal. Touching the window frame creates a seal against any air or water leakage.

CRITERIA 5- Capping must have rigidity. If not aluminum coil stock or rigid vinyl, then the edges must be reinforced and overlapped.

Benefit– "tabbed" return on aluminum edges creates rigidity in the overlap joints to keep the exterior weather seal tight and avoid "caulk-only" joints.

CRITERIA 6- Structural foam insulation shall be used above the head and under the sill of the new window. All holes in the old window frame, caused by the removal of the old window parts, shall also be covered with foam as above, or foil-backed tape.

Benefit– Most variations in old window openings occur on the sill (wear and tear). Compressible foam contours itself to the old sill, yet maintains structural integrity with the new window frame. Air and moisture need only a crack. Old pulley holes, weight housings, leaky frames or gaps created by old frame removal are perfect places for air and moisture to leak unless covered or blocked.

CRITERIA 7- Fiberglass batte or foam insulation shall be inserted around the new window-especially the sides.

Benefit– Irregularities and out-of-square openings can leak air and moisture unless blocked. Flexible insulation is especially important for new windows with channeled sides.

CRITERIA 8- Urethane based sealant, or silicone caulk shall be used and shall be color coordinated to the new window or window trim.

Benefit– Only top grade silicone or advanced urethane sealants will adhere to all the possible installation surfaces - vinyl, wood, masonry, aluminum - with equal strength. The adhesive bond of the sealant should remain flexible and intact for the life of the window.

CRITERIA 9- No more than a 1/2" gap shall be filled with a head expander.

Benefit– Properly measured, built, a window can be custom installed and shimmed with only 1/2" or less difference in the window height and the opening to eliminate gaps, and fit tighter. Some brands have height variations of 3/4" to 1". They rely on the head expander to take up the slack, but the large gap can produce an installation that looks bad, and performs worse. Interior stops don't fit snug up the entire side; the glass area of the window is smaller; and there is a potential air gap along the entire window top.

CRITERIA 10- For any installation, the width of the window shall not be more than 1/4" smaller than the average width of the opening.

Benefit– Properly measured and built, a custom window should not have gaps on each side of more than 1/8" which is sufficient to allow shimming for plumb and square. Larger gaps invite unsightly installations, future air leaks, and poorly operating windows.

CRITERIA 11- Non-degradable shims (plastic or equal) shall be used and they shall not be tapered. Shims shall be used under all mounting screws.

Benefit– Wood shims can swell, crack, or deteriorate causing the new window to loosen, rack, or warp out-of-square. Loose fitting sash and frames then leak air and moisture and the windows become difficult to operate and lock. Plastic, U-shaped (tabbed or plain) shims that fit around the screws for solid support, or self contained factory installed "butterfly" clips will outlast wood and should last as long as the window itself.

CRITERIA 12- All internal mounting screw access holes shall be covered by sash stops or plastic plugs.

Benefit–Installation screw holes can be unsightly but may also leak air and moisture. All holes should provide blockage to air leaks and be hidden from view.

CRITERIA13- All mounting hardware shall be non-corroding stainless steel.

Benefit– Aluminum screws are weak, and zinc coated screws eventually corrode. Stainless steel screws are the strongest and last longest.

CRITERIA14- Each installed window will be double sealed. Inside between the stops and window, the window should be sealed against moisture penetration from inside into the window frame cavity. Outside between the stops or capping and the window, the window should be sealed against water penetration but allow air flow to ensure no moisture buildup in the window cavity.

Benefit– The new window must form a contiguous seal with the frame and siding on the outside, and the frame and wallboard on the inside. Both seals are completed best when caulked. The interior seal must be complete while the exterior seal must breathe to prevent mold forming in the window opening cavity.

CRITERIA15- Application of sealant in spaces 1/8" or greater shall be done with use of backer rod.

Benefit– Caulk type sealant can effectively and attractively only fill a gap of 1/8" or less. For larger spaces backer rod should be used to assure structural integrity and an adequate, attractive weather seal.

CRITERIA 16- All mulled units shall be joined mechanically with non-corroding screws to supplement the use of "H" or snap mulls.

Benefit– Multiple windows are usually used to fill large openings and therefore need additional vertical or horizontal structural support which is not available from the opening frame. Rigid joints are necessary between windows to create structurally integrated units that, as a group, are stronger than the individual units alone, and will leak less air and moisture.

CRITERIA 17- Every homeowner shall be supplied with a "Use and Care Manual" and every window so installed as to comply with AWDI Criteria will be marked with an appropriate, and individually numbered, Certification Seal.

Benefit– Knowing how to properly use and care for the new windows will preserve the enjoyment and performance beyond the anticipated life of the window. The AWDI Seal identifies an installation that will last the life of the window that was installed, and an installer that was proud of his work.

Three Grades of AWDI Certified Installation

Grade C - Inside Out
Blindstop remains. Head Expander used and Window sealed to blindstop.

Exterior sealed but not capped.

Advantage: Least Expensive

Grade B - Outside In
Blindstop removed. Window needs no Head Expander and is sealed to interior stop.

Exterior Capped.

Advantage: No head expander. No disruption to interior.

Grade A - F-Channel
Old window cleared to opening. F-Channel installed. Window sealed to F-Channel.

Exterior Capped.

Advantage: Completely seals old opening. Most weathertight.

