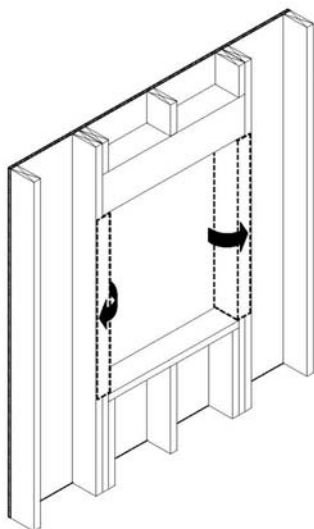


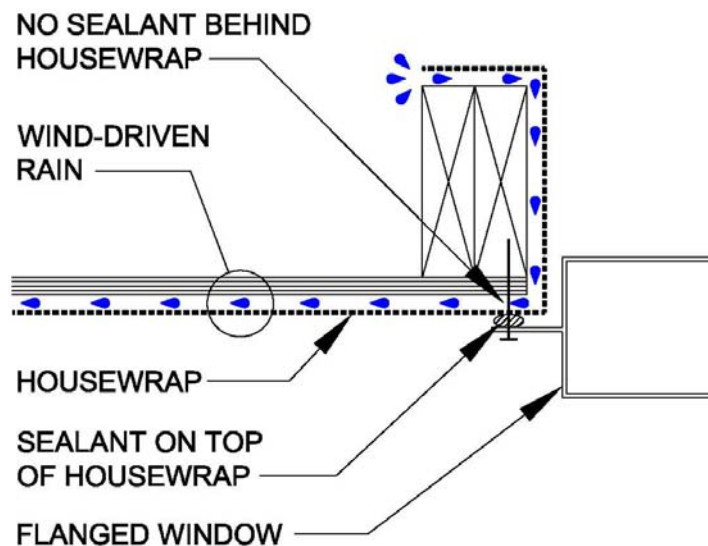
Does Housewrap Really Protect Window Openings?

Housewrap in Rough Opening

Typical housewrap instructions specify wrapping the housewrap inside the rough opening as shown in detail "A" below. When installing a flanged window, sealant is typically specified by the window manufacturer to be applied between the mounting flange and the water-resistive barrier. The sealant, in combination with self-adhering flashing tape, prevents water from entering the rough opening around the window at the jambs. This assembly assumes that all water remains on the outside of the water-resistive barrier. If the continuity of the housewrap is compromised by rips, cuts, staples, un-taped seams, improper lapping, or improper flashing or installation of the housewrap at the window head, water can travel behind the housewrap and into the rough opening. Once water gets between the housewrap and the sheathing, it can be driven by changes in wind pressures (wind-driven rain) towards the window jambs and into the rough opening. A window that is installed in accordance with manufacturer's installation instructions still has the potential to leak due to an absence of a water stop between the housewrap and the sheathing (shown in detail "B").



DETAIL A

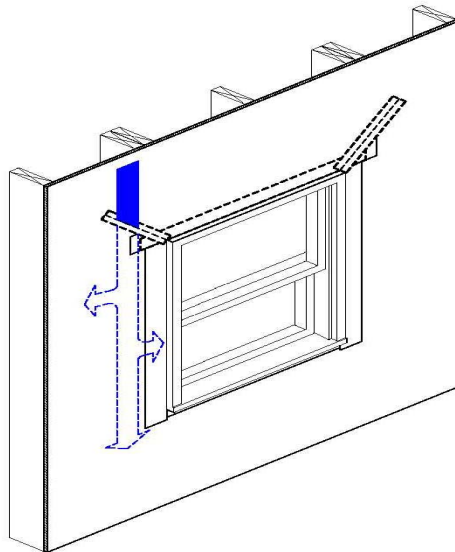


DETAIL B

Housewrap at the Window Head

Typical housewrap instructions specify creating 8"x8" diagonal cuts in the housewrap at the head of the rough opening to allow for window and flashing installation. A common misconception is that the "flap" created at the window head is part of the flashing of the window. In accordance with ASTM E 2112, *Standard Practice for Installation of Exterior Windows, Doors and Skylights* and AAMA 100, *Standard Practice for the Installation of Windows with Flanges or Mounting Fins in Wood Frame Construction*, sealant should be applied between the window mounting flange at the jambs and the head. Following window installation, the jambs and head should be flashed using a self-adhering flashing tape. Common housewraps materials are not code-recognized as flashing.

AC 38, *Acceptance Criteria for Water Resistive Barriers*, section 2.2, requires that upper and lower layers of housewrap, as well as vertical joints, overlap. Horizontal splices are required to overlap a minimum of 2-inches and vertical overlaps are required to overlap a minimum of 6-inches. The diagonal cuts in the housewrap at the window head after window installation do not satisfy the overlapping requirement. There is no exception to the overlapping requirement listed in AC 38 even when taped. The diagonal cuts form a butt splice after the flap is folded back down over the head flashing. These butt splices can potentially create a direct path for water to get behind the water-resistive barrier. Once water gets between the housewrap and the sheathing, it can be driven by changes in wind pressures (wind-driven rain) towards and into window jambs and wood sheathing seams. It is also worth noting that the splices are protected only by small pieces of housewrap tape. Typical Housewrap tape does not meet the performance requirements of self-adhering flashing tape and is therefore not a code-recognized alternate to flashing tape.



The ZIP System® Advantage

ZIP System® wall panels and ZIP System™ tape provide a tight seal around window penetrations without the added steps, time and potential exposure points previously noted. ZIP System wall sheathing is code recognized in ICC-ES ESR-1474 as a combination wall sheathing and water resistive barrier by both the International Building and Residential Codes. Because the water resistive barrier is manufactured as part of the structural panel, it is impossible for water to travel behind the barrier as it can with traditional housewrap systems.

ZIP System tape has passed or exceeded all testing prescribed by ICC-ES Acceptance Criteria 148 for flexible flashing materials. Its adhesion and durability provide the performance required in today's buildings. Use of ZIP System panels and tape allows for faster window flashing and a tight alternative to housewrap systems.

Please contact Huber Engineered Woods at 800-933-9220 with any questions or comments.