

Water can accumulate in walls from two sources: water leaks, and vapor laden air that penetrates the wall to produce condensation. Water from leaks presents the greatest threat of water accumulation in walls. Since water can leak directly into the wall, it can quickly accumulate to levels that will degrade the wood components as well as other products in the wall. Moisture vapor from air penetration and vapor diffusion are important, but represent much smaller amounts of water accumulation.

HOW WATER LEAKS INTO WOOD WALL CONSTRUCTION

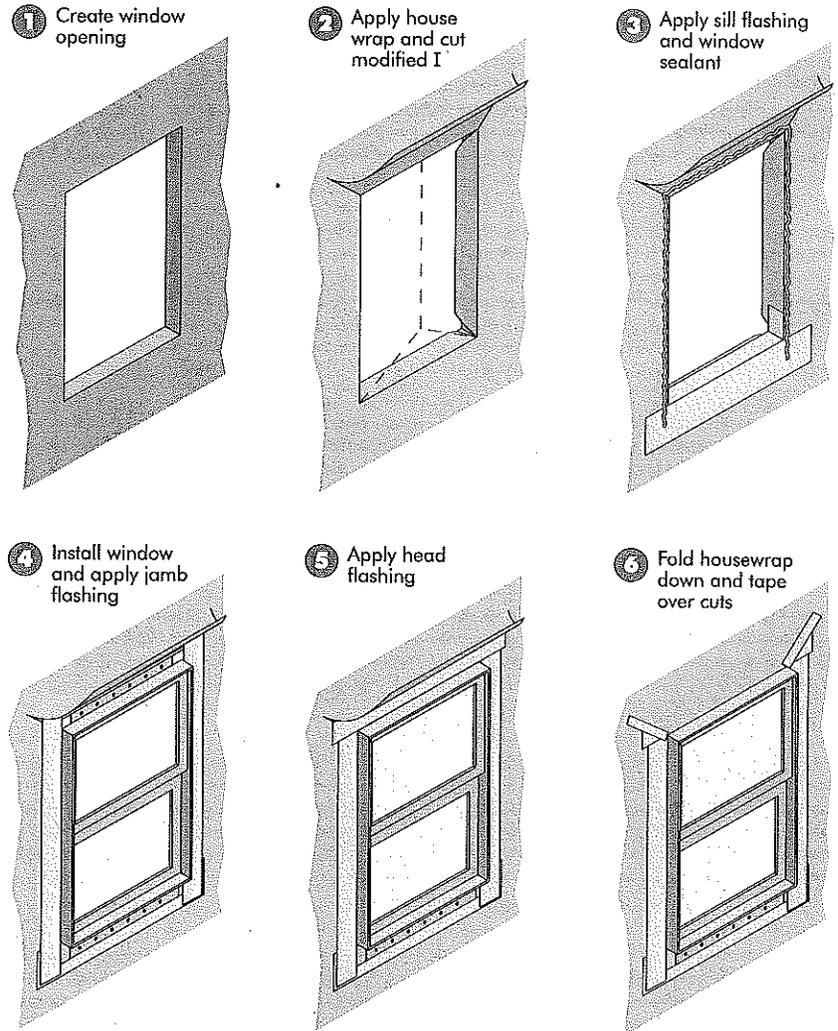
Water leaking through the envelope of a structure is the largest contributor to building damage. Leaks are caused by a number of factors, including:

- Improper or missing flashing
- Improper installation of weather-resistant barriers
- Poorly designed or executed wall intersections and penetrations

Wood structures have the ability to absorb, distribute and dissipate small amounts of water, especially from intermittent sources. Problems arise when there are design or construction errors that allow water into wall cavities at a rate that exceeds the structure's ability to absorb and eliminate the water. Wood construction will perform indefinitely if properly done, but is subject to failure if exposed to prolonged wetting where the wood moisture content exceeds 19 percent.

FIGURE 2

FLASHING WINDOW WHEN USING HOUSE WRAP



Note: In the case of single-wall construction consisting of siding applied direct to studs or over nonstructural sheathing, it may be necessary to attach the windows to the outside of the building. In such instances, refer to the manufacturer's recommended installation procedures.