

Horizontal Metal Flashings

Recent construction defect lawsuits have shown an increase on the missing or improper installation of horizontal metal flashings. Unprotected horizontal surfaces on the exterior of a building can accumulate significant amounts of water. Regardless of the type of surface, flashing is vital for directing water away from the building. Galvanized metal flashings should be common across the top of windows, deck ledgers, box outs around penetrations, and above doors and below the door thresholds. For the flashing to be effective, it must be constructed and installed properly.

The International Residential Code and the International Building Code addresses the installation of flashing.

IRC - R703.8 Flashing. Approved corrosion-resistive flashing shall be provided in the exterior wall envelope in such a manner as to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish and shall be installed to prevent water from reentering the exterior wall envelope. Approved corrosion-resistant flashings shall be installed at all of the following locations:

1. At top of all exterior window and door openings in such a manner as to be leak proof, except that self-flashing windows having a continuous lap of not less than 1¹/₈ inches (28 mm) over the sheathing material around the perimeter of the opening, including corners, do not require additional flashing.

IBC - 1405.3 Flashing. Flashing shall be installed in such a manner so as to prevent moisture from entering the wall or to redirect it to the exterior. Flashing shall be installed at the perimeters of exterior door and window assemblies, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing with projecting flanges shall be installed on both sides and the ends of copings, under sills and continuously above projecting trim.

Door Pans

Door sills are prone to leakage. A sheet metal pan is recommended for all pedestrian doors. The pan is constructed with soldered corners and secured with a nail through each of the side fins that extend up the door jamb. The sill pan must be integrated with the weather resistant barrier installed on the wall.

There are two methods of installing a sill pan under a metal door threshold, as recommended by the *Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA)*. The sill pan can be installed level across the threshold framing or pitched on a thin cant strip of wood or metal.

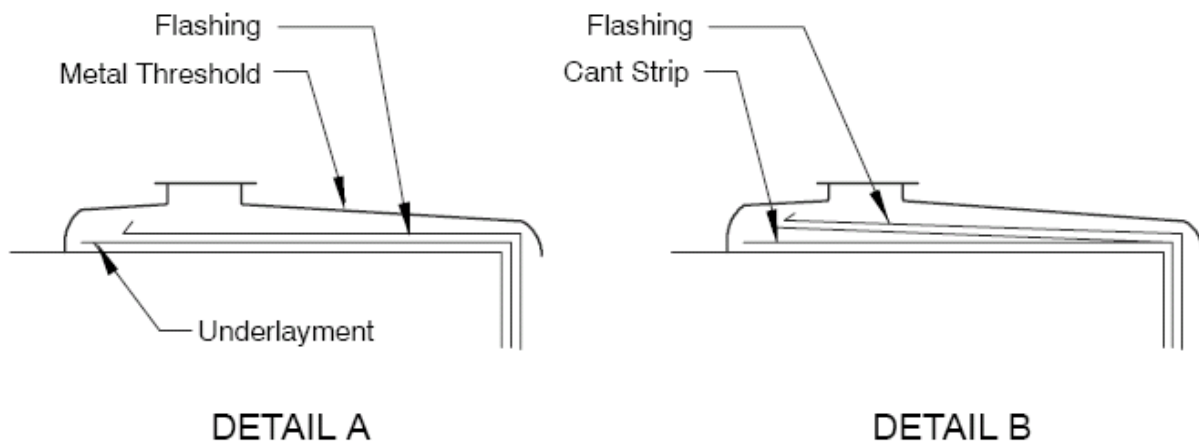
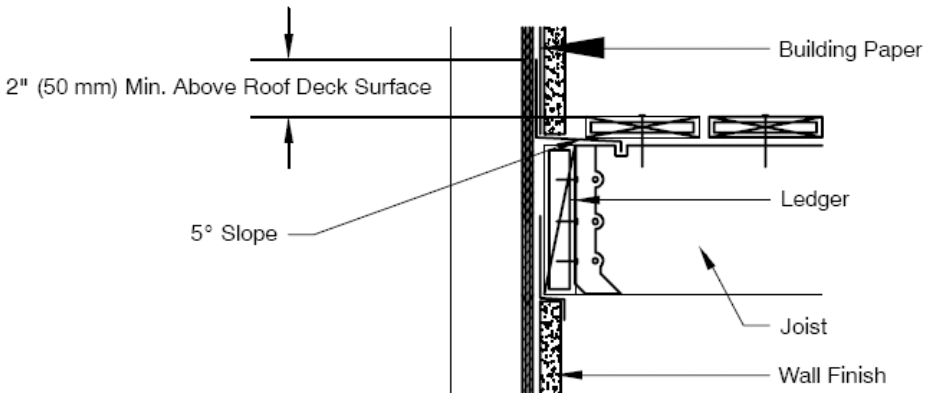


FIG 2-1C

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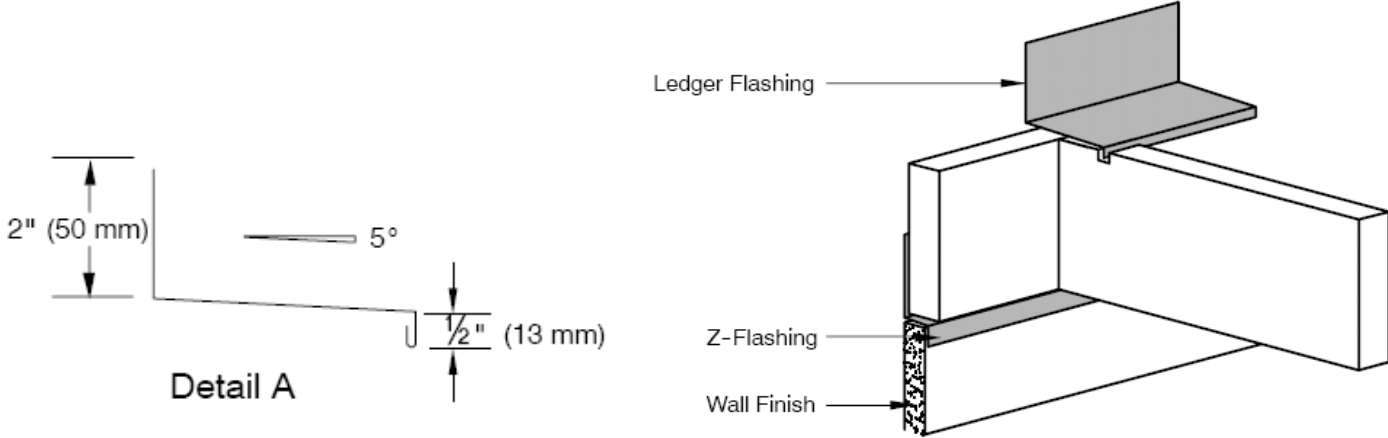
Deck Ledger

Where the deck attaches to the wall, the top of the deck ledger must have flashing installed to prevent water from entering behind the ledger. The flashing should extend up the wall a minimum of 2 inches above the finished deck. The top of the wall flashing must be integrated with the moisture barrier. The flashing must extend out over the top of the ledger and/or joist at a 5 degree slope.



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Flashing must also be installed below the deck ledger. Typically, this flashing is a Z-flashing. This must also be properly integrated with the moisture barrier above. The horizontal leg of the Z-flashing must have a slope of 5 degrees.



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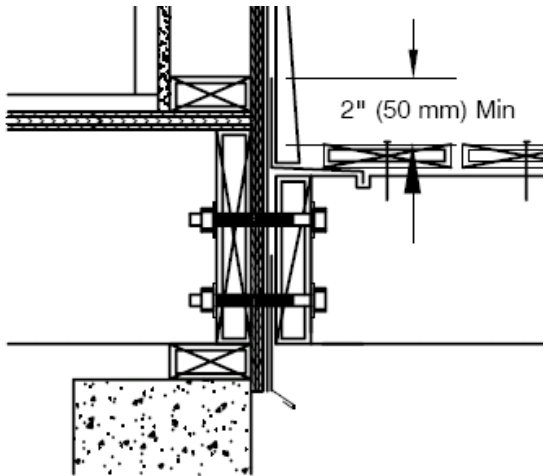
When deck ledgers are attached at the sill plate line at the foundation, this installation requires flashing above and below the ledger. The flashing below the ledger should terminate with a hemmed diverter.

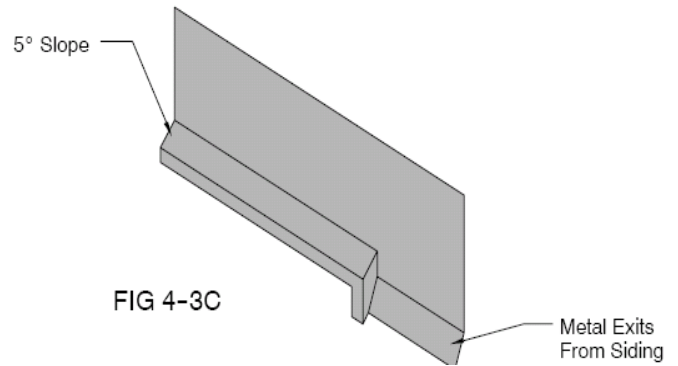
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Doors and Windows

Where the flashing terminates at the jambs of the windows and doors, there are two methods to terminate the metal flashing. In the Residential Sheet Metal Guidelines – First Edition, it states, “The flashing is fabricated with a diverter that exits out of the siding. All horizontal head flashings should maintain a 5 degree slope and have closed ends.”

The second method is to terminate the flashing 1/8 inch past the side edge of the window or door jamb (recommended by several window manufacturers.. This creates a drip edge and helps prevent water from hydrostatically drawing in below the metal flashing.





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Horizontal Protrusions and Penetrations

There are a number of items that penetrate or protrude from the exterior wall. Box outs are built around a number of penetrations and protrusions. These include plumbing, electrical, mechanical, and belly bands, just to name a few. The horizontal surfaces above these must be properly flashed to divert water. The flashing must extend up the wall a minimum of 2 inches and be integrated with the moisture barrier. The horizontal leg of the flashing must have a minimum of a 5 degree slope.

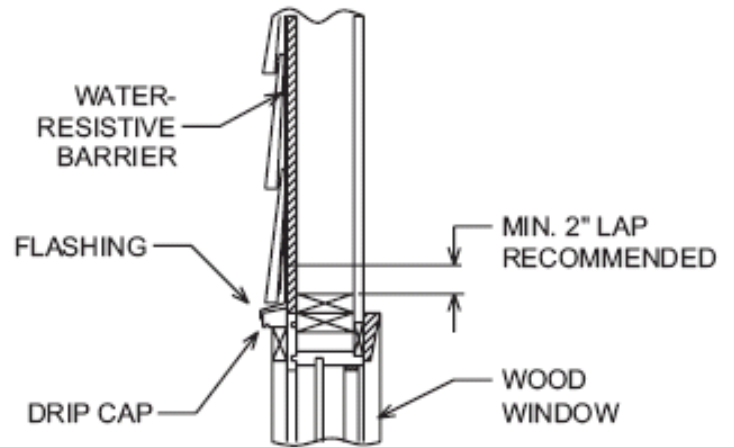
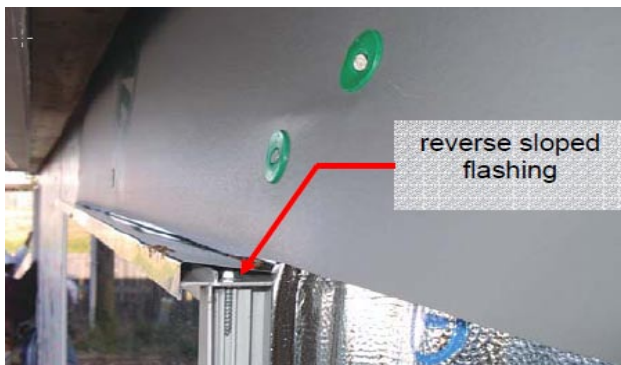


Figure 1405.3(2)
FLASHING AT SIDING/WINDOW INTERFACE

2006 IBC Commentary

Example of reverse sloped flashing.



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