

Ventilation to control ice dams

Some homes are particularly hard to ventilate well because of the way they are built. In Northern climates these homes are the ones with perennial ice damming issues and the roof leaks that accompany them.

Roofer Dan Perkins, owner of Dan Perkins Construction, deals with these issues in the upper peninsula of Michigan.

"A metal roofing contractor will often find an eager customer within the walls of these homes who believes the metal roof itself will cure his ice dam issues," Perkins says. "Any Northern contractor who has been in the roofing business for more than a few seasons will recognize these types of homes and customers. A seasoned contractor also knows that a metal roof alone will not solve the ice problems that result from a poorly vented home."

Pictured are two homes illustrating a couple of the most common examples of poorly ventilated houses a residential roofing contractor encounters: the old half-story Cape Cod, and the hipped ranch. These types of houses have entirely different ventilation issues.

"The Cape Cod is typically constricted or entirely blocked in the center third of the roof span where the angled ceilings of the upstairs bedrooms are often 4-5 inches away from the roof surface with the rafters plugged full of insulation," Perkins says. "The most reliable way of providing ventilation on this type of home is to apply a 2x4 frame over the existing roof deck with the lumber running from eave to peak. Eave venting is then installed at the end of the 2x4s and a new layer of sheathing applied on top of the frame."

Perkins says this upgrade may be further enhanced by adding a layer or two



of sheet foam insulation beneath the 2x4s (note the ventilation strip under drip edge).

The hipped ranch has an unbalanced air flow due to the lack of ridge. "The solution we have chosen for this dilemma is to vent half of the hips," Perkins says. "With our standard perforated ridge cap on the top half of the hip and solid cap on the bottom half we create the volume of draw at the peak necessary to fully utilize the intakes at the eaves."

Properly addressing ventilation enables a metal roofing contractor to solve his client's ice dam problems and saves him the callbacks that accompany them. ■

This is the 12th in a series produced by *Metal Roofing Magazine*, with the help of Michigan roofer Dan Perkins.



Any thoughts?

Do you see something you like or would do differently? Got a better way to ventilate snow-covered roofs? Share it with the editors. Write to *Metal Roofing Magazine*, 700 East State St., Iola, WI, 54990-0001, or e-mail jim.austin@fwpubs.com.