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Hurricane Katrina:

A storm story

A magazine for sheet
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Fit and trim

Installing a metal roof that will last a lifetime

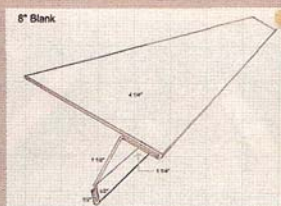
By Dan Perkins

Standing-seam and metal-shingle roofs are fast becoming the choice of many homeowners. This is a time of growth and potential for all involved with the residential metal roofing industry. The appeal for residential customers is the quality and longevity metal provides. In Michigan's Upper Peninsula, there are hundreds of century-old metal roofs on residential buildings.

While these buildings are good endorsements for the durability of metal roofs, there is a general downward price pressure in many industries, including roofing, to make products as cheap as possible. A common example used in the metal-roofing industry is the metal garden shed that became popular in the mid-1970s. While the product became more affordable, it rusted and didn't always hold up and customers lost interest. The industry barely exists anymore.

A properly applied metal roof is beautiful, functional and can be sold as a once-in-a-lifetime purchase. Here are some tips on making the roofs you install last.

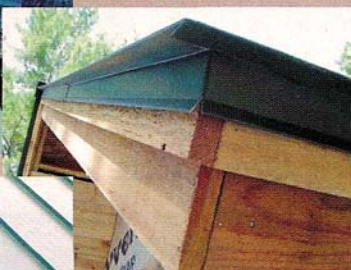
Standard 'drip' edge



Fold your own drip edge from the same stock that your roof is made from. With standing seam roofing, 24-gauge steel or .040-inch aluminum is recommended.



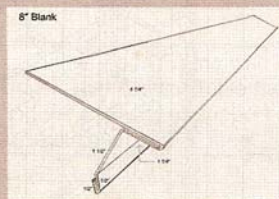
Cut and fold the standing-seam panels over the drip edge on all eaves and gable ends.



Apply metal shingles the same way, folding shingles over gable drip edge.



'C-D' edge (for layover applications)



The C-D edge trim is used when roofing is being laid over on a flat and solid single layer of existing roofing. The C-D edge effectively fits over and hides the existing drip edge and exposed edge of the previous roof while providing a new drip trim for anchoring the metal-roof edge.



Standard valley



When applying standing-seam roofing, use hand tongs to make valleys from roof pans by refolding the "male" and "female" legs and then crease the valley with a site brake.



Drip edges and ridge caps are applied first and valley-fitted next, attached with cleats. The bottom is folded around the drip edge. Roofing pans are then hemmed into valley hems as they are applied.



With metal shingles, make your valleys in the shop in 10-foot lengths. These are hemmed together and metal cleats are applied on the edges over 1-inch butyl tape. The shingles are then hemmed over the cleats.

Trim

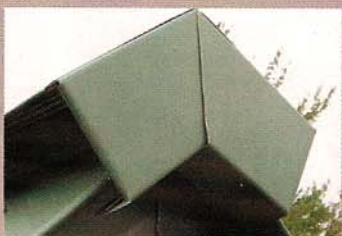
Gable dormer 'bow tie'



On gable dormers where the ridge cap runs into adjoining valleys and meets the primary roof plane, install a "bow-tie" cleat to create a smooth transition.



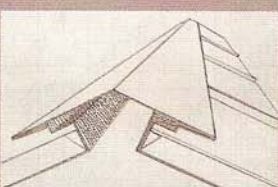
Vented ridge cap



To be more efficient, install ridge caps before pans. Installing ridge caps after roofing is difficult and can scratch pans. Vented ridge channels are made from perforated 20-gauge galvanized steel.



Roofing pans are "box-panned" at ends and slid into ridge caps as they are installed.

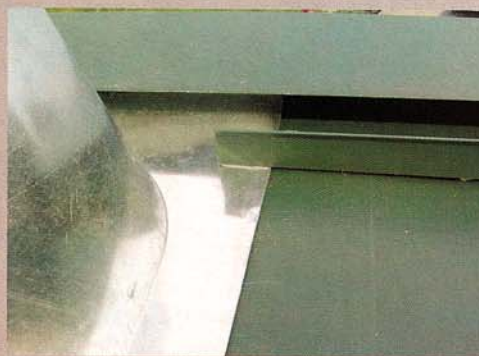


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Trim

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Use of baffles



As pans are applied, baffles are installed over 1-inch butyl tape, 2 inches below the ridge cap. Two screws are installed through the base of the baffle. The baffle is a necessary component of the ridge vent, diverting airflow over the ridge cap and creating negative air pressure. Be sure to leave a small space on either side of the baffle for "weeping" water.

Sidewall flashing



The best way to form sidewall flashing is simply to fold the edge of the pan or metal shingle up 90 degrees. Siding then is applied over the perpendicular fold. Where masonry walls or existing siding materials make this impossible, a cut and a counter flashing detail can be applied.



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Trim

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End-wall, chimney flashing




Simply bend the roofing pan up the wall. Unfold the ribs and seal them against the building.



Chimney flashings are a combination of the details described earlier. On masonry chimneys, a cut will be necessary (use a diamond blade on a circular saw) to accept counter flashing. If chimneys are narrow enough to fit in between two pans and drain on both sides, no cricket is necessary (see picture at right).



These techniques represent just one way to do residential and light-commercial roofing well. There are many good methods for achieving similar goals.

Dan Perkins is owner of Dan Perkins Construction in Ishpeming, Mich. Contact him at 200 E. Hematite, P.O. Box 753, Ishpeming, MI 49849. Call (906) 485-2045. 



A 103-year-old Northern Michigan farmhouse with a metal roof.



The metal roof on this house should last many years.

Skylight flashing



When making flashing for skylights, fold sidewall flashing into roof pans but terminate the pans 6 inches above the skylight. A cleat will be installed on butyl to accept the head flashing as it extends past the edge of the skylight to the rib of the next roof pan. The top of the head flashing is hemmed or "cleated" to accept roofing panels above the skylight.