

Not-So-Heavy Metal: *Builder Forges New Market, Lowers Energy Bills with Metal Roof*

Builder's Experience



Challenges: Learning Curve; Time Management.

Would he do it again? Yes

PATH Attributes:

- Energy Efficiency
- Quality and Durability
- Safety and Disaster Mitigation

Builder Tips: "Plan ahead for metal roof installation, and do your homework. Understand the effects on your timeline."

Builder:

Bob Hastings
Wood and Hastings Construction Co.
Birmingham, Alabama

Builder Type:

Small Custom Builder

The Technology:

Metal Roof

The Project:

Hastings' new home in The Preserve, a Traditional Neighborhood Development in Hoover, Alabama. Homes in The Preserve are designed in classic styles of the 1750s to the 1920s.

"I have a roof that should last forever and require practically no maintenance."

– Bob Hastings

HASTINGS' STORY

Bob Hastings has been building custom homes since 1983, but he had his first encounter with metal roofs in 2005, when he was building his own home.

"The main reason I used a metal roof was because this is a 'Traditional Neighborhood Development.' It features classical homes, all styled after historical homes from the 1750s to the mid-1920s. My home's location is near the Village Green, which is the central part of the community. The architect strongly encouraged the builders to use metal roofs there, mostly to recreate the appearance of an old house," Hastings says.

"If these type of roofs continue to be in demand, it will open up some opportunities for me, particularly in this development. In fact, we are already planning another home there with a metal roof."

TRYING SOMETHING NEW

"One of the problems I faced was that I had never done a metal roof before, other than a front porch overhang. There is a big difference doing an entire roof. Going in,



Following the architect's recommendation, Hastings used a standing seam metal roof, which offers greater efficiency and durability—and less maintenance—than a traditional roof.

I knew the basics about metal roof construction, such as how things should be flashed and the basic theory behind it. But I didn't know how metal roofs work with other components of the home, and how it all comes together. As a result, I was much more reliant on the subcontractor than I am used to," Hastings says.

"It can be hard to find people to do metal roofs. I was fortunate that the subcontractor, Affordable Metal Roofing, was very open. Any time I had issues, they were quick to answer my questions."

"Besides being very helpful, Affordable Metal also gave me a good deal on a standing seam metal roof. Normally, the more common 5-V metal roof is more fiscally competitive than a standing seam, but Affordable Metal rolls its own metal for the roof, which reduced the cost. Besides, from a maintenance and longevity standpoint,



With more than 20 years in home construction, Bob Hastings builds 16 to 20 upscale custom homes a year, selling from \$400,000 to \$900,000, in Birmingham, Alabama.

Why he used a metal roof:

To meet the requirements of the development's architect, Hastings used a standing seam, sheet metal roofing system without striations to encourage "oil canning," an architecturally appealing feature that reveals the visible stressing of the metal and was more historically accurate for this project than other metal roofs.

TECHNOLOGY HIGHLIGHTS

This project included the following PATH-profiled technology:

- Metal Roof

A MATTER OF STYLE

There are two basic styles of metal roofs: metal shingles and metal sheet roofing. Metal shingle systems look like wood shakes, tiles and slate. Sheet roofing starts with flat metal panels, which are formed into roofing panels and components. Some flat stock can be fabricated on site by contractors. Both styles are available in steel, stainless steel, aluminum, copper and zinc alloys. Hastings used sheet metal made from Galvalume,[®] an aluminum-zinc alloy, at the suggestion of his subcontractor.

To help builders find a contractor, the Metal Roof Alliance offers the "Locate a Contractor or Material Supplier" program at www.metalroofing.com.

The Partnership for Advancing Technology in Housing (PATH) brings together builders, manufacturers, researchers, government agencies, and other members of the housing industry. PATH partners work to improve the quality and affordability of new and existing homes. The program is administered by the U.S. Department of Housing and Urban Development's Office of Policy Development and Research.

To learn more about PATH, visit www.pathnet.org.
To learn more about PATH-profiled technologies, visit www.toolbase.org/technv.



The opinions expressed in this document represent those of the builder and do not necessarily reflect the views of PATH.

the standing seam is a great roof because it is clipped down, and then the adjacent panels' seam actually hoods over where the one panel is attached. So water can't get to the fasteners where you are making the penetration into the roof."

"In 8 to 10 years, you may have to do a little maintenance and check on the fasteners in a 5-V roof. While both a standing seam and a 5-V will last 40 or 50 years or more, the standing seam roofs use a self-sealing, raised seam to cover the fasteners. Also, many roofers who install standing seam roofs cut and roll them to fit the size of the project they are working on. This allows for a very quick turnaround of a few days."

UNEXPECTED BENEFITS

"The end result is that I have a roof that should last forever and require practically no maintenance. I probably won't have to look at that roof again for another 50 years."

"On top of that, the subcontractor was teaching me about the roof's energy efficiency. That was sort of an afterthought for me. I learned that the reflective value of the roof should reduce the heat in the attic a lot," Hastings says.

Most metal roofs meet the criteria for ENERGY STAR qualified roof products by reflecting some of the sun's rays. This lowers the surface temperature by as much as 100 degrees, decreasing the amount of heat transferred into the building. Qualified reflective roofs can reduce peak air conditioning demand by as much as 10 percent.

The 2005 Energy Tax Act allows for a 10-percent credit—not to exceed \$500—on the purchase and installation of an ENERGY STAR qualified metal roof.

"The roof has turned out to be a great feature. It looks nice, and I have a more comfortable home with lower energy bills. I wouldn't have considered a metal roof if the architect hadn't asked for it. I'm sure glad he did!"

