

“The roof was a non-vented system to begin with and after the building was built, the only way you could actually do it was with the Hi-Perf system.”

- Garry Maris, Maris & Son Roofing



Project Name: *Maywood Elementary School
Hammond, IN*

Building Type: *School*

Architect: *Fanning Howey*

Roofer: *Maris & Son Roofing*

Materials: *Hi-Perf Vented Fascia, Hi-Perf Ridge Vent: Slope to Slope Shingled Version, & Custom Peak Vents*

Creating a Custom, Balanced Roof Ventilation System

When Maywood Elementary School decided to reroof four of their five buildings, they called on the architects at Fanning Howey for assistance. They found that the roof had no ventilation underneath the roof covering, which can easily lead to problems such as ice damming, increased cooling costs, moisture buildup and early shingle failures.

To avoid these problems and create a cool roof system, Fanning Howey recommended ventilating the roof and installing a vented nailbase. However, a vented nailbase was only part of the solution. They still needed to get air into the system at the eave and then exhaust the hot air the ridge.

A Ventilation Challenge

To help them tackle the issue of creating intake venting where none previously existed, they contacted Metal-Era. Based on the dimensions and other roof conditions, Metal-Era's technical department calculated that 24 in.²/lf of net free area (NFA) would be required. To achieve the

intake ventilation, 1,848 lineal feet of Hi-Perf Vented Fascia was selected. The next question to address was how to provide enough exhaust ventilation for the facility's hipped roofs.

“When ventilating, it is important to create a balanced system, meaning equal amounts of intake and exhaust ventilation. It's notoriously difficult to achieve this in hipped roofs because the eave to rake ratio is essentially nonexistent. A traditional length

of ridge vent just won't work, so we needed to explore other options,” says Joe Inzeo, Senior Process Engineer at Metal-Era. Working with the architect, Metal-Era's engineers developed a custom peak vent that met Maywood's specific ventilation requirements.

96 lineal feet of Hi-Perf Ridge Vent: Slope to Slope Shingled Version was also selected to accommodate gables and other areas of the roof system.



Metal-Era, Inc.

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A Field Test

Garry Maris of Maris & Son Roofing of Hobart, IN and his team were charged with installing the ventilation system and bringing the architect's vision to life.

Maris & Son had been using Metal-Era's fascia and coping lines for the last 25 years and was well familiar with those systems, so they felt quite comfortable installing this system for the first time. "We had a learning curve, but it was short," said Garry. Despite being new to the system, Garry's team was able to do the installation relatively easily. "I would say that we're installing at least 36 foot an hour. That's complete. That's getting the old gutter off, putting the system down and getting the gutter back on. So we're doing pretty good."



The true test came when it was time to install the custom peak vent. The vent was pyramid-shaped to mimic the shape of the roof. The square metal mounting flange allowed Garry's team to attach the pyramid-shaped perforated anchor cleat. From there, they attached metal Z

brackets for additional support and slid on the cover.

It didn't take but a moment to see that the ventilation system was working as designed. In the hot summer sun, a heat shimmer could be seen all around the vent as hot air exited the roof system helping to keep a cool roof system.

As Garry noted, "The roof was a non-vented system to begin with and after the building was built, the only way you could actually do it was with the Hi-Perf system."

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