
Thermoplastic Single-Ply Roof Relieves Water Damage and Inconvenience

Administrators at Mars Hill College had many historic buildings that needed leaky roofs replaced without damaging the facilities.

by Jennifer Lynn Williams

As one of North Carolina's oldest private colleges, Mars Hill College has many architecturally beautiful buildings, including river rock and mortar structures. Many of the campus buildings have existed since the college's inception in 1856. Other buildings were added in the 1940s, '50s and '60s.

As the buildings have aged, so too have the roofs that protect the students, faculty, administration and expensive classroom equipment. Leaking problems were prevalent

on many of these buildings — which had EPDM roofs — causing disruptions for the occupied classrooms and offices. The Mars Hill maintenance staff was constantly dealing with leak calls and making roof repairs to the flat roofs.

A reliable roofing solution was needed to prevent any more water damage and inconvenience.

"All of the buildings that had leaks were in use daily, so we not only had to consider the different types and ages of the buildings,

Photos courtesy Duro-Last



Mars Hill Director of Facilities Henry Haywood stands in front of the Estella Nissen Montague building, which is used as a museum and the main office for the Bailey Mountain Cloggers. Preserving this historical building (dating back to 1919) was a major concern for Mars Hill administrators. That's why installing a clean, nonbazardous and nondisruptive thermoplastic single-ply was the answer to their leaking woes.



Shown here is the kitchen of Pitman Dining Hall, which used to be extremely hot to work in. Today, the highly reflective white single-ply roof that protects the kitchen also keeps it cooler and more pleasant to work in.

but the fact that the structures could not be closed during a roof installation," says Hal Stowers of LaFerney, Inc., Kingsport, Tenn., which completed the project. "Moreover, the Mars Hill administrators wanted to preserve the historical buildings and did not want any messy or hazardous materials that would be disruptive or harmful to occupants on the job site during the installation."

The solution was a mechanically attached thermoplastic single-ply roofing system that could be easily installed while classes were in session — regardless of the type and age of the building.

Because of the roofing system's prefabrication, 80 percent to 85 percent of the seams are factory-welded, thereby reducing the amount of rooftop field seaming and labor necessary to complete the project. Furthermore, the thermoplastic single-ply roofing system included all the accessories, such as prefabricated curb and pipe flashings, which make it much easier to install the membrane around HVAC units and pipes.

"With this single-ply roofing system, there are no hazardous materials or noxious fumes," notes Stowers. "It's a very clean and nondisruptive installation. Most of the time you don't even notice that a roof is being installed!"

During the roofing installation, LaFerney officials encountered some minor obstacles when it came to the buildings made with river rock and mortar.

"It was difficult to attach the single-ply parapets to the wall of the structure because of the river rock," recalls Stowers. "However, with a little extra time and effort, our skilled crew was able to terminate into the river rock and mortar."

LaFerney completed two of the Mars Hill

buildings earlier in 2001, followed by the remainder of the project during the summer and fall of 2001. The entire project consisted of approximately 73,100 sq. ft. of membrane.

"What's great about this type of roofing system is that it can be installed in phases as the need arises and funds are available," says Stowers.

Not only did Mars Hill administrators appreciate a leak-proof roofing system that resolved complaints from students and faculty, they also experienced lower energy costs associated with air conditioning the buildings.

"Before the new roof installation, the kitchen in Pitman Hall was extremely hot to work in," states Henry Haywood, Mars Hill director of facilities. "Now that we have the highly reflective white membrane covering our roof, the kitchen is much cooler, and the HVAC unit doesn't have to work so hard. We have even saved money!"

With no more roof leak problems, the Mars Hill maintenance staff can now spend time on other vital maintenance projects. Plus, the new single-ply roofing system requires very little upkeep and is protected with the roofing industry's best labor and material warranties which, unlike other roofing systems, do not exclude ponding water and consequential damages.

"We are now worry-free when it comes to our campus roofs, and we have increased the value of our buildings," says Haywood. "Plus, if there are any problems, we know that we can depend on LaFerney, Inc., and the single-ply manufacturer to keep us dry and protected."

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