

Weather Barriers for Residential Construction

VYCOR® enV™ provided an energy efficient weather barrier to protect against irreparable moisture damage.

Project	Rockwood Lodge, Highland, North Carolina
General Contractor	John Wesley Hammer Construction Inc., Decatur, Georgia
Architect	Tab Associates, Edwards, Colorado
GCP Solution	VYCOR® enV™ weather barrier



Project

Renovating a Smoky Mountains family estate

When the architecture firm Tab Associates was given the task of renovating a 26,000-square foot family estate in the Smoky Mountains, they were faced with the problem of rectifying immense damage due to wind-driven rain. This is a massive issue for most residential construction, especially in high-altitude environments. In this case, an improperly installed house wrap was letting in moisture through the walls, causing rot and mold between the house wrap and sheathing, and even around finish nail holes.

Tab Associates needed to fix this damage and prevent it from happening again. Otherwise this historic residential construction would eventually turn into a demolition.

"In such rugged weather, the typical methods of construction were failing. And after doing our homework, we found VYCOR® enV™ to be the best product of its kind available. It wasn't just a good idea, but a needed one. It's a better level of protection."

Orion Hansen, Superintendent,
John Wesley Hammer Construction

Ensuring seamless weather protection

Prior to reconstruction, Tab Associates needed to find a weather barrier that would do the job. They sought a barrier that was seamless, would seal around fasteners, and was impermeable to water. In addition, since the previous moisture barrier has been incorrectly installed by the original architect, Tab Associates wanted to find a product supported by technical services that would help them do the job right the first time.

"The GCP technical team walked us through the prep work needed and the process of applying the barrier. They're absolute pros and really know their product. And they helped us avoid any pitfalls."

Orion Hanson, Superintendent,

John Wesley Hammer Construction

Providing job site support during installation

Tab Associates leveraged a 30-year relationship with GCP, and worked with their technical services group to select VYCOR®enV™, a weather resistant barrier system. The GCP field technical services manager and sales representative came out to the job site and applied and demonstrated the VYCOR®enV™ barrier on a test area for the construction team.

Before installing the barrier system, Tab Associates needed to essentially dismantle the house before putting it back together. The Poplar bark shingles, original house wrap, and old OSB sheathing were removed, plus the windows and doors were pulled. Lastly, the home was re-insulated where voids were found, and it was re-sheathed with higher-grade AC plywood sheathing. Only then was VYCOR®enV™ applied.

VYCOR®enV™ was then sprayed and rolled from the underside of the archways down to the foundation, forming a continuous barrier that was bound with joint tape at the seams. The system allowed water vapor to escape from the inside, but repelled liquid water from the outside, ensuring that the home remained dry and free of mold.

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