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BACKGROUND

Stucco Buildings and the Damaging Effects of Moisture – Why a Simple Drainage Plane Can Avoid Costly Renovations

Stucco buildings can face extremely costly and damaging structural problems due to the fact that, without a proper drainage plane, water is trapped, and the building's walls become a breeding ground for mold.¹⁰

Synthetic Stucco (EIFS) was a “lawsuit magnet” in the 90’s. Water could not escape, and caused severe rotting. It has been brought back successfully, but with a drainage plane incorporated into the design.⁴

All stucco is susceptible to water trapping issues. In Minnesota, homeowners have had repair bills upwards of \$175,000, and even \$700,000. Some homes have been rebuilt more than once.⁶ The problem is nationwide. In Florida, buildings were tested over time by Roger G. Morse AIA, and Paul E. Haas CSP, CIH. They concluded that stucco in Florida is failure-prone, and that water control capabilities are greatly improved with drainage plane implementation.¹⁰

In Pennsylvania, stucco problems are rampant. A family trying to sell their home ended up having it torn down to the studs, and needing upwards of \$120,000 in repairs after a stucco test was conducted by a prospective buyer. Not visible from the outside, once the stucco was removed, it was made apparent that the entire house was rotting.³

Also in Pennsylvania, a family had to spend \$200,000 to keep their million dollar home. The rot caused by trapped water from stucco was so bad that a home inspector was

able to crush a 2x6 stud with his bare hands. The same home inspector stated that in the Philadelphia area, stucco house rot is a billion dollar problem.⁵

A high end contractor in Philadelphia believes the solution to homes new and old that are experiencing water damage behind stucco is the incorporation of a rain screen system.⁴

A monastery in WI is currently seeking to raise money to cover \$50,000 repairs for stucco and mold removal.⁷

A Civic Center in British Columbia, Canada is also currently facing a massive repair bill caused by stucco and mold created by stucco-trapped water. Their cost is estimated at \$4 million. The building is only 20 years old.⁹

A City Hall Annex in Destin, FL is requiring a \$70,000 repair after water damage was found in the building. Further assessment showed that “exterior stucco walls had been absorbing water for years resulting in wood rot and water damage.”^{1”}

Construction and architecture websites, Contractors, Architects, and Home Inspectors all recommend the implementation of a rain screen design for prevention of catastrophic water damage in buildings with stucco cladding.

Who is VaproShield?

For over a decade, VaproShield has designed and manufactured high performance mechanically attached and self-adhered vapor permeable water resistive barriers (WRB), air barrier (AB) membranes and accessories to create a total solution-based approach to protecting the building envelope. Their innovative features, such as integrated tape on the membranes, permeable hybrid fluid-applied flashing for rough openings, WRB sealant and various other accessories, have been rigorously tested together to maximize life-long building envelope performance and minimize building failure rates.

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