

# PROJECT PROFILE

## Fire Station #84



### A Fire Station for Christmas

The first Fire Station #84 in the tiny town of Christmas, Fla., was a temporary double-wide trailer. That “temporary” fire house serviced the community of less than 2,000 people for nearly 20 years. After years of wear and tear, the station was dilapidated and barely functional. When storms with winds higher than 45 miles per hour hit the tiny town, the facility flooded, causing firefighters to evacuate and leaving residents without crucial fire and rescue services. As Christmas is located just 20 miles north of Orlando, evacuations were frequent.

Funding for a permanent Fire Station #84 had been secured twice, but sources had fallen through. Undeterred, the town mayor and other Orange County officials sought funding once again in 2011. The third time was a charm, and in April 2012 Christmas’ wishes came true. Local and county officials and firefighters joined town residents to break ground on a new, modern 6,500-square-foot facility. Plans for the firehouse included a community room, dorm room, fitness center, commercial kitchen and a multipurpose space where residents would be able to have their blood pressure checked or seek shelter in the hurricane-proof building.

To ensure the new firehouse was energy efficient, among other things, specifications called for an acrylic, vapor-impermeable, 60-wet-mil-thick air barrier. Sky Builders USA was awarded the contract for the waterproofing, painting and stucco work. Juan Velez, director of operations, said he was having trouble finding an air barrier that both met specifications and did not require his company to invest in expensive spray equipment. He was running up against a fast-approaching deadline when the architect attended a lunch-and-learn hosted by Joe Dugo from Carlisle Coatings & Waterproofing (CCW).

During the lunch-and-learn, Dugo introduced a brand-new line of fire-resistant air and vapor barriers called Fire Resist. The line includes Fire Resist 705FR, Fire Resist Barritech NP and Fire Resist Barritech VP™. Each product borrows technology from the aerospace industry to produce the only fluid- and sheet-applied air and vapor barriers that can pass tough National Fire Protection Association (NFPA) 285 standards.

### Fire Station #84 at a glance

**Location:**

Christmas, FL

**Architect:**

C.T. HSU

**General Contractor:**

Mulligan Constructors

**Carlisle Coatings & Waterproofing Contractor:**

Sky Builders USA

**Project Type:**

New Construction

**Carlisle Coatings & Waterproofing Products:**

- Fire Resist Barritech NP
- LiquiFiber™

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NFPA 285, which is quickly becoming an industry standard, evaluates the flammability characteristics of exterior non-load-bearing wall assemblies containing combustible components like plastic foam insulation. In addition, Fire Resist products have all completed the ABAA Material Evaluation process and are now listed on the association's website.

Velez said the architect thought perhaps Fire Resist Barritech NP would meet Fire Station #84 spec requirements and asked Velez to learn more about the product. After meeting with Dugo, Velez was convinced Barritech NP was a great addition to the Christmas Fire House wish list. Together, they sold the architect on the product, highlighting its spec-compatible features:

- Able to withstand the humid Florida climate due to its water-resistant properties
- Polymer based (acrylic)
- 70-80 wet mils
- <1 perm
- 6-month exposure rate
- Compatible with silicone sealants
- Compliant with NFPA 285 fire code requirements

The architect agreed, and the race was on to get the product delivered and installed. Velez said HD Supply White Cap Construction Supply in Orlando was instrumental in expediting delivery. He also says ease of installation kept the project on schedule.

"Barritech NP was easy to work with," Velez said. "We had an experienced painter who sprayed it onto CMU and was happy to work with it. He said it went on smoothly. Joe came to inspect it after the first application and gave him some pointers on how to get the right thickness. It took about three times around the building. Joe came back after the third application. We measured and it was just at the right thickness. The personalized customer service was important in helping us meet our deadline."

Velez said detailing was easy around windows, pipe penetrations and corners thanks to Barritech NP product attributes, as well as another CCW product, LiquiFiber. LiquiFiber is a strong, flexible, fiberglass-like mat that replaces self-adhered flashing. When laid into a liquid-applied membrane like Barritech NP, the LiquiFiber binder dissolves and the glass strands become fully integrated with the membrane.

Once completely dry – typically within 48 hours – a LiquiFiber-reinforced membrane is stronger and more tear resistant than peel-and-stick sheet membrane products. With LiquiFiber, installers can skip the extra steps associated with peel-and-stick membranes such as measuring, cutting, fitting and rolling. Installed properly, LiquiFiber also eliminates the time-consuming work it takes to smooth out fish mouths, edges and corners, which occur frequently with peel-and-stick membranes.

"LiquiFiber is really easy to work with," Velez said. "You can cut it with your hands. You just brush on some Barritech NP, fit the LiquiFiber around the penetration, window or corner, then brush on some more Barritech NP, and you're done."

Velez says he will use both Barritech NP and LiquiFiber again as projects call for similar products. He says he will also recommend it to his colleagues at Sky Builders USA which operate throughout Central Florida and surrounding areas. "I will also recommend Joe," he said. "His attention to customer service was really helpful."

