

PROJECT PROFILE

Mass Eye and Ear Ambulatory Care Center, Longwood, MA

Adults over the age of 65 and children younger than 5 years of age represent one of the highest fire risk groups in the United States. These demographic groups also represent a large number of patients treated at the Boston-based Massachusetts Eye and Ear Infirmary (Mass. Eye and Ear), many of whom are seeking treatment for diseases that cause blindness and deafness.

According to the National Fire Protection Agency, people who are deaf or have hearing impairments and those who are blind or have vision impairments face unique challenges in an emergency. Their ability to detect or escape the effects of a fire put them at greater risk of death or injury due to fire. Buildings constructed with materials that will either contain or slow the spread of fires are especially important for this vulnerable population. States like Massachusetts recognize this and therefore require strict adherence to fire safety codes.

When specs were first written for a new \$60 million Mass Eye and Ear ambulatory care center at 800 Huntington Avenue, the project was detailed with a standard air barrier with a low-perm and UL rating. In addition, code requirements called for an air barrier that had fire rating. Tom Sanford, owner of Sanford Contracting, Inc., said every product he submitted for approval to the architect was rejected.

“The spec writer worded the specification so that the air barrier had to have a low perm and a UL rating,” he said. “As written, there was no product on the market that would work. Only when your product came on line was I able to satisfy both requirements. Plus it was fire code compliant.”

Mass Eye and Ear Ambulatory Care Center at a glance

Location:

Longwood, MA

Owner:

The Beal Companies, LLP

Architect:

Tsoi/Kobus & Associates

Waterproofing Contractor:

Sanford Contracting, Inc.

Project Type:

Renovation & New Construction

Carlisle Coatings & Waterproofing

Products:

- Fire Resist 705FR
 - CCW CAV-GRIP
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The product? Fire Resist 705FR. It is part of the Fire Resist product line introduced by Carlisle Coatings & Waterproofing in 2011. The line includes Fire Resist 705FR, Fire Resist Barritech NP and 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. 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.

Fire Resist 705FR has all the features and benefits of rubberized asphalt self-adhered sheets, with a foil-faced glass laminate and proprietary fire resistant butyl adhesive. Fire Resist Barritech VP and Barritech NP share the features of 40-mil, fully adhered monolithic membranes, also complete with a fire-resistant formula. Barritech VP is vapor-permeable and dries to a distinctive light blue color for easy identification, while the Barritech NP is a vapor barrier that dries to a dark blue. All Fire Resist products are UV-resistant and offer aggressive adhesion to common building materials, making them ideal for virtually any air/vapor barrier application.

Sanford had more than a dozen years of experience installing CCW-705. So when he learned about the new Fire Resist 705FR, he convinced architect Peter Longley, a senior associate with TSOI Kobus Architects, that the product was the perfect choice for the new 83,000-square-foot Mass Eye and Ear facility.

Sanford said the project was scheduled to start January 15, 2012 but was delayed due to weather. By the time it began, construction was already facing tight deadlines. "We air-freighted the first five rolls of Fire Resist 705FR so we could start installation."

Construction plans called for Sanford's crew to install CCW 705FR over DensGlass® Gold sheathing. To ensure adhesion, crew members first checked the sheathing for gaps, missing screws, misalignment and other defects. Then they wiped the sheathing free of dust and applied CCW CAV-GRIP™ to the surface. CCW 705FR was applied in horizontal rows and cut around window openings.

"Sheets were horizontally overlapped to form a shingled installation vertically up the wall," Sanford said. "My guys hand rolled the membrane to make sure it was firmly seated onto the sheathing. They applied lap sealant to cut edges and terminations and any reversed laps. The final wall was inspected to ensure no gaps, wrinkles or air pockets formed before the metal sub rails were installed."

Sanford said his crew reported that 705FR was easy to install, despite cold temperatures. "Our field installers had no issues using the material. It's stiff in cold weather so they had to use a heat gun on some corners to make it bend and seat correctly. But this was under winter conditions. Under the right circumstances, we will use it again."

