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BUILDING A NET ZERO ENERGY SCHOOL WITH HELP FROM GE ELEMAX™ AWB

Benjamin Banneker Academic High School – Washington DC

Case Study | Air & Water-Resistive Barrier Coating

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Building a Net Zero Energy School – With Help From GE Elemax AWB

Benjamin Banneker Academic High School, in Washington DC, was given the go ahead for a \$152M expansion project that encompassed demolition and transformation of the existing site to a modernized, larger facility that could accommodate an additional 300 students.

A key focus of this construction project was sustainability, with ambitious goals to be Net Zero Energy ready; at a minimum, the school needed to achieve LEED BD+C Schools Gold Certification for efficiency. Architects Perkins Eastman DC and MCN Build were tasked with delivering on these objectives.

Adding GE Elemax to the Specification

To help reach the required standards, the original building plans called for a complex design that included spray foam on the Rockwall of the building's exterior, and an additional thermal barrier coating in order to meet fire safety standards. The plans also specified an acrylic AWB coating.

When Mike Prizzi, General Manager MD at Metro Sealants, the supplier of sealants for the project, saw the plans, he believed there was an easier, more cost-effective way – using GE Elemax 100% silicone air and water-resistive barrier.



He suggested moving the spray foam to the interior and swapping the acrylic AWB for GE Elemax 2600. In addition to enabling greater energy performance of the building, these changes would also eliminate the need for the thermal barrier coating, thus the opportunity for reducing costs, complexity, and shortening the timetable for the project.

The new specification was accepted, and the project broke ground in early Fall 2019.

Efficient Application and Overcoming Project Disruption

This was a large-scale, challenging project that included the application of GE Elemax 2600 AWB to 80,000 sq ft of surface! Unfortunately, due to its proximity, spray application simply wasn't an option, so it needed to be applied with rollers instead. Thankfully, GE Elemax 2600 AWB is primerless, and can be applied in a single coat.



Work began in the spring, but soon, the Coronavirus crisis caused significant and immediate disruption. With the surfaces only partially coated, work was paused for several months. With an acrylic AWB coating, this delay would have likely posed a significant problem, as the product typically needs to be applied to surfaces within a strict time period, or otherwise require recoating.

Delivering LEED Certification

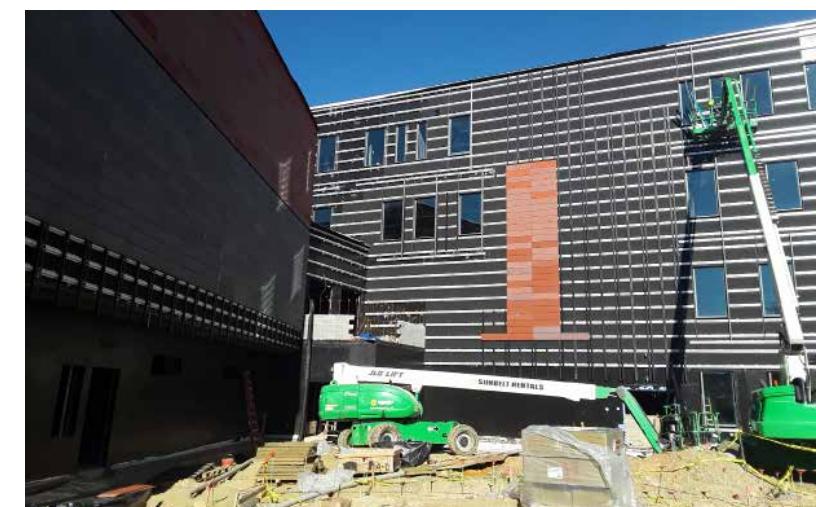
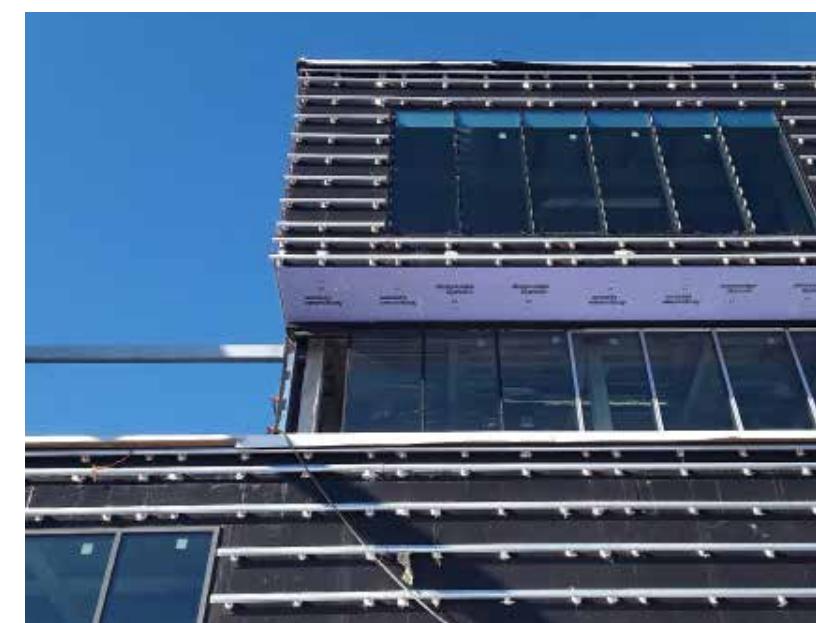
The design changes proved to be a success, and, with help from GE Elemax 2600 AWB, the build is on track to achieve its sustainability goals, including both LEED BD+C Schools Gold certification and Net Zero energy use.

Despite the disruption caused by the pandemic, the school is set to be completed in 2021 – and scheduled to open in time for the new school year in September.

Seamless Protection with GE Elemax Air and Water Barrier Coatings

Protect your building against wet weather, air intrusions, damaging UV and extreme temperatures, with GE Silicones Elemax Air and Water-Resistive Barrier Coatings.

By preventing the seepage of unwanted water and the growth of mold and mildew, a single coat of GE Elemax AWB can help improve air quality, stabilize temperature control, and reduce energy consumption by up to 35%. UV-resistant upon cure, GE Elemax AWB maintains elasticity even after years of exposure to the elements.



Air & Water-Resistive Barrier coating



Silicones

The GE Silicones family of coating and sealant products are engineered with excellence to support the ever-inventive, increasingly demanding architecture found around the world.



Air & Water-Resistive Barrier Coating

Beneath the façade, above the rest.



Architectural Coatings

Protect and enhance the building surface.



Roof Coatings

Strong, lasting roof performance.



Insulating Glass Sealants

Seal in lasting performance.



Residential Glazing Sealants

Simple, snug, and secure.



Structural Silicone Glazing Sealants

The trusted bond that lets you explore new boundaries of building design.



Weatherseal Sealants

For strong, resilient building joints.

Coat & Seal. Protect & Restore.

GE Silicones are a family of coatings and sealants used to weatherproof, insulate, and strengthen every element of the building envelope.

Roofs. Façades. Glazing. And more. We put advanced and trusted innovation to work on your project. Some of our 100% silicone formulas have been part of the world's most ambitious projects. Astronaut boots on the moon. Soaring glass skyscrapers. Structures that have remained snug and secure since the 1970s. And, we make it easy. GE Silicones building envelope solutions are simple to install, and offer resilient, long-lasting protection.

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