



Case Study: DuPage Airport Authority Hangar

Project Specs

Project: DuPage Airport Authority Hangar

EXTECH Products: LIGHTWALL 3440 & SKYGARD 3300

Location: Chicago, IL

Coverage: 9,100 sq. ft.

Architect: Burns McDonnell

General Contractor: Harbour Contractors, Inc.

Installer: Anthony Roofing, LLC.

DuPage Airport's new hangar relies on EXTECH systems to enhance aesthetics and energy efficiency, while supporting design/build goals.

Chicagoland's DuPage Airport Authority, located in the western suburban area, is home to the largest concentration of corporate aircraft in Illinois. It is the only general aviation airport in Illinois with four active runways, two instrument landing system approaches and a 24-hour Federal Aviation Administration (FAA) Air Control Tower, U.S. Customs and 24-hour onsite aircraft rescue and firefighting capabilities.

To better accommodate and store both daily transient aircraft and diverted aircraft, the DuPage Airport Authority opened a new hangar in August 2017, reflecting its goal to build and maintain a world-class facility in the heart of the United States.

The Solution

The new 31,000-square-foot hangar spans 244 feet wide by 134 feet deep with 29-foot-high doors. It features LIGHTWALL 3440° and SKYGARD 3300° polycarbonate systems from Exterior Technologies, Inc. (EXTECH) and was installed by Anthony Roofing.

Specified as the basis of design, EXTECH's innovative LIGHTWALL and SKYGARD systems use highly insulating, 100 percent recyclable structural cellular polycarbonate with aluminum framing. Anthony Roofing installed 6,620 square feet of LIGHTWALL 3440 interlocking wall system as clerestory windows in the hangar and 2,480 square feet of SKYGARD 3300 surface mounted skylights on the large hangar doors.

Multi-Function, Multi-Panel Hangar Door

According to Mark Doles, director of aviation facilities and properties, and director of DuPage Flight Center, the DuPage Airport Authority planned this project for several years. Together with long-time partner and engineering consultant CH2M, they created the basic schematic design and bridging documents. Door Engineering and Manufacturing worked closely with CH2M and EXTECH to perfect the hangar door design.

Enhancing the functionality and appearance of the 29-foot-high, 10-panel hangar doors, Dale Larson, technical sales aviation with Door Engineering, recommended incorporating EXTECH's system. They previously partnered on another successful airport project in White Plains, New York. "On DuPage, we worked together with EXTECH from the earliest stage throughout the nearly three years of the project's development and value engineering with Harbour Contractors."

Borrowed Light Benefits

"Often, monolithic metal panels are what you see on hangar doors," notes Doles. "We chose EXTECH's systems to give us the architecturally attractive look we wanted and the translucent polycarbonate lets us take advantage of the borrowed light. With the natural light, we usually will not have to utilize any electric lighting at all during the day. When we do illuminate the hangar, it's stunning to see at night."

In addition to reducing dependence on electric lighting and accentuating the building's appearance, the diffusing characteristics of the cellular polycarbonate reduce solar heat gain into the building envelope.

Proven Performance

Anthony Roofing installed EXTECH's tongue-and-groove, polycarbonate LIGHTWALL 3440 and SKYGARD 3300 in a two-week timeframe.

"We love working with EXTECH's lightweight products. It's so easy to work with. It installs easily and quickly," emphasizes Tony Orlando, Anthony Roofing's project manager. "It's also rigid enough to hold up to the forceful winds that are always associated with airports."

Along with meeting high winds and thermal performance, EXTECH's LIGHTWALL 3440 interlocking polycarbonate translucent wall system met the project's fire rating, UV resistance, air infiltration and water penetration requirements. Tested and proven to meet these criteria, the products also are backed with a 10-year warranty.

"EXTECH was great in helping solve problems, when components had to be changed due to build variances. They were able to help settle redesign issues to get the parts faster. They have a sense of family that helps work out the issues rather than bicker about them," praises Orlando.

"This was the job that started the relationship that we now enjoy with EXTECH." In particular on the DuPage hangar project, Orlando compliments EXTECH's Senior Project Engineer Alan Lohr and adds, "I consider all the people at EXTECH that I've had the pleasure to work with as my friends."

Why EXTECH?

EXTECH/Exterior Technologies, Inc. has more than 40 years of experience working on unique daylighting and custom façade projects across the United States and Canada. Since their founding in 1975, EXTECH has developed more than 20 unique systems. Their daylighting systems and custom façades have delivered solutions for a wide variety of industries and structural applications. EXTECH believes that a collaborative and creative approach is vital to produce beautiful, functional, and healthy designs. EXTECH partners closely with everyone involved in the architectural process, asking questions, listening to ideas, to foster innovation, cost-savings, and ease of implementation.