Case Study

University of Oklahoma

OKLAHOMA CITY, OKLAHOMA

Owner
University Hospitals Authority and Trust

Vitro Certified™ Fabricator
Tristar Glass
Catoosa, Oklahoma

Architect/Designers
Bockus Payne Architecture
Oklahoma City

Vitro Glass Products
Solarban® R100 on Solargray® Glass
Solarban® 72 Starphire® Glass

Glazing Contractor
Oak Cliff Mirror & Glass
Dallas

General Contractor
Manhattan Construction Co.
Oklahoma City

PROJECT BACKGROUND

School pride can be infectious
This sentiment comes across loud and clear at the University of Oklahoma’s College of Medicine, M. Dewayne Andrews Academic Office Tower, where a bold crimson ribbon sweeping across a gleaming glass atrium featuring two high-performance Vitro Architectural Glass products greets visitors.

One of many focal points of the facility, which opened in 2016, the 60-by-150-foot curved ribbon—adorned in the university’s iconic color—sends an unmistakable message.

“We wanted to leave no doubt that this is the ‘Home of OU Medicine,’” said Mathew Siebert, partner, Bockus Payne Architecture, which designed the 174,000-square-foot building on the university’s Oklahoma City campus.
A welcoming look
With an overarching objective to elevate the college’s mission of leading healthcare in education, research and patient care, while enhancing the quality education of future physicians, Bockus Payne created a distinctive yet welcoming design.

This is seen in the all-glass façade of the nine-story office tower, which was clad in Solarban® R100 solar control low-e glass on Solargray® medium-gray-tinted glass by Vitro Glass. The exterior reflectance and color neutrality of the configuration provided the clean, crisp exterior aesthetic that Bockus Payne originally envisioned.

The products’ excellent solar heat gain capabilities and visible light transmittance values gave the architects the flexibility to design interior spaces that allow daylight to penetrate through the perimeter offices and into the core and center office areas, reducing the need for artificial lighting and minimizing glare.

This combination also was used to glaze two elevated pedestrian skywalks that connect the building to the adjacent OU Medical Center and Children’s Hospital.

To complement the glass and further convey a warm, hospitable feeling, Bockus Payne designed a landscaped vehicular and pedestrian plaza that creates a sense of arrival leading up to the entrance and atrium.

Doing what they do best
Although Solarban® R100 on Solargray® glass achieved the design intent “perfectly,” selecting the right glass for the atrium and entryway was more challenging, both from a performance and geometric perspective.

“We wanted a high visibility glass that also had good thermal characteristics, yet we needed to be cognizant of the budget,” explained Siebert. “After a value engineering exercise removed the original structural glazing system, we focused on a clear glass/curtain wall system.”

The firm worked closely with Lisa Li, National Architectural Manager, Vitro Architectural Glass, to evaluate multiple samples of conventional and low-iron clear glass mixed with different coatings before specifying ultra-transparent Solarban® 72 on Starphire® solar control low-e glass.

With the serpentine layout of the wall enclosing the entryway, glazing contractor Oak Cliff Mirror & Glass enlisted a third-party source to custom-fabricate the "cassettes" (fabricated glass panels with aluminum interface channels factory-applied to the glass with structural silicone) that make up the four-sided structural-sealant glazed curtain wall.

Meeting the production, quality and logistical requirements of two glass products—totaling approximately 120,000 square-feet—demanded precise coordination and planning. To adequately handle this volume and facilitate the shipment of glass orders to Oak Cliff, Tristar Glass, a Vitro Certified™ fabricator, used the Vitro Concierge Program™, which provides logistics management and customized coordination for projects of this size to ensure the timely delivery of glass. This was one of the first projects coordinated through the program.

The time spent planning was critical to successfully executing the project, said Greg Oehlers, executive director, architectural sales, for Tristar's Grand Prairie, Texas, location. "We employ an internal program that complements the Vitro Concierge Program™,” he explained. “The high level of front-end planning ensured that we, Oak Cliff and Vitro would have all of the necessary pieces in place when it came time to execute.”

Open two-way communication and coordination with its suppliers enabled Oak Cliff to meet critical milestones in the construction schedule, according to the company’s vice president, Sam Hill. "We let our suppliers know early what our expectations were, and they were very responsive in letting us know what they needed from us to meet those expectations," he explained.

"The installation of the lobby curtain wall went off with no issues, thanks to the coordination of the glass delivery to the job site. Everyone jumped in and did what they do best—produce materials."
Beautiful and functional
The consistent look of the glass blended in seamlessly with other features designed to evoke the college’s mission. The glass tower is anchored on opposite ends by limestone “wings” that represent the strength of the institution’s education and research, providing a clear message of uncompromising quality, distinction, dignity and professionalism. The stone entry portal features three arches celebrating education, research and patient care.

Dedicated in October 2016, the Academic Office Tower houses several departments and administrative offices, while expanding research opportunities and aiding recruitment efforts. It “is as beautiful as it is functional,” said Dean Gandy, chief executive officer, University Hospitals Authority and Trust.

ENR (Engineering News-Record) Texas and Louisiana recognized the facility with a safety award of merit in the publication’s 2017 “Best Projects” competition, citing the close collaboration and innovative solutions to complete the project under budget and on time.

In the end, the Academic Office Tower met all design objectives and fulfilled the need to accommodate planned growth at the college, all while delivering a uniquely “OU Medicine” feeling. “Its significant presence provides a ‘wow’ factor,” said Siebert. “All the elements, from the glass to the crimson ribbon wrapped around the entrance, come together to communicate that this is a place of significant learning and outstanding health care.”

When united with Solarban® R100 glass in a one-inch IGU, Solargray® glass provides exterior reflectance of 12 percent, visible light transmittance (VLT) of 21 percent and a solar heat gain coefficient (SHGC) of 0.17. These performance characteristics met the architect’s objectives for minimal artificial lighting and glare control.

Formulated using Vitro Glass’s proprietary triple-silver solar control low-e coating technology that is engineered for use on Starphire Ultra-Clear® and Acuity™ low-iron glasses, Solarban® 72 glass has VLT of 71 percent with a SHGC of 0.30.