

Engineering Safe, Seamless Access at Texas A&M RELLIS Campus

TEXAS A&M RELLIS CAMPUS – BRYAN, TX

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Principal at Page Architects



From its origins as a 1940s Air Force base, 2,000 acres of open, rural land in Bryan, TX, was reinvented as a vibrant college campus when Texas A&M RELLIS moved to the space from its original Riverside location. The school evolved into a technology and testing hub, starting with the opening of its first academic building in 2019.

Once established, it was clear the Texas A&M campus extension was on a growth path. The university expanded its RELLIS Academic Complex with a new building that would combine classrooms, labs, collaboration spaces, and more. The construction included the addition of a 50,000-square-foot STEM Education Center designed to provide students with hands-on learning and opportunities for practical experimentation.

While the new STEM Education Center offered cutting-edge facilities for students, the building design and entrance layout introduced unexpected challenges at its entry points.

The building’s orientation created a wind tunnel so strong that its original doors were ripped from their hinges, which needed to be replaced multiple times. For the architects, there was a clear directive: find new doors that would provide safe, reliable access while minimizing the impact of strong winds.

The solution: balanced doors from Ellison Bronze.

From Damaged to Durable: Reinventing the Entryways

To solve the challenge, the team at Page Architects selected twelve narrow style painted aluminum balanced doors from Ellison Bronze. The doors feature monolithic glass, and one leaf includes PowerNow technology from Horton to meet accessibility requirements.

“The building’s original doors were repeatedly damaged as strong winds kept tearing them from the hinges,” said Brian Roeder, principal at Page Architects. “We originally tried a windscreen as a buffer on both buildings, but we were still dealing with a lot of opening pressure.”

Traditional swing doors pivot on vertical hinges attached to the frame, creating lateral stress over time that can eventually cause the entrance system to fail. This issue is amplified under strong wind pressure, which was the case at Texas A&M.

Alternatively, the Ellison balanced doors that were selected as the replacement pivot at two-thirds width, allowing air to pass on both sides of the door leaf, which significantly reduces the force necessary to operate the door. This technology is designed to address challenges posed by high wind pressure, ensuring smooth and nearly effortless operation even in extreme conditions. Traditional doors, like swing doors, can be difficult to open during heavy wind gusts because of the force against them. This puts a strain on the door hardware and the user operating it.





The balanced door hardware also extends the lifespan of the door by eliminating the stress normally placed on hinges and frames, making it an ideal solution for buildings subject to frequent, strong winds and internal building stack and HVAC pressures.

“A wind tunnel study confirmed what our data was already suggesting,” said Roeder. “There were unexpected external forces that were creating higher loads at entryways. We knew we had to reduce the door size and heights, reconfigure pivots and ultimately lower the opening force.”

The Ellison custom balanced doors proved ideal, handcrafted to the exact dimensions specified by the architects. Their design allows smooth, controlled operation even in strong winds, preventing flutter and maintaining energy efficiency.

This controlled movement also prevents doors from slamming, protecting students and staff while supporting a quieter, focused learning environment.

Collaborative Expertise Drives Seamless Design

In addition to Ellison Bronze, the project team included Page Architects and Floyd’s Glass, whose combined expertise ensured a seamless integration of design, materials, and functionality.

The project was completed in phases, with Phase 1 finished in 2024 and Phase 2 completed in the summer of 2025.

The successful installation of the Ellison balanced doors has improved the building’s resilience to wind forces and enhanced safety, accessibility, and durability at a key entry point.

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