SKYFOLD®
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CASE STUDY 02

MITCHELL PHYSICS BUILDING

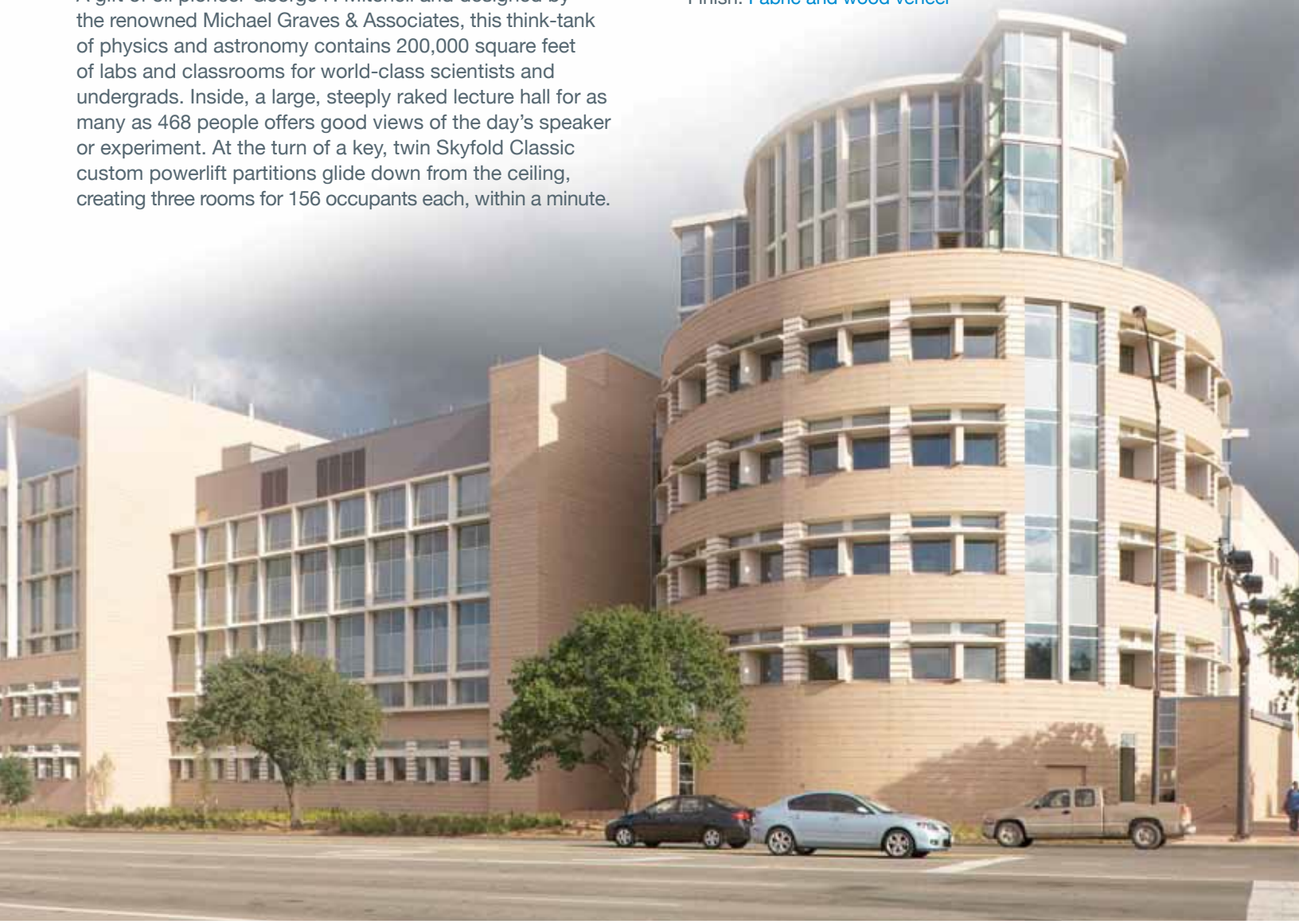
WITH SKYFOLD, AN EDUCATION FACILITY MAXIMISES IT'S USES - ADDING FLEXIBILITY.

HOUSING ONE OF ONLY THREE PHYSICS INSTITUTES IN THE UNITED STATES, AN IMPRESSIVE NEW FACILITY AT TEXAS A&M UNIVERSITY BOASTS A SIX-STORY ATRIUM WITH A GIANT PENDULUM, A LECTURE HALL NAMED FOR STEPHEN HAWKING – AND A LEED SILVER RATING.

A gift of oil pioneer George P. Mitchell and designed by the renowned Michael Graves & Associates, this think-tank of physics and astronomy contains 200,000 square feet of labs and classrooms for world-class scientists and undergrads. Inside, a large, steeply raked lecture hall for as many as 468 people offers good views of the day's speaker or experiment. At the turn of a key, twin Skyfold Classic custom powerlift partitions glide down from the ceiling, creating three rooms for 156 occupants each, within a minute.

PROJECT FACTS
TEXAS A&M UNIVERSITY
College station Texas June 2009
Education (new construction)
Challenge: Large auditorium with stepped and sloped floors
Team: Michael Graves & Associates (architect)
and Vaughn Construction

SKYFOLD SPECS
Installation: 2 Skyfold Classic walls
Finish: Fabric and wood veneer



“WITH SKYFOLD, WE WERE ABLE TO DIVIDE A SLOPED, STEPPED SPACE, AT AN STC OF 50.”

MARK SULLIVAN, AIA, LEED AP SENIOR ASSOCIATE, MICHAEL GRAVES

“We had never used Skyfold before, but we were looking for a solution to the challenge of dividing a sloped, stepped space using the least amount of floor space necessary,” says Mark A. Sullivan, AIA, LEED AP, senior associate with Michael Graves. “Another factor was the STC rating of more than 50, which is excellent. Many accordion partitions tend to lose their STC rating over time as the sliding reduces the effectiveness of their gaskets. Skyfold walls maintain their acoustical performance over time, and that was a big factor – you don’t want to hear the rock concert next door when you’re trying to give a test.”

DIVIDING USES

Highly regarded for its prowess in the sciences, Texas A&M’s physics department had been growing quickly. The new Mitchell physics complex links an elliptical, 45,000-square-foot institute for physics and astronomy, by bridge, to the main physics building, “the department’s workhorse,” Sullivan quips. The result is undergraduates rubbing elbows with senior researchers and faculty, which can cause friction. The large auditorium needed maximum flexibility for lectures, events and other programming. According to John Collins of RSM Services, more education facilities are now opting for stepped walls to resolve varied schedules within large, multiple-use learning spaces. “It does seem to be a popular trend, and the end-users love Skyfold’s performance,” he says. Sophisticated engineering and tight tolerances allow the Skyfold walls to properly mate and seal with each riser, independently and automatically. The partition system’s weight is distributed along the entire span, eliminating high concentration loads that increase structural steel costs for traditional systems.

For the shared lecture hall, this meant flexibility and ease of use, whether for physics club meetings or high-level science symposia. “We just hosted a large, international conference for 250 people,” says Melanie Becker, a Texas A&M professor. “It was very successful thanks to this much, much nicer space.”

SUCCESSFUL MODELS

In fact, Collins notes that the Texas A&M project design team toured a similar installation at the University of Medicine and Dentistry of New Jersey, or UMDNJ. There, two large Powerlift walls also divide a large auditorium into three lecture halls. “One of the best ways to understand the benefits of Skyfold is to come watch them work. Even if it’s just a video clip, they say wow,” says Collins. “But seeing them in action at UMDNJ helped the architect decide to use Skyfold in the first place.”

INTEGRATED DESIGN CONCEPT
The project team used the retracted Skyfold walls as part of the ceiling detail.

FAST AND SIMPLE OPERATION
Texas A&M faculty and students have keys to the walls, which move 1 foot in 10 seconds.

CUSTOM FINISHES TO MATCH
Designers selected a neutral fabric with a eucalyptus veneer base for the walls.

A COMMON CHALLENGE

AS MORE EDUCATIONAL FACILITIES OPT FOR STEPPED WALLS TO RESOLVE VARIED SCHEDULES WITH A SINGLE, MULTIPLE-USE AUDITORIUM, SKYFOLD OFFERS AN EFFECTIVE, LASTING SOLUTION. THE PARTITIONS ARE CAREFULLY ENGINEERED TO PROPERLY AND COMPLETELY SEAL AGAINST THE RISERS' HORIZONTAL AND VERTICAL SURFACES, RESULTING IN A VERY HIGH STC RATING. THE TEXAS A&M DESIGN TEAM VISITED OTHER SCHOOLS USING SKYFOLD PARTITIONS IN THIS WAY, INCLUDING THE UNIVERSITY OF MEDICINE AND DENTISTRY OF NEW JERSEY.

After electing to recommend Skyfold, the project architects addressed key technical questions with Texas A&M's facilities team, headed by Bill Scott, construction project manager, and Randy Wipke, area manager for six Texas A&M University System campuses. Chief questions asked included:

- **Clearance overhead?** The folding ratio is 10:1.
- **Acoustical properties?** Skyfold Classic has an STC rating of 51, due to its thick, 10-1/4" construction of steel plates separated by an anechoic air chamber.
- **Visual appearance?** The team reviewed aesthetics in both raised and lowered positions, selecting custom fabric and eucalyptus finishes.
- **Closure of side seals?** Acoustical seals engage the walls automatically – no receiving track needed.
- **Quietness and simplicity of operation?** The retracting walls make almost no sound at all, and a few professors and even students have keys to operate their spring-loaded switches.

The team unanimously agreed to use Skyfold, with a neutral color palette to offset a splash of maroon carpet – a nod to the Aggies official color.

FOR SCIENCE – AND SUSTAINABILITY

Functional and fluid, the auditorium serves as the heart of an innovative, sustainable building that meets the goals of Texas A&M's master plan and green mandates. "It was one of the first buildings on campus to pursue a LEED rating," says the architect Sullivan, adding that the Skyfold walls contain recycled steel and aluminum.

On the outside, the complex is true to the signature and storied profile of Michael Graves himself. Three kinds of brick and custom shading delineate crisp, geometric lines – and protect the labs inside from the intense Texas sun. Large expanses of glazing add character and scale to the building, projecting an image as scientific as its true mission.

"I hope these buildings will provide an innovative and inspiring atmosphere for students and faculty to study, teach, research and enjoy," says George P. Mitchell, the project's chief patron. "I believe that the physics program at Texas A&M will continue to foster important research and attract outstanding students and faculty from all over the world."

SKYFOLD'S EXCLUSIVE LINE OF VERTICALLY FOLDING OPERABLE WALL SYSTEMS PROVIDE A UNIQUE WAY TO SUBDIVIDE SPACE. OUR CUSTOM BUILT SYSTEMS ARE COMPLETELY AUTOMATIC AND RETRACT INTO A CEILING CAVITY WITH A SIMPLE KEYPAD OPERATION.

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  State-of-the-art acoustics for privacy and soundproofing
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  Cutting-edge, innovative vertical wall technology
- **ZENITH PREMIUM SERIES**
  Enhances the Zenith experience!
- **MIRAGE**
  Brings in the light with your choice of transparent panels

Skyfold is pleased to be an official member of the U.S. Green Building Council. The Green Council is committed to promoting better designed buildings that are not only more environmentally and socially responsible, but also help improve the quality of life for those who occupy them and the communities in which they are built. The Council has developed a benchmarking system known as LEED (Leadership in Energy & Environmental Design). When it comes to recycled materials, architects and owners who choose a Skyfold vertically folding operable wall system can calculate the following toward LEED accreditation on their projects.

In order to continue protecting our environment, it is essential that we all do our part by using recycled materials whenever possible. Skyfold is proud to help.

Recycled materials	Up to 97%
Post-consumer	Up to 27%
Pre-consumer	Up to 51%

SKYFOLD® LIMITED WARRANTY

WORKMANSHIP: Parts & labour - 2 years or 5,000 cycles*
Optional extended warranty on parts available - 10 years or 5,000 cycles*
Acoustical Performance - 10 years
*First occurrence from date of shipment.
Digital touch screen excluded from extended warranty.

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