

# MOMENTUM

FALL 2018

CELEBRATING THE ARTS



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**Mueller**

# DUKE UNIVERSITY OPENS A NEW HOME FOR THE ARTS

## “THE RUBY” SHOWCASES ART IN ACTION



**ENR  
Southeast  
Award of Merit  
in Higher  
Education/  
Research**

Duke University's new Rubenstein Arts Center, a 71,000-square-foot hub for artistic production, recently opened on the Durham, North Carolina, campus. Known as “the Ruby,” the two-story facility was designed to inspire creativity and enable the arts to become “an essential part of every Duke student’s experience,” says David M. Rubenstein, who chairs the university’s board of trustees and contributed \$25 million to the center.

### Art in Action

The Ruby’s paneled glass facade animates the campus with views of lively “art in action,” including dance rehearsals and visual arts activities. The building includes a 200-seat black box theater for performances and the media arts, a 100-seat film theater, dance rehearsal space, video production studios, flexible production studios and makerspace designed to support cross-disciplinary projects, painting and drawing studios, classrooms, a radio station, and lounge spaces.

The building was designed by William Rawn Associates. “What was most exciting about this project was the opportunity to embody Duke’s ambitious mission for a culture of interdisciplinary study in the arts,” the architects have noted. “The chance to reinvent the role that the arts play within a research university led to a building that needed to be immersive, flexible, and open—within itself and outward to the broader campus.”

### Addressing Multiple Requirements

“The hallmark of the Ruby is its flexibility,” says Tom Syvertsen, PE, LEED AP, who served as Mueller Associates’ project manager for mechanical, electrical, and plumbing engineering



*Duke University’s new \$43 million Rubenstein Arts Center is Mueller Associates’ third major project on the campus. Mueller previously provided MEP engineering for the Duke University School of Nursing and a subsequent expansion there, working with Ayers Saint Gross.*

*“The Ruby” accommodates classes from the university’s dance and “Arts of the Moving Image” programs as well as the student-run radio station. A two-story, glass-enclosed dance “cube” is located on the second floor. The building was designed by William Rawn Associates.*

services. “There are many different uses and types of spaces, from the glass-enclosed dance cube, which features radiant heat for the dancers’ comfort, to the visual art studios that require special ventilation. In the ‘Ruby Lounge,’ a multi-purpose student performance space, pipe grids installed at the ceiling level allow for the use of flexible theater lighting systems. The building’s HVAC system is also designed to handle the higher loads as may be needed for major productions.”

Syvertsen notes that the acoustical challenges also required special attention, with carefully specified duct sizes to accommodate acoustical treatments and silencers that attenuate sound throughout the duct system. “The adjacencies and stringent acoustic requirements of the various spaces added some complexity to the project,” he says.

The Ruby celebrated its grand opening in January 2018. “The state of the arts at Duke is one of growing excitement and interest,” stated Scott Lindroth, the university’s vice provost for the arts, in the *Duke Chronicle*. “With the Ruby, we have fabulous facilities that enable departments and student organizations to engage more seriously with the arts.”



Duke University photos by Robert Benson

## The Friends School Sets the Stage

Following a creative renovation and expansion of the Forbush Auditorium, the multi-purpose facility has been transformed into a vibrant home for the Friends School of Baltimore’s performing and visual arts programs. Mueller Associates provided mechanical, electrical, and plumbing engineering for the project, working with Ziger/Snead Architects.

The oldest private school in Baltimore, the Friends School was established in 1784 and has been located on its current, 35-acre campus since 1925. The effort to revitalize the aging auditorium included the addition of a new glass entry pavilion, a sound and lighting booth, and theater-style seating. Removal of the ceiling in the performance space created a more dynamic venue while providing the opportunity to enhance acoustics.

The renovation and expansion also included a new scene shop, an art gallery, a photography darkroom, classrooms, and a sound editing studio. Mueller Associates engineered new mechanical and electrical systems for the building, which has earned two design awards from the Baltimore and Maryland chapters of the American Institute of Architects.



*Renovation of the Forbush Auditorium into a modern center for the arts was Mueller Associate’s third project on the historic campus.*

# THE TERRACE THEATER REOPENS AT THE KENNEDY CENTER

Mueller Associates recently completed its fifth major project at the John F. Kennedy Center for the Performing Arts, a transformation of the popular Terrace Theater. The Kennedy Center's busiest venue, the theater was originally designed in 1976 as a Bicentennial gift from the people of Japan and serves as the principal home for chamber music.

The modernization enhanced the theater's primary function as the Kennedy Center's recital hall while improving support for a broad range of programming, including amplified music, dance, film, and chamber opera. An adjustable proscenium with movable panels allows for reconfiguring the stage, and four side boxes have been added as well as a new sound system, LED architectural lighting, and LED performance lighting. A new seating plan for the 485-seat theater has optimized sightlines and improved accessibility.

Hand-crafted, curved wood paneling, evocative of stringed instruments, adds architectural drama within the theater while enhancing its excellent acoustics. The project also included the creation of a new lower level lobby with an open staircase and a new elevator. The lobby is highlighted by a suspended work of art designed by Dale Chihuly.

Under the project management of Adam Fry, PE, Mueller Associates provided mechanical and electrical engineering services for the renovation, working closely with Quinn Evans Architects. The theater reopened in the fall of 2017 to positive reviews from music critics as well as patrons. "The Terrace Theater has always been an exceptional recital hall. The acoustics are now even better for chamber music, and it can now better accommodate many types of performances and events," says Leora Mirvish, AIA, LEED AP, who served as principal-in-charge for Quinn Evans Architects. "We've added more accessible seating throughout the theater, enhanced the outstanding acoustics for which it is well known, and improved the audience experience of this unique venue."

*The modernization of the Kennedy Center's Terrace Theater was the first since the venue's construction in the 1970s.*



**"Where the audience was once greeted by a boxy, unexceptional space...there now stands a gorgeous concert venue clad in stacks of richly hued, curved wood panels...There's a newly minted feeling of warmth and comfort, and of expanded size and sweep..."**

**Joe Banno**  
*Classical Voices America*



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