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Project of the Month: Windover and DSK Architects complete 37,000 s/f Centennial Arts Center for Concord Academy

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Concord, MA Partnering with Windover Construction, DSK Architects, and a team of industry-leading consultants, Concord Academy embarked on a mission to create a state-of-the-art performing arts center on its West Campus that would transform the student experience.

The Centennial Arts Center (CAC) is a 2-1/2 story, 37,000 s/f facility designed with professional-level systems, equipment, and functionality that includes a 175-seat theater, 125-seat recital hall, digital production lab, large music ensemble and practice rooms, scene shop, dressing rooms, and support spaces. Emphasizing flexibility and technical excellence, the building features spaces that allow students to develop their skills and study the craft.

The CAC creates a learning environment where students can discover, practice, and master the craft of the performing arts, providing hands-on experiences with the same level of technology and professional-grade systems used in the industry today. The entire facility was designed to serve as both a stage and a classroom. The integration of advanced lighting, audio-visual systems, and acoustic engineering wasn't just about performance. It was about exposure, dynamic learning, and pedagogy. Students are discovering what it takes to bring a show to life from backstage to front-of-house.

Delivering this vision required the highest caliber of technical construction. The CAC features state-of-the-art theater, music, and AV systems – expertly designed, coordinated, and installed to create an optimal environment for practice and performance. Integrating all these systems into one facility required extensive coordination during design and preconstruction, as well as rigorous

attention to detail throughout construction.

“The project’s success was made possible through collaboration, communication, and a unified focus on delivering an exceptional space for the Concord Academy community. We worked very closely with the design team both in the model and in the physical building to ensure all spaces and systems were delivered as intended,” said Randy Catlin, Windover’s executive vice president and COO.

From custom-made theater seats from Belgium to recital room panels imported from Sweden, every component had to be installed to exact specifications to achieve the building’s precise acoustical performance. For example, in the practice rooms, the 150-pound soundproofing doors and acoustic flooring required very stringent FF/FL ratios of zero. Windover’s team used in-house laser scanning to ensure compliance with these tight tolerances. The design required all finish floors to be at exactly the same plane, regardless of the depth of the various flooring materials. This necessitated placing the slabs on deck at different thicknesses and closely coordinating them at the points where the different materials would meet, all before the walls were framed. Windover’s use of the 3D model was critical in achieving these requirements.

Meticulous coordination continued throughout the recital hall, which features tiered seating, baffle ceilings, acoustic panels, HVAC ductwork, and custom millwork – all designed to contain and enhance sound. As the pieces came together, comprehensive coordination meetings between trade partners ensured precise installation. Any misstep or delay could have caused cascading schedule impacts, so Windover employed close monitoring and expert sequencing.

The design of the CAC embraces flexibility and caters to end-user needs by integrating open landscapes and a variety of internal social, hangout, and collaboration areas, while thoughtfully harmonizing natural light and spatial requirements to create an inspiring environment. A harmonious addition to the campus, the high-tech building aligns with Concord Academy’s and the town’s sustainability objectives, incorporating a high-performance building envelope, all-electric systems, and on-site renewable energy solutions.

The building is also utilizing digital twin technology to optimize performance and maintenance after construction. The digital twin, a comprehensive 3D model developed by Windover and given to Concord Academy after construction, provides a living, data-rich replica of the building. This enables real-time insight into O&M information, as well as building performance, allowing facilities staff to monitor and optimize systems and further reduce the building’s environmental footprint.

The project team included:

Windover - Construction Manager
DSK Architects - Architect

Kaloutas - Fireproofing
ATRTreehouse - Audio-Visual and Theatrical Equipment
ProUnited Inc. - Tile and Flooring
Environmental Heath & Engineering - MEP/BE Commissioning
Dry Air Systems Inc. - HVAC