

Illuminating Recreation

Daylighting connects students with outdoors

By Marcy Marro, Managing Editor

The University of Illinois-Urbana-Champaign's 340,000-square-foot Activities and Recreation Center (ARC) is one of the country's largest on-campus recreation centers. Designed by Chicago-based VOA Associates Inc., the ARC replaces the original campus recreation center that opened in 1971.

According to Richard H. Fawell, AIA, NCARB, IIDA, principal at VOA and a U of I alumni, the goal was to provide a student-oriented fitness center that would make fitness and wellness attractive and approachable for all students, and aimed specifically at the non-athlete. Additionally, the new facility was to provide a student community center where students could meet in a social non-academic setting with friends, and together experience the mental and spiritual benefits of physical fitness.

PROJECT SCOPE

The overall project scope included two existing buildings—the Intramural Physical Education Building (IMPE) and the Campus Recreation Center East (CRCE)—getting a renovation and additional new construction. The original IMPE building became the new ARC, and was totally renovated along with a new construction that more than doubled the facility's size, Fawell explains. The project was completed in phases so students always had an option for

fitness and recreation, and part of the original IMPE was open during the renovation as well.

The ARC's new construction front brought the building up to the street, making it more accessible and approachable. "The new ARC pays homage to the strong axial Georgian campus tradition and relates to the way that students and faculty remember using the original IMPE, but also with the use of materials, its brick and limestone, and yet has a contemporary character necessary to achieve the internal functions of a state-of-the-art student recreation center," he says.

Located in different areas of the campus, both buildings integrate seamlessly into the campus' character, yet have a modern aesthetic that doesn't feel foreign and call attention to itself, Fawell adds. "We wanted to provide a building that nestled into its context rather than trying to reinvent the context."

BRINGING LIGHT INSIDE

A key feature to the ARC's interior and exterior design, daylighting allows for less power to be used for lighting during the day, while also giving students the chance to feel as if they were outside, regardless of the time of year.

"The internal focus was to make the various program areas work together and allow students and faculty to see all the other activities by opening up the interior to each area, track to weights to pool to cardio and even to the main entry," Fawell says.

"In addition, the interior opens to the exterior so that even students passing by can see into the recreation areas day and night, but especially at night."

Fawell explains that using windows, skylights and clerestory lighting allow the building to feel contemporary and light in a traditional Georgian campus setting, where the building melds in with the campus' tradition while making a strong statement that it was a contemporary expression.

The highlight of the ARC's design is the new winter garden atrium and architectural entrance canopy. Both are glazed with translucent Quadwall Nano-Cell polycarbonate panel systems from CPI Daylighting, Lake Forest, Ill. The 42-foot-wide and 123-foot-long half-round barrel vault skylight adorning the center extends seamlessly beyond the building envelope into the entry canopy. It measures 30 feet wide by 30 feet long, and helps bring the outside daylight into the interior space.

CPI fabricated the translucent panels directly on-site due to the skylights' unique shape and size, and to accommodate the existing steel structure. The customized 2.75-inch-thick Quadwall panel system features a clear glazed exterior skin and a white matte interior skin for soft, glare-free daylight transmission into the space.

A balance was crafted between the visible transmittance and the heat gain required to efficiently heat and cool the space with the least amount of energy. The skylight, therefore, has a

LEFT: Designed by VOA Associates Inc., the 340,000-square-foot Activities and Recreation Center at the University of Illinois-Urbana-Champaign is one of the country's largest on-campus recreation centers. **RIGHT:** The majestic winter garden atrium and architectural entrance canopy are both glazed with CPI Daylighting's translucent Quadwall Nano-Cell polycarbonate panel systems.




very low specified solar heat gain coefficient of 0.183, and a low U value of 0.24, with a 20 percent light transmission.

AMENITIES

The fully accessible facility features two 50-meter swimming pools, a 35-foot climbing wall, 12 racquetball courts, 1/5-mile indoor track, four gymnasiums, nine multipurpose areas, and hundreds of machines and weights. Additionally, there are three meeting rooms, an instructional kitchen, 150-seat auditorium, sauna, wellness center and café. Current students, members and guests can access all of the ARC's amenities, which include free WiFi access throughout.

While not LEED certified, the building includes a number of sustainable features, such as reduced plug loads, passive solar gain and efficient new MEP systems throughout. Additionally, the project utilizes recycled materials in the rubber flooring, plastic laminate and Corian; improves indoor air quality in the pool by reducing chlorine and introducing more outside air; reuse of the existing structure; and local brick materials.

Since the ARC's facilities and ambience were so vastly improved and enlarged, Fawell explains that students have overwhelmingly accepted the new building. "The new building caters to a real need and exceeds the students' expectations, many of whom were involved in the initial programming and campaign for the funding of ARC. ... It has been a real source of pride for students and alumni." 

The half-round barrel vault extends seamlessly beyond the building envelope into the entry canopy.



Activities and Recreation Center, University of Illinois, Champaign, Ill.

Owner: University of Illinois at Urbana-Champaign

Architect of record: VOA Associates, Chicago

Associate architect: Hughes Group Architects, Sterling, Va.

General contractor: Bacon & Van Buskirk, Champaign

Programming consultant: Brailsford & Dunlavey, Washington, D.C.

Skylights: CPI Daylighting, Lake Forest, Ill., www.cpidaylighting.com, Circle #62