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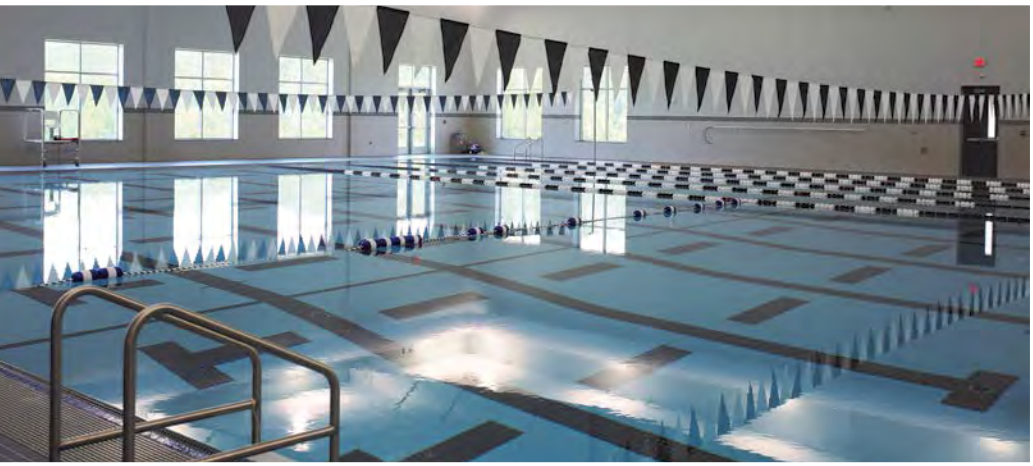
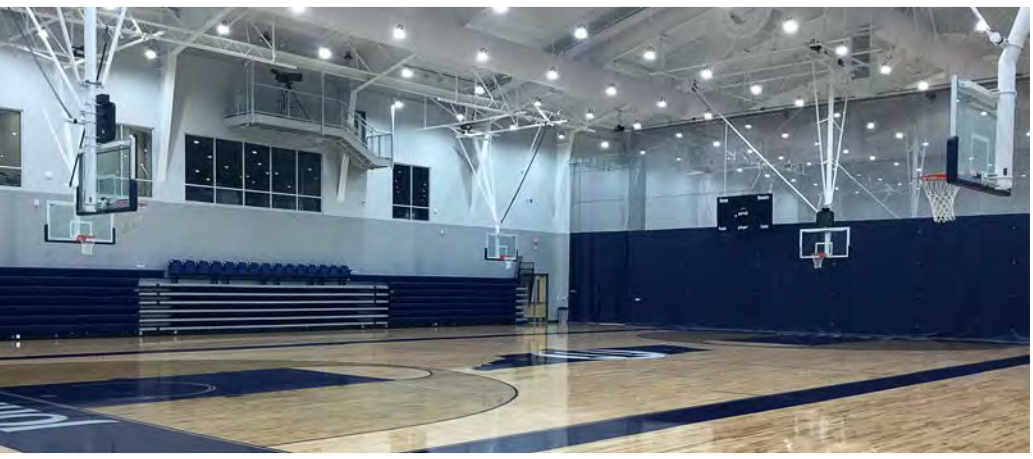
CASE STUDY

JOHNSON UNIVERSITY ATHLETIC & RECREATION COMPLEX





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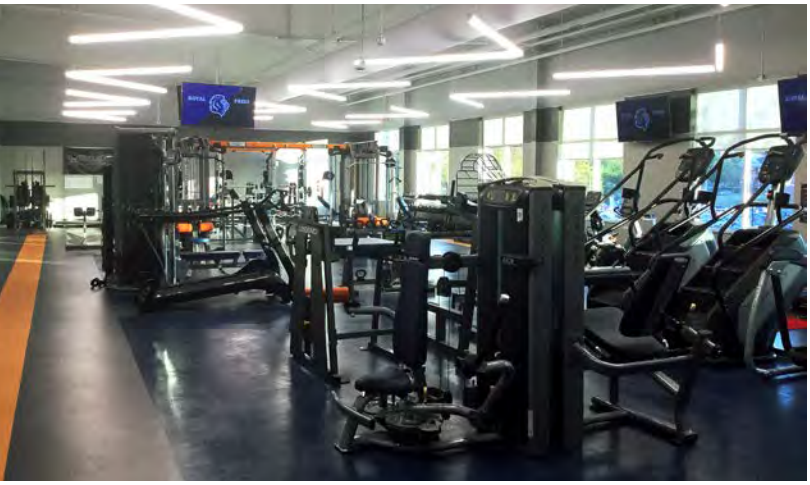

A private, Christian university nestled on the banks of the French Broad River in south Knoxville, TN, Johnson University is continuing their mission to educate students for Christian ministries and other strategic vocations framed by the Great Commission in order to extend the kingdom of God among all nations.

This mission is even more attainable by the construction of a new Athletic and Recreation Complex—the ARC—and expanding the opportunities for students to develop physically, intellectually, spiritually, and socially.

The ARC is an 86,500 square feet facility that includes two NCAA regulation-size basketball and volleyball courts, a 75' x 75' swimming pool with 10 lanes and aquatic center, as well as a workout facility and game room. It features a 6,100 square-foot indoor recreation and athletic room with artificial turf. There is a mezzanine level above the locker rooms, which contains a conference room, a team video viewing and training area, coaches' offices, a reception room, video and audio rooms with a camera platform, and an IT room. An additional 30 acres of recreation space is offered onsite outside the facility.

Once brought into the project and after assisting the architect with initial drawings, Mike Gale, estimator for Blaine Construction, an Authorized American Buildings Builder, was able to offer the ideal solution of a pre-engineered metal building in order to accommodate large clear spans and due to the cost effectiveness of steel construction. "The clear spans allowed for the open areas of the basketball courts and swimming pool," explained Gale. "The school had a budget, which we met. The customer was extremely happy they were getting all that they wanted."

American Buildings supplied the metal roof and wall panels. For the roof, a Standing Seam 360 roof system was used. Architectural V Rib wall panels in Surrey Beige were utilized for the walls. An accent wall with a translucent panel was incorporated into the metal panels in the atrium of the entrance to allow for natural light throughout the space.

A challenge, yet overcome, presented itself regarding the clear span over the swimming pool. “There was a need for specific bracing in that area, simply because there is glass storefront on what would normally be a bracing wall,” explained Ray Duncan, manager of Building Systems Division for Blaine Construction. “American did a great job on the design of that.”

The jobsite staging app ShakeoutPro® which uses a 3D model to illustrate the parts of a building and where they belong on the jobsite, was deemed extremely helpful in this project. At the beginning of construction, the Knoxville area experienced record-breaking rainfall causing the jobsite to be very muddy. “With everything that was happening with the weather, we were chasing trucks loaded with parts around with gravel trucks to keep them from getting stuck in the mud,” said Gale. “With ShakeoutPro we were able to pull parts off the truck and get them in the right place, having the least amount of travel around the jobsite.”

Also beneficial to Blaine Construction was the use of BIM technology, which gives a high quality 3-dimentional model of the building and allows for shared knowledge and reliable communication between contractors, architects, and engineers. “We were able to verify all the dimensions with the architect and American,” said Duncan. “When working on incorporating the metal wall panels with the translucent panels, we could get down to the smallest dimensions. American was great working with the architect and us to get all those dimensions correct.”

Now, with this beautiful and functional facility, Johnson University can expand their athletic offerings and offer the best student experience possible. Certainly, in this case it’s not just a building, but a vessel for growth, recreation, and engagement.

GOING GREEN IS EASIER WITH METAL BUILDING SYSTEMS FROM AMERICAN BUILDINGS

As an ISO 14001 certified manufacturer, American Buildings is dedicated to protecting our environment and reducing waste. All four divisions have achieved accreditation under the International Accreditation Service (IAS) AC472 Inspection Program for Manufacturers of Metal Building Systems. Every teammate is responsible for environmental protection, and we also require contractors, vendors and suppliers to comply with applicable environmental laws.

Metal building systems are the poster child for sustainability and "green," as steel is the most recycled material on the planet. Nucor typically recycles 22 million tons of scrap annually, including 9 million cars. Recycled steel reduces mining waste by 97%, air pollution by 86% and water pollution by 76%. Producing steel through recycling also uses significantly less energy than conventional steel making. In fact, the energy Nucor saves through recycling compared to conventional steel production is enough to power Los Angeles for 8 years. The typical American building is manufactured from at least 70% recycled steel. To top that, at the end of its useful life, 100% of an American building can be recycled into a variety of steel products, including new cars, appliances, buildings and bridges.

American Buildings was the first metal building manufacturer in North America to switch to 100% "cool" paint systems as standard, with no up-charge, for all roof and wall panels. This environmentally friendly cool technology was originally developed for stealth aircraft in the U.S. Military. These coatings help generate lower environmental temperatures, reducing smog and the heat island effect. What's more, they help reduce cooling costs in hot summer months.

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