



Crosstown Concourse

Memphis, Tennessee

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Collaborative effort delivers effective HVAC, controls, and energy management solutions to increase asset potential; helps realize \$250,000+ in capital first cost savings and reduced life cycle costs of \$1.3 million+; assists vertical urban village in becoming catalyst for growth.

Challenge

Crosstown Concourse building managers, Commercial Advisors, and the Crosstown Development Team knew that increasing market value of the property was essential to revitalizing the neighborhood. They also realized it was equally important to lower operational costs, promote sustainability, and maximize asset potential to increase value for building owners; allow tenants to conduct effective commerce; and help property managers attract tenants. The group sought the resources of a strategic partner to align with them in building this community.

Solution

Commercial Advisors and the Crosstown Development Team selected Trane as their HVAC, controls, and energy services partner based on a successful long-term relationship; and Trane's innovative thinking, real estate industry knowledge, and commitment to the project's success. Charged with redesigning systems of a 90-year-old, abandoned warehouse, not built for the business, residential, education or retail establishments that will be housed there, Trane invited the developer, engineers, and property manager to their LaCrosse, WI, location to discuss efficient design, and participate in witness testing of a Trane® CenTraVac™ centrifugal chiller.

Meeting low load requirements, reducing energy use

To accommodate low load conditions, the original HVAC system design consisted of four 525-ton centrifugal chillers, one 100-ton screw chiller and five cooling towers. Through collaboration and the leveraging of Trane's systems expertise, the group was able to bring a new perspective to the challenge. After witnessing the Trane CenTraVac chiller's low turndown rates, two chillers were eliminated from the design and three 700-ton Trane centrifugal chillers with a low



The one-million sq ft Crosstown Concourse development was designed to foster a community of diverse tenants to cross collaborate and become better together.

flow condenser design and three cooling towers were included. The redesign reduced pumping and fan horsepower by 160HP, and freed up 3,500 sq ft of space. "It was a 30-year decision, and we wanted to look at things differently," said Dan Chancey, senior vice president, asset management, Commercial Advisors. "Our goal was to get the chiller down to 10 percent capacity; we watched them get it down to 5 percent. We were able to buy fewer chillers with more tonnage. It was more efficient, less costly, and we now have open space for storage or to rent."

Optimizing operations, improving efficiency

A Trane® Tracer™ Ensemble cloud-based building management system is used to maximize daily operations, establish scheduling, make set point changes, troubleshoot issues and engage chiller plant optimization tools. The system also enables the use of Intelligent Services from the Trane® Building Advantage™ portfolio of energy services, including Building Performance, Energy Performance, and Active Monitoring.

Managing energy consumption

With Building Performance, Trane uses data to uncover opportunities and provide recommendations to optimize equipment runtime, reduce operational costs and promote sustainable efforts. Energy Performance provides real-time energy monitoring to identify where and when the building consumes energy, along with Trane expertise and insights to drive measurable results. Active Monitoring features 24/7 automated alarm and event monitoring, plus analysis by Trane technical specialists to proactively diagnose issues, enabling faster alarm resolution, and improving technician productivity.

Ensuring optimal operations

An interim Trane service agreement helped keep systems running at peak performance during this complex construction project. Post construction, a comprehensive service program was put in place, with two full-time, on-site Trane technicians integrated into the building maintenance team, enabling them to learn internal systems, tools and software, while they provide staff coaching and training. Preventive maintenance on all core equipment helps reduce failures, downtime, energy use, and service costs. Predictive analytics by Trane engineers detect inefficiencies and potential failures, helping to avoid unplanned outages and costly emergency repairs.

Results

Working together, Commercial Advisors and Trane provided solutions to achieve greater efficiency, showcase sustainability, reduce operational costs, enhance comfort, and increase asset potential of the Crosstown Concourse community. The team helped the developer realize more than \$250,000 in capital first cost savings, plus reduced life cycle costs of well over \$1.3 million over next 20 years. In addition, a 50 percent reduction in mechanical assets opened up 3,500 sq ft of space that could generate additional revenue. Trane is working with



A mixed-use vertical urban village, Crosstown Concourse builds on Memphis' strongest community assets - arts, education, and healthcare - to help improve the overall well-being of the neighborhood.

Crosstown Concourse to develop a public education curriculum to promote the importance of energy use and sustainability.

"Going forward, the development has to be an ongoing money maker, otherwise it is a disservice to the community," said Bradley Wilford, vice president, asset management, Commercial Advisors. "The property will eventually be run by a non-profit board and the dollars will go back into the community."

"The collaborative effort was focused on doing what was best for the property," added Chancey. "If Crosstown Concourse influences other investment in the neighborhood, becomes an economic catalyst for growth, and helps to eliminate area blight, that's when we'll know the project was a success."

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