



National Electrical Contractors Association



International Brotherhood Of Electrical Workers

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# J. & M. Brown Company, Inc. Completes \$4 Million Electrical Construction of MIT's Zesiger Sports and Fitness Center in Cambridge

Jamaica Plain based NECA Contractor Works in Tandem with GC:Turner Construction of Boston; Architect: Sasaki Associates of Watertown; EE: Cosenti Associates, Cambridge



CAMBRIDGE, MA - J. & M. Brown Company, Inc., one of the longest standing NECA Boston Chapter member electrical contracting firms, has recently completed the electrical, fire alarm, and sound system installations for MIT's new Zesiger Sports and Fitness Center, the college's central athletic facility, in Cambridge. The electrical contract for the state-of-the art, 162,000 s/f sports facility totaled approximately \$4,000,000.

J. & M. Brown provided comprehensive power distribution, fire alarm system, and sound system installations at the new MIT facility, which houses the college's Olympic-size competition swimming pool, a training swimming pool, squash courts, MAC court (multi-activity court), and weight training rooms. Physical therapy and sports medicine/rehab areas are located on the first floor of facility.

The Zesiger Sports and Fitness Center is physically connected to three existing MIT buildings - the Johnson Building, Rockwell Building and DuPont Building. It is for this reason that the construction of the new facility impacted three major electrical systems at the

college - the power, fire alarm, and sound systems. This physical location of the facility coupled with shared and integrated systems accentuated installation challenges met by J. & M. Brown in the electrical construction.

The main electrical power and fire alarm system for the central athletic facility originates from the Johnson Building which houses the MIT ice rink, used for the university's hockey teams as well as for public skating. The Johnson Building also houses the college's track & field facility. Operation of the Johnson Building is often seven days a week with long hours, therefore requiring significant design considerations and coordination of all aspects of construction to allow for the smooth integration of the electrical systems for the new athletic facility. With ongoing planning, J. & M. Brown was able to minimize power and fire alarm shut downs in the replacement of both existing systems.

The A/V systems, emergency lighting, and fire alarm systems for the Zesiger building are integrated into the same system as is used for the Johnson Building, the Rockwell Building (an older building which houses the

basketball activity court for both basketball and volleyball) and the DuPont Building (also an older health facility that houses MIT's indoor track, weight rooms, fencing and martial arts areas).

Robert Carabia, originally J. & M. Brown's general foreman on the project and later a project manager, spoke of the challenges, saying, "The most unique and demanding aspect of J. & M. Brown's installation is that all existing athletic facilities and systems had to be operating at the same time as the construction work, so that ongoing, scheduled sporting events could go on throughout construction. This required adding manpower and paying close attention to coordination efforts to ensure a timely project completion. It was crucial that fire alarm systems remained functional

ing be completed prior to the pouring of the foundation of the facility. "When Turner Construction reached the 2nd floor of new facility's construction, the power was reintegrated," Carabia said. Emergency power was also handled at the same time - prior to the physical construction of the facility.

Another major requirement within J. & M. Brown's project scope was the relocation of MIT's existing tel/data system to the new Zesiger Sports and Fitness Center. This tel/data system is the main campus communications loop. The integration and installation of all conduits and the cable tray for the new system required considerable redesign, as well as careful coordination with MIT facility and project managers to minimize any interruption of tel/data service at the college.

Carabia commented, "MIT's project management team provided us with the ability to meet project requirements and deadlines. They were very receptive to our project planning and scheduling efforts and this enabled us to meet time constraints."

Throughout construction, J. & M. Brown worked closely with project team members that included General Contractor, Turner Construction of Boston, the architectural firm, Sasaki Associates of Watertown, and electrical engineer, Cosenti Associates of Cambridge.

J. & M. Brown's vice president, Al Moore also spoke of the significant roles that planning and coordination had in the success of the project, saying, "Planning was handled very early on and that was critical in enabling the project to be constructed efficiently. The ongoing coordination efforts between Turner, MIT, and J. & M. Brown were such that it made easy to meet project requirements."



while integrating the new facility's fire alarm installation into that of the existing facility."

The power distribution system at the Zesiger consists of two separate 2500A switchboards, which are maintained and operate from the Johnson Building. The power installations had to be completed in a very tight time frame, from January through October of 2001. This situation mandated that the power for the new build-

The fast track electrical construction project commenced in late January of 2001 and was completed in early October of 2002. J. & M. Brown's project management team supervised a field staff of 22 journeymen and apprentice electricians from IBEW Local 103. The Zesiger Sports and Fitness Center is now opened for MIT student activities and sporting events.

Speaking of the coordination efforts that were required,

*J. & M. Brown Company, Inc., founded in 1921, is one of New England's oldest electrical contracting firms. The family owned and operated company provides electrical construction, fire alarm, telecommunications, and security services for commercial, industrial, healthcare, and educational projects throughout Eastern Massachusetts. Prominent recently completed work includes projects at the Blue Cross/Blue Shield of MA 550,000 s/f Headquarters and Data Center at Landmark Center in Boston, Harvard Medical School, MIT, Brigham & Women's Hospital, Trinity Church, and One Beacon, and the electrical construction of the FleetCenter. The company is nearing completion Lexagen Pharmaceuticals in Billerica. J. & M. Brown employs a staff of approximately 200, including 165 IBEW electricians in the field and an office staff of 35.*

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