

Real Estate Journal

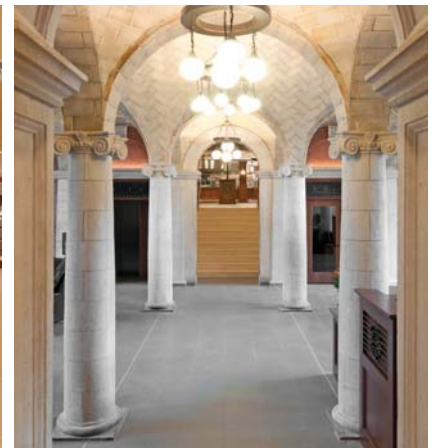
THE LARGEST WEEKLY COMMERCIAL/INVESTMENT NEWSPAPER IN THE WORLD

J. & M. Brown Company Completes Electrical Renovation of MIT's Historic Building W1

Project Submitted for LEED TM Gold Certification

Design-Build: Shawmut Design and Construction, Boston, MA with

Architect: MDS/Miller Dyer Spears, Inc., Boston, MA and EE: R.W. Sullivan Engineering, Boston, MA



Photos courtesy of Benjamin Johnson/Shawmut Design and Construction

CAMBRIDGE, MA – J. & M. Brown Company, Inc. (JMB) recently completed comprehensive electrical construction for the MIT Building W1 renovation at 305 Memorial Drive in Cambridge, Massachusetts. The complex multi-phase project entailed restoration of the historic structure, which is MIT's oldest student residence.

The restored Building W1 is a 6-story, 160,000 square foot residential building that houses a state-of-the-art food servery and conference rooms on the first floor and residential suites for undergraduate students, RAs and housemasters on floors 2 through 6. The first floor has been restored to its original grandeur, circa 1901.

J. & M. Brown's scope included ground-up restoration of the building's electrical systems, including new primary and emergency power, energy efficient lighting and lighting control systems, and a new life safety/fire alarm system. JMB also provided conduit and wiring for the security system infrastructure as a subcontractor to Siemens, the security system provider. In addition, JMB provided power and control wiring for the 16,000 square foot kitchen facility's specialized refrigeration systems.

Energy Efficient Lighting; State-of-the-art Lighting Control

LED lighting is installed in cove areas of the food servery and lighting control is provided via a Lutron Dimming Lighting Control system for the first floor conference center and dining rooms. Upper floors feature energy efficient fluorescent fixtures in dorm rooms and corridors.

Advanced Life Safety

For life safety, Building W1 is equipped with an advanced Simplex dual fire alarm system, which integrates separate smoke evacuation controls and alarms for all 362 dormitory residences. The life safety project was managed by JMB Fire Alarm Division Vice President Tom Rose.

EMON DEMON Power Monitoring System

In an aspect of the electrical construction project that has special significance and application for MIT graduate students, JMB installed an EMON DEMON electrical power monitoring system. The system is comprised of 100 individual meters, enabling MIT student residents to monitor the building's electrical usage. Each floor is divided into 5 or 6 sections and students have contests to determine which section in the building is most energy efficient.

JMB Meets Challenge of Electrical Field Changes

The complex electrical project required JMB to incorporate numerous field changes to the renovated structure in order to retain the building's original design. As the brick and wood framed structure was demolished and reframed, significant changes to the structure's architectural layouts became necessary. In fact, of the 350 architectural changes that were required, 179 affected the building's electrical, lighting and power systems.

JMB's Special Projects Group Division Manager and Sr. Project Manager Steve Cabral, General Superintendent Paul Arthur, and General Foreman John Mallett supervised the overall electrical project, managing an electrical

field crew of 35 IBEW Local 103 electricians.

Due to project's complexity and the significant generation of electrical, mechanical and plumbing field changes, design-build contractor Shawmut Design and Construction maintained an onsite field staff of senior level management and engineering personnel to oversee the project. At peak construction, the Shawmut team managed more than 300 skilled workers in diverse trades.

From J. & M. Brown's perspective, management and coordination of equipment and personnel were critical to the project's success. Sr. PM Cabral commented on those challenges, saying, "Through careful planning, expedited delivery of electrical equipment from our vendors, and our skilled crew of IBEW 103 electricians, the J. & M. Brown team was able to effectively manage power and lighting installations, which included a new substation, emergency generator and backup generator, 104 electrical panels and more than 4,000 light fixtures, to meet the aggressive project schedule. Shawmut Design and Construction deserves great credit in facilitating work on the W1 project that was condensed to a nine-month schedule. They adeptly managed all work and workers in the historic restoration."

Work on the W1 restoration project commenced in Fall 2009 and was suspended shortly thereafter due to economic conditions. In September 2010, project construction began again, and the majority of project was handled in the ensuing nine-month period, through July 2011. The project was completed as scheduled, in August 2011, when MIT took occupancy for the start of the current academic year.