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E.G. Sawyer Co. provides electrical construction services for Dana-Farber Yawkey Center for Cancer Care: project team includes ZGF Architects, Yale Elect., Boston Lightning Rod and LCN

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NECA Boston Chapter member E. G. Sawyer Co, Inc. has completed the \$27.45 million electrical construction of Dana-Farber's Yawkey Center for Cancer Care. The 275,000 s/f, 14-story facility is located at 450 Brookline Ave. in Dana-Farber's existing campus and the Longwood Medical Area.

E. G. Sawyer's comprehensive project scope included shell and core electrical installations as well as electrical fit-out: primary and emergency power, fire alarm, lighting and lighting control, and security systems for the tower building and its 7-story below-grade parking facility. The NECA firm also provided temporary power to the site in the project's earliest phase.

The Yawkey Center is designed to serve as a model for future cancer patient treatment facilities. The building houses 130 exam rooms, 137 infusion chairs and numerous patient and family consultation rooms. The building connects to other Dana-Farber buildings as well as to adjacent affiliated clinical partners, Brigham and Women's Hospital and Children's Hospital.

A Sustainable, Energy Efficient Facility

Designed by ZGF Architects of Washington, DC with an eye toward environmental responsibility through its green building design, the Yawkey Center has numerous environmentally sustainable features. The contemporary glass façade maximizes natural light within the building while enhancing the facility's energy efficiency. North-facing windows in infusion rooms reduce glare while keeping these areas cooler during warmer months. These features are enhanced by automatically dimming lights and automated shade control. Green roofs are designed to improve air quality, lower temperatures and decrease storm water runoff.

The Center's two-story Thea and James Stoneman Healing Garden has special grow lights installed in the ceiling.

Dana-Farber has applied for and is expected to receive a Silver LEED rating for the Yawkey Center.

Primary and Emergency Power

The facility's primary power is generated via E.G. Sawyer's integration of 15KV switchgear service feeding four 13,800V transformers and two main-tie-main double-ended 480V substations. The Yawkey Center is also equipped with three Cummins 800kW generators.

Optimal Lighting and Lighting Control

E.G. Sawyer's energy-efficient lighting installations include a Reflex lighting package supplied by Yale Electric. More than 7,000 light fixtures comprised of over 130 different types of fixtures are installed throughout the facility.

At the center of the lighting system is the Crestron lighting control system, which allows ballasts to be programmed individually as needed to accomplish desired lighting levels. A dimming system

provides optimal lighting for the Healing Garden and all conference areas. Daylight harvesting features are incorporated within the lighting control system, as are motion occupancy sensors. The building also has automated shade control on all floors.

Fully Integrated Life Safety System

The Yawkey Center is equipped with an advanced Simplex life safety system which features separate nodes for the tower and the underground parking facility. According to E.G. Sawyer senior project manager Joe Carey, "The installation of the facility's fire alarm system and its integration into the Dana-Farber's main building, the Smith Building, and Mayer Building were among the most demanding aspects of the project." The Simplex True Site workstation ties in the fire alarm and smoke control for all facilities on the Dana Farber campus. A Comtronics bidirectional amplifier provides communication for the Boston Fire department from all points in the facility.

Fellow NECA contractor, Boston Lightning Rod installed the lightning protection system under subcontract to E.G. Sawyer. This system ties into the Dana-Farber Smith Building.

Advanced Security Systems Tie Into Life Safety

The Yawkey Center for Cancer Care is equipped with card access security systems. More than 200 cameras are installed at all garage levels and on all floors. The building also features a Rowland advanced nurse call and paging system.

Tel/Data and Network Installations by LCN, Division of E.G. Sawyer

The facility's tel/data network installations and integration were provided by LCN, the technology division of E.G. Sawyer. The extensive network has both a fiber optic and copper backbone. In providing the facility's 10-Gigabit network solution, LCN installed approximately 1 million feet of copper cable and 7,000 feet of fiber optic cable (144-strand, 12-strand and 24-strand). The project also entailed LCN's integration of the Yawkey Center with Brigham & Women's data network, providing the Dana-Farber with state-of-the-art patient tracking system technology. At peak construction, LCN's vice president, senior project manager Bob Bennett supervised a field telecom crew of 15 IBEW technicians.

Six-day Work Week to Meet Accelerated Schedule

Carey and general foreman Steve Franklin supervised an electrical crew of seven electrical foremen and approximately 75 electricians from IBEW Local 103 at peak construction. To meet an accelerated project schedule, E.G. Sawyer instituted six-day work weeks beginning at the rough-in stage, late 2009, through September 15, 2010, when the contractor reached substantial completion.

Impeccable Safety Record

Carey commented on the demanding project coordination that was required. He said, "The success of the project was spearheaded by the effective project management of both Dana-Farber and Walsh Brothers from project inception through completion. They implemented procedures that ensured a clean and safe site at all times. Communication between Walsh Brothers, E.G. Sawyer and approximately 20 other subcontractors enabled us to achieve total project quality with the utmost concern for safety." E.G. Sawyer provided more than 150,000 manhours at the Yawkey Center without a recordable incident.