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## **Thornton Tomasetti/Fore Solutions provides services for Tufts dental school project; Achieves LEED Gold**

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According to the engineering firm Thornton Tomasetti, the Level 2 renovation at Tufts University's School of Dental Medicine has received LEED Gold Certification. Fore Solutions, the green building consulting company acquired by Thornton Tomasetti, provided LEED consulting services for the project.

Fore Solutions was hired by the project architect, ARC/Architectural Resources Cambridge, to provide LEED consulting. In this role, Fore Solutions reviewed the energy model; tracked compliance with LEED throughout design and construction; and reviewed and submitted LEED documentation to the Green Building Certification Institute.

The Tufts School of Dental Medicine developed a multi-year, multi-phase master plan to promote sustainability and positive environmental initiatives. Phase 1 of the project included a five-story, 95,000 s/f vertical expansion to the existing building. This allowed for the expansion of patient clinics, classrooms and offices, as well as continuing education and research facilities.

The second installment in the master project was the Level 2 renovation, initiated to house part of the pre-doctoral teaching program along with an emergency clinic. The second floor has been redesigned within the existing building to accommodate clinic and patient functions in the east wing, and academic offices in the west. The Level 2 Renovation was designed to meet sustainability goals in several categories.

Key points:

- \* The renovation of the second floor is considered a "sustainable site," as it was constructed on a pre-existing lot and will not impact a new location.
- \* To encourage the widespread use of public transportation and the nearby subway system by students, faculty and patients, no additional parking spaces were added to the renovation.
- \* A 40% water savings is achieved by the project, aided by the use of low-flow lavatories and metered faucets.
- \* Significant energy savings are accomplished with occupancy sensors, installed for more than 80% of the connected lighting load. These sensors will automatically turn the lights off when users are no longer in the space.
- \* The project has a 20% lighting power reduction from the ASHRAE 90.1-2007 standard.
- \* Energy Star computers, copiers, refrigerators and other machines are utilized at the dental school; 91% of equipment in the project is Energy Star rated.
- \* Hand dryers in the lavatories operate touch-free, using 80% less energy and reducing paper towels as a source of day-to-day waste.
- \* Tufts has purchased Green-e Energy Certified Renewable Energy Certificates that offset 100% of the dental school's second floor power consumption for the first two years after the renovation.

- \* The dental school team used local and regional materials for the construction of the renovation, and highly recycled content where possible.
- \* A waste management plan developed by the contractor recycled 84% of the construction waste.
- \* Three built-in, single-stream recycling stations on the second floor complement the individual recycling bins placed around the clinic and offices and will help to encourage staff and patients to recycle.
- \* The new dental school uses a LEED-developed indoor air quality plan that provides fresh air for the end user. Low emitting and healthy materials were used to minimize off gassing at installation, and green-cleaning strategies employed during occupancy.

Michael Pulaski, Ph.D., LEED AP BD+C, associate, Portland office, Thornton Tomasetti said, "We are pleased to provide green consulting for the recently redesigned home to the Tufts School of Dental Medicine, which has received LEED Gold Certification. By participating in the Level 2 renovation, we have helped to transform the existing structure into a working building that is both innovative and sustainable."

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