CONSTRUCTION ZONE

Marquette University's Engineering Hall facility, Milwaukee. Photo courtesy of Marquette University

BUILT TO TEACH

The $50 million, 115,000-square-foot first phase of Marquette University's Engineering Hall facility, Milwaukee, was "built to teach" by seamlessly integrating state-of-the-art tools and technology into the building's structure, including:

- A total of 130 sensors situated throughout the building that display temperature, wind speed and direction, water collection and usage, humidity and other factors of the building. Data from the sensors are available on monitors throughout the building, as well as off-campus through the Web, enabling students to monitor building energy consumption, water usage and structural forces.
- A two-story, high-bay lab with a 10-ton overhead crane, environmental chamber, soils testing pit, and strong floor and strong wall that enable students to conduct structural and materials testing.
- An 8,000-square-foot Discovery Learning Studio that enables students to design, model and build prototypes of their projects.
- Exposed mechanical, plumbing and electrical systems to help students see firsthand the basic construction and building-management principles they learn in the classroom.

The facility also features a primarily glass exterior and extensive use of glass for interior walls, making laboratories, shops and classrooms visible to students and visitors. Also, common areas on the lower level and first floor surround a central, open staircase, encouraging student-faculty interaction, and providing space for teams to gather, brainstorm and problem-solve.

Opus AE Group, Inc. (Milwaukee) was architect for the project, in collaboration with HGA Architects (Milwaukee).

A DISTINCTIVE ADDITION

Mather High School, part of Chicago Public Schools, has received LEED silver certification from the U.S. Green Building Council (USGBC) and confirmed by the Green Building Certification Institute (GBCI).

The design team achieved certification by carrying out sustainable-design features to optimize energy performance, reduce water usage, and incorporate regional materials and recycled content into the project. These sustainable features will reduce costs for the district and school, and create a more healthful environment for students, faculty and the surrounding community.

The 160,215-square-foot campus houses 2,000 students. The project included the renovation of the existing building, as well as a 10,000-square-foot addition.

The single-story, double-height addition includes a library, lobby, main entrance, entrance canopy, toilets and two classrooms. It provides a more distinctive entrance to make the school more attractive, as well as increase the size of the lobby and library.

The addition also included lighting upgrades and new classrooms. Sustainable design elements include a greenhouse, creative reuse/recycling center, permeable pavers and increased energy efficiency through renovation of all mechanical systems.

FGM Architects (Chicago) is architect for the project.

Mather High School, Chicago.