

# MARK CASE STUDY

## LEED Certification Poses Unique Challenges, Opportunities For College Expansion Project

A 40 percent growth rate over a five- or six-year period left no doubt that Walsh College needed to expand its facilities. College officials were also sure they wanted the addition to be environmentally friendly and were specifically interested in achieving Silver-level LEED certification.

Ground was broken in June 2006 for the two-story, 37,000-square-foot Jeffery W. Barry Center, named in honor of the college's president from 1970 to 1991. When it opened in January 2008, it increased the size of the Troy, Michigan, campus by nearly 50 percent, and while it is currently still in the U.S. Green Building Council's review process, the goal now is for LEED Gold certification.

### PROJECT

[Jeffery W. Barry Center](#)  
[Walsh College Expansion, Phase 1](#)  
[Troy, Michigan](#)

### LIGHTING DESIGNER

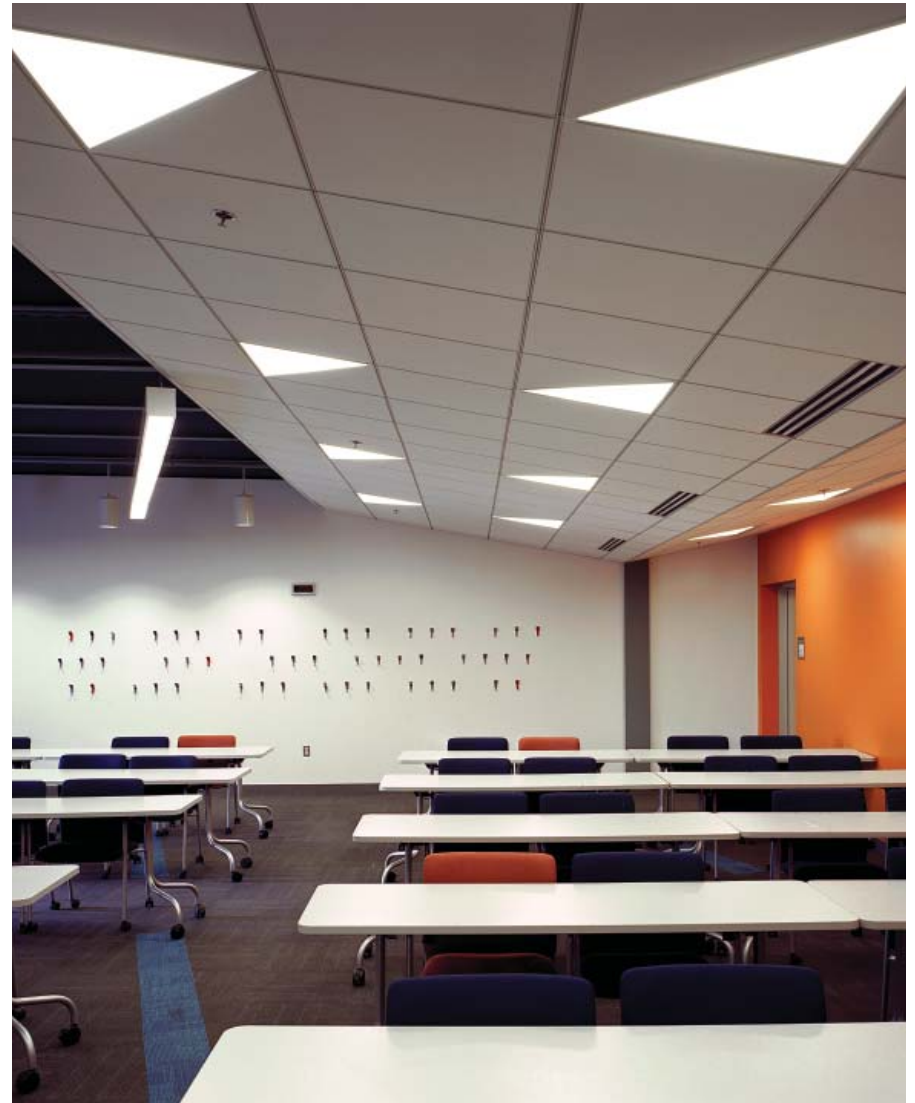
[Lighting Design Alliance](#)  
[Project Team: Laura Roman and Julie Blankenheim](#)

### MARK PRODUCT

[Slice](#)

### ARCHITECT

[Valerio Dewalt Train Associates](#)  
[Project Team: Joe Valerio, Dan Rappel, Andrew Kerr and Frank Louis](#)



A private business college, Walsh focuses on advanced business education for mid-career professionals in the Detroit area. A majority of its students work full-time in the business community during the day and attend classes at Walsh in the evening. One objective in the design of the new center was to create a corporate-like environment that would also serve the requirements of the school's curriculum.

Recognizing the value of community input and the importance of building goodwill with neighbors, the Walsh team hosted a charrette, involving members of the college community, neighbors and civic officials. Through this intensive one-day workshop, the design team was able to discuss plans for building a sustainable facility and obtain helpful ideas for addressing local needs and concerns.

In addition, the project's architectural firm, Valerio Dewalt Train Associates, had its design team members experience the college's environment firsthand—by attending classes, working in administrative offices and otherwise becoming part of the campus life—before beginning the design.





Through this immersion process, the team was able to come up with ideas for overcoming certain LEED challenges, such as those faced by a school that is occupied largely at night, when daylighting cannot be used as part of the lighting strategy, explains architect Andrew Kerr.

In addressing the daylighting problem, the design team went in the opposite direction. They took advantage of the college's evening-oriented schedule and created a building with very limited use of windows but with enhanced thermal efficiency. Twice the standard level of insulation and high-reflectance, highly emissive roofing were used. The points gained from energy efficiency offset the daylighting points lost, according to Kerr.

The task for the project's lighting designers was to focus on aesthetics as well as function.

"The architect requested a design that would address careful integration of light fixtures in the space to allow effects to be seen without interrupting the space's clean lines," explains Laura Roman, manager of Lighting Design Alliance, Chicago. "Some of the layouts followed the pattern of the carpet or other architectural features, thereby blending with the space three dimensionally."

Roman and colleague Julie Blankenheim chose Mark's triangular Slice for use in the classrooms and main lecture hall, an estimated 70 percent of the space. "It met the purpose of introducing the triangular shape into the lighting, just as we were doing with façade openings and other architectural features. While we were able to use an efficient source like

the fluorescent lamping, the shape of the fixture provided playfulness and originality to the classrooms in the new building," Roman says.

System controls also played an important role in the building's efficiency, according to Kerr. Occupancy sensors that control light and room temperature were utilized to save energy and reduce operating costs, earning LEED points in the process.

In addition, recycled and environmentally sensitive materials were incorporated into the design and construction of the Barry Center. Nearly all of the building materials have at least some recycled content, some more than others. For instance, the building features terrazzo floors made of a mixture of recycled windshield glass and blue glass.

The facility uses a variety of other sustainable design strategies, including water-efficient landscaping, a constructed wetland featuring a pond and native plants, and bioswales that capture rainwater and pollutants in the parking lots and move them through a highly efficient filtration system.

The Jeffery W. Barry Center—featuring nine classrooms, three conference rooms, two seminar rooms, a 135-seat auditorium, a marketing focus-group room and a library—now stands as a learning tool, helping to educate future business leaders about sustainable building design. A video kiosk in the main lobby provides information about the building and its sustainable features, and curriculum that will use the building as a case study for sustainable design is in development.