

Ford Motor Company Engineering Design Center

Green Building Profile

The Ford Motor Company Engineering Design Center earned LEED Certification in January 2006, making it the first building on campus to become LEED certified. The project set a precedent, as all new construction and major renovations are designed to meet LEED standards. The building is located next to the Technological Institute on Sheridan Road, and serves engineering students with an open space to work on projects, especially for the Design, Thinking, and Communication course required by the McCormick School of Engineering. The 84,000 square foot, six-story building is home to Segal Design Institute, the Farley Center for Entrepreneurship and Innovation, and the Prototyping and Fabrication Lab. The modern, environmentally conscious space provides opportunities for design collaboration and innovation through engineering.



Green Building Highlights

The LEED New Construction v2.1 Certification process used for this project was based on a 69-point scale. The Ford Motor Company Engineering Design Center earned 33 points, achieving LEED Silver certification. Notable features include the following:

- **Sustainable sites:** The project team made extensive efforts and partnered with the Garden Club of Evanston to preserve the Shakespeare Garden through construction.
- **Water efficiency:** Landscape irrigation is provided through stormwater storage, eliminating potable water use for landscape.
- **Energy and atmosphere:** A 25 percent reduction in energy cost was achieved through HVAC and ventilation choices.
- **Material and resources:** 75 percent of construction waste was diverted from the landfill.
- **Indoor environmental quality:** The building was designed to capture natural daylight reaching over 75 percent of the building's open space, reducing the need for artificial lighting.



What is LEED Certification?

Leadership in Energy and Environmental Design (LEED) certification is a U.S. Green Building Council program that recognizes building designs that are resource efficient and cost effective while providing a healthier and greener lifestyle for building occupants.

Green Building Features

Sustainable Sites

8 out of 14 possible points

The building is within 1/4 mile of bus stops and provides bicycle storage and shower facilities for commuters. Extra steps were made to conserve the Shakespeare Garden, located behind the Ford Center. The Shakespeare Garden is watered through storm water runoff from a specially designed retention basin underneath the building. Additionally, ENERGY STAR® rated reflective roofing insulation was installed to reduce heat island effect.

Water Efficiency

4 out of 5 possible points

The retention basin that irrigates the Shakespeare Garden removes the need to use potable water landscaping. Efficient plumbing fixtures throughout the building resulted in a 30 percent reduction in potable water use.

Energy and Atmosphere

6 out of 17 possible points

Through efficient design, a 25 percent reduction in energy cost was achieved. Sub meters were installed to track and monitor energy performance. Exterior lighting on the project reduces light pollution, especially in regards to the proximity to Dearborn Observatory that uses research equipment and telescopes that are sensitive to light levels.

Materials and Resources

5 out of 13 possible points

Throughout construction, the project team made efforts to reduce landfill waste. This resulted in over 75 percent of waste being diverted through recycling and reusing. Through environmentally conscious purchasing, 5 percent of the materials used on the project contained recycled contents. In addition to recycled contents, 20 percent of the materials were manufactured locally, reducing pollution from transportation.



Indoor Environmental Quality

8 out of 15 possible points

Low-emitting materials were used in paints and carpets to maintain indoor air quality. Achievements in design reduce indoor chemical exposure and control particulate matter in high traffic areas, occupants are able to control lighting and temperature, increasing comfort and productivity. Overall, calculations were made to determine seasonal temperature settings to provide a comfortable indoor environment. Daylight is also provided to over 75 percent of the space, reducing lighting needs and providing an enhanced learning experience. With increased daylight, automatic shades were installed to prevent overheating of spaces. Additionally, a raised floor system provides efficient heating and cooling.

Other Credits

2 points

The project received an extra point since the building is used for educational purposes. Additionally, the building received credit for having a LEED Accredited Professional on the project team.

Years after certification, the building achieved another first for Northwestern. Ford Engineering Design Center added solar panels to its roof, generating 20 kW of renewable power right on site.



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