

Patrick G. and Shirley W. Ryan Center for the Musical Arts

Green Building Profile

Construction on Northwestern University's Ryan Center for the Musical Arts began in June of 2012 and was completed in the summer of 2014. Built to accommodate both the Bienen School of Music and the School of Communication, the building's innovative use of energy efficient technology and its environmentally-minded design earned it a Leadership in Energy and Environmental Design (LEED) Gold certification. The faculty offices, classrooms, teaching labs, studios, practice rooms, and student lounges were designed to meet high environmental standards. Features such as a double-skin glass technology that improves energy efficiency and a gray-water system to encourage water efficiency are only some of the green building practices used to reduce the center's environmental footprint.



Green Building Highlights

The LEED New Construction v2.2 certification system used for this building is based on a scale of 69 points. For Gold certification, a minimum of 39 points is required. The Ryan Center for the Musical Arts was awarded 42 points.

Notable features include the following:

- **Sustainable sites:** Building occupants have access to several community services, public transportation, bicycle storage, showers and changing facilities.
- **Water efficiency:** Reduced the total water required for irrigation by half, and has eliminated the use of potable water for sewage conveyance.
- **Energy and atmosphere:** Achieved an energy savings of 37 percent (compared to ASHRAE standards) through the installation of state-of-the-art mechanical and lighting systems.
- **Material and resources:** The project diverted 85 percent of the construction waste generated from the landfill.
- **Indoor environmental quality:** During and after construction, the project implemented an air quality management plan to ensure a comfortable and safe environment was provided for building occupants.



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 Ryan Center earned many of its sustainable site credits for its location. The building is located within half a mile of at least ten community services such as banks and libraries, and one quarter mile of at least three bus services, including campus shuttles and public transportation.

The building is also accommodating to those who utilize environmentally friendly modes of transportation. Bike storage, changing facilities, and showers are also provided for those who travel by bicycle. Additionally, there is a 20 percent parking discount available for those who commute to the building using low-emitting and fuel-efficient vehicles.

Over half of the site hardscape and a majority of the roof have been paved with highly reflective materials that work to combat the urban heat island effect.

Water Efficiency

5 out of 5 possible points

The Ryan Center received all possible credits for its outstanding water efficiency. Water saving features include high efficiency, low consumption plumbing fixtures, and captured groundwater is used as a non-potable source for flush fixtures and irrigation. The total water savings is 49 percent compared to the standard set by the EPA Act of 1992.

Energy and Atmosphere

8 out of 17 possible points

The Ryan Center for the Musical Arts achieved over 36 percent in energy cost savings from efficient windows, demand control ventilation, energy efficient lighting systems, occupancy sensors, and efficient cooling systems that use chilled beams. In addition, the heating, ventilation, and air conditioning (HVAC) system uses an existing campus-wide district chilled water system that eliminated the need for new refrigeration equipment. Additionally, 35 percent of the project's energy consumption was supplied by renewable energy from green power purchases.



Materials and Resources

7 out of 13 possible points

During construction, over 85 percent of waste generated on the site was diverted from the landfill, and building occupants continue to divert waste from the landfill with dedicated areas for the collection and storage of recyclable materials. 30 percent of the materials used to construct the building were manufactured using recycled materials, and 43 percent of building materials were produced within 500 miles of the project site.

Indoor Environmental Quality

10 out of 15 possible points

The building has a ventilation, filtration, and carbon dioxide monitoring system that improves both its indoor and outdoor air quality. The project team implemented a plan to manage indoor air quality to filter any harmful toxins that may have come from the construction site while the building was under construction. The building also employs low-emitting materials that reduce the output of harmful pollutants, including low-emitting adhesives and sealants, indoor paints and coatings, carpets (without cushions or adhesives), and wood and agrifiber products.

Other Credits

4 points

The Ryan Center for the Musical Arts received several additional LEED credits for exemplary performance. The building stands out by maximizing open space for its occupants, reducing water use by 90 percent, and using 30 percent recycled-content materials during construction. Additionally, the building received credit for having a LEED Accredited Professional on the project team.

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