



University of Washington
BOTANIC GARDENS

Merrill Hall Green Design



Overview

Merrill Hall is a showcase for sustainable urban design. After fire destroyed the original building in 2001, the UW and the greater community turned tragedy into opportunity by creating a building that reflects the mission and vision of UW Botanic Gardens.

Rebuilt with funds from the state of Washington, the University of Washington, and significant private donations, Merrill Hall is now an integral part of UW Botanic Garden's education and outreach on sustainable urban living. Since its completion in January 2005, thousands of students and tour groups have come to see green building principles put into practice.

The building houses research labs, and faculty and student offices on the first floor. The second floor is home to staff and facilities offices, the greenhouse commons, the Otis Douglas Hyde Herbarium, and the Elisabeth C. Miller Library.

Award-Winning Design

The U.S. Green Building Council awarded Merrill Hall a Silver LEED rating for its sustainable features. LEED (Leadership in Energy and Environmental Design) is a national certification

program which recognizes buildings that are environmentally sustainable, profitable, and healthy places to live and work.

Merrill Hall also received recognition for its outstanding design in 2006, when the architect, Miller|Hull Partnership, received a Citation Award in the AIA Washington Civic Design Awards.

Nature-Based Principles

Green buildings reflect careful consideration of the interrelationships between the natural world and the built environment. To recognize Merrill Hall's unique role as the link between surrounding urban neighborhoods and the ecologically valuable Union Bay Natural Area, the design team considered several nature-based principles during the planning phase:

- Create a flexible building that connects to the natural world
- Celebrate, protect, and conserve water
- Reduce building energy use
- Use available sun and wind for light, ventilation, power, and heat
- Demonstrate "good wood" uses
- Use materials that are agriculturally based, salvaged, locally produced, eco-labelled, or recycled content



Architect
Miller|Hull Partnership

Sustainability Consultants
O'Brien & Company, Inc.
Elizabeth D. Powers, LEED AP

Features

Thirty-two **solar panels** were installed on the roof with support from Seattle City Light. These panels supply enough energy to power the lights on the first floor.

Ample windows and light-colored surfaces bring **natural light** into the building. Building overhangs keep the sun from overheating offices in the summer while still allowing it to provide heat and light during the cold winter months.

The **green roof** on McVay Courtyard uses plants and soil to absorb rainwater and slowly evaporate or transpire it back into the atmosphere.

Look for **recycled materials** throughout the building, from 25 percent recycled metal in the roof to restroom wall and floor tiles composed of 50 - 60 percent recycled glass. The building's concrete foundation includes fly ash, a coal combustion byproduct.

Curious about **sustainable wood**? Look no further than Merrill Hall. Its ceiling trusses and headers are made of *glulams*, smaller pieces of lumber glued together into larger,

stronger beams that can span longer distances than traditional wood products. Merrill Hall's floors are made from bamboo, and salvaged trees have been converted into beautiful tables and benches.

Natural ventilation makes Merrill Hall a healthy place to work. The inside uses only low VOC paints, coatings, and adhesives, while separate vents send polluted air directly to the outside.

What You Can Do

Let Merrill Hall's green features inspire your next project!

- Install photovoltaics or solar water heating on a south-facing roof -- or subscribe to your local utility's Green Power program to support local renewable energy efforts.
- Choose Energy Star and other high-efficiency appliances, which could save 25 - 50 percent on energy and water bills.
- Wood alternatives and engineered, salvaged, and sustainably harvested woods are readily available for floors, framing, cabinets, and other building projects.
- Use available sun and wind for light, ventilation, power, and heat.
- Take advantage of daylight when it's available, and hang heavy drapes to shade rooms from summer heat.
- Green roofs work for everyone, even if your roof slopes. Seattle is home to the leading program on residential green roofs, run by the Northwest EcoBuilding Guild.
- Capture stormwater in a barrel or cistern and use it to water gardens or lawns during a dry spell.

UW Botanic Gardens sustains managed to natural ecosystems and the human spirit through plant research, display, and education.

3501 NE 41st Street, Box 354115
Seattle, WA 98195-4115

206-543-8616
www.uwbotanicgardens.org

