

University of Washington

BENJAMIN D. HALL INTERDISCIPLINARY RESEARCH BUILDING



GREEN CENTRAL
PROJECT
PROFILE



Lessons Learned

Our winning design team was chosen to implement an innovative design, build, operate, and maintain proposal established by the University of Washington. Through this model, we were able to improve the design's space efficiency, where nearly 10,000 square feet were added to the original 85,000 square feet program within the same footprint and with a fixed level of expenditures over a full 30-year horizon.

The core and shell design allows maximum flexibility of interior scientific uses from nanotechnology to biometrics. Tenants can lease space and build it out to suit their specific research and laboratory requirements, with an eye to the future needs of scientists working in this world-class research center.

As with most of our projects, we introduced sustainability and LEED® (*Leadership in Energy and Environmental Design*) goals early in the process by setting up a series of integrated design meetings devoted to sustainability goals. A LEED *Responsibility and Action Matrix* included identification of a responsible team member and total cost from design through construction for implementing each feature. This approach proved to be an invaluable tool in cost control, and led the University to achieve a LEED-CS (*Core & Shell*) Gold green building rating.

Building	6 stories with 1½ levels of parking
Building SF	151,000 with 94,000 leasable space
Costs	\$25 million
Completed	2006
Certified	LEED-CS Gold

GREEN STRATEGIES

Sustainable Sites

- Previously used as a parking lot, the selected location was a contaminated urban infill site. We removed and safely disposed of 128 cubic yards of contaminated soil.
- Existing green space was restored and expanded using native and adapted vegetation providing a pedestrian-friendly, welcoming environment. The University dedicated open space along the public Burke-Gilman Hiking/Biking Trail at the north edge of the site. This area is 20% greater than the size of the building footprint.
- A variety of transportation modes serve the site, including local and regional buses, campus shuttles, shared ride programs and future light rail, greatly reducing the need for private vehicle transportation.
- The building accommodates alternative fueled vehicles by providing electric charging stations within the parking facilities for both private vehicles and the UW's fleet of electric vehicles.

Water Efficiency

- Innovative landscaping techniques including stream sprays, bubblers and automatic controllers for the irrigation system, amended soil that holds moisture and reduces evaporation, and low water use plantings reduced water needs by 50%.
- Building water use was reduced by 30% through the use of low-flow lavatories, sinks and showers, and waterless urinals.

Energy + Atmosphere

- Building energy costs were reduced to 77% and 65% for natural gas and electricity by optimizing distribution systems, utilizing variable frequency drives on supply and exhaust fans, incorporating heat recovery systems and energy-efficient lighting systems.
- Integrating building design with mechanical, electrical and plumbing (MEP) distribution systems reduced building floor-to-floor height (from 15'-0" to 13'-6") lowering heating and cooling volumes, and saving building materials.
- Additional commissioning and future systems review help to insure that the building will operate as planned.

Materials + Resources

- Local, regional and recycled products and materials were utilized.
- A comprehensive construction waste management plan diverted 75% of construction waste from landfill.

Indoor Environmental Quality

- Good ventilation, use of low VOC materials, and thermal comfort that met ASHRAE guidelines deliver healthy air quality in the building.
- Sweeping curved glass south-facing façade allows daylight to penetrate deep into the building, enhancing the users' experience while celebrating views to Lake Union and the Seattle skyline.

Design Process

- A motivated and highly qualified team, including a forward thinking client, committed from the beginning to deliver exemplary performance on this project combined with environmental stewardship and responsible building.



Client / Owner
University of Washington

Architect
CollinsWoerman

Contractor
M. A. Mortenson

Operations & Maintenance
Johnson Controls

Design/Build Mechanical
McKinstry Company

Design/Build Electrical
Sasco

Landscape Architect
Fredericks Landscape Architecture



AWARDS

Awarded LEED[®] CS-Gold certification

Winner, AIA 2007 Award Design/Delivery Process Innovation Using BIM

Winner, Design Build Institute of America 2006 National Design-Build Award Competition

GREEN CENTRAL

At CollinsWoerman, our sustainable development teams merge cutting-edge architecture and community-based planning, integrated water and alternative energy, green building and sustainable infrastructure. We have years of experience guiding government leaders, utility executives, developers, and corporations.

For more information, visit www.collinswoerman.com/green-central. Contact our Sustainability Team Leaders, Steve Moddemeyer 206.245.2034 and Lucia Athens at 206.245.2145.

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