Windward Community College
Library Learning Commons
Green Building Features

The Library Learning Commons at Windward Community College is a contemporary learning environment with open flexible spaces to encourage team-based problem solving and collaborative interactive learning. Sustainability is the key to this 69,000-square-foot building designed to reduce energy consumption, water use, waste, and any detrimental impact on human health and the environment. Achieving Silver LEED® (Leadership in Energy and Environmental Design) certification by the U.S. Green Building Council provides independent verification that the Library Learning Commons is designed, constructed, and maintained using strategies for high performance in the following five key areas of human and environmental health.

Sustainable Sites
Responsible and Environmentally Friendly Site Selection and Design Strategies

- Most of the building's mass is tucked into the naturally sloping terrain allowing the structure to sit harmoniously within its site and minimize site disturbance and grading
- Bicycle racks promote the use of alternative transportation
- Dedicated and preferred parking stalls encourage carpooling and use of low-emitting and fuel-efficient vehicles
- To protect the site from runoff, a detention chamber under the new student parking lot can detain 14,000 cubic feet of water; a secondary detention pond can hold 35,000 cubic feet in case of an extreme storm
- Grass pavers and large shade trees reduce the "urban heat island effect"
- "Cool roofs" reflect the sun's light and heat and use insulation to reduce the energy needed to cool the building

Indoor Environmental Quality
Minimization of Contaminates and Optimization of the Indoor Environment

- Window wall, skylights, and other windows provide natural light reducing the need for artificial lighting and allowing views of the Ko'olau mountains and surrounding areas
- Motion and light sensors save energy by turning lights off or on depending on room occupancy or external light conditions
- Building materials, including adhesives, sealants, paints, coatings, carpets, and composite woods, emit low or zero volatile organic compounds
- Composite wood products (plywood, particleboard, door cores, etc.) and laminating adhesives contain no added urea formaldehyde resins
- "Green Cleaning" custodial practices reduce the use of chemical cleaners
**Water Efficiency**
Responsible Water Use and Conservation
- Native Hawaiian and adaptive plant species suited to the Kāne‘ohe environment reduce the need for potable water, require less maintenance, and use less fertilizer
- Water-efficient fixtures, including low-flow toilets, urinals, and lavatory faucets, reduce indoor water use by over 30% compared to conventional buildings

**Energy and Atmosphere**
Optimal Whole-building Energy Efficiency
- 99 photovoltaic panels are projected to generate up to 26,000 kilowatt-hours or 4% of the annual energy used by the Library Learning Commons
- Windows and glass doors incorporating high efficiency glazing allow light in while reducing solar radiation and heat gain
- Electric lighting features compact fluorescent light bulbs (CFLs), light-emitting diodes (LEDs), motion sensors, automatic timers, and dimming controls

**Materials and Resources**
Responsible Waste Management and Materials Selection
- Over 75% of leftover construction and demolition material was diverted from the landfill and recycled or reused in this and other projects
- 20% of the materials used in the interior of the building contain some recycled content
- Wood from the building that originally stood on the site was repurposed into bench seating and cabinetry
- Wood-based materials, certified in accordance with the Forest Stewardship Council’s Principles and Criteria for Wood Building Components, ensure that the wood came from forest managers and manufacturers who adopted environmentally and socially responsible forest management practices
- Storage facilities and building practices promote recycling of materials

Additional information at www.usgbc.org.
Tours are available upon request.