Tacoma Community College Early Learning Center — LEED Gold

TACOMA COMMUNITY COLLEGE

Project Specifics

Gross square footage:	12,962 sf
Construction cost:	$4,873,165
Project occupied:	09/2008
Energy savings:	244 MMBtus/yr; $4,000/yr
Water savings:	237,000 gallons/yr
Waste recycled:	99%
Added LEED cost*:	Approx. $191,000 for construction & fees 3.9% of construction
Incentives:	none

Design and Construction Team

Owner's representative:	Clint Steele, Tacoma Community College
Project manager:	Yelena Semenova, DES
Architect:	McGranahan Architects
Structural engineer:	AHBL Engineers
Mechanical engineer:	BCE Engineers
Civil engineer:	AHBL Engineers
Electrical engineer:	BCE Engineers
Landscape architect:	Cascade Design Collaborative
LEED consultant:	O'Brien & Company
General contractor:	Pease Construction

The Early Learning Center was conceived as a part of a campus-wide initiative to address the concept of environmental Sustainability. The LEED process was utilized as a tool during the design and construction to create a building that meets the requirements for LEED Gold Certification.

The new 12,962 square foot building at Tacoma Community College enables student parents to pursue their education by providing a safe, affordable, and nurturing environment for their children. This project includes classrooms for Infants, Toddlers, Woddlers, and Preschoolers (age 3-5) for a total of 108 children; nearly doubling the capacity of the facility that it replaced. In addition to Early Learning programs for children, the new Center provides a classroom for adults in the Early Childhood Education/Paraeducator programs and observation rooms adjacent to every classroom to provide practicum and field observation opportunities. The facility was funded by TCC students, the TCC Foundation and a State matching grant.

The Early Learning Center received LEED Gold Certification. The building has natural ventilation, operable windows, and radiant floor heating. Through the use of CO2 and occupancy sensors, the ventilation systems adapts to the changing needs of building occupants and maximize energy savings. Bonus LEED innovation credits were achieved through a Green Housekeeping policy for environmental cleaning practices, as well as a Green Building Education program that communicates the sustainable features of the facility.

Sidney Hunt, LEED Green Building Advisor
Phone: (360) 407-9357
Email: sidney.hunt@des.wa.gov

Washington State Department of Enterprise Services

Sustainable Sites

Alternative Transportation: The building is within 1/4 mile of 10 bus routes providing building occupants usable access to an alternate means of transportation.

Heat Island Effect: By using a light colored roof and plants that shade the building, the site creates less heat, reducing its contribution to high temperatures in the city.

Light Pollution Reduction: The building utilizes site and exterior lighting that is efficient and reduces glare. As a result excess light is not reflected into the sky and energy is saved.

Water Efficiency

Water Efficient Landscaping: Utilizing drought tolerant plants and mulches to reduce water needs.

Water Use Reduction: By using dual flush toilets, low flow faucets and drought resistant planting this building will use 55% less water.

Energy and Atmosphere

Commissioning of Building Systems: Commissioning is a process that ensures that all of the building mechanical systems are working properly. For example, if a fan was installed incorrectly it would affect all the other systems associated with it and ultimately waste energy.

Optimize Energy Performance: High relief louvers and low intake louvers naturally ventilate the building by allowing cool air to enter the building near the floor and heated air to exit the building near the ceiling.

Optimize Energy Performance: In-slab hydronic heating is used throughout the learning areas saving in energy expenses.

Material and Resources

Storage and Collection of Recyclables: The Early Learning Center and TCC campus has an organized recycling program for paper, glass, plastics and food waste organics. The ELC is the first building on campus to recycle food waste organics.

Construction Waste Management: 75 percent of the building's construction waste was either reused or recycled.

Indoor environmental quality

Low-emitting Materials: Using materials that emit few volatile organic compounds (VOC's) reduces health problems

Daylight and Views: 95 percent of the ELC's indoor spaces allow views to the outdoors and natural daylight.

Innovation in Design

Education: The Early Learning Center incorporates a Green Building Education program that communicates the sustainable features of the facility through comprehensive signage and informational pamphlets.

Green Cleaning: A LEED innovation credit was achieved through a Green Housekeeping Policy with environmentally preferable cleaning products and practices.

Exemplary Credit for Water Use Reduction: A LEED exemplary credit was awarded by achieving water use reduction by more than 40 percent. (The project saved 55 percent.)

Exemplary Credit for Maximizing Open Space: A LEED exemplary credit was earned by achieving Vegetated open space equal to over 40 percent. The project achieved 46 percent by setting aside open space as visual buffers, preserving native vegetation, maintaining an open meadow for shallow stormwater detention, and incorporating outdoor play spaces.

*construction and fees.

**Added cost for LEED related consultant fees and construction costs, minus the incentives, divided by the savings from utilities based on the modeling performed for the LEED submittal which is comparing the "as-built" building to an ASHRAE 90.1 building.