



Washington Youth Academy

LEED Silver



National
Guard Youth
ChalleNGe
Program

Project Specifics

Gross square footage:	18,050 sf
Construction cost:	\$3,594,994
Project occupied:	01/2009
Energy savings:	\$1,720 /yr, 175.2 MMbtu/yr
Water savings:	\$2,935 /yr, 395,000 gal/yr
Added LEED cost*:	\$ 92,400
Incentives:	N/A
LEED Payback**:	19.8 year payback
CO ₂ savings:	6.4 tons

Design and Construction Team

Owner's representative:	Ron Cross, Military Department
Project manager:	Yelena Semenova, DES
Architect:	Integrus Architecture
Structural engineer:	Integrus Architecture
Mechanical engineer:	Inventrix Engineering
Civil engineer:	AHBL
Electrical engineer:	Inventrix Engineering
General contractor:	CE&C

Washington Youth Academy is a program of the Washington State National Guard, in partnership with the Bremerton School District. The program is part of the National Guard Youth ChalleNGe that helps "at risk" youth who are 18 years old and have dropped out of high school.

The program was able to reuse and adapt existing site components available at the Washington National Guard's campus in Bremerton to help create a more sustainable approach to the building project.

The existing military vehicle service yard was modified to add a new parking area which includes parking stalls for hybrid electric vehicles. The existing Readiness Center kitchen and dining area was updated with water efficient fixtures, and the existing Armory was renovated to enhance natural lighting for cadet physical training and added staff office space. In addition, the electrical design limited energy costs by the use of dimming sensors and dimming ballasts in the light fixtures.

The program uses sustainable features as a teachable opportunity for the Cadets for what makes a better environment so that they make informed choices for themselves and their families. Cadets are given an orientation on the building's sustainable features and how these features impact their lives. As they are cleaning their dorm and work areas, they are being trained in the use of green cleaning products made available by the program, so they may use these in future jobs or their home.

Sidney Hunt, LEED Green Building Advisor
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Sustainable Sites

Land Improvement: Existing, underutilized stormwater system was used for new impervious surfaces.

Alternative Transportation: Bikes racks and showers are provided in the Readiness Center.

Parking stalls for hybrid electric vehicles in prominent and desirable parking locations to encourage their use.

Light Pollution Reduction: The exterior light fixtures were located and oriented to contain any light within the project area.

Water Efficiency

Irrigation: Drought tolerant plants were planted and, once established, require no irrigation.

Water Efficient Fixtures: Water efficient faucets, urinals, toilets and shower heads were included to reduce water use by 33 percent.

Energy and Atmosphere

Natural Light: Natural day lighting was used in occupied spaces to enhance feel and look.

Heating and Cooling: Natural ventilation was used in lieu of a conventional HVAC system to save cost, provide more air changes and eliminate the use of refrigerants.

Lighting: The electrical design limited energy costs by the use of dimming sensors and dimming ballasts in the light fixtures.

Green Power: Green power from local, sustainable source was provided for a minimum two year period.

Material and Resources

Occupant Recycling: Recycling of the program's activities provided at the campus.

Local Materials: Wood products from the region were used throughout as the structural framing systems in the form of glu-lam products.

Indoor Environmental Quality

Low-Emitting Materials:

Low-emitting materials for flooring, paints and sealants were selected for good indoor air quality for the project.



Innovation in Design

Education:

The staff created several elements used to educate the Cadets and family as to LEED features of the project. A brochure and a poster were developed that identifies the sustainable features of the building. The brochure is given as a hand out for the Cadets and visitors. The Cadets are given an overview the sustainable building features at their initial orientation.

Green Cleaning:

Green cleaning products were included in project for a more sustainable environment and as an example for the cadet's understanding and education.

Exemplary Performance:

For exemplary performance used to achieve LEED credits Construction Waste Management, and extensive use regional materials.

*construction and fees.

**Payback equals the 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 compares the "as-built" building to an ASHRAE 90.1 building.

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