



WSD – Vocational Education and Support Bldg.

LEED Gold



Project Specifics

Gross square footage:	23,444 sf
Construction cost:	\$8,432,819
Project occupied:	2009
Energy savings:	\$ 10,636/year / 875 MMBtus/year
Water savings:	26,693 gallons/year
Added LEED cost:	\$141,500.
CO ₂ savings:	50 tons/year

Design and Construction Team

Owner's representative:	Rick Hauan, WSD
Project manager:	Dwayne Harkness, DES
Architect:	SRG Partnership Inc
Structural engineer:	Kramer Gehlen & Associates, Inc
Mechanical engineer:	PAE Consulting Engineers
Civil engineer:	Hopper, Dennis, Jellison, PLLC
Electrical engineer:	PAE Consulting Engineers
Landscape architect:	J. D. Walsh Associates, P.S.
General contractor:	Triplett Wellman Contractor

The Vocational Education and Support Building is the first of three phases in the larger campus master plan. The master plan seeks to create a cultural core generated between the campus' library, auditorium, gymnasium and multipurpose hall. These programs act as the hearts of the communities on campus and will allow the students to see that they are all part of a significant deaf community.

The building harbors the campus' multi-purpose space with adjoining kitchen, but is otherwise intended to function as a place for vocational education. The spaces dedicated to this purpose include a maintenance shop, automotive shop and a garden shop, supported by ancillary spaces devoted to these functions.

Control and even distribution of daylight played an important role in the multipurpose space in the building, which incorporates physically integrated assemblies of prismatic skylights, operable louvers and electric lights. Windows within this space that face out to the future plaza are shaded on their exterior from direct light and use mechanically controlled interior roller blinds to darken the interior space as necessary.

The buildings multipurpose space is located at the edge of what will someday become a central campus plaza because of this project's role in the overall campus master plan. The spaces within the building that facilitate vocational education are located on the other side of the building from the multipurpose space in order to allow it to have a strong public presence.

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Sustainable Sites

Land Improvement: The project site is a previously developed site – a brownfield that required asbestos abatement during excavation. The project's storm water runoff from roofs is directed to drywells on site, while the vegetated open spaces become rain gardens for runoff from paved surfaces. These strategies take advantage of the maximized open space and mean that no runoff leaves the site.

Alternative Transportation: Building program includes 2 staff showers and bike racks to be added to campus. The project is located near several bus lines. Designated parking for low emitting and fuel efficient parking will be created for the school's fleet of hybrid cars.

Water Efficiency

Irrigation: Several approaches were used to reduce potable water consumption for irrigation by 68%. The landscape design maximized the use of drought tolerant plant materials while minimizing high water use turf grasses. The irrigation system was designed with highly efficient irrigation heads and is controlled by a sophisticated system. The new irrigation system will also connect to the existing irrigation system in order to take advantage of these new features.

Water Efficient Fixtures: The project has reduced potable water use by 32% from a calculated baseline design through the installation of dual flush water closets, low-flow urinals, and low-flow showers and sinks.

Energy and Atmosphere

Energy Performance: Well-insulated walls, roof and glazing along with a reduced lighting power density, daylighting, premium efficiency motors, variable speed drives, efficient ground source heat pumps, and an efficient domestic hot water heater optimize this project's energy efficiency.

Lighting: An automated lighting control system with integrated time clock and exterior photocell providing interior sweep control and exterior photocell/time clock control were used. Occupancy sensors, dimmable daylighting controls, and individual switches were provided in private offices, and conference room. The multi-purpose space was provided with two lighting control stations for full dimming control of three lighting zones, and raise/lower controls for motorized shades and skylight louvers.

Material and Resources

Occupant Recycling: In addition to conforming to recycling requirements set forth in LEED Materials & Resources Prerequisite Storage and Collection of Recyclables, campus operations have established a Food Waste Composting program.

Recycled Materials: Recycled content counted for 25% of the total material costs and included: concrete, structural steel, metal deck, insulation, metal wall panels, steel doors, gypsum wallboard, acoustic ceilings, rubber floor, carpet, and linoleum.



Wood: FSC certified woods were used for wood doors, casework, and fire treated plywood. These certified wood products accounted for 79% of new wood-based costs.

Local Materials: 26% of total material cost came from local materials.

Indoor Environmental Quality

Chemical and Pollutant Source Control: Removable walk-off mats were installed at all regularly used entry ways with a weekly maintenance schedule. Rooms used for chemical storage are pressurized and exhausted separately from main building return air. MERV-13 filters were installed in the air handlers.

Natural Light and Views: 78% of all regularly occupied spaces have access to daylight and views. Control and even distribution of daylight played an important role in the multipurpose space in the building, which incorporates physically integrated assemblies of prismatic skylights, operable louvers and electric lights.

Innovation in Design

Education: The project facilitates green building education via related signage, a student curriculum describing green building strategies and concepts, and project specific information posted to the school's web site.

Green Cleaning: WSD has outlined green cleaning practices and will be using cleaners that meet Green Seal's standards for industrial cleaners.

Recycling: The campus operations have established a Food Waste Composting program. This building's program is inclusive of a cafeteria with full size commercial kitchen that produces breakfast lunch and dinner for students 5 days/week producing 320 gallons of weekly food waste. The school has established a program to send this material to be composted for reuse.

Construction Waste Management: More than 96% of construction waste was diverted from landfills.