

WARREN SKAAREN ENVIRONMENTAL LEARNING
CENTER AT WESTCAVE PRESERVE
JACKSON & MCELHANEY ARCHITECTS
TRAVIS COUNTY, TEXAS
PHOTOGRAPHY BY GREG HURSLEY AND RON SPROUSE



COTE Measures of Sustainable Design:

Sustainable Design Intent & Innovation

Regional/Community Design & Connectivity

Land Use & Site Ecology

Bioclimatic Design

Light & Air

Water Cycle

Energy Flows & Energy Futures

Materials & Construction

Long Life, Loose Fit

Collective Wisdom & Feedback Loops

Winners perform by all measures; this one stands out in those in bold.

A 30-acre nature preserve and canyon 28 miles northwest of Austin, Texas, needed to expand its community programs by building a new wilderness classroom and provide a meeting place for walking tours to a nearby waterfall and grotto cave. The goal of the agencies who partnered for the project was to foster respect for and stewardship of the natural environment, provide environmental education, and preserve the sanctuary into the future.

The building was designed to be flexible to accommodate large school groups of 150 students simultaneously with smaller visitor groups of one to 10 people and serve as a community center. The building had to be an efficient classroom which provides standard teaching tools such as computers, projection screens, marker boards, tack boards, exhibit walls, while making the space feel like it is part of the outdoors and open to the surrounding preserve. Lastly, the building creates an awareness and understanding of the basic environmental systems that we live within.

The educational challenge of environmental learning is to simplify the complexities of the natural sciences and ecology to these basic components; air quality, water quality, protection of the soil and the conservation of energy. As such the design of the structure was conceived as a three-dimensional

textbook. The architectural expression of the building is a framework for analogies between building materials and systems and how they mimic or model natural systems.

This project was built by donations from trusts, foundation individuals, public utilities, and county funds. The donations were leveraged to secure a matching grant from the Texas Parks and Wildlife Department for \$750,000, which was half of the amount estimated for construction. These partnerships have taken great pride in the building and continue to sustain their non-profit educational facility. Due to the buildings success, private donations have increased.

The building was designed to be used as a zero energy consumption "pavilion" when large school groups visit. This has been the case where large school groups are moving in and out for various earth science programs. When the building is used for a classroom, seminars, community meetings, and the weather is humid (summer) or too cold in winter, then the heat pumps are used to condition the space.

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SUSTAINABLE DESIGN SNAPSHOT

- > building area naturally ventilated: 100%
- > building area that is daylight: 100%
- > 100% of precipitation is managed on site
- > annual water use: 9.57 gallons/sf
- > 7,003 square feet; \$1,167,850

Juror RK Stewart: "This project is truly of its place. They looked at building as a teaching tool. The east and west faces are the long faces of this building. The eaves are a regional vernacular. There is pocket parking and a wooded site."

Juror Kevin Hydes: "The glass is high and well protected. They were careful to preserve the vegetation. They paid close attention to issues of thermal mass."

The Committee on the Environment (COTE) is a Knowledge Community of the American Institute of Architects. Visit www.aiaopten.org and www.aia.org/cote. Check out Top Ten sponsor U.S. EPA, and its ENERGY STAR tools (including Target Finder) at www.energystar.gov/newbuildingdesign.

Editor's note: Project narratives are excerpts from architect submittals to the AIA COTE Top Ten Green Projects 2006 program.

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