



Green School Building
New Construction

RUHNAU RUHNAU CLARKE

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DESIGN TEAM

David Ruhnau, AIA,
Principal-in-Charge
Joseph A. Calderon, AIA,
Architect Designer
Gustavo Bidart, AIA,
Project Manager
Douglas E. Barnhart, Inc.,
Construction Manager
Nack & Associates,
Mechanical Engineering
FBA Engineering,
Electrical Engineer

OWNER/CLIENT

Chula Vista Elementary
School District
Chula Vista, CA
Lowell J. Billings,
Ed.D. Superintendent
619/425-9600

Type of School and
Grades Served:
Elementary School, K-6
Capacity: 800 students
Size of Site: 11.5 acres

Area of Building:
74,314 square feet
Volume of Building:
1.3 million cubic feet
Space per Student:
93 square feet

Cost per Student: \$27,125

Square Foot Cost: \$292

Cost of Construction:
\$21.7 million

Total Project Cost:
\$26 million

Contract Date: Dec. 2006

Completion Date: July 2007

Percent of Completion: 100%

Wolf Canyon Elementary School

Chula Vista, California

Ruhnau Ruhnau Clarke



WOLF CANYON ENTRANCE

Wolf Canyon Elementary is a public school with a private school feel, accented with covered walkways and graceful arches inspired by famed San Diego architect Irving Gill. Eye-catching exteriors complement the energy-efficient and sustainable processes occurring within, making this attractive public school also one of California's greenest.

The updated prototype elementary school is pursuing CHPS certification, and was designed to use 23.4 percent less energy than allowed under the updated Title 24 code, according to Sally Muir of San Diego Gas & Electric. This qualifies it to participate in the Sustainable Communities Program at SDG&E, earning the district a 20 percent incentive bonus. More important, the school's energy saving features are expected to save the district up to \$36,308



CLASSROOM IN USE



ADMINISTRATION BUILDING

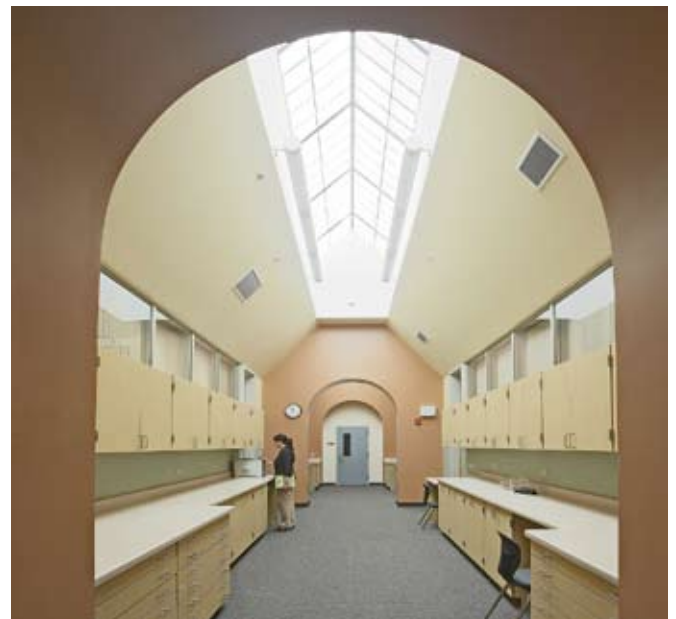
PHOTOS: FRED DALY



MULTIPURPOSE ROOM



MEDIA CENTER—LIBRARY



TEACHERS' WORKROOM

annually on its utility bills.

Much of Wolf Canyon's sustainability happens automatically. A sophisticated energy management system controls air conditioning, hot water, and exterior lighting. Central computers monitor weather conditions and soil moisture content and respond by turning irrigation systems on or off as needed. A demand control ventilation system measures CO₂ levels in each room and controls the opening or closing of fresh air dampers as needed.

Passive, natural lighting and

superior air quality are essential to the design. Supplementary lighting often is unnecessary due to the many skylights and clerestory windows, particularly in the teachers' workrooms and library. Daylighting controls automatically regulate additional lighting throughout the school. Deep overhangs on buildings protect classroom windows from the sun's glare, allowing the use of clear glass to provide the maximum amount of true reflective light into learning spaces. Operable windows ensure adequate fresh

air ventilation. Even the first few feet of carpeting indoors purify the air by removing and trapping pollutants from entrants' shoes.

Other significant green features include: photo-voltaic panels; an Energy Star certified Cool Roof; durable, high-recycled content, low VOC-emitting interior finishes; and landscaping with native drought-tolerant plants and reclaimed water irrigation (except in kindergarten areas). The school meets the light pollution requirements of nearby Palomar Observatory.

To meet the demands of the growing local population, the project had to move quickly to meet an aggressive 10-month construction schedule. Cooperation, dedication, and commitment on the part of the design team translated into completed construction in only seven months.

Sustainable by design, full of natural light and breezes, Wolf Canyon is a healthy, functional school designed and built to last and benefit the community of Chula Vista for years to come. ■