

# Roth: School district LEEDs the way for state

## THE JOURNAL RECORD

My middle school was a mid-1950s, three-story building with mostly glass walls facing north – a decision that only made sense to a mid-century planner unaware of energy costs over the years. For those who sat in drafty classrooms, it was a bad idea. For administrators who had to balance heating and cooling costs against their budgets for books and curriculum, it had to be a drain on limited resources.

We know better today, as evidenced in the Jenks school district.

The Jenks Math and Science Center has received LEED Gold Certification from the United States Green Building Council. This is the first dedicated K-12 education project in Oklahoma to receive this recognition.

Tulsa-based GH2 Architects LLC and Michigan-based TMP Architecture Inc. designed the center. Manhattan Construction Co. served as construction manager.

Leadership in Energy and Environmental Design, or LEED, is an internationally recognized green building certification system organized by the U.S. Green Building Council.

This project was reviewed based on the LEED for Schools 2009 Rating System. The LEED for Schools Rating System recognizes the unique nature of the design and construction of K-12 schools. It exams things such as classroom acoustics, master planning, mold prevention and environmental site assessment.

LEED for Schools looks at school spaces and children's health

issues, as well as the environmental effect.

The 91,580-square-foot, state-of-the-art center includes 10 modern math classrooms, 14 flexible science teaching studios, a student health center, a 200-seat multipurpose room and a 105-seat planetarium.

Green features include a wind power system with four vertical axis wind turbines, as well as ground-source heat pumps that use the steady temperature of the earth to heat and cool the building and generate hot water. Large strips of high-efficiency windows provide natural light for the classrooms, which researchers say enhances learning retention.

A recent and growing trend is to design schools with the specific intent of providing healthy, comfortable and productive learning environments.

The U.S. Department of Energy reported that K-12 schools spend more than \$8 billion annually on energy, second only to personnel costs. A typical school district spends \$400,000 each year on utility bills. The DOE estimates that many districts could save 25 percent of their expenditures through better building design, available energy technologies, improved maintenance and operations, and the use of renewable energy.

The estimated national savings could pay for 40 million new textbooks, 30,000 new teachers or 1.5 million new computers every year. To help schools achieve these savings, DOE created the EnergySmart Schools campaign as part of its Rebuild America program.

According to a national review conducted from 2001 to 2006, green schools cost less than 2 percent more to build than conventional schools, but provide financial benefits that are 20 times greater. The review included 30 green schools built in 10 states. Green schools use an average of 33 percent less energy and 32 percent less water than conventionally designed

schools.

Typical energy performance enhancements include more efficient lighting, greater use of daylight and sensors, more efficient heating and cooling systems and better insulated walls and roofs.

We rely on our schools to prepare students to be our leaders of the future. An innovative green school can be a catalyst for providing a better, more economical learning environment.

Now that's a smart lesson for education advocates of all ages.

*Jim Roth, a former Oklahoma corporation commissioner, is an attorney with Phillips Murrah P.C. in Oklahoma City, where his practice focuses on clean, green energy for Oklahoma.*