

**O'Connell  
Robertson**

# Smart solutions Fall 2011

## **Prototype Offers Consistent Design, Enhances District Learning Model**

Developing school prototype designs can be a smart solution in fast-growth school districts trying to maximize their construction dollars. The key is developing a flexible design that can accommodate different learning models and site variations.

After voters in Leander ISD (LISD) approved bond funding for eight new elementary schools in 2006, District leaders determined designing a prototype would be the most efficient way to develop the future campuses. They wanted the new prototype to reflect the District's educational goals and delivery model, provide flexibility, and offer a nurturing atmosphere for students.

O'Connell Robertson worked with LISD's Elementary Steering Committee, made up of board members, administrators, principals, community members, parents, architects and planners, to develop a multi-phase elementary redesign. The process included staff interviews, site visits at existing District schools, tours of exemplary school designs in other areas of the country, and concentrated design charrettes and planning sessions. The resulting design established the new elementary prototype for future schools. One of the first campuses developed from the prototype design was Westside Elementary School. Reflecting the priorities set by the committee, the design features a neighborhood concept that

supports hands-on learning, small learning communities, fingertip access to technology, and flexibility. Sustainable design features were incorporated to enhance the learning environment and reduce energy consumption.

Reagan Elementary School, which opened in 2009, built upon the success of Westside with some adaptations to accommodate the new site and campus requirements. The 108,000 SF facility serves pre-K through 5th graders. The school design continues the focus on students and learning, with flexible spaces that allow each class to gather in traditional arrangements and small and multi-class groups. Windows between classrooms and into hallways provide transparency that allows learning to flow within the building.



*The new design of our elementary schools has exceeded our expectations. They are buildings designed for collaboration... levels of engagement we see in each community area show a level of excitement for learning that every educator dreams about! We have a model for student learning in Leander ISD, and the new design of our elementary has been a key factor in bringing the Learning Model to life.*

**- Dr. Bret Champion, Superintendent  
Leander ISD**

Another elementary school based on the Leander ISD prototype is scheduled to open next year, again providing an educational environment that reflects and supports LISD's innovative learning process and goals.

# Furniture Choices Support Facility Flexibility



Educational facilities at all levels are becoming more student-focused, with dual-purpose spaces and furnishings that provide more flexibility and often future cost savings. These trends can also help ease high school students' transition into post-secondary environments.

## Learning Outside the Classroom

Universities provide multiple spaces for students to gather, collaborate, and communicate, ranging from small areas off hallways to lounge areas in libraries. Recognizing the role collaboration has in student engagement, many K-12 schools are also incorporating a variety of spaces for small group learning as well as alternatives to the traditional classroom, such as outdoor learning spaces. These interactive spaces also help break down the large scale of a school and encourage a variety of educational uses.

## Dual-Purpose Furniture

Moveable furniture allows teachers and students to easily reconfigure their space to accommodate different styles of teaching and learning. Furniture that can be used in multiple spaces and by multiple users, such as ergonomic chairs suitable for both students and teachers, enables schools to accommodate changing curriculum or attendance and simplifies future procurement. Savings may also be available when ordering larger quantities of the same item.

## Boost Technology

In this digital age, technology is no longer confined to the library, computer lab or even classroom. While some students prefer comfortable lounge furniture that supports using a laptop, others prefer more conventional furnishings. Incorporating both options further supports flexibility and productivity, as do furniture with built-in plug and play capabilities, wireless technology, and work surfaces with adjustable heights.

Many of these trends have been incorporated at Westwood High School in Round Rock ISD, which is undergoing an extensive renovation and expansion project to make the 30-year old campus comparable to the district's newest high school. Breakout areas, moveable furnishings, and easy access to technology support both collaboration and individual study.

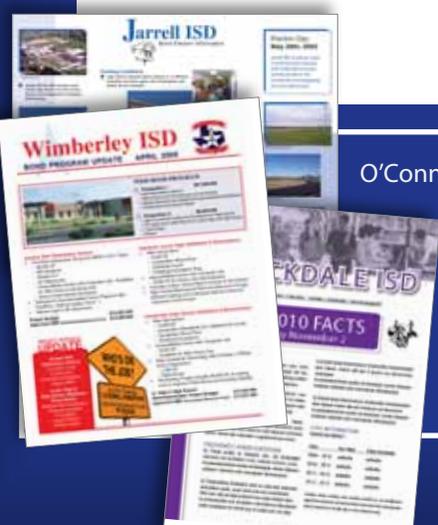
*Our district has identified traits that every graduate should have, including the ability to communicate, use technology, and interact effectively with others. We are making design choices that support our academic goals while also providing a more comfortable and productive environment for our students and teachers.*

*- Rebecca Donald, Principal  
Westwood High School*

For more educational interior design ideas, contact Jennifer Hoskins, IIDA, LEED AP, at O'Connell Robertson, 512-478-7286 or [jhoskins@oconnellrobertson.com](mailto:jhoskins@oconnellrobertson.com).



O'Connell Robertson offers school districts assistance with bond planning and communications. We have staff members with experience and background in school communications and public relations to help districts with their information campaigns. For tips, attend the "Bonds & Buildings: Developing Community Support" breakout session at the 2011 TASA/TASB Conference, presented by Wimberley ISD Board President Dave Williams and Superintendent Dwain York and O'Connell Robertson Principal Amy Jones. Or contact Jones at 512-478-7286 for more information.





## Keeping Schools Safe and Secure

*School leaders and designers now have greater knowledge and more effective tools to keep campuses safe and secure. The most successful preventative measures combine the three D's:*

**Deterrence:** Site selection, road design, fencing, limiting roof access and maintenance are environmental design elements that can deter criminal behavior.

**Detection:** Intrusion detection systems, cameras, photo IDs, remote administration sites, and maintaining lines of sight can assist in identifying and apprehending offenders.

**Delay:** Secure entry vestibules, signage, locks on exterior doors (and diligence in keeping doors from being propped open), locks on knife drawers, and locksets that allow teachers to lock their classrooms from the inside can delay potential dangers.

Planning and practicing for emergencies also increases safety. Preparations should include designating shelter-in-place areas, having reverse egress strategies, identifying utility shut-offs, and providing first responder agencies with access to and knowledge of the campus.

To learn more, call Jarrod Sterzinger, AIA, LEED AP at O'Connell Robertson, 512-478-7286. Resources are also available through the Texas School Safety Center: [www.tea.state.tx.us/txssc](http://www.tea.state.tx.us/txssc).

## 10 Tips for Reducing Energy and Operating Costs in Your Facility

*The tips below, arranged from low/no cost activities to larger initial cost investments, can help school districts reduce their energy use and facility operating costs.*

- 1 Train Staff:** Ensure all maintenance staff understand how to operate systems for optimum energy efficiency.
- 2 Check Equipment:** Verify your HVAC equipment is functioning as intended through retro-commissioning. Faulty control sensors, valves and dampers can lead to impaired performance or inefficiencies.
- 3 Set Temperatures:** When outside conditions allow, reset the chilled water temperature set point higher and heating water set point lower to reduce energy consumption.
- 4 Assess Steam Traps:** Verify your steam traps are not leaking steam or condensate, which can cause steam systems to lose energy.
- 5 Install Motion Detectors:** In on-critical areas, such as storage rooms, install motion detector switches to turn off lights when no one is in the room.
- 6 Measure Outside Air:** Recalibrate existing or add outside air flow measuring stations to accurately measure the building's ventilation rate. Over-ventilation can lead to an increased cooling load (and increased energy costs) and humidity issues. Under-ventilation can lead to building pressurization issues and code compliance problems.
- 7 Evaluate Boilers:** Energy-efficient condensing boilers are a good energy-saving option.
- 8 Evaluate Chiller Options:** The newer chillers with magnetic bearings are substantially more efficient than standard centrifugal chillers. The payback analysis will depend on the building load, utility costs, and hours of operation but should be explored when planning new facilities or major engineering upgrades.
- 9 Reclaim Energy:** Installing air-to-air heat recovery systems in areas that have high outside air and exhaust rates can realize significant savings.
- 10 Use Solar Energy:** The sun can provide you with free hot water to serve your kitchen and locker rooms. Vacuum tube collectors offer a reasonable payback and provide green energy. Photovoltaic array with utility rebates, if available, can also lower electric bills. While there is an initial installation cost and rebates may fluctuate, this technology provides an ongoing credit to the maintenance and operations budget.

To learn more, attend the "Facility Engineering that Makes Dollar and Sense" breakout session at the 2011 TASA/TASB Conference, presented by Alan Albers, Round Rock ISD executive director of operations and facilities; Marty Burger, vice president of American Constructors; and Nick Patterson, PE, LEED AP BD+C, a principal at O'Connell Robertson. You may also contact Patterson at 512-478-7286.

# Partnering for Education



Jason Fryer, LEED AP BD+C (below) has been volunteering with AIA Austin's Architecture in Schools program for three years. The eight-week program introduces architecture and design concepts to 3rd, 4th and 5th graders in **Austin ISD** and meets TEKS and AISD educational standards. This year, Fryer will teach 4th graders about neighborhood buildings and students will work in groups to design a new school. The program will culminate with a showcase of the students' projects at the University of Texas School of Architecture.

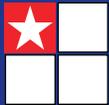


After designing a new classroom addition for Larkspur Elementary School, staff from O'Connell Robertson's San Antonio office volunteered to design and plant a variety of gardens on the **North East ISD** campus. The Firm also arranged to have landscaping materials and plants donated.

The gardens have evolved into an outdoor classroom used to demonstrate how weather and personal management affect plant life.

O'Connell Robertson's commitment to designing energy efficient and sustainable school buildings provides an opportunity to give back to some of our educational clients. Participating in the Energy Efficient Commercial Building

Tax Deduction program, a result of the Energy Policy Act of 2005 and HR 1424 passed in 2008, enables our Firm to earn tax credits if an IRS qualified engineer certifies that a school facility we design reduces energy consumption by up to 50% compared to a similar building. As educational partners, O'Connell Robertson has chosen to share these tax credits with the client for which the project was designed. Above left, Rick Burnight, AIA, presents Dwain York, superintendent of **Wimberley ISD**, with a check based on credit received for the design of Jacob's Well Elementary School.



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## **O'Connell Robertson**

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*O'Connell Robertson listens. We are known for developing innovative design solutions that are responsive to each client's unique needs, while maintaining the highest level of quality.*

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