

# Ursuline is GOING GREEN

## The French Family Science, Math, and Technology Center

BY BOB SHAW, F&S PARTNERS



Bird's eye view from the southeast: New Construction will be sited behind Main Hall and the Sr. Emmanuel Courtyard, connecting to both Haggar and Neuhoff.

**ENVIRONMENTALLY FRIENDLY BUILDINGS** that save energy and use building materials that minimize our impact on the planet are known as “green buildings.”

Ursuline’s new French Family Science, Math, and Technology Center will be one of the first green high school structures in Dallas. Emphasizing good environmental stewardship, the new building will meet the requirements of the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) Green Building Rating System™.

The LEED Green Building Rating System™ is a nationally accepted benchmark for the design, construction, and operation of green buildings. LEED promotes sustainability by recognizing performance in five key areas:

- Sustainable site development
- Water savings
- Energy efficiency
- Materials selection
- Indoor environmental quality

To earn certification, a building project must gain certain credits within each category. The Ursuline project is targeting LEED Silver certification.

Ursuline faculty, staff, and volunteer leaders have worked closely with the architects (F&S Partners), engineers, construction managers, and specialists in building commissioning to identify a wide variety of environmentally responsible features to be incorporated into the new Center:

- Generous use of glass will provide daylight to major spaces and reflect light into the classrooms, minimizing electricity use.
  - Proper orientation of the building on the site, careful placement of windows, and addition of sun-shading devices will reduce the amount of direct sunlight that enters the building in warmer months, improving air conditioning efficiency and reducing operating costs.
    - A highly reflective roof will help the air conditioning system by reducing heat gain through the roof.
    - Rooftop rainwater harvesting equipment will collect water for landscape irrigation; a storm water management plan will reduce the flow of rain water from the Ursuline campus into city sewers.
    - Low-flow plumbing fixtures will reduce water use for sinks and toilets.
    - Landscaping will feature drought-tolerant native plants and an organic fertilization program.
    - Efficient exterior walls with added insulation and vapor barriers will optimize energy performance.
    - Plans will divert construction waste and require the contractor to recycle construction materials.
    - Regionally-produced to minimize shipping, recycled or renewable products will be specified for the project, ranging from steel, concrete, and windows, to ceiling tiles, flooring, cabinets, and furnishings.
    - Installation of a carbon dioxide monitoring system will improve indoor air quality.

### Ursuline Campus Renewal

The new French Family Science, Math, and Technology Center is the centerpiece of a campus renewal plan that will expand total instructional facilities at Ursuline by 25 percent. More than half of all classroom space will be transformed by this \$20 million project. Groundbreaking is scheduled for June 2008; the estimated project timeline is 22 months.

#### New Construction

The new Center is designed to be architecturally attractive in a style that complements existing campus structures. It will include:

- 68,000 square feet of new academic space
- 10 science lab/classroom combinations
- 9 math classrooms and a math lab
- 4 computer science classrooms
- 8 foreign language classrooms
- New faculty office center
- Sustainable science courtyard
- New college counseling suite
- Student chapel
- Ursuline Heritage Gallery

#### Renovations

Renovations will provide new suites for the English, journalism, and theology programs, with more classrooms, a new personal counseling suite, a new music suite, enlarged hallways, and student gathering areas.

#### Ursuline Heritage Gallery >>

An alumnae-sponsored Heritage Gallery will be prominently sited in the two-story Atrium of the Center, along with the restored stained glass window from the Old Ursuline Chapel. The Gallery will include displays that chronicle Ursuline’s distinguished history as the oldest school in Dallas. It will also feature stories of graduates, highlighting their work and accomplishments as *Serviam* women, in Texas and around the world.

- Automatically-controlled lighting systems will allow for reduction in light levels when daylight will suffice and prevent lighting of unoccupied spaces.
  - Maintenance of the building will include a “green” housekeeping plan that uses natural cleaners and promotes a healthy building.
  - Furnishings will be selected from products that are certified as green or re-finished from existing inventory and recycled.
  - Preferred parking will be provided for car pools and fuel-efficient vehicles.

“Green” building strategies such as high performance HVAC and lighting systems improve a building’s indoor air quality and acoustics, enhancing both teaching and learning in that environment. “Green” facilities also use an average of 33 percent less energy than conventionally designed schools.

The French Family Science, Math, and Technology Center will be a living laboratory for sustainable construction, demonstrating a wide array of good environmental practices. Students will be able to monitor rainwater harvesting systems, power conservation



measures, and lighting systems on a daily basis. These and a multitude of other “green” components will help educate future generations of young women to be better stewards of the world’s finite resources.

