

THE MAYOR'S GREEN BUILDING ADVISORY COUNCIL PRESENTS

GREEN BUILDING TOURS

MAY 16 & MAY 17, 2008

St. Catherine's Montessori
Houston, TX

LEED for New Construction

10% Recycled Materials

30% Water Savings

75% Waste Diverted from
Landfill



LEED[®] Facts

St. Catherine's Montessori
Houston, TX

LEED 2.1 for New Construction
Certification awarded May 14, 2007

Certified 30*

Sustainable Sites 6/14

Water Efficiency 3/5

Energy & Atmosphere 1/17

Materials & Resources 5/13

Indoor Environmental Quality 10/15

Innovation & Design 5/5

*Out of a possible 69 points

St Catherine's Montessori, Houston, Texas

Bringing Wisdom to Light

PROJECT DESCRIPTION

Located in the southwest section of Houston, St. Catherine's Montessori sought to design a school to best enable their education mission and also lighten the environmental impact of the building itself. The single story facility is approximately 39,000 square feet and includes ten classrooms capable of accommodating up to 250 students. With a faculty and staff of 40, the building operates at full capacity with nearly 300 people.

GREEN EDUCATION

We discover new ways to "live green" every day at St. Catherine's. Activities such as recycling, using mass transportation or bicycling more often, are now part of our daily lives.

STRATEGIES AND RESULTS

To minimize St. Catherine's transportation footprint, the school location is within ¼ mile of two bus stops, and bicycle storage and shower facilities have been incorporated. The developed area has been minimized, and the unused open site area has been protected. The site was developed to a net zero increase of storm water runoff, as well as eliminating 80% of total suspended solids and 40% of total phosphorous from the water destined to the storm water infrastructure.

The landscape design limits the demand of water by using native and drought tolerant plants and a highly efficient irrigation system to cut landscaping water usage in half. St. Catherine's has reduced its building water usage over 30% (translating to 152,000 gallons annually) by installing low flow lavatories and showers.

The building was designed to create an engaging learning space using 20% regional materials (within 500 miles) that conserved transportation fuel. The interior design provides daylight to 75% of the interior spaces and outdoor views to 90% of the spaces. Other sustainable design elements include: CO2 monitoring, Low VOC paint, no VOC adhesives, low emitting carpet and composite wood.

Innovative credits included green housekeeping (non-caustic, non-corrosive cleaning products), educational outreach programs (including extensive campus recycling) and exemplary performance in purchasing 100% green (wind) power and using high-albedo (reflective) concrete for site paving to reduce the urban heat island effect.

Durotech followed stringent LEED construction requirements by ensuring that a waste management plan was implemented (diverting 75% of construction waste from the landfill) and maintained proper air quality in the building during and after construction.

ABOUT ST. CATHERINE'S MONTESSORI

St. Catherine's Montessori School is dedicated to assisting our students in the development of skills which will enable them to become self-confident, caring citizens of the world. We do this by providing an educational experience based on sound Catholic teaching, through which students are encouraged to reach their highest potential as they grow in respect for themselves, others, and our earth. While St. Catherine's Montessori School is devoted to teaching and practicing the Catholic way of life, we realize that there are other paths to God, and we welcome both students and parents who embrace other faiths. Our school endeavors to provide our children with a firm grounding in all academic areas so that they can then integrate this knowledge into their everyday lives. It is through the awakening in our children of the awareness of their gifts and responsibilities as individuals and as members of a community that we will enhance their ability to help build a world based on love and collaboration rather than competition.

"Learning about the LEED opportunity helped bring all the good ideas our faculty had into an organized list of criteria. We built a school that would be a life long learning tool for our students, helping them make personal decisions about environmental issues now and in the future. We believe: We formed the building, and now the building is forming us."

-Judy McCullough, Principal
St. Catherine's Montessori



Owner: St. Catherine's Montessori
Architect: Gingrich Associates
Contractor: Durotech
MEP Engineer: Redding Linden Burr
Structural Engineer: Matrix Structural Engineers, Inc.
Landscape Architect: Stanger Assoc.
Civil Engineer: A&S Engineers, Inc.
LEED Consultant: Redding Linden Burr
Project Size: 39,000 SF
Total Project Cost: \$5,127,000
Cost PSF: \$131.46
Completion: June 2006

ABOUT LEED

The LEED Green Building Rating System is the national benchmark for the design, construction, and operations of high-performance green buildings. Visit the U.S.Green Building Council's Web site at www.usgbc.org to learn more about how you can make LEED work for you.