

LEED Profile

Sugar Grove Academy

Achievements

- 26%** reduction in energy consumption
- 20%** reduction in water use
- 25%** recycled content of materials
- 30%** use of local/regional materials
- 74%** construction waste diverted from landfill



Project Description

Sugar Grove Academy is located in southwest Houston. The goal of the schools is to create rigorous levels of learning for each child in every classroom so that students can be college- and career-ready upon leaving Sugar Grove Academy. The school was conceptualized as a village with its implied sense of community support, shared interests and safety. The building masses around an exterior teaching courtyard with primary circulation leading past openings revealing interior spaces and activities. The floor plan is compact with manageable travel distances between learning centers. As the school progresses through 3 volumes that are zoned from most public to most private with major programmatic elements expressed through a series of smaller building shapes of a domestic scale more familiar to a young student. Mindful of a limited construction budget, readily available exterior and interior building materials and systems were maximized through careful articulation and straightforward detailing. The expression and integration of material selections and colors between exterior and interior provide both visual cues and continuity throughout the campus.



Sustainable Overview

- Energy savings from high efficiency equipment and thermally improved building envelope will provide ongoing cost reductions
- Improved school environment greatly enhances learning environment through:
 - Daylighting throughout the spaces
 - Secure building access
 - Air quality



Water Efficiency

- Installation of native and adaptive plantings eliminating permanent irrigation
- Low-flow plumbing fixtures used in all the restrooms



Energy & Atmosphere

- Exterior windows are insulated with abundant natural daylight and exterior views throughout
- Improved thermal envelope
- Reduced lighting power density
- Occupancy sensor lighting controls
- Demand-based ventilation
- High-efficiency air cooled chiller



Materials & Resources

- Native and adaptive landscaping plant materials
- Significant amount of demolition and construction debris diverted from landfill
- Over 24% of the installed building materials contained recycled content



Indoor Environmental Quality

- Indoor air quality management plan was implemented throughout construction
- Low emitting indoor materials installed throughout the building
- Roofing material selection reduced heat absorption on the site
- Classroom ambient noise reduced by scheduling high STC rated wall partitions and ceilings
- Ductwork penetrations covered during construction to provide better air quality upon building occupancy
- Improved ventilation and reduced interior humidity contributes to cleaner indoor air



Innovation & Design

- A green housekeeping program has been implemented
 - Educational awareness through documentation of the "green" features in the building has been incorporated into the student curriculum

LEED® Facts

LEED for Schools (v2007)

Certified	35*
Sustainable Sites	8
Water Efficiency	3
Energy & Atmosphere	7
Materials & Resources	5
Indoor Environmental Quality	9
Innovation & Design	3

* Out of a possible 78 points

Project Information

Owner: Houston Independent School District (HISD)

Address: 8405 Bonhomme, Houston, TX 77074

Architect: Courtney Harper+Partners
Civil Engineer: Landtech Consultants, Inc.

MEP Engineer: E&C Engineers & Consultants, Inc.

Structural Engineer: Matrix Structural Engineers, Inc.

LEED Commissioning Agent: Rice & Gardner Consultants Incorporated

Contractor: Comex Corporation

Project Size: 86,000 SF

Project Budget: \$4,700,455

Opened: August 2009

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.