

LEED Profile

Peck Elementary School

Achievements

19% reduction in energy consumption

37% reduction in water use

22% recycled content of materials

23% use of local/regional materials

92% construction waste diverted from landfill



Project Description

HISD consolidated the original 50-year-old Peck Elementary School with the 50-year-old MacArthur Elementary School, resulting in one new elementary school: Lora B. Peck Elementary School. The new school is positioned on an urban site of 6.9 acres. It is bounded on three sides by single-family homes and on the fourth side by a major thoroughfare, upon which a Metro light rail line is currently under development. Mature trees dot the school site. All materials were required to pass tests of sustainability, appearance, maintenance and cost. The end result is a beautiful and functional facility that is responsible environmentally and economically, within the budget of \$12 million. By carefully considering LEED guidelines, the designers were able to target LEED points beyond the Certified level. These features will assist the district in achieving resource savings over the life of the school.



Sustainable Overview

- **Safety** – pervading all aspects of the facility with fencing and gates around the entire campus
- **Simple** – both to plan layout and use of construction materials. Circulation within the facility is easily understood, so students and visitors do not get lost inside the building
- **Durable** – a facility planned for 50+ years of use has materials that are easy to clean, maintain, and withstand constant use
- **Flexible** – enabling future adaptation to minimize modification costs
- **Uplifting** – a positive influence on students and the community, which is a source of pride for students, their families, and neighbors
- **Sustainable and High-Performance** – to the extent practical and reasonable, the design has incorporated sustainable design principles



Water Efficiency

- 36% less water usage than similarly built non-LEED elementary school
- Irrigation water usage was reduced by 70% from similarly built non-LEED elementary schools



Energy & Atmosphere

- 15% savings in total annual energy usage compared to ASHRAE Standard 90.1-2004 baseline



Materials & Resources

- Structural-steel frame and low-slope “TPO” single-ply highly-reflective roof
- Exterior brick masonry (with glazed openings in aluminum storefront) that recall the context of the neighborhood
- Interior materials: painted drywall, ceramic tile, acoustic tile ceilings, and vinyl composition floors



Innovation and Design

- \$134 cost per square foot for the LEED-constructed elementary school versus similarly constructed non-LEED building at \$130 to \$140 per square foot. The LEED requirements had no appreciable cost impact on the construction cost
- LEED principles considered include:
 - Natural light usage
 - Building orientation
 - Indoor air quality
 - Landscaping

LEED® Facts

LEED for Schools (v2007)

Certified	34*
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Sustainable Sites	6
Water Efficiency	3
Energy & Atmosphere	6
Materials & Resources	6
Indoor Environmental Quality	9
Innovation & Design	4

* Out of a possible 78 points

Project Information

Owner: Houston Independent School District (HISD)

Address: 5130 Arvilla Street, Houston, TX 77021

Architect: IDG Architects

Civil Engineer: ESPA Corporation

MEP Engineer: Infrastructure Associates

Structural Engineer: ASA/DALLY Consulting

LEED Commissioning Agent: Carol Vick Architects

CMAR: Cadence McShane Corp.

Project Size: 86,000 SF

Project Budget: \$17,248,586

Opened: November 2011

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.