



GREEN BUILDING TOURS

August 24, 2012



OAK FOREST NEIGHBORHOOD LIBRARY

Houston Public Library
Houston, Texas

LEED® for New Construction

91% Construction waste
diverted from landfill

88.6% Building Reuse

40.9% Water Use Reduction

29.2% Energy Reduction

18.9% Recycled Content



LEED® FACTS

Oak Forest
Neighborhood Library
Houston, Texas
LEED® for New Construction v.2.2
Certification awarded
August 22, 2011

Gold **41***

Sustainable Sites	9 / 14
Water Efficiency	2 / 5
Energy & Atmosphere	8 / 17
Materials & Resources	6 / 13
Indoor Environmental Quality	11 / 15
Innovation & Design	5 / 5

*Out of a possible 69 points

PROJECT PROFILE

PROJECT DESCRIPTION

The Oak Forest Neighborhood Library is the second Houston Public Library facility to receive LEED™ Gold Certification. The project, located in Houston, Texas, is a renovation of a mid-Century brick and glass building that includes two new building extensions surrounding an outdoor deck with benches, shaded by mature pine trees. The 12,000 sq. ft. facility (expanded from 8,000 sq. ft.) features three distinct reading rooms - for children, teens and adults.

Ample glazing provides daylighting and views which contribute to the library's organizational goal of providing safe, welcoming, and exciting facilities to customers. Use of durable, sustainable materials decreases facility maintenance costs and improves public perception.

SUSTAINABLE SITES (9/14)

- Public transportation access is less than 1/4 miles away with four bus lines servicing the area and within 1/2 miles away from at least ten community services
- The site does not include sensitive elements (such as flood plain elevation) or restrictive land types (such as wetlands, farmland or undeveloped land)
- The location provides bike storage for staff and customers and shower/changing facilities for staff to encourage alternate transportation
- Open space has been maximized and no new parking was added to the site
- Non-roof surfaces are paved with highly reflective material to reflect heat
- A reflective, cool roof minimizes solar heat gain and increases energy efficiency

WATER EFFICIENCY (2/5)

- The use of water efficient plumbing faucets and fixtures reduces water consumption by 36.9% inside the facility

ENERGY & ATMOSPHERE (8/17)

- A commissioning agent was retained to ensure the fundamental building system design was as efficient as possible
- Energy efficiency measures include improved roof construction, reduced interior lighting power density, occupancy sensors and high-efficiency cooling equipment
- The facility exceeds the minimum energy standards to achieve an energy cost savings of 29.2% a year
- The City of Houston has agreed to a minimum two-year contract for 74.5% wind renewable energy for this facility

MATERIALS & RESOURCES (6/13)

- The renovation of this existing building maintained nearly 89% of the existing wall, floor and roof elements
- The facility used almost 11% of salvaged, refurbished or reused materials
- Almost 19% of all building materials contain recycled content
- Over 12.8% of the building materials were manufactured within a 500-mile radius
- Over 91% of construction waste was diverted from landfills
- All of the wood based building materials were harvested from FSC certified forests

INDOOR ENVIRONMENTAL QUALITY (11/15)

- The renovation provided daylight for 75% of the spaces within the building
- Low VOC paints, sealants, coatings, adhesives and wood products were used throughout the project to protect staff and visitors from airborne contaminants
- Rubber flooring was installed for its low maintenance needs as well as low off-gassing properties
- The floor does not need to be waxed, thereby reducing exposure to hazardous chemicals and contaminants
- HVAC systems and the building envelope were designed for the thermal comfort of staff and customers
- Air monitoring, MERV 13 filters, and indoor chemical and pollutant source control measures have been installed and implemented to control air quality and pollutants for staff and customers
- Lighting controls are provided for individual workstations and appropriate lighting controls are available in shared multi-occupant spaces

INNOVATION & DESIGN (5/5)

- Exemplary levels were achieved on Green Power (more than 70% use of Green Power), Certified Wood (more than 95% use of certified products), Water Use Reduction (more than 30% in reduction of water usage) and Tree Preservation (14 trees were saved from removal), surpassing the minimum requirements of LEED™ in an effort to reduce environmental impacts



Owner: City of Houston

Architect: James Ray Architects with Natalye Appel Architects and Architectworks, Inc.

Structural: Garza + McLain, Inc.

MEP: Jones Engineers, L.P.

Civil: Martinez, Guy & Maybik, Inc.

Landscape: The Office of James Burnett

Contractor: Teal Construction Co.

Project Size: 12,000 sq. ft.

Total Project Cost: \$4,600,000

Completion: April 2011

Photos: Light Sensible

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.