



SHANGRI LA BOTANICAL GARDENS & NATURE CENTER ORANGE, TEXAS

72%

reduced energy use

77%

reduced water use

79%

of construction waste diverted from landfill

LEED® Facts

Shangri La Botanical Gardens &
Nature Center
Orange, Texas

LEED for New Construction
Certification awarded February 11, 2008

Platinum 57*

Sustainable Sites 10/14

Water Efficiency 5/5

Energy & Atmosphere 17/17

Materials & Resources 7/13

Indoor Environmental
Quality 13/15

Innovation & Design 5/5

**Out of a possible 69 points*

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.

SHANGRI LA BOTANICAL GARDENS & NATURE CENTER

Nature's First Green is Platinum

PROJECT BACKGROUND

Located on 252 acres in the heart of Orange, Texas, Shangri La Botanical Gardens and Nature Center serves primarily as an interpretive center for the site's native ecosystems—cypress and tupelo swamp, wooded uplands, and prairie lowlands—as well as a facility for study and research. A program of the Stark Foundation, Shangri La connects visitors of all ages with nature.

FINDING OPPORTUNITY IN A PROBLEM

In September 2005, at the beginning of construction, the Shangri La property sustained a direct hit from Hurricane Rita. Rather than conceding a setback, the team took advantage of the opportunity for salvaging fallen trees and incorporating them into the new facilities or harvesting them for other projects.

STRATEGIES AND RESULTS

Using the LEED rating system, the project team measured progress on green strategies in team meetings and communications. This approach allowed the team to track and optimize design measures and focus on the project goals. The construction management team was included in the design process, increasing budget and schedule effectiveness and ensuring that design goals were carried through the construction phase.

The project began with the restoration of the land, which had been closed to the public for 50 years. The primary goal was a plan for the facilities that balanced access with preservation of the site, which includes Adam's Bayou, a tupelo and cypress swamp, pine uplands, and prairie lowlands.

Because the construction management team and the design team worked closely together from early in the process, they were able to optimize the construction process to reduce site and habitat disturbances. For example, by working with construction crews the design team was able to modify the boardwalk structure to allow the use of modular components, reducing the site impacts and duration of construction in sensitive habitats.

The architecture responds to both the manmade and natural environments of Shangri La. The visitor center, which surrounds a wetlands demonstration garden, is the gateway to the historic ornamental gardens. It takes its cues from the brick, glass, and steel greenhouses built in the early 1920s, which form one edge of the complex. Circulation is outdoors, often under wide canopies that protect from sun and rain. The structures in the natural areas—the nature discovery lab and pavilion, outdoor classrooms, bird blind, and boat house—were designed for minimal impact, floating above the land on helical pier foundations and powered by photovoltaic panels.

The project earned the first LEED for New Construction Platinum rating in the state of Texas and the Gulf Coast region.

ABOUT SHANGRI LA BOTANICAL GARDENS & NATURE CENTER

The nature center provides hands-on learning opportunities by means of an exhibit called the Nature Discovery Lab, a laboratory, and three outdoor classrooms located deep in the cypress swamp. The Orientation Center includes an exhibit hall, theater, interactive children's garden, classroom and exhibition greenhouses, and a water demonstration garden that shows how plants filter pollution from water. A café, garden store, volunteer center, and administrative spaces are also included.

"The buildings and grounds of Shangri La reflect the heroic mission of the institution by not only incorporating an innovative sustainable design, but, even more significantly, they demonstrate how man can work in harmony with nature,"

Ted Flato, FAIA
LakelFlato Architects



Architect: LakelFlato Architects
Civil Engineer: Brandon J. Monceaux Consulting Engineers
Commissioning Agent: The Nelda C. and H.J. Lutcher Stark Foundation
Contractor: Beck Group
Landscape Architect: MESA Design Group and Jeffrey Carbo Landscape Architects
LEED Consultant: Earthly Ideas
Lighting Designer: Archilume Lighting Design
MEP Engineer: Henderson Engineers, Inc.
Structural Engineer: Raymond L Goodson, Jr. Inc.
Project Size: 30,000 square feet of covered area
9,000 square feet of conditioned area on 252 acres
Total Project Cost: Withheld by owner's request
Cost Per Square Foot: Withheld by owner's request

Photographs Courtesy of: Hester + Hardway

ABOUT THE CENTRAL TEXAS-BALCONES CHAPTER

The Central Texas - Balcones Chapter of the U.S. Green Building Council (USGBC CT-B), founded in 2003, is a 501c3 non-profit comprising industry leaders from Austin, San Antonio and the surrounding communities of Central



www.usgbc-centraltexas.com