

PROJECT PROFILE

**Johnson Space Center
Building 12**
Houston, Texas

LEED for New Construction

2% Renewable Energy Produced on site

13% Materials used are recycled content

44% Reduced Potable Water Usage

95% Construction Waste Diverted

100% Line of site daylighting views

LEED® Facts

NASA Johnson Space Center
Building 12
Houston, TX

LEED for New Construction version 2.2 -
Certification Awarded August 2013

Gold 43*

Sustainable Sites 10/14

Water Efficiency 2/5

Energy & Atmosphere 13/17

Materials & Resources 3/13

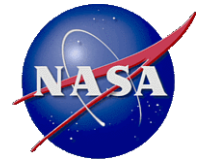
Indoor Environmental Quality 12/15

Innovation & Design 3/5

*Out of a possible 69 points

PROJECT PROFILE

NASA Johnson Space Center – Building 12 Managing our Natural & Fiscal Resources



PROJECT DESCRIPTION

NASA now has its 33rd LEED-certified facility, the Building 12 – Administrative Support Building, at the Johnson Space Center. The 67,348 sqft LEED Gold facility is a renovated building housing 260 employees from Human Resources, Finance and Education. Several sustainable features of Building 12 include a green roof, use of low flow water fixtures, an under floor air distribution system, external aluminum sunshades with photovoltaic cells integrated into the blades of the sunshades producing 2% of the buildings power, and interior lighting controlled by occupancy sensors with daylight harvesting.

SUSTAINABLE SITES (10/14)

Building 12 provided Brownfield redevelopment by removing all asbestos from the existing building in the new design. 24 bicycle storage facilities have been provided to serve 5.3% of building occupants, measured at peak occupancy, and two shower facilities for 0.66% of the building occupants. No new parking was added, and there is 1 preferred parking space for low-emitting and fuel efficient vehicles. The project has implemented a storm water management plan that results in no net increase (rate and quantity) in runoff from calculated pre-project conditions, for the one- and two-year, 24-hour storm events. 67.48% of the site hardscape has been paved with highly reflective materials. The calculations provided in the template indicate that of the 14,672 square feet of total site hardscape, 9,901 square feet have been paved with non-colored concrete.

WATER EFFICIENCY (2/5)

The project has reduced potable water use by 43.7% from a calculated baseline design through the installation of dual-flush water closets, low-flush urinals, and low-flow lavatory faucets, showers, and kitchen sinks.

ENERGY & ATMOSPHERE (13/17)

The project has achieved an energy cost savings of 36% using the ASHRAE 90.1-2004 Appendix G methodology. Energy efficiency measures include an improved thermal envelope, high efficiency glazing, reduced interior lighting power density, and high efficiency chillers. The project has also purchased Green-e accredited Tradable Renewable Certificates (RECs) equal to 137.3% of the predicted annual electrical consumption over a two-year period.

MATERIALS & RESOURCES (3/13)

The project has diverted 95.23% of on-site generated construction waste from landfill, and 12.63% of the total building materials content, by value, have been manufactured using recycled materials. .

INDOOR ENVIRONMENTAL QUALITY (12/15)

Carbon dioxide concentrations are monitored within all densely occupied spaces and that direct airflow measurement devices have been provided for each mechanical ventilation system serving non-densely occupied spaces. The template further states that monitoring equipment has been configured to generate an alarm when conditions vary by 10% or more from the setpoint. Lighting controls are provided to enable 100% of occupants to make adjustments to suit individual task needs and preferences, and to permit transient groups to share lighting controls in all shared multi-occupant spaces. And, the project has provided direct daylight line of sight views for 100% of all regularly occupied areas.

INNOVATION IN DESIGN (3/5)

The project team has received exemplary performance credit for diverting 95.23% of Construction Waste, and for a 43.7% reduction in water usage.

“The building is very open and inviting. Going from the old building to the new one is like going from night to day. Even though it is an open floor plan, you still have privacy in the huddle rooms and offices, and the white noise really helps reduce noise throughout the building.”

Stephen Williams
NASA JSC HR Representative



Owner: NASA, Johnson Space Center
Architect: HDR Architecture
Structural Engineer: HDR Architecture
MEP Engineer: HDR Architecture
Commissioning Authority: Horizon Engineering
Contractor: Satterfield & Pontikes
Project Size: 67,348 SF
Project Cost: \$18,321,129
Completion: August 2012
Photography: HDR Architecture, Inc.; © 2013 HDR, Inc.

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 and the TX Gulf Coast Chapter of USGBC at www.usgbc-texasgulfcoast.org to learn more about how you can make LEED work for you.