PROJECT PROFILE

Jet Propulsion Lab
Building 321 Flight Projects Center
Pasadena, California

LEED for New Construction

25% Less Energy

26% Recycled Content

43% Reduced Potable Water Use

61% Reflective Hardscape

72% Reduced Potable Landscape Water

94% Construction Waste Diverted

LEED® Facts

Jet Propulsion Lab
Building 321 Flight Projects Center
Pasadena, CA

LEED® for New Construction – Version 2.2
Certification Awarded August 17, 2009

Gold **41***

Sustainable Sites	9/14
Water Efficiency	3/5
Energy & Atmosphere	7/17
Materials & Resources	6/13
Indoor Environmental Quality	11/15
Innovation & Design	5/5

*Out of a possible 69 points

PROJECT PROFILE

Building 321 Flight Projects Center
NASA's First LEED Gold Facility

PROJECT DESCRIPTION
NASA's Flight Projects Center in California has been awarded LEED Gold status for its many innovative green features. A green roof, both vegetative and reflective will add efficiency to the building's cooling and will absorb storm water runoff. Additional native landscaping around the facility will require less water for irrigation and in conjunction with high efficiency plumbing fixtures throughout the building, will reduce potable water consumption by 5,000,000 gallons a year. Not only is the building green, but the materials are green as well; the project incorporated recycled materials, local materials and FSC-certified wood products and most of the construction waste was diverted from landfills.

SUSTAINABLE SITES (9/14)
The Flight Project Center promotes walking and has access to city bus stops within 0.25 miles. The facility also provides bicycle storage and shower facilities for the occupants. Innovative stormwater management ensures that over 90% of average annual rainfall is captured or treated so that over 80% of total suspended solids are removed. Over 61% of non-roof impervious surfaces are covered in light-colored concrete and the roof sections are either vegetated or built with highly reflective material.

WATER EFFICIENCY (3/5)
Incorporating highly efficient irrigation technology and native planting around the facility reduces potable water consumption for irrigation by 72%. Inside the building, potable water has been reduced by 43% from the calculated baseline through the use of dual-flush water closets, waterless urinals and low-flow faucets.

ENERGY & ATMOSPHERE (7/17)
The commissioned facility reduced energy consumption by 25% from the ASHRAE 90.1-2004 requirements through an improved thermal envelope, Energy Star cool roof, reduced lighting power density, occupancy sensors, high efficiency elevators, Energy Star office equipment, demand control ventilation, a high efficiency chiller, and high efficiency boilers.

MATERIALS & RESOURCES (6/13)
The project diverted over 4,700 tons of on-site generated construction waste from landfills, nearly 94% of the total construction waste. 26% of construction materials contain recycled content, 13% of all building materials consist of local materials made less than 500 miles from the site, and of the wood used for the building, 89% is harvested from FSC-certified forests.

INDOOR ENVIRONMENTAL QUALITY (11/15)
The project implemented a carbon dioxide monitoring system to ensure ventilation system performance and that occupants are getting 30% more fresh air than required. Indoor adhesives, sealants, indoor paints, coatings, carpet adhesives and composite wood products are environmental friendly. Occupants will enjoy lighting control localized to their personal work space and thermal controls meeting ASHRAE 55-2004 standards on thermal comfort.

INNOVATION IN DESIGN (5/5)
The project has been recognized for innovation in design for developing an educational program that presents the project's sustainable design practices to occupants and visitors to the facility, implementing a green housekeeping program with environmental cleaning practices, products and equipment, reducing water consumption by an impressive 43%, and procuring reduced-mercury light bulbs.

"We are very proud of JPL's thoughtful and innovative approach to the design of the Flight Projects Center. The open and fluid work spaces maximize effective collaboration of project personnel and management. This building represents the vanguard of NASA's integrative approach to building architecture for flight projects."

REBECCA WILKINSON, NASA MANAGEMENT OFFICE, PROCUREMENT OFFICER

AWARDS
► 2007 Savings by Design Participant and Energy Star Challenge for Architects Award
► Green Building Award from Green California Leadership Awards
► 2010 Excellence in Partnering Award by AGC Marvin M. Black
► Western Council of Construction Consumers (WCCC) Outstanding Award

Exterior window shading provides both function and a distinctive design feature.

Owner: NASA Jet Propulsion Lab
Architect: LPA, Inc.
Structural Engineer: LPA, Inc.
MEP Engineer: Syska Hennessey Group
Commissioning Authority: CTG Energetics, Inc
Contractor: Swinerton Builders
Project Size: 194,602 SF
Project Cost: $70,982,000
Completion: August 2009
Photography: LPA, 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 Los Angeles Chapter of USGBC at www.usgbc-la.org to learn more about how you can make LEED work for you.