

PROJECT PROFILE

LEED® Facts

Marshall Space Flight Center
Building 4602
Huntsville, AL

LEED® for New Construction – Version 2.2
Certification Awarded November 27, 2012

Gold 39*

| | |
|------------------------------|-------|
| Sustainable Sites | 9/14 |
| Water Efficiency | 4/5 |
| Energy & Atmosphere | 5/17 |
| Materials & Resources | 7/13 |
| Indoor Environmental Quality | 11/15 |
| Innovation & Design | 3/5 |

*Out of a possible 69 points



Marshall Space Flight Center
Building 4602
Huntsville, Alabama

LEED for New Construction

21% Less Energy

22% Recycled Content

24% Local Materials

36% Reduced Potable Water Use

74% FSC Certified Wood Products

81% Construction Waste Diverted



PROJECT PROFILE

Building 4602

Exemplary Indoor Environmental Quality



PROJECT DESCRIPTION

Building 4602 contains a laboratory and office space, and due to the nature of work performed in the facility, indoor chemical and pollutant source control is crucial. The testing facilities are fully partitioned and exhausted of hazardous chemicals to protect the health and safety of employees. The design was developed for energy efficiency and includes minimum outside airflow, energy recovery, chiller and boiler systems with maximum efficiency, and effective lighting control for an impressive energy-cost savings.

SUSTAINABLE SITES (9/14)

The facility promotes the use of alternative transportation by employees by providing bicycle storage and preferred parking for low-emitting and fuel-efficient vehicles. There are 221,371 square feet of open space adjacent to the building that will be conserved for the life of the facility and 50% of the site area has been restored with native planting. The entire roof area of the building is covered with highly reflective materials to avoid heat island effect.

WATER EFFICIENCY (4/5)

Potable water usage has been reduced by 36% through the installation of low-flow faucets, toilets, urinals, and showers. Since the landscape design utilizes native plants, no potable water is needed for the irrigation system.

ENERGY & ATMOSPHERE (5/17)

The facility reduces energy consumption by 21% from the ASHRAE 90.1-2004 requirements through an improved thermal envelope, high-efficiency glazing, reduced lighting power density, and an energy efficient HVAC system which includes heat recovery units. Additionally, Building 4602 underwent an enhanced commissioning process.

MATERIALS & RESOURCES (7/13)

The project diverted 413 tons (81%) of on-site generated construction waste from landfills and 22% of the total construction materials contain recycled content. 24% of all building materials consist of local materials made less than 500 miles from the site and 74% of all wood used in construction came from FSC-Certified forests.

INDOOR ENVIRONMENTAL QUALITY (11/15)

Permanent entryway systems were installed in all main entry areas to control dirt and other particulate matter from entering the building. Occupants are ensured thermal comfort in accordance with ASHRAE Standard 55-2004 and lighting controls allow all occupants to make adjustments to suit individual preferences. Additionally, low-emitting paints, carpets, and adhesives were used throughout the building.

INNOVATION IN DESIGN (3/5)

The project received exemplary ratings and recognition for its reduced site disturbance by leaving open space of three times the building footprint. Additionally, the facility developed and implemented a green housekeeping program including custodial training, the use of green products to stock the restrooms and maintain overall cleanliness.

“We take great pride in providing Marshall team members with energy-efficient, environmentally conscious places to work.”

JIMMY GUARIN, NASA MARSHALL SPACE FLIGHT CENTER, FACILITIES ENGINEERING OFFICE LEAD



Interior view of the mechanical testing laboratory located within Building 4602.



Interior view of the optics lab located within Building 4602.

Owner: NASA Marshall Space Flight Center
Architect: HOK Architects
Structural Engineer: HOK Architects
MEP Engineer: HOK Architects
Commissioning Authority: SAIC and Environmental Systems Corporation
Contractor: Carothers Construction
Project Size: 90,467 SF
Project Cost: \$34,000,000
Completion: November 2012
Photography: NASA

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 Alabama Chapter of USGBC at www.usgbcocal.org to learn more about how you can make LEED work for you.