

PROJECT PROFILE

Stennis Space Center
Building 8000 Emergency Operations Center
Stennis Space Center, Mississippi

LEED for New Construction

16% Less Energy

18% Recycled Content

52% Reduced Potable Water Use

70% Reflective Hardscape

84% Construction Waste Diverted

100% Renewable Energy Credits

LEED® Facts

Stennis Space Center
Building 8000 Emergency Operations
Center
Stennis Space Center, MS

LEED® for New Construction – Version 2.1
Certification Awarded March 17, 2010

Gold 40*

Sustainable Sites 8/14

Water Efficiency 4/5

Energy & Atmosphere 5/17

Materials & Resources 6/13

Indoor Environmental Quality 12/15

Innovation & Design 5/5

*Out of a possible 69 points



PROJECT PROFILE

Building 8000 Emergency Operations Center

A Leap Forward in Emergency Operations and Response



“Post-occupancy surveys indicate indoor air quality exceeded expectations to provide building occupants with a pleasing environment for their daily activities.”

J. ALVIN ASKEW, NASA DESIGN & CONSTRUCTION PROJECT MANAGER



PROJECT DESCRIPTION

Building 8000 is a giant leap forward in emergency operations and response capabilities, enabling critical integration of the center's medical clinic, fire department, security services, energy management control system and incident command post. The building design focused on sustainability and meeting the rigid requirements of hurricane force winds. The project includes a storm water retention pond that reduces 80% of the total suspended solids and 40% of phosphorous in the collected storm water. A fan array concept was used on all air handling units utilizing variable frequency drives and premium efficiency motors – a concept which won an ASHRAE Innovation award. Additional system commissioning was completed to ensure the major building systems were performing at their peak performance.

SUSTAINABLE SITES (8/14)

The facility offers preferred parking spaces for low-emitting and fuel-efficient vehicles as well as participants in the carpool program. Bicycle storage and shower facilities are also provided to encourage bicycle commuting and exercising. Open space nearly double the size of the building footprint is adjacent to the building, which will be conserved for the life of the facility. 70% of hardscape surfaces are reflective to reduce heat island effect.

WATER EFFICIENCY (4/5)

Potable water usage in the facility has been reduced by 52% through the installation of waterless urinals, dual-flush toilets, and low-flow faucets and showerheads. Outside, the landscape design utilizes native plants which do not require a permanent irrigation system.

ENERGY & ATMOSPHERE (5/17)

The facility reduced energy consumption by 16% from the ASHRAE 90.1-1999 requirements through an improved thermal envelope, high performance fenestration, reduced lighting power density, and energy efficient HVAC systems that include variable speed drives on air-handler motors. Additionally, the facility has a 2-year purchase agreement for Green-e certified renewable power equal to 100% of the building's annual electric energy consumption.

MATERIALS & RESOURCES (6/13)

The project diverted 1,157,389 tons of on-site generated construction waste from landfills which represents 84% of the total construction waste. 18% of construction materials contain recycled content and 64% of all building materials consist of local materials made less than 500 miles from the site.

INDOOR ENVIRONMENTAL QUALITY (12/15)

The facility incorporates a carbon dioxide monitoring system to ensure proper ventilation is provided to the occupants. Low-emitting paints, floor coverings, and adhesives are used throughout the building. Additionally, occupants' thermal comfort is monitored and controlled at local zones within the ranges defined in ASHRAE 55-1992, and this system was commissioned as part of the Fundamental Building Systems Commissioning.

INNOVATION IN DESIGN (5/5)

The project has received exemplary ratings and recognition for reduced site disturbance through adjacent open space double the size of the building footprint, its commitment to purchasing e-Green power, significant potable water reductions, and use of locally manufactured materials.



Building 8000 consolidates and integrates several of the Emergency Operations Center's functions.



Aerial view of the entire facility at its completion in June 2009.

Owner: NASA Stennis Space Center

Architect: Jacobs FOSC Group

Structural Engineer: Jacobs FOSC Group

MEP Engineer: Jacobs FOSC Group

Commissioning Authority: Architectural Engineering Corp.

Contractor: Starks Contracting Co. Inc.

Project Size: 83,000 SF

Project Cost: \$20,000,000

Completion: June 2009

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