



PN69223 MILITARY INTELLIGENCE HQ— SENSITIVE COMPARTMENTED INFORMA- TION FACILITY (SCIF), FORT CARSON, CO

47.3% reduction in energy costs
(LEED)

48.4% reduction in water use

79.0% of construction waste
diverted from the landfill

LEED Facts

PN69223 Military Intelligence HQ—
Sensitive Compartmented Information
Facility (SCIF), Fort Carson, Co

LEED for New Construction Version 2.2
Certification awarded March 19, 2012

Gold 44

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

*Out of a possible 69 points

FORT CARSON DIVISION HEADQUARTERS COMPLEX, INCREMENT

MI Headquarters SCIF Receives LEED Gold

PROJECT BACKGROUND

To meet the goals of the “Grow the Force” initiative, Fort Carson planned for the construction of the MI Battalion HQ. The project was built as a part of the Military Intelligence (MI) Complex at Fort Carson. The project consists of multiple levels of security classification zones, complex data and communication systems, and spaces such as a Sensitive Compartmented Information Facility, offices, classrooms and conference rooms.

In 2006, the Office of the Assistant Secretary of the Army issued a memorandum requiring that all military vertical building construction projects be able to achieve LEED Silver certification. Since then, the Army has achieved LEED Gold at no extra cost on many projects and has one building at Fort Carson achieve LEED Platinum. These efforts are in line with the Army’s long-term goal to achieve net-zero energy, water, and waste on all installations. The MI Battalion HQ at Fort Carson demonstrates that LEED Gold is possible for facilities and puts the Army another step closer to realizing its net-zero vision.

PHOTOVOLTAIC PARKING CANOPIES

The MI Battalion HQ installed a 300 kW photovoltaic canopy system that shades half of the parking lot for the facility, while also generating renewable energy for the facility. The photovoltaic system generates enough energy to offset 25.79% of the project’s energy cost according to LEED, earning the project an Innovation in Design credit for On-Site Renewable Energy. It also helped the project earn all 10 points in the Optimize Energy credit. In addition to generating energy, the canopies helped the project earn the Heat Island Effect: Non-Roof credit. The canopies utilize energy efficient LED canopy lights.

STRATEGIES AND RESULTS

The MI Battalion HQ managed to earn nearly all of the possible Energy and Atmosphere credits by utilizing several strategies. The building envelope is designed to reduce energy usage. The roofs are designed to be cool roofs. Air infiltration is kept to a minimum, and the building is highly insulated with both rigid and spray foam insulation. Windows were selected with low-e coating and the double paned glazing unit is filled with argon. Exterior doors frames are insulated with spray foam. The building utilizes motorized automated window shading to block a majority of the sun’s solar heat gain into the building. All of these strategies allow for a large reduction in energy usage.

In addition, the MI Battalion HQ has a solar hot water system that provides 60% of the buildings hot water, and a 300 kW photovoltaic system. These systems added on to the already excellent energy performance of the building.

To save potable water, the project uses dual-flush fixtures, waterless urinals, and low-flow fixtures to reduce water usage by 48.4%. These systems help the project to earn an Exemplary Performance point for Water Use Reduction.

A heavy emphasis on Energy and Atmosphere credits, along with Indoor Environmental Quality credits, helped this project achieve LEED Gold certification.

“The C2F exemplifies outstanding qualities of teamwork and determination, and represents a great job by the designers, construction personnel, and the Post.... I spent a recent tour of duty at Fort Hood, Texas and spent time in the 4ID HQ and am absolutely pleased with the upgrade at Fort Carson. The final proof of success is a customer who had nothing but words of praise for the facility during my recent visit. This facility and the team that built it absolutely deserves recognition.”

Col. Robert J. Ruch, Commander, Omaha District,
U.S. Army Corps of Engineers



U.S. Army Engineer District, Omaha

Owner: U.S. Army
Architects: U.S. Army Engineer District, Omaha
Structural Engineers: U.S. Army Engineer District, Omaha
HVAC Engineer: U.S. Army Engineer District, Omaha
Energy Modeling: U.S. Army Engineer District, Omaha
Civil Engineer: U.S. Army Engineer District, Omaha
Landscape Architect: U.S. Army Engineer District, Omaha
Interior Designer: U.S. Army Engineer District, Omaha
Prime Contractor: PCL, Inc
Owner’s Representative: Directorate of Public Works—Fort Carson
Electrical Engineer: U.S. Army Engineer District, Omaha
Plumbing Engineer: U.S. Army Engineer District, Omaha
Geotechnical: U.S. Army Engineer District, Omaha
Lighting Consultant: U.S. Army Engineer District, Omaha
Sustainable Design Consultant: Spectra Tech, Inc

Project Size: 62,512 square feet
Total Project Cost: \$13,857,000
Cost Per Square Foot: \$222

Photographs Courtesy of: Omaha District, Corps of Engineers

ABOUT LEED

The LEED green building certification program is the national benchmark for the design, construction, and operations of green buildings. Visit the U.S. Green Building Council’s Web site at www.usgbc.org to learn more about LEED and green buildings.

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U.S. ARMY