



## FIRE STATION, FORT DRUM, NY

**30.9%** reduction in energy costs  
(LEED)

**26.7%** reduction in water use

**91.6%** of construction waste  
diverted from the landfill

### LEED Facts

Fire Station,  
Fort Drum, NY

LEED for New Construction Version 2.2  
Certification awarded September 12, 2011

### Gold 42

Sustainable Sites	9/14
Water Efficiency	3/5
Energy & Atmosphere	8/17
Materials & Resources	6/13
Indoor Environmental Quality	13/15
Innovation & Design	3/5

\*Out of a possible 69 points

## FORT DRUM, NEW YORK

## Fire Station Receives LEED Gold

## PROJECT BACKGROUND

The 10th Mountain Division has undergone an extensive expansion do to the Department of the Army's Force Modernization Program. The additional missions and soldiers in turn created a requirement to expand the Installation's emergency service network. The construction of a new Fire Station provides improved response to the areas of "old post" undergoing the transition from World War II wood to a modern Brigade Complex housing many of the Division's major support battalions.

One of many unique features of Fort Drum is its extreme cold climate; matching or exceeding extreme cold conditions found just about anywhere else in the lower 48 contiguous states. In addition to the weather, Fire Station II incorporates several diverse functions providing administrative space, maintenance space and resident type living space for the Fire Fighters while also serving as the backup location for the Post's Civil Emergency Center. Under the terms of the construction contract, this facility was required to obtain LEED Silver certification from the US Green Building Council (USGBC) which would make this the first "certified" building on the installation. The certification, diversity and weather were a few of the challenges faced by Black Horse Construction LLC, a local small business and the design-build agent of Fort Drum Fire Station II.

## STRATEGIES AND RESULTS

In May 11 the US Green Building Council (USGBC) awarded the much sought after Gold Rating, the first Gold certified project on Fort Drum. Black Horse on its own initiative and with no additional cost to the Government elected to pursue a LEED Gold Rating. In addition to in-floor heating and building envelope insulation, Fire Station II was one of the first facilities to undergo a whole building enhanced commissioning. As one of the first on Fort Drum to under-go such commissioning, both the Government and the Contractor had to collect and develop new testing criteria and protocols for not only the standard systems such as electrical and HVAC, but for new systems such as the foundation, structural frame and curtain walls. The combination of enhance physical features; the in-floor radiant heat, increased insulation and the improved air tightness test: coupled with enhance commissioning makes Fire Station II one of the most energy efficient facilities on post. The facility has received numerous compliments for its functionality and livability.

## NOTABLE LEED FEATURES

One of several unique features of this facility is the vehicle bay in-floor radiant heating system; this system coupled with the increased insulation (ratings of R40 in the walls and R60 ceiling) provides one of the most efficient and effective heating systems installed in a large maintenance bay area on Fort Drum.



U.S. Army Engineer District, New York

**Owner/Operator:** Child Development Service, Fort Drum, NY  
**Prime Contractor:** Black Horse LLC, Watertown, NY  
**Architects:** C&S Engineers, Inc, Syracuse, NY  
**Corps of Engineers, Design District:** New York District  
**Corps of Engineers, Center of Standardization:** Huntsville Center, Huntsville, AL

**Project Size:** 22,141 square feet  
**Total Project Cost:** \$5,721,347  
**Cost Per Square Foot:** \$258

**Photographs Courtesy of:** Fort Drum, PPMD Office

## 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](http://www.usgbc.org) to learn more about LEED and green buildings.

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 Fort Drum



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