



ADA COUNTY PARAMEDICS STATION #34

963 E Pine Street - Meridian, ID 83642
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Case Study

*Prepared by Selena O'Neal, CEM, LEED AP
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Project Overview

Size:	4,137 square feet
Type:	Paramedic Station w/ sleeping quarters and Ambulance Bays
Location:	Boise, Idaho
Utilities:	Idaho Power Intermountain Gas
Completion Date:	December 2007
LEED Certification:	NC v 2.2, Silver Level 2008
Green Features:	Natural Daylight and Views; Local/Regional Materials; Certified Wood; Low-Emitting Paints and Carpeting; Building Commissioning; Optimized Energy Performance; Light Pollution Reduction; Water Efficient Landscaping; Construction Waste Management; Waste Recycling



Ada County Paramedics provide advanced life support services around the clock to over 361,500 residents of Boise, Meridian, Garden City, Eagle, Star, Kuna, and rural Ada County. ACP is an emergency service dispatched by the county's 9-1-1 communications center, just like area law enforcement. In order to keep up with major growth in the Treasure Valley, the Board of Ada County Commissioners determined a new station was needed in the west part of Ada County to serve an ever expanding community.

In 2007, the Ada County Paramedics Department undertook a major construction project to build a new response station in Meridian, ID. The facility was specifically designed and tailored to provide a comfortable and efficient facility for 2 crews of paramedics whose jobs require them to stay at the facility for days at a time. Planning began on the \$821,000 project in November 2006 and construction was completed in December 2007.

The station consists of 5 bedrooms; 3 restrooms with showers; a report-writing room with 4 work stations; a day room with couches, lounge chairs and a television; and a residential-type kitchen with all the amenities of a modern home including a casual dining area. The facility also includes a laundry room with storage for equipment and cleaning supplies; an outdoor patio with a natural gas hookup for a barbeque-cooking grill; 2 full-size vehicle bays for ambulance parking; and a small emergency backup generator for essential services.

The new facility earned a LEED-NC Silver certification by the US Green Building Council in 2008. LEED (Leadership in Energy and Environmental Design) is a national rating system used to develop high-performance, sustainable buildings. LEED emphasizes state-of-the-art strategies for site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The design team incorporated many LEED elements as described below.

Modeling performed by Boise's Integrated Design Lab helped determine the orientation of the building to maximize the use of natural daylight. The back patio was located in an area protected from the hot afternoon sun while the dayroom has ample natural sunlight to minimize the need for artificial light. Operable windows throughout the facility can be used to provide natural ventilation during the milder months. Each bedroom also has its own heating/cooling unit to provide individual temperature control.

The north side of the building was designed as a high bay garage to provide indoor parking for emergency response vehicles. Large rollup doors on the front and back of the garage provide a drive-through arrangement to enable paramedics to quickly leave the facility without needing to backup or turn around. A built-in mechanical exhaust system automatically eliminates vehicle fumes from the space. The vehicle bays are heated with infrared radiant heaters and cooled with an evaporative cooling system in lieu of a traditional rooftop air conditioner, adding to the building's energy efficiency.

Ada County even went the extra step to make use of the local utility's incentive program and earned approximately \$2,500 back for incorporating energy-saving devices such as occupancy sensors, high efficiency exit signs, high performance windows, a "cool" roof, and an energy-efficient cooling system with air side economizers.



While much planning went into designing the facility to provide comfortable energy-efficient housing for the paramedics, equal attention was paid to minimizing its impact on the environment. The water fixtures in the facility are low-flow to reduce the burden on municipal water supply and wastewater systems. The storm water system and landscaping was also designed with water conservation in mind. Roof drains and runoff from parking lots flow into bio swales located on the site. The irrigation system uses nonpotable water provided from an irrigation canal, also located on the site.

The County incorporated environmentally-friendly, sustainable material into the facility such as carpet tiles in the bedrooms and report writing room, rather than broadloom carpet. As per LEED standards, the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of the installers and occupants were minimized. No

aerosol adhesives were used; all floor covering and wall base adhesives were VOC-free. Paints were chosen in keeping with the standard as well. The entire construction process was managed to protect the indoor air quality including ensuring the ductwork was kept sealed, clean and dust-free during installation. Further, the entire building underwent a fresh-air flush before anyone was allowed to move in.

The day room and report writing room ceilings were left "open" with exposed rafters and ductwork to minimize the amount of materials used in the project. The wood studs, plywood, and wood doors are FSC Certified meaning they come from forests that are managed in an environmentally responsible, socially beneficial, and economically viable way. More than 75% of the construction waste was recycled as wood, metal, paper, and plastic rather than being dumped into trash container and hauled up to the landfill.



Overall, the new facility meets or exceeds the County's program requirements of affordable, sustainable, high-performance construction. It costs about 30% less to operate than a conventional facility while providing a safer, healthier environment for the occupants.

PROJECT TEAM	
Board of Ada County Commissioners:	Design Team:
Fred Tilman, Chairman	Lombard Conrad Architects
Rick Yzaguirre	Engineering Inc, Mechanical
Paul Woods	Eidam and Associates, Electrical
Ada County Paramedics:	Lochsa Engineering, Structural
Troy Hagen, Director	The Land Group, Civil
Darby Weston, Deputy Director	General Contractor:
Ada County Operations	Brice Construction
Dave Logan, Director	Commissioning Agent:
Scott Williams, Deputy Director	Heery International
Bruce Krisko, Construction Manager	
Selena O'Neal, Energy Specialist	