

LEED PROJECT PROFILE



COLUMBIA FIRE STATION #7 COLUMBIA, MISSOURI

50% reduction in water
efficient landscaping.

50% construction waste management
diverted from disposal.

Daylight and views for **90%** of spaces.



LEED® Facts

COLUMBIA FIRE STATION #7
Columbia, Missouri

LEED for New Construction
Certification awarded, 2010

Silver 33*

Sustainable Sites 6/14

Water Efficiency 2/5

Energy & Atmosphere 9/17

Materials & Resources 5/13

Indoor Environmental Quality 9/15

Innovation & Design 2/5

**Out of a possible 69 points, LEED v2.2*

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.

COLUMBIA FIRE STATION #7

SILVER Certified for Green Design.

Many sustainable features.

PROJECT BACKGROUND

In 2006, The City of Columbia commissioned PwArchitects Inc. to design a replacement for the existing aging Fire Station No. 7 with the goal of achieving LEED Silver Certification. PWA employed many sustainable features used in a previous fire station prototype.

Fire Station #7 is occupied continuously by three (3) shifts of three (3) staff but meets the needs of up to 8 firefighters per shift. To meet the needs of the round-the-clock staff, the program includes restrooms with showers, an exercise room, kitchen / dining / living space, dormitory sleeping area, offices, storage and laundry rooms. The west side of the station houses an apparatus bay large enough to house three fire trucks, a work room, as well as associated storage and mechanical rooms.

STRATEGIES AND RESULTS

PWA had employed many sustainable features in the previous prototype that allowed the project to move easily into adopting the LEED guidelines. A new site for the station permitted the use of many new storm water management techniques such as a bio-retention pond and rain garden along with the ability to employ low water use native plantings. A large amount of recycled content materials and certified wood products were used as well as a construction waste recycling program.

- Porous concrete paving for storm water collection.
- Rain garden and bio-retention basin for cleansing storm water runoff.
- Native landscape design minimizing the need for irrigation.
- Use of certified wood for rough carpentry, doors, cabinetry and trim.
- Extensive use of regionally available materials for the project from concrete to roofing.
- Extensive use of recycled content materials throughout.
- Material reuse from existing Fire station No. 7.
- Ground source heat pumps for heating and air conditioning.
- Passive solar design elements such as clerestory windows, proper solar orientation, and operable windows.

ABOUT PWARCHITECTS

PwArchitects, Inc. has maintained a mid-Missouri presence working with public and private institutions in our region for thirty-eight years. Offering sustainable architecture and a wide range of services for various building types, PWA interweaves aesthetics, economy, and scheduling to fulfill the needs and desires of our clients.

PWA has been a leader in the sustainable development movement since the U.S. Department of Energy award in 1977. With LEED® Accredited Professionals on staff, PWA strives to meet the needs of our clients while incorporating sustainable design into all of our projects. Through collaboration and teamwork, we work closely with our clients to form strategies that reduce energy usage, conserve water, minimize waste and promote the health and satisfaction of a building's users and visitors.



Owner: City of Columbia, Missouri
Architect: PwArchitects
Civil Engineer: Trabue, Hansen & Hinshaw, Inc.
Contractor: GBH Builders, Inc.
Photographs Courtesy of: PwArchitects, Inc.
Project Size: 7,900 GSF
Total Project Cost: \$2,011,700
Cost Per Square Foot: \$255

About USGBC-Missouri Gateway Chapter

USGBC is the nation's foremost coalition of leaders from across the building industry. Missouri Gateway Chapter members represent all segments of the building industry and work together to promote buildings that are environmentally responsible, profitable, and healthy places to live and work.



Missouri
Gateway
CHAPTER