



**BELL PRAIRIE ELEMENTARY  
KANSAS CITY, MISSOURI**

**38%** reduced water use

**55.2%** of construction waste  
diverted from landfills

**31.6%** reduced energy cost



**LEED® Facts**

Bell Prairie Elementary School  
Kansas City, Missouri

LEED for New Construction v2.2  
Certification awarded December 2009

<b>Gold</b>	<b>39*</b>
Sustainable Sites	7/14
Water Efficiency	4/5
Energy & Atmosphere	9/17
Materials & Resources	4/13
Indoor Environmental Quality	10/15
Innovation & Design	5/5

\*Out of a possible 69 points

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.

## BELL PRAIRIE ELEMENTARY SCHOOL IN KANSAS CITY, MISSOURI

# A Gold Building Focusing on Life Long Learning

## North Kansas City Schools is First District in Missouri with LEED Gold Elementary

### PROJECT BACKGROUND

Bell Prairie Elementary School is the 21st elementary school in North Kansas City Schools. The 82,000 square foot elementary school serves 750 students in grades K-5. It opened in 2009 and combines the best of today's greening initiatives. Bell Prairie is the second LEED certified school in North Kansas City Schools.

### LIVING LEARNING TOOL

Bell Prairie not only houses desks, chairs, computers, teachers and students, but also provides a number of flexible learning spaces where signage and building systems themselves educate students, staff and visitors about its global community.

The students give tours to visitors stopping at the 14 stations that explain the sustainable concepts the building incorporates. At the first station, a computer interface is incorporated into a larger sustainable graphic, allowing students and visitors to view real-time usage of energy for the various systems serving the building. The older students are able to incorporate these statistics into their math curriculum, learning two concepts with one activity. Additional stations throughout the building explore low-emitting materials, green cleaning and ventilation that improve the indoor air quality, the solar orientation and earth contact that helps to keep the building cool in warm weather, and use of innovative waste water technology.

As well as teaching visitors about sustainability using the building, the school developed curriculum for all grades progressively teaching students more in depth about the sustainable features of the building.

### STRATEGIES AND RESULTS

Several initiatives were made throughout the project's site design. The district chose to protect the on-site streamway along the east boundary of the property with a permanent preservation easement. Areas on the site were restored with native plantings and three bioretention basins were created on the site. More than 140,000 square feet was preserved as open space on the site.

One of the most noticeable features of the high performance building is its "green roof" complete with an Aermotor Windmill that pumps rainwater runoff from the 5,370-gallon cistern to the roof top garden for plant irrigation. The 2,224 square foot roof garden has pre-planted sedums in trays that are linked together by a high efficiency drip irrigation system, and it is fed by the runoff storm water captured from a portion of the roof directly above the gymnasium. The rooftop garden reduces the effect of heat island effect, improves energy efficiency and stream water quality by reducing water runoff.

Materials throughout the building were selected for their environmentally friendly characteristics. Low-emitting adhesives, paints, and carpeting helped reduce the quantity of indoor air contaminants. In order to reduce transportation impacts and support regional business, material selection consisted of several regionally based companies and regionally manufactured materials, and more than 20% of the building materials came from recycled content.

### ABOUT NORTH KANSAS CITY SCHOOLS

North Kansas City Schools serves more than 18,000 students who live in 12 municipalities across southern Clay County, Missouri. The district has four high schools, five middle schools and 21 elementary schools (in addition to an early childhood center and several alternative education programs).

"Hollis + Miller builds relationships with organizations and these relationships lead to outstanding results. The firm becomes a member of the client team and contributes to the success of every project. The team at Hollis + Miller doesn't just provide architectural services it becomes an integral part of our organization and helps everyone focus on the specific goals and challenges."

North Kansas City Schools



Owner: North Kansas City Schools  
 Architect: Hollis + Miller Architects, Inc.  
 Civil Engineer: Shafer Kline & Warren, Inc.  
 Commissioning Agent: Smith & Boucher Engineers  
 Construction Manager: JE Dunn Construction  
 Landscape Architect: Shafer Kline & Warren, Inc.  
 LEED Consultant: Earthly Ideas, LLC  
 Lighting Designer: Henderson Engineers, Inc.  
 MEP Engineer: Henderson Engineers, Inc.  
 Structural Engineer: Hollis + Miller Architects, Inc.  
 Project Size: 82,000 square feet  
 Total Project Cost: \$15,000,000  
 Cost Per Square Foot: \$180

Photographs Courtesy of:  
 Alistair Tutton Photography

### ABOUT THE CHAPTER

USGBC Central Plains strives to lead sustainable regional transformation of the built environment in Kansas & Western Missouri.



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