



EXHIBITS STUDIO - NM MUSEUM OF NATURAL HISTORY AND SCIENCE ALBUQUERQUE, NM

96% of existing building reused

37% in water savings

During construction of this project **88%** of construction waste was recycled.

LEED® Facts

Exhibits Studio
Albuquerque, NM

LEED for New Construction v2.2
Certification awarded June, 2011

Silver 33 pts awarded*

Sustainable Sites	6/14
Water Efficiency	3/5
Energy & Atmosphere	4/17
Materials & Resources	9/13
Indoor Environmental Quality	8/15
Innovation & Design	3/5

**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.



EXHIBITS STUDIO - NEW MEXICO MUSEUM OF NATURAL HISTORY AND SCIENCE

Green Building Renovation Earns Silver

Repurposed Building Offers its own Advantages and Challenges

PROJECT BACKGROUND

The Exhibits Studio was an adaptive reuse of an existing 16,000sf industrial building originally constructed in 1975. The project provided a much-needed larger exhibit design and fabrication space for the state's premier natural history research facility in Albuquerque, New Mexico. The building contains offices and collaborative work spaces for the production department staff and graphic designers. Over 70% of the building is taken up by storage areas for exhibit and fabrication materials, metal fabrication shop, wood and plastics fabrication shop, and paint booth.

The building was an existing engineered metal building construction with metal siding and metal roofing over steel purlins. The existing 50 foot on-center steel column and support girders provided a natural subdivision into four almost equal building use quadrants.

STRATEGIES AND RESULTS

Strategies focused on maximizing the potential of the site and existing building, while providing significant energy and water savings, without deviating from the typical construction methods and building systems appropriate for an industrial and office facility in central New Mexico.

The office area saw the most extensive transformation. Existing outer walls on two sides of the building were unstable and had to be removed. While counter to the goal of maximizing building reuse, it provided the opportunity for the offices and graphic design departments to have abundant day-lighting and views to exterior. To create an open-collaborative work environment, full-height glass partitions were used to allow connection between offices and open meeting spaces and to allow daylight to permeate throughout the office area. In contrast to the office area, shops and storage spaces had minimal physical changes. Beam lines were used to subdivide shops and a paint booth, storage alcoves and two shop offices were added. The existing translucent roof panels were replaced with more efficient skylights. These design strategies contributed to over 96% of the existing building being reused and 84% of the spaces having day-light from windows and skylights.

The challenge of repurposing a 33 year old metal building required specific strategies to meet energy and water reduction targets. Through a combination of 12" batt insulation at the roof and 9" cellulose insulation inserted into the existing exterior walls, a 13% reduction of energy use is projected. Indoor water use is expected to be reduced by 37% through use of low-flow fixtures, and exterior water use is reduced by 82% through landscape design and drip irrigation. Material management also was an important strategy which diverted 88% of construction waste away from landfills.

ABOUT THE TEAM

Created in 1978 by the New Mexico Legislature, the Department of Cultural Affairs represents New Mexico's dedication to preserving and celebrating the cultural integrity and diversity of the State of New Mexico. The Department oversees a broad range of New Mexico's arts and cultural heritage agencies. These include 15 divisions representing a variety of programs and services. Among its primary functions is the management of the largest state sponsored museum system in the United States. The New Mexico Museum of Natural History and Science is one of eight museums under the museum division's management.

"... the team delivered a design solution that fulfilled the museum's vision... This project exemplifies the State of New Mexico's commitment to promote energy and water efficiency and to provide cost-effective museum facilities."

Lemoyne F. Blackshear,

Property Control Division
State of New Mexico



Architect: Dekker/Perich/Sabatini
Civil Engineer: High Mesa Consulting Group
Commissioning Agent: TestMarc
Contractor: Enterprise Builders
Landscape Architect: Dekker/Perich/Sabatini
Interior Designer: Dekker/Perich/Sabatini
LEED Consultant: Dekker/Perich/Sabatini
MEP Engineer: Coupland-Moran Engineers, Inc
Structural Engineer: Dekker/Perich/Sabatini
Owner: New Mexico Museum of Natural History and Science
Project Size: 16,000 square feet
Project Cost: 1,159,584 (\$72.47/sf)

Photographs Courtesy of: Travis Lewis

ABOUT CHAPTER

The USGBC - NM Chapter is a local non-profit with a mission: to transform our built environment through education, collaboration and outreach, to promote environmentally responsible practices that are economically and socially beneficial to the community.



www.usgbcnm.org
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