

## Denver Museum of Nature and Science Addition Achieves LEED Platinum

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The \$56.5-million Morgridge Family Exploration Center, the latest addition to the Denver Museum of Nature & Science (DMNS), has earned LEED-Platinum certification from the U.S. Green Building Council.



Photo by Rick Wicker, Denver Museum of Nature and Science

The \$56.5-million Morgridge Family Exploration Center is the second DMNS project to receive LEED Gold or higher.

DMNS partnered with architecture firm klipp | gkkworks and general contractor GH Phipps Construction, both of Denver, on the five-story, 126,000-sq-ft addition, which opened to the public in February.

“Earning LEED-Platinum certification allows the museum to continue its goal of informal education about sustainable practices,” said Elaine Harkins, Denver Museum of Nature & Science facilities director. “We will continue these efforts in our upcoming strategic plan.”

The team designed the expansion to operate at a savings of 62.2% in energy use, with a 50% reduction in energy costs relative to the ASHRAE 90.1-2007 baseline. One of the contributing factors to the energy reduction and savings is an open-loop water-source heat pump that uses Denver’s non-potable water system. The seven 30-ton heat pumps provide 100% of the heating and cooling for the facility, as well as de-humidification in the summer.

Additional sustainable features include rooftop thermal panels that provide domestic hot water, 200kW of photovoltaic panels to offset electricity usage, waterless urinals and low-flush toilets that reduce 43% potable water use, diversion of 62% of construction waste from landfills and high-efficiency gearless elevators.

Renee Azerbegi, owner of Denver’s Ambient Energy, an energy, daylighting and LEED consultant, said, “It was a pleasure to work with the museum’s team to help them achieve their extraordinary sustainability goals on this project—LEED Platinum and 50% energy savings. These notable sustainability benefits will be realized by the thousands of visitors each day.”

The project is the second museum project to receive LEED Gold or higher, reinforcing the museum's mission as a visible steward for sustainability.

Maria Cole, architect at klipp | gkkworks, who worked on the last two projects, including the LEED-Gold Phipps Gallery, said "Achieving high sustainability goals on museum facilities present unique design challenges. Climate control, galleries and collection storage, while saving energy, requires a sophisticated level of integration and communication amongst the team."

Above ground in the new wing is the Morgridge Family Exploration Center, which contains labs, educational spaces, an exhibition gallery and a Discovery Zone for young visitors. The two below-grade floors contain the Rocky Mountain Science & Collections Center, which houses the museum's 1.4 million artifacts and specimens in an environmentally conditioned space.

The adjoining Boettcher Plaza connects DMNS to City Park and allows for an Outdoor Studio for science activities for the 315,000 children and teens who visit the museum on an annual basis.