

CASE STUDY

Protecting 70,000 Pieces of Art

Denver Art Museum Relies on Albireo for BAS Controls and Monitoring to Preserve their Collection

After almost 80 years of operating from several temporary locations, the Denver Art Museum (DAM) built its permanent home in 1971. Known as the Martin Building, it was designed by renowned Italian modernist Gio Ponti in collaboration with James Sudler Associates of Denver. In 2000, the board decided to expand the campus and hired Daniel Libeskind to design the Frederic C. Milton Building, which opened in 2006.

An extensive renovation and expansion project began in 2017, and the campus square footage increased to over 500,000. The museum owns one of the largest art collections between Chicago and the West Coast. The renovation and addition were designed by Michael Graves and the Denver firm of Klipp Colussy Jenks DuBois. The property is adjacent to Denver Art Museum. The Denver Central Library is the 8th largest library in the United States and attracts one million visitors each year.

CHALLENGE

Denver Museum of Art requires precise control for over 70,000 pieces of artwork in 12 collections. Humidity can wreak havoc on an art collection. As the air's humidity increases and decreases, many materials respond by changing their physical form. Humidity can cause bending, warping, cracks and splits. A dangerous humidity level could also affect art on a chemical level. If the relative humidity level is high enough, mold and fungi can begin to grow. Protecting this extensive collection is priority #1. However, no international standards currently exist.

The museum needed a partner to control precise temperature and humidity across 210,000 square feet of gallery space in the Martin building and 146,000 square feet of gallery space in the Hamilton Building. Not only are these benchmarks critical to maintaining their own collection, but a requirement to host federal indemnified shows from across the world.

A flat line for temperature and humidity is needed at the DAM around the clock. In addition, Denver is a very arid environment with naturally low humidity. When the museum receives a special exhibition from New York or Europe, the artwork is used to 50% or higher humidity. Contracts with the lending institutions stipulates that the DAM must maintain this 50% humidity for the entire time the works are in the museum, with a variance of only 2% to 5%.planning and precision.

“Our relationship with Albireo continues to grow along with the advances in technology. We couldn't have a better partner to be joined with on this journey.”

DAM Facilities Manager



“We continue to rely on Westover/ Albireo Energy as a trusted advisor when it comes to security and building management systems. They are knowledgeable, technically savvy, and always offering better ways to do business which is critical for a non-profit such as the Denver Art Museum.”

Albireo Energy's Solutions

Since 2005, Albireo Energy has been involved with the control and maintenance of the DAM buildings. We began with security and then developed integrated campus systems that are monitored and controlled centrally. Our experts understand the importance of preserving the collection, and always do what it takes to get the job right. We remain in sync with the DAM's exhibition schedule to comply with the varying requirements of their contractual obligations.

Our scope of work includes BAS, alarm monitoring, access control, motion detection, temperature control, humidity control and CCTV cameras. The humidity controls system uses clean steam generation to meet the guidelines of the Image Permanence Institute. Our state-of-the-art access control system use the latest technology. Albireo Energy also holds a service contract with the DAM, where we maintain a 15-minute response time for calls and emails in addition to 45-minute onsite or remote response times for emergencies.

Results

The museum enjoys a 100% success rate for hosting large traveling art shows. Outside curators monitor the indemnified shows. If the humidity and temperature fall below the standards or fluctuate rapidly, the curators can immediately strike the artwork from the walls to get the pieces in a better controlled environment. Under Albireo Energy, this scenario has never occurred. With these successful data points, the DAM can bring premier works to Denver from masters such as Claude Monet. In addition to adding prestige, these visiting shows increase revenue and bring more visitors to the campus.

Albireo Energy also has advised the design and construction teams through the DAM's multiple renovation projects. We've provided lessons learned, humidity and temperature control standards and direction on mechanical system design. We are a full-service integrator, providing facility management, programming, trouble shooting and service. Through a building analytics solution, the museum benefits from significant energy savings. Looking forward, we plan to use this technology to help with proactive mechanical and BMS failures. We also recently began using AI technology for headcounts throughout the campus. As technology evolves, we expect our services and sustainability strategies will expand with the Denver Museum of Art.



1

100% success rate for maintaining strict humidity and temperature standards for traveling art shows significant energy savings

2

Trusted advisor to museum's facility managers, collections staff and curators

3

Scope of work includes BAS, alarm monitoring, access control, motion detection, temperature control, humidity control and CCTV cameras

Interested in learning more? Reach out to Albireo Energy Energy at info@albireoenergy.com.