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WEATHERMAKER

changing climate



Proctor Mechanical recreates 12 of earth's 15 weather zones at a zoo's Discovery Center in a job that challenges its employees.

SPECIAL TO CONTRACTOR

The Blank Park Zoo project in

Des Moines, Iowa, is the kind of job that satisfies the needs of both the customer and the mechanical contractor.

As the customer, the Blank Park Zoo required a design/build mechanical contractor that had demonstrated the ability to innovate. That's because the zoo's new 29,000-sq.-ft. Myron

and Jackie Blank Discovery Center has to accommodate 12 of the earth's 15 climate zones, which demand consistent air and water temperatures and quality to support hundreds of species of plants and animals.

As the contractor, Des Moines-based Proctor Mechanical seized the opportunity to design and

install systems in the high-profile project. While many of its sophisticated design/build jobs had been done previously in laboratories and hospitals, Proctor's work at the zoo is now on display to thousands of visitors.

Being recognized for its good work is important in helping the contractor build and retain a team of motivated employees, President Joe Proctor says. Besides the public recognition for its work at the zoo, Proctor Mechanical has won numerous awards from state and national contractor associations.

"It's important to us to be high profile," Proctor says. "Not every mechanical contractor has a team that can create design solutions and react quickly to numerous variables that are present in any building project. This was a good project for us because it showed what we can do."

For the customer

The zoo's Discovery Center opened in November 2001. More than two years before then, however, Proctor and his team of employees and other contractors visited zoos in Omaha, Neb.; Wichita, Kan.; and Denver to learn what they

could for the upcoming job.

"We researched other facilities that offered a similar product but were not as expansive or intricate," Proctor says. "What we did was incorporate the highlights of what we saw in all these other buildings, but we worked in a tighter footprint."

Proctor Mechanical started work on the job in July 1999. The \$1.5 million project included the mechanical, heating, air, piping, filtering systems and high-purity systems.

"A lot of what we did is experimental," Proctor says. "For example, we tried infrared as well as radiant heat. We came up with our own practical inventions as we went along. In the end, we delivered more than mechanical work; we created solutions that supported multiple environments successfully."

Discovery Center visitors can experience a full spectrum of the earth's eco-system. From ice to snow, rain, mist, waterfalls, and multiple fresh and salt water ponds, the Discovery Center's climate zones are accurately maintained 24 hours a day, seven days a week.

Proctor Mechanical's work supports:

- The center's two waterfalls and their circulated systems;
- The Quiet Pool, which incorporates sound filtration in the circulation;
- The 2,000-gal. hot water radiant heated Camen Pool, named for a miniature alligator;
- The Amazon Rain Forest area and its 5,000-gal. exotic fish pool, which requires sand filtration and six ultraviolet filters to eliminate certain micro-organisms as well as reverse-osmosis water for simulated rain and an atomizing fog machine;

- The 2,000-gal. Iowa Pond with two carbon filter pumps and five carbon filtration units to support local species;

- The 16,000-gal. saltwater Reef Tank, which maintains a constant 78° F with two 650-gal. sand filters, one 3-hp chiller, 30 ultraviolet sterilizers, four foam fractionators and two 2,000-gal. "bio-beds" to remove fish waste and solids;

- The 2,500-gal. saltwater Jelly Fish Tank with a consistent 56° temperature, 3-hp chiller, 30 filters and one 700-gal. bio-bed; and

- A 4,000-gal. hot water radiant exterior pool for the Flamingo Exhibit that utilizes city or ground water from 25-ft. deep submersible pumps.

The contractor also installed a 5,000-gal. underground storage tank for salt water; a 4,000-gal. underground storage tank for reverse osmosis water; 13 rooftop HVAC systems; and exhaust ventilation systems.

- The Proctor team members delivered everything they promised and more," says David Allen, Blank Park Zoo administrator. "The Discovery Center's success in supporting animals and vegetation in such varied climatic settings was entirely dependent upon their ability to innovate.

- Anyone who has worked in a large office knows the difficulty of maintaining appropriate heating and cooling throughout the facility. Imagine a mechanical design that delivers consistent air and water temperatures in a multitude of climates as well as a system that maintains water purity, appropriate pH levels and salinity for the hundreds of species whose survival depends on accuracy."

For the contractor

The Blank Park Zoo project is a good example of how his company likes to operate, Proctor says. The contracting firm has embraced a concept it calls ProVision Project Management.

"ProVision means we get involved right off the bat," Proctor says. "It's always better when a contractor can have input early on and there's a team approach among contractors instead of a top-down approach. By scheduling projects properly, you get a better economy of the labor force.

"On this project, we were in early. We want to do space management, which was especially important on this job because every cubic foot counted. We were able to find equipment with the same capacity as other equipment, but which required less cubic feet."

Other members of the building team on the zoo job include Kyker Architects, Taylor Ball General Contractors, Baker Electric, Bassett Exhibit Designers and the Blank Park Zoo staff.

Another concept adopted by Proctor Mechanical for its own group of 75 to 80 employees is the Power Team. This idea is put into practice from the type of people recruited by the company to extensive training, Proctor says.

"With Power Team, we have the right people at the right place at the right time," he says. "We talk about careers here, while others talk about jobs. We realize the people are the most significant part of our success.

"On the Blank Park Zoo job, Mike Bryant was our superintendent. He's been with us since 1987, and he is a real



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detail guy. That was important because this was a very customer-oriented job with the customer, David Allen, on the job every day. Mike was a good pick because he will find ways to work around any problem.”

Project managers on the job were Ray Conway and Larry Sherer.

Proctor Mechanical has annual revenues of \$14 million and celebrates its 70th anniversary this year. Joe Proctor and his brother, Vice President/Operations Mike



Proctor, purchased the company from their father in 1989. The contractor has won

numerous awards from the national and state Associated Builders and Contractors associations, including the Safety Training Education Process Platinum Award for Excellence in Safety in 2001 and the ABC National Safety Committee STEP Award in 1993-2001.