

Case Study

MILWAUKEE COUNTY ZOO MAINTAINS AZA
ACCREDITATION WITH NEW SUPERIOR SHADES



MILWAUKEE COUNTY ZOO

Milwaukee, Wisconsin

THE CUSTOMER: The Milwaukee County Zoo, a 200 wooded acre facility, is home to over 2,000 birds, mammals, fish, amphibians, and reptiles - each having their own specialized habitat. The organization strives to promote animal appreciation and education, while supporting conservation of each animal's diverse habitat.

Due to a recent change in accreditation standards set forth by the Association of Zoos and Aquariums (AZA), facilities are required

THE CHALLENGE: In order to maintain existing AZA certification, the Milwaukee County Zoo sought out artificial shade that could be designed and built into or beside existing exhibits. The zoo had three exhibits - the Adventure African Elephant Exhibit, the Harbor Seal, and the Polar Bear - that needed shade. The first project up to bid was the Adventure African Elephant Exhibit, followed months later by the Harbor Seal and Polar Bear exhibits. The nature of each exhibit presented different design challenges.

The initial project, the Adventure Africa Elephant Exhibit, was quite simple in nature. The existing layout of the exhibit allowed for easy placement of the shade's structural columns outside the elephant's living area. The only other immediate need was to ensure the shade was out of the elephant's tall reach, which is an approximate 20' height if the elephant stood on his hind legs with its trunk extended.

The Harbor Seal and Polar Bear exhibits presented a much different design challenge. Because of the existence of mounds around the seal and polar bear exhibits, the shade structures had to be placed within each exhibit. However, the exhibits were designed with a faux rock material that created changes in elevation. This aspect

THE SUPERIOR SOLUTION: Philip Hung of the Milwaukee County Architecture, Engineering and Environmental Services reached out to Superior Recreational Products (SRP) Partner Greg Bednar of GMB & Associates. Bednar is known for his work within the architectural and design community throughout the state of Wisconsin. Specifically, Bednar is known for his outdoor shade offering.

Bednar reached out to the SRP design team to begin brainstorming ideas that met the zoo's challenges and design criteria.

to provide sufficient shade, either naturally or artificially, so that animals who are kept outdoors can protect themselves from direct sunlight. In order to maintain existing certification from AZA, the Milwaukee County Zoo sought out the help of Milwaukee County Architecture, Engineering and Environmental Services in a phased project to include artificial shade in their African Elephant, Harbor Seal, and Polar Bear exhibits.

would greatly affect the chosen shade's design. In addition to elevation changes, another design challenge would need to be met. No mechanical equipment could be brought into the exhibit to install the shade structures and everything must be completed by hand.

It was important to the Milwaukee County Zoo to find a company that could find a superior solution to all their design needs and install the shade structures in a timely manner as to not close the animal's exhibits for an extended period of time.



Photo by Front Room Photography

“To start conversations and to narrow down what the customer was looking for design-wise, we sent over design concepts that we had completed for previous zoo projects as well as other custom shade projects,” said Brent Derbecker, SRP’s Shade and Shelter Brand Manager.

To meet the needs of the initial project, the Adventure Africa Elephant Exhibit, the Milwaukee County Zoo chose a 25' tall Arched Cantilever design that was installed outside the elephants' exhibit but hung over their living area. This shade featured a | *Continued on Next Page*



It was a fun and exciting process to design something completely new for the Milwaukee County Zoo.

-Brent Derbecker
SRP Shade and Shelter Brand Manager

26' x 35' overhang that provided 20' x 35' worth of direct shaded space. The zoo loved the aesthetics of this design that they hired Bednar again for the design and installation of the Harbor Seal and Polar Bear exhibits, a project that would happen months later.

Because of the many design challenges of the Harbor Seal and Polar Bear exhibits – the motes, changes in elevation, and inability to use mechanical equipment – Superior created a unique and custom 30' x 25' x 19' Arched Umbrella solution that utilized a barred two-column center post. The two-column center post played a major role in avoiding the changes in elevation found in the exhibits' rocky design. A standard two-column design, where

the columns are numerous feet apart, would have presented many install challenges, especially with all work needing to be completed by hand.

Because of the bar design between the two-column center post, the Milwaukee County Zoo was concerned the polar bears might use the structure for climbing. A clear panel that blocked the bars was incorporated into the design.

“Throughout the design process, Philip Hung of the Milwaukee County Architecture, Engineering and Environmental Services was incredibly involved with the customization of these unique structures and gave great design feedback for the space. It was a fun and exciting process to design something completely new for the Milwaukee County Zoo,” said Derbecker.

Ultimately, the two Arched Umbrellas each provided 30' x 25' worth of shaded space to the polar bears and sea lions.

THE IMPLEMENTATION: GMB & Associates contracted J.M. Brennan, Inc., a contracting firm out of Milwaukee, to install the shades. Per the zoo's request, both phases of shading were installed during zoo hours causing the exhibits to be briefly closed while installation took place.

While the Adventure Africa Elephant Exhibit presented little installation challenge to the team, the Harbor Seal and Polar Bear exhibits presented plenty of challenges. Because of the exhibit's design, J.M. Brennan, Inc. could not use mechanical equipment to aid in install. So, the team began work by hand digging a single footer hole for both shades' two-column center post. While digging, the team hit sand causing them to have to dig holes much deeper than originally planned – over 6' in depth.

“I would like to extend my gratitude to the installation team of J.M. Brennan, Inc., which was led by construction manager Joe Piskur. They did an amazing job of overcoming the challenges presented by a manual installation of such a large shade structure,” said Bednar.

During installation, the Milwaukee County Zoo decided not to include the clear paneling that would possibly prevent the polar bears from climbing the shade structure's center post because they liked the aesthetics of the shade so much – a big compliment to SRP's shade design team.

THE RESULTS: As a result of the Adventure Africa Elephant Exhibit's success, the Milwaukee County Zoo trusted the work of GMB & Associates and Superior Recreational Products to complete another phasing of shade for the Harbor Seal and Polar Bear exhibits. Zoo officials were pleased with all shade designs. Now, the animals are protected from direct sunlight and the Milwaukee County Zoo is able to maintain their AZA certification.



ADVENTURE AFRICA ELEPHANT

Photo by Front Room Photography



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