

### Chicago Zoo Goes Wild for Storm Water Detention

Located within Chicago's bustling city limits, Lincoln Park Zoo provides residents with a wildlife escape from their daily activities. For visitors, a new, larger habitat for the polar bears is being added to the zoo, and penguins will soon return in a newly constructed exhibit.

To aid in the development of the new exhibits, Lincoln Park Zoo enlisted the help of Terra Eng.

"The existing exhibits were torn down and replaced with new amenities, including shelters for the animals, pathways, viewing shelters and exhibits with shotcrete rocks, trees, structures and pools for the penguins and polar bears," said Steve McCarthy, consulting engineer for Terra. McCarthy said the new site work for the exhibits triggered a need for storm water detention: "In order to cost-effectively detain [storm water] for any site disturbance, we chose to work with StormTrap to find a solution."

These new developments, however, were not without challenges. The main obstacle was the limited space to accommodate the required amount of storm water storage. McCarthy said they "dealt with different existing utility lines, proposed utility lines, existing retaining walls and

proposed foundations" while trying to find a place for these new detention systems.

To overcome this obstacle, McCarthy and Terra Eng. stayed in constant communication with StormTrap's design team to produce a functional solution. "The variability/flexibility of StormTrap's shape (both geometrically and vertically) really helped to make this work," McCarthy said.

Special design considerations consisted of foundations on or near the proposed systems. McCarthy said, "StormTrap's load rating and the design department that helped verify it made this a non-issue. I would like to stress what a tight squeeze this ended up being—one tank slipped in barely a foot off of a foundation."

McCarthy said that Terra Eng. chose StormTrap over other products due to "cost, pricing advantage, flexibility with such a limited space and excellent customer support." The SingleTrap system at the penguin exhibit not only meets but also exceeds the requirements, with 1,791.15 cu ft of storm water storage with four 5-ft-tall units.

In order to meet the volume requirements for the larger polar bear exhibit, McCarthy and StormTrap decided to



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utilize two separate DoubleTrap basins. The first basin consisted of eight 6-ft, 6-in. pieces, providing a total storage volume of 1,582.91 cu ft, while the second basin consisted of 10 9-ft, 10-in. pieces for an additional 4,099.61 cu ft of storage. "Being able to break the basin into two separate systems that utilized the DoubleTrap design ended up saving this project a massive amount of money on demolition costs," McCarthy said.

Having received a new and lasting storm water solution made possible by StormTrap and Terra Eng., Lincoln Park Zoo can now move forward with the development of its new penguin and polar bear exhibits.

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