



Glass City Metropark



2022

ABOUT THIS PROJECT:

Market Segment:
Power and Utilities

Architecture:
The Lathrop Company

Products Used:
Xypex Admix C-500

Owner:
City of Toledo

Concrete Producer:
Kuhlman Corporation
(Ready Mix Producer)

General Contractor:
The Lathrop Company

Location:
Toledo, Ohio, US

THE CHALLENGE

Situated alongside the Maumee River in Toledo, Ohio, the utility vault's location presented the threat of water infiltration, potentially leading to damage to the electrical equipment and compromising the structure's overall functionality and safety. The project team looked for a waterproofing system capable of protecting against water ingress while accommodating the specific demands of a below-grade environment.

The project faced time constraints and needed a solution to expedite the construction process and ensure on-time project delivery without compromising the quality and effectiveness of the waterproofing system.

THE XYPEX SOLUTION

The concrete producer, Kuhlman Corporation, collaborated with Xypex to find a suitable waterproofing system for the below-grade utility vault. After evaluating various products and applications, Xypex Admix C-500, a specialized crystalline waterproofing admixture, was selected over traditional membranes.



The below-grade environment presented a threat to water infiltration, potentially damaging the electrical equipment found in the utility vault.



A closer look at the cracks found in the concrete that led to water infiltration in the utility vault.

Xypex is a unique chemical treatment for the waterproofing, protection, and improvement of concrete. Xypex Admix C-500/C-500 NF is added to the concrete mix at the time of batching. Xypex Admix C-500/C-500 NF consists of Portland cement, and various active, proprietary chemicals.



The outside of the structure after it was treated with Xypex permanent waterproofing products.

These chemicals react with the moisture in fresh concrete and with the by-products of cement hydration to cause a catalytic reaction. This reaction generates a non-soluble crystalline formation throughout the pores and capillary tracts of the concrete that permanently seals the concrete and prevents the penetration of water and other liquids from any direction.

Xypex Admix C-500 was added to the concrete mix at a dosage of 2% for approximately 350 cubic yards of concrete. By selecting Xypex Admix C-500, the project team successfully addressed the challenges related to water infiltration in the below-grade utility vault. The admixture ensured long-term protection against water penetration, safeguarding the electrical equipment and maintaining a consistently dry environment within the vault.

Moreover, the decision to use Xypex Admix C-500 allowed the project to proceed without delays, as it eliminated the need for traditional membranes. The Xypex solution was ideal, providing a reliable, time-saving, and cost-effective and permanent waterproofing solution for the below-grade utility vault.



The completed project can be found at Glass City Metropark in Toledo, Ohio.