

PROJECT HISTORY—SITE PRESERVATION

LINCOLN PARK ZOO – KOVLER SEA LION POOL

CHICAGO, ILLINOIS

2016

Before Renovation



PROJECT ASSESSMENT

“What needed to be done”

Originally built in 1879, and partially refurbished in 1969, the aging 130 year old Kovler Sea Lion Pool was suffering from extensive water loss (in excess of 20,000 gallons a day), numerous structure cracks, deterioration of its existing coatings and sealants, and many unsightly short term surface patches and repairs. Unsealed concrete, cracks in the faux rocks, and expansion and construction joints with missing sealant were all viable channels for water loss. The 4-FT high overflow ‘tunnel’ with remaining embedded shards from the deteriorating original iron construction forms presented the most challenging efforts for rehabilitation work.

RENOVATION PLAN

“How it was done”

To insure the plumbing system was not contributing to water loss, before work began, the entire recirculation system was pressure tested. Having no leaks or compromises found, plans proceeded for a long-term successful rehabilitation. Existing coatings, contaminants and deteriorated sealants by 40,000 psi Water Jetting. Eight large viewing panels were removed to protect the viewing area during twork, 3/4” plywood being secured in their place. Auto-roller carts were used to carry workers and materials in the difficult access 4FT high overflow tunnel. Following water jetting, the pool was water blasted, cleaned and allowed to dry.

Trapped water in the rock features was drained out, cracks were filled, and given a colored Cementitious Waterproofing Protective Coating. Structure cracks in the pool shell were cleaned, epoxy injected and permanently sealed with a proprietary I/G crack sealing system. Holes in the concrete structure were filled and primed with an Epoxy Amine. Remaining embedded iron construction forms were covered with Armatec® EpoCem® coating material. An epoxy elastomeric penetrating resin was installed over the entire surface, followed by two layers of integrally colored INTER-GLASS® and a final coating of fluoro-polymer.

Finished Restoration Result



SAMPLE PICTORIAL SEQUENCE FOLLOWS

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Viewing Area Protected During Work



Degraded Coating Unsealed Concrete Unsightly Patches



Relief Hole to Drain Water From Inside Faux Rocks



Water Jetting Underway



Unsealed Concrete Drain Sump



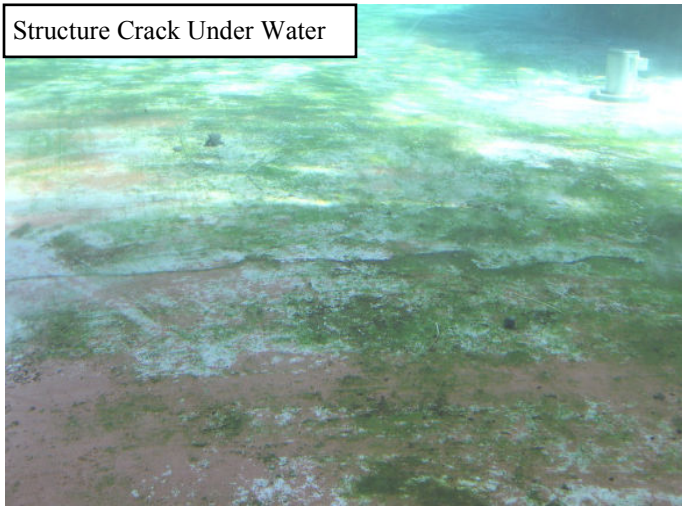
After Water Jetting



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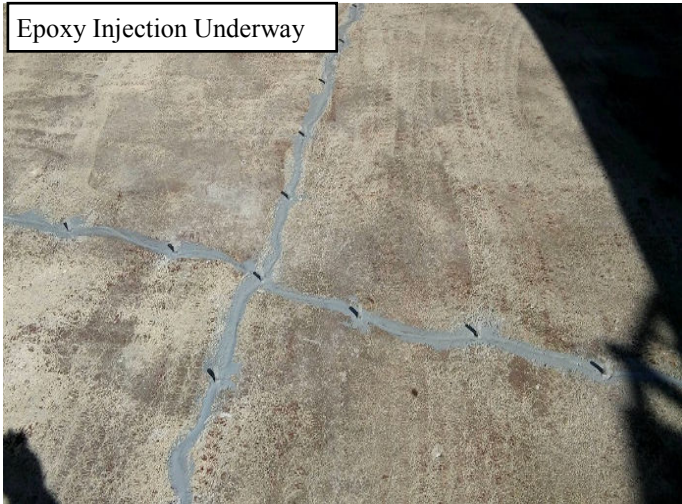
Structure Crack Under Water



Extensive Crack in Rock Feature



Epoxy Injection Underway



Beginning Rock Feature Coating



Crack Repair System Underway



Rock Feature Coatings Complete



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Bug Holes in the Surface



Penetrating Resin Installed on Concrete Surfaces



Initial Final Coating Installation Begins



Diaphragm Pump in Place to Control Sub-Surface Water



PROJECT SPECIFICATIONS:

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|-----------------------------------|------------------------|
| TOTAL SQ. FT.: (ROCKS & SURFACE) | 7,930 |
| POOL SHAPE: | CIRCULAR |
| TYPE OF CIRCULATION: | OVERFLOW CHANNEL |
| TYPE OF CONSTRUCTION: | CONCRETE |
| TYPE OF INTERIOR FINISH: | POLYMERIC INTER-GLASS® |


Mid-America
POOL RENOVATION, Inc.