

CASE STUDY



FEATURING



FAILED T-LOCK LINED MANHOLES REHABILITATED WITH STRUCTURE GUARD® 100% SOLIDS EPOXY

10 Sanitary Sewer Manholes Were Corroded From H₂S Gas Exposure Over Time.

PROJECT SNAPSHOT

Project

- City of Peoria Manhole Rehabilitation

Asset Owner

- City of Peoria, AZ

Problem

- 10 T-Lock lined manholes that failed and corroded behind the liner

Solution

- Structure Guard® 100% solids epoxy utilizing the sprayMASTER® II polymeric lining system

Contractor

- Hunter Contracting
Mark Werner
Hunter Rehab Director
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Product Manufacturer

- Quadex® Repair Materials
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SITUATION

Through routine inspection, a crew from the City of Peoria, AZ Public Works Department identified 10 T-Lock lined sanitary sewer manholes suffering from excessive corrosion and in need of repair and protection. This was a gravity line requiring a lift station to pump to maintain flow. However, once the lift station stops pumping, gases sit in the line until the next time pumping was required. Over the years, the H₂S gas was able to work its way between the liner and walls creating an environment for corrosion.



Before



After



SITUATION (CONTINUED)

Hunter Contracting, a trusted infrastructure contractor for the City believed the degraded manholes could be saved and recommended rehabilitation over replacement.

SOLUTION

Given its years of proven performance and environmental benefits (when compared to polyurethane coatings) Hunter recommended Quadex® Structure Guard® 100% solids epoxy. The most time consuming part of the project was the removal of the failed T-Lock.

Over a period of twelve days, all 10 manholes were stripped of T-Lock, cleaned, prepped and then lined with Structure Guard, which was hand nozzle spray applied to a 250 mil thickness for maximum corrosion and leak protection. Hunter Contracting utilized its sprayMASTER® II polymeric lining rig developed by the Vortex Companies, to perform the job. The sprayMASTER II is a completely self-contained system built onto a trailer. It's ability to both mix and pump out of the same trailer is not only safer, but requires less equipment and a smaller construction footprint.

RESULTS

Hunter was able to complete the job in less than two weeks. The City would shut down the system for four hours each day to allow Hunter to perform their work. This was during low flow time frames to minimize impact on the nearby citizens. However, by rehabilitating the manholes with Structure Guard®, the City saved thousands of dollars, not to mention time and inconvenience to locals if the manholes had to be dug up and replaced.

