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REPAIR MATERIALS

# CASE STUDY

## WASHINGTON NAVY YARD - STEEL LIFT STATION TANK COMPLETELY REHABILITATED USING STRUCTURE GUARD™ SE 1000 EPOXY

### WASHINGTON NAVY YARD LIFT STATION TANK REHABILITATED WITH STRUCTURE GUARD EPOXY TO ADDRESS CORROSION AND ENVIRONMENTAL CONCERNS

#### Snapshot

**Project:** Washington Navy Yard – Steel Lift Station Tank Repair

**Tank Specifications:**

Material - Steel  
Size - 6 ft. diameter by 20 ft. long  
Age - 60-70 yrs

**Tank Condition:**

Suffering from severe corrosion and would have suffered catastrophic failure if not replaced or rehabilitated

**Environmental Concerns:**

Lift Station tank located near Anacostia River - Potential for river contamination without immediate solution

**Solution:**

Structure Guard SE 1000 100% solids epoxy coating to reline and restore

**Contractor:**

Vortex Companies/Stag Technologies

**Speed of Repair:** 2 Days

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#### SITUATION

The Washington Navy Yard is the former shipyard and ordnance plant of the United States Navy. Located in Southeast Washington, D.C., it is the US Navy's oldest shore establishment. The Yard currently serves as a ceremonial and administrative center for the Navy and is the home to the Chief of Naval Operations, the National Museum of the United States Navy and several other Naval operations.

Located along the Anacostia River, parts of the old Navy Yard's sewer infrastructure were in need of repair to avoid leaking and potential contamination.

In particular, a steel lift station tank was suffering from severe corrosion and would either need to be completely replaced or rehabilitated.

#### SOLUTION

Several rehabilitation methods and materials were initially discussed. They included hybrid cements, geopolymers and epoxies. After taking a site walk and meeting with the Navy Yard and NICC, the Vortex Companies and its partner Stag Technologies recommended **Structure Guard™ SE 1000**. Being a manufacturer of a wide range of rehabilitation mortars and epoxies, the Vortex/Stag team was uniquely qualified to recommend the best possible material application for the project environment. In this case the combination of severe corrosion environment and the tank's proximity to the river, Structure Guard™ SE 1000 Epoxy was chosen as the rehabilitation method.



**RESULT**

The Vortex/Stag team was able to clean, prep and reline the 60+ year-old lift station tank with Structure Guard™ Epoxy in two days. Although heavy groundwater infiltration was present, the team was able to work around the problem and complete the installation on time and within budget.

Sensitive to the safety and environmental concerns the US Navy had, Vortex provided an onsite safety compliance manager to ensure the crew was safe and the installation was performed as specified.

