



# CASE STUDY

## BROOKLYN BRIDGE PARK

## Timber Pile Rehabilitation



### Project Data

Location	Brooklyn, NY
Completion	2021
Project Type	Timber Pile Rehabilitation
Products Used	SeaShield Series 500 System

### Project Details

In the early 1960's, New York Harbor had become overrun with raw sewage, oil and chemicals discharged by factories. This led to the Clean Water Act being passed in 1972. The Act established a framework for controlling pollution, including a requirement for permits for industrial discharges and the enforcement of penalties for violations. In addition, it included major upgrades to sewage treatment plants. By the 1990's, as the waters became cleaner, large quantities of marine borers had returned and began actively eating/destroying the timber pilings in the harbor. In the early 2000's, New York City's Economic Development Corp. (NYCEDC), with state and city funding, began repairs to many of these timber piers in the harbor, including the Hudson River and East River.

In 1984, the Port Authority of New York closed its cargo operations, including Brooklyn Heights industrial piers, and announced plans to sell the piers for commercial development. In 2010, Brooklyn Bridge Park was opened to the public, sitting on four former industrial piers held up by 13,000 timber piles (a 5th pier sits on a landfill). In 2018, the new Brooklyn Bridge Park was completed and the supporting timber piles, infested with marine borers (teredo), were slated to be encased with FRP jackets and epoxy grout.

In 2019, Denso's SeaShield Series 500 System was selected as the products to encase approximately 6,500 timber piles underneath Brooklyn Bridge Park Piers 3 and 6. Over the course of the next 2 years, Denso supplied over 110,000 LF of SeaShield Fiber-Form Jackets and 80,000 gallons of SeaShield 550 Epoxy Grout. The contractor was able to complete the work ahead of schedule and the project was completed in 2021.

In 2019, Denso's SeaShield Series 500 System was selected to protect and rehabilitate approximately 6,500 timber piles beneath Brooklyn Bridge Park Piers 3 and 6. Over the next two years, more than 110,000 linear feet of SeaShield Fiber-Form Jackets and 80,000 gallons of SeaShield 550 Epoxy Grout were installed, forming a robust barrier against future marine borer attack. The system not only encapsulated the piles to halt ongoing deterioration, but also restored their structural integrity by filling voids and reinforcing damaged sections with high-strength epoxy grout. This dual action of protection and rehabilitation ensured the piles could continue to support the bridge for decades to come. Thanks to the efficiency of both the product and the contractor, the project was completed ahead of schedule in 2021, leaving Brooklyn Bridge Park with a stronger, more resilient foundation.



Marine borer damage to timber piles.



SeaShield Fiber-Form Jackets staged on barge.



SeaShield 550 Epoxy Grout (165 gallon kits).

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