

**ATLANTIC ENGINEERING, LLC**  
**SAMPLE PROJECT—New Haven Fuel Terminal**  
**Magellan Midstream Partners, New Haven, CT**

**SUBAQUEOUS INSPECTION SURVEY**

**MAGELLAN  
FUEL  
TERMINAL**



Atlantic Engineering, LLC conducted a complete underwater condition survey with photo documentation of three large pile dolphins and approximately 50 timber piles supporting the Main Dock West. A Level II inspection was performed on the timber piles noting their remaining diameters at the waterline, mudline and mid-height. A Level III inspection was performed on the steel piles in Dolphins 2 and 5 using Ultrasonic Thickness Measurements (UTM) readings of the web and flanges at the water line, mudline and mid-height. Documentation included detailed notes and photographs.

- UTM INSPECTION
- STEEL BEAM WITH HEAVY CORROSION AND CLEAN SPOT FOR SURVEY

**DOLPHIN AND TIMBER INSPECTION**

**UNDERWATER CAPABILITIES**

- DETAILED INSPECTION SURVEYS
- CONSTRUCTION INSPECTION
- VIDEO & 35mm PHOTOGRAPHY
- HYDROGRAPHIC SURVEYS
- CONFINED SPACE & PENETRATIONS
- P.E. DIVER INSPECTION
- ULTRASONIC THICKNESS MEASUREMENTS



- MARINE BORER ACTIVITY OBSERVED ON NUMEROUS PILES

**Atlantic Engineering LLC**  
170 Kinnelon Rd. Suite 36  
Kinnelon, NJ 07405  
**Phone (973) 838-3100**  
**Fax (973) 838-2980**  
EMAIL [ATLANTICDV@AOL.COM](mailto:ATLANTICDV@AOL.COM)  
[WWW.ATLANTICENGINEERING.ORG](http://WWW.ATLANTICENGINEERING.ORG)

# Marine Borer Study New Jersey Transit

**Hoboken Ferry Terminal  
Hoboken NJ**

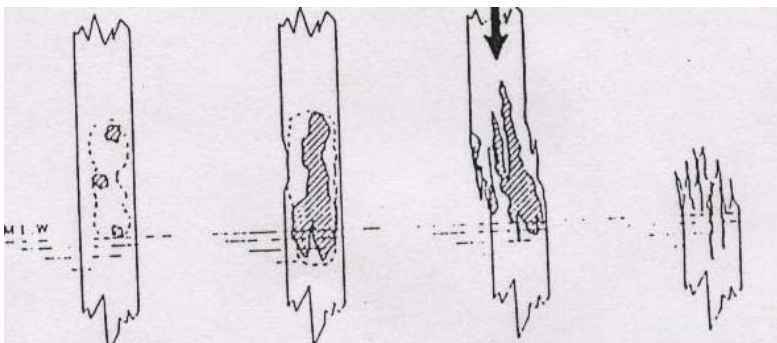
## SUBAQUEOUS INSPECTION SURVEY

Atlantic Engineering, LLC is performing a three year marine borer study which includes the placement, retrieval and analysis of sacrificial timber test boards. A detailed report with the results of each inspection is prepared documenting the extent of marine borer activity along with photographs and recommendations. The information is being used to prioritize repairs.



## REPAIR RECOMENDATIONS

Atlantic Engineering, LLC is familiar with deficiencies observed that are characteristic of the various species of the marine borer. The two species typically found in the northeast are the Limnoria and the Teredo. Pile wrap repair details are provided in order to prevent further damage. If piles are in an advanced state of deterioration, and unable to support the design loads, the pile is encapsulated with concrete or replaced.



**HOBOKEN FERRY TERMINAL**  
Completion Date: December 2002

NJT Reference: Frank Smolnar, P.E.  
Contract Amount: \$150,000

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WWW.ATLANTICENGINEERING.ORG

# Whitehall Ferry Terminal New York City DOT

Whitehall Ferry Terminal  
Manhattan, NY

## SUBAQUEOUS INSPECTION SURVEY



Atlantic Engineering, LLC has been responsible for the underwater inspection of the Terminal for several years and various improvement projects. The work included the inspection and condition assessment of the gallows towers, bridges, piles, cap beams, underside of deck, and bulkheads with detailed documentation and reports.



## UNDERWATER CONSTRUCTION INSPECTION

The Rehabilitation of Piers and Marine Structures is often a three step process.

1. An initial condition survey is performed in order to determine the extent of repair that is needed.
2. An in-depth inspection allows the production of design drawings and details.
3. Construction inspection ensures compliance with design drawings and verifies any need for change orders.

Atlantic Engineering, LLC has performed inspections during construction at the Terminal and is proficient in all the above steps. We serve as the “eyes” for the client who is personally unable to observe the underwater work being performed.



### WHITEHALL FERRY TERMINAL

Completion Date: On-going  
NYCDOT References: Earl Bain  
Contract Amount: \$60,000

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# Emergency Fuel Dock Repair New York City D.O.T.

St. George Ferry Terminal  
Staten Island, NY

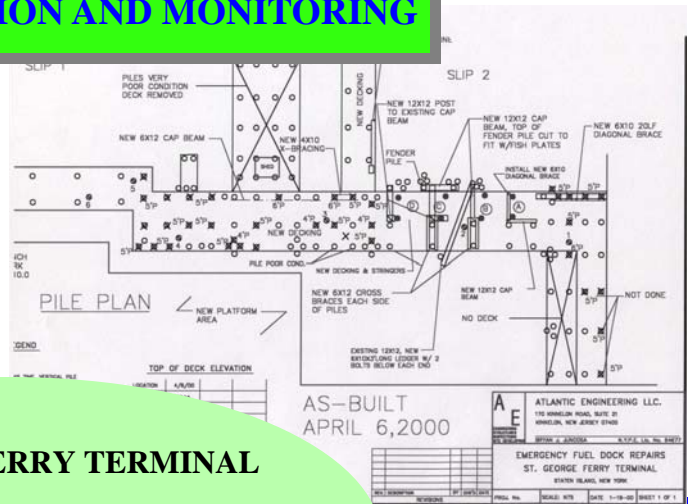
## INSPECTION, EVALUATION, DESIGN



Atlantic Engineering, LLC was summoned for an emergency inspection of the fuel pier. The pier displayed severe deterioration of primary structural members and was exhibiting excessive deflection under ship and barge berth loading. AE performed inspection above and below water with immediate repair recommendations for deteriorated structural elements and design of a temporary fender system. The facility is critical for the operation of the Staten Island Ferry providing refueling for all vessels.

## CONSTRUCTION INSPECTION AND MONITORING

Atlantic Engineering performed construction inspection to ensure compliance with design drawings for the recommended repairs. Survey control monitoring points were set in-order to ensure no further pier movement is occurring. Condition assessments are continued with further repair recommendations on a 6 month frequency until the fuel dock is replaced.



### St. GEORGE FERRY TERMINAL

Completion Date: On-going

NYCDOT References: Sakti Nandi, P.E.

Atlantic Engineering, LLC has performed inspections during construction at the Terminal and is proficient in all aspects of underwater inspection, design, and construction. We serve as the "eyes" for the client who is personally unable to observe the underwater work being performed.

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# Brooklyn Army Terminal Economic Development Corporation

## Pier 1 Brooklyn Army Terminal, Brooklyn NY

### SUBAQUEOUS INSPECTION SURVEY

Atlantic Engineering, LLC was contracted to perform the underwater inspection of Pier 1 and the relieving platform. The work included the visual inspection and condition assessment of selected piles, cap beams, bulkheads, and underside of the deck.



### UNDERWATER CAPABILITIES

- DETAILED INSPECTION SURVEYS
- CONSTRUCTION INSPECTION
- VIDEO & 35mm PHOTOGRAPHY
- HYDROGRAPHIC SURVEYS
- CONFINED SPACE & PENETRATIONS
- P.E. DIVER INSPECTION
- ULTRASONIC THICKNESS MEAS-

### COLLAPSE INVESTIGATIONS

Atlantic Engineering, LLC has the inspection capabilities to perform failure investigations, structural analysis and design of repair details. P.E. Divers lead inspection teams performing 100% of the diving inspection when required.

### PIER 1, BROOKLYN ARMY TERMINAL



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