

## **August 2011 Update**

### **Replacement of the Existing Water Siphons between Brooklyn and Staten Island "Siphon Project"**

The New York City Economic Development Corporation (EDC) is administering the "Replacement of the Existing Water Siphons between Brooklyn and Staten Island" project ("Siphon Project"), which is being funded by the New York City Department of Environmental Protection (DEP) and the Port Authority of New York & New Jersey (PANYNJ). The project is designed to accommodate access to New York Harbor by larger ships once the Panama Canal Expansion Project is completed in 2014. In order to achieve this goal, New York's Anchorage Channel must be dredged to a depth that is currently precluded by the location of two DEP water siphons. These siphons will be removed and replaced by a larger siphon at a lower depth.

Major components of the project include the following:

- use of a tunnel boring machine (TBM) to install a new 72" water siphon; the two existing siphons (36" and 42") will be abandoned once the new siphon is operational
- installation of land piping (new water mains and sewers) in Staten Island and Brooklyn using open cut and microtunneling techniques
- construction of a new "green building" chlorination station in Staten Island
- implementation of an extensive community outreach program, including development of informational materials and ongoing liaison with residents, businesses and other stakeholders

In order to keep you up-to-date on construction activities, monthly summaries of completed and projected work will be prepared. In addition, as part of the ongoing community outreach program, construction notices will be prepared for distribution to residents, businesses and other stakeholders, to announce upcoming work and potential impacts, as needed.

To date, the contractor's (Tully/OHL Joint Venture) work has focused on mobilization activities and collection of data. Construction is scheduled to begin in August at the Staten Island shaft site. Installation of land piping (in Staten Island) and construction at the Brooklyn shaft site will begin after Labor Day.

#### **Work Completed to Date**

- Project mobilization and site preparation, including installation of temporary fencing around the work area, delivery of construction trailers/establishment of field offices and surveying (Staten Island)
- Coordination with utility companies regarding relocation of cable and gas lines, as needed, in advance of construction
- Installation of piezometers (instruments used to measure water pressure) and inclinometers (instruments used to measure angles or elevation)/initial collection of baseline data (Staten Island)

- Drilling of dewatering wells (Staten Island)
- Application for permits and development of detailed work schedules
- Digging of test pits (Staten Island and Brooklyn)
- Collection of baseline noise and vibration data (Staten Island)
- Construction of a TBM that is being built specifically for the Siphon project (scheduled for delivery in January 2012)

In addition, the project team met with Staten Island Community Board #1, Brooklyn Community Board #10 and other interested and affected stakeholders, including residents of Bay Street Landing, to introduce the project, provide an overview of the proposed schedule, and begin to identify critical issues and concerns.

#### **Work Projected for August**

- Initiation of construction of the slurry wall for the Staten Island shaft
- Design work related to construction of the slurry wall for the Brooklyn shaft
- Continuation of TBM construction
- Preparatory work (drawings, permit applications and other submittals) prior to initiation of land piping activities in Staten Island [**NOTE:** Work related to land piping is scheduled to begin in early September, in compliance with contract provisions prohibiting work in the vicinity of the Lyons Pool between Memorial Day and Labor Day.]

For additional information concerning these activities or other aspects of the Siphon construction project, please contact:

Anita Wright  
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355 Front Street  
Staten Island, NY 10304  
(516) 712-5864 [cell phone]

Or visit the project website at:

<http://www.nycedc.com/ProjectsOpportunities/CurrentProjects/Citywide/Siphon/Pages/Siphon.aspx>

## **October 2011 Update**

### **Replacement of the Existing Water Siphons between Brooklyn and Staten Island "Siphon Project"**

Please find below a summary of completed and projected work related to the "Replacement of the Existing Water Siphons between Brooklyn and Staten Island" project ("Siphon Project"). The New York City Economic Development Corporation (EDC) is administering the project, which is being funded by the New York City Department of Environmental Protection (DEP) and the Port Authority of New York & New Jersey (PANYNJ).

Major components of the project include the following:

- use of a tunnel boring machine (TBM) to install a new 72" water siphon
- installation of land piping (new water mains and sewers) in Staten Island and Brooklyn using open cut and microtunneling techniques
- construction of a new "green building" chlorination station in Staten Island
- implementation of an extensive community outreach program, including development of informational materials and ongoing liaison with residents, businesses and other stakeholders

Initial work has focused on project mobilization and site preparation (Staten Island), collection of baseline data, coordination with ConEdison and National Grid regarding relocation of gas and electric lines in advance of construction and application for permits. Construction began in August 2011 with the start of work on the shaft in Staten Island, where the TBM will begin tunneling operations; work on the Brooklyn shaft is expected to begin in mid-November.

#### **Work Completed August/September**

- Initiation of construction of the slurry wall for the Staten Island shaft, including excavation, assembly and installation of slurry wall panels and concrete placement. To date, 9 of the 32 slurry wall panels have been installed. This work has required brief (5-10 minutes) closures of Front Street in order to move the assembled panels from the project yard (located on the east side of Front Street) across the street to the shaft site. These closures are expected to continue until mid-November, when construction of the slurry wall will be completed.
- Collection of baseline data (noise, vibration, groundwater levels) in Staten Island
- Continuation of construction of the TBM (scheduled for delivery in January 2012)
- Design work related to construction of the slurry wall for the Brooklyn shaft
- Preparatory work (drawings, permit applications and other submittals) prior to initiation of land piping activities in Staten Island
- Community outreach activities, including distribution of informational materials; meetings with Staten Island Community Board #1, Brooklyn Community Board #10 and other interested and affected constituencies; and liaison with residents, businesses and stakeholders in the project area

### Work Projected for October

- Continuation of construction of the slurry wall for the Staten Island shaft
- Continuation of TBM construction
- Finalization of design work related to construction of the slurry wall for the Brooklyn shaft
- Project mobilization and site preparation, including installation of instrumentation and tree removal and pruning, as needed, at shaft site (Brooklyn)
- Initiation of land piping activities in Staten Island, including work related to:
  - relocation of two (2) small sections of a gas line in Victory Boulevard, between Bay Street and Murray Hulbert Avenue, to accommodate construction of the jacking pits **[NOTE: This work is being completed for National Grid.]**
  - construction of two (2) jacking pits in advance of microtunneling activities to install a new water main beneath the Staten Island Railroad (SIRR) tracks at Victory Boulevard
  - guniting (spraying concrete) sections of an existing 72" sewer beneath Victory Boulevard, between the SIRR and Murray Hulbert Avenue, to strengthen the existing pipe; another section of pipe will be replaced (work anticipated to be done in November/December)
- Continuation of community outreach program, including meetings with Staten Island Community Board #1's Waterfront Committee, Brooklyn Community Board #10 and residents of Bay Street Landing; preparation and distribution of informational materials (Project Update, construction notices, web site, etc.); and ongoing liaison with residents, businesses and other interested stakeholders and constituencies

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Or visit the project website at:

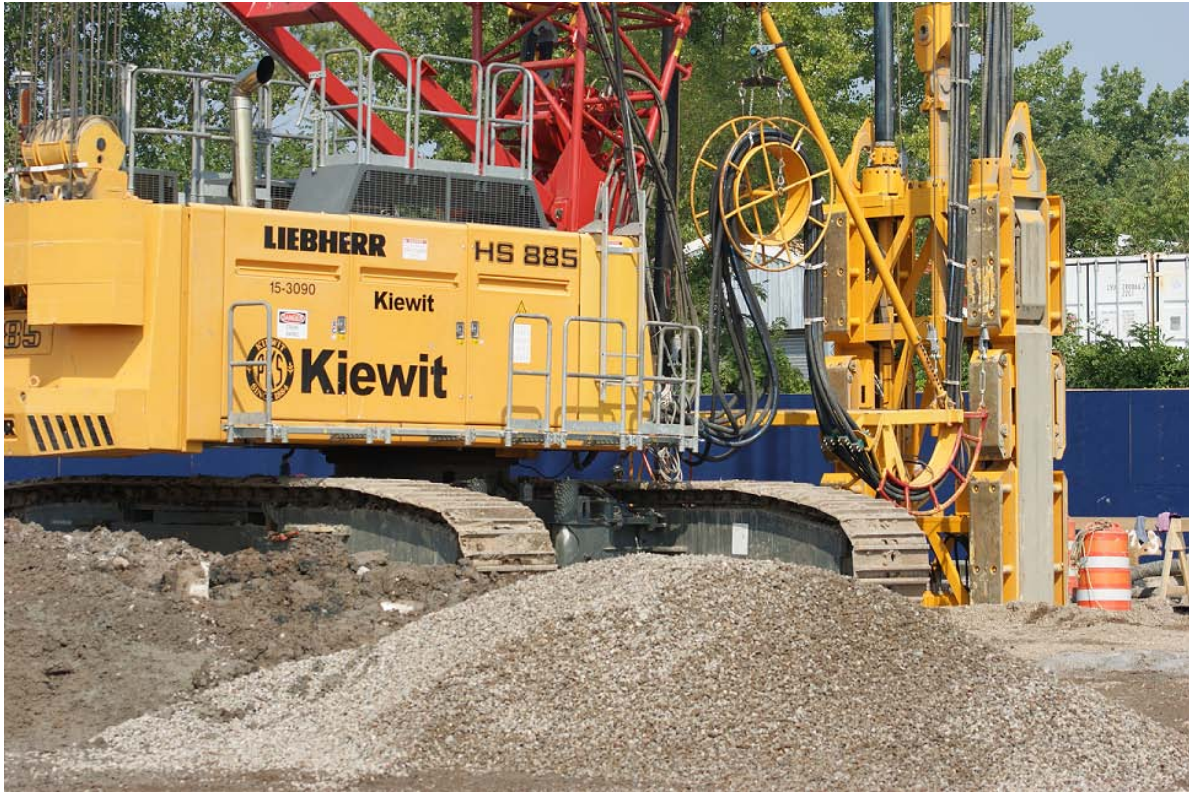
<http://www.nycedc.com/ProjectsOpportunities/CurrentProjects/Citywide/Siphon/Pages/Siphon.aspx>

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### NOTE:

Recent construction photos follow.





Excavation for installation of slurry wall panel



Lifting of slurry wall panel onto lifting frame





Slurry wall panel on lifting frame prior to transport across Front Street to shaft site



Slurry wall panel being placed at shaft site

## **November 2011 Update**

### **Replacement of the Existing Water Siphons between Brooklyn and Staten Island "Siphon Project"**

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Major components of the project include the following:

- use of a tunnel boring machine (TBM) to install a new 72" water siphon
- installation of land piping (new water mains and sewers) in Staten Island and Brooklyn using open cut and microtunneling techniques
- construction of a new "green building" chlorination station in Staten Island
- implementation of an extensive community outreach program, including development of informational materials and ongoing liaison with residents, businesses and other stakeholders

Initial work has focused on project mobilization and site preparation (Staten Island), collection of baseline data, coordination with ConEdison and National Grid regarding relocation of gas and electric lines in advance of construction and application for permits. Construction began in August 2011 with the start of work on the shaft in Staten Island, where the TBM will begin tunneling operations; work on the Brooklyn shaft is scheduled to begin in January 2012.

#### **Work Completed in October**

- Continuation of construction of the slurry wall for the Staten Island shaft, including excavation, assembly and installation of slurry wall panels and concrete placement. To date, 19 of the 32 slurry wall panels have been installed. This work has required brief (5-10 minutes) closures of Front Street in order to move the assembled panels from the project yard (located on the east side of Front Street) across the street to the shaft site. These closures are expected to continue until late November, when construction of the slurry wall will be completed.
- Collection of baseline data (noise, vibrations, groundwater levels) in Staten Island and Brooklyn
- Continuation of construction of the TBM (scheduled for delivery in January 2012)
- Continuation of design work related to construction of the slurry wall for the Brooklyn shaft, which will be located within Shore Road Park (just south of 83<sup>rd</sup> Street opposite Fort Hamilton High School), including coordination with the New York City Department of Parks and Recreation
- Continuation of preparatory work (drawings, permit applications and other submittals) prior to initiation of land piping activities in Staten Island
- Community outreach activities, including distribution of informational materials; meetings with Brooklyn Community Board #10 and Staten Island Community Board #1's Waterfront Committee; and liaison with residents, businesses and stakeholders in the project area

### Work Projected for November

- Completion of construction of the slurry wall for the Staten Island shaft and installation of dewatering wells within the starter trench for the TBM
- Continuation of TBM construction
- Continuation of design work related to construction of the slurry wall for the Brooklyn shaft
- Project mobilization and site preparation, including tree removal and pruning, as needed, at the Brooklyn shaft site
- Initiation of land piping activities in Staten Island, including work related to:
  - relocation of two (2) small sections of a gas line in Victory Boulevard, between Bay Street and Murray Hulbert Avenue, to accommodate construction of the jacking pits [**NOTE:** This work, which was originally anticipated for October, has been rescheduled to begin in early November, due to National Grid's revision of its plans.]
  - construction of two (2) jacking pits in advance of microtunneling activities to install a new water main beneath the Staten Island Railroad (SIRR) tracks at Victory Boulevard
  - guniting (spraying concrete) sections of an existing 72" sewer beneath Victory Boulevard, between the SIRR and Murray Hulbert Avenue, to strengthen the existing pipe; another section of pipe will be replaced (work anticipated to be done in late December/early January)
- Continuation of community outreach program, including meetings with Staten Island Community Board #1's Waterfront Committee and residents of Bay Street Landing; preparation and distribution of informational materials (Project Update, construction notices, web site, etc.); and ongoing liaison with residents, businesses and other interested stakeholders and constituencies

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### NOTE:

Recent construction photos follow.



## Construction of Staten Island Slurry Wall



Transport of slurry wall panel across Front Street; panel is filled with concrete following placement at shaft site

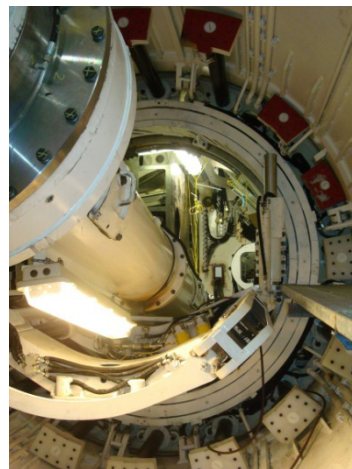


Equipment used to recycle slurry material for reuse during installation of panels

## Fabrication of TBM



Shield (side view)



Shield (inner view)

## **December 2011 Update**

### **Replacement of the Existing Water Siphons between Brooklyn and Staten Island "Siphon Project"**

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Major components of the project include the following:

- use of a tunnel boring machine (TBM) to install a new 72" water siphon
- installation of land piping (new water mains and sewers) in Staten Island and Brooklyn using open cut and microtunneling techniques
- construction of a new "green building" chlorination station in Staten Island
- implementation of an extensive community outreach program, including development of informational materials and ongoing liaison with residents, businesses and other stakeholders

Initial work has focused on project mobilization and site preparation (Staten Island), collection of baseline data (Staten Island and Brooklyn), coordination with ConEdison and National Grid regarding relocation of gas and electric lines in advance of construction, and application for permits. Construction began in August 2011 with the start of work on the shaft in Staten Island, where the TBM will begin tunneling operations; work on the Brooklyn shaft is scheduled to begin in late January 2012.

#### **Work Completed in November**

- Continuation of construction of the slurry wall for the Staten Island shaft, including excavation, assembly and installation of slurry wall panels and concrete placement. To date, 25 of the 32 slurry wall panels have been installed. This work has required brief (5-10 minutes) closures of Front Street in order to move the assembled panels from the project yard (located on the east side of Front Street) across the street to the shaft site. These closures are expected to continue until late December, when construction of the slurry wall will be completed.
- Collection of baseline data (noise, vibrations, groundwater levels) in Staten Island and Brooklyn. In addition, soil borings were taken in the vicinity of the Lyons Pool to determine the extent of an oil spill that was recently discovered in the area.
- Completion of testing of the TBM (scheduled for delivery in January 2012)
- Continuation of design work related to construction of the slurry wall for the Brooklyn shaft, which will be located within Shore Road Park (just south of 83<sup>rd</sup> Street opposite Fort Hamilton High School), including coordination with the New York City Department of Parks and Recreation
- Continuation of preparatory work (drawings, permit applications and other submittals) in support of land piping activities in Staten Island and the shaft in Brooklyn
- Initiation of land piping activities in Staten Island, including work related to:

- relocation of two (2) small sections of a gas line in Victory Boulevard, between Bay Street and Murray Hulbert Avenue, to accommodate construction of the jacking pits. This work required removal of five (5) street trees on the north side of Victory Boulevard, between the Staten Island Railroad (SIRR) tracks and the Bay Street Landing (BSL) complex driveway. The trees will be replaced following completion of construction in the area.
- placement of test piles along Victory Boulevard, between Murray Hulbert Avenue and the SIRR, in advance of replacement of the existing 72" sewer
- preparation for installation of two (2) jacking pits in advance of microtunneling activities to install a new water main beneath the SIRR tracks at Victory Boulevard, including digging of test pits
- Community outreach activities, including distribution of informational materials and liaison with residents, businesses and stakeholders in the project area

#### **Work Projected for December**

- Completion of construction of the slurry wall for the Staten Island shaft and initial installation of dewatering wells within the starter trench for the TBM.
- Completion of the TBM. The TBM will then be disassembled and packaged for delivery to the site in early January.
- Start of design work related to construction of the slurry wall for the Brooklyn shaft
- Continuation of land piping activities in Staten Island, including work related to:
  - completion of relocation of two (2) small sections of a gas line in Victory Boulevard, between Bay Street and Murray Hulbert Avenue, to accommodate construction of the jacking pits
  - construction of two (2) jacking pits in advance of microtunneling activities to install a new water main beneath the SIRR tracks at Victory Boulevard
  - guniting (spraying concrete) sections of an existing 72" sewer beneath Victory Boulevard, between the SIRR and Murray Hulbert Avenue, to strengthen a portion of the existing pipe; another section of pipe will be replaced (work anticipated to be done in late December/early January)
- Continuation of community outreach program, including meetings with Staten Island Community Board #1's Waterfront Committee and residents of BSL; preparation and distribution of informational materials (Project Update, construction notices, web site, etc.); and ongoing liaison with residents, businesses and other interested stakeholders and constituencies

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Drilling of casing pipe in preparation for placement of test piles (intersection of Murray Hulbert Avenue and Victory Boulevard)



Relocation of gas line in Victory Boulevard, between Staten Island Railroad and Bay Street Landing complex