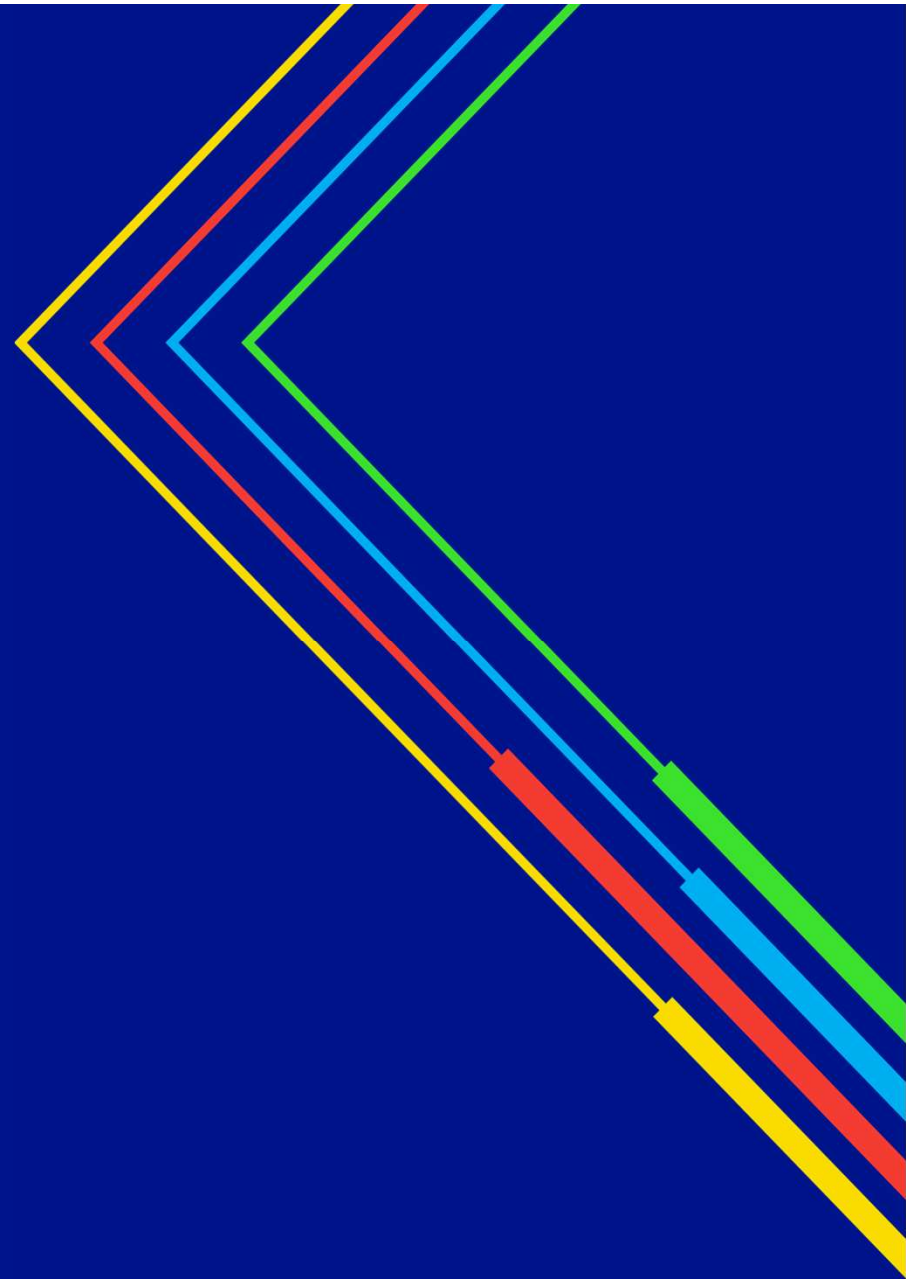


# Saltwater Pump House Storm Hardening Project

December 20, 2023

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# Saltwater Pump House Storm Hardening Project Meeting Agenda

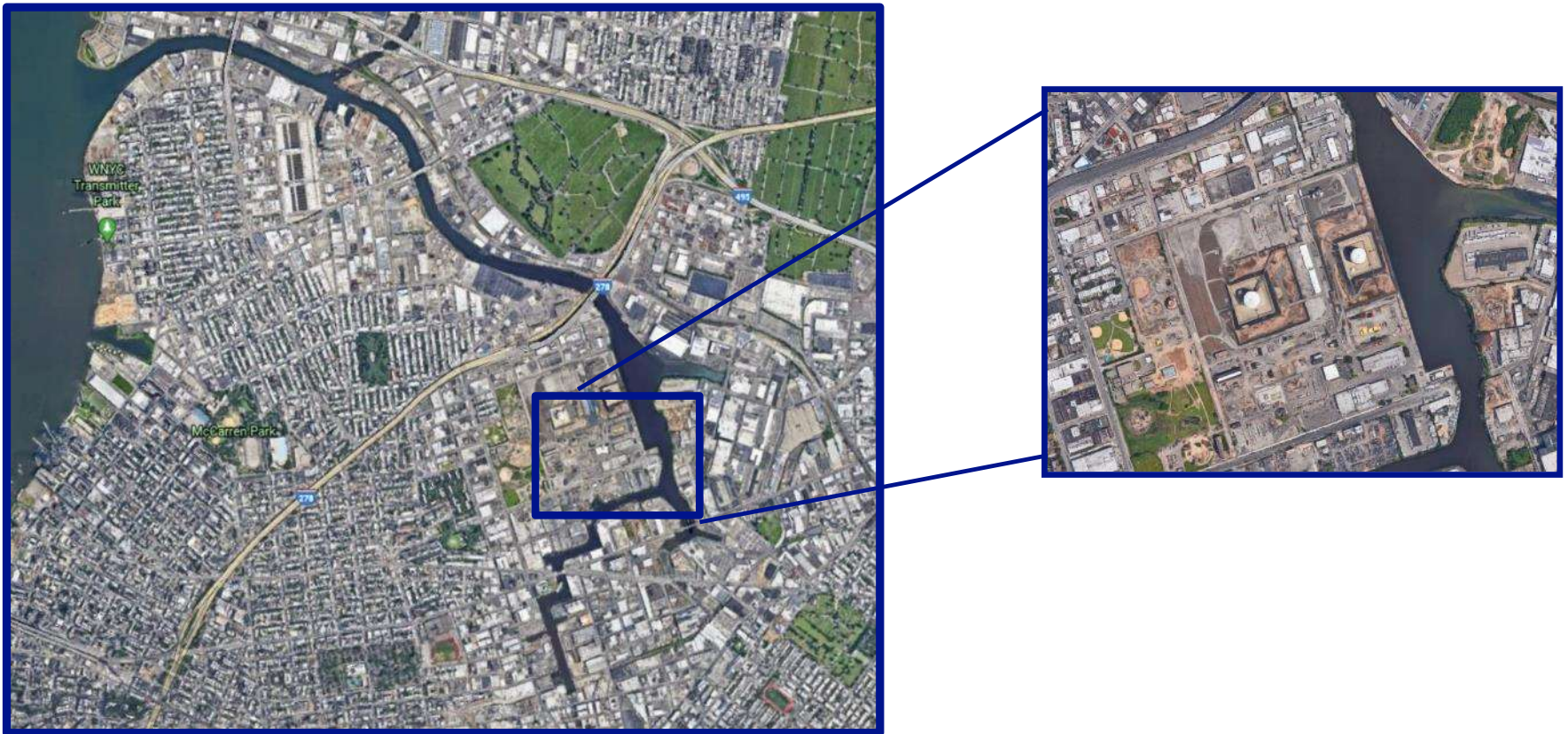
- Introductions
- Project Background
- Project Location
- Project Overview
- Project Details
- Schedule

# Saltwater Pump House Storm Hardening Project

## Background

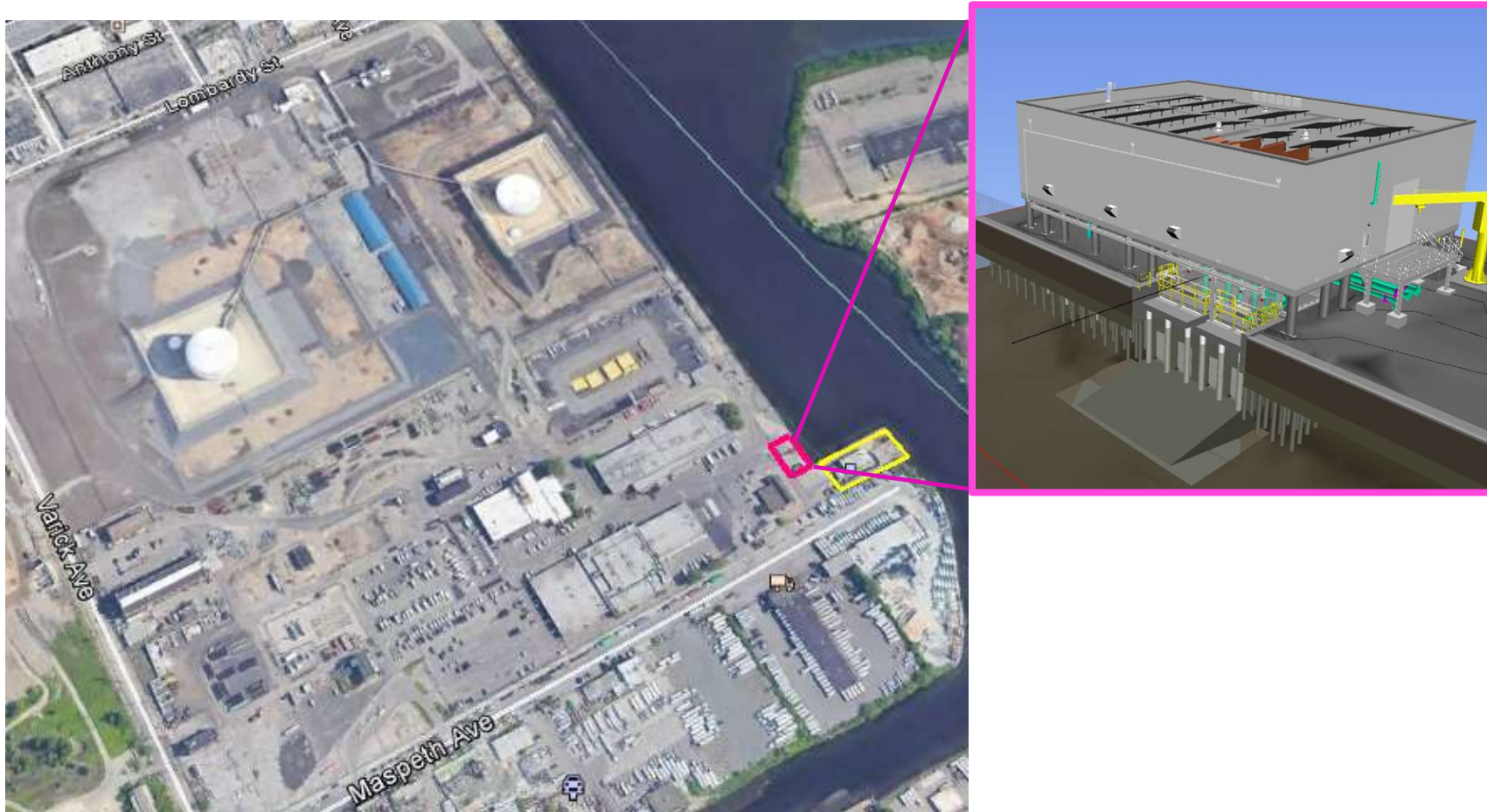
- The saltwater pump house (SWPH) is an emergency fire protection system required by the FDNY
- The purpose of this project is to replace an existing SWPH with a more resilient, structurally and electrically storm hardened structure
- The existing SWPH needs to be replaced due to decades of saltwater exposure and recent storms
- The system uses saltwater from Newtown Creek because the public water mains in the area cannot support the water demand

# Saltwater Pump House Storm Hardening Project Location





# Saltwater Pump House Storm Hardening Project Location



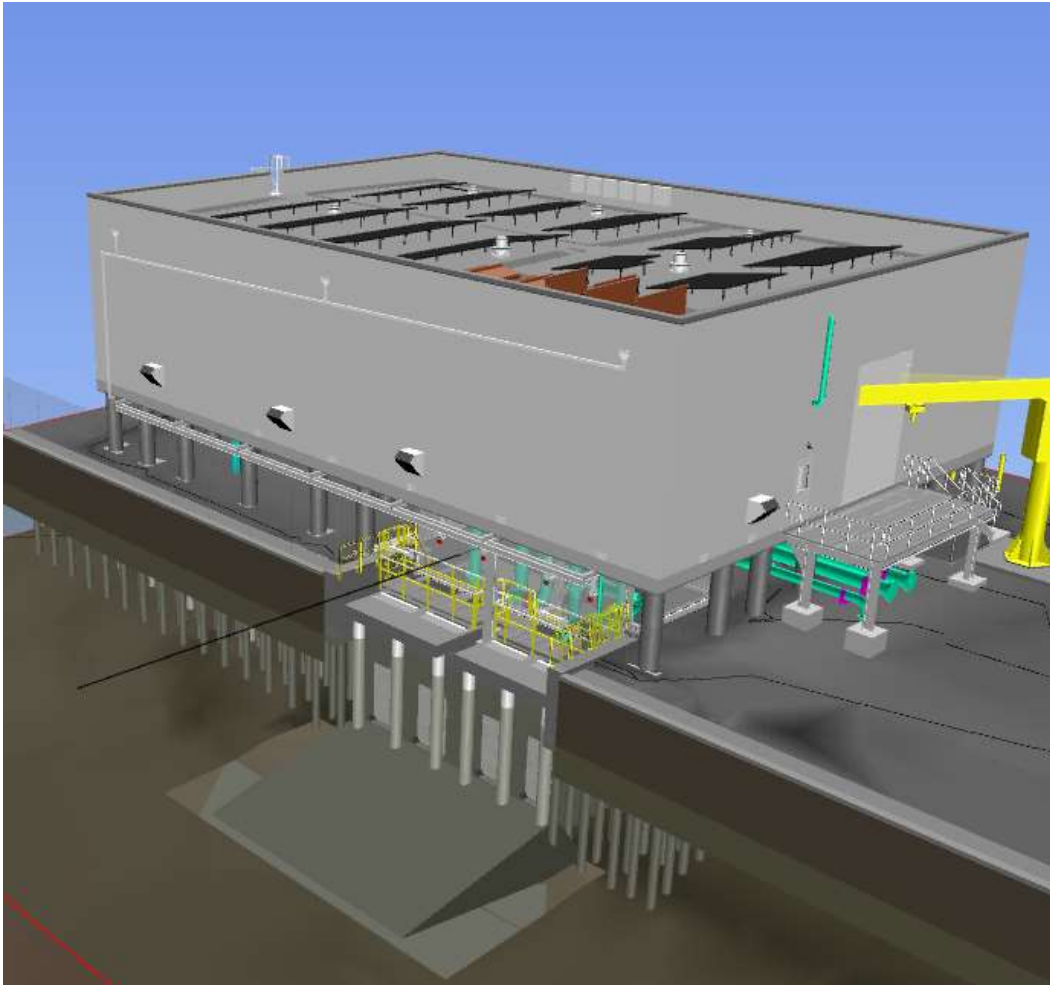
**Note:** All drawings and renderings presented in this document are based on a preliminary design and subject to change.

# Saltwater Pump House Storm Hardening Project Overview

- The new SWPH is proposed along the bulkhead north of the existing SWPH
- The new SWPH will be built above the FEMA flood zones on driven piles and columns
- A concrete intake structure housing the pumps will be installed below the relieving platform; beneath the building; inside the bulkhead line
  - A scour pad will be installed at the bottom of Newtown Creek outside the intake structure to mitigate scour and withdrawal of silt and sediment into the pumps.
- The SWPH is part of National Grid's overall system to protect the Greenpoint Energy Center

# Saltwater Pump House Storm Hardening Project

## 3D Model



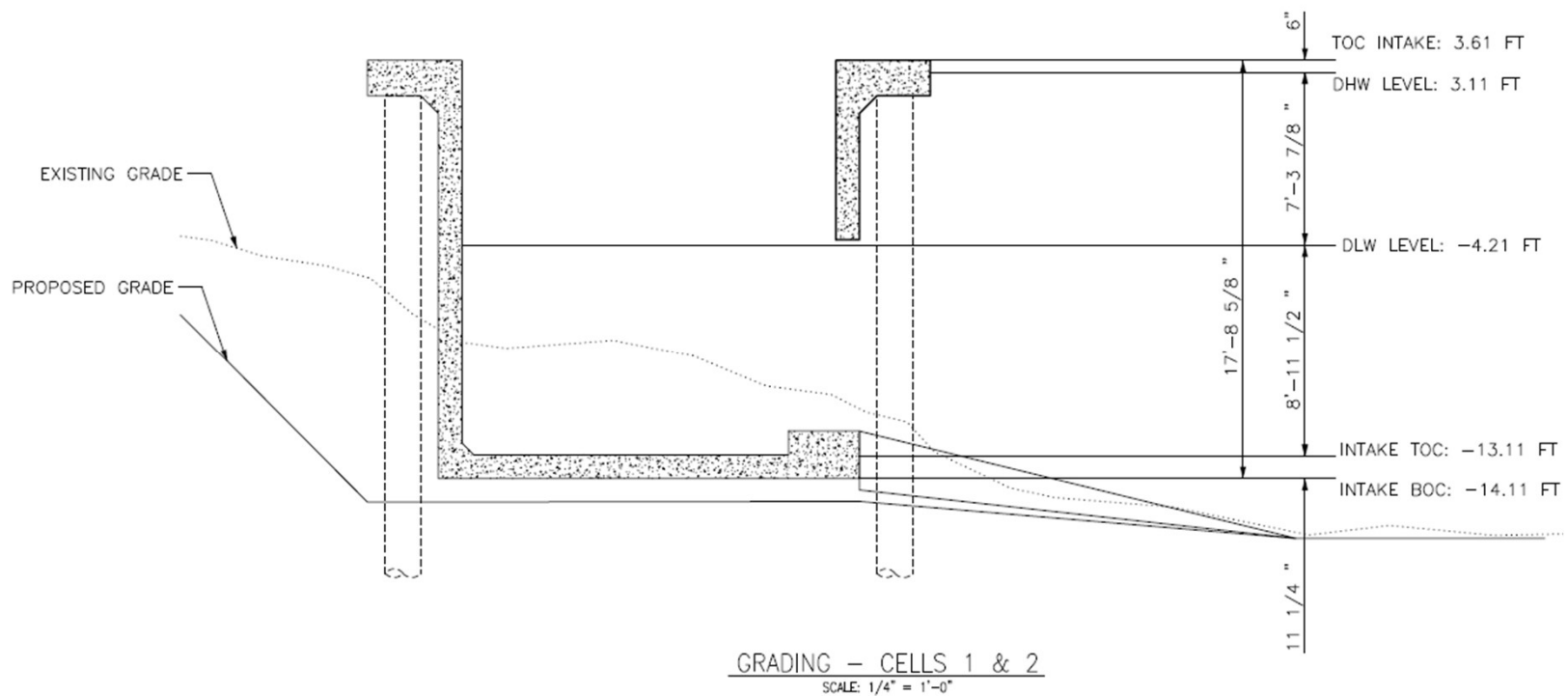
- Overall footprint approximately 98-ft by 67-ft
- Solar panels on rooftop

**Note:** All drawings and renderings presented in this document are based on a preliminary design and subject to change.

# Saltwater Pump House Storm Hardening Project

## Intake Structure Cross Section

- Intake structure approximately 29-ft-long along bulkhead by 33-ft wide

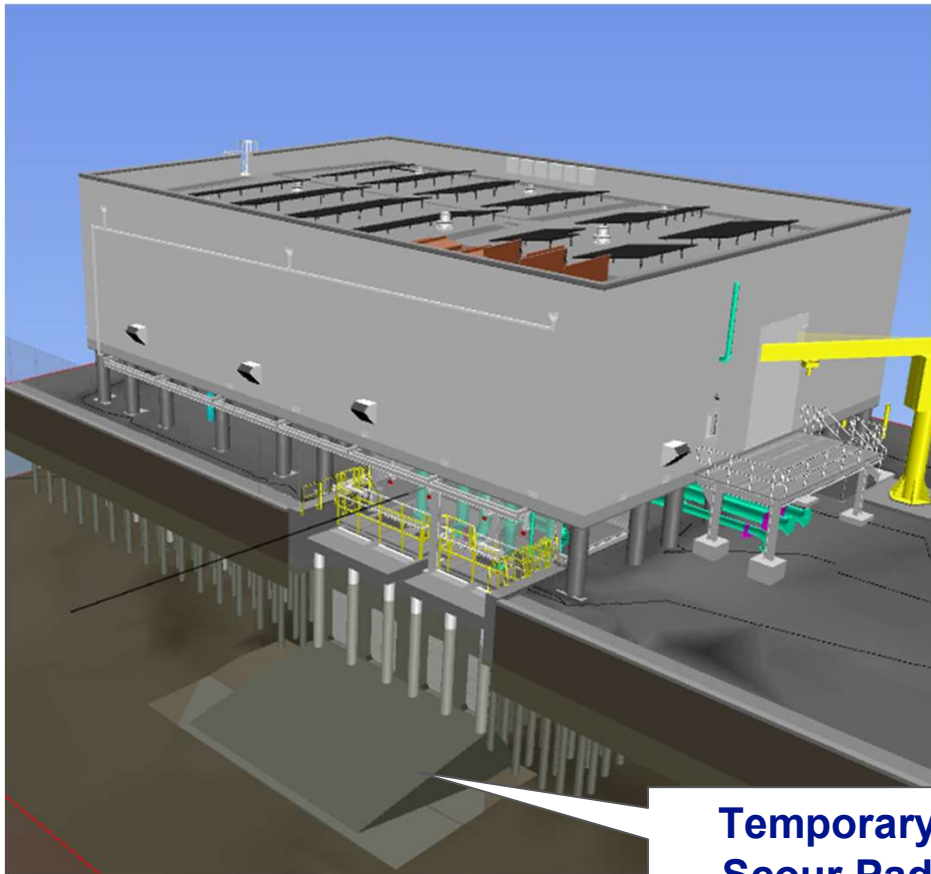


**Note:** All drawings and renderings presented in this document are based on a preliminary design and subject to change.



# Saltwater Pump House Storm Hardening Project

## Intake Structure and Scour Pad



**Temporary  
Scour Pad**

- Temporary Scour Pad approximately 46-ft by 24-ft
- Replace bottom sediments with approximately 3-feet of layers of concrete, sand, and Aqua Block
- Rip rap ramp above sloped to bottom of intake structure
- Mitigate potential scour
- Turbidity curtain and oil boom will extend under timber decking

**Note:** All drawings and renderings presented in this document are based on a preliminary design and subject to change.

# Saltwater Pump House Upgrade

## Environmental Controls

- Turbidity curtain and oil boom will extend under timber decking to design high water level during both phases of work
- Turbidity curtain will extend to the bottom of the Creek
- Continuous remote monitoring effectiveness of the turbidity controls using Turbidity Monitoring Buoys
- Background turbidity monitoring conducted 200 feet from limits of disturbance
- Daily inspections of the conditions of environmental controls
- Corrective actions will be performed as needed

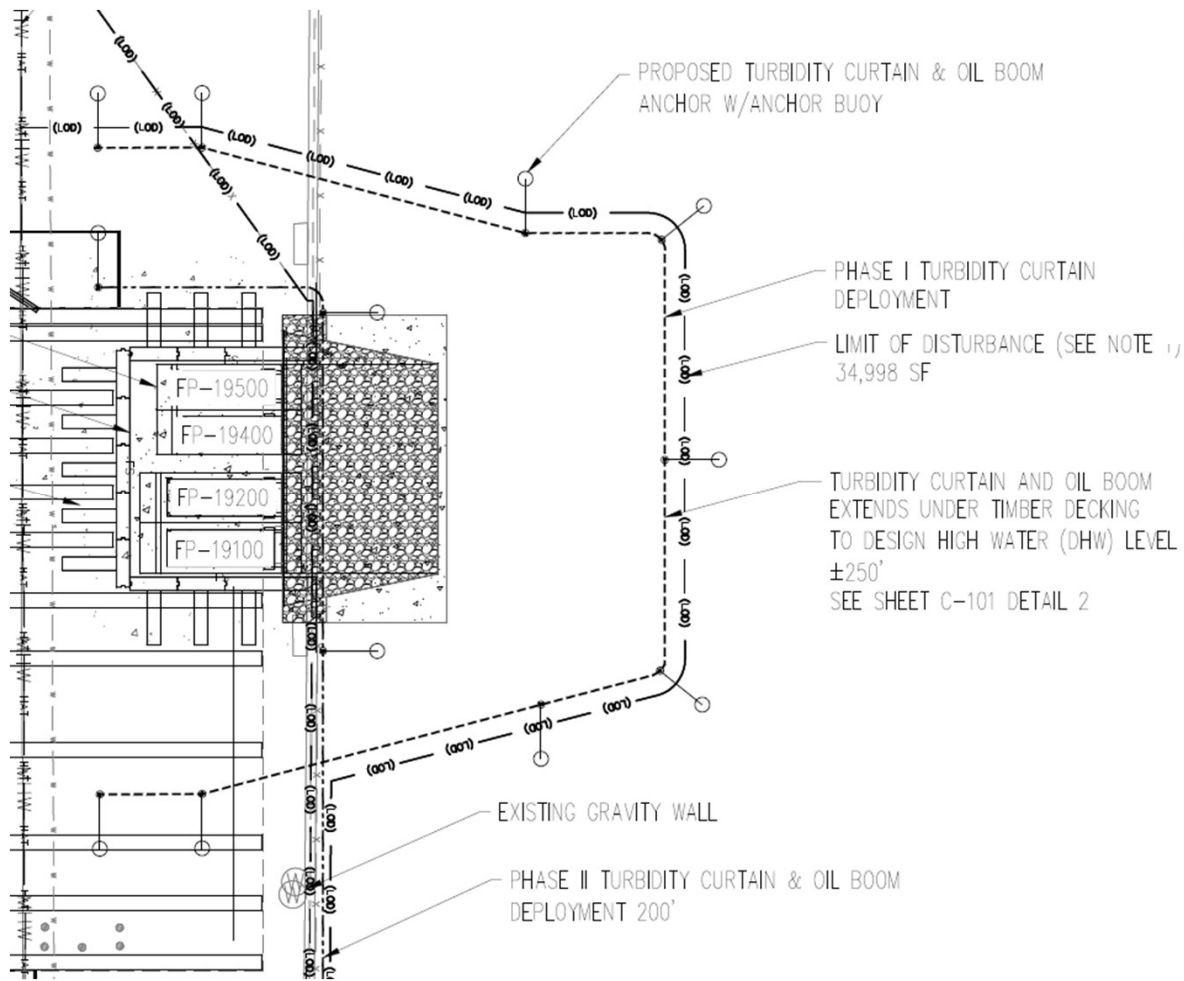
# Saltwater Pump House Upgrade

## EPA Comments on Permit Application

- Implement the appropriate health and safety measures to minimize exposure to the sediments and waters of Newtown Creek
- Best Management Practices (BMPs) required to prevent or minimize resuspension of contaminated sediments
- Sediment removed from Newtown Creek will be characterized, transported, and disposed of in accordance with all applicable regulations
- Provide advance notice to EPA of the schedule of the proposed work
- Notify EPA if any existing outfalls will be modified or discontinued, or if any new outfalls (in addition to the one identified in the permit application) will be constructed as part of the construction activities.

# Saltwater Pump House Storm Hardening Project Sediment Sampling Per EPA Request

- EPA has requested additional sediment sampling be conducted within the accessible construction area
- Sampling of the sediments will occur during construction



**Note:** All drawings and renderings presented in this document are based on a preliminary design and subject to change.

# Saltwater Pump House Storm Wetland Mitigation

- November 12, 2021 NYSDEC Notice of Incomplete Application:
  - *NYSDEC requires mitigation at a 1:1 mitigation ratio (area mitigated: area disturbed) for habitat impacts associated with the proposed 1,200 square feet of scour pad. To meet the mitigation requirements for this project, NYSDEC is willing to consider habitat creation or the purchase of mitigation credits from New York City Economic Development Corporation's (EDC) Saw Mill Creek Mitigation Bank. Please provide your proposed mitigation strategy/plan for NYSDEC review and approval.*
- Mitigation banks are established to expedite permitting.
- Due to the critical nature of the project and no practical alternatives identified National Grid proceeded with the purchase of mitigation credits from EDC's Saw Mill Creek Mitigation Bank, the only mitigation bank in the NYC area to offset the proposed 382 cubic yards of wetland disturbance.



# Saltwater Pump House Storm Hardening Project Tentative Schedule

- Design Complete-Fall 2022
- Permitting Complete - Winter 2023/Spring 2024
- Mobilization/Initiate Marine Work - Spring 2024
  - Installation of piles, intake structure, and scour pad
- Start Building Construction - Fall 2024
- Solar Panel Installation – Spring 2025
- Construction Complete - Spring 2026

**Note:** Schedule is subject to change pending permitting approvals.

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