TOWN OF PHILIPSTOWN CONSERVATION BOARD
238 MAIN STREET, COLD SPRING, NY 10516

December 8, 2015 AT 7:30 PM
PHILIPSTOWN TOWN HALL

MEETING AGENDA

1.) Presentation by NYCDEP of the Catskill Aqueduct in Philipstown .

NYC Environmental Protection
Water for the Future

Catskill Aqueduct Repair & Rehabilitation

Town of Philipstown

Briefing

October 22, 2015

Agenda

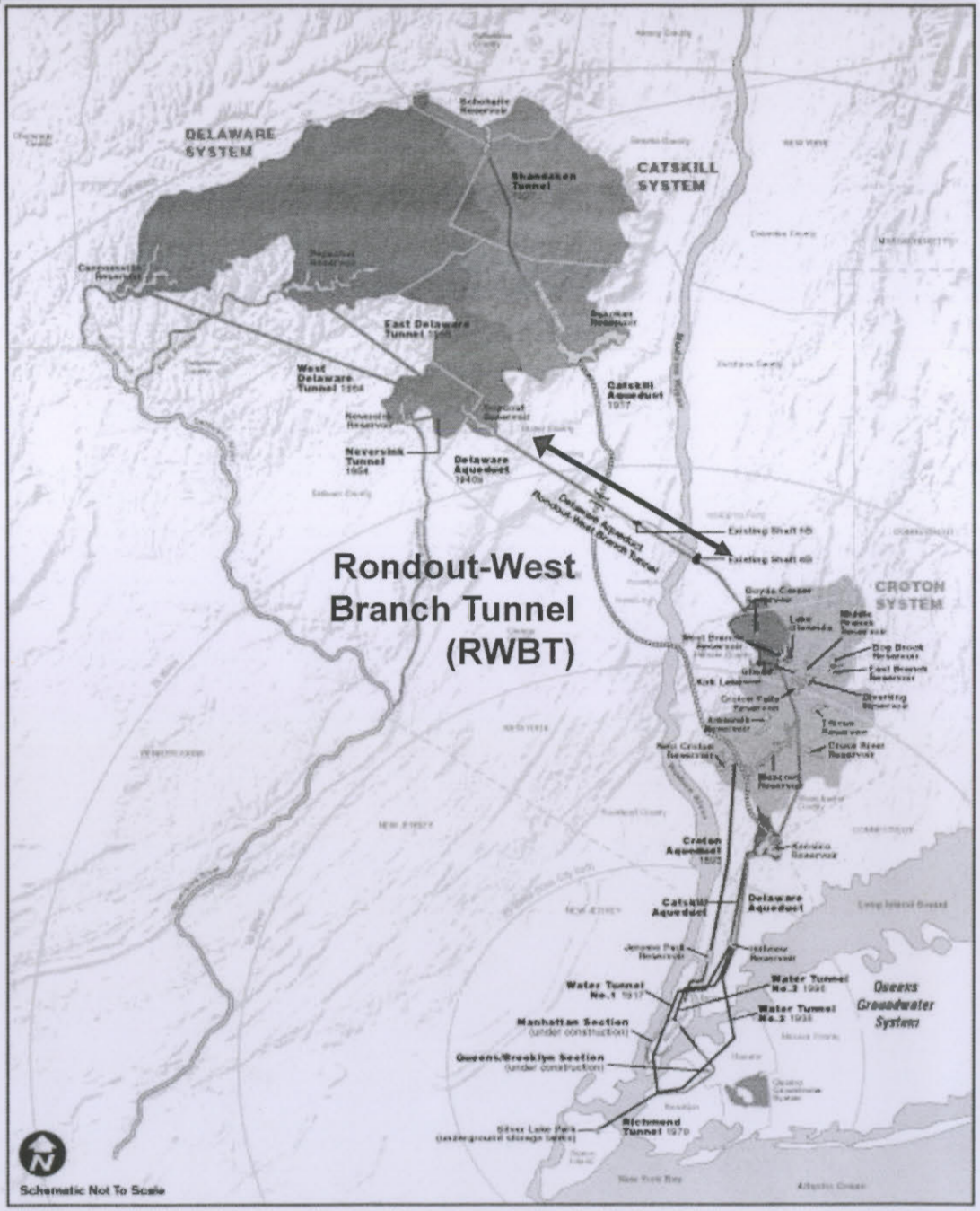
NYC Environmental Protection

- Water For the Future program
- Catskill Aqueduct Repair and Rehabilitation
- Town Specific Scope of Work
- Location Maps
- Preliminary Site Plans / Drawings
- Schedule
- Questions

Water For the Future Program - Overview

NYC Environmental Protection

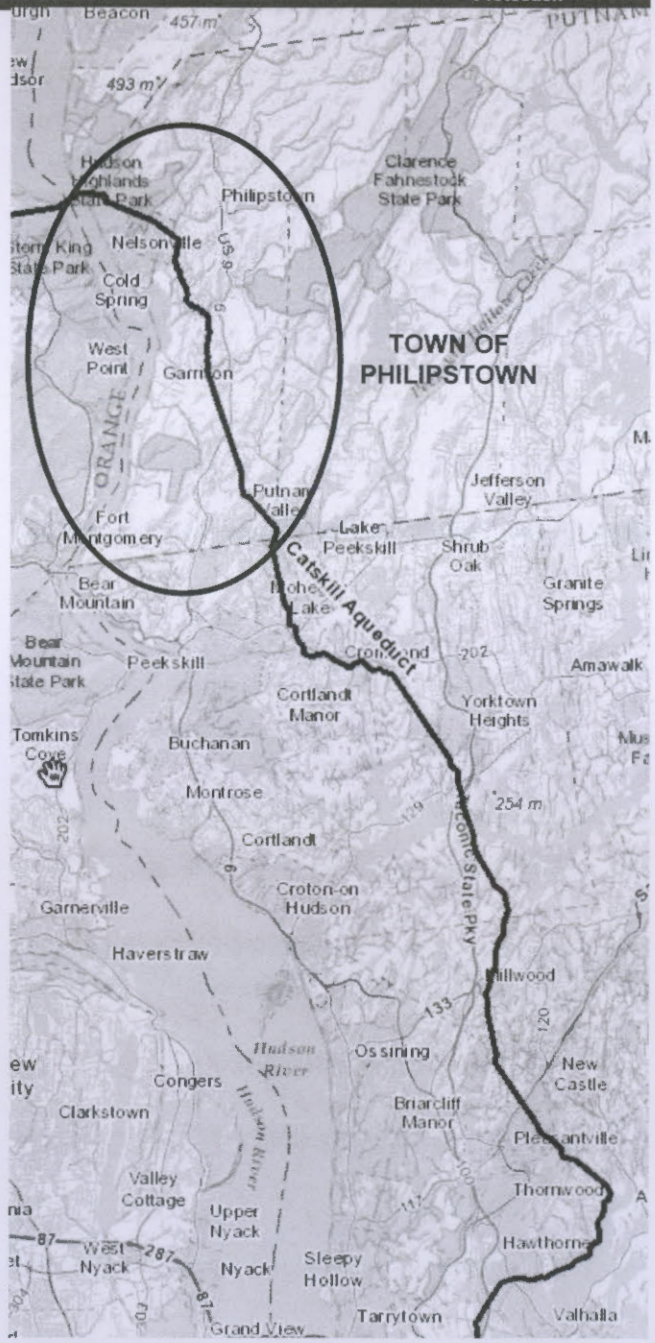
- Delaware Aqueduct
  - 85 mile tunnel conveys up to 800 million gallons per day (mgd) of water to upstate communities and NYC
  - Found to have been leaking 15-35 mgd in the 1990's
- Water for the Future
  - Program developed to fix the Delaware
  - Construction of two shafts and a bypass tunnel across the Hudson River underway
  - Connection and decommissioning of the bypassed section planned for 2022
- Needed Support "Projects"
  - **Catskill Aqueduct Repair and Rehabilitation**
  - Conservation / Demand Management
  - Modified operations of reservoir system



Catskill Aqueduct Repair and Rehabilitation

Goal: Rehabilitation the 74 mile Catskill Aqueduct to ensure the structural integrity, extend the useful life, and restore transmission capacity prior to the RWBT shutdown.

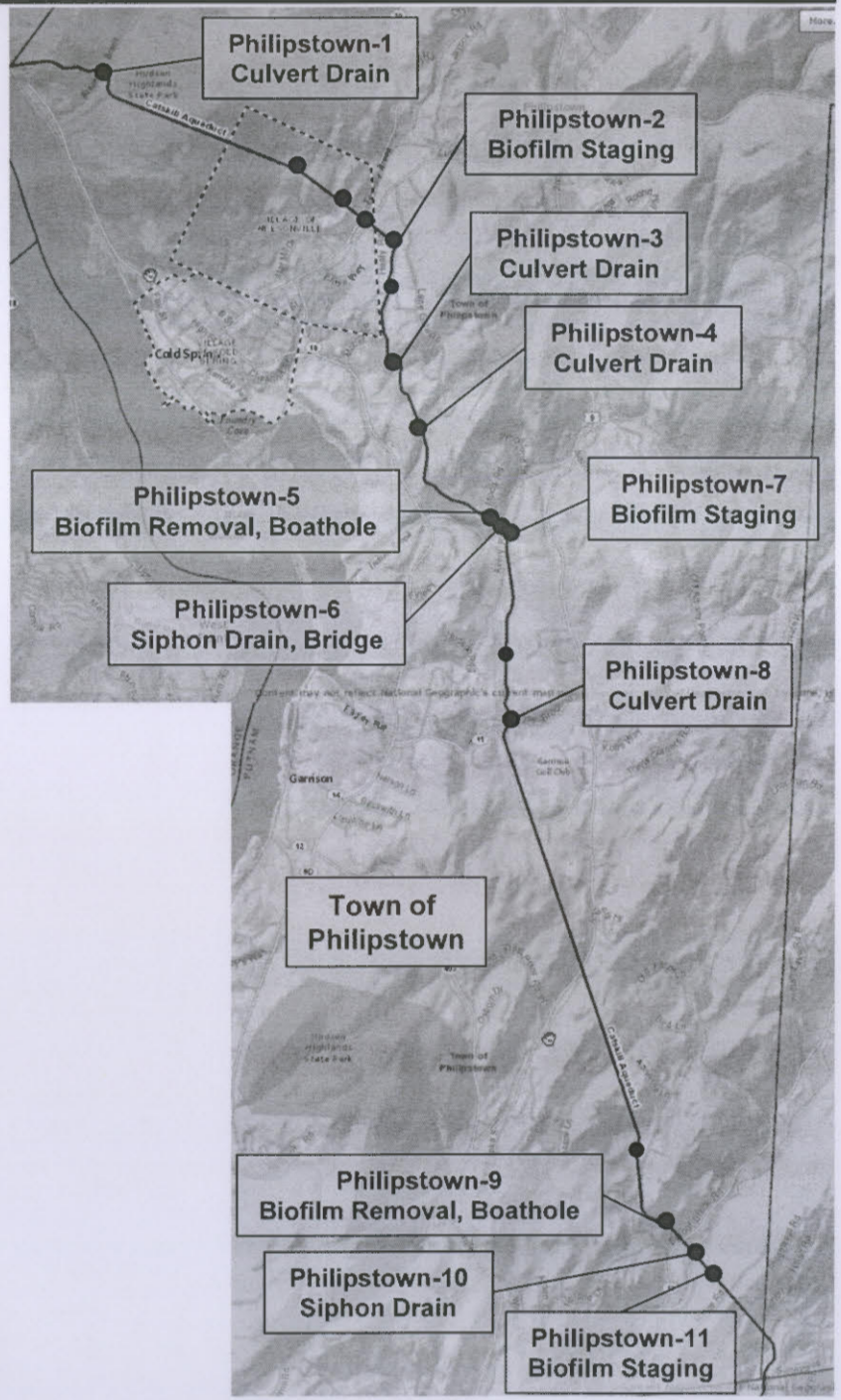
- Leak Mitigation
  - Repairs at identified leaks and surface expressions along the Aqueduct
  - Installation on-site facilities to eliminate any discharge of chlorine-treated aqueduct water, if required
- Mechanical/Structural Repair & Chemical Addition
  - Repair aging equipment used during operation of the Aqueduct
    - Includes drain valves (siphon drains and culvert drains), installation of new air vents, installation of new access "boatholes", and repair of Aqueduct bridge crossings
  - Install chlorination facility in the existing Ashokan Screen Chamber
  - Install dechlorination facility at the Pleasantville Alum Plant site
- Condition Assessment / Biofilm Removal
  - Removal of surface deposits (biofilm) from the inside walls of the Aqueduct to restore its carrying capacity and aid inspections.
  - Repairs of cracks, leaks, or defects will be made from inside the Aqueduct following inspections



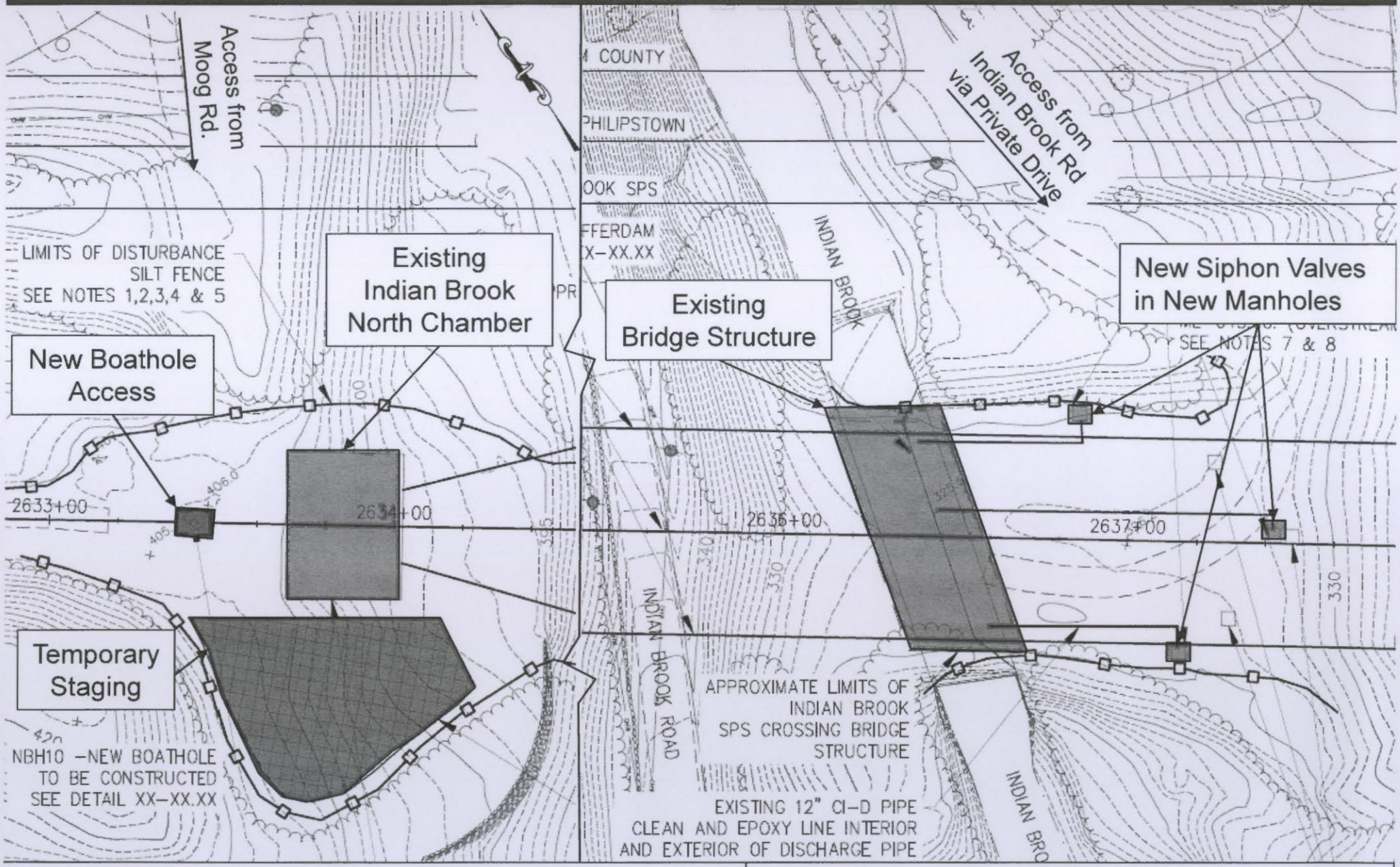
Catskill Aqueduct – "East of Hudson"

Town of Philipstown - Scope

- There are a total of 11 primary locations where work will occur.
- Leak Mitigation
  - No leak mitigation
- Mechanical/Structural Repair & Chemical Addition
  - 6 Siphon Drain Blow-offs replaced (2 locations)
  - 4 Culvert Drains sealed
  - 2 New Boatholes to be installed
  - Bridge repair
- Condition Assessment / Biofilm Removal
  - 5 primary locations for biofilm removal and/or staging



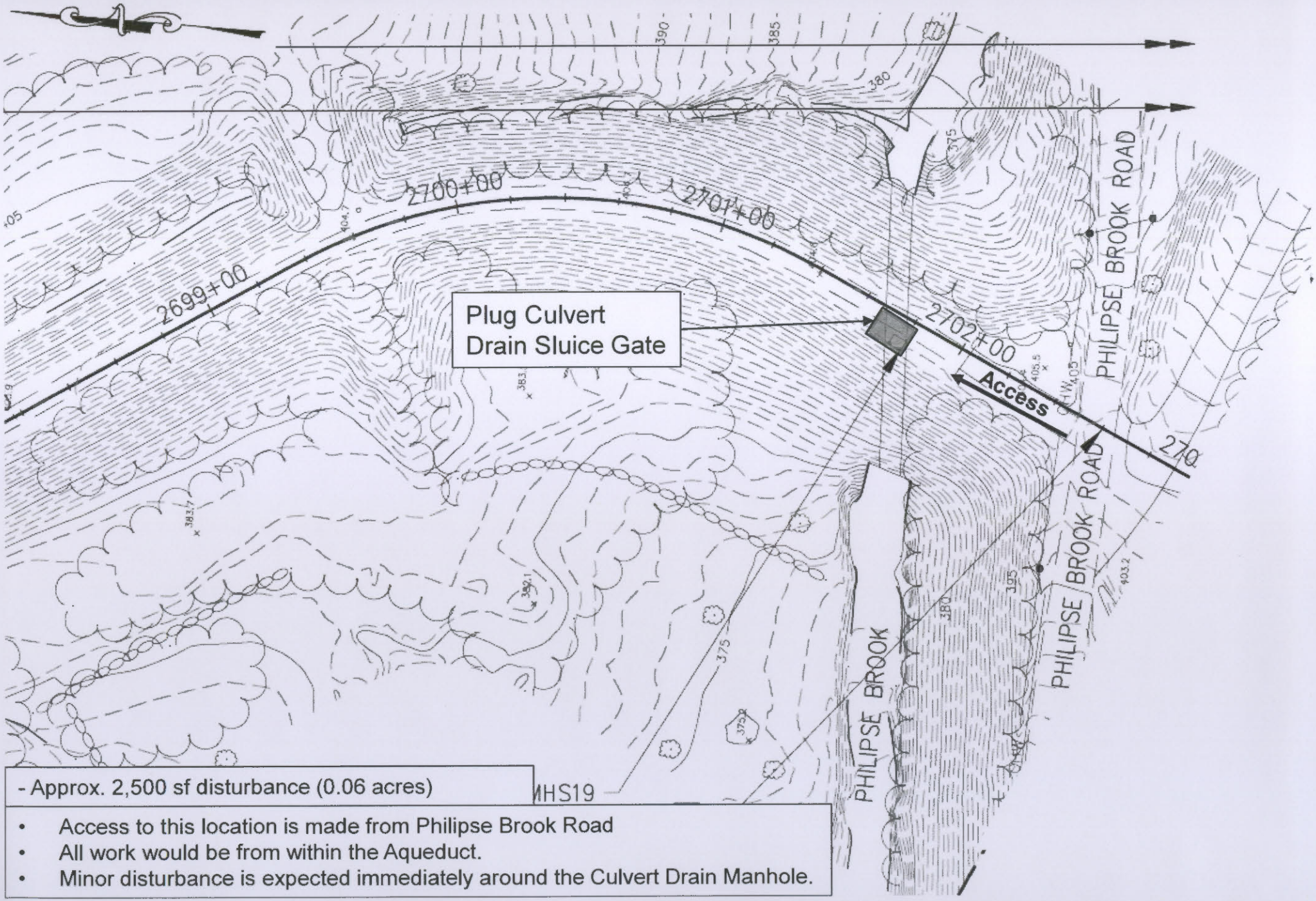
Philipstown-6



- Zoning: R80
- Approx. 2,500 sf disturbance (0.06 acres) at North Chamber
- Approx. 5,000 sf disturbance (0.12 acres) at Siphon Valve Location

- New boathole to be installed in crown of Aqueduct to facilitate biofilm removal and condition assessment.
- Bridge repair in kind, includes concrete rehabilitation

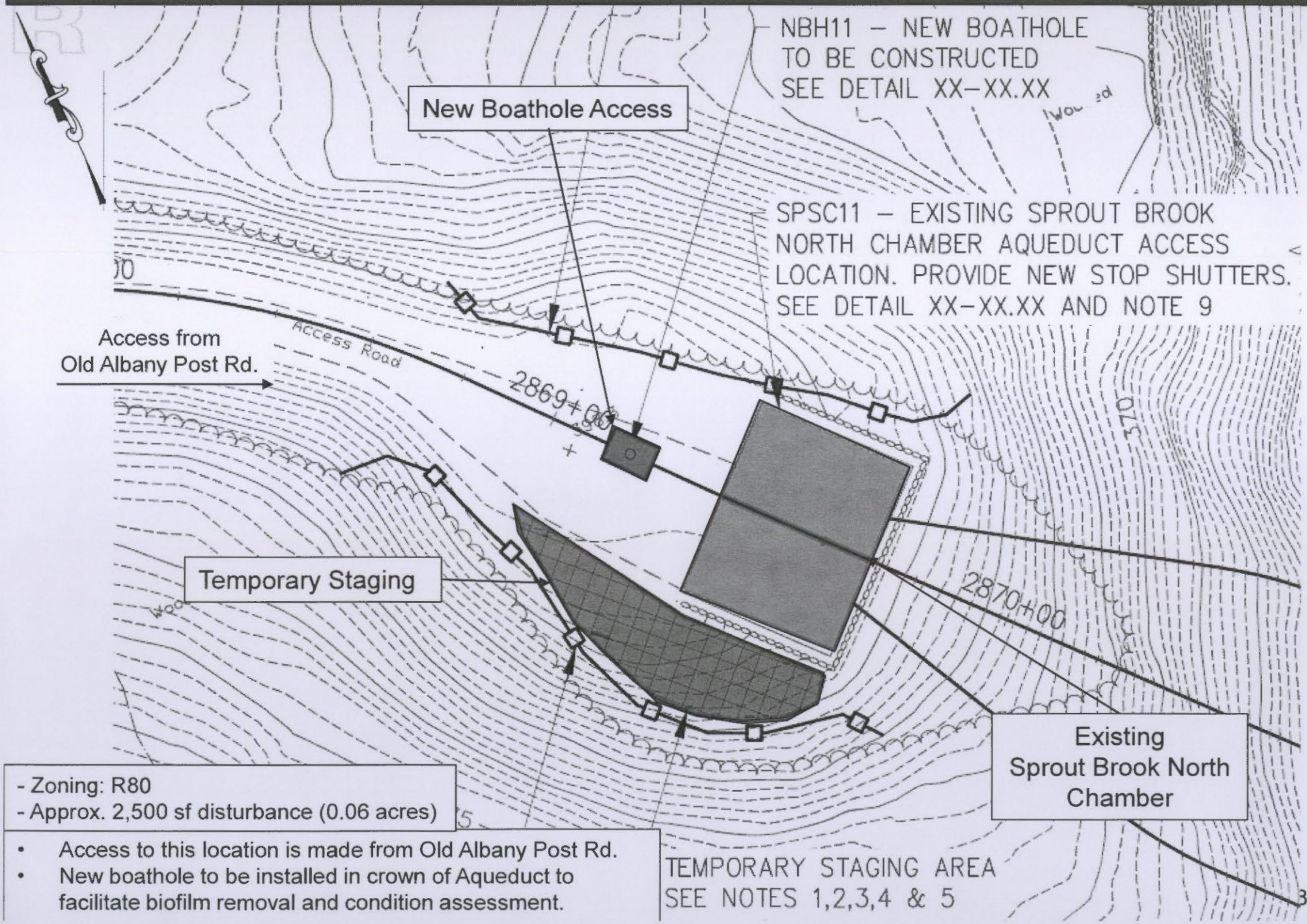
Philipstown-8



- Approx. 2,500 sf disturbance (0.06 acres)

- Access to this location is made from Philipse Brook Road
- All work would be from within the Aqueduct.
- Minor disturbance is expected immediately around the Culvert Drain Manhole.

Philipstown-9



- Zoning: R80
- Approx. 2,500 sf disturbance (0.06 acres)

- Access to this location is made from Old Albany Post Rd.
- New boathole to be installed in crown of Aqueduct to facilitate biofilm removal and condition assessment.

Schedule and Expected Work

NYC Environmental Protection

- Overall Construction (CAT-RR): Spring 2017 through June 2021
- Fall and Spring Shutdowns planned from 2017 through 2020
- EIS Schedule:
  - Final Scope of Work: Issued September 2015
    http://www.nyc.gov/html/dep/html/environmental_reviews/index.shtml
  - Draft EIS: January 2016
  - Final EIS: July 2016
- Expected Work Effort
  - Culvert Drain Sluice Gates: 4 pickup trucks per day, 1 week work duration each, daylight hours
  - Siphon Blow-off Valve Replacement: 5 trucks (pickups, hoists, loader); 10 week duration; normal working hours
  - Biofilm Removal and New Boathole Access: 14 trucks (excavator, concrete, waste hauling, pickup); 10 week duration; possible night work; periodic waste removal from site.

General Questions for Town

NYC Environmental Protection

- Which of the activities described require:
  - Site plan approval?
  - Zoning Board of Appeals or other variances?
  - Other Town permits (e.g., clearing and grading, tree removal, stormwater, etc.)
  - Or simply notification so the Town is aware of project?
- Are there other Town considerations we need to be aware of?

Questions

Planned Catskill Aqueduct Shutdowns

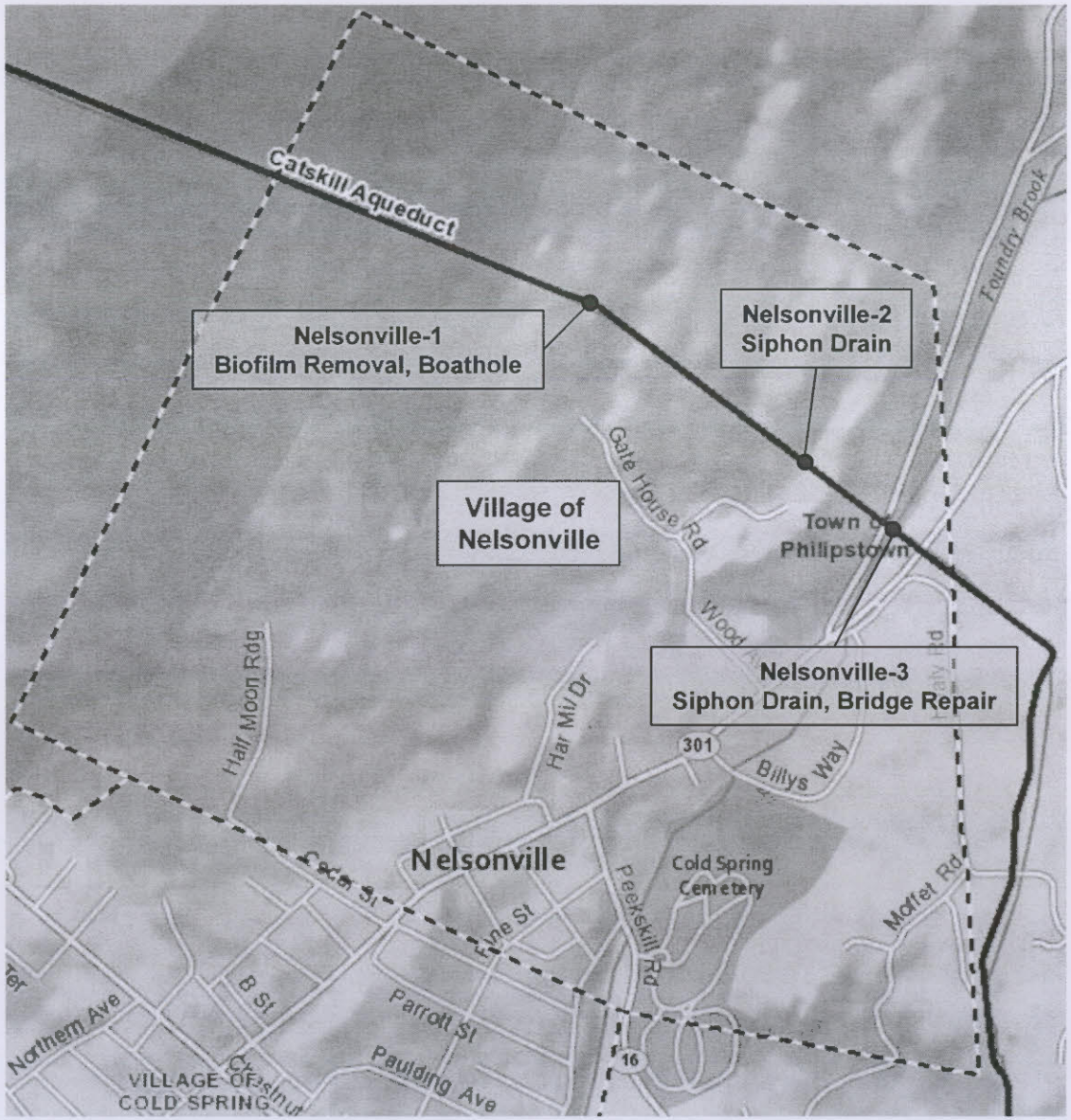
NYC Environmental Protection

Town of Philipstown

2017	Up to 10 Weeks	Mechanical and Leak Repairs
2018	Spring 10 Weeks	Contingency
2018	Fall 10 Weeks	Mechanical Repairs
2019	Spring 10 Weeks	Contingency
2019	Fall 10 Weeks	Biofilm Removal
2020	Spring 10 Weeks	Contingency
2020	Fall 10 Weeks	Overall Program Contingency

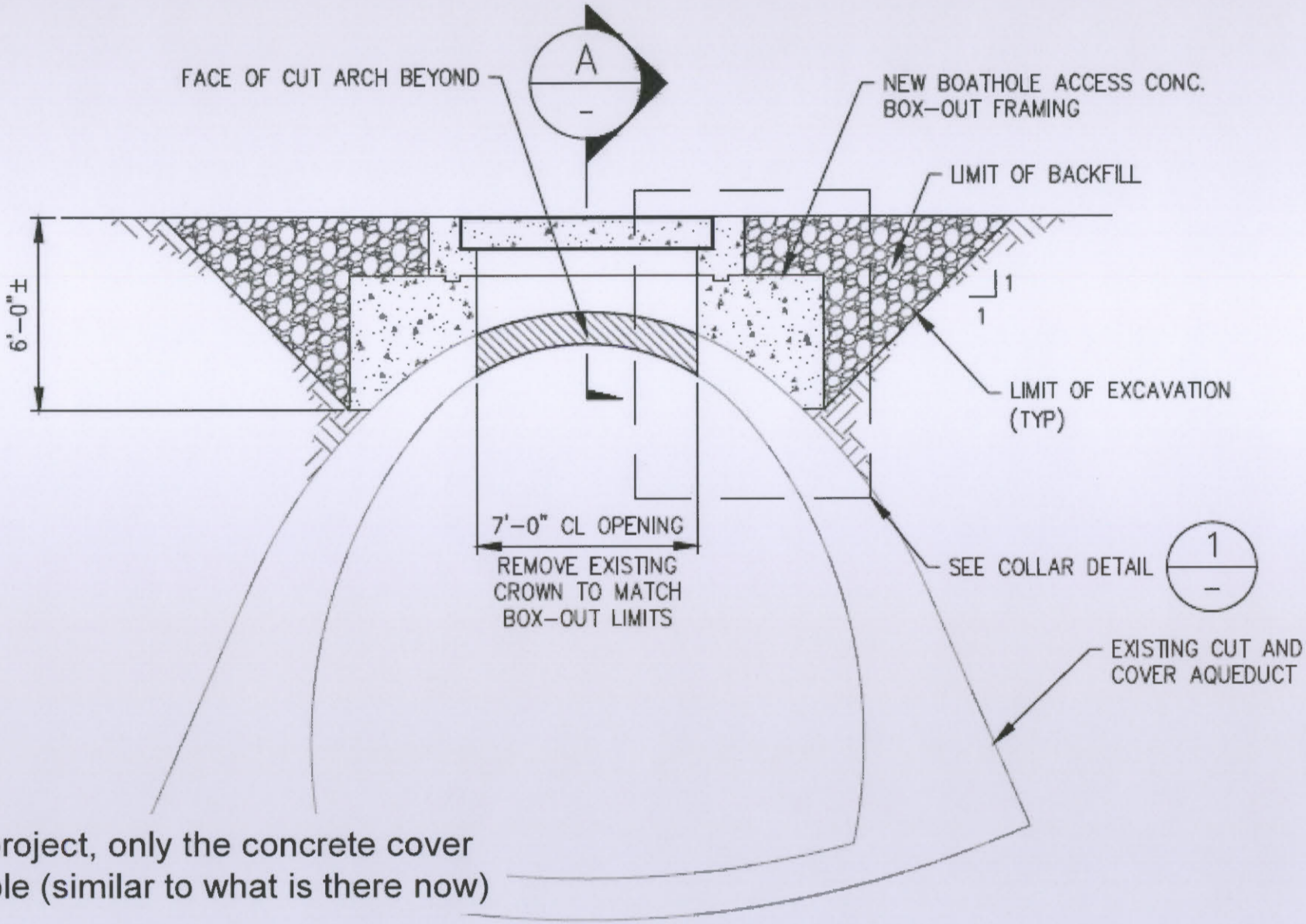
Village of Nelsonville - Scope

- There are a total of 3 primary locations where work will occur.
- Leak Mitigation
  - No leak mitigation
- Mechanical/Structural Repair & Chemical Addition
  - 6 Siphon Drain Blow-offs replaced (2 locations)
  - 1 New Boathole to be installed
  - Bridge repair
- Condition Assessment / Biofilm Removal
  - 1 primary locations for biofilm removal and/or staging



Additional Construction-Related Information

New Access Boatholes

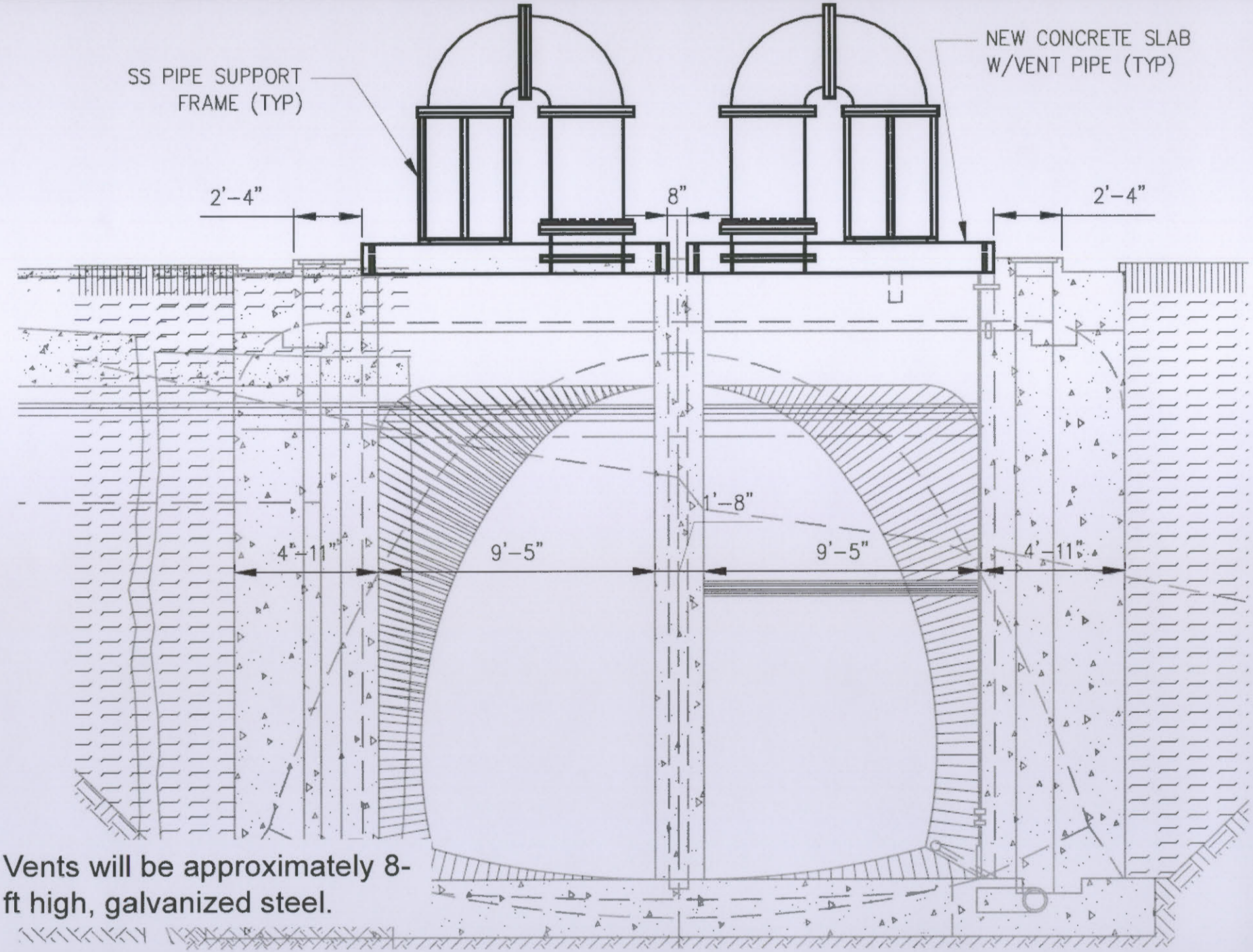


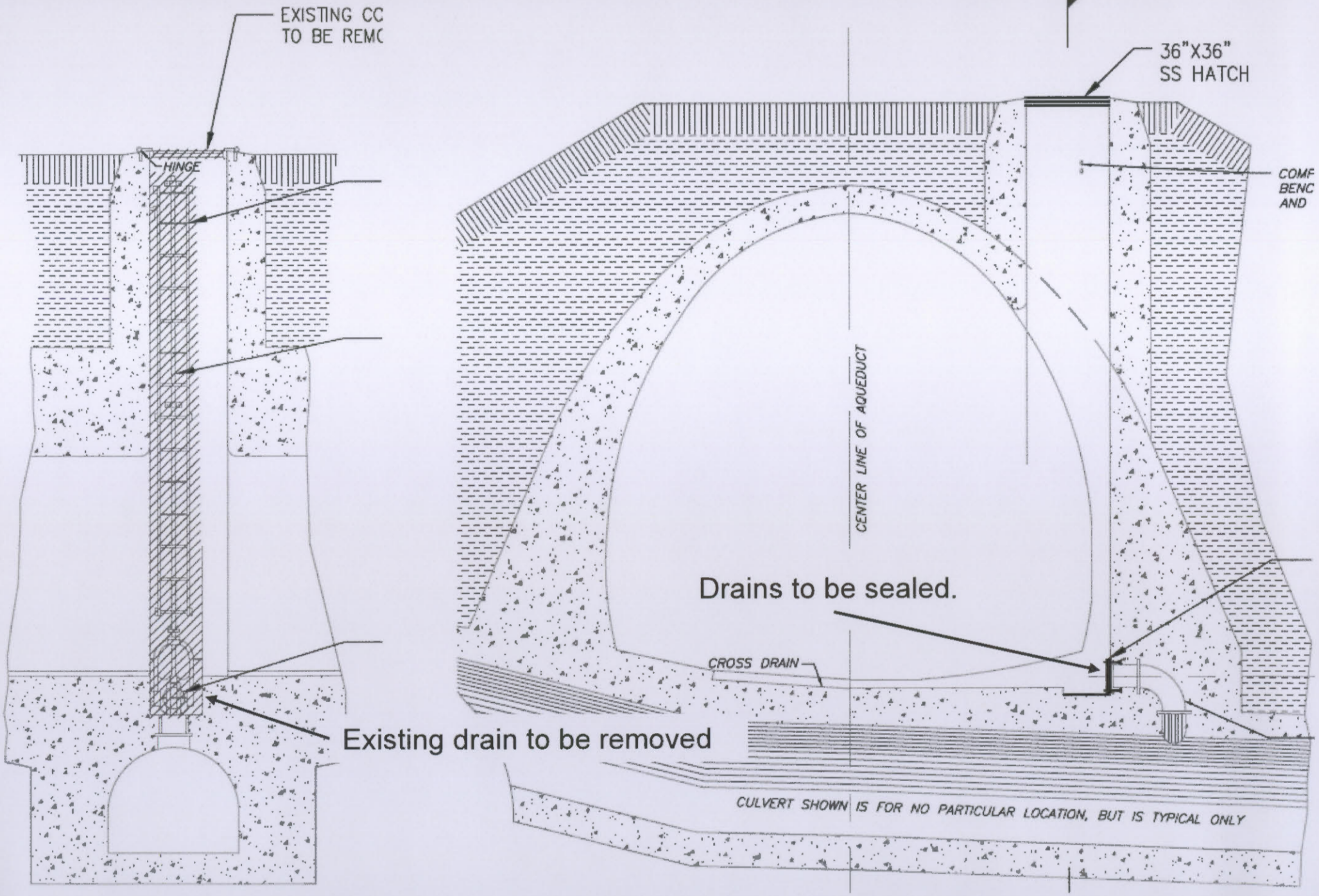
After project, only the concrete cover is visible (similar to what is there now)

SECTION THROUGH AQUEDUCT

SCALE: 1/4"=1'-0"

Air Vent



Vents will be approximately 8-ft high, galvanized steel.

Culvert Drain Sluice Gate