

**WSSC**

*Where Water Matters*

**BROAD CREEK AUGMENTATION PROJECT  
South Pipeline Contract  
Community Meeting  
October 7, 2014**



# Introduction



Austin Freeman, PMP  
Project Manager



John Beitler, PE  
Project Manager

Dennis Funk, P.E.  
Gannett Fleming

# Presentation Overview

- Project Background
- Status
- Conveyance System - South Contract
- Questions and Discussion

# Project Overview - Existing System



Broad Creek Pumping Station

Piscataway Wastewater Treatment Plant

# Project Background

- **Consent Order** - December 2005
- **Facility Plan Study** – to address overflows
- **Consent Decree** – 55 MGD capacity
- **Broad Creek WWPS Augmentation Design** – Hatch Mott MacDonald / Gannett Fleming JV

# Piscataway WWTP Improvements

**GOAL:** Temporary Storage of Peak Plant Inflows with Primary Treatment

- Screening and Grit Removal Systems
- Covered Storage Tank
- Emergency Storage Pond
- Modifications to Site Piping

**Status:** Under Construction

# Piscataway WWTP



Piscataway WWTP Work Areas

Latitude 38.6949 N  
Longitude 77.0031 W  
Altitude 1 feet

150 yds

© 2010 Microsoft Corporation © 2009 NAVTEQ © AND Image courtesy of USGS



# Broad Creek Pump Station Improvements

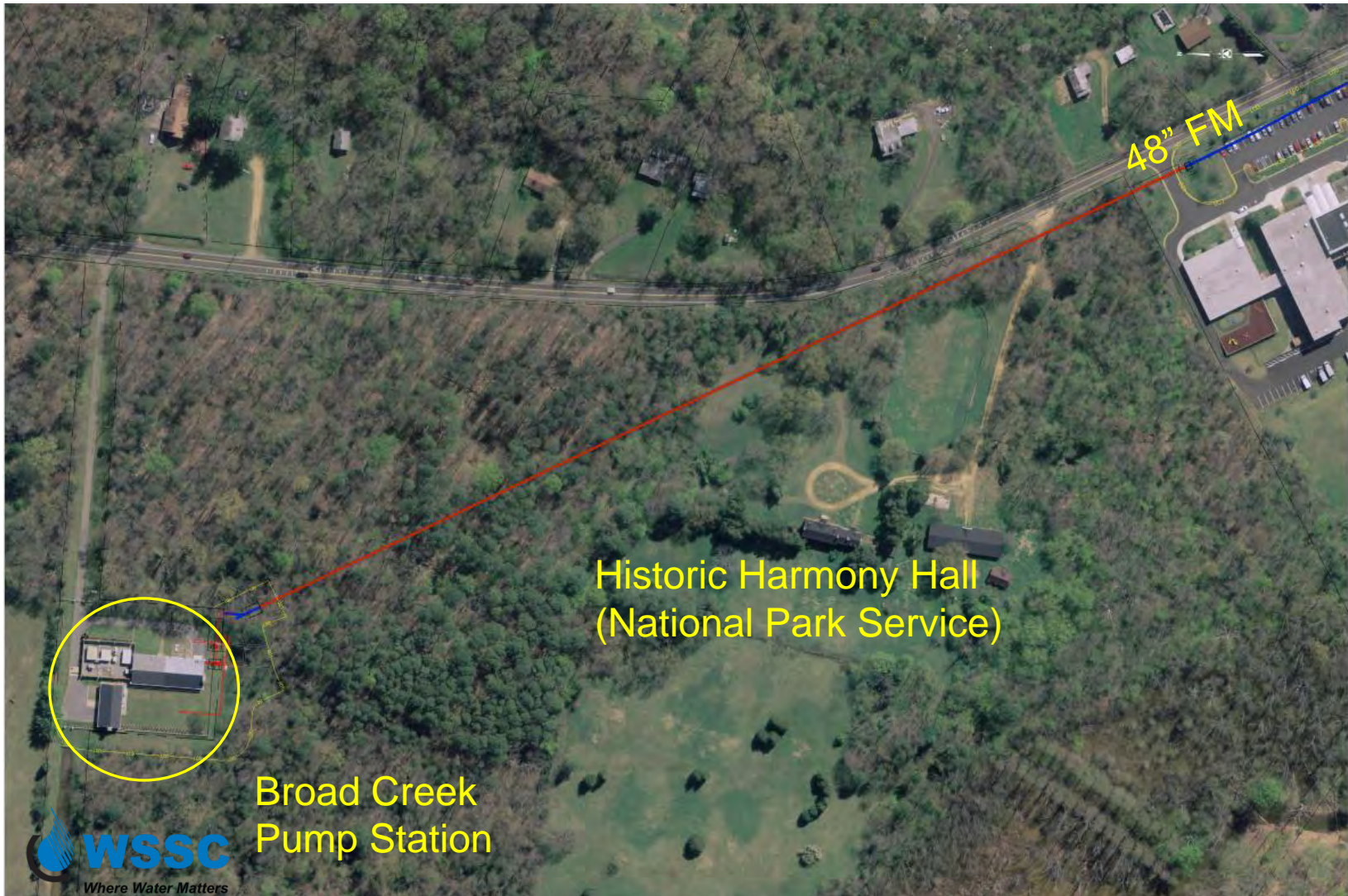
**GOAL:** Pumping Capacity of at least 55 MGD

- Site Piping Modifications
- Pump Replacement
- 3 New Electrical Drives (VFDs)
- Improvements to HVAC System
- Operational Modifications

**STATUS:** Design Complete, awaiting approval from  
National Park Service



# Construction Impacts on National Park Service Lands



# Broad Creek Pump Station Site



# Broad Creek Conveyance System

**GOAL:** Minimum Conveyance Capacity of 55 MGD

- Parallel Conveyance System
- Permit operation of single or parallel pipelines
- Transition Structures for interconnections

**STATUS:** Separated into two construction Contracts; South Contract awarded, North Contract awaiting NPS

# South Pipeline Contract

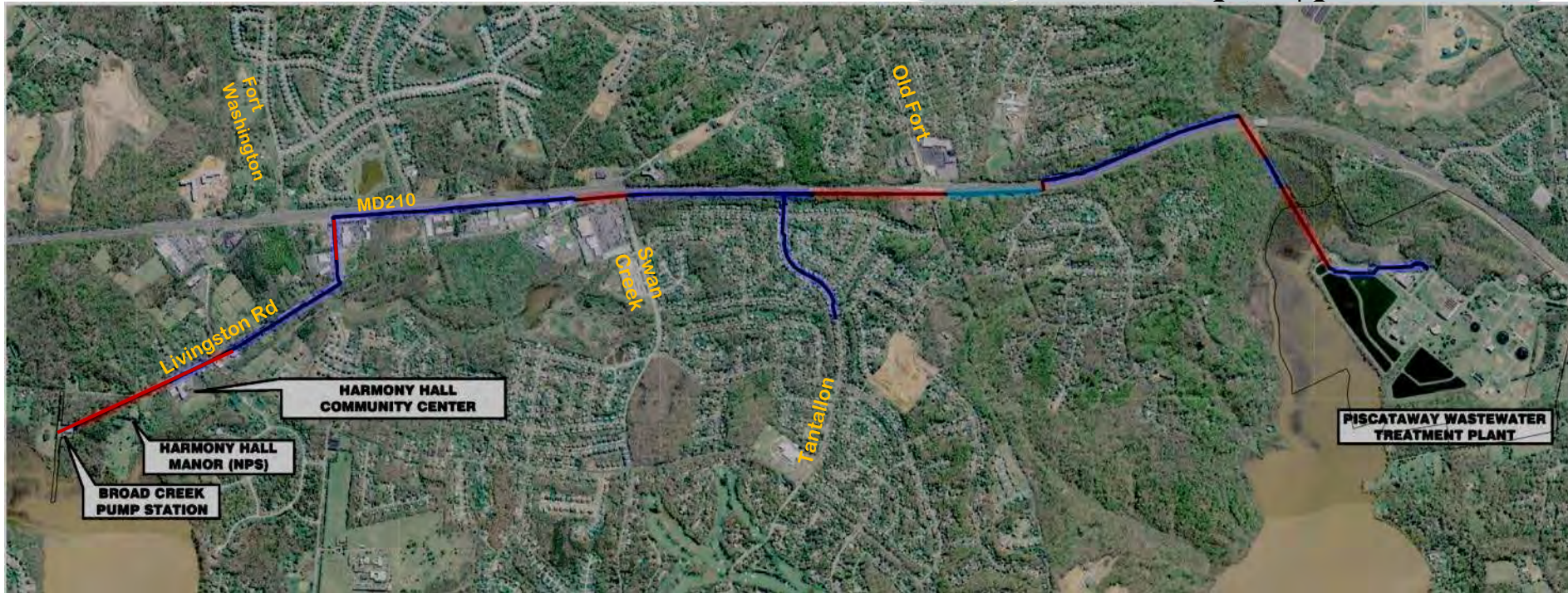
- Design Notice to Proceed September 2009
- Design Studies Complete April 2010
- Final Design Complete June 2012
- Final Permitting February 2014
- Contractor NTP October 2014
- Construction Duration 3 years

# Existing Conveyance System



# Conveyance System Alignment

Legend:



## Pipeline Lengths

48" Force Main	15,045 feet
60" Gravity Sewer	1,460 feet
42" Pressure Sewer	6,050 feet
24" Force Main	2,737 feet

## Tunnel Lengths

Tunnel 1&2	2,722 feet
Tunnel 3	835 feet
Tunnel 4N/4S	1,952 feet
Tunnel 6&7	2,112 feet
Tunnel 9	556 feet

# Conveyance System - South

**Legend:**

- Cut and Cover —
- Tunnel —
- Gravity Sewer —



## Pipeline Lengths

48" Force Main	4,790 feet
60" Gravity Sewer	1,460 feet
42" Pressure Sewer	6,050 feet
24" Force Main	2,737 feet

## Tunnel Lengths

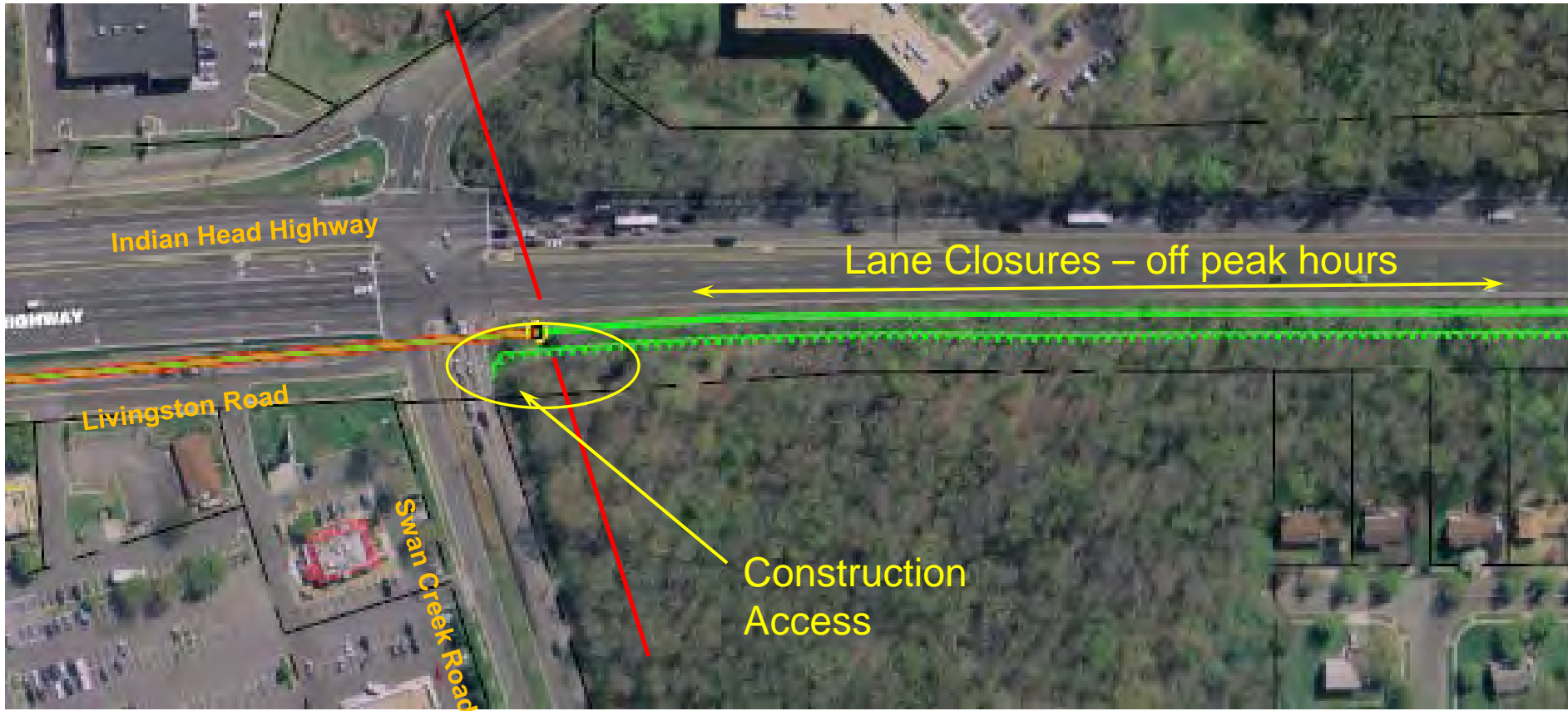
Tunnel 4N/4S	1,952 feet
Tunnel 6&7	2,112 feet

# South Pipeline - Project Alignment





# South Pipeline – Construction Impacts



# South Pipeline - Project Alignment



# South Pipeline – Construction Impacts



SHAFT #4-N - OK  
 g Shaft:  
 Thickness:  
 Stress:  
 Welded Seams

# South Pipeline – Construction Impacts



- Lane Closures during off-peak hours
  - 9 am to 3 pm
- Construction traffic entering and exiting
- Work is behind concrete barrier

# South Pipeline – Construction Impacts



- Lane Closures during off-peak hours
- Construction traffic entering and exiting
- Earthwork and temporary grading at tunnel shaft sites
- Permanent access to shafts
- Landscaping of cleared areas

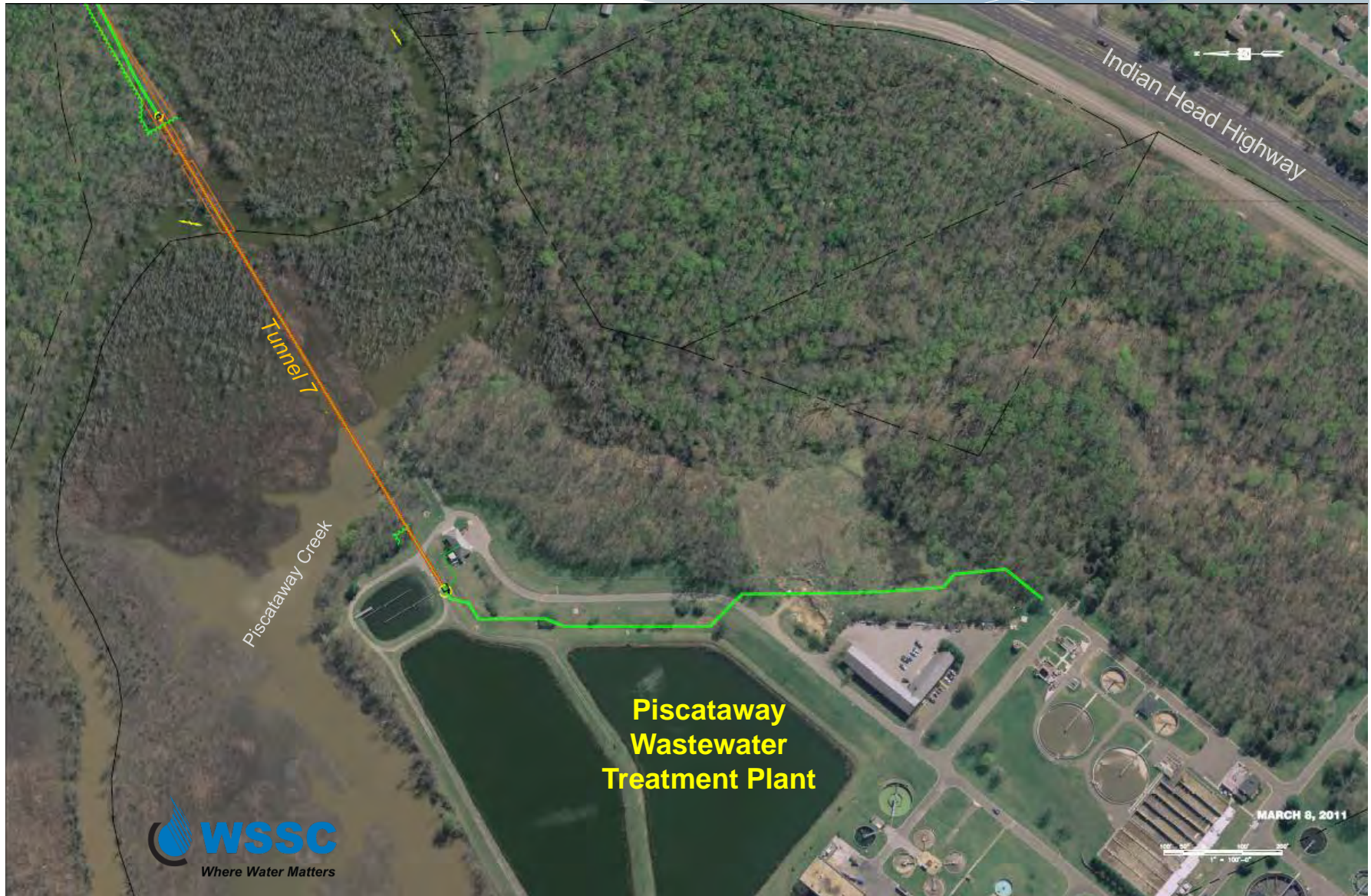
# South Pipeline - Project Alignment



# South Pipeline - Project Alignment



# South Pipeline - Project Alignment

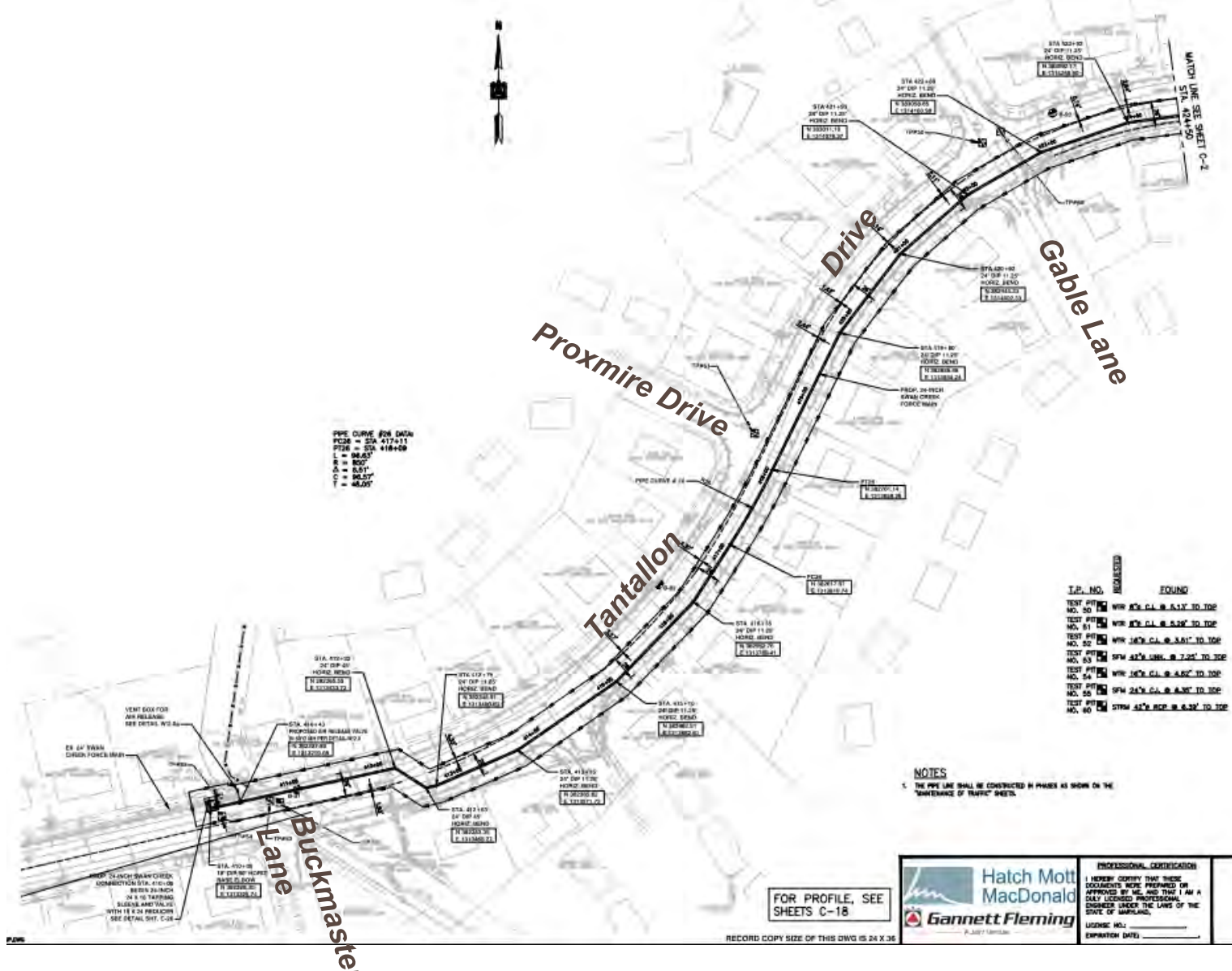




# South Pipeline - Project Alignment



# South Pipeline – Tantallon Drive



# Pipeline Construction Impacts - Traffic

## Route 210

- Lane closures permitted during off-peak hours
- 9 am to 3 pm under normal operations
- Traffic barriers to protect work areas
- Construction Access locations moved in phases

## Tantallon Drive

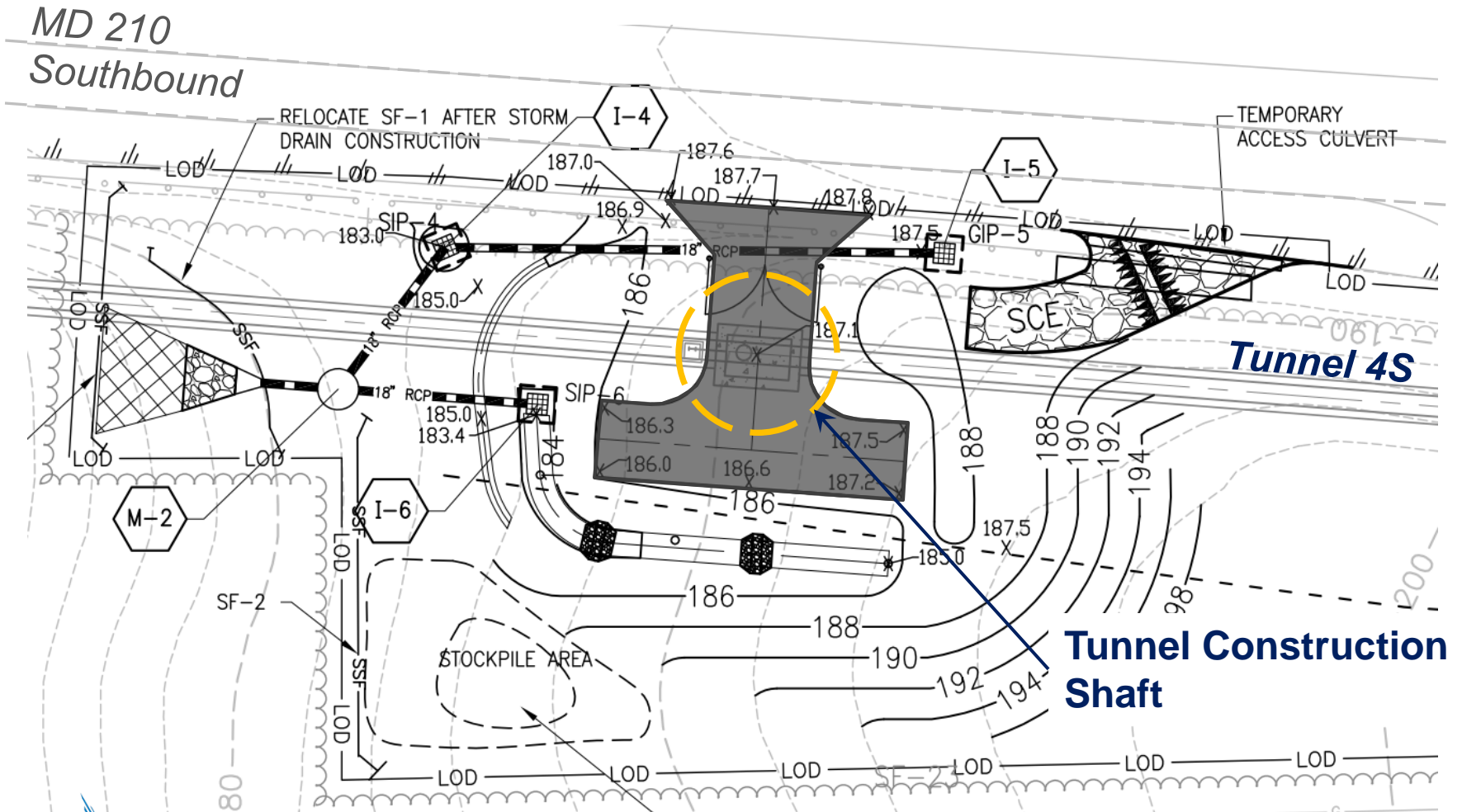
- Flagging operations for lane closures
- 9:00 am to 3:30 pm
- No work December 24 to January 1

# Pipeline Construction Impacts

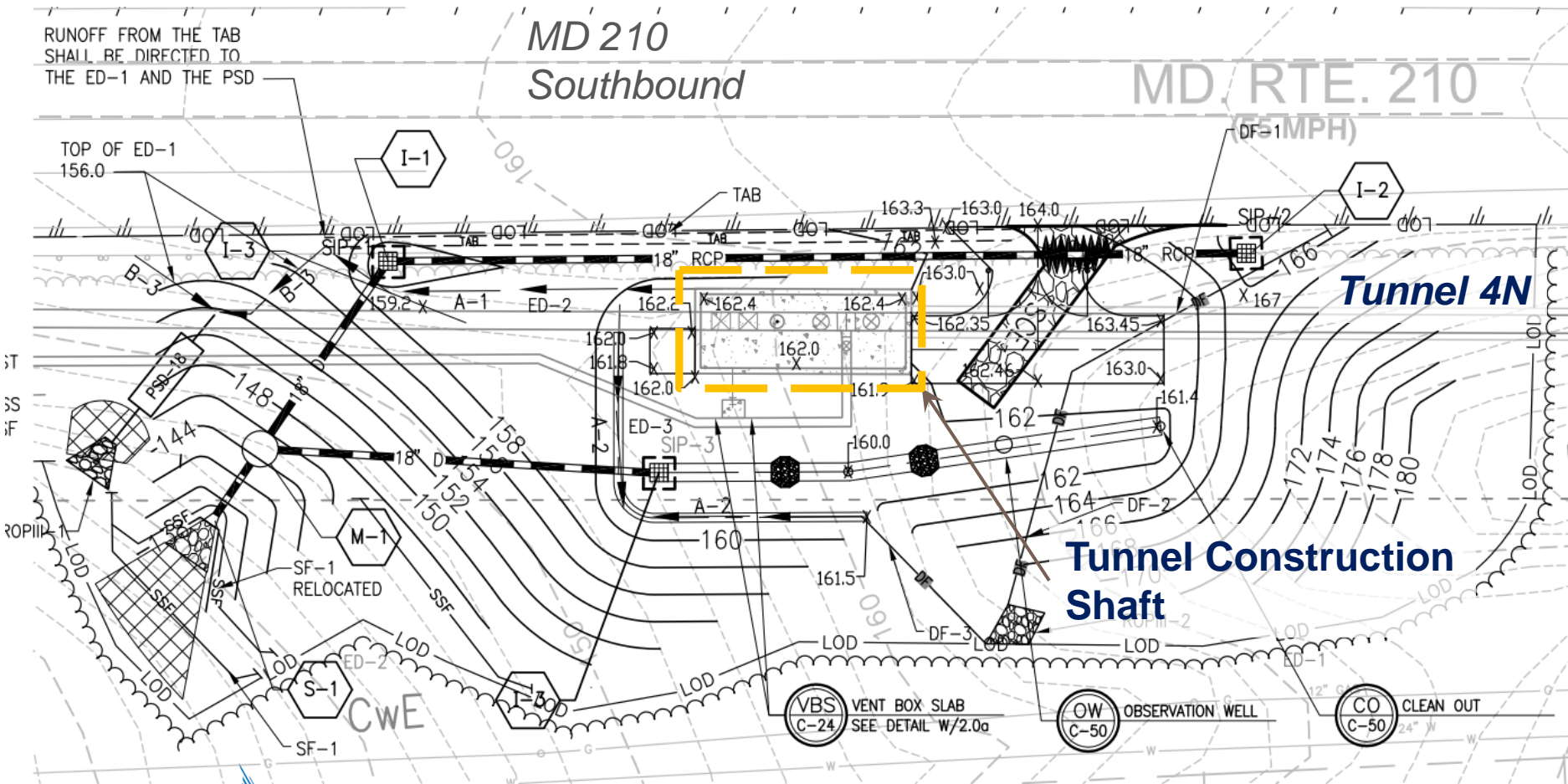
## Construction Activities

- Pipeline and Vault Construction
- **Tunneling**
- Vaults at Tunnel Shafts

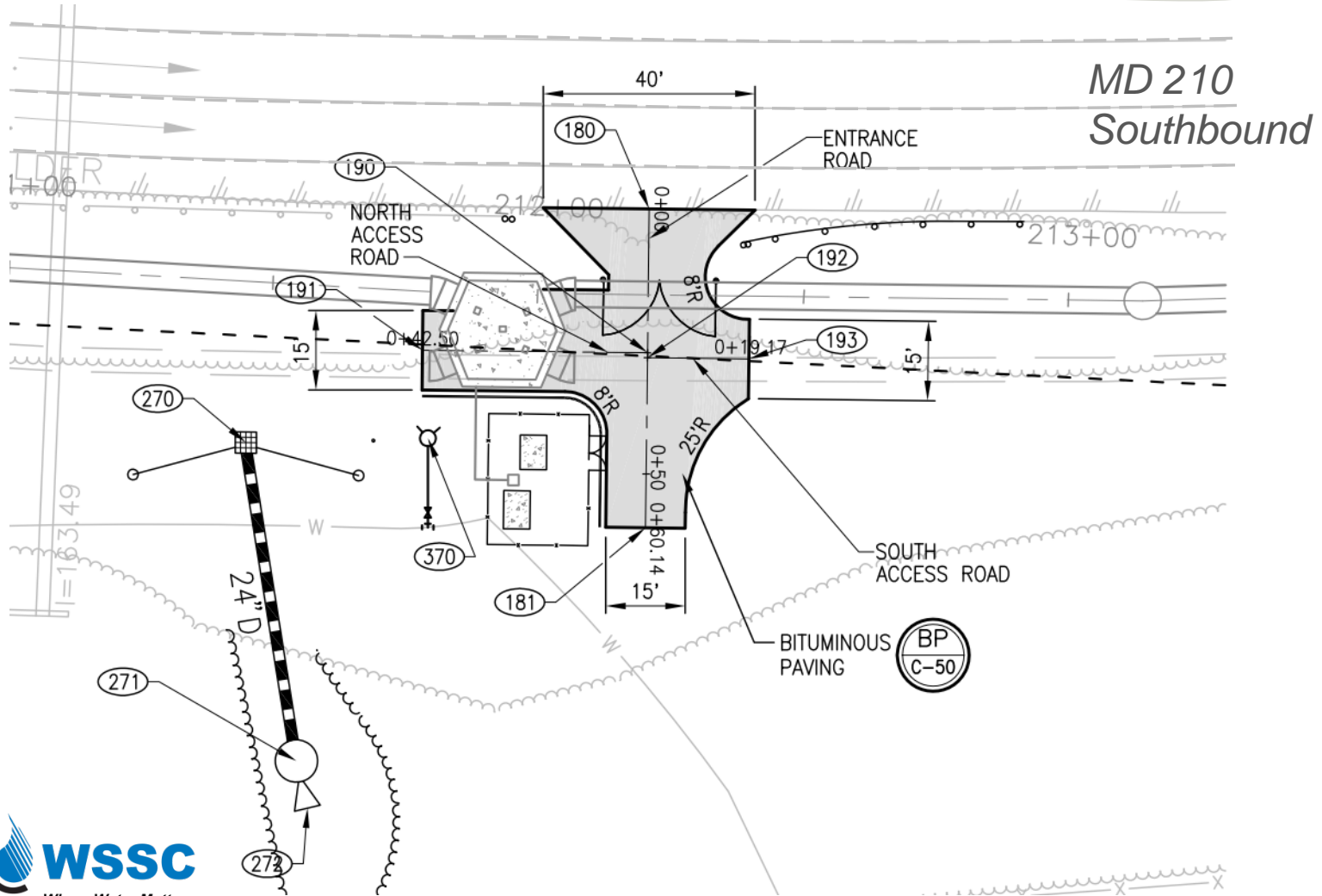
# Tunnel Shaft / Air Release Vault -Site Restoration Plan



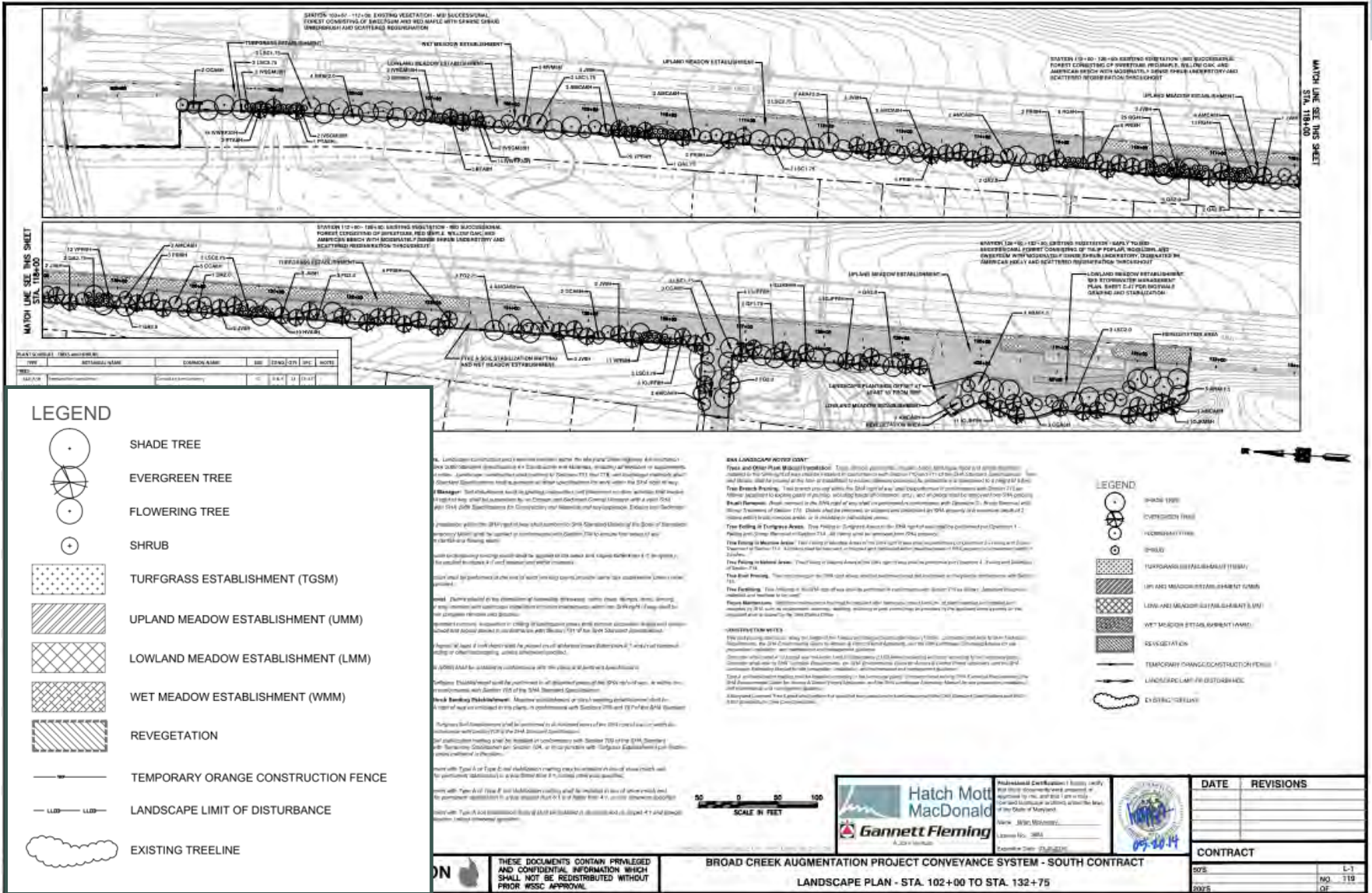
# Tunnel Shaft / Swan Creek Vault -Site Restoration Plan



# Transition Structure 2



# Landscaping – Post Construction





# Comments and Questions?

## Contact Information:

Austin Freeman, Project Manager

[Austin.Freeman@wsscwater.com](mailto:Austin.Freeman@wsscwater.com)

301-206-8328

*Thank you for attending  
tonight's meeting*



# Project Status – Bid/Construction

## Piscataway WWTP Headworks and Storage Improvements

- Under Construction – Estimated Completion Date: May 2016

## South Conveyance System

- Bid Awarded August 2014 – Construction to begin December 2014

## North Conveyance System and Pump Station Improvement

- Waiting on National Park Service Access Agreement. Bid Estimated in 2015.