DC CLEAN RIVERS PROJECT

Northeast Boundary Tunnel and WMATA Coordination

Florida Avenue Site

Background
Project Snapshot

- Long Term Control Plan (LTCP) to:
  - Relieve flooding in the Northeast Boundary Area
  - Control combined sewer overflows to:
    - Potomac River
    - Anacostia River
    - Rock Creek
  - Meet nutrient discharge limits of Chesapeake Bay Program
- Schedule: 2005-2023
- Implemented under a Federal Consent Decree among:
  - United States Environmental Protection Agency (US EPA)
  - United States Department of Justice (US DOJ)
  - District of Columbia
  - DC Water

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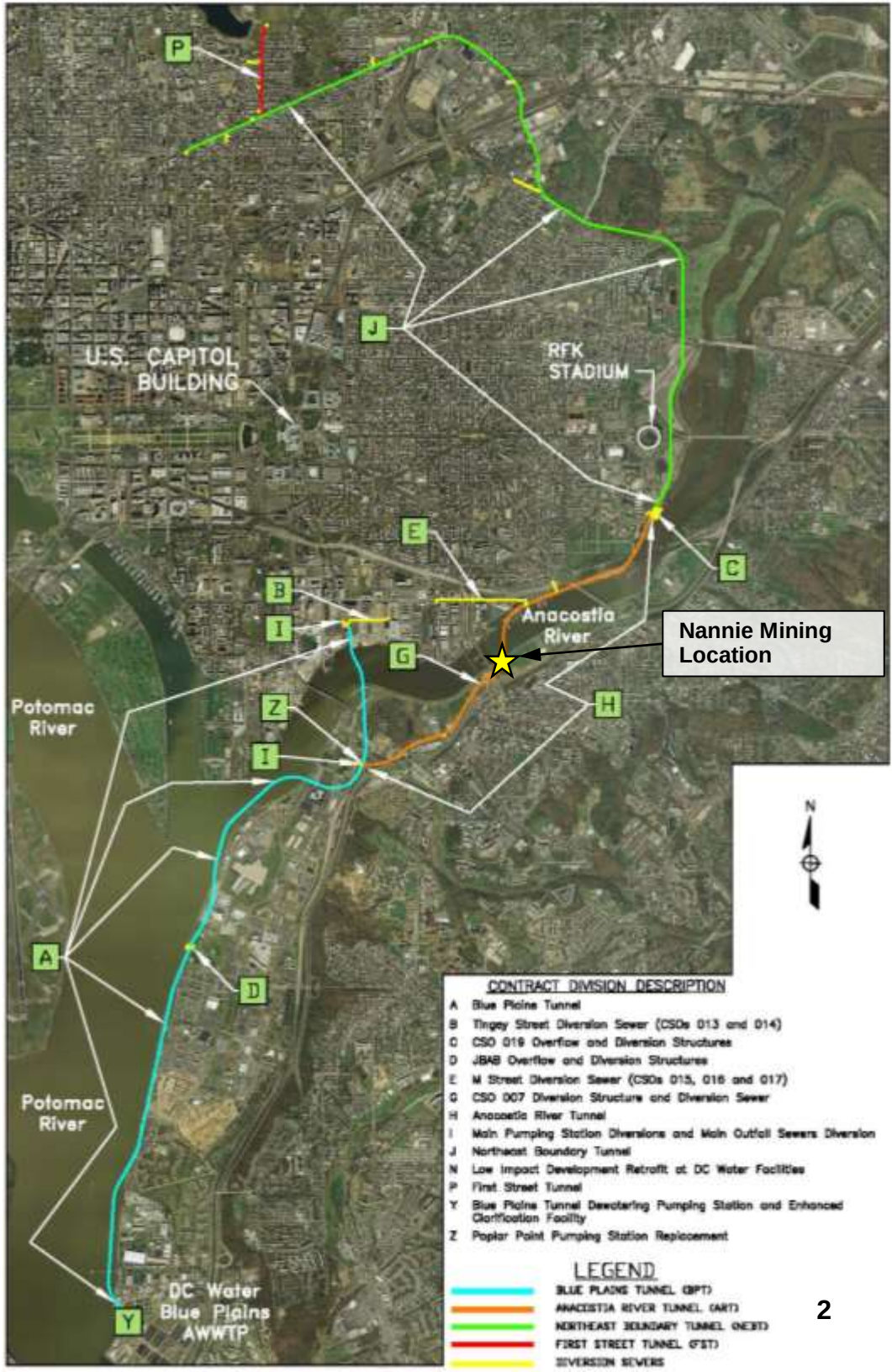


Summer 2012 Storm Events: Surface Flooding

Photo source unknown

1st St NW

Photo source unknown

Rhode Island & T St NW

Photo courtesy of: Greg Roberts

Rhode Island & 1st St NW

Photo source unknown

Rhode Island Metro

Photo courtesy of myfox.com

Rhode Island & T St NW

Photo source unknown

1st & V St NW

Photo courtesy of myfox.com

Flagler St NW

Photo source unknown

Photo courtesy of huffintonpost.com

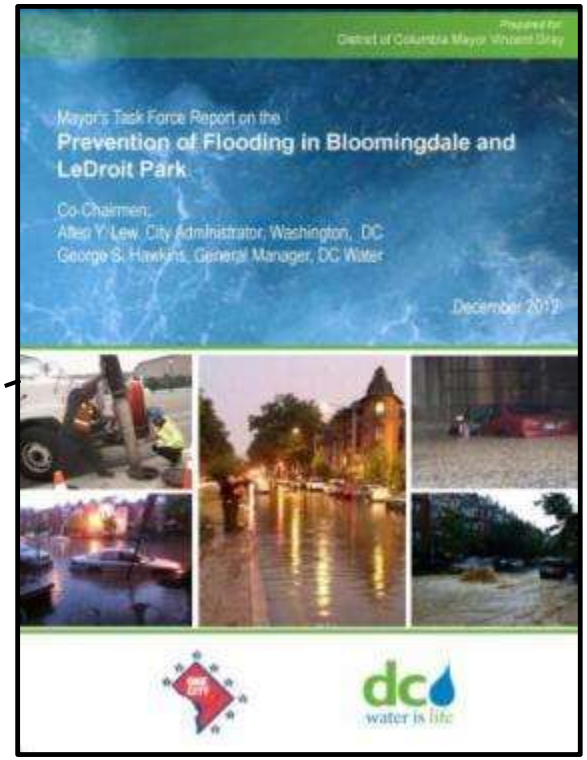
Rhode Island Between 1st & 2nd St

Mayor's Task Force
Overview

4 storms caused major flooding: July 10, 18, 19 and Sept 2, 2012

Mayor formed Task Force in Aug 2012

Task Force report delivered end of Dec 2012



Over 25 Recommendations:

- Public Outreach
- Regulatory
- Code Changes
- Operations & Maintenance
- **Engineering Measures**
  - McMillan Stormwater Storage
  - First Street Tunnel
  - Northeast Boundary Tunnel (NEBT)

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Mayor's Task Force
Recommended Plan

1. SHORT-TERM (NOT ILLUSTRATED)

- Construction of green infrastructure projects
- Installation of storm drains and a five-foot-wide storm sewer
- Backwater valve and rain barrel program

2. MEDIUM-TERM

IRVING STREET GREEN INFRASTRUCTURE PROJECT

- Construction of bioretention facilities along Irving Street NW
- 0.4 million gallons, Completed

MCMILLAN STORMWATER STORAGE PROJECT

- Repurpose McMillan Sand Filtration cells as stormwater storage
- In-line storage in a sewer that runs along First Street NW
- 3.6 million gallons, Completed

FIRST STREET TUNNEL PROJECT

- Construction of a new tunnel under First Street NW
- Construction of diversion facilities to divert flows to tunnel
- 9 million gallons, Summer 2016

3. LONG-TERM

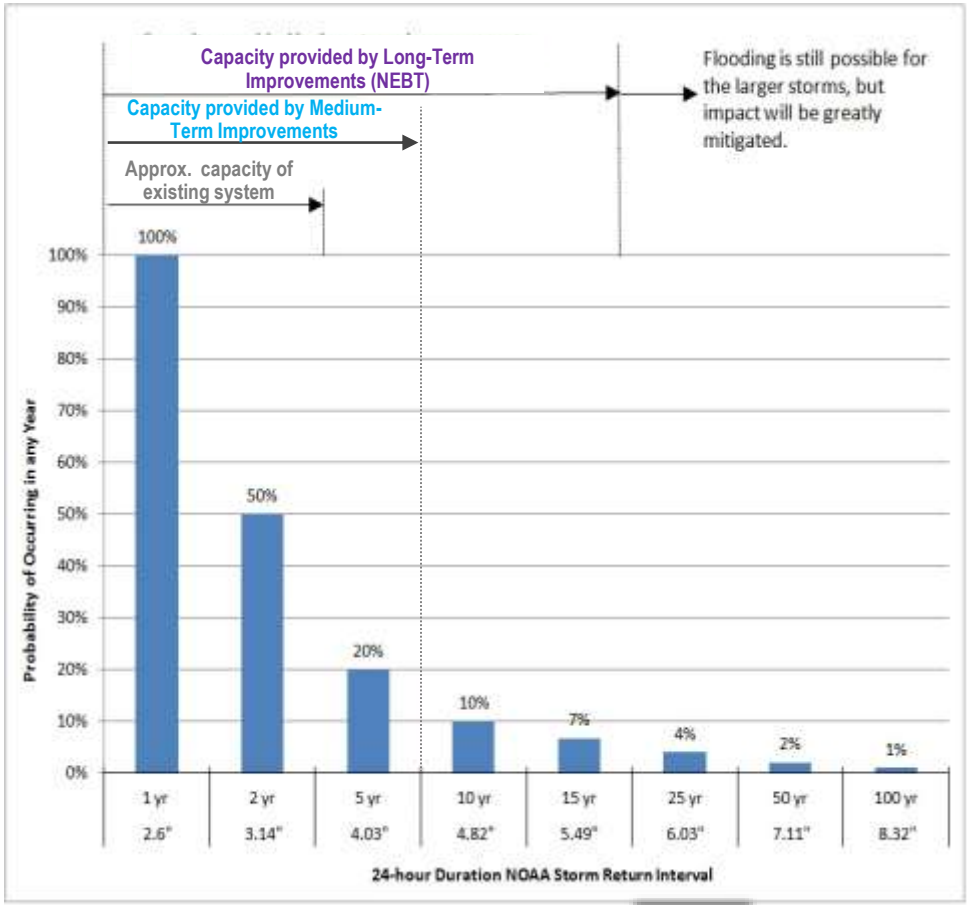
NORTHEAST BOUNDARY TUNNEL PROJECT

- A large, deep sewer tunnel that will increase the capacity of the sewer system to current design standards and control combined sewer overflow discharges to the Anacostia River
- Completion in 2023

Mayor's Task Force
Benefits

- Significantly mitigate the frequency, magnitude and duration of sewer flooding and basement backups in the Northeast Boundary drainage area
- Control combined sewer overflow (CSO) discharges to the Anacostia River, significantly improving water quality
- Minimize the nuisance and economic costs associated with flooding
- Reduce risks to human health
- Greatly reduce the discharge of untreated wastewater into the District's receiving waterbodies
- Prevent deterioration of historic resources from water damage caused by flooding

Flood Relief



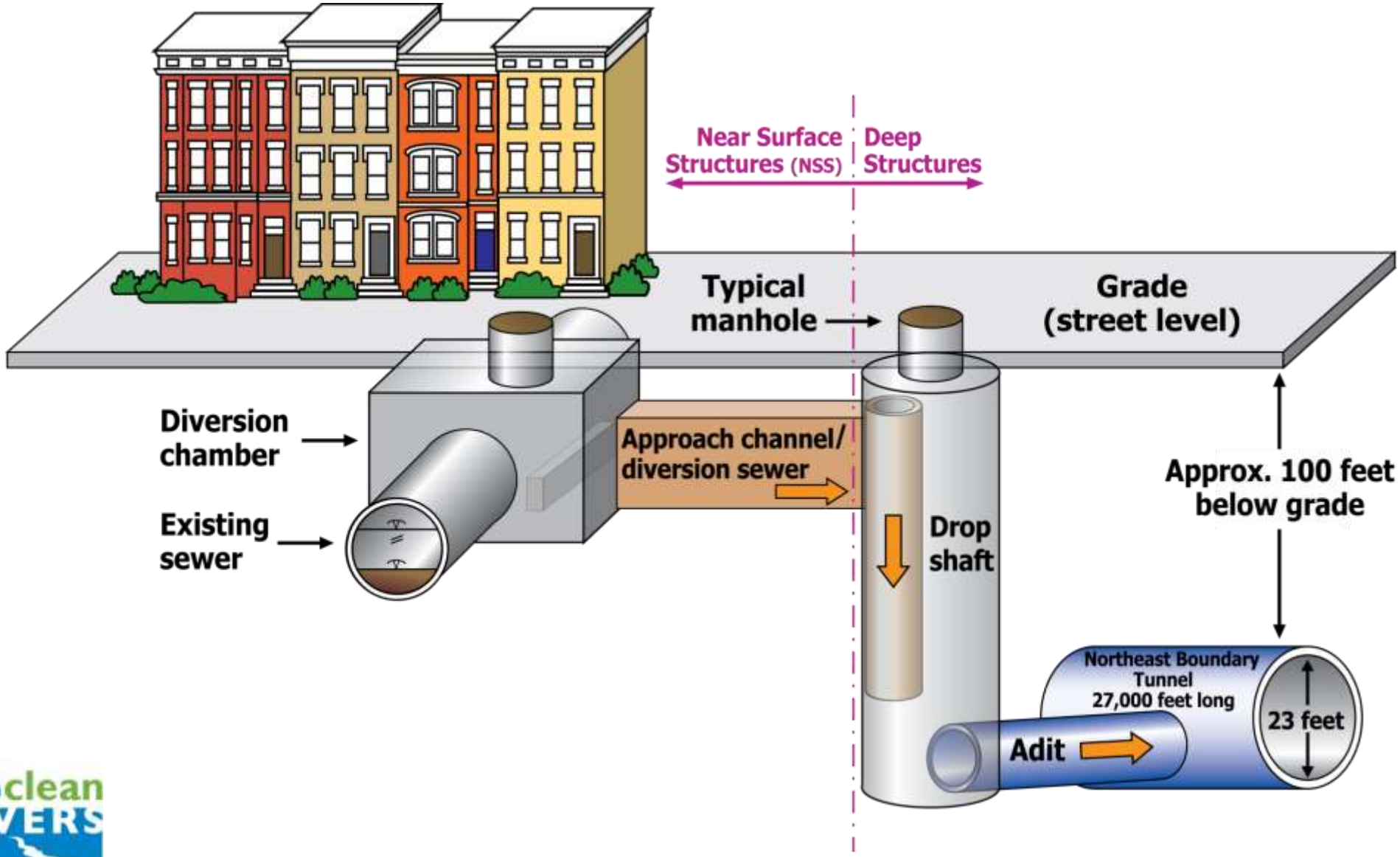
CSO Reduction

CSO Reduction Project Timeline	CSO Overflow Volume to Anacostia River (mg/yr)	% Reduction from Baseline
1996: Baseline: Without Inflatable Dams or Pumping Station Rehab	**2,142**	
2008: After Inflatable Dams and Pumping Station Rehab	**1,282**	**40%**
2018: Blue Plains and Anacostia River Tunnels	**407**	**81%**
2023: Northeast Boundary Tunnel*	**54**	**98%**

SIGNIFICANT CSO REDUCTION

*** 2025 Consent Decree Deadline; Project accelerated due to Mayor's Task Force recommendations.**

Northeast Boundary Tunnel
What is a Diversion Facility?



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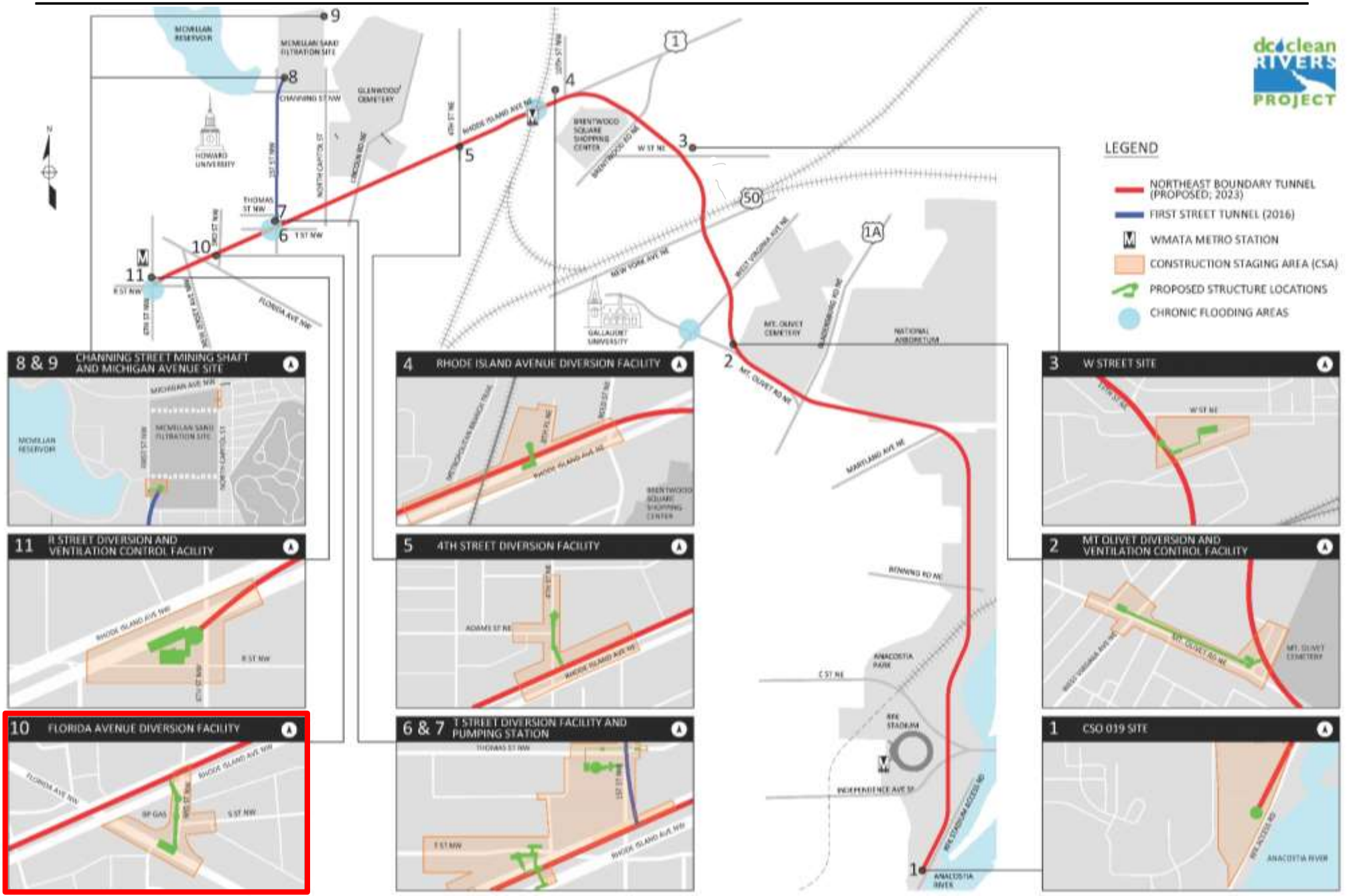
Northeast Boundary Tunnel
Alignment and Chronic Flood Areas



Northeast Boundary Tunnel
Phases of Work

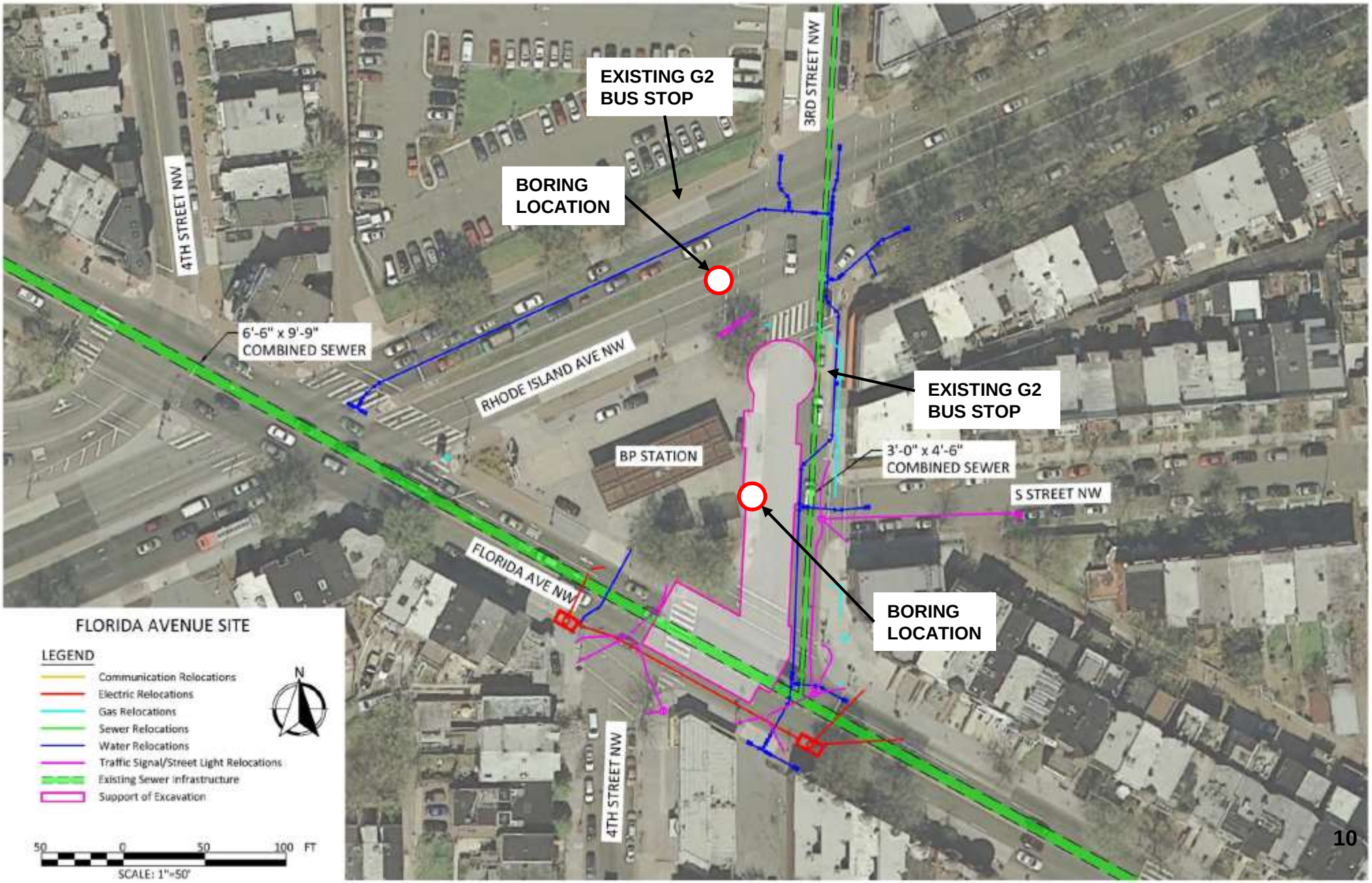
- In order to accomplish the Mayor's Task Force goals, construction work has been divided into two distinct phases

Phase	Description	Start	Finish
A	• Relocation of utilities (gas, electric, communication, water, sewer, etc.) that conflict with permanent diversion facility structures • Typical linear trench-type utility work • Borings • Moving work areas • Short durations	May 2016	September 2017
B	• Construction of NEBT and diversion facilities along tunnel alignment • Stationary work areas • Long durations	September 2017	May 2023

Northeast Boundary Tunnel
Utility Relocations

Anticipated Start of Construction

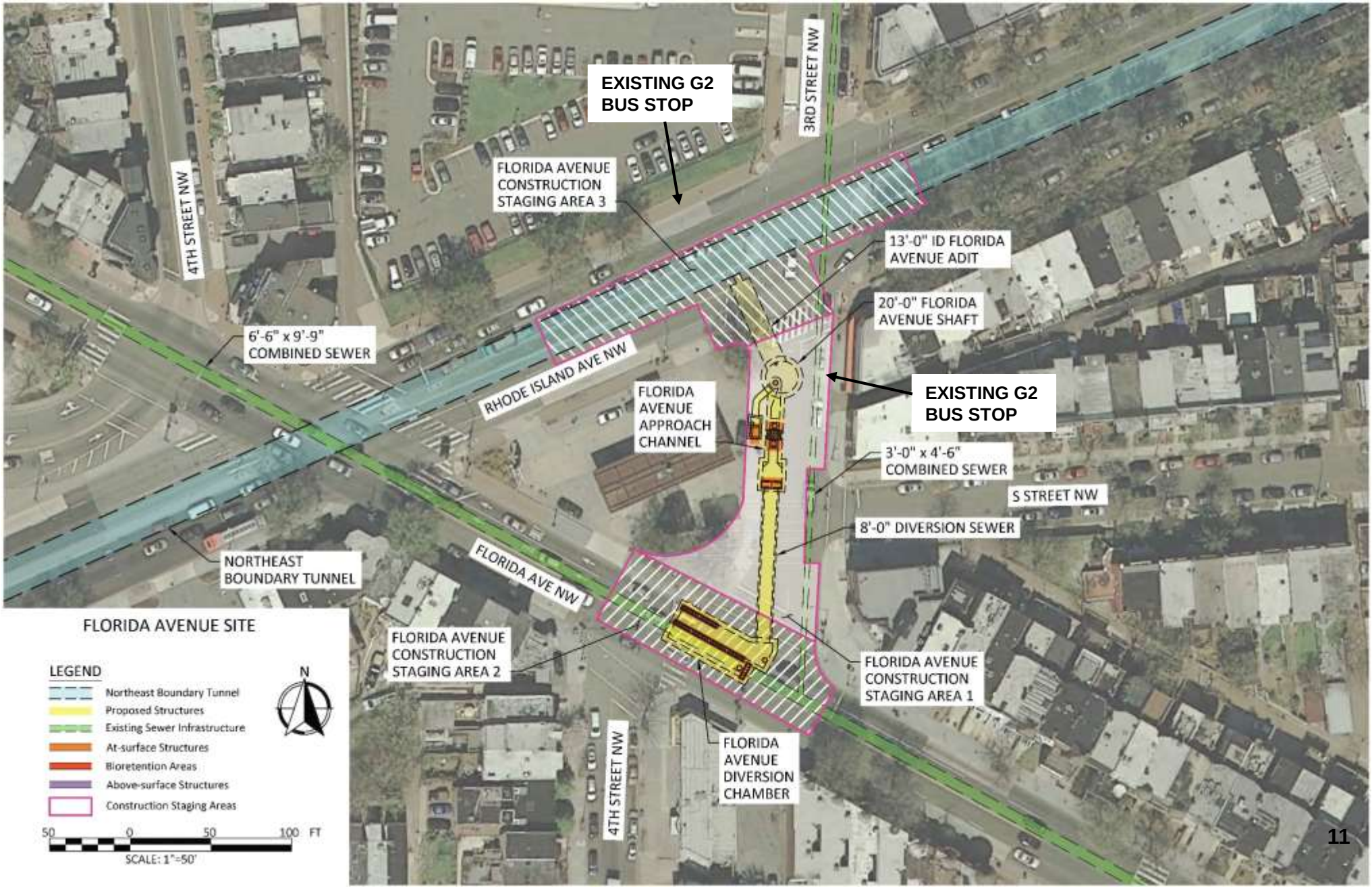
Washington Gas	June 2016
Pepco	June 2016
DC Water Contractor	April 2017



Northeast Boundary Tunnel
Florida Avenue Construction Site

Anticipated Start of Construction

DC Water Contractor Sept. 2017



Why is the G2 Detour Required?

- Sidewalk and lane closures along the G2 route are required to complete the work
- Currently, WMATA using same 40-ft buses from existing route. Forcing less direct routing
- 40-ft buses will be replaced with 30-ft buses at next opportunity for garage switchover (June 26), allowing more direct routing
- WMATA will increase rush hour frequency of buses to maintain capacity
- Bus detour will remain through construction (2023) and will be reevaluated at that time

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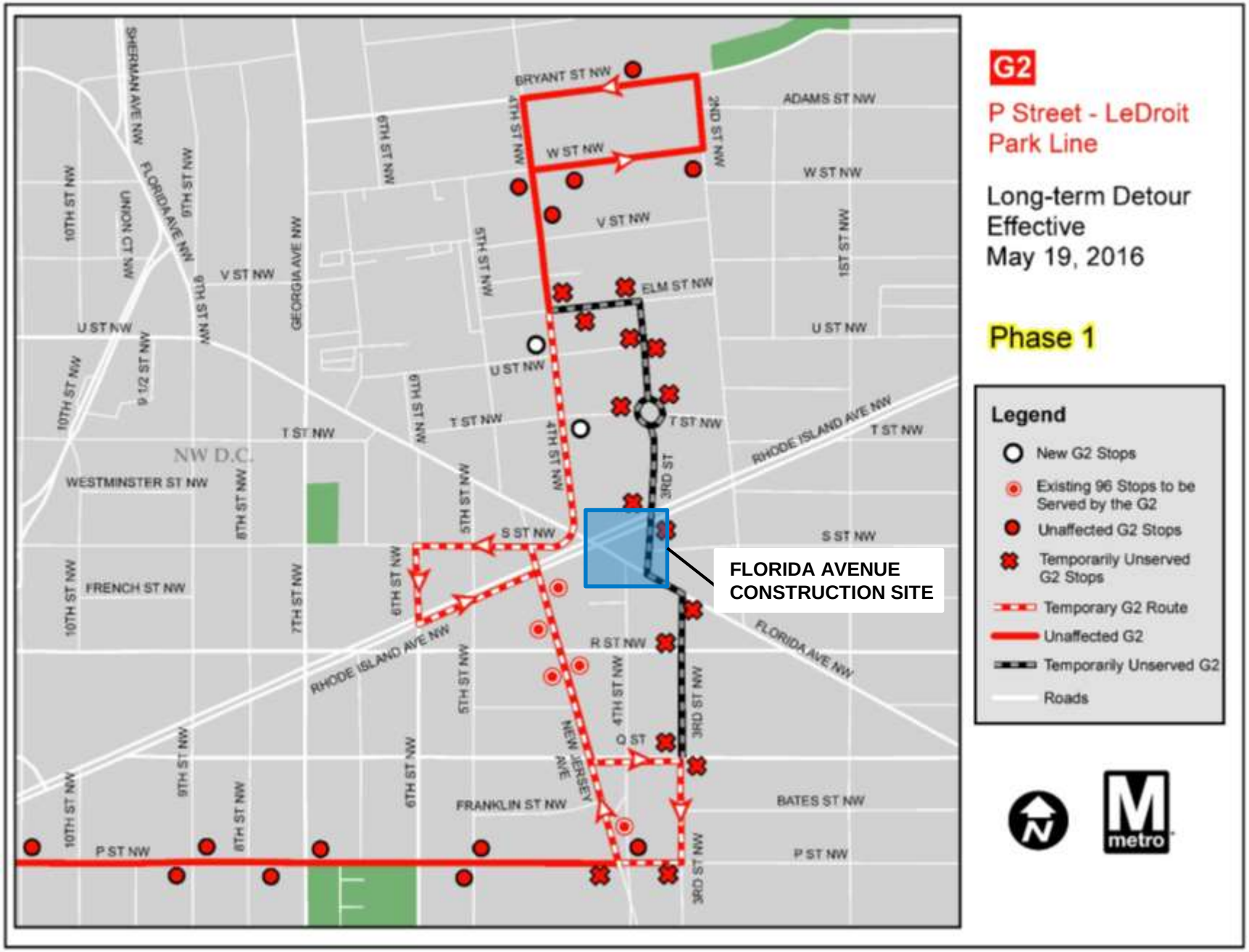
WMATA G2 Detour Phase 1



WMATA G2 Detour Phase 2

Next Steps

- Continue public outreach throughout the project area
- Relocate utilities in advance of construction: June 2016
- NEBT Construction: September 2017 – May 2023