



Metropolitan Water Tunnel Program

Asticou Martinwood South Street Neighborhood Association

Tunnel Program Summary and Geotechnical Investigation Overview

February 28, 2023

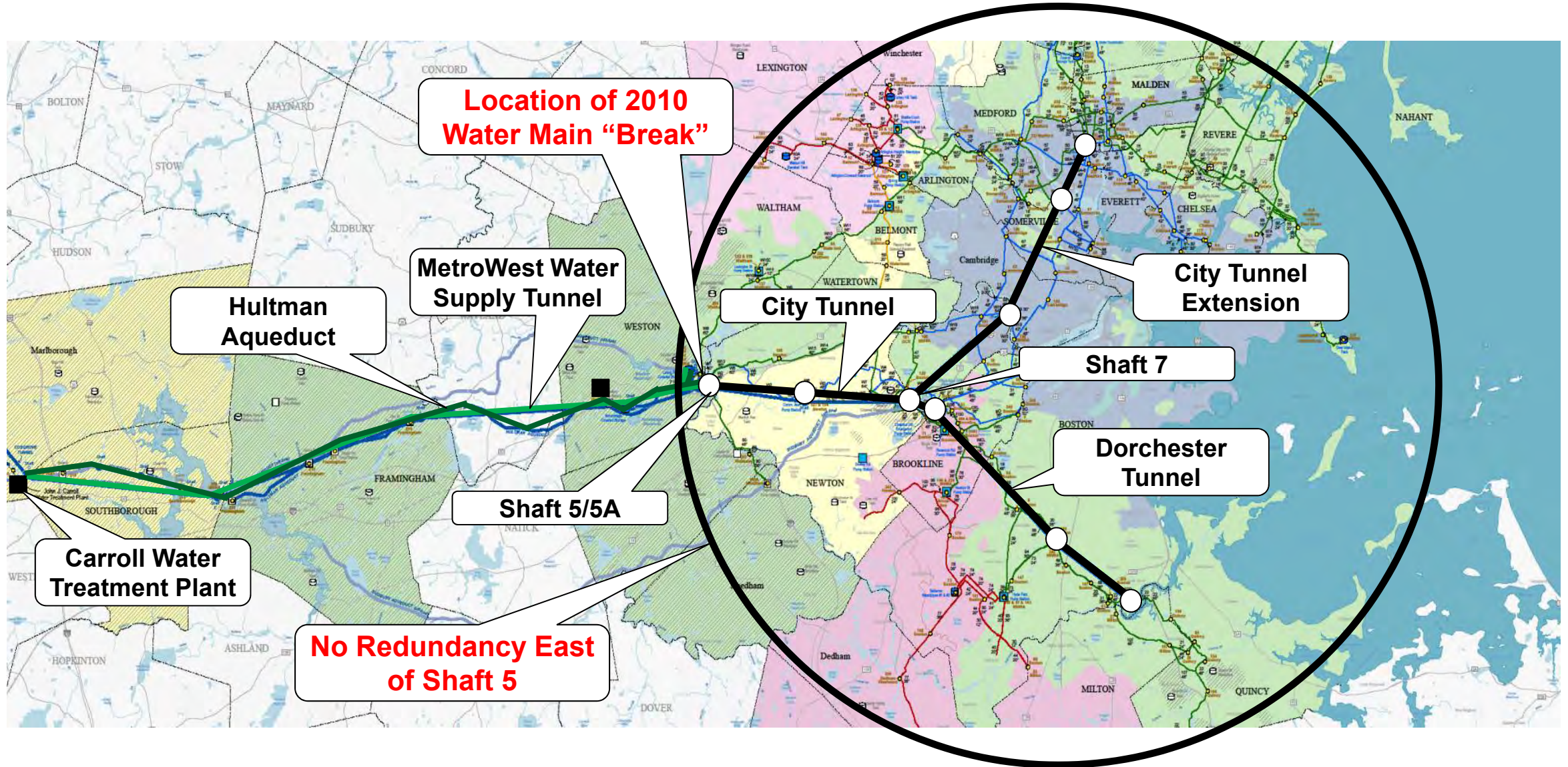


Topics

- Metropolitan Water Tunnel Program
- Tunnel Program Schedule
- Geotechnical Investigation Program
- Where to Find Information / How to Contact Us
- Questions?



Metropolitan Tunnel System Serves About 60 Percent of Water Demand in Metropolitan Area





Metropolitan Water Tunnel Program Purpose

- Our current Metropolitan Tunnel System, servicing the Boston area, is in need of repair
- The tunnels, valves, chambers & pipelines are between 50 – 80 years old

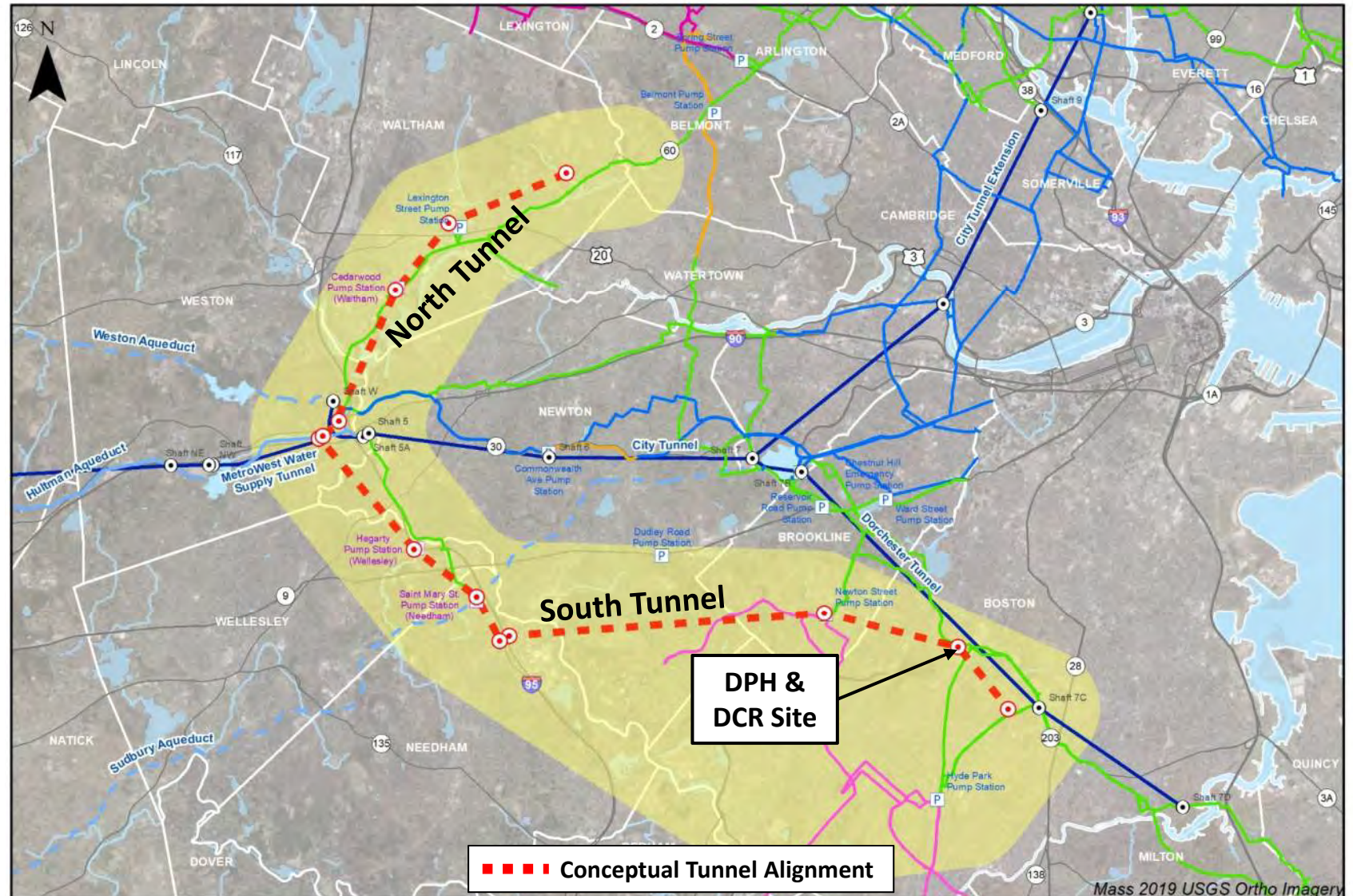


- Currently we cannot maintain our tunnel system east of Shaft 5 in Weston because a shutdown of the entire Metropolitan Tunnel System would be required
- The **Metropolitan Water Tunnel Program** will solve that problem by creating a redundant water tunnel system allowing the old system to be completely taken offline for inspection, maintenance, and repair



Metropolitan Water Tunnel Program

- ~14.5 miles of deep, hard rock, pressure tunnel
- Tunnels will begin in the Weston (I-90/I-95 vicinity)
- Northern Tunnel - ~4.5 miles, ends in Waltham/Belmont line
- Southern Tunnel - ~10 miles, ends in Mattapan near American Legion
- Six intermediate connections to existing water infrastructure
- Construction anticipated between 2027 and 2040





Tunnel Program Schedule

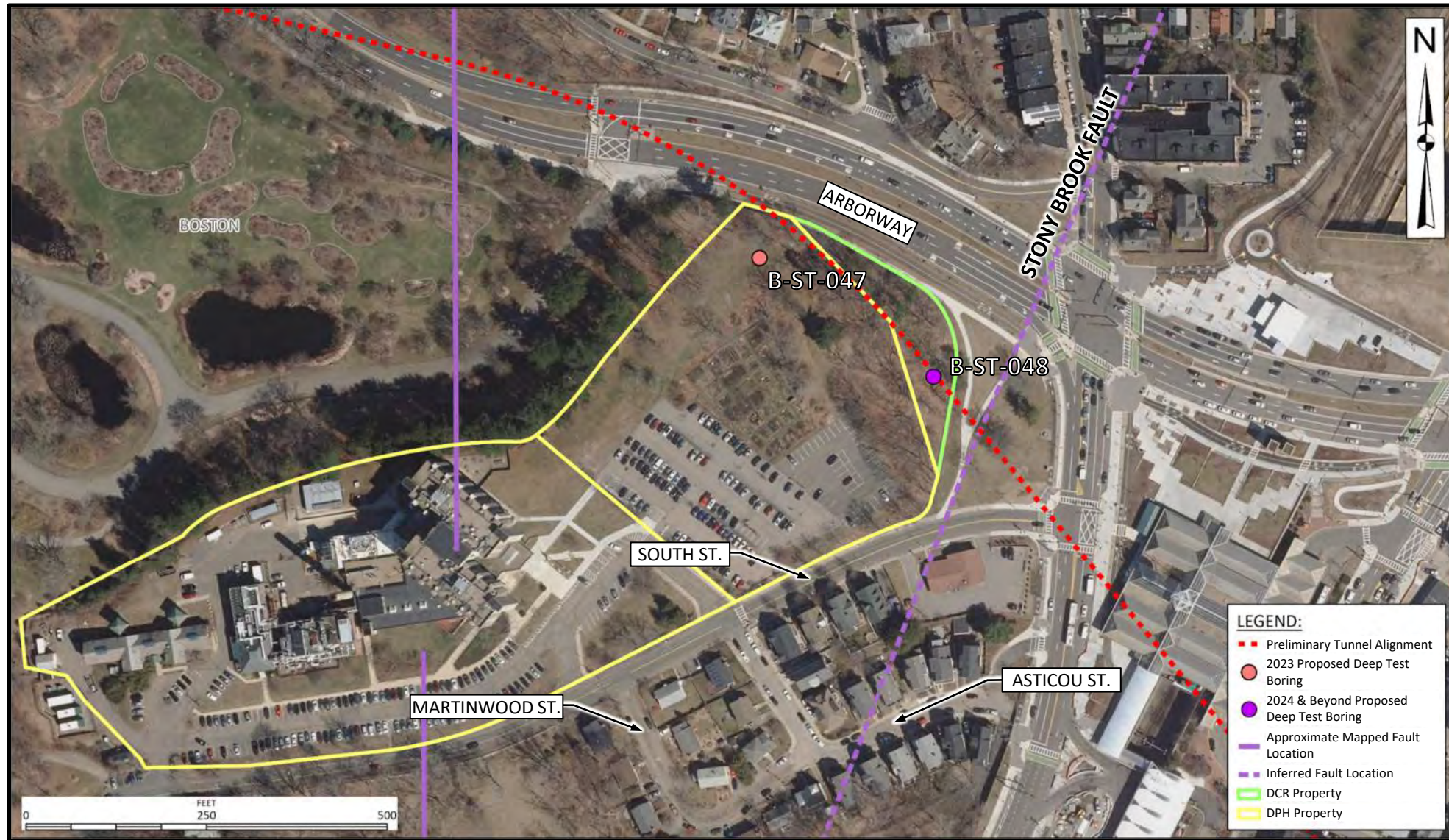
- Overall Program Schedule
 - Preliminary Design is ongoing thru early Jan 2024
 - Currently planning a large geotechnical investigation program to start in 2023
 - Targeting Final Design to start in mid 2024
 - Targeting first tunnel construction contract to bid in 2027
 - Program completion by 2040
- Preliminary Design Status
 - Evaluate tunnel alignment alternatives
 - Geotechnical investigations
 - Environmental Impact Reports
 - Preliminary Design Report
 - Establish contract packages
 - Refine Program cost and schedule

} We are Here





Deep Test Borings Overview





Geotechnical Investigation – Deep Test Borings

- Deep Test Borings
 - ~4-inch diameter borehole, ~400 ft deep
 - Focus on engineering properties, soil and rock core samples
 - Upon completion of drilling downhole geophysical logging and permeability testing will be conducted in the borehole
 - Piezometers will be installed for water level measurement
- What will I see?
 - Typically fenced-in work area
 - Erosion and sedimentation controls around work area
 - Drill rig, support truck, water truck/tanks, testing equipment, area for rock core logging, portable toilet etc. with about 3 to 6 person crew



Deep Boring Site Plan



Geotechnical Investigation – Deep Test Borings

- Upon completion:
 - All excess materials drummed and remove from site
 - Piezometers will be installed for water level measurement
 - Work site restored upon completion (before, during, and after photos taken at all locations)



Before

During

After





Geotechnical Investigation – Deep Test Borings

- How long will it take?
 - Given the depth and the testing to be done within each borehole, it is anticipated each boring will take about 6 to 8 weeks to complete
 - Work will be during normal business hours (typically Monday-Friday, 7am to 5pm)





Schedule Sequence

- Anticipated Schedule Sequence
 - Distribute Notice to Abutters and Program Field Work Fact Sheets door-to-door
 - Site Preparations
 - Conduct Deep Test Boring
 - Site Restoration
 - Periodic Groundwater Level Reading – long term(ish)





Conceptual Permanent Condition & Access – Southern Spine Mains



Conceptual Permanent Site Access

Conceptual Permanent Condition:

- Off Arborway, at grade site access
- Maintain pedestrian & bike paths
- Secure but also fitting for the neighborhood (e.g., stone retaining wall, iron-work fencing, and landscaping)
- Low impact use by MWRA



Conceptual Permanent Condition



MWRA Operations – Post Construction Site Use

- Regular security checks
- Operations
 - Daily inspections
 - Occasional water quality sampling
- Occasional Maintenance/Repairs
 - Valve operations
 - Valve replacement
 - Cathodic protection testing and anode replacement, etc.
- Site Maintenance
 - Snow removal
 - Lawn care



MWRA Shaft 7C
Morton St/American Legion, Boston



Where to Find Information / How to Contact Us

- <https://www.mwra.com/mwtp.html>
 - Program documents (ENF, DEIR, fact sheets)
 - Meeting notices, agendas, presentations, minutes
- Contact Us
 - Carmine DeMaria, Community Relations Coordinator
 - 617-305-5725
 - Carmine.DeMaria@mwra.com
 - Tunnels.info@mwra.com



Metropolitan Water Tunnel Program



Thank You!