



**Massachusetts Water Resources Authority**

**Metropolitan Water Tunnel Program  
Water Supply Citizens Advisory Committee**

**Program Update**

January 10, 2023



# Metropolitan Water Tunnel Program





# Agenda

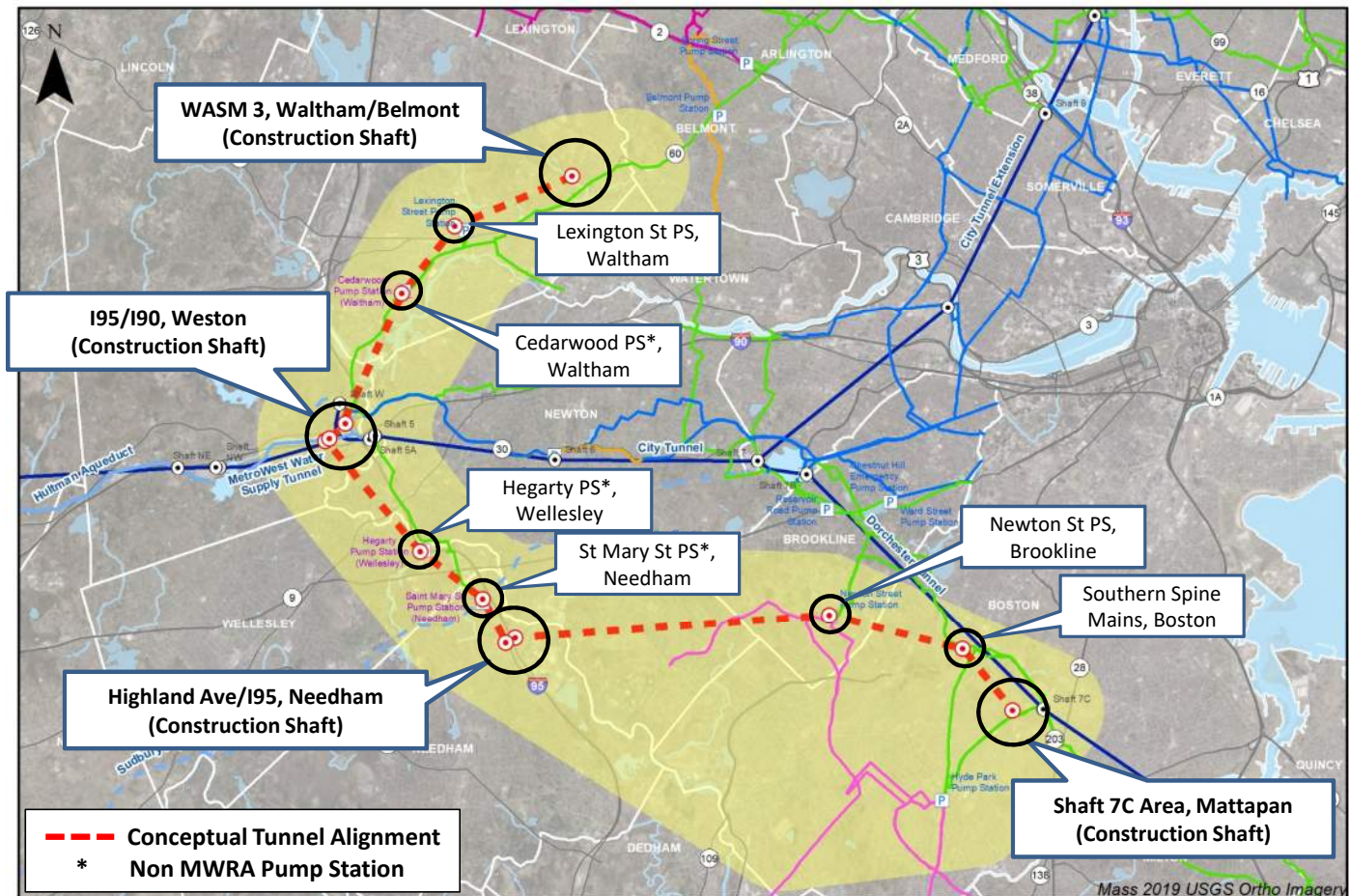
- Metropolitan Water Tunnel Program Update
- Preferred Alternative
- MEPA Review Process
- Preliminary Design
- Geotechnical Update
- Community Outreach
- Ongoing and Upcoming Work
- Thank You and Questions





# Metropolitan Water Tunnel Program

- ~14 miles of 10 ft diameter, hard rock, pressure tunnel
- Time to complete: 17 to 23 years (design - commissioning)
- Current plan is for tunnels to begin in the Mass Pike/Route 128 vicinity
- Northern Tunnel - ~4.5 miles, ends in Waltham/Belmont area @ WASM3
- Southern Tunnel - ~10 miles, ends in Mattapan near Shaft 7C
- Anticipate first tunnel construction procurement to start in 2027



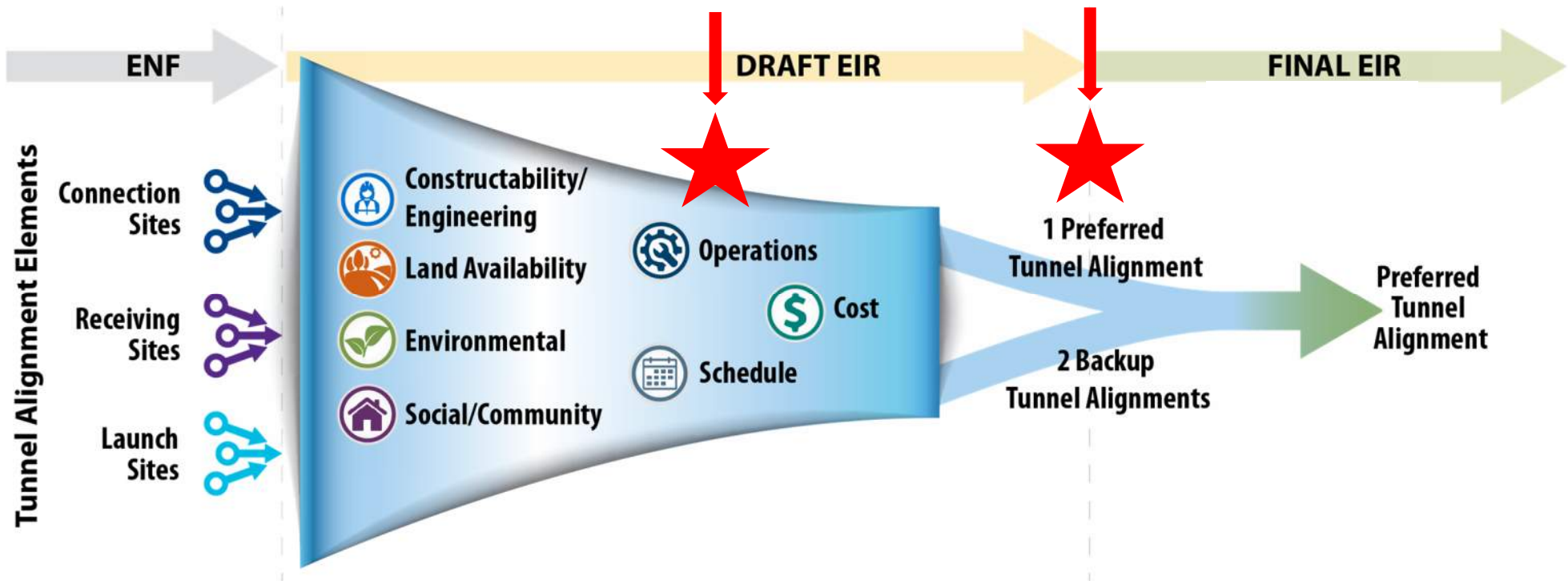
For discussion only



# Alternatives Evaluation Process

WSCAC last update (Feb 2022) - We were here

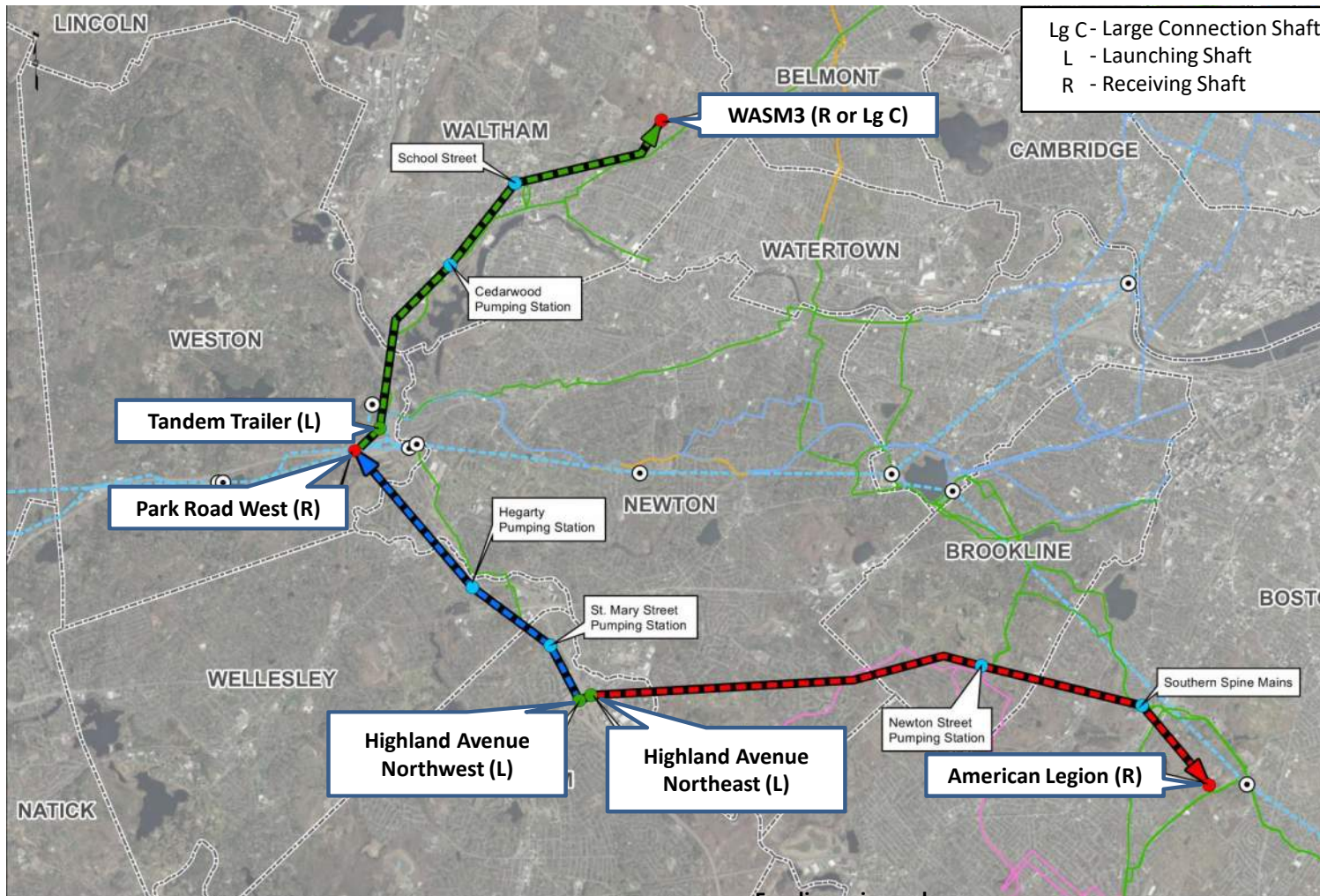
We are now here



For discussion only



# Alternative 4 – Preferred



For discussion only

## Key Challenges

- Use of Tandem Trailer Parcel after completion of future MassDOT bridge construction

## Key Benefits

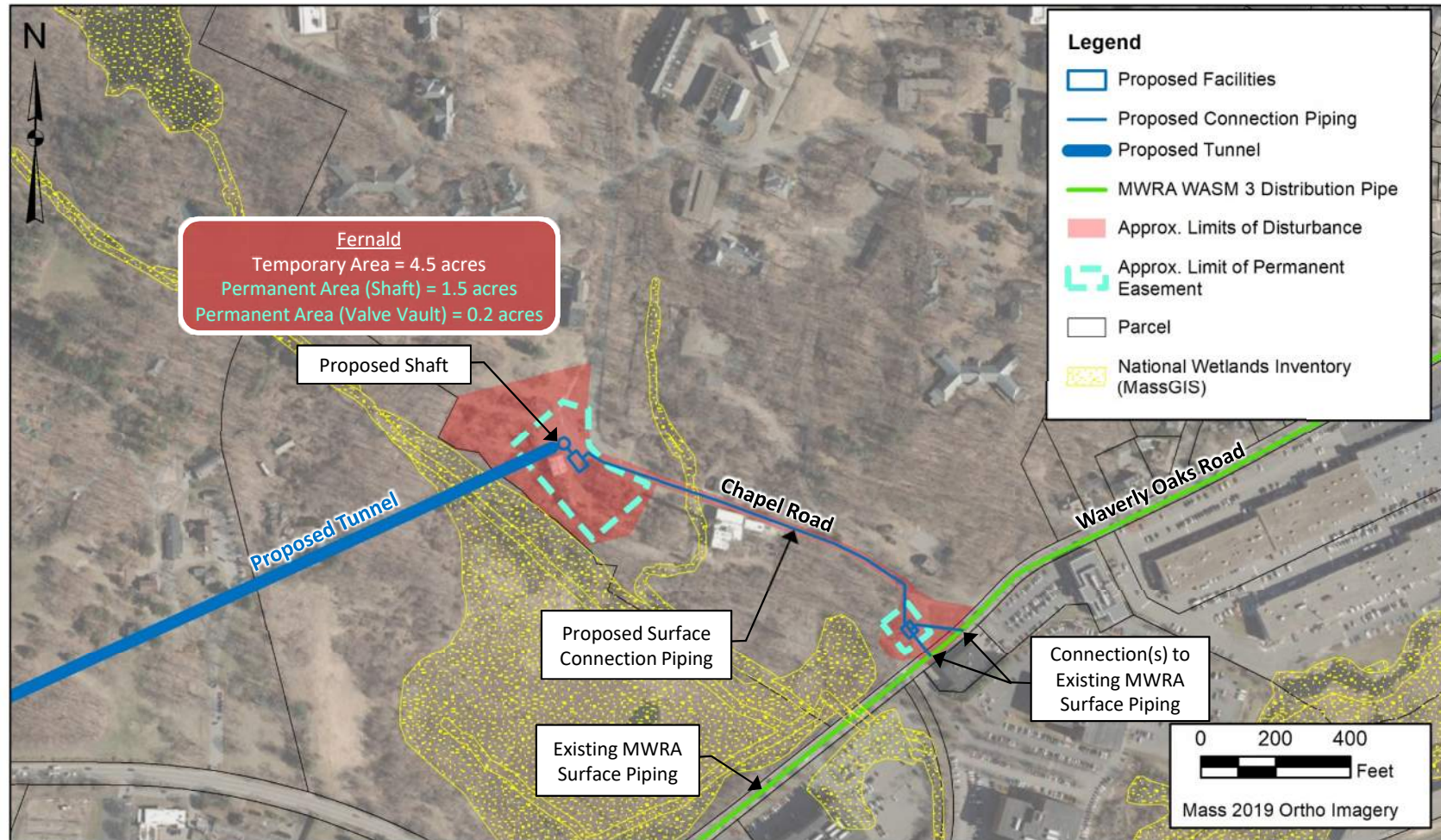
- Shares Tandem Trailer parcel
- Substantially mitigates impact from MassDOT bridge project
- Highland Ave splits southern tunnel into shorter tunnel segments
- Provides additional security by separating Hultman connections
- Contract packaging flexibility (2 or 3 packages)
- Earliest opportunity to put either north or south tunnel “in service”



# WASM3 Connection (Fernald Property as Receiving Shaft)

## Site Characteristics:

- Owned by City of Waltham
- Wetlands Present
- Historic properties
- MCP sites
- Previously disturbed
- Supplemental DEIR to look at alternatives



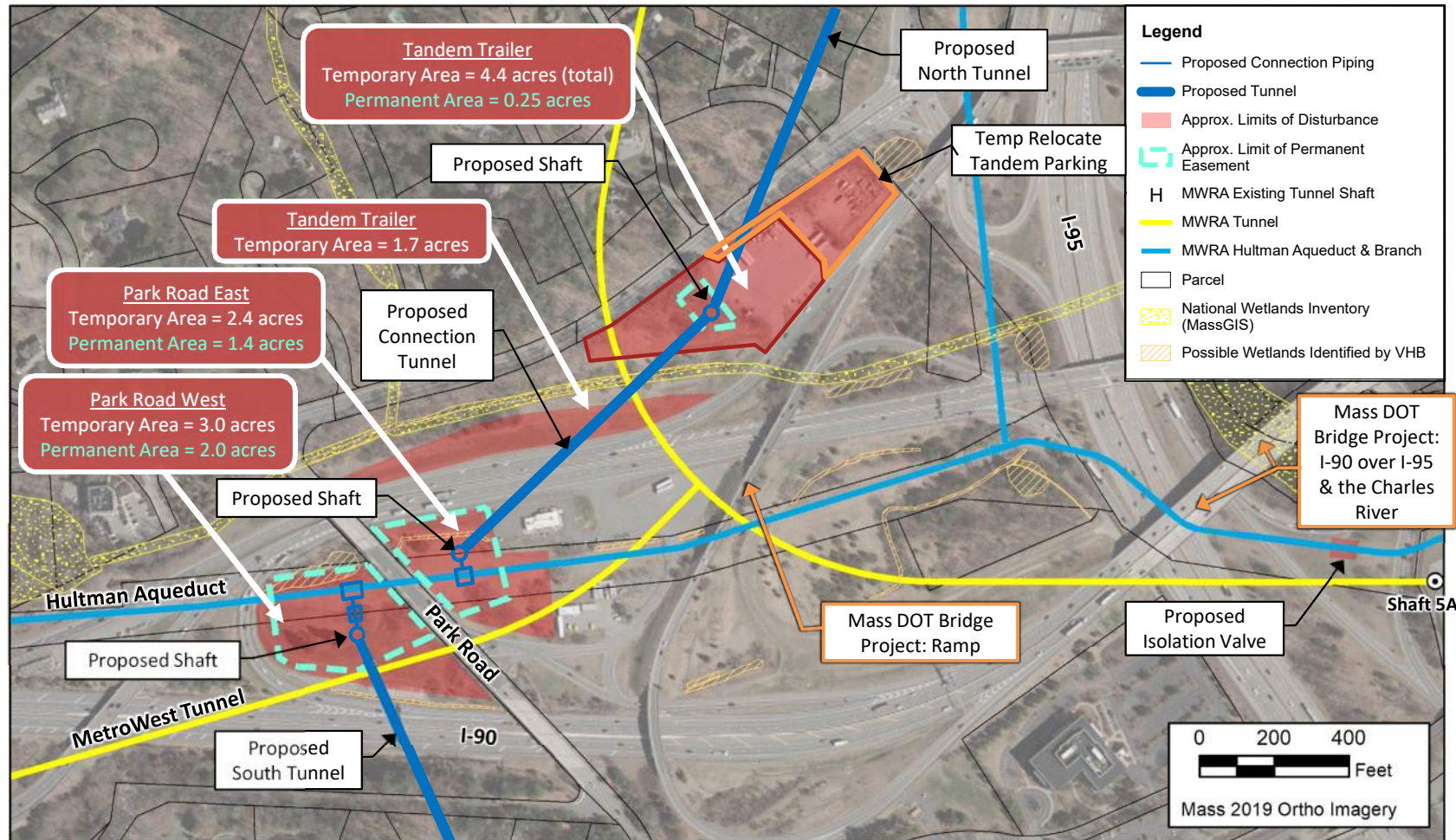
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# I-90 / I-95 Interchange

## Site Characteristics:

- Owned by MassDOT and MWRA
- Wetlands Present
- Previously disturbed, portions paved
- MWRA Hultman Aqueduct



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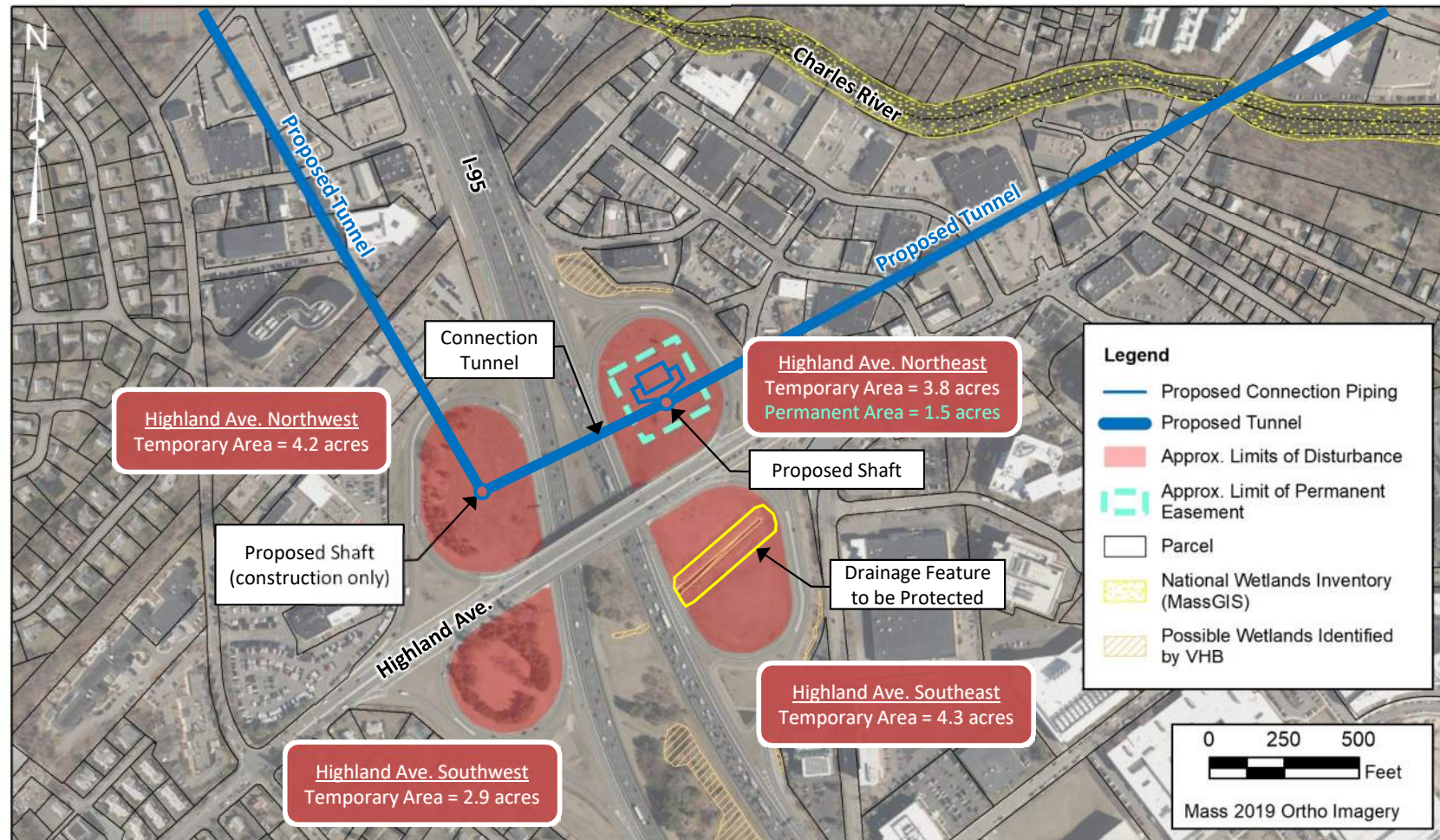




# Highland Avenue Northwest or Northeast

## Site Characteristics:

- Owned by MassDOT
- Wetlands Present
- Previously used for construction staging



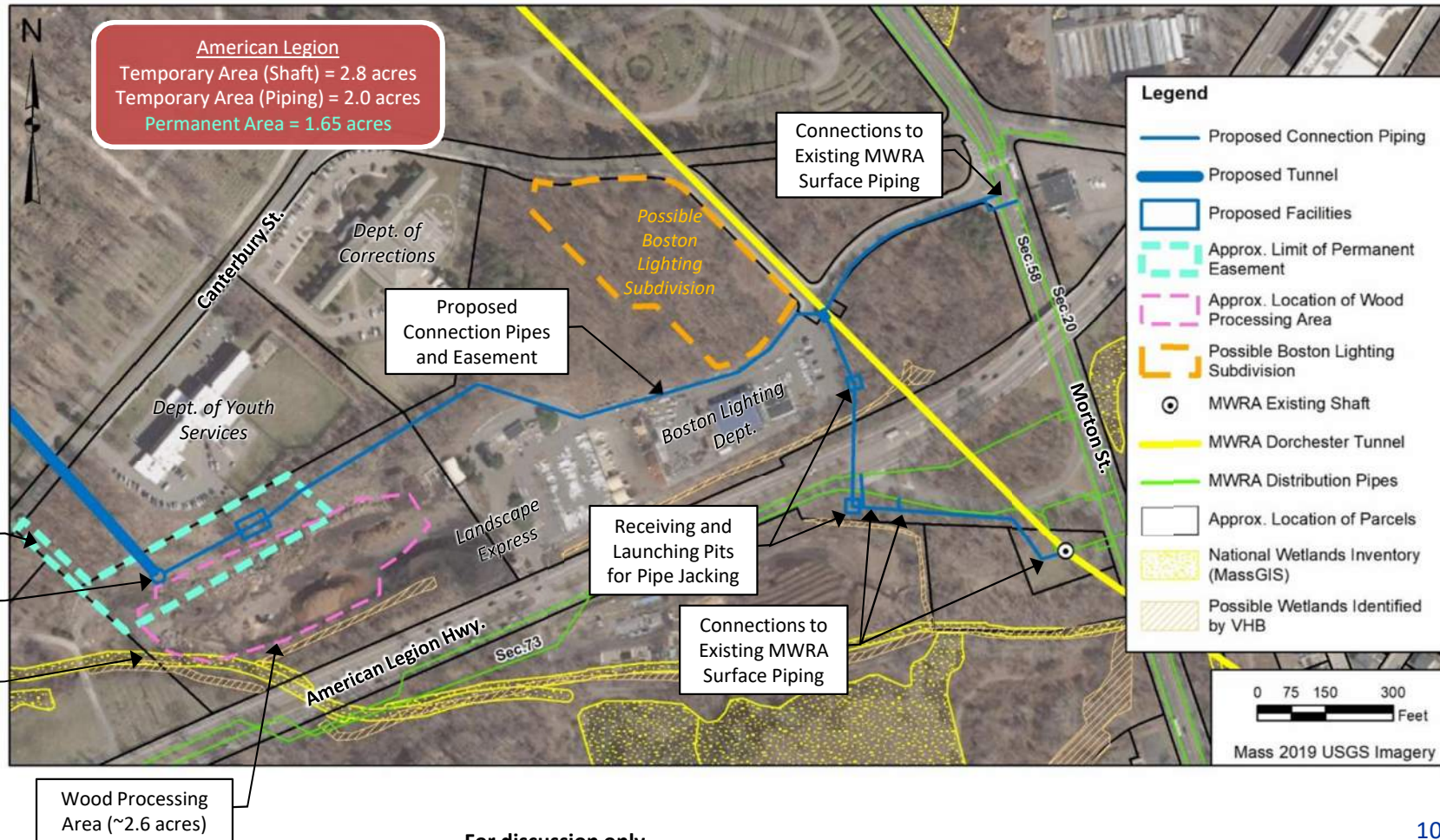
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# American Legion

## Site Characteristics:

- Owned by DCR and DYS
- Wetlands Present
- Article 97 Required
- Commercial business on site



For discussion only



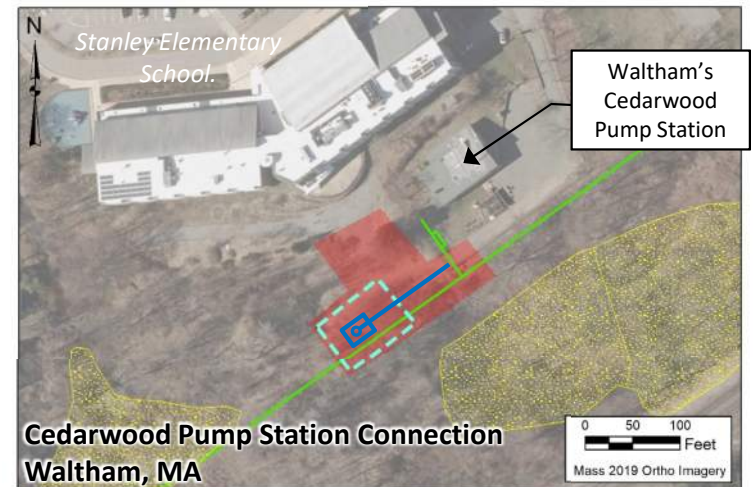
# Connection Shafts (North Tunnel)

## Site Characteristics School Street:

- Owned by MWRA
- Previously a restaurant parking lot, all paved

## Site Characteristics Cedarwood PS:

- Owned by City of Waltham
- Wetlands Present
- Previously disturbed



For discussion only



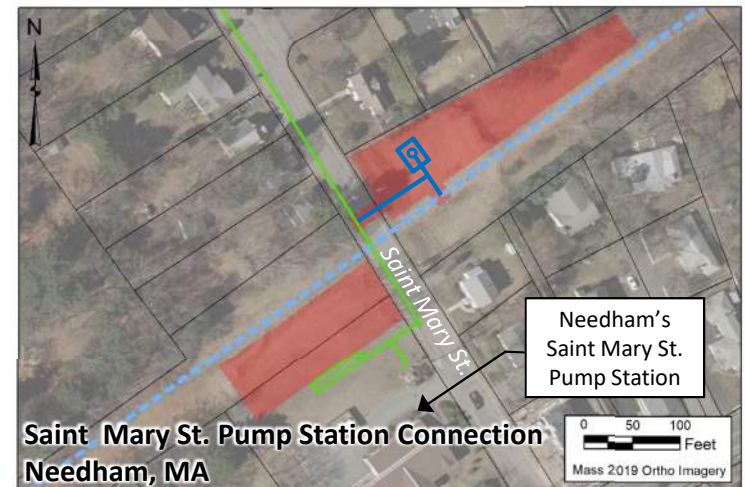
# Connection Shafts (South Tunnel)

## Site Characteristics Hegarty PS:

- Owned by Town of Wellesley
- Potential Article 97
- Wetlands Present

## Site Characteristics St Mary Street PS:

- MWRA's Sudbury Aqueduct Easement
- Pump Station Owned by Town of Needham
- Previously disturbed



For discussion only



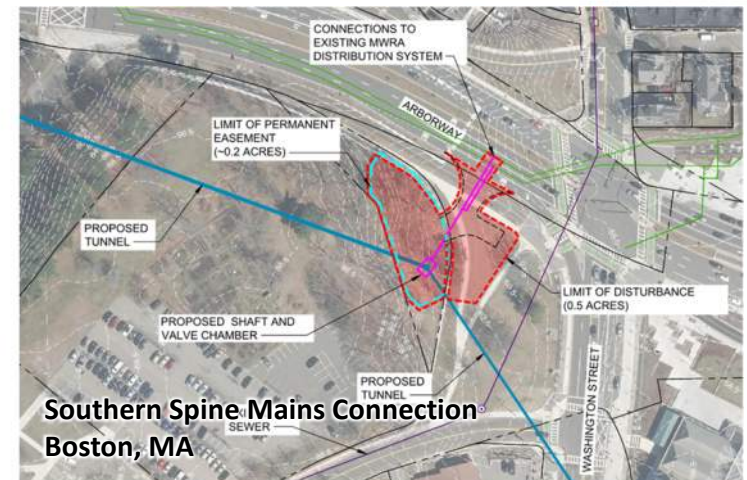
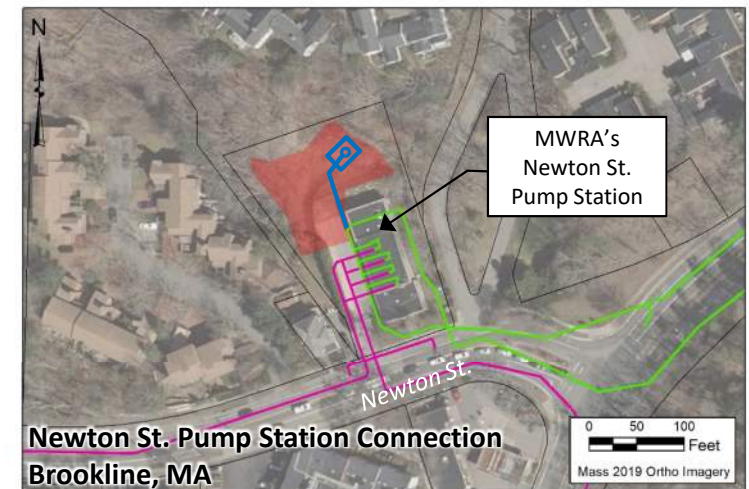
## Connection Shafts (South Tunnel)

### Site Characteristics Newton Street PS:

- Owned by MWRA
- Existing pump station in operation

### Site Characteristics Southern Spine Mains:

- Controlled by DCR adjacent to Mass DPH
- Previously disturbed



For discussion only



## EIR Process Update

- Submitted DEIR on Oct. 17, 2022
  - Published in Environmental Monitor Oct. 24, 2022
  - Public comment period closed December 9, 2022
  - Secretary's Certificate received December 16, 2022
- Comments Received
- Supplemental DEIR Required to address possible Fernald Property alternatives
- Environmental Justice Public Outreach



## Preliminary Design

- Preliminary Design based on the preferred alternative
  - Preliminary design report and drawings
  - Contract packaging, phasing, sequencing, etc.
  - Identify land acquisition needs
  - Updated Program cost estimates
  - Updated Program schedule
- Stakeholder and Community Outreach
  - Consultations held with MEPA, DEP, MHC, MassDOT, DPH, DCR, DYS, DOC
  - Working Group (held 6<sup>th</sup> meeting leading up to DEIR)
  - Additional meetings with community representatives of the seven communities in which the tunnel will be constructed.



# Program Wide Geotechnical Investigation Overview

- The geotechnical investigation started in the spring of 2021 and will last for several years to support the design and construction of the Program
- Anticipate up to ~100 deep test borings along the proposed tunnel alignment plus additional shallow test borings for near surface infrastructure
  - 16 deep test borings were conducted over the past 2 years
  - Planning for ~30 to 35 deep test borings in 2023 plus additional shallow test borings
- Planning on conducting surficial geophysical survey at select locations along the proposed tunnel alignment
  - 42 surficial geophysical survey lines were conducted over the past 2 years
- Planning multiple phases over the next ~4+ years to conduct the remaining work







# Geotechnical Work Supporting the Tunnel Design



Outcrop Mapping



Surface Geophysics



Deep Borings



Rock Core Logging



Geologic Mapping



Tunnel Alignment



## Ongoing and Upcoming Work

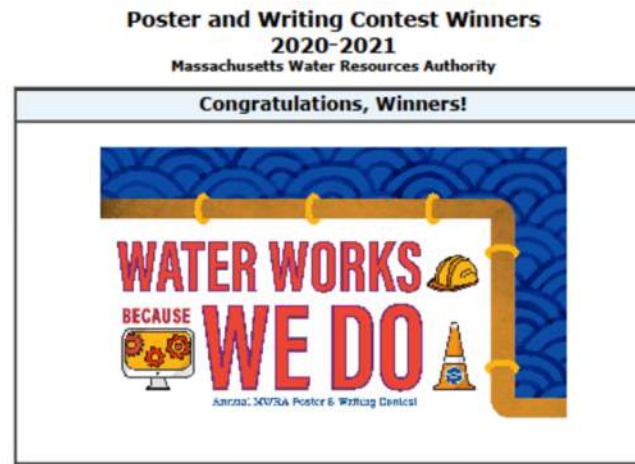
- Submit SDEIR to MEPA in spring 2023
- Finalize FEIR to MEPA in fall 2023
- Phase 2 geotechnical program for spring - fall 2023
- Continue preliminary design work through end of 2023
- Continue to meet with community leaders and stakeholders
- Continue shaft sites real estate acquisition efforts
- Engage our Expert Review Panel regularly
- Onboard our geotechnical assistance consultant
- Prepare for final design and construction management professional services contracts
- Prepare for tunnel construction contracts





## Fun Stuff

- Shaft site names
- Tunnel names
- Program Logo
- TBM names
- School Education Program
- ...
- ....
- .....
- .....
- Ground Breaking!





## Metropolitan Water Tunnel Program

- Contact Us
  - Carmine DeMaria, Community Relations Coordinator
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  - [Carmine.DeMaria@mwra.com](mailto:Carmine.DeMaria@mwra.com)
  - [Tunnels.info@mwra.com](mailto:Tunnels.info@mwra.com)
- <https://www.mwra.com/mwtp.html>
  - Meeting notices, agendas, presentations, minutes



## Questions?



Thank you for your continued  
partnership!