

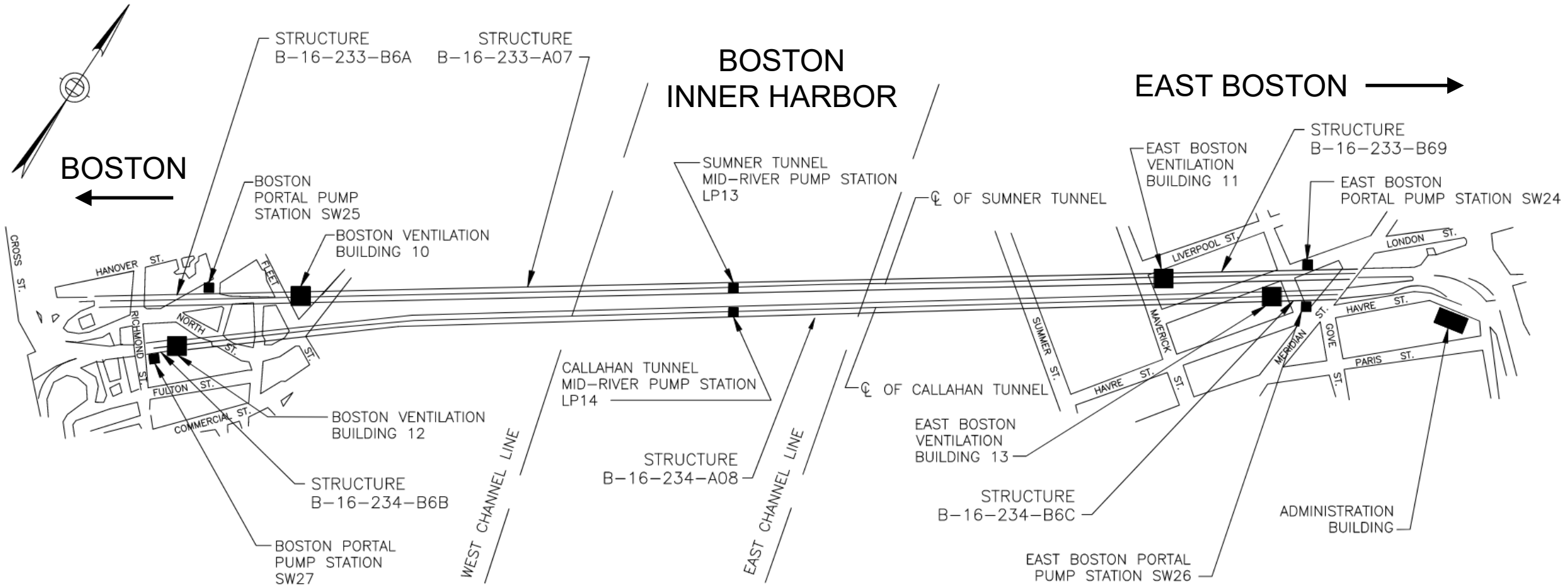


**MassDOT Highway Construction Contract: 113976**  
**Sumner and Callahan Tunnel Vent Buildings and Pump**  
**Stations Mechanical and Electrical Improvements**  
**(Re-Advertised Project)**

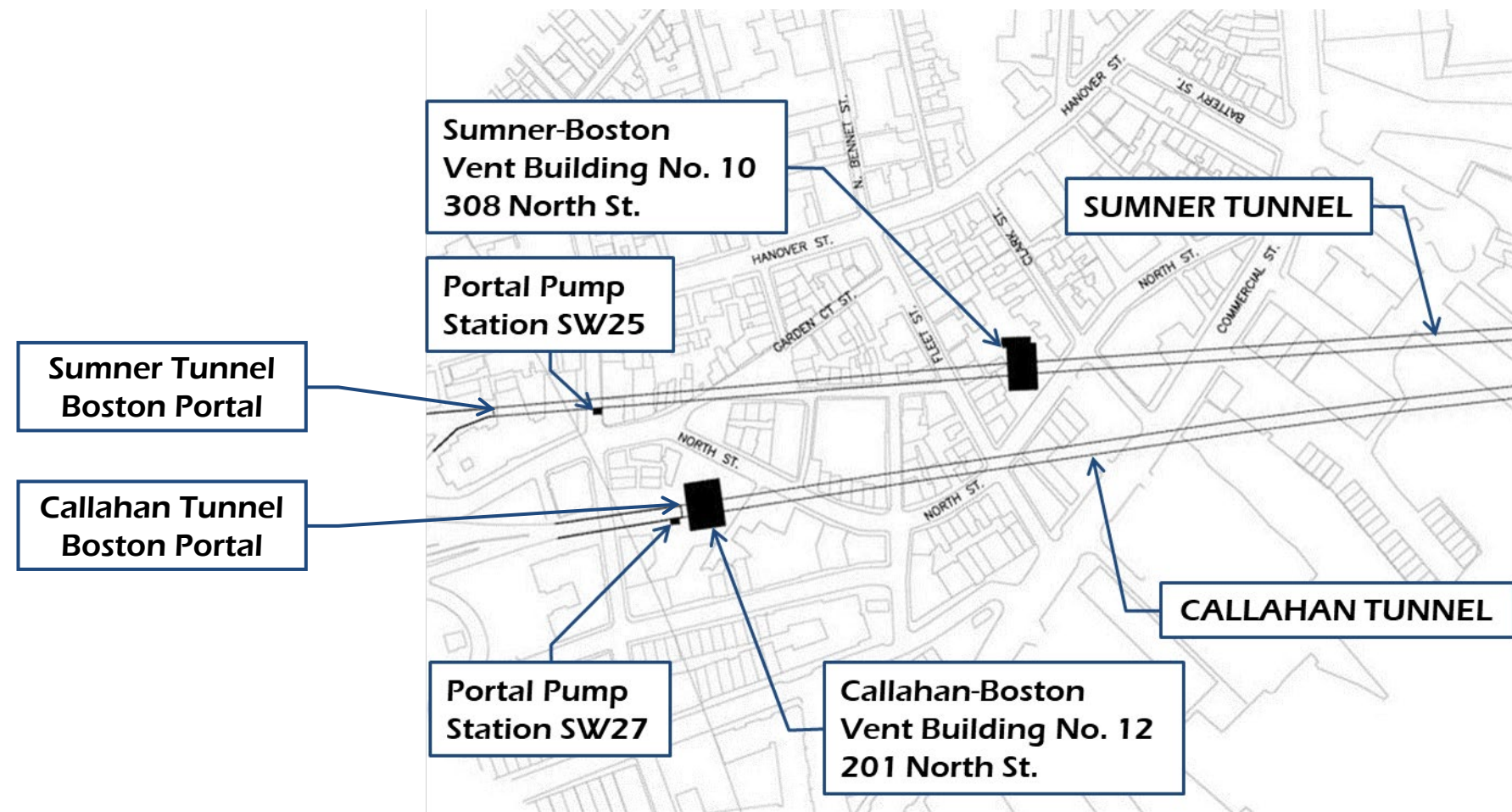
Joint Board Meeting

June 21, 2021

# Project Location



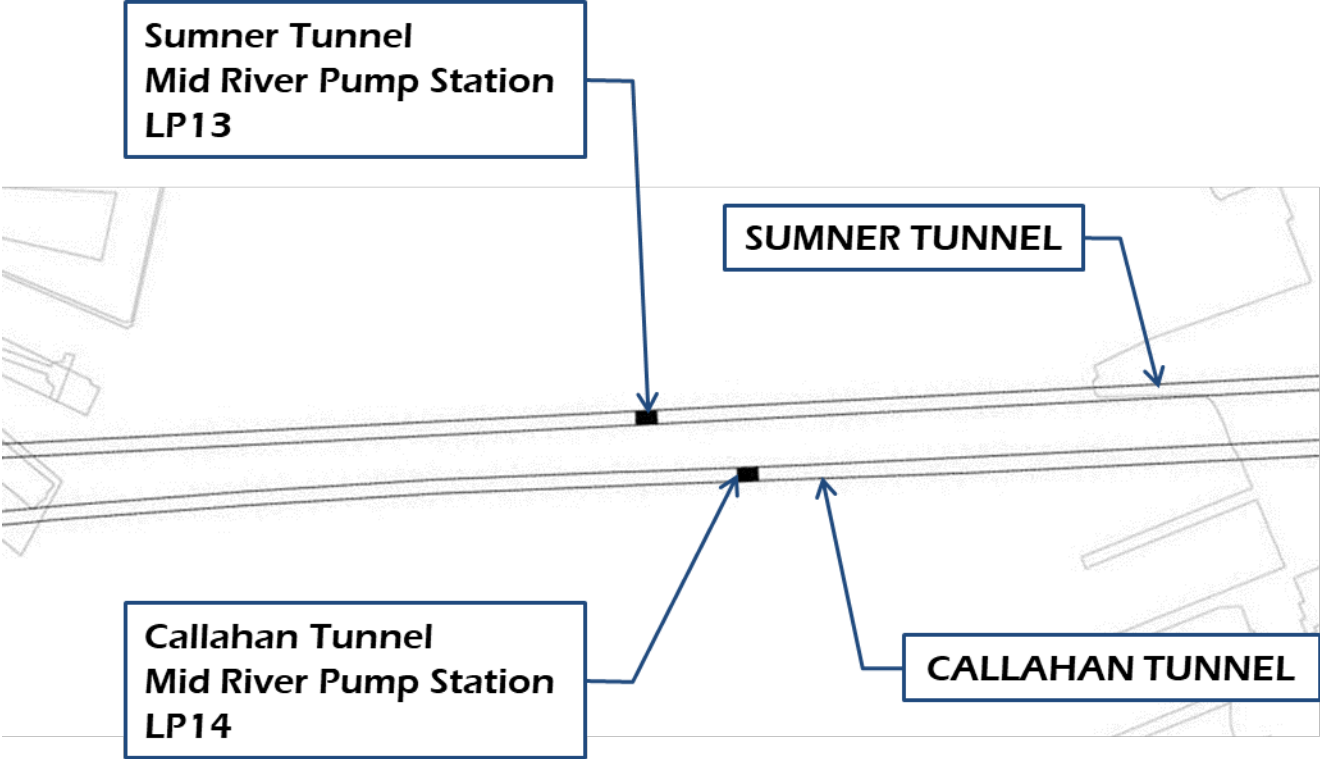
# Project Location – North End



# Project Location – Mid River



To North End

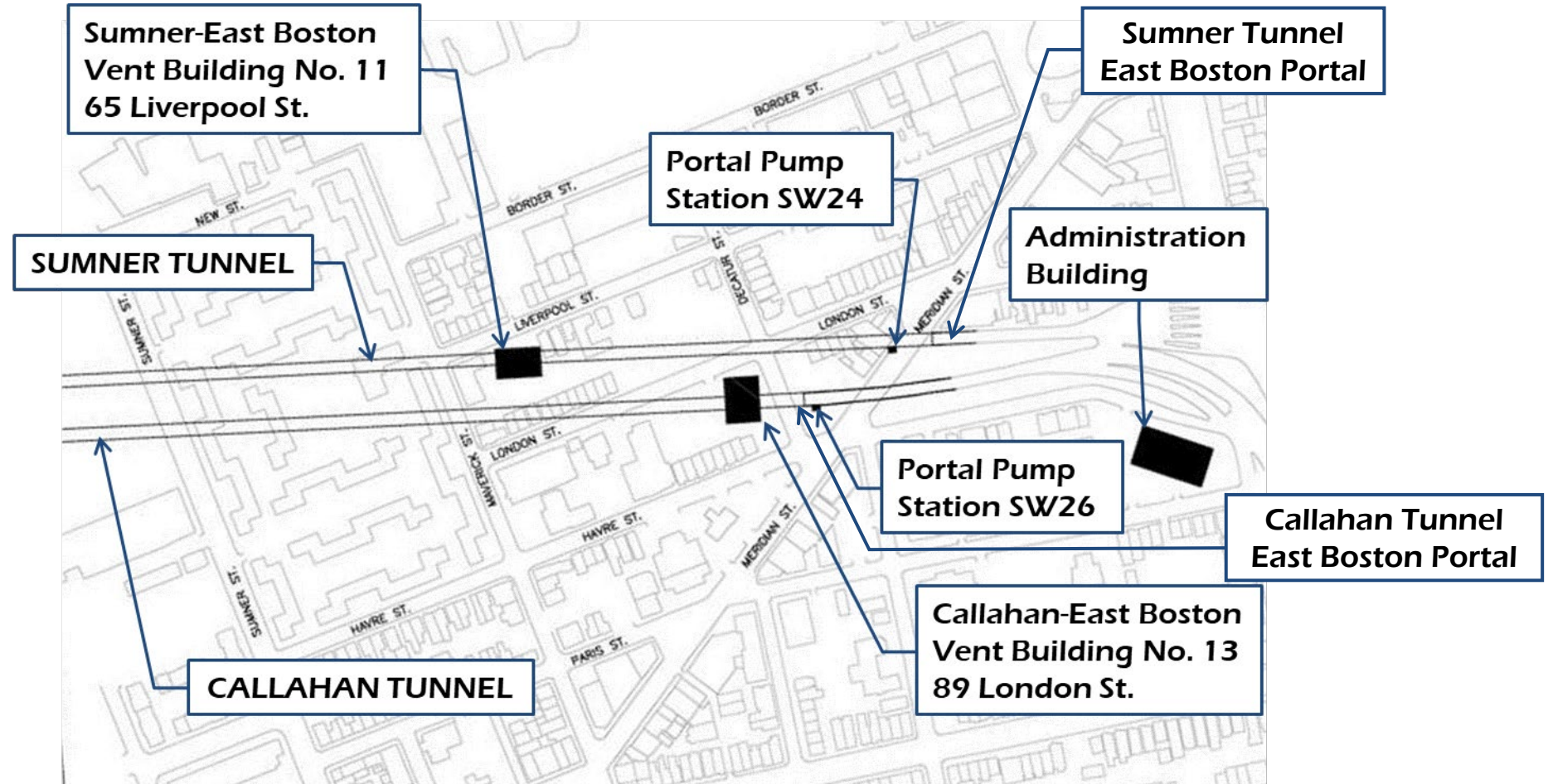


To East Boston





# Project Location – East Boston



# Overview



- Work consists of civil, structural, architectural, mechanical, electrical, pump station upgrades, and life safety system upgrades to each of the four vent buildings serving the Sumner and Callahan Tunnels
- Replacement of pumps and associated power and control equipment in three pump stations serving the Callahan Tunnel and two pump stations serving the Sumner Tunnel
- Requesting MassDOT Board approval of \$37.25M contract with J.F. White Contracting Co.
- Construction will take 26 months to complete; using periodic overnight single lane reductions in both tunnels and 20 overnight closures of Sumner Tunnel

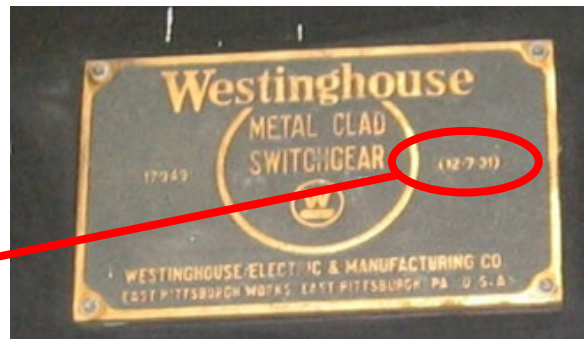
# Purpose and Need

- Upgrade dated equipment – to improve system reliability and safety
- Extend service life – replace with more reliable/efficient equipment
- Provide backup power – add generators to power life-safety systems during loss of utility power
- Minimize disruptive maintenance to traffic and abutters – new systems will require less frequent repairs

# Purpose and Need (cont.)

- Equipment dates from original construction
- Many systems have exceeded service life
- Tunnel cannot operate during utility outage
- Frequent system maintenance disruptive to abutters and traffic

**Equipment  
manufacture date  
12/7/1931**



*Vent Building 10 – Switchgear*



# Purpose and Need (cont.)



*Callahan Mid River Pump Station Piping*



*Callahan Mid River Pump*



*Vent Building 10 - Air Supply Duct - Mid River Pump Station  
Power Cables*

# Construction Scope

## Each Vent Building

- Procurement and installation of standby generators, associated equipment, and environmental controls
- Replacement of interior lighting and installation of exterior lighting with energy efficient LED's
- Installation of heat detector-based fire alarm system
- Replacement of fire standpipe systems
- Installation of fire hydrant at standpipe fill points
- Construction of masonry partitions, louvers and doors for new rooms for ventilation control equipment, standby generators, and uninterruptable power supplies

# Construction Scope (cont.)



## Each Vent Building (cont.)

- Upgrades to SCADA network for electrical, fire alarm, and pump station power and control improvements
- Installation of conduit, supports, pull boxes, equipment and cables
- Identification, abatement, handling and/or disposal of contaminated or hazardous materials

# Construction Scope (cont.)



## Vent Buildings 10 and 11

- Replacement of 13.8kV switchgear and utility service
- Installation of utility service associated equipment for phased removal and replacement of 13.8kV switchgear

## Vent Buildings 10 and 12

- Installation of domestic water service



# Construction Scope (cont.)



## Pump Stations and Tunnel Portals

- Replacement of pumps and associated power and control equipment at three pump stations in Callahan Tunnel and two pump stations in Sumner Tunnel
- Installation of power and control equipment in Boston Portal Pump Station of Sumner Tunnel
- Construction of fire-rated enclosures on the tunnel walkways for mid-river pump station power and control equipment
- Replacement of storm water inlet frames and grates at entry portals and Mid-River Pump Station of Sumner Tunnel

# Traffic Impacts

- Nighttime tunnel closures (11:00 pm to 5:00 am)
  - Sumner Tunnel – 20 overnights
  - Detour route required – as with other maintenance closures
- Single lane reduction
  - Sumner Tunnel – 60 overnights
  - Callahan Tunnel – 50 overnights
  - No detour needed as one travel lane will remain open
- All tunnel closures require MassDOT approval

# Procurement



- Project was advertised February 6, 2021
- Engineers Estimate was \$23,085,000.00
- Filed sub-bids were opened on May 11, 2021
  - 4 filed sub-bid items were opened and only 1 bidder was received for each item
- Bid Opening was May 25, 2021
- One (1) bid was received:
  - **J F White Contracting Co. \$37,249,000.00**

# Overall Project Budget



Line Item	Budget
Bid Amount	\$ 37,249,000.00
Traffic Police	\$ 160,000.00
Contingencies (15%)	\$ 5,587,350.00
Construction Engineering (5%)	\$ 1,888,450.00
Specialty Service	\$ 200,000.00
<b>Total</b>	<b>\$ 45,084,800.00</b>

- 100% State funding



# Request of the Board

## VOTED:

To authorize the Secretary, or his designee, to award and execute MassDOT Construction Contract 113976: Sumner and Callahan Tunnel Vent Buildings and Pump Stations Mechanical and Electrical Improvements with JF White Contracting Co., in a form approved by the General Counsel, in the amount of \$37,249,000.00.