



MassDOT Highway Construction Contract: 114947
Roadway, Ceiling, Arch & Wall Reconstruction and Other
Control Systems in Sumner Tunnel
DESIGN-BUILD PROJECT

Capital Programs Committee
November 10, 2021



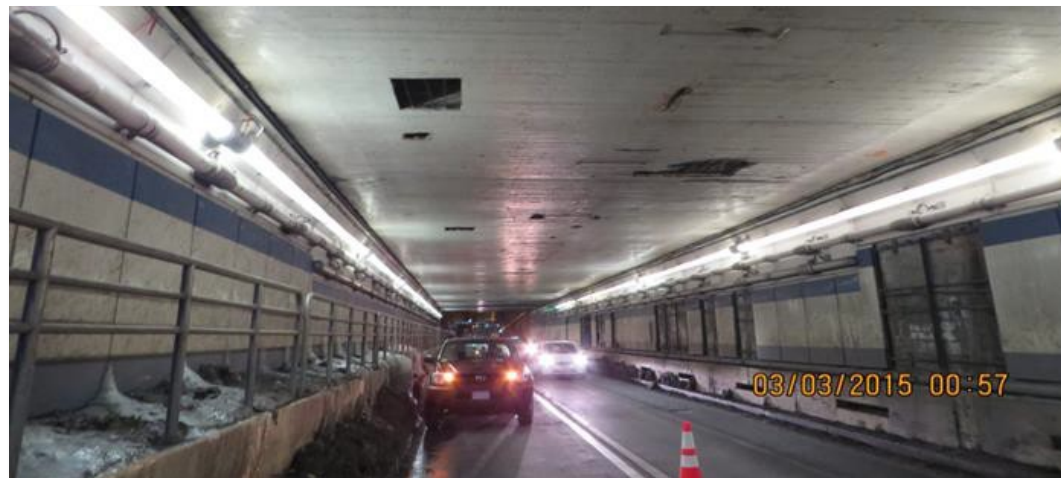
Overview



- Complete rehabilitation of the Sumner Tunnel
- Removal of the suspended ceiling, repair of the arch liner, repair of the roadway deck and walls
- Reconfiguration of ventilation system for fire control
- New tunnel lighting, electrical, and SCADA systems
- Requesting MassDOT Board approval of \$135.1M contract with J.F. White
- Work will take 2 years to complete; 36 weekend closures, 16 weeks complete shutdown, followed by another 8 weekend closures

Purpose and Need

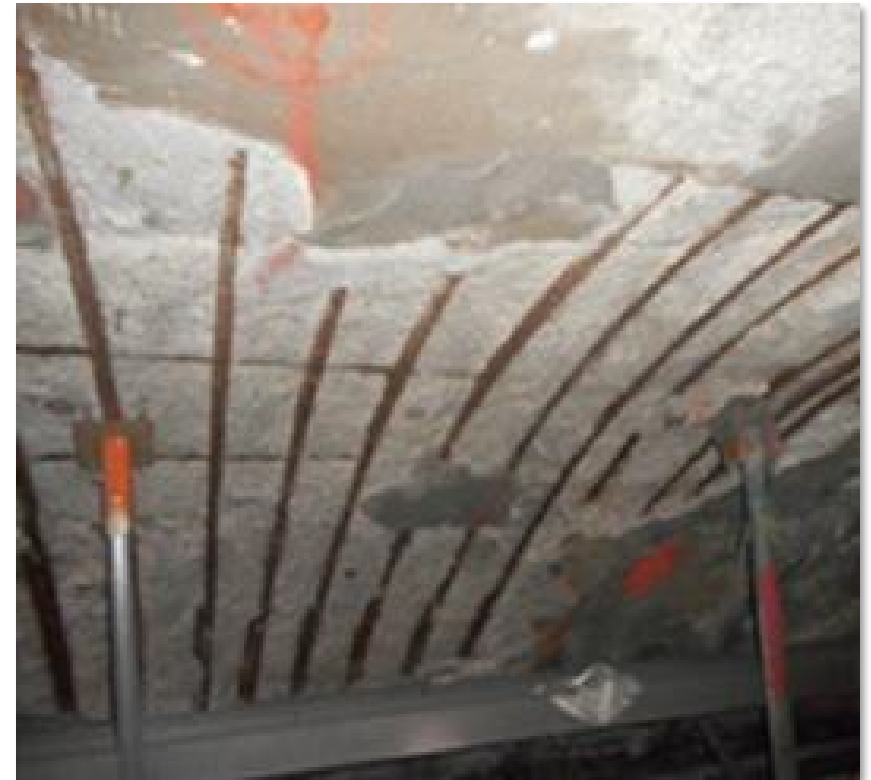
- Suspended ceiling and anchors are structurally deficient
- Roadway slab top surface is deteriorated throughout
- Tunnel liner arch and walls have significant delamination and spalling throughout
- Lighting system has reached the end of its useful life



Construction Scope

Arch Liner

- All spalled and delaminated concrete to be removed by hand chipping
- Cracks will be injected with chemical or epoxy grout
- Precast concrete arch segments will be installed and grouted as a secondary interior liner at the arch of the tunnel
- Spalls and delaminations in the rest of the liner to be repaired to original lines



Construction Scope

Tunnel Ceiling

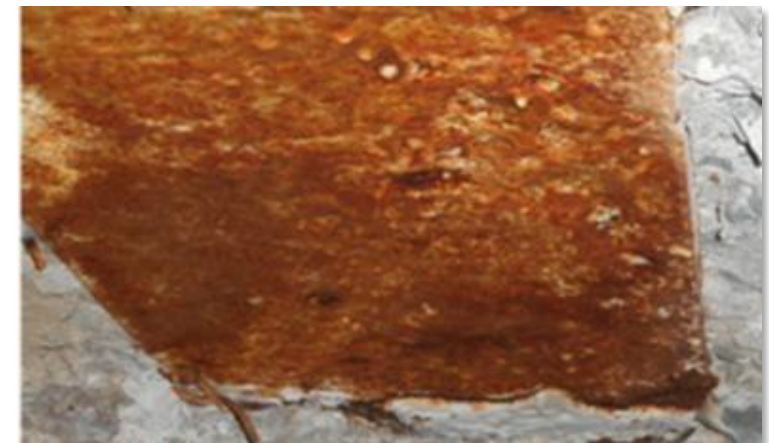
- Existing suspended ceiling and anchors to be completely removed
- Partial length precast concrete ceiling will be reinstalled over approximately $\frac{1}{4}$ of the tunnel length
- New ceiling panels to be supported in shear on the tunnel liner
- Remainder of tunnel will have no ceiling – the precast arch will be exposed



Construction Scope

Roadway Slab

- Top 2" of deck concrete to be removed by hydrodemolition
- Restore top surface of the deck with Ultra High Performance Concrete
- Paint exposed beams on underside of deck
- Final riding surface will be a waterproof asphalt

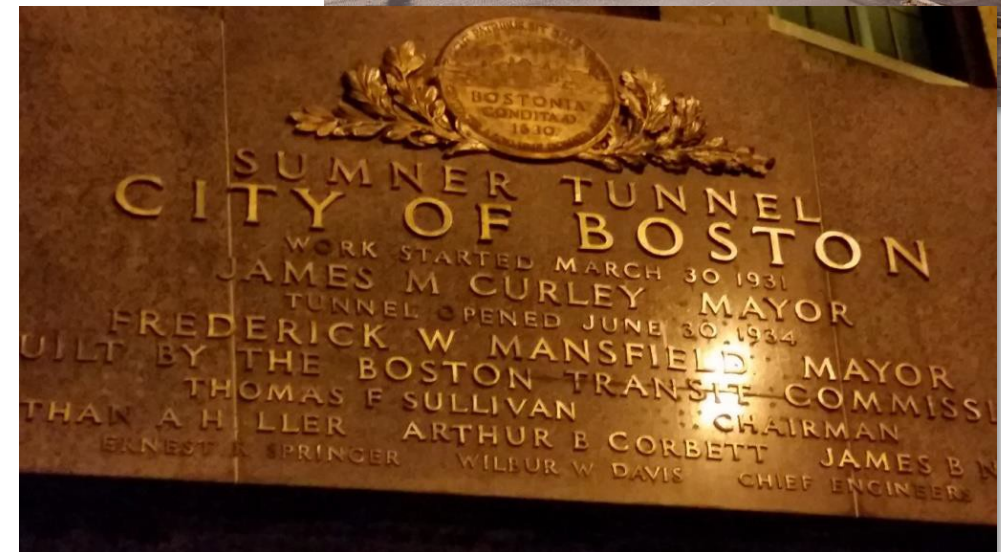


Construction Scope



East Boston Boat Section

- Existing deteriorated precast wall panels to be removed
- New cast-in-place concrete with form liner to reface the existing walls
- Reconstruction of safety walks
- Rehabilitation of the historic granite portal
- Existing tolling loops to be removed and reinstalled



Construction Scope

Tunnel Systems

- Complete replacement of Lighting system to match the rest of the Boston tunnel system
- New CCTV, AM/FM HAR Rebroadcast
- 2-way Radio
- New Fire Standpipe
- Added Fire Alarm / CO2 Monitoring
- SCADA Integration



Public Process



- Legislative Delegation Briefing – April 2021
- Public Information Meetings – April 2021
- MassPort Staff Briefing – April 2021
- Design Public Hearing – May 2021
- Various neighborhood organization briefings and Pop-Ups – April through August 2021
- Virtual Open House - September 2021
- Design-Builder will continue public outreach during design and construction

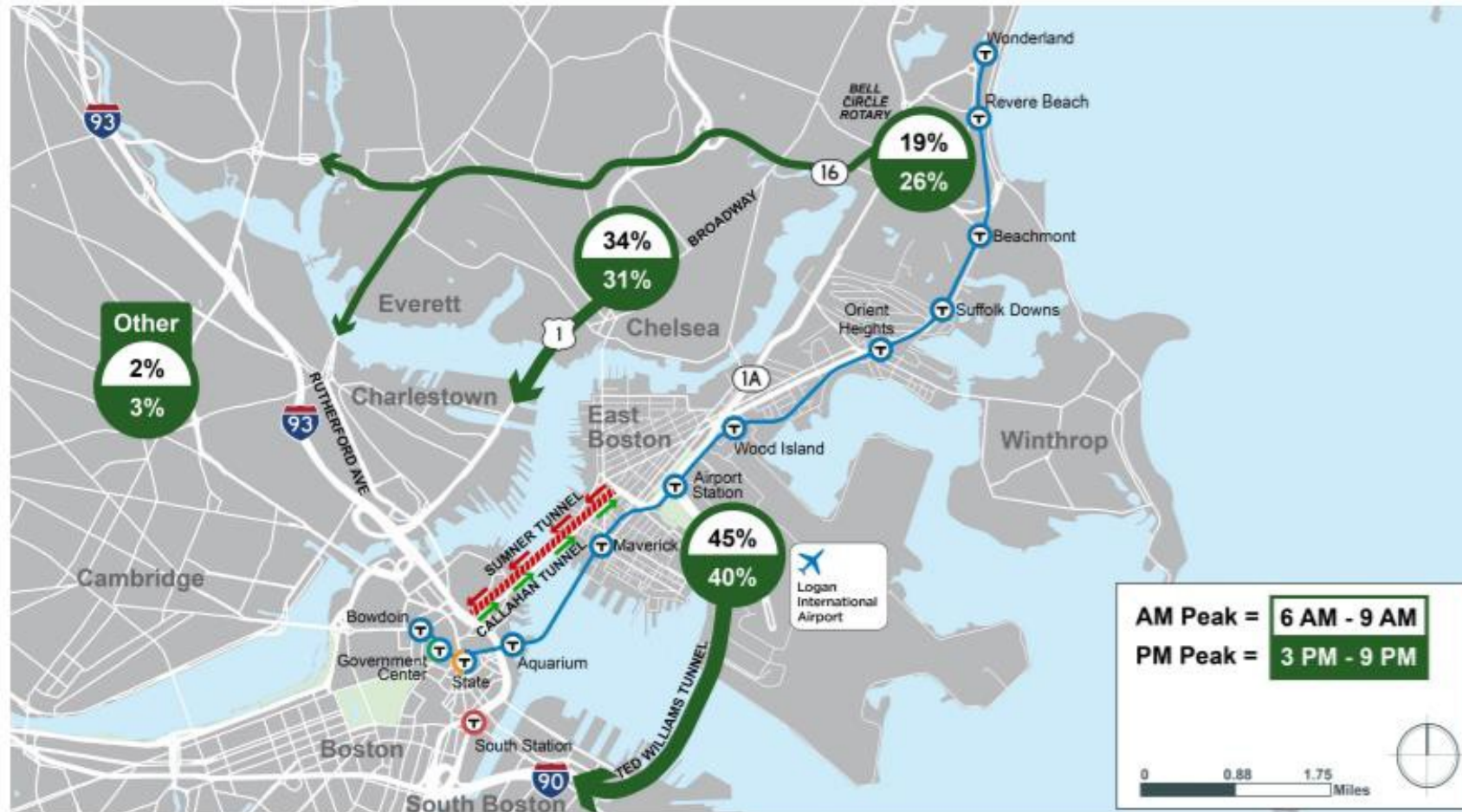
Traffic Impacts

- 36 pre-shutdown weekend closures
- 16 weeks complete shutdown (ending Labor Day weekend)
- 8 post-shutdown weekend closures
- Traffic detoured to Ted Williams, Bell Circle, and Tobin Bridge during closures



Traffic Impacts

Estimated Distribution of Trip Diversions During AM and PM Peaks in Summer 2023



Procurement



**BIDS OPENED - Wednesday - October 27,
2021**



Bids Unit

BOSTON - 606476 - 114947 - FAP# HSI-003S(468);HIP(NI)-003S(468);NHP(EX-NI)-003S(468);NHP(NHS)-003S(468);STP-003S(468) - 61212114 & 61212117 - Roadway, Ceiling, Arch & Wall Reconstruction and Other Control Systems in Sumner Tunnel DESIGN-BUILD PROJECT

DBE % (goal): 14.00 %

MWBE % (goal):

SDVOB % (goal):

OFFICE ESTIMATE: \$111,175,000.00

J F WHITE CONTRACTING CO	10 Burr Street, Framingham, MA, 01701	\$135,156,551.00
SPS-MCCOURT JV	98 Elm Street, Salisbury, MA, 01952	\$143,576,300.00
BARLETTA HEAVY DIVISION INC	40 Shawmut Road, Suite 200, Canton, MA, 02021	\$170,643,000.00

Adjusted Score = Price / Technical Score

J F WHITE CONTRACTING CO	135156551.00 / 83.180
SPS-MCCOURT JV	143576300.00 / 77.060
BARLETTA HEAVY DIVISION INC	170643000.00 / 89.880

Best Value Adjusted Score

1,624,868.37
1,863,175.45
1,898,564.75

Overall Project Budget



Line Item	Budget
Bid Amount	\$135,156,551
Contingencies	\$13,515,655.1
Construction Engineering	\$6,757,827.55
Total	\$155,430,033.7

- 80% Federal funding, 20% State funding
- Programmed in the 2022-26 CIP

Proposed Board Vote



VOTED:

To authorize the Secretary of the Massachusetts Department of Transportation to award and execute a Contract between MassDOT and JF White Contracting Co., for Roadway, Ceiling, Arch, & Wall Reconstruction and Other Control Systems in Sumner Tunnel in the total amount of \$135,156,551.00.