SCOPE OF SERVICES

BOSTON EXHAUST PLENUM, CEILING (S2S ISSUE) &

ROADWAY RECONSTRUCTION IN THE SUMNER TUNNEL

Project Number 606476

Sumner Tunnel Rehabilitation

OVERVIEW

The scope of work detailed herein consists of providing engineering and construction services for reconfiguring the existing ventilation system of the Sumner Tunnel by removing the existing suspended ceiling and installing a new ceiling supported on steel framing, rehabilitating the tunnel's structure including repairs to the tunnel arch, rehabilitation of the concrete roadway slab, placing new bituminous concrete wearing surface, rehabilitation of the boat section in East Boston, refurbishing the tunnel portal architectural features, and replacing the tunnel life safety systems including the lighting system

The limits of work extend from the split between the Sumner and Callahan Tunnel roadways on the East Boston end of the project to just outside the portal on the Boston end, approximately 6,000 linear feet.

Tunnel Repair Work

- The removal and disposal of the existing ceiling system, wall panels and handrailing
- The repair to deteriorated concrete in the exhaust air duct (tunnel arch) with shotcrete
- The repair of the concrete on the top two inches and underside of the roadway slab and in the invert
- The demolition and replacement of tunnel drainage inlets
- The cleaning of the air flues and the repairing /patching of the face of flues at roadway level as necessary
- The repair of the wall concrete following removal of existing wall panels in tunnel, as necessary. Additionally, repair of the tunnel approach wall concrete, as necessary

Electrical and Traffic Surveillance and Control Systems

- Furnish and install new electrical feeders
- Installation of a new SCADA/COMM/ITS and CCTV Camera system
- Installation of a new Fire Alarm system

Tunnel and Roadway Lighting

- Removal and disposal of the existing tunnel lighting system
- Installation of a new tunnel lighting system including new luminaires a powerline control system, a contactor switching, system and stainless steel support system

Tunnel Ventilation and Mechanical Systems

- Removal of the existing dry fire standpipe system
- Installation of a new dry fire standpipe system
- New acoustical louvres at each of the existing tunnel ventilation buildings

Tunnel Finishes

- Installation of new fire protection board on the tunnel walls
- Installation of spray applied fire protection on the new tunnel ceiling

The work will be completed in three distinct work windows. The first work will be done between the NTP and June of 2022. This work will be limited to nighttime and weekend closures. Between June and September of 2022, for no longer than 16 consecutive weeks, the tunnel will be allowed to be fully closed to traffic to allow for 24-hour construction – 7 days per week. Following the full tunnel closure there will be a period from September to December of 2022 that will again allow nighttime and weekend closure to compete construction. Incentives and disincentives will be implemented to ensure the project schedule of shutdowns is achieved.