



# **MassDOT Highway Construction Contract: 107208 Ted Williams Tunnel Lighting Replacement**

## **Joint Board Meeting**

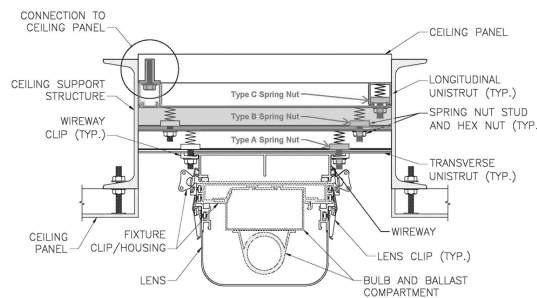
July 22, 2019

# Overview

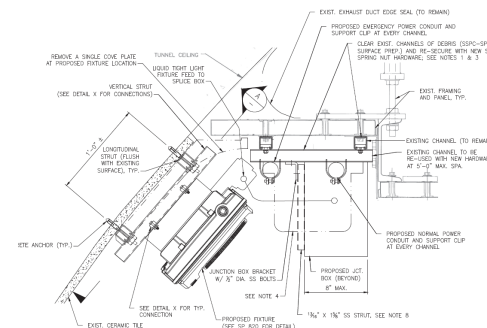
- Ted Williams Tunnel lights to be upgraded with LED lighting for substantial energy and maintenance savings (estimated at \$20M) and enhanced driving conditions.
- Requesting MassDOT Board approval of \$32.4M contract with JF White; \$19.4M funded through CARM
- Work will take 2 years to complete; tunnel will be at full capacity during the day; one side of tunnel lights replaced at a time.

## Purpose and Need

- Replacement of existing lighting system with new LED fixtures and hardware
- Currently approx. 800 lights (of ~6,400) reported in 2019 in the TWT with some level of defects (all stable though - managed through increased inspections and on-going maintenance)
- Proposed lighting system will contain less than half the amount of lights currently present (3,000 +/-)
- Will result in savings of inspection and maintenance costs with lights in a good state of repair and less quantity to manage (up to \$2M/year savings)
- Estimated to result in about \$1.2M/year energy savings
- Estimated 15<sub>±</sub> year return on investment with a 20 year LED design life



Typ. Existing Fixture



Typ. Proposed Fixture

## Construction Scope

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- In-tunnel work will be completed during night shifts (under a single lane or full closure with day time capacity fully restored at the end of each shift)
- Vent Building work may be completed during night or day shifts
- Duration is estimated to be 2 years
- In-tunnel work will consist of replacing lights one side at a time



Example lighting replacement



Rendering of TWT lighting replacement

## Construction Procurement

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- Project was advertised on March 9, 2019
- Engineers Estimate of bids was \$29,002,767.32
- Bid Opening was on June 25, 2019
- Four (4) Bids were received:

<b>J F White Contract</b>	<b>\$32,434,171.40</b>
Dagle Electrical Construction Corporation	\$37,740,467.47
Fischbach & Moore Electric Group LLC	\$40,800,070.19
Mass. Electric Construction Co.	\$42,311,000.00
- The difference between the low bid and the engineer's estimate of bids is due to additional labor required due to limited work windows for nighttime operations.

## Overall Project Budget

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Line Item	Budget
Bid Amount	\$32,434,171.40
Contingencies (10%)	\$3,243,417.14
5% Construction Engineering	\$1,621,708.57
<b>Total</b>	<b>\$37,299,297.11</b>

**Project is funded 40% with MHS & Toll Funds and 60% from CARM**

**Programmed cost in the 2019-2023 CIP - \$31 M**

## **Request of the MassDOT Board**

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Staff request that the MassDOT Board authorize the Secretary of the Massachusetts Department of Transportation, or her designee, to award and execute MassDOT Construction Contract 107208: TWT Lighting Replacement with J F White Contracting for an amount not to exceed \$32,434,171.40.