



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 8d

**ACTION ITEM**

**Date of Meeting** June 11, 2024

**DATE:** May 15th, 2024

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Jennifer Maietta, Director, Real Estate Asset Management  
Sam Hansen, Capital Project Manager, Waterfront Project Management  
Sarah Ogier, Director, Maritime Environmental & Sustainability

**SUBJECT: T-91 LED Lighting Upgrades - Design (CIP #C801297)**

**Amount of this request:** \$700,000

**Total estimated project cost:** \$3,600,000

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to complete design of LED lighting and controls upgrades at T-91. This request is for \$700,000 and would increase the total project authorization to date to \$750,000 out of a total estimated project cost of \$3,600,000.

**EXECUTIVE SUMMARY**

The project addresses insufficient lighting at T-91 in the areas of Piers 90/91, the uplands and trail lighting. All existing fixtures will be upgraded to LED, which will reduce required energy consumption and advance the Port's sustainability goals identified in the Maritime Climate and Air Action Plan (MCAAP). The project will replace approximately 374 existing fixtures on 125 poles with LED fixtures to create a uniform lighting type throughout T-91 and reduce light pollution where possible. It will also install new lighting control systems and smart meters that will interface with all facility lighting. Community outreach will include project briefings to the Port's Neighbors Advisory Committee (NAC) representing the Magnolia and Queen Anne neighborhoods. Outreach will also include a lighting demonstration at the 30% design stage to better inform NAC members regarding the proposed lighting improvements.

**JUSTIFICATION**

This project supports the following Century Agenda, Sustainable Evaluation Framework, and MCAAP goals:

- (1) Meet all increased energy needs through conservation and renewable sources.
- (2) 75% of Port managed spaces converted to LED by 2025
- (3) 100% of Port and tenant managed spaces converted to LED by 2030.

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LED lighting upgrades will:

- (1) Reduce greenhouse gas emissions and energy consumption by replacing high energy use lighting with efficient LED lighting.
- (2) Protect health and the environment by ensuring lighting does not leach zinc into the Puget Sound waters.
- (3) Protect the community and aquatic habitat by limiting light pollution, utilizing directional shields, and considering warm light tones (2700 Kelvin) with high color rendering index (CRI).

This project aims to improve safety and visibility for Port staff and tenants at T-91 by installing new LED fixtures and an updated lighting control system. The installation of LED fixtures on high mast poles will reduce lighting energy consumption which will be monitored by smart meters.

***Diversity in Contracting***

Project team is leveraging an existing IDIQ contract that has an overall women and minority-owned business enterprise (WMBE) commitment of 25% of total amounts paid, including amendments.

**DETAILS**

The project will upgrade the current pole mounted lighting fixtures and lighting control systems and install smart meters at T-91. The design will be performed by a consultant under an IDIQ contract with support from Port Engineering, Information & Communication Technology (ICT), the Marine Maintenance Electrical Shop, and Maritime Environment & Sustainability. Total project design costs are estimated to be \$750,000.

This project will achieve an energy savings of roughly 612,356 kWh per year by installing more efficient lighting. This equates to about 1.7 tons of CO<sub>2</sub> reduced per year. LED fixtures have a longer service life than the existing light fixtures and will result in reduced maintenance costs for the Port as well.

***Scope of Work***

Work will replace all current pole mounted lighting - a combination of older LED, plasma, and high-pressure sodium (HPS) - with LED fixtures. The updated fixtures will be supported by new lighting control systems and connected to new smart meters as applicable. Conduct small works lighting demonstration at 30% design to receive input from the NAC about possible lighting concerns.

***Schedule***

This project will be coordinated with the following T-91 projects: T-91 Uplands Development; T-91 Trail Bridge Removal and Segment Widening; T-91 Berths 6 & 8 Redevelopment; T-91 Buildings (M-39, W-28, 19) Demolition; utility and sustainability planning efforts.

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*Activity*

Commission design authorization	2024 Q2
Design start	2024 Q3
Commission construction authorization	2025 Q2
Construction start	2025 Q3
In-use date	2026 Q2

**Cost Breakdown**

	This Request	Total Project
Design	\$700,000	\$750,000
Construction	\$0	\$2,850,000
Total	\$700,000	\$3,600,000

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** – Do nothing – leave existing fixtures in place and replace in kind as required for facility lighting maintenance.

Cost Implications: No capital project funding utilized; higher long-term expense costs.

Pros:

- (1) Retains Port capital for other priority projects and financial initiatives.
- (2) Avoids temporary lighting disruptions/construction impacts to existing tenants.

Cons:

- (1) Does not advance the Port’s Century Agenda goals and MCAAP.
- (2) Existing (lack of) lighting control systems, metering, and facility lighting level deficiencies issues will continue.
- (3) Ongoing higher operating costs for less energy efficient non-LED lighting fixtures.

***This is not the recommended alternative.***

**Alternative 2** –Replace lighting as failures occur with LED. Limited replacement of existing lighting at T-91

Cost Implications: Capital project fund savings due to reduced scope of work.

Pros:

- (1) Reduced utilization of capital project funds.
- (2) Address immediate areas of lighting deficiencies throughout T-91.

Cons:

- (1) Does not address Port’s Century Agenda goals and MCAAP to the extent a full lighting replacement.
- (2) Does not address lack of functional lighting control system.
- (3) Lighting fixture type inconsistent will persist.
- (4) Does not take advantage of all SCL rebates and annual utility savings.

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***This is not the recommended alternative.***

**Alternative 3** – Proposed scope - Install new LED fixtures on pole mounted lights, smart meters, and lighting control system at T-91.

Cost Implications: Utilize capital project funding; lower long-term expense costs.

Pros:

- (1) Advances the Port’s Century Agenda goals and MCAAP.
- (2) Energy efficiency, more power available for other uses on terminal.
- (3) Resolves existing lighting control, metering, and facility lighting level deficiencies.
- (4) Lower operating and maintenance costs with energy efficient LED fixtures and control systems.
- (5) Take advantage of SCL rebates and annual utility savings.
- (6) Standardization of LED lighting throughout T-91 and Port facilities.

Cons:

- (1) Utilizes Port capital project funds that could be used for other projects.
- (2) Temporary lighting disruptions to existing tenants.
- (3) Temporary lighting may be required during install.

***This is the recommended alternative.***

**FINANCIAL IMPLICATIONS**

Estimated Energy Savings: 612,356 kWh/yr.

Estimated Utility (SCL) Rebate: \$171,739

Estimated Annual Utility Savings: \$61,235

***Cost Estimate/Authorization Summary***

	Capital	Expense	Total
<b>COST ESTIMATE</b>			
Original estimate	\$3,570,000	\$30,000	\$3,600,000
<b>AUTHORIZATION</b>			
Previous authorizations	\$50,000	\$0	\$50,000
Current request for authorization	\$670,000	\$30,000	\$700,000
Total authorizations, including this request	\$720,000	\$30,000	\$750,000
Remaining amount to be authorized	\$2,850,000	\$0	\$2,850,000

***Annual Budget Status and Source of Funds***

Funding for this project was included in the 2024 Capital Plan under CIP C801297 with a total estimated cost of \$2.76 million. The updated project cost estimate has been incorporated into the draft 2025 Capital Plan currently in development.

This project is funded by the Tax Levy.

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***Financial Analysis and Summary***

Project cost for analysis	\$3,600,000
Business Unit (BU)	Cruise, Elliot Bay Fishing & Commercial, and Portfolio Management
Effect on business performance (NOI after depreciation)	The initial annual energy savings from this project is approximately \$60K. Annual depreciation will increase by approximately \$120K based on an estimated 30-year service life. The project also qualifies for a \$171K rebate from Seattle City Light.
IRR/NPV (if relevant)	N/A
CPE Impact	N/A

**ATTACHMENTS TO THIS REQUEST**

- (1) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

N/A