

**THE NORTHWEST SEAPORT ALLIANCE**  
**MEMORANDUM**

**MANAGING MEMBERS**  
**ACTION ITEM**

**Item No.** 9B  
**Date of Meeting** October 3, 2023

**DATE:** August 28, 2023

**TO:** Managing Members

**FROM:** John Wolfe, CEO

**Sponsor:** Tong Zhu, Chief Commercial & Strategy Officer

**Project Manager:** William Shelton, PE, Capital Project Manager

**SUBJECT:** Terminal 18 (T18) Shore Power Project Authorization

**A. ACTION REQUESTED**

Request project authorization in the amount \$8,200,000, for a total authorized amount of \$9,000,000, for design work associated with the T18 Shore Power, Master Identification No. U00670.

**B. SYNOPSIS**

The T18 Shore Power project will install shore power infrastructure at three berths at T18 and upgrade the electrical infrastructure to support shore power.

**C. BACKGROUND**

The T18 Shore Power project supports NWSA's Greenhouse Gas Resolution and Northwest Ports Clean Air Strategy. This project is part of the NWSA's 10-year shore power program to install shore power connections at 5 major container terminals: (T-5, Husky, T-18, WUT, and PCT).

The Terminal 18 shore power project was initiated in 2021 along with the Terminal 18 Bollard and Terminal 18 Dock Rehabilitation projects to address aging infrastructure repair, replacement, and modernization needs. Since all three projects are within or adjacent to each other in location, rely on each other for infrastructure, and have similar timing for design, permitting, and construction, the consultant services were advertised as one IDIQ contract to enhance the quality of the design and construction. The projects are each authorized separately due to different business priorities, grant funding opportunities, and project schedules.

The condition assessment and preliminary design work has been completed, and the design phase can start.

The \$2 million “Air Quality Volkswagen Electrical Shore Power for Ocean Going Vessels” grant from Washington State Department of Ecology received for this project will be used to provide shore power to two berths at T18. This grant provides 50% funding for the first \$4M expensed on the project. Currently, \$141K of the \$2M has been used to fund this project. The grant requires that the project reaches specific milestones by certain dates. The initial deadlines required by the grant were not met. Port of Seattle and NWSA staff are working with Washington State Department of Ecology to extend the deadlines once a well-defined project schedule is established. The funds for this grant currently expire June 30<sup>th</sup>, 2027. The current project schedule has substantial completion of the project February 2028. Any further delay to this project poses a serious risk of not reaching substantial completion by the fund’s expiration date.

Recently, WA state legislature allocated \$14 million in the next biennial budget for the T18 shore power project. Staff are waiting on details from the state on this funding. Staff is working on obtaining additional grant funding including applying for Inflation Reduction Act funds. The Notice of Funding Opportunity (NOFO) for the EPA IRA funded Clean Ports Grant is expected in February or March 2024. Staff does not plan to request construction authorization until outside funding is secured for 50% of the total project costs.

The approved scope to date was to perform a condition assessment and preliminary design to install shore power infrastructure and upgrade electrical infrastructure for two berths. Preliminary investigations show that there is sufficient capacity on Seattle City Light (SCL) infrastructure to power two berths. Powering a third berth at T18 will increase the tenant’s berthing options for providing shore power to vessels. Adding a third berth will require additional coordination with SCL and possible improvements to an SCL substation. Preliminary discussions with SCL have shown that the improvements needed to the SCL infrastructure may be minor, but further investigation is required to confirm the scope of improvements needed. Horizontal directional drilling will be required to run conduits from the SCL southern substation to the two southern most berths. This has been accounted for in the estimated cost and schedule of this project.

A 30% design has been completed for two berths. The 30% design found that the current proximity of the crane rail to the dock face requires extensive concrete work at the edge of the pier to add the receptacles. This is an issue unique to T18 and results in higher-than-normal design and construction costs for shore power.

## D. PROJECT DESCRIPTION AND DETAILS

- The T18 Shore Power project will install 3 shore power substations, 3 wharf-side recessed vaults per berth (Berths 1, 3, and 4) and associated electrical infrastructure, using existing infrastructure wherever available
- Work will require coordination with tenant operations; need a Tenant Phasing plan during construction
- Additional coordination is needed with SCL to determine what upgrades need to happen with SCL infrastructure with the addition of the 3<sup>rd</sup> berth shore power.

### ***Project Objectives***

- Support NWSA's Greenhouse Gas Resolution and Northwest Ports Clean Air Strategy
- Contribute to the NWSA's 10-year shore power program to install shore power connections at 5 major container terminals
- Improve facilities and enhance customer services

### ***Scope of Work***

- Design (Design Consultant)
- Permitting: obtain permits and other regulatory requirements (POS)
- Seattle City Light (SCL) coordination to establish required operational needs and/or projects (POS)
- Grant Administration (POS)
- Terminal Operator Coordination for phasing during design and execution (POS and design consultant)
- Procurement construction contracts (future request) (POS)
- Preparation of Bid Documents

### ***Schedule***

This Authorization will allow for completion of design and preparation of the bid documents for the project. Staff will make a future request to the Managing Members to approve the construction Dates to advertise following completion of design are heavily dependent on permitting timelines.

Design Start	November 1, 2023
Design Finish	September 30, 2024
Receive Permits	March 31, 2025
Advertise to Bid	April 1, 2025
Open Bids	April 29, 2025

Notice of Award	May 13, 2025
Substantial Completion	December 31, 2026
Final Completion	June 30, 2027

**E. FINANCIAL IMPLICATIONS**

***Project Cost Details***

The estimated cost are high-level estimates with an expected accuracy range of -25% to + 25%. An updated estimated will be provided as a part of the final design.

This request is in the amount of \$8.2 million for finalizing the design and preparation of the bid documents for the T18 Shore power at three berths.

Total project costs are based on current estimate from a 30% design estimate and still have a wide cone of uncertainty.

	<b>This Request</b>	<b>Total Project Cost</b>	<b>Cost to Date</b>	<b>Remaining Cost</b>
Procurement	\$0	\$0	\$0	\$0
Pre-Design	\$0	\$179,000	\$179,000	\$0
Design	\$8,200,000	\$9,000,000	\$621,000	\$8,200,000
Construction	\$0	\$70,900,000	\$0	\$70,900,000
<b>Total</b>	<b>\$8,200,000</b>	<b>\$80,079,000</b>	<b>\$800,000</b>	<b>\$79,100,000</b>

***Source of Funds***

The proposed 2024-2028 Capital Investment Plan (CIP) Budget allocates \$9,000,000 for the design of this project.

The design portion of this project has received a Washington State Department of Ecology grant through the Federal Volkswagen Settlement Program for \$1,000,000. Grant funds will be recorded as non-operating income when reimbursement is requested from the granting agency. The grant also includes \$1 million to support the construction phase of the project, for a total of \$2 million.

WA state legislature has allocated \$14 million in the next biennial budget for the T18 shore power project. The Managing Members have not yet voted to accept these funds. The proposed budget does not specifically include funds for this project.

Funds will be added when the scope and cost estimates are further refined through this design process.

<b>Total Estimated Cost</b>	<b>\$80,079,000</b>
Department of Ecology VW Grant	-\$2,000,000
WA State Appropriation (pending)	-\$14,000,000
<b>Total Net Cost</b>	<b>\$64,079,000</b>

### ***Financial Impact***

Assuming the project is completed, the design cost will result in a depreciable cost of approximately \$300,000 per year for thirty years. Construction cost, if authorized, will increase the depreciable amount. T18 is a major source of income for the NWSA. T18 was budgeted to provide approximately \$28.7 million in revenue in 2023.

## **F. ENVIRONMENTAL IMPACTS/REVIEW**

Permitting: The assessment has identified the following requirements for permitting:

- U.S. Army Corps of Engineers; Clean Water Act (CWA) Section 404/10; National Wide Permit 57.
- Washington Department of Ecology (Ecology); CWA Section 401 Water Quality Certification.
- Ecology; Construction Stormwater General Permit.
- Washington Department of Fish and Wildlife; Hydraulic Project Approval.
- City of Seattle (City); Shoreline Substantial Development Permit
- Port; SEPA Review

Remediation: All soil and groundwater at Harbor Island are potentially contaminated due to T18's location within the Harbor Island Superfund site. All construction will be performed in accordance with requirements of the Port's Soil and Groundwater Management Guidance document for the facility which describes the procedures for managing soil and groundwater at Terminal 18 including how to characterize, handle, and dispose of excess waste soil or groundwater that might be generated as part of construction. Soil for offsite disposal may be contaminated and disposed of at a permitted facility. There may be an environmental remediation liability (ERL) cost for the additional disposal cost. Any differential costs between regular and upland disposal will be a homeport responsibility.

Stormwater: Obtain stormwater construction permits, as required.

Air Quality: The shore power project supports NWSA's Greenhouse Gas Resolution and Northwest Ports Clean Air Strategy. There are no anticipated air pollutants above standard construction activities for this project. No additional permitting is required.

**G. ATTACHMENTS TO THIS REQUEST**

None.

**H. PREVIOUS ACTIONS OR BRIEFINGS**

<u>Date</u>	<u>Action</u>	<u>Amount</u>
October 5, 2021	POS Commission Authorization for T18 Improvements Design IDIQ Contract Procurement (\$15,000,000)	\$0
October 5, 2021	NWSA Project Authorization for Condition Assessment and Pre-Design for T18 Shorepower Project	\$800,000
<b>TOTAL</b>		<b>\$800,000</b>

Item No.: 9B  
Date of Meeting: October 03, 2023

# T18 Shore Power Project Authorization



**THE NORTHWEST**  
SEAPORT ALLIANCE

SEATTLE + TACOMA

Name of Presenter: William Shelton

Position: Capital Project Manager - Contractor

October 3, 2023

# ACTION REQUESTED

Request project design authorization in the amount \$8,200,000, for a total authorized amount of \$9,000,000 for design work associated with the T18 Shore Power, Master Identification No. U00670.



# Background

- The T18 Shore Power project supports NWSA's Greenhouse Gas Resolution and Northwest Ports Clean Air Strategy. It is part of the NWSA's 10-year shore power program to install shore power connections at 5 major container terminals (T-5, Husky, T-18, WUT, and PCT).
- SCL 2019 study showed sufficient capacity at existing SCL substations to power two berths. Possibly only minor upgrades needed to provide adequate power for three berths. Further coordination with SCL required.
- 30% design complete for two berths. Design revealed significant structural concrete work is needed along the face of the pier to accommodate the new shore power receptacles. This is a configuration unique to T18.
- This project currently has two grants providing funding.
  - \$2M Air Quality Volkswagen Electrical Shore Power for Ocean Going Vessels from Washington State Department of Ecology
  - \$14M from Washington State Legislature (pending)

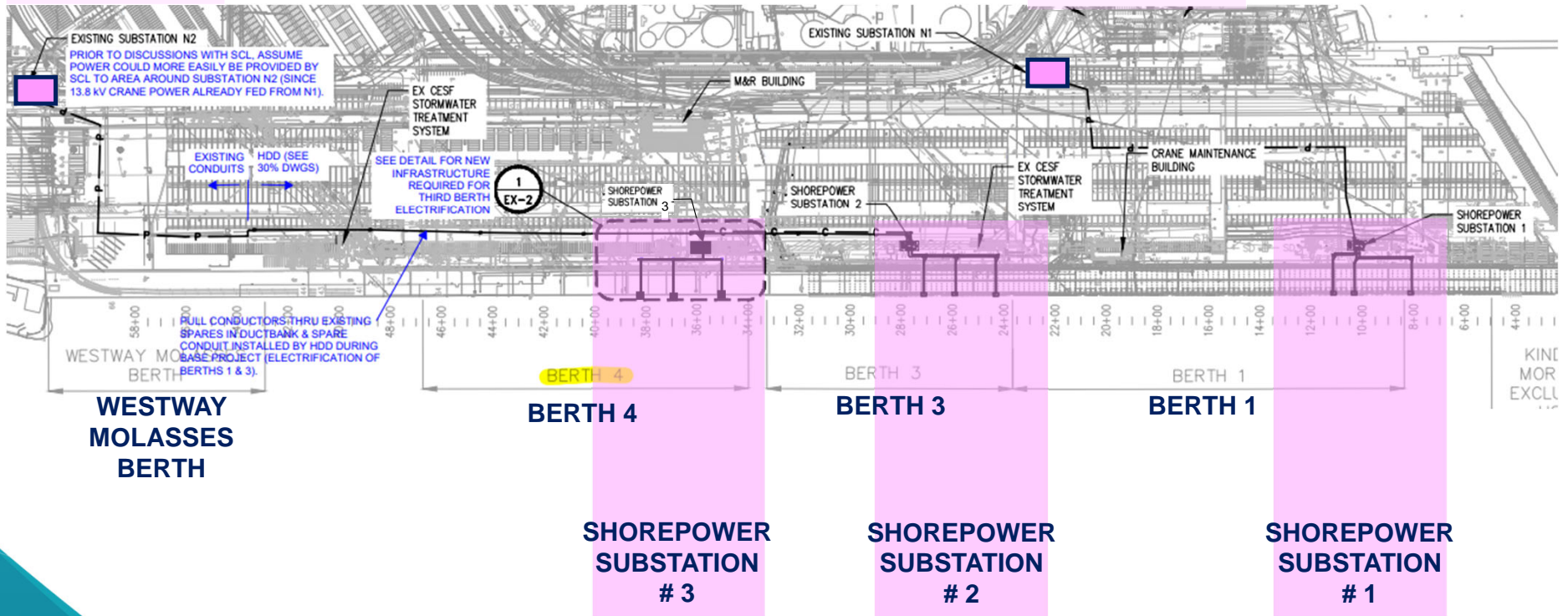
# Background



# Background

**EXISTING  
SUBSTATION  
N2**

**EXISTING  
SUBSTATION  
N1**



# Project Description and Details

- SD3 Mod 1 will provide funding for 60% - Ready to Bid design for shore power at two berths and 0% - Ready to Bid for shore power at the third berth.
- The T18 Shore Power project will install 3 shore power substations, 3 wharf-side recessed vaults per berth (Berths 1, 3, and 4) and associated electrical infrastructure, using existing infrastructure wherever available.
- Work will disrupt Tenant operations; currently working with SSA on a tenant phasing plan for construction.
- Additional coordination is needed with SCL to determine what upgrades need to happen with SCL infrastructure with the addition of the 3<sup>rd</sup> berth shore power.

# Project Schedule

Activity	Timeframe
Design Start	November 1, 2023
Design Finish	September 30, 2024
Receive Permits	March 31, 2025
Advertise Bids	April 1, 2025
Bid Opening	April 29, 2025
Contract Award	May 13, 2025
Substantial Completion	December 31, 2026
Contract Completion	June 30, 2027

# Source of Funds

- The estimated cost of the design for this project is \$8,200,000
- The estimated budget for this project is \$80,073,494
- The 2017-2022 Capital Investment Plan (CIP) allocates \$9,000,000 for this project
- This work and associated budget is consistent with the NWSA valuation
- Work completed since 2021 was previously authorized and has been completed

# Financial Summary

	This Request	Total Project Cost	Cost to Date	Remaining Cost
Procurement	\$0	\$0	\$0	\$0
Pre-Design	\$0	\$179,000	\$179,000	\$0
Design	\$8,200,000	\$9,000,000	\$621,000	\$8,200,000
Construction	\$0	\$70,900,000	\$0	\$70,900,000
<b>Total</b>	<b>\$8,200,000</b>	<b>\$80,079,000</b>	<b>\$800,000</b>	<b>\$79,100,000</b>

<b>Total Estimated Cost</b>	<b>\$80,079,000</b>
Department of Ecology VW Grant	-\$2,000,000
WA State Appropriation (pending)	-\$14,000,000
<b>Total Net Cost</b>	<b>\$64,079,000</b>

# Explanation of Cost Growth

- July 2020: Stage 2 IDDP estimate of \$28M for two berths (\$14M per berth)
- September 2021: \$31M estimate for two berths (\$15.5M per berth)
- June 2023: Estimate was \$52M for two berths (\$26M per berth)
- September 2023: Added third berth, estimate \$80M (\$26.7M per berth)
  
- Estimate per berth nearly doubled between September 2021 and June 2023 for the following reasons:
  1. IDDP was developed as a concept screening with low level of project definition
  2. Inflation for both labor and materials
  3. More knowledge of actual costs for shore power from T5 and Husky
  4. 30% design identified additional civil work needed to install outlets along pier edge



# Environmental Impacts / Review

- Permitting:
  - U.S. Army Corps of Engineers; Clean Water Act (CWA) Section 404/10; National Wide Permit 57.
  - Washington Department of Ecology (Ecology); CWA Section 401 Water Quality Certification.
  - Ecology; Construction Stormwater General Permit.
  - Washington Department of Fish and Wildlife; Hydraulic Project Approval.
  - City of Seattle (City); Shoreline Substantial Development Permit
  - Port; SEPA Review
- Remediation:
  - T18 is an EPA superfund site and may contain contaminated soils and ground water
  - Contaminated soils and groundwater will need to be handled and stored appropriately
  - Contaminated soils and groundwater will need to be disposed of at a permitted disposal facility
  - Handling, storage, and disposal of contaminated soils increases the cost of the project and had been accounted for in the project cost estimate
- Stormwater:
  - Obtain stormwater permits, as required.
- Air Quality:
  - The Shore Power Project supports NWSA's Greenhouse Gas Resolution and Northwest Ports Clean Air Strategy. There are no anticipated air pollutants above standard construction activities for this project. No additional permitting is required.

# ACTION REQUESTED

Request project design authorization in the amount \$8,200,000, for a total authorized amount of \$9,000,000 for design work associated with the T18 Shore Power, Master Identification No. U00670.