

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No.: 8C
Meeting Date: October 1, 2024

DATE: September 23, 2024

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Tong Zhu, Chief Commercial & Strategy Officer
Project Manager: Stefan Wynn, Capital Project Leader

SUBJECT: Terminal 18 (T18) Protective Relay Replacement Project Authorization

A. ACTION REQUESTED

Request the Managing Members grant project authorization in the amount of \$347,000, for a total authorized amount of \$397,000, for work associated with the T18 Protective Relay Replacement Project, Master Identification No. N10575.

B. SYNOPSIS

Terminal 18's main substations (N1 and N2) need protective relay system replacements. The current system is not functioning, leaving the switch gear unprotected and not code compliant. This project will replace protective relay systems at both substations as well as perform a coordination study and testing as necessary. Doing this work will eliminate safety concerns with the current infrastructure. The NWSA is responsible for this work per the lease.

C. BACKGROUND

It has been identified by Port of Seattle (POS) Engineering and Marine Maintenance electrical crew that the T18 main substations N1 and N2's protective relay systems are currently not functioning and need to be replaced and a coordination study conducted. These medium voltage substations are equipped with 6 protective relays each totaling 12 relays that need to be replaced and coordinated. Both substations are not currently protected, at a high risk of failure, and not in code compliance. Safety is a major concern.

This project will also inform NWSA stakeholders of the current condition of both substations in order to prepare for future projects.

D. PROJECT DESCRIPTION AND DETAILS

This project will replace the 12 protective relays at T18 main substations (N1 and N2) with the intent to:

- Maintain substations in good working code-compliant order avoiding large-scale or emergency repairs on an active terminal.
- Eliminate safety concerns with the current infrastructure

POS Engineering will conduct the coordination study after the installation of the new relays. This will include the following:

- Manufacturing nameplate data gathering for devices and equipment.
- Developing a software model of a one-line diagram for Service Entrance Switchgear N1, N2, and other associated switch gears.
- Producing device settings and power analysis document.

Project Objectives

Project objectives include:

- Replacement of T18 substations' protective relay replacement systems.
- Avoid large-scale or emergency repairs on an active terminal.
- Perform a coordination study on the new protective relay systems.

Scope of Work

The scope of work will include:

- Procurement (POS)
- Construction (Contractor)
- Coordination of electrical infrastructure (POS)

Schedule

The projected schedule is reliant upon contractor availability.

Procurement	October 18, 2024
Substantial Completion	November 30, 2024
Final Completion	December 31, 2024

E. FINANCIAL IMPLICATIONS

Project Cost Details

	Previous Requests	This Request	Total Project Cost	Cost to Date	Remaining Cost
Pre-Design	\$50,000	\$0	\$50,000	\$0	\$50,000
Construction	\$0	\$347,000	\$347,000	\$0	\$347,000
Total	\$50,000	\$347,000	\$397,000	\$0	\$397,000

Source of Funds

The 2024-2028 Capital Investment Plan (CIP) Budget allocates \$400,000 for this project. This project is not HMT eligible.

Financial Impact

The cost of this project will be capitalized and expensed over 20 years, resulting in annual depreciation of approximately \$20,000 per year. The T18 terminal is budgeted to provide approximately \$35,000,000 of income in 2024.

F. ENVIRONMENTAL IMPACTS/REVIEW

N/A

G. ATTACHMENTS TO THIS REQUEST

- None

H. PREVIOUS ACTIONS OR BRIEFINGS

<u>Date</u>	<u>Action</u>	<u>Amount</u>
September 4, 2024	Executive Authorization	\$50,000
TOTAL		\$50,000