MANAGING MEMBERS
ACTION ITEM

Item No. 4G

Date of Meeting March 20, 2018

DATE: March 7, 2018

TO: Managing Members, The Northwest Seaport Alliance

FROM: John Wolfe, Chief Executive Officer

Sponsors: Dustin Stoker, Chief Operations Officer

Project Manager: Jan Shawyer, Engineering Project Manager I

SUBJECT: NWSA Clean Drayage System

A. ACTION REQUESTED

As referenced in NWSA Resolution No. 2016-04, Exhibit A, Delegation of Authority Master Policy, Paragraph 8.c.iii., states project costs exceeding $300,000 require approval from Managing Members.

Request project authorization in the amount $2,264,000 for a total authorized amount of $2,599,000, for work associated with the NWSA Clean Drayage System project, Master Identification No. 201044.01 for the South Harbor, and CIP No. C801023 for the North Harbor.

B. SYNOPSIS

This project is the culmination of the effort by the NWSA to unify the Clean Truck Programs of the Port of Tacoma and Port of Seattle and create a gateway-wide solution to consistently monitor the Clean Truck Program and terminal turn times. Cleaner trucks and more efficient operations reduce diesel particulate matter emissions from drayage trucks serving the International Container Terminals. This project includes technology upgrades for the Port of Tacoma and enhancements to the existing Radio Frequency Identification (RFID) system previously deployed at the Port of Seattle in 2013.

Each International Container Terminal will receive multiple installations of the eModal WhereNet based RFID technology at multiple entry and exit gates to identify registered compliant trucks and permit them access to drop-off or pick-up containers from within the terminal. The technology at the exit gates will then permit the calculation of “turn-time” for each truck which can be used as a metric for other purposes, including identifying methods to reduce time in terminal. This yields multiple benefits that include: shorter wait times, reduced engine emissions, reduced fuel consumption, improved terminal operating efficiency and consistency, and better economic conditions for truck drivers through more

container transactions per day, the sum of which boosts the performance of the NWSA gateway and helps attract additional container cargo.

C. BACKGROUND

NWSA Operations hired an independent consultant in June 2017 to develop and provide potential solutions with recommendations for an appropriate technology to support the Clean Truck Program. Incremental reports were released periodically by the consultant beginning in July 2017 and culminated with the final report and recommendations being issued October 31, 2017.

The technology systems considered were the proprietary WhereNet/eModal system and an Open Standard Passive system by Neology of San Diego, California (formerly controlled by 3M).

WhereNet RFID – is a commercially available proprietary technology manufactured and owned by Zebra Technologies known as the WhereNet Real-Time Location System (RTLS) RFID. It is only available from one distribution source, Kalmar Global, under an exclusive distribution agreement with Zebra WhereNet.

Open Standard (STD) Passive RFID - is an open standard Electronic Product Code (EPC) Global Generation 2 (Gen2) Ultra High Frequency (UHF) Passive Windshield Decal RFID. This is either the same or equivalent to that technology which is currently in use by the WSDOT for the statewide *Good To Go!* tolling program.

Each system has unique advantages and disadvantages which are discussed in Section F, Alternatives Considered.

D. PROJECT DESCRIPTION AND DETAILS

The purpose of the work is to reduce diesel particulate matter emissions from drayage trucks at both harbors by providing the tools to enable terminal operators to accurately and reliably identify registered trucks as being either compliant or non-compliant with the Clean Truck Program requirements. The Clean Truck Program requires all trucks serving the NWSA international terminals to have a 2007 engine or newer, or equivalent emission controls, by April 1, 2018. To continue to access the terminals after April 1, 2018, a driver with a non-compliant truck may apply for a Temporary Access Pass. This pass will require a commitment from the trucker to become compliant by December 31, 2018. Non-compliant trucks will not be permitted to drop-off loads or pick-up loads at either North or South Harbor participating international terminals after December 31, 2018.

Project Objectives

Implement a Drayage Truck Management System (DTMS) that will enable the NWSA to gain the cooperation of the drayage truck industry by using a common and uniform operating approach across both harbors.

Improve Safety and Security – Establish and maintain a Drayage Truck Registry (DTR) to keep accurate record of registered trucks and drivers, and to identify drivers and trucks as being compliant or non-compliant with regulatory agency requirements and the Clean Truck Program requirements.

Improve Mobility and Operational Efficiency – Adopt and leverage the technology as an integral portion of the DTMS to facilitate collection and sharing of gathered data and operational information to improve freight traffic efficiency and throughput.

Improve Air Quality – Establish and enforce provisions and standards to limit terminal access to only those vehicles meeting or exceeding the Clean Truck Program emission standards.

Improve Collaboration and Data Sharing – Maintain ongoing communications with the greater port community and stakeholders in federal, state, and local public agency circles, such as US Department of Transportation (USDOT) Federal Motor Carrier Safety Administration (FMCSA), Washington State Department of Transportation (WSDOT), Seattle Department of Transportation (SDOT), Washington State Department of Licensing (DOL), Washington State Patrol (WSP), Washington Department of Ecology (ECY), and stakeholders in private industry such as terminal operators, motor carriers, independent owner operators, beneficial cargo owners, shippers, freight forwarders, and local warehouse and distribution centers.

Scope of Work

The scope of work – South Harbor includes installations at East Sitcum Terminal, Husky Terminal, Pierce County Terminal, and Washington United Terminals.

- Retrofit entry and exit gate truck pedestals with an RFID exciter
- Provide adequate RFID receivers/location sensors near pedestals to identify registered trucks
- Connect RFID receivers into terminal computer rooms using fiber optic cable
- Have new servers installed to accommodate the Drayage Truck Registry
- Test system, adjust and finalize system commissioning

The scope of work – North Harbor includes installations at Terminal 30 and Terminal 46

- Retrofit entry and exit gate truck pedestals with an RFID exciter
- Provide adequate RFID receivers/location sensors near pedestals to identify registered trucks
- Connect RFID receivers into terminal computer rooms using fiber optic cable
- Update existing servers and have switches installed to accommodate the Drayage Truck Registry
- Test system, adjust and finalize system commissioning

Schedule

South Harbor

Advance Procurement of Materials and Services	April 2018
Advertise Bids	June 2018
Construction Contract Award	July 2018
Substantial Completion	November 2018

North Harbor

Advance Procurement of Materials and Services	April 2018
Issue Work Request	August 2018
Testing and Commissioning	October 2018
Substantial Completion	November 2018

E. FINANCIAL IMPLICATIONS

Project Cost Details

	This Request	Total Project Cost	Cost to Date	Remaining Cost
North Harbor				
Technology Purchase	$ 279,000	$ 279,000	$ -	$ (279,000)
Pre-Design	$ -	$ 50,000	$ -	$ (50,000)
Design	$ 265,000	$ 265,000	$ -	$ (265,000)
Construction	$ 351,000	$ 351,000	$ -	$ (351,000)
Subtotal – North Harbor	**$ 895,000**	**$ 945,000**	**$ -**	**$ (945,000)**
*Footnote: Costs for entry gate modifications only to support redlight/greenlight = $708,750				
South Harbor				
Technology Purchase	$ 794,000	$ 794,000	$ -	$ (794,000)
Pre-Design	$ -	$ 90,000	$ 57,528	$ (32,472)
Design	$ 25,000	$ 220,000		$ (220,000)
Construction	$ 550,000	$ 550,000		$ (550,000)
Subtotal – South Harbor	**$ 1,369,000**	**$ 1,654,000**	**$ 57,528**	**$ (1,596,472)**
*Footnote: Costs for entry gate modifications only to support redlight/greenlight = $1,240,500				
Grand Total	**$ 2,264,000**	**$ 2,599,000**	**$ 57,528**	**$ (2,541,472)**

Source of Funds

The 2018-2022 Capital Investment Plan (CIP) allocates $2,050,000 for this project. The 2018 CIP budget includes $3 million in unallocated capital funds. The increase of $549,000 will come from this CIP budget line item.

Financial Impact

Project costs will be capitalized and depreciated over an estimated 5-year life resulting in annual depreciation of $519,000. Depreciation expense for 2018 will be approximately $43,000 based on a completion date of November 2018. This cost will be covered by existing revenue.

F. ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS

Alternative 1) Employ an Open Standard passive RFID technology which uses a windshield decal which can be made compatible with the WSDOT Good To Go! Toll program system statewide. This system would be more flexible and far less costly but would require substantial backend work on the part of the NWSA to develop its own Drayage Truck Registry and would require hands-on development and maintenance of the system thereafter, most likely as Software as a service (SaaS). No MTOs currently have any experience with this technology and interfaces to Terminal Operating Systems (TOS) and Gate Operating Systems (GOS) would need to be developed in order to handle gate protocol. While appealing, this alternative would require more time than permitted by the clean truck program emission standard.

Alternative 2) Leverage existing WhereNet Technology already employed in the North Harbor and used in every other major Port along the West Coast. All the current MTOs in the South Harbor are familiar with it and have it deployed in one or more their other West Coast facilities. It is proven to work with their Terminal Operating Systems (TOS) and Gate Operating Systems (GOS), which are needed components to automate the gate protocol to handle both compliant and non-compliant trucks.

Alternative 2 is the recommended course of action: It's proven technology within the local market at the North Harbor and regionally the terminal operators have experience with it at other facilities in California. This selection also made lease negotiations move more smoothly.

G. ENVIRONMENTAL IMPACTS/REVIEW

Permitting: This work is SEPA exempt. No environmental permits are required for this project.

Remediation: If trenching is required, any soils to be removed must be tested for contaminants prior to disposal.

Water Quality: If ground disturbance occurs, this project will require a Stormwater Pollution Prevention Plan short-form.

Air Quality: Once operational, this project is intended to improve air quality by ensuring Marine Terminal Operators only allow access to trucks compliant with the Clean Truck Program to NWSA international container terminals.

H. ATTACHMENTS TO THIS REQUEST

- Computer slide presentation.

I. PREVIOUS ACTIONS OR BRIEFINGS

Date	Action	Amount
December 11, 2017	Executive Authorization for Design South Harbor	$285,000
January 31, 2018	Executive Authorization for Design North Harbor	$50,000
January 31, 2018	Sole Source Memo to Managing Members per Master Policy (h. Purchased Goods and Services, paragraph ii)	$0
February 6, 2018	Commission Authorization – Port of Tacoma & Port of Seattle Established January 1, 2019 Deadline	$0
TOTAL		**$335,000**