

THE NORTHWEST SEAPORT ALLIANCE
MEMORANDUM

MANAGING MEMBERS
ACTION ITEM

Item No. 6C
Date of Meeting April 6, 2021

DATE: March 24, 2021

TO: Managing Members

FROM: John Wolfe, CEO

Sponsor: Jason Jordan, Director, Environmental and Planning Services

Project Managers: Steve Nicholas, Environmental Senior Project Manager,
and Joe Caldwell, Maintenance Project Manager

SUBJECT: Project Authorization for Lighting Upgrade at NIM

A. ACTION REQUESTED

As referenced in NWSA Resolution No. 2020-02, 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 \$480,000 for work associated with the Lighting Upgrade at the North Intermodal Yard (NIM), Master Identification No. 201127.01.

B. SYNOPSIS

The proposed exterior lighting upgrade project at NIM will:

- Save nearly \$60,000 annually in reduced electricity bills and maintenance costs;
- Reduce the lighting-related energy usage at the NIM by 67%;
- Improve the quality of lighting in ways that improve worker safety and reduce light pollution for both people and aquatic life near the property.

The total estimated project cost is \$480,000, and total estimated rebate that the NWSA will receive from Tacoma Public Utilities (TPU) after project completion is \$122,000 (about 25% of the total project costs). Net project costs will be \$360,000. The financial analysis estimates a payback period of seven years.

C. BACKGROUND

The project entails updating the exterior lighting at NIM – from old, inefficient high-intensity discharge (HID) lamps to new, highly efficient Light-Emitting Diode (LED) lighting. In all, about

279 lighting fixtures will be replaced with 245 LED fixtures at NIM. This project pays for itself in seven years, and achieves the following benefits:

- **Financial/Economic:** Reduces electricity and maintenance costs, saving money the NWSA can deploy elsewhere. Improves safety and working conditions in two ways: 1) reducing the need for maintenance staff to frequently replace bulbs perched on 90-foot poles; and 2) delivering better visibility to workers on night and hoot shifts.
- **Environmental:** Significantly reduces energy use, which translates into less air and climate pollution from power plants by helping TPU sustain its commitment to delivering zero-emission electricity and avoid the need to develop new energy sources. In addition, the project protects marine life in the Blair Waterway because LED lighting is more focused on the docks with less “spillage” into surrounding waters.
- **Social/Community:** Reduced light pollution for South Harbor communities, as the LED lighting is “cleaner” and more directed downward toward the docks.

D. PROJECT DESCRIPTION AND DETAILS

Project Objectives

Remove the high-intensity discharge (HID) lamps and replace them with light-emitting diode (LED) fixtures.

Scope of Work

- NIM – Remove all 279 HID lamps and install 245 LED fixtures

Schedule

- Order Fixtures – 5 to 7 weeks lead time on material, ETA 5/30/21
- Install Fixtures – Estimated 5 months to install all fixtures, ECD 10/31/21

E. FINANCIAL IMPLICATIONS

Project Cost Details

	This Request	Total Project Cost	Cost to Date	Remaining Cost
Procurement	\$ 348,245	\$ 348,245	\$ -	\$ 348,245
Construction	\$ 131,083	\$ 131,083	\$ -	\$ 131,083
TPU Incentive		\$ (122,098)	\$ -	\$ (122,098)
Total	\$ 479,328	\$ 357,230	\$ -	\$ 357,230

Source of Funds

The current Capital Investment Plan (CIP) Budget allocates \$122,000 for this project.

Financial Impact

Assuming 15 years life, this project has a 7-year payback and an expected rate of return of 15.6%.

Project costs will be capitalized and depreciated over an estimated useful life of 15 years, resulting in annual depreciation expense of \$24,000 (after rebate). Depreciation expense for 2021 will be approximately \$4,000 based on a substantial completion date of October 2021.

The NIM yard went through a replace/retrofit yard light project in 2014 replacing the 1000W high pressure sodium lights with 775W pulse-start metal halide lights. The estimated net book value to be written off is \$24,600.

F. ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS

Alternative 1) Do nothing, thereby missing the opportunity to save money (through reduced electricity bills and maintenance costs), reduce energy consumption, reduce light pollution, and improve worker safety.

Alternative 2) This request.

Alternative 2 is the recommended course.

G. PREVIOUS ACTIONS OR BRIEFINGS

None.



Item No: 6C
Date of Meeting: April 6, 2021

Project Authorization For Exterior Lighting Upgrade at NIM Yard

Presenters:
Steve Nicholas, Environmental Senior Project Manager
Joe Caldwell, Maintenance Project Manager

Project Authorization

Exterior Lighting Upgrade at NIM

As referenced in NWSA Resolution No. 2020-02, 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 \$480,000 for the Exterior Lighting Upgrade at North Intermodal Yard (NIM) project, Master Identification No. 201127.01.

The cost is \$480,000 but we will receive an estimated lighting rebate of \$122,000 for a net cost of \$360,000.



Background

Exterior Lighting Upgrade at NIM

- LED (light-emitting diode) lighting is much better than HID (high intensity discharge) lighting:
 - Increased energy efficiency
 - Reduced costs
 - Improved worker safety
 - Reduced light pollution
- Given cost savings and utility rebates, payback period is 7 years
- In addition to the strong business case behind these projects, project advances NWSA's Air Quality & Sustainable Practices program, including the Northwest Ports Clean Air Strategy.



Background

Exterior Lighting Upgrade at NIM

- The NIM yard went through a replace/retrofit yard light project in 2014 replacing the 1000W high pressure sodium lights with 775W pulse-start metal halide lights. Project cost was \$188,661 and the Port received a TPU rebate of \$42,849. There is \$24,600 left to depreciate from that project which will need to be written off.

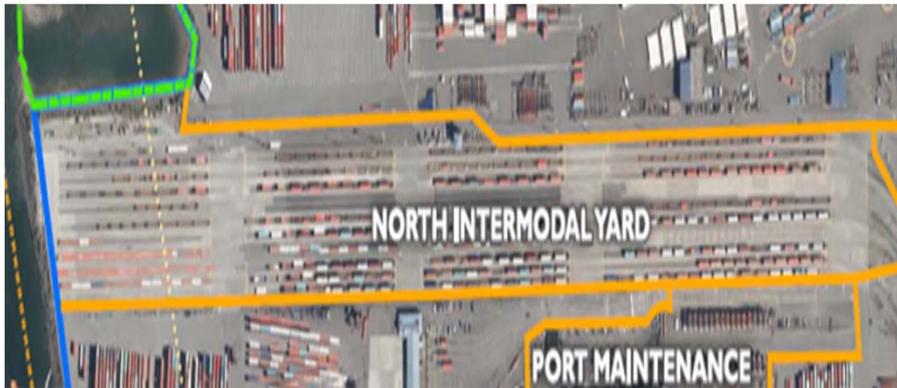


Better, cleaner, safer lighting



Project Description

Exterior Lighting Upgrade at NIM



- Replace 279 HID fixtures with 245 LED fixtures
- Project Cost: \$480K
- Utility Rebate: \$122K
- Net Project Cost: \$360K
- Annual Energy Cost Savings: \$51K
- Annual Maintenance Cost Savings: \$8K
- Annual Energy Savings: 67%

Project Schedule

Exterior Lighting Upgrade at NIM

Activity	Timeframe
Order LED Fixtures	4/7/21 - 5/30/21
Install LED Fixtures	6/1/21 - 10/31/21



Source of Funds

Exterior Lighting Upgrade at NIM

- The estimated cost of the Procurement/Construction for this project is \$479,328.
- Tacoma Power estimated incentive is \$122,098.
- Estimate net project cost is \$357,230.
- The estimated budget for this project is \$360,000.
- The current Capital Investment Plan (CIP) allocates \$122,000 for this project.
- This work and associated budget is consistent with the NWSA valuation.

Financial Summary

Exterior Lighting Upgrade at NIM

	This Request	Total Project Cost	Cost to Date	Remaining Cost
Procurement	\$ 348,245	\$ 348,245	\$ -	\$ 348,245
Construction	\$ 131,083	\$ 131,083	\$ -	\$ 131,083
TPU Incentive		\$ (122,098)	\$ -	\$ (122,098)
Total	\$ 479,328	\$ 357,230	\$ -	\$ 357,230



Conclusion

Exterior Lighting Upgrade at NIM

Request project authorization in the amount of \$480,000 for the Lighting upgrades at NIM project, Master Identification No. 201127.01.

