



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8b

ACTION ITEM

Date of Meeting February 13, 2018

DATE: January 2, 2018

TO: Stephen P. Metruck, Executive Director

FROM: Srin Pendikatla, Program Manager Marine Stormwater Utility
Curtis Stahlecker, Capital Project Manager

SUBJECT: Terminal 18 Stormwater Outfall Renewal and Replacement (CIP #C800895)

Amount of this request: \$2,985,000

Total estimated project cost: \$4,000,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to perform the construction activities for the Terminal 18 Stormwater Outfall Renewal and Replacement project using a combination of Port crews, small works contracts, and reimbursable tenant work for an amount not to exceed \$2,985,000 out of a total estimated project cost of \$4,000,000.

EXECUTIVE SUMMARY

This project will protect water quality of Puget Sound by; 1) Using tide gate valves to prevent tidal waters from entering and flowing within the drainage system; 2) Repairing broken and cracked pipes preventing ground water and soil from migrating into the stormwater system and ultimately entering the waterway.

This is the first capital project in support of the Marine Stormwater Utility (Utility) to repair and replace stormwater outfalls located at Terminal 18. The project is funded by revenue collected from the Port of Seattle (Port) and Northwest Seaport Alliance (NWSA) tenants based on current approved rates. The work focuses at the terminus of the stormwater drainage systems, from the last manhole to the outfall, and includes re-grading the pipes, replacing non-functioning tide gate valves and repairing broken pipes.

Due to the operational impacts on tenant operations, the work will be phased over the next three years. The work will be executed using a combination of Port crews, small works project-specific contracts, and open-order contracts to minimize schedule and cost risk.

JUSTIFICATION

The Port's Marine Stormwater Utility was established in November 2014, and an Interlocal Agreement with the City of Seattle was signed on November 9, 2016. The Utility has

Meeting Date: February 13, 2018

jurisdiction over the NWSA North Harbor managed properties and Port of Seattle properties and facilities.

In 2016, the Utility began collecting drainage fees to be used for a comprehensive investigation and assessment of the stormwater infrastructure, and to pay for system rehabilitation. Terminal 18 is at the forefront of system rehabilitation due to the system size, importance to the container shipping network, and the requirement for improved treatment systems for industrial stormwater, which the tenant is in the process of installing in a number of upland basins.

There are 13 outfalls located at Terminal 18, installed in the 1960s and 1970s, which are owned and maintained by the Port. Given the age of the systems, the outfalls have performed well over the years; however, there are a number of deficiencies that need to be addressed to protect the Port's assets and help protect the water quality of Puget Sound.

DETAILS

Most of the 13 outfalls located on the East Waterway of Terminal 18 have non-functioning or missing tide gate valves, several of the pipes are broken where they pass through the bulkhead, and other pipes have settled, causing ponding to occur within the pipes. This project will repair the broken pipes, correct the grade issues, and install new tide gate valves.

Benefits of this project include maintaining the integrity of the environmental controls established by the Superfund record of decision. Additional benefits include preventing infiltration of groundwater and flow of tidal waters into the stormwater system, protecting the water quality of the East Waterway; reducing corrosion within the pipes from corrosive ocean salt water; reducing maintenance and cleaning within the stormwater pipes; and contributing to meeting Century Agenda Strategy 4, Objective 13 – Meet or exceed agency requirements for stormwater.

Close coordination with the tenant is required for the outfall construction activities to address: 1) Tenant terminal operations and variabilities in shipping schedules; 2) Installation of tenant stormwater treatment system in close proximity to the outfalls; 3) Unknowns associated with excavating within an EPA Superfund site. To achieve this close coordination, and reduce project uncertainties in cost and schedule, we recommend using Port crews, and project specific and small works contracts to execute the work.

Additionally, due to the close proximity of one outfall to the tenant installed treatment system, the repair of that outfall will be accomplished by the tenant contractor and reimbursed under a letter of agreement with the tenant.

Meeting Date: February 13, 2018

Scope of Work

The scope for this project will concentrate on making repairs to the outfalls from the tide gate valve at the end of the pipe to the first manhole upstream, and will include the following:

- (1) New tide gate valves,
- (2) Realign the grade to correct the drainage slope,
- (3) Repair broken pipes, and
- (4) Line pipes to prevent groundwater infiltration where feasible.

Small Business

In conjunction with the Port of Seattle’s Small Business Generator Program’s (PortGen) outreach activities, the leveraging of Small Works contracts will help maximize small business participation for this project. Historically, Small Works have produced high levels of small business participation for the Port.

Schedule

Design and site investigation work began in the second quarter of 2017. Installation of cure-in-place pipe lining of up to two stormwater lines was initially planned during the third quarter of 2017 but was postponed due to the design and permit schedule. This work will be carried forward with the balance of construction phased over the next three years.

Phasing of the project is recommended as the work is located very near and under the dock, making the construction activity disruptive to the terminal operations. To mitigate the terminal disruptions, the work will require close coordination with tenant, and where practical, sequenced with the tenant construction activities conducted to install the stormwater treatment systems.

Commission design authorization	Q2 2017
Commission construction authorization	Q1 2018
Construction start	Q1 2018
In-use date	Begin Q4 2018

Cost Breakdown

	This Request	Total Project
Design	\$0	\$800,000
Construction	\$2,985,000	\$3,200,000
Total	\$2,985,000	\$4,000,000

Meeting Date: February 13, 2018

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Postpone action and monitor the condition of Terminal 18 Outfalls for future action

Cost Implications: \$25,000 to \$50,000 annual monitoring costs

Pros:

- (1) Allows Utility funds to be used at other facilities.

Cons:

- (1) Does not address the failing stormwater infrastructure and compromises quality.
- (2) Current conditions will continue to deteriorate and require increased operations & maintenance expenditures for temporary repairs.
- (3) Would not provide the opportunity to phase the work with the tenant construction of stormwater treatment, minimizing terminal disruptions.

This is not the recommended alternative.

Alternative 2 – Perform the Terminal 18 Outfall Project in a single construction phase

Cost Implications: Project costs are estimated to be \$3.75 million

Pros:

- (1) Slightly lower cost with fewer mobilizations.
- (2) Corrects the identified system deficiencies of inoperable tide gate valves, broken and off-grade pipes.
- (3) Protects the water quality entering Puget Sound.
- (4) Protects the existing infrastructure from further damage.
- (5) Expected life of rehabilitated infrastructure is 50 years.

Cons:

- (1) A single construction phase would significantly impact the terminal operations due to limited working area along the wharf to concurrently handle cargo and repair the 13 outfalls.
- (2) A single phased approach would be compounded by the coordination and space constraints along the wharf due to the tenant installing stormwater treatment system directly upstream of each outfall.
- (3) Utility funding of a single construction phase would be deferred until 2020 due to funding limitations.

This is not the recommended alternative.

Meeting Date: February 13, 2018

Alternative 3 – Move forward with the Terminal 18 Outfall Project using a phased construction approach

Cost Implications: Project costs are estimated to be \$4 million

Pros:

- (1) Corrects the identified system deficiencies of inoperable tide gate valves, broken and off-grade pipes.
- (2) A phase approach allows opportunity to adjust the design or construction processes in the subsequent phases to accommodate unforeseen conditions and minimize risk.
- (3) Protects the water quality entering Puget Sound.
- (4) Protects the existing infrastructure from further damage.
- (5) Expected life of rehabilitated infrastructure is 50 years.
- (6) Capital funds for this project are budgeted in the 10-year budget forecast and 10-year cash spending forecast.

Cons:

- (1) Requires the expenditure of \$4 million in capital costs.
- (2) The execution of this project may limit or postpone funding of other Utility supported projects.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$4,000,000	\$0	\$4,000,000
AUTHORIZATION			
Previous authorizations	\$1,015,000	0	\$1,015,000
Current request for authorization	\$2,985,000	0	\$2,985,000
Total authorizations, including this request	\$4,000,000	0	\$4,000,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

The project was included in the 2018 plan of finance under CIP #C800895 in the amount of \$4,010,000. This project will be funded by the Marine Stormwater Utility fund.

Financial Analysis and Summary

Project cost for analysis	\$4,000,000
Business Unit (BU)	Marine Stormwater Utility
Effect on business performance (NOI after depreciation)	This project will increase depreciation expense by \$80,000 per year after the project is completed in 2020.

Meeting Date: February 13, 2018

IRR/NPV (if relevant)	The NPV of this project is the present value of the project cost and annual maintenance costs.
CPE Impact	NA

Future Revenues and Expenses (Total cost of ownership)

No future revenues are anticipated as a result of this project. The expenses for maintenance are estimated to be \$25,000 in 2021 with 3.5% inflation rate thereafter.

ADDITIONAL BACKGROUND

The Port of Seattle Commission established Stormwater Utility in 2015. With the establishment of the Marine Stormwater Utility, the stormwater drainage fees that were previously paid to the City of Seattle are now collected and retained by the Port to support the Marine Stormwater Utility’s objectives. These objectives include:

- Assess condition of Stormwater lines and related structures
- Identify urgent repairs, and prioritize and complete those repairs
- Identify and characterize longer term capital improvements that could contribute to system rehabilitation and protect stormwater quality entering Puget Sound.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

April 25, 2017 – Port of Seattle Commission authorized design funding