



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8h

ACTION ITEM

Date of Meeting February 13, 2024

DATE: January 31, 2024

TO: Stephen P. Metruck, Executive Director

FROM: Kelli Goodwin, Senior Manager Maritime Operations
Robert Hoyman, Facilities Project Manager IV

SUBJECT: T91 Domestic Waterline Renewal (C801243)

Amount of this request: \$4,500,000

Total requested project cost: \$4,750,000

ACTION REQUESTED

Request Commission Authorization for the Executive director to approve construction costs of \$4,500,000 for a total project cost of \$4,750,000 for the Terminal 91 Domestic Waterline Renewal and to use Port of Seattle crews to perform the work over an eight-year period.

EXECUTIVE SUMMARY

The work will consist of replacing domestic waterlines which serve the vessels at Piers 90 and 91. The domestic waterlines support the North Pacific Fishing Fleet, cruise vessels, and other commercial vessels that call at Terminal 91. This project will restore waterlines that are at end of their service life, some of which are on the verge of failure. Moving forward with this project will restore infrastructure vital to Maritime Operations for the next fifty years.

JUSTIFICATION

The existing piping is galvanized steel and, in some cases, older than 50 years. Several areas have become thin and are currently leaking while others remain in usable condition. Extending the construction timeline over multiple years allows for coordination with planned capital projects and allows the replacement of piping according to the level of degradation. This approach also avoids replacing some sections where other project work will interfere with this effort or otherwise cause rework. There are multiple projects taking place over the next 2-7 years, some of which may require sections of piping to be removed during construction. With the use of Port Crafts', we anticipate being able to accommodate these projects and to plan around them, thereby taking advantage of in-house flexibility.

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Diversity in Contracting

The office of Diversity in Contracting has been involved in Acquisition Planning and strategy discussions. The total of this work has been planned to take place over several years with milestone goals to contract some portions using small and, or WMBE firms to perform the work. There is a goal of spending 10% of the construction costs using WMBE and Small business resources.

DETAILS

This project was originally budgeted for \$850,000 for 2021 to replace waterline which at the time was failing or in poor condition, totaling 3,000 LF of pipe replacement only. Seed funding was authorized by Kenneth R. Lyles followed by Commission Authorization of \$250,000 total, for design. Through the design process it was realized that significant improvements in seismic bracing and other code requirements were needed when replacing the domestic waterline. The design assessments of all the piping and needed improvements suggested that 100% of the domestic waterline should be upgraded. The current estimate for construction is \$4,500,000 which does not include the portion to be replaced by U00554/U00704 Berths 6 & 8 Modernization project.

The scope of work has been evaluated in terms of piping sections requiring immediate replacement, areas requiring replacement in 1-3 years, areas requiring replacement in 3-6 years and those areas which have been replaced due to failure but require seismic upgrades and valve replacements. Approximately 80% of the existing piping has yet to be replaced and 100% requires seismic upgrades and other improvements.

Port of Seattle Engineering has completed a comprehensive design for replacing all the existing galvanized domestic waterline and bringing the system up to current seismic and sanitary code. The design is currently under floodplain code review at SDCI and all permitting, other than Mechanical, is expected to be complete by February of 2024.

Portions of this work may be contracted to serve the most efficient delivery while coordinating with other project work, Operations, and avoiding rework.

Scope of Work

Port Crafts will replace existing galvanized steel piping with new stainless-steel piping, fittings, valves and supports. Seismic bracing will be installed to comply with current seismic code requirements.

Schedule:

- (1) 2024, Replacement of 400' of piping, Seismic Upgrades to 800' of piping.
- (2) 2025, Replacement of 1,000' of piping, Seismic Upgrades to 1,000' of piping
- (3) 2026, Replacement of 1,000' of piping, Seismic Upgrades to 1,500' of piping
- (4) 2027, Replacement of 1,000' of piping, Seismic Upgrades to 1,500' of piping

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- (5) 2028, Replacement of 1,000' of piping, Seismic Upgrades to 1,500' of piping, Replacement of Pipe Supports for 5,000' of piping.
- (6) 2029, Replacement of 1,000' of piping, Seismic Upgrades to 1,000' of piping
- (7) 2030, Replacement of 1,000' of piping, Seismic Upgrades to 1,000' of piping
- (8) 2031, Completion of piping, bracing and other work.

Activity

Design authorization	2022 Q4
Design start	2022 Q4
Commission construction authorization	2024 Q1
Construction start	2024 Q2
In-use date	Phased 2024 - 2032

Cost Breakdown

	This Request	Total Project
Design	\$0	\$170,000
Urgent Need Response (Construction)		80,000
Construction Total	\$4,500,000	\$4,580,000
Total	\$4,500,000	\$4,750,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

The following alternatives have been considered for the execution of this work:

Alternative 1 – Contract Work through a Competitive Bid Process, Perform work over a two-year period.

Cost Implications: Construction Costs \$5,750,000

Pros:

- (1) Domestic Waterline Replacement over a shorter duration
- (2) Avoidance of materials and labor escalation
- (3) Project would proceed as permitted with no modifications required.

Cons:

- (1) Likely interruptions and change orders to conflict with other project work and ongoing operations at the Terminal.
- (2) Likelihood of re-work due to interference with other project work requiring removal of piping.
- (3) Potential of extending to a third year to avoid conflicts with Cruise Season, ongoing project work and operational needs.

This is not the recommended alternative.

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Alternative 2 – Contract work over a 6–8-year period.

Cost Implications: Construction Costs \$6,300,000

Pros:

- (1) Avoidance of rework and interference with other project work.
- (2) Opportunity to use On-Call project specific contracts with WMBE firms.
- (3) Allows flexibility to adapt contracting methods over consecutive years.

Cons:

- (1) Does not eliminate all of challenges in coordinating Operational needs with Contracted work.
- (2) Additional costs due to multiple contracts, added overhead, and escalation to labor and materials over multiple years.
- (3) Increased costs due to subcontractor mark-up and likelihood of market fluctuations.
- (4) Potential for material lead time challenges.
- (5) An alternative permitting approach would have to be pursued.

This is not the recommended alternative.

Alternative 3 – Use Port Crews with Opportunities to Contract Portions using On-Call Contracts, JOC or Bid work.

Cost Implications: Construction Costs \$4,500,000

Pros:

- (1) This method allows for more control over coordinating ongoing project work with replacement of piping over time. This also allows for ease of coordination with Operational needs.
- (2) This approach limits added contracting costs and uses a cost-benefit approach to piping replacement.
- (3) Least likely chance of rework or interference with other project work.
- (4) opportunities to avoid lay-offs during seasonally slow periods.
- (5) Opportunities to contract with WMBE firms for low risk portions of the work.

Cons:

- (1) Extended timeline for full replacement of domestic waterline.
- (2) Material escalation due to extended timeline.
- (3) An alternative permitting approach would have to be pursued.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$850,000	\$0	\$850,000
AUTHORIZATION			
Previous authorizations	\$250,000	0	\$250,000
Current request for authorization	\$4,500,000	0	\$4,500,000
Total authorizations, including this request	\$4,750,000	0	\$4,750,000
Remaining amount to be authorized	\$0	\$0	\$0

Annual Budget Status and Source of Funds

This project is included in the 2024 Capital Plan under C801243 T91 Domestic Water Lines with a total project cost of \$850,000. The additional project costs will be covered by Maritime Reserve C800002.

This project will be funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	\$4,750,000
Business Unit (BU)	60% Elliott Bay Fishing & Commercial Operations and 40% Cruise Operations
Effect on business performance (NOI after depreciation)	This project will maintain current revenue from Elliott Bay Fishing and Commercial Operations, and Cruise Operations. Annual depreciation will increase by \$95,200 based on an estimated service life of 50 years.
IRR/NPV (if relevant)	No incremental revenue. The NPV is the present value of the project cost.
CPE Impact	N/A

Future Revenues and Expenses (Total cost of ownership)

Extending the useful service life of our existing assets defers eventual replacement costs for a longer period, supporting the economic vitality of our operations. Other economic benefits include cost effectiveness and minimum disruption to the terminal operations.

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None