



**COMMISSION  
AGENDA MEMORANDUM**

**Item No.** 10d

**ACTION ITEM**

**Date of Meeting** August 8, 2023

**DATE:** July 18, 2023

**TO:** Stephen P. Metruck, Executive Director

**FROM:** Kenneth R. Lyles, Director, Maritime Operations and Security  
Kelli Goodwin, Senior Manager, Maritime Operations  
Mark Longridge, Capital Project Manager, Seaport Project Management

**SUBJECT: Terminal 91 Berths 6 & 8 Redevelopment and Additional Stormwater Treatment Construction Funding (CIP#s C102475, C801350)**

**Amount of this request:** \$71,825,000

**Total estimated project cost:** \$76,000,000

**ACTION REQUESTED**

Request Commission authorization for the Executive Director to 1) advertise, award, and execute a major works construction contract to complete the redevelopment of the Terminal 91 Berths 6 & 8, to utilize a Project Labor Agreement, and 2) enter into agreements in support of completion of this work, including tribal agreements. Total request for this action will be \$71,825,000 for a project total authorization of \$76,000,000.

**EXECUTIVE SUMMARY**

This project will redevelop the condemned vessel berths and adjoining apron areas of Berths 6 & 8 along the northeast side of Pier 90 at Terminal 91 to help ensure the long-term viability of the Port of Seattle (Port) as the home to the North Pacific fishing fleet.

Planned redevelopment includes demolition of approximately 62,250 square feet of condemned existing timber apron and 830 linear feet of seawall (northerly portion of Berth 6 and entire Berth 8), removal and relocation of existing gangway, floats and boathouse, removal/replacement of existing small office structures, and reconstruction of a concrete apron structure at 600 pounds per square foot along the current alignment. The project includes the removal of over 2,000 failing creosote piles, installation of approximately 320 concrete and steel piles, with an overall decrease in overwater coverage. The project work also includes stormwater improvements, upgraded shore power connections, renewable energy through new solar panel arrays, and a direct connection for vessel sanitary sewer.

Meeting Date: August 8, 2023

**JUSTIFICATION**

The redevelopment of Berths 6 & 8 supports the following Maritime Division goals toward achieving Century Agenda objectives:

1. Continue to grow the economic value of the fishing and maritime cluster including the number of local jobs and regional business revenue.
2. Prioritize uses that support the commercial fishing industry, with a focus on anchoring the North Pacific fishing fleet in Seattle.
3. Supports the Port’s strategy to “be the greenest and most energy-efficient port in North America” by installing solar array infrastructure, stormwater treatment infrastructure, direct connection for vessel sanitary sewer, and replacing existing creosote piling with cement and recycled steel materials.
4. Supports anticipated growth in cruise ship operations.

**DETAILS**

Berths 6 & 8 are the last remaining original timber pier berths at Terminal 91 and are at the end of their service life. Approximately 30% of the apron is condemned, and the remaining sections are posted with severe load limits. Originally built in the 1910s, this section of Pier 90 was most recently rehabilitated in 1985, and little has been done to the structure since then. Redevelopment of Berths 6 & 8 is critical to ensuring the long-term viability of the port as the home to the North Pacific fishing fleet.

The fleet has been modernizing and will continue to do so. New builds are larger than the vessels they are replacing. This means vessels that may have previously been able to moor at Fishermen’s Terminal are now too long or draw too much water to remain and are looking to moor at Terminal 91. Fishing companies are also growing. As an example, both the Ocean Peace and O’Hara companies have each added additional vessels to their fleets in the past five years.

Critical to the fleet’s success while in port is access to laydown areas, heavy lift capability pier side, and ample apron space to perform offloads, backloads, and repair work. This project will replace approximately 62,250 square feet of condemned existing timber pier structure and 830 linear feet of seawall, providing pier apron capable of supporting the fleet’s activities and needs.

Demand for moorage at Terminal 91 continues to grow. Several times during the shoulder seasons the space at Terminal 91 proves inadequate to accommodate the needs of the North Pacific fleet. Cruise activity at Terminal 91 is growing in both number and size of vessels, further increasing the demand on Terminal 91 berth space. This project responds to that demand and will alleviate some of the shoulder season pressure by providing space for three 250-foot-plus catcher processors.

As noted in the 2017 Fishing Vessel Moorage Analysis for the Port by S2 Strategy, “fishing and seafood processing sector of the maritime industry, as a whole has by far the largest revenue impact to the state of any maritime sector. And is at least equal in job production to the other sectors....” Recommendations included providing an additional three to four 200-400-foot berths by 2020 and to plan for berths to accommodate another ten to twelve boats of 175-400-feet over

Meeting Date: August 8, 2023

the next decade. Restoring existing load limited and partially condemned moorage facilities to their full capacity is the first step to meeting these future capacity needs.

***Scope of Work***

This project provides material waterside and landside improvements, including the following:

- Dock demolition and replacement, relocation of boat house and removal of existing small boat floats. Demolition of the existing pier deck and structure, including removal or cutoff of approximately 2,200 creosote piles. Removal and regrading of the existing under pier slope and replacement of the upland sheet pile wall.
- Placement of approximately 240 prestressed concrete structural piles and approximately 80 steel fender and guide piles, placement of 4 feet of riprap rock and habitat fish mix, placement of the new concrete precast deck panels, bullrail, utilities, bollards, upgraded shore power connection points and appurtenances.
- Removal of the existing buildings A-310 building (currently leased by American Seafoods), A-300, A-400, A-301, A-500, A-501 (occupied by Port Operations and police), removal of existing pavement and installation of deep soil mixing soil amendments, stormwater treatment system, and surface regrading.
- Installation of two new modular buildings for tenant and Port use, paving and striping, installation of electric vehicle charging infrastructure, and installation of modernized electrical substation to service the buildings and vessels at the pier.

Berth dredging is not expected to be required to accommodate the current vessel demand; however, future dredging could be achieved if necessary or desired under a separate project, covered by C800431 -- Dredge P90 East.

***Diversity in Contracting***

The project team has coordinated with the Diversity in Contracting Department to determine appropriate Women and Minority Business Enterprise aspirational goals for this project and identified a 5% contracting goal for the major works contract advertisement.

***Sustainability/Community Outreach***

This project will replace the existing creosote timber pier with a more environmentally responsible concrete apron. It is expected that all the existing creosote timber piles will be removed from the water column, resulting in a significant reduction in the number of piles overall. The plans also include a vessel sanitary sewer connection point to eliminate the use of on-dock collection tanks and resulting truck transport of waste with its associated fuel use and greenhouse gas emissions.

Meeting Date: August 8, 2023

The design collects and treats all stormwater collected on the new construction areas using a cartridge filter vault, plus includes additional stormwater treatment elements to treat another approximately 100,000 square feet of additional pier area outside the project limits. This additional scope will be funded by the Marine Stormwater Utility as a separate work project included in this authorization. Completing this work concurrently provides efficiency in both design and construction and allows us to treat twice the impervious surface area before discharging to the Sound.

The new office structures are planned to be modular construction to reduce site construction time and construction waste, with energy efficient heating, ventilation, and air conditioning (HVAC) systems. Solar photovoltaic panels will be installed on the larger of the two buildings and sized to produce sufficient power for all that building’s energy use. Both buildings will include EV charging parking, which is being coordinated with the Port’s fleet management, and covered bike racks to encourage alternate commuting methods.

Port staff have been working with terminal users throughout the design to mitigate operational impacts and have kept the Neighbors Advisory Committee (NAC) informed about the project and potential neighborhood impacts. Outreach included regular updates at the NAC monthly meetings which includes community leaders from Magnolia and Queen Anne. During construction, staff will implement a communication plan to provide specific details to Queen Anne and Magnolia neighbors, adjacent businesses and T91 tenants with a focus on noise from the pile driving work.

***Schedule***

All in-water work associated with the work must be completed within the fish window from August 1 to January 15 of each construction season, with pile driving for steel pile from September 1 to January 15, a two-month reduction from previous typical fish window permit work. This presents another constraint to the project that will need to be closely monitored and will likely require more than one full fish window construction period to complete the work. Both federal and local permits are in process and expected to be issued in Q3 of 2023, but if delayed this may affect the advertising and construction schedule.

The construction scope includes several long lead items, including precast concrete elements and electrical equipment. As such, while contract execution is expected in 2023, the main site construction activity is expected to begin just before the start of in water activity in mid-2024. Minor project elements and some demolition may be accomplished before this if possible.

***Activity***

Commission design authorization	2020 Q1
Design start	2020 Q3
Commission construction authorization	2023 Q3
Construction start	2024 Q2
In-use date	2025 Q4

Meeting Date: August 8, 2023

This request reflects the Engineer’s most recent estimate of construction cost, escalated to the construction period, including potential project risks. The project team performed a full risk analysis of the project at both 30% and 90% design milestones to evaluate potential cost and schedule risks and quantify them using a Monte Carlo probabilistic analysis. The project total in this memo represents the 50<sup>th</sup> percentile estimate from the latest risk analysis update.

<b>Cost Breakdown</b>	<b>This Request</b>	<b>Total Project</b>
Design	\$0	\$4,175,000
Construction	\$71,825,000	\$71,825,000
<b>Total</b>	<b>\$71,825,000</b>	<b>\$76,000,000</b>

**ALTERNATIVES AND IMPLICATIONS CONSIDERED**

**Alternative 1** – Maintain the status quo. Continue to enable limited operations of the berths for workboat moorage and keep the load restrictions and condemnation of dock sections in place.

Cost Implications: This alternative carries significant uncertainty and risk and accordingly much variability in cost potential. Maintenance costs for the berth are not currently high but would expand greatly if a deck failure occurred, for example.

Pros:

- (1) Lower initial capital cost.

Cons:

- (1) Significant risk to the structure if kept in use. Deterioration will continue.
- (2) Current berth space demand from the Pacific fishing fleet not met.
- (3) Revenue for these berths would remain minimal.

This is not the recommended alternative.

**Alternative 2** – Replace the deteriorated timber apron with a concrete apron structure.

Cost Implications: Total project cost \$76 million

Pros:

- (1) Brings the berth back to full operation, replacing the deteriorated facility.
- (2) Provides much needed berth and staging space for the North Pacific fishing fleet.
- (3) Replacement of existing creosote pilings and apron, with far fewer concrete elements. Significant environmental benefits.

Cons:

- (1) Higher initial capital cost.

***This is the recommended alternative.***

**FINANCIAL IMPLICATIONS**

The current total project estimate has significantly increased from initial planning level estimates due to required additional scope, including upland soil improvements to meet current seismic

Meeting Date: August 8, 2023

code and resultant building replacements, increased permitting mitigation costs, and historically high construction escalation over the last several years. Cost increases have been further aggravated due to the pandemic and resultant manufacturing and supply chain issues, especially for long lead items such as electrical equipment.

The current estimate includes significant allowances for continued market volatility, escalation and construction contingency, but will be completed on a competitive low bid basis.

***Cost Estimate/Authorization Summary***

Berth  
Redevelopment  
(U00554)

Additional  
Stormwater  
Treatment  
(U00704)

Expense

Total

<b>COST ESTIMATE</b>				
Original estimate	\$40,000,000	\$0	\$0	\$40,000,000
Previous changes – net	\$0	\$100,000	\$0	100,000
Current change	\$35,600,000	\$300,000	\$0	\$35,900,000
Revised estimate	\$75,600,000	\$400,000	\$0	\$76,000,000
<b>AUTHORIZATION</b>				
Previous authorizations	\$4,075,000	\$100,000	\$0	\$4,175,000
Current request for authorization	\$71,525,000	\$300,000	\$0	\$71,825,000
Total authorizations, including this request	\$75,600,000	\$400,000	\$0	\$76,000,000
Remaining amount to be authorized	\$0	\$0	\$0	\$0

***Annual Budget Status and Source of Funds***

This project is part of the 2023 Capital Plan under C102475 Terminal 91 Berth 6 & 8 Redevelopment with a total project cost of \$70,126,000 and it is included in the draft 2024 Capital Plan with an updated total project cost of \$76,000,000.

The redevelopment of the berths is being funded by the Tax Levy. Additional stormwater treatment work is being funded by the Stormwater Utility.

Meeting Date: August 8, 2023

***Financial Analysis and Summary***

Project cost for analysis	\$76,000,000
Business Unit (BU)	Elliott Bay Fishing and Commercial Operations
Effect on business performance (NOI after depreciation)	The redeveloped berths are expected to increase annual moorage revenue by approximately \$900,000 in the first full year of operation.  Annual depreciation expense is estimated to increase by approximately \$2.5 million based on an expected useful life of 30 years.
IRR/NPV (if relevant)	NPV: (\$50+ million)

**ATTACHMENTS TO THIS REQUEST**

- (1) Sustainable Design Strategy (Dec 27, 2023)
- (2) Presentation slides

**PREVIOUS COMMISSION ACTIONS OR BRIEFINGS**

January 7, 2020 – The Commission authorized design and permitting funding of \$4,000,000.