COMMISSION
AGENDA MEMORANDUM Item No. 10e
ACTION ITEM Date of Meeting February 13, 2024

DATE : January 4, 2024
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 Additional Construction Funding
(CIP#s C102475, C801350)
Amount of this request: $22,000,000
Total estimated project cost: $98,000,000
ACTION REQUESTED
Request Commission authorization for the Executive Director to approve additional funding in the amount of $22,000,000 for construction of the Terminal 91 Berths 6 & 8 redevelopment and to award and execute a contract with the lowest responsible bidder.
EXECUTIVE SUMMARY
Higher than expected bids for the Terminal 91 Berths 6&8 redevelopment require additional funds to proceed with the work. The project redevelops 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.
The major works contract was advertised on November 1, 2023, and bids were opened for the construction contract on December 20, 2023. Three bids were received in response to the construction advertisement. However, acceptance of any of these bids would exceed the previously authorized total project budget of $76,000,000. The Engineer's estimate of construction cost for this contract was $49,615,105. The lowest bid received was from Pacific Pile & Marine for a total of $72,636,235 which is $23,021,129 or 46% over the estimate.
This overage is chiefly attributed to very high escalation and volatility in the current construction market, federal permit requirements, schedule constraints, and the specialized nature of the work. In reviewing the bids there is no single item or class of work items that is driving the cost increase, but rather an escalation across the board of all project elements. The Washington State Department of Fish and Wildlife permit requirement to complete all impact pile driving within a shorter in-water construction window (Sep 1 - Jan 15) is two months shorter than for similar work

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in previous years. The need to expedite the work to comply with the permit may have also contributed to additional labor costs from extended and off-shift hours. The primary driver of the increase remains underestimating construction cost escalation which has continued to exceed the Port's most conservative expectations in the current market which is not expected to abate. The low bid and second bid differed by less than $60,000 or under one tenth of one percent which signals that the bids reflect actual market rates for the work as currently scoped. The additional funds requested in this action will be used to cover the difference of the bid amount including Washington state sales tax and to ensure funds are available for project contingencies (project contingency has been maintained at 10% in the revised project estimate). The staff recommendation is to accept the low bid of Pacific Pile & Marine. Their bid has been reviewed and confirmed that they are the lowest and responsible bidder. Acceptance of the low bid would also meet the project goal of 5% WMBE participation.
The project scope has been carefully developed over the past several years to restore the full utility of the existing berths, include sustainability features and minimize operational impacts to Port and tenant operations, and to conduct the work as an interim action under Ecology oversight because the project is within an active clean-up site. The project has gone through a long and complex permitting process for this work. As a result, limited opportunities exist to modify the scope or contract packaging of the project without the risk of significant delay. Rejecting the current bids would delay completion of the berths and pier structure at least one to two years and could incur significant additional costs required to rescope and readvertise the project.

While scope reductions would be possible in this rebidding scenario, it could not make the project fit within the original budget without significantly impacting the utility of the facility (halving the berths for example) and undermining the purpose of the capital work. Given the current market, even with significant scope reductions, rebidding may not result in any additional bids or in lower project cost.
Approval of this funding request will allow construction to begin with minimal delay to the original construction schedule.
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,

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direct connection for vessel sanitary sewer, and replacing existing creosote piling with cement and recycled steel materials.
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.
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.
Planned redevelopment includes demolition of approximately 62,250 square feet of condemned existing timber apron and replacement of approximately 780 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 2,200 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.
In January of 2020 the Port Commission authorized staff to proceed with the design and permitting phase of the project, and in August of 2023 authorized construction funding and the advertisement of the major works contract. Staff has since completed the design and submitted application packages for all required environmental permits and engaged important stakeholders such as the Suquamish and Muckleshoot Tribes, City of Seattle's Department of Construction and Inspection, the Army Corps of Engineers, U.S. and Washington State Fish and Wildlife, NOAA Fisheries, Washington State Department of Ecology, the Port's Neighbors Advisory Committee, Port operations staff and current tenants in the design development. Demand for moorage at Terminal 91 is strong. Several times during the shoulder seasons the load-limited and condemned berth space at Terminal 91 impeded the facility's ability to accommodate the needs of the North Pacific fleet and other commercial vessels, research vessels and ships of state. This project will also allow the Port to remain ready to respond to future business opportunities. This project responds to the sustained 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, 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.…"

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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 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.
The Washington Maritime Federation recently completed a 2023 Economic Impact Assessment of Washington's Maritime Industry. The Assessment identifies that "In total, the Washington fishing and seafood production sector generated approximately $825 million in labor income in 2022. An estimated 780 businesses generated $3.8 billion in revenue." This sector represents 8,300 jobs in the state.
Scope of Work
This project provides significant 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 existing 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.
? Replacement of the six existing buildings with 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.
While there could be the possibility of reducing some of these scope elements to reduce costs if the current bids were rejected, such as removing sustainability elements or one of the new modular buildings, the maximum amount that could be expected to be reduced would be approximately 10-12% of the cost without significantly reducing the core utility of the berths overall. Rejecting the bids to make these scope reductions and rebid again later would expose the project again to further escalation and market volatility however. Given current escalation rates it is entirely possible that even with significant scope reductions there might be no appreciable savings.

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.
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 Port's 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 February 15 of each construction season, with pile driving for steel pile limited to 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 Q1 of 2024, but if delayed still have the potential to affect the construction schedule.

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Activity
Commission design authorization 2020 Q1
Design start 2020 Q3
Commission Construction auth 2023 Q3
Commission Additional Construction auth 2024 Q1
Construction start 2024 Q2
In-use date 2025 Q4
Previous request estimates reflected the Engineer's 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 of the previous requests represented the 50th percentile estimate from the latest risk analysis update. Unfortunately, this approach still significantly underestimated the total cost of construction as evidenced by the bids received.
Cost Breakdown This Request Total Project
Design $0 $4,175,000
Construction $22,000,000 $93,825,000
Total $22,000,000 $98,000,000
ALTERNATIVES AND IMPLICATIONS CONSIDERED
Alternative 1 – Maintain the status quo and cancel the redevelopment work for Berths 6 & 8. 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 existing creosote structure if kept in use
Deterioration will continue, with larger failures possible
(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 – Reject the current bids, look for potential scope reductions and/or grant opportunities and rebid the work.
Cost Implications: This alternative carries significant uncertainty and risk and accordingly much

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variability in cost potential. Anticipated federal grant award could be in the $5M-$20M range, if

successful. However, this type of grant would also carry significant cost increases due to typical grant requirements (Build America/Buy American requirements would be anticipated to add 10%-15% to the total project cost for example). Total project cost range $90-120M
Pros:
(1) Potential for lower capital cost, or cost sharing with grant agencies
Cons:
(1) No guarantee of grant award. Cost savings may not be realized, even with significant scope reductions and grant award
(2) 1 to 2 year delay in project implementation
(3) Reduced utility of berth and facility due to scope reductions
This is not the recommended alternative.
Alternative 3– Award the major works contract to the lowest bidder and implement the current design, proceed with replacement of the deteriorated timber apron with a concrete apron structure and associated improvements.
Cost Implications: Total project cost $98 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 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 pricing for the construction work obtained on a competitive low bid basis. The low bid and second bid received were separated by less than 0.08%, which does give confidence that this is the actual market price for the work as currently scoped.
The summary below also includes a breakout of anticipated Environmental Remediation Liability (ERL) costs for expenses incurred above regular construction costs due to historic contamination of sites. In this case the estimate is for the cost of upland disposal of slope dredge spoils above

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what in water disposal would cost. These costs were not previously broken out in prior authorizations. Final ERL costs will be determined based on actual construction costs.

Cost Estimate /Authorization Summary	Berth Redevelopment (U00554)	Additional Stormwater Treatment (U00704)	Anticipated ERL funding	Total
COST ESTIMATE				
Original estimate	$40,000,000	$0	$0	$40,000,000
Previous changes – net	$35,600,000	$400,000	$0	$36,000,000
Current change	$19,900,000	$100,000	$2,000,000	$22,000,000
Revised estimate	$95,500,000	$500,000	$2,000,000	$98,000,000
AUTHORIZATION				
Previous authorizations	$75,600,000	$400,000	$0	$76,000,000
Current request for authorization	$19,900,000	$100,000	$2,000,000	$22,000,000
Total authorizations, including this request	$95,500,000	$500,000	$2,000,000	$98,000,000
Remaining amount to be authorized	$0	$0	$0	$0

Annual Budget Status and Source of Funds
This project is part of the 2024 Capital Plan under C102475 Terminal 91 Berths 6 & 8 Redevelopment with a total project cost of $75,600,000.

The redevelopment of the berths is being funded by the Tax Levy. Additional stormwater treatment work is being funded by the Stormwater Utility.
Financial Analysis and Summary
Project cost for analysis $98,000,000
Business Unit (BU) Elliott Bay Fishing and Commercial Operations
Effect on business performance The redeveloped berths are expected to increase annual (NOI after depreciation) moorage revenue by approximately $977,000 in the first full year of operation.
Annual depreciation expense is estimated to increase by approximately $2 million based on an expected useful life of 50 years.

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IRR/NPV (if relevant) NPV: ($70 million)
Payback Period: 44 years (assuming 5% annual dockage rate increase)
ATTACHMENTS TO THIS REQUEST
(1) Presentation slides
PREVIOUS COMMISSION ACTIONS OR BRIEFINGS
August 8, 2023 – The Commission authorized Construction funding of $71,825,000.
January 7, 2020 – The Commission authorized Design and Permitting funding of $4,000,000.

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