COMMISSION
AGENDA MEMORANDUM **Item No.** 8b

ACTION ITEM **Date of Meeting** November 17, 2020

DATE: November 10, 2020

TO: Stephen P. Metruck, Executive Director

FROM: Kenneth Lyles, Director, Maritime Operations and Security
Jo Woods, Sr. Manager, Recreational Boating
Tim Leonard, Capital Project Manager

SUBJECT: **Harbor Island Marina Dock-E Float and North Pier Improvements Project Design Funding**

Amount of this request:	$950,000
Total estimated project cost:	$4,500,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to authorize $950,000 in design funding for the proposed Harbor Island Marina Dock-E Floats and North Pier Improvements project. This design funding will increase the total project authorization to date to $1,045,000, out of a preliminarily estimated total project cost of $4,500,000.

EXECUTIVE SUMMARY

This capital improvements project will replace the southernmost 23 (out of 78 total) existing floats at Dock-E at Harbor Island Marina with heavier duty floats and piles; upgrade the remaining dock portion; and replace the dock's North Pier structure to restore vehicle access to it. These proposed improvements are needed to increase the dock's overall vessel loading capacity and improve its operational ability to provide moorage for large commercial tug tenants.

JUSTIFICATION

Dock Structural Integrity

While originally designed and constructed in 1983 for smaller craft, Dock-E at Harbor Island Marina has been providing moorage for large commercial tugs for over a decade and is currently primarily utilized by long-time commercial tenants Global Diving and Western Towboat, as well as other commercial marine vessel tenants on a more limited basis. As a result of this heavier loading of vessels up to 94-ton (gross) and 120-feet in length, much of the dock's piles, walers, cleats, bollards, and pile hoops have been severely worn or damaged and these elements have been repaired or upgraded over the last five years by Marine Maintenance in a continual effort to extend the dock's capability to accommodate the tenant vessels' berthing needs. Additionally, although many of the original timber guide piles have been

replaced with steel piles as part of a facility programmatic replacement, some lower load capacity timber piles still remain. All of these factors have contributed to Dock-E currently functioning at a less than ideal level of structural integrity as well as requiring a higher rate of repairs and maintenance within its remaining limited service life.

Economic Impact

This improvements project contributes directly to the jobs engine of the local maritime industry cluster. Tugboats and towboats are an essential component of the maritime sector. As just one measure of this value, the 2015 Ties that Bind report by The McDowell Group found that Seattle and Tacoma continue to serve as the "lifeline" to Alaska as they capture 97% of cargo, by weight, moved between Puget Sound and Alaska. This report examined the array of goods and services that Alaska sources from Puget Sound. It found that in 2013 the total value of those goods and services was $5.4 billion. Additionally, the more recent 2019 Community Attributes "Tri-Port" Economic Impact study identified tug and barge operators that utilize Port of Seattle facilities dockage and moorage leases generated nearly $2.4 million in revenue for the Port of Seattle in 2017.

DETAILS

Design and Permitting

A potential project to upgrade/repair Dock-E was originally proposed in 2014. This resulted in a condition assessment study being completed in 2015 in which four increasingly involved levels of improvements were outlined and cost estimated with the fourth level being complete replacement of the entire dock. Major work improvements for Dock-E were subsequently delayed pending a Port decision on the best level to proceed with to continue to meet tenant business needs within the constraint of limited available capital improvement project funding. Upon further analysis and recommendation by Port staff, the Maritime Division has now approved proceeding with a combination of Level 2 and Level 3 improvements for Dock-E.

The proposed Dock-E Float and North Pier Improvements project is a Tier 2 project under the Sustainable Evaluation Framework Policy Directive. The project team will explore design alternatives to minimize impacts on the environment while meeting project goals and objectives. The permitting effort will include performing a SEPA determination; obtaining required Shoreline Substantial Development and building permits from the City of Seattle; and acquiring in-water permits from various state and federal regulatory agencies under a JARPA for the project to be construction bid ready.

Diversity in Contracting

The project design will be performed by a consultant engineering firm under an existing Port of Seattle IDIQ contract in which a WMBE participation commitment of 43% has been established.

Relationship to Other Proposed Improvement Projects at Harbor Island Marina

The proposed Dock-E Float and North Pier Improvements project will supplement the proposed separate HIM Dock-E Power Improvements and HIM Restroom Replacement small works projects

currently planned to be completed by Marine Maintenance in 2020 and 2021, respectively. These two smaller projects have been accelerated in the Maritime Capital Plan under separate CIPs due to facility safety concerns and the Port's ability to provide required amenities to Marina users. Consideration has been given to the planning of all three proposed HIM projects' schedules and it has been determined that advance execution of both the HIM Dock-E Power Improvements and HIM Restroom Replacement projects will best serve marina users and complement the work to be performed under the proposed HIM Dock-E Float & North Pier Improvements project to be completed later in 2022-2023.

Scope of Work

The project design/permitting effort to be completed with the proposed funding includes the development of bid documents and procurement of permits for construction of the following improvement elements:

- Complete replacement of 23 (out of 78 total) of Dock-E's existing float sections with new heavier duty floats, piles, and appurtenances designed for larger vessel berthing and higher load mooring capability. Float design and materials will be explored during design phase. These existing floats to be replaced comprise the southernmost portion of Dock-E.
- Refurbishment of 55 (out of 78 total) of Dock-E's existing float sections consisting of replacing all remaining timber guide piles with higher load capacity steel piles; replacement of damaged walers and cleats; nominal leveling; and concrete surface crack repairs and sealing. These existing floats, to remain in place and be refurbished, comprise the portion of Dock-E north of the floats to be replaced.
- Demolition and replacement of Dock-E's existing North Pier to restore vehicle access to it. This proposed North Pier replacement element was previously to be funded as a separate Marine Maintenance small works CIP before being incorporated into this proposed HIM Dock-E improvements project scope and CIP as part of the 2021 Maritime Capital Plan. Pier design and materials will be explored during design phase.

Schedule

In-water construction work will be restricted to occur within an August 1st – February 15th "fish window".

Activity

Commission design authorization	2020 Quarter 4
Design start	2021 Quarter 1
Commission construction authorization	2023 Quarter 1
Construction start	2023 Quarter 3
In-use date	2024 Quarter 2

Cost Breakdown	This Request	Total Project
Design and Permitting	$950,000	$1,045,000
Construction	$0	$3,455,000
Total	$1,000,000	$4,500,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1: Do nothing – continue to repair Dock-E as necessary to maintain current tenant vessels moorage

Pros

- Retains Port capital for other priority projects and financial initiatives
- Avoids temporary construction impacts to existing tenant moorage

Cons

- Dock-E will continue to incur damage due to high impact loading from existing large tenant vessels
- High ongoing repair and maintenance costs will continue to be incurred in order to keep the dock operational
- Dock-E will continue to have safety/structural failure risk due to ongoing heavy vessel berthing loads

This is not the recommended alternative

Alternative 2: Perform a full replacement (Level 4) of all Dock-E floats and the north access pier.

Pros

- All-new Dock-E with full- service life for north as well as south floats
- Reduced maintenance cost for required tenant vessel moorage
- Eliminates current safety/failure risk for entire dock due to existing tenant large vessel moorage loading impacts

Cons

- High initial cost for full dock replacement
- High level of temporary construction disruption to tenant moorage

This is not the recommended alternative

Alternative 3: Perform proposed combination (Levels 2 and 3) of Dock-E float replacements/repairs as well as replacement of north access pier

Pros

- Extends overall service life of Dock-E while addressing most urgent tenant vessel loading impacts at south end of dock

- Restores vehicle access capability to north pier in order to better meet tenant business needs
- Limits temporary construction impacts to existing tenant moorage
- Maintains ability to extend tenant vessel berthing, with continued maintenance, while limiting overall cost of capital improvements and future maintenance

Cons

- Tenant vessel moorage will need to be phased during construction
- Higher than typical maintenance costs will continue to be incurred with north dock floats in order to keep the dock operational for large vessel moorage
- Combination of old and new floats will require more complicated maintenance schedule

This is the recommended alternative

FINANCIAL IMPLICATIONS

Cost Estimate/Authorization Summary	Capital	Expense	Total
COST ESTIMATE			
Original estimate	$4,100,000	$0	$4,100,000
Current change	$400,000	0	$400,000
Revised estimate	$4,500,000	0	$4,500,000
AUTHORIZATION			
Previous authorizations	$95,000	0	$95,000
Current request for authorization	$950,000	0	$950,000
Total authorizations, including this request	$1,045,000	0	$1,045,000
Remaining amount to be authorized	$3,455,000	$0	$3,455,000

Annual Budget Status and Source of Funds

This project has been included in the 2020 Capital Plan under CIP C800678 T102 HIM E Dock Rehabilitation for a total project cost of $3,965,000 and has been included in the draft 2021 Capital Plan with a total project cost of $4,100,000. The increased estimated cost will be covered by the Maritime CIP Reserve.
This project is funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	$4,500,000
Business Unit (BU)	Maritime Operations & Security

Effect on business performance (NOI after depreciation)	This project is not expected to directly generate incremental revenue increases. It is estimated this project will increase annual depreciation expense by approximately $113,500.
IRR/NPV (if relevant)	N/A
CPE Impact	N/A

ATTACHMENTS TO THIS REQUEST

(1) Presentation slides (PowerPoint)
(2) Sustainable Design Approach memo

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

No previous authorizations by Commission.