



**COMMISSION
AGENDA MEMORANDUM**

Item No. 6f

ACTION ITEM

Date of Meeting October 13, 2020

DATE: September 30, 2020

TO: Stephen P. Metruck, Executive Director

FROM: Kenneth Lyles, Director, Maritime Operations and Security
Jo Woods, Sr. Manager, Recreational Boating
Tin Nguyen, Sr. Manager, Marine Maintenance
Robert Hoyman, Project Manager III Marine Maintenance

SUBJECT: Harbor Island Marina (HIM) Dock-E Power Improvements (CIP# C801200)

Amount of this request: \$165,000

Total estimated project cost: \$450,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to (1) proceed with construction of the power improvements for Dock-E at Harbor Island Marina (HIM) and (2) use Port crews to construct the project. The amount of this request is \$165,000 for a total estimated project cost of \$450,000.

EXECUTIVE SUMMARY

This project provides replacement of an existing transformer located on Dock-E providing 120V power to six locations where power pedestals are currently located. The electrical service upgrades will include a new substation to be located landside and six new power pedestals to be located at existing locations. The new service will deliver 3-Phase 480V power to industrial and commercial use vessels.

JUSTIFICATION

“Harbor Island Commercial Dock East Side” was constructed in 1998. There are currently two long-term tenants using Dock E including; Western Towboat Company since 2008 and Global Diving and Salvage, Inc. since 1999. Both these tenants are committed to future long-term moorage commitment and are vital to the maritime industries in the Puget Sound region and beyond.

The existing 200A Electrical Service and 30A power pedestals dockside are in poor and deteriorating condition. They no longer meet the necessary power requirements for the commercial and industrial vessels they serve. The existing transformer supplying power to the pedestals on Dock-E poses a safety concern, as it is causing the dock to list and shows signs of

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significant corrosion. The existing power pedestals do not meet current code requirements of having ground fault protection and only deliver 120V power, which does not meet the power requirements of larger vessels. In its current condition, the electrical service is a safety concern and the recommendation of Marine Maintenance is that the service be upgraded to current code requirements and service capacity for the needs of the Port's tenants. Future HIM Dock-E Float & North Pier Improvements needs are factored into the design capacity for expansion and adaptability within the Electrical Service Upgrades portion of this work.

This work will be performed by Port crews within Marine Maintenance and benefit from maintenance crafts' familiarity with current electrical systems and established tenant relationships. The schedule will be adaptable to Port's tenant needs and our maintenance staff have institutional knowledge to work around existing operations.

DETAILS

HIM Dock-E Power Improvements was originally proposed in our 2019 Maritime Division Small Capital Program (CIP# 801003), as a result of safety concerns caused by the transformer's deteriorating condition and its location dockside creating a listing effect on Dock-E. The small capital program is intended for projects below \$300,000 and this project was authorized within the EX-2 Delegation of Authority for a total project cost of \$285,000.

The original scope of this small capital project was to upgrade the electrical service to Dock-E to 3-Phase 480V power, remove the existing transformer from Dock-E, and relocate new electrical service equipment landside. Design development led to changes in scope requiring that all (6) power pedestals providing shore power on Dock-E be replaced in conjunction with the electrical service upgrade. The existing power pedestals are in poor condition and do not provide ground fault protection to users.

This additional scope to replace all (6) power pedestals on Dock-E was budgeted as a separate small capital project in our 2020 Maritime Division Small Capital Program (CIP# C801088). This project was recognized as having separate asset features with significantly different lifespans than the electrical service upgrade proposed in the HIM Dock-E Power Improvement project above. However, with proximity of the two small projects along with related interdependencies on their scope of work, they are to be combined as a single investment with a total project cost of \$450,000. Commission approval is sought for this single, larger project.

The combined project will bring the industrial use of Dock-E up to current design standards, meet current code requirements, and provided required safety features to our users.

Scope of Work

SCOPE OF WORK and SCHEDULE:

- Design is complete.
- Permitting is complete.

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- Install new below ground raceways from the main distribution to the new substation location and from the new substation location to Dock-E for new power distribution.
- Install a new fenced substation pad for safety and protection of equipment.
- Replace existing single phase 300A 120V shore power system with a new landside substation providing 600A availability, 3-phase 480V power to new power pedestals to be installed on Dock-E.
- Install new combination 3-phase 480V power/single phase 120V power pedestals on Dock-E.
- Complete project December 2020.

Schedule

Design Completion – July 2020

Equipment Procurement – August 2020

Construction – October 2020

Construction duration is estimated at sixty working days and is expected to commence in October 2020. The site will be ready for full intended use immediately after construction is complete, December 2020.

Relationship to Other Project Work at HIM

This is one of three projects at Harbor Island Marina in various development stages directed toward replacement or repair of assets, which are beyond their useful service life or in a deteriorating condition. All three projects are seeking Commission action before year end and due to their condensed timing, are noted below for clarity:

- **HIM Dock-E Power Improvements:** Current authorization request. Construction planned for in Q4 2020.
- **HIM Restroom Replacement:** Seeking Commission authorization for construction in November 2020. Construction anticipated for in Q1 2021.
- **HIM Dock-E Float & North Pier Improvements:** Seeking Commission authorization for design in November 2020. Construction anticipated for in 2022-2023.

Both the HIM Dock-E Power Improvements and the HIM Restroom Replacement Projects have been planned for construction in advance of the HIM Dock-E Float & North Pier Improvements, which requires a more complex design and longer duration for permitting. These two smaller projects have been accelerated in the Maritime Capital Plan due to concerns with safety and the Port's ability to provide required amenities to Marina users. Consideration has been given to the relationships of these three projects and it has been determined that execution of both the HIM Dock-E Power Improvements and HIM Restroom Replacement in advance will best serve marina users and complement the work to be performed under the proposed 2022-2023 HIM Dock-E Float & North Pier Improvements.

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Activity

EX-2 Small Project Start-up Authorization	2019 Quarter 4
Design start	2019 Quarter 4
Commission construction authorization	2020 Quarter 4
Construction start	2020 Quarter 4
In-use date	2020 Quarter 4

Cost Breakdown

	This Request	Total Project
Design	\$0	\$35,000
Construction	\$165,000	\$415,000
Total	\$165,000	\$450,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Complete HIM Dock-E Power Improvements in 2020 and defer the power pedestal replacement until 2022-2023 when the HIM Dock-E Float & North Pier Improvements is executed. **This is not a recommended alternative.**

Pros:

1. Reduced risk of damage to new pedestals during construction.

Cons:

1. Delay in correction of safety concerns.
2. Impact to Port tenants in need of 3-phase 480V power for existing vessels.
3. Additional cost to purchase temporary breakers and power feeds to provide for existing power supply.
4. Ramifications of unavoids diesel and carbon emissions caused by use of onboard diesel generators while moored.
5. Additional complexities applied to HIM Dock-E Float & North Pier Improvements Project due to added scope.

Alternative 2 – Defer all work and combine work with HIM Dock-E Float & North Pier Improvements. **This is not a recommended alternative.**

Pros:

1. Combined capital work with potential cost savings.

Cons:

1. Deferral of safety corrections
2. Impact to Port tenants on Dock-E in need of 3-phase 480V power.
3. Potential lay-off of Port crafts during COVID-19 slowdown.
4. Two years of cost escalations = additional 6-8% of labor costs.
5. Storage of purchased equipment; potential damage to purchased equipment.

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6. Ramifications of unavoids carbon emissions caused by use of onboard diesel generators while moored.
7. Additional complexities applied to HIM Dock-E Float & North Pier Improvements due to added scope.
8. Potential added impact to neighboring business and Port tenants caused by excavation in parking lot areas.

Alternative 3 - Execute HIM Dock-E Power Improvements as a single project for completion in 2020. **This is the recommended alternative.**

Pros:

1. Benefit to existing tenants providing adequate shore power needs.
2. Correct safety concerns in a timely manner.
3. Reduced impact to tenants and neighboring business by performing work during a time when office attendance is low.
4. Reduced usage of onboard diesel generators resulting in reduced diesel and carbon emissions.

Cons:

1. Increase to capital plan during a time of budgetary constraints.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Capital	Expense	Total
COST ESTIMATE			
Original estimate	\$285,000	\$0	\$285,000
Previous changes – net	\$0	\$0	\$0
Current change	\$165,000	\$0	\$165,000
Revised estimate	\$450,000	\$0	\$450,000
AUTHORIZATION			
Previous authorizations	\$285,000	\$0	\$285,000
Current request for authorization	\$165,000	\$0	\$165,000
Total authorizations, including this request	\$450,000	\$0	\$450,000
Remaining amount to be authorized	\$0	\$0	\$0

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Annual Budget Status and Source of Funds

Funding for this project was included in the approved 2020 Capital Plan under C801003 (2019 MD Small Capital Program) and C801088 (2020 MD Small Capital Program) as described above.

This project will be funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	\$450,000
Business Unit (BU)	Recreational Marinas & Commercial Operations
Effect on business performance (NOI after depreciation)	This project will increase annual depreciation expense by approximately \$37,500.
IRR/NPV (if relevant)	N/A
CPE Impact	N/A

ATTACHMENTS TO THIS REQUEST

- (1) Presentation slides

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

No previous authorizations by Commission.