



**COMMISSION
AGENDA MEMORANDUM**

Item No. 8j

ACTION ITEM

Date of Meeting December 14, 2021

DATE: November 9, 2021

TO: Stephen P. Metruck, Executive Director

FROM: Susie Archuleta, Real Estate Manager
Rod Jackson, Capital Project Manager
Melinda Miller, Director, Portfolio and Asset Management

SUBJECT: WTCW Roof Replacement (CIP # 801104) Design Funding Authorization Request

Amount of This Request	\$ 175,000
Total estimated project cost	\$ 2,284,000

ACTION REQUESTED

Request Commission authorization for the Executive Director to develop design documents, execute professional service contracts, apply for permits and to prepare construction documents for the World Trade Center West Roof Replacement. Total request for this action will be \$175,000 for a total project cost of \$2,284,000.

EXECUTIVE SUMMARY

The World Trade Center West (WTCW) Building was built in 1998 and is 23 years old. Its' existing ballasted gravel roof is original to the structure and is nearing the end of its service life. This project will extend the service life of existing WTCW roofing system via repair, overlay and replacement, based on recommendations contained in a third-party assessment study completed on January 9, 2019. Due to funding priorities over the past few years, this roof project was deferred but is now ready to move forward due to its critical need. The proposed project is intended to provide reuse of existing ballasted roofing, membrane, and insulation. The project includes installing additional insulation including another 80-mil membrane overlay while considering the possibility of adding Green Roof Technology to the building roof top. This will provide an energy efficient and sustainable replacement roof and will have a design service life of 30 years.

The project is currently in the preliminary design/construction documentation phase, with preliminary design documents at the 30% stage of completion.

JUSTIFICATION

This project supports the following Century Agenda objectives:

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1. Position the Puget Sound region as a premier international logistics hub.
2. Advance this region as a leading tourism destination and business gateway.
3. Use the Port's influence as an institution to promote women and minority business enterprise (WMBE) growth, small business growth, and workforce development.
4. Be the greenest, and most energy-efficient port in North America.

Further, the project supports the following additional imperatives

- A. Protect Existing Assets
Ensure that its complex roofing system maintains its watertight integrity.
- B. Reduce Unplanned Maintenance Costs
Mitigate future costs related to roof leaks, including rot, mold, and corrosion.
- C. Mitigate Impacts to Existing Business Operations
Coordinate with WTCW building tenants and work around scheduled business events.
- D. Employ Sustainable Means and Methods
Incorporate environmentally sustainable practices during construction where practical.

Diversity in Contracting

The design portion is under an existing IDIQ which was established prior to the Diversity in Contracting program. This IDIQ has a 17% small business goal associated with it. The Diversity in Contracting Department will set a woman and minority business enterprise (WMBE) aspirational goal for the construction portion.

DETAILS

The roof is original to the WTCW building. The existing ballast, membrane, and insulation will be reused to save on material disposal costs. Adding additional insulation per code and overlaying with an additional 80mil membrane will increase the life of the roofing system to 30+ additional years. The addition of the Green Roof Technology will further the life of the roofing system by eliminating ultraviolet sun rays from deteriorating the roof membrane. The total project cost of the recommended alternative is estimated to be \$2,284,000 which is \$935K more than the least expensive option, Alternative 2 estimated to be \$1,349,000. Funding for this project was included in the 2022 capital budget plan of finance.

Scope of Work

The scope of work for the WTCW Roof Upgrade project includes the evaluation and design for:

- (1) Reuse of existing gravel ballast to eliminate waste.
- (2) A new energy-efficient ballasted roofing system that includes additional insulation while including an option for a Green Roof technology,
- (3) Evaluate the existing roof top fall protection system,

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- (4) Use environmentally sustainable components and methods as appropriate, such as: waste minimization and selecting materials with limited toxicity and greenhouse gas emissions.

Schedule

Activity

Commission design authorization	December 14, 2021
Final design start	December 2021
Commission construction authorization	Q2 2022
Construction start	Q3 2022
In-use date	Q1 2023

Cost Breakdown

	This Request	Total Project
Design	\$175,000	\$300,000
Construction	0	\$1,984,000
Total	\$175,000	\$2,284,000

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1 – Do nothing, Maintain the current state and delay upgrades to the roof. Maintenance costs of \$5K annually (averaged over 12 months) will continue.

Capital Cost: \$5K

Pros:

- (1) Saves Port funding.
- (2) Allows port to reallocate capital investment dollars.

Cons:

- (1) Does not advance efforts to achieve Century Agenda goals.
- (2) Increases the chances that water infiltration will disrupt tenant activities and damage the interior of the facility causing expensive repairs.
- (3) Increase of future construction costs is likely and the risk of emergency repair costs will continue to increase.
- (4) The cost of a future roofing project and additional repairs in the event of roof failure would be the full cost of replacement (\$2.28 million) plus escalation and the cumulative ongoing expense costs. Risk of the cost of lost tenant space due to emergency repairs is unknown but likely would be high.
- (5) Safety of the tenant could be compromised due to the slip hazard to tenant and employees.
- (6) Maintenance costs will continue.

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This is not the recommended alternative.

Alternative 2: - Upgrade and install a new membrane roof and additional insulation while reusing existing gravel ballast to provide a 30-year service life.

Capital Cost: Minimum of \$1.34M

Pros:

- (1) Advances Century Agenda goals.
- (2) Upgrades and replaces project elements on the existing roofing system with various roof applications that have a 30-year life.
- (3) The cost of Alternative 2 is approximately \$935K less than the recommended Alternative 3.
- (4) Repairing and replacing various roof elements will provide the lowest total cost of ownership.
- (5) Helps to assure a stronger positive tenant experience and avoids potential safety hazards.
- (6) Proactive maintenance provides protection of Port assets.
- (7) Provide for a warranted roof that will minimize the cost of repairs going forward for the foreseeable life of the roof.

Cons:

- (1) This alternative uses \$1.34M of capital funds that might otherwise be made available for other uses on other projects.
- (2) Additional ballast may be required once the re-used ballast is in place over the new membrane.

This is not the recommended alternative.

Alternative 3: - Upgrade and install a new membrane overlay and additional insulation while reusing existing gravel ballast including the installation of a Green Roof Technology that will have a 30+ year life.

Capital Cost: Minimum of \$2.28M

Pros:

- (1) Advances Century Agenda goals.
- (2) Upgrades and replaces project elements on the existing roofing system with various roof applications that have a 30+ year life.
- (3) The 30+ year life span of this roof system will protect this Port asset, serving the Port and the tenants well.
- (4) Repairing and replacing various roof elements will provide a lower total cost of ownership than Alternate 2.
- (5) Helps to assure a stronger positive tenant experience and avoids potential safety hazards.

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- (6) This project would provide for a warranted roof that will minimize the cost of repairs going forward for the foreseeable life of the roof.
- (7) Upgrading to Green Roof Technology conceals the roof from harmful ultraviolet light and sun rays, extending the life of the roof.
- (8) The live areas of the Green Roof will produce oxygen, provide stormwater retention, and also create habitat and a stopping point for pollinators.
- (9) Substituting areas of ballast with a Green Roof reduces the heat load to the building and therefore reduces reliance on the HVAC system for cooling.

Cons:

- (1) This alternative uses \$2.28M of capital funds that might otherwise be made available for other uses on other projects.
- (2) The cost of Alternative 3 is approximately \$935K more than Alternative 2.
- (3) Minor weed removal may be needed twice per year at a cost of \$1.5K per year.

This is the recommended alternative.

FINANCIAL IMPLICATIONS

<i>Cost Estimate/Authorization Summary</i>	Total
COST ESTIMATE	
Original estimate	\$2,284,000
AUTHORIZATION	
Previous authorizations	\$125,000
Current request for authorization	\$175,000
Total authorizations, including this request	\$300,000
Remaining amount to be authorized	\$1,984,000

Annual Budget Status and Source of Funds

This project has been included in the 2022 Plan of Finance under C801104 P66 World Trade Center West Roof Replacement at an estimated total project cost of \$1,676,000. The additional estimated cost of \$608,000 will be funded by C800216 EDD Reserve.

This project will be funded by the General Fund.

Financial Analysis and Summary

Project cost for analysis	\$2,284,000
Business Unit (BU)	Portfolio Management

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Effect on business performance (NOI after depreciation)	The project will maintain annual gross revenue of \$1.4 million from WTCW. Depreciation will increase by \$152,267 per year, thereby reducing the NOI by the same amount.
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)

This upgrade will provide protection of Port assets and extend their useful life while redesigning the roof system to also achieve environmental goals. Maintaining existing assets and enhancing their environmental performance will preserve the economic vitality of our operations and serve the Port, tenants, and their customers well.

Environmental Summary:

This project is Tier 2 under the Sustainable Evaluation Framework. Third-party certification is not being pursued due to the project’s limited scope (roof replacement), but green design options are being considered. Opportunities to reduce the building’s and construction project’s carbon footprint are being explored. Solar opportunities were explored but eliminated from scope due to weight, building positioning, and potential glare hazards. As stated above, application of a green roof is being considered.

The WTCW Building Ballasted Roof Replacement Project demonstrates the value of sustainable project evaluation processes which consider social, environmental, and economic benefits holistically. Sustainability goals include energy efficiency, environmental health, sustainable asset management, material reuse, financial sustainability, and tenant impacts. These goals will be considered to identify a recommended alternative that maximize objectives while balancing costs and project objectives.

ATTACHMENTS TO THIS REQUEST

- (1) Sustainable Design Approach (SDA)
- (2) Presentation

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

None.