

PORT OF SEATTLE
MEMORANDUM

COMMISSION AGENDA
ACTION ITEM

Item No.	<u>6b</u>
Date of Meeting	<u>January 14, 2014</u>

DATE: January 7, 2014
TO: Tay Yoshitani, Chief Executive Officer
FROM: Michael Burke, Director, Seaport Leasing and Asset Management
Curtis Stahlecker, Project Manager, Seaport Project Management
SUBJECT: Terminal 91, C-175 Building Roof Replacement (CIP #C800430)

Amount of This Request:	\$2,210,000	Source of Funds:	General Fund
Est. Total Project Cost:	\$2,450,000		
Est. State and Local Taxes:	\$167,000	Est. Jobs Created:	19

ACTION REQUESTED

Request Commission authorization for the Chief Executive Officer to advertise for construction bids, execute construction contracts, and fund the construction phase of the Terminal 91, C175 Building Roof Replacement Project in an amount not to exceed \$2,210,000 for a total estimated project cost of \$2,450,000.

SYNOPSIS

The roofing system on the C-175 building at Terminal 91 is approximately 20 years old and has performed well. However, some portions of the roof are beyond their service life and show signs of aging and deterioration. Under the lease agreement, maintenance of the roof is the responsibility of the Port. The design is complete and the project is ready to advance into the construction phase. This phase will include advertising for construction bids, execution of a major construction contract, and all other work necessary to complete the project, which was included within the 2014 budget and plan of finance.

BACKGROUND

The C-175 building is leased to CityIce Cold Storage, LLC, which operates a cold storage operation in the facility. The building, built in the early 1990s, is in good condition. Roof inspections were performed in November 2009, February 2010, and December 2012. The first of these was sponsored by the tenant; the others by the Port. All of the inspections indicate the roof is showing signs of deterioration with membrane shrinkage, tenting, and uplift during strong winds. The 2009 and 2010 inspections recommended replacement by 2013 and 2014 respectively. The 2012 report identified areas of ice buildup within the roofing insulation system. The preliminary design identified that approximately one quarter of the roof is at the

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end of its useful life and the remainder is in fair shape having a potential remaining useful life of two to five years, (2015 to 2018 respectively). Regardless of the remaining useful life, the entire roof would require replacement at one time. The design is complete and the project is ready to move into the construction phase.

PROJECT JUSTIFICATION AND DETAILS

As the roof membrane is near the end of its service life, replacing the roofing system now will avoid costs for future repairs and potential water damage to the building insulation, structural elements and tenant operations. The lease agreement between the Port and CityIce has the maintenance and repair of the roof as an obligation of the Port.

Project Objectives

- Install a new roofing system on a Port-owned asset.
- Minimize disruption to the tenant and tenant operations.
- Incorporate environmentally sustainable practices into the project where practical.
- Complete project on time and within budget.

Scope of Work

The project consists of the following components:

- Remove and replace the 90,000 square foot roof membrane and associated roof appurtenances.
- Install the new roof system.
- Include environmentally sustainable components and construction methods as appropriate.

Schedule

	<u>Start</u>	<u>Finish</u>
Commission Authorization for Construction	January 2014	January 2014
Advertise and Award	February 2014	April 2014
Construction	May 2014	October 2014

FINANCIAL IMPLICATIONS

Budget/Authorization Summary

	Capital	Expense	Total Project
Original Budget	\$0	\$0	\$0
Previous Authorizations	\$240,000	\$0	\$240,000
Current request for authorization	\$2,210,000	\$0	\$2,210,000
Total Authorizations, including this request	\$2,450,000	\$0	\$2,450,000
Remaining budget to be authorized	\$0	\$0	\$0
Total Estimated Project Cost	\$2,450,000	\$0	\$2,450,000

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Project Cost Breakdown

	This Request	Total Project
Construction	\$1,751,000	\$1,751,000
Construction Management	\$237,000	\$237,000
Design	\$ 0	\$168,000
Project Management	\$49,000	\$107,000
Permitting	\$6,000	\$20,000
State & Local Taxes (estimated)	\$167,000	\$167,000
Total	\$2,210,000	\$2,450,000

Budget Status and Source of Funds

This project was included in the 2014 plan of finance under Committed-Authorized CIP #C800430 – P90 C175 Roof Replacement – for a total cost of \$2,450,000 (including actual spending in 2011 and 2012 and forecasted spending in 2013).

This project will be funded from the General Fund.

Financial Analysis and Summary

CIP Category	Renewal/Enhancement
Project Type	Renewal & Replacement
Risk adjusted discount rate	N/A
Key risk factors	<ul style="list-style-type: none">• Construction costs may increase due to market trends or unforeseen damage to the remaining roofing system below the roof membrane.• Material costs, such as petroleum based roofing membrane are subject to price fluctuations.• Project schedule could be delayed due to project complexity, weather, or the need to minimize tenant disruptions.
Project cost for analysis	\$2,450,000

Business Unit (BU)	Seaport Industrial Properties
Effect on business performance	<ul style="list-style-type: none">• Preserves T91 Building C175 revenue of approximately \$458,000 per year.• Depreciation expense will increase approximately \$122,500 per year based on a 20-year useful life.
IRR/NPV	The NPV is the present value of the project cost.

Lifecycle Cost and Savings

A lifecycle cost analysis was performed using three types of roofing materials in three distinct design configurations with design life ranging between 20 and 30 years. The analysis-recommended roofing system with the best return on investment is a roof with a 20-year design

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life. This design includes the removal of the existing membrane and installation of a new fully adhered white membrane. With proper maintenance, this system should provide a service life of 25 to 30 years.

STRATEGIES AND OBJECTIVES

The project is consistent with Century Agenda objectives to optimize infrastructure investment and financial stewardship by preserving the life of a Port asset; supports economic growth and vitality by preserving existing jobs and commerce; and advances the objective of becoming the greenest and most energy efficient North American port by reducing pollutants and increasing energy efficiency.

TRIPLE BOTTOM LINE

Economic Development

Replacing the roof complies with a lease obligation, protects the asset and maintains the expected service life of the building with minimal to no disruption to tenant operations. The project allows tenant operations to function relatively uninterrupted thereby maintaining jobs, commerce, and revenues.

Environmental Responsibility

The following environmentally sustainable components and activities investigated during the design phase will be incorporated into the new roof system.

- The roof membrane will have a solar reflective index (SRI) that meets or exceeds 80, which will reduce the thermal gain the building experiences requiring less energy to maintain the subzero temperatures in the freezer units that comprise roughly 80 percent of the building. The use of a roof with a high SRI may allow the Port of Seattle to receive an energy rebate from Seattle City Light. Staff is currently working on the application.
- The new roofing system will replace the existing metal flashing and gutter systems with zinc-free materials thereby eliminating the zinc contributions from the roofing systems that currently enter the waters of Puget Sound.
- Recycling of the existing roofing membrane is required, saving both the landfill space and allowing the roof components to be re-used elsewhere.
- An audio bird deterrent system will be tested on an area of the roof to deter geese. If effective, the system will be deployed on the entire roof, which will remove bird fecal material from being discharged from the roof drains into the Sound.

Other environmentally sustainable components investigated but not incorporated into the project were:

- Generating energy through solar panels or wind turbines, not economically viable due to infrastructure costs, limited solar gain and available wind.
- Reuse of rainwater within the building is not viable due to infrastructure cost and low water usage.

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- Storm water bio-filtration not advanced due to limited available space on the terminal and limited effectiveness.

Community Benefits

The Office of Social Responsibility will coordinate with the project manager and the procurement departments to determine opportunities for small business participation in support of Resolution No. 3618.

ALTERNATIVES AND IMPLICATIONS CONSIDERED

Alternative 1) – Do nothing/replace the roof after it leaks or fails. The roof is currently functioning. The risk of waiting until the roof leaks or fails is that emergency repairs would need to be performed during the period when the new roofing system is being designed and bid, potentially increasing the costs. Damage to the insulation and roof support structure could also occur, increasing the replacement cost as well as having the potential of disrupting tenant operations. This is not the recommended alternative.

Alternative 2) – Delay the replacement for one to two years, 2015 to 2018, respectively, to extend the existing service. During this time, additional monitoring and spot repairs would be performed as needed, paying particular attention to the section of the roof that is at the end of the service life. The risk of selecting this alternative is twofold. The first is the combination of increased costs for inspection and maintenance and unknown escalation costs of construction that may exceed the savings gained by the extended service life of the existing roof. The second risk is design may no longer be valid and would need to be redone in part to address any potential changes in the building code or materials. This is not the recommended alternative.

Alternative 3) – Total lifecycle costs were analyzed for roof systems having a design life of 20 years and 30 years, respectively. The roof system with a 20-year design life has the lowest total cost of ownership and is the recommended replacement roof system. Replacement of the roof now will reduce future risks of a major roofing system failure, restore the energy efficiency of the roof, and reduce the risk of emergency repair costs. **This is the recommended alternative**

ATTACHMENTS TO THIS REQUEST

- PowerPoint presentation.

PREVIOUS COMMISSION ACTIONS OR BRIEFINGS

- July 26, 2011 – the Port Commission approved \$190,000 for the design and permitting phase of the Terminal 91, C-175 Building Roof Replacement project (CIP #C800430) for a total authorization of \$240,000.