PORT OF SEATTLE MEMORANDUM

COMMISSION AGENDAItem No.5cCORRECTED COPYDate of MeetingMay 3, 2011

DATE: May 11, 2011

TO: Tay Yoshitani, Chief Executive Officer

FROM: Jasmin Contreras, Property Manager, Seaport Division

Rod Jackson, Capital Project Manager

SUBJECT: Project Budget Increase for Terminal 86 Facility Modernization Project Tower

Strengthening CIP #C800133

Amount of This Request: \$400,000 **Source of Funds:** General Operating Funds

Est. State and Local Taxes: \$38,000 out of a project total of \$226,000

ACTION REQUESTED:

Request \$400,000 of additional project funding for Towers 2, 3 and 5 strengthening and equipment upgrades at Seaport's Terminal 86 (T-86) Grain Facility for a total authorization of \$2,900,000.

SYNOPSIS:

T-86 (leased to Louis Dreyfus Corporation, hereinafter the "tenant") is a very busy export grain terminal important to the Port's Seaport Division business performance. In March 23, 2010, Commission authorized \$2,500,000 to reduce risks to this important property by proactively repairing aging structural and mechanical components on Towers 2, 3 and 5 at T-86. The work is being completed in two phases, with Phase I including design, fabrication and equipment installation of two (2) pendants, one (1) bullwheel and three (3) spout booms on Towers 2, 3 and 5; Phase II which consists of design, fabrication, equipment installation, tower strengthening, replacement of three (3) roller bearing assemblies, one (1) retaining boom assembly and two (2) bullwheel replacements on Towers 2, 3 and 5 by September 2011.

Phase I of the project has been successfully completed with Louis Dreyfus fulfilling its obligation to provide fabricated equipment. However, after completing the structural analyses and design for Phase II tower strengthening work, the engineers determined that additional tower strengthening is required which is greater than previously assumed at the time of the original Commission funding approval in March 2010. Scheduling the additional work within limited

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available work windows due to busy terminal operations added to the complexity of construction and contributed to the higher construction cost estimate.

In 2006 and 2007, there were two major equipment and structural failures on Towers 1 and 4, which were repaired. Prior to 2006, there was a failure to Tower 5, which was repaired. These failures raised concerns for additional failures on Towers 2, 3 and 5 and led to this tower strengthening project.

ADDITIONAL BACKGROUND:

T-86 is an export grain terminal that receives, stores, and loads grain to bulk ships for export to Asia, notably China, and other foreign markets. Constructed in the late 1960s, T-86 was originally designed to export wheat. Today it handles primarily corn, soybean and sorghum from the Midwest.

T-86 is unique in its ability to load bulk ships directly from rail or via its network of silos. Direct loading of ships from railcars reduces handling costs and breakage of product (preserving its quality). Silos enable products to be received from rail prior to arrival of the ship, reducing costs associated with demurrage of railcars. Silos also allow a variety of types and grades of grain to be received. Ship holds can be filled with different commodities and by blending various grades from the silos, a shipment can be prepared to meet exacting standards.

Product is loaded to ship holds via a network of conveyors, which feed five spouts. Each spout is mounted to a tower and can be articulated, much like the boom of a crane, to distribute product evenly throughout each hold. Typically, two spouts operate at any given time during loading. However, to fill all of a ship's holds, all five spouts are used intermittently to eliminate the time and expense of repositioning the ship to fill its array of holds.

Based on an analysis of the three failures of grain spouts on Towers 1, 4 and 5, it has been determined each failure occurred for unrelated reasons. Nevertheless, as a risk assessment measure, a thorough review of all five towers, spouts and assemblies was performed. Repairs of the failed Spouts #1 and #4 were completed including a fix to Spout #5 in 2009.

Towers 2, 3, and 5 and their ship loading systems were inspected in 2009 and are approved for operation, subject to monthly inspections and testing.

Impacts to operations from unexpected spout/tower failures have been and could be substantial. They result in facility shut downs to secure the Terminal prior to resuming operations on an interim basis with a reduced number of loading spouts. The facility subsequently must be shut down to undertake repairs. Such shutdowns reduce throughput volumes (and revenues to the Port and Tenant) and increase demurrage charges for railcars and vessels, alike. Completion of the requested improvements would reduce risks for the short and longer terms.

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PROJECT DESCRIPTION/ SCOPE OF WORK:

Scope of Work:

The project consists of the following components:

- Remove three (3) existing pendants and replace with three (3) new pendant/assemblies (supplied by Tenant) on Towers 2, 3 and 5.
- Remove three (3) existing spout booms and replace with three (3) new booms/assemblies (supplied by Tenant) on Towers 2, 3 and 5.
- Remove three (3) existing bullwheels and replace with three (3) new bullwheel/assemblies (one (1) bullwheel supplied by Tenant) on Towers 2, 3 and 5.
- Remove three (3) existing roller bearings and replace with three (3) new roller bearing/assemblies on Towers 2, 3 and 5.
- Design of Fabrication drawings, Installation drawings and Tower Strengthening drawings.
- Fabrication and procurement of two (2) Bullwheels and three (3) Roller Bearing assemblies.
- Major works includes Installation of two (2) Bullwheels, one (1) Retaining boom and three (3) Roller Bearing assemblies to meet the tenant schedule..
- Strengthen Towers 2, 3 and 5 at strategically designated locations as determined by the structural design analysis.

Schedule:

Phase I: Replace equipment components on Towers 2, 3 and 5

Design, Fabricate Equipment and Installation 3/2010 thru 9/2010 (Complete)

Phase II: Tower and Bullwheel strengthening on Towers 2, 3 and 5

•	Design	10/2010 thru 3/2011 (Complete)
•	Fabricate Equipment	12/2010 thru 5/2011 (Complete)
•	Tenant Facility Shutdown	8/2011 thru 9/2011
•	Major Works Installation of Equipment	8/2011 thru 9/2011
•	Strengthening Towers 2, 3 and 5	5/2011 thru 9/2011
•	Project Close Out	12/2011

STRATEGIC OBJECTIVES:

This project supports the Port strategy to "Ensure Airport and Seaport Vitality" through renewing and replacing vital Seaport Infrastructure to the Port of Seattle Waterfront operations.

Best management practices will be deployed by the Port staff and tenant in the selection of materials, work practices and ongoing total cost of ownership.

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BUSINESS PLAN OBJECTIVES:

This project is aligned with the 2010-2014 Seaport business plan objectives to protect our current business and to meet current lease obligations. This is a renewal and replacement project to upgrade the equipment and to strengthen structures on Towers 2, 3, and 5.

FINANCIAL ANALYSIS:

Budget/Authorization Summary

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	Previous Authorizations	\$2,500,000	
	Current request for Authorization	\$400,000	
	Total Authorizations, including this request	\$2,900,000	
	Remaining budget to be authorized	\$0	

Project Cost Breakdown -

Construction	\$2,036,000
Construction Management + Construction Administration	\$259,000
Design	\$244,000
Project Management	\$120,000
Permitting	\$15,000
State & Local Taxes (estimated)	\$226,000
Total	\$2,900,000

Source of Funds

The project was included in the 2011 Plan of Finance as a committed project under CIP# C800133, T-86 Grain Facility Modernization, in the amount of \$8,687,000. The cost of this project will be funded from the General Fund.

The remaining \$5,840,000 in the capital plan for CIP# C800133 may be needed for future facility upgrades to be considered in conjunction with a new lease proposal, currently being negotiated.

Financial Analysis Summary

CIP Category	Renewal / Enhancement
Project Type	Renewal & Replacement
Risk adjusted Discount rate	N/A

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Key risk factors	 Negative financial impact to grain terminal operations if the upgrade project is not completed within the optimal timeframe during the tenant's slow season and if the project schedule is not compatible with ongoing tenant operations. Potential cost overruns due to project complexity and time constraints. 		
Project cost for analysis	\$2,900,000 (based on final design)		
Business Unit (BU)	Bulk Terminals		
Effect on business	This asset replacement project will not generate any incremental		
performance	revenue. However it will minimize the likelihood of disruptions		
	to the tenant's terminal operations and the tenant's customers		
	from further grain spout failures.		
	The incremental increase to depreciation expense resulting from this \$400,000 funding request is \$13,333/year. Total depreciation expense from this project is estimated at \$97,000/year, based on a 30 year asset life. NOI after Depreciation for this facility will decrease by the associated depreciation expense from this project. NOI (in \$000's) Year 1 Year 2 Year 3 Year 4 Year 5		
IRR/NPV	N/A		

ENVIRONMENTAL SUSTAINABILITY/COMMUNITY BENEFITS;

No impact to the environment is anticipated as a result of this project. Upgrades will be constructed with materials that have demonstrated long life and durability.

ALTERNATIVES CONSIDERED AND THEIR IMPLICATIONS:

<u>Alternative 1:</u> Close out the Phase I work. Do not award Phase II major construction installation contract (Bid opened 4/21/2011), complete equipment fabrication (By 5/15/2011), and do not proceed with strengthening of Towers 2, 3 and 5. Alternative 1 is not recommended because identified risks will not be fully mitigated.

<u>Alternative 2:</u> Continue Phase I close out work, complete remaining Phase II work (complete award and execute contract for installation and complete strengthening of Towers 2, 3 and 5). **This is the recommended alternative.**

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PREVIOUS COMMISSION ACTIONS OR BRIEFINGS:

Below is a chronology of funding authorizations:

On January 2007 – Seaport management authorized \$93,000 to design an in-kind replacement of Spout #4. This authorization was subsequently increased by \$29,047 to a total of \$122,047.

On April 19, 2007 – Spout #1 collapsed. Engineering authorized thru emergency declaration \$90,000 to remove Spout #1 from the ship, secure the area and to determine the cause of the collapse.

On April 24, 2007 – Staff was scheduled to request funding in Public Session to repair Spout #4; this action item was withdrawn due to the April 19th incident.

On May 8, 2007, Commission was briefed in Public Session on the collapse of Spouts #1 and #4.

On May 2007, staff determined need to undertake a new approach that will address repairs to both the spouts and towers at T-86, with emphasis on spouts and Towers #1 and #4.

On May 22, 2007, Seaport management authorized \$200,000 to begin preliminary design and alternative repairs.

On August 28, 2007, Commission authorized \$1,300,000 to design and install temporary and permanent repairs/upgrades on Towers 1 and 4 for a total amount of \$1,500,000 in authorizations.

On July 28, 2009 – An overview was provided to the Commission in public session regarding history of the Grain Terminal, the current situation and lease agreement, business outlook and the need for future capital investment in this aging facility.

On November 10, 2009 – Commission authorized to execute the 11th amendment to the Lease between the Port of Seattle and Louis Dreyfus Corporation at the Terminal 86 Grain Terminal which extended the decision period by 6 months for the next lease option to extend term 5 years.

On March 23, 2010, Commission authorized \$2,500,000 to upgrade, strengthen and install equipment on Tower 2, 3 and 5 for a total amount of \$2,500,000 in authorizations.

OTHER DOCUMENTS ASSOCIATED WITH THIS REQUEST:

Diagram of a spout and tower