

Community and Environmental Health



Waterfront Electrification - Shore Power at Pier 66

This project benefits community and environmental health through investments in the reduction of maritime emissions and is an important step in our plan to provide reliable, efficient, clean, and resilient power throughout the harbor.

"The new shore power at Pier 66 will allow ships to tap into cleaner Pacific Northwest electricity, eliminating harmful pollution and making Seattle's waterfront a healthier place to work, live, and visit."

-Craig Kenworthy, Executive Director of the Puget Sound Clean Air Agency

TOTAL COST AND PROJECT COST BREAKDOWN

\$30 MILLION

PROJECT SUMMARY

- Perform on-site and off-site work to create dual voltage 20 MW shore power system for the single cruise ship berth at Pier 66 and other cruise and container ship facilities.
- Take next steps towards electrifying the Seattle waterfront, building upon success at Terminal 91 and the Smith Cove Cruise Terminal and plans to provide shore power at Terminal 5.
- Perform on-site and off-site work to create dual voltage 20 MW shore power system for the single cruise ship berth at Pier 66.
- Off-site costs include an upgrade to the utility for adequate 20 MW load capacity. This work amounts to more than one mile of trenching through busy downtown streets to lay new conduits, ductbanks, and cables.

- On-site work includes new conduits, cables, and the installation of new equipment such as transformers, switchgears, cables, and a cable positioning device at the bullrail.
- The feasibility and availability of using renewable energy and lower cost alternatives would be explored during design.

JUSTIFICATION

- To be the greenest and most energy efficient port in North America, shore power is emerging as the most effective technique to reduce Port-related maritime air emissions here in the Northwest.
- The project would significantly reduce greenhouse gas emissions from cruise vessels at berth, improving air quality for the highest density of employment and residences in its proximity.



BUSINESS PLAN OBJECTIVES

- Determine customer needs and deliver. Norwegian Cruise Lines has now retrofitted some of their vessels with shore power, therefore the Port of Seattle can leverage that investment to reduce emissions in our harbor.
- Reliability of shore power is important to our customers and higher capacity equipment would allow the Port to meet customer needs for the upcoming years as vessels' electrical demands increase.

SUSTAINABILITY AND LIFE CYCLE COSTS

The Port is in the process of implementing improvements to its project review and design process to integrate sustainability and equity into project development for capital development projects.

This project requires environmental permitting and review. Likely permits/approvals include:

- State Environmental Policy Act (SEPA) Review
- City of Seattle Shoreline Substantial Development Permit
- City of Seattle Construction Permit

Approvals from the U.S. Army Corps of Engineers and the Washington Department of Fish and Wildlife may also be required depending on location and the need of equipment. Complex permitting effort required.

ALTERNATIVES CONSIDERED AND IMPLICATIONS

An alternative to shore power is a requirement for the vessels to burn cleaner fuels while in the harbor. However the air quality and economic benefits are not as great and we now find ourselves in the situation of the customer having invested considerable capital into making the vessel ready to accept shore power.

Estimated Completion Date: 2022

Community and Environmental Health



Terminal 117 Duwamish River Habitat Restoration and Public Access Project

This project benefits community and environmental health through investments in fish and wildlife habitat restoration and access to parks and green space.

"The T 117 project is of upmost importance for Salmon recovery on the Duwamish River but also to the community. With such a lack of open space as well as access to the river in the Duwamish Valley this will become a point of pride in the community. Lastly but not least, the opportunity for Concord Elementary School as well as other public schools in the area to have an outdoor classroom to observe the habitat will be an outstanding educational plus."

-James Rasmussen, Executive Director, Duwamish River Clean-up Coalition

TOTAL COST AND PROJECT COST BREAKDOWN

Staff intends to request **\$17.9 million** in 2019, pending agency approvals.

*Does not represent full project cost.

PROJECT SUMMARY

Construct a 13-acre habitat restoration project at T117. This terminal is in the South Park neighborhood and the project will provide needed public access to the river.

JUSTIFICATION

- This project will improve fish and wildlife habitat, supporting chinook recovery goals. It will also include educational environmental interpretation.
- Shoreline public access will be incorporated into the project, benefiting our near-Port neighbors. Facilities

will include a hand-carry boat launch, pier, viewpoint, seating, bike rack, lighting, public art, and trails.

CENTURY AGENDA/LONG RANGE PLAN

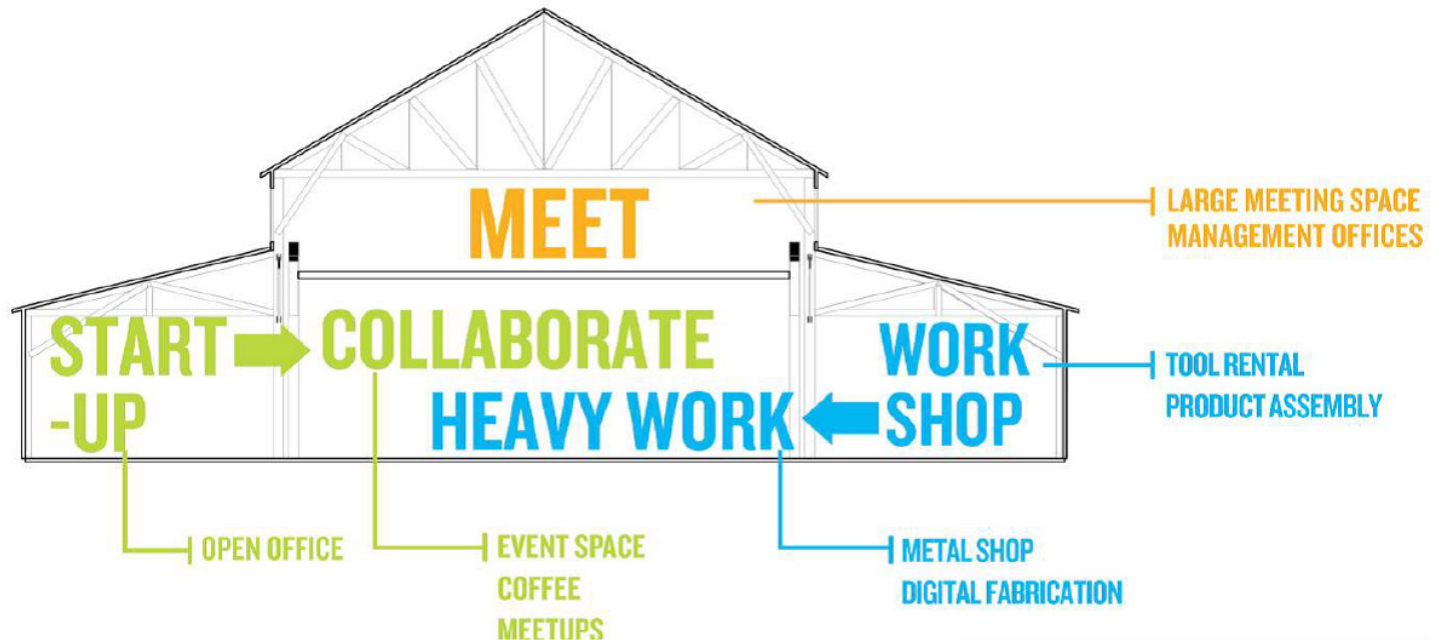
- The project will create 13 acres of fish and wildlife habitat that will contribute to the Century Agenda goal to "create, restore, or enhance 40 additional acres of habitat on the Green-Duwamish Watershed and Elliott Bay."
- The project will support LRP objectives related to greenhouse gas emission reductions by sequestering carbon in upland and wetland plants.

BUSINESS PLAN OBJECTIVES

Shoreline public access features will benefit South Park, an environmental justice community, along the Port's fence line.

Estimated Completion Date: Q2 2020

Modernizing Seattle's Working Waterfront



Maritime Innovation Center

This project preserves the Port's historic Ship Supply Building and renovates it into an innovation center that can help drive maritime industry growth and entrepreneurship.

The proposed Maritime Innovation Center will help our region's maritime industry move forward in a changing economy and city and remain vital into the future."

-Joshua M. Berger, Governor's Sector Lead, Director of Maritime, State of Washington

TOTAL COST: \$10.5 MILLION

PROJECT SUMMARY

Renovation of the existing Seattle Ship Supply Building to a core and shell level of completion to support the Maritime Innovation Center and a larger maritime innovation district.

JUSTIFICATION:

- The Port of Seattle's Maritime Innovation Center will help the region's maritime industry adopt advanced technologies and stimulate innovative entrepreneurship.
- Promoting knowledge transfer, business incubation, and workforce development are the biggest needs in terms of addressing maritime innovation challenges and opportunities.
- This Innovation Center can help sustain maritime industries and help the Port of Seattle modernize operations and key lines of business.

CENTURY AGENDA/LONG RANGE PLAN

- Continue to grow the economic value of the fishing and maritime cluster including the number of local jobs and business revenue

BUSINESS PLAN OBJECTIVES

- Advance maritime industry innovation
- Enhance public awareness of the terminal and fishing industry
- Modernize overall property and create a facility that supports maritime industry events and initiatives.

PRELIMINARY FINANCIAL ANALYSIS SUMMARY

PROJECTED IRR: XXX

NPV: X

PAYBACK: XX YEARS

Estimated Completion Date: Q1 2022