City of Seattle

Edward B. Murray, Mayor

Department of Construction and Inspections

Nathan Torgelson, Director

CITY OF SEATTLE
ANALYSIS AND DECISION OF THE DIRECTOR OF
THE SEATTLE DEPARTMENT OF CONSTRUCTION AND INSPECTIONS

Application Number: 3019071

Applicant Name: Ann Farr for Port of Seattle

Address of Proposal: 2701 26th Ave. SW

SUMMARY OF PROPOSED ACTION

Shoreline Substantial Development Application to allow improvements to existing container cargo facility (Terminal 5). Project includes removal and replacement of portions of pier structure, including crane rails, decking and piling, dredging of 48,000 cu. yds. of sediment, and under pier slope stabilization. Project also includes installation of an electrical substation and utility upgrades. Environmental Impact Statement was prepared by the Port of Seattle*.

The following approvals are required:

Shoreline Substantial Development Permit to allow development in the Urban Industrial (UI), Shoreline Environment.

Shoreline Conditional Use to allow unlisted shoreline modification in the Urban Industrial (UI) Shoreline Environment.

SEPA Substantive decision (to approve, condition or deny on the basis of SEPA policies)

☒ Pursuant to SEPA substantive authority provided in SMC 25.05.660, the proposal is approved subject to compliance with the conditions identified below.

(*) Terminal 5 Cargo Wharf Rehabilitation, Berth Deepening, And Improvements Final Environmental Impact Statement (FEIS), issued by Port of Seattle on October 18, 2016

Proposal Summary

The Port of Seattle with the Northwest Seaport Alliance proposes to rehabilitate the existing marine cargo facilities at Terminal 5 at the west margin of the West Waterway in Elliott Bay. The proposed project includes modifications to the existing Terminal 5 marine cargo facility in order to serve larger cargo vessels. The proposed changes consist of cargo wharf rehabilitation, deepening of the vessel berth, electrical service capacity improvements, and upland

improvements to service increased capacities including reconfiguration of the existing upland marine cargo marshalling area, modification of intermodal rail facilities and pavement areas, improvement of stormwater systems, alteration of maintenance and repair buildings and redesign of entrance/exit gates and heavy access points.

The Port of Seattle is the lead agency for the State Environmental Policy Act (SEPA) environmental review of the proposed project under SEPA. Project scoping began on October 22, 2015 and ended November 23, 2015. The draft Environmental Impact Statement (EIS) was published May 23, 2016 with comment period closing July 8, 2016. The Port selected a Preferred Alternative and issued the Final EIS on October 18, 2016. A detailed summary of the SEPA review steps taken by the Port is found in Chapter 2.1.2 of the FEIS document (October 2016).

Project components are further summarized here:

The existing cargo wharf is 2,900 feet long. Strengthening actions apply to approximately 2,800 linear feet, while the toe-wall stabilization actions measure up to 3,100 linear feet. Wharf strengthening will include the following elements:

- Demolish older wharf and structural systems as needed.
- Demolish asphalt paving for 31 feet x 2,800 feet to access area landside crane rail for strengthening.
- Demolish cast-in-place concrete crane rail beams and pile caps (located above MHHW) and concrete deck slabs (located above MHHW) for 21 feet x 2,800 feet along dock face to waterside crane rail.
- Remove fender system including extraction of timber fender piles and replace with a panelized fender system reducing overwater coverage by a net of 12,470 square feet at the face of the wharf.
- Extract or cut off older, conflicting 16.5-inch structural piling below mudline.
- Install new structural crane rail piles.
- Install 420 structural concrete piles (24-inch) and concrete pile cap beam within footprint of existing wharf structure to replace the waterside crane rail beam.
- Install 420 structural steel pipe piles (24-inch) and concrete pile cap beam in existing upland area, land-ward of the cargo wharf bulkhead.
- Install slope stabilization measures in the riprap armor slope beneath the existing container cargo wharf. Slope stabilization techniques will consist of installation of untreated wood piles penetrating the existing riprap armor slope.
- Install a toe-wall at the transition between the constructed riprap slope and the adjacent container vessel berth area to stabilize the existing slope beneath the container cargo wharf. Drive combination H-pile and sheet pile wall at the toe-of-slope for up to 3,100 feet.
- Install wharf rehabilitation elements:
- Replace the concrete deck structure within the existing wharf footprint.
- Repair existing container wharf beams and deck panels.
- Install panelized wharf fender system at 60-foot intervals.
- Deepen adjacent berth to -54 feet mean lower low water (MLLW) (-56 feet with potential over dredge depth to provide sufficient water depth to ensure the terminal's capacity for berthing larger container ships.
- Slope stability structures are designed for a final depth of up to –56 feet MLLW (–58 feet MLLW potential over dredge depth) for potential work that is not a part of this project.

- Electrical Improvements will include the following elements:
- Construct a new 26-MVA Primary Substation, to provide electrical power to the new cranes and associated terminal operations such as cargo handling, marshalling, and refrigeration.
- Coordinate with Seattle City Light (SCL) to provide power to the new Primary Substation from both the SCL Delridge Substation and the SCL South Substation.
- Construct up to four new electrical distribution substations feeding the new ship-to-shore cranes and dock power and lighting systems.
- Construct a new underground electrical duct bank to connect distribution elements.
- Construct distribution vaults and trenches to power trench.

- Water supply system upgrades will include the following elements:
- Remove and replace existing dockside water distribution system.
- Provide sectional valving in dockside water distribution system. Coordinate with existing looped water distribution system and existing fire hydrant layout.
- Remove and replace existing ship's water supply assemblies. Coordinate assembly installation locations.
- Update ship's water supply deduct meters to comply with City of Seattle standards.

Public Comment

There were three public comment periods for this proposal: June 25, 2015 through July 24, 2015; August 6, 2015 through September 4, 2015 and July 28, 2016 through August 26, 2016. Numerous public comments have been received and are part of the electronic file for this project.

ANALYSIS - SHORELINE SUBSTANTIAL DEVELOPMENT

Section 23.60A.030 of the Seattle Municipal Code provides criteria for review of a shoreline substantial development permit and reads: "The Director may approve or approve with conditions an application for a development, shoreline modification, or use that requires a shoreline substantial development permit, shoreline conditional use permit, shoreline variance permit, or special use approval if the Director determines the applicant has demonstrated that the development, shoreline modification, or use:"

1. *Is consistent with the policies and procedures of RCW 90.58.020;*
2. *Is not prohibited in any shoreline environment, underlying zone and overlay district in which it would be located;*
3. *Meets the standards in this Chapter 23.60A and any applicable development standards of the underlying zone or overlay district, except where a variance from a specific development standard has been granted; and*
4. *If the development, shoreline modification, or use requires a special use approval, shoreline conditional use permit, or shoreline variance permit, the project meets the criteria for the same established in Sections 23.60A.032, 23.60A.034, or 23.60A.036, respectively.*

These criteria are analyzed below:

1. Is consistent with the policies and procedures of RCW 90.58.020;

Chapter 90.58 RCW is known as the Shoreline Management Act of 1971. It is the policy of the State to provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses. This policy seeks to protect against adverse effects to the public

health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary incidental rights. Permitted uses in the shorelines shall be designed and conducted in a manner to minimize, insofar as practical, any resultant damage to the ecology and environment of the shoreline area and any interference with the public's use of the water. The project has been reviewed by SDCI and determined to be consistent with all applicable use and development standards in the City's Shoreline Master Program, as discussed in more detail below. The subject application is consistent with the procedures outlined in RCW 90.58.

2. Is not prohibited in any shoreline environment, underlying zone and overlay district in which it would be located;

The proposed project is a permitted cargo terminal use in the Urban Industrial Shoreline Environment (SMC 23.60A.482) and the underlying Industrial General 1 (Unlimited/85') zone. The proposal does not constitute a change of use from the existing, permitted cargo terminal use.

3. Meets the standards in this Chapter 23.60A and any applicable development standards of the underlying zone or overlay district, except where a variance from a specific development standard has been granted;

The Shoreline Management Act provides definitions and concepts, and gives primary responsibility for initiating and administering the regulatory program of the Act to local governments. The Department of Ecology is to primarily act in a supportive and review capacity, with primary emphasis on ensuring compliance with the policy and provisions of the Act. As a result of this Act, the City of Seattle adopted a local shoreline master program, codified in the Seattle Municipal Code at Chapter 23.60A that also incorporates the provisions of Chapter 173-27, WAC. Title 23 of the Municipal Code is also referred to as the Land Use and Zoning Code. Development on the shorelines of the state is not to be undertaken unless it is consistent with the policies and provisions of the Act, and with the local master program. The Act sets out procedures, such as public notice and appeal requirements, and penalties for violating its provisions which have also been set forth in the Land Use Code.

In evaluating requests for substantial development permits, the Director must determine that a proposed use and subsequent development meets the relevant criteria set forth in the Land Use Code. The Shoreline Goals and Policies, part of the Seattle Comprehensive Plan, and the purpose and location criteria for each shoreline environment must be considered and this project with its upland location was found to comply. The Shoreline Policies encourage the transport of materials and cargo in the shoreline district via modes having the least environmental impact (SA P11) and support the retention and expansion of existing conforming water-dependent and water-related businesses (SA P37) and identify and designate appropriate land adjacent to deep water for industrial and commercial uses that require such condition (SA P38). The proposed project is designed to improve the efficiency and capabilities of the existing cargo terminal use at Terminal 5 and is thus consistent with the purpose of the UI Environment (SMC 23.60A.220) to "provide for efficient use of industrial shorelines by major cargo facilities and other water-dependent and water-related industrial uses, and to allow for warehouse uses that are not water-dependent of water-related where they currently exist." A proposal must also be consistent with the general development standards of SMC 23.60A.152, the specific standards of the applicable shoreline environments and underlying zoning designation, which is discussed below.

SMC 23.60A.152 - Development Standards for all Environments

These general standards apply to all uses in the shoreline environments. The standards require that design and construction of all uses be conducted in an environmentally sound manner, consistent with the Shoreline Management Program and with best management practices for the specific use or activity. Compliance with applicable codes and ordinances for construction of the project will reduce or eliminate most potential adverse long-term impacts to the shoreline environment. The applicant will implement Best Management Practices during development to ensure protection of water quality and potential adverse impacts to the shoreline environment and Elliott Bay during construction. More details on these BMPs and the project's consistency with these general development standards are contained in the application and a "Shoreline Master Program Development Standards Compliance" document dated Dec. 2015 submitted by the applicant and available in the project file. There are a number of mitigation measures that will be implemented to address the project's impacts on the aquatic environment as well as surrounding areas that address these general development standards are detailed in the application material, including the Biological Assessment and the FEIS. Further discussion of these mitigation measures can be found in the SEPA analysis and related conditions below in this decision.

Standards for UI Shoreline Environment and the underlying Industrial General zone.

The project will be located in the Urban Industrial Shoreline Environment. The existing cargo terminal use, which is not proposed to change with this project, is allowed in the UI Shoreline Environment per SMC 23.60A.482 and the underlying Industrial General zone.

The project has been reviewed by SDCI staff and found to be consistent with all applicable development standards in the SMP, such as height, lot coverage, and setbacks.

The applicant submitted an analysis of the project's consistency with applicable shoreline development standards, which is contained in a Shoreline Master Program Development Standards Compliance" document available in the project file.

4. If the development, shoreline modification, or use requires a special use approval, shoreline conditional use permit, or shoreline variance permit, the project meets the criteria for the same established in Sections 23.60A.032, 23.60A.034, or 23.60A.036, respectively.

The proposed project does not require a shoreline variance permit or special use approval, but does require a shoreline conditional use approval, which is analyzed below.

Analysis: Shoreline Conditional Use

The proposed submerged sheet pile wall to help stabilize the slope waterward of Ordinary High Water in the transition between this slope and the adjacent berthing area is an unlisted shoreline modification in SMC 23.60A.172 and therefore triggers a shoreline conditional use analysis, pursuant to SMC 23.60A.034.A.2. The applicant has submitted a shoreline conditional use criteria analysis dated May 27, 2015, that is available in the project file and supplements the analysis below. The Director may approve or approve with conditions a shoreline conditional use application if the proposed use or shoreline modification:

1. Complies with the criteria in WAC 173-27-160 and the Shoreline Policies in the Comprehensive Plan;

The Shoreline Policies encourage the transport of materials and cargo in the shoreline district via modes having the least environmental impact (SA P11) and support the retention and expansion

of existing conforming water-dependent and water-related businesses (SA P37) and identify and designate appropriate land adjacent to deep water for industrial and commercial uses that require such condition (SA P38). See responses to WAC 173-27-160 criteria below.

2. Complies with standards in Section 23.60A.030;

Complies. See discussion above.

3. Complies with all additional shoreline conditional use criteria in this Chapter 23.60A for the specific use or shoreline modification listed as a shoreline conditional use; and

Complies. No additional conditional use criteria are required for this modification than what are analyzed here.

4. Can achieve no net loss of ecological functions, unless the applicant obtains a variance from this requirement under subsection 23.60A.036.C.

The proposed sheet pile wall will occur at depths between -47 to -53 MLLW, which is deeper than juvenile salmonids feed while in the nearshore. There will be no conversion of shallow water habitat to deep water habitat associated with the construction of the wall. The disturbance to the benthic community at the construction location is expected to be short term. Short-term impacts of the construction will be addressed through Best Management Practices discussed in more detail in application, including Biological Assessment for the project.

WAC 173-27-160 Criteria Responses

(*1) Uses which are classified or set forth in the applicable master program as conditional uses may be authorized provided that the applicant demonstrates all of the following:*

a) That the proposed use is consistent with the policies of RCW 90.58.020 and the master program;

The proposal is consistent with RCW 90.58.20 and the master program, as addressed above.

b) That the proposed use will not interfere with the normal public use of public shorelines;

The proposed shoreline modification does not result in a change of use for the Terminal 5 facility and will not interfere with public use of this area. Direct public access to this area is already restricted due to safety and operational concerns for the Terminal 5 facility.

c) That the proposed use of the site and design of the project is compatible with other authorized uses within the area and with uses planned for the area under the comprehensive plan and shoreline master program;

The proposed shoreline modification is consistent with the location's cargo terminal use and the area's mix of industrial and commercial uses.

d*) That the proposed use will cause no significant adverse effects to the shoreline environment in which it is to be located; and*

The project as proposed will cause no significant adverse effect to the shoreline environment in which it is located. See discussion above and Biological Assessment submitted for project.

e) *That the public interest suffers no substantial detrimental effect.*

The public interest will be served by this shoreline modification measure that will help stabilize the submerged shoreline slope and improve the efficiency of loading and unloading of ships at the Terminal 5 facility, while protecting the aquatic environment through appropriate Best Management Practices during construction.

(2) In the granting of all conditional use permits, consideration shall be given to the cumulative impact of additional requests for like actions in the area. For example, if conditional use permits were granted for other developments in the area where similar circumstances exist, the total of the conditional uses shall also remain consistent with the policies of RCW 90.58.020 and shall not produce substantial adverse effects to the shoreline environment.

The Port of Seattle owns the only land capable of deep draft cargo vessels in Elliott Bay. For various reasons, no new locations are likely to be considered for development for this purpose beyond a few existing Port facilities. See analysis for this criteria provided by Port of Seattle for further explanation.

(3) Other uses which are not classified or set forth in the applicable master program may be authorized as conditional uses provided the applicant can demonstrate consistency with the requirements of this section and the requirements for conditional uses contained in the master program.

As provided herein the proposal meets the requirements of this section as well as the requirements for conditional uses in the master program.

(4) Uses which are specifically prohibited by the master program may not be authorized pursuant to either subsection (1) or (2) of this section.

Not applicable.

Recommendation – Shoreline Conditional Use

The Director has determined that the proposed shoreline modification meets the conditional use criteria in SMC 23.60A.034 and therefore recommends to Department of Ecology that the shoreline conditional use be approved.

Conclusion

SMC Section 23.60A.063 provides authority for conditioning of shoreline substantial development permits as necessary to carry out the spirit and purpose of and assure compliance with the Seattle Shoreline Code, Chapter 23.60A, and with RCW 90.58.020 (State policy and legislative findings). To be consistent with shoreline general development standards for protection of the aquatic environment (SMC 23.60A.152), the project will be required to employ Best Management Practices during construction and installation to protect the shoreline environment.

Thus, as conditioned below, the proposal is consistent with the criteria for a shoreline substantial development permit and may be approved.

DECISION - SHORELINE SUBSTANTIAL DEVELOPMENT

The Shoreline Substantial Development Permit is **CONDITIONALLY GRANTED** subject to the conditions listed at the end of this report.

ANALYSIS – STATE ENVIRONMENTAL POLICY ACT (SEPA)

Substantive SEPA

SDCI's SEPA review of the portion of the Terminal 5 project is limited to application of substantive authority and mitigation, as found in Seattle's Environmental Policies and Procedures (SMC 25.05.660). This is because the Port of Seattle, as lead agency for purposes of compliance with the SEPA, RCW Chapter 43.21C (SEPA) and WAC 197-11 (SEPA Rules, has already completed the threshold determination process, which resulted in a Determination of Significance, and publication of the subsequent Environmental Impact Statement (EIS).

The Port of Seattle has conducted an evaluation of the environmental consequences of the Terminal 5 project, including all project elements associated with this SSDP application. The Project has been subject to procedural and substantive SEPA through issuance of the following environmental documents:

- Terminal 5 Cargo Wharf Rehabilitation, Berth Deepening, And Improvements Final Environmental Impact Statement (FEIS), issued by Port of Seattle on October 18, 2016.

The substantive authority role allows the City to consider mitigation for impacts that were identified in the EIS for this project using the 'policies, plans, rules, or regulations" designated in the city's SEPA ordinance (SMC 25.05).

The SEPA Overview Policy (SMC 25.05.665) establishes the relationship among codes, policies, and environmental review. Specific policies for specific elements of the environment, certain neighborhood plans, and other policies explicitly referenced may serve as the basis for exercising substantive SEPA authority. The Overview Policy states in part:

> "[W]here City regulations have been adopted to address an environmental impact; it shall be presumed that such regulations are adequate to achieve sufficient mitigation" (subject to some limitations).

Under certain limitations/circumstances (SMC 25.05.665 D 1-7) additional mitigation can be considered. The information in the EIS documents, supplemental information provided by the applicant (plans, further project descriptions), and the experience of the City with review of similar projects form the basis for this analysis and decision.

Short-term Impacts

Construction activities could result in the following adverse impacts: construction dust and storm water runoff, erosion, emissions from construction machinery and vehicles, increase particulate levels, increased noise levels, occasional disruption of adjacent vehicular and pedestrian traffic, a small increase in traffic and parking impacts due to construction related vehicles, and increases

in greenhouse gas emissions. Several construction-related impacts are mitigated by existing City codes and ordinances applicable to the project such as: the Stormwater Code (SMC 22.800-808), the Grading Code (SMC 22.170), the Street Use Ordinance (SMC Title 15), the Seattle Building Code, and the Noise Control Ordinance (SMC 25.08). Puget Sound Clean Air Agency regulations require control of fugitive dust to protect air quality. In addition, federal and state regulations and permitting authority are effective to control short-term impacts on water and sediment quality.

Compliance with these applicable codes and ordinances will reduce or eliminate most of the short-term impacts to the environment. Some of these impacts are further discussed below.

Earth

Construction impacts for the project related to earth impacts are discussed in Chapter 3 of the FEIS and detailed technical reports were prepared to evaluate the Terminal 5 Improvement Project impacts to earth and geology at the site and presented in Volume II, Appendix 1, Appendix J, and Appendix K. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include short-term slope stability issues during berth dredging; short-term soil erosion from grading and earthwork activities; potential for spills of hazardous substances; excavation and fill for new substation may cause potential for erosion, and potential for turbidity during dredge activities in the West Waterway.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include a SWPPP and BMPs to control stormwater runoff/erosion at the upland site; conditions in construction stormwater permits; SPCCP used for hazardous materials storage, handling, and cleanup; BMPs to minimize turbidity generation during dredging; compliance with Surface Water Quality Standards for Washington (WAC 173-201A); conditions specified in the Water Quality Certification that manage turbidity during in water activities; and slope stabilization measures to be followed as recommended by geo-tech analysis. No additional mitigation pursuant to SEPA is warranted.

Air Quality and Greenhouse Gas Emissions

Construction impacts related to air quality for the project are discussed in Chapter 3 of the FEIS and a technical report provide in Volume II, Appendix A. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that construction could cause short-term increases in local concentrations of dust and diesel-related air contaminants and possibly odors and GHG emissions from construction activities were quantified during General Conformity review. GHG emissions were less than 10,000 tonnes/year. The Department of Ecology considers emissions under 25,000 tonnes/year not significant.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include that construction activities would comply with local, state, and federal air quality regulations requiring minimization of construction-related emissions; implementation of BMPs to reduce air quality impacts during construction identified in Chapter 3, Section 3.2, of the FEIS; and require contractors to prohibit Tier 0 and Tier 1 off-road equipment to have on-road fleet meet 2007 EPA engine standards or better, and to enforce an idle reduction plan. No additional mitigation pursuant to SEPA is warranted.

Water

Construction impacts related to water quality for the project are discussed in Chapter 3 of the FEIS and detailed technical reports or memos prepared to evaluate this project as presented in Volume II, Appendix D, Appendix J, and Appendix K. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include dewatering effluent from excavations extending into groundwater, stormwater runoff during construction activities, vessel activity, and releases of debris or sediments into the West Waterway during dredging and wharf rehabilitation activities; removal of asphalt for pile installation on the uplands could lead to hazardous materials spills entering the soil and groundwater; temporary increases in turbidity caused by suspended sediments during pile removal and pile driving activities; dredging and pile driving could lead to localized impacts on water quality from turbidity.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include adherence to the Construction Stormwater General permit and implementing erosion control and stormwater protection BMPs; management of toxic and hazardous materials consistent with rules and regulations; turbidity impacts from on-land and dredging activity monitored and minimized by using BMPs; design features and BMPs to avoid or minimize impacts will be used during construction. Those required by agency standards and permits would be assumed to be part of the proposal; if dewatering is required, the control and management would be implemented in accordance with regulatory requirements; scour monitoring program would be implemented to observe and track scour trends; vessels would be required to follow all over-water work BMPs; and disposal of all dredged sediments would be consistent with Dredge Material Management Program (DMMP) and other jurisdictional agencies. No additional mitigation pursuant to SEPA is warranted.

Plants and Animals

Construction impacts related to plants and animals for the project are discussed in Chapter 3 of the FEIS and the Biological Assessment in Volume II, Appendix E of the FEIS. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include potential negative effects on migratory and resident fish and wildlife from in-water pile driving noise, dredging, and presence of water-based construction equipment; positive effects may include decrease in shading, removal of creosote-treated wood fender piles, and increased algae and invertebrate production, as well as reduce migratory impediments to salmon during the three-season construction period; construction activities would be limited and include only minor alterations and routine maintenance and repair work and are not expected to result in adverse impacts to plants and animals.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include that all in-water work would be limited to periods determined appropriate by participating state and federal agencies; water quality monitoring plan would be developed and implemented; all equipment would be inspected daily; SPCC plan would be developed and used for the duration of the project; and waste materials would not be allowed to enter the West Waterway. No additional mitigation pursuant to SEPA is warranted.

Environmental Health

Construction impacts related to environmental health for the project are discussed in Chapter 3 of the FEIS. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include potential to encounter, expose, or excavate buried contamination during construction; potential increase in leaching of contaminants; excavation of utilities may require dewatering and affect receiving waters; and some groundwater monitoring wells may need to modified or become damaged during construction; disposal of materials requires characterization; potential for release of hazardous materials to the environment.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include implement appropriate mitigation measures if cleanup areas are impacted during construction; demolition of structures would require surveys; site specific work plans that address management in known contaminated areas; construction design would identify locations of know soil and groundwater contamination and provide specifications to guide management of contaminated soil and groundwater. No additional mitigation pursuant to SEPA is warranted

Noise

Construction impacts related to noise for the project are discussed in Chapter 3 of the FEIS and a Noise Technical Report in Volume II, Appendix B of the FEIS. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that pile driving may intrusive and potentially annoying at times. Pile driving sound levels are expected to fully comply with noise limits applied by the City of Seattle to these types of activities.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the Noise Technical Reports. These mitigation measures are summarized in Table 1.3-1 and include typical construction activities would be limited to between 7 a.m. and 10 p.m. weekdays and between 9 a.m. and 10 p.m. weekdays and legal holidays; impact pile driving would be limited to between 8 a.m. and 5 p.m. weekdays and between 9 a.m. and 5 p.m. weekends and holidays; noise from all on-site construction activities would be subject to noise limits established by the City of Seattle; and the Port of Seattle will develop a Construction Noise Management Plan prior to start of construction in consultation with the Seattle Department of Construction and Inspections. No additional mitigation pursuant to SEPA is warranted.

Historic and Cultural Resources

Construction impacts related to historic and cultural resources for the project are discussed in Chapter 3 of the FEIS. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that construction has the potential to interfere with undiscovered resources; however, the possibility of historic or cultural resources being present is low because Terminal 5 consists of filled upland areas; water-based equipment used for piling construction and dredging activities could potentially disrupt Treaty fishing access. The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include construction would follow the Seattle Municipal Code for Standards for Archaeological and Historic Resources. If archaeological resources are uncovered during construction, work would be stopped and the City of Seattle, affected tribes, and the Washington State Department of

Archaeology and Historic Preservation would be notified; piling and dredging activities would be coordinated with Treaty fishing periods to minimize potential disruption of Treaty-protected fishing areas. No additional mitigation pursuant to SEPA is warranted.

Transportation

Construction impacts related to transportation for the project are discussed in Chapter 3 of the FEIS and detailed technical analyses presented in Volume II, Appendix C and F of the FEIS, including a Transportation Technical Report. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that construction activities would generate truck and employee trips, but less than the no action alternative; and potential detours required during construction. The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the technical reports. These mitigation measures are summarized in Table 1.3-1 and include BMPs for traffic control and safety during construction and adherence to SDOT permits and requirements including coordination with other projects. As increased traffic from construction workers and trucks is anticipated during project construction. To mitigate impacts from this additional traffic, prior to commencing construction the Port and its construction contractor shall submit a Construction Management Plan for review and approval by SDOT. This plan shall include, but not be limited to, the following elements:

1. An identification of truck haul routes;
2. A traffic control plan identifying alternative accommodations for vehicles, pedestrians, bicycles, and transit stops if any traffic lane, pedestrian walkway, bicycle lane, or transit stop is closed for construction;
3. An acknowledgement that the Port and/or NWSA staff shall participate in applicable SDOT construction coordination meetings for projects in Sodo and/or West Seattle; and
4. To ensure that potential cumulative impacts of peak truck loads can be appropriately considered, in the three months prior to any construction that is anticipated to generate more than 20 truck trips per hour (10 truckloads) and for the duration of construction that would generate truck traffic at or above that level, the applicant shall submit a monthly project schedule and construction information to SDOT's Project Coordination Office.

See condition #7 below. No additional mitigation pursuant to SEPA is warranted.

Utilities

Construction impacts related to utilities for the project are discussed in Chapter 3 of the FEIS. Potential construction-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include utility upgrades would be constructed or installed to meet anticipated site demand and to comply with all applicable local, state, and federal code requirements. Implementation of any improvements would be coordinated with, and approved by, the applicable utility provider; lighting associated with exterior construction activities would be controlled by City of Seattle regulations, potentially limiting the hours of construction, and thereby limiting construction lighting during nighttime hours; upgrade to existing electrical power supply to Terminal 5 by Seattle City Light; water and sewer distribution system would be removed and replaced. The FEIS identified mitigation measures to address these impacts in Chapter 3. These mitigation measures are summarized in Table 1.3-1 and include that stormwater improvements would meet state and City of Seattle stormwater regulations; mitigation measures for utility construction impacts would include those described for general construction activities on the terminal site (see Chapter 2, Section 2.3.2). No additional mitigation pursuant to SEPA is warranted.

Long Term Impacts

Long-term or use-related impacts are also anticipated as a result of approval of this proposal including: greenhouse gas emissions; parking; possible increased traffic in this area. Compliance with applicable codes and ordinances is achieve sufficient mitigation of most long-term impacts and no further conditioning is warranted. Some of these impacts are further analyzed below:

Earth

Operational impacts for the project related to earth impacts are discussed in Chapter 3 of the FEIS and detailed technical reports were prepared to evaluate the Terminal 5 Improvement Project impacts to earth and geology at the site and presented in Volume II, Appendix 1, Appendix J, and Appendix K. Potential operation-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include risk of soil liquefaction, seismic lateral spreading, slope failure and ground shaking causing injury/death and structural damage during earthquakes and long-term stability risks.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include design measures for all new structures will be consistent with state and federal regulations, seismic and building code, and standard construction methods to avoid and minimize earthquake impacts; per established agreements with the City, rehabilitation of the existing wharf and slope will be designed to meet or exceed performance of the existing system; for new structures, measures such as foundation tie beams and grade beams to minimize ground movements and/or movements of structures as a result of seismically induced settlement and lateral spreading should be incorporated; slope stabilization measures including ground improvements, such as pinch piles, stone columns, drilled shafts, or other methods; and use of pile-supported structures where necessary for new designs. No additional mitigation pursuant to SEPA is warranted.

Air Quality and Greenhouse Gas Emissions

Operational impacts related to air quality for the project are discussed in Chapter 3 of the FEIS and a technical report provide in Volume II, Appendix A. Potential operation-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that model-predicted concentrations of criteria air pollutants, including shorepower capability, indicate that emissions do not exceed any National Ambient Air Quality standards (NAAQSs); no significant impacts are expected with health-protective NAAQS, air quality standards; facility operations would result in emission of GHG's, but no impact thresholds have been established; given the world-wide nature of climate change issues and the relatively small contribution from this facility, the project would not result in significant impacts from GHGs and would reduce world-wide emissions of GHGs due to improved efficiencies in commodity deliveries compared with existing transport systems and due to improving emission controls in future years.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include measures intended to reduce operational emissions (including GHG Emissions) including: reduction of at-berth emissions from ocean-going vessels through use of shorepower. The NWSA, the Port, and the terminal operator will prepare a shorepower utilization plan to meeting

projected shorepower utilization levels; through the Northwest Ports Clean Air Strategy, the NWSA has adopted a plan to require trucks entering container terminals to meet model-year 2007 EPA emissions standards in 2018; development of facility will utilize an electrical power supplier that obtains >90% of their power from non-fossil fuel sources, reducing greenhouse gas emissions for terminal operations; operational management plans to reduce truck queing and wait times will reduce idling of diesel drayage vehicles; and Port will analyze Terminal 5 air quality performance following resumption of container cargo operations to ensure air quality evaluations included in the EIS are consistent with operations. Data and analysis will be in consultation with Puget Sound Air Quality Agency (PSCAA). With respect to public comments regarding need for additional air quality monitoring station for Terminal 5, please see letter from PSCAA (dated October 2016 in electronic file for project) in which the agency stated that an additional monitoring station was not warranted.

Pursuant to SMC 25.05.675, "any project proposal which has a substantial adverse effect on air quality, the decisionmaker shall, in consultation with appropriate agencies with expertise, assess the probable effect of the impact and the need for mitigating measures. "Nonattainment areas" identified by the Puget Sound Air Pollution Control Agency shall be given special consideration. Subject to the Overview Policy set forth in SMC 25.05.665, if the decisionmaker makes a written finding that the applicable federal, state and/or regional regulations did not anticipate or are inadequate to address the particular impact(s) of the project, the decisionmaker may condition or deny the proposal to mitigate its adverse impacts."

In consultation with SDCI, Puget Sound Clean Air Agency found the following: that implementation of the Terminal 5 expansion will lead to air pollution emissions including fine particle pollution ($PM_{2.5}$) and diesel particulate matter (DPM) from diesel exhaust, a subset of PM $_{2.5}$. These pollutants are associated with adverse health effects. This is particularly true for sensitive populations such as children, the elderly, and people with pre-existing health conditions. The Terminal 5 expansion and resulting emissions will occur near highly impacted communities in the Duwamish Valley that currently face: the highest chronic levels of harmful $PM_{2.5}$ and diesel pollution across the Puget Sound region, elevated rates of adverse health outcomes such as asthma, chronic obstructive pulmonary disease (COPD), and cardiac illness, and socioeconomic barriers.

Decades of health studies reinforce that exposures to $PM_{2.5}$ cause a number of poor health outcomes. Long-term fine particle exposure causes cardiovascular disease, heart attacks, respiratory effects (asthma and respiratory symptoms, reduced lung function), and increased mortality rates (both cardiovascular and respiratory related).

Health studies show health adverse health impacts in populations at levels below EPA's national ambient air quality standards for $PM_{2.5}$. The most recent EPA assessments of health impacts from air pollution apply a health impact function for fine particle pollution without a threshold level. These assessments show health benefits in populations where fine particle pollution is reduced, even at levels below EPA's national ambient air quality standards.

Diesel exhaust and DPM are known to cause cancer. Diesel exhaust is rated by the World Health Organization as a group 1 carcinogen. Exposure to diesel exhaust leads to additional potential cancer risk, as demonstrated by previous study in the Duwamish Valley. Exposure to diesel exhaust can also contribute to reproductive and developmental health effects. EPA does not have national ambient air quality standards for diesel exhaust or DPM.

In order to address the lack of adequate existing regulations to address these potential operational air quality impacts and pursuant to authority under SMC 25.05.675, the Port of Seattle will be required to establish an air quality management program consistent with objectives summarized below through a Memorandum of Understanding between the Port of Seattle and Puget Sound Clean Air Agency.

Outline/Objectives for Air Quality Management Memorandum of Understanding:

1. Each year after certificate of occupancy is issued, the Port will report for Terminal 5:
    a) cargo throughput in TEUs;
    b) total hours of vessel hoteling use;
    c) total hours of vessels hoteling with and without shore power;
    d) summary of CHE inventory, including % of CHE meeting Tier 4i emission standards or equivalent;
    e) cargo handling equipment use hours, summarized by tier; and
    f) summary of fuel efficiency planning for CHE and trucks calling at terminal.

    Information shall be collected and reported annually by March 15 for the preceding calendar year, posted on Port's internet site, and submitted to PSCAA and SDCI.

2. Annual PM2.5 emissions from the same scope of T5 operations for which emissions were estimated in the final environmental impact statement (FEIS) ("annual PM2.5 emissions") will not exceed the amounts shown in Table 1.

TABLE 1	Year of Certificate of Occupancy + The 9 Following Years	10th Through 19th Following Years	20th through 25th Years
Annual PM2.5 Emissions	6.0 tons/year	5.9 tons/year	4.0 tons/year

For any given year, the Port may demonstrate compliance with these emissions levels using any of four methods, at the Port's discretion. Each year by April 15 of the following year, the Port must inform PSCAA and the City which method it will use.

a) If the values reported by March 15 under condition 1 (a) through (d) meet the maximum and minimum values in Table 2, PSCAA in consultation with SDCI will deem annual PM2.5 emissions compliant with condition 2.

TABLE 2	Year of Cert. of Occupancy through Year +9	Years +10 through +19	20th through 25th Years	Any Year
Maximum cargo throughput (M TEU)	0.64	1.3	1.3	Approved values under 2 (b)
Minimum percent of vessel hoteling hours with shore power	30%	50%	70%	
Minimum percent of Cargo Handling Equipment (top picks + RTG + yard tractors) meeting Tier 4i or better	89.8%	97.6%	99.5%	

b) Alternately, the PSCAA and SDCI may approve modifications to the maximum and minimum values in Table 2 proposed by the Port by April 15, that PSCAA and the City determine to deliver equivalent emissions to Table 2. If the values reported by March 15 under condition 1 (a) through (d) meet the maximum and minimum values in the approved modified Table, PSCAA in consultation with SDCI will deem annual PM2.5 emissions compliant with condition 2.

c) Alternately, the Port may conduct an emissions inventory for the same scope of T5 operations for which emissions were estimated in the FEIS, using the same methods as for the FEIS or using methods pre-approved by the PSCAA and the City, by June 30 of the following year. Emissions inventory results will be reported to PSCAA and the City to compare to the amounts in Table 1. (In this method Table 2 will have no bearing.)

d) Alternately, the PSCAA and SDCIU may approve any alternative method and timeline proposed by the Port by April 15.

3. If annual PM2.5 emissions exceed the amounts shown in Table 1, or the Port is unable to demonstrate compliance with condition 2, the Port will design and implement a reasonably practicable program in consultation with the PSCAA to reduce PM2.5 emissions to levels at or below the amounts shown in Table 1. The Port will design and begin program implementation by September 15th.

4. The Port will install shore power electrical equipment accommodating two vessels at the rehabilitated Terminal 5 cargo wharf. Commissioning of installed shore power equipment, necessary to ensure adequate, safe electrical service, will require up to one year from the date of resumption of Terminal 5 container cargo operations to achieve full operational adequacy.

5. The Port in consultation with PSCAA will design a program to influence container cargo vessel environmental performance, to maximize use of shore power at Terminal 5 or identify opportunities to provide equivalent emissions while vessels are docked at-berth at Terminal 5. The Port will implement the Program at Certificate of Occupancy.

See conditions #6 and # 20 below.

Water

Operational impacts related to water quality for the project are discussed in Chapter 3 of the FEIS and detailed technical reports or memos prepared to evaluate this project as presented in Volume II, Appendix D, Appendix J, and Appendix K. Potential operation-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include potential "propwash" scour, deep sub-tidal aquatic are due to tug and vessel service; vessel maneuvering may suspend sub-tidal sediments, effecting short-term, on-site, water column turbidity; and any container cargo operation or cargo transportation facility is required to meet Clean Water Act rules. Cargo terminals are required to be covered under the Industrial Stormwater General Permit. The Washington State ISGP has benchmarks for effluent leaving the site that are some of the strictest in the nation.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and include that management of toxic and hazardous substances used during operations would be consistent with rules and regulations; and prior to reestablishing container cargo terminal operations, the

facility would be reevaluated for the appropriate Level 3 Corrective Actions, requiring a new engineering report. The new engineering report would define treatment options and detailed construction plans for Ecology's review and approval. Upon approval, the stormwater system would be constructed prior to beginning of operations. No additional mitigation pursuant to SEPA is warranted

Plants and Animals

Operational impacts related to plants and animals for the project are discussed in Chapter 3 of the FEIS and the Biological Assessment in Volume II, Appendix E of the FEIS. Potential operation-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include lighting levels could impact plants and animals; and completed project would include modest reduction in area of over-water structure.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the relevant technical reports. These mitigation measures are summarized in Table 1.3-1 and the Biological Assessment and include that light fixtures would use directional shields and internal louvers to minimize light reflection on the waterway. Conditions of Hydraulic Project Approval from WDFW and US Army Corps permit for this project are also required to be implemented by applicant and shall address long-term impacts to plants and animals. See condition #9 below. No additional mitigation pursuant to SEPA is warranted.

Noise

Operational impacts related to noise for the project are discussed in Chapter 3 of the FEIS and a Noise Technical Report in Volume II, Appendix B of the FEIS. Potential operation-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that noise analysis and evaluation calculations indicate potential nighttime noise exceedances from cargo handling equipment and truck operations for future, more intense cargo activity; pure tone safety alarms on mobile cargo handling equipment, although not regulated, are an annoyance noise; train horn noise required for public and private crossings and presence of human activity, although not regulated, are an annoyance noise; and on-vessel power generators are perceived as annoyance noise.

The FEIS identified mitigation measures to address these impacts in Chapter 3 as well as the Noise Technical Reports. These mitigation measures are summarized in Table 1.3-1 and include establishment of an Operational Noise Management Plan/Program. Use of a noise management program would provide objective noise monitoring data and a mechanism to identify reasonable and feasible best practices to ensure compliance with applicable noise limits. The noise management program would include measurement, reporting, and compliance steps to meet applicable Seattle City noise limits. The program would be developed in consultation with the Seattle Department of Construction and Inspections. See Volume II, Appendix M, Operational Noise Management Plan. Annoyance Control Measures include: 1) Ensure that all mobile cargo handling equipment uses ambient-sensing broadband safety alarms; 2) Addition of safety measures to the rail corridor between the bridge across the Duwamish and the terminal. Adding safety measures to the rail use area, including perimeter fencing and installation of crossing gates would reduce the need for locomotive horns. These measures could also be used by the City of Seattle as a basis to begin the process of requesting this section of rail lines be converted into a railroad quiet zone; 3) Reduction in noise from on vessel power generators due to the provision of shorepower for moored vessels.

The Seattle noise ordinance identifies a number of noise sources or activities that are exempt from the noise limits. The following sources are among those specifically exempted:
Sounds created by motor vehicles are exempt from the exterior sound level limits except that sounds created by any motor vehicle operated off highways shall be subject to the exterior sound level limits when the sounds are received with a residential district of the city (SMC 25.08.480)
Sounds created by warning devices or alarms (such as back-up alarms on vehicles) not operated continuously for more than 30 minutes per incident - (SMC 25.08.530).

In addition, sounds from the operation of railroad engaged in interstate commerce are exempt from local noise control rules by virtue of federal preemption of this issue.

Terminal operations will comply with the applicable noise limits included in the Seattle noise ordinance (Seattle Municipal Code [SMC] Chapter 25.08, 410; -420; and -425).

Additional conditions (see conditions below) that apply to noise sources specifically exempt from limits in the Municipal Code have been identified by the Port in consultation with SDCI as means to reduce annoyance to neighboring communities.

Noise modeling of nighttime terminal operations, particularly with a throughput threshold of 1.3 million TEUs or more, did not demonstrate that the facility would comply with the nighttime noise limit of 50 dBA. The noise modeling was conducted assuming peak equipment usage based on general assumptions of terminal operations, and it is unclear at what point in the operations, if ever, this peak equipment usage would occur.

Furthermore, Port of Seattle terminals are often operated by a private terminal management company, and the future operator of T-5 has not yet been determined. The operator makes the ultimate decisions about specific equipment types and needs, and the actual equipment slated for the site may be substantively different than assessed in the noise modeling for the FEIS.

Because the FEIS has identified a potential risk that nighttime operations could exceed the noise limits, additional noise analysis will be necessary once the terminal operator has been selected and has developed an operational plan. See condition #17 below.

<u>Noise from backup alarms:</u>

Past operations at T-5 have elicited numerous noise complaints from residences about equipment backup alarms, especially during nighttime operations. Fixed sound level, pure-tone backup alarms were the primary cause of complaints. Alternate types of alarms (e.g., ambient-sensing, broadband) are available that tend to reduce the annoyance to neighboring communities. These alarms are in common usage in the region, are relatively inexpensive, and have been shown to be effective. Even though, sounds created by warning devices or alarms (such as back-up alarms on vehicles) not operated continuously for more than 30 minutes per incident - (SMC 25.08.530)- are exempt from overall noise limits, the Port is proposing ambient-sensing, broadband backup alarms to reduce annoyance noise. See condition #24 below.

<u>Noise generated by train horns:</u>

Noise from trains, in particular locomotive horns sounding at rail crossings, have been identified by residents in the project vicinity as a source of concern. Although the City and other local jurisdictions are preempted by federal regulations from limiting locomotive horn noise, the Port

has identified a means to reduce annoyance noise from train warning horns in the SW Spokane Street and West Marginal Way SW rail corridor. Per the FEIS, POS will improve the safe operations of trains in the corridor by installing chain link fencing, crossing gates, and wayside horns at suitable grade crossings in all four quadrants of each driveway, thereby reducing the need to sound audible alarms. Although this effort is expected to reduce locomotive horn soundings from what might otherwise occur, it would not eliminate them. Train engineers would still have the discretion to use warning horns at any time. The sounds from the operation of railroad engaged in interstate commerce are exempt from local noise control rules by virtue of federal preemption of this issue.

In order to further address train noise, the Port is committed to establishing a quiet zone through a Memorandum of Understanding (MOU) with SDOT compliant with Federal Railroad Administration regulations. The quiet zone will cover the track between the Terminal 5 gate and the train bridge over the West waterway of the Duwamish. The Port will provide the funding to complete the scope of work defined in the MOU and the infrastructure needed to establish the quiet zone. The technical analysis and agreement with stakeholders will be completed and submitted to BNSF for engineering and construction prior to occupancy of the terminal by a new tenant following completion of wharf rehabilitation project. See conditions #5 and #19 below.

Low frequency ship noise while hoteling at T-5:

Low frequency noise generated by diesel engines/generators from ships hoteling while at berth has been identified by residents as a concern. The engines/generators are operated to provide power to ship facilities. Past activity at T-5 has resulted in complaints of low frequency noise when specific ships have called. Some measurements taken as part of the noise analysis did not detect excessive low frequency noise, but literature review suggests that some vessels emit more low frequency noise when compared to others.

City of Seattle has no codified rules identifying low frequency noise levels. It is expected that any objective standard for low frequency noise would use the "C" scale. One possibility is to use the 50 dBA nighttime standard and add 15 dB to get a "C" scale objective standard. The resulting noise level for nighttime operation would be 65 dBC at residentially zoned properties. Alternatively, excessive low frequency noise could be quantified by a measured dBC – dBA level greater than 15. The "C" scale is used in Director's Rule 12-2011.

Vessels with low frequency noise levels need to be identified in order to implement adaptive responses to these vessels. The Port will establish a complaint hotline to accept complaints of excessive noise. The phone number for hotline shall be posted at the Port's website and a visible location at the site. If the complaint identifies specific ships of concern that emit low frequency noise, noise monitoring will be conducted to assess if a low frequency sound levels exceeding agreed upon limits have been exceeded. The low frequency sound levels considered excessive will be identified in the ONMP after review and approval by the City. Adaptive responses with a time commitment to improvement will be made in concert with DCI noise enforcement division. One option to reduce this source of noise is the use of shore power in lieu of onboard engines/generators. Shore power will be installed at T-5 and will provide plug- in capability for two berths available at occupancy. The Port is proposing to support the use of shore power by establishing a Shore Power Utilization Plan that encourages vessels with shore power capability to call at the Port and to plug in while at berth. This plan will reduce the overall number of ships generating their own power while at berth, reducing noise emissions as well as air emissions.

See condition #6 and #20 below regarding MOU for Air Quality Management Program.

Aesthetics/Light and Glare

Operational impacts related to aesthetics and light and glare for the project are discussed in Chapter 3 of the FEIS. Potential operation-related impacts identified in the FEIS and summarized in Table 1.3-1 of the FEIS include that the proposed project includes use of improved lighting features; the aesthetics are not expected to change significantly as a result of Alternative 2; and current views of Terminal 5 are dominated by industrial facilities, operations and activities. Views from public viewpoints are not expected to be affected by Alternative 2.

The FEIS identified mitigation measures to address these impacts in Chapter 3. These mitigation measures are summarized in Table 1.3-1 and include new lighting would be designed with the latest lighting standards and best practices to minimize glare and confine the lighting using directional lighting and shields. It is expected that new operational lighting will not exceed level of existing lighting. No additional mitigation pursuant to SEPA is warranted.

Transportation

Operational impacts related to transportation for the project are discussed in Chapter 3 of the FEIS and detailed technical analyses presented in Volume II, Appendix C and F of the FEIS, including a Transportation Technical Report.

These documents indicate that the increase in throughput capacity of the proposed action would increase both truck and rail trips from Terminal 5. On a Design Day (reflecting higher-than-typical volumes), the project would generate 3,560 truck trips. The No Action alternative, reflecting shipping throughput using existing terminal facilities, would generate 2,480 daily truck trips. The proposed project therefore would result in an increase of 1,080 Design Day truck trips. 130 additional truck trips are forecast during the Design Day AM peak hour, and 31 additional trips during the PM peak hour.

Employee trips also would increase with the increased operating capacity at the terminal. Based on estimated staffing levels, the highest number of employee trips would occur in the PM peak hour, when day shift employees leave the terminal and night shift employees arrive. The total projected Design Day PM peak hour vehicle trip volume for employees is 303, which represents an increase of 111 employee trips over those estimated under No Action conditions. The transportation analysis also estimated a small increase in employee transit and walk/bike trips. In addition to the truck and employee vehicle volume increases noted above, the project's increased shipping activity would also result in an increase in train trips. Under No Action conditions, Terminal 5 activities would generate about 9 trains in a peak week. The proposed project is expected to generate up to 18 trains in a peak week.

SW Spokane Street/W Marginal Way SW/Chelan Avenue SW/Delridge Way SW

Traffic generated by the project is expected to add up to about 20 second of average delay per vehicle to the SW Spokane Street/W Marginal Way SW/Chelan Avenue SW/Delridge Way SW intersection in the year 2040. Increased train traffic associated with the terminal could block the north leg of this five-legged intersection for much of the day. Eliminating this leg of the intersection would dramatically improve traffic operations by eliminating one phase of the sequential-phase signal operation and allowing some movements to operate concurrently.

Closing the north leg of the intersection also would eliminate the at-grade railroad crossing and the signal pre-emption associated with train movements adjacent to the intersection. With implementation of this measure, all traffic to and from Terminal 5, as well as local businesses at Terminals 7A, 7B, 7C, and 8, would be directed to use the Terminal 5 Access Bridge, which would operate at LOS C or better during the peak hour with diverted traffic.

The Port and SDOT shall establish a Memorandum of Understanding (MOU) to plan, design and fund improvements that will permanently close surface W Marginal Way SW north of SW Spokane St, across the Terminal 5 lead railroad tracks to all vehicular traffic. The threshold for the closure will be reached when the number of lifts at the Terminal 5 On-Dock Intermodal Yard exceeds 245,000 lifts in a 12-month period (equivalent to 426,300 intermodal TEUs.) The MOU will define the scope of work required to design and implement the road closure. The Port shall be responsible for funding implementation measures associated with the street closure, following approval by SDOT of the design changes and infrastructure needed to safely close the leg.

Improvements may include:

- Retaining non-motorized access with improved safety features and federally-mandated upgrades
- Striping changes to adjust channelization on all approaches
- Signal pre-emption protocols at the intersection
- Signal equipment and phasing protocols
- Vehicular barricades at the railroad crossing
- Signage changes appropriate to updated intersection configuration and Terminals 5, 7A, 7B, and 7C
- Maintaining and/or upgrading communication links with RR Bungalow and City Traffic Operations Center (TOC)

See condition #2 below.

Local Access Routes

In addition to adding delay to the SW Spokane Street/W Marginal Way SW/Chelan Avenue SW/Delridge Way SW intersection noted above, increasing train movements will block or add delay to other truck access points. To mitigate this impact, the Port shall install or refresh striping and signage on the surface access route adjacent to and connecting Terminal 7 to West Marginal Way SW under the West Seattle Freeway. This route provides at grade alternate access to industrial properties when train movements block other truck access points. The Port shall submit plans in coordination with adjacent businesses for any signage or striping changes in the public right-of-way to SDOT for review and approval. Following approval of the plans, the Port will implement striping and signage improvements prior to occupancy by a tenant.

See condition #10 below.

Non-motorized Access

As noted above, the project is expected to generate few additional transit or walk/bike trips. However, the potential closure of W Marginal Way SW at the railroad tracks would make it more difficult for employees to walk between the terminal and bus stops located along SW

Spokane Street, as well as other destinations. To reduce this impact, when surface West Marginal Way is closed to vehicular traffic north of SW Spokane Street, the Port shall retain and upgrade the non-motorized (pedestrian and bicycle) crossing of the railroad tracks at that location. The intent is to provide a safe crossing consistent with rail line quiet zone requirements as approved by SDOT and BNSF. The Port shall also install a pedestrian pathway extending southeast from the northeast corner of the SW Spokane Street/W Marginal Way SW/Chelan Avenue SW/Delridge Way SW intersection and the private crossing to the east per SDOT specifications. The pathway will be located between West Marginal Way right-of-way and the south margin of the rail lines. The design of the pathway will be approved by SDOT prior to occupany by a tenant for Terminal 5 and implementation will occur when the north leg of the five-way intersection is closed.

See condition #11 below

Terminal 5 Access Bridge Improvements

To facilitate movements to Terminal 5 and adjacent sites given the potential closure of the north leg of the SW Spokane Street/W Marginal Way SW/Chelan Avenue SW/Delridge Way SW intersection, the Port will complete an analysis, including a bridge load rating, of the existing Terminal 5 access bridge to determine whether the bridge can be re-channelized from a two-lane cross section to a three-lane cross section. The load rating for the access bridge must be stamped by a registered engineer in the State of Washington, and performed in accordance with the June 2016 M 23-50 WSDOT Bridge Design Manual Chapter 13 (BDM) and AASHTO Manual for Bridge Evaluation, 2nd edition with up to 2016 Interims (MBE) and FHWA Memorandum regarding Load Rating of Specialized Hauling Vehicles, dated Nov 15, 2013. The Load Resistance Factor Rating method as outlined in the BDM shall be used.

The intent of the rechannelization would be to accommodate Terminal 5 truck service as well as emergency access and heavy vehicle movement to industrial sites adjacent to Terminal 5, and north and east of rail lines serving the terminal and the West Seattle yard. The analysis will specify lane dimensions, truck circulation and queue capacity for all lanes. The Port will submit the analysis to SDOT for review and approval of the re-channelization changes should the study indicate that bridge could support three lanes of traffic. Following SDOT approval, the Port will implement overpass/entrance ramp re-striping and associated traffic circulation changes to achieve the three-lane cross section.

If the Port, SDOT and/or SFD determine that the existing bridge structure is insufficient to provide the three-lane cross section to accommodate Terminal 5 truck service as well as emergency access and heavy vehicle access to industrial sites adjacent to Terminal 5, the Port will provide alternate truck access to these sites. The revised access will be equivalent to the mitigation provided by the three-lane cross section. The equivalent measures will be reviewed and approved by SDOT and SFD, and will be implemented prior to occupancy of Terminal 5 bby a tenant.

See condition #3 and #12 below.

Rail Delay Notification for Local Businesses

Given expected increases in train trips, the Port and/or Terminal Operator will implement a system to notify businesses located north of the Terminal 5 lead tracks (including businesses at

Terminal 7A, 7B, 7C, and Terminal 5) in advance of train blockages expected to last longer than 30 minutes. This notification could be by e-mail, text, or other electronic media.

See condition #22 below.

Gate Queue Management Plan

Gate queuing is expected to increase with the proposed project. Queuing analysis identified that the pre-check gate is the constraint in the system. Currently the pre-check gate facility is located about 1,900 feet from SW Spokane Street, a distance that can accommodate about 24 trucks. A single-lane gate with one security guard could accommodate up to about 180 trucks per hour before the truck queue would extend to SW Spokane Street. Providing additional gates and additional security guards would increase the truck queue capacity.

To reduce queue impacts, the Port shall prepare a *Gate Queue Management Plan* (GQMP) that defines operational and physical infrastructure design improvements designed to avoid Terminal 5-related truck queuing on City-owned rights-of-way or preventing Spokane Street Swing Bridge operations. The plan shall define monitoring requirements needed to achieve this goal and identify operational responses if queueing onto city rights-of-way does occur. The plan will be reviewed and approved by SDOT prior to issuance of the MUP. Implementation of plan elements will occur prior to occupancy of Terminal 5 by a tenant and monitoring will occur for the life of the project.

The following gate improvements shall be included in the Gate Queue Management Plan:

1. Two inbound pre-check lanes entering Terminal 5, with a minimum storage length for two trucks (150 feet) in each lane between the checkpoint and 26th Avenue SW (the road at the west end of the Terminal 5 Access Bridge).
2. A single security booth with foot access to each of the inbound pre-check lanes.

To verify that the Gate Queue Management Plan is successful in avoiding Terminal 5-related truck queuing on City-owned rights-of-way or preventing Spokane Street Swing Bridge operations, the Port will prepare an Annual Monitoring Report and submit it to the City of Seattle by January 31 of each calendar year. The report shall include information about the prior year's terminal operations. At a minimum, the report shall document the following:

A. Terminal truck (number of trucks and TEUs) throughput per month for the calendar year;
B. Intermodal rail traffic (number of lifts and TEUs) by month for the calendar year;
C. Number of trains per day and time of day with associated TEUs for both October and November (or for the two peak months of the year);
D. Inbound and outbound truck traffic through the terminal gate by day and hour for both October and November (or for the two peak months of the year); and
E. Truck queuing metrics as defined in the executed *Gate Queue Management Plan.*

See conditions #5, #16 and #21 below.

Driver Information

To further the goals of the Gate Queue Management Plan, the Port will connect Terminal 5 to the NWSA's *Gate Wait Time Awareness System* or a similar system, to provide real-time information to truck drivers and dispatchers about the wait time at the terminal gate and turn time between entering and exiting the terminal. See condition #13 below.

Traffic Operations

As noted above, traffic generated by the project is expected to add substantial delay to vehicle movements through the SW Spokane Street/W Marginal Way SW/Chelan Avenue SW/Delridge Way SW intersection; this increased delay will be mitigated by the closure of the north leg of this intersection. The proposed project would also add lesser amounts of delay to several intersections along and near the SW Spokane Street corridor. To mitigate this impact, the Port will upgrade traffic signals along the Spokane Street corridor at the following intersections:

- SW Spokane Street/Harbor Avenue SW
- SW Spokane Street/West Seattle Freeway Off-Ramp
- SW Spokane Street/Terminal 5 Access Bridge
- SW Spokane Street/11th Avenue SW
- S Spokane Street/East Marginal Way SW
- East Marginal Way S/S Hanford Street

If needed, the upgrades will include new traffic signal controllers at all intersections, fiber interconnection between the signals, and detection. New emergency pre-emption equipment may be required at the SW Spokane Street/Terminal 5 Access Bridge intersection, with interconnection to Fire Station #36. The SDOT-approved signal improvements will be implemented prior to occupancy of Terminal 5 by a tenant.

The Port also will replace the Flashing Alert sign located on northbound W Marginal Way SW that notifies motorists approaching Terminal 5 (and local businesses) that the railroad tracks are blocked by a train. The Alert sign shall be maintained until the surface access via W Marginal Way SW is closed to vehicular traffic.

See conditions #14 and #15 below.

Off-site Parking

Increased truck activity at Terminal 5 has the potential to increase overnight truck parking in areas near the terminal. To help identify this potential impact, the Port will, in partnership with SDOT, generate two truck parking studies consisting of both a truck driver survey and an overnight truck parking count in SODO, Georgetown, South Park, and Delridge neighborhoods. The overnight truck parking counts will compare overnight parking pre-Terminal 5 occupancy with overnight parking when annual throughput exceeds 647,000 TEUs per year. SDOT will approve of both the survey questions and truck parking count methodology prior to issuance of the Master Use Permit. SDOT will expect the post-occupancy study to be completed when the TEU threshold has been met.

See condition #4 and #23 below.

DECISIONS - SEPA

The proposed action is approved subject to compliance with the conditions identified below.

CONDITIONS – SEPA AND SHORELINE

Prior to Issuance of MUP/SSDP

1. The Port shall prepare a Gate Queue Management Plan for review and approval by SDOT.

2. The Port and SDOT shall establish a Memorandum of Understanding (MOU) to plan, design, and fund improvements that will permanently close surface W Marginal Way SW north of SW Spokane Street. The Port shall be responsible for funding implementation measures associated with the street closure, including retaining and upgrading the non-motorized crossing of the railroad tracks at that location.

3. The Port will provide to SDOT a copy of the engineer-stamped load rating for the existing Terminal 5 access bridge in order to determine if the bridge can be re-channelized from a two-lane to a three-lane cross-section. The load rating shall meet criteria described above in the SEPA analysis for transportation impacts.

4. The Port will submit a truck driver survey and overnight truck parking count methodology for review and approval by SDOT.

5. The Port will establish a Memorandum of Understanding (MOU) with SDOT to work together to establish a railroad quiet zone between train bridge and gate of terminal as describe above in SEPA analysis section for noise impacts.

6. The Port will establish a Memorandum of Understanding with Puget Sound Clean Air Agency to implement an Air Quality Management Program consistent with the outline and objectives described in the SEPA analysis section in this decision for long-term air quality impacts.

Prior to Issuance of Building Permit

7. The Port shall prepare and submit a Construction Management Plan for review and approval by SDOT, including but not limited to the elements identified in this Analysis and Decision.

8. The Port, in partnership with SDOT, will conduct a truck driver survey and an overnight truck parking count in SODO, Georgetown, South Park, and Delridge neighborhoods. The Port shall be responsible for 50% of the costs of the survey and count.

During Construction

9. The contractor and Port of Seattle shall implement all Best Management Practices and conditions of approval required by Washington Department of Fish and Wildlife through the HPA process and the Army Corps of Engineers permit for this project, including limiting in-water work to approved work windows established.

Prior to Occupancy of Terminal 5 by a tenant

10. The Port shall install or refresh striping and signage on the surface access route adjacent to and connecting Terminal 7 to W Marginal Way SW under the West Seattle Freeway.

11. The Port shall design and receive approval from SDOT for a pedestrian pathway extending southeast from the northeast corner of the SW Spokane St/Delridge Way SW/W Marginal Way SW intersection and the private crossing to the east. Implementation of this pathway will occur when the north leg of the five-way intersection is closed.

12. The Port will implement overpass/entrance ramp re-striping and associated circulation changes on the Terminal 5 access bridge, or provide alternate truck access as approved by SDOT and SFD.

13. The Port will connect Terminal 5 to the NWSA's Gate Wait Time Awareness System or a similar system.

14. The Port will replace the Flashing Alert Sign located on northbound W Marginal Way SW.

15. The Port will upgrade traffic signals along the Spokane Street corridor as described in this Analysis and Decision.

16. The Port will implement the Gate Queue Management Plan, including but not limited to specific improvements identified in this Analysis and Decision.

17. The Port will submit a Terminal Operational Noise Management Plan (ONMP) for review and approval by the Noise Abatement Office of the Seattle Department of Construction and Inspections. The ONMP will contain at a minimum elements identified in Appendix M of the FEIS as well as requirement that Port of Seattle provide annual report to SDCI's Noise Abatement staff verifying project's compliance with noise-related conditions.

18. The Port will establish a complaint hotline to accept complaints of excessive noise as part of the ONMP as described above in SEPA analysis for noise impacts.

19. The technical analysis and agreement with stakeholders for the Quiet Zone per the MOU described in Condition #5 will be completed and submitted to BNSF for engineering and construction.

20. The MOU for Air Quality Management described in condition #6 above will be implemented.

<u>For the Life of the Project</u>

21. The Port will prepare and submit to SDOT a Gate Queue Management Plan Annual Monitoring Report, including but not limited to the elements identified in this Analysis and Decision.

22. The Port and/or the Terminal Operator will implement a system to notify businesses located north of the Terminal 5 lead tracks in advance of train blockages expected to last longer than 30 minutes.

23. The Port, in partnership with SDOT, will conduct one post-occupancy truck driver survey and an overnight truck parking count in SODO, Georgetown, South Park, and Delridge neighborhoods. The survey and count will be conducted when annual throughput at Terminal 5 exceeds 647,000 TEUs. The Port shall be responsible for 50% of the costs of the survey and count.

24. Mobile, cargo-handling equipment operating at T-5 must use ambient-sensing, broadband backup alarms.

25. All operational activities at this facility shall be conducted consistent with applicable development standards in SMC 23.60A.152 for protection of the aquatic and shoreline environment.

Ben Perkowski, Land Use Planner Date: April 3, 2017
Seattle Department of Construction and Inspections

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IMPORTANT INFORMATION FOR ISSUANCE OF YOUR MASTER USE PERMIT

Master Use Permit Expiration and Issuance

The appealable land use decision on your Master Use Permit (MUP) application has now been published. At the conclusion of the appeal period, your permit will be considered "approved for issuance". (If your decision is appealed, your permit will be considered "approved for issuance" on the fourth day following the City Hearing Examiner's decision.) Projects requiring a Council land use action shall be considered "approved for issuance" following the Council's decision.

The "approved for issuance" date marks the beginning of the **three year life** of the MUP approval, whether or not there are outstanding corrections to be made or pre-issuance conditions to be met. The permit must be issued by Seattle DCI within that three years or it will expire and be cancelled (SMC 23-76-028). (Projects with a shoreline component have a **two year life**. Additional information regarding the effective date of shoreline permits may be found at 23.60.074.)

All outstanding corrections must be made, any pre-issuance conditions met and all outstanding fees paid before the permit is issued. You will be notified when your permit has issued.

Questions regarding the issuance and expiration of your permit may be addressed to the Public Resource Center at prc@seattle.gov or to our message line at 206-684-8467.