APPENDIX D. MITIGATION COMMITMENTS

This appendix summarizes the mitigation commitments made by the National Environmental Policy Act (NEPA) Lead Agencies for the Interstate Bridge Replacement (IBR) Program. The mitigation commitments from the Columbia River Crossing Record of Decision (ROD) are replaced.

The IBR Program mitigation commitments are more fully described in Chapter 3 of the Final Supplemental Environmental Impact Statement and Section 4(f) Evaluation (Final SEIS) and in other supporting documents, including the Biological Opinion (Appendix O to the Final SEIS) and Section 106 Programmatic Agreement (Appendix F to this Amended ROD), and those more detailed descriptions remain in effect.

The Amended ROD incorporates these mitigation measures into the definition of the Amended Selected Alternative, and the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) shall implement them, provide funding for their implementation, or ensure that other agencies fund and implement them (though this does not alleviate the Joint Lead Agencies' overall responsibility for implementation). The Joint Lead Agencies are prohibited from withdrawing or substantially changing any of the mitigation commitments identified in the Amended ROD for the Program without FHWA's and FTA's written approval. In addition, FHWA and FTA must review and approve any change to the Program that may involve new or changed reasonably foreseeable effects not yet considered in the existing environmental record, in accordance with 23 Code of Federal Regulations Part 771.

In addition to outlining the specific mitigation measures required under this Amended ROD, this list is provided here to facilitate the monitoring of the implementation and effectiveness of the mitigation measures and to give a sense of the nature of the mitigation actions and associated reasonably foreseeable effects. If mitigation measures identified in the Final SEIS and the other supporting documents identified above are not included in this summary, those mitigation measures are incorporated and included herein.

Mitigation is listed in two categories: temporary (those associated with construction) and long-term (those associated with operation and maintenance of the Amended Selected Alternative). Wherever it is feasible and appropriate, mitigation measures that consist of construction methods or practices or involve constructed elements of Program facilities shall be incorporated in the design and specification documents and included as contractual obligations within construction contracts.

Where appropriate and practicable, the mitigation commitment matrix below describes performance standards or expected results of the mitigation measures. Where it is not practicable to specify performance standards or to define monitoring plans at the current level of design, then they will be developed, as needed, during final design and construction. Where warranted, the Program will define the mitigation performance that contractors and/or design-builders will be required to achieve on each of the relevant elements of construction-related mitigation listed in the matrix below and will require contractors and/or design-builders to document and report their compliance with these measures, where practicable.

A mitigation monitoring program will be established and implemented by the responsible parties for each construction package, which will apply to activities during final design, construction, and startup with the goals of 1) helping the Joint Lead Agencies fulfill the mitigation commitments set forth in the environmental documents, and 2) giving FHWA, FTA, and the Oregon and Washington Departments of Transportation a means of overseeing the effectiveness of and compliance with their mitigation requirements. The monitoring program will consist of the following:

- Maintaining a current list or database matrix of mitigation commitments.
- Tracking the status of implementation of the mitigation measures.
- Monitoring progress and coordinating resolution of any non-compliance events.

Table D-1 lists the mitigation commitments and identifies which resource area(s) they apply to, timing (pre-construction, construction, and post-construction), and who is responsible for enacting the commitment (identified in **bold**).

Table D-1. Avoidance, Minimization, and Mitigation Measures

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
1	Acquisitions	Temporary	Temporary property use during construction	Pre-construction	In compliance with 23 Code of Federal Regulations (CFR) Part 710; the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA), as amended; the Washington State Department of Transportation's (WSDOT) Standard Specifications for Road, Bridge, and Municipal Construction (M41-10) and Revised Code of Washington (RCW) 47; and Oregon Department of Transportation's (ODOT) 2024 Standard Specifications for Construction and Oregon Revised Statutes (ORS) 35, **ODOT and WSDOT** will develop approaches to manage temporary construction easements as part of the overall IBR Program right-of-way plan. The plan will identify measures that will be required for contractors to avoid, minimize, and/or mitigate for impacts to property temporarily used for construction.
2	**Acquisitions**[1] Economics Neighborhoods	Temporary	Disruption to property access during construction.	Construction	In compliance with the URA, **ODOT and WSDOT** will maintain continued access to properties during construction to the extent possible. If continued access cannot be provided, the property owner is entitled under the URA to just compensation for the period of time of the closure. Depending on the length of the closure, loss of access could also trigger temporary relocation for any occupants. Specific provisions will be detailed in the IBR Program right-of-way plan and/or specifications.

[1] When a measure applies to multiple resource topics, the primary topic is shown in bold.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
3	**Acquisitions** Neighborhoods	Temporary	Use of property during construction	Pre-Construction	In compliance with the URA; WSDOT's Standard Specifications for Road, Bridge, and Municipal Construction (M41-10) and RCW 47; and ODOT's 2024 Standard Specifications for Construction and ORS 35, **ODOT and WSDOT** will mitigate for construction easements through payment to property owners in exchange for the use of their property during construction. Site impacts from temporary construction uses will be restored and property owners compensated according to fair market value.
4	**Acquisitions** Land Use Economics Neighborhoods	Long-term	Business and residential displacements before construction	Pre-Construction	Under the URA, when property acquisition and residential or business displacements are unavoidable, **ODOT and WSDOT** will provide affected property owners with just compensation, and affected occupants will receive relocation assistance. Properties will be purchased by ODOT and WSDOT at fair market value. Eligible and displaced residential occupants resulting from the Amended Selected Alternative will be provided with decent, safe, and sanitary replacement housing.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
5	Acquisitions	Long-Term	Property acquisition before construction	Pre-Construction	**ODOT and WSDOT** will notify affected property owners that the IBR Program is planning to acquire their property following the Program's schedule for acquisitions.
6				Pre-Construction	In compliance with 23 United States Code (U.S.C.) §§ 107 and 317, **ODOT and WSDOT** will involve the U.S. General Services Administration in any property acquisition related to the acquisition of federally owned property. No other federal agency landowners will be affected.
7				Pre-Construction	Under the URA, as amended, **ODOT and WSDOT** will compensate property owners for loss of deeded reservations of access. The amount of compensation will be determined during the appraisal process by analyzing the value of the property with and without comparable access point(s), in compliance with the Uniform Standards of Professional Appraisal Practice. Access points that are not at a deeded reservation location may be closed or relocated through police power if reasonable alternative access is available.
8	Acquisitions	Long-Term	Occupant displacement before construction	Pre-Construction	Under the URA, even though some displaced occupants may choose to leave the area, finding sufficient and affordable housing for those affected by the IBR Program could remain a challenge. If sufficient comparable replacement housing is not available, **ODOT and WSDOT** will commit to last resort housing in compliance with the URA's requirements for decent, safe, and sanitary housing.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
9	Acquisitions	Long-Term	Relocation of floating homes before construction	Pre-Construction	Under the URA, as amended, floating homes will be provided relocation assistance to relocate to moorage withing the area if available, which may include a supplement payment for moorage. If homes are not moved, **ODOT or TriMet** will purchase the floating homes at fair market value and provide relocation assistance, which may include payments, if necessary to confirm compliance with URA's requirements for decent, safe, and sanitary housing.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
10	**Air Quality** Aviation Neighborhoods	Temporary	Increased particulate matter and exhaust emissions during construction	Construction	For construction in Washington, **WSDOT and C-TRAN** will coordinate with the contractor to comply with the following standard and regulatory air quality measures during construction: • WSDOT Standard Specifications for Road, Bridge, and Municipal Construction, Section 1.07.5(4). • Fugitive dust control best management practices (BMPs) set forth in the Associated General Contractors of Washington Education Foundation and Fugitive Dust Task Force pamphlet, "Guide to Handling Fugitive Dust From Construction Projects."
11				Construction	For construction in Oregon, **ODOT and TriMet** will coordinate with the contractor to comply with the following standard and regulatory air quality measures during construction: • Division 208 of Oregon Administrative Rules (OAR) 340. • ODOT Standard Specifications Section 290. • The Clean Diesel Construction Standard (OAR-731-005-0800). • Oregon House Bill 2007, known as the "Clean Diesel Bill." • The City of Portland Clean Air Construction Program to reduce diesel emissions by implementing a standard set of idle reduction and diesel equipment requirements on job sites.
12	**Air Quality** Neighborhoods	Temporary	Emissions within communities and residential areas from construction vehicles	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will develop contract specifications that will minimize impacts to surrounding communities such as by using newer low-emitting construction equipment and electric equipment, and avoiding haul routes through residential areas when feasible.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
13	Aviation	Temporary	Aviation obstruction during construction	Pre-construction	In the area of demolition of the Interstate Bridge and construction activities for the Columbia River bridges and the State Route (SR) 14 interchange, **ODOT and WSDOT** will coordinate with the contractor to prepare the Federal Aviation Administration (FAA) Advisory Circular (AC) 70/7460-1M for FAA approval. Means and methods proposed by the contractor will be modified to mitigate and address FAA comments, like the locations of tall cranes near Pearson Field.
14	Aviation	Temporary	Electronic device interference with aviation during construction	Pre-construction, Construction	**ODOT and WSDOT** will coordinate with the contractor to implement construction specifications to confirm that contractors working near Pearson Field will not use any electronic devices that interfere with equipment required for air navigation and communication as specified in FAA Order 6050.32B “Spectrum Management Regulations and Procedures Manual.”
15	Aviation	Temporary	Obstruction hazard to aviation	Pre-Construction, Construction	**ODOT and WSDOT** will coordinate with the contractor to conduct outreach before and during construction to provide information to pilots on findings or recommendations following the FAA's review of the FAA AC 70/7460-1M, including any temporary obstruction proposed by the contractors.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
16	Aviation	Long-Term	Obstruction hazard to aviation	Pre-Construction	During final design, **ODOT and WSDOT** will comply with the FAA's findings in response to the IBR Program's Form 7460-1. The FAA will issue a finding of "hazard to aviation" or "no hazard to aviation" upon completion of the aeronautical review.
17				Pre-Construction	**ODOT and WSDOT** will provide design plans to FAA to develop revised flight procedures to address changes in departure gradient requirements.
18				Pre-Construction	**ODOT and WSDOT** will follow FAA requirements for marking obstacles; this will likely include design, marking, and maintenance according to FAA AC 70/7460-1M "Obstruction Marking and Lighting" using equipment specified in FAA AC 150/5345-43J "Specification for Obstruction Lighting Equipment."
19	Aviation	Long-Term	Glare affecting aviation activities	Pre-Construction	**ODOT, WSDOT, and TriMet** will design roadway or accent lighting on the bridges and surrounding interchanges to limit light or glare that could affect aviation at Pearson Field or Portland International Airport, as feasible.
20	Aviation	Long-Term	Stormwater facilities and off-site mitigation sites becoming a Hazardous Wildlife Attractant	Pre-Construction	**ODOT and WSDOT** will coordinate with the contractor to identify Amended Selected Alternative stormwater facilities within 5,000 feet of Pearson Field's Runway 8 that are likely to need modifications/treatments to avoid becoming a Hazardous Wildlife Attractant, WSDOT's Aviation Stormwater Design Manual (2008) and FAA AC 150/5200-33C "Hazardous Wildlife Attractants on or Near Airports" will be followed in this area to eliminate hazards to airports. Off-site wetlands mitigation sites will also conform with the FAA's guidance in AC 150/5200-33C.
21	Aviation	Long-Term	Birds roosting in proposed structures during construction	Construction	**ODOT, WSDOT, and C-TRAN** will incorporate modern construction materials and designs of proposed structures and features that minimize locations for birds to roost or nest, as feasible.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
22	Aviation	Temporary	Dust, glare, and smoke obstructions for aviation during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to apply dust control measures such as watering exposed soil and using gravel surfacing on temporary construction roads. The Air Quality Technical Report lists dust control requirements in both Oregon and Washington. Construction materials and activities will be managed to minimize glare and smoke.
23	Cultural Resources	Temporary and Long-Term	Adverse effects to historic properties	Pre-Construction	Refer to the Section 106 Programmatic Agreement in Appendix F for mitigation to resolve adverse effects to historic properties.
24	Cultural Resources	Temporary	Effects to the Vancouver Barracks National Cemetery during construction	Pre-Construction	**WSDOT** will avoid effects to the Vancouver Barracks National Cemetery at East Fourth Plain Boulevard by preserving character-defining features along E Fourth Plain Boulevard within the temporary construction easement. This includes preservation of the perimeter fence, cobblestone wall with gates, perimeter road, and planting inside the boundary fence, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.
25	Cultural Resources	Temporary	Effects to the Mickler House	Construction	**WSDOT** will reconstruct the fence, if necessary, at the Mickler House at 901 East 29th Street following project completion. WSDOT will minimize to the maximum extent possible the effects to the existing walkway and curb when implementing Americans with Disabilities Act (ADA) design efforts.
26	Cultural Resources	Temporary	Adverse effects to Fort Vancouver National Historic Site	Construction	**WSDOT** will protect two historic trees in the allée, which are contributing components associated with the Fort Vancouver National Historic Site, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.

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27	Cultural Resources	Temporary	Effects to the House of Providence during construction	Post-Construction	**WSDOT** will minimize effects to the House of Providence, 400 East Evergreen Boulevard, by restoring to preconstruction conditions the character-defining features of the House of Providence located within the temporary construction easement along the southern property boundary at East Evergreen Boulevard, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.
28	Cultural Resources	Temporary	Effects to the Duplex Residence at 2901 K Street during construction	Post-Construction	**WSDOT** will minimize effects to the Duplex Residence at 2901 K Street by restoring the grass lawn within the temporary construction easement that extends into the property's southwest corner to its preconstruction state. This includes replacing in-kind the lawn and preserving one mature ornamental shrub that will not be removed during construction, consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties.
29	Economics	Temporary	Disruption to railway lines during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to design construction schedules to minimize temporary impacts to BNSF Railway lines and service frequency, as feasible.
30	Economics	Temporary	Freight delays during construction	Construction	**ODOT and WSDOT** will work with the contractor to coordinate with the Ports of Portland and Vancouver to identify ways to minimize delays for commercial freight vehicles during construction, as feasible.
31	Economics	Temporary	Disruption to freight and business operations during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will work with the contractor to conduct outreach to businesses in areas with high volumes of freight traffic as construction plans and detours are developed to minimize the impact to their business operations, inform them of detours, and help keep freight moving during construction.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
32	Economics	Long-Term	Disruptions to marine cargo transport during construction	Construction	**ODOT, WSDOT, and TriMet** will continue to work with the U.S. Coast Guard (USCG) and the U.S. Army Corps of Engineers (USACE) to help confirm that the potential for effects on river users is addressed through the agencies' permitting processes.
33	**Economics** Land Use	Temporary	Disruption to local businesses operations during construction	Construction	**ODOT and WSDOT** will coordinate with the contractor to reduce potential impacts to local businesses by implementing a construction schedule that avoids or minimizes complete closures of roads and access points to local businesses, as feasible.
34	Economics	Temporary	Disruption to business access during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will conduct outreach to businesses, in coordination with local jurisdictions, affected by construction as roadway closures and detours are identified to minimize impacts to their businesses.
35	Ecosystems	Temporary	Disruption to aquatic, terrestrial, and botanical resources during construction	Construction	**ODOT and WSDOT** will coordinate with the contractor to perform all construction activities according to the requirements and conditions of the regulatory permits that are issued for the Amended Selected Alternative.
36				Construction	In compliance with ODOT and WSDOT policy and construction administration practice in Oregon and Washington, **ODOT and WSDOT** will have one or more state Department of Transportation inspectors on site during construction. The role of the inspector(s) will be to monitor compliance with contract and permit requirements.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
37	Ecosystems	Temporary	Release of construction materials or waste, or sediment disturbance, that affects aquatic ecosystems during construction	Pre-construction, Construction	**ODOT and WSDOT** will prepare a Water Quality Monitoring and Protection Plan (WQMPP) to satisfy the monitoring and reporting requirements of the 401 Water Quality Certifications that will ultimately be issued for the project. The WQMPP will be provided to applicable agencies for review and approval prior to implementation. The WQMPP will identify the timing and methodology for water-quality sampling during construction of the Amended Selected Alternative, as well as methods of implementation and reporting.
38	Ecosystems	Temporary	Disruption to aquatic ecosystems along the Columbia River bottom	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to prohibit work barges from grounding out.
39	Ecosystems	Temporary	Contamination of aquatic ecosystems during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to dispose of excess or waste materials in an appropriate manner consistent with applicable local, state, and federal regulations, do not dispose of or abandon waterward of the ordinary high water mark (OHWM) or allow to enter waters of the state.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
40	Ecosystems	Temporary	Fish in the Columbia River impacted by pumps during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to confirm that all pumps employ a fish screen that meets the following specifications: • An automated cleaning device with a minimum effective surface area of 2.5 square feet per cubic foot per second and a nominal maximum approach velocity of 0.4 feet per second, or no automated cleaning device, a minimum effective surface area of 1 square foot per cubic foot per second and a nominal maximum approach rate of 0.2 feet per second; and • A round or square screen mesh that is no larger than 0.094 inches (2.38 millimeters [mm]) in the narrow dimension, or any other shape that is no larger than 0.069 inches (1.75 mm) in the narrow dimension; and • Each fish screen must be installed, operated, and maintained according to National Oceanic and Atmospheric Administration (NOAA) Fisheries fish screen criteria.
41	Ecosystems	Temporary	Erosion and sediment disturbance to aquatic and terrestrial ecosystems during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to designate at least one employee as the erosion and sediment control (ESC) lead. The ESC lead will be responsible for the implementation of the spill prevention, control, and countermeasure (SPCC) plan and pollution control plan (PCP).
42	Ecosystems	Temporary	Contamination of aquatic and terrestrial ecosystems from a spill of hazardous materials during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to maintain applicable spill response equipment and material designated in the SPCC plan and PCP at the job site.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
43	Ecosystems	Temporary	Contamination of aquatic ecosystems from a spill of hazardous materials during construction	Construction	With the exception of barges and stationary large equipment (e.g., cranes, oscillators) operating from barges or work platforms, **ODOT and WSDOT** will coordinate with the contractor to fuel and maintain equipment at least 150 feet from the OHWM of any waterbody using secondary containment to minimize potential for spills or leaks entering the waterway.
44	Ecosystems	Temporary	Contamination of aquatic or terrestrial ecosystems from hazardous materials leaking from construction equipment during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to implement inspection and cleanup procedures identified in the SPCC plan and PCP. All equipment to be used for construction activities will be cleaned and inspected prior to arriving at the project site, to confirm that no potentially hazardous materials are exposed, no leaks are present, all equipment is free of noxious weeds (or other invasive plants or animals), and all equipment is functioning properly. Should a leak be detected on heavy equipment used for the project, ODOT and WSDOT will coordinate with the contractor to immediately remove the equipment from the area, and not use the equipment again until it is adequately repaired.
45				Pre-construction, Construction	Where off-site repair for heavy equipment leakage is not practicable, **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to prepare the SPCC plan and PCP to document measures to be implemented to prevent and/or contain accidental spills in the work/repair area to confirm that no contaminants escape containment to surface waters and cause a violation of applicable water-quality standards.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
46	Ecosystems	Temporary	Contamination of aquatic ecosystems from construction equipment during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to confirm that only barges and support vessels will be operated in the water. Other construction equipment will be operated from on top of floating barges, the decks of temporary work bridges and platforms, the decks of the existing or replacement bridges, or areas above the OHWM.
47				Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to provide suitable containment measures for all equipment (including barges, work decks, stationary power equipment, and storage facilities) consistent with the SPCC plan and PCP to prevent and/or contain accidental spills to confirm no contaminants escape containment to surface waters and cause a violation of applicable water-quality standards.
48	Ecosystems	Temporary	Disruption to aquatic ecosystems by in-water construction structures during high-water events	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to design and install temporary work bridges and platforms, cofferdams, and drilled shaft isolation casings consistent with the ODOT Hydraulics Manual, which establishes criteria to avoid these structures being overtopped during high-water events.
49	Ecosystems	Temporary	Contamination of aquatic and terrestrial ecosystems from construction runoff	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to require that process water generated on site from construction, demolition, or washing activities will be contained and treated to meet applicable water-quality standards before entering or reentering surface waters.
50	Ecosystems	Temporary	Contamination of aquatic and terrestrial ecosystems from paving, chip sealing, or painting activities during rain or wet weather	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to confirm that paving, chip sealing, or stripe painting activities will not be conducted during periods of rain or wet weather.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
51	Ecosystems	Temporary	Contamination of aquatic or terrestrial ecosystems from the cleaning of concrete equipment	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to establish a concrete truck chute cleanout area consistent with the SPCC plan and PCP to properly contain wet concrete as part of ODOT Standard Specification 00290.30(a).
52	Ecosystems	Temporary	Vegetation clearing and erosion disrupts the ecosystem function and habitat of wetland and streams during construction	Construction	In compliance with erosion and sediment control plan (ESCP), **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to delineate clearing limits by installing orange barrier fencing prior to vegetation clearing within or adjacent to a stream/wetland or its buffer and install perimeter protection/silt fence as needed to protect surface waters and other critical areas. For additional silt fence detail, consult ODOT Standard Specification 00280.16(c).
53	Ecosystems	Temporary	Disruption to aquatic, terrestrial, and botanical resources from damage to protection measures during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to inspect, maintain, and repair the ESCP measure as described in applicable permit requirements and ODOT Standard Specifications 00280.60 to 00280.70.
54	Ecosystems	Temporary	Chemical and/or debris releases affect the ecosystem function and habitat of surface waters during construction	Construction	For landward construction and demolition, **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to locate project staging and material storage areas a minimum of 150 feet from surface waters, in currently developed areas such as parking lots or managed fields, unless a site visit by an ODOT/WSDOT biologist determines (and an ODOT/NOAA Fisheries liaison confirms) that the topographic features or other site characteristics allow for site use closer to the edge of surface waters.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
55	Ecosystems	Temporary	Erosion and sediment disturbance of aquatic ecosystems during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to complete excavation activities under dry or dewatered conditions where practicable. Where dewatering requires the use of cofferdams and/or berms, these structures will be constructed of sandbags, clean rock, steel sheeting, or other non-erodible material.
56	Ecosystems	Temporary	Damage to river bank and aquatic ecosystem function and habitat during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to limit bank shaping to the extent as shown on the approved grading plans. Minor adjustments made in the field will occur only after engineer's review and approval.
57	Ecosystems	Temporary	Potential for non-degradable debris from erosion and sediment control materials entering aquatic ecosystems during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to install bio-degradable erosion control blankets on areas of disturbed ground with slopes of 1V:3H or steeper and within 150 feet of surface waters. For additional erosion control blanket detail, consult ODOT Standard Specification 00280.14I.
58	Ecosystems	Temporary	Erosion and sediment disturbance to surface water ecosystem function and habitat during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to cover erodible materials (material capable of being displaced and transported by rain, wind or surface water runoff) as prescribed in the ESCP to prevent sediments from being washed from the storage area to surface waters. For additional detail, consult ODOT Standard Specification 00280.42.
59	Ecosystems	Temporary	High noise and vibration levels associated with vibratory hammer operations affect aquatic and terrestrial species during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to use a vibratory hammer to drive steel piles to the maximum extent practicable, to minimize noise levels.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
60	Ecosystems	Temporary	High noise and vibration levels associated with impact pile-driving activities below the OHWM affect aquatic species during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to conduct impact pile driving below the OHWM only between September 15 and April 15. Vibratory pile installation and removal (as well as certain other in-water construction activities) may occur on a year-round basis, provided they are conducted in compliance with all regulatory approvals.
61	Ecosystems	Temporary	High noise and vibration levels associated with impact pile driver affect aquatic species during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to operate no more than two impact pile drivers simultaneously within the same waterbody channel.
62				Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to employ a bubble curtain or other similarly effective noise attenuation device during all impact pile driving conducted in water depths greater than 0.67 meters (2 feet).
63	Ecosystems	Temporary	High noise levels associated with impact pile driving affect aquatic species during construction	Pre-construction, Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to develop and implement a hydroacoustic monitoring plan, to allow the predicted noise attenuation levels and the effectiveness of the noise attenuation devices to be field verified. ODOT, WSDOT, and TriMet will develop the plan based on the template developed by the Fisheries Hydroacoustic Working Group, in coordination with the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA). ODOT and WSDOT will provide the plan to NOAA Fisheries for review and approval prior to any impact pile-driving activity commencing.
64	Ecosystems	Temporary	Disruption to marine mammals during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to implement the marine mammal monitoring plan as required by the Letter of Authorization issued by NOAA's Office of Protected Resources.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
65	Ecosystems	Temporary	Predation from piscivorous birds perching on temporary work structures	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the state wildlife agencies and contractor to determine and install appropriate deterrents or other anti-perching devices on temporary work structures and open-ended pipe piles to discourage perching by piscivorous birds. ODOT, WSDOT, TriMet, and C-TRAN will require that the contractor monitor and manage temporary work structures to not allow for extensive perching by piscivorous birds, including during periods of non-use.
66	Ecosystems	Temporary	Contamination of aquatic or terrestrial ecosystems from release of demolition waste during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to remove temporary piles with a vibratory hammer, or by direct pulling, and prohibit the intentionally breaking of piles by twisting or bending.
67				Construction	In the event a temporary pile cannot be removed, **ODOT and WSDOT** will direct the contractor to cut or press the pile 3 feet below the mudline. At locations where hazardous materials are present or adjacent to utilities, ODOT and WSDOT may allow the contractor to cut the temporary piles at the mud line with underwater torches, if ODOT and WSDOT determine that such activity will not conflict with navigation.
68	Ecosystems	Temporary	Potential loss of fish during fish salvage	Pre-construction, Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to develop and implement a Temporary Water Management Plan, consistent with the requirements of ODOT Special Provision Section 00245.03. ODOT and WSDOT will coordinate with the contractor to provide the Temporary Water Management Plan to NOAA Fisheries for review and approval prior to any work area isolation or fish salvage activities.
69				Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to install cofferdams and isolation casings in a manner that minimizes fish entrapment and install sheet piles from upstream to downstream, lowering the sheet piles slowly until they make contact with the substrate.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
70				Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to install screens (3/32 inch [2.38 mm] on a diagonal) at the bottom of drilled shaft isolation casings prior to installation, to minimize potential for fish entrapment during installation.
71				Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to conduct fish salvage according to the best practices established in the Biological Opinion for ODOT's Federal-Aid Highway Programmatic consultation.
72				Construction	**ODOT, WSDOT, and TriMet**, in coordination with the contractor, will have a qualified fishery biologist conduct and supervise fish capture and release activity to minimize risk of injury to fish.
73				Construction	**ODOT, WSDOT, and TriMet** will prepare a fish salvage report and submit to NOAA Fisheries, U.S. Fish and Wildlife Service (USFWS), Oregon Department of Fish and Wildlife (ODFW), and Washington Department of Fish and Wildlife (WDFW) following project completion.
74				Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to make a reasonable effort to capture Endangered Species Act-listed fish known or likely to be present in an in-water isolated work area using methods that minimize the risk of injury.
75				Construction	If electrofishing must be used, **ODOT, WSDOT, and TriMet** will coordinate with the contractor to conduct consistent with NOAA Fisheries "Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act" (NOAA Fisheries 2000), or most recent version.
76	Ecosystems	Temporary	Disturbance to aquatic and terrestrial ecosystems during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will avoid and minimize short-term impacts to ecosystem resources in final design to the extent practicable.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
77	Ecosystems	Temporary	Disruption to terrestrial habitats during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to restore temporarily disturbed terrestrial habitats consistent with applicable regulatory requirements.
78	Ecosystems	Temporary	Disruption to aquatic, terrestrial, and botanical ecosystems during construction	Pre-construction	**ODOT and WSDOT** will provide compensatory mitigation for unavoidable impacts to ecosystem resources, consistent with applicable federal, state, and local regulatory requirements.
79	Ecosystems	Temporary	Disruption to migratory bird nesting during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to conduct activities with the potential to impact nesting migratory birds, such as nest removal, consistent with the provisions of the Migratory Bird Treaty Act (MBTA), which requires nests of migratory birds to be removed only at times when nests are inactive.
80	Ecosystems	Long-Term	Contamination of aquatic or terrestrial ecosystems from potential increase in pollutants entering stormwater	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will provide stormwater quality and quantity treatment that meets or exceeds applicable regulatory requirements for all post-project Contributing Impervious Area.
81	Ecosystems	Long-Term	Disruption to aquatic, terrestrial, and botanical resources	Pre-construction	**ODOT and WSDOT** will provide compensatory mitigation for unavoidable impacts to ecosystem resources, consistent with applicable federal, state, and local regulatory requirements.
82	Ecosystems	Long-Term	Disturbance to aquatic and terrestrial resources	Pre-construction	**ODOT,WSDOT, TriMet, and C-TRAN** will avoid and minimize long-term impacts to ecosystem resources in final design to the extent practicable.
83	Ecosystems	Long-Term	Loss of function of aquatic or terrestrial ecosystem resources	Pre-construction	**ODOT and WSDOT** will prepare a compensatory mitigation plan that satisfies applicable federal, state, and local regulatory requirements, and that demonstrates no net loss of function of ecosystem resources.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
84	Ecosystems	Long-Term	Removal of existing peregrine falcon nest	Construction	**ODOT and WSDOT** will design and coordinate with the contractor to install an alternate nesting structure within the vicinity, to offset removal of an existing peregrine falcon nest from demolition of the existing Interstate Bridge, as and where feasible.
85	Ecosystems	Long-Term	Predation from avian perching and nesting on the shaft caps and replacement bridge structure	Pre-Construction	**ODOT and WSDOT** will coordinate with WDFW and ODFW during final bridge design for recommendations to reduce the potential for and/or extent of pinniped and avian perching on the shaft caps and avian nesting and perching on the replacement bridge structure. ODOT and WSDOT will evaluate recommendations for feasibility and incorporate them into final design to the extent practicable.
86	**Ecosystems** Parks and Recreation Visual Quality	Temporary	Increased noise levels, light, and glare on aquatic and terrestrial ecosystem and surrounding neighboring viewers during nighttime construction.	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to conduct construction activities consistent with local, state and federal permit restrictions for allowable work hours. If temporary lighting is required, contractors will use directional lighting with shielded luminaries to control glare and direct light onto work area, not surface waters, or sensitive neighboring viewers.
87	Energy	Temporary	Energy consumption by vehicles and equipment during construction	Construction	In Oregon, **ODOT and TriMet** will comply with ODOT Standard Specifications Section 290. In Washington, **WSDOT and C-TRAN** will comply with WSDOT Standard Specifications for Roads, Bridge, and Municipal Construction, Section 1.07.5(4).

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
88	Energy	Temporary	Energy consumption during construction	Construction	As feasible, **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to continue to consider advances in energy-reducing or energy-saving materials and methods including: • Sourcing building and paving materials from local sources that require shorter distances for transport to the project site. • In-place recycling of asphalt surfaces. • Warm-mix asphalt technologies. • Other innovative methods that encourage use of recycled materials.
89	Energy	Long-Term	Energy consumption from highway and transit operations including lighting and other components	Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate to use energy-efficient electrical systems for lighting, transit stations and other electrical needs to decrease energy consumption, where feasible.
90	Energy	Temporary	Increase in energy usage and emissions from vehicle idling, backups, and traffic delays	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to ensure that all work in Washington and Oregon will follow applicable state policies and procedures including: • Minimize delays to traffic during peak travel times. • Minimize unnecessary idling of on-site diesel construction equipment. • Educate vehicle operators to shut off equipment when not in active use. • Prepare a traffic control plan with detours and strategic construction timing (e.g., night work) to move traffic through the area and reduce backups and delays to the traveling public to the extent practicable.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
91	Geology and Groundwater	Temporary	Erosion and stormwater pollution during construction	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to prepare and implement erosion control and stormwater pollution prevention plans and grading plans during construction. Plans will adhere to ODOT and WSDOT guidelines.
92	Geology and Groundwater	Temporary	Discharge to stormwater and groundwater during construction	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to prepare and implement stormwater discharge permits before and during construction.
93	Geology and Groundwater	Long-Term	Construction and maintenance of stormwater mitigation	Construction	**ODOT, WSDOT**, **TriMet, and C-TRAN** will coordinate with the contractor and applicable agencies, for example the City of Vancouver Public Works Water, Sewer and Stormwater Division, City of Portland Environmental Services, and other relevant municipal agencies in Gresham. Coordination will be for inspection and observation monitoring of Amended Selected Alternative stormwater mitigation installations and operations to confirm that appropriate construction and maintenance measures are being taken.
94	Geology and Groundwater	Temporary	Wasted soils during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will evaluate potential reuse of existing soils during construction. Recycle or reuse aggregate, quarry rock, asphalt, and concrete materials to the extent practical.
95	Geology and Groundwater	Long-Term	Risks from earthquakes and other seismic hazards	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will design structures to comply with federal, state, and city building seismic codes and standards; apply advancements in earthquake science and construction materials and update in the conceptual model.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
96	Geology and Groundwater	Long-Term	Contamination of groundwater resources	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will design systems to minimize contamination of groundwater resources in compliance with Vancouver Municipal Code (VMC) Chapter 14.26 Water and Sewers – Water Resources Protection and Portland City Code (PCC) Chapter 21.35, Wellhead Protection, and any applicable Washington and Oregon regulations, based on jurisdictions.
97	Geology and Groundwater	Long-Term	Risk of structure failure during a Cascadia-style seismic event	Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will design structures to consider the effects of seismically induced ground motions on shallow footings, retaining walls, and other structures that could increase the potential for structure failure resulting from a future seismic event.
98	Geology and Groundwater	Long-Term	Geologic concerns, such as increased erosion and scour	Pre-Construction	**ODOT and WSDOT** will design the Amended Selected Alternative to accommodate a range of future conditions resulting from potential geologic events or changes in total precipitation to provide resilience for geologic concerns, such as increased erosion and scour, as feasible.
99	Geology and Groundwater	Long-Term	Geologic hazards	Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will conduct site-specific assessments of existing geologic hazards such as, but not limited to, faults, ancient landslides, steep cut slopes, non-seismic settlements, and soil liquefaction during design of the Amended Selected Alternative, as feasible. Site-specific assessments should include the use of geotechnical drilling, test pitting, material testing, geophysical techniques, subsurface displacement monitoring (inclinometers), and monitoring well installation, as feasible. Assessment will include recommended options for avoiding or mitigating geologic hazards. Compliance with the Post-Review Discovery Plan will be required. This plan is Attachment F of the Section 106 Programmatic Agreement (Appendix F of this Amended ROD).

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
100	Geology and Groundwater	Long-Term	Soil settlement near flood control levees and structures	Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with applicable agencies to consider the use of light weight fills or geoform in areas adjacent to existing flood control levees and structures to minimize the potential for settlements, as feasible.
101	Geology and Groundwater	Long-Term	Soil liquefaction and non-seismic settlements	Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will evaluate soil stabilization techniques to minimize the potential for soil liquefaction and non-seismic settlements during design of the Amended Selected Alternative. Stabilization techniques may include, but are not limited to, the use of soil mixing, compaction grouting, jet grouting, and stone columns.
102	Geology and Groundwater	Long-Term	Contaminated groundwater infiltration to the City of Vancouver well head protection zones and Cascade Expansion groundwater protection area	Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with applicable agencies to locate stormwater treatment facilities, to the extent possible, away from City of Vancouver well head protection zones for WS-1 and WS-3, Port of Vancouver Well 3, and the Cascade Expansion groundwater protection area in Gresham for the Ruby Junction location. Where relocation is not possible, coordinate with appropriate local agencies to design site-specific elements to minimize the infiltration of potential contaminants, treat the runoff and/or further redirect flows away from these sensitive areas.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
103	Hazardous Materials	Temporary	Release of hazardous materials from construction activities and equipment	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to conduct fueling, maintenance, and cleaning in areas that are contained berms or other containment as identified in approved refueling plans.
104				Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to minimize the production or generation of hazardous materials, both upland and during demolition, and replacement of overwater spans.
105				Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to dispose of materials such as used motor oil and water-based paint at recycling centers, as appropriate.
106				Pre-Construction	In accordance with Safety Standards for Construction Work: Lead (Washington Administrative Code [WAC] 296-155) and General Occupational Health Standards: Asbestos (WAC 296-62 Part I-1, OAR 340-248), **ODOT and WSDOT** will coordinate with the contractor to conduct hazardous building materials surveys (HBMSs) on structures proposed for demolition prior to demolition to identify asbestos-containing materials, lead-based paint, and other hazardous materials.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
107	Hazardous Materials	Temporary	Release of hazardous materials from contaminated sites, construction activities, and equipment	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to label and store contaminated media according to federal regulations.
108				Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to locate contaminated media (including dredge spoils) storage away from storm drains or surface water.
109				Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to handle potential spills of hazardous materials in conformance with applicable regulatory requirements and adhere to the Program SPCC plan.
110	Hazardous Materials	Temporary	Exposure of construction workers and other project contractors to hazardous materials which may impact human health	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to prepare a Program-wide construction health and safety plan, as required by federal Occupational Safety and Health Act regulations and state regulations, to minimize the potential for exposure of construction workers to hazardous materials and the risk to human health and the environment.
111	Hazardous Materials	Long-Term	Presence of Recognized Environmental Conditions (REC) at contaminated sites	Pre-Construction	For properties where rights of entry have not yet been obtained, **ODOT and WSDOT** will prepare Phase II Environmental Site Assessments (ESAs) in cases where identified RECs indicate that a subsurface investigation is necessary to confirm the nature and extent of contamination and define the specific measures and applicable regulatory agency approvals needed to address the contamination. Conclusions from these investigations will provide decision-makers with a more detailed understanding of cleanup obligations and associated costs for use during the acquisition process. HBMSs may also be completed during this period to inform the acquisition process for properties with this recommendation.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
112	Hazardous Materials	Long-Term	Liability from acquired contaminated properties	Pre-Construction	**ODOT and WSDOT** will use conclusions and data from IBR Phase I and Phase II ESAs and existing regulatory documentation to compile potential order of magnitude costs for cleanup or remediation of properties with documented contamination.
113				Pre-Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to develop detailed hazardous materials management plans during final design and as part of the property acquisition process. ODOT and WSDOT will coordinate with the contractor to obtain necessary regulatory approvals to address areas where cleanup and remediation are needed.
114	Hazardous Materials	Long-Term	Contaminated material encounters	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to prepare a site-specific contaminated material management plan to confirm proper characterization, management, storage, disposal, and reporting of contaminated materials encountered during construction activities.
115	**Land Use** Public Services Transportation	Temporary	Conflicting construction plans with other projects	Pre-Construction	Prior to finalizing construction plans, **ODOT, WSDOT, TriMet, and C-TRAN** will work with agency partners to obtain information on the construction timelines for other planned projects, including those identified in the Land Use technical report, and will coordinate with those projects to develop traffic and other plans to minimize disruption.
116	Navigation	Temporary	Construction of new bridges in a navigable waterway	Construction	**ODOT, WSDOT, and TriMet** will coordinate with all IBR Program contractors to follow permit requirements for construction that will be detailed in the individual local, state, and federal permits and authorizations that must be obtained as part of the USCG Permit application.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
117	Navigation	Temporary	Closures and limited horizontal and vertical clearances to navigation channels and turning basin during construction	Pre-construction, Construction	**ODOT, WSDOT, and TriMet** will coordinate with USCG Captain of the Port and the USACE to prepare a Construction Sequencing Plan identifying changes to three navigation channels and the turning basin. The Plan will include all navigation channel restrictions or changes throughout construction of the new bridge and demolition of the existing bridge.
118	Navigation	Temporary	Closures and limited horizontal and vertical clearances to navigation channels and turning basin during construction	Pre-construction, Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to provide construction schedule and duration information, impacts to vertical navigation clearance and horizontal navigation clearance or other issues that may impact river users, as well as means to minimize impacts to navigation (e.g., maintaining an open channel, tug assists, etc.) to the USCG for a Local Notice to Mariners, which USCG will publish to provide information to river users prior to and during construction.
119	Navigation	Temporary	Closures and limited horizontal and vertical clearances to navigation channels and turning basin during construction	Construction	**ODOT and WSDOT** will coordinate with the contractor to make assist tug(s) available to support safe navigation when vertical or horizontal clearances are reduced and assistance is needed to safely navigate the restricted channel, as required.
120	Navigation	Temporary	Closures and limited horizontal and vertical clearances to navigation channels and turning basin during construction	Construction	**ODOT and WSDOT** will coordinate with USACE to enable passage of the Interstate Bridge by dredge(s) during construction to support upstream dredging missions.
121	Navigation	Temporary	Navigation community will need to be aware of waterway restrictions and construction activities	Construction	**ODOT, WSDOT, and TriMet** will conduct outreach to inform the navigation community, recreational boaters, and other river users of waterway restrictions and other construction activities that may restrict or otherwise change local navigation conditions via a variety of platforms, including local maritime publications.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
122	Navigation	Temporary	Presence of construction barges and equipment in and near the navigation channels	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to require all construction barges to have active Automatic Identification System signals, in compliance with 33 CFR § 164.46, and coordinate with NOAA and USACE to update published navigation charts for construction channel lines. (NOAA is required to provide nautical charts per the Coast and Geodetic Survey Act of 1947.)
123	Navigation	Temporary	Closures and limited horizontal and vertical clearances to navigation channels and turning basin during construction	Construction	**ODOT, WSDOT, and TriMet** will work with the USACE and the USCG to coordinate navigation channel restrictions and closures during construction with dam lock closures. Consider seasonal factors, such as the spring freshet (high-water, high velocity conditions) and annual agricultural harvests (transport of high freight volume), to the extent feasible.
124	Navigation	Long-Term	New bridges in a navigable waterway	Construction	**ODOT, WSDOT, and TriMet** will follow USCG requirements for visual aids when constructing the bridges and provide obstruction marking and lighting to make the river crossing structures visible to river traffic. Design roadway or accent lighting on the bridges and surrounding interchanges to limit light or glare that could affect river navigation.
125	Navigation	Long-Term	Vertical and horizontal navigation clearance for each navigation channel will change with the new Columbia River bridges	Post-construction	**ODOT and WSDOT** will coordinate with the USCG and USACE to update navigation charts and other navigation publications to reflect changes to vertical and horizontal navigation clearance for future river users.
126	Neighborhoods and Communities	Temporary	Disruption to vehicular traffic during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will use temporary signage, including variable message signs, to inform drivers of construction impacts or heavy equipment entering or leaving the roadway.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
127	**Neighborhoods and Communities** Economics	Temporary	Disruption to business operations during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will provide signs for local businesses impacted by construction to alert customers of their continued operation.
128	Neighborhoods and Communities	Temporary	Changes in active transportation routes and access during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will place communication and signage for temporary routes for pedestrians and biking. Efforts will be made for wayfinding signage to be accessible, consistent, thorough, and maintained.
129	Neighborhoods and Communities	Temporary	In-water activities near floating home communities during construction	Construction	For floating home communities, **ODOT and TriMet** will implement no wake zones, including appropriate signage for waterborne construction vessels.
130	Neighborhoods and Communities	Temporary	Displacement of people camping or occupying public rights-of-way during construction	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with local jurisdictions and other organizations to determine whether homeless persons living in the primary study area will be affected by construction activities and ensure that appropriate services are offered to people experiencing unsheltered homelessness in areas directly affected by construction activities.
131	Neighborhoods and Communities	Temporary	Removal of landscaping during construction	Post-construction	**ODOT, WSDOT, and TriMet** will restore removed landscaping on properties following construction or as otherwise agreed within the property rights process, consistent with local requirements.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
132	**Neighborhoods and Communities** Economics	Long-Term	New tolling implemented	Pre-construction	Toll rates and policies implemented on the existing Interstate Bridge (pre-completion tolling) and the replacement Columbia River bridges under the Amended Selected Alternative (long-term tolling) will be jointly set by the **Oregon Transportation Commission and the Washington State Transportation Commission**. At the direction of the commissions, all toll scenarios under consideration for the IBR Program assume a low-income discount. Formal action will be needed by the commissions in order to implement rates and policies, including discounts and exemptions. This will occur after the completion of tolling studies following the National Environmental Policy Act (NEPA) Record of Decision.
133	**Neighborhoods and Communities** Land Use	Temporary	Highway ramp and local street closures, detours, changes in access to businesses and neighborhoods during construction	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will hold community meetings and provide information to businesses, agencies, and community-based organizations within the greater Portland and Vancouver area before construction starts to inform residents of the construction timeline, relevant staging plans, ramp and road closures, and detour plans. ODOT, WSDOT, TriMet, and C-TRAN will make traffic advisories and updates available to the public to help make travel choices and a hotline will be provided for construction information.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
134	**Noise and Vibration** Cultural Resources	Temporary	Potential structural or architectural damage to historic properties from vibration during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to conduct continuous vibration monitoring for historic properties constructed with unreinforced masonry structural components within the vicinity of the construction footprint for the duration of Program preconstruction and construction activities, and will require the Noise and Vibration Monitoring Plan to document threshold limits, as well as requirements and protocols to achieve these limits specifically for historic properties (FTA 2018). If structural or architectural damage (such as cracked plaster, stucco, or tile) to historic properties occurs as a result of Program construction, **ODOT and WSDOT**, in coordination with FHWA and FTA, will notify the Washington State Department of Archaeology and Historic Preservation and/or Oregon State Historic Preservation Office, as appropriate, the other Consulting Parties, and the property owner, as appropriate, of the adverse effect on historic built environment properties, and then prepare a Treatment Plan to identify and determine any necessary repairs, consistent with the Secretary of the Interiors' Standards for the Treatment of Historic Properties.
135	Noise and Vibration	Temporary	Noise complaints during construction	Construction	**ODOT , WSDOT, TriMet, and C-TRAN** will evaluate and respond to noise complaints in accordance with the Noise and Vibration Monitoring Plan.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
136	Noise and Vibration	Temporary	Noise and vibration during construction	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will prepare a detailed construction noise and vibration assessment and construction specifications for construction noise and vibration. The construction noise and vibration assessment will include refined details on the type of equipment planned during construction, location of equipment, equipment usage and duration, and include all associated construction noise and vibration and related sources such as trucks traveling along designated haul routes. This assessment will provide predicted construction levels at all nearby land uses and fragile and historic buildings sensitive to noise and vibration, locations of predicted impacts, and avoidance, minimization, and mitigation recommendations. Data, analysis, and results of this assessment will be used to develop construction specifications for noise and vibration, construction noise and vibration monitoring and control plans to support IBR Program outreach and maintain compliance with ODOT Standard Specification for Construction (00290.32 Noise Control) and WSDOT's voluntary compliance with ODOT 00290.32 for work completed in Washington.
137	Noise and Vibration	Long-Term	Light-rail track operational noise	Construction	Light-Rail: **TriMet** will equip all light-rail track curves with a radius of less than 300 feet with wayside lubricators. After construction of the alignment, during the initial testing, if additional curves are identified with wheel squeal, TriMet will install wayside track lubricators, as necessary.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
138	Noise and Vibration	Long-Term	Light-rail track operational noise at site LRT-1	Construction	Interstate 5(I-5)/SR 14 Interchange - Light-Rail: **WSDOT, TriMet, and C-TRAN**, will install tall traffic safety barriers or sound barriers along the elevated structure to mitigate the noise impacts at site LRT-1, which represents the Normandy Apartments. A 4-foot acoustical absorptive wall or 6-foot reflective wall, extending above the top of rail, will be effective at reducing noise levels at this location by 7 to 10 A-weighted decibels (dBA).
139	Noise and Vibration	Long-Term	Light-rail operational vibration along direct fixation track way	Construction	I-5/SR 14 Interchange - Light-Rail: **WSDOT and TriMet** will use resilient rail fasteners to mitigate vibration impacts located along direct fixation track way. Receivers LRV-1 and LRV-2, with predicted levels of 72 velocity of vibration in decibels (VdB) and 76 VdB, respectively, will be the only locations where there is still a potential for vibration impact. WSDOT and TriMet will perform additional testing to confirm that the vibration levels at LRV-1 and LRV-2 will be below the 72 VdB and 75 VdB FTA vibration criteria.
140	Noise and Vibration	Long-Term	Traffic noise at Newport Apartments	Pre-construction	Portland Mainland - Highway: **ODOT** will coordinate with the contractor to design and construct Noise Wall 18, if confirmed via poll of benefited receptors.
141	Noise and Vibration	Long-Term	Traffic noise at residences (Noise Walls 4, 5, 6, 7, and 8) and offices within Fort Vancouver (Noise Wall 11A)	Pre-construction	Vancouver: **WSDOT** will coordinate with the contractor and local jurisdictions to conduct community outreach and poll of benefited receptors, design, and reconstruct existing noise walls Noise Wall 1, Noise Wall 2, Noise Wall 3, Noise Wall 4, Noise Wall 5, Noise Wall 6, Noise Wall 7, Noise Wall 8, and Noise Wall 11A. Design and construct Noise Wall 12, if confirmed via poll of benefited receptors.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
142	Noise and Vibration	Temporary	Exceedance of noise limits during construction	Construction	In the event that construction activities exceed the noise limits in Washington set forth in Table 2-10 of the Noise and Vibration Technical Report and local jurisdiction time restrictions, **WSDOT** will coordinate with the contractor to request a noise variance for approval from the local jurisdiction.
143	Noise and Vibration	Temporary	Noise associated with construction equipment and operations, and building equipment	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to comply with pertinent equipment noise standards of the U.S. Environmental Protection Agency (EPA) (EPA 1971).
144	Noise and Vibration	Temporary	Potential construction noise and structural or architectural damage to historic properties from vibration during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to prepare a Noise and Vibration Monitoring Plan to document the details of these requirements and associated protocols, including threshold limits specifically for historic properties.
145	Noise and Vibration	Temporary	Noise from construction activities in Portland Mainland and Portland/Hayden Island	Construction	Portland Mainland, Portland/Hayden Island: **ODOT and TriMet** will coordinate with the contractor to comply with applicable state and local agency noise ordinances and ODOT Standard Specification for Construction, § 00290.32 Noise Control (2024) in Portland.
146	**Noise and Vibration** Economics	Temporary	Potential structural or architectural damage from vibration during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require contractors to perform vibration monitoring at structures located in the vicinity of all construction areas, in accordance with the Noise and Vibration Monitoring Plan.
147	Noise and Vibration	Temporary	Noise from construction activities in Vancouver	Construction	Vancouver: **WSDOT** will coordinate with the contractor to comply with applicable state and local agency noise ordinance, including ODOT Standard Specification for Construction, § 00290.32 Noise Control (2024) in Vancouver, or project special provisions, for work completed in Washington.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
148	Parks and Recreation	Temporary	Potential disturbance or removal of trees in parks and recreation areas during construction	Construction	**ODOT and WSDOT** will coordinate with the contractor to comply with the City of Vancouver's tree conservation requirements (VMC 20.770.090, Tree, Vegetation, and Soil Protection During Construction), City of Portland's preservation standards for trees in development situations (PCC 11.50.040, Tree Preservation Standards), and City of Portland's Tree Plan requirements (PCC 11.50.020). Protect trees, to the extent practical, on park property that will be close to construction activities (as defined in PCC 11.60.030 and VMC 20.770.090), from adverse impacts as directed by the agency managing the park land (the cities of Vancouver, Portland, and Gresham; National Park Service [NPS]; Clark College; and Vancouver Public School District).
149	**Parks and Recreation** Section 4(f) Resources	Temporary	Ground disturbance of park features, including landscaping, during construction	Post-construction	**ODOT, WSDOT, and the contractor** will coordinate with Officials with Jurisdiction to restore park features, including landscaping to its original condition or better. New landscaping will include plants that are resilient or adaptive or in accordance with an established restoration plan.
150	Parks and Recreation	Temporary	Disruption of events at public parks and recreation facilities during construction	Construction	**ODOT and WSDOT** will coordinate with the contractor to schedule construction-related closures at public parks and recreation facilities to minimize effects on planned events, as feasible.
151	Parks and Recreation	Temporary	Restrictions on recreational trails in the Columbia River during construction	Construction	**ODOT, WDSOT, and TriMet** will provide notice to users of the recreational water trails in the Columbia River of temporary construction restrictions.
152	Parks and Recreation	Temporary	Access restrictions to, and temporary closures of, recreational fishing areas during construction	Construction	**ODOT, WSDOT, and TriMet** will notify recreational anglers of temporary access restrictions to fishing areas. ODOT and WSDOT will also consider other coordination efforts, including working with the WDFW and the ODFW to share closure information and distribute information at appropriate locations.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
153	Parks and Recreation	Temporary	Tree removal within parks and recreation areas	Pre-construction	Where trees will be removed from a park or recreation area, **ODOT and WSDOT** will coordinate with the appropriate jurisdiction to follow their current tree removal permitting process and tree replanting requirements of the PCC (Tree Replacement Requirements) and VMC (Tree, Vegetation, and Soil Plan Required), including location and type.
154	Parks and Recreation	Long-Term	Potential removal of recreational amenities within parks	Pre-construction, Construction	As coordinated with the park owners, **ODOT and WSDOT** will replace recreational amenities, such as sports facilities, on acquired park land or fund replacement of equivalent features in the same park or one nearby.
155	Parks and Recreation	Long-Term	Changes in the visual quality of a park or recreation area from project structures	Pre-construction	**ODOT and WSDOT** will explore retaining wall façade treatments adjacent to parks and recreation areas to improve the visual quality, where feasible.
156	**Parks and Recreation** Visual Quality	Long-Term	Changes in the visual quality of a park or recreation area from project structures	Construction	**ODOT and WSDOT** will screen portions of the Amended Selected Alternative from view within parks and recreation areas where feasible within Department of Transportation right of way.
157	**Public Services** Land Use	Temporary	Detours, increased delays, and traffic during construction affecting response times for mobile public services including police, fire, medical emergency, school transportation, and solid waste services	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will develop and implement a preconstruction communication plan, in coordination with affected emergency response groups and other public service agencies, detailing how detour and road closure information will be communicated to public service providers. ODOT, WSDOT, TriMet, and C-TRAN will incorporate measures into contract specifications to avoid and minimize interruptions to traffic flow and access during construction.
158	Public Services	Temporary	Changes in access to construction zones	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will communicate with emergency services about access points to construction zones as needed.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
159	Public Services	Temporary	Detours, increased delays, and traffic during construction affecting response times for mobile public services including police, fire, medical emergency, school transportation, and solid waste services	Pre-construction; Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will conduct outreach before and during construction to communicate construction detours and traffic routing plans to public service providers and the communities they serve. This will include notifying emergency service providers of any planned closures of lanes or detours for fire response and medical transport across the Columbia River, clearly identifying any alternate routes, and providing space for emergency use where feasible.
160	Section 4(f) Resources	Temporary	Parks access during construction	Construction	**ODOT and WSDOT** will keep all parks open and accessible during construction to the extent feasible.
161	Section 4(f) Resources	Temporary	Trails closure during construction	Construction	**ODOT, WSDOT, and TriMet** will provide detours for any trails closed by construction to the extent feasible.
162	**Section 4(f) Resources** Section 6(f) and Federal Lands to Parks (FLP) Resources	Temporary/ Long-Term	Use of Parkland	Post-construction	**WSDOT** will meet the Vancouver Parks, Recreation, and Cultural Services requirements identified in their responses to Section 4(f) and FLP Concurrence Letters signed September 11, 2025 (Final SEIS Appendix Q), to the extent feasible.
163	Section 6(f) and FLP Resources	Temporary	Construction activities at East Delta Park	Construction	**ODOT** will implement mitigation for temporary impacts to East Delta Park as detailed in the temporary non-conforming use document in Appendix P to the Final SEIS. If impacts to this park exceed those listed in the temporary non-conforming use document, then further coordination will be undertaken with the applicable federal, state and local agencies during design and construction.
164	Section 6(f) and FLP Resources	Temporary	Construction activities at East Delta Park	Construction	**ODOT** will confirm that the temporary construction work at the northwest edge of Delta Park will not exceed 180 days.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
165	**Section 6(f) and FLP Resources** Section 4(f) Resources	Long-Term	Implementation of the new shared use path within the Old Apple Tree Park	Post-construction	**WSDOT** will develop and execute an agreement with NPS and City of Vancouver confirming the new shared use path within Old Apple Tree Park is consistent with the existing park program while maintaining current ownership of the land.
166	**Section 6(f) and FLP Resources** Section 4(f) Resources	Long-Term	Transfer of the existing FLP property at Marshall Park	Pre-construction	To address FLP requirements at Marshall Park, **WSDOT** will develop and execute an agreement with FHWA, U.S. General Services Administration, and NPS to transfer existing FLP property to a different federal land conveyance program. WSDOT will also provide City of Vancouver funding to advance their park planning and improvements on a timeline that allows for the City's public involvement and an informed decision-making process.
167	Transportation	Temporary	Changes to local jurisdiction transportation facilities during construction	Construction	During construction activities, **ODOT, WSDOT, and TriMet, and C-TRAN** will comply with permit requirements for maintenance of traffic and with local permit requirements when local jurisdictional transportation facilities are impacted.
168	Transportation	Temporary	Regional travel impacts during construction	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will develop detailed construction plans and maintenance of traffic plans to address all affected transportation facilities and their modes of transportation. Plans will be prepared during subsequent design and construction phases. Plans will be developed to meet applicable agency standards. Plans will be coordinated with agencies with jurisdiction for review and applicable approvals.
169	Transportation	Temporary	Freight mobility and access impacts during construction	Construction	To minimize potential freight impacts during construction, **ODOT, WSDOT, TriMet, and C-TRAN** will communicate with the freight community and the public to notify them of closures or detours.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
170	Transportation	Temporary	Freight rail operations impacts during construction	Pre-construction	To minimize impacts to freight rail operations, **ODOT and WSDOT** will coordinate with the railroad owners and rail operators and will obtain all applicable required permits. Construction will be limited to the times approved and coordinated with freight rail operations.
171	Transportation	Temporary	Bridge opening and gate closure impacts during construction	Construction	**ODOT and WSDOT** will work with the USCG, the Ports, and other jurisdictions to minimize bridge openings and gate closures to overnight periods to lessen the impact to all transportation modes. ODOT and WSDOT will develop a construction plan that identifies available resources that could be used to inform the public of upcoming bridge openings and gate closures.
172	Transportation	Temporary	Local road closures, lane closures, traffic detours, and property access modifications and closures during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will comply with state and local regulations governing construction traffic control and construction truck routing associated with constructing the Amended Selected Alternative.
173	Transportation	Temporary	Transit operations impacts during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate the transit service and facility modifications to minimize temporary impacts and disruptions to bus and light-rail facilities and service during construction. ODOT, WSDOT, TriMet, and C-TRAN will also consider other potential strategies such as temporary transit priority treatments with the affected transit agencies during construction as feasible.
174	**Transportation** Economics	Temporary	Temporary closure of sidewalks, bicycle facilities, and/or shared -use paths or active transportation facility impacts during construction	Pre-construction, Construction	Contracting agencies, including **ODOT, WSDOT, TriMet, and C-TRAN**, will develop plans for, and implementation of, safe and accessible detour routes for active transportation users during construction to preserve access to businesses, transit, parks, and other destinations in the project area.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
175	Transportation	Temporary	Safety impacts during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will comply with their agency construction manuals, FHWA and FTA guidance, and related practices and procedures during construction.
176	Transportation	Temporary	Disruption to transportation demand management (TDM) and transportation system management (TSM) programs and operations during construction	Pre-construction	**ODOT and WSDOT** will coordinate construction, pre-completion tolling, and TDM/TSM with partner agencies to identify opportunities to minimize the severity of transportation effects during construction.
177	Transportation	Long-Term	Highway operations	Pre-construction	During Final Design, **ODOT and WSDOT** will further investigate opportunities to optimize freeway operations and safety in accordance with the Freeway Management and Operations Handbook (FHWA 2006) and other applicable laws and regulations for the Interstate. In addition, the IBR Program and partners will continue to look for opportunities beyond what the IBR Program already includes (i.e., variable-rate tolling, improved transit and active transportation systems, and enhanced TDM and TSM systems).
178	Transportation	Long-Term	Congestion at the southbound I-5 downstream bottleneck near the I-5/I-405 split in North Portland	Post-construction	**ODOT and WSDOT** will continue to work with regional and local agencies to assess the region's transportation issues, such as the southbound I-5 downstream bottleneck near the I-5/I-405 split in North Portland and identify potential solutions.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
179	Transportation	Long-Term	Congestion on the southbound I-5 collector-distributor roadway in Vancouver	Pre-construction	**ODOT and WSDOT** will consider potential mitigation measures to address congestion on the southbound I-5 collector-distributor roadway in Vancouver which could include demand reduction and system management strategies, or design-related enhancements such as braiding the Mill Plain on-ramp and SR 14 off-ramp and possibly providing a slip lane to continue providing access for trips traveling from the Mill Plain interchange to SR 14.
180	Transportation	Long-Term	Disruption to interchange operations at Marine Drive and I-5 Interchange	Pre-construction	As part of final design approval of the Marine Drive and I-5 interchange, **ODOT** will review interchange operations and conduct an updated traffic analysis in accordance with agency requirements to determine final design of the Marine Drive and I-5 interchange.
181	Transportation	Long-Term	Potential disruption to TriMet's light-rail transit (LRT) performance	Pre-construction	As the IBR Program continues with final design and transit operations planning, **ODOT, WSDOT, and TriMet** will coordinate to incorporate the Yellow Line LRT extension's operational plan, in conjunction with TriMet's ongoing system planning and Capital Investment Program. If the IBR Program's LRT frequencies are projected to degrade TriMet's LRT on-time performance, it will provide a proportionate financial share toward a separate TriMet Project to improve on-time performance at the Rose Quarter.
182	Utilities	Temporary	Disruption to broadband/fiber services during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to comply with current federal Dig Once laws (23 CFR § 645.307) and associated state regulations and guidelines, which require advanced coordination with the broadband/fiber industry to invite these providers to participate in highway improvement projects.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
183	Utilities	Temporary	Temporary service disruptions when utilities are relocated or protected in place during construction	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will contact utility providers during design to identify temporary facility needs and staging and sequencing provisions. Utilities will be protected in place where possible; where protection or preservation in place is not possible, the goal will be to relocate facilities only once to reduce service disruptions.
184	Utilities	Temporary	Interruption to fire flow during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will sequence construction to avoid interruptions to fire flow (the volume of water needed to control and extinguish a fire) to the extent possible. ODOT and WSDOT will coordinate with the Vancouver Fire Department and Portland Fire and Rescue to develop a plan for ensuring fire flow is maintained throughout construction to the extent possible, using temporary provisions as needed.
185	Utilities	Temporary	Interruption to fire flows during construction	Construction	If temporary interruptions to fire flows are unavoidable, **ODOT, WSDOT, TriMet, and C-TRAN** will provide additional details on the anticipated locations and durations of the disruptions to Vancouver Fire Department and Portland Fire and Rescue as soon as that information is available.
186	Utilities	Temporary	Disruption to sanitary sewer pump station at Columbia Street and Columbia Way during construction	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the utility providers to protect or preserve in place, to the extent feasible, the sanitary sewer pump station located at Columbia Street and Columbia Way near the Vancouver waterfront.
187	Utilities	Long-Term	Permanent relocation of utilities	Pre-construction	If relocation of utilities is unavoidable, **ODOT, WSDOT, TriMet, and C-TRAN** will develop or modify agreements with affected utility providers to specify the locations of utilities within the right of way, access and maintenance requirements, etc.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
188	Visual Quality	Long-Term	Visual quality changes to public gathering places, open spaces and urban environments	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the City of Vancouver, Port of Vancouver, and City of Portland to create or enhance public gathering places, open spaces, and urban environments, to the extent feasible, including: • Design the active transportation facility on the Columbia River bridges for a low-stress environment that prioritizes safety and offers designated refuge areas for pedestrians, cyclists, and other transportation users, where feasible. • Use "Crime Prevention Through Environmental Design" principles in the design of publicly accessible spaces to promote security (e.g., lighting in low-visibility areas such as under new bridge structures) and apply other related best management practices. • Coordinate with local agencies to encourage creating or enhancing spaces, events, or initiatives that activate open spaces and urban environments, including the Main Street extension to the river. • The final design should emphasize the visual quality of high foot traffic areas and community gathering places, including Terminal 1 and the Vancouver Waterfront, to the extent feasible. • Consider application of treatments to minimize unauthorized use of public rights of way, to the extent possible.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
189	Visual Quality	Long-Term	Introduction of new visual transit structural and architectural elements	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will design transit structural and architectural elements to be context sensitive including: • Design system-related signage and transit patron cues to be consistent with other transit system elements within respective systems. • Design the signal pole color, location, and style in accordance with the lighting district standards of the jurisdiction where the poles will be located. • Provide landscaping, public art, or other façade treatments for the walls of light-rail guideway structures, as feasible, in accordance with Program architectural guidance. • Design the park and rides to complement the surrounding development, to the extent feasible, in compliance with local regulations and in coordination with the City of Vancouver.
190	Visual Quality	Long-Term	Relocation of the Boat of Discovery art	Pre-construction	**ODOT and WSDOT** will coordinate the relocation of the Boat of Discovery art installation with the City of Vancouver, Port of Vancouver staff, the original artists, and/or donors.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
191	**Visual Quality** Neighborhoods	Long-Term	Changes in visual character due to new transportation infrastructure elements	Pre-construction	**ODOT and WSDOT** will develop guidance for architectural elements for the primary study area in consultation with local agencies, tribes, and IBR's advisory groups, including: • Design architectural features to be both aesthetically pleasing and blend with the surrounding community, to the extent feasible. • Consider minimization of structural bulk, to the extent feasible. • Consider natural light permeability with structure design, to the extent feasible. • Coordinate lighting under structures with local jurisdiction and I-5 lighting. • As applicable, design gateways in coordination with local plans, including designs for landscaping, wall treatments, and other IBR Program improvements. • Explore the incorporation of preserved bridgehead visual character elements into the final design. • Coordinate with the City of Vancouver and consider the Urban Design Desired Outcomes. • Coordinate with the City of Vancouver to integrate the design of the Evergreen Station, Community Connector, Library Square site, and the interface with the Historic Reserve, with the surrounding street network by applying the City of Vancouver's Draft Desired Outcomes and Guiding Principles for the Community Connector and Evergreen Station Area (COV 2024) to the extent feasible. • Coordinate with the City of Vancouver on the use and design of publicly accessible spaces in the waterfront area, including beneath the bridge approach and ramps, considering previous and ongoing community input.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
192	Visual Quality	Long-Term	Removal and disturbance of existing vegetation and landscaping during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to comply with the following applicable vegetation and tree mitigation requirements: • Install new vegetation, as soon as feasible. • Provide enhanced landscapes to integrate the facilities into the community to the extent feasible. • Within the ODOT and WSDOT right of way, maintain existing vegetation wherever possible, particularly between the Kanaka Village and SR 14 ramps. • Include plantings as visual screens in landscape plans, as feasible. • Consider matching Vancouver Land Bridge landscaping in new, adjacent landscaped areas, as feasible and appropriate.
193	Visual Quality	Long-Term	Disruption to the visual character from graffiti	Pre-construction	In partnership with the City of Vancouver, at applicable design gateways, **ODOT, WSDOT, TriMet, and C-TRAN** will develop designs and construct project elements with anti-graffiti elements, to the extent feasible and constructable.
194	Visual Quality	Long-Term	Disruption to visual character from graffiti	Pre-construction	In partnership with the City of Portland, **ODOT, WSDOT, and TriMet** will develop designs and construct project elements at Delta Park with anti-graffiti elements, to the extent feasible and constructable.
195	Water Quality and Hydrology	Temporary	Disruption to groundwater hydrology during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to minimize groundwater pumping in instances where construction activities must be conducted in the dry to allow proper installation of materials and visual inspections of completed work to avoid dewatering areas when practicable and minimize changes to groundwater hydrology.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
196	Water Quality and Hydrology	Temporary	In-water work activities affect water quality during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to conduct specified in-water work during approved periods for the Columbia River, as approved by WDFW, ODFW, NOAA Fisheries, and USFWS.
197	Water Quality and Hydrology	Temporary	Water contamination from construction equipment used during construction	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to stage construction equipment used for in-water work activities above the OHWM and will require construction equipment to use non-petroleum-based fluids, as feasible.
198	Water Quality and Hydrology	Temporary	Water turbidity during construction	Construction	In compliance with requirements of the 401 permits issued by the Oregon Department of Environmental Quality (DEQ) and Washington State Department of Ecology (Ecology), **ODOT, WSDOT, and TriMet** will coordinate with the contractor to monitor turbidity and provide a "rest" period to allow turbidity, if any, to dissipate between in-water work activities.
199	Water Quality and Hydrology	Long-Term	Rise in base flood elevation from changes within floodplains	Pre-construction	As design progresses, **ODOT, WSDOT, and TriMet** will conduct a detailed hydraulic analysis of the affected floodplains. If a rise in the base flood elevation is predicted, assess mitigation through floodplain excavation (cut/fill balance) activities within the footprint of the Amended Selected Alternative and determine whether additional land may be required to accomplish the required mitigation. Complete a Location Hydraulic Study to document the impacts, mitigation measures, evaluation of alternatives, and findings in accordance with the provisions of 23 CFR Part 650A.
200	Water Quality and Hydrology	Temporary	Potential for locating flood storage areas in habitat areas	Pre-construction	**ODOT, WSDOT, and TriMet** will continue to work with the City of Portland to confirm flood storage compensation does not jeopardize threatened and endangered species and designated critical habitats or unduly affect any other species or habitats of interest (revised Floodplain Development Code Chapter 24.50 "Flood Hazard Areas").

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
201	Water Quality and Hydrology	Long-Term	Base flood elevation increase	Construction	**ODOT, WSDOT, and TriMet** will offset potential rise in the base flood elevation through compensatory floodplain excavation (cut/fill balance) activities or through other approved mitigation strategies as determined through a Location Hydraulic Study.
202	Water Quality and Hydrology	Long-Term	Contaminated stormwater and changes in stormwater flow to the wellhead protection zone in the Burnt Bridge Creek watershed	Construction	For the wellhead protection zone in the Burnt Bridge Creek watershed, **ODOT and WSDOT** will provide stormwater treatment facilities for treatment of all Amended Selected Alternative-related runoff, such as providing underground injection control requirements, to the extent practicable, and stormwater facilities to manage stormwater volumes.
203	Water Quality and Hydrology	Long-Term	Contaminated stormwater runoff during operations	Post-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will prepare stormwater monitoring plan(s) to evaluate the long-term performance and effectiveness of the updated stormwater conveyance and treatment systems.
204	Water Quality and Hydrology	Temporary	Risk of flooding from increased flood heights or velocities due to project construction	Pre-construction	**ODOT,WSDOT, and TriMet** will coordinate with Cities of Portland and Vancouver to comply with special flood hazard area regulations.
205	Water Quality and Hydrology	Long-Term	Displacement of U.S. Geological Survey (USGS) stream gage 14144700	Construction	Through discussions with USGS Oregon Water Science Center, **ODOT and WSDOT** will relocate the USGS stream gage 14144700 Columbia River at Vancouver, Washington.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
206	**Water Quality and Hydrology** Ecosystems	Temporary	Water contamination from erosion and ground disturbance, and from pollutants in stormwater runoff during construction	Pre-construction, Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to prepare and implement an ESCP and stormwater pollution prevention plan (SWPPP) to minimize impacts associated with clearing, vegetation removal, grading, filling, compaction, or excavation. The BMPs identified in the ESCP and SWPPP will be used to control sediments in areas impacted by vegetation removal or ground-disturbing activities. Additional temporary control measures may be required beyond those described in the ESCP/SWPPP if it appears pollution or erosion may result from weather, nature of the materials, or progress on construction. For additional details, consult ODOT Standard Specifications 00280.00 to 00280.90 and WSDOT Temporary Erosion and Sediment Control Manual M3109.02.
207	**Water Quality and Hydrology** Ecosystems	Temporary	Water contamination from erosion and exposed soils during construction grading and vegetation removal	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to stabilize all exposed soils as directed in measures prescribed in the ESCP and SWPPP. The contractor will hydro-seed all bare soil areas following grading activities and revegetate all temporarily disturbed areas with native vegetation. For additional details, consult ODOT Standard Specifications 01030.00 to 01030.90 and WSDOT Temporary Erosion and Sediment Control Manual M3109.02.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
208	**Water Quality and Hydrology** Ecosystems	Temporary	Water contamination from soils exposed during construction grading and vegetation removal	Pre-construction	**ODOT, WSDOT, and TriMet** will require the contractor to include native plants and pollinator-friendly species, to the extent feasible and consistent with regulatory requirements and specifications, in the design of vegetative landscaping for restoration of areas that are temporarily disturbed.
209				Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to revegetate temporarily disturbed areas as soon as practicable in compliance with applicable regulatory requirements. For additional detail, consult ODOT Standard Specifications 01040.00 to 01040.90 and WSDOT Temporary Erosion and Sediment Control Manual M3109.02.
210	**Water Quality and Hydrology** Ecosystems	Long-Term	Water contamination from erosion of exposed soils	Post-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will maintain and monitor planted vegetation consistent with applicable regulatory and permit requirements. For additional detail, consult ODOT Standard Specifications 01040.00 to 01040.90 and WSDOT Temporary Erosion and Sediment Control Manual M3109.02.
211	Water Quality and Hydrology	Temporary	Material spills during in-water excavation during construction	Construction	If in-water excavation is required outside of a cofferdam, **ODOT, WSDOT, and TriMet** will coordinate with the contractor to use a clamshell bucket minimizing material spillage, within the established in-water work windows. Excavation, handling, and disposal of excavated materials will be conducted consistent with the requirements and conditions of the regulatory permits issued for the Amended Selected Alternative.
212	**Water Quality and Hydrology** Hazardous Materials	Temporary	Contaminated soil or groundwater during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to study, test, and remediate sites with existing soil or groundwater contamination adjacent to construction areas, as needed.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
213	**Water Quality and Hydrology** Hazardous Materials	Temporary	Contaminated stormwater runoff entering waterbodies during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to comply with all relevant water quality permit conditions for the treatment of stormwater runoff prior to discharge into receiving waters during construction.
214	**Water Quality and Hydrology** Hazardous Materials	Temporary	Spills and releases of hazardous materials and pollutants in stormwater runoff during construction	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to select, design, and implement water quality BMPs to comply with all federal, state, and local construction requirements issued through Clean Water Act Section 402, to reduce suspended solids, particulates, and dissolved metals and to treat newly identified pollutants like 6PPD-quinone.
215	**Water Quality and Hydrology** Hazardous Materials	Long-Term	Increased rate of stormwater runoff to waterbodies	Construction	**ODOT and WSDOT** will construct flow control facilities to infiltrate or reduce the flow rates of all primary study area runoff, pursuant to local regulatory requirements. Mitigation for increased runoff to the Columbia Slough or the Columbia River will not be required because these water bodies are exempt from stormwater quantity management.
216	**Water Quality and Hydrology** Hazardous Materials	Long-Term	Contaminated stormwater runoff during operations	Construction, Post-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will treat stormwater runoff through approved bioretention BMPs, such as ponds/planters, biofiltration swales, bioslopes, and/or media filter drains that provide water quality treatment via infiltration through a phosphorus-free, compost-amended soil medium and/or vegetation.
217	**Water Quality and Hydrology** Hazardous Materials	Long-Term	Potential increase in pollutants in stormwater and surface water	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will design advanced and effective water quality treatment facilities in accordance with each jurisdiction's specifications, such as Ecology's Technology Assessment Protocol program (Washington), the 2025 Stormwater Management Manual (Portland), and City of Vancouver's Surface Water Management Program.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
218	Water Quality and Hydrology	Long-Term	Contaminated stormwater runoff entering waterbodies during operations	Post-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will comply with their stormwater management requirements, and the City of Portland and City of Vancouver regulations for the portions of the Amended Selected Alternative along City-managed roads, for the long-term treatment of stormwater runoff prior to discharge into receiving waters.
219	Water Quality and Hydrology	Long-Term	Spills and releases of hazardous materials and pollutants in stormwater runoff during operations	Construction	**ODOT, WSDOT, TriMet, and C-TRAN** will comply with all federal, state, and local regulatory requirements and municipal stormwater permit requirements issued through Clean Water Act Section 402, to reduce suspended solids, particulates, and dissolved metals; and to treat newly identified pollutants like 6PPD-quinone.
220	**Water Quality and Hydrology** Hazardous Materials Ecosystems	Temporary	Release of hazardous materials from a spill during construction	Pre-construction	**ODOT, WSDOT, TriMet, and C-TRAN** will require the contractor to prepare an SPCC plan prior to beginning construction, implement the SPCC plan, and have the SPCC plan available at the project site at all times. This plan will be provided to Ecology in Washington and DEQ in Oregon for review and approval. The SPCC plan will identify the appropriate spill containment materials, as well as the means and methods of implementation, response, and reporting in the event of a spill. Any modifications to the SPCC plan during construction will be provided to ODOT, WSDOT, Ecology, and DEQ for review and approval. For additional details, consult ODOT Standard Specification 00290.00 to 00290.90 and WSDOT Standard Specification 1-07.15.
221	Wetlands and Other Waters	Temporary	Ground disturbance in or around wetlands during construction	Pre-construction	In accordance with local and state standards, **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to implement appropriate high visibility/exclusionary fencing around avoided wetlands and other waters prior to the start of construction.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
222	Wetlands and Other Waters	Temporary	Sediment disturbance and erosion during construction	Construction	In accordance with local and state standards, **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to implement BMPs for sediment and erosion control procedures during construction activities.
223	Wetlands and Other Waters	Temporary	Vegetation removal during construction	Post-construction	At the end of construction, **ODOT, WSDOT, TriMet, and C-TRAN** will coordinate with the contractor to replace vegetation temporarily cleared for construction activities in accordance with local, state regulatory guidance or property agreements.
224	Wetlands and Other Waters	Temporary	Disturbing waters with in-water construction activities	Construction	**ODOT, WSDOT, and TriMet** will coordinate with the contractor to avoid restricted work outside of the in-water work window as identified in the Biological Opinion, and federal, state, and local permits.
225	Wetlands and Other Waters	Temporary	Wetland disturbance during construction	Pre-construction	**ODOT and WSDOT** will offset unavoidable temporary impacts that cannot be minimized through BMPs or restored on site, through the purchase of credits from a mitigation bank or Permittee Responsible Mitigation, similar to mitigation used for certain long-term effects. The total unavoidable temporary impacts and the required compensatory mitigation will be determined through the permitting process.
226	Wetlands and Other Waters	Temporary	Wetland disturbance during construction	Pre-construction	**ODOT and WSDOT** will avoid and minimize short-term, temporary impacts to wetland resources in final design to the extent practicable.
227	Wetlands and Other Waters	Temporary	Wetland and wetland buffer habitat disturbance during construction	Post-construction	At the end of the applicable construction activities, **ODOT, WSDOT, and TriMet** will coordinate with the contractor to restore temporarily disturbed wetland and wetland buffer habitats consistent with applicable regulatory requirements.

Item #	Resource Area	Temporary or Long-Term Effect	Impact Type	Mitigation Timing	Avoidance, Minimization, and Mitigation Measures
228	Wetlands and Other Waters	Long-Term	Filling or removing material in wetlands and other waters of the U.S. and state	Pre-construction	**ODOT and WSDOT** will advance the design of the Amended Selected Alternative consistent with the applicable federal, state, and local agency regulatory mitigation related to filling or removing material in wetlands and other waters of the U.S. and state.
229	Wetlands and Other Waters	Long-Term	Loss of wetland and waters functions and values	Post-construction	**ODOT and WSDOT** will continue to evaluate mitigation actions to offset losses of wetland and waters functions and values, including wetland buffers, as the Amended Selected Alternative design progresses.
230				Pre-construction	**ODOT and WSDOT** will identify agency-approved compensatory mitigation banks and potential Permittee Responsible Mitigation sites in both Oregon and Washington to help fulfill the compensatory requirements for permanent, temporary, and indirect impacts.
231				Pre-construction	**ODOT and WSDOT** will prepare a compensatory mitigation plan that satisfies applicable federal, state, and local regulatory requirements, and that demonstrates no net loss of function and values of wetland and waters resources
232				Pre-construction	**ODOT and WSDOT** will comply with increased wetland mitigation ratios as prescribed by the regulatory agencies during the permitting process for unavoidable impacts to Vanport Wetlands from the Expo Road improvements on mainland Oregon. Increased mitigation ratios are not known at this time and will be dictated by the regulatory agencies during the permitting process.

Key: AC = Advisory Circular; BMPs = best management practices; CFR = Code of Federal Regulations; C-TRAN = Clark County Public Transit Benefit Area Authority; dBA = A-weighted decibels; DEQ = Oregon Department of Environmental Quality; Ecology = Washington State Department of Ecology; EPA = U.S. Environmental Protection Agency; ESA = Environmental Site Assessment; ESC = erosion and sediment control; ESCP = erosion and sediment control plan; FAA = Federal Aviation Administration; FHWA = Federal Highway Administration; FLP = Federal Lands to Parks; FTA = Federal Transit Administration; HBMS = hazardous building materials survey; I- = Interstate; LPA = Locally Preferred Alternative; LRT = light-rail transit; MBTA = Migratory Bird Treaty Act; mm = millimeters; NEPA = National Environmental Policy Act; NOAA = National Oceanic and Atmospheric Administration; NPS = National Park Service; ODOT = Oregon Department of Transportation; ODFW = Oregon Department of Fish and Wildlife; OHWM = ordinary high water mark; ORS = Oregon Revised Statutes; OAR = Oregon Administrative Rules; PCC = Portland City Code; PCP = pollution control plan; REC = recognized environmental condition; RCW = Revised Code of Washington; SEIS =

Supplemental Environmental Impact Statement; SPCC = spill prevention, control, and countermeasure; SR = State Route; TDM = transportation demand management; TriMet = Tri-County Metropolitan Transportation District of Oregon; TSM = transportation system management; VdB = velocity of vibration in decibels; USACE = U.S. Army Corps of Engineers; USCG = U.S. Coast Guard; USFWS = U.S. Fish and Wildlife Service; USGS = U.S. Geological Survey; U.S.C. = United States Code; URA = Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended; VMC = Vancouver Municipal Code; WAC = Washington Administrative Code; WDFW = Washington Department of Fish and Wildlife; WQMPP = Water Quality Monitoring and Protection Plan; WSDOT = Washington State Department of Transportation

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