Columbia River CROSSING

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TRANSMITTAL

DATE: 4/5/13

TO: Randall Overton
Bridge Administrator
Thirteenth Coast Guard District
915 Second Avenue
Seattle, WA 98174-1067

FROM: Heather Wills, CRC Environmental Manager

SUBJECT: Re-submittal: Narrative Responses to Bridge Permit Application Guide

COPY: Document Control

☒ **AS YOU REQUESTED** ☐ **FOR YOUR APPROVAL** ☐ **RETURN REQUESTED**

☐ **FOR YOUR INFORMATION** ☐ **RECORDS MANAGEMENT** ☐ **FOR YOUR USE**

This submittal is an item by item response to the Bridge Permit Application Guide. The majority of the items were included in some form in the original submittal, but is now pulled out into the main body of this document. A response that includes any new information is highlighted in red. In some cases, this may just be a new attachment or a non applicable response. Each item is summarized and a reference to additional information provided right in this document. This submittal includes the following items:

ITEM	COPIES	DESCRIPTION
Binder 1	**1**	**Hard copy of Narrative Responses to Bridge Permit Application Guide**
Binder 2	**1**	**Attachments A through D, F through I** • **A: Revised Plan Set** • **B: Marine Facility Data** • **C: Emergency, National Defense and Channel Maintenance Vessel Information** • **D: Proof of Ownership** • **F: Water Quality Proof of Application** • **G: EPA Comments on DEIS and CRC Reponses** • **H: EPA comments on FEIS and CRC responses** • **I: Troutdale SSA report**

Binder 3	**1**	**Attachments J through N, O through R** • **J: FEMA FIRMette** • **K: Section 106 MOA** • **L: Wetlands Technical Report** • **N: 2010 concurrence letter USFWS** • **O: Letter of Request for Reinitiation-NMFS** • **P: NMFS Reinitiation Documents** • **Q: Indirect Effects Technical Report** • **R: Cumulative Effects Technical Report**
Binder 4	**1**	**Attachment S, Cultural Resource Assessment Binder 1**
Binder 5	**1**	**Attachment S, Cultural Resource Assessment Binder 2**
Binder 6	**1**	**Attachment E, Real Estate Acquisition Management Plan**
Binder 7	**1**	**Attachment M, Project Biological Assessment, June 24, 2010**
CD	**1**	**CD of all re-submittal materials**

This submittal addresses the following items from the March 8, 2013 letter from the USCG to WSDOT and ODOT:

- Letter, "Issues of particular importance," item (d) "Technical/Administrative Requirements."
- Enclosure document, "The application did not contain a Wetlands Finding, but indicated that the project may impact wetlands. Anticipated wetlands impacts must be provided."
- Enclosure document, "The Biological Opinion, issued 19 January 2011, regarding Fish and Wildlife impacts, did not include consultation for Eulachon or Lower Columbia River Coho Salmon. The application must include a Biological Opinion for these species as well."
- Enclosure document, "Provide a copy of the application for the Washington State Water Quality." A CD of this application was provided on March 19, 2013 under separate cover.
- Enclosure document, "Additional administrative items are needed on the plan sheets per the Bridge Permit Application Guide. My bridge staff will provide these items under separate cover or during a meeting with your staff."

This re-submittal package includes:

- Item-by-item narrative response to the USCG Bridge Permit Application Guide (BPAG)
    - This document addresses each request or requirement in the BPAG *Section 2A The Application Package*, *Section 2B Plan Sheets*, and *Section C Environmental Documentation Requirements*.
    - After each item requested in the BPAG, there is an "Applicant's Response" that generally includes a "Reference" and a "Summary." The "Reference" section describes where in the initial submittal and/or this re-submittal that the reader can find the information to address that item. The "Summary" section summarizes, repeats, or provides new information of the response to the item requested.
    - "Applicant's Responses" that are a re-statement of information that is in the initial submittal package are shaded in green. "Applicant's Responses" where new information is provided or referenced are shaded in red.

    - In some places, the "Applicant's Response" will refer to information that has not yet been provided to the USCG. In these cases, the information will be provided to the USCG as part of the additional documents to address items (a-c) under the "Issues of particular importance" and the other bullet points on the enclosure document.
- Attachments A through S. These attachments are new information that was not included in the initial application submittal. References to these attachments are made in the "Reference" sections of the "Applicant's Responses."

Please do not hesitate to contact me at 360-816-2199 if you have any questions or need additional information.

RESPONSE TO US COAST GUARD GENERAL BRIDGE PERMIT APPLICATION GUIDE

Columbia River CROSSING

April 2013

OFFICE OF BRIDGE PROGRAMS, U.S. COAST GUARD

Bridge Permit Application Guide

U.S. Department of Homeland Security

United States Coast Guard

COMDTPUB P16591.3C
OCTOBER 2011

Promulgation Letter

U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

2100 2ND Street, SW, STOP 7580
Washington, DC 20593-7580
COMDT (CG-551)
Phone: (202) 372-1511
Fax: (202) 372-1992

COMDTPUB P16591.3C
OCT 17, 2011

COMMANDANT PUBLICATION P16591.3C

Subj: BRIDGE PERMIT APPLICATION GUIDE

1. PURPOSE. This manual has been prepared to assist Federal, State and local agencies, as well as members of the general public, when applying for a Coast Guard permit to construct a new bridge or causeway or reconstruct or modify an existing bridge or causeway across the navigable waters of the United States.

2. ACTION. All Coat Guard unit commanders, commanding officers, officers-in-charge, deputy/assistant commandants, and chiefs of headquarters staff elements shall comply with the provisions of this manual. Internet release is authorized.

3. DIRECTIVES AFFECTED. This Publication supersedes the previous Bridge Permit Application Guide, COMDTPUB P15691.3B.

4. DISCUSSION. Federal law prohibits the construction of any bridge across the navigable waters of the United States unless first authorized by the Coast Guard. This manual shall be provided to State or local agencies who routinely apply for bridge permits and to other prospective applicants when requested through the Internet. If the procedures described in this manual are followed, it will expedite the permitting process. Questions regarding a specific project should be directed to the Bridge Program staff of the Coast Guard district where the project is located.

5. SUMMARY OF CHANGES.
   a. There have been many minor changes incorporated into this edition of the Bridge Permit Application Guide. A significant portion of the introductory/background information has been removed and will now be available solely on the Commandant (CG-551) website (http://www.uscg.mil/hq/cg5/cg551/). A significant change is the previous guide section which identified the information required for a letter of application, including a sample

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		*X																							

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letter, was deemed repetitive. The sample letter has been removed and the section on the application package requirements has been updated. Also moved to the Commandant (CG-551) website is the glossary, lighting guide and guide clearance information, along with the district map and contact info.

b. The document attached herein provides all the necessary information for an applicant to apply for a Coast Guard bridge permit. The guide is now broken down into two sections, the Introduction and the Permit Application. The permit application section is further broken down into three subsections: The Application Package, Plan Sheet Requirements and Environmental Document Requirements. Overall the Guide provides policy guidance and clarification on program implementing procedures and numerous editorial and format changes.

6. RECORDS MANAGEMENT CONSIDERATIONS. This Manual has been thoroughly reviewed during the directives clearance process, and it has been determined there are no further records scheduling requirements, in accordance with Federal Records Act, 44 U.S.C. 3101 et seq., NARA requirements, and Information and Life Cycle Management Manual, COMDTINST M5212.12 (series). This policy does not have any significant or substantial change to existing records management requirements.

7. ENVIRONMENTAL ASPECTS AND IMPACT CONSIDERATION.

a. The development of this directive and the general policies contained within it have been thoroughly reviewed by the originating office and are categorically excluded (CE) under current USCG CE #33 from further environmental analysis, in accordance with Section 2.B.2. and Figure 2-1 of the National Environmental Policy Act Implementing Procedures and Policy for Considering Environmental Impacts, COMDTINST M16475.1 (series).

b. This directive will not have any of the following: significant cumulative impacts on the human environment; substantial controversy or substantial change to existing environmental conditions; or inconsistencies with any Federal, State, or local laws or administrative determinations relating to the environment. All future specific actions resulting from the general policies in this Manual must be individually evaluated for compliance with the National Environmental Policy Act (NEPA), Council on Environmental Policy NEPA regulations at 40 CFR Parts 1500-1508, DHS and Coast Guard NEPA policy, and compliance with all other environmental mandates.

8. FORMS/REPORTS. None.

D.A. Goward /s/
Director, Marine Transportation
Systems Management

Table of Contents

SECTION 1. INTRODUCTION TO THE PERMITTING PROCESS

The Coast Guard approves the location and plans of bridges and causeways and imposes any necessary conditions relating to the construction, maintenance, and operation of these bridges in the interest of public navigation. A bridge permit is the written approval of the location and plans of the bridge or causeway to be constructed or modified across a navigable waterway of the United States. Any individual, partnership, corporation, or local, state, or federal legislative body, agency, or authority planning to construct or modify a bridge or causeway across a navigable waterway of the U.S. must apply for a Coast Guard bridge permit in accordance with 33 CFR 115.50.

Additional information regarding Coast Guard permitting can be found online at http://www.uscg.mil/hq/cg5/cg551/default.asp Federal law prohibits the construction of these structures unless the Coast Guard first authorizes them. By following the procedures in this publication the Coast Guard can efficiently process a bridge permit application.

This guidance is not a substitute for applicable legal requirements, nor is it itself a rule. It is not intended to nor does it impose legally-binding requirements on any party. It represents the Coast Guard's current thinking on this topic and may assist industry, mariners, the general public, and the Coast Guard, as well as other federal and state regulators, in applying statutory and regulatory requirements. You can use an alternative approach for complying with these requirements if the approach satisfies the requirements of the applicable statutes and regulations. If you want to discuss an alternative approach (you are not required to do so), you may contact the District Commander who is responsible for implementing this guidance.

SECTION 2. PERMIT APPLICATION

The Coast Guard bridge permitting process is directed by laws, policies, professional standards, and other requirements. This chapter is a guide to help you through the bridge permit application process. Additional information may be found at 33 CFR, Parts 114 and 115.

(Note to reader: Text from the USCG General Bridge Permit Application Guide is in* non-italicized black font; *the Applicant's Response is in italicized blue font with a green or red background. The Applicant's Responses that are a re-statement of information that is in the initial submittal package are shaded in green. "Applicant's Responses" where new information is provided or referenced are shaded in red.

A. THE APPLICATION PACKAGE

The application package consists of a cover letter, permit plans, and an environmental evaluation. A checklist for each of these portions of the application follows this section.

1. Per 33 CFR 1115.50(k), when you apply for a bridge permit, submit an application package to the cognizant Coast Guard District Bridge Office which has jurisdiction over the area of the proposed bridge site.

Applicant's Response:

The application was submitted January 30th, 2013, to the Coast Guard District 13 Office in Seattle, which has jurisdiction over the proposed bridge site.

2. Format the application cover letter as shown below.

Applicant's Response:

A cover letter was included with the application package. Below is the applicant's response to each of the items that the USCG requests in the Bridge Permit Application Guide.

Salutation (i.e. Dear Sir;)
Application is hereby made for a Coast Guard Bridge Permit.

a. Applicant information:

    1) Name;

    2) Address;

    3) Telephone number; and

    4) Email address.

Applicant's Response:

Reference:

This information is located in the cover letter on page 5.

Summary:

1) **Oregon Department of Transportation and Washington State Department of Transportation**

2) **Columbia River Crossing Project**
700 Washington Street, Suite 300
Vancouver, Washington 98660

3) **360-737-2726**

4) **willsh@columbiarivercrossing.com**

b. Consultant/Agent information (if employed):

1) Name;

2) Address;

3) Telephone number; and

4) Email address.

Applicant's Response:

The Oregon Department of Transportation and Washington State Department of Transportation are the project applicants. There is no consultant/agent on this application.

c. Proposed Bridge(s):

1) Lead federal agency for environmental review

Applicant's Response:

Reference:

This information is located in the cover letter on page 8.

Summary:

Federal Highway Administration and Federal Transit Administration

2) Name of the waterway that the bridge crosses

Applicant's Response:

Reference:

This information is located in the cover letter on page 5.

Summary:

Columbia River

3) Number of miles above the mouth of the waterway where the bridge is located and provide latitude and longitude at centerline of navigation channel (contact the local Coast Guard Bridge Office for guidance);

Applicant's Response:

Reference:

This information is located in the cover letter on page 7.

Summary:

The existing and replacement Columbia River bridges are located at approximately RM 106 of the Columbia River at 45.6167 latitude and -122.6750 longitude.

4) City or town, county, and state where the bridge is located at, near, or between;

Applicant's Response:

Reference:

This information is located in the cover letter on page 5.

Summary:

Portland, Multnomah, Oregon and Vancouver, Clark, Washington.

5) Brief description of project to include type of bridge proposed and existing bridge at project site, if applicable;

Applicant's Response:

Reference:

This information is located in the cover letter on pages 5-7.

Summary:

The Project, as described in the National Environmental Policy Act (NEPA) Record of Decision (ROD), includes multimodal transportation improvements within a 5-mile corridor between Portland, Oregon, and Vancouver, WA, as well as ancillary

transportation improvements outside this corridor. The ROD describes the locally preferred alternative (LPA) to include:

- **A new river crossing over the Columbia River and I-5 highway improvements.**
- **Improvements to seven interchanges, from south to north: Victory Boulevard, Marine Drive, Hayden Island, SR 14, Mill Plain, Fourth Plain and SR 500. Related enhancements to the local street network.**
- **Three new structures over North Portland Harbor associated with I-5, and one new multimodal bridge carrying light rail transit (LRT), local traffic, pedestrians and bicyclists.**
- **Removal of the existing Columbia River structures.**
- **A variety of bicycle and pedestrian improvements throughout the project corridor. A multiuse path connecting to the existing system. The path will allow users to travel from north Portland, over Hayden Island and the Columbia River into downtown Vancouver.**
- **Extension of LRT from the Expo Center in Portland to Clark College in Vancouver and associated transit improvements. Transit stations will be built on Hayden Island, in downtown Vancouver, and a terminus near Clark College. Three park and rides are to be built, Columbia (near the SR 14 interchange), Mill (in uptown Vancouver) and Central (near Clark College). Improvements will be made to the tracks on the Steel Bridge. Also, bus route changes and the expansion of the Ruby Junction LRT maintenance facility.**
- **Transportation demand and system management measures to be implemented with the project, including the use of tolls, subject to the authority of the Washington and Oregon Transportation Commissions.**

The construction of the Project will be phased. In the first phase, WSDOT and ODOT will build the Initial Construction Phase (ICP), which includes the Columbia River bridge, three of the North Portland Harbor bridges, light rail transit, bike and pedestrian improvements, and interstate highway and related local street improvements beginning at the I-5/Victory Boulevard interchange in Portland, Oregon, extending north to the I-5/Fourth Plain Boulevard interchange in Vancouver, Washington. This covers an approximately 3.5-mile section of the I-5 corridor. The ICP includes the following elements:

- **Two new, parallel, mid-level structures over the Columbia River. The bridge will carry I-5 traffic, light rail transit, bicyclists, and pedestrians.**
- **I-5 highway improvements, including improvements to five interchanges, as well as associated enhancements to the local street network.**

Two new structures over North Portland Harbor associated with I-5, and one new multimodal bridge carrying light rail transit, local traffic, pedestrians, and bicyclists.1

Extension of light rail from the Expo Center in Portland to Clark College in Vancouver, and associated transit improvements, including transit stations, park and rides, bus route and station changes, and expansion of a light rail transit maintenance facility.

Bicycle and pedestrian improvements throughout the project corridor that connect to the transit system.

Minor track system and electrical upgrades and modifications on the Steel Bridge and modifications to the transit command center, both of which are located in Portland outside the 5-mile CRC corridor.

Purchase of 19 light rail vehicles, public art and other transit-related procurements.

Toll system for the river crossing.

Transportation demand and system management measures to be implemented with the project.

At its northern end, the project area extends west into downtown Vancouver and east to near Clark College to include the light rail transit alignment, transit stations, park and ride locations, and city road improvements included as part of this project. On the Oregon mainland, the project area extends east of I-5 to include local street improvements along Victory Boulevard, and west of I-5 to include local street improvements and the light rail extension from the Expo Center.

The new bridge across the main stem of the Columbia River will be downstream (to the west) of the existing Interstate Bridge (the existing Interstate Bridge, which will be replaced, consists of two parallel structures, one built in 1917 and one in 1958). The new structures will be approximately 15 feet apart (at the superstructure), and each will range from approximately 91 to 136 feet wide. The over-water length of each new mainstem bridge will be approximately 2,700 feet. The existing and replacement Columbia River bridges are located at approximately RM 106 of the Columbia River at 45.6167 latitude and -122.6750 longitude.

The proposed Columbia River mainstem crossing design will include two dual-level bridge structures. The western (downriver) structure will carry southbound I-5 traffic on the top deck, with light rail on the lower deck. The eastern structure will carry northbound I-5 traffic on the top deck, with bicycle and pedestrian traffic on the lower deck.

The new Columbia River bridge will include six in-water pier complexes of two piers each, for a total of 12 in-water piers. Each pier will consist of up to six 10-foot-diameter

[1] This permit application is requesting approval for the construction of the bridges over the main stem of the Columbia River only. This permit application is not requesting approval for the construction of new bridges over North Portland Harbor (Oregon Slough) at this time. A permit modification request for the North Portland Harbor (NPH) bridges will be submitted subsequently (likely in 2014) and the modified application will request approval for the bridges in the ICP that cross NPH.

drilled shafts topped by a shaft cap. In-water pier complexes are labeled pier 2 through pier 7, beginning on the Oregon side. Pier complex 1 is on land in Oregon and pier complex 8 is on land in Washington. Portions of pier complex 7 occur in shallow water (less than 20 feet deep). Piers are designed to withstand the design scour without armor-type scour protection (e.g., riprap).

The new Columbia River bridge will replace the existing Interstate Bridge, which currently carries I-5 traffic and bicycles and pedestrians. The superstructures of the existing Interstate Bridge (which consists of two parallel structures) comprise 11 pairs of steel through-truss spans with reinforced concrete decks, including one pair of movable spans over the primary navigation channel and one pair of 531-foot-long span trusses. The remaining nine pairs of trusses range from 265 feet to 275 feet in length. In addition to the trusses, there are reinforced concrete approach spans (over land) on either end of the existing bridge. The existing Columbia River bridge is functionally obsolete (i.e., the existing configuration does not meet current bridge standards and traffic demand). Raising the lift spans on the existing structures for river traffic and maintenance causes automobile, bicyclist and pedestrian traffic delays and impacts highway safety. Each of the existing structures has three lanes, substandard shoulders, and a bicycle and pedestrian sidewalk that does not meet current Americans with Disabilities Act accessibility standards.

4) Purpose and need of project;

Applicant's Response:

Reference:

This information is located in the cover letter on pages 9-10.

Summary:

The Purpose and Need statement developed by the lead agencies, project sponsors, and CRC Task Force is provided below.

The purpose of the proposed action is to improve I-5 corridor mobility by addressing present and future travel demand and mobility needs in the CRC Bridge Influence Area (BIA). The BIA extends from approximately Columbia Boulevard in the south to SR 500 in the north. Relative to the No-Build Alternative, the proposed action is intended to achieve the following objectives: a) improve travel safety and traffic operations on the I-5 crossing's bridges and associated interchanges; b) improve connectivity, reliability, travel times, and operations of public transportation modal alternatives in the BIA; c) improve highway freight mobility and address interstate travel and commerce needs in the BIA; and d) improve the I-5 river crossing's structural integrity (seismic stability).

The specific needs to be addressed by the proposed action include:

- **Growing travel demand and congestion: Existing travel demand exceeds capacity in the I-5 Columbia River crossing and associated interchanges. This corridor experiences heavy congestion and delay lasting 4 to 6 hours daily during the morning and afternoon peak travel periods and when traffic**

accidents, vehicle breakdowns, or bridge lifts occur. Due to excess travel demand and congestion in the I-5 bridge corridor, many trips take the longer, alternative I-205 route across the river. Spillover traffic from I-5 onto parallel arterials such as Martin Luther King Jr. Boulevard and Interstate Avenue increases local congestion. In 2005, the two crossings carried 280,000 vehicle trips across the Columbia River daily. Daily traffic demand over the I-5 crossing is projected to increase by more than 35 percent during the next 20 years, with stop-and-go conditions increasing to approximately 15 hours daily if no improvements are made.

- **Impaired freight movement: I-5 is part of the National Truck Network, and the most important freight highway on the West Coast, linking international, national and regional markets in Canada, Mexico and the Pacific Rim with destinations throughout the western United States. In the center of the project area, I-5 intersects with the Columbia River's deep water shipping and barging as well as two river-level, transcontinental rail lines. The I-5 crossing provides direct and important highway connections to the Port of Vancouver and Port of Portland facilities located on the Columbia River as well as the majority of the area's freight consolidation facilities and distribution terminals. Freight volumes moved by truck to and from the area are projected to more than double over the next 25 years. Vehicle-hours of delay on truck routes in the Portland-Vancouver area are projected to increase by more than 90 percent over the next 20 years. Growing demand and congestion will result in increasing delay, costs and uncertainty for all businesses that rely on this corridor for freight movement.**
- **Limited public transportation operation, connectivity, and reliability: Due to limited public transportation options, a number of transportation markets are not well served. The key transit markets include trips between the Portland Central City and the city of Vancouver and Clark County, trips between north/northeast Portland and the city of Vancouver and Clark County, and trips connecting the city of Vancouver and Clark County with the regional transit system in Oregon. Current congestion in the corridor adversely impacts public transportation service reliability and travel speed. Southbound bus travel times across the bridge are currently up to three times longer during parts of the a.m. peak compared to off-peak. Travel times for public transit using general purpose lanes on I-5 in the BIA are expected to increase substantially by 2030.**
- **Safety and vulnerability to incidents: The I-5 river crossing and its approach sections experience crash rates more than 2 times statewide averages for comparable facilities. Incident evaluations generally attribute these crashes to traffic congestion and weaving movements associated with closely spaced interchanges and short merge distances. Without breakdown lanes or shoulders, even minor traffic accidents or stalls cause severe delay or more serious accidents.**
- **Substandard bicycle and pedestrian facilities: The bike/pedestrian lanes on the I-5 Columbia River bridges are about 3.5 to 4 feet wide, narrower than the 10-foot standard, and are located extremely close to traffic lanes, thus impacting**

safety for pedestrians and bicyclists. Direct pedestrian and bicycle connectivity are poor in the BIA.

- **Seismic vulnerability: The existing I-5 bridges are located in a seismically active zone. They do not meet current seismic standards and are vulnerable to failure in an earthquake.**

5) Estimated cost of bridge and approaches;

a) Provide the estimated cost of the bridge as proposed, with required vertical and horizontal navigational clearances.

Applicant's Response:

Reference:

This information is located in the cover letter on page 8.

Summary:

The estimated cost of the Columbia River bridge and approaches is $1.2 billion. The full cost of the project is $3.1 to $3.4 billion for all the improvements identified in the LPA and selected in the ROD. This includes removal of the existing bridge.

b) Provide the estimated cost of a low level bridge on the same alignment with only sufficient clearance to pass high water while meeting the intended purpose and need.

Applicant's Response:

Reference:

The original application noted on page 8 of the cover letter that this information was not applicable.

Summary:

The project has not calculated the cost of providing a low-level bridge on the same alignment with only sufficient clearance to pass high water, because that option would not meet the project's purpose and need.

6) Type and source of project funding (federal, state, private etc).

Applicant's Response:

Reference:

This information is located in the cover letter on pages 8-9.

Summary:

Funds to pay for the construction of the Columbia River bridge are expected to come from a mix of federal, state and local funding sources, including but not necessarily limited to bridge toll revenues, Section 5309 New Starts grant funds, federal aid highway funds, and funding from the states of Oregon and Washington.

d. Legal Authority for proposed action:

1) The primary authority for the construction of the bridge and under what legislative authority the bridge is being built (state permit, charter, or statement of ownership of lands); typically the General Bridge Act of 1946, as amended; and

2) The legislative authority for the existing bridge as listed in the original permit if it is to be replaced.

3) If the applicant does not own the existing bridge which is being replaced or modified, include a signed statement from the bridge owner authorizing the removal or modification work.

Applicant's Response:

Reference:

This information is located in the cover letter on page 10.

Summary:

The legal authority for the proposed replacement bridge is found in the General Bridge Act of 1946, as amended. The existing and proposed bridges will be owned by WSDOT and ODOT. WSDOT has been authorized by the state legislature to construct and maintain state highways, including bridges by Revised Code of Washington (RCW) 47.01.260(1). ODOT has been authorized by the state legislature to carry out all duties and responsibilities vested in the Oregon Transportation Commission concerning drivers and motor vehicles, highways, motor carriers, public transit, rail and transportation safety (Oregon Revised Statutes (ORS) 184.615), and more specifically (ORS 381.005). ODOT, in the name of the state, may construct, reconstruct, purchase, rent, lease or otherwise acquire, improve, operate and maintain bridges over the Columbia River to the State of Washington.

e. International bridges (if applicable):

1) The International Bridge Act of 1972, or a copy of the Special Act of Congress if constructed prior to 1972, should be cited as the legislative authority for international bridge construction; and

2) Presidential approval shall be obtained from the State Department prior to issuing a Coast Guard bridge permit under the International Bridge Act of 1972.

NOTE: Please include a copy of State Department approval for international bridges in the application package for a Coast Guard bridge permit.

Applicant's Response:

The proposed bridge is not an international bridge, so this section is not applicable.

f. Dimensions of the navigation opening: (All navigational clearances should be stated in US linear feet. Provide clearances in meters if international bridge).

1) Vertical clearance: This is the vertical distance between the lowest part (e.g., member, chord, or steel) of the superstructure spanning the navigation channel and the recognized datum (e.g., MHW, 2% flow line, etc.) at the bridge site. Cite clearances above the appropriate high water elevation and low water elevation. In the case of movable bridges, cite clearances in the open and closed positions. In some situations, vertical clearances should be cited at the margins of channel, and for a bascule bridge clearances at the tip of the leaves, if not fully open.

Applicant's Response:

Reference:

The information on the proposed primary navigation channel is located in the cover letter on page 11 and on sheet 2 of the original plan set.

Information on the proposed alternate navigation channels is located on sheet 2 of the revised plan set.

Summary:

The vertical distance between the lowest part of the superstructure spanning the proposed primary navigation channel is 116 feet above 0 CRD. Vertical clearance at Ordinary High Water (OHW) is 100 feet.

The vertical distance between the lowest part of the superstructure spanning the proposed south alternate navigation channel is 114 feet above 0 CRD. Vertical clearance at Ordinary High Water (OHW) is 98 feet.

The vertical distance between the lowest part of the superstructure spanning the proposed north alternate navigation channel is 99.9 feet above 0 CRD. Vertical clearance at Ordinary High Water (OHW) is 83.9 feet.

The proposed bridge is not a moveable bridge.

2) Horizontal clearance: This is the horizontal distance, measured normal to the axis of the channel, through which the stated vertical clearance is available. Clearance may be between piers (full width of the span), between the bridge protective system, or bank-to-bank in the case of a bridge having no piers in the waterway.

Applicant's Response:

Reference:

The information on the proposed primary navigation channel is located in the cover letter on page 11 and on sheet 2 of the original plan set.

Information on the proposed alternate navigation channels is located on sheet 2 of the revised plan set.

Summary:

The horizontal clearance of all three proposed navigation channels is not less than 300 feet. This measurement is from edge of channel to edge of channel. The distance between the bridge protective system would be greater than 300 feet.

3) Length of bridge project: This is the horizontal distance from abutment-to-abutment or approach-to-approach.

Applicant's Response:

Reference:

This information is located in the cover letter on page 11.

Summary:

The overall length of the proposed bridge over the main stem of the Columbia River, from abutment to abutment is approximately 2870 feet.

4) Width of project: This is the width of the bridge at its widest point (out-to-out).

Applicant's Response:

Reference:

This information is located in sheet 2 of the original plan set. It is also located on sheet 2 of the revised plan set.

Summary:

The proposed bridges are two side-by-side bridges. The widths of the bridges vary. The widest point of the bridges is over land. The measurement from the east side of the eastern bridge to west side of the western bridge is approximately 265 feet. This point is located over the Oregon shoreline.

5) Depth of the waterway: At the appropriate elevation (e.g., NGVD 1929, NAVD 1988, etc.).

Applicant's Response:

Reference:

This information is located in the cover letter on page 12.

Summary:

Depth of waterway in the navigation channels range from 43.8 to 46.5 feet below OHW.

6) Width of waterway: At project site at MHW if tidal or OHW if non-tidal.

Applicant's Response:

Reference:

This information is located in the cover letter on page 12.

Summary:

The width of the waterway at the proposed bridge crossing is 2606 feet bank to bank at OHW.

g. We recommend you discuss waterway characteristics, waterway usage, and prospective long term navigational impacts of the proposed project, and include:

1) The name and contact information for marine facilities within a 3-mile radius of the project [public boat ramps, marinas (or major docking facilities), boat repair facilities, etc.;

Applicant's Response:

Reference:

This information was not included in the original application. It is included as Attachment B of this re-submittal package.

Summary:

Information on marine related facilities in the vicinity of the project is required for a Bridge Permit Application. This information includes the name and contact information for marine facilities within a 3-mile radius of the project (public boat ramps, marinas (or major docking facilities), boat repair facilities, etc.). This radius is shown in Figure 1 of Attachment B.

Facility Identification Methodology

Web-based GIS mapping tools were utilized to highlight taxlots and collect data for marine facilities in Clark County, Washington and for Multnomah County, Oregon.

Clark County: (http://maps.clark.wa.gov/imfmol/imf.jsp?site=pub_mapsonline)

Multnomah County: (http://www3.multco.us/slv/?Viewer=SAIL).

Clark County, Washington references taxlots according to an "Account" number whereas Multnomah County, Oregon utilizes a "Propid" number. Aerial photography layers in the GIS tool were thawed to enable viewing of the facilities. Google Earth was also utilized to confirm facilities having waterfront facilities.

The taxlot data provided the owner's name and address. In addition, a tenant of the facility was listed, if applicable. Google Maps and internet searches were used to determine the tenant information, which is listed under the Facility section of the table, or in the notes column. Site visits were made to properties whose researched information needed verification.

Tables 1 and 2 of Attachment B provide the lists of facilities and their contacts. Table 1 is for Clark County, Washington and Table 2 is for Multnomah County, Oregon.

Appendices A and B of Attachment B are compilations of taxlot aerial images indexed by "Account" numbers for Clark County, Washington and by "Propid" numbers for Multnomah County, Oregon, respectively.

The tables and aerial images are organized from upstream to downstream. The sites on Hayden Island are listed after sites on the mainland and are organized from upstream to downstream along the southern bank followed by facilities on the northern bank in the same order.

2) The approximate width of the waterway at the proposed bridge location (bank to bank, shoreline to shoreline, etc.);

Applicant's Response:

Reference:

This information is located in the cover letter on page 12.

Summary:

The width of the waterway at the proposed bridge crossing is 2606 feet bank to bank at OHW.

3) The depths of the waterway at the proposed bridge location in and around the navigation channel;

Applicant's Response:

Reference:

This information is located in the cover letter on page 12.

Summary:

Depth of waterway in the navigation channels range from 43.8 to 46.5 feet below OHW.

4) A description of vessels on the waterway that are engaged in emergency operations, national defense activities, or channel maintenance, and any potential impacts to their operation;

Applicant's Response:

Reference:

Information on vessels engaged in emergency operations was not included in the original application.

Information on national defense vessels that could be impacted by the project is included in the Navigation Impact Report, Section 6 (especially Navy vessels on pages 6-24 and 6-25), Section 7, and Section 9.

Information on channel maintenance vessels (Port of Portland *Dredge Oregon* and USACE *Yaquina)* and potential impacts is included in the cover letter on pages 13, 17, 18, 24, and 29; in the Vertical Clearance Re-evaluation in Section 3 and Section 5.1.5; and in the Navigation Impact Report in Sections 6, 7 and 9, and in Appendix G.

New information on these vessels is included as Attachment C in this re-submittal package.

Summary:

In the original application, the project identified dredge vessels that engage in channel maintenance, and US Navy vessels that transit the Columbia River. Also identified were contractor vessels that are sometimes called upon during flood events to handle emergency issues, which is a subset of emergency operations.

A full description of emergency operations, national defense, or channel maintenance vessels, and any potential impacts to their operation, is described in Attachment C in this re-submittal package.

Four federal agencies, two state agencies, four local agencies, one port and one private organization were identified as having vessels engaged in emergency operations, national defense activities, or channel maintenance on the segment of the Columbia River in the vicinity of the I-5 Bridge Replacement Project. The vessels and activities of the U.S Navy, U.S. Army Corps of Engineers and the Port of Portland were previously identified in the Navigation Impact Report. Statements about operational impacts are based upon a comparison of the vessel's air draft with an I-5 Replacement Bridge height of 116 feet.

Of the vessels that make up the subject of this study, only the Port of Portland Dredge Oregon might possibly have its operations impacted due to its air draft, however this is contingent upon the river level at the time. The owner has suggested that an acceptable solution would be to lower their spuds for passage under the bridge. A response from the Military Sealift Command on the operations of their vessels has not yet been received. Once a response from this agency is received this information will be updated and forwarded to the USCG. The U.S. Coast Guard vessel in the waterway with the highest air draft is the CGC Fir at 96 feet. Should she need to transit under the bridge at high river stage, the air draft may be as low as four feet. The air drafts of the other vessels are low enough that the 116 foot high replacement bridge will not impact their operations.

A description of these vessels can be found in Attachment C to this re-submittal.

5) Information regarding whether the Corps of Engineers has completed or plans to complete a federal navigation project on this waterway;

Applicant's Response:

Reference:

This information is located in the cover letter on page 12.

Summary:

The existing navigation channels are federally designated and the USACE is responsible and authorized to maintain them. Further description of the existing navigation channels can be found in Section 5.2 of the Navigation Impact Report.

6) A description of the present and prospective recreational navigation on the waterway, indicating whether the proposed project will have an impact on the safe, efficient movement of any segment of the present or prospective recreational fleet operating on the waterway;

Applicant's Response:

Reference:

This information is located in the cover letter on pages 13 and 23-24.

Section 6.2 of the Navigation Impact Report and Section 3.1 of the Vertical Clearance NEPA Re-evaluation describe in further detail the present recreational navigation on the waterway.

Section 7.4.2 of the Navigation Impact Report describes in further detail the prospective recreational navigation on the waterway.

Section 5.1.5 of the Vertical Clearance NEPA Re-evaluation describes in further detail the impacts of the bridge on recreational navigation.

Summary:

Recreational sailboats and powerboats typically use the river more frequently between April and October. Of sailboats and powerboats currently using the river, the sailboats typically range in air draft from 50 to 90 feet. The powerboats typically range from 20 to 25 feet of air draft and were the only users that reported transiting the Oregon Slough.

One prospective recreational vessel has a remote chance of being impacted. Schooner Creek Boat Works, a manufacturer of recreational sailboats, is located west (downstream) of the planned bridge. They have reported plans to build a sailboat that would be too tall (139-foot air draft) to transit under the 116-foot bridge at any time. Schooner Creek Boat Works' possible future sailboat would be constructed downriver of the bridge and it is unknown if it would ever need to transit under the bridge. The size of the Schooner Creek Boat Works vessel is typical of ocean-going sailboats and would

be unprecedented for recreational sailboats on the river. It is unknown and speculative at this time when this boat will be constructed and if it would be used upriver.

7) A description of the present and prospective commercial navigation and the cargoes moved on the waterway, indicating whether the proposed project will have an impact on the safe, efficient movement of any segment of the present or prospective commercial fleet operating on the waterway;

Applicant's Response:

Reference:

This information is located in the initial submittal and in the re-submittal package.

An updated Economics Memo with a "forward-looking land use analysis" will be provided under separate cover.

The initial submittal package includes information to address this item in multiple locations. It is located in the cover letter on pages 13, 17-20 and 22-26.

Section 6.2 of the Navigation Impact Report and Section 3.1 of the Vertical Clearance NEPA Re-evaluation describe in further detail the present commercial navigation on the waterway.

Section 7.4.2 of the Navigation Impact Report and Attachment E, Land Use Analysis and Maps, describe in further detail the prospective commercial navigation on the waterway.

Section 5.1.5 of the Vertical Clearance NEPA Re-evaluation describes in further detail the impacts of the bridge on commercial navigation.

Summary:

The letter from RADM Taylor dated March 8, 2013 identified several issues of particular importance requiring additional information, including the economic impact to river users and the future use of the river. Under separate cover we will be submitting a description of the anticipated future navigation needs upriver of the I-5 bridge and how those needs may be affected by the proposed bridge. It will also include a description of the anticipated long term use of the Columbia Business Center site located upriver of the bridge, and how the use of that site may be affected by the proposed bridge.

The main channel was identified as being the primary route of transit for the majority of the respondents to the 2012 Vessel Survey. Commercial tugs and tows have the greatest frequency of usage on the river and transit year round. Air drafts for tugs and tows range from 28 to 61 feet. Marine contractors reported they use the river on an as-needed basis year round. Air drafts range from 20 feet to 131 feet (excluding two Manson Construction cranes that are not expected to work on the Columbia River). The Port of Portland's Dredge Oregon has an air draft of 103 feet. Marine industries and fabricators ship products or have vessels transiting under the I-5 bridges on an as-needed basis all months of the year. The air drafts range from 60 feet to 141 feet.

Passenger cruise vessels transit the river year round, but more frequently in the summer months. The upriver motor vessels have air drafts that range from 42 to 65 feet. The Grays Harbor Historical Seaport Authority has two sailing vessels with air drafts of 74 and 85 feet that take passengers upstream typically once in May and June, and twice in October.

The conservative assumptions of air gap and river water level described in the Vertical Clearance NEPA Re-evaluation were used to identify the list of 11 vessels/users potentially impacted by the 116-foot bridge. The conservative assumptions assumed a vessel/user to be potentially impacted if, with a 10-foot air gap, their passage would be restricted more than two percent of the days per year. The next step in the analysis evaluated the specific operating requirements of each of the 11 vessels/users identified as potentially affected.

If the operational requirements of a vessel/user can be accommodated with a 116-foot bridge then they are not considered to be an impacted user for this analysis. Additionally, these vessels/users would not require mitigation. Of the 11 potentially impacted vessels/users, the following six will be able to pass a substantial number of the days in every month of the year and therefore are not considered substantially impacted:

- **Advanced American Construction's DB 4100**
- **General Construction's DB General**
- **The Port of Portland's Dredge Oregon**
- **The USACE's dredge Yaquina**
- **A future possible shipment on an SDS barge**
- **Diversified Marine's *DB Freedom***

Of the remaining five vessels/users, one has only a remote chance of being impacted:

- **Schooner Creek Boat Works' possible future sailboat**

In conclusion, there are four vessels/users that would be impacted:

- **The tallest future shipment of Greenberry Industrial**
- **The tallest future shipment of Oregon Iron Works**
- **One marine contractor vessel in its current configuration (J.T. Marine *DB Taylor*)**
- **The tallest reported past shipment by a fabricator (Thompson Metal Fab)**

8) Whether the proposed bridge will block access of any vessel presently using local service facilities;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

JT Marine is the only locally based river user potentially impacted by the bridge. The expected mitigation of modifying their crane to pass unrestricted will result in their continued access to all local service facilities. The other potentially impacted river users are the three fabricators, who would be impacted for relatively infrequent (on average 1-2 times per year) large, ocean-going barge shipments, which would not use local services. To the extent that the ocean-going tugs would require provisioning, fueling, or other services, they will not be height-constrained and thus will not have any change in access to local facilities.

9) Whether alternate routes bypassing the proposed bridge are available for use by vessels unable to pass the proposed bridge;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

There are no alternate routes for vessels unable to pass the proposed bridge. North Portland Harbor, a waterway of the Columbia River located on the south side of Hayden Island, provides a bypass around the proposed bridge. However, the vertical clearance and horizontal clearance of that route are more restrictive than the proposed bridge both during and after construction.

10) A description of any local harbor, indicating whether the bridge will prohibit the entry of any vessels to the local harbor refuge;

Applicant's Response:

Reference:

A description of North Portland Harbor is located on pages 5-10 to 5-13 of the Supplemental Project Description.

Summary:

North Portland Harbor is located south of the proposed bridge. The proposed bridge will not prohibit entry of any vessel to North Portland Harbor.

11) Whether the proposed bridge will be located within one-half mile of a bend in the waterway;

Applicant's Response:

Reference:

A map of the waterway with the extent greater than one-half mile in each direction is provided in Exhibit 1 of the FEIS Executive Summary.

Summary:

The proposed bridge will not be located within one-half mile of a bend in the waterway.

12) Whether there are factors located within one-half mile of the proposed bridge which would create hazardous passage through the proposed structure and a description of each factor;

Applicant's Response:

Reference:

Section 5.2 of the Navigation Impact Report describes in further detail the existing conditions in the project area, including a description of the BNSF railroad bridge.

Section 7.1 of Navigation Impact Report describes in further detail factors affecting safe vessel clearance.

Summary:

No factors are located within one-half mile of the proposed bridge which would create hazardous passage through the proposed structure. The BNSF railroad bridge is located approximately one mile downriver of the proposed structure.

13) Whether local hydraulic conditions increase the hazard of passage through the proposed bridge and a description of these conditions;

Applicant's Response:

Reference:

Section 7.1 of the Navigation Impact Report describes in further detail factors affecting safe vessel clearance.

Summary:

Changes in river flows over the course of the year, wind and wave environment, and currents, are factors that river pilots that ply this stretch of river must consider. The proposed bridge will eliminate the "S-Curve" maneuver between the existing barge channel or alternate barge channel and the swing span of the BNSF railroad bridge, thus making the passage less hazardous.

14) Whether atmospheric conditions increase the hazard of passage through the proposed bridge and a description of these conditions;

Applicant's Response:

Reference:

Section 7.1 of the Navigation Impact Report describes in further detail factors affecting safe vessel clearance.

Summary:

Wind and fog affect passage through the bridge. The proposed bridge will eliminate the "S-Curve" maneuver between the existing barge channel or alternate barge channel and the swing span of the BNSF railroad bridge, thus making the passage less hazardous.

15) A description of guide clearances established for the waterway, if applicable. If not, indicate whether clearance gauges are needed and why;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

The USCG Clearance Guide #116 refers to the reach of the Columbia River in which the bridge is located (below).

No.	Waterway	Bridge Type	Horizontal. Clearance	Vertical Clearance	Reference Plane
116	BNRR Bridge at Vancouver mm105.6 to Dalles	Fixed	450 ft.	135 ft	600kf PS stage

16) A description of any other factors considered necessary for the safe, efficient passage of vessels through the proposed bridge; and

Applicant's Response:

Reference:

Section 7.1 of the Navigation Impact Report discusses factors affecting safe vessel clearance in further detail.

Summary:

Vertical clearance is just one of the factors that vessels transiting in a channel or under a bridge must consider to determine if the passage can be accomplished safely. These factors are both operational and physical. The major operational factors considered by the USACE that affect the vessel transits in channels include the following:

"Wind, wave, and current conditions; visibility (day, night, fog, and haze), water level (including possible use of tidal advantage for additional water depth), traffic conditions (one- or two-way, pushtows, cross traffic), speed restrictions, tug assistance and pilots, under keel clearance, and ice" (USACE 1984, 1995, 1999).

Physical factors affecting safe transit include vertical and horizontal clearance of man-made structures as well as natural obstacles. For the I-5 Bridge, the man-made physical factors include the bridge height and the width between piers. In addition the proximity of, and channel alignment to, other man-made structures (such as other bridges) may also impact safe transit.

Wind and Wave Environment:

Wind blowing over water creates wind waves. The wave environment for the Columbia River is most pronounced at the mouth of the Columbia River and within the coastal estuary. These wave effects do not propagate up to the I-5 bridges. Wind-driven waves could occur during those periods of highest wind speeds from the east as the wind exits the Gorge. Under typical wind conditions, these waves are expected to be small compared to waves caused by vessel bow wake (bow wave) for two-way traffic.

Current

According to the FEMA Flood Insurance Study for Portland, Multnomah County, Oregon dated November 26, 2010, the average cross sectional velocity for the 100 year flood near the I-5 crossing is 3.8 feet/sec (2.25 knots). Note that this velocity is the average of the entire cross section. Localized velocities, especially near the center of the channel, could be greater. During low flow periods the current is affected by tides, such that slack tide can result in very little to no current.

Visibility

Fog, rain and transiting at night reduce visibility. Rain occurs regularly in the project area and fog occasionally.

River Level and Characteristics

Due to water runoff and influence of tides, the river level changes daily and over the course of the year. River level data (from 1972-2012) for the Columbia River at the I- 5 Bridge is summarized in Chapter 5 with more detail provided in Appendices D and F of the Navigation Impact Report. Included are daily maximum, daily minimum, average monthly maximum, average monthly minimum, average daily high, and average daily low.

In general, the following trends can be observed:

- **The average daily high is at approximately 10 feet above CRD in early May of each year.**
- **The average daily low is at approximately 2 feet above CRD in early September of each year.**

- **The water level went above the ordinary high water mark (16 feet above CRD) less than two percent of the time between 1972 and 2012.**

Channel Width and Depth

The existing authorized navigation channel upstream from the I-5 bridges (Columbia river mile 106.7) to the port facilities at The Dalles at river mile 187.9 is 27 feet deep by 300 feet wide. However, the depth is maintained at only 17 feet. The existing navigation channel downstream from the I-5 bridges consists of two turning basins. The Upper Vancouver turning basin is authorized at 35 feet deep (only maintained to 17 feet deep) by 800 feet wide by 2,000 feet in length. The Lower Vancouver turning basin is authorized and maintained at 43 feet deep by 800 feet wide by 5,000 feet in length. From the downstream end of the lower turning basin (river mile 104.6) to the mouth of the Willamette River (river mile 101.4) the existing navigation channel is 43 feet deep by 500 feet wide. Downstream from the mouth of the Willamette River to the Columbia River entrance the existing navigation channel is 43 feet deep by 600 feet wide.

The maintenance of the navigation channel to only 17 feet from the upper Vancouver turning basin to The Dalles limits the water draft of vessels traveling upstream from Vancouver.

The channel depth and width limit large ocean-going freighters, container vessels, and automobile carriers to the end of the 43-foot-deep channel at the Lower Vancouver turning basin, downstream of the I-5 Bridge. Travel upstream from the I-5 Bridge is limited to those vessels that can navigate in a 300-foot-wide channel that is only maintained to 17 feet of depth. Travel upstream is also limited by the width and length of the locks at the upstream dams as well as height restrictions at upriver bridges.

Bridge Height and Air Gap (Vertical Clearance)

The bridge vertical clearance is the distance from the water surface to the lowest member of the bridge structure. Since the river level fluctuates, a river level that is exceeded only two percent or less of the time during the life of the project is a conservative design criterion for determining the near maximum surface for a heavily used channel. At the I-5 bridges, this design river level is 16 feet CRD.

The air gap is the additional height above the highest point on a vessel necessary to allow for a safety factor when transiting under a bridge due to wave- and wind-induced movements in the vertical plane. This is especially applicable for sailboats and other low weight vessels since they have greater responses to wave conditions. Vessel responses are unique for a given ship geometry and weight distribution and vary with the ship's forward speed, the channel bathymetry, and environmental conditions such as wind and wave direction. The amount of air gap is also influenced by visibility. For a project with a long design life the long term effects caused by changing river runoff characteristics, sea level rise and land subsidence are potential considerations as well.

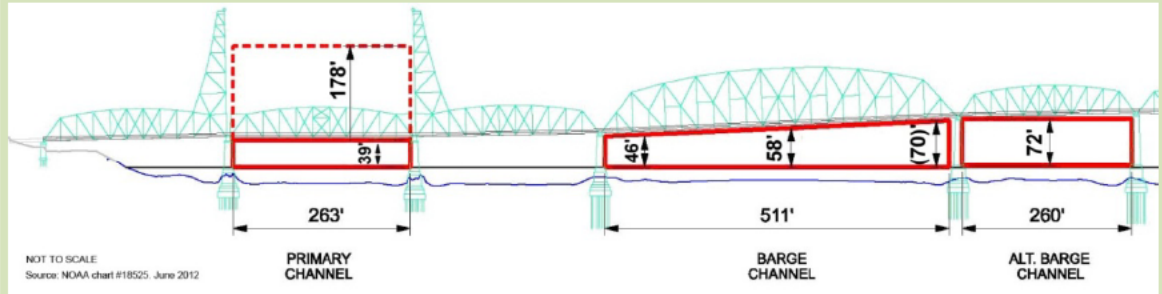
Based on self-reporting, vessel owners expressed a need for air gaps ranging from just one foot to more than ten feet. Through discussions with the US Coast Guard, the Navigation Impact Report used a conservative air gap assumption of ten feet for the

basic impact analysis. The report also provides a second impact scenario based on an assumption of a five foot air gap.

Width between Bridge Piers (Horizontal Clearance)

Under the existing I-5 bridges, vessels pass through one of three channels: the primary channel, the barge channel and the alternate barge channel (see Exhibit below).

The primary channel lies under the bridges' lift spans and has a horizontal clearance of 263 feet and a vertical clearance of 39 feet above 0 CRD in the closed position and 178 feet in the raised position. The barge channel lies under the wide spans of the bridges and has a horizontal clearance of 511 feet and a vertical clearance ranging from 46 feet to 70 feet above 0 CRD. The alternate barge channel occupies the span directly to the south of the wide span and has a horizontal clearance of 260 feet and a vertical clearance of 72 feet.



16) A description of the impacts to navigation caused or which could be reasonably caused by the proposed bridge including but not limited to: proposed construction methodology, proposed or prospective changes to the existing bridge operating schedule (for movable bridges), and any proposed mitigation to all unavoidable impacts to navigation.

Applicant's Response:

Reference:

Section 8 of the cover letter and Section 5.1.5 of the Vertical Clearance NEPA Re-evaluation describe in further detail the navigation impacts of the proposed bridge.

Section 9 of the cover letter describes in greater detail the mitigation measures to address the operational impacts to JT Marine's *DB Taylor.*

Section 10 of the cover letter describes in greater detail the mitigation measures to address the operational impacts to the three fabricators.

Summary:

The proposed replacement bridge would improve the horizontal clearance and eliminate the "S-curve" maneuver that vessels navigate when transiting through the frequently used alternate barge channel with the existing bridge. In addition, because the new structure will be a fixed-span bridge, it will reduce navigation constraints on vessels that currently must wait for the existing liftspan to open before they can pass. Four

vessels/users would be impacted by the vertical clearance (116 feet over 0 CRD) of the proposed bridge. Temporary impacts during construction would impact users/vessels that need greater than 100 feet of vertical clearance over 0 CRD.

Four users/vessels would be impacted by the proposed bridge;

The tallest future shipment of Greenberry Industrial

The tallest future shipment of Oregon Iron Works

One marine contractor vessel in its current configuration (J.T. Marine DB Taylor)

The tallest reported past shipment by a fabricator (Thompson Metal Fab)

The mitigation for the impacts to the three fabricators is based on compensation for projected economic impacts, and includes proprietary information that has been provided by the affected businesses through non-disclosure agreements. This information cannot be released publicly at this time and is therefore included in Section 10, Economic Impacts and Mitigation of the Cover Letter.

Mitigation measures to address the operational impacts to JT Marine's *DB Taylor* are as follows: The project will provide compensation to JT Marine to retrofit the crane on the *DB Taylor* to allow the boom to be lowered sufficiently to transit under the bridge at least 98 percent of the year. Working with a naval architect, the project and JT Marine are jointly developing plans for compensation to reconfigure the crane to ensure it can pass under the proposed bridge while retaining the same lifting capacity and reach.

a) Conduct a navigational evaluation, and include a review of all bridges upstream and downstream of the proposed site to determine the minimum vertical and horizontal clearances available on the waterway.

Applicant's Response:

Reference:

Section 5.1 of the Navigation Impact Report describes the Columbia/Snake River system and Appendix D of the Navigation Impact Report describe in further detail the navigation clearances for all bridges, cables, and locks across the Columbia River (from the mouth to Richland, WA), and across the Snake River (from the mouth to Lewiston, ID).

Summary:

The BNSF bridge at Celilo Falls is located at river mile 201.2, which is approximately 10 miles upriver from The Dalles lock and dam (river mile 191.5). The BNSF Bridge has a fixed height of 79 feet above the normal pool elevation behind The Dalles dam when open and represents the next lowest height restriction in comparison with the options under consideration for the proposed I-5 bridges. This means that the height constraint imposed by the CRC fixed bridge options potentially affects river traffic vertical clearance for a distance of approximately 95 miles or 20 percent of the river system.

b) If the proposed bridge is fixed, and is replacing an existing drawbridge with unlimited vertical clearance, you must determine whether the proposed bridge will accommodate existing and perspective navigation.

Applicant's Response:

Reference:

This information is located in the responses to g (6) and g (7) above.

Summary:

The proposed bridge is fixed and it is replacing an existing liftspan with a vertical clearance of 178 feet above 0 CRD. The proposed bridge would impact four known users/vessels.

h. Existing bridge(s) if applicable:

1) Name(s) of bridge: e.g., US 40 Highway Bridge; or Coleman Memorial Bridge; or State Route 7 Bridge also known as Preston Falls Bridge;

Applicant's Response:

Reference:

This information is located in the cover letter on page 7.

Summary:

Interstate Bridge, also known as I-5 Interstate Bridge, Columbia River Interstate Bridge, I-5 Bridge, Portland-Vancouver Interstate Bridge.

2) Type of bridge: e.g., fixed or moveable (drawbridge, bascule, vertical lift, swing span); highway, railway, pedestrian, pipeline;

Applicant's Response:

Reference:

This information is located in the cover letter on page 7.

Summary:

The existing bridge is two side-by-side vertical lift steel truss highway bridges.

3) Mile point, latitude and longitude at centerline of bridge, and navigational clearances, in linear measurement; and

Applicant's Response:

Reference:

This information is located in the cover letter on pages 7 and 11.

Summary:

The existing and replacement Columbia River bridges are located at approximately RM 106 of the Columbia River at 45.6167 latitude and -122.6750 longitude.

Vertical and Horizontal Navigation Clearances

	Vertical Clearance		
	Above zero CRD	At Ordinary High Water	Horizontal Clearance
Existing Columbia River bridge			
Primary Channel (with liftspan closed)	39 ft	23 ft	263 ft
Primary Channel (with liftspan open)	178 ft	162 ft	263 ft
Barge Channel	46 to 70 ft	30 to 54 ft	511 ft
Alternate Barge Channel	72 ft	56 ft	260 ft
Proposed Replacement bridge			
Navigation Channel	116 ft	100 ft	Not less than 300 ft

4) Owner of the bridge.

Applicant's Response:

Reference:

This information is located in the cover letter on page 10.

Summary:

The States of Oregon and Washington jointly own the bridge.

i. Discuss construction methodology and removal of existing bridge(s), as applicable:

1) Discuss proposed construction methodology and restrictions;

2) Discuss maintenance of land and waterborne traffic during construction activities;

3) Discuss extent of removal of existing bridge, time needed for removal, etc.; and

4) Discuss demolition methodology.

Applicant's Response:

Reference:

Some information is included in the original application. Additional information on construction methodology is summarized below; more detailed information will be provided under separate cover.

The information in the original application is located in the cover letter on page 25. A description of the construction sequencing, timing, impacts, and bridge removal, is included in Attachment B of the original application: *Supplemental Project Description* (see Section 4.2 of that Attachment).

Summary:

Below is a summary of the conceptual staging plan. This is a summary of new information, and more detailed information will be provided under separate cover.

The conceptual staging plans for the Columbia River Crossing project have been developed with 7 stages of construction with each stage having 3 individual steps. Typically the first step each stage is some demolition that clears the ground for the second step of a longer construction period. The third step would be to close movements during nighttime work that would involve the completion of roadways where they are crossed by another roadway in the next stage.

A very simplified description of the construction sequence would be to shift the I-5 traffic and ramps east across Hayden Island and at the SR-14 interchange. This would include constructing temporary alignments for some of the movements at the SR-14 interchange. These shifts would allow the River Crossing structures and the southbound approaches to be built. Southbound traffic would then be placed on the new southbound RC structure and followed by some construction that allows the northbound traffic to also be shifted to the southbound RC structure. At that time, the northbound approaches would be completed and the northbound traffic would then be shifted onto the northbound structures. After that shift there would be some final adjustments to the ramps and shoulders that would allow the I-5 Columbia River Bridges and Approaches Replacement to be completed.

Bicycle and pedestrian traffic will continue to use the existing river bridges to cross the Columbia River until all of the northbound traffic is taken off of the northbound structure. This is necessary because the Hayden Island to I-5 northbound traffic will continue to use the northbound bridge until the new northbound River Crossing and approaches are completed. Conflicts between the existing bridges and the proposed shared-use path prohibit completion of the shared-use path prior to relocation of the northbound traffic.

Another noteworthy item is the need to establish and maintain tolls throughout construction. This adds another level of complexity to the staging that will only be briefly discussed in this document.

Below is the information from the original application:

Bridge construction will have various effects on navigation that will be mitigated to the extent practicable. A detailed description of the construction sequencing, timing, and

impacts is included in Attachment B: *Supplemental Project Description* (see Section 4.2 of that Attachment). The following identifies potentially adverse temporary effects to navigation and summarizes the proposed measures to minimize effects:

Construction activities would result in temporary effects to river navigation. Construction would be staged so that at least one navigation channel would be open at all times. A primary temporary channel will be provided during construction, typically in the location of the current primary channel (drawings of the primary temporary channel and alternate temporary channel can be found in Attachment C to the original application: Columbia River Bridges and Approach Figures). Before the steel truss of the new bridge is erected over the existing primary channel, the vertical clearance will be controlled by the existing bridge vertical lift span (178 feet above 0 CRD). Once the steel truss is erected over the new span across the primary channel, the vertical clearance will be temporarily reduced to approximately 100 feet above 0 CRD until the new I-5 navigation channel is open, at which time the vertical clearance will become 116 feet above 0 CRD.

There could be some temporary restrictions to the primary temporary channel due to blockages from barges and cranes used to construct piers and lift bridge segments into place. It is estimated that there could be three separate 2 to 3 week closures of the primary temporary channel. During these closures, vessels will use a temporary alternate channel, which will provide 200 feet of horizontal clearance and 72 feet above 0 CRD of vertical clearance.

During construction of the ICP, some of the new bridge piers, outside of the navigation channel, would not line up with the existing bridge piers. While the new crossing is under construction and the existing crossing is still operational, this would result in more obstacles in the river and more difficulty in navigation.

Construction staging would be planned to minimize adverse effects to river navigation. Public involvement and education programs would be used to provide information to tug operators, pilots, and the general public. Closures or restrictions on river traffic would be communicated in advance, enabling river users to accommodate their schedules without undue interruption. During construction, should there be occasion that the one open channel has height/width clearance constraints, these periods would be coordinated closely with the USCG District 13 through the weekly Local Notice to Mariners (LNM). The contractor will be required to provide the LNM no less than 2 weeks prior to the week of the event. Additional tugs may be needed to assist vessels through areas of reduced clearances, especially during times of high water. The USCG will review construction plans to determine potential effects. Conditions of this USCG General Bridge Permit will be incorporated into construction contract specifications as applicable.

Proposed Bridge Removal Methods

The existing Columbia River bridges will be removed in two stages: 1) superstructure deconstruction and 2) substructure deconstruction.

Columbia River Bridges Superstructure Removal

Deconstruction of the superstructure will begin with removal of the counterweights. The lift span will be locked into place, and the counterweights will be cut into pieces and transferred off site via truck or barge. Next, the lift towers will be cut into manageable pieces and loaded onto barges by a crane. Prior to removal of the trusses, the deck will be removed by cutting it into manageable pieces or by using a breaker, in which case the debris will be caught on a barge or other containment system below the work area. The deck debris will be transported by barge or truck. After demolition of the concrete deck, trusses will be lifted off of their bearings and onto barges and transferred to a shoreline dismantling site.

The existing Columbia River bridge structures comprise 11 pairs of steel through-truss spans with reinforced concrete decks, including one pair of movable spans over the primary navigation channel and one pair of 531-foot-long span trusses. The remaining 9 pairs of trusses range from 265 feet to 275 feet in length. In addition to the trusses, there are reinforced concrete approach spans (over land) on either end of the bridges.

Columbia River Bridge Pier Removal

Nine sets of the 11 existing Columbia River bridge piers are below the OHW level and are supported on a total of approximately 1,800 driven timber piles. Each pier is approximately 3,090 square feet in area and 4,854 cy in volume. Deconstruction methods have not been finalized; however, the final design will consider factors such as pier depth, safety, phasing constraints, and impacts to aquatic species. Demolition of the concrete piers and timber piling foundations is proposed to use the following method:

A diamond wire/wire saw will be used to cut the piers into manageable chunks that will be loaded onto a barge and transported off site. Cofferdams will not be used. Timber piles that pose a navigation hazard will be extracted or cut off below the mud line.

Although ODOT maintenance personnel regularly inspect the existing bridge, the timber piles located underneath the existing piers are inaccessible and have not been inspected. Therefore, it is unknown whether these timber piles have been treated with creosote, but given their age and intended purpose, it is assumed that they have been treated. Only piles that could pose a navigation hazard will be removed or cut off below mud line. These piles include those that are present in the proposed navigation channels and are at a depth less than 5 feet below the authorized depth of -27.9' CRD and any that extend above the surface of the river bed. Piles will either be removed (using a vibratory extractor, direct pull, or clam shell dredge) or cut off below the mud line using an underwater saw. The exact number of piles to be removed is unknown, and the likely area and volume of removal cannot be calculated at this time.

Columbia River Bridge Deconstruction Sequencing

A conceptual deconstruction sequence was determined based on the amount of equipment likely available to build the project and the physical space the equipment requires at each pier. The sequence is provided in Section 4.2.2 of the Supplemental Project Description. The actual construction sequence will be determined by the contractor once a construction contract is awarded.

Columbia River Bridge Removal Timeline

Bridge removal will occur after the new Columbia River replacement bridges are built. Removal activities will take approximately 18 months.

NOTE: Because the safety of navigation is of paramount importance, the Coast Guard shall make the final decision concerning the extent of bridge removal.

j. Other Agencies with jurisdiction over the proposed project:

1) Agency; and

2) Permits or type of approvals required for the project.

Applicant's Response:

Reference:

This information is located in the cover letter on pages 46-48.

Summary:

In addition to the USCG Bridge Permit, the project will require the following permits and approvals:

US Army Corps of Engineers

Clean Water Act (CWA) Section 404 Permit

Rivers and Harbors Act, US Code 33, Section 408 for Navigation

Rivers and Harbors Act, US Code 33, Section 408 for Modification/Alteration of Levee

Federal Aviation Administration

7460-1 Notice of Proposed Construction or Alteration

National Oceanic and Atmospheric Administration-Fisheries Service

Endangered Species Act Biological Opinion (issued January 2011)

Marine Mammal Protection Act Letter of Authorization

Oregon Department of State Lands

Oregon Removal and Fill Permit

Lease/Easement Application

Washington Department of Natural Resources

Lease/Easement Application

Archaeological Application for Authorization on State Owned Land

Oregon Department of Fish & Wildlife

Oregon Fish Passage Act Compliance

Washington Department of Fish & Wildlife

Hydraulic Project Approval

Oregon Department of Environmental Quality

CWA Section 401 Water Quality Certification

Oregon 1200-C Construction Permit

Oregon Stationary Source Permit

Washington Department of Ecology

CWA Section 401 Water Quality Certification (Washington)

Shoreline Management Act Substantial Development Permit

Construction Stormwater General Permit

Washington Stationary Source Permit

Oregon State Historic Preservation Office

Archaeological Excavation Permit

Washington Department of Archaeology and Historic Preservation

Section 106 Archaeological Treatment Plan

City of Portland

Land Use Review

City of Vancouver

Critical Areas Ordinance Permit

Shoreline Management Act Substantial Development Permit

Land Use Review

k. Summary of environmental analysis.

1) Identify lead federal agency for NEPA. (For an EIS include date filed with EPA and a copy of the Record of Decision); and

2) Indicate whether the proposed bridge will have a significant effect on the human environment and briefly identify impacts.

Applicant's Response:

Reference:

This information is located in the cover letter on page 48.

Summary:

The FHWA and FTA as NEPA lead agencies prepared a draft (May 2008) and final (September 2011) environmental impact statement for the Columbia River Crossing Project, which includes the replacement of the existing Columbia River bridge. FHWA and FTA signed the project's Record of Decision on December 7, 2011. Following the ROD, FHWA and FTA prepared a NEPA re-evaluation (Attachment J) covering updated navigation information and bridge vertical clearance design refinements made in preparation for submitting an application to the USCG for a General Bridge Permit.

The ROD states:

The National Environmental Policy Act, (NEPA) found at 42 U.S.C. 4371 et seq., requires that federal agencies evaluate the environmental impacts of their actions and integrate such evaluations into their decision-making processes, and that each federal department and agency affecting the environment implement appropriate policies. The environmental record for the Columbia River Crossing project includes the previously referenced Columbia River Crossing DEIS (May 2008), the 17th Street Technical Memorandum (March 2010), Composite Deck Truss Bridge Type NEPA Re-evaluation (March 2011), Steel Bridge Documented Categorical Exclusion (November 2010), Environmental NEPA Re-evaluation (May 2011), and the Columbia River Crossing FEIS (September 2011). These documents, all incorporated herein by reference, represent the detailed statements required by NEPA 49 U.S.C. Section 5324(b), 23 U.S.C. 109(h).

Having carefully considered the environmental record noted above and findings below, the mitigation measures as required in Appendix A herein, and the written and oral comments offered by other agencies and the public on this record, and pursuant to 49 U.S.C. Section 5324(b) for consideration of economic, social, and, environmental interests, FTA and FHWA have determined that:

- **The environmental documents include a record of the environmental impact of the proposal; adverse environmental effects that cannot be avoided; alternatives to the proposal; and irreversible and irretrievable impacts on the environment.**
- **FTA and FHWA have cooperated and consulted with the Secretary of the Interior and the Administrator of the Environmental Protection Agency on the Project;**
- **The Project has undertaken extensive outreach efforts and many opportunities for public and agency comment have been provided.**
- **Public hearings on the project have been held and FTA and FHWA have reviewed each transcript submitted under 49 U.S.C. 5323(b) and make the following findings:**

(a) an adequate opportunity to present views was given to all parties having a significant economic, social, or environmental interest;

(b) the preservation and enhancement of the environment and the interest of the community in which the project is located were considered;

(c) all reasonable steps have been taken to minimize adverse environmental effects of the proposed project;

(d) where adverse environmental effects are likely to result from the project, no feasible and prudent alternative to the effect exists and all reasonable steps have been taken to minimize the effect;

(e) the Project meets its Purpose and Need, and the requirements of NEPA and 49 U.S.C. §§ 5323(b) and 5324(b) have been met.

l. Signature Block (applicant/consultant/agent).

Applicant's Response:

Reference:

The signature of the applicant is located on page 7 of the Joint Permit Application form.

Response:

_____

Applicant Date

_____

Applicant Date

_____

Applicant Date

3. Include the following attachments (if applicable) with the application package:

a. Original and one copy of map of the location/vicinity and plan sheets on standard 8 ½ x 11" paper (See Plan Sheet Checklist);

Applicant's Response:

Reference:

Map and plan sheets were included with the original application as Attachment C. A revised plan set is included as Attachment A to this document.

b. Environmental Evaluation or Re-Evaluation (contact the local Coast Guard District Office for re-evaluation requirements). (See Section 2.C.);

Applicant's Response:

Reference:

The Vertical Clearance NEPA Re-evaluation was included with the original application as Attachment J.

c. Navigation Survey to support vertical and horizontal navigation clearance requirements;

Applicant's Response:

Reference:

A Vessel Survey was included with the original application as Appendices, B, C, G, H, I and J of the Navigation Impact Report.

d. Vessel Impact Assessment, if required by the District Commander;

Applicant's Response:

Reference:

The Navigation Impact Report was included with the original application as Attachment K.

e. Lead federal agency's Final CE determination, EA, EIS, FONSI, or ROD as appropriate (If EIS, provide EPA filing dates for DEIS & FEIS). When the Coast Guard is the lead federal agency, the Coast Guard must concur with the selection of the consultant used for the development of the environmental document;

Applicant's Response:

Reference:

The Final Environmental Impact Statement was included with the original application as Attachment G.

The Record of Decision was included with the original application as Attachment F.

f. Authorization for applicant to make application to modify or remove another's bridge;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

The bridge is jointly owned by the permit applicants; therefore this section is not applicable.

g. Consultant/ Agent authorization letter;

Applicant's Response:

Reference:

This information is located in the cover letter on page 5.

Summary:

The Oregon Department of Transportation and Washington State Department of Transportation are the applicants on this project. No consultant or agent is authorized.

h. Proof of ownership of existing bridge;

Applicant's Response:

Reference:

This information was not provided in the original application.

Summary:

The following items, proving proof of ownership of the existing bridge, are Attachment D of this document.

- **1928, December 31 – *Bargain and Sell Deed Book 1166, Page 184*:**
  - **Multnomah County conveys to the State of Oregon, all right title and interest to the Bridge Structure known as the Columbia River Interstate Bridge together with the main approach including all Right of Way vested in Multnomah County.**
- **1929, January 3 – Combined Deed, Bill of Sale and Undertaking, Volume 193, Page 503:**

- **Clark County conveys to the State of Washington all portions of the bridge, approaches, piers, spans, equipment, appliances, machinery, accessories, means of operation, conveyances, street car tracks, and lands owned by Clark County.**

- **1929, January 29 – Columbia River – Vancouver – Portland Interstate Bridge Contract:**
  - **Agreement between Oregon and Washington for joint ownership, control, and operation of the Interstate Bridge.**
- **1948, November 26 – SR5 Interstate Bridge to East 25th Street – Right of Way plan sheet 1 of 5:**
  - **Highway Plans showing existing Right of Way for Interstate Bridge approach and SR14 Interchange (P.S.H. 8).**
- **1957, April 3 – WA DNR Bridge Easement Plat and Letter:**
  - **300' easement from Washington State Department of Natural Resources for Northbound and Southbound Bridge Structures on the Columbia River.**
- **1957, June – ODOT Right of Way Roll Map 8B 5 21 Jantzen Beach Section:**
  - **Highway Plans showing Right of Way acquired for Northbound and Southbound Interstate Bridge approaches.**

i. Proof of right to build (ownership of land);

Applicant's Response:

Reference:

This information was not provided in the original application. The Real Estate Acquisition Management Plan (RAMP) is included as Attachment E to this document.

Summary:

The states of Oregon and Washington own the right of way associated with the existing I-5 corridor. Much of the proposed project will be constructed within existing state-owned right of way. As needed, additional properties noted in the FEIS will be acquired for the project prior to construction. In addition, some of the proposed improvements will be within public right of way owned by the cities of Vancouver, Washington and Portland, Oregon. Authority to construct improvements on municipally owned properties will be acquired through inter-agency agreements.

All rights to build will be obtained by the two States prior to construction. In the water, easements (temporary and permanent) will be obtained from the Washington Department of Natural Resources (DNR) and the Oregon Department of State Lands (DSL). Upland properties require acquisition of fee rights from several ownerships for the structure and temporary easements for construction activities. Possession of these

necessary rights will be obtained prior to construction activities by the two States in accordance with the Columbia River Crossing Project's Real Estate Acquisition and Management Plan (RAMP).

The Federal Transit Administration requires New Starts funding applicants to complete a RAMP before entering final design. FTA envisions the RAMP as a planning tool to help proposed grantees:

- **Identify and minimize the substantial schedule and budget risks inherent to real property activities required by major capital projects using Federal Assistance.**
- **Formulate a real estate schedule commensurate in detail with specific project phases.**
- **Comply with all Federal laws, regulations and guidance during implementation of a real property acquisition program; these include the Uniform Relocation assistance and Real Property Acquisition Policies Act of 1970, as amended; 49 CFR Part 24, and FTA Circular 5010.1D.**
- **Facilitate reviews by a project management oversight consultant (PMOC).**

A copy of the RAMP is included in the re-submittal package.

j. Extracts of motions from meetings authorizing construction of the proposed bridge;

Applicant's Response:

Reference:

Information about local support for the project is located in Section 2.78 and Appendix F of the FEIS. WSDOT and ODOT own the bridge, and the process does not include the need for formal motions.

Summary:

Below is information from the FEIS that describes local support: The preferences for a replacement crossing and for light rail transit were identified by all six local agencies. Only the agencies in Vancouver—C-TRAN, the City of Vancouver, and RTC—specified a preferred Vancouver light rail terminus. As part of this process, the two regional transportation planning agencies, Metro and RTC, adopted the LPA into their Regional Transportation Plan and Metropolitan Transportation Plan, respectively, in late summer 2008 (Metro 08-3960B; RTC 07-08-10). The CRC project is in the Oregon 2010-2013 Statewide Transportation Improvement Program (STIP), the draft 2012-2015 Oregon STIP, and the Washington 2011-2014 STIP.

k. Water quality certification under 33 U.S.C. 1251 (and proof of application requesting it), to include time extensions, waivers, or a statement from the certifying agency that the WQC is either still valid or that WQC is not needed. (See Section 2.C.1.b.);

Applicant's Response:

Reference:

The water quality certification has not been obtained yet. Proof of application is included as Attachment F in this re-submittal package. The information in the summary below is located in the cover letter on page 50.

Summary:

Water Quality Certification will be obtained from the Oregon Department of Environmental Quality (DEQ) and Washington State Department of Ecology (Ecology). A Joint Permit Application (JPA) was submitted to DEQ and a Joint Aquatic Resources Permit Application (JARPA) was submitted to Ecology for the overall CRC Project in January 2013.

To mitigate the effect of pollutants in runoff from additional impervious surface area, the project team has prepared a conceptual stormwater management design. The design was prepared to meet the requirements of ODOT and WSDOT for those portions of the project along I-5. After consultation with and agreement from WSDOT and State of Washington regulatory agencies, the project has adopted ODOT's technical memorandum on stormwater quality on a project-wide basis to provide a standard approach to determining types of water quality facilities. The memorandum is the result of a collaborative effort by ODOT, FHWA, and the following natural resource agencies: NMFS, DEQ, US Fish and Wildlife Service (USFWS), EPA, and ODFW. The decision to use this approach on the Project has been endorsed by WSDOT and the Washington Department of Ecology.

The Cities of Portland's and Vancouver's regulations, found in the 2008 City of Portland Stormwater Management Manual and 2005 Stormwater Management Manual for Western Washington, respectively, will be implemented for those portions of the project along city managed roads.

l. CZM consistency statement, to include time extensions. (See Section 2.C.1.c.);

Applicant's Response:

A Coastal Zone Management consistency statement is not applicable, because the proposed bridge is not in an area covered by a Coastal Zone Management Plan.

m. State agency concurrence in CZM consistency certification, to include time extensions, or a statement from the certifying agency that the state concurrence is still valid;

Applicant's Response:

State agency concurrence to a Coastal Zone Management consistency statement is not applicable, because the proposed bridge is not in an area covered by a Coastal Zone Management Plan.

n. List of property owners – at a minimum adjacent property owners, formatted in Microsoft Excel, or comparable spreadsheet software. Please contact the local bridge office for additional guidance; and:

Applicant's Response:

Reference:

A list of property owners was included with the original application as Attachment I.

o. Provide a summary of preliminary conferences and early coordination or scoping efforts with applicant and/or interested parties. Include information about public meetings.

Applicant's Response:

Reference:

This information was included in the original application in FEIS Section 2.7 Alternatives Development and Screening Process; Appendix B, Public Involvement; Appendix D, Early Screening of Project Components and Evaluation of Alternatives Packages.

Summary:

Early coordination, scoping efforts and public meetings were extensive. A more detailed description can be found in the referenced sections above.

4. Applications for Extensions of Time.

Applicant's Response:

This application is not for an extension of time, so this section is not applicable.

a. Per 33 CFR 114.45, applicants must submit to the appropriate Coast Guard District Commander, time extension requests to commence or complete bridge construction, or to remove a bridge being replaced as part of a permitted bridge project. Submit the following information when requesting an extension of time:

1) Description of construction;

2) Status of the construction work;

3) An explanation of why the project will not be commenced/completed on time, i.e. why an extension is needed;

4) Percentage of project completed to date;

5) Projected completion date and how long the applicant wishes for the permit extension;

6) Water Quality Certification and application for Certification;

7) Coastal Zone Management (CZM) consistency certification;

8) State concurrence with CZM consistency certification; and

9) Environmental documentation: Any categorical exclusions, environmental assessments, environmental impact statements, supplemental studies, findings of no significant impact, records of decision or reevaluations required by the lead agency.

B. PLAN SHEETS - Plans submitted with the bridge permit application become an official, and permanent, part of the issued permit or permit. To minimize delays, provide the following information:

Applicant's Response:

Reference:

A revised plan set is include with this submittal as Attachment A.

Summary:

Items in the checklist that are included on the plan set are indicated with an "X". If a checklist item is not included in the plan set, a response from the applicant is contained below for that item. Checklist items that are new to the revised plan set are highlighted in yellow.

1. Plan Sheet Checklist - Use the following checklist for specifics to include with bridge plans:

   a. **General**

   _X_ Provide all plans on standard 8 ½ X 11" paper. Include the original plus one copy of the plans (of good reproducible quality), on the fewest sheets possible that still show significant project structural details.

   NOTE: Do not show bridge navigational lighting plans on bridge plan and elevation views. Use a separate sheet for the bridge lighting plan.

   _X_ Show all dimensions and distances in U. S. linear feet. For international bridges also show all dimensions in metric equivalent.

   _X_ Include the datum used in the plan and elevation view. Use the same datum for all submitted drawings (e.g. NAVD, NGVD).

   _X_ All plan sheets shall bear the stamp of a professional engineer certifying the design meets American Association of State Highway and Transportation Officials (AASHTO) and/or American Railway Engineering and Maintenance-of-Way Association (AREMA) standards, including private bridges. If the bridge has been designed to withstand vessel impact, a certified statement to that effect, along with the design vessel chosen, shall be included on the plan sheets by a professional engineer.

   b. **Title Blocks** – Include the following items in the title blocks (lower right-hand corner on all of the plan sheets):

   _X_ Applicant/Owner;

   N/A Consultant/Agent;

   _X_ Name of Bridge;

_X_ Name of Waterway;

_X_ Mile point of bridge location (from confluence of mouth of waterway) in statue miles;

_X_ City, County, and State (state at, near, or between – as appropriate);

_X_ Date of plans (i.e. mm/dd/yyyy); and

_X_ Sheet number of total number of sheets in set (i.e. Sheet 1 of 5).

c. **Location/Vicinity Map**

_X_ Show graphic scale and north arrow;

_X_ Show location of bridge on waterway;

_X_ Identify the name of the waterway;

_X_ Show course of waterway (i.e. ebb/flood);

_X_ Show structures immediately adjacent to the proposed bridge and their relation to the proposed bridge;

_X_ Identify wildlife and waterfowl refuges and any historical and archaeological sites; and

_X_ Insert a small map of the state in which the project is located with an arrow showing the location of the proposed project.

d. **Plan View**

_X_ Show graphic bar scale and north arrow;

_X_ Identify the adjacent property owners at the four corners of the proposed structure(s);

_X_ Show existing shorelines;

_X_ Show ebb and flood in tidal waters and direction of flow in non-tidal waterway;

_X_ Show mean high and low waterlines in tidal areas. Show ordinary high water and ordinary low water elevations if proposed activity is in a non-tidal waterway;

_X_ Show all portions of existing bridge(s) that will remain in place;

_X_ Show principal dimensions of structure(s) from grade to grade. Show length, width, etc.;

Show location of dredging, excavation, fill or rip-rap. Give approximate number of cubic yards;

Applicant's Response:

Estimated volumes of materials to be installed in the Columbia River are listed in section 4.2.3.5 of Attachment B of the initial submittal, *Supplemental Project Description*. The actual volume of material removed and installed will be determined by the design-build contractor.

Show location of the bridge protective system, piles, cables, etc. existing or to be constructed in the waterway. Identify type of material to be utilized;

Applicant's Response:

The location and type of the bridge protective system will be determined by the design-build contractor.

_X_ Show limits of navigational channel;

_X_ Show axis of channel;

_X_ Show horizontal clearances, normal to the axis of the channel between the bridge protective system, pilings, or abutments;

_X_ Show water depth at mean low (or ordinary low if non-tidal) at various locations in the channel, under, upstream and downstream of the bridge; and

_X_ Show outline of the bridge protective system.

e. **Elevation View**

_X_ Show graphic bar scale and north arrow;

_X_ Show mean high and mean low water elevations in tidal areas. Show ordinary high and low water elevations in non-tidal areas;

Show amount of fill in cubic yards below mean high water;

Applicant's Response:

Estimated volumes of materials to be installed in the Columbia River are listed in section 4.2.3.5 of Attachment B of the initial submittal, *Supplemental Project Description*. The actual volume of material removed and installed will be determined by the design-build contractor.

_X_ Show horizontal clearance normal to the axis of the channel between the bridge protective system, pilings, or abutments, as appropriate for navigational channel;

Applicant's Response:

Estimated horizontal clearances between shaft caps perpendicular to the axis of the channel are shown in the plan view on the same sheet as the elevation view. The actual clearances will be determined by the design-build contractor.

_X_ Show vertical clearances referenced to the appropriate high water stage either Mean High Water (MHW) or Ordinary High Water (OHW). Show vertical clearances at the center, as well as at the horizontal limits of the navigational channel (the most restrictive vertical clearance in the navigational channel);

_X_ If the bridge will have a draw, show the draw in the open and closed positions;

_X_ Show proposed and existing contour of waterway bottom; and

_X_ Show 100-year flood elevation.

f. **Typical Section View**

_X_ Show graphic bar scale;

_X_ Show out-to-out width of the structure(s). (This is the width of the bridge at its widest point.); and

_X_ Include location and dimensions of travel lanes, shoulders, sidewalks, fishing/pedestrian platforms, railings, pipelines, etc.

PLEASE SUBMIT THE FOLLOWING PERMIT PLAN SHEETS SEPARATELY IF APPLICABLE:

g. **Details of the Bridge Protective System**

____Show bridge protective system in plan and elevation views including detail of attachment to pier, countersunk bolts, and relationship to mean high and low waterlines (on elevation view).

Applicant's Response:

The details of a bridge protective system will be determined by the design-build contractor.

h. **Temporary Structures/Falsework**

_X_ Show temporary structures/falsework;

_X_ Show existing bridge(s) to be removed; and

_X_ Show minimum horizontal and vertical clearances during construction.

i. **Bridge Lighting Plan**

N/A Submit lighting plan application in accordance with 33 CFR 118 and bridge lighting guide (see USCG Bridge Program website). This is a separate application from the bridge permit application.

C. ENVIRONMENTAL DOCUMENTATION REQUIREMENTS

1. Per the National Environmental Policy Act (NEPA) of 1969 (42 U.S.C. 4321) as amended, and its implementing regulations (40 CFR 1500-1508), the following information is required for all application packages:

    a. **Alternatives:** NEPA requires all federal agencies to use a systematic, interdisciplinary, scientific approach when analyzing project impacts under their respective jurisdictions.

        1) These studies must assess: primary and causally related impacts due to the construction of the proposed bridge project, irreversible or irretrievable commitments of resources, comments of federal, state and local government agencies having jurisdiction by law or expertise, and comments of other interested parties or groups. The potential impacts on navigation are considered to be a significant part of the environmental impacts and shall be included in the NEPA review process. When the Coast Guard is the lead federal agency in a project involving a bridge, the NEPA jurisdiction extends to the logical termini on both sides of the bridge or the bridge and road sections having independent utility.

Applicant's Response:

Reference:

This information is located in the cover letter on page 48, but has been revised slightly to the text in the response below.

Summary:

The FHWA and FTA as NEPA lead agencies prepared a draft (May 2008) and final (September 2011) environmental impact statement for the Columbia River Crossing Project, which includes the replacement of the existing Columbia River bridge. FHWA and FTA signed the project's Record of Decision on December 7, 2011. Following the ROD, FHWA and FTA prepared a NEPA re-evaluation (Attachment J) covering updated navigation information and bridge vertical clearance refinements made in preparation for submitting an application to the USCG for a General Bridge Permit.

        2) Per 40 CFR 1502.14, the following information is required to document alternatives:

            a) Identification of the alternatives for the proposed project (Alternatives provided should be more than just build and no build. Alternatives should include various bridge types considered.);

            b) Location;

            c) Design;

            d) Probable impacts of each alternative on the quality of the human

environment;

e) Commitments of resources; and

f) Comments of federal, state and local government agencies, and other interested parties or groups. (For further information, contact the local Coast Guard District.)

Reference:

This information is located in the cover letter on pages 48-50.

Information about early screening of alternatives, the expert review panels, and location and design of the alternatives for the proposed project can be found in FEIS Chapter 2, Description of Alternatives, included in the original application as Attachment G.

Probable impacts of each alternative for the proposed project can be found in FEIS Chapter 3, Existing Conditions and Environmental Consequences, included in the original application as Attachment G, and in the Vertical Clearance NEPA Re-evaluation.

Comments on the proposed project can be found in FEIS Appendix P, CRC DEIS Comments are included in the original application as Attachment G, and in the Record of Decision, included in the original application as Attachment F.

Summary:

Chapter 2 of the Final EIS summarizes the alternatives evaluated for this project and the process used to develop them. Prior to publication of the DEIS in May 2008, the FHWA, FTA, WSDOT and ODOT engaged in an extensive screening process of potential transportation alternatives, options and components. Many of these alternatives and options were eliminated prior to the DEIS because of significant engineering problems, environmental impacts, cost, and/or failure to meet the project's purpose and need. One of the alternatives eliminated was a low-level moveable bridge. Operation of a moveable span would disrupt traffic, cause more accidents on the bridge, be more expensive to construct, and cost substantially more to maintain and operate compared to a fixed span.

These early screening efforts identified several promising possibilities for further study. The best river crossing types appeared to be a replacement bridge or a supplemental arterial or highway bridge. Express bus, bus rapid transit, and light rail were the most promising transit modes for meeting the purpose and need of this project. In July 2006, project staff created 12 alternative packages by combining different river crossing types and transit modes, as well as specific designs to improve safety, freight movement, highway operations, and bicycle and pedestrian access.

Evaluation of these 12 Alternative packages revealed that multimodal packages performed best. Alternatives that did not include a combination of both highway and transit improvements, such as just an aggressive transportation demand management/transportation system management approach or a highway-only

investment, were not recommended to be carried into the DEIS. The project team, working with CRC Task Force members and intensive engagement of the public and other stakeholders, developed the range of alternatives evaluated in the DEIS:

Alternative 1: No-Build

Alternative 2: Replacement crossing with bus rapid transit

Alternative 3: Replacement crossing with light rail

Alternative 4: Supplemental crossing with bus rapid transit

Alternative 5: Supplemental crossing with light rail

Locally Preferred Alternative

The following are the primary transportation improvements included in the Locally Preferred Alternative (LPA):

The new river crossing over the Columbia River and the I-5 highway improvements, including improvements to seven interchanges, north and south of the river, as well as related enhancements to the local street network.

Extension of light rail from the Expo Center in Portland to Clark College in Vancouver, and associated transit improvements, including transit stations, park and rides, bus route changes, and expansion of a light rail transit maintenance facility.

Bicycle and pedestrian improvements throughout the project corridor.

A toll on motorists using the river crossing.

Transportation demand and system management measures to be implemented with the project.

The LPA included two design options and a construction phasing option. The two design options, referred to as LPA Option A and LPA Option B, are the result of substantial public input and additional analysis and design work around the Hayden Island and Marine Drive interchanges. The preferred option, which is described in this FEIS as LPA Option A and is most similar to the Project, includes local vehicular access between Marine Drive and Hayden Island on a local multimodal bridge. LPA Option B does not have traffic lanes on the light rail bridge, but instead provides direct auto access between Marine Drive and the island with collector-distributor (CD) lanes on the two new bridges that would be built adjacent to I-5.

In addition to the two design options, this FEIS also evaluated the potential for phasing construction that is, building part of the project in an initial phase and constructing the remaining elements of the project at a later date. The ICP as presented in this application represents phased construction.

b. **Clean Water Act Coordination:** Section 401 of the Clean Water Act of 1977 (33 U.S.C. 1251), as amended, prohibits federal permitting or licensing

agencies from issuing authorizations for construction activities having discharges into navigable waters, until the appropriate water quality certifying agency has issued a water quality certification or waiver procedures have been satisfied.

1) Water Quality Certification: If applicable to the proposed project;

a) State certifying agency name and point of contact with phone and email address. (e.g., State DEP, Water Management District, State Department of Natural Resources, etc.);

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

For the Oregon Department of Environmental Quality the point of contact is Peter Anderson, 503-229-6030, anderson.peter@deq.state.or.us.

For the Washington Department of Ecology the point of contact is Kerry Carroll, 360-407-7503, kstr461@ecy.wa.gov.

b) Obtain a Water Quality Certification (WQC), waiver or statement that the WQC is not required from the appropriate federal, interstate, or state agency and include in the permit application package, along with a copy of the WQC application, if applicable;

c) If the WQC has not yet been obtained, but has been applied for, include the proof of application in the permit application package;

d) If WQC was waived, provide authority of the waiver; and

e) Specify if the WQC is granted under a Programmatic Agreement (e.g., US Army Corps of Engineers Nationwide Permit (NWP) and the NWP number, etc.).

Applicant's Response:

Reference:

This information is located in the cover letter on page 50. Proof of application for WQC is included as Attachment F in this re-submittal package.

Summary:

Water Quality Certification will be obtained from the Oregon Department of Environmental Quality (DEQ) and Washington State Department of Ecology (Ecology). A Joint Permit Application (JPA) was submitted to DEQ and a Joint Aquatic Resources

Permit Application (JARPA) was submitted to Ecology for the overall CRC Project in January 2013.

To mitigate the effect of pollutants in runoff from additional impervious surface area, the project team has prepared a conceptual stormwater management design. The design was prepared to meet the requirements of ODOT and WSDOT for those portions of the project along I-5. After consultation with and agreement from WSDOT and State of Washington regulatory agencies, the project has adopted ODOT's technical memorandum on stormwater quality on a project-wide basis to provide a standard approach to determining types of water quality facilities. The memorandum is the result of a collaborative effort by ODOT, FHWA, and the following natural resource agencies: NMFS, DEQ, US Fish and Wildlife Service (USFWS), EPA, and ODFW. The decision to use this approach on the Project has been endorsed by WSDOT and the Washington Department of Ecology.

The Cities of Portland's and Vancouver's regulations, found in the 2008 City of Portland Stormwater Management Manual and 2005 Stormwater Management Manual for Western Washington, respectively, will be implemented for those portions of the project along city managed roads.

2) NPDES Permit: List coordination, date(s), enclosures, and EPA comments, if applicable.

Applicant's Response:

Reference:

This information is located in the ROD on pages 27-28.

Summary:

The project has not received an NPDES permit.

Page 27 and 28 of the ROD states:

The Clean Water Act 33 U.S.C. 1251 et seq. establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The Clean Water Act made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. The Clean Water Act also regulates polluted runoff to surface waters. While the Clean Water Act is a federal regulation, review and approval of permits for NPDES and water quality certifications have been assigned to DEQ and the Washington State Department of Ecology in Oregon and Washington, respectively.

To mitigate the effect of pollutants in runoff from additional impervious surface area, the Project team has prepared a conceptual stormwater management design. The design was prepared to meet the requirements of ODOT and WSDOT for those portions of the project along I-5. After consultation with and agreement from WSDOT and State of Washington regulatory agencies, the project has adopted ODOT's technical

memorandum on stormwater quality on a project-wide basis to provide a standard approach to determining types of water quality facilities. The memorandum is the result of a collaborative effort by ODOT, FHWA, and the following natural resource agencies: NMFS, DEQ, USFWS, EPA, and ODFW. The decision to use this approach on the Project has been endorsed by WSDOT and the Washington State Department of Ecology.

The Cities of Portland's and Vancouver's regulations, found in the 2008 City of Portland Stormwater Management Manual and 2005 Stormwater Management Manual for Western Washington, respectively, will be implemented for those portions of the project along city- managed roads.

With the use of state and local regulations and standards, and conformance with the WSDOT, ODOT, City of Vancouver, and City of Portland NPDES permits, FHWA and FTA find that the Clean Water Act requirements have been addressed by the Project to the level necessary to complete the NEPA analysis.

3) Safe Drinking Water Act: List coordination, date(s), enclosure(s), and EPA comments, if applicable.

Applicant's Response:

Reference:

Some of this information was included in the original application in the ROD on pages 30-31.

Some information was not included in the original application. EPA comments on the DEIS and FEIS and CRC responses are included as Attachments G and H in this re-submittal package. The Troutdale Sole Source Aquifer Report is included as Attachment I.

Summary:

Page 30 and 31 of the ROD state:

The Safe Drinking Water Act of 1974, found at 42 U.S.C. Chapter 6A, Subchapter 12, Part C, Section 300H, requires that projects that are to receive "federal financial assistance" and which have the potential to contaminate an aquifer "so as to create a significant hazard to public health" are subject to EPA review and approval. North of the Columbia River, the I-5 corridor and other project facilities are underlain by the Troutdale Aquifer, an EPA designated Sole Source Aquifer (SSA) for the Vancouver area. The Project uses federal funds and was, therefore, required to produce an SSA report discussing potential groundwater impacts. This SSA report is included as Appendix F of the Hazardous Materials Technical Report supporting the FEIS, and was submitted to EPA in 2009 (included as an attachment to this document).

Pages 7-1 and 7-2 of the SSA report include extensive mitigation procedures designed to help ensure the protection of the Troutdale SSA. The EPA reviewed the SSA report, and in July of 2010 provided conditional approval to the Project. The conditions included a

determination that the Project needs additional monitoring and reporting to ensure the Project does not pose a risk for contaminating the aquifer and may require additional mitigation measures. The project sponsors will comply with the additional monitoring, reporting and mitigation requirements required by EPA, as well as implement the mitigation listed in the SSA report. WSDOT would be responsible for any monitoring that is required beyond the duration of the Project construction. Accordingly, FHWA and FTA find that the Safe Drinking Water Act has been addressed to the level necessary to complete the NEPA analysis.

c. **Coastal Zone Management Plan:** The Coastal Zone Management **(**CZM**)** Act of 1972 (16 U.S.C. 1451), as amended, and its implementing regulations (15 CFR 930), requires all projects located within the designated coastal zone of a state to be consistent with the state's federally approved CZM plan.

1) Section 307 of that act instructs federal agencies not to take action until they have received written certification from the applicant and the state CZM agency, signifying that the proposed project is consistent with the state's coastal zone management plan.

2) If the State or territory has a federally approved CZM plan, and the project is located in the coastal zone, the following information is required:

a) Written certification and date that the proposed project is consistent with the approved state CZM Plan; and

b) The State CZM Program office concurrence in writing with the certification. (For further information, contact the State Coastal Zone Management Office.)

3) Per the Coastal Barrier Resources Act of 1982: 16 U.S.C. 3501, verify that the proposed project complies with the listed act’s guidance (if applicable).

4) List Executive Order 13089 – Coral Reef Protection coordination, and US Coral Reef Task Force, if applicable.

Applicant’s Response:

Coastal Zone Management consistency statement is not applicable, because the proposed bridge is not covered by a Coastal Zone Management Plan.

d. **Floodplain:** The base floodplain is the area that would be inundated by a base flood or 100-year flood. The base flood is defined as that flood having a one-percent chance of being exceeded in any given year. Executive Order 11988, Floodplain Management and Protection, requires federal agencies to avoid authorizing projects in the base floodplain unless there is no practical alternative. By their very nature, most bridges are located within the base floodplain. Therefore, the Coast Guard must ensure that the project design includes all measures practicable to minimize floodplain impacts and to protect the natural and beneficial values of the floodplain.

1) State whether the proposed project is located in a base floodplain. If the proposed project is located in a base floodplain, be sure that the application package includes the following information:

Applicant's Response:

Reference:

This information is located in the cover letter on page 50.

Summary:

Portions of the I-5 highway and supporting infrastructure currently exist within the Columbia River's floodplain and within the river itself, including portions of the highway system that will experience an increased footprint as a result of the Project.

Describe extent of encroachment in base floodplain to include amount fill;

Applicant's Response:

Reference:

This information is located in the cover letter on page 53 and revised slightly to clarify that fill material is below ordinary high water.

Summary:

As described in the JPA form (Attachment A to the original application), fill material below ordinary high water (OHW) associated with the main river crossing is approximately 1.555 acres and 46,375 cubic yards of permanent fill and 0.947 acres and 60,348 cubic yards of temporary fill. The project will have 0.638 acres and 43,868 cubic yards of permanent removal below OHW associated with the main river crossing.

a) The degree that the action supports development in the floodplain;

Applicant's Response:

Reference:

This information was not included in the original application. A FEMA "FIRMette" is included as Attachment J to this re-submittal package.

Summary:

The project is in an area that is already developed. Under Executive Order 11988 the project must avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. The project has conducted alternatives analysis to evaluate practicable alternatives to locating in the base floodplain and minimize footprint in floodplains and presently in the process of determining the extent of floodplain fill and the effects through the hydraulic and hydrologic analysis. The FEIS addressed induced growth in the Indirect Effects Technical Report, which found that the project was likely to support the region's growth management goals and support more concentrated development near the urban core.

This would include more development around the project itself. Such induced development, however, would be minimized in the floodplain which is indicated in the FEMA FIRMette included in the re-submittal package.

b) Any risk to human safety (For further information, contact the regional office of the Federal Emergency Management Agency (FEMA). State the FEMA Flood Insurance Rate Map Community Panel Number and panel dates, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

All improvements will be implemented in accordance with FEMA standards and coordinated through FEMA, City of Portland (OR), City of Vancouver (WA), Clark County (WA), and Multnomah County (OR). The FEMA Flood Insurance Rate Map Community Panel Number is 4101830085F and the date is November 26, 2010.

c) Cite the 100-year flood elevation and proposed bridge low member (chord, or steel) elevation, within the 100-year floodplain; and

Applicant's Response:

Reference:

The base flood elevation for the 100-year flood is located on sheet 2 of the original and revised plan sets. The proposed bridge low member was not stated in the original application.

Summary:

The existing FEMA base flood elevation for the 100-year flood at the proposed CRC bridge is elevation 31.4 (NAVD 88). (See Attachment J FEMA FIRMette). Design of the bridge is not yet complete, one criteria that has been established is to maintain the low chord above elevation 35 (NAVD 88) based on being above the 500 year WSE.

d) Describe the effect of the proposed bridge on drift and flood height.

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

The existing I-5 Bridge crosses the Columbia River using 11 groups of piers and an average span of approximately 263 feet. The proposed Columbia River Bridge will cross

using 8 pier groups with an average span of approximately 400 feet. Additionally the low chord elevation of the existing bridge is lower than the proposed bridge. Therefore, the proposed bridge will have a larger hydraulic openings and greater clearance to recruit drift material.

CRC is currently preparing a hydraulic analysis to estimate the proposed bridge structure's impacts to the floodplain compared to the existing structures. This analysis is being developed for the Columbia River main channel and the North Portland Harbor (NPH) to the south. The FEMA mapped floodplain on the Columbia River in the vicinity of the existing structure is 31.6 feet (NAVD 88).

Preliminary hydraulic analysis results indicate that the proposed structure will raise WSE by less than 0.00 feet in the main channel and 0.04 feet in the NPH. In the temporary condition, preliminary estimates indicate a potential raise of 0.03 feet and 0.05 feet for the Columbia River and NPH respectively.

The hydraulic analysis will be updated as design progresses to account for improved pier geometry, bank grading, and other mitigation measures.

CRC will comply with FEMA requirements as outlined in the Code of Federal Regulations (44 CFR 60). This effort will include documenting a "no-rise" condition and coordination with local floodplain jurisdictions including the City of Portland (OR), Multnomah Co. (OR), City of Vancouver (WA), and Clark County (WA).

e. **Historic/Cultural Resources:** All bridge actions require compliance with:
   1) The National Historic Preservation Act of 1966, Section 106 (16 U.S.C. 470);
   2) Protection and Enhancement of the Cultural Environment (E.O. 11593);
   3) Native American Graves Protection and Repatriation Act;
   4) Antiquities Act of 1906;
   5) Archaeological Resources Protection Act of 1979; and
   6) American Indian Religious Freedom Act of 1978.

Applicant's Response:

Reference:

This information on historic preservation is located in the cover letter on pages 50-51. Information on the other acts was not included in the original application.

Summary:

Of the above-listed Acts and Orders, Section 106 of the NHPA is the primary act applicable to the project. NAGPRA will be followed if human remains or associated funerary objects are identified on federal land. Although CRC is having an impact on federal land, the Antiquities Act and ARPA permit requirements were not invoked as NPS personnel, in coordination with CRC, conducted the archaeological work. The policies of AIRFA and EO 11593 will be adhered to where applicable, and are stipulated in Section I.f. of CRC's Section 106 MOA:

"FHWA and FTA shall retain ultimate responsibility for complying with all federal requirements pertaining to direct government-to-government consultation with Indian tribes. Notwithstanding any other provision of this stipulation, FHWA and FTA shall honor the request of any of the Indian tribes listed herein for direct government-to-government consultation regarding the Project. WSDOT and ODOT are authorized by FHWA to carry out, as their agents, Section 106 compliance activities, Section 4(f) of the Department of Transportation Act and tribal consultation. FHWA and FTA also agree that they have specific responsibilities and authorities in compliance with the National Environmental Policy Act, the Archaeological Resources Protection Act, the Native American Graves and Protection and Repatriation Act, the Historic Sites Act of 1935, the American Antiquities Act of 1906, the American Indian Religious Freedom Act, the Religious Freedom Restoration Act, Executive Order 13007 (Indian Sacred Sites), Executive Order 13287 (Preserve America), Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments), and related authorities."

For further information, contact National Park Service, State Historic Preservation Officer (SHPO), local parks or recreation officials, or local historic preservation organizations. If the proposed project impacts any resources covered under any of the above mentioned Acts or Executive Orders:

1) Briefly describe these properties and discuss the impacts of the proposed project;

Applicant's Response:

Reference:

This information is located in the cover letter on page 51 and in the Section 106 MOA which is Attachment K to this re-submittal package. Section 3.8 of the FEIS describes the impacts to these properties in further detail.

Summary:

Three NRHP-listed or eligible historic resources will be adversely affected by the Project. These properties are listed below:

Pier 99 Building

Historic I-5 Bridge

Vancouver National Historic Reserve

A total of 32 archaeological NRHP-listed or eligible sites, as listed in the FEIS, will be affected by the Project.

2) Briefly describe mitigation efforts to reduce these impacts;

Applicant's Response:

Reference:

This information is located in the cover letter on page 51 and in the Section 106 MOA which is Attachment K to this re-submittal package.

Summary:

Adverse effects to the above historic and archaeological resources are addressed by the Section 106 Memorandum of Agreement (MOA) dated September 8, 2011. This MOA was developed in consultation with the SHPOs, tribes, and consulting parties. The MOA stipulations include: general requirements and standards, mitigation for adverse effects, the significant archaeological resources in the project area and principles on how to complete archaeological investigations, dispute resolution, and duration, amendment and termination agreements for the MOA.

The MOA is included as an attachment to this document.

Provide a copy of Cultural Resource Assessment Survey, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application. The Cultural Resource Assessment is Attachment S to this re-submittal package.

3) If applicable, provide other unique information regarding Section 106 process, such as any correspondences with applicable historic preservation and cultural resources agencies for compliance with the National Historic Preservation Act, Executive Order 11593 – Protection and Enhancement of the Cultural Environment, Native American Graves Protection and Repatriation Act, Antiquities Act of 1906, Archaeological Resources Protection Act of 1979, and American Indian Religious Freedom Act of 1978. Include all correspondence, if applicable; and

Applicant's Response:

Reference:

This information is located in the FEIS Section 3.8 and FEIS Appendix A.

Summary:

Section 106

For the CRC project, FHWA and FTA, the lead federal agencies for the project, identified the following Section 106 consulting parties:

- **Chinook Tribe, Washington**
- **City of Portland**
- **City of Vancouver**
- **Confederated Tribes and Bands of the Yakama Nation, Washington**
- **Confederated Tribes of the Colville Reservation, Washington**

- **Confederated Tribes of the Grand Ronde Community of Oregon**
- **Confederated Tribes of the Siletz Reservation, Oregon**
- **Confederated Tribes of the Umatilla Reservation, Oregon**
- **Confederated Tribes of Warm Springs Reservation of Oregon**
- **Cowlitz Indian Tribe, Washington**
- **National Park Service (NPS)**
- **Nez Perce Tribe of Idaho**
- **Oregon State Historic Preservation Office (SHPO)**
- **Spokane Tribe of the Spokane Reservation, Washington**
- **Nisqually Indian Tribe, Washington**
- **United States Army Corps of Engineers**
- **Washington Department of Archaeology and Historic Preservation (DAHP)**
- **Washington Department of Natural Resources**

Consultation Activities to Date

Initiated consultation in December 2005.

Conducted face-to-face meetings with each agency/tribe.

Held several meetings to solicit input on methods for analyzing impacts to resources in the DEIS.

Consulted on the following products:

- **Purpose and Need statement**
- **Method and data reports**
- **The range of alternatives**
- **Area of Potential Effects for Section 106**
- **Tribal consultation plan**
- **Over-water geotechnical boring Plan**
- **Inadvertent Discovery Plan**
- **Jurisdictional wetlands and waters technical report**
- **Geology and Soils technical report**
- **Water quality and soils technical report**

- **Hazardous materials technical report**
- **Ecosystems technical report**
- **Acquisitions and Relations technical report**
- **Historic Resources technical report**
- **Archaeological technical report**
- **Draft research design for archaeological discovery field investigations**
- **Section 106 Memorandum of Agreement**
- **The CRC project hosted a History Seminar on March 20, 2007. The purpose of the seminar was to educate the project team about the significant history of the area. Each tribe sent a speaker to tell their history/experience in the area. There were also four non-tribal historians that presented on the non-tribal and environmental history of the project area.**
- **Coordinated with the Grand Ronde (as requested) to participate in the pedestrian archeology survey in July 2007 and observe cultural resources monitoring for geotechnical borings in February 2008.**
- **Consulted with tribes and agencies (including FHWA, FTA, NPS, DAHP, SHPO, and WSDOT and ODOT archaeologists) on an Inadvertent Discovery Plan (IDP) for any ground disturbing activity on the project. Held two intertribal/interagency meetings to review the plan. Consulted on four drafts of the plan before it was "finalized" in October 2007. The plan is ready to apply to ground-disturbing activities such as testing. This is a living document that we will amend in the future as needed. It will likely be revised before construction.**
- **Held multi-tribal/agency meetings to discuss preliminary findings for the natural and cultural resource discipline reports.**
- **Held pre-DEIS meetings with individual tribes between November and January, and then consulted on the DEIS.**
- **Hosted an intertribal meeting with presentations by NPS and CRC. The purpose of the meeting was to look at detailed archaeological information in relation to the detailed CRC design maps.**
- **Hosted a leadership meeting, including the leaders of tribes, FHWA, FTA, WSDOT, ODOT, City of Portland, City of Vancouver, National Parks Service, Washington and Oregon Governor's Offices and others. Developed contracts with the Warm Springs and Umatilla tribes to conduct oral history studies for the project area.**
- **Developed service contracts with interested tribes to conduct cultural resource monitoring during ground-disturbing activities on the project. Contacted interested tribes about timing of ground-disturbing activities.**

- **Consulted on the on-land geotechnical borings plan and associated cultural resources monitoring plan.**
- **Consulted on the FEIS.**
- **Submitted a draft of the archaeological technical report for review.**
- **Hosted a meeting to discuss the Section 106 Memorandum of Agreement (MOA) and treatment plan, after having sent a copy for review.**

Current/Upcoming Consultation Activities

- **Consultation on updated Inadvertent Discovery Plan.**
- **Consultation on development of Archaeological Treatment Plan.**
- **Consultation on Monitoring Plan.**
- **Consultation on the development of mitigation items listed in the Section 106 MOA.**

4) Include all coordination from Advisory Council on Historic Preservation, National Park Service, SHPO, and other unique and substantive information, if applicable.

Applicant's Response:

Reference:

This information is located in the cover letter on page 50. More information on coordination can be found in the FEIS Appendix A, Agency and Tribal Coordination.

Summary:

The Project has consulted with Washington State Department of Archaeology and Historic Preservation (DAHP) and the Oregon State Historic Preservation Office (SHPO) because the project has the potential to affect properties that are listed or eligible for National Register of Historic Places listing. Consultations and coordination also involved interested parties, including the Chinook Tribe, City of Portland, City of Vancouver, Confederated Tribes and Bands of the Yakama Nation, Confederated Tribes of the Colville Reservation, Confederated Tribes of the Grand Ronde Community of Oregon, Confederated Tribes of the Siletz Reservation, Confederated Tribes of the Umatilla Reservation, Confederated Tribes of Warm Springs Reservation of Oregon, Cowlitz Indian Tribe, National Park Service (NPS), Nez Perce Tribe of Idaho, Spokane Tribe of the Spokane Reservation, Nisqually Indian Tribe, USACE, and Washington Department of Natural Resources.

f. **Wetlands:** Wetlands are defined as lands either permanently or intermittently covered or saturated with water. Executive Order 11990, Protection of Wetlands, states that no federally approved project shall occur in wetlands unless there is no practical alternative to constructing in the wetlands. As a result, the Coast Guard must analyze alternative locations which avoid taking wetlands. If no alternative

locations or designs are practicable, then the Coast Guard must ensure that the project design includes all practicable measures to minimize wetland impacts. If the proposed project is located in or adjacent (within 500 feet) to a wetland, the following information is required:

1) Type and acreage of wetlands taken;

2) A brief description of efforts to mitigate impacts and estimated monetary/functional value, if known or can be reasonably estimated;

3) Date the Wetlands Finding was approved and include a copy of the Wetlands Finding, as applicable; and

4) The amount of acreage saved or increase in wetlands resulting from mitigation efforts.

Applicant's Response:

Reference:

This information was not included in the original application. It is located in the FEIS Wetlands Technical Report which is Attachment L of this re-submittal package.

Summary:

The Project footprint would not take or directly impact any delineated wetlands and would not discharge untreated stormwater runoff into any wetlands. Therefore, no mitigation is needed or proposed. Several wetlands within 500 feet of the project footprint in Oregon have been delineated, other potential wetlands have also been identified. These delineated and potential wetlands have been identified on project maps, and will be avoided completely. The Oregon Department of State Lands concurred with the project's delineation report on September 28, 2008. Additional wetlands were delineated in the project area as part of the I-5 Victory Boulevard to Lombard project; the concurrence letter for that project was published on January 2, 2007. The concurrence letters for both projects were included in Appendix A of the Wetlands Technical Report of the FEIS. No wetlands were identified within or adjacent to the footprint in Washington, so no delineation report was prepared.

Access was not granted to one privately-owned parcel where wetlands were suspected based on remote observations. However, project wetland experts used high-resolution aerial photography, soil maps, and direct observation to draw boundaries of potential wetlands, encompassing all areas that could be considered jurisdictional. The currently proposed project avoids these and all other jurisdictional and potential wetlands.

g. **Fish and Wildlife**

1) Threatened and Endangered Species: The Endangered Species Act of 1973 (16 U.S.C. 1531), as amended, prohibits any activity threatening the continued existence of a federally designated endangered or threatened species. If threatened or endangered species are potentially present in the proposed project area, then the applicant must:

a) Contact the U. S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS) and the State Fish and Game Commission representatives for assistance in determining whether the project is located in the range or habitat of endangered or threatened species;

Applicant's Response:

Reference:

Some of this information was not included in the original application. The information is located in the cover letter on page 51 and in the attached June 2010 Biological Assessment (Attachment M), the August 2010 USFWS concurrence letter (Attachment N), the April 2013 re-initiation document for impacts to newly designated and proposed critical habitat (Attachment P), and a letter of request for re-initiation (Attachment O).

Summary:

The project has had considerable coordination with USFWS and NMFS, which culminated in a Biological Opinion from NMFS and a concurrence letter from USFWS, included as Attachment H to the original submittal. ESA-related approval of the project has been obtained through NMFS's issuance of a Biological Opinion (BO) and USFWS's issuance of a concurrence letter for threatened and endangered species and their habitats that may be affected by the project. NMFS has required in the BO that certain terms and conditions be met in order to provide clearance of the project. The BO requires that impact pile driving would be completed during an in-water work window between September 15 and April 15. There are limits on the sound levels of impact pile driving, as described in the BO. The BO was issued on January 19, 2011. The concurrence letter was issued by USFWS on August 27, 2010. FHWA and FTA are jointly reinitiating consultation to address newly designated and proposed critical habitats, and to provide additional information to the Services on updated project activities. The reinitiation document supports the same effects determinations and likely jeopardy determinations as provided in the 2011 NMFS BO and the 2010 USFWS concurrence letter.

b) If the project is within the range of such species, list species and discuss impacts or lack thereof;

Applicant's Response:

Reference:

Some of this information was not included in the original application. The information is located in the cover letter on page 51 and in the attached June 2010 Biological Assessment (Attachment M), the August 2010 USFWS concurrence letter (Attachment N), the April 2013 re-initiation document for impacts to newly designated and proposed critical habitat (Attachment P), and a letter of request for re-initiation (Attachment O).

Summary:

As described in the Final EIS, the June 2010 BA, the NMFS BO, USFWS's concurrence letter, and the April 2013 ESA re-initiation document, the project proponents along with NMFS and USFWS determined that permanent and temporary project actions may affect and would likely adversely affect listed Chinook (*Oncorhynchus tshawytscha*), sockeye (*O. nerka*), coho (*O. kisutch*), chum (*O. keta*), steelhead (*O. mykiss*), eulachon (*Thaleichthys pacificus*), and Steller sea lion (*Eumetopias jubatus*) and their designated critical habitat, if present. It was determined that the project may affect but would not likely adversely affect bull trout (*Salvelinus confluentus*), green sturgeon (*Acipenser medirostris*), and killer whale (*Orcinus orca*), and their designated critical habitat, if present. The Project would have no effect on listed plant species, as no listed plant species occur within the Project footprint. The Project would not jeopardize the existence of any listed species, nor adversely modify or destroy critical habitat.

As required by Section 7 of the ESA, NMFS also provided an "incidental take statement" with the BO. The incidental take statement describes reasonable and prudent measures NFMS considers necessary or appropriate to minimize the impact of incidental take associated with the Project. The take statement sets forth nondiscretionary terms and conditions, including reporting requirements, that the Project must comply with to carry out these reasonable and prudent measures. Accordingly, FHWA and FTA find that, with the incorporation of the terms and conditions contained in the BO into this ROD and with the issuance of a USFWS concurrence letter, the Section 7 consultation requirements have been met and ESA has been satisfactorily addressed.

NMFS proposed critical habitat for eulachon on January 5, 2011. NMFS designated critical habitat, including portions of the project's action area, on October 20, 2011. The final rule takes effect on December 19, 2011. After coordination with NMFS, FHWA and FTA sent correspondence to NMFS on November 28, 2011 stating their intention to reinitiate consultation to address potential project effects on eulachon critical habitat.

Additionally, on January 14, 2013, NMFS proposed critical habitat for lower Columbia River coho salmon. Proposed critical habitat is within the project's action area. FHWA and FTA will consider the status of lower Columbia River coho salmon's critical habitat at the time of the reinitiation of the eulachon critical habitat to determine the proper course of action for evaluating project effects to this habitat including whether its critical habitat has been formally designated. The request for re-initiation and the ESA re-initiation document is attached.

c) Briefly discuss mitigation efforts to reduce the impact;

Applicant's Response:

Reference:

Impact avoidance and minimization measures are described in detail in Section 5.2 of the Supplemental Project Description and mitigation measures are described in Section 5.5 of the Supplemental Project Description (Attachment B to the original application).

Summary:

These avoidance and minimization measures include those related to timing, duration, and extent of potential impacts. Many impact minimization measures utilize existing WSDOT and ODOT specifications for environmental protection.

Compensatory mitigation for unavoidable impacts to water is proposed at two sites – one on the Sandy River in Oregon and one on the Lewis River in Washington. Both will benefit listed aquatic species that might be impacted by the project.

The project is anticipated to permanently fill approximately 1.6204 acres and temporarily fill up to 0.9477 acre of in-water habitat in the Columbia River and North Portland Harbor in Oregon and Washington. Approximately 0.64 acres of fill associated with existing structures (i.e., the mainstem Columbia River structure) will be removed. No jurisdictional wetlands will be impacted in Oregon or Washington during construction or operation of the project, with the possible exception of impacts related to restoration activities at the Sandy River and Lewis River mitigation sites. Additional required mitigation for these types of impacts is not anticipated.

A mitigation site has been identified west of the project on the east bank of the Lewis River at the confluence with the Columbia River. No jurisdictional wetlands will be impacted in Washington during construction or operation of the CRC project, however approximately 7.4 acres of wetland impacts related to enhancement or restoration activities at the Lewis River mitigation site might occur. Additional required mitigation for these types of impacts is not anticipated. Mitigation activities at the Lewis River site will be funded by the CRC project and be constructed by a third party. The Washington mitigation site will go through its own permitting process separate from the CRC permit process.

Restoration and enhancement actions specific to the Mitigation Area will include discontinuing current livestock grazing, invasive species control, establishing and enhancing floodplain forest habitat, and the restoration of historic side channel habitat. Once completed, the Mitigation Area will consist of 27.2 acres of enhanced floodplain forest, 3.8 acres of proposed floodplain forest, 9.4 acres of restored side channel, 6 habitat complexity structures, and 3,000 linear feet of preserved and enhanced Lewis River bank.

The main goal of the Mitigation Area is to restore, enhance, preserve, and protect the aquatic and riparian habitats onsite to benefit the numerous salmonid species occurring in the Columbia Basin as well as other native fish including Pacific lamprey and Pacific eulachon. Proposed restoration actions and their benefits include:

- **Reconstructing and re-connecting 9.4 acres of Lewis River side channels currently blocked with dredge spoil material in order to provide year-round connectivity to the Lewis River, provide salmon rearing habitat, and reconnect floodplain wetlands**
- **Installing approximately 6 habitat complexity structures to provide additional salmon rearing habitat, improve habitat complexity, and re-direct flow into the newly excavated channel inlets and outlets**

- **Excluding livestock grazing activities from sensitive areas to encourage native riparian species establishment and improve water quality.**
- **Planting native riparian species and removal of invasive species in order to establish floodplain forest habitat and enhance existing floodplain forested areas.**
- **Providing legal and financial protection and stewardship so the restored and enhanced habitats are preserved in perpetuity.**

The restoration actions described above will restore, enhance, and preserve a variety of aquatic and riparian habitats important to Columbia Basin salmon and steelhead and other native fish including Pacific lamprey and Pacific eulachon. Benefits will be attained through on-site usage by juvenile and adult and through off-site dispersal of salmonid prey items such as insects. The Mitigation Area will be preserved and protected with a conservation easement and managed with funds from a non-wasting, third-party-held endowment. The restored habitats will be held to performance standards, monitoring requirements, and management standards, all of which are described in this Plan.

A second mitigation site has been identified along the Sandy River and within Dabney State Recreation Area. No jurisdictional wetlands will be impacted in Oregon during construction or operation of the CRC project, however approximately 3,600 cy of impacts related to enhancement or restoration activities at the Dabney State Recreation Area mitigation site will occur. Additional required mitigation for these types of impacts is not anticipated. Mitigation activities at the Dabney State Recreation Area site will be funded by the CRC project and be constructed under contract by ODOT. The activities associated with this mitigation site are addressed in this permit application.

This project is identified as one of the five priority projects by the Sandy River Basin Partners group. Mitigation and restoration at this site contains the following elements: 1) restoring two side channels of the Sandy River, 2) improving the flow for a tributary that has divergent flows, and 3) removing fish passage barrier culverts in Bonnie Brook, a tributary to the Sandy River. The two side channels contain seasonal winter flows but are mostly dry in summer and fall. The tributary flow comes off of a waterfall and then follows a terrace that follows the river alignment. Under normal conditions, this tributary is not connected to the river except at the confluence. However, the waterfall has scoured a direct path to the river and most or all of the flows are now being diverted into this other channel rather than the full channel. Bonnie Brook has four culverts that were originally installed either when the park was first built or by the first landowner. The mitigation project will remove the culverts, which are currently fish passage barriers. Bonnie Brook also has small dams at two of the culvert locations with head gates that would also be removed. The stream would return to being a free-flowing stream rather than a stream connected by a series of ponds. See Appendix C of the ESA re-initiation document for a conceptual mitigation plan for this site.

Restoration at this site will benefit subyearling and adult salmon and steelhead, and adult and juvenile lamprey. Salmon and steelhead utilizing the Sandy River and the Lower Columbia River will directly benefit through site restoration and indirectly

benefit through increased watershed functions that will extend downstream and into the Columbia River (e.g., food production).

d) Provide the date and a copy of any biological assessment prepared or approved, if applicable; and

Applicant's Response:

Reference:

The Biological Assessment was not included with the original application—it is Attachment M to this re-submittal package. The Biological Opinion is included as Attachment H to the original application.

Summary:

The Biological Assessment is included as an attachment to this document, dated June 2010.

e) List any correspondence and dates of consultations with Federal, state or local agencies to determine compliance with Endangered Species Act of 1973, Fish & Wildlife Coordination Act (FWCA), Marine Mammal Protection Act of 1972, Migratory Bird Treaty Act of 1918, Executive Order 13186 – Responsibility of Federal Agencies to Protect Migratory Birds, Bald and Golden Eagle Protection Act, National Marine Sanctuaries Act, Executive Order 13112 - Invasive Species, and other unique and substantive information, if applicable.

Applicant's Response:

Reference:

Some of this information is included in the original application. The ROD addresses the Endangered Species Act, Fish & Wildlife Coordination Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act on pages 31 to 33. A list of correspondence with Federal, state and local agencies is located in Appendix A of the FEIS.

Responses to Executive Order 13186, Executive Order 13112, and the National Marine Sanctuaries Act were not included in the original application, and are addressed below.

Summary:

The ROD states that the project has addressed the Endangered Species Act, Fish & Wildlife Coordination Act, Marine Mammal Protection Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act to the level necessary to complete the NEPA analysis.

Executive Order 13186 – Responsibility of Federal Agencies to Protect Migratory Birds requires federal agencies taking actions that have, or are likely to have, a measurable negative effect on migratory bird populations to develop and implement, a

Memorandum of Understanding (MOU) with the Fish and Wildlife Service (USFWS) that shall promote the conservation of migratory bird populations. The proposed project will not have a measurable negative effect on migratory bird populations. In addition, the EO 13186 should not affect Federal-aid projects because actions delegated to or assumed by nonfederal entities, or carried out by nonfederal entities with Federal assistance, are not subject to the Order, although such actions continue to be subject to the Migratory Bird Treaty Act itself. The project team has worked with USFWS and others to identify actions and alternatives to avoid impacts on migratory birds. The project will fully comply with the MBTA and the implementation of EO 13186 during construction and operation of the project.

Executive Order 13112 – Invasive Species states that federal agencies cannot authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless all reasonable measures to minimize risk of harm have been analyzed and considered. Both WSDOT and ODOT have roadside vegetation management specifications that require removal of noxious weeds and prohibit the planting of invasive species and noxious weeds during revegetation activities. Trees and other vegetation may be removed within the project footprint, revegetation with native plants in accordance with local regulations would occur within or adjacent to the project footprint. Therefore, EO 13112 would be fully complied with during the construction and operation of the project.

The National Marine Sanctuaries Act authorizes the Secretary of Commerce to designate and protect areas of the marine environment with special national significance due to their conservation, recreational, ecological, historical, scientific, cultural, archeological, educational, or esthetic qualities as national marine sanctuaries. The NMSA requires federal agencies whose actions are "likely to destroy, cause the loss of, or injure a sanctuary resource," to consult with the program before taking the action. The program is, in these cases, required to recommend reasonable and prudent alternatives to protect sanctuary resources. The closest sanctuary is the Olympic Coast National Marine Sanctuary, approximately 170 water miles from the CRC project site. The CRC project will not conduct any activities within this or any other national marine sanctuary, and will therefore not destroy, cause the loss of, or injure any sanctuary resource.

2) Essential Fish Habitat: The Magnuson-Stevens Fishery Conservation and

Management Act (16 U.S.C. 1855), as amended, requires federal agencies which fund, permit, or carry out activities that may adversely impact Essential Fish Habitats (EFH) to consult with the National Marine Fisheries Service (NMFS) regarding potential adverse effects of actions on EFH.

If the applicant knows at the time of application for a bridge permit that the proposed project will impact EFH, the applicant should submit an EFH assessment technical memo.

Applicant's Response:

Reference:

This information is located in the ROD on page 32.

Summary:

The ROD states:

The Magnuson-Stevens Act (MSFCMA) affords protection to Essential Fish Habitat (EFH), which may include streams, lakes, ponds, wetlands, other currently viable water bodies, and most of the habitat historically accessible to salmon. Under MSFCMA, NMFS is required to provide EFH conservation and enhancement recommendations to federal and state agencies for actions that adversely affect EFH. Of the fish species present in the project area, EFH applies only to Chinook and coho.

Consultation with NMFS on effects to EFH has been completed in conjunction with the Section 7 ESA consultation. NMFS determined that adverse effects to EFH from the Project would occur. Their findings are addressed in conjunction with the BO issued on January 19, 2011. Conservation recommendations were included in the NMFS findings. Accordingly, FHWA and FTA found in the ROD that the MSFCMA has been satisfactorily addressed.

h. **Noise Levels:** All authorized bridge construction work must comply with the provisions of the Noise Control Act of 1972 (42 U.S.C. 4331), as amended. Under the Noise Control Act, the adverse impacts on existing activities or land uses that may result from the bridge, its related highway sections, or its construction must be considered.

1) Include the following information in the application packet concerning noise levels:

a) The anticipated operational noise levels for the proposed project and mitigation;

b) The anticipated temporary construction noise/vibration levels for the proposed project and mitigation;

c) A description of all possible measures to minimize the noise impact if there is no alternative to avoid the adverse effects;

d) State standards that were used as guides for noise levels for particular activity categories, for example the FHWA's Federal-Aid Highway Program Manual and any state or local ordinances that may be used (For further information, contact the local highway department); and

Applicant's Response:

Reference:

This information is located in the cover letter on pages 52-53. This information can be found in greater detail in FEIS Section 3.11, Noise and Vibration.

Summary:

The project will result in both construction and operational noise impacts. The Final EIS identifies a number of mitigation measures for long-term noise impacts, including potential noise walls for highway impacts and booted track and building sound insulation for transit impacts. With these mitigation measures, the number of expected highway noise impacts would be reduced substantially relative to the No-Build Alternative throughout the project area. The number of expected moderate and severe transit noise impacts would be the same for both the Project and the No-build Alternative – no impacts.

Construction activities will comply with local jurisdictions maximum noise criteria or obtain appropriate variances. ODOT's Section 292.32 identifies a variety of construction noise abatement measures that will also apply to the Project. Although WSDOT does not have construction standard specifications, WSDOT would voluntarily comply with Section 292.32 for work completed in Washington. In addition to Section 292.32, ODOT and WSDOT would also implement additional noise abatement methods, as described in the Final EIS.

e) State whether the proposed project is in compliance with the Noise Control Act of 1972 and include EPA comments if applicable.

Applicant's Response:

Reference:

This information is located in the ROD on pages 40-41.

Summary:

As stated in the ROD, the project is in compliance with the Noise Control Act of 1972:

There are several federal regulations concerning protection from noise impacts. These regulations include the Noise Control Act of 1972 (and as amended by the Quiet Communities Act of 1978, see 42 U.S.C. 4901 - 4918) which requires federal agencies to develop programs to promote an environment free of noise that jeopardizes public health or welfare and that agencies comply with state and local noise ordinances. FTA has developed criteria, most recently documented in the Transit Noise and Vibration Impact Assessment Manual (May 2006), which addresses Title 42. FHWA has developed criteria, codified in 23 CFR Part 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise and has produced a guidance document, Highway Traffic Noise: Analysis and Abatement Guidance, January 2011. The FEIS Section 3.11 Noise and Vibration, identifies the noise and vibration analysis methods, impacts and mitigation, including compliance with local noise regulations as applicable (Ruby Junction Maintenance Facility in Gresham). With the completion of the mitigation measures cited in the ROD FTA and FHWA find that the noise and vibration requirements of these Acts will be met.

i. **Clean Air:** All bridge actions must comply with the provisions of the Clean Air Act (CAA) [42 U.S.C. 7506(c)], as amended. Section 176(c) of the CAA, as amended (42 U.S.C. 7401), prevents the Coast Guard from approving any project or from issuing any permit for actions not conforming to the provisions of an approved Federal Implementation Plan (FIP) or to a State Implementation Plan (SIP). The Coast Guard must ensure that projects under its jurisdiction meet the National Ambient Air Quality Standards (NAAQS) before issuing a bridge permit.

1) NAAQS were established pursuant to Section 109 of the CAA and include standards for the following criteria pollutants:
   a) Carbon monoxide (CO);
   b) Lead (Pb);
   c) Nitrogen Oxide (NOx);
   d) Ozone (O3);
   e) Particulate matter (PM10); and
   f) Sulfur dioxide (SO2).

2) The General or Transportation Conformity Rule applies to all proposed bridge projects in an area designated non-attainment or maintenance for any of the six criteria pollutants under the NAAQS.

   a) When the General Conformity Rule (40 CFR 93.150) applies to bridge projects requiring a Coast Guard bridge permit, a conformity determination is required for each of the criteria pollutants identified in 40 CFR 93.153, unless the pollutant levels are deemed de minimus for the proposed project during construction and operational scenarios or are exempt under sections such as 40 CFR 93.126.

   b) Transportation plans, programs and projects funded or approved under Title 23, United States Code, or the Federal Transit Act require air quality conformity analyses and determinations pursuant to 40 CFR Part 51 and 93, Subpart T (51.390, 93.100), the Transportation Conformity Rule. This determination is normally completed by the FHWA or the FTA, as appropriate, for Title 23 Projects. This rule also applies to projects that areregionally significant, per 40 CFR 93.121. EPA and/or the local air agency make the determination of regional significance.

   c) Both Conformity Rules apply when private funds are used for the project and the project is considered regionally significant.

Applicant's Response:

Reference:

This information is located in the cover letter on page 53 and in FEIS Section 3.10.

Summary:

Because the Project is a part of the conforming regional transportation plans (RTP and MTIP) for the Portland metropolitan area, and because the Project will not create new

localized violations of NAAQS, worsen an existing violation, or delay timely attainment of NAAQS, the FHWA and FTA found that the Project conforms with the Portland and Vancouver Maintenance Plans in accordance with EPA regulations governing such determinations.

The ROD states:

The Project is subject to conformity requirements imposed by the Clean Air Act (CAA) found at 42 U.S.C. 7401 et seq. The CAA requires that transportation projects conform to the purposes of State Implementation Plans and Maintenance Plans for air quality. Conformity means that the transportation project will not produce new violations of the National Ambient Air Quality Standards (NAAQS) established by EPA, worsen existing violations, or delay timely attainment of NAAQS.

The EPA conformity regulation (40 CFR Part 93) establishes criteria that a transportation project must meet in order to be found by the FHWA and FTA to conform to Implementation and Maintenance Plans. The conformity criteria that the Project is subject to are that the project must be included in a conforming Regional Transportation Plan and Regional Transportation Improvement Program, and that the project not cause or contribute to any localized violation of NAAQS as determined through "hot-spot" analysis. The Project is located within the Portland and Vancouver carbon monoxide (CO) maintenance areas. Because of that, both the DEQ and SWCAA have individual Maintenance Plans that the Project must be in conformance with.

As described in Chapter 3.10 of the FEIS, federal approval for the conformity determination for Metro's 2035 Regional Transportation Plan (RTP) and the 2008-2011 Metropolitan Transportation Improvement Plan (MTIP) was provided by FHWA and FTA on September 20, 2010. Metro included a placeholder assumption for the Project in the regional conformity determination they conducted, and the Selected Alternative (the Project) is consistent with that placeholder assumption. The Vancouver Air Quality Maintenance Area Second 10-Year Limited Carbon Monoxide Maintenance Plan received a finding of adequacy from EPA in December 2007. As a result, regional conformity demonstration is no longer required for projects in the Vancouver area. As also described in Chapter 3.10 of the FEIS, "hot-spot" analysis of CO levels at congested intersections in Portland and Vancouver was performed and demonstrated localized compliance with federal and state CO standards. Under the transportation conformity rules found at 40 CFR 93.123 (c)(5), CO, PM_{10}, and $PM_{2.5}$ hot-spot analyses are not required to consider construction-related activities which cause temporary increases in emissions. Each site which is affected by construction-related activities shall be considered separately, using established "Guideline" methods. Temporary increases are defined as those which occur only during the construction phase and last 5 years or fewer at any individual site.

Although construction will last more than 5 years, project construction activities at any one site are not expected to last more than 5 years. Thus, a CO hot-spot analysis was not conducted. If, as more information is known, construction at any one staging site is expected to last more than 5 years, a hot-spot analysis will be completed.

Additionally, ODOT and WSDOT will pursue emerging technologies for cleaner construction emissions, such as the use of diesel scrubbers for compatible equipment, and continue to encourage and require those types of technologies as bidding laws allow.

Because the Project is a part of the conforming regional transportation plans (RTP and MTIP) for the Portland metropolitan area, and because the Project will not create new localized violations of NAAQS, worsen an existing violation, or delay timely attainment of NAAQS, the FHWA and FTA find that the Project conforms with the Portland and Vancouver Maintenance Plans in accordance with EPA regulations governing such determinations.

3) If the proposed bridge project is in an attainment area, the Conformity Rules do not apply. Actions do not require FIP or SIP conformity when neither the General nor Transportation Conformity Rules apply.

Applicant's Response:

Reference:

This information is located in the cover letter on page 53.

Summary:

The proposed bridge is in a maintenance area, not in an attainment area.

4) Certain projects may generate low levels of direct or indirect emissions of the criteria pollutants. They are likely to be below minimum allowable levels and may be exempt from the General Conformity Rule air quality assessment.

Applicant's Response:

Reference:

This information is located in the ROD on pages 26-27.

Summary:

Please see the response to Section 2(a-c) above.

5) The Conformity Rules pertain to criteria pollutants only. NEPA documents should contain information on these criteria pollutants, attainment/non attainment status, conformity determinations, as well as, hazardous air pollutants, greenhouse gases and odor compounds.

Applicant's Response:

Reference:

This information is located in FEIS Sections 3.10 and 3.19.10.

Summary:

The NEPA documents contain information on criteria pollutants, attainment/non attainment status, conformity determinations, and Mobile Source Air Toxics (a subset of hazardous air pollutants that most directly relate to transportation) and odors are addressed in Section 3.10 of the FEIS. Greenhouse gases are addressed in Section 3.19.10 of the FEIS.

FEIS Section 3.10.2 states that the Portland-Vancouver area is an air quality maintenance area.

FEIS Section 3.10.2 states that the Metro-prepared 2035 Regional Transportation Plan (Portland area), in which the CRC project is included, demonstrates conformity with federal air quality standards. Federal approval for the conformity determination was provided by FHWA and FTA on September 20, 2010.

No regional conformity analysis is required for the Vancouver area.

FEIS Section 3.10.3 states that large declines in MSAT emissions are forecast over time for the proposed project and for the No-Build Alternative. These declines are primarily driven by advances in cleaner fuels and emission control technologies for vehicles, advances that are independent of the CRC project.

FEIS Section 3.10.4 states that construction will cause short-term increases in air pollutant emissions and odors.

FEIS Section 3.19.10 states that the project would result in a net reduction of greenhouse gas emissions compared to the No-Build Alternative.

6) During the bridge permitting process, early coordination and consultation with the state and local air quality agencies is important to determine whether the project is consistent with an approved FIP or SIP governing the ambient air quality at the proposed bridge project location.

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

In development of the EIS and Air Quality Technical Report the project coordinated with Oregon DEQ, Washington DOE and Southwest Washington Clean Air Agency. The project also currently holds monthly meetings in which Oregon DEQ, Washington DOE and SWCAA are invitees and participants. As stated above in the response to Section 2(a-c), the project is consistent with the appropriate air quality plans that govern the area.

j. **Wild and Scenic Rivers:** Section 7 of the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271), as amended, prohibits the issuance of any federal permit for construction of

projects having adverse impacts on a river, or a proposed river, with values qualifying it for protection under this act.

Applicant's Response:

Reference:

This information is located in the cover letter on page 53.

Summary:

The Columbia River is not a designated Wild and Scenic River, so this section does not apply.

1) To determine whether there are any designated or proposed wild, scenic, or recreational rivers located in or within ½ mile radius of the proposed project, the applicant should visit the U. S. National Park Service (NPS) website or contact a NPS representative with jurisdiction over the geographic area of the proposed bridge for assistance in identifying wild and scenic rivers in the project area. If the proposed project will affect a wild and scenic river:

   a) List date that waterway was designated as a wild, scenic, and/or recreational river and include the proposed project's impacts;

   b) List impacts and mitigation, and cite corresponding materials and dates, provide NPS comment, and provide other unique and substantive information, if applicable;

   c) If the river is recreational, list compliance with Section 6(f) - Land and Water Conservation Fund Act of 1965, provide NPS comment, and provide other unique and substantive information, if applicable; and

   d) List compliance with Executive Order 13061 - American Heritage Rivers, provide CEQ comment, and provide other unique and substantive information, if applicable.

k. **Residential or Business Displacement:** All bridge actions must comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 U.S.C. 4601 and 4604). The Act applies to projects that involve federal action.

1) When applicable, the following information is required for displaced residences or businesses:

   a) List businesses and residences affected by project; and

   b) List impacts and mitigation.

Applicant's Response:

Reference:

This information is located in the cover letter on page 53. FEIS Section 3.3, Property Acquisitions and Displacements, goes into further detail on residential and business displacements.

Summary:

The Final EIS discusses the acquisition impacts from the project. 59 residential displacements, 69 commercial displacements and two public use displacements will result from the project.

3) Bridge actions must also comply with the Executive Order 12898, Federal Actions to address Environmental Justice in Minority Populations and Low-Income Populations. (For further information, contact the local Coast Guard District.)

Applicant's Response:

Reference:

This information is located in the ROD on pages 41-42.

Summary:

The project is in compliance with EO 12898. The ROD states:

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority and Low-Income Populations" (February 11, 1994), provides that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations." The Department of Transportation Order (No. 5680.1) to Address Environmental Justice in Minority Populations and Low-Income Populations requires agencies to (1) explicitly consider human health and environmental effects related to transit projects that may have a disproportionately high and adverse effect on minority and low-income populations; and (2) implement procedures to provide "meaningful opportunities for public involvement" by members of these populations during project planning and development. Specifically, the USDOT Order states, in part:

8.b. In making determinations regarding disproportionately high and adverse effects on minority and low-income populations, mitigation and enhancements measures that will be taken and all offsetting benefits to the affected minority and low-income populations may be taken into account, as well as the design and comparative impacts and the relevant number of similar existing system elements in non-minority and non-low-income areas.

8.c. The Operating Administrators and other responsible DOT officials will ensure that any of their respective programs, policies or activities that will have a disproportionately high and adverse effect on minority populations or low-income populations will only be carried out if further mitigation measures or alternatives that would avoid or reduce the disproportionately high and adverse effect are not practicable. In determining whether a

mitigation measure or an alternative is "practicable," the social, economic (including costs) and environmental effects of avoiding or mitigating the adverse effects will be taken into account.

As part of the public project planning process through completion of the FEIS, FHWA, FTA and the project's local partners implemented meaningful outreach efforts to minority and low-income communities to assure their active participation. The outreach efforts are described in the environmental justice analyses included in these environmental documents.

As discussed in FEIS Section 3.5, Neighborhoods and Environmental Justice, adverse impacts such as unmitigated noise impacts, traffic impacts, visual impacts, and displacements will not have a high, adverse, and disproportionate effect on environmental justice populations.

At the Ruby Junction Maintenance Facility, the project identified the potential for disproportional impacts to low-income and minority persons (four of nine residential displacements have minority residents; two of nine are likely low-income, which is slightly lower than the percentage minority and the percentage low-income in the surrounding census tract). When considered with the 59 residential displacements for the project as a whole, the proportions of minority and low-income displaced residents are similar to or slightly above the levels in the project area, but they are not disproportionately high. In addition, given the Project's commitments to provide compensation and relocation assistance in accordance with federal regulations, these impacts would be minimized, avoiding high and adverse impacts to low-income or minority populations.

Therefore, consistent with the definition established in Executive Order 12898, the Project would not result in high and adverse human health, environmental, social, and/or economic impacts. The Project would provide improved access to transit, reduced travel time, and improved accessibility to employment and services. FEIS Section 3.5, Neighborhoods and Environmental Justice, discusses these determinations. Accordingly, FTA and FHWA find that the project would not have disproportionately high and adverse effects on the minority or low-income populations in the project area, as provided under the USDOT Order on Environmental Justice, particularly in light of the offsetting benefits to minority and low-income populations and that the requirements of Executive Order 12898 have been met.

l. **Prime and Unique Farmland:** The Council on Environmental Quality directed federal agencies authorizing construction projects to evaluate impacts on prime and unique farmlands. Agencies should ensure that such farmlands are not irreversibly converted to uses which eliminate their productivity, scenic or wildlife habitat values, or benefit as open space.

Applicant's Response:

Reference:

This information is located in the ROD on page 40.

Summary:

This project does not impact prime and unique farmlands, so this section is not applicable.

The ROD states:

Pursuant to 7 U.S.C. 658, federal agencies are required to account for the adverse effects of their programs on the preservation of farmland. FTA and FHWA find that no farmland will be taken as a direct impact of the Project. The states of Oregon and Washington have land use planning regulations, including urban growth boundaries, to protect farmland. As addressed in the FEIS Section 3.4 Land Use and Economics, the Project is unlikely to induce sprawl, and will likely promote compact urban development. Metro, as the responsible agency for the urban growth boundary around the Metro area, has a long history of effective growth management, and the City of Portland has a sophisticated zoning code with provisions for focusing growth where desired and encouraging compact mixed-use development around transit facilities. The land use regulations in the City of Vancouver and Clark County also have robust growth management policies and regulations. Accordingly, FHWA and FTA find that the Project does not substantially increase the potential for loss of farmland in the Portland-Vancouver region and that the Project is compatible with state and local programs to protect farmland, and that no further action by Project is needed concerning this Act.

1) If prime and unique farmlands are within the proposed project area, then the applicant must:

   a) Contact the U. S. Natural Resources Conservation Service (NRCS) representative with jurisdiction over the geographic area of the proposed project for information regarding prime and unique farmlands under the Farmlands Protection Policy Act of 1981 (7 U.S.C. 4201);

   b) State the number of acres of designated prime or unique farmlands being taken by the proposed project; and

   c) Contact the Coast Guard District with jurisdiction over the geographic area of the proposed project for further guidance if the project will affect prime and unique farmlands.

Applicant's Response:

Reference:

This information is located in the ROD on page 40.

Summary:

This project does not impact prime and unique farmlands, so this section is not applicable.

m. **Other Environmental Controls/Laws:** list impacts and mitigation in reference to Federal, state, and other environmental controls/laws unique to this case and cite corresponding enclosure(s). Include in this list:

1) Environmental Health and Safety Risks to Children: List compliance with

Executive Order 13045 – Environmental Health and Safety Risks to Children, and cite corresponding enclosure(s) and EPA comment, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

As discussed in FEIS Section 3.5, Neighborhoods and Environmental Justice, and in FEIS Section 3.6 Public Services and Utilities, the project team investigated adverse impacts to children. No project impacts to schools, daycare centers or children's programs were found. The project improves transportation facilities, such as pedestrian walkways and bike paths, to improve safety and access for children to walk and bike to schools and parks.

2) Occupation Safety and Health Act of 1970: List compliance with Occupation Safety and Health Act of 1970, and cite corresponding enclosure(s) and OSHA comment, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

The Occupation Safety and Health Act (OSHA) of 1970 is applicable to the CRC in both pre-construction and during construction activities. The CRC applied OSHA guidelines in its drilled shaft and driven pile test project that was done in March 2012. Future project work will require all contractors to provide their employees with a workplace void of serious hazards and to follow all relevant OSHA safety and health standards, primarily through health and safety plans.

As discussed in FEIS Section 3.18, Hazardous Materials, a site-wide construction Health and Safety Plan will be prepared to minimize exposure of construction and excavation workers to hazardous wastes and to reduce the risk to human health and the environment. The CRC project is currently in compliance with the OSHA.

3) Emergency Planning and Community Right-to-Know Act: List compliance with the Emergency Planning and Community Right-to-Know Act, and cite corresponding enclosure(s) and EPA comment, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

EPCRA (40 CFR 355) is enforced by the EPA. EPCRA applies to storage and handling of hazardous materials (chemicals) and requires that facilities report storage of certain chemicals in quantities above designated thresholds to state and local authorities. In Oregon the law directs the Office of State Fire Marshal to survey business and government facilities for information about the presence of hazardous substances and to collect information about incidents involving hazardous substances. In Washington, the law directs the Department of Ecology to receive EPCRA reports and manage EPCRA data on behalf of the Washington SERC. The law further directs the OSFM and Ecology to provide planning and training assistance to local jurisdictions on hazardous substance emergency response and preparedness.

As described in Section 3.18 of the FEIS, a database search identified 238 hazardous materials sites, in or near the main project area, that may possibly contain recognized environmental conditions. Extensive mitigation procedures are described in Section 3.18.5 to ensure the safe handling of all hazardous materials encountered by, and/or used by, the Project. Accordingly, FHWA and FTA found in the ROD that upon completion of all listed mitigation, the Emergency Planning and Community Right-to-Know Act has been addressed to the level necessary to complete the NEPA analysis.

4) Federal Compliance with Right-To-Know Laws & Pollution Prevention Requirements: List compliance with Executive Order 12856 – Federal Compliance with Right-To-Know Laws & Pollution Prevention Requirements, and cite corresponding enclosure(s) and EPA comment, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

The CRC project would not be a federally owned or operated facility, so this section is not applicable.

5) Pollution Prevention Act of 1990: List compliance with the Pollution Prevention Act of 1990, and cite corresponding enclosure(s) and EPA comment, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application.

Summary:

The Pollution Prevention Act is focused on reducing the amount of pollution through cost-effective changes in production, operation, and raw materials use. The CRC Project will identify source reductions to engage in practices that reduce hazardous substances from being released into the environment prior to recycling, treatment or disposal. As described in the FEIS Section 3.18, Hazardous Materials, the following plans will be utilized in the construction phases of the project to both reduce the effects on the environment and reduce the effects on construction from hazardous materials:

Construction Stormwater Pollution Prevention Plans (SWPPPs)

Control plans would be prepared to prevent or minimize soil or sediment from being carried into surface water by erosion (wind and stormwater runoff). Plans would be prepared in a manner that is consistent with all state, federal, and local requirements.

National Pollutant Discharge Elimination System Permits

National Pollutant Discharge Elimination System (NPDES) permits would be prepared to cover all ODOT and WSDOT construction activities that would disturb more than 1 acre and that would discharge stormwater to surface waters.

Stormwater Conveyance System and Treatment Facilities Monitoring Plan

A stormwater monitoring plan would be prepared to evaluate the long-term performance and effectiveness of the updated stormwater conveyance and treatment systems.

Spill Control and Prevention Plans (SCPPs)

SCPPs would address the use, storage, and disposal of asphalt, fuel, raw concrete, striping paint, solvents, spray paint, landscaping chemicals, and other such materials.

Contaminated Media Management Plans (CMMPs)

CMMPs would be prepared to properly characterize, manage, store, and dispose of contaminated materials encountered during construction activities.

Lead and Asbestos Survey and Abatement Program

A lead and asbestos survey of each building or structure would be conducted prior to its acquisition by the project. Based on survey results, abatement would be conducted prior to demolition, renovation and/or repair. Disposal of lead and ACM would be conducted at applicable Subtitle C or D solid waste facilities.

6) Resource Conservation and Recovery Act: List compliance with Resource Conservation and Recovery Act, and cite corresponding enclosure(s) and EPA

comment, if applicable;

Applicant's Response:

Reference:

This information is located in the ROD on pages 33-34.

Summary:

The project is in compliance with the RCRA.

The ROD states:

There are several provisions in federal law and regulations that regulate the generation, transportation, treatment, storage, and disposal of hazardous waste. These laws include the Resource Conservation and Recovery Act, found at 42 U.S.C. 82 et seq. As described in Section 3.18 of the FEIS, a database search identified 238 hazardous materials sites, in or near the main project area, that may possibly contain recognized environmental conditions (RECs) and 117 historic sites with RECs. Extensive mitigation procedures are described in Section 3.18.5 to ensure the safe handling of all hazardous materials encountered by, and/or used by, the Project. Accordingly, FHWA and FTA find that upon completion of all listed mitigation, the Resource Conservation and Recovery Act has been addressed to the level necessary to complete the NEPA analysis.

7) Federal Compliance with Pollution Control Standards: List compliance Executive Order 12088 – Federal Compliance with Pollution Control Standards, and cite corresponding enclosure(s) and EPA comment, if applicable;

Applicant's Response:

Reference:

This information was not included in the original application, although much of it was addressed in the ROD. The Troutdale Sole Source Aquifer Report is included as Attachment I to this re-submittal package. EPA comments on the DEIS and FEIS and CRC responses are included as Attachments G and H in this re-submittal package.

Summary:

The CRC Project is compliant with the applicable pollution control standards which include the following:

(a) Toxic Substances Control Act (15 U.S.C. 2601 et seq.).

As described in Section 3.18 of the FEIS, Hazardous Materials, a database search identified 238 hazardous materials sites, in or near the main project area, that may possibly contain recognized environmental conditions (RECs) and 117 historic sites with RECs. Extensive mitigation procedures are described in Section 3.18.5 to ensure the safe handling of all hazardous materials encountered by, and/or used by, the Project.

(b) Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq.).

The Clean Water Act 33 U.S.C. 1251 et seq. establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The Clean Water Act made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges. The Clean Water Act also regulates polluted runoff to surface waters. While the Clean Water Act is a federal regulation, review and approval of permits for NPDES and water quality certifications have been assigned to the Department of Environmental Quality and the Department of Ecology in Oregon and Washington, respectively.

To mitigate the effect of pollutants in runoff from additional impervious surface area, the Project team has prepared a conceptual stormwater management design. The design was prepared to meet the requirements of ODOT and WSDOT for those portions of the project along I-5. After consultation with and agreement from WSDOT and State of Washington regulatory agencies, the project has adopted ODOT's technical memorandum on stormwater quality on a project-wide basis to provide a standard approach to determining types of water quality facilities. The memorandum is the result of a collaborative effort by ODOT, FHWA, and the following natural resource agencies: NMFS, DEQ, USFWS, EPA, and ODFW. The decision to use this approach on the Project has been endorsed by WSDOT and the Washington State Department of Ecology.

The Cities of Portland's and Vancouver's regulations, found in the 2008 City of Portland Stormwater Management Manual and 2005 Stormwater Management Manual for Western Washington, respectively, will be implemented for those portions of the project along city- managed roads.

With the use of state and local regulations and standards, and conformance with the WSDOT, ODOT, City of Vancouver, and City of Portland NPDES permits, FHWA and FTA find that the Clean Water Act requirements have been addressed by the Project to the level necessary to complete the NEPA analysis.

(c) Public Health Service Act, as amended by the Safe Drinking Water Act (42 U.S.C. 300f et seq.).

The Safe Drinking Water Act of 1974, found at 42 U.S.C. Chapter 6A, Subchapter 12, Part C, Section 300H, requires that projects that are to receive "federal financial assistance" and which have the potential to contaminate an aquifer "so as to create a significant hazard to public health" are subject to EPA review and approval. North of the Columbia River, the I-5 corridor and other project facilities are underlain by the Troutdale Aquifer, an EPA designated Sole Source Aquifer (SSA) for the Vancouver area. The Project uses federal funds and was, therefore, required to produce an SSA report discussing potential groundwater impacts. This SSA report is included as Appendix F of the Hazardous Materials Technical Report supporting the FEIS, and was submitted to EPA in 2009 (included as Attachment I in this re-submittal package).

Pages 7-1 and 7-2 of the SSA report include extensive mitigation procedures designed to help ensure the protection of the Troutdale SSA. The EPA reviewed the SSA report, and

in July of 2010 provided conditional approval to the Project. The conditions included a determination that the Project needs additional monitoring and reporting to ensure the Project does not pose a risk for contaminating the aquifer and may require additional mitigation measures. The project sponsors will comply with the additional monitoring, reporting and mitigation requirements required by EPA, as well as implement the mitigation listed in the SSA report. WSDOT would be responsible for any monitoring that is required beyond the duration of the Project construction. Accordingly, FHWA and FTA find that the Safe Drinking Water Act has been addressed to the level necessary to complete the NEPA analysis.

(d) Clean Air Act, as amended (42 U.S.C. 7401 et seq.).

As the FEIS Chapter 3.10, Air Quality, a "hot-spot" analysis of CO levels at congested intersections in Portland and Vancouver was performed and demonstrated localized compliance with federal and state CO standards. Additionally, the Project is a part of the conforming regional transportation plans (RTP and MTIP) for the Portland metropolitan area, and because the Project will not create new localized violations of NAAQS, worsen an existing violation, or delay timely attainment of NAAQS, the FHWA and FTA found that the Project conforms with the Portland and Vancouver Maintenance Plans in accordance with EPA regulations governing such determinations.

(e) Noise Control Act of 1972 (42 U.S.C. 4901 et seq.).

The Noise Control Act of 1972 (as amended by the Quiet Communities Act of 1978, see 42 U.S.C. 4901 - 4918) requires federal agencies to develop programs to promote an environment free of noise that jeopardizes public health or welfare and that agencies comply with state and local noise ordinances. FTA has developed criteria, most recently documented in the Transit Noise and Vibration Impact Assessment Manual (May 2006), which addresses Title 42. FHWA has developed criteria, codified in 23 CFR Part 772 Procedures for Abatement of Highway Traffic Noise and Construction Noise and has produced a guidance document, Highway Traffic Noise: Analysis and Abatement Guidance, January 2011. The FEIS Section 3.10, Noise and Vibration, identifies the noise and vibration analysis methods, impacts and mitigation, including compliance with local noise regulations as applicable (Ruby Junction Maintenance Facility in Gresham). With the completion of the mitigation measures cited in this document, FTA and FHWA find that the noise and vibration requirements of these Acts will be met.

(f) Solid Waste Disposal Act, as amended (42 U.S.C. 6901 et seq.).

The CRC project does not work with solid waste disposal, so this standard is not applicable.

(g) Radiation guidance pursuant to Section 274(h) of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021(h); see also, the Radiation Protection Guidance to Federal Agencies for Diagnostic X Rays approved by the President on January 26, 1978 and published at page 4377 of the Federal Register on February 1, 1978).

The CRC project will not have elements with radiation, so this standard is not applicable.

(h) Marine Protection, Research, and Sanctuaries Act of 1972, as amended (33 U.S.C. 1401, 1402, 1411-1421, 1441-1444 and 16 U.S.C. 1431-1434).

The CRC project is not located within a Marine Sanctuary, so this standard is not applicable.

(i) Federal Insecticide, Fungicide, and Rodenticide Act, as amended (7 U.S.C. 136 et seq.).

Use of insecticides, fungicides or rodenticides, would be limited to products that have been approved by the EPA, in compliance with this Act.

8) Environmental Effects Abroad of Major Federal Actions: List impacts and mitigation for Executive Order 12144 – Environmental Effects Abroad of Major Federal Actions, and cite corresponding enclosure(s) and EPA comment, if applicable; and/or

Applicant's Response:

Reference:

This information is located in FEIS Section 3.19, FEIS Cumulative Effects Technical Report (Attachment Q to this re-submittal package) and the FEIS Indirect Effects Technical Report (Attachment R to this re-submittal package).

Summary:

Cumulative and secondary impacts from the project are discussed in detail in the Cumulative Effects Technical Report and Indirect Effects Technical Report and summarized in the Final EIS and ROD. The analyses found that the project would result in no adverse effect on countries abroad. The project is being constructed and will remain on U.S. soil. Thus, the Executive Order 12144 – Environmental Effects Abroad of Major Federal Actions does not apply.

9) Comprehensive Environmental Response, Compensation and Liability Act: List compliance with Comprehensive Environmental Response, Compensation and Liability Act, and cite corresponding enclosure(s) and EPA comment, if applicable.

Applicant's Response:

Reference:

This information is located in FEIS Section 3.18.

Summary:

As described in Section 3.18 of the FEIS, Hazardous Materials, a database search identified 238 hazardous materials sites, in or near the main project area, which may possibly contain recognized environmental conditions (RECs) and 117 historic sites with RECs. Acquisition of properties for the project will include the completion of Phase I and/or II Environmental Site Assessments (ESAs) to evaluate the potential

environmental liability associated with environmental conditions on or near the acquired properties.

The Phase I ESAs are being conducted in accordance with ASTM Standard E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. The Phase I ESA is intended to permit the user to satisfy the requirements to qualify for the bona fide prospective purchaser limitation under CERCLA, and as such constitutes "all appropriate inquiries in the previous ownership and uses of the property consistent with good commercial or customary practice" as defined at 42 U.S.C. §9601 (35)(B).

n. **Cumulative and Indirect Impacts:** Briefly discuss potential cumulative or indirect impacts, if any. List impacts and mitigation, cite corresponding materials and dates, and provide other unique and substantive information.

Applicant's Response:

Reference:

This information is located in the cover letter on page 53.

Summary:

Cumulative and secondary impacts from the project are discussed in detail in the Cumulative Effects Technical Report and Indirect Effects Technical Report and summarized in the Final EIS and ROD. The analyses found that the project would result in minor increases in cumulative adverse effects on acquisitions, ecosystems, cultural resources, and irreversible and irretrievable commitments of resources, while providing small net decreases in cumulative adverse effects on water resources, air quality, greenhouse gas emissions, recreation, and transportation. Secondary impacts associated with land use are likely to occur, but these effects on long-term land use patterns would be consistent with the region's growth management policies.

NOTE: For More Information – As stated throughout this guide, your local Coast Guard Bridge Office is available to provide information regarding any questions in the bridge permit application process.

2. ENVIRONMENTAL CHECKLIST - The following checklist is provided as a quick reference to ensure the Environmental Section of the permit application package is complete:

Environmental documentation, including the following items, if applicable:

Alternatives

Clean Water Act Coordination Water Quality Certification

CZM Plan

Floodplain

Historic/Cultural Resources

Wetlands Fish and Wildlife

Threatened and Endangered Species

Essential Fish Habitat

Migratory Bird Act

Marine Mammal Protection Act

Noise Levels Clean Air

Wild and Scenic Rivers Residential or Business Displacement

Environmental Justice Prime and Unique Farmland Other environmental controls/laws Cumulative and Indirect Impacts Navigation

TABLE 2.1 - Environmental Control Laws, Executive Orders, and Regulations Requiring Compliance, as applicable, with Bridge Program Actions

UNITED STATES CODE REFERENCES

BRIDGE LAWS:

33 U.S.C. 401; 491 – 508; 511 TO 535(I)

NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

42 U.S.C. 4321

CLEAN WATER ACT OF 1977

33 U.S.C. 1251, 1352 AND 1330)

SAFE DRINKING WATER ACT

42 U.S.C. 300(f)

COASTAL ZONE MANAGEMENT ACT OF 1972

16 U.S.C. 1451; and 3501 - 3503

COASTAL BARRIER RESOURCES ACT OF 1982

16 USC 3501

IMPLEMENTING REGULATIONS

33 CFR PARTS 114 – 118

40 CFR 1500 – 1508

40 CFR PART 121 Water Quality Certification

40 CFR PARTS 401-503 and 136

15 CFR PART 930

E.O. 11990, Protection of Wetlands

E.O. 11988, Floodplain Management and Protection

DOT Order 5620.2 Floodplain Management

E.O. 13089, Coral Reef Protection

NATIONAL HISTORIC PRESERVATION 36 CFR PARTS 60, 63, and 800 **ACT OF 1966, SECTION 106**

16 U.S.C. 470

NATIVE AMERICAN GRAVES 43 CFR 10

PROTECTION AND REPATRIATION ACT

25 U.S.C. 3001

ARCHAEOLOGICAL RESOURCES E.O. 11593, Protection and Enhancement of

PROTECTION ACT OF 1979 the Cultural Environment

16 U.S.C. 470aa. – 470ll.

AMERICAN INDIAN RELIGIOUS FREEDOM ACT OF 1978

FISH AND WILDLIFE COORDINATION ACT 50 CFR PART 17

16 U.S.C. 661 - 666 50 CFR PART 402

ENDANGERED SPECIES ACT OF 1973 50 CFR PART 216

16 U.S.C. 1531

MARINE MAMMAL PROTECTION ACT OF 1972

Environmental Control Laws, Executive Orders, and Regulations Requiring Compliance, as applicable, with Bridge Program Actions	
NATIONAL MARINE SANCTURIES ACT	15 CFR PART 922

16 U.S.C. 1431 **MAGNUSON – STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT *(Essential Fish Habitat)*** *16 U.S.C. 1855* **MIGRATORY BIRD TREATY ACT OF 1918** *16 U.S.C. 703 – 712* **BALD AND GOLDEN EAGLE PROTECTION ACT**	50 CFR PARTS 600.805 - .930 E.O. 13112, Invasive Species 50 CFR PART 10 and 21 E.O. 13186, Responsibilities of Federal Agencies to Protect Migratory Birds
NOISE CONTROL ACT OF 1972 *42 U.S.C. 4331, 4332, and 4901*	23 CFR PART 772
CLEAN AIR ACT *42 U.S.C. 7401, 7410 and 7506(C)*	40 CFR PARTS 6, 51 and 93
WILD AND SCENIC RIVERS ACT OF1968 *16 U.S.C. 1271 – 1287*	36 CFR PART 297
UNIFORM RELOCATION ASSISSTANCE & REAL PROPERTY ACQUISITION POLICIES ACT OF 1970 *42 U.S.C. 4601 and 4604*	23 CFR PART 740 and 49 CFR PART 24 E.O. 12898 Environmental Justice
PRIME AND UNIQUE FARMLANDS (Farmlands Protection Policy Act of 1981) *7 U.S.C. 4201*	7 CFR PART 658 DOT Order 5610.1C, Procedures for Considering Environmental Impacts
OCCUPATIONAL HEALTH AND SAFETY ACT OF 1970 *29 U.S.C. 651*	29 CFR PART 1910
ENVIRONMENTAL HEALTH AND SAFETY RISKS TO CHILDREN	E.O. 10345, Environmental Health and Risks to Children
EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986	40 CFR PARTS 350-372

14 U.S.C. 116	
FEDERAL COMPLIANCE WITH RIGHT-TO-KNOW LAWS AND POLLUTION PREVENTION REQUIREMENTS	E.O. 12856, Federal Compliance with Right-to-Know Laws & Pollution Prevention Requirements
POLLUTION PREVENTION ACT OF 1990 *42 U.S.C. 13101*	40 CFR PARTS 112 & 300

Environmental Control Laws, Executive Orders, and Regulations Requiring Compliance, as applicable, with Bridge Program Actions	
RESOURCE CONSERVATION AND RECOVERY ACT *42 U.S.C. 9601*	40 CFR PARTS 239-282
FEDERAL COMPLIANCE WITH POLLUTION CONTROL STANDARDS	E.O. 12088, Federal Compliance with Pollution Control Standards
ENVIRONMENTAL EFFECTS ABROAD OF MAJOR FEDERAL ACTIONS	E.O. 12144, Environmental Effects Abroad of Major Federal Actions
COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT OF 1980 *42 U.S.C. 103*	40 CFR PARTS 300 – 374