

NAVIGATIONAL AND ENVIRONMENTAL EVALUATIONS

SUBJ: PROPOSED REPLACEMENT BRIDGE ACROSS THE COLUMBIA RIVER, MILE 106.4, BETWEEN PORTLAND, MULTNOMAH COUNTY, OREGON AND VANCOUVER, CLARK COUNTY, WASHINGTON.

I. REPLACEMENT PROJECT

- A. Final Agency Action: District Headquarters
- B. Applicant and date of application: The applicant, the Columbia River Crossing, submitted an initial application on 30 January 2013, with the complete application submitted on 5 April 2013. On 29 June 2013, the Washington State legislature adjourned without funding the project. On 9 August 2013, the CG was notified that Washington State DOT was no longer participating in the permit application process and that the Oregon DOT had taken on responsibility for completing the permit application tasks. Additional information, as requested by the Coast Guard, was submitted by the project on 15 August 2013, 30 August 2013, and 23 September 2013.
- C. Type of Bridge: Fixed highway bridges.
- D. Purpose: The applicant proposes to construct a bridge across the Columbia River as part of a larger project to improve multimodal transportation within a 5-mile corridor between Portland, OR and Vancouver, WA as well as ancillary improvements outside this corridor. The locally preferred alternative includes construction of two new dual-level parallel mid-level fixed structures over the Columbia River. The bridge will carry I-5 traffic, light rail transit, bicyclists and pedestrians. The western structure will carry SB I-5 traffic on the top deck, with light rail on the lower deck. The eastern structure will carry NB traffic on the top deck with bicycle and pedestrian traffic on the lower deck. The new bridge will be downstream (to the west) of the existing I-5 bridge.
- E. Extent of USCG responsibility: Bridge and approaches.
- F. Other Federal Actions: USACE Federal Channel; see section II.D.2 for more information.
- G. CG-BRG-2 Comment: The cost for the proposed bridge and approaches, currently proposed to be financed and built by the Oregon Department of Transportation, is approximately \$2.71 billion. This cost includes removal of the existing bridge. On 20 August 2012, the Columbia River Crossing was placed on the President's list of Nationally and Regionally Significant Infrastructure Permitting projects and was publicly tracked via an online Dashboard mandated by Executive Order 13604. In accordance with that schedule, the Coast Guard permit decision was set for 30 September 2013.
- H. Project Timeline:
- The U.S. Coast Guard (USCG) has been coordinating with CRC on this project since 2005. USCG accepted cooperating agency status in January 2006.
 - On Sept 21, 2006 USCG held a public hearing in Portland Oregon. During the

meeting General and Manson Construction Companies both stated their need for 125' vertical clearance with a possible need for 140' in the future.

- On May 2, 2008 Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) issued a Draft Environmental Impact Statement (EIS) for a fixed bridge with a 95' vertical clearance. USCG did not provide written comment.
- March 2011 USCG forwarded a letter to CRC from Thompson Metal Fab stating Thompson Metal Fab's need for a minimum 125' vertical clearance.
- On Sept 23, 2011 FHWA and FTA issued a Final EIS (FEIS) with a review period from Sept 23, 2011 to Oct 23, 2011. The locally preferred alternative in the FEIS proposed reducing vertical clearance at this crossing from the current 178' (lift-bridge) to 95' (fixed bridge).
- In Oct 2011, USCG provided written comments to the FEIS, expressing concerns that the navigation issues of the waterway were not comprehensively addressed; therefore the USCG could not accept the FEIS as written.
- On Dec 7, 2011 the Coast Guard Vice Commandant advised the Department of Transportation (DOT) Deputy Secretary of the USCG's concerns regarding the DOT's planned signing of a Record of Decision (ROD) that same day.
- On Dec 7, 2011 FHWA/FTA issued a ROD. DOT formed a "Tiger Team" to work towards addressing the USCG's concerns.
- February 2012, D13 Bridge Administrator starts to attend bi-weekly meeting held between CRC and ACOE regarding the ACOE 408 Permit.
- March -April 2012: A new navigational survey was completed and a comprehensive draft Columbia River User Data Report was developed. This draft report was circulated to the USCG in mid-April. The Tiger Team was tasked to develop an Impact Analysis, which was to include alternative heights and/or proposals to "avoid, minimize or mitigate" impacts to the maritime users.
- On June 8, 2012 CG-5P (Dana Goward) sent the FTA and FHA Administrators a letter summarizing the Coast Guard Bridge permitting responsibilities with respect to the FEIS.
- On Aug 21, 2012 the CRC was added to the Federal Infrastructure Dashboard, with a permit decision target date of Sept 30, 2013. USCG /DOT commenced bi-weekly meetings in Washington, DC to collaborate on the project.
- On September 10, 2012 the D13 District Commander sent a letter to the States of Oregon and Washington providing comments on the "Work Plan for Finalizing Bridge Height and Submitting Bridge Permit Application" emphasizing the need for CRC to consider the reasonable needs of navigation, and explain how CRC plans to avoid, minimize or mitigate those impacts that burden navigation.
- On September 2012, Regional Principals of the USCG, FHA, FTA, CRC and the States of Washington and Oregon commenced periodic meetings in Seattle, WA to collaborate on the project.

- On October 23, 2012 CG-5PW (Dana Goward) sent a letter to FHA summarizing various issues surrounding the Navigation Impact Report and the CRC Project stating among other things that the Coast Guard continued to believe that mid-level heights could be problematic in meeting the reasonable needs of navigation or obtaining a Coast Guard Bridge Permit.
- On Nov 2, 2012 the DOTs for the States of Washington and Oregon jointly released the "Columbia River Crossing Navigational Impact Report" (NIR).
- By letter dated Dec 6, 2012 the USCG advised CRC the analysis provided in the NIR required greater detail regarding future land use and impacted river users, specifically mitigation strategies for future navigation users upriver.
- On Dec 28, 2012 the DOT provided the "Columbia River Bridge Vertical Clearance NEPA Re-evaluation" report. The document addressed a new proposed vertical clearance of 116' at 0 Columbia River Datum.
- On Jan 7, 2013 USCG replied to DOT's NEPA Re-evaluation noting that the final document had been signed and offered no written comment.
- On Jan 30, 2013 the Coast Guard received the bridge permit application from CRC for a fixed bridge with a vertical clearance of 116' at 0 Columbia River datum.
- On March 8, 2013 the Coast Guard notified CRC that additional information was required in order to continue the application review process.
- On April 8, 2013 CRC provided additional information in response to the D13 District Commander's March 8 letter.
- On April 16, 2013 the D13 District Commander traveled to Vancouver, WA to meet with potentially impacted users and to tour their facilities. Site visits included Thompson Metal Fab, Oregon Iron Work, Greenberry Industries, JT Marine, and Killian Pacific owner of the Columbia Business Center.
- On May 6, 2013, the Coast Guard issued a Federal Register notice announcing a public comment period and two public meetings to solicit comments on navigation.
- On May 7, 2013 the Coast Guard issued a public notice to solicit comments on navigation based upon CRC's preferred alternative with a bridge height of 116 feet.
- On May 14, 2013, CG-0941 developed a legal opinion for CG-5PW titled "District Procedures for Columbia River Crossing Bridge Permit Environmental Compliance".
- On June 4 and 5th, 2013 the Coast Guard held a public meetings in Portland, OR and Vancouver, WA. Approximately 278 people attended the meetings with about 115 people providing oral comments. Over 600 comments were received regarding navigation, environment, light rail, cost, etc.
- On 29 June: Washington State legislature adjourned without funding CRC.
- On 15 July: 5P contacted WSDOT and ODOT to discuss way forward.

- On 1 August: Forwarded public comment matrix to CRC; asked if anything in the application changed.
- On 9 August: WSDOT advised that it was no longer participating in permit application process, and that ODOT had taken on responsibility of completing permit tasks.
- On 15 August: Received Oregon responses to public comments.
- On 26 August: Received request from D13 to complete fact finding.
- 27-29 Aug: Held on board review to adjudicate public comments.
- 28 Aug: 5P met with FTA Administrator.
- 29 Aug: 5P ltr to Oregon requesting outstanding documents due; asked again if anything in application changed.
- 30 Aug: Received outstanding documents including mitigation agreements
04 Sep: 094 contacted counsel for FTA, FHWA and States to discuss CG concern as to primary authority and advise of letters to AG being prepared. WA did not participate in call.
- 05 Sep: The CRC has advised by letter dated 5 September (attached) that, while the designs and construction of the portions under permit consideration are unchanged, the financing and operations will be altered to make the State of Oregon the only CRC member providing funding. The approach ramps on the Washington side of the bridge would not be constructed and operated by the State of Oregon.
- 11 Sep: The guidance on this matter (33 CFR 115.05) states "Especially case will be taken that Federal approval is not granted when there is doubt of the right of the builder to construct and utilize the bridge." The Coast Guard must have assurance that the State of Oregon, as applicant, has a right to construct and utilize the bridge in the State of Washington. In attempting to determine whether Oregon does have sufficient legal right, CG sought authoritative guidance as to which state laws apply and whether Washington can and will grant the appropriate permission to Oregon. Our own Bridge Administration Manual directs us to resolve questions regarding sufficiency of State authority by seeking an opinion of the State Attorney General (33 CFR 115.30). CG sought the assurances by letters dated 11 September to the Attorney General of Oregon (attached) and the Attorney General of Washington (attached). Their reply opinions dated 19 September 2013 (attached) presented adequate assurance that Washington state laws exist which will allow the state to acquire the necessary land and transfer it to Oregon exactly as planned. The AGs further indicated a clear intent to do exactly that and indicated that the vehicle for transfer would be completed in time for the start of construction.
- 19 Sep: CGHQ sent Section 106 MOA signatories a letter requesting concurrence with the CG determination that FHWA and FTA acted on the CGs behalf for Section 106 and no further action by the CG is required.

- 19 Sep: CG received AG letters from the states.
- 19 Sep: Schwabe, Williamson and Wyatt, PC, sent a letter to the Washington AG asserting the Columbia Business Center and its need for mitigation have not been resolved.
- 20 Sep: CG determines that the AG responses are adequate for the CG administrative record.
- 20 Sep: CGHQ held a teleconference with ODOT to discuss issues identified during the OBR. No letter was sent to ODOT.
- 23 Sept: CG receives responses from project regarding items identified during the On Board Review that required clarification.

II. NAVIGATIONAL EVALUATION

A. PROPOSED REPLACEMENT BRIDGE:

1. Date of Plans: Sheets 1-7 dated 15 August 2013.
2. Type: Fixed highway bridges (dual-level accommodates light rail, pedestrians and bicycle traffic).
3. Length: 5,305 feet abutment to abutment.
4. Width: Varies 196-265 feet out to out (total structure).
5. Vertical Clearance: The proposed primary navigation channel provides 116.0 feet minimum clearance above 0.0 Columbia River Datum (CRD) and 100.1 feet minimum clearance above Ordinary High Water (OHW). The proposed alternate channel on the Washington side provides a minimum 83.9 feet above OHW. The proposed alternate channel on the Oregon side provides a minimum 98.0 feet above OHW.
6. Horizontal Clearance: 400.0 feet between fenders (rub rail) normal to axis of each channel. Each proposed navigation channel will be 300.0 feet wide.
7. Significant effect on flood heights and associated drift: None.

B. EXISTING BRIDGES: I-5 Bridges

1. Date of Permit: One structure was completed in 1917. The Coast Guard has not located the original permit. The second structure was permitted by the Under Secretary of the Army. The location and plans for the companion bridge were approved on June 18, 1954.
2. Operating Schedule: 33 CFR 117.869
 Change Revoke No change None

3. Vertical clearance:

	Vertical Clearance		Horizontal Clearance
	Above Zero CRD	At Ordinary High Water	
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

4. Horizontal clearance: 263.0 feet measured normal to axis of channel.
5. Length: approximately 5780 feet abutment to abutment.
6. Width: 91.0 feet for both the main span and approaches.
7. Extent of removal for the existing bridge: All parts of the existing to-be-replaced Interstate 5 Bridge across the Columbia River, mile 106.5, not utilized in the new bridge, which are located within the limits of the proposed navigational channels shall be removed down to a minimum of seven feet below the authorized navigational depth. All other parts located within the waterway shall be removed down to or below the mud line and the waterway cleared to the satisfaction of the District Commander. All parts located on land shall be removed to a minimum of two feet below the natural ground line. Such removal and clearance shall be completed when the District Commander determines that the construction of the new bridge, mile 106.4, has reached a point where such action should be taken.

C. CLEARANCES:

1. Established Guide Clearances: The existing guide clearance for this stretch of the waterway is 135 feet as stated in the below table, which is published on the following website: <http://www.uscg.mil/hq/cg5/cg551/Bridge.asp>

Mouth to BNRR Bridge at Vancouver	Fixed	1,000 ft.	180 ft.	25ft. on Portland gauge.
BNRR Bridge at Vancouver mm105.6 to Dalles	Fixed	450 ft.	135 ft	600 kf PS stage.
Dalles to Kennewick, Mile 328	Fixed	400 ft.	60 ft.	2 pct flowline.

2. **Governing Structures: Horizontal clearance: BNSF Railroad Bridge, MP 105.6, 200.0 feet of clearance on each side of the pivot pier. Vertical clearance: I-205 Highway Bridge, MP 112.7, 144 minimum from the central 300 feet above 0.0 CRD.**
3. **Protests against existing bridges across the waterways: The Thirteenth Coast Guard District has received many complaints concerning the BNSF Railroad at mile 105.6 due to the close proximity of the Dual Interstate 5 Drawbridges. Mariners are required to make a hard turn to the right after transiting the highway bridge down bound followed by a hard turn to the left to become aligned with the railroad bridge located about 0.8 miles downstream. A preliminary investigation into the unreasonably obstructive character of the BNSF Railroad Drawbridge was completed 24 October 2001.**
4. **Other bridges on the waterway and their navigational clearances:**

Bridge	Vertical	Horizontal
US 101 Bridge	198	1,070
Lewis and Clark Bridge	198	1,020
BNSF RR Swing Bridge	Unlimited (open)	200
Existing I-5 Bridge (charted at MLLW)	178 (lift span open)	263
	46 (barge channel)	511
	72 (alt channel)	260
I-205	145 (mid 300' of span)	470

D. WATERWAY: Columbia River, MP 106.5

1. **Physical Characteristics at bridge site:**
 - a. **Width: Approximately 2606.0 feet bank to bank at OHW.**
 - b. **Depth: The proposed bridge will be located just upstream of the location where a maintained channel of 43 feet transitions to an authorized channel depth of 27 feet which is presently maintained to a depth of 17 feet. Depth in navigation channel (cited in application) is 43.8 to 46.5 feet below OHW.**
 - c. **Other Limiting Factors: The Columbia River can change elevation more than 20 feet in a year due to seasonal rains. Sight distance is also occasionally reduced by fog. Prudent seamanship is all that should be necessary to safely navigate the proposed bridge structure.**
2. **Federal Project: Yes**
 - a. **The existing authorized navigation channel upstream from the I-5 bridges (MP 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 only maintained at 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 (MP 104.6) to the mouth of the Willamette River (MP 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.

- b. The CRC project proposes to alter the alignment of the primary, barge and alternative channels under the existing I-5 bridges. Approval of this alteration occurs during the U.S. Army Corps of Engineers 408 permit review process.

3. Navigation on Waterways:

- a. Commercial navigation: See Section 6.2 of the Navigation Impact Report and Section 3.1 of the NEPA re-evaluation for a description of the present commercial navigation on the waterway. Section 7.4.2 of the NIR describes the prospective commercial navigation on the waterway. See also the Decision Analysis for additional information about commercial navigation on the waterway. The VCG has determined that the proposed project would provide for the reasonable needs of the present and prospective commercial navigation on the waterway.
- b. Recreational navigation: See Section 6.2 of the Navigation Impact Report and Section 3.1 of the NEPA re-evaluation for a description of the present recreational navigation on the waterway. Section 7.4.2 of the NIR describes the prospective recreational navigation on the waterway. See also the Decision Analysis for additional information about recreational navigation on the waterway. The VCG has determined that the proposed project would meet the reasonable needs of the present and prospective recreational navigation on the waterway.
- c. Emergency operations and national defense: Four federal agencies, two state agencies, four local agencies, one port and one private organization were identified by the applicant as having vessels engaged in emergency operations, national defense activities or channel maintenance in the vicinity of the proposed bridge. See attachment C of the April 5, 2013 "Re-Submittal: Narrative Responses to Bridge Permit Application Guide" for further information. On 15 March 2013, D13 sent letters to the Department of Energy, Department of Defense and the Department of Commerce requesting their review and evaluation of the CBC's "unique industrial capability" and the impact to the DOE if access to CBC is impacted by a proposed new bridge. The CG requested responses by 15 April 2013. As of 26 September 2013, no response was received.

E. PUBLIC NOTICE: The Coast Guard issued public notice D13 01-13 soliciting public comment for the proposed project, **enclosure 8a**.

1. Date(s) issued: 6 May 2013; revised 13 May 2013 to change the closure date of the comment period to 20 June 2013 to be consistent with the Federal Register comment period closure date. Federal Register/ Vol. 78, No. 87/Monday, 6 May 2013. Federal Register/Vol 78, No. 116/Monday, 17 June 2013 corrected the phone number for the person listed in the FOR FURTHER INFORMATION

CONTACT section. Email notifications were also made to Federal and State elected officials of Oregon and Washington on 6 May 2013. Email press releases were issued on 7 May 2013 (announcing public notice) and 31 May 2013 (announcing public meeting). CG Local Notice to Mariners: Week 19/13, dated May 07, 2013. Revised Week 20/13 to add information about how to use Adobe Reader. Revised Week 21/13 to change comment deadline from 19 June to 20 June to coincide with the Federal Register Notice.

2. Circulation: (x) known navigational interests (x) adjacent property owners
3. Content of Public Notice: The public notice announced that application materials had been received by the Coast Guard on 30 January 2013 for a fixed bridge with 116 feet above CRD of vertical clearance. The notice announced there were six impacted waterway users, with three of them being shore-based fabricators. Restricted clearances during construction were also cited in the notice, as well as realignment of the federal channels and an 18% encroachment on the turning basin. FHWA NEPA documents were also cited, as well as a summary of the environmental impacts as a result of the proposed project. In addition, the notice announced two public meetings and solicited comments on navigation.
4. Substantive navigational comments: The Coast Guard received 616 comments, with 246 comments related to navigation. A comment matrix was prepared and sent to CRC for response on items related to navigation, alternatives, environment, cost, light rail, etc. On 27-29 August, the Coast Guard held an On Board Review to review the CRC responses to comments. At the conclusion of the OBR, the CG had identified several items that needed further clarification from CRC. On 20 September 2013, CGHQ held a teleconference with ODOT, requesting responses to the below items. On 23 September 2013, ODOT addressed each issue via several memorandums. See responses within each bullet:
 - Information on the mid-level moveable bridge alternative and why it was eliminated from further review
 - A mid-level moveable bridge was initially considered in the 22 March 2006 Component Step A Screening Report
 - The movable bridge alternative was dismissed at the DEIS stage on grounds that it would “would disrupt traffic, cause more accidents on the bridges, have a greater impact on navigation, be more expensive to construct, and cost substantially more to maintain and operate.” (FEIS page 2.7.5 page 2-75)
 - In 2012, a mid-level moveable bridge was revisited. Due to the size and weight of the lift spans, along with the horizontal curve and variable width, CRC determined it would be extremely complicated to design and construct the mid-level moveable bridge. In addition, the in-water impacts associated with the size of the foundations would increase the environmental impact.
 - The Navigation Impact Report in November 2012 also cited reasons why a mid-level moveable bridge was not feasible:

- Not practical with the curved bridge alignment that is part of the preferred alternative
 - Increase the landside impacts due to straightening out the bridge alignment over the river
 - Penetrate the Pearson Field Part 77 Imaginary Surface, decreasing aviation safety.
 - Have higher capital costs than a fixed span bridge
 - Horizontal navigation clearance would be less than what will be provided for in a fixed span
 - Have larger in-water and environmental impacts than what is stated in the FEIS.
- Potential impacts to airspace were reviewed by the CRC project team throughout the project development. Step A and Step B screening studies were conducted in 2006. Three feasibility studies were conducted with the FAA between 2006 and 2012. Impacts were also addressed in the Draft (2008) and Final (2011) Environmental Impact Statements and in the Navigation Impact Report (2012) analyses.
 - Form 7460-1 and supporting documentation were submitted to the FAA by CRC, initiating an aeronautical review of the proposed construction. The FAA reviewed the proposed construction and its effects on aviation into and out of Pearson Field and Portland International Airport. The outcome of the aeronautical review is either “No Hazard to Aviation” or “Hazard to Aviation”. The FAA also determines what obstacle marking is appropriate and where to place the obstacle marking. All proposed construction obstructing FAA surfaces must comply with FAA standards for markings.
 - The FAA responded to the first feasibility study with several points that penetrated in surfaces identified in 14 CFR 77 (Part 77) for Pearson Field, but did not indicate an objection to the proposal.
 - The FAA responded to the second feasibility study via email with no comments or objections.
 - The FAA responded to the final feasibility study indicating several points that penetrated into the surfaces of Pearson Field which would require hazard lighting in accordance with FAA requirements and a minor adjustment in flight procedures. The FAA did not indicate an objection to the proposed project.
 - The Navigation Impact Report evaluated seven alternative bridge heights providing clearances above 0 Columbia River Data (CRD) ranging from 95 -125 feet in five-foot

increments. For all bridge clearance alternatives greater than 105 feet above CRD, the report indicated that sign bridges and lighting above the roadway deck would penetrate into the Part 77 air space. Sign bridge and lighting penetrations for the alternative bridge heights would be expected to require hazard lighting in accordance with FAA regulations and adjustments in flight procedures that would increase in risk and severity with increasing bridge height.

- At no time did the FAA indicate an objection to the proposed project. The greatest effects, for the structure types and alignments analyzed are due to ramps within the SR-14 interchange.
 - By letter dated 5 December 2012, FAA stated that a final Form-7460 submittal needs to be submitted in order to receive a final determination on the proposed construction. The Coast Guard is not aware of any subsequent correspondence with FAA on this subject.
- Mitigation status for JT Marine, Hidden Family, Houston Equities and Legendary Yachts
 - JT Marine: CRC documented the history of meetings the project held with JT Marine regarding mitigation strategies for their derrick barge, DB Taylor. The NIR did not list any specific mitigation for JT Marine, but Chapter 9.2.3 of the document discusses multiple mitigation options for marine contractors. The Coast Guard requested additional information on the mitigation status of JT Marine. By memo dated 22 September 2013 CRC provided additional information regarding a draft mitigation agreement that was presented to JT Marine on 20 May 2013. It would have provided for a payment by CRC to retro-fit the crane on the DB Taylor. On 22 August 2013, a follow-up meeting was held between CRC and JT Marine to discuss the mitigation agreement. At that time, JT Marine indicated that they had met with a project opponent and had concluded that they could not longer support the project. This was contradictory to the 30 January 2013 letter to the USCG indicating they were a strong supporter of the project. JT Marine stated their desire to discontinue any further discussions about mitigation.
 - Hidden Family: The Hidden Family is an underlying property owner at the CBC. CRC does not consider the CBC an impacted user for the permit process; therefore, no mitigation is proposed. A legal brief was prepared from Oregon and Washington DOT Legal Council Hasenstein and Wendel (see Attachment D of memorandum dtd 22 September 2013)

- **Houston Equities:** Mr Houston has property at Cascade Locks, Hood River, Mosier, and Dallesport. In a 13 May 2013 telephone conversation with the project, Mr Houston noted that he has no specific development plans or any specific maritime requirements that he can anticipate, but that he is concerned about future development that would require moving equipment downstream through the Bonneville Locks and under the proposed I-5 bridge. A key constraint for the Cascade locks site is that marine shipments originating or destined for points downstream must transit through the Bonneville Locks, which have a limited horizontal clearance of 86 feet. Large, height constrained fabricated shipments typically require the loading capacity and stability of ocean-going barges, which customarily have a beam of 110 feet or more and cannot be used upstream of the Bonneville locks. Due to the above factors and the inability to demonstrate an actual impact, mitigation is not proposed for Houston Equities.
- **Legendary Yachts:** The largest sailboat that Legendary Yachts owns is reported at 88 feet above the water line. At OHW of 16 feet above CRD, this vessel would require a bridge height of 114 feet with a 10 foot air gap ($88+16+10=114$). Based on over 40 years of river stage data, OHW is reached or exceeded less than 2% of the time on average. During construction, there will be opportunities for Legendary to pass through the construction work zone with less safety air gap. Legendary also has a demonstrated history of using the Schooner Creek Boat Works site as a launching facility.
- **Comment USCG-2013-0286-0225** submitted during the CG public comment period claimed the CRC analysis, prepared by Dr. Van Vactor and submitted to the USCG on 30 April 2013, was flawed as it concluded the oil and gas industry in Alaska in a state of decline. The Coast Guard requested CRC reconcile the assertions. CRC concluded the analysis and conclusions were accurate due to the following reasons:
 - Competition from other sources of oil and gas
 - Decline in demand for petroleum products in West Coast markets due to increased café standards (higher mpg standards) and potential shifts to other fuels.
 - Higher costs (and environmental sensitivity) associated with Alaskan oil production, particularly on the North Slope.
 - The Coast Guard does not agree with these assertions regarding oil industry trends. Comment USCG-2013-0286-0225 stated BP has announced they will be investing \$1 billion in crude oil production from Alaska's North Slope by adding two rigs to Prudhoe Bay. Separately, BP also announced they will begin

evaluating another \$3 billion in additional development projects that will include drilling more than 110 wells. The CRC response did not address that the Spring 2013 State of Alaska Tax Division Report which cited the decline in North Slope Oil Production was developed prior to the Alaska maximum tax change cut (cited in comment USCG-2013-0286-0225) which projects increased production of North Slope Oil.

- CRC analysis cited transits and value of cargo at the Columbia Business Center (CBC) in relation to that entering and leaving the mouth of the Columbia River. The Coast Guard asked that CRC provide the percentage of transits and value of cargo at CBC in relation the total transits passing under the current I-5 Columbia River Bridge.
 - CRC responded providing data for the upstream Bonneville Locks that included the number of marine transits and estimated value of cargo transshipped though the I-5 bridge area. The analysis provided information on the assumed number of transits through the bridge site and assigned value to the cargo based upon the previously provided CRC Economic Report for height constrained projects generated by CBC fabricators.
 - The analysis concluded the height constrained projects generated by CBC fabricators accounted for 0.035 percent of one way commercial transits at the Bonneville Lock during the period from 2002 to 2012, ranging annually from a low of 0.000 percent to a high of 0.128 percent. As reported in the Economics Report, the fabricators located at the CBC generated height constrained shipments by barge (defined to include height constrained projects and associated non-height constrained project shipments) ranging in value from \$0.0 per year (low) to \$62.3 million per year (high) or a nominal value of \$161.1 million for the 11 year period.

See the FOF and the Decision Analysis for detailed information regarding impacts to existing and future navigation, impacts to navigation during construction, national defense impacts, I-205 bridge clearance requirement, 18 % turning basin requirement, BNSF swing bridge comments, and Boat Survey conclusions (125 feet above CRD).

5. CG-BRG-2 Comment: none.

III. ENVIRONMENTAL EVALUATION

Note to reader: Bracketed numerals are the Adobe Acrobat page number in the cited document, such as [67].NEPA (P. L. 91-190, as amended)

- A. NEPA (P. L. 91-190, as amended)

1. **Lead Agency: Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) are the lead federal agencies, FEIS, Executive Summary, page S-3.**
 - a. **State and Local Lead Agencies: The Washington State Department of Transportation (WSDOT), Oregon State Department of Transportation (ODOT), Southwest Washington Regional Transportation Council (RTC), the Metropolitan Regional Government (Metro), Clark County Public Transportation Benefit Area (C-TRAN) and the Tri-County Metropolitan Transportation District (TriMet), FEIS, Executive Summary, pages S-3 and S-4.**
 - b. **Cooperating Agencies: U.S. Coast Guard (USCG), U.S. Army Corps of Engineers (USACE), U.S. General Services Administration (GSA), Federal Aviation Administration (FAA), National Park Service (NPS), and Washington State Department of Archaeology and Historic Preservation (WDAHP), FEIS, Appendix A, page A-6.**
2. **Documentation: (X) EIS () FEIS/FONSI () Categorical Exclusion**
 - a. **Prepared by: The FHWA and FTA in coordination with WSDOT, ODOT, RTC, Metro, C-TRAN, and TriMet, FEIS, Title page.**
 - b. **DEIS – On 21 April 2008, the FHWA and FTA approved the Draft Environmental Impact Statement (DEIS), document number FHWA-WA-EIS-08-01-D, DEIS, title page. The U.S. Environmental Protection Agency (USEPA) notice of availability was published in the *Federal Register* on 2 May 2008, 73 FR 24281.¹ Appendix P of the FEIS includes a USEPA letter dated 1 July 2008 that provides comments on the DEIS, FEIS, Appendix P, page 2.**
 - c. **17th Street Technical Memorandum – FHWA and FTA prepared the 17th Street Technical Memorandum, dated March 2010, to evaluate the impacts of a 17th Street alignment option for the light rail transit system in Vancouver, Washington. The analysis showed that the 17th Street alignment would not result in any new significant adverse environmental impacts, and would be very similar in character, performance and impacts to the range of options evaluated in the DEIS. FEIS, Appendix O, volume 1, page 15 [20].**
 - d. **Steel Bridge Documented Categorical Exclusion – FHWA and FTA prepared a Categorical Exclusion, dated 8 November 2010, to evaluate the effect of minor modifications to the existing light rail transit track and electrical system on the Steel Bridge, a through-truss, double-lift bridge across the Willamette River in Portland, Oregon. The modifications would allow for greater speeds of light rail vehicles traveling over the bridge. The Categorical Exclusion showed that the proposed modifications would not result in any significant adverse environmental impacts. FEIS, Appendix O, volume 3, page [9].**

¹ Copy obtained from the U.S. Government Printing Office's Federal Digital System (GPO-FDsys) and included in supporting documents folder.

- e. Composite Deck Truss Bridge Type NEPA Reevaluation – FHWA and FTA prepared a NEPA Re-evaluation, dated 29 March 2011, to evaluate the effect of changing the I-5 Columbia River Crossing bridge type from an open web box girder to a composite truss. Other than the potential lessening of impacts related to a smaller water footprint and minor changes to pedestrian connections on the Washington shore, the environmental impacts of the proposed project would be the same as those described in the DEIS. **FEIS, Appendix O, volume 3, page [41].**
- f. Environmental NEPA Re-evaluation – FHWA and FTA prepared a NEPA Re-evaluation, dated 15 May 2011, to evaluate the effect of project changes made in response to public comments through the NEPA process and in coordination with local officials and the public. The re-evaluation showed that impacts associated with the locally preferred option are generally within the range of impacts as reported in the DEIS. **FEIS, Appendix O, volume 2, page 14 [16].**
- g. FEIS and ROD - On 7 September 2011, the FHWA and FTA approved the Final Environmental Impact Statement (FEIS), document number FHWA-WA-EIS-08-01-F, **FEIS, title page [2].** The USEPA notice of availability was published in the *Federal Register* on 23 September 2011, **76 FR 59125.**² On 7 December 2011, the FHWA and FTA signed a Record of Decision (ROD), **ROD, signature page 55 [4].** Appendix E of the ROD includes a USEPA letter dated 24 October 2011 that provides comments on the FEIS, **ROD, Appendix E, page 1.**
- h. In Oct 2011, USCG provided written comments to the FEIS, stating that it failed to comprehensively study existing and future needs of the waterway; therefore the USCG could not accept the FEIS as written.
- i. On Dec 7, 2011 the Coast Guard Vice Commandant advised the Department of Transportation (DOT) Deputy Secretary of the USCG's concerns regarding the DOT's planned signing of a Record of Decision (ROD) that same day.
- j. On Dec 7, 2011 FHWA/FTA issued a ROD. DOT formed a "Tiger Team" to work towards addressing the USCG's concerns.
- k. On June 8, 2012 CG-5P (Dana Goward) sent the FTA and FHWA Administrators a letter summarizing the CG Bridge Permitting responsibilities and raised the potential for requiring a Supplemental FEIS.
- l. Vertical Clearance Re-Evaluation (VCRE) – Following the ROD, FHWA and FTA prepared a NEPA Re-evaluation, dated December 2012, to evaluate the effect of bridge design refinements that increased the vertical clearance in the primary channel from 95 feet above zero Columbia River Datum (CRD) to 116 feet above zero CRD. The Re-evaluation identified no new significant adverse impacts resulting from the refined bridge design. The VCRE was approved by the FHWA and FTA on 28 December 2012, **VCRE, page 7-2 [55].**

² Copy obtained from the GPO-FDsys and included in supporting documents folder.

- m. On Jan 7, 2013, the USCG replied to DOT's NEPA Re-evaluation noting that the final document had been signed and offered no written comment.
- n. As a co-operating agency, the USCG may adopt the FEIS without re-circulating the environmental impact statement if, after an independent review of the statement, USCG concludes that its comments and suggestions have been satisfied (40 CFR 1506.3(c))

The key inquiry therefore is whether USCG comments with regard to the FEIS have been satisfied. The relevant focus of USCG comments on the FEIS relate to the omission of a movable bridge as an alternative. The Coast Guard has construed its environmental responsibility for bridge permitting in 33 C.F.R. § 115.60, which requires the permit official to ensure that the application complies with relevant environmental laws, regulations, and orders. In other words, the permit official must have considered the environmental impact of the actions resulting from the permit and comply with all applicable laws prior to issuing the permit. The action of the Coast Guard, in this case, is only to permit the bridge as an obstruction to navigation.³ The Coast Guard's inquiry is limited to the impacts on the human environment caused by the bridge permit itself.

In the instant action, CRC proposed raising the bridge clearance from 95 to 116 feet after the FEIS was finalized. FHWA took the requisite "hard look" in compliance with both CEQ's and its own NEPA regulations, and determined that the impacts from the design change would not result in additional significant environmental impacts. Although FHWA's re-evaluation was prepared to fulfill FHWA's regulations, and is not a "NEPA document" that can be adopted under CEQ regulations, it adequately assessed the adequacy of the FEIS with respect to the waterway and the Coast Guard can take that into its consideration when deciding whether to adopt the FEIS. After careful review of the NIR and NEPA re-evaluation dated December 2012, USCG determines that a) its comments with regard to omitted alternatives involving clearances above 95 feet have been satisfied and b) the design change impacts from 95 feet to 116 feet will not result in significant environmental impacts not already evaluated.

The FEIS describes the environmental impacts associated with the operation of a movable bridge (no Action) and the construction of a new bridge (preferred alternative). The USCG has concluded that the comments and suggestions it rendered in its capacity as cooperating agency have been

³ 33 C.F.R. §114.10 provides: "The several bridge laws... are intended to prevent any interference with navigable waters of the United States whether by bridges, dams, dikes or other obstructions to navigation except by express permission of the United States. *The decision as to whether a bridge permit or a drawbridge operation regulation will be issued or promulgated must rest primarily upon the effect of the proposed action on navigation to assure that the action provides for the reasonable needs of navigation after full consideration of the effect of the proposed action on the human environment.* The Coast Guard is not responsible for any other permits that the applicant may need from other federal, state, or local agencies and issuance of a bridge permit does not affect flood control projects or other governmental programs. (Emphasis added.)

satisfactorily addressed. It is the USCG's view that the FEIS allows sufficient understanding of the environmental impacts of a new construction of a movable bridge. The USCG has determined that the proposed alternative does not unreasonably burden navigation.

In October 2011, the USCG provided written comments to the FEIS, stating that the future needs of the waterway needed to be addressed; therefore the USCG could not accept the FEIS as written. In addition, on December 7, 2011 the Coast Guard Vice Commandant advised the Department of Transportation (DOT) Deputy Secretary of the USCG's concerns regarding the DOT's planned signing of a Record of Decision (ROD) that same day. The most significant comments in this regard were a) in absence of an alternative that would have addressed navigational issues and b) absence of adequate river navigation data. As stated above, the Navigational Impact Report provided sufficient navigational data. The Coast Guard now concludes that the 116 foot alternative satisfies its concerns with regard to the choice of alternatives.

Other proposed alternatives, such as a movable bridge, were not found feasible by CRC for other than environmental reasons. Therefore, the USCG concludes that its comments and suggestions have been satisfied and therefore adopts, pursuant to 40 CFR 1056.3(c), the bridge-related portions of the FEIS.

- o. The VCG will sign an adoption statement for the bridge related portions of the FEIS in his capacity as the Acting Commandant.

3. Public Meetings:

- a. During preparation of the DEIS and FEIS, the project held numerous public meetings. The public meetings and other public outreach activities are summarized in **FEIS, Appendix B**.
- b. The USCG held public meetings on 4 and 5 June 2013, **PN, page 1 and 78 FR 26380⁴**, related specifically to navigation impacts.

4. CG-BRG-2 Comments:

- a. The FEIS incorporates by reference documentation in the 17th Street Technical Memorandum, the Steel Bridge Documented Categorical Exclusion, the Composite Deck Truss Bridge Type NEPA Reevaluation and the Environmental NEPA Re-evaluation. For this reason, the USCG does not need to adopt bridge-related portions of those documents.
- b. The FHWA/FTA project documentation covers the following, **ROD, page 1 [9]**:
 - 1) Rebuilding and resurfacing approximately 6 miles of Interstate 5 (I-5) between the Victory Boulevard interchange in Portland, Oregon and the Main Street interchange in Vancouver in Washington. This includes highway improvements to seven interchanges along the I-5 corridor with related enhancements to the local street network.

⁴ Copy obtained from the GPO-FDsys and included in supporting documents folder.

- 2) Constructing two new 10-lane fixed highway bridges and approaches, referred to as the "I-5 Columbia River Crossing (CRC) bridges," that would carry I-5 traffic across the Columbia River. The new structures would also accommodate light rail and bike/pedestrian facilities. The eastern structure will carry northbound traffic on the upper deck, with bike/pedestrian traffic below; the western structure will carry southbound traffic on its upper deck, with light rail below.
 - 3) Demolition of the existing through-truss lift bridges that currently carry I-5 traffic across the Columbia River.
 - 4) Extension of light rail transit from the Portland Metropolitan Exposition Center to Clark College in Vancouver, Washington and associated transit improvements. This includes improvements to the tracks on the Steel Bridge, new transit stations, park and ride facilities, and expansion of the Ruby Junction light rail transit maintenance facility in Gresham, Oregon.
 - 5) Improvements to bike/pedestrian facilities throughout the project corridor. This includes construction of a multiuse path that would allow users to travel from north Portland, over Hayden Island and the Columbia River into downtown Vancouver.
 - 6) Improvements to the existing I-5 bridge over North Portland Harbor and construction of three new bridges over this waterway associated with I-5, including one new multi-modal bridge carrying light rail transit, local traffic, pedestrians and bicyclists.
 - 7) Implementation of transportation demand and system management measures, including the use of tolls.
- c. The bridge permit application under review is for the I-5 Columbia River Crossing bridges. The USCG has not received a permit application for the bridges crossing North Portland Harbor or the modifications to the Steel Bridge. The improvements along the 6-mile I-5 corridor between Portland and Vancouver, including the bridges crossing North Portland Harbor and the Steel Bridge are included in this NEPA scope because they are part of the new approach roadway/railway and do not have independent utility. The Ruby Junction light rail transit maintenance facility in Gresham, Oregon is not included in the USCG NEPA scope because the expansion would occur even if the CRC project was not built.

B. Public Notice: USCG D13 issued PN (01-13), PN page 1.

1. Date(s) issued: 6 May 2013.
2. Circulation to appropriate federal, state, local agencies as well as interested parties and environmental groups: Yes; assumption based on previous division reviews and communications.
3. Substantive environmental responses: None.
4. CG-BRG-2 Comments: See section II.E of this evaluation for an extensive description of the public notice contents and comments received during the public

notice comment period and during the public meeting.

- a. On 6 May 2013, the USCG published a notice of application availability and request for comments in the *Federal Register*, **78 FR 26380**.⁵ All comments received in response to both the Federal Register notice and PN (01-13) were posted to Docket No. USCG-2013-0286. **PN, page 1.**

C. Water Quality Certificate (P. L. 92-500, as amended)

1. (X) Issued () Waived () Denied () Not Required

2. Certifying agency and date:

- a. By letter dated 30 August 2013, the Oregon Department of Environmental Quality (ODEQ) issued a Section 401 Water Quality Certification (WQC) for the CRC project, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure A, page 1 [4]**. The Oregon WQC is valid for ten (10) years from the date of issuance of the USACE 404 permit, **ibid, page 5 [8]**.
- b. By letter dated 30 August 2013, the Washington State Department Ecology (WSDE) issued a Section 401 WQC for the CRC project, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure B, page 1 [99]**. The WQC is valid for ten years from the date of issuance, **ibid, page 3 [103]**.

3. Means of USEPA notification and date: By email dated 3 September 2013, the USCG forwarded copies of the Oregon and Washington WQCs to USEPA Region 10, **Email from A. Garneau to Y. Vallette, dated 3 September 2013**. In an email dated 3 September 2013, the USEPA responded that it has no reason to believe that project-related discharges or effects would impact any states or federally recognized tribes other than Oregon and Washington, **Email from Y. Vallette to A. Garneau, dated 3 September 2013**.

4. CG-BRG-2 Comment:

- a. The Oregon WQC conditions include time of year restrictions for in-water work and requirements for water quality monitoring and best management practices, debris control, and soil erosion and sediment control, vegetation protection and restoration, spill control, and stormwater management, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure A, pages 5 through 14 [8 through 17]**.
- b. The Oregon WQC stipulates that certification is granted, provided the WQC conditions are made part of the USACE and USCG permits, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure A, page 4 [7]**. The Oregon WQC will be added to the disclaimer conditions of the permit.
- c. The Washington State WQC conditions include time of year restrictions for in water work and requirements for water quality monitoring and best

⁵ Copy in supporting documents folder.

management practices, debris control, and soil erosion and sediment control, vegetation protection and restoration, bank stabilization, and spill control, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure A, pages 5 through 14 [8 through 17].**

- d. Within the project area, the Columbia River is classified as water quality limited under the Clean Water Act, Section 303(d), for the parameters of arsenic, DDT/DDE, polychlorinated biphenyls (PCBs), polynuclear aromatic hydrocarbons (PAHs), dissolved oxygen, and temperature, **FEIS, page 3-337 [5].**
- e. National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Discharge Permits would regulate the discharge of stormwater from on-site and off-site construction sites. The NPDES permits include discharge water quality standards, runoff monitoring requirements, and provision for preparing a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP would include plans to control construction-related risks from erosion, sedimentation, or accidental spills. **FEIS, page 3-345 [13].**
- f. A new stormwater management system would collect and convey runoff from the proposed bridge, transit guideway, and road improvements. Stormwater treatment facilities would reduce total suspended solids (TSS), particulates, and dissolved metals to the maximum feasible extent before runoff reaches surface waters. **FEIS, page 3-349 [17].**
- g. The project lies atop the Troutdale Aquifer, a federally designated sole source aquifer. A search of federal and state regulatory environmental databases did not identify any recognized sources of contamination in the project bridge areas. Conducting focused environmental assessments in areas of significant pile-driving and shaft drilling will limit the potential for contaminants to enter groundwater. The project will coordinate with ODEQ, WSDE and/or USEPA on any hazardous materials discoveries and response plans. Long-term management and treatment of stormwater generated from new and rebuilt impervious surfaces would result in improved local groundwater quality, including the groundwater in the Troutdale Aquifer. **FEIS, page 3-409 [9].**

D. Section 106 (P. L. 89-665, as amended)

- 1. NRHP checked by: District Headquarters Neither
- 2. SHPO consulted via: Public Notice Other
- 3. Section 106 properties involved: Yes, see CG-BRG-2 comments below.
- 4. CG-BRG-2 Comments:
 - a. Beginning in August 2005, and continuing throughout project planning and development, the FHWA, FTA, WSDOT and ODOT consulted and coordinated with WDAHP and the Oregon State Historic Preservation Office (OSHPO) and other consulting parties in accordance with Section 106 of the National Historic Preservation Act. **FEIS, Appendix A.** A list of the Section 106 consulting parties is provided in Section 3.8 of the FEIS, **FEIS, page**

3-211 [1].

- b. The FHWA, FTA, WSDOT and ODOT in consultation with the WDAHP and OSHPO, conducted a cultural resource survey. Based on the survey, it was determined that the project would have an adverse effect on the northbound I-5 Columbia River Bridge and the Vancouver National Historic Reserve (VNHR), which are listed on the National Register of Historic Places (NRHP), and the Pier 99 Building in Portland, which is eligible for listing in the NRHP. A total of 32 NRHP-listed or eligible archaeological sites would also be adversely affected. **FEIS, page 3-228.**
- c. By letter dated 24 January 2011 the WDAHP concurred with the adverse effect determination.⁶ The OSHPO concurred with the adverse effect determination on 1 May 2009, **FEIS, page 3-254.**
- d. On 8 September 2011, the Federal lead agencies (FHWA and FTA), USACE, DAHP, ORSHPO, WSDOT, ODOT, and the National Park Service (invited signatory) executed a Section 106 Memorandum of Agreement (MOA). The Section 106 MOA commits the FHWA and FTA (as lead federal agencies), in cooperation with the WSDOT and ODOT, to numerous activities to ensure adequate identification, protection, documentation, and preservation of historic and archeological resources. **FEIS, Appendix M.**
- e. The USS LCI-713, an NRHP-listed World War II-era amphibious assault vehicle, is temporarily moored at the Thunderbird Hotel site on Hayden Island, **FEIS, page 3-221.** Although no adverse effects are expected, resolution of any unanticipated adverse effects to the LCI-713 will be agreed upon under a separate Memorandum of Agreement. **FEIS, Appendix M, page 2.**
- f. According to the Section 106 MOA, the FHWA and FTA notified the Advisory Council on Historic Preservation (ACHP) of the adverse effect determination. The ACHP chose not to participate in the Section 106 consultation. **FEIS, Appendix M, page 2.**
- g. Since December 2005, the FHWA, FTA and the CRC project team has consulted with the following eleven tribal groups during the Section 106 process: including the Chinook Tribe, 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, Nez Perce Tribe of Idaho, Spokane Tribe of the Spokane Reservation, and the Nisqually Indian Tribe, **ROD, page 34 [42].** A summary of the consultations with the eleven tribal groups is provided in **Appendix A of the FEIS.** The eleven tribal groups were concurring parties to the Section 106 MOA, **FEIS, Appendix M, page 18.**

⁶ Copy in case file folder.

- h. If more than one federal agency is involved in an undertaking, ACHP regulations provide for designation of a lead agency to fulfill collective National Historic Preservation Act (NHPA) section 106 responsibilities and for the lead agency to designate a representative [36 CFR 800.2(a)(2) and (3)]. The USCG concludes that FHWA, FTA (as duly designated lead federal agencies), WSDOT and ODOT actions have fulfilled USCG NHPA section 106 responsibilities and notified the relevant parties via letter dated 19 September 2013. The letter also stated that unless, by 24 September 2013, the signatories inform the Coast Guard otherwise, the Coast Guard will register their concurrence with the determination that no further NHPA action is required. The USACE, NPS, ODOT, WSDOT, WS-SHPO, WS-FHWA, and FTA did not respond. Therefore, concurrence was presumed. The OR-SHPO (via ltr dtd 19 September 2013) and OR-FHWA (via ltr dtd 20 September 2013), concurred with the CG determination.

E. Flood plain:

1. (X) Encroachment () Significant encroachment () Not applicable
2. CG-BRG-2 Comments:
 - a. The 100-year flood elevation is 31.4 feet National Vertical Datum of 1988 (NAVD88). The low steel (member) elevation would be approximately 89.18 feet NAVD88. **Permit drawing sheet 2.**
 - b. The joint permit application, dated 30 January 2013, indicates that the CRC project would require about 46,375 cubic yards of permanent fill and 60,348 cubic yards of temporary fill in the Columbia River. Approximately 240,000 cubic yards of fill will be removed from below the OHW line of the Columbia River during demolition of the existing bridge structures. **USCG Bridge Permit Application, Attachment A.**
 - c. Preliminary hydraulic analysis results indicate that the proposed structures would not affect the 100-year flood level in the main channel of the Columbia River, and the 100-year flood level in North Portland Harbor would increase by about 0.04 feet. The hydraulic analysis will be updated as design progresses to account for improved pier geometry, bank grading, and other mitigation measures. **Bridge Permit Application Guide Responses, page 53 [65].**
 - d. In accordance with Executive Order 11988, the proposed project would not result in adverse impacts to floodplain resources or result in increased flooding of adjacent areas during the long-term operation of the project. **Bridge Permit Application Guide Responses, page 53 [65].**
 - e. On 30 January 2013, the CRC project applied to the USACE for a Section 10/404 permit, **USCG Bridge Permit Application, Attachment A, page 7 [9]**. The USACE is a cooperating agency for the CRC project, and has established a target date of 30 July 2014 for issuance of the Section 10/404

permit, **Federal Infrastructure Permitting Dashboard**.⁷

F. Section 307 (P. L. 92-583):

1. Federally approved CZM program:

- a. The National Oceanic and Atmospheric Administration (NOAA) approved the Oregon coastal management program in 1977, and the Oregon Department of Land Conservation and Development (ODLCD) is the lead coastal management agency.⁸ The Oregon coastal zone extends up the Columbia River to Puget Island (river mile 38), and does not include the project area.⁹
- b. The NOAA approved the Washington coastal management program in 1976, and the WSDE is the lead coastal management agency.¹⁰ Washington's coastal zone is comprised of the 15 coastal counties with marine shorelines. Clark County, where the project is located, is not within the Washington coastal zone.¹¹

2. Consistency Certification: Not applicable. The proposed bridge is not in an area covered by a Coastal Zone Management Plan.

3. Concurrence by State: Not applicable. The proposed bridge is not in an area covered by a Coastal Zone Management Plan. By letter dated 27 August 2013, the WSDE stated that it would not undertake a CZM federal consistency review for the CRC project because the project is not located within the state's coastal zone and WSDE did not provide notice within 30 days of becoming aware of the CRC federal permit application that it wanted to review the project as an unlisted activity outside of the state's coastal zone, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure D [165]**. By email dated 9 August 2013, ODLCD confirmed the project is outside of the coastal zone and will not require any federal consistency review under the CZMA.

4. CG-BRG-2 Comment: None.

G. Other appropriate environmental control laws/orders.

Wetlands

The CRC project would not impact any delineated wetlands, but it would impact a total of 0.45 acre in three wetland buffer areas: Victory Boulevard interchange (up to 0.05 acre), Kiggins Bowl (0.3 acre), and Burnt Bridge Creek (0.1 acre), **FEIS, page 3-363 [11]**. According to the joint permit application, the USACE will review the wetlands delineation report and make a jurisdictional determination as part of the Section 404

⁷ <http://www.permits.performance.gov/permits/section-404-permit-columbia-river-bridge>. Accessed 13 June 2013. Copy in supporting documents folder.

⁸ <http://coastalmanagement.noaa.gov/mystate/or.html>. Accessed 7 June 2013. Copy in supporting documents folder.

⁹ <http://coastalmanagement.noaa.gov/mystate/docs/StateCZBoundaries.pdf>. Accessed 7 June 2013. Copy in supporting documents folder.

¹⁰ <http://coastalmanagement.noaa.gov/mystate/wa.html>. Accessed 7 June 2013. Copy in supporting documents folder.

¹¹ <http://www.ecy.wa.gov/programs/sea/czm/fed-consist.html>. Accessed 10 June 2013. Copy in supporting documents folder.

permit review process, **USCG Bridge Permit Application, Attachment A.**

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 restoration activities at the Lewis River mitigation site might occur. Additional required mitigation for these types of impacts is not anticipated. The Washington mitigation site will go through its own permitting process separate from the CRC permit process. **USCG Bridge Permit Application Attachment B, page 5-24.**

A 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 cubic yards 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. **USCG Bridge Permit Application Attachment B, page 5-24.**

Some staging areas located near the Columbia River may contain wetlands. Mitigation for temporary effects including the replacement of vegetation that is cleared for construction activity would occur in accordance with local regulatory guidance, **FEIS Page 3-366.**

Fish and Wildlife – Fish & Wildlife Coordination Act (FWCA)

Beginning in August 2005, and continuing throughout project planning and development, the FHWA, FTA, WSDOT and ODOT consulted and coordinated with federal, state, and local agencies, including the USEPA, the National Marine Fisheries Service (NMFS), the U.S. Fish and Wildlife Service (USFWS), the Oregon Department of Fish and Wildlife (ODFW), the Oregon Department of State Lands (ODSL), the Washington Department of Fish and Wildlife (WDFW), the WSDE, the City of Vancouver, the City of Portland, and Metro. Native American tribes with resource interests relevant to this project were also consulted. **Ecosystems Technical Report, page 2-7 [37].**

Fish and Wildlife – Endangered Species Act (ESA)

The CRC project prepared a Biological Assessment (BA), dated June 2010, which addressed impacts to 13 federally-listed salmonid populations and five other federally-listed species that occur in the project area. The NMFS has jurisdictional responsibility for seventeen of those species, including Chinook salmon (5 evolutionarily significant units), sockeye salmon, coho salmon, chum salmon, steelhead (5 distinct population segments), southern green sturgeon, eulachon, Steller sea lion, and killer whale. The USFWS has jurisdictional responsibility for the Columbia River bull trout. The BA also identified a number of measures the project will employ to avoid and minimize impacts to affected species **Bridge Permit Application Guide Responses, Attachment M.**

By letter dated 24 June 2010, the Federal lead agencies (FHWA and FTA) submitted the BA to the USFWS and initiated informal consultation pursuant to Section 7(a)(2) of

the ESA, **Bridge Permit Application Guide Responses, Attachment N, page 1 [3]**. On 25 June 2010, the FHWA and FTA initiated formal consultation with the NMFS by submitting a BA, **2011 BO, page 2 [9]**.

By letter dated 27 August 2010, the USFWS concurred with the FHWA/FTA's determination that the proposed CRC project "may affect, but is not likely to adversely affect" the Columbia River bull trout and its proposed critical habitat, USFWS letter, **Bridge Permit Application Guide Responses, Attachment N, page 1 [3]**.

NMFS issued a Biological Opinion (BO) on 19 January 2011, with a "not likely to jeopardize" determination for 13 salmonid stocks, southern green sturgeon, eulachon, Steller sea lion, and relevant critical habitat. NMFS also concurred with the determination that the proposed project is "not likely to adversely affect" the southern resident killer whale. **2011 BO, page 74 [81]**. The NMFS BO included an Incidental Take Statement for 13 salmonid stocks, southern green sturgeon, eulachon; and required the implementation of a number of measures to minimize and monitor the effects of the proposed action, **2011 BO, Page 75 [82]**. These measures, which are intended to minimize impacts related to in-water work, construction water discharges, pile installation, pollution and erosion, will be implemented through compliance with a series of terms and conditions specified in the BO. **2011 BO, Pages 78 through 86 [85 through 93]**. The NMFS did not include an incidental take authorization for Steller sea lions in the BO because the incidental take of marine mammals has not been authorized under the Marine Mammal Protection Act or its 1994 Amendments, **2011 BO, Page 75 [82]**. Authorization under the Marine Mammal Protection Act for incidental harassment of Steller sea lions and other pinnipeds is addressed below.

By letter dated 4 April 2013, the Federal lead agencies (FHWA and FTA) reinitiated formal consultation with NMFS to address the newly expanded critical habitat for the eulachon, and the proposed designation of Lower Columbia River coho salmon critical habitat. Project design modifications that resulted in changes to the effect analysis are also addressed. **Bridge Permit Application Guide Responses, Attachment O**. On 30 August 2013, the NMFS issued a supplemental BO for the proposed CRC project that supplements, and is intended to be attached to and read in conjunction with, the 2011 BO, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure C, page 2 [124]**. The supplemental BO confirms the conclusions in the 2011 BO, and adds a new conclusion that the modified proposed action will not result in destruction or adverse modification of critical habitat designated for eulachon or proposed for Lower Columbia River coho salmon, **Letter from K. Strickler to Rear Admiral Servidio dated 30 August 2013, enclosure C, page 32 [154]**.

If more than one federal agency is involved in an undertaking, USFWS and NMFS joint regulations implementing the ESA provide for designation of a lead agency to fulfill collective ESA section 7 responsibilities and for the lead agency to designate a representative (50 CFR 402.07 and 402.08). The USCG concludes that the FHWA, FTA, WSDOT and ODOT actions have fulfilled USCG ESA section 7 consultation responsibilities.

Fish and Wildlife – Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act

The project area is located in the Pacific flyway, the major south-north route for migratory birds that extends from Patagonia to Alaska. Migratory birds such as waterfowl, swallows, and passerines (song birds) use the area for resting, feeding, and breeding. The waterways of the project area are important habitat and travel corridors for many species of waterfowl, including Canada geese, ruddy ducks, green-winged teals, mallards, wood ducks, and ring-necked ducks. Peregrine falcons are known to be present in the project area, and utilize the existing I-5 bridge structures year-round. Bald eagles use the Columbia River and environs to forage for fish and waterfowl, but no nesting or breeding sites are known within 1.0 mile of the project. **FEIS, page 3-380 [10].**

Construction activities would impact migratory birds, including peregrine falcons, through noise impacts and removal or degradation of habitat. Mitigation measures to address these impacts include impact avoidance and impact minimization. Impact avoidance would be addressed by timing vegetation removal to occur outside of nesting seasons for migratory birds. Demolition of existing structures would likely be scheduled outside of nesting seasons for native migratory birds to avoid direct impacts to active nests. If demolition activity is to occur during nesting season, and migratory bird nesting is deemed likely, exclusionary measures or other methods to prevent active nesting will be implemented. In very rare cases, removal of active nests may occur through permits held by the U.S. Department of Agriculture Wildlife Services Program. **ROD, page 33 [41].**

Fish and Wildlife – Essential Fish Habitat (EFH)

On 25 June 2010, the Federal lead agencies (FHWA and FTA) submitted a BA to the NMFS and initiated formal consultation on effects to EFH, **2011 BO, page 2 [9]**. The BA indicated that the CRC project area includes areas designated as EFH for various life-history stages of Chinook and coho salmon. On 19 January 2011, NMFS issued a BO with a determination that CRC project would cause adverse effects to EFH designated for salmon, including: degradation of water quality in the lower Columbia River, short and discrete alteration of underwater sound via pile-driving, and reduction of benthic habitat. The NMFS BO included conservation measures to avoid, mitigate, or offset the impact of the CRC project on EFH. The conservation measures include the use of best management practices for pile driving and construction and completion of a conservation monitoring and reporting program. **2011 BO, page 87 [95]**. The FHWA and FTA responded by letter dated 23 February 2011, that the agencies will ensure that the NMFS conservation recommendations for EFH are implemented, Letter from J. McAvoy and R.F. Krochalis to W. Stelle, Jr., **dated 23 February 2011**.

If more than one federal agency is involved in an undertaking, NMFS regulations implementing the Magnuson-Stevens Act provide for designation of a lead agency to fulfill collective EFH responsibilities and for the lead agency to designate a representative [50 CFR 600.920(b) and (c)]. The USCG concludes that FHWA, FTA, WSDOT and ODOT actions have fulfilled USCG EFH responsibilities.

Fish and Wildlife – Marine Mammal Protection Act (MMPA)

During the spring months, Steller sea lions and California sea lions transit through the main project area on their way to and from feeding at Bonneville Dam, and Pacific

harbor seals also occur sporadically in low numbers in the main project area. All three species are protected under the MMPA. **ROD, page 32 [41].**

Noise from construction and demolition activities, such as pile driving and pile removal could result in a “take” of sea lions and seals, in the form of incidental harassment, **ROD, page 33 [42].** On 25 March 2009, the CRC project met with the FHWA, FTA, and NMFS to discuss the need for an Incidental Harassment Authorization (IHA). Because the project would occur over multiple years, the NMFS requested CRC apply for a Letter of Authorization (LOA) instead of an IHA. **LOA Application, page 5-1 [57].**¹² On 22 November 2010, the CRC project applied to the NMFS for an LOA for long-term incidental behavioral harassment of sea lions and seals. On 19 April 2012, the NMFS published in the *Federal Register*, a request for comments on the proposed LOA for the CRC project. **77 FR 23548.**¹³ In-water construction will not commence until a letter of authorization for long-term incidental behavioral harassment of sea lions and seals is obtained from the NMFS..

Fish and Wildlife – National Marine Sanctuaries Act (NMSA)

The closest marine 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. **Bridge Permit Application Guide Responses, page 67 [79].**

Fish and Wildlife – Executive Order 13112, Invasive Species

Noxious weeds grow throughout the project area within most vegetated areas that are not regularly maintained. Several non-native animals that harm native species and tend to proliferate are also present in the project area. **FEIS, page 3-385 [15].** 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. **Bridge Permit Application Guide Responses, page 67 [79].**

Noise and Vibration

Section 3.12 of the FEIS identifies noise impacts and mitigation, including compliance with local noise regulations. Without mitigation, traffic noise impacts would increase with at 325 residential equivalents, **FEIS, page 3-297.** Moderate light rail transit noise impacts were also identified for several floating homes and single-family residences, **FEIS, page 3-297.** Several noise walls have been recommended for noise mitigation. Noise-wall mitigation will be finalized during the final design process, **FEIS, page 3-311.**

Impacts resulting from pile driving, vibratory shoring, soil compacting, and some hauling and demolition activities would occur in areas located near these activities,

¹² Copy in supporting documents folder.

¹³ Copy in supporting documents folder.

including two historic structures the Barracks Post Hospital and the Clark County Museum. The Section 106 MOA, dated 8 September 2011, discusses the measures to monitor, and mitigate vibration impacts to these historic structures. **FEIS, page 3-302.** Vibration mitigation measures such as ballast mats, resilient fasteners, tire derived aggregate and special trackwork would be implemented, **FEIS, page 3-315.**

Air

USEPA regulation 40 CFR 93 requires federal projects in nonattainment and maintenance areas to conform to state implementation plans for attaining and maintaining NAAQS standards. The USEPA greenbook indicates that Clark County, Washington¹⁴ and Multnomah County, Oregon¹⁵ are classified as maintenance for the carbon monoxide (CO) and 1-hour ozone standards. The counties are designated as unclassifiable or attainment for all other criteria pollutants. Regulations 40 CFR 81.338 and indicate that the 1-hour ozone standard is revoked effective 15 June 2005 for all areas in Oregon and Washington, and the Portland-Vancouver area is a maintenance area for the 1-hour ozone standard for the purposes of 40 CFR part 51 Subpart X. Subpart X, at 40 CFR 51.905(e)(3), indicates that upon revocation of the 1-hour ozone standard for an area, conformity determinations are no longer required for the 1-hour ozone standard. Therefore, CO is the only pollutant subject to conformity requirements.

Because the CRC project is being developed, funded, and approved under title 23 of the US Code as evidenced by the FHWA/FTA's lead, regulation 93 subpart A transportation conformity requirements apply.

USEPA regulation 40 CFR 93.115 requires projects come from a currently conforming transportation plan and transportation improvement program (TIP). Metro is the metropolitan planning organization (MPO) responsible for air quality compliance for transportation projects in the Portland, Oregon area, **ROD, page 27 [35]**. CG-BRG-2 confirmed the project comes from the Metro 2035 regional transportation plan list of projects,¹⁶ and the Metro FY2012-2015 TIP list of projects¹⁷. Because the Vancouver Air Quality Maintenance Area Second 10-Year Limited Carbon Monoxide Maintenance Plan received a finding of adequacy from the USEPA in December 2007, a regional conformity demonstration is no longer required for projects in the Vancouver, Washington area, **ROD, page 27 [35]**.

In accordance with USEPA regulation 40 CFR 93.109(f)(1), the project prepared a localized CO (hot-spot) analysis of CO levels at congested intersections in Portland and Vancouver. Modeled CO concentrations show the 1-hour and the 1997 8-hour NAAQS's would not be exceeded. **FEIS, page 3-281 [9]**.

Transportation conformity rules at 40 CFR 93.123 (c)(5) require CO hot-spot analyses for construction-related activities only when the construction phase lasts five years or

¹⁴ http://www.epa.gov/oaqps001/greenbk/anayo_wa.html. Accessed 14 June 2013. Copy in supporting documents folder.

¹⁵ http://www.epa.gov/oaqps001/greenbk/anayo_or.html. Accessed 14 June 2013. Copy in supporting documents folder.

¹⁶ Copy in supporting documents folder.

¹⁷ Copy in supporting documents folder.

more at any individual site. Although the CRC project construction phase will last more than 5 years, project construction activities at any given site are not expected to last more than 5 years. Therefore, no CO hotspot analysis was performed for project construction activities. Should it become evident at any time during final design and construction planning that construction at a given site will continue for more than five years, the CRC project would conduct a hot-spot analysis at that time, **ROD, Page 56 [64]**.

Because the project, as evidenced by the FHWA/FTA's lead, the project is being developed, funded, and approved under title 23 of the US Code and, per USEPA regulation 40 CFR 93.153(a), general conformity requirements are not applicable.

The USCG has determined, in accordance with the Clean Air Act (CAA) section 176(c) [42 U.S.C. 7506(c)], that its issuance of a permit to construct the I-5 bridge across the Columbia River at mile 106.4 would conform to the CAA state implementation plans (SIPs). The USCG is making this determination based on its review of the FHWA/FTA FEIS, ROD and VCRE for the project.

The CRC project estimated criteria pollutant and Mobile Source Air Toxics (MSAT) emissions for the proposed project. The results showed a substantial reduction in criteria pollutant and MSAT emissions relative to existing emissions for all pollutants. Long-term air quality impacts are not expected to occur as a result of the project, and mitigation for long-term impacts is not proposed. **Air Quality Technical Report, page 7-1 [69]**.

The primary impacts of construction activities will be the generation of dust from demolition, site clearing, excavating and grading activities, exhaust emissions from construction equipment, and impacts to traffic flow in the project area. Traffic congestion increases idling times and reduces travel speeds, resulting in increased vehicle emission levels. **Air Quality Technical Report, page 6-2 [64]**. Construction mitigation will focus on controlling dust and exhaust emissions from demolition and construction activities and on minimizing the effects of traffic congestion. The contractor will be required to develop a pollution control plan that includes documentation of operational measures that will be used to reduce emissions. In addition, the project will implement a number of congestion reduction strategies to reduce single-occupancy vehicle trips through the main project area. The Project will comply with relevant regulations. **FEIS, page 3-283 through 3-285 [11 through 13]**.

In a letter dated 24 October 2011 the USEPA commented on the FEIS and provided several recommendations regarding air quality, **ROD, Appendix E**. The ROD provides commitments to the recommendations provided by the USEPA, **ROD, Page 56 [64]**.

Greenhouse Gas Emissions

The CRC project is expected to reduce regional greenhouse gas emissions by approximately 130 metric tons of carbon dioxide equivalents (MtCO₂) per day, which equates to a reduction of approximately 0.5 percent. Greenhouse gas emissions in the project area would decline by about 21 MtCO₂ (5.5 percent) during peak traffic periods. The reductions in greenhouse gas emissions associated with the CRC project are due to a decrease in the number of cars crossing the Columbia River with tolling

and light rail, and decreased congestion on I-5. **Cumulative Effects Technical Report, page 5-6 [74].**

Visual and Aesthetic

Section 3.9 of the FEIS discusses the effect of the CRC project on the visual character of surrounding landscapes. The new higher bridges across Columbia River would appear more prominent for skyline and horizon views, but would maintain the drama (vividness) that large-span bridges add to views. Modifications to interchanges would increase heights at the Marine Drive, Hayden Island, and SR 14 interchanges, where new ramps and elevated roadways would be higher than any existing facilities in these immediate areas. Even at these interchanges, the degree of change is expected to be moderate, since these areas are already and would continue to be large urban interchanges. Removal of the visually complex trusses and lift towers of existing bridges would present less visual clutter for skyline and horizon views, and would generally be interpreted to have a positive visual impact. The Community Connector would introduce a short tunnel for motorists on Hayden Island, intended as a positive experience; vivid features would mark the entrance to the short tunnel. The designs for the interchanges at Marine Drive, Hayden Island, and SR 14 would introduce visually complex systems of ramps at higher elevations than the existing ramps. Visual impacts along the transit alignments in Vancouver are expected to be low. Light rail transit station platforms and associated furnishings such as shelters, benches, paving, and signage would be designed to be compatible with the surroundings and to protect existing sight lines and views. **FEIS, pages 3-262 through 3-267 [6 through 11].** The CRC project will continue to discuss with stakeholders the aesthetic attributes of the new bridge structures, so as to best mitigate potential visual impacts and to create a noteworthy visual feature, **FEIS page 3-270 [14].**

The increased prominence of structures near the village and hospital at the VNHR would change its visual context and contributing to a determination of adverse effect, **FEIS, pages 3-264 and 3-265 [8 and 9].** As discussed in section D.4 of this evaluation, the Section 106 MOA includes stipulations that mitigate these effects.

During construction, the visual quality of views to and from the project area would be temporarily altered. The I-5 overcrossing on Evergreen Boulevard, a designated scenic roadway connecting downtown Vancouver and the VNHR, would be closed for approximately 9 to 12 months for project construction. The detour for traffic crossing over I-5 would result in a temporary negative impact to the scenic roadway. **FEIS page 3-268 [12].** Mitigation for temporary construction-related effects will include: shielding of construction site lighting to reduce spillover of light onto nearby residences and businesses; locating construction equipment and stockpiling materials in less visually sensitive areas; and replanting areas where vegetation is removed or impacted during construction. **FEIS page 3-271 [15].**

Contamination

Section 3.18 of the FEIS discusses the results of environmental screening for hazardous and contaminated materials. Historic land uses at the project site and adjacent properties are known to have caused subsurface contamination. In addition, the project would require some disturbance of structures or equipment containing lead-based paint,

asbestos containing materials, or polychlorinated biphenyls (PCBs).

Any contamination encountered during construction would be removed or remediated in accordance with all applicable regulatory requirements.

Prior to commencing site disturbance, a construction health and safety plan (CHASP) would be prepared to address both the known and suspected contamination issues and contingency items (e.g., finding unexpected contamination or petroleum storage tanks). The CHASP would describe in detail the health and safety procedures to minimize exposure of contaminated materials to workers and the public.

Transportation

Traffic – The FEIS demonstrates that there will be a marked reduction in the average weekday cross-river traffic due to the introduction of high-capacity light rail transit and a toll on the I-5 CRC bridges, **FEIS, page 3-29**. The ROD confirmed that a replacement river crossing would provide substantial traffic congestion relief and improve vehicular safety, **Page 10, ROD**. Construction would result in temporary and impacts such as increased congestion on several roadways along the project corridor, including I-5 and, potentially, I-205; detours and full or partial street closures; and increased truck traffic associated with construction activity, **FEIS, page 3-52**. To mitigate construction impacts, three southbound and three northbound lanes would be maintained during all weekdays. I-5 traffic would be shifted onto temporary alignments, lanes and shoulders would be narrowed to accommodate equipment and workers, merge and exit distances would be shortened, and posted speed limits reduced, **FEIS, page 3-56**.

Air Traffic – Two airports, Portland International Airport and Pearson Field, are located near the project area. The VCRE indicates that the CRC project would not impact operations at the Portland International Airport. The VCRE also indicates that the proposed project would improve aviation safety and efficiency at Pearson Field because the new I-5 CRC bridges would not include lift towers and they would be located slightly farther from the airfield, and so would intrude less into Pearson Field airspace. **VCRE worksheet, page 14, [72]**. By letter dated 5 December 2012, the FAA indicated that it has no objection to the proposed project provided that the part of the structure that penetrates any PART 77 surface is obstruction lighted in accordance with FAA Advisory Circular 70/7460-1K, Obstruction Marking and Lighting, **VCRE page [77]**. Roadway or accent lighting will be designed to limit light or glare that could affect air navigation, and will comply with FAA permit terms and conditions. The FHWA/FTA will submit a Notice of Construction, Alteration, Activation and Deactivation of Airports application to the Federal Aviation Administration (FAA), and continue to coordinate with the FAA the safe and efficient utilization of navigable airspace near the CRC project, **ROD, Page 39**.

Navigation – The proposed CRC project would reduce the maximum vertical clearance from 179 feet to 116 feet. The changed vertical clearance would impact four known vessels/users, including three marine fabricators and a crane barge. The VCRE, FEIS and ROD describe a number of possible mitigation options, such as relocation of operations, disassembling loads and the provision of compensation for loss of profits that could be implemented to offset the impacts to the affected owners. Mitigation

discussions with affected owners are ongoing and will advance through the permitting processes resulting in the specific mitigation commitments, **VCRE, page 6-1.**

Transit – The extension of light rail facilities and services from Portland to Clark College in Vancouver would more than double the number of transit passenger trips over the I-5 crossing, compared to the 2030 No-Build Alternative, **FEIS, page 3-45.** Transit reliability between major origins and destinations would be higher due to the availability of light rail that travels in an exclusive guideway, **FEIS, page 3-46.** Impacts to transit service during construction could include delays, relocation or temporary elimination of bus stops, street detours, and a deterioration of reliability for bus routes using certain roadways and facilities within the corridor. The project construction plans will include mitigation measures to maintain access for motorists, delivery and service vehicles, cyclists, and pedestrians during business hours, **FEIS, page 3-60.**

Pedestrians and Bicyclists – As discussed in the FEIS, the construction of a continuous, grade-separated, multi-use path on the new I-5 CRC bridge would have a beneficial impact, as it would provide for a substantial increase in cross-river pedestrian and bicycle travel, **FEIS, page 3-40.**

Parking – The CRC project would impact the availability of on-street parking along the blocks directly fronting the light rail transit alignment. However, the parking demand is not expected to exceed available supply since additional parking would be available within one to two blocks of the impacted blocks, **FEIS, page 3-48.** The City of Vancouver, C-TRAN, and FTA will evaluate possible shared use agreements that would allow spaces within park and ride facilities to be used to support special events, as well as existing or planned development, **FEIS, page 3-50.**

Other

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations: Section 3.5 of the FEIS evaluated the CRC project's potential operational and construction impacts on minority and low-income populations; and included an analysis of public health assessments. Based on the evaluation, the USCG concluded that the project would not result in any disproportionately high and adverse effects on these communities and no mitigation would be required, **FEIS, page 3-169 [47].**

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks: The CRC project investigated adverse impacts to children in FEIS Sections 3.5 and 3.6. No long-term impacts to schools, daycare centers or children's programs were identified, **FEIS, page 3-180 [6].** Temporary construction noise and vibration may affect Discovery Middle School and the recreation fields at Clark College. Standard construction practices would minimize these impacts. **FEIS, page 3-183 [9].** 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 **FEIS, page 3-154 [32].**

Occupational Safety and Health Act of 1970: The FEIS states that a construction health and safety plan will be developed and implemented to minimize exposure of construction and excavation workers to hazardous wastes and to reduce the risk to human health and the environment, **FEIS, page 3-427 [15]**.

Farmland Protection Policy Act: The project is located in a built-up urban area which consists of a combination of residential, commercial, and industrial properties, **FEIS, page 3-99 [3]**. No farmland would be taken as a direct impact of the CRC project. The CRC project is compatible with state and local programs to protect farmland and it would not substantially increase the potential for loss of farmland in the Portland-Vancouver region. **ROD, page 40 [48]**.

Coastal Barrier Resources Act: As verified using the USFWS Coastal Barrier Resource System Mapper¹⁸, the bridge does not connect to a unit of the coastal barrier resource system.

Executive Order 13089, Coral Reef Protection: As verified using the NOAA coral reef information system website¹⁹ there are no coral reefs in Oregon or Washington.

Land and Water Conservation Fund (LWCFA): No parks protected by Section 6(f) of the LWCFA will be converted to permanent non-park use, however a temporary occupancy of approximately 421 square feet and lasting less than 180 days at East Delta Park would be required during nearby construction activities. Because the use would be temporary, there would be no requirements for the provision of substitution property; however, mitigation would require bringing this area back to its original state, including re-seeding the lawn in this area and replanting any landscaping that was removed during construction. **FEIS, page 3-205 [17]**.

Wild and Scenic Rivers Act: The Columbia River is not a designated Wild and Scenic River, **Bridge Permit Application Guide Responses, page 74 [86]**. This was verified using the Wild and Scenic Rivers System website.²⁰

Executive Order 13061, Federal Support of Community Efforts along American Heritage Rivers: The case file does not discuss American Heritage Rivers. As verified by review of Presidential Proclamation 7112, *Designation of American Heritage Rivers*,²¹ the Columbia River is not designated as an American Heritage River.

Uniform Relocation and Real Property Acquisition Policies Act of 1970: Section 3.3 of the FEIS addresses property acquisition and displacements. The proposed CRC project would require 59 residential displacements, 69 commercial displacements and two public use displacements, **FEIS, page 3-84 [6]**. The CRC project has developed a Real Estate Acquisition and Management Plan to ensure compliance with all Federal laws, regulations and guidance during implementation of the real property acquisition program, **Bridge Permit Application Guide Responses, Attachment E. Displaced**

¹⁸ <http://www.fws.gov/CBRA/CBRS-Mapper.html>. Accessed 7 June 2013.

¹⁹ <http://coris.noaa.gov/map/>. Accessed 7 June 2013.

²⁰ <http://www.rivers.gov/rivers/documents/rivers-table.pdf>. Accessed 7 June 2013. Copy in supporting documents folder.

²¹ 63 FR 41949, Presidential Proclamation 7112, Designation of American Heritage Rivers. Copy in Supporting documents folder.

households and businesses would be relocated per the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*. Acquired property will be purchased at fair market value and individuals living in a residence displaced by the CRC project will be provided decent, safe, and sanitary replacement housing. **FEIS, page 3-93 [15]**.

Up to 20 acres of temporary easements from approximately 200 parcels would be required for the temporary staging of equipment and materials during construction. Property used temporarily during construction could be returned to its owner once construction is complete. **FEIS, page 3-90 [12]**. Impacts to real or personal property, due to temporary construction uses, would be compensated according to fair-market or contributory value, **FEIS, page 3-95 [17]**.

Executive Order 12144, Environmental Effects Abroad of Major Federal Actions: The order does not apply to the project because its effects do not extend abroad.

Indirect and Cumulative Impacts: The FEIS addresses indirect impacts as part of impact-specific analyses, including the following: environmental justice, **pages 3-154 and 3-159 [32 and 37]**; historic and archaeological resources, **pages 3-251 and 3-252 [41 and 42]**; air, **page 3-281 [9]**; threatened and endangered species, **page 3-392 [22]**; wetlands, **page 3-364 [12]**, and visual resources, **page 3-267 [11]**. Section 3.19 of the FEIS evaluated potential cumulative effects that may result from the construction and operation of the project. Based on the Section 3.19 evaluation it was determined that the project would not result in any significant adverse indirect or cumulative effects.

Disclaimer condition: Issuance of this permit does not relieve the permittee of the obligation or responsibility for compliance with the provisions of any other law or regulation as may be under the jurisdiction of any federal, state or local authority having cognizance of any aspects of the location construction or maintenance of said bridge. This includes the State of Oregon water quality certification conditions.

IV. PROGRAM REVIEW DETERMINATION

Based upon a review of the foregoing environmental and navigational evaluations and the entire case record, the Coast Guard has determined that the above Headquarters' evaluations accurately describe the case record with regard to compliance with the various applicable laws and agency procedures.

Signed: _____


JOHN P. CURRIER
Vice Admiral, U.S. Coast Guard
Acting Commandant

Date: _____

27 SEP 2013