Columbia River Crossing

Moving Forward

April 25, 2011

Background, Bridge-type Major Factors, Next Steps

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The Significance of the Columbia River Crossing

The Columbia River Crossing project area spans five miles of Interstate 5 (I-5) between State Route 500 in Vancouver, Washington, to approximately Victory Blvd. in Portland, Oregon. As the only continuous north-south Interstate on the West Coast that connects the Canadian and Mexican borders, I-5 is vital to the local, regional, and national economies. At the Columbia River, I-5 provides a critical economic connection for two major ports, deep-water shipping, upriver barging, two transcontinental rail lines, and much of the region's industrial land.

The CRC project area has seven closely-spaced interchanges, including connections with four state highways (SR 14, SR 500, and SR 501 in Washington and OR 99E in Oregon) and several major arterial roadways. These serve a variety of land uses, and provide access to downtown Vancouver, two international ports, industrial centers, residential neighborhoods, retail centers, and recreational areas.

The Need for the Columbia River Crossing Project

The outdated bridge and highway design are unable to meet the demands of today and tomorrow. The existing I-5 crossing of the Columbia River consists of two side-by-side bridges with lift spans. The eastern bridge (serving northbound traffic) was built in 1917 and the western bridge (serving southbound traffic) was built in 1958. The crossing, which served 30,000 vehicles per day in the 1960s, now carries about 135,000 automobiles, buses, and trucks each weekday. While many of these trips are regionally-oriented (average trip length is 16 miles), it is estimated that about 75 percent of trips using the I-5 crossing actually enter and/or exit I-5 within the 5-mile long project area.

Traffic congestion at the I-5 bridge currently lasts up to six hours a day and could increase to more than seven hours southbound and eight hours northbound by the year 2030, if nothing is done. Congestion compromises on-time freight deliveries, hampering productivity and efficiency. Buses traveling I-5 between Vancouver and Portland are getting stuck in traffic and becoming less reliable. Portland's light rail system doesn't connect to Vancouver.

Safety is getting worse and collisions are occurring about once a day. This crash rate is two times higher than similar highways in Oregon and Washington. Crashes will continue to grow with more congestion. Many collisions can be attributed to short on-and off-ramps, inadequate spaces for merging and weaving, and poor sight distances on and near the I-5 bridge.

In addition to the safety, congestion, and mobility issues described above, the bridge is not equipped to handle seismic activity. A significant earthquake could cause the bridge to bend, buckle or collapse, or could lead to soil liquefaction which would damage the foundation.

Development of the Locally Preferred Alternative

The Columbia River Crossing project formally entered the National Environmental Policy Act (NEPA) process in 2005 as the Purpose and Need Statement was established. This statement established the project's multi-modal transportation objectives: improving transit and freight mobility, reducing congestion and collision levels, improving bicycle and pedestrian facilities,

and minimizing seismic risk. Advisory groups, partner agencies, and the public worked with CRC staff to generate and screen 70 transportation concepts (including ferries, tunnels and other bridge locations) and narrowed them to 12 preliminary alternatives most aligned with the Purpose and Need Statement. Then, five alternatives were selected to study in the Draft Environmental Impact Statement (EIS), which was released in May 2008. A Locally Preferred Alternative was chosen in the summer of 2008.

Public engagement for the project has been ongoing since 2005. Over 26,000 points of contact have been made with residents and business owners at more than 850 events. Substantial outreach efforts resulted in about 1,600 public comments on the Draft EIS. These comments will be responded to in the Final EIS.

Bridge Type Review

The Bridge Panel Review was convened in November 2010 to evaluate the bridge type under consideration for the CRC project, as was recommended by a previous Independent Review Panel. The 16-member panel consisted of national and international experts with experience designing, managing and constructing large bridge projects. In February 2011, the panel released a report that offered three more feasible bridge type alternatives for consideration: a tied arch, cable-stayed, and deck truss. The panel found all three options less expensive and more suitable for the crossing over the Columbia River. The panel did not endorse any one of the three bridge types over the others but did compare the relative risk of each option.

The governors of Oregon and Washington responded to the panel's report by asking their Departments of Transportation to conduct an expedited review of the three bridge types and make a recommendation considering the following criteria:

- is the most affordable
- maintains the project schedule
- minimizes environmental impacts
- honors commitments that have been made to stakeholders and communities in both states, and
- provides the least risk.

Using the governors' criteria, the Departments of Transportation convened a group of bridge engineers, designers, project managers, and environmental managers who met daily to review the independent panel's conclusions and conduct further analysis of the bridge types. The Departments also met with FHWA, FTA, and resource agencies to receive input.

After review of the bridge panel's work, supplemental technical analysis, conversations with resource agencies, consultation with project partners, and consideration of public comments, the Departments concluded the deck truss was the only bridge type that met the needs of both states and the criteria established by the governors. A draft recommendation with key findings was submitted to the governors on February 25, 2011 (Key Findings and Recommendation Related to Bridge Type, 2/25/11).

The public, stakeholders, project advisory committees, project sponsors staff, and local elected officials were asked to review and comment on the proposed deck truss bridge type. The project received over 290 comments on-line and in public sessions. Generally comments can be separated into three categories:

1) support for the Departments' recommendation and importance of making a timely decision;
2) support for the deck truss; and,
3) support for another alternative, the cable stayed bridge type.

Support for the cable-stayed alternative centered almost exclusively on aesthetics – supporters found it a more attractive design and thought that aesthetics should have been a prominent criterion in the Department's review and draft recommendation. Proponents of the cable-stayed bridge type focused most of their critique on the Departments' findings that the deck truss was the only bridge type that could maintain project schedule.

Decision Factors and Findings

The governors considered many different factors in their evaluation of a suitable bridge type for the Columbia River. Both bridge types, the deck truss and the cable-stayed, had further review based on questions and comments raised by the public and stakeholders to the draft recommendation. Factors considered further for both bridge types included: minimal environmental impacts, commitments to stakeholders, impacts to transit time, access for bicyclists and pedestrians, public reaction, aesthetics, footprint, accelerating design time, additional available resources, and the ability to best use resources spent to date.

Major factors considered by the governors revolved primarily around reducing risks and costs, the flexibility of the project schedule and funding:

<u>Reducing and eliminating risks to project schedule and budget</u>

- Overall the deck truss provides more certainty in meeting construction schedules, managing costs and staying on budget. In all of the key areas that determine risk – schedule, design, construction, procurement, cost growth and construction claims – the deck truss performs better than the cable stayed bridge type.
- The deck truss is a simplified version of the open web bridge type originally considered by the CRC. As a result of the work and resources spent to date, there is more known about the deck truss bridge design, its impact on the natural and built environment, construction impacts on the river, and effect on the bike/pedestrian and transit facilities.
- The deck truss is the only bridge type that can maintain the current alignment and footprint. By maintaining the same footprint there are no significant additional environmental impacts and it is likely that the work done to date with resource agencies, neighborhoods and businesses will still apply.
- The cable-stayed bridge type will need additional design work, environmental analysis and public review prior to completing an assessment of whether a supplemental draft environmental impact statement will be needed. The time necessary for the preliminary design work and analysis will add costs and push the project off schedule.
- After the necessary design work and environmental analysis is completed for the cable-stayed bridge type, the resource agencies would determine whether a supplemental draft environmental impact statement would be necessary. If required, the project would be further delayed a minimum of 12 – 18 months.
- Overall, the cable-stayed bridge type has many schedule unknowns and uncertainties, which increase risks to costs and schedule.
- The deck truss bridge type with the current alignment is most likely to maintain the project schedule and is the least likely to require a supplemental draft environmental impact statement.

Affordability

- Preliminary cost estimates for all three bridge types are less expensive than the open web design originally proposed by the CRC. Because the deck truss is the least expensive of the three, the most likely to meet schedule, is the easiest bridge to build and will attract the most competitive bids, it is likely the most affordable of the three bridge types.
- Project cost estimates are based on current schedule assumptions. Delaying the scheduling would increase the cost of delivering the project.

Securing Funding

The CRC is seeking $400 million in federal highway discretionary funding as well as $850 million in Federal Transit Administration (FTA) New Starts funding. A delay in securing the Record of Decision (ROD) creates significant risks of missing or delaying federal funding opportunities.

Transit

- The project was recommended for funding in the Administration's New Starts FY 2012 budget request this year on the expectation that it would receive its ROD in late 2011, allowing it to get approval from FTA to enter Final Design in the spring of 2012. Delay of the ROD would prevent FTA approving the project to enter Final Design, preventing the project from moving forward in the FTA funding process and allowing other projects to move in front of it in line.
- The CRC has received strong support from the Administration and high ratings from FTA, allowing the project to enter the New Starts "funding queue." The project has a very strong chance of receiving a Full Funding Grant Agreement and getting funding allocated in the next several years if it continues on its current timeline.

Highway

- Both chambers of Congress have indicated that this spring they plan to move forward on the surface transportation re-authorization bill that will set the program structure for the next several years. If the CRC is not on track to complete the environmental process and secure the ROD in the near future it will be more difficult to direct funding to the project should the opportunity arise.
- ODOT and WSDOT are seeking funding from a program that provides funding for megaprojects of national significance, whether through the Projects of National and Regional Significance Program that Congress created in 2005, the National Infrastructure Bank proposed by President Obama, or some other program. A ROD is perceived by Congress and US DOT as an indicator of readiness and a criterion to distribute funding.

Conclusion

Selecting the bridge type is necessary now to move forward the Final EIS for consideration of a ROD as scheduled. Confirming the bridge type will also allow further development of the project schedule, update the project cost estimates, and provide greater refinement of financing plans.

After reviewing many different factors, the deck truss bridge type is found to best meet multi-modal transportation needs while also being the most affordable and presenting the least risk to budget and schedule overruns.

Next Steps

Completing the following steps will allow the project to receive its federal Record of Decision by the end of 2011. This milestone is critical to breaking ground in 2013.

Spring 2011:

- Update the project cost estimate (CEVP) to include the deck truss bridge and other recent project refinements. The CEVP process will continue to be conducted annually and will insure rigorous management of project costs and potential risks.
- Add architect(s) to the project team and establish architectural specifications for the design build contractor to follow. Engage design community and public in the process.
- Begin design RFQ/RFP development.
- Engage public as the Final Environmental Impact Statement is prepared and released.
- Work with the Treasurers from both states to determine the assumptions, requirements and structure to finance the project.

Spring/Summer 2011

- Update the financial plan to reflect funding and timing of both state and federal funding contributions to the project.
- Work with legislators from both states to review and refine financing plan and determine potential state revenue sources.
- Develop phasing options and update the project schedule.
- Work with the Project Sponsors Council to complete the Final EIS on schedule, design refinements, develop the financial plan, plan for sustainable construction methods, and help the project comply with greenhouse gas emission reduction goals.

Summer 2011

- Determine the appropriate role of the two state Transportation Commissions in the toll-setting process. Further evaluate pre-completion tolling and base toll rate assumptions.
- Prepare annual New Starts submittal.
- Publish Final EIS.

Fall 2011

- Conduct drilled shaft test project.
- Prepare application to enter final design for the Federal Transit Administration.
- Receive federal Record of Decision.