

# Washington Joint Transportation Committee – Columbia River Crossing Oversight Subcommittee – CRC Responses to Questions

Nov. 15, 2012

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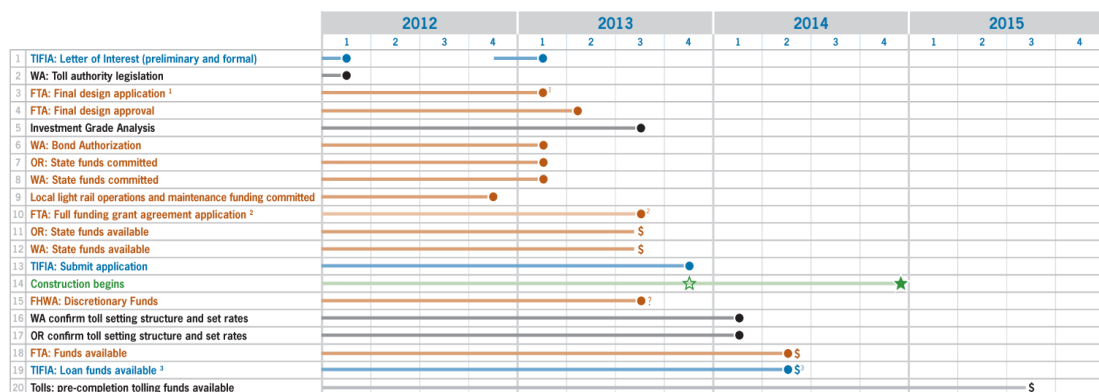
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# Funding

## 1. When do various revenue sources become available and what are the milestones and processes that need to be completed to secure each stream of funding?

The CRC project's finance plan includes the following revenue sources:

- State equity:** Legislatures in both Washington and Oregon will determine mechanisms for and commitments to state funding for the project. The finance plan assumes that state funds are committed the first quarter of 2013 and available in the third quarter of 2013.
- Tolling:** Tolling requires project-specific authorization, which was granted by the Washington State Legislature in 2012. After an investment-grade analysis is complete and a bi-state tolling agreement in place, both states' transportation commissions will begin the toll rate setting process. The finance plan assumes the investment grade analysis is completed in late 2013 and that a bi-state toll setting structure is in place and rates are set by the first quarter of 2014. Funding from pre-completion tolling would be available in the third quarter of 2015.
- FTA New Starts:** A New Starts Full Funding Grant Agreement (FFGA) requires all capital funds to be identified and committed, including state equity funds and tolling authorization. The Finance Plan assumes application for FFGA in the third quarter of 2013, with Federal Transit Administration (FTA) grant funds committed in the second quarter of 2014.
- TIFIA:** An application to the TIFIA program requires commitments of state funding and an investment grade analysis for toll bonds. A letter of interest will be submitted in the first quarter of 2013, with an invitation to apply resulting in application submitted in the fourth quarter 2013. Allocation of TIFIA funds requires a full finance plan and committed FTA funds. The finance plan assumes TIFIA funds are available in the second quarter of 2014.
- FHWA discretionary highway:** Surface transportation reauthorization under MAP-21 appropriated approximately \$500 million in 2013 for Projects of Regional and National Significance, which is less than previous years. Funding is awarded through a competitive process. The CRC project would be highly competitive for this funding when it becomes available. Both states are working with the Oregon and Washington federal delegation to support additional funding for the program. This funding is not required until the later phases of construction.



**Estimated funding sources**

Federal Transit	.....	\$850 M
Federal Highway	.....	\$400 M
Tolls*	.....	\$900 M - \$ 1.3 B
OR/WA state funds (\$450/each)	.....	\$900 M

\*TIFIA is a federal loan and credit program. Tolls are the revenue source for the loans. The federal backed loan program reduces coverage rate for tolls.

<sup>1</sup> Must have 50% non-FTA funds committed or budgeted. Tolling authority in 2012 expected to meet this requirement. MAP-21 may affect FTA New Starts requirements.  
<sup>2</sup> Must have all funds authorized.  
<sup>3</sup> TIFIA is typically the last funding source. Must have full finance plan and FTA approved.

**KEY**

● ● ● ★ = Due Date    BLUE = TIFIA    BLACK = Tolling    ORANGE = FTA, FHWA and State Funding

**2. What is the deadline to submit the FTA grant application? Why must the legislature approve a state equity contribution in the 2013 legislative session? Is there flexibility with FTA to approve the state equity contribution in 2014?**

The CRC's design and construction schedule has centered on taking advantage of federal funding, especially transit funding from FTA's New Starts program. The New Starts program is currently funded and the CRC is well positioned to receive support through 2013. The project's favorable rating with FTA has earned the project a leading spot in the competitive queue for about \$850 million. FTA has stated that after 2013 there funding for the program may be reduced by the U.S. Congress. To apply for the New Starts transit funds in 2013, FTA requires both Oregon and Washington to have committed state funds.

**3. How can the legislature approve funding or set toll rates for CRC in 2013 if the bridge height issue isn't resolved with the US Coast Guard?**

WSDOT and ODOT will submit a bridge permit application for a specific bridge height in January 2013. A permit is necessary before entering into a contractual relationship with FTA for the \$850 million FFGA, which will be applied for in 2013. The timeline for securing funding for the CRC project is more advanced than other projects where funding commitments were made prior to selection of a preferred alternative and securing permits. The Legislature funded \$1.9 billion for the SR 520 project in 2009 prior to selection of a preferred alternative and completion of the environmental impact statement. The Legislature also funded \$2 billion toward replacement of the Alaskan Way Viaduct as early as 2005; the selection of the bored tunnel as the preferred alternative was not made until 2009. Both of these projects received subsequent additional funding.

**4. What source will be used to fund bridge maintenance and operations?**

The finance plan assumes that operations and maintenance and rehabilitation and replacement costs for the highway and tolling system would be paid by toll revenues. This ensures that the revenue-generating asset is maintained for uninterrupted operation. The use of toll revenue for these sources is consistent with the SR 520 and Tacoma Narrows Bridge projects. Potential revenue capacity of pre-completion tolling has been estimated assuming operations and maintenance for the existing bridges continues to be funded by ODOT and WSDOT and not from toll revenues.

## **Project costs**

**5. What are the elements and costs associated with implementing tolling (including tolling equipment, customer service center, marketing, etc.)?**

Tolling implementation costs cover initial planning efforts; design and procurement of tolling equipment and infrastructure; installation and testing of tolling equipment and infrastructure; customer service center modifications and additional facilities locally for customer service and administrative hearings; and, marketing and education. The project's cost estimate includes \$45 million for tolling implementation.

**6. What elements will be paid for with the \$850 million New Starts grant? Has this list of what’s to be paid for changed over time?**

These elements paid for by the New Starts grant has remained consistent since they were first identified in the draft environmental impact statement in 2008. The grant will pay for the following elements (does not include the cost of financing):

Final Design and Procurement	\$41,886,375
Transit Civil - Oregon	\$294,276,219
Transit Civil - Washington	\$256,497,968
Park and Rides	\$153,348,440
Light Rail Vehicles	\$112,072,651

**7. Why is the project paying to upgrade light rail maintenance facilities in Oregon?**

The light rail extension associated with the CRC project takes advantage of the existing 52-mile light rail network to key employment, financial, retail and recreation centers in the Portland-Vancouver metro area. Storage of train cars will be necessary during off-peak travel times and to conduct regular maintenance, cleaning and repair. Expanding an existing light rail facility rather than building a duplicate facility near downtown Vancouver with a duplicate maintenance team provides a more cost effective solution. The preliminary estimate to expand the existing Ruby Junction maintenance facility in Gresham is about \$50 million. The estimate was calculated for planning purposes and will be refined in the coming months as the engineering design progresses. In addition, an adjustment will be made to the Steel Bridge in Portland to support the additional trains associated with the CRC extension. The estimated Steel Bridge improvement cost is about \$300,000.

## **Tolling, traffic and revenue**

**8. Will tolls be collected by a government agency or a private entity?**

Tolls will be collected by a government agency - most likely WSDOT or ODOT. WSDOT and ODOT may choose to contract with a private entity that has expertise and experience in electronic toll collection. For example, the existing toll collection system on the SR 520 bridge, Tacoma Narrow Bridge, and SR 167 HOT lanes implemented by WSDOT with a contract with two vendors, one for the lane system and one for the back office system. In addition the back office system provider is contracted with WSDOT to provide customer service center operations. The design of the system and toll operations business rules are in compliance with the rules and regulations established by Washington State Legislature, and toll rates approved by the Washington Transportation Commission.

**9. What are the alternatives to pay for the bridge if the facility is not tolled?**

Tolling is expected to fund about one third of the construction cost: \$900 million to \$1.3 billion. If the bridge is not tolled, then new sources of state or federal funds would be necessary. Federal

funds are already targeted in the form of FTA New Starts (\$850 million) and federal discretionary highway funds (\$400 million). State equity contributions are assumed to be \$900 million.

**10. What are the per axle toll rates for trucks on other Washington tolled facilities?**

Trucks are charged by axle with categories for two axles (includes motorcycles), three axles, four axles, five axles and six or more axles on the Tacoma Narrows Bridge and SR 520. The same basic per-axle formula is used for both facilities, even though there are different rate structures: three axles are 50 percent more than two axles; four axles are 100 percent more than, or double the cost of, two axles; five axles are 150 percent more; and six or more axles are 200 percent more, or triple the cost, of two axles. For analysis purposes, the CRC project has assumed that commercial vehicles with five or more axles would pay four times the passenger car rate for the given time of day and that commercial vehicles with three or four axles would pay two times the passenger car rate for the given time of day. Final rates and additional charges per axle will be set by the transportation commissions as part of the bi-state toll setting process.

**11. What are the current and projected volumes on the bridge?**

In 2011, the annual average weekday traffic was about 128,100. In 2030 with post-completion tolling, the anticipated annual average weekday traffic is forecast to be about 151,400 (current assumption for toll revenue forecasts). These figures assume certain toll rates for pre-completion and post-completion tolls. A traffic and revenue study currently underway will be used to refine assumptions about future traffic volumes and toll revenue.

**12. What is the process and timeline for estimating toll revenue and rating bonds?**

In July 2011, the Oregon State Treasurer's office provided a report to Oregon Governor Kitzhaber that validated much of the CRC project's work and made recommendations to reduce and manage financial risk. CRC incorporated the recommendations, including:

1. Used conservative traffic numbers in tolling assumptions, to account for the economic recession
2. Included conservative bonding assumptions that do not rely on an escalating toll rate
3. Incorporated federal TIFIA loans in all funding scenarios
4. Incorporated pre-completion tolling into finance plan

Prior to submitting the Final Environmental Impact Statement (EIS), the Oregon State Treasurer's office reviewed the CRC finance plan. An investment grade analysis will be completed in December 2013, prior to bonding.

**13. How will toll rates be set, and what consideration is given to driver's ability to pay the toll when the rates are set?**

In Washington, toll rates are set by the Washington Transportation Commission after a corridor is established as a toll facility by the Washington Legislature. The Oregon Transportation Commission has toll rate setting authority. The rate setting process for the CRC project will be developed as part of a bi-state agreement between the Washington and Oregon transportation commissions. Today the Washington Transportation Commission considers a number of factors when establishing toll rates including maintaining travel time, speed, and reliability, and generating enough revenue to cover bond obligations. In order to generate enough revenue, rates cannot be set so high that drivers chose to not pay the toll, which will reduce the available revenue.

**14. Did the finance plan submitted to FTA describe \$16 round-trip tolls?**

No. The finance plan submitted to FTA uses the same range of toll scenarios as was used for the Final EIS. For the Final EIS, the range of one-way toll rates studied for the financial analysis was between \$1 and \$3 (2006 dollars, see Exhibit 4.3-3 from the FEIS). This range in 2020 dollars (post construction) would be \$1.41 to \$4.24. The project has studied a variety of toll rates over time to test potential funding capacity and the potential for diminishing revenue capacity as toll rates increase. These scenarios were not expected to be implemented, but included rates ranging from \$1.00 - \$6.00 each way (2006 dollars; \$1.41 - \$8.48 in 2020 dollars, assumed year of collection).

## Bridge

**15. Will this project include interchange improvements at Rose Quarter in Oregon?**

No, improvements at the Rose Quarter are not part of the CRC project. The CRC project focuses on the transportation problems in the five-mile bridge influence area. The southern boundary is about three miles north of the Rose Quarter. The 2002 I-5 Trade and Transportation Partnership Strategic Plan identified the Rose Quarter as a significant bottleneck, but acknowledged the need to understand potential widening at the Rose Quarter in the context of effects to the entire freeway loop around downtown Portland. The City of Portland and ODOT agreed they would conduct planning for potential improvements in the Rose Quarter separate from the CRC project.

**16. When will the work on the 115-foot, 120-foot and 125-foot clearances be done?**

The [Navigational Impact Report](#) with analysis of 115, 120 and 125 foot bridge heights was completed and delivered to the U.S. Coast Guard on Nov. 2. The analyses considered river use, vessel impacts, freight mobility, highway safety and efficiency, transit efficiency, landside impacts, air safety, economic impacts and costs associated with various bridge heights. Through November, CRC staff will continue to refine the technical analysis on the number of vessels impacted, river users, costs and potential solutions. A bridge height recommendation is expected in December 2012. The bridge height recommendation will be central to the general bridge permit application to be submitted to the U.S. Coast Guard in January 2013.

**17. Has the project considered a movable span?**

Adding a lift span to the proposed deck truss bridge and alignment would result in a structure of unprecedented complexity with several technical challenges. Lift spans are not typically constructed on bridges with a curved alignment. The lift would need to be many times heavier than is standard due to the double-deck bridge configuration and the proposed pier configuration (which creates a longer lift span). In addition, lifting a span with a variable deck width due to ramps entering the mainline over the water is a technical challenge. A lift span that provides clearance of 125 feet would increase the cost of the project by approximately \$250 million; costs associated with a lift span providing higher clearances would be significantly higher. The challenges of placing a lift span on the proposed bridge would lead to a re-evaluation of the bridge type, configuration, and alignment. This would require additional environmental reviews and increase costs due to delay.

**18. What vessels would be impacted at a 110-foot clearance?**

We have identified vessels that may be impacted at various bridge heights using a very conservative approach. This includes assuming the highest water level and a 10-foot air safety gap. A vessel-by-vessel review will give a more exact accounting of impacted vessels based on the time of year that vessels pass under the bridge, how many times the trip is made, and more specific clearance needs. Using the conservative approach, a bridge with a height of 110 feet would impact three fabricators, 11 marine contractors, two dredge vessels, three recreational vessels and one passenger cruise vessel.

**19. What are examples of bridges with a grade in excess of three percent?**

There are many examples of bridge approaches, ramps and sections of highway in Washington and Oregon that exceed three percent climbing grade. Approaches to the Marquam Bridge in Portland and the Lewis and Clark Bridge in Longview both exceed three percent. The primary concern with increased grades is the corresponding effect on highway speeds and safety. Grades can have a pronounced effect on specific vehicles. Passenger cars can generally readily negotiate grades as steep as five percent without appreciable loss of speed. Trucks, however, travel at the average speed of passenger cars on the level roadway, but increase their speed by five percent on downgrades and decrease their speed by seven percent or greater on upgrades (depending on length and steepness of grade as well as weight-to-horsepower ratio). This differential in speeds contributes to collisions.

**20. What did we learn from the drilled shaft project completed last summer?**

The depth to the Troutdale Formation in the project area was well documented based on earlier geotechnical work. The Troutdale Formation provides stable soils in the event of a major earthquake and the shafts of the new bridge will reach the formation. The current wooden pilings are set in liquifiable soils, which could cause the I-5 bridge to collapse in an earthquake. The goal of the Drilled Shaft/Driven Pile project was not to confirm the depth of the shafts, but rather to determine the strength of the soils and load capacity of the shafts. This would allow us to determine if the number of shafts for the replacement bridge could be reduced. In addition, the study looked at whether some concrete shafts could be replaced with driven piles in some on-land locations. Reducing the

number of drilled (concrete) shafts or shifting with driven (steel) piles has the potential to reduce overall cost. Final data analysis for this project is ongoing.

## Other

### **21. How long would a supplemental EIS take? What would this cost?**

If a change to the preferred alternative results in new and significant impacts, a supplemental EIS is required. A supplemental EIS would likely require 12 to 24 months to complete. The New Starts FFGA would be delayed and become very uncertain because it cannot be awarded without a current Record of Decision. The cost of conducting a supplemental EIS would depend on the scope of analysis and the length of delay. Costs incurred for such an effort would include technical analyses, documentation and public outreach.

### **22. Will a replacement bridge with light rail increase congestion in Oregon?**

No. CRC reduces the hours of congestion and improves travel reliability. There are significant travel time savings in the afternoon from the Rose Quarter to the state line. During the afternoon peak period, northbound drivers traveling from I-84 in Portland and exiting at 179th Street in Vancouver are predicted to save 20 minutes compared with the no-build scenario. Drivers using the short segment of I-5 from Columbia Boulevard north to SR 500 are predicted to save eight minutes compared with the no-build scenario. For drivers traveling southbound during the morning, the time savings will not be as significant, but the trip will be more reliable and safer. For drivers traveling outside of the peak commute hours, there are significant travel time savings both northbound and southbound because they will experience less congestion than with the no-build scenario.

### **23. How many jobs will the project will create? Will the project result in the loss of small business jobs?**

Approximately 20,975 total job-years (defined as one job for one year) will be required for design and construction of the locally preferred alternative (LPA). The average annual regional jobs required will be 1,906 over the 11 year construction project. These estimates include direct, indirect and induced jobs. In Oregon and Washington, an estimated 916 employees (747 in Oregon and 169 in Washington) who work at businesses would be displaced by the LPA. Displaced businesses will receive relocation assistance from the project; it cannot be assumed that all displacements would result in job losses. In Vancouver, the number of displaced businesses will be lower than in Oregon because much of the project can be accommodated within existing right-of-way.

### **24. Was a third bridge alternative dismissed due to right-of-way constraints?**

The CRC Task Force's adopted criteria to evaluate potential alternatives included avoiding and minimizing residential and businesses displacements, respecting the history and culture of neighborhoods and protecting natural resources. The analysis prior to the draft EIS found that building a new river crossing would not meet the basic elements of the project's goals of improving safety, reducing congestion, improving freight mobility, reducing seismic risk, improving transit and enhancing the bicycle and pedestrian path in the I-5 corridor. The additional need to acquire



property for a third bridge was not among the primary reasons that led to its dismissal, but was a consideration for some task force members.

**25. What was the process and who selected the Locally Preferred Alternative?**

The boards and councils of all six local partner agencies (Metro, RTC, Portland, Vancouver, TriMet, C-Tran) unanimously passed resolutions supporting a replacement bridge with light rail as the locally preferred alternative (LPA) in 2008. This led to its formal selection by the project owners, WSDOT and ODOT. The same agencies reaffirmed the LPA when they signed the Final Environmental Impact Statement (EIS) in 2011. The LPA selection occurred after a multi-year process that began in 2005 with local stakeholders, elected officials, and federal, state, and local agencies. The steps in the process included alternatives development, evaluation in the draft and final EIS, and publication of the Record of Decision. Approximately 1,600 public and agency comments were submitted on the draft EIS.

**26. Was there a group called the Project Sponsors Council before 2008?**

A group called the Project Sponsors Council met eight times from 2005 to 2007 to reach consensus on project development. Members included elected officials and regional leaders of the project's sponsoring agencies. This group was formed by WSDOT and ODOT to advise the agencies and made formal recommendations while it existed. A second group, also known as the Project Sponsors Council, was appointed by the Washington and Oregon Governors in 2008 to advise on completion of the Final EIS, project design, project timeline, sustainable construction methods, compliance with greenhouse gas emission reduction goals and the financial plan. Their meetings resulted in recommendations to the governors, WSDOT and ODOT, which were implemented.