

L-004-001

Thank you for taking the time to submit your comments on the I-5 CRC DEIS.

From: [Bertelsen, April \(PDOT\)](#)
To: [Draft EIS Feedback; Adams, Sam;](#)
CC: [Potter, Mayor; Leonard, Randy; Fish, Nick; Saltzman, Dan; Hamilton, Joan; Merrick, Rod; Gillam, John; Drake, Sara; McCollum, Caitlin; Moore-Love, Karla; "rex.burkholder@oregonmetro.gov"; David Aulwes \(david.aulwes@ihigroup.com\);](#)
Subject: Portland Pedestrian Advisory Committee comments on Columbia River Crossing DEIS
Date: Friday, June 27, 2008 3:04:50 PM
Attachments: [CRC DEIS Comments 06-24-08 addressed to Council and CRC.pdf](#)

Heather Gundersen and Commissioner Sam Adams,

L-004-001 I am writing to you on behalf of the Portland Pedestrian Advisory Committee (PAC). Please find the attached letter from the PAC regarding the Columbia River Crossing Project DEIS.

The PAC has requested that the letter be submitted as testimony on the DEIS made during the public comment period (ending July 1, 2008). Please make it a part of the public record for the CRC project DEIS.

The PAC also hopes that the Portland City Council will take their comments under advisement as the CRC project is deliberated and voted on at the upcoming hearing on July 9, 2008.

I have copied several others with whom the PAC wished to share their comments.

Karla Moore-Love - Please include the letter in the public record for the Portland City Council hearing.

Joan Hamilton - Please distribute this letter to Portland Planning Commission members.

Sara Drake - Please distribute this letter to Portland Design Commission members.

If you have any questions or problems with opening the letter, please contact myself and Caitlin McCollum. She is reachable by phone at 503-823-5831, or email Caitlin.McCollum@pdxtrans.org.

<<CRC DEIS Comments 06-24-08_addressed to Council and CRC.pdf>>

Thank you.

April Bertelsen



Portland Pedestrian Advisory Committee
1120 SW5th Avenue Suite 800
Portland OR 97204

Members June 24, 2008

David Aulwes

Columbia River Crossing Project
c/o Heather Gundersen
700 Washington Street, Suite 300
Vancouver, WA 98660

All Corbin

Kim Cottrell

Erin Kelley

Doug Klutz

Commissioner Sam Adams
1221 SW Fourth Avenue, Room 220
Portland, OR 97204

Jess Laventall

Rod Merrick

Elizabeth Mros-O'Hara

Re: Interstate 5 Columbia River Crossing Project, DEIS.

Bob Robinson

Dear Ms. Gundersen and Commissioner Adams:

Matt Whitney

L-004-002

This letter is the Pedestrian Advisory Committee of the City of Portland testimony to the Columbia River Crossing (CRC) Draft Environmental Impact Statement (DEIS) issued on May 2, 2008. We are submitting a number of suggestions that we believe will improve the project and look forward to your response.

L-004-003

Introduction and Executive Summary of Recommendations

The Pedestrian Advisory Committee of the City of Portland (PAC) respects the considerable effort and accomplishment embodied in the CRC DEIS. The PAC *provisionally endorses the replacement bridge alternative* because it appears to provide the best framework for improving the pedestrian and cycling environment within the project study area. The endorsement is conditioned on the project team making extensive revisions as outlined in this letter.

L-004-004

The purpose of this testimony is to encourage the project steering committee – the CRC Task Force – to look beyond the economic and transportation engineering framework articulated in the “Project Purpose” section of Chapter 1. The bridge alternatives proposed fail to respond to a *larger vision and agenda for a more environmentally and economically sustainable future* – policies adopted by the states of Oregon and Washington, Metro, and the City of Portland, and policies that support walking scale communities.

L-004-005

In support of this project the PAC has identified a set of principles, suggested changes to the design, and anticipated outcomes that would fulfill the promise of the new bridge concept. The principles are as follows:

1. Check regional sprawl, commuter trip length, vehicle miles traveled (VMT), and global warming while enhancing freight movement and economic activity.
2. Minimize traffic congestion and highway impacts on Portland's Central City and neighborhoods along the I-5 Corridor within the city.

L-004-006

L-004-002

Thank you for taking the time to submit your comments on the I-5 CRC DEIS.

L-004-003

Preferences for specific alternatives or options, as expressed in comments received before and after the issuance of the DEIS, were shared with local sponsor agencies to inform decision making. Following the close of the 60-day DEIS public comment period in July 2008, the CRC project's six local sponsor agencies selected a replacement I-5 bridge with light rail to Clark College as the project's Locally Preferred Alternative (LPA). These sponsor agencies, which include the Portland City Council, Vancouver City Council, TriMet Board, C-TRAN Board, Metro Council, RTC Board, considered the DEIS analysis, public comment, and a recommendation from the CRC Task Force when voting on the LPA.

With the LPA, new bridges will replace the existing Interstate Bridges to carry I-5 traffic, light rail, pedestrians and bicyclists across the Columbia River. Light rail will extend from the Expo Center MAX Station in Portland to a station and park and ride at Clark College in Vancouver. Pedestrians and bicyclists would travel along a wider and safer path than exists today.

For a more detailed description of highway, transit, and bicycle and pedestrian improvements associated with the LPA, see Chapter 2 of the FEIS.

L-004-004

The Purpose and Need is based on extensive analysis of the existing and projected transportation problems in the I-5 CRC corridor, and reflects extensive feedback from the public and stakeholder groups. This includes analysis and input during the CRC study as well as the I-5

- L-004-007** | 3. Enhance urban neighborhood and recreational land uses in the study area especially along riverfront areas and at interchanges.
- L-004-008** | 4. Create a landmark gateway bridge.
- L-004-009** | 5. Provide “world class” pedestrian and bike routes and environment to facilitate both commuter and recreational use.
- L-004-010** | Changes to the Replacement Alternative flowing from these principals include:
- A world class 24-foot wide multi-use bike commuter and regional trail on the west side of the crossing and a 10-foot wide walking and cycling sidewalk on the east side that will serve commuting and recreational needs for the life of the structure.
 - A lower level, urban, multimodal bridge connecting Hayden Island, neighborhoods to the south and to the freeway at a relocated Marine Drive interchange. This will replace freeway auxiliary lanes serving the island and eliminate the complex high capacity interchange that dominates the island. The bridge would include bike lanes and a 12-foot walkway on the east side.
 - A maximum of 3 vehicle lanes plus one full width shoulder lane *total* in either direction over the river. This provides build out consistent with long term highway capacity to the south. Congestion pricing and lane designations to facilitate freight movement will be included.
 - *Combined* light rail and busway crossing including three or four lanes/ tracks to accommodate both modes and allow for passing.
 - Interchanges that are carefully designed to enhance the adjacent land uses and maximize the network of pedestrian and bike access to nearby destinations.
 - Commitment to sustainability and quality urban design and landscaping for all aspects of the project.

PAC DEIS Overview and Critique

- L-004-016** | The stated *primary goal* of the project articulated in the “Project Purpose” section of Chapter 1 is to reduce congestion and enhance freight movement through the crossing. The project area is a 5 mile stretch of highway, highway interchanges, and “high capacity” transit improvements. Among the alternatives being considered, only one alternative is likely to be given serious study during the *Locally Preferred Alternative* assessment. That alternative includes a new span with 12 vehicle lanes plus full width shoulders (potentially 16 lanes total for later expansion) to replace the 6 lanes without shoulders now in service. Sustainability elements include transit and improved bike and pedestrian access. Toll pricing enhances the economic viability and prolongs reduced congestion. While the lane count provides generous capacity for adding car and truck traffic, the project fails to offer a serious alternative to building a conventional high capacity freeway designed to temporarily reduce congestion and decrease travel time - a short term fix with legendary negative secondary effects.

Transportation and Trade Partnership Study and Strategic Plan that preceded CRC. The Purpose and Need focuses largely on metrics that do not inherently require substantial, or exclusive, increases in highway capacity. The purpose statement is intentionally worded so as to allow consideration of a wide range of solutions including demand management, transit, highway, tolling, and other options for addressing the stated needs. Following the development of the Purpose and Need statement, analysis of a wide range of alternatives, and input from the public, agencies and stakeholders on those alternatives and analysis, it became clear that that the Purpose and Need could not be met by any single type of improvement. It is best met by a multimodal alternative that improves highway, transit, and bicycle and pedestrian facilities in the I-5 corridor, and adds tolling to the highway river crossing.

L-004-005

As described in Chapter 3 (Section 3.4) of the DEIS and in the Indirect Effects Technical Report, highway capacity improvements and access improvements can induce development in suburban and rural areas that were not previously served, or were greatly underserved, by highway access. The DEIS outlines a comprehensive analysis of the potential induced growth effects that could be expected from the CRC project. A review of national research on induced growth indicates that there are six factors that tend to be associated with highway projects that induce sprawl. These are discussed in the Indirect Effects Technical Report. Based on the CRC project team’s comparison of those national research findings to CRC’s travel demand modeling, Metro’s 2001 land use / transportation modeling, and a review of Clark County, City of Vancouver, City of Portland and Metro land use planning and growth management regulations, the DEIS and the FEIS conclude that the likelihood of substantial induced sprawl from the CRC project is very low. In fact, the CRC project, because of its location in an already urbanized area, the inclusion of new tolls that manage demand, the inclusion of new light rail, and the active regulation of growth

- L-004-017** Addressing the land use, transportation, and environment nexus, the DEIS speaks to “urban design” in several technical reports.
1. The “Land Use” technical report summarizes policies in and around the project area and provides a literature review of the impact of highways on development. The authors cite a number of studies that downplay the sprawl inducing influences of highway widening in other cities that *are sprawling*. Included is a summary of a Parsons Brinkerhoff 2001 study that concludes that land use policies may have more impact on what is constructed than highway widening and suggests that *increased capacity simply accentuates what is already occurring* (that would be *sprawl*). The technical report concludes that increasing vehicle capacity on the bridge is “*unlikely* to induce sprawling land use patterns”.
- Remarkable in its absence is a discussion of the Vancouver, BC experience that strongly supports enhanced urban development, reduced sprawl, reduced congestion, and cleaner air by limiting highway and specifically bridge lane capacity. The “Land Use” technical report cites Metro goals to reduce VMT from 1991 levels (no discussion as to how this project meets those goals) and a 2005 report that identifies congestion as a threat to the economy of Portland (citing complaints by shippers). Congestion at the crossing is a serious problem but seems less so when considering congestion on I-5 through Seattle or Los Angeles.
- L-004-018** 2. The “Visual and Aesthetics” technical report is perfunctory description of the visibility of structures from a quantitative perspective - not the quality of or aspirations for the visual or tactile experience. This accurately reflects the lack of concern for aesthetic issues within the project team.
- L-004-019** 3. Environmental Technical Reports. Oregon and Washington have set aggressive goals to roll back greenhouse gas emissions to a percentage of 1990s levels. Environmental pollution is evaluated in the context of the study area only. The writers assume that noise will be reduced by new sound walls. They assume that tailpipe emissions will be reduced by cleaner burning engines. We recommend that this report incorporate the June 9, 2008 health assessment report from the Multnomah County Health Department.

Conclusion

- L-004-020** Quality of life issues for neighborhoods adjacent to the project or for the region as a whole are generally outside the boundary of evaluation. It should not be so. The DEIS fails to consider important environmental and urban design impacts within and adjacent to the project boundaries, and in the region as a whole. The PAC finds the urban design and environmental impact analysis and its conclusions insufficient to support the high speed 12 lane expansion favored by the project leadership. Our concern extends to the lack of emphasis on the quality of design evident in concepts developed for the bridge and interchanges. As a gateway to Oregon and a gateway to Portland, the 12 lane option with its sprawling Hayden Island interchange will represent a profound lack of imagination and vision – a monument to the age of the freeway as a pipeline for suburban sprawl.

management in the region, will likely reinforce the region’s goals of concentrating development in regional centers, reinforcing existing corridors, and promoting transit and pedestrian friendly development and development patterns.

In October, 2008, the project convened a panel of national experts to review the travel demand model methodology and conclusions, including a land use evaluation. The panel unanimously concluded that CRC’s methods and the conclusions were valid and reasonable. Specifically, the panel noted that CRC would “have a low impact to induce growth...because the project is located in a mature urban area,” and that it would “contribute to a better jobs housing balance in Clark County...a positive outcome of the project”. These results are summarized in the “Columbia River Crossing Travel Demand Model Review Report” (November 25, 2008).

In 2010, Metro ran the MetroScope model (an integrated land use and transportation model) to forecast growth associated with transportation improvements of a 12-lane river crossing and light rail to Clark College. The model showed only minimal changes in employment location and housing demand compared to the No-Build.

For a more detailed discussion regarding potential indirect land use changes as a result of the CRC project, including the likely land use changes associated with the introduction of light rail, please see Chapter 3 (Section 3.4) of the FEIS.

Regarding freight and the economy, the ability to efficiently move freight in the Vancouver/Portland region is critical to the overall health of our economy. As such, the CRC project is designed to improve freight mobility on I-5, as well as make it safer and easier for trucks to get on and off I-5 to reach businesses and Port facilities. The Freight Working Group, comprised of representatives of the Vancouver-Portland

Ms. Gundersen and Commissioner Adams
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June 24, 2008

L-004-020

The PAC recommends that the CRC design team develop a replacement bridge alternative that supports state and regional transportation, environmental, and urban design policies in addition to facilitating freight movement. The argument for a fifth option outlined in the pages following contains our detailed recommendations for changes to the project and the beneficial outcomes we anticipate will result from those changes.

We greatly appreciate the opportunity to comment on this important project.

Sincerely,



Pedestrian Advisory Committee
David Aulwes, Chair

Enclosure: Five Principles for the Fifth Alternative

Cc: John Gillam, PDOT Transportation Planning
Rex Burkholder, Metro Council
Portland City Council
Portland Planning Commission
Portland Design Commission

metropolitan area's freight industry, met several times throughout the process to advise and inform the Columbia River Crossing project team about freight issues. The group provided insight, observation, and recommendation about the needs for truck access and mobility within the corridor; characterized the horizontal and vertical clearances, acceleration/deceleration, and stopping performance needs of trucks that must be accommodated; and provided meaningful comments on the effect of geometric, regulatory, and capacity changes on truck movements in the corridor. See Chapter 3 (Section 3.1) of the FEIS for detailed discussion of how the project increases freight mobility and access along I-5 and in the region.

L-004-006

The project would change some circulation patterns on local streets, but in general, by reducing congestion on I-5, and improving travel time reliability on the highway, traffic will be less likely to divert onto local streets. Therefore the project is expected to reduce cut-through traffic on neighborhood streets and potentially increase livability in neighborhoods adjacent to the I-5 improvements of CRC. This, and other effects on local streets, are described in Chapter 3 (Section 3.1) of the DEIS and FEIS. CRC is not intended to fix bottlenecks on I-5 south of the project area, such as the I-5/I-405 split. However, CRC would not exacerbate congestion at these locations because it would not increase the traffic volume traveling through this portion of the corridor. As discussed in the DEIS and FEIS (Section 3.1), this project would not increase daily traffic levels due to the toll moderating demand and the introduction of light rail increasing transit mode share. For additional information on impacts to Neighborhoods and Environmental Justice communities, please see Chapter 3 (Section 3.5) of the FEIS.

L-004-007

Please see the discussion of neighborhood impacts in the FEIS Chapter 3 (Section 3.5).

Five Principles for the Fifth Alternative

L-004-021

1. Check regional sprawl, commuter trip length, vehicle miles traveled (VMT), and global warming while enhancing freight movement and economic activity.

- Every evidence indicates that enhanced bridge capacity will encourage dispersed land use development especially on the north side of the river, encourage longer distance commuting, and will increase auto dependency.
- The availability of LRT/BRT, enhanced bicycle and pedestrian facilities, and tolls will likely encourage higher density growth on Hayden Island and in downtown Vancouver along with park and ride viability. But without lane capacity restraint it will have little to no effect on sprawling development patterns beyond.

Suggested Changes:

Provide HOV+ truck lane to access port facilities.
Encourage long distance freight to use I-205.
Reduce the number of lanes to a maximum of 4 lanes including shoulder lane.
Reduce Design Speed and enforce to 50 MPH.
Expand the capacity of light rail and bus to 3 or 4 lanes.
Use congestion as the primary means of regulating traffic flow with tolling providing additional support.

Expected Outcomes:

Enhance viability of downtown Vancouver as a pedestrian scale employment and residential center.
Stabilize traffic flow at near current levels and enhance viability of options to SOV travel.
Discourage sprawling auto dependent land use patterns and long distance commuting.
Conserve energy and reduce negative environmental and health effects.
Make more efficient use of land for housing and employment.
Reduced speed allows greater capacity, increases safety, reduces lane width, merge lane lengths, shoulder width, and reduce costs.
HOV+ Freight lane will provide priority lane access to and from Port facilities.

L-004-022

2. Minimize traffic congestion and highway impacts on Portland's Central City and neighborhoods along the I-5 Corridor.

- The regional Task Force narrowed the options for the location of the bridge replacement but there does not appear to have been an assessment of the long term management of the I-5 and I-205 corridors within the city to minimize the need to expand roadway capacity in the future and to mitigate the negative impacts of noise, pollution, health impacts, and damage to neighborhood connectivity.
- Designing a bridge to carry up to 6 to 8 lanes in each direction compared to 3 lanes today will greatly increase the speed and flow of traffic through Vancouver and into Portland - where it will stop or move to neighborhood streets. No long-term vision for the I-5 corridor in the city has been adopted. Will it remain the primary through route and will it be periodically widened to accommodate additional traffic? I-5 congestion at the juncture with I-405, I-84, in the area of the Rose Quarter, and

L-004-008

The Urban Design Advisory Group has provided extensive input and considered citizen input, on the design and aesthetics of the proposed CRC bridges over the river. Also see response to comment L-004-018.

L-004-009

As discussed in the DEIS, a replacement bridge over the Columbia River will include dramatically improved bicycle and pedestrian facilities by providing:

- A new 16 to 20 foot multi-use pathway over the Columbia River completely separated from vehicle traffic due to the design of the Stacked Transit Highway Bridge
- Protections from traffic noise, exhaust and debris for pedestrians and bicyclists on the river crossing
- More direct connections on each side of the river, consisting of stairs, ramps, and elevators, as well as pathway extensions that connect in with existing or planned facilities and public transit
- Many new or enhanced sidewalks, bike lanes, and crosswalks near the bridge and throughout the project area

Since the publication of the DEIS in May 2008, and the selection of the LPA in July 2008, the CRC project team has continued to work with the Pedestrian and Bicycle Advisory Committee and project partners to refine route and facility design. The updated design, as described in Chapter 2 (Section 2.2) of the FEIS, is the outcome of a long collaboration process.

L-004-010

Thank you for your recommendations for a "world class" pedestrian and bicycle facility over the Columbia River. Many considerations were included in the development of such facilities as part of the LPA. Since

L-004-022

crossing of the Marquam Bridge will place additional pressure on the viability of these routes

- The additional traffic flowing south of the bridge will create additional traffic, noise, and air pollution in the Portland neighborhoods along the freeway and of course in the city of Vancouver. No mitigation has been discussed.
- The Bridge Replacement Alternative offers a choice between light rail and an exclusive busway. This should not be either-or. Light rail serves urban neighborhoods and high demand routes. Buses are efficient in serving outlying towns and residential areas and provide convenience and flexibility. The project should provide exclusive right of way to accommodate both modes.

Suggested Changes:

Expand the capacity of light rail and bus from 2 lanes/tracks to 3 or 4 lanes/tracks. Encourage long distance trucking and auto traffic onto I-205 to reduce traffic on I-5 traveling through the densest areas of the city. This can be achieved with the following combination of measures: congestion pricing, signage, speed limits, transit enhancements, education.
 Reduce Design Speed and enforce to 50 MPH on the bridge.
 Include traffic calming elements in the design.
 Reduce the number of lanes to a maximum of 4 lanes including shoulder lanes.
 Reduce lane widths to 11 feet and reduce shoulder width to 12.

Expected Outcomes:

I-5 will serve freight destined for Portland west of 82nd Avenue and Washington County.
 Stabilize congestion at I-84 and I-405 intersections and Marquam Bridge.
 Avoid increased highway noise and other highway environmental pollution.
 Reduced construction and maintenance costs.
 Reduce driver frustration and pressure to reconstruct highways at choke points south.
 Minimize demand for capacity improvements.

L-004-023

3. Enhance urban neighborhood and recreational land uses in the study area especially along riverfront areas and at interchanges.

- The Columbia River south shore and Hayden Island are dominated by highway interchanges.
- Truck and car access to Hayden Island is via the shared high speed "auxiliary lanes". Access to and from the Island and the connection to Bridgeton and other neighborhoods in the city including the houseboat communities along the slough is not improved.
- Bike, pedestrian and transit access between Vancouver and the neighborhoods northeast of the downtown and destinations to the east are not being adequately addressed by the project or the City of Vancouver. With one exception, the connections are all associated with I-5 interchanges, are widely spaced, and will become increasingly congested as more vehicles attempt to access the highway.

the publication of the DEIS in May 2008, and the selection of the LPA in July 2008, the CRC project team has continued to work with the Pedestrian and Bicycle Advisory Committee and project partners to refine route and facility design. The final design, as described in Chapter 2 (Section 2.2) of the FEIS, is the outcome of a long collaboration process. See response to comment L-004-009.

L-004-011

Ideas such as eliminating interchanges or reducing posted speeds were considered during earlier phases of the CRC project, but were dropped for further consideration because they did not meet the accessibility goals of the project, did not meet highway design standards, and/or were not supported by the local jurisdictions.

L-004-012

The proposed new add/drop lanes (i.e., lanes that connect two or more interchanges) are used to alleviate demand and safety issues associated with the closely spaced interchanges in the project area and are not designed to increase capacity generally on I-5. 68 to 75% of I-5 traffic in the project area enters and/or exits I-5 within the CRC project area. These add/drop lanes provide space for these traffic movements without disrupting cars and trucks traveling to destinations further north and south of the project area. The project does not propose to add lanes north or south of the project limits. The DEIS evaluation found that the project, with a toll and LRT, would actually reduce the total daily volume of traffic using the I-5 and I-205 river crossings by approximately 3%. The FEIS analysis of the project has been updated to include an evaluation of how the CRC project would affect Vehicle Miles Traveled (VMT) (see Section 3.1). Rather than inducing sprawl, the CRC project will likely reinforce the region's goals of concentrating development in regional centers, reinforcing existing corridors, and promoting transit and pedestrian friendly development and development patterns.

L-004-023

- Proposed interchanges discourage urban land use patterns and bike and pedestrian travel. This is particularly acute for travel parallel to I-5.

Suggested Changes:

Provide a lower level, urban, multimodal bridge connecting Hayden Island and neighborhoods to the south with a relocated Marine Drive interchange. This will replace freeway auxiliary lanes serving the island and eliminate the complex high capacity interchange that dominates the island. The bridge would include bike lanes and a 12 foot walkway.

Move Marine Drive interchange south and away from river and connect to the road serving Hayden Island.

Add Local Street along river to support mixed-use neighborhood relating to Hayden Island.

Add bike and pedestrian network connectivity in the area of all interchanges to minimize out of direction travel.

Expected Outcomes:

Improves east west connectivity and reduces noise and congestion on Hayden Island.

Eliminates need for auxiliary lanes.

Improves safety by limiting merge activity.

Enhances bike and pedestrian access to Island by minimizing height from ground to trail over Hayden Island (currently about 40 feet).

Eliminates long stairs and elevators on Hayden Island.

Improves safety and connectivity to local streets and arterials for Island residents.

Encourages walking and cycling through areas now considered too dangerous or too lengthy in the area of the freeways.

Encourages development of land uses that are pedestrian friendly, which saves development and maintenance costs.

Reduces dependency on the auto.

L-004-024**4. Create landmark gateway bridge**

- The scenic values of the setting, and the *design aspirations* expressed in the *adopted goals* for the project and the urgency of environmental priorities are not described in the DEIS and do not appear in any design studies.
- Although the design is conceptual, every indication is that the view from the top of the bridge southbound will reveal a sea of concrete from Hayden Island to the south shore and through Delta Park - at rush hour a sea of stalled vehicles. This degrading Welcome to Oregon ill serves the states image as a leader in environmental quality.
- The 80 mph design speeds, lane widths, wide shoulders and interchange configurations represent an approach to designing highways in urban areas that is a dinosaur from the 1960s in the context of a densely urbanized land and the dramatic setting of the river and Columbia Slough crossings.

Suggested Changes:

Integrate aesthetics of structural and ornamental elements into the DEIS budget.

Prohibit value engineering of the design elements once adopted.

Employ "A" level landscape / urban design/ bridge designer to lead the urban design and final design of the bridge.

Regarding designating lanes for freight, representatives of the Vancouver-Portland metropolitan area's freight industry served on the CRC project's Freight Working Group. The Freight Working Group worked with the project team to determine how best to accommodate freight needs in the crossing project. The Freight Working Group and project team analyzed a number of ideas, including truck-only lanes in the project area. It was determined that truck-only lanes tend to primarily benefit trucks traveling long distances. For truck-only lanes covering relatively short distances, the maneuvers required to enter and exit the truck-only lane limits their usefulness. Several of the region's major truck freight generators are accessed to and from I-5 in the project area, such as the Port of Vancouver, the Port of Portland, and the Columbia Corridor. Truck-only lanes would not effectively benefit trucks traveling to and from these destinations. Rather than creating truck-only lanes, the CRC project will benefit truck freight through such actions as reducing congestion and redesigning interchanges so they are easier and safer for trucks to use.

L-004-013

Following the close of the 60-day DEIS public comment period in July 2008, the CRC project's six local sponsor agencies selected light rail to Clark College as the project's preferred transit mode. These sponsor agencies, which include the Vancouver City Council, Portland City Council, C-TRAN Board, TriMet Board, RTC Board and Metro Council considered the DEIS analysis, public comment, and a recommendation from the CRC Task Force (a broad group of stakeholders representative of the range of interests affected by the project - see the DEIS Public Involvement Appendix for more information regarding the CRC Task Force) before voting on the LPA.

As illustrated in the DEIS, and summarized in Exhibit 29 (page S-33) of the Executive Summary, light rail would better serve transit riders than bus rapid transit (BRT) within the CRC project area. Light rail would carry

L-004-024

Construct two separate and generally parallel spans from the Oregon Marine Drive interchange to the Washington SR-14 interchange. Landscape around the roadway and bridgehead interchanges to the level of quality of the PDX airport approach road.

Expected Outcomes:

A bridge that is worthy of its setting, expressive of the passion that Oregon and Washington residents have for the environment and regarded as a great engineering and aesthetic achievement.

The quality of the experience of crossing the river in either direction will be timeless, distinctive, and highly memorable both in the design of the bridge and the interchanges. This applies to autos and trucks but equally for transit riders, cyclists, and pedestrians.

The visual quality of the bridge from the river and the river banks will be timeless, distinctive, and highly memorable and a regional attraction as an engineering and urban design achievement.

L-004-025

5. Create “world class” pedestrian and bike routes and environment to facilitate both commuter and recreational use.

- The programming effort for bike and pedestrian access has been productive. However the response from the design team began by asking us to seriously consider the cost of adding such facilities. Whereas highway lane and interchange design are well developed, other modes including transit, bikes and pedestrians have yet to gel as more than rough diagrams indicating intent and general criteria.

Suggested Changes:

Provide separate zones for pedestrians, casual cyclists, and commuter and touring lanes. This will require more space than the 16 foot right of way included in the DEIS options.

Provide quality pedestrian paths on both sides of the bridge structures.

Coordinate multiuse trail with transit right of way over the river.

The PAC endorses the CRC Bike Pedestrian Advisory recommendations for a 24 foot trail on the west side of the bridge and recommends a 10 foot - primarily pedestrian walkway - on the east side.

Expected Outcomes:

Higher than projected use by pedestrians for commuting to work in the Hayden Island to Vancouver downtown corridor.

Higher than projected use by commuter and recreational cyclists.

Regional recreation destination.

Reduced environmental impacts from motorized travel.

Health benefits associated with use of the facility.

L-004-026

In addition to the 5 principles we suggest changes that would reduce costs without compromising safety

- Wide shoulders and auxiliary lanes are described as safety features. One of the reasons that shoulders are required on both sides is the number of lanes and the speeds. One of the common uses of shoulders is for future lane expansion – especially

more passengers across the river during the PM peak, result in more people choosing to take transit, faster travel times through the project area, fewer potential noise impacts, and lower costs per incremental rider than BRT. Additionally, light rail is more likely to attract desirable development on Hayden Island and in downtown Vancouver, which is consistent with local land use plans.

Providing express light rail service between Portland and Vancouver would require a third, and possibly fourth track, to be built through north Portland without providing access to those residents. This would require a significant capital investment and greater community impacts that are not a part of the CRC project.

L-004-014

Project staff have worked with the Pedestrian and Bicycle Advisory Committee on each interchange. These interchange designs have been modified to accommodate pedestrian connectivity and cycling. The facilities will be safer than the current designs. Bike crossings at interchanges have been significantly improved, with the river crossing (for bikes) no longer having intersections with vehicles. These are described in Chapter 2 of the FEIS.

L-004-015

The CRC project is being designed to meet the commitments of its sponsoring agencies to sustainability. The FEIS comprehensively evaluates how this project will affect the many elements of our environment. This evaluation found many benefits from this project, including a shift in future travel patterns toward reduced vehicle usage and greater transit ridership. The FEIS also explores a variety of ways for this project to further sustainability causes (see Chapter 3).

In addition to sustainability, the CRC project design for interchanges, roadway elements, transit stations, and other facilities will be context-

L-004-026

the center shoulder. Reducing the number of lanes and shoulders will result in significant cost to build and maintain savings.

- Lane widths are related to vehicle size and speed. By reducing speeds it is possible to reduce lane width and cost to build and resurface.
- Vehicle speed in an urban freeway setting has numerous indirect and direct costs. To merge safely the merge and exit lanes must be longer. These long merge lanes cost money to construct and maintain and remove land for other uses.
- Higher speeds are also the source of costly serious injuries and ongoing health impacts. When entering an urban area with frequent and complex interchanges reduced speed is appropriate. Reduced speed reduces engine and tire noise and airborne particulates. Finally, reduced speeds increase capacity as safe stopping distances are reduced and more vehicles can be safely accommodated.

Suggested changes:

- Reduce Design Speed and enforce to 50 MPH.
- Include traffic calming elements.
- Reduce the number of lanes to a maximum of 3 lanes including freight and HOV lanes.
- Reduce lane widths to 11 feet.
- Provide one shoulder lane.

Expected Outcomes

- Increase safety at merging without extended merge lanes.
- Reduce construction cost with narrower lanes.
- Reduce Noise impacts on bikes, pedestrians, park areas, and Vancouver neighborhoods.
- Reduce tailpipe emissions.
- Reduce serious injuries.
- Increase the useful life of the crossing.

sensitive and reflect the unique character of the surrounding area. CRC formed a 14-member, bi-state Urban Design Advisory Group (UDAG), made up of design professionals and neighborhood representatives. The goals of the UDAG include, achieving “design excellence that can be embraced by affected communities and users” and providing “a landmark bridge that is both inspired and inspiring and fully integrates the design and function of the structure with the urban design elements.” Working closely with project designers, UDAG has provided input and guidance on integrating the new facilities with the surrounding community. A more detailed discussion of bridge designs can be found in Chapter 2 of the FEIS.

L-004-016

The evaluation of the five alternatives in the DEIS was preceded by an evaluation and screening of a wide array of possible solutions to the CRC project's Purpose and Need statement. Chapter 2 of the DEIS (Section 2.5) and Chapter 2 (Section 2.7) of the FEIS explain how the project's Sponsoring Agencies solicited the public, stakeholders, other agencies, and tribes for ideas on how to meet the Purpose and Need. This effort produced a long list of potential solutions, such as a possible third transportation corridor across the Columbia River, alternative transit modes, and techniques for operating the existing highway system more efficiently. After identifying this wide array of options, the project evaluated whether and how they met the project's Purpose and Need, and found that alternatives that do not include improvements to the existing I-5 facility generally do not address the seismic vulnerability of the existing I-5 bridges, traffic congestion on I-5, or the existing safety problems caused by sub-standard design of I-5. Traffic modeling showed that even significant investment in improving transit options in the corridor or building a third corridor was not enough to alleviate future traffic demand and existing safety hazards on I-5. It is important to note that transit and river crossing components were not eliminated simply because they could not accommodate future vehicular trips. For

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example, both light rail and tolling help to decrease vehicular demand. See Chapter 2 (Section 2.7) of the FEIS for more discussion on the screening process used to develop project alternatives.

L-004-017

As described in Chapter 3, Section 3.4 of the FEIS and in the Indirect Effects Technical Report, highway capacity improvements and access improvements can induce development in suburban and rural areas that were not previously served, or were greatly underserved, by highway access. A review of national research on induced growth indicates that there are six factors that tend to be associated with highway projects that induce sprawl. These are discussed in Chapter 3 (Section 3.4) of the FEIS. Based on the CRC project team's comparison of those national research findings to CRC's travel demand modeling, Metro's 2001 land use / transportation modeling, Metro's 2010 running of the Metroscope Model, and a review of Clark County, City of Vancouver, City of Portland and Metro land use planning and growth management regulations, the DEIS and the FEIS conclude that the likelihood of substantial induced sprawl from the CRC project is very low. In fact, because of its location in an already urbanized area, the inclusion of new tolls that manage demand, the inclusion of new light rail, and the active regulation of growth management in the region, the CRC project will likely reinforce the region's goals of concentrating development in regional centers, reinforcing existing corridors, and promoting transit and pedestrian friendly development and development patterns.

For a more detailed discussion regarding potential indirect land use changes as a result of the CRC project, including the likely land use changes associated with the introduction of light rail, please see Chapter 3 (Section 3.4) of the FEIS.

There are, as you noted, examples of good planning, integrating transportation and land use analyses, in places such as Vancouver BC.

The Portland/ Vancouver area also provides great examples of integrated, progressive planning. As part of such, this project introduces light rail transit to Vancouver, includes tolls and congestion pricing. The investment has been found likely to induce development, though mostly around light rail stations and within the existing urban area, where high density, mixed use development is planned and occurring.

L-004-018

The CRC project design for interchanges, roadway elements, transit stations, and other facilities will be context-sensitive and reflect the unique character of the surrounding area. CRC formed a 14-member, bi-state Urban Design Advisory Group (UDAG), made up of design professionals and neighborhood representatives. The goals of the UDAG include, achieving “design excellence that can be embraced by affected communities and users” and providing “a landmark bridge that is both inspired and inspiring and fully integrates the design and function of the structure with the urban design elements.” Working closely with project designers, UDAG is providing input and guidance on integrating the new facilities with the surrounding community.

The visual and aesthetic analysis in the DEIS was quantitative, because reviewing agencies and professional staff agreed to use the FHWA visual assessment methodology. This methodology is the industry standard, and provides an assessment which can be compared to that of other similar projects. Additionally, for the DEIS, only major bridge types and general transit facilities were being assessed. The design had not progressed to a point where the analysis could take all other factors into consideration (such as lighting, textures, colors, etc). In the FEIS, designs are refined and assessed in greater detail.

L-004-019

Project staff have met with the Multnomah County Health Department staff, studied the June 9, 2008 assessment, and incorporated information

as appropriate. Please see responses to comments from the Multnomah County Health Department (comment letter L-009).

The evaluation of environmental impacts was not limited to the immediate project vicinity. The EIS covers regional impacts to air quality, travel behavior, energy, greenhouse gas emissions, and other impacts at the regional and larger scales, where there would be potential meaningful impacts at that scale.

L-004-020

The CRC project design for interchanges, roadway elements, transit stations, and other facilities will be context-sensitive and reflect the unique character of the surrounding area. CRC formed a 14-member, bi-state Urban Design Advisory Group (UDAG), made up of design professionals and neighborhood representatives. All UDAG meetings are open to the public to attend and observe. Goals of the UDAG include achieving “design excellence that can be embraced by affected communities and users” and providing “a landmark bridge that is both inspired and inspiring and fully integrates the design and function of the structure with the urban design elements.” Working closely with project designers, UDAG will provide input and guidance on integrating the new facilities with the surrounding community. This work includes identifying significant iconography (for example, symbols and patterns) that will reflect the history of the area, the Native American communities, early pioneers, or other significant themes. These images will be incorporated into an art master plan. Additional discussion of bridge designs can be found in Chapter 2 of the FEIS and in the Visual and Aesthetics Technical Report supporting the FEIS.

L-004-021

Actually, most evidence and the detailed analyses of individual growth suggest the project would not encourage dispersed land use patterns. See discussion in L-004-005 above.

Representatives of the Vancouver-Portland metropolitan area's freight industry served on the CRC project's Freight Working Group. The Freight Working Group worked with the project team to determine how best to accommodate freight needs in the crossing project. The Freight Working Group and project team analyzed a number of ideas, including truck-only lanes in the project area. It was determined that truck-only lanes tend to primarily benefit trucks traveling long distances. For truck-only lanes covering relatively short distances, the maneuvers required to enter and exit the truck-only lane limits their usefulness. Several of the region's major truck freight generators are accessed to and from I-5 in the project area, such as the Port of Vancouver, the Port of Portland, and the Columbia Corridor. Truck-only lanes would not effectively benefit trucks traveling to and from these destinations. Rather than creating truck-only lanes, the CRC project will benefit truck freight through such actions as reducing congestion and redesigning interchanges so they are easier and safer for trucks to use.

The Vancouver-Portland region is a trade hub, acting as a gateway and distribution center for domestic and international markets. The region has become a trade hub, in large part, because of its direct access to the freeway system, navigable rivers, rail lines, and international air shipping. The region's continued competitiveness as a trade hub is dependent on the ability to efficiently move freight on and between these transportation facilities. Though I-205 is a convenient, cost-effective route for some freight trips, it cannot replace the role of I-5 as a freight route. For many freight trips, I-205 would be out of direction, adding to travel time and shipping costs. In addition trucks will travel on I-5 because it is shorter and faster than I-205. In 2005, the I-5 Interstate Bridge carried approximately 3,240 more trucks per day or 42 percent more than the I-205 Glenn Jackson Bridge. Trucks try to avoid congestion and travel during uncongested periods and because the travel distance on I-5 from junction to junction is only 19.3 miles

compared to 25.5 miles on I-205 trucks will travel on I-5. Increased shipping costs can have a significant impact on the overall costs of doing business in our region, making us less competitive and threatening our status as a trade hub.

Following the selection of the LPA in July of 2008, the CRC Project Sponsors Council (PSC) was developed to provide recommendations to the project on a variety of issues, including the number of add/drop lanes over the river crossing. Over the course of several months, PSC was provided with operational characteristics and potential environmental impacts of 8-, 10-, and 12-lane options. These technical evaluation criteria included, but were not limited to, traffic safety, congestion, traffic diversion onto local streets and I-205, regional vehicle miles travelled, transit ridership, regional economic impact, effects to neighborhoods, and protected species and habitats. In addition to the technical information, PSC received input from CRC advisory groups and reviewed public comment submitted to the project and obtained during two public Q&A sessions in January 2009 regarding the number of lanes decision, as well as hearings conducted by Portland City Council and by Metro Council. In March 2009, PSC made a final recommendation of 12-lanes with the condition that a bi-state Columbia Crossing Mobility Council be formed to monitor the performance of the river crossings and advise the state DOTs and transit districts on adapting demand management measures to optimize performance.

The proposed new lanes are add/drop lanes (i.e., lanes that connect two or more interchanges), which are used to alleviate safety issues associated with the closely spaced interchanges in the project area, and accommodate the 68 to 75% of traffic that enters and/or exits I-5 within two miles of the Columbia River. Two of the three directional add/drop lanes are primarily between Marine Drive/Hayden Island and SR 14/Mill Plain Blvd. The project does not propose to add lanes north or south of the project limits.

L-004-022

As mentioned in L-004-006, in general, by reducing congestion on I-5, and improving travel time reliability on the highway, traffic will be less likely to divert onto local streets. The project will not exacerbate congestion on I-5 south of the project area, such as at the I-5/I-405 split. There would be fewer daily auto crossings with the project than with No-Build. Also see response to comment L-004-012 regarding how the addition of add/drop lanes in this section of I-5 does not necessarily result in increased traffic further south on I-5.

L-004-023

The project staff has worked closely with Hayden Island residents and the City of Portland to test design options that would not include an interchange on the island. These options failed to adequately provide transportation capacity and address safety goals.

As discussed in the DEIS, a replacement bridge over the Columbia River will include dramatically improved bicycle and pedestrian facilities by providing:

- A new 16 to 20 foot multi-use pathway over the Columbia River completely separated from vehicle traffic due to the design of the Stacked Transit Highway Bridge
- Protections from traffic noise, exhaust and debris for pedestrians and bicyclists on the river crossing
- More direct connections on each side of the river, consisting of stairs, ramps, and elevators, as well as pathway extensions that connect in with existing or planned facilities and public transit
- Many new or enhanced sidewalks, bike lanes, and crosswalks near the bridge and throughout the project area

Since the publication of the DEIS in May 2008, and the selection of the LPA in July 2008, the CRC project team has continued to work with the

Pedestrian and Bicycle Advisory Committee and project partners to refine route and facility design. The final design, as described in Chapter 2 (Section 2.2) of the FEIS, is the outcome of a long collaboration process.

L-004-024

The scenic values of particular views are integrated with the design methodology in the DEIS. With the completion of the FEIS, the Visual and Aesthetic Technical Report has been updated to include more about the Urban Design Advisory Group recommendations and guidelines, including scenic views. The view to the south, from the mid-point of the bridge will include a wider highway facility than currently exists. The same view will still include the Portland west hills, portions of the downtown skyline, and other features in the landscape.

The designs used for the highway are appropriate to high-speed, high volume, access controlled facilities (the Interstate highway system). The project also includes local roadways in Portland and Vancouver as well as light rail, which will also be designed with a sensitivity to scale, speed, and a dense walkable urban environment.

The project team is working with stakeholders to achieve the goals you speak of, within the parameters of safe design, reasonable cost, and public support.

L-004-025

As discussed in the DEIS, a replacement bridge over the Columbia River will include dramatically improved bicycle and pedestrian facilities. These facilities will be adequate for both commuters and casual cyclists and pedestrians. As noted earlier, the new facilities would offer protections from traffic noise and debris for pedestrians and bicyclists on the river crossing. A new multi-use path will be constructed on one side of the new bridge facility but it will accommodate bicyclists and pedestrians

travelling both north and south.

The new facilities will provide better connections to transit for bicyclists and pedestrians by adding stairs, ramps, and elevators, as well as pathway extensions that connect in with existing or planned facilities and public transit.

Greater details for bicycle and pedestrian facility designs are included in the FEIS. The design, as described in Chapter 2 (Section 2.2) of the FEIS, is the outcome of a long collaboration process and the project appreciates your input.

L-004-026

Please see response to L-004-011.