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### Columbia River Crossing project Open House Boards





December 2008

### Welcome to the Columbia River Crossing project open house.







Metro







Washington State Department of Transportation



### U.S. Department of Transportation

Federal Highway Administration

Federal Transit Administration









**TriMet** 





**City of Vancouver** 

**City of Portland** 







### **Columbia River Crossing Locally Preferred Alternative:**

- Replace Interstate Bridge (3 through lanes plus add/drop lanes) Improve seven interchanges
- Extend light rail
- New pedestrian and bicycle path across the Columbia River



### Project Area Improvements







### 2009:

- Select bridge type
- Confirm number of add/drop lanes
- Select transit alignment for local streets and park and ride locations
- Determine pedestrian and bicycle path width and location
- Refine interchange alignments
- Publish Final Environmental Impact Statement
- Develop finance and tolling plan



## **Project Planning and Next Steps**



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![](_page_4_Picture_17.jpeg)

![](_page_5_Picture_1.jpeg)

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![](_page_5_Picture_3.jpeg)

### Safety Benefits

### Safer Travel with Improved Design

- Eliminates ten high-crash locations
- Improves seven interchanges to reduce collisions by up to 75 percent
- Meets earthquake safety standards
- Eliminates bridge lifts
- Decreases weaving and merging with add/drop lanes
- Adds safety shoulders to new bridge

![](_page_5_Picture_14.jpeg)

# **Congestion and Mobility Benefits**

### Improves Travel Times • Reduces roundtrip travel times • Results in less congestion on local streets in North Portland

- and Vancouver
- project compared to 15 hours if no action

### **Creates More Commuter Choices**

- Extends light rail to Clark College
- connections in Oregon and Washington

![](_page_6_Picture_11.jpeg)

• With tolling, reduces number of trips across the river • Improves daily congestion in 2030 – about 5 hours with the

 Adds 20,000 daily transit riders across the Columbia River • Widens pedestrian and bicycle path across the river and improves

![](_page_6_Picture_16.jpeg)

![](_page_6_Picture_17.jpeg)

![](_page_7_Picture_0.jpeg)

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### Jobs and the Economy

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![](_page_7_Picture_8.jpeg)

### **Economic Benefits**

• Adds at least 40,000 new jobs to the Portland-Vancouver region • Helps retain 6,500 jobs and \$844 million annually that would be lost by 2025 without transportation improvements • Reduces congestion by nine hours a day at the I-5 bridge Improves access to ports and highways and keeps goods moving

![](_page_7_Picture_11.jpeg)

![](_page_7_Picture_14.jpeg)

![](_page_8_Picture_1.jpeg)

### Benefits

- Treats 30 million gallons stormwater
- Reduces highway noise along corridor
- and light rail to Vancouver

### **Additional Opportunities**

- Uses recycled, re-used and local materials

![](_page_8_Picture_11.jpeg)

### Environmental Benefits and Opportunities

• Improves fish habitat with fewer piers in the water • Provides options to auto travel – better pedestrian/bicycle paths

 Incorporate renewable energy like wind and solar • Plants trees to improve quality of life and sequester carbon

![](_page_8_Picture_15.jpeg)

### Project Sponsors Council

### **Purpose:**

The Council will advise the two departments of transportation and transit agencies on: • Completion of the Environmental Impact Statement

- Project design
- Timelines associated with project development
- Development and use of sustainable construction methods
- Project consistency with Oregon and Washington's statutory reduction goals for greenhouse gas emissions
- A finance plan

### Members

Hal Dengerink, Chancellor, Washington State University, Vancouver Henry Hewitt, Past Chair, Oregon Transportation Commission Matthew Garrett, Director, Oregon Department of Transportation Paula Hammond, Secretary, Washington State Department of Transportation Sam Adams, Mayor-Elect, City of Portland Royce Pollard, Mayor, City of Vancouver

![](_page_9_Picture_12.jpeg)

![](_page_9_Picture_15.jpeg)

David Bragdon, President, Metro Council Steve Stuart, Vice Chair, Southwest Washington Regional Transportation Council Fred Hansen, General Manager, TriMet Tim Leavitt, Chair of the Board of Directors, C-TRAN

![](_page_9_Picture_17.jpeg)

![](_page_9_Picture_18.jpeg)

![](_page_10_Picture_0.jpeg)

![](_page_10_Figure_2.jpeg)

![](_page_10_Picture_4.jpeg)

# Example–Cross Section of Five Lane Replacement Bridge

The number of add/drop lanes has not been determined

![](_page_10_Picture_7.jpeg)

![](_page_10_Picture_8.jpeg)

![](_page_11_Picture_0.jpeg)

![](_page_11_Figure_2.jpeg)

![](_page_11_Picture_4.jpeg)

# Example–Cross Section of Six Lane Replacement Bridge

The number of add/drop lanes has not been determined

![](_page_11_Picture_7.jpeg)

![](_page_11_Picture_8.jpeg)

![](_page_12_Picture_0.jpeg)

# Example–Cross Section of Five Lane Stacked Transit/Highway Bridge

![](_page_12_Figure_2.jpeg)

![](_page_12_Picture_4.jpeg)

SOUTHBOUND LANES

NORTHBOUND LANES

The number of add/drop lanes has not been determined

![](_page_12_Picture_8.jpeg)

Add/Drop Lanes

Pedestrian/

![](_page_12_Picture_11.jpeg)

![](_page_13_Picture_0.jpeg)

# Example–Cross Section of Six Lane Stacked Transit/Highway Bridge

![](_page_13_Figure_2.jpeg)

![](_page_13_Picture_5.jpeg)

SOUTHBOUND LANES

NORTHBOUND LANES

The number of add/drop lanes has not been determined

![](_page_13_Picture_9.jpeg)

![](_page_13_Picture_10.jpeg)

![](_page_14_Figure_1.jpeg)

![](_page_14_Picture_2.jpeg)

### Schedule

![](_page_14_Picture_4.jpeg)

![](_page_15_Picture_0.jpeg)

### **Preliminary Cost Estimate** \$3.1 – 4.2 billion The cost is calculated for the year the dollars

### **CRC funding will come from multiple sources:**

- Federal
- State of Oregon
- State of Washington
- Tolling I-5
- Regional and Local

![](_page_15_Picture_8.jpeg)

## Cost and Funding

would be spent, 2010–2017.

![](_page_15_Picture_13.jpeg)

![](_page_15_Picture_14.jpeg)

### **Purpose:**

The Urban Design Advisory Group (UDAG) advises CRC in these areas:

- Integration of community input on the appearance of bridge, transit and highway designs
- Incorporation of context sensitive design and sustainability
- Guidelines for visual impact and urban design

### Members

Royce Pollard, Mayor, City of Vancouver Sam Adams, Mayor-elect, City of Portland Rob Barrentine, Vancouver Design Review Committee,

Architects Barrentine Bates Lee Ed Carpenter, Artist

Jane Hansen, Lango Hansen Landscape Architects, P.C. Mark Masciarotte, Aviation Advisory Committee Dick Pokornowski, Downtown Redevelopment Authority

![](_page_17_Picture_11.jpeg)

# Urban Design Advisory Group

![](_page_17_Picture_17.jpeg)

Carrie Schilling, Works Partnership Architecture Jeff Stuhr, HOLST Architecture, Portland Design Commission Dave Smith, Vancouver Planning Commission and Design **Review Committee** Michelle Tworoger, Jantzen Beach Moorage Association, Inc. Walter Valenta, Bridgeton Neighborhood Association Marcia Ward, CRC's Community and Environmental Justice Group, Salmon Creek neighborhood

![](_page_17_Picture_21.jpeg)

![](_page_18_Picture_0.jpeg)

![](_page_18_Picture_2.jpeg)

One concept sketch of the potential Hayden Island light rail station developed by CRC's Urban Design Advisory Group.

![](_page_18_Picture_4.jpeg)

## **Design and Aesthetics**

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![](_page_18_Picture_7.jpeg)

![](_page_19_Figure_0.jpeg)

![](_page_19_Figure_1.jpeg)

![](_page_19_Figure_2.jpeg)

![](_page_19_Picture_4.jpeg)

## Design and Aesthetics

One concept sketch showing what downtown Vancouver could look like with a replacement bridge, light rail and a lid section at Evergreen Boulevard.

![](_page_19_Picture_7.jpeg)

![](_page_19_Picture_8.jpeg)

![](_page_20_Figure_0.jpeg)

![](_page_20_Picture_1.jpeg)

![](_page_20_Figure_2.jpeg)

Develop aesthetics and design features (Urban Design Advisory Group and public input)

![](_page_20_Picture_4.jpeg)

### **Bridge Type and Design Next Steps**

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![](_page_20_Picture_8.jpeg)

### 2010

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![](_page_22_Picture_1.jpeg)

	8 Lanes	10 Lanes	12 Lanes
I-5 Impacts	Northbound I-5: 1. Hayden Island off-ramp to Marine Drive on-ramp 2. Hayden Island on-ramp merge area 3. SR 14 off-ramp diverge area 4. Mill Plain/4th Plain off-ramp to SR 14 on-ramp Southbound I-5: 5. 4th Plain off-ramp to SR 500 on-ramp 6. SR 14 off-ramp to Mill Plain on-ramp 7. Mill Plain on ramp merge area	Northbound I-5: 1. Hayden Island off-ramp to Marine Drive on-ramp 2. Mill Plain/4th Plain off-ramp to SR 14 on-ramp Southbound I-5: 3. 4th Plain off-ramp to SR 500 on-ramp 4. SR 14 off-ramp to Mill Plain on-ramp	None
	<ul> <li>8. North of Hayden Island off-ramp</li> <li>9. Marine Drive off-ramp to Hayden Island on-ramp</li> </ul>	5. North of Hayden Island off-ramp	
	Due to northbound I-5 impacts: 1. Marine Drive 2. Hayden Island 3. SR 14 4. Mill Plain	Due to northbound I-5 impacts: 1. Marine Drive 2. SR 14	
Local Street Impacts	Due to southbound I-5 impacts: 1. SR 500 and Main Street 2. 4th Plain 3. Mill Plain 4. SR 14 and City Center 5. Hayden Island	Due to southbound I-5 impacts: 1. SR 500 and Main Street 2. 4th Plain 3. Mill Plain 4. SR 14 and City Center	None
I-5 Bridge Congestion	7 to 9 hours	5 to 7 hours	3.5 to 5.5 hours
Annual Collisions	300	240	200
I-5 Traffic	165,000 vehicles	174,500 vehicles	178,000 vehicles
I-205 Traffic	219,000 vehicles	214,500 vehicles	213,000 vehicles
Total River Crossing Traffic	384,000 vehicles	389,000 vehicles	391,000 vehicles
Diversion to I-205 from No Build	9,000 vehicles	4,500 vehicles	3,000 vehicles
Regional Vehicle Miles Travelled (VMT)	56.770 million regional VMT 0.21% increase over No Build	56.750 million regional VMT 0.18% increase over No Build	56.746 million regional VMT 0.17% increase over No Build
I-5 Transit Riders	18,900 (16,800 on light rail)	18,900 (16,800 on light rail)	18,900 (16,800 on light rail)
HOV Lane Potential?	No	No With conversion of traffic lane	

Note: All figures are for the year 2030.

![](_page_22_Picture_4.jpeg)

# Traffic Effects of 8, 10 and 12 Lane Options

![](_page_22_Picture_6.jpeg)

![](_page_23_Figure_0.jpeg)

![](_page_23_Picture_1.jpeg)

![](_page_23_Picture_2.jpeg)

![](_page_23_Picture_3.jpeg)

# Traffic Impacts: 8 Lanes

![](_page_23_Picture_5.jpeg)

![](_page_23_Picture_6.jpeg)

![](_page_24_Picture_0.jpeg)

![](_page_24_Figure_1.jpeg)

![](_page_24_Figure_2.jpeg)

![](_page_24_Picture_3.jpeg)

# Traffic Impacts: 10 Lanes

![](_page_24_Picture_5.jpeg)

![](_page_24_Picture_6.jpeg)

![](_page_25_Picture_0.jpeg)

![](_page_25_Figure_1.jpeg)

![](_page_25_Figure_2.jpeg)

![](_page_25_Picture_3.jpeg)

# Traffic Impacts: 12 Lanes

![](_page_25_Picture_5.jpeg)

![](_page_25_Picture_6.jpeg)

![](_page_26_Picture_0.jpeg)

### **Existing Metro Area Add/Drop Lanes**

![](_page_26_Figure_2.jpeg)

### Columbia River CROSSING

![](_page_26_Picture_4.jpeg)

**Oregon Department** of Transportation

![](_page_26_Picture_6.jpeg)

Washington State Department of Transportation

US Department of Transportation: Federal Transit Administration • Federal Highway Administration City of Vancouver • City of Portland • SW Washington Regional Transportation Council • Metro • C-TRAN • TriMet

![](_page_28_Figure_0.jpeg)

![](_page_28_Picture_1.jpeg)

![](_page_28_Picture_2.jpeg)

## Hayden Island Map

![](_page_28_Figure_4.jpeg)

![](_page_28_Picture_5.jpeg)

![](_page_29_Picture_0.jpeg)

![](_page_29_Picture_2.jpeg)

# Vancouver Alignment Options

![](_page_29_Picture_4.jpeg)

![](_page_29_Picture_6.jpeg)

![](_page_29_Picture_7.jpeg)

### **Alignment Options**

Washington-Broadway Couplet

Two-way Washington

Two-way on McLoughlin Blvd

**Two-way on 16th Street** 

![](_page_30_Figure_0.jpeg)

## **Transit Planning Next Steps**

![](_page_30_Figure_2.jpeg)

![](_page_30_Picture_3.jpeg)

![](_page_30_Picture_4.jpeg)

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Early/M	id 2009	
ritv p	an Mid 2009	

![](_page_30_Picture_6.jpeg)

![](_page_30_Picture_7.jpeg)

### 2010

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![](_page_32_Picture_2.jpeg)

![](_page_32_Picture_3.jpeg)

### Project Interchanges

![](_page_32_Picture_5.jpeg)

![](_page_33_Picture_0.jpeg)

![](_page_33_Figure_1.jpeg)

Refine conceptual design for six interchanges *Mid 2009* 

![](_page_33_Picture_3.jpeg)

Victory Boulevard I-5 southbound

![](_page_33_Picture_5.jpeg)

Marine Drive I-5 southbound

![](_page_33_Picture_7.jpeg)

Hayden Island I-5 southbound

![](_page_33_Picture_9.jpeg)

### A Highway and Interchanges Next Steps A how

SR 14 I-5 southbound

![](_page_33_Picture_12.jpeg)

Mill Plain I-5 southbound

![](_page_33_Picture_14.jpeg)

![](_page_33_Picture_15.jpeg)

### 2010


![](_page_33_Picture_19.jpeg)

![](_page_33_Picture_20.jpeg)

![](_page_33_Picture_21.jpeg)

SR 500 I-5 southbound

![](_page_34_Picture_1.jpeg)

![](_page_34_Picture_2.jpeg)

- then east again approaching I-5
- Potential building impacts

![](_page_34_Picture_7.jpeg)

### Marine Drive: **Central Alignment Option**

• Realigns Marine Drive, turning southeast across Expo Center parking lot, Improves local street and pedestrian/bicycle connections One signalized intersection on Marine Drive west of I-5

![](_page_34_Picture_10.jpeg)

### Marine Drive: Southern Realignment Option

![](_page_35_Picture_2.jpeg)

- Improves local street and pedestrian/bicycle connections
- Potential building impacts
- One signalized intersection on Marine Drive west of I-5

![](_page_35_Picture_7.jpeg)

• Realigns Marine Drive west of Force Avenue, turns south and then east between Expo Center and the Vanport wetlands

![](_page_35_Picture_9.jpeg)

### Marine Drive: Southern 2 Realignment Option

![](_page_36_Picture_2.jpeg)

![](_page_36_Picture_6.jpeg)

• Realigns Marine Drive west of Force Avenue, turns south and then east between Expo Center and the Vanport wetlands Improves local street and pedestrian/bicycle connections • Two signalized intersections on Marine Drive west of I-5

![](_page_36_Picture_8.jpeg)

### Marine Drive: **Standard Alignment Option**

![](_page_37_Picture_2.jpeg)

![](_page_37_Picture_6.jpeg)

 Most closely follows the existing Marine Drive alignment Improves local street and pedestrian/bicycle connections • One signalized intersection on Marine Drive west of I-5

![](_page_37_Picture_8.jpeg)