

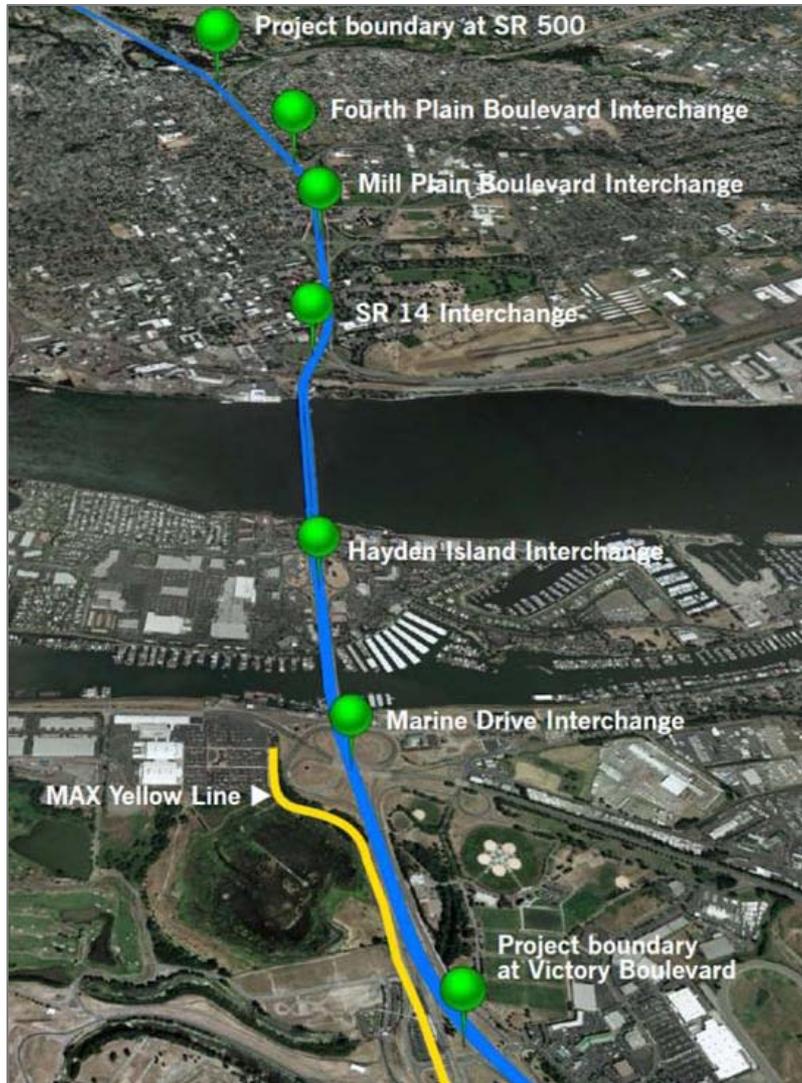
# A long-term, comprehensive solution

Washington State Transportation Commission

December 13, 2011



# Critical I-5 problems



- **Crashes:** 400 per year increasing to 750 by 2030
- **Congestion:** 4 to 6 hrs. per day increasing to 15 hrs. by 2030
- **Freight immobility:** 1 in 4 Washington jobs are trade dependent
- **Limited transit options:** Subject to I-5 congestion
- **Poor bike and ped access:** 4 ft. wide shared path
- **Earthquake risk**

# Public process to develop solutions

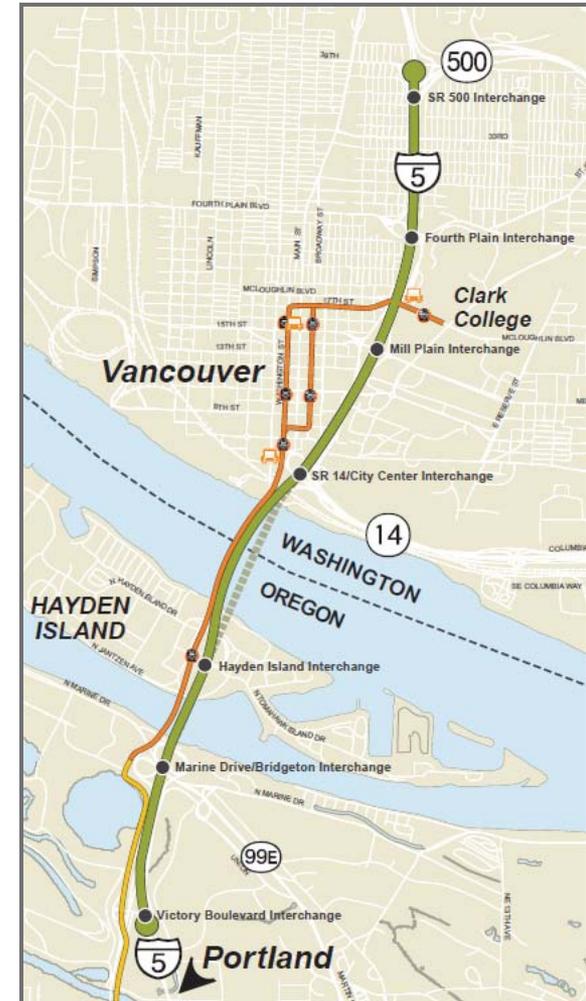


- **2001 – 2002**  
**I-5 Transportation and Trade Partnership**
- **2005 – 2008**  
**39-member CRC Task Force**
- **2008 – today**  
**Project Sponsors Council and citizen advisory groups**
- **More than 29,000 people engaged at over 1,000 events**



# Long-term, comprehensive solution to improve safety and reduce congestion

- Replacement I-5 bridge
- Improvements to closely-spaced highway interchanges
- Light rail extension to Vancouver
- Pedestrian and bicycle facility improvements
- Tolling



# Project benefits

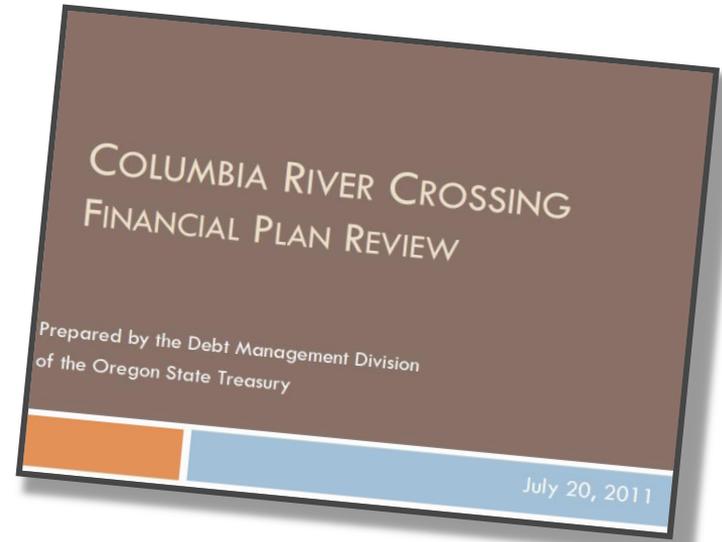
- **Improves safety**
  - Reduces average number of crashes per year by 70%
- **Reduces congestion**
- **Increases travel reliability for freight and businesses**
- **Supports economic growth and access to ports**
- **Provides travel options**
- **Environmental benefits**



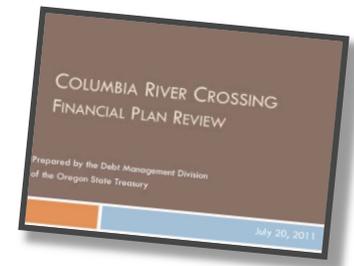
# Oregon State Treasurer Review

# State treasurer review

- ▶ Review by Oregon State Treasurer
- ▶ Recommendations:
  - Bond yields should be based on low end of toll revenue range
  - Bond yields should not assume annual toll rate increases
  - Finance plan should employ:
    - Pre-completion tolls
    - USDOT TIFIA assistance
- ▶ Treasurer recommendations have been incorporated into FEIS



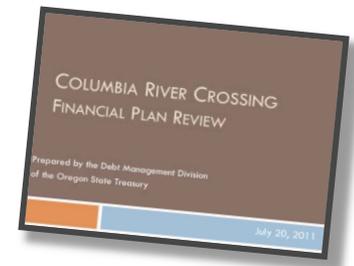
# Elements of OST's Financial Plan Review



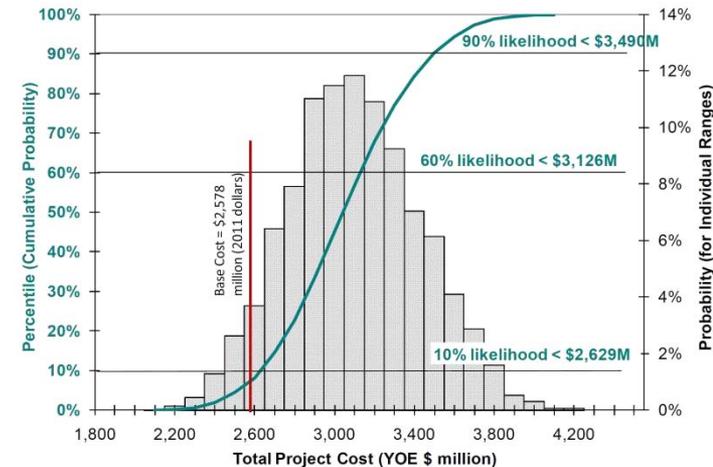
- ▶ Update of Construction Cost Estimates
- ▶ Evaluation of CRC's Traffic and Toll Revenue Forecast
- ▶ Refinement of CRC's 2008 Plan of Finance
- ▶ Exploration of Legal Issues regarding Governance and Ownership Framework

# Update to Construction Cost Estimate

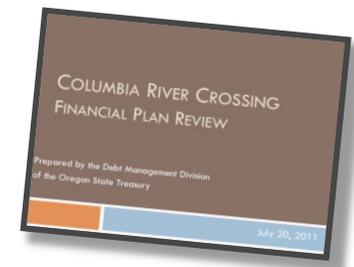
- ▶ Phased Construction Scenario
  - Cost Estimation Validation Process (CEVP) is an estimating technique employed by the CRC that uses a probabilistic approach to narrow the range of costs as key project milestones are met
  - Assuming phased construction (does not include improvements to SR-500 or the Port of Portland flyover ramp), overall CRC project costs are now estimated to be between \$2.63 to \$3.49 billion, with a 60% probability that costs will be \$3.13 billion or less



## CEVP Results for Phase 1 FEIS:



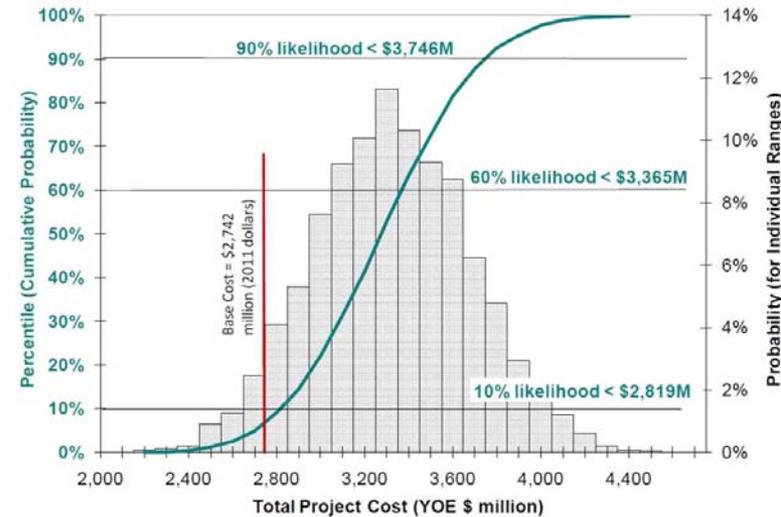
# Update to Construction Cost Estimate



## ► Full Build Scenario

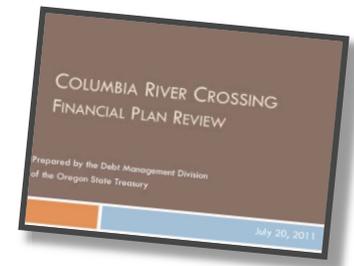
- Under the full build scenario, which does include improvements to SR-500 and the Port of Portland flyover ramp, overall CRC project costs are estimated to be between \$2.82 to \$3.75 billion, with a 60% probability that costs will be \$3.37 billion or less
- Final decision about size and scope of project will be determined upon further refinement of overall project costs and the future availability of various federal and state funds

## CEVP Results for Full Build FEIS:



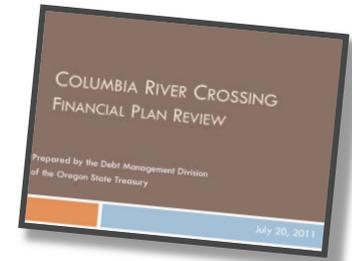
# Initial CRC Financial Plan

based on the 2008 Adopted Draft Environmental Impact Statement (DEIS)



Sources of Funds	Estimated Amt (\$M)	Construction Funds Spent
Federal Funds		
• Discretionary Highway Funds	\$400	FY 2012 – 15
• New Starts Transit Grant	\$850	FY 2013 – 17
State Funds		
• Equity Contribution (50% per state)	\$900	FY 2012 – 15
• State-backed (G.O.) Toll Bonds (50% per state)	\$1,300	FY 2015 – 19
<b>TOTAL</b>	<b>\$3,450</b>	

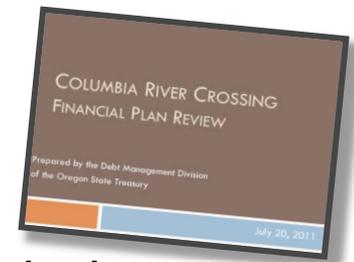
# Toll Bonding Considerations



- ▶ General Obligation (G.O.) bonds vs. stand-alone toll revenue bonds
  - Repayment of either type of bond comes from tolls paid by I-5 bridge users
  - State-backed G.O. bonds can be sold at higher credit ratings and therefore, significantly lower interest costs, than stand-alone toll revenue bonds
  - Each DOT (and ultimately, each state's General Fund) are obligated to cover toll revenue shortfalls over the life of these G.O. bonds
- ▶ An “investment grade” traffic and toll revenue forecast prior to the initial sale of toll bonds is essential
  - Bonds must be structured and sized prudently so that neither states' long-term credit ratings are impacted by the CRC project

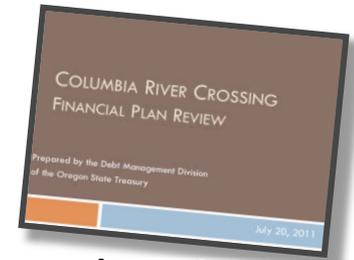
# Toll Bonding Considerations

(continued)



- ▶ Establishing a strong coverage requirement can also help mitigate potential toll revenue shortfalls by providing a substantial revenue cushion
  - CRC financing model assumes 1.25 debt service coverage level for State-backed G.O. toll bonds
- ▶ The initial CRC finance plan phased toll bonds towards the latter parts of the construction project in order to minimize the use of capitalized interest (borrowing for interest payments on the bonds until the imposition of tolls on bridge users)

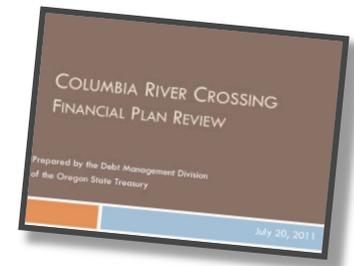
# Background on CRC's Traffic and Toll Revenue Forecasting



- ▶ A 4-step traffic and toll revenue forecast was developed in 2005 by Stantec using the Portland Metro traffic model
  - Model modified upward using “VIS SIM” micro-simulation to adjust traffic flows by 6% based upon planned improvements to the I-5 corridor upon project completion
  - 2008 DEIS conservatively used Stantec’s baseline forecast without this predicted improvement in traffic flows to calculate projected toll revenues

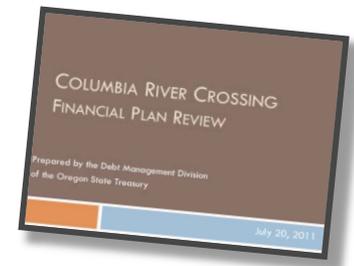
# Background on CRC's Traffic and Toll Revenue Forecasting

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- ▶ Some economists are nevertheless critical of the current 4-step traffic forecast model's ability to accurately predict traffic growth and toll revenue over time
  - By its very nature, this type of model assumes a steady growth rate in annual population, employment, traffic, and GDP
  - Cumulative impacts of relatively small differences in assumptions about traffic growth can have a significant impact on forecast revenues over the 30-year forecast horizon
  - Changes in land use and employment patterns as well as periodic changes in economic conditions can have a profound impact on driving patterns and thus, toll revenue generation
  - Many toll roads around the world have not met their forecast revenues due to these unanticipated conditions

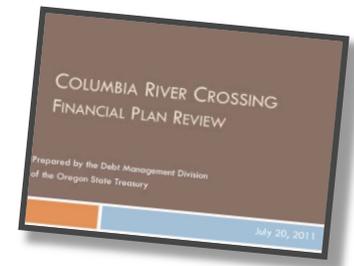
# OST's Evaluation of CRC's Traffic and Toll Revenue Forecasting to Date



- ▶ OST hired two respected independent consulting firms to conduct desktop reviews of the CRC forecasts from both the credit analysis and traffic engineering perspectives
  - Robert Bain, RB Consult Ltd (former S&P ratings analyst who has published widely on problems with the traffic and toll forecasting process)
  - Herb Vargas and Carlos Contreras, C&M Associates, Inc. (traffic engineering firm with international experience in investment grade studies)

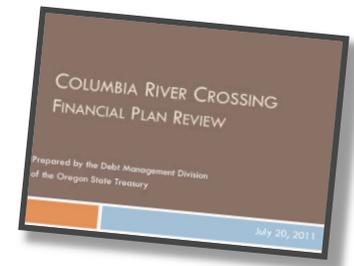
# OST's Evaluation of CRC's Traffic and Toll Revenue Forecasting to Date

(continued)



- ▶ Each firm independently reviewed CRC's traffic modeling approach as well as key socioeconomic and land use factors which drive the forecast of long-term trends in traffic growth in the Columbia River corridor
- ▶ While both firms agreed that CRC's modeling thus far has been adequate for EIS purposes, they also noted that a far more robust modeling approach (i.e., the investment grade traffic and toll revenue study) will be required prior to the initial toll bond financing planned for FY 2015

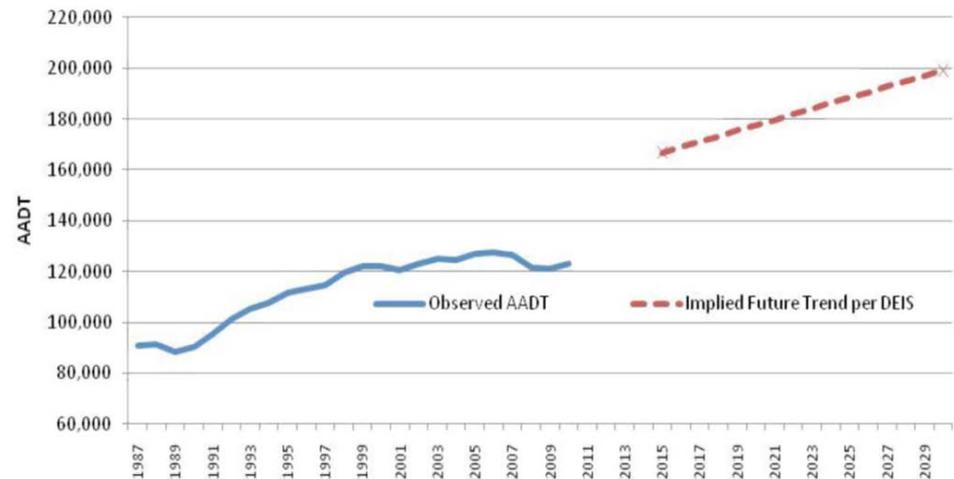
# Summary of the Consultants' Findings



- ▶ Portland Metro's 2002 long-term employment projections, which were relied upon for the 2008 DEIS, are very outdated
- ▶ Traffic counts on the I-5 and I-205 bridges have not grown at the rates predicted in the 2008 DEIS

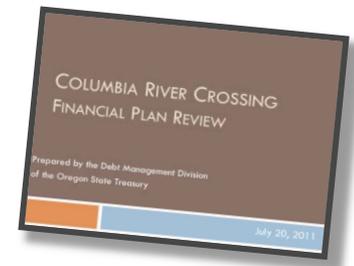
Socioeconomic Data	Source		
	Metro	Moody's	Global Insight
<b>Households</b>			
2005	767,000	805,000	815,300
2030	1,134,100	1,240,000	1,180,500
Growth	48%	54%	45%
<b>Population</b>			
2005	1,906,600	2,074,400	2,072,300
2030	2,853,900	3,142,700	2,977,800
Growth	50%	51%	44%
<b>Employment</b>			
2005	1,032,200	987,200	987,200
2030	1,691,900	1,262,100	1,292,200
Growth	64%	28%	31%

Actual vs. Projected I-5 Bridge Traffic  
Average Annual Daily Trips



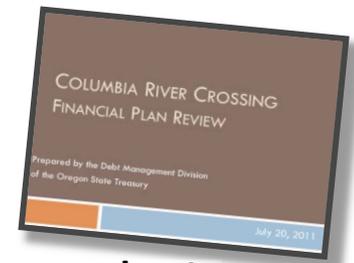
# Summary of the Consultants' Findings

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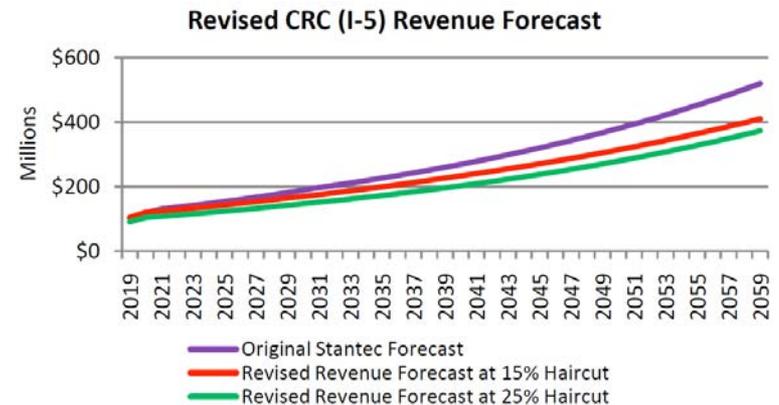
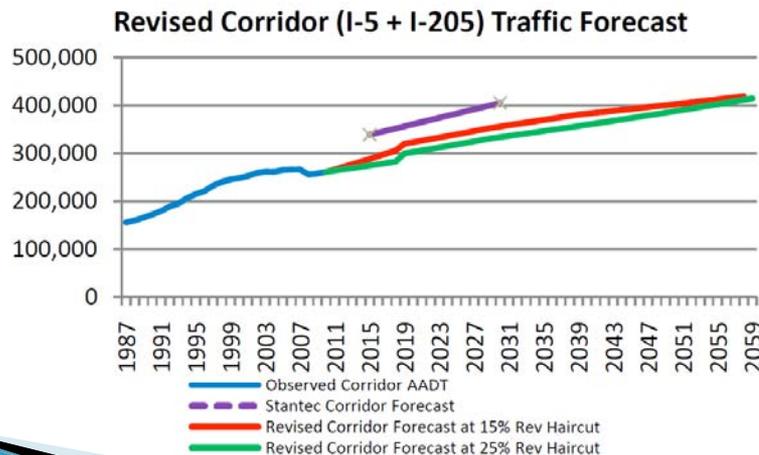


- ▶ Both firms recommend that the CRC lower its baseline traffic and toll revenue forecasts in recognition of the unanticipated depth of the recent recession and the resulting impact on Portland Metro's long-term employment and traffic growth trends
- ▶ For planning purposes, it was suggested that the CRC assume that projected annual gross toll revenues will be somewhere between 15% to 25% lower than the baseline forecast assumed at the time the 2008 DEIS was adopted

# Next Steps in Refining the CRC Traffic and Toll Forecast Model



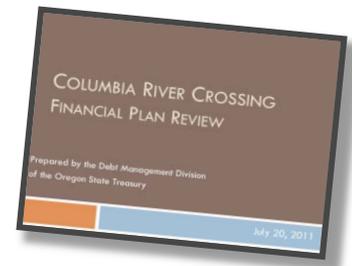
- ▶ The key difference between OST’s two consultants was their assumption regarding the likely shift in traffic to the I-205 bridge upon tolling of the new I-5 bridge
- ▶ The original Stantec forecast assumed the new I-5 bridge would still “capture” 45% - 47% of traffic in the overall corridor
  - For each 1% reduction in the I-5 bridge “capture” rate, our consultants’ estimate that gross toll revenues drop by approximately 2%



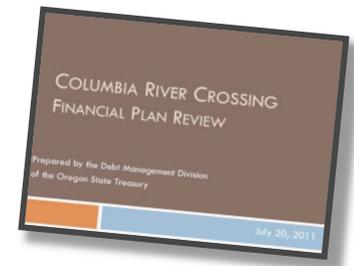
# Next Steps in Refining the CRC Traffic and Toll Forecast Model

(continued)

- ▶ An investment grade study that incorporates the latest forecast of long-term employment trends and examines the impact of tolling on bridge users of different income levels will allow the CRC to narrow and refine projected I-5 toll revenues prior to the initial sale of bonds in FY 2015

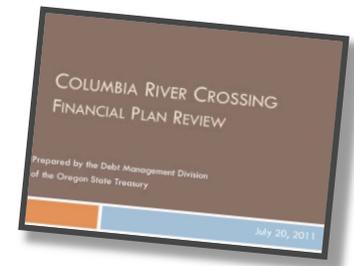


# Impact of Lowering the I-5 Bridge Toll Revenue Forecast on the CRC Finance Plan



- ▶ All else being equal, a 15% reduction in gross toll revenues reduces the amount of proceeds that can be generated for the project through sale of state-backed G.O. toll bonds by 18.5%, or approximately \$240 million compared to the CRC's original finance plan
- ▶ The percentage differential between the reduction in revenues vs. project proceeds is due to certain annual and periodic fixed costs associated with operation and maintenance of the I-5 toll bridge that will need to be funded regardless of overall traffic levels
- ▶ At a 25% toll revenue reduction, estimated project proceeds are reduced by 31% or approximately \$407 million

# Other Bond Structuring Considerations Impacting CRC Project Financing

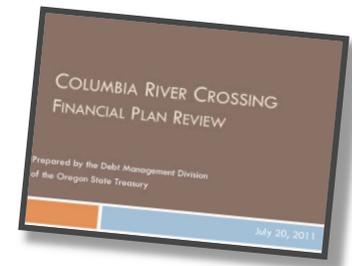


- ▶ The original CRC finance plan envisioned that State-backed GO bonds would be “back-loaded” (i.e. structured with ascending annual debt service linked to ascending toll revenues over time), with the following assumptions:
  - I-5 bridge traffic would grow annually by 1.3%
  - Toll rates would increase annually by 2.5%
- ▶ Based on Washington’s experience with toll revenue shortfalls on the Tacoma Narrows project, Washington State Treasurer McIntire is now requiring WSDOT to use more conservative revenue growth assumptions on all new state bond tolling projects

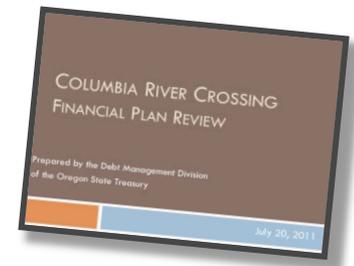
# Other Bond Structuring Considerations Impacting CRC Project Financing

(continued)

- ▶ Eliminating the toll escalation assumption from the CRC financing model reduces the risk of toll revenue shortfalls, but also reduces the amount of toll bond proceeds that can be generated by approximately \$318 million
- ▶ When combined with the impacts of the aforementioned 15% - 25% potential reduction in projected toll revenues, CRC toll bond proceeds are estimated to be \$468 to \$598 million lower than predicted in the 2008 DEIS



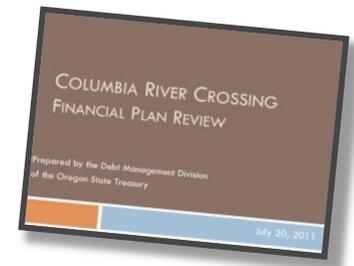
# Potential Solutions to the CRC Funding Gap



- ▶ Pre-Completion Tolling
  - CRC has estimated that pre-completion tolling of the I-5 bridge could generate up to **\$200 million** in additional revenue for the project
- ▶ TIFIA Loan
  - The Transportation Infrastructure Finance and Innovation Act (TIFIA) established a Federal program that provides direct loans to surface transportation projects of national and regional significance
  - TIFIA loans provide competitive interest rates and flexible repayment terms (no interest payments are required during construction, up 35 years for repayment upon project completion, and debt service coverage of 1.1x revenues on a subordinate basis to the states' G.O. bonds)

# Potential Solutions to the CRC Funding Gap

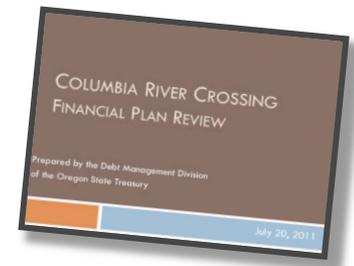
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## ▶ TIFIA Loan

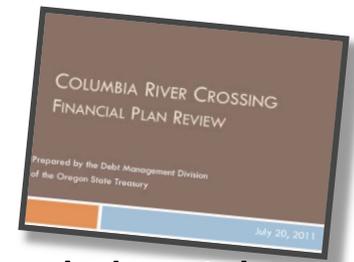
- A TIFIA loan of \$704 to \$833 million, repaid from I-5 toll revenues, would substantially reduce the need for state-backed G.O. bonds and limit the exposure of each state's General Fund to the project, while restoring project funding by **\$194 to \$238 million**
- Given the increasingly competitive nature of the TIFIA loan approval process, the CRC team – if it opts to pursue this option - should initiate efforts to secure US DOT and Congressional approval for this loan at the same time it seeks other Federal funding commitments for the project

# Potential Modifications to CRC's Plan of Finance



Sources of Funds	Original CRC Plan (\$M)	Combined Impact of Debt Structuring Limitations and Toll Revenue Reductions on CRC Original Plan		Potential Modifications to CRC Plan (\$M)
		At a 25% Revenue Reduction	At a 15% Revenue Reduction	
<b>Federal Funds</b>				
• Discretionary Highway Funds	\$400	\$400	\$400	\$400
• New Starts Transit Grant	\$850	\$850	\$850	\$850
<b>State Funds</b>				
• Equity Contribution (50% per state)	\$900	\$900	\$900	\$900
• State-backed (G.O.) Toll Bonds (50% per state)	\$1,300	\$702	\$832	\$190 – 230
• TIFIA Loan (secured by tolls & back-up pledge of ODOT/WSDOT revenues)	---	---	---	\$704 – 833
• Pre-completion Tolling (est.)	---	---	---	\$200
<b>TOTAL</b>	<b>\$3,450</b>	<b>\$2,852</b>	<b>\$2,982</b>	<b>\$3,244 – 3,413</b>

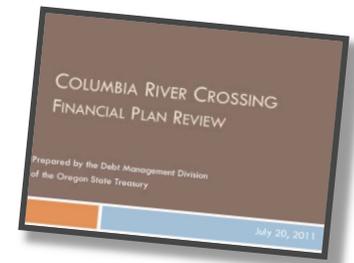
# Conclusions



- ▶ CRC's construction cost estimating process appears solid, with contingency plans being developed for project phasing depending upon the finalized estimate of project costs and the availability of various state and federal funds
- ▶ Key assumptions in the traffic and toll revenue forecast used in the 2008 DEIS are now outdated, given the unanticipated depth of the recent recession
  - Completion of an investment grade study over the next two years will allow the CRC to refine its estimate of anticipated I-5 bridge toll revenues over time, which in turn will allow us to refine the amount of toll bond proceeds that can be generated for the project

# Conclusions

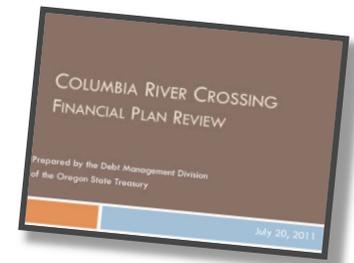
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- ▶ The combined impact of Washington State Treasurer McIntire's requirement that CRC adopt a more conservative toll bond debt structure and the potential toll revenue reduction of 15% – 25% is a \$468 to \$598 million reduction in projected CRC funding resources
- ▶ Pre-completion tolling of the I-5 bridge and the shift from state-backed GO toll bonds to a primarily TIFIA loan funding approach may be able to restore between \$394 to \$438 million in CRC funding, while greatly reducing the financial risk to both states' General Funds and credit ratings

# Conclusions

(continued)



- ▶ Securing Federal funding for the project remains on the critical path, with an important vote on taxes to fund annual transit operating costs coming up this fall in Clark County
- ▶ Both state-generated and federal transportation funds can be leveraged to provide Oregon's \$450 million equity contribution to the CRC project
- ▶ The CRC's governance plan must include a robust toll-setting mechanism to assure that all toll-related debt service is paid in full each year through toll revenues

# Funding



# Key principles of CRC funding plan

- **Single, integrated plan leverages additional federal dollars**
- **Three primary funding sources:**
  - Federal
  - Oregon and Washington
  - Tolling
- **Conservative tolling assumptions**
- **Compete for federal funds**

# Targeted CRC construction funding sources

<b>FTA New Starts</b>	<b>\$850 million</b>
<b>Federal discretionary highway funds</b>	<b>\$400 million</b>
<b>States of Oregon and Washington</b>	<b>\$900 million</b>
<b>Toll bond and loan proceeds</b>	<b>\$900 million - \$1.2 billion</b>

# Construction sequencing

- **Plan in development**
- **Tied to cash flow**
- **Factors in logical order of construction and engineering realities**

# Funding plan next steps

- **Authorization of CRC as “eligible toll facility”**
- **Washington and Oregon legislative approvals of state funding contributions**
- **Application for federal TIFIA loan**
- **Meet requirements for New Starts transit grant**
  - Application to enter transit final design spring 2012

# Governance



# Governance

## WSDOT, ODOT, state DOJs and CRC are identifying key legal issues to inform future intergovernmental agreements

- Reviewing existing bi-state agreements, decision matrix and supporting documents
- Reviewing state authority for Oregon and Washington
- Developing proposals and options for governing structure for toll setting and administration
- Developing proposals for debt allocation including identification of needed legislation
- Identifying issues that may need resolution through new state or federal legislation

# Next steps on governance

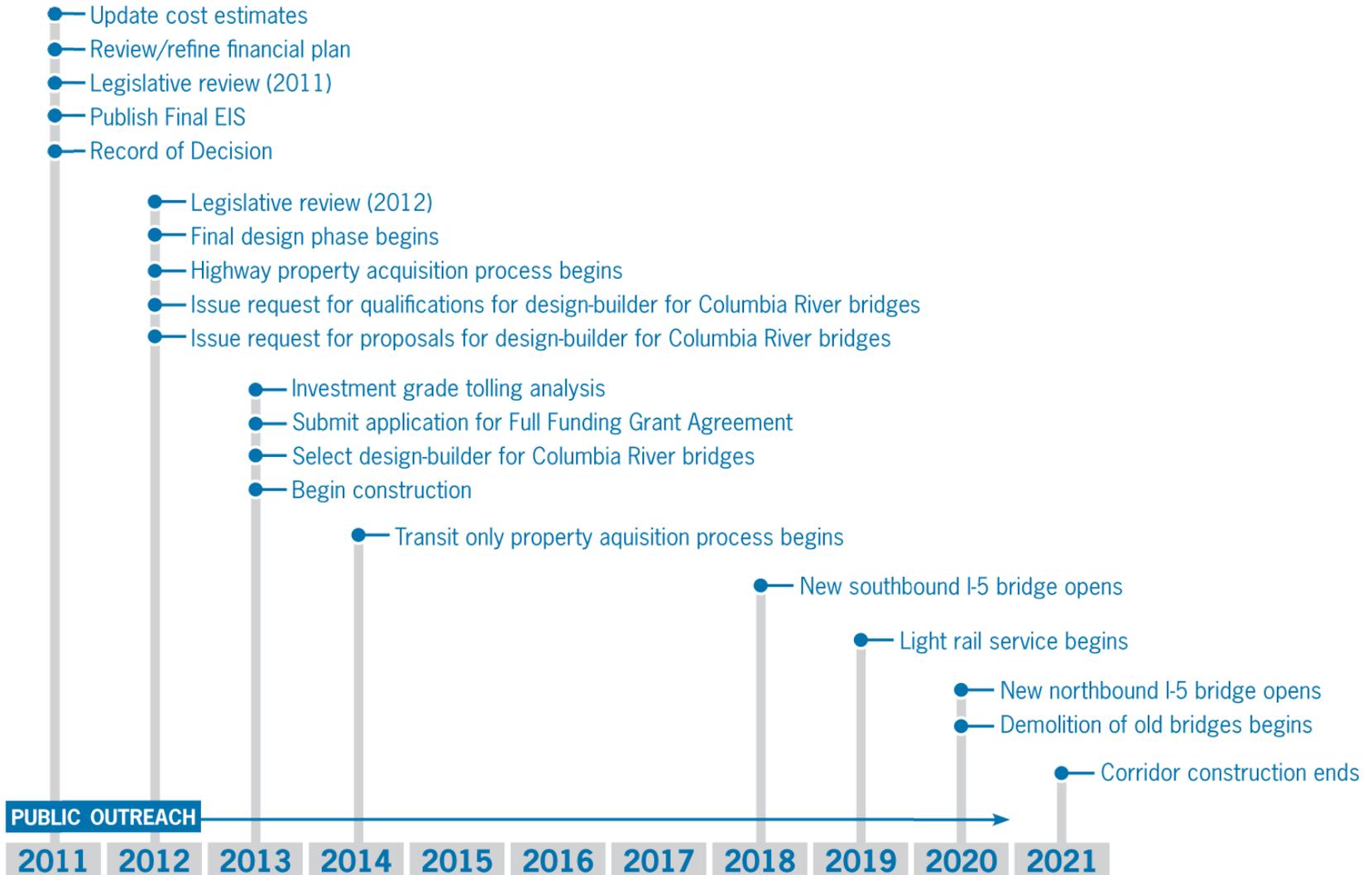
- **Development and adoption of a governance structure is essential for toll-setting decisions and the issuance of bonds for the CRC project.**
- **The two Departments of Transportation will work with their respective Governors, Treasurers, Legislatures and Commissions to establish a governance structure for the project.**

# Next steps



# Project development schedule

## Project Schedule



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