

East Link Project Update

5/26/11



Today's Presentation

- Preferred Alternative Video
- Project Cost and Schedule Status
- Review of City of Bellevue's B7-R Study
- Next Steps

Preferred Alternative



Connecting Seattle, Mercer Island, Bellevue and Redmond via I-90

Cost Estimating Methodology

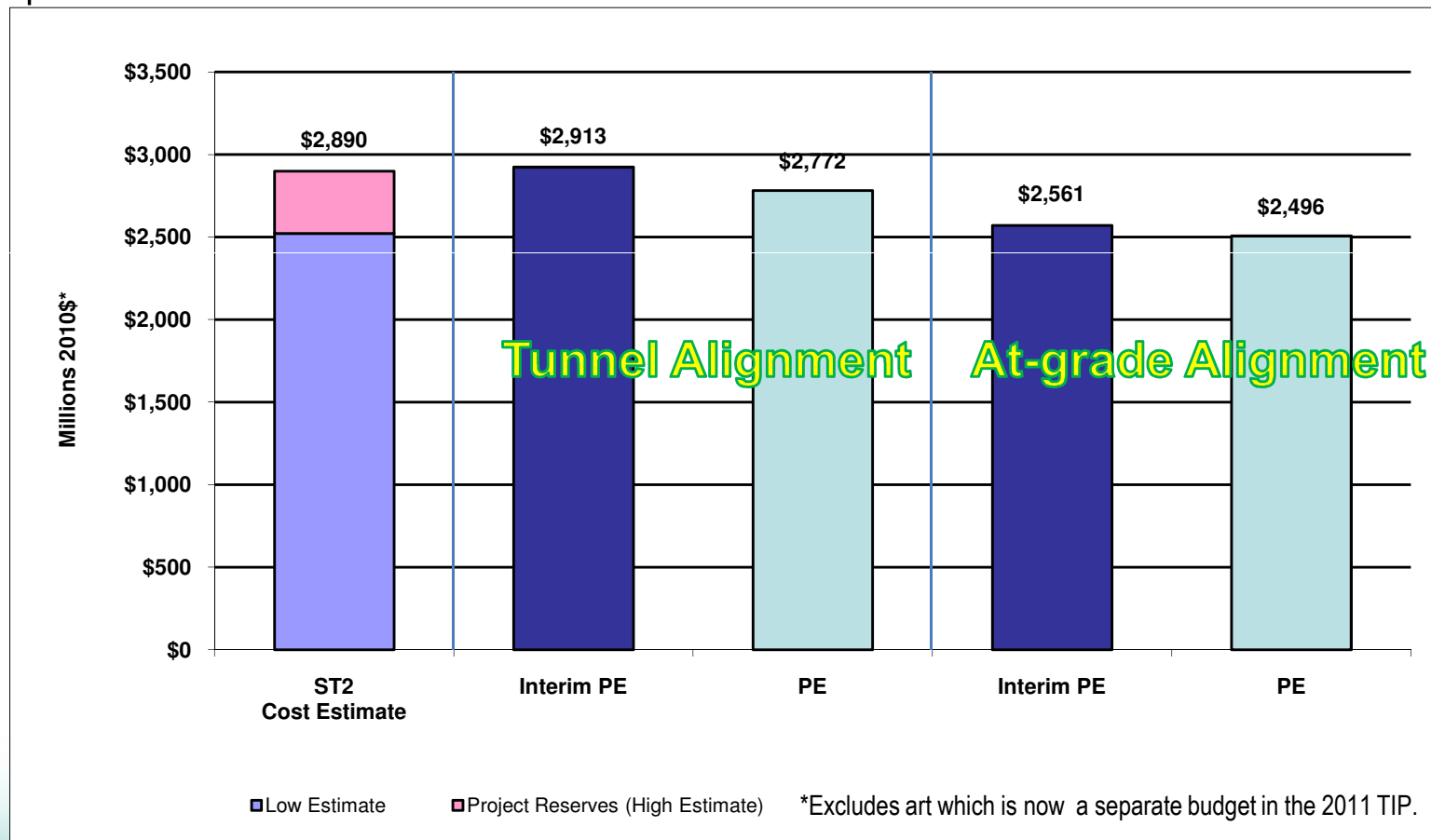
- **Scope Definition**
 - Preferred Alternative with at-grade or tunnel in downtown Bellevue
 - Preliminary Engineering (PE) level of engineering design completion, approximately 30%
- **Cost Estimate Prepared by Design Consultant**
 - 2010\$; Bottom-up construction cost estimates (crew based)
 - Detailed Cost Breakdown Structure (WBS)
 - Local cost information and from ST's LRT projects

Scope Changes Reduce Cost

↓ 112th alignment into downtown Bellevue

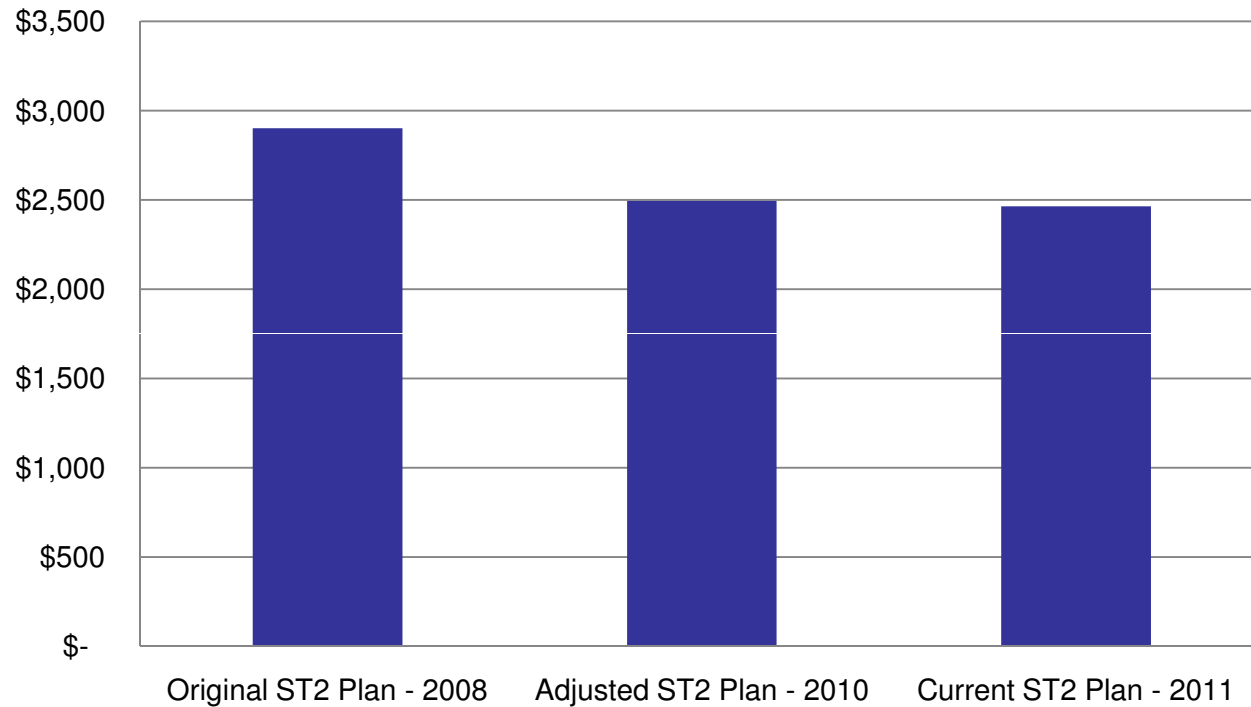
↓ SR 520 alignment in Overlake

↑ 120th station retained cut



But Finance Plan Declining As Well

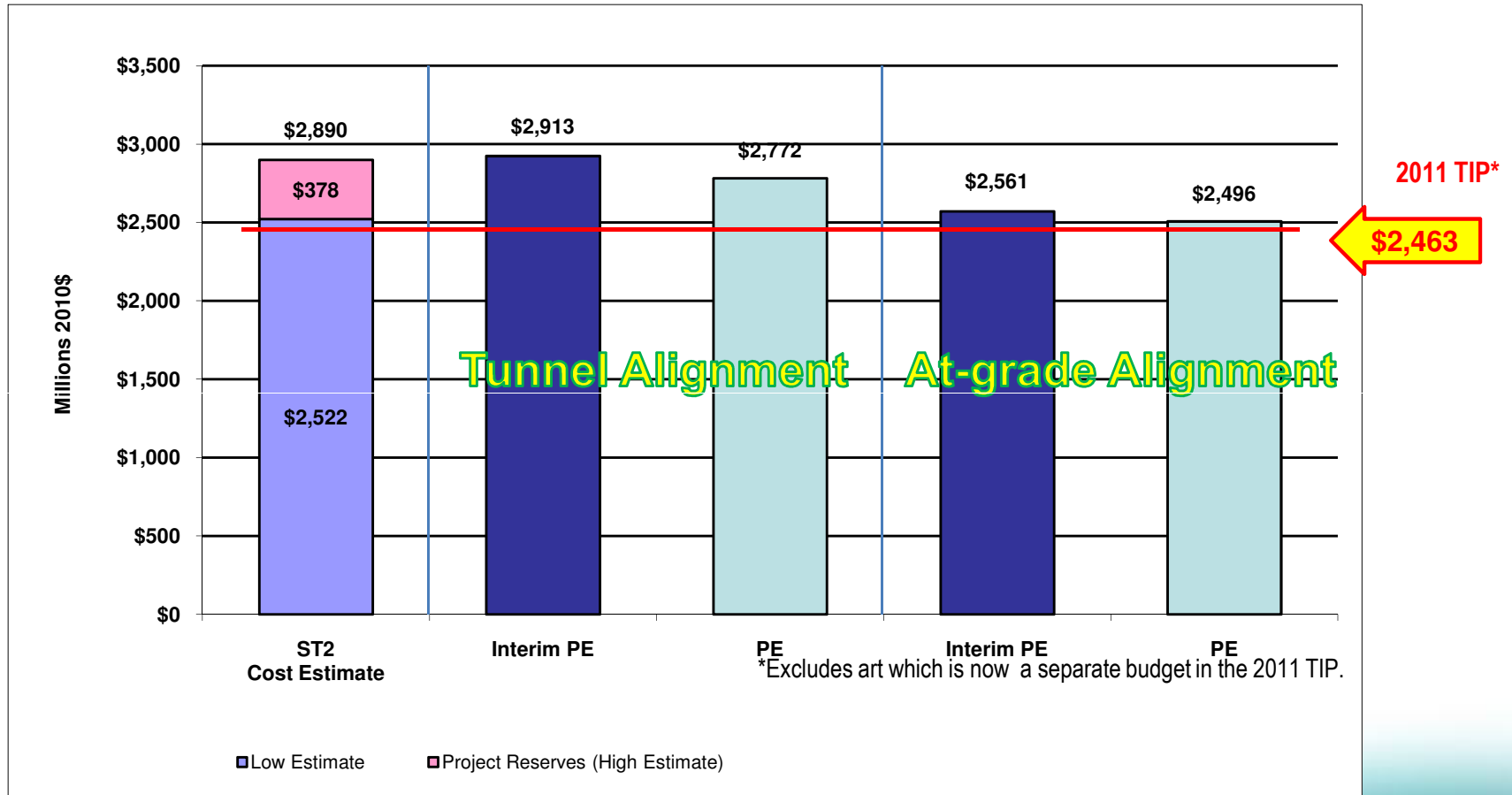
**East Link Finance Plan
(2010\$)**



- 15% Project Reserves
- 5% ROW & Soft Costs

- OTC to Redmond PE
- Start (1% constr.)

Leaving a Project Shortfall



Shortfall at Preliminary Engineering (2010\$)

Project with at-grade	\$2,496 million	Project with tunnel	\$2,772 million
2011 TIP	2,463 million	2011 TIP	2,463 million
Shortfall	\$33 million	Shortfall	\$309 million

Tunnel shortfall \$276 million greater than at-grade shortfall

Design Options Studied at Board Direction

- **3rd Entrance with BTC tunnel station**
 - \$48 million increase in construction cost
- **Pedestrian Connection from Hospital Station to 116th and NE 10th**
 - \$1.5 million increase in construction cost
- **Mercer Island Parking**
 - Expecting proposal from City next week per M2010-44 to “Evaluate proposed partnerships by the City ... for new park-and-ride capacity....”

Schedule Review Methodology

- **Construction Durations Prepared by Design Consultant**
 - Preferred Alternative
 - Representative Work Breakdown Structure (WBS)
- **Representative Master Project Schedule Prepared by Project Controls**
 - Includes environmental, design, ROW, systems-integration, and testing phases
 - Assumes typical permitting durations

Decision Making Process Impacting the Schedule

	Activity	ST2 Plan Assumptions	Current Forecast
✓	Publish Draft EIS	Fall 2008	Fall 2008
✓	Publish SDEIS	N/A	Fall 2010
	Prepare Final EIS	2009-2010	2009-2011
	Board Adopts Project	Summer 2010	Summer or Fall 2011
	FTA Issues Record-of-Decision	Summer 2010	Fall 2011

Revenue Service Impacts*

	ST2 Plan Assumptions	At-grade Forecast	Tunnel Forecast
Bellevue	4 th quarter 2020	Bellevue now same schedule as Overlake	
Overlake	4 th quarter 2021	1 st quarter 2022	1 st quarter 2023

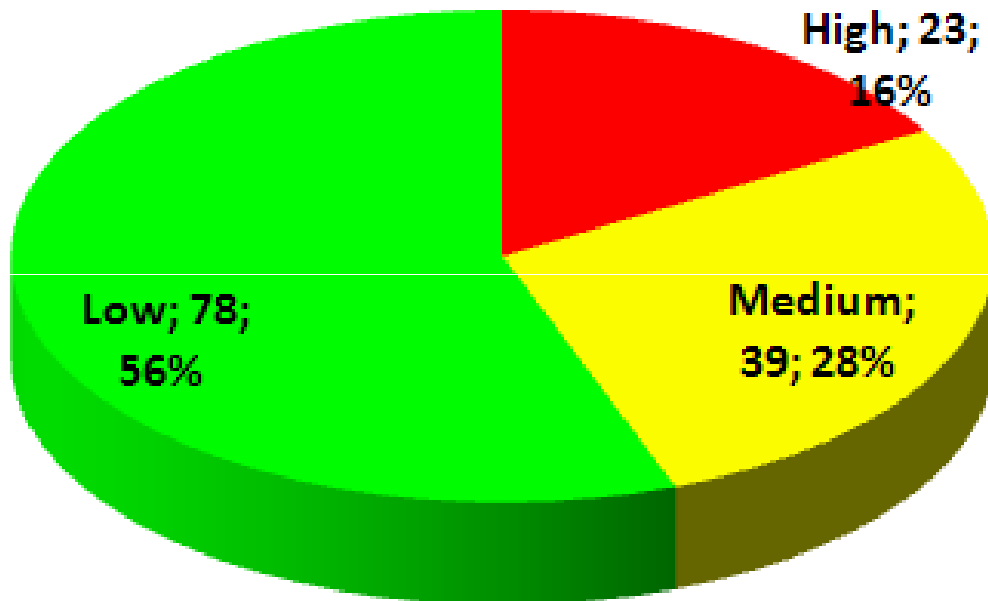
*Assuming most likely date for FTA record-of-decision is in the fall 2011

Risk Analysis Methodology

- **Project team**
 - Developed initial list of project risks
- **Risk facilitator**
 - Met with project team to review design and risks
 - Reviewed draft list of risks with independent engineers
 - Finalized risk register
- **Risk modeling**
 - Examines probability and range of cost and schedule impacts from events on the risk register
 - Simulates multiple potential project outcomes

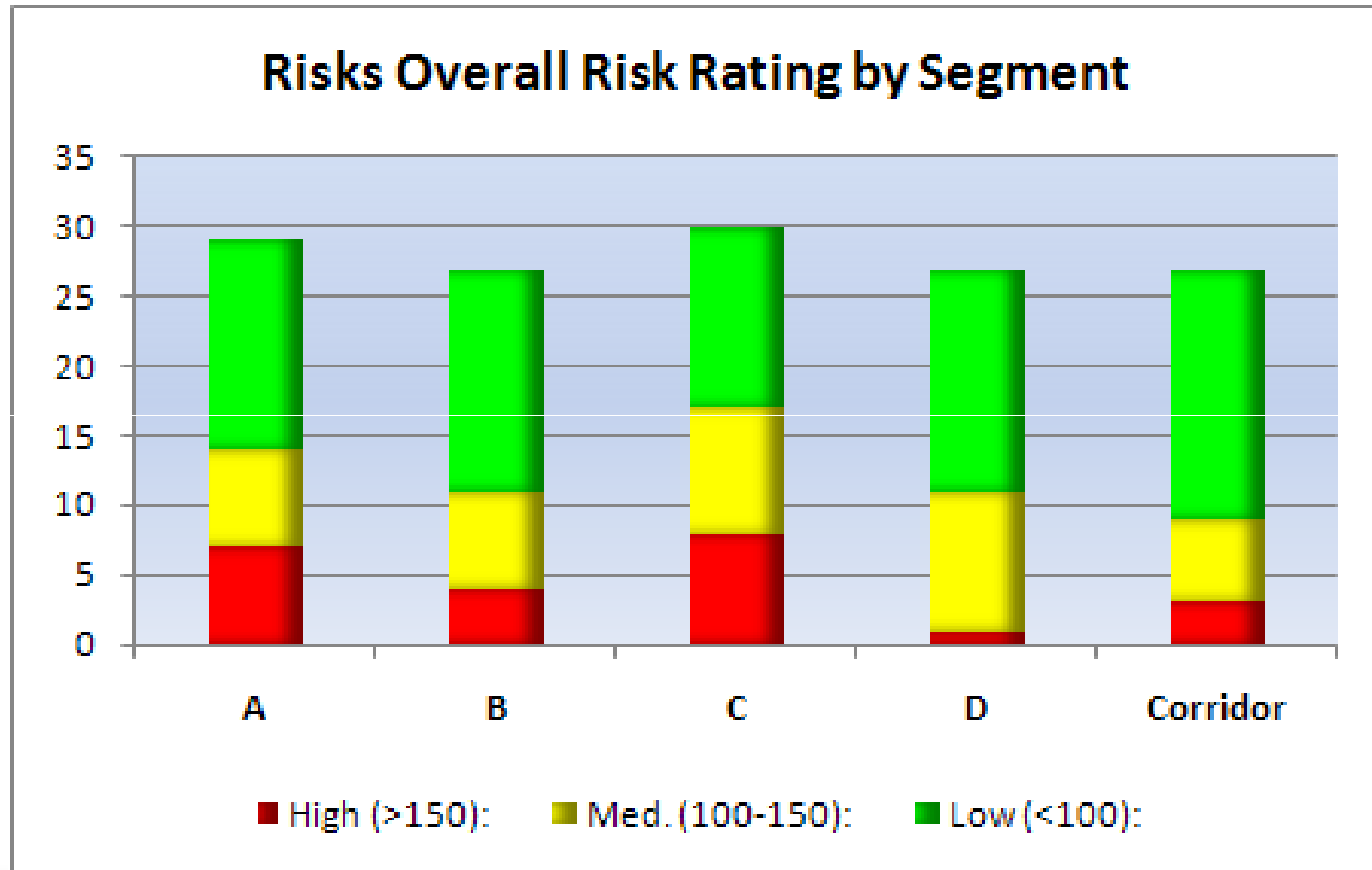
Risk Register

East Link Risk Register - Risks Status



- 140 items identified
- Ratings reflect combination of likelihood, cost, and schedule impact

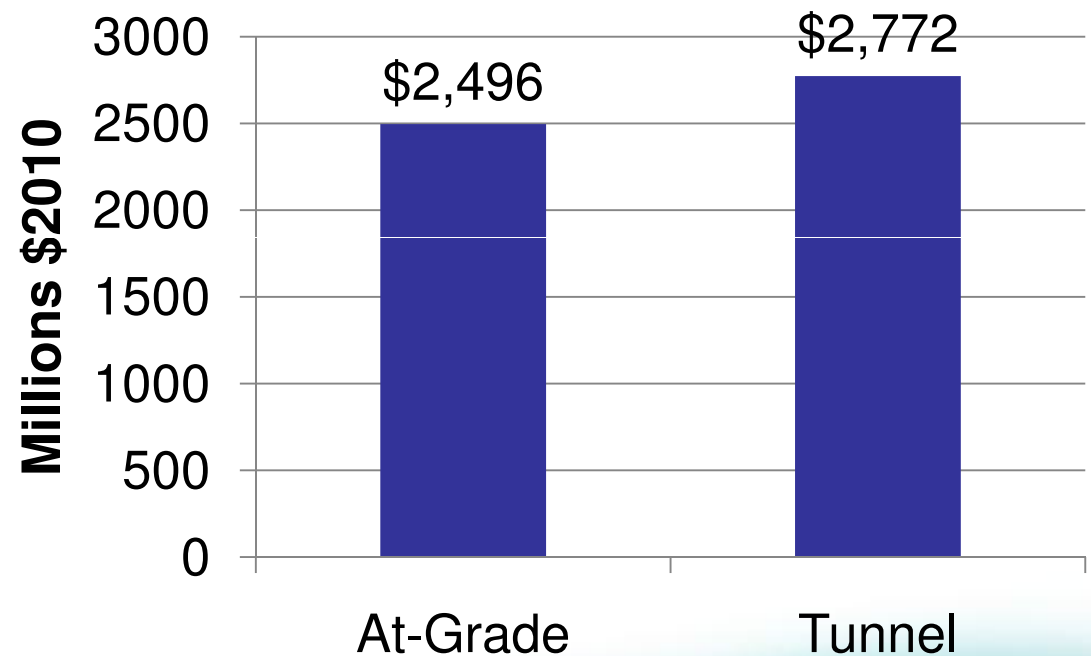
Risk Register by Segment



Cost Risk Results

- Confidence level in the PE cost estimate ranges between 65-75%
- Staff needs continued Board support with scope management

PE Cost Estimates



Schedule Risk Results

- Opportunities may exist to shorten construction schedule but there is risk of continued delay in completion of the decision making process
- Most likely outcome is that current impacts to the revenue service dates will persist or lengthen

Confirms PE Schedule Forecast

	ST2 Plan Assumptions	At-grade Forecast	Tunnel Forecast
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Financial Affordability

- **PE estimate \$33 - \$309 million higher than agency's long-term financial plan**
- **Financial Plan updated this summer, including new revenue forecast**
- **Board financial toolbox**
 - Reduce project scope
 - Local contributions (City of Bellevue)
 - Subarea cost and grant allocations
 - Effects of schedule extensions
 - Public private partnerships (e.g. Spring District)
 - Other new revenue sources

Recent City of Bellevue Studies

- Peer review of Alternative B7 environmental analysis
- South Bellevue Station Alternative Location Analysis
- Analysis of potential wetland impacts on Mercer Slough
- Peer review of noise analysis for 112th Ave. light rail
- Memo on impacts of light rail alignments on salmon
- Sound and Vibration Peer Review of the SDEIS
- B7 Revised Analysis
 - Interim Report (May 2011) / Final Phase 1 Report (July 2011)
 - Future phases?
- C9T and C11A Independent Cost Estimate (on-going)

City of Bellevue's B7 Revised

- Consultant scope to compare B7R to the SDEIS B7/C9T



A-2 Station at Enatai neighborhood



Key Findings in City's Report

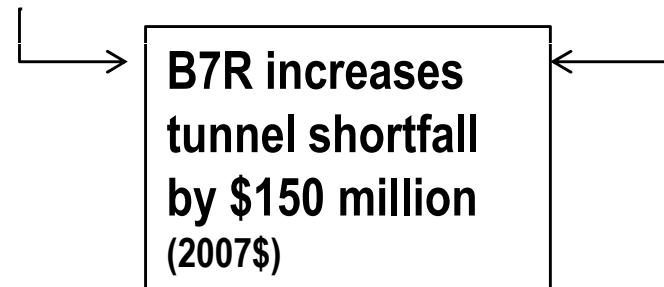
- Improves ridership over B7/C9T
- \$10 million higher cost than B7/C9T
- “Greater environmental impacts” than B7/C9T
- Assumption of shared freight and light rail tracks in former BNSF corridor did not significantly reduce costs (\$4 million)
- WSDOT concerns with the Mercer Slough crossing identified but not addressed

Comparison to the ST Preferred Alternatives (B2M-C9T and B2M-C11A)

- **B7-R ridership analysis confirms the value of a park-and-ride on Bellevue Way**
- **B7-R would have fewer residential displacement and park impacts but more wetland, habitat, and noise impacts**
 - B7-R would also require closures of the Bellevue Way interchange during station construction
- **B7R would be significantly more expensive than the preferred alternatives**

Cost Comparison in 2007\$*

Alternative	B2M-C11A	B2M-C9T	B7-C9T	B7R-C9T
Combined B-C cost	\$1,015 million	\$1,265 million	\$1,405 million	\$1,415 million
Difference from At-grade	-	\$250 million	\$390 million	\$400 million


B7R increases tunnel shortfall by \$150 million (2007\$)

*Based on low end of conceptual engineering cost estimates in the SDEIS (Table 2.2) and Arup estimate of B7R vs. B7-C9T

B7-R Cost Estimate

- **Quantifies cost saving opportunities but only qualitatively treats risks**
 - Risk with station over the Bellevue Way interchange, Mercer Slough crossing, and permitting salmon bearing creek impacts
 - Some suggested savings are mutually exclusive or not ‘apples-to-apples’
- **Mercer Slough crossing identified as a major risk**
 - Yet cost estimate includes \$27 million savings as compared to the SDEIS
- **BNSF shared use corridor design not consistent with railbanking or King County trail easement**
- **Refinement of ROW impacts along BNSF/I-405 carries risk**
 - Assumes that Greenbaum’s property could be a partial acquisition even though alignment impacts furniture store
 - Railbanking design option excluded a likely full acquisition at south end of BNSF corridor

East Link Next Steps

- Finance begins analysis of affordability
- Final EIS published summer 2011
- Potential third party agreements
 - Potential agreement with City of Bellevue needs to address scope management and permitting risk as well tunnel funding
- Project decision

Questions?

