SR 520 Bridge Replacement and HOV Project

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House Transportation Committee
September 11, 2008

Washington State Department of Transportation

Presentation Agenda

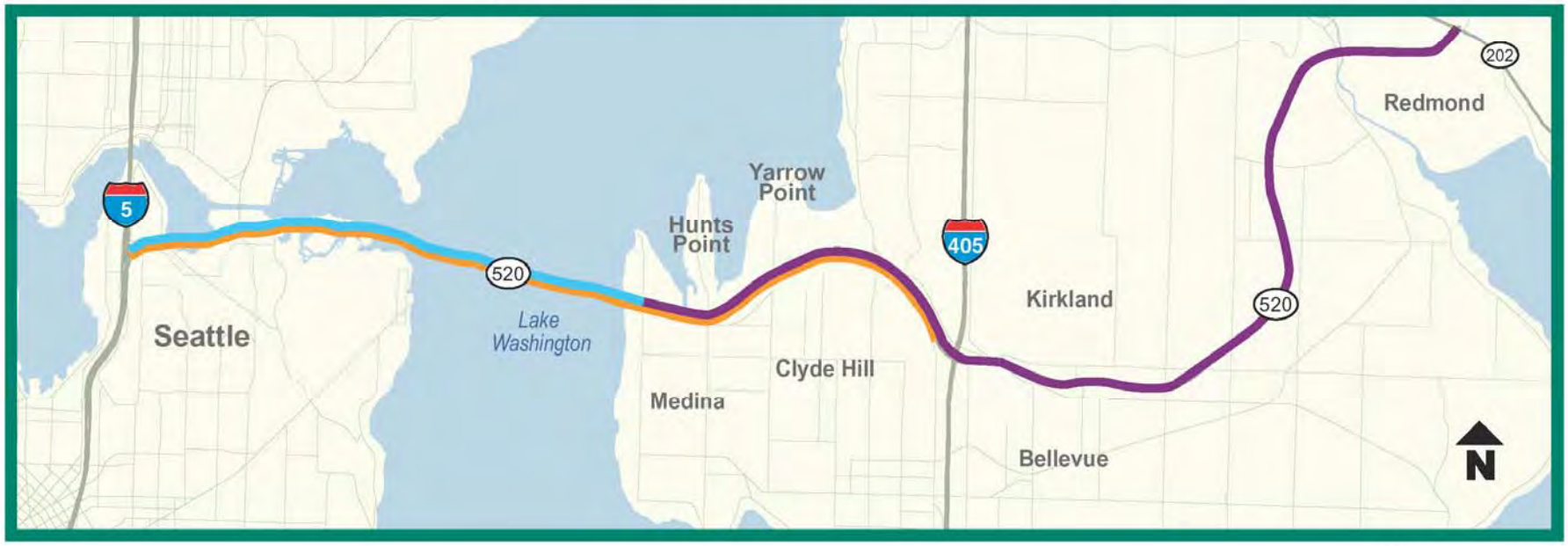
- SR 520 Corridor Program
- Accelerated Improvements to Address ESHB 2878
- West Side Mediation Process
- SR 520 Expenditures by Fiscal Year
- Tolling Implementation Committee

Program Description

The SR 520 Corridor Program will replace the Portage Bay and Evergreen Point bridges and improve existing roadway between I-5 in Seattle and SR 202 on the Eastside.

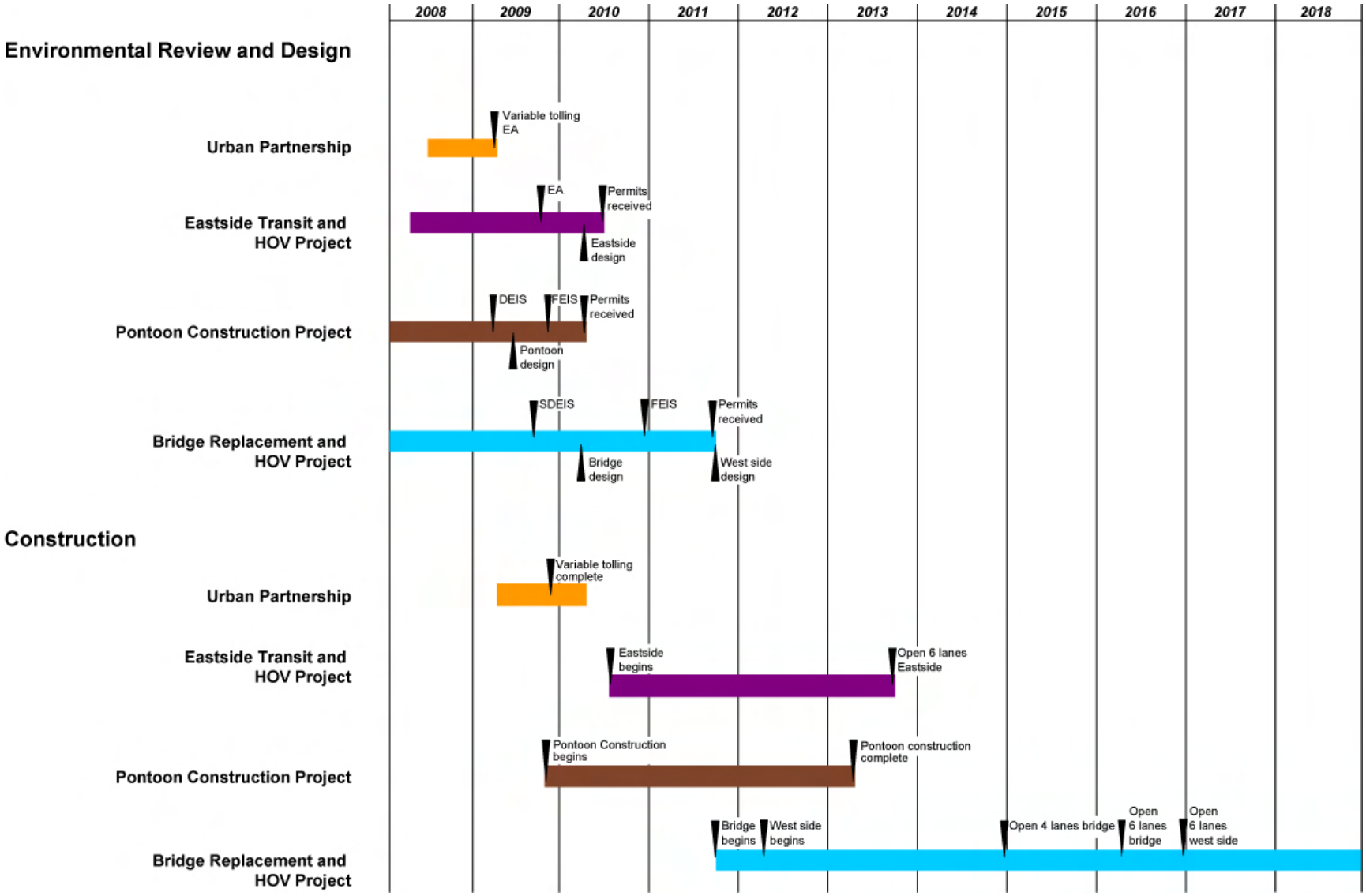
The SR 520 Corridor Program includes four projects:

- **Urban Partnership** – congestion management tolling from I-5 to I-405.
- **Eastside Transit and HOV** – Evergreen Point Road to SR 202.
- **Pontoon Construction Project** – pontoons for catastrophic failure planning.
- **Bridge Replacement and HOV Project** – I-5 to just east of Evergreen Point Road.



Program area map.

SR 520 Program Schedule



Eastside Early Implementation

ESHB 2878

"For the period of pre-construction tolling on the SR 520 bridge, the department shall develop improvements of traffic flow from the eastern Lake Washington shoreline to the 108th Avenue NE in Bellevue including:

a) Near-term, low-cost enhancements which relocate the high-occupancy vehicle lanes to the inside of the alignment; and

b) A plan for an accelerated improvement project for the construction of median flyer stops, reconfiguration of the interchanges, addition of direct access ramps, community enhancement lids, and pedestrian/bike path connections.

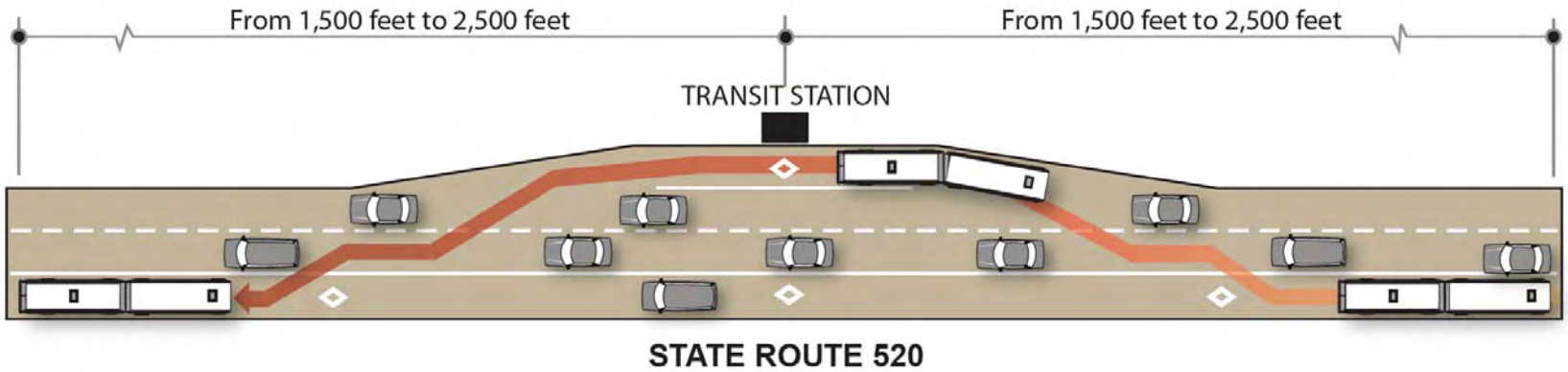
The department shall report to the joint transportation committee by September 1, 2008, on the short-term low-cost improvement plans and include in their budget submittal to the office of financial management a proposal for the accelerated improvement project."

Accelerated Improvements to Address ESHB 2878

- Deliver benefits to drivers and transit riders during pre-construction tolling through Urban Partnership Agreement
  - Technology
  - Transit
  - Telecommuting
- Accelerate construction of corridor improvements
  - Approval of Eastside Transit and HOV Project received from FHWA
  - Travel time benefits for transit and carpools earlier than planned
  - Enhances public safety on the east side of 520

Accelerated Improvements to Address ESHB 2878

- Relocating the HOV lanes early would have benefits and impacts
  - Drivers would have direct access to general purpose lanes from ramps
  - Carpools would see their travel times decrease by 1 minute
  - Transit riders would see their travel times increase by 8 minutes



  - Delays for transit would affect 3,500 riders during the morning commute
    - 1,140 riders coming from I-405
    - 950 riders coming from Redmond
    - 1,400 riders coming from Bellevue/Kirkland area (not using I-405)
  - Delays equal 450 hours of transit delay during the morning commute

Eastside Transit and HOV – Accelerated Improvements to Address ESHB 2878: Recommendation

- Eastside Transit and HOV Project

- Benefits
  - Constructs the necessary infrastructure to support relocating the HOV lane to the inside east of Evergreen Point
  - Relocates the HOV lane to the inside for the full length of the SR 520 corridor
  - Provides the necessary corridor width improvements to facilitate inside HOV lanes and improved ramp operations
  - Improves corridor safety with improvements in design
  - Continue to seek improved traffic management through the State TDM offices and the Urban Partnership opportunities
  - Full benefits open to the eastside commuter by the year 2014

Eastside HOV and Transit Improvements Project

West Side Mediation Process

September

- Continue to hold Supplemental Draft EIS Technical Work Sessions.
- Begin work on Project Impact Plan.

October

- Continue work on Project Impact Plan.

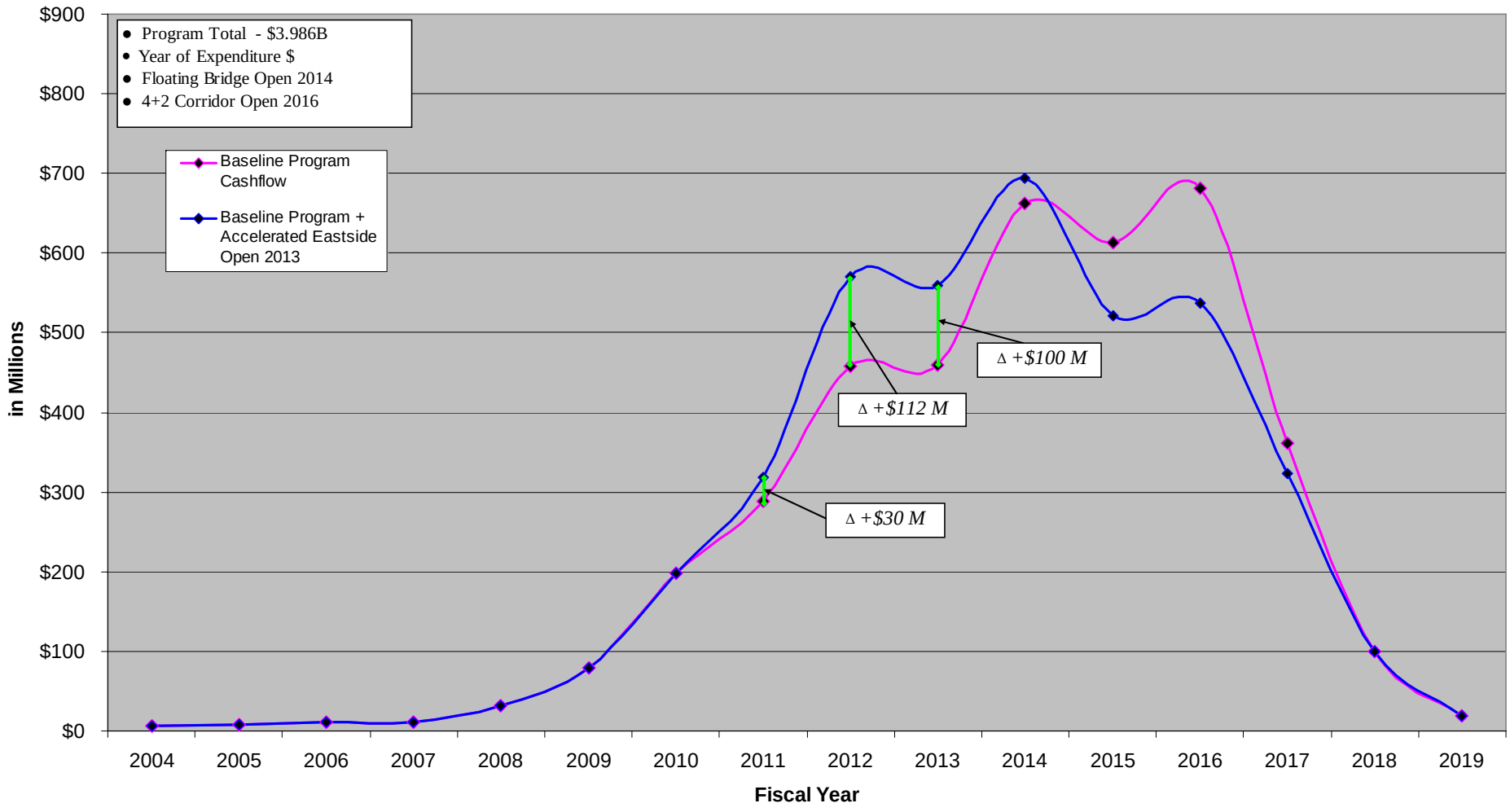
November

- Share preliminary analysis.
- Continue to work on Project Impact Plan.

December

- Submit Project Impact Plan.

SR 520 Expenditures by Fiscal Year



Tolling Implementation Committee charge

- Evaluate
  - Traffic diversion from 520 to other routes, including 522, and recommend mitigation
  - Advanced tolling technology
  - New applications of emerging technology to better manage traffic

- Explore opportunities to partner with the business community to reduce congestion and contribute financially

- Confer with mayors and city councils

- Conduct public work sessions and open houses to solicit citizen views on tolling the existing 520 bridge, tolling both 90 and 520, providing incentives for transit and carpooling, implementing variable tolling

- Provide a report to the governor and legislature in January 2009

Tolling Implementation Committee charge - engagement

Engage citizens on the following topics:

- Funding a portion of the 520 replacement project with tolls on the existing bridge
- Funding the 520 replacement project and improvements on the 90 Bridge with a toll paid by drivers on both bridges
- Providing incentives and choices for transit and carpooling
- Implementing variable tolling as a way to reduce congestion

What evaluation criteria are being considered?

- The “reasonableness” of the tolls
- How much bridge funding is generated
- The diversion effects of tolls – people can choose to:
  - Stay on 520 but switch to carpool or transit
  - Stay on 520 but switch to different times
  - Travel on different routes
  - Choose a different destination – don’t have to cross the lake
- The performance of the bridge (potential congestion relief)
- The impacts tolls may have on low income bridge users

How much funding for a new 520 might come from tolls?

Preliminary results – more work needed

	Total Contribution from Tolls
Scenario 1. Start tolling 520 in 2016	~$835 million
Scenario 2. Start tolling 520 in 2010	~$900 million
Scenario 3. Start tolling the new 520 and 90 in 2016	~$2,300 million
Scenario 4. Start tolling 520 in 2010, and 90 in 2016	~$2,500 million

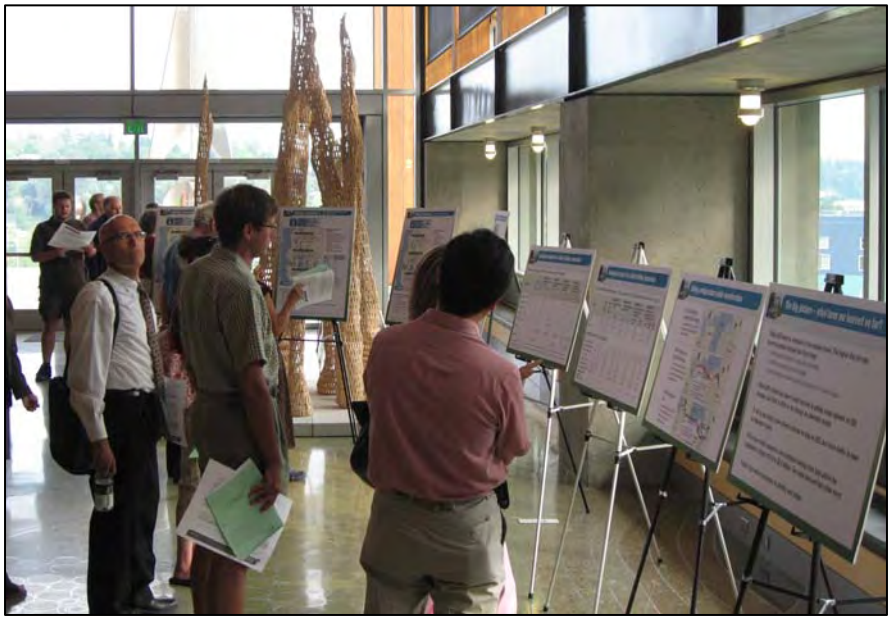
Financing assumptions:
Term: 30-year, general obligation/motor vehicle fuel tax bonds
Minimum Debt Service: Annual revenue 1.25 times debt service
Interest Rate: 5.9% for current interest bonds, 6.4% for capital appreciation bonds

Public Involvement in Tolling Outreach Process

Total attendees at public meetings: Approx. 300

Total comments received to date: Over 1100

Additional briefings/consultation with mayors and jurisdictions around Lake Washington.



What are some of the themes and questions we heard at open houses and in public comments?

- General acknowledgement of need to replace the bridge and tolling as a part of funding strategy
- Concerns: toll rates, particularly for lower income households
  - diversion to alternate routes
- Support for added corridor transit service, possibly funded from tolls
- Questions: how long would tolls be in place?
  - how would tolls be paid if you don't have a transponder?
- Questions about model results—are gas prices factored in?
- Suggestions for additional scenarios to examine, such as
  - toll both bridges starting in 2010
  - different toll rates on 520 and I-90
  - flat rate tolls

What happens next?

- Select new scenarios
- Analyze scenarios

  --travel modeling, revenue analysis, financial capacity
- Report back to public on results
- Conduct web and telephone surveys
- Develop mitigation recommendations for traffic diversion
- Compile summary of comments
- Develop report for governor and legislature

Questions?

For more information visit the project website at:

www.wsdot.wa.gov/projects/SR520Bridge

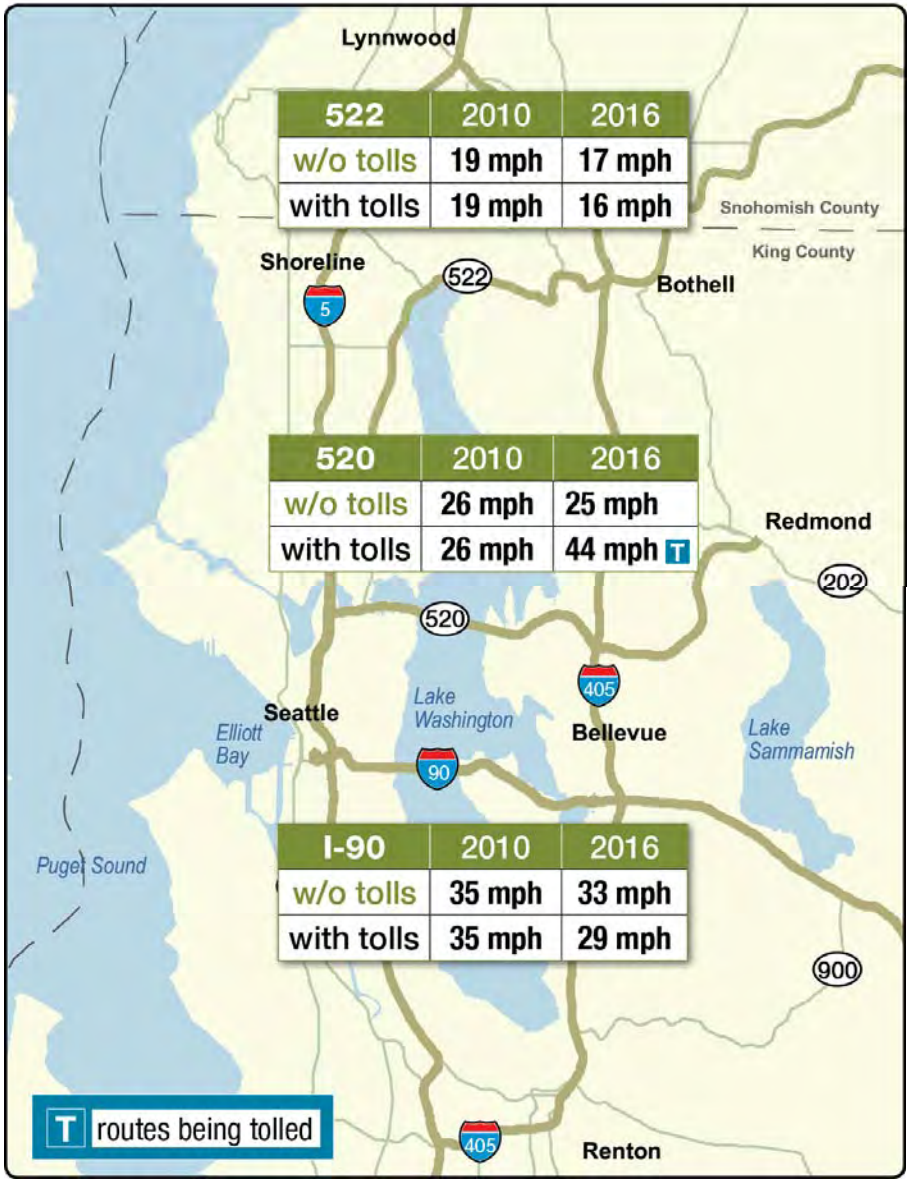
UCO Deputy Administrator Ron Paananen at (206) 464-1221
or

Contact Program Director Julie Meredith at (206) 770-3500

Tolling Implementation Committee

Background/Backup Slides

Scenario 1. Start tolls on new 520 in 2016



Time of day	Toll you'd pay (each direction) 2007$*
Morning (5–9 AM)	$3.05
Mid-day (9 AM–3 PM)	$2.10
Afternoon (3–7 PM)	$3.80
Evenings (7–10 PM)	$1.95
Nights (10 PM–5 AM)	$0.90
Weekends	Varies from $.75 to $1.50
Segment	Varies from $0.40 to $0.80
Estimated funding	*~$835 million*

Scenario 1. Start tolls on new 520 in 2016

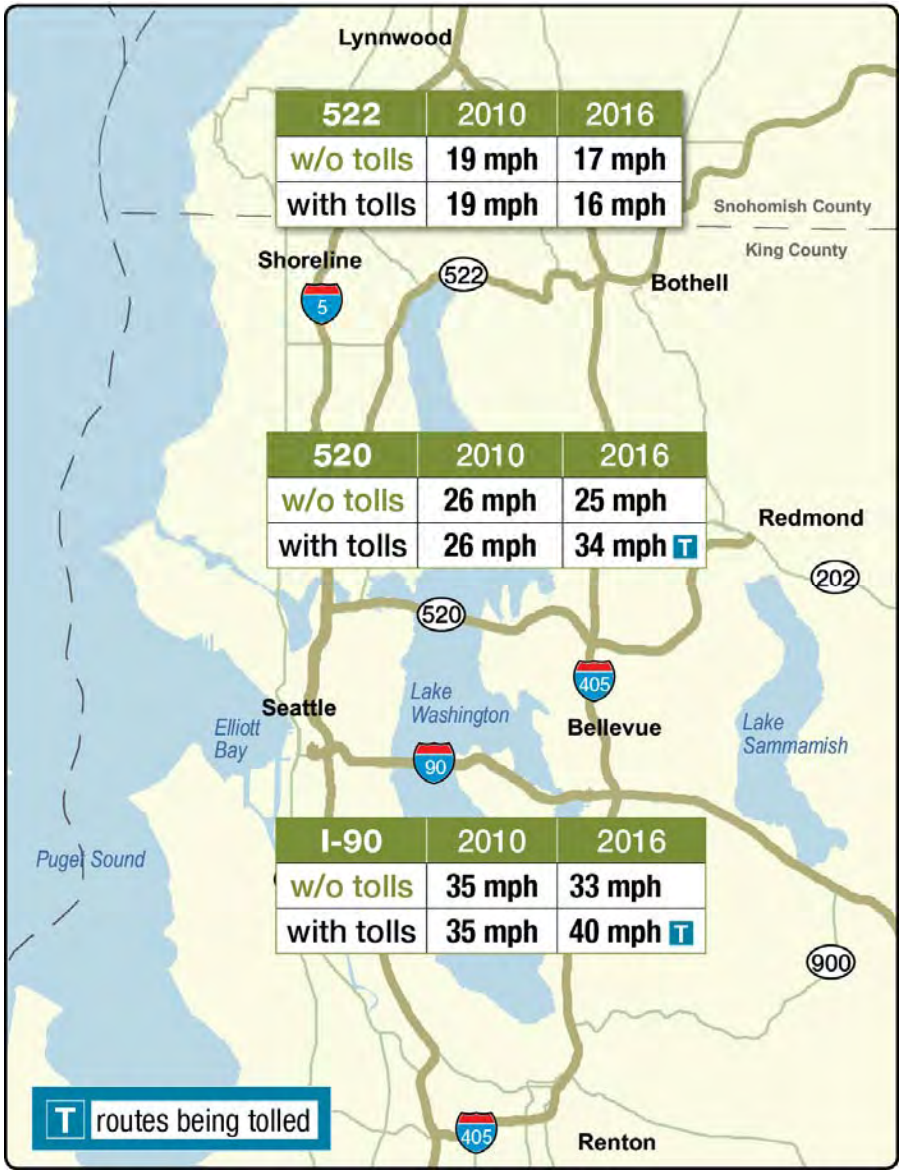
Estimated change in weekday 520 travel

Daily percent change from predicted vehicle volumes with no tolls	
Choose carpool and transit on 520	2.7%
Choose a different time on 520	1.1%
Choose a different route	5.8%
Choose a different destination (no lake crossing)	15.5%

Estimated change in weekday vehicle traffic on 90, 522, 5 and 405

	2016 without toll	2016 with toll
90 (Mid-span)	155,200	162,100
522 (Kenmore at NE 61st)	52,000	52,800
I-5 (Downtown Seattle)	316,500	318,300
405 (Downtown Bellevue)	261,100	261,200

Scenario 3. Start tolling the new 520 bridge and 90 bridge in 2016



Time of day	Toll you'd pay (each direction) 2007$*
Morning (5–9 AM)	$2.60
Mid-day (9 AM–3 PM)	$2.10
Afternoon (3–7 PM)	$3.25
Evenings (7–10 PM)	$1.95
Nights (10 PM–5 AM)	$0.90
Weekends	Varies from $0.75 to $1.50
Segment	Varies from $0.40 to $0.75
Estimated funding	*~$2.3 Billion*

Scenario 2. Start tolling 520 bridge in 2010

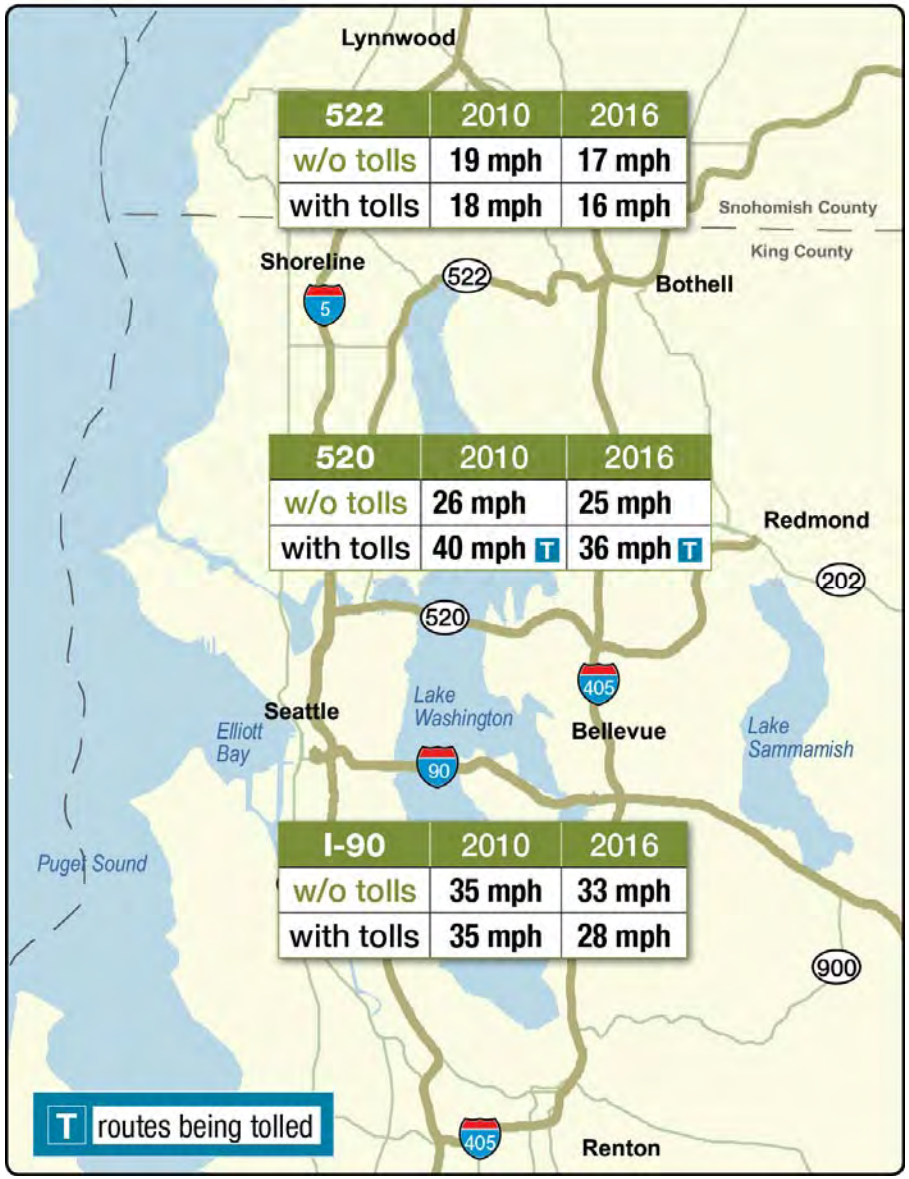
Estimated change in weekday 520 travel

Daily percent change from predicted vehicle volumes with no tolls	2010	2016
Choose carpool and transit on 520	3.2%	1.8%
Choose a different time on 520	2.0%	1.7%
Choose different route	7.2%	6.1%
Choose a different destination (no lake crossing)	1.7%	8.3%

Estimated change in weekday vehicle traffic on 90, 522, 5 and 405

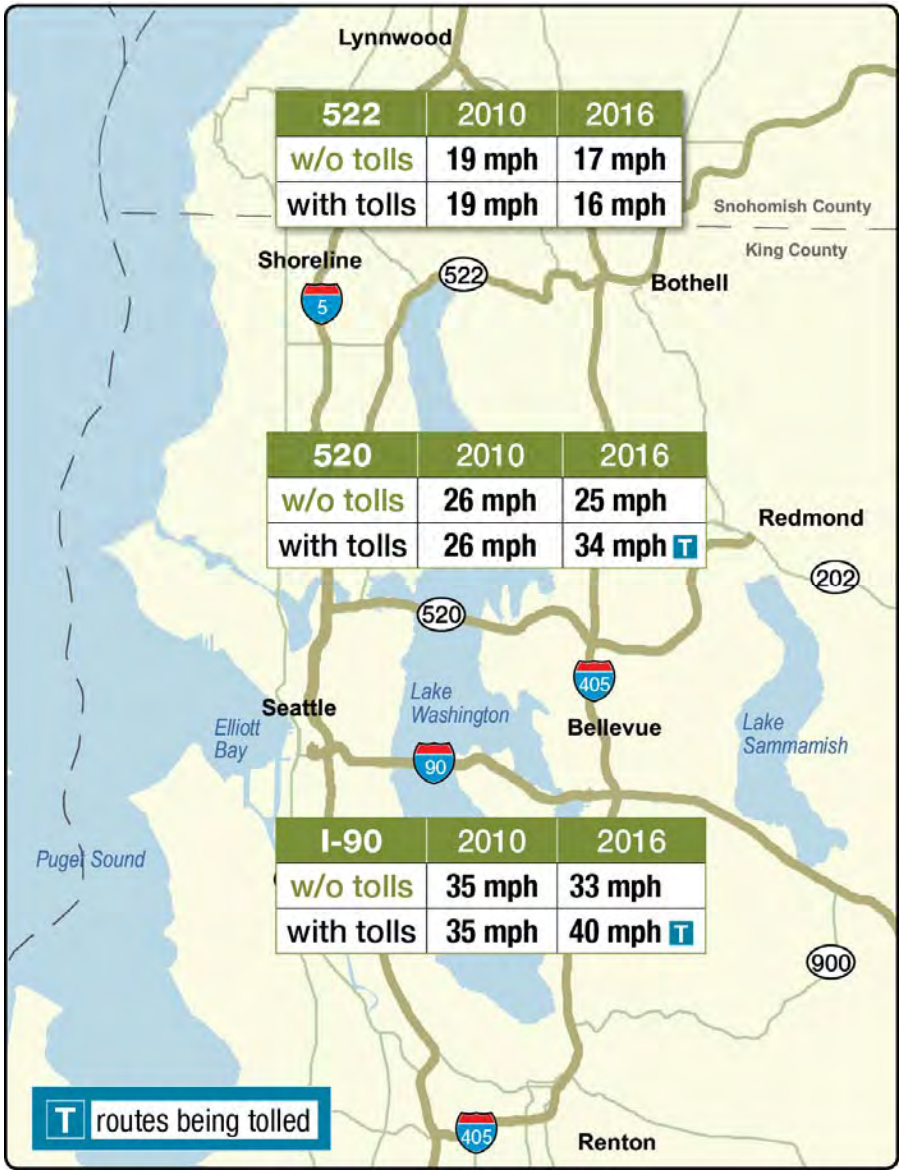
	2010 with no tolls	2010 with tolls	2016 with no tolls	2016 with tolls
90 (Mid-span)	168,700	175,300	155,200	162,200
522 (Kenmore at NE 61st)	50,000	51,400	52,000	52,900
I-5 (Downtown Seattle)	313,800	318,100	316,500	317,700
405 (Downtown Bellevue)	247,600	249,900	261,100	261,500

Scenario 2. Start tolling 520 bridge in 2010



Time of day	Toll you'd pay (each direction) 2007$*
Morning (5–9 AM)	$2.15
Mid-day (9 AM–3 PM)	$1.05
Afternoon (3–7 PM)	$2.95
Evenings (7–10 PM)	$1.30
Nights (10 PM–5 AM)	$0.75 (no charge until 2016)
Weekends	Varies from $0.75 to $1.50
Segment	No charge
Estimated funding	*~$900 Million*

Scenario 3. Start tolling the new 520 bridge and 90 bridge in 2016



Time of day	Toll you'd pay (each direction) 2007$*
Morning (5–9 AM)	$2.60
Mid-day (9 AM–3 PM)	$2.10
Afternoon (3–7 PM)	$3.25
Evenings (7–10 PM)	$1.95
Nights (10 PM–5 AM)	$0.90
Weekends	Varies from $0.75 to $1.50
Segment	Varies from $0.40 to $0.75
Estimated funding	*~$2.3 Billion*

Scenario 3. Start tolling the new 520 bridge and 90 bridge in 2016

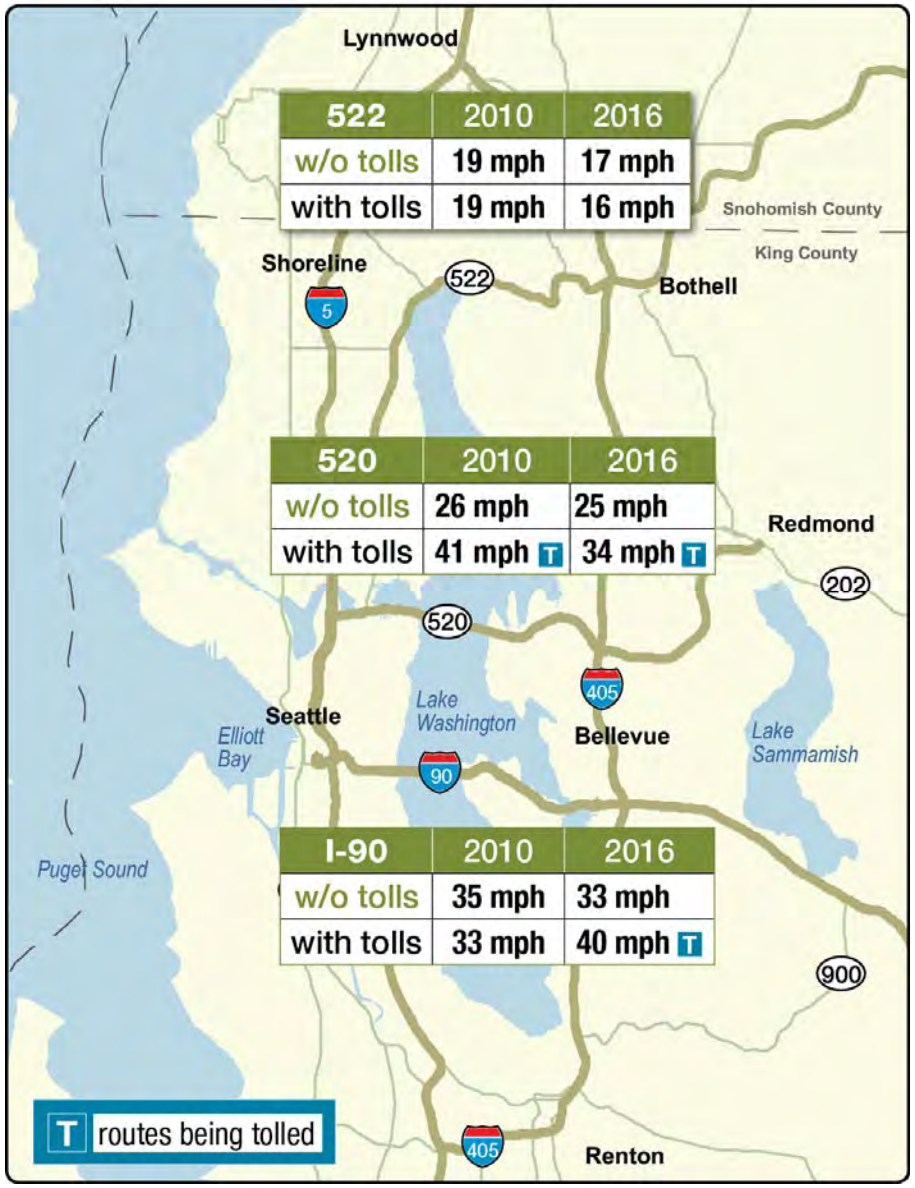
Estimated change in weekday 520 travel

Daily percent change from predicted vehicle volumes with no tolls	2016 on 520	2016 on 90
Choose carpool and transit on 520	2.6%	2.0%
Choose a different time on 520	0.5%	1.1%
Choose different route from 520 and 90	4.6%	
Choose a different destination (no lake crossing)	22.3%	

Estimated change in weekday vehicle traffic on 90, 522, 5 and 405

	2016 with no tolls	2016 with tolls
90 (Mid-span)	155,200	136,200
522 (Kenmore at NE 61st)	52,000	54,700
I-5 (Downtown Seattle)	316,500	316,400
405 (Downtown Bellevue)	261,100	259,400

Scenario 4. Start tolling the 520 bridge in 2010, and 90 bridge in 2016



Time of day	Toll you'd pay in 2010 on 520 (one-way) 2007$*	Toll you'd pay in 2016 on 520 and 90 (each direction) 2007$*
Morning (5–9 AM)	$2.60	$2.60
Mid-day (9 AM–3 PM)	$2.10	$2.10
Afternoon (3–7 PM)	$3.25	$3.25
Evenings (7–10 PM)	$1.95	$1.95
Nights (10 PM–5 AM)	No charge	$0.90
Weekends	$0.75 - $1.50	$0.75 - $1.50
Segment	No charge	$0.40 - $0.75
Estimated funding	*~$2.5 Billion*	

Scenario 4. Start tolling the 520 bridge in 2010, and 90 bridge in 2016

Estimated change in weekday 520 and 90 travel

Daily percent change from predicted vehicle volumes with no tolls	2010 on 520	2016 on 520	2016 on 90
Choose carpool and transit	3.6%	2.6%	2.0%
Choose a different time	1.6%	0.5%	1.1%
Choose different route	7.5%	3.9%	
Choose a different destination (no lake crossing)	19.6%	22.3%	

Estimated change in weekday vehicle traffic on 90, 522, 5 and 405

	2010 with no tolls	2010 with tolls	2016 with no tolls	2016 with tolls
90 (Mid-span)	168,700	174,000	155,200	136,200
522 (Kenmore at NE 61st)	50,000	51,600	52,000	54,700
I-5 (Downtown Seattle)	313,800	319,300	316,500	316,400
405 (Downtown Bellevue)	247,600	249,400	261,100	259,400