

# Alaskan Way Viaduct **REPLACEMENT** PROGRAM



Seattle City Council  
April 8, 2013

## Meeting Overview

- Expert Review Panel.
- SR 99 tolling:
  - ACTT round 1 scenarios.
  - ACTT round 2 scenarios.
  - Next steps.



*Bertha, the SR 99 tunneling machine, arrived in Elliott Bay on April 2 aboard the Jumbo Fairpartner.*

# **Expert Review Panel**

## AWV Expert Review Panel

- The 2011 Legislature directed WSDOT to form an Expert Review Panel to evaluate the key assumptions for the program's schedule, risk and cost estimates.
- The panel is updating work completed by a 2006 Expert Review Panel.
- The Governor, House and Senate transportation committee chairs and the Transportation Secretary selected three members:
  - Dr. Patricia Galloway, P.E., panel chair
  - Robert Goodfellow, P.E.
  - John Rose

# Expert Review Panel Findings 2012

Findings from 2012 report:

- Program is proceeding on schedule and within budget.
- Well managed program with strong implementation practices.
- Work to secure planned funds including tolling and Port contributions.
- WSDOT and the City should complete a binding agreement regarding the management, design and construction of the Alaskan Way surface street.

## Expert Review Panel Findings 2013: Accomplishments

- The ERP identified several Alaskan Way Viaduct Replacement Program successes of the past year. Areas of success included:
  - Delivery of a substantial portion of the South Holgate to South King Street Project.
  - Significant progress in preparing for tunnel boring, including fabrication and testing of the machine.
  - Refining risk and contingency management procedures.
  - Reinforcement of the viaduct.
  - Installment of settlement monitoring equipment and substantial completion of right of way acquisitions.
  - Receipt of Milepost 31 awards.

# Expert Review Panel Findings 2013

Findings from 2013 report:

- Continue work to secure funding sources. Some examples:
  - Port funding agreement.
  - Toll revenue to fund construction.
- Complete WSDOT / City of Seattle agreement outlining roles and responsibilities for surface street projects.
- Continue to manage risk and monitor ambitious project schedule.

## Expert Review Panel Findings 2013

Findings from 2013 report (continued):

- FHWA verified that all federal sources for the project are secured.
- Cost estimate of \$3.1 billion is still valid, based upon Cost Estimation Validation Process (CEVP).
- Reconvene the Executive Oversight Committee.
- Project is well managed by experienced and competent team.

# **SR 99 Tunnel Tolling**

# Advisory Committee on Tolling and Traffic Management

- Committee formed in 2011.
- The committee's scope was established via:
  - Federal Highway Administration-issued Record of Decision.
  - Seattle Department of Transportation and WSDOT Memorandum of Agreement.
  - City of Seattle's resolution 31323.
- The committee will make advisory recommendations on strategies for:
  - Tolling the SR 99 tunnel.
  - Minimizing traffic diversion from the tunnel due to tolling.
  - Mitigating traffic diversion effects on city streets and I-5.

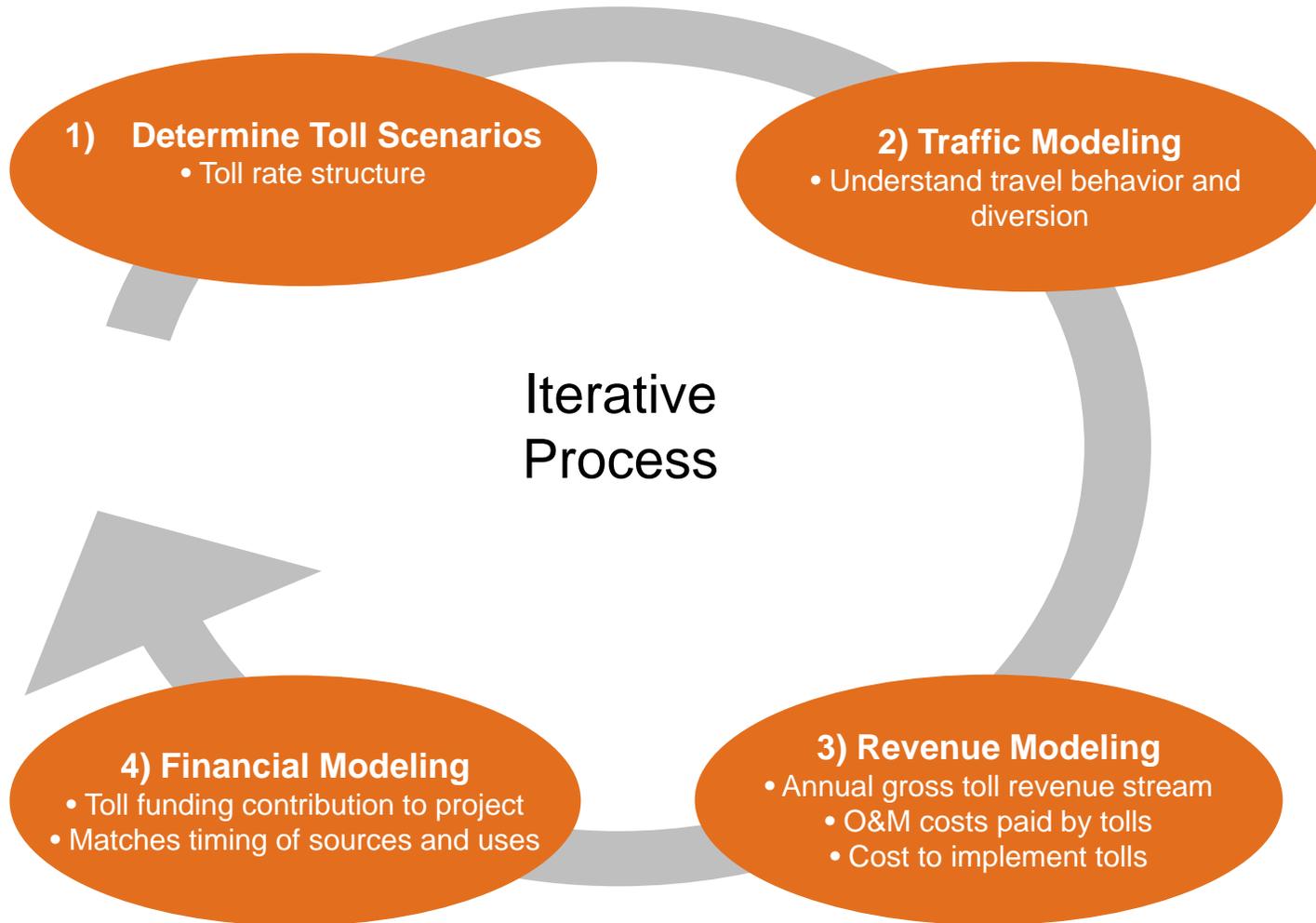
## Guiding Principles

1. Minimize diversion from the tunnel onto city streets.
2. Minimize diversion from the tunnel onto I-5.
3. Mitigate the anticipated adverse effects of traffic diversion.
4. Meet the State's funding obligation for the AWW Replacement Program.
5. Identify funding for mitigation of diversion impacts.
6. Support Seattle's "Complete Streets" policy goals to make city streets function for bicycles, pedestrians, freight, transit and automobiles in strategies that are proposed to mitigate and minimize diversion impacts.

## Guiding Principles

7. Support Seattle's waterfront and Center City policy goals to make the waterfront and downtown an enjoyable place for people to live, work, shop and play.
8. Support and maintain efficient use of city streets and I-5 for transit access into, within, out of and through downtown.
9. Support a vibrant maritime and industrial sector by maintaining efficient use of city streets and I-5 for freight access into, within, out of and through downtown.
10. Ensure that ACTT recommendation(s) provide an effective integrated transportation solution across modes.

# Four-Step Planning Process



## Round One Scenarios Analyzed

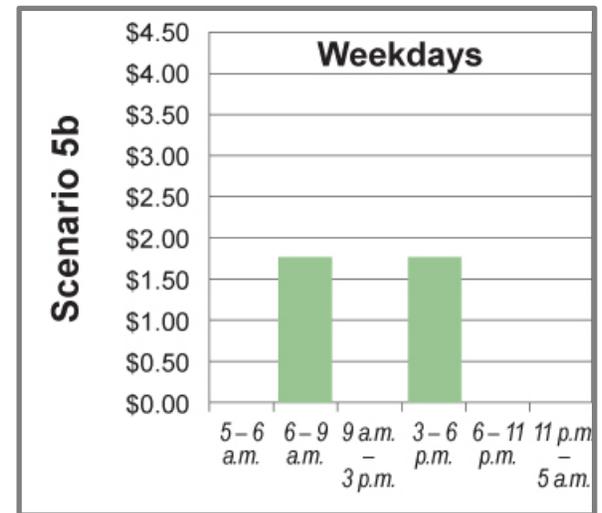
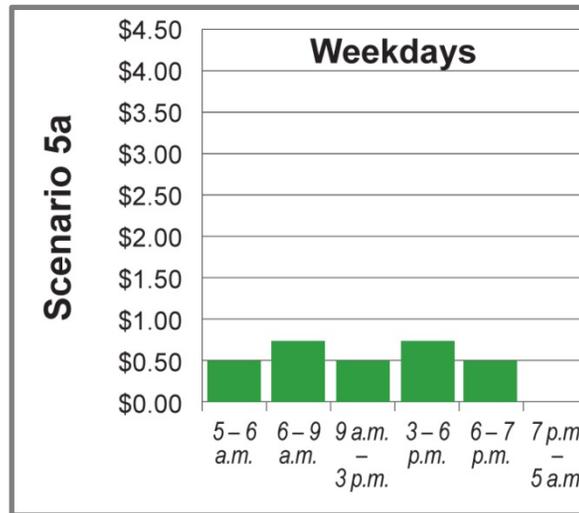
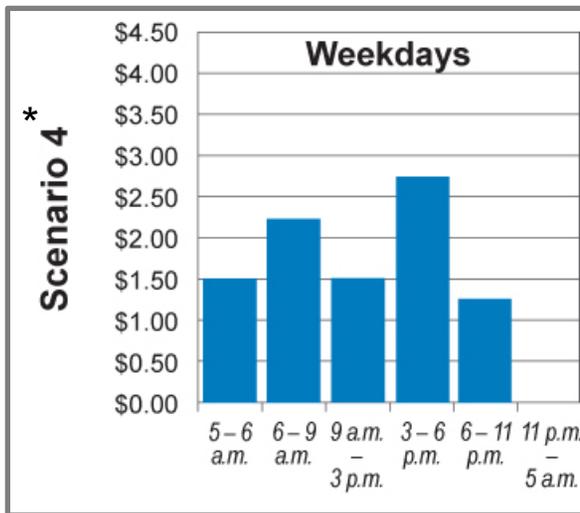
- All scenarios include toll rates that vary by time of day.
- No toll and high toll (\$1 - \$4) were studied as benchmarks.

<b>Scenario</b>	<b>Toll rate range</b>	<b>Objective</b>
1	\$1 - \$3.25	Achieve funding target.
2	\$0.75 - \$2.25	Reduce diversion
3	\$0.75 - \$2.50	Balance funding and diversion.

## Round Two Scenarios Being Analyzed

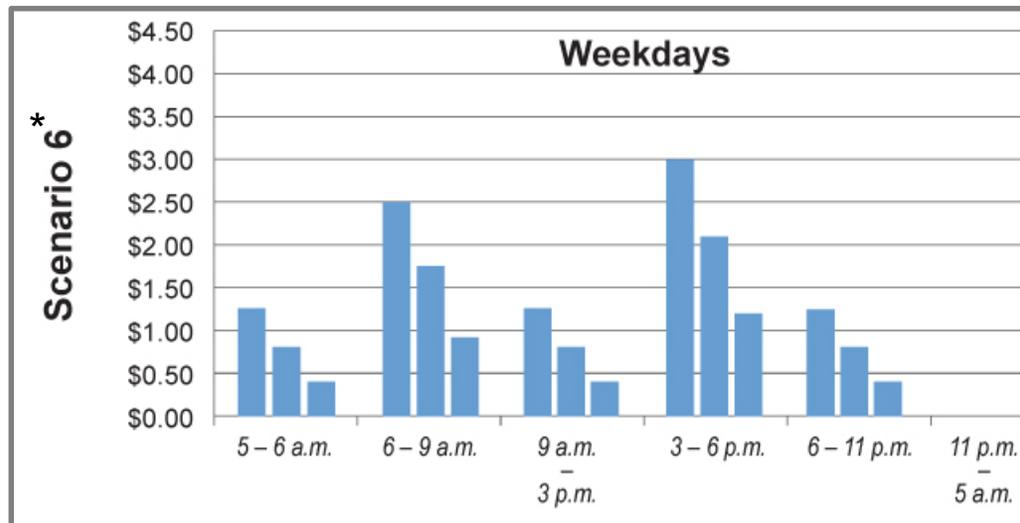
<b>Scenario</b>	<b>Toll rate range</b>	<b>Objective</b>
4	\$1.25 - \$2.75	Achieve funding target.
5a	\$0.50 - \$0.75	Reduce diversion. Includes toll rate escalation.
5b	\$1.75 peak periods only	Reduce diversion. Includes toll rate escalation.
6	\$0.45 - \$3	Balance funding and diversion.

# Weekday Toll Rates by Scenario

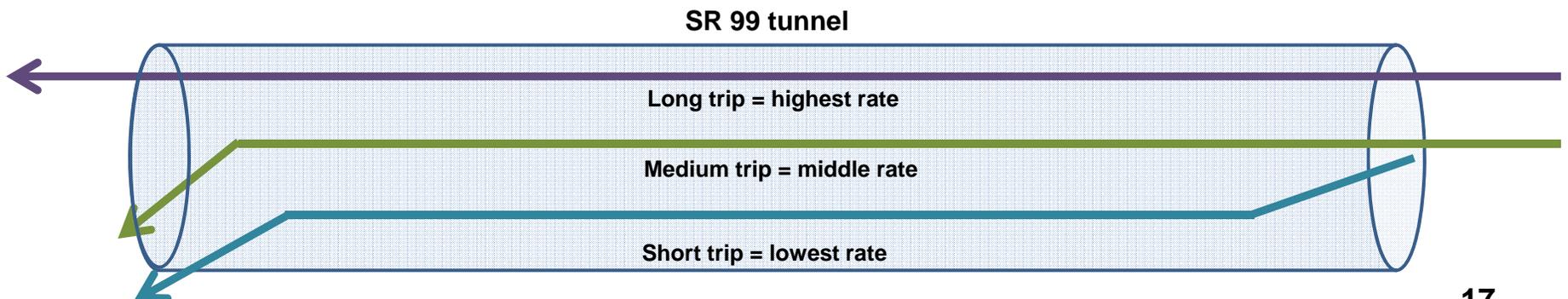


*\*For the purposes of revenue modeling we will assume weekend tolls for scenario 4 and toll rate escalation of 1.3% per year for scenarios 5a and 5b.*

# Toll Rates by Time of Day - by Scenario



*\*For the purposes of revenue modeling we will assume weekend tolls for scenario 6.*



## Preliminary Revenue Results for Scenarios 4 - 6

	Scenario 4	Scenario 6	Scenario 5a	Scenario 5b
Revenue Collected from Tolls*	\$1,270	\$1,260	\$600	\$610
Toll Collection Costs**	(\$320)	(\$360)	(\$280)	(\$160)
Revenues after collection costs	\$950	\$900	\$320	\$450

*Numbers represent estimates for approximately 30 years. Costs in millions of dollars.*

*\*After adjustments for fees, credits and uncollectible accounts. Scenarios 5a and 5b assume 1.3 percent toll rate escalation.*

*\*\*Includes credit card fees and customer service center, state operations and roadway toll system costs. Could be lower with additional operational toll facilities.*

## Potential Costs

Capital Contribution*	\$200
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*Costs in millions of dollars.*

*\*Additional costs for financing to be determined.*

SR 99 Tunnel Expenses	
Operations and Maintenance	\$160
Facility Insurance Costs**	\$55-85
Repair and Replacement	\$190

*Numbers represent estimates for approximately 30 years. Costs in millions of dollars.*

*\*\*Variation due to coverage amounts and deductible levels.*

Mitigation	TBD
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## Traffic Pattern Changes With SR 99 Tunnel

- Full access at tunnel portals to northbound and southbound SR 99 and ramps to downtown city streets.
- Removal of viaduct's Columbia and Seneca ramps.
- Removal of viaduct's Elliott and Western ramps.

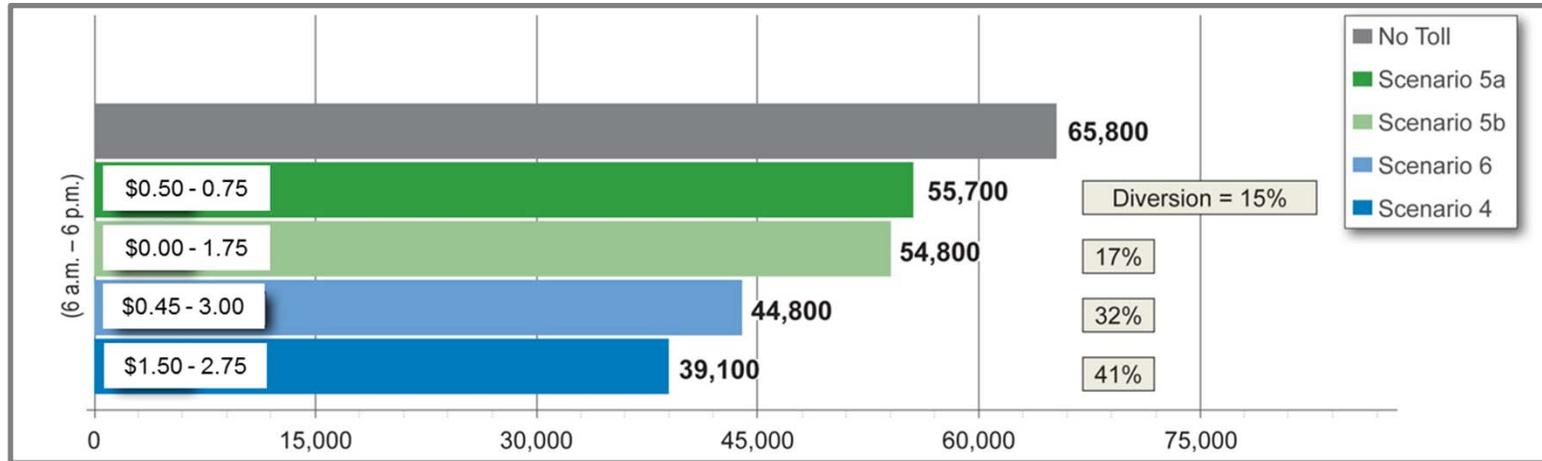


*Alaskan Way Viaduct*

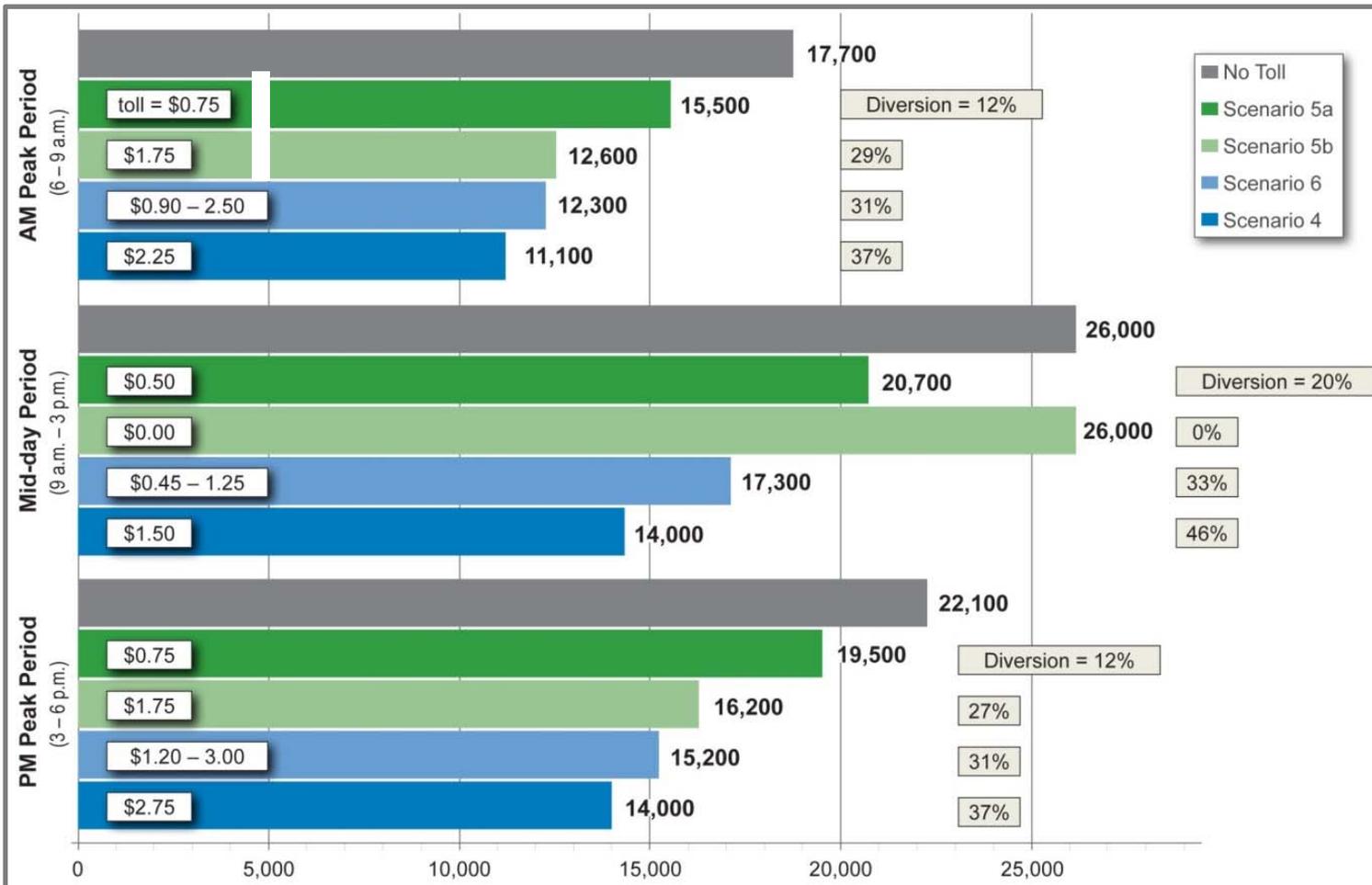


*SR 99 tunnel and Alaskan Way with connection to Elliott and Western avenues*

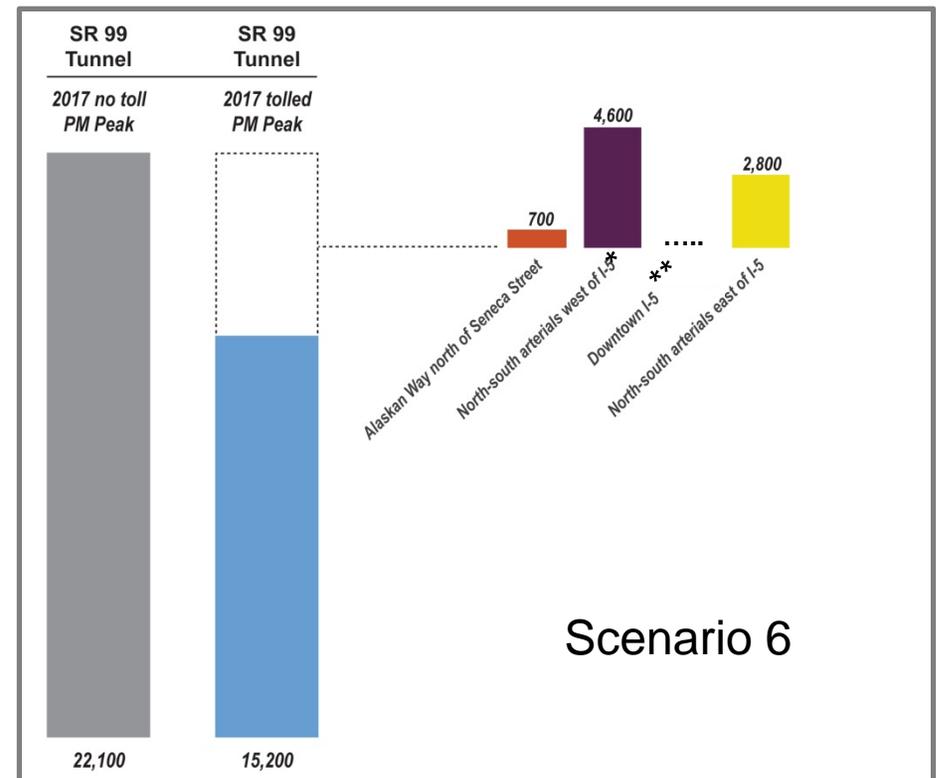
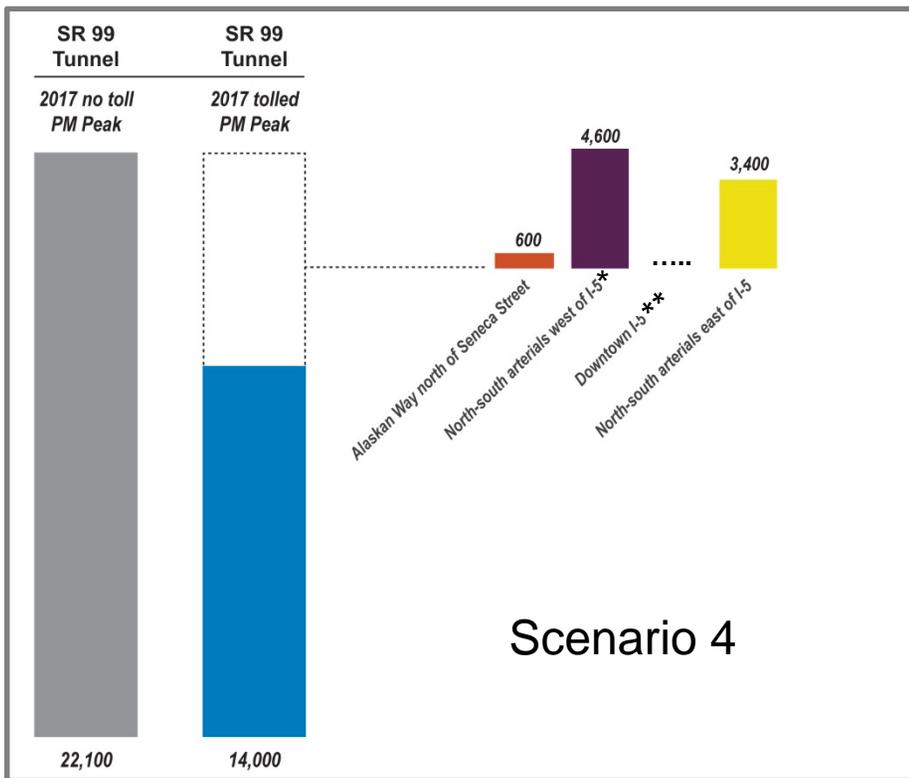
# 2017 Daytime Tunnel Volumes



# 2017 Tunnel Volumes by Time of Day



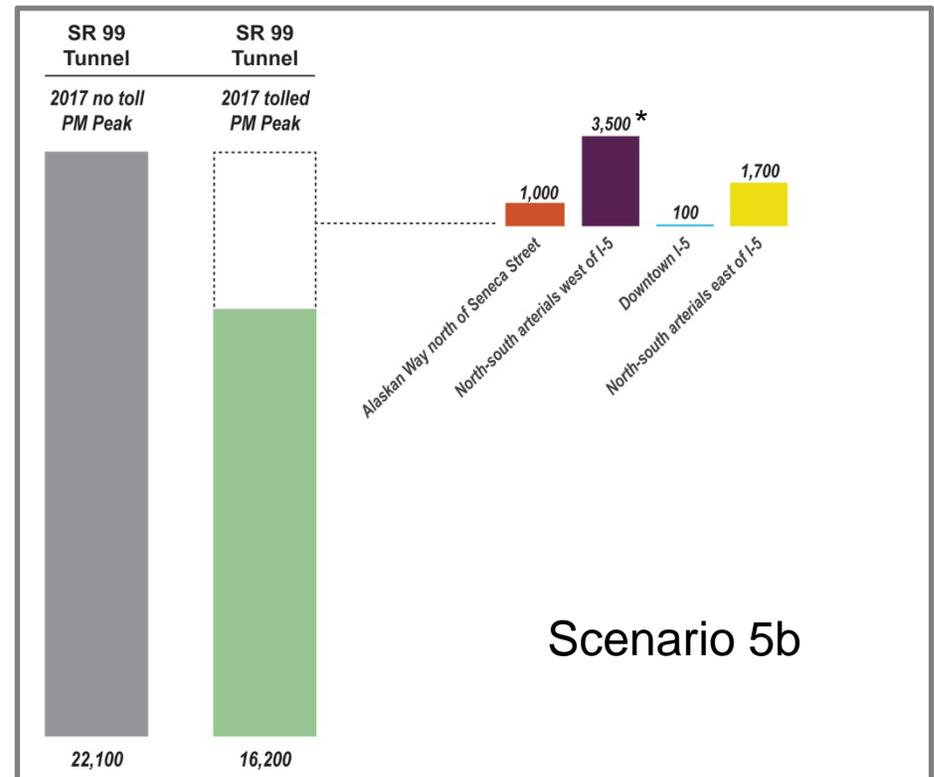
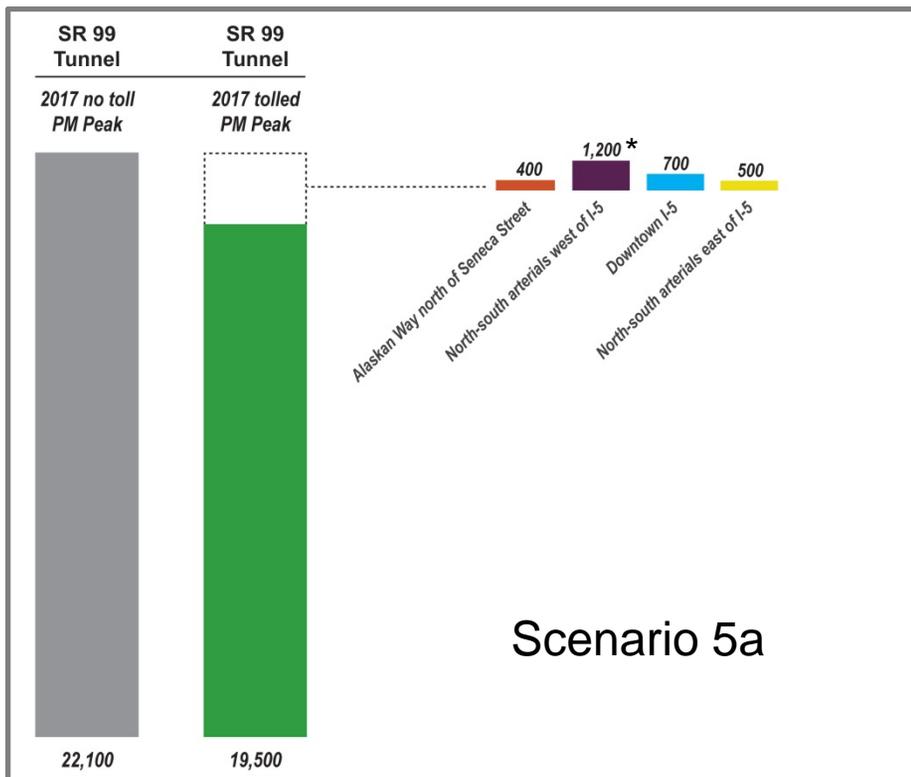
# 2017 Traffic Volumes by Location Scenario 4 and 6 PM Peak Period 3 – 6 p.m.



\*Alaskan Way volumes not included in arterials west of I-5. All volumes taken at Seneca Street.

\*\*Tolls on the SR 99 tunnel change how drivers access I-5. More drivers access the freeway north and south of Seneca Street.

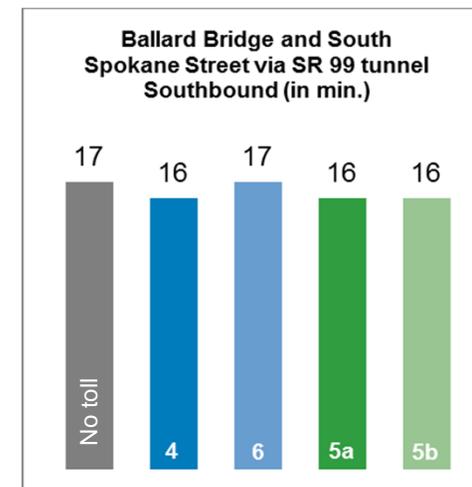
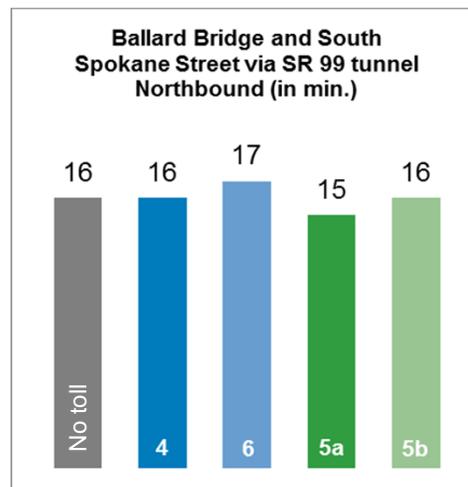
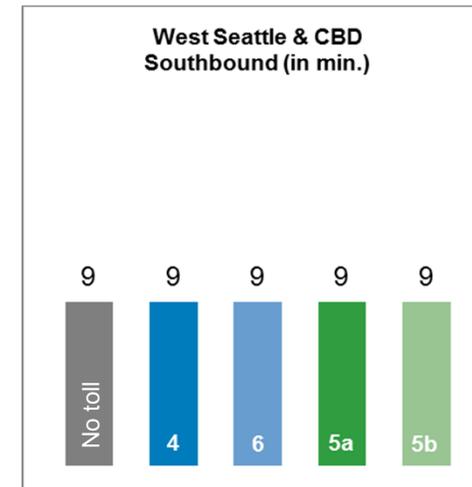
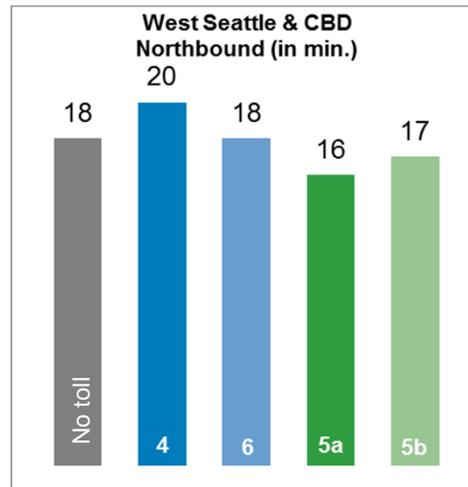
# 2017 Traffic Volumes by Location Scenario 5a and 5b PM Peak Period 3 – 6 p.m.



\*Alaskan Way volumes not included in arterials west of I-5. All volumes taken at Seneca Street.

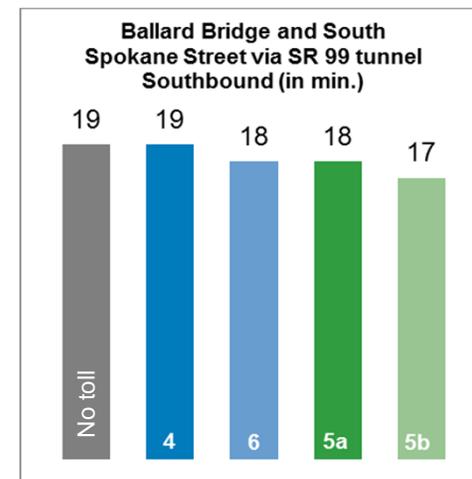
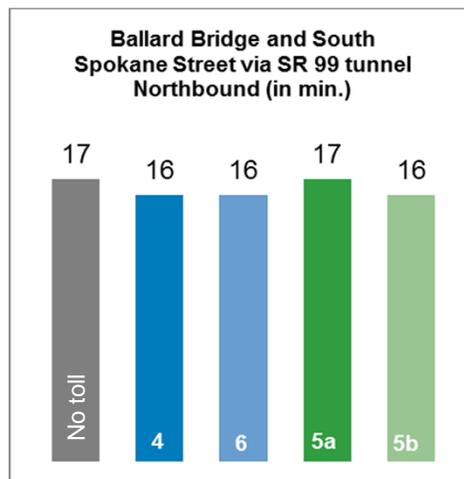
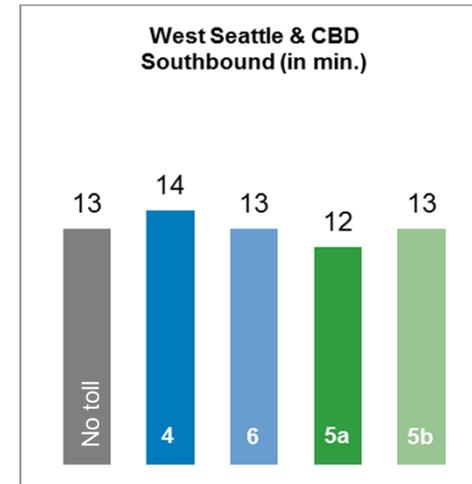
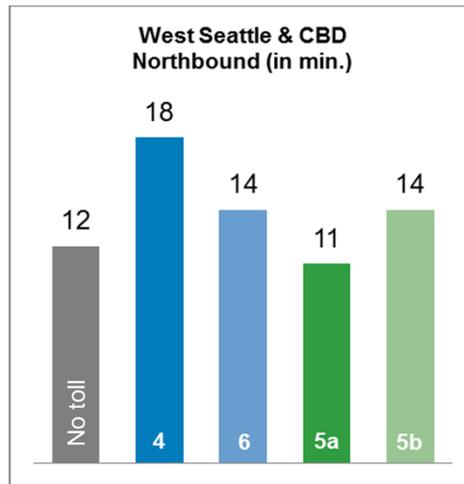
# 2017 Car and Freight Travel Times A.M. Peak Hour 7:30 – 8:30 a.m.

- A.M. peak hour travel times for autos and freight vary minimally across the routes reported.



# 2017 Car and Freight Travel Times P.M. Peak Hour 5 – 6 p.m.

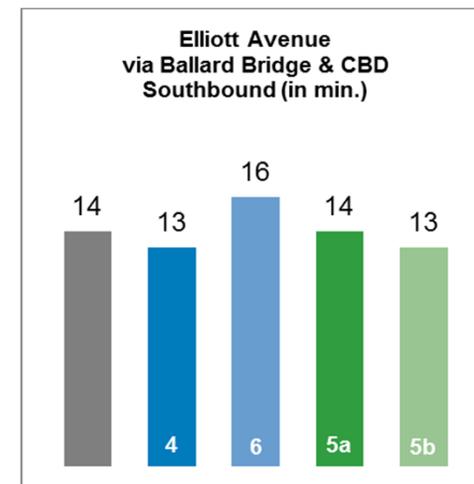
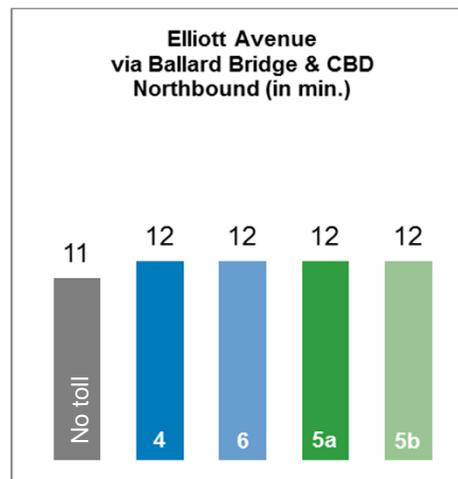
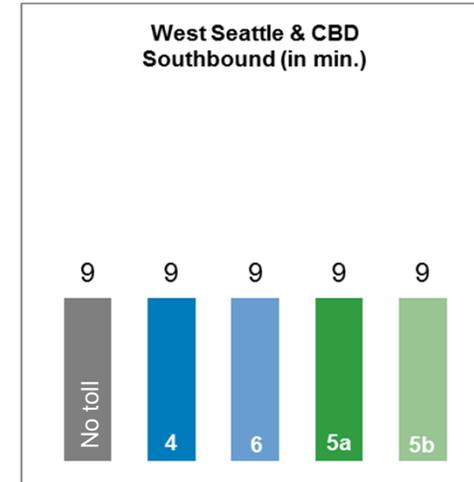
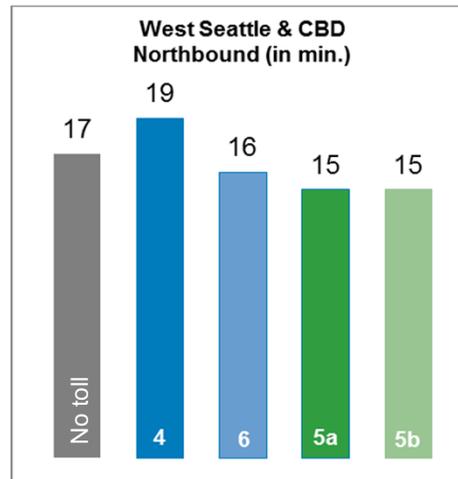
- P.M. peak hour travel times for autos and freight vary minimally across the routes reported.



# 2017 Transit Travel Times

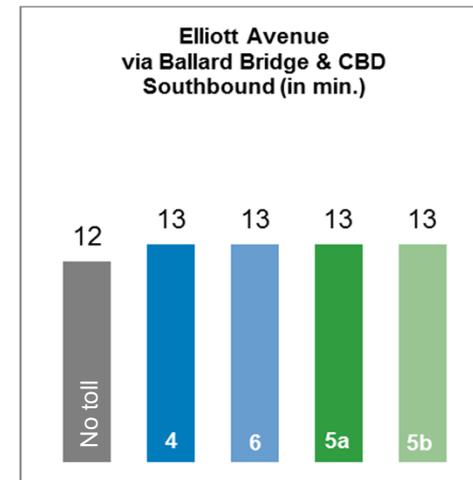
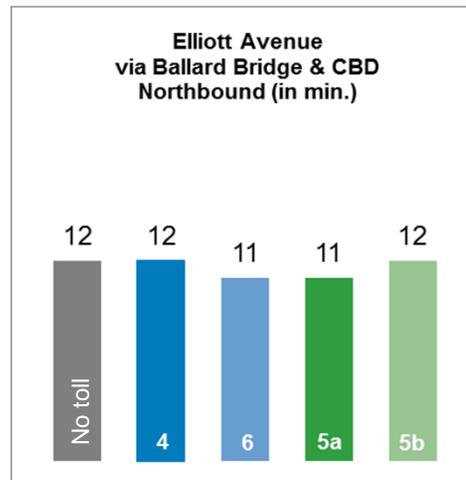
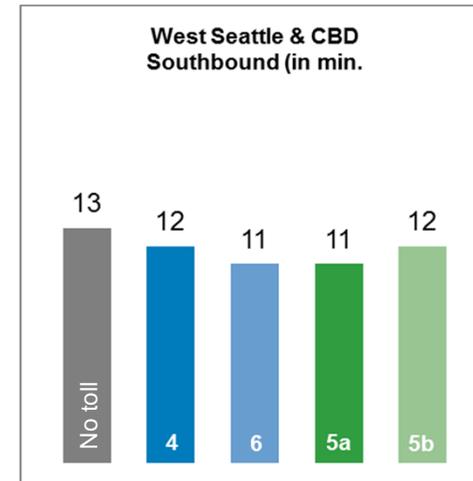
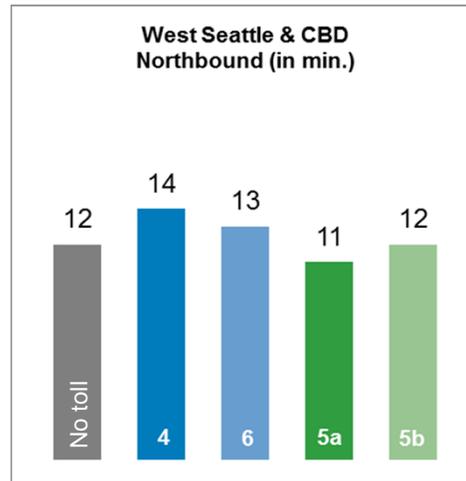
## A.M. Peak Hour 7:30 – 8:30 a.m.

- A.M. peak hour travel times for transit vary minimally due to priority treatments.



# 2017 Transit Travel Times P.M. Peak Hour 5 – 6 p.m.

- P.M. peak hour travel times for transit vary minimally due to priority treatments.



## Additional Metrics for ACTT

- Quantitative metrics (traffic model outputs):
  - Volumes by time of day: SR 99, city streets and I-5.
  - Travel times by time of day and mode: freight, cars, transit.
- Qualitative metrics:
  - Hot spot assessment using changes in volumes and congestion for potential effects on bicycles, pedestrians, freight, cars and transit.
  - Policies noted in guiding principles.

## Looking Ahead

- ACTT committee meetings:
  - April 24: Mitigation and dealing with diversion.
  - May 15: Recommendations discussion.
  - June 12: Recommendations discussion.
- ACTT meeting materials and December 2012 progress report available on website:  
[www.wsdot.wa.gov/projects/viaduct/Library/Meetings/ACTTM](http://www.wsdot.wa.gov/projects/viaduct/Library/Meetings/ACTTM)
- Recommendations in mid-2013.

**Website:**

[www.AlaskanWayViaduct.org](http://www.AlaskanWayViaduct.org)

**Twitter:** @BerthaDigsSR99

**Email:**

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*Loading the cutterhead onto the ship  
in Japan.*