

Alaskan Way Viaduct **REPLACEMENT** PROGRAM



Advisory Committee on Tolling and Traffic Management
July 24, 2013

Overview

Previous discussions:

- 2017 round 2 traffic and revenue modeling.

Today's topics:

- Scenario 7 traffic and revenue results.
- Transportation system approach to minimizing and mitigating diversion.

Future meetings:

- Remaining committee meetings and recommendations discussion.



Crews lowering the tunneling machine's cutterhead into the launch pit, May 31, 2013.

ACTT Purpose

- 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.

Meeting Objectives

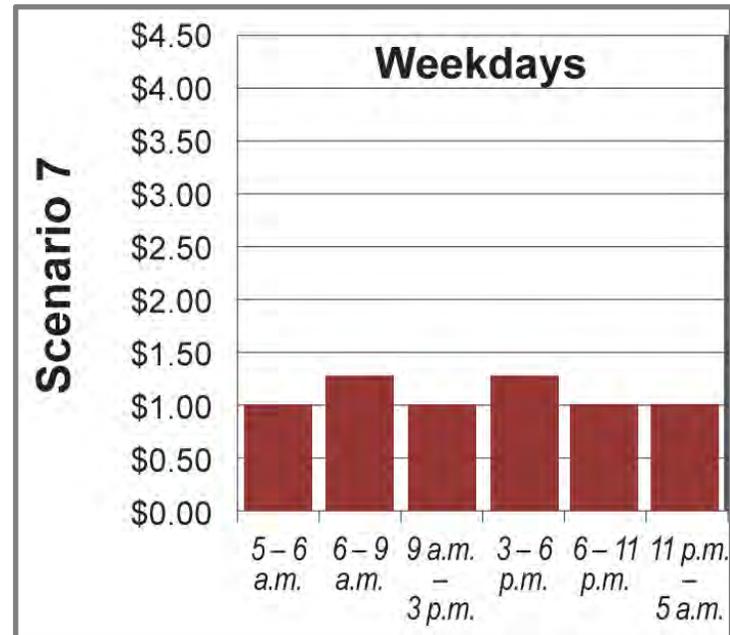
- Understand traffic and revenue results for scenario 7.
- Discuss the transportation system to minimizing and mitigating diversion.
- Agree on remaining committee meetings and approach to recommendations.

Scenario 7 Traffic and Revenue Results

Additional Modeling – Scenario 7

Assumptions:

- Balance between minimizing traffic diversion and raising revenue.
- Includes \$1 overnight and weekend tolls.
- Freight toll is 1.5 times the toll rate for medium trucks and 2.5 times the toll rate for large trucks.
- Toll rate escalates 1.3% per year.



Preliminary Revenue Results for Scenarios 4 - 7

	Scenario 4	Scenario 6	Scenario 5a	Scenario 5b	Scenario 7
Revenue Collected from Tolls*	\$1,270	\$1,260	\$600	\$610	\$1,085
Toll Collection Costs**	(\$320)	(\$360)	(\$280)	(\$160)	(\$350)
Revenues after collection costs	\$950	\$900	\$320	\$450	\$735

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

**After adjustments for fees, credits and uncollectible accounts. Scenarios 5a, 5b, and 7 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.*

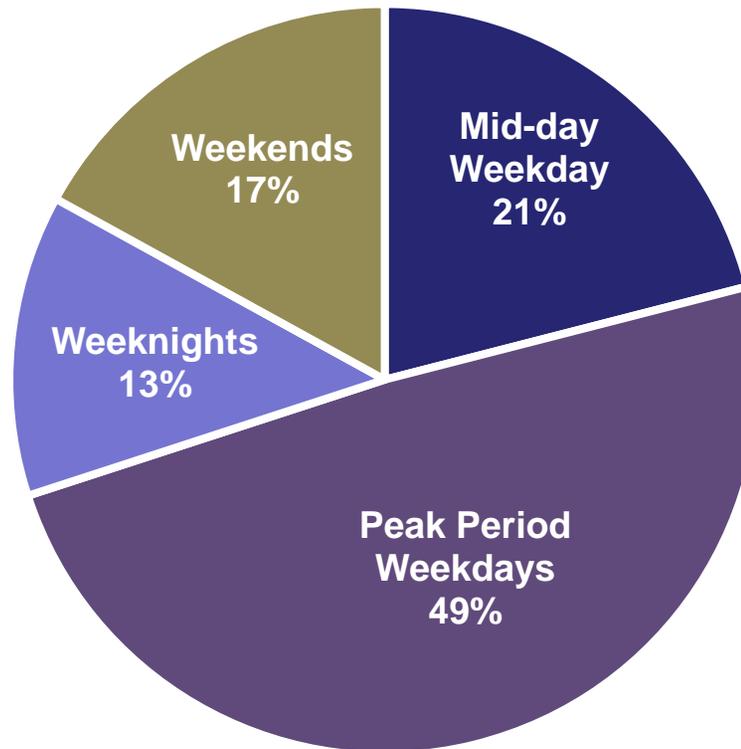
SR 99 Tunnel Expenses	
Operations and Maintenance	\$160
Facility Insurance Costs**	\$55-85
Repair and Replacement	\$190

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

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

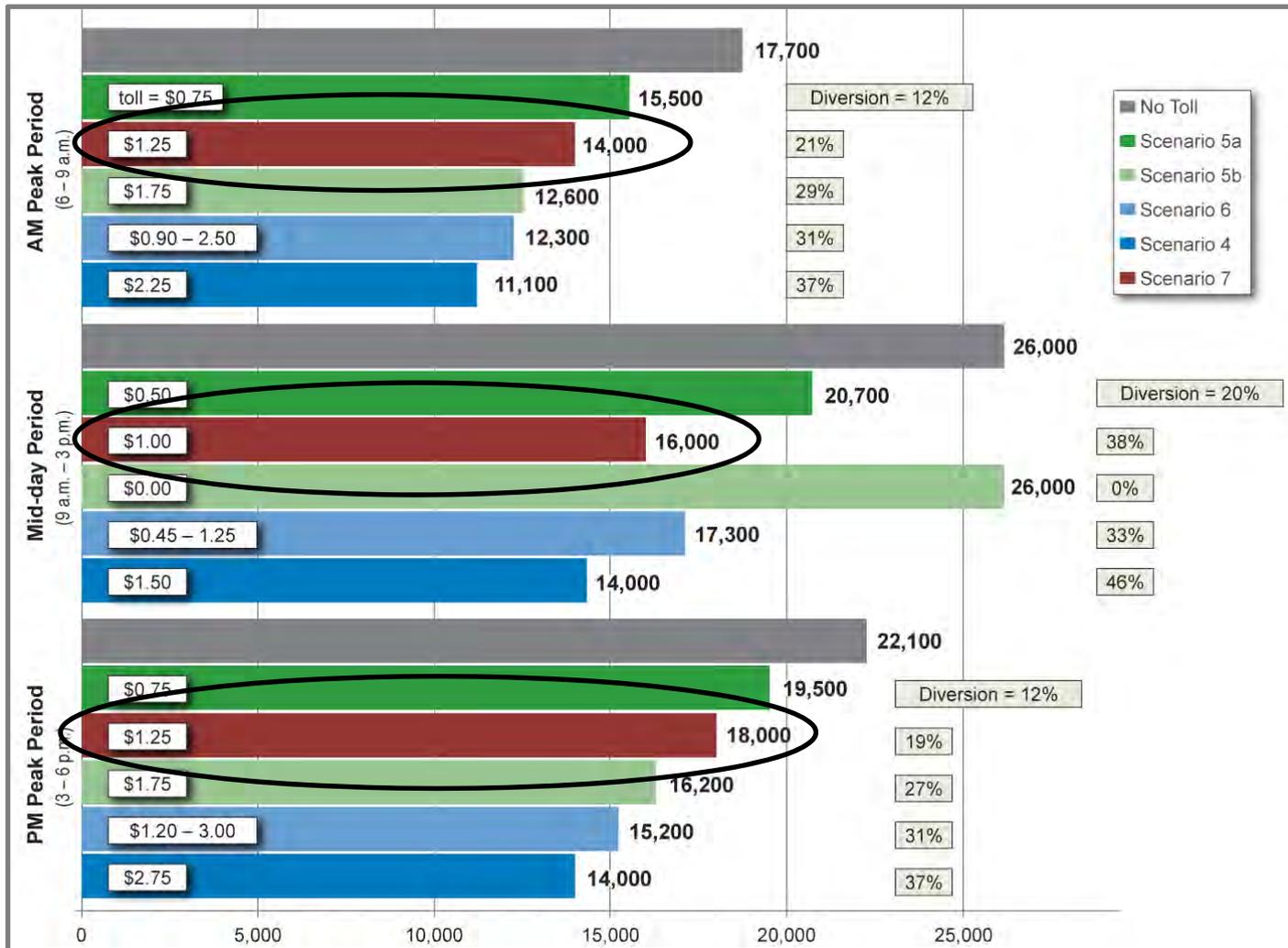
Mitigation	TBD
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2017 – Scenario 7 Gross Toll Revenue By Time Period

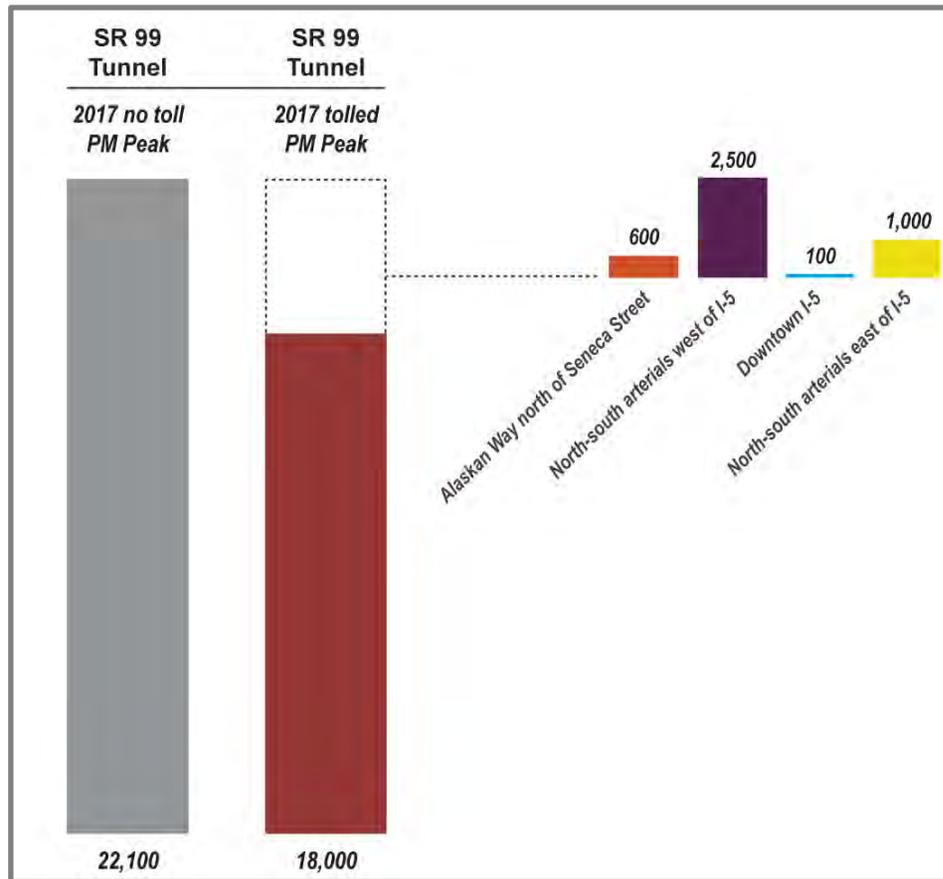


Weekend value represents a 48 hour period from 12:01 a.m. on Saturday through 11:59 p.m. on Sunday. Mid-day weekday value represents 9 a.m. to 3 p.m. Peak period weekday value represents 6 – 9 a.m. and 3 – 6 p.m. Weeknight value represents 6 p.m. – 6 a.m.

Scenario 7 Daytime Volumes

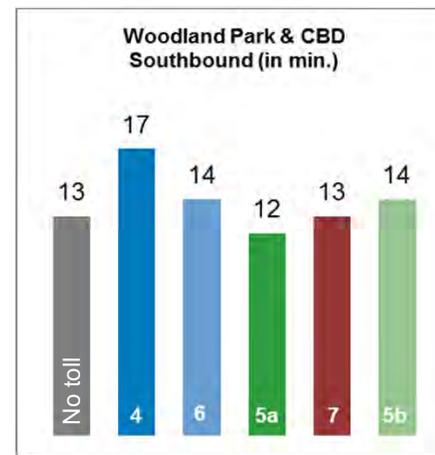
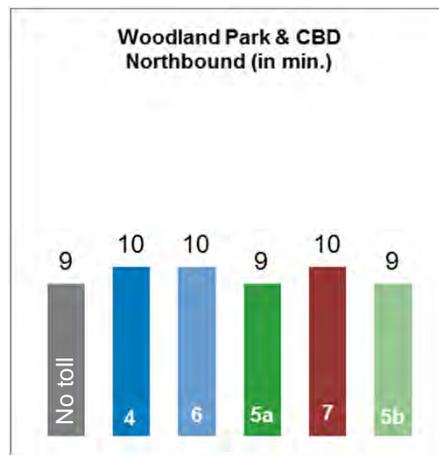
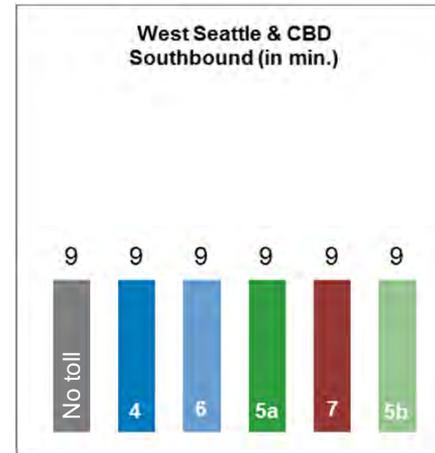
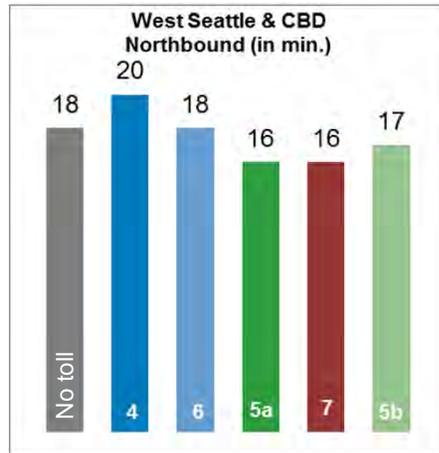


2017 Traffic Volumes by Location – Scenario 7 PM Peak Period 3 – 6 p.m.

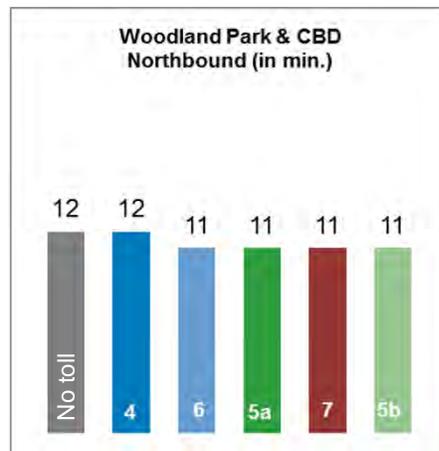
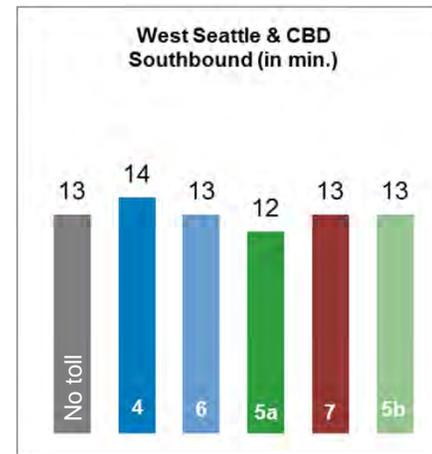
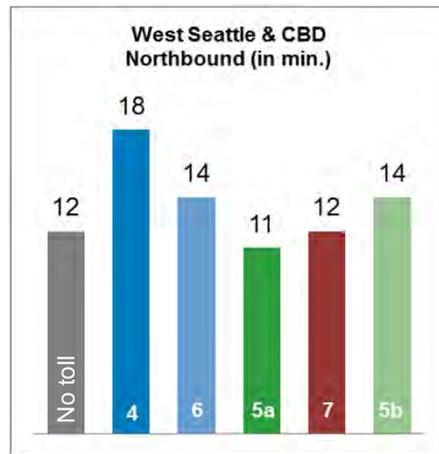


*Alaskan Way volumes not included in arterials west of I-5. All volumes taken at Seneca Street.

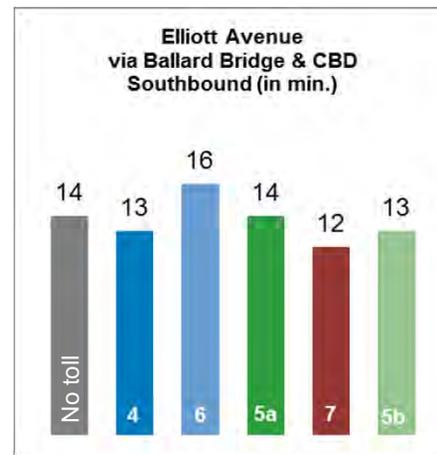
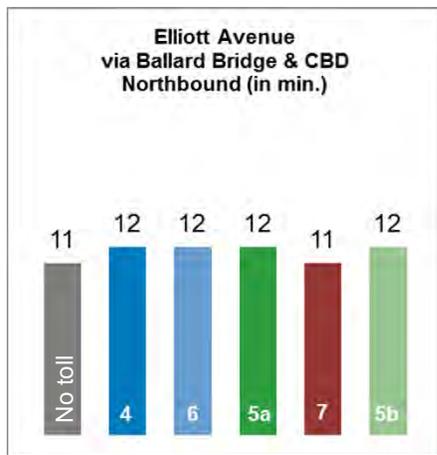
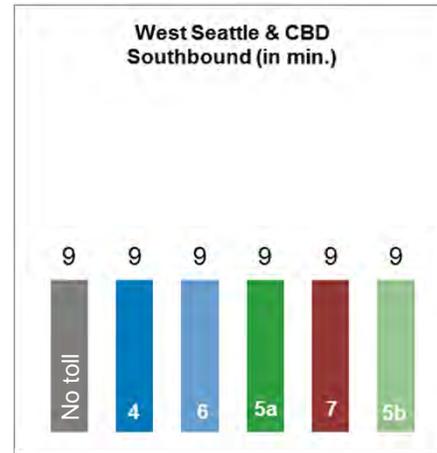
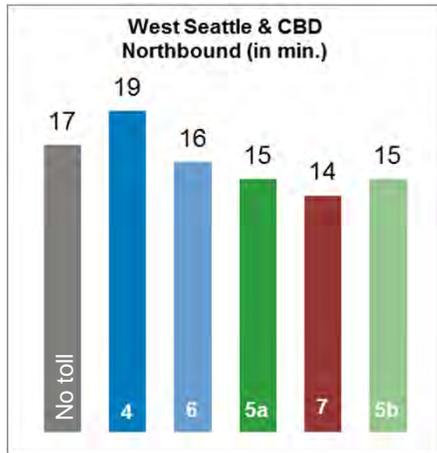
2017 Car and Freight Travel Times AM Peak Hour 7:30 – 8:30 a.m.



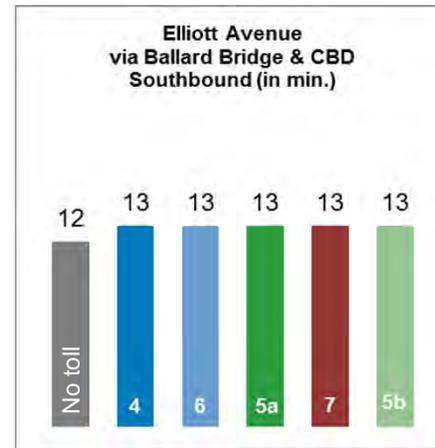
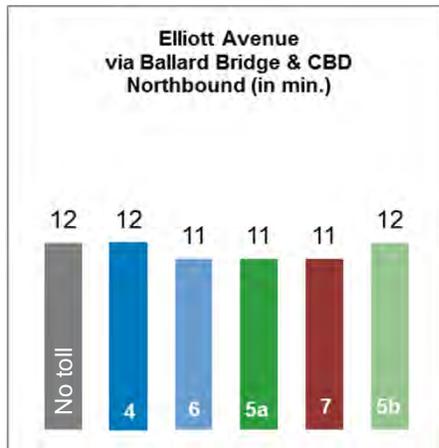
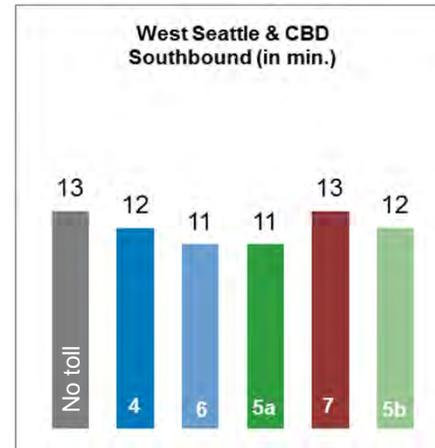
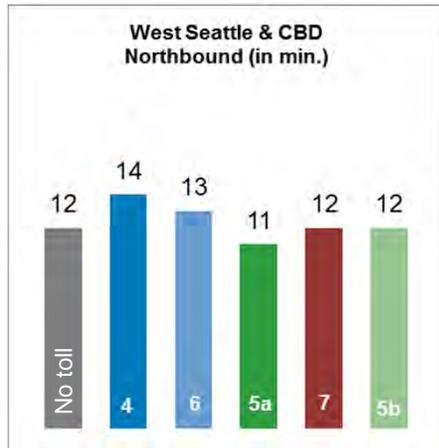
2017 Car and Freight Travel Times PM Peak Hour 5 – 6 p.m.



2017 Transit Travel Times AM Peak Hour 7:30 – 8:30 a.m.



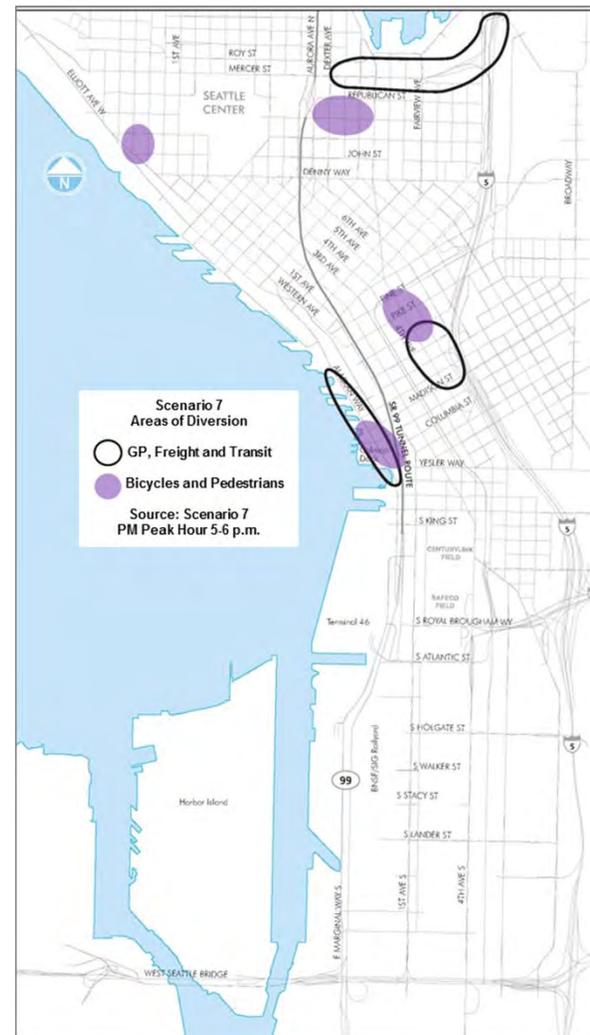
2017 Transit Travel Times PM Peak Hour 5 – 6 p.m.



Diversions Areas for Committee Discussion

Scenario 7 – PM Peak Hour 5 – 6 p.m.

- Parts of South Lake Union and the Mercer Corridor
- Parts of Alaskan Way
- Parts of the downtown core



Another Look at Diversion

- Committee members asked for a metric assigning a dollar amount to the diverted traffic within the transportation system.
- Traffic models produce vehicle hours of delay which shows the number of hours travelers spend on roadways at less than optimum speeds.
- Vehicle hours of delay is inherent in any transportation system and increases over time due to growth.
- In general, vehicle hours of delay increases as toll rates increase.

Another Look at Diversion

- Traffic models produce vehicle hours of delay which shows the number of hours travelers spend on roadways at less than optimum speeds.
- Model output: Hours represent a.m. and p.m. peak periods (6 to 9 a.m. and 3 to 6 p.m.).
- Basic formula: Peak period vehicle hours of delay X 250 work days X \$18 per hour = estimated annual value.

	No toll	Scenario 4	Scenario 5a	Scenario 5b	Scenario 6	Scenario 7
2017 estimated peak period hours	36,600	44,600	38,000	39,800	42,900	40,000
2017 estimated annual peak period hours	9,150,000	11,150,000	9,500,000	9,950,000	10,725,000	10,000,000
Estimated annual value (hourly value of \$18)	\$165 million	\$201 million	\$171 million	\$179 million	\$193 million	\$180 million

Committee Discussion About Traffic / Revenue Analysis to Date

Potential Recommendation Topics

- Support for tolling as a way to help fund a variety of costs.
- Support for a tolling strategy.
- From progress report:
 - Priority of state's use of toll revenue: what types of costs should be covered by toll revenue and in what relative order.
 - Financing and toll rate adjustments: how capital costs could be financed and whether toll rates could be adjusted in future years to keep up with inflation.
 - Allocation of toll collection costs: how statewide tolling system costs are allocated among facilities.

Potential Recommendation Topics

- From progress report (continued):
 - Systems approach to tolling: as the region moves forward with studying and tolling additional highways, the committee sees value in analyzing a systems approach to tolling – I-5, I-405, I-90, SR 99 – to reduce diversion across the regional roadway network.
 - Freight rates: what freight rate structure makes sense for the tunnel.
 - Mitigation funding: finding a funding source for potential mitigation measures.
 - Transit funding: finding a sustainable funding source for King County Metro service.

Transportation System Approach to Minimizing and Mitigating Diversion

Transportation System Approach

- SR 99 is part of a whole transportation system that helps move people and goods through the Puget Sound region.
- System considerations include:
 - Various modes of transportation: cars, transit, bicycles, freight, pedestrians.
 - Elements of system: I-5 and SR 99, surface streets, transit, demand management strategies.
 - Network performance: current and future.
 - Levels of tolling.
 - Status of various planning processes.
 - Policy goals.

Program Overview

The Alaskan Way Viaduct Replacement Program includes projects led by the Washington State Department of Transportation, City of Seattle, King County and Port of Seattle.



Viaduct Replacement Program Development

- 2007: Agreed to set of “moving forward” projects, including replacing approximately half of the viaduct.
- 2008: Stakeholder Advisory Committee met regularly to discuss replacement of central waterfront section of the viaduct.
 - Evaluated “new project area” highlighted in map and considered entire system of streets.



Viaduct Replacement Program Development

- In 2009, Governor, King County Executive and Seattle Mayor agreed to a solution for the viaduct replacement.
- Recommended investments in improved city streets, enhanced transit service and a new tunnel.
- Recommendation grounded in six guiding principles:
 - Improve public safety.
 - Provide efficient movement of people and goods now and in the future.
 - Maintain or improve downtown Seattle, regional, the port and state economies.
 - Enhance Seattle's waterfront, downtown and adjacent neighborhoods as a place for people.
 - Create solutions that are fiscally responsible.
 - Improve the health of the environment.

Program Progress Since 2009 Agreement

- Implementation of the viaduct replacement program is in various stages.
- Complete:
 - SR 519 improvements
 - Spokane Street Viaduct widening project
 - Majority of south end viaduct replacement
 - East Marginal Way grade separation project
 - I-5 active traffic management
 - I-5 travel time signs
 - City street and SR 99 intelligent transportation systems
 - Burien Park-and-Ride
- Requires funding:
 - Transit: pathways on city streets, infrastructure and services

Program Progress Since 2009 Agreement

- Under construction / in progress:
 - SR 99 tunnel
 - Elliott Bay Seawall
 - Mercer Corridor Project
 - South Atlantic Street overpass
 - Enhanced transit service during south end viaduct replacement
 - Demand management strategies during south end viaduct replacement
- In design / further analysis needed:
 - Alaskan Way / Elliott Way
 - Waterfront Seattle
 - First Avenue Streetcar

Strategies To Consider With Tolled SR 99 Tunnel

- Freight movement priority to/from Port facilities and between manufacturing and industrial centers (including I-5).
- Signal and intelligent transportation system improvements including adaptive signal control.
- Bicycle improvements in downtown.
- Pedestrian improvements near the tunnel portal areas.
- Transit pathways into downtown including tunnel portal areas.
 - Could capture additional riders and provide more reliable trip.
- Transit routes serving areas like South Lake Union that have experienced tremendous growth.

Examples for Keeping People Moving on Transit

Category	Examples of projects
Service capacity investments	<ul style="list-style-type: none">• Burien-Delridge RapidRide• Separating RapidRide C and D lines through downtown and extend service to South Lake Union
Speed and reliability improvements	<ul style="list-style-type: none">• Transit priority: Bus lane striping on Aurora Avenue

- Other categories:
 - Operational and facility improvements
 - Increase access and ease of use

Committee Discussion

Remaining Committee Meetings and Recommendations Discussion

Potential ACTT Meetings

Proposed 2013 meeting dates (Wednesdays)	Meeting topic(s)
Sept. 25	Recommendations discussion and follow up from July 24 meeting
Oct. 23	Recommendations discussion including process for sharing recommendations with elected officials and agencies
Nov. 13	Finalize recommendations

Potential Recommendation Topics

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Website:

www.AlaskanWayViaduct.org

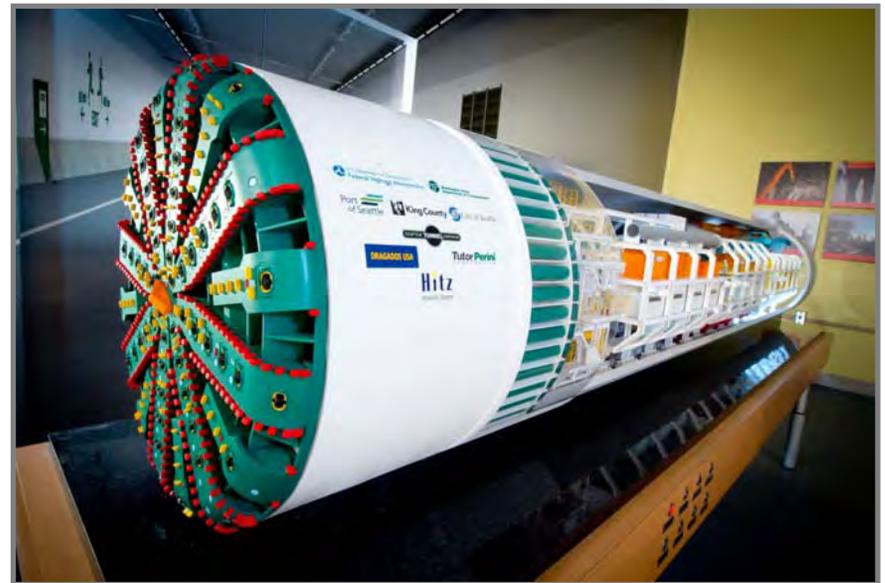
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