Overview

Previous Discussions:

• Program funding need and changes in assumptions from State Treasurer / State Finance Committee.

• Scenarios for round 1 modeling.

Today’s Topics:

• Review scenarios.

• Traffic modeling results.

• Questions.

• Small group discussion.
Meeting Objectives

• Understand the scenarios and modeling results.

• Prepare for revenue discussion and scenario refinements in July.

Crews are preparing the tunnel boring machine launch pit.
Upcoming Meetings and Discussion Topics

July 11:
- Preliminary revenue results.
- Discuss scenario refinements for round 2 modeling.

July 18:
- Finalize round 2 scenarios.
Scenarios Review
Four-Step Planning Process

1) **Determine Toll Scenarios**
   - Toll rate structure

2) **Traffic Modeling**
   - Understand travel behavior and diversion

3) **Revenue Modeling**
   - Annual gross toll revenue stream
   - O&M costs paid by tolls
   - Cost to implement tolls

4) **Financial Modeling**
   - Toll funding contribution to project
   - Matches timing of sources and uses

Iterative Process
Round One Scenarios Being Analyzed

- No toll and high toll ($1 - $4) are being studied as benchmarks.
- Scenario 1 ($0 - $3.25): Objective is to achieve funding target.
- Scenario 2 ($0 - $2.25): Objective is to reduce diversion.
- Scenario 3 ($0 - $2.50): Objective is to balance funding and diversion.
Toll Rates by Time of Day - High Toll Benchmark

** Chart represents Good To Go! rates. Pay by mail rates are approximately $1.50 more.
Toll Rates by Time of Day - by Scenario

* Scenario 3 includes a 20 percent one-time adjustment for all toll rates in July 2030.
** Scenarios 2 and 3 reduce the freight toll to a 1.25 multiplier for all trucks, regardless of size or axle count.
*** Chart represents Good To Go! rates. Current pay by mail rates are approximately $1.50 more.
Traffic Modeling Results
Outputs

Today’s data discussion points:

• Diversion
• Congestion
• Travel times

Times of day

• Data will be provided for:
  • Mid-day: 1:30 – 2:30 p.m.
  • P.M. peak period: 3 – 6 p.m.
  • P.M. peak hour: 5 – 6 p.m.
# Mid-Day and P.M. Toll Rates by Scenario

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mid-day</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1:30 – 2:30 p.m.</td>
<td>South: $1.50 North: $1.50</td>
<td>South: $0.75 North: $0.75</td>
<td>South: $1.00 North: $1.00</td>
</tr>
<tr>
<td><strong>P.M. Peak Period</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 – 6 p.m.</td>
<td>South: $3.25 North: $2.50</td>
<td>South: $2.25 North: $1.50</td>
<td>South: $2.50 North: $2.00</td>
</tr>
<tr>
<td>Peak Hour 5 – 6 p.m.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Initial Observations

• P.M. peak tolls caused some areas:
  • To experience more congestion - Alaskan Way, Western Avenue.
  • To operate a little better – SR 99 near Republican Street and north of Aurora Bridge.

• Southbound tolls resulted in higher diversion than we anticipated.

• Even modest mid-day tolls led to diversion:
  • Diversion does not necessarily lead to congestion.
  • 30 – 40% of traffic leaves the tunnel which may have an effect on revenues.
Diversion
Diversion largely depends on three things:

• Toll rate
• Traffic in the system (demand)
• Capacity available (supply)

We factor in traffic and capacity when determining potential toll rates.
2017 Tunnel Volumes
Mid-Day 1:30 – 2:30 p.m.
2017 Traffic Volumes Scenarios 1 – 3
Mid-Day 1:30 – 2:30 p.m.

- Scenarios 1 – 3 are combined into one chart because there isn’t much variation among the scenarios.

<table>
<thead>
<tr>
<th>SR 99 Tunnel</th>
<th>SR 99 Tunnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 no toll mid-day</td>
<td>2017 tolled mid-day</td>
</tr>
</tbody>
</table>

4,800 2,950-3,250

1,550 – 1,850 cars

*Alaskan Way volumes not included in arterials west of I-5.
2017 Tunnel Volumes
Peak Period 3 – 6 p.m.

Southbound Tunnel:
- Toll = $3.25: 5,400
- $2.25: 6,900
- $2.50: 6,600
- $4.00: 4,400

Diversion - 51%
- No Toll: 37%
- Scenario 1: 40%
- Scenario 2: 60%
- High Toll: 27%

Northbound Tunnel:
- $2.50: 7,300
- $1.50: 8,400
- $2.00: 7,900
- $3.25: 7,100

Diversion - 32%
- No Toll: 32%
- Scenario 1: 22%
- Scenario 2: 27%
- High Toll: 34%
2017 Traffic Volumes by Location Scenario 1
Peak Period 3 – 6 p.m.

SR 99 Tunnel
2017 no toll PM Peak
21,800

SR 99 Tunnel
2017 tolled PM Peak Scenario 1
12,700

9,100 cars
400
0
3,600

- Alaskan Way north of Seneca Street
- North-south arterials west of I-5
- North-south streets east of I-5

*Alaskan Way volumes not included in arterials west of I-5.
2017 Traffic Volumes by Location Scenario 2
Peak Period 3 – 6 p.m.

*Alaskan Way volumes not included in arterials west of I-5.
2017 Traffic Volumes by Location Scenario 3
Peak Period 3 – 6 p.m.

*Alaskan Way volumes not included in arterials west of I-5.*
2017 Congestion Comparison
Peak Hour 5 – 6 p.m.

No Toll Benchmark  Scenario 1  Scenario 2  Scenario 3  High Toll Benchmark

Handout 6a
22
2017 Car and Freight Travel Times
Mid-Day 1:30 – 2:30 p.m.

- Mid-day travel times for autos, transit and freight vary minimally across the routes reported.

- That is because we kept all mid-day toll rates lower with small variance between rates.

Northbound (in min.)  Southbound (in min.)

<table>
<thead>
<tr>
<th>Route</th>
<th>Northbound</th>
<th>Southbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woodland Park &amp; S. Spokane via SR 99</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Woodland Park &amp; S. Spokane via downtown streets</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Handout 4b
Summary

General observations:

• Congestion exists even in a no toll scenario.

• Where capacity is added, for example, Alaskan Way, or reconnecting streets, such as Harrison Street) drivers will use it.

• Those who use the tunnel will save time compared to use city streets.

Observations about rate structure:

• Southbound tolls resulted in higher diversion than we anticipated. We should test similar northbound and southbound tolls in future scenarios to encourage tunnel use.

• As expected, higher toll rates result in more diversion. We see that especially on Alaskan Way and Western Avenue during the evening peak period.
Summary

Time of Day Observations:
• Even modest mid-day tolls led to some diversion and may affect revenues.
• P.M. peak tolls caused some areas to experience more congestion and other areas operated a little better.

Geographic observations:
• East of I-5
  • When I-5 is congested, cars leave it for city streets east of the highway.
• Downtown/Belltown
  • Lower tolls don’t result in much change in congestion intensity in the downtown core compared to the No Toll Benchmark.
  • Higher tolls affect the southbound streets (1\textsuperscript{st}, 2\textsuperscript{nd} and 3\textsuperscript{rd}) between Stewart and Belltown as drivers avoid the tunnel and work their way to Alaskan Way and SR 99.
Summary

More geographic observations:

• North Portal area/Mercer Corridor
  • SR 99 near Republican Street and north of Aurora Bridge operates a little better.
  • Higher tolls add to congestion on eastbound Mercer Street. SR 99 drivers divert to Mercer and South Lake Union trips might go to I-5 instead of the tunnel.

• South Portal/Pioneer Square
  • Higher toll rates result in more diversion on Alaskan Way and Western Avenue during the evening peak periods.

• Waterfront
  • P.M. Peak congestion intensity increases on the waterfront in any toll scenario.
Small Group Discussion / Questions
Small Group Discussion Overview

• Break into three groups to continue dialogue.
• Each group will have technical staff to answer questions.
• Each group will have someone to take notes.
• 60 minutes for discussion.
• One committee member in each group will report out and share:
  • 3 questions with answers.
  • 3 unanswered questions that we’ll answer at the next meeting or in the future.
Closing: Questions and Next Steps
Website:
www.alaskanwayviaduct.org

Email:
viaduct@wsdot.wa.gov

Hotline:
1-888-AWV-LINE