SR 518 Corridor Planning Study
Puget Sound Regional Council FAST Freight Committee

Roger Millar, Secretary of Transportation
Keith Metcalf, Deputy Secretary of Transportation

April 10, 2019

Thomas Noyes, Senior Transportation Planner
Today’s Presentation

• SR 518 Corridor Planning Study Background
  – Need, Goals and Objectives, Scope of Work
• Practical Solutions approach
  – Screening Criteria
• Communications and Outreach
  – Stakeholder Committee, Web Survey
• Existing Conditions along the SR 518 corridor–
  – Traffic Analysis
  – Environmental Constraints
• Freight on the SR 518 corridor
• SR 518 Corridor Planning Study – Regional Context
  – Sound Transit – I-405 BRT
  – WSDOT Gateway Program: SR 509 Extension to Interstate 5
  – Port of Seattle - SAMP
• Questions?
SR 518 Study Background

- 2017 legislative proviso to conduct study of SR 518 corridor, updating previous corridor study (2002 - RDP)
  - Funding for study: $500,000
  - WSDOT to use a Practical Solutions approach in this study
- WSDOT hired WSP America Inc. in summer 2018 to complete study
- Port of Seattle partnership funding of $400,000 for additional traffic/modeling work (SR 518 corridor/subarea analysis)
SR 518 Study: Need

• Rise in population and employment resulting in higher demands on SR 518 and connecting corridors
  – Capacity levels already limited
  – Sea-Tac International Airport expansion plans
  – Growth in communities along the SR 518 corridor (Burien, Des Moines, Sea-Tac, Tukwila)

• No plans to modify I-5/I-405 interchange

• I-405 BRT project may compete for limited ROW on SR 518 near Tukwila International Boulevard Station (TIBS)
SR 518 Corridor

SR 518 Corridor Study Area

Extended Traffic Analysis Area
SR 518 Study: Goals and Objectives

- **Understand current travel patterns** including demand profiles and hot spots
- **Obtain feedback from stakeholders** on existing and future corridor needs, performance gaps and other concerns
- **Research and document** future growth in general purpose traffic, trucks and transit demand
- **Develop practical solutions** for traffic management and circulation to address future corridor issues
- **Integrate strategies** with related projects in the area such as SR 509 Completion, I-405 BRT, ST Link, etc.
Schedule

• Study kick-off (Summer/Fall 2018)
  - Stakeholder Committee Kick-Off – October 24 2018
  - Existing Conditions Analysis (Sept -2018 – January 2019)
  - Stakeholder Committee Meeting #2 held on January 23rd.

• Future Baseline Conditions (Dec 2018-Mar 2019)
  - Stakeholder Committee Meeting #3 – mid/late April 2019*

• Alternatives Development/Analysis (April-May 2018)
  - Advisory Committee Meeting #4 – Late May 2019*

• Draft / Final Report: May/June 2019*

* Subject to change
An Overview of Practical Solutions –
a visual explanation of Practical Solutions at WSDOT
Practical Solutions Screening Criteria

- Safety (consistency with Target Zero, Crash-reduction, etc.)
- Mobility (travel times, trip reliability, etc.)
- Local Access (to local communities from SR 518 corridor)
- Airport Access (to/from Airport for passengers and freight)
- Environmental (displacements, steep slopes, sensitive areas, etc.)
- Constructability (cost, technical feasibility, etc.)
- Community Support
Stakeholder Committee

- Burien, Des Moines, SeaTac, Tukwila
- King County Metro
- Port of Seattle
- Puget Sound Regional Council (PSRC)
- Sound Transit
- Tribes
- WSDOT HQ
- WSDOT NW Region
Communications and Outreach

• **Key objective**: Gather input from all users of the corridor and keep them informed of study developments

• **Fall 2018**: Conducted web survey to gain understanding of public concern/interest
  
  – Almost 1,500 survey respondents
  
  – Web survey: key findings

• **Communications strategies**: Coordinated messaging means no surprises; Lead with the web; Use existing channels

• **Communications tactics and tools**: Webpage; Social Media; Email Distribution; Partner Agencies; Media
Communications and Outreach: Web Survey

94% use private vehicles

- 38% Weekly
- 17% Monthly
- 12% Multiple times a day
- 10% Daily
- Rarely
- 2% Never
- 2% Never

How often do you travel on SR 518?

For what purpose do you use SR 518?

- 41% Work commute
- 4% School commute
- 65% Shopping, errands, etc.
- 44% Visiting friends/family
- 35% Recreational activities
- 16% Freight/commercial travel
- 61% Airport travel
- 5% Other
Web Survey – Overview (Cont.)

Where do SR 518 users travel from?

- 25% 98166
- 21% 98146
- 18% 98188
- 15% 98168
- 12% Seattle
- 7% Bellevue-Renton-Eastside
- 4% South King County
- 4% Pierce County
- 3% 98158
- 2% Snohomish County

Which section of SR 518 most needs improvement?

Least improvement

Most improvement

SR 509

Des Moines Memorial Dr S

I-5

SR 99

WSDOT
Web Survey – Overview (Cont.)

What priorities are important to SR 518 users?

- 24% Improve travel reliability
- 24% Improve safety
- 28% Manage congestion
- 16% Improve transit service
- 8% Other

What do users want done on SR 518?

- 72% Improve I-5/SR 518 interchange
- 54% Widen SR 518 with general purpose lanes
- 42% Improve ramps at S 154th or SR 99
- 38% Operational Strategies (adjusted signal timing or improved signage)
- 29% Widen shoulders
- 23% More transit options
- 23% Widen SR 518 with HOV lane
- 15% Other
SR 518 Corridor Planning Study

SR 518 Corridor
Existing Conditions – Traffic Analysis
Average Daily Traffic

SR 518 mainline at 42nd Ave S

2017 ADT: 147,000 vpd
Average Daily Traffic

I-405 mainline at Longacres Dr SW

2017 ADT: 176,900 vpd

Traffic volume (veh/h)

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 11000 12000
0:00:00 1:00:00 2:00:00 3:00:00 4:00:00 5:00:00 6:00:00 7:00:00 8:00:00 9:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00

Northbound
Southbound
Total
Existing Conditions: Travel Times

SR 518 Peak Hour Travel Times

Source: Google API

AM Peak
08:00 - 09:00 AM

9.0 min
8.1 min

PM Peak
05:00 - 06:00 PM

10.2 min
16.1 min
Environmental Constraints
SR 518 Corridor: Freight

- Primary freight connection between Sea-Tac International Airport and the I-5/I-405 corridors
- WSDOT Freight & Goods Transportation System (FGTS) Network:
  - Truck volumes (2017) vary from 1,400 daily truck trips (w. of NAE/SR 99-TIBS) to 2,400 daily truck trips (NAE to I-5 / I-405 I/C)
- Truck volumes and travel patterns could change due to:
  - Air-cargo growth/redevelopment at Sea-Tac
  - The Gateway/SR 509 extension
  - Land-use developments along the corridor
  - NERA Phase II development
- Overall truck volumes on SR 518 are modest, approx. 2-5% of total AADT, but specific on/off ramps can be as high as 8-10% (VISSIM model output).
# Freight (cont.)

## AM Truck percentages on SR 518 WB/EB (VISSIM Model)

**AM peak, at 8:00 AM**

<table>
<thead>
<tr>
<th>Count Map ID (Refer attachment)</th>
<th>Direction</th>
<th>Segment Description</th>
<th>Truck %</th>
<th>Number of HGVs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WB Direction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>501</td>
<td>WB</td>
<td>WB 51st to SR 518</td>
<td>6.9%</td>
<td>22</td>
</tr>
<tr>
<td>302</td>
<td>WB</td>
<td>WB 154th to SR 518</td>
<td>3.9%</td>
<td>11</td>
</tr>
<tr>
<td>201</td>
<td>WB</td>
<td>WB SR 518 to NB DMM</td>
<td>7.5%</td>
<td>24</td>
</tr>
<tr>
<td>102</td>
<td>WB</td>
<td>WB SR 518 to NB SR 509</td>
<td>4.8%</td>
<td>47</td>
</tr>
<tr>
<td></td>
<td>WB</td>
<td>WB SR 518 between NB 509 Term NBL &amp; NBR</td>
<td>5.3%</td>
<td>52</td>
</tr>
<tr>
<td>110</td>
<td>WB</td>
<td>NB Term NBL</td>
<td>2.7%</td>
<td>4</td>
</tr>
<tr>
<td>105A</td>
<td>WB</td>
<td>SB Term WBL</td>
<td>3.5%</td>
<td>8</td>
</tr>
<tr>
<td>101A</td>
<td>WB</td>
<td>SB 509 ramp to SR 518, SBR</td>
<td>8.7%</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>WB</td>
<td>SR 518 to 1st, Exit Point</td>
<td>4.6%</td>
<td>46</td>
</tr>
<tr>
<td><strong>EB Direction</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101B</td>
<td>EB</td>
<td>EB, east of 1st Ave</td>
<td>3.4%</td>
<td>33</td>
</tr>
<tr>
<td>105B</td>
<td>EB</td>
<td>SB Term SBL</td>
<td>2.1%</td>
<td>21</td>
</tr>
<tr>
<td>103</td>
<td>EB</td>
<td>SB Term EBR</td>
<td>4.0%</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>EB Loop Off to NB SR 509</td>
<td>7.8%</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>EB</td>
<td>EB SR 518 between NB 509 Term slip &amp; NB Term NBL</td>
<td>3.0%</td>
<td>50</td>
</tr>
<tr>
<td>202</td>
<td>EB</td>
<td>DMM EB on</td>
<td>7.6%</td>
<td>30</td>
</tr>
<tr>
<td>301</td>
<td>EB</td>
<td>EB SR 518 to 154 St</td>
<td>4.8%</td>
<td>11</td>
</tr>
<tr>
<td>403</td>
<td>EB</td>
<td>NB Pacific Hwy on</td>
<td>4.4%</td>
<td>37</td>
</tr>
<tr>
<td>502</td>
<td>EB</td>
<td>EB SR 518 to 51st Ave</td>
<td>1.4%</td>
<td>5</td>
</tr>
</tbody>
</table>
Regional Context: Projects near SR 518
Regional Projects near SR 518

• WSDOT SR 509 Extension (Gateway Program)
  – Stage 2 completion by 2030

• WSDOT I-405 Corridor Program
  – ETL expansion Renton-Canyon Park by 2024-2025

• Sound Transit I-405 BRT Project
  – Expected opening of 2024 (To Burien TC via SR 518)

• Sound Transit Link Extensions (Lynnwood, Redmond, Federal Way, Tacoma, West Seattle)
  – Expected openings 2024-2030

• Port of Seattle SAMP
  – Near-Term Projects by 2027
**SR 509 Completion Project**

**Tolling SR 509**
All lanes on the new portion of SR 509 will be tolled using one electronic toll point. There will be no tollbooths. Toll rates will be set by time of day – more during peak periods and less during mid-day, evenings and weekends. Toll rates for the new portion of SR 509 have not been determined. A toll authorization bill must be passed by the Legislature before tolling begins. $85 million from tolls will be used to construct the SR 509 Completion project. The Washington State Transportation Commission would then oversee the rate-setting process. The rate-setting process will begin closer to when the project is completed.

**Lake to Sound Trail Final Segment**
The Puget Sound Gateway Program will help to fund a portion of the Lake to Sound Trail, a 15-mile non-motorized trail extending from Lake Washington to the Puget Sound shoreline. WSDOT is working in close coordination with the City of SeaTac and King County to finish the final segment of the trail. The SR 509 alignment will cross over the trail near South 200th St. and South 189th St.

---

**Working with Sound Transit**
WSDOT is working closely with Sound Transit as both agencies work to build new major infrastructure projects in the area. Coordination is underway to work through shared property needs in the area. Both teams are also in close coordination at key locations where the projects interact with each other, including the SR 99 crossing, the South 216th St. Bridge, retaining walls near Mansion Hill Neighborhood, and the Southbound off ramp to SR 516.

---

**Early Work in SeaTac: Connecting 28th/24th Avenue South**
The city of SeaTac just completed a project, with funding support from WSDOT, to build a new road between South 200th and South 208th streets to connect 28th Avenue South to 24th Avenue South. The project completes the gap in the 28th/24th Avenue South corridor and provides an alternative to SR 99 in the area. As part of the project, a new bridge and tunnel were constructed that accommodates the future SR 509 corridor and the South Airport Expressway.

---

**Southern Access to Sea-Tac Airport**
The SR 509 project design accommodates the Port of Seattle’s concept for a South Airport Expressway from SR 509 to Sea-Tac International Airport. Trips to the airport from the south will have a new access point to the airport, relieving the north access route. By creating this new southern access point, communities south of SeaTac would have improved access. An interim South Access will be provided from 28th/24th Avenue South.
Regional Context: Transit

• KCM’s RapidRide F-Line via S 154th St and Southcenter Boulevard (Renton to Burien transit centers)
  – Ridership of 7,000 passengers

• Sound Transit Link service to/from airport and TIBS runs 20 hours per day
  – Over 7,000 daily boardings at Airport station

• Future Link expansion to Lynnwood, Federal Way and Redmond in the near term

• Future I-405 BRT service will connect to/from TIBS potentially with freeway stations on SR 518
  – Headways of 10 minutes are expected
Regional Context: Surrounding Growth and Planned Projects

- NERA Gateway Centers 1 and 2
- City of Tukwila Strander Boulevard Extension
- City of Tukwila Transit Oriented Development (TOD) along S 154th Street
- Various parcel developments in Tukwila and Burien
Airport Growth

- Unconstrained forecast of 66 million annual passengers (MAP) in 2034
- SAMP Near-Term projects by 2027
  - Second Terminal north of S 170th Street
  - North Airport Expressway improvements
  - Projects north of SR 518 Corridor
- South access provisions may affect travel patterns to some degree
Airport Growth
(Continued)

SAMP: SERVING NEAR-TERM DEMAND

NEAR-TERM PROJECTS

www.portseattle.org
ADDITIONAL QUESTIONS OR COMMENTS?

Thomas A. Noyes – WSDOT

noyest@wsdot.wa.gov  (206) 464-1272