Corridor 382 - SR 518: SR 509 Jct to I-5 Jct (Tukwila) Summary

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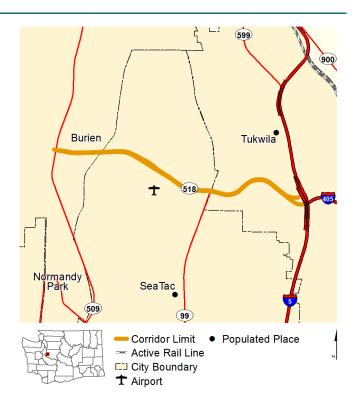
Corridor Sketch Summary

WSDOT

WSDOT's Corridor Sketch Initiative is a collaborative planning process with agency partners to identify performance gaps and select high-level strategies to address them on the 304 corridors statewide. This Corridor Sketch Summary acts as an executive summary for one corridor. Please review the User Guide for Corridor Sketch Summaries prior to using information on this corridor:

SR 518: SR 509 Jct to I-5 Jct (Tukwila)

This three-mile long east-west corridor is located directly north of the Seattle-Tacoma International Airport in King County. The corridor is bound by the Interstate 5 and I-405 junction in the city of Tukwila and State Route 509 in the city of Burien and passes through the cities of SeaTac, Burien, and Tukwila. The corridor is urban in character. Surrounding land uses primarily include Sea-Tac International Airport, suburban residential, and commercial. Burien's central business district is at the western end of the route and Tukwila's central business district is southeast of the corridor. The corridor has separated crossings with SR 99 and the light rail track. Vegetation on the corridor is a mix of shrubs and scattered hardwood/conifer trees. The corridor traverses slightly rolling terrain with several sweeping curves throughout its length.



Current Function

SR 518 is the primary access route to the Seattle-Tacoma International Airport via connections to SR 99. The corridor has connections with the Airport Expressway for passenger service and to SR 509 for air cargo service. There are several freight distributions centers and warehouses accessed by the corridor including FedEx Express, Summit Northwest Corp, UPS Supply Chain Solutions and airport-related facilities. Many private shuttles use the corridor to access the airport. Non-airport related use of the corridor includes commuters and freight trucks. While the local road network accommodates pedestrian and bicyclists, non-motorized travel is prohibited on SR 518.

Future Function

Sound Transit plans to add a new bus rapid transit route as part of the approved Sound Transit 3 measure. This route will use a bus only lane between Burien and Tukwila. Based on the projected population, land use, and economic trends, the future function of this corridor is otherwise expected to remain the same.

Highlights and Performance

SR 518 is a four- to six-lane, divided freeway. The route is largely unsignalized, with the exception of signals at the SR 509 interchange. The annual average daily traffic on this corridor is highest at the I-5 junction in Tukwila and lowest at the SR 509 junction in Burien.

What's working well?

- Roughly 96% of surveyed pavements on the corridor are in fair or better condition.
- There are numerous intermodal freight facilities operating on the corridor.
- The corridor has a low climate change vulnerability rating.

What needs to change?

- Approximately 59% of the corridor experiences congestion on a regular basis.
- There are fish passage barriers present on the corridor.
- The park and ride lots near the corridor are at 100% or more capacity.
- There are currently no pedestrian, bicyclist, or shared-use facilities available on the corridor.

WSDOT monitors the state system in ongoing efforts to track asset performance. For this corridor, WSDOT finds:

High	Low					Mobili	ty					
112,507	42,803	Annual Average Daily Traffic (AADT)				Percent of Corridor Congested (Statewide Screen)						
2.4%	2.4%	Bus/Truc	k Percent									
16	16.58		Number of Lane Miles				20%	40%	60%	80%	100%	
1		# of Signalized/Stop Controlled Intersections					% Cong	gested 🔳	% Not Co	ngested		
\$46,20	3,000	Corridor	Investments	(2005-2016	5)							
Preservation						Environment				Restore/Enhance		
Roadway Surface Type						Protect			tect	Assess		
						Fish Ban	riers	25% Pa	assable	75%	to Do	
0%	20%	20% 40% 60% 80% 100%		100%	Noise W	Noise Walls 0% Built		Built	100% Proposed			
	ACP	BST	PCCP	Bridge		Chronic						
Roadway Surface Condition (Percent of Surveyed Area)					Environn	Environmental 0% Resolved		0% Unresolved				
						Deficien	cies					
0%	20%	40%	60%	80%	100%	Wildlife	0 Structures in Place		0 High Priority Miles			
Poor	Poor & Very Poor Fair Good & Very Good						ivity			o high Phoney Miles		
Corridor Bridge Preservation Needs						Stormwa	ter	8 BMPs		Retrofit Pr	Retrofit Prioritization	
Bord	Border Bridge						nt			in progress		
Bridge Repair Bridge Deck						7000	Zero % of Corridor with high potential for increased Climate Impacts					
🖉 Rehabilitate Bridge 📕 Paint Bridge						Zeit						
Replace Bridge Scour Repair					2		Wetland Mitigation Locations					
Seismic Retrofit Moveable Bridge					None	Historical Bridges						

What we heard from our partners

WSDOT collected feedback from agency partners. Key themes included:

• A desire to address the congestion at several major interchanges, particularly the SR 508 and Des Moines Memorial Drive interchanges.

• Concerns about planned expansions to Sea-Tac Airport and their effects on the corridor's mobility and surrounding environment.

• Interest in bus rapid transit between Burien and Tukwila, new extensions made to existing transit and light rail services in order to ease congestion.

- A desire for widening ramps and eastbound bridge over 42nd Ave South.
- Interest in a perpendicular trail crossing along Des Moines Memorial Drive.
- A desire for ramps at International Boulevard/S 154th St and at Des Moines Memorial Dr.

Strategies

• \$7.4 1.4

WSDOT identified the following strategies and associated actions to keep the corridor working well and address performance gaps. Regional partners collaborated on high-level mobility strategies. The identified strategies are not meant to be all-inclusive, nor an established list of priorities. Further evaluation is needed before any strategy can be recommended as a solution to address performance. Project funding decisions will take place at the programming phase, and are subject to statewide prioritization. For more strategy information, visit the Corridor Sketch Summary User Guide.

Policy Goals / Strategies Description and Near-Term Actions

Economic Vitality						
Under Development	WSDOT will continue to work with partners in developing strategies to address economic vitality.					
Environment						
Protect and Maintain	Protect and maintain existing assets that provide environmental function (these include WSDOT's mitigation sites, storm water systems, fish passable culverts).					
Enhance or Restore	Enhance or restore natural areas and environmental functions associated with the multimodal transportation system.					
Fish Barrier Retrofit	WSDOT has prioritized the removal of state-owned culverts that block habitat for salmon and steelhead. See interactive map of uncorrected fish barriers at http://www.wsdot.wa.gov/Projects/FishPassage/default.htm.					
Mobility						
Assessment	Further information about the proposed strategies can be found attached at the end of this document.					
Preservation						
Maintenance	Based on expenditure history, it is expected that the top three activities will contine to be maintenance on snow and ice control, pavement repair, and sweeping and cleaning.					
Pavement	WSDOT has identified one Pavement action in the next six years encompassing 6 of the corridor.					
Stewardship						
Planning	Under Practical Solutions, the Corridor Sketch Initiative identifies corridor performance, and assesses alternative strategies to improve the quality, effectiveness, and efficiency of the transportation system.					

WSDOT

Mobility assessment for segment of Corridor 382 SR 518: SR 509 to I-5 (Milepost 0.0 – 3.8)

This portion of SR 518 is a predominantly east-west principle arterial, serving the cities of Burien, SeaTac, and Tukwila. The surrounding land uses primarily include SeaTac International Airport, suburban residential, and commercial. In addition to commercial, recreational, and freight traffic to and from the airport, this route supports a large amount of commuter traffic in the morning and evening, providing connections to I-5 and I-405 to the east and numerous employment centers.

Congestion occurs on this segment between SR 99 and I-5 throughout the day and particularly during periods of peak use in the morning and evening.

Corridor Segment Characteristics

- The average daily traffic on this segment was greater than 125,000 vehicles in 2015.
- This segment is classified as a T-2 freight route with an annual tonnage of roughly 9,190,000 in 2015.
- The King County Metro Rapid Ride F line and other frequent local bus service is available.

Contributing Factors

- Traffic demand exceeds capacity during heavy airport traffic and commuter use, resulting in delay.
- Lack of local network connections forces additional traffic demand onto the segment.
- Lack of non-motorized facilities at interchanges make crossing the highway difficult for these users.

Mobility Strategies:

WSDOT compiled these strategies based on available information and existing plans. The agency will conduct engagement with its partners to further develop strategies for the corridor.

Operational Improvements

- Install ramp metering and freight friendly right turns to improve operational capability of intersections.
- Provide Intelligent Transportation Systems and traveler information on roadway conditions to help manage delay and traffic flow.
- Implement access management improvements involving SeaTac airport to reduce peak air travel related traffic.

Demand Management

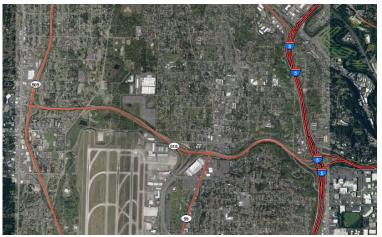
- Improve modal access, options, and connectivity to reduce single occupant vehicle trips.
- Encourage HOV and transit use for airport-related travel via targeted policy or infrastructure improvements.

Policy Change

• Encourage HOV and transit use for airport-related travel via targeted policy or infrastructure improvements to reduce single occupant vehicle trips.

Further Study

- Develop options to improve intersections to manage congestion during periods of high use.
- Additional strategies to improve mobility may be identified through the Puget Sound Regional Council's regional planning processes.
- Continue outreach and collaboration with the Port of Seattle on completing SR 518 Corridor Study.



Congestion on the corridor occurs between the SR 99 and I-5 interchanges.

For more information

To find out more information about this corridor or how to get involved, please contact:

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WSDOT Management of Mobility Division

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Washington State Department of Transportation's Corridor Sketch Initiative is a set of planning activities that engage our partners to define the context and performance information for all of the state's 304 highway corridors. The Corridor Sketch complements and supports regional planning processes in Washington. It is not intended to duplicate, substitute or compete with other planning efforts; nor is it intended to generate lists of projects.

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