

Corridor Sketch Summary

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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 167/SR 509: Gateway Corridor (South)

This 24-mile long corridor is comprised of two separate segments within Pierce County. One segment of the corridor is made up of an 11-mile long section of State Route 509, running between Interstate 705 in Tacoma and the Pierce-King County line, and winding its way around both Commencement Bay and Dash Point. One end of the SR 509 segment leads to downtown Tacoma, the Tacoma Dome, and several museums. The second segment is a 12.5-mile long SR 167 section that runs between the I-5/Bay St interchange in Tacoma and the 8th St E interchange at the Pierce-King County line. The SR 167 segment runs through Tacoma, Puyallup, and Sumner as it parallels the Puyallup River.Both corridor segments pass through the Puvallup Indian Reservation. The character of the corridor is urban with many industrial uses near the Port of Tacoma. Other land uses along the corridor include residential, commercial, industrial, and manufacturing. The area surrounding the corridor is very dense. Due to the dense, urban character of the corridor, vegetation along the corridor is limited and includes small patches of trees.



Current Function

SR 167 is commonly known as Valley Freeway and runs between Tacoma and Renton. SR 509 connects Tacoma in Pierce County to downtown Seattle in King County, serving the cities along Puget Sound and west of the Seattle-Tacoma International Airport. Generally, both corridor segments are north-south facilities providing direct service to heavily urbanized areas. The corridor works to provide access to Tacoma, Puyallup, and surrounding areas. The corridor functions as a commuter, freight, shopping, and recreational route. The SR 509 corridor also has freight commodity terminals and freight rail lines, which converge at the Port of Tacoma. Pedestrian and bicyclist use is permitted along corridor shoulders, trails, and within the city limits of Puyallup and Tacoma.

Future Function

Based on the projected population, land use, and economic trends, the future function of this corridor is expected to change. The SR 167 Completion Project will construct a new divided freeway between Tacoma and Puyallup with full control limited access. A high occupancy vehicle lane will be added in each direction.

Highlights and Performance

This corridor is comprised of the western segments of SR 167 and SR 509. SR 167 is a four-lane, divided, unsignalized highway north of Puyallup, and a four to five-lane undivided signalized highway between Tacoma and Puyallup. The segment of SR 509 is a mostly four-lane, undivided, signalized highway which narrows to two lanes past Norpoint Way NE. The corridor includes center turn, right turn, and deceleration lanes at various points. The annual average daily traffic on the corridor is highest at the SR 167/SR 410 interchange and lowest on SR 509 near Dash Point State Park.

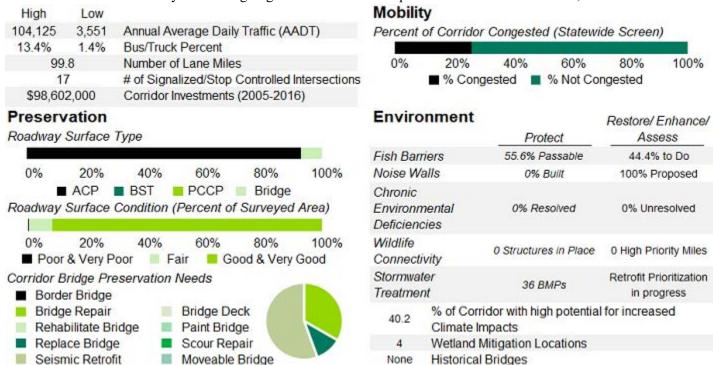
What's working well?

- Approximately 99% of surveyed pavements on the corridor are in fair or better condition.
- There are several multimodal freight options on the corridor.
- There are two shared-use trails and sidewalks available for pedestrian use.
- There are no chronic environmental deficiency sites on the corridor.

What needs to change?

- Over 26% of the corridor experiences congestion on a regular basis.
- There are nine bridge preservation needs, including five seismic retrofits.
- There are fish passage barriers present on the corridor.
- A portion of SR 167 has a medium climate change vulnerability rating due to flooding.

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



 $1)\ 2015\ data\ unless\ otherwise\ noted.\ 2)\ For\ more\ information\ see\ the\ User\ Guide\ for\ Corridor\ Sketch\ Summaries\ at\ http://bit.ly/WSDOT corridors ketch\ Sum$

What we heard from our partners

WSDOT collected feedback from agency partners. Key themes included:

- Concerns about trucks blocking SR 509 at Alexander Ave and Taylor Way.
- Concern that the SR 167 Completion Project will create congestion issues at the SR 410 and SR 512 interchanges.
- A desire to address the weight restrictions on SR 167's bridges near the N Meridian Ave and N Levee Road intersections that force freight onto parallel corridors.
- Concern about the lack of lighting along SR 167 between Tacoma and Puyallup, particularly at the River Road intersection.
- A desire to extend a separated shared use trail along the Puyallup River between Tacoma and Puyallup with a connection to the Puyallup Tribe Youth Center.
- Sound Transit is planning for new parking garages in the cities of Puyallup and Sumner.
- A desire for intelligent transportation systems along SR 509 in Tacoma.

Strategies

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 continue to be maintenance on snow and ice control, pavement repair, and rest areas.
Pavement	WSDOT has identified two Pavement actions in the next six years encompassing 19% of the corridor.
Structures	WSDOT has identified two Structures actions in the next six years at specific locations within this corridor.
Safety	
Investment	WSDOT has identified five Safety Investment actions in the next six years encompassing 61% 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.



Mobility assessment for segment of Corridor 339 SR 509: I-705 Vicinity (Milepost 0.00-0.12)

This segment of SR 509 is an urban freight and commuter corridor which is a critical component of the larger transportation system between the city of Tacoma and the Port of Tacoma.

This corridor experienced up to 15 hours of daily congestion in the westbound (decreasing) direction in 2015.

Corridor Segment Characteristics

- The SR 509/I-705 interchange is an urban bottleneck chokepoint with posted speeds transitioning from 25 mph to 60 mph in level terrain.
- The Freight and Goods Transportation designation was T-2 from I-705 to Norpoint Way with 8,730,000 in annual tonnage and 2,100 daily trucks (7.4%) in 2017.
- The annual average daily traffic volumes were 37,000 east of I-705 in 2016.

Contributing Factors

- Traffic generators include the Port of Tacoma and downtown Tacoma.
- High traffic volumes and freight trucks with slower acceleration reduce throughput capacity at signalized intersection.

Mobility Strategies: Operational Improvements

- Consider installing Intelligent Transportation Systems to help manage congestion.
- Consider installing adaptive signal systems in the city of Tacoma using detection of vehicles in a grid to improve efficiency.

Local Network Improvements

 Explore establishing parallel adjacent routes to relieve congestion.

Further Study

- Consider hard shoulder driving from Portland Ave to I-705 Northbound ramp to reduce congestion.
- Study the efficiency of a Diverging Diamond Interchange (DDI) to improve traffic flow.
- Consider a grade separated ramp from SR 509 Westbound to I-705 Southbound to reduce congestion.

Acceptance

• Do nothing - Accept current performance.





Mobility assessment for segment of Corridor 339 SR 509: Alexander Ave to Norpoint Way Vicinity (Milepost 2.48-5.95B)

This segment of SR 509 is an urban freight and commuter corridor providing access to the Port of Tacoma and industrial businesses.

Data shows up to 15 hours of daily congestion n 2015.

Corridor Segment Characteristics

- SR 509 is an urban four-lane divided facility and five-lane undivided facility in the city of Tacoma with posted speeds ranging from 40 mph to 50 mph in level terrain.
- The Freight and Goods Transportation designation was T-2 from I-705 to Norpoint Way with 8,730,000 in annual tonnage and 2,100 daily trucks (7.4%) in 2017. From Norpoint Way to Pierce/King County line the designation dropped to T-3 with 660,000 in annual tonnage and 210 daily trucks (3.2%) in 2017.
- The annual average daily traffic ranged from a low of 22,000 south of Norpoint Way to a high of 33,000 north of Port of Tacoma Road.
- This section is full control limited access south of Hylebos Creek and Class 4 to the north.
- The corridor is on the National Highway System and is a Highway of Statewide Significance.

Contributing Factors

- High traffic volumes and signals reduce capacity.
- Freight trucks with slower acceleration reduce throughput capacity at signalized intersections.

Mobility Strategies: Operational Improvements

- Consider installing Intelligent Transportation Systems to help manage congestion.
- Study adaptive signal system to improve overall efficiency in the city of Tacoma.
- Consider updating signal timing to improve traffic flow (City of Tacoma jurisdiction).

Further Study

- Study the feasibility of a northbound double left to southbound SR 509 at Alexander Ave and SR 509 to increase efficiency.
- Study the feasibility of improving traffic flow from Taylor Way to southbound SR 509 and the northwest direction at Taylor Way E to northbound SR 509.
- Study options for intersection relief at SR 509 and Norpoint Way.
- Evaluate the feasibility of a four lane divided freeway with westbound and eastbound frontage roads to reduce congestion.
- Consider a two way cycle track along SR 509 to develop Port access for bikes to increase mode shift.
- Evaluate options to improve traffic flow near Alexander Ave and Taylor Way intersections.





Mobility assessment for segment of Corridor 339 SR 167: I-5 to Pierce/King County Line (Milepost 0.28-11.17)

This segment of SR 167 is an urban freight and commuter corridor between Tacoma and Puyallup and into King County. It serves as a main street for the city of Puyallup.

The segment experienced up to 15 hours of daily congestion in 2015.

Corridor Segment Characteristics

- SR 167 is typically a five-lane undivided facility between Tacoma and Puyallup (center two-way left turn lane) with 30 mph to 50 mph posted speeds in level terrain. Between Puyallup and King County it is a four-lane divided freeway with 60 mph posted speeds in level terrain.
- The Freight and Goods Transportation designation was T-1 and T-2 in 2017. The T-2 segment of the corridor from I-5 in Tacoma to SR 512 had 7,960,000 in annual tonnage and 1,900 daily trucks (6.5%). From SR 512 to Pierce/King County line the designation was T-1 with 43,030,000 in annual tonnage and 9,000 daily trucks (9.0%).
- The annual average daily traffic ranged from a low of 8,400 near I-5 to a high of 106,000 near SR 512 in 2016.

Contributing Factors

High traffic volumes with signal systems between Tacoma and Puyallup and high traffic volumes on the freeway portion from Puyallup to the Pierce/King County line reduce capacity.

Mobility Strategies:

Operational Improvements

- Study adaptive signals in the city of Puyallup along SR 167 River Road from Meridian Ave to 11th St to improve efficiency.
- Consider installing Intelligent Transportation Systems to reduce congestion.

Demand Management

Consider extending Puyallup Foothills Trail near 134th Ave to the Puyallup Tribe Little Wild Wolves Youth Center for bicyclists and pedestrians to encourage mode shift.

Demand Management (Continued)

- Consider expanding park and ride lots to encourage carpooling on future high occupancy vehicle lanes to reduce congestion.
- Consider express transit service and bus stops along River Rd E to encourage mode shift.
- Consider new Sound Transit parking garage west of the existing station and a new surface parking lot along the north side of 3rd Ave NW in Puyallup to encourage mode shift.
- Consider new Sound Transit parking garage at the current parking site of 810 Maple St in the city of Sumner to encourage mode shift.

Local Network Improvements

• Study alternative local routes that bypass SR 167 for congestion relief.

Further Study

- Study adding illumination between Tacoma and Puyallup for bicyclists and pedestrians to encourage mode shift.
- Consider reducing the number of lanes on SR 167 from five to three with wider shoulders and sidewalk for pedestrians and bicyclists after SR 167 extension is complete to encourage mode shift.
- Revisit the idea of finishing the SR 167 extension between Tacoma and Puyallup to improve traffic
- Study the feasibility of adding additional lane capacity between Puyallup and the King/Pierce county line to reduce congestion.



For more information

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

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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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