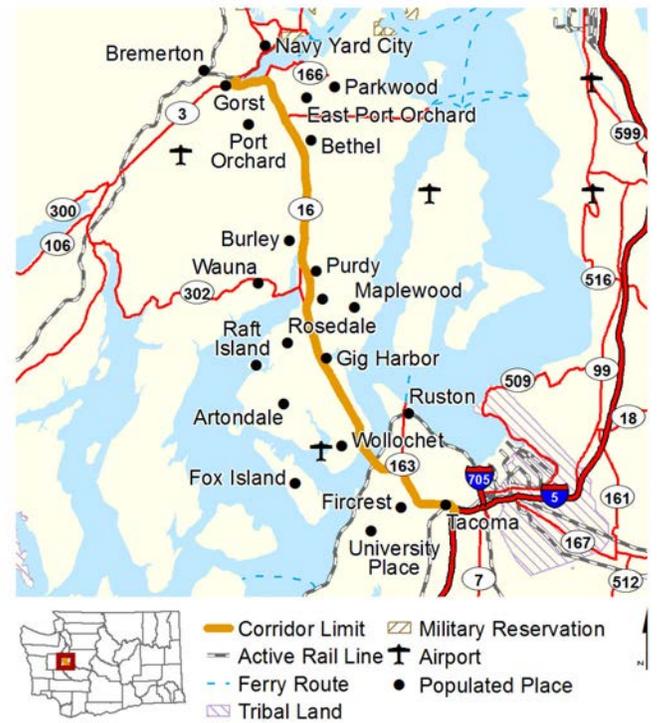


WSDOT's Corridor Sketch Initiative is a collaborative planning process with agency partners to identify performance gaps and select high-level strategies to address them on the 304 corridors statewide. This Corridor Sketch Summary acts as an executive summary for one corridor. Please review the User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

SR 16: I-5 Jct (Tacoma) to SR 3 Jct (Gorst)

This 28-mile long east-west corridor runs from the Interstate 5 interchange in Tacoma to the State Route 3 interchange in Gorst on the Kitsap Peninsula, encompassing SR 16 in its entirety. The corridor includes both a .7-mile alternative route and a .4-mile spur in Gorst. The corridor travels between Kitsap and Pierce counties, and crosses over the Narrows via the Tacoma Narrows Bridge. The corridor runs between the cities of Tacoma, Gig Harbor, Purdy, Port Orchard and Gorst. The corridor's character changes throughout its length. The southeastern portion of the corridor is densely populated and urban, with intense retail and commercial development and relatively dense residential areas. There are also multiple parks and schools located near this section of the corridor. The northwestern portion of the corridor becomes progressively less dense. The middle portion of the corridor is more suburban in character with some residential and commercial areas scattered throughout, and the northwestern portion of the corridor is suburban and rural in character with residential concentrations scattered throughout. The corridor is tree-lined for most of its route and travels through rolling terrain.



Current Function

SR 16 connects Pierce and Kitsap counties, and is the primary north-south route connecting Tacoma with the Olympic Peninsula, and the urban centers of Bremerton and Port Orchard. The corridor serves a variety of traffic needs, commuter trips, recreational excursions, shopping, and freight. Most of the traffic on the corridor is commuter-related travel between Kitsap county, Tacoma, and employment centers located in the Puget Sound metropolitan area. The southern end of the corridor transports the majority of the corridor's freight tonnage. The southern portion of the corridor also provides access to many educational facilities such as the University of Puget Sound and Tacoma Community College, as well as health care facilities. SR 16 connects to SR 163, SR 302, SR 166, and SR 160, and SR 16 indirectly provides access to ferry service in Pierce and Kitsap counties. SR 163 provides access to the Point Defiance-Tahlequah Ferry terminal and SR 160 provides access to the Fauntleroy-Southworth Ferry terminal. The corridor provides a critical link to the Puget Sound Naval Shipyard at Bremerton. The corridor accommodates Pierce Transit and Sound Transit routes.

Future Function

Based on the projected population, land use, and economic trends, the future function of this corridor is expected to remain the same.

Highlights and Performance

This corridor is comprised of three separate facilities. Mainline SR 16 is a mostly four to six lane, divided, unsignalized highway; the southbound alternate route at the Tacoma Narrows Bridge is six lanes; and the Gorst Spur is a two-lane, divided, signalized highway. The main highway includes inside HOV lanes for the six to eight-lane facility between I-5 and Olympic Drive NW Interchanges with acceleration and deceleration lanes, and shoulders for peak use. It is typically a four-lane divided facility between Olympic Drive NW and Gorst. The annual average daily traffic is highest at the Union Avenue interchange in Tacoma and lowest on the SR 16 Spur in Gorst.

What's working well?

- All surveyed pavements on the corridor are in fair or better condition.
- There are multimodal opportunities for passenger and commuter traffic on the corridor.
- There are operational and traffic management strategies in active use on the corridor.
- The corridor has a low climate change vulnerability rating.

What needs to change?

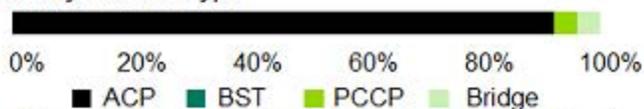
- Roughly 8% of the corridor experiences congestion on a regular basis.
- There are 11 bridge preservation needs on the corridor, including 10 seismic retrofits.
- There are no shared-use facilities on the corridor north of Gig Harbor.
- There are multiple fish passage barriers on the corridor.

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

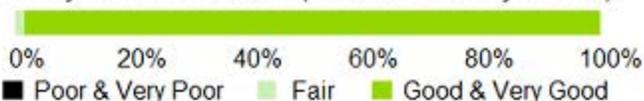
High	Low	
128,533	5,016	Annual Average Daily Traffic (AADT)
7.6%	4.8%	Bus/Truck Percent
133.69		Number of Lane Miles
2		# of Signalized/Stop Controlled Intersections
\$920,073,000		Corridor Investments (2005-2016)

Preservation

Roadway Surface Type



Roadway Surface Condition (Percent of Surveyed Area)

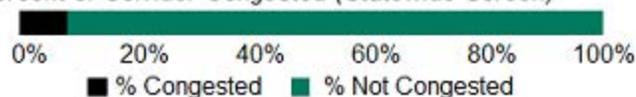


Corridor Bridge Preservation Needs



Mobility

Percent of Corridor Congested (Statewide Screen)



Environment

	Protect	Restore/ Enhance/ Assess
Fish Barriers	30% Passable	70% to Do
Noise Walls	100% Built	0% Proposed
Chronic Environmental Deficiencies	0% Resolved	100% Unresolved
Wildlife Connectivity	0 Structures in Place	9 High Priority Miles
Stormwater Treatment	55 BMPs	Retrofit Prioritization in progress
Zero	% of Corridor with high potential for increased Climate Impacts	
4	Wetland Mitigation Locations	
1	Historical Bridges	

1) 2015 data unless otherwise noted. 2) For more information see the User Guide for Corridor Sketch Summaries at <http://bit.ly/WSDOTcorridorsketch>

What we heard from our partners

WSDOT collected feedback from agency partners. Key themes included:

- Emphasis on susceptibility to rising sea level in the city of Gorst.
- A desire for park and ride lots and expanding fixed-route transit coverage.
- A desire to improve east-west connections across the highway in the city of Gig Harbor.
- A desire to extend Cushman Trail further north to SR 302 vicinity for pedestrians and bicyclists.
- A desire for interchanges to be evaluated using strategies identified in the SR 16-Tacoma Narrows Bridge to SR 3 congestion study.

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	<i>WSDOT will continue to work with partners in developing strategies to address economic vitality.</i>
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Environment

Protect and Maintain	<i>Protect and maintain existing assets that provide environmental function (these include WSDOT's mitigation sites, storm water systems, fish passable culverts).</i>
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Enhance or Restore	<i>Enhance or restore natural areas and environmental functions associated with the multimodal transportation system.</i>
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Fish Barrier Retrofit	<i>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.</i>
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Mobility

Assessment	<i>Further information about the proposed strategies can be found attached at the end of this document.</i>
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Preservation

Maintenance	<i>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 vegetation control.</i>
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Pavement	<i>WSDOT has identified one Pavement action in the next six years encompassing 30% of the corridor.</i>
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Structures	<i>WSDOT has identified one Structures action in the next six years encompassing 4% of the corridor.</i>
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Safety

Investment	<i>WSDOT has identified one Safety Investment action in the next six years encompassing 34% of the corridor.</i>
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Stewardship

Planning	<i>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.</i>
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SR 16 is as an urban freight, recreational and tourism corridor which runs near the communities of North Tacoma, Hilltop, Fircrest and University Place.

This corridor segment experienced up to fifteen hours of daily congestion in 2015. The Highway Segment Analysis indicates up to twelve hours of mainline congestion near the I-5/SR 16 interchange.

Mobility Strategies:

Operational Improvements

- Evaluate S 19th Street/Orchard Street, S Union Ave, and S Sprague Ave Interchanges to reduce congestion.

Demand Management

- Consider Scott Pierson Trail as a local network improvement for pedestrians and bicyclists.
- Consider Pierce Transit High Capacity Transit (HCT) between downtown colleges and Lakewood passing through the SR 16/S19th Street/Orchard Street Interchange to encourage mode options.
- Consider Sound Transit Tacoma Link Extension to Tacoma Community College to encourage mode options.

Further Study

- Study express lanes in both directions as a toll lane to replace carpool lane in each direction.

Acceptance

- Do nothing - Acceptance of current performance after construction is complete in this segment and at the I-5/SR 16 Interchange.

Corridor Segment Characteristics

- SR 16 is typically an urban six lane facility (inside high occupancy vehicle lanes) with posted speeds of 60 mph in rolling terrain.
- SR 16 is a Highway of Statewide Significance and is part of the Strategic Highway Network (STRAHNET).
- This segment includes Sprague Avenue, Union Avenue, Center Street, and S 19th-Orchard Street interchanges with many adjacent businesses and nonprofit traffic generators.
- The Freight and Goods Transportation designation is T-1 with 17,100,000 in annual tonnage and 4,800 daily trucks (5.2%) in 2017.
- The annual average daily traffic ranged from a low of 34,000 after I-5 to a high of 125,000 before the Center Street ramp at the permanent traffic recorder site in 2016.

Contributing Factors

- There are large traffic generators located adjacent to this SR 16 corridor segment, including Tacoma Community College, Cheney Stadium, Foss High School, Allenmore Hospital and Medical Center and multiple big box retail stores.
- High traffic volumes with merging, diverging, and weaving between closely spaced interchanges cause congestion.



This segment of SR 16 is an urban freight, recreational and tourism corridor between the city of Gig Harbor and the Tacoma Narrows Bridge. The Tacoma Narrows Bridge is a tolled facility in the southeast direction.

This segment experienced up to fifteen hours of daily congestion in the southbound direction between the 36th St NW and 24th St NW Interchanges in 2015.

Mobility Strategies:

Operational Improvements

- Evaluate operation improvements at Olympic Drive NW Interchange for efficiency such as on ramp metering.
- Consider expansion of nearby Traffic Management Center to continue providing Intelligent Transportation Systems (upgrade end equipment and software).

Further Study

- Consider SR 16 Tacoma Narrows Bridge to SR 3 Congestion Study strategies to reduce congestion and expand mode options.
- Study options to reduce congestion between Olympic Drive NW and SR 302- Purdy vicinity interchanges.

Acceptance

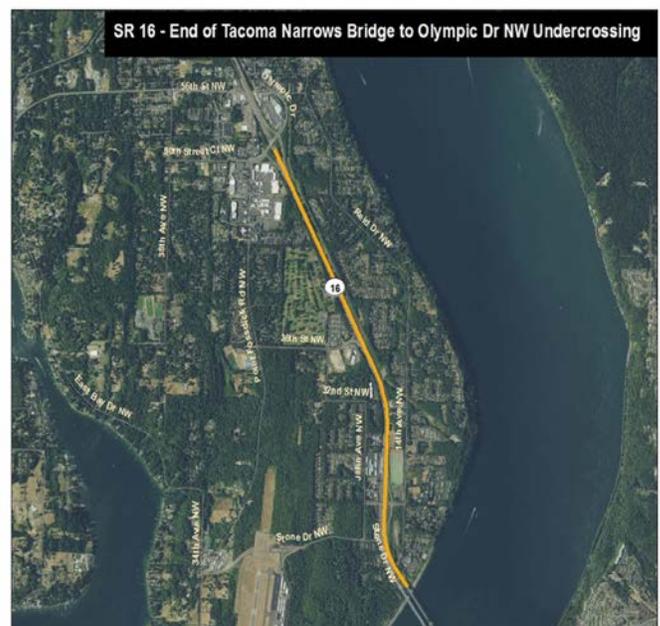
- Do nothing – Acceptance of current performance.

Corridor Segment Characteristics

- SR 16 is typically an urban six lane facility (inside high occupancy vehicle lanes) with posted speeds of 60 mph in rolling terrain.
- The Scott Pierson Trail runs roughly parallel to SR 16 between 25th Street in Tacoma and 24th Street on the southern edge of Gig Harbor.
- The Cushman Trail roughly parallels SR 16 and follows overhead Tacoma Power electric lines in the city of Gig Harbor between 14th Ave NW and Olympic Drive NW interchange.
- The North Gig Harbor (Kimball Drive) Park and Ride serves this corridor.
- The Freight and Goods Transportation designation is T-1 with 11,370,000 in annual tonnage with 3,100 daily trucks (5.2%) in 2017.
- The annual average daily traffic ranged from a low of 60,000 at Olympic Drive NW to a high of 83,000 before 24th St ramp near west end of Tacoma Narrows Bridge in 2016.

Contributing Factors

- There are large traffic generators located adjacent to the SR 16 corridor, including the Tacoma Narrows Airport, Madrona Links Golf Course, Safeway, Kohl's and the Galaxy Uptown Luxury Theatre.



SR 16 Alternate Route is an urban freight, recreational and tourism corridor. This segment is for drivers using the toll booths in the southeast direction heading towards the Tacoma Narrows Bridge.

This corridor segment experienced one hour of daily congestion in 2015.

Corridor Segment Characteristics

- SR 16 Alternate Route is an urban toll facility with posted speed of 55 mph in rolling terrain.
- SR 16 is a Highway of Statewide Significance and is part of the Strategic Highway Network (STRAHNET).
- The Freight and Goods Transportation designation is T-1 with 11,370,000 in annual tonnage and 3,100 daily trucks (3.6%) in 2017.
- The annual average daily traffic for the Tacoma Narrows toll booth lanes was 9,800 in 2016.

Mobility Strategies:

Operational Improvements

- Consider “Slower Traffic Keep Right” signs for efficiency.
- Consider improving merge areas to reduce congestion.
- Consider expansion of Traffic Management Center to continue providing Intelligent Transportation Systems (upgrade end equipment and software).

Policy Change

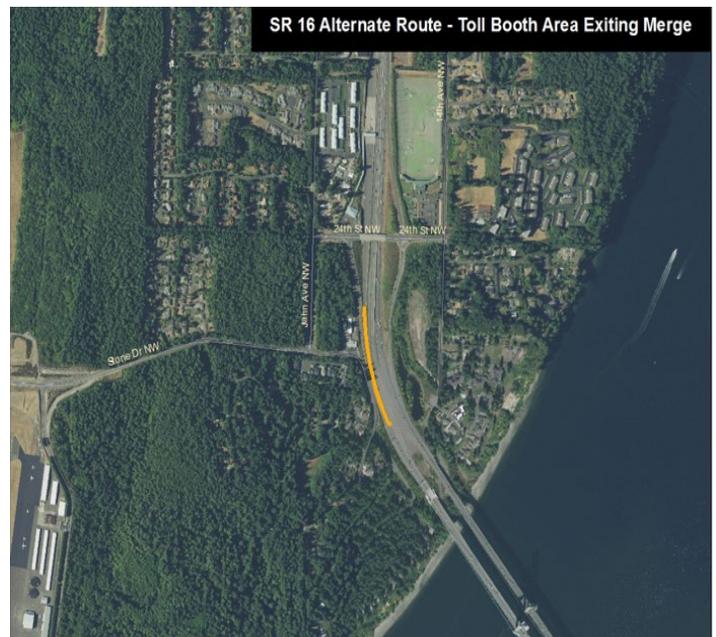
- Consider moving to all electronic tolling instead of toll booths to reduce congestion.
- Consider opening more or all of the toll booths to reduce congestion (e.g. during holiday weekends in summer).

Acceptance

- Do nothing - Acceptance of current performance and remove tolls after bridge is paid for in 2032.

Contributing Factors

- Six toll booth lanes narrowing down into a one lane exiting merge reduce capacity.
- When not enough toll booth lanes are open traffic backs up.



This segment of SR 16 is an urban commuter, freight, recreational and tourism corridor connecting the urban centers of Bremerton and Port Orchard with the Gorst community located in between.

This segment experienced one hour of daily congestion in 2015 (possibly up to three hours of daily congestion in the northeast direction where three lanes narrow down into two approaching SR 3).

Mobility Strategies:

Operational Improvements

- Consider installation of “smart highway” devices that help WSDOT manage traffic and relay roadway information to the public. These devices could include additional traffic cameras, electronic overhead message signs, and ramp meters to reduce congestion.

Further Study

- Study location, spacing, and operation of driveways near the SR 3/SR 16 interchange in Gorst to reduce the number of access points.
- Study possible solutions to reduce congestion at SR 16/SR 3 interchange in Gorst
- Study the potential impact of sea level rise due to climate change at SR 16/SR 3 interchange in Gorst.
- Consider recommendations from the SR 16 Tacoma Narrows Bridge to SR 3 Congestion Study to reduce congestion and increase mode options.
- Evaluate options for network improvements across Sinclair Inlet to distribute demand away from Gorst and reduce congestion.

Corridor Segment Characteristics

- This segment of SR 16 is typically an urban six-lane divided facility with 40 mph posted speeds in rolling terrain. The lanes in the northeast direction reduce from three-lanes to two-lanes approaching SR 3.
- The Freight and Goods Transportation designation was T-1 from the Pierce/Kitsap County Line to Gorst with 11,370,000 in annual tonnage and 3,100 daily trucks (5.2%) in 2017.
- The annual average daily traffic ranged from a low of 34,000 at the SR 16/SR 3 Interchange to a high of 61,000 east of Anderson Creek at SR 166.

Contributing Factors

- This segment of SR 16 experiences high mainline traffic volumes.
- Weaving, merging, exiting, and transitions in number of lanes results in reduced capacity through Gorst.
- Access to commercial properties in Gorst result in slowdowns due to vehicles turning into and out of parking. Access on the west side of SR 16 is effectively continuous in this segment.
- Auto-oriented local streets and development patterns discourage high occupancy travel.



The SR 16 Spur is an urban commuter, freight, recreational and tourism corridor in the Gorst community.

This segment experienced up to fifteen hours of daily congestion in 2015 (possibly related to westbound off-ramp being one lane).

Mobility Strategies: Operational Improvements

- Consider installation of “smart highway” devices that help WSDOT manage traffic and relay roadway information to the public.

Further Study

- Study location, spacing, and operation of driveways near the SR 3/SR 16 interchange in Gorst for efficiency.
- Study possible solutions to reduce congestion at the SR 16/SR 3 interchange in Gorst.
- Study the potential impact of sea level rise due to climate change at SR 16/SR 3 interchange in Gorst.
- Consider recommendations from the SR 16 Tacoma Narrows Bridge to SR 3 Congestion Study.
- Evaluate options for network improvements across Sinclair Inlet to reduce congestion and distribute demand away from Gorst.

Corridor Segment Characteristics

- SR 16 Spur Gorst is an urban two-lane facility with a posted speed of 40 mph in rolling terrain. The westbound lane is an elevated off-ramp.
- The Freight and Goods Transportation designation was T-3 with 2,710,000 in annual tonnage and 700 daily trucks (7.6%) in 2017.
- The annual average daily traffic ranged from a low of 5,300 near SR 16 to a high of 11,000 at Feigley Street in Gorst.

Contributing Factors

- This SR 16 Spur off ramp in Gorst is adjacent to SR 16 mainline which experiences high traffic volumes.



For more information

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

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Planning Manager

360-357-2651

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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.

Under 23 U.S. Code § 148 and 23 U.S. Code § 409, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

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