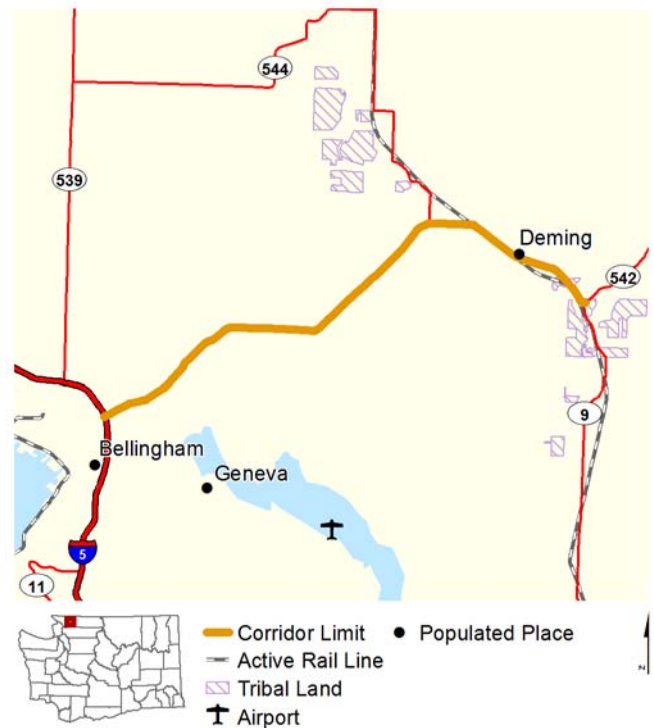


WSDOT's Corridor Sketch Initiative is a collaborative planning process with agency partners to identify performance gaps and select high-level strategies to address them on the 304 corridors statewide. This Corridor Sketch Summary acts as an executive summary for one corridor. Please review the User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

SR 542: I-5 Jct (Bellingham) to SR 9 Jct (Deming)

This 15-mile long east-west corridor runs between the Interstate 5 interchange in Bellingham and State Route 9 junction in Deming, where the Nooksack Tribal headquarter is located in rural Whatcom County. This corridor is a segment of the Mt. Baker Scenic Byway and passes through the city of Bellingham and the rural community of Deming. The corridor crosses over the Nooksack River and follows the river through to Deming. The corridor also crosses a BNSF railroad which runs parallel to this section of SR 542. The corridor is primarily rural with low-density housing and agriculture being the most common land uses as well as some commercial uses particularly near intersections or in small towns. Within the city of Bellingham, the area surrounding the corridor is urban with commercial and clustered residential development. A major industrial area is located just north of the corridor in Bellingham via Hannegan Road. Vegetation along the corridor ranges from maintained boulevards with trees and decorative landscaping within Bellingham to open agricultural fields and forested areas dispersed throughout the eastern portion of the corridor.



Current Function

SR 542 serves as the main route between I-5 in Bellingham and Mount Baker and also connects rural communities such as Deming, Kendall, Maple Falls, and Glacier along the Nooksack River. This segment of SR 542 connects Bellingham and Deming, and provides access to local communities it passes through. The corridor is used by commuters, tourists, and freight traffic for local and regional travel both within the city of Bellingham and eastern Whatcom County. The corridor serves significant recreational traffic from travelers accessing the Mount Baker-Snoqualmie National Forest, and Mt. Baker Ski Area/Artist Point. Major traffic generators for the corridor include the large commercial and industrial centers, regional hospital, and other services in Bellingham, the Nooksack tribal services in Deming, and recreational areas along this corridor. Pedestrians and bicyclists are active within the city limits of Bellingham accessing transit and nearby destinations. Experienced cyclists also use the shoulders to commute along the more rural segments of this corridor. Whatcom Transportation Authority provides bus service along the entire length of the corridor.

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 section of SR 542 is primarily a two-lane, undivided highway with left turn lanes at major intersections. The facility expands to four lanes with a center turn lane and signalized intersections in Bellingham. The annual average daily traffic on the corridor is highest within the city of Bellingham and lowest at the SR 9 junction.

What's working well?

- Roughly 94% of surveyed pavements on the corridor are in fair or better condition.
- City of Bellingham capacity improvements provided more lanes of travel, as well as enhanced bicycle, and pedestrian network connections.
- Roundabouts at Smith and Nugent's Corner improved access and safety.
- Transit options are available and well used on the corridor.
- Britton Road intersection low cost turn- lane, greatly improve throughput.

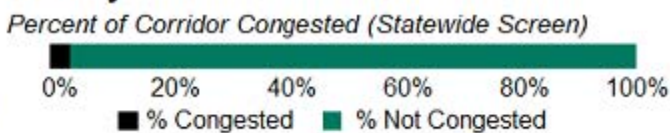
What needs to change?

- Approximately 3% of this corridor experiences congestion on a regular basis due to high traffic volumes, limiting mobility for all corridor users.
- Due to a lack of local street network connections, SR 542 functions as access to I-5 and an east-west connecting corridor, forcing demand on to the facility.
- Gaps in facilities such as the sidewalks limit pedestrian connections and multimodal options.
- The climate vulnerability rating is high on this corridor.
- One chronic environmental deficiency and a fish passage barrier have been identified on the corridor.

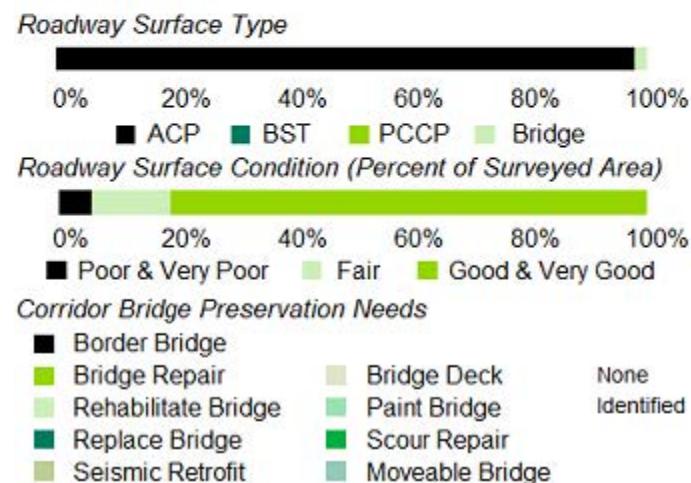
WSDOT monitors the state system in ongoing efforts to track asset performance. For this corridor, WSDOT finds:

High	Low	
38,242	5,698	Annual Average Daily Traffic (AADT)
9.5%	3.9%	Bus/Truck Percent
46.36		Number of Lane Miles
8		# of Signalized/Stop Controlled Intersections
\$19,652,000		Corridor Investments (2005-2016)

Mobility



Preservation



Environment

	Protect	Restore/ Enhance/ Assess
Fish Barriers	50% Passable	50% to Do
Noise Walls	0% Built	0% Proposed
Chronic Environmental Deficiencies	100% Resolved	0% Unresolved
Wildlife Connectivity	0 Structures in Place	7 High Priority Miles
Stormwater Treatment	3 BMPs	Retrofit Prioritization in progress
31.4	% of Corridor with high potential for increased Climate Impacts	
None	Wetland Mitigation Locations	
None	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:

- The Nooksack Tribe expressed a desire for better crossing to the library within the Nooksack Tribal Community, options to calm traffic, and a welcome sign in the SR 542 right of way.
- Interest in expanding east-west connections such as a direct connection from E Bakerview Road to SR 542 to expand accessibility particularly for freight and non-motorized traffic.
- Concern over growing delay within Bellingham during peak hours particularly since the City's transportation improvements are focused on supporting modal options as opposed to handling peak hour vehicle demand.
- Concerns over freight navigating difficult intersection layouts such as the Squalicum Way-Birchwood intersection.
- The City has identified a variety of improvements to pedestrian facilities that are desired to enhance non-motorized mobility and last mile connections.

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, rest areas, and pavement repair.</i>
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Pavement	<i>WSDOT has identified two Pavement actions in the next six years encompassing 100% of the corridor.</i>
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Other Facilities	<i>WSDOT has identified one Other Facilities action in the next six years at a single location on this corridor.</i>
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Safety

Investment	<i>WSDOT has identified two Safety Investment actions in the next six years encompassing 7% 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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This corridor provides access to one of Bellingham's primary commercial areas, as well as the Mount Baker National Forest.

Queuing occurs at major intersections during peak travel periods and private business access.

Corridor Segment Characteristics

- The segment lies within the city limits of Bellingham.
- The average daily traffic on this segment was 38,242 vehicles in 2015. Freight accounted for 3.9% of traffic.
- The speed limit on the segment is 35 mph.
- There are four general purpose lanes with a center turn lane from I-5, east to Britton Road.
- Pedestrian and bicycle facilities are present on segment.
- Public transit is available on the segment.

Contributing Factors

- The segment experiences intense commercial activity near I-5 transitioning to residential activity and rural activity past Woburn Street resulting in heavy usage and congestion during peaks.
- There are heavy traffic volumes near I-5 that result in prolonged periods of congestion, as vehicles cross and enter I-5.
- Traffic signals at five closely spaced intersections are not optimized resulting in reduced throughput and delays.
- I-5 southbound on-ramp and merge from SR 542 has a tight curve radius and short ramp length making merging difficult and resulting in slowdowns.
- Local network lacks parallel routes and north-south access to Bellingham east of I-5 funneling additional travel demand onto the segment.
- Multiple private driveway access points from individual businesses between signalized intersections impact traffic operations and mobility on the segment.
- Heavy transit use causes some schedule delays to transit service.

Mobility Strategies: Operational Improvements

- Encourage shared used driveways and/or public roads in areas that are underdeveloped or undeveloped along the corridor to avoid multiple turning conflicts.
- Implement adaptive signal operations in order to reduce vehicle delay.

Demand Management

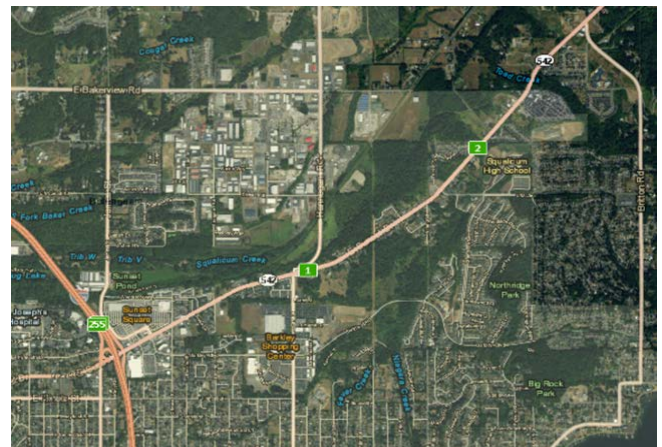
- Improve modal access, options, and connectivity in order to serve more users and reduce single occupancy vehicle trips.
- Provide transit alternatives by integrating managed lanes, bus pull-outs, queue jumps, or other operational features to support transit efficiency and encourage transit use.

Policy Change

- Identify Level of Service measures and standards during peak travel periods to include all modes, and provide measures for users served.
- Work to leverage funding for mutually beneficial improvements on local and state system.
- Encourage ridesharing, vanpooling, and transit service to reduce single occupant vehicle trips.
- Adopt additional policies to restrict the number and location of individual driveways to reduce conflict points, maximize the efficiency of traffic movement, and preserve public investment.

Further Study

- Develop options to reduce travel demand from local trips on SR 542.



SR 542 Sunset Interchange to Britton Road

The corridor accommodates passenger vehicles, commercial freight and public transit and is a major road to the Mount Baker National Forest.

During peak travel periods, the intersections of Van Wyck Road and Everson Goshen Road are not operating efficiently. Non-motorized travel is also restricted in areas where there is inadequate bicycle facilities.

Corridor Segment Characteristics

- The segment is the primary rural highway corridor to Mount Baker and is composed of two general purpose lanes.
- The average daily traffic on this segment was 9,400 vehicles in 2015. Freight accounted for 7% of traffic.
- There are frequent private driveways, many with 100-foot spacing along both sides of the corridor.
- The speed limit on the segment is 35 mph.
- Van Wyck Road has two intersection points with SR 542 in a wye configuration.
- Everson Goshen Road has channelization from SR 542.
- The Nugent Corner roundabout is located where SR 542 and SR 9 converge.
- There is a transit route available on the segment.
- The segment has limited pedestrian and bicycle facilities, other than four-foot shoulders.
- Transit service is available on the segment.

Contributing Factors

- The intersection configuration at Van Wyck and SR 542 makes accessing the highway difficult.
- Everson-Goshen Road intersection control makes access difficult to SR 542.
- Too many individual residential driveways along the corridor restrict traffic movement increasing congestion.
- No pedestrian or bicycle facilities present causing poor non-motorized connectivity along the corridor.



SR 542 Nooksack River Bridge to Nugent's Corner

Mobility Strategies: Operational Improvements

- Improve the operational capability at key intersections in order to reduce congestion and improve access.
- Manage access to address turning conflicts.

Demand Management

- Improve bicycle facilities along the corridor, and cross highway network connections to accommodate pedestrian and biking traffic.

Policy Change

- Work to leverage funding for mutually beneficial improvements on local and state system
- Utilize Everson- Goshen Road as an alternative to SR 9 for north-south trips (route jurisdiction transfer option) in order to improve direct connections.
- Encourage ridesharing, vanpooling, and transit service to reduce single occupant vehicle trips.
- Adopt additional policies to restrict the number and location of individual driveways and reduce conflict points, maximize the efficiency of traffic movement, and preserve public investment.

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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