SCOG
SKAGIT COUNCIL OF GOVERNMENTS
315 South Third Street, Suite 100 • Mount Vernon • WA • 98273 www.scog.net

SKAGIT COUNCIL OF GOVERNMENTS
TRANSPORTATION POLICY BOARD MEETING

December 15, 2021 – 1:30 p.m.
GoToMeeting
Dial In: 1 (866) 899-4679
Access Code: 608-940-109

AGENDA

1. **Call to Order and Roll Call**
2. **Written Public Comments** – *Mark Hamilton*
3. **Consent Agenda**
   a. Approval of November 17, 2021 Transportation Policy Board Meeting Minutes
4. **Action Items**
   a. 2022 Skagit Regional Transportation Priorities – *Grant Johnson*
5. **Discussion Items**
   a. Interstate 5 Existing Conditions Baseline Analysis Mount Vernon / Burlington – *John Shambaugh, WSDOT*
6. **Chair's Report**
7. **Executive Director's Report**
8. **Roundtable and Open Topic Discussion**
9. **Next Meeting:** January 19, 2022, 1:30 p.m., ***GoToMeeting***
10. **Adjourned**

Information:

December 2, 2021 Technical Advisory Committee Meeting Minutes
Monthly Financial Update

Meeting Packet

The Growth Management Act Steering Committee meeting will follow this meeting

SCOG
SKAGIT COUNCIL OF GOVERNMENTS
315 South Third Street, Suite 100 • Mount Vernon • WA • 98273 www.scog.net

TRANSPORTATION POLICY BOARD OFFICERS

Mayor Julia Johnson .....Chair

Commissioner Peter Browning .....Vice-Chair

TRANSPORTATION POLICY BOARD MEMBERSHIP AND VOTES

Anacortes.....1
Burlington 1
Mount Vernon 1
Sedro-Woolley 1
Skagit County 3
WSDOT.....1
Ports 1

- Port of Anacortes
- Port of Skagit

Towns.....1

- Concrete
- Hamilton
- La Conner
- Lyman

Tribes 1

- Swinomish Indian Tribal Community
- Samish Indian Nation

NON-VOTING MEMBERS

Major Employer Representative
Skagit PUD
State Representatives
State Senators

QUORUM REQUIREMENT

A quorum consists of a simple majority (6) of the total votes (11), provided there is at least one Skagit County representative present.

SKAGIT COUNCIL OF GOVERNMENTS
TRANSPORTATION POLICY BOARD
MEETING MINUTES

November 17, 2021
GoToMeeting Remote Meeting

MEMBERS PRESENT

Mayor Julia Johnson, City of Sedro-Woolley, Chair; Commissioner Peter Browning, Skagit County, Vice-Chair; Mayor Jill Boudreau, City of Mount Vernon; Todd Carlson and Chris Damitio, Washington State Department of Transportation; Commissioner Steve Omdal, Port of Skagit; Mayor Steve Sexton, City of Burlington; and Assessor Dave Thomas, Skagit County.

STAFF PRESENT

Kevin Murphy, Executive Director; Mark Hamilton, Senior Transportation Planner; and Grant Johnson, Associate Planner.

OTHERS PRESENT

One member of the public attended the meeting.

MINUTES

1. Call to Order: Mayor Johnson called the meeting to order at 1:58 p.m.

   Roll Call: Roll was taken with a quorum present.

2. Written Public Comments: Mr. Hamilton stated that a public comment period was held from November 10–16, and that no comments were received.

3. Consent Agenda

   a. Approval of October 20, 2021 Transportation Policy Board Meeting Minutes

      Mayor Boudreau moved approval of the October 20, 2021 meeting minutes as presented, and Mayor Sexton seconded the motion. The motion carried unanimously.

4. Action Items

   a. Unified Planning Work Program Amendment: Mr. Hamilton presented an amendment to the Unified Planning Work Program (UPWP). He explained that a copy of the Title VI Plan Annual Report had been provided as an information item, and that while creating the report SCOG staff noticed new requirements from the Washington State Department of Transportation. To update the Title VI Plan, the UPWP will first need to be amended to reflect the work. He stated that SCOG staff recommends approval of the amendment to the Unified Planning Work Program for state fiscal year 2022, and that there is no recommendation from the Technical Advisory Committee since they did not have a meeting in November.

      Commissioner Browning moved to approve the amendment to the Unified Planning Work Program as presented. Mayor Boudreau seconded the motion and it carried unanimously.

5. Discussion Items

   a. Skagit Regional Transportation Priorities: Mr. Johnson presented the update to the 2022

Skagit Regional Transportation Priorities. He explained that the Skagit Regional Transportation Priorities is a list created annually to bring regionally important projects visibility to the Washington state legislature, and that SCOG staff work with member organizations to compile the list. Mr. Johnson stated that there is no draft to present at the current time, but that the draft document will be presented to the Technical Advisory Committee at their December 2, 2021 meeting for review and recommendation, and that the final draft will be brought to the Transportation Policy Board at the December 15, 2021 meeting as an action item.

6. Chair's Report: Mayor Johnson had nothing to report.
7. Executive Director's Report: Mr. Murphy stated that regarding the 2022 Skagit Regional Transportation Priorities, he has been informed that the Washington state legislature is unlikely to take up a transportation package in their next session and will most likely wait until their 2023 session. He stated that the federal Infrastructure Investment and Jobs Act was recently passed by Congress and signed by the President, and that metropolitan planning organizations and state departments of transportation are now determining impacts of the new law. There are several new programs created by the new law, which may include new funding sources that SCOG has authority over. There are going to be talks shortly about how Washington state will allocate the new funds statewide. Mr. Murphy also stated that SCOG had met its obligation target for several years in a row, and due to sanctions on other organizations, approximately one million dollars will be reallocated to SCOG.

   Mayor Boudreau asked for clarification about whether the Washington state legislature intends to address transportation in this coming session, along with the new federal funding available. Mr. Murphy stated that U.S. Department of Transportation has already begun their process for drafting new regulations, and that there is a strong push to get the federal funds flowing across the U.S. as quickly as possible.
8. Roundtable and Open Topic Discussion: No topics were discussed.
9. Next Meeting: The next meeting is December 15, 2021, at 1:30 p.m., via the GoToMeeting remote meeting platform.
10. Adjourned: Mayor Johnson adjourned the meeting at 2:13 p.m.

Information: The Board was provided with the most recent version of the 2021 Obligation Authority Plan; the 2021 Title VI Plan Annual Report; and a monthly financial update.

Approved,

_____ Date: _____

Kevin Murphy, Executive Director
Skagit Council of Governments

_____ Date: _____

Mayor Julia Johnson, Sedro-Woolley
Transportation Policy Board Chair
Skagit Council of Governments

SCOG
SKAGIT COUNCIL OF GOVERNMENTS
315 South Third Street, Suite 100 • Mount Vernon • WA • 98273 www.scog.net

ACTION ITEM 4.A. – 2022 SKAGIT REGIONAL TRANSPORTATION PRIORITIES

Document History

Meeting	Date	Type of Item	Staff Contact	Phone
Transportation Policy Board	11/17/2021	Discussion	Grant Johnson	(360) 416-6678
Technical Advisory Committee	12/2/2021	Recommendation	Grant Johnson	(360) 416-6678
Transportation Policy Board	12/15/2021	Action	Grant Johnson	(360) 416-6678

RECOMMENDED ACTION

Skagit Council of Governments (SCOG) staff and the Technical Advisory Committee (TAC) recommend approval of the 2022 Skagit Regional Transportation Priorities.

FISCAL IMPACT

There is no fiscal impact to the proposed 2022 Skagit Regional Transportation Priorities.

DISCUSSION

SCOG Staff has been working with member jurisdictions to update the Skagit Regional Transportation Priorities. Two new projects have been added to the Skagit Regional Transportation Priorities that were adopted by the Transportation Policy Board on December 16, 2020. One project was removed from the list due to the commencement of construction. The new projects are:

- Library Commons Project Regional Transportation Supporting Elements, City of Mount Vernon
- Washington State Ferries Anacortes Improvements, Washington State Ferries

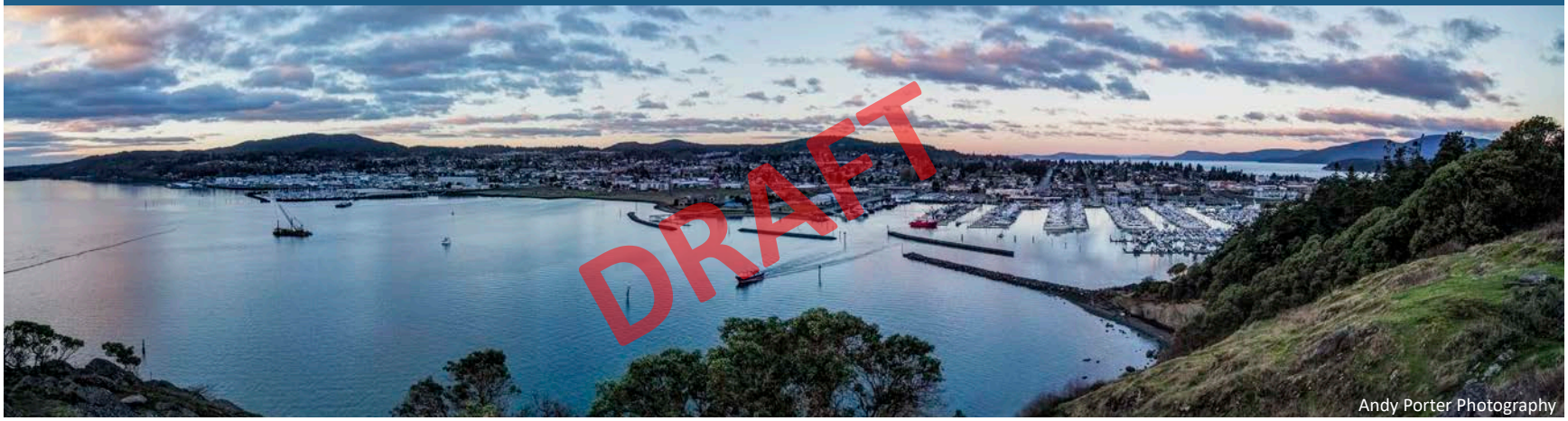
The project removed due to commencement of construction is:

- Josh Wilson Road / Farm to Market Road Intersection Improvements, Skagit County

Projects have been updated based on information provided by member jurisdictions. Where applicable, programmatic funding need amounts have been updated based on best available estimates.

Skagit Regional Transportation Priorities

December 15, 2021

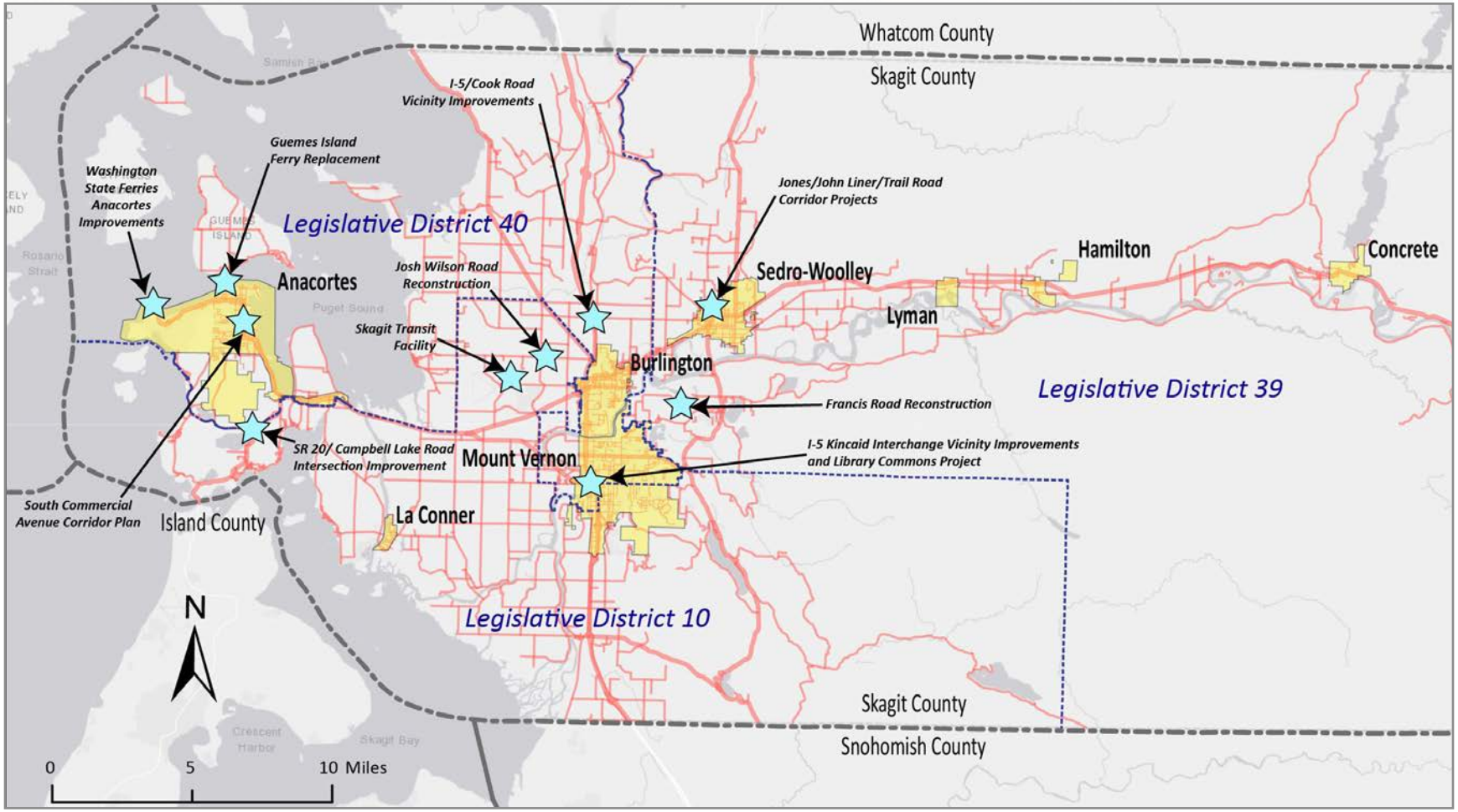


The Skagit Council of Governments (SCOG) is the Metropolitan Planning Organization and Regional Transportation Planning Organization in Skagit County. SCOG works cooperatively with local and tribal governments, the Washington State Department of Transportation (WSDOT), Skagit Transit and other stakeholders to plan for all modes of transportation.

SCOG
Skagit Council of Governments

SCOG has identified a number of high priority transportation projects that further the Skagit region's plans. The projects are organized below into either countywide projects or projects that occur in a particular legislative district. Project order does not necessarily indicate the level of priority.

Regional Overview



DRAFT

WSDOT Highway System Needs

Maintenance, preservation, safety, operations, seismic resilience, environmental retrofit and other needs are estimated at approximately $61 million per year for the Skagit region. These needs are for Interstate 5 and state routes in Skagit County. Currently, 36% of these needs are funded.

Environmental retrofits, principally to improve fish passage, are the highest estimated need.

Highway system needs on I-5 and state routes are estimated at around $61 million per year

DRAFT

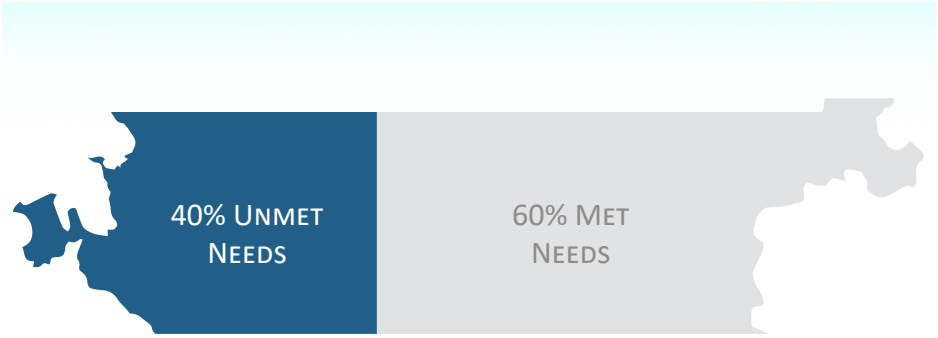
Local Roadway System Needs

The vast majority of the roadway network in the Skagit region is owned and maintained by local jurisdictions. Maintenance and preservation needs for these local facilities are estimated at $27 million per year.

Of these local needs, nearly 60% are being met with available revenues (~$16 million) and the other 40% are unmet needs (~$11 million).

Transportation benefit districts have been utilized in recent years by local jurisdictions to provide funding for maintenance and preservation, but these districts have not provided the funding necessary to address all unmet needs.

Deferred maintenance due to these unmet needs are leading to further degradation of local roadways.



40% of Needs are Unmet with Available Revenues

DRAFT

Regional Connector Transit Services

Regional Connector transit services continue to relieve congestion and improve mobility by providing commuter-based transit services.

This effort will meet increasing demand for public transportation options between Island, Skagit, and Whatcom counties with the Seattle metropolitan region.

With the recent addition of mid-day trips during the week and new weekend service, the Regional Connector is able to assist the public in reaching critical services in the Seattle area.

This includes Skagit Transit Routes 80X and 90X which connect Bellingham and Mount Vernon to Everett seven days a week.

Riders traverse counties on a regional connector transit route

Project Sponsor: Skagit Transit

Operating Funds Requested: $1,700,000 per year

DRAFT

Francis Road Reconstruction (Sections 1,3 & 4)

Existing conditions on Francis Rd. Section 1

Project Sponsor: Skagit County

Project Cost: $10,474,324

Existing Funding: $3,951,296

Funding Needed: $6,523,028

Francis Road Reconstruction began in 2012 with the reconstruction of Section 2 to current standards (12 foot lanes and 8 foot shoulders).

Section 1 is scheduled for construction in 2021 and will begin where Section 2 ended near Debay's Isle Road, and will tie into the State Route 9 roundabout. The remaining Sections 3 & 4 will continue the realignment to decrease the radii of the curves and widen to current standards.

Section 3 has begun work on the design phase and includes a survey of the existing roadway and area topography.

In addition, Sections 3 & 4 have two bridges that will need to be addressed by replacement, widening, or removal, once the alignment is determined.

Francis Road is a logical extension of the Anderson LaVenture Road Extension in Mount Vernon. This route was used extensively during the 2013 Skagit River Bridge collapse to relieve pressure off of local city routes. Since that time volumes have increased from 3,300 vehicles a day to over 5,000 in 2019, a 34% increase in volume. When fully constructed, it will provide a safe and efficient alternative route from Interstate 5 to State Route 9, linking Mount Vernon to Sedro-Woolley and the surrounding Clear Lake area.

DRAFT

Jones/John Liner/Trail Road Corridor Projects

The City of Sedro-Woolley is proposing to construct a system of roadway and rail transportation improvements to stimulate economic development around the State Route 20 corridor and support the transition from the timber-based past to a modern technology-based future.

The Jones/John Liner Road BNSF Railroad Undercrossing and Road Extension project is the vital first element to make this east-west corridor possible.

The city is partnering with the BNSF Railroad for design and construction of the undercrossing itself.

Project Sponsor: City of Sedro-Woolley

Project Cost: $35,000,000

Existing Funding: $7,500,000

Funding Needed: $27,500,000

Legislative District 39

DRAFT

I-5/Cook Road Vicinity Improvements

Drivers experience long delays and backups during peak commute times at the Interstate 5/Cook Road interchange. Ramp traffic routinely backs up onto the 70 mph lanes on Interstate 5, increasing the risk for collisions involving inattentive drivers.

The WSDOT portion of the project will add intersection control to the ramps at the Interstate 5/Cook Road interchange and some limited road widening. A variety of Automated Traffic Management systems will be installed to prevent queuing traffic from spilling back onto the Interstate 5 mainline. This project will go through a Practical Solutions process with Skagit County.

The Skagit County portion of the project will also add an additional eastbound lane on Cook Road beginning at the Interstate 5 northbound ramp intersection and extending a few hundred feet past Green Road.

This project will reduce the potential for traffic backups on this busy off-ramp; reduce travel times; and improve traffic flow – particularly for trucks headed to local businesses and Sedro-Woolley industrial areas.

These improvements are intended to be a mid-term Practical Solution and forward compatible with the ultimate concept for the interchange. The improved safety and traffic flow will also benefit travel times for commuter transit service on Interstate 5. The project is scalable and, though not as efficient, could be broken up into phases.

I-5 and Cook Rd. Vicinity

Project Sponsor: WSDOT & Skagit County

Project Cost: $6,000,000 (WSDOT)
$3,250,000 (Skagit County)

Existing Funding: $0

Funding Needed: $9,250,000

Legislative District 40

DRAFT

Guemes Island Ferry Replacement

The Guemes Island Ferry owned by Skagit County travels a short 5/8 of a mile to serve the Guemes Island community. The current vessel is 39 years old and burns 65,000 gallons of diesel fuel every year.

All electric technology is moving at a rapid pace with ferry vessels going into service in Norway, Sweden and Denmark. Skagit County has hired Glosten of Seattle to design the new all-electric replacement ferry and coordinate the design of shore-side facilities. The County has been very aggressive in seeking funding to move forward with the construction of this project. The County was awarded $7.5 million in funding through the County Road Administration Board and $1.5 million in the State Capital Budget, and will continue to seek additional state and federal funding as opportunities arise.

Skagit County's all-electric vehicle ferry in Puget Sound, could lead the way for the State of Washington. Washington State Ferries burn 18 million gallons of diesel every year. This is not sustainable into the future. The time for change is now.

Ferries, water taxis, freighters, buses and automobiles are converting to all-electric every day. Momentum and opportunity continue to grow. Skagit County is committed and ready to launch Puget Sound's first all-electric ferry by 2022.

Conceptual design for new electric ferry

Project Sponsor: Skagit County

Project Cost: $20,900,000

Existing Funding: $10,400,000

Funding Needed: $10,500,000

Legislative District 40

DRAFT

Josh Wilson Road Reconstruction (Phase 2, 3 & 4)

Existing conditions on Josh Wilson Rd.

Project Sponsor: Skagit County

Project Cost: $7,805,049

Existing Funding: $0

Funding Needed: $7,805,049

Josh Wilson Road reconstruction design began in 2017 on Phase 1 of the project from Avon Allen Road to Jensen Lane (1.10 miles). Construction of Phase 1 of the project was completed in 2021.

The projects will include the reconstruction of Phases 2-4 to current standards (12 foot lanes and 8 foot shoulders).

Josh Wilson Road is a major collector and truck route that provides an alternate access to the Port of Skagit County and Interstate 5, the community of Bayview and a list of growing industries in the area.

The remaining Phases 2, 3 and 4 will continue with the reconstruction of the failing road base and widening to current standards.

Josh Wilson provides an alternate route for State Route 20 during collisions and roadwork that require closures, and is an alternative route that is becoming more popular due to increased congestion on State Route 20 and at the interchange. As industry grows at the Port of Skagit, Skagit County anticipates increased volumes of both vehicles and trucks utilizing Josh Wilson Road as an alternative to SR 20.

Legislative Districts 10, 40

DRAFT

South Commercial Avenue Corridor Plan

Above: Current conditions Below: Proposed corridor

Project Sponsor: City of Anacortes

Project Cost: $56,770,628

Existing Funds: $1,621,188

Funding Needed: $55,149,440

Commercial Avenue in Anacortes, Washington is a combination of a main street and a state highway spur leading to a WSDOT Ferry Terminal. The terminal services both the San Juan Islands and Sydney, B.C., in Canada.

The north end of Commercial Avenue, after the highway turns, is a city street and is vibrant with tourism and commerce; however, the state highway portion of Commercial Avenue, while serviceable and functioning, is not friendly for bicycle riders and pedestrians and also is not conducive to the wandering and exploring that tourists and locals both like to do.

This project proposes to increase safety for non-motorized users of the street by:

- widening sidewalks.
- separating bicycle riders from the driving lanes.
- creating and enhancing pedestrian crossing opportunities along the corridor.
- creating more park-like spaces, encouraging physical activity.
- calming traffic with narrower lanes (without compromising vehicular throughput).
- modernizing the stormwater facilities for water quality and water detention.
- beautifying the corridor to draw pedestrian and bicycle scale businesses and thereby strengthening economic development.

Legislative District 40

DRAFT

I-5/Kincaid Interchange Vicinity Improvements

Kincaid Street serves as a gateway to downtown Mount Vernon. Due to the close spacing of intersections and the presence of the Burlington Northern Santa Fe rail mainline, access to adjacent land uses, safety and mobility are significantly challenged.

This corridor improvement project will improve safety, mobility, circulation and economic vitality by focusing upgrades to the southbound and northbound Interstate 5 ramp intersections, and the intersection of Kincaid Street and Third Street.

These improvements will provide a long term solution on a state route that serves an existing multimodal train/bus terminal, a planned $26 million dollar community center, city library, multilevel parking facility and a planned six-acre mixed use development in downtown Mount Vernon.

When completed, the corridor will operate more efficiently and reduce Interstate 5 and State Route 536 congestion facilitating safer access to services and centers of trade in the Puget Sound region.

Locations of proposed improvements on Kincaid St.

Project Sponsor: City of Mount Vernon

Project Cost: $10,000,000

Existing Funding: $0

Funding Needed: $10,000,000

Legislative Districts 10, 40

DRAFT

Construction of New Maintenance, Operations, and Administration Facility

Skagit Transit's current facility is inadequate to support ongoing and future transit service support activities.

When the facility was completed in 1998, it did not include sufficient room for growth and the addition of commuter services (vanpool and commuter bus) were not envisioned at the time the facility was designed.

Skagit Transit recently purchased property sufficient to support current and future expansion of transit services - the project is ready to enter into phased construction activities.

Project construction will be accomplished in three phases, the first phase of construction began in 2020.

- Phase I - completion of the energy envelope of the south and east section of the facility, laying the foundation for the construction activities planned for the next phase.
- Phase II - completion of the administrative, operations and public use areas of the facility.
- Phase III - completion of the vehicle maintenance shop, ancillary facilities and site improvements.

Phases II and III will begin as funding is secured.

Project Sponsor: Skagit Transit

Project Cost: $40,000,000

Existing Funding: $30,000,000

Funding Needed: $10,000,000

Legislative District 10

DRAFT

SR 20/Campbell Lake Road Intersection Improvement

The State Route 20 corridor provides the primary access to Whidbey Island, as well as local Skagit County Fidalgo Island communities; serving over 19,000 vehicles and 1,000 trucks/buses a day in 2018. The intersection of State Route 20 and Campbell Lake Road has seen a 20% increase in traffic over the past five years and is just southwest of recent corridor improvements at Sharpe's Corner and Gibralter Road.

The Samish Indian Nation approached WSDOT about corridor improvements to maintain safe access to nearby tribal property between Gibralter Road and Campbell Lake Road. The Samish Indian Nation partnered with WSDOT and Skagit County to develop a Practical Solution to improve safety and access. Several options were evaluated.

A feasibility/constructability analysis pointed to a single-lane, three-legged roundabout as the most practical solution at the intersection of State Route 20 and Campbell Lake Road.

This improvement will support development and existing property access, improve regional mobility and safety, reduce environmental impacts, right of way needs, and costs compared with the other options considered. It will also accommodate projected growth in the area and improve resilience of local and regional transportation networks; both for emergency preparedness and routine road construction.

Existing conditions on SR 20 and Campbell Lake Rd.

Project Sponsor: Samish Indian Nation

Project Cost: $3,200,000

Existing Funding: $3,200,000

Funding Needed: $0,000,000[1]

1. Alternative funding for this project is being sought in order to expedite project completion.

Legislative Districts 10, 40

DRAFT

Library Commons Project
Regional Transportation Supporting Elements

The regional transportation component of this project in the form of structured public parking, an electric vehicle (EV) mega charging site, electric bicycle charging and parking, and transit stop combined with other infrastructure is a purposeful City investment to replace surface parking lost to our flood protection project and will catalyze dense housing and commercial development.

Skagit Station (Skagit Transit) is located 1 block from the Project site. This transit facility serves between 4,000-5,000 customers per day and regularly and routinely exceeds the capacity of their available parking. Multiple service providers including Amtrak, Bolt Bus, Greyhound, and Skagit Transit routes including 5 regional routes serving Whatcom County, Island County, and Snohomish County utilize Skagit Station. The parking structure will serve as a park and ride facility for Skagit Station also incorporating a new enclosed transit stop to ensure equitable access to those who rely on public transportation.

The EV mega charging site is proposed to include 75 EV charging stations, the largest in Washington State, and will be used for daytime downtown visitors and overnight residential use, providing an equitable access for multi-family residents who may not have access to EV charging otherwise. The project will double the capacity of EV public charging along the Interstate 5 corridor between Seattle and Vancouver B.C., contributing to the success of the Biden Administration priorities through U.S. Department of Transportation, Washington State Commerce Department State energy strategy, the Pacific Coast Collaborative, Cascadia Innovation Corridor, and the West Coast Electric Highway collaboration of British Columbia, Canada, Washington, Oregon, and California.

Proposed Library Commons project.

Project Sponsor: City of Mount Vernon

Project Cost: $45,000,000

Existing Funding: $32,000,000

Funding Needed: $13,000,000

Legislative District 40

DRAFT

Washington State Ferries Anacortes Improvements

Project Sponsor: Washington State Ferries

Project Cost: $309,100,000

Existing Funding: $0,000,000

Funding Needed: $309,100,000

Washington State Ferries delivered the 2040 Long Range Plan to the Legislature on January 3, 2019 to create a vision for the future ferry system and to provide guidance for services and investments through 2040.

The 2040 Long Range Plan states that maintenance and preservation of terminal infrastructure should remain a priority for a reliable Washington State Ferries system. The existing Anacortes terminal building is more than 50 years old, undersized and in deteriorating condition. A new or enhanced facility would improve efficiencies and meet current safety, security and accessibility requirements. Terminal electrification is also planned in coordination with electric-hybrid vessel deployment. Construction of a new terminal building at Anacortes is planned for the 2025-2027 biennium.

The Olympic Class vessel brings an opportunity for standardization of the fleet under a common hull design, leading to cost efficiencies in training and spare parts, and interchangeability of labor. One vessel serving this route will be retired and replaced with an electric-hybrid, international certified (SOLAS) Olympic Class vessel (144-car) in 2028.

Source: Washington State Ferries 2040 Long Range Plan.

DRAFT

Washington State Department of Transportation

Technical Report: Interstate 5 Existing Conditions Analysis Mount Vernon / Burlington

I-5 Mount Vernon, north

Old 99 Highway (Exit 222.5) to Cook Road (Exit 233)

Final Report
September 10, 2021

Prepared by:
Washington State Department of Transportation Northwest Region
Mount Baker Area Multimodal Transportation Planning Office

Disclosure

Title VI Notice to Public

It is the Washington State Department of Transportation's (WSDOT) policy to assure that no person shall, on the grounds of race, color, national origin, as provided by Title VI of the Civil Rights Act of 1964, be excluded from participation in, be denied the benefits of, or be otherwise discriminated against under any of its programs and activities. Any person who believes his/her Title VI protection has been violated, may file a complaint with WSDOT's Office of Equal Opportunity (OEO). For additional information regarding Title VI complaint procedures and/or information regarding our non-discrimination obligations, please contact OEO's Title VI Coordinator at 360-705-7090.

Americans with Disabilities Act (ADA) Information

This material can be made available in an alternate format by emailing the Office of Equal Opportunity at wsdotada@wsdot.wa.gov or by calling toll free, 855-362-4ADA (4232). Persons who are deaf or hard of hearing may make a request by calling the Washington State Relay at 711.

Notificación de Titulo VI al Público

Es la política del Departamento de Transporte del Estado de Washington el asegurarse que ninguna persona, por razones de raza, color, nación de origen, como es provisto en el Título VI del Acto de Derechos Civiles de 1964, ser excluido de la participación en, ser negado los beneficios de, o ser discriminado de otra manera bajo cualquiera de sus programas y actividades. Cualquier persona quien crea que su protección bajo el Titulo VI ha sido violada, puede presentar una queja con la Comisión Estadounidense Igualdad de Oportunidades en el Empleo. Para obtener información adicional sobre los procedimientos de queja bajo el Titulo VI y/o información sobre nuestras obligaciones antidiscriminatorias, pueden contactar al coordinador del Título VI en la Comisión Estadounidense de Igualdad de Oportunidades en el Empleo 360-705-7090.

Información del Acta Americans with Disabilities Act (ADA)

Es la política del Departamento de Transporte del Estado de Washington el asegurarse que ninguna persona, por razones de raza, color, nación de origen, como es provisto en el Título VI del Acto de Derechos Civiles de 1964, ser excluido de la participación en, ser negado los beneficios de, o ser discriminado de otra manera bajo cualquiera de sus programas y actividades. Cualquier persona quien crea que su protección bajo el Titulo VI ha sido violada, puede presentar una queja con la Comisión Estadounidense Igualdad de Oportunidades en el Empleo. Para obtener información adicional sobre los procedimientos de queja bajo el Titulo VI y/o información sobre nuestras obligaciones antidiscriminatorias, pueden contactar al coordinador del Título VI en la Comisión Estadounidense de Igualdad de Oportunidades en el Empleo 360-705-7090.

Safety

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.

COVID-19 implications for the results of this study are currently unknown. WSDOT and our partners conducted this study between July 2018 and January 2020. Modeling used historic data on regional population, job growth and travel behavior to project future demand. This did not account for potential impacts of major disruptions such as COVID-19. While the near- and long-term effects of the pandemic are unknown, it will likely be different from the assumptions used in this study.

Washington State Department of Transportation

Technical Team

Skagit Council of Governments (SCOG)

Kevin Murphy, Executive Director

Mark Hamilton, Senior Transportation Planner

Katie Bunge, Transportation Planner

WSDOT NW Region Mount Baker

Jay Drye, Assistant Regional Administrator

WSDOT NW Region Planning

Todd Carlson, Planning and Engineering Services Manager

John Shambaugh, Planning Manager

Elizabeth Sjostrom, Transportation Planner

WSDOT NW Region Traffic Area Operations

Norene Pen, Traffic Area Engineer Snohomish and Mount Baker Area

Mike Koidal, Assistant Area Traffic Engineer Snohomish & Mount Baker Area

Shane Sullivan, Transportation Engineer

WSDOT NW Region Traffic Design & Safety

Chris Thomas, Assistant Regional Traffic Engineer-Design & Safety Manager

Duke Do, Assistant Traffic Design Engineer

Alex Zhang, Traffic Engineer Safety Manager

Jared Cassidy, Transportation Engineer

William Yeung, Transportation Engineer

Eden Havens, Transportation Engineer

WSDOT NW Region Traffic Regional Operations

Vinh Dang, Freeway Operations Engineer

Sayuri Koyamatsu, Transportation Engineer

WSDOT NW Region Public Affairs

R.B. McKeon, Communications Specialist

WSDOT HQ Olympia

Ida van Schalkwyk, Transportation Technical Engineer, Design Policy and Standards

Table of Contents

Table of Exhibits

Interstate 5 Existing Conditions Baseline Analysis
Mount Vernon / Burlington

The Washington State Department of Transportation (WSDOT) NW Region Mount Baker Area (MBA) together with the Skagit Council of Governments (SCOG) initiated an existing conditions baseline analysis of Interstate 5 (I-5) in the Mount Vernon / Burlington urban area in the spring of 2021. The purpose of the baseline analysis was to determine if I-5 is meeting regional transportation performance expectations.

Why study the corridor?

Statewide Highway Review

Safety and mobility needs were identified on I-5 in Skagit County during a 2017 statewide study of state highway corridors. This statewide study effort became known as the Corridor Sketch Initiative (CSI). CSI was a new approach to evaluate state highway facilities and their role in a connected, multimodal transportation system with partnering agencies. The outcome of CSI was designed to help inform decision makers where state highways were performing within expectations and identify where problems may exist. CSI examined a range of issues including mobility, safety, preservation and environment issues. In the case of I-5 through Skagit County mobility and safety were the only issues identified as a potential problem, however CSI did not specifically identify the extent or location of a problem or need. Another key focus of CSI was the engagement with local and state multimodal, multidisciplinary agencies who helped to identify challenges on state highways and participated in the identification of complementary strategies.

Exhibit A. Potential congested highway corridor segments.

In the Mount Baker Area 27 corridor segments on 17 state routes (463 lane miles) were evaluated in a three-county area, Skagit, Whatcom, and Island. About 67-miles or 14 percent of the state highway in this area were found to have mobility (congestion) issues. Mobility challenges on the system were primarily located in urban areas during peak travel periods between 2:30 p.m. and 7:00 p.m. There were several factors cited that contributed to mobility challenges including: high volume of traffic during commute periods, inefficient intersections and local street network, turning movements from uncontrolled driveway access points onto the state highway and large numbers of single-

occupancy vehicles. To help address these issues partnering agencies identified a host of potential strategies including: managing demand by developing better transportation connections with all modes of transportation and optimizing multimodal transportation operations on local streets and highways. Exhibit A shows the location of corridors segments identified in CSI with possible mobility/congestion issues. I-5 through the urban areas of Mount Vernon and Burlington was one of the areas identified.

Skagit Council of Government (SCOG) Regional Analysis

In 2016 and again in 2021 SCOG updated its Regional Transportation Plan. The update included an analysis of all regional transportation facilities including I-5 through Mount Vernon and Burlington. The analysis found that population growth and regional travel would exceed the adopted Level of Services (LOS) standards on the I-5 corridor in the next 20 years if measures were not taken to address it. Exhibit B shows the existing demand on the interstate in 2018 with projected future growth in 2045. The area most impacted on I-5 was between the SR 20 Interchange and the Kincaid Interchange.

To address mobility on I-5, the updated Regional Transportation Plan included a number of strategies

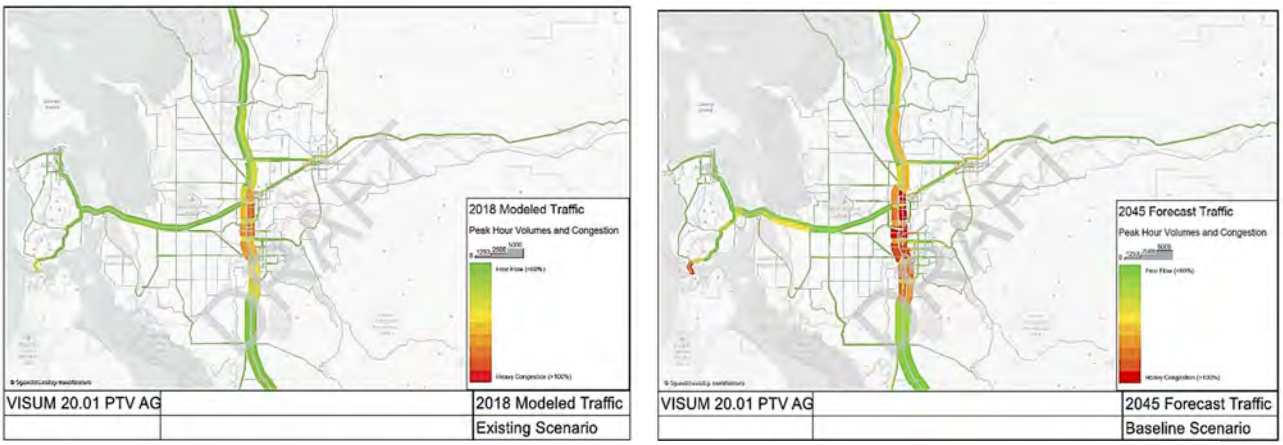


Exhibit B. Skagit Regional Transportation Plan Traffic Demand Model Output for 2018 and 2045.

and proposed local improvement projects at three major interchanges on I-5 through the Mount Vernon-Burlington urban area. Many local street network improvements and enhancements for bicycles and pedestrians were also included.

Strategies

- Reduce or spread-out traffic demand through the use of intelligent transportation systems (ITS) and operational improvements on I-5. Improvements may include adaptive intersection signal system improvements, traffic information signs, and ramp metering.
- Increase modal connectivity by addressing multimodal transportation system gaps and emphasizing modal linkages for all modes of transportation.

Proposed Improvements

- Burlington George Hopper / I-5 Interchange improvements. Lane addition on east side and partial cloverleaf in the northwest quadrant to minimize left turn movements.
- Hickox Road (Old Highway 99) / I-5 Interchange full southbound and northbound access improvements to I-5.
- WSDOT Cook Road / I-5 interchange. Lane addition and signal improvements.

- WSDOT I-5 Active Traffic Management. System-wide improvements to optimize intersection signals, adaptive ramp meters, and traveler information signs.

What actions have been taken to study the corridor?

Beginning in 2017, WSDOT and SCOG identified a corridor project in the Skagit Regional Transportation Plan to analyze I-5 in the urban areas of Mount Vernon and Burlington. In the fall of 2019 both parties met to discuss analyzing the I-5 corridor to determine the extent of mobility and safety needs on the corridor. The initial meeting established the Study Area limits together with the notion of developing a work plan to conduct a limited (baseline) analysis of the corridor to help determine if the corridor was meeting existing regional and statewide objectives as well as determine if there were potential problems and needs on the corridor that should be addressed.

Where is the study area?

The study area is in Skagit County between Old Highway 99 at mile post 222.5 and Cook Road at mile post 233 and is within the urban areas of the cities of Mount Vernon and Burlington. See Exhibit C.

Exhibit C. Old 99 Highway (MP 222.5) to Cook Road to (MP 233)

What measures were taken to engage stakeholders?

Stakeholder and public engagement are essential components of transportation planning in Washington State and the region. As part of the study analysis, a communication and stakeholder engagement strategy was developed to respond to the needs and wants of the community to be informed about transportation issues. The engagement plan outlined key outcomes to promote and encourage fair and equal opportunities for stakeholders and the public to be informed about the process and results of the transportation analysis on I-5. Several actions were taken to connect issues with stakeholders and the public on study issues. These actions included:

- Engaging and informing elected and local jurisdictions and agencies about the study progress and results through the SCOG at the Technical Advisory Committee and Policy Board.
- Community survey targeting key interest groups in the community. Interest groups included traditionally underserved populations, Tribes, economic development interests, freight, and the general public.

Follow-up engagement with the public and local jurisdictions and agencies are planned following the conclusion of the study effort to inform stakeholders on the results of the analysis and next steps.

How was the corridor analyzed?

The initial assessment of the corridor included a high-level baseline analysis of the existing condition (pre-COVID-19) for the I-5 mainline and associated ramps. If a problem and need are identified during the process the technical team would decide if further analysis was needed to develop strategies and alternatives to address significant problems or needs on the interstate.

The baseline analysis of the corridor included the following analysis:

A. Traffic Operations.

- Highway Capacity Analysis This analysis looked at existing traffic operations performance on the I-5 mainline during peak mid-weekday travel periods for the 2021 analysis year. The analysis was developed using the adopted Highway Capacity Manual (HCM) (speed, volumes, and delay) as well as person throughput. WSDOT's performance standard for I-5 in this location is LOS D. When the level of service exceeds LOS D (i.e., LOS E) it indicates that I-5 is at or nearing capacity and may begin to lose some of its capacity to move traffic safely and efficiently.
- Pre-pandemic and Seasonal Traffic Value Adjustments Hourly traffic design values were post-processed to obtain seasonally adjusted and pre-pandemic traffic values for 2015 – 2019 using the methodology outline in the current version of the Federal Highway Administration (FHWA) Traffic Monitoring Guide and FHWA Traffic Data Computation Method Guide for the 2021 analysis year.
- Freeway Facility Analysis Analyzes connected interstate segments over a set of sequential 15-minute periods and added the ability to capture and analyze oversaturated and undersaturated conditions on the I-5 corridor.

B. Safety.

- Target Zero Summary. This summary provides information on crash types, users, and circumstances of the higher severity crashes from data collected from 2016 to 2020.
- Crash Summary Assessment. This assessment looked at the historical crash data from 2016 to 2020 to help identify characteristics and patterns such as time of day, directionality, and lane location throughout the corridor.
- HSM Analysis. This analysis provides information on where the corridor is experiencing an excess of fatal and serious injury crashes than what a typical site would. The analysis was conducted using the Interactive Highway Safety Design Model (IHSDM) with data from 2016 to 2020 and supporting traffic operations analysis.

C. I-5 On-Ramps.

- Merge Lane Volume Threshold Analysis. This analysis showed where there is a need to manage the flow of on-ramp traffic to the I-5 mainline.
- Ramp Operations Analysis and Geometric Assessment. This assessment analyzed on-ramp acceleration using factors identified in the WSDOT Design Manual Section 1360.04(4), of 720 feet. Ramp storage capacity was also analyzed and was derived from peak hour volumes with a minimum of 450 feet.

What are the study area characteristics?

I-5 in Skagit County is part of a 48,000-lane mile system of interconnected controlled or limited access highways that forms part of the National Highway System. The FHWA, along with the Washington State Department of Transportation (WSDOT), is responsible for this system and recognizes that the interstate system is not only a part of the National Highway System but is also a part of regional and local transportation systems.

In this location I-5 runs north – south from the U.S. / Canadian border to Mexico through Skagit County. The study area is about 9-miles in length with an estimated urban area population in Mount Vernon / Burlington to be about 49,500 in 2019-2020 according to the Washington State Office of Financial Management (OFM). I-5 is a four-lane divided interstate and consists of 12-foot driving lanes and 8-foot shoulder, with exception of the Skagit River Bridge where the shoulders narrow to 3 feet. Bicycles are permitted on a portion of the interstate but restricted between the College Way Interchange (Exit 227) and George Hopper Road Interchange at (Exit 229). Additionally, many local streets in the urban area permit bicycle use. The posted speed limit varies between 60 MPH and 70 MPH in the study area, with the urban area posted speed limit set at 60 MPH, which is primarily south of the SR 11 interchange.

There are eight interchanges within the corridor with a total of 30 ramps that provide access on and off the interstate to local communities. All interchanges are separated by one or more miles with four interchanges that carry traffic to four other state routes. These routes include SR 536, SR 538, SR 20 and SR 11. In Burlington, there is one pedestrian / bicycle east-west crossing under I-5, and four east-west street corridors over or under I-5 in Mount Vernon. The Skagit River is a major barrier between the two communities of Mount Vernon and Burlington. There are only two north-south bridges across the Skagit River; the Skagit River Bridge (now formally known as the I-5 Trooper Sean M. O'Connell Jr. Memorial Bridge) and the Riverside Bridge, a local bridge that serves the communities of Burlington and Mount Vernon. In Mount Vernon, the SR 536 Division Street Bridge serves east and west Mount Vernon and is an alternative route to Anacortes/San Juan Ferry and Whidbey Island.

Traffic operations analysis

The Annual Daily Traffic (ADT) varies significantly through the study area corridor from between 73,000 ADT at the Old Highway 99 interchange to 81,000 at the Skagit River Bridge, and 77,000 at SR 20. There is about 54,000 ADT at the northern limits of the study area at Cook Road. Freight traffic is constant at 9.45 percent throughout the corridor.

To assess existing conditions of I-5, traffic data was collected, processed, and analyzed using adopted traffic operations analysis methods and principles[1] to obtain pre-pandemic years (2015 to 2019) design hour volume for the 2021 analysis year. Seasonal and design hour factors were also calculated for all days in 2021 as well as the Level of Service (LOS)[2] for multilane highway segments to determine passenger vehicle density on the corridor.

The baseline analysis on I-5 for analysis year 2021 revealed that there are some segments of I-5 that may experience poor levels of service during peak hour week-day travel periods. The primary break down appears to be northbound on I-5 between Kincaid Street and George Hopper Road adjacent to the Skagit River Bridge between 5 and 6 p.m. Southbound travel shows degraded performance but it is not as severe. Exhibit D northbound and Exhibit E southbound shows passenger vehicle density and

[1] FHWA Traffic Monitoring Guide and FHWA Traffic Data Computation Method Guide,
[2] Highway Capacity Manual 6th Edition and Highway Capacity Software version 7.

Level of Service segments on I-5. The areas identified as red and black indicate that the Level of Service (LOS) and /or density exceed the performance measure established by WSDOT for I-5 in the study area.

More detailed information on the traffic analysis is located in Appendix B. I-5 Traffic Operations Analysis.

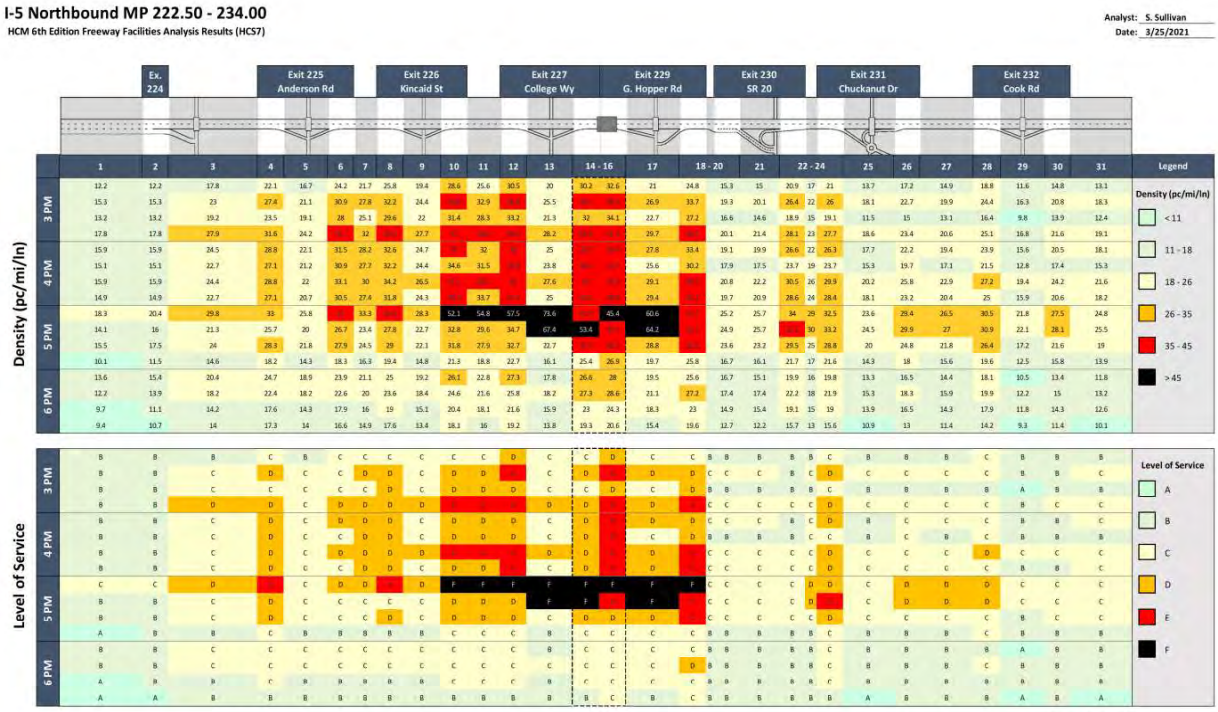


Exhibit D. Northbound Density (pc/mi/ln) and Level of Service Analysis **------- Skagit River Bridge**

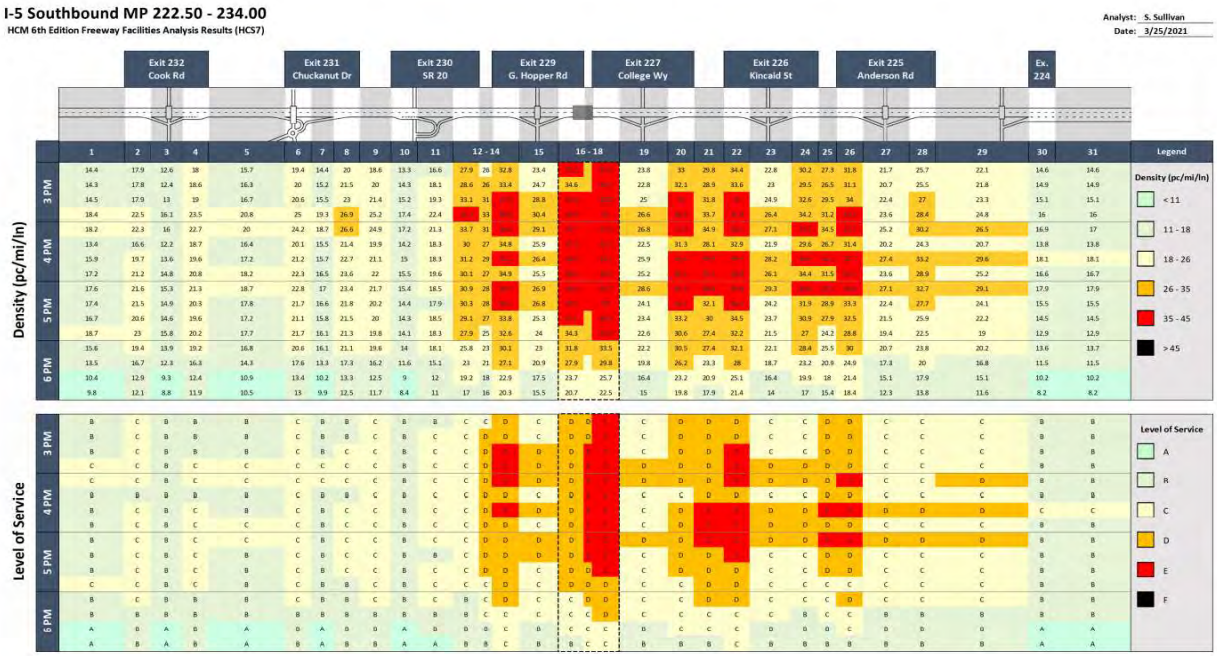


Exhibit E. Southbound Density (pc/mi/ln) and Level of Service Analysis **------- Skagit River Bridge**

Safety analysis

A safety analysis was conducted as part of the baseline traffic operations analysis to determine if any areas or conditions in the corridor present safety issues. A separate analysis was conducted to determine if conditions on the corridor were better or worse than other similar corridors in the state.

The analysis addressed five years of data from 2016 to 2020. During that time there were 1,301 crashes. 73-percent of crashes were on the mainline of I-5. Of these 21-percent were injury crashes. There were five serious injury crashes and five fatal crashes that included two pedestrian fatalities. Most crashes were rear-ends, sideswipes and crashes with fixed objects (runoff the road). Exhibit F provides a summary of crash types by Year. Exhibit G provides information of crashes by time of day and northbound versus southbound travel with 34-percent of mainline crashes due to following too closely and 14-percent attributed to inattention.

COLLISION TYPE (SIMPLE)	2016	2017	2018	2019	2020	Grand Total
Animal	2	2	2	5	4	15
Entering at angle	12	10	7	8	7	44
Fixed object	98	70	87	62	46	363
Misc	3	4	3	3	9	22
Opp Dir 1LT-1STR	5	5	5	5	4	24
Opposite direction	1	4	1		1	7
Overturn	9	5	3	4	1	22
Parking	3					3
Pedalcycle	1	1				2
Pedestrian		1		1		2
Rear-end	126	143	148	148	49	614
Same Dir-Misc	11	4	5	2	11	33
Sideswipe	35	25	25	45	20	150
Grand Total	**306**	**274**	**286**	**283**	**152**	**1301**

Exhibit F. Crash types by year.

In the Study Area 54-percent of crashes were northbound and 45-percent southbound with approximately 27-percent of crashes occurred weekday afternoon during the p.m. peak period.

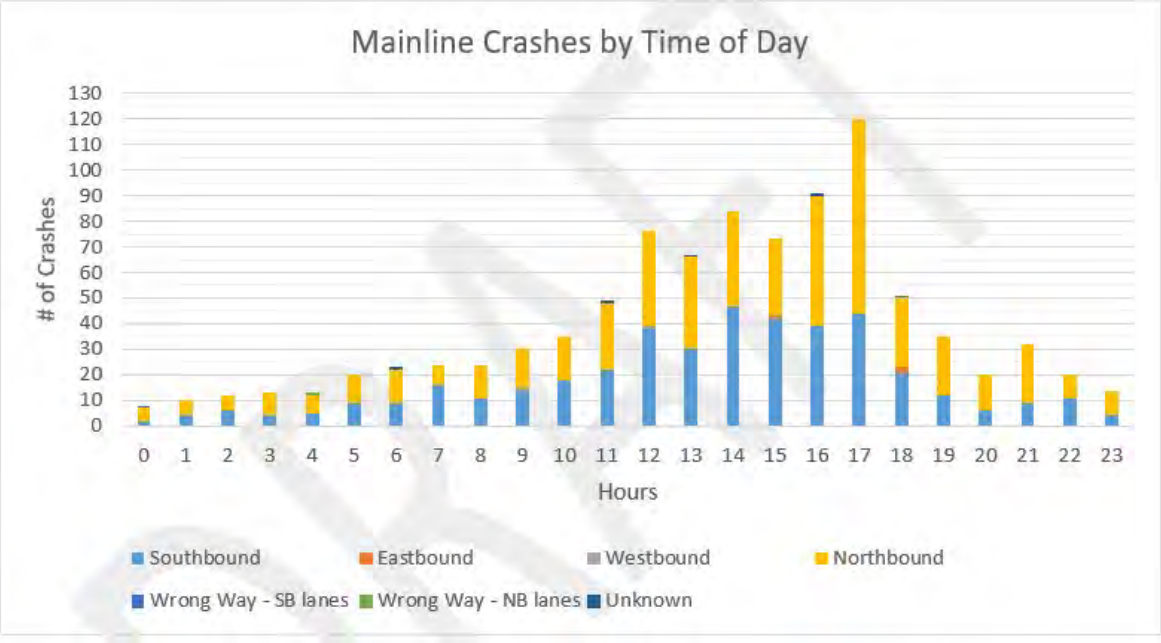


Exhibit G. Mainline crashes by time of day and direction of travel.

Following too closely, speed and inattention were the top three causes in most crashes. Exhibit H shows the type of crashes experienced for both northbound and southbound traffic.

Most of "all crashes" occurred northbound between exit 224 at Old Highway 99 interchange and exit 229 at the George Hopper interchange with the highest percentage of crashes occurring at the College Way interchange from 3 to 7 p.m. peak as shown in Exhibit H and I respectfully.

Crash Type	Southbound	Northbound	Entering from the Right	Entering from the Left	Unk
Fixed object	43%	56%			1%
Rear-end	46%	54%	<1%		
Sideswipe	44%	53%		2%	2%
% of above crash types versus the total directional crashes	**91%**	**91%**	**50%**	**67%**	**100%**

Exhibit H. Mainline crashes by time of day and direction

Northbound all crashes

Exhibit I. Northbound crashes all day

------- Skagit River Bridge

Northbound p.m. peak crashes

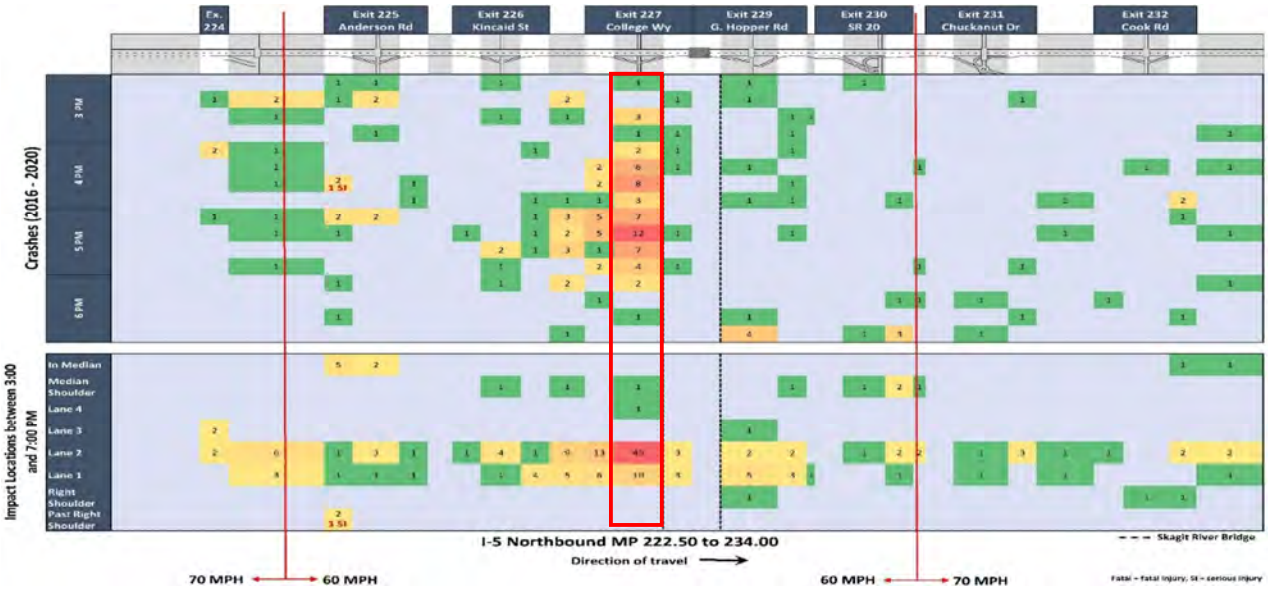


Exhibit J. Northbound p.m. peak crashes

------- Skagit River Bridge

The analysis for southbound showed that 86-percent of crashes were spread out within the urban area between Anderson Road at exit 225 and SR 20 at exit 230 with a large number of crashes occurring most often approaching the southbound off-ramp to SR 20. Higher frequencies of incidents were also noted at George Hopper, College Way and Kincaid interchanges which is also reflected during 3 to 7 p.m. peak period as shown in Exhibit J and Exhibit K, respectfully.

Southbound crashes all day

Exhibit K. Southbound crashes all day

------- Skagit River Bridge

Southbound p.m. peak crashes

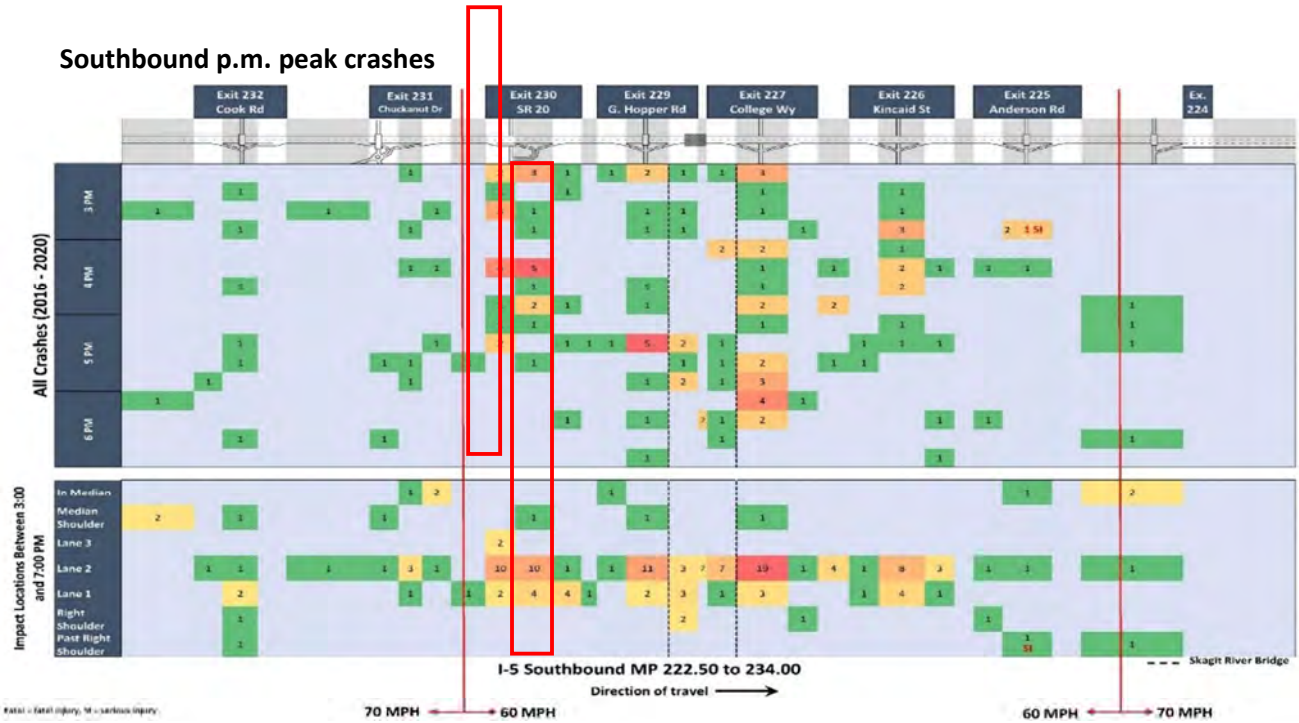


Exhibit L. Southbound p.m. peak crashes

------- Skagit River Bridge

The Highway Safety Manual Analysis revealed that the entire study area corridor is performing better than the average freeway in Washington. However, two areas stood out as performing worse than the average freeway. The first segment is SR 538 / College Way to south of George Hopper Road (MP 227.52-228.50). This is roughly a 1-mile segment experiencing an excess fatal and serious injury crash frequency (K+A) of 0.22 crashes per year, or 1 excess fatal/serious crash approximately every 4.5 years. The second segment is the SR 20 vicinity (MP 229.81-230.60), which is a roughly 0.8-mile segment and is experiencing an excess fatal and serious injury crash frequency (K+A) of 0.17 crashes per year, or 1 excess fatal/serious crash every 6 years.

Fatal and serious injury crash frequency - average

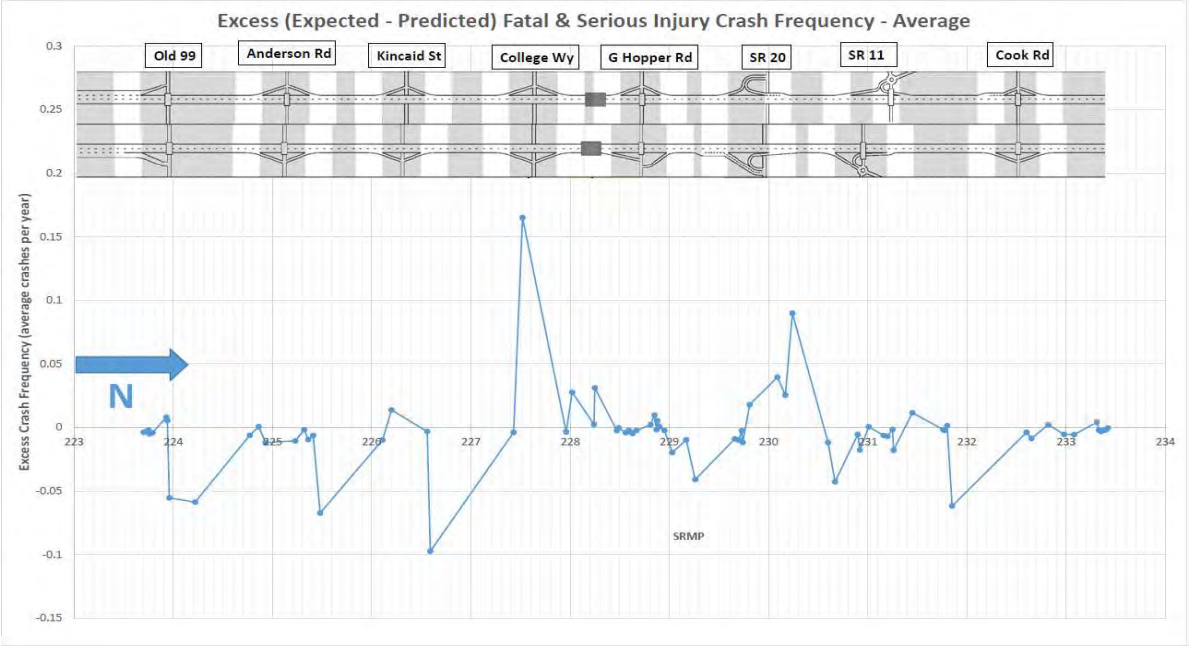


Exhibit M. Highway Safety Manual Analysis of (expected and predicted) fatal and serious injury crash frequency

Interstate ramp operations and geometrics analysis

In the study area there are eight interchanges with associated north and south bound ramps on I-5. These facilities are essential for providing reasonable access and mobility to the community and for regional activities. However, over time as traffic conditions change interchanges and ramps can also diminish in functionality, decreasing their effectiveness for carrying traffic in a safe and effective manner. To understand more about the relationship of interchange ramp operations and traffic operations on the I-5 mainline, a Merge Lane Volume Threshold Analysis and geometric feasibility analysis was conducted to determine operating conditions on to the I-5 mainline and viability for implementing low-cost operational improvements to existing on-ramps in the study area at the following interchanges:

- Exit 224 Old Highway 99 / Mount Vernon Road
- Exit 225 Anderson Road
- Exit 226 Kincaid Street / SR 536
- Exit 227College Way / SR 538

- Exit 229 George Hopper Road
- Exit 230 Avon Cutoff / SR 20
- Exit 231 Chuckanut Dr / SR 11
- Exit 232 Cook Road

Merge Lane Volume Threshold Analysis

WSDOT Merge Lane Volume Threshold analysis was used to determine if existing traffic volumes show a need to manage the flow of traffic where on-ramps merge onto the I-5 mainline. The existing conditions analysis was based on I-5 mainline and ramp traffic volumes for an average mid-weekday in 2019, which were queried from WSDOT's vehicle detection loops for the p.m. peak hours. The on-ramp volumes were added to the right lane volume on I-5 at all the on-ramp merge points for every 15-minute period. When the combined traffic volume meets or exceeds a Merge Lane Volume Threshold of 1,700 vehicle/lane/hour it is an indication of a need to manage traffic flow in the merge lane at one or more locations on I-5.

Exhibits N and O provide a summary of the Merge Lane Volume Threshold Analysis for existing conditions on I-5 northbound and southbound. The locations and times that are at or above the 1700 vehicle/lane/hour threshold are shown as colored sections in the charts. The darker the colors, the higher the merge lane volumes, and the greater the need to manage traffic flow in the merge lane. Based on this analysis Kincaid, College Way and George Hopper Road on-ramps all have merge-lane volumes for both northbound and southbound traffic that exceed 1900 vehicle/lane/hour threshold. During the p.m. peak SR 20 is also affected for a short duration. Additionally, it was noted with higher densities of traffic, vehicular crashes were also occurring more frequently. See Exhibit J and L on page 8 and 9.

I-5 Nothbound Ramp Operations Heat Map
I-5 Milepost 224.0 to 234.0

	Exit 225	Exit 226	Exit 227	Exit 229	Exit 230	Exit 231	Exit 232
Time Period	Anderson Rd	Kincaid St	College Wy	George Hopper	SR 20	SR 11	Cook Rd
2:00 PM - 2:15 PM	261	286	316	310	234	211	196
2:15 PM - 2:30 PM	320	355	381	365	279	254	221
2:30 PM - 2:45 PM	340	369	385	372	307	278	271
2:45 PM - 3:00 PM	400	441	475	446	385	355	320
3:00 PM - 3:15 PM	302	352	375	348	289	258	226
3:15 PM - 3:30 PM	376	424	448	438	358	335	312
3:30 PM - 3:45 PM	346	381	393	377	262	225	213
3:45 PM - 4:00 PM	417	467	476	456	379	344	323
4:00 PM - 4:15 PM	381	416	454	435	361	328	309
4:15 PM - 4:30 PM	375	412	432	406	324	293	263
4:30 PM - 4:45 PM	399	470	486	472	407	375	358
4:45 PM - 5:00 PM	372	430	460	447	386	341	310
5:00 PM - 5:15 PM	465	520	557	567	485	452	427
5:15 PM - 5:30 PM	353	392	428	435	388	357	332
5:30 PM - 5:45 PM	369	409	453	454	363	325	286
5:45 PM - 6:00 PM	242	281	311	298	253	233	194
6:00 PM - 6:15 PM	338	365	389	387	325	299	251
6:15 PM - 6:30 PM	297	328	372	372	319	299	263
6:30 PM - 6:45 PM	245	265	294	291	232	209	186
6:45 PM - 7:00 PM	226	245	251	246	200	184	159

Exhibit N. Northbound Lane Volume Threshold Analysis

I-5 Southbound Ramp Operations Heat Map
I-5 Milepost 224.0 to 234.0

	Exit 232	Exit 231	Exit 230	Exit 229	Exit 227	Exit 226	Exit 225	Exit 224
Time Period	Cook Rd	SR 11	SR 20	George Hopper	College Wy	Kincaid St	Anderson Rd	Old Hwy 99
2:00 PM - 2:15 PM	245	284	371	395	381	347	342	354
2:15 PM - 2:30 PM	280	313	383	399	391	372	358	368
2:30 PM - 2:45 PM	218	266	370	411	399	373	353	362
2:45 PM - 3:00 PM	288	332	438	465	430	397	394	404
3:00 PM - 3:15 PM	276	308	388	430	404	378	371	386
3:15 PM - 3:30 PM	285	331	396	421	396	369	368	393
3:30 PM - 3:45 PM	292	352	449	472	423	402	387	398
3:45 PM - 4:00 PM	355	402	469	497	440	418	406	420
4:00 PM - 4:15 PM	343	398	454	496	449	446	425	444
4:15 PM - 4:30 PM	287	329	413	451	387	371	353	365
4:30 PM - 4:45 PM	301	347	427	458	464	459	458	471
4:45 PM - 5:00 PM	316	359	413	459	454	420	411	437
5:00 PM - 5:15 PM	323	356	424	497	477	467	453	466
5:15 PM - 5:30 PM	309	334	417	463	426	395	397	409
5:30 PM - 5:45 PM	300	331	401	445	406	385	373	382
5:45 PM - 6:00 PM	307	327	387	419	379	342	329	340
6:00 PM - 6:15 PM	293	324	359	394	379	357	345	360
6:15 PM - 6:30 PM	251	269	324	350	330	297	294	303
6:30 PM - 6:45 PM	191	208	274	302	296	256	264	270
6:45 PM - 7:00 PM	185	195	243	267	254	219	204	215

Exhibit O. Southbound Lane Volume Threshold Analysis

Ramp and geometric analysis

On-ramps to the interstate were evaluated to determine feasibility for introducing strategies to improve traffic operations to the I-5 mainline through the introduction of ramp meters. Ramp metering shown to be an effective tool for decreasing crashes on interstates by reducing and

smoothing the flow rate of vehicles entering onto the system. Meters are also effective in breaking up large platoons of vehicles by introducing them at a slower rate to the mainline.

To determine the feasibility of ramp meters, an analysis was conducted to determine if the on-ramp from each of the eight interchanges met the design standards for acceleration and storage length. The acceleration length and storage length were based on the WSDOT Design Manual M 22-01.19, Section 1360.04(4) – Interchanges: On-Connections. Google map satellite images were also utilized as a base map for calculating acceleration and storage length. For additional information on the analysis and findings for each on-ramp see Appendix D Ramp Meter Feasibility and Geometric Analysis.

The analysis revealed that of the 15 on-ramps in the study area for both north and southbound lanes eight on-ramps met design requirements, three on-ramps could meet the requirements with a little effort and cost, and four on-ramps would need substantial improvement to meet requirements. A summary of the analysis is presented in Exhibit P.

Mile Post	Interchange	Direction	Assessment
223.9	Old SR99	SB	Sufficient
225.1	Anderson Road	SB	Sufficient
225.1	Anderson Road	NB	Sufficient
226.4	Kincaid Street	SB	Sufficient
226.4	Kincaid Street	NB	Does not meet req.
227.7	College Way	SB	Does not meet req.
227.7	College Way	NB	Meets req. with little effort
228.8	George Hopper	SB	Meets req. with little effort
228.8	George Hopper	NB	Sufficient
230.1	SR 20	SB	Meets req. with little effort
230.1	SR 20	NB	Sufficient
231.2	SR11	SB	Does not meet req.
231.2	SR 11	NB	Sufficient
232.8	Cook Road	NB	Sufficient

Exhibit P. Ramp operations and geometric assessment results

Follow-up evaluation needed to determine feasibility with the local street network and design attributes for system operations. Additionally, with any proposed improvements to I-5 close coordination with regional, local partners and the public is a key component to addressing regional and community needs and priorities.

Community and stakeholder outreach

Public and stakeholder engagement was initiated early in the study with the development of an engagement and outreach plan. The plan identified three approaches to help achieve project expectations and minimize risks, which included:

- Engaging and informing elected and local jurisdictions and agencies about the study progress and results through the Skagit Council of Governments at the Technical Advisory Committee and Policy Board.
- Community survey targeting key interest group. Interest groups included traditionally underrepresented populations, Tribes, economic development interests, freight and surrounding community.
- Follow-up of study results by WSDOT and SCOG with state and local agencies, economic development interests, Tribes and other interested parties at the conclusion of the Study later this year.

Community survey highlights

On April 22 a community survey was initiated. The survey was open for three weeks. During that time 762 persons responded to the survey. Survey respondents were primarily located within the immediate areas around Burlington, Mount Vernon and Sedro Woolley. There were a total of 17

questions that asked about what their primary purpose was for traveling on the corridor, what mode of transportation they used and what their overall experience was on I-5.

The survey data confirmed much of the same information that was revealed through data analysis.

- 81 percent of respondents indicated they experience traffic congestion in the corridor.
- Three areas of concern were highlighted by the public via open text response:
  - Skagit River Bridge
  - Kincaid Street to the Skagit River Bridge
  - Cook Road interchange and northbound on-ramp
- Congestion was also reported relatively evenly on most days of the week with a peak on Fridays and a dip on Sundays.
- Congestion is reported as most significant between 2-5 p.m., followed by 5-7 p.m. with little to no congestion reported between 7 p.m. – 7 a.m.
- When asked to rank what WSDOT should prioritize as a transportation goal, more than 50-percent of respondents indicated "safety."

The survey also revealed the following information:

- The primary mode of transportation was a personal vehicle at 97 percent. Public transit was reported at 1.75 percent.
- 37 percent of people used the interstate to commute to/from work with 50 percent using the interstate for local travel (errands, recreation)
- 25 percent merge onto I-5 at Cook Road/Sedro-Woolley with up to 15 percent exiting the system at the same location.
- When asked how their travel routines changed over the past year (COVID-19) 37 percent indicated reduced work trips and a 51 percent increase in home delivery services. 22 percent reported an increase in walking and biking.

See Appendix A for more information on the public and stakeholder outreach.

Study summary and recommendations

The purpose of the study was to determine if the corridor is meeting regional mobility and safety performance expectations. And, second to determine if performance was not being met, what steps or measures should be taken to address identified problems and needs.

The I-5 study corridor is about 9-miles long and has eight interchanges with thirty on-and off-ramps that serve the community and regional travel through the urban areas of Mount Vernon and Burlington. The analysis included a review of existing conditions (pre-COVID) on the I-5 mainline using performance metrics for traffic, safety and ramp operations. The analysis also included an assessment of I-5 on-ramp geometrics. Outreach to the community and key stakeholder was an important component of the study.

Study summary

The study analysis revealed that some corridor segments are not performing within expectations. The traffic operations analysis, safety analysis and merge threshold analysis revealed that there are some segments on the corridor that experience higher vehicle density and poor levels of service both in regards to traffic, ramp operations and crashes. The general locations include Kincaid Street (exit 226)

to George Hopper (exit 229) northbound and SR 20 (exit 230) to Kincaid Street (exit 226) southbound as indicated on the heat maps located on the following pages and Exhibits:

- Page 6 Exhibit D. northbound and E. southbound traffic operations LOS and density during peak traffic periods 3 to 6 p.m.
- Page 8 and 9 Exhibit J. northbound p.m. peak crashes and L. southbound p.m. peak crashes.
- Page 11 Exhibit N. Northbound Lane Volume Threshold Analysis and Figure O. Southbound Lane Volume Threshold Analysis.

Additionally, the Highway Safety Manual Analysis revealed that while the majority of the corridor was performing better than the average freeway in Washington State two areas stood out as performing worse than the average freeway. These locations included:

- SR 538/College Way to South of George Hopper Road (MP 227.52-228.50), which is roughly a 1-mile segment and is experiencing an excess fatal and serious injury crash frequency (K+A) of 0.22 crashes per year, or 1 excess fatal/serious crash approximately every ~4.5 years.
- SR 20 vicinity (MP 229.81-230.60), which is a roughly 0.8-mile segment and is experiencing an excess fatal and serious injury crash frequency (K+A) of 0.17 crashes per year, or 1 excess fatal/serious crash every 6 years.

It is also interesting to note, that about 24-percent more vehicles (73,000 ADT) were entering the urban area of Mount Vernon and Burlington from the south than exiting the study area north at Cook Road (54,000 ADT). There was also a 10-percent jump in vehicle operations (81,000 ADT) at the Skagit River Bridge near interchanges with major commercial/retail business at College Way (exit 227) and George Hopper (exit 229). The increase in traffic at these locations may have influenced traffic mobility and safety in the corridor between Kincaid Street and George Hopper Road. The pattern suggests that the Skagit River Bridge may influence travel behavior.

In Addition, it should be noted that the baseline analysis did not consider the impacts of future population growth in the study area and therefore it may be prudent to explore the impacts of future growth on the regional transportation system. For example, residential and industrial growth is expected to continue at the current rate of growth at the Skagit Regional Airport and City of Anacortes west of Burlington on SR 20, and east of Burlington on SR 20 and Cook Road at Sedro-Woolley and beyond.

Recommended actions

1) Was a problem or need identified on the I-5 corridor within the study area?

Yes, based on the existing conditions analysis congestion and safety issues were identified on the I-5 corridor with more congestion occurring northbound on I-5 between Kincaid Street and George Hopper Road, with safety performance performing worse southbound on I-5 near SR 538/College Way to George Hopper Road and the SR 20 vicinity.

2) Should further analysis be conducted to develop feasible alternatives to address problems identified during the analysis on I-5?

Based on the results of the I-5 Baseline Analysis additional review of some or all of the initial study area should be investigated to help determine improvement measures needed to address existing and future capacity and safety challenges identified in the corridor.

3) Should the study area be resized to address the specific problems and needs identified in the Study?

The analysis revealed that many segments both northbound and southbound on I-5 in the study area had capacity and safety challenges during peak travel periods of the day. The primary locations were located between Kincaid Street (exit 226) to George Hopper Road (exit 229) northbound, and SR 20 (exit 230) to Anderson Road Street southbound. Additionally, while the existing conditions analysis did not reveal significant traffic operations or safety problems at Cook Road the Merge Lane Volume Threshold Analysis indicated that traffic density may be increasing above the 1700 vehicle/lane/hour threshold. Cook Road was also identified during the stakeholder survey as one of three areas of concern. The other two areas mentioned in the survey included the I-5 Skagit River Bridge and College Way, which were also identified as problems in the technical analysis.

Based on the existing conditions analysis the area most impacted from congestion and safety challenges included an area between Kincaid (exit 226) and SR 20 (exit 230) northbound and SR 20 to Anderson Road (exit 225) southbound. In addition, to the traffic operations analysis and safety analysis the Skagit Regional Transportation Plan included several interchange transportation projects at Cook Road (exit 232), George Hopper Road and Old Highway 99 (exit 224) to address local traffic issues on the regional transportation network.

With the factors noted in the report and the issues addressed below, the Leadership Team recommended that further analysis was needed in the initial study area to determine future conditions and identify potential solution strategies to address problems and needs identified in the corridor.

- The corridor analysis only included an existing conditions assessment and did not factor in future growth needs.
- Urban type growth is already occurring between Anderson Road and Old 99 Highway, and between SR 11 to Cook Road which is expected to continue due to the limitations for industrial growth in the urban area.
- There is significant traffic operations occurring between SR 11 and Cook Road and this will only increase as Sedro-Woolley and areas to the east and west continue to encourage more residential and industrial growth. Additionally, the ramp geometric assessment indicated that the southbound onramp was inadequate and should be evaluated together with proposed improvements of the Cook Road interchange.

Appendix Index

Appendix A Communications and Stakeholder Outreach

- Stakeholder Engagement Summary
- Stakeholder Survey
- Communications and Stakeholder Engagement Strategy

Appendix B I-5 Traffic Operations

- I-5 Traffic Operations Analysis Technical Report

Appendix C I-5 Safety Assessment

- I-5 Mount Vernon/Burlington Crash Analysis

Appendix D Interstate Ramp Operations and Geometric Analysis

- I-5 Traffic Operations: Merge Lane Volume Threshold Analysis

SKAGIT COUNCIL OF GOVERNMENTS TECHNICAL ADVISORY COMMITTEE MEETING MINUTES

December 2, 2021
GoToMeeting Remote Meeting

AGENCIES REPRESENTED

- City of Burlington ..... Brian Dempsey
- City of Mount Vernon ..... Bill Bullock
- City of Sedro-Woolley ..... Mark Freiberger
- Samish Indian Nation ..... David Strich
- Skagit County ..... Forrest Jones
- Skagit Transit ..... Brad Windler
- Town of Concrete ..... Cody Hart
- Town of La Conner ..... Scott Thomas
- Washington State Department of Transportation (WSDOT) ..... John Shambaugh

STAFF PRESENT

- Skagit Council of Governments ..... Kevin Murphy, Mark Hamilton, Grant Johnson

OTHERS PRESENT

No one else was present at the meeting.

1. Call to Order: 1:32 p.m.

   Roll Call: Roll was taken with a quorum present.

2. October 7, 2021 Technical Advisory Committee (TAC) Meeting Minutes: Mr. Strich moved approval of the October 7, 2021 Technical Advisory Committee Meeting Minutes as presented, and Mr. Hart seconded the motion. The motion carried unanimously.

3. Non-Motorized Advisory Committee:

   - Biannual Update: Mr. Hamilton presented the Non-Motorized Advisory Committee (NMAC) biannual update. He explained the background of the biannual update, and that there was no report in June 2021 due to staffing changes at SCOG. He stated that key activities of the NMAC over the year had been participation in the project selection process, and working with Skagit GIS to update the Skagit County Walking Trails Guide. The NMAC also received a presentation from Skagit County detailing work on the Centennial Trail. Mr. Hamilton finished the report by explaining that WSDOT did not conduct the annual bicycle and pedestrian count in 2021, so the NMAC was unable to participate in this anticipated work product.

   - Proposed 2022 Work Program: Mr. Johnson presented the proposed Non-Motorized Advisory Committee 2022 Work Program. He explained that the NMAC is an advisory committee to the Technical Advisory Committee, and that the TAC is required to approve the NMAC

work program on an annual basis. A change from the 2021 work program is that the Skagit County Walking Trail Guide update was completed in 2021, so for 2022 the NMAC will focus on distributing the new guide. Mr. Johnson stated that SCOG staff recommend approval of the Non-Motorized Advisory Committee 2022 Work Program.

Mr. Windler motioned to approve the Non-Motorized Advisory Committee 2022 Work Program as presented. Mr. Dempsey seconded the motion, and the motion carried unanimously.

- Proposed 2022 Membership: Mr. Johnson presented the Non-Motorized Advisory Committee Proposed 2022 Membership. He explained that according to the NMAC bylaws, the membership must be approved annually by the TAC. The proposed changes in membership from 2021 to 2022 are Robert Huitt being nominated to replace the previous tribal representative, and the addition of Katie McNett. Mr. Johnson gave background information on both proposed new members and stated that SCOG staff recommend approval of the Non-Motorized Advisory Committee Proposed 2022 Membership.

  Mr. Hart asked how many members the NMAC will have if the proposed membership is approved. Mr. Johnson responded that there will be one additional member than previous, which will bring the total to six members.

  Mr. Thomas motioned to approve the Non-Motorized Advisory Committee Proposed 2022 Membership as presented. Mr. Freiberger seconded the motion, and the motion carried unanimously.

4. 2022 Skagit Regional Transportation Priorities: Mr. Johnson presented the 2022 Skagit Regional Transportation Priorities. He explained that the regional priorities are intended to bring visibility of regionally important projects to the Washington state legislature. SCOG staff work with member jurisdictions to update the list on an annual basis. He stated that there are a couple significant changes from the previous year, including: (1) A "Regional Overview" page has been added that shows the location of projects on a map; and (2) the Library Commons Project Regional Transportation Supporting Elements – City of Mount Vernon and Washington State Ferries Anacortes Improvements – Washington State Ferries were new projects added to the list. He explained that other minor changes in project funding amounts and descriptions have also been made. Mr. Johnson then stated that the regional priorities will be presented as an action item to the Transportation Policy Board at their December 15, 2021 meeting, and that SCOG staff recommend approval of the 2022 Skagit Regional Transportation Priorities.

   Mr. Freiberger moved to recommend the 2022 Skagit Regional Transportation Priorities to the Transportation Policy Board as presented, and Mr. Jones seconded the motion. The motion carried unanimously.

5. Quarterly Obligation Report: Mr. Hamilton presented the Quarterly Obligation Report for the fourth quarter of federal fiscal year 2021. He explained that the regional obligation authority target was approximately $1.8 million, and that the region had gone over that target by obligating close to $3.5 million. A change from the previous quarterly obligation report was the City of Sedro-Woolley obligating the construction phase of the SR20/SR9N – Township Intersection Improvements project. Mr. Hamilton also discussed the potential impacts of project extensions on obligations through the end of calendar year 2021.

Mr. Hart asked if there had been any changes to the right-of-way phase of the City of Burlington project on George Hopper Rd. Mr. Hamilton explained that if any funds are deobligated for the project, they would come back to the region and could affect obligation in 2022. Mr. Dempsey stated that it is still an active project, and there are no plans for Burlington to deobligate the funding. Mr. Hamilton explained that for any deobligation occurring in the region, it is best for the region if the deobligation happen at the beginning of the federal fiscal year (October–December), preferably prior to the start of the next calendar year – this better positions the region to fill any obligation authority gap that may be created when project funding is deobligated.

6. 2022 Obligation Authority Plan: Mr. Hamilton presented the 2022 Obligation Authority Plan. He highlighted the projects expected to obligate federal funding next year through the SCOG process.

7. Interstate 5 Existing Conditions Baseline Analysis Mount Vernon/Burlington: Mr. Shambaugh presented the Interstate 5 Existing Conditions Baseline Analysis Mount Vernon/Burlington technical report to the Technical Advisory Committee. Committee members discussed findings from the report, including results from the safety analysis, congestion through the corridor during the weekday p.m. peak period, and adequacy of interchange ramps for ramp meters. Mr. Shambaugh described next steps for the project, including future stakeholder outreach and preparation of a work plan for a corridor study in the area.

8. Roundtable and Open Topic Discussion: Technical Advisory Committee members provided project updates for their jurisdictions. Mr. Murphy spoke about the status of the infrastructure legislation in Congress, and that a continuing resolution has passed to fund federal surface transportation through October.

9. Next Meeting: January 6, 2022, 1:30 p.m.

10. Adjourned: 3:02 p.m.

Attest:

_____ Date: _____

Mark Hamilton, Senior Transportation Planner
Skagit Council of Governments

SCOG
Skagit Council of Governments

Dates	Total Funding Available	FHWA (13.5%)	STBG (13.5%)	FTA (13.5%)	RTPO	STP (13.5%)
06/30/2021 Carryforward	$320,091	$105,098		$109,243		$105,750
RTPO July 1, 2021 to June 30, 2023	$143,286				$143,286	
STBG July 1, 2021 to June 30, 2023	$167,541		$167,541			
July 2021 Expenditures	(32,508)	(13,845)	(3,010)	(4,722)	(10,930)	0
07/31/2021 Balance	$598,411	91,253	164,531	104,521	132,356	105,750
August 2021 Expenditures	(19,554)	(12,424)	(19,554)	(3,039)	(5,263)	0
08/31/2021 Balance	$558,131	78,829	144,977	101,482	127,093	105,750
Sept 2021 Expenditures	($48,430)	(11,387)	(10,697)	(4,692)	(6,652)	(15,003)
09/30/2021 Balance	509,701	67,442	134,281	96,790	120,442	90,748
Oct 2021 Expenditures	(37,055)	(11,394)	(10,507)	(6,399)	(8,754)	0
10/31/2021 Balance	472,647	56,048	123,773	90,390	111,687	90,748
Nov 2021 Expenditures	(51,700)	(9,836)	(27,359)	(6,482)	(6,139)	(1,884)
11/30/2021 Balance	420,946	46,211	96,414	83,909	105,549	88,864