

SR 167 Master Plan Planning and Environmental Linkages (PEL) Study

Final Study

JUNE 2023



Prepared by:
Washington State Department of Transportation



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Agency Support

WASHINGTON STATE DEPARTMENT OF TRANSPORTATION

SR 167 Master Plan Planning and Environmental Linkages (PEL) Study

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6/28/2023

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
ADA	Americans with Disabilities Act
BAT	business access and transit
BMP	best management practice
BRT	bus rapid transit
CBO	community-based organization
CED	chronic environmental deficiencies
CFR	Code of Federal Regulations
CLOMR	Conditional Letter of Map Revision
CTS	Commitment Tracking System
DAHP	Washington State Department of Archaeology and Historic Preservation
dBA	A-weighted decibel
DOT	Department of Transportation
EA	environmental assessment
EAC	Equity Advisory Committee
Ecology	Washington State Department of Ecology
EIS	Environmental Impact Statement
ESA	Endangered Species Act of 1973
ETL	express toll lane
FGDC	Federal Geographic Data Committee
FEMA	Federal Emergency Management Agency
FGTS	Freight and Goods Transportation System
FHWA	Federal Highway Administration
HEAL Act	Healthy Environment for All Act
HOT	high-occupancy toll
HOV	high-occupancy vehicle
HPA	hydraulic project approval
I-	Interstate
ITS	Intelligent Transportation Systems
LOS	Level of Service
MIC	manufacturing industrial centers
MOVES	Motor Vehicle Emissions Simulator

Acronym/Abbreviation	Definition
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NPL	National Priorities List
NRHP	National Register of Historic Places
PAC	Policy Advisory Committee
PEL	Planning and Environmental Linkages
ppm	parts per million
PSRC	Puget Sound Regional Council
RCRA	Resource Conservation and Recovery Act
RCW	Revised Code of Washington
RGC	regional growth center
SEPA	State Environmental Policy Act
SFHA	Special Flood Hazard Area
SOV	single-occupancy vehicle
SR	State Route
ST3	Sound Transit 3
TAC	Technical Advisory Committee
TDM	transportation demand management
TSMO	Transportation System Management and Operations
USACE	U.S. Army Corps of Engineers
USDOT	U.S. Department of Transportation
U.S. EPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife
v/c ratio	volume-to-capacity ratio
VIA	visual impact assessment
VMT	vehicle miles traveled
WDFW	Washington Department of Fish and Wildlife
WRIA	Water Resource Inventory Area
WSDOT	Washington State Department of Transportation
WSTC	Washington State Transportation Commission

Vision, Purpose (Goals) and Need

Vision

The Vision for the SR 167 Master Plan is as follows:

The SR 167 Master Plan identifies transportation solutions intended to facilitate the movement of people that travel on and across SR 167 for work, school, and other essential and non-essential trips, and the movement of goods that support economic vitality. Travel along and across the SR 167 corridor will be safe, connected, resilient, and reliable. The SR 167 Master Plan strives for practical solutions to: (a) prioritize the needs of vulnerable populations and overburdened communities, (b) reduce physical barriers of the current system, (c) support the Puget Sound Regional Council (PSRC) Regional Growth Strategy, (d) facilitate transit and active transportation, (e) support projected growth and land use changes, (f) accommodate freight movement, and (g) reduce per capita greenhouse gas emissions.

The vision and project Purpose and Need was the guiding framework for the development of high-level multimodal transportation solutions, and it supported the evaluation of multimodal scenarios for the SR 167 Master Plan PEL Study. During future environmental review processes of individual projects, more specific purpose and need statements should be considered.

Purpose (Goals)

The project Purpose (Goals) is to develop transportation solutions that promote the following:



Equity: Provide a range of transportation options that address the needs of vulnerable populations and overburdened communities.



Safety: Improve existing and future safety conditions.



Environment: Provide improvements that reduce greenhouse gas emissions and limit environmental impacts.



Multimodal: Transform how people and goods travel in support of the PSRC Regional Growth Strategy, by focusing on regional growth centers (RGC), manufacturing and industrial centers (MIC), and Countywide Centers through multimodal and multiagency investments while reducing single-occupancy-vehicle (SOV) demand and removing barriers that limit local connectivity across the SR 167 corridor for all modes.



Mobility and Economic Vitality: Manage mobility for local, regional, state, and interstate trips, by leveraging technology advancements, supporting economic vitality, and considering the unique needs of all travelers and transportation modes, including freight/goods movement, active transportation, and transit.



Practical Solutions and State of Good Repair: Identify strategies that are practical, implementable, and fundable in a realistic timeline considering the importance of maintaining a State of Good Repair throughout the facility's lifecycle.

Projects and strategies were evaluated for whether they met the project Purpose and Need. Refer to *Chapter 3* for more information on how they were used in evaluating scenarios.

Need (Problems)

The need for a master plan to improve mobility along and around SR 167 is evident to those who live, work, or regularly travel along the corridor. Through discussions with partners and an analysis of existing and future conditions data, specific needs were identified that support each project Purpose (Goals), as summarized in Table ES-1.

Table ES-1. SR 167 Corridor Needs (Problems)

Need (Problems)	Supporting Data Findings
The corridor runs through areas with diverse populations. Vulnerable populations and overburdened communities need transportation solutions that reduce environmental risk and that serve their transportation needs. (Equity Goal)	Low-income households represent 25 percent of the total population in the study area. People of color represent more than 40 percent of the study area population.
Fatal and severe crashes have occurred on the SR 167 corridor. (Safety Goal)	Between 2015-2019, there were 24 fatalities and 120 serious injuries along or within 1 mile of SR 167.
Vehicle emissions are the top source of greenhouse gas emissions in Washington state, and they negatively impact health outcomes. (Environmental Goal)	In 2019, transportation accounted for 39 percent of all greenhouse gas emissions in Washington state.
The SR 167 corridor experiences high travel demand and congestion. (Mobility and Economic Vitality Goal)	About 45 percent of the southbound general purpose lanes experience congestion in the afternoon (PM) period.
The SR 167 corridor is one of the fastest growing areas in the state, and it is changing. (Multimodal Goal)	The study area is expected to add more than 550,000 residents and 240,000 jobs by 2050.
SR 167 can act as a barrier for local trips. (Multimodal Goal)	Seventy-eight percent of SR 167 crossings lack bicycle facilities and 22 percent lack sidewalks.
The SR 167 corridor has limited capacity to accommodate additional SOV travel demand. (Multimodal and Mobility and Economic Vitality Goals)	It is not financially or environmentally feasible to “build our way out of congestion.” Expanding SOV capacity to match growth would require adding two or three new general purpose lanes in each direction along the highway.
SR 167, a key alternate route to Interstate 5 (I-5), has moderate vulnerability to climate change and is subject to non-recurring congestion. (Mobility and Economic Vitality Goal)	SR 167 adds resilience to the state highway system in the event of a natural disaster or crash that would disrupt I-5 or other parallel highways.
SR 167 is the second busiest freight corridor in the state, and it connects key freight hubs, including the Port of Tacoma. (Mobility and Economic Vitality Goal)	Large trucks make up 10 to 20 percent of all traffic on SR 167.
Transit is critical to mobility in the corridor. (Mobility and Economic Vitality Goal)	In 2019, there were nearly 40,000 daily transit boardings within the study area.
Maintain and preserve the system. (Practical Solutions and State of Good Repair Goal)	Much of SR 167 is rated in fair to good condition; therefore, continued investment in maintenance is critical.

Agency and Public Coordination

The SR 167 Master Plan PEL Study and overall master planning process was driven by the ongoing involvement of key partners in the study area, as summarized in Figure ES-2. *Chapter 2* and *Attachment E* summarize the agency and public coordination and key feedback received.

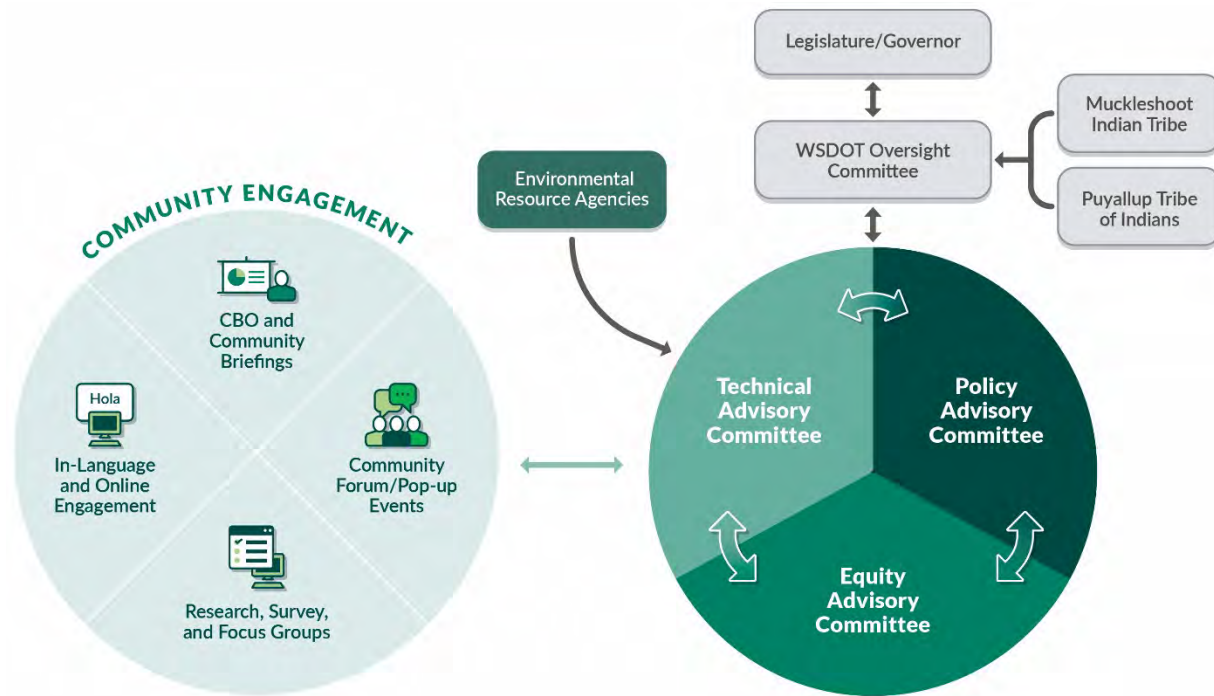


Figure ES-2. SR 167 Master Plan PEL Study Engagement Overview

Agency Coordination

For this study, WSDOT conducted the four required coordination points with the Federal Highway Administration (FHWA). WSDOT received concurrence and feedback at each coordination point that the project team applied throughout the study process. The project team also sent project information to and solicited feedback from resource agencies during the study process.

Representatives from the Muckleshoot Indian Tribe and Puyallup Tribe of Indians were invited to participate in the Technical Advisory Committee (TAC), Equity Advisory Committee (EAC), and Policy Advisory Committee (PAC). This engagement allowed WSDOT and tribal nation staff to share information and to discuss topics relevant to each tribe, such as potential projects and strategies that are on or near tribal lands, feedback for new projects or strategies, or coordination with tribal projects and services.

Committee Coordination

The TAC, EAC, and PAC were consulted throughout the planning process and their feedback heavily influenced the scenarios that were considered, identified evaluation metrics and criteria for screening, and helped shape the Final Study Recommendations. Table ES-2 provides a summary of the committees and meetings held. In addition to the committee meetings, the project team met with interested committee members, as needed or requested, to provide project updates and to discuss future corridor needs.

Table ES-2. SR 167 Master Plan PEL Study Committees Summary

Committee	Role and Description	Meetings Held (from 2012 -2023)
Technical Advisory Committee	<ul style="list-style-type: none"> • Formed to provide analysis and technical direction on this study. • Included staff from local jurisdictions, the ports, transit agencies, tribes, and business community. • Would typically attend both the PAC and TAC meetings to support their elected and act as alternates to an elected member if they were unable to attend. • Provided input at several key milestones through this study, which included the existing conditions report, Draft Scenarios, Refined Scenarios, and Final Study Recommendations. 	7
Equity Advisory Committee	<ul style="list-style-type: none"> • Formed to support the project Purpose (Goals) related to equity. • Included representatives from CBOs that advocated on behalf of vulnerable populations and overburdened community members and environmental justice and transportation initiatives. • Provided input on the following topics, and feedback was shared with the TAC and the PAC: <ul style="list-style-type: none"> – Locations of equity priority areas within the study area, which were used to help identify potential project impacts and benefits to communities living in these areas – Locations of community-identified destinations – Equity considerations and transportation needs and priorities – Potential ideas and solutions for the scenarios and, ultimately, the Final Study Recommendations – Development and implementation of co-creation workshops 	7 One-on-one listening sessions also took place between October 2021 and January 2022
Policy Advisory Committee	<ul style="list-style-type: none"> • Formed to provide feedback and direction on the study from a policy perspective and to advise about local policy issues and the needs of the community they serve. • Included primarily elected officials, representatives from local jurisdictions along the project corridor, and members of partner agencies. 	7

Public and Community Participation

PEL studies are required to solicit public feedback and input to understand the needs, concerns, and potential transportation solutions for a community. The communities within the study area are diverse; therefore, to gain as much community input and knowledge as possible, public and community participation was highlighted throughout the SR 167 Master Plan PEL Study process.

Feedback from community members and the public informed this study by providing the following:

- Input on transportation challenges, needs, and concerns for the SR 167 corridor
- Confirmation on the methodology and location of equity priority areas (via the EAC)
- Feedback on transportation solutions and ideas for the SR 167 corridor
- Feedback that helped form the evaluation metrics and projects for the Final Study Recommendations

The project team partnered with the EAC to identify nearly 70 community members to invite to co-creation workshops from August through September 2022. Participants of the co-creation workshops helped the project team members better understand the transportation stories, needs, ideas, and challenges of the community members living and working within the equity priority areas and study area.

Translation Services

The online open house and materials were published in the following languages: **Chinese, Russian, Spanish, Tagalog, Somali, Vietnamese, and English.**

Two online open houses were held for the project. Online Open House No. 1 (June 29 to July 29, 2022) focused on gathering feedback related to transportation needs and concerns, and it included a demographic survey. Online Open House No. 2 (March 15 to April 15, 2023) focused on gathering feedback on the SR 167 Master Plan PEL Study process and the Final Study Recommendations.

Additionally, the project team joined informational tables hosted by the Gateway Program at local fairs, festivals, and farmers markets to inform community members about the study and to provide an opportunity for people to provide feedback. The project team successfully informed more than 1,000 people about the project.

Scenario Evaluation Summary

The SR 167 Master Plan PEL Study incorporated a rigorous evaluation process while incorporating feedback from the public, partners, agencies, and committee members. The overall evaluation process is summarized in Figure ES-3. Potential projects and strategies were subject to increasingly detailed and more quantitative analysis as the evaluation process progressed from the initial list of projects and strategies to the Level 2b screening that developed the Final Study Recommendations. Evaluation criteria were centered around the project Purpose (Goals) from the Purpose and Need statement. Key findings from the scenario evaluation process include the following:

- New general purpose lanes on SR 167 increase per capita vehicle miles traveled (VMT), and they will eventually become congested with continued growth in the corridor.
- All-lane congestion pricing results in the greatest mode shift away from SOV, but it diverts substantial traffic to arterial streets that would impact safety and vulnerable populations and overburdened communities.
- Transit ridership increases substantially when new routes are added in the study area, and access for vulnerable populations and overburdened communities is improved with more evening and weekend service.
- Complete Streets improvements at SR 167 crossings and interchanges would substantially improve pedestrian and bicycle connections and access to community-identified destinations.
- Sidewalk gap closure in RGCs addresses a community-identified need and supports the regional growth strategy.
- Interurban Trail improvements that close gaps and improve lighting and access from other regional trails and routes and that connect vulnerable populations and overburdened communities to employment centers and transit hubs have strong community support.
- Fatal and serious injury crashes can be reduced by implementing planned Complete Streets facilities, interchange improvements, trail and sidewalk crossing improvements, and low-stress bicycle connections to community-identified destinations.

- Dual express toll lane (ETL) system with direct access ramps to transit hubs and bus rapid transit (BRT) service substantially increases person throughput on the corridor, maintains per capita VMT, and improves travel time reliability for all SR 167 users.
- Strategic multimodal capacity on key arterials and at select SR 167 interchanges can improve freight and transit access and travel time reliability.
- Low-income toll program implementation has broad community support and would improve equitable access to the ETLs.

Final Study Recommendations

Figure ES-4 and Figure ES-5 present the Final Study Recommendations, which meet the project Purpose and Need better than the Refined Scenarios when compared to the Baseline Scenario. The Final Study Recommendations constitute a major investment in multimodal travel within the study area. They are supported by a broad set of partners, ranging from local jurisdictions to CBOs and leaders in the equity community to freight, transit, bicycle, and pedestrian interest groups, tribal leaders, and transit agencies.

Key benefits of the Final Study Recommendations include:

- **Vulnerable populations and overburdened communities** benefit from increased transit access and reliability, improved multimodal connections, and improved access to employment centers and key destinations.
- **Safety** is improved by investing in infrastructure where there is a history of fatal and serious injury crashes, particularly for pedestrians and bicyclists. Safety also is improved in areas where there are high differentials in vehicle speeds.
- **Environmental impacts** are avoided, minimized, or mitigated as part of project implementation. The projects and strategies support lower VMT per capita compared to existing conditions, and they result in higher mode shares for transit, walking, bicycling, and rolling.
- **Multimodal access** is greatly improved through a much more robust transit network, including an expansion of all-day transit and new on-demand services in lower density areas. Active mode infrastructure is enhanced through Complete Streets improvements across SR 167 and in PSRC-designated centers.
- **Mobility and Economic Vitality** is enhanced through new managed roadway capacity that would result in better travel time reliability and lower congestion in the dual ETL system. Freight access and reliability is enhanced through interchange improvements and medium-duty vehicle access in the ETLs.
- **State of Good Repair** is advanced by replacing aging infrastructure and by adding a practical amount of new infrastructure that improves mobility and is affordable to maintain over time.

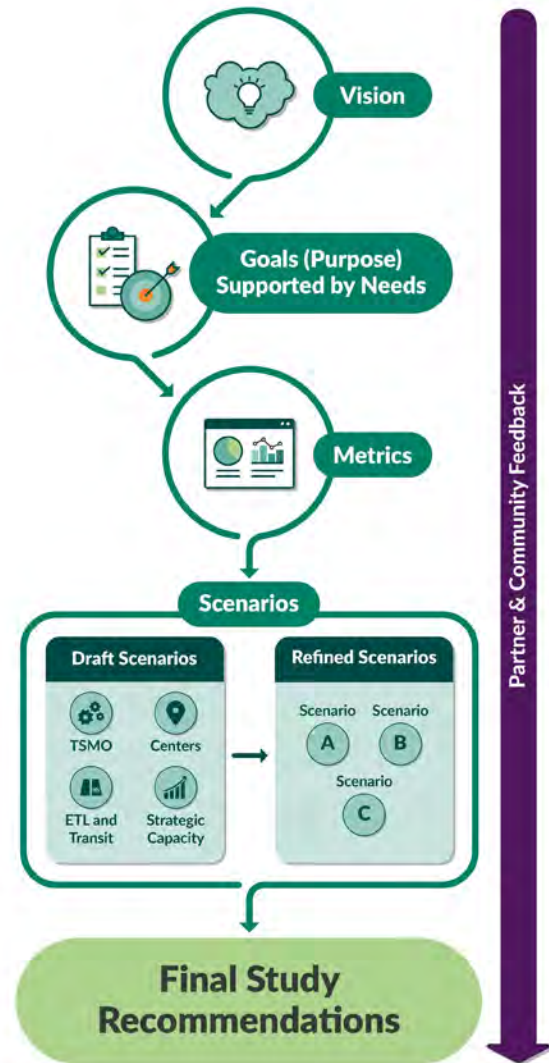


Figure ES-3. SR 167 Master Plan PEL Study Planning Process

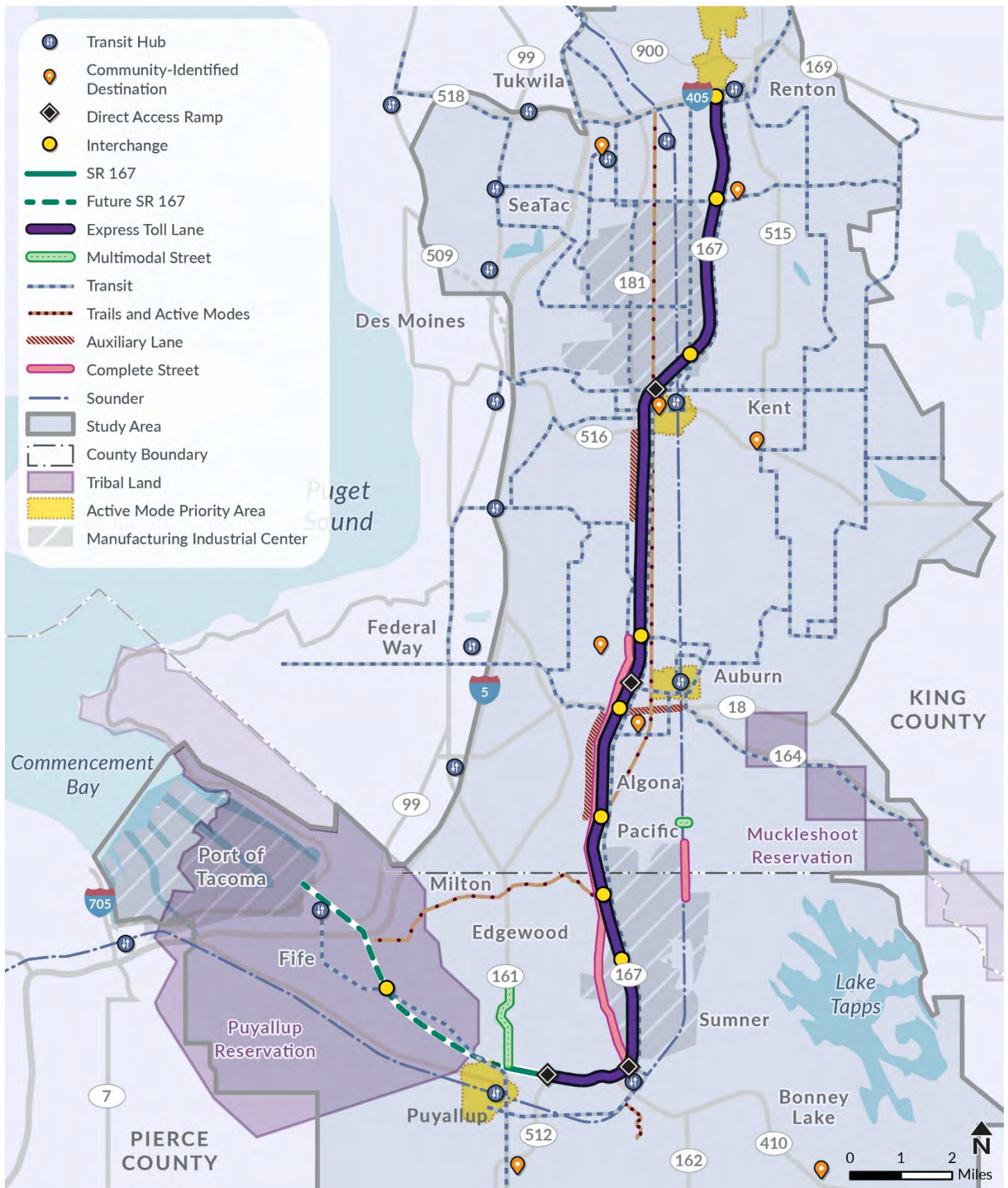


Figure ES-4. SR 167 Final Study Recommendations

Table ES- 3. Potential Timing for Projects and Strategies in the Final Study Recommendations

Project or Strategy	Near-Term	Mid-Term	Long-Term
Second ETL on SR 167 between I-405 and SR 512	No	Yes	Yes
Complete missing ramps at SR 18/SR 167 interchange	No	Yes	Yes
Add auxiliary lanes on SR 167 and SR 18	No	Yes	Yes
Add direct access ramps at Kent, Auburn, and Sumner	No	Yes	Yes
Add direct connector ramps between ETLs and SR 512	No	Yes	Yes
Reconstruct or improve arterial interchanges at: South 180th Street, 84th Avenue South, Ellingson Road, Stewart Road, 24th Street East, and Valley Road (including low-stress pedestrian and bicycle improvements at these locations)	No	Yes	Yes
Implement statewide low-income toll program	Yes	Yes	No
Allow medium-duty trucks in ETLs	Yes	Yes	No
Implement ramp meters on all lanes at arterial interchanges	Yes	No	No
Grady Way/Rainier Avenue grade separation	No	Yes	Yes
Implement 7 miles of complete streets improvements	No	Yes	Yes
Implement BRT on SR 167	No	Yes	Yes
Implement 18 new or enhanced transit routes	No	Yes	Yes
Expand Sounder service per the Sound Transit 3 (ST3) plan	No	Yes	No
Add BAT lanes on Meridian Avenue	No	Yes	Yes
Implement a program to complete sidewalk gaps within 1 mile of SR 167	Yes	Yes	No
Implement program to construct low-stress bicycle facilities connecting community-identified destinations	Yes	Yes	No
Interurban Trail enhancements	Yes	Yes	No

Environmental Resource Considerations

Chapter 5 provides a summary of the environmental resources that were studied to understand the existing environmental setting for the SR 167 corridor, support the evaluation of scenarios, and identify potential impacts to these resources with the implementation of the Final Study Recommendations. These analyses provide important information for future planning and design efforts to avoid or minimize, to the extent possible, the potential impacts of individual projects.

WSDOT prepared an environmental baseline in 2022 (*Attachment B, Chapter 12*) to help identify key existing environmental resources early in the planning process by using readily available data sources. Refer to *Attachment B, Appendix C* for the detailed methodology used for the environmental baseline scan and the applicable regulations for each resource. The project team also solicited feedback from resource agencies to help identify existing environmental constraints throughout the SR 167 corridor.

The study identified potential effects to environmental resources at a high level during the scenario development and analysis phases of the project (refer to *Chapter 3* and *Chapter 4*) and next steps were documented. The evaluation focused on areas within the SR 167 corridor, which represent the area within 1 mile of the SR 167 facility. The evaluation was primarily qualitative, as potential construction and operational footprints have not been established for the projects.

The project Purpose (Goals) related to equity and the environment are:



Environment: Identifying improvements that reduce greenhouse gas emissions and limit environmental impacts.



Equity: Provide a range of transportation options that address the needs of vulnerable populations and overburdened communities.

Environmental resources that are present within the SR 167 study area and have the potential to be affected by the Final Study Recommendations include:

- Air Quality
- Climate Change and Climate Vulnerability
- Cultural Resources and Historic Bridges
- Environmental Justice and Equity Priority Areas (includes social resource considerations)
- Fish and Wildlife Habitat
- Fish Passage Barriers
- Flood Hazards
- Geologic Hazards
- Hazardous Materials
- Land Use
- Noise
- Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources
- Visual Resources
- Water Quality and Stormwater
- Wetlands

Community Summary

The SR 167 Master Plan PEL Study focuses on equity, and it identifies mobility investments that aim to address transportation needs and issues for vulnerable populations and overburdened communities. The project team developed a community profile (*Attachment B, Chapter 3*) to summarize the demographic, economic, and social characteristics in the study area. Key demographics are summarized in Figure ES-6. These demographic indicators were used to help identify equity priority areas and environmental justice communities in support of

Executive Order 12898 and Chapter 70A.02 Revised Code of Washington (RCW), Environmental Justice (Healthy Environment for All [HEAL] Act).

Findings include:

- Vulnerable populations and overburdened communities are more concentrated north of SR 18. As summarized in Figure ES-7, more than half of the communities in the study area have higher concentrations of minority and low-income populations than the PSRC area.
- People who identify as Asian or Hispanic/Latino comprise the largest proportion of minority populations in the study area.
- Asian households have the highest median household income within the study area (about \$128,000), and Native Hawaiian and Pacific Islander householders have the lowest household income (about \$57,000).
- Approximately half of the foreign-born populations are naturalized U.S. citizens.
- About 10 percent of the population (age 5 or older) speak English less than “very well.”
- Adults (age 20 to 64) represent nearly half (5 percent) of the total population that identifies as having a disability (11 percent).

Community Profile
 A summary of existing demographic, social, and economic characteristics for the study area that provides the basis for assessing effects on local communities and evaluating SR 167 Master Plan scenarios with respect to environmental justice requirements.

Equity Priority Areas
 Communities with high concentrations of vulnerable populations and overburdened communities.

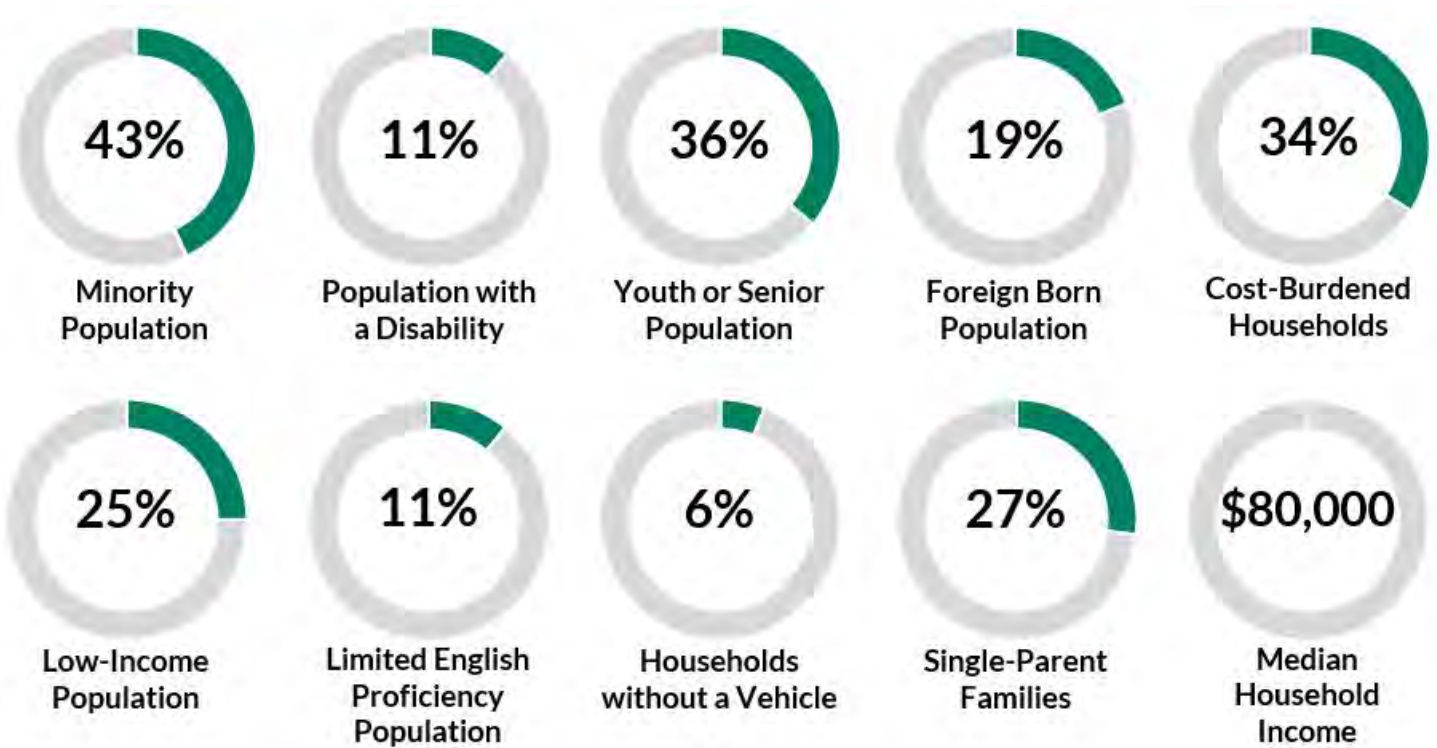


Figure ES-5. SR 167 Master Plan PEL Study Demographic Summary

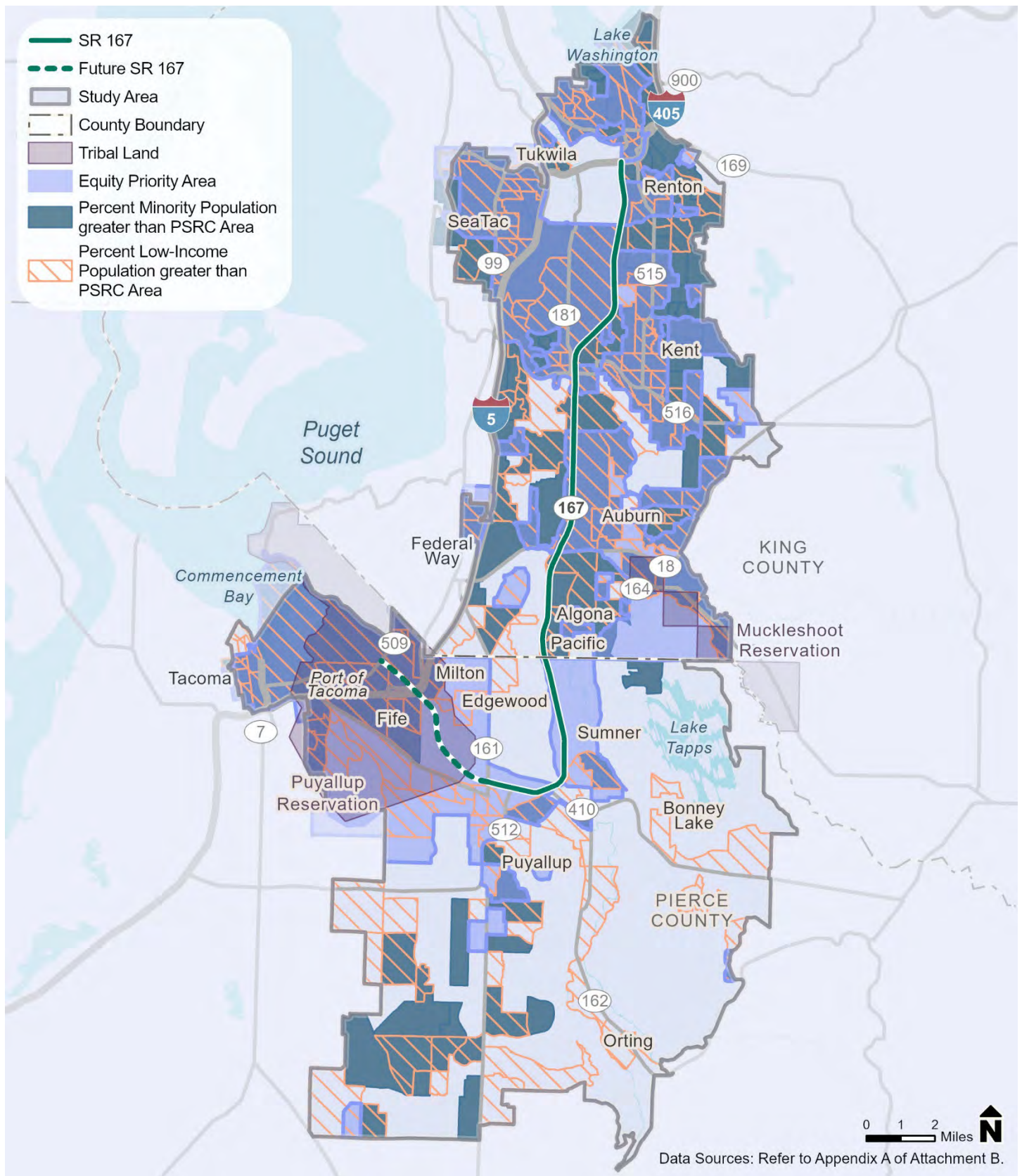


Figure ES-6. Minority Populations, Low-income Populations, and Equity Priority Areas

Summary of Environmental Resources Studied

Table ES-3 provides a summary of the environmental resources that were studied and the potential effects associated with the Final Study Recommendations. Most projects in the Final Study Recommendations would require additional planning and design before construction and best management practices (BMP) would be included to avoid or minimize impacts where possible. Where possible, impacts would be mitigated. Refer to *Chapter 5*, for additional information. Relevant environmental next steps for each of these projects depends on timing, funding, and the National Environmental Policy Act (NEPA)/State Environmental Policy Act (SEPA) class of action. *Attachment A, Appendix A* includes tables with potential next steps and mitigation information related to each environmental resource. *Attachment A, Appendix B* includes detailed maps of environmental resources and Final Study Recommendations.

Table ES-4. Environmental Considerations Summary

Environmental Resource	Presence and Relevance of Resource within SR 167 Corridor	Potential Effects with the Final Study Recommendations
Air Quality	All areas within the study area currently meet the National Ambient Air Quality Standards (NAAQS). The southern portion of the study area is within the Tacoma–Pierce County maintenance area for PM _{2.5} .	Predicted to lower VMT per capita and provide congestion relief, which should contribute to improvements in air quality.
Climate Change and Climate Vulnerability	The northern portion of the SR 167 corridor has moderate vulnerability for impacts from climate change, and much of SR 167 has moderate vulnerability to and may be affected by climate-change-induced flooding.	Some projects would replace aging infrastructure and ultimately extend the service life and resiliency of the SR 167 facility.
Cultural Resources and Historic Bridges	The study area includes portions of the Puyallup and Muckleshoot tribal reservations and areas where Native Americans and non-Native peoples make their home. There are nine resources listed in the National Register of Historic Places (NRHP) and many unsurveyed potentially historic properties that meet the age threshold.	No identified projects are likely to impact a resource listed in the NRHP, but several projects may involve work at or near properties that meet the age requirements for recordation and evaluation for the NRHP.

Environmental Resource	Presence and Relevance of Resource within SR 167 Corridor	Potential Effects with the Final Study Recommendations
Environmental Justice and Equity Priority Areas ^a	Vulnerable populations and overburdened communities are found throughout the corridor but are more concentrated north of SR 18. Approximately half of the U.S. Census Block Groups in the study area have higher concentrations of minority and low-income populations compared to King and Pierce counties.	<p>Expected to provide benefits to vulnerable populations and overburdened communities, including increased access to jobs and frequent transit service, and increased sidewalk and bicycle system completeness, particularly in equity priority areas.</p> <p>Without detailed analysis, it is not possible to determine if environmental justice communities would experience disproportionately high and adverse effects from implementing the projects. This analysis will be conducted during NEPA, in accordance with WSDOT’s Environmental Manual.</p> <p>Projects along the SR 167 facility are more likely to require commercial or industrial property acquisitions, and local roadway projects are more likely to require residential property acquisitions. Some projects may affect community facilities and social resources.</p>
Fish and Wildlife Habitat	Riparian areas that provide habitat, are present along the rivers and streams near SR 167. However, riparian conditions and functions are degraded by bank armoring, channelization, and development. Three fish species have critical habitat present within the SR 167 corridor: bull trout, Chinook salmon, and steelhead.	Projects that require work near a stream could potentially impact the federal Endangered Species Act of 1973 (ESA) critical habitat for steelhead, Chinook salmon, and bull trout.
Fish Passage Barriers	There are a total of 123 known culverts along the SR 167 corridor, 60 of which convey streams with confirmed fish use. Twenty known WSDOT injunction barriers exist along or near SR 167.	Projects that involve work in or adjacent to a stream may need to correct fish passage barriers.
Flood Hazards	Many areas surrounding SR 167 are within Federal Emergency Management Agency (FEMA) floodplains or floodways. Special Flood Hazard Areas (SFHA) associated with Springbrook Creek, Green River, Mill Creek, White River, Puyallup River, and Hylebos Creek are present near SR 167.	Interchange, highway, and local roadway projects that are located within an SFHA have the potential to impact 100-year floodplains and regulatory floodways.
Geologic Hazards	Geologic hazards, including steep slopes and areas susceptible to liquefaction, erosion, and landslides, are present along and near SR 167. Most of the SR 167 corridor is within an area with moderate to high liquefaction susceptibility.	Most projects would need to consider geologic hazards in project design and implementation.
Hazardous Materials	Land uses closest to the SR 167 facility are predominantly industrial, which are more likely to have hazardous materials sites than other land uses. The Olympic Pipeline and Williams Northwest Pipeline travel near the SR 167 corridor, with the Olympic Pipeline crossing SR 167 in Auburn. There were two federal cleanup sites, 98 state cleanup sites, and 170 storage tank sites identified.	Projects that require work near hazardous materials sites could potentially be affected by a storage tank or a state cleanup hazardous materials site. None of the projects are anticipated to affect a Resource Conservation and Recovery Act (RCRA) site or a National Priorities List (NPL) superfund site.

Environmental Resource	Presence and Relevance of Resource within SR 167 Corridor	Potential Effects with the Final Study Recommendations
Land Use	The SR 167 corridor area is one of the fastest growing areas in the state, and the study area is expected to experience an 84 percent increase in housing units and a 61 percent increase in jobs between 2019 and 2050. Land use within the study area is primarily industrial, commercial, and residential.	There is potential to convert existing land uses to a transportation use. Projects located along the SR 167 facility are more likely to impact commercial and industrial lands while local roadway projects are more likely to impact residential and commercial lands.
Noise	Land uses closest to the SR 167 facility are predominantly industrial; therefore, they are less likely to be noise sensitive. Noise walls are present along SR 167 near SR 516 in Kent and south of SR 18 in Algona.	Projects that would change the geometry of a road (e.g., an interchange reconfiguration) or add lanes have the potential to cause impacts at nearby sensitive receptors. Construction noise will be evaluated in future project-specific studies.
Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources	Many recreational resources and other potential Section 4(f) resources were identified during the study of existing conditions, such as publicly owned parks, trails, and recreation facilities, open space areas, playgrounds, wildlife or waterfowl refuge areas, and recreational vehicle and camping parks. No Section 6(f) resources were identified.	Some recreation resources would be enhanced. Projects would fill gaps for trails, such as the Interurban Trail. Parks, trails, open space areas, or other recreational resources could be impacted if permanent property acquisition is required.
Visual Resources	Lands closest to SR 167 are primarily industrial, but there are several residential areas within 1 mile that may be considered sensitive viewer groups. Lands within the Muckleshoot and Puyallup tribal reservations are within the study area, and they may play a role in identifying sensitive visual resources. Views of Mount Rainier, the Cascade Mountain range, and the Olympic Mountains are available near the south end of the SR 167 corridor. There are no Resource Conservation Areas along the SR 167 corridor.	Most of the area surrounding SR 167 is an urban environment; project features are likely to be consistent with the surrounding foreground landscape.
Water Quality and Stormwater	There are several impaired waterbodies listed on the Washington Department of Ecology's (Ecology) 303(d) List, including the Green, White, and Puyallup rivers. There are also Shorelines of Statewide Significance. Stormwater within the SR 167 corridor is managed through open channels, underground pipes, ecology embankments, wet ponds, and detention ponds. There are four medium-priority areas for stormwater retrofit on SR 167.	Work done in or near any stream or waterbody has the potential to affect water quality. Permanent and temporary impacts would occur where work occurs on a culverted stream and an open stream channel.
Wetlands	Wetlands are present along the SR 167 corridor. Estuarine wetlands are present at Commencement Bay. Palustrine wetlands are located throughout the SR 167 corridor, but they are more prominent in the Green River and the Puyallup River valleys. Riverine wetlands are located along rivers and streams adjacent to the facility.	Work near or at a wetland or waterbody has the potential for impacting wetlands or waters of the U. S.

Notes:

^a Includes social resource considerations.

Next Steps

The Final Study Recommendations in Figure ES-5 and Figure ES-6 represent a bold yet realistic vision to address the transportation challenges this corridor is expected to experience over the next 30 years. Partner and community engagement has been critical throughout the SR 167 Master Plan and PEL process. Partners and community members reviewed data, provided invaluable insight about transportation issues and potential solutions, and strongly shaped the Final Study Recommendations. This deep integration in the planning process is also reflected in the Letters of Support included in *Attachment F*.

While the development of the Final Study Recommendations represents a major step forward in improving transportation and mobility in the SR 167 corridor, there is still a long way to go to fund, design, and implement the \$5.5 to \$6 billion in improvements.

The next steps for SR 167 include further analysis to develop a prioritized phasing and funding strategy and to determine the needed environmental reviews for individual projects. Ongoing collaboration between WSDOT, partners, and the community will be critical to advance the list of projects and strategies into mobility solutions.

Chapter 1. Introduction and Purpose and Need

The Washington State Department of Transportation (WSDOT) initiated this PEL Study for the State Route (SR) 167 Master Plan to assess and identify recommended transportation improvements on or near the SR 167 corridor. This report documents the results of the SR 167 Master Plan PEL Study.

The SR 167 Master Plan PEL Study is defined by the following characteristics:

- **Centered on Equity.** The SR 167 corridor is in one of the most diverse areas of the state with many vulnerable populations and overburdened communities. Focusing mobility investments on projects that address issues for **vulnerable populations, overburdened communities, and equity priority areas** (definitions follow) is a key outcome of the study.

Vulnerable populations include groups that are more likely to be at higher risk for poor health outcomes in response to environmental harms and due to adverse socioeconomic factors, high housing and transportation costs relative to income, limited access to nutritious food and adequate health care, linguistic isolation, and other factors that negatively affect health outcomes and increase vulnerability to the effects of environmental harms and sensitivity factors (WSDOT 2022b).

Overburdened communities are found in geographic areas where vulnerable populations face combined, multiple environmental harms and health impacts, and they include, but are not limited to, highly impacted communities as defined in RCW 19.405.020 (Healthy Environment for All [HEAL] Act).

Equity priority areas include communities with high concentrations of vulnerable populations and overburdened communities. They were used to identify and analyze transportation solutions for the SR 167 Master Plan Study that maximize benefits and minimize impacts to people living in these areas.

Chapter Overview

Chapter 1 introduces the SR 167 Master Plan PEL Study, it summarizes the overall vision and project Purpose and Need, and it describes the requirements for this study. It also provides context for NEPA processes and principles that were used. This chapter also provides a summary of key findings from *Attachment B. Existing and Future Baseline Conditions Report* that are related to existing travel patterns and transportation networks, surrounding land uses, safety, and future forecasts. Refer to the following chapters and attachments for more information related to this chapter:

- *Attachment A* includes the PEL Questionnaire that is intended for use by future NEPA practitioners.
- *Attachment B* includes additional detail and references for the information summarized in this chapter related to existing and future conditions.
- *Attachment B, Chapter 4* includes additional detail on the existing conditions of the SR 167 facility.
- *Attachment B, Chapter 5* includes additional detail on the surrounding land uses.
- *Attachment B, Chapters 6 through 11* provide detailed information related to transportation networks (freight, active mode, transit), safety analysis results, and system performance and travel pattern analysis results.
- *Chapter 5 and Attachment B, Chapter 12* include details related to existing environmental conditions.

- **Transparent.** The planning process is open and transparent to partners and the community. The process includes thoughtful and proactive outreach and engagement at all stages of development. Consistent with the equity focus of this plan, outreach focuses on listening and working with vulnerable populations and overburdened communities.
- **Data-Driven, Partner Refined.** The planning process is rooted in data analysis and data-driven evaluation methods. It also considers partner input that helps understand the full context of the transportation network and needs.
- **Considers the Full Transportation System.** This plan focuses on improving mobility along and across SR 167 by looking holistically at the entire transportation system, including the travel patterns that influence conditions on SR 167 and the adjacent city and county systems.
- **Multiagency.** No single agency or organization can effectively address the myriad of transportation needs along this 28-mile-long corridor; therefore, this plan highlights critical transportation investments that improve mobility on SR 167 and support the regional growth strategy. In partnership with WSDOT, local jurisdictions, tribes, and transit agencies along the corridor will have the responsibility of leading and advancing some of the transportation solutions identified in this plan.
- **Multimodal.** This study considers all modes when addressing SR 167 corridor travel needs. Multimodal improvements reduce traffic demand on the SR 167 freeway by making transit, bicycling, and walking more viable and attractive.
- **Focus on Freight.** The SR 167 corridor features the largest warehousing and distribution cluster in the Pacific Northwest. These land uses not only provide thousands of jobs, but they also are the nexus of the regional supply chain.
- **Sustainable.** This plan is sustainable from an environmental and fiscal perspective. By leveraging Transportation System Management and Operations (TSMO), including technology and travel demand management solutions, the plan seeks more efficiency from existing infrastructure, which minimizes environmental harm. Doing more with less also reduces the ongoing costs to operate and maintain the system, which is a key objective of WSDOT.
- **Practical.** By fully implementing WSDOT's Practical Solutions performance-based framework (which prioritizes quickly solving issues with data-driven and performance-based solutions), this plan results in a set of projects and strategies that clearly advance the plan's goals and can be implemented with existing and planned resources.

Multimodal Plan

Considers all modes of transportation or ways to move people and goods.



PEL encourages agencies to adopt an integrated approach to planning that addresses transportation and environment goals while considering quality of life (Barberio et al., 2008). The SR 167 Master Plan PEL Study uses an integrated approach (Figure 1-1) by considering the community, surrounding lands, and the natural and built systems to help identify transportation projects and investments that would address existing issues of mobility and connectivity and align with projected development patterns included in the PSRC'S Regional Growth Strategy.

PSRC's Regional Growth Strategy from *VISION 2050* provides guidance to achieve a development pattern with fewer environmental impacts and more compact urban form.

"Land use, transportation, economic development, and human health are interconnected and therefore require integrated planning, regulations, and implementation actions." - PSRC VISION 2050

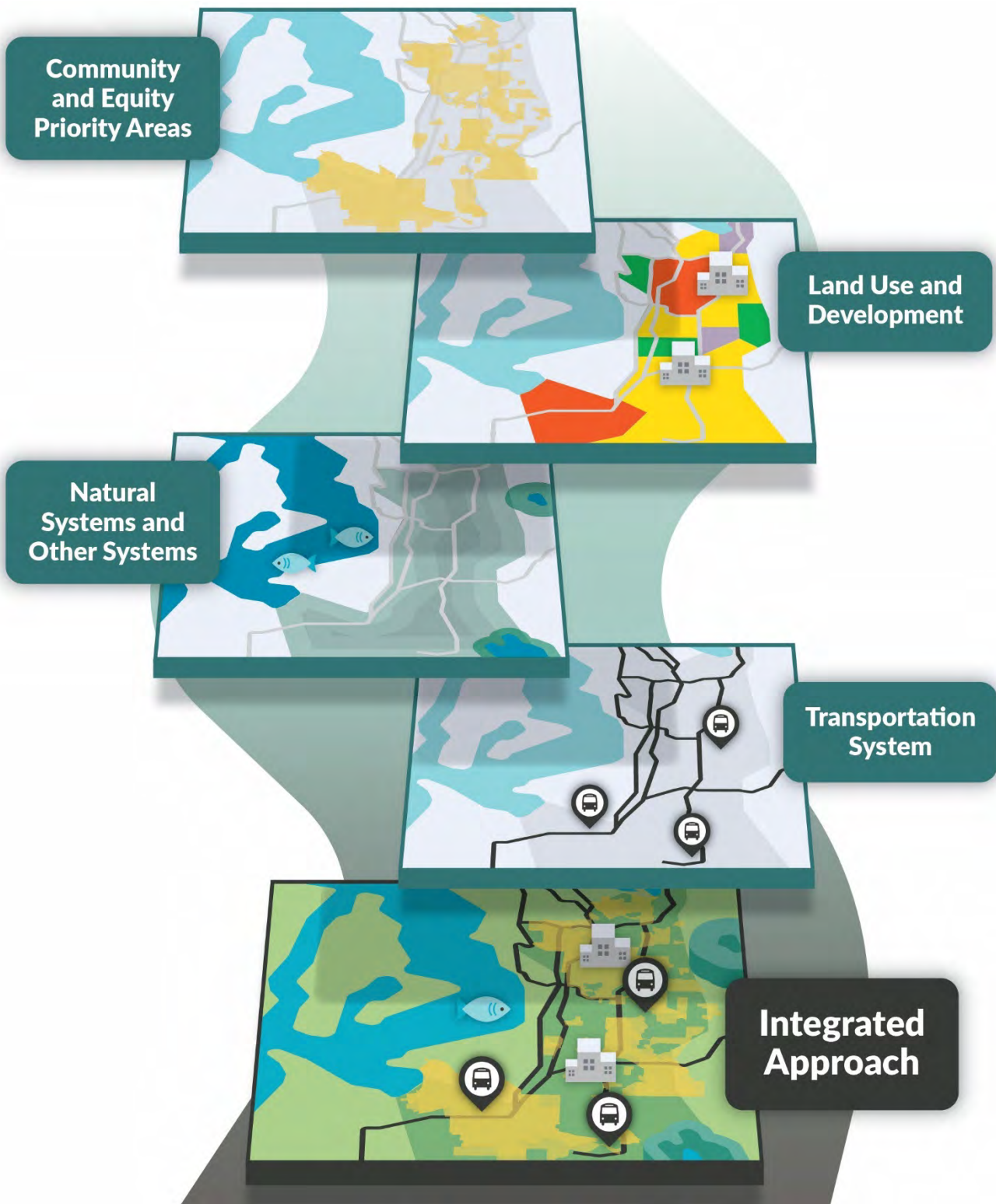


Figure 1-1. Integrated Planning Approach

PEL Study Requirements

The PEL process followed FHWA PEL guidance regarding the integration of transportation planning and the NEPA process, which encourages the use of planning studies to provide information for incorporation into future NEPA documents (23 Code of Federal Regulations [CFR] 450). The goal of these early integrated planning efforts is to streamline subsequent alternatives analysis during NEPA processes and to incorporate early and continuous engagement with partners, agencies, and the public. The SR 167 Master Plan PEL Study meets the requirements under 23 CFR 450, which are illustrated on Figure 1-2. The overall timeline for the study, with the FHWA coordination points, is illustrated in Figure 1-3. Resource agency input, public open houses, and committee meetings are also presented.

The **PEL Questionnaire (Attachment A)** is intended to act as a summary of the planning process and ease the transition from planning to NEPA (FHWA 2011a).

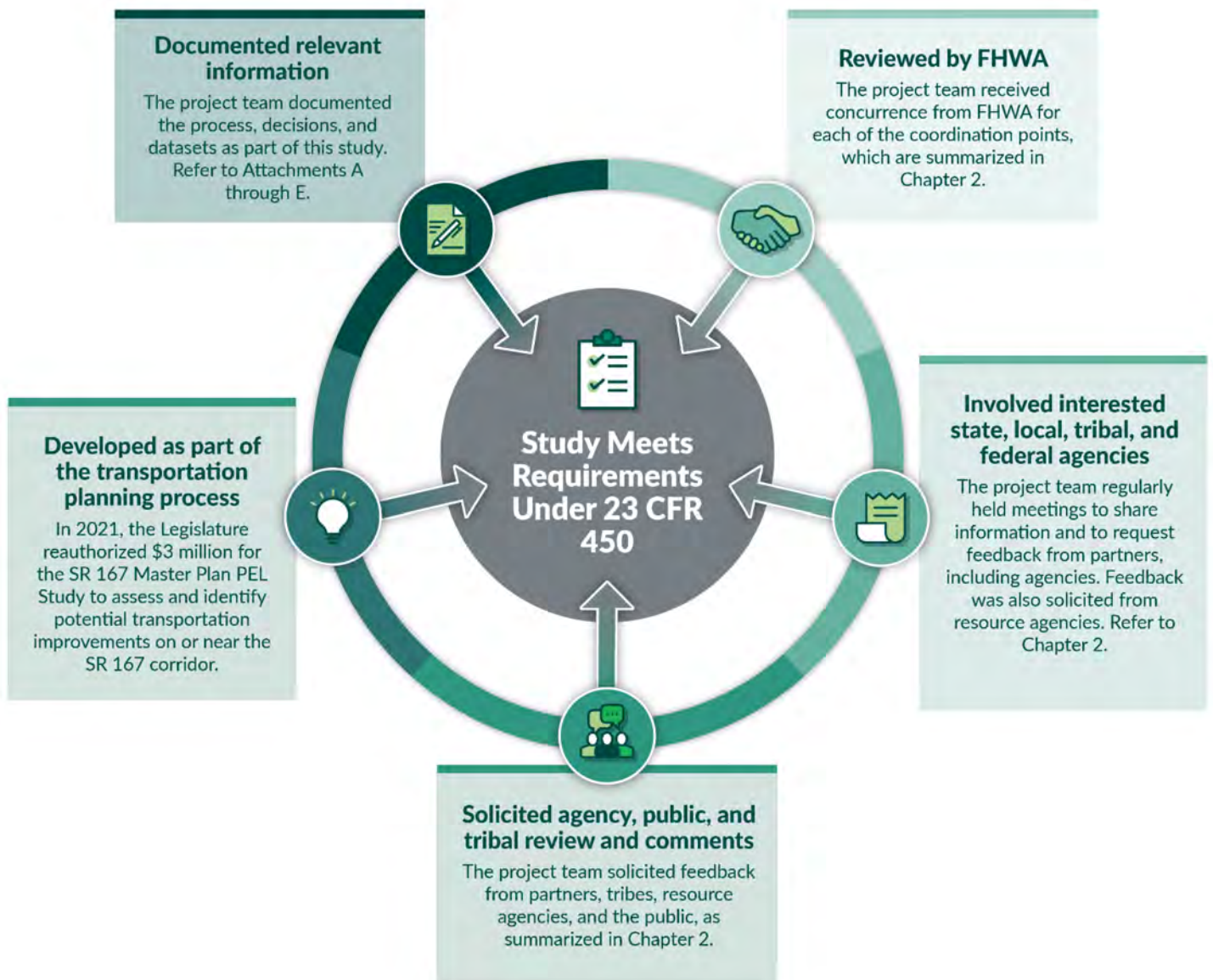


Figure 1-2. SR 167 Master Plan PEL Study Requirements

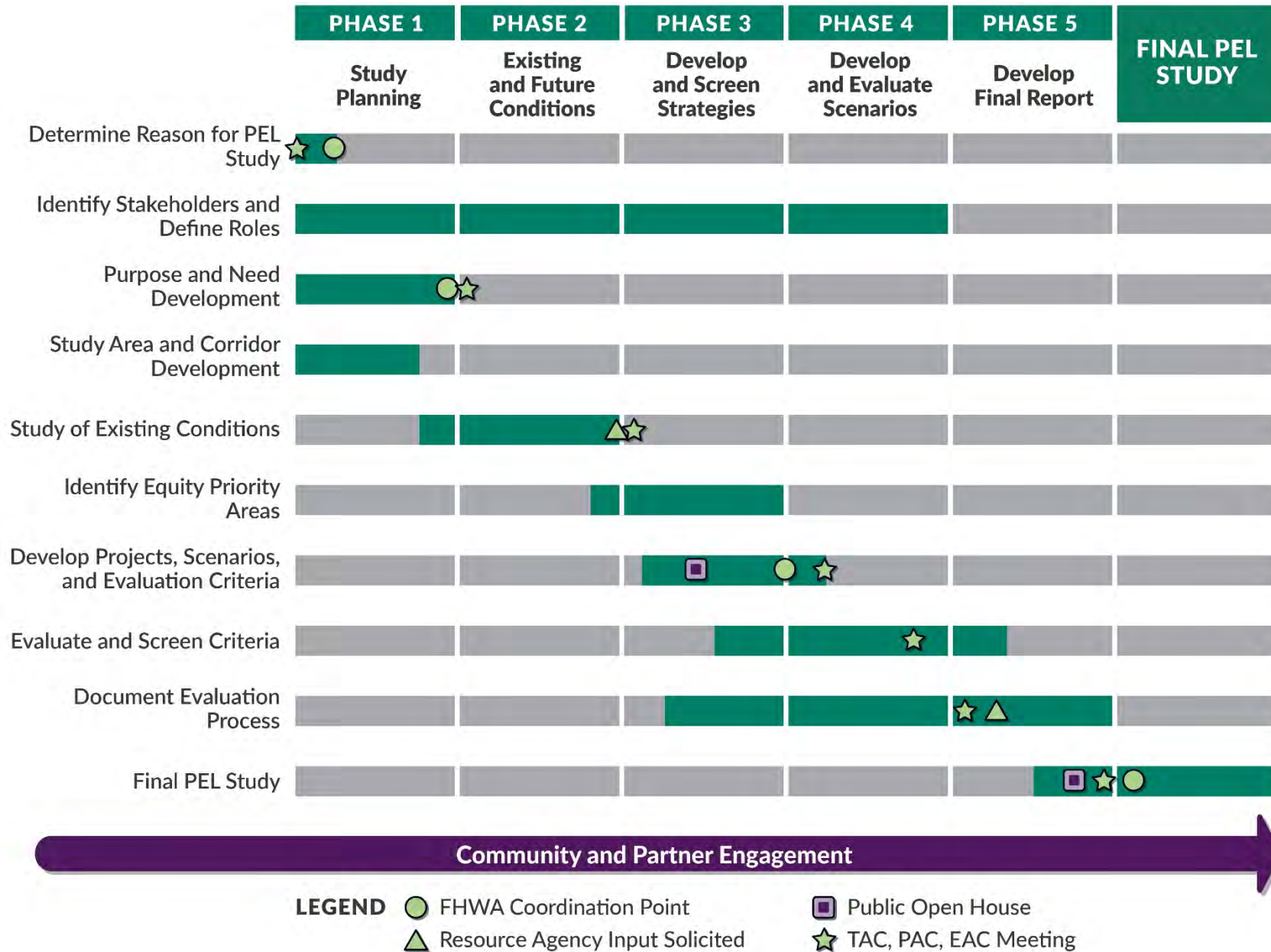


Figure 1-3. SR 167 Master Plan PEL Study Timeline

NEPA Process Principles

The FHWA PEL Questionnaire is intended to act as a summary of the PEL process and should be used for transitioning from planning to implementation and NEPA reviews. The PEL Questionnaire for the SR 167 Master Plan PEL Study is included in *Attachment A*, and it includes a crosswalk (Question 2.d, Table 4) of planning terms used in this study with equivalent NEPA-like terms. The following general NEPA process principles were followed:

- Prepare a PEL study project Purpose and Need (refer to the Vision, Purpose (Goals) and Need section).
- Study existing (2019) and future conditions (2030 and 2050 were evaluated) (refer to *Attachment B. Existing and Future Baseline Conditions Report*).
- Evaluate alternatives (projects, strategies, and scenarios), including studying a No Action Alternative (Baseline Scenario) (refer to *Chapter 3*).
- Evaluate environmental effects and potential mitigation strategies (refer to *Chapter 3* and *Chapter 5*).
- Coordinate with federal, state, and local agencies, including gaining concurrence from FHWA at four required coordination points (refer to *Chapter 2*).
- Solicit public feedback (refer to *Chapter 2*).

Study Area

SR 167 is a state highway located in the Central Puget Sound region, extending from Renton in King County to Puyallup and Tacoma in Pierce County. The study area for the SR 167 Master Plan PEL Study is illustrated in Figure 1-4, and it was developed through a data-driven and partner-refined process to capture the SR 167 facility's entire "area of influence." Refer to *Attachment B* for details on each step in the study area development process.

SR 167 Facility

The SR 167 highway, including all travel lanes, interchange ramps, and right-of-way.

SR 167 Corridor

The area within approximately 1 mile of the SR 167 facility that was used to study details related to environmental, safety, active mode, and system performance evaluations.

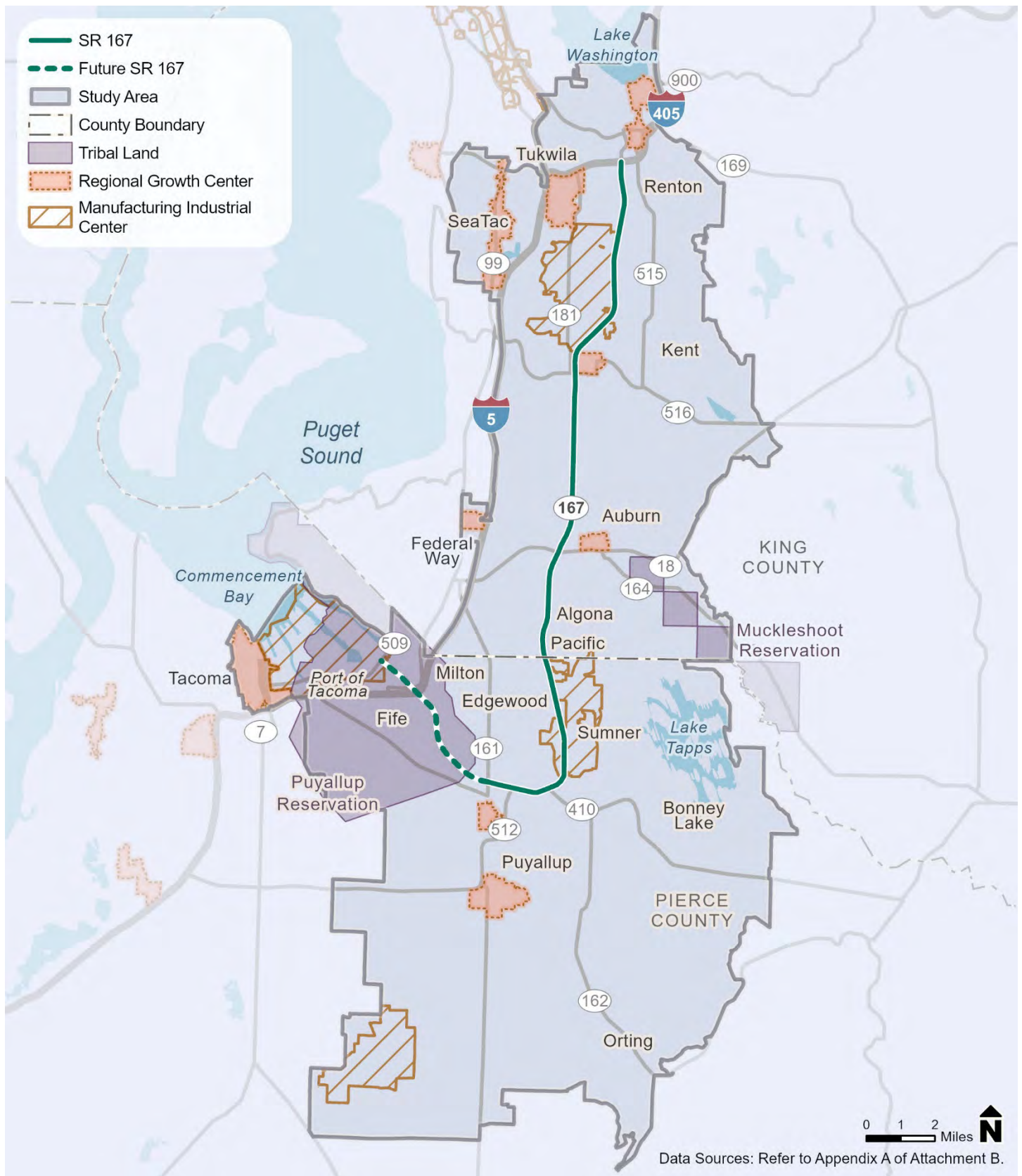


Figure 1-4. Study Area

Vision, Purpose (Goals) and Need

WSDOT staff, along with partner agencies and CBOs, collaboratively developed the vision and the project Purpose and Need. The specific needs are based on the analysis and findings obtained from the existing conditions analysis documented in *Attachment B*, as well as data and community input from previous studies.

The Vision for the SR 167 Master Plan is as follows:

The SR 167 Master Plan identifies transportation solutions intended to facilitate the movement of people that travel on and across SR 167 for work, school, and other essential and non-essential trips, and the movement of goods that support economic vitality. Travel along and across the SR 167 corridor will be safe, connected, resilient, and reliable. The SR 167 Master Plan strives for practical solutions to: (a) prioritize the needs of vulnerable populations and overburdened communities, (b) reduce physical barriers of the current system, (c) support the PSRC Regional Growth Strategy, (d) facilitate transit and active transportation, (e) support projected growth and land use changes, (f) accommodate freight movement, and (g) reduce per capita greenhouse gas emissions.

Purpose and Need

Purpose is the set of objectives that will be met to address the transportation deficiency.

Need is an identified transportation deficiency or problem.

The vision and project Purpose and Need is the guiding framework for the development of high-level multimodal transportation solutions, and it supported evaluation of multimodal scenarios for the SR 167 Master Plan PEL Study. During future environmental review processes of individual projects, more specific purpose and need statements should be considered.

Purpose (Goals)

The project Purpose (Goals) of this SR 167 Master Plan PEL Study is to develop transportation solutions that promote the following goals. Projects and strategies were evaluated for whether they met the project Purpose and Need. Refer to *Chapter 3* for more information on how they were used in evaluating scenarios.



Equity: Provide a range of transportation options that addresses the needs of vulnerable populations and overburdened communities.



Safety: Improve existing and future safety conditions.



Environment: Provide improvements that reduce greenhouse gas emissions and limit environmental impacts.



Multimodal: Transform how people and goods travel in support of the PSRC Regional Growth Strategy, by focusing on RGCs, MICs, and Countywide Centers through multimodal and multiagency investments, while reducing SOV demand and removing barriers that limit local connectivity across the SR 167 corridor for all modes.



Mobility and Economic Vitality: Manage mobility for local, regional, state, and interstate trips, by leveraging technology advancements, supporting economic vitality, and considering the unique needs of all travelers and transportation modes, including freight/goods movement, active transportation, and transit.



Practical Solutions and State of Good Repair: Identify strategies that are practical, implementable, and fundable in a realistic timeline considering the importance of maintaining a State of Good Repair throughout the facility's lifecycle.

Need (Problems)

The project Purpose (Goals) statements were developed through an understanding of the existing and future conditions. The following is a summary of the specific needs and relevant data that support each Purpose (Goals). Refer to *Chapter 3* for more information on how the needs helped identify projects and strategies. Refer to *Attachment B* for detailed information related to existing conditions findings.

The corridor runs through areas with diverse populations. Vulnerable populations and overburdened communities need transportation solutions that reduce environmental risk and serve their transportation needs. (Equity Goal)

About 30 percent of households in the study area have an income less than \$50,000 while 25 percent of the households have a household income of more than \$125,000. People of color represent more than 40 percent of the study area population. Approximately 25 percent of the study area population is considered low-income for the Puget Sound region (people who are at or below 200 percent of the federal poverty guidelines). About 6 percent of the households in the study area do not own a vehicle. The Washington Health Disparities Map Risk Index (developed by the Washington Department of Health 2019) identifies many communities along SR 167 as having high vulnerability and risk of cumulative health impacts from multiple environmental hazards. Refer to *Attachment B, Chapter 3. Community Profile*.

Fatal and severe crashes have occurred on the SR 167 corridor. (Safety Goal)

From 2015 through 2019, there were seven fatalities and 33 serious injuries resulting from vehicle crashes recorded on the SR 167 mainline (all through lanes). There were also five fatalities and 22 serious injuries resulting from vehicle crashes recorded on SR 167 ramps, ramp terminals, and interchange cross streets. During the same time period, there were 360 pedestrian crashes within 1 mile of SR 167 that resulted in 11 fatalities and 52 serious injuries. Another 139 bicycle crashes were recorded during the same time period in this area, resulting in one fatality and 13 serious injuries.¹ Refer to *Attachment B, Chapter 9. Safety Analysis*.

Vehicle emissions are the top source of greenhouse gas emissions in Washington state, and they negatively impact health outcomes. (Environmental Goal)

Vehicle emissions are highly correlated with vehicle miles traveled (VMT). Within Washington state, transportation accounted for 39 percent of greenhouse gas emissions in 2019 (Ecology 2019). According to the United States Environmental Protection Agency (U.S. EPA), the emissions for an average passenger vehicle is 4.6 metric tons of carbon dioxide per year, assuming the average fuel economy is 22 miles per gallon and the average VMT is 11,500 miles per year (U.S. EPA 2022a). Reducing SOV demand helps reduce per capita VMT and emissions. Refer to *Attachment B, Chapter 11. Travel Patterns*.

The SR 167 corridor experiences high travel demand and congestion. (Mobility and Economic Vitality Goal)

The facility currently carries 100,000 to 135,000 vehicles on an average day, making it the fourth busiest

¹ Under 23 U.S. Code § 148 and 23 U.S. Code § 407, 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.

freeway in the Puget Sound region. The low-density development along the corridor, limited availability of transit options, and patchy non-motorized network means that most trips are made by driving SOVs. SR 167 experiences substantial morning (AM) and afternoon (PM) peak period congestion. Specifically, about 45 percent of the SR 167 southbound general purpose lanes experience stop-and-go traffic during the PM peak period. Major parallel arterials to SR 167 and some of the east-west arterials that have interchanges with SR 167 also experience high travel demand to arterial capacity, which is often called a volume-to-capacity ratio or v/c ratio. Refer to *Attachment B, Chapter 10. System Performance*.

The v/c ratio, a measure of congestion on a roadway, is used to evaluate the performance of arterial roadways. It compares the traffic volume along a roadway to its theoretical capacity. For this study, a v/c ratio between 0.85 and 1.0 indicates a Level of Service (LOS) E, which means a segment of road is operating near capacity. A v/c ratio of 1.0 or greater indicates LOS F, which means a road segment is over capacity.

The SR 167 corridor is one of the fastest growing areas in the state, and it is changing. (Multimodal Goal)

As identified in the PSRC, new travel patterns and needs are emerging from changing demographics and increasing density as the communities along the corridor expand. The SR 167 Master Plan PEL Study area is expected to grow by more than 550,000 new residents and 240,000 new jobs by 2050. The comparatively affordable properties of south King County and north Pierce County will fuel continued growth and development for both housing and employment. This growth will include continued expansion of the manufacturing and warehouse facilities in the corridor and the suburban residential development pattern. However, a series of higher density/mixed-use areas is expected to develop along the corridor, creating new opportunities for walking, biking, and transit. Refer to *Attachment B, Chapter 4. Facility Summary*.

SR 167 can act as a barrier for local trips. (Multimodal Goal)

SR 167 runs through many cities, and it has limited east-west connectivity due to missing or high-stress crossing opportunities at interchanges, overpasses, and underpasses within and between cities, which increases reliance on vehicles for east-west trips. For example, only six of the 27 existing SR 167 crossings include bike lanes/trail crossings and six of the crossings have no pedestrian accommodations. There are also some areas where it is more than 1 mile between crossings of SR 167. Refer to *Attachment B, Chapter 7. Active Transportation Network* and Figure 1-16.

The SR 167 corridor has limited capacity to accommodate additional SOV travel demand. (Multimodal and Mobility and Economic Vitality Goals)

Over the past 20 years, traffic volumes on SR 167 have grown by between 3 and 5 percent, which is significantly less than the area's population and employment growth. Growth in traffic volumes, which is limited by vehicular capacity constraints on SR 167, has resulted in changes to travel behavior and mode choice. Urban and sensitive environmental areas, such as wetlands and wildlife habitats, increase the cost and complexity of physical capacity improvements. It is not feasible to "build our way out of congestion" on the SR 167 corridor. Refer to *Attachment B, Chapter 10. System Performance and Chapter 12. Environmental Baseline*.

SR 167, a key alternate route to Interstate 5 (I-5), has moderate vulnerability to climate change and is subject to non-recurring congestion. (Mobility and Economic Vitality Goal)

In concert with SR 410, SR 18, SR 512, and Interstate 405 (I-405), SR 167 provides a limited access state route alternative to the congested I-5 corridor and adds resilience to the state highway system in the event of a

natural disaster, a serious crash on I-5, or climate-driven disruptions. Refer to *Attachment B, Chapter 4. Facility Summary* and *Chapter 12. Environmental Baseline*.

SR 167 is the second busiest freight corridor in the state, and it connects key freight hubs, including the Port of Tacoma. (Mobility and Economic Vitality Goal)

Freight makes up 10 to 20 percent of all traffic on the SR 167 facility, and trucks have more limited route options than other vehicles and trips. The corridor is home to many MICs, the Port of Tacoma, and other manufacturing and industrial areas outside of the MICs that are of great importance to freight (91 percent of all truck trips on SR 167 begin or end within the study area). Freight depends on SR 167, particularly the south segments, to connect eastern Washington via SR 18 with southern Washington and with interstate destinations via I5 (20 percent to 30 percent of all truck trips on SR 167 come from or are going to southern or eastern Washington, which is well beyond the study area boundary). Accommodating reliable movement of truck trips is critical for the economic health of the region and ports (on average, trucks that travel on SR 167 for part of their route travel a total distance of 40 to 70 miles per trip). Refer to *Attachment B, Chapter 6. Freight Network* and *Chapter 11. Travel Patterns*.

Transit is critical to mobility in the corridor. (Mobility and Economic Vitality Goal)

Sound Transit's commuter rail, the S Line (formerly Sounder South line), which parallels the SR 167 corridor and connects downtown Seattle to Tacoma and Lakewood, is the second busiest transit route in the region, and it had more than 16,000 average weekday boardings in 2019. However, the S Line operates at limited times (only during AM and PM peak periods on weekdays), with no alternative transit options to directly serve many of the transit stations (e.g., Kent to Sumner) along the corridor between service runs during early morning and late evening hours and on weekends. Rapid growth in transit ridership prior to the pandemic also resulted in crowding on the Sounder S Line and several bus routes, and many of the corridor's park and ride lots were full before 8 a.m. The limited times transit operates, the current challenges accessing what transit is available to connect to transit hubs (not all origins or destinations are within a convenient walking distance of a transit route), and limited park and ride access means transit service to and from these stations is not sufficiently reliable or convenient. Additionally, Amtrak Cascades operates within the study area with intercity service from Vancouver, British Columbia, to Eugene, Oregon. Amtrak Cascades has a corridor area stop in Tukwila. Refer to *Attachment B, Chapter 8. Transit Network* and *Chapter 11. Travel Patterns*.

Maintain and preserve the system. (Practical Solutions and State of Good Repair Goal)

The SR 167 facility from Renton to Puyallup was built in the 1970s. The facility has 64 bridges, 17 of which are rated as Functionally Obsolete and two of which are rated Structurally Deficient. Much of the SR 167 facility pavement is in fair or good condition, although there are portions of the northbound lanes between Kent and Auburn and in Puyallup in poor condition. As the SR 167 facility ages, the costs to maintain and preserve the system will increase, and those costs must be considered when adding new infrastructure that will increase the overall costs of the corridor over time. The need to maintain and preserve the existing system prior to expanding it is in accordance with the transportation system policy preservation goal (RCW 47.04.280). Underfunding maintenance and preservation puts the functions currently served by SR 167 at risk. According to WSDOT's *2023-25 Capital Improvement and Preservation Program*, its current unfunded preservation and maintenance need (adjusted for inflation) is \$9.1 billion over 10 years (WSDOT 2022a). Refer to *Attachment B, Chapter 4*.

Functionally Obsolete bridges are older structures that do not meet the current design standards (i.e., lane widths).

Bridges are considered **structurally deficient** if significant load-carrying elements are found to be in poor or worse condition due to deterioration and/or damage, or the adequacy of the waterway opening provided by the bridge is determined to be extremely insufficient to the point of causing intolerable roadway traffic interruptions.

The urgency of repair for bridges considered functionally obsolete or structurally deficient is dependent upon if such bridges are determined unsafe upon routinely scheduled inspections (FHWA 2010).

Corridor Conditions and Planning Context

The following sections summarize the existing and future corridor conditions identified for this plan and as detailed in *Attachment B*. The methodology for assessing travel conditions within the SR 167 corridor consisted of reviewing travel forecasts, studying the system performance and travel patterns, and analyzing freight, transit, and active mode networks. Surrounding land uses were studied to better understand areas of potential future growth. A summary of relevant regional transportation projects and studies is provided in the Planning Context section of this chapter.

Existing Corridor Conditions and Transportation System

SR 167 Facility

SR 167, a 28-mile-long corridor from Puyallup to Renton, is part of the greater 50+ mile-long I-405/SR 167 corridor. The greater I-405/SR 167 corridor is a critical alternative to I-5 and a freight corridor. As demonstrated in Figure 1-5, the SR 167 facility primarily consists of two access-controlled, general purpose lanes in each direction, and a high-occupancy toll (HOT) lane in each direction north of Ellingson Road. Not illustrated in the figure is the 6-mile-long arterial segment of SR 167, also known as River Road. This portion of the highway will be turned back to the applicable jurisdictions upon

The corridor's HOT lanes are part of the larger I-405/SR 167 managed lanes system and currently operate seven days a week between 5:00 a.m. and 7:00 p.m. with a 2+ vehicle occupancy requirement for non-tolled trips. Outside of these times, the HOT lanes are open to all.

completion of the new segment of SR 167 that will link SR 509 and I-5 to the existing SR 167 segment at Meridian Avenue.

There are 20 known culverts in the SR 167 facility that must be corrected to eliminate barriers to fish. This requirement is to comply with *United States, et al. vs. Washington, et al. No. C70-9213 Subproceeding No. 01-1* dated March 29, 2013 (a federal permanent injunction requiring the State of Washington to correct fish barriers in Water Resource Inventory Areas [WRIAs] 1 through 23). *Chapter 5* includes information related to fish passage and other environmental conditions of the SR 167 corridor, such as flooding and wetlands. The facility has 64 bridges, 17 are rated Functionally Obsolete and two are rated Structurally Deficient.

As illustrated in Figure 1-6, most of the SR 167 facility pavement condition is rated by WSDOT as Fair or Good, but there are areas between Kent and Auburn and in Puyallup rated Poor or Very Poor, which constitute up to 10 percent of northbound travel lanes and 1 percent of southbound travel lanes.

The SR 167 corridor contains various technology focused assets that support most communication, tolling, and Intelligent Transportation Systems (ITS), which have been installed and/or upgraded under different projects. As discussed in *Attachment B, Chapter 4*, WSDOT ITS experts identified five areas along the facility that need updates to maintain a State of Good Repair (Figure 1-6).

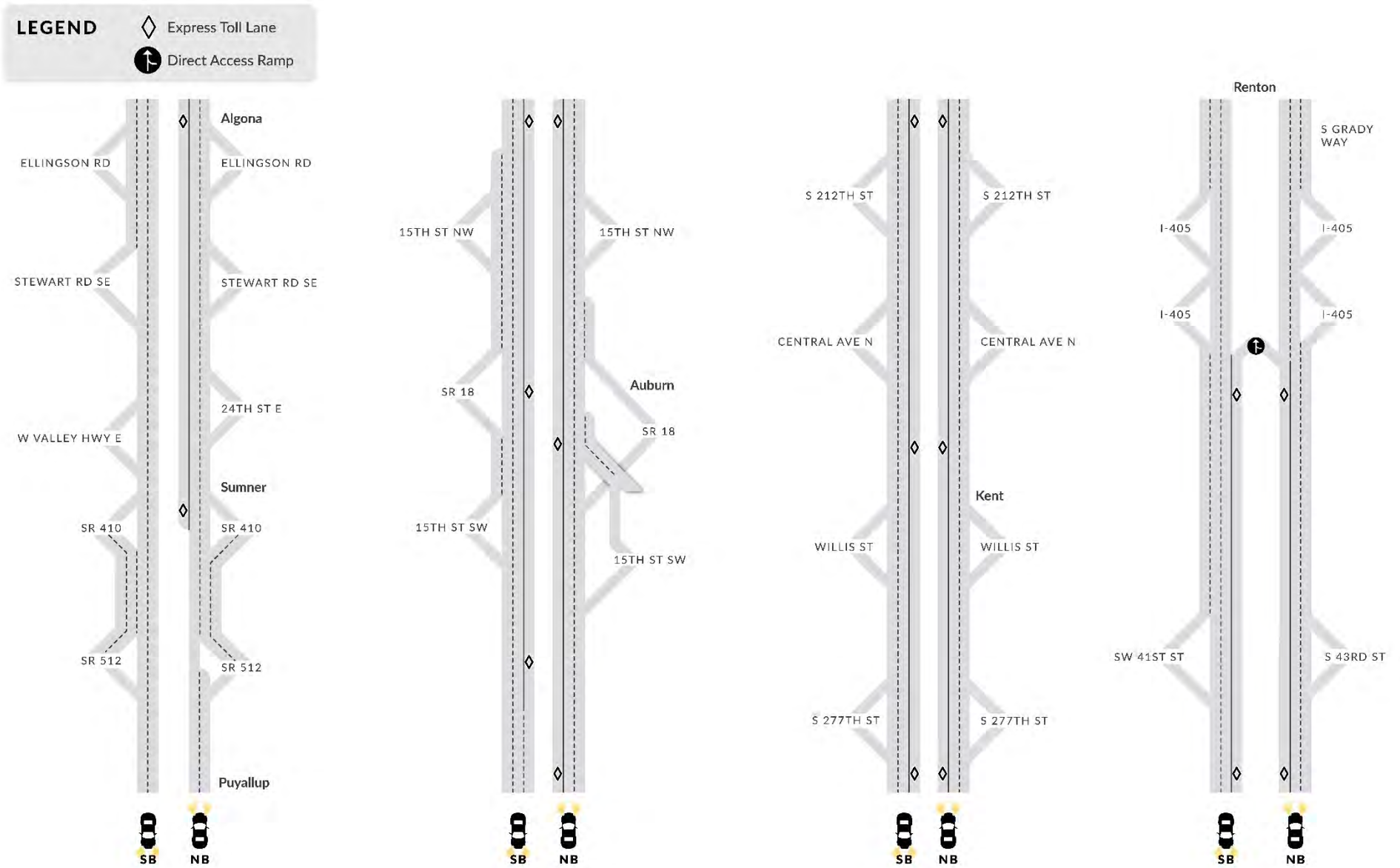


Figure 1-5. SR 167 Existing Facility between SR 512 and I-405

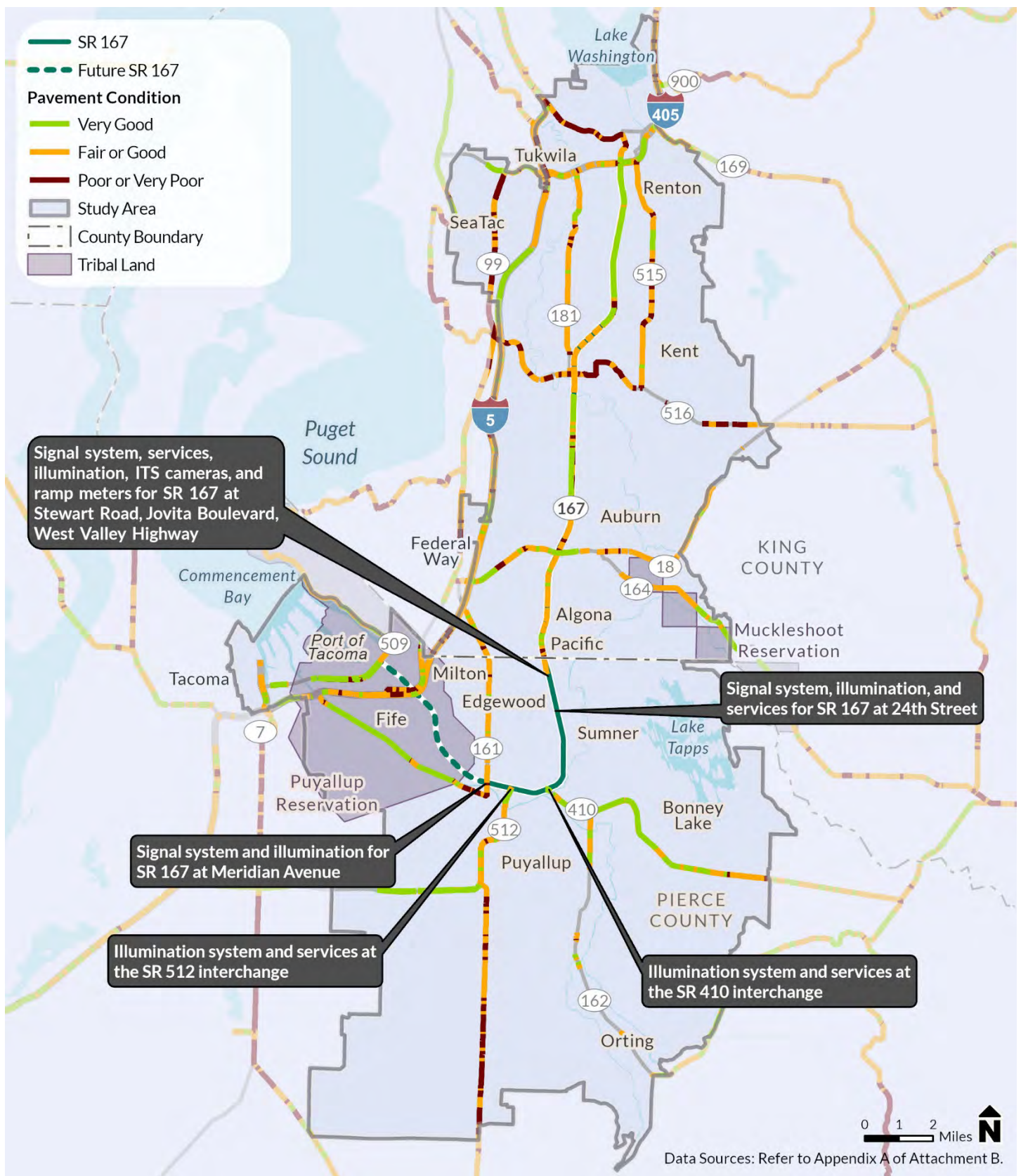


Figure 1-6. SR 167 Pavement Condition and Existing Electronics Needing Upgrade

Travel Patterns and System Performance

The project team identified three distinct segments of SR 167 based on travel characteristics from an analysis of travel patterns in the study area (Figure 1-7):

- **SR 18 to I-405 (North Segment):** This segment is about 12.5 miles long, and it includes a diverse mix of trucks, commuters, and other non-home or work-based trips. This segment connects the study area to the Central Puget Sound region, including Seattle and Bellevue. HOT lanes are present that attract users from parallel facilities by providing a more reliable and faster trip.
- **SR 410 to SR 18 (Middle Segment):** This segment is about 7.5 miles long, and it is often congested in the weekday peak direction of travel. This section has the highest percentage of heavy vehicles, and it has the longest trip lengths on the corridor. A notable travel pattern is trucks that move from southern to eastern Washington (i.e., from I-5 to I-90 via SR 512, SR 167, and SR 18 bypassing Tacoma, Seattle, and Bellevue).
- **SR 161 to SR 410 (South Segment):** This segment is about 2 miles long, and it is a short but critical segment of SR 167. It facilitates a mix of shorter east-west based trips, and it serves as a regional connection between SR 512 and SR 410 and more regionally based freight travel that largely travels on SR 167.

Table 1-1 demonstrates that most trips using SR 167 have at least one trip end outside of the study area. Many trucks traveling on SR 167 begin or end their trips at locations between SR 410 and SR 18, which is where many large distribution centers are located that receive goods from the Port of Tacoma or pick-up/drop-off shipments to and from eastern Washington or southern Washington/Oregon. Only 9 percent of trucks pass through the SR 167 corridor without stopping.

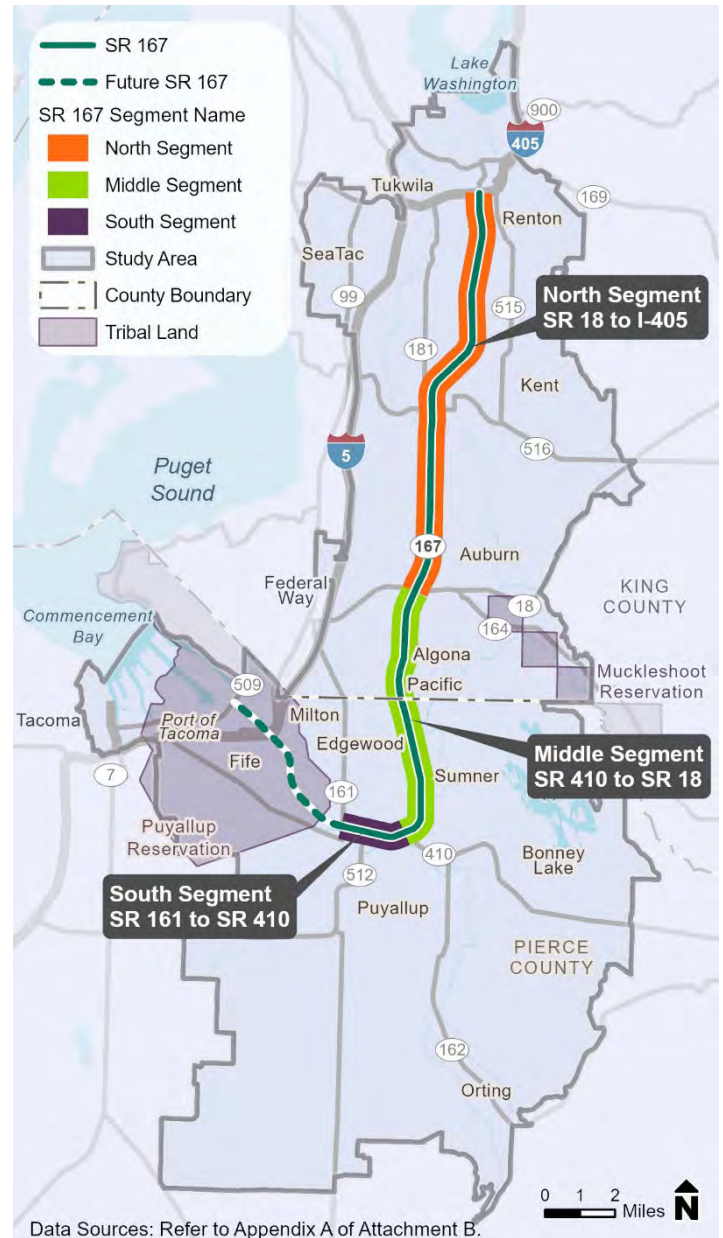


Figure 1-7. SR 167 Segments

Table 1-1. SR 167 Internal, External, and Pass-through Trips

Type of Trip	All Vehicles	Trucks
Internal Only ^a	27%	25%
Internal to/from External ^b	54%	66%
External (pass through) ^c	19%	9%

Sources: StreetLight Data, 2019; refer to *Attachment B, Appendix G* for the methodology and data sources related to StreetLight.

Notes:

^a Trips that begin and end within the SR 167 study area.

^b Trips that start or end inside going to or coming from outside the study area.

^c Trips that both begin and end outside of the SR 167 study area.

Key findings related to 2019 congestion conditions on SR 167 include:

- There is substantial recurring traffic congestion in the corridor, notably northbound in the morning and southbound in the afternoons.
- SR 167 northbound congestion is generally caused by high traffic demand, and it has fewer lane drops and weaving areas than the southbound direction. Congestion that spills back from I-405 can cause slow traffic on northbound SR 167 throughout much of the day. Morning congestion also may be caused by early work shifts at manufacturing centers along the corridor, high truck activity, and peak period spreading as drivers seek to leave earlier to avoid systemwide congestion.
- Southbound congestion can occur as early as 1 p.m. and as late as 7 p.m. Like the AM peak period, afternoon congestion is likely caused by the weaving area between SR 410 and SR 512 in the southbound direction. The terminus of the southbound HOT lane at Stewart Road is also a major contributor to afternoon congestion. WSDOT has funding to extend the HOT lane from Stewart Road to SR 410, which could help reduce this area of southbound congestion when the project is complete.
- Weekend recurring congestion typically occurs on Saturdays in both directions of the general purpose lanes in the southernmost segment of the study area between SR 512 and Ellingson Road.
- The SR 167 corridor is subject to non-recurring traffic congestion that is often related to weather, crashes, or special events. Non-recurring congestion is an issue throughout the Puget Sound region because of the high utilization of freeway facilities that often operate near or above capacity.

A **weaving section** is a length of highway over which one-way traffic streams cross by merging and diverging maneuvers.

The **peak period** represents the times of the day when traffic volumes are the highest. Typically, this is weekdays during the morning (AM) and afternoon (PM).

An **arterial** is a road or street intended to move high volumes of traffic over long distances at high speed, with partial control of access, having some intersections at grade.

A **freeway** is a divided highway with a minimum of two lanes in each direction for the exclusive use of traffic and with full control of access.

(WSDOT 2021a)

Additional findings related to 2019 congestion conditions on **arterials** surrounding SR 167 include:

- North/south arterials experience the highest congestion levels, although east/west streets near SR 167 interchanges can become congested as well.
- About 8 percent of the arterials are operating near or above capacity (LOS E or F), with higher congestion levels during the PM peak hour.

- When SR 167 is congested south of SR 18 (middle segment), some motorists shift to parallel roadways, including East Valley Highway, West Valley Highway, Meridian Avenue (SR 161), and I-5. North of SR 18, parallel arterials are not as frequently used to avoid travel on SR 167 due to longer travel times.

Surrounding Land Uses and Community

As of 2019, the study area had approximately 236,000 housing units and 401,500 jobs. Compared to 2019, PSRC forecasts predict an estimated 433,000 housing units (an 84 percent increase) and 645,300 jobs (a 61 percent increase) by 2050. It is predicted that growth will be concentrated as infill of existing lots that can be redeveloped at higher densities and new and expanded master planned communities, such as Tehaleh, which are largely located in unincorporated Pierce County.

Land uses within the study area are primarily industrial, commercial, and residential, as summarized in *Chapter 5*. Areas of higher density development are found in the downtown cores of Tukwila, Renton, Kent, Auburn, and Puyallup. Due to the nature of the land use along SR 167, employment and housing are often located in separate areas, meaning that areas with high employment density (MICs) often have low housing density. Figure 1-8 and Figure 1-9 illustrate the concentration of households and jobs in the study area.

The project team developed a community profile (*Attachment B, Chapter 3*) to summarize the demographic makeup of communities in the study area and to identify equity priority areas. Refer to *Chapter 5* for more information about the community profile, environmental justice, and equity priority areas.

Key findings related to the study area demographics include:

- Vulnerable populations and overburdened communities are more concentrated north of SR 18 (refer to maps in *Attachment A, Appendix C*).
- People of color account for almost half of the total population in the study area. People who identify as Asian or Hispanic/Latino comprise the largest proportions.
- About 20 percent of the people in the study area are foreign born, and approximately half of those people are naturalized U.S. citizens.

PSRC-designated Centers

Regional Growth Centers are a mixed-use center that includes housing, employment, retail, and entertainment uses. They are pedestrian-oriented and well-served by transit. RGCs are planned for significant additional growth.

Manufacturing/Industrial Centers include intensive manufacturing and/or industrial activity with concentrations of industrial land use, employment, and freight infrastructure.

Countywide Centers serve important roles as places for concentrating jobs, housing, shopping, and recreational opportunities.

(PSRC 2020)

Community Profile

A summary of existing demographic, social, and economic characteristics for the study area that provides the basis for assessing effects on local communities and evaluating SR 167 Master Plan scenarios with respect to environmental justice and equity.

Equity Priority Areas

Communities with high concentrations of vulnerable populations and overburdened communities. Equity priority areas are used to identify and analyze transportation solutions for the SR 167 Master Plan PEL Study that maximize benefits and minimize impacts to people living in these areas.

- Within the study area, about 60 percent of the housing units are owner-occupied.
- The median income for households is approximately \$80,000 per year, with Native Hawaiian and Pacific Islander householders having the lowest household income (about \$57,000) and Asian householders having the highest household income (about \$128,000).
- About 6 percent of the households in the study area do not have a vehicle available, and most are located north of SR 18.

The equity priority areas, community and social resources, and community-identified destinations for the SR 167 Master Plan PEL Study are illustrated in Figure 1-10 and included in maps in *Appendix C* of *Attachment A*. Refer to *Chapter 2* and *Attachment B*, *Appendix F* for details on the methodology review process for identifying equity priority areas. Refer to *Chapter 3* and *Chapter 4* for evaluation results related to equity and equity priority areas. Refer to *Chapter 5* for the definition of equity priority areas and information related to equity and environmental justice.

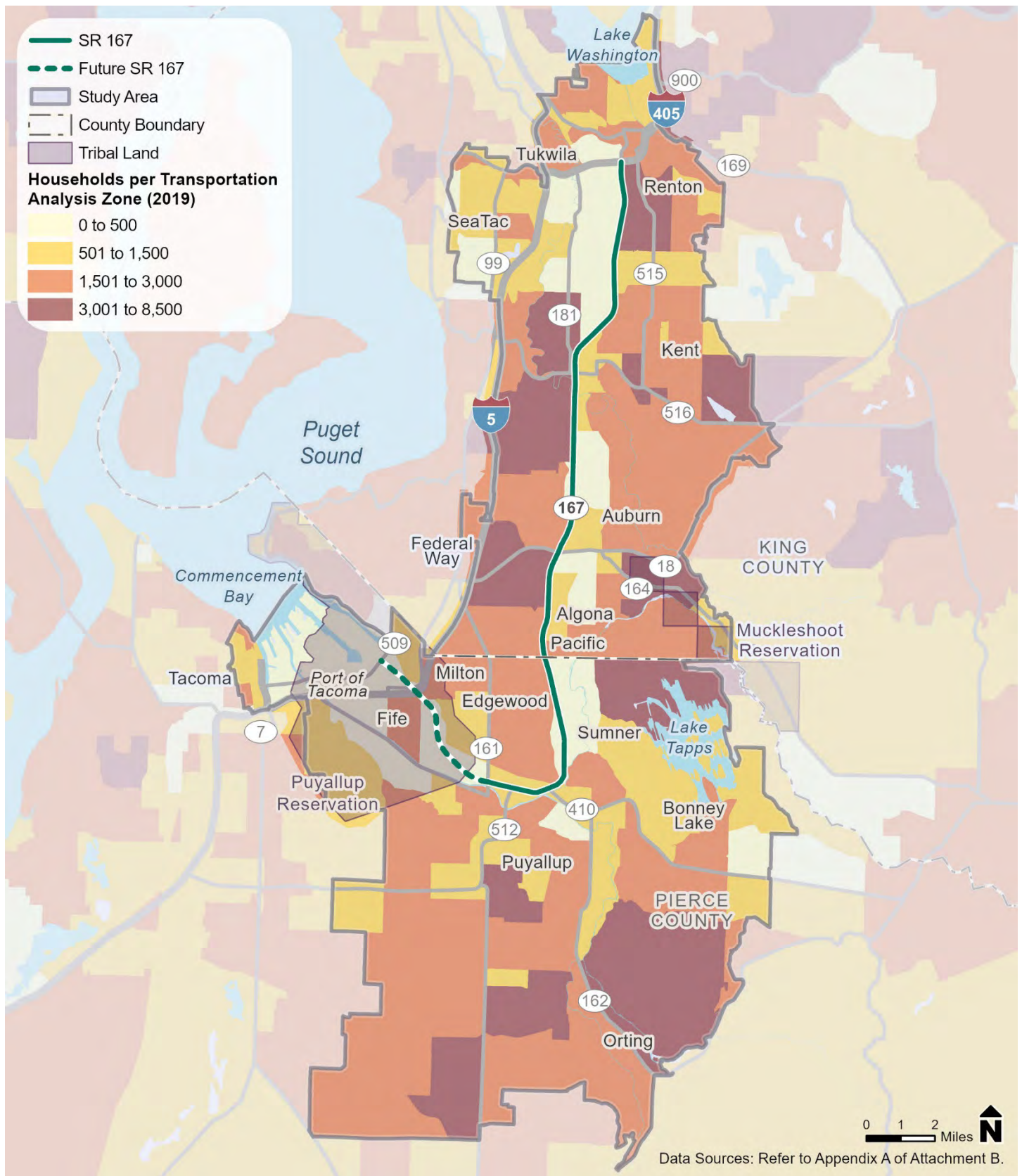


Figure 1-8. Study Area Households

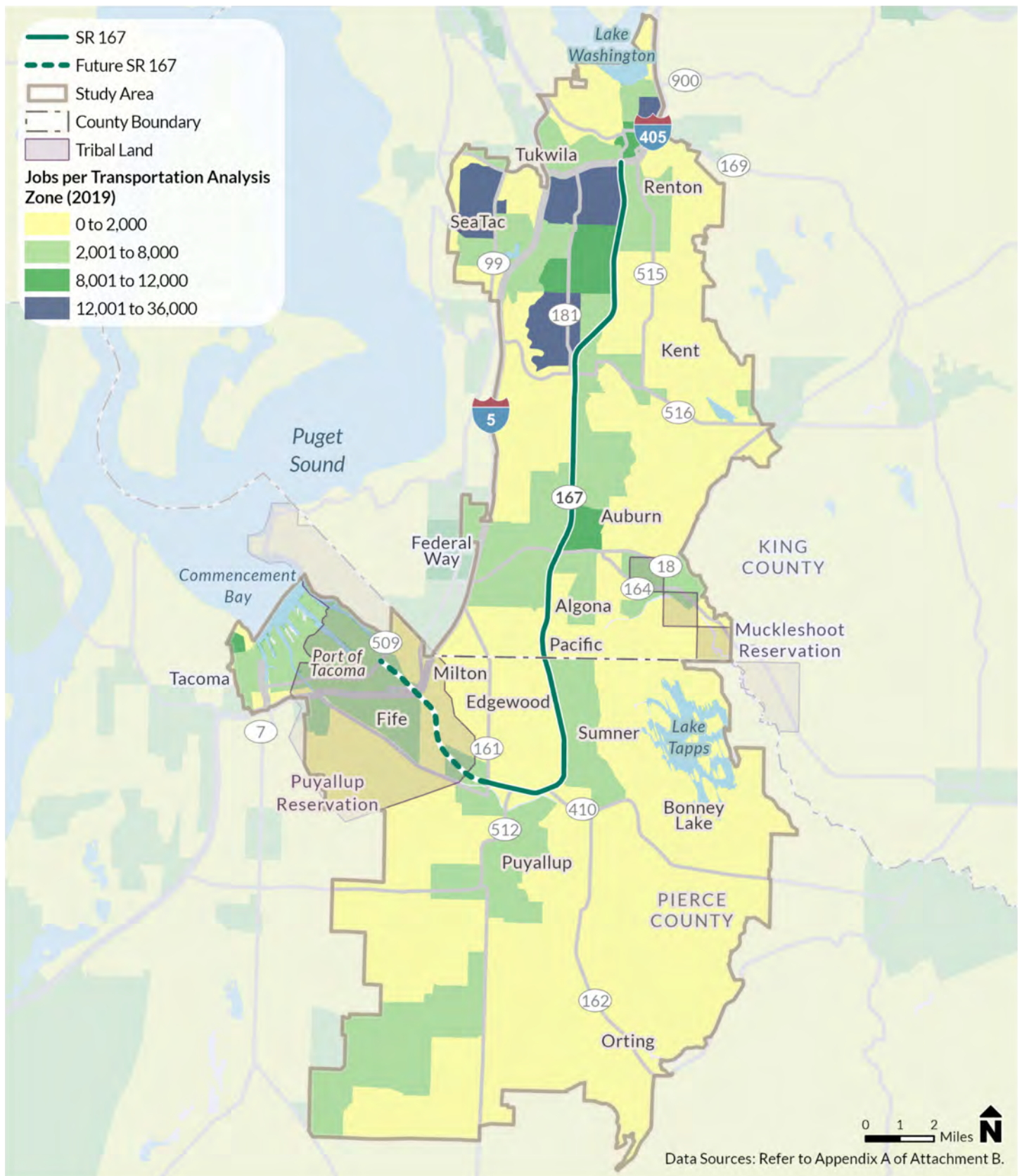


Figure 1-9. Study Area Employment

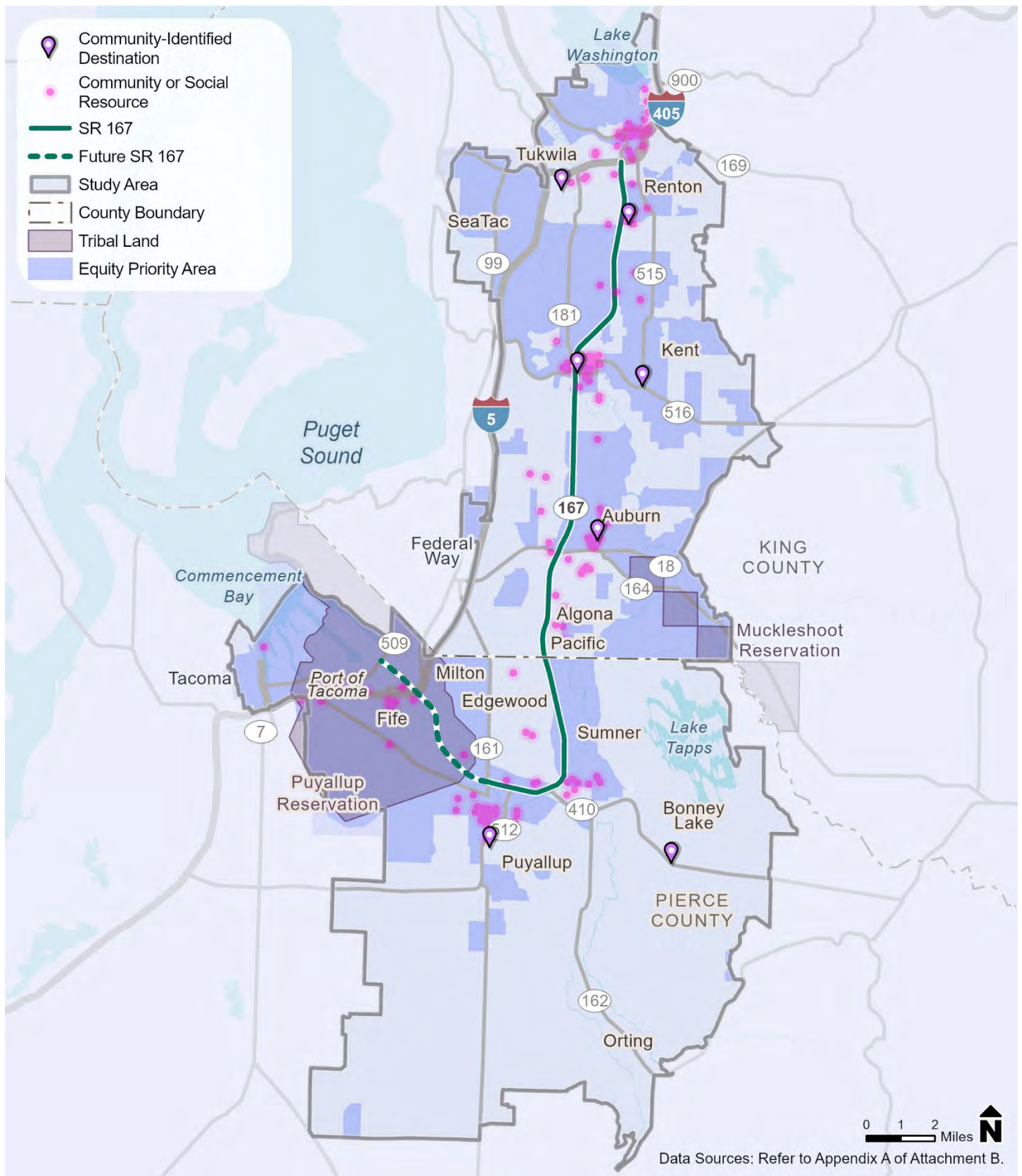


Figure 1-10. Equity Priority Areas

Safety²

The project team reviewed the crash history for a five-year period (2015 to 2019) to examine locations, types, and severity of crashes on the SR 167 facility, on- and off-ramps, and cross streets. Pedestrian and bicycle crashes were studied for all roads within 1 mile of SR 167. Figure 1-11 presents the existing crash types identified for SR 167. Figure 1-12 and Figure 1-13 present the crash frequency on the SR 167 facility from 2015 to 2019 and the locations with the highest concentrations of fatal and serious injury crashes. The type of crash is typically related to congestion and weaving movements.

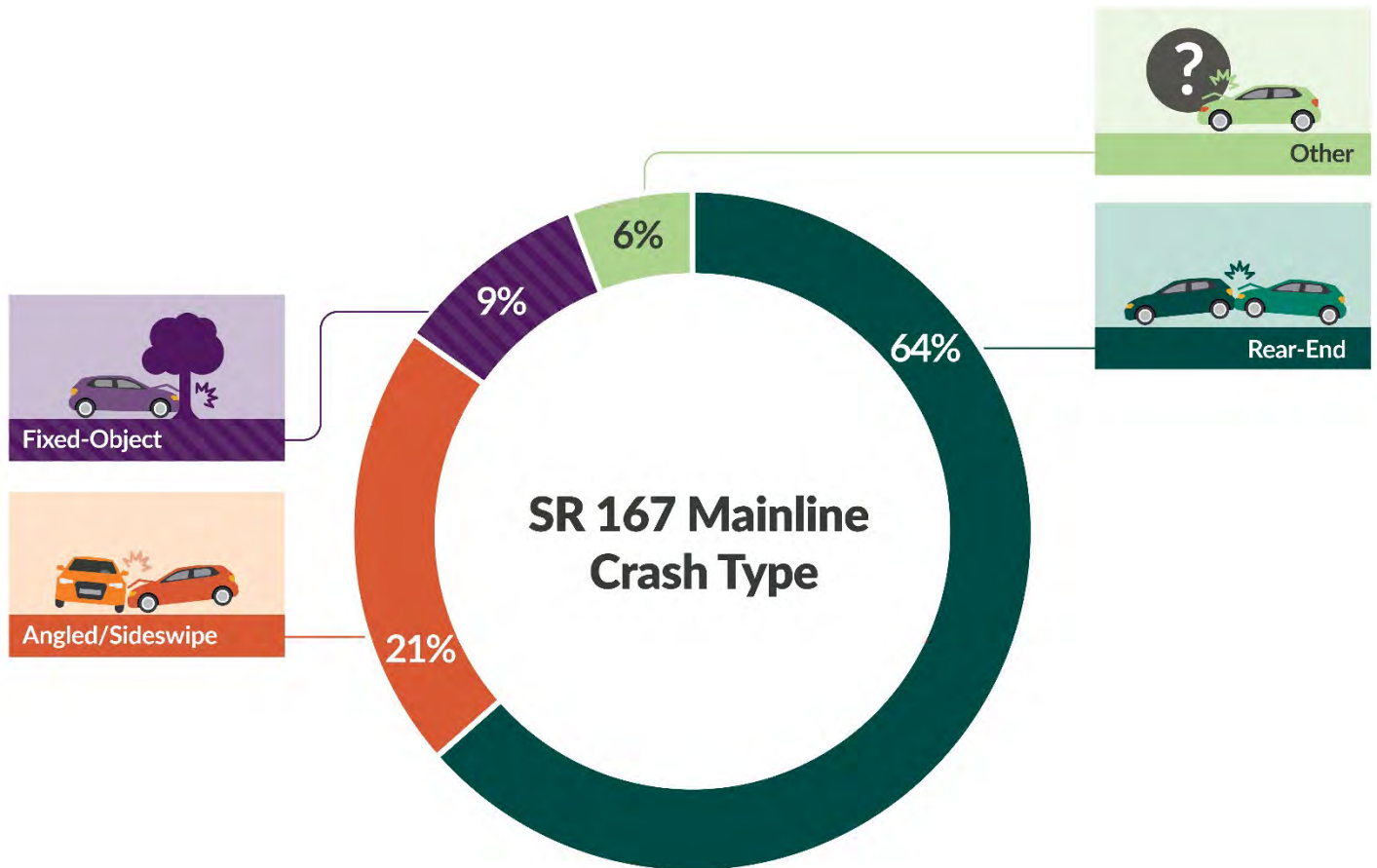


Figure 1-11. SR 167 Vehicle Crash Types

Bicycle and pedestrian crash severity, for serious and fatal crashes, is presented in Figure 1-14. The highest concentration of pedestrian and bicycle crashes occurred in downtown areas (such as Puyallup, Sumner, Auburn, Kent, and Renton) and interchange cross streets (such as 84th Avenue South, SR 516, and South 180th Street), where there are higher levels of pedestrian activity. The pattern of bicycle crashes is less concentrated than pedestrian crashes in downtown areas, and bicycle crashes were more focused on larger arterial streets without dedicated bicycle facilities.

² Under 23 U.S. Code § 148 and 23 U.S. Code § 407, 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.

Bicycles are permitted on the shoulder of SR 167 in two segments: from SR 161 to SR 410 and from SR 18 to Rainier Avenue. However, bicycles do not often use SR 167, and no bicycle crashes were identified on the facility for the five-year study period.

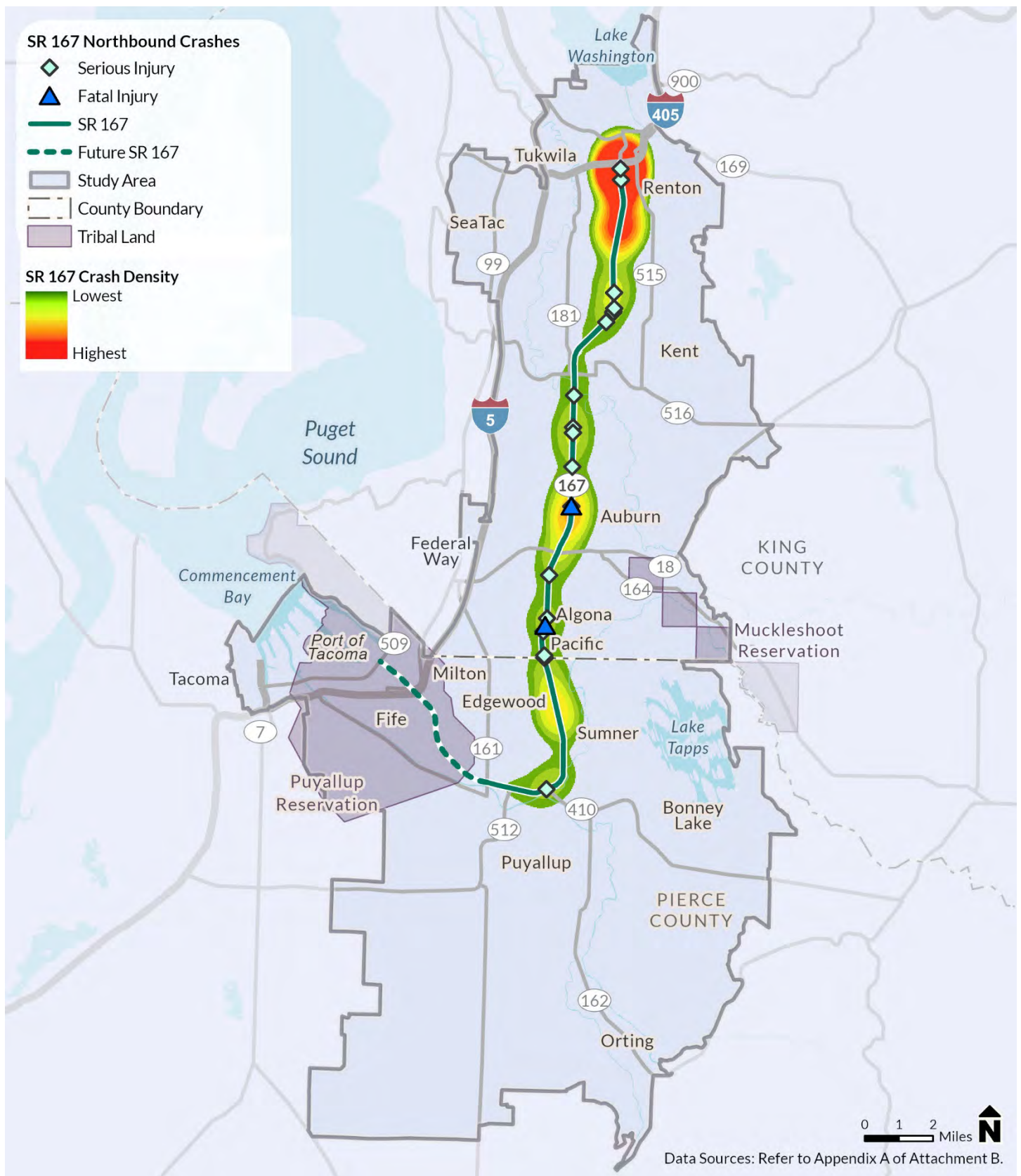


Figure 1-12. Northbound SR 167 Vehicle Crash Frequency

Note: Refer to the 23 U.S. Code § 148 and 23 U.S. Code § 407 footnote in the Safety section.

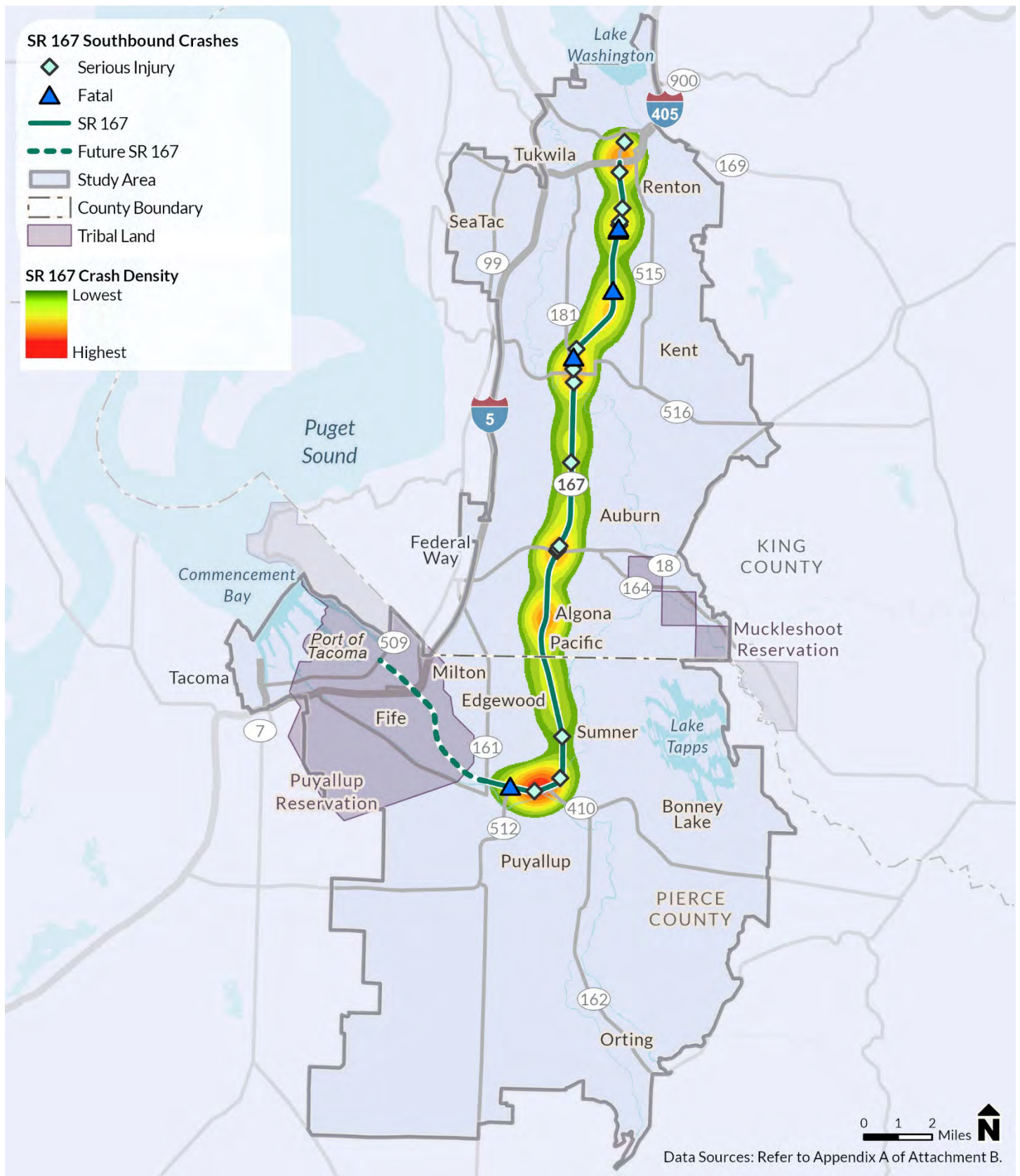


Figure 1-13. Southbound SR 167 Vehicle Crash Frequency

Note: Refer to the 23 U.S. Code § 148 and 23 U.S. Code § 407 footnote in the Safety section.

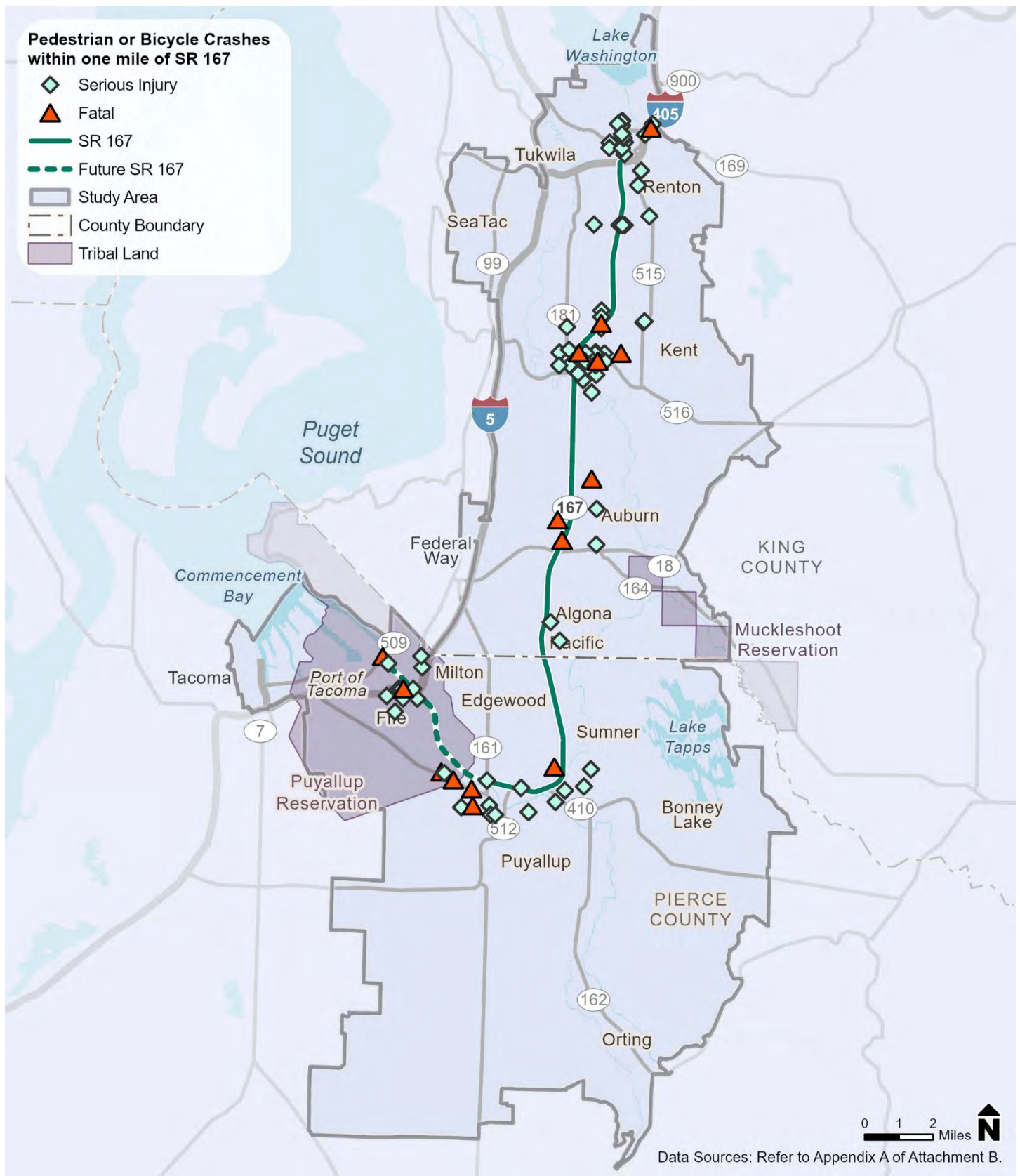


Figure 1-14. Pedestrian and Bicycle Crashes

Note: Refer to the 23 U.S. Code § 148 and 23 U.S. Code § 407 footnote in the Safety section.

Freight Network

The SR 167 corridor features the largest warehousing and distribution cluster in the Pacific Northwest. These land uses, combined with major manufacturers and the nearby Ports of Tacoma and Seattle, result in substantial freight movement through the study area.

The regional freight network is illustrated in Figure 1-15 with WSDOT freight classifications that show SR 167 and several other highways and arterials serve as T-1 corridors, which means they facilitate the transportation of more than 10 million tons of freight per year.

SR 167 carries approximately 10,000 trucks daily (representing between 10 and 20 percent of all vehicle volumes on SR 167), as illustrated in Figure 1-14. Most of the trips on SR 167 have at least one end outside of the study area, which suggests that most trips along SR 167 are not short or local, conveying the importance of the study area from a goods movement perspective.

The Freight and Goods Transportation System (FGTS) is a Washington-specific freight designation system, which classifies the state's freight corridors by modes based on annual freight tonnage moved through truck, rail, and waterway freight corridors. State, local, and regional agencies actively partner in building and maintaining an efficient freight transportation network through the FGTS.

Rail freight also plays a large role in local, regional, and nationwide freight movement within and through the SR 167 Master Plan PEL study area. Two north-south Class I rail freight corridors (Union Pacific and BNSF) run parallel and adjacent to the SR 167 corridor, and they connect the Port of Tacoma to the Port of Seattle. The east-west BNSF Auburn-to-Pasco Railway connects to the BNSF Tacoma-to-Seattle Railway near SR 18. Both rail freight corridors serve as R-1 corridors in the FGTS, which means they facilitate the transportation of more than 5 million tons of freight per year.

Growing congestion within the SR 167 corridor, as well as the rest of the region, directly impacts freight movement and increases travel time, costs, and the environmental impact of transporting goods.

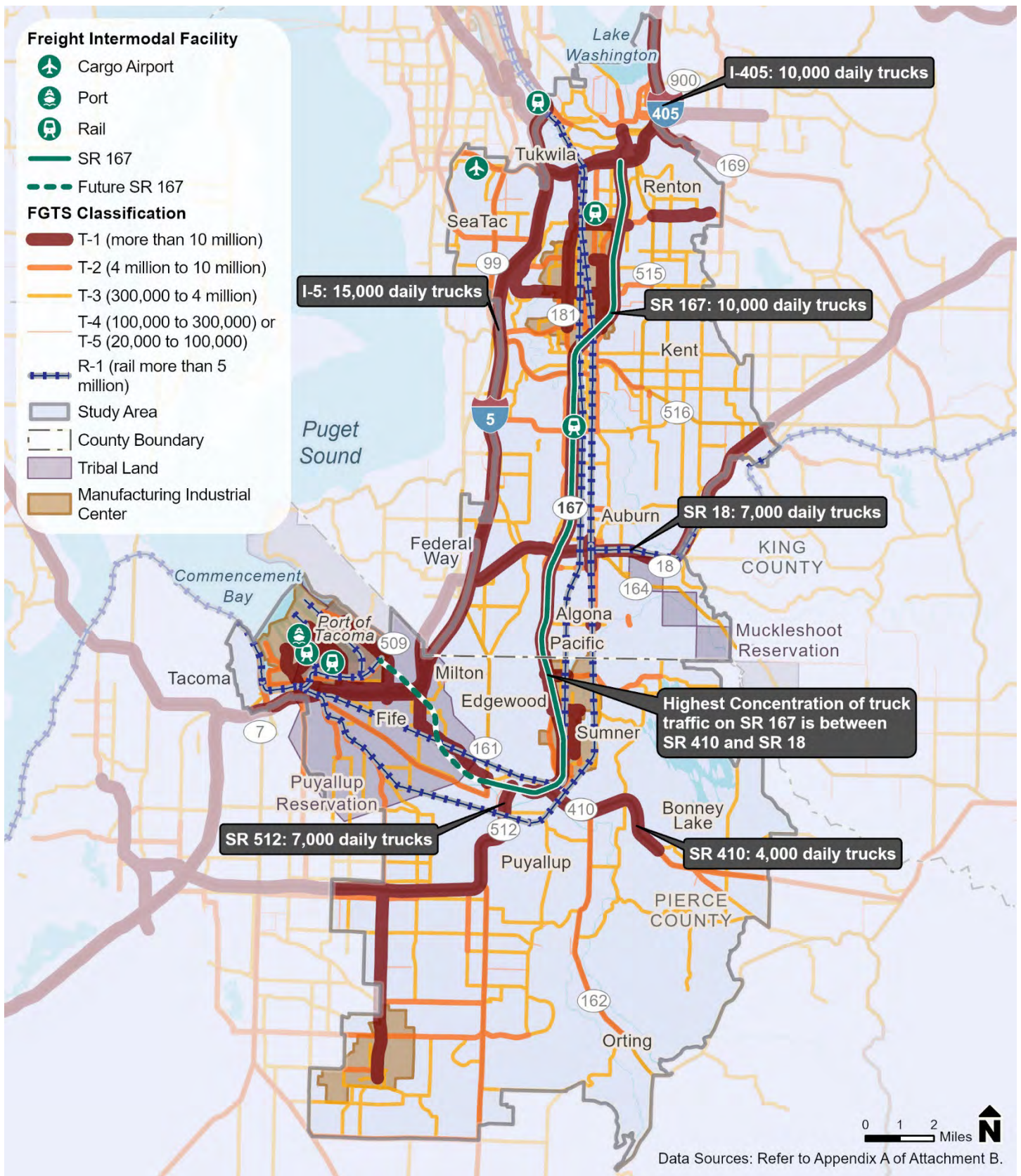


Figure 1-15. Regional Freight Network

Transit Network

The project team studied existing ridership and transit routes to better understand where there are opportunities for improving transit connectivity, frequency, and service. The northern portion of the study area has the greatest existing transit activity because of the more robust transit network. North-south routes have the highest 2019 ridership, and most routes offer frequent 15-minute headways. There are no frequent east-west routes that run through the study area, but some east-west routes offer 30-minute frequencies.

Figure 1-16 illustrates the regional transit routes in the study area. Multiple transit agencies, including Sound Transit, King County Metro, Pierce Transit, and Muckleshoot Tribal Transit provide bus service and commuter rail service along or parallel to the SR 167 corridor. Amtrak Cascades offers intercity rail service between Vancouver, British Columbia, and Eugene, Oregon, with a stop in Tukwila. While Sound Transit, King County Metro, Pierce Transit, and Muckleshoot Tribal Transit provide extensive service within the study area, there is a gap in local transit service that encompasses Sumner, Bonney Lake, Orting, and much of unincorporated Pierce County.

Sound Transit offers regional transit service in the study area. Prior to 2020, the Sounder S Line was the dominant transit route in the study area during weekdays with a high seat utilization (93 percent in peak direction), indicating that the commuter rail was typically close to seated capacity during the peak period. Although the Sounder S Line has headways as low as 20 minutes during the peak period in the peak direction, there is no midday, evening, or weekend service and only limited non-peak direction service.

In 2019, local bus routes also had competitively high average weekday boardings compared to the Sounder S Line; however, only an average of 56 percent of seats were utilized. Transit service provided by King County Metro is mostly focused on local connections within the study area, but there are routes that offer connections to Seattle and Burien. The RapidRide F Line at the northern end of the study area offers frequent all-day service between Burien, Tukwila, and Renton. Pierce Transit operates four transit routes in the study area that generally have one-hour frequencies.

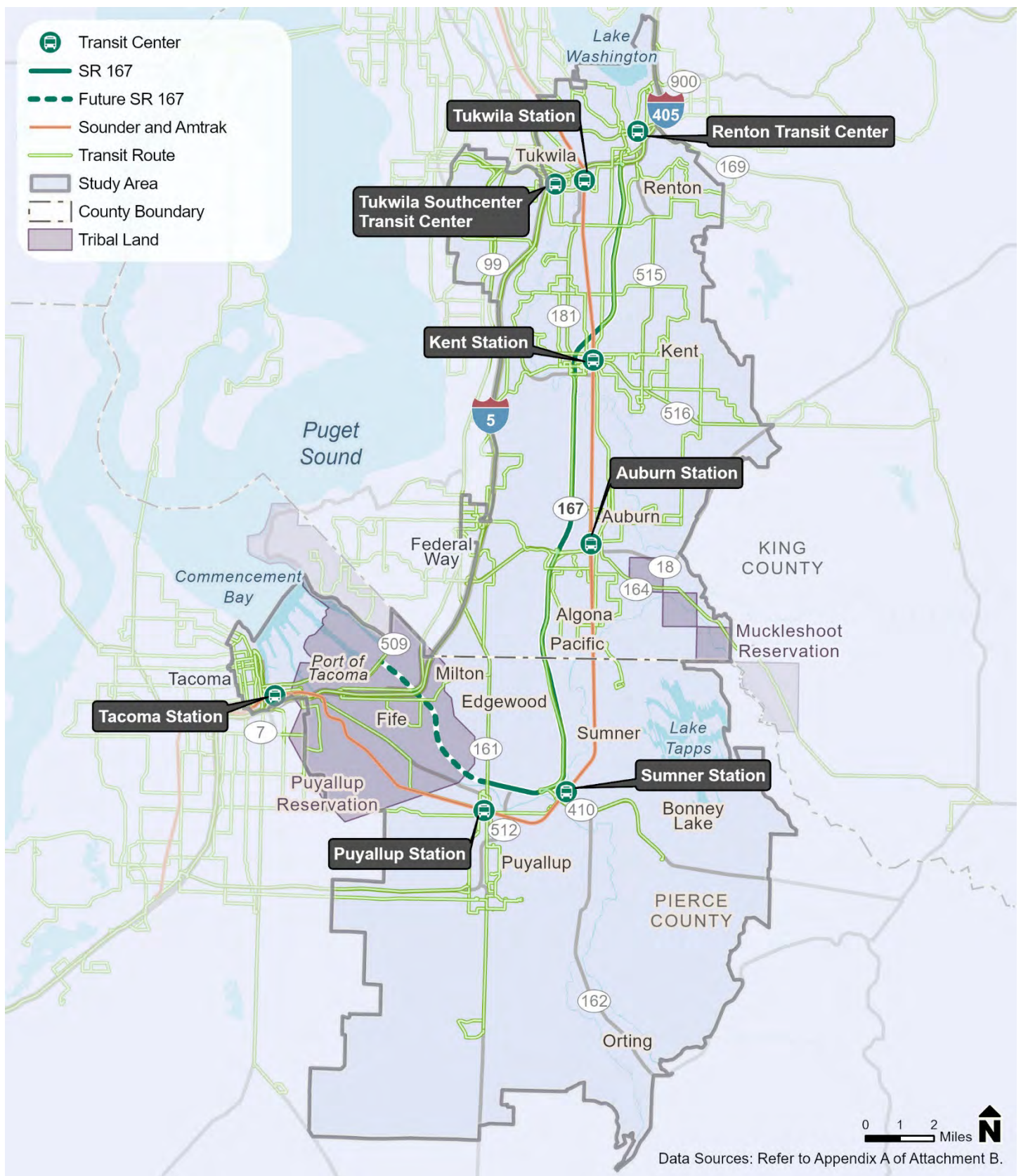


Figure 1-16. Transit Network

Active Transportation Network

The project team studied pedestrian, bicycle facilities, and trails within 1 mile of SR 167 and adjacent RGCs to understand how complete the existing systems are and to identify locations where there may be active mode barriers in the network.

Figure 1-17 illustrates pedestrian connectivity within 1 mile of SR 167. The existing active mode networks in the study area are generally more complete in denser areas, such as the RGCs, but gaps remain in many areas. There are several major trails in the study area, including the Interurban Trail, Green River Trail, Lake to Sound Trail, Sumner Link Trail, and Puyallup Riverwalk Trail. Refer to *Chapter 5* for more information on trails in the study area.

Level of Traffic Stress quantitatively evaluates road segments and crossings based on posted speed, number of vehicle travel lanes, traffic volume, and if there is a bike lane.

System completeness rates the degree to which a transportation network has been built to what is planned by a jurisdiction. This approach was used to evaluate the extent of the existing sidewalk and bike lane facilities within the study area (WSDOT 2020).

Table 1-2 demonstrates that more than half of the minor and principal arterials within 1 mile of SR 167 have complete pedestrian facilities, but only about one third of these streets have complete bicycle facilities.

Table 1-2. Active Transportation Network Completeness

Type and Area	Incomplete (%)	Partially Complete (%)	Complete (%)
Pedestrian network within 1 mile of SR 167	22	25	54
Bicycle network within 1 mile of SR 167	57	11	33
Pedestrian network within RGCs ^a	6	14	80
Bicycle network within RGCs ^a	76	4	20

Notes: Incomplete = facility is missing sidewalks or bike lanes; Partially Complete = gaps in the networks or facilities on only one side of the roadway; Complete = sidewalks or bike lanes on both sides of the facility

^a Average of all RGCs studied in the existing conditions

Connectivity near SR 167 is poor due to the barrier it presents, as east-west crossings of the highway can be far apart, and existing crossings often have basic pedestrian accommodations but no bicycle facilities. In addition to the connectivity barrier created by SR 167, other barriers include the freight railroads, large blocks in the MICs, disconnected cul-de-sac neighborhoods that are largely east of SR 167, and the steep bluffs on both sides of the highway that limit the number of roadways connecting the hilltops to the valley.

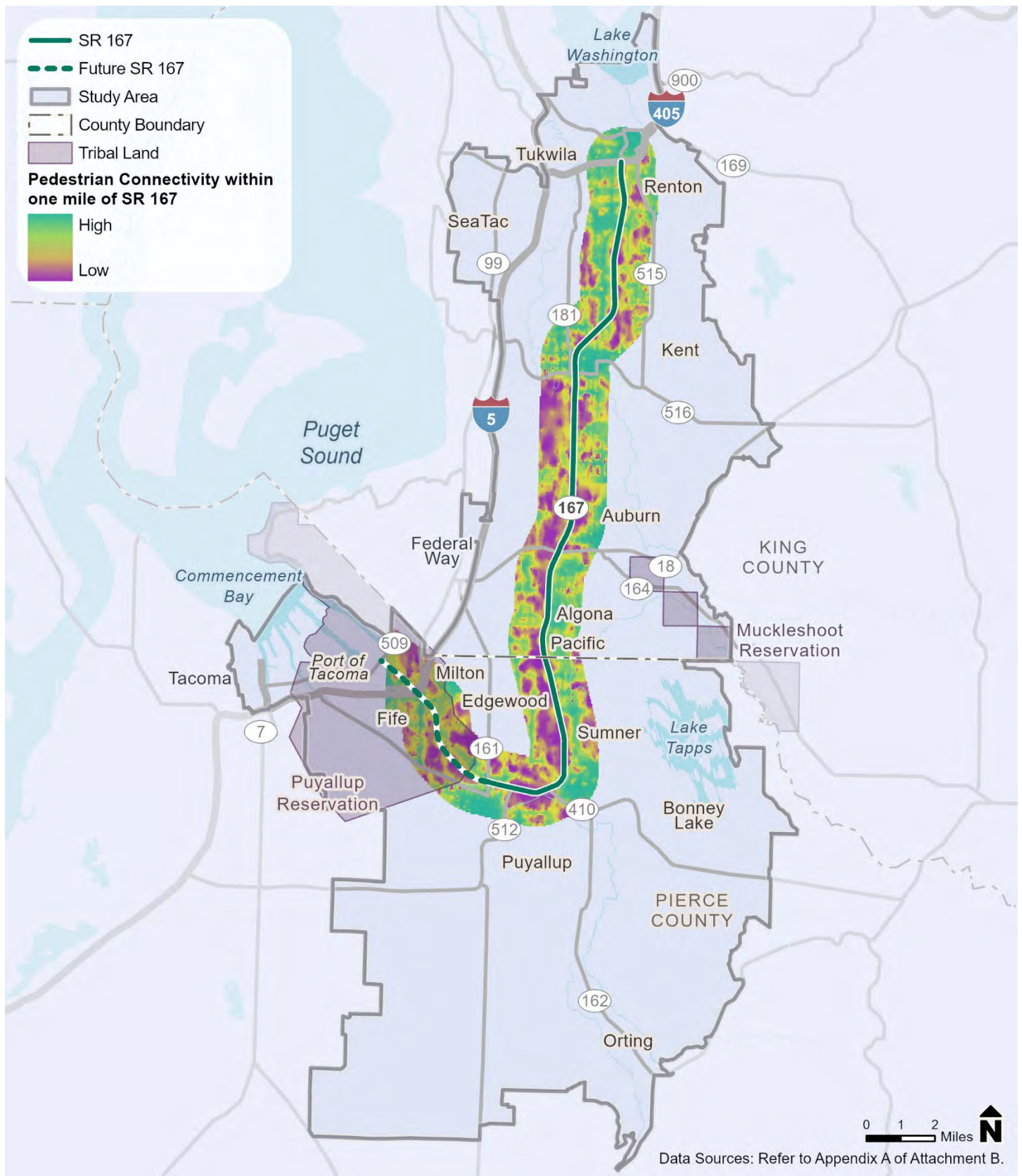


Figure 1-17. Pedestrian Connectivity

Future Travel Forecasts

Forecasting travel provides important information for project teams to understand how growth in land use and changes in the transportation network influence travel outcomes. The forecasts provide valuable information needed to model traffic operations and to test different transit routes and services during scenario analysis. For all forecasts, the PSRC regional travel demand model was used. This includes a base year of 2019 and future years of 2030 and 2050. Refer to *Chapter 3* and *Chapter 4* for a summary of how projects and strategies evaluated for the SR 167 Master Plan PEL Study compared under future conditions.

Planning and Policy Context

The SR 167 corridor and highways within surrounding areas have been a focus of past studies with transportation improvement recommendations. In December 2008, WSDOT completed the *SR 167 Corridor Plan Final Report* that documents two phases of planning efforts and a recommended set of capacity improvements on the SR 167 facility. The following relevant past studies were reviewed in relation to the transportation system within or in proximity to the study corridor. A review of existing plans provides a baseline for identifying projects and strategies, as described in *Chapter 3*. Also refer to *Attachment A* for a summary of past studies and plans.

- SR 167 Corridor Plan Final Report (2008)
- PSRC Regional Transportation Plan (2022)
- PSRC VISION 2050 (2020)
- Metro Connects (2021)
- Destination 2040 (2016-2020)
- Sound Transit 3 Plan (2017)
- Sound Transit Long-Range Plan Final Supplemental Environmental Impact Statement (EIS) (2019)
- Comprehensive plans, transportation master plans, transportation improvement plans/programs, and capital improvement plans/programs from local agencies within the study area

By incorporating regional and state planning policies and guidance in planning studies, it ensures the study has considered regional and statewide goals. Key policies and guidance used in this study include:

- Transportation System Policy Goals (RCW 47.04.280)
- VMT per capita reduction (RCW 47.01.4406)
- Healthy Environment for All (HEAL) Act (RCW 70A.02)
- Resiliency and Climate Change WSDOT Guidance
- PSRC, King County, and Pierce County growth strategies and areas designated for growth

Regional Planning Context

The PSRC is the designated metropolitan planning organization for the region. The PSRC's *VISION 2050*, adopted in 2020, informs the Regional Transportation Plan and Regional Economic Strategy. *VISION 2050* provides a regional growth strategy for how the area will accommodate the anticipated growth through 2050, and it provides actions and planning policies to help guide regional decision making.

SR 167 serves as a freeway extension of I-405, as a critical alternative to I-5, and as a major freight corridor. The conditions surrounding the SR 167 corridor are influenced in part by regional projects or programs. Key WSDOT projects and programs near the SR 167 corridor include the following (Refer to *Attachment A*):

- I-405/SR 167 Corridor Program (Ongoing)
- Puget Sound Gateway Program (Construction 2019 to 2028)
- SR 167 Completion Project — part of the Puget Sound Gateway Program (Construction 2019 to 2028)
- SR 167 - SR 410 to SR 18 Northbound Congestion Management (Construction 2021 to 2023)
- SR 167 HOT Lanes (Ongoing)
- Tacoma/Pierce County High-occupancy Vehicle (HOV) Program (2000 to 2022)
- SR 512 Corridor Study (2022 to 2023)

- WSDOT Strategic Plan
- Complete Streets (RCW 47.24.060)
- WSDOT Active Transportation Plan
- Safe System Approach
- Other WSDOT plans, such as the Highway System Plan

Chapter 2. Agency and Public Coordination

The SR 167 Master Plan PEL Study and overall master planning process was driven by the ongoing involvement of key partners in the study area, as summarized in Figure 2-1. The following sections summarize the agency and public coordination for the study, and they highlight key decision points, feedback received, and how the project team met PEL requirements related to coordination and engagement.

Chapter Overview

Chapter 2 summarizes the agency and public coordination for this study, and it includes key feedback received from committees and community members. Refer to the following chapters and attachments for more information related to this chapter:

- *Attachment E* includes additional details on all coordination and outreach events.
- *Attachment E, Appendix A* includes the FHWA Coordination Point summaries.
- *Attachment E, Appendix B* includes meeting summaries from committee meetings, open houses, co-creation workshops, and other events.
- *Chapter 1* summarizes the project Purpose and Need, which include a Purpose (goal) related to Equity.
- *Chapter 3* includes a summary of scenario development and evaluation that incorporated feedback from agencies, committees, and the public.
- *Chapter 4* includes the Final Study Recommendations, which feedback helped identify.
- *Chapter 5* and *Attachment B* summarize the community profile and equity priority areas identified for this study.
- *Chapter 6* includes details on ongoing coordination efforts needed after this study is published, and includes issues raised by committee members, agency partners, and community members that require continued coordination and attention.

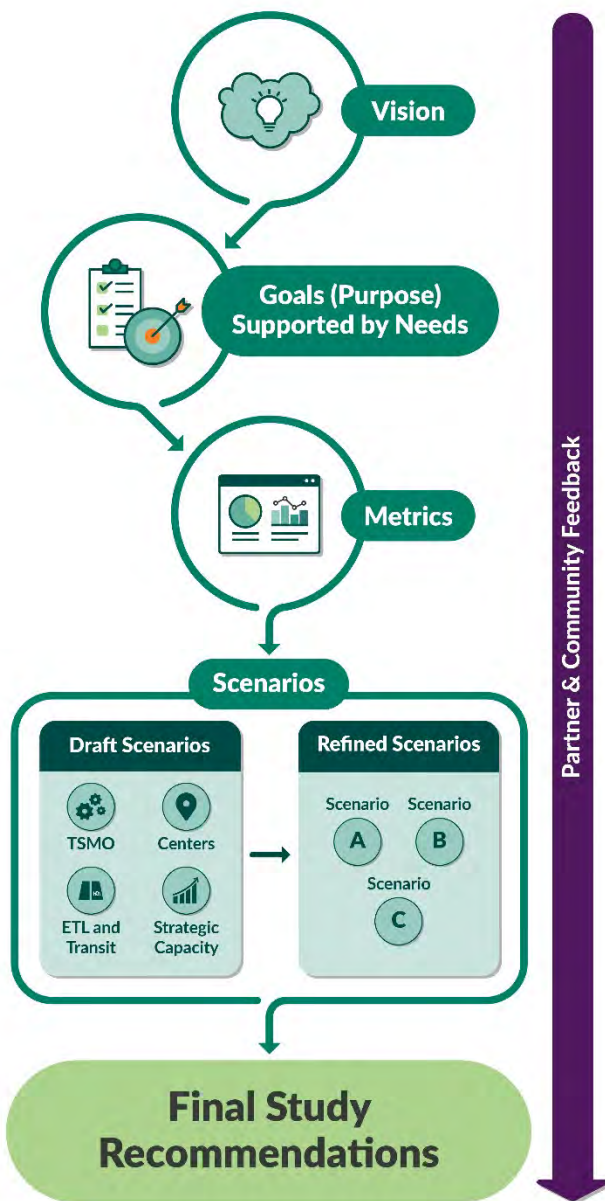


Figure 2-1. Planning Process

Figure 2-2 and Figure 2-3 present a summary of engagement for the study. For additional information on public and agency coordination for the study and feedback received during the PEL study process, refer to *Attachment E. Coordination and Public Participation Summary*. Letters of agency support are included in *Attachment F*. Agency and public coordination requirements for PEL studies have been fulfilled as described in the following sections. These requirements include FHWA coordination points No. 1 through No. 4 and soliciting input from the public and agencies, including resource agencies.

The planning process began with listening sessions in summer and fall 2021. A total of 16 listening sessions were conducted with cities, freight partners, chambers of commerce and the business community, CBOs, and tribal nations. The listening session objectives included the following:

- Engage a broad constituency, including traditionally underserved and historically disadvantaged populations or priority populations, on the transportation needs within the SR 167 corridor.
- Understand partner concerns, consider their feedback, and set expectations as WSDOT develops near- and long-term multimodal solutions for the SR 167 corridor.
- Understand the resource needs and availability of CBOs to engage in the planning process and to conduct and document intentional, inclusive, and equitable partner and community engagement.
- Build and grow positive relationships with transportation partners and CBOs to increase their understanding of the corridor planning process, how their input will be used, and the potential impacts and solutions associated with the plan.
- Provide context for the study's timeline and opportunities for engagement.

Feedback from the listening sessions informed the Vision, Purpose (Goals) and Need for the SR 167 Master Plan PEL Study. The first two meetings with the TAC, EAC, and PAC focused on reaching a consensus on the Vision, Purpose (Goals) and Need for the corridor. These committees were consulted throughout the planning process and their feedback heavily influenced the scenarios that were considered, identified evaluation metrics and criteria for screening, and helped shape the Final Study Recommendations.

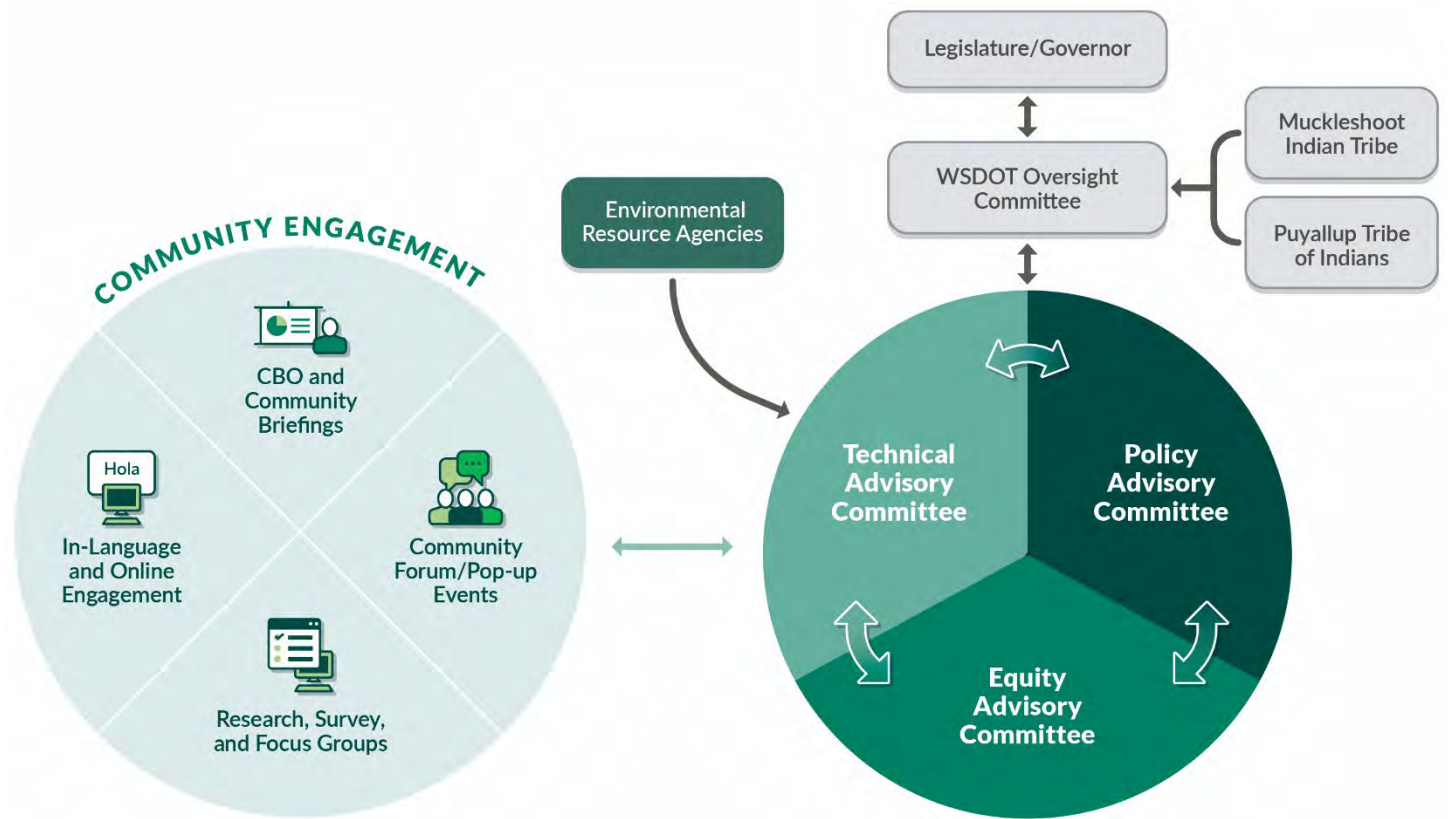


Figure 2-2. Engagement Overview



Figure 2-3. Engagement by the Numbers

Agency Coordination

The following sections describe the agency coordination for this study, which included coordination with FHWA and resource agencies, as summarized in Figure 2-4.

FHWA

The project team completed the four required coordination points with FHWA, and they received concurrence at each coordination point. Table 2-1 summarizes the goal and the feedback received for each coordination point, and it includes references to where and how feedback was incorporated. The project team applied feedback throughout the study process. Refer to *Attachment E, Appendix A* for a copy of the agenda, meeting notes, and FHWA concurrence.

FHWA involvement in PEL studies is required for projects that have a federal nexus and are likely to require compliance with NEPA in the future. PEL studies are required to involve FHWA at four formal Coordination Points.

– Colorado Department of Transportation (DOT) PEL Handbook 2022

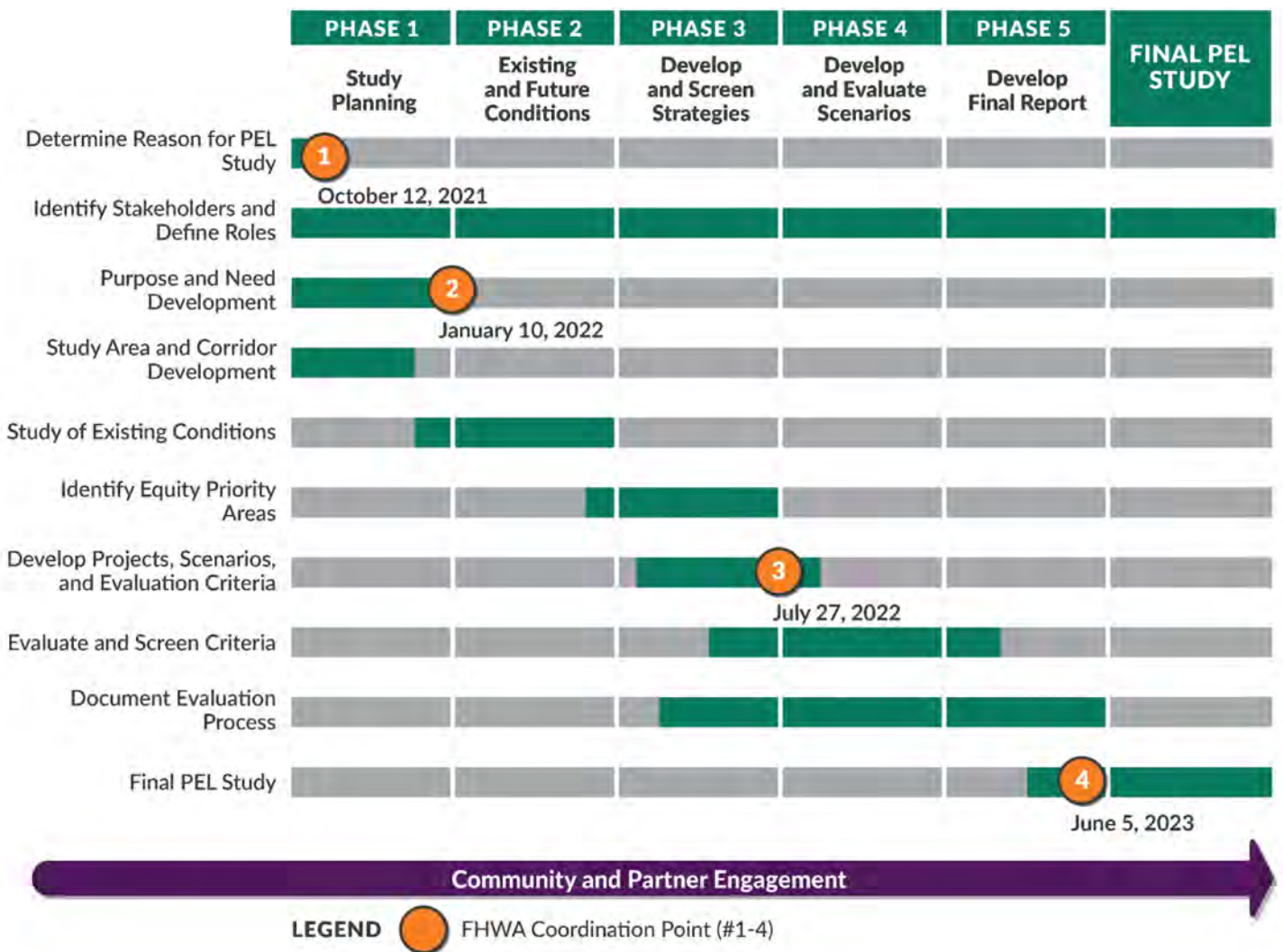


Figure 2-4. FHWA Coordination Points Schedule

Table 2-1. FHWA Coordination Points Summary

Coordination Point	Goal	FHWA Feedback
Coordination Point No. 1: October 12, 2021	Introduce the SR 167 Master Plan PEL Study and ask for feedback on the scope. Confirm rationale for the study.	FHWA agreed with the scope for the study. <ul style="list-style-type: none"> The project team should include information on floodplains, wetlands, and stormwater – <i>Refer to Chapter 5.</i> FHWA should be included throughout the PEL process – <i>Refer to the FHWA section in Chapter 2.</i> Resource agencies should be engaged early in the process – <i>Refer to the Resource Agency section in Chapter 2.</i> NEPA language in PEL studies can be beneficial – <i>Refer to the NEPA Process Principles section of Chapter 1 and Attachment A.</i>
Coordination Point No. 2: January 10, 2022	Provide an overview of the draft project Purpose and Need and ask for feedback.	FHWA concurred with the project Purpose and Need. <ul style="list-style-type: none"> They agreed with the approach of a corridor-wide purpose and need for this study and then explained how the project Purpose and Need would be used to inform future project-level NEPA purpose and need statements – <i>Refer to Chapter 1.</i>
Coordination Point No. 3: July 27, 2022	Provide an overview of project and scenario development and ask for feedback on the scenario evaluation process.	FHWA concurred with the project team’s approach for the scenario analysis. <ul style="list-style-type: none"> They requested access to information or tools used in the evaluation – <i>Refer to Chapter 3.</i> They asked if the project team can anticipate potential environmental documentation needs – <i>Refer to Chapter 5.</i>
Coordination Point No. 4: June 5, 2023	Provide a summary of updates made since FHWA’s review of the PEL Study, and request concurrence on the study.	FHWA agreed with the revisions made to the study. <ul style="list-style-type: none"> They requested a template for drafting a support letter and signing an agency concurrence/support page.

Resource Agencies

The project team solicited feedback from resource agencies, including:

- FEMA
- Muckleshoot Indian Tribe
- National Oceanic and Atmospheric Administration Fisheries
- Puyallup Tribe of Indians
- U.S. Army Corps of Engineers (USACE)
- U.S. Bureau of Reclamation
- U.S. Coast Guard (USCG)
- U.S. Fish and Wildlife (USFWS)
- Washington Department of Ecology (Ecology)
- Washington Department of Fish and Wildlife (WDFW)
- Washington Department of Health
- Washington Department of Natural Resources
- Washington State Conservation Commission
- Washington State Department of Archaeology and Historic Preservation (DAHP)
- Washington State Patrol

Information was distributed to resource agencies during the study process. Some resource agencies were involved in the TAC and attended meetings throughout the study process. Early in the study, resource agencies were asked to provide feedback on the *Environmental Baseline* chapter of the Existing and Future Baseline Conditions Report (*Attachment B*). Resource agencies also were invited to review the Final Study Recommendations and participate in Online Open House No. 2, which is described in the *Public and Community Participation* section of this chapter.

Tribal Nations Coordination

Representatives from the Muckleshoot Indian Tribe and Puyallup Tribe of Indians were invited to participate in the TAC, EAC, and PAC. WSDOT staff met with the Puyallup Tribe of Indians on October 21, 2021, for a listening session and a final one-on-one briefing on February 7, 2023. The Muckleshoot Indian Tribe staff engaged with WSDOT via email and phone calls. The result of this engagement allowed WSDOT and tribal nation staff to share information and to discuss topics relevant to each tribe, such as potential projects and strategies that are on or near tribal lands, feedback for new projects or strategies, and coordination with tribal projects and services.

Committee Coordination

Executive Committee

The Executive Committee was formed to serve as the WSDOT oversight committee and decision-making group. Led by Washington Secretary of Transportation Roger Millar, the group met at key study milestones to hear progress and to guide the SR 167 Master Plan PEL Study process.

Technical Advisory Committee

The TAC was formed to provide analysis and technical direction on this study. It included staff from local jurisdictions, the ports, transit agencies, tribes, and the business community. Committee members typically would attend the TAC and PAC meetings to support their elected officials and to act as alternates to an elected official if they were unable to attend.

The TAC included representatives from the following agencies and communities:

- Cities of Algona, Auburn, Bonney Lake, Edgewood, Fife, Kent, Milton, Pacific, Puyallup, Renton, SeaTac, Sumner, and Tukwila
- Auburn Area Chamber of Commerce
- FHWA
- Fife Milton Edgewood Chamber of Commerce
- Freight Mobility Strategic Investment Board
- Kent Chamber of Commerce
- King County
- King County Executive Dow Constantine's Office
- King County Metro
- Muckleshoot Indian Tribe
- Northwest Seaport Alliance
- Pierce County
- Pierce County Washington Building and Construction Trades Council
- Pierce Transit
- Port of Seattle
- Port of Tacoma
- PSRC
- Puyallup Sumner Chamber of Commerce
- Puyallup Tribe of Indians
- Renton Chamber of Commerce
- Sound Transit
- South Sound Chambers of Commerce Legislative Coalition
- Tacoma-Pierce County Chamber of Commerce
- Washington State Transportation Commission (WSTC)
- Washington Trucking Associations

Seven TAC meetings were held on the following dates. Refer to *Attachment E* for detailed summaries from each meeting. Members of the TAC had the responsibility to keep their respective elected officials updated between PAC meetings.

- November 10, 2021
- January 19, 2022
- March 30, 2022
- June 29, 2022
- November 9, 2022
- February 15, 2023
- May 3, 2023

The TAC provided input at several key milestones through this study, which included the existing conditions report, Draft Scenarios, Refined Scenarios, and Final Study Recommendations.

Equity Advisory Committee

The EAC was formed to support the project Purpose (Goals) and Need related to equity and to ensure equity was included in the overall planning process for this study. It was developed by cross-referencing the community profile and demographic analysis with the list of CBOs within the corridor. A listening session was held with each group to gauge interest and availability in staffing the EAC.

The EAC consisted of representatives from the following CBOs that advocated on behalf of vulnerable populations and overburdened community members, environmental justice initiatives, and transportation initiatives:

- African Community Housing & Development
- Asian Counseling and Referral Service
- Atlantic Street Center
- Center for Independence
- Congolese Integration Network, Inc.
- Forever Green Trails
- Future Wise
- IDIC Filipino Senior and Family Services
- Muckleshoot Indian Tribe
- Orion Industries
- Puyallup Tribe of Indians
- Renton Inclusion Task Force
- Somali Community Services of Seattle
- Sound Generations (Hyde Shuttle)
- Tilth Alliance

Seven EAC meetings were held on the following dates. Refer to *Attachment E* for detailed summaries from each meeting. One-on-one listening sessions also took place between October 2021 and January 2022.

- February 25, 2022
- April 22, 2022
- June 10, 2022
- September 23, 2022
- November 18, 2022
- February 24, 2023
- May 12, 2023

The EAC provided input on the following topics, and feedback was shared with the TAC and the PAC:

- Locations of equity priority areas within the study area, which were used to help identify potential project impacts and benefits to communities living in these areas
- Locations of community-identified destinations
- Equity considerations and transportation needs and priorities
- Potential ideas and solutions for the scenarios and, ultimately, the Final Study Recommendations
- Development and implementation of co-creation workshops

Table 2-2 provides a summary of feedback received from the EAC, and it includes examples of projects included in the Final Study Recommendations (as described in Chapter 4) that were selected based in part on the feedback received.

Table 2-2. Equity Advisory Committee Feedback Summary

Topic or Theme	EAC Feedback Received	Final Study Recommendations
Transit needs to be more reliable and accessible	<ul style="list-style-type: none"> • Nighttime transit service is needed. Buses are not present in industrial areas during night times for swing shift workers (10 p.m. to 6 a.m.). • There is bad congestion in Auburn, and senior communities here need transit. • Need transit service in Renton to the Highlands and other residential areas. • Area around SW 43rd Street has industrial uses and workers could benefit from additional transit service, particularly at night times for swing shift workers (10 p.m. to 6 a.m.). • Bicycle theft is a deterrent from making bike-transit trips. 	<ul style="list-style-type: none"> • Add access to 21 new or enhanced transit routes, including a new SR 167 BRT service. • Provide transit access improvements at four new direct access ramps or grade separations. • Add new on-demand transit services within the study area with a focus on equity priority areas and employment areas that are not served by all-day fixed route transit. • Add four new east-west frequent transit routes. • Add new on-demand transit areas/services (e.g., Via, Pingo). • Provide more night/weekend service.
Sidewalk and trail gaps are barriers to access	<ul style="list-style-type: none"> • Need separation between cars and people due to fast vehicles; people try to walk on the primary route to Muckleshoot Casino – sidewalks are needed. • On Rainier Avenue tree roots have broken up sidewalks, especially near Renton Airport. • There is bad congestion in Auburn, and senior communities here need transit. • Need more connections for people to use the new light rail station in Tacoma. • Need trails that can get people to schools. 	<ul style="list-style-type: none"> • Add between 5 and 10 miles of new bicycle facilities between community-identified destinations. • Add 5 miles of new sidewalks on arterials within 1 mile of SR 167 with an emphasis on closing gaps in regional centers. • Complete streets upgrades at interchanges and on parallel arterials that include new pedestrian and bicycle facilities. • Complete missing segments of the Interurban Trail. • Create new connections to regional trails. • Add or improve sidewalks and bike lanes through interchanges and across SR 167.

Topic or Theme	EAC Feedback Received	Final Study Recommendations
<p>Lighting, visibility, and design can improve sense of security</p>	<ul style="list-style-type: none"> • Need to add lighting with pedestrian/trail projects. 	<ul style="list-style-type: none"> • Improve sidewalks and street crossings and add lighting with an emphasis on pedestrian priority areas. • Improve access to new and existing transit stops and stations. • Invest in new lighting, access, and placemaking on regional trails.
<p>Traffic congestion is a barrier to travel</p>	<ul style="list-style-type: none"> • High traffic/truck traffic present; there is bad congestion at multiple interchanges. • There is bad congestion at the I-405 interchange; people use the carpool lane to avoid the ramp area/interchange. • Road repairs are needed and at 212th Street; it is difficult getting on and off the SR 167 interchange. • SR 167 north to Kent does not have pull out areas for emergencies. 	<ul style="list-style-type: none"> • Add new ETLs on SR 167. • Add new auxiliary lanes on SR 167 and SR 18. • Provide multimodal improvements on parallel arterials and Ellingson Road and Meridian Avenue/SR 161. • Provide interchange improvements at eight interchanges to remove bottlenecks and better accommodate all modes. • Freeway-to-freeway interchange improvements to increase mobility (SR 18, SR 512, SR 405). • Implement ramp meters for all lanes at all arterial interchanges. • Prepare a study of traffic operations on SR 18.
<p>Tolling may be a barrier to low-income travelers on SR 167</p>	<ul style="list-style-type: none"> • Tolling in the lower income Auburn/Kent area should not be as expensive as in Bellevue. Tolling funds could be used for driving training programs for immigrant populations. 	<ul style="list-style-type: none"> • Recommend a statewide low-income tolling program.

Policy Advisory Committee

The PAC was formed to provide feedback and direction on the study from a policy perspective and to advise about local policy issues and the needs of the community they serve.

PAC members were primarily elected officials, representatives from local jurisdictions along the project corridor, and members of partner agencies. The PAC invited representatives from the following agencies:

- Cities of Algona, Auburn, Bonney Lake, Edgewood, Fife, Kent, Milton, Pacific, Puyallup, Renton, SeaTac, Sumner, Tacoma, and Tukwila
- FHWA
- Freight Mobility Strategic Investment Board
- King County Metro
- King County
- Muckleshoot Indian Tribe
- Pierce County
- Pierce Transit
- Ports of Seattle and Tacoma
- PSRC
- Puyallup Tribe of Indians
- Sound Transit
- Washington State House of Representatives
- Washington state senators
- WSTC

Seven PAC meetings were held on the following dates. Refer to *Attachment E* for detailed summaries from each meeting.

- November 17, 2021
- February 2, 2022
- May 4, 2022
- July 13, 2022
- November 30, 2022
- March 13, 2023
- May 23, 2023

Other Coordination Efforts

The project team met with various members of the TAC, EAC, and PAC, as needed or requested, to provide project updates and to discuss future corridor needs. These briefings and meetings intersected and informed meetings of the larger TAC and PAC. Depending on the interests of the participants, the project team discussed different aspects of the corridor ranging from local interests in the refinement of study scenarios based on individual goals, regional and local transit needs paralleling the SR 167 corridor, and quantities of medium and large trucks traveling the SR 167 corridor and their freight volumes. These briefings and meetings included the following:

- *City Subgroup meetings* (Cities of Auburn, Bonney Lake, Edgewood, Fife, Kent, Milton, Puyallup, Renton, Sumner): January 24, 2022; June 15, 2022; October 10, 2022; November 11, 2022
- *City of Kent briefing*: August 11, 2022, November 28, 2022; January 13, 2023
- *City of Auburn briefings*: August 23, 2022; January 4, 2023; January 5, 2023
- *City of Bonney Lake briefing*: March 7, 2023
- *City of Edgewood briefing*: January 5, 2023
- *City of Puyallup briefing*: January 19, 2023
- *City of Renton briefings*: November 17, 2022; December 16, 2022
- *City of Sumner briefings*: January 4, 2023; March 7, 2023
- *Congolese Integration Network briefing*: August 30, 2022
- *Forever Green Trails briefings*: January 26, 2023; March 8, 2023
- *Freight Subgroup meetings* (Port of Seattle, Northwest Seaport Alliance, Washington Trucking Associations, Washington State Freight Mobility Strategic Investment Board): October 15, 2021; February 8, 2022; May 31, 2022; October 17, 2022
- *King County Metro briefing*: September 28, 2022
- *Liberian Community of Washington State briefing*: August 29, 2022
- *Pierce County Accessible Communities Advisory Committee briefing*: July 8, 2022
- *Pierce Transit briefings*: September 23, 2022; November 28, 2022; March 10, 2023
- *Port of Tacoma briefing*: January 12, 2023
- *Puyallup Tribe of Indians briefing*: February 7, 2023
- *Sound Transit briefing*: September 20, 2022
- *SW King County Regional Trail Plan briefings*: October 20, 2022; January 6, 2023
- *Transit Subgroup meetings* (including representatives from Pierce Transit, King County Metro, and Sound Transit): June 14, 2022; August 8, 2022; October 25, 2022
- *WSTC briefings*: June 17, 2022; September 28, 2022; January 5, 2023; January 18, 2023; February 28, 2023

Additionally, the project team met with EAC members as part of the listening sessions.

Public and Community Participation

PEL studies are required to solicit public feedback and input to understand the needs, concerns, and potential transportation solutions for a community. The communities within the study area are diverse; therefore, to gain as much community input and knowledge as possible, public and community participation was highlighted throughout the SR 167 Master Plan PEL Study process. The following sections describe the public and community participation for this study.

Translation Services

The online open house and materials were published in the following languages: **Chinese, Russian, Spanish, Tagalog, Somali, Vietnamese, and English.**

The project team used feedback from the CBOs to inform the data analysis, decision making, planning process, and recommended investments for the SR 167 corridor. People providing input to the SR 167 Master Plan include historically marginalized populations within study area communities. These communities included equity priority areas; environmental justice communities; people affected by systemic racism, poverty, disability, and citizenship status; and people with limited English proficiency and who speak languages other than English. Feedback from community members and the public informed this SR 167 Master Plan PEL Study by providing the following:

- Input on transportation challenges, needs, and concerns for the SR 167 corridor
- Confirmation on the methodology and location of equity priority areas (via the EAC)
- Feedback on transportation solutions and ideas for the SR 167 corridor
- Feedback that helped form the evaluation metrics and projects for the Final Study Recommendations

Co-creation Workshops

Co-creation workshops were held to better understand the transportation needs, priorities, and ideas of the community members living and working within the equity priority areas and the study area, including shift workers and people with mobility challenges.

The project team partnered with the EAC to identify nearly 70 community members to invite to co-creation workshops on the following dates. Translation services, food, and childcare were provided at the workshops, which were hybrid (in-person and online). Community members also were compensated for their time and travel to the co-creation workshops.

- August 26, 2022: African Community and Housing Development (SeaTac)
- August 30, 2022: Federal Way Community Center
- September 1, 2022: Tukwila Community Center
- September 12, 2022: Kent Commons
- September 13, 2022: Pioneer Park Pavilion (Puyallup)

Feedback Related to Tolling

Feedback related to the toll lanes was used to inform the selection of projects for the Final Study Recommendations (*Chapter 4*). Key feedback from the co-creation workshops included:

- Some people avoid toll lanes because they are unsure of how they work and do not know the exact cost; some think it is too expensive and would like to use the lanes if they were more affordable.
- There is support for the low-income toll program along with a desire to make signing up easy (e.g., automatic eligibility if a person already qualifies for the ORCA LIFT Program).
- Reliable truck access and mobility is needed on SR 167.

Refer to *Attachment E* for a detailed list of feedback collected throughout the project.

Participants of the co-creation workshops were invited to help the project team members markup printed and online interactive maps with comments related to transportation stories, needs, ideas, and challenges. Comments from the co-creation workshops are included in *Attachment E, Appendix B*. Feedback and comments focused on the following topics, and they were shared with the TAC, EAC, and PAC.

- Expand the number of lanes to accommodate more traffic.
- Add more exits along SR 167 to increase access to frequently visited locations.
- Increase visibility along the corridor, including lighting and reflective paint.
- Expand Commute Trip Reduction programming for shift workers.
- Designate a dedicated lane for freight traffic or assign specific hours.
- Provide more education about ETLs or HOT lanes.
- Add more HOV lanes on SR 167.
- Provide reduced or free bus fares for vulnerable populations and overburdened communities.
- Provide better signage along SR 167.

Additional feedback collected from partners and the community show that the SR 167 corridor could benefit from safety improvements, including better lighting and designs that separate people and cars.

Refer to *Chapter 3* for more information on the evaluation metrics related to equity and how trails, bicycle lanes, and sidewalks were evaluated. As summarized in *Chapter 4*, trail projects that would provide connections to jobs, prioritize the needs of vulnerable populations and overburdened communities for this study, and improve safety include:

- Five miles of new sidewalks
- Five to 10 miles of new bicycle facilities
- Fill-in gaps, improve lighting, add access to the Interurban Trail
- Build connections and extensions between other regional trails and the Interurban Trail

Open Houses

Open houses provided community members with an opportunity to learn more about the study and to provide feedback on how they use SR 167, where they are traveling to and for what purpose, and any general comments about SR 167. The first online open house introduced the study and gathered input from the larger community. The second online open house reported on the input provided and how the input informed the Final Study Recommendations. These online open houses were in English and translated into six additional

ETLs are managed lanes WSDOT charges tolls for as a means of regulating access to or use of the lanes to maintain travel speed and reliability.

HOT lanes are managed lanes that combine HOV lanes and toll lanes.

(WSDOT 2021a)

Trail Connections

Trails can provide important access to jobs and open spaces. The SR 167 corridor includes several regional trails that provide a strong connection between homes, businesses, and transit hubs, particularly for bicyclists.

PSRC's *VISION 2050* includes regional goals and policies that prioritize historically underserved communities for investments (including multimodal investments):

- *MPP-EN-15*: Provide parks, trails, and open space within walking distance of urban residents. Prioritize historically underserved communities for open space improvements and investments.
- *MPP-T-9*: Implement transportation programs and projects that provide access to opportunities while preventing or mitigating negative impacts to people of color, people with low incomes, and people with special transportation needs.

languages. They also provided Americans with Disabilities Act (ADA)/Section 508 compliant (accessible) materials and were held on the following dates:

- Online Open House No. 1: June 29 to July 29, 2022
- Online Open House No. 2: March 15 to April 15, 2023

Online Open House No. 1 had 22,003 unique pageviews from 7,955 visitors, 2,642 of which participated in an optional demographics survey the project team used to compare how well respondent demographics aligned with the study area demographics. The project team found that most survey participants identify as “white or Caucasian,” own their home, make a household income of \$100,000 or more, and travel to work three or more days a week. The survey also revealed that 99 percent of respondents travel through the SR 167 corridor with a personal vehicle; that most respondents live in Puyallup, Bonney Lake, Kent, Auburn, or Renton; and that most respondents travel through the corridor to access Kent, Auburn, Renton, Puyallup, and Tacoma.

Feedback from Online Open House No. 1 focused on transportation needs and concerns, which included:

- **SR 167 Highway Expansion:** provide more lanes, including HOT lanes/ETLs, wider lanes, and longer on-ramps, to help with traffic capacity.
- **Congestion Relief:** reduce the burden of tolls for low-income travelers, provide more lanes on SR 167 (carpool, ETLs, truck-only lanes), improve intersections, and create new lanes on arterial streets.
- **Transit Connections:** need more reliable transit and solutions, including more extensive transit routes and services, easier access to transit, more transit parking, more frequent transit service, and more hours of transit service for shift workers/nighttime services, particularly in industrial areas.
- **Pedestrian and Bicycle Connections:** fix gaps in sidewalks, bike lanes, and trail systems that present barriers to travel. There is a need to provide more ways to access the trail system and additional pedestrian and bicycle connections to transit. SR 167 can be a barrier due to a lack of sidewalks or bicycle facilities at interchanges, bridges, or under crossings.
- **Local Connections:** could create more local connections by improving interchanges with SR 167, adding direct access ramps, and creating more neighborhood connections.
- **Safety:** provide beneficial safety improvements in the corridor, such as lighting and visibility design, separation between cars and people, reducing stop-and-go traffic, and adding pull out areas for emergencies.

Online Open House No. 2 had 6,910 unique page views from 3,566 visitors, 90 of which participated in a brief optional survey. The survey was primarily an opportunity for community members to leave comments reflecting on the study process and draft Final Study Recommendations, but they were also asked for basic demographic information so the project team could compare how well respondent demographics aligned with study area demographics. The project team found that most survey participants identify as “white or Caucasian,” own their home and have access to a vehicle, make a household income of \$75,000 or more, and primarily speak English at home. Comments from Online Open House No. 2 focused on the following:

- **Support:** General support for the Final Study Recommendations and noted an urgency to “build it now”
- **Tolling concerns:** Concerns around ETLs and the cost burden on low-income community members
- **HOV definition in ETLs:** Requests to keep HOV occupancy at two people or more instead of three.
- **Capacity expansion:** Ongoing requests for multiple general purpose lanes in both directions
- **Prioritizing equity communities:** Appreciation for WSDOT listening to people affected by transportation and working to provide solutions

- **Transit expansion:** Support for increasing transit, specifically Sounder service and putting light rail along SR 167
- **Pedestrian and bicycle connections:** Appreciation for multimodal improvements, especially for low-income community members

Other Events and Organizations

In addition to the previously described outreach and engagement, the project team engaged in outreach activities that could inform people about project information at convenient places and events. These additional outreach events helped community members learn more about the study, and they provided an opportunity for people to provide feedback to the project team.

The project team joined informational tables hosted by the Gateway Program at local fairs, festivals, and farmers markets to reach out to local communities. The project team successfully informed over 1,000 people about the project. Community members provided feedback about improvements and needs for the SR 167 corridor.

Most attendees expressed excitement about the WSDOT projects along SR 167, and they shared feedback on how to improve SR 167. Outreach events were held on the following dates:

- Kent Cornucopia: July 8 and 9, 2022
- Sumner Rhubarb: July 9 and 10, 2022
- SeaTac Music in the Park: July 27, 2022
- Tacoma Broadway Farmers Market: August 4, 2022
- Auburn Farmer's Market: August 7, 2022
- Milton Days: August 20, 2022
- Skyway Health and Safety Fair: August 20, 2022

Feedback from these outreach events included the following:

- **Capacity expansion:** requests for more and wider lanes, longer on-ramps, and more dedicated lanes for trucks and HOV/HOT lanes, and for increased transit options, including more light rail and safer public transit.
- **Improved connectivity:** requests for improved connections to I-5, I-405, and other interchanges and less traffic congestion along the corridor.
- **Planning for the future:** desire for finishing project construction quickly, and ensuring this project anticipates future traffic needs.

Information Distribution

The SR 167 Master Plan PEL Study utilized a variety of information distribution methods and techniques for outreach. Refer to *Attachment E, Appendix B* for summaries of the online open house that describe how information was distributed.

WSDOT's primary information distribution took place online through the [SR 167 Master Plan project website](#), media releases, and social media coordination. WSDOT also maintained contact lists for agencies, tribes, and the public while tracking ongoing comments from engagement activities. Additionally, for the online open houses the project team sent mailers out that directed people to the project website. They also used display boards at outreach events throughout the corridor.

The project team used several methods to notify the community of the online open houses. Outreach included online and print advertisements, postcards to 58,000 mailing addresses, press releases, and email updates. The

project team also developed a social media toolkit for local jurisdictions and CBOs, which included translated social media posts they could use on their social media channels to help increase their reach.

In addition to English, WSDOT translated outreach information into simplified Chinese, Russian, Spanish, Tagalog, Somali, and Vietnamese to keep community members engaged and informed.

Chapter 3. Scenario Evaluation Summary

Evaluation Process

The process for evaluating projects and strategies to identify the Final Study Recommendations is represented in Figure 3-1 and summarized within this chapter. The team relied on the project Purpose and Need and information from *Attachment B. Existing and Future Baseline Conditions Report* to develop evaluation criteria for each step in the following screening levels.

- Initial List of Projects and Strategies
- Level 1 Screening – Purpose and Need
- Level 2a Screening – Draft Scenario Analysis
- Level 2b Screening – Refined Scenario Analysis

The evaluation process incorporated feedback from the public, partners, agencies, and committee members. The team documented feedback received and decisions made during each screening level. The following terms were used to document the decisions made during the evaluation.

- **Eliminated:** Project or strategy that was removed from further consideration for not meeting the project Purpose and Need.
- **Carried Forward:** Project or strategy that was recommended for further consideration in subsequent screening levels.
- **Eliminated as a Standalone:** Project that was eliminated from further evaluation as an individual project and that was packaged as part of a larger project for further consideration.

Chapter Overview

Chapter 3 summarizes the process used to identify a reasonable range of projects and strategies that aim to address the transportation needs identified in *Chapter 1* in the Vision, Purpose and Need section, and, ultimately, to identify the Final Study Recommendations summarized in *Chapter 4*. Refer to the following chapters and attachments for more information related to this chapter:

- *Attachment C* includes detailed information about the evaluation of projects, strategies, and scenarios.
- *Attachment C, Appendix A* provides matrices of projects and strategies that were studied and documents projects and strategies that were eliminated or carried forward through each screening level.
- *Chapter 1* provides details on the existing transportation system, and it includes the project Purpose and Need statements used in evaluating the scenarios.
- *Chapter 2* includes a summary of public and agency coordination and a summary of community and partner feedback on transportation needs and priorities.
- *Chapter 4* provides a summary of the Final Study Recommendations that were identified based on the evaluation described in this chapter.
- *Chapter 5* provides additional details related to environmental resources, including a summary of what was analyzed for each resource.

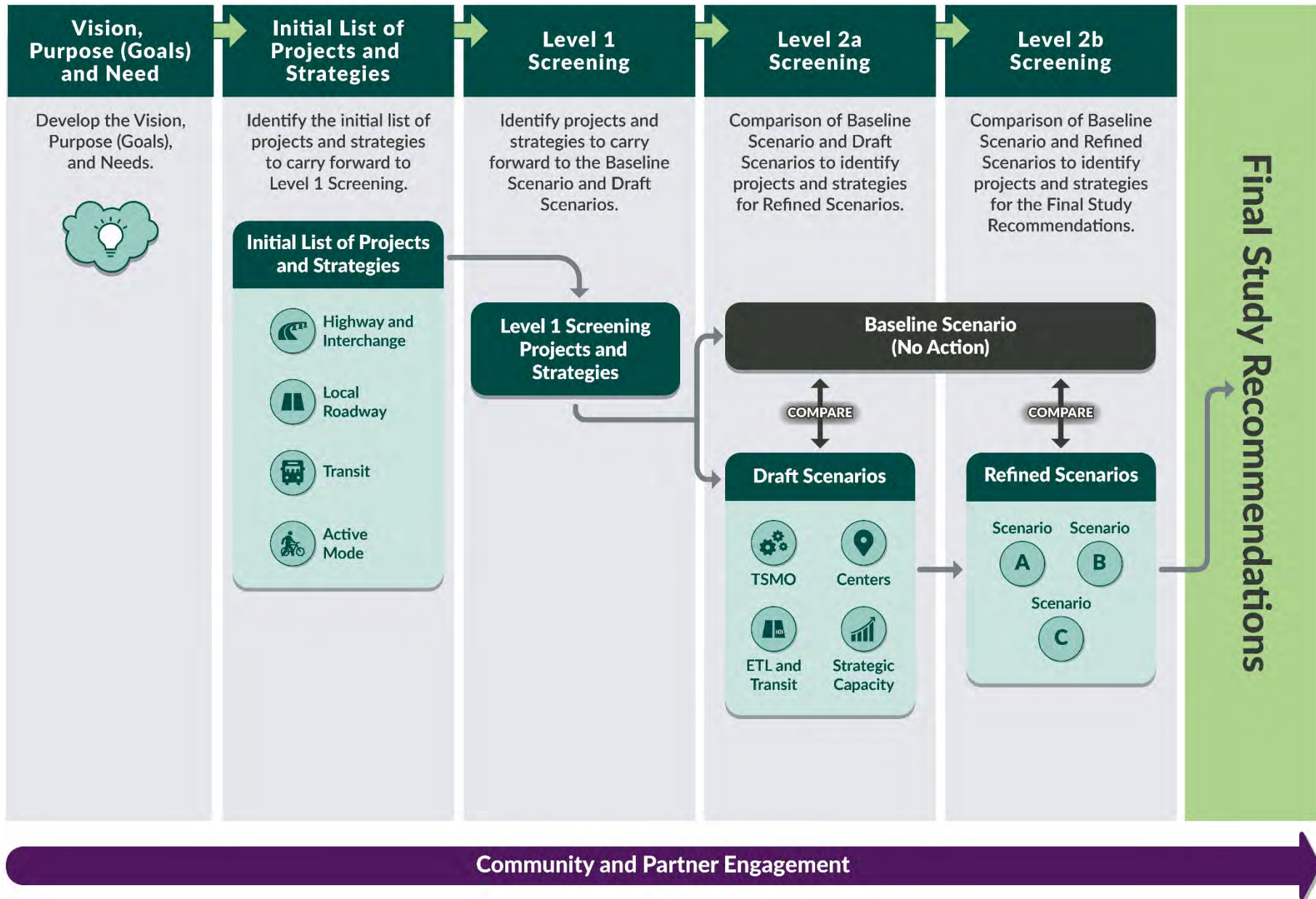


Figure 3-1. Evaluation Process

Travel Forecasting

For most of the metrics analyzed in this study, future conditions were forecast for the year 2050 to understand the long-term changes in growth patterns and travel demand in the study area. However, detailed future traffic operations on SR 167 are forecast using year 2030 conditions. The year 2030 analysis is consistent with all similar traffic operations analyses for the I-405/SR 167 Program as the nearer-term look at traffic operations better identifies bottlenecks and refinements that can be made to potential projects, such as off-ramps or merging areas. Using 2050 forecasts for the detailed traffic operations analysis would obscure these details and make it more difficult to identify practical solutions to reduce traffic congestion.

For all forecasts, the PSRC regional travel demand model was used. This includes a base year of 2019 and future years of 2030 and 2050. The PSRC model includes future land use forecasts and planned and likely transportation improvements, including new transit service and routes and new or wider roadways.

Baseline Scenario (No Action)

The Baseline Scenario represents the No Action Alternative, and it only includes the existing transportation system and funded projects that would likely be implemented by 2050 and be built regardless of other improvements identified in this study. Although the Baseline Scenario does not meet the project Purpose and Need, it was carried forward through the scenario evaluation process as a baseline for comparison to the SR 167 Master Plan scenarios.

Projects and strategies were identified for the Baseline Scenario during the Level 1 Screening evaluation by reviewing available funding data, and by discussing projects and strategies with implementing agencies. *Attachment C, Appendix A* provides a detailed list of projects and strategies included in the Baseline Scenario. Figure 3-2 presents the major projects included in the Baseline Scenario:

- **ETL and HOT Lanes:** Construction of ETLs in both directions on I-405 from Renton to Bellevue; extension of southbound HOT lane on SR 167 from Ellingson Road to SR 410; and conversion of existing HOV and HOT lanes on SR 167 to ETLs by upgrading tolling equipment to be consistent with tolling equipment on I-405

HOV Modeling

The analysis models used for the SR 167 Master Plan PEL Study require an assumption related to how many people in a carpool would be allowed to use the ETLs for free. Consistent with all other analysis performed for the I-405/SR 167 Corridor Program, the modeling team assumed that free access would be limited to HOV 3+ during the weekday peak travel periods.

No Action Alternative

Like the NEPA process, PEL studies should evaluate a No Action Alternative to provide a baseline against which potential improvements are measured, even if it does not meet the project Purpose and Need (Colorado DOT 2022). The 2050 Baseline Condition is the No Action Alternative for this PEL. This scenario represents what is expected to happen within the study area if growth proceeds as forecast and only currently funded transportation projects are implemented.

- **Highway Completion:** Completion of SR 509 near SeaTac Airport; completion of the SR 167 extension from Port of Tacoma (SR 509) to North Meridian Avenue (SR 161) with a half interchange at Valley Road and restriping of northbound lanes near SR 512
- **Auxiliary Lanes:** Construction of a southbound auxiliary lane on SR 167 from SR 516 to South 277th Street
- **Transit and Active Modes:** Construction of Tacoma to Puyallup Trail; addition of BRT service on I-405; addition of the RapidRide I Line between Auburn and Renton; light rail extensions to Federal Way and Tacoma; and Sounder station access and parking improvements
- **Other Improvements:** Canyon Road Regional Connection project to more directly link the Frederickson MIC to I-5; widening of Stewart Road over the White River to improve freight access and complete the multipurpose path between the Interurban Trail, Sumner Link Trail, and Lake Tapps Parkway Trail; local roadway projects to address traffic and freight access; and local active mode projects to improve sidewalks and crossings

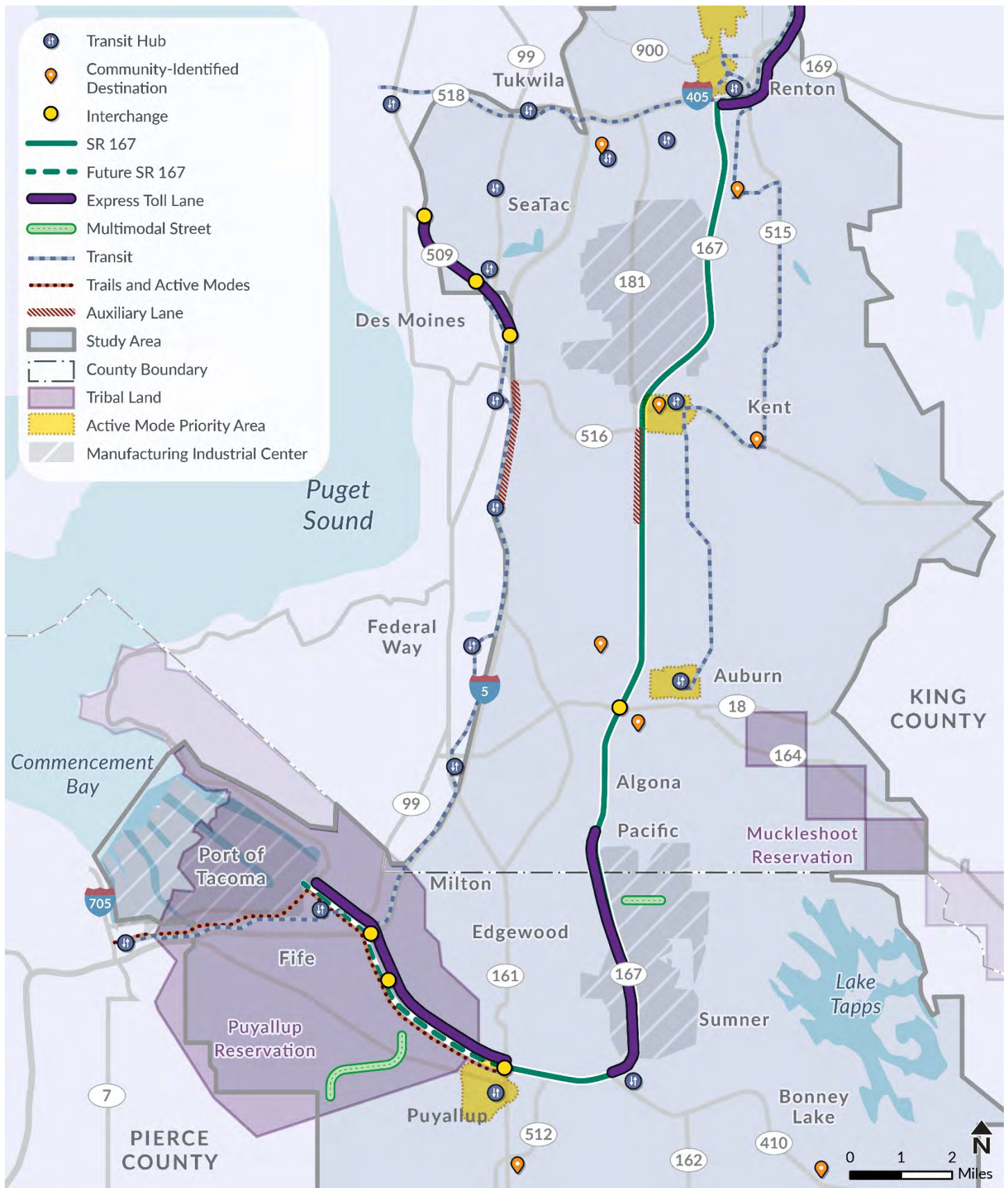


Figure 3-2. Baseline Scenario (No Action)

Scenario Development and Evaluation

The following sections summarize the projects and strategies studied and evaluated for this SR 167 Master Plan PEL Study. Each screening level includes a description of projects and strategies evaluated, criteria and metrics used, and a summary of projects and strategies eliminated or carried forward. The Final Study Recommendations are described in *Chapter 4*.

Initial Projects and Strategies List

The initial list of projects and strategies was developed based on the project team’s review of projects in current local, regional, and state planning documents. Projects and strategies were qualitatively assessed to determine if they could meaningfully improve travel, by any mode, along, across, or parallel to SR 167. Projects that did not meet this basic definition of the project Purpose and Need were removed from further consideration. This screening resulted in 185 projects carried forward to Level 1 Screening. Table 3-1 summarizes the projects and strategies carried forward to Level 1 Screening.

Projects include capital infrastructure improvements.

Strategies include changes in policies or operations that do not need substantial physical infrastructure (e.g., new lanes or bridges).

Table 3-1. Key Projects and Strategies Carried Forward to Level 1 Screening

Type	Key Projects and Strategies
SR 167 Highway and Interchange Projects and Strategies	<ul style="list-style-type: none"> • Additional general purpose lanes • Additional ETLs in each direction between I-405 and SR 410/SR 512 • Low-income toll program • Four policy or practice strategies related to how the ETLs would operate • Additional freight and truck-only lanes between SR 18 and SR 161 • Eight auxiliary lane projects • Five direct access ramp projects • Twenty interchange-related projects • Three TSMO strategies and projects
Local Roadway Projects and Strategies	<ul style="list-style-type: none"> • Three projects related to West Valley Highway • Four projects related to East Valley Highway • TSMO strategies and projects on 50 miles of parallel arterial streets, including Meridian Avenue, West Valley Highway, East Valley Highway/Auburn Way/Central Avenue, and 104th Avenue/108th Avenue/Benson Drive • More than 100 other local roadway projects
Transit Projects and Strategies	<ul style="list-style-type: none"> • New BRT service on SR 167 • New or expanded on-demand transit service • Additional Sounder service • Eight high-capacity transit or RapidRide projects • Thirty-two new or enhanced transit routes

Type	Key Projects and Strategies
Active Mode Projects and Strategies	<ul style="list-style-type: none"> • Three projects for the Interurban Trail • Twenty-one projects to expand or enhance other trails • Sixty-five sidewalk or crossing enhancement projects • Fifty-four bicycle projects

Level 1 Screening – Project Purpose and Need

The Level 1 Screening focused on evaluating projects with the project Purpose and Need by using an additional set of qualitative screening questions (*refer to Attachment C*). The Level 1 Screening also assessed the funding status of projects and strategies carried forward from the initial project list to determine a set of Baseline projects (Baseline Scenario) that would likely be implemented even in the absence of any new funding associated with the SR 167 Master Plan. Ultimately, the Level 1 Screening narrowed down the list of projects and strategies into a set of Draft Scenarios and a Baseline Scenario (representing the No Action Alternative) to carry forward to Level 2a Screening. Projects and strategies were eliminated from further consideration if it was considered they could not meet the project Purpose and Need. This screening resulted in 135 projects carried forward to Level 2a Screening. Refer to the Level 1 Screening chapter of *Attachment C* for additional details related to specific projects and strategies in the Level 1 Screening and evaluation criteria.

Scenario
 A grouping of projects and/or strategies that complement one another and are evaluated based on their ability to meet the project Purpose (Goals) and Need.

Level 2a Screening – Draft Scenario Analysis

The Level 2a Screening evaluation focused on comparing how well the Draft Scenarios performed relative to the project Purpose and Need by evaluating the benefits and tradeoffs for each and by comparing the findings to the Baseline Scenario. The evaluation identified projects and strategies to carry forward into the Refined Scenarios for Level 2b Screening.

To facilitate the Level 2a Screening, the project team organized projects and strategies in the Draft Scenarios around “themes.” Table 3-2 describes the key projects and strategies for each Draft Scenario and the scenario titles describe the overall theme. Figure 3-3, Figure 3-4, Figure 3-5, and Figure 3-6 show the project locations on maps. Some projects and strategies were carried forward into more than one Draft Scenario. Each Draft Scenario also included the following:

- A mix of project types to support improved mobility for all modes (highway, transit, active mode, local roadway)
- Multi-agency projects
- Consideration for each project Purpose and Need statement

Table 3-2. Level 2a Screening Draft Scenario Key Projects and Strategies

Draft Scenario	Key Projects and Strategies
TSMO Scenario	<ul style="list-style-type: none"> • All-lane congestion pricing strategy for SR 167 • Arterial widening and Complete Streets projects on West Valley and East Valley highways • Signal upgrades (timing updates, coordination, adaptive signal systems) on major parallel arterials • Multimodal improvements in PSRC-designated centers and to transit hubs • Low-income Toll Program strategy • Ramp meter upgrades on SR 167
Centers Scenario	<ul style="list-style-type: none"> • Expansion of transportation demand management (TDM) requirement strategies for employers • Transit service expansion • Transit speed and reliability projects • Expansion and completion of active transportation infrastructure and Complete Streets within and connecting to PSRC-designated centers • Truck-only lane on SR 167 between SR 18 and Meridian Avenue • Medium-duty trucks allowed (less than 20,000 pounds) in ETLs • Five interchange improvement projects • Low-income Toll Program strategy
ETL and Transit Scenario	<ul style="list-style-type: none"> • Construction of a second ETL between I-405 and SR 512 • Direct access ramps from ETLs connecting to transit hubs • Implementation of BRT on SR 167 • Four east-west transit routes to connect residential areas to transit hubs and BRT • Multimodal improvements in PSRC-designated centers and to transit hubs • Low-income toll program strategy
Strategic Capacity Scenario	<ul style="list-style-type: none"> • Construction of an additional general purpose lane between I-405 and SR 512 • Construction of a northbound auxiliary lane between South 277th Street and SR 516 • Interchange improvements at 11 locations • Multimodal Complete Streets projects near major interchange improvements • Four east-west transit routes to connect residential areas to transit

Complete Streets

Complete Streets is an approach to planning, designing, building, operating, and maintaining the transportation system that enables safe and convenient access to destinations for all people, including pedestrians, bicyclists, motorists, and transit riders. It uses a set of tools or treatments that create a more balanced and resilient transportation system (WSDOT n.d.). As of July 1, 2022, state transportation projects (with a budget of \$500,000+) in incorporated cities, in areas where active transportation gaps have been identified in WSDOT or local plans, or in overburdened communities must incorporate the principles of Complete Streets with facilities that provide access with all users in mind, including pedestrians, bicyclists, and public transportation users.

This plan included Complete Streets improvements for many of the evaluated projects, including arterial interchanges and roadways. Refer to *Attachment C* for additional details on Complete Streets components.

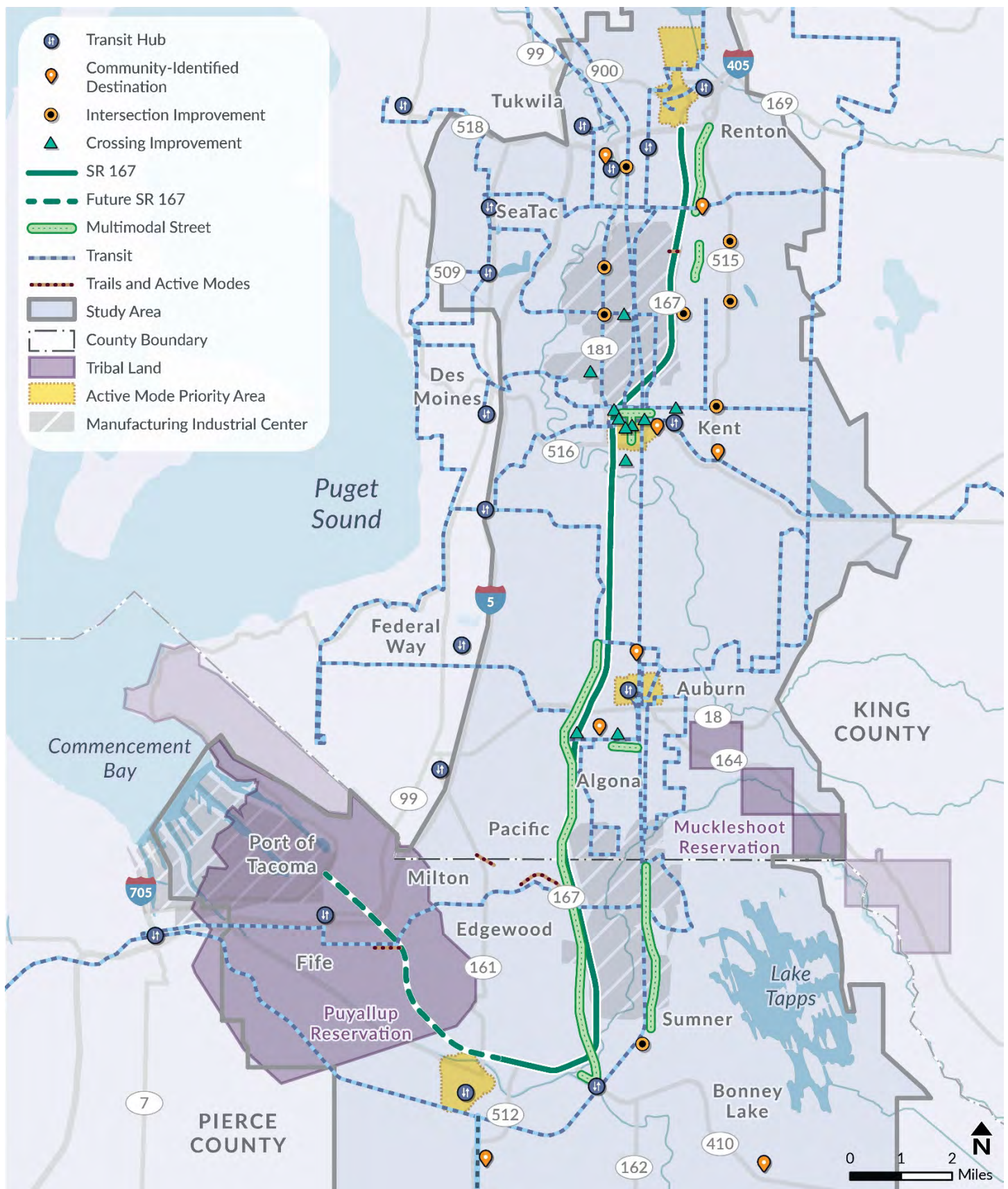


Figure 3-3. TSMO Scenario (Theme)

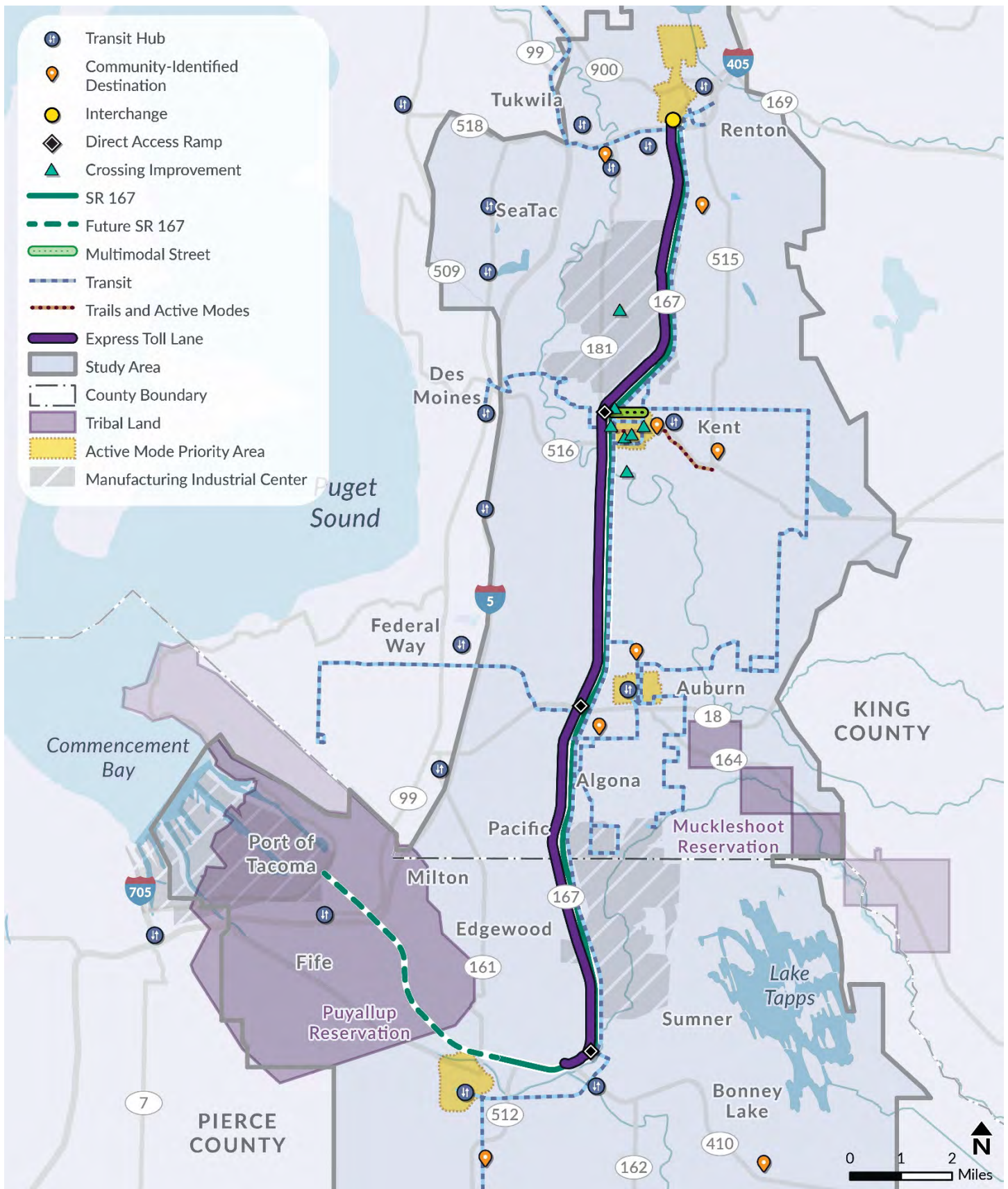


Figure 3-5. ETL and Transit Scenario (Theme)

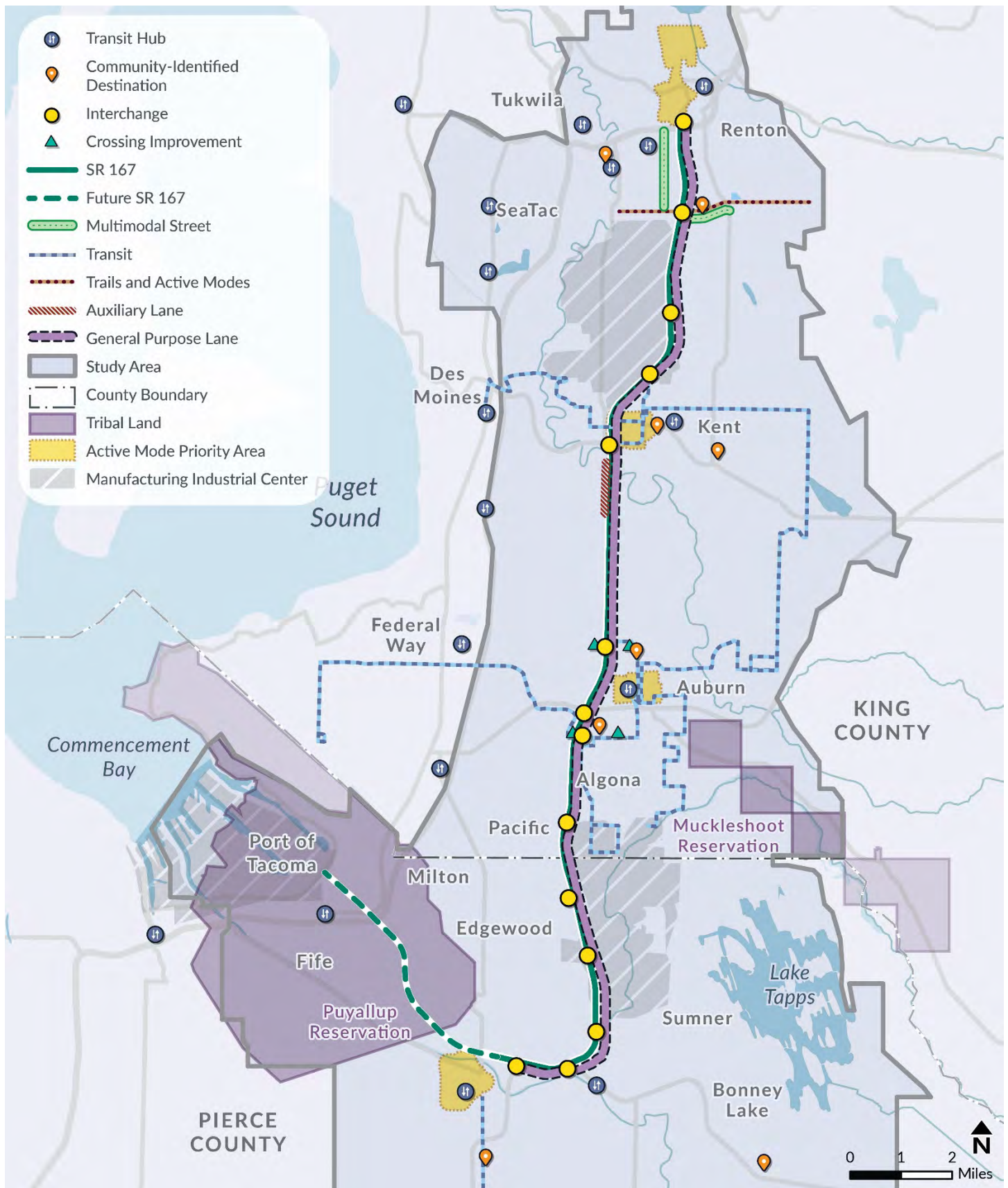


Figure 3-6. Strategic Capacity Scenario (Theme)

Level 2a Screening Criteria and Metrics

The Level 2a Screening criteria focused on the metrics summarized in Table 3-3, which respond to the project Purpose and Need. Draft Scenarios were evaluated by comparing their potential benefits and tradeoffs relative to the Baseline Scenario for each evaluation metric. Refer to the *Level 2b Screening* section for evaluation metrics related to the practical solutions and the State of Good Repair and project Purpose and Need categories.

Table 3-3. Level 2a Screening Evaluation Criteria and Metrics

Project Purpose and Need Category	Evaluation Metric
Equity, Multimodal, Safety	<ul style="list-style-type: none"> • Transit service coverage within equity priority areas • Presence or absence of sidewalks and bicycle facilities along arterials within equity priority areas • Improvements to trail crossing at arterials (qualitative)
Equity, Multimodal, Environment	<ul style="list-style-type: none"> • Daily transit boardings
Safety, Multimodal, Environment, Mobility, and Economic Vitality	<ul style="list-style-type: none"> • AM peak hour SOV mode share • VMT per capita
Safety, Mobility, and Economic Vitality	<ul style="list-style-type: none"> • Hours of congestion on SR 167 • Hours of congestion on parallel arterials
Environment	<ul style="list-style-type: none"> • Relative environmental effects (qualitative)

Target Zero and Safe System Approach

WSDOT is guided by the strategies and recommendations in Target Zero, the state’s Strategic Highway Safety Plan. Target Zero’s goal is to reduce the number of deaths and serious injuries on Washington’s roadways to zero by 2030. WSDOT approaches safety using the USDOT’s Safe System Approach that makes safety a primary factor in road system investment decisions. The Safe System Approach includes five elements in synergy: safe road users, safe vehicles, safe speeds, safe roads, and post-crash care. All five elements must be addressed and strengthened to achieve the Target Zero goal of zero traffic deaths and serious injuries. The Safe System Approach has been embraced by the transportation community as an effective way reduce the potential risks inherent in the transportation system. It works by building and reinforcing multiple layers of protection to proactively address crashes and to reduce the severity of crashes when they do occur (USDOT 2022).

This SR 167 Master Plan PEL Study included safety improvements for many of the evaluated projects, such as reducing speed differentials on SR 167, reducing weaving areas, separating cars and pedestrians, and improving bicycle facilities. Refer to *Attachment C* for additional details on safety improvements.

** Note: Refer to the 23 U.S. Code § 148 and 23 U.S. Code § 407 footnote in the Chapter 1, Safety section.*

Level 2a Screening Results

The Level 2a Screening evaluated the Draft Scenarios for how well they performed to meet the project Purpose and Need, and it identified key benefits and tradeoffs related to the Level 2a metrics, which are described in the following bullets. The key benefits and tradeoffs were used to select projects and strategies from the Draft Scenarios to carry forward into Refined Scenarios for Level 2b Screening.

- **TSMO Scenario:** Due to the congestion pricing strategy and investments in transit and active mode projects, this scenario would provide the greatest levels of transit access, particularly to vulnerable populations and overburdened communities; the greatest level of trail access and crossing improvements; the lowest VMT (and corresponding emissions) per capita; and the greatest reduction in traffic congestion on SR 167 compared to the other Draft Scenarios. However, it would also increase congestion on arterial streets because of the increased cost of driving on SR 167. The increased traffic volumes on arterials could increase the number of crashes on arterials and wider arterials could increase crash severity due to higher off-peak period speeds.
- **Centers Scenario:** When compared to the other Draft Scenarios, this scenario shows the greatest reduction in SOV travel and the greatest increase in non-auto mode share due to the expanded TDM strategy and supporting transit and active mode infrastructure projects. This scenario is also strongly aligned with the Regional Growth Strategy to increase land use density and mixed-use developments within designated centers. Truck travel time reliability improved as a result of the truck-only lane on SR 167. However, there are no improvements planned in some areas of SR 167 that have a history of crashes, and overall traffic congestion levels were similar to the Baseline Scenario due to the lack of specific congestion management strategies or new capacity north of SR 18.
- **ETL and Transit Scenario:** Compared to the other Draft Scenarios, this scenario shows the greatest overall person throughput, and it would improve traffic safety on SR 167 by reducing the differential in traffic speeds and correcting designs that have systemic safety issues. This scenario also results in the lowest level of arterial traffic congestion. Compared to the Baseline Scenario, it shows improved truck travel times but similar VMT per capita because the mode shift generated by the improved transit service and performance is offset by induced demand from more vehicle capacity. However, there is potential for larger environmental impacts related to widening SR 167 compared to the Baseline Scenario.
- **Strategic Capacity:** This scenario shows the greatest reduction in freight travel times, particularly during the midday, and it would reduce the risk of crashes related to bottlenecks and speed differentials on SR 167 during more hours of the day than all Draft Scenarios, except for TSMO. It is the only Draft Scenario that would increase VMT per capita compared to the Baseline Scenario. This additional VMT could result in adverse traffic impacts in equity priority areas. However, there is potential for larger environmental impacts related to widening SR 167 compared to the Baseline Scenario and for additional environmental impacts from the higher VMT per capita.

The following summarizes key projects and strategies that were eliminated from further consideration based on the identified benefits and tradeoffs.

- **General Purpose Lanes on SR 167:** Eliminated because it increased VMT per capita compared to the Baseline Scenario.
- **All-lane Congestion Pricing:** Eliminated because of the large increase in arterial congestion levels.
- **Expanded TDM Requirements for Employers:** Eliminated because will likely have a high level of complexity to implement and to achieve results.
- **I-405 and SR 167 Interchange Reconstruction:** Eliminated because it is inconsistent with the priorities identified in the I-405 Master Plan.

- **Regional Trail Projects:** Eliminated trail projects further than 1 mile from SR 167 because there were no identified effects to SR 167 mobility or access to trails that directly serve the SR 167 corridor.
- **Arterial Widening Projects:** Eliminated select arterial widening projects that were not parallel to SR 167, not within 1 mile of SR 167, or where modeling indicated the project would not benefit SR 167 mobility or access.
- **Transit Routes/Strategies:** Eliminated one transit route and one transit expansion strategy that likely would not serve travel patterns on SR 167 and that lacked local support.

Level 2b Screening – Refined Scenario Analysis

The Level 2b Screening evaluation focused on analyzing how well each Refined Scenario performed in comparison with the Baseline Scenario to meet the project Purpose and Need and to identify general effects (such as performance gaps) related to each Refined Scenario. The evaluation identified projects and strategies to carry forward as Final Study Recommendations.

Projects and strategies carried forward from the Level 2a Screening were grouped into Refined Scenarios that were developed with feedback and input from the following:

- Subject matter experts from WSDOT and outside consultants: The project team convened a series of workshops with experts whose backgrounds included safety, maintenance, transit, smart cities/TSMO, traffic operations, and capital project planning and implementation to review the Draft Scenario evaluation results and to suggest project concepts to include in the Refined Scenarios.
- TAC, EAC, and PAC members who highlighted the projects and strategies they considered best met the project Purpose and Need and that aligned with their local constituent travel needs.
- Co-creation workshop participants provided detailed information about their transportation challenges and the types of projects and strategies that could improve their transportation outcomes in the study area.
- Open house participants shared thoughts related to what does and does not work with respect to transportation within the study area along with ideas for projects and strategies for improvements.

Based on this feedback, several projects and strategies were identified as fundamental to meeting the project Purpose and Need. The projects and strategies common to all Refined Scenarios are described in Table 3-4 and presented in Figure 3-7.

Table 3-4. Level 2b Screening – Projects and Strategies Common to all Refined Scenarios

Project or Strategy Type	Description of Projects and Strategies
Highway and Interchange	<ul style="list-style-type: none"> • ETL: Add a second ETL between I-405 and SR 18 to manage traffic congestion without increasing VMT per capita, which would benefit transit and person throughput. • SR 18 Interchange: Complete the missing ramps to connect SR 167 and SR 18 so that regional traffic is not diverted to local roads. • Valley Interchange: Complete Valley interchange ramps to improve freight access. • Auxiliary Lanes: Add auxiliary lanes on SR 167 and SR 18 to reduce speed differentials around on- and off-ramps. • Direct Access Ramps: Add direct access ramps from the ETLs in Kent and Auburn to Sounder stations to improve access to designated RGCs. Exact location and design of these ramps would be determined through future studies. • Statewide Low-income Toll Program: Strategy to recommend to the WSTC (sets all toll rates and policies for the state) that it establish a statewide tolling program for qualifying low-income individuals to improve equitable access to the ETLs. • Medium-duty Trucks in ETLs: Strategy to recommend to the WSTC to change operational policies to allow medium-duty (less than 20,000 pounds) trucks access to the ETLs to benefit freight access. • Implement Ramp Meters: Add ramp meters to all lanes and arterial interchanges on SR 167 to manage traffic congestion.
Local Roadway	<ul style="list-style-type: none"> • Grady Way and Rainier Avenue Grade Separation: Intersection grade separation to improve transit access, particularly for high-capacity transit services on I-405 and SR 167.
Transit	<ul style="list-style-type: none"> • Frequent Transit Routes: Implement four all-day, frequent transit routes to connect major residential areas, equity priority areas, and transit hubs. Also includes improvements to transit access, such as sidewalk and pedestrian crossing enhancements.
Active Mode	<ul style="list-style-type: none"> • Sidewalks: Complete sidewalk system gaps in designated RGCs within about 1 mile of SR 167 to better accommodate anticipated growth in these areas and to comply with ADA standards and Public Right-of-Way Accessibility Guidelines. Also includes improved arterial crossings. • Bicycle Facilities: Complete up to 10 miles of bike lanes or facilities that connect to community destinations that were identified in the feedback received from the people living and working in equity priority areas that attended the co-creation workshops. • Low-stress Facilities: Include low-stress pedestrian and bicycle improvements with any project that has more than \$500,000 in state investment to meet the WSDOT Complete Streets requirement and to reduce potential mobility barriers caused by the SR 167 facility. • Interurban Trail Enhancements: Close the remaining gaps in the Interurban Trail in Milton and Edgewood to create a continuous trail corridor between Tacoma (via the Tacoma to Puyallup Trail) and Seattle. Improve safety on the Interurban Trail by improving arterial street crossings, adding lighting in key areas, and incorporating new connections. Also enhance regional trail connections to the Interurban Trail through improvements and extensions of other regional trails (e.g., Puyallup Riverwalk Trail, Foothills Trail Link to the Riverwalk Trail, White River Trail, Green River Trail, and Lake to Sound Trail) and connections between the Interurban Trail and other regional trails.

Scenario A focuses on expanded transit and active mode investments to benefit mobility in equity priority areas while also reducing SOV travel and VMT per capita. It also includes a number of local roadway projects and TSMO strategies. **Scenario B** focuses more investment along the SR 167 facility than off the facility, in comparison to Scenario A. Key projects include more interchange improvements along SR 167 but less transit and active mode infrastructure. **Scenario C** is similar to Scenario B, but it focuses more on freight access and mobility—a key difference is a truck-only lane on SR 167 between SR 18 and SR 410 instead of a second ETL. Key projects and strategies for each Refined Scenario are presented in Table 3-5 and in Figure 3-8, Figure 3-9, and Figure 3-10.

Table 3-5. Level 2b Screening – Refined Scenario Key Projects and Strategies

Refined Scenario	Key Projects and Strategies ^a
Scenario A	<ul style="list-style-type: none"> • ETL: Add a second ETL from SR 18 to SR 410 to create a dual ETL system from I-405 to SR 410. • Direct Access Ramps: Improve transit access between the SR 167 ETLs and Sumner Station. Exact design and location to be determined through a future study. • SR 410 and SR 512: Reconstruct interchange to improve traffic flow, access, and safety. • TSMO: Implement TSMO strategies on 25 miles of arterial streets. • BRT on SR 167: Create a BRT system to meet mobility needs expressed by communities living and working in equity priority areas for all-day, frequent transit service. • New or Enhanced Transit: Implement 15 transit routes, expanding transit with 160 miles of new or enhanced service. • Business Access and Transit (BAT) Lanes:^b Rebuild Meridian Avenue to include BAT lanes and low-stress bicycle facilities. • Sidewalks: Complete sidewalk gaps on 20 miles of arterials within 1 mile of SR 167. • Complete Streets: Improve 10 miles of local arterial streets (such as West Valley and East Valley highways) by rebuilding the roadways and improving pedestrian and bicycle infrastructure.
Scenario B	<ul style="list-style-type: none"> • ETL: Add a second ETL from SR 18 to SR 512 to create a dual ETL system from I-405 to SR 512. • Direct Access Ramps: Improve transit access between the SR 167 ETLs and Sumner Station (same as Scenario A). • SR 18 Interchange: Complete the missing ramps to connect SR 167 and SR 18 (common to all Refined Scenarios) with additional improvements to reduce weaving and eliminate tight loop ramps. • SR 512 Interchange: Construct direct connector ramps between ETLs and SR 512. • Arterial Interchanges: Reconstruct or improve five arterial interchanges, including South 180th Street interchange in Renton, 84th Avenue South interchange in Kent, Ellingson Road and Stewart Road interchanges in Pacific, and 24th Street East in Sumner. • Transit Frequency and ETLs: Implement a strategy to improve the frequency and span of service of three planned transit routes on SR 167 and a new bus route along SR 167 between Puyallup and Renton to provide 15-minute or better frequencies on SR 167.
Scenario C	<ul style="list-style-type: none"> • Truck-only Lane: Add a truck-only lane to function alongside the two general purpose lanes and ETL lane from SR 18 to the SR 167 Extension Project at SR 161. • SR 18 Interchange: Complete the missing ramps to connect SR 167 and SR 18 (common to all Refined Scenarios) with additional ramp improvements between SR 18 and SR 187 to enhance the functionality of truck-only lanes. • Arterial Interchanges: Includes the same arterial interchange projects as Scenario B. • BRT on SR 167: Similar to Scenario A, but it would not include a connection to Sumner because there are no direct access ramps at Sumner under Scenario C.

Notes:

^a Projects and strategies shown for each Refined Scenario are in addition to the projects and strategies common to all Refined Scenarios.

^b BAT lanes allow buses to travel faster on arterials. General purpose vehicles must turn right at each intersection of a BAT lane while buses can continue through.

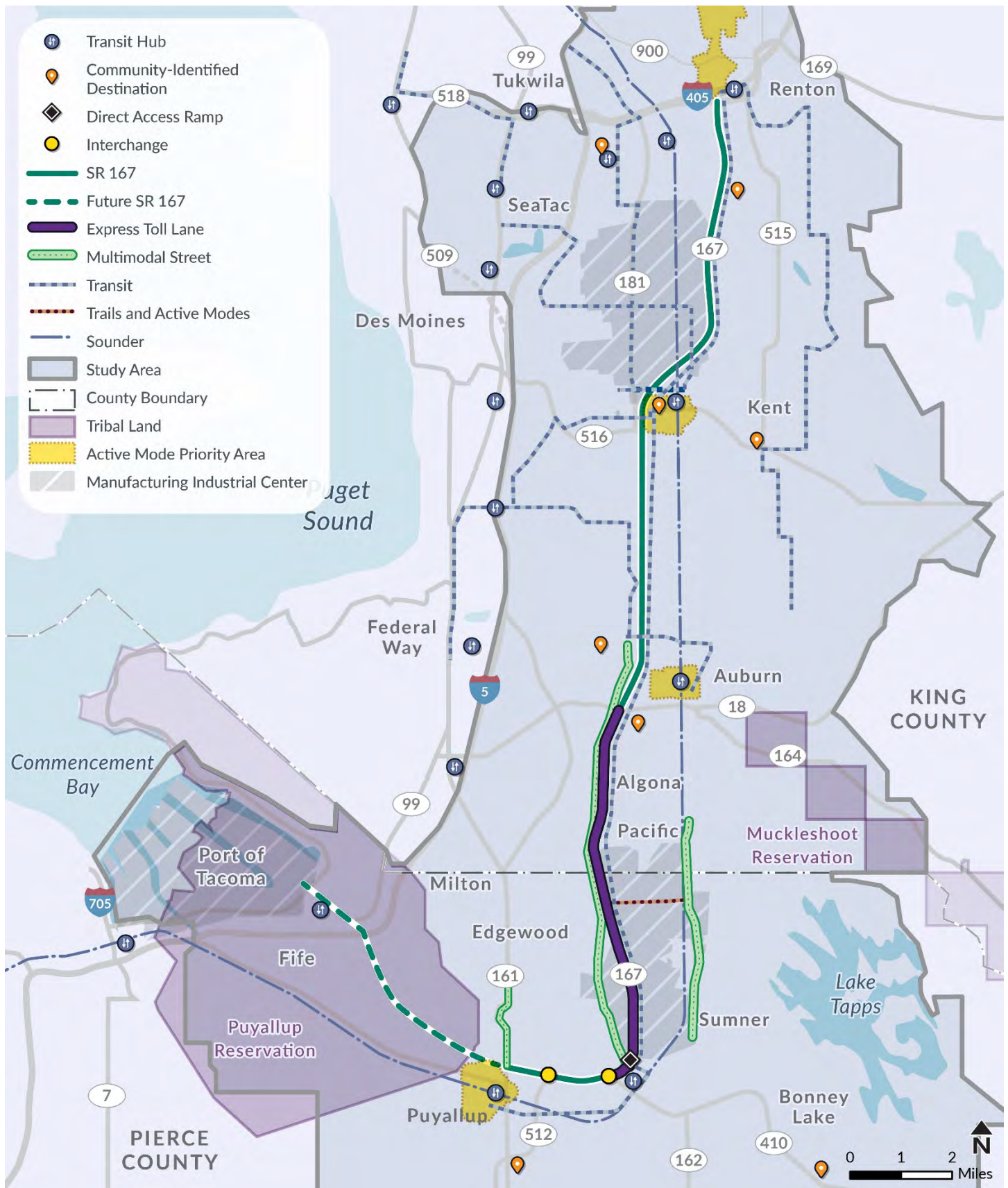


Figure 3-8. Level 2b Screening - Scenario A

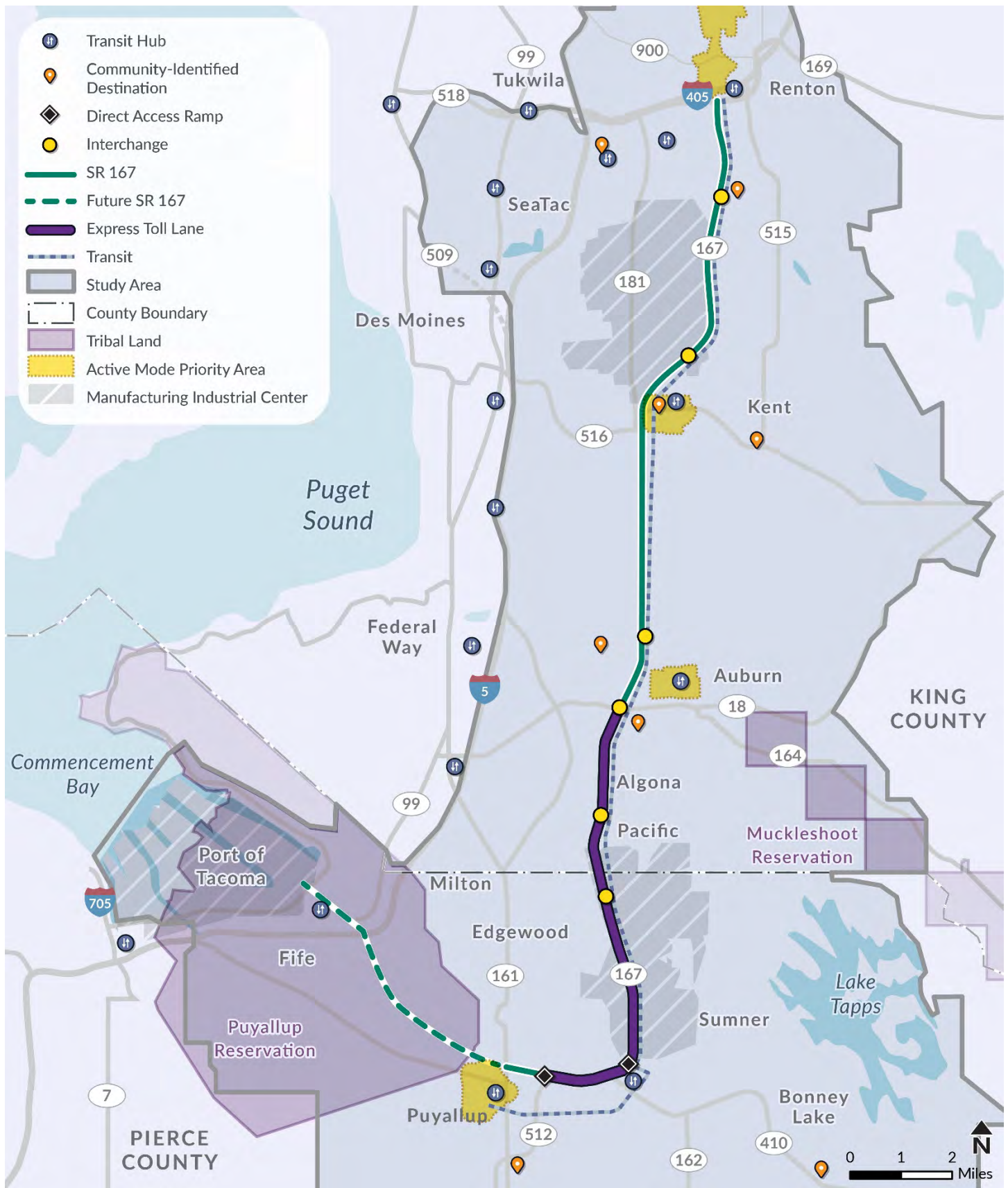


Figure 3-9. Level 2b Screening - Scenario B

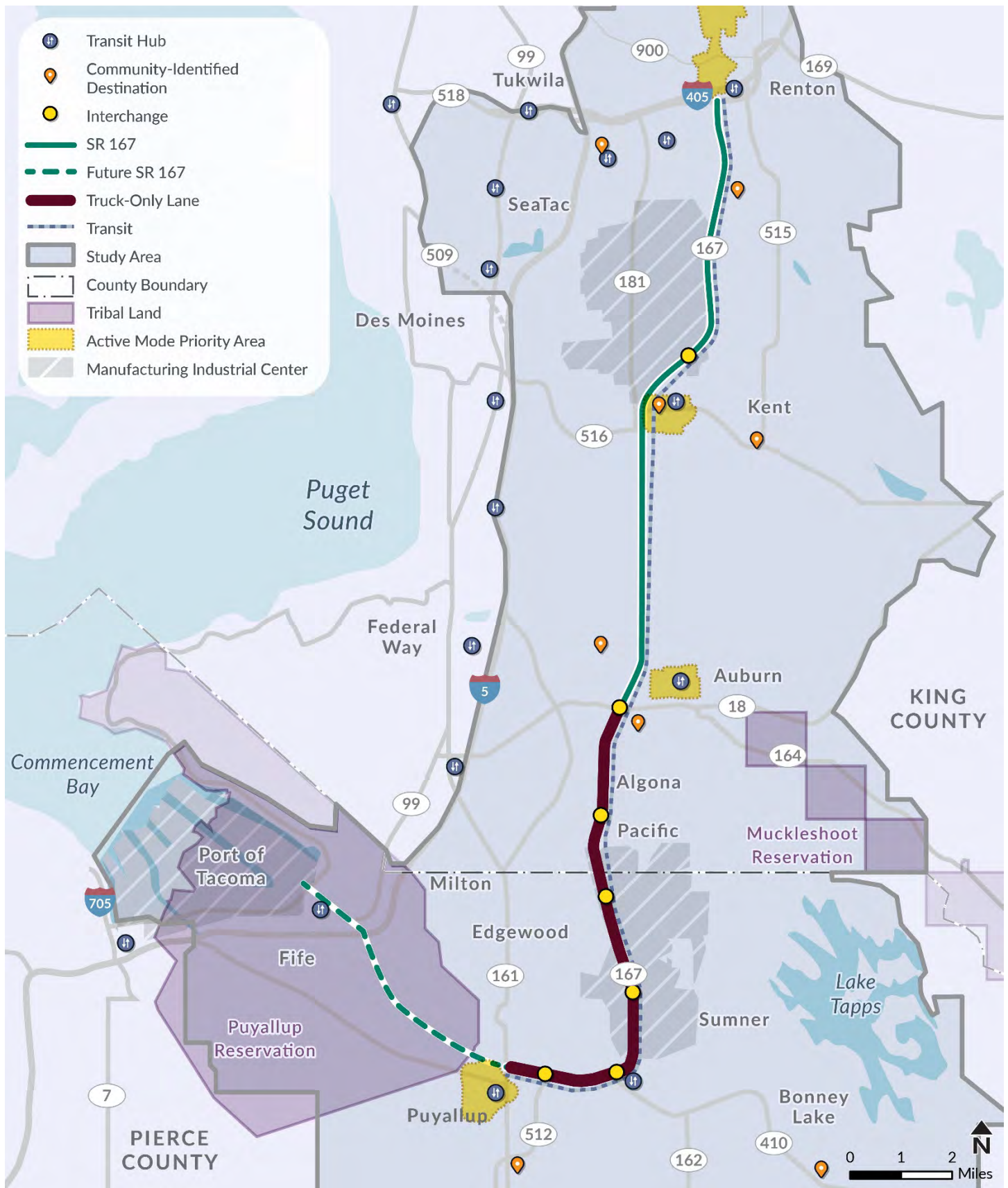


Figure 3-10. Level 2b Screening - Scenario C

Level 2b Screening Criteria and Metrics

Similar to the Level 2a Screening evaluation, the Level 2b Screening criteria were developed to assess how well Refined Scenarios met the project Purpose and Need compared to the Baseline Scenario. The Level 2b Screening evaluation criteria and performance metrics are described in Table 3-6.

Table 3-6. Level 2b Screening Evaluation Criteria and Performance Metrics

Criteria	Performance Metrics
Equity Criteria: <ul style="list-style-type: none"> • Access to jobs • Access to households • Population with access to transit • Transit service availability during off-peak periods • Travel cost 	Equity Performance Metrics: <ul style="list-style-type: none"> • Jobs within a 45-minute bus or train ride of equity priority areas • Equity priority households within a 45-minute bus or train ride from an MIC • Equity priority area population within a half-mile of frequent or on-demand transit • Total number of bus hours of service in midday and evening periods in the study area • Travel costs for vehicle and transit from equity priority areas (qualitative)
Safety Criteria: <ul style="list-style-type: none"> • Ability to reduce the potential for fatal and serious injury crashes 	Safety Performance Metrics: <ul style="list-style-type: none"> • Investments in areas with a history of: <ul style="list-style-type: none"> – SR 167 facility crashes (qualitative) – SR 167 speed differentials (qualitative) – Active mode crashes (qualitative)
Environment Criteria: <ul style="list-style-type: none"> • Effects on environmental resources 	Environment Performance Metrics: <ul style="list-style-type: none"> • Assessment of impacts and benefits to natural and built environment resources based on the existing conditions identified in the Environmental Baseline chapter of <i>Attachment B</i> • VMT per capita
Multimodal Criteria: <ul style="list-style-type: none"> • Pedestrian and bicycle system completeness • Transit boardings 	Multimodal Performance Metrics: <ul style="list-style-type: none"> • System completeness for bicycle and pedestrian infrastructure within 1 mile of SR 167 • Sidewalk system completeness within 1 mile of SR 167 and within RGCs • Active mode gap closures across SR 167 • Daily transit boardings • Daily transit boardings on SR 167 bus service
Mobility and Economic Vitality Criteria: <ul style="list-style-type: none"> • Number of people moved • Traffic congestion • Freight mobility and reliability 	Mobility and Economic Vitality Performance Metrics: <ul style="list-style-type: none"> • Peak period person throughput on SR 167 • Average travel speeds for vehicles in general purpose lanes on SR 167 • Average travel speeds for vehicles in ETLs on SR 167 • Peak period congestion on SR 167 in general purpose lanes • Peak period congestion on SR 167 in ETLs • Peak period vehicle-hours of delay on SR 167 and arterials within 1 mile of SR 167 • Freight vehicle travel time on SR 167 • Freight vehicle travel time reliability on SR 167 • Local freight access at interchanges on SR 167 (qualitative)

Criteria	Performance Metrics
Practical Solutions and State of Good Repair Criteria: <ul style="list-style-type: none"> • Capital cost • State of Good Repair 	Practical Solutions and State of Good Repair Performance Metrics: <ul style="list-style-type: none"> • Planning level capital costs of engineering, right of way, environmental mitigation, and construction • Ability to maintain the system in a State of Good Repair (qualitative)

Level 2b Screening Results

Findings from the evaluation, along with feedback gathered from partners, committees, and the public, were used to select projects and strategies from the Refined Scenarios to carry forward to the Final Study Recommendations. The Level 2b Screening evaluation results are described in Table 3-7. Refer to *Attachment C, Level 2b Screening section* for additional details about the evaluation results.

Table 3-7. Level 2b Screening Evaluation Results

Project Purpose and Need Category	Evaluation Results
Equity	<ul style="list-style-type: none"> • Scenario A generally performs the best in terms of transit and active mode investments, resulting in more jobs that are accessible during off-peak times and a greater level of sidewalk system completeness within equity priority areas. • All scenarios include projects that could require property acquisition in equity priority areas. • Scenarios B and C have the most projects that could require commercial property acquisition. Scenario A has the most projects that could require residential property acquisition.
Safety	<ul style="list-style-type: none"> • All scenarios perform better than the Baseline Scenario because they invest more in projects that correspond with areas that have a history of fatal and serious injury crashes and that help reduce speed differentials. • Scenarios A and B generally perform the best. Scenario A invests more in active mode infrastructure, and Scenario B is likely to have less crash potential on the SR 167 facility.
Environment	<ul style="list-style-type: none"> • All scenarios would lower VMT per capita from existing conditions (25 percent by 2050), but Scenario A would have the greatest decrease because of the more extensive transit service and active mode investments. • Scenario A includes more local roadway projects with environmental impacts, including the West Valley and East Valley highways projects. • Scenario B and C are generally similar in terms of impacts and include more projects on SR 167.
Multimodal	<ul style="list-style-type: none"> • All scenarios perform better than the Baseline Scenario with respect to the Multimodal Master Plan criteria to provide pedestrian and bicycle system completeness and transit boardings. • Scenario A performs the best, but Scenario B has better transit performance due to the more extensive toll lane system. • Scenario A would complete system gaps related to bicycle and pedestrian infrastructure within 1 mile of SR 167.

Project Purpose and Need Category	Evaluation Results
Mobility and Economic Vitality	<ul style="list-style-type: none"> Compared to the Baseline Scenario, all scenarios would improve person throughput on SR 167, manage congestion, and create more reliable trip times where dual ETLs are used. All scenarios would improve travel time reliability for freight vehicles and freight access compared to the Baseline Scenario. Scenarios A and B generally perform the best for person throughput and reliable travel times on SR 167. Scenario B is expected to have fewer vehicle-hours of delay, compared to Scenarios A and C. Scenario C has a lower reduction of arterial vehicle-hours of delay, compared to Scenarios A and B, because the truck-only lane is less effective at moving people and vehicles compared to the ETL. Scenario C would allow for more reliable freight travel times because heavy trucks would interact less with other vehicles, compared to Scenarios A and B. However, the difference in truck travel time reliability for the truck only lane is hampered by the interactions of vehicles entering and existing SR 167.
State of Good Repair	<ul style="list-style-type: none"> All Refined Scenarios were developed in accordance with the Practical Solutions framework, and they are of a scale that is consistent with other large WSDOT capital programs and that can be maintained in a State of Good Repair in the future. The projects in the Refined Scenarios can also be implemented in time to replace aging infrastructure.

The following summarizes key projects and strategies that were eliminated from further consideration based on the Level 2b evaluation and feedback received:

- Truck-only Lane on SR 167:** Eliminated because it provided only a marginal freight travel time reliability benefit, and it did not reduce traffic congestion or improve transit performance as much as dual ETLs.
- Full Reconstruction of the SR 167/SR 18 and SR 167/SR 512/SR 410 Interchanges:** Eliminated because of high costs, high environmental impacts, property impacts, and smaller-scale, practical solutions that achieved similar improvements in congestion relief and freight access.
- Twenty Miles of Sidewalk Gap Closures Outside of RGCs:** Eliminated because of limited alignment with the regional land use strategy, high costs, limited ability to change travel patterns, and potential property and environmental impacts.
- New General Purpose Capacity on Arterial Streets:** Eliminated because of concerns raised by jurisdictions related to attracting additional traffic to city streets.
- TSMO on Arterial Streets:** Eliminated to focus more resources on interchange improvements to/from SR 167; however, WSDOT supports TSMO strategies overall as a low-cost way to improve mobility for all modes.
- Complete Streets Improvements on Portions of East Valley Highway:** Eliminated south of Terrace View Drive due to concerns raised by the city of Sumner about the ability to maintain additional facilities over time given the unstable hillside adjacent to the road.
- New Active Mode Crossings of SR 167:** Eliminated because WSDOT's Complete Streets policy will add low-stress facilities on the majority of existing SR 167 crossings as ETL and interchange projects that require reconstruction. Areas where there are long stretches between existing crossings do not connect to any community-identified destinations and often have environmentally sensitive areas (e.g., wetlands).

Chapter 4. Final Study Recommendations

Evaluation of Final Study Recommendations

The Final Study Recommendations were developed based on the analysis results and community and partner feedback from the Level 2b Screening.

The Final Study Recommendations were evaluated using the same metrics, methods, and assumptions as the Refined Scenarios. Detailed results are presented in *Attachment D. Final Study Recommendations Report*, and a summary of the major findings is presented in Figure 4-1.

The Final Study Recommendations meet the project Purpose and Need better than the Refined Scenarios when compared to the Baseline Scenario. These results are not a coincidence as the best performing projects and strategies were advanced from the Level 2b Screening along with further refinement by partners, including committee members, represented agencies (refer to *Chapter 2*), and the community.

Ultimately, the Final Study Recommendations constitute a major investment in multimodal travel within the SR 167 Master Plan PEL study area through the coordinated efforts of many agencies. The Final Study Recommendations are supported by a broad set of partners, ranging from local jurisdictions to CBOs and leaders in the equity community to freight, bicycle, transit, and pedestrian interest groups, tribal leaders, and transit agencies. This support and the feedback that shaped the Final Study Recommendations are equally important to the data-driven results that speak to the project Purpose and Need.

Chapter Overview

Chapter 4 presents the Final Study Recommendations for the SR 167 Master Plan PEL Study, and it provides a summary comparison of the Final Study Recommendations with the Refined Scenarios from the Level 2b Screening described in *Chapter 3*. Refer to the following chapters and attachments for more information related to this chapter:

- *Attachment D* includes detailed information about the Final Study Recommendations and includes a list of the Final Study Recommendations.
- *Chapter 1* includes the project Purpose and Need statements used in identifying the Final Study Recommendations.
- *Chapter 2* includes a summary of public and agency coordination and of community and partner feedback used to identify the Final Study Recommendations.
- *Chapter 3* provides a summary of the evaluation process used for to screen projects, strategies, and scenarios.
- *Chapter 5* provides additional detail related to environmental resources, including a summary of potential effects and next steps for environmental resources.
- *Chapter 6* provides information about the next steps related to the implementation of individual projects.

Purpose (Goals)	Final Study Recommendations	Scenario A	Scenario B	Scenario C
Equity	●	●	◐	◐
Safety	●	◐	◐	◐
Environment	◐	◐	◐	◐
Multimodal – Active Modes	●	●	●	●
Multimodal – Transit	●	●	◐	◐
Mobility and Economic Vitality – Traffic Congestion	●	●	●	◐
Mobility and Economic Vitality – Freight Reliability	●	◐	●	●
State of Good Repair	\$5.5 to \$6.0 billion	\$5.0 to \$5.5 billion	\$5.5 to \$6.0 billion	\$4.5 to \$5.0 billion




Legend - Performance relative to Baseline Scenario:  Less improvement  Some Improvement  More improvement

Figure 4-1. Evaluation of Final Study Recommendations

Some of the key benefits of the Final Study Recommendations include:

- **Vulnerable populations and overburdened communities** benefit from increased transit access and reliability, improved multimodal connections, and improved access to jobs and key destinations.
- **Safety** is improved by investing in infrastructure where there is a history of fatal and serious injury crashes, particularly for pedestrians and bicyclists. Safety also is improved in areas where there are high differentials in vehicle speeds.
- **Environmental impacts** are avoided, minimized, or mitigated as part of project implementation. The projects and strategies support lower VMT per capita compared to existing conditions, and they result in higher mode shares for transit, walking, biking, and rolling.
- **Multimodal access** is greatly improved through a more robust transit network, including an expansion of all-day transit services and new on-demand services in lower-density areas. Active mode infrastructure is enhanced through Complete Streets improvements across SR 167 and in PSRC-designated centers.
- **Mobility and Economic Vitality** is enhanced through new managed capacity that will result in better travel time reliability and lower congestion in the dual ETL system. Freight access and reliability is enhanced through interchange improvements and access for medium-duty vehicles in the ETLs.
- **State of Good Repair** is advanced by replacing aging infrastructure and by adding a practical amount of new infrastructure that improves mobility and is affordable to maintain over time.³

³ It is important to note that the Final Study Recommendations have a smaller physical footprint than the recommendations of the 2008 SR 167 Corridor Plan; therefore, they are less costly to keep in a State of Good Repair. It is beyond the scope of this study to provide recommendations on how WSDOT funds maintenance and State of Good Repair across the entire agency. As noted in the policy section, the State Legislature has identified maintenance as a priority for WSDOT, but historically it has not aligned funding with that priority.

Projects and Strategies in the Final Study Recommendations

The Final Study Recommendations are presented in Figure 4-2 and summarized in this section. Figure 4-3 illustrates the highway configuration for the SR 167 facility. The full list of projects and strategies can be found in *Attachment D*. The potential timing (near-, mid-, or long-term) is included in the description of each project or strategy (refer to the *Timing of Projects and Strategies* section).

Highway and Interchange Projects and Strategies

- **ETL:** Add a second ETL on SR 167 between I-405 and SR 512 (Mid- or Long-term).
- **SR 18 Interchange:** Complete the missing ramps (northbound to westbound and eastbound to southbound) to connect SR 167 and SR 18 and reconfigure the ramp from westbound SR 18 to southbound SR 167 for freight mobility (Mid- or Long-term).
- **Auxiliary Lanes:** Add auxiliary lanes on SR 167 (northbound between South 277th Street and SR 516 and both directions between SR 18 and Ellingson Road) and SR 18 (eastbound between SR 167 and SR 164) to reduce weaving and merging congestion (Near- or Mid-term).
- **Direct Access Ramps:** Add direct access ramps from the ETLs in Kent, Auburn, and Sumner to the Sounder and future BRT stations to improve access to PSRC-designated centers. Exact location and design of these ramps would be determined through future studies (mid- or long-term).
- **SR 512 Interchange:** Construct direct connector ramps between ETLs and SR 512 (Mid- or Long-term).
- **Arterial Interchanges:** Reconstruct or improve six arterial interchanges, including South 180th Street interchange in Renton, 84th Avenue South interchange in Kent, Ellingson Road and Stewart Road interchanges in Pacific, 24th Street East interchange in Sumner, and Valley Road interchange in Fife (Mid- or Long-term).
- **Statewide Low-income Toll Program:** Recommend to WSTC (sets all toll rates and policies for the state) that it establish a statewide tolling program for qualifying low-income individuals to improve equitable access to the ETLs (Near- or Mid-term).
- **Medium-duty Trucks in ETLs:** Recommend to WSTC that they change operational policies for the ETLs to allow medium-duty (less than 20,000 pounds) truck access to the ETLs to benefit freight access (Near- or Mid-term).

Tolling

As the state tolling authority, WSTC adopts state highway tolls and monitors, reviews, and oversees tolling revenue, collection, and operational policies (WSTC 2023).

The Final Study Recommendations include the implementation of a low-income toll program and a policy change to allow medium-duty trucks and trailers into ETLs. Any future decision on tolling policies, such as these, is under the purview of the WSTC, who sets rules and tolls through its public rate setting process.

Operations and Maintenance

Maintaining infrastructure in a State of Good Repair is one of WSDOT's highest priorities. The need to maintain and preserve the existing system prior to expanding it is in accordance with the transportation system policy preservation goal (RCW 47.04.280). The Final Study Recommendations will result in an SR 167 facility that is larger than it is today, which will require more investment to maintain it over time. WSDOT will continue to coordinate with the State Legislature to ensure adequate funding for the maintenance and operations of state highways. Chronic underfunding of maintenance and preservation statewide puts SR 167 and the rest of the multimodal transportation network in the study area at risk.

- **Implement Ramp Meters:** Add ramp meters to all lanes and arterial interchanges on SR 167 to manage traffic congestion (Near-term).

Local Roadway Projects and Strategies

- **Grady Way and Rainier Avenue Grade Separation:** Add intersection grade separation to improve transit access, particularly for high-capacity transit services on I-405 and SR 167 (Mid- or Long-term).
- **Complete Streets:** Improve 7 miles of local arterial streets, such as the West Valley and East Valley highways, by rebuilding the streets and improving pedestrian and bicycle infrastructure (Mid- or Long-term).

Transit Projects and Strategies

- **BRT on SR 167:** Create a BRT system to meet mobility needs expressed by communities living and working in equity priority areas for all-day, frequent transit service (Mid- or Long-term).
- **New or Enhanced Transit:** Implement 18 transit routes, expanding transit along 160 miles with new or enhanced service. Expand Sounder service consistent with the Sound Transit 3 plan (Near-, Mid-, or Long-term depending on the route).
- **BAT Lanes:** Rebuild Meridian Avenue to include BAT lanes and low-stress bicycle facilities (Mid- or Long-term).

Active Mode Projects and Strategies

- **Sidewalks:** Programmatic investment to complete sidewalk system gaps in PSRC-designated centers within about 1 mile of SR 167 to better accommodate anticipated growth in these areas (totals about 5 miles of new sidewalk). This investment also includes improved arterial crossings within the centers. Many individual projects that were identified by local jurisdictions were consolidated into this programmatic investment. Examples include sidewalk completion projects in downtown Kent and new traffic signals or other street crossing improvements in downtown Puyallup (Near- or Mid-term).
- **Bicycle Facilities:** Programmatic investment to complete up to 10 miles of bike lanes or facilities to meet WSDOT's Complete Streets requirements that connect to community destinations that were identified based on feedback from the people living and working in equity priority areas that attended the co-creation workshops. Many individual projects identified by jurisdictions were consolidated into this programmatic investment. Examples include bicycle facilities along South 43rd Street/SE Carr Road in Renton, new bike lanes as identified in the Sumner Bike Plan, and bicycle facility improvements to connect to the Puyallup Sounder station (Near- or Mid-Term).

Programmatic Strategies

The SR 167 Final Recommendations include programmatic strategies that would improve mobility in the SR 167 corridor. These types of strategies differ from major projects (such as the additional ETL, BRT service, and Interurban Trail enhancements) because they do not specify exact project details or locations. The programmatic approach allows for more flexibility in terms of the types and locations of what is ultimately built. For example, a city of Sumner active mode connection across SR 410 and, potentially, the Puyallup River between the Foothills Trail, Sumner's Rivergrove neighborhood, Sumner Link Trail, and downtown Sumner is consistent with the programmatic recommendation to improve regional trail connections, since it is within 1 mile of SR 167 and it links to a countywide center and transit hub. Other similar projects could be identified in the future as consistent with programmatic recommendations.

- **Low-stress Facilities:** Implement low-stress pedestrian and bicycle improvements with any project that has more than \$500,000 in state investment to support WSDOT's Complete Streets Initiative and to reduce potential mobility barriers caused by the SR 167 facility (Mid- to Long-Term).
- **Interurban Trail Enhancements:** Close the remaining gaps in the Interurban Trail in Milton and Edgewood to create a continuous trail corridor between Tacoma (via the Tacoma to Puyallup Trail) and Seattle. Implement a programmatic investment to improve safety on the Interurban Trail by improving arterial street crossings, adding lighting in key areas, and incorporating new connections. Also enhance regional trail connections to the Interurban Trail through improvements and extensions of other regional trails (e.g., Puyallup Riverwalk Trail, Foothills Trail Link to the Riverwalk Trail, White River Trail, Green River Trail, and Lake to Sound Trail) and connections between the Interurban Trail and other regional trails (Near- or Mid-Term).

Complementary Projects

The SR 167 Master Plan was developed in coordination with other WSDOT efforts completed or currently underway. Some of the key complementary projects that will enhance the performance of the Final Study Recommendations include:

- *I-405 Master Plan* projects, including completion of the *Lind Avenue half diamond interchange*, the *northbound SR 167 to southbound I-405 ramp capacity project*, and strategic improvements to the *I-405/I-5 interchange*.
- *Puget Sound Gateway Program* is currently building extensions of SR 509 between Burien and Kent and SR 167 between the Port of Tacoma and Puyallup.
- *SR 512 Corridor Study* is developing near-, mid-, and long-term projects and strategies to improve traffic operations, safety, and mobility for all users of SR 512 between SR 167 and I-5. Recommendations published in the summer 2023 study report will be used to pursue future funding for recommended improvements. Additional analysis by the SR 512 Study will identify phasing options for connecting the SR 167 Master Plan PEL flyover ramps to SR 512.
- *South Pierce Multimodal Connectivity Study* is identifying multimodal improvements to address traffic congestion, safety, and multimodal barriers in south Pierce County, specifically along and between SR 7, SR 161, SR 162, SR 507, and SR 702.

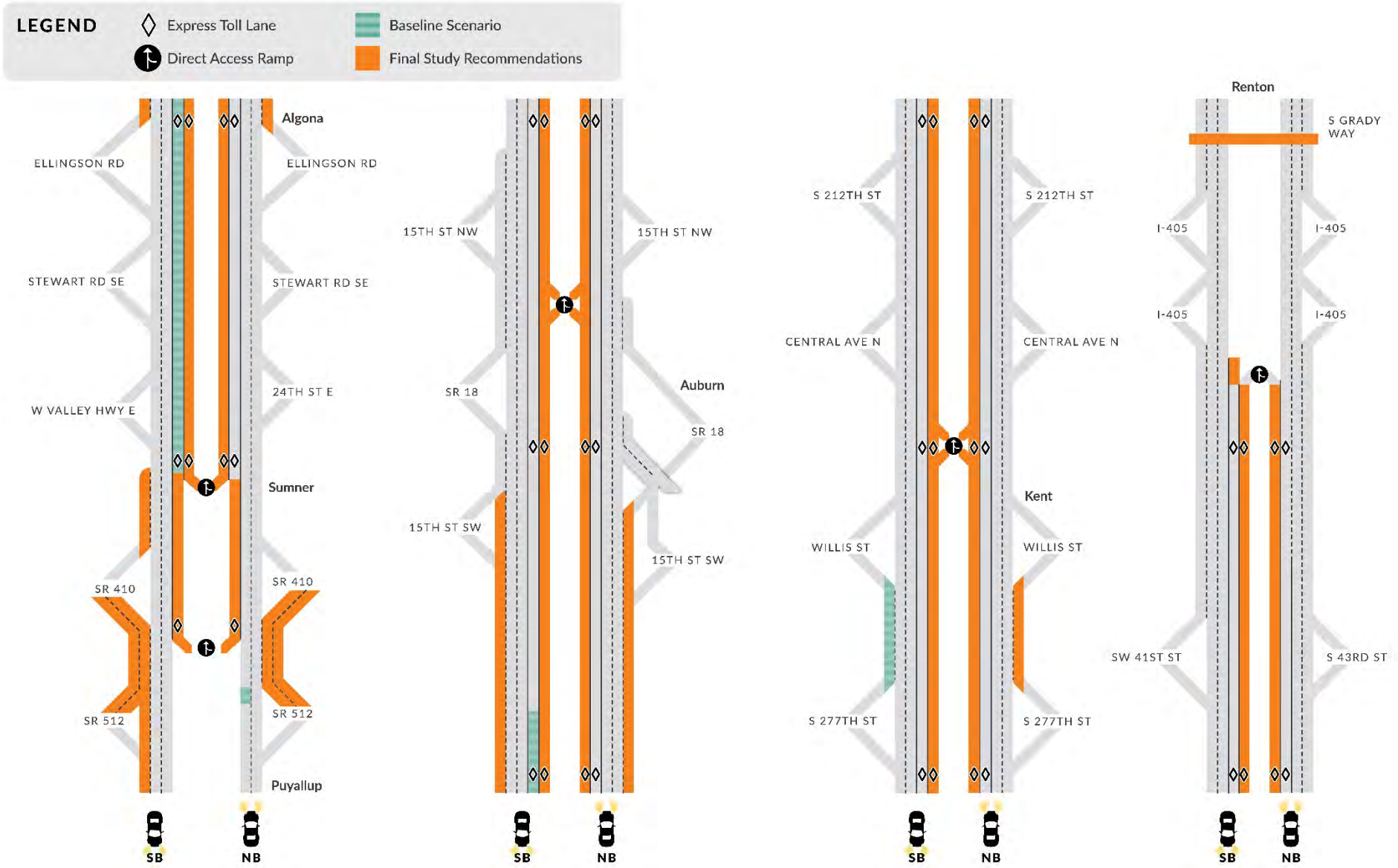


Figure 4-2. SR 167 Facility - Final Study Recommendations

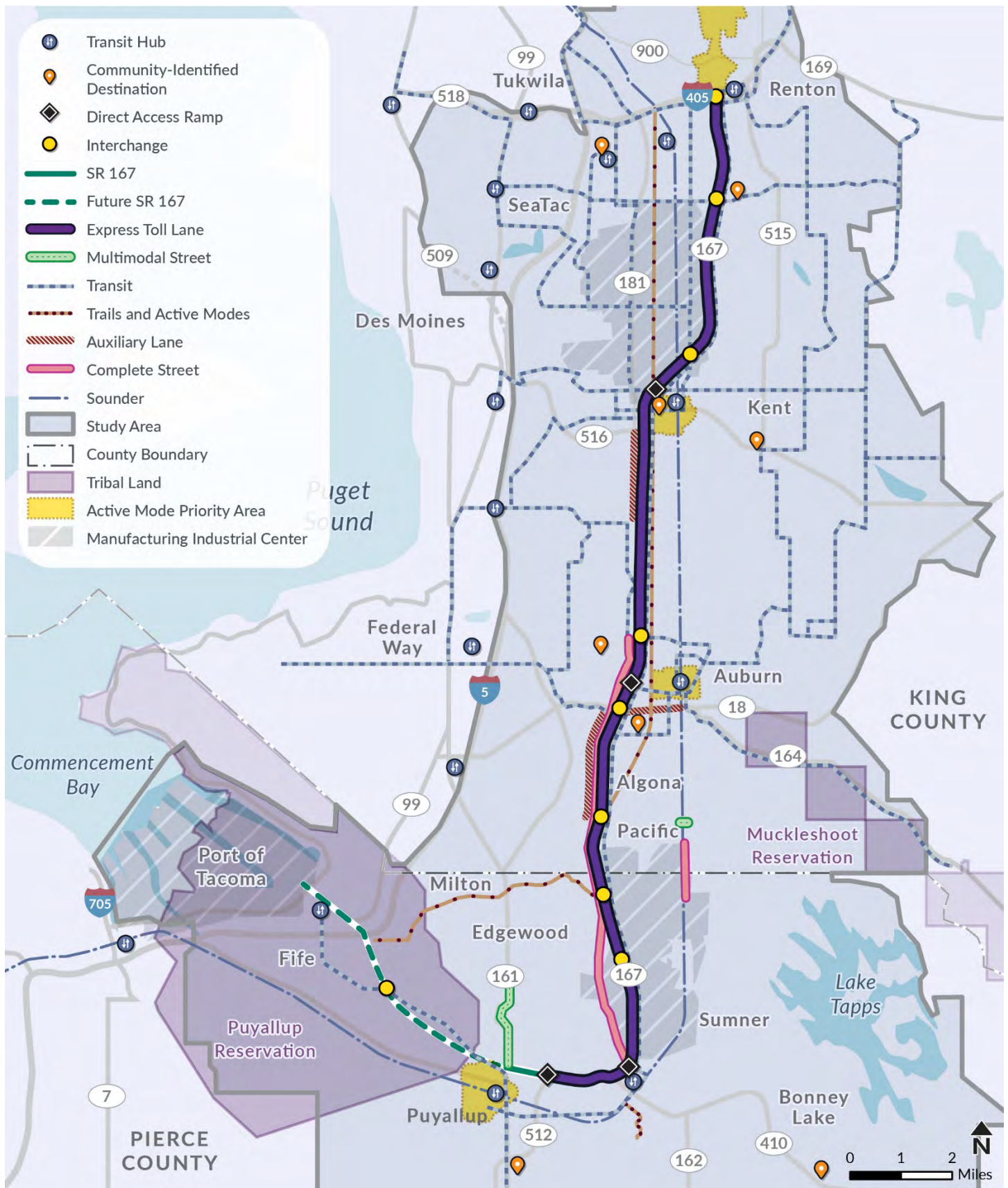


Figure 4-3. SR 167 Master Plan PEL Study – Final Study Recommendations

Timing of Projects and Strategies

Although more analysis is needed to develop a phasing plan for the Final Study Recommendations (refer to *Chapter 6*), the project team has identified some of the relevant characteristics that will factor into deciding what can be implemented in the near-, mid-, and long-term, which are summarized in Table 4-1. Table 4-2 summarizes the key projects and strategies in the Final Study Recommendations by potential timing. Near-term projects with a federal nexus could incorporate information from this SR 167 Master Plan PEL Study into NEPA processes if they move forward within five years, as they are less likely to require revalidation of analyses and decisions that were made during the PEL study process. Projects and strategies that are more costly or complex would likely be implemented in longer timeframes due to the needed time to secure significant funding and the design and construction timelines of major infrastructure projects.

Table 4-1. Near-, Mid-, and Long-Term Project Characteristics

Near-term Project Characteristics	Mid-term and Long-term Project Characteristics
<ul style="list-style-type: none"> Project is already included as part of an existing state and local plan that was developed in partnership with the community. Has strong community support. Would be competitive for grant opportunities. Would meet the NEPA requirements for a categorical exclusion. Can be implemented entirely within the right of way with minimal amounts of new impervious surfaces. Would not result in increased peak period vehicle traffic to an area that already experiences substantial congestion. 	<ul style="list-style-type: none"> Requires more extensive environmental analysis and mitigation. Requires other Final Study Recommendations are implemented first to avoid unintended bottlenecks or to provide supporting infrastructure (e.g., transit speed and reliability improvements to support BRT). Is not included in a local plan that was developed in partnership with the community. Has high costs, and it will take time to assemble funding.

Table 4-2. Potential Timing for Key Projects and Strategies in the Final Study Recommendations

Project or Strategy	Near-Term	Mid-Term	Long-Term
Second ETL on SR 167 between I-405 and SR 512	No	Yes	Yes
Complete missing ramps at SR 18/SR 167 interchange	No	Yes	Yes
Add auxiliary lanes on SR 167 and SR 18	No	Yes	Yes
Add direct access ramps at Kent, Auburn, and Sumner	No	Yes	Yes
Add direct connector ramps between ETLs and SR 512	No	Yes	Yes
Reconstruct or improve arterial interchanges at: South 180th Street, 84th Avenue South, Ellingson Road, Stewart Road, 24th Street East, and Valley Road (including low-stress pedestrian and bicycle improvements at these locations)	No	Yes	Yes
Implement statewide low-income toll program	Yes	Yes	No
Allow medium-duty trucks in ETLs	Yes	Yes	No
Implement ramp meters on all lanes at arterial interchanges	Yes	No	No
Grady Way/Rainier Avenue grade separation	No	Yes	Yes
Implement 7 miles of complete streets improvements	No	Yes	Yes
Implement BRT on SR 167	No	Yes	Yes
Implement 18 new or enhanced transit routes	No	Yes	Yes

Project or Strategy	Near-Term	Mid-Term	Long-Term
Expand Sounder service per the ST3 plan	No	Yes	No
Add BAT lanes on Meridian Avenue	No	Yes	Yes
Implement a program to complete sidewalk gaps within 1 mile of SR 167	Yes	Yes	No
Implement program to construct low-stress bicycle facilities connecting community-identified destinations	Yes	Yes	No
Interurban Trail enhancements	Yes	Yes	No

Chapter 5. Environmental Resource Considerations

One of the study's Purpose (Goals) is to identify improvements that reduce greenhouse gas emissions and limit environmental impacts. Environmental resources were studied to understand the existing environmental setting for the SR 167 corridor. With this environmental context, the project team evaluated projects and scenarios and identified sensitive areas and resource issues potentially affected by the Final Study Recommendations so they can be avoided or minimized to the extent possible during future planning and design refinements.

Environmental resources were selected based on the characteristics of the SR 167 corridor and on feedback from FHWA during Coordination Points No. 1 and No. 2. The resources included were generally consistent with NEPA and FHWA and WSDOT guidelines. Fieldwork was not conducted as part of this study, which relied on desktop analyses and publicly available information.

The following environmental resources are included in this chapter:

- Air Quality
- Climate Change and Climate Vulnerability
- Cultural Resources and Historic Bridges
- Environmental Justice and Equity Priority Areas (includes social resource considerations)
- Fish and Wildlife Habitat
- Fish Passage Barriers
- Flood Hazards
- Geologic Hazards
- Hazardous Materials
- Land Use
- Noise
- Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources
- Visual Resources
- Water Quality and Stormwater
- Wetlands

Chapter Overview

Chapter 5 summarizes the environmental resources reviewed for this SR 167 Master Plan PEL Study, which included analyzing existing conditions, evaluating scenarios and potential effects, and providing next steps and mitigation strategies. Refer to the following chapters and attachments for more detail on the environmental resources studied:

- *Attachment A* includes the PEL Questionnaire for this study, which is intended to support the transition from PEL to implementation and NEPA reviews.
- *Attachment A, Appendix A* includes tables with potential next steps and mitigation information related to each environmental resource.
- *Attachment A, Appendix B* includes detailed maps of environmental resources and Final Study Recommendations.
- *Attachment A, Appendix C* includes maps related to equity.
- *Attachment B, Chapter 12* includes detailed information about the existing environmental conditions related to each resource.
- *Attachment B, Appendix A* includes a list of geographic information systems (GIS) data sources used to identify environmental resources.
- *Attachment B, Appendix C* includes a list of applicable regulations for each environmental resource.
- *Attachment B, Appendix D* includes additional detail related to future environmental phases. Information from this attachment was used to summarize the potential next steps.
- *Chapter 3* and *Attachment C* includes a summary of the scenario evaluations related to environmental resource findings.

Environmental Resource Information in this Chapter

Each environmental resource includes the following sections:

- **Existing Conditions:** Describes the resource context and the existing conditions.
- **Scenario Evaluation and Potential Effects:** Provides what was evaluated for each resource in the scenarios screening and the potential effects related to the Final Study Recommendations.
 - **Potential effects** related to the Final Study Recommendations were identified based on sensitive areas that were discovered during the study of existing conditions, and **the effects described in this study are focused primarily on potential operational effects.** Refer to *Attachment A, Appendix B* for an environmental resources map book with an overlay of the projects identified in the Final Study Recommendations for a visual representation of potential effects or sensitive areas.
 - **Construction effects** would need to be analyzed during future phases. Likewise, indirect and cumulative impacts were not analyzed for this study and would be assessed in future phases. Refer to *Attachment A, Appendix A* for additional information related to next steps for each of the environmental resources.
- **Next steps and Mitigation Measures:** Summarizes the potential next steps and mitigation measures to avoid or minimize impacts to environmental resources.

To approve NEPA documentation, the requirements of fiscal constraint must be satisfied for FHWA and WSDOT. The identified projects and strategies are not required to be built in succession, and they may be constructed in any order as funding becomes available. Separate projects should meet the following NEPA-related criteria:

- **Independent Utility:** Projects should have the ability to operate on their own and provide a functional transportation system regardless of other elements of the Final Study Recommendations.
- **Logical Termini:** Projects should have rational end points for transportation improvements identified in the Final Study Recommendations and for the review of environmental impacts.
- **Purpose and Need:** Consistent with FHWA Coordination Point No. 2 (refer to *Chapter 2*), separate projects should demonstrate how they contribute to the overall SR 167 Master Plan PEL Study project Purpose and Need.
- **Environmental Impacts and Mitigation:** Separate projects should avoid the introduction of substantial additional environmental impacts that cannot be mitigated. Mitigation measures should be appropriate for the environmental impacts.

Air Quality

Transportation sources contribute to carbon monoxide, ground level ozone, nitrogen dioxide, and particulate matter (PM₁₀ and PM_{2.5}). Mobile Source Air Toxics (MSAT) also concern transportation projects. Greenhouse gases are regulated by the permitting requirements of the federal Clean Air Act. All WSDOT projects must comply with the Clean Air Act and Amendments of 1990, the Washington State Clean Air Act, and local requirements, and they must follow agency guidance. For additional context and regulations, refer to *Attachment B, Appendix C*.

Air quality is a result of factors, such as climate, airborne pollutants, and topography. The Clean Air Act regulates emissions through the NAAQS and the Hazardous Air Pollutants program, which includes MSATs.

Climate change is a long-term change in average weather patterns that results in impacts, such as increased winter precipitation, sea level rise, and increases in extreme heat events.

Existing Conditions

All areas within the study area currently meet the NAAQS (Ecology 2022). The southern portion of the study area (Edgewood south to Puyallup and Tacoma) is within the Tacoma–Pierce County maintenance area for PM_{2.5}, ending in year 2035, as illustrated in Figure 5-1. For additional information, refer to the *Air Quality* section in *Attachment B, Chapter 12*.

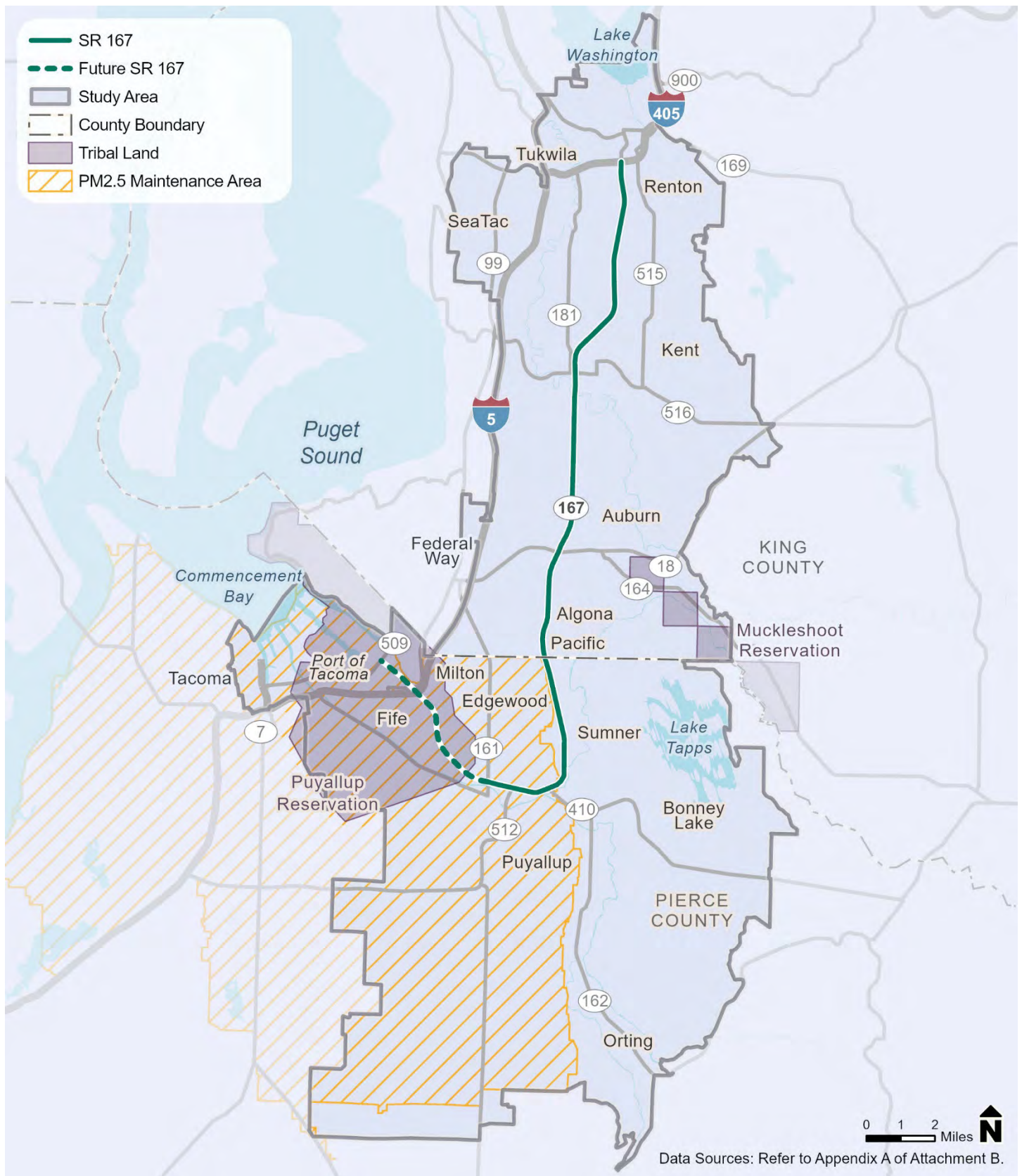


Figure 5-1. Air Quality Attainment Status

Scenario Evaluation and Potential Effects

Potential effects related to air quality may result from construction activities, but the use of BMPs should minimize effects to nearby receptors. Potential effects during operation were reviewed using VMT per capita and congestion metrics. The Final Study Recommendations are predicted to lower VMT per capita and provide congestion relief. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

Primary next steps would be to perform additional analyses to understand the effects of a proposed project or scenario. Air quality analyses should be performed once the project location's attainment and maintenance status are identified and traffic projections are available.

Projects within the Final Study Recommendations that are located in the Tacoma–Pierce County maintenance area would need to meet conformity requirements set in the federal Clean Air Act and the Washington Clean Air Act State Implementation Plan. Projects or scenarios may be exempt from transportation conformity if the actions are listed under 40 CFR 93.126 or WAC 173-420-110. A hot spot analysis (required by transportation conformity regulations for nonexempt projects within carbon monoxide or particulate matter nonattainment or maintenance areas) may be required, depending on transportation conformity.

If a project requires a quantitative analysis (for a NEPA environmental assessment [EA] or EIS) requiring the U.S. EPA's Motor Vehicle Emissions Simulator (MOVES), a technical report may be required. Energy analysis is typically not required for documents other than an EIS. Temporary construction effects must be addressed in an EA and EIS. As of January 2023, the U.S. EPA's MOVES model is required for regional and hot spot analyses.

Refer to the WSDOT *Environmental Manual, Chapter 425.08* for BMPs to control fugitive dust during construction and to reduce greenhouse gas emissions, energy use, and air pollution. Environmental commitments to mitigate known and unanticipated impacts to air quality are required to be documented and managed via WSDOT's Commitment Tracking System (CTS). Refer to Table 2 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for air quality.

Climate Change and Climate Vulnerability

Climate change is a long-term change in average weather patterns that results in impacts, such as increased winter precipitation, sea level rise, and increases in extreme heat events. WSDOT considers future climate risks during long-term planning and project designs and documents how climate change and extreme weather vulnerability are considered. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

Figure 5-2 presents WSDOT's Climate Impact Vulnerability dataset overlaid with sea level rise information. The northern portion of the SR 167 corridor has moderate vulnerability for impacts from climate change, meaning it could have temporary operational failure and closure, but it would reopen or be repaired within 60 days. Most state-owned facilities within the study area have low to moderate vulnerability to impacts from climate change.

SR 181 has a high vulnerability to the impacts from climate change due to its proximity to the low-lying areas adjacent to the Green River. Most of SR 167 has moderate vulnerability to and may be affected by climate-change-induced flooding. Sea level rise is not projected to directly impact either corridor, according to available modeling. For information about flood risks, refer to the *Flood Hazards* section. For additional information, refer to the *Climate Vulnerability* section in *Attachment B, Chapter 12*.

WSDOT assessed the impacts of extreme weather events and the projected climate impacts on its system (**climate vulnerability**) utilizing FHWA's conceptual climate risk assessment model developed for transportation infrastructure (WSDOT 2011).

The **climate impact vulnerability** data layer provides scores of low, medium, and high, which represent the criticality to overall transportation operations and public safety and how potential climate changes impact operations.

Scenario Evaluation and Potential Effects

Potential impacts related to climate change and vulnerability on WSDOT highways include increased mudslides, flooding, stormwater drainage damage, and roadside vegetation loss (WSDOT 2011). The review of potential impacts included a qualitative evaluation of the likelihood of maintaining a State of Good Repair and improving the resilience of the SR 167 facility to mitigate climate vulnerability. The Final Study Recommendations are similar in scale and scope to other ongoing WSDOT programs, so it is reasonable to assume projects and strategies will be maintained in a State of Good Repair well into the future. Some of the projects identified in the Final Study Recommendations would replace aging infrastructure and, ultimately, extend the service life and resiliency of the SR 167 facility. These projects could include any new bridges necessary to support the additional ETLs or new pavement and lighting that is

Nature-based Solutions

The **SR 167 Completion Project** used the *FHWA Vulnerability Assessment and Adaptation Framework* to identify areas at risk of flooding and sea level rise. It proposed stream and floodplain restoration strategies, including the restoration of a tidally influenced creek, as effective, nature-based solutions to reconnect creeks to their historic floodplains, improve salmon habitats, and manage stormwater flows from the new highway. The proposed stream and floodplain restoration efforts within the study area would reduce flood risks not only to SR 167, but also to I-5 and the surrounding community (WSDOT 2019).

included in interchange project. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

Future projects will be designed to improve resiliency of the transportation system, increasing the ability to withstand increased storm events and other climate changes. For information about next steps related to flood risk, refer to the *Flood Hazards* section and to [WSDOT's climate change and transportation webpage](#). Also refer to Table 2 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for climate change and climate vulnerability.

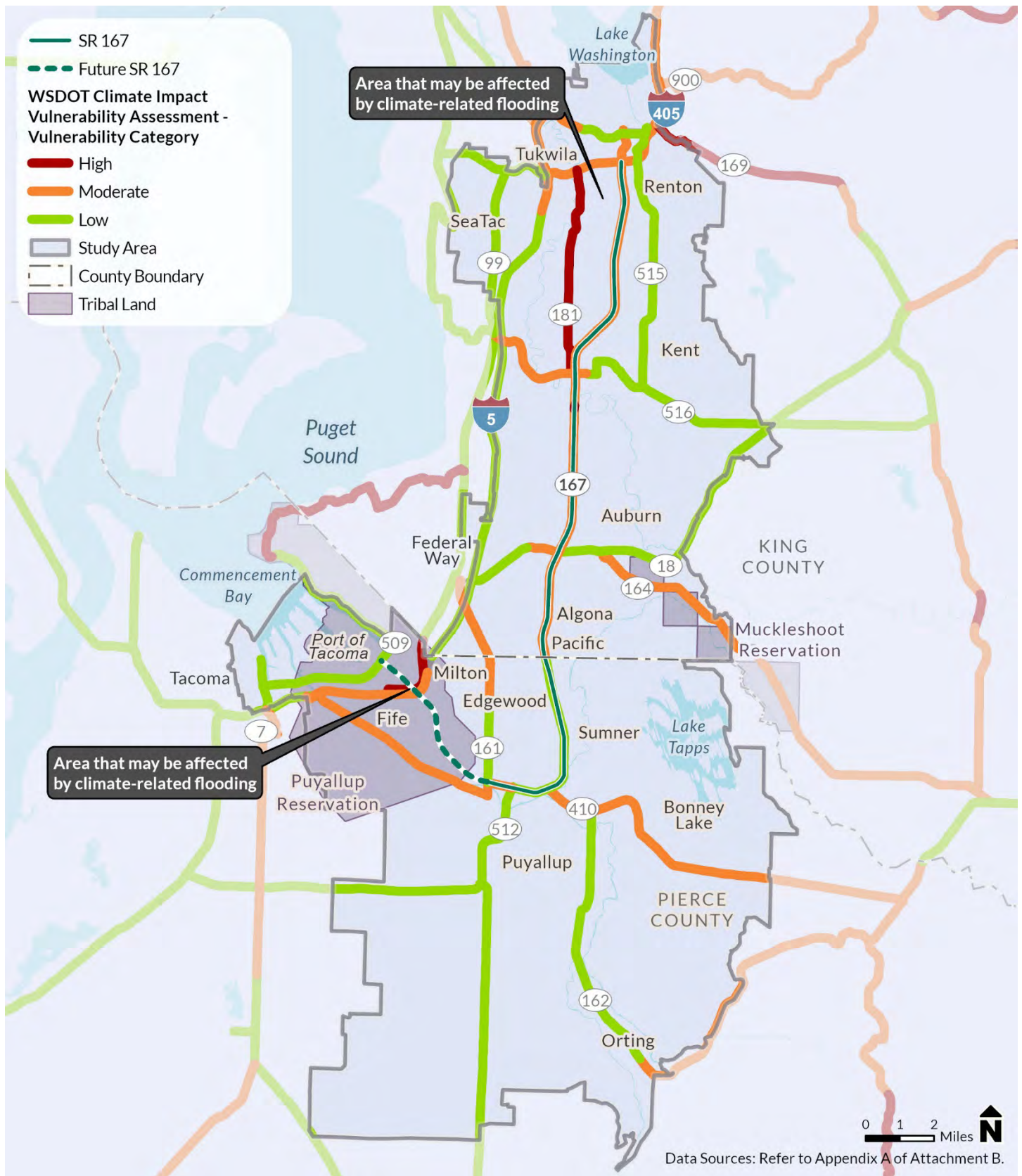


Figure 5-2. WSDOT Climate Vulnerability Map

Cultural Resources and Historic Bridges

Cultural resources include built historic, archaeological, and tribal resources. Identifying cultural resources early in planning processes helps identify potential scope and scheduling impacts. Transportation projects sponsored or performed by WSDOT have the potential to affect cultural resources; therefore, they are required to comply with state and federal regulations that govern how such impacts on these resources are taken into consideration. Projects with federal nexus or on tribal lands must be compliant with Section 106 of the National Historic Preservation Act to assess impacts to historic properties and to consult with FHWA, Advisory Council on Historic Preservation, DAHP, and tribes, as appropriate. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

The study area includes portions of the Puyallup and Muckleshoot tribal reservations and the landscape where Native and non-Native peoples make their homes (WSDOT 2008).

The resources listed in the NRHP and Washington Heritage Barn Register properties eligible for listing in the NRHP include:

- F.W. Woolworth Co. Store Renton (ID 289391)
- Daniel Upper Farm (ID 663123)
- Blomeen, Oscar, House (ID 29495)
- U.S. Post Office Auburn (ID 287039)
- Masonic Temple Auburn (ID 288587)
- Jovita Land Company Model Home, Corbett House (ID 662763)
- M.V. Kalakala Ferry (ID 662786)
- Dieringer School (ID 26185)
- Ryan House (ID 26155)
- Christ Episcopal Church Puyallup (ID 25916)

Descendants of the Duwamish, Suquamish, Puyallup, Muckleshoot, and other native peoples consider not only archaeological sites but also traditional places on the landscape where they hunted, fished, gathered plants and shellfish, and conducted sacred activities to be cultural resources. In state and federal regulations, such places are included in the definitions of traditional cultural places or traditional cultural landscapes.

They are also presented in Figure 5-3. Additionally, there are many unsurveyed potentially historic properties that meet the age threshold along the SR 167 corridor. For additional information, refer to the *Cultural Resources and Historic Bridges* section in *Attachment B, Chapter 12*.

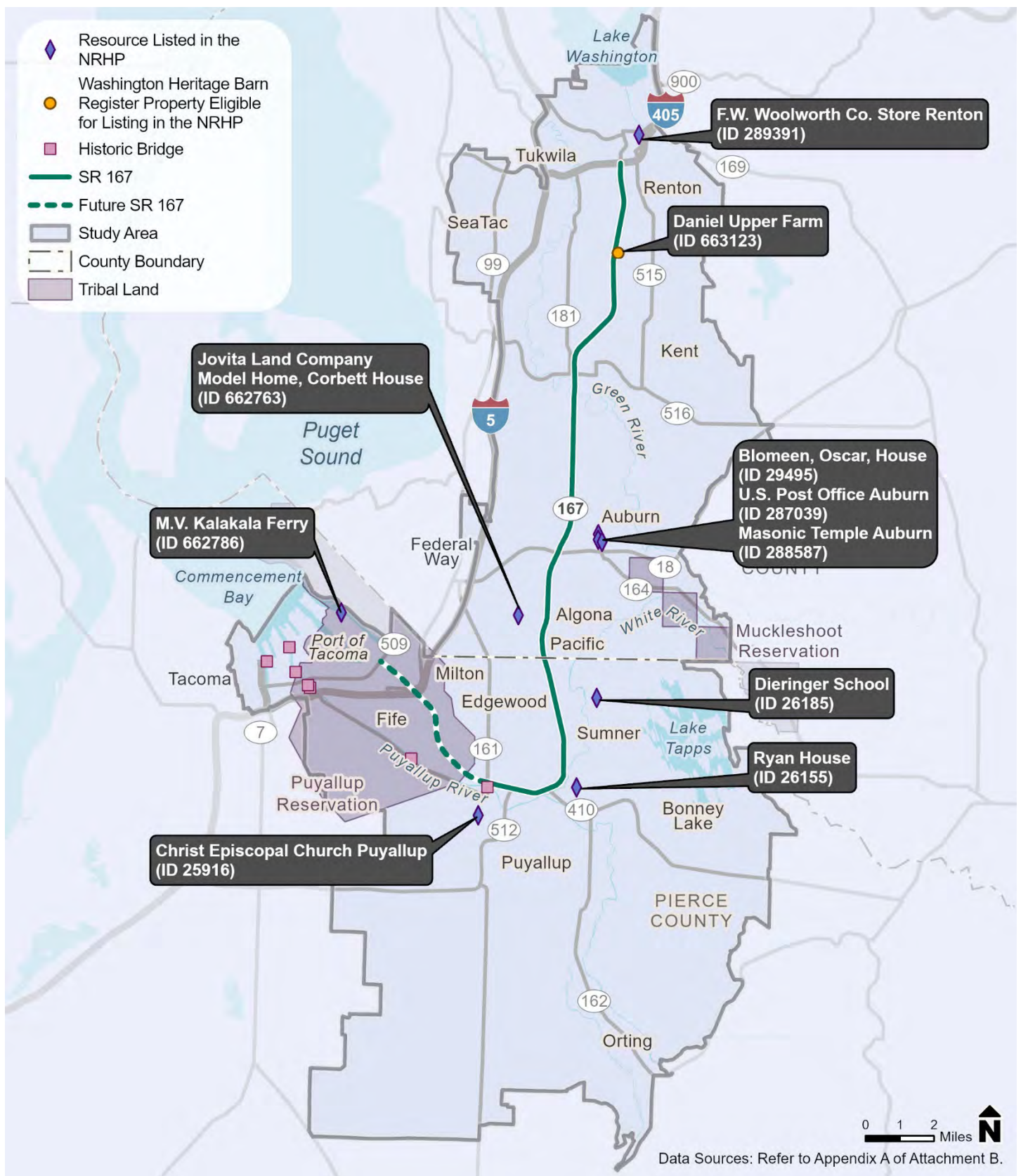


Figure 5-3. Existing Resources Listed in the NRHP and Historic Bridges

Scenario Evaluation and Potential Effects

Potential effects to properties were reviewed from federal, state, and tribal levels of screening. The project team reviewed properties listed in or eligible for the NRHP. There were no projects identified in the Final Study Recommendations that are likely to impact a resource listed in the NRHP, but there are many properties that meet the age requirements for eligibility. Adding ETL lanes on SR 167 could potentially affect a resource in the Washington Heritage Barn Register, the Daniel Upper Farm, which is eligible for listing on the NRHP. The Elm Street East and Valley Avenue local roadway project could affect the Sidney Williams House, a site listed on the Washington Register. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

When the project alignment is identified, the Area of Potential Effects (APE) delineation and the DAHP WISAARD (Washington Information System for Architectural and Archaeological Records Data) search can be performed. Fieldwork also would be conducted. Because there are several properties that meet the age requirements for eligibility, additional analysis and fieldwork is needed during future phases. The cultural resources study documentation and survey report must be completed prior to developing Section 4(f) documentation. Traditional Cultural Properties/Landscapes data will not be publicly disclosed. The project team's review of previous cultural resources surveys, historical maps, and ethnographic reports or other sources will provide the more detailed information needed to assess low and high probability of archaeological resources and potential impacts for future projects.

Section 4(f) refers to the original section within the U.S. Department of Transportation Act of 1966 that established the requirement for consideration of park and recreational lands, wildlife and waterfowl refuges, and historic sites in transportation project development.

Section 106 and DAHP/Tribal Historic Preservation Officers consultation would be ongoing throughout the NEPA process. Section 106 requires input from the public and other interested and affected parties. Mitigation measures will be developed through Section 106 consultation with Native American tribes and agencies. Common strategies for mitigation include excavation, relocation, rehabilitation, recordation, screening, signage, and public interpretation. Section 4(f) impacts would be assessed during future project phases. Refer to Table 3 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for cultural resources and historic bridges.

Environmental Justice and Equity Priority Areas

At the federal and state level, advancing equity and supporting vulnerable populations and overburdened communities is a clear priority of administrations. Through several executive orders and state legislation, infrastructure and mobility projects are required to incorporate an equity lens into the planning, construction, and operation of new projects.

As equity is an overarching goal of this study (refer to *Chapter 1*), it is important to understand the community profile and to identify **equity priority areas** to ensure engagement with these communities and that proposed projects and scenarios will address identified needs. For additional context and regulations related to environmental justice, refer to *Attachment B, Appendix C*.

Equity Priority Areas are communities with high concentrations of vulnerable populations and overburdened communities. They are used to identify and analyze transportation solutions for this study that maximize benefits and minimize impacts to people living in these areas.

Executive Order 12898 (Federal)

Environmental justice is the fair treatment of and access to meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, rules, and policies. The principles of environmental justice include avoiding, minimizing, and mitigating disproportionately high and adverse effects on **minority and low-income populations**; ensuring full/fair engagement and participation by potentially affected communities; and preventing the denial, reduction, or significant delay in receiving benefits by minority and low-income communities (WSDOT Environmental Manual, Chapter 460).

Under Executive Order 12898, federal agencies are directed to do the following (U.S. EPA 2022b):

- Identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law,
- Develop a strategy for implementing environmental justice, and
- Promote nondiscrimination in federal programs that affect human health and the environment, as well as provide minority and low-income communities access to public information and public participation.

Healthy Environment for All or HEAL Act (State)

The HEAL Act (Chapter 70.A.02 RCW, Environmental Justice) was passed in July 2021 and implementation begins in July 2023. Key elements include incorporating environmental justice as part of agency work, promoting equitable sharing of environmental benefits, investing in communities that experience the greatest environmental and health burdens, providing a voice for disproportionately affected communities, and supporting evaluation tools and processes (Washington Department of Health 2021). New grant programs, agency rules, and transportation projects equal to or greater than \$15 million that are starting design on or after July 1, 2023 are required to conduct environmental justice assessments. The SR 167 Master Plan PEL Study is not required to comply with the HEAL Act. Individual projects and strategies identified in the Final Study Recommendations are required to comply with federal and state regulations during future environmental review phases.

The HEAL Act defines **vulnerable populations** as those at higher risk for poor health in response to environmental harms from adverse socioeconomic and sensitivity factors, and **overburdened communities** as

geographic areas where vulnerable populations face combined, multiple environmental harms and health impacts (Washington State Legislature 2021).

Vulnerable populations include, but are not limited to:

- Racial or ethnic minorities
- Low-income populations
- Populations disproportionately impacted by environmental harms
- Populations of workers experiencing environmental harms

Existing Conditions

The community profile includes findings related to the existing community within the study area, which includes vulnerable populations, overburdened communities, and environmental justice populations. Table 5-1 summarizes the overall community demographics for the study area, and it presents the demographic indicators used to identify environmental justice communities and equity priority areas. For additional information, refer to *Attachment B, Chapter 3. Community Profile* and the *Environmental Justice* section in *Attachment B, Chapter 12*.

Community Profile

A summary of existing demographic, social, and economic characteristics for the study area that provides the basis for assessing effects on local communities and evaluating SR 167 Master Plan scenarios with respect to environmental justice and equity.

Table 5-1. Study Area Demographic Summary

Demographic	Study Area	PSRC Area ^a
Total Population	660,400	4,137,204
Minority Population ^{b, c}	43%	34%
Low-Income Population ^{b, c, d}	25%	20%
In-Poverty Population	10%	9%
Youth Population ^c	24%	22%
Senior Population (over 64) ^c	12%	13%
Limited English Proficiency Population ^c	11%	8%
Household without a Vehicle ^c	6%	7%
Cost-burdened Household ^c	34%	32%
Population with a Disability ^c	11%	11%
Single-parent Family ^c	27%	22%
Foreign-born Population ^c	19%	17%
Owner-occupied Household	60%	61%
Renter-occupied Household	40%	39%
Unemployed Population	5%	4%

Sources: U.S. Census Bureau 5-year American Community Survey data (2019)

Notes:

^a The PSRC area represents the geography within King, Pierce, Kitsap, and Snohomish counties.

^b Indicator used to identify environmental justice communities.

^c Indicator used to identify equity priority areas for the SR 167 Master Plan PEL Study.

^d Includes populations at or below 200 percent of the Federal Poverty Threshold.

Key findings related to the community profile include:

- Minority populations account for almost half (43 percent) of the total population in the study area, but they make up more than half (60 percent) of the total population living in poverty.
- About 25 percent of the study area population is considered low-income, which is higher than the comparison geography (PSRC area).
- About 10 percent of the study area population (age 5 or older) have limited English proficiency, with higher concentrations in the northern half of the study area. Of the limited English-speaking populations, most speak Spanish or Asian languages, including Korean, Chinese, Vietnamese, Tagalog (including Filipino), and Pacific Islander languages.
- About 5 percent of people between the ages of 20 and 64 have a disability, and about 11 percent of the people living in the study area identify as having a disability.

Low-income Populations

Given the high cost of living in the Puget Sound region, PSRC designates people who are at or below 200 percent of the federal poverty guidelines as being low-income (PSRC 2018).

Certain federal agencies and programs use percentages of the federal poverty guidelines, as determined by the U.S. Department of Health and Human Services, to define income limits and to set eligibility criteria for low-income designation (which is dependent on household size). People who are at or below 200 percent of the federal poverty guidelines have a household income that is within two times the amount of the federal poverty limit for their respective household size (ASPE 2023).

Environmental Justice Communities and Equity Priority Areas

Protected classes under environmental justice include minority and low-income populations, both of which are present in the study area. Of the 384 block groups in the study area, more than half (225 block groups or 59 percent) contain higher concentrations of minority populations than the PSRC area (34 percent). Similarly, a little more than half of the block groups (209 block groups or 54 percent) have higher concentrations of low-income populations compared to the PSRC area (20 percent). For more information, refer to the *Environmental Justice* section in *Attachment B, Chapter 12*.

For this study, a broader set of draft demographic indicators was considered to identify equity priority areas (refer to *Attachment B, Chapter 3*). These indicators are in Table 5-1, and they are generally consistent with how the HEAL Act (Chapter 70A.02 RCW) defines vulnerable populations and disadvantaged communities. The equity priority areas were reviewed and confirmed during meetings with the EAC. Refer to *Chapter 2* and *Attachment B, Appendix F* for details on the methodology review process for identifying equity priority areas. Refer to *Chapter 3* and *Chapter 4* for evaluation results related to equity and equity priority areas.

Concentrations of minority and low-income populations and locations of equity priority areas are presented in Figure 1-9, Figure 5-4, and Figure 5-5. Within the study area, vulnerable populations and overburdened communities, including environmental justice protected classes (minority, low-income populations), are more concentrated north of SR 18 (refer to maps in *Attachment A, Appendix C*). Many community and social resources, such as parks and schools, are located within equity priority areas (refer to Figure 5-4 and Figure 5-5; the Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources section; and *Attachment A, Appendix B*). Also refer to *Attachment A, Appendix C* and *Attachment B, Appendix F* for additional maps related to vulnerable populations and overburdened communities.

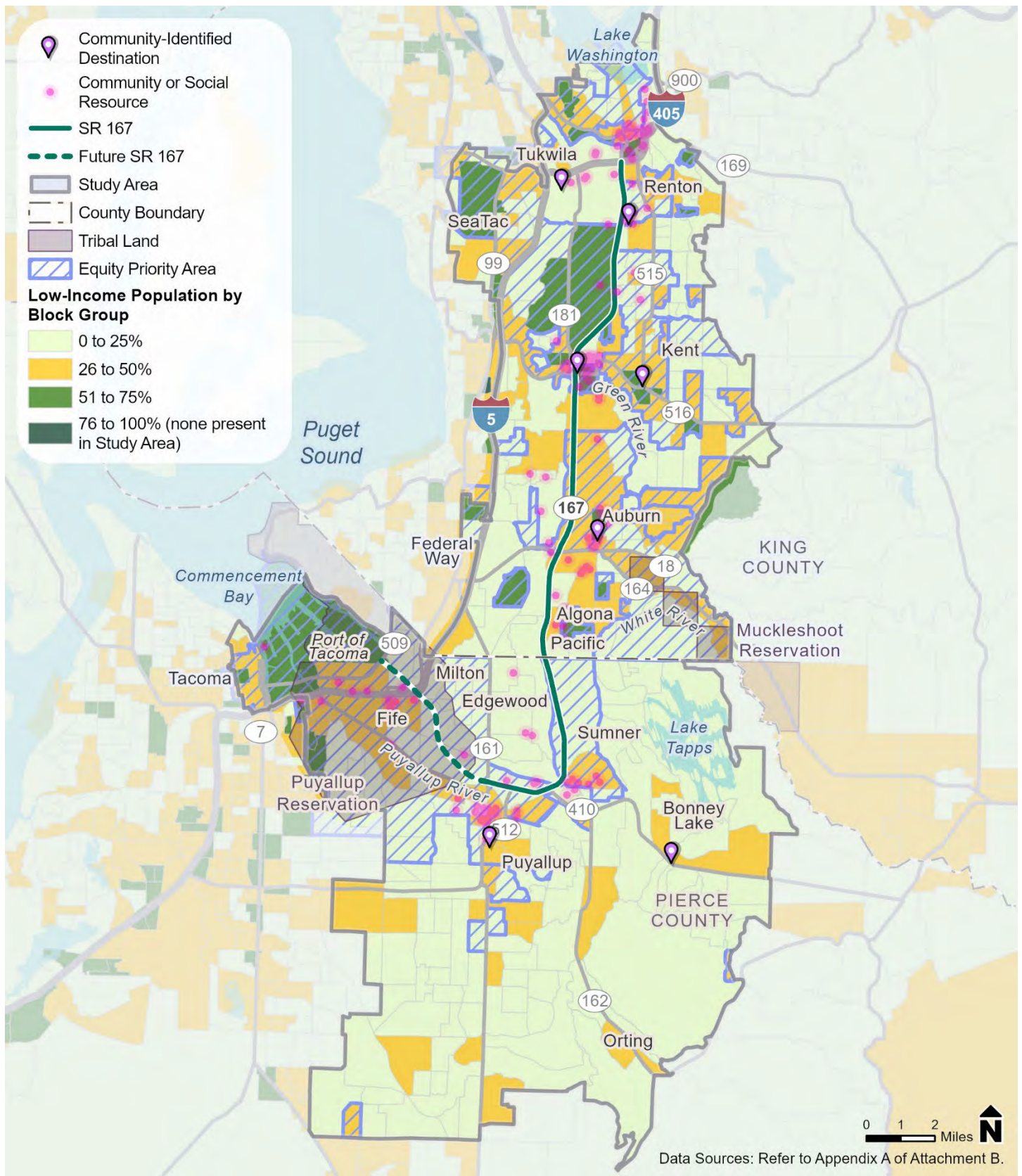


Figure 5-5. Low-income Populations

Scenario Evaluation and Potential Effects

The project team analyzed potential effects on communities, including environmental justice communities and communities in equity priority areas, as well as effects on community and social resources, such as parks and schools. This qualitative review included potential effects to these communities from other resources, such as noise. The project team also relied on feedback from the community when evaluating projects and strategies for the study. Refer to *Chapter 2* for details on feedback received.

WSDOT is required to partake in government-to-government consultation with local tribes to ensure any disproportionately high and adverse effects to American Indian or Alaskan Native communities or tribal reservations are eradicated, mitigated, or avoided appropriately (WSDOT 2022b).

Projects along the SR 167 facility are more likely to require commercial or industrial property acquisitions, and local roadway projects are more likely to require residential property acquisitions. Based on information available at the time of this study, the project team identified that some projects would require right of way acquisition, but it is not possible to determine if residential and business displacements would occur at this level of project detail. Refer to the *Next Steps and Mitigation Strategies* discussion of this section and *Attachment A, Appendix A* for additional information about next steps in identifying displacements in future phases. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

The following interchange, highway, and local roadway Final Study Recommendations that could potentially affect community and social resources include:

- Ilalko Elementary near the East Valley Highway projects
- Gustaves Manor subsidized housing complex and city buildings with the A Street Northwest project
- Chateau Valley Center retirement facility near the 43rd/180th Street Interchange project
- Potential park, trail, and open space impacts, as described in the *Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources* section

The Final Study Recommendations are expected to provide the following benefits that would not be realized under the Baseline Scenario. Refer to *Chapter 4* and *Attachment D* for additional detail.

- An 18 percent increase in the number of jobs accessible within a 45-minute bus or train trip from equity priority areas, and a 50 percent increase in the number of households accessible within equity priority areas.
- A 110 percent increase in the equity priority area population within a half-mile of frequent or on-demand transit
- A 49 percent increase in midday bus hours of service, and a 149 percent increase in evening bus hours of service.
- Lower auto costs for ETL users relative to the Baseline Scenario due to a low-income toll program and dual ETLs.
- Increased system completeness (91 percent) and sidewalk completeness (100 percent) for pedestrians and bicyclists within 1 mile of SR 167.

Next Steps and Mitigation Strategies

Next steps would be focused on continued outreach and additional analysis as needed to comply with state and/or federal regulations. Outreach to environmental justice protected classes and/or other vulnerable populations and overburdened communities, such as populations with limited English proficiency, should be started early and should continue throughout a project so that these populations have the opportunity for meaningful participation in the project. Project teams should consider language translation needs and targeted outreach needs early in project schedules. It is also important to consider businesses and community resources and facilities that are important to these populations.

If a project triggers a NEPA EA or EIS, a social and community effects analysis would be required as part of the environmental justice analysis, as described in Section 109(h) of the Federal-Aid Highway Act. NEPA categorical exclusions do not require a community effects analysis. During NEPA, the project team would use the design footprint to identify property acquisitions and displacements and to conduct an environmental justice analysis to determine if resource-specific effects occur disproportionately in areas with low-income and minority populations. For EIS projects, a Title VI disparate analysis is required to determine if the project may have a disparate impact by comparing the least and most impacted groups.

Projects with complex or substantial impacts may require a discipline report. An environmental justice memorandum is generally required for projects requiring the relocation of a person or a property, and a discipline report is required if the project would displace more than 10 residences or businesses. If disproportionately high and adverse effects exist, the project team would work with the affected populations to co-create mitigation strategies that would address the proposed project's impacts and improve conditions or benefit the community in other ways. The analysis of impacts to environmental justice communities and communities in equity priority areas may be performed and documented either within an environmental justice report or in a standalone discipline report.

WSDOT uses community input when identifying appropriate mitigation measures to address transportation impacts. Mitigation must match the type of impacts the project has on the individuals to be considered appropriate (WSDOT 2022b). SEPA does not contain specific requirements for conducting environmental justice analysis. Project mitigation would follow the steps laid out in the WSDOT *Environmental Manual, Chapter 460.08*. Refer to Table 1 in *Attachment A, Appendix A* for additional information regarding the next steps and implementation considerations for environmental justice.

Fish and Wildlife Habitat

Fish and wildlife habitat and habitat connectivity are important components of an ecosystem's health and functionality. The presence of wildlife in urban landscapes depends on the availability of appropriate habitat and vegetation. Transportation systems can represent the main cause of habitat fragmentation for wildlife (FHWA 2011b). Species of interest are given more detailed consideration because they are protected either by the state or federal government. Critical habitat under the ESA includes specific geographic areas that contain features essential to the conservation of an endangered or threatened species that may require special management and protection. Critical habitat also may include areas that are not currently occupied by the species but would be needed for its recovery (USFWS 2021). For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

Much of the land surrounding SR 167 has seen extensive growth in recent years, and more urban areas tend to have reduced functional riparian habitats and connectivity between and within aquatic and terrestrial habitats. Riparian areas are present along the rivers and streams near SR 167 and provide habitat for plants and animals. However, riparian conditions and functions are degraded by bank armoring, channelization, and development.

Biodiversity areas and corridors are mostly on steep slopes along the river valleys with native vegetation providing wildlife habitat and migration corridors. Pierce County has also identified the White River and Puyallup River in its dataset for biodiversity networks. There are no King County identified wildlife networks within the SR 167 corridor. Waterfowl concentration areas are mainly found south of SR 516. Most of the identified habitat connectivity investment areas are ranked as low priority, indicating there is a low safety ranking and/or a low ecological stewardship ranking.

Species of interest include federal- and state-listed species identified by the USFWS, National Marine Fisheries Service (NMFS), and WDFW as endangered or threatened and potentially occurring near the SR 167 corridor.

Chronic environmental deficiencies (CED) are roadways adjacent to rivers or streams that are subject to damage from streambank erosion, sedimentation, flooding, or washouts that require frequent emergency repairs or maintenance and potentially disturb fish habitat. No CED areas are present near the SR 167 corridor.

Table 5-2 presents the ESA-listed species that were identified in the existing conditions. Three fish species have critical habitat present within the SR 167 corridor. Critical habitat for the study area is illustrated in Figure 5-6. For additional information, refer to the *Fish and Wildlife Habitat and Chronic Environmental Deficiencies* section in *Attachment B, Chapter 12*.

Table 5-2. Listed Species Identified in Existing Conditions

Species	Federal Status	State Status	Critical Habitat Present
Bull trout (<i>Salvelinus malma</i>)	Threatened	Candidate	Yes
Chinook salmon (<i>Oncorhynchus tshawytscha</i>)	Threatened	None	Yes
Steelhead (<i>Oncorhynchus mykiss</i>)	Threatened	None	Yes
Marbled murrelet (<i>Brachyramphus marmoratus</i>)	Threatened	Endangered	No
Oregon spotted frog (<i>Rana pretiosa</i>)	Threatened	Endangered	No
Streaked horned lark (<i>Eremophila alpestris strigata</i>)	Threatened	Endangered	No
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Threatened	Endangered	No
Taylor’s checkerspot butterfly (<i>Euphydryas editha taylori</i>)	Endangered	Endangered	No
Golden paintbrush (<i>Castilleja levisecta</i>)	Threatened	None	No
Marsh sandwort (<i>Arenaria paludicola</i>)	Endangered	None	No

Sources: USFWS 2023, WDFW 2022, NMFS 2022

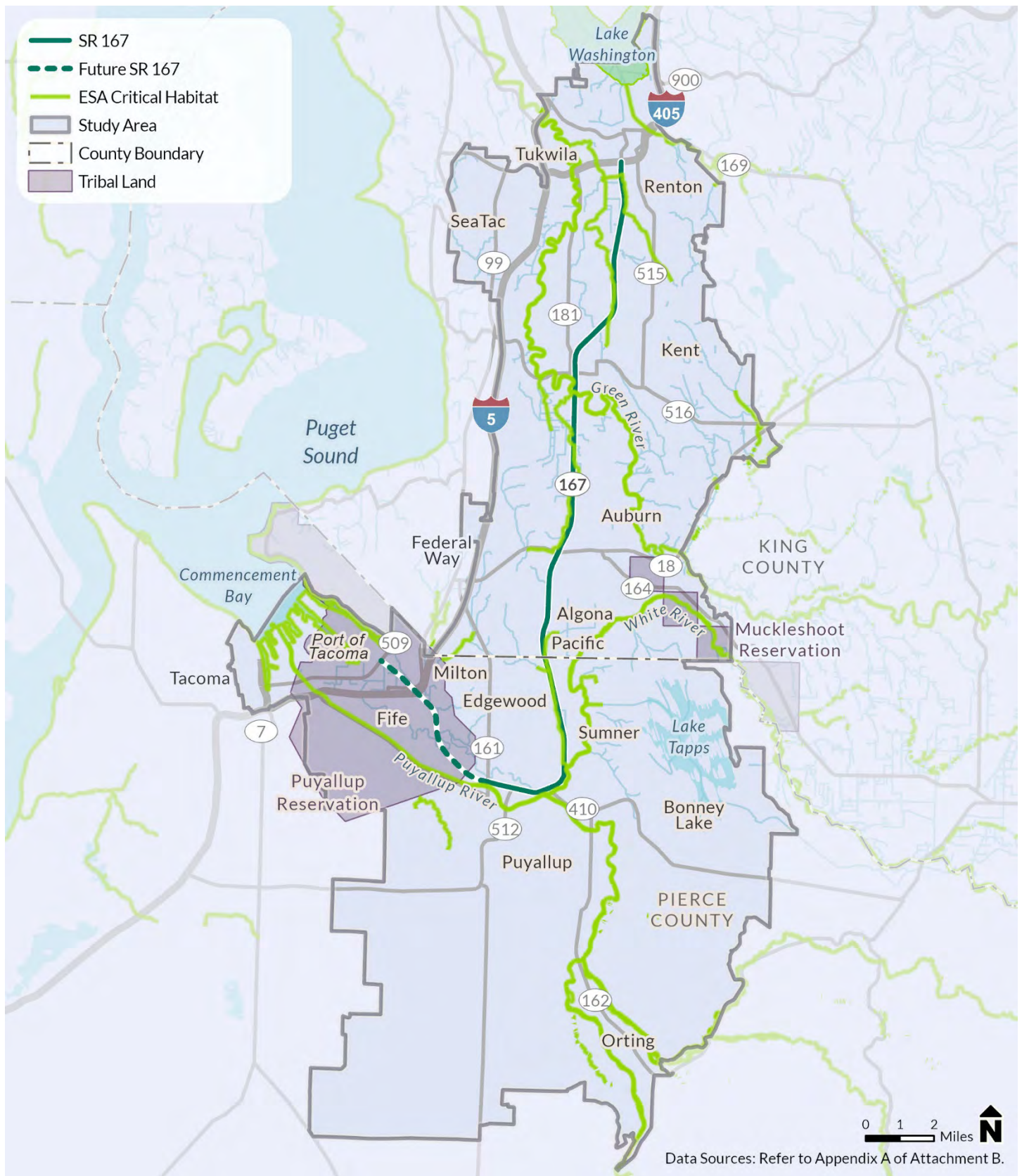


Figure 5-6. Critical Habitat

Scenario Evaluation and Potential Effects

Potential effects to species of interest or critical habitat were reviewed. No field surveys for the occurrence of the federal- and state-listed species were conducted for this study, which performed a desktop analysis of publicly available data. CEDs were not evaluated. Final Study Recommendations that require work near a stream could potentially impact ESA critical habitat for steelhead, Chinook salmon, and bull trout. Other potential impacts to habitat would be assessed in future phases. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

Once a project location and alignment are identified, more detailed analyses of existing fish and wildlife habitat would be performed, which would likely include fieldwork. Early coordination with WSDOT ESA liaisons should occur prior to submitting ESA requests for consultation or other approvals. Potential permits or approvals may include a hydraulic project approval (HPA), ESA Section 7 compliance, Essential Fish Habitat compliance, construction in state waters memorandum of agreement, incidental harassment authorization, and bald eagle form.

Measures to avoid, minimize, or mitigate impacts to fish and wildlife habitat may include altering the project design, changing construction methods, incorporating construction timing restrictions, providing more water quality treatment for fish species, and protecting and enhancing existing habitats. Refer to Table 5 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for fish and wildlife habitat.

Fish Passage Barriers

Fish passage barriers are identified and inventoried by the WDFW. Culverts must be identified and verified to evaluate and determine if they are fish passage barriers. As detailed in *Chapter 1*, the injunction determined by United States, et al. vs. Washington, et al. No. C70-9213 Subproceeding No. 01-1 requires the state to significantly increase the effort to remove state-owned culverts by 2030 that block habitats for fish that are identified on the injunction list. This includes maintaining and monitoring these culverts for fish passage. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

There are a total of 123 known culverts along the SR 167 corridor, 60 of which convey streams with confirmed fish use. During the study of existing conditions, 20 known WSDOT injunction barriers were identified along or near SR 167. Potential barriers that have not been identified or field verified may also be present. The location of injunction barriers identified in existing conditions is presented in Figure 5-7. Refer to the *Water Quality and Stormwater* section for more information on streams and water quality. For additional information, refer to the *Fish Passage Barriers* section in *Attachment B, Chapter 12*.

Fish Passage Barriers

A fish barrier is either a natural or humanmade structure that prevents the upstream movement of fish and aquatic organisms. They are corrected either through standalone correction projects or as part of a larger transportation improvement project. Replacing fish barriers with restored stream connections provides improved anadromous fish access to upstream habitat.

The review of injunction barriers is coordinated through WSDOT, WDFW, and the affected tribes. As of 2021, WSDOT has completed 365 fish passage barrier corrections statewide, restoring access to approximately 1,215 miles of potential upstream habitat.

Scenario Evaluation and Potential Effects

Potential effects to streams and fish passage along the corridor were reviewed by identifying the barrier status of culverts in or next to potential project areas. The Final Study Recommendations that involve work on or adjacent to any stream may need to correct fish passage barriers. These projects include adding lanes on SR 167, interchange projects, direct access ramps, and local roadway projects including the West Valley Highway project. Projects in the Final Study Recommendations near an injunction barrier would be reviewed and evaluated for including barrier correction work. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

When a project location and alignment are available, coordination with the WSDOT Environmental Services Office, WDFW, and local tribes will be needed to confirm the WSDOT-owned fish barriers that require correction during future project review. A concurrence site visit with the tribes and WDFW should occur prior to completing a preliminary hydraulic design report. During the design process, tribal approval of the stream crossing design and fish passage barrier correction proposal and an HPA should be obtained.

Impacts to fish habitat should be mitigated per the HPA mitigation sequence provided on the [WSDOT Fish Environmental Guidance webpage](#). Pre-mitigation efforts may include designing to avoid the fish passage culvert or mitigating by repairing, rehabilitating, or restoring the affected environment by removing a fish barrier. Refer to Table 4 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for fish passage barriers.

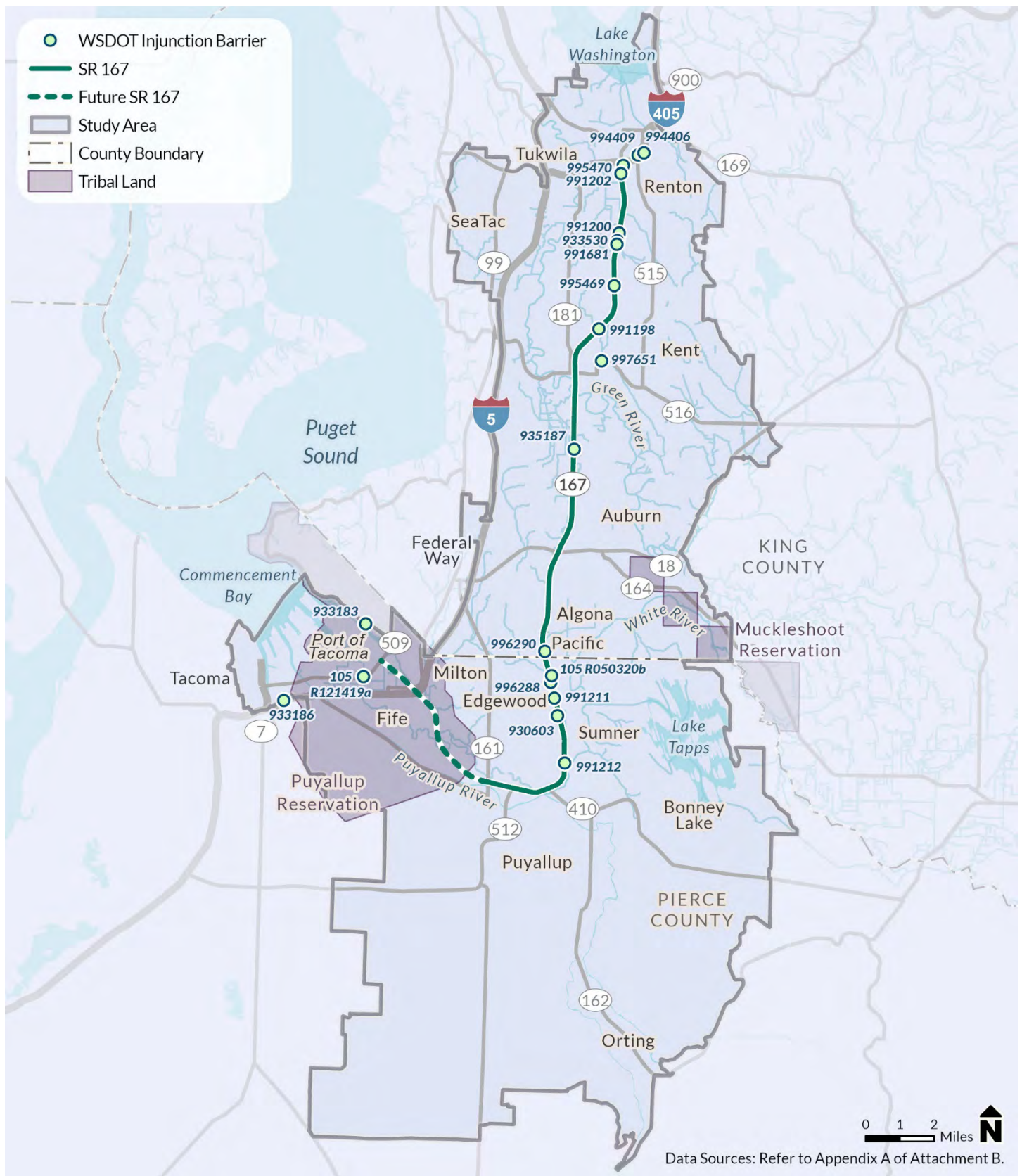


Figure 5-7. Fish Passage WSDOT Injunction Barriers

Flood Hazards

Floodplains and floodways are regulated by FEMA through the National Flood Insurance Program. Floodplains temporarily store excess water when waterbodies periodically overflow their banks and inundate land. When floodplains are developed or natural flooding processes are altered, flood damage can occur. The 100-year floodplains, or base flood, are areas with a 1 percent chance of flooding in any given year, and they are considered high-risk areas (FEMA 2020). Special flood hazard areas include areas subject to inundation by the 100-year flood. For additional context and regulations, refer to *Attachment B, Appendix C*.

Special Flood Hazard Areas (SFHA) include areas subject to inundation by the 100-year flood.

Existing Conditions

Many areas surrounding SR 167 are within floodplains or floodways that are prone to frequent flooding, as illustrated in Figure 5-8. SFHAs associated with Springbrook Creek, Green River, Mill Creek, White River, Puyallup River, and Hylebos Creek are present near SR 167. There are also some regulatory floodways present, including areas around the Green, White, and Puyallup rivers and near the Mullen Slough Natural Area near SR 516. As noted in the *Air Quality, Climate Change, and Climate Vulnerability* section, SR 167 may be affected by climate-change-induced flooding, but it is not projected to be directly impacted by sea level rise, according to the available modeling. Specific locations known to flood frequently along the SR 167 corridor are specified in Figure 5-8, and they are described in *Attachment B, Appendix B*. For additional information, refer to the *Flood Hazards* section in *Attachment B, Chapter 12*.

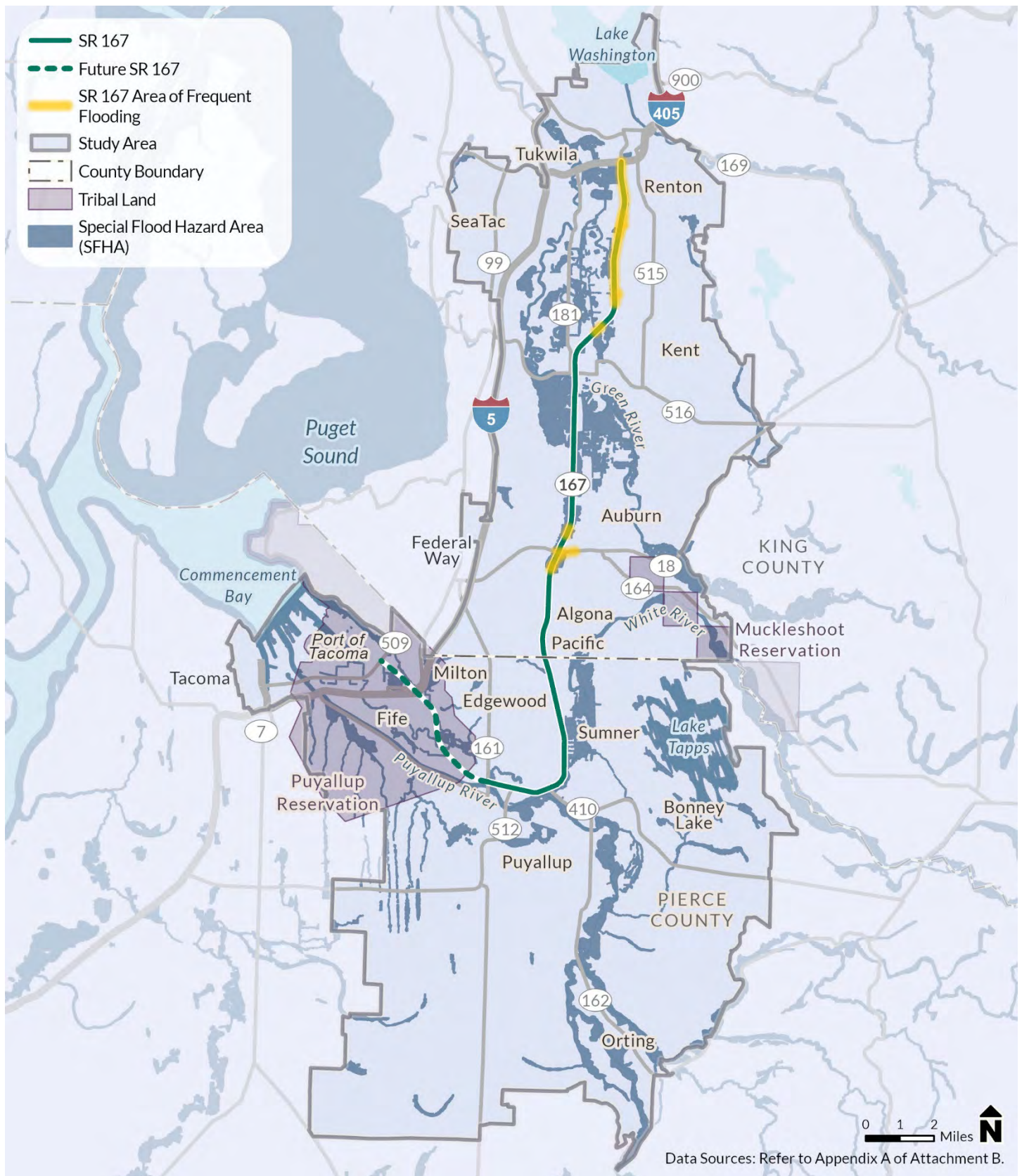


Figure 5-8. Existing Flood Hazard Areas and Floodways

Scenario Evaluation and Potential Effects

Potential impacts to flood hazard areas, including floodways and floodplains, were evaluated. Projects near the frequently flooded areas (Figure 5-8) have the potential to increase the frequency or severity of flooding by changing flood flows or filling floodplain storage, requiring mitigation. Interchange, highway, and local roadway projects in the Final Study Recommendations that are located within an SFHA have the potential to impact 100-year floodplains and regulatory floodways. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

Floodplain evaluations should be performed once project designs and footprints are available. If a project encroaches on a regulatory floodplain, it must be analyzed to determine if a revision to the regulatory floodway is necessary. For projects that propose work within an SFHA, a hydraulic analysis, hydrologic analysis, floodplain discipline report, and scour or climate change analysis are needed. A No-Rise Certification or Conditional Letter of Map Revision (CLOMR) are required to document analysis results and if there is a rise in the base flood elevation. A floodplain development permit may be required, depending on the local agency's floodplain and critical areas ordinances. Prior to final design, a CLOMR should be submitted to FEMA to ensure project design does not violate FEMA's requirement of no rise within floodplains.

Refer to the WSDOT *Environmental Manual, Chapter 432.08* for compensatory storage requirements set by local jurisdictions to mitigate impacts to regulatory floodplains and floodways. These requirements include the excavation of floodplain storage areas to compensate for fill placed in floodplains, and they stipulate elevation requirements for the location of the compensatory storage area. Refer to Table 6 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for flood hazards.

Geologic Hazards

Geologic hazards analysis helps identify potentially hazardous areas, including seismic activity, and methods to avoid and mitigate these hazards. It also helps to determine the work required for construction activities (e.g., cuts and fills) and the needs for bridge foundations or retaining walls. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

Geological hazards, including steep slopes and areas susceptible to liquefaction, erosion, and landslides, are present along and near SR 167. Figure 5-9 illustrates liquefaction susceptibility; most of the SR 167 corridor is within an area with moderate to high liquefaction susceptibility. Portions of the study area are within the Tacoma Fault Zone. For additional information, refer to the *Geologic Hazards* section in *Attachment B, Chapter 12*.

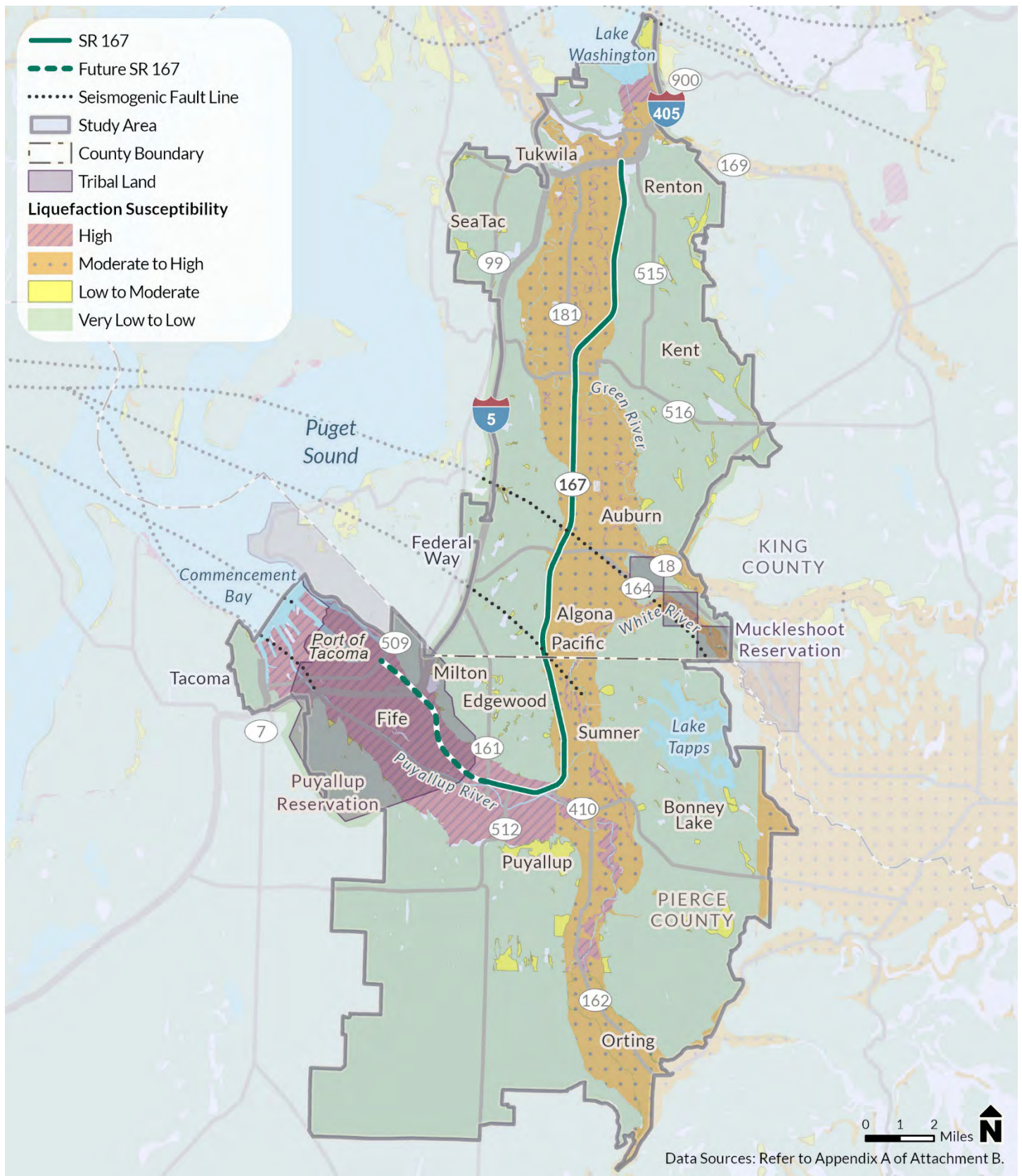


Figure 5-9. Geologic Hazards

Scenario Evaluation and Potential Effects

Potential impacts related to areas of high liquefaction susceptibility and other geologic hazards were evaluated. Most projects in the Final Study Recommendations that are near the SR 167 corridor would be located within an area with moderate to high liquefaction susceptibility and could have potential effects related to geologic hazards. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

To further inform project development and design, geologic hazard and soil evaluations would be performed once project footprints are determined. Grading permits should be acquired from local agencies prior to starting construction. WSDOT is exempt from grading permits for work within WSDOT right of way.

Existing structures may require significant retrofitting or replacement to meet current seismic standards. Some bridges within the SR 167 corridor do not meet current design standards for earthquakes and liquefaction; therefore, the design of future projects will need to consider this.

Project designs should be adjusted or designed to avoid or minimize impacting geologically hazardous areas. Refer to the WSDOT *Environmental Manual, Chapter 420.08* for details on mitigation measures for unavoidable impacts and the *Geotechnical Design Manual, M 46-03* for specific guidance on engineering solutions to address geologic hazards. Refer to Table 7 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for geologic hazards.

Hazardous Materials

Hazardous materials must be evaluated where they are encountered on WSDOT right of way or where there is a right of way property acquisition. Hazardous materials investigations identify hazardous materials sites, where the release or threat of release during or after project construction could harm the environment or human health. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

Land uses closest to the SR 167 facility are predominantly industrial, which are more likely to have hazardous materials sites than other land uses. The Olympic Pipeline and Williams Northwest Pipeline travel nearby the SR 167 corridor, with the Olympic Pipeline crossing SR 167 in Auburn. Much of the project study area is within the Tacoma Smelter Plume with predicted arsenic concentrations under 20 parts per million (ppm), which is considered protective of human health and the environment under the Washington State Model Toxics Control Act, but some areas have predicted arsenic concentrations between 20 and 40 ppm. The federal active cleanup sites identified during the study of existing conditions and arsenic concentrations associated with the Tacoma Smelter Plume are presented in Figure 5-10. Hazardous materials sites that were identified included the following:

- **Federal Cleanup:** 2 NPL superfund sites, 37 non-NPL remediation sites, and 1,722 RCRA sites
- **State Cleanup:** 98 sites
- **Storage Tanks:** 170 underground storage tanks, 118 leaking underground storage tanks (Ecology 2021, U.S. EPA 2021)

For additional information, refer to the *Hazardous Materials* section in *Attachment B, Chapter 12*.

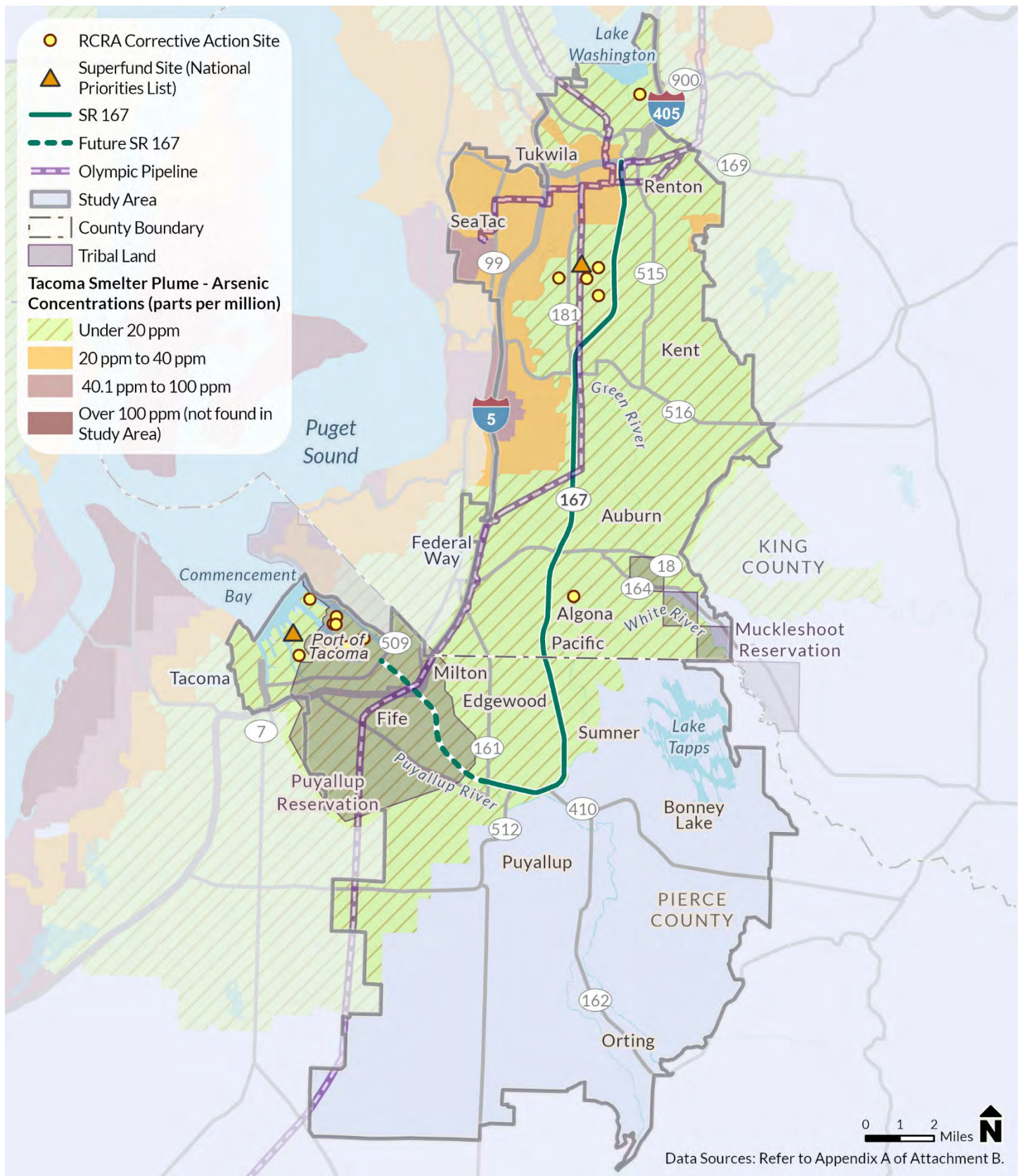


Figure 5-10. Hazardous Materials Sites – Federal Active Cleanup Sites and Tacoma Smelter Plume

Scenario Evaluation and Potential Effects

Potential hazardous materials sites that may be affected by projects in the Final Study Recommendations were reviewed. Final Study Recommendations that require work near hazardous materials sites could potentially be affected by a storage tank or a state cleanup hazardous materials site.

None of the projects in the Final Study Recommendations were anticipated to affect an RCRA site or NPL superfund site. Projects located near the Olympic Pipeline would require utility location/identification, which would be completed prior to construction, minimizing the potential for accidental disruption. BMPs would include development of construction safety management and safety and security management plans to address conflicts with utilities, including high-pressure natural gas pipelines. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

A regulatory database search and risk analysis should be performed once project designs and footprints are available. A Phase I environmental site assessment may be required if the project proposes acquiring a site that is considered substantially contaminated. A Phase II environmental site assessment may be required if the Phase I environmental site assessment indicates potential or recognized on-site contamination or if WSDOT will acquire a property with potential or recognized on-site contamination. Phase I and Phase II environmental site assessments generally take two months. The timing for property acquisition can be delayed if remediation activities are required. Projects that include work near the Olympic Pipeline would require coordination with the owner/operator of the BP Pipelines.

A risk analysis helps prioritize sites and determine the need for avoidance, remediation, and mitigation options.

The risk analysis assesses the risk and complexity (straightforward or complicated) levels for future mitigation measures.

– Guidance and Standard Methodology for WSDOT HazMat Discipline Reports (WSDOT 2021b)

It is a requirement that impacts are addressed as part of the Stormwater Pollution Prevention Plan process that will result in the development of a site-specific temporary erosion and sediment control plan. Refer to WSDOT's *Standard Impacts & Mitigation Measures* that are organized by impact type. Environmental commitments to mitigate known and unanticipated impacts to hazardous materials is required to be documented and managed via WSDOT's CTS. Refer to Table 8 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for hazardous materials.

Land Use

Changes in transportation systems can influence nearby land uses. Projects can affect land use through property acquisition and conversion to a transportation use. PSRC's regional plan, *VISION 2050*, recognizes the importance of planning where growth will occur, and it identifies planned PSRC-designated centers that aim to focus household and employment growth in areas with investments in transit and other infrastructure that is supportive of higher densities, including freight to and from MICs. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

As identified in the *Chapter 1, Vision, Purpose (Goals) and Need* section, the SR 167 corridor area is one of the fastest growing areas in the state, and the study area is expected to experience an 84 percent increase in housing units and a 61 percent increase in jobs between 2019 and 2050. Land use within the study area is primarily industrial, commercial, and residential, as summarized in Table 5-3. Areas of higher density development are found in the downtown cores of Tukwila, Renton, Kent, Auburn, and Puyallup. Due to the nature of land use along SR 167, employment and housing are often located in separate areas, meaning that areas with high employment density often have low housing density. For additional information, refer to the *Land Use* section in *Attachment B, Chapter 12*.

Table 5-3. Existing Land Uses within the Study Area

Land Use Category	Percent of Study Area ^a
Commercial, Retail, Food, Services	7%
Farm, Agriculture	3%
Manufacturing and Industrial	14%
Office, Government, Medical, Schools, Military	6%
Multi-family Residential	7%
Single-family Residential	43%
Parks and Open Space	20%

Source: King County 2021; Pierce County 2021

Notes:

^a Land use percentages do not include the areas within public streets and highways.

Scenario Evaluation and Potential Effects

Potential changes to land uses were evaluated to determine effects related to converting lands to a transportation use. The Final Study Recommendations have the potential to convert land to a transportation use. Projects located along the SR 167 facility are more likely to impact commercial and industrial lands while local roadway projects are more likely to impact residential and some commercial lands. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

When project alignments are available, existing land uses should be studied to determine number of acres being converted and consistency with local comprehensive plans. The more detailed evaluation would include quantitative calculations of acreage, which can be done when footprints are determined. A land use discipline report may be required to document impacts and consistency with local and regional land use plans and goals during NEPA review. Depending on the project location, a critical area permit may be required through the local jurisdiction; other permits may be required as well.

Refer to the WSDOT *Environmental Manual, Chapter 455.08* for measures to avoid, minimize, or mitigate impacts to notable land use types, including using public lands before land defined as “agricultural land of long-term commercial significance,” and to replace it with land of equal value, location, usefulness, and function as the impaired property. Refer to Table 9 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for land use.

Noise

The WSDOT *Environmental Manual, Chapter 446.01* defines noise as unwanted sound. FHWA developed noise regulations to investigate traffic noise impacts in areas where humans live, work, or play adjacent to highways and to effectively control the undesirable effects of traffic noise. Noise levels near roadways depend on traffic volume, traffic speed, percent of heavy trucks, distance from roadway, intervening topography, and atmospheric conditions. Noise sensitive areas include land uses that are considered sensitive to noise impacts, such as residential and recreation areas.

WSDOT considers a predicted sound level of 1 A-weighted decibel (dBA) below the Noise Abatement Criteria as “approaching” those criteria; therefore, it is an impact for outdoor uses. Receivers also are affected if the worst hourly traffic noise is predicted to increase by at least 10 dBA over existing conditions. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

There are existing land uses identified in existing conditions that are likely noise sensitive, but land uses closest to the SR 167 facility are predominantly industrial; therefore, they are less likely to be noise sensitive. Figure 5-11 illustrates existing noise wall locations. The map also shows the general locations of potentially noise sensitive land use areas and industrial areas identified during the existing conditions study. For additional information, refer to the *Noise* section in *Attachment B, Chapter 12*.

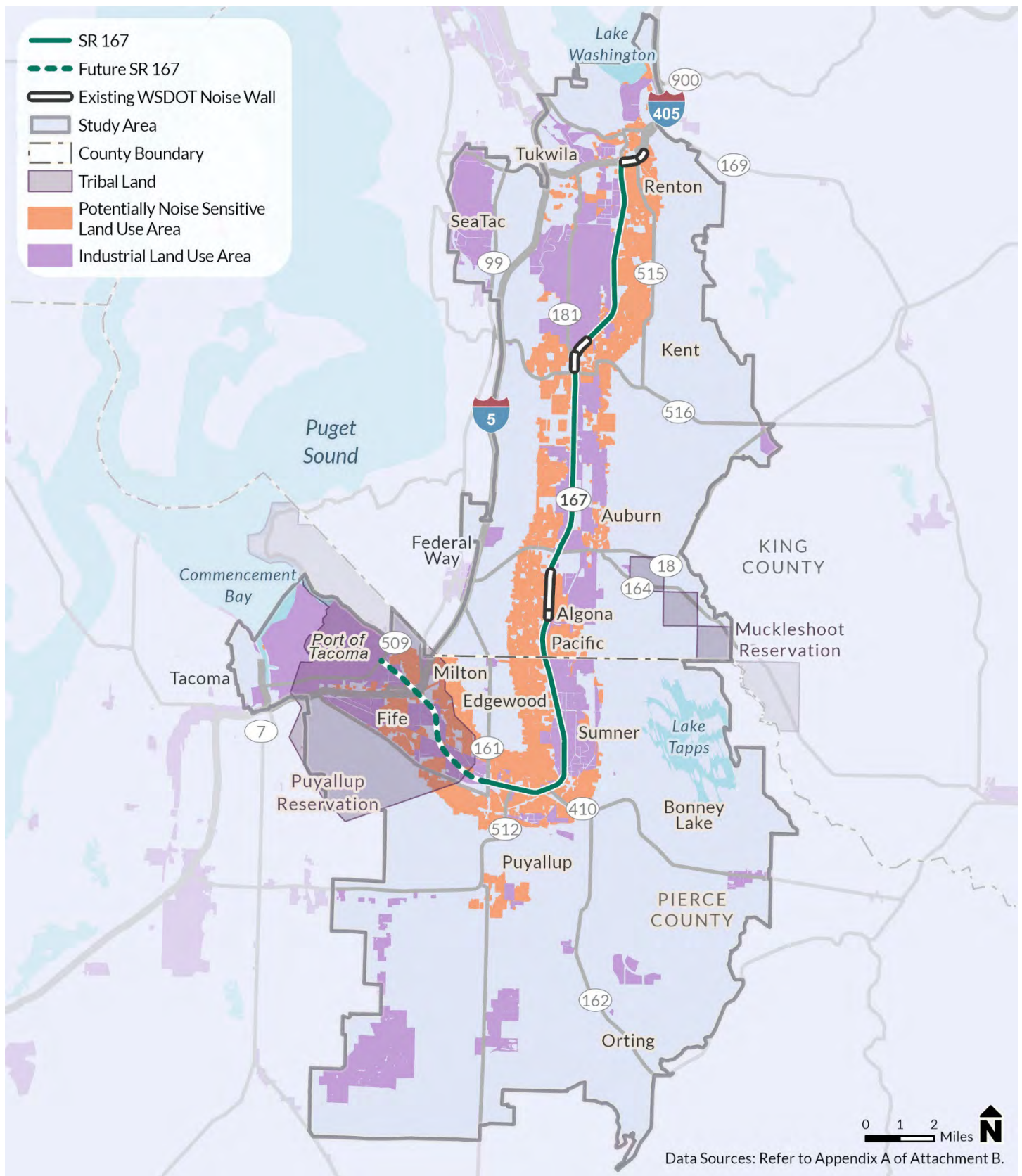


Figure 5-11. Existing Noise Walls with Industrial and Residential Lands

Scenario Evaluation and Potential Effects

Potential impacts related to projects that could increase traffic noise near sensitive receptors were reviewed. Potential impacts related to construction noise were not assessed for this study, but they would be analyzed in future project phases. No noise measurements were taken. Projects in the Final Study Recommendations that would change the geometry of a road (e.g., an interchange reconfiguration) or add lanes have potential cause impacts at nearby sensitive receptors. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

Noise analyses for future projects will need to consider undeveloped lands and land use changes to determine the current locations of sensitive receptors at the time of the project. Noise evaluations should be performed once a project's location and alignment are identified, noise sensitive receptors are identified, and existing and future traffic projections are confirmed. Construction noise also will be evaluated and addressed with avoidance and minimization measures. Public outreach should be conducted in future project phases, so that partners may provide input on the proposed project design and mitigation.

NEPA documentation can be used to support SEPA documentation. If a future project is a WSDOT Type 1 or Type 2 project, a traffic noise analysis will be required. A full noise analysis report is required for any project with noise impacts. If nighttime work is needed during future project phases, the proposed project will be subject to local noise ordinances, and it may require a noise variance or exemption.

During NEPA, mitigation measures, including noise walls, will be identified to minimize impacts to sensitive receptors. The project team will meet with local government staff and officials and other partners to address issues and concerns identified during the design process. During the outreach process if communities indicate they do not want noise walls for various reasons, other mitigation is available. Through direct communication with the affected communities, noise impacts would be mitigated in a way that is satisfactory to most residents.

Noise walls or other mitigation measures will be required if a project is determined to have noise impacts. Mitigation must be shown to be feasible and reasonable. Suggested strategies for mitigating traffic noise at nearby sensitive receptors include constructing noise barriers, reducing traffic speeds, coordinating with agencies to prevent noise sensitive development near highways, preserving existing buffer zones, and helping support local jurisdictions in establishing routes for buses and trucks. Refer to the WSDOT *Environmental Manual, Chapter 446.08* for further details on noise abatement options. Refer to Table 10 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for noise.

Recreational Resources, including Potential Section 4(f) and Section 6(f) Resources

Transportation projects can affect public parks and recreation areas, public wildlife and waterfowl refuges, and historic sites that are important community resources. For projects involving FHWA (or other U.S. Department of Transportation [USDOT] agencies), WSDOT must consider effects on recreational resources, including those protected under Section 4(f) of the USDOT Act or Section 6(f) of the Land and Water Conservation Fund Act. WSDOT also must consider impacts on other resources protected under Section 4(f), including wildlife refuges and historic and cultural resources listed on or eligible for listing on the NRHP. For additional context and regulations, refer to *Attachment B, Appendix C*.

Section 4(f) properties include publicly owned parks, recreation areas, and wildlife or waterfowl refuges, or any publicly or privately owned historic site listed or eligible for listing on the National Register of Historic Places.

Section 6(f) properties include lands or facilities that were acquired or developed with grants from the Land and Water Conservation Fund.

(FHWA n.d.)

Existing Conditions

Many recreational resources and other potential Section 4(f) resources were identified during the study of existing conditions, including publicly owned parks, publicly owned recreation facilities and open space areas, playgrounds, wildlife or waterfowl refuge areas, publicly owned trails, and recreational vehicle and camping parks. Figure 5-12 presents the locations of major recreational resources, including regional trails. No Section 6(f) resources were identified. Refer to the *Cultural Resources and Historic Bridges* section for information related to the cultural resources present. For additional information, refer to the *Recreational, Section 4(f), and Section 6(f) Resources* section in *Attachment B, Chapter 12*.

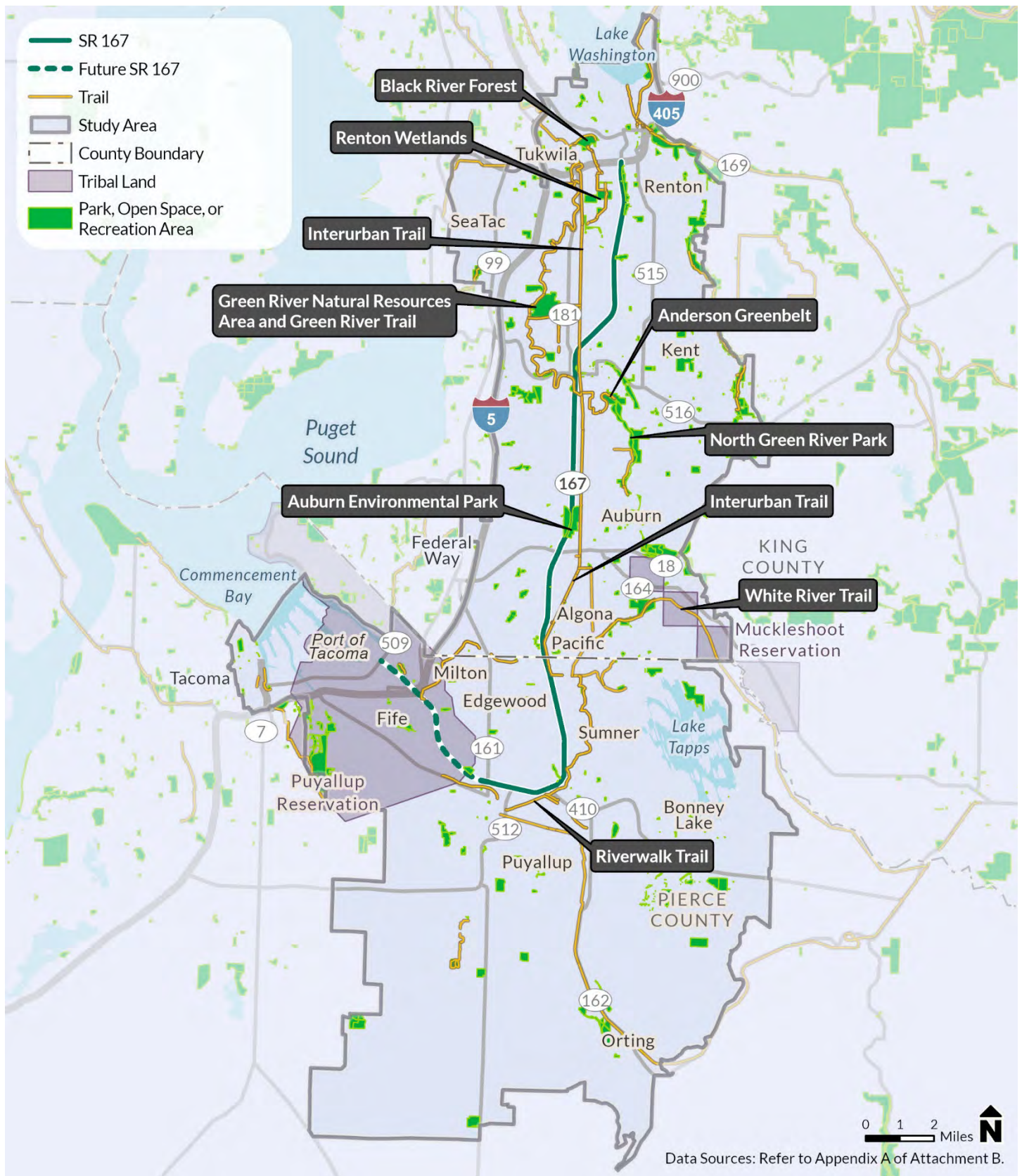


Figure 5-12. Recreational Resources and Wildlife or Waterfowl Refuges

Scenario Evaluation and Potential Effects

Potential impacts, such as potential park acquisition, trail relocation, highway under or overpass added along a trail, proximity effects from increased noise or air pollution, access changes, visual setting degradation, or surrounding land use changes, could affect the viability of the resource evaluated.

The Final Study Recommendations include projects for the Interurban Trail to close gaps between Fife and Pacific and to add safety and access enhancements throughout the entire study area along the Interurban Trail. They also include projects and strategies related to other regional trail improvement projects that would close gaps in and improve access to regional trails within the study area. There are also projects that would fill sidewalk gaps and complete bicycle network gaps.

Final Study Recommendations could potentially impact parks, trails, open space areas, or other recreational resources when property acquisition is required at these properties or when there is a temporary use of the properties during construction. Section 4(f) impacts would be assessed during future project phases. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

If a project has a federal nexus, it will require further evaluation under NEPA. Additional project-level analysis will be needed to evaluate potential project-specific impacts on Section 4(f) resources and an impact determination will need to be made to receive federal approval and funding when projects are selected. Project-level design and analysis will need to demonstrate avoidance of the use of Section 4(f) properties or no more than a *de minimus* impact. If the use of a potential Section 4(f) resource is unavoidable, the project must be assessed within an individual Section 4(f) evaluation to indicate there is no feasible and prudent alternative to the proposed design and all possible planning has been done to minimize harm. Public engagement must occur if a *de minimus* impact is proposed for a potential Section 4(f) resource. Depending on the level of analysis required, public notice may be accomplished via the NEPA public notice process, city council meetings, project open house, or publication in local newsletters. The public must be provided with an opportunity to comment on the decision. Early coordination with the public is an important step in identifying concerns with potential Section 4(f) impacts and to preventing potential delays to public involvement and engagement and Section 4(f) evaluations.

FHWA's programmatic, nationwide Section 4(f) evaluations can help to streamline the evaluation if the project action falls within the description and criteria of one or more of FHWA's nationwide Section 4(f) evaluations. Section 4(f) determination will be made during future project phases.

NEPA/SEPA and regulatory permit commitments are required to be incorporated into the project contract per the WSDOT *Environmental Manual, Chapter 490*. Refer to the WSDOT *Environmental Manual, Chapter 457.08* for further guidance on how to document measures to avoid, minimize, or mitigate impacts or to enhance impacted resources. Refer to Table 11 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for recreational, Section 4(f), and Section 6(f) resources.

Visual Resources

Visual resources form the overall visual character and perception of an area, and they can be natural or humanmade features. Visual impacts from transportation projects depend on the visual character and quality of an area, the project characteristics, and the presence of people (viewers). For additional information, refer to the *Visual Resources* section in *Attachment B, Chapter 12*.

Resource Conservation Areas are natural areas owned and protected by WSDOT that provide a vegetated buffer between the highway and adjacent land uses.

Existing Conditions

Areas surrounding SR 167 are mostly urban environments. Lands closest to SR 167 are primarily industrial, but there are several residential areas within 1 mile that may be considered sensitive viewer groups. There are several open space areas and parks that offer visual variety and breaks or contrasts in developed areas.

Transportation projects and, in particular, highway projects can affect **visual quality** through changes in the relationship between people and their surrounding environment.

Views of Mount Rainier, the Cascade Mountain range, and the Olympic Mountains are available near the south end of the SR 167 corridor. Lands within the Muckleshoot and Puyallup tribal reservations are within the study area, and they may play a role in identifying sensitive visual resources. There are no Resource Conservation Areas along the SR 167 corridor. The nearest Resource Conservation Areas are located along the I-5 corridor. Visual impact assessments (VIA) and viewshed analyses were not performed for this SR 167 Master Plan PEL Study, and areas of visual effects were not defined. Additionally, landscape units were not created as field work has not been done yet. For additional information, refer to the *Visual Resources* section in *Attachment B, Chapter 12*.

Scenario Evaluation and Potential Effects

Potential effects to visual quality were studied qualitatively. The Final Study Recommendations have the potential to impact visual quality where projects would change the existing visual character or viewed landscape and impact the visual quality. Most of the area surrounding SR 167 is an urban environment, so it is less likely the project features would be out of character with the surrounding landscape. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

The FHWA VIA scoping process provides a framework for establishing the appropriate level of study and documentation for NEPA projects. As part of the VIA, landscape units, landscape character, sensitive viewer groups, key viewpoints, and impacts on scenic resources will be identified. The public and affected tribes may help inform the visual quality, important visual resources, and area of visual effect. Coordination will be needed during development of Section 4(f), Section 6(f) (if applicable), and Section 106 documentation to ensure visual impacts resulting from other resource compliance are addressed. Once project designs and footprints are available the project team can develop the VIA scoping questionnaire, identify the area of visual effect, perform viewshed analysis, and take on-site photography.

Refer to the WSDOT *Environmental Manual, Chapter 459.08* for details on mitigation measures to avoid or minimize visual impacts, including public art, good faith negotiations, and roadside restoration. Refer to the WSDOT *Roadside Policy Manual, M 3110* for specific guidance on restoration to address visual impacts and mitigation for planned visual impacts, maintenance impacts, or disturbance that may affect Resource Conservation Areas. Refer to the WSDOT *Design Manual, M 22-01, Chapter 950* for guidance regarding public art and community-identified mitigation within WSDOT right of way. Refer to Table 12 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for visual resources.

Water Quality and Stormwater

Waters of the U.S., including rivers and lakes, are found within the study area. Rivers, streams, and lakes provide habitat for fish and aquatic species and recreational activities for people. Changes to chemical, physical, and biological characteristics of surface waters affect water quality and quantity and fish and wildlife habitats. For additional context and regulations, refer to *Attachment B, Appendix C*.

Existing Conditions

Surface waters (rivers, streams, lakes, and stormwater) are illustrated in Figure 5-12. Surface waters in the SR 167 corridor have been altered from their natural and historical states to accommodate growth. The SR 167 corridor crosses three watersheds: Lake Washington/Cedar/Sammamish (Water Resource Inventory Area [WRIA] 8), Green-Duwamish (WRIA 9), and Puyallup-White (WRIA 10).

The Washington State Department of Ecology (Ecology) prepares a **303(d) list** every two years that identifies waterbodies that do not meet the state water quality standards.

Stormwater within the SR 167 corridor is managed through open channels, underground pipes, ecology embankments, wet ponds, and detention ponds. There are a total of 123 known culverts along the SR 167 corridor, 60 of which convey streams with confirmed fish use. Refer to the *Fish Passage Barriers* section for more information. There are four medium-priority areas for stormwater retrofit: 33 pond-type BMPs, 170 roadside slope-type BMPs, 17 ditch-type BMPs, and four vault-type BMPs. There are a number of impaired waterbodies listed on Ecology's 303(d) List, including the Green, White, and Puyallup rivers, which are represented in Figure 5-13 along with Ecology's Shorelines of Statewide Significance. Aquifer recharge areas and sole source aquifers are also present in the SR 167 corridor. There are also Ecology Shorelines of the State near SR 167, including the Green River, Black River, Lower Springbrook Creek, Cedar River, Clarks Creek, Hylebos Creek, Puyallup River, Wapato Creek, and White River. For additional information, refer to the *Water Quality and Stormwater* section in *Attachment B, Chapter 12*.

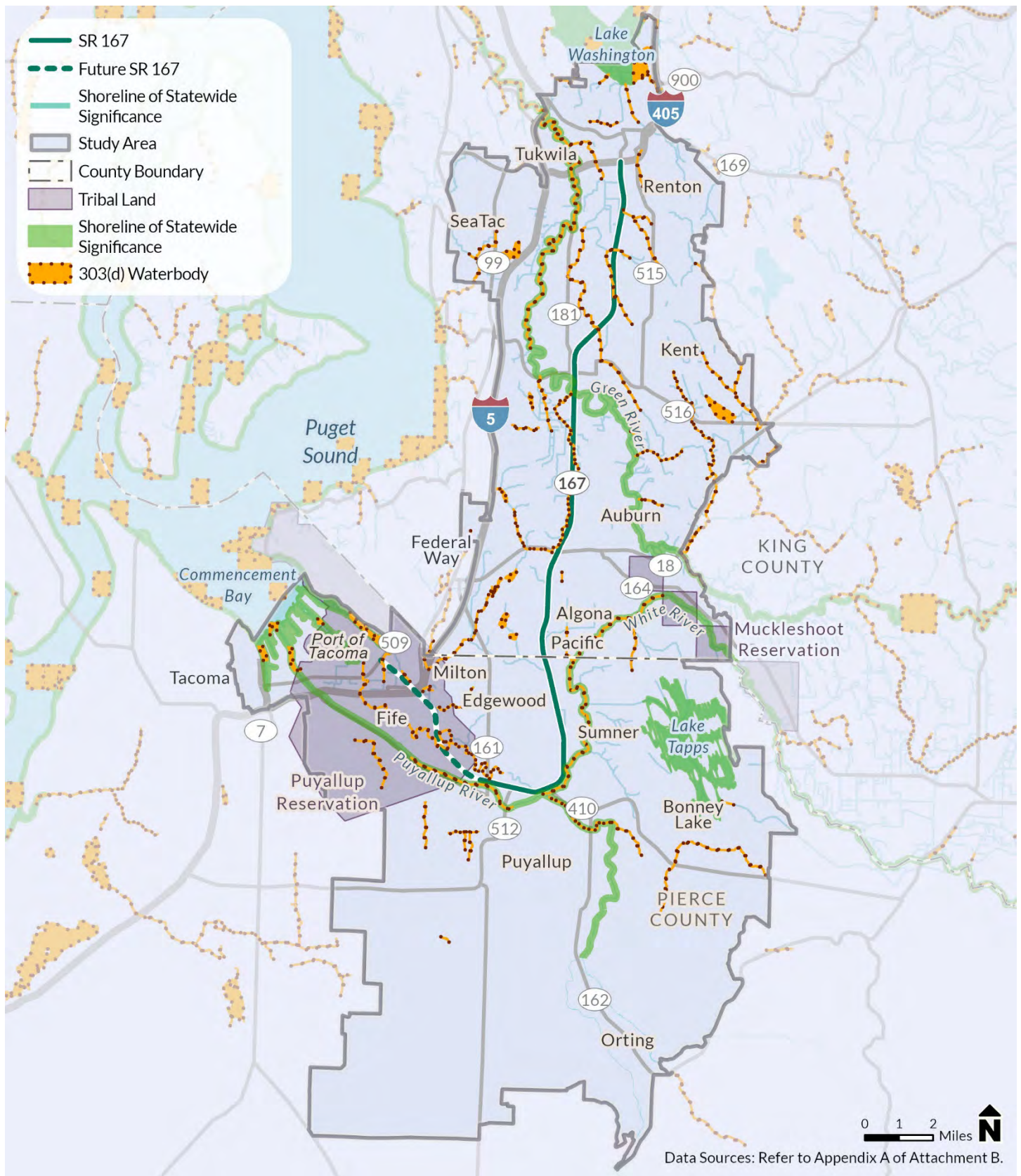


Figure 5-13. Waterbodies and Shorelines of Statewide Significance

Scenario Evaluation and Potential Effects

Potential effects to water quality were reviewed. Final Study Recommendations that include work done on or near any stream or waterbody have the potential to affect water quality. Permanent and temporary impacts would occur where work occurs on a culverted stream and an open stream channel. Refer to the *Fish Passage Barriers* and the *Fish and Wildlife Habitat* sections for more information related to potential fish passage and habitat impacts. The effects could be addressed early by incorporating BMPs into project design. Potential new impervious surface areas were not calculated for this study and modeling was not performed. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

Projects that have the potential to impact the shorelines of the state, such as Green River, will need to comply with local shoreline management requirements. All future projects will also need to avoid and mitigate impacts on surface waters. New and existing impervious surfaces will need to be calculated as project design progresses to identify whether a project would require runoff treatment or flow control facilities. Guidance from WSDOT's *Highway Runoff Manual* will be used to design runoff treatment and control facilities.

When Ecology issues a Construction Stormwater General Permit, monthly discharge monitoring reports must be submitted to Ecology's WQWebPortal, even if construction has not started or there have been no discharges. Pending the results of hazardous materials surveys, Ecology may institute an administrative order with the issuance of a Construction Stormwater General Permit to ensure hazardous waste regulations are met. When the local jurisdiction issues a construction stormwater dewatering permit, monthly discharge monitoring reports must be submitted to the appropriate jurisdiction, even if construction has not started or there have been no discharges.

Guidance and resources for mitigation options can be found on the [WSDOT stormwater and water quality webpage](#). Some measures include stormwater retrofit, *Highway Runoff Manual* required treatment, special or newly researched BMPs, and assistance with watershed priorities set through watershed planning. For future projects within aquifer recharge areas, sole source aquifers, or wellhead protection areas, specific measures will be implemented to prevent groundwater contamination. Refer to Table 13 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for water quality and stormwater.

Wetlands

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas (Environmental Laboratory 1987). For additional context and regulations, refer to *Attachment B, Appendix C*.

Wetlands provide important functions, including fish and wildlife habitat, water quality treatment, floodwater storage, and groundwater recharge.

Existing Conditions

Wetlands found within 1 mile of SR 167 include estuarine, palustrine, and riverine systems. Estuarine wetlands are present at Commencement Bay. Palustrine wetlands are located throughout the SR 167 corridor, but they are more prominent in the Green River and the Puyallup River valleys. Riverine wetlands are located along rivers and streams, as illustrated in Figure 5-14. These wetlands vary in size and typically consist of emergent, scrub-shrub, and forested vegetation. There are also several wetland compensatory mitigation sites throughout the SR 167 corridor. WSDOT constructs these sites to compensate for wetland impacts that cannot be avoided, and it is responsible for protecting, monitoring, and maintaining these sites. For additional information, refer to the *Wetlands* section in *Attachment B, Chapter 12*.

Scenario Evaluation and Potential Effects

Potential impacts to wetland systems were reviewed via desktop analysis using the USFWS National Wetlands Inventory; sensitive aquatic and wetland data from WSDOT, King County, and Pierce County; and wetland delineation data from the SR 167 Completion Project and previous projects along SR 167. Fieldwork was not conducted for this study. The Final Study Recommendations that would involve work near or at a wetland or waterbody have potential for impacting wetlands. Projects that would impact greater than 0.5 acres of waters of the U. S. would likely have longer approval times, and they would include local roadway projects, such as the West Valley Highway projects and SR 167 highway and interchange projects. Refer to *Attachment A, Appendix B* for detailed maps overlaying the Final Study Recommendations with environmental resources.

Next Steps and Mitigation Strategies

A reconnaissance survey and fieldwork should be performed once the project's location and alignment have been identified. Wetlands should be classified using the USFWS classification system (Cowardin et al., 1979; Federal Geographic Data Committee [FGDC] 2013) and the hydrogeomorphic classification system (Brinson 1993). Wetlands also should be rated using the Washington State Wetland Rating System for Western Washington 2014 Update (Hruby 2014). High-functioning wetlands would be identified during the fieldwork, but they are not typically found along existing highways. All identified wetlands will be included in a wetland and stream assessment report, which is valid up to five years from the date of the field work.

Under Section 404 of the Clean Water Act, a nationwide or individual permit will be required through the USACE for projects that impact waters of the U.S., which include wetlands. An individual permit is required for projects that impact over 0.5 acres of wetlands, which require an individual permit from the USACE, which can have longer approval times and will require 404(b)(1) analysis under the Clean Water Act.

Refer to the WSDOT *Environmental Manual, Chapter 431.08* for measures to avoid, minimize, or mitigate impacts to wetlands, including design techniques, such as selective widening, widening to the median, and incorporating steeper slopes and retaining walls, and compensatory mitigation for any unavoidable permanent and long-term impacts on wetlands. The amount of compensatory mitigation will be dependent upon the type and location of impacts. Future project teams should refer to the Wetland Mitigation in Washington State Part 1: Agency Policies and Guidance (Version 2) for compensatory ratio calculation tables (Ecology et al., 2021). If wetland mitigation credits are available, the Springbrook Creek Wetland and Habitat Bank or Upper Clear Creek Mitigation Bank may be used. Refer to Table 13 in *Attachment A, Appendix A* for additional information regarding next steps and implementation considerations for wetlands

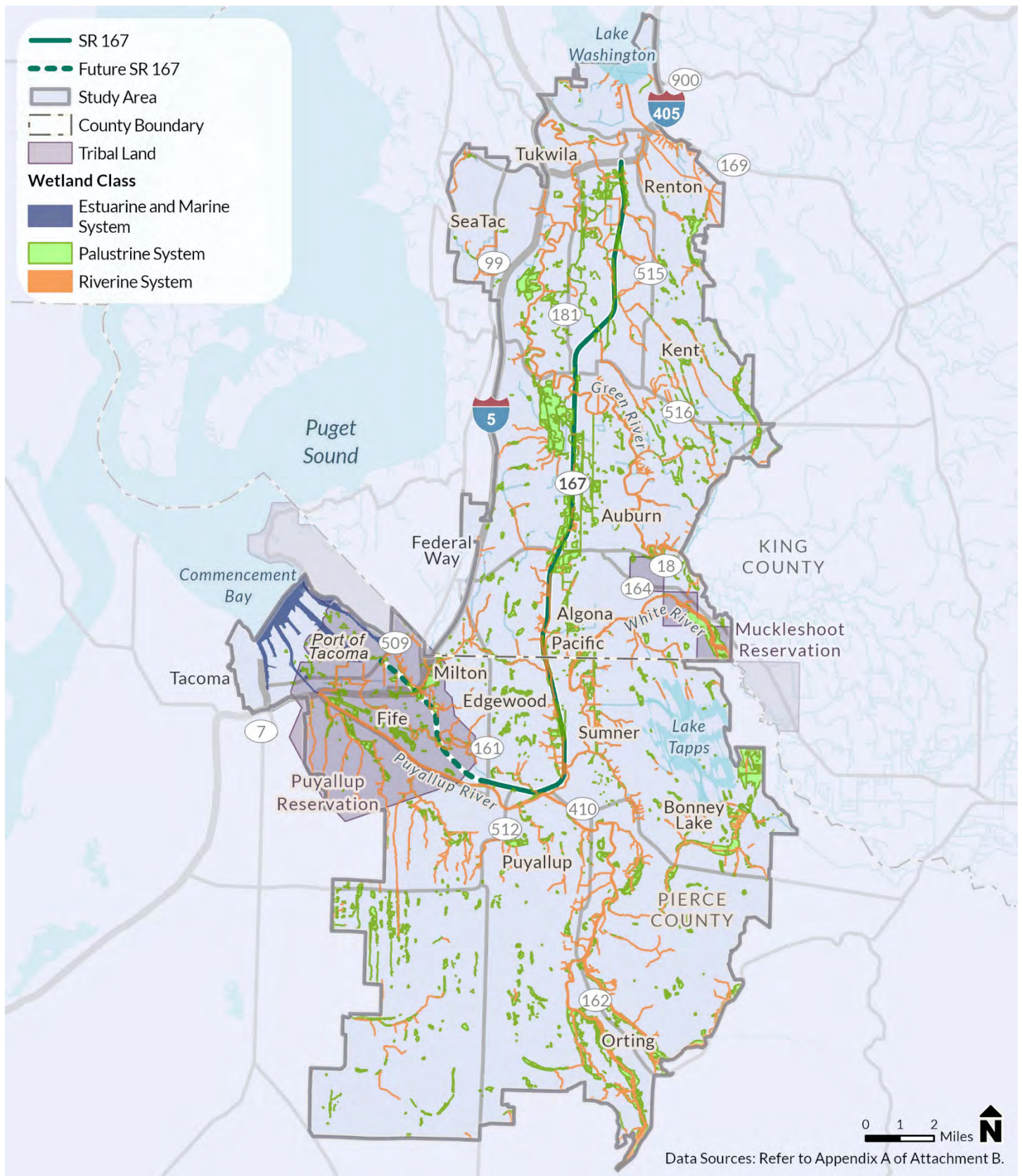


Figure 5-14. Wetlands

Chapter 6. Next Steps

The Final Study Recommendations described in *Chapter 4* represent a bold yet realistic vision to address the transportation challenges this corridor is expected to experience over the next 30 years. Throughout the SR 167 Master Plan and PEL process, partner and community engagement has been critical. Partners and community members reviewed data, provided invaluable insight about transportation issues and potential solutions, and strongly shaped the Final Study Recommendations, as described in *Chapter 2* and as demonstrated in Table 2-2. This deep integration in the planning process is also reflected in the letters of support that are included in *Appendix F*.

While the development of the Final Study Recommendations represents a major step forward in improving transportation and mobility in the SR 167 corridor, there is still a long way to go to fund, design, and implement the \$5.5-\$6 billion in improvements that are projected in Figure 4-1. There will be similar maintenance costs for transit and local agency infrastructure that also will require future funding streams to support.⁴

Recognizing that funding is not currently available for the Final Study Recommendations, the next steps will include further analysis to develop a prioritized phasing and funding strategy (refer to the *Implementation* section of this chapter). From an environmental perspective, another key step is to determine the needed environmental reviews for individual projects (refer to the *NEPA Considerations* section of this chapter, *Chapter 5*, and *Attachment A*). Continued collaboration between WSDOT, its partners, and the community is key for these next steps to succeed and for the final implementation of needed SR 167 corridor solutions (refer to the *Continued Collaboration and Issues* section).

Chapter Overview

Chapter 6 summarizes the necessary next steps for the successful implementation of the Final Study Recommendations. Additional technical assessments and continued partner collaborations are essential in the near term to develop a phased implementation strategy and to secure funding. Refer to the following chapters and attachments for more information related to the Final Study Recommendations and next steps:

- *Chapter 4* and *Attachment D* present the Final Study Recommendations for the SR 167 Master Plan PEL Study.
- *Attachment A* includes the PEL Questionnaire that is intended for use by future NEPA practitioners to support the transition from PEL to implementation and NEPA reviews. The PEL Questionnaire can be available during NEPA scoping processes.
- *Attachment A, Appendix B* includes detailed tables with potential next steps and mitigation information related to each environmental resource.

⁴ Per the State's transportation system policy goals, any new infrastructure must be maintained in a State of Good Repair. WSDOT estimates that maintenance costs of new infrastructure on the state highway system is about 0.5 percent of the total capital cost. Cities, counties, and transit agencies also must maintain new infrastructure so that it has long-term value, but the costs of maintenance for these non-WSDOT facilities varies.

Implementation

In order for the SR 167 Master Plan PEL Final Study Recommendations to be implemented in a timely manner, a prioritization and funding strategy is needed. A successful project prioritization framework would build on the SR 167 Master Plan's data-driven and partner-refined process and engagement practices, and it would include the following:

- Analyzing tolling and revenue to determine potential funding opportunities and needs.
- Performing additional traffic analyses to ensure new infrastructure does not result in poor system performance as the Final Study Recommendations are built out over time.
- Developing more detailed engineering design and environmental analyses to determine delivery timelines, minimize potential impacts, evaluate long-term maintenance needs, and refine costing assumptions.
- Progressing concept designs for SR 167 facility projects, such as direct access ramps, and collaborating/partnering with the community to ensure they can be delivered in a way that is compatible with community land use plans while still delivering the transit speed and reliability improvements necessary for BRT and frequent bus service.
- Identifying project alignment with funding sources.
- Clarifying and fully documenting the roles for design, implementation, and maintenance of facilities.

Partnerships to Transform Mobility

Achieving the SR 167 Master Plan PEL Study vision will require a coordinated effort by WSDOT and partner agencies. The transportation projects and strategies identified in the Final Study Recommendations provide a strong foundation to improve mobility in the study area. However, to fully capitalize on the investments and transform mobility in the study area, there are other policies, investments, and strategies that partner agencies can continue to work on. Examples include:

Continued implementation of the regional growth strategy: Land use decisions are an important factor in the success of transportation solutions. The transportation network overall, including WSDOT facilities, also benefits from greater development intensities in areas that are served by transit, and that are easy and comfortable for people walking and bicycling. WSDOT is committed to support the PSRC, cities, and counties as they work to make land use decisions that leverage multimodal investments and that reduce reliance on driving.

Invest in complementary multimodal projects: This SR 167 Master Plan PEL study has identified a number of specific multimodal projects, like implementing BRT on SR 167, completing gaps and adding improvements on the Interurban Trail, and investing in multimodal programmatic strategies, such as implementing low stress pedestrian and bicycle improvements in regional centers. Given the study's limited scope, these investments could be further leveraged by complementary investments to extend the reach of pedestrian, bicycle, and transit projects. Examples include the buildout of community active mode networks or additional fixed route or flexible transit services as land uses become denser.

NEPA Considerations

The requirements of fiscal constraint must be satisfied for FHWA and WSDOT to approve NEPA documentation (as discussed in *Chapter 5*). In most cases, the next step for projects identified in the Final Study Recommendations will be to determine if there is a federal nexus, such as funding. If there is a federal nexus, the project(s) would require evaluation under NEPA. The project team would coordinate with FHWA to determine the NEPA class of action and to complete the appropriate analyses and documentation, which varies by resource. If there is none, proposed projects may still require state and local evaluations and permitting. The information from this study and, particularly *Chapter 5* and *Attachment A*, should be used as a resource for future NEPA processes.

Continued Collaboration and Issues

WSDOT will continue to work closely with community and partner agencies to develop and refine project concepts, secure needed funding, and implement the important transportation projects and strategies identified in the Final Study Recommendations. Specific issues that have been raised by partners and the community and that will need continued coordination and attention include:

- **HOV Policy:** As noted in *Chapter 3*, for modeling and analysis this study assumed that HOV 3+ vehicles would use the ETLs for free during peak commute periods. This modeling assumption is consistent with all other modeling work performed for the I-405/SR 167 Corridor Program. However, the project team has heard concerns from partners and community members about ETL lane utilization and potential equity impacts from HOV 3+ operations (versus HOV 2+). The final HOV occupancy policies will be set by WSTC through its rate setting process that involves WSDOT, partners, and community members.
- **Low-Income Toll Program:** A statewide low-income toll program is included in the Final Study Recommendations (*Chapter 4*) that could, in part, reduce the cost burden of ETLs on lower income drivers who are not able to carpool. A low-income toll program can only be established by the WSTC, and it would need collaboration from WSDOT, partners, and the community to help ensure the low-income toll program is designed in a way that benefits the SR 167 corridor and the people using it.
- **Implementing Future Transit Service:** The Final Study Recommendations include planned but unfunded transit routes on the SR 167 corridor. While supportive of expanded transit, some partners have expressed concerns about relying on transit services that may have difficulty securing stable operating funding. It is important to note that transit agency partners support the Final Study Recommendations in this plan and WSDOT will partner with them to build projects to improve transit speed and reliability, and it will support additional transit funding for stable operations.
- **Electric Vehicle Mandate:** Senate Bill 5974 directs the state to require that all light-duty passenger vehicles sold in Washington are electric by 2030. While not a detailed element of the master plan, the EAC raised concerns that this mandate would make it more difficult and expensive to travel in the future and urged the state to consider how to implement the benefits of electric vehicles in an equitable manner. Substantial coordination between local and state agencies will be required to ensure access to charging infrastructure is distributed equitably and that the costs of accessing or building charging stations does not disproportionately fall on vulnerable populations or overburdened communities. One potential area for agency partner collaboration is to jointly pursue federal charging and fueling infrastructure grant funds. These funds prioritize low and moderate-income areas with limited private parking or high proportions of multifamily housing.
- **Truck Parking:** The *2016 Washington State Truck Parking Study* identified SR 167 as the fifth highest corridor in the state with a substantial unmet demand for truck parking. The *2022 Washington State Freight*

System Plan Update identified undesignated truck parking in the vicinity of the Port of Tacoma. There are numerous land use compatibility issues, equity implications, and land use regulations that need to be coordinated to address and implement truck parking. WSDOT is committed to partnering with other agencies and the private sector on addressing truck parking. Of note, the 2023-2025 Biennium allocated \$12 million to assess, develop, and implement truck parking strategies across the state, including in the Puget Sound region.

- **Land Use Coordination:** Many of the projects and strategies identified in the Final Study Recommendations will be more effective at locations with higher densities and that have a greater mix of land uses, such as in the designated RGCs and Countywide Centers. Community members reiterated the need for a greater amount of affordable housing within the study area, particularly around transit hubs, and measures to address displacement.

Additionally, federal, state, and regional policy and guidance are always evolving and will need to be monitored and incorporated. Refer to the *Planning Context* section in *Chapter 2* for existing policy and guidance.

The PEL process framework includes a questionnaire (*Attachment A*) to track and facilitate coordination on outstanding issues, and the PEL process will continue to serve as a guide for bringing projects forward into future planning and development phases.

Chapter 7. References

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