Appendix B: Active Transportation Context

Reconnecting I-90 Communities

Application for the FY 2022 RAISE Discretionary Urban Planning Project Grant

The Active Transportation Plan

WSDOT released its new Active Transportation Plan in December 2021. Statewide modal plans often stay at the conceptual level. WSDOT took a different approach with more substantive analysis and direction. It provides new direction for the agency on a number of fronts.

- The plan assesses the needs for accessible pedestrian and bicyclist facilities, highlights safety concerns, and provides the first-ever examination of state right of way and its suitability for active transportation.
- For consideration of future investments, the plan lays out a rational and equity-based approach to prioritizing safety and operational performance needs on state highways as part of the overall networks people use to reach their destinations.
- It incorporates the Safe System Approach, which emphasizes using engineering approaches that acknowledge humans make mistakes and that crashes with greater impact force are more deadly, especially for vulnerable road users.
- It provides new metrics for tracking and reporting progress that emphasize the importance of complete and accessible walk/bike facilities and connections to transit and other modes, particularly in overburdened communities.
- It calculates the environmental, health, and economic benefits to society when people shift trips from driving to walking or cycling.
- The plan notes that improvements for people walking, rolling, or cycling provide more information to drivers as well. It provides examples such as pedestrian-scale lighting and crossing visibility so drivers can see and stop in time. It also includes designs that provide a "self-enforcing road" to help people drive at the appropriate speed for a place with a mix of destinations and people walking or cycling. Making a road safer for the most vulnerable users also makes it safer for everyone, including the people who drive there.
- It lays out the concept of a statewide bikeways and trails network that will support everyday transportation needs while also drawing bike tourism, which contributes significantly to local economies.

WSDOT's Active Transportation Division is leading development of a coordinated and growing body of work resulting in changes to agency policy and investment decisions. Examples:

- 2018: Policy direction in the Action Plan for Implementing Pedestrian Crossing Countermeasures at Uncontrolled Locations developed under EDC-4, Safe Transportation for Every Pedestrian.

- 2019: The pedestrian/bicyclist chapter in the Strategic Highway Safety Plan (Target Zero) emphasized engineering solutions; a new chapter on the Safe System Approach was included in the SHSP.
- 2020: Speed management and injury minimization approach outlined in a policy framework developed by a multi-agency, multidisciplinary group facilitated by WSDOT Active Transportation Division staff.
- 2021: Active Transportation Plan released.
- 2022: The ATP itself has led to an update in how WSDOT programs highway safety dollars; the agency now includes funding set-asides for active transportation based on level of traffic stress and on speed management.
- 2022: The state legislature adopted Move Ahead Washington, a package of transportation revenue and investments that includes new funding to reconnect the active transportation network in communities severed by legacy state transportation facilities; significant expansion in the Safe Routes to School and Pedestrian/Bicyclist Program grants; a new school-based bike safety education program; and a Complete Streets design directive for WSDOT projects. All of these represent implementation of various elements in the ATP.

This project's planning approach will address specific safety issues in the Seattle and Spokane planning processes and within the tools to be developed, including:

Driving speed: 2010-2019, 86% of pedestrian and bicyclist fatalities occurred on roads with a posted speed over 25 miles per hour. This describes nearly all state highways and many of the major arterials that intersect with state routes, such as those at the location in Spokane and Seattle.

Crossings: A majority (62%) of pedestrian fatalities and serious injuries 2010–2019 occurred when the pedestrian was crossing the road. Crossings that are appropriately located, designed for context, and ADA-accessible are not available at all crossing locations, meaning people may have to cross in conditions that increase crash risk.

Lack of separated infrastructure and incomplete networks: Providing appropriately designed, functional, and complete networks will reduce the potential for active transportation crashes. Comparison of places with and without complete networks provides evidence that having continuous connections and separated facilities reduces crashes for every mode.

Vulnerable road users face greatest risk: Pedestrians and bicyclists comprise a disproportionate share of serious injuries and fatalities in Washington, well above their share of mode use. Crashes involving people who walk and bike represented 21% of all fatal and serious injury traffic crashes in 2019, even though walking and biking for transportation only represents about 12% of all trips.

This deadly trend line has continued to climb over the past decade at rates far outstripping population growth. Pedestrian deaths increased 62.5% from 2010 to 2019; the number of

bicyclist fatalities has fluctuated over the years but overall has shown a 61.4% increase between 2010 and 2019. Population growth in Washington during the same period was only 11.86%.

Safety is an equity issue: Traffic crash data do not include the income level or race of someone killed or injured in a crash. WSDOT therefore examines demographic characteristics around crash locations to identify possible equity concerns tied to differences between neighborhoods. This analysis by place serves as a proxy for the crash exposure of people who live in that area. Lower-income neighborhoods tend to have less infrastructure dedicated to walking and bicycling and more residents who do not own a personal vehicle. People living in poverty also include an over-representation of other vulnerable groups, such as people who are older or disabled who are more likely to experience severe or fatal trauma in a crash.

In Washington, about 44% of census block groups have higher poverty levels than the state average. About 51% of fatal and serious injury crashes occur in these locations, meaning that people are seriously injured or killed in crashes in these neighborhoods in disproportionate numbers. About 33% of fatal and serious injuries occurred in census blocks where the percentage of the population that is Black, Indigenous, and/or people of color was greater than the state average. This is out of proportion to the representation of these races/ethnicities; those census blocks only represent 24% of all census blocks.

I-90 Communities as Learning Labs

Planning for improvements in the I-90 communities of Spokane and Seattle coupled with toolkit development and testing are presented here as a single project. Collectively they represent a unique approach to improving safety and mobility for vulnerable road users both in the short term and over the long run.

Both locations and the toolkit have independent utility in the activities proposed in this application. Due to their geographic locations, the proposed improvements will be implemented on independent timelines, with toolkit development and testing coordinated across the locations. The contexts and challenges presented by the need for more effective planning for active transportation in general, and the specific issues and opportunities at both sites, collectively address the RAISE grant selection criteria.

Core concepts/tools from the ATP will be tested and refined in this project and woven into WSDOT's project development and planning processes. These include use of the route directness index (RDI) as an element of network connectivity and level of traffic stress (LTS) as a measure of network quality. WSDOT guidance will be updated to incorporate specific recommendations concerning context and active transportation planning and design. These include focus on population centers (including census-designated places, not solely incorporated municipalities); emphasis on reducing driving speed through self-enforcing roads to save lives; and a definition of demand based on destination density, not user counts.

Both locations have elements that will help to further refine all of the planning and development tools from the ATP, particularly crossing barriers. The Spokane and Seattle projects will test the RDI and intersection LTS within a planning process to address crossing barriers. The work will clarify how the tools should be improved for project-specific decisions and feed into the agency's guidance on pedestrian crossing frequency. In addition, these projects will help to determine where the LTS and RDI analyses best fit within planning and project development.

The Economic and Societal Value of Walkable, Bikeable, Rollable Places

As a recent report on ways to evaluate walking and walkability notes, "Walking and walkability provide a variety of benefits, including basic mobility, consumer cost savings, cost savings (reduced external costs), efficient land use, community livability, improved fitness and public health, economic development, and support for equity objectives." A number of studies have described the many ways that improved walkability and bikeability contribute to quality of life and place and to economic vitality.

Bicycling programs and active transportation facilities such as sidewalks have been shown to deliver economic benefit to society, including increased retail sales and property values. Those who bike to businesses make more frequent trips and spend more per month than those who drive. This economic return provides tax revenues to local and state government. In addition to drawing business activity, walkable places support workforce recruitment and retention in smaller towns as well as in larger cities. At the same time they reduce automobile dependency, improving both the equity and efficiency of the transportation system.

Job Creation

Multiple studies have found that active transportation projects create far more jobs per dollar invested than any other type of transportation project. Mining Recovery Act Data for Opportunities to Improve the State of Practice for Overall Economic Impact Analysis of Transportation Investments found an average of 17+ jobs per $1 million investment in active transportation projects in a 2012 study of the American Recovery and Reinvestment Act—61% more jobs than the lowest-returning investments. The 2011 National Study of Employment Impacts from Pedestrian and Bicycle Infrastructure found 13-14+ per $1 million. By preparing communities with comprehensive and coordinated plans, this project positions them to be more competitive in winning grants for construction of future projects and adding more local jobs to the economy.

Bike Tourism and Walkable Communities

Two recent studies of the economic, environmental, social, and health benefits of trails in Washington found significant return on investment, including health savings and spending by travelers drawn to more walkable and bikeable destinations.

The project locations share a unique tie to the US travel industry. While bike travel is not the primary focus of this project, planning for completion and connection of regional trail systems and local connections to the US Bicycle Route System in the state will enhance Washington's attractiveness for bike travel, a form of eco-tourism or active tourism. Bicycle tourism represents an opportunity for economic development that favors locally owned businesses where the proceeds remain in the hands of the community.

Both project locations connect to a significant regional trail system and are adjacent to an existing or proposed US Bicycle Route. The Spokane project connects to the 64-mile bi-state Spokane River Centennial Trail that lies at the intersection of the future USBR14 and future USBR87. The Seattle location lies on the Mountains to Sound Greenway, part of the cross-country Great American Rail Trail. It ties into a growing regional trail network surrounding Lake Washington and connects to the future USBR40 and USBR95. Washington was the first state on the West Coast to achieve designation of a USBR and continues to submit additional routes for the growing state and national system.

Multiple studies have found that bike travelers typically spend more per day on average than car travelers, since they stop and "fuel up" again and again over the course of the day and require more overnight stays for the same number of miles traveled. As the League of American Bicyclists' #1 Bicycle Friendly State in America since 2008, Washington's bike-friendly towns and trail connections position it as a top-tier destination. An economic impact study on hiking and biking in Washington used the Spokane River Centennial Trail as a case study, finding an annual economic contribution of $1.688M primarily based on use by local residents. Investments in trails also bring health savings, recreational-use value, and increased property value.

Shareable Tools in the Toolkit

The results of Reconnecting I-90 Communities can inform similar efforts nationwide for more effective pursuit of equity, sustainability, safety, mobility, and health goals. Proactively conducting analysis, developing plans that showcase best-practice designs, training on new concepts to address old problems, identifying ways of getting to "yes" within a large and potentially intimidating organization's complex processes—all of this will demonstrate and embed a commitment to change and will lead to better projects on and off the state system. Deliverables for the toolkit include new analytical tools and design/operational guidance, the ability to use them on future projects, and a plan for ongoing stewardship and learning.

The list below serves as an initial set of toolkit deliverables, with additional details to be defined in the first phase of work. By co-creating the scope of work with WSDOT staff who are being

asked to change how they define priorities and outcomes, this project will support the ongoing shift toward a fully multimodal approach that is already under way within the agency. People who feel ownership of new tools are more likely to use them and to involve others in learning about the changes.

WSDOT has begun applying the Capability Maturity Framework approach to its work in transportation and land use and has developed an initial Capability Maturity Framework for active transportation. That existing work and associated processes for evaluation and feedback are part of the foundation for this project's work to improve agency implementation capability.

- **Practitioner-oriented guidance:** This will incorporate and synthesize concepts from Complete Streets, the Safe System Approach (modeled on Vision Zero and similar systematic and data-driven approaches), speed management for injury minimization, multimodal network connectivity and quality evaluated through level of traffic stress, route directness, and crossing safety, and transportation equity.
- **Updated Equity + Safety + Potential Demand Analysis:** An initial analysis was created for the ATP as a snapshot in time using data sources that are now outdated. WSDOT has begun scoping an active transportation decision-making tool initially conceived of as GIS layers. Our research points us to the need for two elements:
    - a simple site-specific tool that enables designers to calculate the effects of various countermeasures on level of traffic stress and other key performance metrics, and
    - an updated approach for the larger analysis to be stewarded within the agency's community planning portal for easy access by local agencies as well as WSDOT Region offices.
- **Illustrated models and case study examples**: These will help practitioners recognize and identify what is around them, both the "ecosystem" of existing designs, barriers, and challenges, and the many users with their wide variety of transportation needs to be met within that system.
- **Transportation Equity Labs:** These planning and project development learning experiences will bring together agency staff and community representatives to focus on transportation equity understanding and insight as a project moves through planning to design.
- **Design and operations updates**: Agency manuals, guidance, and standard plans and designs will be updated and expanded to incorporate elements needed to apply the principles and methods from the ATP, the speed management policy framework, and other sources.
- **Hands-on tools and practice**: The toolkit will provide "system navigation" in the form of templates, decision trees, flowcharts, checklists, and other formats as needed to effectively steer WSDOT staff and partners through analysis and decisions for systematic application in everyday work.