

April 2014

Application to the TIGER Discretionary Planning Grants Program

Regional Planning Study (Urban)

\$720,000 TIGER Funds Requested

Greening Interchanges with Multimodal Redevelopment – Seattle to Lynnwood



Location: Cities of Seattle, Shoreline, Mountlake Terrace and Lynnwood in Washington State; Congressional Districts 2 and 7; Interstate 5, milepost 173-182

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* Supporting documentation can also be found on our project web page (including Appendices listed above):

<http://www.wsdot.wa.gov/Funding/Tiger6/GreeningInterchanges>

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Greening Interchanges with Multimodal Redevelopment – Seattle to Lynnwood

The Washington State Department of Transportation is pursuing strategies that emphasize return on investment while encouraging flexibility, innovation, community and multimodal solutions. We engage people from local communities at the earliest stages in our planning process, ensuring that local input influences outcomes. We are advancing the planning, design and construction of our projects through the use of least-cost planning principles. This approach to planning considers a variety of investments on an equal basis; analyzes the costs and benefits of various strategies, including direct and indirect costs; and engages the public in the planning process. It identifies an optimum mix of practical investment and policy options to address system performance while supporting communities, the economy and the environment. Each of the applications submitted by WSDOT for the TIGER planning grant competition will embrace a least-cost planning approach, and we look forward to working with USDOT to make FHWA’s [Every Day Counts](#) design initiative applicable to WSDOT planning and capital projects.



I. Project Description

Project name: Greening Interchanges with Multimodal Redevelopment – Seattle to Lynnwood

Location: I-5 milepost 173-182, Seattle to Lynnwood.

This project will deliver plans to integrate three elements – transit oriented development; accessibility enhancements for transit, cyclists and pedestrians; and environmental enhancements at future light rail stations at three Interstate 5 interchanges. Plans produced from this study will guide future public and private development to ensure that they:

- Improve first and last mile connections to transit, jobs, education, neighborhoods and business centers
- Improve accessibility and safety
- Improve access for people with special transportation needs
- Improve access for economically disadvantaged populations
- Deliver on sustainable community goals and implement environmental enhancements
- Provide infrastructure that encourages healthy transportation choices and reduces personal out-of-pocket transportation costs
- Support regional growth strategies, small business, disadvantaged business enterprise and economic mobility
- Improve transportation facilities and systems to minimize life-cycle costs and enhance resiliency

Now is the ideal time to develop plans to transform the three interchanges included in this planning project.

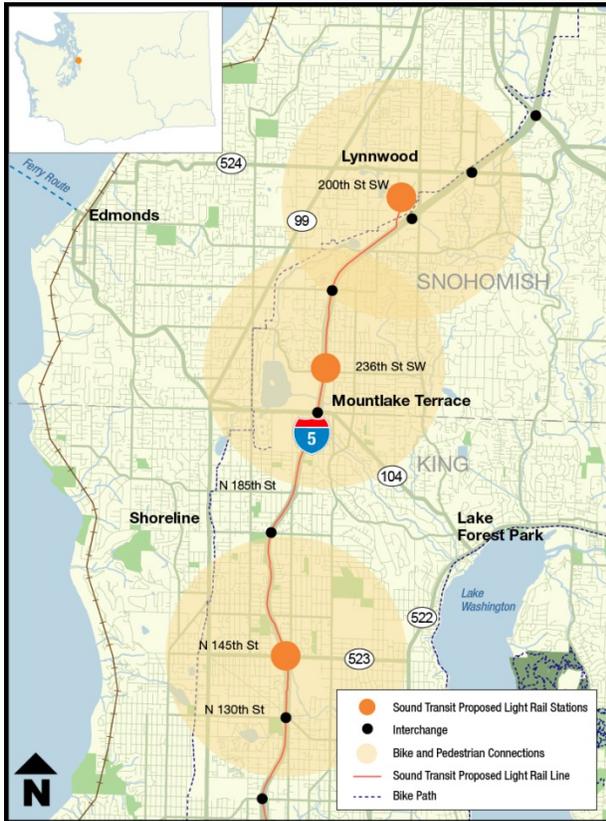


Figure 1: Maps of project area and future Lynnwood Link Extension light rail alignment. See Appendix A for full size maps.

New light rail stations provide once-in-a-generation opportunity

By 2023, Sound Transit will extend light rail service north to serve Shoreline, Mountlake Terrace and Lynnwood. Sound Transit has identified I-5 as the preferred alignment for this light rail extension, which is known as the Lynnwood Link Extension. Planning is underway for these stations, providing a once-in-a-generation opportunity for communities, transit agencies, WSDOT and other partners to transform the station areas from congested, car-centric thoroughways to community hubs that connect residents and businesses to other regional destinations via transit.

Traffic chokes commutes, freight and smart growth

I-5 is the primary West Coast transportation route, connecting Canada, Washington, Oregon, California and Mexico. The section of I-5 to be studied carries 160,000 - 180,000 vehicles and is regularly congested daily for 7.5 hours in each direction. Travel on I-5 currently takes up to three times longer during peak hours compared to off-peak hours. Average speed on I-5 ranges from 23 to 40 mph; and travel time is highly variable and unpredictable. By 2035, 4 to

12 percent more vehicles are expected to use I-5, which currently operates at 98 percent or more capacity.

In 2013 there were approximately 2.1 million jobs in the central Puget Sound region, and the region's population reached an estimated 3.78 million people. By 2040, employment in the region is expected to grow to nearly 3 million jobs, according to the Puget Sound Regional Council's Economic and Demographic Forecast. In short, the region is expected to accommodate 20 percent more people and nearly 40 percent more jobs. This project area encompasses well-established suburbs that must adapt to accommodate a share of this growth and remain vibrant, livable and sustainable.

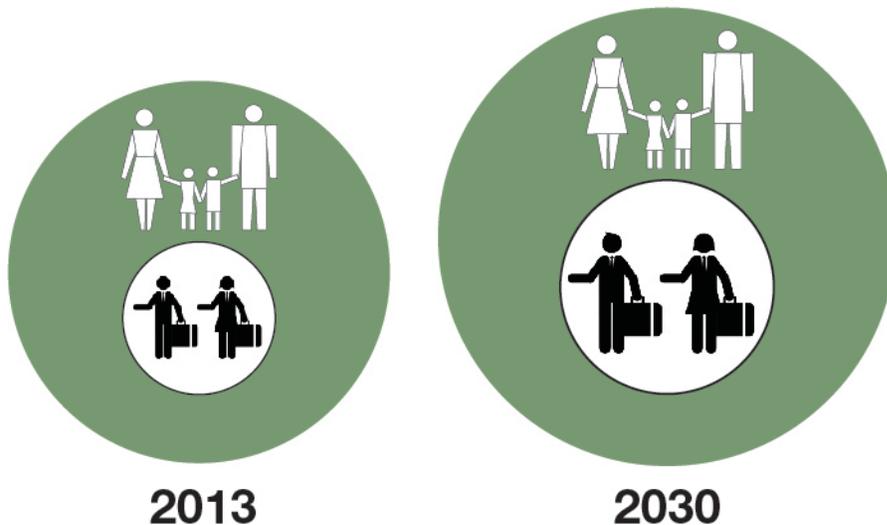


Figure 2: *Regional jobs and population growth*

Keeping suburbs vibrant through green growth

This planning project will integrate the light rail system with improved bicycle, pedestrian and bus access; land-use changes; economic development and environmental enhancements. This combination will help well-established suburbs thrive for decades to come. Community members will have congestion-free, reliable ways to access jobs, education, health care, shopping and recreation locally and regionally. This will enhance economic mobility and reduce growing travel demand on I-5, a boon for both commuters and freight.

Opportunity to set the stage for green growth

WSDOT oversees planning, design, construction and operation of I-5. WSDOT owns the majority of park-and-ride lots at Sound Transit's proposed light rail station locations. A TIGER Planning Grant would enable interdisciplinary teams and community groups to:

- Use least-cost planning principles to identify multimodal options for improving connections to light rail stations by transforming the freeway from a barrier into a pedestrian-friendly connection that improves multimodal access to the stations and transit oriented development
- Coordinate efforts to create a shared, holistic vision of what green light rail station area plans could achieve, using least-cost planning and an integrated planning process

- Rethink how to provide multimodal connections across I-5 in a manner that supports the region's long-range land-use vision for vibrant, livable communities
- Conduct advance traffic and safety analysis of interchanges for proposed light rail stations
- Identify opportunities to leverage WSDOT assets to support partnerships with Sound Transit and the cities of Shoreline, Mountlake Terrace and Lynnwood in furthering transit orient development at existing transit centers
- Plan coordinated removal of barriers to safe, efficient, multimodal travel for people with special needs
- Identify environmental improvements and innovative stormwater management designs that enhance the community and environment and improve resiliency of critical transportation facilities

Sound Transit identifies I-5 as preferred alternative for light rail expansion

Sound Transit is building on several decades of planning and environmental assessment to define alternatives for extending light rail throughout the central Puget Sound region. The Lynnwood Link Extension connecting King and Snohomish counties with light rail was part of the 1996 Regional Transit System Plan. More information about the Lynnwood Link light rail extension can be found on the Sound Transit website www.soundtransit.org/Projects-and-Plans/Lynnwood-Link-Extension.

The Lynnwood Link Extension will provide frequent, reliable, congestion-free connections to major economic, medical and educational centers in the Puget Sound region. Regional Link light rail destinations include downtown Seattle, the University of Washington, North Seattle College, Shoreline College, Seattle Central College and Seattle-Tacoma International Airport. According to Sound Transit's Draft Environmental Impact Statement, the Lynnwood Link Extension is expected to provide 60,000 to 70,000 daily transit trips by 2035.

Sound Transit has completed the scoping process for Lynnwood Link Extension's Environmental Impact Statement as required by the National Environmental Policy Act and the Washington State Environmental Policy Act. In November 2013, the Sound Transit Board identified the I-5 route for light rail and stations as the preferred alternative and will continue to study and refine design options until the environmental review is complete in 2015.

The catchment area for the Lynnwood Link Extension creates local redevelopment opportunities. This planning study uses those opportunities to simultaneously create a shared vision of transit oriented development with green infrastructure.

Who benefits from these improvements?

Shoreline, Lynnwood, Mountlake Terrace pursue green growth – *A catalyst for redevelopment to support public transit investments*

The region is committed to making the most of a \$25 billion investment in regional rapid transit. With funding from the U.S. Department of Housing and Urban Development's Sustainable Communities Regional Planning Grant Program, the Puget Sound Regional

Council formed the Growing Transit Communities Partnership – www.psrc.org/growth/growing-transit-communities. This Partnership provides tools and strategies for local jurisdictions to locate affordable housing and jobs in walkable communities served by transit.

The cities of Shoreline, Mountlake Terrace, and Lynnwood have initiated a community-based, station-area planning process that includes rezoning areas around the potential station locations to encourage higher densities of housing, employment and multimodal connections to encourage transit oriented development and use of transit.

Sustainable transportation: Rethinking urban interchanges to provide multimodal freeway crossings

All of the proposed station areas must be redesigned to accommodate light rail and support transit oriented development. This provides a unique opportunity to reshape interchange areas into vibrant, walkable, livable communities with access to frequent, reliable transit connecting regional growth centers.

Using least-cost planning principles, an interdisciplinary team with stakeholders from local agencies and community groups will identify how interchange areas can be modified to provide better interconnectivity of all modes. The groups will identify impacts on local streets and develop plans that enhance the natural environment. These goals align with WSDOT's Strategic Plan.

The FTA defined the pedestrian catchment area as one-half mile in radius. With the proposed light rail stations at the center of the circle, radiating out one-half mile, I-5 currently bisects the pedestrian catchment area or walk shed. In its current configuration, I-5 creates a barrier rather than an access to existing transit centers and transit stops where future light rail station areas will co-locate. The absence of multimodal connections to and from transit centers limits the number of pedestrians and bicyclists who could access transit.

This planning study addresses barriers to access and will recommend ways to replace identified barriers with improved multimodal connections. By removing barriers and improving interconnectivity for all modes of travel, non-drivers will have more viable transportation choices, and the new light rail stations will become vibrant centers for healthy communities.

Community profiles at proposed light rail station locations at I-5 interchanges

Each potential station location includes unique characteristics and opportunities for integrated planning of future station areas.

1. NE 145th Street Shoreline (SR 523)

NE 145th Street is a four-lane arterial designated as State Route 523 with average daily traffic volume exceeding 30,000 vehicles. Its sidewalks fail to meet ADA standards; they are uneven with numerous obstructions and a limited number of curb ramps at

Opportunities

The city of Shoreline initiated a planning effort around NE 145th Street to evaluate land-use changes to encourage transit oriented development. For more information:

[www.shorelinewa.gov/government/departments/planning-community-development/planning-projects/light-rail-station-area-planning/145th-walking-and-biking-tour`](http://www.shorelinewa.gov/government/departments/planning-community-development/planning-projects/light-rail-station-area-planning/145th-walking-and-biking-tour)

In 2013 Shoreline voters approved a ballot measure authorizing the city to create its own water system, disconnecting it from Seattle's system. This will require construction along NE 145th Street. There is an opportunity to coordinate with the city of Shoreline on planning NE 145th interchange improvements, including innovative stormwater treatment design that takes advantage of local green space.

Thornton Creek

Thornton Creek includes 18 miles of urban creek and tributaries, running from southwest Shoreline through northeast Seattle. The creek forms the largest watershed in Seattle, draining a 12-square-mile area of relatively dense biodiversity in an urban setting. Much of the creek has run through culverts for many decades. The Thornton Creek Alliance has been working to gradually restore the creek by day-lighting many buried parts. The TIGER Planning Grant will provide resources for WSDOT to use the work of the Thornton Creek Alliance to identify enhancements for Thornton Creek as part of planning process. For more information on Thornton Creek Alliance: www.scn.org/tca.

2. Mountlake Terrace Transit Center

In 2006 WSDOT and Sound Transit partnered to construct the Mountlake Terrace Transit Center. In 2009 the transit center opened to the public. Three transit agencies provide bus service at the transit center. Bus service includes three Sound Transit express routes, nine Community Transit local routes and one King County Metro route. A park-and-ride survey conducted in 2013 found 100 percent of the 880 parking spaces occupied during the work week. The transit center includes a four-story, five-level garage and surface parking lot with 880 parking spaces combined. The transit center was awarded a Green Globes designation by the Green Building Initiative. Solar panels on the garage feed energy back into the regional power grid, and construction materials included recycled concrete. The facility also includes 10 electric-vehicle charging stations to serve up to 20 electric vehicles at a time.

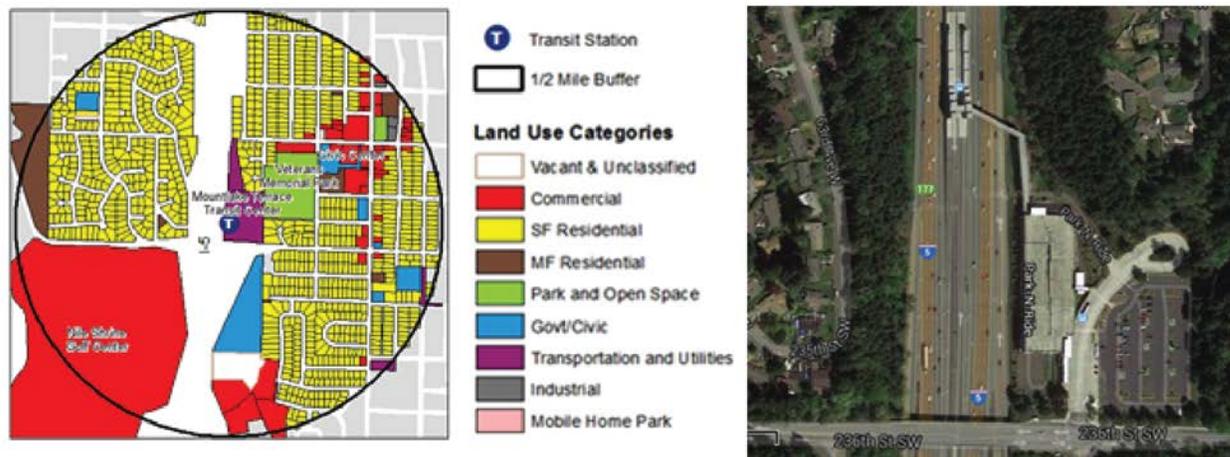


Figure 4: *Mountlake Terrace land use and aerial photo maps. A covered pedestrian bridge connects the freeway station to the transit center adjacent to I-5.*

Community profile

The city of Mountlake Terrace, the proposed location of the 236th Street Link light rail station, has an estimated (2012) population of 20,198 people. The city has grown in population by 1.5 percent annually, a rate slightly less than the state’s 2.5 percent. The median household income in Mountlake Terrace is \$59,099 (2012), slightly more than the national average household income of \$53,048 and slightly less than Washington’s median household income of \$59,374. According to current U.S. Census Bureau statistics, Mountlake Terrace has a 34 percent minority population. The average travel time to work for Mountlake Terrace residents is 27.1 minutes, slightly more than the statewide average travel time of 25.5 minutes. The proposed location of Sound Transit’s Lynnwood Link Extension light rail station at Mountlake Terrace is bisected by I-5. It is considered “moderately walkable” with small city blocks and typical urban amenities. The catchment-area population proximate to this station site is 2,640, with a minority population of approximately 28 percent. There are 600 jobs near the proposed station, and the approximate average median household income is \$58,350. However, census tract level data taken from GIS information on the EPA Environmental Justice View (EJ View) website shows some areas of Mountlake Terrace have higher levels of poverty and lower than average household income. *See Figures 7 and 8 below.*

Opportunities

The existing Mountlake Terrace Transit Center will require reconfiguration to accommodate light rail. Mountlake Terrace is engaging residents in a community-based planning process known as the “Main Street Revitalization Project” to encourage transit oriented development near the proposed station and transit center. Multimodal access across I-5 and intersection redesign will be necessary to accommodate the new station and support new development. For more information:
www.cityofmlt.com/cityServices/planning/mainStreet/pdf/MainStreet_02.13.14-State.pdf

3. Lynnwood Transit Center

Community Transit operates 13 bus routes providing 100 roundtrips each weekday between Snohomish County and downtown Seattle. A park-and-ride survey conducted in

2013 found that 100 percent of the Lynnwood Transit Center's 1,370 parking spaces were occupied during the work week.

Community profile

The city of Lynnwood has an estimated population (2012) of 36,275. With an annual population growth rate of 1.2 percent, the city is growing at a lower rate than Washington's 2.5 percent annual growth rate. The median household income for residents of Lynnwood is \$49,839, less than the statewide median income of \$59,374. According to current U.S. Census Bureau statistics, Lynnwood has a total minority population percentage of almost 37 percent (2010 census figures). The average travel time to work for residents of Lynnwood is 27.7 minutes, which is slightly more than statewide average travel time of 25.5 minutes.

The location of the proposed Link light rail station at Lynnwood Transit Center is bisected by I-5. Surrounding Lynnwood neighborhoods are characterized by large blocks with a nearly complete network of sidewalks. The population in the one-half-mile circumference surrounding the transit center location is 2,315, with a predominantly minority population of about 55 percent. The median household income in the immediate area of the proposed light rail station is \$37,510, which is lower than Lynnwood's overall median income of \$49,839. There are currently 2,790 jobs located in the immediate vicinity of the Lynnwood Transit Center.



Figure 5: Lynnwood Transit Center land use and aerial photo maps.

Opportunities

WSDOT owns a significant portion of the Lynnwood Transit Center. Sound Transit and the city of Lynnwood own two large parcels adjacent the transit center. A large vacant parcel next to the existing transit center has great potential for transit oriented development. The Lynnwood Transit Center will be the final light rail station on the northern segment for many years and will serve as the main hub for Community Transit's commuter bus routes and feeder service. The large parcels provide a unique opportunity for WSDOT, Sound Transit and the city of Lynnwood to collectively plan for transit oriented development.

Scriber Creek

Scriber Creek Park is located in the Cedar Valley area of south Lynnwood. Acquired by the city of Lynnwood in 1991, the park includes forested wetlands, wildlife habitats and nature trails. It is bordered by Scriber Creek to the north and the Scriber Creek Trail to the south. The Scriber Creek Trail links the park with the Interurban Trail at the Lynnwood Transit Center on 44th Avenue West. Community groups have expressed concern about Scriber Creek flooding because of development. The large parcels owned by WSDOT, Sound Transit and city of Lynnwood provides an opportunity to take an innovative approach stormwater treatment.

Multiagency integrated planning/simultaneous planning

This planning study will engage stakeholders to promote use of context sensitive design as a tool to identify new or improved connections to the proposed light rail stations. The proposed planning study will also incorporate the infrastructure climate vulnerability assessments conducted by WSDOT (2011) and Sound Transit. The study will include adaptation strategies and opportunities for protecting vulnerable and critical transportation facilities in the event of extreme weather and climate change. By using context sensitive design, WSDOT and stakeholders will be able to plan for low-impact, low-cost improvements to connect people, transit and mixed-used development without compromising safety, operations or performance.

The proposed study will forge new links between sustainability and transit oriented development in a freeway environment by:

- Using least-cost planning to identify improvements that spur transit oriented development and provide connections across I-5 for people to access affordable, reliable public transportation
- Creating ladders of opportunity and improving quality of life with transportation choices affordable to people in a range of income levels
- Developing new and improved multimodal connections through and across the corridor, linking where people live with where they work, go to school and spend leisure time
- Identifying how interchange modifications will best accommodate the changing land use around the light rail/transportation hub locations
- Creating local and interagency partnerships during the planning process to integrate transit oriented development with local land-use decisions
- Building early involvement with environmental resource agencies to better inform study recommendations, project scoping and environmental documentation
- Integrating planning for climate change into corridor study planning. There are eight known barriers to fish passage on I-5 between mileposts 173 and 182. Replacing these culverts as part of project design as required is an opportunity to right size culverts for extreme weather events expected to increase due to climate change.

II. Project Parties

In 1905 the state Legislature established the **Washington State Department of Transportation**. The agency is directed by Transportation Secretary Lynn Peterson and overseen by the Legislature and Gov. Jay Inslee. Secretary Peterson is a voting member on the Sound Transit Board. WSDOT is a cabinet-level agency that builds, operates and maintains the state’s highway and ferries systems. WSDOT is also responsible for a number of local roads, railroads, small airports and multimodal alternatives to driving. WSDOT tracks, reports and manages its programs and projects according to six interdependent transportation policy goals adopted by the Legislature in [RCW Chapter 47.01.012](#). The six policy goals are safety, preservation, mobility (congestion relief), environment, stewardship and economic vitality. Although WSDOT is the sole party responsible for this application, it has broad based support from Sound Transit and nearby affected communities. WSDOT homepage: www.wsdot.wa.gov.

III. Grant Funds and Sources/Uses of Project Funds

WSDOT is requesting \$720,000 in TIGER Planning Grant funds for the “Greening Interchanges with Multimodal Redevelopment – Seattle to Lynnwood” study. The agency will provide 20 percent matching funds (\$180,000) for technical expertise in a variety of fields within WSDOT. The total project is estimated to cost \$900,000. WSDOT will pay 20 percent of the salaries for transportation planners and traffic and structural engineers to identify and evaluate the multimodal connectivity improvements. In addition, water resource planners and engineers from WSDOT’s Environmental Services will identify innovative approaches to treat stormwater to enhance development around the light rail stations.

Funding Source	3rd & 4th Q of 2015	Year 2016	1st & 2nd Q of 2017
TIGER Funds	\$ 180,000	\$ 360,000	\$ 180,000
Local Match	\$ 45,000	\$ 90,000	\$ 45,000
Total Sources	\$ 225,000	\$ 450,000	\$ 225,000
	\$900,000		

Table 1. *Grant funds and sources*

IV. Selection Criteria

a. Primary Selection Criteria

i. State of Good Repair

Reconstruction of these station and interchange areas to accommodate light rail and transit oriented development presents an opportunity to integrate innovative stormwater and drainage design into the plans. The planning process will identify ways to use green infrastructure to encourage the development of livable, sustainable communities close to multimodal transit options.

While the study area is rated as low risk for climate change, the importance of I-5 and the multimodal centers in the study area means disruption of service could be disastrous for the local and regional economies. The proposed planning study will include adaptation planning to improve the resilience and recovery of the system in

the event of extreme weather or other catastrophe. In a post-Hurricane Sandy world, the keys to planning adaptively as a transportation agency are integration and regional coordination for a resilient approach to infrastructure investment. If funded, this planning study will develop an integrated emergency-response plan in coordination with appropriate local, state and federal agencies.

The proposed planning study builds upon and is consistent with the goals of the PSRC Regional Transportation Plan (TIP), the ongoing work of the WSDOT sustainable transportation leadership team and climate impacts and adaptation planning groups, the State Transportation Plan (STIP), the Washington Bike and Pedestrian Plan and the coordinated efforts of the King County and Snohomish counties Emergency Management Division plans. It also builds upon the 2011 Climate Vulnerability Assessment to improve resilience in the transportation system.

Planning document reference hyperlinks:

- PSRC Transportation 2040 www.psrc.org/transportation/t2040
WSDOT Climate Impacts and Adaptation
www.wsdot.wa.gov/sustainabletransportation/adapting
Washington State Transportation Plan www.wsdot.wa.gov/planning/wtp
WSDOT Sustainable Transportation www.wsdot.wa.gov/SustainableTransportation
Washington Bike and Pedestrian Plan
www.wsdot.wa.gov/NR/rdonlyres/F061CF6D-7B96-4E61-BF20-50EAF2716997/0/BikePedPlan.pdf
- Climate Impacts Vulnerability Assessment
www.wsdot.wa.gov/NR/rdonlyres/B290651B-24FD-40EC-BEC3-EE5097ED0618/0/WSDOTClimateImpactsVulnerabilityAssessmentforFHWAFinal.pdf

ii. Economic Competitiveness

A coordinated and proactively collaborative planning process will reduce inefficiencies between transportation and local agencies in the development of the proposed light rail station plans by eliminating duplication of efforts and reaching early interagency agreements on overlapping areas of jurisdiction. The implementation of recommendations likely to result from this planning study could mean reduced costs for all multimodal users of the corridor, including freight movement. More users can access Lynnwood Link by either walking or biking if integrated multimodal connections are included in design, reducing the growing travel demand on I-5. The implementation of the recommendations likely to result from this planning study will also stimulate and enhance economic competitiveness by:

- Identifying improved multimodal connections to the stations and to surrounding communities
- Increasing property values from improved transit access and environmental enhancements
- New economic development opportunities in transit oriented development linked to green station design plans

Planning Study Application to the TIGER Discretionary Grants Program

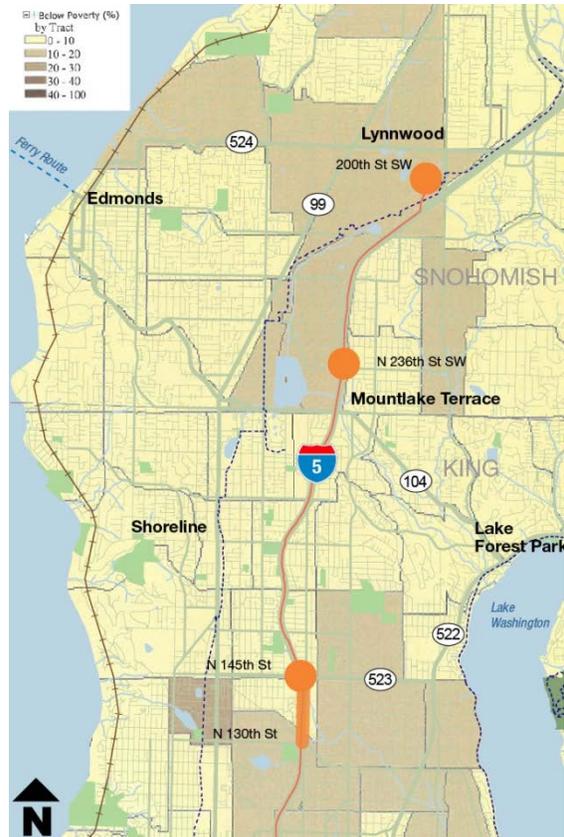
- Decreased travel demand and increased travel time reliability on I-5 from shifting commute patterns from SOV to multimodal and transit
- Reduced travel time between regional centers, contributing to the long-term economic success of the Puget Sound region, the Pacific Northwest and the West Coast
- Supported transit oriented development with enhanced multimodal connections to regional employment centers and higher education
- Job creation and economic development opportunities at station areas
- Identifying options for integrating environmental enhancements and amenities with innovative stormwater treatment concepts
- Identifying ladders of economic opportunity for economically disadvantaged areas, where income levels are lower and poverty levels are higher than the regional and/or state and national averages. *See Figures 6 and 7.*

Figure 6: Project corridor areas by per-capita income



See Appendix A for full size maps.

Figure 7: Areas of project corridor by populations below poverty level



iii. Quality of Life

WSDOT's sustainable transportation program is growing steadily along with adaptation planning and a long tradition of emergency management. Construction of Sound Transit's Lynnwood Link Extension provides an opportunity for the region to transform areas bordering freeways into livable communities that provide a safe, convenient environment for walking and biking to light rail stations.

"Greening Interchanges with Multimodal Redevelopment" promotes sustainable, livable transportation, according to the six livability principles identified by the Partnership for Sustainable Communities by:

- providing more transportation choices
- promoting equitable, affordable housing
- enhancing economic competitiveness
- supporting existing communities
- coordinating and leveraging federal policies and investment
- valuing communities and neighborhoods

The following strategies will be used to support livability principles:

Provide more transportation choices

The study will address multimodal connectivity at local and regional levels to evaluate preliminary intersection design. Consideration will be given to the integration of park and ride, bicycle and pedestrian, ADA access, light rail and transit to optimize accessibility for the broadest range of users. By improving access, the transportation system becomes a ladder of opportunity by improving mobility for all users. One of the planned stations is in Mountlake Terrace, an area remarkable for its large number of diverse immigrants and lower-than-average income levels. See figures 6 and 7 above for GIS maps showing income and poverty levels in the project area. *For more information on bicycle and pedestrian planning, see Appendix C.*

Promote equitable, affordable housing

As local jurisdictions update their comprehensive plans according to state mandate under the state's Growth Management Act, WSDOT will be a partner in the review and development process. This collaboration means that innovative ideas about station and intersection design can be coordinated with the 2015 local comprehensive plan updates required by state law. In combination with local land-use plans, access to multimodal transportation choices can foster affordable housing opportunities that leverage access to jobs, educations and business opportunities for disadvantaged populations.

Enhance economic competitiveness

This study will evaluate how best to serve the business community with improved freight-travel times after addressing congestion at existing bottlenecks in the study area.

Support existing communities

Using a stakeholder group, WSDOT will partner with local communities to envision optimal intersection plans that integrate context-sensitive design with multimodal options.

Coordinate and leverage federal policies and investment

This study will address presidential executive orders on climate change and resiliency planning as well as state mandates for emissions reduction. It will also reflect evolving WSDOT strategies to integrate sustainable transportation into all levels of planning.

Value communities and neighborhoods

The new Sound Transit Link light rail stations will immediately increase multimodal connectivity for the cities of Seattle, Shoreline, Mountlake Terrace and Lynnwood. The stations will also serve as regional nodes of multimodal connectivity for destinations such as Sea-Tac International Airport, the University of Washington, Microsoft and other major employment centers.

iv. Environmental Sustainability

WSDOT has already taken significant steps to improve resilience and integrate climate-change adaptation into the state transportation planning process. This planning study proposes to take WSDOT one step further down the path of sustainable transportation planning.

This planning study addresses environmental sustainability by targeting multimodal connectivity to put people first and protect the environment at the same time. Partnering with Sound Transit, the city of Shoreline and others in the planning study area, WSDOT will use practical and context-sensitive design solutions to integrate sustainable transportation concepts and evaluation criteria into the planning study process. For the purpose of this study, an emphasis on a sustainable transportation perspective will emphasize how individual connections to local and regional travel modes fit into the overall context of long-term sustainable transportation goals, while achieving the objectives of the state transportation improvement plan.

Key links:

WSDOT Sustainable Transportation
www.wsdot.wa.gov/SustainableTransportation/partners

WSDOT Climate Adaptation
www.wsdot.wa.gov/sustainabletransportation/adapting

For example: if average miles driven per capita is 10,000 miles per year, and if average gas mileage is 21 mpg, with the average commuter buying about 500 gallons of gas per year, then 4.5 metric tons of CO₂ is emitted by one person driving one car every year. If convenient multimodal connectivity in the planning study area makes it possible for one commuter to drive half as much (by driving to adjacent park and ride and taking light rail downtown for example), then greenhouse gas reduction for that one person would be 2.25 metric tons of CO₂ per year!

VMT and GHG calculations made using EPA Greenhouse Gas Equivalencies Calculator. <http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>

Environmental sustainability challenges:

- Improve energy efficiency
- Reduce dependence on oil
- Reduce greenhouse gas emissions
- Address stormwater through natural means
- Avoid and mitigate environmental impacts. benefit the environment

Examples of how this study could address the challenges:

- By planning for the integration of solar panels and wind turbines into intersection redesign to power information technologies such as electronic messaging systems, WSDOT could improve energy efficiency even with added infrastructure that otherwise would consume additional energy. By utilizing construction materials and methods that help structures conserve fuel, WSDOT could improve the energy efficiency of buildings and new systems.
- By planning for electric vehicle charging stations as part of Link light rail station design, connected to the Washington's Electric Highway system. Integrating EV charging stations and the West Coast Electric Highway into the planning study encourages EV use and reduces dependence on oil. The Electric Highway currently runs along I-5. *For more information on The Electric Highway, visit their homepage here: <http://www.westcoastgreenhighway.com/electrichighway.htm>*
- By planning for convenient multimodal connections, commuters will be less dependent on cars to get where they need to go (school, work), which will reduce annual vehicle miles travelled per capita, and that in turn will reduce GHG emissions.

- Using green infrastructure in stormwater design and planning, WSDOT could use natural means to address stormwater issues throughout the planning study area. As planning for stormwater is also a critical component of planning for climate change and resilience, it might be possible to simultaneously return cleaner water to area streams while reducing the climate vulnerability risk to critical transportation facilities. *See Appendix B for more information on WSDOT experience with innovative stormwater design.*

- Through a public outreach process, advocates for local streams and watersheds like Thornton Creek can help WSDOT connect the transportation planning process with educational opportunities for system users. Stormwater system designs that enable the public to see where stormwater goes (such as transparent roof drains that visibly flow to local streams and lakes) provide people an opportunity to learn how their transportation choices affect the natural environment in their communities.



Figure 8: *Green Infrastructure and Natural Stormwater Treatment System Design*

- By adding interpretive signage at WSDOT facilities, the agency can begin to educate the public on the environmental costs of transportation. Interpretive signs could include information on what WSDOT is doing to mitigate environmental impacts and otherwise benefit the environment.

v. Safety

An important focus of this study will be the analysis of safety issues in the vicinity of the proposed Sound Transit Lynnwood Link light rail stations at NE 145th Street, 236th Street SW and 200th Street SW. The planning and design efforts that evolve from this study will identify operational conflicts between users and help transform these interchanges from serving primarily automobiles and trucks to facilitating all modes of mobility.

One example of safety issues and operational conflicts is at the current 145th Street / I-5 interchange, which inadequately accommodates pedestrians, bicyclists and special-needs/ADA populations. Although there is existing transit service at nearby flyer stops, poor connectivity poses barriers for pedestrians/bicyclists and ADA/special-needs users. The lack of safe connections for non-motorized/special-needs users is a considerable deterrent for them to use transit or cross the 145th Street interchange. WSDOT has been working with the city of Shoreline and Sound Transit to prepare a preplanning corridor study for 145th Street. 145th Street is also a state highway, SR 523, from SR 522 (Lake City Way) to SR 99 (Aurora Avenue North). The purpose of this study was to develop planning-level cost estimates for bringing sidewalks up to current accessibility and design standards along the entire length of the SR 523 corridor. The study also identified low-cost operational improvements for key arterial intersections in the corridor.

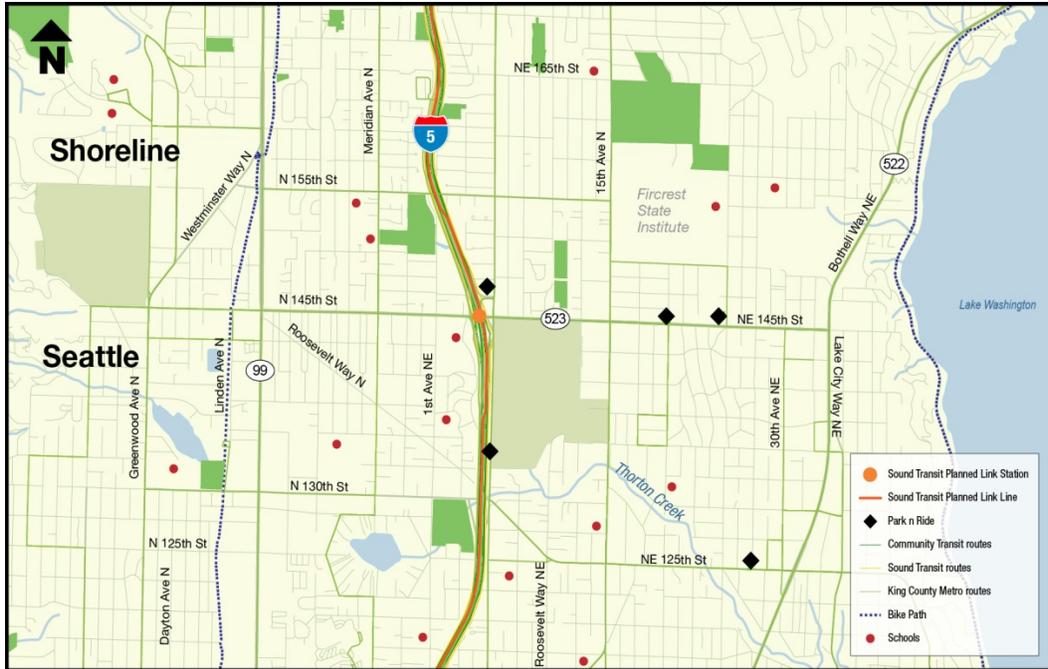


Figure 9: 145th Street Station vicinity.

The existing sidewalks on the NE 145th Street corridor do not meet the Americans with Disabilities Act standards. In numerous places there are utility poles and obstructions that block the sidewalk and make it difficult for people with special needs to navigate safely. The SR 523 Corridor Study identified 14 pedestrian and seven cyclist collisions over a five-year period (October 2006 to September 2011) on the NE 145th Street corridor. This is within two miles of the proposed Sound Transit light rail station to be developed in the vicinity of the I-5/145th Street interchange. WSDOT will incorporate the results of this earlier SR 523 Corridor Study safety analysis into the work of the proposed study.

A partnership with WSDOT, Sound Transit, King County Metro, Community Transit and the cities of Shoreline, Mountlake Terrace and Lynnwood will identify improvements for multimodal transit oriented development concepts at the proposed NE 145th Street, Mountlake Terrace and the Lynnwood Transit Center stations. Sound Transit has recently completed a Draft Environmental Impact Statement in compliance with environmental requirements for the Northgate-to-Lynnwood Link Extension project. This extension of the Sound Transit’s light rail line is projected to open in 2023 and in the planning horizon year of 2035. The projected net daily ridership is 10,600 at the 145th Street station, ranging from 3,600 to 4,600 daily riders at Mountlake Terrace and approximately 19,400 to 19,800 daily riders projected at the Lynnwood Transit

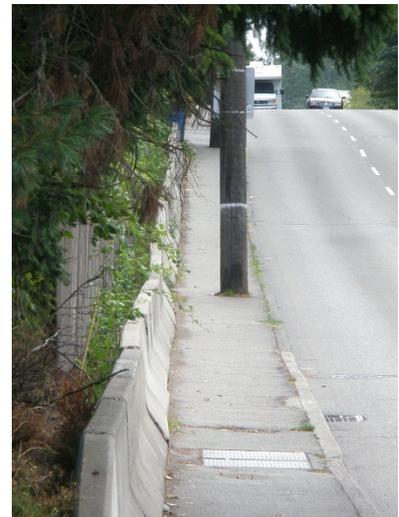


Figure 10: Utility Pole Blocking ADA access, 145th Street/SR 523

Center. The Lynnwood Link Extension DEIS identifies several different station configurations at the 145th Street / I-5, Mountlake Terrace / I-5 and Lynnwood Transit Center locations that are contingent on the different light rail alignments being considered along the I-5 corridor from Seattle's Northgate station to Lynnwood. *Additional information on the Sound Transit Lynnwood Link Extension project can be found at <http://www.soundtransit.org/Projects-and-Plans/Lynnwood-Link-Extension>.*

All Link stations will include on-site parking garages along with parking enhancements and additions at the Mountlake Terrace station and Lynnwood Transit Center. Sound Transit will develop all stations with improved pedestrian and non-motorized connections. A number of special needs facilities exist along the 145th Street corridor, both east and west of the site of the proposed Sound Transit station at the I-5 / 145th Street interchange. One of these facilities is the Fircrest Residential Habilitation Center located northeast of this location. Fircrest provides schooling for more than 200 people with developmental disabilities. Other special-needs and low-income populations are located near to both the proposed Mountlake Terrace and Lynnwood Transit stations. Additionally, there are eight public schools near the NE 145th Street location, three by the Mountlake Terrace location and two near the Lynnwood location, all within one mile of the proposed stations.

Safety benefits from this study

WSDOT will work collaboratively with its study partners and stakeholders to identify and develop recommendations that will help address the primary safety issues that impact all users at each of the proposed light rail transit stations in the study area. The successful implementation of safe, transit oriented development at these sites will require a transformation of these locations from a vehicle-focused design and operation to multimodal centers of transportation accessibility. While there is potential to enhance both motorized and non-motorized safety at these specific locations, there is the additional potential for improving safety in the I-5 corridor with increased use of light rail. According to the Federal Transit Administration's 2009 Rail Safety Statistics Report, light rail ranks as one of the safest modes of transportation. The national accident rate was 5.35 per 100 million passenger miles traveled for rail users. In comparison, the collision rate for automobile drivers in King County was 214.4 per 100 million vehicle miles traveled, and in Snohomish County the rate was 208.6 per one hundred million vehicle miles traveled (2012).

b. Secondary selection criteria

i. Innovation

WSDOT is proposing to make a paradigm shift from a traditional focus on freeway planning to a more community-based approach that supports the development of livable communities within the vicinity of freeway interchange areas. The goal is to identify multimodal connections and environmental enhancements that support the redevelopment of interchange areas with integrated light rail stations, creating vibrant communities with transit oriented development.

An interdisciplinary environmental and engineering team will work with community groups to identify innovative stormwater treatment designs that link local natural stream systems with station plans. Development of potentially new stormwater-treatment best practices outside the norm of the WSDOT Highway Runoff Manual could result in cost savings and a more context-sensitive design. *For more information on how WSDOT stormwater professionals work to protect the environment, visit our webpage at: <http://www.wsdot.wa.gov/Environment>*

ii. Partnership

1. Jurisdictional and stakeholder collaboration

WSDOT and Sound Transit enjoy a long-standing collaborative relationship. The Secretary of Transportation is a voting member of the Sound Transit Board, and WSDOT staff collaborate with Sound Transit on a variety of projects. Regionally, WSDOT Urban Planning staff represent the agency at numerous regional transportation forums. These regional forums are a primary means by which urban planning staff advance state transportation planning goals and coordinate planning activities with other agencies and jurisdictions in the Puget Sound region.

For this planning study, WSDOT will rely on partnerships with the following jurisdictional and agency stakeholders during the planning process:

- Shoreline
- Seattle
- Lynnwood
- Mountlake Terrace
- King County
- Snohomish County
- Sound Transit
- Community Transit
- Puget Sound Regional Council
- Confederated Tribes of the Yakama Nation
- The Tulalip Tribes
- Snoqualmie Tribe
- Sauk-Suiattle Indian Tribe
- Muckleshoot Indian Tribe
- Seattle-Shoreline Transportation Advisory Committee

2. **Disciplinary integration**

The study process will bring together an interdisciplinary group of engineers and environmental planners from a range of disciplines to develop innovative stormwater treatment scenarios. Likely participants to be included but not limited to are the following:

- Transportation planners
- Traffic engineers
- Construction and design engineers
- Hydraulic engineers
- Fish and wildlife biologists
- Tribal biologists
- Ecologists
- Environmental planners
- Watershed planners

Additional agencies likely to be included but not limited to are the following:

- FHWA
- Washington State Department of Ecology
- Army Corps of Engineers
- NOAA/NMFS
- Washington State Department of Fish and Wildlife

V. **Demonstrated Project Readiness**

a. **Technical feasibility**

WSDOT is responsible for developing strategies to improve bicycle and walkway connections and reduce congestion. The state has established policies, guidelines and strategies that support bicycling and walking as an integrated part of the transportation network and requires that bicycle and pedestrian facilities be included in new roadway construction and reconstruction projects in all urbanized areas.

<http://www.wsdot.wa.gov/bike/designing.htm>

Washington State was named the nation's number one "Bicycle Friendly State" by the League of American Bicyclists for six years in a row. Because of strong partnerships between the WSDOT, cities, counties and advocacy groups Washington has a foundation for improving conditions for bicycling and walking. The "Greening of

Interchanges” study supports these goals by identifying recommended improvements to multimodal connections to light rail stations.

The planning study will assess innovative stormwater treatment designs with potential new best management practices. If new BMPS are introduced, the designs will need to be approved by the State Department of Ecology before implementation. WSDOT has previously installed innovative stormwater treatment design on a similar scale at Grand Mound, Washington. See Appendix B for more information about that project. The planning study includes the use of stakeholders as well as an interdisciplinary environmental resource group, and includes a public outreach process. WSDOT has extensive experience with these types of collaborative planning practices and the experienced staff to conduct these efforts.

b. Financial Feasibility

The project financing will be complete assuming the availability of the requested TIGER Planning grant funds. WSDOT has experience in managing grants and partnering with others in managing grants. WSDOT has a successful delivery record, with 90 percent of projects on time and 86 percent under or on budget.

Budget

Major Activities	TIGER	Local	Total
Public & Agency Engagement	\$ 200,000	\$ 50,000	\$ 250,000
Multimodal Access Options	\$ 280,000	\$ 70,000	\$ 350,000
Stormwater Management Concepts	\$ 240,000	\$ 60,000	\$ 300,000
Totals	\$ 720,000	\$ 180,000	\$ 900,000

Table 2. Project Budget

c. Project Schedule

The “Greening of Interchanges” study is aligned with Sound Transit’s environmental and design schedule. Over the next two years Sound Transit will be making decisions on major elements of station design. Under optimal conditions final station designs would consider the multimodal connections and environmental enhancements identified in this study. In order to fully consider optimal multimodal and green stormwater design concepts, it is critical for this 18 month study to be completed by early 2017. The schedule below assumes that TIGER funds will be available by April 1, 2015, and that the study will take 18 months to complete.

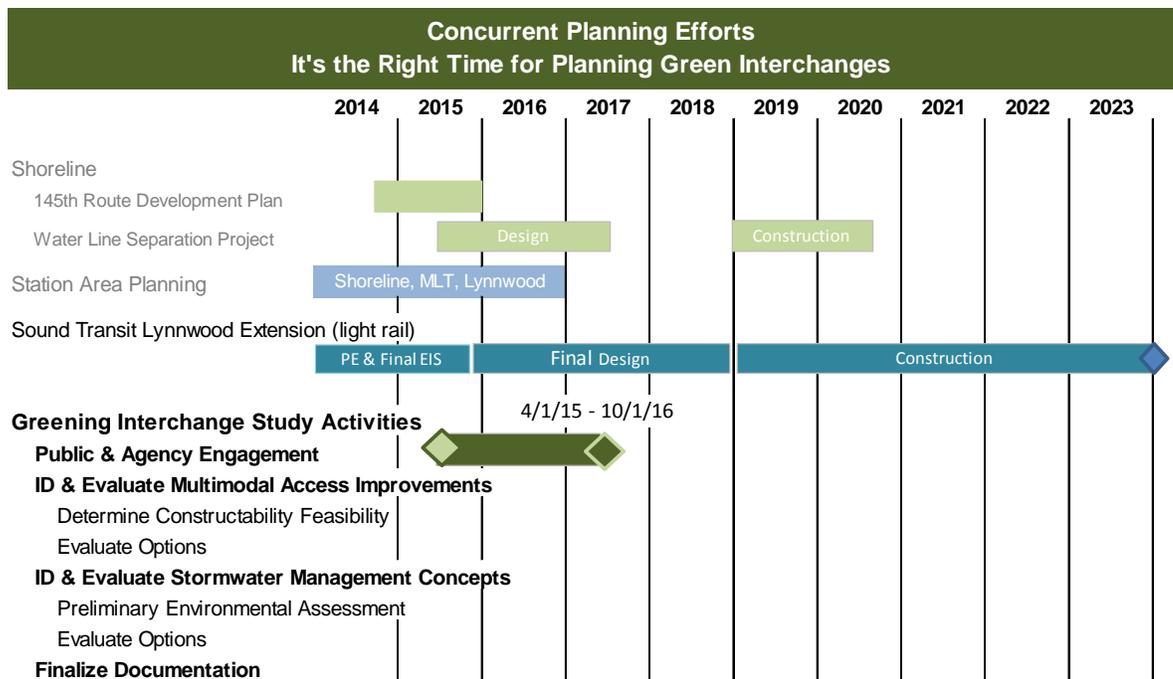


Figure 11. Project schedule

d. Assessment of project risks and mitigation strategies

In the event of a partial TIGER Discretionary Planning Grant award, the planning team is prepared to adjust the proposed project scope to achieve the primary goals of the planning study while maintaining the matching funds requirement ratio through increased WSDOT or partner contribution.

During the interdisciplinary stormwater and environmental review process, it is possible that new constraints on unavoidable environmental impacts and mitigation costs could be brought to light. Were this to be the case, the planning team is prepared to adjust the proposed project scope of the project to prioritize and rescale the goals of the planning study.

e. Other environmental reviews and approvals

- NEPA. The planning study process will include preliminary environmental review and screening for likely permit requirements for the type of work to be recommended. This will include preliminary determination of NEPA, permits, and mitigation. The goal of the study is to structure the preliminary environmental review process in such a way that any documentation and agreements developed during the study can be of use at the project design phase, as well as to avoid the kind of surprises that inflate construction costs.
- Legislative Approvals. WSDOT has received support from legislators for this project. See Appendix D.

- **State and Local Planning.** Local jurisdictional stakeholders have indicated their support for the planning study and will participate in the planning process. The “I-5 Greening Interchanges with Multimodal Redevelopment Seattle to Lynnwood” study includes Sound Transit Link light rail station projects previously approved by the Puget Sound Regional Council transportation Improvement Plan (TIP) and the WSDOT State TIP. Components of the project have already been added to the TIPs.

By building multimodal connectivity and local partnerships, this planning study will improve ladders of opportunity for a range of users in the planning study area and across the region. Addressing stormwater treatment with innovative, green infrastructure design ideas, the study will gather an interdisciplinary team of environmental planners to develop stormwater flow and control treatments that integrate with the local natural environment in a visual and educational opportunity for light rail users at the stations. By working with local communities in a public outreach process that includes developing a shared vision, the planning study will produce recommendations for intersection redesign, combining multimodal connectivity with green infrastructure and transit oriented development.



Figure 12: Planning Process

In addition to a jurisdictional stakeholders group, the proposed planning study will establish a parallel advisory group of environmental stakeholders. The primary purpose of this environmental stakeholders group will be to plan for a green infrastructure design for stormwater treatment and for environmental permits and approvals required to removal of several significant barriers to fish passage in the study area. This group will also address the compensatory mitigation likely to be required due to unavoidable environmental impacts. Once the environmental advisory group is established for the study area, WSDOT staff will implement a planning and outreach process with the group for reviewing environmental constraints, planning approvals, NEPA/SEPA, permits and mitigation. This environmental advisory group will also consider opportunities for project partnerships with public and private partners. Recent Washington State legislation (SHB 2251) calls for the Washington State Department of Fish and Wildlife (WDFW) to work with local governments, WSDOT and others to coordinate the approach to barrier corrections. This legislative call to action

creates common ground for creative problem solving between WSDOT and WDFW and new opportunities for involving local jurisdictions in the planning process.

The environmental planning process for replacing culverts blocking fish passage will also integrate planning for resilience and adaptation to climate change. Many culverts that are barriers to fish passage are also undersized and contribute to flooding during extreme weather events. Scientists agree that climate change will continue to produce increasingly extreme weather events, jeopardizing critical and vulnerable transportation facilities and threatening national security. A safe, reliable transportation system is a crucial element of both the local economy and national security.

This planning study will build early involvement with environmental resource agencies to better inform study recommendations as well as project scoping and environmental documentation farther down the road. In order to address the overlap between project development and climate change, the planning study will also build early involvement internally, linking the experiential knowledge of the WSDOT maintenance division with the WSDOT office of emergency management to assist the planning process in the evaluation of recommended projects using resiliency evaluation criteria.

Challenges:

- 20 culverts in study area
- Four significant streams with numerous tributaries vulnerable to flooding
- Nine culverts identified as barriers to fish passage
- Any culvert touched by construction will require upgrade to fish passage per Washington State Hydraulic Code
- Federal injunction requires WSDOT to remove fish passage barriers in Puget Sound area by 2030
- Climate change and increased risk of flooding at critical facilities

How the planning study will address these challenges:

- Early involvement with environmental resource agencies to better inform study recommendations and inform project scoping and environmental documentation farther down the road
- Green infrastructure and innovative stormwater design to integrate with local natural systems for stormwater treatment
- Climate change planning integrated into the corridor study planning process

VI. Evaluation of Project Costs and Benefits

Who benefits and what are the benefits from improved multimodal connectivity?

- **Commuters:** Transit service will offer a more convenient, productive and reliable trip. Sound Transit's light rail line is projected to open in 2023 and in the planning horizon year of 2035. The projected net daily ridership is 10,600 at the NE 145th Street station, ranging from 3,600 to 4,600 daily riders at Mountlake Terrace and approximately 19,400 to 19,800 daily riders projected at the Lynnwood Transit Center. The planning project will also support roadway improvements that would allow faster, more frequent local transit service and enhance connections between transit services.
- **People with low incomes:** Improved facilities for walking, bicycling and improved access to transit; greatly improved access to education and jobs, improved economic mobility and small business development opportunities.
- **Non-commute travelers:** Convenient and reliable transit service to regional destinations like SeaTac airport, regional hospitals and specialty medical facilities, the University of Washington, sports stadiums and downtown Seattle.
- **Business:** Improved worker access for businesses near the new transportation hubs and at regional employment centers, improve economic mobility for workers, opportunities for small businesses at new transportation hubs.
- **Freight:** Reduces growth of freight bottlenecks and peak hour traffic, reduces the spread of traffic congestion into off-peak hours. Local land owners: Increased property values and environmental enhancements
- **I-5 drivers:** improved traffic flow, reduces the growth of traffic bottlenecks and the spread of traffic congestion into off-peak hours
- **Bicyclists and pedestrians:** Improve connections to transit, improved access within and through interchange areas, more options for healthy commute and access to local destinations, safer access
- **ADA and special needs populations:** Improved safety, better access to transit and local destinations
- **Local environment:** Innovative stormwater design benefits streams and habitat, increased public use of transit, bicycles and walking reduced growth in traffic delay and idling
- **Cost savings:** Stormwater design (Grand Mound green stormwater design saved WSDOT \$4 million)
- Efficient use of WSDOT resources to integrate Sound Transit Link light rail station design with improving multimodal connectivity

Costs:

- Planning study \$720,000 TIGER, \$180,000 local match

Planning Study Application to the TIGER Discretionary Grants Program

- WSDOT and local jurisdictional staff time for coordination and participation in planning study
- Opportunity costs – time and money could be used for other purposes

Benefits that can't be quantified:

- Improved quality of life
- Investment in ecological sustainability
- WSDOT leadership in environmental stewardship
- democratic public participation opportunities for communities and citizens during outreach process

VII. Federal Wage Rate Letter



**Washington State
Department of Transportation**

Lynn Peterson
Secretary of Transportation

Strategic Planning Division
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April 3, 2014

Subject: Department of Transportation's National Infrastructure Investments
TIGER VI Discretionary Grants Federal Wage Rate Certification

I hereby certify that the Washington State Department of Transportation complies with Federal Wage Rate requirements per subchapter IV of chapter 31 of Title 40, United States Code (Federal wage rate requirements), as required by the FY 2014 Continuing Appropriations Act.

A handwritten signature in black ink, appearing to read 'Shuming Yan', with a long horizontal flourish extending to the right.

Shuming Yan
Assistant Director,
Urban Planning Office