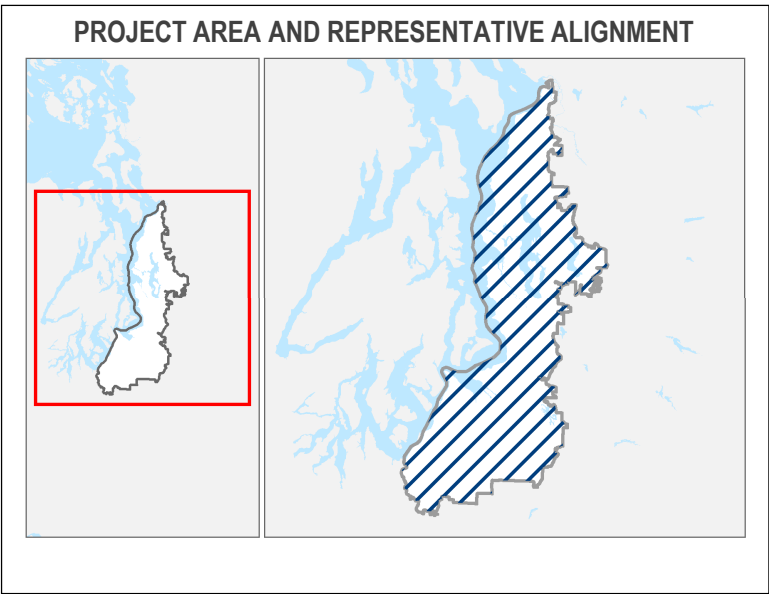


Future System Planning (ST4)

Subarea	All
Primary Mode	Policies and Programs
Facility Type	N/A
Length	N/A
Version	Draft ST3 Plan
Date Last Modified	March 28, 2016



SHORT PROJECT DESCRIPTION

This project would include funds for planning efforts supporting a potential future Sound Transit 4 ballot measure that continues progress toward implementing Sound Transit’s Long-Range Plan.

Note: The elements included in this representative project will be refined during future phases of project development and are subject to change.

KEY ATTRIBUTES	
REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	N/A
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$60 — \$64
RIDERSHIP <i>2040 daily project riders</i>	N/A
PROJECT ELEMENTS	<ul style="list-style-type: none"> Update of the 2014 Long-Range Plan, including Plan-level SEPA environmental review System planning activities related to a potential future Sound Transit 4 ballot measure
NOT INCLUDED	<ul style="list-style-type: none"> Environmental or project development activities beyond the system planning phase
ISSUES & RISKS	<ul style="list-style-type: none"> Timing of future potential system plan development Future potential legislative action that may be required for Sound Transit taxing authority

Future System Planning (ST4)

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

Long Description:

This project would consist of planning studies, SEPA plan-level environmental review, updates to the Long-Range Plan, and system planning efforts. These efforts are intended to help narrow the range of alternatives, evaluate potential transit corridors and station locations, inform local comprehensive planning, lay the groundwork for future project development, and position the Sound Transit Board to evaluate options and establish the highest priorities for implementation of future phases of high-capacity transit investments in the region. Each of these planning efforts will include extensive public outreach, consideration of environmental effects, ridership forecasting, conceptual engineering, and cost estimating.

Assumptions:

ST4 effort and cost would be similar to ST3 study.

Environmental:

Sound Transit will complete a state-required plan-level environmental review that broadly considers potential impacts and mitigation measures for an updated Long-Range Plan.

Utilities:

N/A

Right-of-Way and Property Acquisition:

N/A

Potential Permits/Approvals Needed:

SEPA review for Long-Range Plan update

Project Dependencies:

N/A

Potential Project Partners:

- Transit agencies
- Local jurisdictions
- WSDOT (depending on specific locations/corridors where studies are focused)

Future System Planning (ST4)

Cost:
 Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.












In Millions of 2014\$

ITEM	COST	COST WITH RESERVE
Agency Administration	\$12.00	\$12.84
Preliminary Engineering & Environmental Review	\$40.01	\$42.81
Final Design & Specifications		
Property Acquisition & Permits	\$4.00	\$4.28
Construction		
Construction Management		
Third Parties		
Vehicles		
Contingency	\$4.00	\$4.28
Total	\$60.01	\$64.21

Design Basis:

Future System Planning (ST4)

Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 Regional Light Rail Spine <i>Does project help complete regional light rail spine?</i>	N/A	
 Ridership <i>2040 daily project riders</i>	N/A	
 Capital Cost <i>Cost in Millions of 2014 \$</i>	\$60 — \$64	
 Annual O&M Cost <i>Cost in Millions of 2014 \$</i>	N/A	
 Travel Time <i>In-vehicle travel time along the project (segment)</i>	N/A	
 Reliability <i>Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</i>	N/A	
 System Integration <i>Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</i>	N/A	
	Ease of Non-motorized Access <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	N/A
	Percent of Non-motorized Mode of Access <i>Percent of daily boardings</i>	N/A
 Connections to PSRC-designated Regional Centers <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	N/A	
	Land Use and Development/TOD Potential <i>Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>	N/A
	<i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>	N/A
	<i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential station areas</i>	N/A
	Socioeconomic Benefits <i>Existing minority / low-income populations within 0.5 mile of potential station areas</i>	N/A
	<i>2014 and 2040 population within 0.5 mile of potential station areas</i>	N/A
	<i>2014 and 2040 employment within 0.5 mile of potential station areas</i>	N/A

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>

HCT Planning Studies

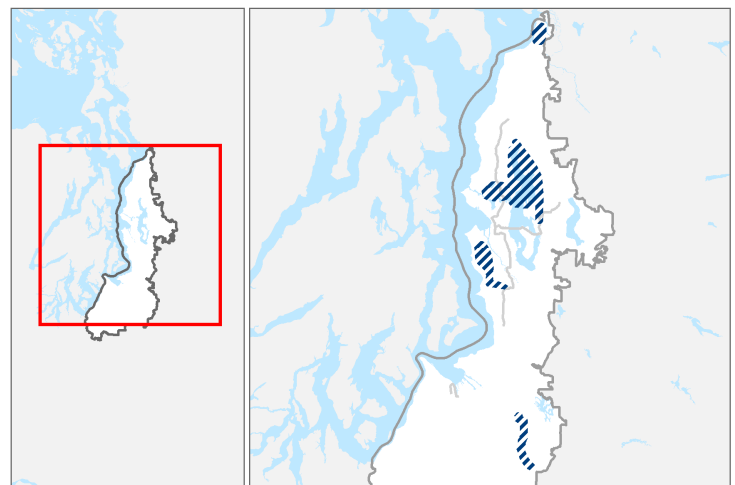
Subarea	Systemwide
Primary Mode	HCT
Facility Type	Study
Length	N/A
Version	Draft ST3 Plan
Date Last Modified	April 22, 2016

SHORT PROJECT DESCRIPTION

The planning studies will help to identify the range of alternatives, evaluate potential routes and station locations and terminals, inform local comprehensive planning, prepare for formal environmental review and engineering, and position the Sound Transit Board to evaluate options and establish priorities for implementation in future phases of high capacity transit investments in the region.

Note: The elements included in this representative project will be refined during future phases of project development and are subject to change.

PROJECT AREA AND REPRESENTATIVE ALIGNMENT



KEY ATTRIBUTES

REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	N/A
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$37 — \$40
RIDERSHIP <i>2040 daily project riders</i>	N/A
PROJECT ELEMENTS	<ul style="list-style-type: none"> • HCT Study: Light Rail Extending from West Seattle to Burien and extending to the Light Rail Spine • HCT Study: Northern Lake Washington • HCT Study: Commuter Rail to Orting • HCT Study: Connections from Everett to North Everett • HCT Environmental Study: Bothell to Bellevue via Kirkland
NOT INCLUDED	<ul style="list-style-type: none"> • Completion of Preliminary Engineering and project development • NEPA/SEPA environmental documentation (except Bothell to Bellevue via Kirkland) • Identification of a preferred alternative (except Bothell to Bellevue via Kirkland)
ISSUES & RISKS	<ul style="list-style-type: none"> • Potential timing and coordination with a future system planning process • Coordination with jurisdictions and partner transit agencies

HCT Planning Studies

Sound Transit has developed a conceptual scope of work for completing these studies for the purpose of generating a representative range of study costs and scope elements. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Representative project elements that would be included in this study are subject to refinement during later stages of project development if the project being studied is ultimately advanced as part of the next Long-Range Plan and the next system plan (i.e., beyond ST3). If the project is advanced, final decisions on specific project elements will be determined through future phases of project development following approval by voters. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

Long Description:

The planning studies would help to identify the range of alternatives, evaluate potential routes and station locations and terminals, inform local comprehensive planning, prepare for formal environmental review and engineering, and position the Sound Transit Board to evaluate options and establish priorities for implementation in future phases of high capacity transit investments in the region. The studies will include public outreach, preliminary environmental assessment, ridership forecasting, and conceptual engineering and cost estimating.

The studies include:

- HCT Study: Light Rail Extending from West Seattle to Burien and extending to the Light Rail Spine

This study would examine a light rail extension from West Seattle to Burien, including the connection from Burien to the light rail spine. The study would be completed in coordination with local transit partners to examine a variety of options for service provision and to maximize opportunities for regional integration.

- HCT Study: Northern Lake Washington

This study would examine options for expanding light rail transit connections across northern Lake Washington that may be needed when ridership demand exceeds available capacity. This study would examine alternatives including and parallel to SR 522 and SR 520, as well as connections from Ballard to Kirkland, Sand Point to Kirkland, and Redmond and/or Bellevue. This study would also examine connections to the University of Washington. This study can consider potential upgrades in existing service and/or improved connections. It should be completed in coordination with local transit partners to examine a variety of options for service provision and to maximize opportunities for regional integration.

- HCT Study: Commuter Rail from Puyallup to Orting

This study would examine a future extension of a commuter rail connection from Orting to the existing South Sounder System.

- HCT Study: Connections from Everett to North Everett

This study would examine a future extension of light rail from Everett to North Everett.

- HCT Environmental Study: Bothell to Bellevue via Kirkland

This study would complete project-level environmental review and conceptual engineering to determine the project alternative for the Bothell to Bellevue via Kirkland corridor.

Assumptions:

The studies could include the following elements:

- Public Involvement
- Planning
- Conceptual design
- Station area assessment
- Access considerations
- Appraisals and rights-of-entry

Environmental:

For the HCT corridor Bothell to Bellevue via Kirkland, Sound Transit will complete project-level state and federal environmental reviews as necessary and determine mitigation for significant impacts.

Utilities:

N/A

HCT Planning Studies

Right-of-Way and Property Acquisition:
N/A

Potential Permits/Approvals Needed:
N/A

Project Dependencies:
N/A

Potential Project Partners:

- Project partners will include transit agencies, local jurisdictions & the Washington State Department of Transportation based on the specific locations/corridors where the studies are focused.

HCT Planning Studies

Cost:
 Sound Transit has developed a conceptual scope of work for completing these studies for the purpose of generating a representative range of study costs and scope elements. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Representative project elements that would be included in this study are subject to refinement during later stages of project development if the project being studied is ultimately advanced as part of the next Long-Range Plan and the next system plan (i.e., beyond ST3). If the project is advanced, final decisions on specific project elements will be determined through future phases of project development following approval by voters. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.












In Millions of 2014\$

ITEM	COST	COST WITH RESERVE
Agency Administration	\$6.85	\$7.33
Preliminary Engineering & Environmental Review	\$27.14	\$29.04
Final Design & Specifications		
Property Acquisition & Permits		
Construction		
Construction Management		
Third Parties		
Vehicles		
Contingency	\$3.40	\$3.64
Total	\$37.38	\$40.00

Design Basis:

HCT Planning Studies

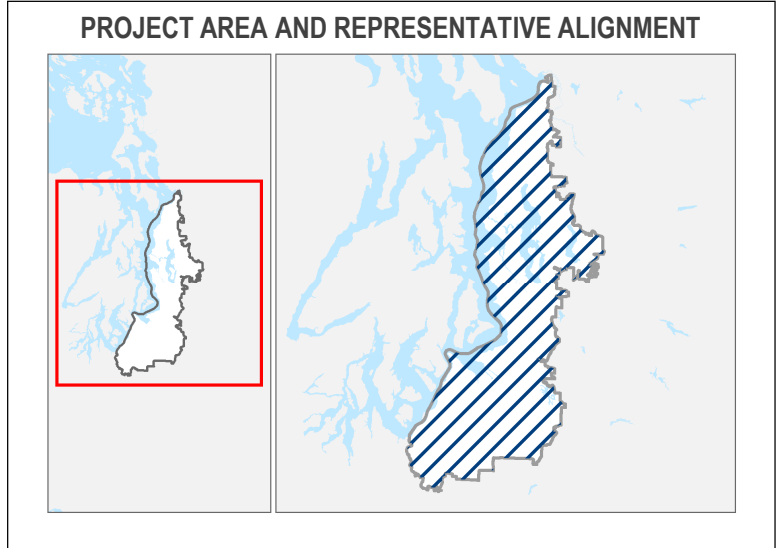
Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 Regional Light Rail Spine <i>Does project help complete regional light rail spine?</i>	N/A	
 Ridership <i>2040 daily project riders</i>	N/A	
 Capital Cost <i>Cost in Millions of 2014 \$</i>	\$37 — \$40	
 Annual O&M Cost <i>Cost in Millions of 2014 \$</i>	N/A	
 Travel Time <i>In-vehicle travel time along the project (segment)</i>	N/A	
 Reliability <i>Percentage of alignment/route in exclusive right-of-way</i>	N/A	
 System Integration <i>Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</i>	N/A	
	Ease of Non-motorized Access <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	N/A
	Percent of Non-motorized Mode of Access <i>Percent of daily boardings</i>	N/A
 Connections to PSRC-designated Regional Centers <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	N/A	
	Land Use and Development/TOD Potential <i>Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>	N/A
	<i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>	N/A
	<i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential station areas</i>	N/A
	Socioeconomic Benefits <i>Existing minority / low-income populations within 0.5 mile of potential station areas</i>	N/A
	<i>2014 and 2040 population within 0.5 mile of potential station areas</i>	N/A
	<i>2014 and 2040 employment within 0.5 mile of potential station areas</i>	N/A

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>

EARLY DELIVERABLES

Subarea	Systemwide
Primary Mode	N/A
Facility Type	N/A
Length	N/A
Version	Draft ST3 Plan
Date Last Modified	March 28, 2016



SHORT PROJECT DESCRIPTION

This program would implement a series of improvements designed to improve passenger access and amenities, existing transit services, travel time through bus on shoulder operations and other related transit priority elements. These projects would be implemented as early deliverables within the Draft ST3 System Plan.

KEY ATTRIBUTES	
REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	No
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$232
RIDERSHIP <i>2040 daily project riders</i>	N/A
PROJECT ELEMENTS	<ul style="list-style-type: none"> King County Metro Rapid Ride C and D Capital Improvements Proposed Bus on Shoulder Program: Opportunities along I-5, I-405, SR 518, and SR 167 and related improvements North Sounder Parking Improved Passenger Amenities at Stations and Stops, which could be completed in coordination with the ST3 System Access Program and ST3 System Innovation and Research Fund.
NOT INCLUDED	<ul style="list-style-type: none"> Funding for operations Enhanced aesthetic surface treatments Parking (aside from North Sounder parking) Transit-oriented development planning/due diligence and sustainability measures See "Common Project Elements"
ISSUES & RISKS	<ul style="list-style-type: none"> Feasibility of bus on shoulder improvements on freeways and state routes has not been identified Coordination and approval for bus on shoulder improvements and operations from the Federal Highway Administration Coordination required with WSDOT, FTA, FHWA, and transit partners to determine feasible locations for bus on shoulder improvements Risk to completing schedule for projects as early deliverables

EARLY DELIVERABLES

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

Long Description:

This program would implement a series of improvements designed to improve passenger access and amenities, existing transit services, travel time through bus-on-shoulder and other related transit priority elements. These projects would be implemented as early deliverables within the ST3 System Plan. Program elements include:

- King County Metro Rapid Ride C and D Capital Improvements

This project would design and implement transit priority improvements along King County Metro's Rapid Ride C and D lines that provide service to Ballard and West Seattle as an early deliverable to provide improved speed and reliability, in advance of light rail starting operations to these areas. This project would be completed in coordination with King County Metro.

- Proposed Bus on Shoulder Program: Opportunities along I-5, I-405, SR 518, and SR 167

This program proposes to enable buses to use shoulders on freeway and state route facilities during periods of congestion in general traffic and/or HOV lanes. This program will require coordination and further study with transit partners, WSDOT, and Federal Highway Administration in order to determine locations that may be feasible for this program.

- North Sounder Parking and Access Improvements

This project would provide an early deliverable within the ST3 System Plan by providing additional parking at Mukilteo and Edmonds Sounder Stations and an opportunity for access improvements prioritized per Sound Transit's System Access Policy.

- Improved Passenger Amenities at Stations and Stops

This program would provide improved passenger amenities at stations and stops, including access improvements for bikes/pedestrian access, real time information expansion at stations/stops; Expanded use of ORCA and/or Mobile Pay options; Access for drop-off and pick-up capacity at stations, transit services, car share services, and private vehicles.

Assumptions:

- Coordination and study with WSDOT to determine feasible locations for bus on shoulder will be required. Specific locations within the opportunity areas have not yet been identified for these type of treatments
- Improvements along RapidRide C and D routes would enable faster travel time and reliability for these services
- The schedule for completing these project would be within the first 3-8 years of Sound Transit's System Plan
- North Sounder improvements include parking, but other access improvements can be considered depending on the prioritization per the ST System Access Policy and in coordination with local jurisdictions

Environmental:

Sound Transit will complete project-level state and federal environmental reviews as necessary to provide mitigation for significant impacts, obtain and meet the conditions of all required permits and approvals, and strive to exceed compliance and continually improve its environmental performance.

Utilities:

Utility relocation as needed to complete projects, including fiber options, sewer, overhead electric/communications, etc.

Right-of-Way and Property Acquisition:

Property acquisitions may be needed for transit capital improvements.

Potential Permits/Approvals Needed:

- WSDOT approvals for modifications to a state route
- Approval by FHWA for bus on shoulder operation
- Building permits: Electrical, Mechanical, Plumbing

EARLY DELIVERABLES

- Utility connection permits
- Right-of-way permits
- Construction-related permits (clearing and grading, stormwater management, street use, haul routes, use of city right-of-way)
- All required local, state, and federal environmental permits
- NEPA/SEPA and related regulations

Project Dependencies:

- Identification of locations where bus on shoulder operation is feasible
- Approval by FHWA and WSDOT for bus on shoulder operation
- Identification of improvements on Rapid Ride C and D lines that would improve travel time along these corridors

Potential Project Partners:

- Federal Highway Administration
- King County Metro
- Transit partners
- Washington Department of Transportation
- Cities and jurisdictions along the corridors
- Federal Transit Administration
- BNSF

EARLY DELIVERABLES

Cost:
 Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.












In Millions of 2014\$

ITEM	COST
Agency Administration	\$13
Preliminary Engineering & Environmental Review	
Final Design & Specifications	
Property Acquisition & Permits	
Construction	
Construction Management	
Third Parties	
Vehicles	
Early Deliverable Program	\$219
Contingency	
Total	\$232

Design Basis:

EARLY DELIVERABLES

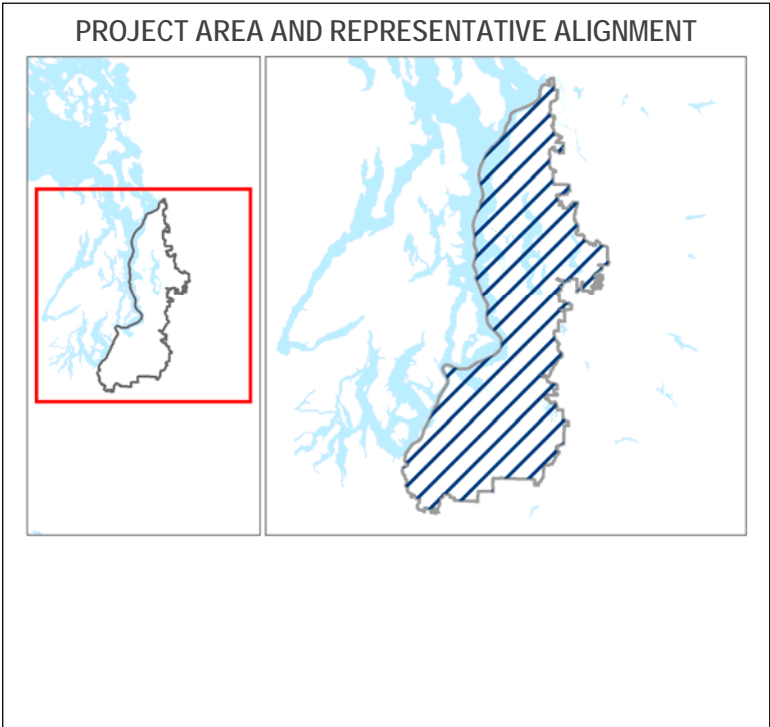
Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 Regional Light Rail Spine <i>Does project help complete regional light rail spine?</i>	N/A	
 Ridership <i>2040 daily project riders</i>	N/A	
 Capital Cost <i>Cost in Millions of 2014 \$</i>	\$232	
 Annual O&M Cost <i>Cost in Millions of 2014 \$</i>	N/A	
 Travel Time <i>In-vehicle travel time along the project (segment)</i>	N/A	
 Reliability <i>Percentage of alignment/route in exclusive right-of-way</i>	N/A	
 System Integration <i>Qualitative assessment of issues and effects related to connections to existing local bus service</i>	N/A	
	Ease of Non-motorized Access <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	N/A
	Percent of Non-motorized Access <i>Percentage of daily boardings</i>	N/A
 Connections to PSRC-designated Regional Centers <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	N/A	
	Land Use and Development/TOD Potential <i>Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>	N/A
	<i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>	N/A
	<i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential stations</i>	N/A
	Socioeconomic Benefits <i>Existing minority / low-income populations within 0.5 mile of potential stations</i>	N/A
	<i>2014 and 2040 population within 0.5 mile of potential stations</i>	N/A
	<i>2014 and 2040 employment within 0.5 mile of potential stations</i>	N/A

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>

System Access Program (Pedestrian and bicycle access, bicycle parking, transit)

Subarea	Region-wide
Primary Mode	Non-motorized
Facility Type	Various
Length	N/A
Version Number	Draft ST3 Plan
Date Last Modified	March 28, 2016



SHORT PROJECT DESCRIPTION

This program would fund access improvements for Sound Transit stations and facilities including non-motorized access, bicycle parking and facilities, bus transit access and expanded drop-off/pick-up as needed. This program includes a mode of access data collection program and station area access studies. Funds would be prioritized per Sound Transit's System Access Policy.

Implementation would be conducted in accordance with the System Access Policy and the Bicycle Policies and future updates.

Note: The elements included in this representative project will be refined during future phases of project development and are subject to change.

KEY ATTRIBUTES	
REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	N/A
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$100
RIDERSHIP <i>2040 daily project riders</i>	N/A
PROJECT ELEMENTS	<ul style="list-style-type: none"> • Non-motorized Access Improvements • Bicycle Parking and Facilities • Transit Access and Drop-off/Pick-up Improvements • Mode of Access Data Collection • Station Access Studies • System Access Strategic Plan
NOT INCLUDED	<ul style="list-style-type: none"> • Limited funds intended to support many smaller investments rather than major expansion projects • No Park-and-Ride expansion; future parking management program development in the Innovation Fund
ISSUES & RISKS	<ul style="list-style-type: none"> • Coordination with local jurisdictions and local agencies. • Partnership agreements for non-motorized access improvement investments. • Typical project risks will be minimized as many partnership projects will be led by local jurisdictions • Partnership agreements for potentially complex non-motorized access improvements could consume more staff time than anticipated • Education component of Class 1 on-demand secure access to bicycle cages (including sign-up and provision of identification or special fare media) may add to cost

System Access Program (Pedestrian and bicycle access, bicycle parking, transit)

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

Long Description:

This program would fund access improvements for Sound Transit stations and facilities including non-motorized access, bicycle parking and facilities, bus transit access and expanded drop-off/pick-up as needed. Implementation would be conducted in accordance with the System Access Policy and the Bicycle Policies and future updates that may be informed by the studies and data collection included in this project. Following are examples of some of the types of projects that could be funded in partnership with local jurisdictions through the System Access Fund:

- **Non-motorized Access Improvements:** Provide funds for pedestrian and bicycle access improvements, in partnership with local jurisdictions and agencies to increase ridership at existing and ST2 stations; the goal of this program is to increase ridership and access to transit by connecting activity centers with higher density residential and employment to stations through improved non-motorized access facilities and reduce demand for automobile parking by providing access options with lower costs and fewer impacts.
- **Bicycle Parking and Facilities:** Provide funds for future bicycle parking demand at existing stations; provide on-demand secure parking; improve/replace bicycle parking furnishings that are past their useful life or are in disrepair
- **Transit Access and Drop-off/Pick-up Improvements:** Provide funds for transit integration with partner transit agencies, improve efficiency of transit access to stations, and improve transit information; provide funds to improve or expand capacity of drop-off/pick-up area at stations in response to demand and changing technology
- **Mode of Access Data Collection:** Establish a regular and recurring mode of access data collection program; the goals are to establish baseline mode of access and then monitor the effectiveness of access investments over time; mode of access data will also be used to monitor the effectiveness of local jurisdiction land use plans and TOD projects to increase access by non-motorized modes; mode of access data will provide a basis for planning of bicycle parking and access needs and cost-effective phasing of bicycle parking expansion and bicycle infrastructure near the facility
- **Station Access Studies:** This project will fund a System Access Strategic Plan that identifies and prioritizes access improvements; provide funds for in-depth needs at select stations as needed, including coordination with local jurisdictions and public outreach; station Access Studies can guide the implementation and prioritization of non-motorized access, transit, drop-off/pick-up, and detailed analysis of benefits estimated from investments; station access studies can be used to address more complex prioritization of access funds

Assumptions:

- Implementation would be conducted in accordance with the System Access Policy (Resolution No. R2013-03 & Attachment A) and the Bicycle Policies (Administrative Policies and Procedures No. 34; Motion No. M2010-87 – Attachment A) and future updates
- Non-motorized improvement budget is relative to street construction costs at approximately \$4,000,000 per mile, which includes concrete sidewalks, bicycle access improvements, roadway base course, drainage facilities, traffic signal upgrades, utility relocation, and pavement overlay
- Class 1 secure bicycle lockers at existing Sound Transit stations with low demand for bicycle parking
- Class 1 on-demand secure bicycle cages at existing Sound Transit stations with high demand (>40 parked bicycles) for bicycle parking
- Class 1 on-demand secure bicycle technology for ST2 stations; cages included within current ST2 station scope
- Class 2 bicycle parking (freestanding racks) at all stations
- Station access studies will define transit and drop-off/pick-needs
- Mode of access data collection at 30 existing stations, biennial data collection over 20 years
- Mode of access data collection at 25 ST2 stations beginning one year after opening and biennial over 16 years
- Station access studies at up to 20 stations

Environmental:

For non-motorized project improvements Sound Transit or a project partner will complete state and federal environmental reviews as appropriate. Sound Transit or project partner will also obtain and meet the conditions of all required local, state, and federal environmental permits and approvals.

Utilities:

Utility relocation as needed to complete the project, including fiber optics, sewer, water, overhead electric/communications, etc.

System Access Program (Pedestrian and bicycle access, bicycle parking, transit)

Right-of-Way and Property Acquisition:

Little to no right-of-way acquisition by Sound Transit because facilities are developed in partnership with local jurisdictions on their streets and trails, and improvements may be located on ST property.

Potential Permits/Approvals Needed:

Sound Transit will be the lead agency responsible for constructing few projects selected for funding outside Sound Transit property. The local jurisdiction or transit partner, as appropriate, will be responsible for construction, permitting and environmental requirements, and operating/maintenance associated with projects located outside Sound Transit property.

Project Dependencies:

- Non-motorized access improvements are dependent on local plans and policies consistent with station area development and local jurisdiction and agency partnerships
- Sound Transit will work with local jurisdictions as necessary to implement companion bikeshare stations near Sound Transit stations

Potential Project Partners:

The System Access Policy and Bicycle Policies require that Sound Transit work in partnership with local jurisdictions to identify, fund, and implement agreed-upon non-motorized access around the agency's rider facilities. For improvements not on Sound Transit owned property, Sound Transit may make capped contributions that reimburse up to 50% of capital costs incurred by local jurisdictions or other third parties. A shared cost partnership will be developed for these improvements. Implementation guidelines, including project eligibility and prioritization criteria, will be prepared concurrent with ST3 planning and updated to reflect new data, policies, and practices.

System Access Program (Pedestrian and bicycle access, bicycle parking, transit)

Cost:

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

In Millions of 2014\$












ITEM	Cost
Non-motorized Access Improvements	\$76.78
Bicycle Parking and Facilities	\$4.59
Transit access improvements	\$3.54
Drop-off/Pick-up Improvements	\$3.54
Mode of Access Data Collection	\$1.18
Station Access Studies	\$4.72
Agency Administration	\$5.66
Total	\$100.00

Design Basis:

N/A

System Access Program (Pedestrian and bicycle access, bicycle parking, transit)

Evaluation Measures:

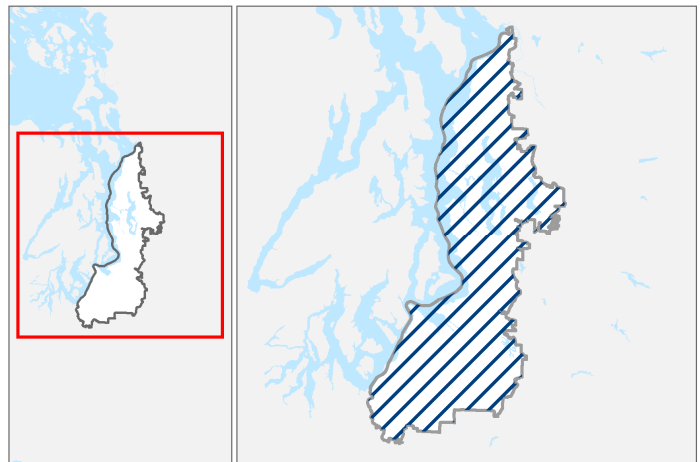
MEASURE	MEASUREMENT/RATING	NOTES	
 <p>Regional Light Rail Spine <i>Does project help complete regional light rail spine?</i></p>	N/A		
 <p>Ridership <i>2040 daily project riders</i></p>	N/A	Prioritization of access improvement projects will include analysis of ridership benefits	
 <p>Capital Cost <i>Cost in Millions of 2014 \$</i></p>	\$100		
 <p>Annual O&M Cost <i>Cost in Millions of 2014 \$</i></p>	N/A	Prioritization of access improvement projects will include analysis of ridership benefits	
 <p>Travel Time <i>In-vehicle travel time along the project (segment)</i></p>	N/A		
 <p>Reliability <i>Percentage of alignment/route in exclusive right-of-way</i></p>	N/A		
 <p>System Integration <i>Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</i></p>	N/A	Prioritization of access improvement projects will include analysis of ridership benefits	
	<p>Ease of Non-motorized Access <i>Qualitative assessment of issues and effects related to non-motorized modes</i></p>	N/A	This Fund creates many opportunities for safer and more convenient walk and bicycle access in locations with incomplete street grids
	<p>Percent of Non-motorized Access <i>Percentage of daily boardings</i></p>	N/A	
 <p>Connections to PSRC-designated Regional Centers <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i></p>	N/A		
	<p>Land Use and Development/TOD Potential <i>Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i></p>	N/A	Non-motorized access investments enhance and support transit oriented development.
	<p><i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i></p>	N/A	
	<p><i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential stations</i></p>	N/A	
	<p>Socioeconomic Benefits <i>Existing minority / low-income populations within 0.5 mile of potential stations</i></p>	N/A	Data can be used to ensure that access improvement investments improve access to transit and opportunity in underserved places.
	<p><i>2014 and 2040 population within 0.5 mile of potential stations</i></p>	N/A	
	<p><i>2014 and 2040 employment within 0.5 mile of potential stations</i></p>	N/A	

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>

Innovation and Technology Program

Subarea	Systemwide
Primary Mode	N/A
Facility Type	N/A
Length	N/A
Version	Draft ST3 Plan
Date Last Modified	March 28, 2016

PROJECT AREA AND REPRESENTATIVE ALIGNMENT



SHORT PROJECT DESCRIPTION

This program would fund research, analysis, and implementation of innovative best practices, partnerships, and technologies to increase ridership, improve service, and enhance efficiency of regional mobility outside of new investments in large capital projects.

KEY ATTRIBUTES

REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	N/A
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$75
RIDERSHIP <i>2040 daily project riders</i>	N/A
PROJECT ELEMENTS	<p><u>Transit Technology</u></p> <ul style="list-style-type: none"> • Research and development (R&D) for improvements in design and delivery of electronic customer information and mobility-oriented systems and applications for the following: <ul style="list-style-type: none"> ○ General ridership ○ First-time and occasional riders ○ Limited English proficiency populations (residents and tourists) ○ Limited mobility and special needs populations ○ Transit-dependent populations • R&D for improvements in fare payment systems • Mobile and online application design for multi-modal coordination/integration • Awards, prizes, and support for student projects to develop transit-related innovations • Grant and partnership funding for joint R&D and implementation of innovative transit-related systems in conjunction with partner agencies and jurisdictions • Demonstrations or pilots of connected vehicle and driverless vehicle technologies • Deployment of other technology to improve ridership or system performance, safety, or reliability <p><u>Transportation Business models</u></p> <ul style="list-style-type: none"> • Research and development of new partnerships and collaborative business models with the full range of public and private mobility service providers such as bikeshare, carshare, rideshare, and employer/private/community/social service shuttles, as well as traditional fixed route and demand response public transit providers • Research and development of approaches to transition of transit facilities into multi-modal or multi-functional transportation hubs

Innovation and Technology Program

KEY ATTRIBUTES	
PROJECT ELEMENTS	<ul style="list-style-type: none"> • Research into best and emerging industry policies, practices, and business models <p><u>Data analysis and research</u></p> <ul style="list-style-type: none"> • “Big data” research using operational, survey, fare collection, incident/security, commute trip, built environment, census, traffic, economic, demographic, etc. data sources to identify barriers to transit use and system improvements to maximize regional mobility • Analysis of crime, accident, and incident data to identify security and safety improvement needs • Grant, partnership, and program funding for joint data-driven research and analysis with partner agencies and jurisdictions <p><u>Transportation Demand Management</u></p> <ul style="list-style-type: none"> • Employer and residential (particularly multi-family and TOD) outreach, incentive and marketing programs • Market research to identify target ridership segments for transportation demand management strategies • First- and last-mile partnerships and programs
NOT INCLUDED	Innovative technologies or business practices that are developed through this program and subsequently incorporated into standard Sound Transit programs and practices would no longer be considered “innovative”
ISSUES & RISKS	<ul style="list-style-type: none"> • The design of this project relies upon coordination with other agencies, institutions, organizations, and businesses that are beyond Sound Transit’s control, and therefore introduce more risk than would otherwise be involved in traditional capital projects • This program involves researching or testing new concepts for providing or enhancing regional mobility, and some ideas would be found to be unpromising for further development or implementation

Innovation and Technology Program

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

Long Description:

This is a program that would fund research, analysis, and implementation of innovative best practices, partnerships, and technologies to increase ridership, improve service, and enhance efficiency and equity of regional mobility outside of new investments in large capital projects. Examples of projects that would be pursued within this program include the following:

- Research, development, and implementation for improvements in the design and delivery of electronic customer information, fare payment, and mobility-oriented systems and applications
- Improved integration of transit with existing and emerging networks of multimodal mobility services as well as all forms of transit connectivity and access
- “Big data” analysis to improve understanding of mobility markets, to identify barriers to transit use, and to identify system improvements to maximize regional mobility
- Transportation Demand Management programs for employers and residential populations to increase the use of Sound Transit systems
- Deployment of other technology to improve ridership or system performance, safety, or reliability, and to improve customer satisfaction/retention

Assumptions:

- All work would be coordinated with existing Sound Transit policies and programs, including the Transit Oriented Development (TOD) Policy and the System Access Policy
- To the extent possible, all work would be coordinated and integrated with efforts by partner transit/transportation/planning agencies, jurisdictions and organizations
- To the extent possible, program funds would be leveraged through partnerships, joint project agreements, and grant funds

Environmental:

Sound Transit would complete any state and federal environmental reviews and obtain any environmental permits that may be necessary for some elements of this project.

Utilities:

N/A

Right-of-Way and Property Acquisition:

N/A

Potential Permits/Approvals Needed:

N/A

Project Dependencies:

N/A

Potential Project Partners:

- All public and private mobility service providers, including partner transit agencies
- Local jurisdictions
- Research groups, universities, and organizations
- Grant-making institutions and organizations, including the State of Washington, FTA, FHWA, etc.
- Planning organizations and associations, including the Puget Sound Regional Council

Innovation and Technology Program

Cost:
Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.












In Millions of 2014\$

ITEM	COST
Agency Administration	\$4
Preliminary Engineering & Environmental Review	
Final Design & Specifications	
Property Acquisition & Permits	
Construction	
Construction Management	
Third Parties	
Vehicles	
Regional Fund	\$71
Contingency	
Total	\$75

Design Basis:

Innovation and Technology Program

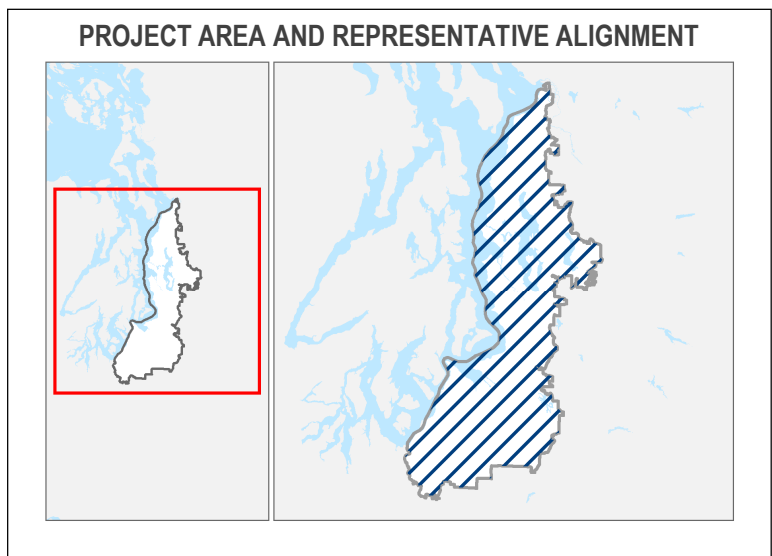
Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 Regional Light Rail Spine <i>Does project help complete regional light rail spine?</i>	N/A	
 Ridership <i>2040 daily project riders</i>	N/A	Targeting ~2% increase in total daily project riders from efficiency/productivity gains
 Capital Cost <i>Cost in Millions of 2014 \$</i>	\$75	
 Annual O&M Cost <i>Cost in Millions of 2014 \$</i>	N/A	
 Travel Time <i>In-vehicle travel time along the project (segment)</i>	N/A	
 Reliability <i>Percentage of alignment/route in exclusive right-of-way</i>	N/A	
 System Integration <i>Qualitative assessment of issues and effects related to connections to existing local bus service</i>	N/A	
	Ease of Non-motorized Access <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	N/A
	Percent of Non-motorized Access <i>Percentage of daily boardings</i>	N/A
 Connections to PSRC-designated Regional Centers <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	N/A	
	Land Use and Development/TOD Potential <i>Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>	N/A
	<i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>	N/A
	<i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential stations</i>	N/A
	Socioeconomic Benefits <i>Existing minority / low-income populations within 0.5 mile of potential stations</i>	N/A
	<i>2014 and 2040 population within 0.5 mile of potential stations</i>	N/A
	<i>2014 and 2040 employment within 0.5 mile of potential stations</i>	N/A

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>

Transit-Oriented Development Planning Program

Subarea	Systemwide
Primary Mode	N/A
Facility Type	N/A
Length	N/A
Version	Draft ST3 Plan
Date Last Modified	March 28, 2016



SHORT PROJECT DESCRIPTION

This program would fund TOD analysis and support beyond the planning phase of transit capital project development in anticipation of sale, lease, or transfer of surplus properties or air rights to third parties.

All analysis and property disposition would be conducted in accordance with the TOD Policy (Resolution No. R2012-14).

KEY ATTRIBUTES	
REGIONAL LIGHT RAIL SPINE <i>Does this project help complete the light rail spine?</i>	N/A
CAPITAL COST <i>Cost in Millions of 2014 \$</i>	\$20
RIDERSHIP <i>2040 daily project riders</i>	N/A
PROJECT ELEMENTS	<ul style="list-style-type: none"> • TOD envelope definition/physical form alternatives • Civil engineering analysis necessary for property disposal • Housing suitability analysis • Parcel market analysis, financial feasibility, and timing • Determination of highest and best uses and establishment of Fair Market Value • Identification of concepts for development on specific TOD parcels • Public outreach associated with a specific TOD project • Agency TOD staff time involved in early planning and predevelopment activities • Development of TOD educational tools targeted to other government institutions and non-profits <p><i>See page two for additional representative project elements</i></p>
NOT INCLUDED	<ul style="list-style-type: none"> • Consultant efforts for TOD analysis for early planning and project development are covered within the individual ST3 projects' scopes and budgets and are excluded from this program budget • Community TOD planning and policy assistance to facilitate community readiness to identify appropriate development near transit facilities
ISSUES & RISKS	<ul style="list-style-type: none"> • Readiness of local jurisdictions for TOD • Availability of partners and adequacy of matching funding sources • Trade-offs between achieving land use intensity and local/regional affordable housing policy goals • Community TOD depends, in part, on the ability of local jurisdictions and other potential partners to dedicate capital funds to a project, which has historically proven difficult • Projects may benefit from a shared understanding, during all phases, of the appropriate and/or legal roles of various partners in TOD

Transit-Oriented Development Planning Program

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

Long Description:

This program supports analysis of opportunities for development around Sound Transit facilities (Community TOD) and on properties owned by Sound Transit and no longer needed for a transit purpose (Agency TOD). The primary responsibility of Sound Transit is to complete and expand regional high-capacity transit systems to deliver fast, frequent services, greater capacity, and improved mobility. This program fund enhances Sound Transit's mission by supporting transit communities and transit-oriented development that can increase ridership. The goal of the Agency TOD effort is to foster redevelopment of properties used for new facility construction that are no longer needed for further construction, operations, or other ongoing transit purposes. Properties may be disposed through sale, lease, or transfer of land or air rights. Where properties are suitable for housing, affordable housing will be considered a priority use.

Program funds will support staff work with local and regional partners on identifying and facilitating TOD, as well as due diligence activities.

Program elements include but are not limited to:

- TOD envelope definition/physical form alternatives
- Civil engineering analysis necessary for property disposal
- Environmental analysis and remediation recommendations to identify potential impediments to project delivery
- Housing suitability analysis
- Parcel market analysis, financial feasibility, and timing
- Determination of highest and best uses and establishment of Fair Market Value
- Property valuation analysis, including appraisals
- Identification of concepts for development on specific TOD parcels
- Public outreach associated with a specific TOD project
- TOD project team execution of RFQ/RFP process and selection of development team
- Update and maintenance of data base for property status
- Development of procedures and guidelines for a TOD program
- Internal and external reporting on program goals, activities, and priorities, including the annual TOD report to the Board of Directors
- Development of TOD educational tools targeted to other government institutions and non-profits

Assumptions:

- All work will be conducted in accordance with the TOD Policy (Resolution No. R2012-14), as well as other existing Sound Transit policies and programs such as the System Access Policy, Sustainability Program, and Scope Control Policy
- To the extent possible, all work will be coordinated and integrated with efforts by partner agencies and organizations

Environmental:

Sound Transit or a 3rd Party will complete all required plan-level or project-level environmental reviews necessary to support the TOD program. In addition, Sound Transit or a 3rd Party will obtain and meet the conditions of all required local, state, and federal permits and approvals.

Utilities:

N/A

Right-of-Way and Property Acquisition:

N/A

Potential Permits/Approvals Needed:

N/A

Transit-Oriented Development Planning Program

Project Dependencies:

- Depends on individual ST3 projects
- This program will also depend on municipal "readiness" to develop TOD within their jurisdictions. Local and regional support for TOD plans and policies will affect the execution of TOD projects
- Actual TOD will be developed by other parties (public, private, or partnerships), so the timing of TOD is dependent on upon the real estate market and background business cycles

Potential Project Partners:

TOD Policy specifies that Sound Transit will "coordinate, cooperate and consider partnerships with public and private interests to identify and achieve Agency and Community TOD strategies." These partners will vary depending on the location of the transit project and station area context.

Transit-Oriented Development Planning Program

Cost:

Sound Transit has developed a conceptual scope of work for this candidate project for the purpose of generating a representative range of costs, both capital and operating; and benefits, including ridership forecasts, TOD potential, multi-modal access and others. This information is being developed to assist the Sound Transit Board as it develops an ST3 system plan, including phasing of investments and financial plan, for voter consideration. Final decisions on project elements (e.g., alignment, profile, station locations, and number of parking stalls) will be determined after completion of system planning, project level environmental review, and preliminary engineering during which additional opportunities for public participation will be provided. Therefore, this scope definition should not be construed as a commitment that all representative features will be included in the final developed project.

In Millions of 2014\$












ITEM	COST
Agency Administration	\$4.03
Preliminary Engineering & Environmental Review	\$14.15
Final Design & Specifications	
Property Acquisition & Permits	
Construction	
Construction Management	
Third Parties	
Vehicles	
Contingency	\$1.82
Total	\$20.00

Design Basis:

N/A

Transit-Oriented Development Planning Program

Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 Regional Light Rail Spine <i>Does project help complete regional light rail spine?</i>	N/A	
 Ridership <i>2040 daily project riders</i>	N/A	
 Capital Cost <i>Cost in Millions of 2014 \$</i>	\$20	
 Annual O&M Cost <i>Cost in Millions of 2014 \$</i>	N/A	
 Travel Time <i>In-vehicle travel time along the project (segment)</i>	N/A	
 Reliability <i>Percentage of alignment/route in exclusive right-of-way</i>	N/A	
 System Integration <i>Qualitative assessment of issues and effects related to connections to existing local bus service</i>	N/A	
	Ease of Non-motorized Access <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	N/A
	Percent of Non-motorized Access <i>Percentage of daily boardings</i>	N/A
 Connections to PSRC-designated Regional Centers <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	N/A	
	Land Use and Development/TOD Potential <i>Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>	N/A
	<i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>	N/A
	<i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential stations</i>	N/A
	Socioeconomic Benefits <i>Existing minority / low-income populations within 0.5 mile of potential stations</i>	N/A
	<i>2014 and 2040 population within 0.5 mile of potential stations</i>	N/A
	<i>2014 and 2040 employment within 0.5 mile of potential stations</i>	N/A

For additional information on evaluation measures, see <http://soundtransit3.org/document-library>