S-17: Sounder Expansion to DuPont

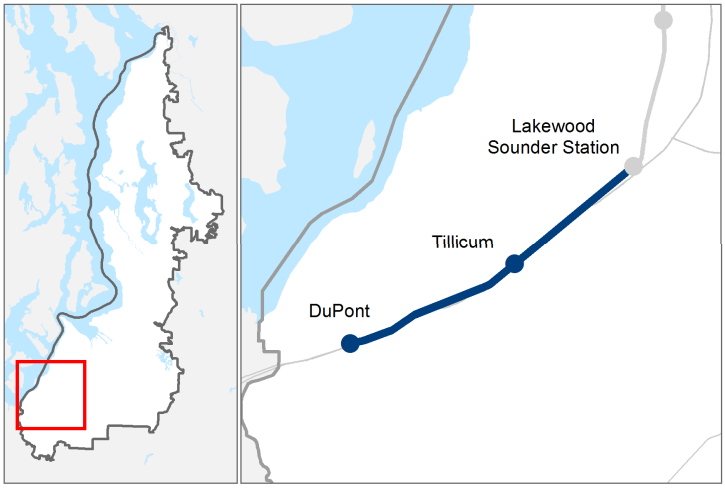
Project Number	S-17
Subarea	Pierce
Primary Mode	Commuter Rail
Facility Type	Station
Length	7.8 miles
Version	ST Board Workshop
Date Last Modified	11-25-2015

SHORT PROJECT DESCRIPTION

This project would extend Sounder commuter rail service from Lakewood to Tillicum and DuPont with two new stations.

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 *Does this project help complete the light rail spine?*	No
CAPITAL COST *Cost in Millions of 2014 $*	$289 — $309
RIDERSHIP *2040 daily boardings*	1,000 — 2,000
PROJECT ELEMENTS	• One at-grade station: Tillicum neighborhood of Lakewood near the intersection of I-5 and Berkeley Avenue SW, sized to accommodate 7-car trains or longer if Projects S-06 or S-07 are implemented • Pedestrian plaza at Tillicum Station • Surface parking at the Tillicum with approximately 125 stalls; the scope of the transit parking components included in this project could be revised to include a range of strategies for providing rider access to the transit facility; along with, or instead of, parking for private vehicles or van pools, a mix of other investments could be accomplished through the budget for this project • One at-grade station: Sound Transit's existing DuPont Station on Wilmington Drive, just northeast of the intersection of I-5 and Center Drive in DuPont, sized to accommodate 7-car trains or longer if Projects S-06 or S-07 are implemented • A second mainline track from Bridgeport Way SW to the DuPont Station • One new layover and train storage facility southwest of the proposed DuPont station with a capacity for five trains • Operator welfare building and security equipment • 4 trains in the a.m. and p.m. peak periods • 1 percent for art per Sound Transit Policy • Non-motorized access facilities (bicycle/pedestrian), transit-oriented development (TOD)/planning due diligence, bus/rail integration facilities, and sustainability measures (see separate document titled "Common Project Elements") • The operational plan for this project assumes that every other Sounder train that reaches Lakewood will continue south to DuPont

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KEY ATTRIBUTES	
NOT INCLUDED	• See separate document titled "Common Project Elements"
ISSUES & RISKS	• WSDOT project work with the Point Defiance Bypass project • Ongoing coordination with WSDOT project to expand I-5 between Lakewood and DuPont (JBLM) • Impacted by inclusion of Projects S-06, S-07, and S-08 in ST3 system plan (could result in different station platform lengths and/or additional Sounder service beyond assumptions listed)

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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, number of stations, 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 construct an extension of Sounder commuter rail from the Lakewood station to DuPont. The extension would include a second mainline track from Bridgeport Way SW to the terminus at DuPont station. The project includes the construction of two commuter rail stations; Tillicum and DuPont. The station near Tillicum will include 125 parking stall, bus loop and pedestrian plaza. The station near DuPont will include a track layover and train storage facility at the terminus. The station at DuPont is located near the existing Wilmington Drive Park and Ride lot.

Assumptions:

- Two at-grade commuter rail stations: Tillicum and DuPont
- The proposed station platform would be designed to match the lengths of existing South Sounder platforms; if Projects S-06 and S-07 are included in the ST3 system plan, platform lengths for this project would be modified to match
- A second track will be included from Bridgeport Way SW to the DuPont station to expand the track capacity and facilitate operations
- The project includes a new layover and train storage facility that would accommodate five trains
- New parking at Tillicum of approximately 125 stalls
- Retention of the existing surface parking lot at DuPont (126 stalls)
- The assumed operating concept is that four of the trips that currently serve Lakewood Station would also serve Lakewood's Tillicum neighborhood and DuPont; these trips would start and end in DuPont
- Sound Transit currently owns the rail line between Tacoma and Nisqually, with BNSF being the designated operator
- WSDOT is upgrading the existing mainline rail line between Nisqually and Tacoma as part of their Point Defiance Bypass Project to accommodate Amtrak trains; based on WSDOT's plans, as many as 14 Amtrak intercity passenger trains (seven in each direction) would operate daily on this rail line segment between about 9 am and 10 pm; the mainline is generally used by four freight trains per day (two in each direction), and the existing freight train service would continue, although the times of day that freight trains operate could change; WSDOT will completely rebuild the mainline track with new wood or concrete ties and continuously welded rail (CWR), but the yard tracks across from the existing DuPont Station would remain mostly unchanged; the mainline would be double-tracked between S. 66th Street in Tacoma to Bridgeport Way SW in Lakewood; the Point Defiance Bypass Project is not a part of this project and is not included in the cost estimate
- Improvements by WSDOT to expand capacity to I-5 between Lakewood and DuPont could be constructed prior to this project; the improvements to some interchanges would eliminate current at-grade train crossings at these locations
- The project's proposed service would operate four trains during the a.m. and p.m. peak periods
- No additional vehicles will be needed to operate the four weekday roundtrips serving DuPont due to adequate fleet available through ST2 program
- For non-motorized station access allowances, both stations are categorized as Suburban LRT stations
- For bus/rail integration, facilities have been assumed at the DuPont station

Environmental:
Sound Transit will complete project-level state and federal environmental reviews as necessary; 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 the project, including fiber optics, sewer, water, overhead electric/communications, etc.
- It is likely that two fiber optic communication lines would need to be relocated as part of the project

Right-of-Way and Property Acquisition:

- Minimal right-of-way acquisition, approximately 3 acres of WSDOT property at the I-5 and Center Drive intersection, would be required for the layover facility
- Additional ROW would be needed at I-5 and Berkley Avenue NW for the Tillicum Station
- Property acquisition for bus/rail integration facility

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Potential Permits/Approvals Needed:

- Building permits: Electrical, Mechanical, Plumbing
- Utility connection permits
- Construction-related permits (clearing and grading, stormwater management, street use, haul routes, use of city right-of-way)
- Master use
- Land use approvals (Conditional use, design review, site plans, Comprehensive Plan or development code consistency, Special Use Permits)
- All required local, state, and federal environmental permits
- FHWA approvals for work within the I-5 ROW
- NEPA/SEPA and related regulations

Project Dependencies:

JBLM – I-5 Mounts Road to Thorne Ln I/C – Corridor Improvements Project

Potential Project Partners:

- WSDOT
- Cities of Lakewood and DuPont
- Camp Murry
- Joint Base Lewis-McChord
- FHWA
- Tacoma Rail
- FRA
- BNSF
- FTA
- Transit partners serving project: Pierce Transit and Intercity Transit

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Cost:
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In Millions of 2014$

ITEM	COST	COST WITH RESERVE
Agency Administration	$15.26	$16.33
Preliminary Engineering & Environmental Review	$9.85	$10.54
Final Design & Specifications	$19.17	$20.51
Property Acquisition & Permits	$8.31	$8.89
Construction	$195.50	$209.19
Construction Management	$17.25	$18.46
Third Parties	$4.23	$4.53
Vehicles	$0.00	$0.00
Contingency	$19.17	$20.51
Total	**$288.74**	**$308.95**

Design Basis: Conceptual

The costs expressed above include allowances for TOD planning and due diligence, Sustainability, Bus/rail integration facilities, and Non-Motorized Access. These allowances, as well as the costs for Parking Access included above, are reflected in the following table. Property acquisition costs are not included in the table below, but are included within the total project cost above.

ITEM	COST	COST WITH RESERVE
TOD planning and due diligence	$0.67	$0.71
Sustainability	$6.20	$6.63
Parking access	$1.29	$1.38
Non-motorized (bicycle/pedestrian) access	$17.57	$18.81
Bus/rail integration facilities	$2.75	$2.95

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Evaluation Measures:

MEASURE		MEASUREMENT/RATING	NOTES
	**Regional Light Rail Spine** *Does project help complete regional light rail spine?*	No	
	**Ridership** *2040 daily station boardings*	1,000 — 2,000	
	**Capital Cost** *Cost in Millions of 2014 $*	$289 — $309	
	**Annual O&M Cost** *Cost in Millions of 2014 $*	$4.00	
	**Travel Time** *In-vehicle travel time along the project (segment)*	11 min	
	**Reliability** *Quantitative/qualitative assessment of alignment/route in exclusive right-of-way*	Medium-High	Some at-grade crossings
	**System Integration** *Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities*	Medium-Low	Low number of existing daily transit connections from Dupont to Tillicum; Peak-hour service only
	**Ease of Non-motorized Access** *Qualitative assessment of issues and effects related to non-motorized modes*	Low	Low intersection density providing non-motorized access, with I-5, Fort Lewis and open space as barriers
	Percent of Non-motorized Mode of Access *Percent of daily boardings*	25-35%	
	**Connections to PSRC-designated Regional Centers** *Number of PSRC-designated regional growth and manufacturing/industrial centers served*	1 center	Regional growth center: Lakewood
	**Land Use and Development/TOD Potential** *Quantitative/qualitative assessment of adopted Plans & Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations* *Qualitative assessment of real estate market support for development within 1 mile of potential corridor* *Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential station areas*	Low Medium-Low Pop/acre = 2014: 2; 2040: 2 Emp/acre = 2014: 1; 2040: 2 Pop + Emp/acre = 2014: 3; 2040: 4	Very limited support in local and regional plans; approx. 15% land is compatibly zoned Limited market support
	**Socioeconomic Benefits** *Existing minority / low-income populations within 0.5 mile of potential station areas* *2014 and 2040 population within 0.5 mile of potential station areas* *2014 and 2040 employment within 0.5 mile of potential station areas*	42% Minority; 23% Low-Income Pop: 2014: 1,600; 2040: 2,100 Emp: 2014: 1,000; 2040: 1,500	

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