

University Link LRT Extension

Seattle, Washington

(November 2007)

The Central Puget Sound Regional Transit Authority, commonly known as Sound Transit, is proposing to implement an extension of the Central Link light rail transit (LRT) Initial Segment currently under construction from the Segment's northern terminus at Westlake Station in downtown Seattle to the University of Washington, 3.1 miles to the northeast. The all-tunnel alignment includes a station at Capitol Hill. Twenty-seven vehicles would be procured as part of the project, which would permit five-minute peak-period operations throughout the entire Central Link line. University Link is the first phase of Sound Transit's planned North Link LRT extension to the Northgate Transit Center in North Seattle.

The University Link corridor is the most densely developed residential and employment area in Seattle and the state of Washington. The three largest urban centers in the state – downtown Seattle, Capitol Hill/First Hill, and the University District – are located along the alignment. Travel by private vehicle and bus between these areas is extremely congested due to high traffic volumes and the corridor's geography. First Hill and Capitol Hill rise sharply northeast of downtown Seattle, and Interstate 5 (I-5) – the region's primary north-south freeway corridor – runs along the base of these hills, separating them from downtown. Farther to the north, the University District is separated from Capitol Hill and downtown by Portage Bay and the Lake Washington Ship Canal; only three crossings (two of them drawbridges) connect the University with the southern portion of the corridor.

Reversible express lanes on I-5 north of downtown result in a disparity between northbound and southbound transit travel times during peak periods. The University Link LRT Extension is intended to provide more reliable and faster bi-directional transit service to and between downtown Seattle, Capitol Hill/First Hill, and the University District, while supporting local land use goals and contributing to the maintenance of 1990 traffic levels at the University of Washington.

Summary Description

Proposed Project:	Light Rail Transit 3.1 Miles 2 Stations
Total Capital Cost (\$YOE):	\$1,798.12 Million (Includes \$184.11 million in finance charges)
Section 5309 New Starts Share (\$YOE):	\$750.00 Million (41.7%)
Annual Forecast Year Operating Cost:	\$21.28 Million
Ridership Forecast (2030):	40,200 Average Weekday Boardings 17,400 Daily New Riders
Opening Year Ridership Forecast (2016):	28,600 Average Weekday Boardings
FY 2009 Local Financial Commitment Rating:	Medium-High
FY 2009 Project Justification Rating:	Medium-High
FY 2009 Overall Project Rating:	High

FTA expects to execute a Full Funding Grant Agreement (FFGA) for the University Link LRT Extension in Summer 2008.

Project Development History and Current Status

The University Link LRT Extension is part of the Central Link LRT system that has been in planning for more than two decades. In 1999, Sound Transit published an Environmental Impact Statement (EIS) for a Central Link alignment extending from South 200th Street in the City of SeaTac to North 103rd Street in the City of Seattle. Due to financial constraints, Sound Transit identified three operable segments for implementation, the first of which extended from just south of downtown Seattle to the University of Washington. FTA awarded an FFGA for this project in January 2001, which was suspended later that year due to cost increases.

Sound Transit redefined the project as an “Initial Segment” from Westlake Station in the Downtown Seattle Transit Tunnel south to Tukwila, which is currently being constructed under an FFGA executed by FTA in October 2003. Sound Transit completed a Supplemental Draft EIS for the North Link segment in December 2003, and the Sound Transit Board selected the 3.1-mile University Link Extension as the first phase in August 2005. FTA issued a limited-scope Supplemental Draft EIS in October 2005 to address changes in the preferred alternative, including an alternative route through the University of Washington. FTA approved the project into preliminary engineering in December 2005. FTA issued a Final EIS in April 2006, and Record of Decision (ROD) in June 2006. FTA approved the project into final design in December 2006, and recommended the project for an FFGA in the FY 2008 President’s Budget.

Significant Changes Since FY 2008 Evaluation (November 2006)

Sound Transit updated the project cost estimate and financial plan, reflecting increased finance costs of approximately \$50 million, and a net capital cost increase of approximately \$100 million due to advanced design, evolution of staffing plans, and increased real estate costs. Sound Transit also revised the revenue operations date from June to September 2016. The number of light rail vehicles was reduced from 30 to 27, consistent with a revised fleet plan analysis.

Project Justification Rating: Medium-High

The *Medium-High* rating for project justification is based on a *Medium* rating for cost effectiveness and a *Medium-High* rating for transit-supportive land use.

Cost Effectiveness Rating: Medium

The *Medium* rating is based on the level of travel-time benefits (14,500 average weekday hours) relative to the project’s annualized costs.

Cost Effectiveness	
	<u>New Start vs. Baseline</u>
Cost per Hour of Transportation System User Benefit	\$22.21*
Incremental Cost per Incremental Trip	\$18.81

* Indicates that measure is a component of Cost Effectiveness rating.

The University Link LRT Extension is intended to provide improved bi-directional transit access and faster travel times between Capitol Hill, the University District, downtown Seattle, and points south. Over one-half of project travel-time benefits accrue to travelers destined for the University District or Capitol Hill, while 25 percent of benefits are for trips originating in these station areas destined for other parts of the region. Over 20 percent of travel-time benefits accrue to trips internal to the project corridor. Approximately 10 percent of project benefits are the result of improved LRT frequencies throughout the entire Central Link line necessitated by the higher passenger loads caused by the extension.

The project scope, cost and schedule are consistent with the June 2006 ROD. The cost estimate and schedule appear to be reasonable and achievable.

Transit-Supportive Land Use Rating: Medium-High

The *Medium-High* rating is based upon the average of the ratings assigned to the subfactors below, each of which contribute one-third to the land use rating. The rating reflects conditions as of November 2007.

Existing Land Use: Medium-High

- The University Link connects the densely developed Seattle CBD to the Capitol Hill neighborhood and the University of Washington (UW) campus. Employment in the Seattle CBD was a relatively high 183,200 in 2000. Capitol Hill, a mixed-use urban neighborhood with the most dense residential development in the Puget Sound Region, is also home to two colleges and four large medical facilities. The University of Washington is home to 35,000 students and 20,000 faculty and staff. The two project station areas have a combined population of nearly 21,000 and 23,700 jobs, with an average population density of 16,400 persons per square mile.
- Parking in the CBD is relatively expensive, up to \$26 daily. Total parking provided for the UW campus is capped at a restrictive 12,300 which is roughly one space for every five students, faculty, and staff. In the Capitol Hill neighborhood, most parking is on-street or in small off-street lots, and is highly utilized.

Transit-Supportive Plans and Policies: High

- Growth management policies are strong at all levels of government. The state's Growth Management Act requires establishment of an urban growth boundary, reflected in local comprehensive plans. King County's planning policies established this boundary and designated urban centers, including downtown Seattle, Capitol Hill, and the University District. Seattle's comprehensive plan identifies both the Capitol Hill and University of Washington station areas as urban centers or villages, in which new growth will be concentrated. The region's Vision 2020 land use plan identifies policies used to guide development and control urban sprawl.
- Seattle's Comprehensive Plan and neighborhood plans for the Capitol Hill and University District call for the concentration of growth in compact walkable neighborhoods known as urban villages. Station area planning processes have been completed and resulted in recommendations including changes to zoning, parking policies, development opportunities, and other actions. Many of these recommendations have been implemented. For example, station area overlay districts and rezones have been accomplished to prohibit auto-oriented uses, increase densities, and reduce parking requirements in the Capitol Hill station area. The UW Campus Master Plan defines opportunities for building expansion, provides design guidelines, and recommends pedestrian improvements.
- A range of tools exists to implement policies that are not otherwise mandated by law. These include tax increment financing, multi-family tax abatement and exemption programs, a location efficient mortgage program, and funding provided through the Washington State Commute Trip Reduction Act. Regional, county, and city agencies have all implemented outreach activities, technical assistance, and financial incentives to promote transit-oriented development.

Performance and Impacts of Policies: Medium-High

- Regional monitoring of growth targets in 2002 by the Puget Sound Regional Council indicates that growth is in fact occurring in targeted areas, with King County the most aggressive in targeting this growth in its urban centers. Some instances exist of coordination of development with the LRT Initial Segment planning and construction.
- There is not a significant amount of land available for development in either of the two University Link station areas. However, redevelopment and infill development is expected to be supportive of transit, based on policies and zoning adopted in each area.

Other Project Justification Criteria

Mobility Improvements Rating: Medium-High	
<p><u>Average Per Station:</u> Employment Low Income Households</p>	<p>23,700 35,000</p>
<p>Transportation System User Benefit Per Project Passenger Mile (Minutes)</p>	<p><u>New Start vs. Baseline</u> 2.82</p>
Environmental Benefits Rating: Medium	
<p><u>Criteria Pollutant Status</u></p>	<p><u>EPA Designation</u> Maintenance or Attainment for all Pollutants</p>

Local Financial Commitment Rating: Medium-High

The *Medium-High* local financial commitment rating is based on *Medium-High* ratings for the New Starts share of project costs and the capital finance plan and the *High* rating for the operating finance plan.

Section 5309 New Starts Share of Total Project Costs: 42%

Rating: Medium-High

Sound Transit is requesting a less than 42 percent New Starts share of total project costs, which equates to a *Medium-High* rating for this measure.

Locally Proposed Financial Plan		
<u>Source of Funds</u>	<u>Total Funds (\$million)</u>	<u>Percent of Total</u>
Federal:		
Section 5309 New Starts	\$750.00	41.7%
FHWA Flexible Funds (CMAQ)	\$3.00	0.2%
Section 5309 Fixed Guideway Modernization	\$9.00	0.5%
Local:		
Local Option Tax Revenues	\$248.77	13.8%
Bond Proceeds	\$774.17	43.1%
Additional Revenues	\$13.18	0.7%
Total:	\$1,798.12	100.0%

NOTE: The financial plan reflected in this table has been developed by the project sponsor and does not reflect a commitment by DOT or FTA. The sum of the figures may differ from the total as listed due to rounding.

Capital Finance Plan Rating: Medium-High

The capital finance plan is rated *Medium-High* based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency capital condition is weighted 25 percent, the commitment

of capital funds is weighted 25 percent, and the capital cost estimate, planning assumptions and capital funding capacity subfactor is weighted 50 percent.

Agency Capital Condition: Medium

- The average age of Sound Transit's bus fleet is 7.1 years, which is in line with the industry average. The age of the agency's light rail and commuter rail fleet is very young at five and six years respectively.
- Sound Transit's good bond ratings, which were issued in March 2005, are as follows: Moody's Investors Service Aa3 and Standard and Poor's Corporation AA-.

Commitment of Capital Funds: High

- One hundred percent of non-New Starts funding is committed. The non-Section 5309 New Starts funds are comprised of Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds, FTA Section 5309 Fixed Guideway Modernization funds, local option sales and use taxes, bond proceeds, and additional local resources.

Capital Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-High

- The cost estimate is considered reasonable and achievable, although unallocated contingencies and cost escalation assumptions may be low.
- The assumptions in the capital plan are conservative compared to historical experience.
- The project's financial plan shows projected cash balances, reserve accounts, and/or access to credit that would allow Sound Transit to cover cost increases or funding shortfalls equal to approximately 50 percent of project costs.

Operating Finance Plan Rating: High

The operating finance plan is rated *High* based upon the weighted average of the ratings assigned to each of the subfactors listed below. The agency operating condition is weighted 25 percent, the commitment of operating funds is weighted 25 percent, and the operating cost estimates, planning assumptions and operating funding capacity subfactor is weighted 50 percent.

Agency Operating Condition: High

- Sound Transit is in excellent financial condition, demonstrating no historical cash flow shortages and no recent service cutbacks.
- Sound Transit's current ratio of assets to liabilities as reported in its most recent audited financial statement is 3.4.
- Sounder commuter rail service continues to ramp up as additional round-trips are added, while Regional Express bus service increases gradually.

Commitment of Operating and Maintenance Funds: High

- All operating funding is committed. Sound Transit's operating expenses are entirely funded by dedicated local option (sales and use/motor vehicle excise/car rental) taxes, fares and other system-generated revenue, including investment income and advertising.

Operating Cost Estimates, Planning Assumptions, and Financial Capacity: Medium-High

- Sound Transit's estimates of light rail operating costs are reasonable, but fare revenue assumptions are optimistic.
- Sound Transit maintains a two month operating reserve fund. In addition to this reserve, the project's operating financial plan shows large cash balances, indicating significant financial capacity.

Map