

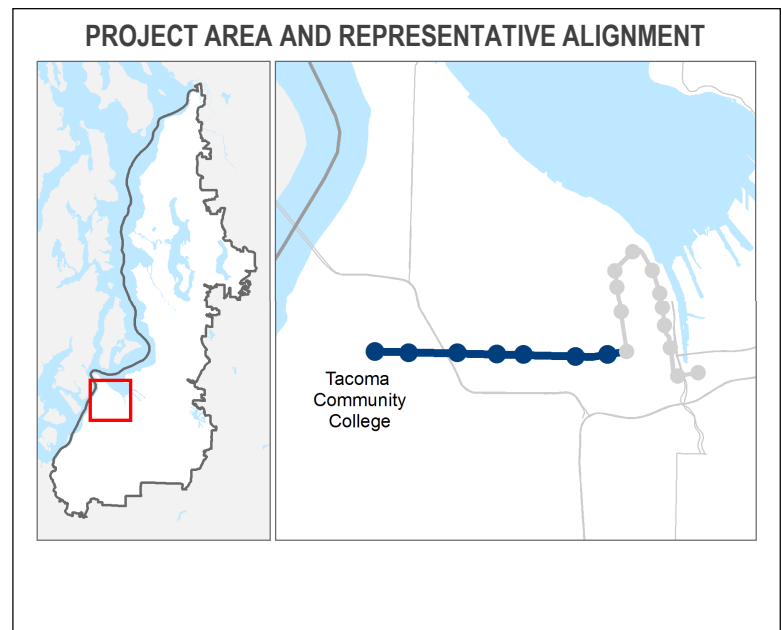
# S-11: Tacoma Link Extension to Tacoma Community College

<b>Project Number</b>	S-11
<b>Subarea</b>	Pierce
<b>Primary Mode</b>	Light Rail
<b>Facility Type</b>	Corridor
<b>Length</b>	3.65 miles
<b>Version</b>	ST Board Workshop
<b>Date Last Modified</b>	11-25-2015

**SHORT PROJECT DESCRIPTION**

This project would extend Tacoma Link from Downtown Tacoma to Tacoma Community College and include modifications to existing and planned Tacoma Link infrastructure.

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



KEY ATTRIBUTES	
<b>REGIONAL LIGHT RAIL SPINE</b> <i>Does this project help complete the light rail spine?</i>	No
<b>CAPITAL COST</b> <i>Cost in Millions of 2014 \$</i>	\$642 — \$687
<b>RIDERSHIP</b> <i>2040 daily boardings</i>	6,000 — 8,000
<b>PROJECT ELEMENTS</b>	<ul style="list-style-type: none"> <li>• Approximately 3.65 miles of mostly at-grade light rail, with a portion of elevated track over SR-16</li> <li>• Four center platform stations: S Union Avenue, S. State Street, S Proctor Street, S Stevens Street</li> <li>• Three side platform stations: S Ainsworth Ave, S Pearl St, Tacoma Community College</li> <li>• Stations accommodate 1-car trains (train cars will be longer than existing cars)</li> <li>• Widening of existing right-of-way to provide for exclusive, center-running track along S 19<sup>th</sup> Street from MLK Jr Way to SR 16; from SR 16 to TCC, the track will run parallel to S 19<sup>th</sup> Street, to the north, within exclusive ROW; the crossing of SR 16 will be on an independent bridge</li> <li>• Reconstruction of S 19<sup>th</sup> Street from S Wilkeson Street to SR 16</li> <li>• Grind and overlay existing roadway from MLK Jr Way to S Wilkeson Street</li> <li>• New vehicle storage and washing facility at the project terminus</li> <li>• Purchase of 16 new one-car trains (98.5' in length) to provide service for the extension and replace the existing fleet</li> <li>• Expansion of and modifications to the existing maintenance facility to appropriately serve new vehicles</li> <li>• Added a northbound track from Union Station to the Tacoma Dome Station via Puyallup Avenue</li> <li>• Extension of 5 existing/planned station platforms (counting both center and side platforms individually); these include stations that are currently under design as part of the Tacoma Link Extension</li> <li>• Peak headways: 6 minutes</li> <li>• 1 percent for art per ST policy</li> <li>• Non-motorized access facilities (bicycle/pedestrian), transit-oriented development (TOD)/planning due diligence, and sustainability measures (see separate document titled "Common Project Elements")</li> </ul>

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KEY ATTRIBUTES	
NOT INCLUDED	<ul style="list-style-type: none"><li>• See separate document titled "Common Project Elements"</li></ul>
ISSUES & RISKS	<ul style="list-style-type: none"><li>• This project will require replacement of the entire Tacoma Link fleet</li><li>• Light rail currently operates in Tacoma and specific station area standards are codified; light rail mentioned in the Comprehensive Plan</li><li>• Integration of service with ST2 planned extension</li></ul>

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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 Tacoma Link from Downtown Tacoma to Tacoma Community College. Leaving the St. Joseph Medical Center Station, the alignment would follow MLK Jr Way to S 19<sup>th</sup> Street. It would then travel along S 19<sup>th</sup> Street to the existing transit center at Tacoma Community College (S 19<sup>th</sup> Street and S Mildred Street). Modifications to existing Tacoma Link infrastructure would be performed to accommodate one-car trains that are longer than the existing trains.

## Assumptions:

- Projected ridership along Tacoma Link from the Tacoma Dome to Tacoma Community College cannot be accommodated with single car trains at 10 minute headways; all trains (existing and new) must be one-car trains; service would operate at 6 minute headways during the peak periods and 10 minute headways during the off peak periods
- Existing single track alignment is not sufficient for operations; installation of a second track from Union Station to the Tacoma Dome Station via Puyallup Avenue
- Some existing platforms are not long enough to accommodate longer (98.5' in length) one-car trains
- Existing maintenance facility will need to be retrofitted to appropriately serve new vehicles
- Stations include: shelters, signage, lighting, seating, ticket vending machines, CCTVs
- Center platform stations were used where possible
- Side platforms were used when alignment is side running and in-lane
- Active signal control is used to minimize delay at signalized intersections
- For non-motorized station access allowances, all stations are categorized as Urban LRT stations

## 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.

## Right-of-Way and Property Acquisition:

Property acquisitions anticipated at stations and for the vehicle storage and washing facility and traction power substations

## 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
- NEPA/SEPA and related regulations

## Project Dependencies:

- Completion of Tacoma Link to St. Joseph Medical Center
- Ability to extend all existing station platforms to accommodate one-car trains

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**Potential Project Partners:**

- City of Tacoma
- Transit partners serving project: Pierce Transit
- Tacoma Community College
- FTA
- WSDOT

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## 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, 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.

In Millions of 2014\$

ITEM	COST	COST WITH RESERVE
Agency Administration	\$34.55	\$36.97
Preliminary Engineering & Environmental Review	\$16.31	\$17.46
Final Design & Specifications	\$31.35	\$33.55
Property Acquisition & Permits	\$62.44	\$66.81
Construction	\$319.78	\$342.16
Construction Management	\$28.22	\$30.19
Third Parties	\$6.47	\$6.92
Vehicles	\$111.26	\$119.05
Contingency	\$31.35	\$33.55
<b>Total</b>	<b>\$641.73</b>	<b>\$686.65</b>

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	\$0.84	\$0.90
Sustainability	\$13.93	\$14.91
Parking access	N/A	N/A
Non-motorized (bicycle/pedestrian) access	\$30.76	\$32.91
Bus/rail integration facilities	N/A	N/A

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## Evaluation Measures:

MEASURE	MEASUREMENT/RATING	NOTES
 <b>Regional Light Rail Spine</b> <i>Does project help complete regional light rail spine?</i>	No	
 <b>Ridership</b> <i>2040 daily station boardings</i>	6,000 — 8,000	
 <b>Capital Cost</b> <i>Cost in Millions of 2014 \$</i>	\$642 — \$687	
 <b>Annual O&amp;M Cost</b> <i>Cost in Millions of 2014 \$</i>	\$11.16	
 <b>Travel Time</b> <i>In-vehicle travel time along the project (segment)</i>	16 min	
 <b>Reliability</b> <i>Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</i>	Medium-High	At-grade crossings
 <b>System Integration</b> <i>Qualitative assessment of issues and effects related to connections to existing local bus service and potential future integration opportunities</i>	Medium-Low	Low to medium-low number of existing daily transit connections Tacoma Community College to S Cushman Avenue
 <b>Ease of Non-motorized Access</b> <i>Qualitative assessment of issues and effects related to non-motorized modes</i>	Medium-Low	Medium to low intersection density providing nonmotorized access, with large parcels as barriers
	<b>Percent of Non-motorized Mode of Access</b> <i>Percent of daily boardings</i>	70-80%
 <b>Connections to PSRC-designated Regional Centers</b> <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i>	2 centers	Regional growth centers: Tacoma Downtown, University Place
 <b>Land Use and Development/TOD Potential</b> <i>Quantitative/qualitative assessment of adopted Plans &amp; Policies and zoning compatible with transit-supportive development within 0.5 mile of potential stations</i>  <i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i>  <i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential station areas</i>	Medium	Moderate support in local and regional plans; approx. 25% land is compatibly zoned
	Medium  Pop/acre = 2014: 7; 2040: 11 Emp/acre = 2014: 6; 2040: 10 Pop + Emp/acre = 2014: 13; 2040: 21	Moderate market support
 <b>Socioeconomic Benefits</b> <i>Existing minority / low-income populations within 0.5 mile of potential station areas</i>  <i>2014 and 2040 population within 0.5 mile of potential station areas</i>  <i>2014 and 2040 employment within 0.5 mile of potential station areas</i>	38% Minority; 17% Low-Income  Pop: 2014: 17,000; 2040: 25,400  Emp: 2014: 13,000; 2040: 23,200	

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