












# CANDIDATE PROJECT EVALUATION METHODOLOGIES

## Evaluation Measures:

MEASURE	METHODOLOGY
 <p><b>Regional Light Rail Spine</b> <i>Does project help complete regional light rail spine?</i></p>	This measure identifies whether the project contributes to the completion of the light rail spine to Everett, Redmond, and Tacoma.
 <p><b>Ridership</b> <i>2040 daily station boardings / 2040 daily project riders</i></p>	<p>Ridership forecasts were developed for year 2040 using the Sound Transit ridership forecasting model.</p> <p>For candidate project templates, daily station boardings are reported, while for corridor summaries, daily project riders (including riders using the project who may have boarded at a station outside of the project corridor) are reported.</p>
 <p><b>Capital Cost</b> <i>Cost in Millions of 2014 \$</i></p>	A capital cost estimate, reflected in a range from "Low" to "High," was developed based on a representative project scope.
 <p><b>Annual O&amp;M Cost</b> <i>Cost in Millions of 2014 \$</i></p>	The annual operations and maintenance cost was estimated based on a representative project scope and assumed operating characteristics.
 <p><b>Travel Time</b> <i>In-vehicle travel time along the project (segment)</i></p>	The end-to-end travel time for transit corridor projects was estimated based on assumed average operating speeds along a representative alignment. This represents in-vehicle time only on the transit corridor itself.
 <p><b>Reliability</b> <i>Quantitative/qualitative assessment of alignment/route in exclusive right-of-way</i></p>	Assessment of the representative alignment that is in exclusive right-of-way is reported as an indicator of the reliability of transit service. Ratings range from Low to Medium-Low for limited BAT lanes and/or intersection or spot improvements, to Medium for arterial bus-only or BAT lanes in most of the corridor, to Medium-High for LRT with at-grade portions (including moveable bridges) or BRT in managed/express lanes, to High for 100% grade-separated LRT.
 <p><b>System Integration</b> <i>Qualitative assessment of issues and effects related to connections to local bus service and potential future integration opportunities</i></p>	This rating is based on a quantitative assessment of the number of existing daily transit trips at bus connections within 0.5 mile of potential stations and the potential for future integration opportunities. The highest rating was given for locations with over 2,000 total daily existing connecting transit trips. The rating by project was calculated from the average of each station rating associated with the project, combined with potential future integration opportunities as identified in coordination with transit partners.
 <p><b>Ease of Non-motorized Access</b> <i>Qualitative assessment of issues and effects related to non-motorized modes</i></p>	The ease of non-motorized access evaluation consists of two measures to evaluate and rate the quality of non-motorized access at each station. Connectivity of the street system surrounding each station was measured by evaluating the number of intersections within 0.5 mile of each potential station. A second, qualitative rating was given to each station based on barriers to non-motorized access, including freeways, railroads, large parcels, open space, and hillsides. The two measures for ease of non-motorized access were applied at the station level and then aggregated to the segment or project level.
<p><b>Percent of Non-motorized Access</b> <i>Percent of daily boardings</i></p>	The percent of riders accessing stations by non-motorized modes was estimated based on station typologies. Typologies were identified for each potential station based on national research (TCRP Report 153). Access percentages were assigned for urban, urban CBD, suburban, and intermodal transit center station types.
 <p><b>Connections to PSRC-designated Regional Centers</b> <i>Number of PSRC-designated regional growth and manufacturing/industrial centers served</i></p>	The number of PSRC-designated regional growth and manufacturing/industrial centers served by the project was counted. Centers/MICs were included if the project would provide additional connections to them, even if they are already served by high capacity transit.

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	<p><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></p> <p><i>Qualitative assessment of real estate market support for development within 1 mile of potential corridor</i></p> <p><i>Density of activity units (population and employment for 2014 and 2040) within 0.5 mile of potential stations</i></p>	<p>An assessment of adopted plans, policies, and zoning assessed the degree to which regionally and locally adopted land use plans and policies support future development at station areas within a project as well as the existing station area character and an estimate of land within station areas that could be developed or redeveloped with high-density mixed use development based on existing zoning data. These three factors were rated separately and then averaged for the adopted plans, policies, and zoning rating.</p> <p>Real estate market support for new development was assessed at the project level and based on quantitative and qualitative considerations. The area within one mile of the proposed project alignment was assessed using quantitative data, including proximity of demand generators, nature of the existing apartment and office development inventory, current development activity, and the amount of underutilized land. A qualitative assessment was then made to identify submarkets, which were used to rate its market support for new development.</p> <p>Density of Activity units was measured by determining the existing and forecast density of population, employment, and population and employment combined per acre. Puget Sound Regional Council 2014 and 2040 land use forecasts were used, consistent with data used in the Sound Transit ridership forecasting model.</p>
	<p><b>Socioeconomic Benefits</b>  <i>Existing minority / low-income populations within 0.5 mile of potential stations</i></p> <p><i>2014 and 2040 population within 0.5 mile of potential stations</i></p> <p><i>2014 and 2040 employment within 0.5 mile of potential stations</i></p>	<p>The percent of the population who are minority or low-income within 0.5 mile of potential stations associated with each project was calculated using GIS. Minority persons include American Indian and Alaska Native, Asian, Black or African American, and Hispanic or Latino. Minority persons do not include non-Hispanic White individuals. Low-income means a person whose median household income is at or below the Department of Health and Human Services poverty guidelines. Any overlapping areas, which are areas within 0.5 mile of more than one station, were only included once. Census tracts were used for this analysis, plus data from the American Community Survey 2009-2013 5-year estimates, released by the U.S. Census Bureau on December 4, 2014.</p> <p>Total 2014 and 2040 population and employment within 0.5 mile of potential stations associated with each project was calculated using GIS. Any overlapping areas, which are areas within 0.5 mile of more than one station, were only included once. Puget Sound Regional Council 2014 and 2040 land use forecasts were used, consistent with data used in the Sound Transit ridership forecasting model.</p>