



Sound Transit 3 Risk Assessment

Expert Review Panel Meeting February 9, 2016

 **SOUNDTRANSIT**

Phases and Purpose of Risk Assessment

- Phases of Risk Assessment
 - Part I – Focused on Individual Projects (Week of February 1, Ongoing)
 - Part II – System Analysis (Date TBD)
- Purpose
 - Part I - Support Decision Making of ST3 Candidate Projects
 - Develop Shared Level of Project Scope Understanding
 - Identify Potential Project Risks
 - Improve Confidence of Cost Information
 - Part II - Support Decision Making of ST3 Plan

Approach to Part I – Individual Projects

- ST3 Risk Assessment Differs from Typical ST Project Risk Assessment
 - Very Early Planning
 - Much Less Known About Projects
- Project Scope Review Process
 - Project Summary Sheets
 - Conceptual Drawings
 - Right of Way Maps, Google Maps
 - Cost Estimates

Approach to Part I – Individual Projects, Cont.

- Review the scope of projects with multi-disciplinary teams (design, planning, operations, etc.)
- Identify uncertainties including:
 - Threats
 - Opportunities (possible savings)
- Review of quantities, unit prices, and allowances

Project Scope Review: S-03-SegB

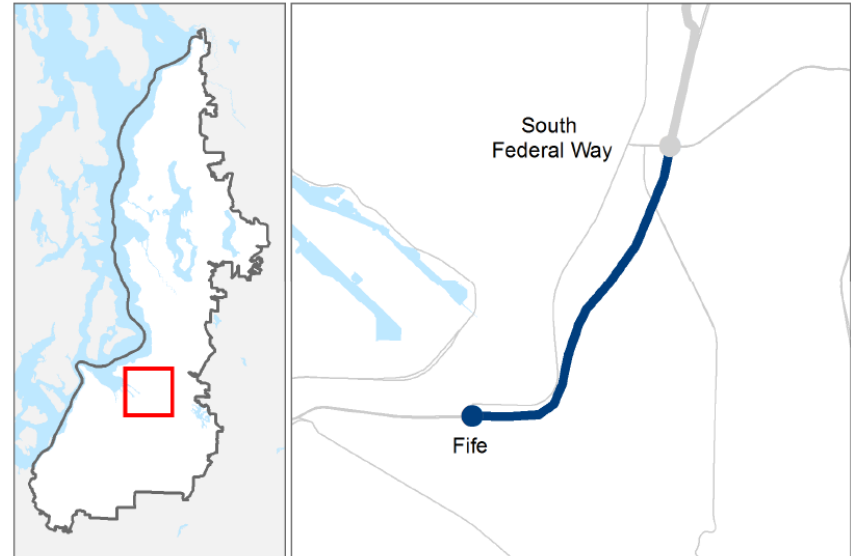
Project Number	S-03-SegB
Subarea	South King/Pierce
Primary Mode	Light Rail
Facility Type	Corridor
Length	4.0 miles
Version	ST Board Workshop
Date Last Modified	11-25-2015

SHORT PROJECT DESCRIPTION

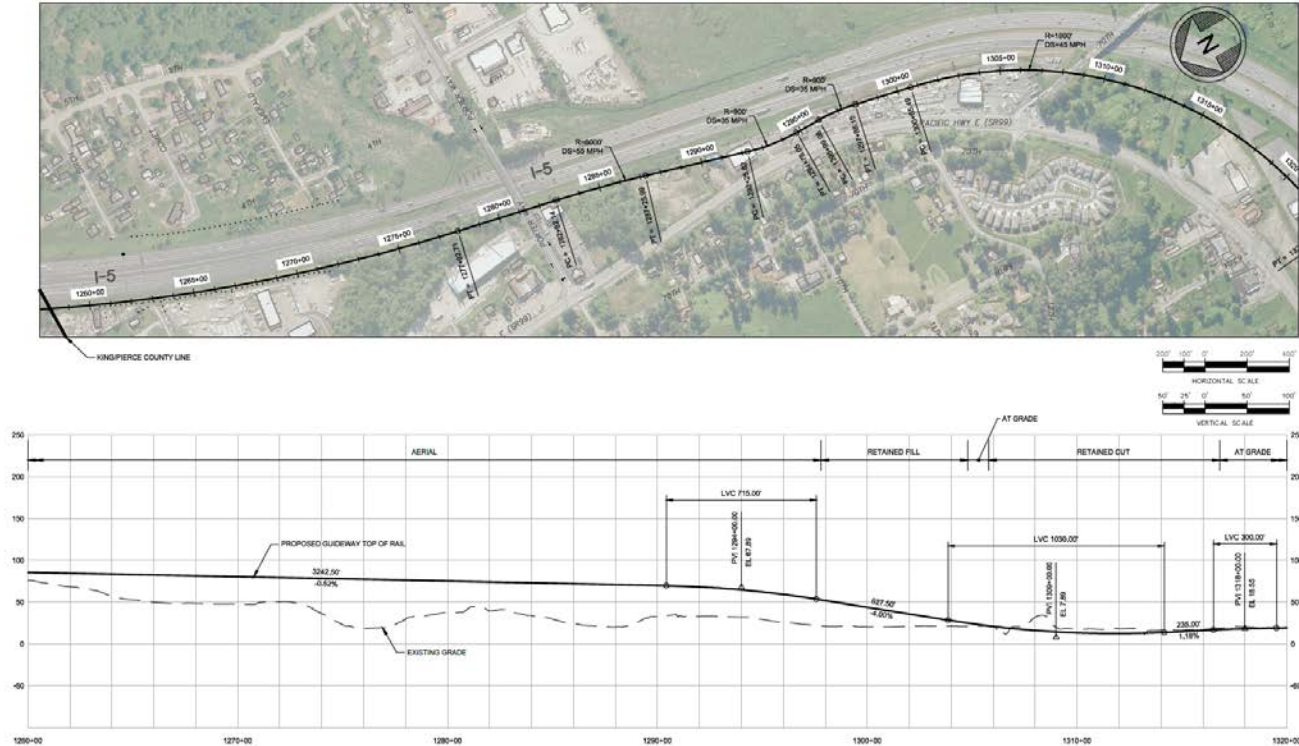
This project would extend light rail from South Federal Way to Fife via I-5 with one elevated station.

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



Project Scope Review: S-03-SegB



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Project Scope Review: S-03-SegB

Cost (Millions 2014)	Cost	Cost with Reserve
Agency Administration	\$41.00	\$43.87
Prel. Engineering & Environmental Review**	\$22.86	\$24.46
Final Design & Specifications	\$45.33	\$48.51
Property Acquisition & Permits	\$33.69	\$36.04
Construction***	\$462.41	\$494.78
Construction Management	\$40.80	\$43.66
Third Parties**	\$9.27	\$9.92
Vehicles	\$68.90	\$73.72
Contingency	\$45.33	\$48.51
Total	\$769.59	\$823.46

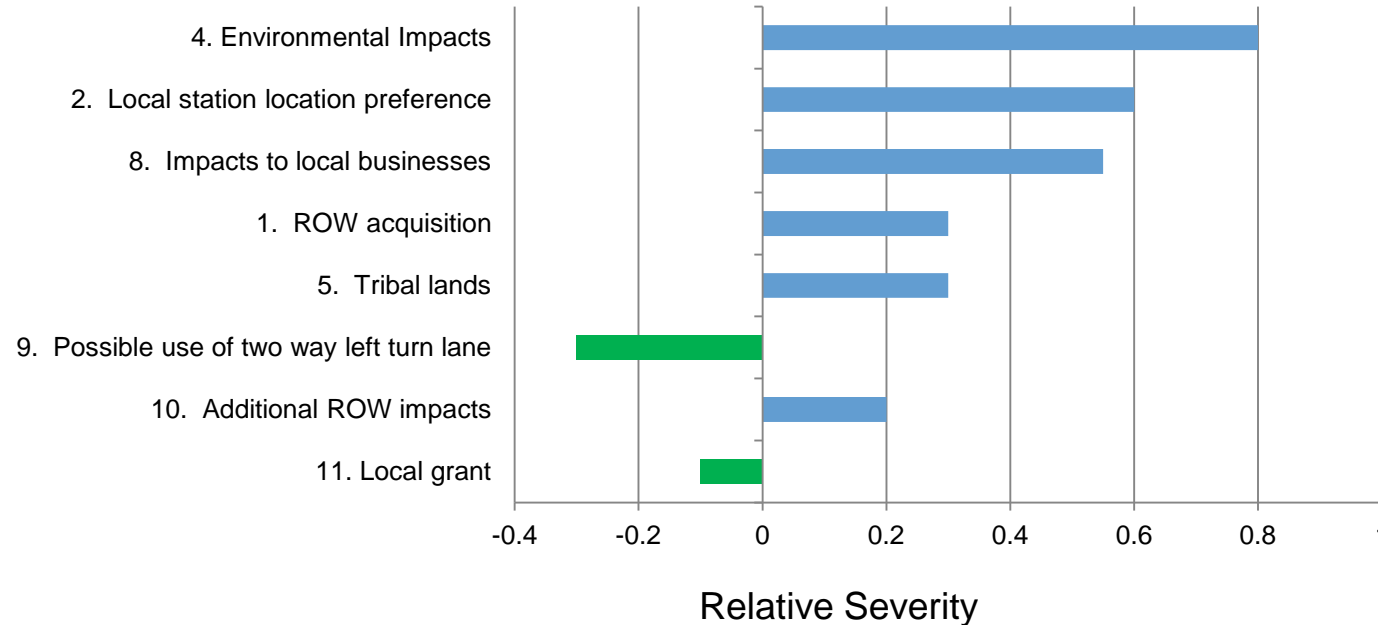
Project Risk Assessment Process

- Characterize Risks (or Opportunities)
 - Identify project uncertainties
 - Categorize risks and identify nature of risk
- Project Risk Categories
 - Design
 - Construction
 - Stakeholders / Public
 - Environmental / Permitting
 - Right-of-Way / Utilities

Project Risk Assessment Process, Cont.

- Establish Risk Scales and Analyze Risks
 - Identify likelihood of risk (probability – very low to very high)
 - Identify degree of risk exposure (expected impact – very low to very high)
- Summary of Potential Risk Exposure
 - Develop range of potential cost risk exposure

Prioritize Risks/Opportunities by Relative Severity (Hypothetical Example)



Independent Project Cost Estimate Validation (Underway)

- Evaluate Assumptions
 - Quantities
 - Prices
 - Estimating Methodology
 - Review allowances, reserves
- Validate Conceptual Project Capital Costs
 - Identify “missing” items
 - Suggest revisions to existing items where appropriate

Next Steps

- Complete Part I of Risk Assessment
 - Complete Cost Estimate Validation
 - Prepare Summary of Potential Risk Exposure
- Conduct Part II of Risk Assessment
 - Additional projects (if needed)
 - System Plan Phasing
 - Agency Capacity
 - Industry Capacity
 - Program-Wide Risks



Thank you.

