



Sound Transit 3 Risk Assessment

Expert Review Panel Meeting April 11, 2016

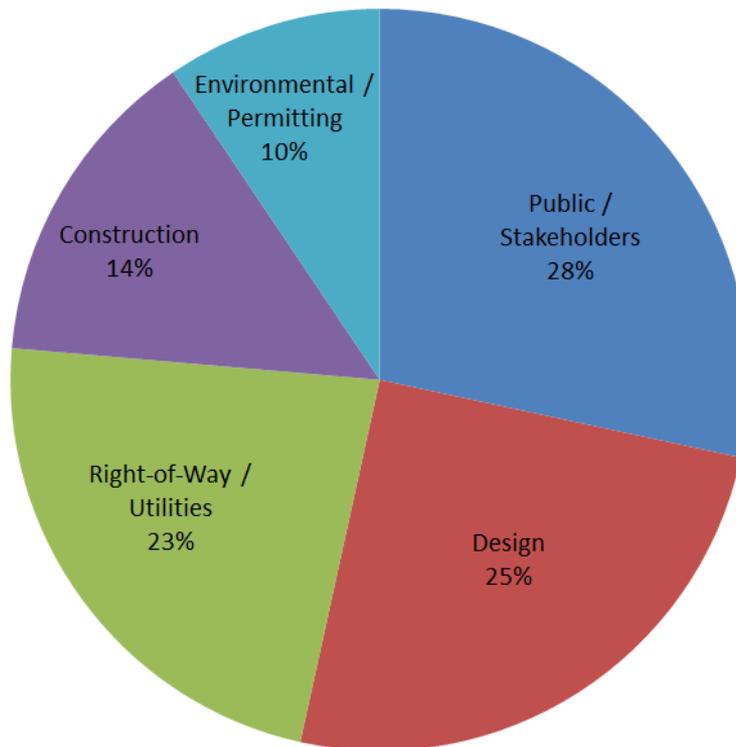
 **SOUND TRANSIT**

Approach

- Focused on a subset of ST3 candidate projects (19)
- Multi-disciplinary teams: design, permitting, construction management, property acquisition, cost and scheduling, planning, and operations
- Phases of Risk Assessment:
 - Part I – Workshop Focused on Individual Project Scopes/Budgets (February 1-5)
 - Part II – Workshop Focused on Individual Project Schedules (February 24-25)
- Very early level of design; wide range of uncertainties or risks identified
- Potential risks to cost and schedule were identified
- Scales identified to assess relative magnitude of severity:
 - Relative severity of risk exposure = (likelihood of risk) x (expected impact)
- Recorded initial mitigation ideas, but generally not mitigation focused

Risks/Uncertainties by Type – All Projects

(275 Total Risks/Uncertainties)



Examples of More Severe Risks/Uncertainties

- **C-10 Sounder Infill Station at Boeing Access Road**
 - Station location disagreement with BNSF (Risk Severity = 1.0)
 - Sounder station operations negotiations with BNSF (Risk Severity = 1.0)
- **S-04 Federal Way Transit Center to S. Federal Way Via SR 99**
 - Horizontal clearance between powerlines and tank (Risk Severity = .64)
 - Powerline relocation south of Commons Mall along 324th St. (Risk Severity = 1.0)
- **N-02 Lynnwood to Everett Light Rail Via SW Everett Industrial Center**
 - Temporary construction easements and additional parcel takes (Risk Severity = .40)
 - OMSF site selection and suitability (Risk Severity = .40)
- **C-01b: Downtown Seattle to Ballard**
 - Third party agreement for needed parcels (Risk Severity = .40)
 - Permitting issues (Risk Severity = .30)

Total Individual Risk Severity Ranged from 0 to 1.0;

1.0 = very high probability, very high cost impact, and very high schedule impact

Other Examples of Project Changes

- **Lynnwood to Everett Light Rail**
 - Changed profile to elevated over Ash Way HOV direct access ramp (elevated station at Ash Way whereas previously at grade; short length of additional elevated guideway).
 - Increased the number of assumed acquisitions in multiple locations.
 - Shifted the alignment south of 196th Street to the west to avoid potential complications with transmission wires, the interurban trail, and a future extension of Poplar Way across I-5.
- **Bellevue to Issaquah Light Rail**
 - Opportunity: Modified the alignment in portions of the I-90 right-of-way from Eastgate to Issaquah to be at-grade, including retained cut and fill, in the freeway median rather than elevated.
 - Adjusted the number of full residential property acquisitions in the City of Bellevue, consistent with Bellevue requirements.
- **Ballard to Downtown Seattle Light Rail**
 - Changed the cost estimate for maintenance of traffic activities, particularly with respect to the locations of underground station construction.

Other Outcomes of ST3 Risk Assessment

- A benefit to future project development:
 - Fostered more comprehensive, early, multi-disciplinary review of ST3 candidate projects
 - Once system plan approved, will use risks and uncertainties identified to manage risks throughout project development.
 - Quarterly review of list of risks and uncertainties identified
 - Full risk assessment at 10%, 30%, 60%, 90% design, and at various points during construction.
 - Identifies opportunities for early proactive risk management:
 - Will result in some earlier outreach/coordination for some projects
 - Earlier start on some federal regularly permitting issues
 - Early careful consideration of potential utility relocations needed
 - Potential early acquisition of some properties needed

Next Steps

- Finalize risk assessment report (under internal review)
- Continuing to review some projects to assess if changes needed
- Document the catalogue of identified uncertainties and risks as starting point for risk management for each project

Thank you.



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RIDE THE WAVE

Candidate Projects Included in Risk Assessment

Central Candidate Projects

- C-01b - LRT Downtown Seattle to Ballard
- C-01c - LRT Downtown Seattle to Ballard
- C-03a - LRT Downtown Seattle to West Seattle
- C-08 - Infill Light Rail Station: Graham Street
- C-09 - Infill Light Rail Station: Boeing Access Road
- C-10 - Infill Sounder Station: Boeing Access Road

East Candidate Projects

- E-01 - LRT Redmond Technology Center to Downtown Redmond
- E-02a – BRT Lynnwood TC to Burien TC
- E-03 - LRT Kirkland/Totem Lake to Issaquah via Bellevue

North Candidate Projects

- N-02aMod- LRT Lynnwood Transit Center to Everett Station via Southwest Everett Industrial Center
- N-04 - Infill Light Rail Station: 130th Street
- N-05 - Infill Light Rail Station: 220th Street
- N-09b - BRT on SR 523/145th
- N-10 - BRT on SR 522 to the Vicinity of UW Bothell

South Candidate Projects

- S-03 - LRT Federal Way TC to Tacoma Dome via I-5
- S-04 – LRT Federal Way TC to Tacoma Dome via SR 99
- S-06 - Expand Sounder South Train Platforms to 8 cars
- S-11a - Tacoma Link extension to Tacoma Comm. College
- S-17 - Sounder expansion to DuPont