West Seattle and Ballard Link Extensions
Agenda

- Alternatives development process
- Level 3 alternatives
- Level 3 evaluation results
- Potential mix-and-match opportunities
Alternatives development process

**LEVEL 1**
Alternatives development
- Early-2018
  - Conduct early scoping
  - Study ST3 representative project and alternatives
  - Screen alternatives

**LEVEL 2**
Alternatives development
- Mid-2018
  - Technical analysis
  - Refine and screen alternatives

**LEVEL 3**
Alternatives development
- Late-2018 / Early-2019
  - Refine and screen alternatives
  - Conduct Environmental Impact Statement (EIS) scoping

*The Sound Transit Board identifies preferred alternatives and other alternatives to study in the Environmental Impact Statement (EIS).*
## Community engagement and collaboration

### Community Updates
- **Community Engagement and Collaboration**
- **Early Scoping Period**
- **EIS Scoping Period**

### Neighborhood Forums
- Early Scoping Open Houses (multiple locations)
- Multiple Locations

### Stakeholder Advisory Group
- Level 1 Alternatives Screening
- Level 2 Alternatives Screening
- Level 3 Alternatives Screening

<table>
<thead>
<tr>
<th></th>
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<th>LEVEL 2 Alternatives Screening</th>
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<tbody>
<tr>
<td><strong>2018</strong></td>
<td>JAN</td>
<td>FEB</td>
<td>MAR</td>
</tr>
<tr>
<td><strong>Level 1 Briefing</strong></td>
<td>✔️</td>
<td></td>
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</tr>
<tr>
<td><strong>Level 1 Recommendation</strong></td>
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<tr>
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<tr>
<td><strong>Level 2 Recommendation</strong></td>
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<td>✔️</td>
<td>✔️</td>
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<tr>
<td><strong>Preferred Alternative Recommendation</strong></td>
<td>✔️</td>
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<tr>
<td><strong>Identification of Preferred Alternative and other alternatives to study in the EIS</strong></td>
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### Elected Leadership Group
- Community Update
- EIS Scoping Open Houses (multiple locations)
- Multiple Locations
- Preferred Alternative Recommendation

### Sound Transit Board
- Level 1 Briefing
- Level 2 Briefing
- Preferred Alternative Recommendation

*Meeting dates subject to change.*
Level 3 alternatives screening

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SAG = Stakeholder Advisory Group; ELG = Elected Leadership Group
What is EIS Scoping?

- 30-day *public comment period* until *March 18*
- Seeking public *feedback on scope of EIS*
  - Range of alternatives
  - Topics to study
  - Purpose and need
- Helps *inform Board decision* on what to study in EIS*

* Scope of EIS also subject to Federal Transit Administration (FTA) oversight
How to provide scoping comments

• **Attend an open house:**
  • West Seattle on Wednesday, Feb. 27, 6 – 8:30 p.m. at **Alki Masonic Center**
  • Ballard/Interbay on Thursday, Feb. 28, 6 – 8:30 p.m. at **Ballard High School**
  • Downtown on Thursday, March 7, 5 – 7:30 p.m. at **Union Station**

• **Comment online:** wsblink.participate.online

• **Email us:** wsbscopingcomments@soundtransit.org

• **Leave a voicemail:** 833-972-2666

• **Mail us:**
  • West Seattle and Ballard Link Extensions, c/o Lauren Swift, Sound Transit, 401 S. Jackson St., Seattle, WA 98104
Screening process

Broad range of initial alternatives

Refine remaining alternatives

Further evaluation

Preferred Alternative and other EIS alternatives
Level 3 recommendations

• Interest in *additional scope* items

• Additional scope items *require 3rd party funding* *

• Potential *recommendations*:
  • Preferred Alternative #1: If 3rd party funding *not* secured
  • Preferred Alternative #2: If 3rd party funding *is* secured

*“3rd party funding” refers to potential local contribution/funding partnership(s) to supplement Sound Transit and federal funding*
### Level 3 alternatives screening

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SAG = Stakeholder Advisory Group; ELG = Elected Leadership Group
Level 3 alternatives
Summary of Level 3 alternatives

ST3 Representative Project

- West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated
  - C-ID station options: 5th Ave Cut-and-Cover and 5th Ave Mined

- West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel
  - Junction station options: 41st Ave, 42nd Ave and 44th Ave
  - C-ID station options: 4th Ave Cut-and-Cover and 4th Ave Mined
  - Ballard station options: 14th Ave and 15th Ave
ST3 Representative Project
Summary of Level 3 alternatives

ST3 Representative Project

West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated

• C-ID station options: 5th Ave Cut-and-Cover and 5th Ave Mined

West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel

• Junction station options: 41st Ave, 42nd Ave and 44th Ave
• C-ID station options: 4th Ave Cut-and-Cover and 4th Ave Mined
• Ballard station options: 14th Ave and 15th Ave
West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated

Alaska Junction elevated station oriented north/south

Delridge Station further south

6th Avenue route through downtown

Smith Cove Station near Galer St

Terry/Mercer route in South Lake Union

At grade along E-3 Busway

Chinatown/ID station options
- 5th Ave Bored Tunnel, Cut and Cover Station
- 5th Ave Mined

Interbay Station at 17th/Thorndyke

High level fixed bridge at 14th Ave
Summary of Level 3 alternatives

- ST3 Representative Project
  - West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated
    - C-ID station options: 5th Ave Cut-and-Cover and 5th Ave Mined

- West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel
  - Junction station options: 41st Ave, 42nd Ave and 44th Ave
  - C-ID station options: 4th Ave Cut-and-Cover and 4th Ave Mined
  - Ballard station options: 14th Ave and 15th Ave
Junction tunnel station options
- 41st Ave
- 42nd Ave
- 44th Ave

Delridge Station further south and west

North crossing of Duwamish

At grade along E-3 Busway

Chinatown/ID station options
- 4th Ave Cut and Cover
- 4th Ave Mined

Interbay Station at 17th/Thorndyke

Ballard tunnel station options
- 14th Ave
- 15th Ave

South Lake Union Station on Harrison

Delridge

West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel
Level 3 evaluation results
Evaluation criteria

17 criteria consistent in all levels of evaluation

- Reliable service
- Travel times
- Regional connectivity
- Transit capacity
- Projected transit demand
- Regional centers served
- ST Long-Range Plan consistency
- ST3 consistency
- Technical feasibility
- Financial sustainability
- Historically underserved populations
- Station area land use plan consistency
- Modal integration
- Station area development opportunities
- Environmental effects
- Traffic operations
- Economic effects
Evaluation measures

➤ 50+ quantitative and/or qualitative measures

➤ Ratings for Lower, Medium and Higher performing
**Comparative estimates**

- **Purpose:** To *inform comparison* of Level 3 alternatives
- **Comparative estimates** for end-to-end alternatives
  - Consistent methodology (2018$; construction, real estate, etc.)
  - Based on *limited conceptual design* (less than 5% design)
  - Does not establish project budget
- **Project budget** established during final design (~ 2024)
Project budget

ALTERNATIVES DEVELOPMENT

Comparative estimates (2019)

ENVIRONMENTAL PROCESS

Establish project budget (2024)

FINAL DESIGN

CONSTRUCTION

More design/greater certainty
### Evaluation Measures

<table>
<thead>
<tr>
<th>ST3 Representative</th>
<th>West Seattle Elevated/C-ID 5th Ave/Downtown 6th Ave/Ballard Elevated</th>
<th>West Seattle Tunnel/C-ID 4th Ave/Downtown 5th Ave/Ballard Tunnel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project</td>
<td>5th Ave Cut-and-Cover International District/Chinatown Station</td>
<td>41st Ave Alaska Junction/4th Ave Cut-and-Cover/14th Ave Ballard</td>
</tr>
<tr>
<td></td>
<td>5th Ave Mined International District/Chinatown Station</td>
<td>42nd Ave Alaska Junction Station</td>
</tr>
<tr>
<td></td>
<td>4th Ave Alaska Junction Station</td>
<td>4th Ave Alaska Junction Station</td>
</tr>
<tr>
<td></td>
<td>4th Ave Mined International District/Chinatown Station</td>
<td>15th Ave Ballard Station</td>
</tr>
</tbody>
</table>

Provide high quality rapid, reliable, and efficient peak and off-peak light rail transit service to communities in the project corridors defined in ST3.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Lower Performing</th>
<th>Medium Performing</th>
<th>Higher Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential service interruptions/recoverability</td>
<td>Lower</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Network integration</td>
<td>Lower</td>
<td>Medium</td>
<td>Higher</td>
</tr>
<tr>
<td>Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit’s Regional Transit Long-Range Plan.</td>
<td>Lower</td>
<td>Medium</td>
<td>Higher</td>
</tr>
</tbody>
</table>

Implement a system that is consistent with the ST3 Plan that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.

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<th>Lower Performing</th>
<th>Medium Performing</th>
<th>Higher Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential ST3 schedule effects</td>
<td>Higher</td>
<td>Higher</td>
<td>Medium</td>
</tr>
<tr>
<td>Potential ST3 operating plan effects</td>
<td>Lower</td>
<td>Higher</td>
<td>Higher</td>
</tr>
<tr>
<td>Engineering constraints</td>
<td>Lower</td>
<td>Medium</td>
<td>Lower</td>
</tr>
<tr>
<td>Constructability issues</td>
<td>Lower</td>
<td>Medium</td>
<td>Lower</td>
</tr>
<tr>
<td>Operational constraints</td>
<td>Lower</td>
<td>Medium</td>
<td>Lower</td>
</tr>
<tr>
<td>Capital costs (2018$)</td>
<td>-</td>
<td>$400M</td>
<td>$500M</td>
</tr>
<tr>
<td>Passenger transfers</td>
<td>Higher</td>
<td>Higher</td>
<td>Medium</td>
</tr>
<tr>
<td>Equitable development opportunities</td>
<td>Lower</td>
<td>Medium</td>
<td>Higher</td>
</tr>
<tr>
<td>Preserves and promotes a healthy environment and economy by minimizing adverse impacts on the natural, built, and social environments through sustainable practices.</td>
<td>Lower</td>
<td>Medium</td>
<td>Higher</td>
</tr>
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<table>
<thead>
<tr>
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<th>Higher Performing</th>
</tr>
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<tbody>
<tr>
<td>Parks/recreational resource effects (acres)</td>
<td>1.4</td>
<td>5.3</td>
<td>5.7</td>
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<tr>
<td>Water resource effects (acres)</td>
<td>0.8</td>
<td>0.5</td>
<td>&lt;0.1</td>
</tr>
<tr>
<td>Fish and wildlife habitat effects (acres)</td>
<td>15.0</td>
<td>6.0</td>
<td>15.0</td>
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<td>Hazardous materials sites</td>
<td>50</td>
<td>60</td>
<td>40</td>
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<tr>
<td>Visual effects to sensitive viewers (miles)</td>
<td>2.5</td>
<td>1.7</td>
<td>1.2</td>
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<tr>
<td>Potentially affected properties</td>
<td>Medium</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Residential unit displacements</td>
<td>Medium</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Business displacements (square feet)</td>
<td>Higher</td>
<td>Lower</td>
<td>Higher</td>
</tr>
<tr>
<td>Construction impacts</td>
<td>Lower</td>
<td>Lower</td>
<td>Medium</td>
</tr>
<tr>
<td>Burden on minority/low-income</td>
<td>Lower</td>
<td>Medium</td>
<td>Lower</td>
</tr>
<tr>
<td>Traffic circulation and access effects</td>
<td>Lower</td>
<td>Medium</td>
<td>Higher</td>
</tr>
<tr>
<td>Effects on transportation facilities</td>
<td>Lower</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Effects on freight movement</td>
<td>Lower</td>
<td>Medium</td>
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(1) On properties that overlap with the project footprint

### Summary of differentiators

- **Higher Performing:** Indicating projects with superior performance metrics.
- **Medium Performing:** Projects with moderate performance.
- **Lower Performing:** Projects with lesser performance metrics.
Comparative estimates

Estimates based on limited conceptual design for the purpose of comparing alternatives only. Project budget established during final design (~2024).
Potential mix-and-match opportunities
Summary of Level 3 alternatives

ST3 Representative Project

West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated
- C-ID station options: 5th Ave Cut-and-Cover and 5th Ave Mined

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- Ballard station options: 14th Ave and 15th Ave
West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated – Potential mix-and-match opportunities

- Crossing on north (instead of south) side of existing bridge
- 5th/Harrison (instead of 6th/Mercer) route through Downtown
- Station near Prospect St (instead of Galer St)
Summary of Level 3 alternatives

- **ST3 Representative Project**

- **West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated**
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Next steps
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