

West Seattle and Ballard Link Extensions

Stakeholder Advisory Group | November 5, 2018

Agenda

- > Welcome and introductions
- Community engagement & collaboration
- Level 2 recommendations recap
- > What to expect in Level 3
- Level 3 end-to-end alternatives
- > Next steps and next meeting

WHO IS SOUND TRANSIT

We plan, build and operate regional branalit systems and services to improve mobility in urban areas of King, Pierce and Snohomish counties.

FUTURE SERVICE

Sound Transit System Expansion v

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- Establish stall Result Transa (BRT) to the north, east and worth of Lake Washington.
- Expland Sources source and cableon and servers adding two new stations
 - wing at station

Community Engagement and Collaboration

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Veeding file systems plan is paid for with a contribution of votesingeneed local tances, fedical grants, function revenues, bornment ands and interest revenues. By 2005, system expending costs will be paid for with local tance, functions revenues, interest amings, pinning aurosts and relational openating assistances.

SOUNDTRANSIT

Community engagement and collaboration



External Engagement Report: October 2018





engaging more than 4,160 subscribers





Elected Leadership Group meeting

October briefings snapshot

- ✓ South Lake Union Community Council (10/2)
- ✓ Delridge Neighborhoods Development Association (10/9, 10/24)
 ✓ BNSF (10/9)
- ✓ Expedia Group Annual Fall Transportation Fair (10/10)
- ✓ SDOT/Metro Rapid Ride H Open House (10/10)
- ✓ North Downtown Mobility Action Plan Open House (10/11)
- ✓ Delridge Way SW Businesses (10/15)
- ✓ Feet First West Seattle Walk & Talk (10/16)
- ✓ El Centro de la Raza (10/24)



Level 2 recommendations recap

Level 2 meetings and milestones

SAG Meeting #8	Sep 5	Level 2 evaluation results
Neighborhood Forum/Open House West Seattle	Sep 8	Level 2 evaluation results
Neighborhood Forum/Open House Downtown	Sep 11	Level 2 evaluation results
Neighborhood Forum/Open House Ballard	Sep 17	Level 2 evaluation results
SAG Meeting #9	Sep 26	Level 2 recommendations
ELG Meeting #4	Oct 5	Level 2 recommendations



Level 2 study segments

Level 2 alternatives

West Seattle/Duwamish	SODO and Chinatown/ID	• Downtown	Interbay/Ballard
 ST3 Representative Project Pigeon Ridge/ West Seattle Tunnel Oregon Street/Alaska Junction Elevated Golf Course/Alaska Junction Tunnel Oregon Street/Alaska Junction Tunnel 	 ST3 Representative Project Massachusetts Tunnel Portal Surface E-3 Occidental Avenue 4th Avenue Cut-and-Cover Tunnel/Station 4th Avenue Bored Tunnel/ Mined Station 5th Avenue Bored Tunnel/ Mined Station 	 ST3 Representative Project 5th/Harrison 6th/Boren/Roy 5th/Terry/Roy/Mercer 	 ST3 Representative Project 15th/Fixed Bridge/15th 20th/Fixed Bridge/17th 20th/Tunnel/15th Armory Way/Tunnel/14th Central Interbay/Movable Bridge/14th Central Interbay/Fixed Bridge/14th Central Interbay/Fixed Bridge/14th



West Seattle/Duwamish

Level 2 alternatives

West Seattle / Duwamish ELG recommendations

Alternative	Public feedback - common themes	Do Not Carry Forward?	Carry Forward?	w/suggested refinements?
ST3 Representative Project				
Oregon Street / Alaska Junction / Elevated	 Concern about elevated guideway across California Ave If elevated, explore locating terminus station east of Junction 	\checkmark		
Oregon Street / Alaska Junction / Tunnel	 General support for north crossing of Duwamish due to less environmental effects; but interest in minimizing freight effects Concern about Junction station location at 44th Concern with higher guideway along Genesee <i>Explore Junction station location at 41st/42nd</i> 	\checkmark		
Golf Course / Alaska Junction / Tunnel	 General support for this alternative, with development opportunities at Delridge station location to serve neighborhood Support for lower guideway along Genesee <i>Explore Junction station location at 41st/42nd</i> <i>Explore north crossing of Duwamish</i> 		✓	Explore Junction station location at 41st/42nd Explore north crossing of Duwamish
Pigeon Ridge / West Seattle Tunnel	 Concern about overall cost and environmental effects Support for lower guideway along Genesee and support for fewer residential effects in Delridge Support for Junction station location at 42nd 	\checkmark		

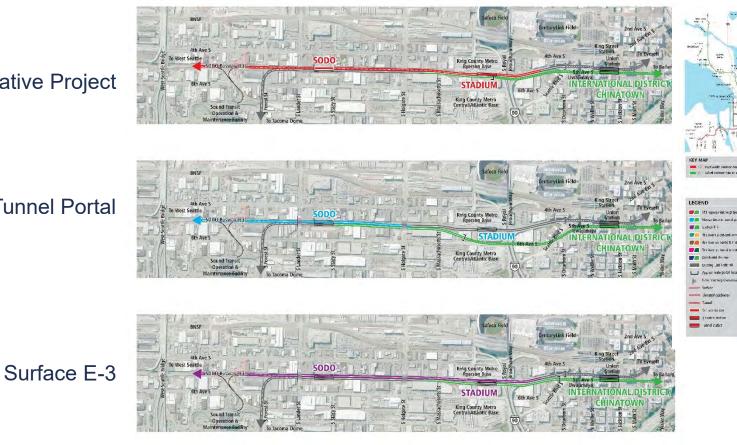
West Seattle / Duwamish

ELG general discussion

- Interest in good transfer environment and transit-oriented development (TOD) opportunities at Delridge Station
- Concern with location of station on Fauntleroy; does not serve Alaska Junction well and too close to Avalon Station
- Concern with state freight mobility impacts of construction of Duwamish crossing north of West Seattle Bridge
- Adopt SAG recommendations on modifying ST3 Representative Project
- > Explore tradeoffs with 44th Ave station location
- > Continued interest in Junction station at 42nd Ave

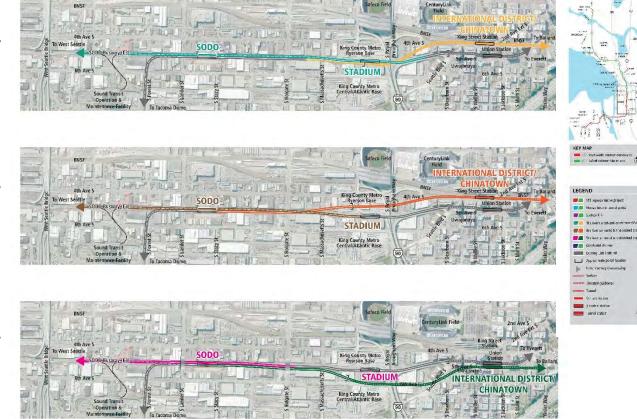
ST3 Representative Project

Massachusetts Tunnel Portal



SODO and Chinatown/ID Level 2 alternatives – 1 of 3

4th Avenue Cut-and-Cover Tunnel/Station



4th Avenue Bored Tunnel/ Mined Station

5th Avenue Bored Tunnel/ Mined Station

SODO and Chinatown/ID Level 2 alternatives – 2 of 3



Occidental Avenue

SODO and Chinatown/ID

Level 2 alternatives – 3 of 3

NB

SODO ELG recommendations

Alternative	Public feedback - common themes	Do Not Carry Forward?	Carry Forward?	w/suggested refinements?
ST3 Representative Project				
Surface E-3	 General support for surface alignment Support for new roadway overpasses at Lander and Holgate Some support for second Stadium station Explore shifting existing and new SODO stations closer to Lander 		\checkmark	
Massachusetts Tunnel Portal	 General support for surface alignment Support for new roadway overpasses at Lander and Holgate Explore shifting existing and new SODO stations closer to Lander 		\checkmark	
Occidental Ave	 Some support for locating new SODO station further west Some concern about freight mobility and property effects 	\checkmark		

SODO

ELG general discussion

- Need to continue analysis on interim terminus options to avoid short-term forced transfer at SODO Station if possible
- Need improved mobility options in SODO
- Strong interest in resolving limited bus base capacity

Chinatown-ID ELG recommendations

Alternative	Public feedback - common themes	Do Not Carry Forward?	Carry Forward?	w/suggested refinements?
ST3 Representative Project				
Surface E-3 (shorter 5th Ave Cut-and- Cover Tunnel)	Concern about cut-and-cover tunnel construction effects	\checkmark		
Massachusetts Tunnel Portal (5th Ave Bored Tunnel/ Cut-and-Cover Station)	Support for reduced construction effects and shallower station		\checkmark	
5th Ave Bored Tunnel/ Mined Station	Support for reduced construction effectsConcern about access due to deep station		\checkmark	
4th Ave Bored Tunnel/ Mined Station	 Support for closer proximity to King Street Station and reduced Chinatown/International District effects along 5th Ave Concern about traffic detours and access due to deep station 		\checkmark	
4th Ave Cut-and-Cover Tunnel/Station	 Support for closer proximity to King Street Station, reduced Chinatown/International District effects along 5th Ave and shallower station Concern about traffic detours 		\checkmark	

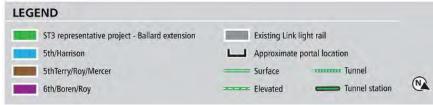
Chinatown-ID

ELG general discussion

- Must recognize historical context of impacts to community
- Need to interact with community about short term versus longterm impacts and benefits
- Interest in activating Union Station
- Concern with effects of displacing Ryerson bus base and effects on bus use of E3 Transitway (busway)
- Concern with poor transfer environment and customer experience with deep mined stations
- > Need more time to engage with community on options







Downtown

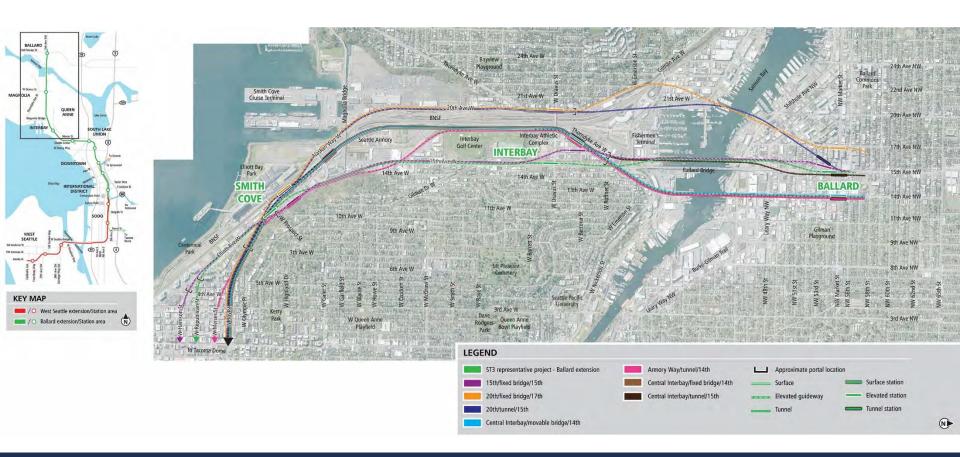
Level 2 alternatives

Downtown ELG recommendations

Alternative	Public feedback - common themes	Do Not Carry Forward?	Carry Forward?	w/suggested refinements?
ST3 Representative Project				
6th/Boren/Roy	• Limited support for Denny station at Boren (due to steep grade) and South Lake Union station at Roy, but interest in maintaining 6th Ave route through Downtown	\checkmark		
5th/Harrison	Support for this alternative with Seattle Center Station located at Republican		\checkmark	With Seattle Center Station located at Republican
5th/Terry/Roy/ Mercer	 Some support for Denny station at Terry, with interest in 6th Ave route through Downtown 		\checkmark	With 6th Ave route through Downtown

Downtown ELG general discussion

- Transfers at Westlake Station will be critical to serve region well
- Consider pedestrian safety upgrades, especially at South Lake Union station near Mercer



Interbay/Ballard Level 2 alternatives

Interbay / Ballard ELG recommendations

Alternative	Public feedback - common themes	Do Not Carry Forward?	Carry Forward?	w/suggested refinements?
ST3 Representative Project				
Central Interbay/ Fixed Bridge/14th	Some support for fixed bridge and Ballard station with fewer property effects		\checkmark	
Central Interbay/ Movable Bridge/14th	Concern about movable bridges	\checkmark		
15th/Fixed Bridge/15th	Concern about Fishermen's Terminal effects	\checkmark		
Armory Way/ Tunnel/14th	 General support for more cost-effective tunnel crossing Support for Ballard station with fewer property effects Explore Ballard Station access at 15th Ave NW, closer to center of urban village 		\checkmark	Explore Ballard Station access at 15th Ave NW, closer to center of urban village
Central Interbay/ Tunnel/15th	 Concern about tunnel cost versus Armory Way/ Tunnel/14th Support for 15th Ave NW station 	\checkmark		
20th/Fixed Bridge/17th	 Concern about overall cost Concern about Ballard Station property, construction and visual effects, though support for location 	\checkmark		
20th/Tunnel/15th	 Concern about tunnel cost versus Armory Way/ Tunnel/14th 	\checkmark		

Interbay / Ballard ELG general discussion

- Concern with Representative Project, movable bridge and anything on 15th Ave W
- Consider pedestrian bridge if Smith Cove Station located east of 15th Ave W
- Concern with effects on Fishermen's Terminal

Summary of Level 2 screening

• We	est Seattle/Duwamish	SODO and Chinatown/ID	Downtown	Interbay/Ballard
• <u>s</u>	T3 Representative Project	 ST3 Representative Project 	 ST3 Representative Project 	 ST3 Representative Project
•	igeon Ridge/West Seattle unnel	• Massachusetts Tunnel Portal	 5th/Harrison (w/ refinements) <u>6th/Boren/Roy</u> 	<u>← 15th/Fixed Bridge/15th</u> ← 20th/Fixed Bridge/17th
મ	regon Street/Alaska unction /Elevated	 Surface E-3 Occidental Avenue 	 5th/Terry/Roy/Mercer (w/ refinements) 	•-20th/Tunnel/15th
T	olf Course/Alaska Junction unnel (w/ refinements)	 4th Avenue Cut-and-Cover Tunnel/Station 		Armory Way/Tunnel/14 th (w/ refinements)
•	regon Stroet/Alaska unction /Tunnel	 4th Avenue Bored Tunnel/ Mined Station 		 Central Interbay/Movable Bridge/14th
	T3 Representative Project v/ refinements)	 5th Avenue Bored Tunnel/ Mined Station 		Central Interbay/Fixed Bridge/14 th Control Interback
				Central Interbay/Tunnel/15th

Summary of Level 2 screening

• West Seattle/Duwamish	SODO and Chinatown/ID	Downtown	Interbay/Ballard
 ST3 Representative Project Golf Course/Alaska Junction Tunnel (w/ refinements) ST3 Representative Project (w/ refinements) 	 ST3 Representative Project Massachusetts Tunnel Portal Surface E-3 4th Avenue Cut-and-Cover Tunnel/Station 4th Avenue Bored Tunnel/ Mined Station 5th Avenue Bored Tunnel/ Mined Station 	 ST3 Representative Project 5th/Harrison (w/ refinements) 5th/Terry/Roy/Mercer (w/ refinements) 	 ST3 Representative Project Armory Way/Tunnel/14th (w/ refinements) Central Interbay/Fixed Bridge/14th

What to expect in Level 3

Alternatives development process

LEVEL 1

Alternatives development

Early-2018

Conduct early scoping

Study ST3 representative project and alternatives

Screen alternatives

Alternatives development

LEVEL 2

Mid-2018

Technical analysis

Refine and screen alternatives

Alternatives development

LEVEL 3

Late-2018 / Early-2019

Refine and screen alternatives

Conduct Environmental Impact Statement (EIS) scoping

PUBLIC INVOLVEMENT

PUBLIC INVOLVEMENT

pment ALTERNATIVE*

Early-2019

PREFERRED

Alternatives development process

Early-2018

Study ST3 representative

LEVEL 2

Mid-2018

Technical analysis

Refine and screen alternatives

Alternatives development

Late-2018 / Early-2019

Refine and screen alternatives

Conduct Environmental **Impact Statement** (EIS) scoping

PUBLIC INVOLVEMENT



*The Sound Transit Board identifies preferred alternatives and other alternatives to study.

Screening process

Broad range of initial alternatives

Refine remaining alternatives

Further evaluation

Preferred Alternative and other EIS alternatives

Purpose and need

Purpose Statement	Symbol
Provide high quality rapid, reliable, and efficient peak and off-peak LRT service to communities in the project corridors as defined in ST3.	<u></u>
Improve regional mobility by increasing connectivity and capacity through downtown Seattle to meet the projected transit demand.	STATION
Connect regional centers as described in adopted regional and local land use, transportation, and economic development plans and Sound Transit's <i>Regional Transit Long-Range Plan</i> .	\mathbf{O}
Implement a system that is consistent with the <i>ST3 Plan</i> that established transit mode, corridor, and station locations and that is technically feasible and financially sustainable to build, operate, and maintain.	0
Expand mobility for the corridor and region's residents, which include transit dependent, low income, and minority populations.	
Encourage equitable and sustainable urban growth in station areas through support of transit-oriented development, station access, and modal integration in a manner that is consistent with local land use plans and policies.	
Preserve and promote a healthy environment and economy by minimizing adverse impacts on the natural, built and social environments through sustainable practices.	Q

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 local land use plan consistency
- Modal integration
- Station area development opportunities
- Environmental effects
- Traffic operations
- Economic effects

Measures and methods

- > 50+ quantitative and/or qualitative measures
- > Rating thresholds for Higher, Medium and Lower
- > Differentiators and findings among alternatives



STOLE DEATTLE/CT

Level 3 end-to-end alternatives

- > ST3 Representative Project
- 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
 - C-ID station options: 5th Ave Cut-and-Cover and 5th Ave Mined

ST3 Representative Project

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ST3 Representative Project

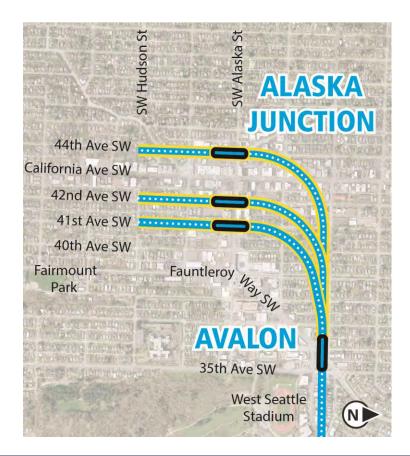
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West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel

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 ST3 Representative Project (w/ refinements) 	 Surface E-3 4th Avenue Cut-and-Cover Tunnel/Station 4th Avenue Bored Tunnel/ Mined Station 5th Avenue Bored Tunnel/ Mined Station 		



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



West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel Alaska Junction station options



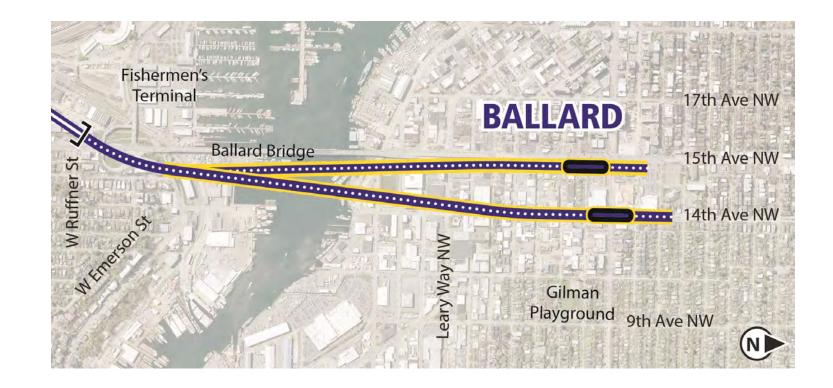
West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel North crossing of Duwamish



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



West Seattle Tunnel/ C-ID 4th Ave/ Downtown 5th Ave/ Ballard Tunnel Seattle Center Station on Republican



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

- > ST3 Representative Project
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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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	Mined Station		



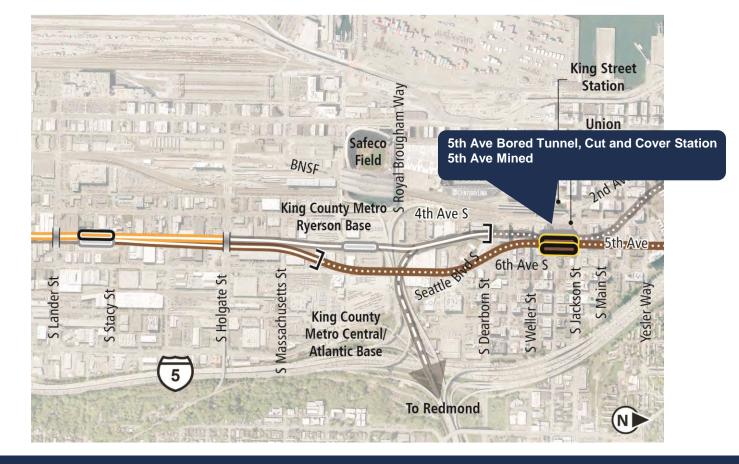
West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated



West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated Alaska Junction Station orientation



West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated Delridge Station further south



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



West Seattle Elevated/ C-ID 5th Ave/ Downtown 6th Ave/ Ballard Elevated 6th Avenue route through downtown

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Next steps

Community engagement and collaboration



Next steps

SAG Meeting #10	Nov 5	Preliminary Level 3 alternatives and screening criteria	
SAG Meeting #11	Jan 9	Community engagement update Technical briefing (T.B.D.)	
SAG Meeting #12	Jan 30	Level 3 evaluation results	
ELG Meeting #6	T.B.D Early Feb	Level 3 evaluation results	
EIS Scoping Neighborhood Forums/ Open Houses	T.B.D. (mid-Feb)	Level 3 evaluation results	
SAG Meeting #13	T.B.D. (mid/late-March)	Level 3 recommendations	
ELG Meeting #7	T.B.D. (late-March/ early April)	Level 3 recommendations	
Sound Transit Board	April 25	Identify a preferred alternative (and other alternatives to study in the EIS)	

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