



West Seattle and Ballard Link Extensions

DRAFT Stakeholder Advisory Group | 7.16.18

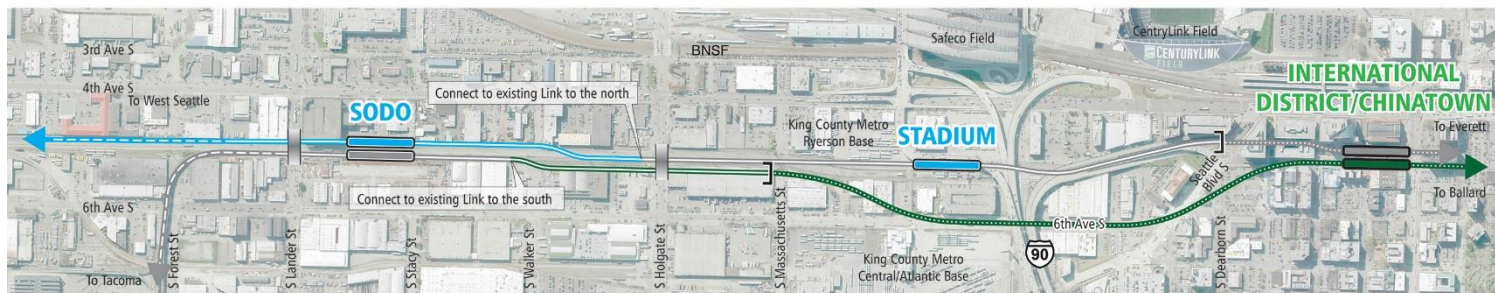
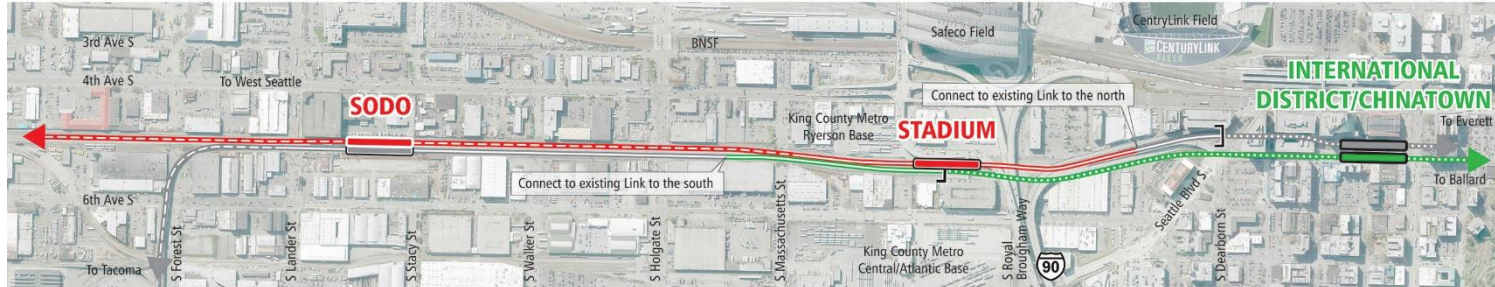
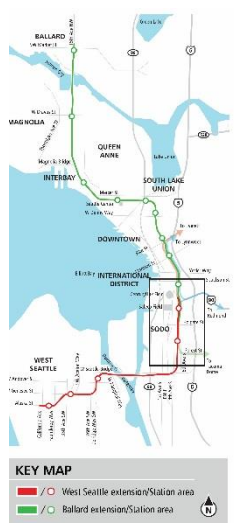
A photograph of a Sound Transit train, specifically car 139B, stopped at a station platform. The train is white with blue accents and features the Sound Transit logo. The platform has a metal railing in the foreground and a yellow tactile paving strip along the edge. A digital display above the platform shows the train's destination. The overall scene is dimly lit, suggesting dusk or dawn.

SODO Evaluation Results

Level 2 alternatives

• SODO and Chinatown-ID •

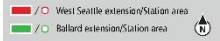
- ST3 Representative Project
- Massachusetts Tunnel Portal
- Surface E-3



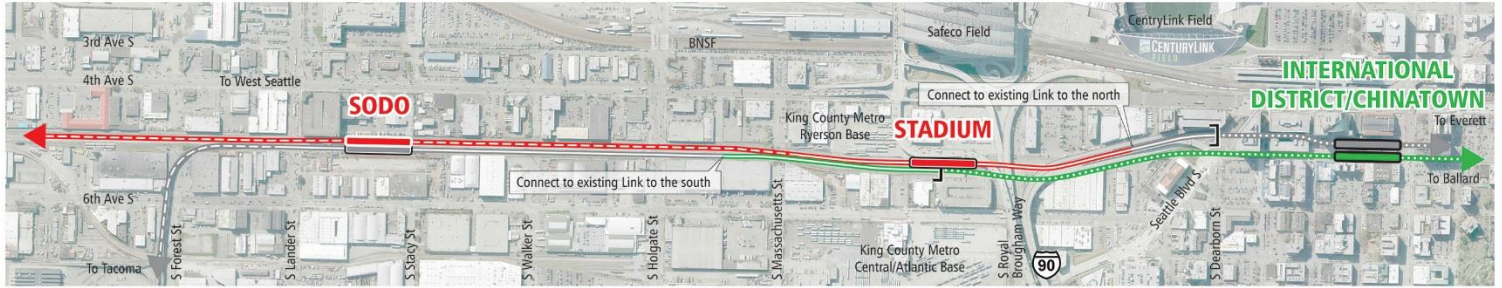
SODO and Chinatown-ID – Level 2 alternatives



KEY MAP



LEGEND



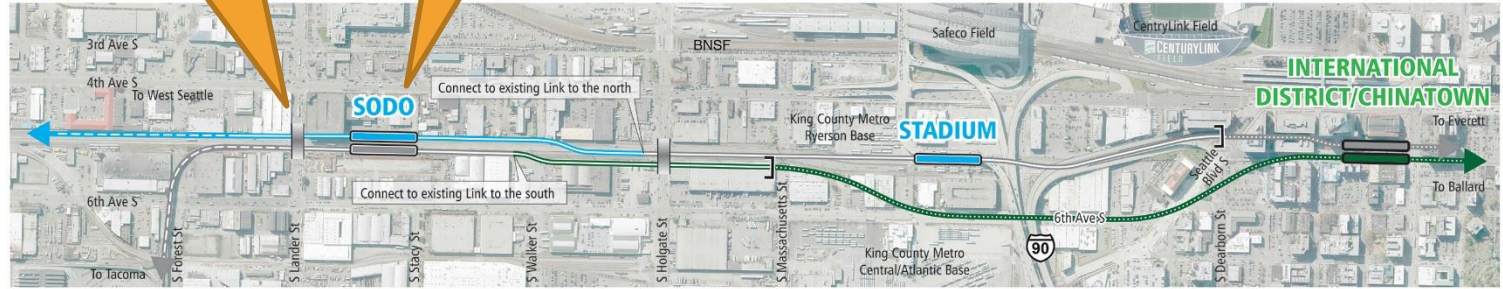
SODO and Chinatown-ID

Level 2 Alternative – *ST3 Representative Project*



New Lander roadway overcrossing

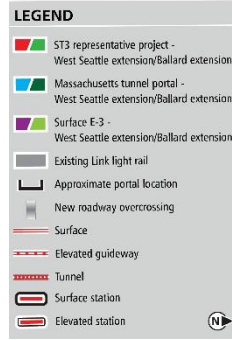
At-grade SODO Station



= Refinement from Level 1

SODO and Chinatown-ID

Level 2 Alternative – *Massachusetts Tunnel Portal*



SODO and Chinatown-ID

Level 2 Alternative – *Surface E-3*

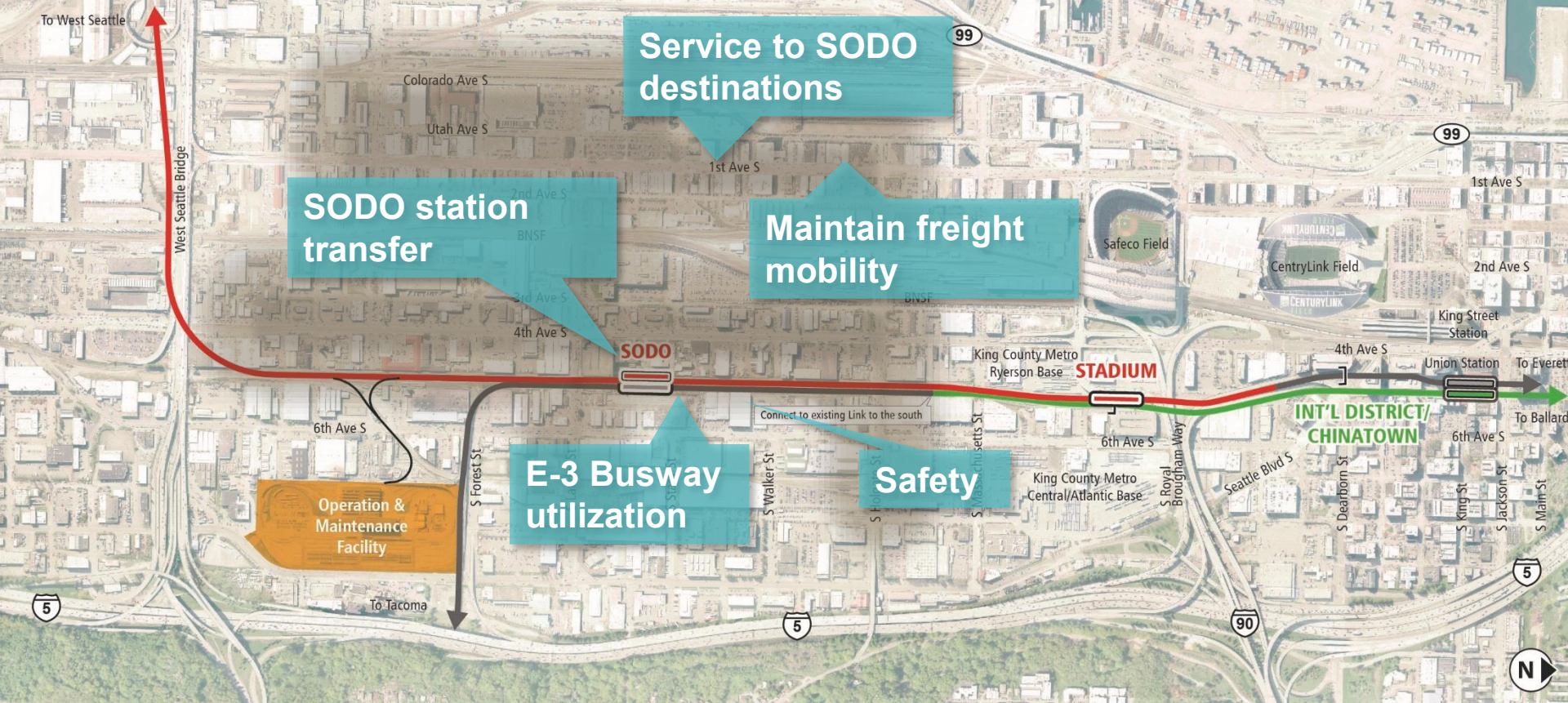
Additional feedback

SODO and Chinatown-ID

- Consider 4th Avenue location for Chinatown-ID station
- Explore alignments further west of ST3 Representative Project

A photograph of a light rail train, specifically a Sound Transit model 139B, stopped at a station platform. The train is white with blue accents and has 'SOUND TRANSIT' written on its front. The number '139B' is visible on the side. The train is positioned on tracks next to a platform with a metal railing in the foreground. The background shows a clear sky and some distant structures. Overlaid on the image is the title 'SODO Alignment and Station Alternatives' in a large, white, bold, sans-serif font.

SODO Alignment and Station Alternatives



SODO segment community concerns



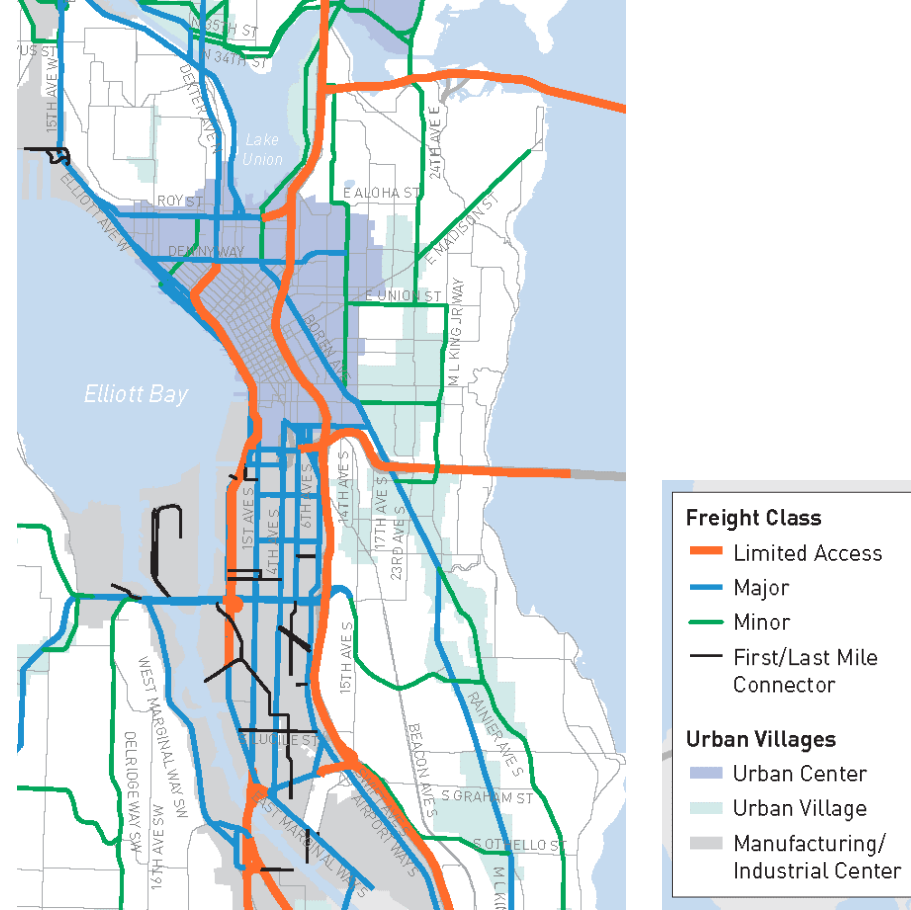
Service to SODO Destinations



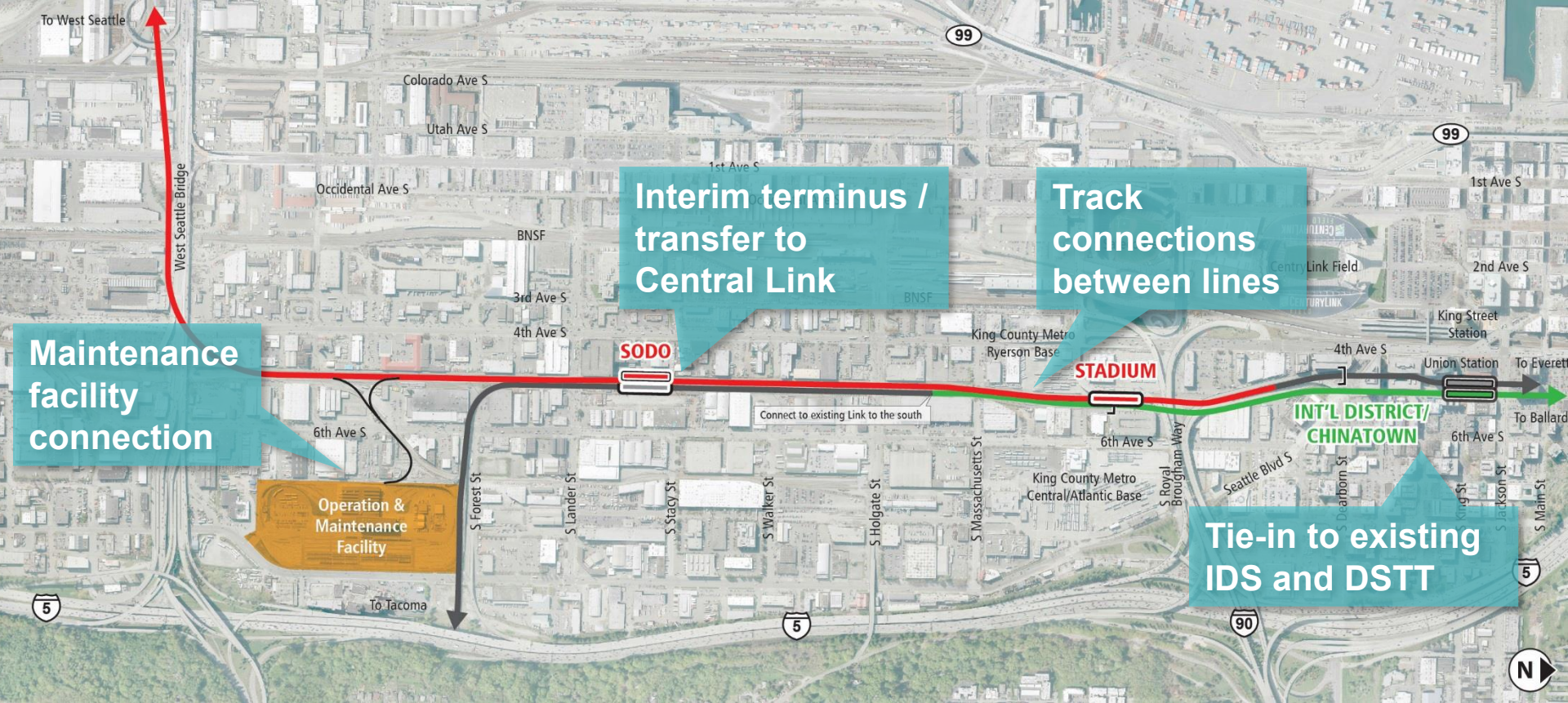
SODO Station Transfer



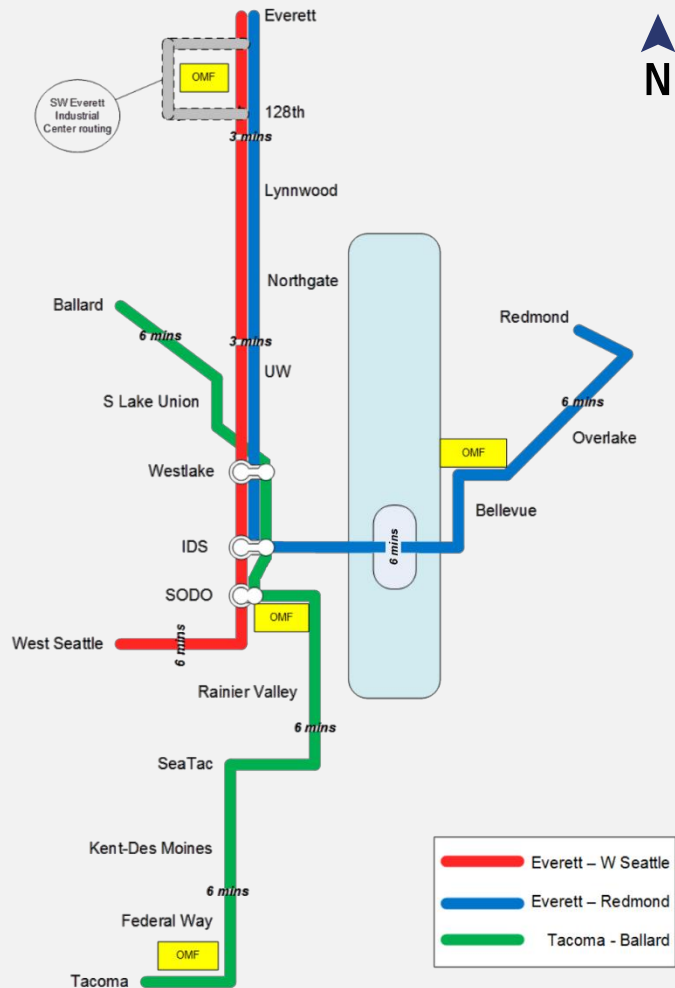
E-3 Busway Utilization



Maintain Freight Mobility



SODO Segment Operational Needs

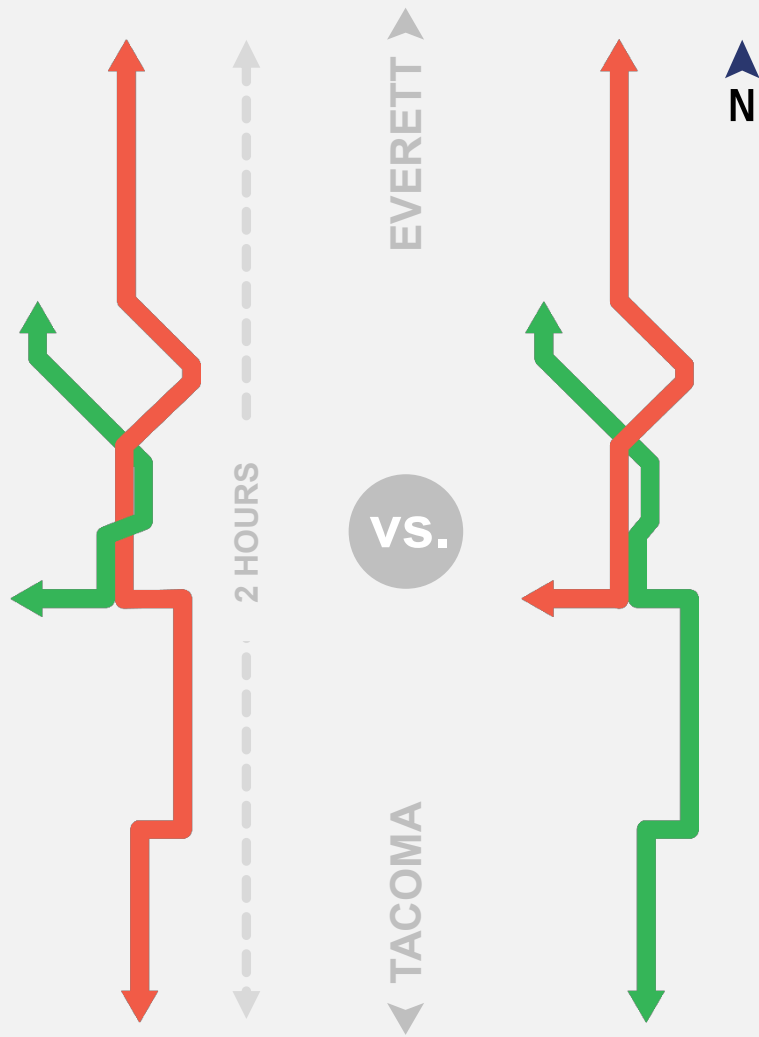


Operating plan

Everett to West Seattle via
Downtown Seattle Transit Tunnel

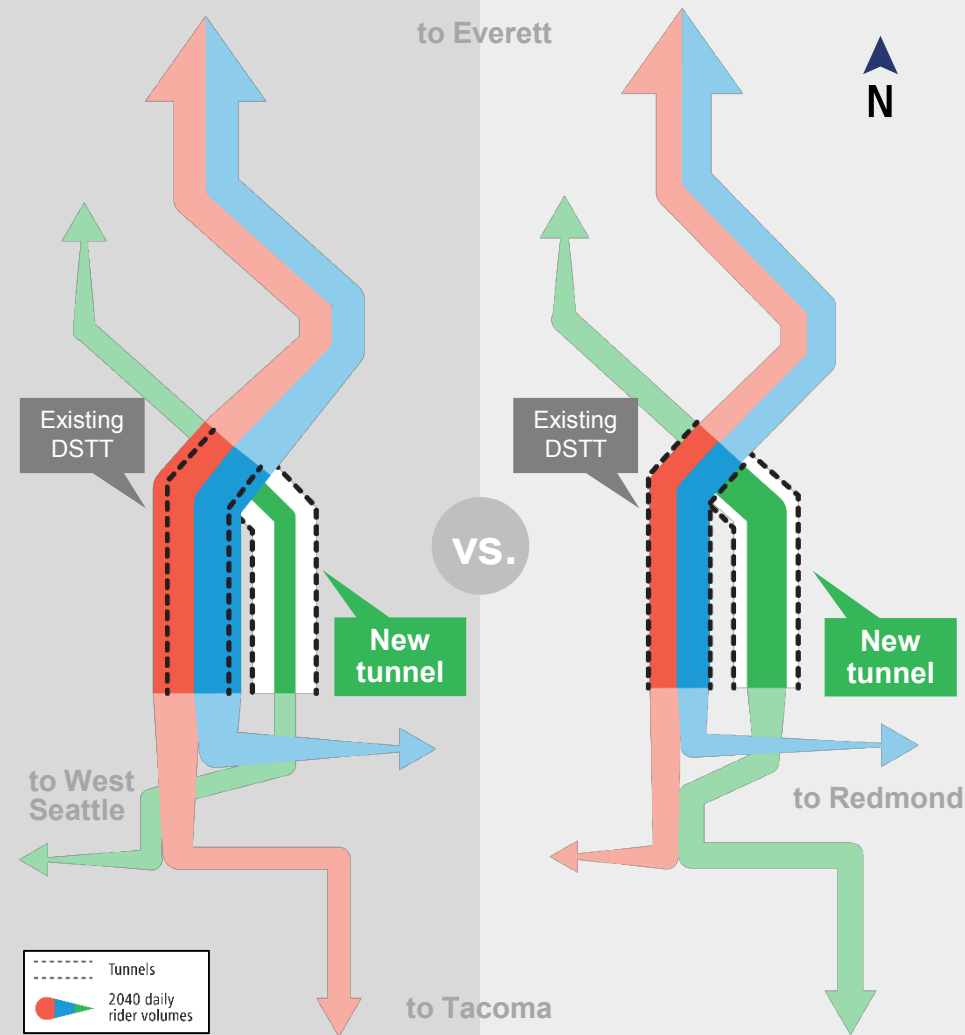
Everett to Downtown Redmond via
Downtown Seattle Transit Tunnel

Ballard to Tacoma via
new rail-only tunnel



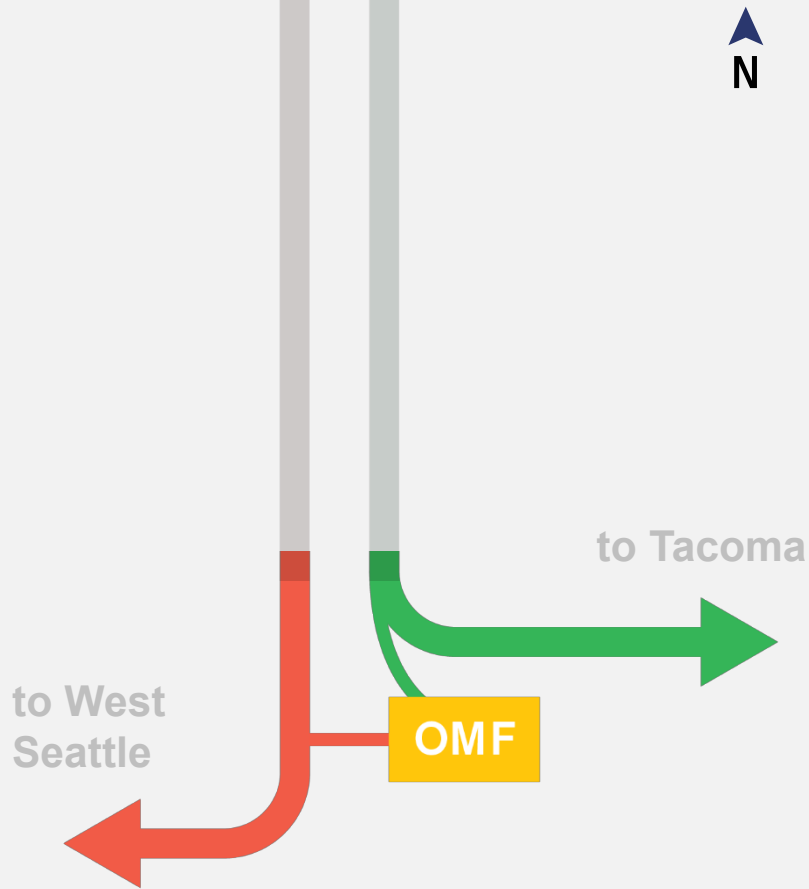
Spine segmentation

- ✓ Splits long trips from Tacoma to Everett



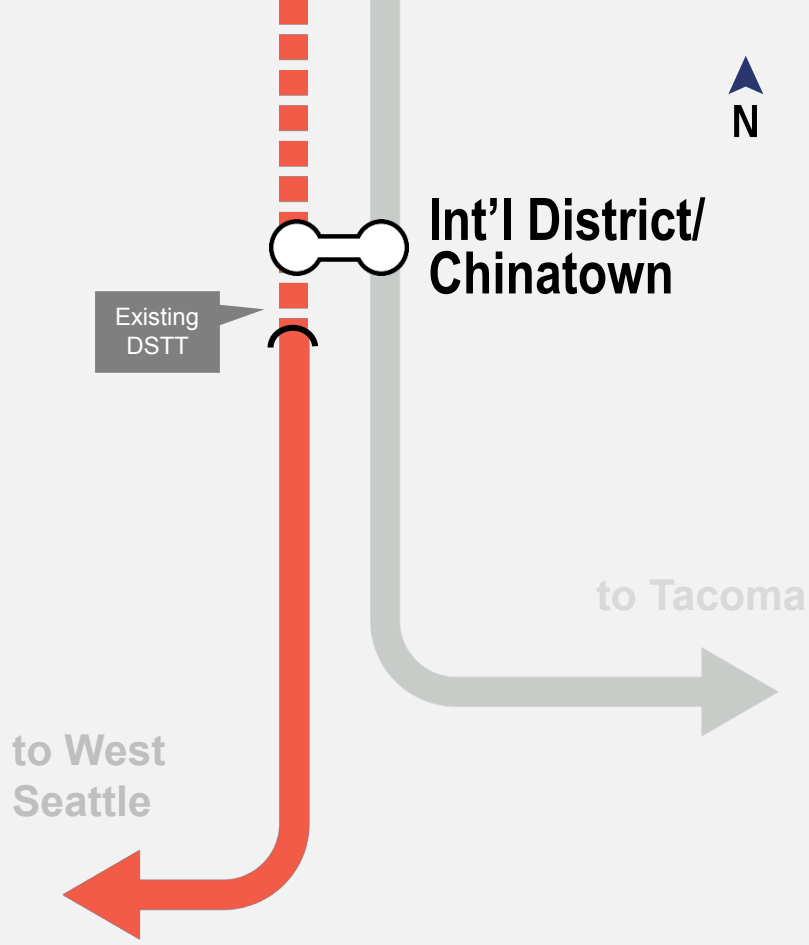
Balanced loads

- ✓ Balances passenger loads, enabling future growth
- ✓ All users benefit from core capacity expansion



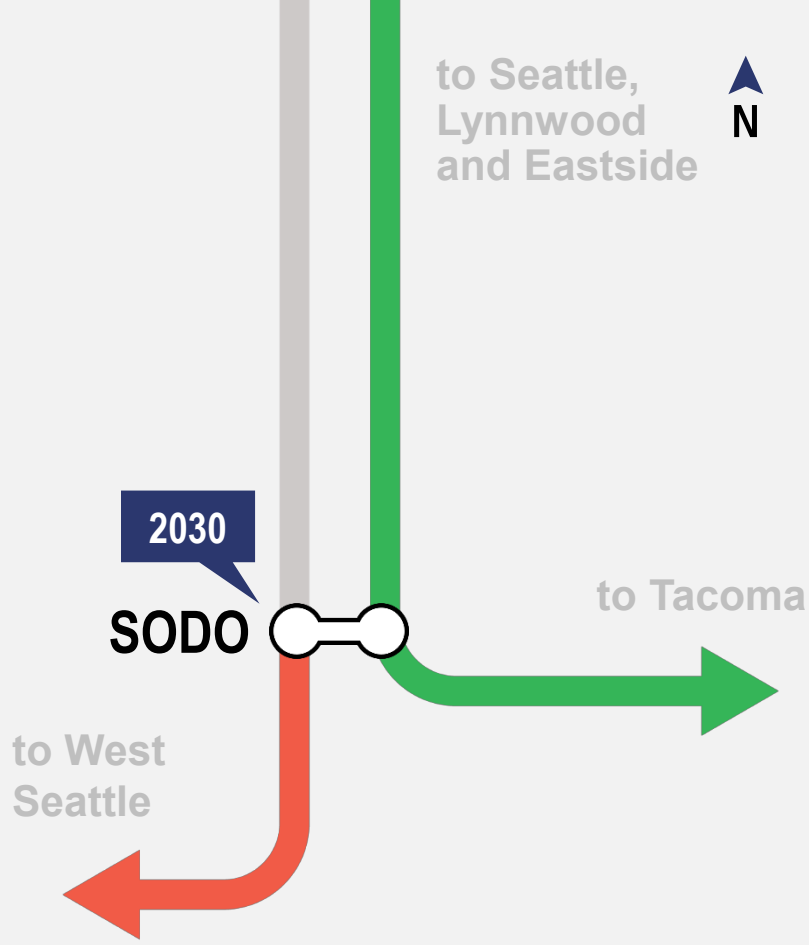
Maintenance facility connection

- ✓ Accommodate connection from West Seattle Link to existing maintenance facility at Forest Street



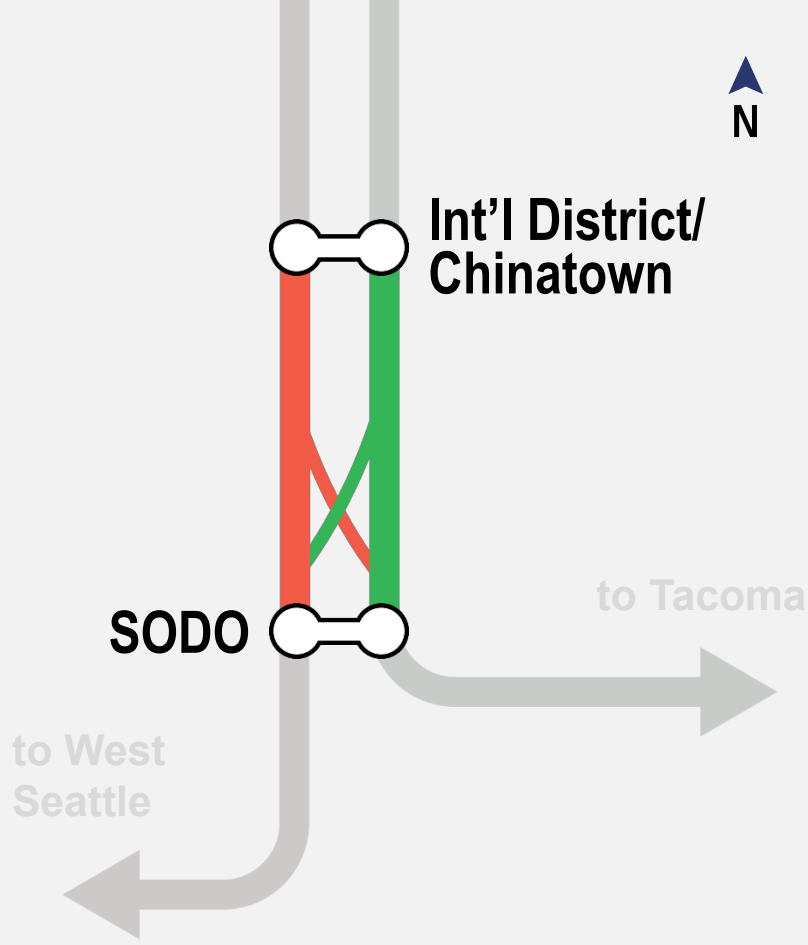
Tie-in to existing DSTT

- ✓ Connect to existing DSTT
International District/
Chinatown Station



Interim terminus / transfer to Central Link

- ✓ Accommodate interim transfer to northbound Central Link and permanent transfer to southbound Central Link



Track connections between lines

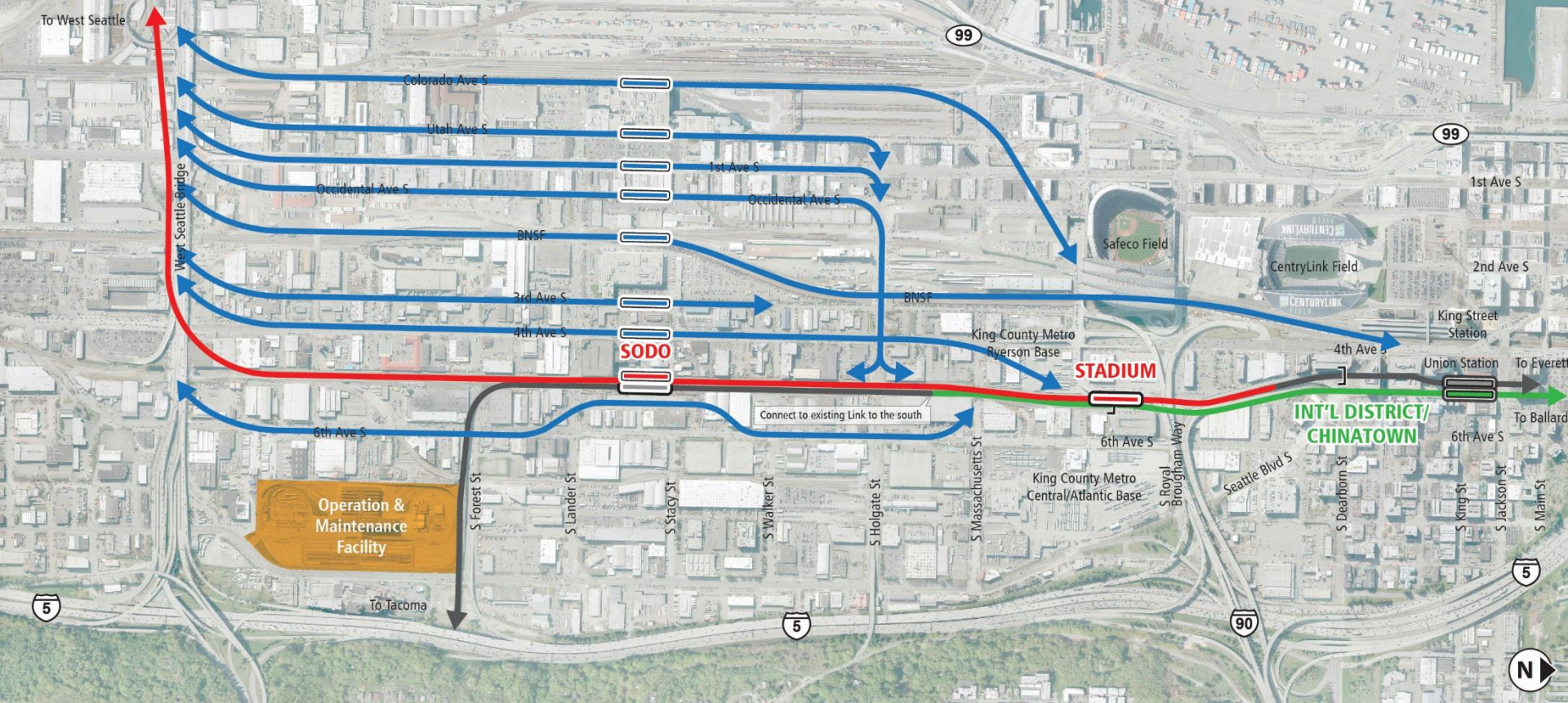
- ✓ Accommodate track connections between West Seattle Link and Ballard Link to allow for movement of trains and failure management

SODO community concerns

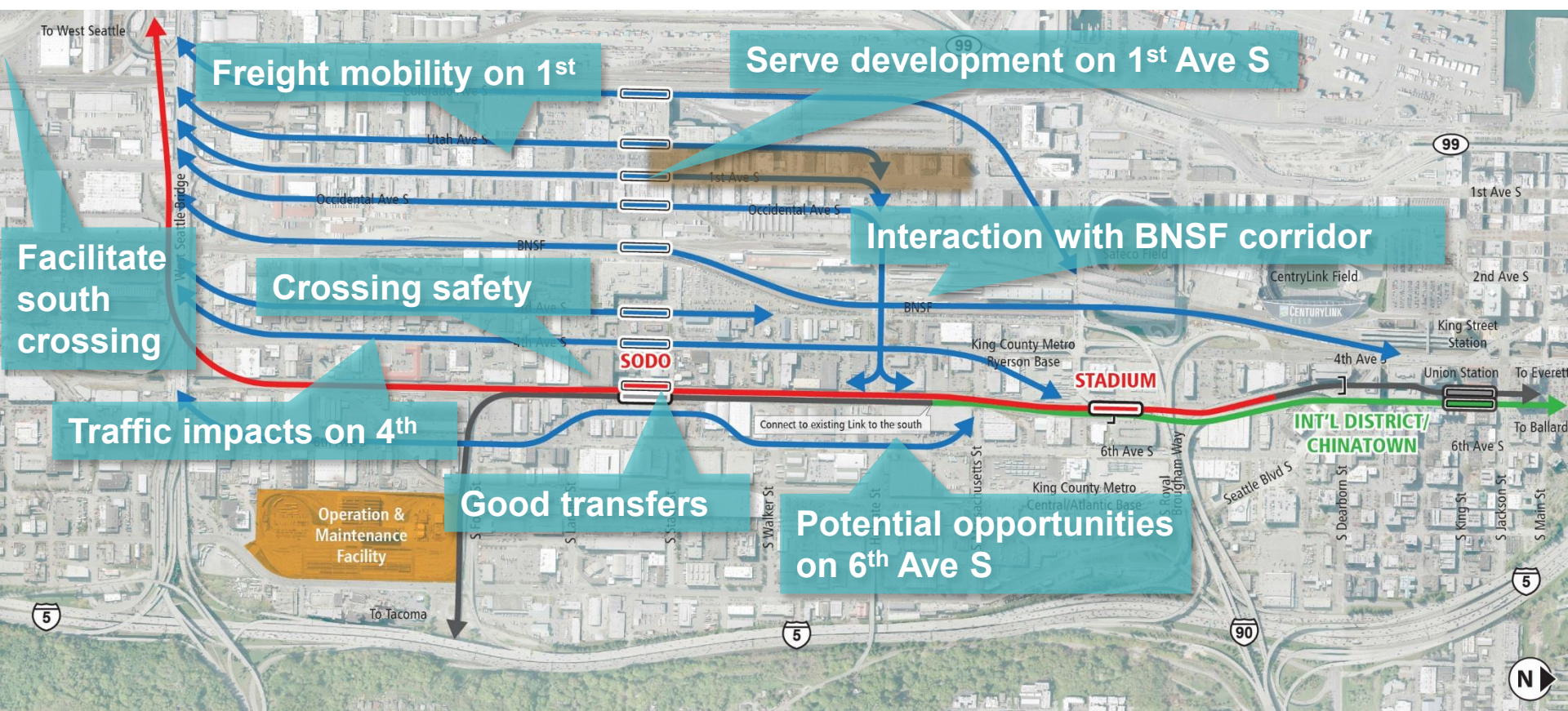
- ✓ SODO station transfer
- ✓ E-3 busway utilization
- ✓ Service to SODO destinations
- ✓ Freight mobility
- ✓ Safety

Operational needs

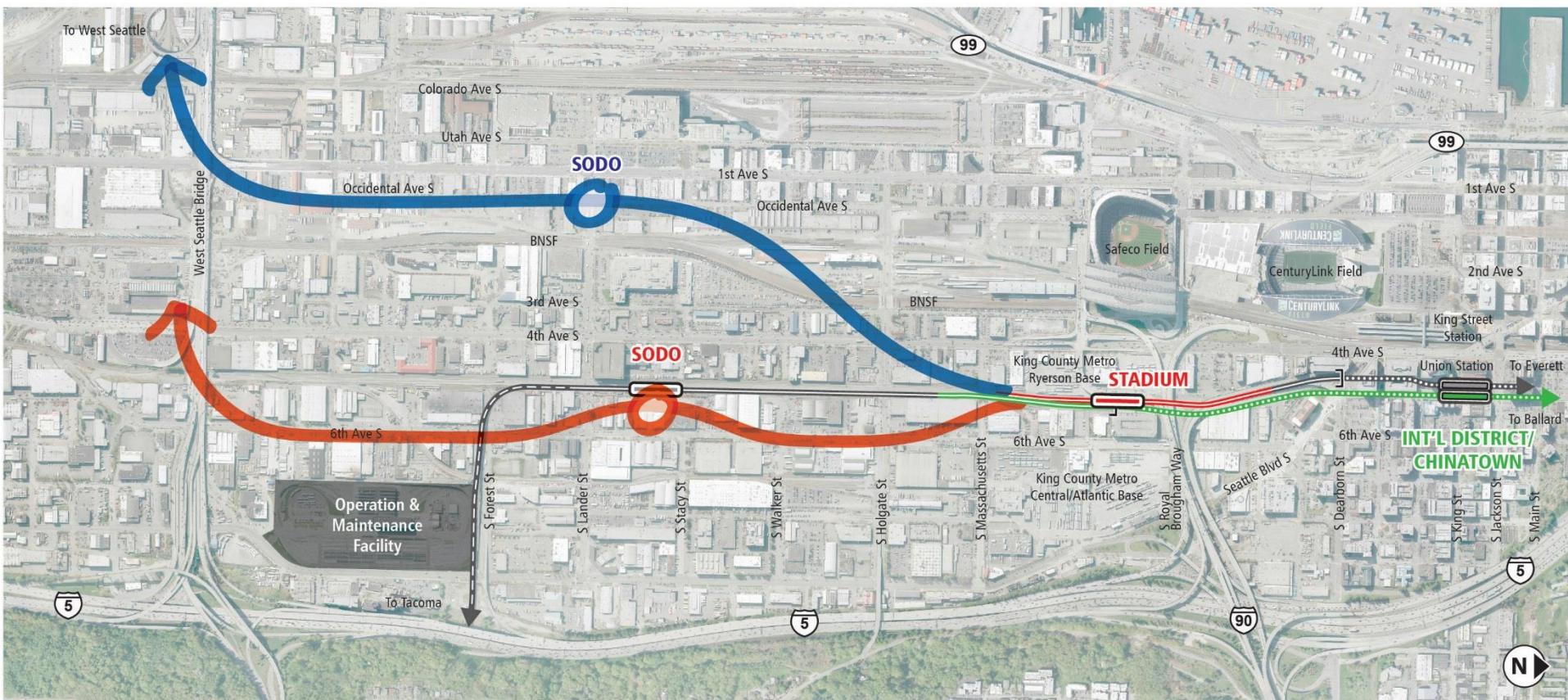
- ✓ Maintenance facility connection
- ✓ Tie-in to DSTT
- ✓ Interim terminus
- ✓ Track connections



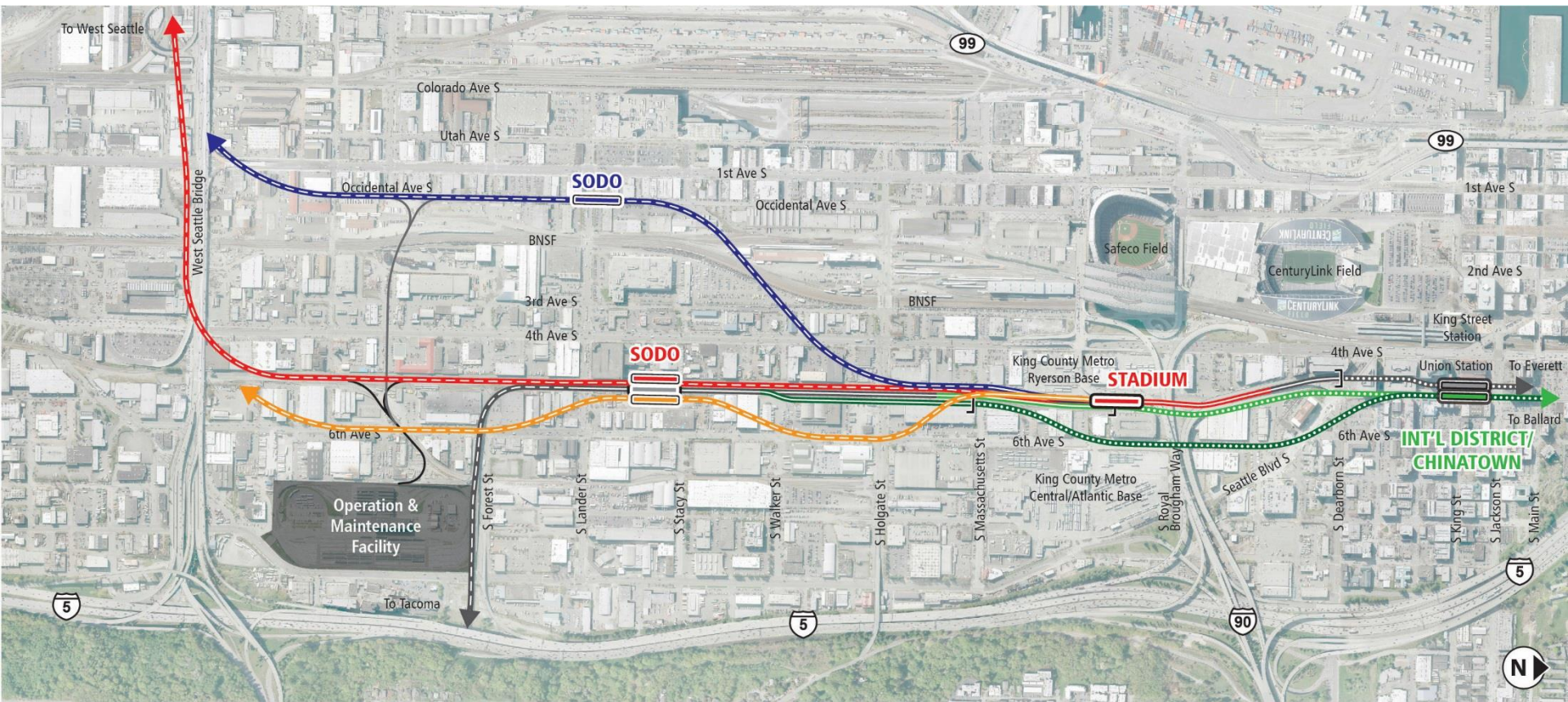
SODO route ideas from agency workshop



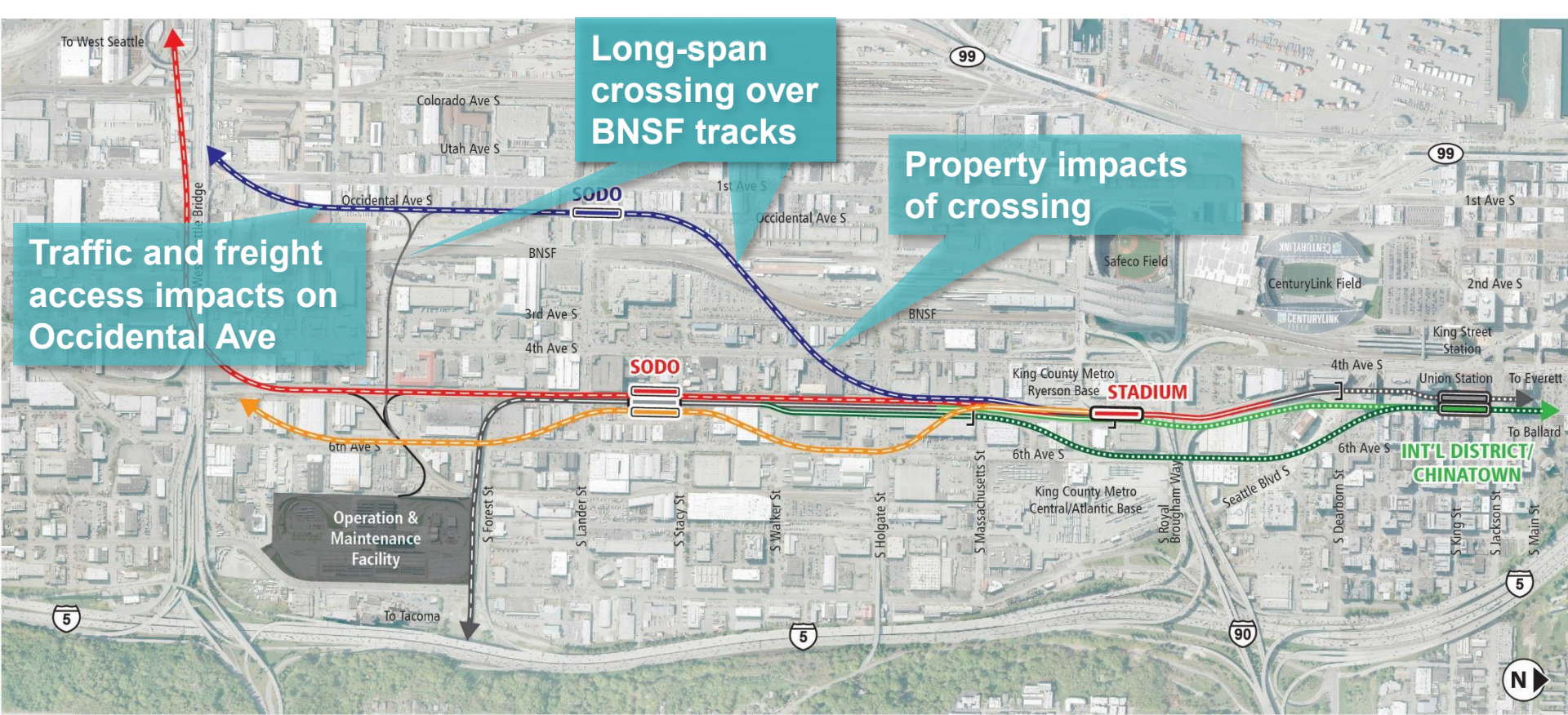
Agency workshop concerns/issues



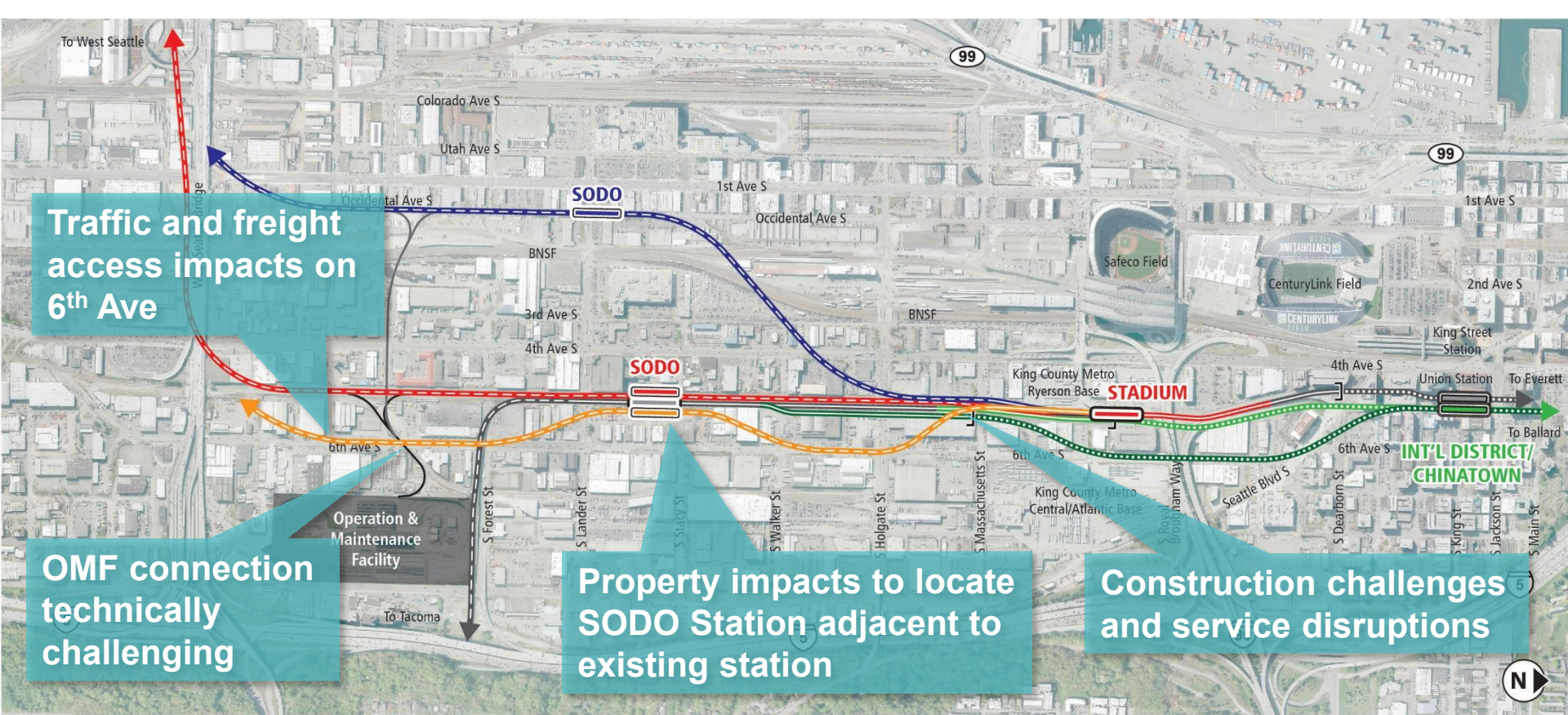
Potential alternatives from agency workshop



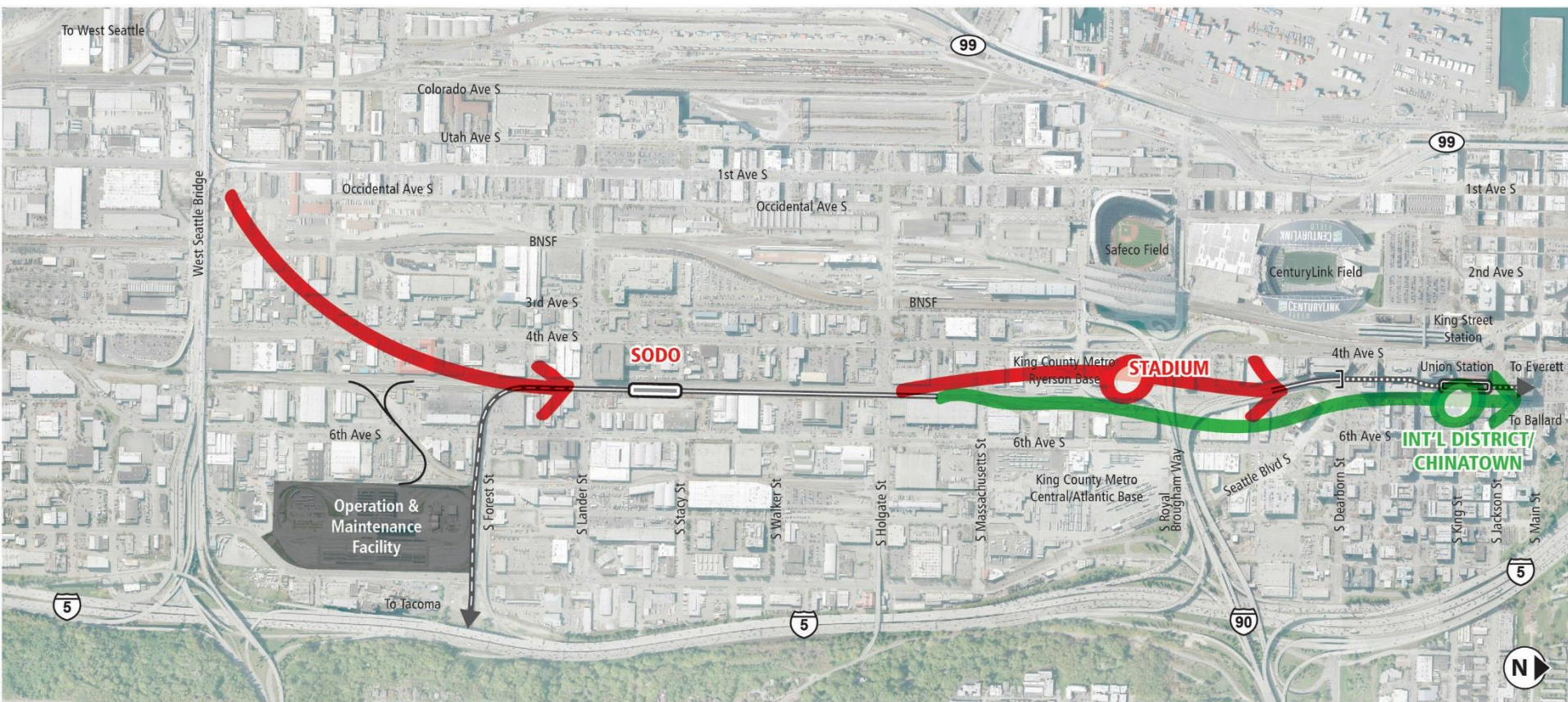
New SODO Level 1 Alternatives



Occidental Ave – Key Findings



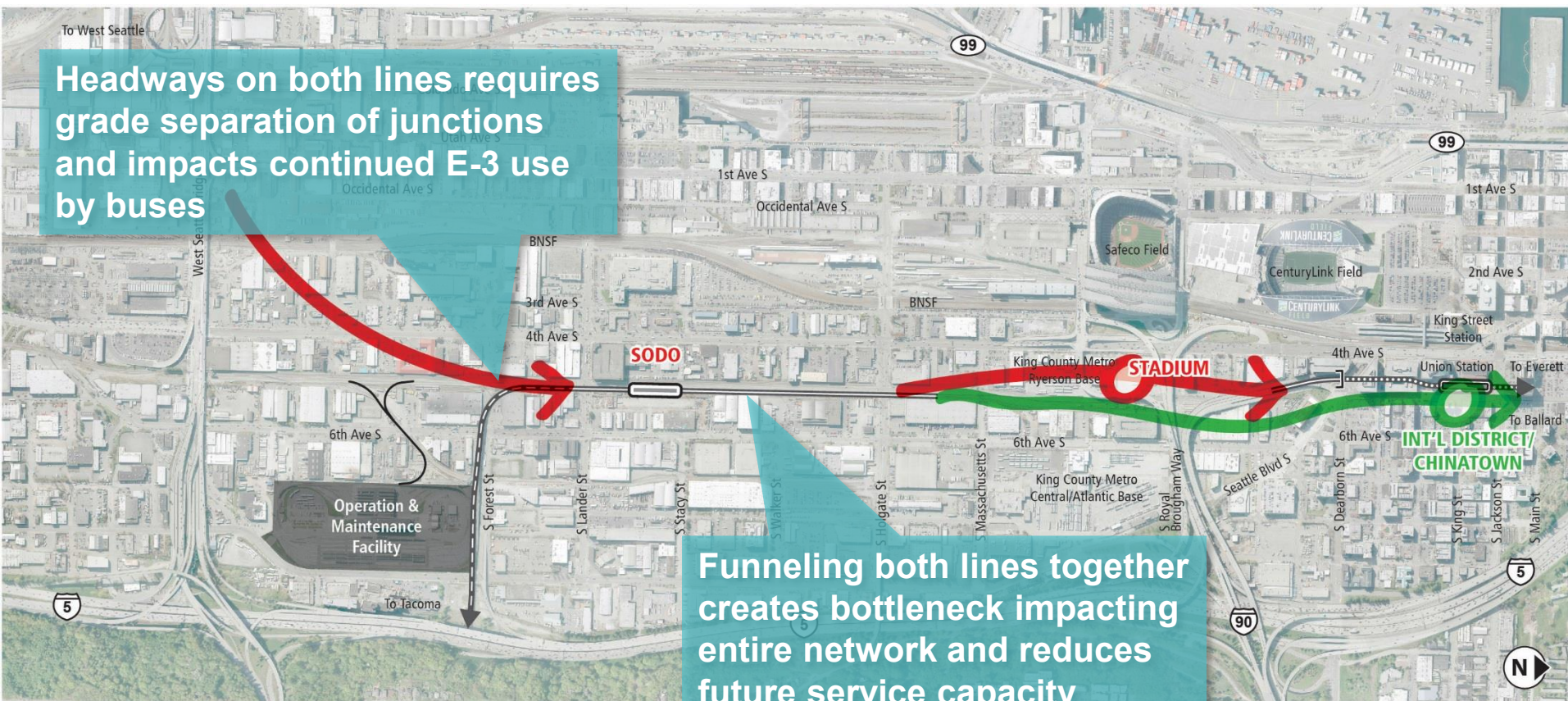
6th Ave – Key Findings



Other suggestions – “Track interlining”

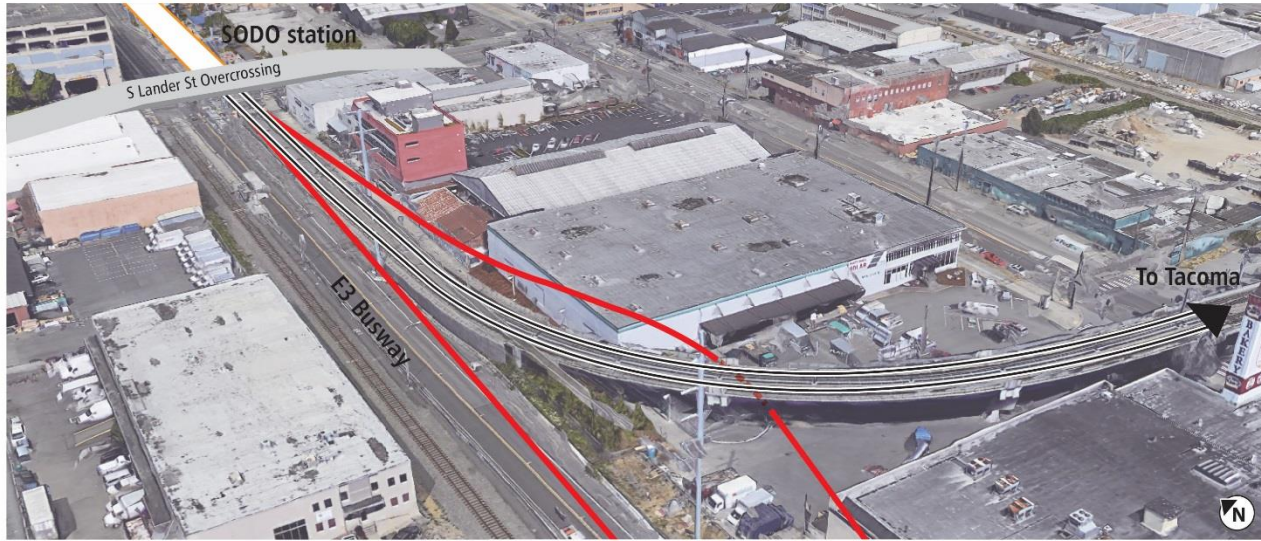
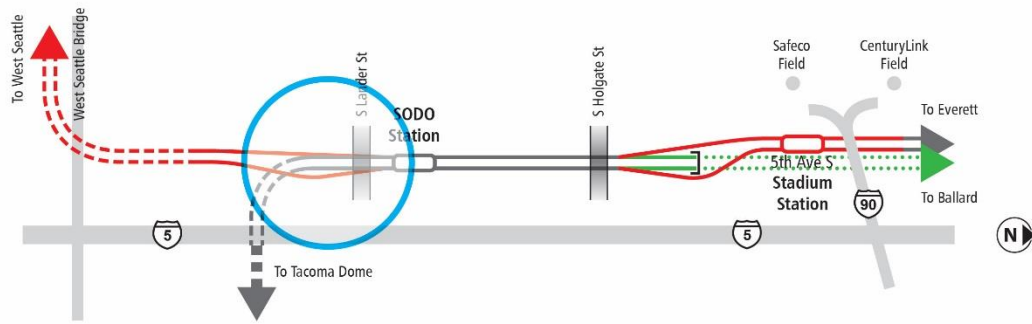
To West Seattle

Headways on both lines requires grade separation of junctions and impacts continued E-3 use by buses

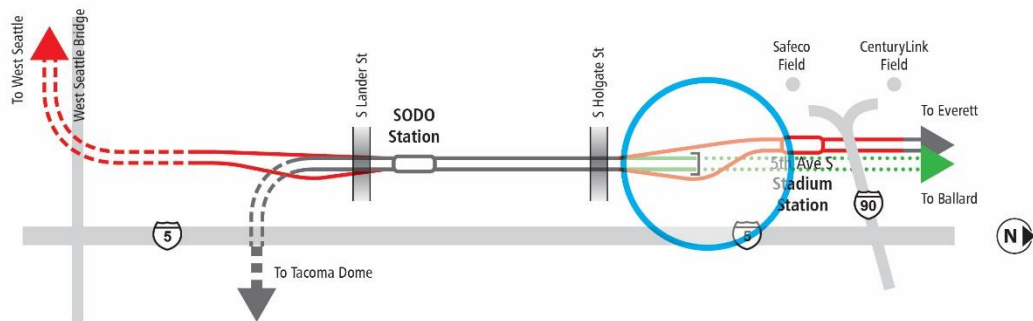


Funneling both lines together creates bottleneck impacting entire network and reduces future service capacity

Other suggestions – “Track interlining”



Track interlining – Forest Street junction



Track interlining – Stadium junction



Other suggestions – “Extended Ballard line”

To West Seattle

**Additional length of
elevated guideway**

Colorado Ave S

Utah Ave S

SODO

1st Ave S

Occidental Ave S

**No track connections
between lines**

Safeco Field

CenturyLink Field

1st Ave S

2nd Ave S

King Street
Station

To Everett

4th Ave S

Union Station

To Ballard

**INT'L DISTRICT/
CHINATOWN**

6th Ave S

Operation &
Maintenance
Facility

**Extended service
disruption and cost to
rebuild Forest Street
elevated structure**

acom

S Forest St

S Lander St

S Stacy St

S Walker St

S Holgate St

S Massachusetts St

6th Ave S

King County Metro
Central/Atlantic Base

Seattle Blvd S

Dearborn St

S King St

S Jackson St

S Main St

**Deep piles under King
Street Station, 4th Ave
Viaduct, Union Station, IDS**

5

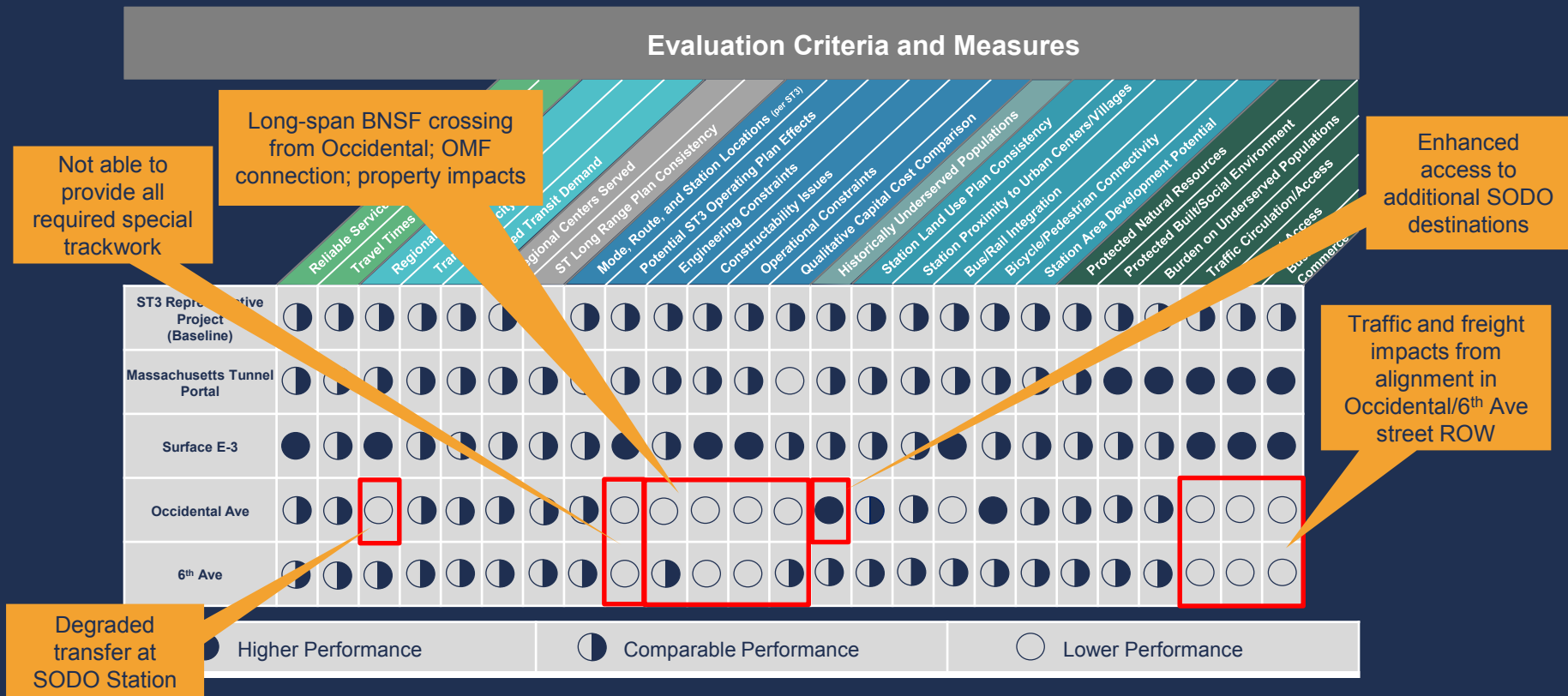
N

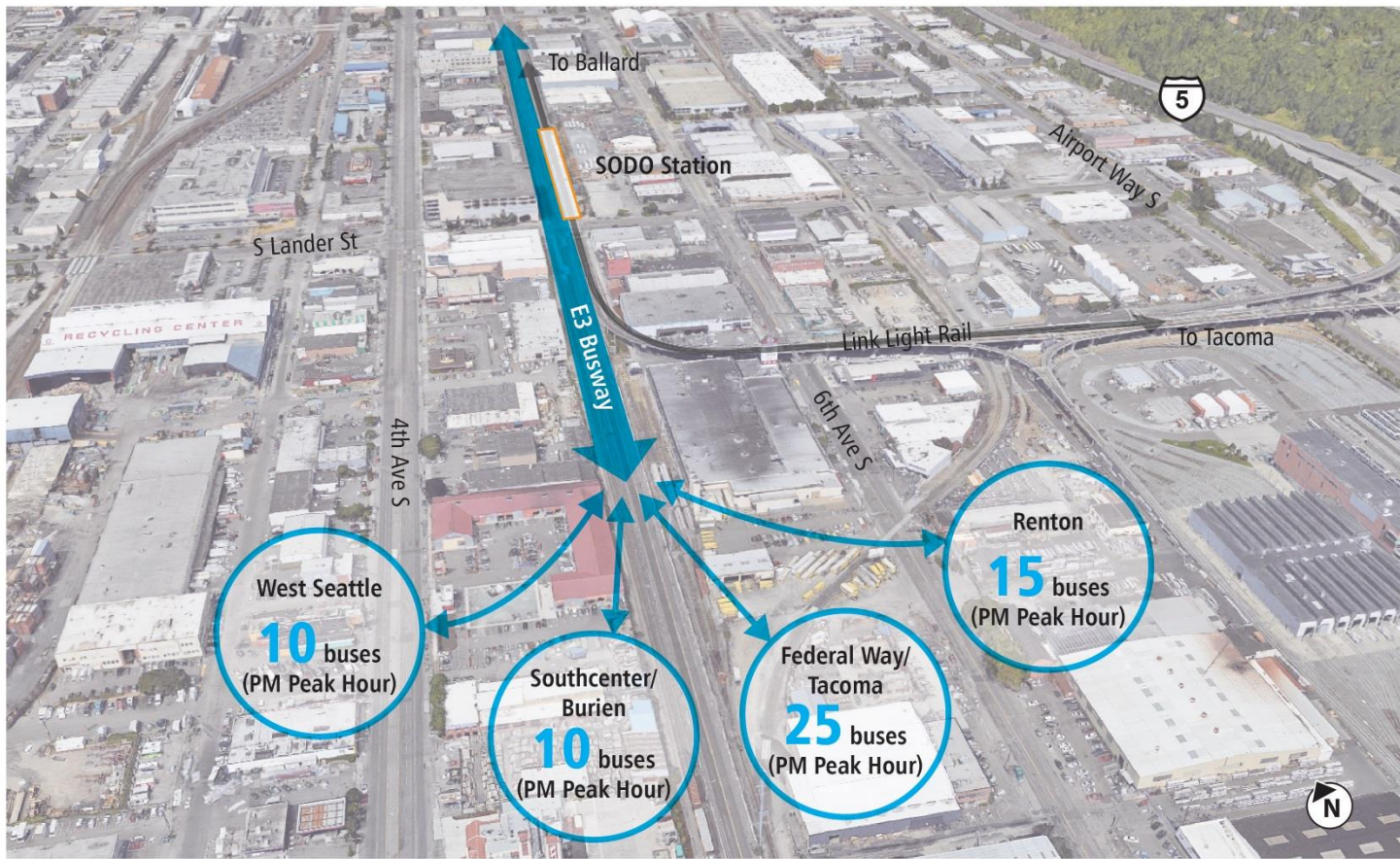
Other suggestions – “Extended Ballard line”

SODO Level 1 Alternatives – Evaluation Results

Evaluation Criteria and Measures																											
	<div>Reliable Service</div> <div>Travel Times</div> <div>Regional Connectivity</div> <div>Transit Capacity</div> <div>Projected Transit Demand</div> <div>Regional Centers Served</div> <div>ST Long Range Plan Consistency</div> <div>Mode, Route, and Station Locations (per ST3)</div> <div>Potential ST3 Operating Plan Effects</div> <div>Engineering Constraints</div> <div>Constructability Issues</div> <div>Operational Constraints</div> <div>Qualitative Capital Cost Comparison</div> <div>Historically Underserved Populations</div> <div>Station Land Use Plan Consistency</div> <div>Bus/Rail Integration</div> <div>Station Proximity to Urban Centers/Villages</div> <div>Bicycle/Pedestrian Connectivity</div> <div>Protected Natural Resources</div> <div>Protected Built/Social Environment</div> <div>Burden on Underserved Populations</div> <div>Traffic Congestion/Access</div> <div>Freight Access</div> <div>Business/Commerce</div>																										
ST3 Representative Project (Baseline)	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Massachusetts Tunnel Portal	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Surface E-3	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
Occidental Avenue	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
6th Avenue	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>	<div></div>
<div></div> Higher Performance							<div></div> Comparable Performance							<div></div> Lower Performance													

SODO Level 1 Alternatives – Evaluation Results

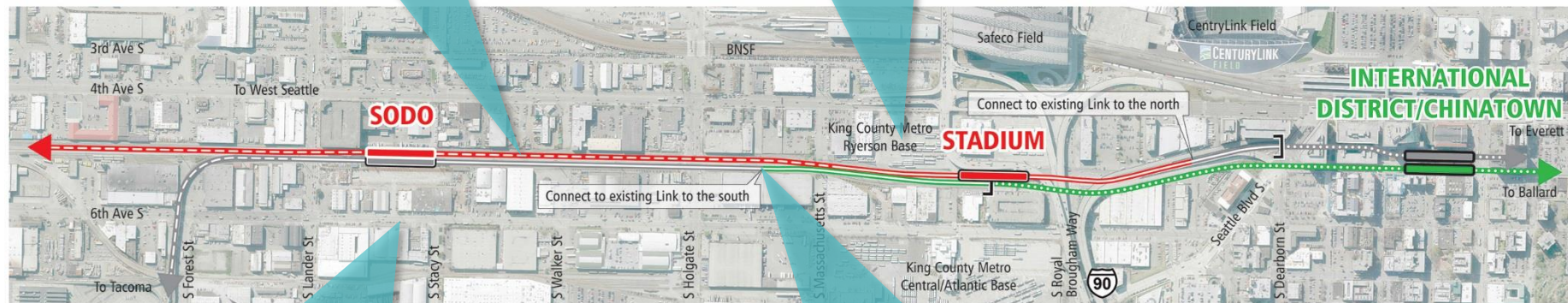




E-3 Busway – Existing Bus Volumes (PM Peak Hour)

Confirm future bus volumes expected to use E-3 corridor

Confirm extent of potential Ryerson Base capacity impacts



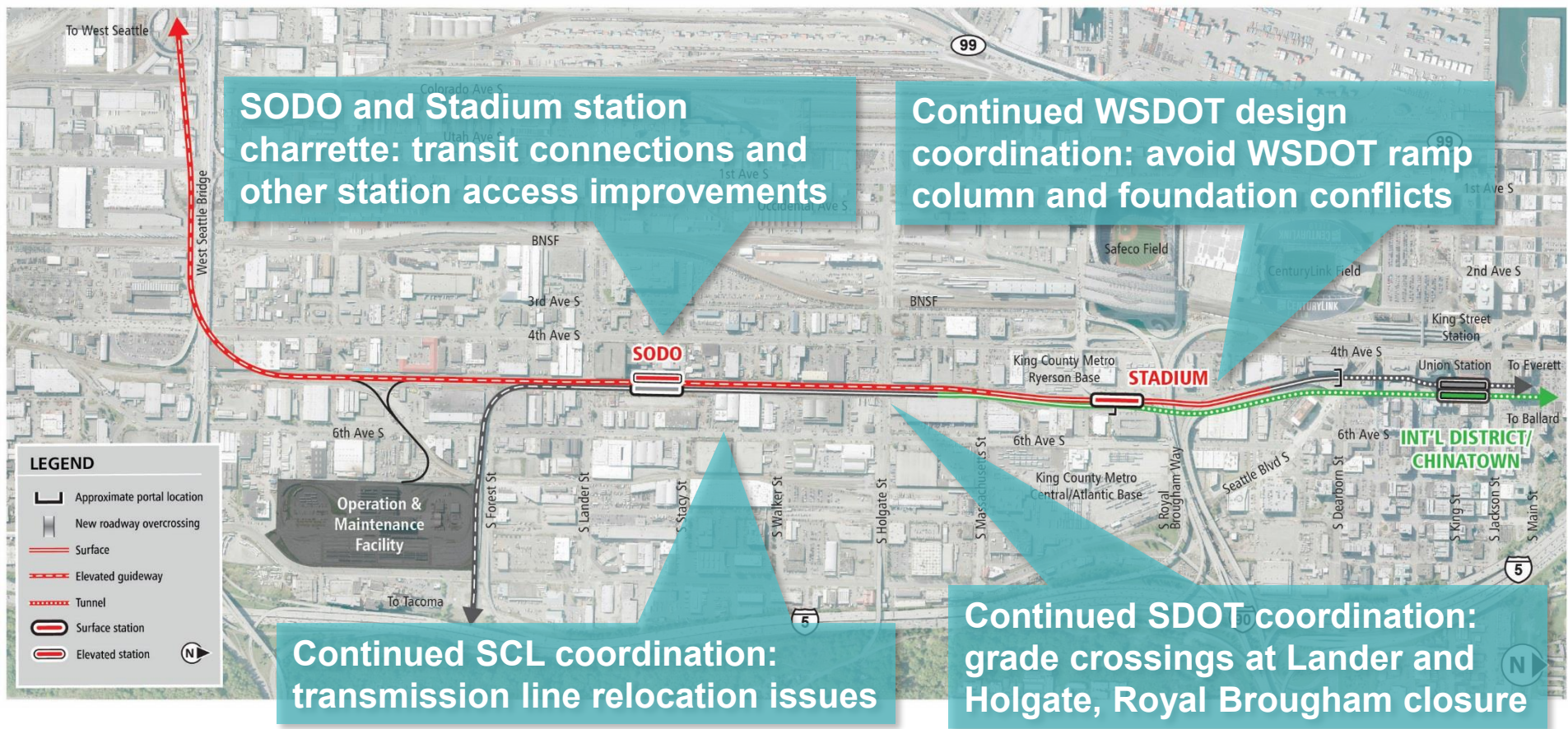
Assess potential 6th Ave roadway improvements to accommodate bus use

Confirm extent of future bus layover needs

E-3 Busway – Level 2 technical work
On-going discussions with partner agencies








SODO station access technical work



Level 2 – other technical work activities

SODO Alternatives Summary – Level 1

Alternatives with more potential	ST3 Representative Project 	<ul style="list-style-type: none"> • Baseline for comparison
	Surface E-3 	<ul style="list-style-type: none"> • Moved forward to Level 2
	Massachusetts Tunnel Portal 	<ul style="list-style-type: none"> • Moved forward to Level 2
Alternatives with greater challenges	Occidental Ave 	<ul style="list-style-type: none"> • Long-span elevated crossing over BNSF tracks • Traffic and freight access effects on Occidental Ave • Property impacts of alignment crossing from Occidental Ave to Stadium Station
	6th Ave 	<ul style="list-style-type: none"> • OMF connection technically challenging • Property impacts to locate SODO Station adjacent to existing station • Braiding lines could have major construction challenges and service disruptions
Not practical concepts	“Track interlining”	<ul style="list-style-type: none"> • Requires grade-separated junctions; does not accommodate buses on E-3 • Creates bottleneck; impacts service reliability and limits system capacity
	“Extended Ballard line”	<ul style="list-style-type: none"> • Rebuild of Forest St junction requires disruption of existing LRT service • Deep mined C-ID station; constructability challenges • Additional guideway length; no track connections