

2024 Service Plan

Early service concepts

Rider Experience and Operations Committee

05/04/23

Why we are here

- Briefing only, no action needed today.
- Provide overview of the various components of the 2024 Service Plan
- Highlight challenges around meeting desired service levels and discuss potential mitigations.

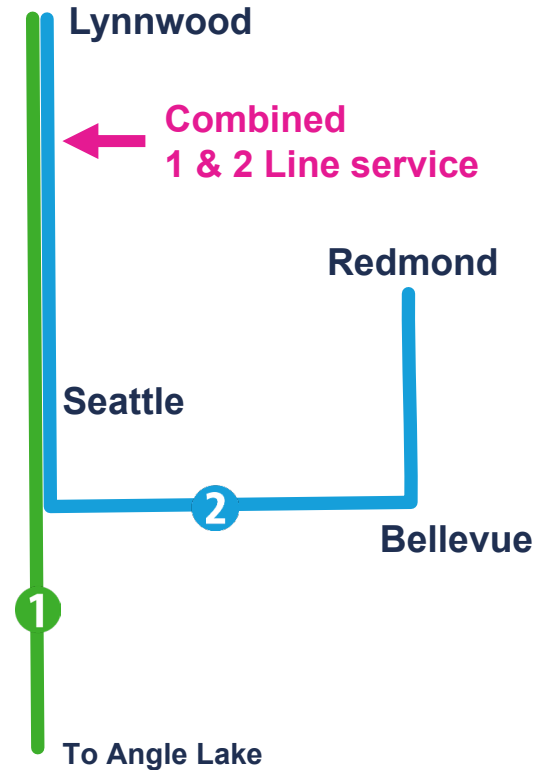
Issue summary

- The 2024 Service Plan is the mechanism for the Board to decide Eastlink Starter Line service levels; 1 Line service levels when it extends to Lynnwood; ST Express service levels and connections to new HCT services.
- Due to staffing and construction challenges, service levels across modes will deviate significantly from earlier plans communicated to the Board and to the public.
- **Depending on mode, these lower service levels will impact passengers through longer wait and transfer times, crowded conditions, and in the case of the Eastlink Starter Line a shorter span of service.**

1 Line extends to Lynnwood

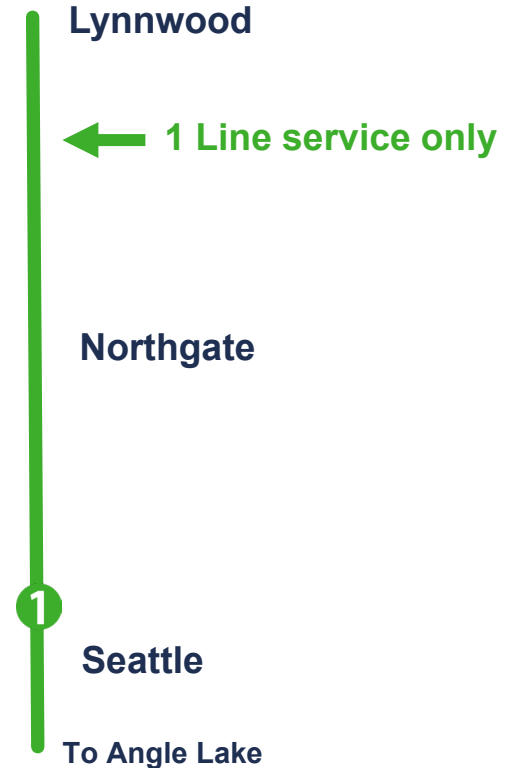
Original Plan Lynnwood Link

- Lynnwood was planned to open after East Link.
- 1 Line and 2 Line provide combined service with trains running every 4 minutes during rush hour; every 5 minutes during the mid-day and every 7.5 minutes in the evenings.
- All 4-car trains.



What's changed - Lynnwood Link

- Without East Link/OMFE being open, the 1 Line will require temporarily reduced service levels to match fleet storage limitations.
- Operational analysis of the Lynnwood terminal shows there may be challenges reliably delivering 4 minute headways, further analysis required.
- Crowding during the peak is expected between Northgate–Westlake, even with reduced post-pandemic demand.

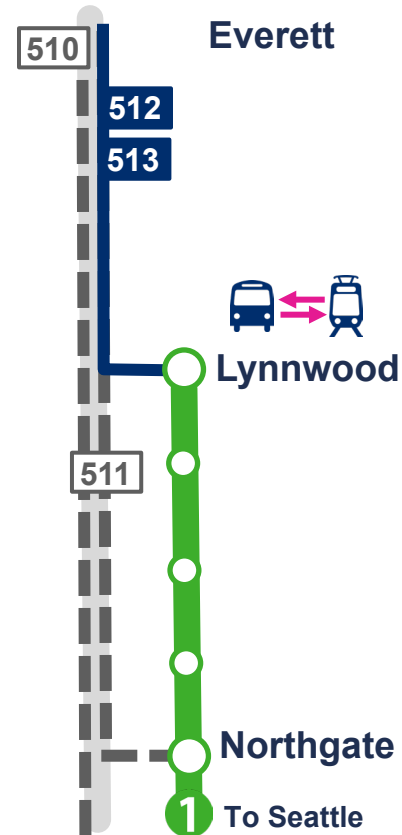


How we're responding

- Analyze alternative Link service scenarios to mitigate lack of capacity and crowding challenges.
- Analyze feasibility of providing bus shuttle to mitigate crowding on Link.
- Restore two remaining Sounder N Line round trips to provide travel alternatives.
- Adopt ST Express restructures consistent with ST3 plan to replace ST Express with Link and BRT; phase implementation.
- Planning for service level increase with OMFE access & monitoring timing of potential construction impacts on I-5 North.

Changes to I-5 service with Lynnwood

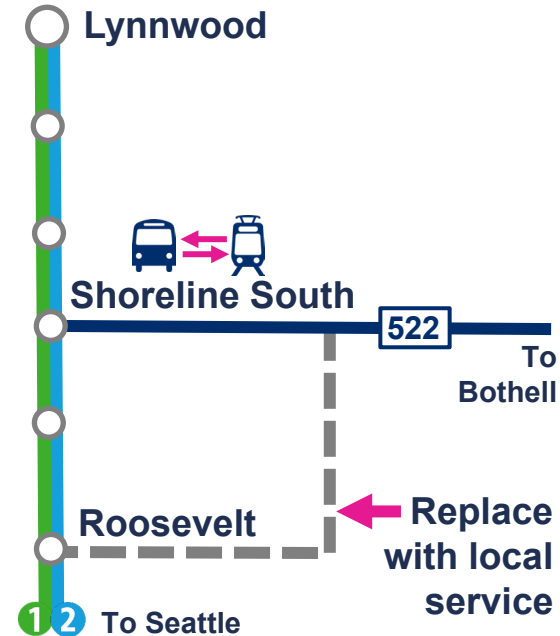
- Shorten Routes 512 & 513 to connect with Link at Lynnwood.
- Eliminate Routes 510 & 511, since Routes 512 & 513 + connection to Link serve the same stops.
- Riders have more reliability and consistent access with a transfer to Link at Lynnwood.



Change Route 522 with full 2 Line

Wait to change Route 522

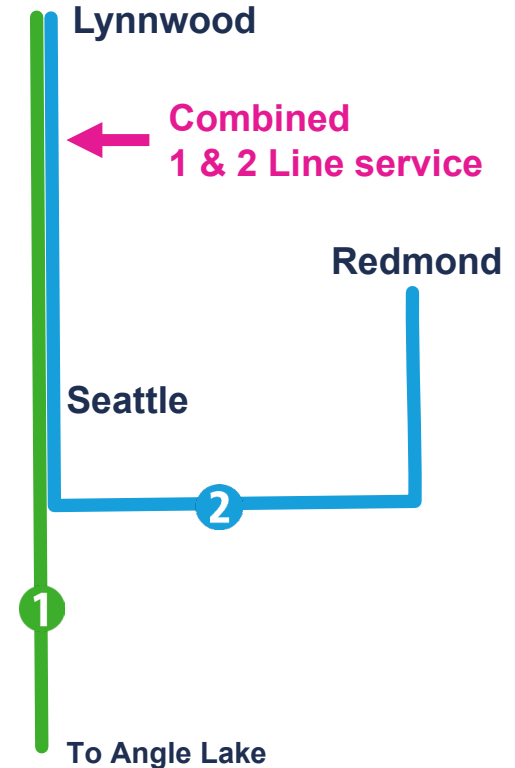
- Route 522 currently connects to Link at Roosevelt Station.
- Moving the connection north to Shoreline South is consistent with future Stride S3 and should be coordinated with KCM changes.
- Implement when both 1 & 2 Line service operate between Lynnwood and Seattle.
- Coordinate with KCM planning of local service for stops south of 145th.



East Link Starter Line

Background: Full 2 Line service design

- Connects eastside with Downtown Seattle, providing increased regional mobility and needed carrying capacity from IDS to points north.
- 8 minute headways in peak (combines with 1 Line for a 4 minute headway), and 4 car trains.
- Requires ~110 LRVs and provides service to passengers ~20 hours per day.
- Connecting ST Express bus services in East King County to be restructured, coordinated with KCM.

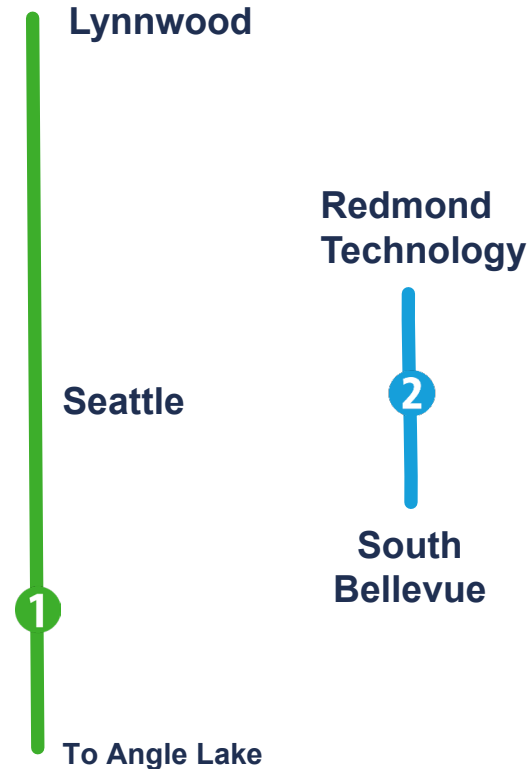


What's changed – East Link

- East Link was planned to open in 2023, before Lynnwood and now will not cross Lake Washington until at least Spring 2025.
- Board directed staff to evaluate an East Link Starter Line.
- Not crossing Lake Washington significantly lowers ridership; projected demand ~15% of full 2 Line.
- LRV reliability and availability lower than planned; today, only 23 LRVs available for service at OMF-E.

Desired ELSL service assumptions

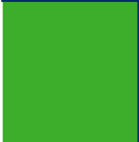




- 10 minute all day headway with 2 car trains is simple and supports bus transfers.
- Will meet projected ridership of up to 6,700 passengers per day.
- **We also assumed that ELSL's service span—the hours it serves passengers— would replicate the 1 Line at approximately 20 hours per day.**



Option 1: Replicate Full 2 Line Service Levels

Service Level	20 hours of service per day Train size: 4 car trains Headway: 8 mins peak, 10 mins off-peak, 15 mins early/late.	
Train Car Availability		LRVs needed to deliver are 40. Available fleet is 23 due to new vehicle commissioning and warranty, retrofitting and spare ratio needs.
Staffing Resources		Between 150-160 new staff required.
Room for passengers		Maximum demand ~400/people hr. Link carrying capacity at ~3,500/hr.
Impact on Lynnwood		Would require staffing and LRVs to be re-deployed from 1 Line service delivery; could impact a summer opening.
Conclusion		Option not achievable due to vehicle shortage and uncertainty in staffing.

Option 2: Desired East Link Starter Line

Service Level	20 hours of service per day Train size: 2 car trains Headway: 10 mins peak, 10 mins off-peak, 15 mins early/late.
Train Car Availability	 LRVs needed to deliver are 22. Total available are 23.
Staffing Resources	 Between 130-140 new staff required.
Room for passengers	 Maximum demand ~400/people hr. Link carrying capacity at ~1,800/hr.
Impact on Lynnwood	 Would require staffing to be re-deployed from 1 Line service delivery; could impact a summer opening.
Conclusion	 Option challenging due to uncertainty in staffing, impact to Lynnwood.

Option 3: Reduced Span East Link Starter Line

Service Level	14 hours of service per day Train size: 2 car trains Headway: 10 mins peak, 10 mins off-peak.	
Train Car Availability		LRVs needed to deliver are 22. Total available are 23.
Staffing Resources		Between 110-120 new staff required.
Room for passengers		Maximum demand ~400/people hr. Link carrying capacity at ~1,800/hr.
Impact on Lynnwood		LRVs and staffing levels provide more certainty around a summer opening.
Conclusion		Option likely achievable due to vehicle availability and lower staffing number required.

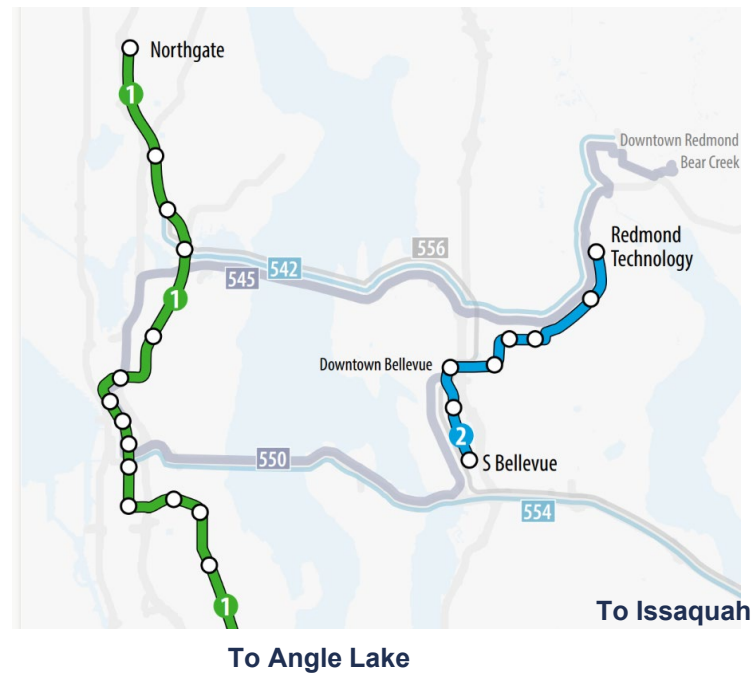
Recommend Option 3

This approach allows for providing both ELSL and LLE service

- Option 3: Changing the ELSL span from 20 to 14-hours prioritizes the Lynnwood opening schedule and improves mobility for a higher number of riders on the 1 Line.
- Rough estimates indicate a 14-hour ELSL service span will miss approximately 15% of potential riders.
- At the SEC this month, we'll provide more updates on the Starter Line project status.

ELSL and connecting ST Express service

- ST Express provides critical cross-lake mobility.
- We recommend ST Express service remain unchanged until the full 2 Line crosses Lake Washington.
- Restructuring ST Express around ELSL would introduce service gaps.
- Early analysis suggests restructuring could increase travel times by 10 minutes or more for about 2,500 average weekday riders.
- When the 2 Line crosses Lake Washington, current riders will experience improved access and reliability on Link.



ST Express
Service Restoration

Planned improvements deferred

- No growth in service levels anticipated as operating partners indicate staffing levels likely flat through 2024.
- Challenge filling both operator & maintainer positions.
- More buses out of service due to supply chain issues reducing spare parts availability.
- Must defer Board adopted 2022 & 2023 Service Plans that prioritized additional service in S. King and Pierce County to improve service equity.
- Evaluating if resource neutral changes to existing South corridor service may deliver some of the deferred benefits.
- Rider survey will ask for rider priorities to shape draft changes.

Next steps

- May – August: Public comment on service plan components: Lynnwood Link and bus restructure, Starter Line service, South corridor ST Express service concepts.
- Return to REO in August with further details on Starter Line service levels, risks and challenges.
- In October, summarize public comment, recommend Board adoption of Service Plan in coordination with budget process.

Thank you.



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