

Progress Report

Link Light Rail Program



Crew constructing skeleton track for the pocket track of Northgate Link Ext.

January | 2019



Prepared by Project Control & VE | Design, Engineering & Construction Management



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SOUND TRANSIT LINK LIGHT RAIL CURRENT SERVICE AND FUTURE EXTENSIONS

Link Light Rail

Future service:

- Everett–Seattle–West Seattle
- Redmond–Seattle–Mariner
- Ballard–Seattle–Tacoma
- Issaquah–Bellevue–South Kirkland
- Tacoma Dome–Tacoma Community College

In service:

- Univ. of Washington–Angle Lake
- Tacoma Dome–Theater District

○ New station
 P Added parking
 ○ Existing station
 H Existing parking
 ○ Provisional light rail station



Link Light Rail Program Overview



University Link Extension (U-Link): This project is a 3.15-mile light rail segment which is located entirely underground with tunnels traveling from Pine Street, under the I-5 freeway to an underground station at Capitol Hill, continuing north beneath SR 520 and the Montlake Cut to an underground station on the University of Washington campus, near Husky Stadium. The Sound Transit Board adopted the baseline capital budget of \$1.76B in July 2008. Revenue Service began on March 19, 2016.

Northgate Link Extension: The University of Washington Station (UWS) to Northgate project is a 4.3-mile extension of light rail from the UWS north under campus via twin-bored tunnels to an underground station at NE 45th Street continuing to an underground station at NE 65th Street and via tunnel, retained cut and elevated sections to Northgate. Revenue Service date is September 2021. The Sound Transit Board adopted the baseline capital budget of \$2.13B originally in 2012 and revised the baseline budget to \$1.89B in October 2015.

Lynnwood Link Extension: Lynnwood Link Extension extends light rail 8.5 miles to Snohomish County along I-5 from Northgate Mall in Seattle to the Lynnwood Transit Center, with four new light rail stations. The configuration includes at-grade, elevated, and retained cut/fill alignment. The Sound Transit Board adopted the baseline capital budget of \$2.77B on May 24, 2018.

East Link Extension: East Link Extension expands light rail to East King County via I-90 from Downtown Seattle to the Overlake Transit Center area of Redmond, with stations serving Rainier Avenue/I-90, Mercer Island, South Bellevue, Downtown Bellevue, Overlake Hospital, the Bel-Red corridor, Overlake Village and the Redmond Technology Center (formerly Overlake Transit Center). Revenue service to the Redmond Technology Station is forecast for June 2023 with a tunnel route in Downtown Bellevue. The Sound Transit Board adopted the baseline capital budget of \$3.67B in April 2015.

Downtown Redmond Link Extension: This project builds a new light rail from the Redmond Technology Station to downtown Redmond by 2024. Light rail will travel along SR-520 with two new stations in southeast Redmond, at Marymoor Park, and downtown Redmond. The ST Board adopted the baseline capital budget of \$1.53B on October 25, 2018.

West Seattle and Ballard Link Extensions: The West Seattle & Ballard Link Extensions are voter-approved projects under the ST3 Plan. West Seattle segment includes 4.7 miles of light rail from downtown Seattle to West Seattle's Junction neighborhood. It includes five light rail stations. The route will run primarily on elevated guideway with a new rail-only bridge over Duwamish River. The Ballard segment includes 7.1 miles of light rail from downtown Seattle to Ballard's Market Street area. It includes nine light rail stations. The route will run through a new downtown Seattle rail-only tunnel, elevated guideway, and a rail-only bridge over Salmon Bay. The current budget for these projects through completion of Preliminary

Engineering is \$286M.

South 200th Link Extension: S. 200th Link Extension consists of a 1.6-mile extension of the light rail from the SeaTac/Airport Station to an elevated station at South 200th Street. The Project was developed through a design-build delivery strategy. The Sound Transit Board adopted the baseline capital budget of \$383.2M in 2011. Revenue Service began on September 24, 2016.

Federal Way Link Extension: The Federal Way Link Extension adds approximately 7.8 miles of light rail from the Angle Lake Station in the City of SeaTac to the Federal Way City Center. The extension generally parallels SR 99 and I-5 freeway with stations at Kent/Des Moines, South 272nd Star Lake park-and-ride and the Federal Way Transit Center. The Sound Transit Board adopted the baseline capital budget of \$2.45B on September 27, 2018.

Hilltop Tacoma Link Extension: The Hilltop Tacoma Link Extension is a 2.4 mile extension of the existing Tacoma Link system from the Theater District in downtown Tacoma to the Hilltop neighborhood. The extension will travel at-grade along Stadium Way, North 1st. Street, Division Avenue, and Martin Luther King Jr. Way. The Sound Transit Board adopted the baseline capital budget of \$217.3M in September 2017.

Tacoma Dome Link Extension: This project will extend light rail from the Federal Way Transit Center in the City of Federal Way to the Tacoma Dome area in the City of Tacoma a total distance of approximately 9.7 miles, generally along or near I-5 with three elevated stations at South Federal Way, Fife, and East Tacoma, and one at-grade/retained station at the Tacoma Dome. The budget for this project through completion of Preliminary Engineering in June 2019 is \$125.7M.

Link Operations and Maintenance Facility East: This project located in the City of Bellevue, includes a 160,000 square foot operations and maintenance facility that will maintain, store and deploy and expand light rail fleet, including seven LRV service bays, a LRV wash facility and storage for up to 96 light rail vehicles. The ST Board adopted the baseline capital budget of \$449.2M in July 2016.

Light Rail Vehicle (LRV) Fleet Expansion: This project includes the design, manufacturing, inspection, testing and delivery of 152 low floor LRVs for service requirements of Northgate, East Link and Lynnwood Link Extensions. The Sound Transit Board adopted the baseline capital budget of \$733M originally in 2015 and revised the baseline budget to \$740.7M in April 2017 to allow for the procurement of 30 additional vehicles.

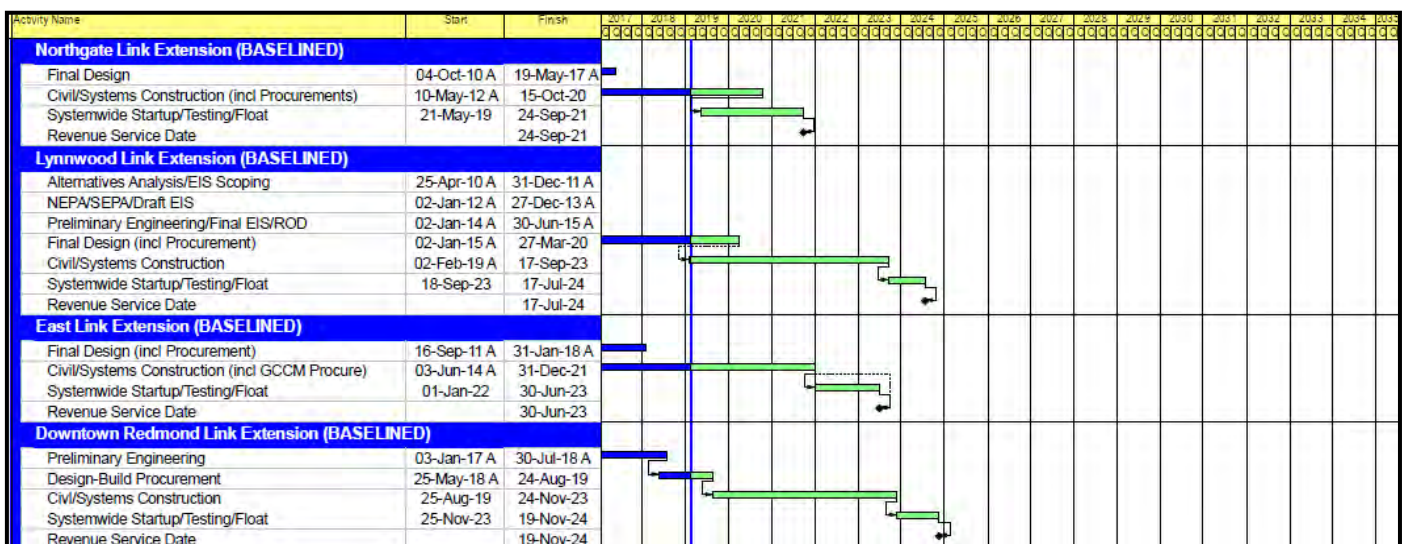
Program Budget

Project figures for active projects are represented in millions below.

project	Authorized Project Allocation	Commitment to Date	Incurred to Date	Forecast to Complete	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
University Link Extension	\$1,756.0	\$1,518.4	\$1,509.4	\$35.6	\$1,554.0	\$202.0
Northgate Link Extension	\$1,899.8	\$1,644.7	\$1,357.7	\$202.7	\$1,847.4	\$52.4
Lynnwood Link Extension	\$2,771.6	\$356.6	\$307.6	\$2,415.0	\$2,771.6	\$0
East Link Extension	\$3,677.2	\$3,040.3	\$1,705.9	\$636.8	\$3,677.2	\$0
Downtown Redmond Link Ext.	\$1,530.0	\$34.2	\$25.6	\$1,495.8	\$1,530.0	\$0
West Seattle and Ballard Link Ext.	\$285.9	\$32.4	\$25.7	\$253.5	\$285.9	\$0
South 200th Link Extension	\$383.2	\$332.2	\$329.0	\$0.5	\$332.6	\$50.6
Federal Way Link Extension	\$2,451.5	\$108.1	\$89.1	\$2,343.5	\$2,451.5	\$0
Hilltop Tacoma Link Extension	\$217.3	\$182.9	\$53.9	\$34.5	\$217.3	\$0
Tacoma Dome Link Extension	\$125.7	\$13.7	\$8.1	\$112.0	\$125.7	\$0
Link O & M Facility: East	\$449.2	\$357.2	\$193.1	\$92.0	\$449.2	\$0
LRV Fleet Expansion	\$740.7	\$655.6	\$87.4	\$85.1	\$740.7	\$0
Total Link	\$16,288.2	\$8,276.3	\$5,692.5	\$7,706.9	\$15,983.2	\$305.0

Program Schedule

Schedules for active projects are summarized below.

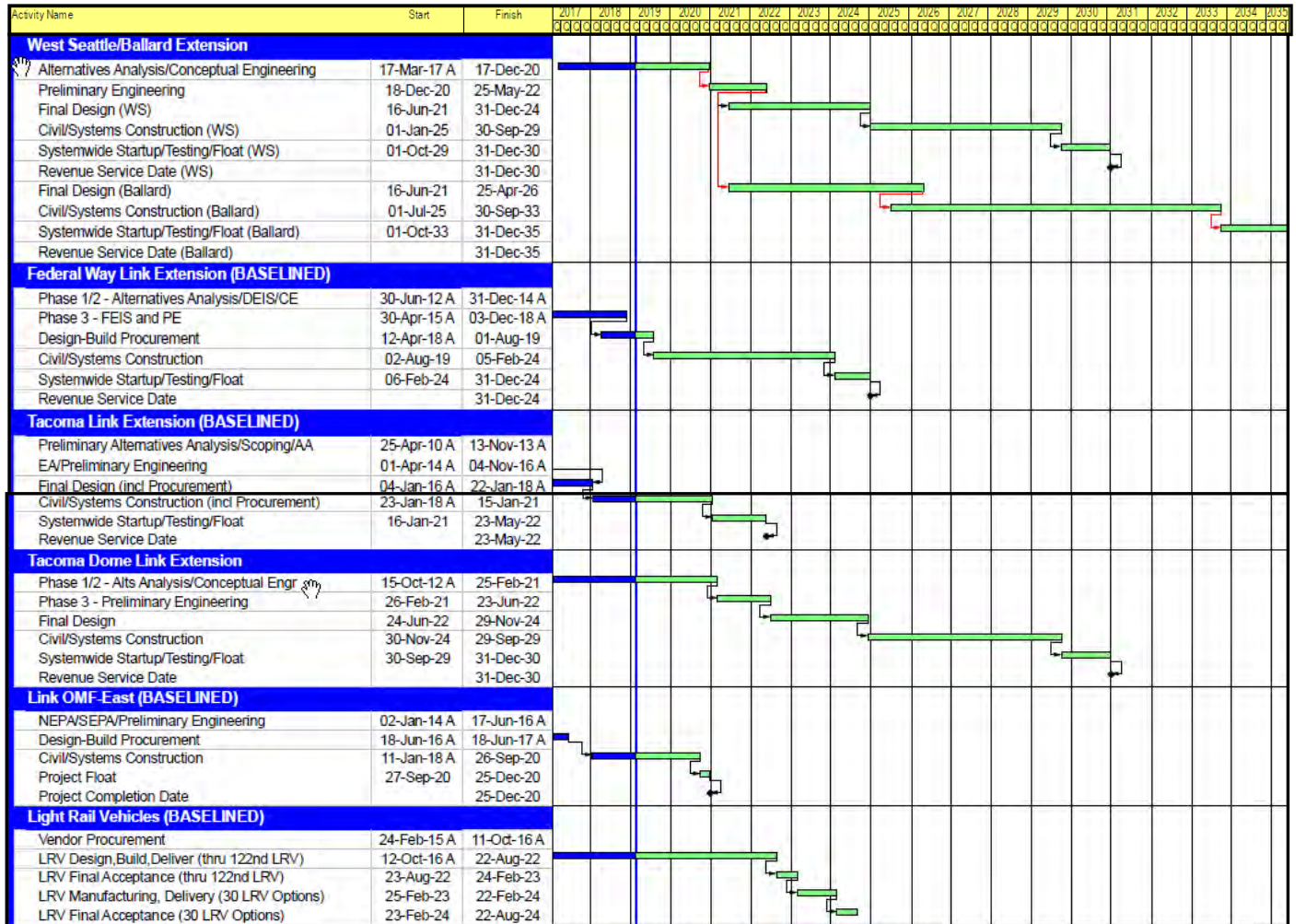


Link Light Rail Program Overview



Program Schedule

Schedules for active projects are summarized below.



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Link Light Rail University Link Extension

Project Summary

Scope

Limits 3.15-mile extension of the Initial Segment light rail transit (LRT) system from the Pine Street Stub Tunnel (PSST) in downtown Seattle to University of Washington (UW) campus near Husky Stadium.

Tunnels Two twin bored tunnels. Two contract segments: U220 starts at Husky Stadium, continues beneath SR 520 and the Montlake Cut south to the Capitol Hill underground station. U230 commences at Capitol Hill Station and proceeds south under the I-5 freeway to the PSST.

Stations Two underground center platform stations – Capitol Hill (U240) and University of Washington (U250). U240 is approximately 65' underground with three station entrances. U250 is about 100' below ground, with three station entrances and connections to the UW campus by a pedestrian bridge.

Systems 27 LRV; direct fixation tracks, signals, traction electrification, and SCADA communications

Budget \$1.948 billion including finance cost (capital subtotal of \$1.756 billion)

Schedule Revenue Service began March 19, 2016



Map of Project Alignment

Key Project Activities

- Certificate of Occupancy (C of O): University Link continues to operate under a temporary certificate of occupancy until all permit requirements are fully met. All C of O for stations has been issued. The request for system wide C of O for the University Link has been submitted and is awaiting Seattle Fire Department's determination.
- Continue negotiation with Capitol Hill Station Contractor on commercial issues.
- Miscellaneous follow-on commitments and restoration work remains including but not limited to the following: Additional UW escalator work, Decommissioning of monitoring wells, restoration of the Systems staging area on Pine Street, power reliability and vibration monitoring and other follow up on various minor commitments from the Record of Decisions.
- Before and After Study continues to progress. FTA's recommended "on to off" data collection to expand the survey data to more accurately reflect total ridership were incorporated. Study to complete by summer 2019.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

University Link's projected Estimated Final Cost (EFC) including Finance Cost remains at about \$1.75B. As the project inches closer to close out, the timing for expenditure becomes less predictable. This period, the project expenditure came in at about \$780K increasing the total direct expenditure to just under about \$1.51B (Finance Cost excluded). Current activities continues to pertain to close out and miscellaneous follow on work. The construction EFC continues to be approximately \$1.02B. This trend continues to hold as the project is substantially complete with only miscellaneous follow on scope and commercial issues remaining. The Total Incurred to Date for the Construction Phase is approximately \$992M and LRV is at about \$99.2M. Cost of LRV repairs were excluded from this project and tracked independently.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$115.23	\$113.55	\$83.35	\$83.02	\$88.10	\$25.45
Preliminary Engineering	\$24.39	\$24.26	\$24.26	\$24.26	\$24.26	\$0.00
Final Design	\$77.94	\$90.31	\$87.96	\$86.67	\$89.17	\$1.14
Construction Services	\$68.53	\$94.81	\$86.88	\$86.57	\$88.71	\$6.11
3rd Party Agreements	\$18.65	\$18.65	\$11.65	\$11.31	\$13.23	\$5.42
Construction	\$1,180.00	\$1,158.18	\$998.70	\$991.91	\$1,021.84	\$136.34
Vehicles	\$103.91	\$103.91	\$99.19	\$99.19	\$101.90	\$2.00
ROW	\$167.33	\$152.33	\$126.43	\$126.43	\$126.79	\$25.54
Capital Total	\$1,755.97	\$1,756.01	\$1,518.42	\$1,509.37	\$1,554.00	\$202.01
Finance Cost	\$191.71	\$191.71	\$191.71	\$174.87	\$191.71	\$0.00
Project Total	\$1,947.68	\$1,947.72	\$1,710.13	\$1,684.24	\$1,745.71	\$202.01

Totals may not equal column sums due to rounding of line entries.

Construction commitment under the SCC format remains relatively unchanged at about \$985M. Construction SCC expenditures to date is just above \$980M this period mostly attributed to other miscellaneous follow on work project level commitments prior to close out. Total capital cost incurred to date including non-construction cost (SCC 60 thru 90) now just under \$1.51B or about 86% of total project budget scoped (Finance Cost excluded). Total project cost incurred to date at the end of this period including Finance Cost is at \$1.68B. The financing cost incurred to date is about \$175M. University Link EFC continues to be projected to close out with at least \$200M under budget excluding financing cost.

Link Light Rail University Link Extension



Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$626.83	\$450.46	\$456.45	\$456.03	\$461.61	(\$11.15)
20 Stations	\$366.33	\$350.75	\$346.01	\$343.88	\$353.10	(\$2.34)
30 Support Facilities: Yards, Shops	\$7.01	\$24.83	\$23.55	\$23.47	\$24.80	\$0.03
40 Sitework & Special Conditions	\$59.03	\$67.39	\$57.43	\$54.92	\$56.77	\$10.62
50 Systems	\$69.63	\$116.42	\$102.17	\$101.84	\$102.40	\$14.02
Construction Subtotal (10 - 50)	\$1,128.82	\$1,009.85	\$985.61	\$980.14	\$998.67	\$11.18
60 Row, Land, Existing Improvements	\$167.33	\$126.60	\$126.43	\$126.43	\$125.77	\$0.83
70 Vehicles	\$99.76	\$100.16	\$99.87	\$99.87	\$100.15	\$0.01
80 Professional Services	\$306.41	\$346.58	\$306.49	\$302.93	\$317.92	\$28.66
90 Unallocated Contingency	\$53.65	\$172.81	\$0.00	\$0.00	\$11.48	\$161.33
Capital Total (10 - 90)	\$1,755.97	\$1,756.01	\$1,518.39	\$1,509.37	\$1,554.00	\$202.01
100 Finance Cost	\$191.71	\$191.71	\$191.71	\$174.87	\$191.71	\$0.00
Project Total	\$1,947.68	\$1,947.72	\$1,710.10	\$1,684.24	\$1,745.71	\$202.01

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Link Light Rail Northgate Link Extension

Project Summary

Scope

Limits The Northgate Link Extension consists of 4.3 miles of light rail extending from the University of Washington to Northgate.

Alignment The extension begins at UW Station, continues under UW campus, then north to a portal at NE 94th Street, then transitioning to an aerial structure north to Northgate Mall.

Stations U District Station (UDS)
Roosevelt Station (RVS)
Northgate Station and Parking Garage

Systems Signals, track electrification, and SCADA communications

Phase Construction

Budget \$1.899 Billion

Schedule Revenue Service: September 2021



Map of Project Alignment

Key Project Activities

- **Tunnel, Cross Passages, and Maple Leaf Portal (N125):** The CM team continues to work with JCM to close remaining Changes and Claims. Safety & Quality Management has accepted and closed final reports for N125.
- **U District Station/UW Campus (N140):** Crews commenced stair and upper landings formwork, waterproofing, rebar and completed assembly of north escalator. Crews continued electrical conduit installations throughout the project and continued ventilation ductwork installation throughout basement levels.
- **Roosevelt Station (N150):** Crews continued setting elevator platform, entrances and machine room; continue to build-out escalator frames while continuing work on stair walls. Crews built-out fire sprinkler valve room and continue installation of sprinkler work and wall tile installation in the central area of the project.
- **Northgate Station (N160): Guideway Substructure/Superstructure:** Punchlist is now 78% complete with crews continuing installation of under-deck drain pipes. **Station:** Crews completed placement of Stair 2 concrete and completed installation of metal decking over north end. **Garage:** Continued punch-list corrections continue and testing all-weather heat detectors.
- **Trackwork (N180):** Stacy Witbeck crews completed the installation of the 5Hz floating slab side pad bolts in Work Area 1. In Work Area 2, crews completed installing 16Hz floating slabs in the northbound and southbound trackways. For northbound and southbound direct fixation, crews continue installing fasteners and performing final line and grade.
- **Environmental:** Environmental and Safety Site Walks conducted on N160.

Closely Monitored Issues

- **N140 U District Station:** The city of Seattle is reviewing the permit set for the additional stair from the intermediate landing to the platform level. The design team continues work on the 100% design development for the stair.
- **N150 Roosevelt Station:** Field testing of the three 450 HP fans have been conditionally accepted.

Project Cost Summary

The project cost is summarized in two cost categories. The first table summarizes cost in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes the project in accordance with the FTA's Standard Cost Category (SCC) format. The figures in both tables are shown in millions.

The Estimated Final Cost (EFC) for the project as of this reporting period is \$1,846.9M, which is \$52.4M below the current project budget, down \$0.5M from last period. This period approximately \$22.9M was incurred, bringing the total project expenditures from \$1.33B to \$1.35B. Project commitments are at \$1.64B with all major construction projects well underway.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$144.9	\$144.9	\$67.8	\$67.8	\$135.5	\$9.4
Preliminary Engineering	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$0.0
Final Design	\$132.2	\$132.2	\$120.5	\$115.6	\$134.7	\$(2.6)
Construction Services	\$118.3	\$118.3	\$103.1	\$77.6	\$110.4	\$7.9
3rd Party Agreements	\$11.8	\$11.8	\$9.8	\$6.8	\$11.4	\$0.4
Construction	\$1,343.0	\$1,343.0	\$1,227.7	\$974.1	\$1,334.4	\$8.7
ROW	\$112.3	\$112.3	\$100.6	\$100.6	\$106.0	\$6.3
Project Contingency	\$22.2	\$22.2	\$0.0	\$0.0	\$0.0	\$22.2
Total	\$1,899.8	\$1,899.8	\$1,644.7	\$1,357.7	\$1,847.4	\$52.4

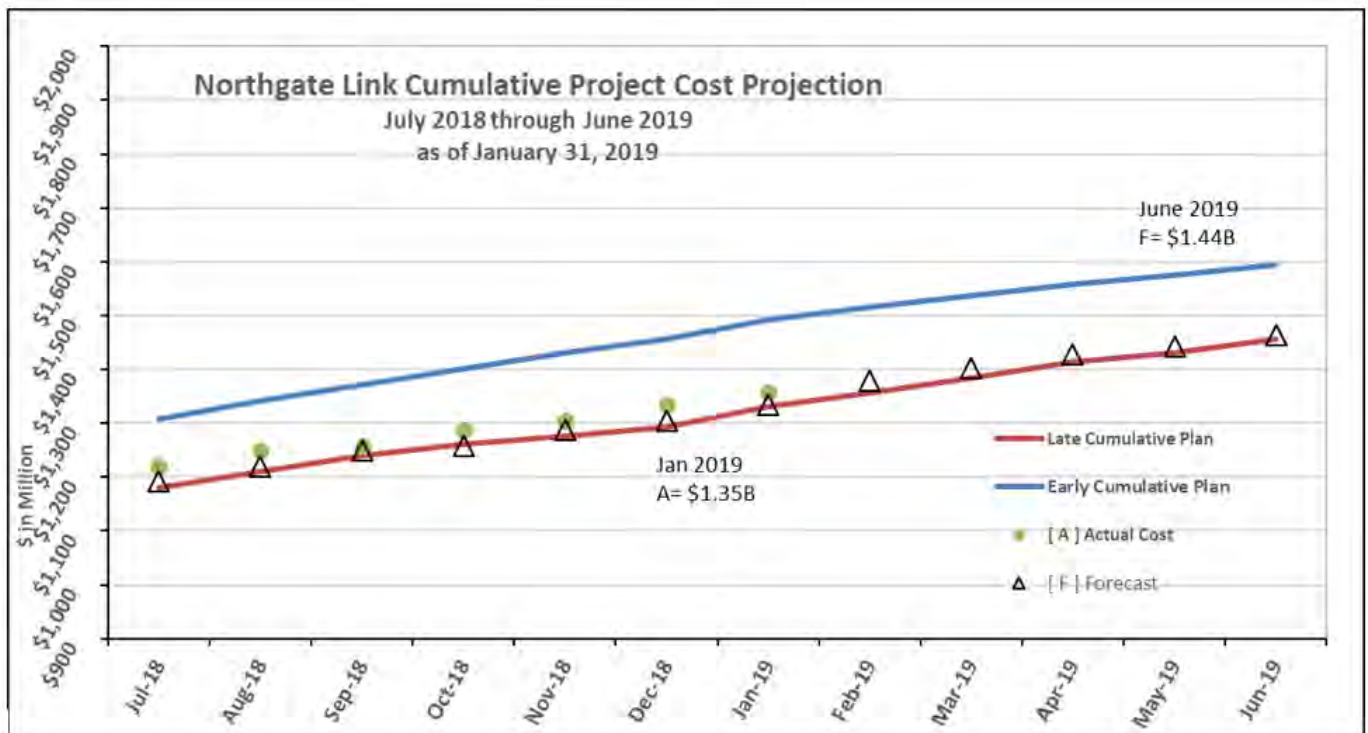
Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$595.6	\$548.2	\$512.5	\$485.2	\$533.7	\$14.4
20 Stations	\$376.1	\$425.1	\$422.7	\$300.8	\$447.4	\$(22.3)
30 Support Facilities: Yard, Shop	\$5.3	\$6.1	\$6.5	\$6.2	\$6.5	\$(0.3)
40 Sitework & Special Conditions	\$140.8	\$230.7	\$168.1	\$145.1	\$202.0	\$28.8
50 Systems	\$110.9	\$98.5	\$107.5	\$28.1	\$119.5	\$(21.0)
Construction Subtotal (10 - 50)	\$1,228.7	\$1,308.6	\$1,217.3	\$965.4	\$1,309.0	\$(0.5)
60 Row, Land, Existing Improvements	\$119.9	\$110.9	\$100.6	\$100.6	\$105.5	\$5.4
80 Professional Services	\$420.7	\$431.6	\$326.8	\$291.7	\$427.4	\$4.2
90 Contingency	\$130.4	\$48.7	\$0.0	\$0.0	\$5.4	\$43.3
Total (10 - 90)	\$1,899.8	\$1,899.8	\$1,644.7	\$1,357.7	\$1,847.4	\$52.4

Project Cash Flow Projection

The Northgate Link cost projection continues to progress within the planned expenditures as construction activities continue. This period's expenditure of \$22.9M included \$20.5M for the ongoing major construction contracts including the N140, N150, and N160 Station Finishes contracts, the N180 Trackwork contract, the N830 Systems contract, and other miscellaneous construction; \$0.9M was incurred for civil and systems final design and design support during construction; and \$1.0M was for construction management. The remaining expenditures were for third party coordination, permits, staff, legal, right-of-way and other direct charges.

Total project cost incurred to date reached \$1.35B of which about \$974M (72%) is attributed to the Construction Phase. The project cost is currently predicted to increase to approximately \$1.4B by June 2019, reflecting continued active construction activities.



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The top project-wide risks are:

- Coordination with third parties (City of Seattle, WSDOT, UW etc.).
- Coordination of system installation, integration, and testing.
- Potential shortage of skilled labor and O&M support during startup and integration testing.
- Multiple contract interfaces/loss of interface float.

Contingency Management

The Northgate Link project budget was baselined in 2012 with a total contingency of \$396.2M.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA has been fully depleted and all major contracts have been awarded.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties.

The current contingency drawdown is trending below the project drawdown in the 1st QTR 2019 with a total decrease on \$2.1M this period. This period, the UAC decreased by \$1.5M following 2019 budget reconciliation, and AC decreased by \$0.6M following execution of change orders on the N140, N150 and N160 Station contracts, and the N180 Trackwork contract. The UAC balance remains well above both the minimum contingency and the buffered (minimum plus 20%) contingency levels.

Contingency Status (Monthly)

Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$113.9	6.0%	\$0.0	0.0%
Allocated Contingency	\$184.0	9.7%	\$140.9	24.0%
Unallocated Contingency	\$98.3	5.2%	\$26.5	4.5%
Total:	\$396.2	20.9%	\$167.4	28.5%

Contingency by Type

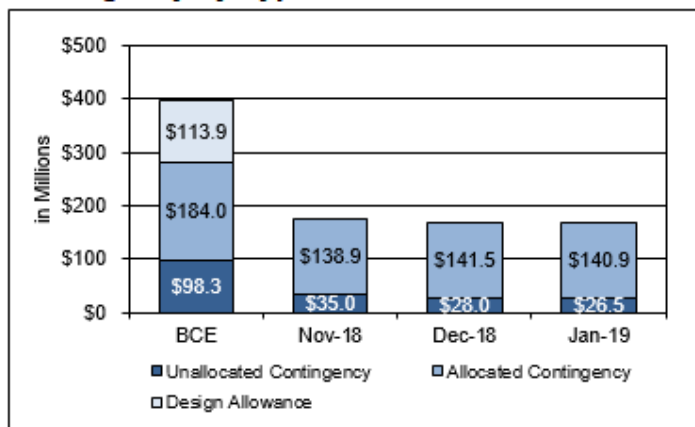
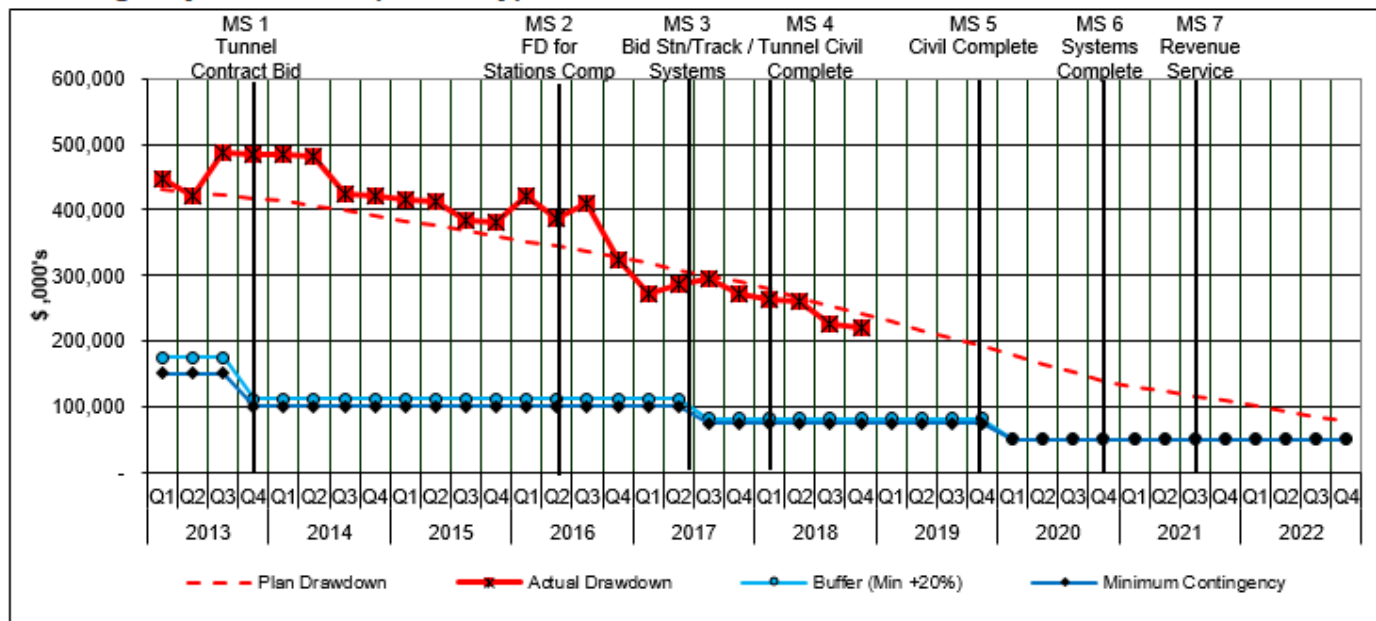


Table figures are shown in millions.

Contingency Drawdown (Quarterly)



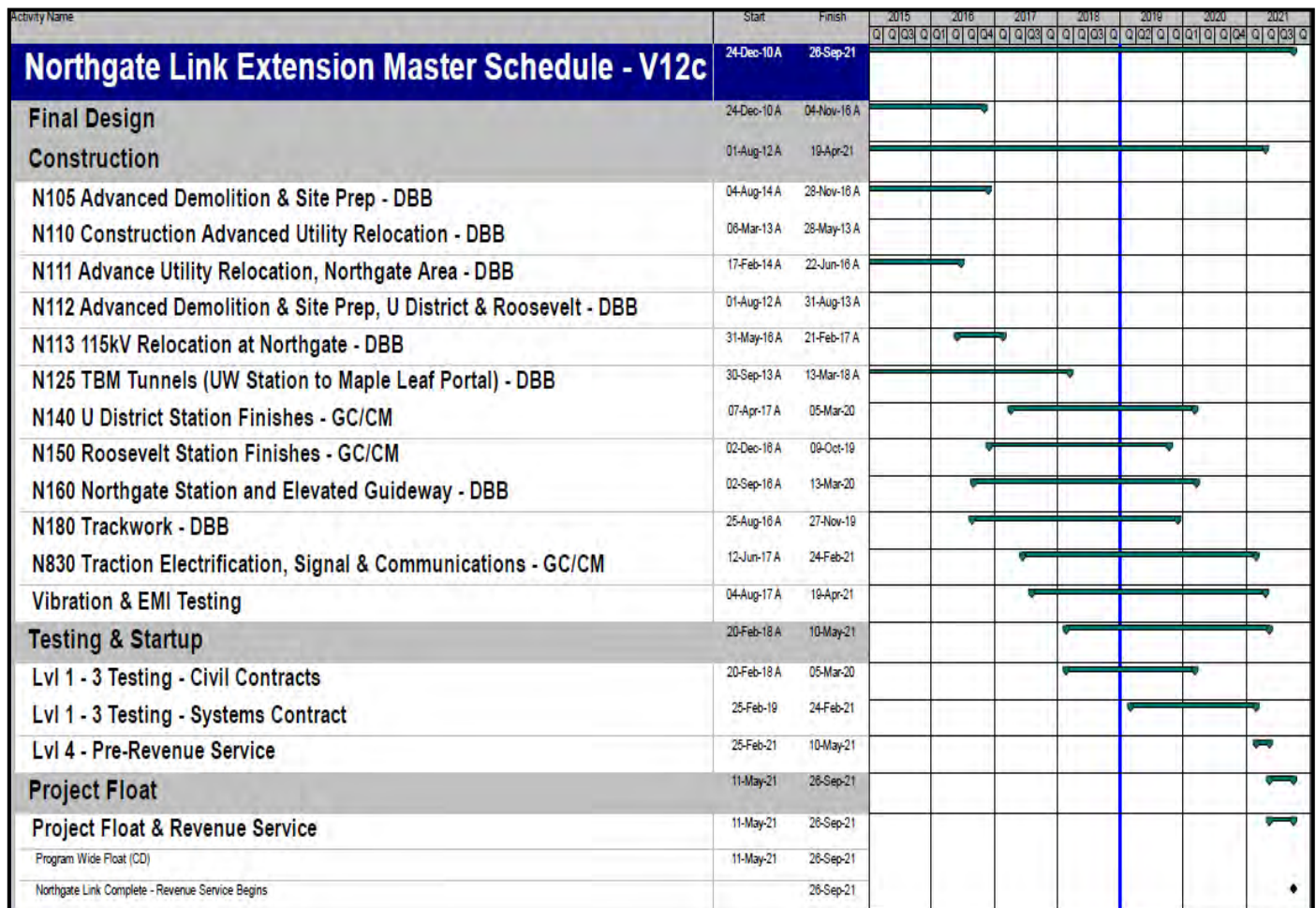
Link Light Rail Northgate Link Extension



Project Schedule

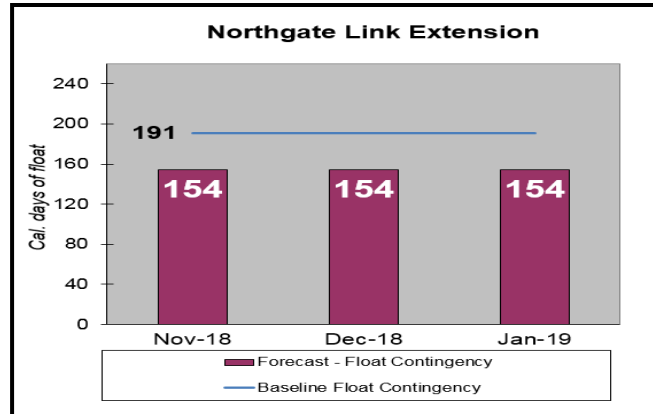
As of January 2019, all Northgate Link civil contracts are under construction and the calculated physical percent complete for all major construction contracts has increased from 74.6% to 76.8%.

The Northgate Link Extension remains on largely schedule for the period. Civil construction has experienced some delays related to required changes at UDS. ST and the contractor are currently evaluating the potential impact to both the contract and the overall project. The trackwork remains on schedule with the trackwork contractor now working on the elevated guideway. Completion of the civil construction may move to the 3rd QTR of 2020, with Systems construction & testing currently forecast to be complete in late 4th QTR 2020 as planned. The Revenue Service date remains late September 2021.



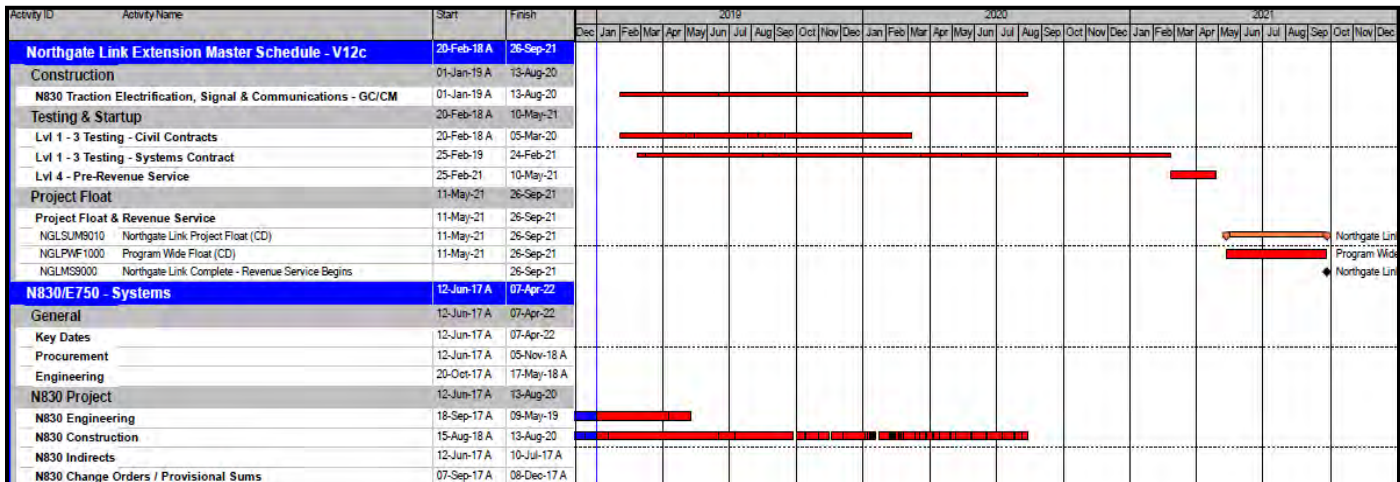
Project Float

The Northgate Link Project currently retains 154 days of unallocated project float. In light of recent changes and some delays incurred in both the civil construction and systems procurements ST will be evaluating the overall schedule in the next few months and may use some of the float contingency.



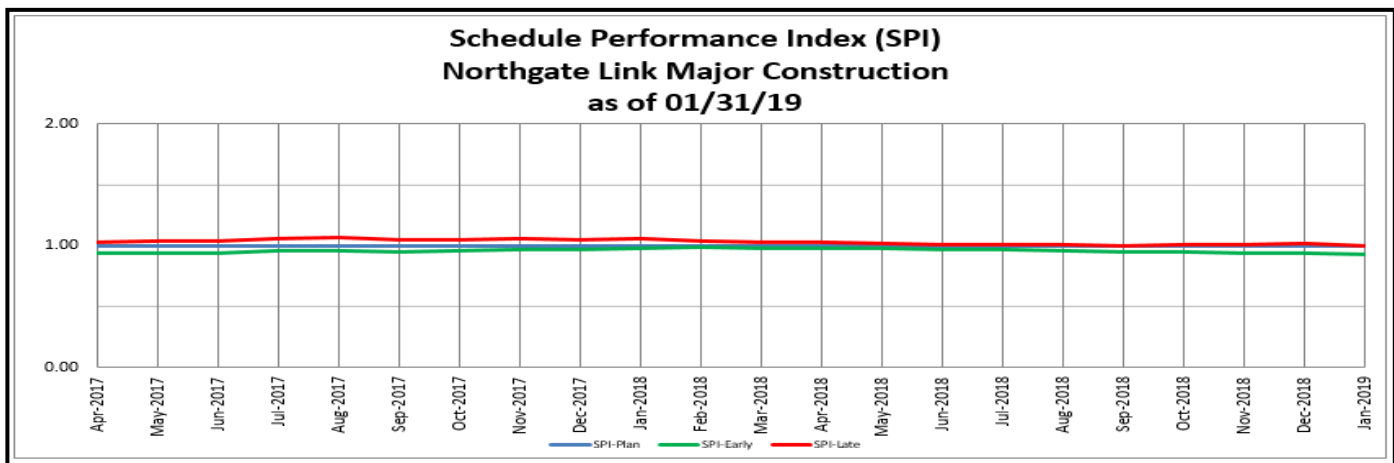
Critical Path Analysis

The critical path for the Northgate Link Extension continues to run through the N830 Systems installations, then into the Testing & Commissioning proceeding the Pre-Revenue Service period. Extended durations for the procurement and building of Train Control systems is current driver of the critical path.



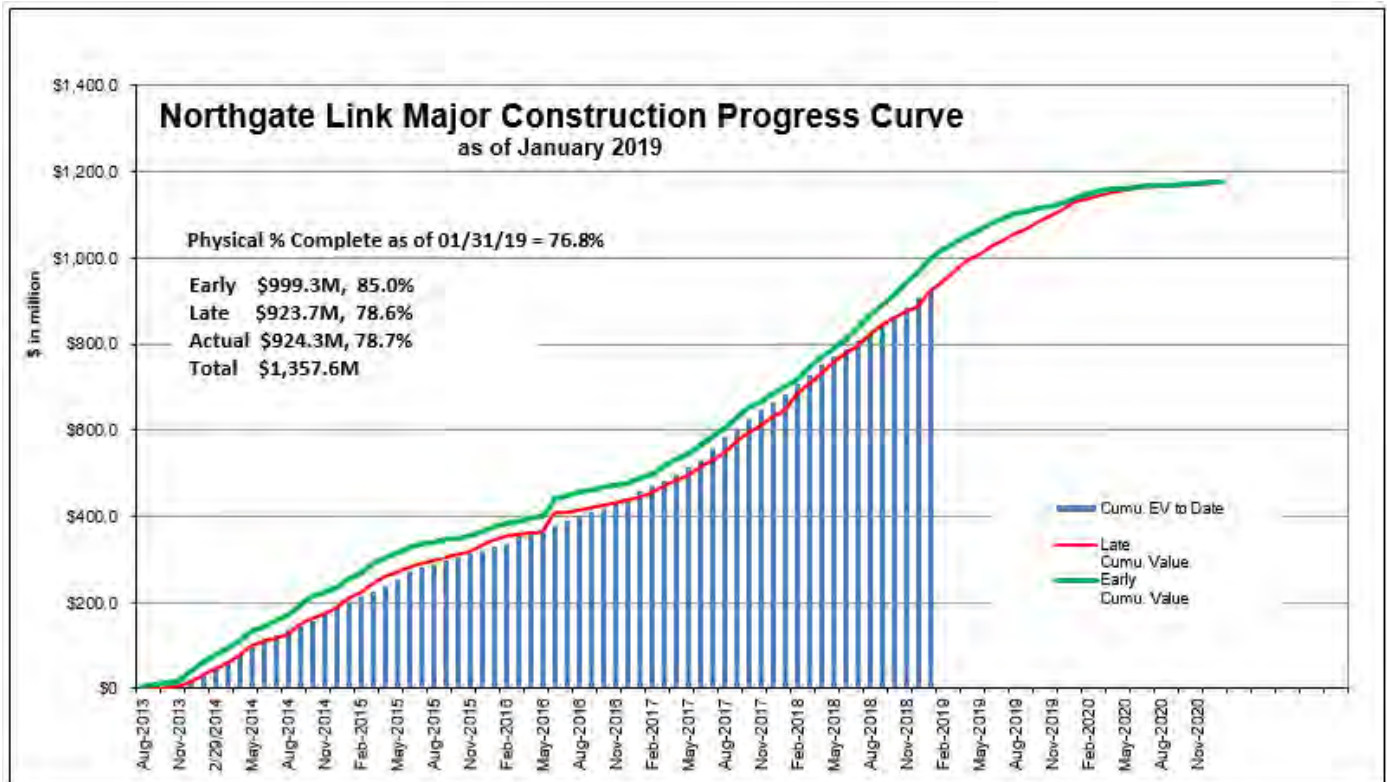
Schedule Performance Index

The early Schedule Performance Index (SPI) for the project is at 0.92 for this period, and the late SPI is at 1.00, unchanged from last period, showing that in general, performance is satisfactory. Both the early and late numbers have been trending within a range of 0.04 above or below the current period numbers for several months.



Cost Progress Analysis

All civil work in the tunnels is complete and all three station finishes contracts and trackwork are well underway. The Northgate Garage opened to the public in November 2018. Systems procurement continues for signals and communications. Overall Northgate Link Major Construction percent complete analysis is based on a weighted measurement among the six major construction contracts' schedules, durations and costs. The graph below shows the aggregate cost progression for these construction contracts is trending appropriately between the early/late projections as drawn from the master schedule. The overall physical percent complete for Northgate Link construction is approximately 76.8% as compared to approximately 75% of contractual duration expended.



Community Outreach

University District Station (N140)

- Distributed construction alert for partial street closures and traffic impact during the backfill of U District Station site.
- Met with business owners to discuss concerns with their used cooking oil containers.
- Assisted contractor with vibration equipment install and removal in residential buildings.
- Distributed construction alert for the removal of temporary bridge abutments at U District Station site.

Roosevelt Station (N150)

- Distributed construction alert for extended nighttime closure on portion of NE 65th street near 12th Ave NE for trench work.
- Distributed construction alert for extension of hours for lane closure along 12th Ave NE.
- Coordinated with the contractor to access to residential buildings to remove equipment.

Community Outreach continued...

Northgate Station (N160)

- Finalized ambassador garage observations and lessons learned, debriefed with project team.
- Published Construction alert for NE 103rd St. partial closure on December 28th, both on website and through email.
- Assisted Operations/CEA with Northgate Station Garage closure Jan 12 – Jan 14.
- Shared Northgate Station NE 103rd St closure construction alert with King County Metro and through City of Seattle construction organizer, for distribution through their email list and Park & Ride alerts page.
- Addressed questions from the public around light rail expansion.

Trackwork (N180)

- Distributed construction alert for nighttime work for track slab delivery and installation at U District Station site.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	January 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	0	104
Days Away From Work Cases	0	0	6
Total Days Away From Work	0	0	397
First Aid Cases	2	2	154
Reported Near Mishaps	5	5	126
Average Number of Employees on Worksite	490	-	-
Total # of Hours (GC & Subs)	76,085	76,085	4,116,113
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	0.00	5.01
Lost Time Injury (LTI) Rate	0.00	0.00	0.29
Recordable National Average	3.20	3.20	3.20
LTI National Average	1.30	1.30	1.30
Recordable WA State Average	6.40	6.40	6.40
LTI WA State Average	2.10	2.10	2.10

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

Link Light Rail Northgate Link Extension

Major Construction Contract Packages

Below are the major construction contract packages for the project with a brief scope description of each.

N105 Advance Demolition and Site Prep - Demolition of Key Bank Building, removal of underground storage tanks and remediation of contaminated soil at UDS. Demolition site and site prep at strip mall near the NG Station. (Complete)

N111 Advanced Utility Relocation at Northgate Area - Relocation of 26kV and communication lines at the Northgate Station vicinity. (Complete)

N113 115kV Relocation at Northgate Station Area - Relocation of overhead electrical facilities at the Northgate Station area. (Complete)

N125 TBM Tunnels UW Station to Maple Leaf Portal - Tunneling work and support of excavation of station boxes for the U District and Roosevelt stations. (Complete)

N140 U District Station Finishes - Civil and architectural finishes work for the U District Station.

N150 Roosevelt Station Finishes— Civil and architectural finishes work for the Roosevelt Station.

N160 Northgate Station & Elevated Guideway & Parking Garage- Civil and architectural finishes work for the Maple Leaf Portal, the aerial guideway, and the Northgate Station and Tail Track. Construction of a 450 stall parking garage to be located at the south corner of the existing Northgate Mall surface parking lot at NE 103rd St. near 1st Avenue NE.

N180 Trackwork - Installation of all trackwork through two tunnels and three stations between UW Station and Northgate Station, including tail track.

N830 Track Electrification, Signals, Communication System - Installation of the major system elements – Traction Electrification, 26kV Distribution, Signals, and Communications.



N150—View of Roosevelt Station from the tower crane with Roosevelt High School beyond.

Contract N140—U District Station Finishes

Current Progress

The N140 Contractor, Hoffman Construction, is continuing structural work below and above grade as well as MEP work below grade.

- Completed new framed plenum walls and ledger angle supports
- Continued TOD Girder rebar installation, and striping of formwork for completed sections.
- Continued south entry level structural steel canopy installation.
- Completed south area HVAC ductwork and exhaust fan installations BL2.
- Continued guide wall and secant wall demolition at south entrance area.

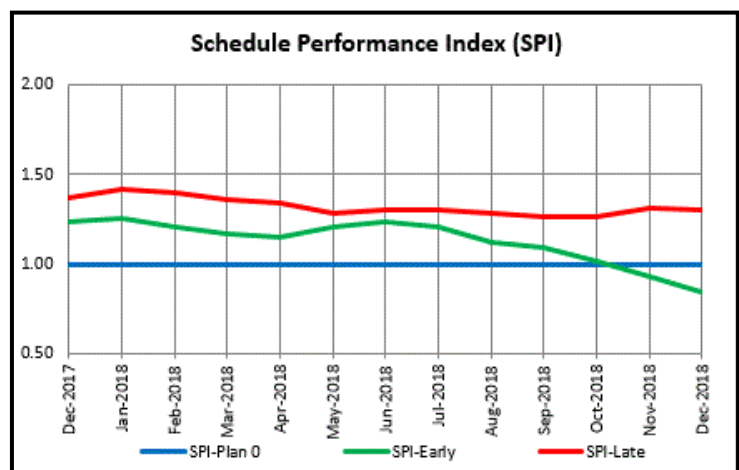
Schedule Summary

Hoffman is currently forecasting a substantial completion 5-Mar-20, nine days late. Of greater concern is the forecast late achievement of Milestone 2A—Basic Structure Completion Above Grade. This milestone bears on the systems rooms access for the N830 contractor. At this time ST, Hoffman, and Mass Electric, have worked out a room handover sequence to mitigate as much delay as possible. ST will follow-up contractually once the sequences have been confirmed.

Activity Name	OD	RD	Start	Finish	2017				2018				2019				2020
					Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
N140 - U-District Station Finishes	769	278	10-Feb-17 A	05-Mar-20													
MILESTONES	0	0	05-Mar-20	05-Mar-20													
Milestone 4 - Substantial Completion	0	0		05-Mar-20*													
PRECONSTRUCTION	0	0	17-Jul-17 A	17-Jul-17 A													
Precon - Site Access Granted (Construction NTP)	0	0	17-Jul-17 A														
CONSTRUCTION	769	278	10-Feb-17 A	05-Mar-20													
Structure	737	246	10-Feb-17 A	21-Jan-20													
EXTERIOR SHELL / SKIN	171	148	28-Dec-18 A	29-Aug-19													
INTERIORS	366	232	23-Jul-18 A	31-Dec-19													
ELEVATORS	223	223	25-Feb-19	13-Jan-20													
ESCALATORS	434	276	18-Jun-18 A	03-Mar-20													
STAIRS	342	158	10-May-18 A	13-Sep-19													
SITWORK	394	216	18-Jun-18 A	07-Jan-20													
START-UP & COMMISSIONING	171	171	03-Jul-19	05-Mar-20													

Schedule Performance Index

This period, the SPI early is at 0.79 and the SPI late is 1.17. The early index indicates that the contractor continues to perform slightly ahead of plan when compared to the base-line schedule and cash flow and is expected to trend the same way next period.



Link Light Rail Northgate Link Extension

Next Period's Activities

- Continue with electrical and mechanical rough-in and commence sheet metal plenum wall that is included in WD 044A.
- Continue welding T.O.D. girder connections.
- Continue lid waterproofing in the north and central areas.
- Continue stair 3 & 4 upper landings formwork, waterproofing and rebar.
- Continued installation of north escalator circulation tube structural framework.
- Continue electrical conduit installations in various headhouse areas.
- Complete installation of fire sprinklers in north stairwell BL3.
- Commence entry electrical rough in for slab on grade.
- Commence installation of escalators.
- Commence BL3 wall metal stud framing.
- Complete guide wall and secant wall demolition at south entrance area.
- Continue MEP hangers and ductwork at platform area.

Closely Monitored Issues

- **Additional stairs from intermediate level to the platform:** The design team submitted the Permit Set which is currently at the City for review. The design team is continuing to work on the 100% Design Development which is next month for review.
- **Work Directive 044A—Lid Level Stem Walls & 0053 North Plenum Insulation & Doors:** Due to mitigation measures that have been implemented, the indications are that this change will have minimal impact to the construction schedule. The CM team is coordinating with N830 to keep them informed of the schedule dates for the systems rooms. The contractor resubmitted the December schedule which includes mitigation measures and is currently under review by ST.
- **Request for Change 107 Roof Deck Composition for System Supports:** The contractor received a revised design for supporting mechanical and electrical facilities, including seismic bracing. It is an improvement from the original design but still involves a lot of structural steel. We are in the process of verifying the contractor's assumptions with the design team to see if this system can be further simplified.

Cost Summary

Present Financial Status	Amount
N140 Contractor—Hoffman Construction	
Original Contract Value	\$ 159,836,688
Change Order Value	\$ 1,303,290
Current Contract Value	\$ 161,139,978
Total Actual Cost (Incurred to Date)	\$ 79,803,251
Financial Percent Complete	49.6%
Physical Percent Complete	53.3%
Authorized Contingency	\$ 7,991,834
Contingency Drawdown	\$ 1,303,290
Contingency Index	3.3



UDS – South headhouse roof looking southeast.

Contract N150—Roosevelt Station Finishes

Current Progress

Hoffman Construction (HCC) continues to focus on interior Mechanical and Electrical installations, vertical transportation, and utility work. On-going work this period includes:

- Continued exterior metal panel and louver installation at south entrance roof.
- Continued setting electrical panels, terminating branch circuits and lighting rough-in throughout the station.
- Continued framing walls, rough-in MEP in walls, hanging drywall, mud, taping and painting throughout the station.
- Continued setting elevator 1 platform and entrances and machine room.
- Continued build-out of escalator frames 3 & 4.

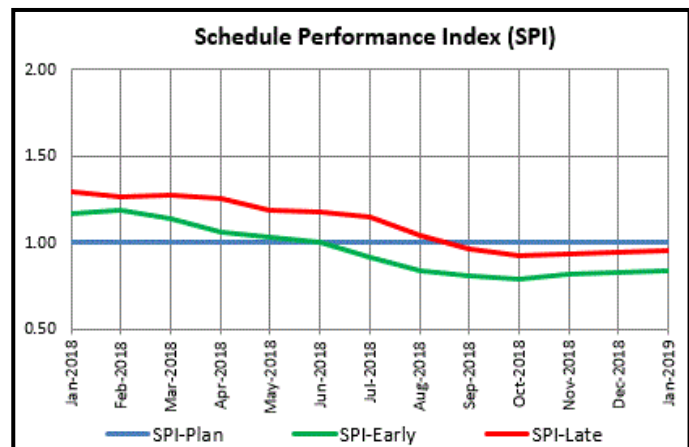
Schedule Summary

The N150 December schedule update forecasts a ten day late Substantial Completion date. The critical path is unchanged, driven by the North Headhouse Finishes and NE 66th St Restoration. The Civil/Systems interfaces continue to retain adequate float. The negative float has been traced to erroneous logic in the Test and Commission activities, that will be corrected in February.

Activity Name	OD	RD	Start	Finish	2017				2018				2019				
					Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
N150 - Roosevelt Station Finishes	753	205	02-Dec-16 A	19-Nov-19													
MILESTONES	0	0	09-Oct-19	09-Oct-19													
MILESTONE 3 - SUBSTANTIAL COMPLETION OF ALL WOR	0	0		09-Oct-19*													
PRECONSTRUCTION	0	0	02-Dec-16 A	02-Dec-16 A													
ISSUE CONSTRUCTION NTP	0	0		02-Dec-16 A													
CONSTRUCTION	705	205	13-Feb-17 A	19-Nov-19													
MOBILIZATION	576	60	13-Feb-17 A	17-May-19													
STRUCTURE	596	20	13-Feb-17 A	17-Jun-19													
INTERIORS	371	153	23-Mar-18 A	06-Sep-19													
HEADHOUSE	377	157	21-Mar-18 A	12-Sep-19													
BUS SHELTER	30	30	01-Feb-19	14-Mar-19													
BIKE CAGE	13	13	01-Feb-19	19-Feb-19													
ELEVATORS	180	138	01-Nov-18 A	16-Aug-19													
ESCALATORS	113	71	03-Dec-18 A	10-May-19													
STAIRS	144	156	04-Sep-18 A	11-Sep-19													
CP-31	447	55	19-Feb-18 A	19-Nov-19													
CONSTRUCTION ACCESS INFILL	68	68	20-May-19	23-Aug-19													
START-UP & COMMISSIONING	176	176	01-Feb-19	09-Oct-19													
SITE RESTORATION	307	142	07-Jun-18 A	21-Aug-19													
ARTWORK	207	72	15-Aug-18 A	07-Jun-19													
CLOSEOUT	68	68	14-Jun-19	19-Sep-19													
N830 TRACTION ELECTRIFICATION, SIGNALS, C	40	0	01-Nov-18 A	28-Dec-18 A													

Schedule Performance Index

This period, the SPI early is at 0.80 and the SPI late is 1.0. The early index indicates that the contractor continues to perform slightly ahead of plan when compared to the baseline schedule and cash flow and it is expected to continue this trend next period.



Next Period's Activities

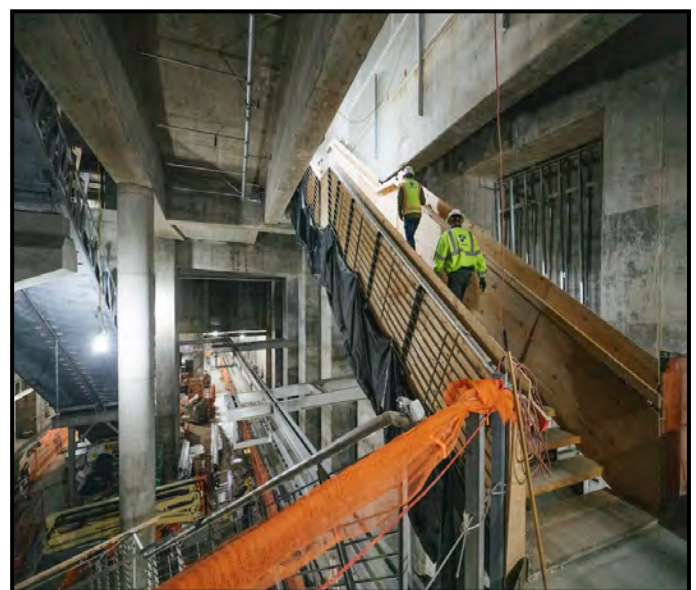
- Continue setting elevator 1 platform and entrances and machine room.
- Continue build-out of framing for escalators 3 & 4.
- Continue storefront installation at south entrance clere-story.
- Continue insulation and roofing membrane all levels at north and south entrances.
- Continue lighting rough-in at south platform, south basement level 3, south entrance and north basement levels 2 & 3.
- Continue exterior metal panel and louver installation at south entrance roof.
- Continue setting electrical panels, terminating branch circuits and lighting rough-in throughout the station.
- Continue framing walls, rough-in MEP in walls, hanging drywall, mud, taping and painting throughout the station.
- Continue build-out of fire sprinkler valve room/back of house walls.
- Continue installation of sprinkler work and wall tile installation in high bay center area.

Closely Monitored Issues

- **450h Fans (3 Located at North Station):**
Pre-production factory testing commenced and the field testing to-date has been conditionally accepted based on receipt and confirmation of raw data points. The testing requiring the soft starter was completed and soft starter was shipped. Soft starter is scheduled to arrive on site next month. Open action items developed during field testing and follow-up meetings will be held weekly to track the status of those items. The balance of fan testing is scheduled in February for 3 weeks to complete production testing. It is anticipated that all fans will be shipped by mid February.
- The Design team is behind on preparing change notices for electrical and architectural items. A list of outstanding and overdue change notices was sent to the ST Design Manager for assistance in receiving more timely responses. A delay notice was received from the Contractor this month indicating a delay to the start of BMS and EVS commissioning due to outstanding electrical changes related to UPS.

Cost Summary

Present Financial Status	Amount
N150 Contractor - Hoffman Construction	
Original Contract Value	\$ 152,291,184
Change Order Value	\$ 4,983,019
Current Contract Value	\$ 157,274,203
Total Actual Cost (Incurred to Date)	\$ 106,892,528
Financial Percent Complete	68.0%
Physical Percent Complete	73.0%
Authorized Contingency	\$ 14,614,559
Contingency Drawdown	\$ 4,983,019
Contingency Index	1.8



RVS—Looking up the stairs from the landing.

Contract N160 – Northgate Station, Elevated Guideway, and Parking Garage

Current Progress

The N160 Contractor, Absher Construction, is continuing to prosecute work in all areas of the project including punchlist on the Guideway. Accomplishments to date:

- Completed falsework removal of Stair/Escalator 1 over NE 103rd St.
- Continued placing raceway conduit in Mezzanine ceiling.
- Continued mezzanine level metal wall stud and ceiling grid installation.
- Continued forming of bio-retention wall along MSE Wall 5 for North Signal Bungalow.
- Layout and drilling for South Watercourse Wall Railing.
- Began installation of south watercourse wall safety rail.
- Continuing punchlist corrections at Garage.

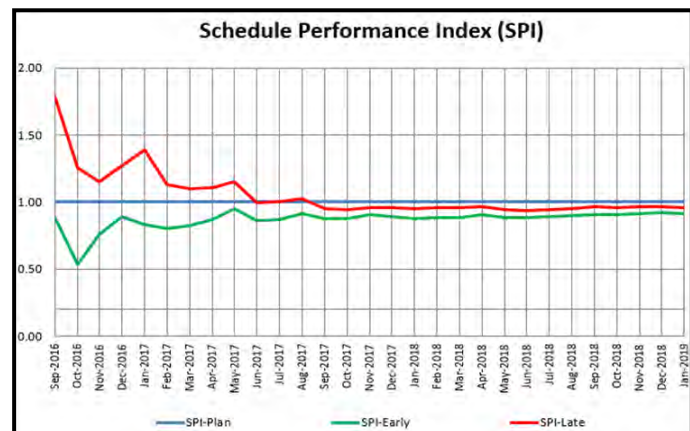
Schedule Summary

The project schedule for January retains a 13-Mar-20 substantial completion date, thirteen days late. Interim Milestone 5—System Room access is still forecast to be late, however the Systems contractor will likely not need the access as early as originally planned. Potential impacts are being assessed through the CIP process. The critical path for the project is unchanged and is driven by the station structure & station finishes, in particular the installation of vertical transportation (escalators and stairs).

Activity Name	OD	RD	Start	Finish	2017				2018				2019				2020			
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
N160 - Northgate Station Finishes	892	283	01-Sep-16 A	13-Mar-20																
1.00 - General Requirements	892	0	01-Sep-16 A	13-Mar-20																
1.10 - Project Start-up	0	0	01-Sep-16 A	01-Sep-16 A																
Contract Award/NTP (See Site Access Dates)	0	0	01-Sep-16 A																	
1.20 - Contractual Milestones	0	0	13-Mar-20	13-Mar-20																
Absher Contract Milestones	0	0	13-Mar-20	13-Mar-20																
MS08 - Substantial Completion [Site Access+1201c	0	0		13-Mar-20*																
2.00 - Procurement	784	176	02-Sep-16 A	09-Oct-19																
3.00 - Preparatory Work	861	283	17-Oct-16 A	13-Mar-20																
4.00 - Earthwork & Utilities	807	283	04-Jan-17 A	13-Mar-20																
5.00 - Guideway (inc. Station Unit)	640	106	03-Jan-17 A	01-Jul-19																
6.00 - Station Finishes	457	242	27-Mar-18 A	15-Jan-20																
7.00 - Garage	413	2	27-Jun-17 A	04-Feb-19																
8.00 - At-Grade Restoration	584	242	22-Sep-17 A	15-Jan-20																
9.00 - Transition to Operations	5	0	14-Jan-19 A	22-Jan-19 A																
10.00 - Project Close-out	76	76	22-Nov-19	13-Mar-20																

Schedule Performance Index

This period, the SPI early is at 0.91 (down from 0.92 last month), and the SPI late is at 0.96 (down from 0.97 last month). The early index indicates that the contractor continues performing slightly behind plan when compared to the baseline schedule. Overall work progress has remained within 0.03 of its current trend over the last year.



Link Light Rail Northgate Link Extension

Next Period's Activities

- **General Project Progress:** Hold final Turnover to Ops meeting for Garage and Quality Task Force meeting.
- **Guideway Substructure/Superstructure:** Continue punchlist work. Continue under-deck storm drainage.
- **Station:** Continue installation of Mezzanine walls and door frames and begin sheathing. Continue Mezzanine plumbing and electrical conduits. Install Stair 6 precast elements and continue Stair 2 and 3 steps and landings. Install metal wall framing at Elevator S-3. Excavate and place sump pump vault.
- **North Signal Bungalow:** Continue electrical rough-in.
- **Parking Garage:** Complete punchlist corrections. Complete VFD training.
- **Utility & Drainage Work:** Continue wall forming for bio-retention structure at MSE wall 6. Continue storm drains and excavation for duct banks for North TPSS Building.

Closely Monitored Issues

- Schedule slippage continues on elevated structure and station. Delays from 3-hr Fire Rating revisions and other work directives are being reviewed and mitigated. Weather in Chicago may result in delay to delivery of Escalators 4 and 5.
- Review of Guideway deck grades and plinth bar locations found multiple elevation and tolerance issues that require correction by N180.
- Water leakage has been identified at the Garage, and root cause is being evaluated. Contractor continuing with action to seal the leaks.

Cost Summary

Present Financial Status	Amount
N160 Contractor - Absher Construction	
Original Contract Value	\$ 174,000,000
Change Order Value	\$ 6,763,625
Current Contract Value	\$ 180,763,625
Total Actual Cost (Incurred to Date)	\$ 137,340,521
Financial Percent Complete	76.0%
Physical Percent Complete	72.0%
Authorized Contingency	\$ 17,400,000
Contingency Drawdown	\$ 6,763,625
Contingency Index	1.9



Placing Escalator at Northgate Station.

Contract N180 – Trackwork UWS to Northgate Station

Current Progress

The N180 Contractor, Stacy and Witbeck, Inc. (SWI) continues to prosecute the work as follows:

- All Special Trackwork submittals have been reviewed and approved.
- SWI completed the installation of the 5Hz floating slab side pad bolts in Work Area 1.
- Crews completed installing 16Hz floating slabs in the NB and SB trackways at UDS.
- Crews continue installing fasteners and performing final line and grade between UDS and RVS.
- N150 has been notified they can commence installation of the platform edge finish work.
- Completed MLP Stair Tower walls.

Schedule Summary

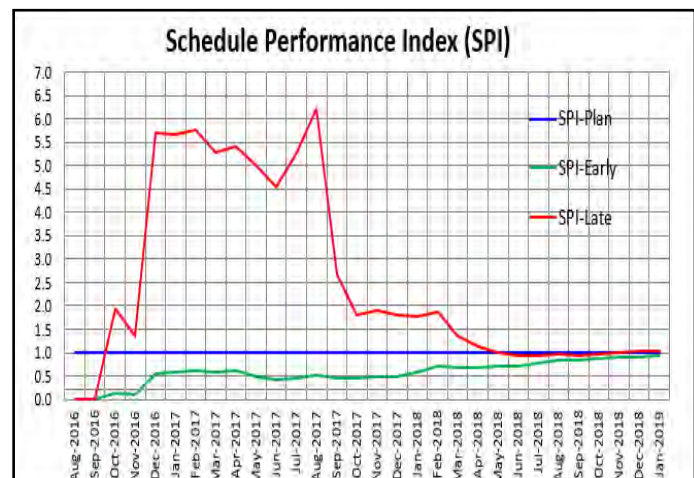
The N180 schedule for January continues to forecast an on-time completion of work. The critical path is unchanged and continues to run through the construction of the plinths within the tunnels which is crew driven.

Activity Name	OD	RD	Start	Finish	16	2017				2018				2019			
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
N180 - Trackwork	787	177	25-Aug-16 A	11-Oct-19													
Milestones	0	0	11-Oct-19	11-Oct-19													
Milestone 7d - Substantial Completion of Work Area 7, 7.1, 7.2 (10/31/19)	0	0	11-Oct-19	11-Oct-19*													
Construction	767	152	25-Aug-16 A	06-Sep-19													
Mobilization	658	152	25-Aug-16 A	06-Sep-19													
Submittals	1086	10	25-Aug-16 A	16-Aug-19													
Procurement	553	56	07-Oct-16 A	22-Apr-19													
Work Area 1 (N06 - UWS to UDS Tunnels)	230	0	13-Nov-17 A	09-Oct-18 A													
Work Area 2.1 and 2.2 (N07 - U-District Station)	321	3	15-Dec-17 A	05-Feb-19													
Work Area 3 (N08 - UDS to RVS Tunnels)	222	7	05-Feb-18 A	11-Feb-19													
Work Area 4 (N09 - Roosevelt Station)	186	0	19-Mar-18 A	11-Jan-19 A													
Work Area 5 (N10 - RVS to MLP Tunnels)	303	94	28-Feb-18 A	15-Jun-19													
Work Area 6 (MLP and At Grade Guideway)	323	101	19-Mar-18 A	25-Jun-19													
Work Area 7 (Elevated Guideway South of NGS)	136	115	12-Dec-18 A	16-Jul-19													
Work Area 7.1 (N11 - Northgate Station)	67	67	07-Jan-19 A	06-May-19													
Work Area 7.2 (Elevated Guideway North of NGS)	113	105	08-Jan-19 A	01-Jul-19													

Schedule Performance Index

This period, the SPI early is at 0.93 (slightly up from 0.92 last month), and the SPI late is at 1.02. The expected performance is between early and late.

Due to late access to the tunnel, the contractor is behind the baselined schedule, but continues to meet their goals for early work such as material procurement and fabrications. Work performed in the field has to date met or exceeded forecasts.



Link Light Rail Northgate Link Extension

Next Period's Activities

- **Work Area 1** - Minor punch-list activities continues.
- **Work Area 2.2** - 16Hz floating slab installation through UDS Station is complete. The contractor continue to make final adjustment and alignment of the slabs.
- Contractor to pull and secure the rail onto the 16Hz floating slabs.
- **Work Area 5** - Direct Fixation (DF) Track Construction in northbound & southbound tunnels will continue north to the Maple Leaf Portal.
- **Work Area 5.1 & 6** - 1. MLP Stair Tower - Welding and Prepping for Landing 2 work, MLP Track Slab work—Prep to begin DF track on SB side, Acoustic Barrier Foundation work, continued ductbank work
- **Work Area 7.1** - Contractor is working North to South to allow access from the MLP yard.
- **Work Area 7.2** - NB and SB Trackways DF Plinths work underway.

Closely Monitored Issues

- The most notable monitored issue going forward appears to be the Direct Fixation track construction in work Area 5. Tracking to meet the Substantial Completion Milestones, but it still needs to be monitored closely since it is the critical path for the project.
- Work Area 6 work is going to present difficulties due to the tightness of the work area and maintaining access to the tunnels during construction. Work Areas 7, 7.1 & 7.2 will present challenges of building track on a bridge deck constructed by another contract, with added complexity of staging concrete pours from below.
- Unusually severe weather that could potentially impede work.

Cost Summary

Present Financial Status	Amount
N180 Contractor—Stacy & Witbeck	
Original Contract Value	\$ 71,455,950
Change Order Value	\$ 3,100,049
Current Contract Value	\$ 74,555,999
Total Actual Cost (Incurred to Date)	\$ 58,452,797
Financial Percent Complete	78.4%
Physical Percent Complete	83.0%
Authorized Contingency	\$ 10,718,393
Contingency Drawdown	\$ 3,100,049
Contingency Index	2.90



SWI—Continuing their drilling for the DF stirrup bar placement in the invert of the SB tunnel of WA.5.

Contract N830 – Northgate Link Systems, Heavy Civil GC/CM

Current Progress

The N830 Contractor, Mass Electric Construction Co. (MEC), continues to prosecute the work as follows:

- Factory Acceptance Test (FAT) for the first set of DC Switchgear (Siemens) for Roosevelt TPSS is on-going.
- The Medium Voltage Substation (MVSS) equipment at Roosevelt Station is currently being assembled.
- The CMC reviewing advance copies of the Systems Integration Data Table (SIDT) from the Northgate Civil contractors.

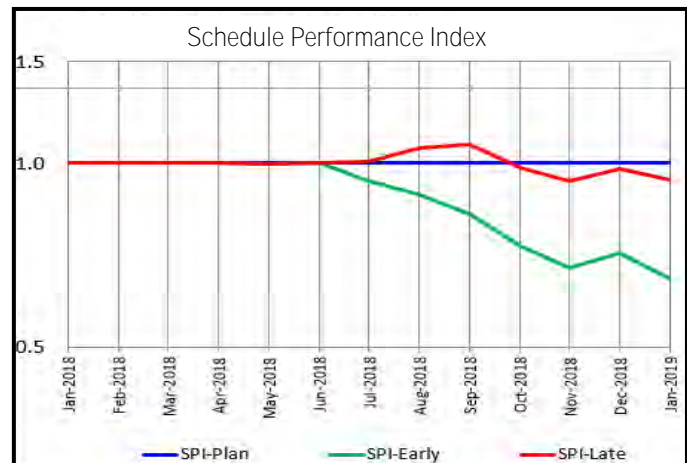
Schedule Summary

An updated N830 schedule for January is still pending. The December schedule update was submitted late but still forecasts an on-time completion. ST and MEC are working closely with the civil contractors to mitigate potential delays in access dates due to changes in the civil construction work. ST is continuing to work with the N180 contractor to confirm an early access date to the tunnels in order to begin systems installations.

Activity Name	OD	RD	Start	Finish	2017				2018				2019				2020				2021				
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
N830/E750 - Systems	910	529	12-Jun-17 A	24-Feb-21																					
General	0	0	12-Jun-17 A	12-Jun-17 A																					
Key Dates	0	0	12-Jun-17 A	12-Jun-17 A																					
NTP - Notice to Proceed (NTP) Northgate and East Link	0	0	12-Jun-17 A		NTP - Notice to Proceed (NTP) Northgate and East Link																				
N830 Project	844	529	18-Sep-17 A	24-Feb-21																					
N830 Engineering	839	41	18-Sep-17 A	17-Feb-21																					
N830 Construction	778	529	20-Dec-17 A	24-Feb-21																					
N830 Milestones	0	0	17-Feb-21	17-Feb-21																					
MS#05 Northgate: Substantial completion of Northgate Link systems (12/31/20)	0	0		17-Feb-21*																					MS#05 Northgate
N830 OCS	495	419	10-Sep-18 A	06-Sep-20																					
N830 Traction Power / Substations Procurement	605	356	20-Dec-17 A	08-Jun-20																					
N830 Signals	479	403	15-Aug-18 A	13-Aug-20																					
N830 Communications	577	359	10-Feb-18 A	12-Jun-20																					
N830 Radio	410	290	09-Jul-18 A	03-Apr-20																					
N830 Trunk Fiber	405	329	28-Sep-18 A	29-Apr-20																					
N830 Testing and Commissioning	602	447	07-Sep-18 A	24-Feb-21																					

Schedule Performance Index

The Contractor performed slightly ahead of the late schedule (SPI 0.95) and behind the early schedule (SPI 0.68) in comparison to the baseline work plan.



Link Light Rail Northgate Link Extension

Next Period's Activities

- Continue Procurement for Signal and Communication materials fabrication and installation.
- Continue development and reviews of engineering submittals covering all disciplines: Traction Power Substations (TPSS), Overhead Catenary Systems (OCS), Train Control Systems (TCS)/Signals and Communications.
- Continue meetings held between Systems and Civil Contractors to discuss and coordinate interface/access points for respective contracts.
- Complete As-Built drawings and Safety Certification for the Northgate Parking Garage.
- Continue MVSS work on Roosevelt Station.
- Ongoing inspections of OCS foundations on Eastlink.

Closely Monitored Issues

- The Construction Management Consultant (CMC) and Sound Transit (ST) continue to closely monitor the schedule of the procurement packages and to ensure it does not impact upcoming work activities.
- The CMC and ST continue ongoing coordination for the IDS cutover change from full shutdown to single tracking.
- ST and CMC will be closely monitoring the delivery of the MVSS Switchgear equipment associated with Roosevelt Station and the potential effects on installation, testing, and Milestone #3.
- ST, CMC, and the Systems Contractor closely monitoring and continue to work with the N140 project team to manage the later than expected access to the Above Grade System Rooms at University District Station and the potential effects on installation, testing, and Milestone #2.

Cost Summary

Present Financial Status	Amount
N830 Contractor - Mass Electric Construction Co.	
Original Contract Value	\$ 104,660,444
Change Order Value	\$ 687,611
Current Contract Value	\$ 105,348,055
Total Actual Cost (Incurred to Date)	\$ 26,208,452
Financial Percent Complete	24.9%
Percent Complete	30.8%
Authorized Contingency	\$ 5,233,022
Contingency Drawdown	\$ 687,611
Contingency Index	2.3

**The N830 and E750 Systems is a joint procurement. The Cost Summary table above represents N830 Systems only.*



Offloading MVSS Switchgear with Tower Crane at Roosevelt Station, 01/22/2019.

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Link Light Rail Lynnwood Link Extension

Project Summary

Scope

Limits North Seattle to Shoreline, Mountlake Terrace, and Lynnwood Transit Center

Alignment Lynnwood Link extends light rail 8.5 miles to Snohomish County along I-5 from Northgate Mall in Seattle to the Lynnwood Transit Center, with four new light rail stations. The configuration includes at-grade, elevated, and retained cut/fill alignment.

Stations Shoreline South/145th, Shoreline North/185th, Mountlake Terrace, Lynnwood City Center

Systems Signals, traction power, and communications (SCADA)

Phase Final Design

Budget \$2.772 Billion (Baseline May 2018)

Schedule Revenue Service: July 2024



Map of Lynnwood Link Extension Alignment.

Key Project Activities

- Submitted interim parking permit application to the Mountlake Terrace on Jan. 4th.
- Issued Notice to Proceed for L200 early work with Stacy and Witbeck –Kiewit-Hoffman (SKH) on Jan. 8th.
- Received approval of the Project Design Review (PDR) from Lynnwood on Jan. 10th. PDR to be signed once Development Agreement (DA) process is complete (expected April 2019).
- Completed the review of the appraisal for the 145th Park and Ride surplus action and transmitted appraisal to WSDOT for review and approval.
- Received Shoreline hearing examiner approval on McAleer Creek Critical Areas Special Use Permit (CASUP) on Jan. 19th.
- Attended Mountlake Terrace's public open house for the project's Conditional Use Permit (CUP) application on Jan. 23rd.
- Received L200 90% design submittals from the civil final design consultant for the 145th Station & Garage on Jan. 11th, and for the 185th Station on Jan. 31st.
- Received L300 90% design submittals for the stations & garage from the civil final design consultant on Jan. 31st.
- Completed negotiations L300 early work with Skanska; anticipate ST Board action in February.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

In January 2019, \$8.6M was incurred, of which \$3.3M was for advancing civil & systems final design, and \$4.1M was for property acquisition and relocation. The remaining expenditures were for third party coordination, permits, staff, legal, and other direct charges.

Commitments and incurred costs under the construction phase are related to permits, utility relocation, and early demolition activity.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$98.2	\$98.2	\$28.3	\$28.1	\$98.2	\$0.0
Preliminary Engineering	\$39.1	\$39.1	\$39.1	\$39.1	\$39.1	\$0.0
Final Design	\$164.2	\$164.2	\$111.2	\$95.5	\$164.2	\$0.0
Construction Services	\$128.4	\$128.4	\$20.6	\$17.0	\$128.4	\$0.0
3rd Party Agreements	\$14.6	\$14.6	\$10.1	\$5.5	\$14.6	\$0.0
Construction	\$1,921.4	\$1,921.4	\$19.6	\$4.6	\$1,921.4	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$235.7	\$235.7	\$127.8	\$117.9	\$235.7	\$0.0
Project Contingency	\$170.2	\$170.2	\$0.0	\$0.0	\$170.2	\$0.0
Total	\$2,771.6	\$2,771.6	\$356.6	\$307.6	\$2,771.6	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$791.8	\$791.8	\$0.0	\$0.0	\$791.8	\$0.0
20 Stations	\$333.8	\$333.8	\$0.0	\$0.0	\$333.8	\$0.0
30 Support Facilities	\$2.0	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
40 Sitework & Special Conditions	\$421.1	\$421.1	\$15.2	\$4.3	\$421.1	\$0.0
50 Systems	\$244.4	\$244.4	\$0.0	\$0.0	\$244.4	\$0.0
Construction Subtotal (10 - 50)	\$1,793.0	\$1,793.0	\$15.2	\$4.3	\$1,793.0	\$0.0
60 Row, Land	\$235.7	\$235.7	\$127.8	\$117.9	\$235.7	\$0.0
70 Vehicles (Non-Revenue)	\$1.4	\$1.4	\$0.0	\$0.0	\$1.4	\$0.0
80 Professional Services	\$449.3	\$449.3	\$213.7	\$185.4	\$449.3	\$0.0
90 Unallocated Contingency	\$292.2	\$292.2	\$0.0	\$0.0	\$292.2	\$0.0
Total (10 - 90)	\$2,771.6	\$2,771.6	\$356.6	\$307.6	\$2,771.6	\$0.0

Link Light Rail Lynnwood Link Extension



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

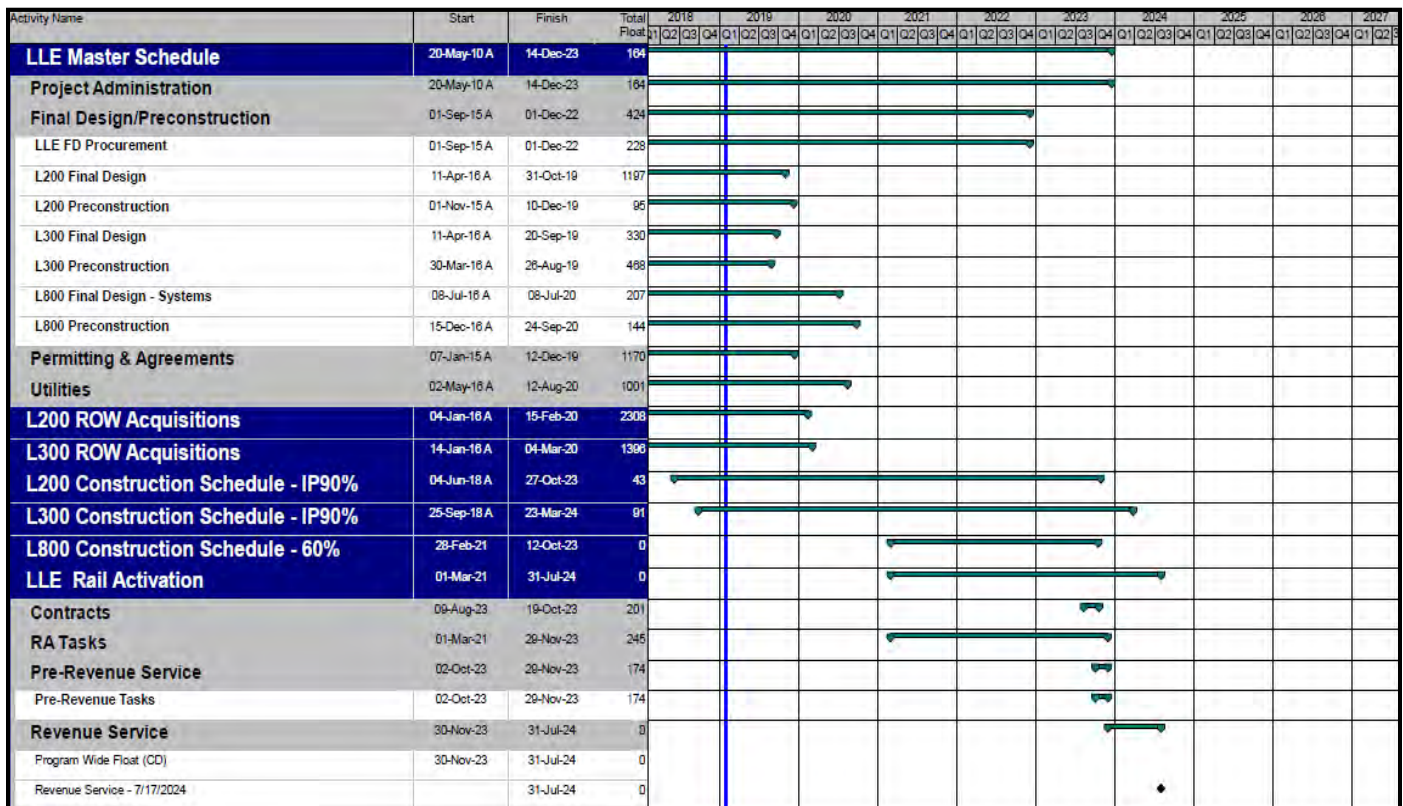
The next quarterly (1st QTR) risk update for the project is scheduled for March 2019. ST includes participation of construction management consultants and construction contractors in its risk management program.

The following are the top project risks:

- Obtaining permits—Cities, WSDOT and resource agencies.
- Timely completion of right-of-way acquisition.
- Construction market conditions.
- Differing site conditions encountered during construction.

Project Schedule

The work delineated in the Project Master Schedule continues to progress. The Notice-to-Proceed (NTP) for L200 was issued on January 8th authorizing the start of the Early Work scope of work. Right-of-Way acquisition and permitting continue to be closely monitored and managed for potential critical path impacts. The critical path for the program is once again driven by L200 permitting, due to revisions in the timelines for obtaining the Master Use Permits from the City of Seattle. The L200 Preliminary Construction schedule was submitted, reviewed, and ST is currently reviewing the resubmission. The L300 NTP is scheduled for early March 2019. Revenue Service for Lynnwood Link remains 2024.



Contingency Management

The Lynnwood Link project budget was baselined in May 2018 with a total contingency of \$737.7M.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is expected to be fully drawn when all construction contract packages are executed.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties.

During this period, AC decreased by a net amount of \$0.04 M. The change included contract closeout leading to a budget shift to contingency for a construction change order and for 3rd Party construction assistance. No drawdown to UAC occurred in this period.

1st QTR 2019 will include a significant drawdown to DA, with L200 & L300 contract early work scope fully quantified and contract packages executed.

Contingency Status (Monthly)

Type	Baseline		Current Status	
	Amount	% of Total	Remaining Amount	% of Work
Design Allowance	\$247.9	8.9%	\$247.9	10.1%
Allocated Contingency	\$197.6	7.1%	\$200.8	8.1%
Unallocated Contingency	\$292.2	10.5%	\$292.2	11.9%
Total:	\$737.7	26.6%	\$740.9	30.1%

Contingency by Type

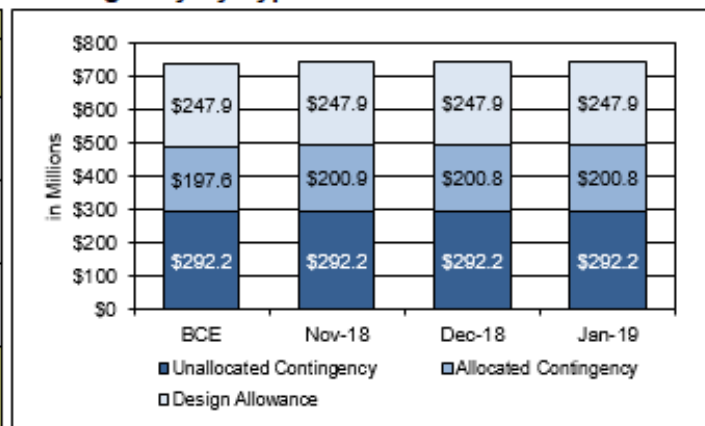
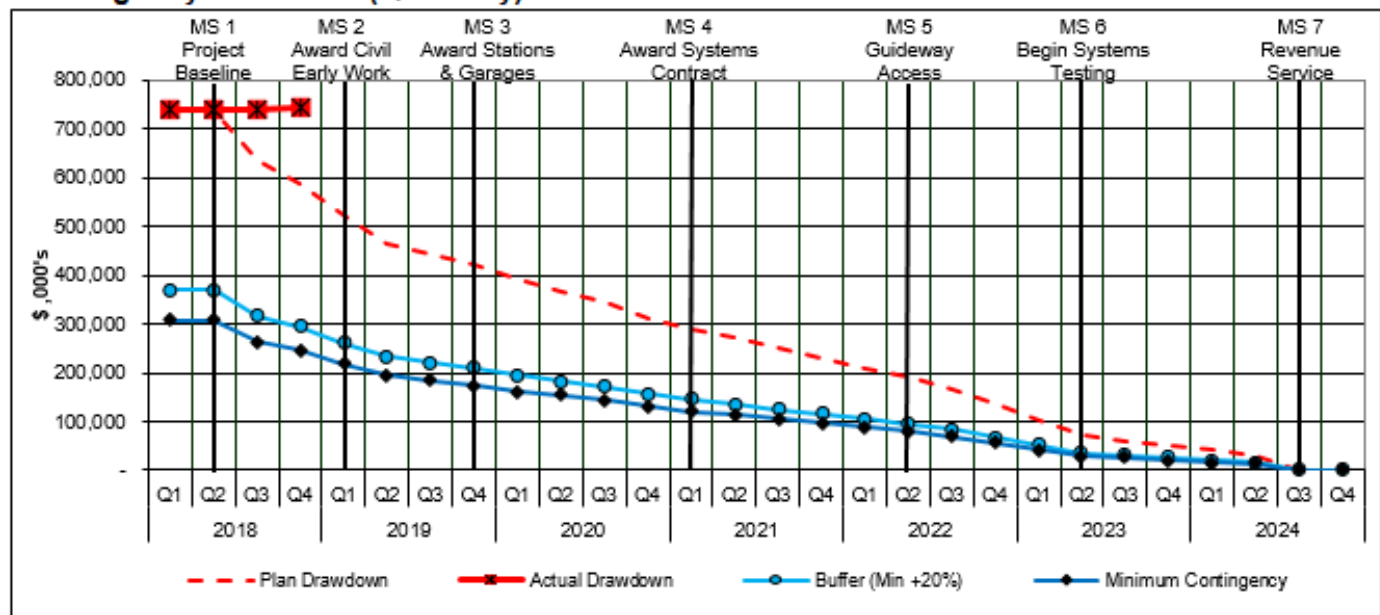


Table figures are shown in millions.

Contingency Drawdown (Quarterly)



Right-of-Way

The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The Right-of-Way program status for this period is summarized in the following table.

Lynnwood Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
373	355	316	151	249	185
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

Community Outreach

In January, the Lynnwood Link Community Outreach team:

- Finalized the Lynnwood Link Community Outreach and Communications Plan.
- Provided a project update and overview of the Community Outreach plan for construction to the Lynnwood and Mountlake Terrace City Councils on Jan. 16th and 17th respectively, and to the Sound Transit Board of Directors on Jan 24th.
- Published a project update to the Lynnwood Link email listserv (over 5,000 subscribers) recapping what transpired in 2018 while also looking ahead to what's coming in 2019 with the start of project construction.
- Responded to three inquiries from members of the public interested in the start date for Lynnwood Link construction.
- Published a post on Sound Transit's blog (The Platform) discussing the upcoming start of light rail construction with an emphasis on the tree removal/replacement program.
- Clarified parking rules for several members of the community at or around the Lynnwood Transit Center.
- Continued work with the Latvian Church to clarify access during construction.
- Attended an SR 522/NE 145th Bus Rapid Transit project event in Shoreline to present Lynnwood Link information.
- Confirmed details for the first pre-construction open house – Feb. 26th at Shorewood High School in Shoreline. Identified mid-April as the target time frame for pre-construction open houses in Mountlake Terrace and Lynnwood.
- Developed a Community Outreach and Communications Plan specific to the North Jackson Park-and-Ride closure currently scheduled for late March.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Civil Final Design Overview

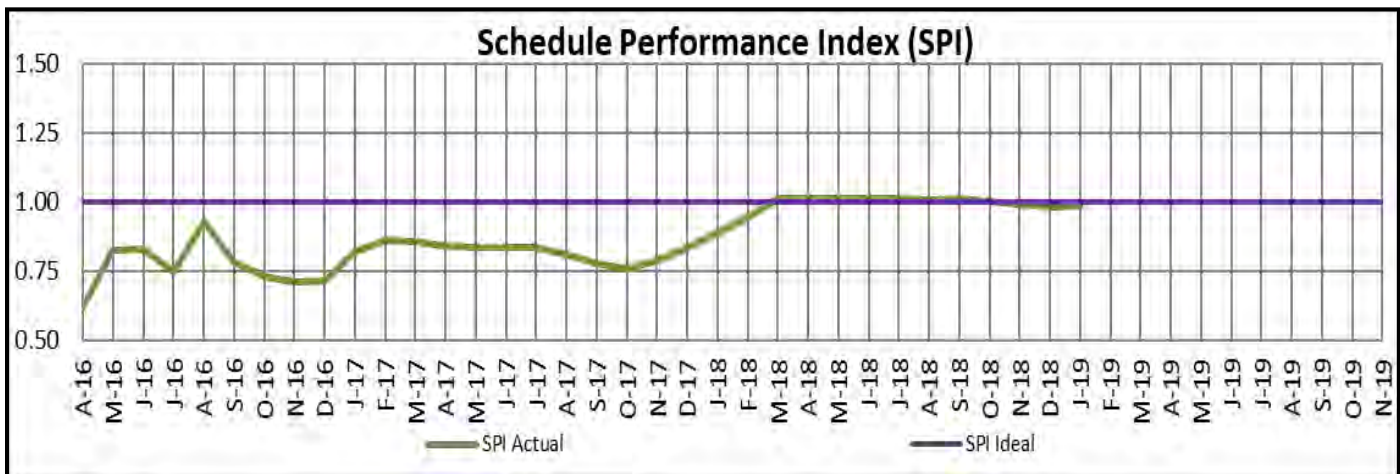
Sound Transit executed a professional services contract with HNTB Jacobs in April 2016 to perform civil final design along the entire Lynnwood Link alignment. Design services include preparation of comprehensive civil contract documents for construction, design coordination and cooperation with the GC/CM contractors, permit support, survey, geotechnical investigations, right-of-way planning and acquisition support, third party coordination support, risk assessment support, value engineering and constructability support, building and station systems design, cost estimating, and sustainability reports.

Current Progress

- Submitted L200 90% design for the 145th Station & Garage on Jan. 11th, and for the 185th Station on Jan. 31st.
- Submitted L300 90% design submittals for the stations & garage on Jan. 31st.
- Submitted L200/L300 100% guideway and civil design Pricing Set Revision (PSR) #1.
- Advanced work on building permit plans for submittal to the City of Shoreline.
- Advanced work to address design review comments.

Schedule Performance Index

The cumulative Schedule Performance Index (SPI) trends at 0.99 through January 2019, which means that the cumulative amount of work accomplished is close to the value of work planned.

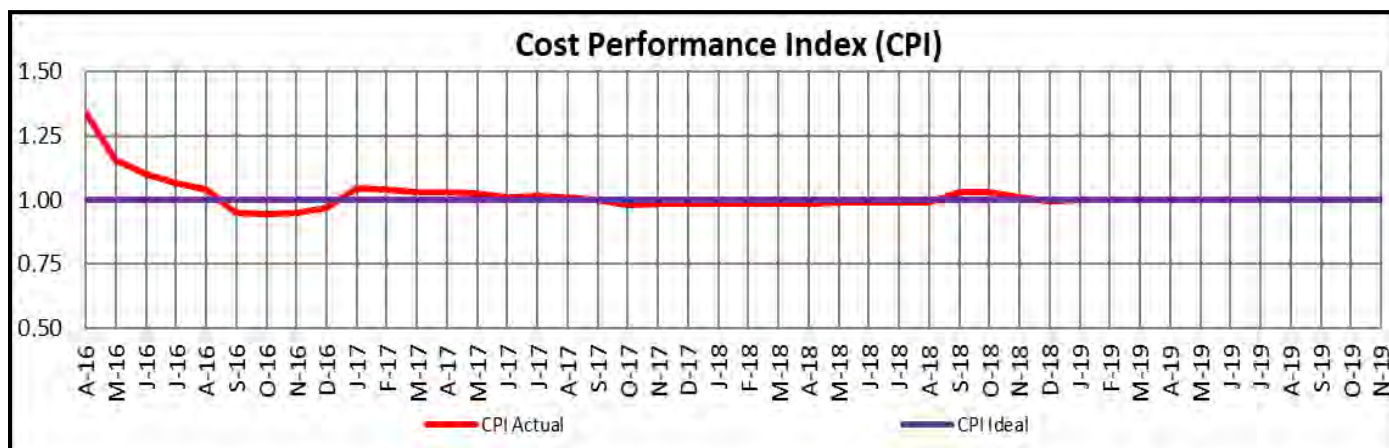


Link Light Rail Lynnwood Link Extension



Cost Performance Index

\$86.4 M of the total contract amount, 86%, has been spent through January 2019. The civil final design percent complete is 86%, with an earned value of \$86.3 M. The cumulative Cost Performance Index (CPI) through January is 1.00 indicating that actual costs are close to the earned value of work performed.



Cost Summary

Contract	Cumulative To-date
Amount Invoiced	\$86.4 M
% Spent	86%
Earned Value	\$86.3 M
% Complete	86%
SPI	0.99
CPI	1.00

Systems Final Design Overview

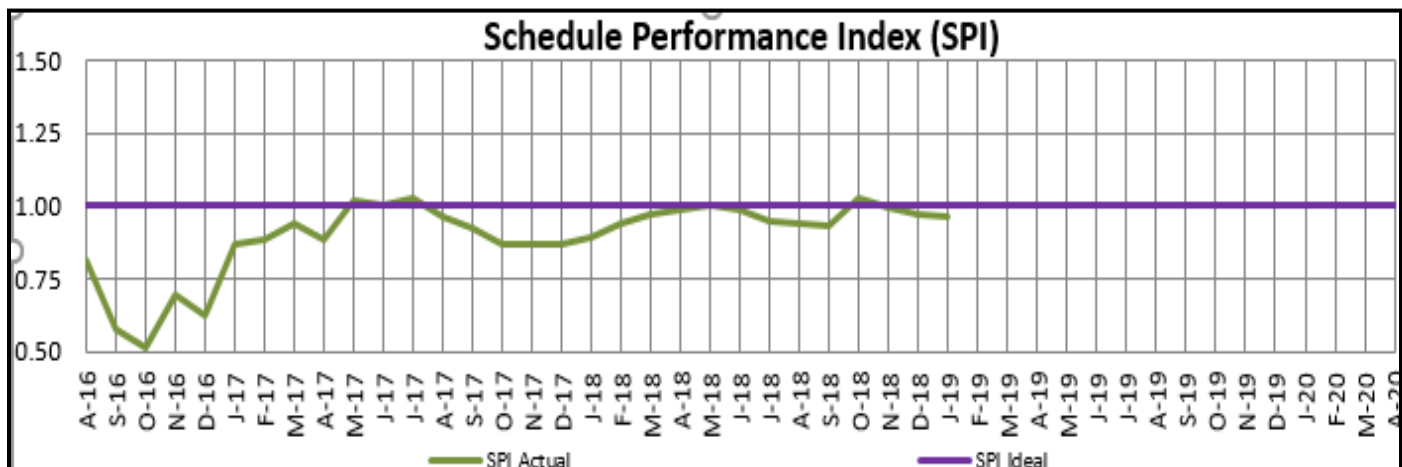
Sound Transit executed a professional services contract with LTK Engineering in July 2016 to perform systems final design along the entire Lynnwood Link alignment. Design services include preparation of comprehensive systems contract documents for construction, design coordination and cooperation with the civil final designer and GC/CM contractors, permit support, third party coordination support, risk assessment support, value engineering and constructability support, schedules and cost estimating.

Current Progress

- Performed review of civil design submittals.
- Developed new signals installation drawings for bonding of floating slab impedance and rail expansion joint.
- Signal System - 90% drawings mark-ups complete.

Schedule Performance Index

The cumulative Schedule Performance Index (SPI) trends at 0.96 through January 2019, which means that cumulative amount of work accomplished is close to the value of work planned.

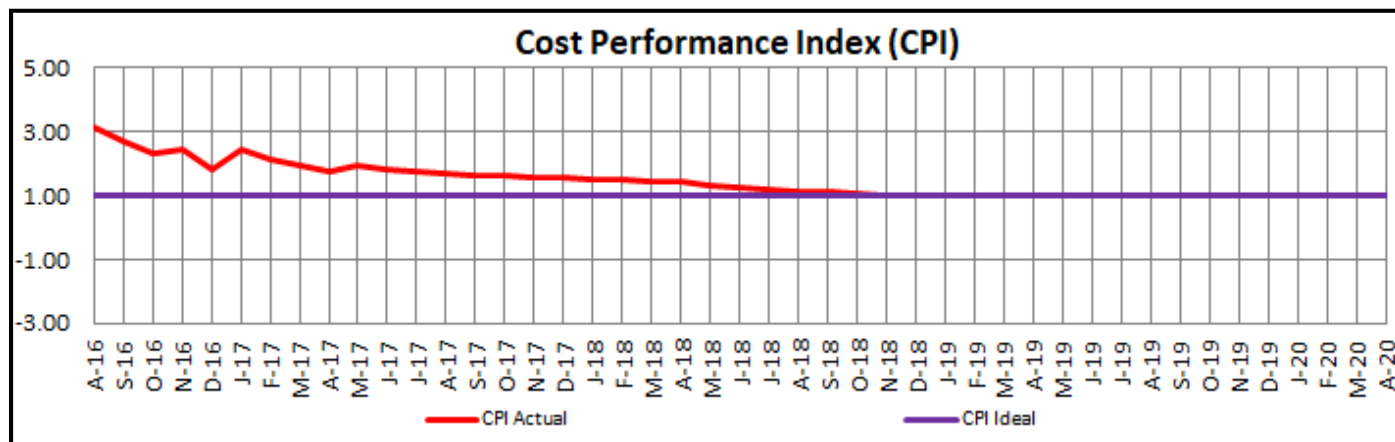


Link Light Rail Lynnwood Link Extension



Cost Performance Index

\$7.1 M of the total contract amount, 76%, has been spent through January 2019. The systems final design percent complete is 76%, with an earned value of \$7.1M. The cumulative Cost Performance Index (CPI) 1.0 indicating that actual costs are close to the earned value of work performed.



Cost Summary

Contract	Cumulative To-date
Amount Invoiced	\$7.1M
% Spent	76%
Earned Value	\$7.1M
% Complete	76%
SPI	0.96
CPI	1.00

GC/CM Pre-Con - L300 NE 200th St. to Lynnwood Transit Center

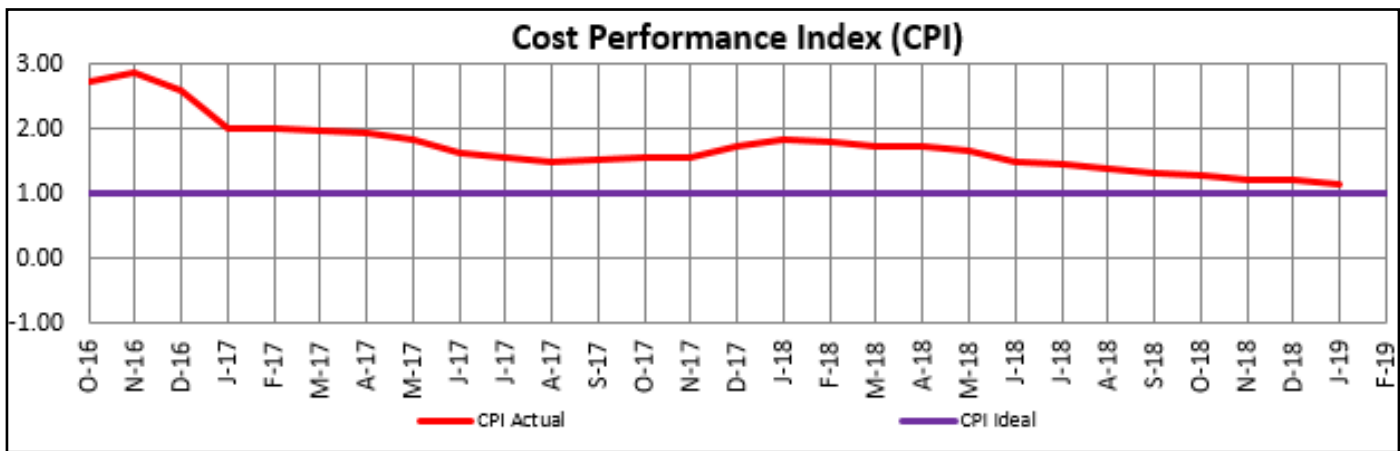
Sound Transit executed a professional services contract with Skanska in October 2016 to perform pre-construction services for the L300 segment, including assistance in preparation of final construction plans including traffic control, preparation of schedules, reviewing right-of-way needs, identifying potential early work, assisting in risk assessments, value engineering and constructability workshops, preparing cost estimates, and completing reviews of contract documents.

Current Progress

- Coordinated meetings with design, Construction Management Consultant (CMC), and Sound Transit teams.
- Progress on various pre-construction activities including cost estimating, schedules, and constructability review.
- Preparation for award and execution of L300 contract for early work.

Cost Performance Index

\$4.7 M of the total contract amount, 87%, has been spent through January 2019, with an earned value of \$5.3 M. The cumulative Cost Performance Index (CPI) is 1.15, indicating that expenditures are lower than expected for the earned value of work performed.



Cost Summary

Contract	Cumulative To-date
Amount Invoiced	\$4.7 M
% Spent	87%
Earned Value	\$5.3 M
CPI	1.15

Link Light Rail Lynnwood Link Extension



Contract L200 GC/CM - Northgate to NE 200th Street

Current Progress

The ST Board approved the L200 construction contract with Stacy & Witbeck– Kiewit– Hoffman JV (SKH) for early work scope in December 2018. This period, SKH performed the following work:

- Notice-to-Proceed issued Jan. 8th.
- Began mobilization and fulfilling insurance/bonding requirements.
- Started development of contract baseline schedule.
- Initiated contract submittal requirements to begin physical work (safety, environmental, etc.)

SKH is currently developing the contract baseline schedule. Schedule reporting will begin in March 2019.

Next Period Activities

- Continue contract submittal requirements.
- Site tree surveying.

Closely Monitored Issues:

- None to note.

Cost Summary

Financial Status	Amount
L200 Contractor - SKH	
Original Contract Value	\$ 88,147,258
Change Order Value	\$ 0
Current Contract Value	\$ 88,147,258
Total Actual Cost (Incurred to Date)	\$ 7,177,044
Financial Percent Complete	8.0%
Physical Percent Complete	0.0%
Authorized Contingency	\$ 6,170,342
Contingency Drawdown	\$ 0
Contingency Index	1.0

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Link Light Rail I-90 Two-Way Transit & HOV Operations (Stage 3)

Project Summary

Scope

The I-90 Two-Way Transit and HOV Operations (Stage 3) project provides approximately four miles of HOV lanes in each direction of the outer roadway between 80th Avenue South on Mercer Island and Rainier Avenue in Seattle. The project includes upgrades and retrofits to the fire, life, safety, and other systems in the Mount Baker and Mercer Island/First Hill tunnels. The project also includes remaining dowel bar retrofit work on the west side of Lake Washington, and the installation of screening on the shared-use pathway on the I-90 floating bridge.



Since June 2017, the project has provided 24/7 HOV access on I-90 between Seattle, Mercer Island and Bellevue.

Phase

Construction

Budget

\$225.6 Million

Schedule

Construction Complete: 1st QTR 2019

Major Contracts

	Scope	Agreement/Contract Amount
WSDOT	Final Design	\$ 20,942,000
WSDOT	CM Services	\$ 39,188,449
IMCO	Construction	\$131,515,559
City of Mercer Isl.	Transportation Mitigation	\$10,050,000

Key Project Activities

- **Work outside the tunnels** – Continue troubleshooting irrigation issues; ongoing finalization of materials documentation; Ongoing documentation & acceptance of factory warranty and additional test certifications.
- **Mercer Island Tunnel** – Monitoring fuel tank leak issues on back-up generator.
- **Mount Baker Ridge Tunnel** – Review interface issues between CCTV & Supervisory Control and Data Acquisition (SCADA) assignments; continue documentation of materials & warranty information; scheduled inspection and test of Mount Baker Tunnel infra-red scanners.
- **SCADA** – Final programming of SCADA control/report systems.
- **Simplex** – Ongoing mitigation of remaining programming issues.

Closely Monitored Issues

While the center roadway turnover to Sound Transit was completed on schedule, Substantial Completion continues to slip; achievement of Substantial Completion is anticipated for 1st QTR 2019, due to the following:

- Challenges continue with final commissioning of the Fire/Life/Safety Systems, including incomplete Business Information Modeling (BIM) As-Built data, incomplete or missing Operations & Maintenance manuals, and missing test reports;
- Ongoing resolution of irrigation system issues; and
- Unresolved issues with multiple punch list items.

Project Cost Summary

The following tables summarize the cost information for the I-90 Two-way Transit and HOV Operations (Stage 3) project. WSDOT has caught up on their invoice submittals, allowing resolution to past over-accruals and a more realistic expenditure forecast. January's Project expenditure indicates a negative \$65.6K, due to year-end over-accrual of WSDOT's construction and construction administration costs for December 2018. Future expenditures are expected to taper off. Tables below are in millions.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$3.6	\$3.6	\$2.3	\$2.3	\$3.6	\$0.0
Preliminary Engineering	\$1.5	\$1.5	\$1.5	\$1.5	\$1.5	\$0.0
Final Design	\$22.1	\$22.1	\$18.7	\$18.1	\$22.1	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$198.3	\$198.3	\$184.2	\$169.7	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$205.2	\$191.6	\$225.6	\$0.0

Totals may not equal column sums due to rounding of line entries.

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
40 Sitework & Special Conditions	\$180.6	\$190.7	\$184.2	\$169.7	\$190.7	\$0.0
80 Professional Services	\$26.3	\$26.3	\$22.6	\$21.9	\$26.3	\$0.0
90 Unallocated Contingency	\$18.7	\$8.7	\$0.0	\$0.0	\$8.7	\$0.0
Total	\$225.6	\$225.6	\$205.2	\$191.6	\$225.6	\$0.0

Totals may not equal column sums due to rounding of line entries.

Link Light Rail I-90 Two-Way Transit & HOV Operations (Stage 3)

Cost Contingency Management

In the table below, the Allocated Contingency includes both WSDOT-controlled construction contingency and the total ST-controlled allocated contingencies. There has been no change in the Current Contingency Amount from the last period, as WSDOT has not executed any change orders to the contract. This results in a 0.1% increase to the overall Current Contingency % when compared to the remaining work budgeted. (Table in millions)

Contingency Status	Baseline		Current	
	Amount	% of Total	Amount	Contingency as a % of Work Remaining
Design Allowance	\$0.0	0.0%	\$0.0	0.0%
Committed Allocated Contingency	\$17.0	7.5%	\$1.9	5.6%
Unallocated Contingency	\$18.7	8.3%	\$8.7	25.4%
Total:	\$35.7	15.8%	\$10.6	31.0%

NOTE: CTG as % of Work Remaining is calculated as % of Budget Remaining

Project Schedule

Project Milestones for construction are indicated below; forecast dates were submitted by WSDOT as anticipated dates, but have not at this time been accepted. Ongoing negotiations between WSDOT and the contractor to resolve commercial issues continue to push out the forecast Substantial and Physical Completion dates, now anticipated for 1st QTR 2019.

Contract	Final Tunnel Commissioning Complete		Substantial Completion		Center Roadway Turnover		Physical Completion	
	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual	Baseline	Forecast / Actual
I-90 Two-Way Transit & HOV Operations Stage 3	2/16/2017	Q1/2019	2/20/2017	Q1/2019	5/31/2017	6/14/2017 A	5/31/2017	Q1/2019

Changes from previous update are indicated in **RED**; A indicates Actual



Troubleshooting systems alarms.



Inspecting MI Tunnel back-up generator fuel piping

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Link Light Rail East Link Extension

Project Summary

Scope

Limits	Fourteen-mile extension from Downtown Seattle to Mercer Island, Bellevue and the Overlake area of Redmond.
Alignment	East Link Extension expands light rail to East King County via I-90 from Downtown Seattle to the Overlake Transit Center area of Redmond.
Stations	Judkins Park, Mercer Island, South Bellevue, East Main, Bellevue Downtown, Wilburton, Spring District/120th, Bel-Red/130th, Overlake Village (OVS) and Redmond Technology Center (RTS).
Systems	Signals, traction electrification, and communications (SCADA).
Phase	Construction
Budget	\$3.677 Billion (Baseline April 2015)
Schedule	Revenue Service: June 2023



Map of East Link Extension Alignment.

Key Project Activities

Seattle to South Bellevue

- **Floating Bridge Retrofit (E130):** WSDOT's winter work constraint in effect; continued electrical retrofit for cathodic protection, seismic retrofit of approach structures, forming and pouring Dex-G surface treatment for plinth attachment.
- **Mercer Island (E130):** Ongoing electrical & structural retrofits at MI Tunnel & E Channel Bridge; structure & utility construction at Mercer Island Station; direct fixation track installation and rail crossover.
- **IDS to Mt. Baker Tunnel (E130):** Ongoing tunnel electrical & structural retrofits; TPSS 2 structure & utilities construction; progress on Judkins Park Station East Head House structures and utilities, West Head House excavation for pile caps.

South Bellevue to Redmond

- **South Bellevue (E320):** Continued long span work over I-90, trench excavation for undercrossing at 112th Ave undercrossing. Progressed parking garage work, starting vertical work on the south side of the garage.
- **Downtown Bellevue Tunnel (E330):** Continued waterproofing, installing rebar, drainage pipe and electrical conduits and placing concrete in tunnel invert.
- **Downtown Bellevue to Spring District (E335):** Continued aerial guideway work. Progressed and reinforcing for the 120th Station platform and interior walls, begun excavation for footings and elevator pits at Wilburton Station, utility installation and footings and foundation walls on Bellevue Downtown Station.
- **Bel-Red (E340):** Continued placing end diaphragms, forming bridge deck at the aerial guideway. Completed wall panel placement at south-side station. Began excavation and shoring for wall at 136th PI NE.
- **SR520 to Redmond Technology Station (E360):** Design – IFC for Design Package 16 OVS Pedestrian Bridge submitted for final validation and approval. Construction – Five girders spans were set, Redmond Technology Station garage construction continues, OVS Pedestrian Bridge placement of Pier #3 column and cap.
- **Systems (E750):** Continued with submittals, components, product design, and Coordinated Installation Plan discussions.

Closely Monitored Issues

- Completing remaining property acquisitions and easements from both public and private owners.
- Timely submissions and issuance of construction permits.
- With ongoing construction in all segments, construction safety and environment compliance are priorities.
- Unidentified commercial utility connections within roadways and private properties continues to be challenging.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

The Estimated Final Cost (EFC) continues to be projected at approximately \$3.68B. This period's expenditure is about \$42.7M, pushing the total project expenditure to date cost from \$1.66B to \$1.71B. Project commitments has risen to over \$3B with all major construction contracts in place and construction is on-going throughout the alignment.

Cost Summary by Phase

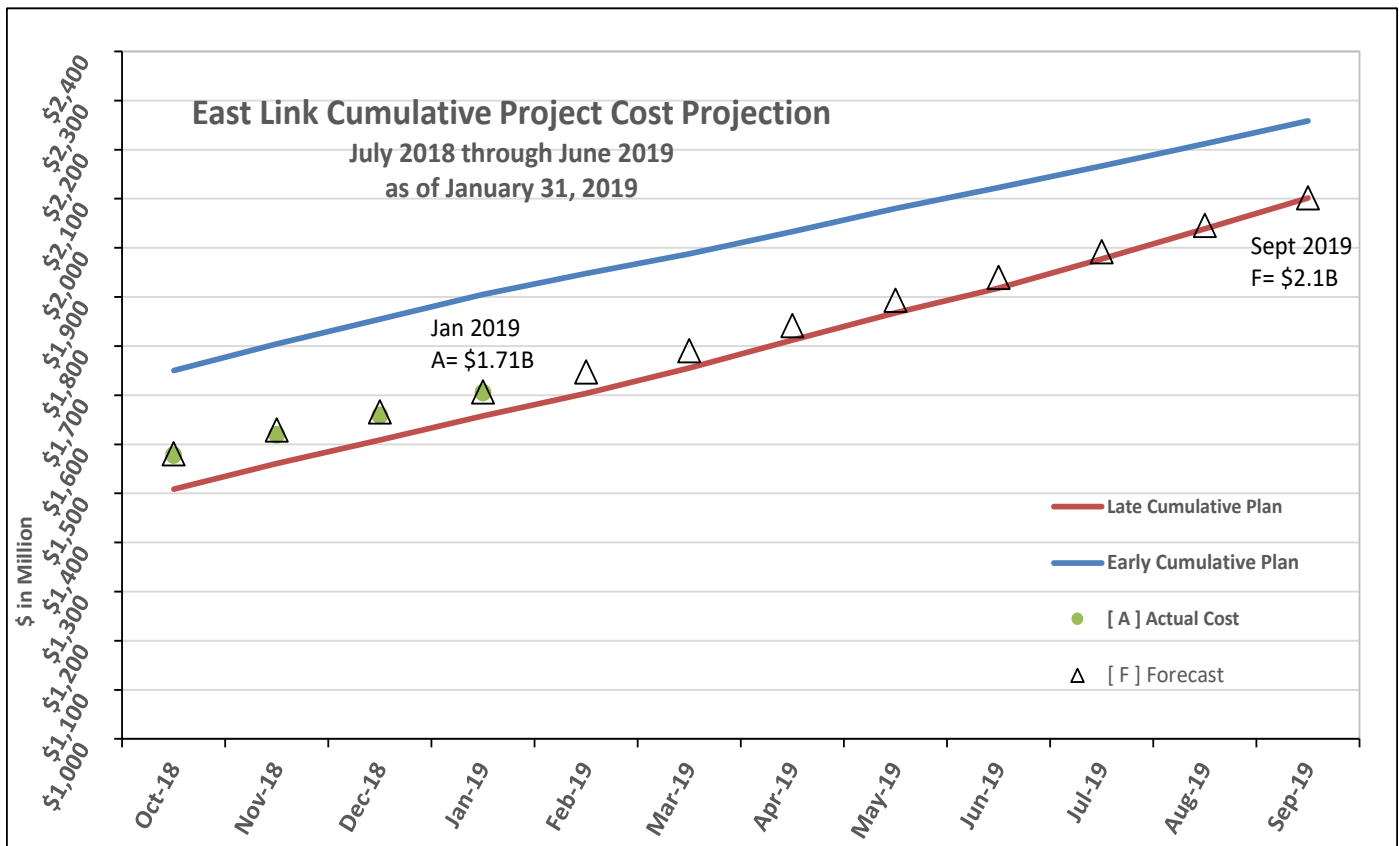
Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$186.2	\$186.2	\$78.0	\$77.9	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.8	\$54.8	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$245.6	\$213.5	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$196.7	\$82.1	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$38.5	\$22.6	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$2,158.0	\$987.5	\$2,544.3	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$298.2	\$298.2	\$268.7	\$267.6	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$3,040.3	\$1,705.9	\$3,677.1	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$744.6	\$949.7	\$891.8	\$492.3	\$959.1	(\$214.5)
20 Stations	\$397.7	\$474.2	\$434.9	\$156.2	\$470.9	(\$73.2)
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$808.5	\$568.3	\$461.4	\$264.6	\$600.2	\$208.3
50 Systems	\$353.8	\$367.9	\$347.3	\$61.2	\$329.8	\$24.0
Construction Subtotal (10 - 50)	\$2,304.6	\$2,360.1	\$2,135.3	\$974.3	\$2,360.0	(\$55.4)
60 Row, Land	\$288.5	\$288.5	\$268.7	\$267.6	\$288.5	\$0.0
70 Vehicles (non-revenue)	\$2.8	\$2.8	\$0.0	\$0.0	\$2.8	\$0.0
80 Professional Services	\$898.4	\$889.1	\$636.4	\$464.0	\$889.2	\$9.2
90 Unallocated Contingency	\$182.9	\$136.6	\$0.0	\$0.0	\$136.6	\$46.2
Total (10 - 90)	\$3,677.2	\$3,677.2	\$3,040.3	\$1,705.9	\$3,677.1	\$0.0

Project Cash Flow Projection

The East Link cost projection continues to progress within the planned expenditure as construction activities continue to pickup. This period's project expenditure topped out at approximately \$46.5M where Construction Phase is responsible for over 87% or approximately \$42.7M of January's expenditure. Total project cost incurred to date topped \$1.71B, to which about \$987M was recorded in the Construction Phase. The project expenditures continue to pick up and is predicted to rise to approximately \$2.1B by September 2019, taking into consideration slower winter construction activities.



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks.

The 4th QTR 2018 risks updates have been completed and is being finalized. Draft of the Risk Mitigation Milestone #4 (completion of SEM Tunneling) report is completed and given the current risk profile in the project, there are sufficient schedule and budget in the project to complete in accordance to baseline. The following are the current top project wide risks areas:

- Coordination and completion of the relocations of public and private utilities.
- Compliance with environmental requirements.
- Competitiveness in the construction market and potential shortage of skilled labor.
- Interfaces between various contracts and third party jurisdictions.

Contingency Management

East Link project budget was baselined on April 2015 with a total contingency of \$795.9M. At the end of this period, all major construction contracts have been procured, the total contingency balance stands at \$412.3M (previously \$413.5M). The current contingency balance is consistent with the project's planned contingency drawdown.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is unchanged this period with a balance at \$3.6M and is expected to be fully drawn when all construction scope are executed.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. This period, AC decreased by a net amount of approximately \$1.2M bring the AC to \$272.0M. The contingency draw in this period is primarily driven by aggregation of construction change orders in the project, primarily the construction contracts.

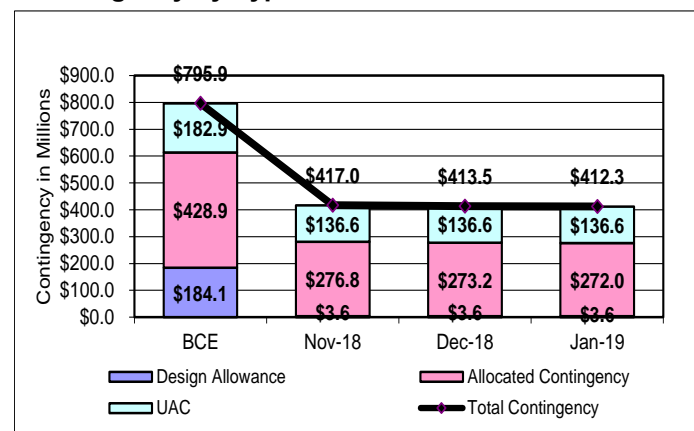
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance remains unchanged at \$136.6M.

Contingency Status

Contingency Type	Baseline		Current Status	
	Amount	% of Total Budget	Amount Remaining	% of Work Remaining
Design Allowance	\$184.1	5.0%	\$3.6	0.2%
Allocated Contingency	\$428.9	11.7%	\$272.0	13.8%
Unallocated Contingency	\$182.9	5.0%	\$136.6	6.9%
Total	\$795.9	21.6%	\$412.3	20.9%

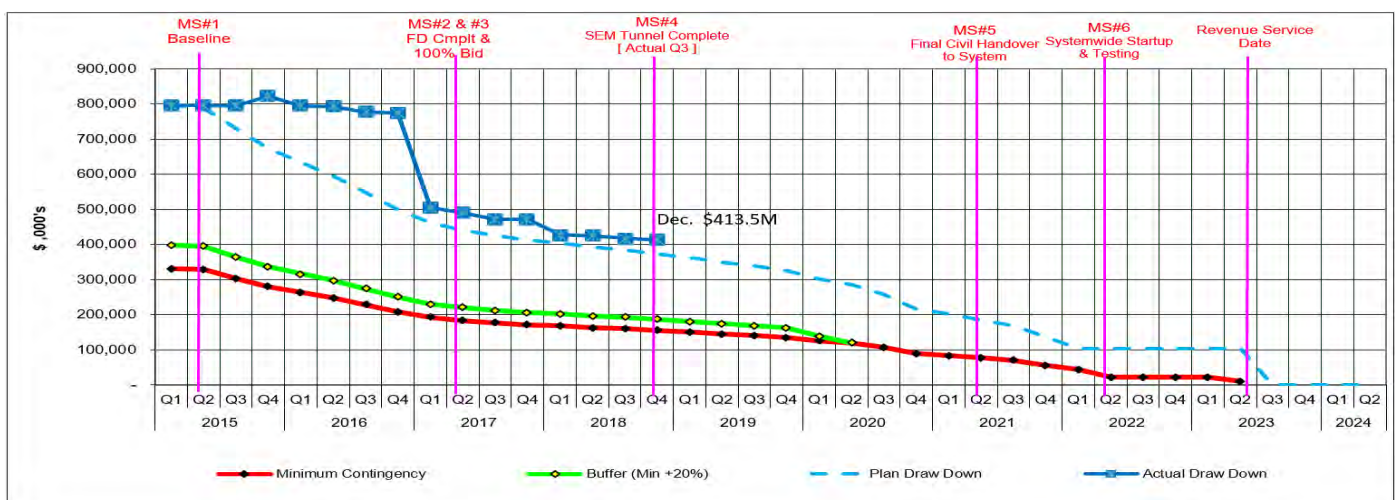
Table figures are shown in millions.

Contingency by Type



Contingency Drawdown

At the end of the 4th QTR 2018, East Link Project's total contingency drawdown plan is trending within plan with an overall balance was approximately \$413.5M and with all major construction contracts procured, remains above the baseline draw down projection and well above both the minimum contingency and the buffered (minimum plus 20%) contingency levels. The contingencies at the end of December represented a draw of \$4.4M in the 4th QTR 2018. The next update will be for 1st QTR 2019.



Contingency Drawdown as of December 31, 2018

Link Light Rail East Link Extension



Project Schedule

The Integrated Master Schedule is presented below.

E130 continued work on demonstration section of direct fixation track on the floating bridge; continued structural work on both stations and continued installing ballasted track on the East Channel Bridge.

E320 finished placing tub girders; long-span segmental work continued over I-90; continued installing walls at the parking garage, along Bellevue Way SE, and at the 112th undercrossing; continued removal of roadway at 112th undercrossing.

E330 continued final tunnel lining work, including waterproofing application.

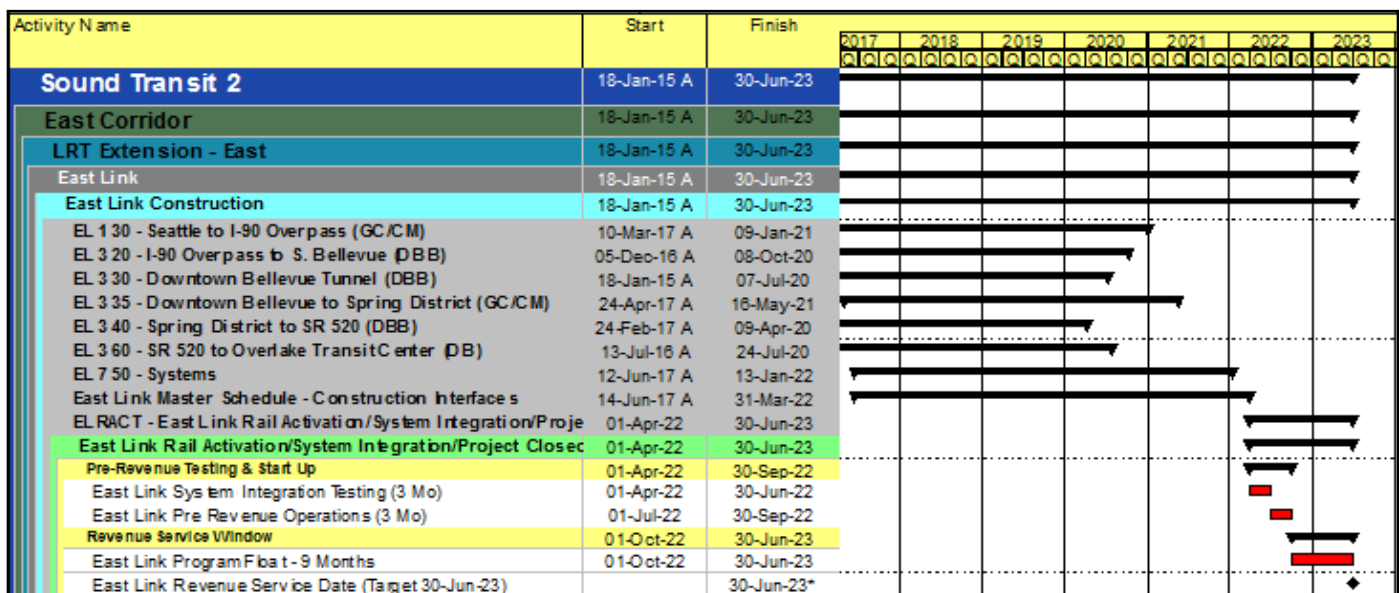
E335 continued work on aerial guideway and the long span over I-405; commenced work at Wilburton Station with excavation for footings and elevator pits; installed falsework for the cut & cover lid at the north portal.

E340 continued sanitary sewer installation and retaining wall placement on Spring Blvd; completed wall panel placement for the south side retaining wall at 130th Station; and continued placing bridge deck for the aerial guideway.

E360 continued placing girders and diaphragms. Wall placement continued, working east toward RTS. Continued RTS garage with level 2/3 columns and deck/beams.

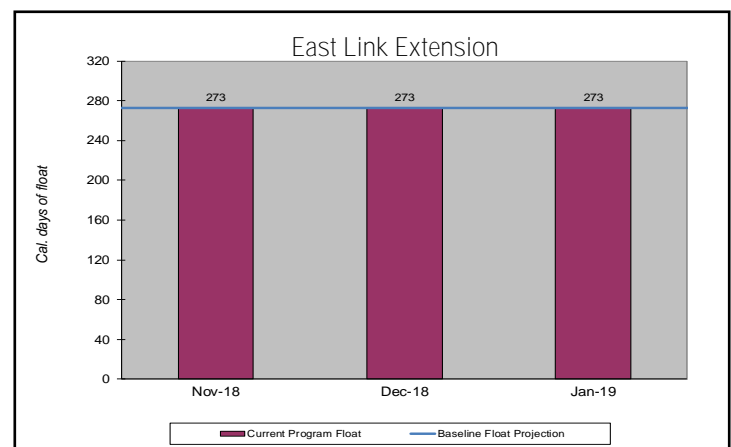
E750 Systems contractor continued product design, submittal, and procurement. Systems construction on East Link is anticipated to start on the eastern segment of E130 in Summer of 2019.

All contracts are forecast to complete on or before target. Revenue Service is forecasted in June 2023.



Project Float

East Link was baselined with 273 days of program float. No float has been used to date.



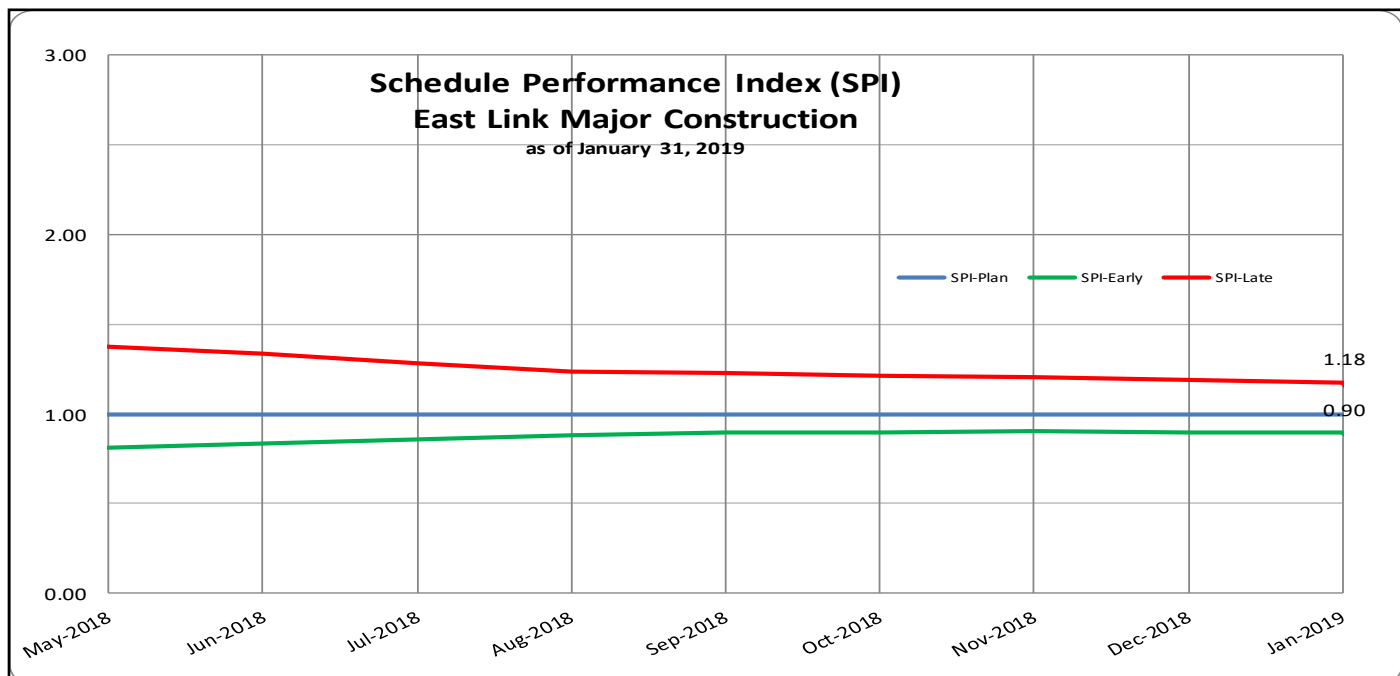
Critical Path Analysis

The East Link Critical path is currently contained entirely within the E750 Systems contract, where work has begun on signalization on North Link; the signal crew will begin work on East Link this summer. Near-critical paths along the alignment will continue to be monitored closely.

Activity Name	Start	Finish	2019	2020	2021	2022	2023
EL 130 - Seattle to I-90 Overpass (GC/CM)			Q	Q	Q	Q	Q
EL 320 - I-90 Overpass to S. Bellevue (DBB)							
EL 330 - Downtown Bellevue Tunnel (DBB)							
EL 335 - Downtown Bellevue to Spring District (GC/CM)							
EL 340 - Spring District to SR 520 (DBB)							
EL 360 - SR 520 to Overtake Transit Center (DB)							
EL 750 - Systems	15-Aug-18 A	31-Dec-21					
E750 Construction	15-Aug-18 A	31-Dec-21					
N830 Project	15-Aug-18 A	14-Feb-19					
N830 Construction	15-Aug-18 A	14-Feb-19					
N830 Signals	15-Aug-18 A	14-Feb-19					
E750 Project	15-Dec-18	31-Dec-21					
E750 Engineering	02-Nov-21	31-Dec-21					
E750 Construction	15-Dec-18	31-Dec-21					
E750 Milestones	31-Dec-21	31-Dec-21					
E750 Signals	15-Dec-18	25-May-21					
E750 Testing and Commissioning	13-May-21	01-Nov-21					
East Link Master Schedule - Construction Interface s	01-Jan-22	31-Mar-22					
EL RACT - East Link Rail Activation/System Integration/Project Closeout	01-Apr-22	30-Jun-23					
East Link Rail Activation/System Integration/Project Closeout	01-Apr-22	30-Jun-23					
Pre-Revenue Testing & Start Up	01-Apr-22	30-Sep-22					
East Link System Integration Testing (3 Mo)	01-Apr-22	30-Jun-22					
East Link Pre Revenue Operations (3 Mo)	01-Jul-22	30-Sep-22					
Revenue Service Window	01-Oct-22	30-Jun-23					
East Link Program Float - 9 Months	01-Oct-22	30-Jun-23					
East Link Revenue Service Date (Target 30-Jun-23)		30-Jun-23*					

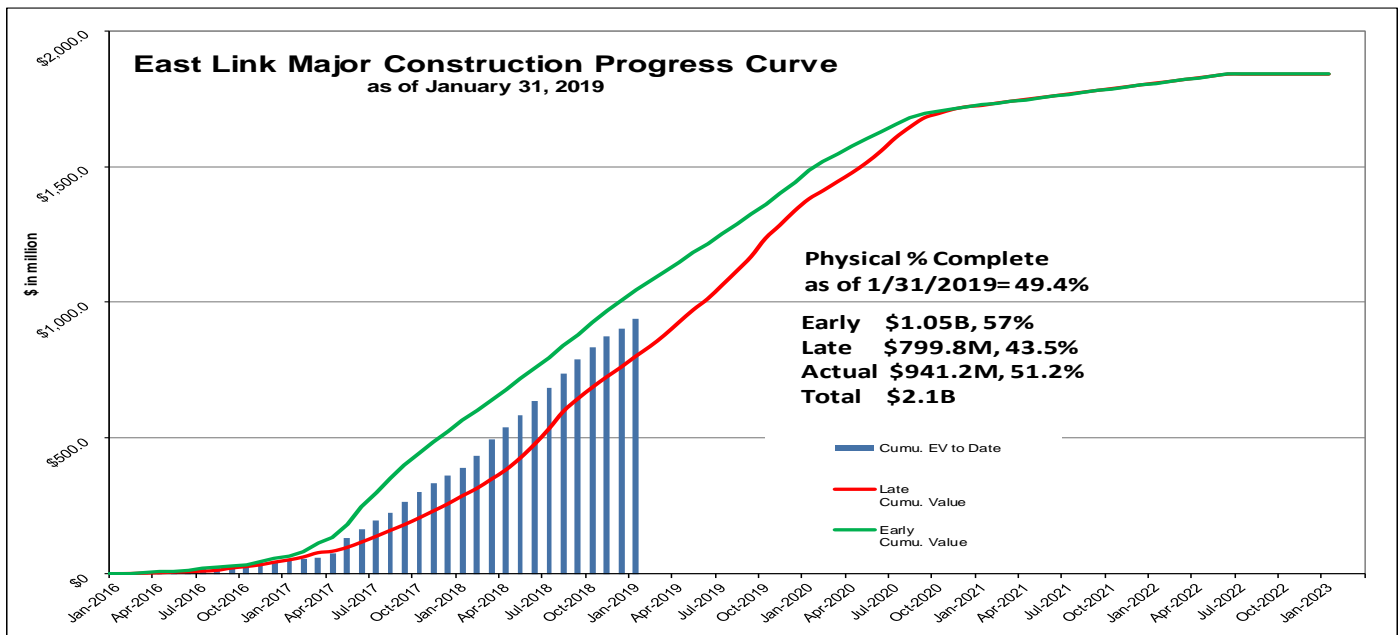
Schedule Performance Index

The early Schedule Performance Index (SPI) for East Link's Major Construction Packages is at 0.9 for this period, which is the same as last month. The late SPI is at 1.18 showing that in general, performance is satisfactory.



Project Cash Flow Projection

All seven major construction contractors are now mobilized. All major civil work is well underway. The overall East Link Major Construction percent complete analysis is based on a weighted measurement among the seven major construction contracts' schedule, duration and cost. The graph below shows the aggregate cost progression for these construction contracts. As of the end of December, performance is trending appropriately between the early/late projection as drawn from the master schedule. The overall physical percent complete for East Link construction is approximately 49.4%.



E360 SR520 to Redmond Technology Station: Span 16 Girder erection at the sweeper site along SR 520

Right-of-Way

The East Link Extension involves the acquisition of a range of property interests including fee acquisitions for stations, guideway, staging areas, support facilities, and tunnel and guideway easements as well as permanent and temporary easements for construction. These acquisitions resulted in owner and tenant residential and commercial relocations. Property acquisition and relocations are mostly complete, with limited processing of relocation claims and coordination of property transfers with the City of Bellevue remaining. The right-of-way program status for this period is summarized in the following table:

East Link Ext Extension Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
237	244	234	226	227	226
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

Community Outreach

- Ongoing distribution of weekly construction alerts for maintenance of traffic activities for Mercer Island, Bellevue and Redmond. Coordinated many briefings and meetings with impacted neighbors about upcoming major traffic changes including but not limited to full closures.
- Ongoing engagement with individual property owners, members of the public and impacted neighbors on a variety of concerns including demolition, noise wall construction, signage, night time noise, traffic, access, maintenance of traffic, irrigation line repairs.
- Briefed Mercer Island Chambers of Commerce.

Sound Transit Board Actions

Board Action	Description	Date
	None this period	

Construction Safety

Data/ Measure	January 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	2	2	42
Days Away From Work Cases	1	1	8
Total Days Away From Work	9	9	393
First Aid Cases	8	8	132
Reported Near Mishaps	3	3	196
Average Number of Employees on Worksite	1014	-	-
Total # of Hours (GC & Subs)	140,788	140,788	2,703,974
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	2.84	2.84	3.11
LTI Rate	1.42	1.42	0.59
Recordable National Average	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates. All previous months' numbers are reconciled and replaced with actuals.

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Major Construction Contract Packages

Below are the major construction contract packages for the project with a brief scope description of each.

R8A Stage 3A – Modification of HOV Ramp between I-90 and Bellevue Way SE. [Design-bid-build]

Status: Completed and Operational.

E130 Seattle to South Bellevue – International District Station (IDS) modification, Retrofit of existing WSDOT structures, I-90 Center Roadway and two light rail stations. [Heavy Civil GC/CM]

Status: See following pages under Contract E130.

E320 South Bellevue – One light rail station and a parking garage at South Bellevue P&R; aerial, at-grade and retained-cut guideway along Bellevue Way SE and 112th Avenue SE. [Design-bid-build]

Status: See following pages under Contract E320.

E330 Downtown Bellevue Tunnel – SEM Tunneling along 110th Ave. NE in Downtown Bellevue. [Design-bid-build]

Status: See following pages under Contract E330.

E335 Downtown Bellevue to Spring District – Four light rail stations; aerial, at-grade and retained-cut guideway from Downtown Bellevue, over I-405 to 124th Ave. NE. [Heavy Civil GC/CM]

Status: See following pages under Contract E335.

E340 Bel-Red – One light rail station, aerial and at-grade guideway from 124th Ave. NE to NE 20th. [Design-bid-build]

Status: See following pages under Contract E340.

E360 SR520 to Redmond Technology Station – Two light rail stations; aerial and retained-cut guideway along SR-520 in the Overlake area of Bellevue and Redmond. [Design-Build]

Status: See following pages under Contract E360.

E750 Systems – Light rail systems elements, including Traction Power Electrification, Overhead Catenary System, Train Signals and Communication System. Combined with Northgate Link N830. [Heavy Civil GC/CM]

Status: Contractor continues with critical submittal, reviews of plans, component and product designs as well as meetings with civil contractors with regards to the Coordinated Installation Plan (CIP).



E320 South Bellevue: Construction progress on the aerial guideway off I-90 on to S. Bellevue Way looking north

Contract E130 – Seattle to South Bellevue Heavy Civil GC/CM

Current Progress

D2 Structure & Mt. Baker Tunnel (West Segment): Ongoing tunnel electrical & structural retrofits; TPSS 2 structure & utilities construction; ongoing construction of Judkins Park Station East Head House structures and utilities, West Head House excavation for pile caps

Floating Bridge Retrofit (Center Segment): WSDOT's winter work constraint in effect; continued electrical retrofit for cathodic protection, seismic retrofit of approach structures, form and pour Dex-G and Corkelast for direct rail attachment

Mercer Island (East Segment): Ongoing electrical & structural retrofits at MI Tunnel & E Channel Bridge; structure & utility construction at Mercer Island Station; direct fixation track installation and rail crossover

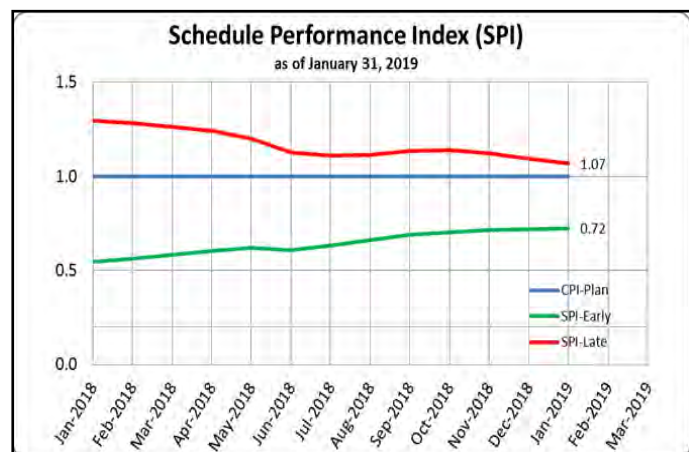
Schedule Summary

The critical path for this project continues to run through Judkins Park Station. Contractor is currently forecast to achieve all milestones on or ahead of target completion dates.

Activity Name	Start	Finish	2019				2020			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
E130 Construction	10-Mar-17 A	09-Jan-21								
Milestones	10-Mar-17 A	09-Jan-21								
Access Milestones	10-Mar-17 A	12-May-17 A								
16. Notice to Proceed - Package 1	10-Mar-17 A									
16. Notice To Proceed - Remaining Scope	12-May-17 A									
Major Project Completion Milestones	23-Jul-19	09-Jan-21								
16. MS#01 - Substantial Completion Mercer Island Station to East End Of Project (17-Jul-19)		23-Jul-19*								
16. MS#02 - Substantial Completion Mercer Island Station to West Mercer Island Lid (29-Jan-20)		08-Jan-20*								
16. MS#03 - Substantial Completion of IDS Conversion (27-Feb-20)		23-Feb-20*								
16. ST E130 Work Complete		10-Nov-20								
16. MS#04 - Substantial Completion All Work (12-Dec-20)		10-Dec-20*								
16. Acceptance		09-Jan-21								
Construction	20-Mar-17 A	10-Nov-20								
Preliminary Activities	03-Apr-17 A	07-Oct-20								
Sitework	23-Aug-17 A	07-Feb-19								
Demolition	20-Jul-17 A	05-Apr-19								
Tunnel Modifications	18-Sep-17 A	28-Sep-19								
Stations	15-Sep-17 A	23-Sep-20								
OCS Bases/Frames	02-Apr-18 A	10-Aug-20								
Civil/Utilities	05-Jul-17 A	10-Nov-20								
Electrical	20-Mar-17 A	08-Oct-20								
Structures Retrofit	20-Mar-17 A	10-Nov-20								
Trackwork	29-Jan-18 A	02-Nov-20								
Systems	26-Jun-17 A	10-Nov-20								
IDS Modification	16-Sep-19	23-Feb-20								

Schedule Performance Index

This period, the SPI early remains at 0.72, SPI late is 1.07. The early index indicates the Contractor is behind their early finish plans; the late index shows the Contractor remains on target with their late finish plan. Challenges were encountered in the initial phases of the post-tensioning scope; current figures indicate the Contractor continues to catch up to their baseline plan. WSDOT's winter work restrictions on the Floating Bridge end April 1, 2019; during this time, activities on the floating bridge are limited to those not requiring movement of ballast in the pontoons.



Link Light Rail East Link Extension

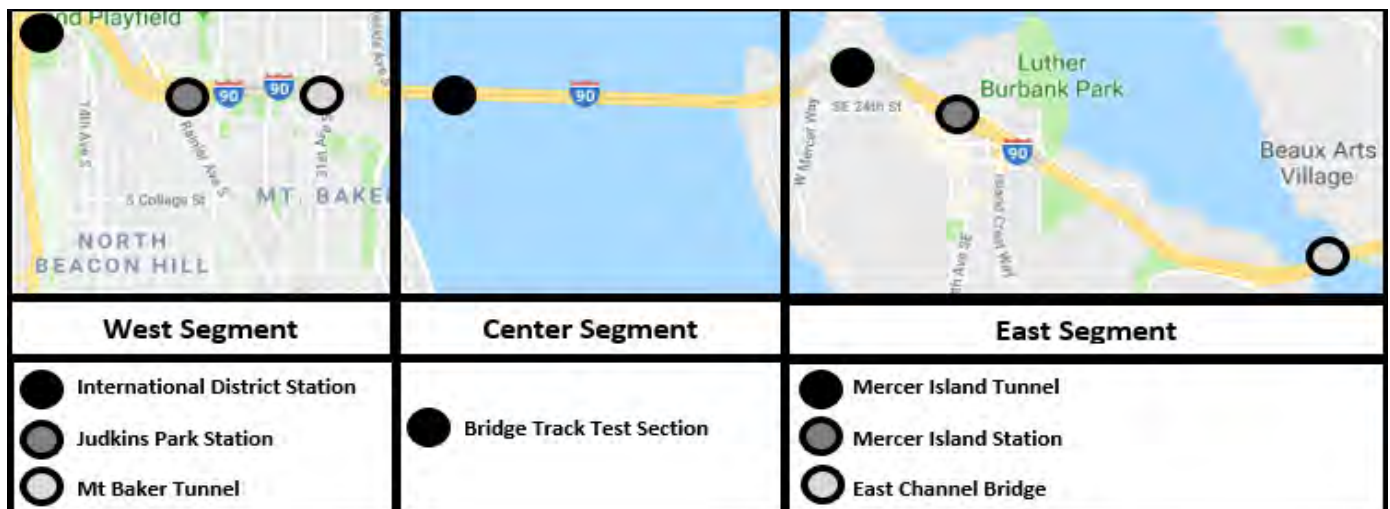
Next Period's Activities

- **West Segment:** Continue electrical and structure retrofits; ongoing TPSS 2 utilities, Judkins Park Station construction.
- **HMH Floating Bridge (Center Segment):** Continue cathodic protection, approach structures seismic retrofits, prep for direct rail attachment.
- **East Segment:** Ongoing electrical & structure retrofits at MI Tunnel & E Channel Bridge; ongoing structure & utility construction at Mercer Island Station; ongoing ballasted track installation.

Closely Monitored Issues

- Extent of variations in the actual deck thickness on the East Channel Bridge and potential ramifications
- Timeliness of utility service connections on Mercer Island regarding Milestone 1 and E750 interface.
- Third party coordination of rail tie-in activities at the International District Station

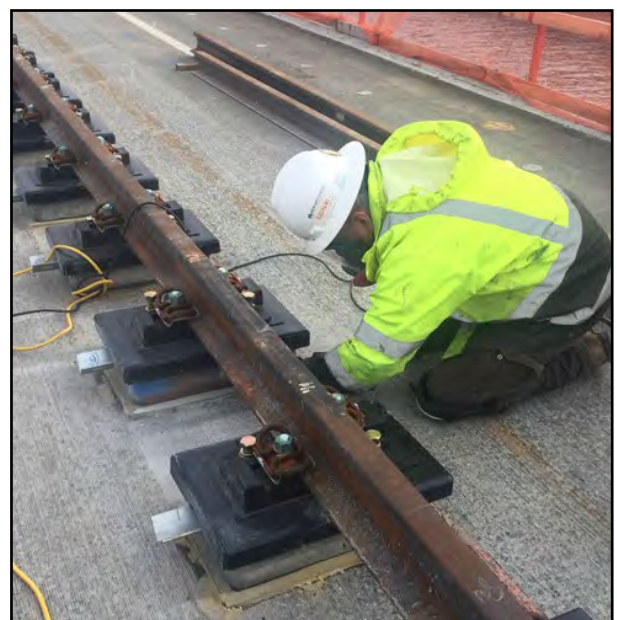
E130 Construction Activities



Cost Summary

Present Financial Status	Amount
E130 Contractor - Kiewit-Hoffman	
Original Contract Value (incl. Phase 2 MACC)	\$665,000,000
Change Order Value	\$19,511,299
Current Contract Value	\$683,511,299
Total Actual Cost (Incurred to Date)	\$326,540,873
Percent Complete	45.96%
Authorized Contingency	\$46,660,541
Contingency Drawdown	\$19,511,299
Contingency Index	1.1

Contract Value excludes Betterment



Track test section installation on the floating bridge

Contract E320 – South Bellevue

Current Progress

I-90 Flyover: Continued long span segmental work crossing I-90; finished tub girder placement; pouring of top deck on aerial guideway and finish excavating subgrade on I-90 track slab; commence restoration of 108th Ave.

Bellevue Way SE: Continued installing lagging tiebacks on East and West walls; excavation under Winter House lid; begun mechanically stabilized earth (MSE) wall.

S. Bellevue Sta./P&R: Continued construction of parking garage; pouring of slab on grade on north side and performing under-slab drainage scope; construction of station, pouring footing and station walls.

Wye-to-East Main: Continued trenching at 112th undercrossing; fill/grade embankment on both sides of 112th Ave.; continued excavation to subgrade North of SE 4th to end of site.

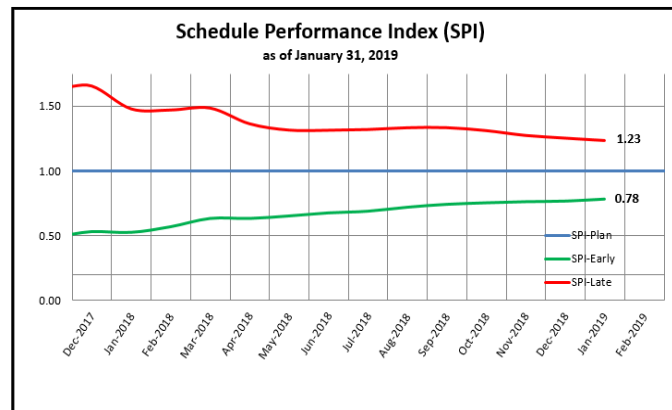
Schedule Summary

The critical path for this project currently runs through the 112th undercrossing and trench along Bellevue Way SE. The contractor is currently forecast to achieve all milestones on schedule. The contractor's December schedule (latest schedule received) is presented below. There was a lag in monthly updates due to non-compliance in November; all issues have been corrected and the current update should be available in time for next period's reporting.

Activity Name	Start	Finish	2019				2020			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
E320 Construction	05-Dec-16 A	07-Oct-20								
Milestones and Summary	05-Dec-16 A	07-Oct-20								
Contract Milestones	05-Dec-16 A	07-Oct-20								
Limited Notice to Proceed	05-Dec-16 A									
Notice to Proceed	13-Feb-17 A									
Milestone 3A - Clear & Grub Sneydlocken (Stat of 'Wetland Fill' Work+365 D)		21-Dec-18 A								
Milestone 1 - (Alternate) Phase B2.1 Not Used		04-Feb-19								
Milestone 3B - Clear & Grub Coal Creek		13-Aug-19*								
Milestone 4 - SIFT & SCADA Complete (NTP+1160D)		03-Dec-19*								
Milestone 5 - Acceptance of South Bellevue Station (NTP+1215D)		29-May-20*								
Milestone 2 - Final Restoration of Bellevue Way (Start+897D)		30-Jun-20								
Milestone 6 - Required Substantial Completion (NTP+1340D)		07-Oct-20*								
Construction-1	21-Apr-17 A	22-Sep-20								
Mobilization	21-Apr-17 A	16-Jul-18 A								
Area A - I-90 Mainline to Bellevue Interchange - Sta EB405+54 to EB438+20	16-Jun-17 A	28-Jul-20								
Area B - Bellevue Way SE SE 30th St to 112th Ave SE Wye - Sta EB438+20 to EB476+75	30-May-17 A	22-Sep-20								
Area C - 112th Ave SE, 112th Ave SE Wye to SE 8th - Sta EB476+75 to EB508+00	13-Jun-17 A	31-Aug-20								
Area D - 112th Ave SE to SE 8th St to Main St - Sta 508+00 to EB528+25	22-May-17 A	20-Aug-20								
Area E - Coal Creek Stream Enhancement	09-Jul-18 A	13-Aug-19								
Area F - Sneydlocken Mitigation	23-Apr-18 A	21-Dec-18 A								

Schedule Performance Index

This period, the SPI early is measured at 0.8 and the SPI late is at 1.2. Since the contractor's schedule updates have been inconsistent, the confidence level with the accuracy of the SPI measurements has somewhat diminished. Timely and compliant CPM schedules will restore confidence in the SPI measurements. Discussions with the Contractor are ongoing to improve with this deliverable. Currently, the 112th undercrossing is the critical path, as the excavation has taken much longer than anticipated. The spread between the indexes is probably due to the frequent mitigation and out of sequence progress.



Link Light Rail East Link Extension

Next Period's Activities

- **I-90 Flyover:** Continue wall and long span work over I-90 via Traveler system; and restoration of 108th Ave.
- **Bellevue Way SE:** Continue tie back work at several points along Bellevue Way; under-slab track drainage and MSE wall work.
- **S. Bellevue Sta/P&R:** Continue construction of north side of the parking garage and vertical element walls at the station.
- **Wye-to-East Main:** Continue track wall work, stripping west side of 112th Ave. undercrossing and pour Surrey Downs wall footings

Closely Monitored Issues

- Working adjacent to wetland areas, environmental compliance concerns.
- Refinement to the three-lane reversible Maintenance of Traffic on Bellevue Way SE.



Cost Summary

Present Financial Status	Amount*
E320 Contractor - Shimmick/Parsons JV.	
Original Contract Value	\$319,859,000
Change Order Value	\$1,383,295
Current Contract Value	\$321,242,295
Total Actual Cost (Incurred to Date)	\$157,762,966
Percent Complete	48.95%
Authorized Contingency	\$38,532,000
Contingency Drawdown	\$1,383,295
Contingency Index	14.4

* \$ Amount excludes betterments and STArt.



Trench work under Lid at Winters House.

Contract E330 – Downtown Bellevue Tunnel

Current Progress

Tunnel Invert: Continued installation of spray applied waterproofing and placed protection layer in the invert and the tunnel rib. Continued drain pipe and electrical conduit installation. Continued rebar installation and using the mid-tunnel shaft to supply concrete for the invert concrete placement and center wall.

Tunnel Crown: Continued monitoring the water in the area of the drainage pipes at 4th and 110th from inside the tunnel to mitigate the leaks in the tunnel crown during rain events.

South Portal: Continued receiving delivery tunnel liner reinforcing. Continued to maintain the temporary erosion/sediment control and the traffic control at the South Portal and at the mid-access shaft. Commenced waterproofing, forming, reinforcement and placement of the Cut and Cover invert.

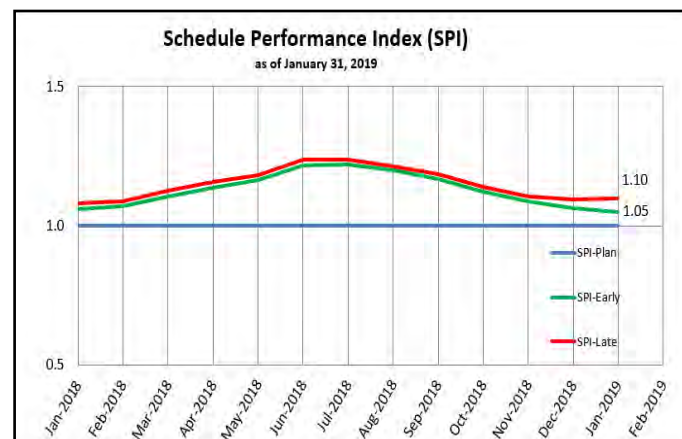
Schedule Summary

The critical path for this contract follows the final tunnel lining and the completion of the South Portal structure. The contractor is forecast to achieve Substantial Completion in time to meet their contractual requirements.

Activity Name	Start	Finish	2019					
			Q1	Q2	Q3	Q4	Q1	Q2
E330 Construction	15-Dec-15 A	08-Jun-20						
CONSTRUCTION	15-Dec-15 A	08-Jun-20						
MILESTONES/CONSTRUCTION EASEMENTS	15-Dec-15 A	08-Jun-20						
MILESTONES	15-Dec-15 A	08-Jun-20						
CALCULATED MILESTONES	15-Dec-15 A	08-Jun-20						
L-NTP	15-Dec-15 A							
NTP	08-Feb-16 A							
MLST 1 - Acceptance of the 110th Ave Controlled Low Strength Material Work		14-Oct-16 A						
MLST 2 - Acceptance of CO #006 Work		14-Oct-16 A						
MLST 3 - Substantial Completion of all Work from Station EB 542+64.52 to Station EB 562+47.91		04-Feb-20						
MLST 4 - Substantial Completion Total Contract		08-Jun-20						
MOBILIZATION	08-Feb-16 A	17-May-19						
SITEWORK	29-Feb-16 A	08-Jun-20						
PRECONSTRUCTION	21-Mar-16 A	13-Feb-20						
TRAFFIC CONTROL	25-Mar-16 A	26-Aug-19						
SURVEY & MONITORING	29-Feb-16 A	03-May-18 A						
NORTH PORTAL AREA	13-Jun-16 A	14-Oct-16 A						
CAST IRON PIPE REPLACEMENT	08-Feb-17 A	08-Apr-17 A						
SOUTH PORTAL AREA	29-Feb-16 A	08-Jun-20						
SKYLINE BUILDING RETROFIT	17-Jan-17 A	18-Oct-17 A						
TUNNELING	01-Feb-17 A	10-Jan-20						
EXCAVATION	01-Feb-17 A	20-Jul-18 A						
FINAL TUNNEL LINING	20-Jul-18 A	08-Oct-19						
FINAL TUNNEL FINISHES	09-Oct-19	10-Jan-20						
MID TUNNEL	08-Mar-18 A	03-Sep-19						
DEMOBE	13-Mar-17 A	26-May-20						

Schedule Performance Index

For the month of January, the SPI early is at 1.05 and the SPI late is at 1.10. The advanced production achieved because of good ground conditions and elimination of spiles work, is slowing down as tunnel excavation is completed. Although both SPI early and late are still ahead of baseline schedule, contractor faces some challenges such as storm water issues, seepage and delayed completion of invert waterproofing, also, invert final lining is taking longer than it was planned, which converge SPI early towards 1.00.



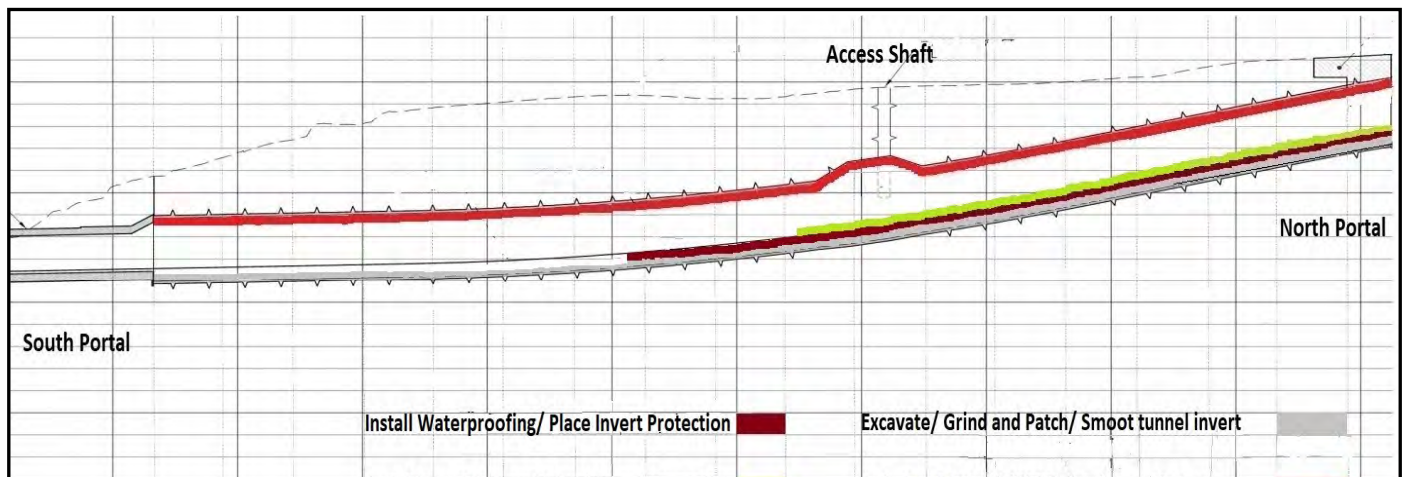
Next Period's Activities

- **Tunnel invert:** Continue invert rebar, drain pipe and electrical conduit installation. Continue concrete placement. Continue waterproofing invert and the tunnel rib.
- **South Portal:** Continue deliveries of tunnel liner reinforcing. Continue waterproofing, forming, reinforcement and placement of the Cut and Cover invert.
- **Shaft/Adit:** No structural work. Contractor continue using mid-tunnel shaft pumping concrete for the tunnel final lining.

Closely Monitored Issues

- Tunnel water seepage continues to be a risk. The installation of drainage matting yielded a dry surface in most of the tunnel. Water seepage at 4th and 110th intersection during rain event due to leaking City of Bellevue utilities. The placement of the protection layer appears to have resolved impacts to the invert.; However, impacts to the crown still have potential.
- The installation of the invert final lining is taking longer than anticipated. The contractor is working additional crews to accelerate the installation of the reinforcing. Sound Transit is monitoring the work to determine if other mitigation effort is required.

E330 Tunnel invert excavation/ place crown smoothing layer (As of 1/25/2019)



Cost Summary

Preset Financial Status	Amount
E330 Contractor– Guy F Atkinson Construction, LLC.	
Original Contract Value	\$121,446,551
Change Order Value	\$308,878
Current Contract Value	\$121,755,429
Total Actual Cost (Incurred to Date)	\$94,811,318
Percent Complete	75.68%
Authorized Contingency	\$12,144,655
Contingency Drawdown	\$308,878
Contingency Index	29.8



Rebar, conduit, and drain pipe installation.

Contract E335 – Bellevue to Spring District Heavy Civil GC/CM

Current Progress

Area 3: N Portal/ Bellevue Down town Station: Completed concrete pour for interior walls at North Portal. Commenced installation of falsework for cut and cover lid. Completed installation of the MSE (Mechanically Stabilized Earth) wall, with the exception of the final row of panels. Commenced utility installation and footings and foundation walls at the west, central, and east areas of the station.

Area 4: Aerial Guideway/ Wilburton Station: Continued reinforcing, formwork and concrete pouring on aerial guideway. Commenced work at Wilburton Station with excavation for footings and elevator pits, installation of electrical conduit and plumbing/drain lines.

Area 6: 120th-124th Trench/Station: Continued formwork, reinforcing platform, interior walls and MEP (Mechanical, Electrical, Plumbing) rough-ins for 120th Station. Commenced installation of shoring for plaza level beams and deck.

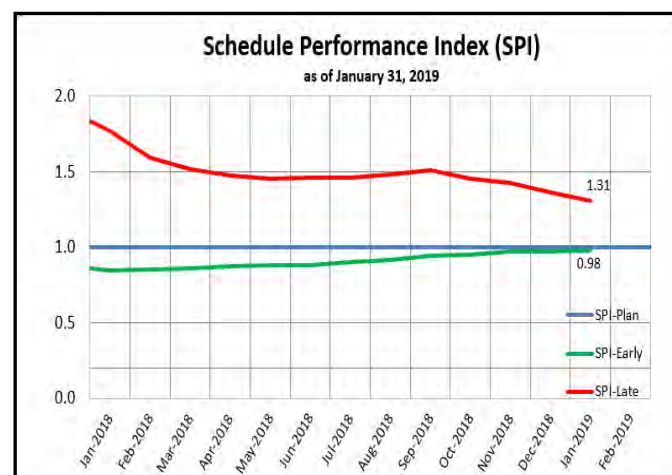
Schedule Summary

There are two primary critical paths for this contract, corresponding to the two handovers to the E750 Systems Contractor — one runs through the aerial guideway and Wilburton Station, and the other follows access to the SEM tunnel (E330 Contract) in Area 2 and goes through the South Portal and the South Portal Electrical Building. Tunnel work will not start until mid-2020. The contractor is currently 14 days behind their first interface milestone, but is expected to continue mitigating to deliver on schedule.

Activity Name	Start	Finish	2019	2020	2021
E335 Construction	24-Apr-17 A	16-May-21			
Milestones	04-May-18 A	16-May-21			
Contract Milestones	30-Sep-18 A	16-May-21			
Milestone #1 -C Complete North Portal Headwall Temporary Shoring		30-Sep-18 A			
Milestone #2 -C complete SDTs for Interface to SCADA		14-Jan-20*			
Milestone #3 -C complete Trackway and Stations for Primary Systems Access - BTC to EOP		13-May-20*			
Milestone #4 -C complete SBM Tunnel Trackwork for Primary Systems Access		16-Jan-21*			
Milestone #5 -C complete All Trackway and Stations for Primary Systems Access		16-Mar-21*			
Milestone #6 -Substantial Completion of all Work		16-May-21*			
Calculated Milestones	04-May-18 A	29-Apr-21			
E335 Achieves Milestone #1		04-May-18 A			
E335 Achieves Milestone #2		13-Jan-20			
E335 Achieves Milestone #3		27-May-20			
E335 Achieves Milestone #4		16-Jan-21			
E335 Achieves Milestone #5		14-Mar-21			
E335 Achieves Milestone #6		29-Apr-21			
Construction	24-Apr-17 A	30-Mar-21			
Mobilization	24-Apr-17 A	24-Apr-17 A			
Area 1: E. Main Station to South Portal (531+55 - 538+00)		11-Oct-17 A			
Area 2: South Portal to SEM Tunnel (538+00 - 562+47.91)		01-Feb-19			
Area 3: North Portal to Aerial Guideway (562+50 - 568+45)		24-Apr-17 A			
Area 4: Aerial Guideway (568+45 - 606+59)		24-Apr-17 A			
Area 5: Pine Forest to 120th (606+59 - 619+00)		07-Jul-17 A			
Area 6: 120th - End of Project (619+00 - 634+99)		01-Aug-17 A			
Testing and Commissioning	21-Jan-20	15-Dec-20			

Schedule Performance Index

This period, the SPI early is at 0.98 and the SPI late is at 1.31. The numbers indicate that the contractor continues to lag the early plan, but well ahead of the late finish plan when compared to the baseline work. The aerial guideway continue to lag behind baselined schedule as result of repair and rework related to upper diaphragms of some columns, which delayed the post tensioning of related spans and setting girders. Track work has not started as baselined schedule shows in December 2018, since the delivery of special track has been delayed by the change to moveable point frog crossings and start of track construction in this area.



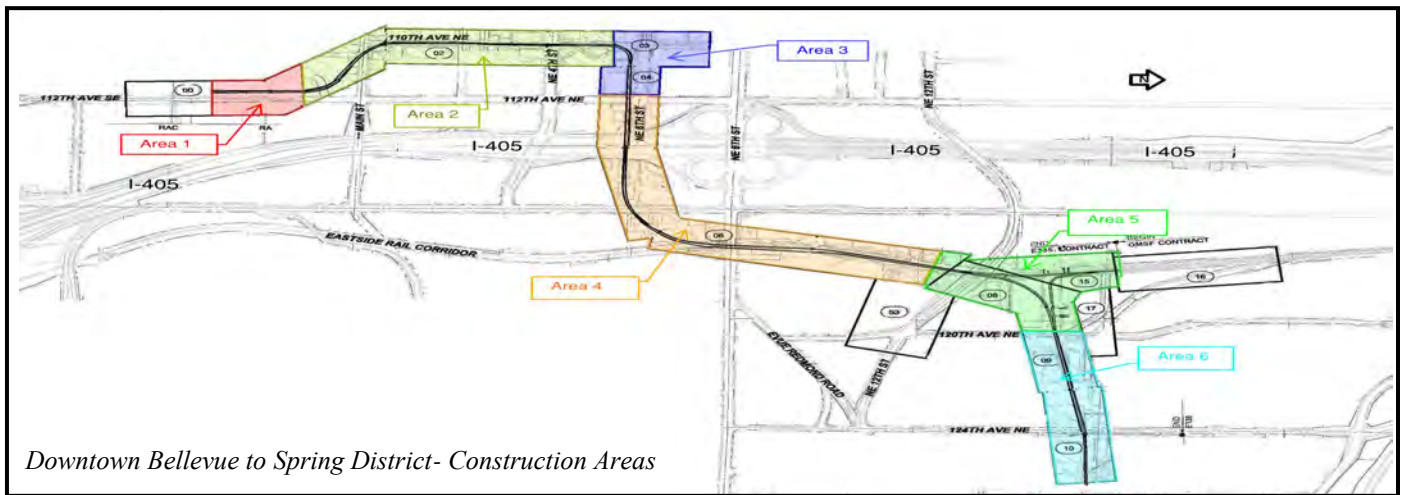
Link Light Rail East Link Extension

Next Period's Activities

- **Area 3:** N Portal/ Bellevue Downtown Station: Continue formwork and reinforcing for the North Portal head-wall. Continue installing shoring towers for the North Portal roof and footing formwork and concrete placement for east side of Bellevue Downtown Station.
- **Area 4:** Aerial Guideway/Wilburton Station: Continue underground utility work, and complete concrete placement for elevators footing at Wilburton Station. Continue formwork, reinforcement and concrete placement for decks, diaphragms and trestle curbs on Aerial Guideway.
- **Area 6:** 120th-124th Trench/Station: Continue reinforcing steel placement and MEP rough-ins for 120th station.

Closely Monitored Issues

- Outstanding design issues and design revisions related to stations impacting the installation on conduits, mechanical systems and elevator/escalators. The revisions need to be finalized by Sound Transit and provided to contractor and coordinated with the subcontractors performing the work.
- The partial completion of the City of Bellevue's 124th Ave Project is necessary but it continues to be delayed. Trench walls in this area have been completed as far as possible. Starting in February, shoring at 124th will be installed, and the construction of the trench to 124th will start. However, work under the road cannot be completed until the 124th bridge is built and access is available.



Cost Summary

Present Financial Status	Amount
E335 Contractor– Stacy & Witbeck/Atkinson Joint Venture (SWA-JV)	
Original Contract Value (includes station scope)	\$393,798,210
Change Order Value	\$6,016,883
Current Contract Value	\$399,815,093
Total Actual Cost (Incurred to Date)	\$167,541,797
Percent Complete	52.37%
Authorized Contingency	\$19,689,911
Contingency Drawdown	\$6,016,883
Contingency Index	1.7



Elevator Pit rebar at Wilburton Station (Area 4)

Contract E340 – Bel-Red

Current Progress

Ongoing closure at NE Spring Blvd (132nd Ave to 134th Ave). Shift traffic on NE Spring Blvd to one-way configuration from 134th Ave NE to 136th Pl NE, to allow work on the North half of the roadway. Continued forming final footing pour; form, rebar and pour wall panels - 4 of 5 footing sections completed, 9 of 13 wall panels completed. Continued storm drain work. Aerial guideway: placing end diaphragms and forming bridge deck. South-side station retaining wall: completed wall panel placement. **132nd Pl NE:** installed service conduit for service line to future City of Bellevue signal cabinet. **136th Pl NE:** continued work on sanitary sewer side services to the businesses, resumed waterline placement.

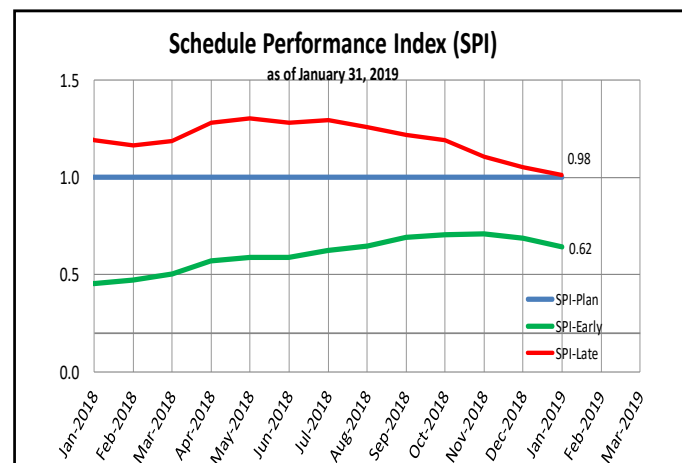
Schedule Summary

Critical path of this project now runs through the casting and placement of track wall along 136th, followed by trackwork. The Contractor is trending to finish ahead of their contractual milestone.

Activity Name	Start	Finish	2019					
			Q1	Q2	Q3	Q4	Q1	Q2
E340 Construction	24-Feb-17 A	09-Apr-20						
CONSTRUCTION	24-Feb-17 A	09-Apr-20						
~MILESTONES/EASEMENTS~	24-Feb-17 A	09-Apr-20						
~~Milestones	24-Feb-17 A	09-Apr-20						
Contract Milestones	24-Feb-17 A	09-Apr-20						
Limited Notice to Proceed (LNTF - Feb 24 2017)	24-Feb-17 A							
Notice to Proceed (NTP - March 27, 2017)	27-Mar-17 A							
MS #1 West Tributary Mitigation Site - NTP + 537 DAYS (September 15, 2018)		14-Sep-18 A						
MS #2 Substantial West Tributary Mitigation Site - NTP + 734 DAYS (March 31, 2019)		08-Apr-19*						
MS #3 Acceptance of SDIT- NTP + 976 DAYS- (Nov 27, 2019)		23-May-19*						
MS #4 Substantial Completion - NTP + 1156 DAYS - (May 26, 2020)		09-Apr-20*						
~SUBMITTALS/PRELIMINARY ACTIVITIES~	24-Feb-17 A	31-Aug-19						
~MOBILIZATION~	24-Feb-17 A	01-Apr-19						
~SITEWORK~	04-Apr-17 A	09-Mar-20						
~RETAINING WALLS~	12-Feb-18 A	17-Sep-19						
~AERIAL STRUCTURES~	15-May-17 A	05-Aug-19						
~STATIONS~	01-Aug-18 A	28-Jan-20						
~ELECTRICAL/ITS~	02-Jan-18 A	26-Jun-19						
~FINISHES~	01-Feb-19	15-Aug-19						
~TRACKWORK~	13-Jul-18 A	22-Jan-20						
~LANDSCAPING/FLATWORK~	22-May-18 A	11-Feb-20						
~TESTING AND COMMISSIONING~	22-Feb-19	19-Nov-19						

Schedule Performance Index

This period, the SPI early is at 0.62 and the SPI late is at 0.98. The late index indicates that the contractor continues to be ahead of the planned finish work; while the SPI early measures the Contractor's planned early finish lags. Some of the contributing factors to the SPI late index are as follows. Continued progress of the retaining wall as well as aerial guideway end diaphragm constructions. Progressed on the signal conduit installation at the 132th track crossing. Continued sanitary sewer work on 136th Pl. working from north to south. Progressed on PSE gas installation on 136th Pl.



Link Light Rail East Link Extension

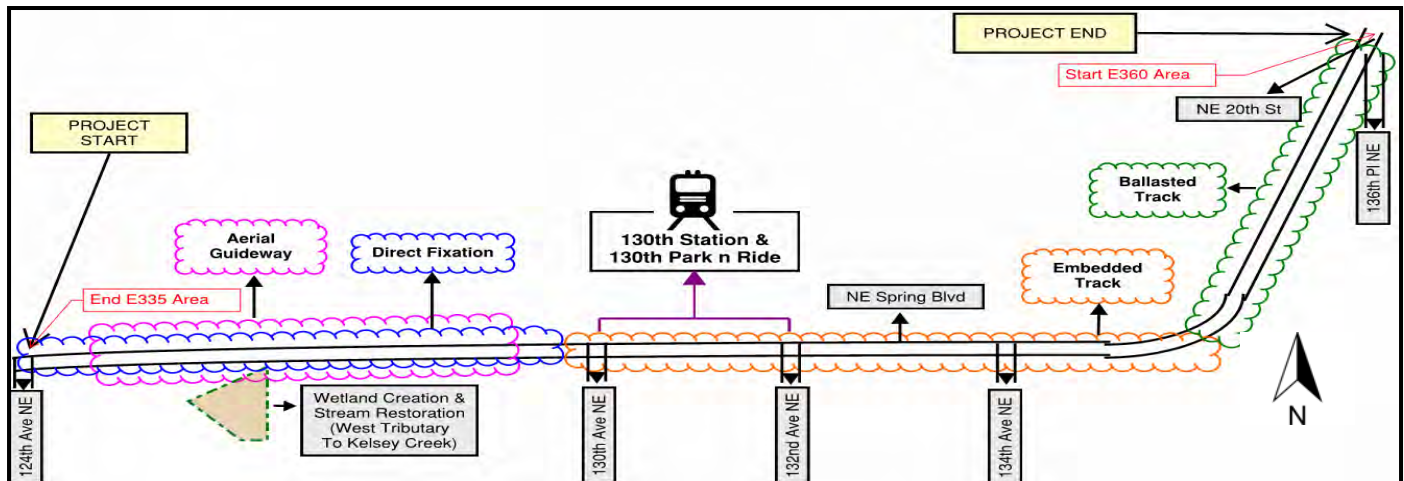
Next Period's Activities

- Complete remaining soldier piles and resume excavation for remaining tie-backs just east of 124th Ave.
- On the aerial guideway, continue to form, rebar, and pour end diaphragms. Forming bridge deck. Begin intermediate diaphragm repairs.
- NE Spring Blvd. Continue wall panel placement; form, rebar, and pour last footing section.
- Continue to excavate contaminated soil just west of 132nd Ave.
- 136th Pl NE: Continue excavation and shoring; form, rebar, and pour first footing pour.

Closely Monitored Issues

- Delayed start on west end of the project and late start on the 124th Ave NE Bridge Project have potential to impact to the overall project schedule. Seattle City Light has agreed to allow early works for Sound Transit while compatibility is discussed between Seattle City Light, City of Bellevue and Sound Transit. This work will continue to carry risk relative to de-watering challenges that the project experienced during the installation of piles and tie-backs late summer 2018. To mitigate this risk, Contractor has begun pile installation in the Seattle City Light easement area, hoping to get tie-backs installed while benefiting from present dewatering by other near-by projects.

E340 Construction Work Areas



Cost Summary

Present Financial Status	Amount
E340 Contractor– Max J Kuney	
Original Contract Value	\$93,170,012
Change Order Value	\$2,802,744
Current Contract Value	\$95,972,756
Total Actual Cost (Incurred to Date)	\$46,372,913
Percent Complete	49.28%
Authorized Contingency	\$9,317,000
Contingency Drawdown	\$2,802,744
Contingency Index	1.64



Placing trench box into open trench facing south.

Contract E360 – SR 520 to Redmond Technology Center (RTC)

Current Progress

Design: Advanced design packages for the following areas: Design Package 5C/19C—Sweeper Site 100% Submittal, Design Package 5B/19B — Landscape and Restoration 100% ST Review and IFC submittal preparation, Design Package 16—Overlake Village Ped Bridge Superstructure IFC ST review complete and signed IFCs submitted for ongoing validation and approval.

Construction: Work Area (WA) #2 Aerial guideway structures continued with superstructure work for diaphragms, pre-cast panels and girder erection. Five spans of girders were set (64—68). TPSS vault was backfilled. WA #3/4 completed track underdrain. Barrier walls started dry finish activities. WA #5 started track underdrain. WA #6 continued Redmond Technology Station (RTS) Garage columns and deck/beams (level 2 to level 3). Start ramp activities from level 2 to level 3. Underground rough-in ongoing at the main electrical room. Vertical Circulation Tower structure ongoing with elevator walls being placed. WA #7 OVS Pedestrian Bridge substructure ongoing with cast in place abutment wing wall construction and placement of Pier #3 column and cap.

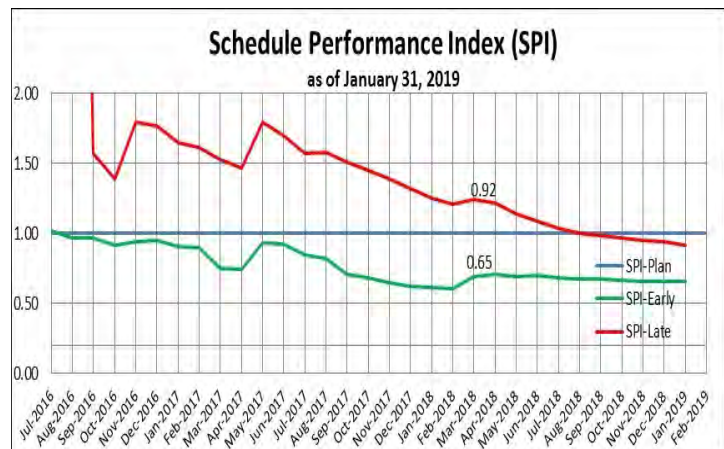
Schedule Summary

The critical path for this project currently goes through the structural work at RTS. The contractor is currently forecast to complete this contract on schedule.

Activity Name	Start	Finish	2019
E360 Construction	13-Jul-16 A	16-Feb-20	
Base Contract	13-Jul-16 A	16-Feb-20	
Design	13-Jul-16 A	07-Aug-19	
Design Milestones	03-Oct-16 A	23-Jul-19	
Design Submittals Start		03-Oct-16 A	
30% Design Submittals Complete		28-Oct-16 A	
60% Design Submittals Complete		26-Feb-18 A	
100% Design Submittals Complete		01-Feb-19	
IFC Design Submittals Complete		23-Jul-19	
Design Overhead	13-Jul-16 A	18-Jul-17 A	
Design and Engineering	13-Jul-16 A	07-Aug-19	
Construction	13-Jul-16 A	16-Feb-20	
General	13-Jul-16 A	16-Feb-20	
Project Milestones	13-Jul-16 A	16-Feb-20	
Notice to Proceed	13-Jul-16 A		
Civil Systems 100% Design Submittal (NTP+300d) (09-May-2017)		10-Apr-17 A	
Substantial Completion		18-Dec-19	
Actual Acceptance of all Work		16-Feb-20	
WA #1 -Track Slab Guideway	22-May-17 A	24-Oct-19	
WA #2 -Aerial Guideway	01-Jun-17 A	13-Dec-19	
WA #3 -Ballast Guideway Block #1	01-May-17 A	25-Oct-19	
WA #4 -Overlake Village Station	14-Jul-16 A	22-Nov-19	
WA #5 -Ballast Guideway Block #2	15-Aug-17 A	04-Nov-19	
WA #6 -Overlake Transit Center	01-May-17 A	18-Dec-19	
WA #7 -OVS Pedestrian Bridge	01-Oct-18 A	10-Oct-19	
WA #8 -RTC Pedestrian Bridge	18-Dec-19	18-Dec-19	

Schedule Performance Index

This period, the SPI early is 0.65 and SPI late is .92. The early SPI value continues to reflect slippage of early finish of baseline plan. ST directed stoppage of RTS Pedestrian Bridge due to Microsoft reevaluation of the bridge and a two month stoppage is girder work has contributed to the slippage as well. Drilled shaft work is complete, column work is complete, and cap work is complete. Some procurement activities have been rolled into construction activities, which has contributed to lower late SPI recovery.



Link Light Rail East Link Extension

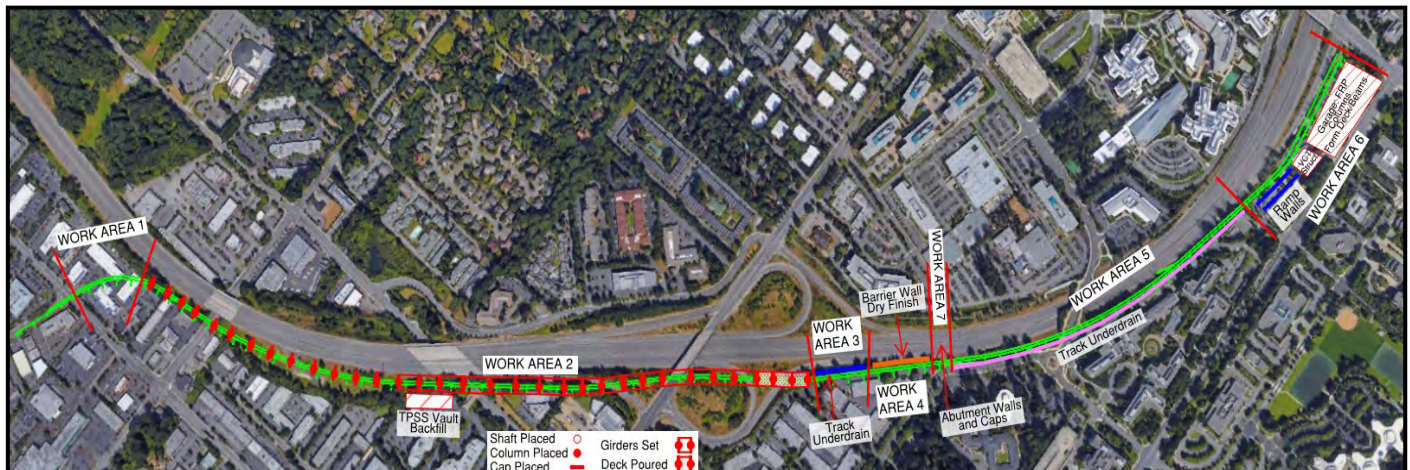
Next Period's Activities

- **Work Area #1:** MSE foundation and wall placement.
- **Work Area #2:** Continue diaphragm placement, precast panel set and deck/curb placement. Girder erection to resume in February with 5 spans planned.
- **Work Area #3/4:** Continue MSE abutment wall, start transition slab to aerial guideway, and continue platform and track wall grade beams, footings and wall placement.
- **Work Area #5:** Complete drainage structures and track underdrain. Start fine-grade and sub-ballast work for the at-grad guideway. Complete wall B6, 13, and 16.
- **Work Area #6:** Continue platform grade beams, ramp walls, garage column and deck placement Level 2 & 3. Rough-in at garage site underground.

Closely Monitored Issues

- Microsoft designs for an alternative pedestrian bridge. Contract amendment will be required if pursued.
- Contractor, ST and City of Redmond continue to work out permitting issues having commercial impacts.
- Commercial Issues on Sales Tax Increase, waterline routing at Redmond Technology Center, north ancillary building deletion, and As-Built Specification.
- Clearance requirements between the WSDOT Aggregate Disposal Site access road and aerial guideway.
- Construction Work Plan content, timeliness and completion/accuracy of all attributed submittals.

E360 Construction Work Areas



Cost Summary

Present Financial Status	Amount
E360 Contractor— Kiewit-Hoffman	
Original Contract Value	\$225,336,088
Change Order Value	\$2,075,297
Current Contract Value	\$227,411,385
Total Actual Cost (Incurred to Date)	\$129,213,832
Percent Complete	69.67%
Authorized Contingency	\$22,786,521
Contingency Drawdown	\$2,075,297
Contingency Index	7.8

Excludes Betterment



RTS (L2 garage looking west) - Track approach, electrical room and circulation tower foundation.

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Link Light Rail

Downtown Redmond Link Extension

Project Summary

Scope

Limits	The Downtown Redmond Link Extension builds new light rail from the Redmond Technology Station to downtown Redmond.
Alignment	The extension starts at Redmond Technology Station and travels generally along SR-520 and SR-202 to downtown Redmond.
Stations	Two Stations—SE Redmond (at Marymoor Park) and Downtown Redmond
Systems	Signals, traction electrification, and communications (SCADA)
Phase	Planning
Budget	\$1.530 Billion (Baselined October 2018)
Schedule	Revenue Service: December 31, 2024



Map of Downtown Redmond Link Extension

Key Project Activities

- Continued pursuit of resolution to storm water design requirements within Marymoor Park.
- Continued pursuit of cost responsibilities for transit integration facilities requested by King County.
- Continued drafting and reviews of the MOA with King County Parks.
- Continued work on Development Agreement with City of Redmond
- Continue progressing permit applications including submittal of the King County shoreline substantial development permit materials.
- Continued development of O & M agreement to identify responsibilities for both stations.
- Continued environmental due diligence investigation on ROW parcels.
- Ongoing Concept and Alternative Technical Concepts (ATC) meetings.

Project Cost Summary

Voters approved funding for preliminary engineering for the Redmond Link extension in the 2008 in the Sound Transit 2 ballot measure. In response to the 2007-2009 Great Recession, the ST Board suspended the project. In February 2016, the ST Board restored funding to support preliminary engineering of the project prior to funding approval for final design and construction as part of the Sound Transit 3 Plan. Table (below) figures in millions. This project has now been baselined, The baseline budget has been incorporated into the tables below.

The first table below summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS), while the second table in FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

In this period, the Redmond Link project incurred approximately \$0.01M of expenses bringing the total expenditure to date from \$25.5M to \$25.6M. Preliminary Engineering and Administrative activities are the main cost drivers during this period. Agency Administrative activities are primarily staffing cost.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$77.0	\$77.0	\$5.0	\$4.9	\$77.0	\$0.0
Preliminary Engineering	\$23.0	\$23.0	\$18.1	\$16.7	\$23.0	\$0.0
Final Design	\$4.5	\$4.5	\$0.0	\$0.0	\$4.5	\$0.0
Construction Services	\$58.0	\$58.0	\$1.7	\$0.6	\$58.0	\$0.0
3rd Party Agreements	\$17.0	\$17.0	\$0.5	\$0.5	\$17.0	\$0.0
Construction	\$1,151.5	\$1,151.5	\$0.0	\$0.0	\$1,151.5	\$0.0
ROW	\$199.0	\$199.0	\$8.9	\$2.9	\$199.0	\$0.0
Total	\$1,530.0	\$1,530.0	\$34.2	\$25.6	\$1,530.0	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$332.4	\$332.4	\$0.0	\$0.0	\$332.4	\$0.0
20 Stations	\$261.9	\$261.9	\$0.0	\$0.0	\$261.9	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$287.1	\$287.1	\$0.0	\$0.0	\$287.1	\$0.0
50 Systems	\$108.6	\$108.6	\$0.0	\$0.0	\$108.6	\$0.0
Construction Subtotal (10 - 50)	\$990.0	\$990.0	\$0.0	\$0.0	\$990.0	\$0.0
60 Row, Land	\$168.5	\$168.5	\$8.9	\$2.9	\$168.5	\$0.0
70 Vehicles (Non-Revenue)	\$4.1	\$4.1	\$0.0	\$0.0	\$4.1	\$0.0
80 Professional Services	\$289.3	\$289.3	\$25.2	\$22.7	\$289.3	\$0.0
90 Unallocated Contingency	\$78.2	\$78.2	\$0.0	\$0.0	\$78.2	\$0.0
Total (10 - 90)	\$1,530.0	\$1,530.0	\$34.2	\$25.6	\$1,530.0	\$0.0

Link Light Rail Downtown Redmond Link Extension



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility to continuously monitor project status and associated risks.

The quantitative risk assessment report is completed and finalized with good probability that supported the DRLE baseline cost and schedule assumptions.

The highest risk areas continues to be:

- Property acquisition - market conditions; protracted durations of attaining control of properties; evolving design impacts property needs.
- Permitting and 3rd party requirements - construction adjacent to SR520; flood prone areas by Sammamish River and Bear Creek; archaeological discovery; betterment requests increases complexity of projects; construction impacts to traffic; storm water discharge requirements by King County Parks; protracted negotiation with 3rd parties.
- Construction market conditions - inflationary pressure due to potential shortages of labor; higher materials pricing due to demand as well as regulations (tariffs and taxes).
- Agency staffing capacity - Developing and mobilizing resources and coordinating start up activities across multiple Link extensions within a short time frame.

Project Schedule

The project schedule is presented below. One-on-one meetings with the RFP shortlist continue. Final proposals will be submitted in April 2019. Property acquisition is underway and environmental permitting is ongoing. Project is currently forecast for completion near the end of 2024.

Activity Name	Start	Finish												
			2019	2020	2021	2022	2023	2024						
Downtown Redmond Link Extension - Preliminary Engineering	15-Dec-18 A	12-Feb-20												
Downtown Redmond Link Extension - Workshops and Phase Gate	15-Dec-18 A	25-Oct-18 A												
Downtown Redmond Link Extension - Preliminary Engineering & Bridging Documents	15-Dec-18 A	12-Feb-20												
Downtown Redmond Link Extension - Right of Way	27-Dec-17 A	14-Dec-20												
Downtown Redmond Link Extension - Permits & Third Party Agreements	01-Jun-18 A	09-Jun-20												
Downtown Redmond Link Extension - Construction	05-Oct-17 A	31-Dec-24												
Downtown Redmond Link Extension - DBPM Procurement	05-Oct-17 A	11-Jun-18 A												
Downtown Redmond Link Extension - Design-Build Procurement	01-Jun-18 A	19-Sep-19												
Downtown Redmond Link Extension - Design-Build Contract	20-Sep-19	31-May-24												
Downtown Redmond Link Extension - Rail Activation/Closeout	28-Dec-23	31-Dec-24												
Systems Integration & Testing	28-Dec-23	01-Apr-24												
Safety and Security Certification	28-Dec-23	18-Mar-24												
Pre-Revenue Service	01-Jun-24	31-Jul-24												
Pre-Revenue Operations	01-Jun-24	31-Jul-24												
Revenue Service/Project Float	01-Aug-24	31-Dec-24												
Project Float	01-Aug-24	31-Dec-24												
Revenue Service		31-Dec-24												

Right-of-Way

The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The right-of-way program status for this period is summarized in the following table.

Downtown Redmond Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
89	87	2	0	1525	0
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

- Total Relocations—additional eligible relocatees discovered.

Community Outreach

- Continued meetings with potentially impacted property owners in southeast and downtown Redmond to provide updated project information and real estate process information and timing.
- Engaged with the community on a variety of concerns including schedule, property acquisition and station access.

Sound Transit Board Actions

Board Action	Description	Date
	None in this period	

Link Light Rail West Seattle and Ballard Link Extensions

Project Summary

Scope

Limits The West Seattle extension includes 4.7 miles of light rail from downtown Seattle to West Seattle's Junction neighborhood. The Ballard extension includes 7.1 miles of light rail from downtown Seattle to Ballard's Market Street area.

Alignment The West Seattle extension route is assumed to run primarily on elevated guideway with a new rail-only bridge over the Duwamish River. The Ballard extension route is assumed to run through a new downtown Seattle rail-only tunnel, elevated guideway, and a rail-only bridge over Salmon Bay.

Stations Five stations planned for West Seattle Segment. Nine stations planned for the Ballard Segment.

Phase Planning

Budget \$286M through completion of Preliminary Engineering

Schedule Revenue Service: 2030 (West Seattle), 2035 (Ballard)



Map of Project Alignment

Key Project Activities

- Coordination with FTA experienced slight delays resulting from the federal government shutdown.
- Continued preparations for the EIS Scoping period, expected to begin in mid-February.
- Continued engagement with City of Seattle, WSDOT, Port of Seattle, King County and other regulatory and partner agencies regarding the alternatives development process and design, permitting, construction and operational feasibility issues.
- Held an Inter-agency Group Meeting to brief partner agencies on Level 3 alternatives, screening process and evaluation results.
- Held two Stakeholder Advisory Group meetings: the first to recap Level 3 alternatives and the screening process, as well as the upcoming Scoping period. The second covering Level 3 alternatives evaluation results.
- Continued outreach to neighborhood and stakeholder groups throughout the project corridor.
- Completed six geotechnical borings on Harbor Island and surrounding Port of Seattle and Northwest Seaport Alliance properties to provide technical information for Duwamish waterway crossing alternatives.
- Continued development of consultant Scope of Work for Phase 2 (Draft EIS / Conceptual Engineering).

Project Cost Summary

The West Seattle and Ballard Link Extensions are voter-approved projects under the ST3 Plan. The Current Budget for the project that has been approved by the Sound Transit Board allows staff to conduct alternatives development, followed by an Environmental Impact Statement, leading to ST Board selection of the project to be built and FTA issuance of a Record of Decision no later than 2022.

Out of the total Authorized Project Allocation, the project incurred approximately \$20M in 2018 for alternatives development and evaluation; conducting feasibility studies on key project scope assumption in the ST3 Plan, project administration and stakeholder engagement.

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$63.1	\$5.7	\$5.1	\$63.1	\$0.0
Preliminary Engineering	\$205.4	\$25.3	\$20.4	\$205.4	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$11.4	\$1.1	\$0.1	\$11.4	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$6.0	\$0.1	\$0.1	\$6.0	\$0.0
Total	\$285.9	\$32.4	\$25.7	\$285.9	\$0.0

Cost Summary by SCC

SCC Element	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
50 Systems	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Subtotal (10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 Row, Land	\$5.0	\$0.3	\$0.1	\$5.0	\$0.0
80 Professional Services	\$263.4	\$32.1	\$25.6	\$263.4	\$0.0
90 Unallocated Contingency	\$17.5	\$0.0	\$0.0	\$17.5	\$0.0
Total (10 - 90)	\$285.9	\$32.4	\$25.7	\$285.9	\$0.0

Link Light Rail West Seattle and Ballard Link Extensions



Risk Management

Sound Transit has a vigorous risk management program and is committed to identifying, assessing, and monitoring risks and implementing risk reduction/mitigation actions. Risk Assessment for the West Seattle and Ballard Link Extensions Project was conducted as part of the ST3 Planning process.

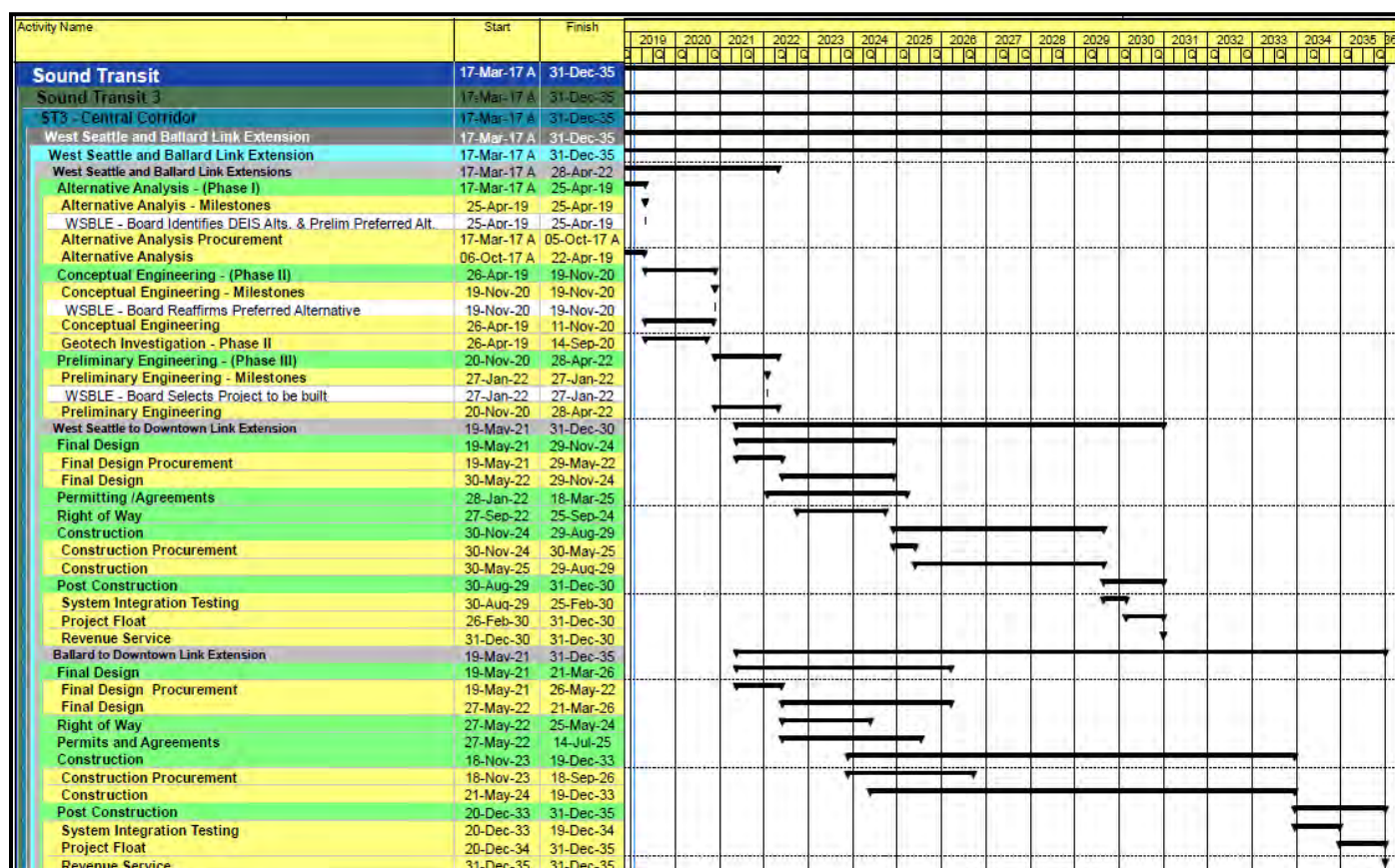
Project issues and risks identified at this stage include:

- Reaching stakeholder consensus on a preferred alternative;
- Complexity of alignments in constrained environment with challenging topography and waterway crossings;
- Complexity associated with tunneling through a mature urban environment;
- Potential construction effects in a constrained environment;
- Potential effect on Central Link operations during construction;
- ROW and property impacts.

Project Schedule

The preliminary project schedule can be found below. ST Board identifies preliminary preferred alternatives in 2nd QTR 2019. FTA issuance of ROD and Final Design is expected to begin in 2022.

Revenue Service between West Seattle and Downtown Seattle is targeted for 2030, and revenue service between Ballard and Downtown Seattle is targeted for 2035.



Community Outreach

- Continued outreach to neighborhood and stakeholder groups throughout the project corridor.
- Continued collaboration with the city of Seattle on Racial Equity Toolkit outreach and evaluation.

Sound Transit Board Actions

Board Action	Description	Date
	None to Report	

Link Light Rail Federal Way Link Extension

Project Summary

Scope

Limits	The Federal Way Link Extension adds approximately 7.8 miles of light rail from the Angle Lake Station in the City of SeaTac to the Federal Way City Center.
Alignment	The extension generally parallels SR 99 and I-5 freeway.
Stations	Stations at Kent/Des Moines, South 272nd Star Lake Park –and-Ride and the Federal Way Transit Center
Systems	Signals, traction power, and communications (SCADA)
Phase	Proceed to Final Design/Construction
Budget	\$2.451 Billion (Baseline Sep 2018)
Schedule	Revenue Service: December 2024



Map of Federal Way Link Extension.

Key Project Activities

- Entry to Engineering (EIE) approval is pending next month due to government shutdown. Working with FTA/PMOC on EIE readiness recommendations.
- Project team continues to prepare for Full Funding Grant Agreement (FFGA) application submission for next month.
- Design Build (DB) procurement: Project team continues supplemental meetings with DB proposers, and proposals are due at the end of March.
- Advanced demolition contract was executed and NTP issued.
- WSDOT Construction Funding Agreement pending execution.
- Coordination continues with WSDOT regarding the Air Space Lease (ASL) and Temporary Construction Air Space Lease (TCAL); contingent on execution of Construction Funding Agreement.
- Project team continues to work with City SeaTac and Federal Way to finalize Transit Way and Development Agreements.
- Continued preparing for advanced utility relocations agreements with Century Link and Puget Sound Energy.
- Continued ROW acquisition and relocation activities; significant increase of completed appraisals this period.

Project Cost Summary

The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

This period approximately \$2.6M was incurred for January 2019, of which \$1.8M incurred was for Right-Of-Way; \$0.3M incurred for Administration; \$0.2 for Construction Services. Remaining expenditures of \$0.3M were for Third Party and Preliminary Engineering services. Overall the project Estimate at Completion continues to reflect \$2.45B.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$96.5	\$14.9	\$14.9	\$96.5	\$0.0
Preliminary Engineering	\$46.5	\$43.1	\$43.4	\$46.5	(\$0.0)
Final Design	\$3.1	\$1.0	\$0.8	\$3.1	\$0.0
Construction Services	\$107.0	\$4.6	\$1.9	\$107.0	\$0.0
3rd Party Agreements	\$27.7	\$4.0	\$3.0	\$27.7	(\$0.0)
Construction	\$1,831.9	\$0.1	\$0.0	\$1,831.9	\$0.0
ROW	\$338.8	\$40.3	\$25.0	\$338.8	\$0.0
Total	\$2,451.5	\$108.1	\$89.1	\$2,451.5	(\$0.0)

Cost Summary by SCC

SCC Element	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$517.7	\$0.0	\$0.0	\$523.0	(\$5.2)
20 Stations	\$316.1	\$0.0	\$0.0	\$318.9	(\$2.8)
30 Support Facilities	\$5.3	\$0.0	\$0.0	\$5.3	(\$0.0)
40 Sitework & Special Conditions	\$557.7	\$0.1	\$0.0	\$558.4	(\$0.7)
50 Systems	\$153.0	\$0.0	\$0.0	\$153.8	(\$0.8)
Construction Subtotal (10 - 50)	\$1,549.9	\$0.1	\$0.0	\$1,559.4	(\$9.5)
60 Row, Land	\$338.8	\$40.3	\$25.0	\$338.8	\$0.0
70 Vehicles	\$1.8	\$0.0	\$0.0	\$1.8	\$0.0
80 Professional Services	\$383.0	\$67.6	\$64.1	\$373.5	\$9.5
90 Unallocated Contingency	\$178.1	\$0.0	\$0.0	\$178.1	\$0.0
Total (10 - 90)	\$2,451.5	\$108.1	\$89.1	\$2,451.5	(\$0.0)

Link Light Rail Federal Way Link Extension



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks.

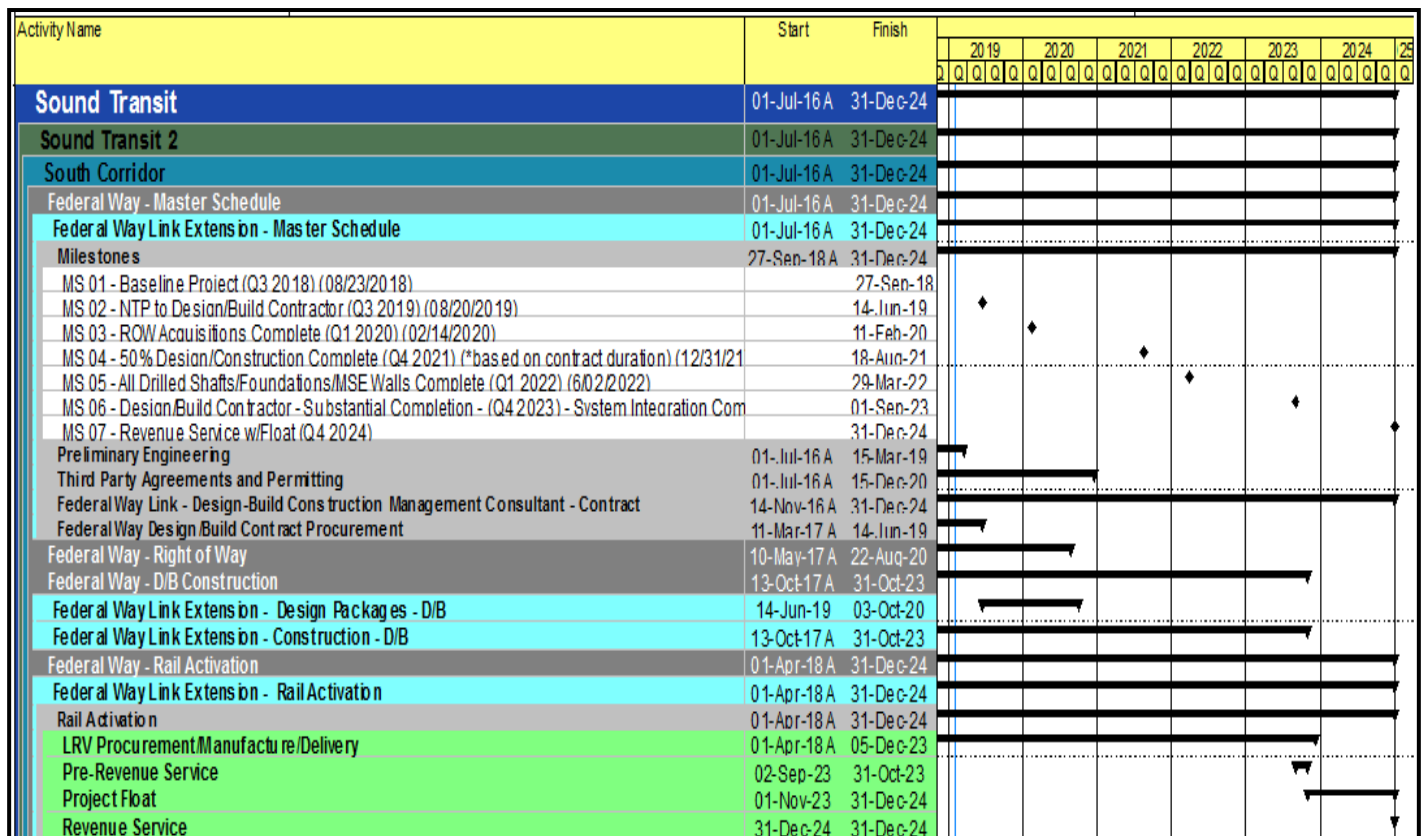
The most recent Quarterly Risk Register review update was held in December 2018. Below are the top project risks.

- Jurisdictional reviews not completed in time, thus delaying DB progress.
- Property acquisition and relocations completed in time for construction.
- Volume of residential relocations continues to be a concern due to limited housing availability.
- Volatility in construction market and unanticipated jurisdictional stakeholder requirements may drive project cost higher than PE cost estimate.
- Availability of federal funding remains uncertain and may impact schedule and funding resources.

Project Schedule

The project schedule is presented below. Real Estate acquisitions and relocations continue and additional detail has been added to the master schedule to monitor any impacts to the project. acquisitions and relocations continue and additional detail has been added to the master schedule to monitor any impacts to the project. Final Entry to Engineering was submitted and approval is expected in 1st QTR 2019 with the FFGA submittal to follow in 1st QTR 2019. A limited Notice to Proceed to the Design/Build contractor is expected in 2nd QTR 2019

Revenue Service expected in 4th QTR 2024.



Contingency Management

The Federal Way Link Extension project budget was baselined in September 2018 with a total contingency of \$549.9M.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is expected to be fully drawn when the design build construction contract package is executed.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. During this period a minor amount of \$0.04M was utilized for advanced demolition contract and the execution of third party agreement.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. During this period, no drawdown to UAC occurred.

Contingency Status (Monthly)

Type	Baseline		Current Status	
	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$139.6	5.7%	\$139.6	5.9%
Allocated Contingency	\$232.2	9.5%	\$232.1	9.8%
Unallocated Contingency	\$178.1	7.3%	\$178.1	7.5%
Total:	\$549.9	22.4%	\$549.9	23.3%

Contingency by Type

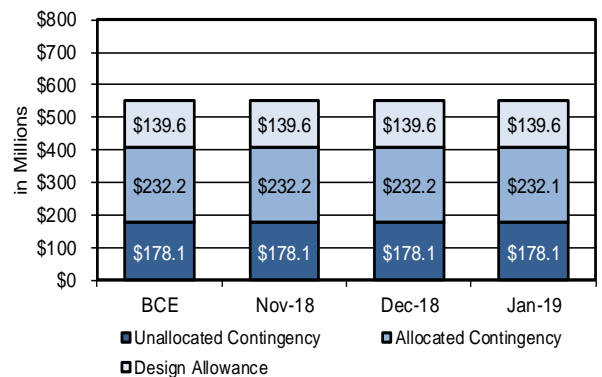
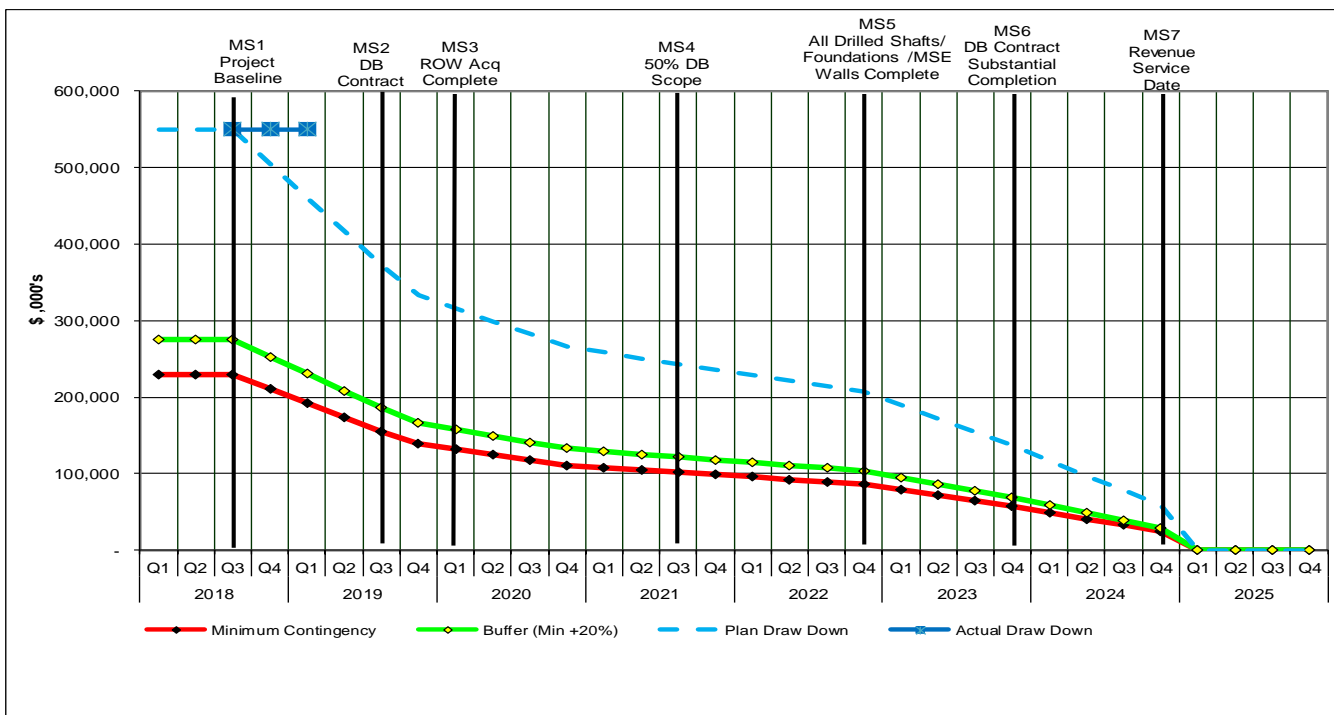


Table figures are shown in millions.

Contingency Drawdown (Quarterly)



Link Light Rail Federal Way Link Extension

Right-of-Way

The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The Right-of-Way program status for this period is summarized in the following table.

Federal Way Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
256	259	165	24	460	82
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

- Relocations impacts changed because subsequent tenants moving into vacated spaces.

Community Outreach

- Communication with property owners regarding FWLE route, profile, station areas, acquisition and relocation is ongoing.
- Provided project updates at various outreach events:
 - Centro Rendu, Renton 1/4
 - City of Federal Way, Diversity Commission 1/9
 - Federal Way HealthPoint 1/9
 - Kent Downtown Partnership 1/14
 - Federal Way Multi-Service Center All Staff Meeting 1/15
 - Kent West Hill Cambridge Neighborhood Meeting 1/22
 - Federal Way Library Office Hours 1/23
 - Federal Way Library Office Hours 1/30
- Held Neighborhood Briefings for area residents
 - Military Road S Area, Federal Way 1/10
 - Silverwood Apartments, Des Moines 1/17
 - Saybrook Condos, Federal Way 1/24



Community Outreach presentation to Silverwood Apartments Residents, Des Moines 1/17

Sound Transit Board Actions

Board Action	Description	Date
	None	

Phase 3 Preliminary Engineering (PE)

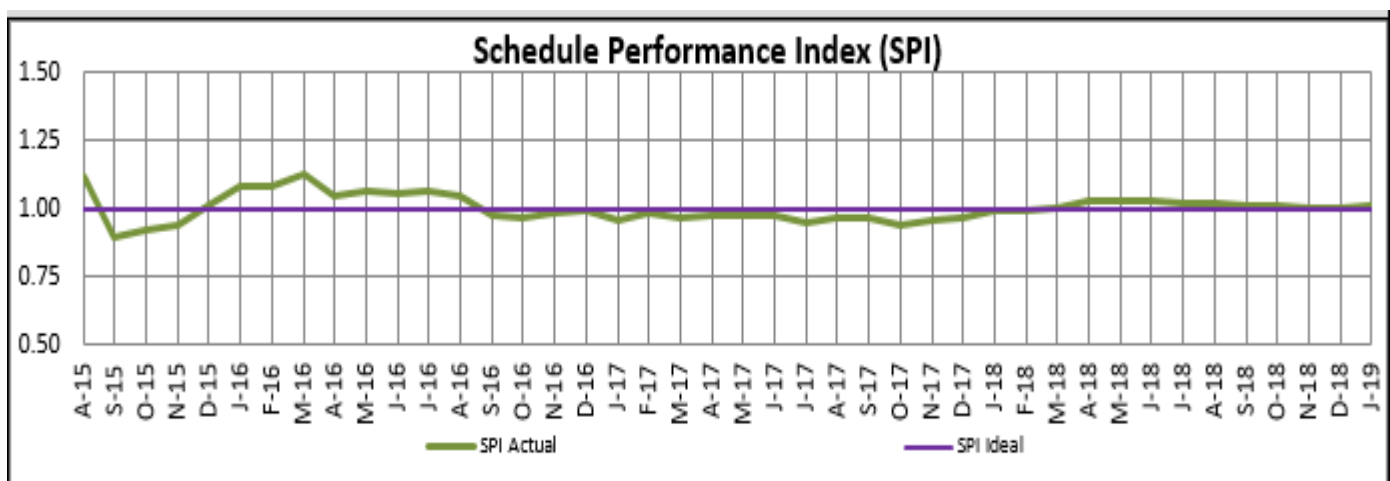
In July 2015, Sound Transit executed an amendment to the professional services agreement with HDR Engineering, Inc. for Phase 3 professional services, including completion of a Final Environmental Impact Statement (FEIS) using the preferred alternative and the other alternatives in the Draft EIS, preliminary engineering of the preferred alternative to Kent/Des Moines and additional engineering as needed to support receipt of environmental approvals. In February 2016, Sound Transit executed an amendment to extend the preliminary engineering effort from Kent/Des Moines to the Federal Way Transit Center.

Current Progress

- Continued responding to design-builder RFIs (Request for Information) and RFP (Request for Proposal) addenda.
- Efforts continued to finalize the Development Agreements with the AHJs (Authorities Having Jurisdiction).
- Continued environmental permitting effort including Critical Areas reports and responding to comments on the JARPA (Joint Aquatic Resources Permit Application).
- Property acquisitions continued including ESA (Environmental Site Assessments) phase 2 reports, and Hazardous Building Materials Survey.

Schedule Performance Index

The cumulative Schedule Performance Index (SPI) is 1.01 through January 2019, indicating the overall amount of work accomplished is as planned. The consultant is fully engaged on the scope, to assist in DB procurement RFI and RFP responses, environmental permit support and in ROW acquisition support.

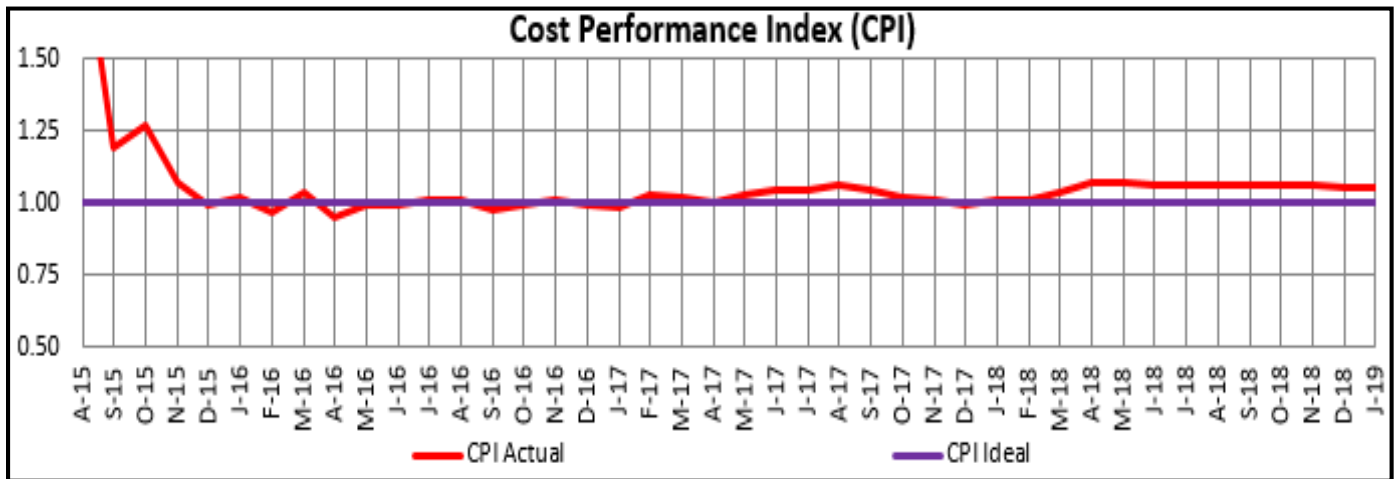


Link Light Rail Federal Way Link Extension



Cost Performance Index

Phase 3 expenditures through January 2019 totaled \$35M, approximately 94.4% of the amended total contract. The Phase 3 percent complete is reported at 99.6%, with an earned value of \$37M. The cumulative Cost Performance Index (CPI) is 1.06 showing costs are on track with work accomplished. The Consultant is engaged in assistance of DB contract RFIs and RFP response, environmental permits, support and in ROW acquisition support.



Cost Summary

Contract (Ph.3 portion)	Cumulative To-date
Amount Invoiced	\$35M
% Spent	94.4%
Earned Value	\$37M
% Complete	99%
SPI	1.01
CPI	1.06

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Link Light Rail Hilltop Tacoma Link Extension

Project Summary

Scope

Limits City of Tacoma

Alignment The Hilltop Tacoma Link Extension project is a 2.4-mile extension of the existing Tacoma Link system from the Theater District in downtown Tacoma to the Hilltop neighborhood. The extension will travel at-grade along Stadium Way, North 1st Street, Division Avenue, and Martin Luther King Jr. Way.

Stations Old City Hall, S. 4th, Stadium District, Tacoma General, 6th Avenue, Hilltop District, and St. Joseph.

Systems Expansion of the Operations and Maintenance Facility; The at-grade alignment will include additional signals, OCS, traction power, and communications infrastructure.

Phase Construction

Budget \$217.3 Million (Baselined September 2017)

Schedule Revenue Service: May 2022



Map of Hilltop Tacoma Link Extension.

Key Project Activities

Final Design

- Staff completed design conformance verification activities.
- Design consultant continued design services during construction scope including review of construction contractor submittals and responded to requests for information.

Construction

- Contractor continued potholing along alignment to confirm utility locations.
- Heading 1 (Commerce St./Stadium Way to Division St.) continued storm, sanitary sewer and water work
- Heading 2 (Stadium District): began sanitary sewer work at N. Tacoma Ave./N. 1st St. toward Division.
- Heading 3 (Hilltop): continued planning for water, storm and sewer jack and bore at Tacoma General ; performed OCS foundation installations from S. 15th to S. 19th.
- Operations and Maintenance Facility—completed pile driving activities for a total of 193 piles. Began wet utility work on 25th and elevator and wheel truing pit excavation work.
- Provided advanced notification to community and key stakeholders regarding maintenance of traffic revisions at work zones along the alignment.

Vehicles

- Held monthly progress meeting with representatives from Brookville Equipment Corporation on LRVs. Sound Transit (ST) staff and vehicle consultant reviewed vehicle subsystem design submittals. Consultant staff visited car builder facility in Brookville, PA for design progress review ahead of February Preliminary Design Review.

Project Cost Summary

In September 2017, Sound Transit Board adopted the Hilltop Tacoma Link Extension (HTLE) baseline schedule and budget by increasing the authorized project allocation from \$34.6M to \$217.3M. The project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions. To date, most of the expenditures have been from Administration, Design, 3rd Party, and ROW.

Award of the construction contract required phase level budget transfers and were approved at July's ST Board meeting. The T100 construction contract was executed in August 2018.

This period approximately \$11.4M was incurred, of this most expenditures were due to the Construction Phase related to the T100 construction contract. ST continues to anticipate majority of expenditures in the construction phase for the next month.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$16.9	\$16.9	\$7.9	\$7.9	\$16.9	\$0.0
Preliminary Engineering	\$5.6	\$5.6	\$5.6	\$5.6	\$5.6	\$0.0
Final Design	\$10.8	\$11.3	\$10.4	\$9.6	\$11.3	\$0.0
Construction Services	\$9.9	\$10.3	\$8.9	\$1.3	\$10.3	\$0.0
3rd Party Agreements	\$1.5	\$1.5	\$1.3	\$1.3	\$1.5	\$0.0
Construction	\$127.2	\$130.1	\$115.4	\$25.6	\$130.1	\$0.0
Vehicles	\$35.4	\$32.8	\$31.2	\$0.9	\$32.8	\$0.0
ROW	\$3.6	\$2.3	\$2.1	\$1.9	\$2.3	\$0.0
Contingency	\$6.6	\$6.6	\$0.0	\$0.0	\$6.6	\$0.0
Total	\$217.3	\$217.3	\$182.9	\$53.9	\$217.3	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$21.9	\$24.9	\$22.1	\$4.9	\$24.9	\$0.0
20 Stations	\$1.8	\$2.8	\$2.5	\$0.5	\$2.8	\$0.0
30 Support Facilities	\$26.6	\$33.1	\$29.3	\$6.5	\$33.1	\$0.0
40 Sitework & Special Conditions	\$40.0	\$41.6	\$36.9	\$8.2	\$41.6	\$0.0
50 Systems	\$25.0	\$27.8	\$24.6	\$5.5	\$27.8	\$0.0
Construction Subtotal (10 - 50)	\$115.4	\$130.12	\$115.4	\$25.6	\$130.1	\$0.0
60 Row, Land	\$3.4	\$2.3	\$2.1	\$1.9	\$2.3	\$0.0
70 Vehicles (non-revenue)	\$34.1	\$32.8	\$31.2	\$0.9	\$32.8	\$0.0
80 Professional Services	\$48.4	\$45.6	\$34.2	\$25.6	\$45.6	\$0.0
90 Unallocated Contingency	\$16.1	\$6.6	\$0.0	\$0.0	\$6.6	\$0.0
Total (10 - 90)	\$217.3	\$217.3	\$182.9	\$53.9	\$217.3	\$0.0

Risk Management

The Hilltop Tacoma Link Risk and Contingency Management Plan (RCMP) was updated in 2nd QTR 2018. This establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It will provide a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks, taking mitigation actions for known risks identified on the risk register, and effectively responding in a timely manner to those risks that pose a significant impact to the project cost or schedule forecast. The quarterly risk review for 4th QTR 2018 was held on December 12, 2018.

The Baseline Risk Assessment was conducted in May 2017 and a Quantitative Risk Assessment is anticipated in 2nd QTR 2019. Per the 4th QTR 2018 Register Review the current top project risks include:

- Unidentified utility conditions under the proposed alignment lead to schedule delays and increased cost.
- Roadway improvements and modifications along MLK are greater than anticipated, creating additional scope.
- Requirements and request from the City for UPO, MOT and property access lead to increased cost and schedule delays.
- Contaminated soils throughout the corridor, including the OMF site, could lead to additional cost and schedule delays.



Crew preparing 30 inch casing for installation.



Vacuum extracting sub grade for shoring box installation.

Contingency Management

Hilltop Tacoma Link Extension was baselined on September 2017 with a total contingency of \$33.8M. Since baselining, there were draw downs on AC and UAC to address Final Design Change Orders, the Procurement of the Tacoma LRV contract and the T100 Construction contract.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. DA is at \$0M, as a result of completion of Final Design.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. This period the Total AC remained the same to \$9.0M.

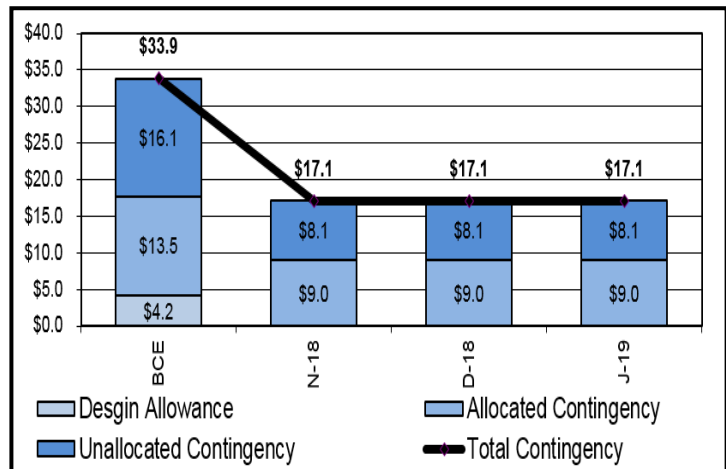
Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance remained the same in October with a net amount of \$8.1M.

Contingency Status (Monthly)

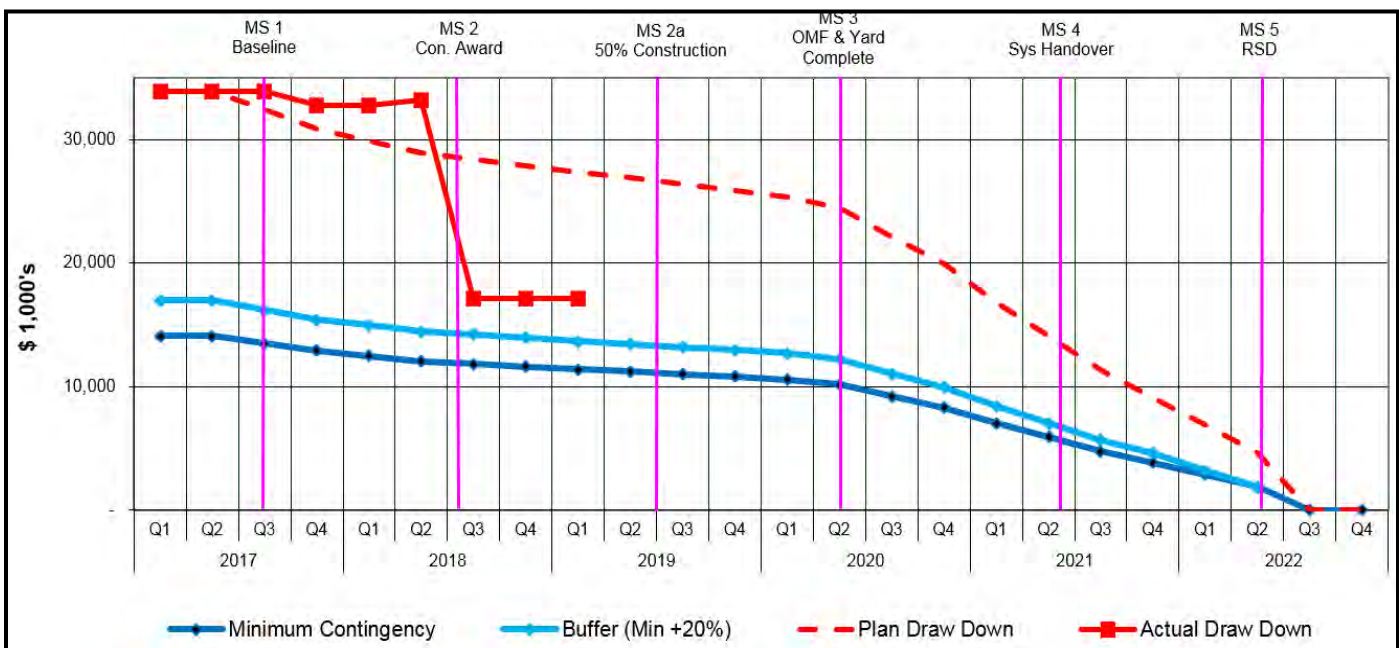
Type	Baseline		Current	
	Amount	% of Total	Amount	% of Work
Design Allowance	\$4.2	2.2%	\$0.0	0.0%
Allocated Contingency	\$13.5	6.8%	\$9.0	5.5%
Unallocated Contingency	\$16.1	8.2%	\$8.1	5.0%
Total	\$33.8	17.2%	\$17.1	10.5%

Table figures are shown in millions.

Contingency by Type



Contingency Drawdown (Quarterly)



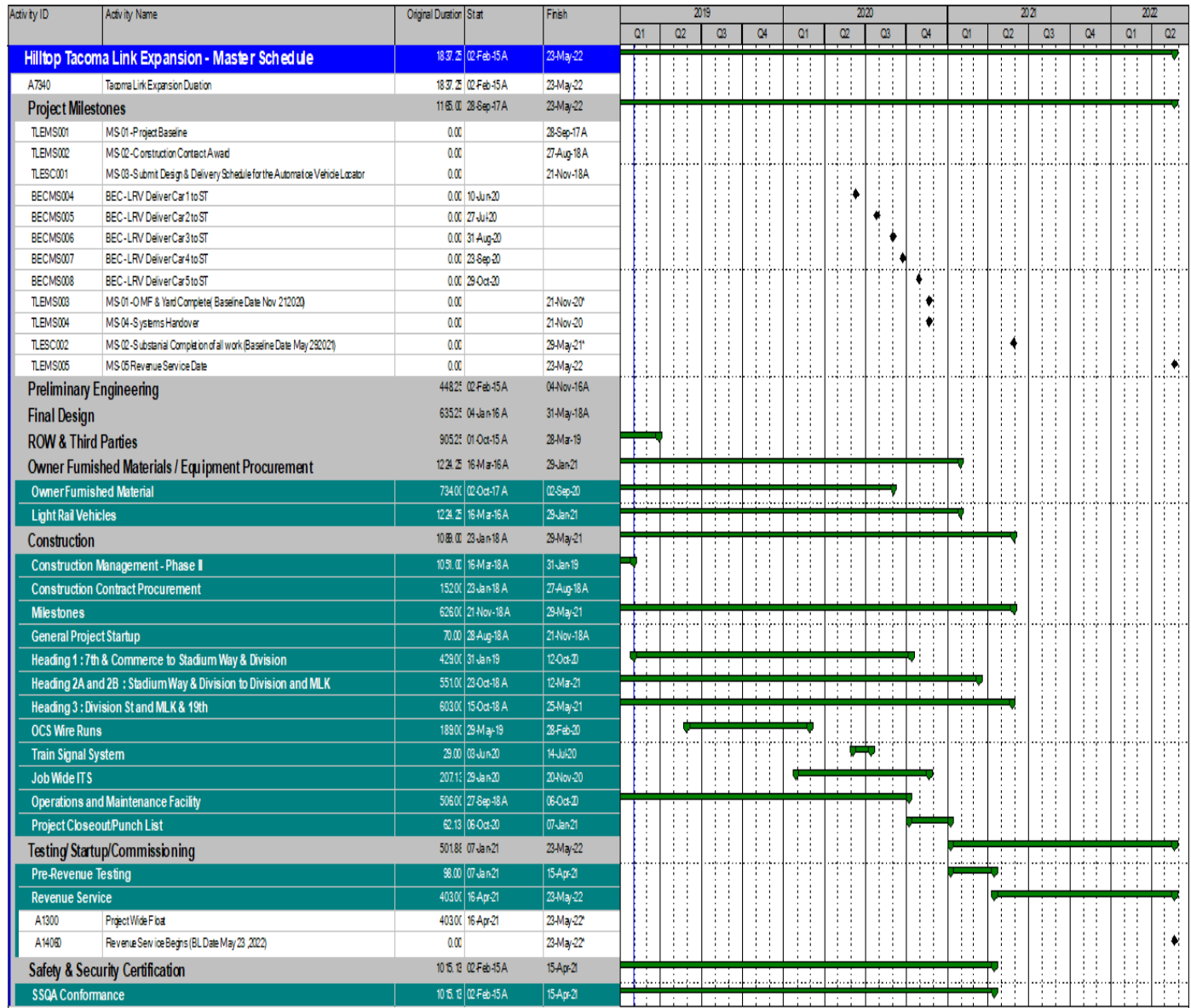
Link Light Rail Hilltop Tacoma Link Extension



Project Schedule

The Master Schedule has been updated through the end of January 2019. The LRV procurement contractor continues submitting CDRLS (Contract Data Requirement Lists) packages in support of Preliminary Design Review #1 (PDRs) scheduled in late 1st QTR 2019. Preliminary Design Review #2 in 2nd QTR 2019 and Final Design Review (FDR) completion in 3rd QTR 2019. Forecast delivery of the LRVs forecasts the first car arriving in 2nd QTR 2020 and last car in 3rd QTR 2020.

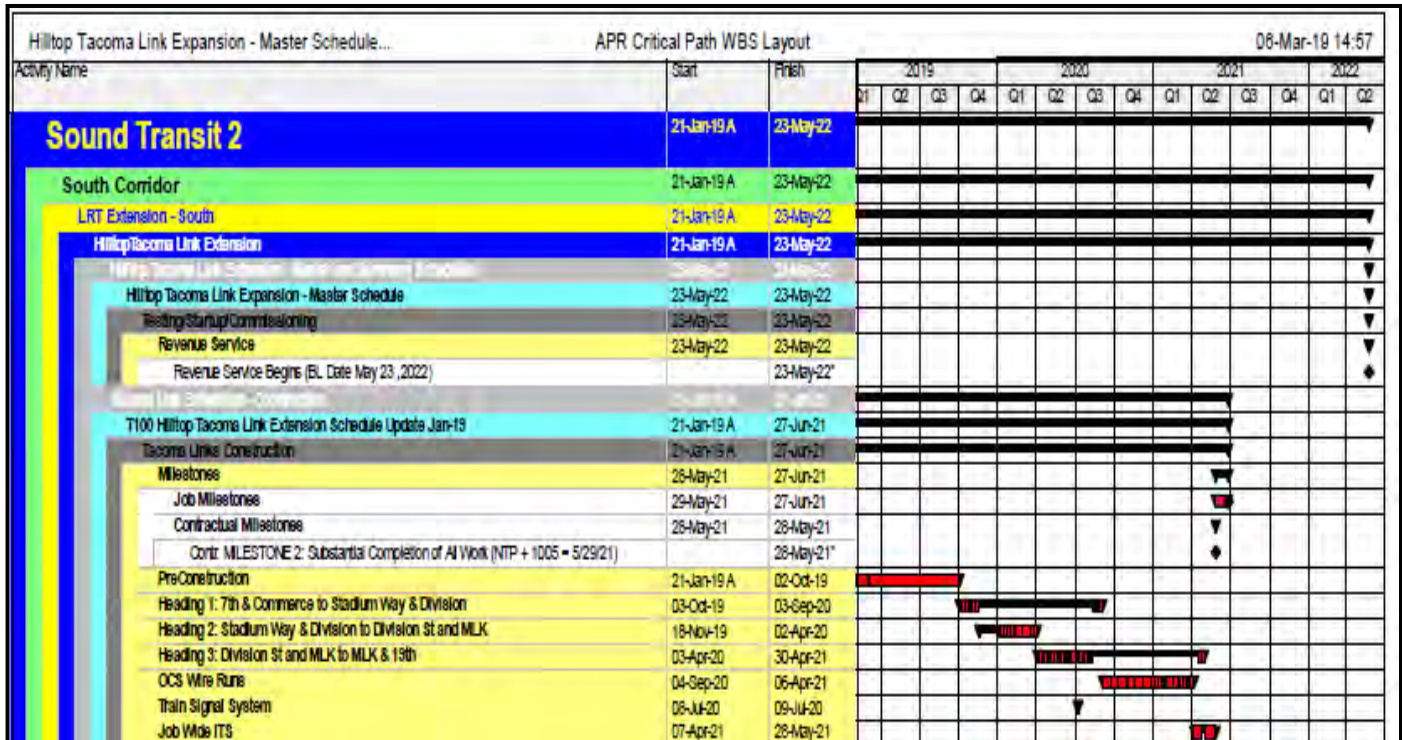
Revenue Service is forecasted in May 2022.



Critical Path Analysis

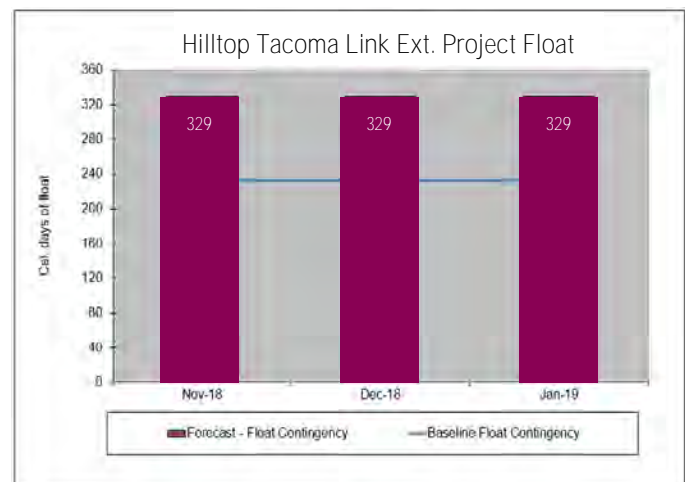
The Hilltop Tacoma Link Extension project critical path analysis for Jan 2019 .

The critical path is begins in T100 Construction which starts with the procurement and installation of Traffic Signal Poles and Equipment in Heading 1 and completing in Heading 3, OCS Wires Assemblies and Registration completion, and Job Wide ITS Installation for Mainline required for MS 02 Substantial Completion of Work (Baseline date May 29, 2021).



Project Float

The Tacoma Link Extension project currently forecasts 329 days of unallocated project float.



Right-of-Way

The Hilltop Tacoma Link Operations and Maintenance Facility will be expanded to the east and five new vehicles will be purchased. The Right-of-Way effort for this project involves the acquisition of a range of property interests which includes compensable (e.g. fee acquisitions, guideway easements, permanent and temporary construction easements) and non-compensable rights (e.g. rights of entry). These acquisitions will result in owner and tenant residential and commercial relocations. The Right-of-Way program status for this period is summarized in the following table. Design efforts have reduced the total acquisitions required from 140 to 22 parcels.

Tacoma Link Extension Property Acquisition Status					
ACQUISITION				RELOCATION	
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date
20	20	20	20	1	1
* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.					

Community Outreach

- Hosted East Tacoma Community meeting to discuss 38th and Pacific Staging area, Jan. 12.
- Gave presentations on the HTLE project to the Stadium Apartments (Jan. 10), Hilltop Business Association (Jan. 17), Hilltop Action Coalition (Jan. 28), and Stadium Business District (Jan. 29).
- Held the Coffee with the Contractor meeting in Stadium District, Jan. 15
- Held drop-in community meetings in partnership with the Hilltop Action Coalition, Jan. 30 and 31.
- Met with MultiCare to continue planning for construction in front of Tacoma General, Jan. 11.
- Began addressing construction noise in Tacoma General's call center.
- Wrote talking points for the Stadium High School principal to share safety messages with students.
- Met with several businesses along the HTLE alignment to create marketing materials for Sound Transit's Loyal to the Local business relations program.
- Met several times with Stadium Thriftway to discuss construction in front of the store and access to the store's driveway.
- Produced and distributed a project update about some Stadium District businesses and construction in each area.
- Produced and distributed notification about potholing on Martin Luther King Jr. Way, the full street closure on Commerce Street, closure on S. 4th St., as well as noise variance notification about weekend work on N. 1st Street.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	January 2019	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	0	1
Days Away From Work Cases	0	0	0
Total Days Away From Work	0	0	0
First Aid Cases	2	2	3
Reported Near Mishaps	0	0	7
Average Number of Employees on Worksite	84	-	-
Total # of Hours (GC & Subs)	5,998	5,998	17,811
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	0.00	11.23
LTI Rate	0.00	0.00	0.00
Recordable National Average	3.10	3.10	3.10
LTI National Average	1.20	1.20	1.20
Recordable WA State Average	5.70	5.70	5.70
LTI WA State Average	2.30	2.30	2.30

Note: Due to the timing of contractor's reporting periods, the current month's numbers above are a combination of actuals and estimates.

Link Light Rail Hilltop Tacoma Link Extension



Contract T100 — Hilltop Tacoma Link Extension

Current Progress

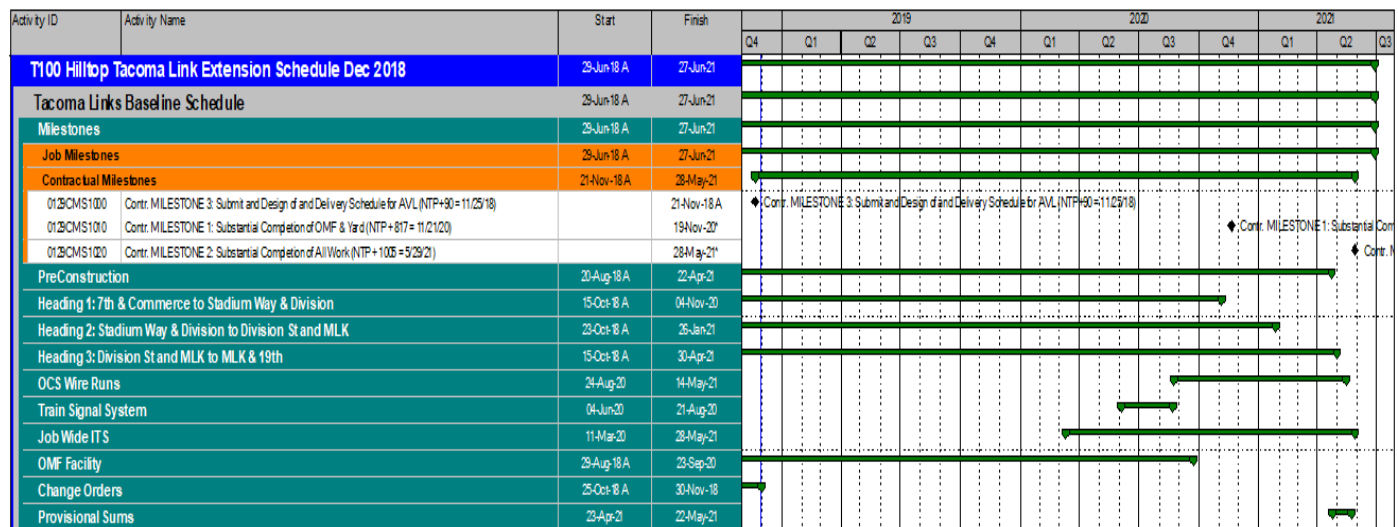
The T100 Contractor, Walsh Construction Company II, LLC, is continuing OMF and Mainline work at grade.

- Procurement of Precast Vaults/Manholes.
- Potholing work at Heading 3 Division ST and MLK complete.
- Removal and Disposal of Contaminated Soil at OMF .
- Start installation of ELB Storm Drain at Heading 2 Stadium Way and Tacoma Ave.
- Completion of Sanitary Sewer at MLK and 17th Ave.
- Excavated Truing Pit at OMF.
- All piles installed at OMF.

Schedule Summary

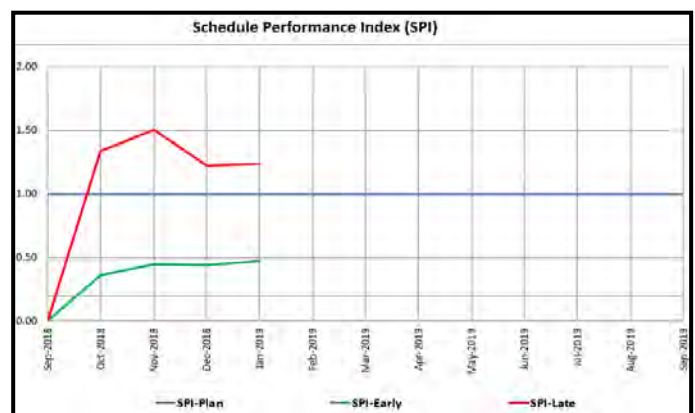
The schedule update for Jan 2019 indicates a target completion date for the OMF Substantial Completion in late November 2020 and Substantial Completion T100 complete in May 2021.

The critical path has changed from last months submittal from the heavy utility work located in the mainline to installation of piles in the OMF Facility structures. Weighted Percent Complete is currently 14.7%.



Schedule Performance Index

This period, the SPI-early is at 0.47 and the SPI-late is 1.24. The early index indicates that the contractor continues to perform behind the plan when compared to the baseline schedule. The SPI-early did improve slightly from 0.44 last month.



Next Period's Activities

- Procurement of specialty rail, tangent rail and pre-curved rail materials and traffic signal equipment.
- Excavation of elevator pit in OMF.
- Completion of Sanitary Sewer Storm & Water work and start work on Traction Powered Substation in Heading 1.
- Continue Sewer and Storm work in Heading 2.
- Completion of pot holing and storm utilities and start of intersection work in Heading 3.

Closely Monitored Issues

- The third party utility relocations (Tacoma Public Utility, CenturyLink and PSE) appear to have little impact on the T100 contract schedule and the HTLE Contractor has shown flexibility in accommodating the remaining third party work through coordinated sequencing. ST CM continue to monitor for potential cost and schedule impacts.
- Notifications to the community are critical in providing advance notice of upcoming construction activities. Community Outreach staff are managing this effort with the support of Contractor, City of Tacoma and ST field staff.

Cost Summary

Present Financial Status	Amount
T100 Contractor— Walsh Construction Company	
Original Contract Value	\$ 108,295,000
Change Order Value	\$ 0
Current Contract Value	\$ 108,295,000
Total Actual Cost (Incurred to Date)	\$ 17,668,439
Percent Complete	16%
Authorized Contingency	\$ 5,414,750
Contingency Drawdown	\$ 0
Contingency Index	N/A



Restoring trench line south of Thriftway Market driveway.

Link Light Rail Tacoma Dome Link Extension

Project Summary

Scope

Limits	Federal Way Transit Center to South Federal Way, Fife, East Tacoma, and Tacoma Dome
Alignment	The Tacoma Dome Link Extension expands light rail 9.7 miles from the Federal Way Transit Center to Tacoma. The representative alignment travels adjacent to I-5 with four stations.
Stations	South Federal Way, Fife, and East Tacoma (elevated stations) and Tacoma Dome (at-grade station)
Systems	Signals, traction power, communications (SCADA), Operations and Maintenance Facility South (OMF South)
Phase	Planning: Alternative Development
Budget	\$125.7 Million for Preliminary Engineering Phase 1—Alternative Development
Schedule	Revenue Service: December 2030



Map of Tacoma Dome Link Extension.

Key Project Activities

- Federal Way Project Administration Agreement approved by ST System Expansion Committee and Board in January.
- Began preparing for TDLE and OMF South Scoping. It was decided to begin OMF South scoping period Feb 19 through April 1, 10 days earlier than originally planned. Scoping for TDLE is now targeted to start April 1.
- Project team has completed Level 2 technical evaluation.
- Continued negotiations of Project Administration Agreement and Task Order 1 with the City of Tacoma. Similarly, continued discussion with Puyallup Tribe of Indians on a statement of partnering intent agreement.
- Continued monthly coordination meetings with the Cities of Federal Way, Fife, Milton and Tacoma.

Project Cost Summary

The Tacoma Dome Link Extension and OMF South project cost is summarized below in two cost categories. The first table summarizes costs in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The second table summarizes costs in accordance with the FTA's Standard Cost Categories (SCC) format. The figures in both tables are shown in millions.

Project cost and monthly expenditures are trending lower than planned monthly budget but the current forecast is on track for completing this phase within the authorized budgeted amount.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$26.8	\$3.2	\$2.8	\$26.8	\$0.0
Preliminary Engineering	\$87.1	\$10.3	\$5.2	\$87.1	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
3rd Party Agreements	\$5.8	\$0.2	\$0.1	\$5.8	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$6.0	\$0.0	\$0.0	\$6.0	\$0.0
Total	\$125.7	\$13.7	\$8.1	\$125.7	\$0.0

Cost Summary by SCC

SCC Element	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
50 Systems	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Subtotal (10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 Row, Land	\$5.0	\$0.0	\$0.0	\$5.0	\$0.0
80 Professional Services	\$110.9	\$13.7	\$8.1	\$110.9	\$0.0
90 Unallocated Contingency	\$9.8	\$0.0	\$0.0	\$9.8	\$0.0
Total (10 - 90)	\$125.7	\$13.7	\$8.1	\$125.7	\$0.0

Link Light Rail Tacoma Dome Link Extension



Risk Management

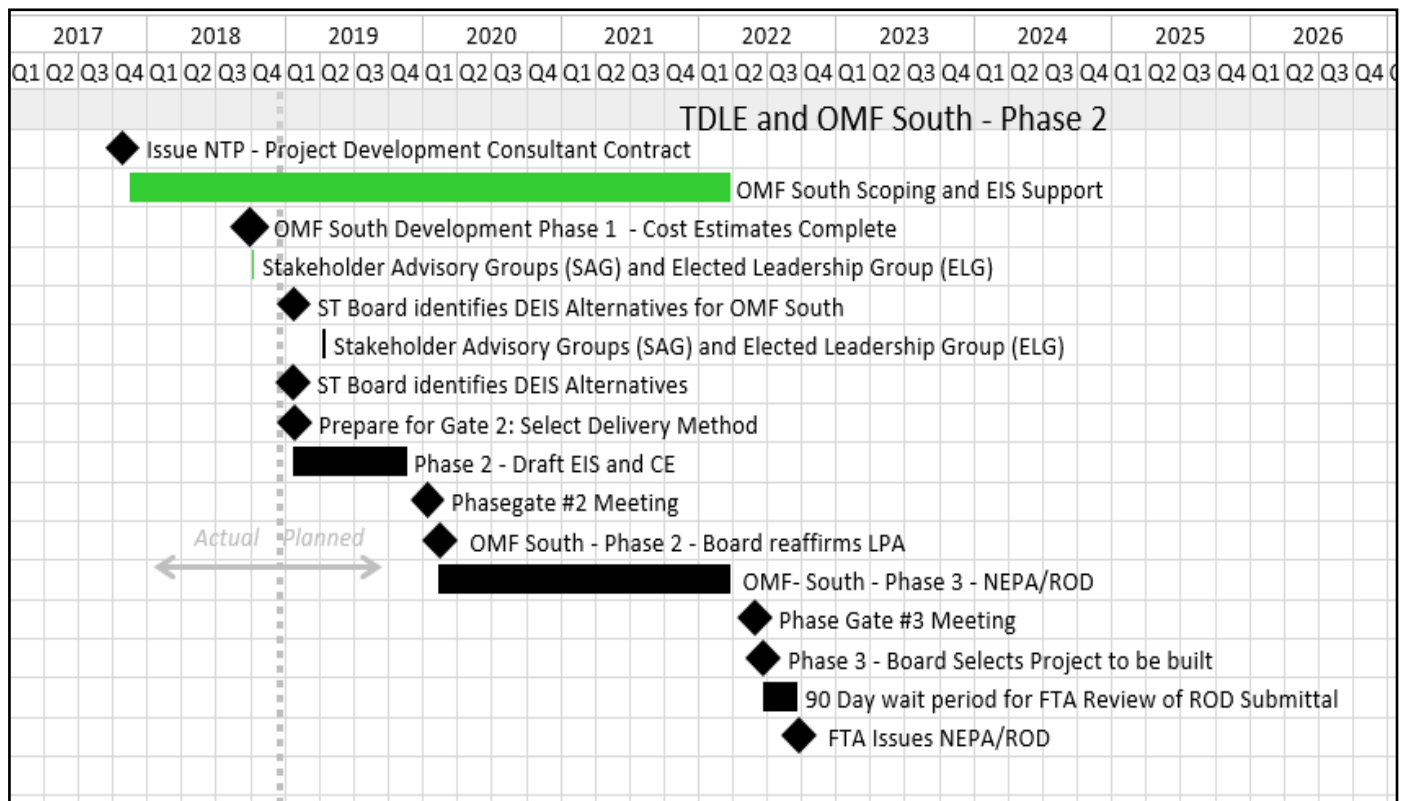
The Tacoma Dome Link Extension and OMF South Risk and Contingency Management Plan (RCMP) will establish a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It will provide a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks, taking mitigation actions for known risks identified on the risk register, and effectively responding in a timely manner to those risks that pose a significant impact to the project cost or schedule forecast.

The third risk review workshop was held in the 4th QTR 2018. The following are the top project wide risks:

- Coordination with SR 167 Gateway project.
- Siting OMF: South and potential schedule challenges.
- Coordination with Puyallup Tribe of Indians regarding potential property needs, schedule.
- Potential third party scope requests.
- Market conditions impacting costs.

Project Schedule

Phase I Alternative Analysis —The HDR detailed schedule as of Jan 31, 2019 is remaining on target for completing level 1 and level 2 scoping and Final DEIS Alternatives Development and Preferred Alternative Identification in 2nd QTR 2019 for the TDLE project.



Critical Path Analysis

Utilizing the criteria of Critical Path equals Total Float less than 5 Days, Phase 1 critical path continues to run through the Draft Recommended Solution Report including the Cost Estimates for selection of the OMF S sites, running through Milestone for Sound Transit Board Action to select Preferred Alternatives and DEIS Options.

Activity ID	Activity Name	OD	RD	Start	Finish	TF	2019		
							Q1	Q2	Q3
A1790	Draft Recommended Solution Report, including TSL, with Cost Estimate	0.00	0.00		29-Mar-19	73.00			
A4850	Draft Recommended Solution Report, including TSL, with Cost Estimate- ST Review	10.00	10.00	29-Mar-19	11-Apr-19	73.00			
A3260	Authorize Supplemental Task- Draft Final Recommended Solution Reports, Puyallup River Analysis	0.00	0.00	29-Mar-19		105.00			
A3475	Sound Transit Board Action- Select OMF S sites for DEIS	0.00	0.00		23-May-19	0.00			
A5880	Board Approves OMF Phase 2 Contract	0.00	0.00		23-May-19	0.00			
A3516	Phase 1 Complete	0.00	0.00		25-Jun-19	0.00			
A6140	Sound Transit Board Action- Select Preferred Alternative and DEIS Options	0.00	0.00		25-Jun-19	0.00			

Community Outreach

- Met with staff of Tacoma Public Utilities to discuss outreach opportunities.
- Hosted Interagency Group Meeting.
- Hosted Fife Community Office Hours.
- Provided briefing to Healthpoint Federal Way.
- Participated in New Tacoma Neighborhood Council meeting.
- Participated in Dome District meeting.
- Provided briefing to Transit Access Coalition.
- Provided briefing to Multi-service Center.
- Provided briefing at the West Hill Neighborhood meeting.
- Provided briefing to Eastside Neighborhood Council.
- Provided briefing to O'Brien Auto Group and Tacoma RV.
- Hosted Federal Way Community Office Hours.
- Tabled at Pierce Transit BRT Open Houses at UW Tacoma and Moore Library.

Sound Transit Board Actions

Board Action	Description	Date
	None to report.	

Link Light Rail

Link Operations & Maintenance Facility: East

Project Summary

Scope The Link Operations and Maintenance Facility: East (OMF East) project, located in the City of Bellevue, includes a 160,000 sq. ft. operations and maintenance facility that will maintain, store and deploy and expanded light rail fleet, including seven LRV service bays, a LRV wash facility and storage for up to 96 LRVs.

Phase Proceed to Construction

Budget \$449.2 Million (Baselined July 2016)

Schedule Project Completion: December 2020



Map of OMF East Site

Key Project Activities

- Design Package (DP) development for DP3A - review IFC resubmittal.
- North vault work continues.
- OCS pole foundation work is in progress.
- Wheel truing pit and truck wash pit work is ongoing.
- OMFE Building foundation work continues.
- OMFE Building electrical undergrounding and plumbing continues.
- Rail delivery has commenced.
- Utility vault installation continues.

Closely Monitored Issues

- Elements of DB Contractor's proposal (shear wall elimination for future development) may require MOU amendment with City of Bellevue and council action may be required.
- Spur property exchange proposal with City of Bellevue may complicate the timing of the RFP for Transit Oriented Development.
- Commercial issues with the Design Build contractor regarding differing site conditions.
- Track related deviation with regards to the dynamic envelope of the LRV movements in the yard.

Project Cost Summary

The Baseline Budget (July 2016) for the OMF East is \$449.2M. The OMF East cost is summarized into two cost tables. The first table is in accordance with Sound Transit's Work Breakdown Structure (WBS) displaying the cost summary by phase. The second table summarizes project cost by SCC, in accordance to the FTA Standard Cost Categories (SCC) format. Both tables show figures in millions.

The Estimated Final Costs (EFC), continues to be projected at approximately \$449.2M. This period's expenditure of about \$8.7M. The total project cost incurred from \$184.4M to \$193.1M. The primary cost drivers during this period on the OMF East project comes from the design build (construction) phase at \$8.4M or roughly 97% of the total monthly expenditures. The next cost driver this period are the Construction Service and Administrative Phase expenditures at about \$267K and \$80K respectively.

Cost Summary by Phase

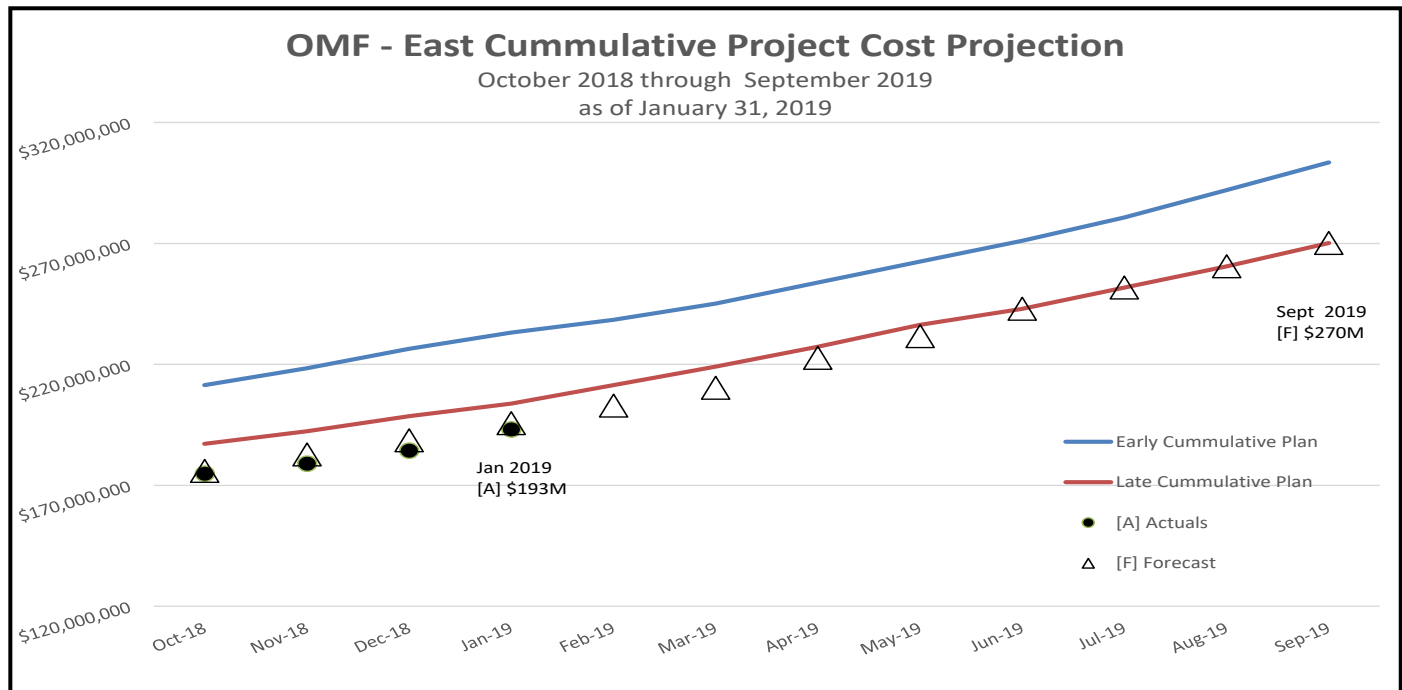
Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$17.6	\$17.6	\$5.3	\$5.3	\$17.6	\$0.0
Preliminary Engineering	\$9.5	\$9.5	\$9.0	\$8.7	\$9.5	\$0.0
Final Design	\$0.4	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
Construction Services	\$19.3	\$19.3	\$17.6	\$5.4	\$19.3	\$0.0
3rd Party Agreements	\$3.1	\$3.1	\$0.3	\$0.1	\$3.1	\$0.0
Construction	\$264.8	\$264.8	\$223.0	\$72.1	\$264.8	\$0.0
ROW	\$134.5	\$134.5	\$101.9	\$101.5	\$134.5	\$0.0
Total	\$449.2	\$449.2	\$357.2	\$193.1	\$449.2	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$2.6	\$4.4	\$4.1	\$1.0	\$4.1	\$0.3
20 Stations	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
30 Support Facilities: Yard, Shop	\$140.1	\$136.1	\$124.3	\$37.6	\$145.5	-\$9.4
40 Sitework & Special Conditions	\$43.6	\$48.5	\$39.7	\$10.5	\$42.7	\$5.8
50 Systems	\$43.0	\$41.6	\$38.6	\$9.1	\$38.6	\$3.0
Construction Subtotal (10 - 50)	\$229.3	\$230.6	\$206.6	\$58.2	\$230.8	-\$0.3
60 ROW, Land, Improvements	\$134.5	\$134.5	\$101.9	\$101.5	\$134.5	\$0.0
70 Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
80 Professional Services	\$71.6	\$70.3	\$48.7	\$33.4	\$70.1	\$0.3
90 Unallocated Contingency	\$13.8	\$13.8	\$0.0	\$0.0	\$13.8	\$0.0
Total (10 - 90)	\$449.2	\$449.2	\$357.2	\$193.1	\$449.2	\$0.0

Project Cash Flow Projection

The OMF East cost projection is trending late this period but anticipates to pick up through the following summer. Total project expenditure incurred to date passed \$193M with Right-of-Way (ROW) phase cost being the largest driver at 52.5% and Construction Phase at about 37.3%. The projected cash flow was revised this period for the next nine months to reflect some current trends. The Design Builder's (DB) design completion continues to slip specifically on Systems where some procurements were anticipated that did not occur. In addition, ROW acquisitions and relocation phase is reflecting some positive trends where anticipated cost may not materialized as previously anticipated. The revised project expenditure trending is now to reach \$270M by September of 2019 which is at the lower bounds of the late planned expenditures.



Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks.

The project has completed Risk Mitigation Milestone 2, the completion of ROW Acquisition and Mass Grading. The Quantitative Risk Assessment (QRA) assessed that with the current risk profile, the project would complete within the baseline schedule and budget. The current top actively managed risk areas remains similar to the previous quarter and are listed below:

- **Design:** As the project approaches the 60% design milestone, changes made to scope or design will have greater cost impact than during the earlier design stages.
- **Scope:** Scope interfaces with East Link (E335/E750) tracks, OCS, Signals, LRV vehicle envelop, Operations' requirement changes creates additional work impacts the project's schedule and budget.
- **Construction:** As the construction commenced with early work; normal and routine construction risks will be encountered and may complicate and influence design completion. Soil conditions and coordination with third parties has shown some early evidence of such challenges.

Contingency Management

The Link Operations and Maintenance Facility: East was baselined and approved by Sound Transit Board in July 2016 with a total contingency of \$93.2M. The Project's starting contingency balance as of the Notice to Proceed for Construction was \$71.6M. In this period, there several construction change orders that drew on contingency. The current contingency balance remains practically unchanged at approximately \$69.5M (previous quarter at \$69.7M).

Design Allowance (DA): N/A.

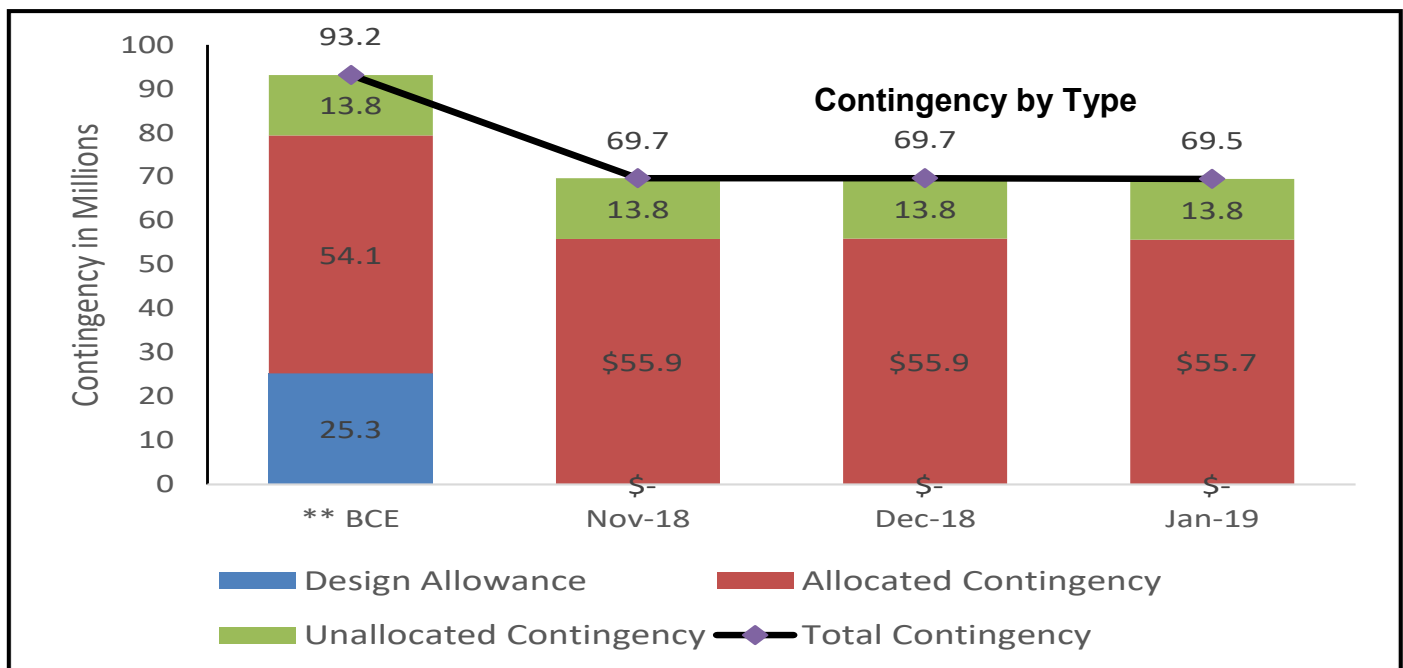
Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. Allocated contingency balance at the end of this period changed from the previous month at \$55.9M to \$55.7M.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The baseline UAC amount of \$13.8M reflects no changes this period.

Contingency Status

Contingency Type	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ 25.3	5.6%	\$ -	0.0%
Allocated Contingency	\$ 54.1	12.0%	\$ 55.7	21.7%
Unallocated Contingency	\$ 13.8	3.1%	\$ 13.8	5.4%
Total	\$ 93.2	20.7%	\$ 69.5	27.1%

Table figures are shown in millions.

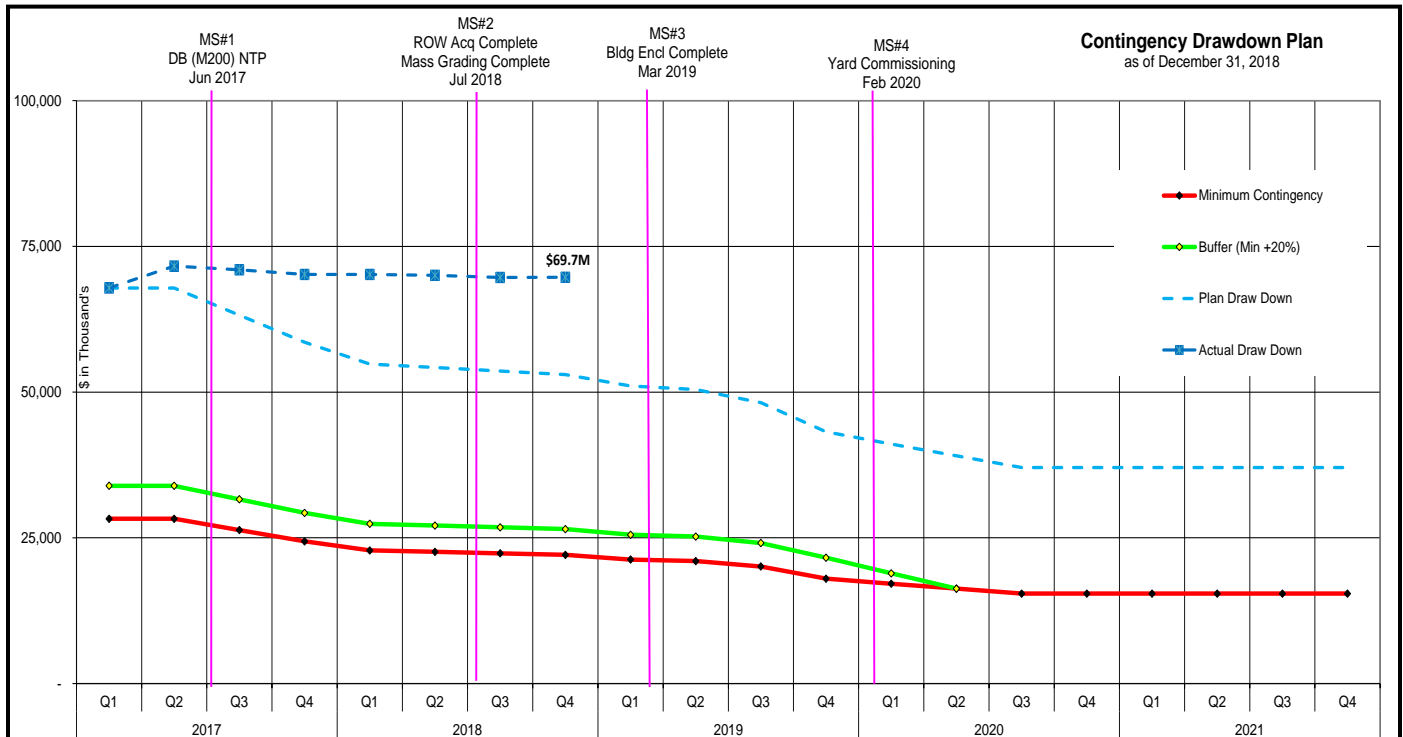


Link Light Rail

Link Operations & Maintenance Facility: East

Contingency Drawdown

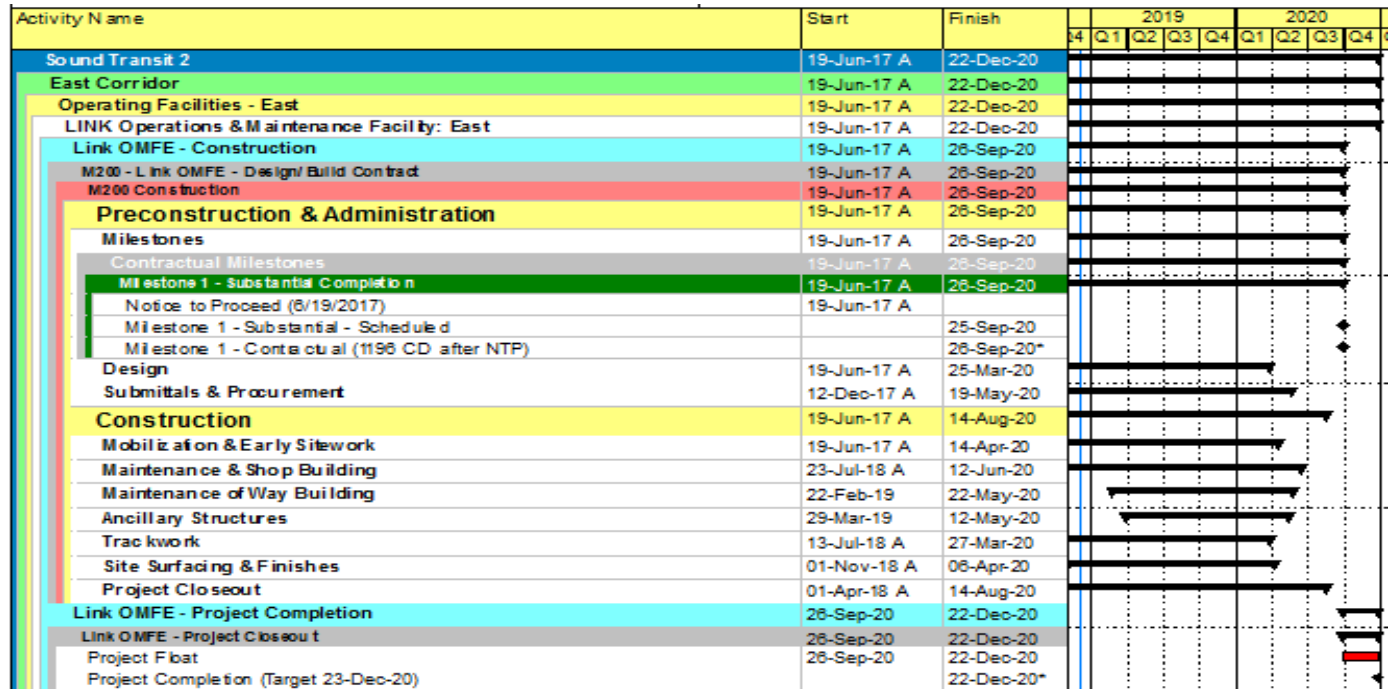
At the end of the 4th QTR 2018, OMF East Project's total contingency drawdown plan is trending positively. Total contingencies balance is at approximate \$69.7M (previously at \$70M) and remains above all the baseline draw down projection and well above both the minimum contingency and the buffered (minimum plus 20%) contingency levels. The next update will be at end of the 1st QTR 2019.



Territorial photo of OMF East site looking north on January 31, 2019

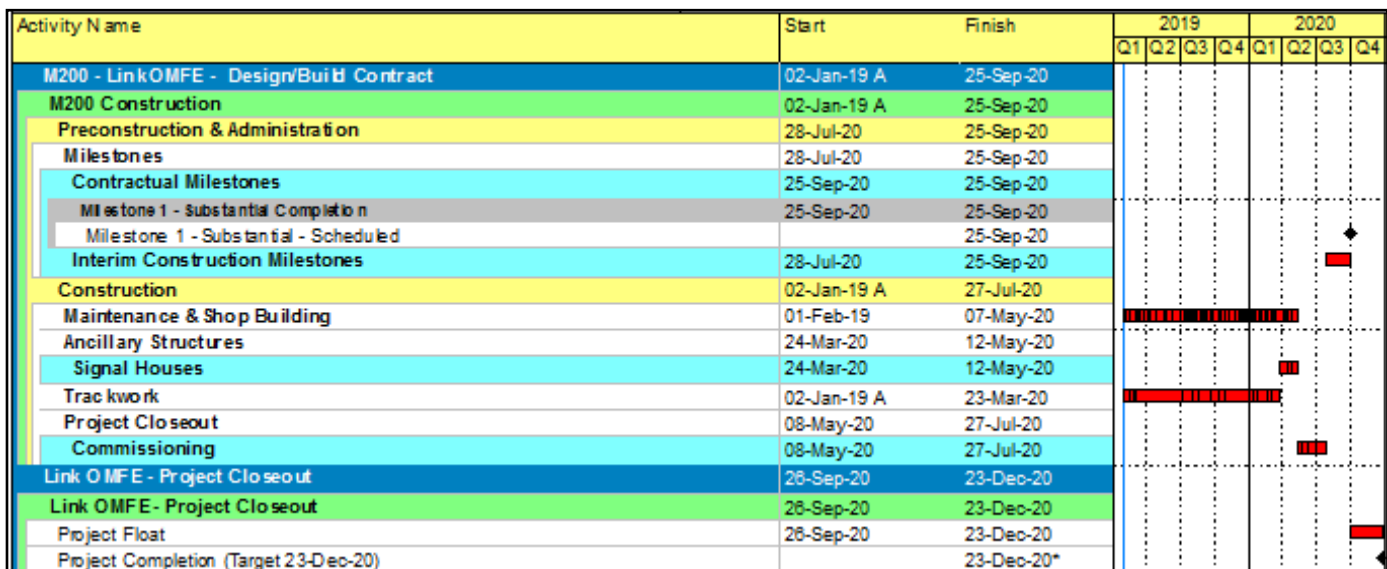
Project Schedule

The schedule for OMF East is now entirely within the M200 contract, which is presented below. The Contractor continues to progress as planned and is forecast to complete on target. The OMF East is expected to be available to begin receiving LRVs as needed in Summer 2020.



Critical Path Analysis

The critical path currently runs concurrently through the track work in the storage yard and the Maintenance of Way building, before converging on building/site commissioning and testing.



Link Light Rail

Link Operations & Maintenance Facility: East

Right-of-Way

All OMF East properties have now been vacated and are in the project's control. Only administrative functions remain in this phase of the project. *No more updates.*

Community Outreach

- Uploaded final renderings of the facilities to the project website.
- Continued engaging with the public on potential construction impacts to the neighborhood.

Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	



Design Builder's 3-D model of the OMF East looking Southeast.

Contract M200 - OMF East Design Build

Current Progress

Design: Hensel Phelps (HP) advanced design packages (DP) for the following areas: DP 03 IFC was resubmitted on January 4th and comments were sent to HP requiring resubmission. IFC for DP 03 was conditionally approved on January 16th. HP submitted DP 03A IFC and comments were sent to HP requiring resubmission. HP is collaborating with subject matter experts to resolve comments for DP 03A IFC and plan on resubmitting in February.

Construction: HP began installation of top panels, welds, and placing grout for the North Vault. Excavation and subgrade excavation of the west crane pad at the North Vault was completed. HP continued drilling work and placing rebar cages for OCS foundations; excavating, backfilling, and compacting utility vault foundations. Installation began for fencing of the south storage fan area. Completed PVC plumbing installation and electrical underground for areas B & C for the OMFE Building. Backfill for the Wheel Turing Pit has been completed.

Next Period's Activities

- Approval of DP #003A IFC
- Continue North Vault work continues
- Continue work for OMFE building
- Continue OCS pole foundation work
- Continue work at north pit, south pit, train wash pit, wash room pit, and truck wash pit

Closely Monitored Issues

- **Site infiltration issue:** Contractor has submitted an RFC stating differing site conditions on the soil infiltration rate. ST has rejected this RFC and currently working on partnering activities to resolve the issue. Mediation has begun.
- **North Vault Subgrade Condition:** Potential differing site condition

Cost Summary

Present Financial Status	Amount
M200 Contractor – Hensel Phelps	
Original Contract Value	\$218,912,000
Change Order Value	\$2,039,942
Current Contract Value	\$220,951,942
Total Actual Cost (Incurred to Date)	\$70,067,261
Percent Complete	35.93%
Authorized Contingency	\$21,891,200
Contingency Drawdown	\$2,039,942
Contingency Index	3.9

*Excludes Betterments



North Vault East base pad fine grade.

Link Light Rail Light Rail Vehicle Fleet Expansion

Project Summary

Scope	Design, manufacturing, assembly, inspection, testing and delivery of 152 low floor light rail vehicles for service requirements of Northgate, East Link and Lynnwood Link Extensions.
Phase	Manufacturing
Budget	\$740.7 Million (Baseline September 2015, Amended April 2017)
Schedule	Project Completion: 3rd QTR 2024



Artist rendering of the new light rail vehicles fleet.

Key Project Activities

- All First article inspections (FAIs) have been submitted to ST.
- All twenty (20) Final Design Review Packages have been submitted.
- Conducting qualification testing on LRV 201
- LRV Familiarization training in at Siemens facility in Sacramento California
- Conducting qualification testing on LRV 201.

Closely Monitored Issues

- Commercial dispute in negotiations with Siemens regarding lift design and jacking points, and door supplier change.
- Test Waivers, Siemens is behind on submitting anticipated waiver requests and test procedures.
- First Article inspection packages with open items still be resolved.



LRV #202 with the Wave

Project Cost Summary

The LRV Fleet Expansion Project has an approved baseline budget of \$740.7M. The project cost is summarized into two cost tables. The first table is in accordance with Sound Transit's Work Breakdown Structure (WBS) displaying the cost summary by phase. The second table summarizes project cost by SCC, in accordance to the FTA Standard Cost Categories (SCC) format. Both tables show figures in millions.

In January, the majority of this period's costs were attributed to administration costs, design support and technical document reviews.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$6.4	\$6.4	\$1.6	\$1.4	\$6.4	\$0.0
Construction Services	\$18.0	\$18.0	\$4.8	\$3.8	\$18.0	\$0.0
Vehicles	\$716.3	\$716.3	\$649.3	\$82.1	\$716.3	\$0.0
Total*	\$740.7	\$740.7	\$655.7	\$87.4	\$740.7	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Construction Subtotal (10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 ROW, Land, Improvements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
70 Vehicles	\$702.8	\$702.8	654.1	\$86.0	\$702.8	\$0.0
80 Professional Services	\$6.1	\$6.1	\$1.6	\$1.4	\$6.1	\$0.0
90 Contingency	\$31.7	\$31.7	\$0.0	\$0.0	\$31.7	\$0.0
Total *(SCC 10 - 90)	\$740.7	\$740.7	\$655.7	\$87.4	\$740.7	\$0.0

**Totals may not equal column sums due to rounding of line entries.*

Risk Management

The Risk and Contingency Management Plan (RCMP) establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. It is Sound Transit's responsibility for continuously monitoring project status and associated risks. The project's qualitative risk register reflects 4th QTR of 2018.

The current top risk areas are listed below:

- Hoist Beam Lifting Issues, OMF (Forest St.) upgrades impacted by design , may not be unable to lift car.
- Design of the propulsion and auxiliary power system may not pass qualification test.
- Commissioning of LRVs is impacted due to lack of sufficient space, lift access or other resources at OMF (Forest St.).
- Interface details between old ATP and ST1 vehicle.
- OMSF Storage & Space Requirements causing no place to store spare parts for ST2 LRV.

Link Light Rail Light Rail Vehicle Fleet Expansion



Contingency Management

The project's budget was Baseline in September 2015 and was amended in April 2016 to exercise the option LRV contained a total of \$78.0M of Total Contingency. The project's Total Contingency is currently at \$68.9M or about 12.1 % of remaining work in the project.

Design Allowance (DA) was established to account for unquantified scope at the time of the cost estimate. This project contains \$0 design allowance.

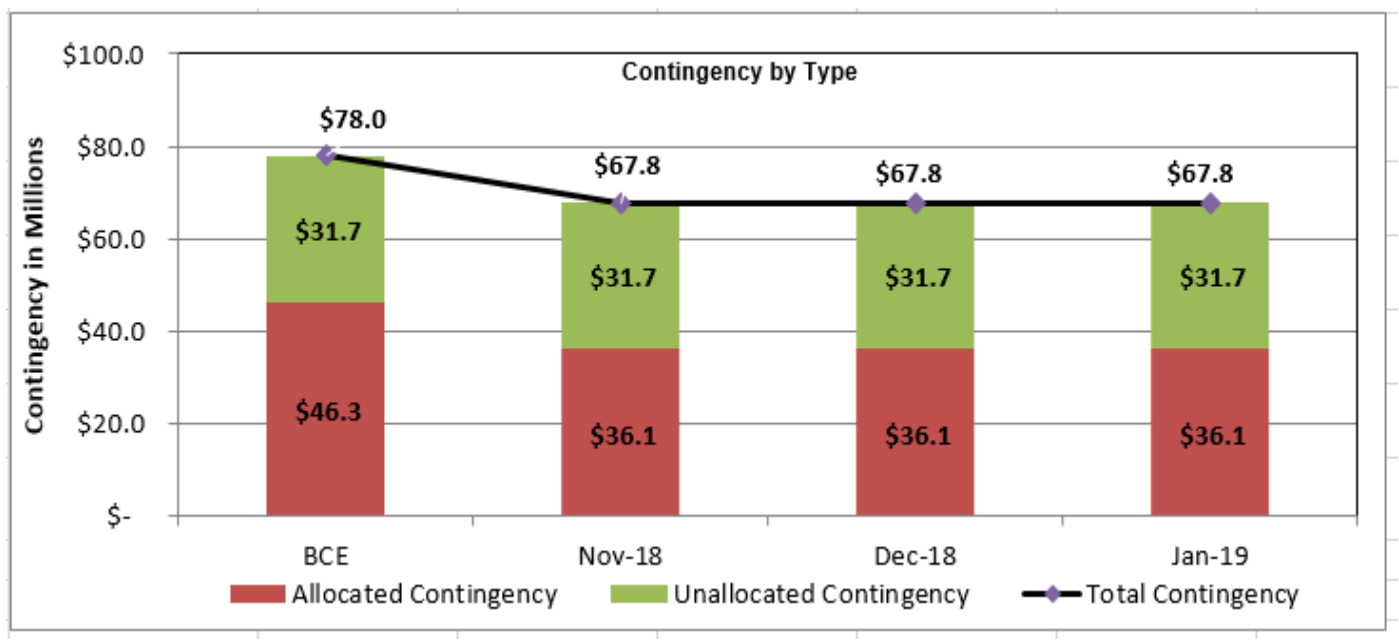
Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. The project baseline's allocated contingency was \$46.3M. The current available allocated contingency is \$36.1M. Approximately \$1M contingency was drawn last quarter for LRV change orders.

Contingency Status

Contingency Type	Baseline		Current	
	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ 0.0	0.0%	\$ 00.0	0.0%
Allocated Contingency	46.3	6.4%	\$ 37.2	6.5%
Unallocated Contingency	\$ 31.7	4.3%	\$ 31.7	0.0%
Total	\$ 78.0	10.7%	\$ 68.9	12.1%

Table figures are shown in millions.

Contingency by Type



Project Schedule

The LRV Fleet Expansion project schedule is shown below. The progress schedule below was established by using the last monthly production schedule submittal and forecast milestones updates for engineering final design during the weekly progress and coordination meeting.

As of January 2019, Siemens continues to forecast the 2nd LRV to be shipped in place of 1st LRV to Sound Transit facility will arrive on or before March 27, 2019. This is the result of the amount of test waivers against the 1st LRV which will cause it to ship after LRV#005 in 2nd QTR 2019.

Activity ID	Activity Name	Start	Finish	2019	2020	2021	2022	2023	2024	2025	2026	2027
ST2 Light Rail Vehicle Fleet Expansion												
	ST2 Light Rail Vehicle Fleet Expansion	24-Feb-15 A	26-Jun-24									
	LRV Engineering and Manufacture	11-Oct-16 A	04-Mar-19									
A1820	LRV Design Reviews, Manufacturing, and System Tests	11-Oct-16 A	04-Mar-19									
	LRV Delivery Schedule	15-Mar-19	26-Jun-24									
	LRV #1-122 (122 LRV Base Order)	15-Mar-19	01-Feb-23									
A1825	Delivery of 1st LRV (BL 27-Mar-19)		15-Mar-19									
A1835	Delivery of 40th LRV - Northgate Link Vehicle Deliveries Complete (BL 26-Jun-20)		04-May-20									
A1838	Delivery of 42nd LRV - Existing OMF at capacity (104 LRVs) (BL 27-Jul-20)		22-May-20									
A2080	Final Acceptance of Vehicles (BL 28-Feb-23)		01-Feb-23									
A2070	Delivery of 122nd LRV - Final ST2 Delivery (BL 26-Aug-22)		06-Jul-22									
	LRV #123 - 152 (30 LRV Options) - Change Order #4	20-Dec-23	26-Jun-24									
A2080	Delivery of 152nd LRV - Final Delivery (BL 26-Feb-24)		20-Dec-23									
A2080	Final Acceptance of Vehicles (BL 28-Aug-24)		26-Jun-24									
	Project Closeout	01-Feb-23	20-Dec-23									

Critical Path Analysis

The critical path starts at LRV #15 through #122 car shell production, final assembly, shipment and arrival at O&M Facility, to Final Acceptance Test milestone completion of LRV #152.

The delivery of all the light rail vehicles requirements for Northgate Link Extension is currently anticipated approximately a year ahead of the start of revenue service. This is well within fleet requirement for a successful commissioning and testing of the LRVs prior to revenue simulation period. Consequentially, the planned deliveries and commissioning and testing of light rail

LRV Manufacturing Critical Path Schedule

Activity ID	Activity Name	Start	Finish	Total Hours	2019	2020	2021	2022	2023	2024	2025	2026
SEA0040	Car Shell Production LRV#015	20-Nov-18 A	08-Feb-19	0.00								
SEA7110	Car Shell Production LRV#123	17-Dec-20	19-Feb-21	0.00								
SEA18020	Car Shell Finishing LRV#123	08-Mar-22	11-Apr-22	0.00								
SEA18720	Car Shell Production LRV#129	14-Apr-22	13-Jun-22	0.00								
SEA18040	Final Assembly LRV#123	20-Apr-22	30-Jun-22	0.00								
SEA18180	Final Assembly LRV#124	09-May-22	20-Jul-22	0.00								
SEA22480	Car Shell Production LRV#152	06-Jun-23	08-Aug-23	0.00								
SEA22500	Car Shell Finishing LRV#152	18-Aug-23	20-Sep-23	0.00								
SEA22520	Final Assembly LRV#152	28-Sep-23	08-Dec-23	0.00								
SEA22420	Shipment and Arrival at O&M Facility LRV#151	20-Nov-23	28-Nov-23	0.00								
SEA22580	Contractual Delivery LRV#152	20-Dec-23		0.00								
SEA22570	Acceptance Testing (includes MP and GBV) LRV#152	21-Dec-23	07-Mar-24	0.00								
SEA22580	Burn-In LRV#152	08-Mar-24	28-Mar-24	0.00								
SEA22590	Contractual Conditional Acceptance (Milestone A-E) LRV#152	01-Apr-24		0.00								
SEA22600	Final Acceptance (Milestone A-F) LRV#152	28-Jun-24		0.00								

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Link Capital Program Staffing October – December 2018 (updated quarterly)

Recruiting Status

The following positions were filled in 4th QTR 2018 to support the Link Capital Program:

Position	Position
DECM Executive Director	Sr. Scheduling Engr
Deputy Project Director, Lynnwood Link	Risk Engineer
Permit Administrator (2)	Principal Construction Manager (2)
Sr. Land Use Permitting	Deputy Construction Manager
Manager, Civil Engineering	Sr. Project Manager
Mechanical Engr, Fire Protection	Deputy Project Director, Vehicles
Sr. Systems Engr, Traction Electrification	Capital Signage Specialist
Sr. Systems Engr, Rail/Vehicle	Project Director, Environmental Affairs
Project Control Coordinator (2)	Sr. Environmental Planner
Sr. Project Control Specialist	Environmental Planner

As of the end of 4th QTR 2018, below is the current DECM and PEPD staffing levels:

Division	Total Positions	Open Positions	Filled Last Quarter
Executive, includes Project Directors	22	3	2
Project Management	34	2	3
Civil/Structural Engineering	60	13	1
System Engineering	40	2	2
Architecture & Art	18	0	1
Permitting	13	1	3
Construction Management	31	3	3
Project Control	62	3	5
Real Property	19	2	0
Capital Project Development	34	2	0
Environmental Affairs & Sustainability	27	2	3
TOTAL	360	33	23

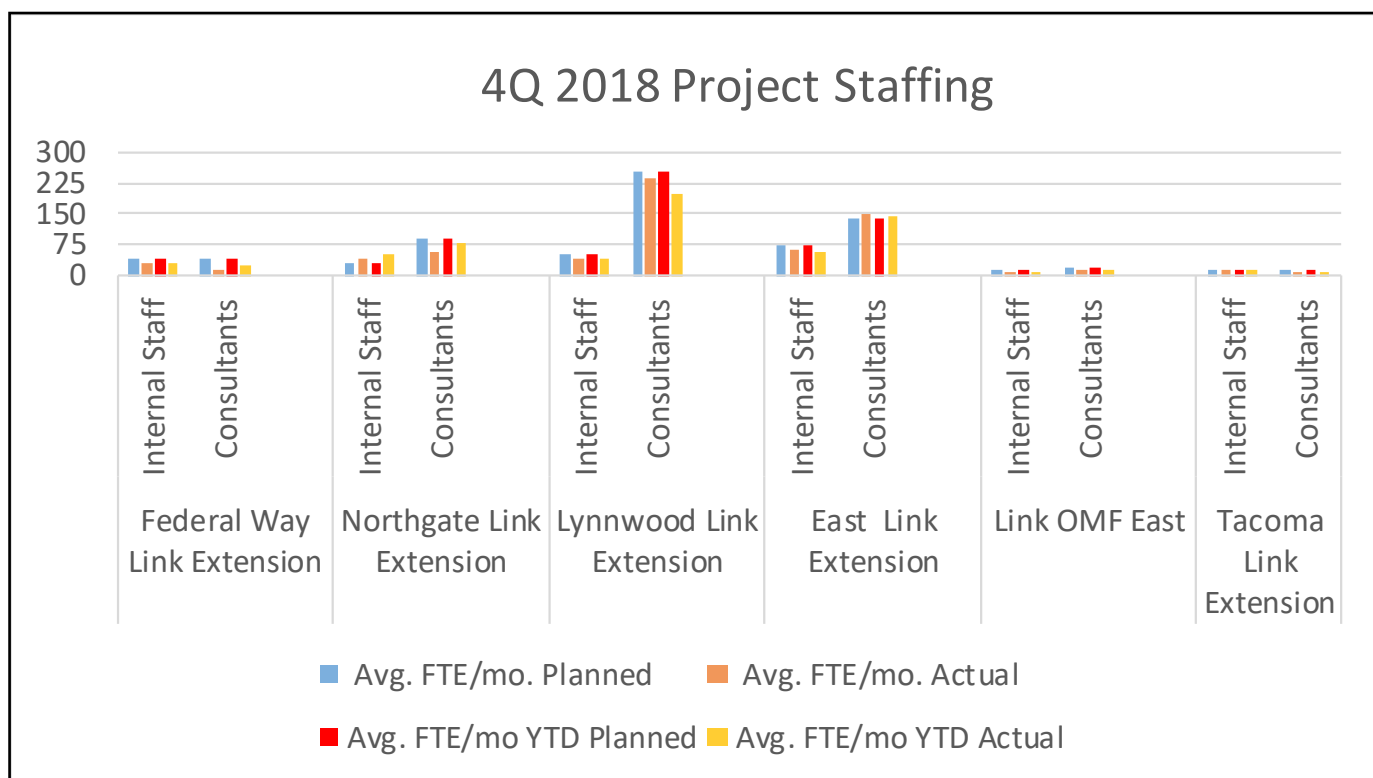
Link Light Rail Staffing Report



Staffing Variance relative to Plan

There were 197 internal and 483 consultant full time equivalents (FTE) supporting design and construction of Link light rail extensions (Table 1). Staffing for the Lynnwood, East, and Tacoma Link Extensions were within 10% of plan. Staffing for the Federal Way and Northgate Link Extensions and OMF East were 58%, 80%, and 66% of plan respectively.

Project	Sound Transit Staff				Consultants				Total (AVG. YTD)			
	FTE		Variance		FTE		Variance		FTE		Variance	
	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan	Planned	Actual	FTE	% of Plan
Federal Way Link Extension	41	32	-9	-21%	41	15	-26	-64%	82	47	-35	-42%
Northgate Link Extension	30	39	8	27%	91	58	-33	-36%	121	96	-25	-20%
Lynnwood Link Extension	53	43	-10	-19%	255	235	-20	-8%	308	279	-30	-10%
East Link Extension	73	63	-11	-15%	140	150	10	7%	213	212	-1	-1%
OMF East	13	7	-6	-46%	19	14	-5	-26%	32	21	-11	-34%
Tacoma Link Extension	12	13	1	10%	12	11	-1	-10%	24	24	0	0%
Total	223	197	-26	-12%	558	483	-75	-13%	781	679	-102	-13%



AA	Alternative Analysis	GC/CM	General Contractor /Construction Management
APE	Area of Potential Impact	HVAC	Heating, Ventilation and Air Conditioning
BCE	Baseline Cost Estimate	ICD	Integration Control Document
BCWS	Budgeted Cost of Work	IFB	Issue for Bids
BIM	Building Information Modeling	IFC	Industry Foundation Classes
BNSF	Burlington Northern Santa Fe Railway	IRT	Independent Review Team
CCB	Change Control Board	IWP	Industrial Waste Permit
CDF	Controlled Density Fill	JA	Jacobs Associates
CHS	Capitol Hill Station	JARPA	Joint Aquatic Resource Permit Application
CM	Construction Management	KCM	King County Metro
CMU	Concrete Masonry Unit	LNTP	Limited Notice to Proceed
CO	Change Order	LRRP	Light Rail Review Panel
CPI	Cost Performance Index	LRT	Light Rail Transit
CPM	Critical Path Method	LRV	Light Rail Vehicle
DAHP	Department of Archaeology & History Preser-	LTK	LTK Engineering Services
DART	Days Away, Restricted or Modified	MACC	Maximum Allowable Construction Cost
DB	Design -Build	MDA	Major Discharge Authorization
DBPM	Design-Build Project Management	MLK	Martin Luther King, Jr. Way
DECM	Design, Engineering and Construction Man-	MOA	Memorandum of Agreement
DEIS	Draft Environmental Impact Statement	MOS	Minimum Operable Segment
DP	Design Package	MOU	Memorandum of Understanding
DPD	Seattle Department of Planning and Develop-	MPPCV	Major Public Project Construction Variance
DSC	Differing Site Conditions	MRB	Material Review Board
DSDC	Design Support During Construction	MTP	Montlake Triangle Project
DSTT	Downtown Seattle Transit Tunnel	MUP	Master Use Permit
EFC	Estimated Final Cost	NB	Northbound
EMI	Electro Magnetic Interference	NCR	Notification of Change Report
ERC	East Rail Corridor	NCTP	North Corridor Transit Partners
FD	Final Design	NEPA	National Environmental Policy Act
FHWA	Federal Highway Administration	NOAA	National Oceanic and Atmospheric Admin- istration
FSEIS	Final Supplemental Environmental Impact	NTP	Notice to Proceed
FFGA	Full Funding Grant Agreement	OCS	Overhead Catenary System
FTA	Federal Transit Administration	OMF	Operations and Maintenance Facility
FTE	Full Time Employee	OMSF	Operations and Maintenance Satellite Facility

PE	Preliminary Engineering	UAC	Unallocated Contingency
PEP	Project Execution Plan	U-Link	University Link project
PEPD	Planning, Environment and Project Development	UDS	University District Station
PMOC	Project Management Oversight Consultant	USFWS	U.S. Fish and Wildlife Service
PSST	Pine Street Stub Tunnel	UW	University Of Washington
QA	Quality Assurance	UST	Underground Storage Tank
QC	Quality Control	UWS	University of Washington Station
QTR	Quarter	VE	Value Engineering
RE	Resident Engineer	VECP	Value Engineering Cost Proposal
RFC	Request for Change	WBS	Work Breakdown Structure
RFD	Request for Deviation	WDFW	Washington Department of Fish and Wildlife
RFI	Request for Information	WSDOT	Washington Department of Transportation
RFP	Request for Proposal		
RFQ	Request for Qualifications		
RIR	Recordable Injury Rates		
RMP	Risk Management Plan		
ROD	Record of Decision		
ROW	Right of Way		
SB	Southbound		
SCADA	Supervisory Central and Data Acquisition		
SCC	Standard Cost Categories		
SCL	Seattle City Light		
SDEIS	Supplemental Draft Environmental Impact Statement		
SEPA	State Environmental Policy Act		
SIP	Street Improvement Permitting		
SPI	Schedule Performance Index		
SR	State Route		
ST	Sound Transit		
START	Seattle Tunnel and Rail Team		
SWI	Stacy and Witbeck, Inc.		
TBM	Tunnel Boring Machine		
TCE	Temporary Construction Easement		
TE	Traction Electrification		
TFK	Traylor Frontier Kemper Joint Venture		
TOD	Transit Oriented Development		
TVM	Ticket Vending Machine		