Agency Progress Report Capital Programs









Sound Transit Ambassadors Assisting Riders During Connect 2020

February | 2020



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

Editor's Note

Sound Transit's Monthly Agency Progress Report summarizes projects and major contracts status, risk, and performance for capital projects.

Due to timing differences in the production of the APR and the ST financial statements, actual cost data presented in the APR may not match the quarterly financial statements. However, the actual cost data is reconciled to the financial statements on a monthly basis.

We always appreciate any suggestions you might have for future refinements to this document. To be added to the distribution list for this report or to make suggestions, please contact Aniekan Usoro at (206) 398-5000.

The Agency Progress Report can also be found on the web at http://www.soundtransit.org/get-to-know-us/documents-reports/agency-progress-reports.

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Agency Progress Report

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SOUND TRANSIT CURRENT SERVICE







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Executive Summary Sound Transit Capital Program

NE 130th Street Station

In late February, the Sound Transit Board voted to advance elements of NE 130th Street Station. Advancing this project, originally scheduled to open in 2031 as an infill station as part of the Lynnwood Link Extension, is intended to minimize disruption for customers when Lynnwood Link opens for service in 2024.

In September 2018, the Board authorized preliminary engineering to determine if all or part of the NE 130th Street Station project could be constructed concurrently with Lynnwood Link.

Preliminary engineering confirmed that construction of an infill station over and around an active railway would adversely affect existing riders and customer service. The likely need to operate trains on a single track through the construction area could create service disruptions affecting more than 60,000 daily riders on the Lynnwood Link alignment. Advancing the construction schedule should minimize the need for single-track operations.

At its Feb. 27 meeting, the Board approved a motion to advance the schedule for completing final design of the entire station using an integrated design, and to complete the work in the first construction package.

In the second quarter of 2021, after the final design is complete, staff will return with additional financial, operational and construction information so the Board can determine whether to authorize the second, or both the second and third, construction packages. The Board's decision at that time is expected to determine the opening date for NE 130th Street Station.

Connect 2020

In early February, Sound Transit's Connect 2020 project to tie existing light rail track into new tracks that will eventually serve the Eastside in 2023, hit its midway mark.

As planned, during the weekend of Feb. 7, Sound Transit closed light rail service between Capitol Hill and SODO stations from Friday night through early Monday morning, Feb. 10, to perform testing and swap single-tracking operations. Shuttle buses made surface stops at all closed stations, and Sound Transit suspended fares for Link and shuttle bus passengers.

As was the case during the first half of the Connect 2020 project, after service resumed, Link riders traveling through downtown had to transfer across a temporary center platform at the Pioneer Square Station. After single-tracking operations switched tracks during the weekend closing, however, platform service changed as well; riders boarded trains



Connect 2020 construction in the International District/ Chinatown Station has connected East Link tracks into the existing system.





from the opposite platforms they'd used during the first half of Connect 2020.

Staff Ambassadors along with security staff were on hand to direct and assist riders and answer any questions. Extensive signage also marked the change.

Throughout Connect 2020, Sound Transit prohibited bikes at Pioneer Square Station to ensure safety and access on the temporary center platform. Passengers with bikes exited Link at University Street or International District/Chinatown stations.

Connect 2020 construction and the service disruption for customers is scheduled to conclude in mid-March, including one more weekend closure for testing.

When construction is complete, Sound Transit's existing downtown light rail tunnel will be connected to East Link in preparation for 2023, when light rail expands to 10 new East King County stations.



Connect 2020 evening commute at Pioneer Square Station



Sound Transit ambassadors during a Connect 2020 shift at International District/Chinatown Station

Progress Report Link Light Rail Program



Aerial View of the Link Operations and Maintenance Facility: East



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







Northgate Link Extension: The University of WashingtonFedStation (UWS) to Northgate project is a 4.3-mile extension oftenslight rail from the UWS north under campus via twin-boredgletunnels to an underground station at NE 45th Street continuingCento an underground station at NE 65th Street and via tunnel,wayretained cut and elevated sections to Northgate. RevenueparkService date is September 2021. The Sound Transit BoardTranadopted the baseline capital budget of \$2.13B originally inSep2012 and revised the baseline budget to \$1.89B in OctoberHill

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 atgrade, 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.

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 1-5 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	Commit- ment to Date	Incurred to Date	Forecast to Com- plete	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Northgate Link Extension	\$1,899.8	\$1,685.4	\$1,595.2	\$161.9	\$1,847.3	\$52.5
Lynnwood Link Extension	\$2,771.6	\$2,209.0	\$621.0	\$562.6	\$2,771.6	\$0
I-90 Two– Way Transit & HOV	\$225.6	\$209.6	\$195.6	\$16.0	\$225.6	\$0
East Link Extension	\$3,677.2	\$3,091.8	\$2,378.2	\$585.4	\$3,677.1	\$0
Downtown Redmond Link Ext.	\$1,530.0	\$863.8	\$135.4	\$666.2	\$1,530.0	\$0
West Seattle and Ballard Link	\$285.9	\$97.6	\$59.9	\$188.3	\$285.9	\$0
Federal Way Link Extension	\$2,451.5	\$1,529.2	\$373.2	\$922.6	\$2,451.8	\$0.3
Hilltop Tacoma Link Extension	\$217.3	\$193.3	\$109.6	\$24.0	\$217.3	\$0
Tacoma Dome Link Extension	\$125.7	\$56.0	\$24.4	\$69.6	\$125.7	\$0
Link O & M Facility: East	\$449.2	\$362.1	\$298.0	\$87.2	\$449.2	\$0
LRV Fleet Expansion	\$740.7	\$668.6	\$184.7	\$72.1	\$740.7	\$0
Total Link	\$14,374.6	\$10,966.4	\$5,975.2	\$3,355.9	\$14,322.3	\$52.8

Program Schedule

Schedules for active projects are summarized below.

ctivity Name	Start	Finish	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
			adda	dada	adaa	daaa	dddd	0000	qqqq		dada	adaa	doloc	qqqq	dada	adad		dddd	qqqq	0000
Northgate Link Extension (BASELINED)																				
Final Design	04-Oct-10 A	19-May-17 A																		
Civil/Systems Construction (incl Procurements)	10-May-12 A	15-Oct-20		_	-		1													
Systemwide Startup/Testing/Float	21-May-19	24-Sep-21			4															
Revenue Service Date		24-Sep-21					*					1						1.1		
Lynnwood Link Extension (BASELINED)															1					
Alternatives Analysis/EIS Scoping	25-Apr-10 A	31-Dec-11 A																		
NEPA/SEPA/Draft EIS	02-Jan-12 A	27-Dec-13 A																		
Preliminary Engineering/Final EIS/ROD	02-Jan-14 A	30-Jun-15 A																		
Final Design (incl Procurement)	02-Jan-15 A	27-Mar-20					1.11													
Civil/Systems Construction	02-Feb-19 A	17-Sep-23		-	-	-	-	-												
Systemwide Startup/Testing/Float	18-Sep-23	17-Jul-24				1.1	1.1		L+E											
Revenue Service Date	1.00	17-Jul-24	-			1													-	
East Link Extension (BASELINED)			100			1.1	1.1.1	111				10.0	1	10.0	110.1	3.4	100	1.0	10.5	
Final Design (incl Procurement)	16-Sep-11 A	31-Jan-18 A		1		1.00	1.11													
Civil/Systems Construction (incl GCCM Procure)	03-Jun-14 A	31-Dec-21					-													
Systemwide Startup/Testing/Float	01-Jan-22	30-Jun-23					4	-												
Revenue Service Date		30-Jun-23					1.11		*											
Downtown Redmond Link Extension (BASELI	NED)					10.0	1.1.1	11.1		1.000		(Press			1.000	1.00	1.000	1.1		-
Preliminary Engineering	03-Jan-17 A	30-Jul-18 A																		
Design-Build Procurement	25-May-18 A	24-Aug-19		+																
CivI/Systems Construction	25-Aug-19	24-Nov-23			-	-	-	_												
Systemwide Startup/Testing/Float	25-Nov-23	19-Nov-24					111		بعا ا	-	4									
Revenue Service Date	1	19-Nov-24								1.1.6	•									



Program Schedule

Schedules for active projects are summarized below.

ctivity Name	Start	Finish	0000	2016	2019	2020	2021	2022	2023	2024	2025	2026	2027	2020	2029	2030	2031	2032	2033	2034 20
West Seattle/Ballard Extension																			ন্প্ৰপূ	
Alternatives Analysis/Conceptual Engineering	17-Mar-17 A	17-Dec-20			-															
Preliminary Engineering	18-Dec-20	25-May-22				-	-													
Final Design (WS)	16-Jun-21	31-Dec-24					-	-					1.00							
Civil/Systems Construction (WS)	01-Jan-25	30-Sep-29								4				-						
Systemwide Startup/Testing/Float (WS)	01-Oct-29	31-Dec-30													-	-	-			
Revenue Service Date (WS)		31-Dec-30					1.1										1			
Final Design (Ballard)	16-Jun-21	25-Apr-26					-	-	-	1						1.11	1			
Civil/Systems Construction (Ballard)	01-Jul-25	30-Sep-33									-	-		-	-				-	
Systemwide Startup/Testing/Float (Ballard)	01-Oct-33	31-Dec-35																	-	
Revenue Service Date (Ballard)	2 2 K	31-Dec-35																_	_	
Federal Way Link Extension (BASELINED)					1.1								1.1							
Phase 1/2 - Alternatives Analysis/DEIS/CE	30-Jun-12 A	31-Dec-14 A																		
Phase 3 - FEIS and PE		03-Dec-18 A																		
Design-Build Procurement	12-Apr-18 A			*	-															
Civil/Systems Construction	02-Aug-19	05-Feb-24			4		-		-	1										
Systemwide Startup/Testing/Float	06-Feb-24	31-Dec-24							4	-										
Revenue Service Date	1212.000	31-Dec-24								-	-	10.00					(***),			
Tacoma Link Extension (BASELINED)					1 - 1															
Preliminary Alternatives Analysis/Scoping/AA	25-Apr-10 A	13-Nov-13 A																		
EA/Preliminary Engineering	01-Apr-14 A	04-Nov-16 A																		
Final Design (incl Procurement)	04-Jan-16 A	22-Jan-18 A	-	-							-		1.1			-				
Civil/Systems Construction (incl Procurement)	23-Jan-18 A	15-Jan-21	1				1										· • · · · ·			
Systemwide Startup/Testing/Float	16-Jan-21	23-May-22			-	-		-												
Revenue Service Date		23-May-22		-	_	-		-		-		_								
Tacoma Dome Link Extension			1								1.1.1									111
Phase 1/2 - Alts Analysis/Conceptual Engr	15-Oct-12 A	25-Feb-21					2													
Phase 3 - Preliminary Engineering	26-Feb-21	23-Jun-22					-													
Final Design	24-Jun-22	29-Nov-24						-	-											
Civil/Systems Construction	30-Nov-24	29-Sep-29									-	-		-			0			
Systemwide Startup/Testing/Float	30-Sep-29	31-Dec-30															-			
Revenue Service Date		31-Dec-30				1											HI.			1.1.1
Link OMF-East (BASELINED)			1.0								1.11					1.000				
NEPA/SEPA/Preliminary Engineering	02-Jan-14 A	17-Jun-16 A	· · · ·																	
Design-Build Procurement	18-Jun-16 A	18-Jun-17 A	-																	
Civil/Systems Construction	11-Jan-18 A	26-Sep-20		-	-															
Project Float	27-Sep-20	25-Dec-20					4													
Project Completion Date		25-Dec-20	-	_		1	-								-		1.			(1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,
Light Rail Vehicles (BASELINED)																				
Vendor Procurement	24-Feb-15 A	11-Oct-16 A	1	-	_															
LRV Design, Build, Deliver (thru 122nd LRV)	12-Oct-16 A	22-Aug-22	-	-	-															
LRV Final Acceptance (thru 122nd LRV)	23-Aug-22							h-												
LRV Manufacturing, Delivery (30 LRV Options)	25-Feb-23	22-Feb-24																		
LRV Final Acceptance (30 LRV Options)	23-Feb-24	22-Aug-24	-												_		1			1.1.1



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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, contin- ues 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

- U District Station/UW Campus (N140): Crews continued installing wiring for escalators 1-8 and commenced installation of art wall armatures to the west wall at the platform. Outside the station, crews commenced installation of curb and gutter forms along Brooklyn Avenue. The electrical construction continues with crews installing lighting fixtures throughout the station.
- **Roosevelt Station (N150):** Electrical: The contractor is required to increase sound levels from fire alarm speakers and will schedule a retest. Continuing testing of electrical components of door hardware and overhead doors.
- Northgate Station (N160): Station: At the main station, Elcon continues platform lighting conduit, fixture brackets and speaker conduits while continuing Plaza level conduits for lighting. The subcontractor is continuing to install MP3 panels under Public Stair 6.
- Trackwork (N180): Northbound and Southbound track is complete throughout work areas across the Northgate alignment.
- Environmental: Environmental and safety site walks conducted on all Northgate contracts.





Closely Monitored Issues

N830 Northgate Systems Construction: During testing of sump pump at CP-31 it was determined that the sump pump is running at full load amp higher than recommended by manufacturer in order to pump pressure required by Design.

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 \$1,847.3M, which is \$52.5M below the current project budget, unchanged since last period. This period approximately \$12.2M was incurred, primarily on the major construction and construction support contracts.

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	\$130.4	\$81.7	\$81.3	\$125.4	\$4.9
Preliminary Engineering	\$15.1	\$15.1	\$15.1	\$15.1	\$15.1	\$0.0
Final Design	\$132.2	\$137.2	\$124.6	\$120.9	\$132.0	\$5.2
Construction Services	\$118.3	\$118.3	\$103.1	\$91.8	\$111.8	\$6.6
3rd Party Agreements	\$11.8	\$11.8	\$8.4	\$7.4	\$11.4	\$0.4
Construction	\$1,343.0	\$1,352.5	\$1,251.1	\$1,177.3	\$1,340.8	\$11.7
ROW	\$112.3	\$112.3	\$101.4	\$101.4	\$110.9	\$1.4
Project Contingency	\$22.2	\$22.2	\$0.0	\$0.0	\$0.0	\$22.2
Total	\$1,899.8	\$1,899.8	\$1,685.4	\$1,595.2	\$1,847.3	\$52.5

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$595.6	\$523.2	\$517.8	\$511.7	\$530.5	-\$7.3
20 Stations	\$376.1	\$439.6	\$437.0	\$417.8	\$458.6	-\$19.1
30 Support Facilities: Yard, Shop	\$5.3	\$6.1	\$6.5	\$6.5	\$6.5	-\$0.3
40 Sitework & Special Conditions	\$140.8	\$232.2	\$170.4	\$163.6	\$192.9	\$39.4
50 Systems	\$110.9	\$101.5	\$106.9	\$66.5	\$117.1	-\$15.6
Construction Subtotal (10 - 50)	\$1,228.7	\$1,302.6	\$1,238.6	\$1,166.1	\$1,305.6	-\$3.0
60 ROW, Land, Improvements	\$119.9	\$110.9	\$101.4	\$101.4	\$110.9	\$0.0
80 Professional Services	\$420.7	\$424.9	\$345.4	\$327.7	\$424.9	\$0.0
90 Contingency	\$130.4	\$61.4	\$0.0	\$0.0	\$5.9	\$55.5
Total (10 - 90)	\$1,899.8	\$1,899.8	\$1,685.4	\$1,595.2	\$1,847.3	\$52.5



Project Cash Flow Projection

The Northgate Link cost aligns with the planned expenditures as construction activities continue.

Total project cost to date reached \$1.60 B of which about \$1.18 B (74%) is attributed to construction. The project cost is forecast to reach \$1.64 B by December 2020, 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:

- Slower than expected electrical progress causing delays on completion of construction.
- Coordination with third parties/possible requests for additional work by City of Seattle (SDOT, SPU, SCL, SFD, and SDCI), Wash. Dept. of Labor & Industries (L&I), FTA, ST operations, etc.
- Procurement of long lead items causes delays or increased costs.
- UW thresholds for noise/vibration/EMI may be exceeded, requiring additional mitigation.
- Systems Installation and Integration, Testing/Startup and Commissioning, Rail Activation may experience delays.



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.

In January 2020, a change was made to how \$22.2 M in project contingency is counted. Previously counted as AC, it is now counted as UAC. In addition, \$18.0 M in AC was transferred to UAC as part of the 2020 budget update.

In this period, \$3.0 M was transferred from Construction UAC to the N150 contract to fund additional change orders. AC decreased by \$1.0 M, due to change orders on construction services and construction contracts. The overall contingency balance remains well above both the minimum and the buffer zone contingency levels.

Contingency Status (Monthly)

	Base	eline	Currren	t Status			
Туре	Amount	nount % of Total Remaining % Budget Amount Re					
Design Allowance	\$113.9	6.0%	\$0.0	0.0%			
Allocated Contingency	\$184.0	9.7%	\$87.7	34.8%			
Unallocated Contingency	\$98.3	5.2%	\$58.4	23.2%			
Total:	\$396.2	20.9%	\$146.1	58.0%			



Design Allowance

Table figures are shown in millions.

Contingency Drawdown (Quarterly)





Project Schedule

In February 2020, the physical percent complete for all Northgate Link construction contracts increased from 93.1% to 94.1%.

Completion of the civil construction remains in late 3rd QTR 2020. The systems schedule continued to experience some slippage with the forecast completion in early January 2021. Sound Transit is working with the contractors to mitigate the slippage.

The Revenue Service Date remains late September 2021.

My Name	Start	Finish	2015	2016	2017	2018	2019	2020	2021
Northgate Link Extension Master Schedule - V12c	24-Dec-10A	05-Nov-21							
Final Design	24-Dec-10 A	04-Nov-16 A	-						
Construction	01-Aug-12A	22-Apr-21		-					-
N105 Advanced Demolition & Site Prep - DBB	04-Aug-14.A	28-Nov-16 A	-		1	1			
N110 Construction Advanced Utility Relocation - DBB	06-Mar-13 A	28-May-13 A	-		1.1.1	1.1			
N111 Advance Utility Relocation, Northgate Area - DBB	17-Feb-14 A	22-Jun-16 A		-		1.1.1			1.1
N112 Advanced Demolition & Site Prep, U District & Roosevelt - DBB	01-Aug-12A	31-Aug-13 A		1.01		1.111			
N113 115kV Relocation at Northgate - DBB	31-May-16 A	21-Feb-17 A			-	1			1
N125 TBM Tunnels (UW Station to Maple Leaf Portal) - DBB	30-Sep-13A	26-Feb-18 A				0			-
N140 U District Station Finishes - GC/CM	07-Apr-17 A	13-Mar-20			-			-	
N150 Roosevelt Station Finishes - GC/CM	02-Dec-16A	24-Oct-19 A			-	1	~		
N160 Northgate Station and Elevated Guideway - DBB	02-Sep-16A	05-May-20		-				-	he.
N180 Trackwork - DBB	25-Aug-16.A	31-Oct-19 A		-			-		1
N830 Traction Electrification, Signal & Communications - GC/CM	12-Jun-17 A	10-Dec-20			6	1	-		1
Vibration & EMI Testing	04-Aug-17 A	22-Apr-21		1	÷				-
Testing & Startup	20-Feb-18 A	D5-Nov-21				0			
Lvl 1 - 2 Testing - Civil Contracts	20-Feb-18 A	16-Apr-20		1.1.1				•	
Lvl 1 - 3 Testing - Systems Contract	13-Feb-19A	05-Nov-21					-		
NLE Rail Activation	15-Dec-20	26-Sep-21		1		1			
Pre-Revenue Service	15-Dec-20	02-May-21		-				•	-
Northgate Link Level 4 Pre-Revenue Service	15-Dec-20	02-May-21							
Revenue Service	28-May-21	26-Sep-21							4
Revenue Service - Roat Northgate Link Extension - Revenue Service	28-May-21	26-Sep-21 26-Sep-21							

Project Float

Project float for the Northgate Extension increased from 121 days to 125 days. Slight improvement in the N830 Systems project schedule accounted for the additional float.

ST is continuing to evaluate the Vibration and EMI testing schedule, looking for opportunities to move the testing up in time and allow additional time for data evaluation and University of Washington agreement.





Critical Path Analysis

The N830 Systems contract is the critical path for Northgate Link. The key driver continues to be the Signals installations. Near critical issues still include the Northgate Station electrical work, as well as completion of the additional stairs and deferred work at U District Station. The path runs through the Systems Integrated Testing, led by the N830 contractor, then into the Rail Activation process, prior to Revenue Service.

Activity ID	Activity Name	Start	Finish	TF		2020						2021										
					F I	М	AI	MJ	J	Α	S (D N D	JF	М	A M	JJ	lul A	s o	N D			
Northgate Lin	k Extension Master Schedule - V1	13-Feb-19 A	02-Nov-21	-27																		
Construction		16-Oct-20	17-May-21	-27																		
Vibration & EM	l Testing	16-Oct-20	17-May-21	-27																		
Vibration Atten	uation Estimates (VAE)	16-Oct-20	01-Mar-21	-27																		
Electro-Magne	tic Interference (EMI)	02-Mar-21	17-May-21	-27																		
Testing & Sta	artup	13-Feb-19 A	02-Nov-21	-27																		
Lvl 1 - 3 Testing	g - Systems Contract	13-Feb-19 A	02-Nov-21	-27																		
N160 - Northg	ate Station Finishes	03-Jan-17 A	04-Mar-20	-27																		
N830/E750 - S	systems	17-Dec-19 A	16-Oct-20	-27																		
N830 Project		17-Dec-19 A	16-Oct-20	-27																		
N830 Construc	tion	17-Dec-19 A	16-Oct-20	-27					1													
N830 Milestone	es	16-Oct-20	16-Oct-20	-37																		
N830 Trunk Fib	er	17-Dec-19 A	14-Jul-20	-26																		
N830 Testing a	nd Commissioning	19-Mar-20	16-Oct-20	-27		1																
NLE Rail Acti	vation	18-May-21	23-Sep-21	-39																		
Revenue Ser	vice	18-May-21	23-Sep-21	-39														1				
Revenue Servi	ce Preparation	18-May-21	25-May-21	-39																		
Project Float &	Revenue Service	25-May-21	23-Sep-21	-39																		

Schedule Performance Index

The early Schedule Performance Index (SPI) for the project is at 0.98 for this period, and the late SPI is at 0.99, showing that in general, performance continues to be close to plan.





Cost Progress Analysis

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 toward the late projection as drawn from the master schedule.



Community Outreach

Northgate Station:

- Distributed construction alerts via project page, .gov list server and email for the following activities around the station site:
 - Weekend closure of a portion of 1st Ave NE, NE 100th Street for road striping
 - Extended: Daytime closure of portion of NE 103rd Street.

U-District Station:

• Met with Varsity Arms to document water intrusion in their boiler room.



Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The planned FTE monthly average takes peaks and valleys in activity into account; whereas the YTD monthly average only reflects January actuals. As civil construction activity concludes over the course of the year, the monthly average will trend closer to the plan.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance							
ST Staff	42	29	-13							
Consultants	29	55	26							
TOTAL	71	84	13							
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.										

Sound Transit Board Actions

Board Action	Description	Date
	None to report.	



Construction Safety

Data/ Measure	February 2020	Year to Date	Project to Date						
Recordable Injury/Illness Cases	0	0	113						
Days Away From Work Cases	0	6							
Total Days Away From Work	0	0	397						
First Aid Cases	4	6	191						
Reported Near Mishaps	0	148							
Average Number of Employees on Worksite	349	-							
Total # of Hours (GC & Subs)	60,650	5,200,117							
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date						
Recordable Injury Rate	0.00	4.35							
Lost Time Injury (LTI) Rate	0.00 0.00 0.23								
Recordable National Average		3.00							
LTI National Average	1.20								
Recordable WA State Average	6.00								
LTI WA State Average	1.90								

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.

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 (Substantially Complete)

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. (Substantially Complete)

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



N160—Northgate Station nearing completion.



Contract N140—U District Station Finishes

Current Progress

The N140 Contractor, Hoffman Construction, is continuing work on site as follows:

- Continued installation of stair 8.
- Commence installation of architectural metal wall panes in south headhouse.
- Continued placement of concrete paving on Brooklyn Ave.
- Continued installation of lighting fixtures throughout the station.
- Continued installation of wiring for escalators 1-8.

Schedule Summary

The February schedule continues to forecast a seven day delay to substantial completion with the schedule progressing from 91% complete to 94%. South Headhouse finishes and Deferred BL2 finishes are critical for achievement of Milestone 4, Substantial Completion. Milestone 4A, Stair 8, is still on schedule for March completion. Milestone 4B, Deferred Work remains thirteen days behind schedule, driven by remaining finish work in both headhouses. Commissioning is ongoing.



Schedule Performance Index

This period, the SPI early is at 0.96 (slightly up from last month) and the SPI late is 0.96 (no change from last month).

The early index is reflective of the of the forecast late achievement of MS-4A and MS-4B. The late index indicates that the remaining work is being performed close to or on the forecast late dates. As the project nears completion, the range of float separating early and late will continue to lessen, such that the difference between performing close to the early SPI and performing close to the late SPI will be small.





Next Period's Activities

- Continue installation of metal ceilings at south headhouse.
- Commence installation of metal panels on escalator 7 and 8.
- Continue final testing and adjustment of elevator 1 at south end.
- Continue FRP of seat walls on Brooklyn Ave.
- Continue installing conduit, junction boxes and pulling wiring to various locations.
- Continue installation of light fixtures.
- Continue FME installation on mezzanine level.

Closely Monitored Issues

• CNWD 044A – Lid Level Stem Walls & 0053 N Plenum Insulation & Doors – Received CCB approval and issued a bilateral change to the Contractor. If the change order is rejected, Sound Transit will proceed with a unilateral change order.

Cost Summary

Present Financial Status	Amount							
N140 Contractor—Hoffman Constructio	n							
Original Contract Value	\$ 159,836,688							
Change Order Value	\$ 6,772,008							
Current Contract Value	\$ 166,608,696							
Total Actual Cost (Incurred to Date)	\$ 151,469,431							
Percent Complete	95.1%							
Authorized Contingency	\$ 15,491,834							
Contingency Drawdown	\$ 6,772,008							
Contingency Index	2.2							



Concrete Paving along Brooklyn Ave.



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Contract N150 – Roosevelt Station Finishes

Current Progress

Hoffman Construction focused on punchlist activities. Additional activities were as follows:

- Continued commissioning testing of electrical and mechanical equipment.
- Continued working on completing change notice work.

Next Period's Activities

• Continue completing change notice work and punchlist items.

Closely Monitored Issues

- Lighting at Escalators 1-4: L&I provided acceptance of Escalators 1-8 with a requirement to address low lighting issues within 90 days.
- Lighting at Escalators 5-8: Contractor confirmed lighting levels do not meet code. The issue was documented via RFI 1331 and is under review by Design is working towards completing CNWD 176 for the escalators.
- Switchgear Issue: CNWD 137 Revision 1 was issued to order materials and prepare shop drawings. CNWD Revision 2 to perform the work is pending CCB approval in early March.

Cost Summary

Present Financial Status	Amount							
N150 Contractor - Hoffman Construction								
Original Contract Value	\$ 152,291,184							
Change Order Value	\$ 12,050,788							
Current Contract Value	\$ 164,341,972							
Total Actual Cost (Incurred to Date)	\$ 161,778,317							
Percent Complete	99.4%							
Authorized Contingency	\$ 14,614,559							
Contingency Drawdown	\$ 12,050,788							
Contingency Index	1.2							



North plaza bike storage.



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

Current Progress

The N160 prime contractor, Absher Construction, and its various subcontractors are continuing work in all areas of the project. Accomplishments through the end of February include:

- Continued installation of plumbing, electrical, tiling, painting, seismic expansion joints, ceiling panels, roof glass canopies, and overhead doors at Main Station. Continued work on elevator controls.
- Continued landscaping, irrigation, and placement of concrete paving at plazas.
- Continued coordination with trackwork and systems contractors as well as King County Metro and Seattle Department of Transportation on tie-in for Pedestrian Bridge over Interstate 5.

Schedule Summary

The project schedule for February forecasts a Substantial Completion date of April 24, 2020. ST has completed evaluation of time impacts related to weather, third party, design changes and will be issuing change orders that will include time extensions. The critical path continues to be driven by electrical work within the station.



Schedule Performance Index

This period, the SPI early is 0.98 (up from 0.97 last period) and the SPI late is at 0.98 (up from 0.97 last period), indicating no major change in performance since last month. However, the indices indicate that the contractor continues performing slightly behind plan when compared to the baseline schedule. Overall work progress has remained within 0.07 of its current trend over the last year.





Next Period's Activities

- Continue electrical installations and finish work at main station. Continue work on elevators.
- Continue wrapping up landscaping and paving work at plazas.
- Continue work at Maple Leaf Portal.
- Continue coordination with other contractors and third parties.

Closely Monitored Issues

- Schedule push is resulting in quality issues. CMC and CQM conducted a "quality stand-down" with Absher to discuss how to walk the line between schedule needs, and quality.
- Garage Water Infiltration Conducted another walk with Absher and FD Thomas. No change, despite little or no rain in recent weeks. No formal response from Absher has been received.

Cost Summary

Present Financial Status	Amount							
N160 Contractor - Absher Construction								
Original Contract Value	\$ 174,000,000							
Change Order Value	\$ 10,854,524							
Current Contract Value	\$ 184,854,524							
Total Actual Cost (Incurred to Date)	\$ 176,519,919							
Percent Complete	94.2%							
Authorized Contingency	\$ 17,400,000							
Contingency Drawdown	\$ 10,854,524							
Contingency Index	1.5							



Subcontractor Elcon Electric pulling wire into Main Electrical Room.





Contract N180 – Trackwork UWS to Northgate Station

Current Progress

The N180 Contractor, Stacy and Witbeck, Inc. (SWI) achieved Substantial Completion of all Milestones on Oct. 31, 2019.

Remaining work are the punch list items for all work areas and documentation prior to closeout, which is being carried out and ongoing.

Next Period's Activities

• Punchlist activities and final walk related to all work areas ongoing.

Closely Monitored Issues

• Communication and coordination between contracts is ongoing, monitoring related activities to bring the contract to a successful close out.

Cost Summary

Present Financial Status	Amount								
N180 Contractor - Stacy and Witbeck, Inc.									
Original Contract Value	\$	71,455,950							
Change Order Value	\$	4,657,476							
Current Contract Value	\$	76,113,426							
Total Actual Cost (Incurred to Date)	\$	75,189,824							
Percent Complete		100%							
Authorized Contingency	\$	10,718,393							
Contingency Drawdown	\$	4,657,476							
Contingency Index	\$	2.2							



Punchlist work on elevated guideway.



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

Current Progress

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

- Installed UPS, battery cabinets, isolation transformer, and network rack at Roosevelt Station (RVS).
- Installed conductor cable, inverter, and battery cabinets at U District Station (UDS). Tested 26kV cable UDS to RVS.
- Continued installing reverse running signals and testing at International District Station (IDS) / Downtown Seattle Transit Tunnel (DSTT).

Schedule Summary

The February update from MEC forecasts an late completion in early January 2021. The critical path continues to be driven by Signals and Communications installations. This is followed by testing of the equipment in the field and finally, systems integrated testing. Overhead Catenary System (OCS) installation is ongoing in the tunnels. MEC will set the last Traction Power Substations (TPSS) at the Maple Leaf Portal in mid-March. OCS installation in the Tunnels is ongoing.

Activity Name	OD	RD	Start	Finish	017			20)18			20	19			20	20			20	021	
					Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
N830/E750 - Systems	865	217	12-Jun-17 A	10-Dec-20			11					;;	11		1	;;						
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		• NT	PłŅ	otice	to:Pn	ocee	a (NT	P) N	orthg	ate a	ndEa	ast Li	nk						
N830 Project	733	217	20-Dec-17 A	10-Dec-20			Ħ						::									
N830 Construction	733	217	20-Dec-17 A	10-Dec-20			1::	1-11-		111	11	:		- 1	:						TTT.	
N830 Milestones	0	0	03-Dec-20	03-Dec-20														•				
MS#05 Northgate: Substantial completion of Northgate Links	0	0		03-Dec-20														•	MS	# 051	North	gate:
N830 OCS	480	137	10-Sep-18 A	16-Aug-20								::										
N830 Traction Power / Substations Procurement	614	98	20-Dec-17 A	19-Jun-20			H						11									
N830 Signals	457	114	15-Aug-18 A	15-Jul-20				111				11	11									
N830 Communications	622	137	10-Feb-18 A	16-Aug-20								::	::			::						
N830 Radio	500	134	09-Jul-18 A	12-Aug-20					H					;;								
N830 Trunk Fiber	444	101	28-Sep-18 A	25-Jun-20						÷			::	•••		÷						
N830 Testing and Commissioning	557	217	07-Sep-18 A	10-Dec-20					ļ													

Schedule Performance Index

This period, the SPI early is 0.85 (same from 0.85 last period) and the SPI late is 0.95 (nearly the same from 1.01 last period). The indices are nearly the same from the previous month. ST and CMC continue to work closely with the Contractor/Subcontractors to help strengthen the schedule and improve performance.





Next Period's Activities

- Continue development and reviews of engineering submittals covering all disciplines: Traction Power Substations (TPSS), Overhead Catenary Systems (OCS), Train Control Signal Systems, and Communications.
- Ongoing coordination meetings between systems and civil contractors for interface and access points for respective contracts.
- Ongoing installation of TPSS equipment, and signal racks in train control equipment room and communication conduits/cables at University District Station.
- Ongoing installation of TPSS equipment in train control room, communications rack in equipment room, and pulling cable to field end devices at Roosevelt Station.
- Ongoing installation of communication devices, OCS brackets, and wiring at Northgate Station.
- Ongoing installation of OCS bracket, cables for trackside devices and communications fiber and radio radix cable and support brackets in the Northgate tunnels.

Closely Monitored Issues

- Sound Transit and Construction Management Consultant (CMC) coordination ongoing for the IDS cutover change from full shutdown to single tracking.
- ST and CMC closely monitoring conduit handover from Civil to Systems Contractor; mitigation steps have been taken by the Systems CMC surveying all conduits and to work closely with the Civil Contractors to rectify the situation.
- Sound Transit and CMC concerned Contractor's rampup of labor is not sufficient to meet the planned construction activities. Sound Transit and CMC closely tracking the planned ramp-up of labor in comparison to actual progress.

Cost Summary

Present Financial Status	Amount								
N830 Contractor - Mass Electric Construction Co.									
Original Contract Value	\$104,660,444								
Change Order Value	\$848,718								
Current Contract Value	\$105,509,162								
Total Actual Cost (Incurred to Date)	\$64,097,696								
Percent Complete	64%								
Authorized Contingency	\$5,233,022								
Contingency Drawdown	\$848,718								
Contingency Index	4								

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



University District: Installation of Signal Room Power Wire



Link Light Rail Lynnwood Link Extension

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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 sta- tions. 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 communica- tions (SCADA)
Phase	Construction
Budget	\$2.772 Billion (Baseline May 2018)
Schedule	Revenue Service: July 2024



Map of Lynnwood Link Extension Alignment.

Key Project Activities

- Continued integration of contract modification scopes into the schedules for each active heavy civil GC/CM contract.
- Continued ground improvement work at the Shoreline South / NE 145th St. Station site (L200).
- Continued construction of Phase 2 area mitigation work at the Ronald Bog site in Shoreline (L200).
- Commenced formwork and reinforcing steel placement for columns (L200).
- Continued drilled shaft installation on both L200 and L300, with four drilled shaft crews between the two contracts.
- Completed negotiations with the L800 Systems GC/CM to exercise the Lynnwood option to integrate the scope into the N830/E750 contract. The contract amendment is being prepared for Board review and potential approval later this year.
- Received Board approval for construction of the integrated guideway structure to support the future NE 130th St. Station, as well as authorization for completion of the station's final design (*Note: NE 130th St Station is a separate project from Lynnwood Link, funded under the ST3 program*).





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 February 2020, \$18.1 M was incurred. The major project expenditures were for civil construction, construction management, and work toward completion of civil & systems final design. The remaining expenditures were for right of way, third party coordination, permits, staff, legal, and other direct charges.

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	\$37.7	\$37.4	\$98.2	\$0.0
Preliminary Engineering	\$39.1	\$39.1	\$39.1	\$39.1	\$39.1	\$0.0
Final Design	\$164.2	\$164.2	\$140.9	\$114.3	\$164.2	\$0.0
Construction Services	\$128.4	\$128.4	\$92.3	\$33.5	\$128.4	\$0.0
3rd Party Agreements	\$14.6	\$14.6	\$10.5	\$8.5	\$14.6	\$0.0
Construction	\$1,921.4	\$2,091.6	\$1,713.1	\$230.1	\$2,091.6	\$0.0
Light Rail Vehicles	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$235.7	\$235.7	\$175.5	\$158.1	\$235.7	\$0.0
Project Contingency	\$170.2	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$2,771.6	\$2,771.6	\$2,209.0	\$621.0	\$2,771.6	\$0.0

Cost Summary by Phase

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	\$1,002.2	\$676.4	\$26.2	\$716.2	\$286.0
20 Stations	\$333.8	\$333.8	\$408.9	\$11.9	\$432.4	-\$98.6
30 Support Facilities	\$2.0	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
40 Sitework & Special Conditions	\$421.1	\$426.2	\$571.3	\$188.0	\$638.3	-\$212.1
50 Systems	\$244.4	\$244.4	\$46.1	\$1.6	\$219.8	\$24.7
Construction Subtotal (10 - 50)	\$1,793.0	\$2,008.5	\$1,702.6	\$227.7	\$2,008.5	\$0.0
60 ROW, Land	\$235.7	\$235.7	\$175.5	\$158.1	\$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	\$447.4	\$330.9	\$235.1	\$447.4	\$0.0
90 Unallocated Contingency	\$292.2	\$78.6	\$0.0	\$0.0	\$78.6	\$0.0
Total (10 - 90)	\$2,771.6	\$2,771.6	\$2,209.0	\$621.0	\$2,771.6	\$0.0



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 following are the top project risks:

- Relationship with GC/CM contractors and culture of each contract.
- Tight budget and limited contingency; changes during construction that impact cost and schedule.
- Adequacy and consistency of design documents for the civil contracts.
- Quality of CPM schedule submittals from the civil contractors impairs master schedule clarity and reliability.
- Delays in long lead procurement of girders and other key material/equipment/resources.
- Obtaining permits-Cities, WSDOT and resource agencies.
- Timely completion of utility relocations, ROW acquisition (including CC&Rs) and ROW relocations necessary for construction.
- Coordination of civil/systems interface and potential for civil construction delays to systems construction.



Drilling by I-5 for L200



Contingency Management

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

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.

Following a significant drawdown in project contingency in Q2/Q3 2019, Sound Transit revised the contingency forecast to align with the cash flow forecast of the major civil contracts.

During the current period, unused L200 and L300 pre-construction services budget was transferred to UAC, increasing the balance by \$3.2 M. AC decreased by \$4.5 M due to final design and construction change orders.

Contingency Status

1.	Bas	eline	Curren	t Status
Туре	Amount	% of Total Budget	Remaining Amount	% of Work Remaining
Design Allowance	\$247.9	8.9%	\$0.0	0.0%
Allocated Contingency	\$197.6	7.1%	\$176.6	8.2%
Unallocated Contingency	\$292.2	10.5%	\$78.6	3.7%
Total:	\$737.7	26.6%	\$255.2	11.9%

Contingency by Type



Table figures are shown in millions.

Contingency Drawdown





Project Schedule

The February update maintains the July 2024 revenue service date, with 133 days of project float. The critical path continues to be driven by the placement of drilled shafts and subsequent guideway construction within the L200 alignment. The path then proceeds into the L800 systems work after handover of the guideway to the systems contractor. This month's update is characterized by the rejection of the L200 monthly update as submitted by the contractor. The issues found during review, were such that the update could not be incorporated into the project master schedule. This results in out-of-sequence progress of the L200 schedule, causing remaining work to be pushed out by one month. A corrected update should show recovery of the project float.

ctivity Name	Start	Frish	Float	2018	2020	2021	2022	2023	2024	202
L200 ROW Acquisitions	04-Jan-16A	28-Jui-20	1260	1 02 03 04	01 02 03 04	Q1 Q2 Q3 Q4	Q			
LLE Master Schedule	20-May-10 A	07-Mar-24	172		1				-	+
Project Administration	20-May-10 A	07-Mar-24	172			-		-	-	1
Final Design/Preconstruction	01-Sep-15A	23-Nov-22	492							1
Permitting & Agreements	07-Jan-15 A	01-Dec-20	990		+	•				+
Utilities	02-May-16 A	20-Jul-22	590					1.1	1.2	91
L300 ROW Acquisitions	14-Jan-16A	24-Apr-21	980			-		11	11	
L200 Construction	08-Dec-18 A	12-Nov-23	32					é.		1
L300 Construction	25-Sep-18A	07-Mar-24	172						~	1
L800 Construction 90Pct	06-Aug-20	28-Dec-23	9		1				•	1
LLE Rail Activation	18-Aug-23	17-Jul-24	91		1,1 =		1.2		~	
Contracts	11-Sep-23	28-Dec-23	14		b			-	•	1
RA Tasks	18-Aug-23	07-Mar-24	245		. 2	1	11 1 1 1 1	-	-	
Pre-Revenue Service	13-Dec-23	07-Mar-24	175		- Tu				-	
Revenue Service - FFGA	07-Mar-24	17-Jul-24	91		1					1
Program Wide Float (CD)	07-Mar-24	17-Jul-24	91							
Revenue Service - 7/17/2024		17-Jul-24	91						•	

Project Float

The Lynnwood Link Extension was baselined with 245 days of project float. Currently the project has 133 days remaining between completion of work and the 17-Jul-2024 Revenue Service Date. At this time, the project has not formally committed to the use of any of the baselined 245 days. A determination of how much project float to use will depend on acceptance of main package L200 and L300 schedules for civil construction, the L800 systems schedule, and incorporation of the full rail activation schedule.



Critical Path Analysis

The critical path for the project continues to run though the L200 project, specifically the path driven by placement of the drilled shafts for A-Bridge in Work Zone 1, then through the elevated guideway construction in both Work Zones 1 and 3. Also on the critical path is the NE 145th St. station which is driven by placement of the tub girders in the adjacent guideway. The driving handover to the L800 contract is access to the NE 145th St. station platform for systems construction. From that point on the critical path runs through installation of station communications, conducting systems integration testing and finally through rail activation to revenue service. It should be noted that this critical path is in part a consequence of the rejection of the L200 February update.



Critical Path Analysis, continued

ctivity ID Activity Name	OD	RD	Start	Finish	TF		20	020		2	021	1	2022		2023	3		20)24	
						Π	Ш	Ш	Ш			ШТ	Ш	Ш				Ш	Ш	Π
L200 Construction	815	801	11-Jan-20 A	29-Apr-23	0			-					_					T	—	Г
Project Wide	30	30	31-Mar-23	29-Apr-23	1										ı					
WZ-1 Elevated (1437+00 to 1458+63)	7	7	12-Jun-20	18-Jun-20	0															
WZ-3 Elevated (1492+45 to 1559+17)	239	239	13-Aug-20	25-Jul-21	1						•									
WZ-4 145th Station & Garage	602	602	10-Nov-20	30-Mar-23	1							-	+							
L800 Construction 90Pct	167	167	30-Apr-23	28-Dec-23	0			1			1							1	1	1
L800 90% Systems	167	167	30-Apr-23	28-Dec-23	0										-					
LLE Rail Activation	315	315	28-Dec-23	07-Nov-24	0													+	<u> </u>	ŧ
RA Tasks	10	10	28-Dec-23	11-Jan-24	0												•			
Pre-Revenue Service	40	40	11-Jan-24	07-Mar-24	0													1		
Revenue Service	245	245	07-Mar-24	07-Nov-24	0			1	1		1	 			 					ŧ

Community Outreach

- Met with City of Lynnwood staff to discuss the temporary parking at the Lynnwood Transit Center.
- Met with City of Seattle, Mountlake Terrace and King County Metro to discuss the Mountlake Terrace Transit Center freeway station flyer stop closure coming up later this year.
- Met with the director of Shoreline Art to discuss future partnerships.
- Worked with the Latvian Church to discuss entrance and exit configuration and to restore telecom service.
- Published construction update in the Shoreline Currents newsletter.
- Distributed construction alerts via project page, .gov list server, email and door-to-door for the following activities: Swing shift beginning at the Lynnwood Transit Center staging yard; Night work at the on-ramp from eastbound State Route 104 to northbound I-5; Off-ramp closure at exit 175 for crane mobilization; NE 155th St. utility work; Northbound I-5 on-ramp closure at Northgate Way to 1st Ave. NE for column concrete placement; Trail closure of NE 116th St.; and NE 200th St. underground utility work.

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											
	ACQUISIT	RELOCATION										
Total Acquisitions	Board Approved	Offers Made to date	Closings to date *	Relocations Re- quired	Relocations Completed to date							
384	393	720	554	432	367							
384	393	720	554	432	367							

All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods. *Total number of parcels available for construction = 321.

Sound Transit Board Actions

Board Action	Description	Date
	None this period	



Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The planned FTE monthly average takes peaks and valleys in activity into account; whereas the YTD monthly average only reflects actuals from the first two months of 2020. As construction activity increases through the year, the monthly average will trend closer to the plan.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	43	35	(8)
Consultants	87	83	(4)
TOTAL	130	117	(12)

An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.

Construction Safety

Data/Measure	February 2020	Year to Date	Project to Date					
Recordable Injury/Illness Cases	1	2	3					
Days Away From Work Cases	0	0	0					
Total Days Away From Work	0	0	0					
First Aid Cases	1	3	11					
Reported Near Mishaps	0	1	10					
Average Number of Employees on Worksite	211	-	-					
Total # of Hours (GC & Subs)	32,345	61,196	257,487					
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date					
Recordable Injury Rate	6.18	6.54	2.33					
LTI Rate	0	0	0					
Recordable National Average		3						
LTI National Average		1.2						
Recordable WA State Average		6						
LTI WA State Average	1.9							

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. Data includes the L200 and L300 contracts.



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 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

- Letter issued by Sound Transit to LTK to selectively delay completion of portions of design work effective Oct. 31, 2019. This delay allows better alignment of the Issue for Construction (IFC) documents and construction contract negotiations and notice to proceed. Exceptions may be directed for certain activities like signal systems, communication systems and cost estimating work, if the need arises.
- No design revisions occurred in February.
- Will resume design efforts in March.

Schedule Performance Index

The cumulative Schedule Performance Index (SPI) trends at 0.95 through February 2020, which means that the cumulative amount of work accomplished is lower than the overall work planned.

The recent decrease in SPI is due to the selective delay in design work.



Link Light Rail Lynnwood Link Extension



Cost Performance Index

\$9.8 M (99%) of the total contract amount has been spent through February 2020. The systems final design percent complete is 94%, with an earned value of \$9.4 M. The cumulative Cost Performance Index (CPI) is 0.95 indicating the earned value of the work performed is lower than the actual cost incurred.



Cost Summary

Present Financial Status	Amount
LTK Engineering	
Original Contract Value	\$9,293,684
Change Order Value	\$650,494
Current Contract Value	\$9,944,178
Total Actual Cost (Incurred to Date)	\$9,831,353
Financial Percent Complete	98.9%
Physical Percent Complete	94.1%
Authorized Contingency	\$650,558
Contingency Drawdown	\$650,494
Contingency Index	0.99



Light Rail Train run by the Overhead Catenary System (OCS) powered from the Traction Power Substation (TPSS).



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

Current Progress

The L200 Contractor, Stacy & Witbeck-Kiewit-Hoffman JV (SKH), is continuing work on site as follows:

- Work Zone (WZ)-1: Completed drilled shafts A4-A7. Completed cloverleaf staging yard.
- WZ-2: Completed noise wall demo to NE 119th St. Continued site water discharge.
- WZ-3: Fabricated drilled shaft cages for C19-C721. Continued temp lighting at NE 145th St.
- WZ-5: Completed installation of Ronald sewer A & B. Begin site access for noise walls.
- WZ-7: Begin WSDOT services relocation conduit install. Begin soldier pile wall.

Schedule Summary

The February update submitted by contractor was reviewed and found to have significant logic flaws, as well as forecast durations which did not reflect the incorporation of actual productivity. As a result, the update will be returned to contractor for revision, and has not been incorporated in the project master schedule.

Activity Name	Start.	Finish	Total	2020	2021	2022	2023	2024
L200 Construction	08-Dec-18 A	19-Oct-23	Float C	21 02 03 04	Q1 Q2 Q3 Q4	01 02 03 04	01 02 03 04	Q1 Q2 Q3
L200 Construction	02-Jan-20 A	12-Jul-23	118				-	
Project Wide	08-Dec-18A	19-Oct-23	49					
WZ-1 Elevated (1437+00 to 1458+63)	08-Apr-19A	01-Jun-23	146					
WZ-2 At Grade - Fill (1458+63 to 1492+45)	21-Mar-19A	01-Sep-23	81					
WZ-3 Elevated (1492+45 to 1559+17)	23-Mar-19A	01-Sep-23	81					-
WZ-4 145th Station & Garage	09-Apr-19.A	01-Sep-23	81			1		
WZ-5 At Grade - Fill (1559+17 to 1571+30)	26-Mar-19 A	14-Feb-23	222				-	
WZ-6 155th Bridge (1571+30 to 1572+40)	22-May-19A	29-Jun-23	128	-				
WZ-7 At Grade - Retained (1572+40 to 1624+00)	27-Mar-19 A	01-Sep-23	81					
WZ-8 175th Bridge (1624+00 to 1631+25)	25-Apr-19.A	15-Jun-22	380					
WZ-9 At Grade - Cut (1631+25 to 1661+78)	15-Apr-19A	01-Sep-23	81			1		
WZ-10 185th Station & Garage	08-Apr-19.A	04-Jan-23	221	-		1	•	
WZ-11 At Grade (1661+78 to 1694+01)	09-Apr-19 A	16-Nov-22	252	-		÷.		
Provisional Sums	22-Mar-19A	02-Sep-23	81			1	-	
Change Orders	01-Feb-20	31-Jul-23	107					

Schedule Performance Index

The cumulative SPI is at 0.92 meaning the cumulative amount of work accomplished is below the planned.

Through February, the earned value represents only the early work portion of the contract. The major contract modification is not yet integrated into the earned value plan.



Link Light Rail Lynnwood Link Extension



Work Zone Overview



Next Period Activities:

- WZ-1: Continue traffic signal at 1st Ave. Drilled shaft A2-A3.
- WZ-2: Begin WSDOT service ductbanks.
- WZ-3: Continue dewatering and begin structures access for drill pads.
- WZ-5: Continue ground improvement access and installation.
- WZ-7: Continue WSDOT service conduit. Continue soldier pile wall.
- WZ-9: Finish temp fencing and lighting at NE 185th St.
- WZ-11: Finish duct bank NE 200th St. and complete street restoration.

Closely Monitored Issues:

- Monitoring timing of receipt of all permits necessary for construction.
- Evaluating cost impact of plan set revision between the early work pricing and Issue for Construction (IFC) sets.
- Coordination of construction impacts to bicycle/ pedestrian path between 1st Ave NE and NE 116th St.
- Erosion and sediment control during the wet season; impacts of heavy rain and snow occurrences.

Cost Summary

Financial Status	Amount
L200 Contractor - SKH	
Original Contract Value	\$ 88,147,258
Change Order Value	\$ 752,398,354
Current Contract Value	\$ 840,545,612
Total Actual Cost (Incurred to Date)	\$ 59,010.961
Percent Complete	20.1%
Authorized Contingency	\$ 43,762,892
Contingency Drawdown	\$ 547,348
Contingency Index	14.1



Drilled shaft construction.



Contract L300 GC/CM—NE 200th Street to Lynnwood Transit Center

Current Progress

The L300 Contractor, Skanska, is continuing work on site as follows:

- Applied additional efforts in the maintenance of stormwater BMPs in response to the heavy rainfall events.
- Continued access road work in Work Areas (WA) 1, 3, 4, and 14.
- Continued wall installation in WA-6 and 8. Made corrections to non-conforming soldier piles in WA-4 and 6.
- WA-3 Worked on storm sewer installation that reroutes water around the future F13 drilled shaft.
- WA-6 Initiated drilled shaft work. Drilled two shafts.
- WA-7 Continued to clear and grub the sloped area between the MLT Transit Center parking and 59th Place W. Completed drill shaft equipment access pads. Continuing the deep sewer work in the MLT Transit Center.
- WA-9 Continued tree clearing and placing stabilizing fill material adjacent to I-5. Mobilized drilling crews.
- WA-15 Began the interim parking lot work to shift the bus parking for the Edmonds School District to make way for the drilled shaft and guideway work.
- WA-16 Completed ten drilled shafts. Completed the installation of two detention vaults and appurtenances.

Schedule Summary

The February schedule update continues to forecast a substantial completion in June 2023. The critical path remains in the shifting of parking at the Lynnwood Transit Center, allowing construction of the new parking garage to begin. Near-critical work are the G and H bridges. Skanska is continuing to work toward greater level of detail in the schedule and also toward completing the schedule cost loading, now expected with the April schedule submission.

cevity Name	Start	Finish	Total	2020	2021	2022	2023
L300 Construction	25-Sep-18A	01-Deo-23	Float 01	Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
L300 Construction			0				
MILESTONES	25-Sep-18A	01-Dec-23	0				~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
ROW ACQUISITIONS (PARCELS & TCE'S)	04-Jun-19 A	27-Oct-20	792	*			
PERMITTING	01-Feb-19A	22-Aug-20	274	-			
SUB-CONTRACTS	07-Aug-19 A	02-Mar-20	195				
SUBMITTALS	12-Apr-19A	06-Aug-20	170				
MATERIAL PROCUREMENT	19-Aug-19 A	04-Apr-21	109				
EARLY WORK	12-Apr-19A	08-Dec-20	224				
3RD PARTY UTILITIES	03-Oct-19A	13-Apr-20	149	->			
CONSTRUCTION	25-Oct-19A	04-Jun-23	115				4
CHANGE ORDERS	09-Sep-19.A	28-Jan-20 A					
Deleted Activities	01-Mar-20	25-Dec-20	224				1

Schedule Performance Index

This period the cumulative SPI is at 0.91, which means that cumulative amount of work accomplished is lower than the value of work planned.

Through February, the earned value represents only the early work portion of the contract. The major contract modification is not yet integrated into the earned value plan.



Link Light Rail Lynnwood Link Extension



Work Zone Overview



Next Period's Activities

- Continuing installation and maintenance of temporary stormwater collection system and BMPs.
- Continue drilled shaft installation in WA-6, 9, and 16.
- Continue wall installation in WA-8.
- Continue to build the interim parking lot work to shift the bus parking for the Edmonds School District to make way for the drilled shaft and guideway work in WA-15.

Closely Monitored Issues

- Monitoring timing of receipt of all permits necessary for construction.
- Evaluating cost impact of plan set revision between the early work pricing and Issue for Construction (IFC) sets.
- Coordination of temporary parking at Lynnwood Transit Center.
- Erosion and sediment control during the wet season; impacts of heavy rain occurrences.

Cost Summary

Present Financial Status	Amount
L300 Contractor—Skanska	
Original Contract Value	\$ 56,886,631
Change Order Value	\$7 79,117,299
Current Contract Value	\$ 837,091,302
Total Actual Cost (Incurred to Date)	\$ 51,823,311
Percent Complete	12.2%
Authorized Contingency	\$ 42,888,048
Contingency Drawdown	\$ 2,091,302
Contingency Index	2.5



Installing temporary soil nail wall shotcrete in WA-8.



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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.



Mitigation

Major Contracts

Phase	Phase Construction		Scope	Agreement/Contract Amount
Budget	\$225 6 Million	WSDOT	Final Design	\$ 20,942,000
Budget \$225.6 Million	WSDOT	CM Services	\$ 39,188,449	
Schedule	Construction Complete: 1st QTR 2019		Construction	\$131,515,559
		City of Mercer Isl.	Transportation	\$10,050,000

Key Project Activities

- **Civil Construction** Complete punch list items.
- SCADA/Simplex Systems Complete commissioning, punchlist items.
- Physical Completion Anticipated Q1/2020.







Project Cost Summary

The following tables summarize the cost information for the I-90 Two- way Transit and HOV Operations (Stage 3) project. Expenditures for the month of February were \$531.9K. Tables below are in millions.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commit- ment 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	\$18.4	\$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	\$187.0	\$173.3	\$198.3	\$0.0
Total	\$225.6	\$225.6	\$209.6	\$195.6	\$225.6	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
40 Sitework & Special Conditions	\$180.6	\$190.7	\$187.0	\$173.3	\$190.7	\$0.0
80 Professional Services	\$26.3	\$26.3	\$22.6	\$22.3	\$26.3	\$0.0
90 Unallocated Contingency	\$18.7	\$8.7	\$0.0	\$0.0	\$8.7	\$0.0
Total	\$225.6	\$225.6	\$205.3	\$195.6	\$225.6	\$0.0

Tables in millions; totals may not equal column sums due to rounding of line entries.

Cost Contingency Management

In the table below, the Allocated Contingency includes both WSDOT-controlled construction contingency and total STcontrolled allocated contingencies. Allocated payment to WSDOT for the pending clear-all settlement with their contractor was accrued in December; execution of the settlement is pending. Payments to WSDOT for administration and reimbursement of contractor payments resulted in a decrease of the remaining Project budget; this has resulted in a 0.6% increase to the overall Current Contingency when compared to the Remaining Work Budgeted.

Contingency Status	Baseline Amount	Baseline % of To- tal	Current Amount	CTG as % of Remaining Work Budgeted		
Design Allowance	\$0.0	0.0%	\$0.0	0.0%		
Committed Allocated Contingency	\$17.0	7.5%	\$1.4	4.6%		
Unallocated Contingency	\$18.7	8.3%	\$8.7	28.8%		
Total	\$35.7	15.8%	\$10.0	33.4%		

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

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 Down- town Seattle to the Overlake Transit Cen- ter area of Redmond.
Stations	Judkins Park, Mercer Island, South Belle- vue, East Main, Bellevue Downtown, Wilburton, Spring District/120th, Bel- Red/130th, Overlake Village (OVS) and Redmond Technology (RTS).
Systems	Signals, traction electrification, and com- munications (SCADA).
Phase	Construction
Budget	\$3.677 Billion (Baseline April 2015)
Schedule	Revenue Service: June 2023



SoundTransit

Map of East Link Extension Alignment.

Key Project Activities

- Floating Bridge Retrofit (E130): Interior pontoon cathodic protection continues; progress seismic retrofit activities at east and west approach structures.
- Mercer Island (E130): Advance the installation and commissioning of F/L/S systems at the MI Station; tile installation at station platform; initiate commissioning of the eastern station escalator.
- **IDS to Mt. Baker Tunnel (E130)**: Progressed track tie-in at the IDS; advance MBT structures retrofit and track installation along the D2 Roadway; Ancillary Building structure construction, utilities installation at Judkins Park Station continues.
- South Bellevue (E320): Electrical work continued in the station as did plumbing and HVAC work in the garage. Track and plinth work continued to progress along the alignment, as did overhead catenary system (OCS) pole foundation work.
- **Downtown Bellevue Tunnel (E330)**: Completed placement of the center and interior walls and continued setting towers for the roof slab south portal.
- **Downtown Bellevue to Spring District (E335)**: Wilburton Station: Continued installation of structural steel and MEP rough-in at the plaza level. Continued track work on the aerial guideway, with plinths to the double crossover. 120th Station: Continued work on elevators and escalators. BDS: Started installation of canopy structural steel.
- **Bel-Red (E340)**: Installed handrail and expansion seal on the aerial guideway. Continued station buildout, track wall placement, electrical conduit installation. Sidewalk placement, curb and gutter along 134th Ave NE.
- SR520 to Redmond Technology Station (E360): Completed aerial guideway guardrail, drainage, ductbanks and cleared demolished office site at Overlake Village Station. Erected westbound truss of Overlake Village Pedestrian Bridge.
- Systems (E750): Continued with submittals, component design/manufacturing/fabrication, continued progressed on East Link tie-in at International District Station.



Closely Monitored Issues

- Bellevue Downtown Station (E335) and the Bel-Red Segment (E340) challenges and schedule slippage.
- Design change during construction phase particularly at our most technically challenging stations.
- Quality, construction safety and environment compliances.
- Contractor performance and level of confidence in turning over access to follow on Systems contract.
- Spread of covid-19 virus pandemic worsen as it is likely to impact labor resources and disrupts supply chains.

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) remains the same at approximately \$3.68B. This period's expenditure is a little over \$53.0M, pushes the total expenditure to date from \$2.32B to \$2.38B. Project commitment approaches \$3.1B with all major construction contracts in place. This period's expenditures is perform as anticipated despite the construction challenges; however, the COVID -19 pandemic has produces a high level of unpredictability and will likely be impacted the project.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$186.2	\$186.2	\$90.5	\$90.6	\$186.2	\$0.0
Preliminary Engineering	\$55.9	\$55.9	\$54.8	\$54.8	\$55.9	\$0.0
Final Design	\$283.0	\$283.0	\$246.6	\$224.5	\$283.0	\$0.0
Construction Services	\$257.5	\$257.5	\$196.7	\$124.1	\$257.5	\$0.0
3rd Party Agreements	\$52.2	\$52.2	\$38.3	\$28.8	\$52.2	\$0.0
Construction	\$2,544.3	\$2,544.3	\$2,193.9	\$1,585.5	\$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	\$271.0	\$270.0	\$298.2	\$0.0
Total	\$3,677.2	\$3,677.2	\$3,091.8	\$2,378.2	\$3,677.1	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$744.6	\$949.7	\$895.7	\$742.9	\$954.7	(\$210.1)
20 Stations	\$397.7	\$474.2	\$441.1	\$298.0	\$468.6	(\$70.9)
30 Support Facilities	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
40 Sitework & Special Conditions	\$808.5	\$568.3	\$484.4	\$379.1	\$567.3	\$241.2
50 Systems	\$353.8	\$367.9	\$347.7	\$144.7	\$369.0	(\$15.2)
Construction Subtotal (10 - 50)	\$2,304.6	\$2,360.1	\$2,168.8	\$1,564.7	\$2,359.6	(\$55.0)
60 Row, Land	\$288.5	\$288.5	\$271.0	\$270.0	\$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	\$651.9	\$543.5	\$889.5	\$8.9
90 Unallocated Contingency	\$182.9	\$136.6	\$0.0	\$0.0	\$136.6	\$46.2
Total (10 - 90)	\$3,677.2	\$3,677.2	\$3,091.8	\$2,378.2	\$3,677.1	\$0.0

Link Light Rail East Link Extension



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 to date expenditure topped out at approximately \$53.0M where Construction Phase is responsible for about 89.2% or approximately \$47.3M of February's expenditure. Total project cost incurred to date topped \$2.38B, to which a little under \$1.5B was recorded in the Construction Phase. The project expenditures continue to pick up and is predicted to rise to approximately \$2.7B by September 2020.



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 Risk Mitigation Milestone #4 (Completion of SEM Tunneling), completed in 2018/19 predicted that given the risk profile in the project, there are sufficient schedule and budget in the project to complete in accordance to baseline. The Q4 2019 risk registers has been updated. The next risk mitigation milestones is in 2021 but the project decided to insert an interim risk "milestone" as a check in for 2020. This workshop is being scheduled at time of writing. The following are the top project wide risks areas as of the 4th quarter.:

- Compliance with quality, safety and environmental requirements.
- Design changes during construction, particularly at technically complex stations such as Mercer Island, Bellevue Down-town and Redmond Technology.
- Interfaces between contracts, agency supplied equipment and third party jurisdictions.
- International District Station coordination of pre-requisite work that leads up to East Link tie in to mainline operations work in Q1 2020.



Contingency Management

East Link project budget was baselined on April 2015 with a total contingency of \$795.9M. All major construction contracts have been procured and the total contingency balance stands at \$352.8 (previously \$357.9). 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 remains unchanged in this period at \$3.3M 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 was drawn down for an aggregate of approximately \$1.4M due to predominantly construction changes. However; there were some annual budgetary adjustment that shifts between contingencies and future commitments—note that AC was \$219.1M (December), \$224.6M (January) and \$219.5 (February). These number should settle down in the next reporting period.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance remains at \$130.M.

contingency status								
Continuonou	Base	eline	Current Status					
Contingency Type	Amount % of Total Budget		Amount Remain- ing	% of Work Remaining				
Design Allowance	\$184.1	5.0%	\$3.3	0.3%				
Allocated Contingency	\$428.9	11.7%	\$219.5	16.9%				
Unallocated Contingency	\$182.9	5.0%	\$130.0	10.0%				
Total	\$795.9	21.6%	\$352.8	27.2%				



Contingency Status

Table figures are shown in millions.

Contingency Drawdown

East Link Project's total contingency drawdown continues to trend within plan with an overall contingency balance at proximately \$352.8M (previously \$358.9M) 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 February represented the monthly draw of about \$5M due to various construction change orders.



Contingency Drawdown as of February 29, 2020



Project Schedule

The Integrated Master Schedule is presented below.

E130 continued installing cathodic protection in the HMH floating bridge pontoons; work continued at both stations; completed Phase 1 of tie-in work at International District Station and began Phase 2.

E320 continued guardrail and OCS foundation installation; continued plinth pours; continued conveyance and electrical work at S. Bellevue Station; commenced work on CIP sound wall.

E330 continued punchlist work and ductbank installation within the SEM tunnel; wall construction at the South Portal.

E335 continued trackwork and ductbank installation on aerial guideway, including plinths for double-crossover; continued work at all stations.

E340 continued pouring wall panels at aerial guideway and plinths at the west end; continued excavation for trackwall placement on 136th Pl; continued work at 130th Station.

E360 de-stressed track and tied in to the E340 track slab at the west end of the alignment; completed guardrail and ductbank on aerial guideway; de-stressed track on at-grade guideway; continued work at both stations.

E750 Systems contractor continued procuring equipment; began placing TPSS; mobilized for work on guideway in E360 work area; completed Phase 1 of tie-in work at International District Station and began Phase 2.

All contracts are forecast to complete in time to perform pre-revenue simulation as planned. Revenue Service is forecasted in June 2023.

ivity Name	Start	Finish							
			2017	2018	2019	2020	2021	2022	202
Sound Transit	18-Jan - 15 A	30-Jun-23							
Sound Transit 2	A SI-net-81	30-Jun-23			-			-	
East Comidor	18-Jan-15 A	30-Jin-23	-		-				
LRT Extension - East	18-Jan 15 A	30-Jun-23	-	-			-		
East Link	18-Jan-15 A	30-Jun-23	-				-	-	
East Link Construction	18-Jan-15 A	30-Jun-23							
EL 130 - Seatle to I-90 Overpass (GC/CM)	01-Mar-17A	19-Jun-21			-				1.1
EL 320 - I-90 Overpass to S. Bellevue (DBB)	05-Dec-16 A	22-Nov -20	_	-	-				
EL 330 - Downtown Bellevue Tunnel (DBB)	18-Jan-15 A	24-11-20			+	-			
EL 335 - Downtown Bellevue to Spring District (GCICM)	24-Apr-17 A	16-May-21	-		-				
EL 340 - Spring District to SR 520 (DBB)	24-Feb-17 A	28-11-20							
EL 360 - SR 520 to Overlake Transit Center (DB)	13-Jul-16 A	11-Sep-20	_	-	-	-			
EL 750 - Systems	12-Jin-17 A	28-Jan-22				-	-	•	
East Link Master Schedule - Construction Interfaces	14-Jun-17.A	01-Apr-22						-	
EL RACT - East Link Rail Activation/System Integration/Project	02-Apr 22	30-Jun-23	and the second			- trainer		-	-
East Link Rail Activato n/System integrationProject Closeout	02-Apr 2.2	30-Jun-23				1	1	*	
Pre-Revenue Teating & startUp	02-Apr 22	30-Sep-22							
East Link System Integration Testing (3 Mo)	02-Apr 2.2	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 (Baseline 30-Jun-23)		30-Jun-23*	-						

Project Float

East Link was baselined with 273 days of program float. To date, no float has been used.





Critical Path Analysis

The East Link critical path this month is currently driven entirely by E750 signal work. East Link civil contracts continue to be closely monitored for potential impacts to the E750 schedule.

otivity Name	Start	Finish		2020			2021				2022					20
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
EL 130 - Seatle to 1-90 Overpass (GC/CM)				1												1
EL 320 - 1-90 Overpass to S. Bellevue (DBB)				1	1											
EL 330 - Downtown Bellewe Tunnel (DBB)				1	1											
EL 335 - Downtown Belleweto Spring District (GCICM)				1												1
EL 340 - Spring District to SR 520 (DBB)			1					10.0			1.0		1.1	1.1		
EL 360 - SR 520 to Overlake Transit Center (DB)				1	1											
EL 750 - Systems	01-Oct-18 A	15-Jan-22				91										-
E750 Construction	01-Oct-18 A	15-Jan-22														6
N830 Project	01-Dec-18 A	25-Jun-20		1	1											9
N 80 Construction	01-Dec-18 A	25-Jun-20		1												l.
N830 Signals	01-Dec-18 A	25-Jun-20													1	
E750 Project	01-Oct-18 A	15-Jan-22			1											1
E750 Engineering	01-Oct-18 A	15-Jan-22			1					-	•					6
E750 Construction	03-Sep-19 A	15-Jan-22		1	1											ŧ.
E750 Milestones	15-Jan-22	15-Jan-22		1									5.13			1
E750 Signals	03-Sep-19 A	11-Jun-21			(IIII)											
E750 Testing and Commissioning	07-Jun-21	18-Nov-21		1	1	1.11										6
East Link Master Schedule - Construction Interfaces	15-Jan-22	01-Apr-22		1	1								1.3			
EL RACT - East Link Rail Activation/System Integration/Project Closeout	01-Apr-22	30-Jun-23		1	1											1
East Link Rail Activation/System Integration/Project Closeout	01-Apr-22	30-Jun-23						1.1			1.5					0
Pre-Revenue Testing & Start Up	01-Apr-22	30-Sep-22		1	1										1	
East Link System Integration Testing (3 Mid)	01-Apr-22	30-Jun-22		1	1											1
				1	1											1
East Link Pre Revenue Opeations (3 Mig	30-Jun-22	30-Sep-22		-												1
Revenue Service Window	30-Sep-22	30-Jun-23		1	I.											1
East Link Program Float - 9 Months	30-Sep-22	30-Jun-23		-										_		
East Link Revenue Service Date (Baseline 30-Jun-23)		30-Jun-23*		1	1				•••••							

Schedule Performance Index

The early Schedule Performance Index (SPI) for East Link's Major Construction Packages is at .88 for this period, which indicates steady performance. The late SPI of 1.01 shows that in general, performance is satisfactory.



Link Light Rail East Link Extension



Project Cash Flow Projection

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 February, performance is trending toward the late projection as drawn from the master schedule. The overall physical percent complete for East Link construction is 75.5%.





E130 Seattle to South Bellevue: Connect 2020—East Link rail tie-in clearance testing of train on the south bound tracks.



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. February's focus: continued outreach on planned closure and traffic switch on NE 20th and 136th Pl. NE.; full closure of NB 110th Ave NE between NE 2nd Street and NE 2nd Place and ADA ramp work on 110th Ave. NE; notifications for TPSS unit delivery; Instituted MOT Outreach meetings with E330 contractor; and began coordination with City of Bellevue for a public art project.
- Ongoing engagement with individual property owners, members of the public, and impacted neighbors on a variety of concerns including demolition, noise wall construction, dust control, signage, night time noise, traffic, access, maintenance of traffic.

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 Extensior	Acquisition State	us					
ACQUISITION RELOCATION							
Total Acquisitions	Board Approved	Offers Made to date	Closings to date	Relocations Required	Relocations Completed to date		
239	246	239	228	229	227		
* All numbers are cumulat	ive totals, except where	noted. Number of tota	ls may differ from o	other reports due to the timi	ng of reporting periods.		

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The variance on the ST staffing is attributed to vacancy. The consulting variance is attributed to construction being in full swing and some segments (specifically E330 and E360) should start ramping down beginning of summer. In addition, the design element of Mercer Island Transit Integration commenced and it was inadvertently omitted from the plan. Overall, the project variance levels should still effectively average down as it progress thorough this year.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	57.5	54.8	(2.7)
Consultants	106.8	155.6	48.8
TOTAL	164.3	210.4	46.1
* An FTE is the equivalent of 208	0 hours. YTD performance FTE hour	s are divided by a monthly factor of 1	73.33.



Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	February 2020	Year to Date	Project to Date		
Recordable Injury/Illness Cases	1	5	77		
Days Away From Work Cases	0	1	15		
Total Days Away From Work	29	94	1,183		
First Aid Cases	12	20	237		
Reported Near Mishaps	4	4 10 2			
Average Number of Employees on Worksite	1,482	1,482 -			
Total # of Hours (GC & Subs)	223,591	402,210	5,166,425		
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date		
Recordable Injury Rate	0.89	2.49	2.98		
LTI Rate	0.00	0.50	0.58		
Recordable National Average		3.00			
LTI National Average		1.20			
Recordable WA State Average		6.00			
LTI WA State Average		1.90			

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), off site TPSS worksite interface inspections and surveys of E130. Commenced East Link Tie-In (Connect 2020) at the International District Station.



E335 Downtown Bellevue to Spring District: Drone view of long span emerging out from Bellevue Downtown Station.



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

Current Progress

West Segment: Progress track tie-in and systems upgrades in the IDS; advance MBT structures retrofit and track installation along the D2 Roadway; Ancillary Building structure construction, utilities installation, platform construction at Judkins Park Station continues.

Center Segment: Interior pontoon cathodic protection continues; progress seismic retrofit activities at east and west approach structures.

East Segment: Advance the installation and commissioning of F/L/S systems at the Mercer Island Station west headhouse; complete preliminary landscape activities, tile installation at station platform; initiate commissioning of east headhouse escalator.

Schedule Summary

The critical path for this project currently runs through cathodic protection on the floating bridge. The contractor's January update is presented below. A recovery effort is currently underway to mitigate potential disruptions to the E750 systems contractor, resulting in a slight lag in the monthly update process. Contract work is proceeding as planned.

Activity Name	Start	Frish		.20		Street State		
			Q1	Q2	Q3	Q4	01	02
E130 Construction	10-Mar-17 A	19-Jun-21		1 1				1
Milestones	10-Mar-17A	19-Jun-21		+ +		-	-	-
Access M lestones	10-Mar-17A	12-May-17 A		1		1	10.00	1
16. Notice to Proceed - Package 1	10-Mar-17 A			1				1
16. Notice To Proceed - Remaining Scope	12-May-17 A			1 1		1		1
Major Project Complete Milestones	21-Aug-19A	19-Jun-21						
16. MS#02 - Substantial Completion of IDS Conversion - Reinstate NB Operations (10-Feb-20)		20-Feb-20*	+			1		1
16. MS#03 - Substantial Completion of IDS Conversion - Reinstate SB Operations (18-Mar-20)		01-Apr-20*		+		1		1
16. MS#01 - Substantial Completion West Meicer Island Lid to East End of Project (29 Jan-20)		13-Oct-20*		1 1		•		1
16. MS#01 - A coeptance		12-Nov-20				•		1
16. MS#04 - Substantial Completion All Work (12-Deo-20)		20-May-21*				1		1
16. A coeptance		19-Jun-21		1				
Miestone 1Interim Dates	21-Aug-19A	13-Oct-20		1				1
Construction	20-Mar-17 A	20-Apr-21						1
Pre liminary Activities	03-Apr-17 A	28-Apr-20	H-	+				£
Sitework	23-Aug-17A	14-Oct-18 A		1		1		1
Demolition	20-JU- 17 A	28-Feb-20	+	1 1		1	1.1	1
Tun nel Modifications	18-Sep-17A	23-Oct-20		+ +	_	÷.		1
Stations	31-May -17 A	18-Nov-20	-	-	-	-		1
OCS Bases Frames	02-Apr-18 A	10-Aug-20	-	+ +	-		- 13	1
Civil/Utilities	05-14-17 A	20-Jan-21						
Electrical	20-Mar-17A	28-Aug-20	-	-	-	1	6.03	1
Structures Retrofit	20-Mar-17A	20-Apr-21	-	-		-	-	÷
Trackwork	29-Jan-18 A	05-Jan-21	<u> </u>	-	-	-	-	1
System s	28-Jun-17 A	11-Nov-20		-	_	-		
IDS Modification	16-Jan-19 A	17-Jul-20			-	÷		·

Schedule Performance Index

An acceptable schedule update for January and February work progress had not been received from the contractor at the time of this report. Schedule Performance Index information is current as of December 31, 2019.





Next Period's Activities

- West Segment: Progress construction of Judkins Park Station ancillary building & platform; continue installation of track in IDS.
- Center Segment: Progress cathodic protection in pontoon interiors; continue trackwork prep & installation at east and west approach structures.
- **East Segment**: Ongoing punchlist & commissioning activities, complete platform tile installation at MI Station; continue punch list & commissioning in MI Tunnel.

Closely Monitored Issues

- Current East Segment activity progress to reach Milestone 2 and potential impacts to E750.
- Schedule details for Coordinated Installation Program (CIP) requirements, Submittals, Procurement, and NCR's .
- Coordination of rail tie-in activities at the International District Station.
- Requirement for shielding non-conductive wires for the cathodic protection on floating bridge.



Cost Summary

Present Financial Status	Amount
E130 Contractor - Kiewit-Hoffman	
Original Contract Value (<i>incl. Phase 2</i> <i>MACC</i>)	\$665,000,000
Change Order Value	\$27,693,988
Current Contract Value	\$691,738,988
Total Actual Cost (Incurred to Date)	\$533,783,557
Percent Complete	74.63%
Authorized Contingency	\$46,660,541
Contingency Drawdown	\$27,693,988
Contingency Index	1.3
Contract Value excludes Betterment	

Rebar installation at Judkins Park Station east headhouse platform

E130 Construction Segments



Contract E320 – South Bellevue

Current Progress

I-90 Flyover: Continued emergency guardrail work; erecting of maintenance stairs, pigment sealer being and civil restoration work. Track and plinth work continued, as well.

Bellevue Way SE (BWSE): Continued trench and pigment sealer work in multiple sections as well as forming/rebar and pouring (FRP) traffic barrier and slab work along BWSE.

S. Bellevue Sta./P&R: Buildout continued in both the garage and the station including plumbing, HVAC and conveyance work in the garage and conveyance, structural, finishing work and electrical work in that station.

Wye-to-East Main and Track Work: Continued civil work relating to constructing mechanically stabilized earth (MSE) wall. Started removal of falsework in undercrossing. Overhead catenary structure (OCS) work continued, as well.

Schedule Summary

The critical path for this project continues to run through the 112th undercrossing, now following the construction of the sound wall. The contractor is currently forecast to achieve substantial completion in time to hand over the station and guideway to the E750 systems contractor.

Activity Name	Start	Finish				2020		
			C	1	Q2	Q3	Q4	4
E320 Construction	05-Dec-16 A	25-Nov -20						-
Milestones and Summary	05-Dec-16 A	25- Nov -20						-
Contract Milestones	05-Dec-16 A	25-Nov -20						-
Limited Natice to Proceed	05-Dec-16 A							
Natice to Praceed	13-Feb-17A							
Miestone 3A - Clear & Grub Sweyolocken (Statt of "Wetland Fill" Work+365D)		21-Dec-18 A						
Miestone 1 - (Atemate) Phase B 21 Not Used		31-May-19 A						
Miestone 3B - Clear & Grub Coal Creek		22-Nov -19 A						
Miestone 2 - Final Restoration of Belevue Way (Start+857D)		09-Aug-20*				+		
Miestone 4 - SIDT & SCADA Complete (NTP+1160D)		17-Aug-20*				+		
Miestone 5 - Acceptance of South Belevue Station (NTP +1225D)		25-Sep-20*		1		1	•	
Miestone 6 - Required Substantal Completion (NTP+1384D)		25-Nov -20*						•
Construction-1	21-Apr 1 7 A	06-Nov -20						
Mobilization	21-Apr-17 A	16-Jil-18 A						
Area A - I-90 Mainline to Bellevue Interchange - Sta E B405+54 to EB438+20	16-Jun-17 A	25-Sep-20						
Area B - Bellevue Way SE, SE 30th St to 112th Ave SE Wye - Sta EB438+20 to EB476+75	30-May-17 A	06-Nov -20						
Area C - 112th Ave SE, 112th Ave SE Wye to SE 8th - Sta EB476+75 to EB508+00	13-Jun-17 A	28-Sep-20					-	
Area D - 112th Ave SE to SE 8th St to Main St - Sta 508+00 to EB528+25	22-May-17 A	28-Aug-20						
Area E - Coal Creek Stream Enhancement	09-Jul-18 A	22-Nov -19 A						
Area F - Sweyolocken Mitigation	23-Apr-18 A	21-Dec-18 A						

Schedule Performance Index

The SPI early is at 0.96 this month and the SPI late is 1.13. The contractor continues to remain ahead of their late finish plan and are slightly behind their early plan. Affecting the schedule are the station and garage which are running behind plan. Also affecting the schedule is continued resequencing of work. Critical path remains the work on 112th with ballasted track install, weld and de-stress and eastbound track wall work.





Next Period's Activities

- **I-90 Flyover**: Continue track and plinth work, buildout of traction power substation (TPSS) work and OCS foundation work.
- **Bellevue Way SE**: Continue pigment sealer work, as well as, traffic barrier and wall work in trench.
- S. Bellevue Sta./P&R: Continue conveyance and electrical work in garage and structural and electrical work in station.
- Wye-to-East Main and Track Work: Continue undercrossing work/removing falsework and OCS work.

Closely Monitored Issues

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



Cost Summary

Present Financial Status	Amount*
E320 Contractor - Shimmick/Parsons J	Ι.
Original Contract Value	\$319,859,000
Change Order Value	\$4,433,763
Current Contract Value	\$324,292,763
Total Actual Cost (Incurred to Date)	\$266,82,696
Percent Complete	81.45%
Authorized Contingency	\$38,532,000
Contingency Drawdown	\$4,033,446
Contingency Index	6.9

* \$ Amount excludes betterments and STArt.



Pigment sealer work in trench



Contract E330 – Downtown Bellevue Tunnel

Current Progress

Tunnel: Continued grouting Fuko hoses and remaining leaks, dry finishes in the tunnel final lining in the expanded zone and south tunnel. Completed ductbanks in tunnel.

South Portal: Continued to maintain the Temporary Erosion/Sediment Control (TESC) and the traffic control. Completed placement of the center and interior walls and continued setting towers for the roof slab south portal.

Commenced replacing sidewalk rams, curbs and panels along 110th Ave. completed installation of traffic cameras both 2nd and 4th, 110th Ave intersections .

Schedule Summary

The critical path for this contract follows the completion of the South Portal structure. In January, the contractor achieved Milestone 3 (completion of the SEM tunnel) and granted access to the E335 contractor, who will complete trackwork. Contractor is forecasted to achieve Substantial Completion in time to meet their contractual requirements.

Activity Name	Start	Finish		1.1	2	020
			Q1	- ()-	Q2	Q3
E330 Construction	15-Dec-15 A	25-Jun-20			,	
CONSTRUCTION	15-Dec-15 A	25-Jun 20				
MLESTONES/CONSTRUCTION EASEMENTS	15-Dec-15 A	25-Jun-20				
MLESTONES	15-Dec-15 A	25-Jun-20		+		
CALCULATED MILE STONES	15-Deo-15 A	25-Jun-20		1		Second Second Second
MOBLIZATION	08-Feb-16 A	19-Feb-20A				
SITEWORK	29-Feb-16 A	25-Jun-20				1
PREC ON STRUCTION	21-Mar-16 A	02-Jun-20				
TRAFFICCONTROL	25-Mar-16 A	14-Apr 20				
SURVEY & MONITORING	29-Feb-16 A	03-May-18 A				1
N OR TH PO RTAL AREA	13-Jun-16 A	14-0d-16A				
CASTIRON PIPE REPLACEMENT	08-Feb-17 A	08-Apr-17 A				
SOUTH PORTAL AREA	29-Feb-16 A	25-Jun-20				
SKYLINE BUIL DING RETROFIT	17-Jan-17 A	18-0d-17A		1		1
TUNNEUNG	01-Feb-17 A	06-Feb-20A	-			
EXOVATION	01-Feb-17 A	20-Jul-18 A				
FINAL TUN NEL LINING	20-Jul-18 A	03-Jan-20 A				1
FINAL TUN NEL FINI SHE S	09-Sep-19 A	08-Feb-20A	-			Î
MD TUNNEL	08-Mar-18 A	08-Nov -19 A				
DEMOBE	13-Mar-17 A	12-Jun-20				

Schedule Performance Index

In February, the SPI early is at 0.98 and the SPI late is at 0.99. The lag on the SPI curves are effectively immaterial at this stage of the project for E330. That said, there are some weather delay days has not been incorporated in the schedule.





Next Period's Activities

- South Portal: Continue maintain TESC and shoring for Cut and Cover lid. Commence reinforcement and forming and placement of the lid.
- Continue removal and replace sidewalks at 110th intersection with 2nd and 4th St.

Closely Monitored Issues

• ST requested additional investigation of tunnel liner . Contractor drilled (16) holes, no voids found. ST reviewing the report for approval to patch holes.



E330 Downtown Bellevue Tunnel Cut and Cover Progress (2/28/2020)

Cost Summary

Preset Financial Status	Amount
E330 Contractor– Guy F Atkinson Cons	truction, LLC.
Original Contract Value	\$121,446,551
Change Order Value	(\$1,333,507)
Current Contract Value	\$120,113,044
Total Actual Cost (Incurred to Date)	\$115,092,494
Percent Complete	%95.21
Authorized Contingency	\$13,478,162
Contingency Drawdown	(\$1,333,507)
Contingency Index	N/A



Form and pour center wall at South Portal



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

Current Progress

Area 3: North Portal (NP)/ Bellevue Downtown Station (BDS): Continued wall construction in the east and west areas of the station. Completed the waterproofing of the west surface level deck. Continued Mechanical Electrical Plumbing (MEP) rough-in at both the west and east sides. Started installation of canopy structural steel.

Area 4: Aerial Guideway and Wilburton station: Continued installation of structural steel and MEP rough-in on the plaza level. Steel roof decking was also installed on the plaza level. Continued trackwork on the aerial guideway, with plinths to the double crossover.

Area 6: 120th-124th Trench/Station: Continued work on MEP in the platform back-of-house rooms, installation of wall tile and platform floor tile. Continued on the plaza level, installation of glazing lass for the curtain walls and roofing at the plaza entrances. Steel for the stair entrances and railing was installed. Continued work on elevators and escalators.

Schedule Summary

There are two primary critical paths on this contract, corresponding to the two handovers to the E750 Systems Contractor — one runs through BDS, and the other follows access to E330 tunnel in Area 2 and goes through the South Portal and its electrical building. Tunnel work will begin in early 2020 The contractor is currently behind on Milestone 3, but coordination efforts are underway to mitigate impacts to the E750 systems contractor.

bivity Name	Start	Finish		2	2020			
			Q1	Q2	Q3	Q4	Q1	Q2
E335 Construction	24-Apr-17 A	18-May -21				1		-
Milestones	04-May-18 A	18-May-21				+	-	
Contract Milestones	30-Sep-18 A	16-May -21			-			÷
Miestone#1 - Complete North Portal Headwall Temporary Shoring		30-Sep-18 A			1			1
Miestone#2- Complete SIDT's for Intelface to SCADA		14-Jan-20 A						
Miestone#3 - Complete Tackway and Stations for Primary Systems Access - BTC to EOP		21-May -20*		•				1
Miestone#4- Complete SEM Tunnel Tackwork for Primary Systems Access		16-Jan-21*						1
Milestone#5- Complete All Trackway and Stations for Primary Systems Access		18-Mar-21*			1	1	•	1
Miestone#6- Substantial Completion of al Work		16-May -21*						•
Calculated Milestones	04-May-18 A	23-Apr 21		-		-		÷
E335 Achieves Milestore #1		04-May-18 A	1		1	1		1
E335 Achieves Milestone #2		14-Jan-20 A						1
E335 Achieves Milestone #8		06-Oct-20			1	•		1
E335 Achieves Miestore #4		10-Feb-21					•	
E335 Achieves Milestone #5		12-Mar-21			1		•	1
E335 Achieves Milestore #0		23-Apr-21			1	· • • • • • • • • • • • • • • • • • • •		•
Mobilization	24-Apr-17 A	24-Apr-17 A.						
Construction	24-Apr-17 A	24-Mar-21				-	-	r.
Area 1: E Main Station to South Portal (531+55 - 538+00)	11-Oct-17 A	24-Mar-21			-	-	-	ń.
Area 2: South Portal to SEM Tunnel (538+00 - 562+47.91	24-Aug-18 A	24-Mar-21		-	-		-	ŕ.
Area 3: North Portal to Aerial Guideway (562+50 - 568+45)	24-Apr-17 A	24-Mar-21						é
Area 4: Aerial Guideway (568+45 - 606+59)	24-Apr-17 A	24-Mar-21					-	Ŕ.
Area 5: Fine Forest to 120th (606+59 - 619+00)	07-Jul-17 A						-	é l
Area 6: 120th - End of Project (619+00 - 634+99)	01-Aug-17 A	22-Sep-20			-	•		1
Testing and Commissioning	13-Mar-20	06-Dec-20			:	:		1

Schedule Performance Index

This period, the SPI early is at 0.90 and the SPI late is at 1.12. The numbers indicate that the contractor continues to lag the early plan yet ahead of late planned curve. These factors contributed to SPI's early falls behind: Track construction continues to lag behind the baseline; however, it is catching up. Installation of signal ductbank on the aerial guideway is behind the baseline. In addition, all three stations in progress – BDS, Wilburton, and 120th, are behind schedule compared to the baseline.



Link Light Rail East Link Extension



Next Period's Activities

- Area1: East Main Station: Continue install conduits and power ductbank. Continue form, rebar and pour canopy footing.
- Area 2: Tunnel: Install fire protection standpipe and electrical supports. Continue thermite welding tracks east bound.
- Area 3: North Portal (NP)/ Bellevue Downtown Station (BDS): Continue fire protection, mechanical, electrical and plumbing rough-ins at mid and platform level BDS. Continue form rebar and pour bicycle shelters. Start install platform canopy structural steel at platform level.

Closely Monitored Issues

- Design revisions for Mechanical, Electrical and Pluming (MEP) stations, impacted City of Bellevue and permits issuance taking longer than anticipated. Currently all changes are finalized and issued to contractor. ST is closely monitor the progress of work on site and installation of infrastructure to support these systems at Wilburton and BDS Stations.
- Procurement and selection of switchgear equipment and Jet fans have delayed procurement. This switchgear may now not be procured until late 2020, and PSE will not connect power until this equipment is installed and terminated. ST closely monitor the procurement process.



Cost Summary

Present Financial Status	Amount				
E335 Contractor– Stacy & Witbeck/Atkinson Joint Ven- ture (SWA-JV).					
Original Contract Value (includes station scope)	\$393,798,210				
Change Order Value	\$9,506,850				
Current Contract Value	\$403,305,060				
Total Actual Cost (Incurred to Date)	\$279,209,944				
Percent Complete	%76.43				
Authorized Contingency	\$19,689,911				
Contingency Drawdown	\$9,506,850				
Contingency Index	1.5				



120th Station platform tiles completed



Contract E340 - Bel-Red

Current Progress

Aerial Guideway: Continued rebar, form and pour wall panels. Working on plinths on the west end. Placing handrail, guardrail and expansion seal. Placing fascia walls. Backfill wall final lift west of aerial guideway.

130th Ave Station: Continued slab placement and began forming curbs at station slab. Placing high performance coating, offsite fabrication of metal panels and glazing, installing electrical conduit at station canopies.

NE Spring Blvd.: Signal and illumination pole placement. Continued sidewalk placement and sidewalk placement east of 134th Ave NE. Curb and gutter placement along 134th Ave NE. Storm drain adjustments. Additional paving to widen roadway.

Schedule Summary

Critical path of this project segment now runs concurrently through the trackwork on 136th Place. The contractor's January update is presented below. Schedule updates have lagged while ST and the contractor negotiate schedule impacts and recovery options in order to preserve the scheduled interface with the E750 systems contractor. No impact to E750 is anticipated at this time.

tiv ty Name	Start	Finish		2020				
			Q1		Q2		Q3	
E340 Construction	24-Feb-17A	20-Jul-20						
CONSTRUCTION	24-Feb-17A	20-JU-20						
-MILESTONE S/EASEMENTS~	24-Feb-17A	20-Jul-20						
~-Milestones	24-Feb-17A	20-Jul-20						
Contract Milestones	24-Feb-17A	20-Jul-20						
Limited Natice to Proceed (LNTP - Feb 24 2017)	24-Feb-17A	2.00						
Notice to Proceed (NTP - March 27, 2017)	27-Mar-17A			1		1		
MS #1 West Tributary Mitigation Site - NTP + 537 DAYS (September 15, 2018)		14-Sep-18 A						
MS#2Substantial West Tributary Mitigation Ste - NTP + \$26 DAYS (July 1, 2019) Ref. CO063		10-Jun-19 A						
MS #3A coeptance of S DIT- NTP +976 DAYS- (Nov 27, 2019)		28-Nov-19 A						
MS#4Substantial Completion - NTP + 1166 DAYS - (May 26, 2020)		20-Jul-20*				•		
~SUBMITTALS/PRELIMINARY ACTIVITIES~	24-Feb-17A	12-May-20				1		
-MOBILIZATION~	24-Feb-17A	29-Jul-19 A						
~SITEWORK~	04-Apr 17 A	19-Jun-20				-		
-RETAINING WALLS-	12-Feb-18A	10-Apr-20						
-AERIAL STRUCTURES-	15-May-17 A	09-Apr-20						
-STATIONS-	01-Aug-18A	24-Jun-20						
-ELECTRICALITS-	02-Jan-18 A	21-Apr-20		-	-			
-FINISHES-	02-Jan-20	21-May-20	-					
-TRACKWORK-	13-14-18A	24-Jun-20	Contraction of the Association		A			
-LANDSCAPING/FLATWORK-	22-May-18 A	22-May-20						
~TESTING AND COMMISSIONING~	27-Aug-19A	17-Jun-20			-	-		
-DEMOBILIZATION-	01-Aug-18A	21-Apr-20						

Schedule Performance Index

The Schedule Performance Index chart has been updated as of January 2020 which is the latest approved update. This period, the SPI early is at 0.82 and the SPI late is at 1.01. The numbers indicate that the contractor continues to lag the early plan yet slightly ahead of late planned curve. The positive trend as seen in the early curve should continue as we get closer to the end of the contract and the remaining monies get billed.


Link Light Rail East Link Extension



Next Period's Activities

- Aerial Guideway: West approach: set overhang soffit, form / rebar coping. East approach: begin grading for approach slab. Stair tower: grade for footing.
- 130th Ave Station: Canopies: Placement for high performance coating. Begin sloped glazing placement.
- NE Spring Blvd: Place center track slab. Resume placing track slab. Install signal poles and mast arms.
- **136th Pl NE**: Continue placing precast track wall segments and backfill along track wall. Excavation / grading for track wall.

Closely Monitored Issues

- The E340 team continues to see discrepancies between the immediately planned work and the CPM schedule. The E340 Team is holding regular work planning sessions to resolve issues and expedite work flow.
- NE Spring Blvd was opened on November 22nd. There are outstanding elements of permanent work that may require road closures on the new alignment to complete.
- Contractor has encounter unsuitable soil. It was also determined that the recent weather events have impacted progress of the track wall work. This issue has potential cost and critical path impacts.



Cost Summary

Present Financial Status	Amount						
E340 Contractor– Max J Kuney							
Original Contract Value	\$93,170,012						
Change Order Value	\$4,270,444						
Current Contract Value	\$97,440,456						
Total Actual Cost (Incurred to Date)	\$77,704,306						
Percent Complete	77.2%						
Authorized Contingency	\$9,317,000						
Contingency Drawdown	\$4,270,444						
Contingency Index	1.68						



Placing rail during the NE 20th Street.



Contract E360 – SR 520 to Redmond Technology Station (RTS)

Current Progress

Design: All design packages are issued for construction. Notice of Design Change work is still ongoing to include ST and KH initiated changes. ST initiated design changes: PSE Meter Relocation, Track Access at Signal House & Sweeper Site.

Construction:

- Work Area (WA) #1: Completed fence installation and de-stress direct fixation track. Tie in to E340 track slab.
- WA #2: Completed trackwork de-stressing and rail to earth testing. Completed aerial guideway guardrail, drainage and ductbank installation. Continued sitework at E24 TPSS site and Valley Creek Vault.
- WA #3/4: Continue station canopy and kiosk finishes. Completed site clearing and started plaza street utilities.
- WA #5: De-stress track and rail to earth testing.
- WA #6: Garage facade, finishes and trim out ongoing. Garage Entry Ramp prep for concrete placement. Station platform canopy, kiosk and ancillary room finishes ongoing. Continued Leased Office Building foundation and start steel erection. Elevator work ongoing in the Vertical Circulation Tower.
- WA #7: Continue OVS Pedestrian Bridge paperclip ramp curb, rail and stair concrete placement. Erect westbound truss.

Schedule Summary

The critical path currently goes through the structural work at RTS and into the Leased Office Building near the station. The contractor is nearing substantial completion on elements of construction to be handed over to the E750 systems contractor in March.

ctivity Name	Start	Finish		2	220
		1	Q1	Q2	Q3
E360 Construction	13-JJF16 A	12-Aug-20			
Base Contract	13-JUF 16 A	12-Aug-20			
Design	13-14-18 A	16-Apr-20		-	
Design Milestones	03-Oct-16A	01-Mar-20			1
Design Submittals Start		03-Oct-16 A			
30% Design Submittals Complete		28-Oct-16 A			
60% Design Submittals Complete		28-Feb-18 A			
100% Design Submittals Complete		06-May-19 A			
IFC Design Submittals Complete		01-Mar-20	•		
Design Overhead	13-JJ-18 A	18-11-17 A	1		1
Design and Engineering	13-JUI-16 A	16-Apr-20			
Construction	13-11-18 A	12-Aug-20			
General	13-JUI-16 A	12-Aug-20			
Project Milestones	13-JJF 16 A	12-Aug-20			
Natice to Praceed	13-Jul-18 A				
Civil/Systems 100% Design Submittel (NTP+300d) (09-May-2017)		10-Apr 17 A			
Milestone 3A for E750 Work (05-Feb-2020)		09-Mar-20*	•		
Miestone 3B Substantial Completion (02A ug-2020)		12-Aug-20*			•
WA #1 - Track Slab Guideway	22-May-17 A	23-Apr 20			
WA #2 - Aerial Guideway	01-Jun-17 A	15-May-20			
WA #3- Ballasted Guideway Block #1	01-May-17 A	06-May-20			
WA#4- Overlake Vilage Station	14 JUL 16 A	01-14-20			
WA #5- Ballasted Guideway Block #2	15-Aug-17 A	14-May-20			
WA#6- Overlake Transit Center	01-May-17 A	13-14-20			
WA #7 - OV S Pedestrian Bridge	01-Oct-18A	01-14-20			·

Schedule Performance Index

The January schedule was rejected and February update is still under review. December early SPI was .79 and late SPI is .80. 164 days has been added the schedule without rebaselining. After February KH will be past the baselined finish and SPI will continue to drop until Milestone 3B is reached. The removal of the RTS Pedestrian Bridge is still being negotiated and is reflected in the EV (Earned Value). SPI will recover slightly with it's removal, depending upon the negotiated amount.





Next Period's Activities

- WA #1: Punchlist track; fencing; grade site
- WA #2: Punchlist track; turnover to E750; TPSS fencing and landscaping throughout.
- WA #3/4: Continue station/kiosk finishes and sitework grading. Start sitework utilities and concrete. Ramp/stair concrete placement and finishes ongoing.
- WA #5: Punchlist track; turnover to E750
- WA #6: Continue finishes at Vertical Circulation Tower & ancillary rooms and elevator installation. Station platform finishes & MEP trim. Start/finish steel erection at Leased Office Building.
- WA #7: Eastbound truss delivery to site.

Closely Monitored Issues

- PSE construction schedule for establishing permanent power. Completed all locations except E24 TPSS.
- OVS Pedestrian Bridge Fabrication delays due to welding and fabrication criteria. Delivery ETA March 2020.
- Commercial issues for RTS Pedestrian Bridge, As-Built Specification, Safety/Security, City of Redmond CDF, Ped Bridge Artwork and Garage Lighting.
- Schedule Delays for Building Management Systems E340/E360 Interface, Jan & Feb Weather Events.
- Shared access road for the WSDOT Aggregate Disposal Site and Valley Creek vault.
- Turnover to E750 in March 2020.



Cost Summary

Present Financial Status	Amount					
E360 Contractor— Kiewit-Hoffman						
Original Contract Value	\$225,336,088					
Change Order Value	\$6,106,697					
Current Contract Value	\$231,189,873					
Total Actual Cost (Incurred to Date)	\$190,111,386					
Percent Complete	89.8%					
Authorized Contingency	\$22,533,609					
Contingency Drawdown	\$6,106,697					
Contingency Index	3.1					



Work Area 7 OVS Ped Bridge — Erecting Westbound Truss..

Excludes Betterment



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Link Light Rail Downtown Redmond Link Extension

Project Summary

Scope

Limits	The Downtown Redmond Link Extension (DRLE) builds new light rail from the Red- mond Technology Station to downtown Redmond.
Alignment	The extension starts at Redmond Technolo- gy 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 com- munications (SCADA)
Phase	Design Build
Budget	\$1.530 Billion (Baselined October 2018)
Schedule	Revenue Service: December 31, 2024



Map of Downtown Redmond Link Extension

Key Project Activities

- Ongoing field work to support final design (survey, geotechnical borings, potholing).
- Reviewing design build contractor revised baseline schedule.
- Continued to work with the Tribes, WSDOT and WDFW on design options for the unnamed tributary to accommodate fish passage per the WSDOT injunction with the Tribes.
- Working to identify possible spots to relocate cell towers.
- Sound Transit's appeal of the shoreline permit was postponed to work on a settlement agreement with the City of Redmond.
- Presented project status to the City's Parks and Trails Committee and the Bicycle/Pedestrian Advisory Board.
- Received National Pollutant Discharge Elimination System (NPEDS) permit.
- Received Right of Entry for exploratory work on Microsoft property.
- Special Use and Clear and Grade permits issued by King County for osprey nest relocation.
- Executed a Letter of Concurrence with the City on archeological resources code requirements.



Project Cost Summary

Voters approved funding for preliminary engineering for the Redmond Link Extension (DRLE) 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, DRLE incurred approximately \$17.5M of expenditure. This period expenditure incurred primarily in the Design Build line of the Construction phase for approximately \$15.5M. The rest of the expenditures for about \$2M in February are expended largely to ST staffing and Consultants in Administrative and Construction Services phase and support for ROW phase. Total cumulative expenditure to date is at \$135.4M.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$77.0	\$77.0	\$8.7	\$8.6	\$77.0	\$0.0
Preliminary Engineering	\$23.0	\$23.0	\$19.3	\$18.5	\$23.0	\$0.0
Final Design	\$4.5	\$4.5	\$0.7	\$0.4	\$4.5	\$0.0
Construction Services	\$58.0	\$58.0	\$49.7	\$5.0	\$58.0	\$0.0
Third Party Agreements	\$17.0	\$17.0	\$6.7	\$2.6	\$17.0	\$0.0
Construction	\$1,151.5	\$1,151.5	\$726.9	\$51.5	\$1,151.5	\$0.0
ROW	\$199.0	\$199.0	\$51.7	\$48.9	\$199.0	\$0.0
Total	\$1,530.0	\$1,530.0	\$863.8	\$135.4	\$1,530.0	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$332.4	\$332.4	\$229.5	\$31.0	\$332.4	\$0.0
20 Stations	\$261.9	\$261.9	\$182.5	\$7.4	\$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	\$181.2	\$7.6	\$287.1	\$0.0
50 Systems	\$108.6	\$108.6	\$65.2	\$2.7	\$108.6	\$0.0
Construction Subtotal (10 - 50)	\$990.0	\$990.0	\$658.4	\$48.7	\$990.0	\$0.0
60 Row, Land	\$168.5	\$168.5	\$51.7	\$48.9	\$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	\$153.7	\$37.7	\$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	\$863.8	\$135.4	\$1,530.0	\$0.0



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 project completed its quantitative risk assessment risk workshop as part of the process project baseline in Q4 2018. The quantitative risk assessment report is completed and finalized with good probability that supported the DRLE baseline cost and schedule assumptions. The externality conditions remains the same this period and may have reduced in some instances, therefore, the project's risk profile remains unchanged. The qualitative risk assessment risk meeting for Q4 was performed in February 2020. The following are the current top project risk areas:

- Property acquisition market conditions; protracted durations of attaining control of properties; evolving design impacts property needs; however, the current cost risk seems to be subsiding due to appraisals and offers aligning to the baseline budget assumptions.
- Permitting and third party requirements construction adjacent to SR520; flood prone areas by Sammamish River and Bear Creek; archaeological discovery; permitting of stream crossings; betterment requests increases complexity of projects; construction impacts to traffic; protracted negotiation with third parties; interfaces with private utilities for utility relocations.
- Construction market conditions inflationary pressure due to competitiveness for resources and labor; higher materials pricing due to demand as well as regulations (tariffs and taxes); However, since the DB contract bid and awarded for less than baseline estimate, a very significant cost pressure to this project has been averted.
- Agency staffing capacity developing and mobilizing resources and coordinating start up activities across multiple extensions within a short time frame.
- COVID-19 Pandemic Impact due to COVID-19 is unknown and this fluid situation is being closely monitored.

Project Schedule

The project schedule is presented below. Property acquisition and environmental permitting are ongoing. NTP was issued to the DB contractor in September 2019 The contractor's revised baseline was submitted in February and review is ongoing. The contractor is currently preparing 60% design packages and engaging in the permitting process with the City of Redmond and King County. The project is forecast for completion near the end of 2024.

Activity Name	Start	Finish	2020	2021	2022	2023	2024
Downtown Redmond Link Extension - Right of Way	27-Dec- 17 A	18-Feb-21					
Downtown Redmond Link Extension - Permits & Third Party Agreements	01-Jun-18 A	15-Jan-20	4				
Downtown Redmond Link Extension - Construction	01-Jun-18 A	31-Dec-24					
Downtown Redmond Link Extension - Design-Build Procurement	01-Jun-18 A	08-Sep-19A					
Downtown Redmond Link Extension - Design-Build Contract	01-Jul-19 A	31-May-24	H				-
Downtown Redmond Link Extension - Rail Activation/Closeout	15-Dec-23	31-Dec-24				١	
Systems Integration & Testing	15-Dec-23	01-May-24				٦	-
Safety and Security Certification	15-Dec-23	08-Mar-24				٦	-
Pre-Revenue Service	01-Jun-24	29-Aug-24					T
Pre-Rev enue Operations	01-Jun-24	29-Aug-24					
Revenue Service/Project Float	30-Aug-24	31-Dec-24		[
Project Float	30-Aug-24	31-Dec-24					
RevenueService		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 Co to date			
93 93 67 20 1552 1390							
All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods							

* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.
** A large majority of the relocation count is due to the relocation of storage units.

Community Outreach

- Continued meetings with potentially impacted property owners in southeast and downtown Redmond. Outreach provided updated project information and real estate process information and timing for various stakeholders.
- Performed outreach for parking closures at Redmond Central Connector lot for potholing work.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The variance from ST staffing is partially caused by vacancy and early stage of the project but mostly due to the cumulative fractions of FTE anticipated across departments. Meanwhile, the consulting variance is due to the fact that the design build project management consultants are being prudent in its mobilization. Effectively this variance gap should start to reduce as we progress thorough this year.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance				
ST Staff	30.8	19.4	(11.4)				
Consultants	25.9	22.7	(3.2)				
TOTAL	56.7	42.1	(14.6)				

* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.

Sound Transit Board Actions

в	oard Action	Description	Date
		None 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.
- StationsFive stations planned for West Seattle Segment.PhasePlanningBudget\$286M through completion of Preliminary
Engineering

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

Key Project Activities

- Participated in community briefings along the corridor with City of Seattle. Provided overview of outreach, project goals, agency roles, and near-term opportunities for engagement.
- Continued production of the Draft EIS.
- Continued collecting data and conducting fieldwork, including geotechnical borings, for environmental and engineering evaluation in support of design.
- Continued engagement with partner and regulatory agencies, tribes, waterway users, stakeholder groups and property owners regarding environmental process and next steps.
- Continued coordinating with partner agencies including City of Seattle, King County, Port of Seattle and other local, state and federal agencies.







Project Cost Summary

The West Seattle and Ballard Link Extensions are voter-approved projects under the ST3 Plan. The current Authorized Project Allocation (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 is authorized and planned to incur approximately \$47M in 2020 for completing Draft EIS development, conceptual engineering; 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	\$11.0	\$10.6	\$63.1	\$0.0
Preliminary Engineering	\$205.4	\$82.8	\$48.3	\$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	\$1.4	\$0.4	\$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	\$2.5	\$0.7	\$6.0	\$0.0
Total	\$285.9	\$97.6	\$59.9	\$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	\$2.5	\$0.7	\$5.0	\$0.0
80 Professional Services	\$263.4	\$95.1	\$59.2	\$263.4	\$0.0
90 Unallocated Contingency	\$17.5	\$0.0	\$0.0	\$17.5	\$0.0
Total (10 - 90)	\$285.9	\$97.6	\$59.9	\$285.9	\$0.0



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, including Third Party funding;
- 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 project schedule can be found below. ST Board identified preferred alternatives (to be studied in the Draft EIS) on May 23, 2019. FTA issuance of ROD and Final Design are 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.

vity Name	Start	Finish	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
					alaala			adaaa			quada	qualqua	qqqqq	qqqq	quada	00000	qqqqq	
Sound Transit	17-Mar-17 A	31-Dec-36																
Sound Transit 3	TT-Mar-17 A	31+Dec-35	-		-	-	-	-		-	-	-	-	-		-	-	
ST3 - Central Corrido:	17-Mar-17 A	31-Dep-35										-			-	-		-
West Seattle and Ballard Link Extension - Master Sche	17-Mar-17 A	31-Dec-36		-	-	-	-	-		-	-	-	-		-	-	-	_
West Seattle and Ballard Link Extension	17-Mar-17 A	31-Dec-35	-					A			abarta a	hourse a		the second second	and the set of	AL MARK PLAT		_
West Seattle and Ballard Link Extensions	17-Mar-17A	22-Sep-22	-															
Alternative Analysis - (Phase I)	17-Mar-17 A	23-May-19 A			Ľ.													1
Conceptual Engineering - (Phase II)	24-May-19A	22-Apr-21	-	-														
Conceptual Engineering - Milestones	22-Apr-21	22-Apr-21																
WSBLE - Board Reaffirms Preferred Alternative	22-Apr-21	22-Apr-21		a.c.	and the	Constant of		1.711	1000	2.00	L. Trees	C 10.23		5.50		and it	ni nin	
Conceptual Engineering	24-May-19 A	06-Jan-21	-	7														
Geotech Investigation - Phase II	24-May-19A	06-Nov-20		1.														
Preliminary Engineering - (Phase III)	17-Feb-22	22-Sep-22		2.20						-		-						
West Seattle to Downtown Link Extension	23-Apr-21	31-Dec-30		-	-	-	-	-	-	-	_	-	-					
Final Design	20-Oct-21	02-May-25						-				L						
Final Design Procurement	20-Oct-21	30-Oct-22		۲		1												[
Final Design	31-Oct-22	02-May-25		1.00	-	-	-	-										1
Permitting /Agreements	23-Apr-21	19-Aug-25		-	-	-	-											
Right of Way	31-Oct-22	26-Feb-25		1.5		-					1.000							
Construction	03-May-25	30-Jan-30			2.03	(A. T.)	1.1.1	-			÷	-		_				
Post Construction	31-Jan-30	31-Dec-30		10.00									-		200.00			1.00
System Integration Testing	31-Jan-30	29-Jul-30					1.1	1.01	1.111		1.001	1000						
Project Float	30-Jul-30	31-Dec-30											-	(1 - 11)				
Revenue Service	31-Dec-30	31-Dec-30			1.11	1.000		1.1	1.5		11							
Ballard to Downtown Link Extension	20-Oct-21	31-Dec-35	1			-	-				-							
Final Design	20-Oct-21	22-Aug-28																
Right of Way	28-Oct-22	23-Feb-25			- -	-	-	-			1.000	1	10.00				1.00	
Permits and Agreements	28-Oct-22	15-Dec-25			-	-				1.000		10000	10 i					
Construction	20-Apr-24	22-May-34			1.0		-	-	-		-	-	-	_	_		-	
Post Construction	23-May-34	31-Dec-35				1.2		1.00	100	I want	1.0	1000	distant.			1000	-	-
System Integration Testing	23-May-34	22-May-35			*****													
Project Float	23-May-35	31-Dec-35															i ni	-
Revenue Service	31-Dec-35	31-Dec-35																1



Community Outreach

- Prepared and staffed multiple neighborhood events and community briefings in February 2020 for the communities to learn more about light rail route and station location options being studied in the Draft EIS. The specific dates of those events were:
 - First Hill Improvements Association February 2, 2020
 - District 1 Community Network February 5, 2020
 - Lunar New Year Festival February 8, 2020
 - Five City Commissions February 12, 2020
 - ^o Delridge Neighborhood Development Association February 21, 2020
- Drafted and distributed monthly Project Update February 19, 2020.
- Prepared and distributed notifications regarding Waterway User Survey and collected survey responses.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE is an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The planned FTE monthly average takes peaks and valleys in activity into account; whereas the YTD monthly average only reflects January—February actuals. As design activity increases through the year, the monthly average will trend closer to the plan.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance				
ST Staff	44.8	28.0	(16.8)				
Consultants	125.0	105.9	(19.1)				
TOTAL	169.8	133.9	(35.9)				
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.							

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 communica- tions (SCADA)
Phase	Proceed to Final Design/Construction
Budget	\$2.45 Billion (Baseline Sep 2018)
Schedule	Revenue Service: December 2024



Map of Federal Way Link Extension.

Key Project Activities

- Workshop with transit agency partners was held to review design solutions, concepts and the new agency criteria for the Federal Way Transit Center. Next month a workshop with City of Federal Way.
- DBPM Construction Quality Plan responses from FTA/PMOC is under review by project team.
- Continue preparing task order scope of work for advanced utility relocation with Century Link and PSE.
- Continue negotiations with Lakehaven for Developer Extension Agreements (utility relocation).
- Continue discussion of interagency coordination for Midway Landfill agreement is progressing forward with Seattle Public Utility (SPU), WSDOT, Ecology, EPA and FTA; goal to reach agreement resolution in Q2 2020.
- Ecology-led Public hearing for FWLE and 509 for Midway Landfill was held with ST, Kiewit, SPU, and WSDOT; comment period was closed. The timeline for completion of necessary regulatory documents as well as agreements with WSDOT and SPU is Q1 2020.
- Discussions continue with King County Metro for temporary lease parking during construction at Star Lake Park & Ride.
- King County (KC) Fee In-Lieu Environmental Mitigation agreement for purchasing mitigation credits was executed.
- Progress continues with settling Right-of-Way acquisition and relocations 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 \$22.7M was incurred for February, of which \$6.1M incurred was for Right-Of-Way; \$1.5M incurred for Construction Services; \$14M for Construction phase comprised mainly of \$7.6M for Design Build construction contract, \$0.4M for Construction Permits from Cities and environmental mitigation payment to KC. Remaining major expenditures of \$1M were for Preliminary Engineering, Third Party and Administration. Overall the project Estimate at Completion continues to reflect \$2.45B.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$96.5	\$96.5	\$21.8	\$21.9	\$96.5	\$0.0
Preliminary Engineering	\$46.5	\$49.0	\$45.5	\$44.6	\$49.0	\$0.0
Final Design	\$3.1	\$3.1	\$1.0	\$0.9	\$3.1	\$0.0
Construction Services	\$107.0	\$107.0	\$15.6	\$11.9	\$107.0	\$0.0
3rd Party Agreements	\$27.7	\$27.7	\$21.2	\$5.1	\$27.7	\$0.0
Construction	\$1,831.9	\$1,829.4	\$1,285.2	\$157.4	\$1,829.4	\$0.0
ROW	\$338.8	\$338.8	\$138.6	\$131.4	\$338.8	\$0.0
Total	\$2,451.5	\$2,451.5	\$1,528.9	\$373.2	\$2,451.5	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$523.0	\$451.1	\$392.7	\$34.2	\$517.7	(\$66.7)
20 Stations	\$318.9	\$297.7	\$244.5	\$21.1	\$316.1	(\$18.5)
30 Support Facilities	\$5.3	\$11.8	\$11.5	\$1.0	\$5.3	\$6.5
40 Sitework & Special Conditions	\$558.4	\$489.5	\$413.3	\$40.4	\$548.9	(\$59.4)
50 Systems	\$153.8	\$170.4	\$116.5	\$10.0	\$153.0	\$17.4
Construction Subtotal (10 - 50)	\$1,559.4	\$1,420.4	\$1,178.5	\$106.7	\$1,541.0	(\$120.6)
60 Row, Land	\$341.6	\$338.8	\$138.6	\$131.4	\$338.8	\$0.0
70 Vehicles	\$1.8	\$1.8	\$0.0	\$0.0	\$1.8	\$0.0
80 Professional Services	\$370.7	\$514.4	\$211.8	\$135.1	\$393.7	\$120.6
90 Unallocated Contingency	\$178.1	\$176.3	\$0.0	\$0.0	\$176.3	\$0.0
Total (10 - 90)	\$2,451.5	\$2,451.5	\$1,528.9	\$373.2	\$2,451.5	(\$0.0)



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.

Below are the top project risks:

- Obtaining easements for PSE advanced utility relocation could impact DB Contractor schedule.
- Design review/approvals may not be completed in timely manner by jurisdictional partners, thus delaying project progress.
- Midway Landfill crossing agreement may not reach timely execution with WSDOT & SPU prior to DB contract submittal permit package.
- Known third party utility relocations may not occur as scheduled, delaying DB construction activities.
- FTA review of design refinements could cause construction schedule delays.
- Federal Way Transit Center design changes could impact construction contract.



Construction on HWD 30 inch waterline replacement.



Contingency Management

The Federal Way Link Extension project budget was baselined in September 2018 with a total contingency of \$549.9M. The current contingency balance is \$413.6M.

Design Allowance (DA) has been used and no longer reported.

Allocated Contingency (AC) is used to address risks, complexity and unforeseen conditions during the execution of work, including procurement. During this period the AC remained unchanged from the previous month.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. During this period the UAC remained unchanged from the previous month.

Contingency by Type

Contingency Status (Monthly)



Table figures are shown in millions.



Link Light Rail Federal Way Link Extension



Project Schedule

The project schedule is presented below. Right-of-Way acquisitions and relocations continue and additional detail has been added to the master schedule to monitor any impacts to the project. LNTP was issued June 7, 2019. The baseline schedule submittal was approved in January 2020. Our Full Funding Grant Agreement was awarded on January 22, 2020. Construction NTP is now expected in May 2020. Kiewit is assessing the impacts for this delay and looking for opportunities to mitigate at this time. Revenue Service is on schedule for Q4 2024.

ivity Name	Start	Finish						
			2019	2020	2021	2022	2023	2024
Sound Transit	01-Jul-16A	31-Dec-24	alo.		alalala			alalala
Sound Transit 2	01-JUL16A	31-Dec-24			1			
South Conidor	01-Jul-76 A	31-Dec-24	-	1	it	· · · · · · · ·	· · · · · · ·	1 mar 1 a
Federal Way - Master Schedule	01-Jul-16 A	31-Dec-24	1 2 2					
Federal Way Link Extension -Integrated Master Schedule	01-JUE16 A	and the second se		C	()	2		1.000
		31-Dec-24	14 5.					
Milestones MS 01 - Baseline Project (Q3 2018)	27-Sep-18A	31-Dec-24 27-Sep-18 A						
MS 02 - NTP to Design/Build Contractor (Q3 2019)		07-Jun-19 A						
MS 03 - ROW Acquisitions Complete (Q1 2020)		08-Jul-19 A						
MS 05 - All Drilled Shafts/Foundations/MSE Walls Complete (Q1 2022)		04-Feb-22	÷					
MS 04 - 50% Design/Construction Complete (Q4 2021) (*based on contract duration)		09-Aug-22	+					
MS 06 - Design/Build Contractor - Substantial Completion - (Q4 2023)		30-Jul-23						
MS 07 - Revenue Service w/Float (Q4 2024)		31-Dec-24*	-					
Preliminary Engineering	01-Jul-16A	28-Dec-19	-	-				
Third Party Agreements and Permitting	01-Jul-16A	30-Mar-20	0	-				
Federal Way Link - Design-Build Construction Management Consultant - Contract	14-Nov-16A	17-May-24						
Federal Way Design/Build Contract Procurement	11-Mar-17 A	07-Jun-19 A	-			1		
Federal Way - Right of Way	10-May-17 A	06-Feb-21		-	-			
FWLE ROW Acquisitions	10-May-17 A	06-Feb-21	-	-				1.2.4
Federal Way - D/B Construction	07-Jun-19A	16-Apr-24	-					-
F200 Federal Way Link Extension - Preliminary Baseline (FTA)	07-Jun-19 A	16-Apr-24	-					-
General	07-Jun-19 A	16-Apr-24	-					-
Design	07-Jun-19 A	20-Jan-23	-			-	V	
Construction	07-Jun-19.A	14-Dec-23	-	-		-		
Provisional Sums	30-Jul-23	08-Aug-23		a conserver		1		autorit.
Federal Way - Rail Activation	07-Jun-19 A	31-Dec-24	-					
Federal Way Link Extension - Rail Activation	07-Jun-19 A	31-Dec-24						
Rail Activation	07-Jun-19 A	31-Dec-24						1
LRV Conditional Acceptance - FWLE	12-Jan-23	05-Dec-23						
Systems Integration & Testing	14-Jul-23	17-Jan-24						
Safety and Security Certification	07-Jun-19A	14-Dec-23	-				,	
Pre-Revenue Service	18-Jan-24	17-Mar-24			1			
Project Float	17-Apr-24	31-Dec-24						-
Revenue Service	31-Dec-24	31-Dec-24				1	12.2.22	1.1.1.1

Project Float

Federal Way Link Extension was baselined with 427 days of project float. Currently the project is reporting 257 days remaining between Pre-Revenue Service and Revenue Service in December 2024.





Critical Path Analysis

The critical path for Federal Way Link Extension, currently runs through Elevated Guideway Design at Star Lake Station through drilled shafts, columns and deck to KDM station deck and finishes, systems and commissioning to Pre-Revenue Service. ROW access is on near critical site work at KDM station in this update.

stivity Name	Start	Frish	2020	2021	2022	2023	2024
			Q1 Q2 Q3 Q4 Q1				
Sound Transit	17-Jan-20 A	31-Dec-24					
Sound Transit 2	17-Jan-23-	51-Dec-34	-		-		
South Comidor	17-Jan-20A	31-Dec-24					
Federal Way - D/B Construction	17-Jan-20 A	18-Apr-24		-			-
F200 Federal Way Link Extension - Schedule Update - D/B Contractor	17-Jan-20 A	18-Apr-24	-	-			- · · ·
Contract Milestones	19-Jan-24	18-Apr-24	1				
Substantial Completion		19-Jan-24		_			•
60-Day Pre-Revenue Operations	20-Jan-24	19-Mar-24					-
30-Day Sound Transit-Controlled Float	20-Mar-24	18-Apr-24					
MS 5 - Acceptance of All Work (19-April-24)		18-Apr-24					• • •
Design	17-Jan-20 A	13-Aug-20					
Design Packages - Star Lake Segment 2	17-Jan-20 A	13-Aug-20					
Design S2.01 - Elevated Guideway - Structure B	17-Jan-20 A	13-Aug-20					
General	04-Feb-20A	20-Mar-20	-				
Right-of-Way	04-Feb-20A	20-Mar-20	T				
Parcel FL-366 ROW Transfer [STA 1396+00] (WA-3.8)	04-Feb-20 A	20-Mar-20					
Construction	21-Mar-20	19-Jan-24			-	-	
Construction Milestones	05-Oct-20	05-Oct-20	1 . T		a province of		
Submittals & Engineering	20-May-20	13-Aug-20			1.1		
Segment 1 Construction [STA 990+10 to 1112+99]	17-Aug-20	19-Nov-21		-		a chief of the	the second second
Work Area 1.2 Construction [STA 1018+73 to 1095+13] (AT-GRADE)	17-Aug-20	28-Jul-21					
Work Area 1.3 Construction [STA 1095+13 - 1113+00] (ELEVATED)	05-Oct-20	19-Nov-21					
Segment 2 Construction [STA 1112+99 to 1227+29]	01-Jun-20	16-Oct-20		-			
Segment 3 Construction [STA 1227+29 to 1401+87]	21-Mar-20	19-Jan-24	-		-	-	
Work Area 3.8 Construction [STA 1369+25 - 1401+87] (ELEVATED)	21-Mar-20	11-Aug-23		-			1 C
Systems (Segment 3)	17-Jan-23	11-Aug-23					
Commissioning (Segment 3)	14-Aug-23	19-Jan-24				-	-
Federal Way - Rail Activation	19-Apr-24	31-Deo-24					-
Federal Way Link Extension - Rail Activation	19-Apr-24	31-Dec-24					
Rail Activation	19-Apr-24	31-Dec-24			a stranger a	1	-
Project Float	19-Apr-24	31-Dec-24	1			1	1
Revenue Service	31-Dec-24	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.

RELOCATION
quired Relocations Complete
381
•

* All numbers are cumulative totals, except where noted. Number of totals may differ from other reports due to the timing of reporting periods.

- Total Acquisitions is defined as only parcels (recognizing only land not owners).
- Board Approved based on parcels and properties (multi-unit acquisitions).
- Relocation numbers are the number of affected individuals.



Community Outreach

- Communication with property owners and the public regarding FWLE route, profile, station areas, acquisition and relocation is ongoing.
- Continued outreach to businesses in the project area.
- Extensive planning for the upcoming closure of Star Lake Park and Ride on 3/21.
- Conducted in-person outreach and hung banners at the Star Lake Park and Ride the week of 2/24.
- Met with Camelot Square Mobile Home Park ownership group om 2/24.
- Outreach at the State of Federal Way address by Mayor Ferrell on 2/27.



Banners at Star Lake Park and Ride announcing the upcoming closure

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Overall the project FTE is 8.8 (or 13%) over staffing plan. The main cause for this overrun is due to the consultant plan not aggressive enough this year for the DBPM services overseeing Design Build contractor. DBPM plan is overrun by 14.3 FTE (or 43%) as they oversee and react to design and certain construction activities (demo and utility relocations) performed by the Design Build contractor.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	39.8	34.3	(5.5)
Consultants	28.7	43.0	14.3
TOTAL	68.5	77.3	8.8

An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.



Sound Transit Board Actions

Board Action	Description	Date
	None to report.	

Construction Safety

Data/ Measure	February 2020	Year to Date	Project to Date		
Recordable Injury/Illness Cases	0	0	0		
Days Away From Work Cases	0	0	0		
Total Days Away From Work	0	0	0		
First Aid Cases	1	1	1		
Reported Near Mishaps	0	1	1		
Average Number of Employees on Worksite	80	-	-		
Total # of Hours (GC & Subs)	12,343	13,683	13,683		
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date		
Recordable Injury Rate	0.00	0.00	0.00		
Lost Time Injury (LTI) Rate	0.00	0.00	0.00		
Recordable National Average		3.00			
LTI National Average	1.20				
Recordable WA State Average	6.00				
LTI WA State Average	1.90				

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 Federal Way Link Extension



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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 effort environmental work including responding to FTA comments on Draft 2b of the NEPA/SEPA document and submitting the final package to Sound Transit for FTA review.
- Continued follow-up ESA and HBM work and support for property acquisition including ROW drawings, parcel maps, AL-TA maps, and TCALs.
- Various coordination works between Sound Transit, the DBPM and the design-builder.

Schedule Performance Index

The cumulative Schedule Performance Index (SPI) is 0.99 through February 2020, indicating the overall amount of work accomplished is as planned. The consultant (HDR) is fully engaged on coordination efforts with the DBPM consultant, and the design-builder, Environmental works including NEPA/SEPA, property acquisition support with parcel maps, ALTA maps and TCALs.



Link Light Rail Federal Way Link Extension



Cost Performance Index

Phase 3 expenditures through February 2020 totaled \$36.46M, approximately 97.8% of the amended total contract. The Phase 3 percent complete is reported at 99.0%, with an earned value of \$36.84M. The cumulative Cost Performance Index (CPI) is 1.01 showing costs are on track with work accomplished. The Consultant is engaged in coordinating efforts with the DBPM and the design-builder, environmental works, ROW acquisition support, parcel maps, ALTA maps, and TCALs.



Cost Summary

Contract (Phase 3 portion)	Cumulative To-date
Amount Invoiced	\$36.46M
% Spent	98%
Earned Value	\$36.84M
% Complete	99%
SPI	0.99
СРІ	1.01



F200 Design Build Contract

Current Progress

The F200 Contractor, Kiewit, is continuing work on as follows:

- Continue Design Task Force meetings and design package submittal reviews are in various stages (60%/90%/IFC)
- Began review of Safety and Security Management Plan

Design: The Project is identified by segments in three parts (S1, S2, S3). The team worked the design packages below:

- 60% Station & Garage, Landscaping, KDM Station & Garage, Utilities, Drainage; Garage, Drainage & Utilities, S2 Roadway & Walls at SL Station.
- 90% CW.01 Track
- 90/100% Std Drawings Walls; S1 Guideway Grading & Walls; S3 FWTC Foundation & Site Grade; STD System-wide Ductbank; S3 Demo C&G
- IFC S3 MOT at SL Station; S2 Demo, C&G at SL Station; S1 Utilities

Construction:

• Continue early property demolition and 30" Highline Water District (HWD) water line replacement work.

Schedule Summary

Limited Notice to Proceed was issued on June 7, 2019. The baseline schedule was approved in January 2020. The progress schedule for February 2020 has been accepted; Construction NTP is now expected in May 2020. Kiewit is assessing these impacts at this time. Below is a summary schedule from the contractor's February 2020 schedule update.

y Name	Start	Finish	2020 2021 2022 2023 2024						
			2020	2021	2022	2023			
Federal Way Link Extension - Master - Design/Build	03-Jun-19A	18-Apr-24					-		
F200 Federal Way Link Extension - Schedule Update - D/B Contractor	03-Jun-19 A	18-Apr-24			-	-	+-		
Contract Milestones	07-Jun-19A	18-Apr-24		********					
Limited Notice to Proceed	07-Jun-19 A				1.00				
Notice to Proceed	01-Mar-20*		•		1571				
MS 1 - Civil Work in WSDOT ROW From S 208th Street to I-5 (Sta. L 2260+00) (VA-2) (01-Mar-22)		25-Feb-22*			•				
MS 2 - Civil Work in WSDOT ROW from Start of FWLE to S 208th Street (VA-1) (01-Nov-22)		04-Oct-22*			•		2.12		
MS 3 - LRV Early Storage (2,000 feet of Track) (01-Jun-23)		20-Apr-23*				•			
MS 4 - Work in WSDOT ROW from I-5 (Sta. L 2260+00) to S 272nd Street (VA-3) (01-Nov-23)		27-Sep-23*				•	1		
60-Day Pre-Revenue Operations	20-Jan-24	19-Mar-24							
30-Day Sound Transit-Controlled Float	20-Mar-24	18-Apr-24					1		
MS 5 - Acceptance of All Work (19-April-24)		18-Apr-24							
Design	07-Jun-19 A	20-Jun-23				-			
Design Milestones	07-Jun-19 A	02-Mar-23		1.000					
Corridor Wide	07-Jun-19 A	16-Apr-21		-	1000				
Design Packages - Kent Des Moines Segment 1	07-Jun-19A	26-Oct-20							
Design Packages - Star Lake Segment 2	07-Jun-19 A	16-Feb-21		-	1.000	1			
Design Packages - Federal Way Transit Segment 3	07-Jun-19 A	19-Apr-21							
General	07-Jun-19 A	20-Jun-23	-	-					
Construction	03-Jun-19A	29-Mar-24				_	+		
Construction Milestones	18-Jun-19 A	21-Apr-23		-	-	-			
Project Managment-Construction	02-Dec-19A	29-Aug-23		-	-				
Construction Summary	24-Jun-20	19-Jan-24					-		
Mobilization - Construction	28-Feb-20A	19-Feb-21		-					
Submittals & Engineering	03-Jun-19A	27-Dec-23		_		_	-		
Procurement	20-Aug-19 A	13-Nov-22		-	-				
Segment 1 Construction ISTA 990+10 to 1112+99]	28-Jun-19A	18-Dec-23		-			-		
Segment 2 Construction [STA 1112+99 to 1227+29]	28-Jun-19 A	29-Dec-23					-		
Segment 3 Construction [STA 1227+29 to 1401+87]	18-Sep-19 A	29-Mar-24							

Link Light Rail Federal Way Link Extension

SoundTransit

Schedule Performance Index

This period, the SPI early is 0.99 and the SPI late is at 1.48. The indices indicate that the contractor's performance, although early curve is steady, the late curve trending negative suggest non critical activities are not progressing as planned. Performance is mostly design and minor construction work; full NTP for all construction is tentatively May 2020. Overall work progress remains in adequate standing.



Next Period's Activities

- Continue Design Task Force meetings.
- **Design:** Continue reviewing various design packages in 60%, 90% and IFC stages for bridge structures, guideway track, drainage, utilities, Midway Landfill Civil, demolition and clear & grub.
- **Construction:** Continue 30inch utility relocation of Highline Water District (HWD).
- Continue early property demolition of commercial and residential buildings.

Closely Monitored Issues

- Midway Landfill Agreements ST coordinating on a monthly basis with stakeholders and has developed a roadmap for reaching agreement with WSDOT and SPU by Q4 2019, however discussions continue.
- Federal Way Transit Center—Design changes under discussion with ST management and City of Federal Way
- Notice to Proceed Revised NTP date from end of Feb to early May. Possible revision of LNTP work to avoid potential delay.
- **Property Acquisitions**—Around 10 properties will cause a delay/inefficacy to completing the planned work.

Cost Summary

Present Financial Status	Amount						
F200 Contractor - Kiewit Infrastructure West Co							
Original Contract Value	\$1,285,200,000						
Change Order Value	\$509,705						
Current Contract Value	\$1,285,709,705						
Total Actual Cost (Incurred to Date)	\$151,382,120						
Percent Complete	13%						
Authorized Contingency	\$128,520,000						
Contingency Drawdown	(\$509,705)						
Contingency Index	32						



Construction on the Highline Water District (HWD) 30" water line replacement. S 211th St Service meter installation started.



Link Light Rail Federal Way Link Extension

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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
- 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: Design consultant continued design services during construction scope including review of construction contractor submittals and responded to requests for information.

Construction

- Heading 1: Continued installation of OCS foundations and outbound track slab installation on Stadium Way; performed site grading and began permanent drainage installation at Traction Power Substation (TPSS) No. 1. Re-opened Stadium Way to two-way traffic.
- Heading 2: Completed inbound/outbound track slab, curb and gutter and crosswalk installations at Tacoma Ave./1st St intersection (this required a four week closure); performed OCS foundation wok in Stadium District and installed systems ductbank at TPSS No. 2.
- Heading 3: Continued storm and sewer work from Division St. to Tacoma General. Installed traffic signal and illumination conduit at various intersections on MLK. Began systems ductbank and vault installations from 19th to 18th on MLK followed by track slab installation.
- OMF: Continued mechanical, electrical and plumbing rough-in at interior. Began installation of insulation at interior and exterior walls. Began exterior sheathing work and installed storefront at north elevation. Began installation of systems duct-bank at yard.
- General: Staff continue to update Recovery Plan and project Risk Register.





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.

The T100 construction contract was executed in August 2018. The team went to the ST Board in December 2019 to add contingency to this contract.

In the February 2020 period approximately \$3.0M was incurred. Most expenditures are occurring in the Construction Phase related to the T100 construction contract. ST continues to anticipate majority of expenditures in the construction phase.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$16.9	\$17.3	\$11.2	\$11.1	\$17.3	\$0.0
Preliminary Engineering	\$5.6	\$5.6	\$5.6	\$5.6	\$5.6	\$0.0
Final Design	\$10.8	\$12.8	\$12.5	\$11.3	\$12.8	\$0.0
Construction Services	\$9.9	\$10.3	\$8.9	\$4.9	\$10.3	\$0.0
3rd Party Agreements	\$1.5	\$1.5	\$1.3	\$1.0	\$1.5	\$0.0
Construction	\$127.2	\$134.5	\$121.3	\$70.5	\$134.5	\$0.0
Vehicles	\$35.4	\$33.1	\$30.3	\$3.5	\$33.1	\$0.0
ROW	\$3.6	\$2.3	\$2.2	\$1.9	\$2.3	\$0.0
Contingency	\$6.6	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$217.3	\$217.3	\$193.3	\$109.6	\$217.3	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Current Adopted Budget	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Adopted Budget vs. EFC
10 Guideway & Track	\$21.9	\$25.7	\$23.2	\$13.5	\$25.7	\$0.0
20 Stations	\$1.8	\$2.9	\$2.6	\$1.5	\$2.9	(\$0.0)
30 Support Facilities	\$26.6	\$34.2	\$30.8	\$17.9	\$34.2	(\$0.0)
40 Sitework & Special Conditions	\$40.0	\$43.0	\$38.8	\$22.5	\$43.0	(\$0.0)
50 Systems	\$25.0	\$28.7	\$25.9	\$15.0	\$28.7	(\$0.0)
Construction Subtotal (10 - 50)	\$115.4	\$134.52	\$121.3	\$70.5	\$134.5	\$0.0
60 Row, Land	\$3.4	\$2.3	\$2.2	\$1.9	\$2.3	(\$0.0)
70 Vehicles (non-revenue)	\$34.1	\$33.1	\$30.3	\$3.5	\$33.1	(\$0.0)
80 Professional Services	\$48.4	\$47.5	\$39.5	\$33.8	\$47.5	(\$0.0)
90 Unallocated Contingency	\$16.1	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total (10 - 90)	\$217.3	\$217.3	\$193.3	\$109.6	\$217.3	\$0.0



Risk Management

The Hilltop Tacoma Link 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 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 Baseline Risk Assessment was conducted in May 2017 and we conducted a Quantitative Risk Assessment in May 2019. A Recovery Action Workshop was conducted on October 24-25, 2019. An update to the risk model following review of secondary risk mitigations was done and an updated estimate at completion is in progress. The team is implementing the mitigations for the top risks and are being tracked a bi-weekly status updates. Per the December 2019 Register Update the current top project risks include:

- Lack of contractor's approved schedule is creating a series of cascading impacts to the project.
- Roadway improvements and modifications along MLK are greater than anticipated.
- Unidentified utilities under the proposed alignment lead to increased cost and schedule delays for mitigation during construction.
- Redesign of Division St./J/K intersection work leads to schedule delay and higher costs.
- Contractor assumed CoT discretion to relax code requirements regarding material staging in public ROW.
- Work zone constraints due to traffic control considerations and impacts to stakeholder require additional contractor resources due to resequencing activities and materials and equipment handling.



Panel installation at north exterior side of OMF



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 the Procurement of the Tacoma LRV and T100 Construction contracts, Design Services During Construction contract, and various Change Orders.

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 was decreased primarily as a result of Change Orders executed for T100. The balance decreased to \$8.4M. We anticipate this to decrease as we process more Change Orders for T100 and Brookville.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC balance did not change this period. The a net balance amount is \$2.4M.

Contingency Status (Monthly)

	Base	line	Curr	ent
Туре	Amoun t	% of Total	Amount	% of Work
Design Allowance	\$4.2	2.2%	\$0.0	0.0%
Allocated Contingency	\$13.5	6.8%	\$8.6	8.0%
Unallocated Contingency	\$16.1	8.2%	\$2.4	2.2%
Total	\$33.8	17.2%	\$11.0	10.2%

Contingency by Type Histogram (\$ Millions) Contingency by Type Histogram (\$ Millions) \$40.0 \$33.9 \$35.0 \$30.0 \$16.1 \$25.0 \$20.0 \$15.0 \$11.1 \$11.0 \$13.5 \$10.0 \$5.0 \$8.9 \$8.9 \$8.6 \$4.2 \$0.0 BCE D-19 J-20 20 Desgin Allowance Allocated Contingency Unallocated Contingency Total Contingency

Table figures are shown in millions.

Contingency Drawdown (Quarterly)



Link Light Rail Hilltop Tacoma Link Extension



Project Schedule

The Master Schedule has been updated through the end of February 2020. Overall Physical % Complete is 52 %

LRV: The LRV procurement contractor is still forecasting that a Final Design Review (FDR) completion to be held in 4th QTR 2020. Forecast delivery of the first car arriving in Q1 2021 and last car in early Q3 2021. The contractor schedule is still projecting that all cars will be delivered in time to support T100 mainline system integration testing and pre-revenue service startup in Q3 2021.

T100: Construction Schedule MS#2 Substantial Completion of all work has slipped from December 2021 to January 2022. The February T100 submittal reflects impacts due design issues and differing site conditions that push the installation of track and could possibly delaying pre- revenue service.

ty Name	Start	Finish	20	020	-	110.000	20	21	-	-	20	022
			Q2	Q3	Q4	Q1	Q2	03	Q4	Q1	Q2	
Hilltop Tacoma Link Expansion - Feb 2020	02-Feb-15 A	19-Jun-22	1	-		-						Γ
Preliminary Engineering	02-Feb-15A	04-Nov-16 A	1									F
Project Milestones	28-Sep-17A	23-May-22	+			-				-	-	ł
MS-01 - Project Baseline		28-Sep-17 A										i
MS-02 - Construction Contract Award		27-Aug-18 A	1									Ł
MS-03 - Submit Design & Delivery Schedule for the Automatice Vehicle Locator		21-Nov-18 A	1									ľ
MS-02 - Substantial Completion of all work (Contractual Date May 29 2021)		01-Mar-20		1000		1110						Į.
BEC - LRV Deliver Car 1 to ST (Contractual Date Jun 4 2020)		28-Jan-21				٠		2				l
MS-01 - OMF & Yard Complete (Contractual Date Nov 21 2020)		02-Mar-21	1			٠						i
BEC - LRV Deliver Car 2 to ST (Contractual Date Aug 4 2020)		14-Apr-21		L			٠					İ.
BEC - LRV Deliver Car 3 to ST (Contractual Date Sep 4 2020)		27-Apr-21					٠					ł
BEC - LRV Deliver Car 4 to ST (Contractual Date Oct 4 2020)		09-Jun-21					٠					ļ
BEC - LRV Deliver Car 5 to ST (Contractual Date Nov 4 2020)		22-Jul-21	I I					•			1	i
MS-04 - Systems Handover OMF and Mainline Testing		13-Jan-22	1	1						•		Î
MS-05 Revenue Service Date		23-May-22*		L							٠	ļ
Final Design	04-Jan-16 A	31-May-18 A				1113						ł
ROW & Third Parties	01-Oct-15A	29-Dec-20										ł
Owner Furnished Materials / Equipment Procurement	11-Oct-16A	13-0ct-21	-			11 11 1						-
Construction	23-Jan-18 A	14-Jan-22				1			-			ł
Construction Contract Procurement	23-Jan-18 A	27-Jul-18A										ł
T100 Schedule	29-Jun-18 A	14-Jan-22										ľ
Testing/Startup/Commissioning	28-Jan-21	14-Sep-21				-		-				ļ
Safety & Security Certification	02-Feb-15A	04-Apr-22	1									ł
Pre-Revenue Testing	15-Sep-21	29-Oct-21							-			ł
Simulated Revenue Service	15-Sep-21	29-Oct-21	1								L	1
Revenue Service	30-Oct-21	19-Jun-22	1						-			Ĩ
Project Float - Baseline Project Float	30-Oct-21	19-Jun-22				5						ł
Revenue Service Begins (BL Date May 23 ,2022)		23-May-22*	1-								٠	i

Project Float

Hilltop Tacoma Link Extension was baselined with 232 days of project float. Forecast Float has been reduced from 322 to 277 in order to achieve Revenue Service on May 23, 2022.

RFC #148/ CO #37 was approved and awaiting signature for a 45 day time extension due to differing site conditions and design issues and is reflected in the current project float drawdown.





Critical Path Analysis

The analysis for February 2020 shows a critical path runs through the T100 contract with the completion of wet utilities in Heading 1, 2B and 3. Followed by installation of inbound/outbound track for each of the headings, completing OCS wire runs and Job Wide ITS Mainline systems testing before pre-revenue service runs.

Adivity Name	Start	Finish	TotalFloat	2	20			2	21		İ	2	122
				Q	œ	Q4	Q1	92	Q3	04	Q1	8	ß
Hilltop Tacoma Link Expansion - Feb 2020	20-Apr-20	23-May-22	-110.00	-									
Construction	20- A pr-20	19-Jan-22	-190.00	-	:	:		:	!	!	•		
T100 Sche dule	20-Apr-20	19-Jan-22	-190.00	-		-		-			+ −		
Heading 1: 7th & Commerce to Stadium Way & Division	04-Jan-21	05-May-21	-170.00			· ·		÷.					
Utilities	22-Apr-21	28-Apr-21	-170.00					T					
9th &Commerce Intersection Work	15-Apr-21	05-May-21	-170.00		1		1	T			1		
Outbound	04-Jan-21	11-Mar-21	-170.00			· ·	-						
Inbound	12-Mar-21	15-Apr-21	-170.00				•	T					
Heading 3: Division Stand MLK to MLK & 19th	17-Sep-20	31-Dec-20	-192.00		,	:	ŧ.						
Inbound	17-Sep-20	31-Dec-20	-192.00		٦		ŧ						
OC S Wire Runs	06-May-21	25-Oct-21	-190.00		1		1	-		-	1		
Job WidelT \$	26-Oct-21	19-Jan-22	-190.00							-	•		
Job Wide ITS Installation - Mainine	26-Oct-21	12-Nov-21	-190.00										
Job Wide ITS - Main line Systemwide Testing	15-Nov-21	19-Jan-22	-190.00								•		
OMF Fadity	20-Apr-20	16-Sep-20	-21 5.00			£ 1	.	i		<u></u>		<u>i</u>	i
Pre-Revenue Testing	19-Jan-22	05-Mar-22	-153.88										
Simula ted Revenue Service	19-Jan-22	05-Mar-22	-153.88										
Revenue Service	05-Mar-22	23-May-22	-153.88								-	-	
Project Float - Baseline Project Float	05-Mar-22	23-May-22	-153.88									<u> </u>	

Right-of-Way

The Hilltop Tacoma Link Operations and Maintenance Facility will expand to the east and five new vehicles will be purchased. The Right-of -Way effort for this project involved 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 resulted in owner and tenant residential and commercial relocations. The following table summarizes the Right-of-Way program status for this period. All project property acquisitions are complete.

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

- Checked in with Stadium businesses every day during the track installation in the Tacoma Ave and N. 1st St. intersection. The intersection opened on Feb 14.
- Visited Stadium businesses and apartment managers to discuss track installation on N. 1st St. Met with Stadium Thriftway and Columbia Bank to discuss the work and access, Feb 7 and Feb 28.
- Met with MultiCare on Feb 3 to discuss the stormwater work on MLK Jr. Way from Division Ave to S. 3rd St., including work that will block the entrance of the Jackson parking garage. Provided 2-week notification to MultiCare about sewer work on MLK Jr. Way that will block the Baker Center driveway. Provided additional signage.
- Informed Hilltop businesses and residents about the next steps in track installation on MLK Jr. Way from S. 19th St. to S. 15th St. and about utility work at MLK Jr. Way and S. 13th St. Notified Hilltop businesses/organizations about concrete pours in front of their driveways.
- Informed businesses and apartments on Commerce St. about potholing and utility work; Stadium Way residents and businesses that Stadium Way will open to two-way traffic between S. 4th St. and I-705; and stakeholders near Division Avenue about the Division and J St. intersection closure.
- Gave an update on the HTLE project at the Hilltop Business Association's monthly meeting (Feb 20), met with Downtown on the Go to plan a Ride the Link event (Feb 21), and attended the Hilltop Action Coalition's meeting to answer community questions (Feb 24).
- Coordinated with Stadium businesses and ST Communications on a flyer featuring the businesses with coupons and ads. In addition, we arranged for a sign spinner to help attract customers.
- Produced and distributed weekly construction alerts about traffic impacts.
- Attended the HTLE partnering session.
- Responded to questions/complaints about when two-way traffic will resume on Stadium Way, flooding at 8th St. & MLK Jr. Way, potential ground movement near TPSS 1, construction at 4th St. and Stadium Way, and the Links to Opportunity project. Coordinated with the contractor about scheduling work around the Valentine's week to help Johnson Candy.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

ST staff variance reflects shared design and engineering SME resources across multiple ST projects including South Corridor and Vehicles.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	23.6	20.5	(3.1)
Consultants	19.7	19.2	(0.5)
TOTAL	43.3	39.7	(3.6)
* An ETE is the equivalent of 200	0 hours VTD porformance ETE hour	a are divided by a menthly featur of 1	72.00

* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.



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Sound Transit Board Actions

Board Action	Description	Date
	None to report.	

Construction Safety

Data/ Measure	February 2020	Year to Date	Project to Date
Recordable Injury/Illness Cases	0	1	4
Days Away From Work Cases	0	0	0
Total Days Away From Work	0	0	0
First Aid Cases	1	1	9
Reported Near Mishaps	4	5	20
Average Number of Employees on Worksite	205	-	-
Total # of Hours (GC & Subs)	17,373	30,384	169,058
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date
Recordable Injury Rate	0.00	6.58	4.73
Lost Time Injury (LTI) Rate	0.00	0.00	0.00
Recordable National Average		3.00	
LTI National Average		1.20	
Recordable WA State Average		6.00	
LTI WA State Average		1.90	

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.



Contract T100 — Hilltop Tacoma Link Extension

Current Progress

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

- Heading 1: Start demolition and preparation for repairs to track slab on Stadium Way, form, pour & strip OCS foundation, start installation of TPSS #1 drainage system.
- Heading 2B: Form, pour & strip OCS foundation, installed underground electrical work for TPSS#2 feeders. Continue outbound and inbound track installation.
- Heading 3: Continuing storm drain and sanitary sewer work at Multicare Facility. Complete underground electrical duct crossing of MLK and Earnest S Brazil Street and start pouring the outbound track slab.
- OMF: Install electrical raceways in OMF yard, Install green wall cladding and rock wool insulation on OMF building. Continue plumbing and HVAC rough-in.

Schedule Summary

The T100 contractor schedule update for February 2020 forecasts MS#1 OMF & Yard Substantial completion of all work in Mar 2021. The contractor remains on schedule for track installation work and systems integration portion of the schedule to meet the MS #2 Substantial Completion of All Work forecast date of Jan 2022. This represents a delay of approximately seven months.

Activity Name		Finish	2020	2021			2022			1	
			Q2 Q3	Q4	Q1 Q4	2 03	Q4	Q1	92	03 Q4	í.
T100 Hilltop Tacoma Link Extension Schedule Feb Update	29-Jun-18 A	10-Feb-22						ľ			7
Tacoma Links Baseline Schedule	29-Jun-18 A	10-Feb-22	1 1					-			
Milestone s	29-Jun-18 A	10-Feb-22	╞╴┊╴	<u>.</u>	+ +	•		-			
Job Milestones	29-Jun-18 A	10-Feb-22	 					-			ł
Contractual Milestones	21-Nov-18 A	11-Jan-22		!							_
Contr. MILESTONE 3: Submit and Design of and Delivery Schedule for AVL (NTP+90 = 11/25/18)		21-Nov-18 A	II I	1	1						
Contr. MILESTONE 1: Substantial Completion of OMF & Yard (NTP + 817 = 11/28/20)		02-Mar-21*			+						
Contr. MILESTONE 2: Substantial Completion of AI Work (NTP + 1005 = 8/5/21)		11-Jan-22*						•			
Pre Construction	09-Aug-18 A	22-Aug-21				1					
Heading 1:7th & Commerce to Stadium Way & Division	15-Oct-18 A	19-Jul-21									
Heading 2: Stadium Way & Division to Division Stand MLK	23-Oct-18 A	02-Jun-21	1 1			•					1
Heading 3: Division St and MLK to MLK & 19th	15-Oct-18 A	20-Jul-21		<u>.</u>		÷.					
OC SWire Runs	18-Nov-20	14-Oct-21		-		÷ .					
Train Signal System	12-Oct-20	16-Apr-21		-	-						
JobWide ITS	23-Dec-20	11-Jan-22		•	÷	-		•			
OMF Facility	29-Aug-18 A	02-Mar-21	1 1		•						-
Change Orders	07-Jan -19 A	10-Jul-20	÷ • •								
Provisional Sum Time Impacts	01 -Feb - 19 A	31-Aug-20	 								
Other Time Impacts	25-Mar-19 A	22-Mar-21	+ +		-						
RFCs	29-Jan - 19 A	07-May-21	: : :		+ + +						
Provisional Sums	03-Dec-18 A	23-Aug-21	1 1								1
WeatherDays	04-Feb-19 A	- 27 - Jan - 20 A									

Schedule Performance Index

This period, the SPI-early increased slightly to .68 and the SPI-late slightly decreased to .96. The early index indicates that the contractor continues to perform behind the plan when compared to the baseline schedule. Based on the current trends there is a high likelihood of schedule impacts to the current T100 contract milestones.




Next Period's Activities

- Heading 1: Continue OCS pole foundations. Begin rebar work at TPSS No. 1 wall. Form and pour the platform foundation for Stadium Way /S 4th Station.
- Heading 2: Continue systems ductbank and outbound and inbound track slab installation in Stadium District on 1st St. Continue water, storm and sewer work at Division & J St.
- Heading 3: Continue traffic signal and illumination work on south MLK. Continue systems ductbank and outbound track slab installation on MLK between 15th and 14th. Continue storm and sewer work at Tacoma General.
- OMF: Continue installation of electrical ductbank and OCS foundations in OMF yard. Complete MEP roughins and begin drywall at interior walls. Install hollow metal interior doors and frames.

Closely Monitored Issues

- The third party utility relocations (Tacoma Public Utility, CenturyLink and PSE) appear to have minimal impact on the contract schedule. ST construction management continue to monitor for potential cost and schedule impacts.
- Notifications to the community of upcoming construction activities are ongoing. Business mitigation efforts are underway to support businesses impacted by construction activities. Community Outreach staff are managing this effort with the support of the contractor, City of Tacoma and ST field staff.
- The cutover at 9th and Commerce requires a series of planning workshops which began in January 2020. Participants include ST (including Operations), City of Tacoma and the contractor.

Cost Summary

Present Financial Status	An	nount
T100 Contractor— Walsh Construction	Com	ipany
Original Contract Value	\$	108,295,000
Change Order Value	\$	4,486,776
Current Contract Value	\$	112,781,776
Total Actual Cost (Incurred to Date)	\$	65,145,692
Percent Complete		54.5%
Authorized Contingency	\$	9,714,750
Contingency Drawdown	\$	4,486,776
Contingency Index		1.2



Exterior Cladding at the OMF



Contract RTA/RP 0014-16 — Tacoma Link Light Rail Vehicle (LRV) Procurement

Current Progress

The Brookville Monthly Schedule Submittal is updated as of February 29, 2020.

- Planning to have 5 Final Design Releases (FDR) instead of one Final Design Release in order to reduce the risk of delaying the shop floor.
- Continuing on phase 2 system integration design and phase 3 system design and models.
- Holding internal design reviews for propulsion, communications, HVAC System and Electrical arrangement.
- Reworking and resubmittal of CDRLS listed under: Sections 2–16 and Section 19.

Schedule Summary

The February 2020 schedule update indicates Brookville that plans to have five Final Design Reviews (FDR) with the 1st FDR in May 2020 and the completing the remaining FDRs before the release of work packets for building the end base of the car in the Fab Shop and Cut Shop. All First Article Inspections to be complete by October 2020.

Current Forecast indicates the shipping and delivery of the 1st car arriving to OMF in Tacoma will begin in Jan 2021. Approximately six weeks later the 2nd car will arrive in March 2021. Car 3 arriving in April 2021, car 4 arriving in June 2021 and the final car 5 in July 2021.

Contractor schedule is projecting all cars will still be delivered in time to support mainline system integration testing and prerevenue service startup in Q3 2021.

Activity Name	Start	Finish	2	120			1	21			- 20	22	
			Q2	œ	Q4	a	92	Q3	Q4	ğ	œ	Q3	Q4
Sound Transit BEC Monthly Submittal Feb 2020	04-Dec-17 A	27 -May-22									-		
Tacoma NTP	04-Dec-17 A												
Kick Off/Schedule Creation	17-Apr-19A	17-Apr-19 A											
Engineering - Tacoma	04-Dec-17 A	19-Jan-22	÷-							7			
CDRL Submittals - Tacoma	01 -Jan -18 A	18-Mar-21	<u>+</u>			-							
Ordering of Subsystems and Components	26-Mar-20	14-Jul-20	÷	7									
MANUFACTURING / TESTING	18-Oct-18 A	19-Jan-22	<u>+</u>							•			
Component/System Type Tests	17-Dec-18 A	08-Nov-20	÷	!									
First Article Inspections	18-Oct-18 A	18-Mar-21	<u> </u>			-							
Car1	06-May-20	19-Apr-21	-	!									
Car2	02-Jul-20	03-May-21		-			-						
Car3	28-Aug-20	14-Jun-21		•			,						
Car4	26-Oct-20	27-Jul-21			-			•					
Car5	23-Dec-20	08-Sep-21			٦								
Portland	05-Feb-21	19-Jan-22								7			
SOUND TRANSIT PAYMENT MILESTONES	02-Jul-18 A	19-Jan-22	1							7			
PORTLAND PAYMENT MILESTONES	02-Mar-20	27 -May-22	<u> </u>								-		
Brookville Contract Milestones	04-Dec-17 A	27 -May-22	<u>+</u>								-		

Link Light Rail Tacoma Dome Link Extension

Project Summary

Scope

Limits	Federal Way Transit Center to South Fed- eral Way, Fife, East Tacoma, and Tacoma Dome
Alignment	The Tacoma Dome Link Extension ex- pands light rail 9.7 miles from the Federal Way Transit Center to Tacoma. The repre- sentative 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



SoundTransit

Map of Tacoma Dome Link Extension.

Key Project Activities

- Advanced the footprints for the OMF South and presented to Interagency Group (IAG) and provided information to impacted properties.
- Participated in site visits at the Midway Landfill and coordinated with Seattle Public Utilities (SPU) on an agreement.
- Collaborated on a sustainability charrette for TDLE.
- Held over the shoulder design review meetings with the cities of Federal Way 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	\$6.8	\$6.5	\$26.8	\$0.0
Preliminary Engineering	\$87.1	\$47.4	\$17.4	\$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	\$1.5	\$0.5	\$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	\$0.4	\$0.0	\$6.0	\$0.0
Total	\$125.7	\$56.1	\$24.4	\$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	\$0.4	\$0.0	\$5.0	\$0.0
80 Professional Services	\$110.9	\$55.7	\$24.4	\$110.9	\$0.0
90 Unallocated Contingency	\$9.8	\$0.0	\$0.0	\$9.8	\$0.0
Total (10 - 90)	\$125.7	\$56.1	\$24.4	\$125.7	\$0.0



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 4th QTR 2019 risk review workshop was held in December-2019. The following are the top project wide risks:

- Preferred alignment cost is greater than the ST3 budgeted project cost may cause the project to delay.
- OMF South cost is greater than the ST3 budgeted project cost may cause the project to delay.
- Other earlier-programmed ST projects are experiencing baseline cost escalation, resulting in insufficient funding available for TDLE and OMF S.
- Contaminated soil and/or groundwater are discovered during TDLE and OMFS construction, resulting in increased costs.
- ST funding authorization reduced by voters or legislation may result in insufficient local funds.
- Complication to cross the Puyallup River due to cultural, geo-technical, structural, or ROW.
- OMFS can't be built in time for ST3 vehicle schedule.

TDLE Project Schedule

Below is the HDR consultant detailed schedule as of February 29, 2020. The schedule indicates the Draft EIS publication completion in 1st QTR 2021 with ST Board Confirms/Revises Preferred Alternative in 2nd QTR 2021. Final EIS publication shows completion in 2nd QTR 2022. FTA issuance of the Record of Decision expected in 3rd QTR 2022. Revenue Service is targeted for December 31, 2030.

Activity Name	Start	Finish	2020)	2021	2022	2023	2024	2025	2020	202	27 20	28	2029	2030	2031
			QQ	QC			aqqq	aaaa	aqaa	QQQC	QQQ	aaaa	QQ	QQQ	0000	
Tacoma Dome Link Extension - Feb 2020	12-Dec-17A	31-Dec-30	11	1		111	111		11				i	111	111	1
Key Milestones	25-Jul-19 A	31-Dec-30	÷													†
TDLE - ST Board identifies DEIS Alternatives		25-Jul-19 A														
TDLE Phasegate #2 Meeting (TBD)		10-Nov-20		•												
Publish Draft EIS		26-Feb-21		٠												
Board Action on Preferred Alternative		24-Jun-21*			•									111		
TDLE - ST Board Selects Project to be built		28-Jul-22				٠										
TDLE - FTA Issues Record of Decision (ROD)		30-Sep-22				•										
TDLE - Revenue Service (December 31, 2030)		31-Dec-30*														†
TDLE and OMF South Alternative Analysis - (Phase I)	12-Dec-17A	05-Jan-18 A														
Conceptual Engineering - (Phase II)	05-Aug-19A	24-Jun-21			7	TTT										
Preliminary Engineering - (Phase III)	24-Jun-21	30-Jun-22			-	•••										
ROW	10-Aug-23	20-Oct-26					-				7					
Final Design	03-Oct-22	09-Jan-26				•				7						
Tacoma Dome Link Extension DBB	27-Sep-26	31-Dec-30											++			†
Construction Procurement	27-Sep-26	27-Sep-26		1	†-†-†-	1111				t t t t	1					
Construction	21-Oct-26	25-Nov-29											+	+++		
Construction	21-Oct-26	25-Nov-29										+ + + +	÷			
Post Construction	26-Nov-29	31-Dec-30												•		†
System Integration Testing	26-Nov-29	25-Mar-30												1		
Project Float	26-Mar-30	31-Dec-30	11	11	+-+-+-	1111	1111							++++	-	Y
Revenue Service	31-Dec-30	31-Dec-30														†



OMF South Project Schedule

Below is the summary schedule as of February 29, 2020. The schedule indicates OMF South is in the Conceptual Engineering phase now and Final SEPA EIS with NEPA DCE will be published in 4th QTR 2021. ST Board Selects Project to be Built in late 4th QTR 2021. The milestone, Substantial Completion of the OMF South and Yard, is targeted for December 2026 to receive the ST3 Light Rail Vehicle cars and perform burn-in testing to support TDLE Revenue Service in December 31, 2030.

Activity Name	Start	Finish	2	120			20	21			- 202	2		- 2	023			- 20	24			2025			- 2	026			2027	
			1 02	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3 Q	4 Q	1 Q2	2 Q3	Q4	Q1	Q2	Q3 (Q4	Q1 Q	20	3 Q4	I Q1	Q2	Q3	Q4 (Q1 0	2 03	Q4
OMF South - NEPA/ SEPA DCE Feb 2020	02-Apr-19A	13-Jul-27		1	1										1							1			!				7	T
Key Milestones	17-Dec-20	26-Jan-27			•					_		-	+	+	+	-			-	+	-	+	+	+-	+		-	·		
OMF S - Board Selects Preferred Alternative		17-Dec-20	11		•		11					1			1				1							1			1	1
OMF S - Final SEPA Final EIS with NEPADCE Issued		08-Oct-21	11																											
OMF S - ST Board Selects Project to be Built		28-Oct-21		1					٠					i.	1	İ.					į.									
TDLE - FTA Issues Record of Decision (ROD)		21-Sep-22*	11	1	1	[[]					٠	- T- '	1	1	Γ			1		- T	7	1	1	1	T		T	T	T
OMF South - MS#1 Substantial Completion of OMF South and Ya		26-Jan-27*													1				1							1	•			
Alternative Analysis - (Phase I)	02-Apr-19A	03-Jul-19A																												
Conceptual Engineering - (Phase II)	03-Jul-19A	28-Dec-20			+	ŧ.																								
Project Management	23-Jan-20	17-Dec-20			÷-,																									
Conceptual Engineering	03-Jul-19 A	28-Dec-20				1									1	1	11		· · · · ·					-1	1	1			1	1
Draft EIS	21-Aug-19 A	22-Jun-20	<u>H</u>																											
Preliminary Engineering - (Phase III)	31-Dec-19	29-Nov-21		+	+				-																					
ROW	18-Dec-20	22-Nov-22			•	-	\vdash			-		+	1																	
OMF South DB	28-Oct-21	13-Jul-27							-			+	+	+	1	i –			t	-		+	1	+-	t	1		1	7	
ROW (Phase IV)	28-Oct-21	28-Jun-24	1	1	1	·····	1											-	'				1	-1	1	†			-	1
Design Build Contract	23-Jun-23	20-Aug-26													÷					-		+		-	-					
System Integration Testing	21-Aug-26	26-Jan-27																									-	1		
Post Construction	27-Jan-27	13-Jul-27		1			1					1		1	1				1							1		÷	÷.	1
Project Float	27-Jan-27	13-Jul-27	11 -																								,	+	-	
OMF South - Project Float (Schedule Contingency)	27-Jan-27	13-Jul-27	††	1	, 	†	11				1				1	†		1	·†					-1	1	†i			i	1
Revenue Service	13-Jul-27	13-Jul-27	11	1	1							i		1	1				1		1		1		1	1				1
OMF South - In Service Date		13-Jul-27																											٠	

Critical Path Analysis

The critical path for the overall TDLE program continues to run through OMF South portion of the project. OMF South must complete conceptual engineering and environmental to produce the Draft EIS. The critical path then continues through the project life cycle of conceptual, preliminary design, final design, permitting, Right-of-Way acquisition, and construction to meet a target substantial completion of December 2026.

Project team reviewing for the best project procurement method to be used in order to meet the substantial completion target 2026.

Activity Name	Start	Finish	2	020			2021			2022			- 20	23			2024				2025			202	6		- 20	127
			1 02	Q3	Q4	Q1 Q	2 Q3	Q4	Q1	Q2 (23 Q4	Q1	Q2	Q3	Q4	Q1 (22 0	3 Q	4 Q	1 Q	2 Q3	Q4	Q1	Q2	Q3 Q	4 Q	1 Q2	Q3 (
OMF South - NEPA/ SEPA DCE Feb 2020	02-Apr-19 A	13-Jul-27	1				1									-		1		1		:						1
Key Milestones	17-Dec-20	26-Jan-27				-	+			-	-		-	-		-	-	+	+	+	+	-	-	-	-	+		
OMF S - Board Selects Preferred Alternative		17-Dec-20	18 -		٠																							
OMF S - Final SEPA Final EIS with NEPADCE Issued		08-Oct-21						•																				
OMF S - ST Board Selects Project to be Built		28-Oct-21						٠																				
TDLE - FTA Issues Record of Decision (ROD)		21-Sep-22*	11		[]		· · · · ·				٠					T	1	Т		- -	1	1			- T		1	
OMF South - MS #1 Substantial Completion of OMF South and Yard		26-Jan-27*																								•		
Alternative Analysis - (Phase I)	02-Apr-19 A	03-Jul-19 A																										
Conceptual Engineering - (Phase II)	03-Jul-19A	28-Dec-20			-																							
Project Management	23-Jan-20	17-Dec-20	H-		-																							
Conceptual Engineering	03-Jul-19 A	28-Dec-20					1									1		-†				1	Ť				1	
Draft EIS	21-Aug-19A	22-Jun-20	þ.																									
Preliminary Engineering - (Phase III)	31-Dec-19	29-Nov-21		-	:	-	, and the second second second second second second second second second second second second second second se	F																				
ROW	18-Dec-20	22-Nov-22			۲	-	-			-																		
OMF South DB	28-Oct-21	13-Jul-27						1		-	-					-	-	÷	+	÷	1			-	-	+	+	7
ROW (Phase IV)	28-Oct-21	28-Jun-24	1				1	L			:			_			-7	T		Ť	1	1		1	1		1	
Design Build Contract	23-Jun-23	20-Aug-26											۲			<u> </u>	÷	÷	+	÷	÷	÷		÷	-			
System Integration Testing	21-Aug-26	26-Jan-27																							-	+		
Post Construction	27-Jan-27	13-Jul-27																								-	+	
Project Float	27-Jan-27	13-Jul-27	11 -																							-	-	
OMF South - Project Float (Schedule Contingency)	27-Jan-27	13-Jul-27	11									1						1				1						
Revenue Service	13-Jul-27	13-Jul-27																										7
OMF South - In Service Date		13-Jul-27																										•



Community Outreach

- Participated in the following meetings/events:
 - Asia Pacific Cultural Center Lunar New Year event (2/8)
 - Monthly New Tacoma Neighborhood Council meeting (2/12)
 - Monthly Dome District meeting (2/13)
 - East Tacoma Collaborative meeting (2/22)
- Provided briefings the following:
 - Spanish-speaking families at the Circulo de Salud community meeting (2/10)
 - Neptune Seafoods (2/19)]
 - Vietnamese-speaking seniors at the Korean Women's Association lunch event (2/20)
 - A property owner in East Tacoma (2/26)
- Hosted an information table at the Multi-Service Center food bank (2/19) and volunteered at the Seeds of Change meal at the Mountain View Community Center (2/27)
- TDLE/OMFS Hosted an information table at the Federal Way State of the City event (2/27)
- OMFS Participated in the FWLE/509 Midway project public hearing (2/11)

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Project has planned 81.3 average FTEs per month for the year 2020. Although there is a variance on ST staff and consultants planned vs. actual staffing, Total YTD actual FTE is close to the plan. For the month of February, efforts spent by consultants continued to be higher than the average to produce Phase 2 deliverables of TDLE and OMFS for ST staff to review later in 2020.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	32.6	18.9	(13.7)
Consultants	48.7	62.1	13.4
TOTAL	81.3	81.0	(0.3)
* An FTE is the equivalent of 208	0 hours. YTD performance FTE hour	s are divided by a monthly factor of 1	73.33.



Sound Transit Board Actions

Board Action	Description	Date
	None this period	

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

- OMF East building, framing and mechanical/electrical/plumbing/fire sprinkler (MEPF) overhead and in wall rough-ins continue at Levels 1 and 2, including on the high bay area of the shop.
- Maintenance of Way (MOW) mechanical/electrical/plumbing/fire sprinkler (MEPF) overhead and wall rough-ins was ongoing, began high performance paint and prime ceiling.
- Overhead Centenary System (OCS) Poles, prefabrication and field installation of OCS assemblies, installation of signal cables in yard, cable racking in Traction Power Substation basement.

Closely Monitored Issues

- Monitoring commissioning and testing in support of project transition to Operations.
- Late design changes to the Type 2 LRVs (Siemens) that may impact the OMF East LRV interfaces.
- Late design changes by PSE could impact timely availability of power to the site.



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 \$7.M. The total project cost incurred increased from \$290.9 to \$298.0M. The primary cost drivers during this period on the OMF East project comes from the design build (construction) phase at \$6.4M or roughly 91% of the total monthly expenditures. The next cost driver this period pertains to Construction Services expenditures at about \$512K.

Project Phase	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$17.6	\$17.6	\$6.9	\$6.9	\$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	\$17.5	\$10.7	\$19.3	\$0.0
3rd Party Agreements	\$3.1	\$3.1	\$0.3	\$0.1	\$3.1	\$0.0
Construction	\$264.8	\$264.8	\$225.6	\$169.1	\$264.8	\$0.0
ROW	\$134.5	\$134.5	\$102.7	\$102.5	\$134.5	\$0.0
Total	\$449.2	\$449.2	\$362.1	\$298.0	\$449.2	\$0.0

Cost Summary by Phase

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Allocation	Commit- ment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
10 Guideway & Track	\$2.6	\$4.4	\$4.1	\$2.7	\$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	\$125.8	\$98.2	\$146.1	-\$10.0
40 Sitework & Special Conditions	\$43.6	\$48.5	\$40.1	\$26.5	\$43.1	\$5.4
50 Systems	\$43.0	\$41.6	\$39.0	\$26.0	\$39.0	\$2.6
Construction Subtotal (10 - 50)	\$229.3	\$230.6	\$209.1	\$153.5	\$232.4	-\$1.8
60 ROW, Land, Improvements	\$134.5	\$134.5	\$102.7	\$102.5	\$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	\$50.2	\$42.0	\$68.5	\$1.8
90 Unallocated Contingency	\$13.8	\$13.8	\$0.0	\$0.0	\$13.8	\$0.0
Total (10 - 90)	\$449.2	\$449.2	\$362.1	\$298.0	\$449.2	\$0.0

Link Light Rail Link Operations & Maintenance Facility: East



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 at approximated \$298M with Construction Phase at 56.7% and Right-of-Way (ROW) phase at 34.3%. Construction activities is now the main cost driver. The forecasted cash flow was revised this period for the next nine months to reflect some current trends. While the Design Builder's (DB) design completion slipped and impacted specifically on Systems where some anticipated procurements did not occur as planned, construction has certainly picked up on yard tracks and structural steel installations. The project expenditure continues to trend a projection of \$352.1 by December of 2020 which is below the lower bounds of the late planned expenditures as shown in the graph below. The probability of Project to finish with-in the project budget of \$449.2 M is high; however, there are still risk and uncertainties that may impacts the cost at completion.



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 reached Risk Mitigation Milestone (RMS) 3, the completion of building enclosure and performed a Quantitative Risk Assessment (QRA). The QRA) assessed the current risk profile and predicts with a high probability the project to complete on schedule and within budget. The current top actively managed risk areas are as follows:

- **Design:** Late changes made to scope by 3rd Parties impact the project at this stage.
- Scope: Scope interfaces with the two types of LRV vehicles and Operations' requirements creates additional work impacts the project's schedule and budget.
- Construction: Covid-19 virus pandemic is a fluid situation and the impacts are difficult to assess at this stage.
- **Start Up:** As the project continues progress, the need coordination for testing and acceptance with ST Operations is critical. The virus pandemic complicates the preparation and the execution of this phase of the project scope.



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 reflecting the inclusion of the Design Allowance in the Design Builder contract amount. In this period, change orders were related to various construction scope. The current contingency balance remains materially unchanged at approximately \$66.8M (previous period at \$66.9M).

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 remains at \$53.0M (the previous period at \$53.1M).

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

	Base	eline	Cu	rrent
Contingency Type	Amount	% of Total	Amount	% of Work Remaining
Design Allowance	\$ 25.3	5.6%	\$-	0.0%
Allocated Contingency	\$ 54.1	12.0%	\$ 53.0	35.0%
Unallocated Contingency	\$ 13.8	3.1%	\$ 13.8	9.1%
Total	\$ 93.2	20.7%	\$ 66.8	44.2%



Table figures are shown in millions.

Link Light Rail Link Operations & Maintenance Facility: East



Contingency Drawdown

At the end of the 4th QTR 2019, OMF East Project's total contingency drawdown plan is trending positively. Total contingencies balance is at approximate \$66.9M (previously quarter at \$67.1M) 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 2020. Risk Mitigation Milestone #3 was revised and met in 4th QTR 2019.





OMF East birds eye view looking north taking shape with yard scope and steel structure framing



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 the summer of 2020.

vity Name	Start	Finish	2020			
			Q1	Q2	Q3	Q4
So und Transit	19-Jun-17 A	23-Dec-20		-		
Sound Transit 2	19-Jun-17 A	23-Dec-20	-	-	-	
East Corridor	19-Jun-17 A	23-Dec-20				
Operating Facilities - East	19-Jun-17 A	23-Dec-20	-	-		
LINK Operations & Maintenance Facility: East	19-Jun-17 A	23-Dec-20	-		-	
Link OMFE - Construction	19-Jun-17 A	08-Oct-20		1		7
M200 - Link OM FE - Deeign Build Contract	19-Jun-17 A	08-Oct-20		1	!	
M200 Construction	19-Jun-17 A	08-Oct-20			!	
Preconstruction & Administration	19-Jun-17 A	08-Oct-20	-	-	-	7
Construction	19-Jun-17 A	09-Sep-20	-	1		
Mobilization & Early Sitework	19-Jun-17 A	29-JU-20				
Maintenance & Shop Building	23-JU-18 A	28-Jul-20		-	.	
Maintenance of Way Building	22-Jan-19 A	09-Jul-20			÷.	
Ancillary Structures	08-JU-19 A	25-Jun-20		-		
Trackwork	13-Jul-18 A	03-Jun-20				
Site Surfacing & Finishes	01-Nov-18 A	28-Jun-20	-	1	ŧ.	-
Project Closeout	01-Apr-18 A	09-Sep-20		-		
Link OMFE - Project Competion	07-Oct-20	23-Dec-20			-	-
Link OMFE -ProjectCloseout	07-Oct-20	23-Dec-20				
Project Float	07-Oct-20	23-Dec-20		1	1	
Project Completion (Baseline 23-Dec-20)		23-Dec-20*		1	1	1000

Critical Path Analysis

The critical path this month runs through the mechanical room in the Maintenance & Shop Building, and then through building commissioning, integration testing, and project closeout.

ctivit y Name	Start	Finish	2020				
		1122	Q1.	02	Q3	Q4	
Link OMFE - Construction	01-Nov-19 A	06-Oct-20		1			
M200 Construction	01-Nov-19 A	06-Oct-20					
Preconstruction & Administration	08-Aug-20	08-Oct-20			1		
Miestones	08-Aug-20	06-Oct-20					
Contractual Milestones	08-Oct-20	08-Oct-20					
Millistone 1 - Substantial Completion	08-Oct-20	06-Oct-20		1	·····		
Milestone 1 - Substantial - Scheduled		08-Oct-20		1		•	
Interim Construction Milestones	08-Aug-20	08-Oct-20					
Construction	01-Nov-19 A	07-Aug-20					
Maintenance & Shop Building	03-Jan-20 A	04-Jun-20		÷			
Building Systems & Startups	03-Jan-20 A	04-Jun-20		-			
Mechanicial Sjetem Low/ottage Equipment & Systems	24-Feb-20 A 03-Jan-20 A	04-Jun-20 28-May-20					
Project Closeout	01-Nov-19 A	07-Aug-20		1			
Commissioning	01-Nov-19 A	07-Aug-20		i			
Link OMFE - Project Completion	07-Oct-20	23-Dec-20		1	1		
Link OMFE - Project Closeout	07-Oct-20	23-Dec-20			-		
Project Float	07-Oct-20	23-Dec-20		1	1		
Project Completion (Baseline 23-Dieo-20)		23-Dec-20*		1			



Community Outreach

- Ongoing engagement with the public on potential construction impacts to the neighborhood.
- Outreach on three day closure of Eastrail to complete trail resurfacing and construction of a temporary trail bridge.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The variance on ST staffing is due to the cumulative fractions of FTE anticipated across many departments and cannot be attributed to any one factor. The variance on the consultants is due to stage of project marching closer to substantial completion and should start ramping down beginning in the summer. Effectively this variance will start to average down as we progress thorough this year.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	13.2	7.2	(6.0)
Consultants	12.3	18.7	6.4
TOTAL	25.5	25.9	0.4

An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.



Securing steel plates to track walls in the OMF East yard.



Sound Transit Board Actions

Board Action	Description	Date
	None to report this period.	

Construction Safety

Data/ Measure	February 2020	Year to Date	Project to Date		
Recordable Injury/Illness Cases	1	2	8		
Days Away From Work Cases	0	0	2		
Total Days Away From Work	0	0	31		
First Aid Cases	1	3	11		
Reported Near Mishaps	1	2	18		
Average Number of Employees on Worksite	160	-	-		
Total # of Hours (GC & Subs)	33,000	63,000	385,635		
OSHA Incident Rates	Monthly Average	Year to Date	Project to Date		
Recordable Injury Rate	6.06	6.35	4.15		
LTI Rate	0.00	0.00	1.04		
Recordable National Average	3.00				
LTI National Average	1.20				
Recordable WA State Average	6.00				
LTI WA State Average		1.90			

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.



Contract M200 - OMF East Design Build

Current Progress

Design: Hensel Phelps (HP) design administration for supporting construction activities.

Construction: A majority of the OCS poles were erected with the mainline, south maintenance and runaround remaining. The last portion of track was completed at the north maintenance fan, substantially completing track work. At the OMF Building, the insulated metal panels and ribbon windows were substantially completed. On the interior, in-wall rough-in for both levels in areas A through C were completed and signed off with insulation and drywall following with an expected finish in early March. At the MOW building, exterior panels enclosing the admin areas were completed as well as the shop area horizontal roofing. On the interior of the building wall framing was completed as well as top down drywall. MEPF crews continued to install overhead and in-wall rough-in.

Next Period's Activities

- Continue work at OMF East Building.
- Continue work at MOW Building.
- Finish track work throughout site.
- Systems work to begin.

Closely Monitored Issues

• PSE power delivery date to energization for all three facilities in mid-April. Infrastructure construction to support PSE power delivery is now scheduled to begin shortly.

Cost Summary

Present Financial Status	Amount
M200 Contractor – Hensel Phelps	
Original Contract Value	\$218,912,000
Change Order Value	\$5,117,484
Current Contract Value	\$224,029,484
Total Actual Cost (Incurred to Date)	\$167,822,046
Percent Complete	77.19%
Authorized Contingency	\$21,891,200
Contingency Drawdown	\$5,117,484
*Contingency Index	4.1

*Excludes Betterments



OMFE—MOW Building



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Link Light Rail Light Rail Vehicle Fleet Expansion



Project Summary

Scope	Design, manufacturing, assembly, inspec- tion, 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



Siemen's LRV on test track.

Key Project Activities

- Collaborating to wrap up the remaining issues on the 4 conditionally approved design reports (17 of 21 design reports has been previously approved).
- Continued qualification testing in Seattle to ensure Conditional Acceptance (CA) of 1st LRV by the end of April. LRV shipments has been halted until the 1st LRV is CA.
- 31 cars in final assembly and 9 carshells in process at Siemens' facilities in Sacramento, CA.
- Continued monitoring Siemens recovery progress.

Closely Monitored Issues

- High schedule risk for commissioning and burn-in of Siemens' LRVs until lift jacks issue is resolved.
- OMFC yard storage capacity in 2020 may limit Siemens LRV delivery schedule; production progress is being monitored closely. Risk lower, shifting to 2021. LRVs delivery and transportation study between OMFC & OMFE based on updated schedule is in progress.
- Moderately high number of documents on CIL (Certifiable Items List) pending approval: Design (25%), Qualification (94%).
- The fluidity of the COVID-19 virus pandemic impact is closely monitored.



High Speed Circuit Breaker (HSCB) Inspection at Seattle



Fire Department re-railing training at Seattle, WA



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.

The project expenditure incurred to date is approximately \$184.7M to which a majority of the cost is attributed to the vehicles phase of \$175.9M. The current period expenditure is approximately \$9.2M, where the majority cost is associated to LRVs of \$8.9M. The other incurred cost was mostly attributed from engineering and inspection of \$99.3k and staff costs of \$112.9k.

Cost Summary by Phase

Project Phase	Baseline Budget	Authorized Project Alloca- tion	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$6.4	\$6.4	\$2.8	\$2.8	\$6.4	\$0.0
Construction Services	\$18.0	\$18.0	\$15.1	\$6.0	\$18.0	\$0.0
Vehicles	\$716.3	\$716.3	\$650.6	\$176.0	\$716.3	\$0.0
Total	\$740.7	\$740.7	\$668.6	\$184.7	\$740.7	\$0.0

Cost Summary by SCC

SCC Element	Baseline Budget	Authorized Project Alloca-	Commitment to Date	Incurred to Date	Estimated Final Cost	Authorized Allocation
Construction Subtotal (10 - 50)	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
60 ROW, Land, Existing Improve- ments	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
70 Vehicles	\$702.8	\$704.8	\$665.8	\$181.9	\$704.8	\$0.0
80 Professional Services	\$6.1	\$6.1	\$2.8	\$2.8	\$6.1	\$0.0
90 Contingency	\$31.7	\$29.7	\$0.0	\$0.0	\$29.7	\$0.0
Capital Total (10 - 90)	\$740.7	\$740.7	\$668.6	\$184.7	\$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 to continuously monitoring project status and associated risks.

The project's qualitative risk register reflects 4th Quarter of 2019, the meeting was held on January 7th and 14th, 2020. The current top risk are listed below:

- Siemens slower than expected Safety Certification Process could possibly delays to revenue service dates on all programs.
- Special tools and test equipment must be identified, procured, delivered and commissioned prior to LRV conditional acceptance.
- Familiarization Training with local emergency responders has not yet started and no time table for completion.
- Siemens limited staff and equipment supporting testing and commissioning slowing down qualification testing and remainder of certification process.
- Automatic Train Protection interface between ST1 vehicle ATP system and new ST2 vehicle ATP causing potential interface or functional problems.

Contingency Management

Contingency Status (Monthly)

The project's budget was Baselined 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 13.3 % 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 AC for November remains unchanged at \$37.2M.

Unallocated Contingency (UAC) is used to address general project-wide cost risks and uncertainties. The UAC for November remains unchanged at \$31.7M.

Baseline Current Contingency % of Total Remaining % of Work Status Amount Remaining Budget Amount Design \$ 0.0% \$ 0.0% Allowance Allocated Con-\$46.3 6.4% \$ 37.2 7.5% tingency Unallocated \$31.7 4.3% \$31.7 6.4% Contingency Total \$78.0 10.7% \$ 68.9 14.0%

Contingency by Type





Project Schedule

The schedule below is a summary schedule identifying the factory testing, delivery and conditional acceptance testing of Light Rail Vehicles for each project as reported from the Siemen's monthly schedule update. As of February 2020, all vehicles are expected to be available for Pre-Revenue Service testing at each of the projects identified below.

ctivity Name	Start	Finish						
			2020	100	2021	2022	2023	2024
ST LRV Fleet Expansion - Siemens Summary	31-Aug-18A	30-May-24			d al al a			
Northgate Link - LRV Summary	31-Aug-18A.	25-Nov-20						
LRV Factory Test - Northgate Summary	31-Aug-18A	11-Feb-20A	1	- 11				
LRV Delivery to OMF - Northgate Summary	29-Aug-19 A	02-Sep-20		1.				
LRV Conditional Acceptance - Northgate Summary	08-May-20	25-Nov-20						
East Link - LRV Summary	17-Feb-20 A	28-Mar-22					T	
LRV Factory Test - East Link Summary	17-Feb-20A	03-Mar-21			0			
LRV Delivery to OMF - East Link Summary	10-Sep-20	02-Sep-21				1		
LRV Conditional Acceptance - East Link Summary	27-Apr-21	28-Mar-22						
Lynnwood Link - LRV Summary	24-Feb-21	28-Nov-22						
LRV Factory Test - Lynnwood Summary	24-Feb-21	04-Jan-22					+	******
LRV Delivery to OMF - Lynnwood Summary	10-Sep-21	07-Jun-22						
LRV Conditional Acceptance - Lynnwood Summary	28-Mar-22	28-Nov-22						
Extra - LRV Summary	20-Dec-21	28-Nov-22						
LRV Factory Test - Extra Summary	20-Dec-21	20-Jan-22	1		- C	·	1 I	
LRV Delivery to OMF - Extra Summary	15-Jun-22	23-Jun-22	1			1	1	
LRV Conditional Acceptance - Extra Summary	28-Nov-22	28-Nov-22				,		
Federal Way - LRV Summary	27-1/ay-22	05-Dec-23						
LRV Factory Test - Federal Way Summary	27-May-22	18-May-23	1					
LRV Delivery to OMF - Federal Wa Summary	10-Aug-22	10-Jul-23	1					
LRV Conditional Acceptance - Federal Way Summary	12-Jan-23	05-Dec-23						
Downtown Redmond - LRV Summary	19-May-23	30-May-24						
LRV Factory Test - Downtown Redmond Summary	19-May-23	29-Nov-23	1					
LRV Delivery to OMF - Downtown Redmond Summary	09-Aug-23	15-Mar-24						
LRV Conditional Acceptance - Downtown Redmond Summary	11-Jan-24	30-May-24						

LRV Delivery and Testing Progress as of February 29, 2020								
LRV status	LRV status Received in Seattle Testing in progress (Seattle) Conditionally Accepted Entered Revenue Service							
Planned	23	23	10	10				
Actual	18	17	0	0				

Critical Path Analysis

The critical The critical path is completing the on-site Vehicle Performance Qualification Test of Car 204 and Acceptance Testing and Burn-In of all LRVS that have been delivered to Sound Transit site as of December 2019.

Delivery and Conditional Acceptance Testing of all 40 light rail vehicles required for Northgate Link is closely monitored to support the Pre-Revenue simulation period. The planned deliveries, commissioning and testing of light rail vehicles are anticipated to be complete by September 2024. As well as on time for the start of Pre-Revenue Service for each of the new extension lines: East Link, Lynnwood Link, Downtown Redmond Link and Federal Way Link and Federal Way Link.



LRV Manufacturing and Qualification Testing Critical Path Schedule

avity Name	Start	Frish			2020	1	
	and the second		01		Q2	Q3	04
Manufacturing	23-Aug-19 A	15-Dec-20					
LRV #004	23-Aug-19 A	14-Jan-20			1		
Qualification Testing LRV#004	23-Aug-19 A	14-Jan-20					
LRV #011	29-Aug-19 A	16-Mar-20		-	1		
Acceptance Testing (includes MP and GBV) LRV#011	29-Aug-19 A	21-Feb-20					
Bum-In LRV#011	24-Feb-20	13-Mar-20					
Conditional Acceptance (Milestone A-E) LRV#011	16-Mar-20*			•	1		
LRV #012	12-Sep-19 A	18-Mar-20			1		
Acceptance Testing (includes MP and GBV) LRV#012	12-Sep-19A	21-Feb-20			1		
Bum-In LRV#012	24-Feb-20	13-Mar-20	· · · · · · · · · · · · · · · · · ·				
Conditional Acceptance (Milestone A-E) LRV#012	16-Mar-20*			•	1		
LRV #013	24-Sep-19 A	16-Mar-20	1				
Acceptance Testing (includes MP and GBV) LRV#013	24-Sep-19 A	21-Feb-20					
Bum-In LRV#013	24-Feb-20	13-Mar-20					
Conditional Acceptance (Milestone A-E) LRV#013	16-Mar-20*			•			
LRV #014	26-Sep-19 A	15-Apr-20					
Acceptance Testing (includes MP and GBV) LRV#014	26-Sep-19 A	23-Mar-20			1		
Bum-In LRV#014	24-Mar-20	14-Apr-20					
Conditional Acceptance (Milestone A-E) LRV#014	15-Apr-20*			•			
LRV #015	30-Sep-19.A	15-Apr-20	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.			1	
Acceptance Testing (includes MP and GBV) LRV#015	30-Sep-19 A	23-Mar-20					
Bum-In LRV#015	24-Mar-20	14-Apr-20					
Conditional Acceptance (Milestone A-E) LRV#015	15-Apr-20"			•			
LRV #016	17-Od-19 A	15-May-20	10.0			1	
Acceptance Testing (includes MP and GBV) LRV#016	17-Oct-19 A	23-Apr-20					
Bum-In LRV#016	24-Apr-20	14-May-20			_		
Conditional Acceptance (Milestone A-E) LRV#016	15-May-20*				•		
LRV #048	23-Jul-20	15-Dec-20			1		
Shipment and Arrival at O&M Facility LRV#048	23-Jul-20	29-Jul-20			+	-	
Delivery LRV#048	30-Jul-20	in the second				•	
Acceptance Testing (includes MP and GBV) LRV#048	31-Jul-20	19-Nov-20					
Burn-In LRV#048 Conditional Acceptance (Milestone A-E) LRV#048	20-Nov-20 15-Dec-20*	14-Dec-20					

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The Planned Monthly Average FTE is an average that reflects the work effort across the entire year. The variance between the planned ST Staff and the YTD Actual ST Staff is 4.1. This variance is largely due to the cumulative fractions of estimated FTEs spread across various departments and cannot be attributed to any one main variance driver. This number is expected to trend toward the planned as the project progress through the year.

Resource Type	Planned FTE Monthly Average						
ST Staff	9.5	5.4	(4.1)				
Consultants	7.8	7.4	(0.4)				
TOTAL	17.3	12.8	(4.5)				
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.							

Sound Transit Board Actions

Board Action	Description	Date
	None this period	



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Progress Report Sounder Program



Sounder trains travel between Lakewood and Seattle with regular runs weekday morning and afternoons. Sounder also serves select major weekend events such as Mariners, Sounders, and Seahawk games.



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

February 2020



Sounder Commuter Rail Program Overview



Sounder Commuter Rail Routes



Auburn Station Access Improvements: Project includes alternatives identification, screening, environmental documentation, design and construction of station access improvements at or around Auburn Station. The purpose of the project is to improve access to the existing Auburn Sounder station for Sounder riders, bicyclists, bus riders, and drivers.

Edmonds and Mukilteo Stations Parking & Access Improvements: The Edmonds and Mukilteo Stations Parking and Access Improvements Project will provide parking and access improvements to the Edmonds and Mukilteo Sounder Stations. A variety of access improvements will be considered for each station including bicycle and pedestrian access, pick up/drop off areas, transit integration, and parking.

Kent Station Access Improvements: Project includes alternatives identification, screening, environmental documentation, design and construction of station access improvements at or around Kent Station. The purpose of the project is to improve access to the existing Kent Sounder station for Sounder riders, bicyclists, bus riders, and drivers.

Puyallup Station Access Improvements: Project includes environmental documentation, design and construction of station access improvements at or around Puyallup Station. The purpose of this project is to accommodate and encourage future demand for Sounder ridership in an economically efficient and environmentally sustainable manner.

Sounder South Capacity Expansion: This project establishes a program of capital elements that will improve South Sounder access, capacity, and services in response to increase in demand. Program elements could include platform extensions, track and signal upgrades and other related infrastructure to facilitate additional capacity, and access improvements for pedestrians, bicyclists, buses, and private vehicles, prioritized per Sound Transit's System Access Policy. The elements included in this representative project will be refined during future phases of project development and are subject to change.

Sounder Maintenance Base: Sound Transit will construct a new railroad maintenance facility to service Sounder commuter trains at its expanded Century Yard facility in the City of Lakewood. The building will contain maintenance bays, materials storage areas, offices, and facilities for employees.

Sumner Station Access Improvements: Project includes environmental documentation, design, and construction of station access improvements at or around Sumner Sounder Station. The purpose of this project is to accommodate and encourage future demand for Sounder ridership in an economically efficient and environmentally sustainable manner.



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Program Budget

The Authorized Project Allocation reflects the budget for each project through the approved project phase, meaning that for projects approved for Final Design activities only, the project budget will be amended at some point to add budget for construction activities.

SOUNDER	Authorized Allocation	Commitment To Date	Incurred to Date	Forecast to Complete	Estimated Final Cost	Authorized Allocation vs EFC
AUBURN STATION ACCESS IMPRVMNT	\$11.4	\$4.3	\$3.5	\$7.2	\$11.4	\$0.0
EDMONDS & MUKILTEO STN P&A IMP	\$2.5	\$0.8	\$0.8	\$1.7	\$2.5	\$0.0
KENT STATION ACCESS IMPRVMNTS	\$15.6	\$4.6	\$3.7	\$11.0	\$15.6	\$0.0
PUYALLUP STATION IMPROVEMENTS	\$79.1	\$13.7	\$10.3	\$65.4	\$79.1	\$0.0
SOUNDER MAINTENANCE BASE	\$12.9	\$9.4	\$7.9	\$3.6	\$12.9	\$0.0
SOUNDER SOUTH CAPACITY EXPN	\$3.6	\$2.4	\$2.0	\$1.2	\$3.6	\$0.0
SUMNER STATION IMPROVEMENTS	\$17.8	\$16.3	\$9.5	\$1.4	\$17.8	\$0.0
Total SOUNDER	\$142.9	\$51.5	\$37.7	\$91.5	\$142.9	\$0.0

Figures are shown in millions

Program Schedule

Schedule for select major Sounder projects are summarized below.

Schedule Snapshot

roject Name	Start	Finish			202	0		20	21		20	022		2	023		2	024		2	025
			Q	Q	Q	QC	Q	Q	Q	Q	2 0	Q	Q	QC	Q	Q	Q	Q	Q	Q (QQ
Sound Transit	01-Apr-13 A	31-Dec-24													\square						
♦ Sound Transit 2	01-Apr-13 A	31-Dec-24								T											
📣 South Corridor	01-Apr-13 A	31-Dec-24								╈					\square						+
📣 Sounder Commuter Rail - South	01-Apr-13 A	31-Dec-24								╈	\top	T			\square				Π	1	\top
Operations/Facilities - South	01-Apr-13 A	31-Dec-24																			T
S300004 - Sounder Maintenance Base - DB	01-Apr-13 A	31-Dec-24				-	-			-	-	-		-			-	-			T
Station Access - South	01-May-15.	31-Dec-24								╈					\square				Π		\uparrow
S300017 - Puyallup Station Access Improvements - DB	01-May-15.	24-Feb-22				+	-		=	÷	ī	\top							Π	+	T
S300018 - Sumner Station Access Improvements - DB	01-May-15.	25-Aug-23			_	-	-			+	+	-		-					Π		T
S300036 - Kent Station Access Improvements - DB	24-Feb-16 A	14-Nov-24			_	+	-		=	÷	+			-		-		+			T
S300041 - Auburn Station Access Improvement - DB	24-Feb-16 A	31-Dec-24				-	+		-	+	+			-				-			T

Construction Safety

Construction and System Safety provide systematic and comprehensive oversight, resources, and guidance to eliminate recognized hazards, promote a safety culture and achieve an integrated system of compliance and continuous improvement of safety on both construction projects and transit system elements. Agency-led active construction contracts under the Sounder program are as follows:

• None to report.



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Project Summary

Scope	The purpose of the project is to improve access to the existing Auburn Sounder Sta- tion for Sounder riders, bicyclist, bus rid- ers, and drivers.
	Project includes alternatives identification, screening, environmental documentation, design, and construction of station access improvements at or around Auburn Station.
Phase	Conceptual Engineering and Environmental Review
Budget	\$11.4 Million
Schedule	Open for Service: 2024



Improving access to Sounder Auburn Station

Key Project Activities

- Sound Transit issued SEPA/DNS on January 29 with a two week public review and comment period concluded on February 12, 2020.
- Sound Transit and City of Auburn held meetings to reach concurrence on environmental mitigation option for the traffic impacts associated with the design of the new parking garage.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

This period expenditures increased by \$67K. The incurred cost increased from \$3.5M to \$3.5M. The majority of this period's costs is attributed to staff costs, preparing environmental documentation, conceptual engineering work and ROW activities.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.6	\$1.1	\$1.1	\$1.6	\$0.0
Preliminary Engineering	\$3.4	\$2.8	\$2.4	\$3.4	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
3rd Party Agreements	\$0.6	\$0.0	\$0.0	\$0.6	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$3.8	\$0.4	\$0.0	\$3.8	\$0.0
Total	\$11.4	\$4.3	\$3.5	\$11.4	\$0.0





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 project team will develop the Risk and Contingency Management Plan (RCMP) during Phase III—Preliminary Engineering phase of the project. The project team will conduct a risk management workshop to identify all the potential risks during design and construction by Q1 2020.

The project team reviewed and updated the risk register in Q4 2019, and will continue to do so on a quarterly basis. The following are the top project wide risks:

- Project estimate higher than financial plan
- Project schedule delayed to 2024 due to lengthier environmental process
- Ability to reach concurrence with the City of Auburn on key elements to advance project

Project Schedule

The project is nearing completion of Phase II—Conceptual Engineering and Environmental activities. The project forecasts completion of the environmental assessment in Q1 2020.

Sound Transit and City of Auburn reached concurrence on traffic mitigation. Sound Transit sent a Letter of Concurrence (LOC) to City of Auburn in late January 2020 for review and the LOC was signed by both parties in February 2020.

Project team issued SEPA Checklist and SEPA Determination of Non-Significance (DNS) with conditions for public comment January 29, 2020 and the FTA approved the NEPA Documented Categorical Exclusion (DCE) in February 2020. With the delay in reaching concurrence the Sound Transit Board action for "Select the Project to be Built" is now planned for April 2020 with the Sound Transit Phase Gate 3: Enter Design and Construction planned thereafter for May 2020

Construction NTP is forecast for Q4 2021 and Open for Service is forecast for Q4 2024.

Activity ID Activity	/ Name	Start	Finish	2019	2020	2021	2022	2023	2024
				Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
Sound Transit		24-Feb-16A	31-Dec-24						
Sound Transit 2		24-Feb-16A	31-Dec-24						
South Corridor		24-Feb-16A	31-Dec-24						
S300040 - Auburn Statio	n Access Improvements - DB N	24-Feb-16A	31-Dec-24						
Alternative Analysis (Pr	nase I)	24-Feb-16A	15-Nov-17 A						
Conceptual Engineerin	g (Phase II)	22-Mar-18A	06-May-20						
Preliminary Engineerin	g (Phase III)	13-Dec-18 A	19-Nov-20						
Permits and Agreement	ts	30-Sep-19 A	03-Apr-22						
Right of Way		09-May-19 A	08-Jan-22	· · · · · ·			•		
Design-Build Project M	anagement (DBPM)	02-Jan-20 A	04-Jun-24	,					
Design-Build Contract	(DB)	14-Oct-20	04-Jun-24		-				
Design-Build Contract - Pr	ocurement	14-Oct-20	06-Oct-21						
Design/Build Contract - De	sign and Construction	06-Oct-21	04-Jun-24			· · ·			
Post Construction		05-Jun-24	31-Dec-24						
Transition to Operations		05-Jun-24	04-Jul-24						₩
Project Float		05-Jul-24	31-Dec-24						
Open For Service		31-Dec-24	31-Dec-24						V



Community Outreach

• Continued planning for spring open house to share updates on project design and what to expect during construction. Open house information will be provided online.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The SEPA/DNS was issued on January 29, 2020 for a two week public comment review. During that two week period, staff was not working on the SEPA/DNS. At the conclusion of the two week comment period, no comments were received to analyze and the documents were submitted to the FTA for approval. Therefore, the project team level of effort was lower for the month in February 2020 as the team paused work to allow the SEPA/DNS comment and FTA process to conclude.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance					
ST Staff	5.6	2.3	(3.3)					
Consultants	2.3	1.2	(1.1)					
TOTAL	7.9	3.5	(4.4)					
* An ETE is the equivalent of 2080 hours. VTD performance ETE hours are divided by a monthly factor of 173.33								

An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.

Sound Transit Board Actions

Board Action	Description	Date
M2020-15	Authorizes the chief executive to execute a contract modification with HNTB Corpora- tion to exercise contract options for design-build project management services for the Kent and Auburn Station Parking and Access Improvement projects in the amount of \$3,633,637, with a 10 percent contingency of \$363,363, totaling \$3,997,000, for a new total authorized contract amount not to exceed \$8,896,552.	02/23/2020



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Sounder Commuter Rail Edmonds and Mukilteo Station Parking & Access Improvements



Project Summary

Scope	The purpose of the project is to provide parking and access improvements to the Edmonds and Mukilteo Sounder Stations, in order to increase ridership on Sounder North.
	A variety of access improvements will be considered for each station including bicy- cle and pedestrian improvements, transit connections, vehicle access, parking and pickup/drop-off areas.
Phase	Planning—Phase 1: Project Definition and Screening
Budget	\$2.5 Million (Phase 1)
Schedule	Open for Service: 2024



Sounder Mukilteo Station Access Improvements

Key Project Activities

- Completed evaluation and solicited comments on seven new improvements considered for Mukilteo.
- Presented results of evaluation for all potential improvements to Mukilteo City Council.
- Developed scope, estimated costs, and completed negotiations for Phase 2 contract.
- Prepared for March Capital Program Control Board (CCB) and April System Expansion Committee (SEC) and Sound Board of Director meetings.



Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

This period expenditures increased due to progress by the consultant by \$22K on alternative development studies and increased on ST staff costs by \$10K but not enough to be seen in the rounded figures.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.0	\$0.3	\$0.3	\$1.0	\$0.0
Preliminary Engineering	\$1.3	\$0.5	\$0.5	\$1.3	\$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	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Total	\$2.5	\$0.8	\$0.8	\$2.5	\$0.0

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 following are the top project wide risks:

- Challenge in allocating the \$40M project budget between two station areas. This is a decision the ST Board of Directors will make, likely during Phase 2 of the project.
- Cities/partners' desires for more parking, or more expensive parking, than appears affordable within the \$40M project budget.
Sounder Commuter Rail Edmonds and Mukilteo Station Parking & Access Improvements



Project Schedule

Sound Transit has almost completed Alternative Analysis Phase 1. Currently working on identifying improvements for further analysis. This should be done by end of Q1 2020. Some work has been initiated to prepare SEPA Check Lists - Draft. Anticipated Phase Gate II start is end of Q2 2020. NTP should be by end of Q1 2023 and Services to be Open to Public by end Q4 2024.

Activity ID	Activity	Name	Start	Finish		2	020		2021		20	22		2023		2	024
					Q	1 02	2 Q3 Q	4 Q1	വുവം	Q4 (21 Q2	Q3 Q4	Q1 (Q2 Q3	Q4	Q1 Q2	2 Q3
S 00 (087 - Edmonds & Mukilte	eo Stations Parking	08-Jan-18 A	31-Deo-24													
Mi	lestones																
Pre	elminary Engineering		08-Jan-18 A	08-Oct-21					,	'							
	Alternative Analysis - (Phase I)		08-Jan-18 A	28-Mar-20													
0	Conceptual Engineering - (Pha	se II)	03-Deo-19 A	05-Oct-20													
F	Preliminary Engineering - (Pha	se II)	08-Jul-20	06-Oct-21									1				
Fin	nal Design		08-Oct-21	03-Jul-23													
RC)W/Permitting		25-Mar-20	20-Sep-22													
Co	onstruction		27-Mar-23	08-Nov-24									•				
Po	st Construction		07-Nov-24	31-Deo-24													
5	System Integration Testing		07-Nov-24	04-Deo-24									1				
F	Project Float		05-Deo-24	31-Deo-24													
0	Open for Service		31-Deo-24	31-Deo-24													

Community Outreach

• Drafted summary of feedback on new Mukilteo potential improvements, summary of project status, and newsletter article.



Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Planned FTE is an annual projection. The variance is explained by the fact that Phase 2 will be advanced in Q2 2020.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance						
ST Staff	5.7	1.2	(4.5)						
Consultants	4.0	0.4	(3.6)						
TOTAL	9.7	1.6	(8.1)						

* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.

Board Action	Description	Date
	None this period.	

Sounder Commuter Rail Kent Station Improvements

Project Summary

Scope	The purpose of the project is to improve ac- cess to the existing Kent Sounder station for Sounder riders, bicyclists, bus riders, and drivers.	
	Project includes alternatives identification, screening environmental documentation, de- sign, and construction of station access im- provements at or around Kent Station.	
Phase	Conceptual Engineering and Environmental Review complete	
Budget	\$15.6 Million	
Schedule	Open for Service: 2024	In



SoundTransit

Improving access to Sounder Kent Station

Key Project Activities

- Sound Transit and City of Kent executed Letter of Concurrence on project scope elements to be built.
- Sound Transit and King County Metro to execute a Letter of Concurrence on bus layover scope elements to be built on site.
- Sound Transit's Board of Directors selected the project to be built and authorized ROW acquisition in February 2020.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

This period expenditure increased by \$85K. The incurred cost increased from \$3.6M to \$3.7M. The majority of this period's costs is attributed to staff costs, ROW activities, preparing environmental documentation, and conceptual engineering work.

Cost Summary by Filase					
Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.7	\$1.1	\$1.2	\$1.7	\$0.0
Preliminary Engineering	\$3.4	\$3.1	\$2.5	\$3.4	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$2.0	\$0.0	\$0.0	\$2.0	\$0.0
3rd Party Agreements	\$0.6	\$0.0	\$0.0	\$0.6	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$7.9	\$0.4	\$0.0	\$7.9	\$0.0
Total	\$15.6	\$4.6	\$3.7	\$15.6	\$0.0

Cost Summary by Phase



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 Kent Station Access Improvements Project Team will develop the Risk and Contingency Management Plan (RCMP) during Phase III—Preliminary Engineering phase of the project. The project team will conduct a risk assessment workshop to identify all the potential risks during design and construction by Q1 2020.
- The Kent Station Access Improvements Project Team reviewed and updated the risk register in Q4 2019. The team will review and revise the register on a quarterly basis.

Project Schedule

The project continued working towards completing the Phase II—Conceptual Engineering and Environmental activities throughout Q4 2019 and completed the environmental evaluation in Q4 2019. Letter Of Concurrence (LOC) between Sound Transit and City of Kent signed in January 2020. Sound Transit sent Development Agreement (DA) to City of Kent in late January 2020 for City of Kent review.

In February 2020 the project team went to the ST Board and received approval for the "Select the Project to be Built". Sound Transit's "Phase Gate 3: Enter Design and Construction" is scheduled for early March 2020.

Upcoming activities are PHA Workshop in April 2020, followed by Initial Draft Preliminary Hazards Analysis (PHA) Report, Threat Vulnerability Assessment (TVA) in May 2020 and project specific Safety/Security Management Plan (SSMP). The project team is also planning a Visual Design Aesthetics workshop in mid April 2020 and open house for the garage in early Q3 2020. Design-Build Contractor NTP is forecast for Q3 2021. Open For Service is forecast for Q4 2024.

tivity ID Activity	/ Name	Start	Finish		2019	2020	2021	2022	2023	2024
				Q4 (Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q Q2 Q3 Q4	Q Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q
Sound Transit		24-Feb-16 A	14-Nov-24							
Sound Transit 2		24-Feb-16 A	14-Nov-24							-
South Corridor		24-Feb-16A	14-Nov-24							
S300035 - Kent Station A	Access Improvements - DB M	24-Feb-16 A	14-Nov-24				-	-		-
Alternative Analysis (Ph	nase I)	24-Feb-16 A	15-Nov-17 A							
Conceptual Engineerin	g (Phase II)	22-Mar-18 A	16-Jul-20							
Preliminary Engineerin	g (Phase III)	13-Dec-18A	24-Sep-20	-		-				
Permits and Agreemen	ts	01-Apr-19A	27-Feb-22		-			T		
Right of Way		01-Jan-20 A	30-Jun-22			-				1.2.1
Design/Build Project M	anagement	02-Jan-20 A	18-Apr-24							-
Design/Build Contract		05-Oct-20	18-Apr-24			-				-
DB Contract Procurement		05-Oct-20	31-Aug-21							
Design/Build - Design and	Construction	31-Aug-21	18-Apr-24				-			-
Post Construction		18-Apr-24	14-Nov-24							1.00
Transition to Operations		18-Apr-24	18-May-24							
Project Float		18-May-24	14-Nov-24							-
Open For Service		14-Nov-24	14-Nov-24							1.00



Community Outreach

- Continued to inform affected property owners and businesses about February 27th Board Action providing authority to acquire property interests.
- Began planning for visual design outreach.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The environmental assessment process was completed in October 2019. The project team plans to seek the ST Board approved to "Select the Project to be Built" was rescheduled from January 2020 to February 2020. The project team and consultants level of effort was lower for the month in January 2020.

Resource Type	Planned FTE Monthly Average								
ST Staff	5.5	3.1	(2.4)						
Consultants	3.8	1.2	(2.6)						
TOTAL	(5.0)								
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.									

Board Action	Description	Date
M2020-15	Authorizes the chief executive to execute a contract modification with HNTB Corpora- tion to exercise contract options for design-build project management services for the Kent and Auburn Station Parking and Access Improvement projects in the amount of \$3,633,637, with a 10 percent contingency of \$363,363, totaling \$3,997,000, for a new total authorized contract amount not to exceed \$8,896,552.	02/23/2020
R2020-03	Authorizes the chief executive to acquire or lease certain real property interests, includ- ing acquisition by condemnation of the extent authorized by law, and the reimburse eligible relocation and reestablishment expenses incurred by affected owners and ten- ants as necessary for the Kent Station Parking and Access Improvement project.	02/27/2020
R2020-02	Selects the non-motorized, transit and parking improvements to be constructed to im- prove access to the Kent Sounder Station as part of the Kent Station Parking and Ac- cess Improvements project.	02/27/2020



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Sounder Commuter Rail Puyallup Station Access Improvements



Project Summary

Scope	The purpose of the project is to improve access to the existing Puyallup Sounder station for Sounder riders, bicyclists, bus riders, and drivers.
	The proposed project includes an up to 5 level parking garage and an expansion of a surface lot; together both shall provide a minimum of 600 total stalls. The project also includes a pedestrian bridge over 5th St. NW.
Phase	Final Design and Construction
Budget	\$79.1 Million
Schedule	Open for Service: Q1 2022



Improving access to Sounder Puyallup Station

Key Project Activities

- Design Build contract awarded to Hensel Phelps in December 2019.
- Design Build contract Notice To Proceed (NTP) projected for March 2020.
- Update of project schedule is underway due to ongoing negotiations with the City impacting previously forecast Design Build Notice To Proceed (NTP) date. Open For Service date may be delayed beyond February 2022.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

This period expenditures increased by \$973K. The incurred cost increased from \$9.3M to \$10.3M. This period's costs is attributed to property acquisition and relocation, staff costs, engineering design work and construction management services.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$4.6	\$1.9	\$1.9	\$4.6	\$0.0
Preliminary Engineering	\$2.7	\$2.6	\$2.5	\$2.9	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$5.1	\$4.4	\$0.4	\$5.2	\$0.0
3rd Party Agreements	\$0.3	\$0.0	\$0.0	\$2.2	\$0.0
Construction	\$60.2	\$0.1	\$0.0	\$58.4	\$0.0
ROW	\$6.2	\$4.7	\$5.5	\$5.6	\$0.0
Total	\$79.1	\$13.7	\$10.3	\$79.1	\$0.0



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 following are the top project wide risks:

- Environmental Contamination (Soil &/or Water). *Risk mitigation*: A work plan has been included in the procurement documents to mitigate and address remediation of contaminated materials. This will be the first line of work the contractor will perform when they are approved to proceed with Construction.
- Real Estate / Right-of-Way having parcels in-hand before contract award. *Risk mitigation:* Real Property representative and Project Manager regularly monitor progress and discuss status of all ROW acquisitions.
- Development Agreement process As a result of the still undefined development agreement language and process, the permit could be delayed. *Risk mitigation*: The DA document will be finalized before issuance of project NTP.

Project Schedule

Design Build contract issued Intent to Award letter to Hensel Phelps in December 2019, Notice To Proceed (NTP) to Hensel Phelps may occur in March 2020, but is at risk pending concurrence/approval of Development Agreement between Sound Transit and City of Puyallup. Open For Service date may be delayed beyond February 2022, now forecasting March 2020 or later, due to negotiations with the City on Development Agreement, impacting previously forecasted Design Build Notice To Proceed (NTP) date.

Schedule updates are underway and will be reviewed further after concurrence/approval of Development Agreement and review of post-NTP Design Builder's schedule. Right of way acquisitions are in progress and are forecast to be completed in advance of the planned construction start need by dates.

Activity ID	Activity Name	Start	Finish			20	19		2020				202	21	
				Q4	Q1	Q2	Q3 (Q4	Q1	Q2 C	23 Q4	1 Q1	Q2	Q3 Q	4 Q1
Sound Transi	it	01-May-15 A	12-Mar-22												
Sound Transit 2	2	01-May-15 A	12-Mar-22												
South Corrido	r	01-May-15 A	12-Mar-22												
S300017 - Puya	allup Station Access and Expansion - DB M	01-May-15 A	12-Mar-22												
Alternative An	alysis (Phase I)	28-Apr-16 A	28-Apr-16 A												
Preliminary E	ngineering (Phase III)	01-May-15 A	20-Mar-19 A	-		/									
Right of Way		26-May-16 A	29-Dec-21												-
Permits and A	greements	15-Jul-16 A	30-Dec-20									•			
Design/Build	Project Management	17-Sep-18 A	02-Mar-22												
Design/Build	Contract	01-Oct-18 A	02-Mar-22												
DB CCB RFQ		01-Oct-18 A	26-Dec-18 A		,										
DB Contract Pr	ocurement	17-Dec-18 A	16-Mar-20	•					-						
Design/Build - I	Design and Construction	16-Mar-20	02-Mar-22												
Post Construc	tion	19-Jan-22	12-Mar-22												
Transition to Op	perations	19-Jan-22	02-Mar-22	l											
Project Float		03-Mar-22	12-Mar-22					1							
Open For Servi	ce	12-Mar-22	12-Mar-22												▼



Community Outreach

• Continued planning for construction outreach activities.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Due to negotiations with the City and Property Owners, the previously forecasted Design Build Notice To Proceed (NTP) is delayed; resulting in a variance.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance					
ST Staff	5.0	2.7	(2.3)					
Consultants	4.7	1.7	(3.0)					
TOTAL	(5.3)							
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.								

Board Action	Description		Date
		None this period.	



Sounder Commuter Rail Sounder Maintenance Base

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Sounder Commuter Rail Sounder Maintenance Base



88th St SW

94th St SW

96th St SW

Steilacoom Blvd SW

Project Summary

Scope	Sound Transit will design and construct a Sounder Commuter Rail maintenance facil- ity and train yard elements that will in- clude: maintenance shops, repair positions,	Sounder Maintenance Base Sounder service Seattle-Tacoma-Lakewood	MS
	storage areas, office and employee welfare facilities. Located in Lakewood, WA on Sound Transit's railroad right of way between Steilacoom Boulevard and 100th Street	95th St SW 95th St SW	crsw
	SW, east of Lakeview Boulevard.	45th Ave SW	T2024
Phase	Design and Construction		toth Ave SW
Budget	\$12.9 Million	100th St SW	101st St SV
Schedule	Open for Service: Q4 2024	Sounder Maintenance Base	Project Alignment



Sounder

Key Project Activities

- The Design-Build Project Management (DBPM) consultant is developing the design build project requirements, building program, and other procurement documents.
- The project team and the preliminary engineering consultant are performing environmental analysis to determine the impact of the new project changes. These project changes include the a new "run-through" facility layout, co-location of the Maintenance of Way building on the site, accommodation of ST3 storage needs, and the purchase of a adjacent parcel.
- Continued development of cost agreements with Tacoma Power to relocate their utilities off Sound Transit's railroad right . of way.
- Project has successfully proceeded through Phase Gate 4 to establish project baseline budget and schedule.



Brake pads are replaced on a Sounder car.



Air filters are changed at the Sounder maintenance base in Seattle



Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

This period expenditures increased approximately \$450K. The majority of this period's costs are attributed to staff costs in the Admin phase; for conceptual engineering tasks, including geotechnical investigations in the Preliminary Engineering Phase; Phase 1 design-build project management services; and Right-of-Way activities, including Temporary construction easement appraisals.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$2.5	\$2.0	\$2.0	\$2.3	\$0.0
Preliminary Engineering	\$3.5	\$3.0	\$2.7	\$3.6	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$2.0	\$1.9	\$1.0	\$2.0	\$0.0
3rd Party Agreements	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$2.0	\$0.1	\$0.0	\$2.0	\$0.0
ROW	\$3.0	\$2.4	\$2.2	\$3.0	\$0.0
Total	\$12.9	\$9.4	\$7.9	\$12.9	\$0.0

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 project team conducts quarterly risk management workshops to identify, update, and monitor potential risks during design and construction. The project team completed a quantitative risk analysis to evaluate confidence in the current budget and schedule. The analysis will establish contingency levels and schedule float for the project baseline, which is to occur in March 2020. The analysis has identified the following as the top project risks and proposed mitigations:

- Advanced utility relocation delays *Risk Mitigation*: Execute agreements with the utility companies in advance of the design-build team mobilizing. Monitor progress on a regular basis.
- Potential differing site conditions *Risk Mitigation*: Complete additional geotechnical investigations.
- Implementing new form of contracting: Design Build Guaranteed Maximum Price Contract. *Risk Mitigation*: Work closely with Design Build Project Management and Sound Transit team to modify contract documents. Seek Sound Transit sponsorship to accomplish timely review and approval of changes.
- ROW acquisition delay *Risk Mitigation*: Monitor Sound Transit Real Estate negotiations and obtain possession and use of property being acquired.



Project Schedule

Sounder Maintenance Base is anticipated to be to open for service in Q4 2024. The revised conceptual engineering (10%) design submittal and cost estimate were completed previously. In late Q1 2019 a value engineering effort on the current 10% design was initiated, in late Q3 2019 a value engineering option was approved to proceed forward, which is for a "run-through" design. Draft Design-Build Project Requirements for Design-Build Procurement are being developed and will be incorporated into the planned Q2 2020 Issue Design-Build Request For Qualifications (RFQ) and finalized for the Request For Proposal (RFP). The project team anticipates issuing Design/Build Notice to Proceed in Q1 2021.

ivity ID	Activity Name	Start	Finish	2019	2020	2021	2022	2023	2024
				Q Q2 Q3 Q4	Q1 Q Q3 Q	14 Q1 Q Q3 Q4	Q1 Q Q3 Q4	Q1 Q Q3 Q4	Q1 Q Q3 Q
Sound Transit		01-Apr-13A	31-Dec-24						
Sound Transit 2		01-Apr-13A	31-Dec-24						
South Corridor		01-Apr-13A	31-Dec-24						
S300004 - Soun	der Maintenance Base - Design/Build MS (Mas	01-Apr-13A	31-Dec-24						
Conceptual En	gineering	29-Jul-13 A	21-May-18 A						
Environmental	Assessment	01-Apr-13A	13-Mar-20		-				
Environmental As	ssessment (2014-2015)	01-Apr-13A	30-Jan-15 A						
Environmental As	ssessment (2017-2018)	30-Apr-17 A	04-May-18A						
Environmental As	ssessment (2019-2020)	02-Dec-19A	13-Mar-20		•				
Preliminary Eng	gineering	01-Jun-14 A	23-Apr-20						
Permits and Ag	reements	02-Jan-19 A	26-May-20						
Right of Way		08-Jul-16 A	20-Dec-21				4		
Design Build P	roject Management Services +	01-Aug-18A	31-Dec-24						
DBPM - Procurer	nent	01-Aug-18 A	24-Jun-19 A	—					
DBPM - Construc	ction Services/Support	17-Jun-19 A	31-Dec-24						
Third Party Utili	ity Relocation and Misc Construction	30-Aug-19A	29-Mar-24						-
SMB - Design/E	Build Procurement, Design and Construction	02-Jan-20 A	29-Mar-24		Ť				
SMB - Design/Bu	ild Procurement Admin	02-Jan-20 A	29-Apr-20	· ·					
SMB - Design/Bu	ild Procurement	30-Apr-20	07-Jan-21			-			
SMB - Design/Bu	ild Design and Construction	08-Jan-21	29-Mar-24						-
Rail Activation		26-Apr-23	26-Apr-24					-	-
SMB - Post Cor	nstruction	01-Apr-24	31-Dec-24						-
SMB - Transition	to Operations	01-Apr-24	29-Apr-24						
SMB - Project Flo	pat	30-Apr-24	31-Dec-24						
SMB - Project Co	mpletion	31-Dec-24	31-Dec-24						
Sounder Ops M	laintainer Agreement	21-Jul-20	28-Apr-24						_
•	intainer Procurement	21-Jul-20	20-Jul-22						
Sounder Ops Mai	intainer - Maintenance	27-Nov-22	28-Apr-24				-		-
Amtrak Mainter	nance Agreement	31-Dec-21	30-Dec-24				Ý		

Community Outreach

• Project team has started outreach to property owners that are impacted by early utility relocations.



Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

The variance is due to limited availability of Sound Transit subject matter experts. This limited availability is being supplemented by the Design Build Project Management Consultant, therefore explaining the variance in the consultant projections.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	8.1	4.8	(3.3)
Consultants	2.3	5.2	2.9
TOTAL	10.4	10.0	(0.4)
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.			

Board Action	Description	Date
	None to report.	

Sounder Commuter Rail Sounder South Capacity Expansion



Seattle King Stree

Project Summary

Scope	This project will establish a program of capital elements that will be used to en- hance South Sounder access, capacity, and services in response to increased demand. Program elements could include platform extensions, track and signal upgrades and other related infrastructure to facilitate ad- ditional capacity, and access elements such as improvements for pedestrians, bicyclists, buses, and private vehicles, prioritized per Sound Transit's System Access Policy. Once the Sounder Strategic Development and Implementation Plan is complete then the capital projects included in this repre- sentative program will be refined.	P Existing parking P Added parking S Station improvements by 2023 P DuPont extension (opens 2036) Sound Transit district Tukwila C Tukwila
Phase	Planning	Lakewood
Budget	\$3.6 Million	DuPont 2008 Tanut
Schedule	Open for Service: 2036	Sounder South Capacity map alignment

Sounder South

Key Project Activities

- Sound Transit reviewing public comments this included comments received posted on the online open house survey. Project Team developing the Public Outreach Involvement Summary Report.
- Project Team reviewing and will preparing response to jurisdictions' comment letters on the draft Sounder South Strategic Development and Implementation Plan (SDIP).
- Project Team editing the draft SDIP based on the external engagement comments received.



Possible platform and track improvements



Sounder South Tukwila Station showing access elements



Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

Since January 2019, the project costs incurred to date is \$145K. The majority of those costs is for creation of the strategic development and implementation plan and staff costs.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$1.2	\$0.8	\$0.8	\$1.2	\$0.0
Preliminary Engineering	\$2.0	\$1.6	\$1.2	\$2.0	\$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	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Total	\$3.6	\$2.4	\$2.0	\$3.6	\$0.0

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.

There are no risks identified at this time.

Community Outreach

• Finished online open house for draft Strategic Development and Implementation Plan on February 6th. Analyzed public input and drafted outreach summary and FAQ.



Project Schedule

Baseline Schedule was approved in September 2019. Sound Transit is expected to complete Phase I -Alternative Analysis by end of Q3 2020. Phase II – Conceptual Engineering to commence in Q4 2020. Final Design is expected to start by end of Q2 2022 and Construction by end of Q1 2024. Revenue Service Date is 2036.

Activity ID	Activity Name	Start	Finish	2020	2021	2022	2023 Qoloo	2024	2025	2026 Q Q Q Q	2027	12
Sounder South - P	latform Extensions	13-Jun-18 A	30-Dec-36			alalala		aaaa	<u> </u>	٩٩٩٩	9999	
Sounder South P	latform Extensions	13-Jun-18 A	30-Dec-36									+
Alternative Analy	rsis - (Phase I)	13-Jun-18 A	26-Mar-20	-								
Conceptual Engi	neering/Environmental - (Ph	27-Mar-20	21-Nov-21			r						
Preliminary Engi	neering - (Phase III)	22-Nov-21	22-Sep-22		1							
Final Design		30-Jun-22	24-Mar-24			-		-				
ROW		22-Mar-22	19-Feb-24					-				
Construction		25-Mar-24	24-Nov-27					`				
Post Constructio	n	25-Nov-27	30-Dec-36									┿
Project Float		25-Nov-27	30-Dec-36									+
Revenue Servi	ice	30-Dec-36	30-Dec-36									

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Planned FTE estimate assumed all expansion improvements would be underway by January 2020. Due to delayed start there is a variance in ST Staff Actual FTE. Consultant FTE is higher as the team is staying through March 2020 and the planned FTE is an estimate for the entire 2020 year.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	13.4	4.2	(9.2)
Consultants	0.7	1.8	1.1
TOTAL	14.1	6.0	(8.1)
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.			

Board Action	Description	Date
	None this period.	



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Sounder Commuter Rail Sumner Station Access Improvements



Scope	The purpose of the project is to provide increased access to parking by adding 505 net new spaces and new bus loop.
	Project includes alternative identification, screening, environmental documentation, design and construction of station access improvement at or around Sumner Station.
Phase	Preliminary Engineering
Budget	\$17.8 Million
Schedule	Open for Service: 2023



Improving access to Sounder Sumner Station

Key Project Activities

- Continued drafting Design-Build procurement documents.
- Completed negotiations with parcel owners for relocation and acquisition.
- Approach to baselining has received a exception from Project Controls to take place post Design Builder selection.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

This period expenditures increased by \$19K. The incurred cost increased from \$9.5M to \$9.5M. This period's costs are attributed to staff costs, property acquisition, engineering design work, project requirements and drafting the construction RFP.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$2.1	\$1.5	\$1.5	\$2.1	\$0.0
Preliminary Engineering	\$2.8	\$2.6	\$2.5	\$2.8	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.4	\$0.0	\$0.0	\$0.4	\$0.0
3rd Party Agreements	\$7.6	\$7.6	\$1.7	\$7.6	\$0.0
Construction	\$0.3	\$0.1	\$0.1	\$0.3	\$0.0
ROW	\$4.6	\$4.6	\$3.7	\$4.6	\$0.0
Total	\$17.8	\$16.4	\$9.5	\$17.8	\$0.0





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 Project performed a quantitative risk assessment in Q4 2019. The following are the top project wide risks:

- Third Party Agreements to be finalized before contract award. Risk mitigation ST staff has finalized a draft of the Conditional Use Permit (CUP); readying for a meeting with the City once key open issues have been addressed.
- Environmental-Contamination (Soil &/or Water). Risk mitigation- Inclusion of a work plan has been included in the procurement documents to mitigate and address remediation of contaminated materials. This will be the first line of work the Contractor will perform when they are approved to proceed with construction.

Project Schedule

The project is in the Preliminary Engineering phase, the preliminary engineering work overall is complete, the remaining activities in this phase are to Baseline the project in Q4 2020/Q1 2021. Approach to Baselining received an exemption from Project Controls in February 2020 to take place post Design Builder selection which is forecast for Q4 2020/Q1 2021. Right of way acquisitions are in progress and are forecast to be completed in advance of the area of construction needed for the Design-Build contractor's construction activities. Issuance of the Design-Build Request For Qualifications (RFQ) is planned for 1st half of 2020 and Notice To Proceed (NTP) is forecast for Q1 2021. The projected Open For Service (OFS) date is 2023.

Activit	/ ID Activity Name	Start	Finish		2019		2020		2021		2022	2		2023	
				Q4	Q1 Q2 Q3 Q4	Q1	Q2 Q3 Q4	Q1	I Q2 Q3 Q4	Q1	Q2 0	23 Q4	Q1	Q2 Q	3
S	ound Transit	01-May-15 A	25-Aug-23												7
5	Sound Transit 2	01-May-15 A	25-Aug-23												"
	South Corridor	01-May-15 A	25-Aug-23												"
	S300018 - Sumner Station Parking and Access Improvem	01-May-15 A	25-Aug-23												•
	Alternative Analysis (Phase I)	01-May-15 A	26-May-16 A												
	Conceptual Engineering (Phase II)	01-May-15 A	14-Mar-16 A			1				1					
	Preliminary Engineering (Phase III)	14-Jul-16 A	17-Dec-20												
	Right of Way	22-Sep-16A	16-Sep-21												
	Permits and Agreements	01-Mar-16 A	28-Nov-20	-											
	Design-Build Project Management	04-Apr-20	07-Feb-23										-		
	Design/Build Contract	03-Sep-19A	07-Feb-23										-		
	DB Contract Procurement	03-Sep-19A	02-Feb-21					•							
	Design/Build - Design and Construction	03-Feb-21	07-Feb-23					•					-		
	Post Construction	07-Feb-23	25-Aug-23										-		"
	Transition to Operations	07-Feb-23	07-Feb-23										▼		
	Project Float	08-Feb-23	25-Aug-23										-		"
	Open For Service	25-Aug-23	25-Aug-23												7



Community Outreach

• Continued planning for future outreach activities, including summer fairs and festivals, and construction outreach.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Variance between the planned and actual FTE figures is the result of the project's baselining being delayed. Once the project has been baselined actual staffing numbers are expected to rise to meet the planned.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance							
ST Staff	6.0	2.4	(3.6)							
Consultants	1.6	0.2	(1.4)							
TOTAL	7.6	2.6	(5.0)							
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.										

Board Action	Description	Date
	None this period.	



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Progress Report Regional Express & Bus Rapid Transit Program









ST Express Bus routes connects major regional hubs throughout the three counties (King, Pierce, and Snohomish)



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





ST Regional Express Bus Routes

Regional Express & Bus Rapid Transit Program Overview



ST Express Bus Base: Sound Transit is evaluating the need for an operations and maintenance base. Project development activities include confirmation of fleet operations; facilities and site programming; and identification of site alternatives. Project is currently on hold, but being re-evaluated by senior management.

I-405 Bus Rapid Transit: This project establishes Bus Rapid Transit (BRT) from the Lynnwood Transit Center to Bellevue Transit Center and Burien Transit Center via I-405 and SR 518. The project relies on the I-405 express toll lane system where available, and Business Access Transit (BAT) lanes on SR 518 from Tukwila to Burien. Project elements include parking, station access improvements, and 11 pairs of stations, including a new transit center in South Renton and new stations at Northeast 85th Street with connection to Downtown Kirkland and at Northeast 44th Street in Renton.

Bus Base North: This project establishes the operations and maintenance facility necessary to support to support BRT operations.

SR522 Bus Rapid Transit: This project establishes BRT from the Link station at I-5 and Northeast 145th Street to UW Bothell, with service continuing at lower frequencies to Woodinville. On Northeast 145th Street, this project includes transit priority spot treatments to facilitate BRT movement through corridor bottlenecks. On SR 522 the majority of the corridor through Lake Forest Park, Kenmore and Bothell will feature BAT lanes, with transit-supportive enhancements on arterials from downtown Bothell to UW Bothell. This project includes nine pairs of stations, with additional parking at Lake Forest Park, Kenmore and Bothell and an expanded transit center at UW Bothell.

Bus on Shoulder: This program provides opportunities for buses to use shoulders on freeway and state route facilities during periods of congestion in general traffic and/or HOV lanes. This program will require coordination and further study with transit partners, WSDOT and Federal Highway Administration in order to determine locations where Bus on Shoulder may be feasible.

North Sammamish Park & Ride: The project includes the planning, design and construction of a park and ride facility. The North Sammamish Park and Ride will provide up to 200 parking spaces in the north end of the City of Sammamish. The park and ride will be open for public access in 2024, improving access to transit service for Sammamish residents.



Program Budget

The Authorized Project Allocation reflects the budget for each project through the approved project phase, meaning that for projects approved for Final Design activities only, the project budget will be amended at some point to add budget for construction activities.

Regional Express and BRT	Authorized Allocation	Commitment To Date	Incurred to Date	Forecast to Complete	Estimated Final Cost	Authorized Allocation vs EFC		
ST EXPRESS BUS BASE	\$5.8	\$3.1	\$1.2	\$2.7	\$5.8	\$0.1		
I-405 BRT	\$226.1	\$181.1	\$67.2	\$45.0	\$226.1	\$0.0		
BUS BASE NORTH	\$48.7	\$26.5	\$26.0	26.0 \$22.1 \$48.7		\$0.0		
SR 522-NE 145th ST BRT	\$69.4	\$36.8	\$15.3	\$27.7 \$69.4		\$15.3 \$27.7 \$69		\$0.0
BUS ON SHOULDER PROJECT	\$3.9	\$0.8	\$0.8	\$3.1	\$3.9	\$0.0		
NORTH SAMMAMISH PARK & RIDE	\$2.1	\$0.3	\$0.3	\$1.8	\$2.1	\$0.0		
TOTAL REX & BRT	\$355.9	\$248.5	\$110.7	\$102.3	\$356.0	\$0.1		

Figures are shown in millions

Program Schedule

Schedule for BRT projects are summarized below.

Schedule Snapshot

Project Name	Start	Finish			202	0		202	21		2022 2023						2024				025
			Q	Q	Q	QQ	Q	Q	Q	QC	Q	Q	Q	QQ	Q	Q	Q	QQ	Q	Q	QQ
▲ Sound Transit	21-Nov-177	30-Oct-25																	\square		
▲ Sound Transit 3	21-Nov-177	30-Oct-25	Π																\square		
📣 ST3 - North Corridor	26-Feb-18 A	30-Oct-25	\square					1										1	\square		
STRIDE - Bus Rapid Transit - North Corridor	26-Feb-18 A	30-Oct-25	Π					1										+	\square		++
STRIDE Master Schedule	03-Feb-20	30-Oct-25		-	-	-		-	-	-			-	-			-	ŧ	=	-	##
STRIDE - SR 522/NE 145th Bus Rapid Transit (BRT)	26-Feb-18 A	06-Sep-25	Π																\square		
SR 522/NE 145th BRT - Preliminary Engineering	26-Feb-18 A	16-Jun-21	F	-		-													\square		
SR 522/NE 145th BRT - Final Design	31-Jul-19 A	13-Jul-22										1									
SR 522/NE 145th BRT - Third Party Agreements and Permitting	10-Apr-20	20-Jul-22	\square			-			_	_		1							Π		ТТ
SR 522/NE 145th BRT - Right of Way (ROW)	24-Apr-20	30-Jan-23		1	¢	-		-	_	-		_	-								
SR 522/NE 145th BRT - Construction	07-Jan-19 A	06-Sep-25		_	_			_	_	-		_	_	-			_			-	=
	21-Nov-177	02-Oct-25																			
STRIDE - Bus Rapid Transit - East Corridor	21-Nov-177	02-Oct-25	Π	\top				\uparrow			\square							+	\square		++
STRIDE - 1-405 Bus Rapid Transit (BRT)	21-Nov-17 /	02-Oct-25	Π																\square		
🔺 I-405 BRT - Preliminary Engineering	02-Mar-18 A	11-May-21	Ħ	-	-	+												+	\square		++
🗛 I-405 BRT - Final Design - GEC (General Engineering Contract)	31-Jul-19 A	15-Jun-22		-	Ļ	-		_	_	-									\square		\top
I-405 BRT - Third Party Agreements and Permitting	11-Apr-20	26-May-22	\square		-	+		-	-	-									\square		
I-405 BRT - Right of Way (ROW) / Property Acquisition	18-Mar-21	24-Jun-24	\square				ļ	-	-	-		_	-	-			-		\square		
🔺 I-405 BRT - Construction	01-Jan-18 A	12-Jul-25		-		-		-	-				-					Ŧ	Ħ	-	
STRIDE - BRT - Bus Base North	21-Nov-17/	12-Apr-24	F	_	r†			-				_	_						Π		TT
STRIDE - BBN - Maintenance Provider	20-Jul-21	04-Jun-24	Π						¢,	-			-	-			-		\square		\square
STRIDE - BRT - BRT Coaches- Procurement and Delivery	26-Jun-20	22-May-23			þ	-		_	_	-				+							
STRIDE - BRT - Intelligent Transportation System (ITS)	18-Mar-21	04-Apr-25					ļ	_				_						-	-		
STRIDE - BRT - Service Line Activation	13-Apr-24	02-Oct-25																ŧ	Ħ	-	ال

Regional Express & Bus Rapid Transit ST Express Bus Base



Project Summary

Scope	Sound Transit is evaluating the need for an operations and maintenance base. Project development activities include confirma- tion of fleet operations, facilities and site programming, and identification of site alternative	
Phase	Planning	
Budget	\$5.8 Million	ST. Express bus maintenance performed by transit partners
Schedule	Project is on hold	51. Express ous maintenance performed by transit partners

Key Project Activities

- Sound Transit Executive Leadership is evaluating the need for an operations and maintenance base.
- Sustainability is completing a \$125K study of Battery-Electric Buses to develop an agency-wide implementation plan for future transition to Battery Electric Buses. Work will begin in 2020.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are 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	\$0.8	\$0.4	\$0.4	\$0.8	\$0.0
Preliminary Engineering	\$4.8	\$2.7	\$0.8	\$4.8	\$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	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Total	\$5.8	\$3.1	\$1.2	\$5.8	\$0.0



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Project Summary

Scope	Launch a Bus Rapid Transit (BRT) system along the I-405 corridor.
Limits	Approximately 37 miles between Lynnwood and Burien
Alignment	I-405 BRT will extend along the I-5, I-405 and SR 518 corridors. BRT will serve Lynnwood, Bothell, Kirkland, Bellevue, Renton, SeaTac, Tukwila, and Burien. Bus- es will operate in high occupancy vehicle lanes, express toll lanes, bus only lanes and general purpose lanes.
Stations	Lynnwood City Center, Canyon Park, NE 195th-UW Bothell/Cascadia College, NE 160th/Brickyard, NE 128th/Totem Lake, NE 85th, Bellevue Transit Center, NE 44th, South Renton Transit Center, Tukwila In- ternational Blvd Station, Burien Transit Center
Phase	Planning Phase 2: Environmental review and conceptual engineering
Budget	I-405 BRT: \$226.1 Million Preliminary Engineering (Phases 1-3)
Schedule	Revenue Service: 2024



Map of Project Alignment

Key Project Activities

- Conducting environmental review of the Refined Project and completing conceptual engineering.
- Developing partnering agreements and letters of concurrence.
- WSDOT has selected a design builder for the Renton to Bellevue Express Toll Lanes project, which includes the NE 44th Station.
- Working with WSDOT to advance environmental and design at 85th, Brickyard, SR 522/I-405 Transit Hub, and Canyon Park.
- Held WSDOT lead Cost Estimate Validation Process for Brickyard and NE 85th.



Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures are \$1.3M, of which \$0.2M was for staff (Admin), \$1.0M for project refinement activities in the PE phase. Project refinement activities include refining and analyzing multiple concepts for speed and reliability improvements, alternative routing options, and station locations throughout the system and various technical memorandums.

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$8.3	\$4.7	\$4.7	\$8.3	\$0.0
Preliminary Engineering	\$49.7	\$34.2	\$14.3	\$49.7	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.8	\$0.0	\$0.0	\$0.8	\$0.0
3rd Party Agreements	\$1.0	\$0.2	\$0.4	\$1.0	\$0.0
Construction	\$130.2	\$118.4	\$24.4	\$130.2	\$0.0
ROW	\$36.2	\$23.6	\$23.4	\$36.2	\$0.0
Total	\$226.1	\$181.1	\$67.2	\$226.1	\$0.0

Cost Summary by Phase

Risk Management

The project team continues to hold risk management workshops to identify all the potential risks during design and construction. The risk register will be updated and monitored quarterly.

The following are top project risks and proposed mitigations:

- Completion of WSDOT's I-405 Renton to Bellevue Widening and Express Toll Lanes (ETL) Project. *Risk Mitigation:* Sound Transit participated in WSDOT's Design-Build process for the I-405 Renton to Bellevue Project as a proposal evaluation member and integrated BRT milestones into the WSDOT schedule. Sound Transit staff is participating in design and constructability reviews for BRT related facilities.
- Cost of the NE 85th BRT Station. *Risk Mitigation*: An ST lead Value Engineering Study was held to further refine project scope. WSDOT has held a CEVP study for both Brickyard and NE 85th to help refine the estimated costs.



Project Schedule

The current phase, Conceptual Engineering/Environmental Review, commenced in Q2 2019 and is anticipated to complete in Q3 2020. Construction required for BRT service is anticipated to be complete in 2024*.

The current critical path for the I-405 BRT project is conceptual engineering, environmental review, preliminary engineering, permitting/agreements, final design, construction, intelligent transportation system (ITS), and service line activation. There are other critical design efforts and projects being managed by WSDOT**, with elements specific to Sound Transit, such as the I-405 Renton to Bellevue Widening and Express Toll Lanes, which includes the NE 44th Street interchange and BRT station, I-405 NE 85th interchange and BRT Station, and select planned elements of WSDOTs I-405—SR 522 Vicinity to SR 527 Express Toll Lanes Improvement Project.

There is a separate project schedule and Agency Progress Report update for the Bus Base North (BBN) Facility. The Bus Base North Facility will provide for the operation, storage and maintenance of the new I-405 BRT and SR 522/NE 145th BRT corridor bus fleet and is an important project to be completed in a timely manner to support the new BRT bus fleet.

*Construction for most of the BRT projects are expected to begin by 2023 and complete by 2024. Construction of some elements will begin before 2023 and others may occur after service starts in 2024 and complete in 2025.

**Sound Transit contributed construction funding to WSDOT for Sound Transit's portion of the I-405—Renton to Bellevue Widening and Express Toll Lanes project's Design-Build construction. WSDOT awarded this Design-Build contract in 2019 wherein the I-405 NE 44th Interchange will be constructed for the BRT inline station at that interchange. WSDOT is also currently conducting ST funded design efforts for I-405 NE 85th interchange.

ect Name	Start	Finish	2020	2021	2022	2023	2024	2025	2
		1	0000	Q Q Q Q	0000	9999	Q Q Q Q	00000	_
Sound Transit	01-Jan-18 A	02-Oct-25						<u> </u>	-00
Sound Transit 3	01-Jan-18 A	02-Oct-25	-			-		02-	-0
🐁 ST3 - East Corridor	01-Jan-18 A	02-Oct-25						02-	-0
STRIDE - Bus Rapid Transit - East Corridor	01-Jan-18 A	02-Oct-25						0 02-	-0
A STRIDE - 1-405 Bus Rapid Transit (BRT)	01-Jan-18 A	02-Oct-25		_				02-	-0
🔺 I-405 BRT - Preliminary Engineering	02-Mar-18 A	17-Mar-21	**********	> 17-Mar	21		*********		-
🔥 I-405 BRT - Alternatives Analysis - Phase I	02-Mar-18 A	29-Apr-19	-19						
405 BRT - Conceptual Engineering/Environmental Review - Phase II	08-Apr-19 A	27-Aug-20	27-	Aug-20					
👍 1-405 BRT - Preliminary Engineering - Phase III	17-Mar-20	17-Mar-21		17-Mar-	21				
🐁 I-405 BRT - Final Design - GEC (General Engineering Contract)	31-Jul-19 A	15-Jun-22		_	15~	Jun-22			
I-405 BRT - Final Design - Procurement (GEC)	31-Jul-19 A	12-May-20	12-May	y-20					
🔈 I-405 BRT - Final Design - Design (GEC)	12-May-20	15-Jun-22	10	_	15-	lun-22			
I-405 BRT - Third Party Agreements and Permitting	11-Apr-20	26-May-22			0 26-M	ay-22			
👞 I-405 BRT - Right of Way (ROW) / Property Acquisition	18-Mar-21	24-Jun-24	18-Mar-21	-	_		24-	un-24	
💧 I-405 BRT - Construction	01-Jan-18 A	12-Jul-25						12-Ju	1-2
▲ 1-405 BRT - Construction - North	01-Jan-18 A	12-Jul-25						12-Ju	1-2
1-405 BRT - Construction Roadway - North	01-Jan-18 A	05-Jan-25		_		_		05-Jan-25	
🔈 I-405 BRT - Poplar Way Loop Ramp Widening	15-Apr-22	05-Jan-25	1	15-Apr-22	0			05-Jan-25	
I-405 BRT - Downtown Lynnwood Transit Signal Priority (TSP)	15-Apr-22	05-Jan-25		15-Apr-22	0			05-Jan-25	
🔈 I-405 BRT - Totem Lake Freeway Station Upgrade	15-Apr-22	05-Jan-25		15-Apr-22	0	_) 05-Jan-25	
I-405 BRT - WSDOT North Express Toll Lanes (ETL)	22-Aug-19 A	30-Jun-24					30-	lun-24	
I-405 BRT - WSDOT - I-405 NE 85th Interchange	01-Jan-18 A	11-Sep-24					0 1	-Sep-24	
1405 BRT - Construction Parking Garages/Facilities/Transit Center- North	02-Dec-20	05-Jan-25	Dec-20					05-Jan-25	
1-405 BRT - Lynnwood Transit Center BRT Stations	10-Jun-21	05-Jan-25	10-Jun-21		_			05-Jan-25	
I-405 BRT - Kingsgate Parking Garage	02-Dec-20	30-Sep-24	Dec-20			_	03	0-Sep-24	
▲ I-405 BRT - Bellevue Transit Center BRT Stations - D/B	10-Jun-21	05-Jan-25	10-Jun-21	0				05-Jan-25	1
1-405 BRT - Service Line Activation - 1405 N	13-Jan-25	12-Jul-25	A			1	3-Jan-25	12-Ju	1-2
1-405 BRT - Construction - South	29-Oct-18 A	05-Jul-25		_	_			05-Jul	11-2
👌 I-405 BRT - Construction Roadway - South	29-Oct-18 A	31-Dec-24				_		31-Dec-24	
1-405 BRT - WSDOT I-405 Renton to Bellevue Widening & Express Toll Lane	29-Oct-18 A	31-Dec-24			_	-		31-Dec-24	
↓ I-405 BRT - SR 518 Corridor Improvements	15-Apr-22	09-Dec-24		15-Apr-22	0		0	09-Dec-24	
1-405 BRT - Construction Parking Garages/Facilities/Transit Center- South	02-Dec-20	24-Jul-24	Dec-20	_			24-	Jul-24	
1-405 BRT - S. Renton Parking Garage/Station	02-Dec-20	24-Jul-24	Dec-20	_		-	0 24-	Jul-24	
📣 1405 BRT - Service Line Activation - 1405 S	06-Jan-25	05-Jul-25	-			0	6-Jan-25 4	05-Jul	11-2
STRIDE - BRT - Intelligent Transportation System (ITS)	18-Mar-21	04-Apr-25	18-Mar-21	-				04-Apr-2	25
STRIDE - BRT - Intelligent Transportation System (ITS) - Procurement (DB)	18-Mar-21	12-Nov-21	18-Mar-21		12-Nov-21			2	1
STRIDE - BRT - Intelligent Transportation System (ITS) - Design / Build	13-Nov-21	04-Apr-25	13-N	lov-21 0				04-Apr-2	25
STRIDE - BRT - Service Line Activation	13-Apr-24	02-Oct-25				13-Apr-24		02-	-0



Community Outreach

Sound Transit is committed to proactively seeking public input during all stages of the I-405 BRT Project. The I-405 BRT Community Engagement Guide establishes a stakeholder engagement process that helps ensure priorities of local communities are heard and considered along with the project-wide goals. The BRT team will collaborate with elected officials, partner staff, and local communities throughout the project.

- Met with Interagency Advisory Group (partner staff).
- Closed online open house with 2,300 participants
- Met with neighbors near the 85th St. project

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Planned FTE is annual projection. ST Staff level of effort will reduce once Phase 3 begins. Consultant FTE variance is due to higher level of effort needed to accelerate Phase 2 work.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance						
ST Staff	16.6	12.0	(4.6)						
Consultants	16.2	20.3	4.1						
TOTAL	32.8	32.3	(0.5)						
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.									

Board Action	Description	Date
	None to report	
	None to report.	

Regional Express & Bus Rapid Transit Bus Base North



Project Summary

Scope	The Bus Base North will accommodate up to 120 buses to serve I-405 and SR 522/145th BRT and some ST Express routes.
Phase	Conceptual engineering/environmental review
Budget	\$48.7 Million
Schedule	Open for Service: 2023



Map of Project Alignment

Key Project Activities

- Conducting environmental review and completing conceptual engineering.
- Held pre-application meeting with Bothell for the Bus Base North.
- Selecting a Bus Base North Design-Build Project Management team.



Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditure increased by approximately \$100K primarily due to progress made by the consultant on preliminary engineering and environmental, and by Sound Transit Staff time .

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$4.4	\$0.7	\$0.7	\$4.4	\$0.0
Preliminary Engineering	\$2.3	\$1.1	\$0.7	\$2.3	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$12.6	\$0.0	\$0.0	\$12.6	\$0.0
3rd Party Agreements	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$29.2	\$24.7	\$24.6	\$29.2	\$0.0
Total	\$48.7	\$26.5	\$26.0	\$48.7	\$0.0

Risk Management

The BRT Project Team will develop the Risk and Contingency Management Plan (RCMP) during Phase III - Preliminary Engineering phase of the project. The project team conducted a risk management workshop to identify all the potential risks during design and construction. The risk register will be updated and monitored quarterly.

The following are the top project risks and proposed mitigations:

- Appeal of SEPA Checklist. *Risk Mitigation*: Review draft SEPA checklist with City of Bothell staff to get their comments and concerns and address them. Ensure SEPA Checklist is legally defensible.
- Appeal of SEPA Checklist requires an EIS. *Risk Mitigation:* Include an optional task in consultant contract for EIS preparation if necessary, saving time to initiate.
- Additional project requirements from AHJs. *Risk Mitigation:* Ensure SEPA document is clear on whether an impact exists and level or impact. Working with City of Bothell staff to coordinate Bus Base North and the City's on-going planning process.



Project Schedule

The current phase, Conceptual Engineering/Environmental review, commenced in Q2 2019 and is anticipated to complete in Q3 2020. A design-build project management (DBPM) procurement is underway and will be followed by development of project requirements, a design-build procurement in late 2020 or early 2021, then construction.

The current critical path for Bus Base North is conceptual engineering, environmental review, developing project requirements, permitting/agreements, design-build procurement, design-builder final design, design-builder permitting, construction, integration with intelligent transportation system (ITS), preparation for and readiness of Bus Base North for new BRT bus fleet and service line activation.

Bus Base North construction required for BRT service is anticipated to be complete by Q1 or early Q2 2024. Current plans are to have the Bus Base North ready to start receiving initial new BRT buses by late 2023.

Project Name	Start	Finish	2020 2021		2022	2023	2024
			Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q	4 Q1 Q2 Q3 Q	4 Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
Sound Transit	21-Nov-17 A	12-Apr-24					12-Apr-24
Sound Transit 3	21-Nov-17 A	12-Apr-24		-			12-Apr-24
♦ ST3 - East Corridor	21-Nov-17 A	12-Apr-24		-			12-Apr-24
STRIDE - Bus Rapid Transit - East Corridor	21-Nov-17 A	12-Apr-24				-	12-Apr-24
STRIDE - I-405 Bus Rapid Transit (BRT)	21-Nov-17 A	12-Apr-24					12-Apr-24
🔥 STRIDE - BRT - Bus Base North	21-Nov-17 A	12-Apr-24					12-Apr-24
BRT - Bus Base North - Preliminary Engineering	08-Apr-19 A	21-Jul-21		21-J	ul-21		1.1.1.1.1.1
👌 BRT - Bus Base North - Conceptual Engineering - Phase II	08-Apr-19 A	05-Aug-20	05-A	ug-20			
🔈 BRT - Bus Base North - Preliminary Engineering - Phase III	06-Aug-20	21-Jul-21	Aug-20	C) 21-J	ul-21		
BRT - Bus Base North Right of Way (ROW) / Property Acquisition	21-Nov-17 A	06-May-19 A	A				
A BRT - Bus Base North - Design-Build Project Management (DBPM)	19-Aug-19 A	08-May-20	08-May-2	20			
BRT - Bus Base North - DBPM Procurement	19-Aug-19 A	08-May-20	08-May-2	20			
BRT - Bus Base North - Construction (D/B)	06-Aug-20	12-Apr-24	Aug-20				12-Apr-24
BRT - Bus Base North - D/B Construction Procurement	06-Aug-20	20-Jul-21	Aug-20	▲ 20-J	ul-21		
🔥 BRT - Bus Base North - Construction - Design / Build (DB)	20-Jul-21	12-Apr-24	2	0-Jul-21		_	12-Apr-24

Community Outreach

Sound Transit is committed to proactively seeking public input during all stages of the BRT Project. The I-405 BRT Community Engagement Guide establishes a stakeholder engagement process that helps ensure priorities of local communities are heard and considered along with the project-wide goals. The BRT team will collaborate with elected officials, partner staff and adjacent property owners during the project. Sound Transit is working closely with the City of Bothell on the Bus Base North project.



Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Planned FTE is annual projection. The variance in ST staff level of effort will reduce once DBPM (Design-Build Project Management contract) starts in Q2. Consultant staff are currently working on Phase 2 with a new Change Order coming with should reduce the variance with the planned FTE annual projection.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	5.5	4.0	(1.5)
Consultants	2.7	2.1	(0.6)
TOTAL	8.2	6.1	(2.1)

* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.

Board Action	Description	Date
	None to report.	


Project Summary

Scope	Launch a Bus Rapid Transit (BRT) system from the Shoreline South/145th light rail station to UW Bothell campus with con- necting service to Woodinville, including park and ride, access improvements, and transit centers.
Limits	Approximately 8 miles between Shoreline and Woodinville.
Alignment	The BRT route will travel via NE 145th Street and SR 522 serving Seattle, Shore- line, Lake Forest Park, Kenmore, and Bothell, including UW Bothell/Cascadia College area. The route will have a connec- tion to I-405 BRT at the SR 522/I-405 in- terchange. Buses will operate primarily in Business Access and Transit (BAT) lanes, transit queue bypass lanes, and in general purpose lanes.
Stations	Includes 13 BRT stations, one of which is in review and two additional provisional stations are also in review. Additional park- ing is included in Lake Forest Park, Kenmore, and Bothell.
Systems	BRT Operations & Transit Signal Priority
Phase	Planning Phase 2 Conceptual Engineering and Environmental Review
Budget	\$69.4 Million—Preliminary Engineering Phase (1-3)
Schedule	Revenue Service: 2024



Map of Project Alignment



Key Project Activities

- Developed and presented 10% plans to the local agencies for their review.
- Lake Forest Park Partnering agreement executed.
- Conducting environmental review.
- Continuing stakeholder outreach focused on property owners and businesses.
- Issued consultant Notice to Proceed to take the Lake Forest Park section of the project to a 30% design.



Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures are shown in millions.

This period expenditures increased by approximately \$1Million, primarily due to progress made by the consultant on conceptual engineering and Environmental, City of Bothell stage 3 BAT lanes construction progress, Sound Transit staff time.

Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$6.3	\$3.3	\$3.3	\$6.3	\$0.0
Preliminary Engineering	\$17.0	\$8.2	\$6.1	\$17	\$0.0
Final Design	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Construction Services	\$0.3	\$0.0	\$0.0	\$0.3	\$0.0
3rd Party Agreements	\$6.4	\$0.2	\$0.3	\$6.4	\$0.0
Construction	\$34.0	\$25.0	\$5.4	\$34.0	\$0.0
ROW	\$5.3	\$0.2	\$0.1	\$5.3	\$0.0
Total	\$69.4	\$36.8	\$15.3	\$69.4	\$0.0

Risk Management

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

The following are the top project risks and proposed mitigations:

- The SR 522/NE 145th Street BRT project is an early deliverable and involves close coordination with multiple project partners. Staff and consultants are continuing to coordinate closely with project partners.
- The timeline for property acquisition is a risk for this project. Mitigation includes advancing a change order in Phase 2 to perform work that supports property civil certification and acquisition, conducting focused property owner outreach in the fall/winter of Phase 2, and advancing Phase 3 contract to first quarter 2020 to further expedite design to support property acquisition.
- Early concurrence on project components is a key effort in the first year of project development though on-going coordination with the Project Interagency Coordination Group, City Managers Group, and Elected Leadership Group.
- Coordination of ST3 refined project and WSDOT and City of Shoreline plans for NE 145th- complex jurisdictional situation and third partner expectation for ST capital investment. Partner Agency staff are actively working towards a multi-agreeable solution.
- Planning, Design, Construction and Opening the Bus Base North Facility. The Bus Base North Facility will store and maintain the BRT fleet for both the I-405 and SR 522/145th BRT corridors. The I-405 BRT team will track the progress of the Bus Base North Facility project development as it is on the critical path for the program.



Project Schedule*

The SR 522/NE 145th BRT Project Refinement Phase completed in Q2 2019. The current phase, Conceptual Engineering/ Environmental Review, commenced in Q2 2019 and is anticipated to complete in Q3 2020. Construction required for BRT service is anticipated to be complete in 2024.

The current critical path for the ST 522/NE 145th BRT project is conceptual engineering, environmental review, Right-of-Way (ROW) civil certification, ROW acquisition, preliminary engineering, permitting/agreements, final design, construction, intelligent transportation system (ITS), and service line activation.

There is a separate project schedule and Agency Progress Report update for the Bus Base North (BBN) Facility. The Bus Base North Facility will provide for the operation, storage and maintenance of the new I-405 BRT and SR 522/NE 145th BRT corridor bus fleet and is an important project to be completed in a timely manner to support the new BRT bus fleet.

*Construction for some of the BRT projects/elements is expected to begin by 2023 and be completed by 2024. Construction of other projects/ elements began in 2019 and others may occur after service starts in 2024 and complete in 2025.

**Sound Transit contributed construction funding to certain city(s)/Authorities Having Jurisdiction (AHJ) where construction by contracts managed by those city(s) (i.e. City of Bothell) commenced in Q2 2019 allowing early construction of transit speed and reliability on roadways along the BRT corridor in advance of BRT service operation.

oject Name	Start	Finish	2020	2021	2022	2023	2024	2025	2026
			0000	0000	0000	0000	20000	0000	0000
Sound Transit	26-Feb-18 A	02-Od-25			1				02-Oct-2
▲ Sound Transit 3	26-Feb-18 A	02-Od-25				-	-		02-Oct-2
🔈 ST3 - North Corridor	26-Feb-18 A	06-Sep-25		1					06-Sep-2
A STRIDE - Bus Rapid Transit - North Corridor	26-Feb-18 A	06-Sep-25					-	0	06-Sep-2
STRIDE - SR 522/NE 145th Bus Rapid Transit (BRT)	26-Feb-18 A	06-Sep-25				_	-	0	6-Sep-2
SR 522/NE 145th BRT - Preliminary Engineering	26-Feb-18 A	16-Jun-21		16-	Jun-21				1
SR 522/NE 145th BRT - Alternatives Analysis - Phase I	26-Feb-18 A	28-Mar-19 A	-19 A	100	1.0				
♦ SR 522/NE 145th BRT - Conceptual Engineering/Environmental Review - Phas	26-Apr-19 A	11-Aug-20	11	-Aug-20					
SR 522/NE 145th BRT - Preliminary Engineering - Phase III	23-Apr-20	16-Jun-21	-	D 16-	Jun-21				
SR 522/NE 145th BRT - Final Design	31-Jul-19 A	13-Jul-22			0 13	Jul-22			
📣 SR 522/NE 145th BRT - Final Design - GEC (General Engineering Contract)	31-Jul-19 A	13-Jul-22			13	Jul-22			
SR522/NE 145th BRT - Final Design - Procurement (GEC)	31-Jul-19 A	05-Jun-20	05-J	un-20		1			
SR522/NE 145th BRT - Final Design - Design (GEC)	12-May-20	13-Jul-22			0 13	Jul-22			
SR 522/NE 145th BRT - Third Party Agreements and Permitting	10-Apr-20	20-Jul-22			20	Jul-22			
SR 522/NE 145th BRT - Right of Way (ROW)	24-Apr-20	30-Jan-23	<u>a</u>			🛆 30-Jan	-23		
SR 522/NE 145th BRT - Construction	07-Jan-19 A	06-Sep-25							06-Sep-2
SR 522/NE 145th BRT - Construction - Roadway	07-Jan-19 A	09-Mar-25				-	-	09-Ma	r-25
SR 522/NE 145th BRT - Construction Roadway 145th/SR522/Shoreline/Seattle	16-Jun-22	09-Feb-25	1	16-Jun-2	2 0	-	-	09-Fet	-25
A SR 522/NE 145th BRT - Stage 3 Improvements [96th Ave NE to 83rd Place NE	07-Jan-19 A	30-Sep-20		30-Sep-20					6.0
SR 522/NE 145th BRT - Stage 2B Improvements [Wayne Curve to NE 180th S	16-Jun-22	09-Mar-25		16-Jun-2	2 0	-		09-Ma	ir-25
SR 522/NE 145th BRT - Construction - Parking Garages	02-Dec-20	30-Sep-24	Dec-20				0	30-Sep-24	1
SR 522/NE 145th BRT - Lake Forest Park Parking Garage (LFP) - DB	02-Dec-20	30-Sep-24	Dec-20			-		30-Sep-24	
SR 522/NE 145th BRT - Kenmore Parking Garage (KEN) - DB	02-Dec-20	02-Sep-24	Dec-20	-		-		2-Sep-24	
SR 522/NE 145th BRT - Bothell Parking Garage (BTH) - DB	02-Dec-20	02-Sep-24	Dec-20			-	00	2-Sep-24	
SR 522/NE 145th BRT - Service Line Activation	10-Mar-25	06-Sep-25		Sec. 1			10-Mar-25	0	06-Sep-2
♦ ST3 - East Corridor	18-Mar-21	02-Oct-25	18-Mar-21	4	1		1	0	02-Oct-
A STRIDE - Bus Rapid Transit - East Corridor	18-Mar-21	02-Oct-25	8-Mar-21	0		-	-	0	02-Oct-
A STRIDE - I-405 Bus Rapid Transit (BRT)	18-Mar-21	02-Oct-25	8-Mar-21	0			-	0	02-Oct-
STRIDE - BRT - Intelligent Transportation System (ITS)	18-Mar-21	04-Apr-25	8-Mar-21	0				04-A	or-25
STRIDE - BRT - Intelligent Transportation System (ITS) - Procurement (DB)	18-Mar-21	12-Nov-21	8-Mar-21		12-Nov-21	i			1.
STRIDE - BRT - Intelligent Transportation System (ITS) - Design / Build	13-Nov-21	04-Apr-25	13-1	Nov-21	******			04-A	or-25
STRIDE - BRT - Service Line Activation	13-Apr-24	02-Oct-25		1.0		13-Apr-2	4 0	0	02-Oct-



Community Outreach

Sound Transit is committed to proactively seeking public input during all stages of the Project. The SR522 BRT Community Engagement and Communication Guide establishes a stakeholder engagement process that helps ensure priorities of local communities are heard and considered along with the project-wide goals. The BRT team will collaborate with elected officials, partner staff, and local communities throughout project development. The following steps have been undertaken:

- Updated Phase 2 community engagement plan, including supporting outreach/engagement with property owners along the corridor in the fall and winter.
- Meetings with potentially impacted property owners in Lake Forest Park and Kenmore started. Remote meetings will continue and include property owners in Seattle and Shoreline along 145th St.
- 29 meetings took place in February and 75 comments were received.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Planned FTE is an annual projection. The staffing variance is less than planned as the project has yet advance to Phase 3. Staffing levels are expected to rise to meet planned estimates as the project progresses.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance
ST Staff	13.8	11.0	(2.8)
Consultants	24.0	15.5	(8.5)
TOTAL	37.8	26.5	(11.3)

* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.

Sound Transit Board Actions

Board Action	Description	Date
	None to report.	

Regional Express & Bus Rapid Transit Bus on Shoulder



Project Summary

- **Scope** This program provides opportunities for buses to use shoulders on freeway and state route facilities during periods of congestion in general traffic and/or HOV lanes. This program will require coordination and further study with transit partners, WSDOT and Federal Highway Administration in order to determine locations that may be feasible.
- feasible.

 Phase
 Planning—Conceptual Engineering and Environmental Review

 Budget
 \$3.6 Million—Planning Phase

 \$0.3 Million—Construction Phase

 Schedule
 Revenue Service: Early deliverable under
- Schedule Revenue Service: Early deliverable under ST3 plan. Individual project delivery timing varies.



Examples of Bus-on-Shoulder facilities



Key Project Activities

- Supplemented the study with additional projects identified by transit agency partners.
- Developed engineering and environmental documentation scope of work for candidate segments which has been included in the Bus Rapid Transit GEC contract.
- Continued coordination with WSDOT and partner transit agencies.

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are in millions.

Since January 2020, the project cost incurred to date increased but not enough to be seen in the rounded figures on the next page.



Cost Summary by Phase

Project Phase	Authorized Project Allocation	Commitment to Date	Incurred to Date	Estimated Final Cost (EFC)	Authorized Allocation vs. EFC
Administration	\$0.9	\$0.1	\$0.1	\$0.9	\$0.0
Preliminary Engineering	\$2.2	\$0.0	\$0.0	\$2.2	\$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	\$0.4	\$0.4	\$0.4	\$0.4	\$0.0
Construction	\$0.3	\$0.3	\$0.3	\$0.3	\$0.0
ROW	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Total	\$3.9	\$0.8	\$0.8	\$3.9	\$0.0

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 following are the top project wide risks:

- The right combination of factors must be present to implement Bus on Shoulder operation: sufficient transit service and ridership along a roadway segment; service that is adversely affected by roadway congestion; and physical and operating conditions along a roadway segment's shoulder that can accommodate reasonable improvements to its length, width, pavement, etc.
- Candidate projects must benefit one or more of the three contributing subareas.
- Washington State Patrol and other emergency responders also use shoulders for enforcement and hazard response. Facilitating WSP and emergency responder needs may preclude bus operation on candidate roadway segments or require certain types of improvements beyond shoulder modifications.

Project Schedule

A feasibility study completed in Q2 2019, identifying and evaluating initial candidate Bus On Shoulder projects. A post-feasibility study-projects verification-next steps effort completed in December 2019. The most cost-effective projects will proceed to the design process, further analysis of candidate projects is being performed in 2020 within the Conceptual Engineering Phase. Bus on Shoulder improvement projects may be designed, constructed and in-service over a multiple year period from 2021-2024.

vity Name	Start	Finish		2019		2020	100	2021	1.	2022		2023	202
			Q4	Q1 Q2 Q3 Q4	Q1	Q2 Q3 Q4	Q1	Q2 Q3 Q4	1 Q1	Q2 Q3 Q4	L Q1	Q2 Q3 Q4	4 Q1 /
Sound Transit	05-Jun-18A	27-Apr-24					Ĩ.						
Sound Transit 3	05-Jun-18 A	27-Apr-24					-		-				-
ST3 - East Corridor	05-Jun-18A	27-Apr-24	H					-	1				+
Bus on Shoulders	05-Jun-18 A	27-Apr-24							1	_	-		+
Preliminary Engineering	05-Jun-18 A	30-Dec-21		1					•				
Alternative Analysis - Phase I	05-Jun-18 A	31-Dec-19A											
Feasibility Study	05-Jun-18 A	30-Apr-19A											
Post-Feasibility Study - Projects Verification/Next Steps	01-May-19A	31-Dec-19A		-	+								
Conceptual Engineering - Phase II	01-Jan-20 A	30-Dec-20			-	-							
Preliminary Engineering - Phase III	31-Dec-20	30-Dec-21					-		•				
Final Design	31-Dec-21	30-Oct-22							-		1		
Construction	31-Oct-22	30-Oct-23								-	-		
Post Construction	31-Oct-23	27-Apr-24											-
Project Float	31-Oct-23	27-Apr-24											-
Project Completion	27-Apr-24	27-Apr-24											



Community Outreach

- Outreach activities are minimal at this time.
- We are monitoring outreach needs for the project and are available to answer any questions from the public.

Staffing Summary

The planned Full-Time Equivalent (FTE) is an annual projection of ST project staff and consultants. Planned FTE are an annual projection and remains constant from month to month. The Year-to-Date (YTD) Performance is the total actual FTEs accumulated through this reporting period. Staffing status is summarized in the following table.

Planned FTE being annual, the variance is explained by the fact that design cost estimate and environmental won't start before-Q2 2020.

Resource Type	Planned FTE Monthly Average	YTD Actual FTE Monthly Average	Variance					
ST Staff	0.7	0.2	(0.5)					
Consultants	n/a	n/a	n/a					
TOTAL	0.7	0.3	(0.5)					
* An FTE is the equivalent of 2080 hours. YTD performance FTE hours are divided by a monthly factor of 173.33.								

Sound Transit Board Actions

Board Action	Description	Date
	None this period.	



Regional Express & Bus Rapid Transit North Sammamish Park & Ride



Project Summary

Scope	The North Sammamish Park-and-Ride is a planned parking facility with up to 200 spaces in the northern portion of the City of Sammamish. It is planned for project open- ing by 2024 in coordination with the launch of Downtown Redmond Link Extension.				
Phase	Conceptual Engineering and Environmental Review				
Budget	\$20 Million				
Schedule	Open for Service: 2024				



North Sammamish Park & Ride project area

Key Project Activities

- Completed Phase 3 Screening to determine preferred site
- Phase 3 Screening Presentation to City of Sammamish Council February 4th
- Central Washington University screening site scored the highest in terms of cost, risk, and feasibility

Project Cost Summary

The project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS). The figures shown are 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	\$0.8	\$0.3	\$0.3	\$0.8	\$0.0
Preliminary Engineering	\$1.1	\$0.0	\$0.0	\$1.1	\$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	\$0.2	\$0.0	\$0.0	\$0.2	\$0.0
Construction	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
ROW	\$0.1	\$0.0	\$0.0	\$0.1	\$0.0
Total	\$2.1	\$0.3	\$0.3	\$2.1	\$0.0



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 following are the top project wide risks:

- City Staff and councilmembers have vocalized interest in a joint parking/City services facility. There is a risk that the City will request additional time to explore and propose a joint development that would involve a structured park and ride.
- Constructing a structured lot would likely pose schedule and budgetary risks to the project. Prolonging the decision on project scope and delivery method may also pose a risk to delivering the project on time.

Project Schedule

This is a preliminary schedule as the project team continues in discussions with the City of Sammamish Council. The project team is advancing toward Phase Gate 2 Select Delivery Method for later this year. Once there is agreement on project delivery method, the team will proceed with procuring a consultant(s) to conduct conceptual engineering and environmental review, followed by preliminary engineering, final design and construction

Activity ID Activity Na	ame	Start	Finish	2019	2020	2021	2022	2023	2024
				Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4	Q1 Q2 Q3 Q4
Sound Transit		03-Aug-18 A	17-Dec-24						•
Sound Transit 3		03-Aug-18 A	17-Dec-24						
ST3 - East Corridor		03-Aug-18 A	17-Dec-24						
North Sammamish Park-ar	nd-Ride Master Schedule	03-Aug-18 A	17-Dec-24						
Preliminary Engineering		03-Aug-18 A	27-Jan-22				•		
Alternative Analysis - Phase	I	03-Aug-18 A	14-May-20						
Conceptual Engineering/Envir	ronmental Review- Phase II	08-Apr-20	22-Oct-21		•				
Preliminary Engineering - Pha	ase III	12-Feb-21	27-Jan-22			•	•		
Final Design (DBB)		28-Jan-22	24-Oct-22				~~~~		
Permits and Agreements		07-Apr-20	03-Dec-21		-				
Right of Way (ROW)		03-Jan-21	30-Jul-23						
Construction		25-Oct-22	20-Jun-24				-		
Construction Procurement		25-Oct-22	22-Jun-23						
Construction		22-Jun-23	20-Jun-24					-	
Post Construction		21-Jun-24	17-Dec-24						
Project Float		21-Jun-24	17-Dec-24			[[
Open for Service		17-Dec-24	17-Dec-24						▼

Community Outreach

• Sound Transit presented the project to the Sammamish City Council on February 4th.

Sound Transit Board Actions

Board Action	Description	Date
	None this period.	





Progress Report Capital Program Support



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



Capital Program Support Grants



Current Grant Funding (Includes only Active Executed Grants)

Line of Service	Grant ID	Project	A۱	ward Amount	Date Executed		Life to Date Drawdowns nru Dec. 2019)
Federal Tran	sit Administration (F	ΤΑ)	1				
Link	WA-03-0237	University Link FFGA	\$	684,370,641	9/16/15	\$	612,915,262
Link	WA-95-X061	Tacoma Link Expansion	\$	5,599,943	8/27/15	\$	5,314,144
Link	WA-95-X067	East Link: Overlake Village Ped Bridge	\$	6,606,585	8/8/14	\$	6,606,585
Link	WA-95-X073	East Link: Bellevue Way HOV Improvements (S Bell P&R to I-90)	\$	2,200,000	8/8/14	\$	444,950
Link	WA-2016-012	Tacoma Link Expansion light rail vehicles	\$	6,000,000	5/17/17	\$	2,452,054
Sounder	WA-2018-015	Sounder Rolling Stock	\$	7,799,730	3/8/18	\$	-
Link	WA-2018-024	Northgate Link Extension	\$	49,708,902	5/9/18	\$	49,708,902
Link	WA-2018-030	Federal Way Link Extension	\$	4,509,494	6/5/18	\$	4,509,494
Link	WA-2018-013	Tacoma Link Extension	\$	74,999,999	5/15/18	\$	23,999,583
Sounder	WA-2018-081	Puyallup Station Access Improvements	\$	6,700,000	11/16/18	\$	4,741,879
Link	WA-2018-082	Downtown Redmond Link Ext	\$	600,000	11/16/18	\$	58,016
Link	WA-2019-001	Linkwood Link Extension	\$	300,000,000	12/19/18	\$	214,326,633
REX	WA-2019-023	Bus Replacements	\$	1,375,000	4/19/19	\$	-
REX	WA-2019-024	Bus Replacements	\$	4,920,406	4/19/19	\$	4,920,406
REX	WA-2019-018	HIMB Bus Preventative Maintenance	\$	17,948,707	4/16/19	\$	17,948,707
Link	WA-2019-025	HIFG Rail Prev Maint	\$	41,456,995	4/20/19	\$	41,456,995
Sounder	WA-2020-002	Sounder Expansion (ST3)	\$	5,600,000	12/13/19	\$	-
REX	WA-2020-007	I-405 BRT North	\$	3,500,000	12/30/19	\$	-
Other Feder	al						
Systemwide	EMW-2017-RA-00018	Video Monitoring System and Security Program	\$	662,238	11/2/17	\$	21,529
Systemwide	EMW-2019-RA-00014	Systemwide Security	\$	1,315,813	9/1/19	\$	-
State							
Link	GCB2114	Tacoma Link Expansion	\$	5,000,000	3/28/17	\$	4,999,999

Above table as of 4th QTR 2019. This section is updated every quarter.





Sustainability

Sustainability is at the core of Sound Transit's mission to connect more people to more places efficiently, affordably, reliably and in an environmentally friendly manner. Investing in transit builds a better future, maintains a clean environment, and supports both healthy communities and vibrant economies. At Sound Transit, sustainability is about more than the natural environment – it is a holistic goal that protects and enhances people, planet and prosperity.

In 2019, Sound Transit continued to carry out a wide range of projects, with increased focus on integrating sustainable design into capital expansion – from planning and final design to construction. With the passage of the ST3 Plan, a fully funded Sustainability Program will integrate green building and infrastructure in projects across all phases of development.

Sound Transit continues to implement our Sustainability Initiative through our internationally certified (ISO 14001) Environmental and Sustainability Management System (ESMS). The agency also continues to be a transit industry leader through our ongoing participation in APTA's Sustainability Commitment at the platinum recognition level.

Key Q4 2019 Accomplishments and Activities

- Continued providing alignment between PEPD, DECM and Operations on evaluating battery electric bus feasibility:
 - ° Finalized Battery Electric Bus Feasibility Analysis for ST Express and Bus Rapid Transit.
 - Continued meetings of internal Battery Electric Bus Working Group; presented results of both ST Express and Bus Rapid Transit analyses at these meetings.
- Completed the Environmental and Sustainability Management System external audit.
- Updated research on using greener concrete in transit expansion projects.
- Finalized guidelines on using Efficiency and Sustainability funds.
- Continued developing guidelines on using funds from the ST3 Sustainability Cost Allowance.
- Began evaluating LEED Existing Builling Operations and Maintenance for Union Station.

Key Upcoming Activities for Q1 2020

- Present semiannual Sustainability Plan progress to the Sound Transit Board of Directors.
- Finalize and publish list of 2020 Environmental and Sustainability targets.
- Begin data collection for annual Sustainability Inventory and Progress Report.
- Complete procurement of a new ISO 14001 registrar.
- Finalize the guidelines for using funds from the ST3 Sustainability Cost Allowance.
- Finalize procedure for integrating utility rebates on capital projects.







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



AA	Alternative Analysis	GC/CM	General Contractor /Construction Management		
AHU	Air Handling Units	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		
ССВ	Change Control Board	IWP	Industrial Waste Permit		
CDF	Controlled Density Fill	JA	Jacobs Associates		
CHS	Capitol Hill Station	JARPA	Joint Aquatic Resource Permit Application		
СМ	Construction Management	КСМ	King County Metro		
CMU	Concrete Masonry Unit	LNTP	Limited Notice to Proceed		
CO	Change Order	LNTF			
СРІ	Cost Performance Index		Light Rail Review Panel		
СРМ	Critical Path Method	LRT	Light Rail Transit		
DAHP	Department of Archaeology & History Preser-	LRV	Light Rail Vehicle		
	vation	LTK	LTK Engineering Services		
DART	Days Away, Restricted or Modified	MACC	Maximum Allowable Construction Cost		
DB	Design -Build	MEPF	Mechanical/Electrical/Plumbing/Fire Sprinkler		
DBPM	Design-Build Project Management	MLK	Martin Luther King, Jr. Way		
DECM	Design, Engineering and Construction Man-	MOA	Memorandum of Agreement		
DEIG	agement	MOU	Memorandum of Understanding		
DEIS	Draft Environmental Impact Statement	MOW	Maintenance of Way		
DP	Design Package	MPPCV	Major Public Project Construction Variance		
DPD	Seattle Department of Planning and Develop- ment	MRB	Material Review Board		
DSC	Differing Site Conditions	MUP	Master Use Permit		
DSDC	Design Support During Construction	NB	Northbound		
DSTT	Downtown Seattle Transit Tunnel	NCR	Notification of Change Report		
EFC	Estimated Final Cost	NCTP	North Corridor Transit Partners		
EMI	Electro Magnetic Interference	NEPA	National Environmental Policy Act		
ERC	East Rail Corridor		National Oceanic and Atmospheric Admin-		
FD	Final Design	NOAA	istration		
FHWA	Federal Highway Administration	NPDES	National Pollutant Discharge Elimination Sys-		
FSEIS	Final Supplemental Environmental Impact Statement	NIDES	tem		
FFGA	Full Funding Grant Agreement	NTP	Notice to Proceed		
FTA	Federal Transit Administration	OCS	Overhead Catenary System		
FTE	Full Time Employee	OMF	Operations and Maintenance Facility		

ACRONYMS



PEPreliminary EngineeringPEPProject Execution PlanPEPDPlanning, Environment and Project DevelopmentPMOCProject Management Oversight ConsultantPSSTPine Street Stub TunnelQAQuality AssuranceQCQuality ControlQTRQuarterREResident EngineerRFCRequest for ChangeRFDRequest for InformationRFPRequest for ProposalRFQRequest for QualificationsRIRRecordable Injury RatesRMPRisk Management PlanROMRight -of -WaySBSouthboundSCADASupervisory Central and Data AcquisitionSCLSate Environmental Policy ActSIPSuplemental Draft Environmental ImpactSIPSuplemental Draft Environmental ImpactSIPState RouteSIPSuplemental Draft Environmental ImpactSIPSuplemental Draft Environmental ImpactSIPState RouteSIPState RouteSIPState RouteSIPState RouteSIPState RouteSIPState RouteSIPState RouteSIPState RouteSIPState RouteSIP <th>OMSF</th> <th>Operations and Maintenance Satellite Facility</th>	OMSF	Operations and Maintenance Satellite Facility		
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TBMTunnel Boring MachineTCETemporary Construction EasementTETraction ElectrificationTFKTraylor Frontier Kemper Joint Venture	START	Seattle Tunnel and Rail Team		
TCETemporary Construction EasementTETraction ElectrificationTFKTraylor Frontier Kemper Joint Venture	SWI	Stacy and Witbeck, Inc.		
TETraction ElectrificationTFKTraylor Frontier Kemper Joint Venture	TBM	Tunnel Boring Machine		
TFK Traylor Frontier Kemper Joint Venture	TCE	Temporary Construction Easement		
	ТЕ	Traction Electrification		
TOD Transit Oriented Development	TFK	Traylor Frontier Kemper Joint Venture		
-	TOD	Transit Oriented Development		

TVM UAC	Ticket Vending Machine Unallocated Contingency
U-Link	University Link project
UDS	University District Station
USFWS	U.S. Fish and Wildlife Service
UW	University Of Washington
UST	Underground Storage Tank
UWS	University of Washington Station
VE	Value Engineering
VECP	Value Engineering Cost Proposal
WBS	Work Breakdown Structure
WDFW	Washington Department of Fish and Wildlife
WSDOT	Washington Department of Transportation