

Progress Report

Regional Express & Bus Rapid Transit Program



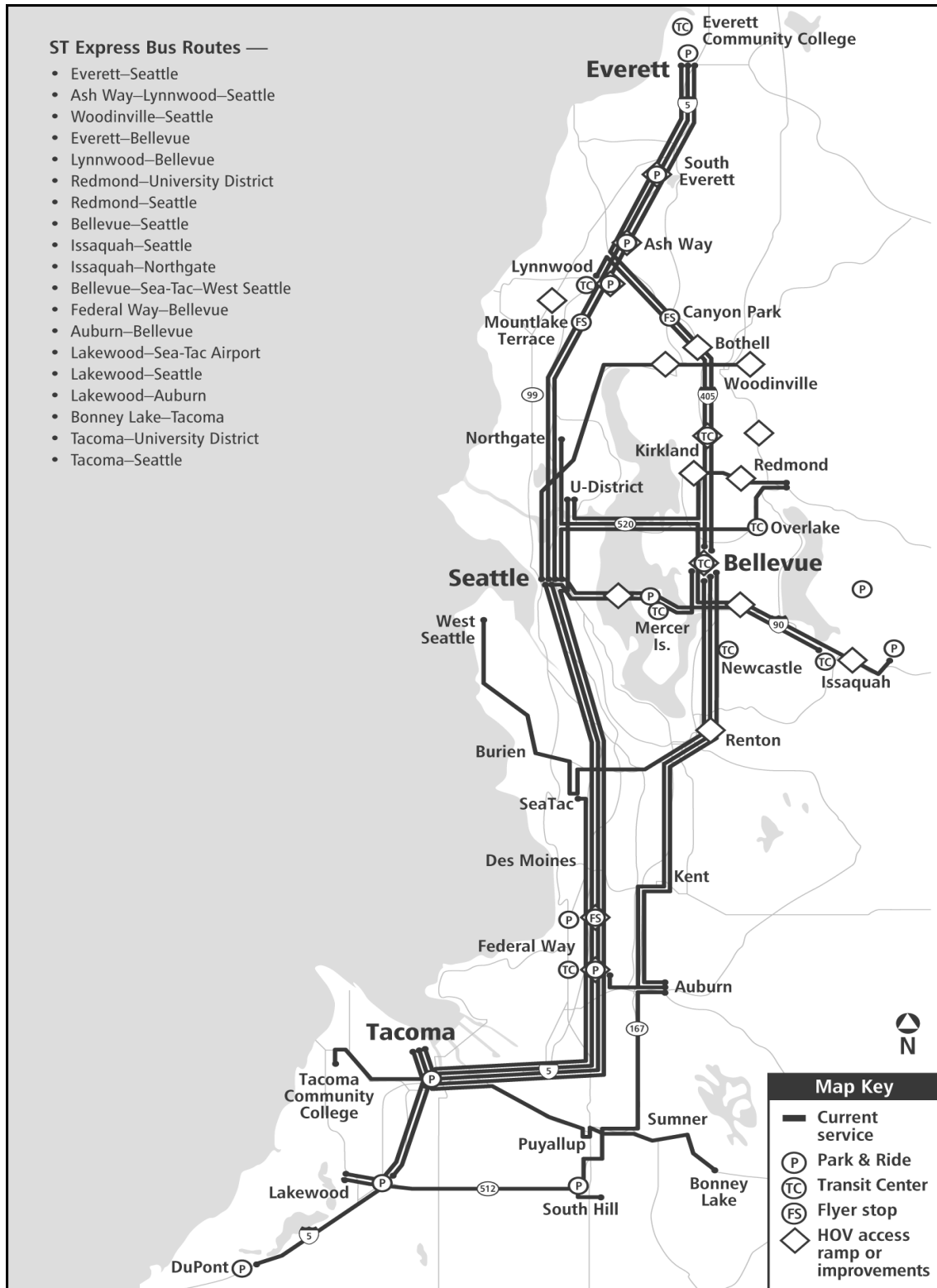
ST Express Bus routes serve urban centers in Snohomish, King, and Pierce

June | 2018



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

Regional Express & Bus Rapid Transit Program Overview



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 on hold.

I-405 Bus Rapid Transit: This project establishes Bus Rapid Transit (BRT) from the Lynnwood Transit Center to the Burien Transit Center via I-405 and SR 518. The project relies on the I-405 express toll 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 stations, including a new transit center in South Renton and new stations at Northeast 85th Street with BAT lanes extending toward Downtown Kirkland and at Northeast 44th Street in Renton.

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 that may be feasible.

I-90 Two-Way Transit and HOV Operations (Stage 3): Stage 3 provides for two-way transit/HOV operations on I-90 between 80th Avenue SE and Rainier Ave. Following completion of the Stage 3 project, the center roadway will be closed to traffic to allow construction of East Link Extension. Project detail page is located under the Link light rail section of this report.

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 / BUS RAPID TRANSIT | Authorized Project Allocation | Commitment to Date | Incurred to Date | Forecast to Complete | Estimated Final Cost (EFC) | Authorized Allocation vs. EFC |
|--------------------------------------|-------------------------------|--------------------|------------------|----------------------|----------------------------|-------------------------------|
| ST EXPRESS BUS BASE | \$5.8 | \$3.1 | \$1.2 | \$2.7 | \$5.8 | \$0 |
| I-405 BUS RAPID TRANSIT | \$88.1 | \$8.4 | \$3.0 | \$79.6 | \$88.1 | \$0 |
| SR 522 BUS RAPID TRANSIT | \$18.6 | \$3.4 | \$1.4 | \$15.2 | \$18.6 | \$0 |
| BUS ON SHOULDER PROJECT | \$3.9 | \$0.7 | \$0.0 | \$3.2 | \$3.9 | \$0 |
| REX I-90 2 WAY TRANS& HOV III | \$225.6 | \$205.1 | \$186.8 | \$20.6 | \$225.6 | \$0 |
| Total REGIONAL EXPRESS | \$341.9 | \$220.7 | \$192.4 | \$121.3 | \$341.9 | \$0 |

Figures are shown in millions



Regional Express & Bus Rapid Transit Program Overview

Program Schedule

Schedule for active projects are summarized below.

| 06-Aug-18 10:29 | | REX APR Update | | | | | | | | | | REX_APR Layout | | | | |
|--------------------------------------|------------|----------------|------|----|----|----|----|------|----|----|----|----------------|----|----|----|------|
| Activity/Name | Start | Finish | 2018 | | | | | 2019 | | | | 2020 | | | | 2021 |
| | | | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 |
| BRT - Bus Rapid Transit (REX) | 10-Nov-09A | 01-Feb-21 | | | | | | | | | | | | | | |
| X500387 - I-90 Stage 3 - R8A | 12-Jan-15A | 31-May-17A | | | | | | | | | | | | | | |
| X500005 - ST Express Bus Base | 10-Nov-09A | 01-Feb-21 | | | | | | | | | | | | | | |

Region 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 confirmation of fleet operations, facilities and site programming, and identification of site alternatives.

Phase Planning

Budget \$5.8 Million

Schedule Project on hold



St Express bus maintenance currently performed by transit partners.

Key Project Activities

Project is on hold.

Project Cost Summary

The ST Express Bus Base project cost is summarized below in accordance with Sound Transit's budget Work Breakdown Structure (WBS), figures 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 | \$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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Region Express & Bus Rapid Transit

I-405 Bus Rapid Express



Project Summary

| | |
|------------------|--|
| Scope | Develop a new bus rapid transit (BRT) system along the I-405 corridor and bus operations and maintenance facility. |
| 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. Buses will operate in general purpose lanes, bus-only shoulders, high occupancy vehicle lanes, express toll lanes, and bus-only 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 International Blvd Station, Burien Transit Center |
| Phase | Phase 1: Alternatives Development / ST3 Project Refinement |
| Budget | Overall budget is \$88.1 Million I-405 BRT: \$64.0 Million Preliminary Engineering (Phases 1-3) Bus OMF: \$24.0 Million Preliminary Engineering (Phases 1-3) |
| Schedule | Revenue Service: 2024 |



Map of project alignment

Key Project Activities

- Project refinement activities are ongoing per schedule.
- External engagement efforts have begun and are ongoing as planned.
- Planning for programmatic BRT elements (branding, station design, bus operations and maintenance base, and vehicle fleet) has begun.
- Phase 1 environmental work underway includes: defining the study area to identify the potentially affected environment; identifying and applying environmental screening criteria as the project is refined.



Regional Express & Bus Rapid Transit I-405 Bus Rapid Express

Project Cost Summary

The I-405 Bus Rapid Transit and Bus Operations and Maintenance Facility project cost is summarized below in accordance with Sound Transit’s budget Work Breakdown Structure (WBS), shown in millions.

Since March 2018, \$1.7M was incurred, of which \$0.4M was for staff (Admin) and \$1.3M 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.

Cost Summary by Phase

| Project Phase | Authorized Project Allocation | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Authorized Allocation vs. EFC |
|-------------------------|-------------------------------|--------------------|------------------|----------------------------|-------------------------------|
| Administration | \$13.7 | \$1.1 | \$1.1 | \$13.7 | \$0.0 |
| Preliminary Engineering | \$29.0 | \$6.6 | \$1.6 | \$29.0 | \$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 | \$0.3 | \$0.1 | \$0.4 | \$0.0 |
| Construction | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| ROW | \$45.0 | \$0.5 | \$0.2 | \$45.0 | \$0.0 |
| Total | \$88.1 | \$8.4 | \$3.0 | \$88.1 | \$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 will conduct a risk management workshop to identify all the potential risks during design and construction. An Interagency Group and Executive Leadership Group were established to support project decision-making and partner concurrence on project components.

The following are the top project risks and proposed mitigations:

- Completion of WSDOT’s I-405 Renton to Bellevue Widening and Express Toll Lanes Project.
- The I-405 BRT team is coordinating with WSDOT on the project’s RFQ and RFP for Design-Build services. Sound Transit will participate in WSDOT’s Design-Build process for the I-405 Renton to Bellevue Project and will integrate BRT milestones into the WSDOT schedule. Sound Transit will participate in design and constructability reviews for BRT related facilities.
- Completion of East Link’s Bellevue Downtown Station and Lynnwood Link’s City Center Station.
- The I-405 BRT team is coordinating closely with the East Link (2023) and Lynnwood Link (2024) teams to plan, design and construct BRT facilities that will serve these two light rail stations. The I-405 BRT team will track progress of construction and develop contingency plans, as appropriate, if construction schedules change.
- Planning, Design, Construction and Opening of the Bus Operations and Maintenance Facility.
- The Bus Operations and Maintenance 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 Operations and Maintenance Facility project development as it is on the critical path for the program.

Region Express & Bus Rapid Transit

I-405 Bus Rapid Express



Project Schedule

Preliminary Engineering/Project development includes three phases:

- Phase 1 – Alternatives Development / Project Refinements (current phase), Phase 1 is anticipated to be completed by 1st QTR 2019. The Sound Transit Board of Directors is expected to take action by advancing a proposed project into conceptual engineering and environmental review on the I-405 corridors in 1st QTR 2019.
- Phase 2 – Conceptual Engineering and Environmental Review (future phase), Phase 2 is anticipated to be completed by 4th QTR 2019.
- Phase 3 – Preliminary Engineering (future phase), Phase 3 is anticipated to be completed by 4th QTR 2020.
- I-405 BRT Final Design (Future Phase) Procurement is anticipated to start late 4th QTR 2020/early 1st QTR 2021.
- I-405 BRT Construction (Future Phase) is anticipated to be complete in 2024, some elements may occur after service starts in 2024 and continue in 2025
- Construction for the I-405 BRT project is expected to begin by 2023 and be completed by 2024. Construction of some elements may begin before 2023 and others may occur after service starts in 2024.
- I-405 BRT service will commence in 2024

Sound Transit is reliant upon and partnering with multiple agencies, jurisdictions and stakeholders to deliver the I-405 BRT project, such as WSDOT. The I-405/NE 44th and I-405/NE 85th Interchange projects are two such projects which Sound Transit is funding in part or in whole. There are other key WSDOT projects upon which the I-405 BRT project is reliant for speed and reliability, in particular, WSDOT’s I-405 Renton to Bellevue Widening and Express Toll Lanes Project, with an anticipated open to traffic date in 2024, as part of WSDOT’s overall I-405 Corridor Program.

The Bus Operations and Maintenance Facility (OMF) is anticipated to be completed in 2023.

| Activity ID | Activity Name | Remaining Duration | Start | Finish | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 |
|--|---------------------------------------|--------------------|-------------|-----------|------|------|------|------|------|------|------|------|
| | | | | | Q | Q | Q | Q | Q | Q | Q | Q |
| Sound Transit | | | | | | | | | | | | |
| I-405 BRT Master Schedule | | | | | | | | | | | | |
| Bus Rapid Transit (BRT) - East Corridor | | | | | | | | | | | | |
| I-405 BRT | | | | | | | | | | | | |
| Preliminary Engineering | | | | | | | | | | | | |
| | Alternative Analysis - Phase I | 243d | 01-Jul-17 A | 28-Feb-19 | | | | | | | | |
| | Conceptual Engineering - Phase II | 301d | 01-Mar-19 | 26-Dec-19 | | | | | | | | |
| | Preliminary Engineering - Phase III | 357d | 27-Dec-19 | 17-Dec-20 | | | | | | | | |
| Final Design | | | | | | | | | | | | |
| | Final Design Procurement | 272d | 18-Dec-20 | 15-Sep-21 | | | | | | | | |
| | Final Design | 675d | 17-Aug-21 | 22-Jun-23 | | | | | | | | |
| Right of Way | | | | | | | | | | | | |
| | Right of Way | 730d | 17-Aug-21 | 16-Aug-23 | | | | | | | | |
| Construction | | | | | | | | | | | | |
| | Construction Procurement | 300d | 23-Feb-23 | 19-Dec-23 | | | | | | | | |
| | Construction | 378d | 20-Dec-23 | 31-Dec-24 | | | | | | | | |
| Post Construction | | | | | | | | | | | | |
| | Revenue Service | 0d | 31-Dec-24 | 31-Dec-24 | | | | | | | | |
| | Project Float | 365d | 01-Jan-25 | 31-Dec-25 | | | | | | | | |
| | Project Completion | 0d | 31-Dec-25 | 31-Dec-25 | | | | | | | | |
| Bus Operations and Maintenance Facility (OMF) | | | | | | | | | | | | |
| | Preliminary Engineering | 329d | 01-Mar-19 | 23-Jan-20 | | | | | | | | |
| | Preliminary Engineering - (Phase III) | 329d | 01-Mar-19 | 23-Jan-20 | | | | | | | | |
| Right of Way | | | | | | | | | | | | |
| | Right of Way | 695d | 01-Mar-19 | 23-Jan-21 | | | | | | | | |
| Construction | | | | | | | | | | | | |
| | Construction Procurement | 300d | 23-Jan-20 | 18-Nov-20 | | | | | | | | |
| | Construction | 912d | 24-Jan-21 | 24-Jul-23 | | | | | | | | |
| | Construction | 912d | 24-Jan-21 | 24-Jul-23 | | | | | | | | |
| Post Construction | | | | | | | | | | | | |
| | Revenue Service | 0d | 24-Jul-23 | 24-Jul-23 | | | | | | | | |
| | Project Float | 160d | 25-Jul-23 | 31-Dec-23 | | | | | | | | |
| | Project Completion | 0d | 31-Dec-23 | 31-Dec-23 | | | | | | | | |



Regional Express & Bus Rapid Transit I-405 Bus Rapid Express

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.

- The I-405 BRT Interagency Group has held three meetings.
- The first I-405 BRT Elected Leadership Group Meeting was held on April 25 and the second is scheduled for July 31.
- A public open house with WSDOT and the City of Kirkland was held on April 26.
- I-405 BRT Project public open houses are scheduled for July 18 and July 19 in Renton and Kirkland respectively.

Sound Transit Board Actions

| Board Action | Description | Date |
|--------------|--|---------|
| M2018-16 | Authorizing the chief executive officer to execute Agreement GCA 3536 Task Order #33 with the Washington State Department of Transportation to provide professional services coordination for the project development phase of the I-405 Bus Rapid Transit project in the amount of \$202,630, with a 10% contingency of \$20,263, for a total authorized task order amount not to exceed \$222,893. | 2/8/18 |
| M2018-18 | Authorized the chief executive officer to execute a contract with WSP USA Inc. to provide project development services for the I-405 Bus Rapid Transit project in the amount of \$5,840,000, with a 10 % contingency of \$584,000, for a total not to exceed amount of \$6,424,000. | 2/22/18 |
| M2018-33 | Authorizing the chief executive officer to execute a task order with the Washington State Department of Transportation to provide project development services for the NE 85th Street In-Line Station portion of the I-405 Bus Rapid Transit project in the amount of \$583,690, with a 10% contingency of \$58,369, for a total authorized task order amount not to exceed \$642,059. | 3/8/18 |
| M2018-61 | Authorizing the chief executive officer to execute a Partnering Agreement with the City of Bothell on the SR 522 Bus Rapid Transit and I-405 Bus Rapid Transit projects. | 5/24/18 |

System Expansion

SR 522 Bus Rapid Transit

Project Summary

Scope The SR 522/NE 145th BRT route will connect the Shoreline South/145th Light Rail Station to the UW Bothell/Cascadia College area, with less frequent service to the Woodinville Park-and-Ride. The representative project assumes buses will operate primarily in Business Access and Transit (BAT) lanes, transit queue jumps and in general purpose lanes.

Alignment The approximately 8 mile route will travel via NE 145th Street and SR 522 serving Seattle, Shoreline, Lake Forest Park, Kenmore, and Bothell. Every other bus will travel 4 additional miles from UWB/CC to serve Woodinville.

Limits SR 522 and NE 145th Street in Seattle/Shoreline, Lake Forest Park, Kenmore, Bothell, and Woodinville

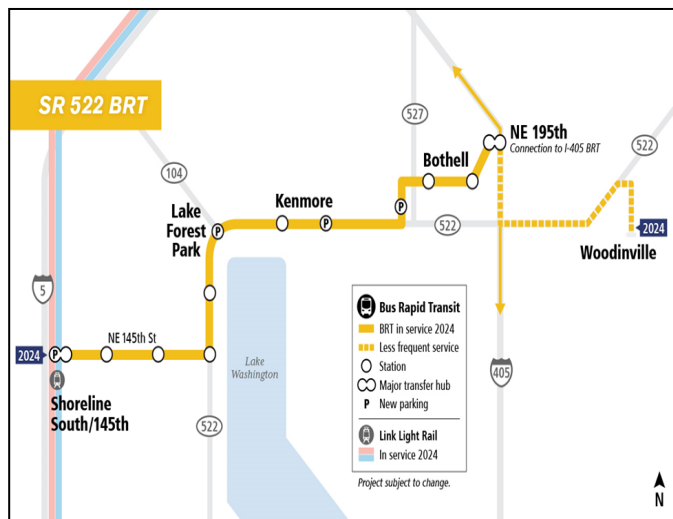
Stations Includes nine BRT station pairs plus an expanded transit center at UWB/CC. Additional parking is included in Lake Forest Park, Kenmore, and Bothell.

Systems BRT Operations
Transit Signal Priority

Phase Preliminary Engineering: Phase 1 Project Refinements Analysis

Budget \$18.6 Million for Preliminary Engineering (Phases 1-3)

Schedule Revenue Service: 2024



Map of Project Alignment

Key Project Activities

- Held Interagency Group meetings in April, May, and June and several meetings with individual cities, WSDOT, partner transit agencies, and college campuses.
- Held Elected Official's Group meeting in April and city managers group meetings in May and June.
- Held four meetings with property owner groups.
- Project refinements evaluations are proceeding per schedule.
- Conducted Project open houses and online virtual open house in May and June.
- Sound Transit met with federal partners, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), to discuss potential roles as lead agency and potential class of action for NEPA documents during Phase 2. Sound Transit is the lead agency under SEPA.
- Phase 1 environmental work underway includes: collecting baseline environmental information within the study area; identifying and applying environmental screening criteria as the project refinements are evaluated.

Project Cost Summary

The SR 522/NE 145th Street Bus Rapid Transit project cost is summarized below in accordance with Sound Transit’s budget Work Breakdown Structure (WBS), figures are shown in millions.

Since March 2018, project expenditures increased by approximately \$1.0 Million, primarily due to progress made by the consultant on project refinements evaluation, and 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 | \$6.6 | \$0.7 | \$0.7 | \$6.6 | \$0.0 |
| Preliminary Engineering | \$10.3 | \$2.5 | \$0.7 | \$10.3 | \$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 | \$1.4 | \$0.2 | \$0.0 | \$1.4 | \$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 | \$0.2 | \$0.0 | \$0.0 | \$0.2 | \$0.0 |
| Total | \$18.6 | \$3.4 | \$1.4 | \$18.5 | \$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 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. Early concurrence on project components is a key effort in the first year of project development.
- Risks include competing agency goals with limited street right-of-way. Decisions to be made during Phase 1 include parking locations, station locations, and location and scope of roadway improvements. ST is leading a multi-agency effort to address conflicts.
- Integration with the Shoreline South/145th LRT Station, and with the I-405 BRT project in Bothell are two critical interfaces. On-going coordination with the Lynnwood Link Expansion team and the I-405 BRT project team will help address conflicts.

System Expansion

SR 522 Bus Rapid Transit



Project Schedule

SR522/NE 145th BRT Preliminary Engineering/Project development includes three phases:

- Phase 1 – Alternatives Development / Project Refinements (current phase), Phase 1 is anticipated to be completed by 1st QTR 2019. The Sound Transit Board of Directors is expected to take action by advancing a proposed project into conceptual engineering and environmental review on the SR522/NE 145th corridor in 1st QTR 2019.
- Phase 2 – Conceptual Engineering and Environmental Review (future phase), Phase 2 is anticipated to be completed by 4th QTR 2019.
- Phase 3 – Preliminary Engineering (future phase), Phase 3 is anticipated to be completed by 4th QTR 2020.
- SR522/NE 145th BRT Final Design (Future Phase) Procurement is anticipated to start late 4th QTR 2019/early 1st QTR 2020.
- SR522/NE 145th BRT Construction (Future Phase) is anticipated to be complete in 2024, some elements may occur after service starts in 2024 and continue in 2025.
- Construction for the SR522/NE 145th BRT project is expected to begin by 2023 and be completed by 2024. Construction of some elements may begin before 2023 and others may occur after service starts in 2024.
- SR522/NE 145th BRT service will commence in 2024.

Sound Transit is reliant upon and partnering with multiple agencies, jurisdictions and stakeholders to deliver the SR522/NE 145th BRT project, such as WSDOT, and multiple cities along the SR522/NE 145th BRT corridor.

| Activity ID | Activity Name | Remaining Duration | Start | Finish | 2018 2019 2020 2021 2022 2023 2024 2025 | | | | | | | | | | | | | | | | | | | |
|---|---------------|--------------------|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | | | | | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | Q | |
| Sound Transit | | 2741d | 01-Jul-17 A | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| SR522/NE 145th BRT Master Schedule | | 2741d | 01-Jul-17 A | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Bus Rapid Transit (BRT) - North Corridor | | 2741d | 01-Jul-17 A | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| SR522/NE 145th BRT | | 2741d | 01-Jul-17 A | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Preliminary Engineering | | 901d | 01-Jul-17 A | 17-Dec-20 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Alternative Analysis - Phase I | | 243d | 01-Jul-17 A | 28-Feb-19 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Conceptual Engineering - Phase II | | 300d | 01-Mar-19 | 26-Dec-19 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Preliminary Engineering - Phase III | | 358d | 26-Dec-19 | 17-Dec-20 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Final Design | | 917d | 18-Dec-20 | 22-Jun-23 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Final Design Procurement | | 272d | 18-Dec-20 | 15-Sep-21 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Final Design | | 675d | 17-Aug-21 | 22-Jun-23 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Right of Way | | 730d | 17-Aug-21 | 16-Aug-23 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Right of Way (ROW) | | 730d | 17-Aug-21 | 16-Aug-23 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Construction | | 558d | 23-Jun-23 | 31-Dec-24 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Construction Procurement | | 180d | 23-Jun-23 | 20-Dec-23 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Construction | | 378d | 20-Dec-23 | 31-Dec-24 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Post Construction | | 365d | 31-Dec-24 | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Revenue Service | | 0d | 31-Dec-24 | 31-Dec-24 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Project Float | | 365d | 01-Jan-25 | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |
| Project Completion | | 0d | 31-Dec-25 | 31-Dec-25 | [Gantt bar] | | | | | | | | | | | | | | | | | | | |

Community Outreach

Sound Transit is committed to proactively seeking public input during all stages of the Project. The SR522 BRT Community Engagement and Communications 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:

- Open House events on May 21, 30 and 31
- Project website went live on May 30.

Sound Transit Board Actions

| Board Action | Description | Date |
|--------------|---|----------|
| M2018-61 | Authorized the chief executive officer to execute a Partnering Agreement with the City of Bothell on the SR522 Bus Rapid Transit project. | May 2018 |

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.

Phase Planning (Feasibility Study) and Construction (I-5 southbound Lynnwood to Mountlake Terrace bus-on-shoulder project, by WSDOT).

Budget \$3.9 Million (\$3.6M Planning Phase; 0.3M Construction Phase)

Schedule Revenue Service: Varies



Examples of Bus-on-Shoulder facilities

Key Project Activities

- Received approval from Sound Transit Capital Committee to execute two task orders with WSDOT - for the Bus-on Shoulder (BOS) Feasibility Study and for the I-5 southbound Lynnwood to Mountlake Terrace BOS project.
- Issued NTP to Feasibility Study consultant.
- WSDOT placed I-5 southbound BOS project out for bid on Small Works roster in April 2018 and received bids in May 2018.
- Feasibility Study data collection/inventory tasks commenced, and first meeting of technical advisory group occurred in June 2018.
- All BOS program environmental documentation and other related activities will be conducted by WSDOT with oversight and assistance as necessary by ST staff.

Project Cost Summary

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

Since March 2018, the project cost increased by approximately \$10K for Sound Transit staff time. The total project incurred to date is approximately \$40K, which is below the threshold of being visible in the below.

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 | \$0.0 | \$0.0 | \$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 | \$0.0 | \$0.4 | \$0.0 |
| Construction | \$0.3 | \$0.3 | \$0.0 | \$0.3 | \$0.0 |
| Light Rail Vehicles | \$0.0 | \$0.0 | \$0.0 | \$0.0 | \$0.0 |
| ROW | \$0.1 | \$0.0 | \$0.0 | \$0.1 | \$0.0 |
| Total | \$3.9 | \$0.7 | \$0.0 | \$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. Sound Transit continuously monitor project status and assesses associated risks.

The following are the top project wide risks:

- For a BOS improvement to be effective, the right combination of factors must be present: 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., as needed. Not all candidate roadways will meet these criteria.
- Candidate projects must benefit one or more of the three contributing subareas
- No feasible projects are identified, or those that are have a short useful lifespan.
- 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.

Regional Express & Bus Rapid Transit Bus on Shoulder



Project Schedule

In 2018/19, a feasibility study will be conducted to identify and evaluate candidate BOS projects. The most cost-effective projects will proceed to the design process. Bus on Shoulder improvement projects may be designed, constructed and in-service over a multiple year period from 2021-2024.

| Activity ID | Activity Name | Remaining Duration | Start | Finish | 2018 | | 2019 | |
|----------------------|--|--------------------|-------------|-----------|------|----|------|----|
| | | | | | Q1 | Q2 | Q3 | Q4 |
| Sound Transit | | | | | | | | |
| | Bus on Shoulders of I-5, I-405, SR 518 and SR 167 - Feasibility Study | 206d | 01-Jun-18 A | 22-Jan-19 | | | | |
| | Preliminary Engineering | 206d | 01-Jun-18 A | 22-Jan-19 | | | | |
| | Alternative Analysis - Phase I | 206d | 01-Jun-18 A | 22-Jan-19 | | | | |
| | Feasibility Study | 206d | 01-Jun-18 A | 22-Jan-19 | | | | |

Sound Transit Board Actions

| Board Action | Description | Date |
|--------------|----------------|------|
| | None to report | |