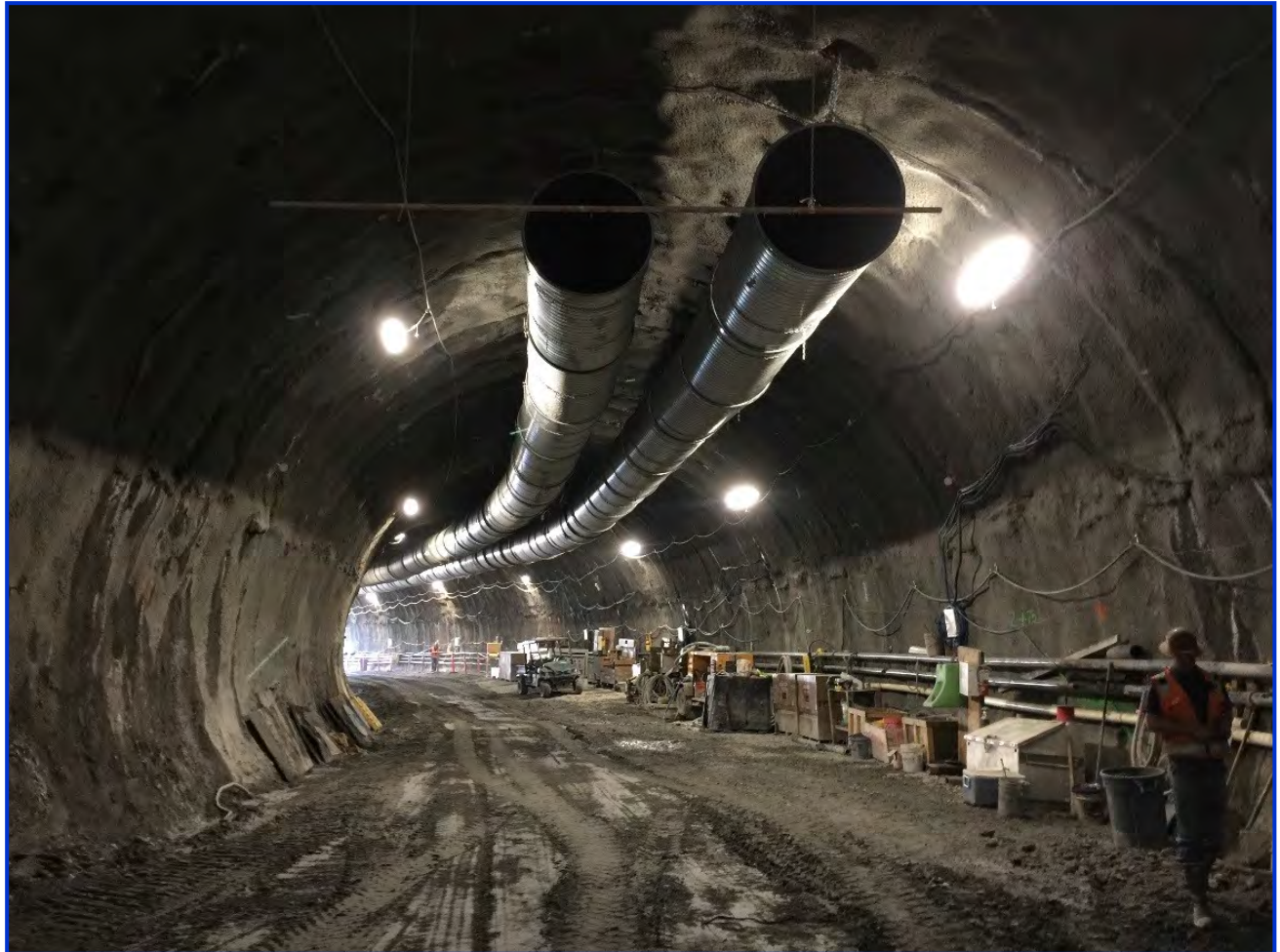


# Progress Report Link Light Rail Program

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Downtown Bellevue Tunnel

JULY | 2017





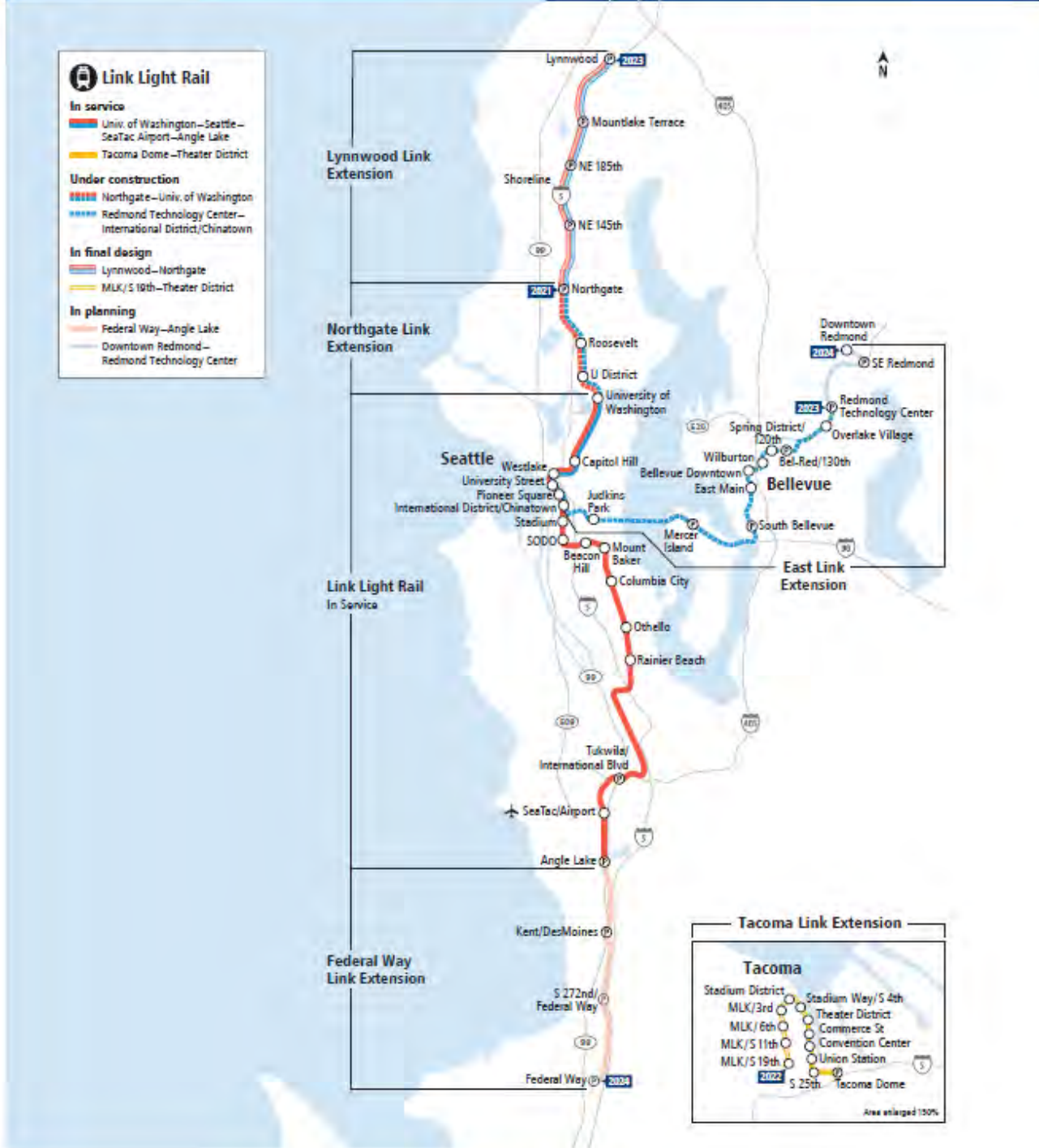


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## LINK LIGHT RAIL

### CURRENT SERVICE AND FUTURE EXTENSIONS OPENING BY 2024



Map of Sound Transit's current and future light rail projects.



## Projects

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

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

**Lynnwood Link Extension:** Lynnwood Link Extension extends light rail 8.5 miles to Snohomish County along I-5 from Northgate Mall in Seattle to the Lynnwood Transit Center, with four new light rail stations. The configuration includes at-grade, elevated, and retained cut/fill alignment. The proposed budget for this project is \$488.4M.

**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 Center is forecast for early 2023 with a tunnel route in Downtown Bellevue. The Sound Transit Board adopted the baseline capital budget of \$3.67B in April 2015.

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

**Federal Way Link Extension:** The Federal Way Link Extension adds approximately 7.8 miles of light rail from the Angle Lake Station in the City of SeaTac to the Federal Way City Center. The extension generally parallels SR 99 and I-5 freeway with stations at Kent/Des Moines, South 272nd Star Lake park –and-ride and the Federal Way Transit Center. The current budget for this project is \$412.6M.

**Tacoma Link Expansion:** The Tacoma Link Expansion 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 1<sup>st</sup>. Street, Division Avenue, and Martin Luther King Jr. Way. The Final Design budget is \$34.6M.

**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 pays, 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 \$740.7M in September 2015.

**Downtown Redmond Link Extension:** This project adds two new light rail stations beyond the future Redmond Technology Center Station being build as part of the East Link Extension. Preliminary Engineering for the Redmond light rail extension resumed in 2016 with a budget of \$28.6M.



# Link Light Rail Program Overview

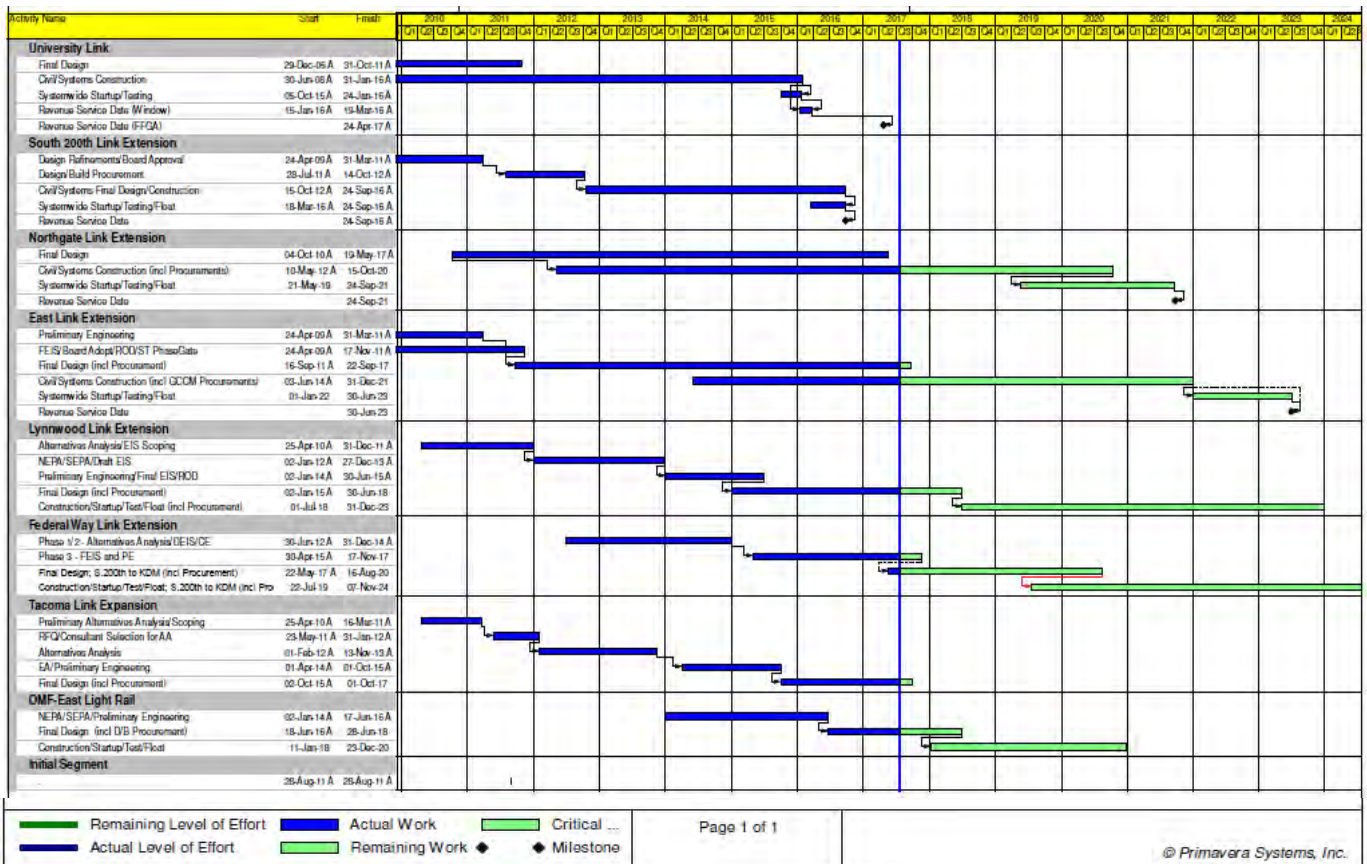
## Program Budget

| Project                    | Adopted Budget   | Committed to Date | Incurred to Date | Forecast to Complete | Estimated Final Cost | Adopted Budget vs. EFC |
|----------------------------|------------------|-------------------|------------------|----------------------|----------------------|------------------------|
| University Link            | \$1,756.0        | \$1,513.5         | \$1,502.6        | \$40.7               | \$1,554.2            | \$201.9                |
| Northgate Link Extension   | \$1,899.8        | \$1,580.4         | \$925.4          | \$319.4              | \$1,899.8            | \$0                    |
| Lynnwood Link Extension    | \$488.4          | \$217.3           | \$155.4          | \$271.1              | \$488.4              | \$0                    |
| East Link Extension        | \$3,677.2        | \$2,774.1         | \$824.3          | \$903.0              | \$3,677.1            | \$0                    |
| South 200th Link Extension | \$383.2          | \$332.4           | \$327.2          | \$8.8                | \$341.2              | \$42.0                 |
| Federal Way Extension      | \$412.6          | \$53.8            | \$45.4           | \$358.8              | \$412.6              | \$0                    |
| Tacoma Link Expansion      | \$34.6           | \$23.0            | \$18.0           | \$11.6               | \$34.6               | \$0                    |
| Link O & M Facility: East  | \$449.2          | \$289.5           | \$56.9           | \$159.7              | \$449.2              | \$0                    |
| ST2 LRV Expansion          | \$740.7          | \$653.6           | \$10.5           | \$87.1               | \$740.7              | \$0                    |
| Downtown Redmond Link Ext. | \$28.6           | \$14.2            | \$4.0            | \$14.4               | \$28.6               | \$0                    |
| <b>Total Link</b>          | <b>\$9,870.3</b> | <b>\$7,451.7</b>  | <b>\$3,869.7</b> | <b>\$2,174.7</b>     | <b>\$9,626.4</b>     | <b>\$243.9</b>         |

Table in millions.

## Program Schedule

Schedules for active projects are summarized below.



## Scope

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

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

**Stations:** 2 underground center platform stations – Capitol Hill (U240) and University of Washington (U250). U240 is approximately 65' underground with three station entrances. U250 is about 100' below ground, with three station entrances and connections to the UW campus by a pedestrian bridge.

**System:** 27 LRV; direct fixation tracks, signals, traction electrification, and SCADA communications

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

**Schedule:** Revenue Service began on March 19, 2016.



## Key Project Issues

- Revenue Service commenced on March 19, 2016. Coordination between the Construction teams and the Operations group are ongoing to adjust the System for optimum operations. Contractors continue to perform punch list items but access to these activities poses to be challenging as they now have to work under Operations' rules and not Construction protocols.
- *U830 Systems:* Contractor is currently focusing on punch list on U-Link and systems refinement to achieve optimal operation status. U-Link Systems has encountered some issues related to this infancy period and is working for resolutions.
- *Certification of Occupancy:* University Link continues to operate under a temporary certification of occupancy until all permit requirements are fully met. The final items remaining are the utilities as-built to be submitted to City of Seattle (SPU) and a final review of the emergency ventilation systems by the Seattle Fire Department.
- Commercial issues with all prime Civil contractors (with the exception of Capitol Hill Station Contractor) have been negotiated as the project proceeds through the close-out process.
- Miscellaneous follow-on commitments and restoration work remain.

## Project Cost Summary

The U-Link project cost is summarized in two types of cost classifications. In the first table, cost is classified in accordance with Sound Transit's Work Breakdown Structure (WBS); and in the second table, cost is summarized in accordance to the FTA's Standard Cost Categories (SCC) format. (Both tables' figures in millions.)

| WBS Phase Elements      | Baseline Budget    | Current Adopted Budget | Commitment to Date* | Incurred to Date   | Est. Final Cost (EFC) | Adopted Budget vs. EFC |
|-------------------------|--------------------|------------------------|---------------------|--------------------|-----------------------|------------------------|
| ADMINISTRATION          | \$ 115.23          | \$ 113.55              | \$ 82.16            | \$ 81.32           | \$ 88.17              | \$ 25.38               |
| PRELIMINARY ENGINEERING | \$ 24.39           | \$ 24.26               | \$ 24.26            | \$ 24.26           | \$ 24.26              | \$ -                   |
| FINAL DESIGN            | \$ 77.94           | \$ 90.31               | \$ 87.98            | \$ 86.21           | \$ 88.66              | \$ 1.65                |
| CONSTRUCTION SERVICES   | \$ 68.53           | \$ 94.81               | \$ 86.94            | \$ 86.51           | \$ 88.71              | \$ 6.11                |
| 3rd PARTY AGREEMENTS    | \$ 18.65           | \$ 18.65               | \$ 11.65            | \$ 11.30           | \$ 13.23              | \$ 5.42                |
| CONSTRUCTION            | \$ 1,180.00        | \$ 1,158.18            | \$ 994.84           | \$ 987.34          | \$ 1,022.38           | \$ 135.81              |
| VEHICLES                | \$ 103.91          | \$ 103.91              | \$ 99.20            | \$ 99.19           | \$ 101.91             | \$ 2.00                |
| ROW                     | \$ 167.33          | \$ 152.33              | \$ 126.43           | \$ 126.43          | \$ 126.79             | \$ 25.54               |
| <b>Capital Total</b>    | <b>\$ 1,755.97</b> | <b>\$ 1,756.01</b>     | <b>\$ 1,513.46</b>  | <b>\$ 1,502.56</b> | <b>\$ 1,554.10</b>    | <b>\$ 201.91</b>       |
| FINANCE COST            | \$ 191.71          | \$ 191.71              | \$ 191.71           | \$ 174.87          | \$ 191.71             | \$ -                   |
| <b>Project Total</b>    | <b>\$ 1,947.68</b> | <b>\$ 1,947.72</b>     | <b>\$ 1,705.16</b>  | <b>\$ 1,677.44</b> | <b>\$ 1,745.81</b>    | <b>\$ 201.91</b>       |

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

In July, the projected Estimated Final Cost (EFC) including Finance Cost remains at about \$1.75B. As the project inches closer to close out, the timing for expenditure becomes less predictable. This period, after some cost adjustments the project expenditure net a little under \$69K and continues to inch the project's Incurred to Date amount about \$1.5B (Finance Cost excluded). Direct construction activities pertain to close out and miscellaneous follow on work. The construction EFC continues to be approximately \$1B. The trend continues to hold as the project is essentially completed with only miscellaneous follow on scope and commercial issues remaining. Systems (U830) continues optimization process with some operational equipment purchases trailing. The Total Incurred to Date for the Construction Phase is about \$987M and LRV is at about \$99.2M. Cost of repairs are excluded from this project and tracked independently.

Construction EFC under the SCC format remains relatively unchanged at about \$1B. Construction SCC expenditures to date at about \$975M an increase of about \$0.1M—mostly attributed to Systems' continuing optimization and resolutions to change order work and miscellaneous follow on work. Total capital cost incurred to date including non-construction cost (SCC 60 thru 90) now at \$1.5B or about 85% of total project budget scoped (excluding Finance Cost). Total project cost incurred to date at the end of July 2017 close including Finance Cost is at \$1.67B. The financing cost incurred to date is about \$175M. University Link EFC continues to be projected to close out with at least \$200M under budget excluding financing cost.

| Project Elements by SCC                  | Baseline Budget    | Current Adopted Budget | Commitment to Date* | Incurred to Date   | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|--|--------------------|------------------------|---------------------|--------------------|----------------------------|------------------------|
| 10 Guideway & Track Elements             | \$ 626.83          | \$ 450.46              | \$ 455.74           | \$ 455.74          | \$ 461.23                  | \$ (10.77)             |
| 20 Stations                              | \$ 366.33          | \$ 350.75              | \$ 344.88           | \$ 342.90          | \$ 353.10                  | \$ (2.34)              |
| 30 Support Facilities: Yards, Shops      | \$ 7.01            | \$ 24.83               | \$ 23.43            | \$ 23.30           | \$ 24.80                   | \$ 0.03                |
| 40 Sitework & Special Conditions         | \$ 59.03           | \$ 67.39               | \$ 57.16            | \$ 54.81           | \$ 56.91                   | \$ 10.48               |
| 50 Systems                               | \$ 69.63           | \$ 116.42              | \$ 100.57           | \$ 98.46           | \$ 102.40                  | \$ 14.03               |
| <b>Construction Subtotal (SCC 10-50)</b> | <b>\$ 1,128.82</b> | <b>\$ 1,009.85</b>     | <b>\$ 981.78</b>    | <b>\$ 975.21</b>   | <b>\$ 998.43</b>           | <b>\$ 11.42</b>        |
| 60 Row, Land, Existing Improvements      | \$ 167.33          | \$ 126.60              | \$ 126.43           | \$ 126.43          | \$ 125.77                  | \$ 0.83                |
| 70 Vehicles                              | \$ 99.76           | \$ 100.16              | \$ 99.87            | \$ 99.87           | \$ 100.16                  | \$ 0.00                |
| 80 Professional Services                 | \$ 306.41          | \$ 346.58              | \$ 305.37           | \$ 301.06          | \$ 318.26                  | \$ 28.33               |
| 90 Unallocated Contingency               | \$ 53.65           | \$ 172.81              | \$ -                | \$ -               | \$ 11.48                   | \$ 161.33              |
| <b>Capital Cost Total (SCC 10-90)</b>    | <b>\$ 1,755.97</b> | <b>\$ 1,756.01</b>     | <b>\$ 1,513.46</b>  | <b>\$ 1,502.56</b> | <b>\$ 1,554.10</b>         | <b>\$ 201.91</b>       |
| 100 Finance Cost                         | \$ 191.71          | \$ 191.71              | \$ 191.71           | \$ 174.87          | \$ 191.71                  | \$ -                   |
| <b>Project Total</b>                     | <b>\$ 1,947.68</b> | <b>\$ 1,947.72</b>     | <b>\$ 1,705.16</b>  | <b>\$ 1,677.44</b> | <b>\$ 1,745.81</b>         | <b>\$ 201.91</b>       |

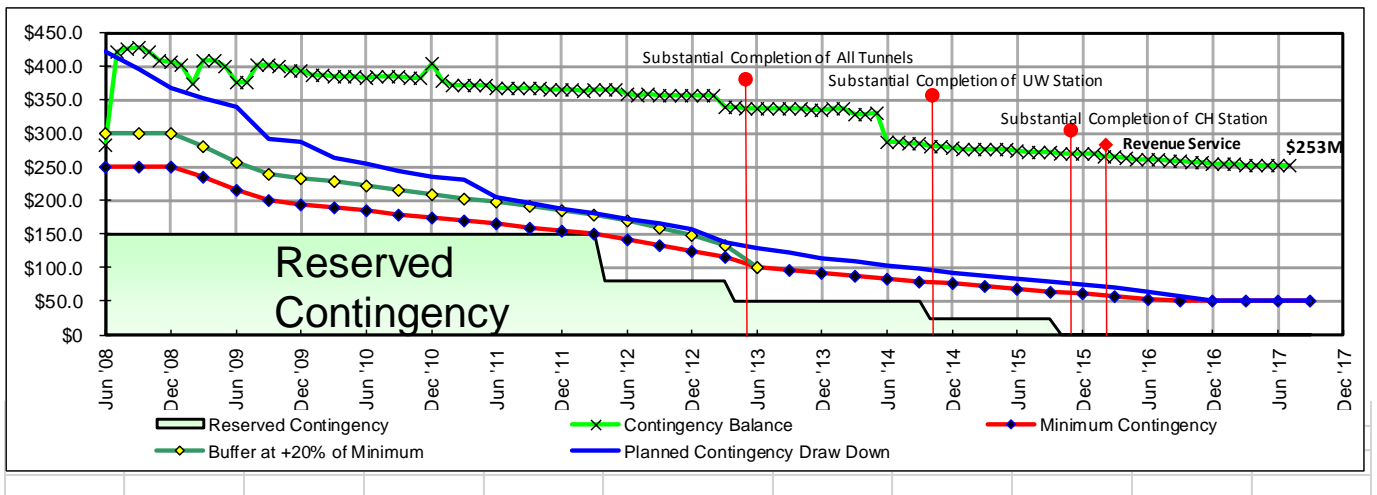
(\*)Totals may not equal column sums due to rounding of line entries.



## Cost Contingency Management

At this close out stage of the project, contingencies remains very healthy at approximately \$250M. Multitudes of favorable factors contributed to this positive stage that ranges from construction bidding climate, ROW acquisition cost trends, diligent project risk management practices, to excellent tunneling conditions. In July, overall contingencies notched down by about \$320K due to miscellaneous change orders and follow on project commitments. While major construction activities are now complete, there are still considerable follow-on scope to complete (pertaining to close-out of the project, systems adjustments to optimize the operating systems as well as settlement of commercial issues). Barring any catastrophic event, the likelihood that this contingency stays on trend is high. The forecast indicates that approximately 80% of these contingencies will be remain unused; thereby, generating at least \$200M of budget savings excluding financing cost.

**MINIMUM CONTINGENCY CURVES** as of July 31, 2017 \$ in millions



## U240 Contract – Capitol Hill Station

### Close-out

The U240 Contractor achieved Substantial Completion on December 31, 2015.

### Close-out Activities

#### Current Period

- Continued negotiating and finalizing outstanding commercial issues. The latest round of mediation was successful in resolving some subcontractor claims, but a final settlement with the general contractor has not been reached.

#### Next Period

- Continue negotiating and finalizing commercial issues.

### Closely Monitored Issues

- Multiple commercial issues remain open including various notice of intents to claim and actual claims. These claims continue to be reviewed and assessed by Sound Transit and the Contractor.

### Cost Summary

| Present Financial Status                        | Amount        |
|---|---------------|
| <b>U240 Contractor - Turner Construction Co</b> |               |
| Original Contract Value                         | \$104,850,276 |
| Change Order Value                              | \$11,254,629  |
| Current Contract Value                          | \$116,104,905 |
| Total Actual Cost (Incurred to date)            | \$113,926,440 |
| Financial Percent Complete:                     | 98%           |
| Physical Percent Complete:                      | 99%           |
| Authorized Contingency                          | \$11,742,514  |
| Contingency Drawdown                            | \$11,254,629  |
| Contingency Index                               | 1.02          |

## U250 Contract – University of Washington Sta.

### Close-out

Milestone #7, Substantial Completion, was granted in November 2014. U250 achieved acceptance on April 26, 2016.

### Close-out Activities

- All outstanding claims have been verbally settled and will continue moving through the formal execution phase. A final settlement change order will be issued to the Contractor.

### Cost Summary

| Present Financial Status                          | Amount      |
|---|-------------|
| <b>U250 Contractor - Hoffman Construction Co.</b> |             |
| Original Contract Value                           | 141,745,898 |
| Change Order Value                                | 8,568,882   |
| Current Contract Value                            | 150,314,781 |
| Total Actual Cost (Incurred to date)              | 150,254,810 |
| Financial Percent Complete:                       | 99%         |
| Physical Percent Complete:                        | 99%         |
| Authorized Contingency                            | 9,152,295   |
| Contingency Drawdown                              | 8,568,882   |
| Contingency Index                                 | 1.06        |

## U810 Contract – *Maintenance of Way*

### Close-out

ST and contractor have settled on a final contract amount.

### Close-out Activities

No more updates.

### Cost Summary

| Present Financial Status                        | Amount       |
|---|--------------|
| <b>U810– Forma Construction (Design/ Build)</b> |              |
| Original Contract Value                         | \$11,998,725 |
| Change Order Value                              | \$501,013    |
| Current Contract Value                          | \$12,499,738 |
| Total Actual Cost (Incurred to date)            | \$12,438,547 |
| Financial Percent Complete                      | 99%          |
| Physical Percent Complete:                      | 99%          |
| Authorized Contingency                          | \$959,898    |
| Contingency Drawdown                            | \$501,013    |
| Contingency Index                               | 1.9          |

## U830 Contract – *Track, Signal, Traction Power and Communications*

### Close-out

Revenue Service on March 19, 2016. Punchlist and close-out work continue.

### Close-out Activities

#### Current Period

- Ongoing work on Systems punch list items; delivery of spare parts; and finalizing O&M Manuals, As-built drawings, and other final project documentation.
- Ongoing work on commercial closure of the U830 project. ST working closely with the GC/CM and the EC/CMs to ensure rapid and fair commercial settlement of claims.

#### Next Period

- Continue Systems punch list, spare parts delivery, and finalizing O&M Manuals and documentation.
- Continue work on commercial closure of the project.

### Closely Monitored Issues

- ST working closely with the GC/CM and the EC/CMs to ensure rapid and fair commercial settlement of claims.

### Cost Summary

| Present Financial Status                           | Amount        |
|--|---------------|
| <b>U830 GC/CM Contractor - Stacy &amp; Witbeck</b> |               |
| Original Contract Value                            | \$119,167,433 |
| Change Order Value                                 | \$5,582,860   |
| Current Contract Value                             | \$124,750,293 |
| Total Actual Cost (Incurred to date)               | \$121,602,934 |
| Financial Percent Complete                         | 97.5%         |
| Physical Percent Complete:                         | 99.0%         |
| Authorized Contingency                             | \$5,958,373   |
| Contingency Drawdown                               | \$5,582,860   |
| Contingency Index                                  | 1.1           |

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# Link Light Rail Northgate Link Extension

## 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 the UW Station, boring tunnels under campus then continues north to a portal located north of NE 94<sup>th</sup> Street on the east side of I-5, then transitioning to an aerial structure running north to the Northgate Mall.
- Stations:** The *U District Station* is an underground station located on the west side of the UW campus near Brooklyn Ave. and NE 45<sup>th</sup> St. The *Roosevelt Station* is an underground station located near NE 65<sup>th</sup> St. and 12<sup>th</sup> Ave NE. The *Northgate Station* is an elevated station located at the southwest edge of the Northgate Mall property.
- Systems:** Include Signals, track electrification, and SCADA communications.
- Budget:** \$1.899 Billion
- Service:** September 2021
- Phase:** Final Design and Construction



Map of Northgate Link Extension route and stations.

## Key Project Activities

- JCM handed over U District Station site to N140 contractor, Hoffman Construction, on July 17. A Letter of Agreement for the handover was issued July 21, 2017. Hoffman has full mobilization on site.
- For N125 TBM Tunnels, JCM completed removal of concrete debris and excavation down to shaft permanent slab elevation and continued final cleanup for shaft handover.
- For N150 Roosevelt Station, Video production staff scheduled a drone flyover with N150 construction management over construction work site. Contractor (Hoffman) placed concrete for specific north and center station walls and north columns and placed concrete for final invert pour.
- For N160 Northgate Station, Contractor (Absher) continued setting track slab decking and edge formwork; Maintained dewatering while monitoring water levels and potential wall movement. Crews continued tiebacks and lagging installation.
- For N180 Trackwork, The revised criteria for welding requirements for ultra-straight rail is under review by designer.

## Closely Monitored Issues

- Overhead electrical work in SB tunnel between UDS and UWS is proceeding slowly due to manpower levels.
- ST is closely monitoring water leakage in tunnel at previously frozen cross passages 29-32.

## Project Cost Summary

The Northgate Link project cost is summarized below by two cost categories. In the first table, the cost is summarized in accordance with Sound Transit's 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.

### Cost Summary by Phase

| Project Phase           | Baseline Budget  | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|-------------------------|------------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| ADMINISTRATION          | \$147.9          | \$147.9                | \$49.2             | \$49.1           | \$147.9                    | \$0.0                  |
| PRELIMINARY ENGINEERING | \$15.1           | \$15.1                 | \$15.1             | \$15.1           | \$15.1                     | \$0.0                  |
| FINAL DESIGN            | \$129.2          | \$129.2                | \$116.6            | \$105.0          | \$129.2                    | \$0.0                  |
| CONSTRUCTION SERVICES   | \$118.3          | \$118.3                | \$97.7             | \$55.0           | \$118.3                    | \$0.0                  |
| 3rd PARTY AGREEMENTS    | \$11.8           | \$11.8                 | \$10.0             | \$6.3            | \$11.8                     | \$0.0                  |
| CONSTRUCTION            | \$1,343.0        | \$1,343.0              | \$1,197.9          | \$601.4          | \$1,343.0                  | \$0.0                  |
| ROW                     | \$112.3          | \$112.3                | \$93.9             | \$93.5           | \$112.3                    | \$0.0                  |
| PROJECT CONTINGENCY     | \$22.2           | \$22.2                 | \$0.0              | \$0.0            | \$22.2                     | \$0.0                  |
| <b>Total</b>            | <b>\$1,899.8</b> | <b>\$1,899.8</b>       | <b>\$1,580.4</b>   | <b>\$925.4</b>   | <b>\$1,899.8</b>           | <b>\$0.0</b>           |

The Estimated Final Cost (EFC) for the project as of this reporting period is \$1,899.8M, which is equal to the current project budget. This period approximately \$31.9M was incurred, of which \$29.2M was for the N125 tunneling contract, the N140, N150, and N160 Station Finishes contracts, the N180 Trackwork contract and N830 Systems contract, and other miscellaneous construction; \$0.35M was incurred for civil and systems final design and design support during construction; and \$1.9M was for construction management. The remaining expenditures were for third party coordination, permits, staff, legal, right-of-way and other direct charges.

### Cost Summary by SCC

| SCC Element                                | Baseline Budget  | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|--|------------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| 10 GUIDEWAY & TRACK                        | \$595.6          | \$547.6                | \$494.3            | \$382.9          | \$548.8                    | (\$1.2)                |
| 20 STATIONS                                | \$376.1          | \$429.0                | \$414.9            | \$88.5           | \$430.6                    | (\$1.6)                |
| 30 SUPPORT FACILITIES: YARD, SHOP          | \$5.3            | \$5.3                  | \$6.4              | \$5.3            | \$6.4                      | (\$1.1)                |
| 40 SITEWORK & SPECIAL CONDITIONS           | \$140.8          | \$225.1                | \$165.3            | \$109.4          | \$218.8                    | \$6.3                  |
| 50 SYSTEMS                                 | \$110.9          | \$95.1                 | \$106.7            | \$6.9            | \$97.4                     | (\$2.3)                |
| <b>Construction Subtotal (SCC 10 - 50)</b> | <b>\$1,228.7</b> | <b>\$1,302.1</b>       | <b>\$1,187.8</b>   | <b>\$593.0</b>   | <b>\$1,302.1</b>           | <b>\$0.0</b>           |
| 60 ROW, LAND, EXISTING IMPROVEMENTS        | \$119.9          | \$110.9                | \$93.9             | \$93.5           | \$110.9                    | \$0.0                  |
| 80 PROFESSIONAL SERVICES                   | \$420.7          | \$429.1                | \$298.7            | \$238.9          | \$429.0                    | \$0.1                  |
| 90 CONTINGENCY                             | \$130.4          | \$57.8                 | \$0.0              | \$0.0            | \$57.8                     | (\$0.1)                |
| <b>Capital Total (SCC 10 - 90)</b>         | <b>\$1,899.8</b> | <b>\$1,899.8</b>       | <b>\$1,580.4</b>   | <b>\$925.4</b>   | <b>\$1,899.8</b>           | <b>\$0.0</b>           |

## Cost Contingency Management

Compared to the baseline amount of \$396.2M, the Total Contingency has decreased by \$159.4M to \$236.8M, which is 24.3% of project work remaining. During this reporting period, a decrease of \$0.7M in the overall project contingency occurred. Detailed information is provided below.

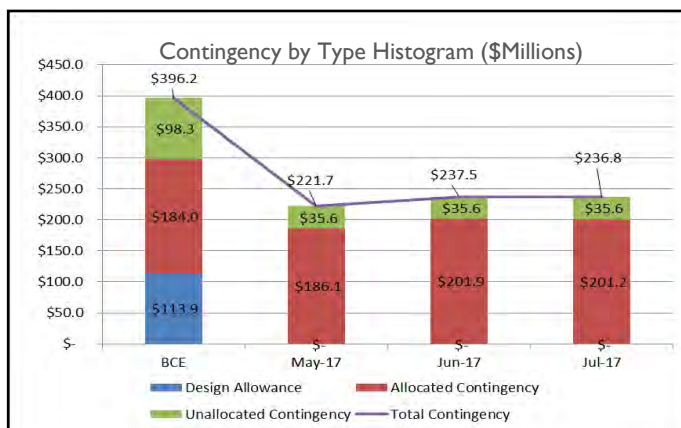
**Design Allowance (DA)** – The baseline Design Allowance of \$113.9 M has been fully depleted and all major contracts have been awarded.

## Cost Contingency Management, continued

**Allocated Contingency (AC)**– Compared to the baseline amount of \$184.0M, Allocated Contingency has increased by \$17.2M to \$201.2M. During this reporting period, a decrease of \$0.7M occurred in the AC following execution of change orders on the N125 Tunnel, and the N150 and N160 Station Finishes contracts.

**Unallocated Contingency (UAC)** – Compared to the baseline amount of \$98.3M, Unallocated Contingency has decreased by \$62.7M to \$35.6M. No changes to UAC occurred during this period.

| Contingency Status      | Baseline        |              | Current         |                     |
|-------------------------|-----------------|--------------|-----------------|---------------------|
|                         | Amount          | % of Total   | Amount          | % of Work Remaining |
| Design Allowance        | \$ 113.9        | 5.3%         | \$ -            | 0.0%                |
| Allocated Contingency   | \$ 184.0        | 8.6%         | \$ 201.2        | 20.6%               |
| Unallocated Contingency | \$ 98.3         | 4.6%         | \$ 35.6         | 3.7%                |
| <b>Total</b>            | <b>\$ 396.2</b> | <b>18.6%</b> | <b>\$ 236.8</b> | <b>24.3%</b>        |



## Project Schedule

The N113 115kV Transmission Line work is completed. This completes all of the advanced utility relocation contracts for the Northgate Link Extension.

The N125 Tunneling Contractor (JCM) is continuing work on cross passages and tunnel finishes. JCM's July schedule shows achievement of Milestone 5, and handover of the N140 U District Station box on August 17, 2017. Milestone 5A for completion of the tunnel work is scheduled for November 2017. The turn-over of UDS on August 17 has pushed back all of the N140 milestones and absorbed all of the contract interface float between N125 and N140, as well as the interface float between N140 and N180. JCM continues to forecast a 12 day late achievement of Milestone 6 Substantial Completion.

The N140 U District Station Contractor Hoffman Construction is continuing to set up the construction offices at the Key Bank site. Review of submittals continues. Hoffman received site access on July 17, 2017. This date sets the milestones for the N140 contract, which will be later than originally planned. ST is working with Hoffman to find ways to improve the schedule. Hoffman is currently working on the contract baseline schedule.

At Roosevelt Station (RVS), the N150 Contractor, Hoffman Construction, is continuing with the Invert pours and has begun wall pours with-in the box. Work at RVS remains on schedule.

The N160 Northgate Station & Elevated Guideway Contractor, Absher has begun installation of the pre-cast girders at the Station. Drilling is proceeding at the "A" series shafts south of the station for Guideway units 1 & 2. Columns are being constructed north of the station for Guideway Unit 4. At the Parking Garage site, the Contractor is continuing mass excavation, installation of soil nails, timber lagging and soldier piles. Relocation of the storm sewer on 1st Ave. is underway.

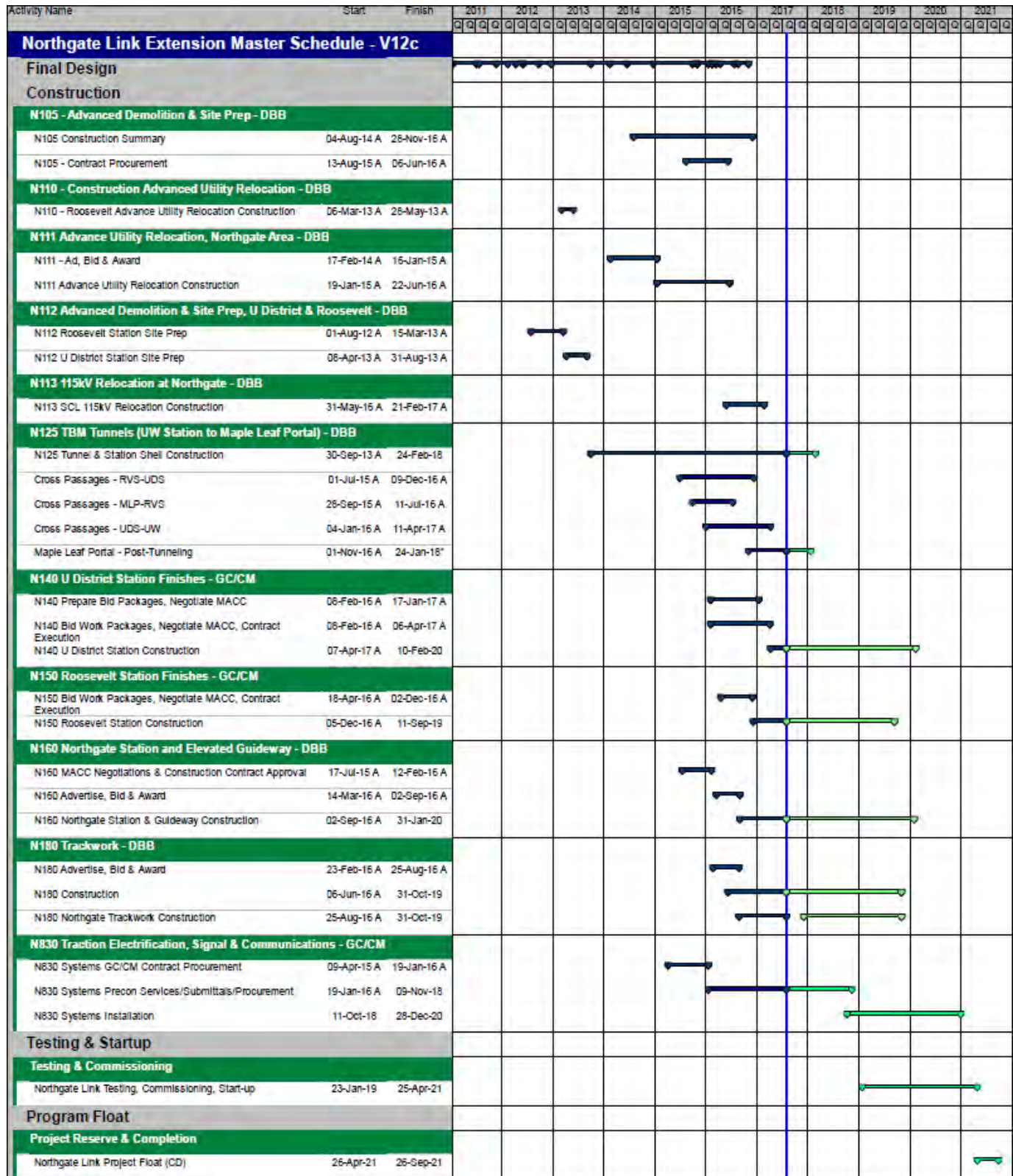
The N180 Trackwork contract is currently casting the initial 3'10" test slabs and receiving the forms for the 7' slabs. Isolation pad production, for the 5Mhz pads is continuing. The Contractor is finalizing the order with British Steel for the Ultra-Straight Rail.

The N830/E750 Systems contract was issued the NTP on June 2, 2017. Mass Electric is currently working on submission of early submittals and the Preliminary Schedule.

Revenue Service date for Northgate Link Extension is scheduled in September 2021. See schedule in the following page.



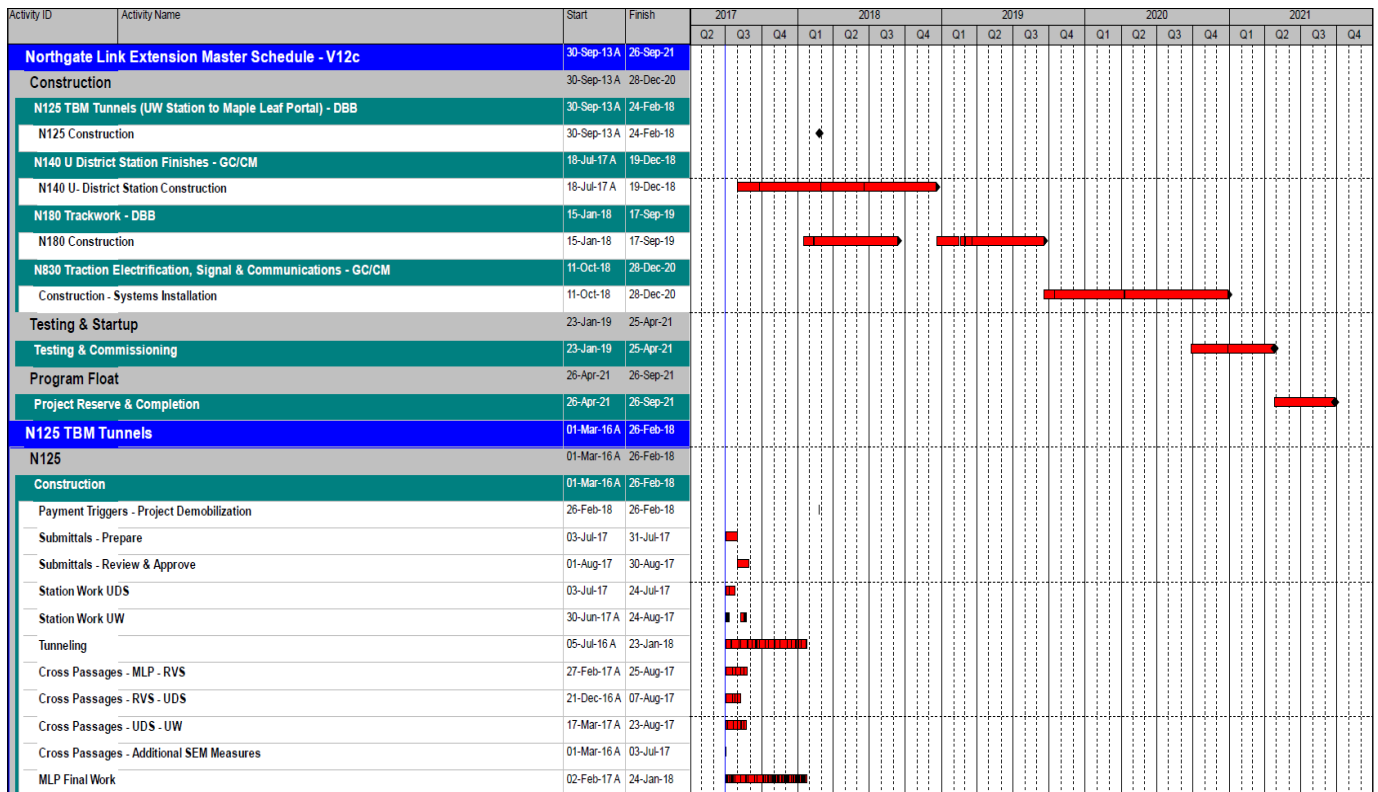
## Project Schedule, continued





## Critical Path Analysis

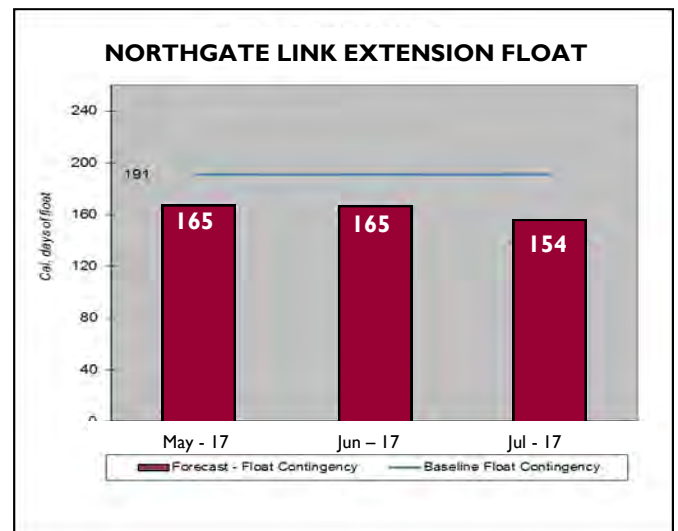
The critical path for the Northgate Link Extension remains the completion of cross passage work in the UWS to UDS segment, to a degree sufficient to allow turnover of the UDS Station to the N140 Contractor. ST and JCM has reached agreement on scope & cost of the CP 23 Differing Site Condition. Milestone 5 has been split into Milestones 5 - Turnover of the UDS Site (completed on July 17th) and Milestone 5A - Turnover of MLP scheduled for November 15, 2017. Pushing the access date for N140 has resulted in the loss of Contract Interface Float between N125/N140 and N140/N180. In addition to the loss of those 30 day interfaces an additional loss of 11 days of Project Float is also forecast. ST is discussing with Hoffman Construction strategies to mitigate the loss of time in order to maintain the overall schedule.



## Critical Path Float

The Northgate Link Project currently retains 154 days of unallocated project float. A loss of 11 days occurred due to the CP-23 Differing Site Conditions which in turn resulted in late handover of the station box to the N140 contractor.

The Revenue Service date for the Northgate Link Extension remains September 2021.



## Construction Safety

| Data/ Measure                           | July 2017       | Year to Date   | Project to Date  |
|---|-----------------|----------------|------------------|
| Recordable Injury/Illness Cases         | 3               | 17             | 71               |
| Days Away From Work Cases               | 1               | 1              | 5                |
| Total Days Away From Work               | 14              | 14             | 233              |
| Restricted or Modified Work Cases       | 4               | 8              | 31               |
| Total Days Restricted or Modified Work  | 17              | 98             | 995              |
| First Aid Cases                         | 7               | 11             | 62               |
| Reported Near Mishaps                   | 6               | 10             | 64               |
| Average Number of Employees on Worksite | 539             | -              | -                |
| <b>Total # of Hours (GC &amp; Subs)</b> | <i>136,884</i>  | <i>673,334</i> | <i>2,646,206</i> |
| OSHA Incident Rates                     | Monthly Average | Year to Date   | Project to Date  |
| Recordable Injury Rate                  | 4.38            | 5.05           | 5.37             |
| DART Rate                               | 4.38            | 2.67           | 2.72             |
| <i>Recordable National Average</i>      | <i>3.50</i>     | <i>3.50</i>    | <i>3.50</i>      |
| <i>DART National Average</i>            | <i>2.00</i>     | <i>2.00</i>    | <i>2.00</i>      |
| <i>Recordable WA State Average</i>      | <i>7.00</i>     | <i>7.00</i>    | <i>7.00</i>      |
| <i>DART WA State Average</i>            | <i>3.90</i>     | <i>3.90</i>    | <i>3.90</i>      |

## Right of Way

The U District and Roosevelt stations required the acquisition of a range of property interests including fee takings for stations and staging areas; tunnel easements are required for the running tunnel. These acquisitions resulted in owner and tenant, residential and commercial relocations.

**Roosevelt Station** – All parcels have been acquired. One parcel de-certified.

**U District Station** – All parcels have been acquired. One parcel de-certified.

**Northgate Station** - All parcels have been acquired.

### Tunnel Easements:

*RVS to North Portal* - Two parcels are still in court.

*UWS to U District Station* - All parcels have been acquired.

| Line Section       | Total Parcels Certified | Offers Made | Signed Agreements | Admin. Settlements | Possession and Use (P&U) | Closings to date | Baseline Relocations Required | Relocations Completed |
|--------------------|-------------------------|-------------|-------------------|--------------------|--------------------------|------------------|-------------------------------|-----------------------|
| U District Station | 15                      | 15          | 0                 | 0                  | 0                        | 15               | 3                             | 3                     |
| Roosevelt Station  | 19                      | 19          | 0                 | 0                  | 0                        | 19               | 26                            | 26                    |
| Tunnel Easements   | 190                     | 188         | 0                 | 0                  | 0                        | 188              | 0                             | 0                     |
| Northgate Station  | 11                      | 11          | 0                 | 0                  | 0                        | 9                | 13                            | 13                    |
| <b>Total</b>       | <b>235</b>              | <b>233</b>  | <b>0</b>          | <b>0</b>           | <b>0</b>                 | <b>231</b>       | <b>42</b>                     | <b>42</b>             |

## Community Outreach

- Published monthly electronic newsletter.
- Distributed various construction alerts which includes the following:
  - Final restoration on surface of CP 29, 30 & 35.
  - Restriping of crosswalk along entrance of UW Central Plaza Parking garage.
  - Weekend (Jul 22 & 29) delivery of the crane for the Roosevelt Station site.
  - Early morning concrete work alert to surrounding Northgate neighbors.
  - Nighttime sewer work in 1st Avenue NE.
- Held drop-in session along U District Pedestrian pathway to discuss progress.
- Installed way finding signage for Thornton Place at Northgate Station site.
- Continued to address noise related issues from residents along UDS site.

## Sound Transit Board Actions

| Board Action | Description            | Date |
|--------------|------------------------|------|
|              | <i>None to report.</i> |      |

## Environmental

- None to report.

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## Major Construction Contract Packages

Below are the major construction contract packages for the Northgate Link Extension 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)

**N110 Utility Relocation at Roosevelt Station Area** - Relocation of electrical and communication facilities at the Roosevelt Station site. (Complete)

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

**N112 U District and Roosevelt Station Site Preparation** - Demolition of existing structures, grading and paving at the U District and Roosevelt Station sites. (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.

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

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

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

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

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

## Construction Schedule Highlights

| Package  | Bid Advertisement        | NTP                        | Substantial Completion |
|--|--------------------------|----------------------------|------------------------|
| N105-Advance Demolition & Site Prep                | Mar 2016A                | May 2016A                  | Nov 2016A              |
| N111-Advanced Utility Relocation                   | Sept 2014A               | Jan 2015A                  | Apr 2016A              |
| N113-SCL 115kV Relocate                            | Feb 2016A                | June 2016A                 | Feb 2017A              |
| N125-Station Box Exc. & TBM Tunnels                | Jan 2013A                | Sep 2013A                  | Jan 2018               |
| N140-U District Station Finishes                   | Oct 2013A (GC/CM-Precon) | April 2017A (construction) | Jan 2020               |
| N150-Roosevelt Station Finishes                    | Apr 2013A (GC/CM-Precon) | Dec 2016A (construction)   | Sep 2019               |
| N160-Northgate Station & Guideway & Parking Garage | Apr 2016A                | Sept 2016A                 | Jan 2020               |
| N180-Trackwork to Northgate Station                | Apr 2016A                | Sept 2016A                 | Oct 2019               |
| N830-Traction Power, Signals & Com                 | May 2015A (GC/CM-RFQ)    | Jun 2017A (construction)   | Dec 2020               |

A = Actual

## Contract N125 – TBM Tunnels

### Current Progress

The N125 Contractor, JCM, is continuing work on the Cross Passages (CP), tunnel inverts, troughs, Electrical, and Fire Stand Piping. Installation of finishes at Husky Stadium Plaza is complete.

*UDS*—Removal of temporary facilities complete, site turned over to ST.

*Tunnel Finishes* – Installation of the sidewalk, cable trough, drainage pipe, and conduit is continuing in both tunnels.

*Cross Passage Construction*—Work in progress at the end of this period: surface restorations at cross passage locations, continuing firestand pipe installation, and electrical installations. Installation of tunnel signage and handrails underway.

*MSE Wall*—Construction of the MSE Moment slab and walls continues at Maple Leaf Portal.

### Schedule Summary

JCM's July schedule shows achievement of Milestone 5, and handover of the N140 U District Station box on August 17, 2017. Milestone 5A for completion of the tunnel work is scheduled for November 2017. The turn-over of UDS on August 17 has pushed back all of the N140 milestones and absorbed all of the contract interface float between N125 and N140, as well as the interface float between N140 and N180. JCM continues to forecast a 12 day late achievement of Milestone 6 Substantial Completion .

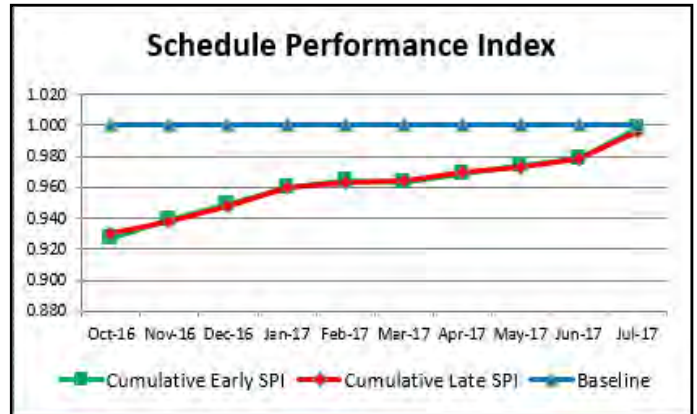
| Activity ID                                | Activity Name | Start       | Finish      | 2017 |     |     |     |     |     | 2018 |     |     |
|--|---------------|-------------|-------------|------|-----|-----|-----|-----|-----|------|-----|-----|
|  |               |             |             | Jul  | Aug | Sep | Oct | Nov | Dec | Jan  | Feb | Mar |
| <b>N125 Schedule Update Jul-17</b>         |               |             |             |      |     |     |     |     |     |      |     |     |
| <b>N125</b>                                |               | 26-Aug-13 A | 23-Feb-18   |      |     |     |     |     |     |      |     |     |
| <b>Construction</b>                        |               | 26-Aug-13 A | 23-Feb-18   |      |     |     |     |     |     |      |     |     |
| Payment Triggers - Project Mobilization    |               | 26-Aug-13 A | 30-Apr-14 A |      |     |     |     |     |     |      |     |     |
| Payment Triggers - TBM #1 TBM Mobilization |               | 07-Apr-15 A | 11-May-15 A |      |     |     |     |     |     |      |     |     |
| Payment Triggers - TBM #2 TBM Mobilization |               | 13-May-15 A | 16-Jun-15 A |      |     |     |     |     |     |      |     |     |
| Payment Triggers - TBM #3 TBM Mobilization |               | 01-Mar-16 A | 31-Mar-16 A |      |     |     |     |     |     |      |     |     |
| Payment Triggers - Project Demobilization  |               | 29-Jan-18   | 23-Feb-18   |      |     |     |     |     |     |      |     |     |
| Submittals - Prepare                       |               | 26-Aug-13 A | 28-Aug-17   |      |     |     |     |     |     |      |     |     |
| Submittals - Review & Approve              |               | 28-Aug-13 A | 27-Sep-17   |      |     |     |     |     |     |      |     |     |
| Procurement Tasks                          |               | 26-Aug-13 A | 12-Aug-16 A |      |     |     |     |     |     |      |     |     |
| Construction / Sound Wall - Construction   |               | 31-Oct-13 A | 12-Feb-15 A |      |     |     |     |     |     |      |     |     |
| Station Work MLP                           |               | 30-Sep-13 A | 07-Aug-17   |      |     |     |     |     |     |      |     |     |
| Station Work Roosevelt                     |               | 07-Oct-13 A | 30-Nov-16 A |      |     |     |     |     |     |      |     |     |
| Station Work UDS                           |               | 10-Dec-13 A | 14-Jul-17 A |      |     |     |     |     |     |      |     |     |
| Station Work UW                            |               | 15-Dec-16 A | 22-Sep-17   |      |     |     |     |     |     |      |     |     |
| UW Campus EMI System                       |               | 01-Sep-15 A | 31-Oct-15 A |      |     |     |     |     |     |      |     |     |
| <b>Tunneling</b>                           |               | 06-Mar-14 A | 04-Jan-18   |      |     |     |     |     |     |      |     |     |
| Cross Passages - MLP - RVS                 |               | 13-Jan-15 A | 01-Dec-17   |      |     |     |     |     |     |      |     |     |
| Cross Passages - RVS - UDS                 |               | 19-Jun-15 A | 02-Aug-17   |      |     |     |     |     |     |      |     |     |
| Cross Passages - UDS - UW                  |               | 24-Nov-15 A | 10-Oct-17   |      |     |     |     |     |     |      |     |     |
| Cross Passages -Additional SEM Measures    |               | 01-Mar-16 A | 01-Aug-17   |      |     |     |     |     |     |      |     |     |
| MLP Final Work                             |               | 01-Jul-15 A | 26-Jan-18   |      |     |     |     |     |     |      |     |     |
| Trench Safety Systems                      |               | 01-Apr-14 A | 30-Jun-14 A |      |     |     |     |     |     |      |     |     |

# Link Light Rail Northgate Link Extension - Construction



## Schedule Performance Index

The early SPI for this period moved up to 0.99 from 0.97. The SPI for the period approached 1.00 as a result of the payment for change orders including CO 203, which in total amounted to 2.25 times the base contract earnings.



## Key Activities

### Current Period

- Continued permanent surface restoration at multiple cross passages.
- Continued installation of internal electrical work and fire standpipes at multiple cross passages.
- Continued patching doorway concrete for door frames installation at cross passages.
- Continued electrical/mechanical final testing & commissioning at cross passages.
- Continued installation of tunnel handrails, fire standpipe, and overhead electrical.
- Continued installation of east and west portal wall rebar and formwork.
- Completed installation of rebar for west fascia wall.

### Next Period

- Complete permanent surface restoration at cross passages.
- Continue installation of internal fire standpipe and internal electrical work at cross passages.
- Continue testing and commissioning of mechanical systems.
- Resume installation of tunnel signage.
- Continue tunnel segment patching and leak repairs.
- Continue rebar, formwork, and concrete pours for east and west portal walls and fascia wall at MLP.

### Closely Monitored Issues

- Water leakage in the tunnel at Cross Passages 29 through 32 (all of which were previously frozen) remains a concern. JCM started Fuko grouting at these locations to remedy the tunnel leakage issue. Close monitoring of this issue by ST is ongoing.

## Cost Summary

| Present Financial Status               | Amount        |
|--|---------------|
| <b>NI25 Contractor - JCM Northlink</b> |               |
| Original Contract Value                | \$440,321,000 |
| Change Order Value                     | \$ 57,293,834 |
| Current Contract Value                 | \$497,614,834 |
| Total Actual Cost (Incurred to date)   | \$471,399,891 |
| Financial Percent Complete:            | 94.7%         |
| Physical Percent Complete:             | 95.3%         |
| Authorized Contingency                 | \$66,048,150  |
| Contingency Drawdown                   | \$57,293,834  |
| Contingency Index                      | 1.10          |



MLP: Installing rebar and formwork for the west portal wall.

## Contract N140 – U District Station Finishes

### Current Progress

Hoffman Construction gained site access on July 17th, 46 days behind the originally scheduled date. Preparation of the field office site is ongoing, with ST continuing to work to resolve permit issues with the City of Seattle. The Contractor is continuing with submittals. Mobilization is underway at the UDS site, with access and crane placement being priority activities. Placement of shotcrete over the existing shoring has started. The Preliminary Construction Schedule has been reviewed and resubmission is expected in mid-August.

### Schedule

The latest schedule is shown below. The Contractor is currently working on the contract baseline schedule.

| Activity ID   | Activity Name | Start              | Finish           | 2017   |   |   |   |   |   |   |   |   |   |   |   | 2018 |   |   |   |   |   |   |   |   |   |   |   | 2019 |   |   |   |   |   |   |   |   |   |   |   | 2020 |   |   |
|---|---------------|--------------------|------------------|--|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|
|   |               |                    |                  | N  | D | J | F | M | A | M | J | J | A | S | O | N    | D | J | F | M | A | M | J | J | A | S | O | N    | D | J | F | M | A | M | J | J | A | S | O | N    | D | J |
| <b>N140 SOUND TRANSIT U-DISTRICT STATION 6/19/1</b> |               | <b>28-Oct-16 A</b> | <b>24-Jan-20</b> | [Gantt Bar spanning from Oct 2016 to Jan 2020] |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| PRECONSTRUCTION                                     |               | 28-Oct-16 A        | 17-Jul-17        | [Gantt Bar from Oct 2016 to Jul 2017]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| CONSTRUCTION  |               | 05-Dec-16          | 24-Jan-20        | [Gantt Bar from Dec 2016 to Jan 2020]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| MOBILIZE  |               | 05-Dec-16          | 15-Feb-17        | [Gantt Bar from Dec 2016 to Feb 2017]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| CONCRETE  |               | 17-Jul-17          | 07-Mar-19        | [Gantt Bar from Jul 2017 to Mar 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| PROTECTION SLAB                                     |               | 17-Jul-17          | 07-Sep-17        | [Gantt Bar from Jul 2017 to Sep 2017]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| SOUTH   |               | 22-Aug-17          | 07-Mar-19        | [Gantt Bar from Aug 2017 to Mar 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| CENTER  |               | 05-Sep-17          | 28-Aug-18        | [Gantt Bar from Sep 2017 to Aug 2018]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| NORTH   |               | 15-Sep-17          | 27-Feb-19        | [Gantt Bar from Sep 2017 to Feb 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| EXTERIOR SHELL / SKIN                               |               | 11-Dec-18          | 28-May-19        | [Gantt Bar from Dec 2018 to May 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| HEADHOUSE SOUTH                                     |               | 05-Feb-19          | 28-May-19        | [Gantt Bar from Feb 2019 to May 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| HEADHOUSE NORTH                                     |               | 11-Dec-18          | 24-Apr-19        | [Gantt Bar from Dec 2018 to Apr 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| INTERIORS   |               | 26-Jun-18          | 02-Jan-20        | [Gantt Bar from Jun 2018 to Jan 2020]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| SOUTH   |               | 21-Nov-18          | 02-Jan-20        | [Gantt Bar from Nov 2018 to Jan 2020]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| CENTER  |               | 26-Jun-18          | 05-Nov-19        | [Gantt Bar from Jun 2018 to Nov 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| NORTH   |               | 11-Dec-18          | 12-Dec-19        | [Gantt Bar from Dec 2018 to Dec 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| HEADHOUSE   |               | 26-Dec-18          | 26-Sep-19        | [Gantt Bar from Dec 2018 to Sep 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| SOUTH   |               | 07-Feb-19          | 26-Sep-19        | [Gantt Bar from Feb 2019 to Sep 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| NORTH   |               | 26-Dec-18          | 23-Aug-19        | [Gantt Bar from Dec 2018 to Aug 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| ELEVATORS   |               | 14-Mar-19          | 22-Oct-19        | [Gantt Bar from Mar 2019 to Oct 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| SOUTH   |               | 14-Mar-19          | 29-Jul-19        | [Gantt Bar from Mar 2019 to Jul 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| NORTH   |               | 07-Jun-19          | 22-Oct-19        | [Gantt Bar from Jun 2019 to Oct 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| ESCALATORS  |               | 12-Dec-18          | 02-Aug-19        | [Gantt Bar from Dec 2018 to Aug 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| STAIRS  |               | 05-Jan-18          | 08-Jan-19        | [Gantt Bar from Jan 2018 to Jan 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| START-UP & COMMISSIONING                            |               | 14-Mar-19          | 16-Dec-19        | [Gantt Bar from Mar 2019 to Dec 2019]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| SITWORK   |               | 05-Dec-16          | 24-Jan-20        | [Gantt Bar from Dec 2016 to Jan 2020]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| EARLY RESTORATION NE 43RD TO BROOKLYN               |               | 05-Dec-16          | 20-Feb-17        | [Gantt Bar from Dec 2016 to Feb 2017]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| REMAINING   |               | 28-Feb-19          | 24-Jan-20        | [Gantt Bar from Feb 2019 to Jan 2020]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |
| MILESTONES  |               | 12-Jan-18          | 24-Jan-20        | [Gantt Bar from Jan 2018 to Jan 2020]          |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |



## Key Activities

### Current Period

- Continued to prepare and process submittals and RFIs.
- Mobilized site.
- Continued construction planning.
- Installed rebar and placed concrete foundation for tower crane.
- Tower crane was delivered, erected, and is operational.
- Began preparation of east bench for crawler crane.
- Movable stair tower installed.
- Continued rebar installation over tie-back ends.
- Began shotcrete at tie-backs on west wall.
- Began smoothing shotcrete at south headwall.
- Began preparation of south half of protection slab.

### Next Period

- Continue to process submittals and RFIs.
- Delivery and erection of crawler crane.
- Continue shotcrete over tie back ends.
- Continue preparation of south half of protection slab.
- Begin installation of elevated platforms for staging areas.
- Begin modification of pretreatment system to save space.

## Closely Monitored Issues

- Potential Teamster strike could disrupt concrete and shotcrete delivery.
- Scope is being reviewed for the technical specifications and extended maintenance for N140/N150 joint procurement for vertical transportation.

## Cost Summary

| Present Financial Status                      | Amount       |
|---|--------------|
| <b>N140 Contractor - Hoffman Construction</b> |              |
| Original Contract Value                       | \$159,836,68 |
| Change Order Value                            | \$-          |
| Current Contract Value                        | \$159,836,68 |
| Total Actual Cost (Incurred to date)          | \$2,415,502  |
| Financial Percent Complete:                   | 1.5%         |
| Physical Percent Complete:                    | 0%           |
| Authorized Contingency                        | \$7,991,834  |
| Contingency Drawdown                          | \$-          |
| Contingency Index                             | N/A          |



Mobilizing the 100-ton crane at the UDS.

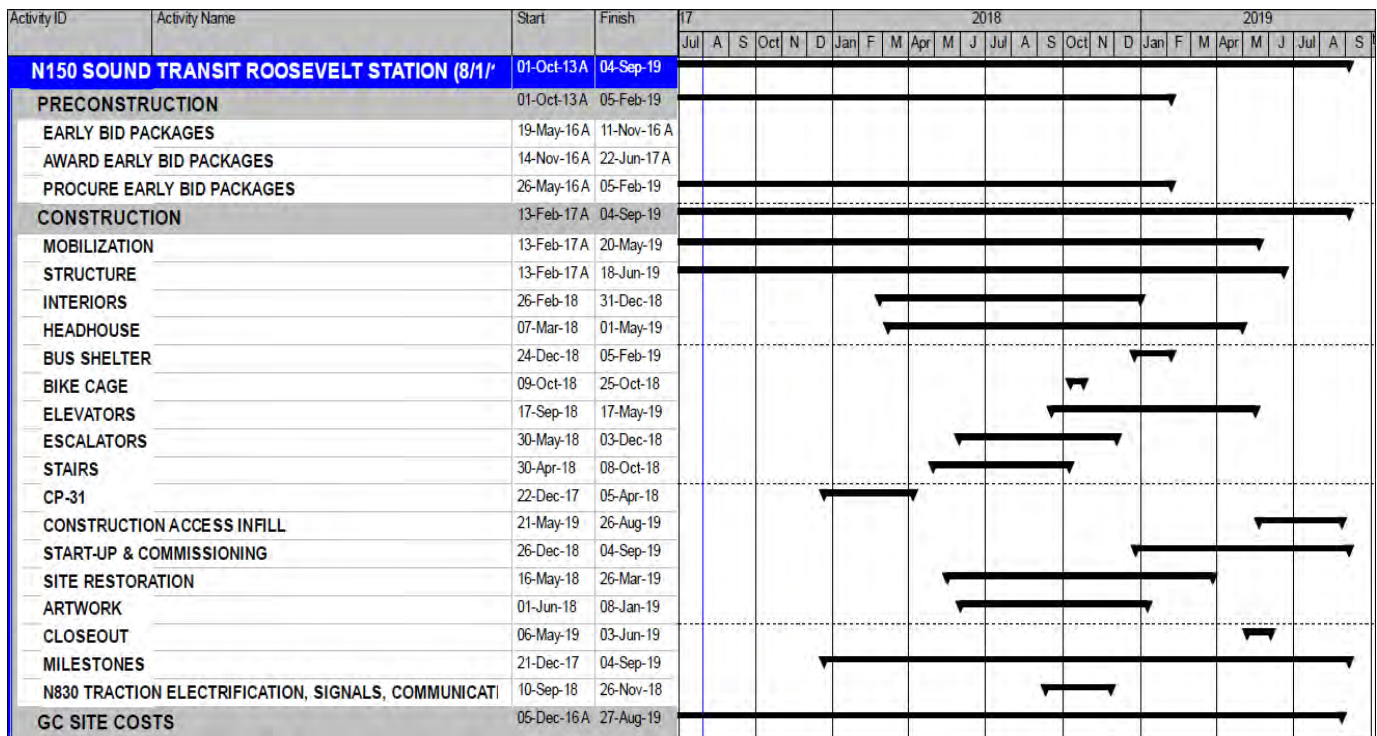
## Contract N150 – Roosevelt Station Finishes

### Current Progress

Hoffman Construction completed the invert slabs. Wall and pilaster formwork and rebar installation are in progress. Installation of embeds and pour on the platform slabs is underway.

### Schedule

The project remains on schedule. The longest path is unchanged and runs through the Invert pours, to the South Station Walls and Slabs, to the South Headhouse to and finally to Start-Up and Commissioning.





## Key Activities

### Current Period

- Continued to prepare and process submittals and RFIs.
- Completed invert slabs and continued wall pours throughout the station.
- Continued center wall station grounding, embeds and systems grounding.
- Commenced forming for first lift of topping slab at north platform.
- Continued grounding and installing concrete embeds for OCS and artwork.
- Placed concrete for the first lift of platform slab grids at north end.
- Continued installing track drainage on north end of station.
- Continued installing and testing ground cable for platform slab.
- Wall rebar and pilaster trim bar was installed in the center and south sections of the project.

### Next Period

- Continue to prepare, review and respond to submittals and RFIs.
- Complete rebar installation for the south walls.
- Continue to place concrete at center station wall and south wall.
- Continue formwork for center and south wall.
- Commence rough-in of plumbing and electrical for center platform grids.
- Commence shoring for basement level 3 elevated deck.

### Closely Monitored Issues

- Meeting with Labor and Industries to review requirements for escalator machine room based on updated energy code.
- Possible Teamster's Union strike may effective concrete deliveries to the site

## Cost Summary

| Present Financial Status                             | Amount        |
|--|---------------|
| <b><i>N150 Contractor - Hoffman Construction</i></b> |               |
| Original Contract Value                              | \$152,291,184 |
| Change Order Value                                   | \$ 280,960    |
| Current Contract Value                               | \$152,572,144 |
| Total Actual Cost (Incurred to date)                 | \$26,824,065  |
| Financial Percent Complete:                          | 17.6%         |
| Physical Percent Complete:                           | 13.7%         |
| Authorized Contingency                               | \$7,614,559   |
| Contingency Drawdown                                 | \$280,960     |
| Contingency Index                                    | 3.7           |



View of Roosevelt Station box looking south.

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

### Current Progress

The N160 Contractor Absher Construction is continuing to erect the formwork and place rebar for the Track Slabs between columns C1 and C5, as well as placing concrete for the B series columns. Installation of the storm drain on 1st Ave continues as night work.

At the Parking Garage, Absher has completed the mass excavation and has completed the installation of tie-backs and lagging. Waterproofing is underway, and the tower crane base has been completed.

### Schedule

Absher's July schedule update forecasts an on time achievement of Substantial Completion. The Parking Garage completion, Milestone No. 3, is now shown as completing on time. Milestone No. 1, completion of Guideway Units 1-3 continues to exhibit negative 14 days of float. ST is developing an independent analysis of delays, including inefficiencies on the Contractor's part.

| Activity ID                               | Activity Name   | Start       | Finish      | 2017        |           |   |   |   |   |   |   |   |   |   |   | 2018 |   |   |   |   |   |   |   |   |   |   |   | 2019 |   |   |   |   |   |   |   |   |  |  |  | 2020 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---|---|-------------|-------------|-------------|-----------|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|---|---|---|------|---|---|---|---|---|---|---|---|--|--|--|------|--|--|--|--|--|--|--|--|--|--|--|--|--|
|   |   |             |             | J           | A         | S | O | N | D | J | F | M | A | M | J | J    | A | S | O | N | D | J | F | M | A | M | J | J    | A | S | O | N | D | J | F | M |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>N160 - Northgate Station Finishes</b>  |   |             |             | 31-Aug-16 A | 19-Feb-20 |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.00                                      | General Requirements                                  | 31-Aug-16 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.05                                      | Project Summary                                       | 03-Jan-17 A | 18-Oct-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Summary Budget Section / Provisional Sums |   | 31-Aug-16 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.10                                      | Project Start-up                                      | 31-Aug-16 A | 28-Aug-17   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.20                                      | Contractual Milestones                                | 24-Mar-18   | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.30                                      | Contractual Constraints                               | 17-Oct-16 A | 07-Aug-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1.40                                      | Completion of Major Elements of Work                  | 06-Feb-18   | 18-Oct-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.00                                      | Procurement   | 02-Sep-16 A | 01-Oct-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.10                                      | Construction Plans                                    | 02-Sep-16 A | 22-May-17 A |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.20                                      | Construction Engineering                              | 12-Sep-16 A | 15-Feb-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.30                                      | Trade Packaging                                       | 02-Sep-16 A | 01-Oct-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.40                                      | Long Lead Materials                                   | 12-Sep-16 A | 12-Aug-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2.50                                      | Mock-ups  | 17-Feb-17 A | 11-Sep-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.00                                      | Preparatory Work                                      | 17-Oct-16 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.10                                      | Maintenance of Traffic                                | 17-Oct-16 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.20                                      | Environmental   | 17-Oct-16 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3.40                                      | Mobilization  | 24-Oct-16 A | 02-Apr-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.00                                      | Earthwork & Utilities                                 | 04-Jan-17 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.10                                      | Storm Drainage Vaults/FC Structures                   | 15-Nov-17   | 31-Oct-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.20                                      | Storm Drainage Conveyance                             | 08-Jan-17 A | 21-Aug-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.30                                      | Water   | 07-Feb-18   | 08-Apr-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.40                                      | Sewer   | 25-Apr-17 A | 04-Apr-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.50                                      | Roadway Electrical & In-Ground Systems                | 02-Jan-18   | 12-Apr-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.60                                      | Grading & Ditches                                     | 10-Sep-18   | 07-Aug-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.70                                      | Mass Excavation & Shoring                             | 04-Jan-17 A | 19-Feb-20   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 4.80                                      | Walls   | 03-Apr-17 A | 28-Sep-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.00                                      | Guideway (inc. Station Unit)                          | 03-Jan-17 A | 30-Nov-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.40                                      | Station Unit  | 03-Jan-17 A | 04-May-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.30                                      | GW Unit 3   | 15-Mar-17 A | 31-Aug-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.60                                      | GW Unit 5   | 08-Mar-17 A | 21-May-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.50                                      | GW Unit 4   | 25-Apr-17 A | 28-Sep-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.10                                      | GW Unit 1   | 16-Jun-17 A | 19-Sep-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5.20                                      | GW Unit 2   | 30-Mar-17 A | 30-Nov-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.00                                      | Station Finishes                                      | 27-Dec-17   | 18-Oct-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.10                                      | Station North   | 27-Dec-17   | 21-Jun-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.20                                      | Station South   | 04-Apr-18   | 02-Jul-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.30                                      | Station Mezzanine                                     | 25-Jul-18   | 04-Jun-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 6.40                                      | Station Platform                                      | 05-Nov-18   | 16-Oct-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.00                                      | Garage  | 27-Jun-17 A | 26-Jul-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.10                                      | Garage Structure                                      | 10-Jul-17 A | 27-Feb-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 7.20                                      | Garage Finishes                                       | 05-Jan-18   | 28-Jul-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.00                                      | At-Grade Restoration                                  | 07-Feb-18   | 27-Dec-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.10                                      | Maple Leaf Portal                                     | 08-Mar-19   | 13-Aug-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.20                                      | North TPSS & Signal Bungalow (W of R02; at Bents A1-4 | 31-Jul-18   | 13-Mar-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.30                                      | North Signal Bungalow (E of R02; at Bent B6)          | 06-Mar-18   | 27-Aug-18   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8.40                                      | Civil Restoration                                     | 07-Feb-18   | 27-Dec-19   |             |           |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |   |   |   |      |   |   |   |   |   |   |   |   |  |  |  |      |  |  |  |  |  |  |  |  |  |  |  |  |  |

# Link Light Rail Northgate Link Extension - Construction



## Key Activities

### Current Period

- *Guideway:* Installed track slab decking, edge formwork, OCS supports and diaphragms from C1 to C; Completed drilling, rebar cages and concrete placement for drilled shafts on A- line and stripped B-line columns. All drilled shafts complete; Continued formwork, starter frames, rebar installation, and concrete placement for line B transition zones; Continued tying rebar and placing post-tensioning in caps, diaphragms, and continuity block; Set piles and falsework for straddle bent caps at B7 and B8.
- *Parking Garage:* Maintained dewatering for shoring and excavation; Completed tiebacks and lagging; Completed soldier pile installation and continued mass excavation; Continued waterproofing placement; Completed crane foundation, erection and certification.
- *Offsite Fabrication:* Continued girder fabrication and began structural steel fabrication.

### Next Period

- Continue formwork and concrete placement for columns/caps.
- Continue falsework and concrete for straddle bents.
- Continue girder erection.
- Continue track slab rebar and embeds, and begin concrete placement for track slabs.
- Continue mass excavation and complete lagging.
- Continue waterproofing installation and shotcrete at perimeter walls.
- Continue slab mechanical piping.

## Closely Monitored Issues

- Interface coordination between N160 ST/CM and the Lynnwood Link design team is ongoing.
- Permanent power needs at Station and Garage/transformer sizing under review.
- Possible Teamster strike would impact concrete deliveries. Elevator/Escalator subcontracting is continuing.

## Cost Summary

| Present Financial Status                     | Amount        |
|--|---------------|
| <b>N160 Contractor - Absher Construction</b> |               |
| Original Contract Value                      | \$174,000,000 |
| Change Order Value                           | \$ 1,299,999  |
| Current Contract Value                       | \$175,299,999 |
| Total Actual Cost (Incurred to date)         | \$44,817,355  |
| Financial Percent Complete:                  | 25.6%         |
| Physical Percent Complete:                   | 22.7%         |
| Authorized Contingency                       | \$17,400,000  |
| Contingency Drawdown                         | \$ 688,249    |
| Contingency Index                            | 5.73          |



Garage mass excavation looking south.



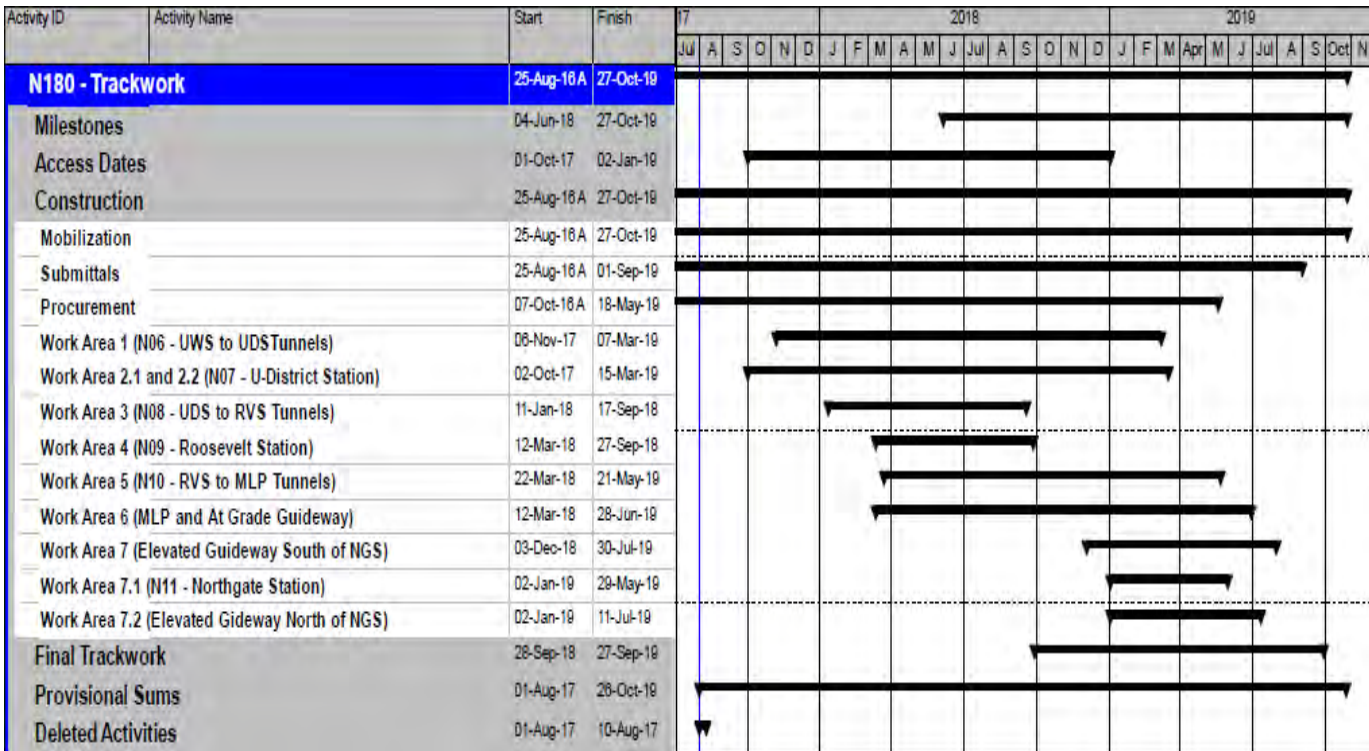
## Contract N180 – Trackwork UWS to Northgate Station

### Current Progress

The N180 Contractor continues to focus on procurement, submittals, and manufacturing of the pre-cast floating slabs. The Contractor contracted with British Steel for the Ultra-Straight Rail. The Pre-Cast yard in Woodland is casting the 3’10” slabs and preparing to cast the 7’ test slabs. Isolation pad and shim manufacture is underway. To date the work remains on schedule.

### Schedule Summary

Below is the latest schedule for N180.



## Key Activities

### Current Period

- *Columbia Precast Plant (CPP)*: continued to cast six 3'-10" floating slabs per day; total slab production to date: 164 out of 1618; continued to install the 7'-10" formwork in the CPP facility and work on re-bar jigs; continued minor concrete surface repair, utilizing the approved repair procedures, on floating slabs to be accepted for MOH payment; performed T1 Anchor Pull Out tests on 3'-10" floating slabs on 7/24/17. All anchors tested passed.
- *Scougal Facility*: finalized their long-term creep tests and has sent their prototype pads out to Dynamark Engineering to have the pads re-tested on Dynamic vs. Static Ratio; continued fabrication of the 5Hz tapered side shim pads.

### Next Period

- CPP to continue casting 3'-10" floating slabs and to produce 7'-10" prototype.
- Scougal to begin submitting qualification testing results and plan for mass production of isolation pads.

## Closely Monitored Issues

- ST continues to work with various stakeholders on the potential deletion of the 26kv cable run between the RVS and MLP. SWI sent a letter stating the 26kV cable for the run south of RVS needed to be ordered ASAP in order to maintain the schedule. ST responded stating that was acceptable but to hold off on ordering the 26kV cable and splice kits for the run between RVS and MLP.

## Cost Summary

| Present Financial Status                         | Amount       |
|--|--------------|
| <b>N180 Contractor - Stacy and Witbeck, Inc.</b> |              |
| Original Contract Value                          | \$71,455,950 |
| Change Order Value                               | \$1,192,160  |
| Current Contract Value                           | \$72,648,110 |
| Total Actual Cost (Incurred to date)             | \$7,481,572  |
| Financial Percent Complete:                      | 10.3%        |
| Physical Percent Complete:                       | 6.4%         |
| Authorized Contingency                           | \$10,718,393 |
| Contingency Drawdown                             | \$1,192,160  |
| Contingency Index                                | 0.93         |



Columbia Precast: Crews performing minor concrete surface repairs.

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# Link Light Rail Lynnwood Link Extension



## Scope

- Limits:** North Seattle to Shoreline, Mountlake Terrace, and Lynnwood Transit Center
- Alignment:** Lynnwood Link extends light rail 8.5 miles to Snohomish County along I-5 from Northgate Mall in Seattle to the Lynnwood Transit Center, with four new light rail stations. The configuration includes at-grade, elevated, and retained cut/fill alignment.
- Stations:** NE 145th (Shoreline), NE185th (Shoreline), Mountlake Terrace Transit Center, Lynnwood Transit Center
- Systems:** Signals, traction power, and communications (SCADA).
- Budget:** \$488.4 Million Pre-baseline Budget; excludes Construction (Year of Expenditure Dollars)
- Phase:** Final Design
- Const. Starts:** 2018
- Service:** Late 2023



Map of Lynnwood Link Extension Alignment.

## Key Project Activities

- L800 60% systems design was submitted on June 30, 2017. Gave Notice-to-Proceed in July for the L800 Systems Construction Management Consultant.
- Conducting VE reviews with 3rd party jurisdictions, effort to extend into September.
- WSDOT completed engineering review of L200 Temporary Construction Air Space Lease (TCAL) and Air Space Lease (ASL); legal review begins on August 7; L300 submitted to WSDOT on July 31, 2017.
- L800 60% systems design submitted in June, reviews anticipated to complete in August 2017.
- Continuing right of way acquisition and pre-construction planning.
- Evaluating cost savings ideas.

## Project Cost Summary

The Lynnwood Link 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.

Commitment and Actuals under Construction Phase is related to Construction Permits for early demolition work associated with ROW Property Acquisitions.

### Cost Summary by Phase

| Project Phase           | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|-------------------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| Administration          | \$88.3                 | \$17.0             | \$16.8           | \$88.3                     | \$0.0                  |
| Preliminary Engineering | \$42.0                 | \$39.1             | \$39.1           | \$42.0                     | \$0.0                  |
| Final Design            | \$111.5                | \$82.4             | \$41.7           | \$111.5                    | \$0.0                  |
| Construction Services   | \$104.9                | \$18.1             | \$6.8            | \$104.9                    | \$0.0                  |
| 3rd Party Agreements    | \$17.4                 | \$7.2              | \$2.3            | \$17.4                     | \$0.0                  |
| Construction            | \$0.5                  | \$0.2              | \$0.1            | \$0.5                      | \$0.0                  |
| Light Rail Vehicles     | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| ROW                     | \$123.8                | \$53.4             | \$48.7           | \$123.8                    | \$0.0                  |
| <b>Total</b>            | <b>\$488.4</b>         | <b>\$217.3</b>     | <b>\$155.4</b>   | <b>\$488.4</b>             | <b>\$0.0</b>           |

### Cost Summary by SCC

| SCC Element                            | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget 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       | \$0.5                  | \$0.2              | \$0.1            | \$0.5                      | \$0.0                  |
| 50 Systems                             | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| <b>Construction Subtotal (10 - 50)</b> | <b>\$0.5</b>           | <b>\$0.2</b>       | <b>\$0.1</b>     | <b>\$0.5</b>               | <b>\$0.0</b>           |
| 60 Row, Land                           | \$123.8                | \$53.4             | \$48.7           | \$123.8                    | \$0.0                  |
| 80 Professional Services               | \$364.1                | \$163.7            | \$106.7          | \$364.1                    | \$0.0                  |
| 90 Unallocated Contingency             | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| <b>Total (10 - 90)</b>                 | <b>\$488.4</b>         | <b>\$217.3</b>     | <b>\$155.4</b>   | <b>\$488.4</b>             | <b>\$0.0</b>           |

## Risk Management

The Lynnwood 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 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, 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 most recent Lynnwood Link Quarterly Risk Review Workshop was an FTA/PMOC led risk assessment workshop in May 2017.

## Project Schedule

The project schedule is shown below. The schedule is at high risk; delays to permitting, right-of-way acquisition, or final design completion could push the anticipated revenue service date into 2024.

| Activity ID  | Activity Name | Remaining Duration | Start       | Finish      | 2017        |    |    |    | 2018 |    |    |    | 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 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 |
| Sound Transit  |               | 1795d              | 20-May-10 A | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Sound Transit 2  |               | 1795d              | 20-May-10 A | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| North Corridor   |               | 1795d              | 20-May-10 A | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| LRT Extension - North  |               | 2513d              | 20-May-10 A | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link  |               | 2513d              | 20-May-10 A | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Master Schedule                              |               | 2359d              | 20-May-10 A | 18-Nov-23   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| LLE Project Administration/Milestones                        |               | 2359d              | 20-May-10 A | 18-Nov-23   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Preliminary Engineering                      |               | 0d                 | 02-Dec-13 A | 31-May-18 A | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Final Design                                 |               | 1841d              | 09-Apr-15 A | 15-Jun-22   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Final Design - Procurement                   |               | 1841d              | 01-Sep-15 A | 16-Jun-22   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Final Design                                 |               | 542d               | 09-Apr-15 A | 28-Jun-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L200FD - Lynnwood Link South Civil - Final Design            |               | 354d               | 09-Apr-15 A | 22-Oct-18   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L300FD - Lynnwood Link North Civil - Final Design            |               | 442d               | 11-Apr-16 A | 27-Feb-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L800FD - Lynnwood Link Systems - Final Design                |               | 528d               | 08-Jul-16 A | 28-Jun-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Right of Way                                 |               | 835d               | 17-Dec-15 A | 13-Sep-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Permits and Agreements                       |               | 554d               | 07-Jan-15 A | 08-Dec-18   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Permits                                      |               | 554d               | 07-Jan-15 A | 08-Dec-18   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Agreements                                   |               | 250d               | 02-May-16 A | 18-May-18   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| Lynnwood Link - Construction                                 |               | 2513d              | 01-Nov-15 A | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L200CNP - Lynnwood Link South Civil - Pre-Construction       |               | 872d               | 01-Nov-15 A | 03-Apr-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L200CN - Lynnwood Link South Civil - GC/CM - Construction    |               | 881d               | 29-Oct-18   | 08-Apr-22   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L300CNP - Lynnwood Link North Civil - Pre-Construction       |               | 331d               | 30-Mar-16 A | 25-Jan-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L300CN - Lynnwood Link North Civil - GC/CM - Construction    |               | 1059d              | 03-Dec-18   | 28-Oct-21   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L800CNP - Lynnwood Link Systems - Pre-Construction           |               | 756d               | 15-Dec-16 A | 01-Jul-19   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| L800CN - Lynnwood Link Systems - GC/CM - Construction        |               | 1083d              | 10-Jun-19   | 05-Jul-23   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |
| LRACT - Lynnwood Link Rail Activation/System Integration/Pro |               | 1013d              | 09-Jul-21   | 17-Apr-24   | [Gantt bar] |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |      |    |    |    |

## Right-of-Way

The Right-of Way project for Lynnwood Link 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 |                |                             |                   |                    |                  |                  |                      |                 |
|---|----------------|-----------------------------|-------------------|--------------------|------------------|------------------|----------------------|-----------------|
| Line Section  | Board Approved | Offers Made/In Negotiations | Signed Agreements | Possession and Use | Admin Settlement | Closings to date | Relocations Required | Parcels Vacated |
| L200– South Segment                                 | 112            | 75                          | 5                 | 0                  | 0                | 30               | 157                  | 57              |
| L300—North Segment                                  | 18             | 12                          | 1                 | 1                  | 0                | 7                | 25                   | 2               |
| <b>Total*</b>                                       | <b>130</b>     | <b>87</b>                   | <b>6</b>          | <b>1</b>           | <b>0</b>         | <b>37</b>        | <b>182</b>           | <b>59</b>       |

\*Note– number of totals may differ from other reports due to the timing of reporting periods.

### L200 –Northgate to NE 200th Street Parcels

Twelve additional offers made; three additional offers signed; three additional parcels closed; seven additional relocations vacated.

### L300– NE 200th Street to Lynnwood Transit Center

One parcel P & U; one additional relocation vacated.

## Sound Transit Board Actions

| Board Action | Description   | Date   |
|--------------|---|--------|
| M2017-102    | Sound Transit Board adopted the permanent station names for the Lynnwood Link Extension. Permanent station names are as follows:<br>Shoreline South/145th<br>Shoreline North/185th<br>Mountlake Terrace<br>Lynnwood City Center | Jul 27 |

## Community Outreach

- The ST Board adopted permanent station names and a notice was sent to email subscribers about this action.
- Completed final preparations for the Wetlands Work Neighborhood Meeting to be held on August 3 at the Shoreline Library. This meeting will focus on wetlands work in Shoreline at an I-5 interchange.
- Impacted property owners were notified about upcoming survey work on their property; residents received notices about geotech boring work near their homes.

## Civil Final Design Overview

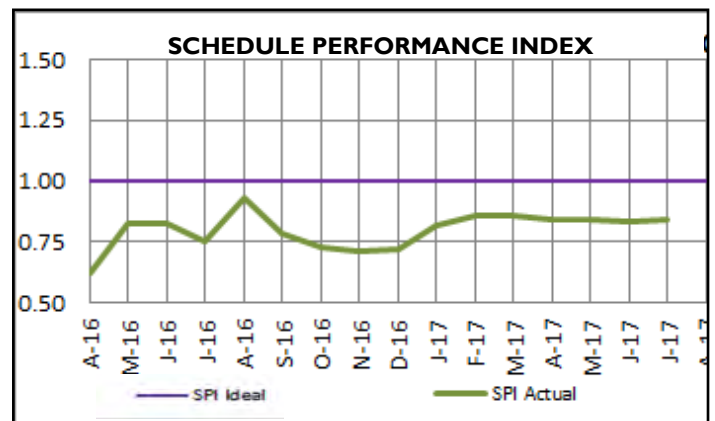
Sound Transit executed a professional services contract with HNTB Jacobs in April 2016 to perform Civil Final Design Services.

### Civil Final Design Activities

- Currently reviewing & finalizing cost savings ideas from previous VE workshops.
- Continuing design refinements to 185th garage and Lynnwood Transit Center area, and advancing design to 90%.

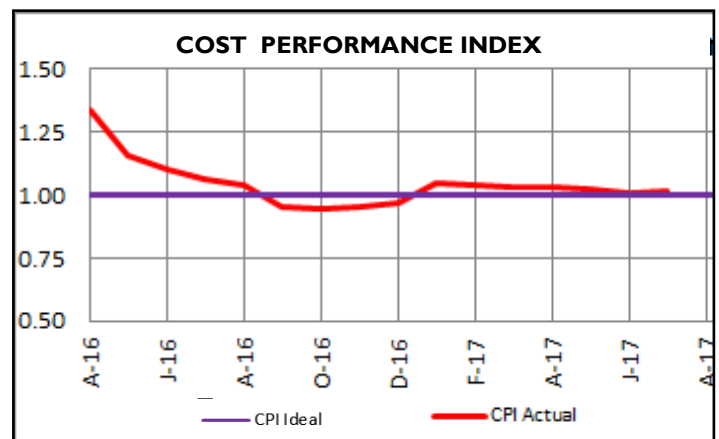
### Civil Final Design Schedule Performance Index

The cumulative Schedule Performance Index (SPI) trends at 0.84 through July 2017, which means that cumulative work accomplished is less than work originally planned. Currently the civil final design is behind schedule due delay in finalizing configuration at 185th and Lynnwood Transit Center, and modifying design between 60% and 90%.



### Civil Final Design Cost Performance Index

\$37.9 M of the total contract amount, 52%, has been spent through July 2017. The Civil Final Design percent complete is 53%, with an earned value of \$38.4M. The cumulative Cost Performance Index (CPI) through July is 1.01 indicating that expenditures are slightly less than the earned value of work performed.



| Final Design Performance | Cumulative To-date |
|--------------------------|--------------------|
| Amount Invoiced          | \$37.9M            |
| % Spent                  | 52%                |
| Earned Value             | \$38.4M            |
| % Complete               | 53%                |
| <b>SPI</b>               | <b>0.84</b>        |
| <b>CPI</b>               | <b>1.01</b>        |



## Systems Final Design Overview

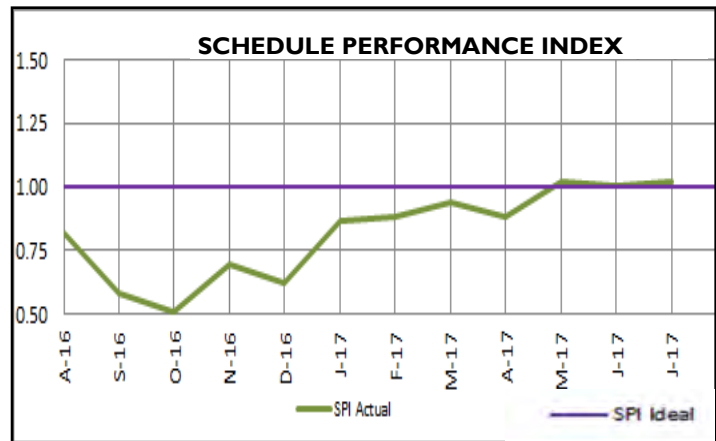
Sound Transit executed a professional services contract with LTK Engineering in July 2016 to perform Systems Final Design Services.

### Systems Final Design Activities

- Sound Transit issued a letter of notification of contract hold/stop work to LTK Engineering on July 21, 2017 effective on July 31, 2017. This letter stopped portions of the systems final design work which the Lynnwood Project undergoes a project wide value engineering assessment. At this time, no date for resuming work has been provided. All future contract milestones will be revised when notification of work is re-issued.

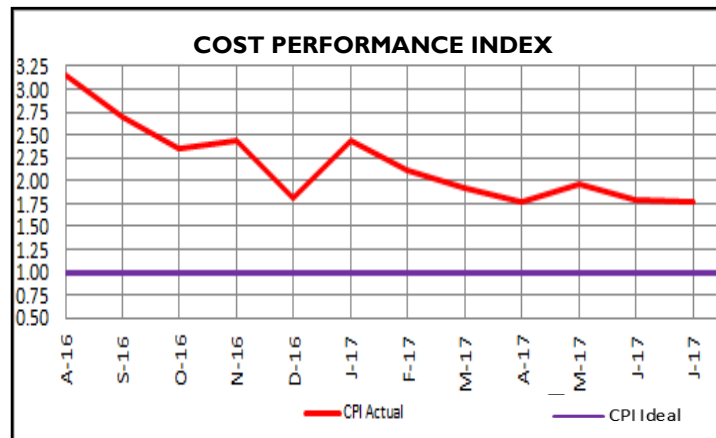
### Systems Final Design SPI

The cumulative Schedule Performance Index (SPI) trends at 1.02 through July 2017, which means that cumulative work accomplished is ahead of the work originally planned. The monthly SPI for July was 1.41, indicating significantly more work accomplished than planned for the month.



### Systems Final Design Cost Performance

\$2.4M of the total contract amount, 26%, has been spent through July 2017. The Systems Final Design percent complete is 46%, with an earned value of \$4.4M. The cumulative Cost Performance Index (CPI) through July is 1.77 indicating that expenditures are significantly lower than the earned value of work performed.



| Final Design Performance | Cumulative To Date |
|--------------------------|--------------------|
| Amount Invoiced          | \$2.4M             |
| % Spent                  | 26%                |
| Earned Value             | \$4.4M             |
| % Complete               | 46%                |
| <b>SPI</b>               | <b>1.02</b>        |
| <b>CPI</b>               | <b>1.77</b>        |

## Civil Construction Management Overview

Sound Transit executed a professional services contract with PGH Wong in May 2016 to perform Civil Construction Management (CMC) Services

### Civil Construction Management Activities

- Coordinating meetings with design, GC/CM, and ST teams.
- Coordination on various preconstruction activities including cost estimates, schedule, and constructability.
- Coordinating GC/CM review of 60% civil plans.

### Civil Construction Management Schedule Performance Index

Work by the CMC is on a level-of-effort basis to support Sound Transit during the final design/pre-construction period. Earned value for level-of-effort is calculated as equal to the planned value, so SPI = 1.00.

### Civil CM Cost Performance Index

\$2.2M of the total contract amount, 30%, is spent through July 2017, with an earned value of \$4.6M. The cumulative Cost Performance Index (CPI) through July is 2.06; indicating significantly lower costs than expected on the contract. The Consultant assumed more support staff would be required early in the schedule and that has not been the case, leading to a high CPI. With the current work on the 60% deliverables, and CPI is slowly trending closer to an expected value of 1.0.



| Civil CM Performance | Cumulative To-date |
|----------------------|--------------------|
| Amount Invoiced      | \$2.2M             |
| % Spent              | 30%                |
| Earned Value         | \$4.6M             |
| <b>CPI</b>           | <b>2.06</b>        |

## GC/CM Pre-Con Overview - L200 Northgate to NE 200th Street

Sound Transit executed a professional services contract with Stacy & Witbeck Kiewit Hoffman in June 2016 to perform GC/CM Pre-Construction Services for the L200 segment.

### L200 GC/CM Pre-Con Activities

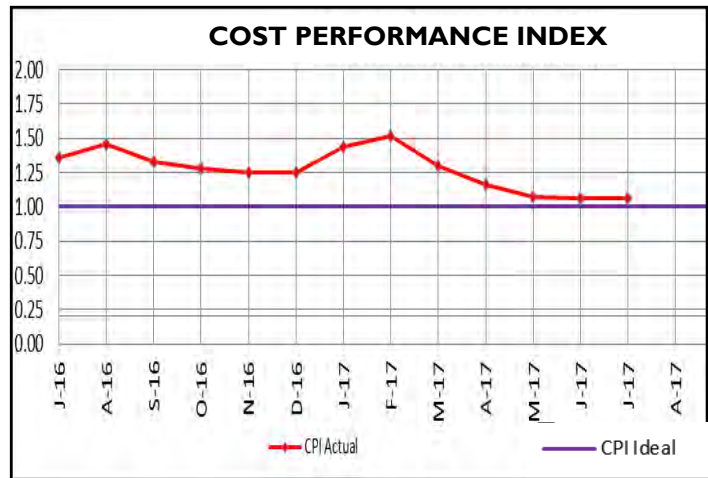
- Coordinating meetings with design, CM, and ST teams.
- Progress on various preconstruction activities including cost estimates, schedule, and constructability.
- Project wide effort towards value engineering.

### L200 GC/CM Pre-Con Schedule Performance Index

Driving the L200 GC/CM Contract is the LLE Final Design contract; GC/CM Pre-Construction work is on a level-of-effort basis to support Sound Transit during the final design/pre-construction period. Earned value for level-of-effort is calculated as equal to the planned value, so SPI = 1.00.

### L200 GC/CM Pre-Con Cost Performance Index

\$2.4M of the total contract amount, 47%, is spent through July 2017, with an earned value of \$2.6M. The cumulative Cost Performance Index (CPI) through July is 1.06; indicating actual costs are lower than planned.



| L200 GC/CM Performance | Cumulative To-date |
|------------------------|--------------------|
| Amount Invoiced        | \$2.4M             |
| % Spent                | 47%                |
| Earned Value           | \$2.6M             |
| <b>CPI</b>             | <b>1.06</b>        |

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

Sound Transit executed a professional services contract with Skanska in October 2016 to perform GC/CM Pre-Construction Services for the L300 segment.

### L300 GC/CM Pre-Con Activities

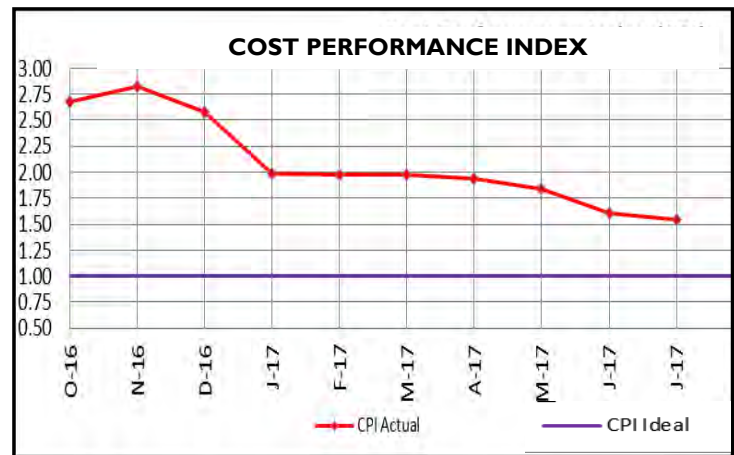
- Coordinating meetings with design, CM, and ST teams.
- Progress on various preconstruction activities including cost estimates, schedule, and constructability.
- Project wide effort towards value engineering.

### L300 GC/CM Pre-Con Schedule Performance Index

Driving the L300 GC/CM Contract is the LLE Final Design contract; GC/CM Pre-Construction work is on a level-of-effort basis to support Sound Transit during the final design/pre-construction period. Earned value for level-of-effort is calculated as equal to the planned value, so SPI = 1.00.

### L300 GC/CM Pre-Con Cost Performance Index

\$1.8M of the total contract amount, 33%, has been spent through July 2017, with an earned value of \$2.8M. The cumulative Cost Performance Index (CPI) through July is 1.55; indicating actual costs are lower than planned. It is anticipated this trend will moderate as the work towards deliverables increases.



| L300 GC/CM Performance | Cumulative To-date |
|------------------------|--------------------|
| Amount Invoiced        | \$1.8M             |
| % Spent                | 33%                |
| Earned Value           | \$2.8M             |
| <b>CPI</b>             | <b>1.55</b>        |

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**Scope:** The I-90 Two-Way Transit and HOV Operations (Stage 3) project provides approximately four miles of the HOV lanes in each direction of the outer roadway between 80<sup>th</sup> 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, the installation of screening on the shared-use pathway on the I-90 floating bridge.



The project, when completed, will enable 24/7 HOV access on I-90 between Seattle, Mercer Island and Bellevue.

**Budget:** \$225.6 Million  
**Phase:** Construction  
**Construction Start:** January 2015  
**Construction Completed:** June 2017

### Major Contracts

|       | Scope        | Agreement/Contract |
|-------|--------------|--------------------|
| WSDOT | Final Design | \$ 20,942,000      |
| WSDOT | CM Services  | \$ 16,358,000      |
| IMCO  | Construction | \$122,021,000      |

## Key Project Activities

- WSDOT is conducting additional Fire-Life-Safety testing to complete Final Commissioning and resolve concerns addressed by the Contractor.
- I-90 Island Crest Way HOV exit opened July 14th.
- Contractor continues working on punch list and clean up at both Mercer Island and Mount Baker Tunnels.

## Closely Monitored Issues

- While the Center Roadway was turned over to Sound Transit, the Substantial Completion continues to slip. The forecast to achieve Substantial Completion is now anticipated for 3<sup>rd</sup> QTR 2017.
- Sound Transit requested a detailed update for WSDOT's Estimate at Completion; forecast shows project completion within budget. WSDOT/IMCO executive teams are meeting weekly to discuss path forward for issuance of substantial completion.
- Commissioning is taking longer than anticipated; additional Fire-Life-Safety testing is being performed by WSDOT.
- Recent SCADA/Simplex integration testing identified additional needs; WSDOT is conducting additional testing fully to demonstrate system integration.

### Project Cost Summary

Total Project Cost expended this period is \$5M. The following tables summarize the cost information for the I-90 Two-way Transit and HOV Operations (Stage 3) project. Tables in millions. Total Project Costs expended during this period was \$5M.

#### Cost Summary by Phase

| Project Elements by Phase | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|---------------------------|-----------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| Administration            | \$3.6           | \$3.6                  | \$2.2              | \$2.2            | \$3.6                      | \$0.0                  |
| Preliminary Engineering   | \$1.5           | \$1.5                  | \$1.5              | \$1.5            | \$1.5                      | \$0.0                  |
| Final Design              | \$22.1          | \$22.1                 | \$18.0             | \$18.0           | \$22.1                     | \$0.0                  |
| Construction Services     | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| 3rd Party Services        | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| Construction              | \$198.3         | \$198.3                | \$171.9            | \$158.8          | \$198.3                    | \$0.0                  |
| <b>Total</b>              | <b>\$225.6</b>  | <b>\$225.6</b>         | <b>\$194.4</b>     | <b>\$180.6</b>   | <b>\$225.6</b>             | <b>\$0.0</b>           |

#### Cost Summary by SCC

| Project Elements by SCC          | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|----------------------------------|-----------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| 40 Sitework & Special Conditions | \$180.6         | \$180.6                | \$171.9            | \$158.8          | \$180.6                    | \$0.0                  |
| 80 Professional Services         | \$26.3          | \$26.3                 | \$22.5             | \$21.7           | \$26.3                     | \$0.0                  |
| 90 Unallocated Contingency       | \$18.7          | \$18.7                 | \$0.0              | \$0.0            | \$18.7                     | \$0.0                  |
| <b>Project Total (SCC 10-90)</b> | <b>\$225.6</b>  | <b>\$225.6</b>         | <b>\$194.4</b>     | <b>\$180.6</b>   | <b>\$225.6</b>             | <b>\$0.0</b>           |

ST Board-authorized new work package, Mercer Island Traffic and Pedestrian Enhancements to be funded out of Construction phase Unallocated Contingency.

### Cost Contingency Management

In the table below, the Allocated Contingency includes both WSDOT-controlled construction contingency & the total ST-controlled allocated contingencies. The change to the Current Status Remaining Contingency Amount since last period is a result of WSDOT executing change orders to the construction contract during the update period.

| Contingency Status      | Baseline      |              | Current       |                     |
|-------------------------|---------------|--------------|---------------|---------------------|
|                         | Amount        | % of Total   | Amount        | % of Work Remaining |
| Design Allowance        | \$0.0         | 0.0%         | \$ 0.0        | 0.0%                |
| Allocated Contingency   | \$17.0        | 7.5%         | \$ 8.2        | 18.2%               |
| Unallocated Contingency | \$18.7        | 8.3%         | \$18.7        | 41.50%              |
| <b>Total</b>            | <b>\$35.7</b> | <b>15.8%</b> | <b>\$26.9</b> | <b>59.7%</b>        |

*Note: Table in millions. Contract does not carry Design Allowance.  
Contingency % of Work Remaining based on Contingency Remaining as a % Budget Remaining.  
Allocated contingency includes WSDOT-controlled contingency & ST-controlled Contingency.*

### Project Schedule

WSDOT executed a change order implementing a schedule recovery plan that preserved the commitment to turn over the Center Roadway to Sound Transit on June 14th which occurred as anticipated. WSDOT is currently working with the Contractor to resolve commercial issues affecting agreement on the Substantial Completion date, now projected to be in the 3rd QTR 2017. Physical Completion has also slipped to 3rd QTR 2017. The E130 Construction Contractor has begun mobilization on the floating bridge.

| Contract                                      | Final Tunnel Commissioning Complete |                   | Substantial Completion |                   | Center Roadway Turnover |                   | Physical Completion |                   |
|---|-------------------------------------|-------------------|------------------------|-------------------|-------------------------|-------------------|---------------------|-------------------|
|   | Baseline                            | Forecast / Actual | Baseline               | Forecast / Actual | Baseline                | Forecast / Actual | Baseline            | Forecast / Actual |
| I-90 Two-Way Transit & HOV Operations Stage 3 | 2/16/2017                           | 9/1/2017          | 2/20/2017              | 9/1/2017          | 5/31/2017               | 6/14/2017 A       | 5/31/2017           | 9/1/2017          |

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

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# Link Light Rail

## East Link Extension



### Scope

**Limits/Alignment:** Fourteen-mile extension from Downtown Seattle to Mercer Island, Bellevue and the Overlake area of Redmond. The extension includes 10 stations along the alignment that includes at-grade, elevated, bridges, new and retrofitted tunnels.

**Stations:** Judkins Park (formerly Rainier), Mercer Island, South Bellevue, East Main, Bellevue Downtown, Wilburton (formerly Hospital), Spring District/120th, Bel-Red/130th, Overlake Village and Redmond Technology Center (RTC).

**Systems:** Signals, traction electrification, and communications (SCADA).

**Budget:** \$3.677 Billion Year of Expenditure Dollars

**Schedule:** Revenue Service - June 2023



Map of East Link Extension Alignment.

## Key Project Activities

### Seattle to South Bellevue

- I-90 Island Crest Way HOV exit opened on July 14.
- Continued site preparation work such as potholing, for utilities, saw cutting, pavement barrier removals on I-90.
- Continued site preparation work such as hole layout, scaffolding, core drilling, within the pontoons on I-90 for post tensioning scope.

### South Bellevue to Redmond

- *E320 South Bellevue:* Site and staging preparations and demolition work ongoing including clearing, grading and constructing access from South Bellevue Park and Ride to SE 30th. Commenced drill shaft work.
- *E330 Downtown Bellevue Tunnel:* Tunneling advances to about 435 linear feet without spiles due to favorable ground conditions; Completed final work on the Skyline Building and received final sign off.
- *E335 Downtown Bellevue to Spring Dist.:* Commenced Phase 1 of City of Bellevue garage reconfiguration on 110th/ North Portal area that includes driveway widening, selective demolition, advance utility relocation. Commenced selective abatement and demolition of Lincoln center building east of I-405.
- *E340 Bel-Red:* Asbestos abatement at Evans Industrial Park continues. Performed exploratory drilling operations to characterize soil conditions, develop dewatering plan to mitigate drill shafts work near wetlands. Coordinate advance utilities scope with independent utilities along Spring Blvd.
- *E360 SR520 to Redmond Technology Center:* Completed demolition work at Park Place. Start of concrete crushing and tree removal and clearing east of NE 24th. Commenced excavation for the infiltration vault at Overlake Village Station site.

## Closely Monitored Issues

- Completing remaining property acquisitions.
- Timely submissions and issuance of construction permits.
- E330 Downtown Bellevue Tunnel production rate continues to be monitored closely.
- With the commencement of construction at all segments, construction safety is a priority.
- E340 Bel-Red dewatering of remaining wells near wetlands.
- Compliance with environmental requirements.



## Project Cost Summary

The East Link project cost is summarized below in two cost categories. In the first table, the cost is summarized in accordance with Sound Transit's 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) continues to be projected at approximately \$3,677M in year of expenditure dollars. This period's expenditure is about \$45.7M, increasing the total project cost from \$778.6M to \$824.3M. This period's project commitments increased \$70M from \$2.70B to \$2.77B primarily due to the commitments of E750 system construction contract and real estate activities.

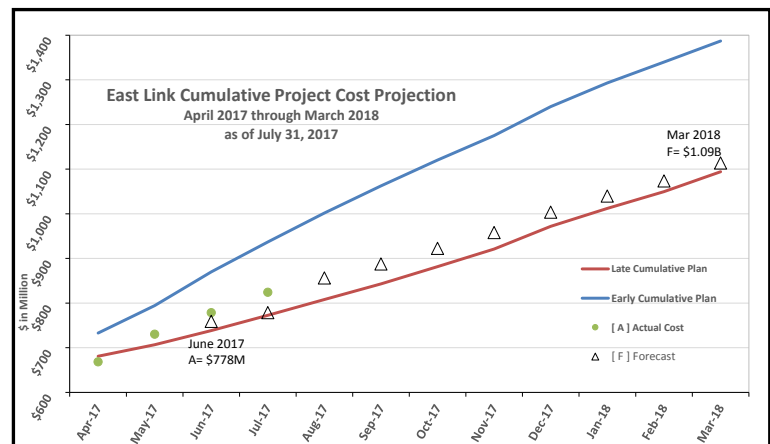
### Cost Summary by Phase

| Project Phase           | Baseline Budget | Current Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Current Budget vs. EFC |
|-------------------------|-----------------|----------------|--------------------|------------------|----------------------------|------------------------|
| Administration          | 186.2           | 186.2          | 60.8               | \$60.2           | 186.2                      | \$0.0                  |
| Preliminary Engineering | 55.9            | 55.9           | 54.8               | \$54.7           | 55.9                       | \$0.0                  |
| Final Design            | 283.0           | 283.0          | 232.2              | \$194.0          | 283.0                      | \$0.0                  |
| Construction Services   | 257.5           | 257.5          | 196.7              | \$33.3           | 257.4                      | \$0.0                  |
| 3rd Party Agreements    | 52.2            | 52.2           | 35.9               | \$12.3           | 52.1                       | \$0.0                  |
| Construction            | 2,544.3         | 2,544.3        | 1,957.5            | \$237.6          | 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          | 236.2              | \$232.2          | 298.2                      | \$0.0                  |
| <b>Total</b>            | <b>3,677.2</b>  | <b>3,677.2</b> | <b>2,774.1</b>     | <b>\$824.3</b>   | <b>3,677.2</b>             | <b>\$0</b>             |

### Cost Summary by SCC

| SCC Element                            | Baseline Budget  | Current Budget   | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Current Budget vs. EFC |
|--|------------------|------------------|--------------------|------------------|----------------------------|------------------------|
| 10 Guideway & Track                    | \$744.6          | \$747.6          | \$880.0            | \$117.9          | 944.0                      | (\$196.5)              |
| 20 Stations                            | \$397.7          | \$397.7          | \$262.8            | \$30.7           | 365.2                      | \$32.5                 |
| 30 Support Facilities                  | \$0.0            | \$0.0            | \$0.0              | \$0.0            | 0.0                        | \$0.0                  |
| 40 Sitework & Special Conditions       | \$808.5          | \$806.0          | \$449.4            | \$75.0           | 669.9                      | \$136.2                |
| 50 Systems                             | \$353.8          | \$353.8          | \$344.1            | \$9.5            | 336.4                      | \$17.4                 |
| <b>Construction Subtotal (10 - 50)</b> | <b>\$2,304.6</b> | <b>\$2,305.1</b> | <b>\$1,936.3</b>   | <b>\$233.1</b>   | <b>2,315.4</b>             | <b>(\$10.3)</b>        |
| 60 Row, Land                           | \$288.5          | \$288.5          | \$236.2            | \$232.2          | 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          | \$899.7          | \$601.7            | \$359.0          | 889.2                      | \$10.5                 |
| 90 Unallocated Contingency             | \$182.9          | \$181.0          | \$0.0              | \$0.0            | 181.2                      | (\$0.2)                |
| <b>Total (10 - 90)</b>                 | <b>\$3,677.2</b> | <b>\$3,677.2</b> | <b>\$2,774.1</b>   | <b>\$824.3</b>   | <b>3,677.2</b>             | <b>\$0.0</b>           |

The East Link (EL) cost projection continues to progress back to within the planned expenditure. Construction activities have begun to pick up. This period's project expenditure was \$45.7M where construction phase is responsible for about 88% or \$40.2M of July's cost. This is an indication that construction activities is picking up for the summer period. Total project cost incurred to date has now surpassed \$824M of which about \$237.6M were within the Construction Phase. All civil construction segments have now mobilized. Systems contract, a joined East Link and Northgate Link contract was issued Notice to Proceed in June and has commenced mobilization.



## Risk and Contingency Management

### Risk Management

The RCMP established 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 (ST) continuously monitors 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.

This period, Sound Transit began the quantitative risks update and risk assessment workshops. ST included participation of construction management consultants and construction contractors who are under contract (E130, E330, E335, E340, E360 and E750) in its risks management program.

### Contingency Status

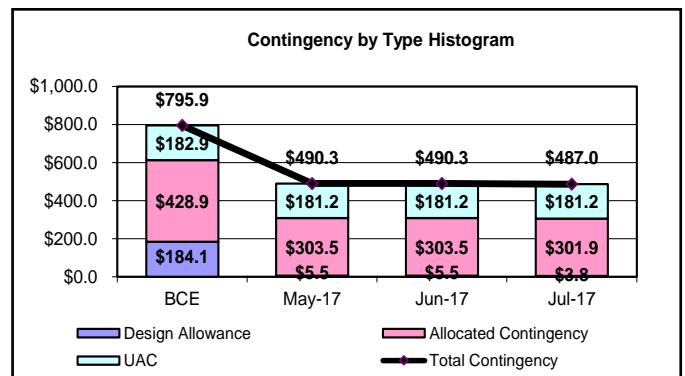
East Link project budget was baselined on April 2015 with a total contingency of \$795.9M. At the end of July 2017, with all major construction contracts procured, the total contingency balance stands at \$487M (previously \$490.3M). The current contingency balance is consistent with the project's planned contingency drawdown.

**Design Allowance (DA)** was set up to account for unquantified scope at the time of the cost estimate. This period, DA balance was reduce by \$1.7M dropping the balance from \$5.5 to \$3.8M due to the completion of private utility designs. DA balance 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 balance was reduced by \$1.5M drawing the balance from \$303.5M to \$301.9M.

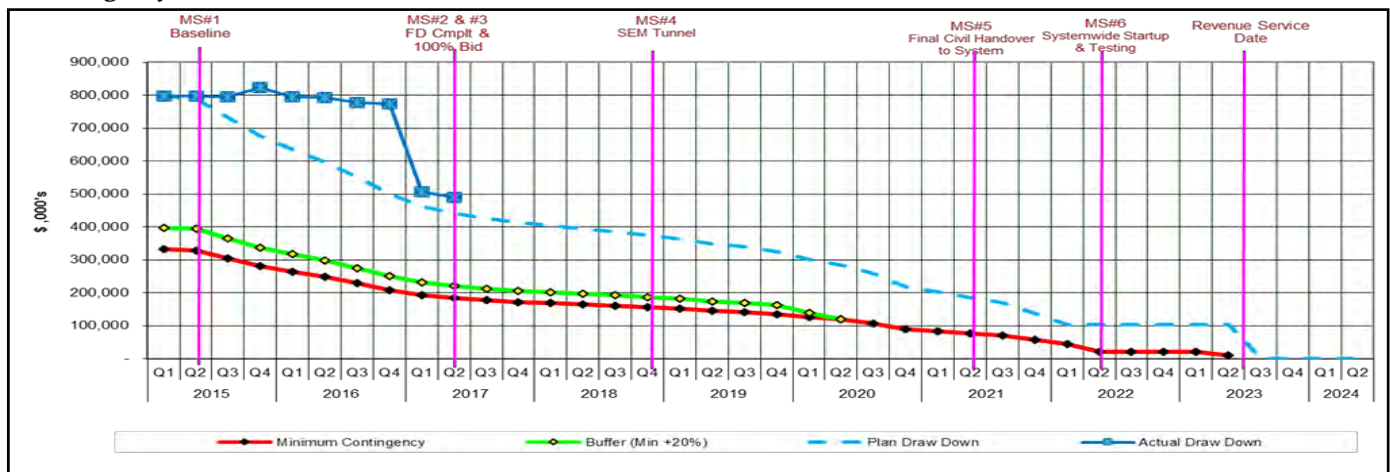
**Unallocated Contingency (UAC)** is used to address general project-wide cost risks and uncertainties. The UAC balance of \$181.2M continues to be stable compared to the initiation balance of \$182.9M at Baseline Cost Estimate (BCE).

| Contingency Status      | BCE            |                   | Current Status   |                     |
|-------------------------|----------------|-------------------|------------------|---------------------|
|                         | Amount         | % of Total Budget | Remaining Amount | % of Work Remaining |
| Design Allowance        | \$184.1        | 5.0%              | \$3.8            | 0.1%                |
| Allocated Contingency   | \$428.9        | 11.7%             | \$301.9          | 10.6%               |
| Unallocated Contingency | \$182.9        | 5.0%              | \$181.2          | 6.4%                |
| <b>Total:</b>           | <b>\$795.9</b> | <b>21.6%</b>      | <b>\$487.0</b>   | <b>17.1%</b>        |



Dollar figures on this page are displayed in millions.

### Contingency Drawdown

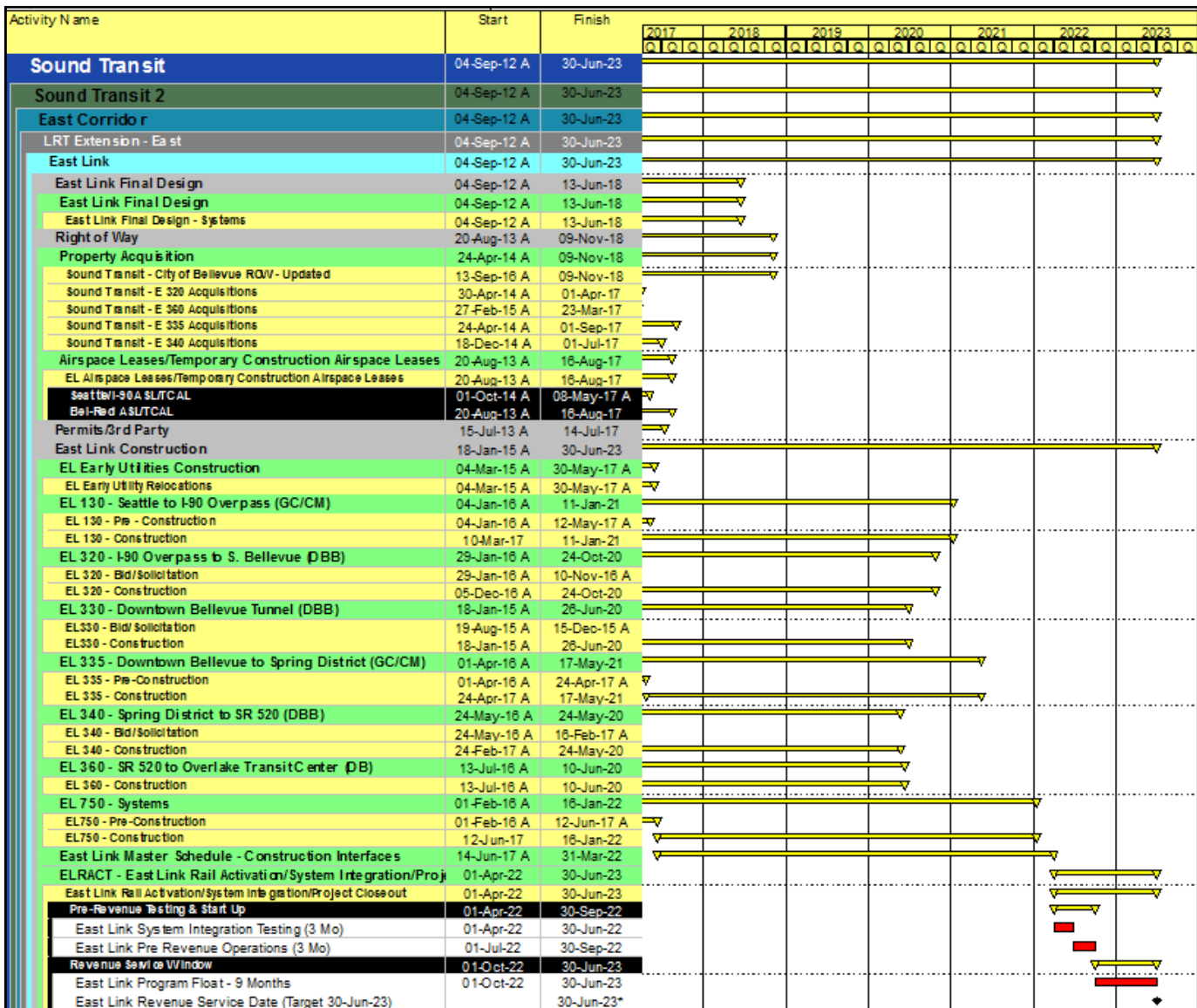


## Project Schedule

Baseline schedules have been approved for E320 South Bellevue, E330 Downtown Tunnel, E340 Bel-Red, and E360 SR520 to RTC. Baselines are currently under review for E130 Seattle to S Bellevue, E335 Downtown to Spring District, and E750 Systems, and are anticipated to be accepted by early August. All contractor schedules have been incorporated into the Integrated Master Schedule below.

E130 continued work on the I-90 floating bridge including continued site access setup as well as demo inside the pontoons in anticipation of installation of the steel reaction frames. E130 Contractor also began demolition at Mercer Island and Judkins Park Stations. E320 continued demolition and hazardous material removal, and began excavation along Bellevue Way. E330 continues tunneling and is making good progress. E335 has been preparing submittals, procuring materials, and applying for permits in anticipation of starting work in August. E340 is relocating utilities and drilling shafts. E360 has started demolition, tree removal, and utility relocation. E750 is in the design phase and is focusing on North Link, which is under the same contract and precedes work on East Link. E750 will complete design in the next two years and will begin work on the East Link alignment in Summer of 2019 at Mercer Island Station.

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

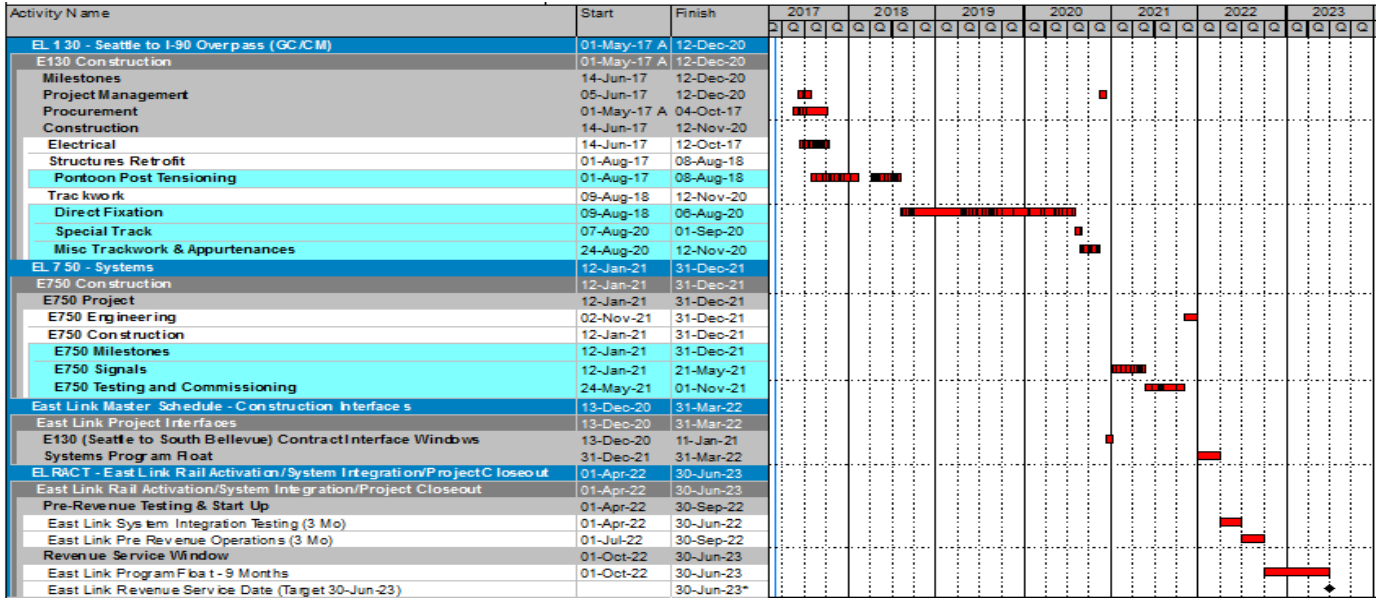


# Link Light Rail East Link Extension



## Critical Path Analysis

The East Link critical path is currently running through the handover of the I-90 corridor from the E130 contractor to the E750 Systems contractor. The critical path for E130 is driven by the pontoon post-tensioning retrofit due to the restricted work seasons on the floating bridge.



## 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 result in owner and tenant residential and commercial relocations. Market value trends in both residential and commercial properties are exhibiting strong upward pressure. The overall impact on the Right-of-Way (ROW) budget is being closely monitored. Efforts are also underway to prioritize acquisitions by contract package to help ensure timely availability of property. Property acquisition is recognized as a high priority and the management team has formed an ad hoc ROW team consisting of internally involved departments to prioritize and manage the process. See right-of-way program status in the table below.

Several of the remaining properties needed for construction are City of Bellevue properties committed in the Memorandum of Understanding. The ST/City of Bellevue Steering Committee consisting of senior staff are collaborating to ensure timely transfer of these property rights consistent with the project schedule and priorities.

| East Link Extension Property Acquisition Status |                |                             |                   |                    |                  |                  |                      |                 |
|---|----------------|-----------------------------|-------------------|--------------------|------------------|------------------|----------------------|-----------------|
| Line Section                                    | Board Approved | Offers Made/In Negotiations | Signed Agreements | Possession and Use | Admin Settlement | Closings to date | Relocations Required | Parcels Vacated |
| <b>Total</b>                                    | 244*           | 234                         | 3                 | 28                 | 2                | 185              | 243                  | 202             |

Note: Excluded from the table above are 9 parcels that were approved under a separate ST Board authorized agreement. These parcels are tracked in a working file and will be added to the table above in future reports. \*Two City of Seattle parcels were added; did not need Board approval.

**E130 Seattle to South Bellevue** - Air Space Leases fully executed.

**E320 South Bellevue** - Air Space Leases fully executed.

**E330 Downtown Bellevue** - No new activity.

**E335 Downtown Bellevue to Spring District** - Two parcels vacated.

**E340 Bel-Red** - One parcel closed.

**E360 SR 520 to Redmond Technology Center** - No new activity.

## Construction Safety

| Data/ Measure                           | July 2017       | Year to Date   | Project to Date |
|---|-----------------|----------------|-----------------|
| Recordable Injury/Illness Cases         | 1               | 4              | 4               |
| Days Away From Work Cases               | 0               | 0              | 0               |
| Total Days Away From Work               | 0               | 0              | 0               |
| Restricted or Modified Work Cases       | 0               | 1              | 1               |
| Total Days Restricted or Modified Work  | 0               | 17             | 17              |
| First Aid Cases                         | 1               | 14             | 18              |
| Reported Near Mishaps                   | 6               | 22             | 35              |
| Average Number of Employees on Worksite | 418             | -              | -               |
| <b>Total # of Hours (GC &amp; Subs)</b> | <i>89,453</i>   | <i>262,389</i> | <i>298,226</i>  |
| OSHA Incident Rates                     | Monthly Average | Year to Date   | Project to Date |
| Recordable Injury Rate                  | 2.24            | 3.05           | 2.68            |
| DART Rate                               | 0.00            | 0.76           | 0.67            |
| <i>Recordable National Average</i>      | <i>3.50</i>     | <i>3.50</i>    | <i>3.50</i>     |
| <i>DART National Average</i>            | <i>2.00</i>     | <i>2.00</i>    | <i>2.00</i>     |
| <i>Recordable WA State Average</i>      | <i>7.00</i>     | <i>7.00</i>    | <i>7.00</i>     |
| <i>DART WA State Average</i>            | <i>3.90</i>     | <i>3.90</i>    | <i>3.90</i>     |

## Sound Transit Board Actions

| Board Action | Description   | Date           |
|--------------|---|----------------|
| M2017-87     | <i>Execute a contract amendment with WSP USA, Inc. (formerly Parsons Brinckerhoff, Inc.), to provide design services during construction for the International District Station to the South Bellevue segment of the East Link Extension in the amount of \$12,000,000, with a 10% contingency of \$1,200,000 totaling \$13,200,000, for a new total authorized contract amount not to exceed \$69,039,782.</i> | <i>July 27</i> |

## Environmental

- Continued developing environmental permit application packages. Environmental commitments are being incorporated into the design, program, and specifications of the project.
- Coordinating with East Link project team to ensure environmental compliance with an emphasis on establishing and maintaining appropriate Best Management Practices (BMPs) in advance of clearing and grubbing activities.



## Community Outreach

- Hosted open house for the kick-off construction at the Mercer Island Community & Event Center; 83 people attended.
- Attended the Mercer Island Summer Celebration weekend of July 8 & 9 and engaged with over 300 people by providing EL project information.
- Attended the Redmond Derby Days and engaged with 300 people.
- Provided Downtown Redmond Link Extension project info to 25 people at the Velodrome Assoc. Annual Grand Prix event.
- Distributed construction alerts regarding weekly traffic impacts on Bellevue Way and 112th.
- Began outreach efforts at the end of July to mitigate changes in the Overlake Transit Center operations to accommodate construction of the Redmond Link Technology Center Station. Staff sent construction alerts.

## Major East Link Construction Contract Packages

Below are the major construction contract packages for the East Link Extension with a brief scope description and status of each.

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

*Status: Completed.*

**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: Contractor continues to mobilize as well as performing site and staging preparations as well as submittal of work plans and reviews prior to commencing critical works on the floating bridge.*

**E160 Track Bridge System** – Fabrication, delivery and installation of eight track bridges that will span over fixed structures and the floating bridge. [Furnish and Install]

*Status: Incorporated as part of 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: Contractor continues site and staging preparations including grading work at the Park and Ride, grub clearing, saw cutting and demolition works on I-90 as well as drainage and trenching and duct bank works near Bellevue Way SE.*

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

*Status: See following pages.*

**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: Contract with the exception of the Station package scope awarded, executed and NTP issued. The station scope exception will be repackaged and procured by year's end. Contractor continues mobilization effort with site preparations and has commenced some selective demolition scope.*

**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 Center** – 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: MACC negotiated, Contract executed, Notice to Proceed issued on June 12.*

## Contract E330 – Downtown Bellevue Tunnel

### Current Progress

**South Portal:** The Contractor continued tunneling throughout the month and completed excavation through station point 547+34, which is approximately 461 feet of excavation. Good ground conditions being encountered decreases the need for ground spiles and has helped maintain the increased excavation rate at or around the 5ft/day mark. Hauling of spoils offsite continues. The Contractor has increased capacity for stockpiling batch plant materials in preparation for potential sand and gravel Teamsters Union strike.

**North Portal:** Completed the Skyline Building scope of work, and continued finalizing all sign-offs and closing out permits.

**Between Portals:** Installed crack gages in Bell Centre along tunnel alignment.

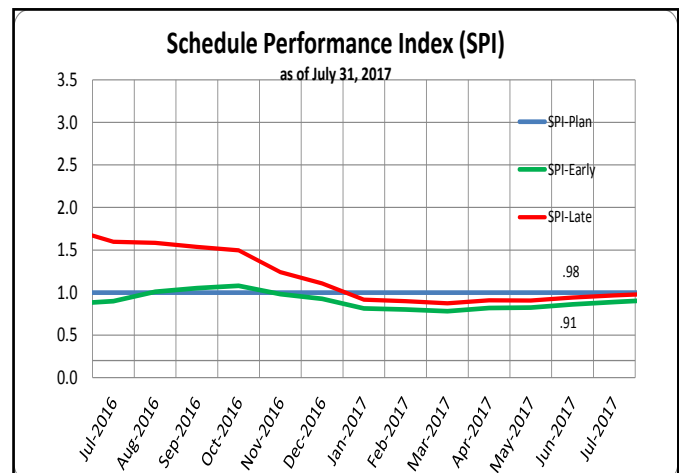
### Schedule Summary

The critical path for this contract follows the tunnel excavation and the completion of the South Portal structure. Tunneling continues to exceed estimated production rates. By the end of July, production was at 5.16LF/Day. The Contractor is now forecasting to achieve Substantial Completion on time.

| Activity Name   | Start       | Finish      | 2017   |    | 2018 |    |    |    | 2019 |    |    |    | 2020 |    |  |  |
|---|-------------|-------------|--|----|------|----|----|----|------|----|----|----|------|----|--|--|
|   |             |             | Q3   | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 |  |  |
| <b>E330 Construction</b>  | 15-Dec-15 A | 30-May-20   | [Gantt bar spanning from Dec 2015 to May 2020] |    |      |    |    |    |      |    |    |    |      |    |  |  |
| <b>CONSTRUCTION</b>   | 15-Dec-15 A | 30-May-20   | [Gantt bar spanning from Dec 2015 to May 2020] |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MILESTONES/CONSTRUCTION EASEMENTS   | 15-Dec-15 A | 30-May-20   | [Gantt bar spanning from Dec 2015 to May 2020] |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MILESTONES  | 15-Dec-15 A | 30-May-20   | [Gantt bar spanning from Dec 2015 to May 2020] |    |      |    |    |    |      |    |    |    |      |    |  |  |
| <b>CALCULATED MILESTONES</b>  | 15-Dec-15 A | 30-May-20   | [Gantt bar spanning from Dec 2015 to May 2020] |    |      |    |    |    |      |    |    |    |      |    |  |  |
| L-NTP   | 15-Dec-15 A | 30-May-20   | [Gantt bar spanning from Dec 2015 to May 2020] |    |      |    |    |    |      |    |    |    |      |    |  |  |
| NTP   | 08-Feb-16 A | 14-Oct-16 A | [Gantt bar from Feb 2016 to Oct 2016]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MLST 1 - Acceptance of the 110th Ave Controlled Low Strength Material Work              |             | 14-Oct-16 A | [Gantt bar ending at Oct 2016]                 |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MLST 2 - Acceptance of CO #008 Work   |             | 14-Oct-16 A | [Gantt bar ending at Oct 2016]                 |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MLST 3 - Substantial Completion of all Work from Station EB 542+64.52 to Station EB 562 |             | 28-Jan-20   | [Gantt bar ending at Jan 2020]                 |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MLST 4 - Substantial Completion Total Contract  |             | 30-May-20   | [Gantt bar ending at May 2020]                 |    |      |    |    |    |      |    |    |    |      |    |  |  |
| <b>MOBILIZATION</b>   | 08-Feb-16 A | 03-Apr-19   | [Gantt bar from Feb 2016 to Apr 2019]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| <b>SITEWORK</b>   | 29-Feb-16 A | 30-May-20   | [Gantt bar from Feb 2016 to May 2020]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| PRECONSTRUCTION   | 21-Mar-16 A | 27-May-20   | [Gantt bar from Mar 2016 to May 2020]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| TRAFFIC CONTROL   | 25-Mar-16 A | 31-Jan-20   | [Gantt bar from Mar 2016 to Jan 2020]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| SURVEY & MONITORING   | 29-Feb-16 A | 22-Jun-18   | [Gantt bar from Feb 2016 to Jun 2018]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| NORTH PORTAL AREA   | 13-Jun-16 A | 14-Oct-16 A | [Gantt bar from Jun 2016 to Oct 2016]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| SOUTH PORTAL AREA   | 08-Feb-17 A | 08-Apr-17 A | [Gantt bar from Feb 2017 to Apr 2017]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| SKYLINE BUILDING RETROFIT   | 29-Feb-16 A | 30-May-20   | [Gantt bar from Feb 2016 to May 2020]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| <b>TUNNELING</b>  | 01-Feb-17 A | 01-Jan-20   | [Gantt bar from Feb 2017 to Jan 2020]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| Sound Transit Controlled SEM Float - Tunnel Completion                                  | 01-Jan-20   | 01-Jan-20   | [Gantt bar at Jan 2020]                        |    |      |    |    |    |      |    |    |    |      |    |  |  |
| Atkinson Controlled SEM Float - Tunnel Completion                                       | 01-Jan-20   | 01-Jan-20   | [Gantt bar at Jan 2020]                        |    |      |    |    |    |      |    |    |    |      |    |  |  |
| <b>EXCAVATION</b>   | 01-Feb-17 A | 06-Mar-19   | [Gantt bar from Feb 2017 to Mar 2019]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| FINAL TUNNEL LINING   | 07-Mar-19   | 01-Oct-19   | [Gantt bar from Mar 2019 to Oct 2019]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| FINAL TUNNEL FINISHES   | 29-May-19   | 31-Dec-19   | [Gantt bar from May 2019 to Dec 2019]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| MID TUNNEL  | 17-May-18   | 18-Jul-19   | [Gantt bar from May 2018 to Jul 2019]          |    |      |    |    |    |      |    |    |    |      |    |  |  |
| DEMOBE  | 13-Mar-17 A | 14-May-20   | [Gantt bar from Mar 2017 to May 2020]          |    |      |    |    |    |      |    |    |    |      |    |  |  |

### Schedule Performance Index

This period, the SPI early is at 0.91 and the SPI late is at 0.99. Both the early and late indexes indicate that the Contractor continues to be behind schedule when compared to the baseline schedule. The recent trend however continues moving in the positive direction with regards to tunnel excavation progress. The Contractor is anticipated to continue to improve progress in the near future with the improved ground conditions being encountered, and the potential decrease in the amount of rebar spiling required moving forward.



## Next Period's Activities

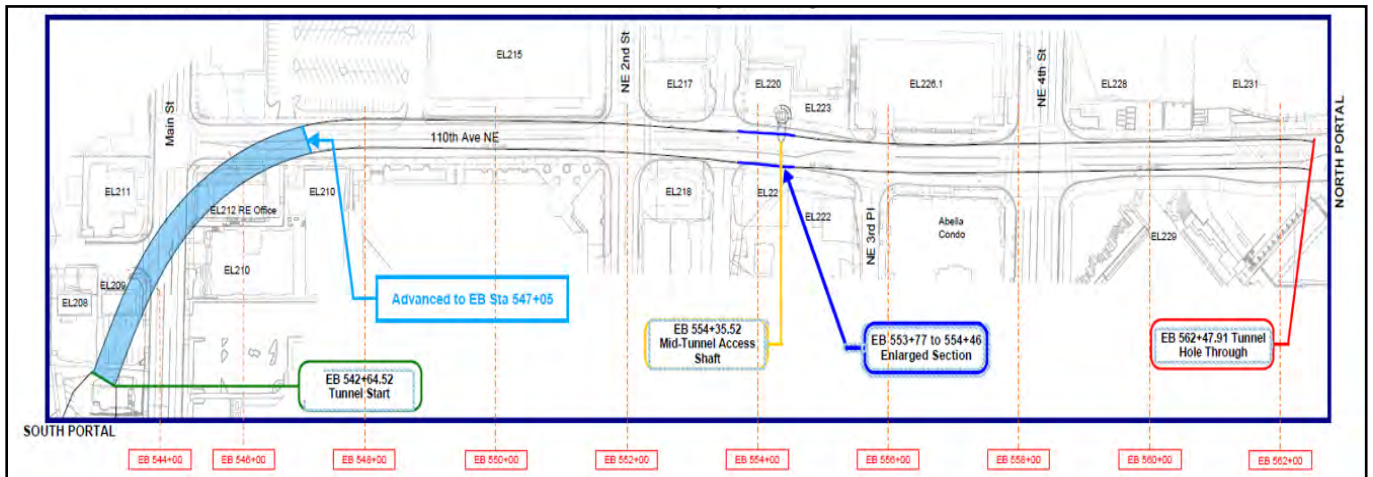
- Continue tunnel excavation and extend ventilation lines.
- Dewatering Consultant to continue developing dewatering plan and identifying if additional test wells are required for northernmost end of tunnel.

## Closely Monitored Issues

- City of Bellevue (COB) is requiring an electrical permit for the permanent electrical conduit installed inside the tunnel. COB and ST are discussing if ST or the Contractor will procure the permit.
- Obtaining right of entry agreements and temporary construction easements for properties along alignment.

- Potential impacts from sand and gravel Teamsters (Local 174) Union strike that may start next week. The strike would hinder the contractor's ability to obtain sand and aggregate material. Contractor is working to store material for up to 2 weeks of anticipated strike duration.
- Water build-up outside the existing Skyline basement wall along 110th Ave. Discussing means to mitigate the hydrostatic pressure and draining the water out of the ground prior to tunneling at this location. Investigating the COBs detention tank and adjacent storm drain line for leaks to determine if either are the source of the water into Skyline. COB anticipated to investigate the storm drain lines in August 2017.

## E330 Tunnel Excavation Progress Tracking



As of July 28, 2017

## Cost Summary

| Present Financial Status                                  | Amount        |
|---|---------------|
| <b>E330 Contractor– Guy F Atkinson Construction, LLC.</b> |               |
| Original Contract Value                                   | \$121,446,551 |
| Change Order Value  | \$1,969,956   |
| Current Contract Value                                    | \$123,425,979 |
| Total Actual Cost (Incurred to date)                      | \$41,840,290  |
| Financial Percent Complete:                               | 33.9%         |
| Physical Percent Complete:                                | 33.9%         |
| Authorized Contingency                                    | \$12,144,655  |
| Contingency Drawdown                                      | \$1,979,428   |
| Contingency Index   | 2.1           |



Installing lattice girder at invert.

## Contract E340 – Bel-Red

### Current Progress

E340 Contractor continued asbestos abatement for preparation of building demolition at the Evans Industrial Park. Completed the assembly of rebar cages for guideway column. Drilled Abutment 01 North Shaft and set primary containment for Abutment 01 Shaft (see pictures at left) borings were completed on all guideway bents.

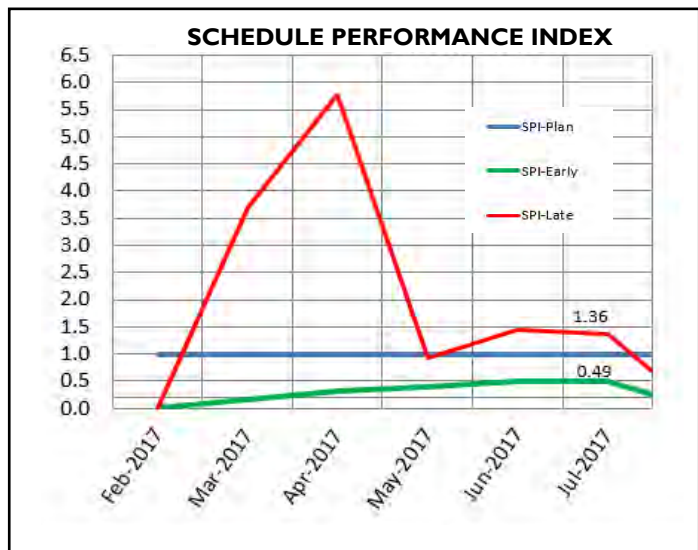
### Schedule Summary

The Contractor's work in July included demolition and abatement, utility relocation, and drilled shafts for the aerial guideway. The critical path of this project runs through the retaining walls on the west end of the project, followed by trackwork.

| Activity Name   | Start     | Finish    | 17 |    | 2018 |    |    |    | 2019 |    |    |    | 20 |    |  |
|---|-----------|-----------|----|----|------|----|----|----|------|----|----|----|----|----|--|
|   |           |           | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1   | Q2 | Q3 | Q4 | Q1 | Q2 |  |
| <b>E340 Construction</b>  | 24-Feb-17 | 24-May-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| <b>CONSTRUCTION</b>   | 24-Feb-17 | 24-May-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~MILESTONES/EASEMENTS~  | 13-Jan-18 | 24-May-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~Milestones   | 13-Jan-18 | 24-May-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| <b>Calculated Milestones</b>  | 13-Jan-18 | 24-May-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| MS #3 - Actual Acceptance of Systems Interface Data Table (SDIT)          | 13-Jan-18 | 14-Jan-18 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| MS #1 - Actual Complete Grading & Stabilization of West Tributary Wetland | 10-Aug-18 | 11-Aug-18 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| MS #2 - Actual Substantial Completion of West Tributary Wetland           | 10-Mar-19 | 11-Mar-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| MS #4 - Actual Substantial Completion                                     | 23-May-20 | 24-May-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~SUBMITTALS/PRELIMINARY ACTIVITIES~                                       | 24-Feb-17 | 21-Oct-18 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~MOBILIZATION~  | 24-Feb-17 | 13-Dec-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~SITEWORK~  | 04-Apr-17 | 23-Apr-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~RETAINING WALLS~   | 31-Aug-17 | 18-Dec-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~AERIAL STRUCTURES~   | 15-May-17 | 08-Dec-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~STATIONS~  | 18-Aug-17 | 30-Oct-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~ELECTRICAL/ITS~  | 02-Oct-17 | 14-Mar-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~FINISHES~  | 01-Nov-17 | 18-Dec-18 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~TRACKWORK~   | 05-Oct-17 | 23-Apr-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~LANDSCAPING/FLATWORK~  | 29-Aug-17 | 27-Mar-20 |    |    |      |    |    |    |      |    |    |    |    |    |  |
| ~TESTING AND COMMISSIONING~   | 01-Nov-19 | 10-Dec-19 |    |    |      |    |    |    |      |    |    |    |    |    |  |

### Schedule Performance Index

This period, the SPI early is at 0.49 and the SPI late is at 1.36. The late index indicates that the Contractor is still ahead of schedule when compared to the baseline schedule. This trend is supported by the fact that construction ran into delays due to drilled shaft operations, and constructability issues related to design have occurred for Piers 2-6, but the Contractor is mitigating the issues by re-sequencing tasks and that could be affected by the dewatering of the drill shafts.





## Next Period's Activities

- Continued asbestos abatement and demolition at the Evans Industrial park.
- Potholing along 132nd Ave NE.
- Continued installation of drilled shafts, cross hole sonic logging, cure and test.

## Closely Monitored Issues

- Utility Coordination (PSE, CenturyLink and Comcast)
- Teamsters Local 174 possible strike.
- City of Bellevue (COB) Mid-Lakes Pump Station delayed start has potential to impact schedule.
- Coordination with COB and Safeway to facilitate Safeway loading dock construction.

## Cost Summary

| Present Financial Status             | Amount       |
|--------------------------------------|--------------|
| <b>E340 Contractor– Max J Kuney</b>  |              |
| Original Contract Value              | \$93,170,012 |
| Change Order Value                   | \$0          |
| Current Contract Value               | \$93,170,012 |
| Total Actual Cost (Incurred to date) | \$11,990,830 |
| Financial Percent Complete:          | 12.9%        |
| Physical Percent Complete:           | 12.9%        |
| Authorized Contingency               | \$9,317,000  |
| Contingency Drawdown                 | \$503,183    |
| Contingency Index                    | 1.9          |



Workers continued drilling shafts.



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

### Current Progress

The Design-Build Contractor Kiewit-Hoffman East Link Constructors (K-H), worked on finalizing the OVS and RTC early work IFC design packages. The DB team submitted 100% design packages for the aerial guideway, retaining walls, and OV Pedestrian Bridge. K-H began excavation for the continued site clearing along the WSDOT ROW and demolition of Park Place structures. K-H secured the site civil permits for early work elements at OVS and RTC.

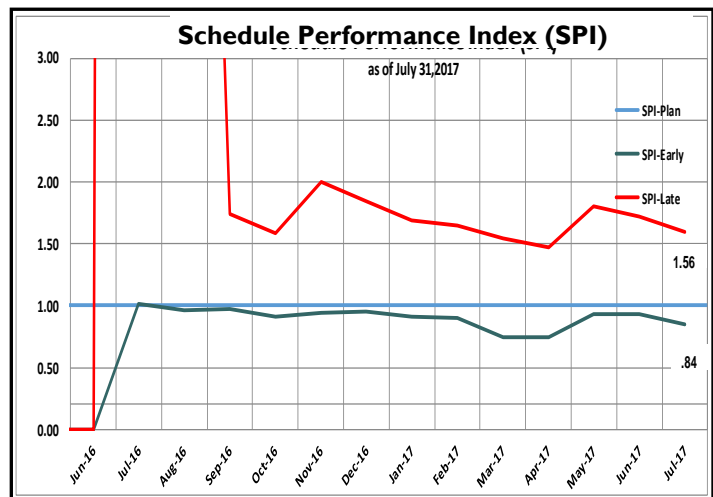
### Schedule Summary

The Contractor is between 60-100% on most design packages. Construction continued in July with structure demolition and infiltration vault excavation at Overlake Village and some utility relocation and the temporary bus loop at Overlake Transit Center. The critical path for this contract runs through the aerial guideway and direct fixation trackwork. The Contractor's current projected completion is two months ahead of Sound Transit's baseline milestone.

| Activity Name  | Start       | Finish      | 2017   |    |    |    | 2018 |    |    |    | 2019 |    |  |  |
|--|-------------|-------------|--|----|----|----|------|----|----|----|------|----|--|--|
|  |             |             | Q3   | Q4 | Q1 | Q2 | Q3   | Q4 | Q1 | Q2 | Q3   | Q4 |  |  |
| <b>E360 Construction</b>                                     | 13-Jul-16 A | 08-Dec-19   | [Gantt bar spanning from Q3 2017 to Q4 2019] |    |    |    |      |    |    |    |      |    |  |  |
| <b>Base Contract</b>   | 13-Jul-16 A | 08-Dec-19   | [Gantt bar spanning from Q3 2017 to Q4 2019] |    |    |    |      |    |    |    |      |    |  |  |
| <b>Design</b>  | 13-Jul-16 A | 22-May-18   | [Gantt bar spanning from Q3 2017 to Q2 2018] |    |    |    |      |    |    |    |      |    |  |  |
| <b>Design Milestones</b>                                     |             |             | [Milestone markers for design milestones]    |    |    |    |      |    |    |    |      |    |  |  |
| Design Submittals Start                                      | 03-Oct-16 A | 03-Oct-16 A | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| 30% Design Submittals Complete                               |             | 28-Oct-16 A | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| 60% Design Submittals Complete                               |             | 05-Aug-17   | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| 100% Design Submittals Complete                              |             | 23-Oct-17   | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| IFC Design Submittals Complete                               |             | 21-Dec-17   | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| <b>Design Overhead</b>                                       | 13-Jul-16 A | 17-Jul-17   | [Gantt bar spanning from Q3 2017 to Q2 2018] |    |    |    |      |    |    |    |      |    |  |  |
| <b>Design and Engineering</b>                                | 13-Jul-16 A | 22-May-18   | [Gantt bar spanning from Q3 2017 to Q2 2018] |    |    |    |      |    |    |    |      |    |  |  |
| <b>Construction</b>  | 14-Jul-16 A | 08-Dec-19   | [Gantt bar spanning from Q4 2017 to Q4 2019] |    |    |    |      |    |    |    |      |    |  |  |
| <b>General</b>   | 10-Apr-17 A | 08-Dec-19   | [Gantt bar spanning from Q1 2018 to Q4 2019] |    |    |    |      |    |    |    |      |    |  |  |
| <b>Project Milestones</b>                                    | 10-Apr-17 A | 08-Dec-19   | [Gantt bar spanning from Q1 2018 to Q4 2019] |    |    |    |      |    |    |    |      |    |  |  |
| Civil/Systems 100% Design Submittal (NTP+300d) (08-May-2017) |             | 10-Apr-17 A | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| Substantial Completion                                       |             | 11-Oct-19   | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| Actual Acceptance of all Work                                |             | 08-Dec-19   | [Milestone marker]                           |    |    |    |      |    |    |    |      |    |  |  |
| WA #1 -Track Slab Guideway                                   | 22-May-17 A | 20-Sep-19   | [Gantt bar spanning from Q2 2018 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |
| WA #2 -Aerial Guideway                                       | 01-Jun-17 A | 27-Sep-19   | [Gantt bar spanning from Q2 2018 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |
| WA #3 -Ballast Guideway Block #1                             | 08-Jun-17 A | 17-Jul-19   | [Gantt bar spanning from Q2 2018 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |
| WA #4 -Overlake Village Station                              | 14-Jul-16 A | 16-Aug-19   | [Gantt bar spanning from Q4 2017 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |
| WA #5 -Ballast Guideway Block #2                             | 24-Jul-17   | 25-Jul-19   | [Gantt bar spanning from Q3 2018 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |
| WA #6 -Overlake Transit Center                               | 01-May-17 A | 30-Sep-19   | [Gantt bar spanning from Q1 2018 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |
| WA #7 -OVS Pedestrian Bridge                                 | 16-Apr-18   | 19-Aug-19   | [Gantt bar spanning from Q1 2018 to Q3 2019] |    |    |    |      |    |    |    |      |    |  |  |

### Schedule Performance Index

This period, the SPI early is 0.84 and SPI late is 1.56. The SPI early value continues to reflect schedule slippage versus the baseline schedule. The early design packages for the OVS Infiltration Vault and RTC temporary drainage are near IFC issuance. The Contractor could only perform early/temporary work that ST waived formal IFCs, such as demo and clear and grub. The DB team continues to work on the 100% Station packages. Excavation of the OVS vault continued into July. Interim bus loop was opened at RTC, which required much demo, grading, and paving work leading up to the completion of the interim bus loop.



## Next Period’s Activities

- Continue work on 100% and IFC design packages .
- Contractor will continue with clear and grub, access road construction and preload.
- Backfill OVS Infiltration Vault base and begin vault footings/walls.
- Relocate Microsoft operations and begin RTC temporary drainage.

## Closely Monitored Issues

- *Alternative OTC Ped Bridge* - Contractor and Microsoft are working on 30% designs for an alternative OTC Ped Bridge. Once design, costs and schedule are developed. The parties intend to incorporate this scope into the E360 contract.
- Contractor, Sound Transit, and City of Redmond continue to work out permitting issues. Contractor has submitted a notice of potential delay.
- Continue ongoing discussion with ST and Microsoft about the necessary easement for soil nail walls under Augusta Drive.
- ST and the Contractor must resolve and negotiate changes related to Track/Fasteners/Clips, the OTC Temporary Drainage, and the OVS Infiltration Vault base modification.

## Cost Summary

| Present Financial Status               | Amount        |
|--|---------------|
| <b>E360 Contractor— Kiewit-Hoffman</b> |               |
| Original Contract Value                | \$225,336,088 |
| Change Order Value                     | \$500,000     |
| Current Contract Value                 | \$225,836,088 |
| Total Actual Cost (Amount Billed)      | \$42,899,324  |
| Financial Percent Complete:            | 19%           |
| Physical Percent Complete:             | 19%           |
| Authorized Contingency                 | \$22,533,609  |
| Contingency Drawdown                   | \$500,000     |
| Contingency Index*                     | 4.2           |



Temporary RTC Bus Loop.

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## Scope

- Limits:** South 200th Link Extension consists of 1.6-mile extension of light rail from the SeaTac/Airport Station to South 200th Street.
- Alignment:** The extension continues in an aerial configuration heading south of the existing SeaTac/Airport Station, east of Air Cargo Road across South 188th Street, and continuing south along the east side of 28th Avenue South to the elevated Angle Lake Station located at South 200th Street. A passenger pickup/drop-off area, bus transfer, plaza, and a minimum 700-space structured park and ride facility will be located at Angle Lake Station. Up to 400 additional spaces may be developed for interim parking while Angle Lake Station is the interim southern terminus of the Link system. Guideway/Station and Parking Garage/Plaza are being delivered under a Design Build contract.
- Station:** Angle Lake Station is located at South 200<sup>th</sup> Street.
- Systems:** Signals, track electrification, and SCADA communications
- Budget:** \$383.2 Million
- Schedule:** Revenue Service began on September 24, 2016



Map of S. 200th Link Extension.

## Key Project Activities

- *Design Build Guideway and Station (S440):* The project team continued working with the Contractor and Operations to finalize remaining work to achieve Acceptance on the contract.
- *Design Build Parking Garage (S445):* The project team continued working toward achieving Acceptance on the contract.
- *Military Road/South 200th (S446):* Construction work managed by WSDOT reached Substantial Completion this period.
- *Roadway Improvements (S447):* Closeout was completed.
- *Project-wide:* Goal to conclude all closeout work by end of 3rd Quarter 2017. Follow-on work items continue and expected to be completed by 4th QTR 2017.

## Closely Monitored Issues

- *S440:* Completion of Training, O&M Manuals – corrective actions need to be completed.
- *S445:* Completion of as-builts needs to be accomplished.

## Project Cost Summary

The South 200th Link Extension cost is summarized into two cost tables. The current Adopted Budget column reflects the 2016 Adopted Budget. 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.

### Cost Summary by Phase

| WBS Phase Elements      | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Est. Final Cost (EFC) | Adopted Budget vs. EFC |
|-------------------------|-----------------|------------------------|--------------------|------------------|-----------------------|------------------------|
| Administration          | \$16.1          | \$17.1                 | \$16.0             | \$16.0           | \$17.1                | \$0.0                  |
| Preliminary Engineering | \$5.9           | \$5.7                  | \$5.7              | \$5.7            | \$5.7                 | \$0.0                  |
| Final Design            | \$20.0          | \$9.5                  | \$8.7              | \$8.7            | \$8.7                 | \$0.8                  |
| Construction Services   | \$15.1          | \$17.3                 | \$17.1             | \$17.1           | \$17.2                | \$0.1                  |
| 3rd Party Agreements    | \$6.9           | \$7.1                  | \$5.7              | \$3.8            | \$5.2                 | \$1.9                  |
| Construction            | \$275.7         | \$282.9                | \$241.0            | \$238.0          | \$249.2               | \$33.7                 |
| Vehicles                | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                 | \$0.0                  |
| ROW                     | \$43.5          | \$43.5                 | \$38.1             | \$38.0           | \$38.1                | \$5.4                  |
| <b>Capital Total</b>    | <b>\$383.2</b>  | <b>\$383.2</b>         | <b>\$332.4</b>     | <b>\$327.2</b>   | <b>\$341.2</b>        | <b>\$42.0</b>          |
| Finance Cost            | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                 | \$0.0                  |
| <b>Project Total</b>    | <b>\$383.2</b>  | <b>\$383.2</b>         | <b>\$332.4</b>     | <b>\$327.2</b>   | <b>\$341.2</b>        | <b>\$42.0</b>          |

The overall project Estimated Final Cost (EFC) for this period reflects \$341M, a savings projection of \$42M. This period incurred cost increased by approximately \$0.3M, of this \$0.3M for S446 WSDOT construction task order, and the remaining expenditures for administrative charges are immaterial.

The EFC grouped by SCC is also reflecting \$341M, a savings projection of \$42M. The work remaining can be achieved under the adopted budget.

### Cost Summary by SCC

| Project Elements by SCC                  | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Est. Final Cost (EFC) | Adopted Budget vs. EFC |
|--|-----------------|------------------------|--------------------|------------------|-----------------------|------------------------|
| 10 Guideway & Track Elements             | \$144.8         | \$133.0                | \$100.2            | \$100.2          | \$108.9               | \$24.1                 |
| 20 Stations                              | \$46.4          | \$51.7                 | \$42.0             | \$42.1           | \$42.5                | \$9.3                  |
| 30 Support Facilities: Yards, Shops      | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                 | \$0.0                  |
| 40 Sitework & Special Conditions         | \$34.6          | \$55.3                 | \$57.3             | \$54.3           | \$58.6                | -\$3.3                 |
| 50 Systems                               | \$30.8          | \$19.9                 | \$20.3             | \$20.3           | \$20.3                | -\$0.4                 |
| <b>Construction Subtotal (SCC 10-50)</b> | <b>\$256.6</b>  | <b>\$259.9</b>         | <b>\$219.8</b>     | <b>\$216.8</b>   | <b>\$230.2</b>        | <b>\$29.7</b>          |
| 60 Row, Land, Existing Improvements      | \$43.5          | \$43.5                 | \$38.1             | \$38.0           | \$38.1                | \$5.4                  |
| 70 Vehicles                              | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                 | \$0.0                  |
| 80 Professional Services                 | \$64.1          | \$72.5                 | \$74.5             | \$72.4           | \$68.3                | \$4.2                  |
| 90 Unallocated Contingency               | \$19.0          | \$7.3                  | \$0.0              | \$0.0            | \$4.6                 | \$2.7                  |
| <b>Project Total (SCC 10-90)</b>         | <b>\$383.2</b>  | <b>\$383.2</b>         | <b>\$332.4</b>     | <b>\$327.2</b>   | <b>\$341.2</b>        | <b>\$42.0</b>          |
| 100 Finance Cost                         | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                 | \$0.0                  |
| <b>Project Total (SCC 10-90)</b>         | <b>\$383.2</b>  | <b>\$383.2</b>         | <b>\$332.4</b>     | <b>\$327.2</b>   | <b>\$341.2</b>        | <b>\$42.0</b>          |



## Cost Contingency Management

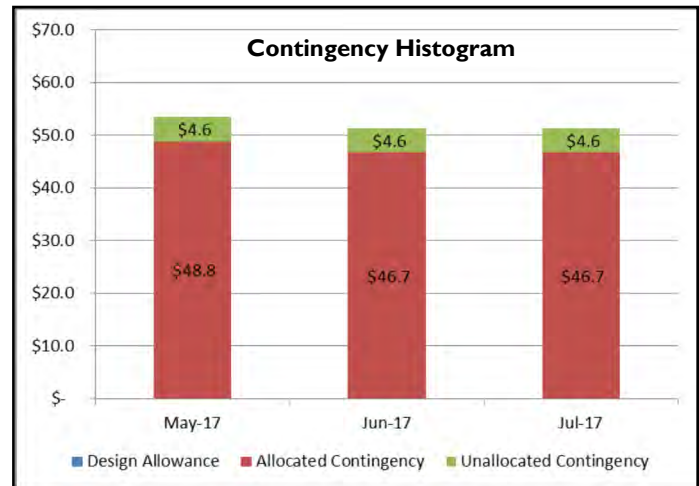
The overall project contingency balance as of this period is \$51.3M. Table (below) figures in millions.

*Design Allowance (DA):* N/A

*Allocated Contingency (AC):* This period the AC balance of \$46.7M, remains unchanged.

*Unallocated Contingency (UAC):* This period the UAC balance is \$4.6M, remains unchanged.

| Contingency Status      | Baseline      |              | Current       |                     |
|-------------------------|---------------|--------------|---------------|---------------------|
|                         | Amount        | % of Total   | Amount        | % of Work Remaining |
| Design Allowance        | \$26.7        | 7.0%         | \$ -          | 0.0%                |
| Allocated Contingency   | \$29.8        | 8.0%         | \$46.7        | 325.5%              |
| Unallocated Contingency | \$19.0        | 5.0%         | \$ 4.6        | 32.1%               |
| <b>Total</b>            | <b>\$75.5</b> | <b>20.0%</b> | <b>\$51.3</b> | <b>357.6%</b>       |



### S440 Contract—Design -Build (Guideway and Station)

#### Close-out

Revenue Service began on September 24, 2016. The S440 Contractor continues to work on closeout and punchlist items.

#### Close-out Activities

##### Current Period

- Continued post revenue system work arounds and safety certification.
- Completed all NCRs and Transition to Operations.
- Continued change order work and address contract closeout items (training, O&M Manuals, Commissioning Reports and As-Builts).

##### Next Period

- Complete closeout materials and work around work.

#### Closely Monitored Issues

- Need to complete remaining training, Safety Certification, and as-builts to transfer maintenance responsibilities to Operations and Facilities.

### Cost Summary

| Present Financial Status                           | Amount        |
|--|---------------|
| <b>S440 Contractor—PCL Civil Contractors, Inc.</b> |               |
| Original Contract Value                            | \$169,000,000 |
| Change Order Value                                 | \$8,490,373   |
| Current Contract Value                             | \$177,490,373 |
| Total Actual Cost (Amount Billed)                  | \$175,761,970 |
| Financial Percent Complete:                        | 99.2%         |
| Physical Percent Complete:                         | 100%          |
| Authorized Contingency                             | \$13,520,000  |
| Contingency Drawdown                               | \$8,490,373   |
| Contingency Index*                                 | 1.6           |

### S445 Contract—Design -Build Parking Garage

#### Close-out

Substantial Completion issued on December 21, 2016.

#### Close-out Activities

##### Current Period

- Preparing final change item.
- Continue closeout activities (As-builts).

##### Next Period

- Complete contract closeout.

#### Closely Monitored Issues

- None

### Cost Summary

| Present Financial Status                     | Amount       |
|--|--------------|
| <b>S445 Contractor—Harbor Pacific/Graham</b> |              |
| Original Contract Value                      | \$29,978,000 |
| Change Order Value                           | \$2,604,606  |
| Current Contract Value                       | \$32,582,606 |
| Total Actual Cost (Amount Billed)            | \$32,582,606 |
| Financial Percent Complete:                  | 100%         |
| Physical Percent Complete:                   | 100%         |
| Authorized Contingency                       | \$2,798,240  |
| Contingency Drawdown                         | \$2,604,606  |
| Contingency Index*                           | 1.1          |

# Link Light Rail Federal Way Extension

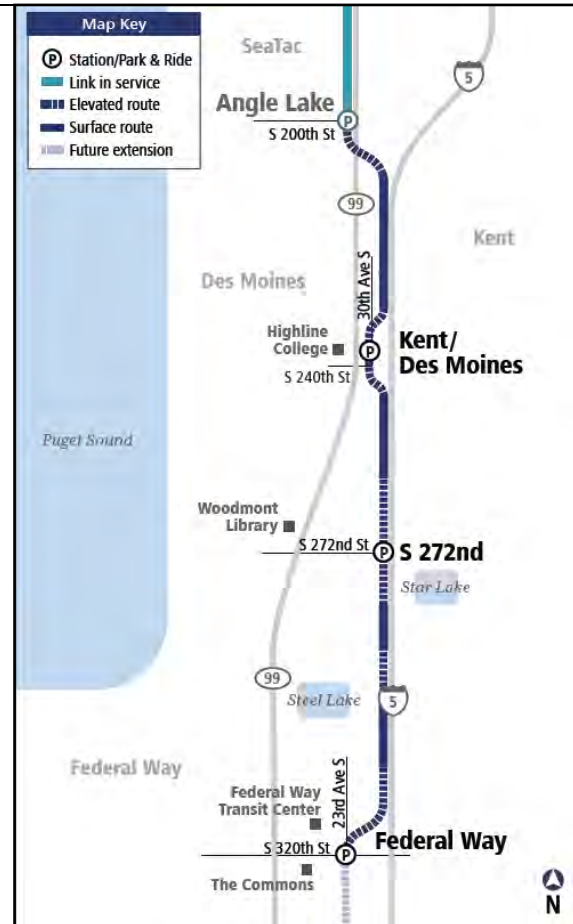


## Scope

The Federal Way Link Extension adds approximately 7.8 miles of light rail from the Angle Lake Station in the City of SeaTac to the Federal Way City Center. The extension generally parallels SR 99 and I-5 freeway with stations at Kent/Des Moines, South 272nd Star Lake Park –and-Ride and the Federal Way Transit Center. The current budget for this project is \$412.6M.

## Key Project Activities/Issues

- Board identified a Preferred Alternative and approved Phase 3 contract amendment on July 23, 2015.
- Executed Phase 3 contract amendment with HDR for Final EIS and Preliminary Engineering on July 24, 2015.
- ST Board approved contract amendment in February 2016 to extend Preliminary Engineering from Kent/Des Moines to the Federal Way Transit Center.
- Final EIS was published in November 2016.
- Sound Transit Board has selected the alignment and stations for the project on January 26, 2017.
- Received Record of Decision from FTA in March 2017.
- Entered Final Design (Phase Gate 4) in March 2017.



Map of Federal Way Link Extension.

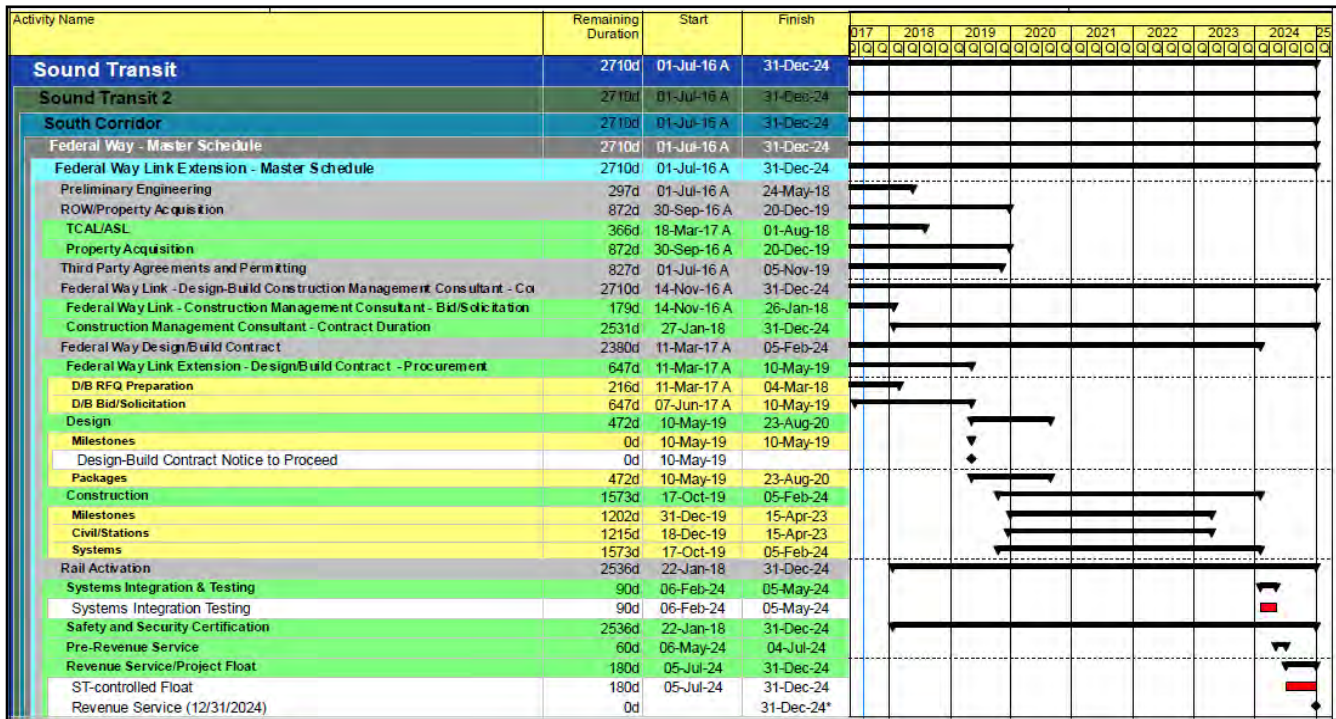
## Project Cost Summary

In March 2017, the Sound Transit Board authorized the Federal Way Link Extension Project to advance through Gate 4 (Final Design), increasing the authorized project allocation from \$48.8M to \$412.6M. Board approval for Gate 5 to release the entire project budget will be sought in December 2017. Table (below) figures in millions.

| Phase                   | Adopted Budget | Commitment to Date | Incurred to Date | Forecasts and Trends | Estimated Final Cost (EFC) | Budget Versus EFC |
|-------------------------|----------------|--------------------|------------------|----------------------|----------------------------|-------------------|
| Administration          | \$14.9         | \$7.4              | \$7.4            | \$7.5                | \$14.9                     | \$0.0             |
| Preliminary Engineering | \$40.4         | \$39.1             | \$35.6           | \$1.2                | \$40.4                     | \$0.0             |
| Final Design            | \$2.4          | \$0.0              | \$0.0            | \$2.3                | \$2.4                      | \$0.0             |
| Construction Services   | \$45.7         | \$0.0              | \$0.0            | \$45.7               | \$45.7                     | \$0.0             |
| Third Parties           | \$18.6         | \$2.7              | \$1.3            | \$15.9               | \$18.6                     | \$0.0             |
| Construction            | \$25.5         | \$0.0              | \$0.0            | \$25.5               | \$25.5                     | \$0.0             |
| Right of Way            | \$265.1        | \$4.5              | \$1.2            | \$260.7              | \$265.1                    | \$0.0             |
| <b>Total</b>            | <b>\$412.6</b> | <b>\$53.8</b>      | <b>\$45.4</b>    | <b>\$358.8</b>       | <b>\$412.6</b>             | <b>\$0.0</b>      |

## Project Schedule

The project schedule is presented below. ROD was received in March 2017. ST has commenced acquiring real estate and will Baseline the project in 2nd QTR 2018, and will issue an RFQ for potential Design-Build contractors in 1st QTR 2018. Real Estate Acquisitions are now underway and additional detail has been added to the master schedule to monitor any impacts to the project. Project Baseline has been delayed to 2018 due to allow time for completion of independent cost estimate and risk assessment.



## Sound Transit Board Actions

Board motions and resolutions directly related to Federal Way Link Extension is summarized in the table below.

| Motion Number | Description     | Date |
|---------------|-----------------|------|
|               | None to report. |      |

## Environmental

- None to report.

## Community Outreach

- Weekly neighborhood briefings will continue through September; tabling events are occurring at farmers markets, fairs and other local events. Public outreach events in each of the cities are scheduled for mid-August to mid-September.
- Hosted a station workshop with staff from the Cities of Kent, Federal Way and Des Moines, King County Metro and other stakeholders to gather input about the station.
- Attended the South King County Mobility Coalition meeting to provide project update and gather feedback from organizations that work with people with mobility issues.
- Continued meeting with property owners regarding the ST Board decision on the project's route, profile and station areas.

## Phase 3 Preliminary Engineering (PE)

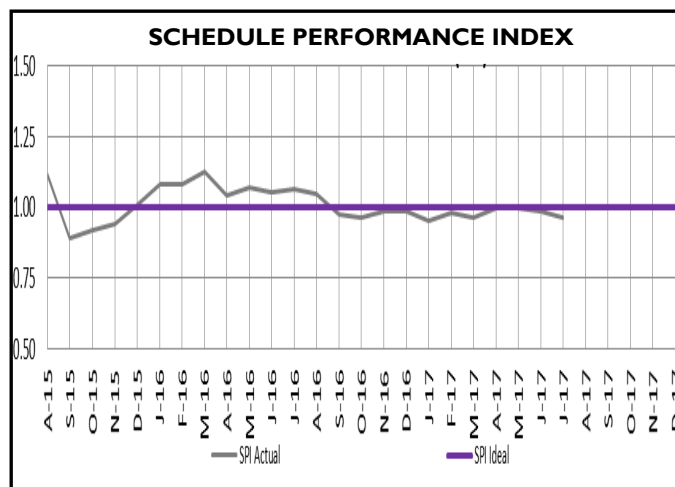
In July 2015, Sound Transit executed an amendment to the professional services agreement with HDR Engineering, Inc. for Phase 3 professional services, including completion of a Final Environmental Impact Statement (FEIS) using the preferred alternative and the other alternatives in the Draft EIS, preliminary 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.

### Phase 3 Key Activities

- Record of Decision (ROD) from FTA received and moving toward Entry to Engineering.
- Resolution of Pre-Final PE submittal comments by third parties and initiation of development of project requirements associated with RFP development for design-build contract.
- Continued coordination with potentially affected property owners including neighborhood briefings and one-on-one meetings.
- Completion of term sheets with affected jurisdictions documenting concurrence on project improvements, impacts analysis and mitigation and initiation of future agreements.
- Continued discussion with FTA regarding New Starts requirements for Entry to Engineering.
- Agreements setup with affected cities for design review and RFP preparation.

### Phase 3 Schedule Performance

The cumulative Schedule Performance Index (SPI) is 0.97 through July 2017, indicating the overall amount of work accomplished is near planned. A new plan has been developed to incorporate new scope to extend consultant contract for assistance in RFP process of DB contract and in ROW acquisition support.

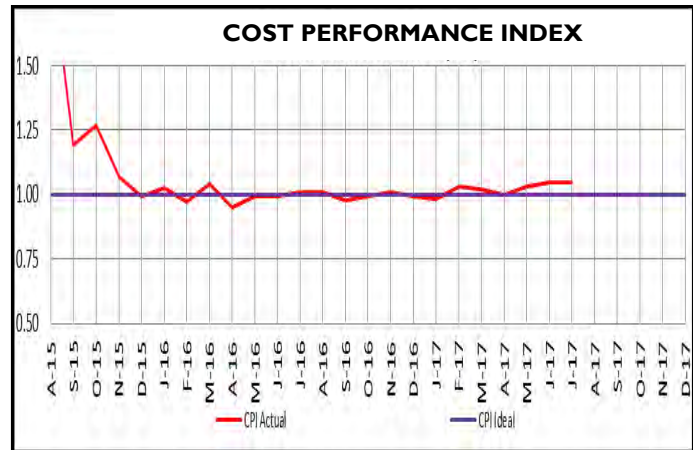




## Phase 3 Cost Performance

Phase 3 expenditures totaled \$22.8M, approximately 77% of the Phase 3 contract total. The Phase 3 percent complete is reported at 80%, with an earned value of \$24.0M. The cumulative Cost Performance Index (CPI) for July is 1.05, indicating costs are on track with work accomplished. Phase 3 cost is on budget.

A change order was approved for a contract extension for one year for assistance in RFP process of the DB contract and in ROW acquisition support.



| Phase 3 Performance | Cumulative To Date |
|---------------------|--------------------|
| Amount Invoiced     | \$22.8             |
| % Spent             | 77%                |
| Earned Value        | \$24.0             |
| % Complete          | 80%                |
| <b>SPI</b>          | <b>0.97</b>        |
| <b>CPI</b>          | <b>1.05</b>        |

# Link Light Rail Tacoma Link Expansion

## Scope

**Limits:** City of Tacoma

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

**Stations:** Relocated Theater District Station, Stadium Way & 4th St, Stadium District, MLK Jr. Way and Division, MLK Jr. Way and 6TH Ave, MLK Jr. Way and S. 11th St., and MLK Jr. Way and S. 19th St.

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

**Budget:** \$34.6 Million Phase Gate 4 budget; excludes Construction (Year of Expenditure Dollars)

**Phase:** Final Design

**Const. Starts:** 2018



Map of Tacoma Link Expansion.

## Key Project Activities

### Final Design

- Design consultant completed responses to 60% design package and continued work on 90% design package.
- Continued work with City of Tacoma on issues regarding OCS pole placement along Stadium Way and Commerce St. and treatment of un-signalized intersections.

### Pre-Construction Services

- Construction Management Consultant's (CMC) Resident Engineer and ST staff continued to review maintenance of traffic plans and provide constructability reviews in advance of Constructability Workshop.

### Third Parties

- Completed amendment to funding agreement to address City contribution based on baseline cost estimate.
- ST and City of Tacoma staff substantially completed work order negotiations for City inspection and project management services of various project elements, most notably utilities.
- Issued final risk assessment report to FTA for review. Provided additional information to FTA and PMOC for inclusion into independent risk assessment report

### Right of Way

- Continued right of way property acquisition activities as they relate to required temporary construction easements (TCE) along the alignment.

## Project Cost Summary

The Tacoma Link 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

| WBS Phase Elements      | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|-------------------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| Administration          | \$10.6                 | \$4.5              | \$4.4            | \$10.6                     | \$0.0                  |
| Preliminary Engineering | \$5.9                  | \$5.6              | \$5.6            | \$5.9                      | \$0.0                  |
| Final Design            | \$10.8                 | \$7.7              | \$6.1            | \$10.8                     | \$0.0                  |
| Construction Services   | \$0.8                  | \$0.5              | \$0.0            | \$0.8                      | \$0.0                  |
| 3rd Party Agreements    | \$1.3                  | \$1.1              | \$0.0            | \$1.3                      | \$0.0                  |
| Construction            | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| Vehicles                | \$2.0                  | \$1.9              | \$0.3            | \$2.0                      | \$0.0                  |
| ROW                     | \$3.2                  | \$1.6              | \$1.5            | \$3.2                      | \$0.0                  |
| <b>Total</b>            | <b>\$34.6</b>          | <b>\$23.0</b>      | <b>\$18.0</b>    | <b>\$34.6</b>              | <b>\$0.0</b>           |

### Cost Summary by SCC

| Project Elements by SCC                | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget 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                  |
| <b>Construction Subtotal (10 - 50)</b> | <b>\$0.0</b>           | <b>\$0.0</b>       | <b>\$0.0</b>     | <b>\$0.0</b>               | <b>\$0.0</b>           |
| 60 Row, Land                           | \$3.2                  | \$1.6              | \$1.5            | \$3.2                      | \$0.0                  |
| 70 Vehicles (non-revenue)              | \$2.0                  | \$1.9              | \$0.3            | \$2.0                      | \$0.0                  |
| 80 Professional Services               | \$29.4                 | \$19.4             | \$16.1           | \$29.4                     | \$0.0                  |
| 90 Unallocated Contingency             | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| <b>Total (10 - 90)</b>                 | <b>\$34.6</b>          | <b>\$23.0</b>      | <b>\$18.0</b>    | <b>\$34.6</b>              | <b>\$0.0</b>           |

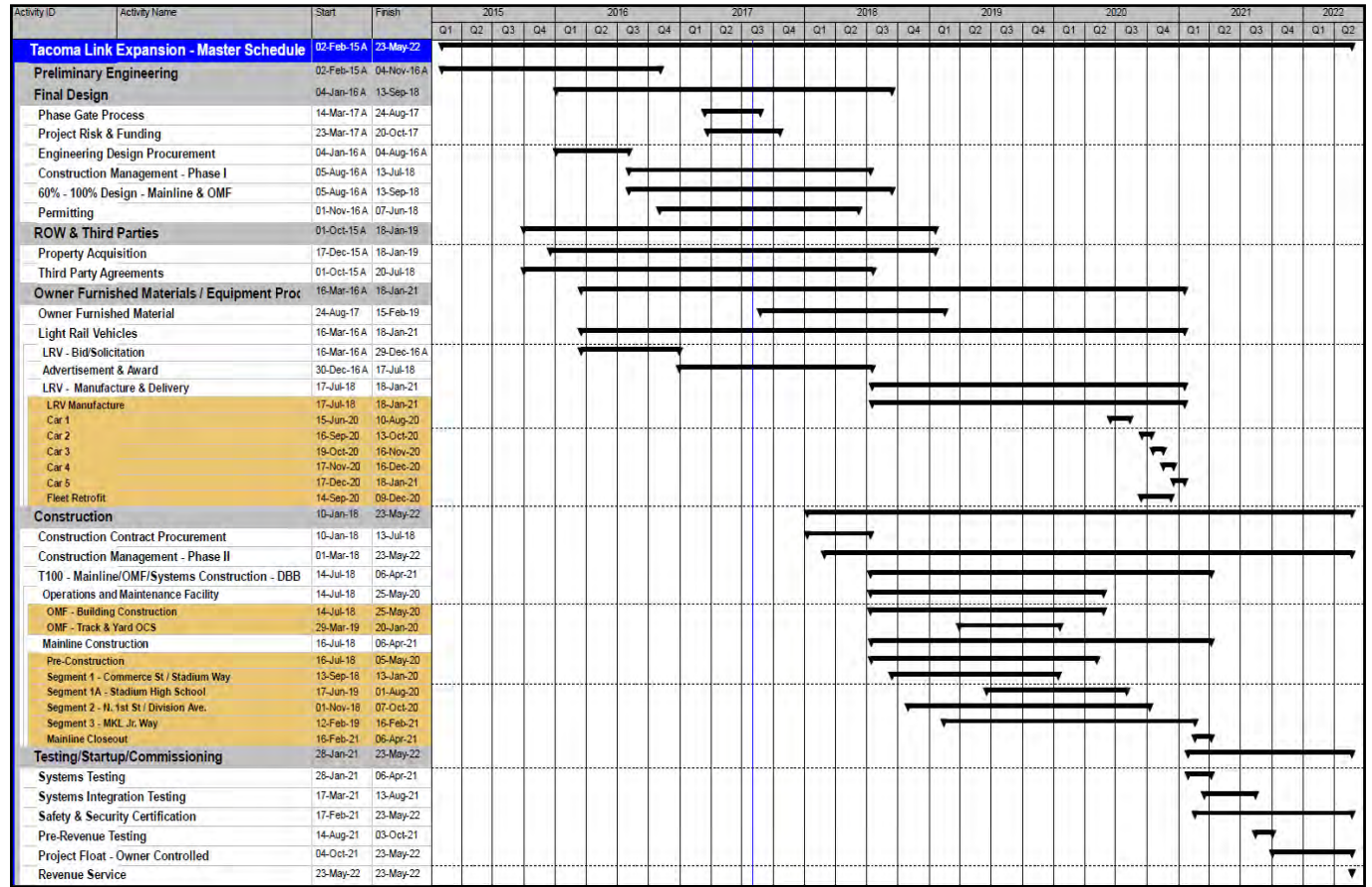
## Risk Management

The Tacoma Link Risk and Contingency Management Plan (RCMP) was completed in 2nd QTR 2017. This establishes a risk management and oversight process for identifying, assessing, and monitoring risks and develops risk reduction/mitigation plans. It will provide a tool for the project team to proactively manage risks on the project. It is Sound Transit’s responsibility for continuously monitoring project status and associated risks, taking mitigation actions for known risks identified on the risk register, and effectively responding in a timely manner to those risks that pose a significant impact to the project cost or schedule forecast.

The Tacoma Link Quarterly Risk Review Meeting was held in March 2017. The baseline risk assessment was conducted in May 2017.

## Project Schedule

The Master Schedule has been updated through the end of July. Project baselining, Phase Gate 5, will take place in August 2017. The Final Design is on schedule to submit the 90% design package on Sept. 5th. TCE Batch No. 1 appraisals are expected in mid to late August. The issuance of the request for the LRV BAFOs has been pushed back to early August, with the offers due at the end of the month. LRV manufacturing is still scheduled to start in December of 2017. Project Float remains 8 months. The schedule end date remains May 23, 2022.



## Community Outreach

- Met with Tacoma Mayor Marilyn Strickland to discuss proposed station names and received concurrence with names vetted through ST's public outreach process.
- Met with various community members and City staff to assure smooth transition of ST Outreach staff.
- Met with Tacoma Public Utilities to begin planning for coordinated outreach efforts for utility relocations.
- Continued planning and development of 90% open house and pre-construction outreach material.
- Staff provided project information to over 500 people at the Tacoma Ethnic Fest on July 29 & 30.

## Sound Transit Board Actions

| Motion Number | Description     | Date |
|---------------|-----------------|------|
|               | None to report. |      |



## Final Design

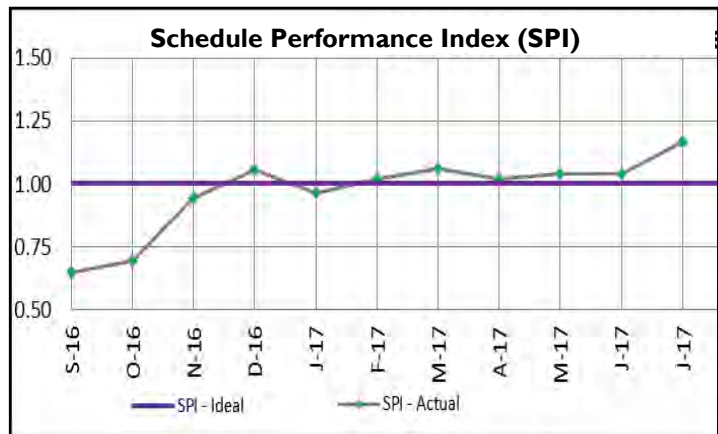
In July 2016 Sound Transit executed a contract with HDR Engineering, Inc. to provide civil and systems final design services for Tacoma Link.

### Final Design Key Activities

- Continued coordination meetings with the City of Tacoma.
- Continued work order development with the City of Tacoma for construction services as identified in the Construction Services Agreement.
- Received three proposals from interested LRV manufacturers. Two firms were shortlisted with car builder meetings occurred in July.

### Final Design Schedule Performance

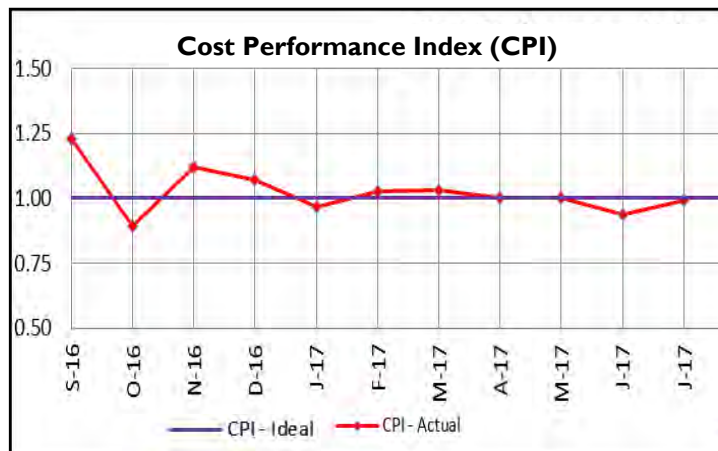
The cumulative Schedule Performance Index (SPI) for the Final Design contract is 1.17 through July, indicating that the contract work performed is slightly ahead of the original plan. The consultant is scheduled to complete the design submittals earlier than anticipated.



### Final Design Cost Performance

Based on Actuals, the Contract expenditures through July totaled \$6.1M, approximately 81% of the Final Design contract total. The Final Design contract percent complete reported at the end of July is 80%, with an earned value of \$6.0M.

The cumulative Cost Performance Index (CPI) through July is 0.99 ; indicating expenditures greater than the Budgeted Cost for Work Performed. Civil/Track/Station Design is the greatest driver of the CPI. The consultant is scheduled to complete the design submittals earlier than anticipated. There change request is in discussion to address cost issues in these tasks.



| Phase 3 Performance | Cumulative To-Date |
|---------------------|--------------------|
| Amount Invoiced     | \$6.1M             |
| % Spent             | 81%                |
| Earned Value        | \$6.0M             |
| % Complete          | 80%                |
| <b>SPI</b>          | <b>1.17</b>        |
| <b>CPI</b>          | <b>0.99</b>        |



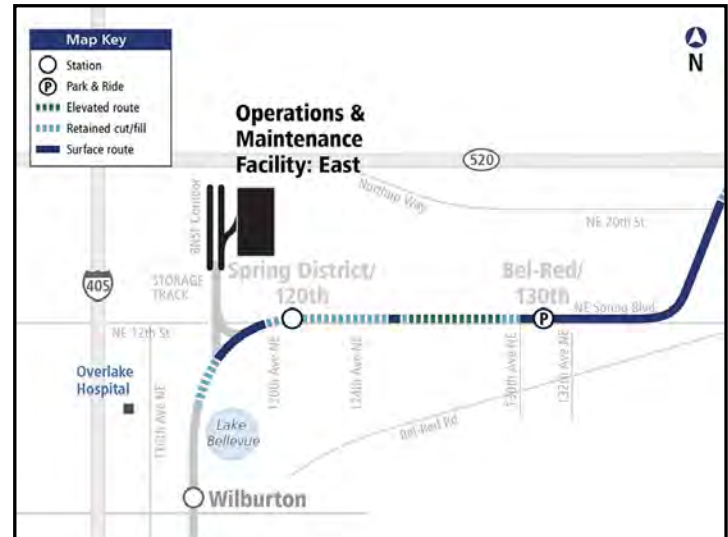
### Project Summary

**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.

**Budget:** \$449.2 Million (Baselined July 2016)

**Schedule:** Project completion December 2020

**Phase:** Proceed to Construction



Map of OMF East site.

### Key Activities

- Continue property relocations with a vacate date in September, with exception of one property that may lag until December 2017. Private property acquisitions in condemnation phase continue to achieve settlements.
- Continue collaboration with City of Bellevue (COB) regarding: surplus property disposition, TOD decision making process, Men’s Shelter and supportive housing alternatives.
- Continue preparation of the Master Development Plan permit application to COB by DB Contractor.
- Continue Critical Areas permit application reviews with COB.
- Pre-development services PO for building permit with COB is pending.
- Continue discussions with King County regarding betterment agreement to upsize KC sewer pipe line on construction site. DB Contractor evaluating design impact.
- CAR corrections notice regarding possible buffer mitigation on site. ST Environmental working on response.
- NPDES issuance pending from Ecology.

### Closely Monitored Issues

- Property acquisition and tenant relocation schedule is on critical path. Condemnation process timeline are being monitored closely.
- Permit schedule for the Master Development Plan by City of Bellevue is pending and is a top schedule risk.
- Elements of DB Contractor’s proposal (shear wall elimination for future development) may require MOU amendment with COB.
- King County betterment scope being defined, may involve additional property TCE.
- City of Bellevue adherence to the MOU and IA future development (TOD) intent potentially in question.

### Project Cost Summary

The Adopted Capital Budget 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.

#### Cost Summary by Phase

| WBS Phase Elements      | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|-------------------------|-----------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| Administration          | \$17.6          | \$17.6                 | \$2.9              | \$2.9            | \$17.6                     | \$0.0                  |
| Preliminary Engineering | \$9.5           | \$9.5                  | \$9.0              | \$8.6            | \$9.5                      | \$0.0                  |
| Final Design            | \$0.4           | \$0.4                  | \$0.0              | \$0.0            | \$0.4                      | \$0.0                  |
| Construction Services   | \$19.3          | \$19.3                 | \$17.6             | \$0.2            | \$19.3                     | \$0.0                  |
| 3rd Party Agreements    | \$3.1           | \$3.1                  | \$0.2              | \$0.0            | \$3.1                      | \$0.0                  |
| Construction            | \$264.8         | \$264.8                | \$219.8            | \$6.1            | \$264.8                    | \$0.0                  |
| ROW                     | \$134.5         | \$134.5                | \$40.0             | \$39.1           | \$134.5                    | \$0.0                  |
| <b>Total</b>            | <b>\$449.2</b>  | <b>\$449.2</b>         | <b>\$289.5</b>     | <b>\$56.9</b>    | <b>\$449.2</b>             | <b>\$0.0</b>           |

The Estimated Final Cost (EFC) for this reporting period is \$449.2M, which is equal to the current project budget. This period approximately \$1.6M was incurred, of which \$0.1M was Administration, ROW was \$0.3M, and Construction phase is \$1.1M for M200 contract regarding design development and other expenditures.

#### Cost Summary by SCC

| Project Elements by Phase                | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget vs. EFC |
|--|-----------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| 10 Guideway & Track Elements             | \$2.6           | \$2.6                  | \$4.0              | \$0.0            | \$4.0                      | -\$1.5                 |
| 20 Stations                              | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| 30 Support Facilities: Yards, Shops      | \$140.1         | \$140.1                | \$123.1            | \$1.7            | \$145.7                    | -\$5.7                 |
| 40 Sitework & Special Conditions         | \$43.6          | \$43.6                 | \$38.3             | \$0.5            | \$41.4                     | \$2.3                  |
| 50 Systems                               | \$43.0          | \$43.0                 | \$38.3             | \$0.5            | \$38.3                     | \$4.7                  |
| <b>Construction Subtotal (SCC 10-50)</b> | <b>\$229.3</b>  | <b>\$229.3</b>         | <b>\$203.8</b>     | <b>\$2.7</b>     | <b>\$229.5</b>             | <b>-\$0.2</b>          |
| 60 Row, Land, Improvements               | \$134.5         | \$134.5                | \$40.0             | \$39.1           | \$134.5                    | \$0.0                  |
| 70 Vehicles                              | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| 80 Professional Services                 | \$71.6          | \$71.6                 | \$45.7             | \$15.1           | \$71.4                     | \$0.2                  |
| 90 Unallocated Contingency               | \$13.8          | \$13.8                 | \$0.0              | \$0.0            | \$13.8                     | \$0.0                  |
| <b>Project Total (SCC 10-90)</b>         | <b>\$449.2</b>  | <b>\$449.2</b>         | <b>\$289.5</b>     | <b>\$56.9</b>    | <b>\$449.2</b>             | <b>\$0.0</b>           |

### Risk and Contingency Management

#### Risk Management

The Risk Contingency Management Plan (RCMP) established a risk management and oversight process for identifying, assessing, and monitoring risk and develop risk reduction/mitigation plans. It provides a tool for the project team to proactively manage risks on the project. Sound Transit (ST) continuously monitors 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 and/or schedule forecast. The most recent OMF East quarterly risk register review meeting was held June 2017 and the top five actively managed are shown below.

- Third Party requesting additional site improvements not included in the agreements.
- Authorities Having Jurisdiction not fully communicating all of their requirements to Sound Transit.

# Link Light Rail Link Operations and Maintenance Facility: East



## Risk Management, continued

- Third Party not satisfied with progress on Master Development Plan causing reconsideration for use of a development agreement process and late permits.
- Third Party imposes additional scope or betterments through the permitting process.
- ST requirements potentially increase change items.

## Contingency Status

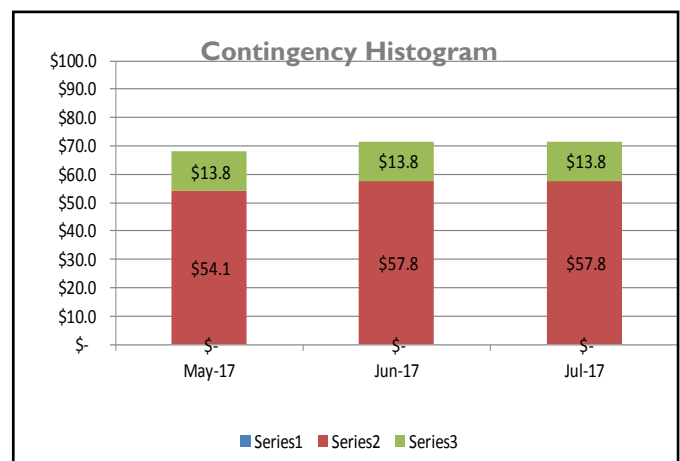
The Link Operations and Maintenance Facility East was baselined and approved by Sound Transit Board on July 2016 with a total contingency of \$93.2M. The contingency drawdown plan (shown below) excludes the Design Allowance amount as it was absorbed by the design builder, therefore the starting contingency drawdown balance began at \$67.8M. At the end of July 2017, the total contingency balance remains at \$71.6M. The current contingency balance is consistent with the project's planned contingency drawdown. Details are provided below.

**Design Allowance (DA)** – The baseline DA of \$25.3M has been fully depleted based on recent award of Design Build construction contract (M200).

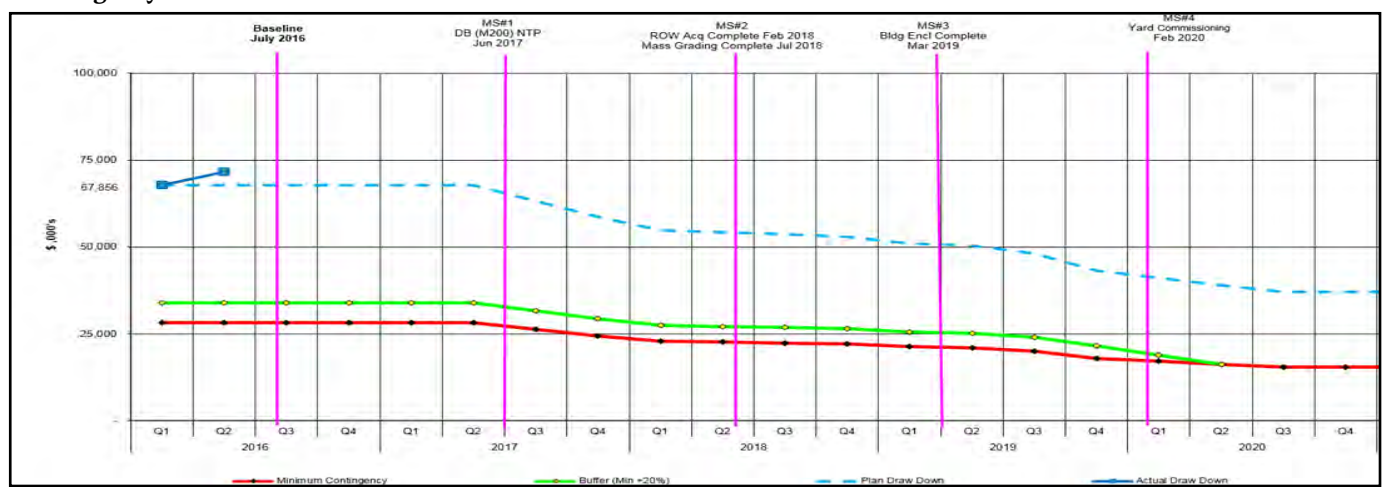
**Allocated Contingency (AC)** – Compared to the baseline amount of \$54.1M, AC of \$57.8M reflects no changes this period.

**Unallocated Contingency (UAC)** – The baseline UAC amount of \$13.8M reflects no changes this period.

| Contingency Status      | Baseline       |              | Current        |                     |
|-------------------------|----------------|--------------|----------------|---------------------|
|                         | Amount         | % of Total   | Amount         | % of Work Remaining |
| Design Allowance        | \$ 25.3        | 5.6%         | \$ -           | 0.0%                |
| Allocated Contingency   | \$ 54.1        | 12.0%        | \$ 57.8        | 14.7%               |
| Unallocated Contingency | \$ 13.8        | 3.1%         | \$ 13.8        | 3.5%                |
| <b>Total</b>            | <b>\$ 93.2</b> | <b>20.7%</b> | <b>\$ 71.6</b> | <b>18.2%</b>        |

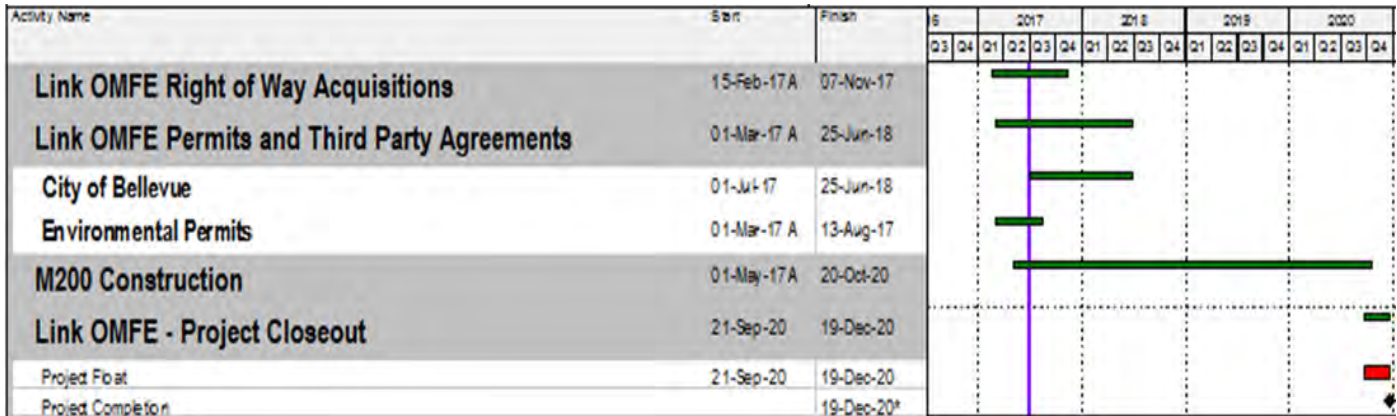


## Contingency Drawdown



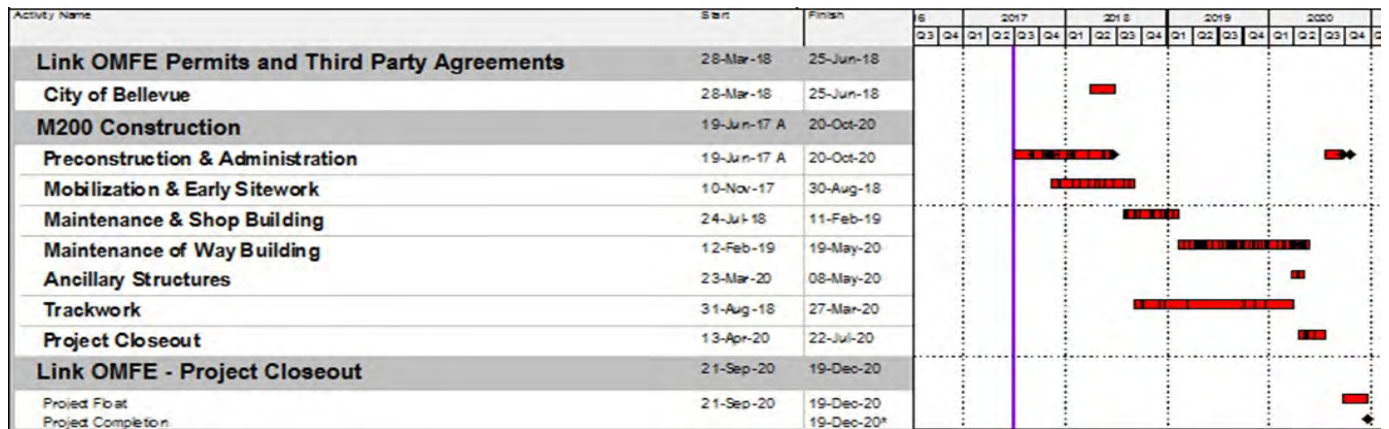
## Project Schedule

The project schedule is presented below and reflected in the baseline. The Contractor has mobilized to the jobsite and has prepared the Master Development Plan submittal. Design work has begun. Property acquisitions are trending ahead of schedule to be completed in late 2017, in time for construction to start as planned.



## Critical Path Analysis

The critical path is now fully within the M200 contract. It runs through site preparation and building structures, with a parallel critical path running through the storage tracks. The two paths converge on signal and systems commissioning.





## Right of Way

Filed condemnations and requested Possession and Use of all properties. ST responded to second counter offer for one property. One parcel relocated this period. The right - of-way program status of this period is summarized below:

| Link OMF East Property Acquisition Status |                |                             |                   |                    |                  |                  |                      |                 |
|---|----------------|-----------------------------|-------------------|--------------------|------------------|------------------|----------------------|-----------------|
|   | Board Approved | Offers Made/In Negotiations | Signed Agreements | Possession and Use | Admin Settlement | Closings to date | Relocations Required | Parcels Vacated |
| <b>Total*</b>                             | 11             | 9                           | 0                 | 2                  | 0                | 1                | 31                   | 5               |

\*Number totals may differ from other reports due to the timing of reporting periods.

## Sound Transit Board Actions

Board motions and resolutions directly related to OMF East is summarized in the table below.

| Motion Number | Description     | Date |
|---------------|-----------------|------|
|               | None to report. |      |

## Community Outreach

- Project website refinements in progress. Posting of time lapse video of existing OMF yard in Forest Street being prepared.
- Coordinated with King County parks for participation in ERC open houses.

## Environmental

- Wetland Mitigation Permit is under review by the City of Bellevue.



Aerial view drawing of the proposed OMF East site.



## Phase 2 Preliminary Engineering and FEIS

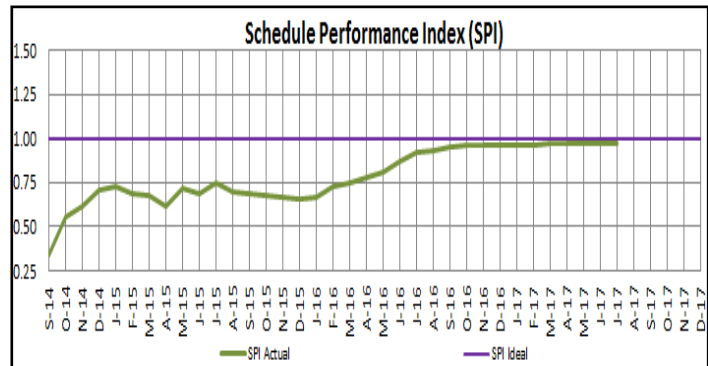
Sound Transit executed a professional services agreement with Huitt-Zollars, Inc. (HZ) for civil engineering and architectural design services and issued NTP for Phase 2, Preliminary Engineering and FEIS for the Link Operations and Maintenance Facility: East in September 2014.

### Phase 2 Key Activities

- Continued working on draft agreement with King County regarding mainline sewer replacement .
- JARPA approval received, awaiting City of Bellevue review of CAR prior to implementing fee in lieu program.
- Coordinated permit support services payment concurrence with the City of Bellevue.

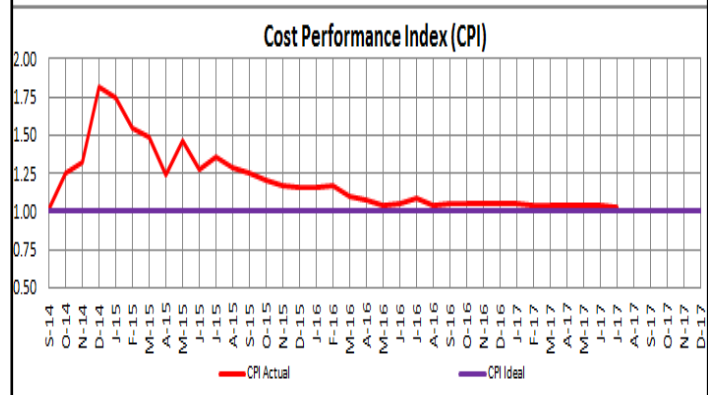
### Phase 2 Schedule Performance

The cumulative Schedule Performance Index (SPI) trends at 0.97 through July 2017, which means that cumulative work accomplished is slightly less than work planned.



### Phase 2 Cost Performance

\$4.9M of the total Phase 2 contract amount, approximately 93.6%, was spent through July 2017. The Phase 2 percent complete is 97%, with an earned value of \$5.2M. The cumulative Cost Performance Index (CPI) is 1.03, meaning that expenditures are slightly less than the earned value.



| Phase 2 Performance | Cumulative To Date |
|---------------------|--------------------|
| Amount Invoiced     | \$4.9M             |
| % Spent             | 93.6%              |
| Earned Value        | \$5.2M             |
| % Complete          | 97%                |
| <b>SPI</b>          | <b>0.97</b>        |
| <b>CPI</b>          | <b>1.03</b>        |

## Contract M200 - OMF East Design Build

### Scope

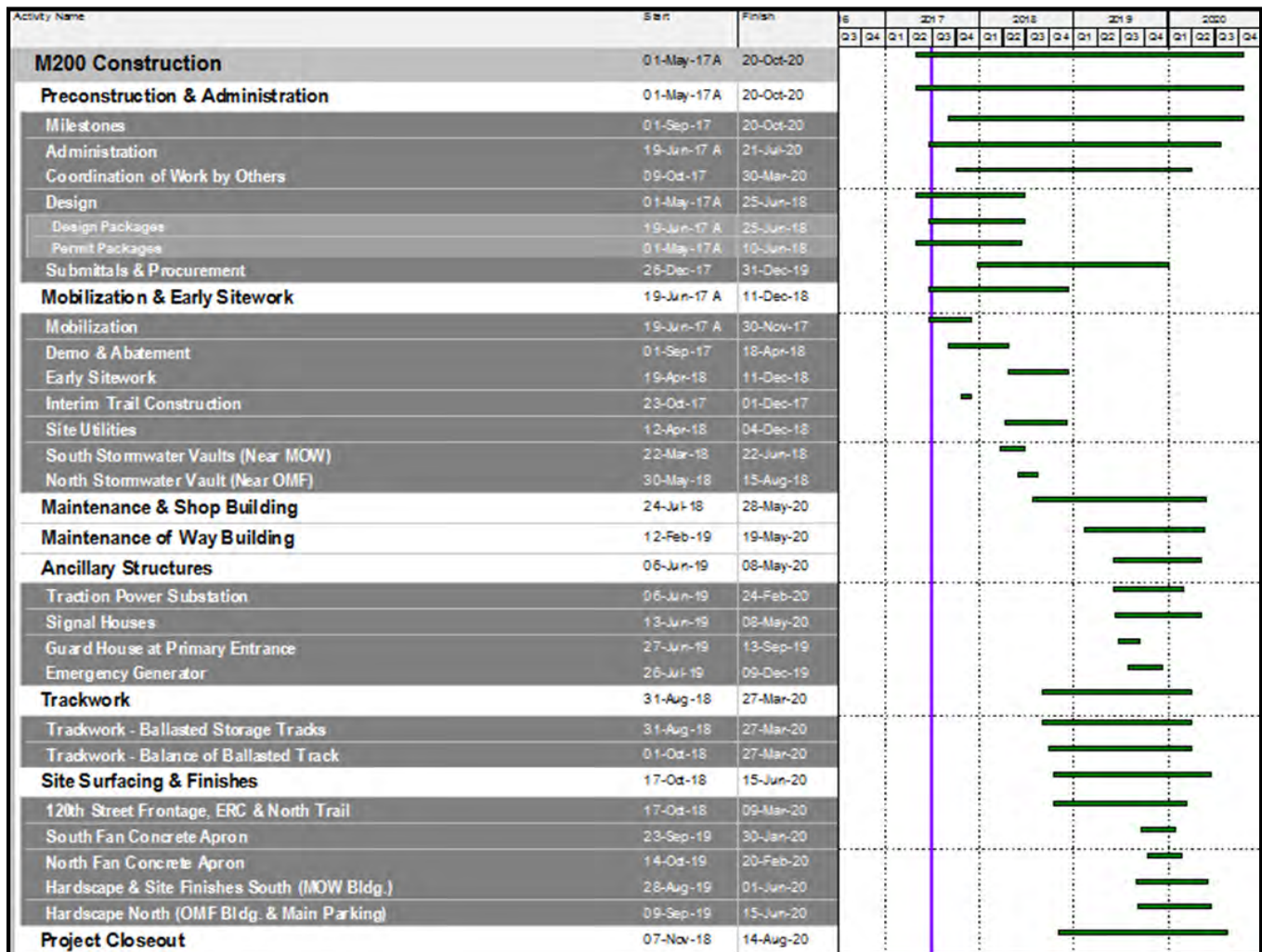
Design and construct an O&M facility with offices and furnishings, storage yard for 96 LRVs, vehicle maintenance facility, Maintenance of Way (MOW) facility, bike trail, and light rail system elements [Traction Power Substation (TPSS), Overhead Catenary System (OCS), Communications and Supervisory Control & Data Acquisition (SCADA)] in Bellevue, WA.

### Current Progress

Contractor continued working on the early submittals, design schedule, baseline schedule, and 30% design package with ST Collaboration. The schedule of values were approved by ST and the initial payment was processed. Additional geotechnical Site Investigation drilling was completed. The revisions continue of the Master Development Plan (MDP), and anticipate to submit MDP permit application to City of Bellevue next month.

### Schedule Summary

The Contractor's preliminary baseline schedule is presented below. This schedule has not been formally approved; however, it is unlikely that any major work elements will change prior to approval. The Contractor began design prior to NTP in anticipation of submitting their Master Development Permit application for ST review. Design will continue throughout 2017 with construction beginning toward the end of the year, primarily to demolish existing buildings and construct the interim trail. Major sitework is planned for early 2018.



**Next Period’s Activities**

- Continue coordinating with King County and ST regarding the preliminary design options for sewer line.
- Finalizing and submission of (30%, 60% , and 100%) Design Package (DP) plan.
- Continue Design work to complete the 30% DP.
- Continue refining MDP permit application and submit to ST legal and City of Bellevue.
- Continue to revise DQPP for Re-submission .
- Continue to work on key submittals for approval.
- Continue baseline schedule development.

**Closely Monitored Issues**

- King County to provide decision regarding allowing bends of pipe without full structures.
- Submission of MDP to City of Bellevue

**Cost Summary**

| Present Financial Status               | Amount        |
|--|---------------|
| <b>M200 Contractor – Hensel Phelps</b> |               |
| Original Contract Value                | \$218,912,000 |
| Change Order Value                     | \$0           |
| Current Contract Value                 | \$218,912,000 |
| Total Actuals (Incurred to Date)       | \$5,000,000   |
| % of Authorized Billed to Date         | 0%            |
| Physical Percent Complete              | 0%            |
| Authorized Contingency                 | \$21,891,200  |
| Contingency Drawdown                   | \$0           |
| Contingency Index                      | NA            |

## Project Summary

**Scope:** Design, manufacturing, assembly, inspection, testing and delivery of 152 low floor light rail vehicles for service requirements of Northgate, East Link and Lynnwood Link Extensions.

**Budget:** \$740.7 Million (Baseline September 2015)

**Schedule:** Project completion 3rd QTR 2024



Graphic simulation of the new light rail vehicles.

## Key Activities

- Continued engineering on car shells and systems.
- Continued Preliminary Design Reviews and submittals of Contract Deliverables Requirements List.
- Continued monthly quality assurance meeting.
- LRV manufacturer finalizing order commitments with sub-suppliers.

## Project Cost Summary

The LRV Fleet Expansion project cost is summarized below by two cost categorizations. In the first table, the cost is summarized in accordance with Sound Transit's Work Breakdown Structure (WBS) at the Phase Level. The second table summarizes the project in accordance with the FTA's Standard Cost Category (SCC) format. Both tables below are shown in millions.

To date, approximately \$10.5M has been expended with over \$653.6M committed. The LRV manufacturer submitted preliminary engineering design packages and is on track to complete all major milestones scheduled in August. The project management team continues preliminary engineering design package reviews.

### Cost Summary by Phase

| Project Phase         | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget Vs. EFC |
|-----------------------|-----------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| Administration        | \$6.4           | \$6.4                  | \$0.6              | \$0.6            | \$6.4                      | \$0.0                  |
| Construction Services | \$18.0          | \$18.0                 | \$4.8              | \$2.1            | \$18.0                     | \$0.0                  |
| Vehicles              | \$716.3         | \$716.3                | \$648.2            | \$7.7            | \$716.3                    | \$0.0                  |
| <b>Total</b>          | <b>\$740.7</b>  | <b>\$740.7</b>         | <b>\$653.6</b>     | <b>\$10.4</b>    | <b>\$740.7</b>             | <b>\$0.0</b>           |

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

### Cost Summary by SCC

| SCC Element                         | Baseline Budget | Current Adopted Budget | Commitment to Date | Incurred to Date | Estimated Final Cost (EFC) | Adopted Budget Vs. EFC |
|-------------------------------------|-----------------|------------------------|--------------------|------------------|----------------------------|------------------------|
| Construction Subtotal (SCC 10-50)   | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| 60 ROW, Land, Existing Improvements | \$0.0           | \$0.0                  | \$0.0              | \$0.0            | \$0.0                      | \$0.0                  |
| 70 Vehicles                         | \$702.8         | \$702.8                | \$653.0            | \$9.8            | \$702.8                    | \$0.0                  |
| 80 Professional Services            | \$6.1           | \$6.1                  | \$0.6              | \$0.6            | \$6.1                      | \$0.0                  |
| 90 Contingency                      | \$31.7          | \$31.7                 | \$0.0              | \$0.0            | \$31.7                     | \$0.0                  |
| <b>Capital Total (SCC 10-90)</b>    | <b>\$740.7</b>  | <b>\$740.7</b>         | <b>\$653.6</b>     | <b>\$10.4</b>    | <b>\$740.7</b>             | <b>\$0.0</b>           |

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



## Cost Contingency Management

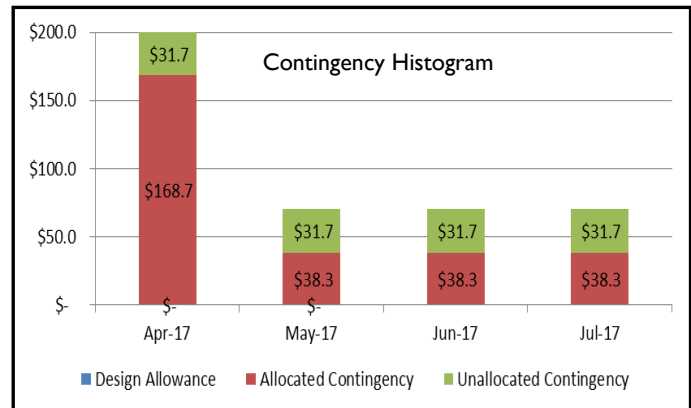
The project's baseline budget approved by the ST Board in September 2015 contained a total of \$78.0M of Total Contingency. The project's Total Contingency is currently at \$70.1M or about 10.9% of remaining work in the project.

*Design Allowance* – This project contains \$0 design allowance.

*Allocated Contingency* – The project baseline's allocated contingency was \$46.3M. Due to a successful vehicle procurement and a lower than anticipated contract value the allocated contingency was realized at \$167.3M in October 2016. The current available allocated contingency is \$38.3M after executing a change order to add additional vehicles and spare parts to Siemen's contract.

*Unallocated Contingency* – The project baseline's unallocated contingency remained unchanged at \$31.7M.

| Contingency Status      | Baseline       |              | Current        |                     |
|-------------------------|----------------|--------------|----------------|---------------------|
|                         | Amount         | % of Total   | Amount         | % of Work Remaining |
| Design Allowance        | \$ -           | 0.0%         | \$ -           | 0.0%                |
| Allocated Contingency   | \$ 46.3        | 6.4%         | \$ 38.3        | 6.0%                |
| Unallocated Contingency | \$ 31.7        | 4.3%         | \$ 31.7        | 0.0%                |
| <b>Total</b>            | <b>\$ 78.0</b> | <b>10.7%</b> | <b>\$ 70.1</b> | <b>10.9%</b>        |



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

## Project Schedule

The ST2 LRV Expansion project schedule is shown below.

| Activity Name  | Start       | Finish    | Baseline Start | Baseline Finish | 17 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
|--|-------------|-----------|----------------|-----------------|----|------|------|------|------|------|------|------|
| <b>LRV Procurement Schedule</b>  | 10-Oct-16 A | 08-May-23 | 12-Sep-16      | 20-Sep-24       | Q  | Q    | Q    | Q    | Q    | Q    | Q    | Q    |
| <b>LRV Engineering and Manufacture</b>                                     | 10-Oct-16 A | 11-May-22 | 12-Sep-16      | 13-Mar-19       |    |      |      |      |      |      |      |      |
| LRV Design Reviews, Manufacturing, and System Tests                        | 10-Oct-16 A | 11-May-22 | 12-Sep-16      | 13-Mar-19       |    |      |      |      |      |      |      |      |
| <b>LRV Delivery Schedule</b>   | 21-Nov-18   | 07-Feb-23 | 13-Mar-19      | 22-Jun-24       |    |      |      |      |      |      |      |      |
| Delivery of 1st LRV  |             | 21-Nov-18 |                | 13-Mar-19       |    |      |      |      |      |      |      |      |
| Delivery of 40th LRV - Northgate Link Vehicle Deliveries Complete          |             | 13-Mar-20 |                | 13-Dec-20       |    |      |      |      |      |      |      |      |
| Delivery of 42nd LRV - Max Capacity at Existing OMF at capacity (104 LRVs) |             | 02-Apr-20 |                | 12-Jan-21       |    |      |      |      |      |      |      |      |
| Final Acceptance of Vehicles   | 12-May-22   | 07-Feb-23 | 25-Sep-23      | 22-Jun-24       |    |      |      |      |      |      |      |      |
| Delivery of 122nd LRV - Final ST2 Delivery                                 | 12-May-22   |           |                |                 |    |      |      |      |      |      |      |      |
| <b>Project Closeout</b>  | 08-Feb-23   | 08-May-23 | 23-Jun-24      | 20-Sep-24       |    |      |      |      |      |      |      |      |
| ST-Controlled Float  | 08-Feb-23   | 08-May-23 | 23-Jun-24      | 20-Sep-24       |    |      |      |      |      |      |      |      |
| LRV Procurement Complete   |             | 08-May-23 |                | 20-Sep-24       |    |      |      |      |      |      |      |      |

## Sound Transit Board Actions

| Motion Number | Description     | Date |
|---------------|-----------------|------|
|               | None to report. |      |



# Link Light Rail Staffing Report



## Project Staffing – Link Light Rail Program – JUNE 2017

Staffing variance reported in the following section is relative to the May 2016 Agency Staffing Plan (Version 6). During this period, the following positions were filled to support the Link capital program:

| Position                       | Project Assignment                                 | Planned Hire Date |
|--------------------------------|--|-------------------|
| Project Control Specialist     | Northgate Link Extension                           | 2017 Attrition    |
| Community Outreach Specialist  | South Corridor                                     | 2017 Attrition    |
| Leasing Document Coordinator   | Property Management                                | 2017 Attrition*   |
| Assistant Permit Administrator | Construction Permitting                            | June 2017*        |
| Project Control Supervisor     | OMF: East and Federal Way to Tacoma Link Extension | June 2017*        |

\*Attrition resulting from internal promotion.

Recruiting is on-going for the following design, engineering and construction management staff.

| Position                          | Project Assignment               | Planned Hire Date |
|-----------------------------------|----------------------------------|-------------------|
| Sr. Project Manager               | Sounder Capital Program          | 2016 Attrition*   |
| Civil Engineer                    | Lynnwood Link Extension          | 2016 Attrition*   |
| Deputy Director                   | Construction Management          | 2016 Attrition*   |
| Construction Contracts Claims Sp. | Construction Management          | 2016 Attrition*   |
| Sr. Systems Engineer              | LRV Procurement and Testing      | 2016 Attrition    |
| Sr. Project Manager               | OMF: East                        | 2016 Reclass      |
| Executive Project Director        | Executive Director's Office      | 2016 Reclass      |
| Project Corridor                  | Permit Administration            | 2017 Attrition*   |
| Config. and Change Mgt. Spec.     | Project Controls                 | 2017 Attrition*   |
| Deputy Director                   | Civil and Structural Engineering | 2017 Attrition *  |
| Mechanical Engineer               | Civil/Systems Integration        | 2017 Attrition*   |
| Civil Engineer                    | Utilities                        | 2017 Attrition    |
| Project Coordinator               | Non-Corridor Projects            | 2017 Attrition    |
| Civil Engineering Supervisor      | Sounder and Operations           | 2017 Attrition    |
| Sr. Systems Engineer              | Operations Technology            | January 2017      |
| Sr. Systems Engineer              | Operations Technology            | January 2017      |

\*Attrition resulting from internal promotion

## Project Staffing – Link Light Rail Program continued

| Position                       | Project Assignment                 | Planned Hire Date |
|--------------------------------|------------------------------------|-------------------|
| Sr. Civil Engineer             | Non-Corridor Projects – Operations | February 2017     |
| Construction Manager           | Systems                            | February 2017     |
| Construction Manager           | Lynnwood Link Extension            | February 2017     |
| Project Manager                | Public Art (STart)                 | February 2017     |
| Construction Manager           | Systems                            | March 2017        |
| Engineering Stds. Program Mgr. | Civil and Structural Engineering   | April 2017        |
| Chief Systems Engineer         | Traction Power                     | April 2017        |
| Sr. Scheduling Engineer        | Right-of-Way                       | April 2017        |
| Chief Systems Engineer         | Signals                            | April 2017        |
| Chief Systems Engineer         | Communications                     | May 2017          |
| Assistant Permit Administrator | Permit Administration              | June 2017         |
| Project Control Specialist     | Federal Way Link Extension         | June 2017         |
| Construction Manager           | South Corridor                     | June 2017         |
| Construction Manager           | Lynnwood Link Extension            | June 2017         |
| Construction Manager           | Systems                            | June 2017         |

There were 745.5 (118% of plan) consultant and internal staff full time equivalents (FTE) participating in the on-going planning, design and construction of Link light rail extensions in June. Staffing was within 10% of plan for the Federal Way Link Extension. Staffing for the East, Lynnwood, Tacoma, and Northgate Extensions was 118%, 126%, 134%, and 124% of plan respectively; staffing for the Link Operations & Maintenance Facility: East was 36% of plan.

Staffing variance to plan for the month and year to date summary by project follows.

| Project                    | June 2017 Staffing Plan Variance |              |              |             |                     |              |              |            |                  |              |             |             |
|----------------------------|----------------------------------|--------------|--------------|-------------|---------------------|--------------|--------------|------------|------------------|--------------|-------------|-------------|
|                            | Consultant Staff                 |              |              |             | Sound Transit Staff |              |              |            | Total (AVG. YTD) |              |             |             |
|                            | FTE                              |              | Variance     |             | FTE                 |              | Variance     |            | FTE              |              | Variance    |             |
| Planned                    | Actual                           | FTE          | % of Plan    | Planned     | Actual              | FTE          | % of Plan    | Planned    | Actual           | FTE          | % of Plan   |             |
| Federal Way Link Extension | 42.0                             | 66.6         | 24.6         | 159%        | 37.9                | 18.3         | -19.6        | 48%        | 79.9             | 62.5         | -17.4       | 78%         |
| Northgate Link Extension   | 71.1                             | 105.0        | 33.9         | 148%        | 44.2                | 38.4         | -5.8         | 87%        | 115.3            | 133.0        | 17.8        | 115%        |
| OMF East                   | 6.6                              | 1.8          | -4.8         | 28%         | 16.7                | 6.6          | -10.0        | 40%        | 23.3             | 7.3          | -16.0       | 31%         |
| East Link Extension        | 66.8                             | 94.9         | 28.1         | 142%        | 72.1                | 68.4         | -3.7         | 95%        | 138.8            | 148.5        | 9.7         | 107%        |
| Lynnwood Link Extension    | 178.0                            | 240.7        | 62.7         | 135%        | 51.9                | 48.5         | -3.4         | 93%        | 229.9            | 250.3        | 20.3        | 109%        |
| Tcoma Link Expansion       | 24.0                             | 38.5         | 14.5         | 160%        | 18.1                | 17.7         | -0.4         | 98%        | 42.1             | 48.8         | 6.8         | 116%        |
| <b>Total</b>               | <b>388.5</b>                     | <b>547.5</b> | <b>159.1</b> | <b>141%</b> | <b>240.9</b>        | <b>198.0</b> | <b>-42.9</b> | <b>82%</b> | <b>629.3</b>     | <b>627.9</b> | <b>21.1</b> | <b>100%</b> |

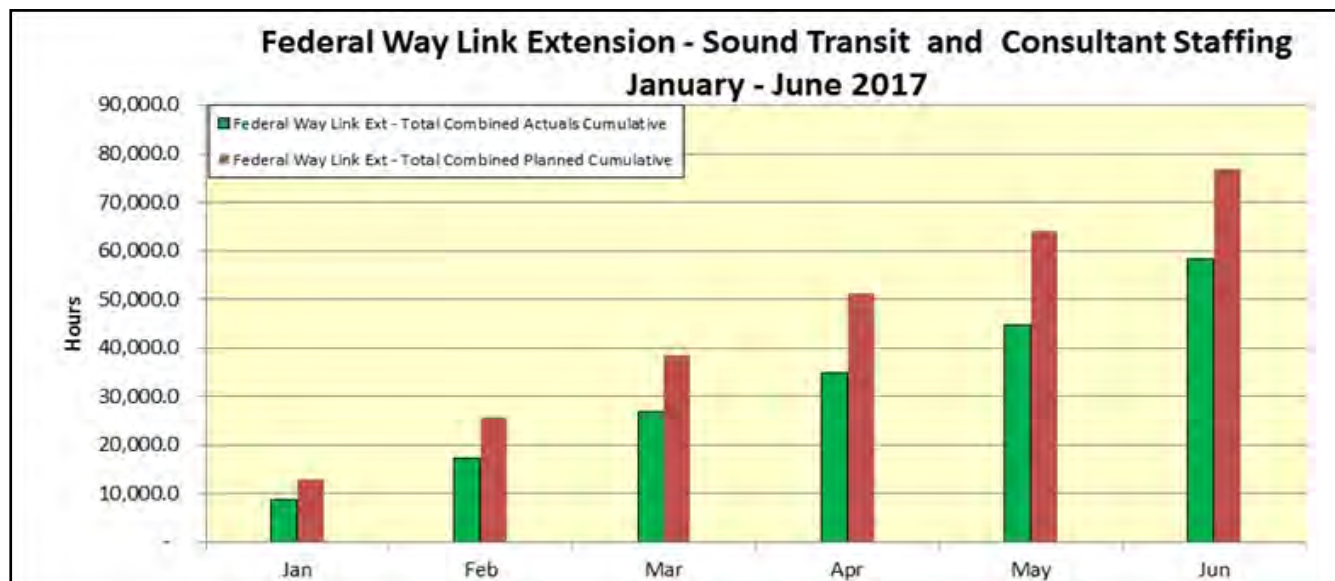
# Link Light Rail Staffing Report



## Federal Way Link Extension Staffing

### Total Internal and External Staffing – Federal Way Link Extension

There were 85 (106% of plan) consultant and internal staff on the Federal Way Link Extension in June including 66.6 consultant FTE (159% of plan) and 18.3 internal FTE (48% of plan). Cumulatively from January 2017 staffing is trending 24.1% (19.3 FTE/mo.) below plan; average year-to-date (YTD) staffing (62.5 FTE/mo.) is 22% (17.4 FTE/mo.) below plan. All consultant staff is supporting preparation of bridging documents for Design-Build (DB) contract.



|                        | Labor Hours Jan-June 2017 |              |                |                  | Current Period Jun 2017 |               |                 |                  |
|------------------------|---------------------------|--------------|----------------|------------------|-------------------------|---------------|-----------------|------------------|
|                        | Total Planned             | Total Actual | Total Variance | Percent Expended | Period Planned          | Period Actual | Period Variance | Percent Expended |
| <b>No. of Hours</b>    | 76,838.4                  | 58,282.4     | -18,556.0      | 75.9%            | 12,806.4                | 13,593.0      | 786.6           | 106.1%           |
| <b>Monthly Average</b> | 12,806.4                  | 9,713.7      | -3,092.7       |                  |                         |               |                 |                  |
| <b>Monthly FTE</b>     | 80.0                      | 60.7         | -19.3          |                  | 80.0                    | 85.0          | 4.9             |                  |

## Operations & Maintenance Facility: East Staffing

### Total Internal and External Staffing – OMF East

There were 6.6 internal and 1.8 consultant FTE participating in the Operations & Maintenance Facility: East project in June. This is 38% (2.3 FTE) above May staffing and 36% of plan. Average year-to-date staffing (7.3 FTE/mo.) is 69% (16 FTE/mo.) below plan.

|                        | Labor Hours to Date |              |                |                  | Current Period Jun 2017 |               |                 |                  |
|------------------------|---------------------|--------------|----------------|------------------|-------------------------|---------------|-----------------|------------------|
|                        | Total Planned       | Total Actual | Total Variance | Percent Expended | Period Planned          | Period Actual | Period Variance | Percent Expended |
| <b>No. of Hours</b>    | 22,358.4            | 7,008.9      | -15,349.5      | 31.3%            | 3,726.4                 | 1,354.6       | -2,371.8        | 36.4%            |
| <b>Monthly Average</b> | 3,726.4             | 1,168.2      | -2,558.3       |                  |                         |               |                 |                  |
| <b>Monthly FTE</b>     | 23.3                | 7.3          | -16.0          |                  | 23.3                    | 8.5           | -14.8           |                  |

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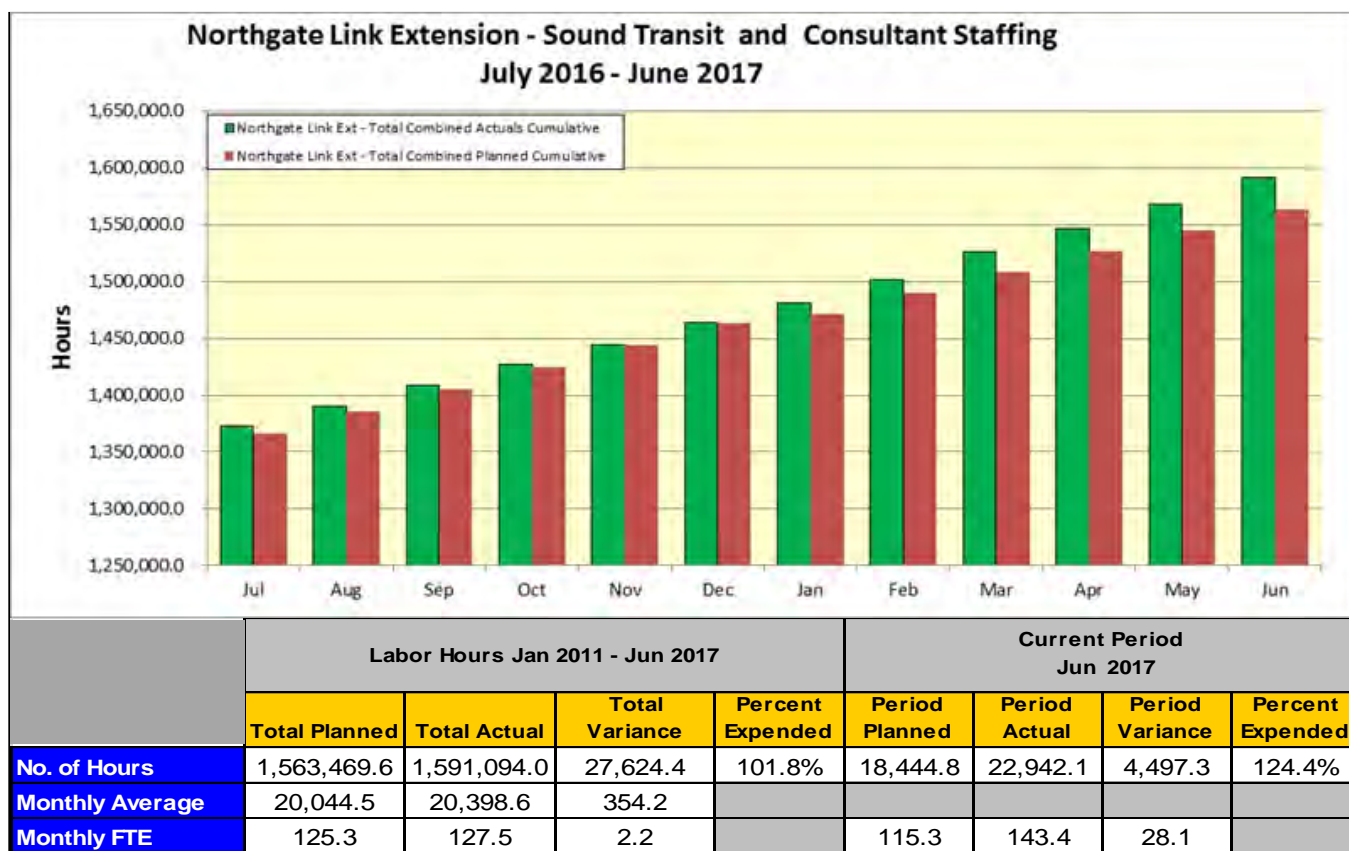
# Link Light Rail Staffing Report



## Northgate Link Extension Staffing

### Total Internal and External Staffing – Northgate Link Extension

During June 38.4 internal and 105 consultant FTE were assigned to the Northgate Link Extension. This is 6% (8.7 FTE) above May staffing and is 24% (28.1 FTE) above plan. Average year-to-date staffing (133 FTE/mo.) is 15% (17.8 FTE/mo.) above plan; cumulatively since January 2011 average monthly staffing is trending with plan.

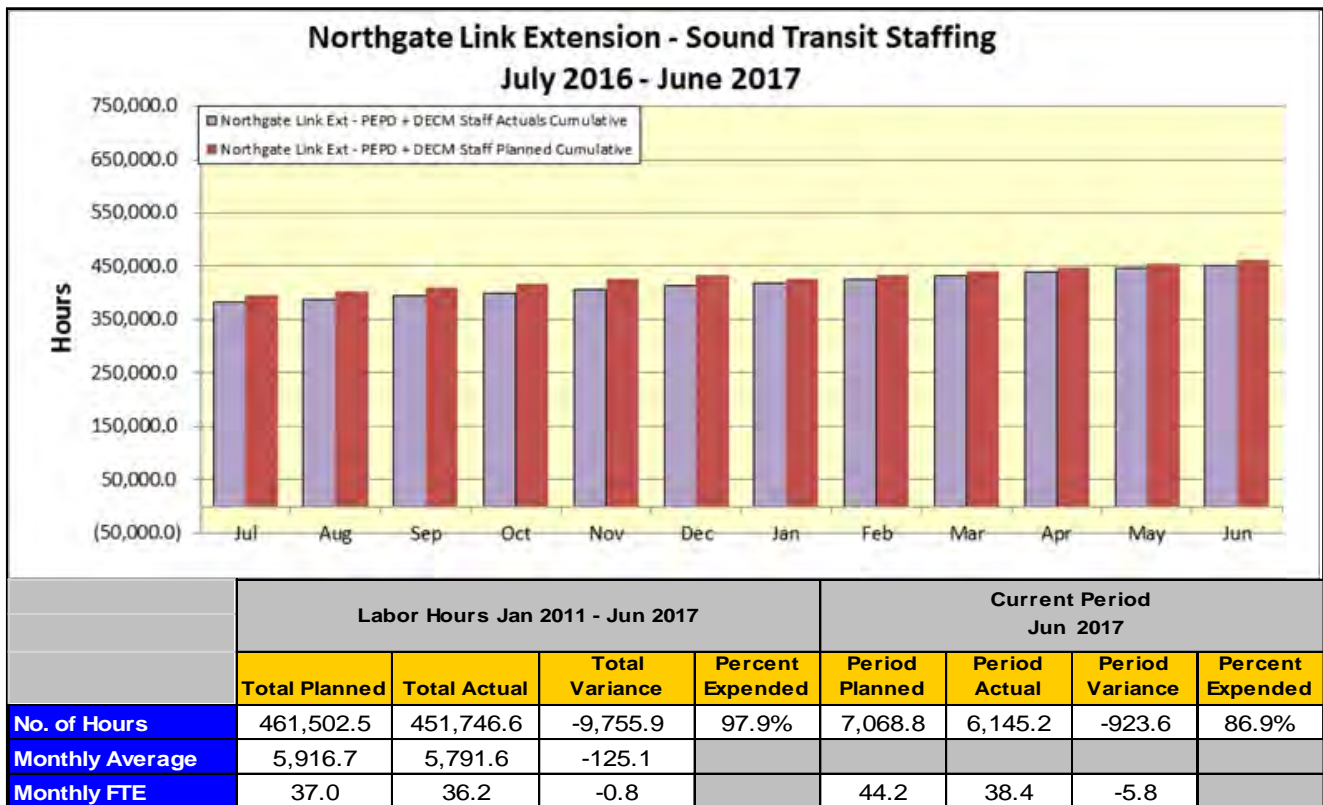




## Northgate Link Extension Staffing

### Internal Resource Commitments to Northgate Link Extension

Internal staffing in June (38.4 FTE) decreased 11% (4.4 FTE) from May and was 13% (5.8 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing (36 FTE/mo.) is 2.1% (0.8 FTE/mo.) below plan.



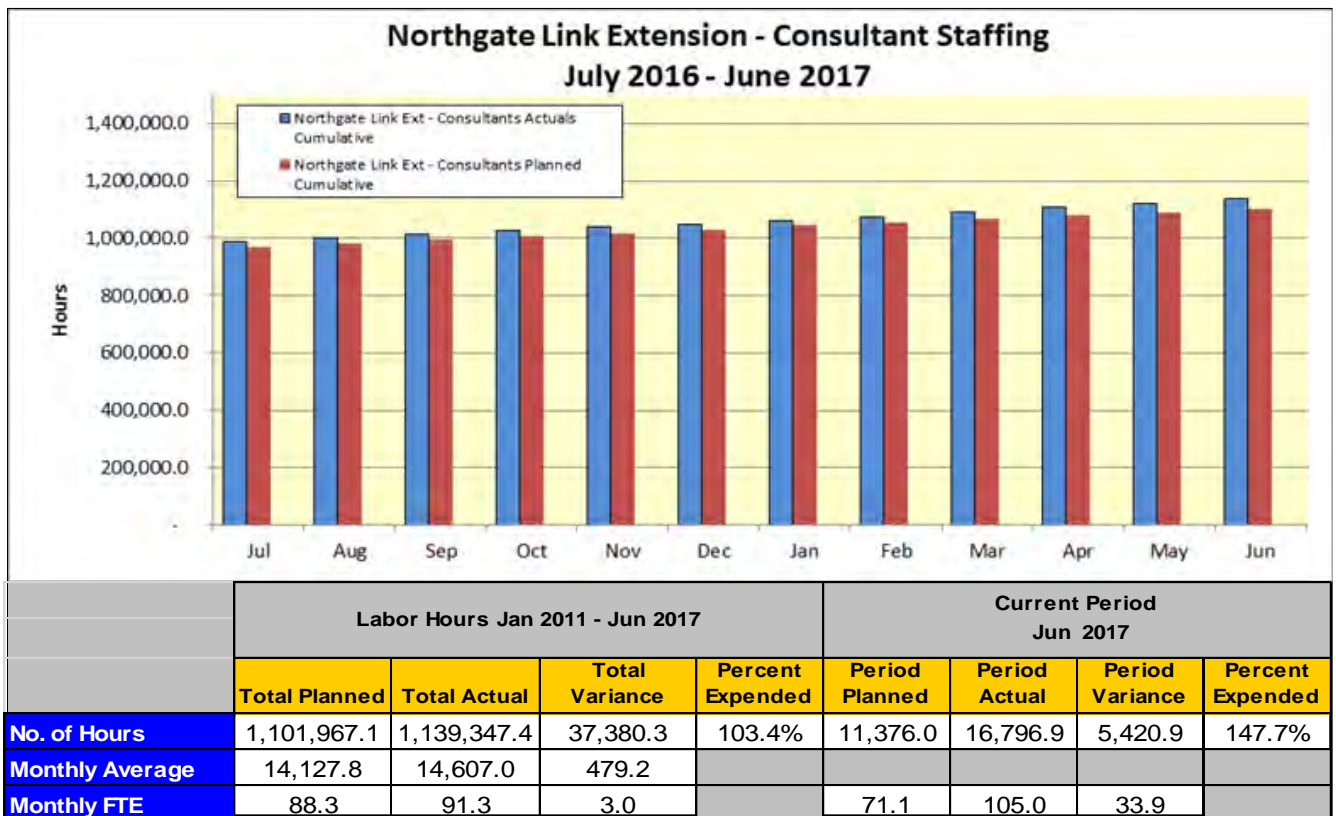
# Link Light Rail Staffing Report



## Northgate Link Extension Staffing

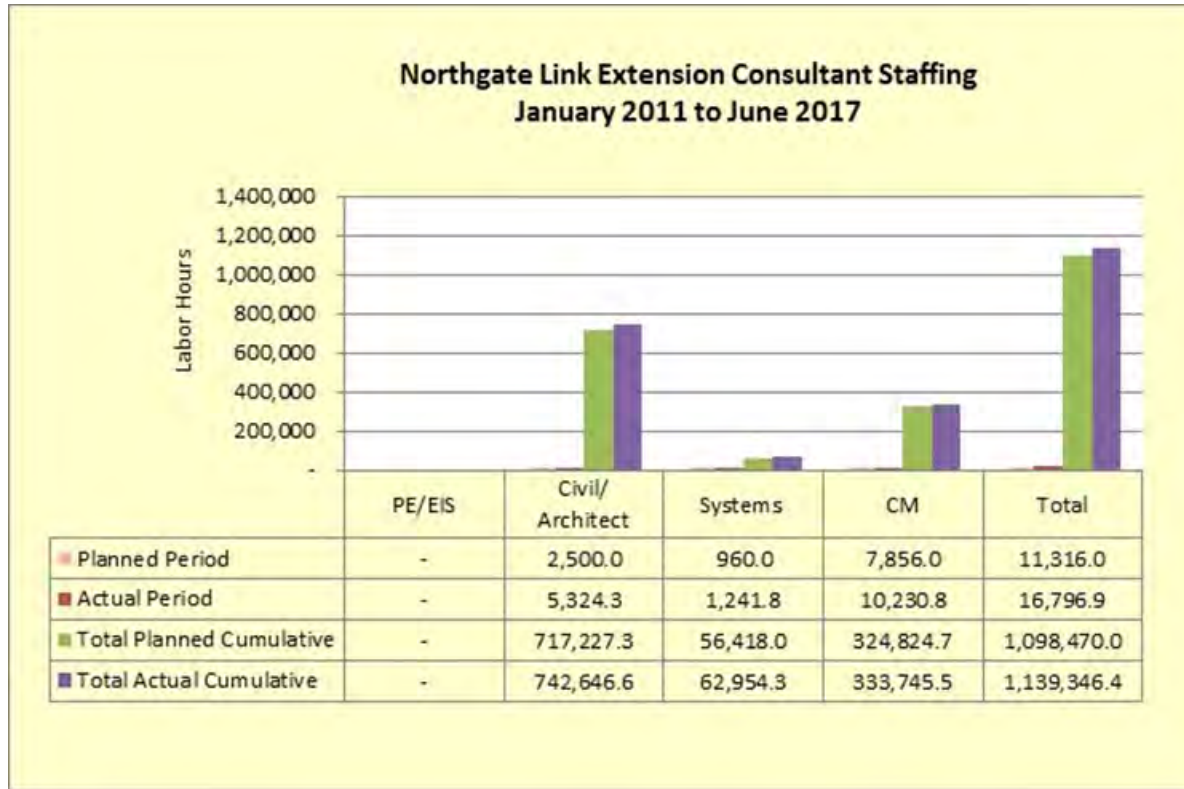
### Consultant Resource Commitments to Northgate Link Extension

In June 105 consultant FTE were assigned to the Northgate Link Extension; consultant staffing was 14% (13.1 FTE) above May staffing and was 48% (33.9 FTE) above plan. Cumulatively, since January 2011, average monthly consultant utilization (91.3 FTE/mo.) is trending 3.4% (3 FTE/mo.) above plan.



## Northgate Link Extension Staffing

### Consultant Resource Commitments to Northgate Link Extension



Consultant utilization by discipline follows:

- Civil/architecture consultant utilization in June (33.3 FTE) was 22% (6 FTE) above May staffing and was 108% (17.3 FTE) above plan. Cumulatively since January 2011, average civil engineering/architecture consultant staffing of 59.5 FTE/mo. is trending within 3% of plan.
- Systems consultant utilization in June (7.8 FTE) was 41% (5.4 FTE) below May staffing and was 29% (1.8 FTE) above plan. Since January 2011, average monthly Systems consultant staffing (5 FTE/mo.) is trending within 10% of plan.
- CM consultant staffing in June (63.9 FTE) was 24.3% (12.5 FTE) above May staffing and was 30% (14.8 FTE) above plan. Cumulatively, since January 2011, average monthly CM consultant staffing (26.7 FTE/mo.) is trending with plan.

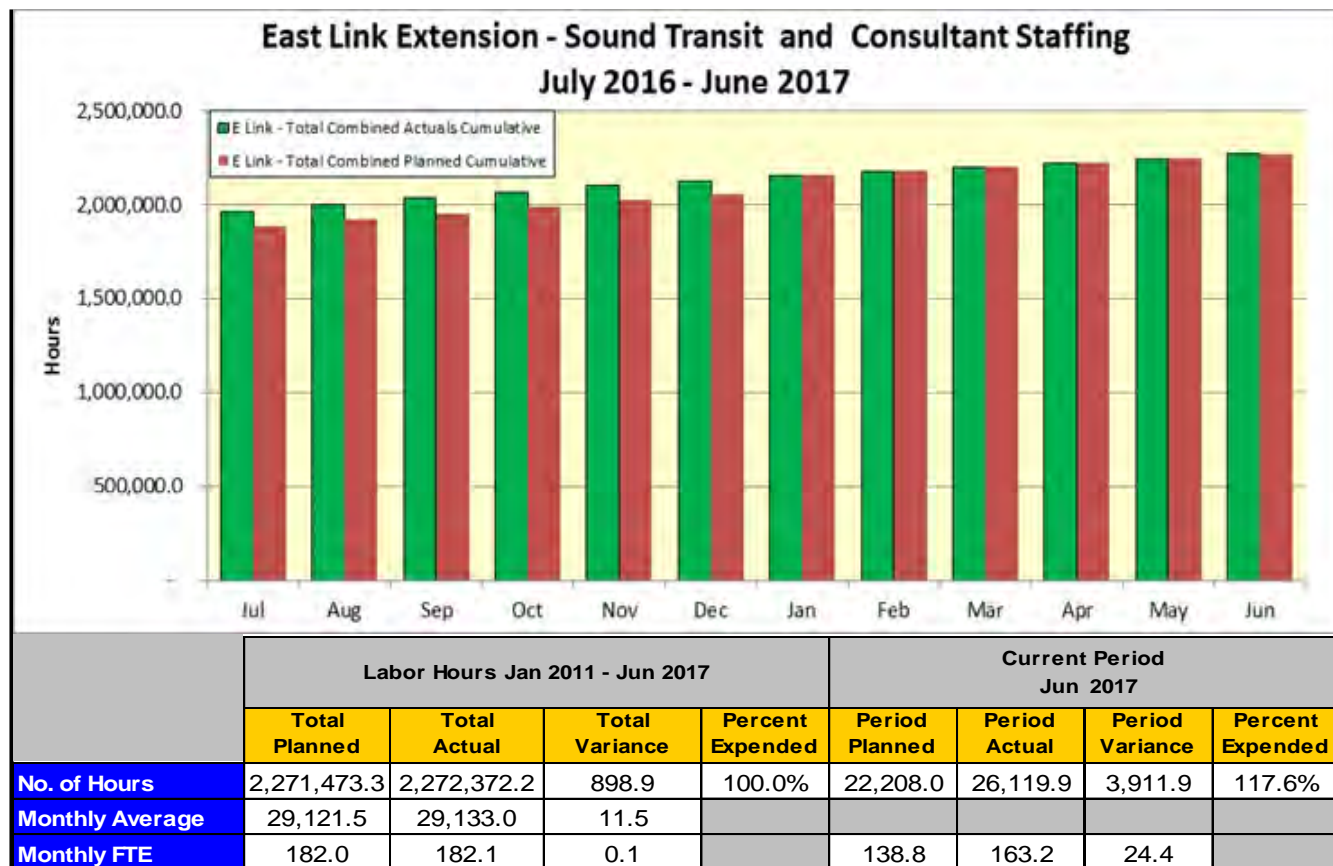
# Link Light Rail Staffing Report



## East Link Extension Staffing

### Total Internal and External Staffing – East Link Extension

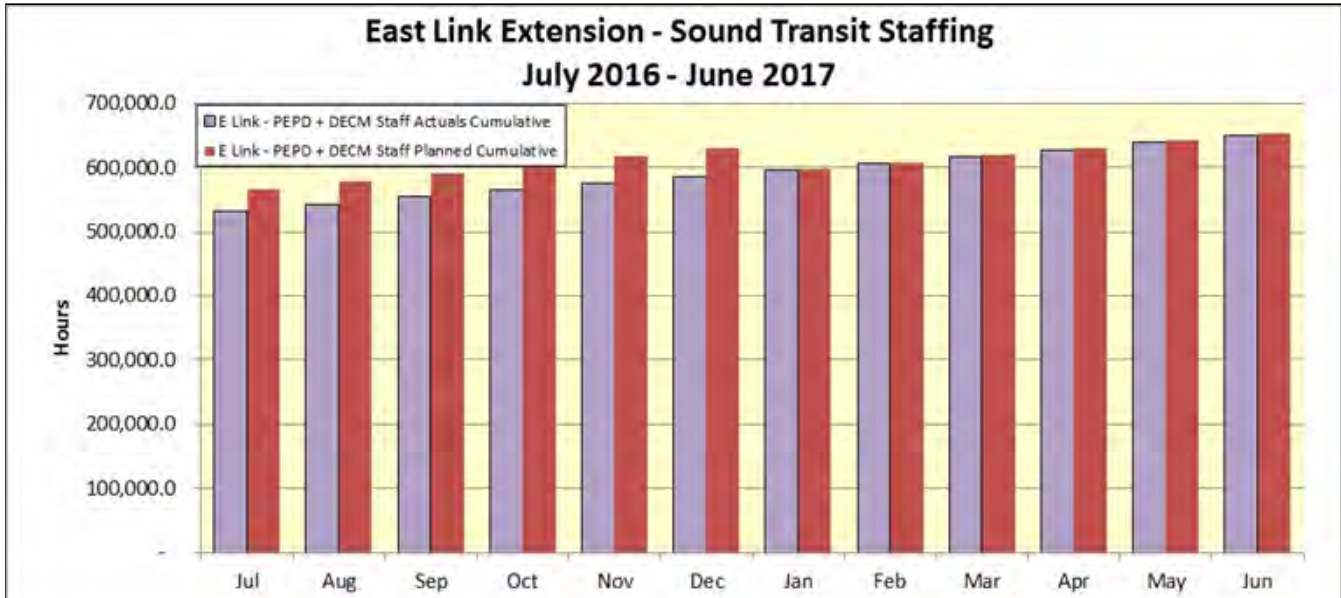
Staffing for the East Link Extension in May (151.9 FTE) increased 4% (5.2 FTE) from April and was 9% (13.1 FTE) above plan. Average year-to-date staffing of 145.6 FTE/mo. is trending 5% above plan. Cumulatively since January 2011, average monthly staffing of 182.3 FTE/mo. is trending with plan.



## East Link Extension Staffing

### Internal Resource Commitments to East Link Extension

During June internal staffing for the East Link Extension (68.4 FTE) was 6% (3.8 FTE) below May and was 5% (3.7 FTE) below plan. Cumulatively, since January 2011, average monthly internal staffing (52.1 FTE/mo.) is trending with plan.



|                        | Labor Hours Jan 2011 - Jun 2017 |              |                |                  | Current Period Jun 2017 |               |                 |                  |
|------------------------|---------------------------------|--------------|----------------|------------------|-------------------------|---------------|-----------------|------------------|
|                        | Total Planned                   | Total Actual | Total Variance | Percent Expended | Period Planned          | Period Actual | Period Variance | Percent Expended |
| <b>No. of Hours</b>    | 653,702.6                       | 649,775.2    | -3,927.4       | 99.4%            | 11,528.0                | 10,940.6      | -587.4          | 94.9%            |
| <b>Monthly Average</b> | 8,380.8                         | 8,330.5      | -50.4          |                  |                         |               |                 |                  |
| <b>Monthly FTE</b>     | 52.4                            | 52.1         | -0.3           |                  | 72.1                    | 68.4          | -3.7            |                  |



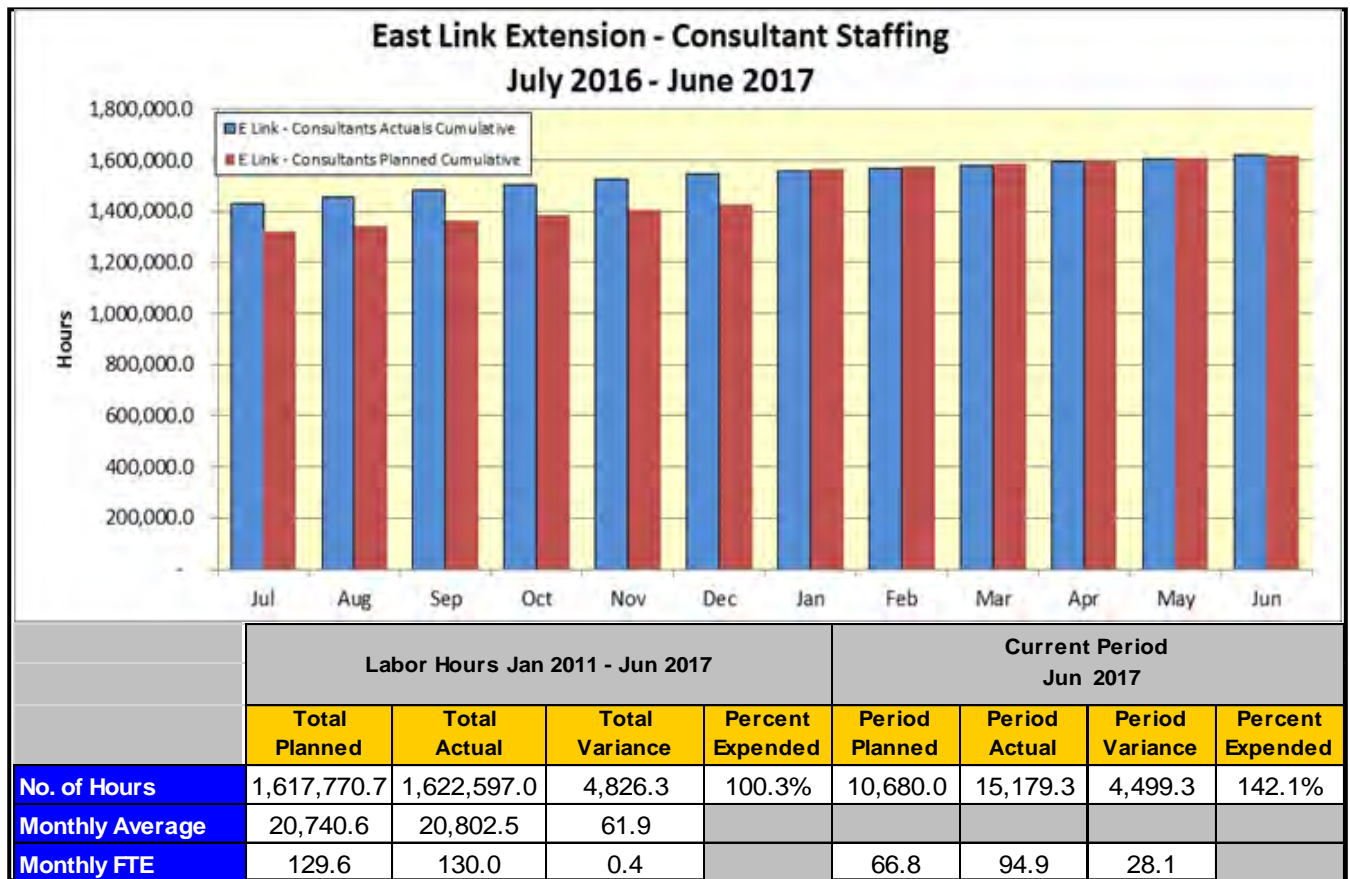
# Link Light Rail Staffing Report



## East Link Extension Staffing

### Consultant Resource Commitments to East Link Extension

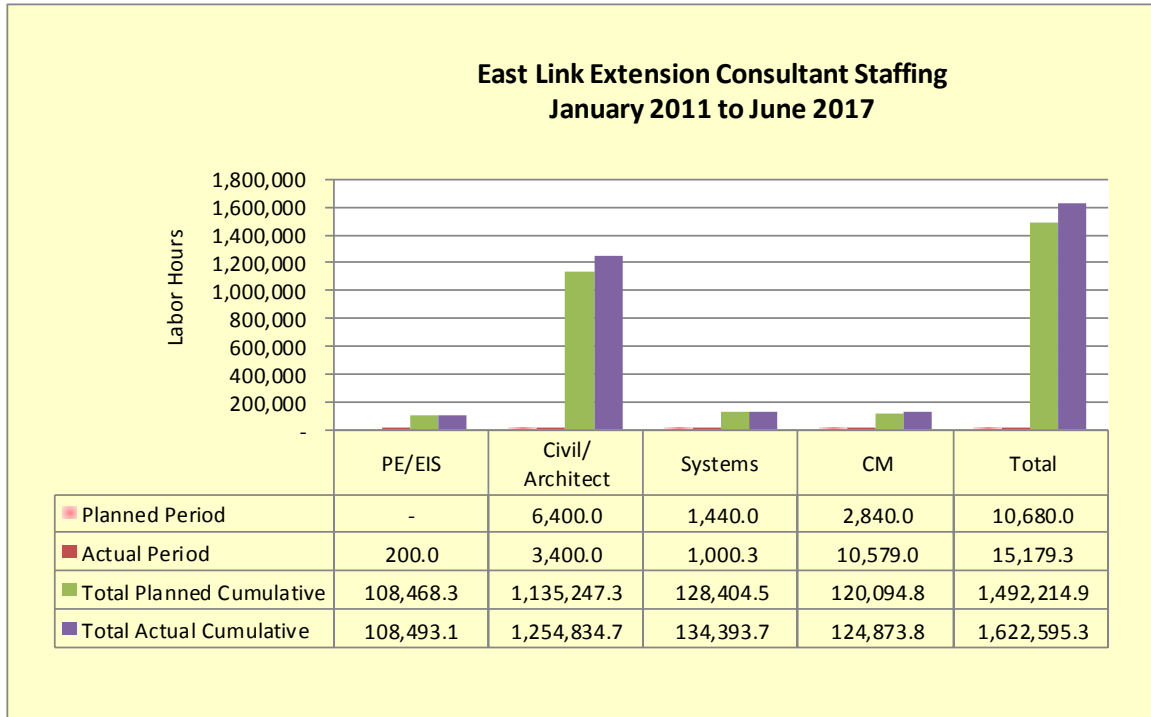
There were 94.9 consultant FTE assigned to the East Link Extension during June. Consultant staffing was 19% (15.1 FTE) above May and 42% (28.1 FTE) above plan. Cumulatively since January 2011, average monthly consultant staffing (130 FTE/mo.) is trending with plan.



## East Link Staffing

### Consultant Resource Commitments to East Link, continued

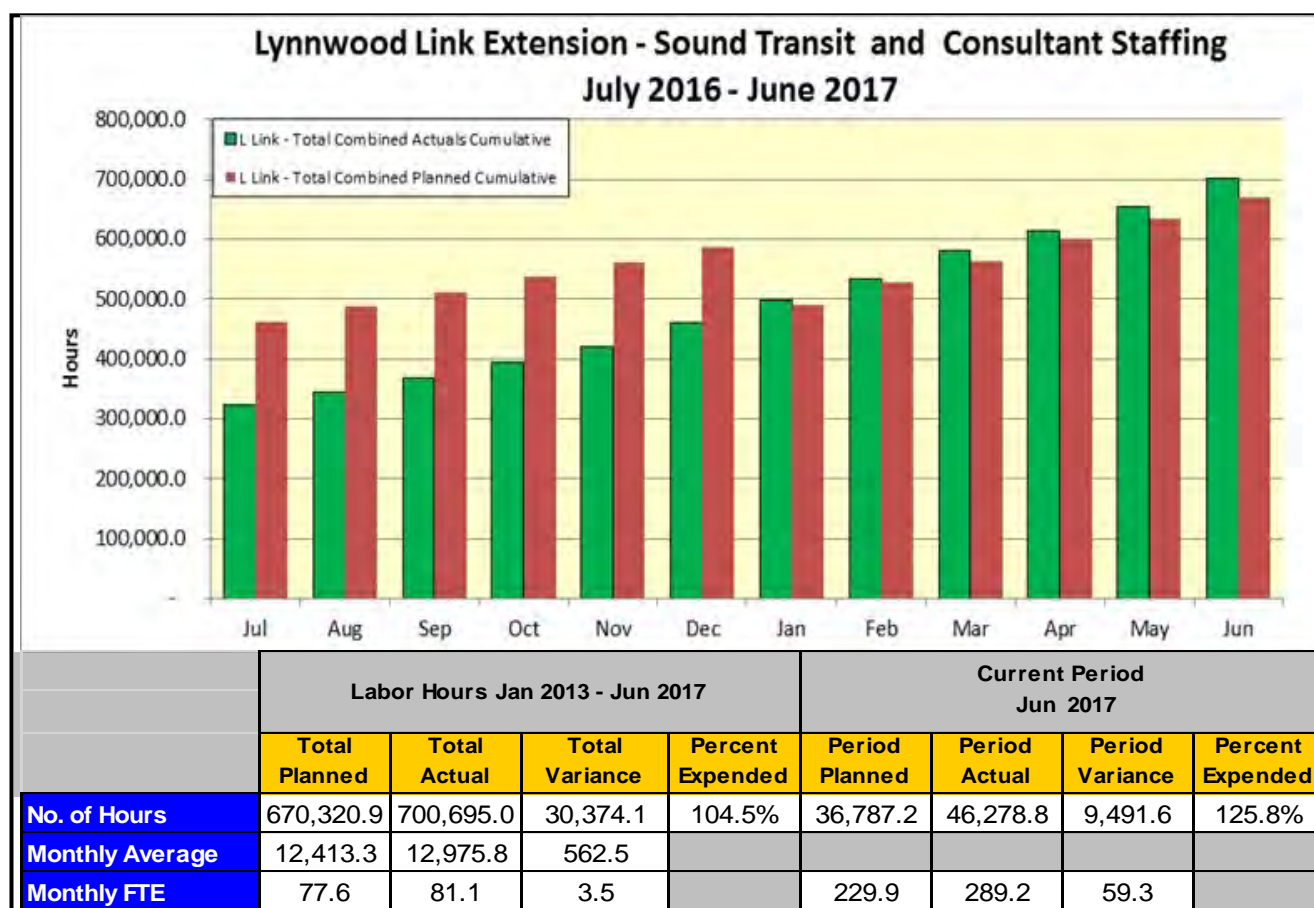
In June construction management consultant staffing (66.1 FTE) was 70% of consultant staffing; civil engineering consultant staffing (21.3 FTE) comprised 23% of consultant staffing. Systems consultant staffing (6.3 FTE) was 31% (2.7 FTE) below plan; there were 1.3 consultant FTE performing Preliminary Engineering (PE).



## Lynnwood Link Extension Staffing

### Total Internal and External Staffing – S. 200th Link Extension

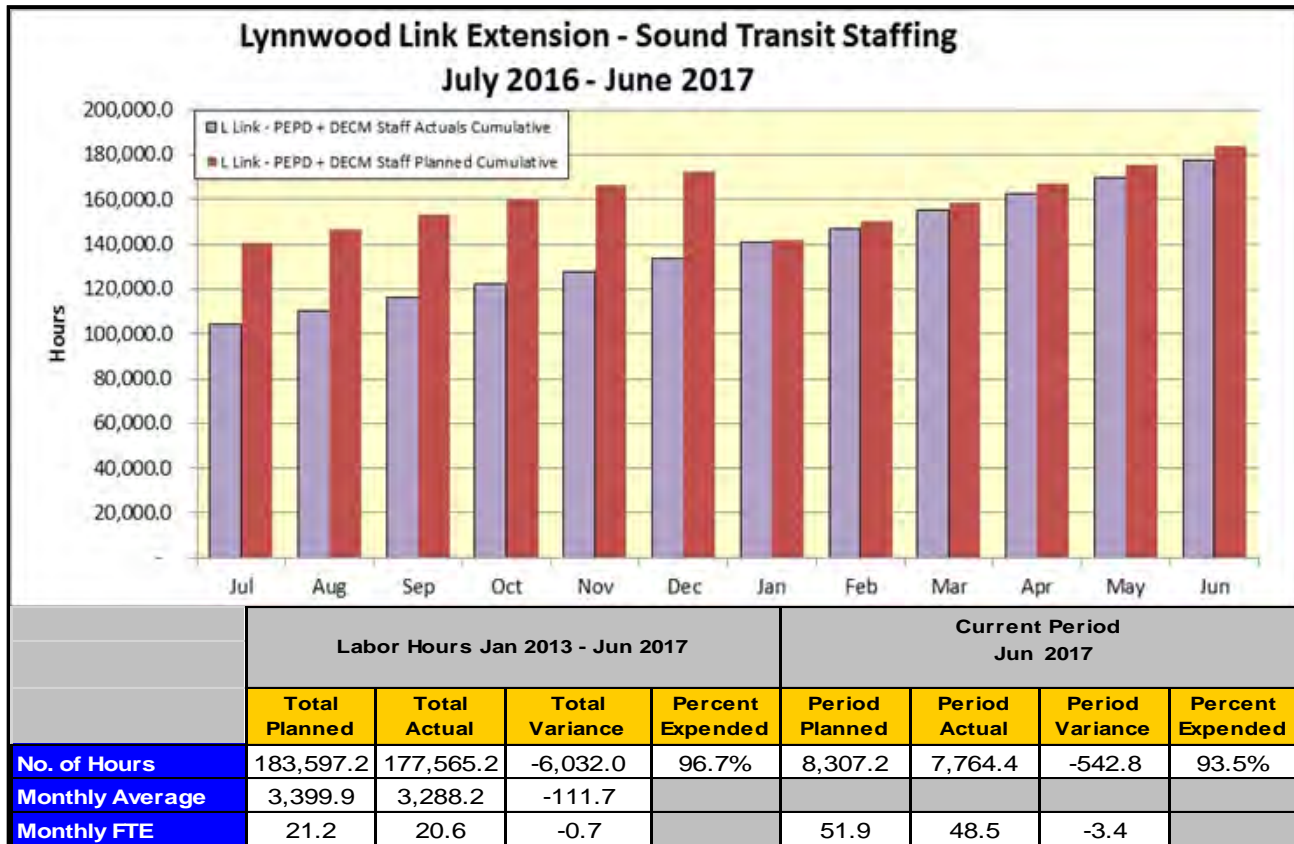
During June Lynnwood Link Extension staffing was 289.2 FTE (26% or 59.3 FTE above plan) and included 240.7 consultant FTE (35% above plan) and 48.52 internal FTE (93% of plan). Average year-to-date staffing of 250.3 FTE/mo is trending 9% (20.3 FTE/mo.) above plan; cumulatively since January 2013 staffing is averaging 81.1 FTE/mo. and is trending 3.5 FTE/mo above plan.



## Lynnwood Link Extension Staffing

### Internal Staffing—Lynnwood Link

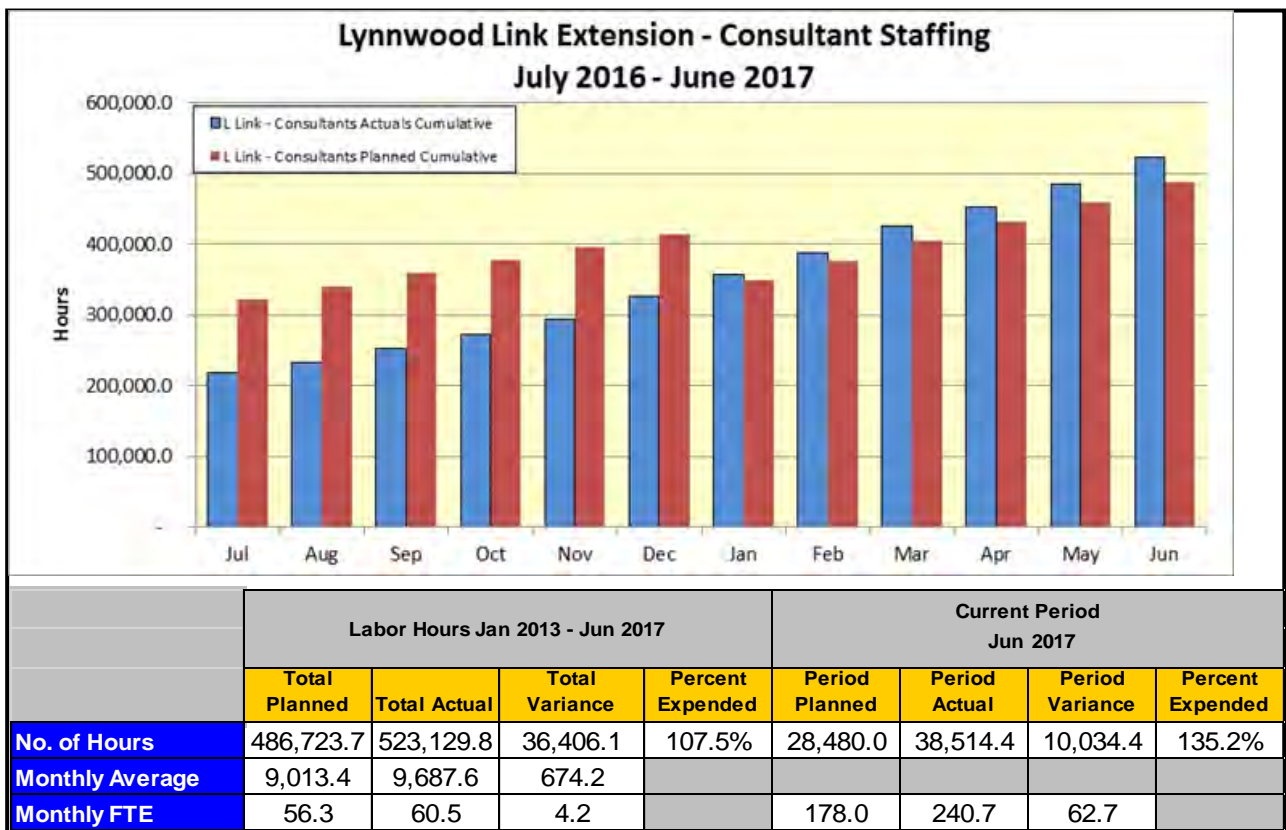
During June internal staffing for the Lynnwood Link Extension (48.5 FTE) was 3% (1.7 FTE) above May staffing and 7% (3.4 FTE) below plan. Cumulatively, since January 2013, average monthly internal staffing (20.6 FTE/mo.) is trending within 5% of plan.



## Lynnwood Link Expansion

### Consultant Staffing—Lynnwood Link

There were 240.7 consultant FTE assigned to the Lynnwood Link Extension during June. Consultant staffing increased 22% (43.1 FTE) from May and was 35% (62.7 FTE) above plan. Cumulatively since January 2013, average monthly consultant staffing (60.5 FTE/mo.) is trending 7.5% (4.2 FTE/mo.) above plan.

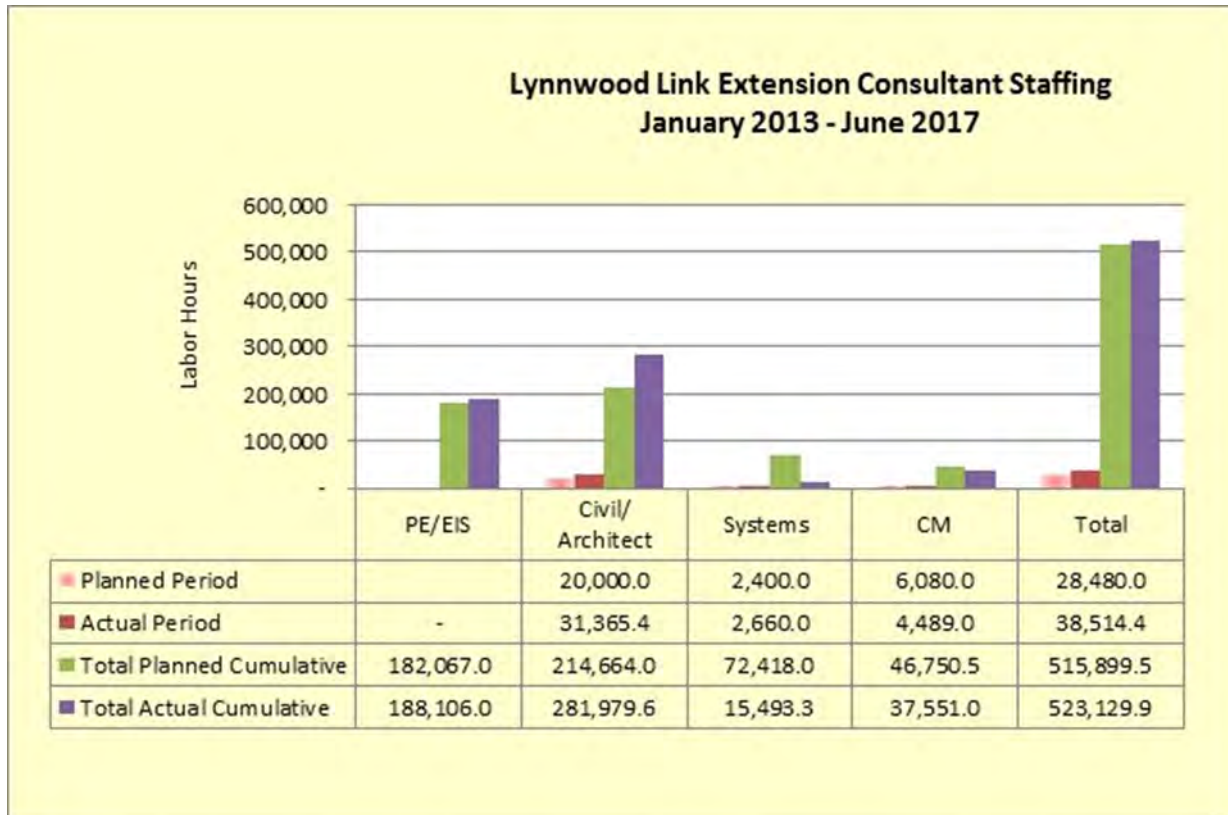




## Lynnwood Link Extension Staffing

### Consultant Resource Commitments to Lynnwood Link

Eighty-two percent of the Lynnwood Link consultant staffing (196 FTE) were civil engineering consultants. Additional consultant staffing (44.7 FTE) provided construction management (28.1 FTE) and systems design (7 FTE) support.



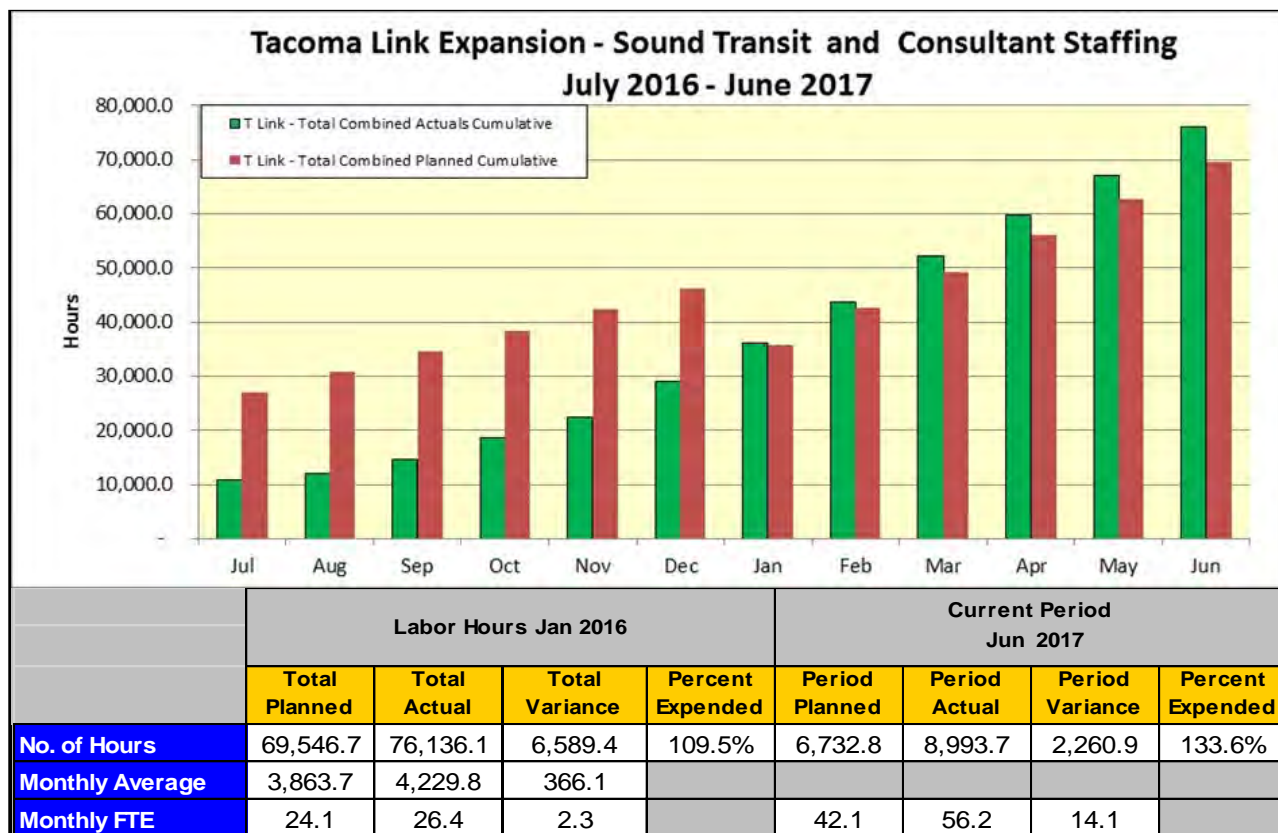
# Link Light Rail Staffing Report



## Tacoma Link Expansion

### Total Internal and Consultant Staffing – Tacoma Link Expansion

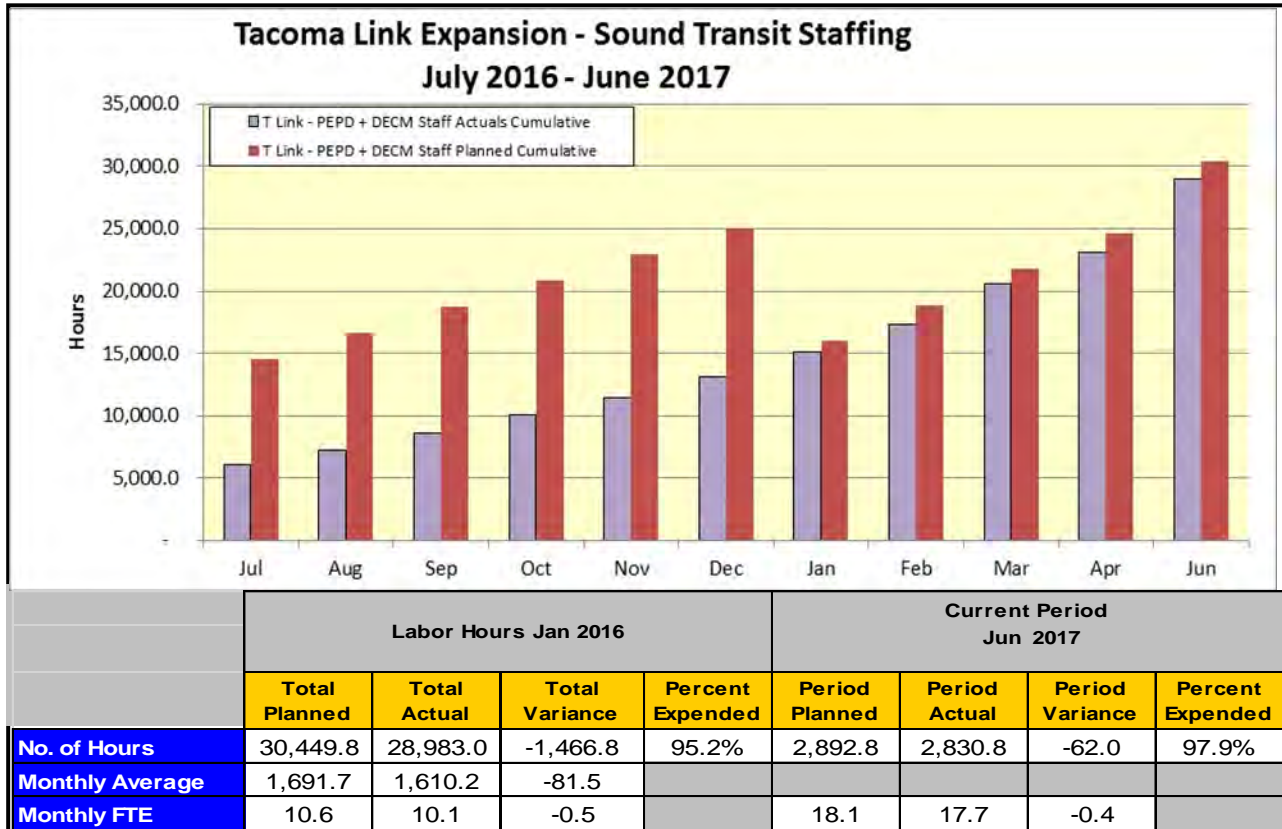
During June there were 56.2 FTE (134% of plan) assigned to the Tacoma Link Expansion including 38.5 consultant FTE (60% above plan) and 17.7 internal FTE (2% below plan). Average year-to-date staffing (48.8 FTE/mo.) is 16% (6.8 FTE/mo.) above plan; cumulatively since January 2016 staffing is trending 9.5% (2.3 FTE/mo.) above plan.



## Tacoma Link Expansion

### Internal – Tacoma Link Expansion

During June internal staffing for the Tacoma Link Extension (17.7 FTE) was 6% (1 FTE) below May staffing and was 2% (0.4 FTE) below plan. Cumulatively, since January 2016, average monthly internal staffing (10.1 FTE/mo.) is trending 4.8% (0.5 FTE/mo.) below plan.



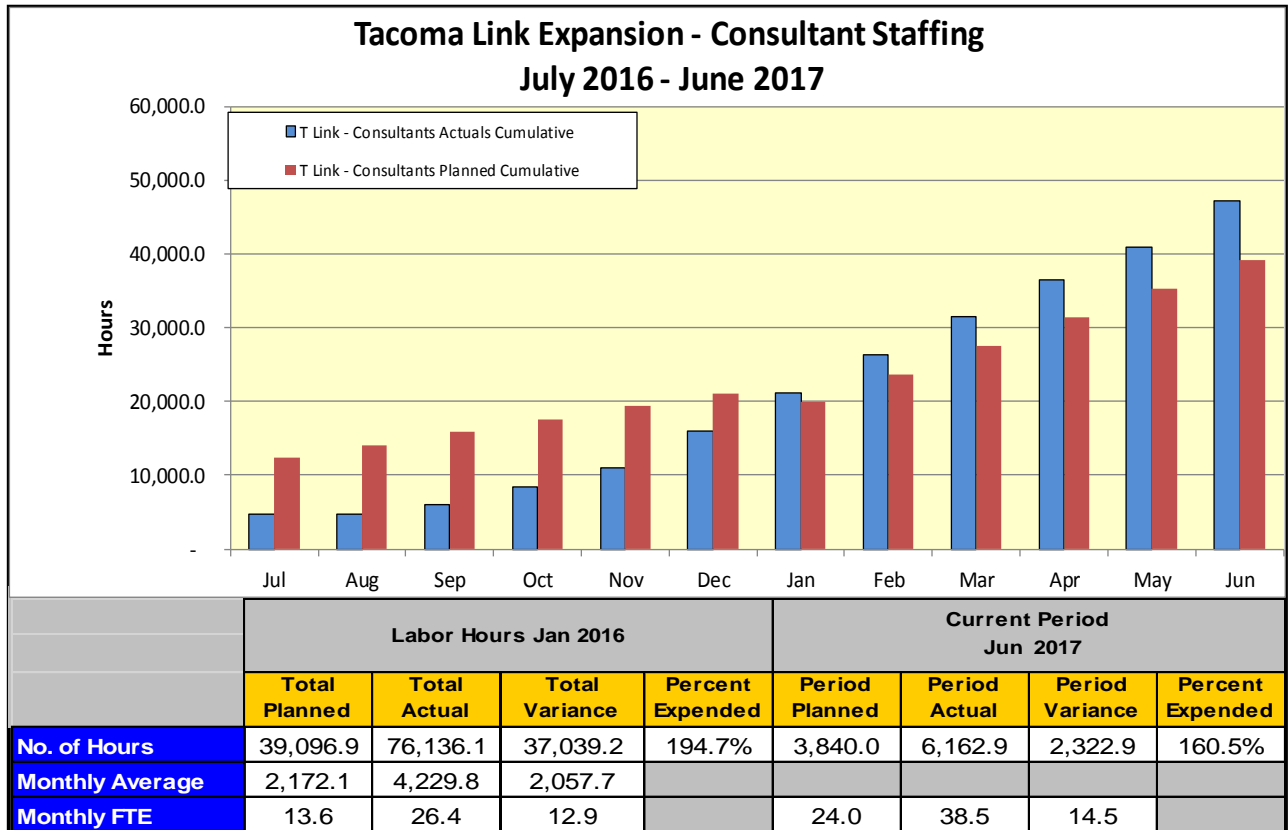
# Link Light Rail Staffing Report



## Tacoma Link Expansion

### Consultant Resource Commitments – Tacoma Link Expansion

There were 38.5 consultant FTE assigned to the Tacoma Link Extension during June. Consultant staffing was 60% (14.5 FTE) above plan. Cumulatively since January 2016, average monthly consultant staffing (26.4 FTE/mo.) is trending 94.7% (12.9 FTE/mo.) above plan.



## ACRONYMS

|       |   |
|-------|---|
| AA    | Alternative Analysis                              |
| APE   | Area of Potential Impact                          |
| BCE   | Baseline Cost Estimate                            |
| BCWS  | Budgeted Cost of Work                             |
| BIM   | Building Information Modeling                     |
| BNSF  | Burlington Northern Santa Fe Railway              |
| CCB   | Change Control Board                              |
| CDF   | Controlled Density Fill                           |
| CHS   | Capitol Hill Station                              |
| CM    | Construction Management                           |
| CMU   | Concrete Masonry Unit                             |
| CO    | Change Order                                      |
| CPI   | Cost Performance Index                            |
| CPM   | Critical Path Method                              |
| DAHP  | Department of Archaeology & History Preservation  |
| DART  | Days Away, Restricted or Modified                 |
| DB    | Design -Build                                     |
| DECM  | Design, Engineering and Construction Management   |
| DEIS  | Draft Environmental Impact Statement              |
| DPD   | Seattle Department of Planning and Development    |
| DSC   | Differing Site Conditions                         |
| DSDC  | Design Support During Construction                |
| DSTT  | Downtown Seattle Transit Tunnel                   |
| EFC   | Estimated Final Cost                              |
| EMI   | Electro Magnetic Interference                     |
| FD    | Final Design                                      |
| FHWA  | Federal Highway Administration                    |
| FSEIS | Final Supplemental Environmental Impact Statement |
| FFGA  | Full Funding Grant Agreement                      |
| FTA   | Federal Transit Administration                    |
| FTE   | Full Time Employee                                |
| GC/CM | General Contractor /Construction Management       |
| HVAC  | Heating, Ventilation and Air Conditioning         |
| ICD   | Integration Control Document                      |
| IRT   | Independent Review Team                           |
| IWP   | Industrial Waste Permit                           |
| JA    | Jacobs Associates                                 |
| JARPA | Joint Aquatic Resource Permit Application         |
| KCM   | King County Metro                                 |
| LNTF  | Limited Notice to Proceed                         |



ACRONYMS, continued

|       |   |
|-------|---|
| LRRP  | Light Rail Review Panel                         |
| LRT   | Light Rail Transit                              |
| LRV   | Light Rail Vehicle                              |
| LTK   | LTK Engineering Services                        |
| MACC  | Maximum Allowable Construction Cost             |
| MDA   | Major Discharge Authorization                   |
| MLK   | Martin Luther King, Jr. Way                     |
| MOA   | Memorandum of Agreement                         |
| MOS   | Minimum Operable Segment                        |
| MOU   | Memorandum of Understanding                     |
| MPPCV | Major Public Project Construction Variance      |
| MRB   | Material Review Board                           |
| MTP   | Montlake Triangle Project                       |
| MUP   | Master Use Permit                               |
| NB    | Northbound                                      |
| NCR   | Notification of Change Report                   |
| NCTP  | North Corridor Transit Partners                 |
| NEPA  | National Environmental Policy Act               |
| NOAA  | National Oceanic and Atmospheric Administration |
| NTP   | Notice to Proceed                               |
| OCS   | Overhead Catenary System                        |
| OMF   | Operations and Maintenance Facility             |
| OMSF  | Operations and Maintenance Satellite Facility   |
| PE    | Preliminary Engineering                         |
| PEP   | Project Execution Plan                          |
| PEPD  | Planning, Environment and Project Development   |
| PMOC  | Project Management Oversight Consultant         |
| PSST  | Pine Street Stub Tunnel                         |
| QA    | Quality Assurance                               |
| QC    | Quality Control                                 |
| QTR   | Quarter   |
| RE    | Resident Engineer                               |
| RFC   | Request for Change                              |
| RFD   | Request for Deviation                           |
| RFI   | Request for Information                         |
| RFP   | Request for Proposal                            |
| RFQ   | Request for Qualifications                      |
| RIR   | Recordable Injury Rates                         |

ACRONYMS, continued

|        |   |
|--------|---|
| RMP    | Risk Management Plan                              |
| ROD    | Record of Decision                                |
| ROW    | Right of Way                                      |
| SB     | Southbound  |
| SCADA  | Supervisory Central and Data Acquisition          |
| SCC    | Standard Cost Categories                          |
| SCL    | Seattle City Light                                |
| SDEIS  | Supplemental Draft Environmental Impact Statement |
| SEPA   | State Environmental Policy Act                    |
| SIP    | Street Improvement Permitting                     |
| SPI    | Schedule Performance Index                        |
| SR     | State Route                                       |
| ST     | Sound Transit                                     |
| START  | Seattle Tunnel and Rail Team                      |
| SWI    | Stacy & Witbeck, Inc.                             |
| TBM    | Tunnel Boring Machine                             |
| TCE    | Temporary Construction Easement                   |
| TE     | Traction Electrification                          |
| TFK    | Traylor Frontier Kemper Joint Venture             |
| TOD    | Transit Oriented Development                      |
| TVM    | Ticket Vending Machine                            |
| UAC    | Unallocated Contingency                           |
| U-Link | University Link project                           |
| 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                          |
| WSDOT  | Washington Department of Transportation           |