



Proposed
Transit Improvement Plan
2016



2016 Proposed Transit Improvement Plan

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Transit Improvement Plan Overview

The 2016 Transit Improvement Plan (TIP) provides a long-term forecast of project and transit mode costs, plus reserves set aside for potential future expenditures. The ST Board adopts the TIP and the annual budget to authorize spending for the budget year, as well as lifetime project budgets.

Transit Modes

The TIP includes annual forecasts for six years of operating expenses for each of the agency's transit modes. The expense forecasts are developed in a detailed long-term operating and maintenance plan and reflect service plans contained in the Proposed 2016 Service Implementation Plan (SIP).

Projects

The TIP includes project scope, schedule, budget, and risk information for all active projects. Budget information is presented at the phase-level including life-to-date costs, annual spending forecasts for the upcoming six years, summarized costs for years beyond this six-year period, and the total authorized lifetime budget. Only board-approved budget amounts are included. Where a baseline budget has not been approved, the total budget only includes the authorized phase(s). The baseline budget reflects the estimated costs for the entire project and is used to measure actual project budget performance. For most projects, Phase Gate status is also provided. For ST2 projects only, cost estimate information is shown in the Projects section and in Appendix A. Lifetime budgets for active Sound Move projects are shown in Appendix B.

Reserves

The TIP includes reserves that are set aside for both planned and unplanned expenditures. Reserves are not considered appropriations, and Board authorization is required to use reserved funds.

TRANSIT IMPROVEMENT PLAN SUMMARY (in millions)

Program	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total TIP
Transit Modes	\$ -	\$264	\$276	\$283	\$291	\$299	\$326	\$ -	\$1,739
Projects	6,468	803	1,236	1,281	936	868	544	769	12,905
Reserves	318	69	14	9	9	3	3	8	433
Total	\$6,786	\$1,136	\$1,526	\$1,573	\$1,237	\$1,169	\$873	\$777	\$15,076

Financial Plan

In addition to the TIP that is published annually, Sound Transit maintains a long-term agency financial plan – a model of forecasted cash flows through 2040. A review of agency programs against the financial plan ensures a balance of revenues and expenditures, as well as affordability of the overall program. Sensitivity analysis, using the financial plan, gauges the impact of potential changes in the economy as well as changes in project schedule and scope on overall program affordability.

Project Budgeting

Project Prioritization Process

During the development of the budget, the agency follows an objective process to vet all proposed new projects and increases to existing projects that are not part of the Sound Move or ST2 programs. Projects are scored using objective criteria including: safety, sustainability, regulatory, financial, impact on asset “State of Good Repair,” system enhancements, security, and impact on ridership. The goal is to identify high-value, high-priority projects and pair them with available resources.

Budget Approval and Phase Gate Process

Prior to 2010, the Sound Transit Board approved project lifetime budgets at the outset of a capital project. Since 2010, our approach to project budgeting has been modified to provide greater Board oversight and control. As projects reach key milestones, requests for budget approval to complete the next project phase are presented for Board approval. Phase Gate, our project management oversight process, confirms that the project is ready to move forward to the next phase and triggers the request to the Board for additional budget. There are exceptions to having projects pass through each gate in sequence, such as procurements and alternative contracting methods, as in design-bid-build.

Typical budget requests include funding for:

- Project development through preliminary engineering and environmental investigation.
- Final design and right-of-way acquisition.
- Baseline or total expected project budget.

The initial project development budget includes alternatives analysis to shape the scope of the project and selection of a preferred alternative, compliance with environmental requirements which may include an Environmental Impact Statement, development of operations and maintenance plans, and preliminary engineering for the preferred alternative.

A final design and right-of-way budget includes funding for all design work – civil, structural, electrical and HVAC, systems and architectural through to construction procurement documentation, as well as purchase or lease of all property needed to build the project.

A baseline budget is established during final design when sufficient information is available to establish a project’s cost through construction. Project spending is benchmarked against the baseline through completion of the project. Projects are fully funded when the Board approves the baseline.

Cost Estimates

Each ST2 capital project has a cost estimate that originated from the 2008 voter-approved plan. Original ST2 cost estimates, 2015 cost estimates, and 2016 cost estimates for ST2 projects appear in Appendix A.

Our cost estimates are maintained on a current year, constant dollar basis. For instance, in the 2016 TIP, full project cost estimates are presented in constant 2015 dollars. However, the Board approves budgets in year-of-expenditure dollars to take into account the fact that project spending occurs over several years and so must be adjusted for inflation.

Transit Modes

The Proposed 2016 Transit Improvement Plan (TIP) contains forecasted expenses to operate and maintain the regional transit system from 2016 – 2021. Operating expenses include the costs of third-party operators for light rail, commuter rail, and bus services, as well as Sound Transit's direct costs for providing those services.

TRANSIT MODES SUMMARY

(in thousands)

Mode	2016	2017	2018	2019	2020	2021	Total TIP
Link Light Rail	\$87,596	\$92,322	\$95,375	\$98,272	\$104,221	\$118,534	\$596,319
Tacoma Link Light Rail	5,068	5,290	5,384	5,565	6,464	11,631	39,402
Sounder Commuter Rail	45,764	48,850	52,143	53,770	56,120	58,646	315,295
ST Express Bus	125,823	129,883	129,900	133,291	132,031	136,734	787,663
Total	\$264,252	\$276,345	\$282,803	\$290,898	\$298,837	\$325,545	\$1,738,679

As a part of the annual budget, the Sound Transit Board approves spending for each of these modal services for the following fiscal year. The agency also maintains a Service Implementation Plan (SIP) that includes service level and expenditure forecasts for a six-year period. The Adopted 2016 SIP provides the service plan on which the adopted 2016 budget is based. Reviewed and recommended by the Operations and Administration Committee, the Board adopts the 2016 SIP at the same time as adopting the budget for 2016. The TIP only includes summary spending information for the six-year period described in the SIP. The SIP may be read at www.soundtransit.org.

In 2016, service levels provided by three of Sound Transit's four modes will be increasing. In the fourth quarter of 2016, an additional round trip for Sounder commuter rail service is planned. An additional 19,750 service hours (annualized 32,000 hours in future years) will be phased in for ST Express service to help mitigate East Link Extension construction congestion and address capacity and schedule issues on many routes.

In the first quarter of 2016, Link expansion north to the University of Washington will open, followed later in the year by the addition of light rail service south to Angle Lake Station at South 200th Street in SeaTac. In 2021, light rail service north to Northgate will begin. Additional extensions of light rail service are planned for 2023 north to Lynnwood, south to Kent/Des Moines in the vicinity of Highline Community College, and east to Overlake in Redmond. There are no changes planned for Tacoma Link light rail service through 2020; however, fare collection is proposed to begin in late 2016. The extension of Tacoma Link service approved by voters in ST2 is moving through the planning process, and it is projected to open in late 2021.

Projects

The 2016 Transit Improvement Plan (TIP) contains all board-authorized budgets for active projects. The majority of Sound Transit's projects support the planning, design, and construction of light rail, commuter rail, and express bus transit infrastructure as described in the Sound Move and ST2 plans. The TIP uses project categories, which aligns with common industry practice and provides transparency into the agency's investment in expanding service versus investment in existing assets. Projects are also reported by program.

PROJECT DELIVERY SUMMARY BY PROJECT TYPE

(in thousands)

	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total TIP
System Expansion									
Link	5,189,219	480,292	893,878	1,123,880	849,598	786,140	442,966	607,982	10,373,956
Sounder	572,495	133,168	134,495	12,182	-	-	-	-	852,340
Regional Express	146,291	83,128	43,074	23,136	-	-	-	-	295,629
Other	50,435	18,455	33,582	13,873	9,612	4,371	3,996	29,405	163,729
System Expansion Subtotal	5,958,440	715,044	1,105,029	1,173,071	859,211	790,510	446,962	637,387	11,685,653
Enhancement	82,008	17,192	33,912	1,463	1,406	644	962	335	137,921
Rehabilitation & Replacement	136,555	10,547	27,248	34,899	2,435	1,791	24,564	3,509	241,547
Administrative	290,609	60,074	69,394	71,764	73,307	74,682	71,976	127,812	839,618
Total	\$6,467,612	\$802,856	\$1,235,583	\$1,281,196	\$936,358	\$867,627	\$544,464	\$769,043	\$12,904,739

PROJECT DELIVERY SUMMARY BY PROGRAM

(in thousands)

	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total TIP
Link	\$5,209,459	\$484,478	\$901,768	\$1,124,053	\$849,731	\$786,140	\$443,010	\$608,174	\$10,406,813
Sounder	625,045	141,949	150,702	14,697	-	-	-	-	932,394
Regional Express	281,315	87,934	73,875	53,751	-	-	22,112	-	518,986
Other	351,792	88,496	109,238	88,695	86,627	81,487	79,342	160,869	1,046,546
Total	\$6,467,612	\$802,856	\$1,235,583	\$1,281,196	\$936,358	\$867,627	\$544,464	\$769,043	\$12,904,739

System Expansion

As a relatively young transit system, the majority of Sound Transit's project budget is focused on building light rail to connect the region. Both Sound Move and ST2 programs funded light rail facilities and tracks – in tunnels, at grade, and elevated. By 2023, these two programs will extend light rail north to Lynnwood, south to Federal Way, and east to the Overlake area of Redmond.

Commuter rail is focused on providing rail service between Everett and Seattle from the north and Lakewood to Seattle from the south. Projects are now focused on rail station improvements among its 12 commuter rail stations, track and signal improvements in Tacoma, and the improvement of track and signals between Lakewood and Nisqually.

Projects in support of Regional Express bus services are mostly completed, and the focus is now on the expansion of high occupancy vehicle (HOV) transit lanes on I-90.

Sound Transit is working to finalize the next transit development plan – Sound Transit 3 (ST3). The scope of the plan, including specific projects, will be selected by the Board in June 2016.

2016 System Expansion Project Highlights

- Complete University Link and South 200th Street extensions and commence with passenger service along these two new light rail extension segments.
- Complete preliminary engineering of the preferred alternative to expand Tacoma Link.
- Focus on design and construction for Northgate Link and begin final design for Lynnwood Link extensions.
- Begin East Link Extension construction of segments in south Bellevue, downtown Bellevue-Spring District and Bel-Red area, with tunneling in Bellevue. The project's baseline scope, schedule, and budget were approved by the Board in 2015.
- Complete preliminary engineering to Federal Way Transit Center and begin final design to allow for the construction of a light rail extension from South 200th Street to Kent-Des Moines Road.
- Continue construction on track and signal improvements from Tacoma to Nisqually along Sound Transit owned right-of-way for Point Defiance Bypass.

BUDGET CHANGES

(in thousands)

Project	Reason	Budget Type	Explanation	Change
SOUNDER				
Puyallup Station Improvements	Phase Gate	Preliminary Engineering	Acquire right-of-way (ROW) property ahead of Final Design and ROW budget approval.	\$4,867
Souder Yard & Shops Facility	Cost Increase	Preliminary Engineering	Acquire ROW property ahead of Final Design and ROW budget approval.	\$560
OTHER				
ST3 Planning	Transfer	Preliminary Engineering	Receive budget transfers from HCT planning	\$2,925
Central & East HCT Study	Transfer	Preliminary Engineering	Transfer surplus budget to ST3 Planning project.	(\$2,426)
HCT Corridor Planning Studies	Transfer	Preliminary Engineering	Transfer surplus budget to ST3 Planning project.	(\$500)
Research & Technology	Cost Increase	Program	Expand new features and functions in application development to share transit data with more transit providers as well as to customers using web platforms, rider alerts, interactive signage, and fare payment technology.	\$5,344
Total System Expansion				\$10,771

2016 TIP Cashflow by Budget Approval

(in thousands)

System Expansion
LINK

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Preliminary Engineering									
400008 Tacoma Link Expansion	7,786	0	0	0	0	0	0	0	7,786
400009 Link Operations & Maintenance Satellite Facility	33,489	3,339	0	0	0	0	0	0	36,828
4X115 Lynnwood Link Extension	56,907	7,211	0	0	0	0	0	0	64,119
4X445 Federal Way Link Extension	19,904	22,973	0	0	0	0	0	0	42,877
Subtotal	118,086	33,524	0	0	0	0	0	0	151,610
Baseline									
400007 First Hill Streetcar	132,283	137	40	40	40	40	40	160	132,780
4X100 Northgate Link Extension	642,169	162,433	284,309	300,490	221,922	214,960	62,470	242,647	2,131,400
4X200 University Link Extension	1,490,334	40,561	41,234	183,289	589	0	0	0	1,756,007
4X300 Initial Segment	2,091,479	289	0	0	0	0	0	0	2,091,768
4X420 So. 200th Link Extension	293,435	23,010	66,796	0	0	0	0	0	383,241
4X600 East Link Extension	421,432	220,339	501,499	640,062	627,048	571,140	380,455	315,175	3,677,150
Subtotal	5,071,133	446,768	893,878	1,123,880	849,598	786,140	442,966	557,982	10,172,346
Reserve									
4X199 Northgate Link Extension Project Reserve	0	0	0	0	0	0	0	50,000	50,000
Subtotal	0	0	0	0	0	0	0	50,000	50,000
Total	\$5,189,219	\$480,292	\$893,878	\$1,123,880	\$849,598	\$786,140	\$442,966	\$607,982	\$10,373,956

2016 TIP Cashflow by Subarea
(in thousands)

System Expansion
LINK

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	38,104	4,639	0	0	0	0	0	0	42,743
2 - North King	3,848,112	208,498	328,592	487,659	226,313	218,427	64,793	294,698	5,677,092
3 - South King	861,880	46,700	66,796	0	0	0	0	0	975,376
4 - East King	433,337	220,456	498,490	636,222	623,286	567,713	378,173	313,284	3,670,960
5 - Pierce	7,786	0	0	0	0	0	0	0	7,786
Total	\$5,189,219	\$480,292	\$893,878	\$1,123,880	\$849,598	\$786,140	\$442,966	\$607,982	\$10,373,956

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	370,389	48,797	44,581	50,058	32,242	28,750	25,872	77,101	677,790
20-Prelim Engineering/Env Review	204,430	19,508	293	198	203	208	213	222	225,275
30-Final Design+Specifications	483,427	57,334	31,901	26,726	20,166	15,809	10,801	9,566	655,730
35-Third Party	221,185	8,685	10,922	15,163	7,861	5,816	5,211	10,955	285,799
40-Row Acquisition+Permits	635,629	65,620	72,214	56,733	309	19,838	0	7,426	857,769
50-Construction	2,781,809	228,442	664,715	905,066	678,435	526,608	327,955	382,888	6,495,916
55-Construction Services	235,814	48,248	61,846	57,512	53,835	47,495	42,074	43,191	590,014
70-Vehicles	231,776	650	7,251	12,425	55,331	136,549	25,567	25,260	494,808
80-System Testing+Startup	24,760	3,009	156	0	1,216	5,067	5,274	1,373	40,855
90-Contingency	0	0	0	0	0	0	0	50,000	50,000
Total	\$5,189,219	\$480,292	\$893,878	\$1,123,880	\$849,598	\$786,140	\$442,966	\$607,982	\$10,373,956

System Expansion

400008**Tacoma Link Expansion****Managed by: PEPD**

Scope: Sound Transit, in cooperation with the city of Tacoma and Pierce Transit, is conducting conceptual and preliminary engineering and environmental review to expand Tacoma Link in the selected corridor. Federal Transit Administration guidance is being followed so that the project is eligible for future Small Starts grant funding consideration. Expansion is expected to require additional funding from other entities.

The estimated total project cost of \$165 million YOE is expected to be funded by \$50 million YOE of local Sound Transit revenues, \$75 million YOE of Small Starts funding, and \$40 million YOE of a local partnership.

The project anticipates presenting to the Board in November 2015, a budget amendment seeking additional funding to complete final design and the full right-of-way procurements for the project. If approved the changes would appear in the adopted 2016 Transit Improvement Plan (TIP).

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	3-Identify Preferred Alternative		
Baseline:	\$0	2008 Cost Estimate:	\$100,162
2015 TIP:	\$7,786	2015 Cost Estimate:	\$135,876
2016 TIP:	\$7,786	2016 Cost Estimate:	\$135,876

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	7,786	0	0	0	0	0	0	0	7,786
Total	7,786	0	0	0	0	0	0	0	7,786

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,831	0	0	0	0	0	0	0	1,831
20-Prelim Engineering/Env Review	5,872	0	0	0	0	0	0	0	5,872
40-Row Acquisition+Permits	83	0	0	0	0	0	0	0	83
Total	7,786	0	0	0	0	0	0	0	7,786

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	High
Budget Risk Level:	High	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

Budget and Schedule Risk: Route alternatives may exceed budget. Project requires continued coordination with community stakeholders and contribution from public/private partners.

System Expansion

400009**Link Operations & Maintenance Satellite Facility****Managed by: PEPD**

Scope: Review and evaluate current and future light rail storage and maintenance requirements to support the development, design, and construction of a future light rail operations and maintenance facility for ST2 system expansion. It is anticipated that the total cost of this project when baselined will exceed the estimate of the original ST2 cost estimates. As the preliminary engineering of the project is completed, an understanding of the additional costs of the project will be identified.

It is anticipated that a budget amendment to the project will be presented to the Board in December 2015 funding the final design and right-of-way procurements. These changes if approved will be included in the adopted budget.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	3-Identify Preferred Alternative	2008 Cost Estimate:	\$298,615
Baseline:	\$0	2015 Cost Estimate:	\$251,589
2015 TIP:	\$36,828	2016 Cost Estimate:	\$251,589
2016 TIP:	\$36,828		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	7,033	701	0	0	0	0	0	0	7,734
North King	5,593	558	0	0	0	0	0	0	6,150
South King	6,430	641	0	0	0	0	0	0	7,071
East King	14,434	1,439	0	0	0	0	0	0	15,873
Total	33,489	3,339	0	0	0	0	0	0	36,828

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,639	1,597	0	0	0	0	0	0	3,237
20-Prelim Engineering/Env Review	8,667	1,315	0	0	0	0	0	0	9,982
35-Third Party	0	385	0	0	0	0	0	0	385
40-Row Acquisition+Permits	23,183	42	0	0	0	0	0	0	23,225
Total	33,489	3,339	0	0	0	0	0	0	36,828

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	High
Budget Risk Level:	High	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Design challenges and coordination efforts with third parties, stakeholders, and jurisdictions have the potential to impact both the budget and the schedule for completing preliminary engineering resulting in potentially delayed schedule for opening of the facility in 2020 and increased costs to the project.

System Expansion

LINK

4X115**Lynnwood Link Extension****Managed by: PEPD**

Scope: The Lynnwood Link Extension project extends light rail approximately 8.5 miles from Northgate through Shoreline and Mountlake Terrace to Lynnwood.

The project anticipates to present to the Board in late 2015, a budget amendment seeking additional funding to complete final design and the full right-of-way procurements for the project. If approved it would appear in the Adopted 2016 Transit Improvement Plan (TIP).

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	3-Identify Preferred Alternative		
Baseline:	\$0	2008 Cost Estimate:	\$1,668,579
2015 TIP:	\$64,119	2015 Cost Estimate:	\$1,421,593
2016 TIP:	\$64,119	2016 Cost Estimate:	\$1,421,593

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	31,071	3,937	0	0	0	0	0	0	35,009
North King	25,836	3,274	0	0	0	0	0	0	29,110
Total	56,907	7,211	0	0	0	0	0	0	64,119

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	8,123	3,615	0	0	0	0	0	0	11,738
20-Prelim Engineering/Env Review	41,610	2,724	0	0	0	0	0	0	44,334
35-Third Party	599	398	0	0	0	0	0	0	996
40-Row Acquisition+Permits	6,575	475	0	0	0	0	0	0	7,050
Total	56,907	7,211	0	0	0	0	0	0	64,119

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Budget Risk: Working with Final Designer, GC/CM contractor, and Construction Management Consultant in 2016 to develop updated construction cost estimates.

Schedule Risk: Coordination efforts with multiple third parties, stakeholders, and jurisdictions, and complying with the requirements of the Federal Transit Administration's (FTA) New Starts process has the potential to impact the schedule for completion of Final Design.

System Expansion

4X445

Federal Way Link Extension

Managed by: PEPD

Scope: The Federal Way Link Extension extends approximately 7.6 miles from S. 200th Street in the city of SeaTac to the Federal Way Transit Center. The project has undergone alternatives analysis and environmental scoping. Publication of a draft environmental impact statement is anticipated in early 2015 and completion of a final environmental impact statement in 2016. The project scope includes conceptual engineering to support the environmental analysis. In addition, design of the preferred alternative will be advanced through preliminary engineering for the 2.3-mile segment from S. 200th Street to Kent/Des Moines.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	3-Identify Preferred Alternative	2008 Cost Estimate:	\$492,281
Baseline:	\$0	2015 Cost Estimate:	\$437,636
2015 TIP:	\$42,877	2016 Cost Estimate:	\$437,636
2016 TIP:	\$42,877		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	19,904	22,973	0	0	0	0	0	0	42,877
Total	19,904	22,973	0	0	0	0	0	0	42,877

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	3,574	5,811	0	0	0	0	0	0	9,385
20-Prelim Engineering/Env Review	15,754	15,130	0	0	0	0	0	0	30,883
35-Third Party	162	1,413	0	0	0	0	0	0	1,575
40-Row Acquisition+Permits	414	620	0	0	0	0	0	0	1,034
Total	19,904	22,973	0	0	0	0	0	0	42,877

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	High
Budget Risk Level:	High	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Project entering environmental review. Uncertainties exist in design, environmental, third party, and jurisdictional requirements that could present budget and schedule risks.

System Expansion

400007**First Hill Streetcar****Managed by: PEPD**

Scope: Provide funding for planning, design and construction of a street car providing connections between Capitol Hill and International District/Chinatown stations via the First Hill neighborhood. Substantial completion of the system was accomplished in 2014, with revenue operations to begin in 2015.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	5-Establish Baseline	2008 Cost Estimate:	\$136,600
Baseline:	\$132,780	2015 Cost Estimate:	\$135,066
2015 TIP:	\$132,780	2016 Cost Estimate:	\$135,066
2016 TIP:	\$132,780		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	132,283	137	40	40	40	40	40	160	132,780
Total	132,283	137	40	40	40	40	40	160	132,780

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	222	137	40	40	40	40	40	160	719
35-Third Party	132,061	0	0	0	0	0	0	0	132,061
Total	132,283	137	40	40	40	40	40	160	132,780

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Fixed Contribution	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2025

Project Risk Assessment

The project schedule and budget risks remain low as the Agency is providing a fixed contribution based on completed progress of the project. Project schedule is extended to accommodate follow on work related to the street car system.

System Expansion

LINK

4X100**Northgate Link Extension****Managed by: DECM**

Scope: The Northgate Link Extension extends light rail 4.3-miles from the University of Washington Station north under the campus via twin bored tunnels to an underground U-District Station along Brooklyn Avenue NE between NE 43rd and NE 45th Streets, and underground Roosevelt Station along 12th Avenue NE between NE 65th Street and NE 67th Street, and continuing to an elevated station in Northgate along 1st Avenue NE spanning NE 103rd Street. The Northgate Link Extension is scheduled to be completed in September 2021 and will provide an interim terminus for Link at Northgate until the Lynnwood Link Extension is in service, currently anticipated in 2023.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	\$1,734,306
Baseline:	\$2,131,400	2015 Cost Estimate:	\$1,904,550
2015 TIP:	\$2,131,400	2016 Cost Estimate:	\$1,904,550
2016 TIP:	\$2,131,400		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	642,169	162,433	284,309	300,490	221,922	214,960	62,470	242,647	2,131,400
Total	642,169	162,433	284,309	300,490	221,922	214,960	62,470	242,647	2,131,400

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	36,225	13,057	15,918	15,642	13,204	10,388	8,271	34,795	147,500
20-Prelim Engineering/Env Review	15,077	0	0	0	0	0	0	0	15,077
30-Final Design+Specifications	90,502	14,031	4,284	4,749	4,381	2,960	1,899	5,716	128,523
35-Third Party	5,722	1,710	1,500	1,227	537	300	108	696	11,800
40-Row Acquisition+Permits	113,287	2,173	2,196	1,909	309	0	0	7,426	127,300
50-Construction	350,721	112,833	236,176	253,398	136,439	52,877	12,628	156,198	1,311,270
55-Construction Services	29,915	18,128	18,787	13,840	10,504	6,819	8,724	11,183	117,900
70-Vehicles	721	500	5,447	9,725	55,331	136,549	25,567	25,260	259,100
80-System Testing+Startup	0	0	0	0	1,216	5,067	5,274	1,373	12,930
Total	642,169	162,433	284,309	300,490	221,922	214,960	62,470	242,647	2,131,400

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2021
		2016 Budget Schedule:	2021

Project Risk Assessment

Risks associated with underground conditions, limited site access, deep stations and groundborne noise and vibration have the potential to impact costs and schedule. TBM progress continues to be slower than planned, which has the potential for delaying critical path work.

System Expansion

4X200**University Link Extension****Managed by: DECM**

Scope: University Link Extension is a 3.15-mile light rail extension located entirely underground extending east from the Downtown Seattle Transit Tunnel, under I-5 to an underground Capitol Hill Station that will serve the First Hill/Capitol Hill urban center. The tunnel route crosses under the Lake Washington Ship Canal to an interim terminus in an underground University of Washington Station near Husky Stadium. University Link Extension is expected to generate high ridership by connecting the three major population and employment centers of Downtown Seattle, Capitol Hill, and the University District when it opens in 2016.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$1,756,007	2015 Cost Estimate:	N/A
2015 TIP:	\$1,756,007	2016 Cost Estimate:	N/A
2016 TIP:	\$1,756,007		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	1,490,334	40,561	41,234	183,289	589	0	0	0	1,756,007
Total	1,490,334	40,561	41,234	183,289	589	0	0	0	1,756,007

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	77,767	7,438	10,655	17,195	500	0	0	0	113,554
20-Prelim Engineering/Env Review	24,261	0	0	0	0	0	0	0	24,261
30-Final Design+Specifications	86,062	1,659	2,090	497	0	0	0	0	90,308
35-Third Party	11,945	600	0	6,101	0	0	0	0	18,646
40-Row Acquisition+Permits	125,617	10	145	26,560	0	0	0	0	152,332
50-Construction	974,931	24,650	18,877	130,236	89	0	0	0	1,148,783
55-Construction Services	83,855	3,296	7,663	0	0	0	0	0	94,814
70-Vehicles	99,255	150	1,804	2,700	0	0	0	0	103,909
80-System Testing+Startup	6,641	2,759	0	0	0	0	0	0	9,400
Total	1,490,334	40,561	41,234	183,289	589	0	0	0	1,756,007

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Budget and schedule risks significantly decreased after the completion of tunneling work in 2013. Some low-level risk associated with tighter constraints and coordination between Civil station contractors and Systems contractor. Some additional risk have surfaced regarding the LRV retrofit project; although those risks are captured in that project, they do have the potential to force some mitigation measures for the pre-revenue service testing activities. Execution of an early revenue service start date could be effected by coordination of contractors and work necessary for completion.

System Expansion

4X300**Initial Segment****Managed by: DECM**

Scope: The 13.9-mile Initial Segment of the Link light rail system connecting South 154th Street in Tukwila with downtown Seattle opened for service in July 2009. The project is expected to close in 2016.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	7-Transition to Operations	2008 Cost Estimate:	N/A
Baseline:	\$2,070,000	2015 Cost Estimate:	N/A
2015 TIP:	\$2,091,768	2016 Cost Estimate:	N/A
2016 TIP:	\$2,091,768		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	1,549,368	214	0	0	0	0	0	0	1,549,582
South King	542,111	75	0	0	0	0	0	0	542,186
Total	2,091,479	289	0	0	0	0	0	0	2,091,768

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	186,823	39	0	0	0	0	0	0	186,862
20-Prelim Engineering/Env Review	33,268	0	0	0	0	0	0	0	33,268
30-Final Design+Specifications	143,997	0	0	0	0	0	0	0	143,997
35-Third Party	61,101	0	0	0	0	0	0	0	61,101
40-Row Acquisition+Permits	205,046	0	0	0	0	0	0	0	205,046
50-Construction	1,210,291	250	0	0	0	0	0	0	1,210,541
55-Construction Services	102,529	0	0	0	0	0	0	0	102,529
70-Vehicles	131,799	0	0	0	0	0	0	0	131,799
80-System Testing+Startup	16,625	0	0	0	0	0	0	0	16,625
Total	2,091,479	289	0	0	0	0	0	0	2,091,768

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2009
		2016 Budget Schedule:	2009

Project Risk Assessment

Work is complete.

System Expansion

4X420**South 200th Link Extension****Managed by: DECM**

Scope: The South 200th Link Extension will extend light rail approximately 1.6 miles south from Sea-Tac/Airport Station to Angle Lake Station at South 200th Street. The design features an elevated light rail guide way, an elevated station, and detached park-and-ride facility at South 200th. The project is being delivered through a design-build (DB) delivery strategy and is expected to begin revenue service operation in 2016.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	\$404,745
Baseline:	\$383,241	2015 Cost Estimate:	\$385,788
2015 TIP:	\$383,241	2016 Cost Estimate:	\$385,788
2016 TIP:	\$383,241		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	293,435	23,010	66,796	0	0	0	0	0	383,241
Total	293,435	23,010	66,796	0	0	0	0	0	383,241

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	12,365	2,349	2,050	0	0	0	0	0	16,764
20-Prelim Engineering/Env Review	5,698	0	0	0	0	0	0	0	5,698
30-Final Design+Specifications	8,928	0	974	0	0	0	0	0	9,902
35-Third Party	3,306	607	3,172	0	0	0	0	0	7,085
40-Row Acquisition+Permits	37,229	300	6,020	0	0	0	0	0	43,549
50-Construction	212,759	15,965	52,298	0	0	0	0	0	281,022
55-Construction Services	11,655	3,539	2,127	0	0	0	0	0	17,322
80-System Testing+Startup	1,494	250	156	0	0	0	0	0	1,900
Total	293,435	23,010	66,796	0	0	0	0	0	383,241

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Project being delivered through alternative design-build delivery strategy. As the project approaches revenue service in 2016, the schedule and budget risks are low. In 2016, construction work will conclude and close coordination of System testing between University Link and South 200th may be required between both projects.

System Expansion

4X600**East Link Extension****Managed by: DECM**

Scope: East Link extends light rail 14 miles to East King County from downtown Seattle serving Mercer Island via I-90, Bellevue and the Overlake area of Redmond, with ten new light rail stations. The project is transitioning from Final Design into Construction. Revenue service to the Overlake Transit Center is forecasted for mid-2023.

Resolution R2015-04 increased the lifetime budget \$2.9 billion for a total lifetime budget of \$3.7 billion.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	5-Establish Baseline		
Baseline:	\$3,677,150	2008 Cost Estimate:	\$3,311,457
2015 TIP:	\$3,677,150	2015 Cost Estimate:	\$3,134,891
2016 TIP:	\$3,677,150	2016 Cost Estimate:	\$3,134,891

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	2,529	1,322	3,009	3,840	3,762	3,427	2,283	1,891	22,063
East King	418,903	219,017	498,490	636,222	623,286	567,713	378,173	313,284	3,655,087
Total	421,432	220,339	501,499	640,062	627,048	571,140	380,455	315,175	3,677,150

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	41,820	14,755	15,917	17,181	18,498	18,322	17,561	42,146	186,200
20-Prelim Engineering/Env Review	54,223	340	293	198	203	208	213	222	55,900
30-Final Design+Specifications	153,938	41,643	24,554	21,480	15,785	12,849	8,902	3,850	283,000
35-Third Party	6,290	3,572	6,251	7,836	7,324	5,516	5,103	10,259	52,150
40-Row Acquisition+Permits	124,195	62,000	63,853	28,264	0	19,838	0	0	298,150
50-Construction	33,107	74,744	357,363	521,432	541,907	473,731	315,327	226,690	2,544,300
55-Construction Services	7,860	23,285	33,269	43,672	43,331	40,676	33,350	32,008	257,450
Total	421,432	220,339	501,499	640,062	627,048	571,140	380,455	315,175	3,677,150

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	High	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment

The project presents technical and third party approval challenges, and requires close coordination with stakeholders and other governmental jurisdictions. Timely decision-making, maintaining the schedule for completing Final Design, and Construction contracts procurement will be necessary in 2016. Project costs are heavily influenced by the competitiveness in the construction market.

System Expansion

4X199	Northgate Link Extension Project Reserve	Managed by: DECM
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Scope: Project reserve created for the Northgate Link Extension that, if required, can be directed to mitigate budget risks associated with project construction. Funding for the reserve originated from unused funds in the project reserve that was set up for the Initial Segment. The project reserve cannot be used for additional scope and approval for its use requires super-majority approval by the Board.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$50,000	2015 Cost Estimate:	N/A
2015 TIP:	\$50,000	2016 Cost Estimate:	N/A
2016 TIP:	\$50,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	0	0	0	0	0	0	0	50,000	50,000
Total	0	0	0	0	0	0	0	50,000	50,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
90-Contingency	0	0	0	0	0	0	0	50,000	50,000
Total	0	0	0	0	0	0	0	50,000	50,000

Budget Risk Assessment	Schedule Risk Assessment
Estimate Type: Construction	Schedule Risk Level: Medium
Budget Risk Level: Medium	2015 Budget Schedule: 2021
	2016 Budget Schedule: 2021

Project Risk Assessment
Reflects Northgate Link Extension project risk assessment.

2016 TIP Cashflow by Budget Approval
(in thousands)

Sound Transit

System Expansion
SOUNDER

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Preliminary Engineering									
300004 Sounder Yard & Shops Facility	1,835	5,006	0	0	0	0	0	0	6,841
300017 Puyallup Station Improvements	2,470	5,945	0	0	0	0	0	0	8,414
300018 Sumner Station Improvements	5,295	1,177	0	0	0	0	0	0	6,472
300019 Lakewood Station Improvements	266	138	0	0	0	0	0	0	404
Subtotal	9,865	12,266	0	0	0	0	0	0	22,131
Final Design & ROW									
300021 Tacoma Trestle Track & Signal	26,206	43,583	38,801	11,920	0	0	0	0	120,509
300027 Point Defiance Bypass	5,636	50,482	71,882	0	0	0	0	0	128,000
3X510 Sounder South Expanded Service	194,176	4,300	3,492	0	0	0	0	0	201,968
Subtotal	226,018	98,365	114,175	11,920	0	0	0	0	450,477
Baseline									
300026 Sounder Yard Expansion	2,415	11,405	6,468	262	0	0	0	0	20,550
3X130 M St-Lakewood Track & Signal	80,435	5	214	0	0	0	0	0	80,654
3X135 D St-M St Track & Signal	152,735	460	5,067	0	0	0	0	0	158,262
3X206 Mukilteo Station, S Platform	16,617	1,040	656	0	0	0	0	0	18,313
3X216 Passenger Information System	6,455	0	0	0	0	0	0	0	6,455
3X236 Tukwila Station	37,324	730	7,916	0	0	0	0	0	45,969
7X755 Sounder ST2 Fleet Expansion	40,633	8,897	0	0	0	0	0	0	49,530
Subtotal	336,613	22,537	20,320	262	0	0	0	0	379,732
Total	\$572,495	\$133,168	\$134,495	\$12,182	\$0	\$0	\$0	\$0	\$852,340

2016 TIP Cashflow by Subarea
(in thousands)

System Expansion
SOUNDER

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	18,390	1,791	656	0	0	0	0	0	20,836
3 - South King	40,498	6,729	11,318	138	0	0	0	0	58,682
5 - Pierce	513,607	124,648	122,521	12,044	0	0	0	0	772,821
Total	\$572,495	\$133,168	\$134,495	\$12,182	\$0	\$0	\$0	\$0	\$852,340

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
02-Operation+Maintenance-Agency	42	0	0	0	0	0	0	0	42
10-Agency Administration	21,537	4,542	4,313	117	0	0	0	0	30,508
20-Prelim Engineering/Env Review	16,311	5,938	808	116	0	0	0	0	23,172
30-Final Design+Specifications	36,581	3,563	2,516	136	0	0	0	0	42,796
35-Third Party	1,174	584	509	54	0	0	0	0	2,321
40-Row Acquisition+Permits	264,819	5,978	4,989	146	0	0	0	0	275,932
50-Construction	163,030	92,266	116,194	11,014	0	0	0	0	382,503
55-Construction Services	9,517	11,550	5,103	600	0	0	0	0	26,770
70-Vehicles	58,438	8,747	0	0	0	0	0	0	67,185
80-System Testing+Startup	1,046	0	64	0	0	0	0	0	1,110
Total	\$572,495	\$133,168	\$134,495	\$12,182	\$0	\$0	\$0	\$0	\$852,340

System Expansion

300004

Sounder Yard & Shops Facility

Managed by: PEPD

Scope: Sound Transit is evaluating operations and maintenance cost efficiencies associated with the development of commuter rail operations and maintenance facilities to support existing and future service levels. Funding has been approved for completing site selection, preliminary engineering (30% design), and environmental determination.

Changes in lifetime budget since 2015: Increased by \$560 thousand for property acquisition.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	2-Identify Alternatives	2008 Cost Estimate:	\$171,727
Baseline:	\$0	2015 Cost Estimate:	\$149,559
2015 TIP:	\$6,281	2016 Cost Estimate:	\$149,559
2016 TIP:	\$6,841		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	275	751	0	0	0	0	0	0	1,026
Pierce	1,559	4,255	0	0	0	0	0	0	5,815
Total	1,835	5,006	0	0	0	0	0	0	6,841

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	342	518	0	0	0	0	0	0	860
20-Prelim Engineering/Env Review	1,442	3,674	0	0	0	0	0	0	5,116
40-Row Acquisition+Permits	51	814	0	0	0	0	0	0	865
Total	1,835	5,006	0	0	0	0	0	0	6,841

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	PE/ED	Schedule Risk Level:	High
Budget Risk Level:	High	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment
Uncertainties exist in siting, design, environmental, third party and jurisdictional requirements that present budget and schedule risks.

System Expansion

300017

Puyallup Station Improvements

Managed by: PEPD

Scope: The Puyallup Station Access Improvement Project is evaluating potential capital investments to improve access to Puyallup Station for pedestrians, bicyclists, and drivers. Improvements include additional parking facilities, pedestrian access improvements, bicycle route improvements, and secure bicycle storage.

Changes in lifetime budget since 2015: Increase project budget \$4.8 million for property acquisition.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	3-Identify Preferred Alternative	2008 Cost Estimate:	\$68,525
Baseline:	\$0	2015 Cost Estimate:	\$57,977
2015 TIP:	\$3,547	2016 Cost Estimate:	\$57,977
2016 TIP:	\$8,414		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	2,470	5,945	0	0	0	0	0	0	8,414
Total	2,470	5,945	0	0	0	0	0	0	8,414

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	493	264	0	0	0	0	0	0	757
20-Prelim Engineering/Env Review	1,943	737	0	0	0	0	0	0	2,680
40-Row Acquisition+Permits	33	4,944	0	0	0	0	0	0	4,977
Total	2,470	5,945	0	0	0	0	0	0	8,414

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	PE/ED	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment
Uncertainties exist in siting, design, environmental, third party and jurisdictional requirements that present budget and schedule risks.

System Expansion

300018

Sumner Station Improvements

Managed by: PEPD

Scope: The Sumner Station Access Improvement Project is evaluating potential capital investments to improve access to Sumner Station for pedestrians, bicyclists, and drivers. Improvements include additional parking facilities, pedestrian access improvements, bicycle route improvements, and secure bicycle storage.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)	
Phase Gate Passed:	3-Identify Preferred Alternative
Baseline:	\$0
2015 TIP:	\$6,472
2016 TIP:	\$6,472

ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
2008 Cost Estimate:	\$48,603
2015 Cost Estimate:	\$44,113
2016 Cost Estimate:	\$44,113

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	5,295	1,177	0	0	0	0	0	0	6,472
Total	5,295	1,177	0	0	0	0	0	0	6,472

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	492	270	0	0	0	0	0	0	762
20-Prelim Engineering/Env Review	1,948	737	0	0	0	0	0	0	2,685
40-Row Acquisition+Permits	2,742	170	0	0	0	0	0	0	2,912
50-Construction	113	0	0	0	0	0	0	0	113
Total	5,295	1,177	0	0	0	0	0	0	6,472

Budget Risk Assessment	
Estimate Type:	PE/ED
Budget Risk Level:	Medium

Schedule Risk Assessment	
Schedule Risk Level:	Medium
2015 Budget Schedule:	2016
2016 Budget Schedule:	2016

Project Risk Assessment

Uncertainties exist in siting, design, environmental, third party and jurisdictional requirements that present budget and schedule risks.

System Expansion

300019

Lakewood Station Improvements

Managed by: PEPD

Scope: Construction of a pedestrian bridge in the city of Lakewood connecting the community to the northwest of Lakewood Station with the station. This work is partly funded by a capped contribution from Sound Transit. Additional access improvements contemplated in ST2 and reflected in the ST2 cost estimate were evaluated through the Station Access and Demand Study project and may be proposed in the future.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	Pending	2008 Cost Estimate:	\$44,466
Baseline:	\$0	2015 Cost Estimate:	\$37,798
2015 TIP:	\$404	2016 Cost Estimate:	\$37,798
2016 TIP:	\$404		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	266	138	0	0	0	0	0	0	404
Total	266	138	0	0	0	0	0	0	404

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	27	13	0	0	0	0	0	0	40
35-Third Party	238	125	0	0	0	0	0	0	363
Total	266	138	0	0	0	0	0	0	404

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Fixed Contribution	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2016

Project Risk Assessment
N/A

System Expansion

SOUNDER

300021**Tacoma Trestle Track & Signal****Managed by: DECM**

Scope: Design and construction of additional track and new structures along an approximately 0.65 mile section of track between the existing Tacoma Dome Station and the vicinity of M Street in Tacoma.

During 2015 the project was baselined and amended under Resolution R2015-09. The project lifetime was amended from \$34.6 million to \$120.5 million which represents the full baselined project budget.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	5-Establish Baseline	2008 Cost Estimate:	\$75,114
Baseline:	\$120,509	2015 Cost Estimate:	\$63,529
2015 TIP:	\$120,509	2016 Cost Estimate:	\$63,529
2016 TIP:	\$120,509		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	26,206	43,583	38,801	11,920	0	0	0	0	120,509
Total	26,206	43,583	38,801	11,920	0	0	0	0	120,509

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,800	1,195	974	117	0	0	0	0	4,086
20-Prelim Engineering/Env Review	4,451	300	0	0	0	0	0	0	4,750
30-Final Design+Specifications	9,169	2,513	1,410	136	0	0	0	0	13,228
35-Third Party	300	454	269	54	0	0	0	0	1,077
40-Row Acquisition+Permits	9,767	0	294	0	0	0	0	0	10,061
50-Construction	153	36,721	33,753	11,014	0	0	0	0	81,641
55-Construction Services	566	2,400	2,100	600	0	0	0	0	5,666
Total	26,206	43,583	38,801	11,920	0	0	0	0	120,509

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	PE/ED	Schedule Risk Level:	High
Budget Risk Level:	High	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment

Sound Transit has been awarded a \$10 million USDOT TIGER grant for construction which is obligated to be expended by Fall 2017. The schedule has been accelerated in order to meet the Fall 2017 completion date. During the preliminary engineering phase several challenges to the project were recognized resulting in the project exceeding its ST2 estimate when the project was baselined by Board approval of Resolution No. R2015-09.

System Expansion

300027**Point Defiance Bypass****Managed by: DECM**

Scope: Sound Transit will administer the construction of the Point Defiance Bypass Project which will construct a new second track adjacent to Sound Transit's existing main line between South Tacoma (South 66th Street Bridge) and Lakewood (Bridgeport Way) and install new rails, ties, and ballast on Sound Transit's existing track between Lakewood and Nisqually. Improvements will be made at the connection to BNSF's main line near Nisqually and safety improvements will be made at some existing at-grade crossings within the project corridor.

The project started in 2014 with \$6.4 million lifetime budget which is used for the procurement of a construction services contract, right-of-way acquisition, and associated staff costs to administer the same in support of the construction of a second track between South Tacoma and Lakewood. These costs are reimbursable through the Federal High Speed Rail grant administered by the Washington State Department of Transportation (WSDOT).

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	5-Establish Baseline	2008 Cost Estimate:	N/A
Baseline:	\$128,000	2015 Cost Estimate:	N/A
2015 TIP:	\$128,000	2016 Cost Estimate:	N/A
2016 TIP:	\$128,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	5,636	50,482	71,882	0	0	0	0	0	128,000
Total	5,636	50,482	71,882	0	0	0	0	0	128,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
02-Operation+Maintenance-Agency	42	0	0	0	0	0	0	0	42
10-Agency Administration	1,052	1,235	371	0	0	0	0	0	2,658
30-Final Design+Specifications	118	0	82	0	0	0	0	0	200
40-Row Acquisition+Permits	53	10	937	0	0	0	0	0	1,000
50-Construction	4,000	41,437	69,063	0	0	0	0	0	114,500
55-Construction Services	371	7,800	1,429	0	0	0	0	0	9,600
Total	5,636	50,482	71,882	0	0	0	0	0	128,000

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	High
Budget Risk Level:	Low	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment

Due to ARRA grant requirements, the project is on a very tight schedule.

System Expansion

3X510**Souder South Expanded Service****Managed by: DECM**

Scope: Purchase of four additional commuter rail easements between Seattle and Lakewood from Burlington Northern Santa Fe (BNSF) Railroad. BNSF is responsible for track and signal improvements; Sound Transit maintains responsibility for environmental permitting and mitigation. The fourth easement payment was made in 2015.

Sound Transit is working with BNSF and Federal and local environmental regulatory agencies on environmental impacts and mitigation.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	4-Enter Final Design	2008 Cost Estimate:	\$196,715
Baseline:	\$0	2015 Cost Estimate:	\$253,762
2015 TIP:	\$201,968	2016 Cost Estimate:	\$253,762
2016 TIP:	\$201,968		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	194,176	4,300	3,492	0	0	0	0	0	201,968
Total	194,176	4,300	3,492	0	0	0	0	0	201,968

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,090	300	860	0	0	0	0	0	2,250
20-Prelim Engineering/Env Review	499	300	208	0	0	0	0	0	1,007
30-Final Design+Specifications	0	700	0	0	0	0	0	0	700
40-Row Acquisition+Permits	185,182	0	1,303	0	0	0	0	0	186,485
50-Construction	7,405	2,800	1,022	0	0	0	0	0	11,226
55-Construction Services	0	200	100	0	0	0	0	0	300
Total	194,176	4,300	3,492	0	0	0	0	0	201,968

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Final Design	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Budget risks may be presented by environmental mitigation requirements. Additional environmental studies are being performed to verify mitigation requirements and establish appropriate mitigation budget/schedule.

System Expansion

300026**Sounder Yard Expansion****Managed by: PEPD**

Scope: Increase track capacity at the layover facility in Lakewood to store up to seven train sets. The project will also complete drainage improvements and increase electrical power to accommodate additional wayside power and yard lighting. The increase in capacity is needed for the additional ST2 Sounder South service that begins in 2016 before the Sounder Yard & Shops Facility project is complete.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	5-Establish Baseline	2008 Cost Estimate:	N/A
Baseline:	\$20,550	2015 Cost Estimate:	\$21,092
2015 TIP:	\$20,550	2016 Cost Estimate:	\$21,092
2016 TIP:	\$20,550		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	1,270	5,999	3,402	138	0	0	0	0	10,809
Pierce	1,145	5,406	3,066	124	0	0	0	0	9,741
Total	2,415	11,405	6,468	262	0	0	0	0	20,550

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	530	425	245	0	0	0	0	0	1,200
20-Prelim Engineering/Env Review	1,394	40	600	116	0	0	0	0	2,150
40-Row Acquisition+Permits	234	20	0	146	0	0	0	0	400
50-Construction	165	10,070	5,165	0	0	0	0	0	15,400
55-Construction Services	91	850	459	0	0	0	0	0	1,400
Total	2,415	11,405	6,468	262	0	0	0	0	20,550

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	Low	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment

Materials requiring long lead time could create potential for delays in construction as busy rail construction market could affect availability.

System Expansion

3X130**M St-Lakewood Track & Signal****Managed by: DECM**

Scope: Reconstruction of approximately seven miles of rail track between M Street in Tacoma and Lakewood was completed in 2010. Remaining project elements include restoration of the South 66th Street Bridge and installation of the Centralized Train Control system. Commuter rail service began in 2012 following the completion of the D Street to M Street Track and Signal project (Project 3x135). Project is complete and closing in 2016.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	7-Transition to Operations	2008 Cost Estimate:	N/A
Baseline:	\$78,630	2015 Cost Estimate:	N/A
2015 TIP:	\$80,654	2016 Cost Estimate:	N/A
2016 TIP:	\$80,654		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	80,435	5	214	0	0	0	0	0	80,654
Total	80,435	5	214	0	0	0	0	0	80,654

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	3,652	0	113	0	0	0	0	0	3,765
20-Prelim Engineering/Env Review	1,496	0	0	0	0	0	0	0	1,496
30-Final Design+Specifications	2,982	0	3	0	0	0	0	0	2,985
40-Row Acquisition+Permits	12,773	5	38	0	0	0	0	0	12,815
50-Construction	50,579	0	60	0	0	0	0	0	50,639
70-Vehicles	8,953	0	0	0	0	0	0	0	8,953
Total	80,435	5	214	0	0	0	0	0	80,654

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2010
		2016 Budget Schedule:	2016

Project Risk Assessment

Schedule delays caused by requirement for boundary survey along project limits.

System Expansion

3X135**D St-M St Track & Signal****Managed by: DECM**

Scope: Design and construct a 1.4 mile rail connection between Tacoma Dome Station and Sound Transit owned right-of-way at the Lakewood Subdivision Line. Construction included; rail work, an overpass at Pacific Avenue, roadway improvements, utility relocations and centralized traffic control for the rail line. The project completed construction and began Sounder service between Lakewood and Tacoma in October 2012. Follow-on work continues and is anticipated to be completed by the end of 2016.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	7-Transition to Operations	2008 Cost Estimate:	N/A
Baseline:	\$161,581	2015 Cost Estimate:	N/A
2015 TIP:	\$158,262	2016 Cost Estimate:	N/A
2016 TIP:	\$158,262		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	152,735	460	5,067	0	0	0	0	0	158,262
Total	152,735	460	5,067	0	0	0	0	0	158,262

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	8,802	95	709	0	0	0	0	0	9,606
20-Prelim Engineering/Env Review	1,733	0	0	0	0	0	0	0	1,733
30-Final Design+Specifications	17,351	200	561	0	0	0	0	0	18,112
35-Third Party	601	5	240	0	0	0	0	0	846
40-Row Acquisition+Permits	41,940	10	1,679	0	0	0	0	0	43,629
50-Construction	67,136	100	1,263	0	0	0	0	0	68,499
55-Construction Services	5,173	50	550	0	0	0	0	0	5,773
70-Vehicles	8,953	0	0	0	0	0	0	0	8,953
80-System Testing+Startup	1,046	0	64	0	0	0	0	0	1,110
Total	152,735	460	5,067	0	0	0	0	0	158,262

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2016

Project Risk Assessment

Continued coordination with local jurisdictions may result in additional requirements.

System Expansion

3X206

Mukilteo Station, S Platform

Managed by: DECM

Scope: The Mukilteo Station South Platform project includes the 2nd platform, stair, and elevator towers for both platforms and the pedestrian bridge connecting them.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$18,313	2015 Cost Estimate:	N/A
2015 TIP:	\$18,313	2016 Cost Estimate:	N/A
2016 TIP:	\$18,313		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	16,617	1,040	656	0	0	0	0	0	18,313
Total	16,617	1,040	656	0	0	0	0	0	18,313

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,304	70	166	0	0	0	0	0	1,540
30-Final Design+Specifications	2,340	100	207	0	0	0	0	0	2,647
35-Third Party	35	0	0	0	0	0	0	0	35
40-Row Acquisition+Permits	1,678	0	100	0	0	0	0	0	1,778
50-Construction	9,560	620	183	0	0	0	0	0	10,363
55-Construction Services	1,700	250	0	0	0	0	0	0	1,950
Total	16,617	1,040	656	0	0	0	0	0	18,313

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

System Expansion

3X216

Passenger Information System

Managed by: FIT

Scope: Upgrade of station communications and all closed circuit television (CCTV) and passenger information systems for commuter rail stations. The system includes communications between stations and the Union Station centralized security and operations control center for CCTV cameras; audible rail announcement capabilities; variable message signs; customer emergency stations; and onboard, automated vehicle location.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	None	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$6,455	2016 Cost Estimate:	N/A
2016 TIP:	\$6,455		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	1,497	0	0	0	0	0	0	0	1,497
South King	1,904	0	0	0	0	0	0	0	1,904
Pierce	3,053	0	0	0	0	0	0	0	3,053
Total	6,455	0	0	0	0	0	0	0	6,455

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	210	0	0	0	0	0	0	0	210
20-Prelim Engineering/Env Review	204	0	0	0	0	0	0	0	204
50-Construction	6,040	0	0	0	0	0	0	0	6,040
Total	6,455	0	0	0	0	0	0	0	6,455

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

System Expansion

3X236**Tukwila Station****Managed by: DECM**

Scope: Construction of a new permanent commuter rail station to replace the existing temporary Tukwila Sounder Station on Sound Transit owned property at Longacres Way in Tukwila. The project includes two 600-foot-long platforms with shelters, ADA compliant ramps, stairs, ticket vending machines, improvements to the underpass connecting the two platforms, a bus transit area with shelters, 390 car parking stalls, 68 bicycle parking spaces, and underground water quality and stormwater detention facilities. Project is expected to continue well into 2016 to complete follow-on work including potential platform crack repairs, removal of soil stockpile, and possible lighting enhancements.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	\$40,943
Baseline:	\$45,969	2015 Cost Estimate:	\$48,360
2015 TIP:	\$45,969	2016 Cost Estimate:	\$48,360
2016 TIP:	\$45,969		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	37,324	730	7,916	0	0	0	0	0	45,969
Total	37,324	730	7,916	0	0	0	0	0	45,969

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,740	158	875	0	0	0	0	0	2,773
20-Prelim Engineering/Env Review	1,101	0	0	0	0	0	0	0	1,101
30-Final Design+Specifications	4,622	50	252	0	0	0	0	0	4,924
40-Row Acquisition+Permits	10,366	5	638	0	0	0	0	0	11,009
50-Construction	17,879	517	5,685	0	0	0	0	0	24,081
55-Construction Services	1,615	0	466	0	0	0	0	0	2,081
Total	37,324	730	7,916	0	0	0	0	0	45,969

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Final Design	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

N/A

7X755**Sounder ST2 Fleet Expansion****Managed by: Operations**

Scope: Fleet expansion to add train sets to support additional trips between Seattle and Lakewood. The number of coaches and cab cars that will be procured will be refined based on ridership trends and forecasts. In 2012, three locomotives were ordered and received from Motive Power, Inc. Nine cabs were ordered in 2013 from Bombardier and will be received in 2015 through 2016.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	\$36,854
Baseline:	\$0	2015 Cost Estimate:	\$30,438
2015 TIP:	\$49,530	2016 Cost Estimate:	\$30,438
2016 TIP:	\$49,530		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	40,633	8,897	0	0	0	0	0	0	49,530
Total	40,633	8,897	0	0	0	0	0	0	49,530

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	2	0	0	0	0	0	0	0	2
20-Prelim Engineering/Env Review	100	150	0	0	0	0	0	0	250
70-Vehicles	40,531	8,747	0	0	0	0	0	0	49,278
Total	40,633	8,897	0	0	0	0	0	0	49,530

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Scoping	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Time between the contract for purchase and delivery can be affected by manufacturing delays or unforeseen challenges.

2016 TIP Cashflow by Budget Approval
(in thousands)

Sound Transit

System Expansion

REGIONAL EXPRESS

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Preliminary Engineering									
500005 ST Express Bus Base	1,146	2,793	1,869	0	0	0	0	0	5,808
Subtotal	1,146	2,793	1,869	0	0	0	0	0	5,808
Final Design & ROW									
500030 Bothell Transit Related Improvements	8	5,032	0	0	0	0	0	0	5,040
Subtotal	8	5,032	0	0	0	0	0	0	5,040
Baseline									
500020 ST Express Mid-Day Bus Storage	2,593	0	535	0	0	0	0	0	3,128
5X141 85th Corridor, Kirkland	5,419	0	172	0	0	0	0	0	5,590
5X142 Kirkland Transit Center/3rd	10,809	0	151	0	0	0	0	0	10,959
5X321 Federal Way Transit Center	38,601	0	853	0	0	0	0	0	39,455
5X387 I-90 Two-Way Transit & HOV Operations, Stage 3	87,715	75,303	39,494	23,136	0	0	0	0	225,648
Subtotal	145,137	75,303	41,205	23,136	0	0	0	0	284,781
Total	\$146,291	\$83,128	\$43,074	\$23,136	\$0	\$0	\$0	\$0	\$295,629

2016 TIP Cashflow by Subarea
(in thousands)

System Expansion
REGIONAL EXPRESS

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	205	500	334	0	0	0	0	0	1,040
3 - South King	38,734	324	1,070	0	0	0	0	0	40,128
4 - East King	104,484	81,634	40,685	23,136	0	0	0	0	249,939
5 - Pierce	2,868	670	984	0	0	0	0	0	4,522
Total	\$146,291	\$83,128	\$43,074	\$23,136	\$0	\$0	\$0	\$0	\$295,629

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	5,937	393	792	1,706	0	0	0	0	8,829
20-Prelim Engineering/Env Review	6,407	2,540	1,410	0	0	0	0	0	10,357
30-Final Design+Specifications	22,686	15	6	3,699	0	0	0	0	26,406
35-Third Party	0	5,000	0	0	0	0	0	0	5,000
40-Row Acquisition+Permits	7,613	30	172	0	0	0	0	0	7,814
50-Construction	103,394	75,150	40,577	17,730	0	0	0	0	236,852
55-Construction Services	254	0	16	0	0	0	0	0	270
90-Contingency	0	0	100	0	0	0	0	0	100
Total	\$146,291	\$83,128	\$43,074	\$23,136	\$0	\$0	\$0	\$0	\$295,629

System Expansion

REGIONAL
EXPRESS

500005

ST Express Bus Base

Managed by: PEPD

Scope: Sound Transit is evaluating constructing an ST Express Bus Base for operating and maintaining the ST Express bus fleet. The Board has approved initial project development activities including confirmation of fleet operating assumptions, development of facilities and site programming evaluations and review of alternative project delivery methods.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	1-Enter Project Development	2008 Cost Estimate:	\$196,007
Baseline:	\$0	2015 Cost Estimate:	\$189,577
2015 TIP:	\$5,808	2016 Cost Estimate:	\$189,577
2016 TIP:	\$5,808		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	205	500	334	0	0	0	0	0	1,040
South King	133	324	217	0	0	0	0	0	674
East King	533	1,299	869	0	0	0	0	0	2,701
Pierce	275	670	448	0	0	0	0	0	1,394
Total	1,146	2,793	1,869	0	0	0	0	0	5,808

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	346	223	290	0	0	0	0	0	859
20-Prelim Engineering/Env Review	798	2,540	1,410	0	0	0	0	0	4,748
40-Row Acquisition+Permits	3	30	168	0	0	0	0	0	201
Total	1,146	2,793	1,869	0	0	0	0	0	5,808

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2016

Project Risk Assessment

Uncertainties exist in siting, design, environmental, third party and jurisdictional requirements that present budget and schedule risks.

500030

Bothell Transit Related Improvements

Managed by: PEPD

Scope: Capital contribution to transit center/park-and-ride project near SR 527/Bothell Way NE and NE 185th Street in the downtown Bothell area. Sound Transit and the city of Bothell would enter into an memorandum of understanding to confirm the responsibilities of each party, the project capital component(s) to receive funding, and the financial participation schedule.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	\$5,884
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$5,040	2016 Cost Estimate:	\$4,923
2016 TIP:	\$5,040		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
East King	8	5,032	0	0	0	0	0	0	5,040
Total	8	5,032	0	0	0	0	0	0	5,040

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	8	32	0	0	0	0	0	0	40
35-Third Party	0	5,000	0	0	0	0	0	0	5,000
Total	8	5,032	0	0	0	0	0	0	5,040

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Fixed Contribution	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2016

Project Risk Assessment

The execution of the grant matching contribution is reliant on the city of Bothell receiving the grant award. As such the actual payment may be carried over year to year until such time the grant is received.

System Expansion

REGIONAL
EXPRESS

500020

ST Express Mid-Day Bus Storage

Managed by: DECM

Scope: The ST Express Mid-Day Bus Storage Project will replace temporary bus storage at the Link Operations Maintenance Facility employee parking area with a more permanent facility. Currently 30, forty-five foot buses are stored in the mid-day lot at the Link OMF during periods of non use. The buses need to be relocated from the employee parking area in 2014 prior to implementing testing on the University Link.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	\$3,336
2015 TIP:	\$3,128	2016 Cost Estimate:	\$3,336
2016 TIP:	\$3,128		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	2,593	0	535	0	0	0	0	0	3,128
Total	2,593	0	535	0	0	0	0	0	3,128

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	263	0	90	0	0	0	0	0	353
20-Prelim Engineering/Env Review	229	0	0	0	0	0	0	0	229
30-Final Design+Specifications	449	0	6	0	0	0	0	0	455
40-Row Acquisition+Permits	6	0	4	0	0	0	0	0	10
50-Construction	1,391	0	420	0	0	0	0	0	1,811
55-Construction Services	254	0	16	0	0	0	0	0	270
Total	2,593	0	535	0	0	0	0	0	3,128

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

5X141**85th Corridor, Kirkland****Managed by: DECM**

Scope: Street widening, traffic signal and bus shelter installations, and sidewalk improvements at various intersections in the city of Kirkland to enhance reliability and connections to transit. This project is being led by the city of Kirkland; transit elements are funded by capped contribution from Sound Transit. Project will be closed in 2016.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	5-Establish Baseline	2008 Cost Estimate:	N/A
Baseline:	\$6,015	2015 Cost Estimate:	N/A
2015 TIP:	\$5,590	2016 Cost Estimate:	N/A
2016 TIP:	\$5,590		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
East King	5,419	0	172	0	0	0	0	0	5,590
Total	5,419	0	172	0	0	0	0	0	5,590

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	447	0	13	0	0	0	0	0	460
20-Prelim Engineering/Env Review	1,124	0	0	0	0	0	0	0	1,124
30-Final Design+Specifications	554	0	0	0	0	0	0	0	554
40-Row Acquisition+Permits	876	0	0	0	0	0	0	0	876
50-Construction	2,417	0	158	0	0	0	0	0	2,575
Total	5,419	0	172	0	0	0	0	0	5,590

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Fixed Contribution	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

5X142 **Kirkland Transit Center/3rd** **Managed by: DECM**

Scope: Design and construct, and place into service, a new regional transit center in Kirkland on Third Street, south of Central Way to accommodate existing and anticipated bus service by King County Metro and ST Express routes. The project also includes a capped contribution for intersection improvements near the transit center to enhance bus service speed and reliability. This project was completed in 2015.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	7-Transition to Operations	2008 Cost Estimate:	N/A
Baseline:	\$13,300	2015 Cost Estimate:	N/A
2015 TIP:	\$10,959	2016 Cost Estimate:	N/A
2016 TIP:	\$10,959		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
East King	10,809	0	151	0	0	0	0	0	10,959
Total	10,809	0	151	0	0	0	0	0	10,959

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	939	0	5	0	0	0	0	0	943
20-Prelim Engineering/Env Review	1,154	0	0	0	0	0	0	0	1,154
30-Final Design+Specifications	1,574	0	0	0	0	0	0	0	1,574
40-Row Acquisition+Permits	187	0	0	0	0	0	0	0	187
50-Construction	6,955	0	46	0	0	0	0	0	7,001
90-Contingency	0	0	100	0	0	0	0	0	100
Total	10,809	0	151	0	0	0	0	0	10,959

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

5X321**Federal Way Transit Center****Managed by: DECM**

Scope: Construct a new transit center and five level 1,200 stall parking structure in Federal Way. Connect I-5 high occupancy vehicle (HOV) lanes to the transit center via South 317th Street. Project is complete and pending closeout.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	7-Transition to Operations	2008 Cost Estimate:	N/A
Baseline:	\$39,455	2015 Cost Estimate:	N/A
2015 TIP:	\$39,455	2016 Cost Estimate:	N/A
2016 TIP:	\$39,455		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	38,601	0	853	0	0	0	0	0	39,455
Total	38,601	0	853	0	0	0	0	0	39,455

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	2,415	0	111	0	0	0	0	0	2,526
20-Prelim Engineering/Env Review	1,553	0	0	0	0	0	0	0	1,553
30-Final Design+Specifications	1,701	0	0	0	0	0	0	0	1,701
40-Row Acquisition+Permits	6,541	0	0	0	0	0	0	0	6,541
50-Construction	26,392	0	742	0	0	0	0	0	27,134
Total	38,601	0	853	0	0	0	0	0	39,455

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2006
		2016 Budget Schedule:	2006

Project Risk Assessment

N/A

5X387

I-90 Two-Way Transit & HOV Operations, Stage 3

Managed by: DECM

Scope: Stage 3 of the I-90 Two-way Transit and HOV Operations project will provide reliable two-way transit and HOV operations eastbound and westbound on I-90 between 80th Avenue SE on Mercer Island and Rainier Avenue/I-5 in Seattle. This stage will also include the installation of screening on the shared pathway on the I-90 floating bridge. Upon completion of the Stage 3 project, the center roadway will be closed to allow the construction of East Link to proceed.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$225,648	2015 Cost Estimate:	N/A
2015 TIP:	\$225,648	2016 Cost Estimate:	N/A
2016 TIP:	\$225,648		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
East King	87,715	75,303	39,494	23,136	0	0	0	0	225,648
Total	87,715	75,303	39,494	23,136	0	0	0	0	225,648

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,520	138	283	1,706	0	0	0	0	3,648
20-Prelim Engineering/Env Review	1,549	0	0	0	0	0	0	0	1,549
30-Final Design+Specifications	18,407	15	0	3,699	0	0	0	0	22,121
50-Construction	66,239	75,150	39,211	17,730	0	0	0	0	198,330
Total	87,715	75,303	39,494	23,136	0	0	0	0	225,648

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	High	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment
Fire Life Safety in a tunnel retrofit does create risk in cost and in schedule. Commissioning of the fire life safety equipment and system will require a multi-phase detailed plan through commissioning. Other construction risks are known and suitable contingencies and project schedule float included in the baseline budget.

2016 TIP Cashflow by Budget Approval
(in thousands)

System Expansion
OTHER
Sound Transit

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Preliminary Engineering									
4X446 South Corridor Alternatives Planning	3,038	0	0	0	0	0	0	0	3,038
809100 ST3 Planning	11,455	11,942	28,454	0	0	0	0	0	51,851
809102 HCT Corridor Planning Studies	65	0	0	0	0	0	0	0	65
809103 Central & East HCT Study	2,099	0	0	0	0	0	0	0	2,099
Subtotal	16,657	11,942	28,454	0	0	0	0	0	57,053
Baseline									
6X668 STart	16,036	1,254	1,691	6,244	6,690	1,688	1,026	14,638	49,267
Subtotal	16,036	1,254	1,691	6,244	6,690	1,688	1,026	14,638	49,267
Operating									
600668 STart Operations & Maintenance	791	250	210	145	144	145	150	3,093	4,927
Subtotal	791	250	210	145	144	145	150	3,093	4,927
Program									
3X212 Fare Collection	8,547	788	584	398	460	437	583	3,074	14,870
5X410 Research & Technology	7,630	2,727	2,043	1,414	1,821	1,911	1,036	1,419	20,000
600016 Fare Administration	774	1,494	600	5,673	498	190	1,200	7,182	17,611
Subtotal	16,951	5,009	3,227	7,484	2,779	2,538	2,819	11,674	52,482
Total	\$50,435	\$18,455	\$33,582	\$13,873	\$9,612	\$4,371	\$3,996	\$29,405	\$163,729

2016 TIP Cashflow by Subarea
(in thousands)

System Expansion
OTHER

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	3,547	322	316	714	772	277	245	2,420	8,612
2 - North King	4,987	352	445	1,495	1,599	429	275	4,149	13,731
3 - South King	6,266	569	570	1,351	1,457	504	433	4,461	15,611
4 - East King	8,137	634	790	2,611	2,794	758	495	7,303	23,523
5 - Pierce	7,574	415	364	615	671	302	312	2,472	12,725
6 - Systemwide	19,924	16,163	31,097	7,087	2,319	2,101	2,236	8,600	89,527
Total	\$50,435	\$18,455	\$33,582	\$13,873	\$9,612	\$4,371	\$3,996	\$29,405	\$163,729

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
02-Operation+Maintenance-Agency	884	158	115	47	43	41	43	2,385	3,715
10-Agency Administration	3,787	1,794	3,594	484	501	514	529	2,996	14,199
20-Prelim Engineering/Env Review	16,539	11,270	26,121	886	714	608	820	1,335	58,292
26-Research+Technology	5,723	3,393	1,852	6,201	1,606	1,493	1,417	7,266	28,949
40-Row Acquisition+Permits	100	200	0	0	0	0	0	0	300
50-Construction	7,934	750	584	398	460	437	583	2,391	13,537
61-Art	15,468	890	1,316	5,858	6,290	1,278	604	13,033	44,737
Total	\$50,435	\$18,455	\$33,582	\$13,873	\$9,612	\$4,371	\$3,996	\$29,405	\$163,729

4X446**South Corridor Alternatives Planning****Managed by: PEPD**

Scope: The project includes identification and evaluation of high-capacity transit (HCT) alternatives for the corridor between Federal Way and Tacoma. It also includes an examination of potential projects for Pierce and South King subareas to enhance transit use and operational efficiencies. This is one of the HCT Corridor Planning studies that will serve as a resource for the Board and public during the update of the Long-Range Plan.

Project is expected to be complete by the end of 2015 and remaining funds will be transferred to ST3 Planning.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	1-Enter Project Development	2008 Cost Estimate:	\$82,921
Baseline:	\$0	2015 Cost Estimate:	\$3,077
2015 TIP:	\$3,038	2016 Cost Estimate:	\$3,077
2016 TIP:	\$3,038		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	3,038	0	0	0	0	0	0	0	3,038
Total	3,038	0	0	0	0	0	0	0	3,038

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	271	0	0	0	0	0	0	0	271
20-Prelim Engineering/Env Review	2,767	0	0	0	0	0	0	0	2,767
Total	3,038	0	0	0	0	0	0	0	3,038

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

809100**ST3 Planning****Managed by: PEPD**

Scope: ST3 Planning project provides funding for the study of future regional transit system expansion beyond the Sound Move and ST2 programs. The ST3 plan includes funding for studying public transit expansion options in nine corridors. These studies were split into their own projects reducing the scope to long-range planning beyond the Sound Move and ST2 programs. The project is currently in the ST3 project identification phase.

Changes in lifetime budget since 2015: Project budget increased by \$2.9 million to reflect transfer of surplus budget from multiple corridor planning studies projects.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	1-Enter Project Development	2008 Cost Estimate:	\$67,204
Baseline:	\$0	2015 Cost Estimate:	\$27,954
2015 TIP:	\$48,925	2016 Cost Estimate:	\$36,762
2016 TIP:	\$51,851		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	11,455	11,942	28,454	0	0	0	0	0	51,851
Total	11,455	11,942	28,454	0	0	0	0	0	51,851

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,386	1,300	3,124	0	0	0	0	0	5,810
20-Prelim Engineering/Env Review	9,969	10,442	25,330	0	0	0	0	0	45,740
40-Row Acquisition+Permits	100	200	0	0	0	0	0	0	300
Total	11,455	11,942	28,454	0	0	0	0	0	51,851

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2018
		2016 Budget Schedule:	2018

Project Risk Assessment

N/A

809102**HCT Corridor Planning Studies****Managed by: PEPD**

Scope: ST2 includes funding for identifying and evaluating potential high-capacity transit improvements beyond those identified in ST2. These studies have been budgeted separately under other projects. The remaining budget will fund additional ST3 corridor planning work as requested by the Sound Transit Board of Directors during the ST3 planning process as related to the High-Capacity Transit corridor studies.

Changes in lifetime budget since 2015: Project budget decreased by \$500 thousand reflecting the transfer of remaining funds to ST3 Planning project.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	1-Enter Project Development	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	\$5,706
2015 TIP:	\$565	2016 Cost Estimate:	\$554
2016 TIP:	\$65		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	65	0	0	0	0	0	0	0	65
Total	65	0	0	0	0	0	0	0	65

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	65	0	0	0	0	0	0	0	65
20-Prelim Engineering/Env Review	0	0	0	0	0	0	0	0	0
Total	65	0	0	0	0	0	0	0	65

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

809103**Central & East HCT Study****Managed by: PEPD**

Scope: Identify and evaluate alternative high-capacity transit (HCT) modes, routes, and potential station areas along high-capacity transit corridors.

Changes in lifetime budget since 2015: Project budget decreased by \$2.4 million reflecting the transfer of funds to ST3 Planning.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	1-Enter Project Development	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	\$4,736
2015 TIP:	\$4,525	2016 Cost Estimate:	\$4,736
2016 TIP:	\$2,099		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	1,049	0	0	0	0	0	0	0	1,049
East King	1,049	0	0	0	0	0	0	0	1,049
Total	2,099	0	0	0	0	0	0	0	2,099

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	142	0	0	0	0	0	0	0	142
20-Prelim Engineering/Env Review	1,957	0	0	0	0	0	0	0	1,957
Total	2,099	0	0	0	0	0	0	0	2,099

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

3X212**Fare Collection****Managed by: FIT**

Scope: Maintain and upgrade as required, Agency fare collection systems which includes: Ticket Vending Machines (TVMs), One Regional Card for All (ORCA) system, secure payment requirements, and electronic citations for fare validation and enforcement.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	None	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$14,870	2016 Cost Estimate:	N/A
2016 TIP:	\$14,870		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	1,898	175	130	88	102	97	129	682	3,301
South King	3,086	284	211	144	166	158	210	1,110	5,368
East King	239	22	16	11	13	12	16	86	416
Pierce	3,325	307	227	155	179	170	227	1,196	5,785
Total	8,547	788	584	398	460	437	583	3,074	14,870

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	463	38	0	0	0	0	0	683	1,184
20-Prelim Engineering/Env Review	150	0	0	0	0	0	0	0	150
50-Construction	7,934	750	584	398	460	437	583	2,391	13,537
Total	8,547	788	584	398	460	437	583	3,074	14,870

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	High	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment

The current budget and schedule is based on early planning estimates for rehabilitation and replacement for these assets. The costs are at high risk until more detailed assessment of the condition of the fielded assets and associated repair and replacement costs are developed.

System Expansion

OTHER

5X410**Research & Technology****Managed by: FIT**

Scope: Assess and implement new transit technologies to improve the agency's operational effectiveness, efficiency and improving customer experience. This program focuses on system wide security and safety technology, real-time service information and passenger communications, and deploying applications to manage operations better.

Changes in lifetime budget since 2015: Increased lifetime budget by \$5.3 million to expand new features and functions in application development to include sharing transit data on to a wider audience of transit providers, interface of useful customer data to web platforms, rider alerts, interactive signage and fare payment expansion.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$14,656	2016 Cost Estimate:	N/A
2016 TIP:	\$20,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	8,244	2,727	2,043	1,414	1,821	1,911	1,036	1,419	20,614
Total	8,244	2,727	2,043	1,414	1,821	1,911	1,036	1,419	20,614

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
01-Operation+Maintenance	0	0	0	0	0	0	0	0	0
02-Operation+Maintenance-Agency	276	0	0	0	0	0	0	0	276
10-Agency Administration	805	0	0	0	0	0	0	0	805
20-Prelim Engineering/Env Review	1,008	380	391	403	415	418	420	847	4,281
26-Research+Technology	6,155	2,347	1,652	1,011	1,406	1,493	617	572	15,251
Total	8,244	2,727	2,043	1,414	1,821	1,911	1,036	1,419	20,614

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	High
Budget Risk Level:	Medium	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment

Elements of this program are in various stages of design and include new technologies that require custom software development which creates budget and schedule risk while a project goes from an idea or concept to a fully scoped project. Extensive coordination with external agencies adds level of schedule risk.

System Expansion

OTHER

6X668**STart****Managed by: DECM**

Scope: The Sound Transit Art Program (STart) incorporates art into Sound Transit facilities. The artwork is intended to reflect the communities served and contribute to a positive experience for customers. The Board supports a public art budget of one percent of construction costs excluding tunneling for all Sound Move and ST2 projects. In 2010, Resolution No. R2010-21 consolidated the Sound Move and ST2 Art programs and established an Art Policy. Ten percent of the total Art program funding is earmarked for the maintenance of the art collection (see project 600668).

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	\$49,267
2015 TIP:	\$49,267	2016 Cost Estimate:	\$49,267
2016 TIP:	\$49,267		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	1,572	123	166	612	656	165	101	1,434	4,828
North King	3,752	293	396	1,461	1,565	395	240	3,425	11,529
South King	3,031	237	320	1,180	1,264	319	194	2,767	9,312
East King	6,527	510	688	2,541	2,723	687	418	5,958	20,052
Pierce	1,155	90	122	450	482	122	74	1,054	3,547
Total	16,036	1,254	1,691	6,244	6,690	1,688	1,026	14,638	49,267

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	568	364	375	386	400	410	422	1,605	4,530
61-Art	15,468	890	1,316	5,858	6,290	1,278	604	13,033	44,737
Total	16,036	1,254	1,691	6,244	6,690	1,688	1,026	14,638	49,267

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment

N/A

System Expansion

OTHER

600668

STart Operations & Maintenance

Managed by: DECM

Scope: Maintenance and occasional replacement of the agency's art installations. As part of the Sound Transit Art program (STart), the lifetime budget is set at ten percent of the total STart program.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)	
Phase Gate Passed:	N/A
Baseline:	\$0
2015 TIP:	\$4,927
2016 TIP:	\$4,927

ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
2008 Cost Estimate:	N/A
2015 Cost Estimate:	\$4,927
2016 Cost Estimate:	\$4,927

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	77	25	21	14	14	14	15	303	483
North King	185	59	49	34	34	34	35	724	1,153
South King	149	47	40	27	27	27	28	585	931
East King	322	102	85	59	58	59	61	1,259	2,005
Pierce	57	18	15	10	10	10	11	223	355
Total	791	250	210	145	144	145	150	3,093	4,927

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
02-Operation+Maintenance-Agency	608	158	115	47	43	41	43	2,385	3,439
10-Agency Administration	183	92	95	98	101	104	107	708	1,488
Total	791	250	210	145	144	145	150	3,093	4,927

Budget Risk Assessment	
Estimate Type:	Planning
Budget Risk Level:	Low

Schedule Risk Assessment	
Schedule Risk Level:	Low
2015 Budget Schedule:	2023
2016 Budget Schedule:	2023

Project Risk Assessment
N/A

System Expansion

OTHER

600016

Fare Administration

Managed by: FIT

Scope: Create and install fare system enhancements to the existing regional smart card system (ORCA) and fare collection systems. Beginning in 2015 this project includes the planning, development and implementation of a new fare collection system. The program also manages fares and pricing for Sound Transit.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$17,611	2016 Cost Estimate:	N/A
2016 TIP:	\$17,611		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	774	1,494	600	5,673	498	190	1,200	7,182	17,611
Total	774	1,494	600	5,673	498	190	1,200	7,182	17,611

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	0	0	0	0	0	0	0	0	0
20-Prelim Engineering/Env Review	774	448	400	483	298	190	400	488	3,481
26-Research+Technology	0	1,046	200	5,190	200	0	800	6,694	14,130
Total	774	1,494	600	5,673	498	190	1,200	7,182	17,611

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment
N/A

Enhancement

Although the majority of Sound Transit's projects are related to expanding the regional transit system, work is planned and ongoing to improve operating efficiency and effectiveness, improve the rider experience, increase system functionality, or reduce operating costs.

2016 Enhancement Project Highlights

- Install brighter, more energy efficient LED lighting at Kent, Sumner, and Puyallup Sounder stations.
- Begin operation of Positive Train Control (PTC) to increase operational safety of commuter rail. Completion is expected by the end of 2015 in accordance with National Transportation Safety Board requirements.
- Design and install a second light rail vehicle lift at the Link Operations & Maintenance Facility.
- Upgrade the Link Closed Circuit Television System (CCTV) to be compatible with technology installed for the University Link and South 200th Link extensions.
- Install heating systems in washers for light rail vehicles, in order to allow for all-weather operation and reduce hazards to operators in freezing weather conditions.

BUDGET CHANGES

(in thousands)

Project	Reason	Budget Type	Explanation	Change
LINK				
Central Link HVAC - Instrument House and UPS Room	Cost Increase	Baseline	Acquire ROW and install external HVAC equipment.	\$661
SOUNDER				
Kent Station Parking Lot Paving	New Project	Operating	New project.	\$700
Kent Station Platform Lighting	New Project	Operating	New project.	\$236
Puyallup Station LED Lighting	New Project	Operating	New project.	\$178
Sumner Station LED Lighting	New Project	Operating	New project.	\$134
OTHER				
Downtown Seattle Transit Tunnel Mitigation	New Project	Preliminary Engineering	New project.	\$1,334
Operations & Maintenance Facility LRV Vehicle Lift	New Project	Preliminary Engineering	New project.	\$4,898
Transit Oriented Development Planning	Transfer	Program	Transfer surplus budget to Transit Oriented Development (TOD) Planning project.	(\$494)
Transit Oriented Development Property Disposition	Cost Increase	Program	Receive budget transfer from TOD Planning project and increase budget to focus on planning TOD near ST2 stations.	\$6,014
Total Enhancement				\$13,661

2016 TIP Cashflow by Budget Approval

(in thousands)

Enhancement

ALL MODES

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Preliminary Engineering									
4X210 LRV On Board Energy Storage	1,488	93	63	0	0	0	0	0	1,643
5X261 Bus Maintenance Facility	9,889	275	11,869	0	0	0	0	0	22,033
600029 Tacoma Link Fare Collection	64	392	58	0	0	0	0	0	514
700723 Downtown Seattle Transit Tunnel Mitigation	0	728	606	0	0	0	0	0	1,334
700730 Operations & Maintenance Facility LRV Vehicle Lift	0	2,475	2,423	0	0	0	0	0	4,898
700736 Union Station Garden Level Remodel	30	1,353	0	0	0	0	0	0	1,383
700784 Regional Parking Pilot Project	360	115	0	0	0	0	0	0	475
700793 Signage Improvements	148	784	0	0	0	0	0	0	931
700798 Link Remote Switch Heaters	35	165	0	0	0	0	0	0	200
Subtotal	12,014	6,379	15,019	0	0	0	0	0	33,412
Baseline									
300011 Positive Train Control	40,009	2,694	10,351	0	0	0	0	0	53,054
4X340 Noise Abatement	9,001	26	3,972	0	0	0	0	0	13,000
700774 Central Link HVAC - Instrument House and UPS Room	328	904	0	0	0	0	0	0	1,232
7X743 Security Enhancements	2,498	0	0	0	0	0	0	0	2,498
7X753 Bike Locker Program	1,108	0	246	0	0	0	0	0	1,355
Subtotal	52,944	3,624	14,570	0	0	0	0	0	71,138
Operating									
600033 Link CCTV System Upgrade	700	0	0	0	0	0	0	0	700
700724 Puyallup Station LED Lighting	0	178	0	0	0	0	0	0	178
700725 Sumner Station LED Lighting	0	134	0	0	0	0	0	0	134
700726 Kent Station Platform Lighting	0	236	0	0	0	0	0	0	236
700727 Kent Station Parking Lot Paving	0	700	0	0	0	0	0	0	700
700733 OMF LRV Wash Heater System	300	0	0	0	0	0	0	0	300
56 700773 Central Link HVAC for Traction Power	1,278	0	0	0	0	0	0	0	1,278
700775 Central Link Card Readers	30	393	0	0	0	0	0	0	423
700777 Central Link Overhead Catenary System Tie Switch	55	100	2,845	0	0	0	0	0	3,000
700790 Pierce Transit Radio System Upgrade	562	438	0	0	0	0	0	0	1,000

2016 TIP Cashflow by Budget Approval

(in thousands)

Enhancement
ALL MODES

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
7X745 ST Express Mobile Communications	10,311	220	0	0	0	0	0	0	10,531
Subtotal	13,236	2,399	2,845	0	0	0	0	0	18,480
Program									
700781 Non-revenue Support Vehicles	560	865	163	172	133	0	44	192	2,130
804100 Transit Oriented Development Property Disposition	2,107	3,925	1,315	1,291	1,273	644	918	143	11,615
8X100 Transit Oriented Development Planning	1,146	0	0	0	0	0	0	0	1,146
Subtotal	3,813	4,790	1,479	1,463	1,406	644	962	335	14,891
Total	\$82,008	\$17,192	\$33,912	\$1,463	\$1,406	\$644	\$962	\$335	\$137,921

2016 TIP Cashflow by Subarea
(in thousands)

Enhancement
ALL MODES

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	6,252	276	2,618	0	0	0	0	0	9,145
2 - North King	16,240	9,997	8,623	1,405	1,361	644	947	271	39,488
3 - South King	8,216	2,914	4,728	58	45	0	15	64	16,038
4 - East King	9,447	232	5,630	0	0	0	0	0	15,309
5 - Pierce	41,493	3,659	12,314	0	0	0	0	0	57,467
6 - Systemwide	360	115	0	0	0	0	0	0	475
Total	\$82,008	\$17,192	\$33,912	\$1,463	\$1,406	\$644	\$962	\$335	\$137,921

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	3,343	1,192	2,057	244	340	139	242	98	7,653
20-Prelim Engineering/Env Review	1,407	277	0	0	0	0	0	0	1,684
30-Final Design+Specifications	708	71	117	0	0	0	0	0	895
35-Third Party	2,510	2,118	973	0	0	0	0	0	5,601
40-Row Acquisition+Permits	1,927	3,337	979	905	839	505	521	45	9,058
50-Construction	62,877	8,356	23,734	142	95	0	155	0	95,359
55-Construction Services	2,887	283	4,165	0	0	0	0	0	7,335
70-Vehicles	5,308	958	163	172	133	0	44	192	6,970
80-System Testing+Startup	1,041	449	0	0	0	0	0	0	1,490
90-Contingency	0	152	1,725	0	0	0	0	0	1,877
Total	\$82,008	\$17,192	\$33,912	\$1,463	\$1,406	\$644	\$962	\$335	\$137,921

Enhancement

4X210**LRV On Board Energy Storage****Managed by: DECM**

Scope: Design, procurement, and install energy storage units on up to five light rail vehicles to capture and store energy generated by vehicle braking for reuse to improve vehicle operational efficiencies and leading to lower energy consumption and reduced operating costs. The project is partially funded by a Transit Investment for Greenhouse Gas and Energy Reduction (TIGGER) grant awarded to Sound Transit in 2011. Work was completed in June 2014; however, the project will not close until contract warranty support is closed out in 2016. Budget cash flow in 2017 reflects projected surplus budget.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$1,643	2015 Cost Estimate:	N/A
2015 TIP:	\$1,643	2016 Cost Estimate:	N/A
2016 TIP:	\$1,643		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	1,488	93	63	0	0	0	0	0	1,643
Total	1,488	93	63	0	0	0	0	0	1,643

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	7	0	53	0	0	0	0	0	60
30-Final Design+Specifications	0	0	10	0	0	0	0	0	10
70-Vehicles	1,481	93	0	0	0	0	0	0	1,573
Total	1,488	93	63	0	0	0	0	0	1,643

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2016

Project Risk Assessment

Project pending final payment of warranty coverage in 2016.

5X261**Bus Maintenance Facility****Managed by: Operations**

Scope: Fund expansion of Sound Transit's fleet maintenance capacity through contributions to facilities managed by third party service providers.

Changes in lifetime since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	None	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$22,033	2016 Cost Estimate:	N/A
2016 TIP:	\$22,033		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	1,562	43	1,875	0	0	0	0	0	3,481
South King	1,098	31	1,317	0	0	0	0	0	2,446
East King	4,687	130	5,626	0	0	0	0	0	10,444
Pierce	2,541	71	3,050	0	0	0	0	0	5,662
Total	9,889	275	11,869	0	0	0	0	0	22,033

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	38	25	464	0	0	0	0	0	527
20-Prelim Engineering/Env Review	8	0	0	0	0	0	0	0	8
40-Row Acquisition+Permits	59	0	0	0	0	0	0	0	59
50-Construction	9,784	250	11,405	0	0	0	0	0	21,439
Total	9,889	275	11,869	0	0	0	0	0	22,033

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment

The schedule is flexible as it is predicated on partners to submit projects for participation. The schedules dates can change if no projects are planned.

Enhancement

600029**Tacoma Link Fare Collection****Managed by: FIT**

Scope: Installation and commissioning of eight ticket vending machines at Tacoma Link stations, establish a spare parts inventory, setup fare collection and fare enforcement support, and conduct public outreach.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$514	2016 Cost Estimate:	N/A
2016 TIP:	\$514		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	64	392	58	0	0	0	0	0	514
Total	64	392	58	0	0	0	0	0	514

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	64	325	58	0	0	0	0	0	447
90-Contingency	0	67	0	0	0	0	0	0	67
Total	64	392	58	0	0	0	0	0	514

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Medium
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2016

Project Risk Assessment

Key project risks include a further deferment of implementation. Additionally, fare system contractor timelines for software development and ability to reach intergovernmental agreements for fare enforcement may cause a delay once implementation is approved.

700723 Downtown Seattle Transit Tunnel Mitigation Managed by: Operations

Scope: Payment to third party as Sound Transit's share of a series of street improvements in downtown Seattle to improve bus operations as buses transition from Downtown Seattle Transit Tunnel (DSTT) to surface streets to accommodate increased light rail activity.

Changes in lifetime budget since 2015: New Project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$1,334		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	0	728	606	0	0	0	0	0	1,334
Total	0	728	606	0	0	0	0	0	1,334

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
35-Third Party	0	728	606	0	0	0	0	0	1,334
Total	0	728	606	0	0	0	0	0	1,334

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Fixed Contribution	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment

700730 Operations & Maintenance Facility LRV Vehicle Lift Managed by: DECM

Scope: Design, procure and install a second lift in the Link Operations and Maintenance Facility (OMF). To accommodate vehicle scheduled and unscheduled maintenance needs and capacity necessitate the installation of a second lift in support of operations.

Changes in lifetime budget since 2015: New Project

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	Pending	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$4,898		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	0	1,832	1,793	0	0	0	0	0	3,625
South King	0	644	630	0	0	0	0	0	1,274
Total	0	2,475	2,423	0	0	0	0	0	4,898

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	0	175	124	0	0	0	0	0	299
50-Construction	0	2,300	2,299	0	0	0	0	0	4,599
Total	0	2,475	2,423	0	0	0	0	0	4,898

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Conceptual Engineering	Schedule Risk Level:	High
Budget Risk Level:	Medium	2015 Budget Schedule:	
		2016 Budget Schedule:	2017

Project Risk Assessment
Constructability of project given the constraints of having to install the lift in an on-going working environment, create challenges in both schedule and cost.

700736**Union Station Garden Level Remodel****Managed by: Operations**

Scope: Renovate Union Station's Garden Level to include converting cubicle space from 8X8 to 6X8 configuration, adding 7 enclosed offices, relocating 3 offices, create a new mailroom, new carpet, purchase and installation 132 cubicles, and installation of new data cabling in support of additional staff and consultants.

Change in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	None	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,383	2016 Cost Estimate:	N/A
2016 TIP:	\$1,383		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	30	1,353	0	0	0	0	0	0	1,383
Total	30	1,353	0	0	0	0	0	0	1,383

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	5	0	0	0	0	0	0	0	5
20-Prelim Engineering/Env Review	10	0	0	0	0	0	0	0	10
30-Final Design+Specifications	15	0	0	0	0	0	0	0	15
50-Construction	0	1,353	0	0	0	0	0	0	1,353
Total	30	1,353	0	0	0	0	0	0	1,383

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2016

Project Risk Assessment

700784 **Regional Parking Pilot Project** **Managed by: Operations**

Scope: Conduct test and evaluate of parking management strategies under the system implementation of customer parking permits to include; vanpool customer parking, community outreach activities and real time parking availability monitoring.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$475	2016 Cost Estimate:	N/A
2016 TIP:	\$475		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	360	115	0	0	0	0	0	0	475
Total	360	115	0	0	0	0	0	0	475

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	125	77	0	0	0	0	0	0	202
50-Construction	236	37	0	0	0	0	0	0	273
Total	360	115	0	0	0	0	0	0	475

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2016

Project Risk Assessment
N/A

700793**Signage Improvements****Managed by: Operations**

Scope: Sound Transit is modifying and updating signage at existing Link and Sounder stations and TVM locations to improve wayfinding and reflect system expansion. Work includes design, fabrication, and installation of new signage elements.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$931	2016 Cost Estimate:	N/A
2016 TIP:	\$931		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	0	2	0	0	0	0	0	0	3
North King	70	374	0	0	0	0	0	0	445
South King	76	402	0	0	0	0	0	0	478
East King	0	1	0	0	0	0	0	0	1
Pierce	1	4	0	0	0	0	0	0	5
Total	148	784	0	0	0	0	0	0	931

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	42	34	0	0	0	0	0	0	76
30-Final Design+Specifications	73	21	0	0	0	0	0	0	94
50-Construction	32	696	0	0	0	0	0	0	728
55-Construction Services	0	33	0	0	0	0	0	0	33
Total	148	784	0	0	0	0	0	0	931

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:		Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2016

Project Risk Assessment

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700798**Link Remote Switch Heaters****Managed by: Operations**

Scope: Installation of remote switch heaters at Rainier Beach Station and Stadium Station interlockings to enhance the capabilities of providing all-weather service.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$200	2016 Cost Estimate:	N/A
2016 TIP:	\$200		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	35	165	0	0	0	0	0	0	200
Total	35	165	0	0	0	0	0	0	200

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	35	0	0	0	0	0	0	0	35
50-Construction	0	165	0	0	0	0	0	0	165
Total	35	165	0	0	0	0	0	0	200

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2017

Project Risk Assessment

Remote switch heaters will be installed by Sound Transit maintenance staff. Risk of other work receiving the resource allocations resulting in delays to the project schedule.

Enhancement

SOUNDER

300011**Positive Train Control****Managed by: DECM**

Scope: Integrate command, control, communications, and information systems for controlling passenger train movements with safety, security, precision, and efficiency. Federal regulations mandate that PTC be operational on passenger rail systems by December 2015. These systems will improve railroad safety by significantly reducing the probability of collisions between trains, casualties to roadway workers and damage to their equipment, and over speed accidents. The project is scheduled to be completed in 2015, however contractor payments may carry over into 2016. Budget displayed in 2017 is considered surplus at this time.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$53,054	2015 Cost Estimate:	N/A
2015 TIP:	\$53,054	2016 Cost Estimate:	N/A
2016 TIP:	\$53,054		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	2,841	191	735	0	0	0	0	0	3,767
South King	1,760	119	455	0	0	0	0	0	2,334
Pierce	35,408	2,385	9,161	0	0	0	0	0	46,953
Total	40,009	2,694	10,351	0	0	0	0	0	53,054

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,177	151	911	0	0	0	0	0	2,238
30-Final Design+Specifications	226	0	52	0	0	0	0	0	279
35-Third Party	2,510	1,390	367	0	0	0	0	0	4,267
50-Construction	34,256	505	4,234	0	0	0	0	0	38,995
55-Construction Services	799	200	3,063	0	0	0	0	0	4,062
80-System Testing+Startup	1,041	449	0	0	0	0	0	0	1,490
90-Contingency	0	0	1,725	0	0	0	0	0	1,725
Total	40,009	2,694	10,351	0	0	0	0	0	53,054

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

Limited contractor technical staffing availability and high demand for these services. Availability of Federal Railroad Administration staff for final certification.

Enhancement

4X340**Noise Abatement****Managed by: DECM**

Scope: Designed and construct a noise wall along the Link elevated guideway in Tukwila. In addition, funding for the completion of the Residential Sound Insulation Program (RSIP) for residences impacted by noise from operations of Central Link in the Rainier Valley is included in this project. Construction of the noise wall was completed in 2013. The project is expected to close in 2016. Budget cash flow in 2017 reflects projected surplus budget.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$13,000	2015 Cost Estimate:	N/A
2015 TIP:	\$13,000	2016 Cost Estimate:	N/A
2016 TIP:	\$13,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	6,146	18	2,712	0	0	0	0	0	8,876
South King	2,855	8	1,260	0	0	0	0	0	4,124
Total	9,001	26	3,972	0	0	0	0	0	13,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	1,036	10	154	0	0	0	0	0	1,200
30-Final Design+Specifications	5	0	55	0	0	0	0	0	60
40-Row Acquisition+Permits	16	1	83	0	0	0	0	0	100
50-Construction	5,855	15	2,579	0	0	0	0	0	8,450
55-Construction Services	2,088	0	1,102	0	0	0	0	0	3,190
Total	9,001	26	3,972	0	0	0	0	0	13,000

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2016

Project Risk Assessment

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700774**Central Link HVAC - Instrument House and UPS Room****Managed by: DECM**

Scope: Install HVAC system in the uninterruptible power supply (UPS) rooms and signal houses. This project consists of installing AC units in ten instrument houses along the central link corridor. AC units are needed to keep equipment inside the bungalows from overheating during periods of hot weather. This project is necessary to ensure the continued integrity of the signal equipment throughout the system. AC units needed to protect equipment in the instrument houses from overheating and failing. This is the current design standard for Link light rail.

Changes in lifetime budget since 2015: Increased lifetime budget \$661 thousand due to complications and procurement of real property at various sites.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$571	2016 Cost Estimate:	N/A
2016 TIP:	\$1,232		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	219	605	0	0	0	0	0	0	824
South King	109	299	0	0	0	0	0	0	408
Total	328	904	0	0	0	0	0	0	1,232

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	107	343	0	0	0	0	0	0	450
30-Final Design+Specifications	101	0	0	0	0	0	0	0	101
50-Construction	120	500	0	0	0	0	0	0	621
90-Contingency	0	60	0	0	0	0	0	0	60
Total	328	904	0	0	0	0	0	0	1,232

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2016

Project Risk Assessment

Project delays associated with small right-of-way needs to allow for the proper installation of equipment.

7X743**Security Enhancements****Managed by: FIT**

Scope: Install 95 analog cameras and 8 digital video recorders with a central monitoring application. Upgrade networked video recorders with six times the amount of video storage and high quality digital video capabilities. Upgrade 62 cameras to either a megapixel IP camera or a higher quality encoded video camera which allows such features as video analytics, high definition viewing, and a streamlined video administration and video sharing capability. Project is complete.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$2,498	2016 Cost Estimate:	N/A
2016 TIP:	\$2,498		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	2,498	0	0	0	0	0	0	0	2,498
Total	2,498	0	0	0	0	0	0	0	2,498

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	162	0	0	0	0	0	0	0	162
50-Construction	2,336	0	0	0	0	0	0	0	2,336
Total	2,498	0	0	0	0	0	0	0	2,498

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

Enhancement

OTHER

7X753**Bike Locker Program****Managed by: DECM**

Scope: Install new bicycle parking at various Sounder commuter rail, ST Express bus, and Link light rail stations. In addition, project funded the design and construction of a bicycle plaza adjacent to the light rail Columbia City station. In King County, Sound Transit will add bicycle parking spaces at six light rail and commuter rail stations (Tukwila Station, Kent Station, Auburn Station, Columbia City Station, Othello Station, and Rainier Beach Station). In Pierce County, Sound Transit will expand secured bicycle parking at Puyallup and Sumner Stations. The project will also add benches, lighting, signage, and other pedestrian and bicycle amenities at the commuter rail stations.

This project should close out by the end of 2015.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,355	2016 Cost Estimate:	N/A
2016 TIP:	\$1,355		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	33	0	7	0	0	0	0	0	41
North King	546	0	121	0	0	0	0	0	668
South King	307	0	68	0	0	0	0	0	375
East King	17	0	4	0	0	0	0	0	20
Pierce	205	0	46	0	0	0	0	0	251
Total	1,108	0	246	0	0	0	0	0	1,355

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	253	0	27	0	0	0	0	0	281
30-Final Design+Specifications	108	0	0	0	0	0	0	0	108
40-Row Acquisition+Permits	18	0	5	0	0	0	0	0	23
50-Construction	730	0	214	0	0	0	0	0	944
Total	1,108	0	246	0	0	0	0	0	1,355

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

Enhancement

LINK

600033

Link CCTV System Upgrade

Managed by: FIT

Scope: Upgrade existing Link light rail Closed-Circuit Television (CCTV) NiceVision system at 16 stations and Link Operations and Maintenance Facility (OMF). This upgrade will be compatible with the new U-Link and South 200th Link expansion equipment.

Changes in lifetime budget since 2015: New project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A		
Baseline:	\$0	2008 Cost Estimate:	N/A
2015 TIP:	\$700	2015 Cost Estimate:	N/A
2016 TIP:	\$700	2016 Cost Estimate:	N/A

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	468	0	0	0	0	0	0	0	468
South King	232	0	0	0	0	0	0	0	232
Total	700	0	0	0	0	0	0	0	700

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	700	0	0	0	0	0	0	0	700
Total	700	0	0	0	0	0	0	0	700

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Scoping	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

Enhancement

700724

Puyallup Station LED Lighting

Managed by: Operations

Scope: Install energy efficient lighting at Puyallup Station. Work will result in receiving a utility incentive based upon the energy reduction achieved and will reduce energy consumption on a ongoing basis.

Changes in lifetime budget since 2015: New project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$178		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	0	178	0	0	0	0	0	0	178
Total	0	178	0	0	0	0	0	0	178

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	0	19	0	0	0	0	0	0	19
50-Construction	0	159	0	0	0	0	0	0	159
Total	0	178	0	0	0	0	0	0	178

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	
		2016 Budget Schedule:	2016

Project Risk Assessment

With the adoption of new technologies there is always a risk in long term durability. The current LED technology is significantly improved over the earlier versions and lighting fixtures typically come with extended warranties as long as 10 years.

Enhancement

700725

Sumner Station LED Lighting

Managed by: Operations

Scope: Install energy efficient lighting at Sumner Station. Work will result in receiving a utility incentive based upon the energy reduction achieved and will reduce energy consumption on a ongoing basis.

Changes in lifetime budget since 2015: New project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$134		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	0	134	0	0	0	0	0	0	134
Total	0	134	0	0	0	0	0	0	134

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	0	15	0	0	0	0	0	0	15
50-Construction	0	120	0	0	0	0	0	0	120
Total	0	134	0	0	0	0	0	0	134

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	
		2016 Budget Schedule:	2016

Project Risk Assessment

With the adoption of new technologies there is always a risk in long term durability. The current LED technology is significantly improved over the earlier versions and lighting fixtures typically come with extended warranties as long as 10 years.

Enhancement

700726**Kent Station Platform Lighting****Managed by: Operations**

Scope: Install energy efficient lighting at Kent Station. In late 2012 lighting was upgraded in the Kent Garage, this project will extend the upgrades to the platform, surface lots, pedestrian bridge, and bus loop areas. Work will result in receiving a utility incentive based upon the energy reduction achieved and will reduce energy consumption on an ongoing basis.

Changes in lifetime budget since 2015: New project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$236		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	0	236	0	0	0	0	0	0	236
Total	0	236	0	0	0	0	0	0	236

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	0	26	0	0	0	0	0	0	26
50-Construction	0	210	0	0	0	0	0	0	210
Total	0	236	0	0	0	0	0	0	236

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	
		2016 Budget Schedule:	2016

Project Risk Assessment

With the adoption of new technologies there is always a risk in long term durability. The current LED technology is significantly improved over the earlier versions and lighting fixtures typically come with extended warranties as long as 10 years.

Enhancement

700727 Kent Station Parking Lot Paving Managed by: Operations

Scope: Design and install paved and landscaped commuter parking to an additional 36 standard spaces, 1 compact space and 2 Americans with Disabilities Act (ADA) spaces to the total capacity at Kent Station.

Changes in lifetime budget since 2015: New project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$700		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	0	700	0	0	0	0	0	0	700
Total	0	700	0	0	0	0	0	0	700

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	0	140	0	0	0	0	0	0	140
50-Construction	0	560	0	0	0	0	0	0	560
Total	0	700	0	0	0	0	0	0	700

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	
		2016 Budget Schedule:	2016

Project Risk Assessment
Project could be delayed or more costly if environmental review discovers any site issues.

700733**OMF LRV Wash Heater System****Managed by: Operations**

Scope: Install a heating system within the OMF LRV washbay facility that includes overhead radiant heaters, water line heat tracing, and a small unit heater. The installation of the system will allow for all-weather operation and reduce the risk to operators of working in icy conditions when weather is below freezing.

Changes to lifetime budget since 2015: New project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	1-Enter Project Development	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$300	2016 Cost Estimate:	N/A
2016 TIP:	\$300		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	201	0	0	0	0	0	0	0	201
South King	99	0	0	0	0	0	0	0	99
Total	300	0	0	0	0	0	0	0	300

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	103	0	0	0	0	0	0	0	103
50-Construction	197	0	0	0	0	0	0	0	197
Total	300	0	0	0	0	0	0	0	300

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	
		2016 Budget Schedule:	2016

Project Risk Assessment

N/A

Enhancement

LINK

700773 **Central Link HVAC for Traction Power** **Managed by: DECM**

Scope: Install air conditioning is required in the TPSS buildings to protect and enhance the life of temperature sensitive equipment.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,278	2016 Cost Estimate:	N/A
2016 TIP:	\$1,278		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	907	0	0	0	0	0	0	0	907
South King	449	0	0	0	0	0	0	0	449
Total	1,355	0	0	0	0	0	0	0	1,355

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	213	0	0	0	0	0	0	0	213
30-Final Design+Specifications	206	0	0	0	0	0	0	0	206
50-Construction	937	0	0	0	0	0	0	0	937
Total	1,355	0	0	0	0	0	0	0	1,355

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

Enhancement

700775**Central Link Card Readers****Managed by: DECM**

Scope: Install card readers on all doors at Central Link stations' public areas. Card readers are required to ensure secure premises, eliminate the need to issue keys to a large number of staff and ensure consistency in key control.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$423	2016 Cost Estimate:	N/A
2016 TIP:	\$423		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	20	263	0	0	0	0	0	0	283
South King	10	130	0	0	0	0	0	0	140
Total	30	393	0	0	0	0	0	0	423

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	30	20	0	0	0	0	0	0	50
30-Final Design+Specifications	0	50	0	0	0	0	0	0	50
50-Construction	0	249	0	0	0	0	0	0	249
55-Construction Services	0	50	0	0	0	0	0	0	50
90-Contingency	0	25	0	0	0	0	0	0	25
Total	30	393	0	0	0	0	0	0	423

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

700777**Central Link Overhead Catenary System Tie Switch****Managed by: Operations**

Scope: Install the mechanical means to electrically bridge the OCS section insulators at approximately 34 various locations throughout the Link alignment.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$3,000	2016 Cost Estimate:	N/A
2016 TIP:	\$3,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	37	67	1,903	0	0	0	0	0	2,007
South King	18	33	942	0	0	0	0	0	993
Total	55	100	2,845	0	0	0	0	0	3,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	0	0	0	0	0	0	0	0	0
50-Construction	55	100	2,845	0	0	0	0	0	3,000
Total	55	100	2,845	0	0	0	0	0	3,000

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:		Schedule Risk Level:	Medium
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2017

Project Risk Assessment

Project is intended to be completed by Link Maintenance staff. There is a risk to schedule when competing projects use limited resources initially allocated to this project.

700790**Pierce Transit Radio System Upgrade****Managed by: Operations**

Scope: Replace all ST owned mobile radios currently installed in Pierce Transit-operated buses and necessary radio infrastructure components to be compliant with F.C.C. 6.25 MHZ narrow band, digital technology effective December 31, 2016. The project will cover 118 radios for installation on ST Express buses, plus 13 mobile/portable radios assigned to supervisors/mechanics.

Change since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,000	2016 Cost Estimate:	N/A
2016 TIP:	\$1,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	562	438	0	0	0	0	0	0	1,000
Total	562	438	0	0	0	0	0	0	1,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	562	438	0	0	0	0	0	0	1,000
Total	562	438	0	0	0	0	0	0	1,000

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2015

Project Risk Assessment

N/A

7X745 ST Express Mobile Communications Managed by: Operations

Scope: As part of the operation of the ST Express bus fleet, mobile communications are necessary to ensure driver and passenger safety, to enhance the customer service information, and to improve the information available to the service planning function. The existing mobile communications systems are aging and in need of upgrades. In addition, this investment allows the ST Express bus fleet to be compatible with partner communication systems. A signed project participation agreement with Pierce Transit was executed in 2007. This project is in service. It was tested and accepted in 2010. Agreements for ST project participation with King County Metro and Community Transit projects were approved by the Board in 2008. These projects were completed in 2014 and the entire project will close in 2015. Remaining 2016 funds in this project are considered surplus.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$10,531	2016 Cost Estimate:	N/A
2016 TIP:	\$10,531		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	1,815	39	0	0	0	0	0	0	1,853
South King	1,041	22	0	0	0	0	0	0	1,064
East King	4,743	101	0	0	0	0	0	0	4,844
Pierce	2,712	58	0	0	0	0	0	0	2,770
Total	10,311	220	0	0	0	0	0	0	10,531

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	7,044	220	0	0	0	0	0	0	7,264
70-Vehicles	3,267	0	0	0	0	0	0	0	3,267
Total	10,311	220	0	0	0	0	0	0	10,531

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:		Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

Enhancement

700781**Non-revenue Support Vehicles****Managed by: Operations**

Scope: Purchase and replace maintenance vehicles to improve maintenance efficiencies for the Link light rail system.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	\$905
2015 TIP:	\$2,130	2016 Cost Estimate:	\$2,130
2016 TIP:	\$2,130		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	372	575	109	115	88	0	29	128	1,416
South King	188	290	55	58	45	0	15	64	713
Total	560	865	163	172	133	0	44	192	2,130

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
70-Vehicles	560	865	163	172	133	0	44	192	2,130
Total	560	865	163	172	133	0	44	192	2,130

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2019
		2016 Budget Schedule:	2019

Project Risk Assessment

N/A

804100**Transit Oriented Development Property Disposition****Managed by: PEPD**

Scope: Perform for properties acquired during the construction of projects that are no longer needed and declared surplus fund activities associated with the sale or lease of surplus property to other parties. The program includes only properties suitable for transit-oriented development based on size and proximity to ST transit services, consistent with Sound Transit's Transit-Oriented Development Policy.

Changes in lifetime budget since 2015: Project budget increased by \$5.6 million: \$5.1 million is due to adding additional TOD eligible properties acquired through ST 2 phase and \$494 thousand from the transfer of remaining funds from TOD Planning project.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$5,601	2016 Cost Estimate:	N/A
2016 TIP:	\$11,615		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	2,107	3,925	1,315	1,291	1,273	644	918	143	11,615
Total	2,107	3,925	1,315	1,291	1,273	644	918	143	11,615

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	273	435	324	244	340	139	242	98	2,094
40-Row Acquisition+Permits	1,834	3,336	891	905	839	505	521	45	8,876
50-Construction	0	154	100	142	95	0	155	0	646
Total	2,107	3,925	1,315	1,291	1,273	644	918	143	11,615

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2020
		2016 Budget Schedule:	2023

Project Risk Assessment

N/A

Enhancement

OTHER

8X100**Transit Oriented Development Planning****Managed by: PEPD**

Scope: The program budget funds transit oriented development planning within the Sound Transit District including external technical assistance to local jurisdictions and internal project support to help identify and shape TOD and joint development opportunities.

Changes in lifetime budget since 2015: Project budget is decreased by \$494 thousand. Project is completed and remaining funds are transferred to TOD Property Disposition project.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,640	2016 Cost Estimate:	N/A
2016 TIP:	\$1,146		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	1,146	0	0	0	0	0	0	0	1,146
Total	1,146	0	0	0	0	0	0	0	1,146

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	43	0	0	0	0	0	0	0	43
20-Prelim Engineering/Env Review	1,103	0	0	0	0	0	0	0	1,103
Total	1,146	0	0	0	0	0	0	0	1,146

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2017

Project Risk Assessment

N/A

Rehabilitation & Replacement

Rehabilitation & Replacement projects extend the life of existing system assets and replace those at the end of their useful life. As the transit system ages, investment in maintaining our assets in a state of good repair will rise.

2016 Rehabilitation & Replacement Project Highlights

- Replace deficient braided tile at Link stations to improve wayfinding and meet ADA standards.
- Overhaul three Sounder locomotives to maintain them in good repair.
- Upgrade CCTV and Public Announcement systems at Sounder stations and ST Express transit centers.

BUDGET CHANGES

(in thousands)

Project	Reason	Budget Type	Explanation	Change
LINK				
Link Station Braided Tile Replacement	New Project	Operating	New project.	\$435
OTHER				
Small Works Program	Cost Increase	Program	Extend the program another year and provide an earmark for potential safety projects that need immediate action.	\$1,179
Total Rehabilitation & Replacement				\$1,614

2016 TIP Cashflow by Budget Approval
(in thousands)

Rehabilitation & Replacement
ALL MODES

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Preliminary Engineering									
870100 IT Link Light Rail	0	0	240	673	906	456	488	1,173	3,935
Subtotal			240	673	906	456	488	1,173	3,935
Baseline									
4X360 Beacon Avenue Paving	1,212	0	788	0	0	0	0	0	2,000
7X758 Tacoma Link Announcement/Sign System	342	29	0	0	0	0	0	0	371
Subtotal	1,553	29	788	0	0	0	0	0	2,371
Operating									
700728 Link Station Braided Tile Replacement	0	435	0	0	0	0	0	0	435
700769 LRV Overhaul	5,000	0	0	0	0	0	0	0	5,000
700770 Sounder Vehicle Overhaul Program	11,561	4,573	5,652	2,516	0	0	0	0	24,301
7X356 Tacoma Dome Station	414	0	0	0	0	0	0	0	414
7X768 Federal Way Post Tension Cable Repair	4	521	0	0	0	0	0	0	525
Subtotal	16,978	5,530	5,652	2,516	0	0	0	0	30,675
Program									
700771 Station Midlife Refurbishment Program	981	265	204	0	0	0	0	0	1,450
7X701 ST Express Fleet Replacement	114,258	3,352	18,932	30,615	0	0	22,112	0	189,269
7X740 Small Works Program	2,720	856	656	614	979	992	1,125	0	7,942
870101 IT Transit Systems	65	515	776	480	550	343	840	2,336	5,905
Subtotal	118,023	4,988	20,567	31,710	1,530	1,335	24,077	2,336	204,566
Total	\$136,555	\$10,547	\$27,248	\$34,899	\$2,435	\$1,791	\$24,564	\$3,509	\$241,547

2016 TIP Cashflow by Subarea
(in thousands)

Rehabilitation & Replacement
ALL MODES

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	22,047	1,328	4,192	5,813	127	129	4,038	0	37,673
2 - North King	4,964	563	1,065	591	818	486	530	869	9,886
3 - South King	20,319	3,562	5,170	4,677	382	267	2,528	304	37,209
4 - East King	53,075	1,705	8,833	14,200	186	188	10,385	0	88,573
5 - Pierce	36,084	2,875	7,212	9,138	372	377	6,243	0	62,301
6 - Systemwide	65	515	776	480	550	343	840	2,336	5,905
Total	\$136,555	\$10,547	\$27,248	\$34,899	\$2,435	\$1,791	\$24,564	\$3,509	\$241,547

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
09-Admin Capital	0	0	0	0	112	0	0	112	224
10-Agency Administration	578	148	48	0	0	0	0	0	774
20-Prelim Engineering/Env Review	87	23	28	0	0	0	0	0	138
30-Final Design+Specifications	189	91	159	10	0	0	0	0	449
50-Construction	10,359	2,484	4,261	2,283	2,323	1,791	2,452	3,397	29,350
55-Construction Services	166	0	64	0	0	0	0	0	230
70-Vehicles	125,175	7,800	22,688	32,605	0	0	22,112	0	210,381
Total	\$136,555	\$10,547	\$27,248	\$34,899	\$2,435	\$1,791	\$24,564	\$3,509	\$241,547

870100

IT Link Light Rail

Managed by: FIT

Scope: Maintain the lifecycle maintenance of the IT infrastructure behind the Link light rail (LLR) SCADA system to mitigate equipment failure of an operationally-critical system. This project will provide for lifecycle maintenance of SCADA systems including, but not limited to, servers, SANs, networking equipment, Video Messaging Systems/backend and other computer-based infrastructure. This will also entail enhancements and maintenance for IT SCADA security.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$3,935	2016 Cost Estimate:	N/A
2016 TIP:	\$3,935		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	0	0	178	499	671	338	361	869	2,915
South King	0	0	62	174	235	118	126	304	1,020
Total	0	0	240	673	906	456	488	1,173	3,935

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
09-Admin Capital	0	0	0	0	112	0	0	112	224
50-Construction	0	0	240	673	794	456	488	1,061	3,711
Total	0	0	240	673	906	456	488	1,173	3,935

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Medium	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment
Potential for risk of increased cost as system expands and integration and support require more resources to meet system compliance standards.

Rehabilitation & Replacement

LINK

4X360**Beacon Avenue Paving****Managed by: DECM**

Scope: As agreed with the city of Seattle, perform roadway improvements on Beacon Avenue between South McClellan Street and South Landers Street to mitigate construction impacts by construction of the Initial Segment. Budget cash flow in 2017 reflects projected surplus budget.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	6-Proceed to Construction	2008 Cost Estimate:	N/A
Baseline:	\$2,000	2015 Cost Estimate:	N/A
2015 TIP:	\$2,000	2016 Cost Estimate:	N/A
2016 TIP:	\$2,000		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	1,212	0	788	0	0	0	0	0	2,000
Total	1,212	0	788	0	0	0	0	0	2,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	112	0	38	0	0	0	0	0	150
30-Final Design+Specifications	79	0	46	0	0	0	0	0	125
50-Construction	855	0	640	0	0	0	0	0	1,495
55-Construction Services	166	0	64	0	0	0	0	0	230
Total	1,212	0	788	0	0	0	0	0	2,000

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2014
		2016 Budget Schedule:	2016

Project Risk Assessment

Work is completed.

7X758 Tacoma Link Announcement/Sign System Managed by: Operations

Scope: Procurement and installation of a new communications system for Tacoma Link. System replacement is necessary due to the limited availability of replacement parts and technical support for the existing technology.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$371	2016 Cost Estimate:	N/A
2016 TIP:	\$371		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	342	29	0	0	0	0	0	0	371
Total	342	29	0	0	0	0	0	0	371

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	2	19	0	0	0	0	0	0	21
50-Construction	340	10	0	0	0	0	0	0	350
Total	342	29	0	0	0	0	0	0	371

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

700728

Link Station Braided Tile Replacement

Managed by: Operations

Scope: Demolition and reinstallation of braided wayfinding tile at five link stations.

Changes in lifetime budget since 2015 - New project

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$0	2016 Cost Estimate:	N/A
2016 TIP:	\$435		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	0	435	0	0	0	0	0	0	435
Total	0	435	0	0	0	0	0	0	435

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	0	22	0	0	0	0	0	0	22
50-Construction	0	413	0	0	0	0	0	0	413
Total	0	435	0	0	0	0	0	0	435

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	
		2016 Budget Schedule:	2016

Project Risk Assessment

Rehabilitation & Replacement

700769	LRV Overhaul	Managed by: DECM
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Scope: Complete repairs of the gear units and traction motors on light rail vehicles (LRVs), and purchase materials, equipment, services, and labor necessary to complete repairs.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)	ST2 Total Project Cost Estimate (in thousands of 2015 dollars)
Phase Gate Passed: N/A	2008 Cost Estimate: N/A
Baseline: \$0	2015 Cost Estimate: N/A
2015 TIP: \$5,000	2016 Cost Estimate: N/A
2016 TIP: \$5,000	

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	3,345	0	0	0	0	0	0	0	3,345
South King	1,655	0	0	0	0	0	0	0	1,655
Total	5,000	0	0	0	0	0	0	0	5,000

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
70-Vehicles	5,000	0	0	0	0	0	0	0	5,000
Total	5,000	0	0	0	0	0	0	0	5,000

Budget Risk Assessment	Schedule Risk Assessment
Estimate Type: Initial Estimate	Schedule Risk Level: High
Budget Risk Level: High	2015 Budget Schedule: 2015
	2016 Budget Schedule: 2015

Project Risk Assessment

Repairs to eliminate wear of the bearings in the traction motors and gear units are required to ensure that Sound Transit will have a sufficient number of LRVs to allow University Link operations to commence in the first quarter of 2016. Required materials must be delivered in time to implement the necessary repairs to commence pre-revenue testing in October 2015. The current schedule for retrofit of the vehicles does not support having all the vehicles ready for pre-revenue service testing of University Link; alternate strategies are being reviewed.

700770**Sounder Vehicle Overhaul Program****Managed by: Operations**

Scope: Maintain, preserve, and extend the life of Sounder locomotives and cab car fleet. This program overhauls 11 locomotives of the Sounder fleet while upgrading technologies and emission efficiencies, truck overhauls of cab cars and HVAC upgrades to the same.

Change in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$24,301	2016 Cost Estimate:	N/A
2016 TIP:	\$24,301		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	1,584	627	774	345	0	0	0	0	3,329
South King	6,058	2,396	2,962	1,318	0	0	0	0	12,734
Pierce	3,919	1,550	1,916	853	0	0	0	0	8,238
Total	11,561	4,573	5,652	2,516	0	0	0	0	24,301

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	11	11	11	0	0	0	0	0	32
20-Prelim Engineering/Env Review	23	23	28	0	0	0	0	0	74
30-Final Design+Specifications	91	91	113	10	0	0	0	0	305
50-Construction	5,707	0	1,745	516	0	0	0	0	7,968
70-Vehicles	5,729	4,448	3,756	1,990	0	0	0	0	15,923
Total	11,561	4,573	5,652	2,516	0	0	0	0	24,301

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Initial Estimate	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2018
		2016 Budget Schedule:	2018

Project Risk Assessment

N/A

7X356

Tacoma Dome Station

Managed by: Operations

Scope: Provide financial support per agreement with Pierce Transit, to address major maintenance requirement at Tacoma Dome Station.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$414	2016 Cost Estimate:	N/A
2016 TIP:	\$414		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Pierce	414	0	0	0	0	0	0	0	414
Total	414	0	0	0	0	0	0	0	414

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	414	0	0	0	0	0	0	0	414
Total	414	0	0	0	0	0	0	0	414

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Fixed Contribution	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

7X768 Federal Way Post Tension Cable Repair Managed by: DECM

Scope: Repair post tension cables that provide structural reinforcement of the Federal Way parking garage. Grease has been leaking out of the post tension cable grout pockets indicating water penetration. The budget funds complete remediation. At a minimum, removal of failed grout pockets and replacement of the grease-filled caps is required; however, more extensive remediation may be needed. The project is complete.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$525	2016 Cost Estimate:	N/A
2016 TIP:	\$525		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	4	521	0	0	0	0	0	0	525
Total	4	521	0	0	0	0	0	0	525

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	4	96	0	0	0	0	0	0	100
50-Construction	0	425	0	0	0	0	0	0	425
Total	4	521	0	0	0	0	0	0	525

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2015
		2016 Budget Schedule:	2015

Project Risk Assessment
N/A

700771**Station Midlife Refurbishment Program****Managed by: Operations**

Scope: Identify, maintain and provide rehabilitation and mid-life maintenance activities for Sound Transit facilities that have been in service for fifteen years or longer.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,450	2016 Cost Estimate:	N/A
2016 TIP:	\$1,450		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
South King	654	177	136	0	0	0	0	0	967
Pierce	327	88	68	0	0	0	0	0	483
Total	981	265	204	0	0	0	0	0	1,450

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	8	0	0	0	0	0	0	0	8
50-Construction	973	265	204	0	0	0	0	0	1,442
Total	981	265	204	0	0	0	0	0	1,450

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	Low	2015 Budget Schedule:	2016
		2016 Budget Schedule:	2017

Project Risk Assessment

Continued changes and refinement of the scope of work at the various station locations could affect both the budget and schedule.

7X701**ST Express Fleet Replacement****Managed by: Operations**

Scope: The project funds the bus replacement program for the ST Express Fleet.

Current Assumptions: FTA guidelines indicate that buses are to be replaced no earlier than either 12 years of service or 500,000 miles. Due to the unique service characteristics of the ST Express fleet, Sound Transit buses typically reach 500,000 miles after only 10 years of operations. Replacement decisions are informed by specific fleet performance in consultation with our operating partner agencies. During the period from 2013-2021, more than 185 buses will be replaced. The current fleet size is 280.

Changes in lifetime since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$189,269	2016 Cost Estimate:	N/A
2016 TIP:	\$189,269		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	20,109	590	3,332	5,388	0	0	3,892	0	33,311
South King	11,540	339	1,912	3,092	0	0	2,233	0	19,116
East King	52,559	1,542	8,709	14,083	0	0	10,171	0	87,064
Pierce	30,050	882	4,979	8,052	0	0	5,815	0	49,778
Total	114,258	3,352	18,932	30,615	0	0	22,112	0	189,269

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	47	0	0	0	0	0	0	0	47
70-Vehicles	114,211	3,352	18,932	30,615	0	0	22,112	0	189,222
Total	114,258	3,352	18,932	30,615	0	0	22,112	0	189,269

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Medium	2015 Budget Schedule:	2020
		2016 Budget Schedule:	2021

Project Risk Assessment

Budget risk is a concern as the cost estimates and vehicle types are annually reviewed as replacements are identified and the agency adopts on-board technologies to be included in future replacements.

7X740**Small Works Program****Managed by: Operations**

Scope: Projects completed under the small works program include modification/repairs of operating facilities and systems with an estimated total cost of less than \$200,000 per project. The budget for this program is based on number of sites maintained, age of facilities, and amount of use.

Changes in lifetime budget since 2015: Project budget increased by \$1.2 million - \$979 thousand to extend the program another year and \$200 thousand earmarked for potential safety related projects.

Board Approved Capital Budget (in thousands of YOY dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$6,763	2016 Cost Estimate:	N/A
2016 TIP:	\$7,942		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	354	111	85	80	127	129	146	0	1,032
North King	408	128	98	92	147	149	169	0	1,191
South King	408	128	98	92	147	149	169	0	1,191
East King	517	163	125	117	186	188	214	0	1,509
Pierce	1,033	325	249	233	372	377	427	0	3,018
Total	2,720	856	656	614	979	992	1,125	0	7,942

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	442	0	0	0	0	0	0	0	442
20-Prelim Engineering/Env Review	64	0	0	0	0	0	0	0	64
30-Final Design+Specifications	19	0	0	0	0	0	0	0	19
50-Construction	1,958	856	656	614	979	992	1,125	0	7,181
70-Vehicles	236	0	0	0	0	0	0	0	236
Total	2,720	856	656	614	979	992	1,125	0	7,942

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Scoping	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2020
		2016 Budget Schedule:	2021

Project Risk Assessment

N/A

870101**IT Transit Systems****Managed by: FIT**

Scope: Maintenance multiple computer and technology-based systems at Sounder stations and Regional Express transit centers to keep them safe, secure, and functional for our customers.

Systems maintained include: Sounder Stations & Transit Centers - Closed circuit television (CCTV) access control and customer emergency stations. Sounder - Passenger information systems, automated passenger counters and variable message signage.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$5,905	2016 Cost Estimate:	N/A
2016 TIP:	\$5,905		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	65	515	776	480	550	343	840	2,336	5,905
Total	65	515	776	480	550	343	840	2,336	5,905

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
50-Construction	65	515	776	480	550	343	840	2,336	5,905
Total	65	515	776	480	550	343	840	2,336	5,905

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Medium
Budget Risk Level:	Medium	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment

Information technology is ever changing and could adversely affect both the cost of the equipment and the availability of the equipment.

Administrative

Administrative projects are not specific to any transit mode or capital program. However, these projects fund disposition of surplus real estate, procurement of administrative equipment, facilities, and technology, as well as administrative support critical to the successful operation of the agency. Administrative costs that support projects are charged to construction in progress and capitalized with the resulting assets.

2016 Administrative Project Highlights

- Replace eight non-revenue vehicles used by administrative staff.
- Replace asphalt shingles on the Union Station administration building.
- Continue landscape and wetland hydrology mitigation and maintenance activities at selected Sound Transit properties.
- Procure and implement the eBid system to improve vendor solicitation process.
- Investigate the potential of a business intelligence system to enhance usability of agency and industry data.

2016 TIP Cashflow by Budget Approval

(in thousands)

Administrative
ALL MODES

Project Number and Name	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Operating									
0X002 Agency Administration Operating	272,204	56,834	64,281	68,629	70,421	71,691	69,274	118,585	791,918
Subtotal	272,204	56,834	64,281	68,629	70,421	71,691	69,274	118,585	791,918
Program									
600025 Environmental Mitigation, Monitoring & Maintenance	309	194	153	160	113	0	0	494	1,423
802000 Administrative Capital	5,807	762	2,551	906	601	695	670	1,342	13,334
803800 Information Technology Program	11,815	2,164	2,296	2,068	2,172	2,296	2,032	7,391	32,235
804500 Surplus Property Disposition	474	120	113	0	0	0	0	0	708
Subtotal	18,405	3,240	5,113	3,135	2,886	2,991	2,702	9,228	47,700
Total	\$290,609	\$60,074	\$69,394	\$71,764	\$73,307	\$74,682	\$71,976	\$127,812	\$839,618

2016 TIP Cashflow by Subarea
(in thousands)

Administrative
ALL MODES

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
1 - Snohomish	54	34	27	28	20	0	0	86	249
2 - North King	474	120	113	0	0	0	0	0	708
3 - South King	192	120	95	99	70	0	0	306	882
4 - East King	18	11	9	9	7	0	0	29	83
5 - Pierce	45	28	22	24	17	0	0	73	209
6 - Systemwide	289,826	59,760	69,128	71,604	73,194	74,682	71,976	127,318	837,487
Total	\$290,609	\$60,074	\$69,394	\$71,764	\$73,307	\$74,682	\$71,976	\$127,812	\$839,618

2016 TIP Cashflow by Phase
(in thousands)

Phase # and Description	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
02-Operation+Maintenance-Agency	0	246	0	0	0	254	0	0	500
09-Admin Capital	16,948	2,340	4,524	2,765	2,563	2,537	2,542	8,430	42,650
10-Agency Administration	272,659	57,024	64,394	68,629	70,421	71,691	69,274	118,585	792,676
20-Prelim Engineering/Env Review	528	294	263	270	223	100	110	701	2,488
40-Row Acquisition+Permits	474	120	113	0	0	0	0	0	708
90-Contingency	0	50	100	100	100	100	50	97	597
Total	\$290,609	\$60,074	\$69,394	\$71,764	\$73,307	\$74,682	\$71,976	\$127,812	\$839,618

Administrative

OTHER

0X002

Agency Administration Operating

Managed by: FIT

Scope: Agency Administration Operating project funds overhead costs that support projects and agency costs that are not eligible to be allocated. The Agency uses a fully-allocated cost model approved by the Federal Transit Administration increasing the amount of costs eligible for federal grant funding. This is for the period 2010 - 2023.

Changes in lifetime since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A		
Baseline:	\$0	2008 Cost Estimate:	N/A
2015 TIP:	\$791,918	2015 Cost Estimate:	N/A
2016 TIP:	\$791,918	2016 Cost Estimate:	N/A

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	272,204	56,834	64,281	68,629	70,421	71,691	69,274	118,585	791,918
Total	272,204	56,834	64,281	68,629	70,421	71,691	69,274	118,585	791,918

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
10-Agency Administration	272,204	56,834	64,281	68,629	70,421	71,691	69,274	118,585	791,918
Total	272,204	56,834	64,281	68,629	70,421	71,691	69,274	118,585	791,918

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment
N/A

600025**Environmental Mitigation, Monitoring & Maintenance****Managed by: PEPD**

Scope: Monitor and maintain post-construction environmental mitigation including wetland hydrology, plant establishment, and other site features. Duration depends upon permit conditions and may be 10 years and/or may last for the life of the property.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$1,423	2016 Cost Estimate:	N/A
2016 TIP:	\$1,423		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Snohomish	54	34	27	28	20	0	0	86	249
South King	192	120	95	99	70	0	0	306	882
East King	18	11	9	9	7	0	0	29	83
Pierce	45	28	22	24	17	0	0	73	209
Total	309	194	153	160	113	0	0	494	1,423

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
20-Prelim Engineering/Env Review	309	194	153	160	113	0	0	494	1,423
Total	309	194	153	160	113	0	0	494	1,423

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Construction	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2030
		2016 Budget Schedule:	2030

Project Risk Assessment

N/A

802000

Administrative Capital

Managed by: FIT

Scope: Fund capital expenditures for administrative assets that support agency staff, including administrative facilities, non-revenue administrative fleet, office equipment, space planning, and furnishings.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$13,334	2016 Cost Estimate:	N/A
2016 TIP:	\$13,334		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	5,807	762	2,551	906	601	695	670	1,342	13,334
Total	5,807	762	2,551	906	601	695	670	1,342	13,334

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
09-Admin Capital	5,807	712	2,451	806	501	595	620	1,245	12,737
90-Contingency	0	50	100	100	100	100	50	97	597
Total	5,807	762	2,551	906	601	695	670	1,342	13,334

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment
N/A

803800 Information Technology Program Managed by: FIT

Scope: Supports agencywide hardware and software infrastructure, development and implementation of technology solutions to improve administrative efficiency through 2023.

Changes in lifetime budget since 2015: None.

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$32,235	2016 Cost Estimate:	N/A
2016 TIP:	\$32,235		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
Systemwide	11,815	2,164	2,296	2,068	2,172	2,296	2,032	7,391	32,235
Total	11,815	2,164	2,296	2,068	2,172	2,296	2,032	7,391	32,235

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
02-Operation+Maintenance-Agency	0	246	0	0	0	254	0	0	500
09-Admin Capital	11,142	1,628	2,074	1,958	2,062	1,942	1,922	7,185	29,913
10-Agency Administration	455	190	113	0	0	0	0	0	758
20-Prelim Engineering/Env Review	219	100	110	110	110	100	110	206	1,065
Total	11,815	2,164	2,296	2,068	2,172	2,296	2,032	7,391	32,235

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Conceptual Engineering	Schedule Risk Level:	High
Budget Risk Level:	High	2015 Budget Schedule:	2023
		2016 Budget Schedule:	2023

Project Risk Assessment

Future year forecasts reflect initial planning estimates so costs are subject to change. Schedules are dependent on staff capacity and the specific application or approach selected.

Administrative

OTHER

804500

Surplus Property Disposition

Managed by: DECM

Scope: Prepare surplus properties for sale that due to their size or location do not lend themselves to Transit Oriented Development (TOD) opportunities. Surplus properties represent remnant properties that may have been used during construction or were acquired and no longer need for transit use.

Changes in lifetime budget since 2015: None

Board Approved Capital Budget (in thousands of YOE dollars)		ST2 Total Project Cost Estimate (in thousands of 2015 dollars)	
Phase Gate Passed:	N/A	2008 Cost Estimate:	N/A
Baseline:	\$0	2015 Cost Estimate:	N/A
2015 TIP:	\$708	2016 Cost Estimate:	N/A
2016 TIP:	\$708		

TIP Cashflow (in thousands)

Subarea	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
North King	474	120	113	0	0	0	0	0	708
Total	474	120	113	0	0	0	0	0	708

Phase	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total
40-Row Acquisition+Permits	474	120	113	0	0	0	0	0	708
Total	474	120	113	0	0	0	0	0	708

Budget Risk Assessment		Schedule Risk Assessment	
Estimate Type:	Planning	Schedule Risk Level:	Low
Budget Risk Level:	Low	2015 Budget Schedule:	2017
		2016 Budget Schedule:	2017

Project Risk Assessment
N/A

Lifetime Budget Changes from 2015 to 2016

The 2016 TIP contains the expenditures for active phases of capital and operating projects as authorized by the Board through the agency's Phase Gate process. The table below reconciles the changes in project lifetime budgets for each project category from 2015 to 2016.

SUMMARY OF LIFETIME BUDGET CHANGES FROM 2015 TO 2016

(in thousands)

	2015 Lifetime Total	2015 Board Actions	2015 Closed Projects	2016 New Projects	Lifetime Budget Inc/(Dec)	Transfer from Cost Est.	2016 Lifetime Budget
System Expansion							
Link Light Rail	\$7,761,989	\$2,878,803	(\$266,836)	\$ -	\$ -	\$ -	10,373,956
Souder Commuter Rail	\$767,473	85,955	(6,516)	-	-	5,427	852,340
Regional Express	\$401,629	-	(106,001)	-	-	-	295,629
Other	\$163,597	-	(5,211)	-	5,344	-	163,729
Subtotal	\$9,094,688	2,964,758	(384,564)	-	5,344	5,427	11,685,653
Enhancement	\$123,260	1,000	-	7,481	6,180	-	137,921
Rehabilitation & Replacement	\$239,933	-	-	435	1,179	-	241,547
Administrative	\$839,618	-	-	-	-	-	839,618
Total	\$10,297,499	\$2,965,758	(\$384,564)	\$7,916	\$12,703	\$5,427	\$12,904,739

2015 Board Actions – An action to change a project's lifetime budget taken by the Board after adoption of the 2015 TIP.

- Amendments creating a new project.
 - OMF LRV Wash Heater project is new in 2015 and has an authorized budget of \$300 thousand. The project will allow for all-weather operation and reduce repairs and hazards during sub-freezing conditions.
 - Link CCTV System Upgrade project is new in 2015 and has an authorized budget of \$700 thousand. The existing obsolete equipment will be replaced with technology that integrates with the system installed for the two new Link extensions.
- Amendments changing existing projects.
 - Tacoma Trestle Track and Signal's lifetime budget was increased by \$86.0 million when the project's baseline budget was adopted.
 - East Link Extension's lifetime budget was increased by \$2.9 billion when the project's baseline budget was adopted. At the same time, the Overlake Village Bridge project was incorporated into the East Link Extension project.

2015 Closed Projects – Closed projects that are excluded from the 2016 TIP.

- Ten projects completed Phase Gate 8 and were closed in July 2015.

2016 New Projects – Newly created projects for the 2016 budget year.

- Seven projects are new for 2016.
 - Downtown Seattle Transit Tunnel (DSTT) Mitigation project has a proposed lifetime budget of \$1.3 million to contribute to street improvements in Seattle over three years. This work is intended to mitigate the impacts of increasing bus traffic downtown as buses move out of the DSTT to accommodate growth in Link light rail traffic.
 - Three lighting improvement projects are planned for the Kent, Sumner, and Puyallup Sounder stations. The total proposed lifetime budget is \$548 thousand.
 - Kent Station Parking Lot Paving project will expand parking capacity at that station with a proposed lifetime budget of \$700 thousand.
 - Operations & Maintenance Facility LRV Lift project will install a second light rail vehicle lift to increase maintenance capacity to service an expanding light rail vehicle fleet. The proposed lifetime budget is \$4.9 million.
 - Link Station Braided Tile Replacement project will ensure conformity with the Americans with Disabilities Act and improve wayfinding with a proposed lifetime budget of \$435 thousand.

Budget Transfers – Moving lifetime budget to new or existing projects.

- Central and East HCT Study and HCT Corridor Planning Studies projects' remaining unspent budget of \$2.9 million will be transferred to the ST3 Planning project.
- TOD Planning project will be completed in 2015 and \$494 thousand in unspent budget will be transferred to TOD Property Disposition project.

Budget Increases (Decreases) – Lifetime budget increases or decreases that are not transfers.

- Central Link HVAC-Instrument House and UPS Room project lifetime budget is proposed to rise by \$700 thousand to install external HVAC equipment as well as purchase right-of-way to house the equipment.
- Transit Oriented Property Disposition project lifetime budget will be augmented by \$5.5 million to expand the program to include surplus properties from ST2 projects.
- Small Works Program has a proposed lifetime budget of \$1.2 million to add a year to the program and fund potential safety related issues requiring immediate attention.
- Research and Technology Program proposed lifetime budget is increasing by \$5.3 million to continue improving our technology to communicate with riders and transit partners.

Transfer from Cost Estimate – Budget approved for an amount that is within the ST2 cost estimate for the project.

- Sounder Yard and Shop project's proposed lifetime budget is increasing by \$560 thousand to fund a potential ROW acquisition.
- Puyallup Station Improvements project's proposed lifetime budget is increasing by \$4.9 million to fund a potential ROW acquisition.

Reserves

The 2016 TIP includes history and forecasts for reserve fund contributions through 2023 to support emergencies as well as unplanned expenditures.

AGENCY RESERVE SUMMARY

(in thousands)

Reserve	Life to Date	2016	2017	2018	2019	2020	2021	Future	Total TIP
Emergency Loss	\$ 11,946	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 3,000	\$ 7,982	\$ 37,928
Insurance Systemwide	-	5,625	5,625	5,625	6,425	-	-	-	23,300
Operations & Maintenance	-	59,961	-	-	-	-	-	-	59,961
Systemwide Contingency	-	-	5,000	-	-	-	-	-	5,000
Capital Replacement	306,366	-	-	-	-	-	-	-	306,366
Total	\$ 318,312	\$ 68,586	\$ 13,625	\$ 8,625	\$ 9,425	\$ 3,000	\$ 3,000	\$ 7,982	\$ 432,555

Emergency/Loss

While the agency maintains a comprehensive insurance program, the policies do contain retentions (deductibles), which the agency would have to cover in the event of an insurable loss. In such instances, the Board could authorize the use of the emergency/loss fund on a case-by-case basis.

Insurance Systemwide

The insurance systemwide reserve is forecasted to be funded beginning in 2016 when major new construction gets underway. It will be available to partially pay for builders' risk insurance in conjunction with funds provided by building contractors.

Operations & Maintenance

Sound Transit's financial policies require the agency to maintain an operation and maintenance reserve equal to two months of department operating expenses, including costs allocated to transit modes and projects.

Systemwide Contingency

The systemwide contingency was established as part of the Sound Move program and was supplemented in the ST2 plan. This fund is for use by the Board to deal with any unforeseen events.

Capital Replacement

The agency maintains a minimum \$300.0 million reserve for unanticipated expenditures necessary to keep the system in good working condition. In addition, the agency maintains a forecast of the funds necessary to repair and replace existing assets to keep the regional transit system in a state of good repair, consistent with industry standards. These forecasts are included in the agency's long-term financial plan as a financial commitment. When such investments are required, they are added to the budget and TIP in the Repair & Replacement project category.

Appendix A - Sound Transit 2 Cost Estimates

The agency maintains cost estimates for all of its capital projects that are funded in the agency's financial plan. These estimates are updated as new engineering, right-of-way, public outreach, and other project information are developed. Project cost estimates are updated prior to seeking Board authorization of budgets for preliminary engineering, final design, and right-of-way acquisition, and baseline budget, which includes total project costs and construction.

ST2 cost estimates were initially developed and reported in 2007 constant-year dollars. To enable comparisons between cost estimates, the figures in this appendix have been updated to 2015 constant-year dollars based on the agency's August 2015 inflation forecasts. The table on the next page includes the following information:

- 2008 cost estimates are from the initial ST2 plan approved by voters in November 2008.
- 2015 cost estimates match the proposed 2015 TIP.
- 2016 cost estimates include all ST2 projects currently funded in the agency's financial plan.

The changes to the cost estimates between 2015 and 2016 include:

- The transfer of cost estimates from HCT Corridor Planning Studies and Central and East HCT Study to ST3 Planning to provide additional funding for long-range planning.

ST2 COST ESTIMATES

(in thousands/constant 2015 dollars)

	2008 Estimate	Inc / (Dec)	2015 Estimate	Inc / (Dec)	2016 Estimate
Link Light Rail					
East Link	\$ 3,311,457	\$ (176,566)	\$ 3,134,891	\$ -	\$ 3,134,891
Northgate Link Extension	1,734,306	170,244	1,904,550	-	1,904,550
Lynnwood Link Extension	1,668,579	(246,986)	1,421,593	-	1,421,593
First Hill Link Connector	138,141	(1,552)	136,590	-	136,590
South 200th Street Link Extension	404,745	(18,957)	385,788	-	385,788
South Corridor HCT - S200th to KDM Rd	492,218	(54,582)	437,636	-	437,636
South Corridor HCT - KDM Rd to S 272nd St	535,365	(535,365)	-	-	-
HCC to Tacoma Dome - P/E & ROW	47,267	(47,267)	-	-	-
South Corridor Alternatives Analysis	82,921	(79,843)	3,077	-	3,077
Tacoma Link Expansion	100,162	35,714	135,876	-	135,876
Link Maintenance & Storage	298,615	(47,026)	251,589	-	251,589
Link Fleet Expansion	583,579	(255,326)	328,253	-	328,253
Subtotal Link Light Rail	9,397,354	(1,257,510)	8,139,844	-	8,139,844
Sounder Commuter Rail					
Station Access & Demand Study	148,901	(87,676)	61,226	-	61,226
Sumner Station Improvements	48,630	(4,518)	44,113	-	44,113
Puyallup Station Improvements	68,525	(10,548)	57,977	-	57,977
Lakewood Station Improvements	44,466	(6,668)	37,798	-	37,798
Sounder Yard & Shop Facility	171,727	(22,168)	149,559	-	149,559
Sounder Yard Expansion	-	21,092	21,092	-	21,092
Tukwila Permanent Station	40,943	7,417	48,360	-	48,360
Edmonds Permanent Station	27,168	(27,168)	-	-	-
Seattle to Lakewood - Expanded Service	196,715	57,047	253,762	-	253,762
Sounder ST2 Fleet Expansion	36,854	(6,416)	30,438	-	30,438
Reservation Junction - Track & Signal	75,114	(11,585)	63,529	-	63,529
Tacoma Track & Signal	30,574	(306)	30,268	-	30,268
Platform Extensions - South King / Pierce	61,318	(61,318)	-	-	-
Eastside Rail Partnership	57,584	(57,582)	1	-	1
Subtotal Sounder Commuter Rail	1,008,520	(210,397)	798,123	-	798,123
Regional Express					
ST Express Bus Base	196,007	(6,429)	189,577	-	189,577
Mid-Day Bus Storage	-	3,336	3,336	-	3,336
ST Express Fleet Expansion	41,041.14	4,179	45,220	-	45,220
ST Express Capital Reserve Program	28,164.24	(28,164)	-	-	-
I-90 Contribution	55,033.18	-	55,033	-	55,033
Burien - Parking Garage / Transit Center	16,357.08	(645)	15,712	-	15,712
Bothell - Parking Garage / Transit Center	6,129.39	(6,129)	-	-	-
Subtotal Regional Express	342,732	(33,854)	308,878	-	308,878
Other					
ST3 Planning	64,099	(16,700)	47,399	2,926	50,325
Ballard to Downtown Seattle HCT Planning Study	-	1,193	1,193	-	1,193
HCT Corridor Planning Studies	-	559	559	(500)	59
Central and East HCT Study	-	4,581	4,581	(2,426)	2,155
Lynnwood to Everett HCT Study	-	1,991	1,991	-	1,991
South King County Study	-	2,520	2,520	-	2,520
ST Art Program	-	27,565	27,565	-	27,565
Subtotal Other	64,099	21,709	85,808	-	85,808
Total ST2 Cost Estimate	\$ 10,812,705	\$ (1,480,052)	\$ 9,332,653	\$ -	\$ 9,332,653

Note: The cost estimates included in the table above reflect the amount funded in the Agency's long-term Financial Plan. Projects proposed to proceed with only limited engineering activity are funded only to the extent that activity requires. Projects proposed to be suspended or deleted have no funding in the current Long-term Financial Plan.

Appendix B - Sound Move Lifetime Budgets

The agency has two voter-approved system expansion programs, Sound Transit 2 (ST2) approved in 2008 and the earlier Sound Move program approved in 1996. Appendix A reflects the cost estimates in constant-year dollars for all projects funded under the ST2 program. This appendix displays adopted lifetime budgets in year-of-expenditure dollars for active Sound Move system expansion projects.

Lifetime budgets for Sound Move projects were adopted as total project budgets/baseline budgets, since these projects pre-date the agency's Phase Gate process. As with the ST2 projects in Appendix A, Sound Move lifetime budgets are shown for 2008, 2015, and 2016.

The changes between 2015 and 2016 include:

Link Light Rail

Airport Link project was closed in 2015.

Souder Commuter Rail

Permitting and Environmental Mitigation was closed in 2015

Regional Express

Rainier Avenue Arterial improvements project was closed in 2015.

Strander Boulevard Extension project was closed in 2015.

Mountlake Terrace Freeway Station project was closed in 2015.

S. Everett Freeway Station project was closed in 2015.

Issaquah transit Center/SR900 project was closed in 2015.

The I-90 Two-Way Transit and HOV Operations, Stage 3 project was baselined in 2014. This project is funded by Sound Move & ST2, Regional Express Reserve, and agency financial capacity.

I-90 TWO-WAY AND HOV OPERATIONS, STAGE 3 TOTAL FUNDING

(in thousands)

Sound Move	\$64,222
I-90 Contribution (ST2)	45,000
REX Program Reserve	27,126
Agency Financial Capacity	89,300
Total Project Cost	\$225,648

ADOPTED LIFETIME BUDGETS FOR ACTIVE SOUND MOVE PROJECTS

Year of Expenditure (YOE) Dollars (in thousands)

	2008	Inc/(Dec)	2015	Inc/(Dec)	2015
Link					
University Link	\$ 1,614,007	\$ 142,000	\$ 1,756,007	\$ -	\$ 1,756,007
Initial Segment	2,070,000	21,768	2,091,768	-	2,091,768
Subtotal Link	3,684,007	163,768	3,847,775	-	3,847,775
Souder					
M Street to Lakewood Track and Signal	73,601	7,053	80,654	-	80,654
D Street to M Street Track and Signal	76,025	82,237	158,262	-	158,262
Mukilteo Station, South Platform	9,371	8,942	18,313	-	18,313
Tukwila Station (see Notes)	-	-	-	-	-
Subtotal Souder	158,997	98,232	257,229	-	257,229
Regional Express					
I-90 2-Way Transit & HOV Op, Stage 3 (see notes)	1,722	223,926	225,648	-	225,648
85th Corridor, Kirkland	6,015	(425)	5,590	-	5,590
Kirkland Transit Center	13,300	(2,341)	10,959	-	10,959
Federal Way Transit Center	39,455	-	39,455	-	39,455
Subtotal Regional Express	60,492	221,160	281,652	-	281,652
STart Program	18,100	16,100	34,200	-	34,200
Total Active Sound Move Projects	\$ 3,921,596	\$ 499,260	\$ 4,420,856	\$ -	\$ 4,420,856

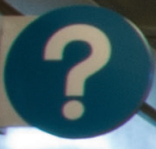
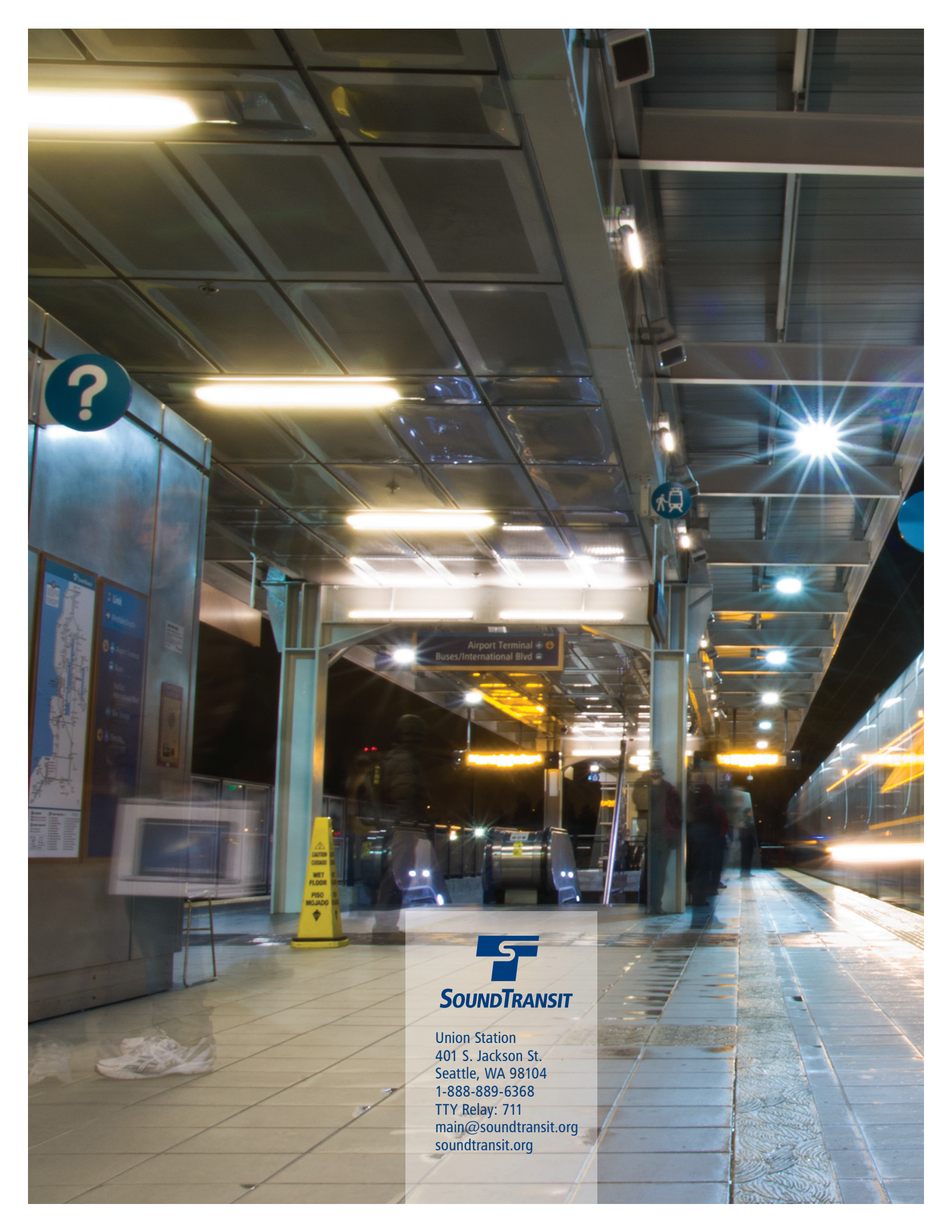
Notes: Numbers may not add due to rounding.

Sound Move Project lifetime budgets are expressed in Year of Expenditure (YOE) dollars.

Table includes Sound Move projects only.

Tukwila Station is a project recognized in ST2, but Sound Move did fund the project through Final Design.

I-90 2-Way Transit and HOV Op, Stage 3 is recognized in Sound Move, but ST2 contributed \$45 million



Airport Terminal →
Buses/International Blvd ←



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