



Massachusetts Bay Transportation Authority

Capital Programs Office Report: Q1 Update

November 7, 2016



Table of Contents

- 1) Goals
- 2) Overview
- 3) Spending Projections and Q1 Actuals
- 4) Top Programs
- 5) Capital Pipeline Status
- 6) Leading Indicators
 - a) SGR Construction Contracts
 - b) Vehicle Contracts
- 7) Next Steps



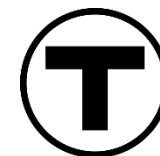
1) Goals

- T's CIP requires doubling of capital delivery over next 5 years to \$6.5B
- Top priority is reliability and modernization ("SGR"); our goal is to spend 59% more on SGR than FY 2016 and to more than double our spending on vehicles
- We plan to award \$300M in SGR construction contracts this year which is more than the total SGR construction contracts awarded for the last 3 years combined



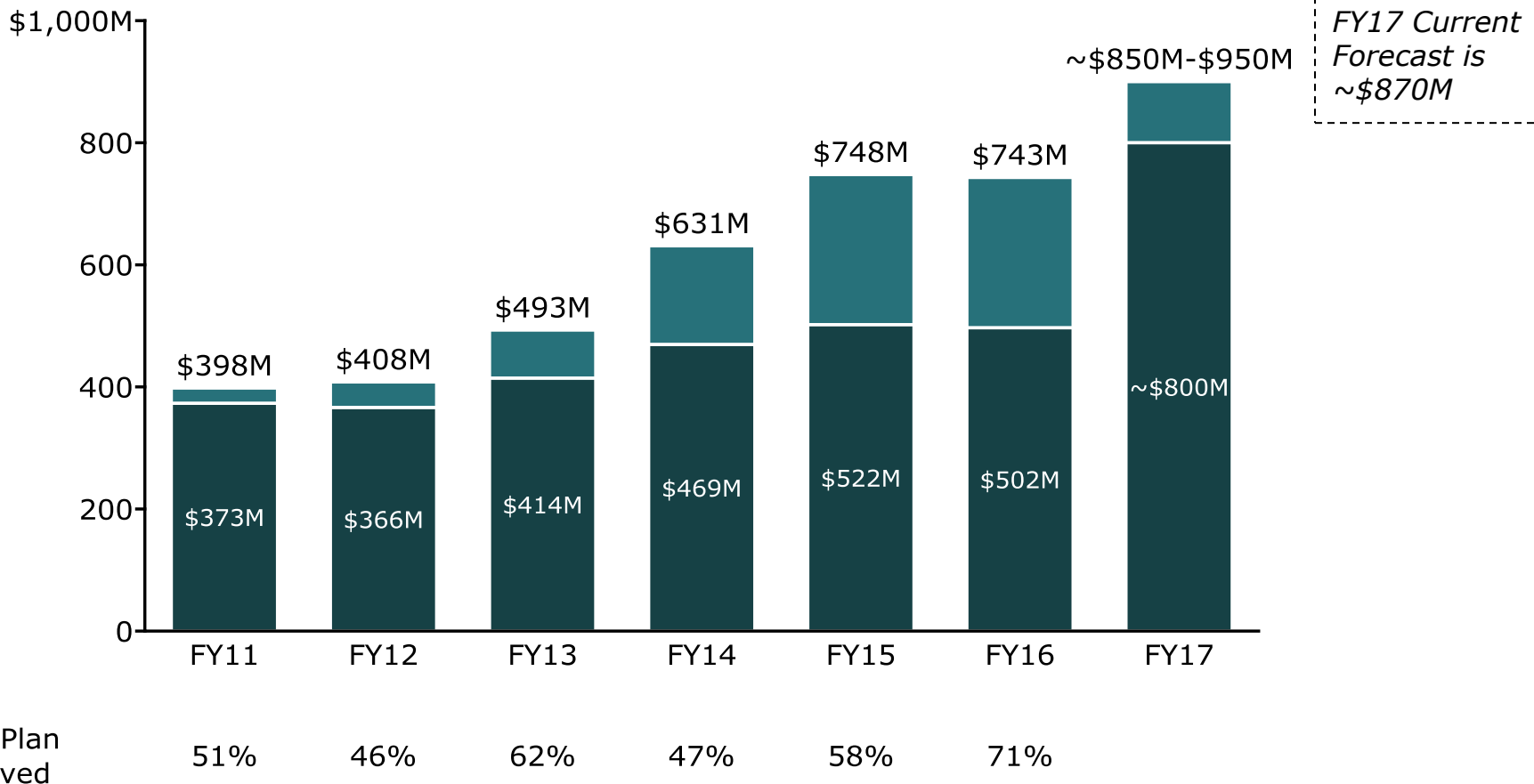
2) Overview

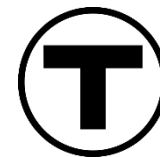
- Projected spend for FY 2017 is \$850M- \$950M; our current 2017 forecast is \$870M
 - Q1 spending is low
 - Vehicle milestone payments heavily weighted to Q4
 - Risk that we will not achieve spend plan
- FY 17 accomplishments
 - New leadership & organizational structure
 - Focus on top programs will accelerate delivery in FY 18
 - Progress on interim reporting
- Q1 results show progress but many hurdles remain
 - Pipeline / planning
 - Controls / reporting
 - Resources / capacity



3) Spending Projections and Actuals: FY 2017 projected spend (~\$850M-\$950M) is a 21% increase over FY 2016

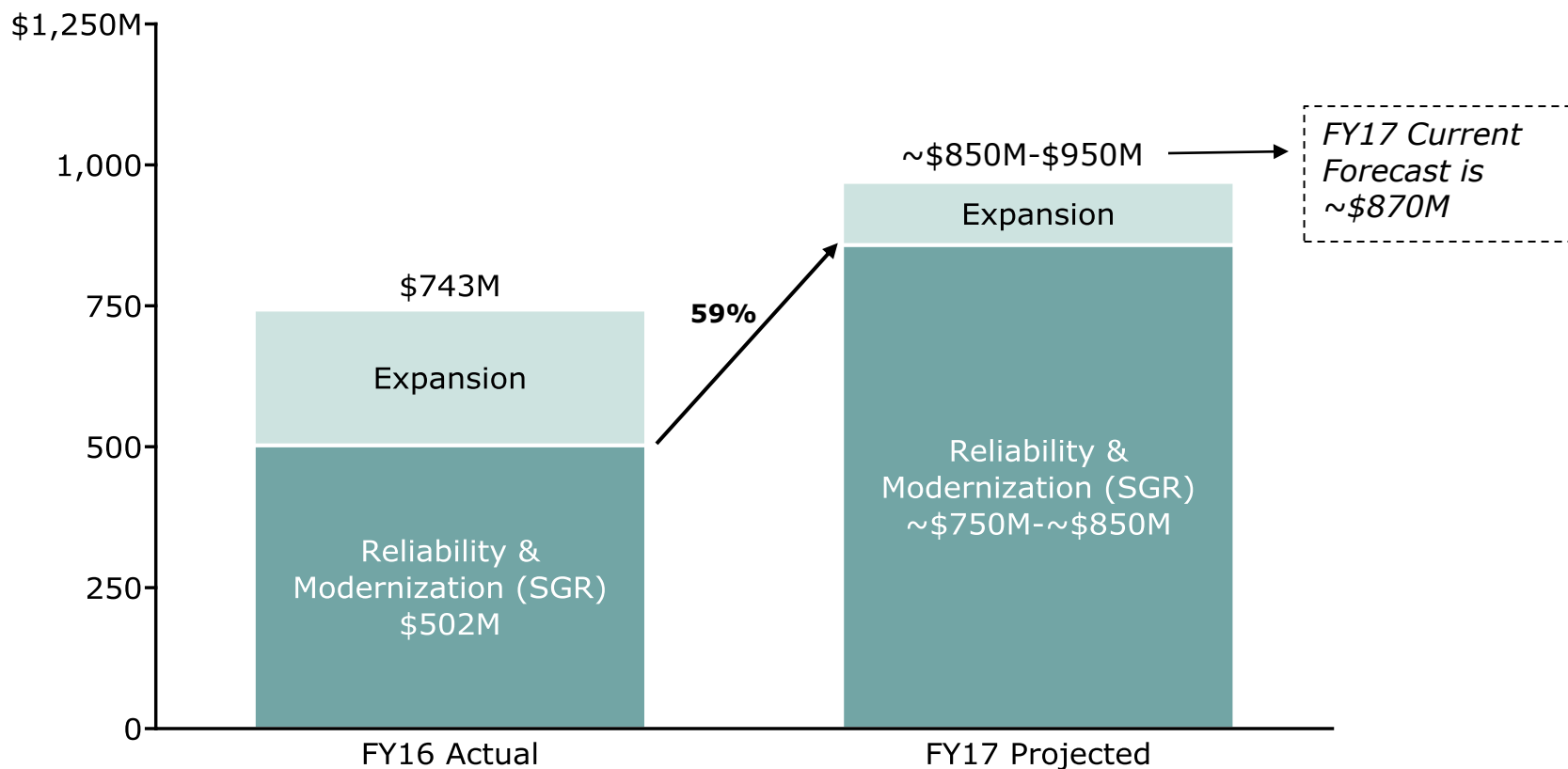
MBTA Capital Spending



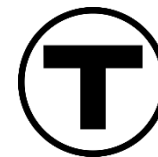


3) FY 2017 forecasted spending on top CIP priorities (~\$850M-\$950M) – reliability and modernization – approximately 59% higher than prior year actual spending

MBTA Capital Spending

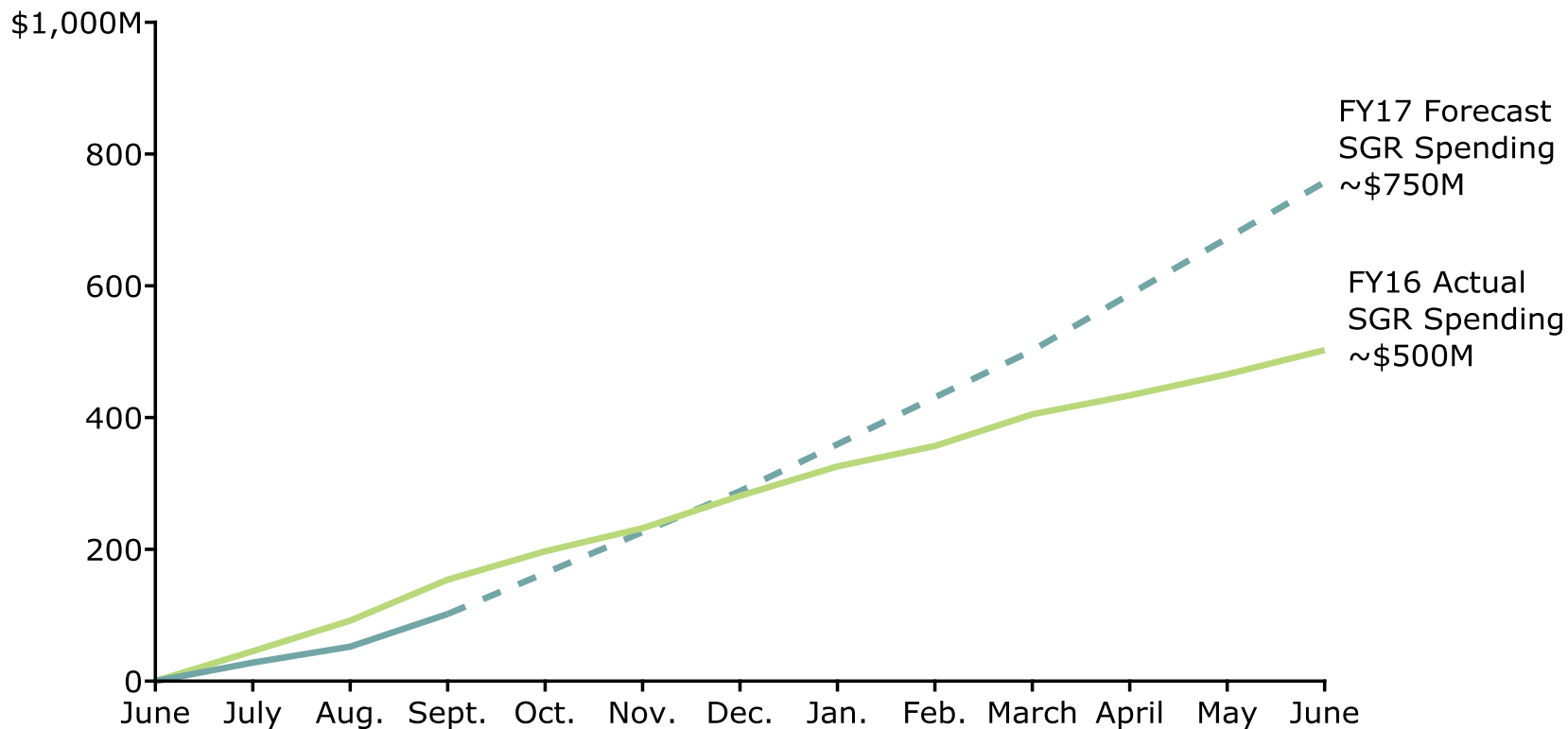


Note: 2017 Expansion projects include: GLX, South Coast Rail, Wachusett Extension, Knowledge Corridor, Chelsea Silver Line, South Station expansion, Blue Hill Ave. Station, and Boston Landing Station.

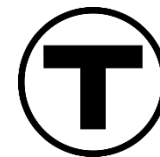


3) FY 2017 SGR (not including expansion projects) Spending Forecast vs. FY 2016 SGR Spend

MBTA Capital Spending (Actuals, FY 2017 Forecast)

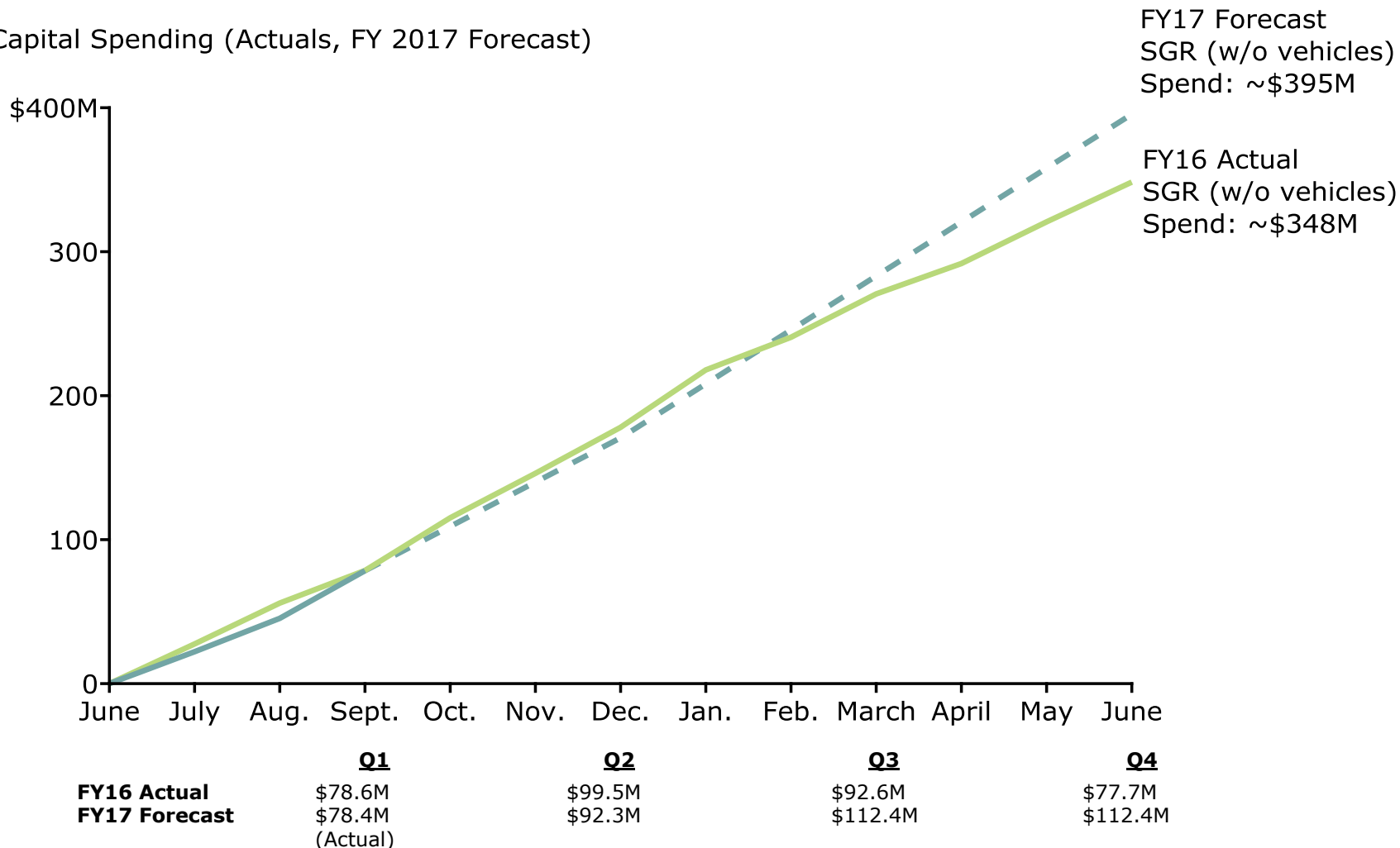


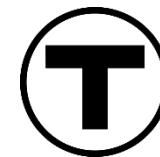
	Q1	Q2	Q3	Q4
FY16 Actual	\$154.0M	\$127.3M	\$123.7M	\$97.5M
FY17 Forecast	\$101.8M (Actual)	\$186.5M	\$213.5M	\$255.6M



3) SGR Spending Forecast (Not including expansion projects or vehicle projects)

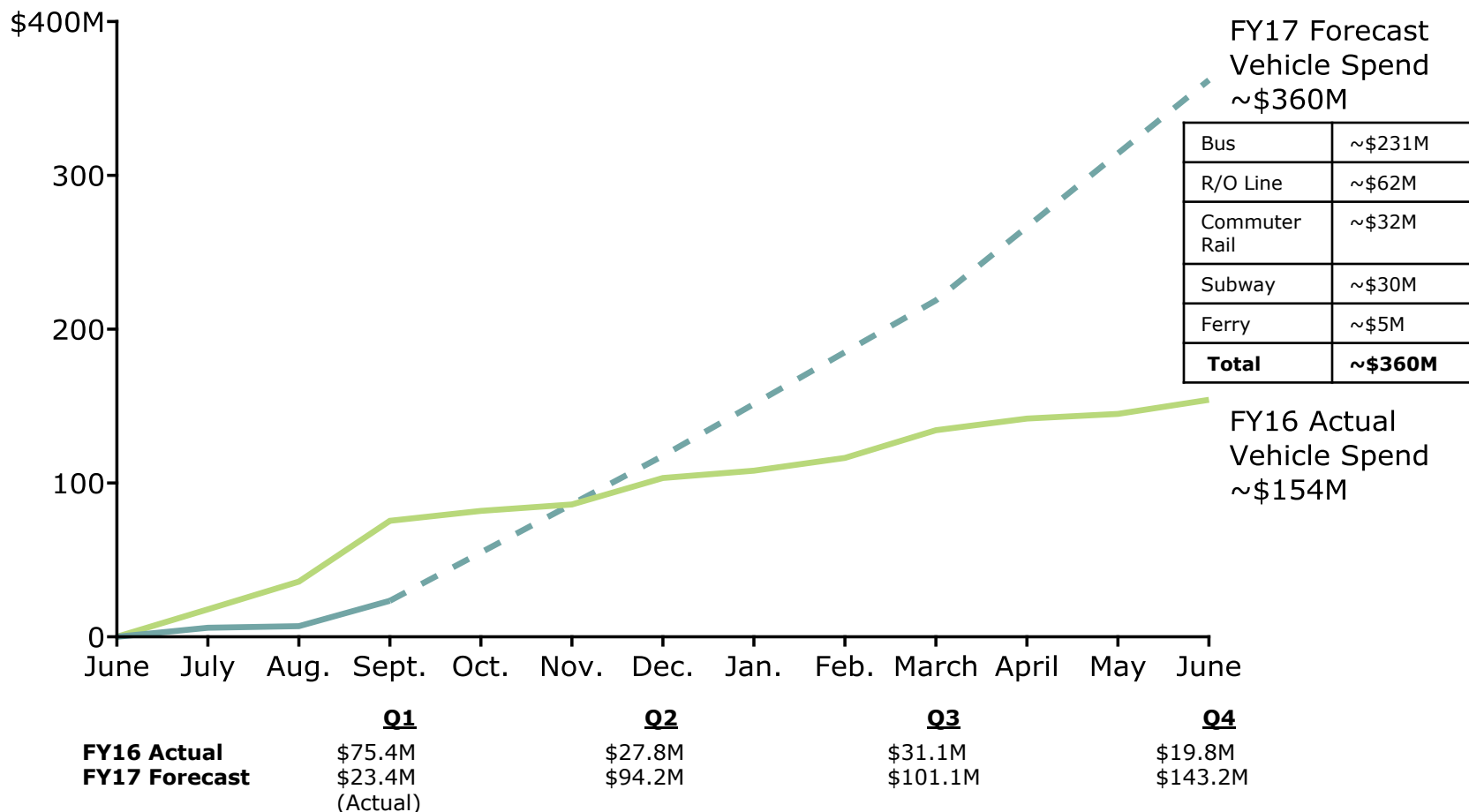
MBTA Capital Spending (Actuals, FY 2017 Forecast)





3) FY 2017 SGR Vehicle Spending Forecast is more than double FY 2016 Actual Spending

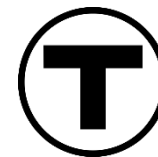
MBTA Capital Spending (Actuals, FY 2017 Forecast)





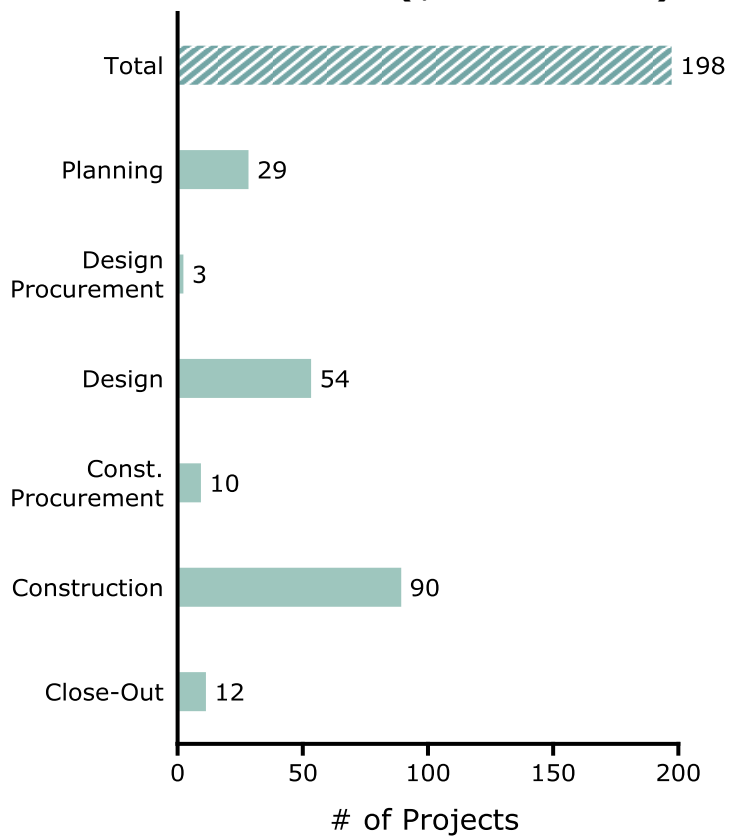
4) Top Programs Overview

Top Programs	Total CIP Funding (All Years)	Inception to Date Spending	FY17 Projection (8/10/16)	FY 2017 Q1 Spending
Major Programs				
R/O Line Vehicles	\$729.0M	\$57.4M	\$82.4M	\$1.4M
R/O Line Infrastructure	498.6	18.0	28.0	3.7
Positive Train Control	478.4	2.3	12.4	0.3
Winter Resiliency (Phase I and II)	99.2	51.3	41.0	6.4
Functional Programs				
Revenue Vehicles	1,954.3	709.9	349.4	22.0
Bridge	570.5	87.1	63.7	18.7
Power	223.8	61.6	38.9	6.6
Station Improvements	237.6	136.4	25.6	1.9
Signals	562.3	13.5	23.5	1.0
Top Programs Total	\$5,353.7M	\$1,137.5M	\$664.9M	\$62.0M
Other	2,368.0	1,072.3	~85	39.8
SGR Total	\$7,721.7M	\$2,209.8M	~\$750M	\$101.8M

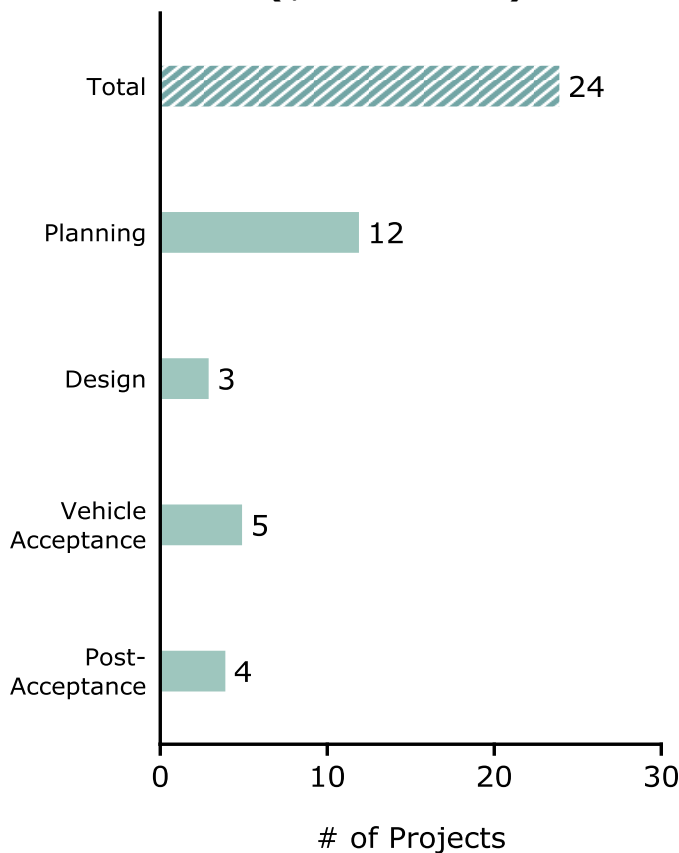


5) Capital Pipeline Status

Capital Delivery (\$3.9B of CIP) and E&M (\$660M of CIP)



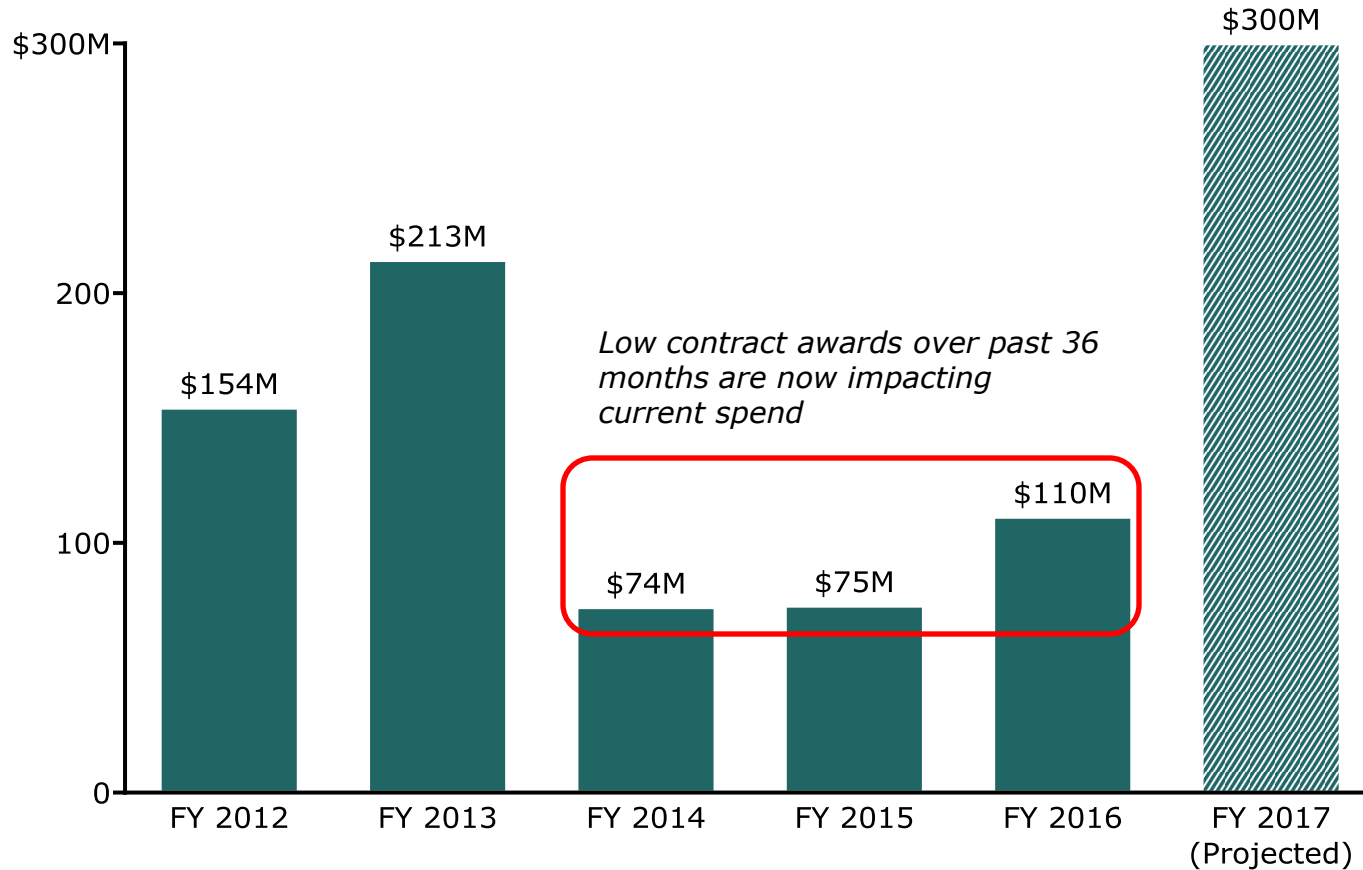
Vehicles (\$1.5B of CIP)





6) SGR Construction Contracts Awards FY 2012 – FY 2017 (does not include Vehicle or Expansion projects)

Dollar Value of Contracts (\$M)





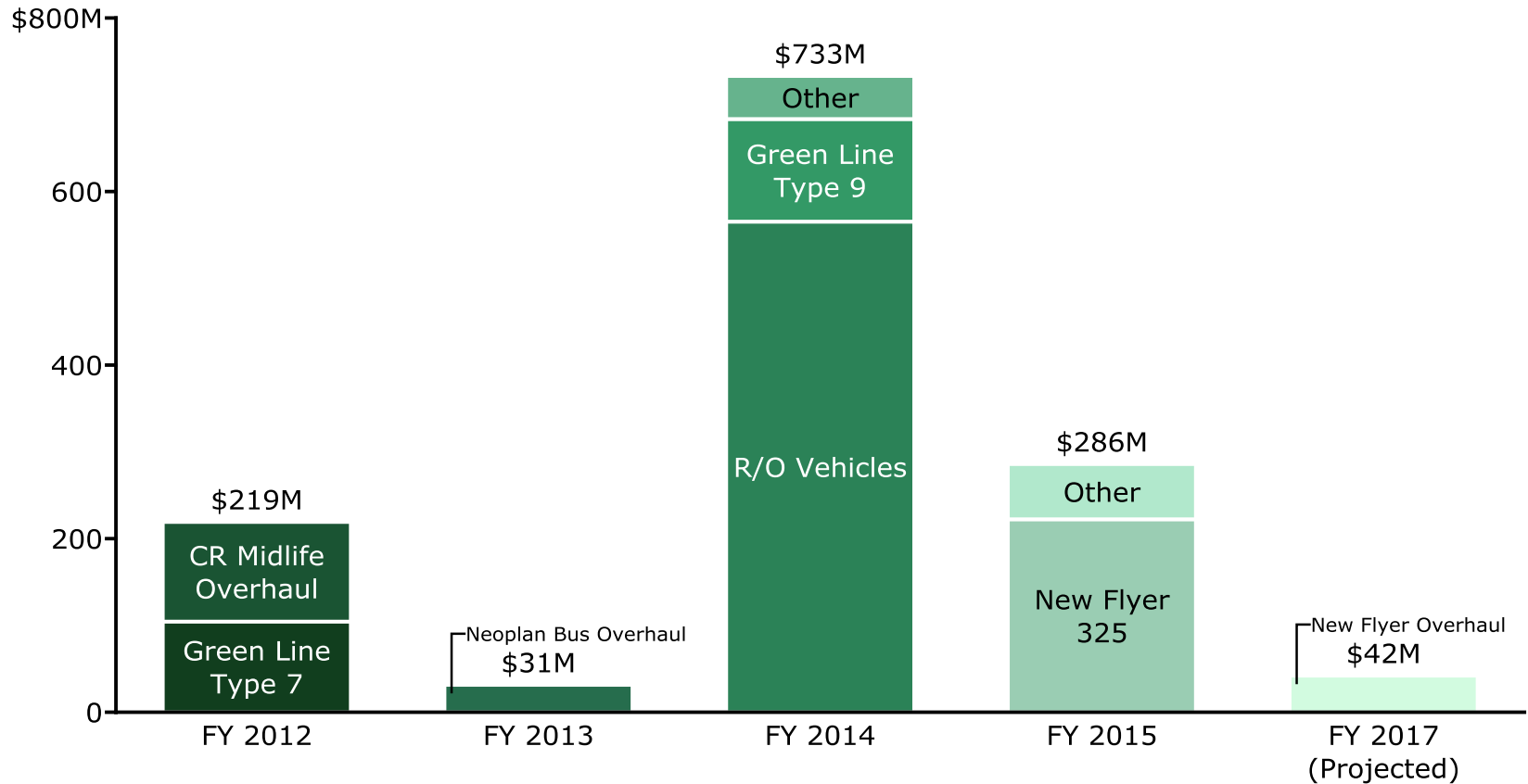
6) SGR Construction Contracts Awarded / Planned – FY 2017

Description	Program	Contractor	Award Amount/Est.	Award Date / Target
Pemberton Point Ferry Dock Emergency Repair	Ferry	C. White Marine Inc.	\$62K	7/15/2016
Red Line Signal Trough and Winter Resiliency Improvements	Winter Resiliency	Barletta	\$18.5M	7/27/2016
On Call Services-Buildings And Facilities, Systemwide	On-Call Construction	N.E.L.	\$8.7M	9/14/2016
Underground Storage Tank Replacement Program	Operations	SPS	\$3.5M	9/15/2016
Andrew and Tufts Medical Center Station Elevator Modernization	Elevators	LMH	\$7.8M	9/16/2016
RL/OL Wellington Tracks 33-38	RL/OL Infrastructure	TBD	\$19.2M	NOV
On-Call Contracting - Track work	On-Call Construction	TBD	\$14.0M	NOV
Mansfield Commuter Rail Accessibility Improvements	Stations	TBD	\$9.0M	DEC
Rockport Commuter Rail Layover Facility	Layover Facilities	TBD	\$4.9M	DEC
Replacement Elevators, Alewife	Elevators	TBD	\$5.4M	JAN
On-Call Contracting - Power	Power	TBD	\$15.0M	JAN
Shawsheen River Bridge	Bridge	TBD	\$2.0M	JAN
Wollaston Station Improvements	Stations	TBD	\$38.7M	FEB
Central Square & Harvard Station Elevators	Elevators	TBD	\$8.0M	FEB
Bridge and Tunnel Repairs Contract	Bridge	TBD	\$10.0M	FEB
IT Data Center, 45 High Street	IT Upgrades	TBD	\$3.0M	MAR
RL/OL Orange Line Test Track at Wellington Yard	RL/OL Infrastructure	TBD	\$5.0M	APR
RL/OL Wellington Maintenance Facility	RL/OL Infrastructure	TBD	\$75.0M	APR
Neponset River Bridge	Bridge	TBD	\$3.2M	APR
Gloucester Drawbridge	Bridge	TBD	\$48.0M	MAY
		TOTAL	~\$300M	



6) Vehicle Contracts Awarded FY 2012 – FY 2017

Dollar Value of Contracts (\$M)





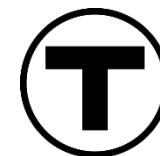
7) Next Steps: Short-term and Mid-term Initiatives

Initiatives	Short-term	Mid-term
Organization & Capacity	<ul style="list-style-type: none"> Create executive level Capital Program Office (complete) Establish a SGR acceleration committee (complete) <u>Recruit critical capital delivery leaders and staff</u> (in process) 	<ul style="list-style-type: none"> Bring all capital delivery together to align with maintenance and operations
CIP/ Develop pipeline	<ul style="list-style-type: none"> FY 17 CIP Scrub (complete) Fund FY 17 projects through pay go capital (complete) <u>FY 18 CIP scrub and develop a pipeline of future projects in line with CIP</u> (in coordination with SGR acceleration) 	<ul style="list-style-type: none"> Align FY 18 CIP with SGR acceleration
Capital Program Oversight & Controls	<ul style="list-style-type: none"> <u>Track all projects through interim portfolio monthly reporting</u> (in process) Convert tracking and reporting approach from funds-based to project-based (in process) 	<ul style="list-style-type: none"> Plan, budget and implement an integrated PMIS Develop portfolio wide controls team
Program Focus	<ul style="list-style-type: none"> Focus on top programs (PTC, R/O line, GLX, and Vehicles) (in process) Create cross-functional teams with culture of accountability (in process) 	<ul style="list-style-type: none"> Set outcome-based goals and key performance indicators Roll out to other programs in portfolio
SGR Acceleration	<ul style="list-style-type: none"> <u>Remove funding and financing bottlenecks</u> (ongoing) <u>Shorten procurement process</u> (in process) <u>ID CIP and other SGR projects to accelerate</u> (in process) <u>Utilize alternative procurement methods</u> (in process) 	<ul style="list-style-type: none"> Add resources to support plan (internal and external)



Appendix





Pay Go Capital FY 2017 Actual Spending also reflects need to accelerate

	PROJECTS/PROGRAMS	FY17 Target	FY17 Spending
SUBWAY/ BUS	1. Beacon Junction (Green Line): Replace signal cables, flood mitigation, improved track function	\$1.8M	\$0.6M
	2. Red, Orange, Green Line Signals System Design: Prepare signals for delivery of new vehicles	\$4.5M	\$0.1M
	3. Bus scheduling improvement: Software that offers dynamic route and operator scheduling, enabling more flexible service planning effort	\$3.8M	\$0.1M
	4. AFC 2.0 Design and consumer website: System design and performance specifications for next generation AFC; mobile platform	\$6.7M	\$0.4M
	5. Short Term Power Investments: Sub-station replacements; 3 rd rail power supply, tunnel lighting, and emergency electrical duct bank	\$10.0M	\$0.0M
	6. Station improvements: Leveraging schedule shut-downs to make critical station improvements	\$0.1M	\$0.0M
	7. Unimog: Replace existing Unimog vehicle (purchased 1987) used for work on road and right of way; lower maintenance costs	\$1.1M	\$0.0M
	8. Asset Management Systems: Increased reliability and productivity tracking and documentation of maintenance across the entire system	\$0.5M	\$0.0M
	9. Green Line Rail Grinding: Grinding rail surfaces to reduce risk of derailment	\$3.5M	\$0.5M
	10. TransitMaster Server Upgrade	\$0.5M	\$0.0M
COMMUTER RAIL	11. Worcester Line De-stressing: Improve existing track conditions and significantly reduce heat-related speed restrictions	\$2.6M	\$1.8M
	12. Locos restoration to increase fleet size: Initial rebuild of 5 locos	\$3.6M	\$0.0M
	13. Lynn Garage: Repairs to garage leased space to local community college for improved safety and state of good repair needs	\$4.9M	\$2.4M
Total Budgeted Pay-Go Projects (1-13)		\$43.6M	\$5.9M



Additional Approved Pay Go Capital Projects for FY 2017

	PROJECTS/PROGRAMS	FY17 Target
SUBWAY/ BUS	1. AFC 1.0 State of Good Repair: Bringing AFC systems into a state of good repair to improve reliability, performance, and enhance the customer experience	\$1.3M
	2. Alewife Path Improvements: Improve drainage on Alewife Station path reducing need for E&M response when walkway floods during heavy rain	\$81K
	3. Braintree and Codman Yard Security Upgrades: Camera upgrades and additions, improved lighting, and automated gates to better secure customer and employee areas	\$625K
	4. Blue Line Vehicle Battery Replacement: Replacing batteries that are due for replacement on No. 5 vehicles to improve reliability	\$400K
	5. Green Line #8 Wheel Flange Lubricators: Decreases friction against Green Line wheels and track, resulting in reduced maintenance costs and reducing risk of train derailments	\$150K
	6. T-Alert Concierge App: Creating a new application to handle customer alerts and notifications, eliminating duplicate messages and allowing for more user customization	\$144K



Additional Pay Go Capital Projects Approved for FY 2017

	PROJECTS/PROGRAMS	FY17 Target
SUBWAY/ BUS	1. Systemwide Track and Signal Condition Assessments	\$4.4M
	2. Riverside Carhouse Roof Replacement	\$3.5M
	3. Longfellow Approach Design	\$2.0M
	4. Misc. Facility and Station Projects	\$2.0M
	5. E&M CAD Plans Digitization	\$1.5M
	6. North Station Floor	\$1.2M
	7. Sullivan Square Station Rehabilitation	\$1.1M
	8. Court House Station Leaks Repair	\$1.0M
	9. Broadway Station – Emergency Training Station Mechanical Repair	\$500K
	10. Ashmont Station Mattapan High Speed Mini-High	\$400K
	11. Park St. Station Wayfinding Improvements (Design)	\$300K
	12. Camera Installation on Vaulting Stations	\$150K
	13. JFK / UMass Plank Above Stairway	\$60k
COMMUTER RAIL	14. Back Bay Station – Ventilation and Concourse Repairs	\$4.0M
	15. Walpole Station – Interlocking, Grade, and Ped. Crossing (Design)	\$400K
	16. Locomotive / Coach Inspections & Maintenance – Mass Coastal	\$400K
	17. Wachusett Extension – Layover Facility Equipment	\$215K
	18. Coach Shop Infrastructure Improvement	\$180K
SYSTEM-WIDE	19. Repaving and Env. Remediation Work at 9 Parking Lot Facilities	\$12.6M
Total Additional Pay-Go Projects: Additional Approved Projects (prior page) and Under Review		\$37.5M