



**Massachusetts Bay  
Transportation Authority**

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## **FY19 Q3 Capital Program Update**

**Report to Fiscal and Management Control Board**



## Outline of Presentation

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1. Overarching Capital Program Goals
2. FY19 Performance vs. FY19 Key Performance Indicators (KPIs)
3. Initiatives to Improve Accountability & Reporting
4. Q4 FY19 Look Ahead



## Overarching Capital Program Goals

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- **15-Year Goal** – Achieve a State of Good Repair (SGR)
- **5-Year Goal** – Execute \$8.0B FY19-23 CIP ... **\$6.7B in SGR**
- **FY19 Goal** –
  - Award \$1B in new construction and vehicle contracts
  - Deliver \$1B in capital improvements ... **\$850M in SGR**
- Deliver quality programs safely, on schedule and within budget



## FY19 Key Performance Indicators (KPIs) (FY19 actuals through 3/31/19)

Key Performance Indicator	FY17 Actual	FY18 Actual	FY19 YTD Actual	FY19 Target
Total Capital Investment	\$811M	\$875M	\$694M (69%)	\$1 billion
State-of-Good-Repair Capital Investment	\$709M	\$720M	\$564M (66%)	\$850M
Capital Construction Contracts Awarded	\$328M	\$639M	\$360M (55%)	>\$650M
Vehicle Procurement Contracts Awarded	New for FY19	New for FY19	\$238M (79%)	\$300M
Percentage of FY19-23 CIP projects Underway/In-Progress	New for FY19	New for FY19	77.4%	>75%
% of FY19 CIP Delivered	New for FY19	New for FY19	58%	95%



## FY19 Milestones & Achievements: Reliability Programs

CIP Program	FY19 CIP \$	FY19 Milestones
Revenue Vehicles	\$237M	<ul style="list-style-type: none"> <li>✓ <b>Exercise option contract for additional 194 hybrid buses</b></li> <li>☐ Implement near-term fleet investments identified in the Integrated Fleet and Facilities Plan</li> <li>☐ Advance planning for Green Line Type 10 vehicle</li> <li>☐ Receive LoNo pilot buses for testing to inform future fleet</li> <li>✓ <b>Complete overhaul of 103 Green Line Type 7 vehicles</b></li> </ul>
Track, Signal, and Power	\$144M	<ul style="list-style-type: none"> <li>✓ <b>Begin Green Line D Branch Track and Signals project</b></li> <li>✓ <b>Continue Orange Line Direct Fixation (track) repairs</b></li> <li>✓ <b>Award Green Line Grade Crossings construction contract</b></li> </ul>
Bridges and Tunnels	\$57M	<ul style="list-style-type: none"> <li>✓ <b>Initiate design for Lechmere Viaduct rehabilitation</b></li> <li>☐ Procure professional services for inspection/rating of bridge inventory</li> <li>☐ Award "bridge bundle" design-build contract for six CR bridges                             <ul style="list-style-type: none"> <li>• Begin Orange Line Tunnel Repair project in downtown core (FY 2020)</li> </ul> </li> <li>☐ Procure professional services for North Station Draw 1 Bridge Replacement</li> </ul>
Stations (includes parking)	\$73M	<ul style="list-style-type: none"> <li>✓ <b>Initiate comprehensive station needs assessment</b></li> <li>✓ <b>Advance design for Winchester Center Station Improvements</b></li> <li>✓ <b>Award Alewife Garage repairs contract</b></li> <li>☐ Open Wollaston Station (August 2019).</li> </ul>
Facilities (admin and maintenance)	\$79M	<ul style="list-style-type: none"> <li>✓ <b>Award construction contract for CR Iron Horse Park OCC</b></li> <li>☐ Advance planning for new or expanded bus maintenance facility, consistent with Integrated Fleet and Facilities Plan</li> <li>✓ <b>Begin Facility Roof Replacement project to replace roofs at 13 facilities</b></li> </ul>
System Upgrades	\$67M	<ul style="list-style-type: none"> <li>☐ Implement MBTA enterprise asset management program</li> <li>☐ Implement MBTA cybersecurity programs                             <ul style="list-style-type: none"> <li>• Begin procurement for systemwide radio upgrade project</li> </ul> </li> </ul>



## FY19 Milestones & Achievements: Modernization Programs

CIP Program	FY19 CIP \$	FY 2019 Goals and Objectives
Red and Orange Line Improvements Program	\$154M	<ul style="list-style-type: none"> <li>✓ <b>Award Red/Orange Line Signals Design-Build project</b> <ul style="list-style-type: none"> <li>▪ Introduce new Orange Line cars into revenue service (FY 2020)</li> <li>▪ Receive new Red Line pilot cars for testing (FY 2020)</li> </ul> </li> <li>☐ Complete OL Test Track, RL Test Track, and Wellington Track 38/39 (FY 19/20)</li> </ul>
Commuter Rail Safety and Resiliency Program	\$109M	<ul style="list-style-type: none"> <li>✓ <b>Achieve Positive Train Control milestones</b> <ul style="list-style-type: none"> <li>☐ Award North Side Automatic Train Control work</li> <li>• Initiate Commuter Rail resiliency program</li> </ul> </li> </ul>
Accessibility Program	\$49M	<ul style="list-style-type: none"> <li>☐ Enhance system-wide accessibility through investment in station upgrades, replacement and redundant elevators, bus stop improvements, and removing other barriers at stops and stations</li> </ul>
Risk Management and Mitigation Program	\$38M	<ul style="list-style-type: none"> <li>☐ Advance Green Line Train Protection</li> <li>☐ Support OSHA implementation with priority capital investments</li> </ul>
AFC 2.0	\$16M	<ul style="list-style-type: none"> <li>• Award Design-Build contract for equipment installation (FY 2020)</li> </ul>
Customer Experience and Tech. Improvements Program	\$37M	<ul style="list-style-type: none"> <li>✓ <b>Launch Customer Technology Capital Program</b> <ul style="list-style-type: none"> <li>☐ Improve wayfinding and lighting at Top 10 stations</li> <li>☐ Support Better Bus Project through targeted capital investments in partnership with cities and towns</li> </ul> </li> </ul>
Process Improvements and Innovation	\$15M	<ul style="list-style-type: none"> <li>✓ <b>Begin FMIS upgrade and business process redesign</b></li> <li>✓ <b>Launch Project Management Information System (PMIS) Phase 2</b></li> </ul>

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## FY19 Milestones & Achievements: Expansion Programs

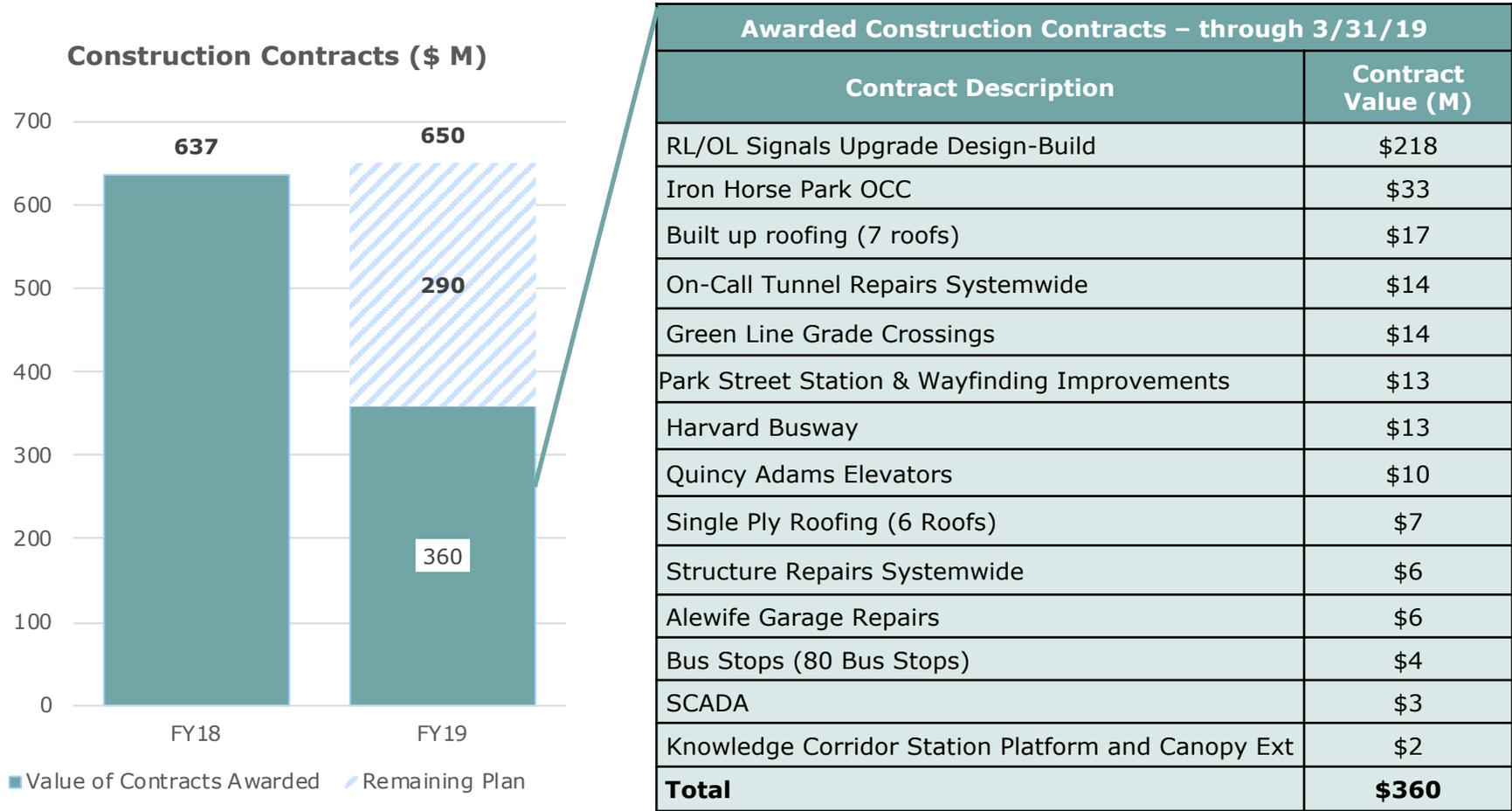
CIP Program	FY19 CIP \$	FY 2019 Goals and Objectives
Green Line Extension	\$179M	<ul style="list-style-type: none"> <li>✓ <b>Introduce new GL Type 9 vehicles into revenue service</b></li> <li>☐ Bridge replacements at Broadway, Washington Street, and Medford St</li> <li>☐ Complete the Design Packages (DP) for all of the Early Release Construction (ERC) aspects</li> <li>✓ <b>Start Construction of critical retaining walls, track work, bridge work and corridor drainage</b></li> </ul>
Expansion projects	\$17M	<ul style="list-style-type: none"> <li>✓ <b>Complete Blue Hill Ave Station on the Fairmount Line</b></li> <li>☐ Award construction contract for new Chelsea Commuter Rail Station</li> </ul>

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## FY19 KPI: Award > \$650M in Capital Construction Contracts – Awarded-to-Date

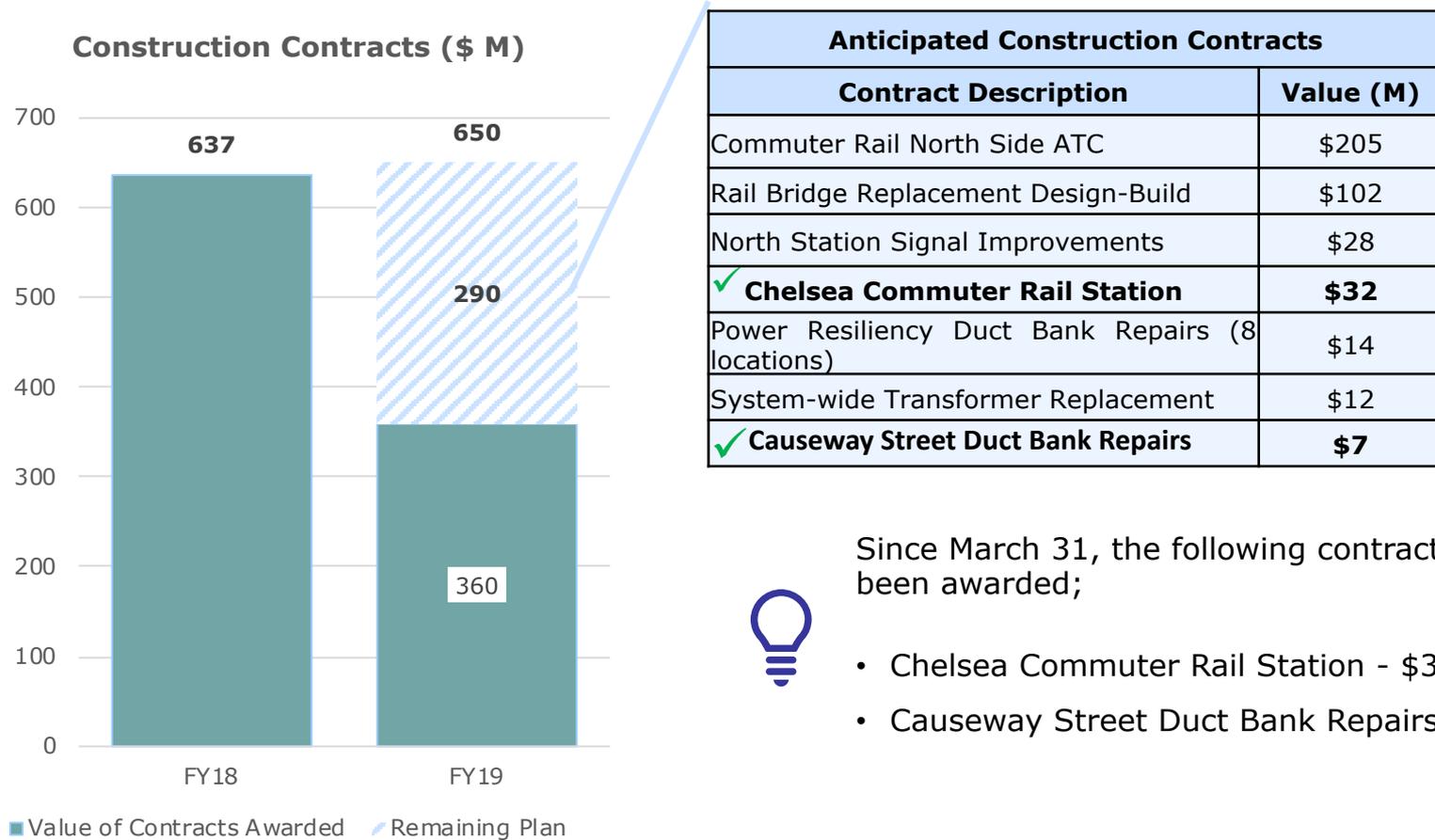
Capital Construction contracts on pace to hit FY19 target.





## FY19 KPI: Award > \$650M in Capital Construction Contracts – Planned for FY19

Capital Construction contracts on pace to hit FY19 target.



Since March 31, the following contracts have been awarded;

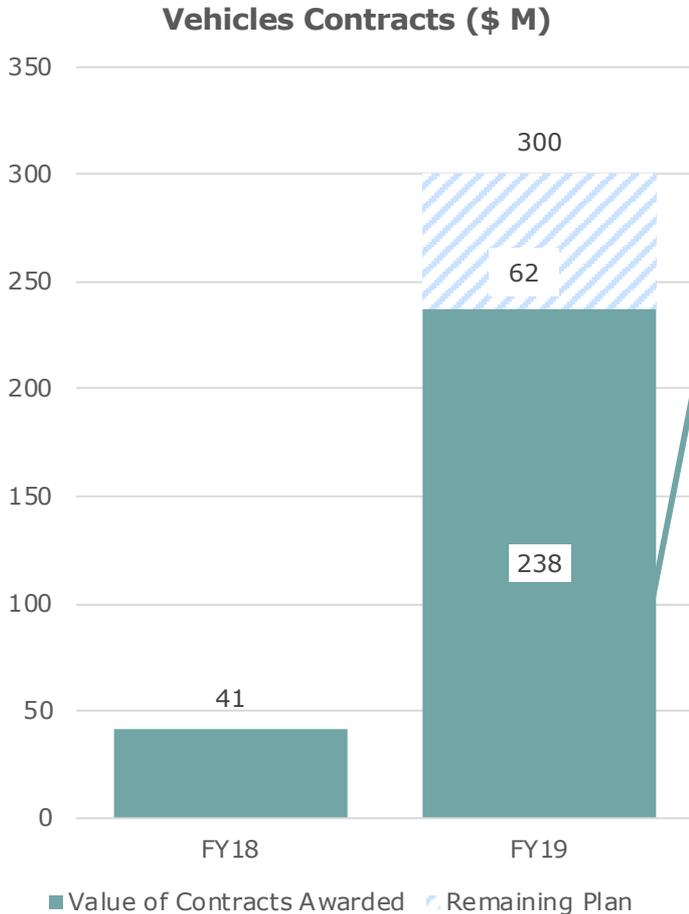


- Chelsea Commuter Rail Station - \$32M
- Causeway Street Duct Bank Repairs - \$7M



## FY19 KPI: Award \$300M in Vehicle Procurement Contracts- Awarded to Date

Vehicle commitments on pace to hit FY19 target.

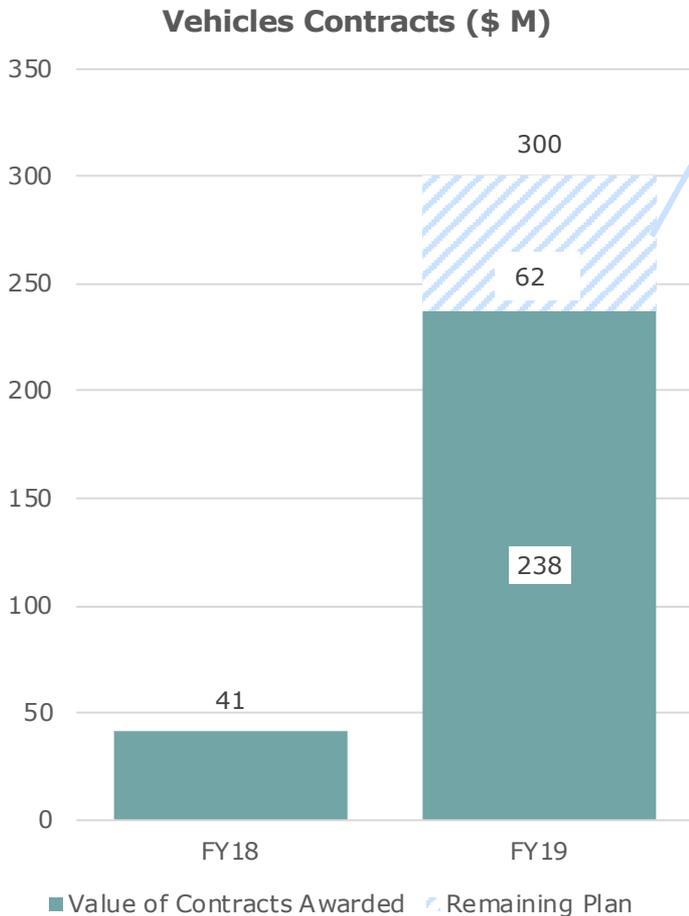


Awarded Vehicle Contracts – Through 3/31/19	
Contract Description	Value (M)
194 Hybrid Buses	\$150.5
Green Line Type 10 Professional Services	\$44
Green Line Train Protection Professional Services	\$18
5 LoNo Bus Procurement	\$13
New Bus Professional Services	\$12.5
<b>Total</b>	<b>\$238</b>



## FY19 KPI: Award \$300M in Vehicle Procurement Contracts- Planned for FY19

Vehicle commitments on pace to hit FY19 target.



Anticipated Vehicle Contracts	
Contract Description	Est. Value (M)
Green Line Train Protection vendor	\$85
✓ Commuter Rail Locomotive overhaul option	\$85
33 Bi-level Coach - overhaul	\$57
Professional Services Bi-level Coaches - new	\$31
Mid-Life overhaul-25 New Flyer hybrid 60 ft bus	\$16
Professional Services for future bus overhauls	\$11
Professional Services Bi-level Coach - overhaul	\$8



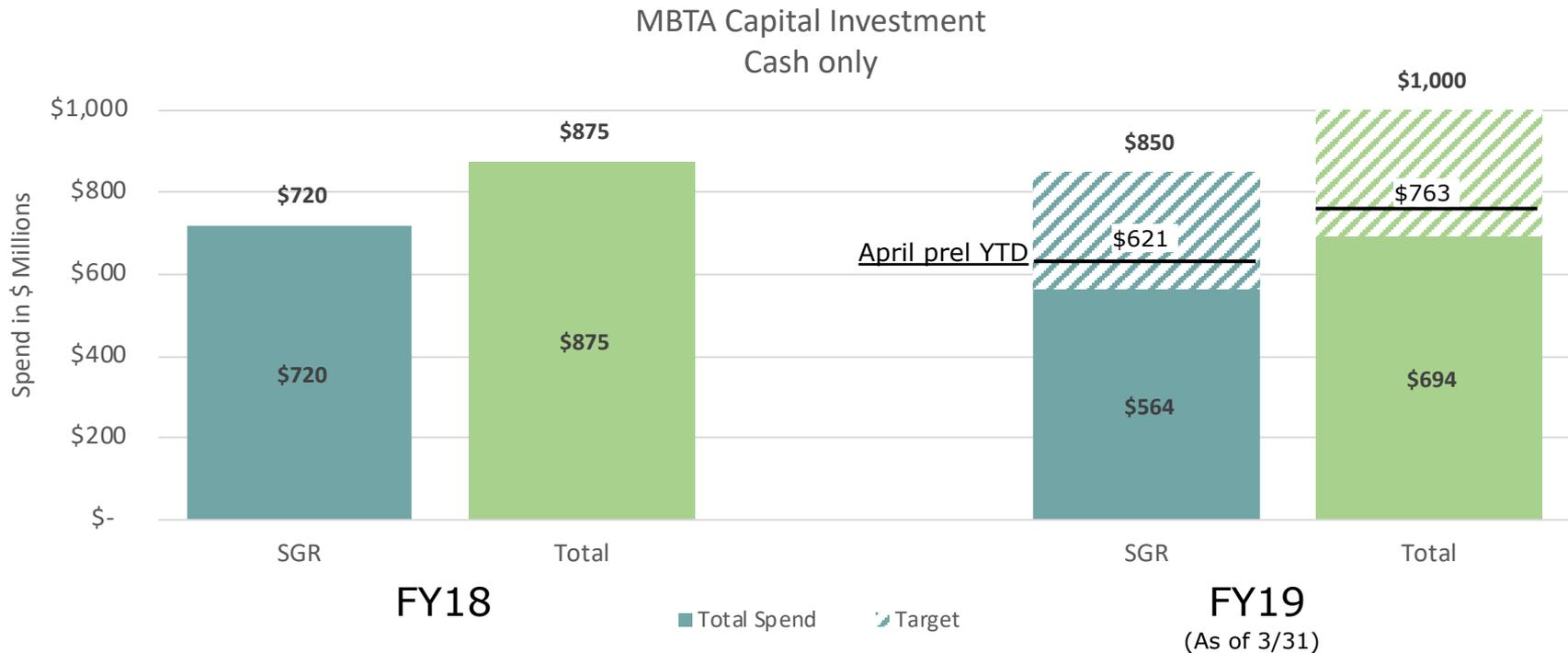
Since March 31, the following contracts have been awarded;

- Commuter Rail Locomotive overhaul option - \$85M



## FY19 KPI: \$1B Total Capital Investment and \$850M SGR Capital Investment

MBTA continues to make progress toward aggressive capital delivery targets; SGR spend is trailing behind \$850M goal while expansion spend will exceed \$150M target. Management is focused on closing this gap.



As of 3/31/19, the MBTA invested \$694M in its capital program and achieved 69% of FY19 Target. As of April 30, 2019, the MBTA had invested ~\$763M and achieved 76% of its target. April accounting period has not closed as of the date of this presentation.

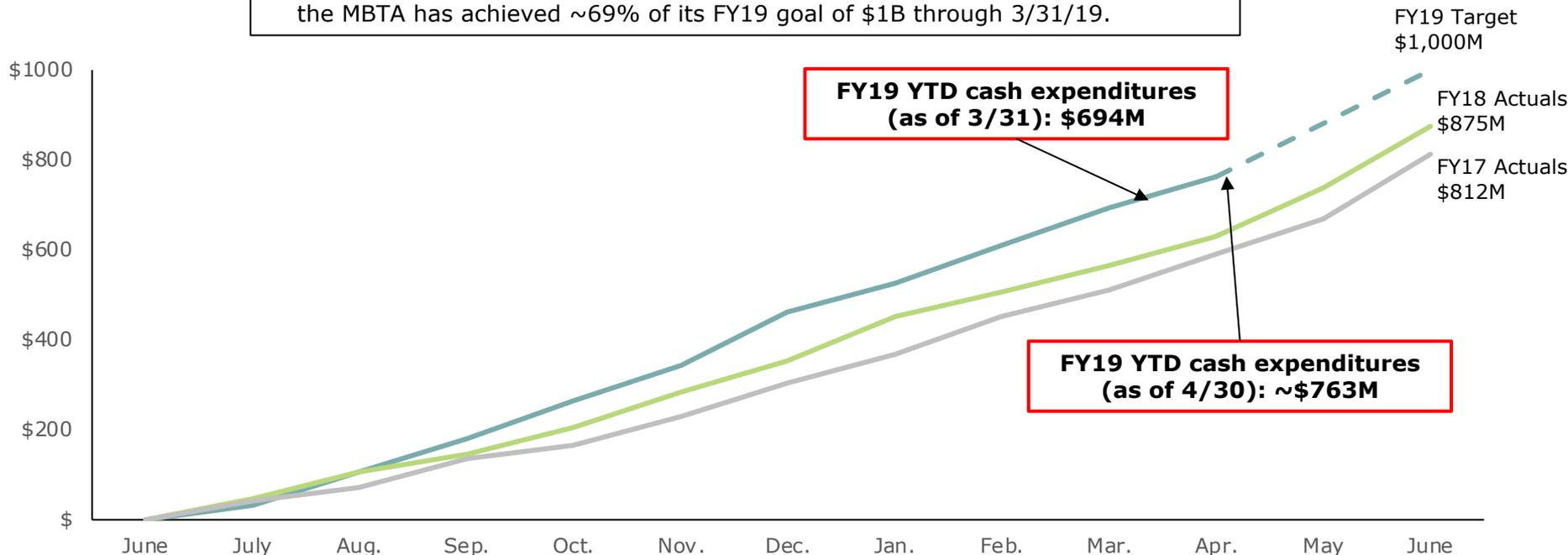


### Q3 Capital Program Update

## FY19 KPI: \$1B Total Capital Investment - YTD Total Spending vs. Previous Years

- FYTD dollars spent is ahead of the previous two years through 9 months.
- In FY17 and FY18, July-March accounted for ~64% of the total FY spend, while the MBTA has achieved ~69% of its FY19 goal of \$1B through 3/31/19.

MBTA Capital Spending Actuals (\$M)



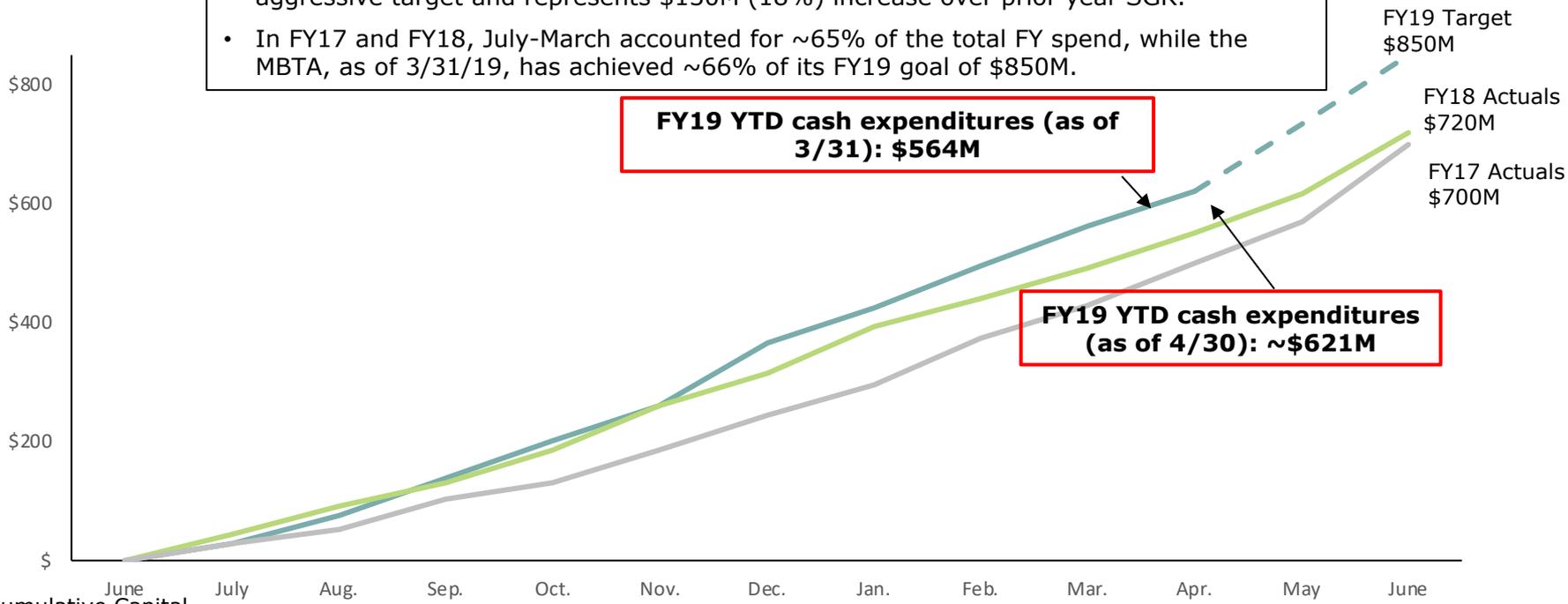
MBTA Cumulative Capital Spending Actuals (\$M)

	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Jan.</u>	<u>Feb.</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
<b>FY19 (\$M)</b>	\$33	\$105	\$180	\$265	\$343	\$459	\$527	\$609	\$694	~\$763		
<b>FY18 (\$M)</b>	\$48	\$105	\$146	\$205	\$286	\$353	\$454	\$507	\$567	\$631	\$736	\$875
<b>FY17 (\$M)</b>	\$40	\$72	\$134	\$167	\$232	\$304	\$366	\$451	\$512	\$588	\$670	\$813



# FY19 KPI: \$850M SGR Spending - YTD Total SGR Spending vs. Previous Years

- FYTD SGR dollars spent is ahead of the previous two years through 9 months and Q4 historically represents highest quarter for capital spend. However, FY19 KPI is an aggressive target and represents \$130M (18%) increase over prior year SGR.
- In FY17 and FY18, July-March accounted for ~65% of the total FY spend, while the MBTA, as of 3/31/19, has achieved ~66% of its FY19 goal of \$850M.



MBTA Cumulative Capital Spending Actuals (\$M)

	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>	<u>Jan.</u>	<u>Feb.</u>	<u>March</u>	<u>April</u>	<u>May</u>	<u>June</u>
<b>FY19 (\$M)</b>	\$28	\$76	\$139	\$200	\$262	\$365	\$426	\$495	\$564	~\$621		
<b>FY18 (\$M)</b>	\$43	\$91	\$129	\$186	\$260	\$317	\$394	\$440	\$493	\$552	\$616	\$720
<b>FY17 (\$M)</b>	\$28	\$52	\$102	\$129	\$187	\$246	\$295	\$375	\$430	\$500	\$571	\$700

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## Accountability & Reporting: Monthly Dashboard

- In January, the MBTA launched an enterprise-wide monthly capital dashboard for departments, consisting of a standard dashboard report and a review of capital projects to improve accountability and reporting.

- Some of the key KPI's being monitored include;

○ FY19 plan vs. expenditures vs. forecast

○ Lockbox project spending oversight

○ Tracking against planned contract award

○ Status of Major Milestones

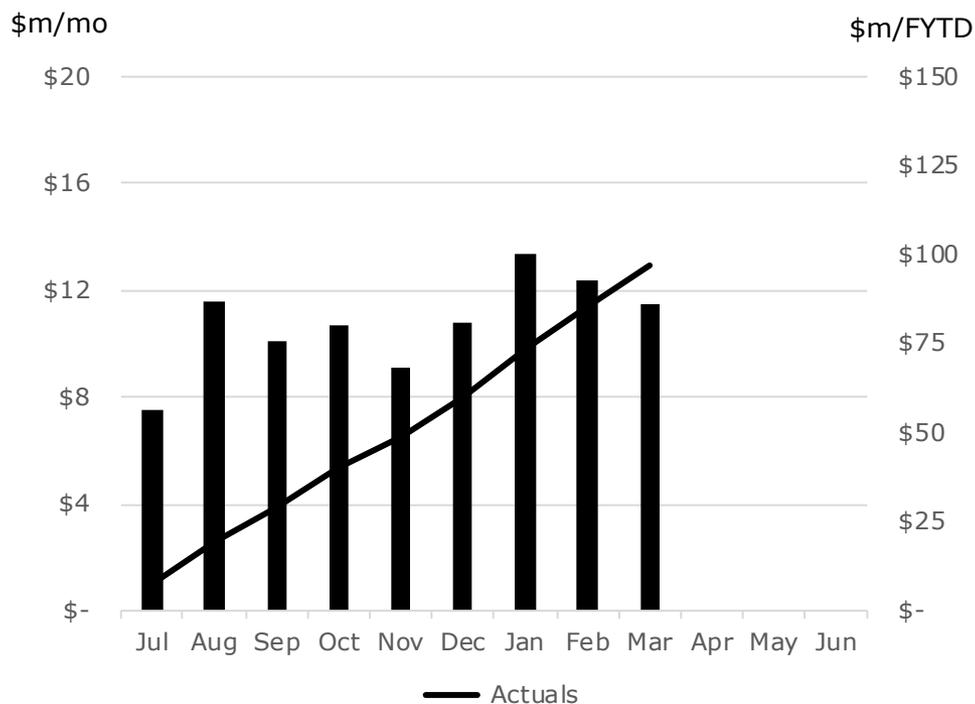
○ Risks, challenges and mitigations





## Accountability and Reporting: FY19 Lockbox Spending

We have reinforced our focus and oversight towards Lockbox funding through more rigorous monitoring and reporting around Lockbox expenditure, allowing for dedicated discussion around this during monthly dashboard reviews with the respective departments.



**175** Number of current active Lockbox projects

**24** Projects are spread across 24 departments

**\$5M** Average budget of Lockbox funded Projects

**\$150M** Total FY19 Lockbox funding

**\$97M** FY19 Lockbox spend thru 3/31

**Q4** Management continuous to focus on achieving FY19 target spend, through monitoring and departmental reviews

**Q4** Has historically been the highest quarter for Lockbox spending



## Accountability & Reporting: Launched PMIS Phase II Processes and Training

The PMIS Implementation have made significant progress over the last quarter in finalizing phase 2 and starting to train all relevant stakeholders on the newly deployed processes. We will continue to build on the momentum as we onboard more projects and train more users over the next few months.

**762** Users Received basic training



**12** NEW Processes deployed this month



**320** Projects Onboarded



**51** Users Received Process training



**574k** Documents uploaded



**3017 GB** Size of files migrated



- The new capital project processes deployed this month will increase process efficiencies, create transparency and improve collaboration between consultants, contractors and MBTA staff across projects.
- Some of these processes include RFI's, Change Orders, Design Changes, Daily Reports, Incident Reports etc. while they also enable 'electronic signature'.
- The MBTA has also increased its internal PMIS administration and training capacity, driving towards better user support, adoption and sustainability.



## FY19 Q4 Look Ahead

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- Management continues to focus on:
  - Carefully managing projects within the SGR and expansion programs to achieve the FY19 milestones and objectives.
  - Concentrating on contract awards in Q4 to build a pipeline that will drive future spend.
    - Since March 31, 2019, the MBTA awarded another \$233M in capital contracts (including the South Coast Rail PM/CM contract for \$109M)
  - Closely monitoring outstanding expenditure over the next 2 months, leveraging our monthly capital dashboard reviews to drive timely processing.
    - Preliminary FYTD 2019 capital spend through April, 2019 is ~\$763M, including ~\$621M of SGR.
    - Lockbox FY19 YTD capital spend through April, 2019 is ~\$107M.
    - Q4 has historically been the highest quarter for capital expenditures. However, \$850M SGR target is aggressive and represents \$130M (18%) increase over prior year.