



**Massachusetts Bay  
Transportation Authority**

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## **Capital Program Update: FY18 Recap and FY19 Look Ahead**

**October 1, 2018**

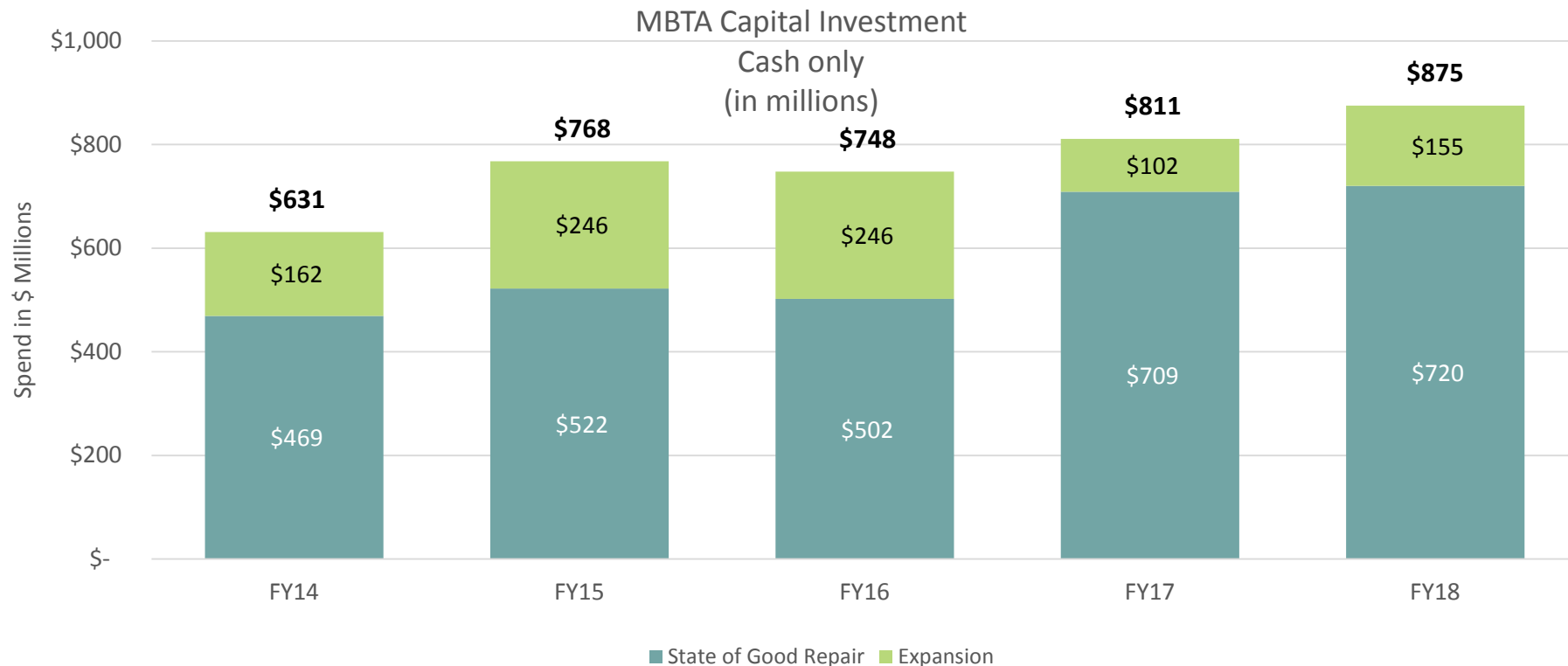


## FY 2018 Recap

| Capital Program FY18 Goals   | FY18 Accomplishments  |  |
|--|---|--|
| 1) <i>Execute approved FY18-FY22 Capital Investment Plan (CIP)</i>   | <ul style="list-style-type: none"> <li>Invested \$1.0B in capital program (\$875M cash + \$150M accrued work)</li> <li>Achieved 93% of FY18 Plan</li> <li>Awarded \$2.1 billion in capital contracts</li> <li>Awarded \$639M in SGR construction contracts</li> </ul> |  |
| 2) <i>Lead the development of a FY19-23 Capital Investment Plan that helps advance the MBTA's strategic priorities and achieve meaningful outcomes for customers</i> | <ul style="list-style-type: none"> <li>Developed and funded \$8.0B 5-year Plan</li> <li>Tied programs to specific strategic imperatives</li> </ul>  |  |
| 3) <i>Improve project controls, reporting, and processes and implement enterprise-wide project management information system (PMIS)</i>                              | <ul style="list-style-type: none"> <li>Every <b>new</b> project is in PMIS as of 7/1/18</li> <li>~150 FY 19-23 CIP projects in PMIS</li> <li>592 total users in PMIS</li> <li>372,000 documents uploaded</li> <li>~140 training sessions held</li> </ul>              |  |



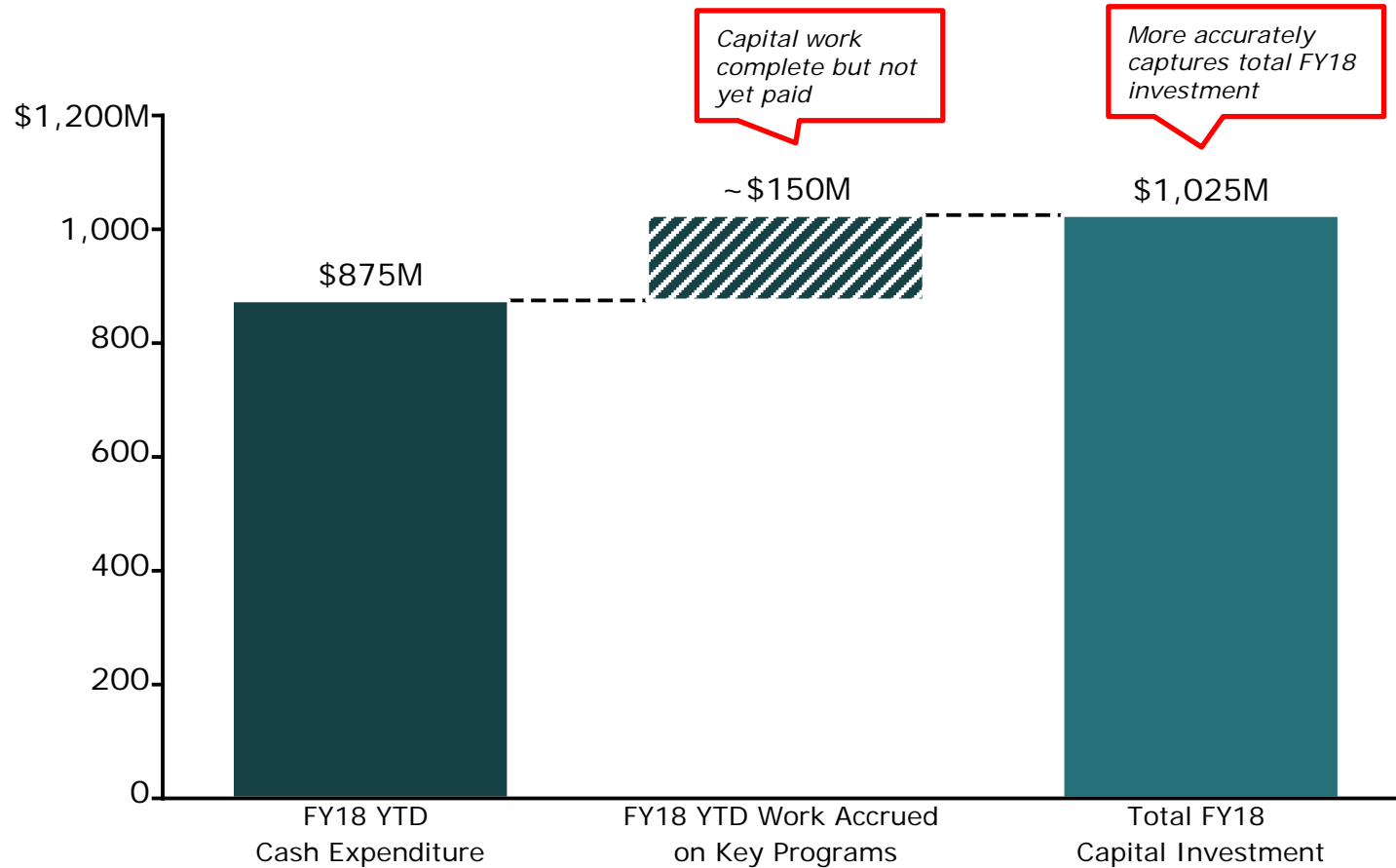
**In 2018, the MBTA invested \$875M in its capital program and achieved 93% of FY18 Plan.**



- Total MBTA capital investment FY14-18: **\$3.8 billion**
  - \$2.9 Billion for State of Good Repair
- MBTA projected capital investment FY19-23: **\$8.0 billion**
  - \$6.7 billion for State of Good Repair



## FY 2018 YTD Total Capital Investment, including accrued work

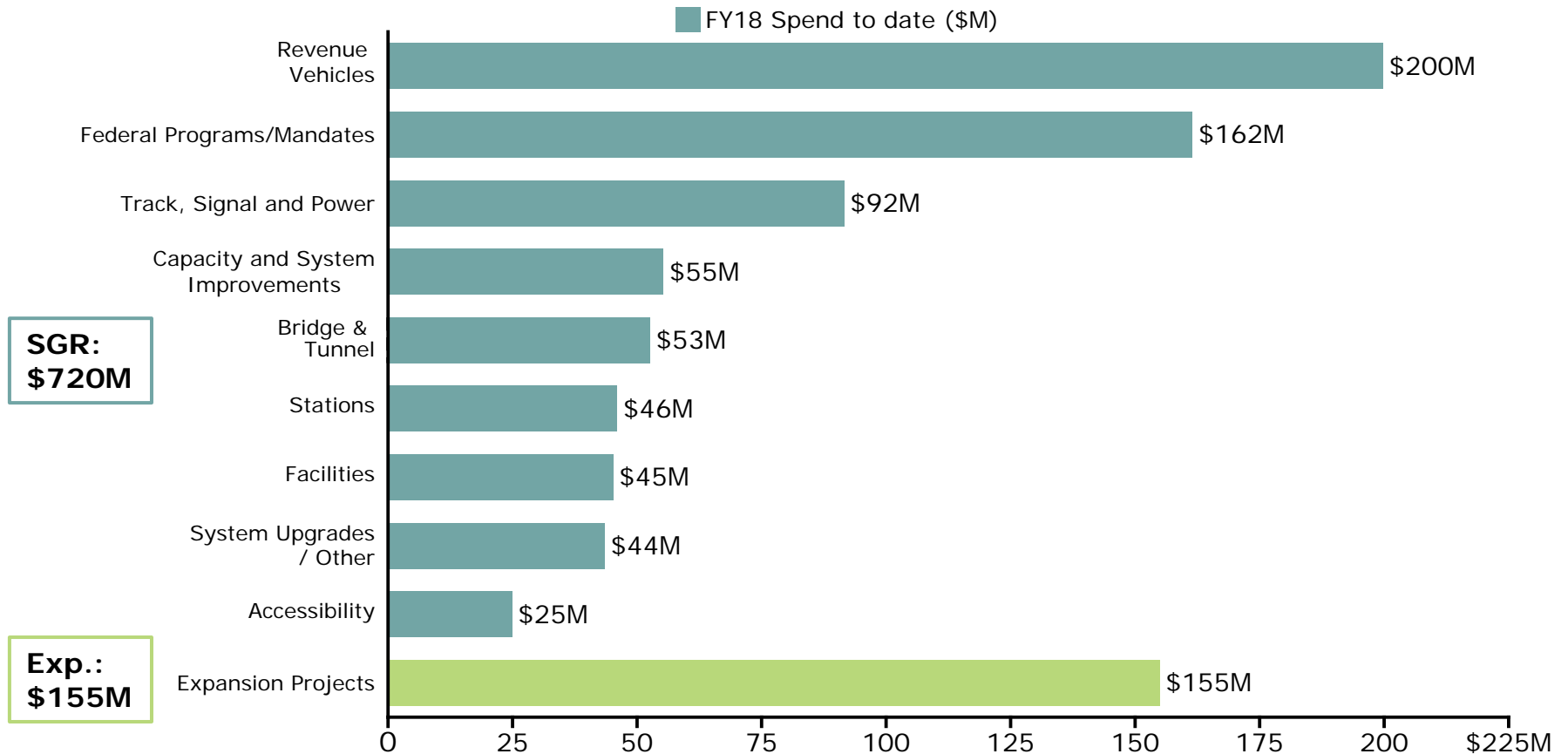


\* Assumes accrued work occurred in FY18.



## FY 2018 Spend by CIP Program

**Total FY 2018 Cash Spending: \$875M**



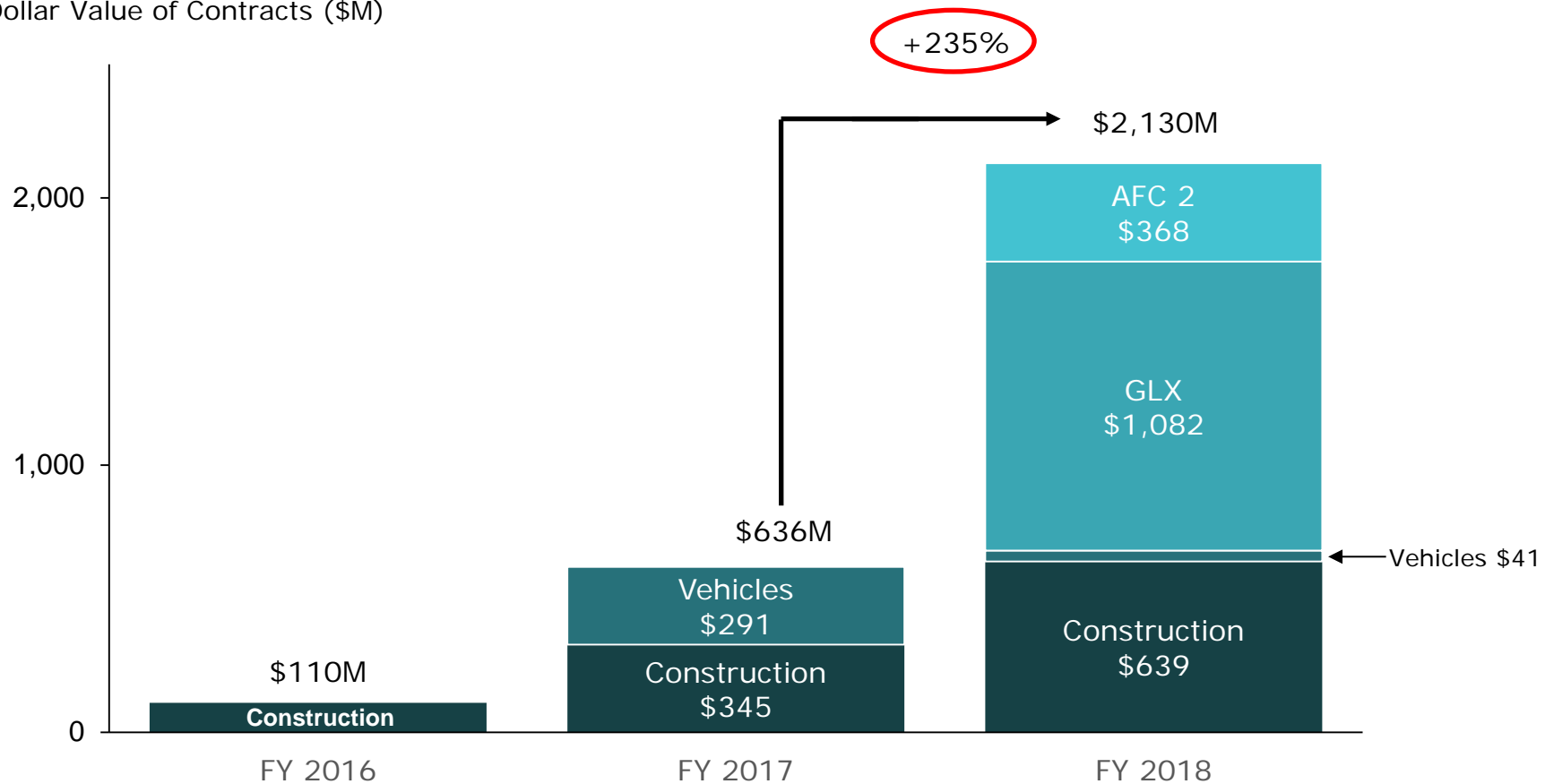
Note: Numbers may not sum due to rounding.

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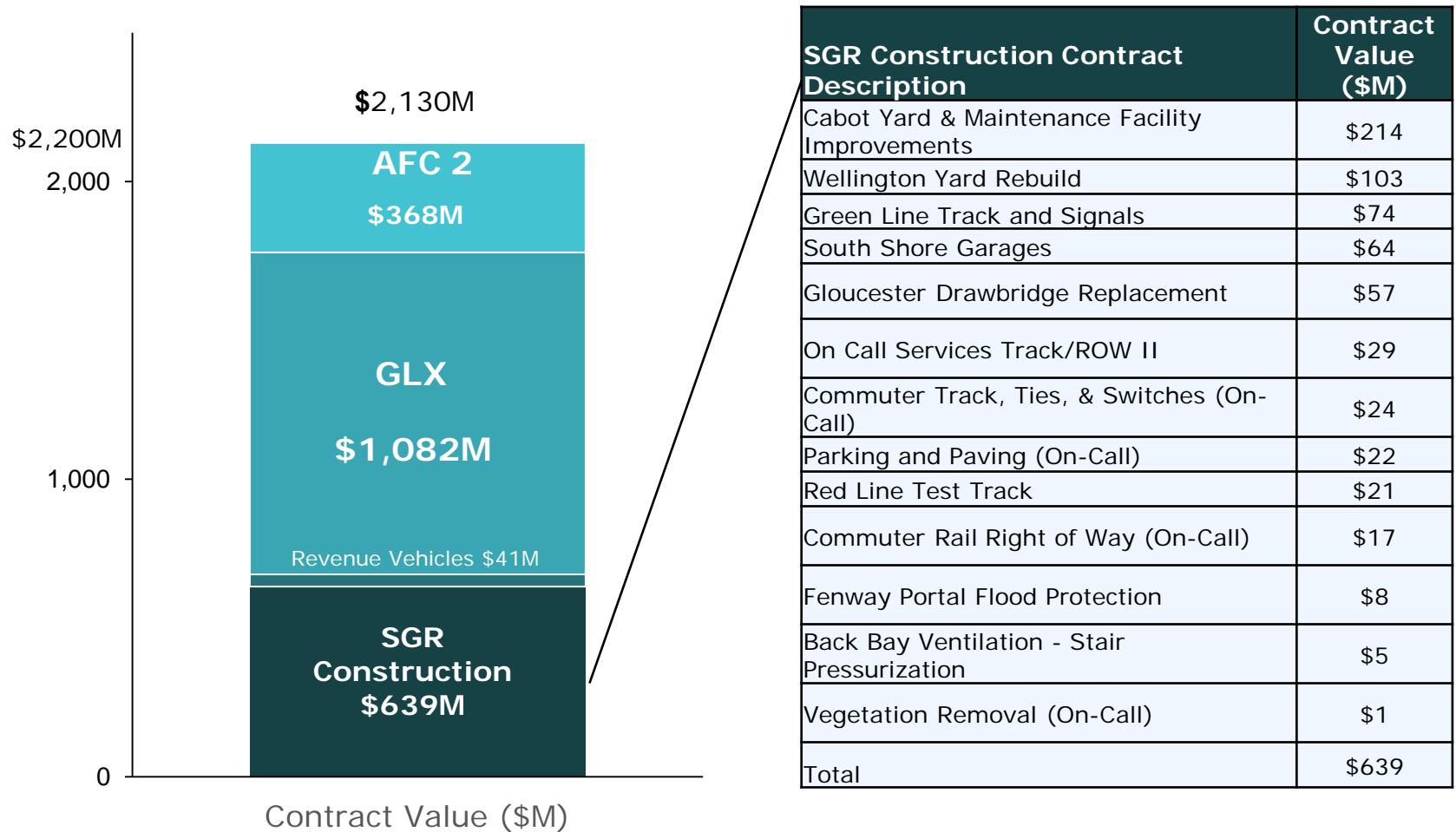
## Overall, the MBTA awarded \$2.1 billion in new capital contracts in FY 2018

Dollar Value of Contracts (\$M)





## Capital construction commitments entered in FY18 are building a strong pipeline of future work.





## FY 2018 Major Project Milestones

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- **Green Line Extension:** \$1 billion Design-Build contract awarded in November 2017 with notice to proceed in December 2017; Mobilized the DB entity and the MBTA team. Advanced the design of many critical design packages. Delivery of first two pilot cars.
- **Red-Orange Line Program:** First new Orange Line pilot cars arrived for testing in December 2017; 100% of Orange Line and Red Line infrastructure construction contracts awarded (if Signals contract awarded today).
- **Positive Train Control:** MBTA has achieved its goal for meeting the requirements necessary to apply for and be granted an extension for a full PTC system deployment by 2020.
- **AFC 2.0** contract awarded November 2017 and reached financial close in March 2018. Program Director hired.
- **Vehicles:** Completed delivery of 376 new buses. Two new ferries placed in service. Completed overhaul 15 bi-level commuter rail coaches and 24 Green Line Type 7 vehicles in FY 18.





## FY 2018 Federal Program Accomplishments

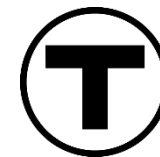
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- Executed nearly **\$1.5 billion** in grants from the FTA over the past two years, making available close to \$1.2 billion in federal funds (80%) for the capital program.
- This includes nearly **\$400M** in federal funds for the GLX project as well as funding for the PTC program, bus procurements, South Shore garages and initial funding for Green Line Train Protection.
- Expended **\$354M** through FTA-funded grants in FY18. Examples include: Charlestown Seawall, Fenway Portal and of course, PTC.
- Through discretionary grant programs, applied for and were awarded **\$28M** of federal funds for the implementation of PTC and **\$6.05M** of federal funds for the Hingham ferry dock.
- Closed 13 FTA grants in FY18.



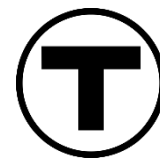
## PMIS Project Summary

| FY18 Accomplishments   | FY19 Look Ahead  |
|--|--|
| <ul style="list-style-type: none"><li>✓ Configuration to allow new Pay-Go projects to begin using e-Builder</li><li>✓ Developed CIP Project Initiation process, including the project charter approval for FY19-23 projects</li><li>✓ 153 projects within FY19-23 CIP have been uploaded into e-Builder</li><li>✓ 592 total users trained in PMIS (including 263 GLX users)</li><li>✓ 372,000 documents have been uploaded to date (64,000 are in the GLX project)</li><li>✓ Conducted the following trainings:<br/>~140 Trainings</li></ul> | <ul style="list-style-type: none"><li>▪ Utilize CIP Project Initiation process for FY20-24 CIP Development</li><li>▪ Develop and configure 17 new processes to increase document management efficiency</li><li>▪ Key on-going workstreams:<ul style="list-style-type: none"><li>○ Training and adoption</li><li>○ Functional process analysis</li><li>○ e-Builder system design and configuration</li><li>○ Production deployment</li></ul></li><li>▪ PMIS Sustainability Model<ul style="list-style-type: none"><li>○ Standard Operating Procedures</li></ul></li></ul> |



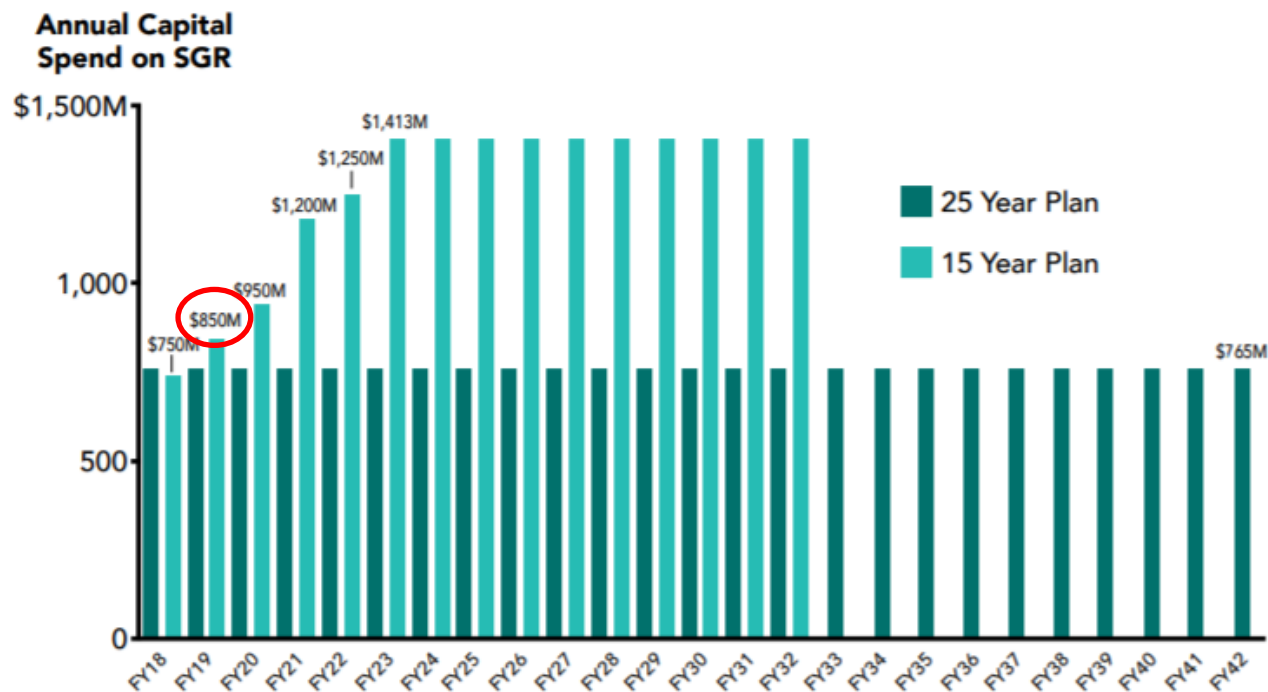
## Capital Key Performance Indicators (KPIs) for FY 2019

| Key Performance Indicator                               | FY 2018 target | FY 2018 actual | FY 2019 target |
|---|----------------|----------------|----------------|
| Total capital investment                                | \$942M         | \$875M         | ~\$1 billion   |
| State of Good Repair capital investment                 | \$790M         | \$720M         | \$850M         |
| Capital construction contracts awarded                  | \$450M         | \$639M         | >\$650M        |
| Vehicle procurement contracts awarded                   | New for FY19   | New for FY19   | ~\$300M        |
| Percentage of FY19-23 CIP projects underway/in progress | New for FY19   | New for FY19   | >75%           |
| % of FY19 Capital Investment Plan Delivered             | New for FY19   | New for FY19   | ~95%           |



## 15-year plan for SGR investment

### SGR SPEND PLAN TO ELIMINATE BACKLOG IN 15 YEARS

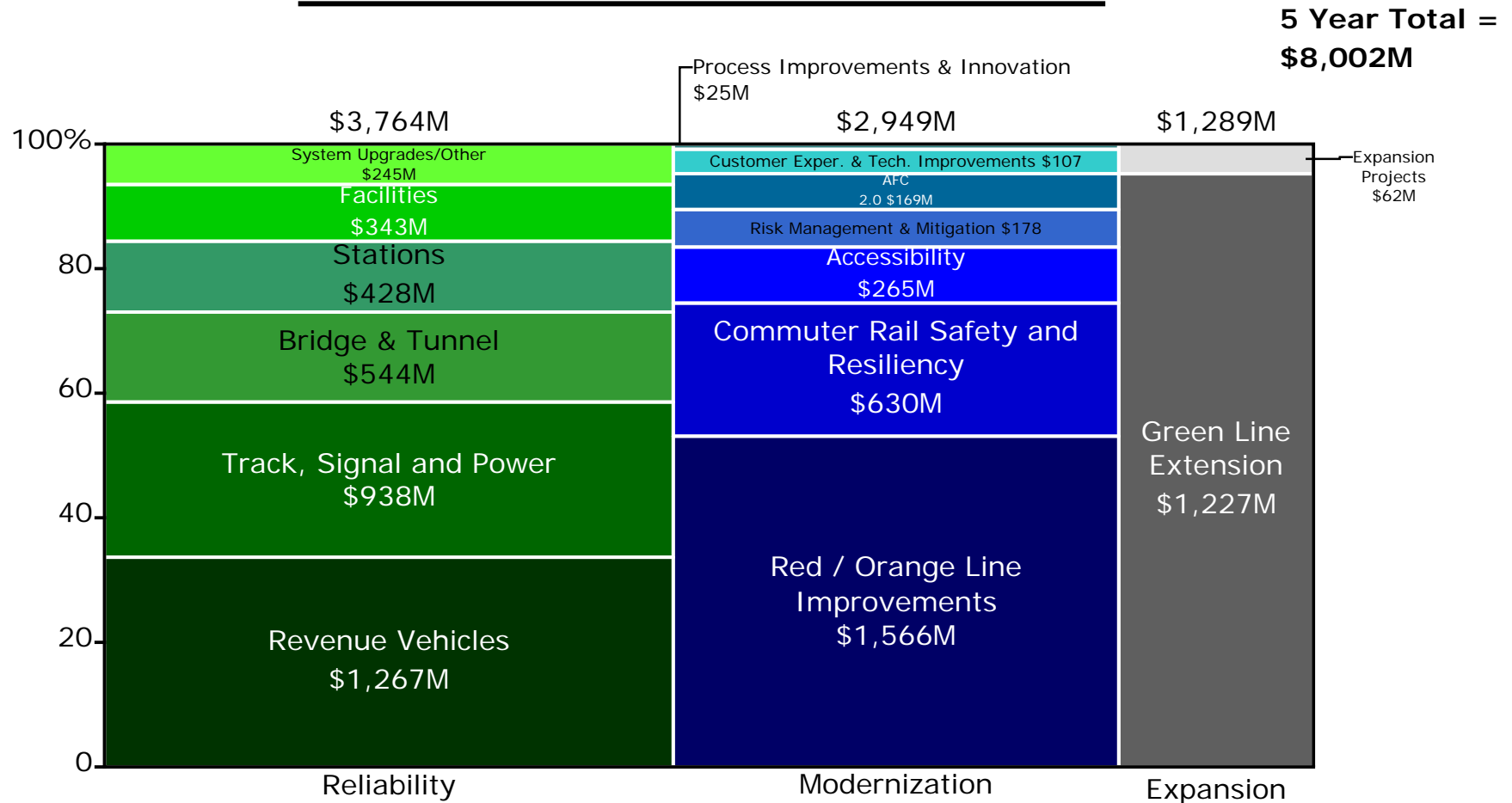


*Note: Dollar figures shown above are 2015 dollars and uninflated (future update will include inflation). SGR backlog assumption based on 2015 assessment of \$7.3B SGR backlog.*



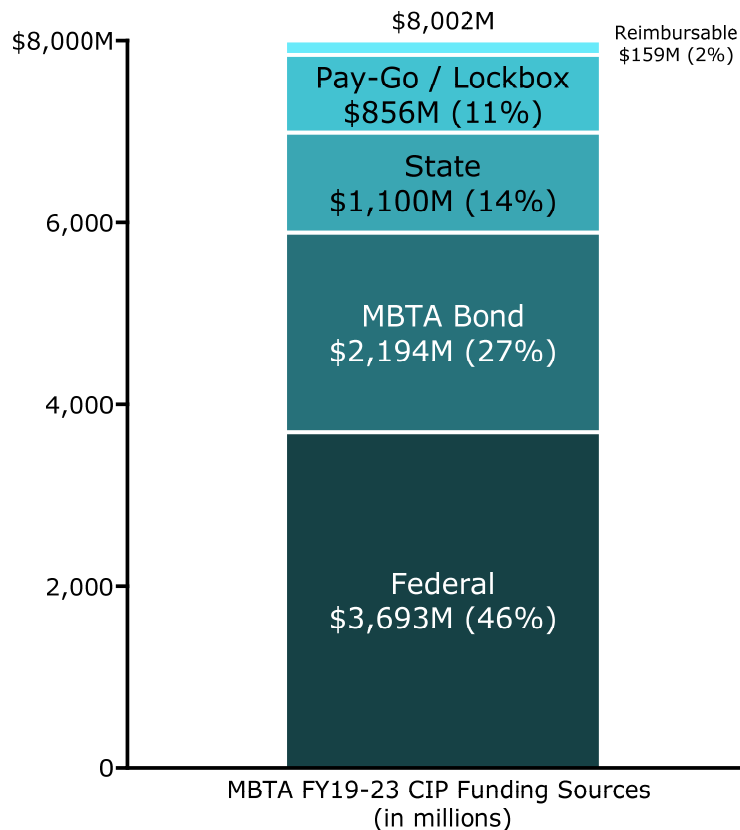
## FY19-23 Capital Investment Plan calls for ~\$8B in capital spending over the next five years

FY19-23 CIP Spending by Priority and Program  
(\$million)





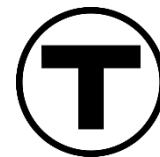
## FY19-FY23 CIP Funding Sources



*Note: Federal source includes GLX federal funding.*

### Sources highlights:

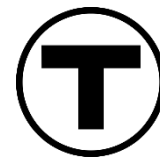
- **Federal** funds continue to be the single largest source of capital for the MBTA
  - GLX Full Funding Grant Agreement: \$996M overall; \$828M in FY19-23
  - FTA formula Funds: \$2.7B in FY19-23
  - Other federal: \$116M in FY19-23
- **MBTA Bonds**, including Sustainability Bonds, support the 20% match for Federal projects, as well as MBTA-only funded projects
- **State** funds include Rail Enhancement Program special obligation bonds for GLX, Red Line/Orange Line improvements, and other projects
- **Pay-Go/Lockbox** reflects an assumption of \$150M/year, plus prior year carryover
- **Other** funding sources include municipal contributions and other reimbursements



## Major Reliability program goals and objectives for FY 2019

| CIP Program                           | FY19-23 \$ | FY 2019 Goals and Objectives   |
|---------------------------------------|------------|--|
| Revenue Vehicles                      | \$1,287M   | <ul style="list-style-type: none"> <li>Implement near-term fleet investments identified in the Integrated Fleet and Facilities Plan</li> <li>Exercise option contract for additional 194 hybrid buses</li> <li>Advance planning for Green Line Type 10 vehicle</li> <li>Receive LoNo pilot buses for testing to inform future fleet</li> </ul> |
| Track, Signal, and Power              | \$938M     | <ul style="list-style-type: none"> <li>Begin Green Line D Branch Track and Signals project</li> <li>Continue Orange Line Direct Fixation (track) repairs</li> <li>Award Green Line Grade Crossings construction contract</li> </ul>  |
| Bridges and Tunnels                   | \$544M     | <ul style="list-style-type: none"> <li>Procure professional services for inspection/rating of bridge inventory</li> <li>Award "bridge bundle" design-build contract for six CR bridges</li> <li>Begin Orange Line Tunnel Repair project in downtown core</li> <li>Initiate design for Lechmere Viaduct rehabilitation</li> </ul>               |
| Stations<br>(includes parking)        | \$428M     | <ul style="list-style-type: none"> <li>Complete Wollaston Station reconstruction project</li> <li>Initiate comprehensive station needs assessment</li> <li>Advance design for Winchester Center Station Improvements</li> <li>Award Alewife Garage repairs contract</li> </ul>   |
| Facilities<br>(admin and maintenance) | \$343M     | <ul style="list-style-type: none"> <li>Advance planning for new or expanded bus maintenance facility, consistent with Integrated Fleet and Facilities Plan</li> <li>Begin Facility Roof Replacement project to replace roofs at 13 facilities</li> <li>Award construction contract for CR Iron Horse Park OCC</li> </ul>                       |
| System Upgrades                       | \$245M     | <ul style="list-style-type: none"> <li>Implement MBTA enterprise asset management program</li> <li>Implement MBTA cybersecurity programs</li> <li>Begin procurement for systemwide radio upgrade project</li> </ul>  |

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## Major Modernization program goals and objectives for FY 2019

| CIP Program  | FY19-23 \$ | FY 2019 Goals and Objectives  |
|--|------------|---|
| Red and Orange Line Improvements Program           | \$1,566M   | <ul style="list-style-type: none"> <li>Award Red/Orange Line Signals Design-Build project</li> <li>Introduce new Orange Line cars into revenue service</li> <li>Receive new Red Line pilot cars for testing</li> <li>Complete OL Test Track, RL Test Track, and Wellington Track 38/39</li> </ul> |
| Commuter Rail Safety and Resiliency Program        | \$630M     | <ul style="list-style-type: none"> <li>Achieve Positive Train Control milestones</li> <li>Award North Side Automatic Train Control DB project</li> <li>Initiate Commuter Rail resiliency program</li> </ul>   |
| Accessibility Program                              | \$265M     | <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             | \$178M     | <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  | \$169M     | <ul style="list-style-type: none"> <li>Award Design-Build contract for equipment installation</li> </ul>  |
| Customer Experience and Tech. Improvements Program | \$107M     | <ul style="list-style-type: none"> <li>Improve wayfinding and lighting at Top 10 stations</li> <li>Launch Customer Technology Capital Program</li> <li>Support Better Bus Project through targeted capital investments in partnership with cities and towns</li> </ul>                            |
| Process Improvements and Innovation                | \$25M      | <ul style="list-style-type: none"> <li>Launch Project Management Information System (PMIS) Phase 2</li> <li>Begin FMIS upgrade and business process redesign</li> </ul>   |

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## Major Expansion program goals and objectives for FY 2019

| CIP Program          | FY19-23 \$ | FY 2019 Goals and Objectives   |
|----------------------|------------|--|
| Green Line Extension | \$1,227M   | <ul style="list-style-type: none"><li>• Introduce new GL Type 9 vehicles into revenue service</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>• Start Construction of critical retaining walls, track work, bridge work and corridor drainage</li></ul> |
| Expansion projects   | \$62M      | <ul style="list-style-type: none"><li>• Complete Blue Hill Ave Station on the Fairmount Line</li><li>• Award construction contract for new Chelsea Commuter Rail Station</li></ul>   |



## FY19-23 CIP Reliability Programs: Revenue Vehicles

FY19-23 MBTA CIP Reliability Programs  
Total: \$3.8B

|                                   |
|-----------------------------------|
| System Upgrades/Other<br>\$245M   |
| Facilities<br>\$343M              |
| Stations<br>\$428M                |
| Bridge & Tunnel<br>\$544M         |
| Track, Signal and Power<br>\$938M |
| Revenue Vehicles<br>\$1,267M      |

### FY19 Goals and Objectives:

- Ensure safe, reliable, and resilient operation of revenue vehicle fleets through replacement, overhaul, and capital maintenance projects
- Implement near-term fleet investments identified in the Integrated Fleet and Facilities Plan
- Major project milestones:
  - Exercise option contract for additional 194 hybrid buses
  - Advance planning for Green Line Type 10 vehicle
  - Receive LoNo pilot buses for testing to inform future fleet

### FTA TAM Performance Measure: Rolling Stock

- *Percent of revenue vehicles that have met or exceeded their useful life benchmark*

### Significant projects underway in FY19:

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| - 194 Hybrid Bus Procurement         | - Commuter Rail Coach Overhauls      |
| - Bus Overhauls                      | - Green Line Type 10 Planning/Design |
| - Commuter Rail Locomotive Overhauls | - Green Line #7 Overhauls            |



## FY19-23 CIP Reliability Programs: Track, Signal, and Power

FY19-23 MBTA CIP Reliability Programs  
Total: \$3.8B

|                                   |
|-----------------------------------|
| System Upgrades/Other<br>\$245M   |
| Facilities<br>\$343M              |
| Stations<br>\$428M                |
| Bridge & Tunnel<br>\$544M         |
| Track, Signal and Power<br>\$938M |
| Revenue Vehicles<br>\$1,267M      |

### FY19 Goals and Objectives:

- Ensure safe, reliable, and resilient operation of core infrastructure through replacement, renewal, and capital maintenance projects
- Major project milestones:
  - Begin Green Line D Branch Track and Signals project
  - Continue Orange Line Direct Fixation (track) repairs
  - Award Green Line Grade Crossings construction contract

### FTA TAM Performance Measure: Infrastructure

- *Percent of track segments with performance restrictions*

### Significant projects underway in FY19:

- |  |  |
|--|--|
| - Green Line D Branch Track and Signal Improvement | - Track On-Call                                |
| - Power Program                                    | - Franklin Double Track and Signal             |
| - Commuter Rail Track, Ties, and Switches On-Call  | - Track, Signal, and Power Capital Maintenance |

Note: Red/Orange signals upgrade is now reflected in "Red and Orange Improvements" CIP program



## FY19-23 CIP Reliability Programs: Bridge & Tunnel

FY19-23 MBTA CIP Reliability Programs  
Total: \$3.8B

|                                   |
|-----------------------------------|
| System Upgrades/Other<br>\$245M   |
| Facilities<br>\$343M              |
| Stations<br>\$428M                |
| Bridge & Tunnel<br>\$544M         |
| Track, Signal and Power<br>\$938M |
| Revenue Vehicles<br>\$1,267M      |

### FY19 Goals and Objectives:

- Ensure safe, reliable, and resilient operation of bridge and tunnel infrastructure through inspection, repair, and replacement projects
- Major project milestones:
  - Procure professional services support for inspection and rating of bridge inventory
  - Award “bridge bundle” design-build contract for six Commuter Rail bridges
  - Begin Orange Line Tunnel Repair project in Downtown core
  - Initiate design for Lechmere Viaduct rehabilitation to accommodate new Green Line fleet
  - Procure professional services for North Station Draw 1 Bridge Replacement

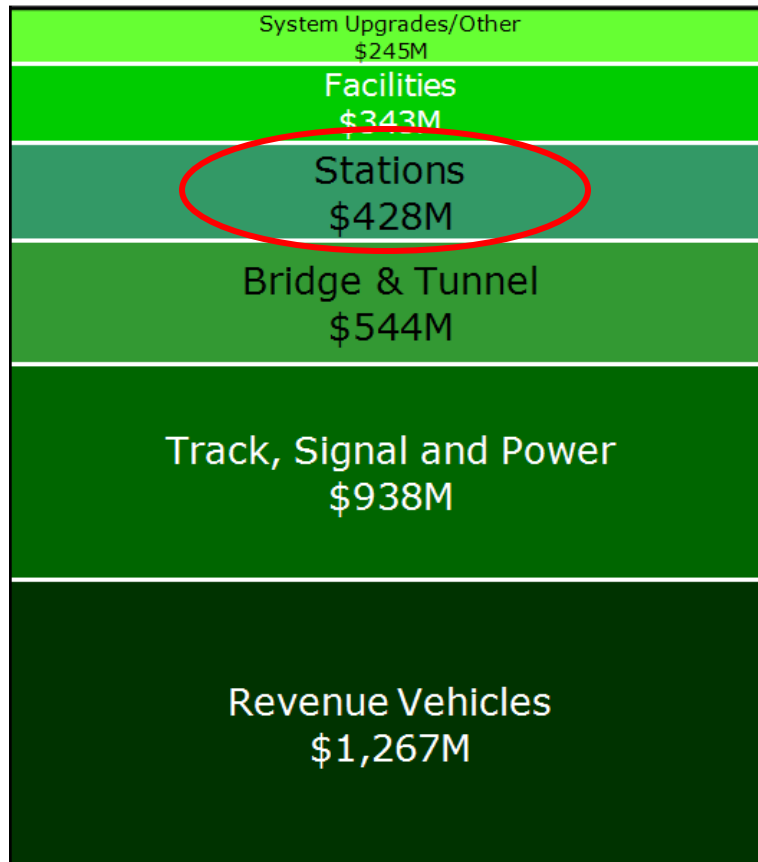
### Significant projects underway in FY19:

- Gloucester Drawbridge Replacement
- Orange Line Tunnel Repairs
- East Street Bridge Replacement
- Inspection and Rating of MBTA System-wide Bridges
- Bridge Bundle



## FY19-23 CIP Reliability Programs: Stations

FY19-23 MBTA CIP Reliability Programs  
Total: \$3.8B



### FY19 Goals and Objectives:

- Ensure safe, reliable, and resilient operation of passenger stations and parking facilities through repair, reconstruction, and capital maintenance projects
- Major project milestones:
  - Complete Wollaston Station project
  - Initiate comprehensive station needs assessment
  - Award Alewife Garage repairs contract
  - Advance design for Winchester Center Station improvements.

### FTA TAM Performance Measure: Facilities

- *Percent of facilities rated below 3 on the condition scale*

### Significant projects underway in FY19:

- |  |                                   |
|--|-----------------------------------|
| - Wollaston Station                            | - Ruggles Station Upgrade         |
| - Quincy Center Garage Demolition              | - Parking Lot Paving – On-Call    |
| - South Shore Garages (Braintree/Quincy Adams) | - Alewife Garage Rehabilitation   |
|  | - Comm. Ave Station Consolidation |



## FY19-23 CIP Reliability Programs: Facilities

FY19-23 MBTA CIP Reliability Programs  
Total: \$3.8B

|                                   |
|-----------------------------------|
| System Upgrades/Other<br>\$245M   |
| <b>Facilities<br/>\$343M</b>      |
| Stations<br>\$428M                |
| Bridge & Tunnel<br>\$544M         |
| Track, Signal and Power<br>\$938M |
| Revenue Vehicles<br>\$1,267M      |

### FY19 Goals and Objectives:

- Ensure safe, reliability, and resilient operation of administrative and maintenance facilities through repair, replacement, and capital maintenance projects
- Major project milestones:
  - Advance planning for new or expanded bus maintenance facility, consistent with Integrated Fleet and Facilities Plan
  - Begin Facility Roof Replacement project to replace roofs at 12 facilities
  - Award construction contract for Commuter Rail Iron Horse Park Operations Control Center

### FTA TAM Performance Measure: Facilities

- *Percent of facilities rated below 3 on the condition scale*

### Significant projects underway in FY19:

- Facility Roof Replacements
- Charlestown Seawall Rehabilitation
- Iron Horse Park Operations Control Center
- Fenway Portal Flood Protection
- Bus Maintenance Facility



## FY19-23 CIP Reliability Programs: System Upgrades

FY19-23 MBTA CIP Reliability Programs  
Total: \$3.8B

|                                   |
|-----------------------------------|
| System Upgrades/Other<br>\$245M   |
| Facilities<br>\$343M              |
| Stations<br>\$428M                |
| Bridge & Tunnel<br>\$544M         |
| Track, Signal and Power<br>\$938M |
| Revenue Vehicles<br>\$1,267M      |

### FY19 Goals and Objectives:

- Ensure safe, reliable, and resilient operation of non-revenue vehicles, IT systems, and other equipment through replacement and renewal projects
- Major project milestones:
  - Implement MBTA enterprise asset management program
  - Implement MBTA cybersecurity programs
  - Begin procurement for system-wide radio upgrade project

### FTA TAM Performance Measure: Equipment

- *Percent of non-revenue vehicles that have met or exceeded their useful life benchmark*

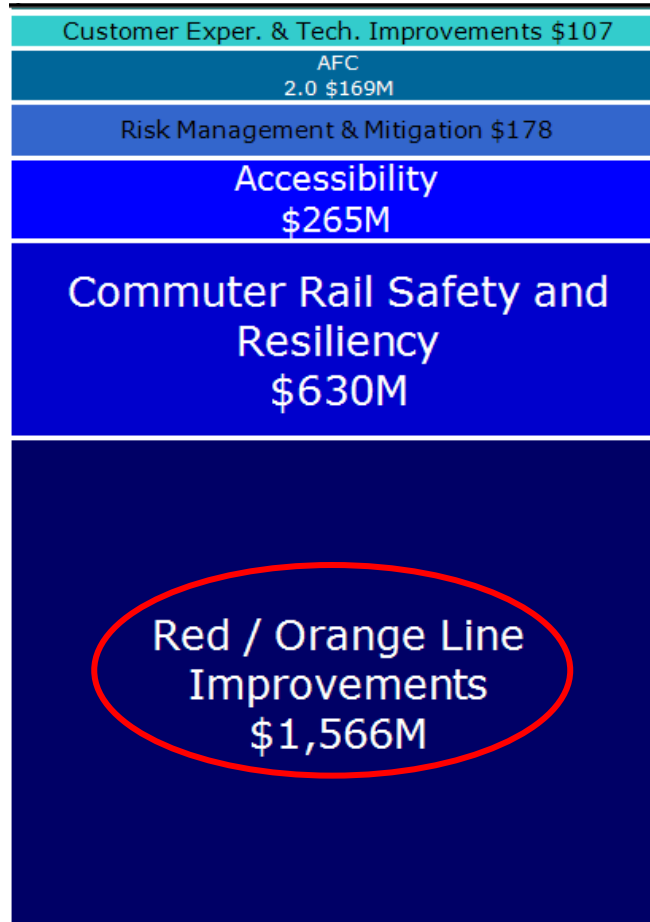
### Significant projects underway in FY19:

- System-wide Radio Upgrades
- Infrastructure Asset Management
- Non-Revenue Vehicle Program
- MBTA Security Modernization
- 45 High Street Data Center Upgrade



## FY19-23 CIP Modernization Programs: Red / Orange Line Improvements

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Deliver vehicle, facility, and infrastructure projects to achieve the program goal of 3 minute headways on the Red Line and 4.5 minute headways on the Orange Line
- Major project milestones:
  - Introduce new Orange Line vehicles into revenue service
  - Award design-build contract for Red and Orange Line Signals Modernization
  - Complete Orange Line Test Track, Red Line Test Track, and Wellington Yard Track 38/39 improvement projects

### Significant projects underway in FY19:

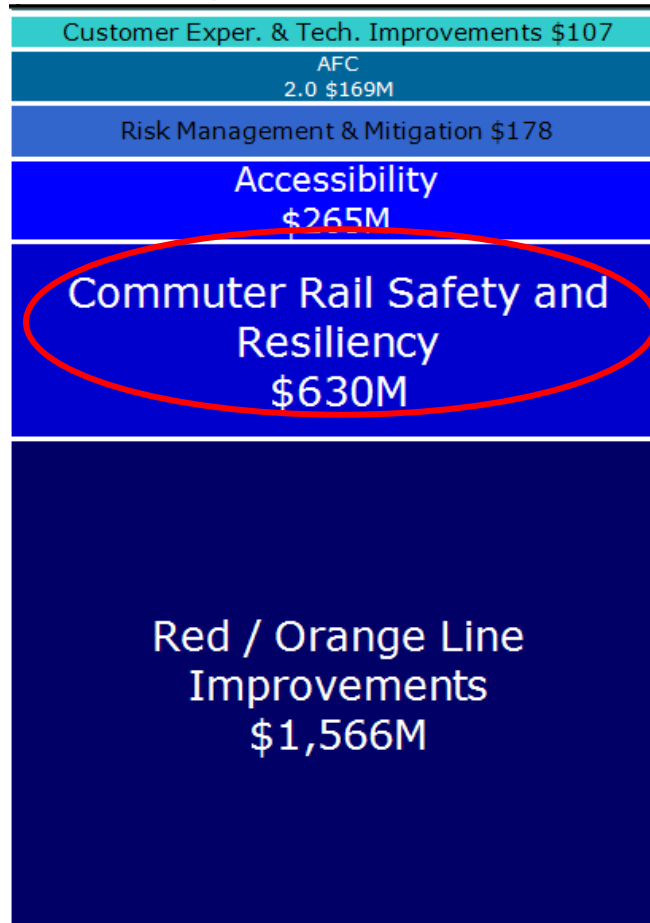
- |   |                                      |
|---|--------------------------------------|
| - Red / Orange Line Vehicles                    | - Wellington Yard – complete upgrade |
| - Red / Orange Line Infrastructure Improvements | - Cabot Yard – complete upgrade      |
| - Signal Program - Red / Orange Line            |                                      |





## FY19-23 CIP Modernization Programs: Commuter Rail Safety and Resiliency

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Improve the safety and resiliency of the Commuter Rail network through investments in systems and solutions to mitigate risk
- Major project milestones:
  - Achieve Positive Train Control milestones
  - Award North Side Automatic Train Control design-build contract
  - Initiate Commuter Rail resiliency program

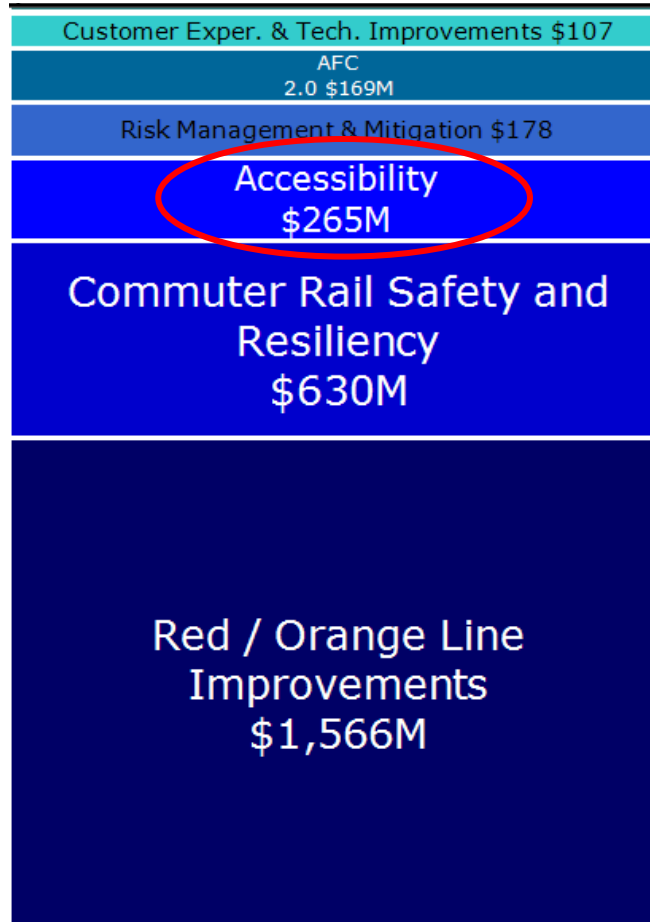
### Significant projects underway in FY19:

- Positive Train Control
- System-wide tree removal
- ATC Implementation on the North Side Commuter Rail Lines



## FY19-23 CIP Modernization Programs: Accessibility

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Enhance system-wide accessibility through investment in station upgrades, replacement and redundant elevators, bus stop improvements, and removing other barriers at stops and stations
- Advance priorities identified through the Program for Accessibly Transportation Infrastructure (PATI)
- Major project milestones:
  - Complete construction of Downtown Crossing Phase 1 elevators
  - Complete design for Newton Highlands Green Line Station Accessibility Project
  - Complete design for Natick Center Commuter Rail Station project
  - Begin design for Symphony Station Improvements project

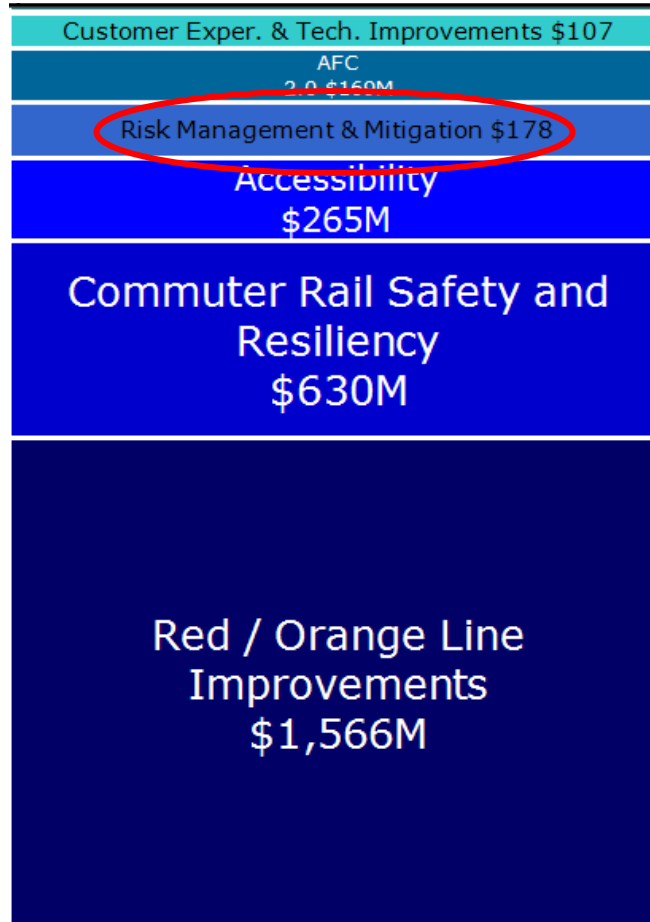
### Significant projects underway in FY19:

- |  |  |
|--|--|
| - Elevator Program (multiple locations)                  | - Newton Highlands Green Line Station Accessibility Project      |
| - Forest Hills Improvement Project                       | - Downtown Crossing Vertical Transportation Improvements Phase 2 |
| - Oak Grove Station Vertical Transportation Improvements |  |



## FY19-23 CIP Modernization Programs: Risk Management and Mitigation

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Implement risk management initiatives as well as proactive efforts to improve workplace safety and system security
- Major project milestones:
  - Advance Green Line Train Protection project
  - Support OSHA implementation with priority capital investments in MBTA facilities
  - Upgrade access control and security cameras

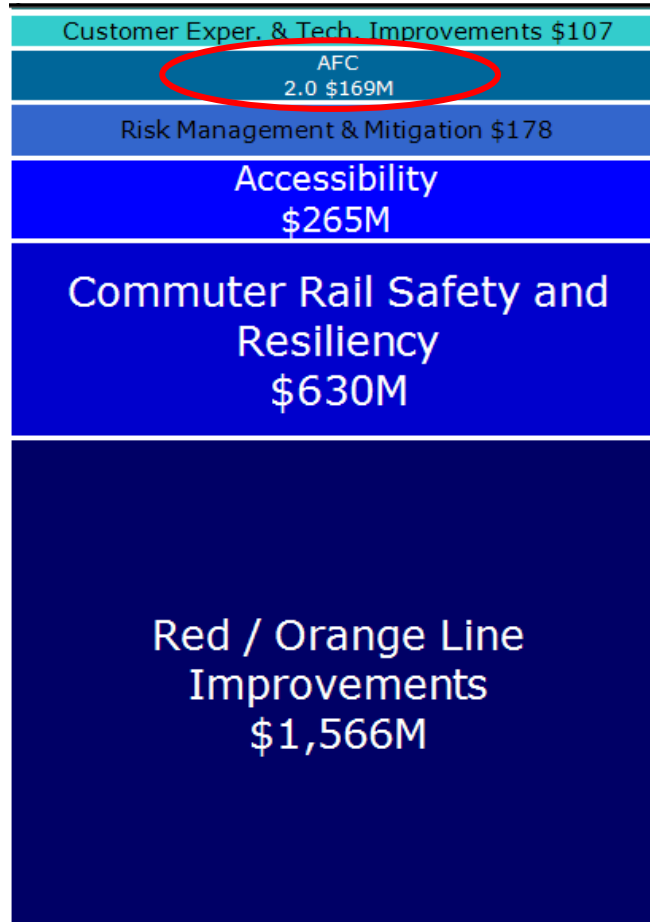
### Significant projects underway in FY19:

- Green Line Train Protection System
- OHS Implementation
- System-wide security upgrades
- Climate Change Resiliency Vulnerability Assessments



## FY19-23 CIP Modernization Programs: AFC 2.0

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Implement a new reliable and convenient fare payment and collection system, integrated across all modes, to replace CharlieCards/Tickets and their supporting hardware and software
- Major project milestones:
  - Award design-build contract for equipment installation early 2019

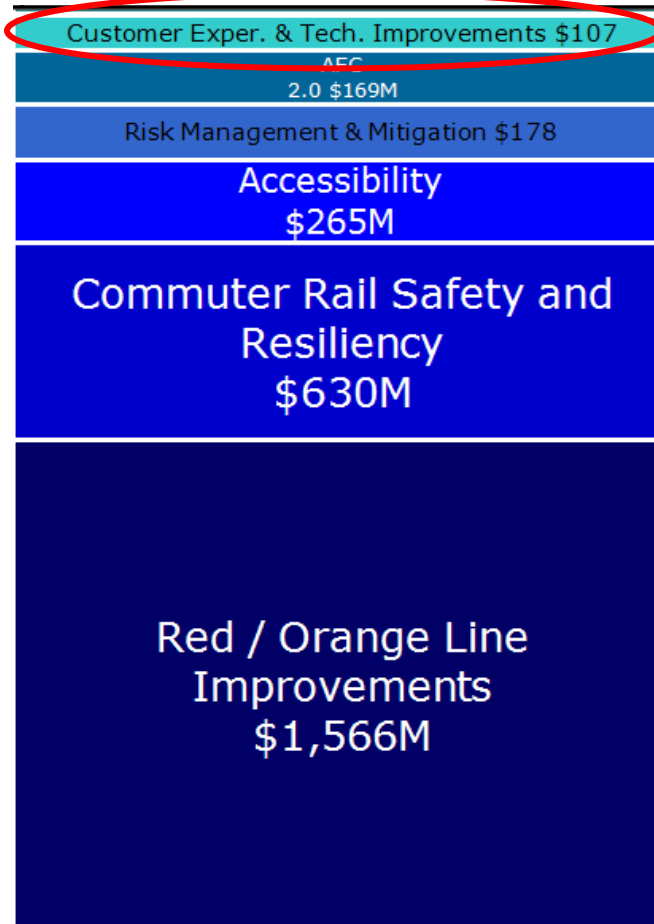
### Significant projects underway in FY19:

- AFC 2.0 project designs underway – hardware and software
- Design-build team to commence design
- Progress user testing



## FY19-23 CIP Modernization Programs: Customer Experience and Tech. Improvements

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Improve the customer journey through investments in technology and other systems and amenities
- Major project milestones:
  - Launch new customer technology capital program
  - Improve wayfinding and lighting at top ten transit stations
  - Support Better Bus Project through targeted capital investments in partnership with cities and towns

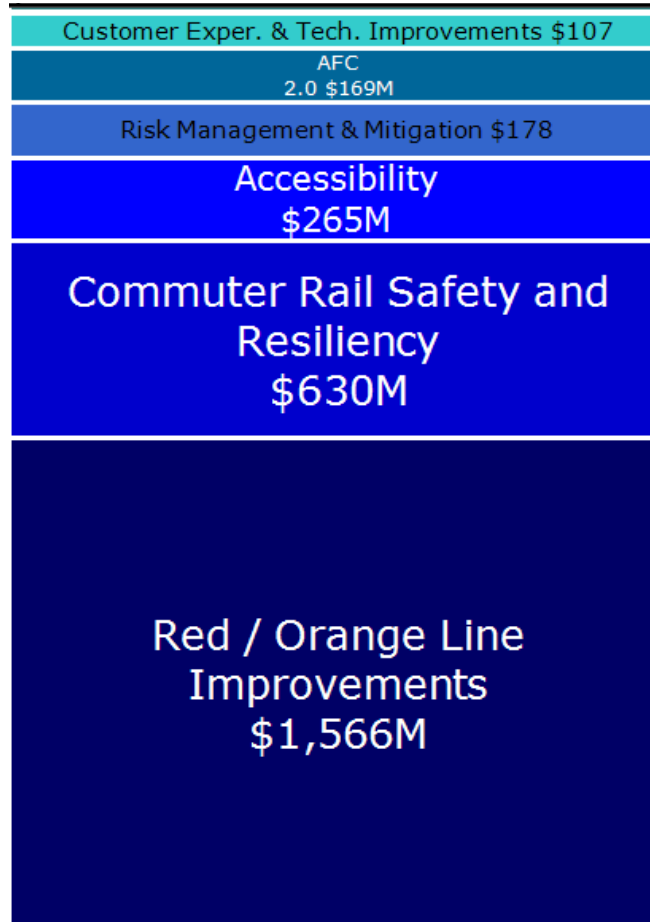
### Significant projects underway in FY19:

- |                                       |                                   |
|---------------------------------------|-----------------------------------|
| - System-wide Wayfinding Improvements | - Green Line – Real Time Tracking |
| - Park Street Wayfinding              | - T Digital Service               |
| - Bus Service Plan Optimization       | - Customer Technology Program     |



## FY19-23 CIP Modernization Programs: Process Improvements and Innovation

FY19-23 MBTA CIP Modernization  
Programs Total: \$2.9B



### FY19 Goals and Objectives:

- Enhance productivity or quality of MBTA services and capital programs through targeted investments
- Major project milestones:
  - Project Management Information System (PMIS) Phase 2 launched
  - Begin FMIS upgrade and business process redesign

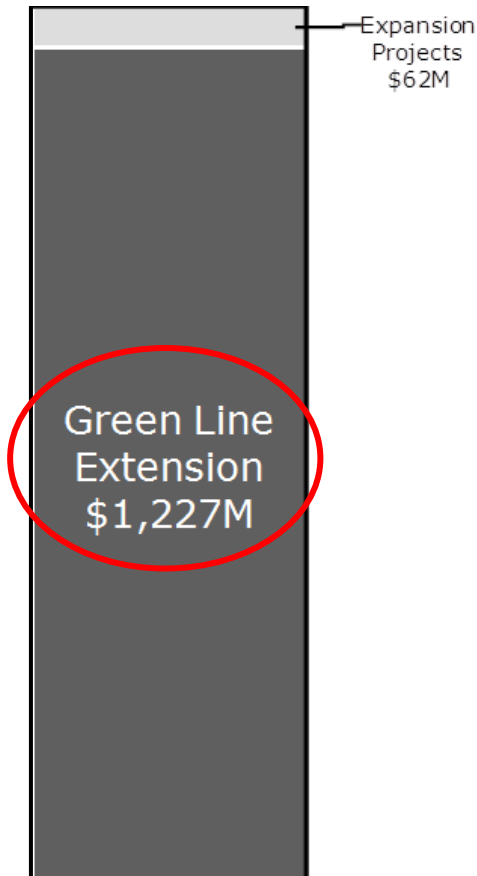
### Significant projects underway in FY19:

- Project Management Information System (PMIS) Implementation
- Green Line Lean Study
- Commuter Rail Vision
- FMIS upgrade and business process redesign
- Lean Strategy Implementation



## FY19-23 CIP Expansion Programs: Green Line Extension

FY19-23 MBTA CIP Expansion  
Programs Total: \$1.3B



### FY19 Goals and Objectives:

- Extend the Green Line 4.3 miles into Somerville and Medford
- Major activities:
  - New Green Line #9 vehicles introduced into revenue service
  - Begin bridge replacements at Broadway, Washington Street, and Medford St
  - Complete the Design Packages (DP) for all of the Early Release Construction (ERC) aspects
  - Start Construction of critical retaining walls, track work, bridge work and corridor drainage

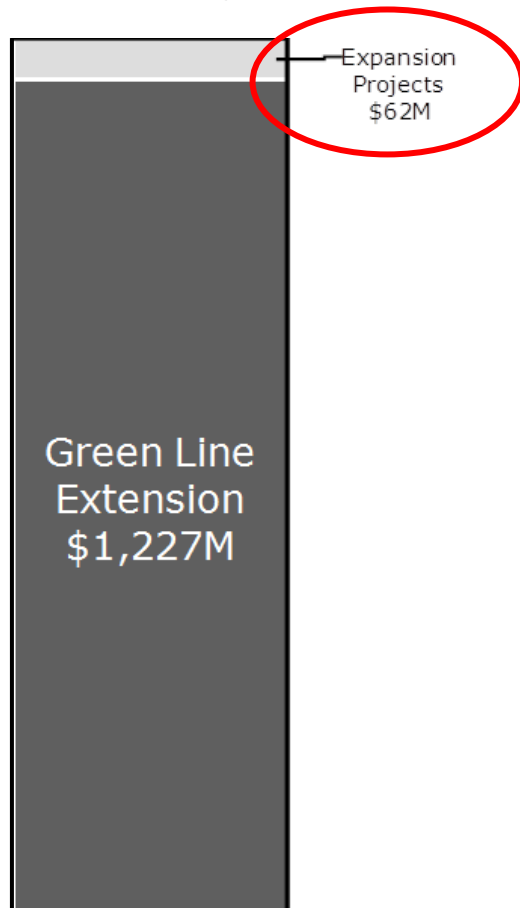
### Significant projects underway in FY19:

- Green Line Extension



## FY19-23 CIP Expansion Programs: Expansion Projects

FY19-23 MBTA CIP Expansion  
Programs Total: \$1.3B



### FY19 Goals and Objectives:

- Deliver targeted capital investment projects to expand the existing transit or commuter rail system
- Major project milestones:
  - Complete Blue Hill Ave Station on the Fairmount Line
  - Award construction contract for new Chelsea Commuter Rail Station

### Significant projects underway in FY19:

- Blue Hill Ave Station
- Silver Line Gateway – Phase 2





## Major capital goals for FY 2019

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- 1) Execute approved FY19-FY23 Capital Investment Plan (CIP)
  - a) Invest over \$1B on the capital program in FY 2019, including \$850 million in SGR project
  - b) Award up to \$1B in new state of good repair construction contracts and vehicle procurement contracts to ensure project pipeline that will drive future investment
- 2) Improve project controls, reporting, and processes and implement enterprise-wide project management system
- 3) Lead the development of a FY20-24 Capital Investment Plan that helps advance the MBTA's strategic priorities and achieve meaningful outcomes for customers



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## Appendix



## Phase 2.1 Planned Processes

### Phase 2.1.1 Processes – Targeting e-Builder Release in January, 2019

**The following processes are currently undergoing e-Builder design analysis to begin configuration shortly:**

- |                                  |                                    |
|----------------------------------|------------------------------------|
| 1. Contractor Invoice            | 5. Proposed Change Order           |
| 2. Professional Services Invoice | 6. Professional Services Amendment |
| 3. Work Directive                | 7. Project Intake and Approval     |
| 4. Change Order                  |                                    |

### Phase 2.1.2 Processes – Targeting e-Builder Release in March, 2019

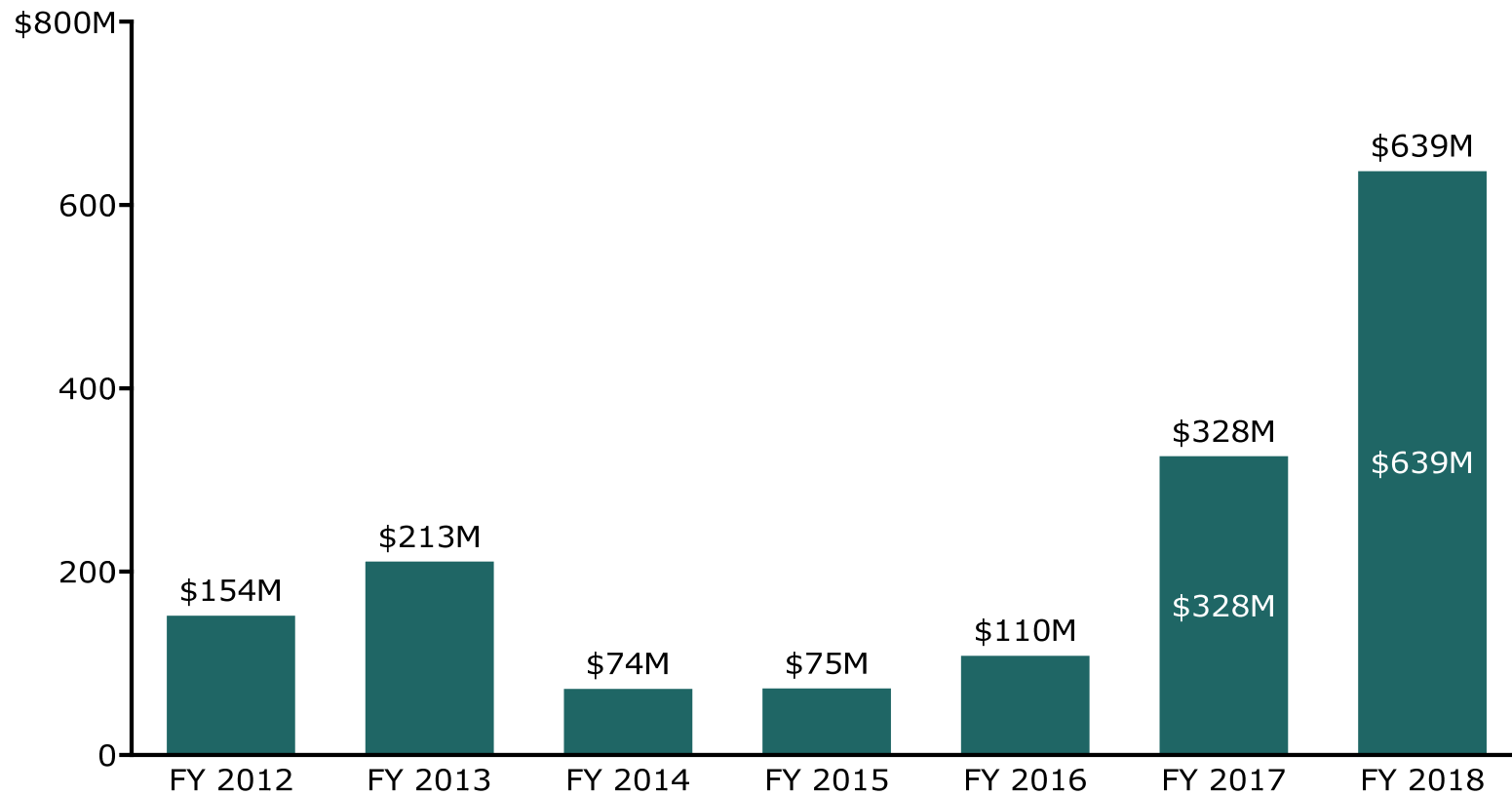
**The following processes are currently beginning functional analysis:**

- |  |  |
|--|--|
| 1. Design /Specification Change request              | 6. Schedule Progress Review  |
| 2. Construction Deliverable Review Submittal Process | 7. Independent Cost Estimate Submission                              |
| 3. Design Deliverable Review Submittal Process       | 8. Inspection Report (quality, vehicle, site)                        |
| 4. Design / Specification Review Submittal Process   | 9. Notice to proceed   |
| 5. Request for Information (RFI)                     | 10. CIP Change Request (budget / project consolidation / separation) |



## In FY18 the MBTA Capital Program awarded \$639M in SGR construction contracts\*

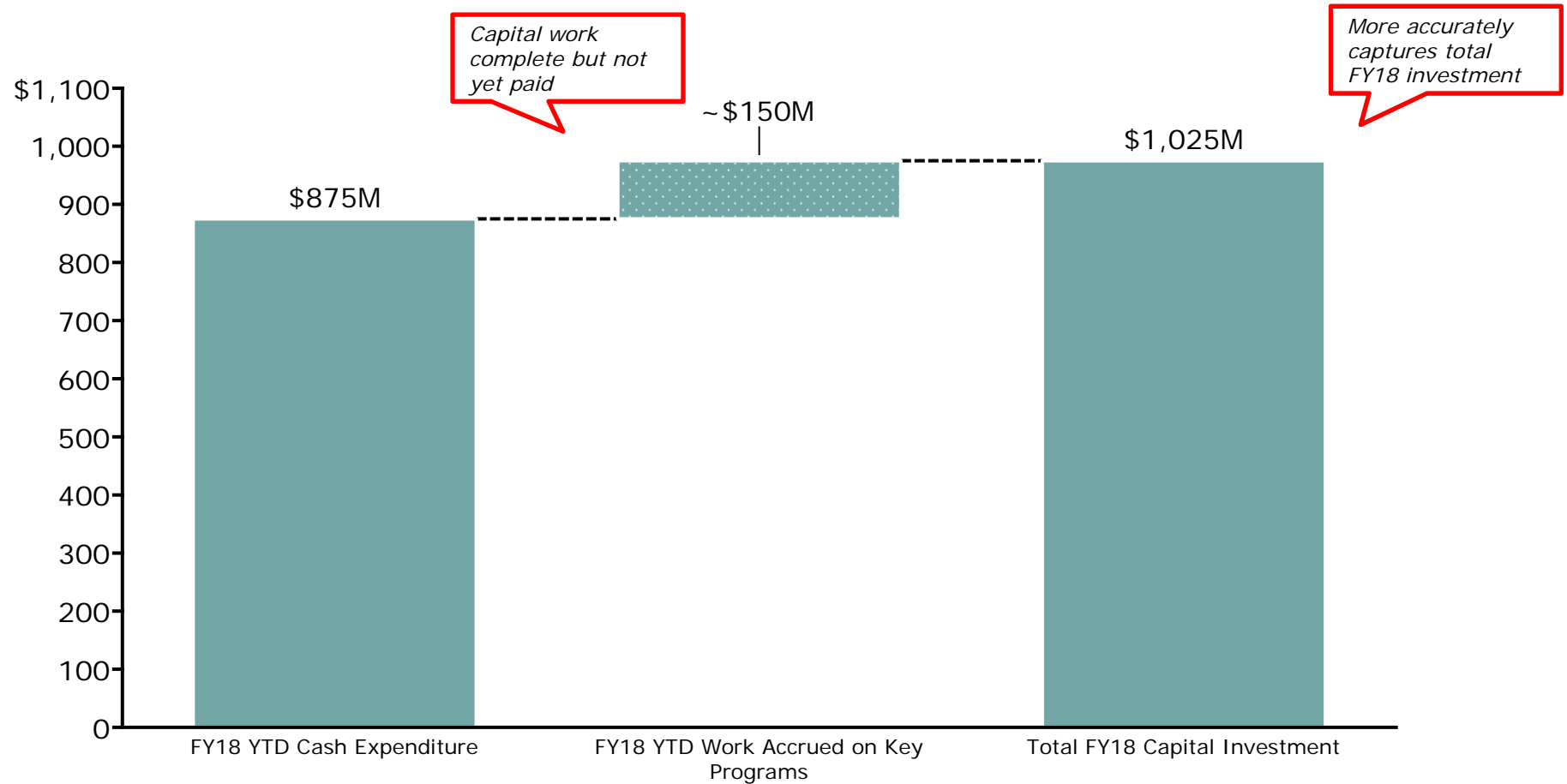
Dollar Value of Contracts (\$M)



\*SGR construction contracts do not include expansion projects (e.g. GLX), or non-construction procurement (e.g. vehicles, technology)



## FY 2018 YTD Total Capital Investment, including accrued work



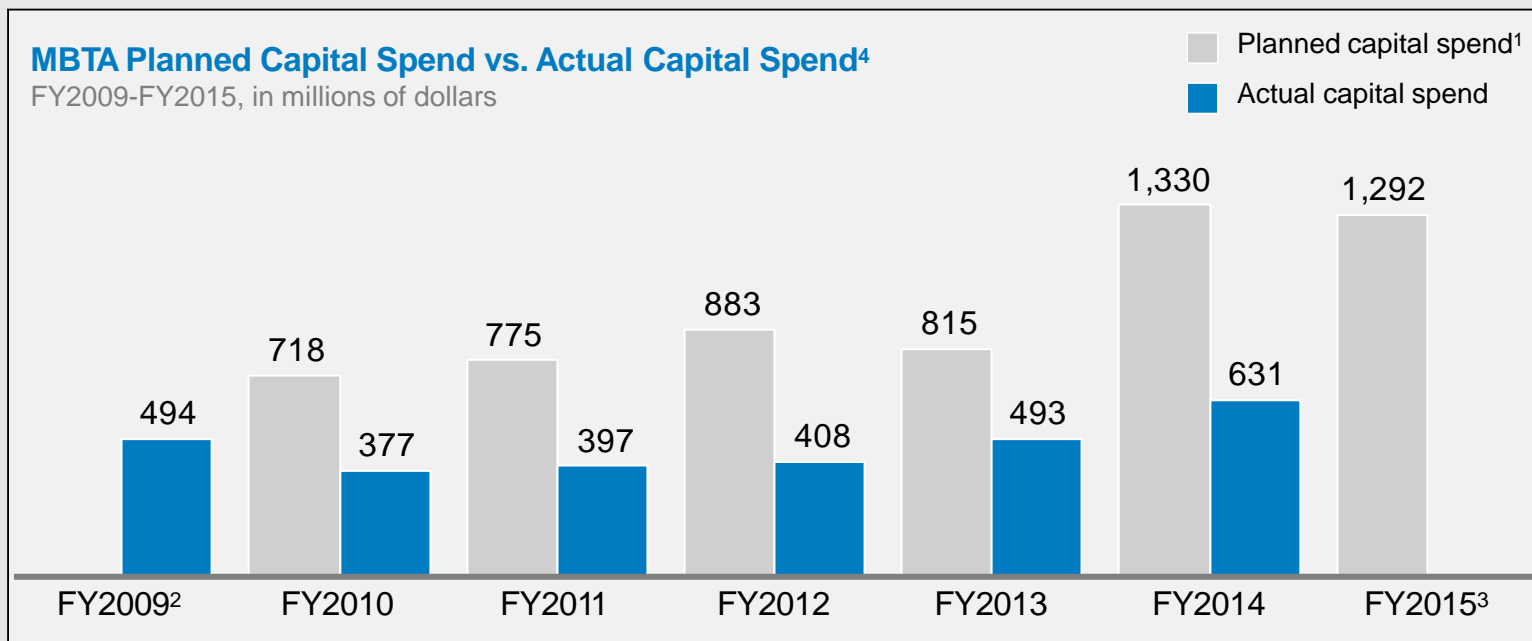
\* Assumes accrued work occurred in FY18.

## 2. Chronic Capital Underinvestment

**While the MBTA will ultimately need additional state funding for capital spending, it has been unable to spend the capital funds already available to it, contributing to chronic underinvestment and an acute backlog in fleet, facilities, systems, and infrastructure.**

Additional significant warning signs with respect to capital budgeting:

- The MBTA regularly uses funds intended for the capital program for operating expenses.
- In 2015, the MBTA will use \$66.5 million in capital dollars to fund 444 salaries.
- In the past five years, the MBTA spent only \$2.3 billion of the \$4.5 billion it had planned to spend on capital construction.



<sup>1</sup> Based on CIP published at start of that fiscal year

<sup>3</sup> Actual capital spend for 2015 is not recorded as year is still in progress

Source: MBTA CIPs, MBTA Actual Capital Spend Model

<sup>2</sup> Before 2010, planned capital spend was not broken down per year

<sup>4</sup> Capital spend is defined as budget spent for long-term projects via CMS (Capital Management System) 17