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# Draft CIP Update SFY 2018-2022 Joint Board presentation

May 8, 2017



# Overview

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- **CIP updates:**

- SFY 2017 accomplishments
- Updates to approach
- Updated program budgets
- Updated spending by source
- Updates on highlighted projects

- **Today:**

- Need feedback on draft plan
- Approval to release for public comment and review



# SFY 2017 accomplishments

## Accomplishments from the first year of the SFY 2017-2022 CIP

### Aeronautics:

- Administration Buildings – two buildings were completed at Beverly and Fitchburg airports
- Pavement Management – updating asset management data and will be complete by June 30<sup>th</sup>
- Vegetation Management – removal of trees in over 150 acres in protected airspace; four airports were provided with guidance to maintain overgrowth

### Highway:

- First phase of all-electronic tolling completed during the fall of 2016. Customers have also + experienced an average of 12 minutes saved on eastbound trips from I-495 to South Boston.
- Rt. 2 over I-95 reached the substantial completion stage for the \$59.6 million project to replace the structurally deficient bridges in Lexington
- Began operations from a new maintenance facility in Billerica constructed at the Route 3; the \$6.8 million project provides a state of the art, fully functioning maintenance facility

### Information Technology:

- MBTA extended the predictive modeling and forecasting capability in our MBTA 360 data analysis group to Commuter Rail Transportation, Events, Weather, On-Time Performance, Social Media, Customer Satisfaction, Labor Relations, Revenue & Expense Analysis, and Maintenance Work Order Analysis. This will facilitate significantly enhanced customer service.
- MassDOT automated Commonwealth's Human Resource Compensation Management System Self Service Time and Attendance module by upgrading paper time-keeping sheets with an electronic solution. This will reduce paperwork significantly, save money and improve service levels.

### MBTA:

- State of Good Repair spending will increase approximately 25% to 35% over prior year
- On target to double vehicles spending at approximately \$310 million in SFY 2017
- On target to award \$300 million in SFY 2017 and \$450 million in SFY 2018



# SFY 2017 accomplishments

## Accomplishments from the first year of the SFY 2017- 2022 CIP continued

### Rail:

- Procured 20 ballast cars, purchased 93,000 ties and installed 6,000
- Inspected and rated 53 bridges and replaced 5 bridges
- Inspected 97 culverts and 5 culverts have been replaced
- 10 grade crossings have been reconstructed
- 37,000 trucks have been removed from the road with completion of 7 IRAP projects.
- Reprogrammed South Coast Rail into 2 Phases and Filed Notice of Project Change with MEPA

### Registry of Motor Vehicles:

- ATLAS – Completed the core system replacement vendor procurement and contract negotiation for ATLAS;
- ATLAS – Preliminary Configuration Specifications review and approved system design for Issuance, Enforcement, eServices and Revenue completed in April 2017
- Opened 3 new Service Centers (Springfield, New Bedford, Fall River) to provide enhanced customer experience
- Expanded service channel customer options to include AAA partnership to 23 locations across the Commonwealth



# Plan update: approach

## Capital Planning Approach

- ▶ This is a one-year update
- ▶ The majority of the CIP was set in motion in SFY 2017-2022
- ▶ Adding SFY 2022
- ▶ Nearly 37% of the CIP is decided by our regional MPO partners

**Priorities:** this CIP update maintains the strategy to invest first in the reliability of the transportation system, followed by modernization and, as final priority, expansion.

**Programs:** this CIP update has changed some programs to better reflect the needs of modal divisions or asset management. There are still 59 investment programs. See appendix for details on the program changes.

**Project selection:** this CIP update reflects the changes made to the weights used in the evaluation of modernization and expansion investments.

**Planning for Performance Tool:** the tool was revamped to more clearly reflect the CIP programs contained in this CIP update. The tool also updated data and analysis for some programs. The tool will continue to be updated in the future to forecast the performance of as many programs as possible.

**Project intake:** a new tool has been launched to help our municipal partners initiate Highway Division projects to be considered for investment by MassDOT or their respective MPO. This tool streamlines and improves what used to be a paper-driven process, which required substantial manual entry of data. The tool will continue to be improved and expanded for other Divisions.

**CIP and STIP alignment:** the development timelines of the CIP and STIP were aligned so that all applicable investments are identified in each document. This is important for the CIP to more accurately reflect regional priority projects identified by our MPO partners.



# MassDOT funding sources

Projected sources (in millions)	<u>FY18</u>	<u>FY19</u>	<u>FY20</u>	<u>FY21</u>	<u>FY22</u>	<u>Total</u>
<b>Federal sources of funds</b>						
Federal Highway (FHWA) reimbursements	\$613.8	\$638.3	\$657.9	\$765.2	\$844.3	<b>\$3,519.5</b>
Federal Transit (FTA) reimbursements**	\$7.1	\$6.0	\$6.0	\$6.0	\$6.0	<b>\$31.2</b>
Federal Aviation (FAA) reimbursements and grant draws	\$42.4	\$32.3	\$42.2	\$37.7	\$50.9	<b>\$205.5</b>
Federal Rail (FRA) reimbursements and grant draws	\$1.1	\$0.1	\$0.0	\$0.0	\$0.0	<b>\$1.2</b>
<b>Subtotal federal sources</b>	<b>\$665.7</b>	<b>\$669.5</b>	<b>\$706.0</b>	<b>\$822.7</b>	<b>\$927.6</b>	<b>\$3,791.4</b>
<b>Bond cap</b>	<b>\$839.1</b>	<b>\$819.1</b>	<b>\$795.3</b>	<b>\$795.4</b>	<b>\$845.0</b>	<b>\$4,093.9</b>
<b>Accelerated Bridge bonds</b>	<b>\$130.1</b>	<b>\$46.3</b>	<b>\$9.9</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$186.2</b>
<b>Rail enhancement bonds</b>	<b>\$63.7</b>	<b>\$34.0</b>	<b>\$34.5</b>	<b>\$34.9</b>	<b>\$20.0</b>	<b>\$187.1</b>
<b>CARM</b>	<b>\$37.3</b>	<b>\$150.8</b>	<b>\$156.7</b>	<b>\$93.4</b>	<b>\$0.0</b>	<b>\$438.3</b>
<b>Metropolitan Highway system (MHS) pay-go</b>	<b>\$118.7</b>	<b>\$91.8</b>	<b>\$57.5</b>	<b>\$36.0</b>	<b>\$34.9</b>	<b>\$338.8</b>
<b>Western Turnpike (WT) pay-go</b>	<b>\$109.1</b>	<b>\$67.4</b>	<b>\$91.1</b>	<b>\$77.3</b>	<b>\$57.8</b>	<b>\$402.8</b>
<b>Tobin Bridge (Tobin) pay-go</b>	<b>\$30.0</b>	<b>\$47.7</b>	<b>\$24.3</b>	<b>\$12.0</b>	<b>\$7.8</b>	<b>\$121.8</b>
<b>Gaming</b>	<b>\$3.8***</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3.8</b>
<b>Municipal and local funds</b>	<b>\$2.6</b>	<b>\$2.9</b>	<b>\$2.6</b>	<b>\$3.2</b>	<b>\$3.0</b>	<b>\$14.2</b>
<b>Reimbursable and 3<sup>rd</sup> parties</b>	<b>\$0.9</b>	<b>\$8.8</b>	<b>\$9.2</b>	<b>\$0.2</b>	<b>\$0.2</b>	<b>\$19.4</b>
<b>Public private partnerships</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>	<b>\$0.0</b>
<b>Subtotal of non-federal sources</b>	<b>\$1,335.3</b>	<b>\$1,268.8</b>	<b>\$1,181.1</b>	<b>\$1,052.4</b>	<b>\$968.7</b>	<b>\$5,806.3</b>
<b>Total Sources</b>	<b>\$2,001.0</b>	<b>\$1,938.2</b>	<b>\$1,887.1</b>	<b>\$1,875.2</b>	<b>\$1,896.2</b>	<b>\$9,597.7</b>

\* Totals may not add due to rounding | \*\* FTA reimbursements for MassDOT projects only; RTA federal funds are not included | \*\*\* These are gaming funds not spent in SFY 2017 for SFY 2017 grants.

These are funding sources that either special purpose and spending down, or include reserve funding amounts that are also being spent down in this CIP update; see next slide for graph



# MBTA funding sources

Projected sources (in millions)	SFY 2018	SFY 2019	SFY 2020	FY 2021	SFY 2022	Total
<b>Federal sources of funds</b>						
Federal Highway (FHWA) reimbursements	\$67.4	\$32.0	\$32.0	\$25.7	\$0	<b>\$157.1</b>
Federal Transit (FTA) reimbursements (prospective)	\$107.5	\$191.7	\$387.9	\$507.6	\$598.7	<b>\$1,793.4</b>
Existing FTA reimbursements and grant draws	\$168.6	\$160.8	\$136.5	\$116.1	\$70.0	<b>\$652.0</b>
FTA Full funding grant agreement (GLX FFGA)	\$62.6	\$291.7	\$495.7	\$100.0	\$46.1	<b>\$996.1</b>
Other federal funds	\$1.3	\$1.2	\$0.8	\$0.6	\$0.3	<b>\$4.2</b>
Positive Train Control (PTC) loans	\$78.2	\$75.1	\$91.7	\$62.2	\$57.8	<b>\$365.0</b>
<b>Subtotal federal sources</b>	<b>\$485.6</b>	<b>\$752.5</b>	<b>\$1,144.6</b>	<b>\$812.2</b>	<b>\$772.9</b>	<b>\$3,967.8</b>
State bond cap	\$0.8	\$0.2	\$0.1	\$0.1	\$0.0	<b>\$1.2</b>
Accelerated Bridge bonds	\$6.4	\$2.0	\$1.1	\$0.6	\$0.3	<b>\$10.4</b>
Rail enhancement bonds	\$165.1	\$126.4	\$191.1	\$474.6	\$338.5	<b>\$1,295.7</b>
MBTA Revenue bonds	\$134.0	\$181.6	\$249.0	\$332.3	\$429.2	<b>\$1,326.1</b>
Metropolitan Highway system (MHS) pay-go	\$1.1	\$0.7	\$0.4	\$0.2	\$0.1	<b>\$2.5</b>
Gaming funds	\$2.3	\$0.0	\$0.0	\$0.0	\$0.0	<b>\$2.3</b>
Municipal and local funds (GLX)	\$0.0	\$0.0	\$37.4	\$22.6	\$15.0	<b>\$75.0</b>
Reimbursable and 3 <sup>rd</sup> parties	\$5.0	\$1.9	\$0.8	\$0.5	\$0.3	<b>\$8.5</b>
Additional State Assistance*	\$150.0	\$150.0	\$150.0	\$150.0	\$150.0	<b>\$750.0</b>
Capital maintenance fund	\$5.4	\$2.0	\$1.1	\$0.6	\$0.3	<b>\$9.4</b>
<b>Subtotal of non-federal sources</b>	<b>\$470.1</b>	<b>\$464.8</b>	<b>\$631.0</b>	<b>\$981.5</b>	<b>\$933.7</b>	<b>\$3,481.1</b>
<b>Total Sources</b>	<b>\$955.7</b>	<b>\$1,217.3</b>	<b>\$1,775.6</b>	<b>\$1,793.7</b>	<b>\$1,706.6</b>	<b>\$7,448.9</b>

Note: The use of Revenue Bonds in each year of the CIP includes both cash on hand and new issuances. It does not represent the amount of new issuances anticipated each year. \*Includes \$60M in State bond cap each year. | \*\* Totals may not add due to rounding

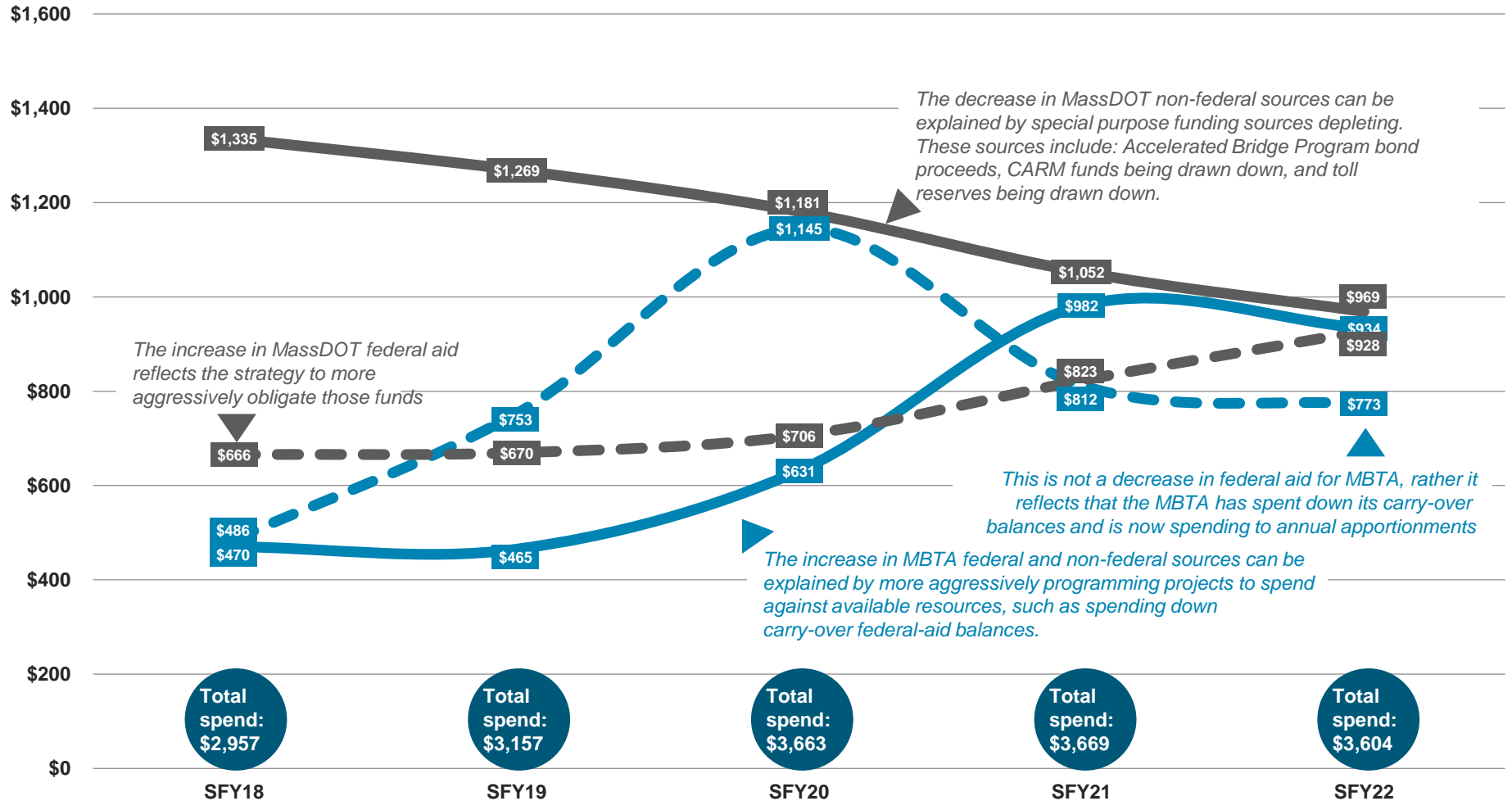


# Notes about federal and non-federal sources

## Spending comparison: federal sources to non-federal sources

— MBTA federal sources — MBTA non-federal sources — MassDOT federal sources — MassDOT non-federal sources

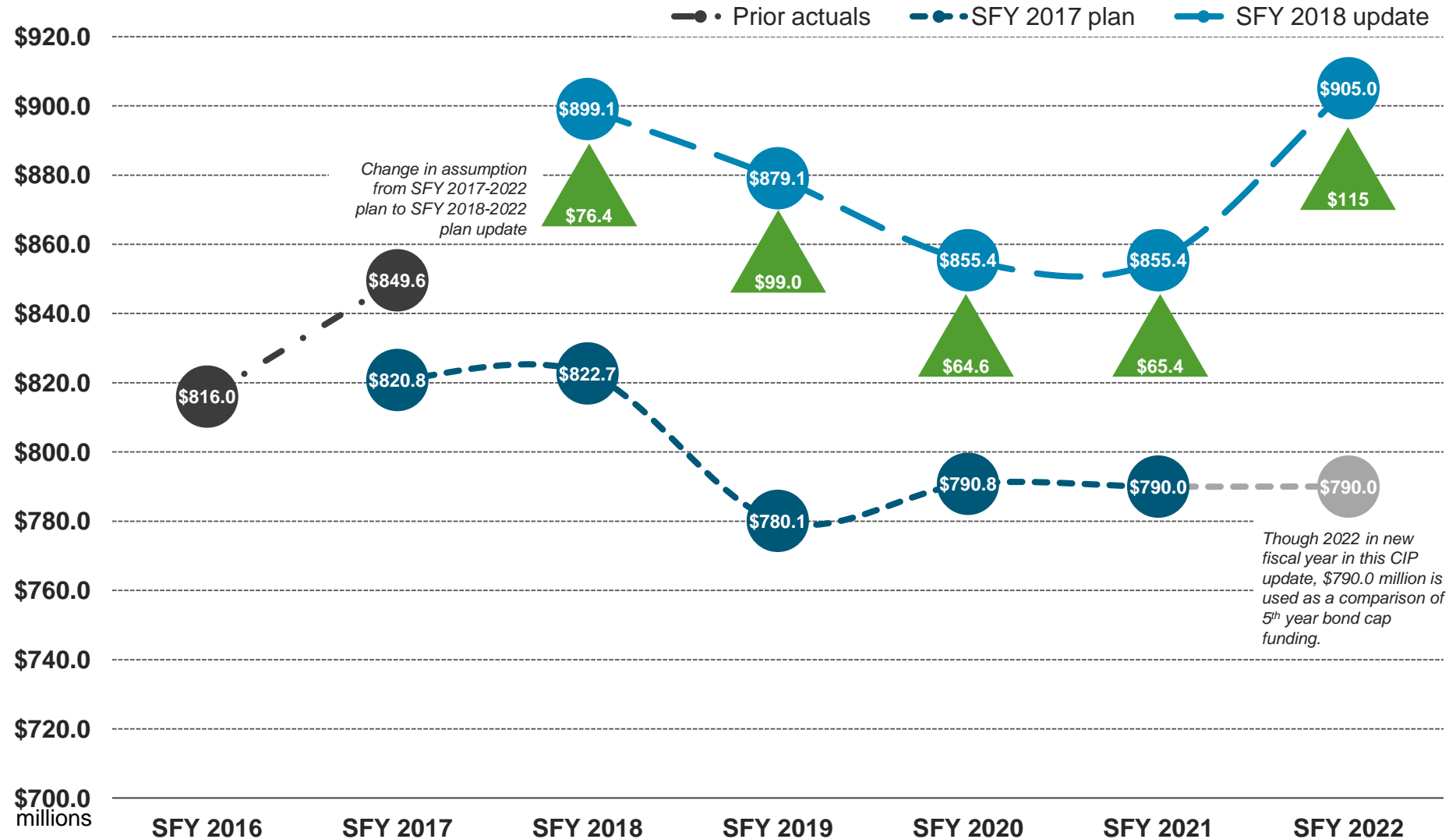
Sum per annum of federal and non-federal sources for MassDOT and the MBTA (in millions)





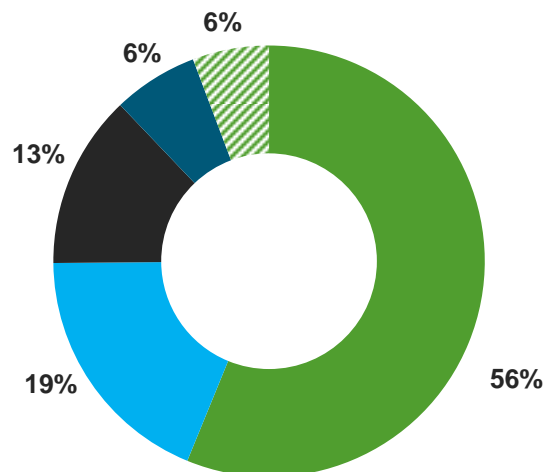
# Plan update: bond cap comparisons

## Bond cap: SFY 2017-2022 plan versus SFY 2018-2022 plan update



# Plan update: investments overview

## Overall spending by priority



millions	SFY 2017- 21	SFY 2018- 22	Differences
Reliability	\$8,798.0	\$9,802.6	+\$1,004.6
Modernization	\$2,638.0	\$3,258.8	+\$620.8
Expansion	\$2,147.0	\$2,270.7	+\$123.7
Chapter 90	\$1,000.0	\$1,000.0	-
Planning, Enterprises Services, & Other	\$203.0	\$1,114.4	\$911.4
Five-year total	\$14,786.0	\$17,446.5	\$2,660.5

## Overall:

- ▶ The draft SFY 2018-2022 CIP update continues the investment strategy of the prior CIP. 56% of funds continue to go toward the reliability of our transportation system

## Increase highlights:

- ▶ \$795.1 million in GANs repayments (in STIP, though not CIP), reserves, and Commonwealth projects that were not reflected SFY 2017-2021 plan
- ▶ \$2.3 billion in program budget increases, such as:
  - ▶ \$436.5 million increase due to capture of Roadway Reconstruction spending and \$868 million in program budget increases at MBTA

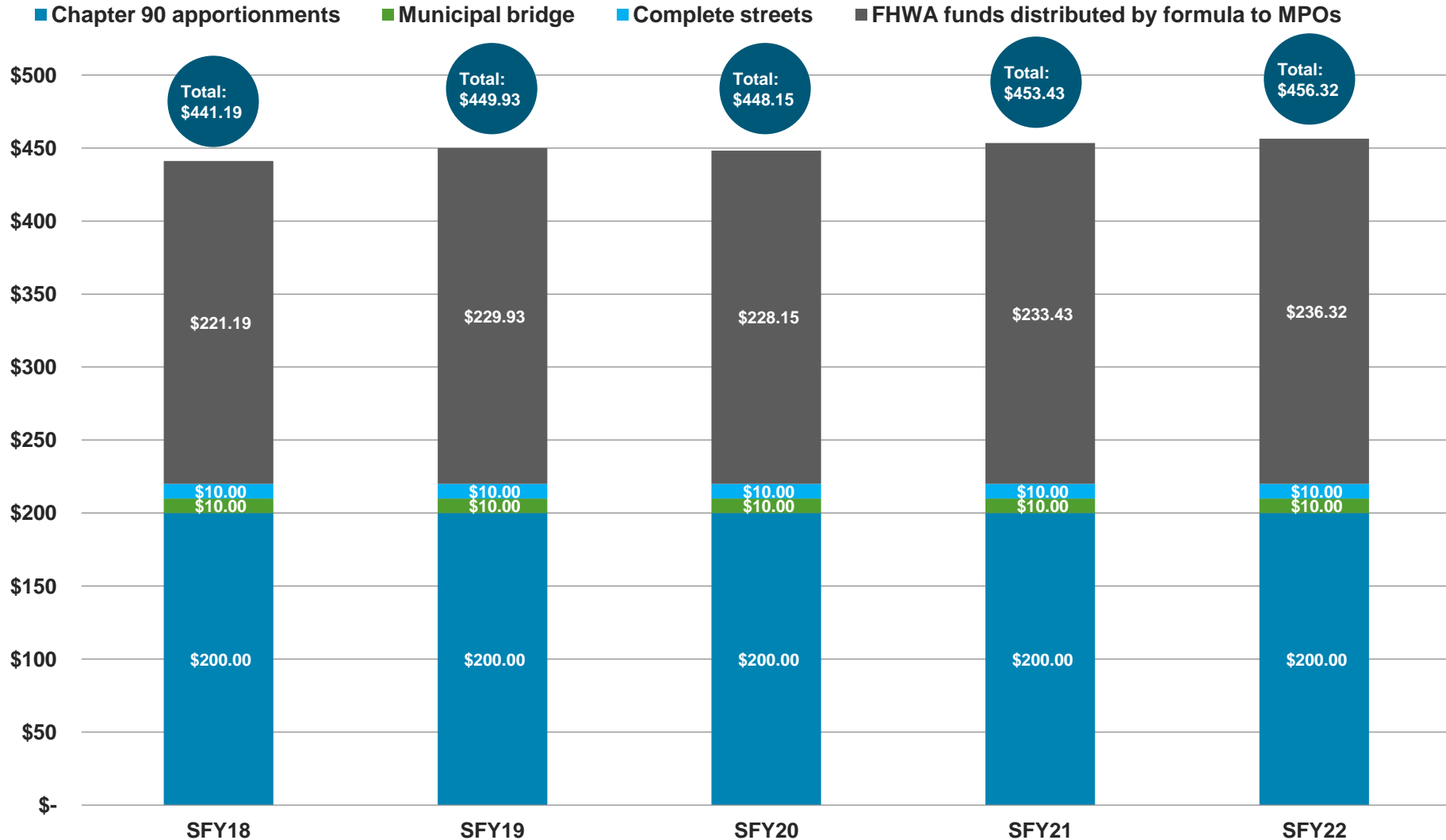
## Is it affordable?

- ▶ More in revenue bond assumptions for MBTA
- ▶ \$420.4 million more in bond cap assumptions
- ▶ More aggressive capture of federal aid in all Divisions
- ▶ Program size does not account for drift of spending occurring in out years
- ▶ GANS payments and Commonwealth projects were already funded but not accounted for in prior CIP

# Funding for municipalities

- ▶ 30% of Highway Division state and federal funds in this plan update go to support investments in municipal roadways and bridges

## Annual funding available for municipal roadway investments (in millions)



# Plan update: program changes

## Program changes

**Highway Division / Equipment:** this program was created to reflect investments made to procure capital equipment. Previously, these investments were not accurately represented within the prior program structure.

**Highway Division / Roadway improvements:** this program's name was modified for alignment with the STIP.

**Highway Division / Safety improvements:** this program's name was modified for alignment with the STIP.

**Highway Division / Intersection improvements:** this program's name was modified for alignment with the STIP.

**Highway Division / Multi-use paths:** this program was absorbed into the Bicycle and Pedestrian program to more comprehensively reflect the expansion of bicycle and pedestrian infrastructure across the Commonwealth. This program includes \$60 million for implementation of the Bicycle and Pedestrian plans now in development. This \$60 million is in addition to the multi-use path program substantially funded with FHWA funds.

**Tunnels:** this program replaces the CA/T Trust Spending program in the SFY 2017-2021 CIP. The prior program nomenclature inaccurately represented the nature of the investments made in this program.



## Program changes ...continued

**IT / Desktop experience:** this program was moved from the Modernization priority to the Reliability priority.

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**IT / Digital infrastructure:** this program was renamed.

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**IT / Asset management:** this program was moved from the Modernization priority to the Reliability priority.

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**IT / Cyber/Information security:** this program was moved from the Modernization priority to the Reliability priority.

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**MBTA / Bridges and tunnels:** this program was renamed to reflect the asset needs of both bridges and tunnels within the MBTA system.

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**MBTA / Stations and facilities:** this program was renamed to better reflect the needs of the vertical infrastructure within the MBTA system.

## Program changes ...continued

**MBTA / System upgrades:** this program was created to reflect the needs of a wide range of MBTA systems including communications, security, computer technology, fare collection, asset management and environmental remediation systems.

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**MBTA / System improvements:** this program was renamed from the “system capacity program” to provide clarity to the investments made within this program, which are modernization in nature, not expansion.

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**RMV / CDLIS:** this program was moved into the ATLAS program.

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**RMV / Real ID:** this program was moved into the ATLAS program.

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**Rail programs:** All rail programs with the exception of the Industrial Rail Access Program and the Grade Crossings program were renamed to better reflect the assets that comprise our rail system and the investments needed to be made into the system.

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**MBTA / Stations and facilities:** this program was renamed to better reflect the needs of the vertical infrastructure within the MBTA system.

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# Plan update: program budget changes

## Program budget changes

Program	2017-2021 program budget (in millions)	Updated program budget	Comments
Aeronautics / Airport Administration Buildings	\$13.8	\$25.0	Poor state of legacy buildings
Highway / All-electronic tolling	\$207.3	\$66.6	Accelerated project in SFY 2017
Highway / Equipment	\$0	\$75.0	Assets not considered in SFY 2017-2021
Highway / Safety improvements	\$162.8	\$235.8	Increase to achieve target and initiate recommendations from Work Zone Safety plan
Highway / Roadway reconstruction	\$824.5	\$1,261.0	SFY 2017-2021 CIP chosen major projects showing spending; increase also driven by investments chosen by MPOs
Highway / Intersection improvements	\$130.1	\$160.7	Primarily safety investments; increase also driven by investments chosen by MPOs
Highway / Interstate pavement	\$339.2	\$281.7	Represents continued strategy to shift investment to non-interstate pavement to improve asset conditions on those roadways
Highway / Non-interstate pavement	\$475.9	\$543.9	Represents continued strategy to shift investment to non-interstate pavement to improve asset conditions on those roadways
IT / Desktop experience	\$3.75	\$9.1	Budget allows for the institution of best practice state of good repair policies for hardware and software replacement
IT / Customer digital experience	\$8.4	\$10.0	Budget ensures that MassDOT and MBTA websites present clear, concise, and timely information to the public at all times

*The highlighted program budget updates do not reflect all budget updates; rather they indicate the most noteworthy changes*

## Program budget updates ... continued

Program	2017-2021 program budget (in millions)	Updated program budget	Comments
IT / Workforce productivity	\$6.45	\$14.2	Implementation of a number of initiatives that increase productivity
MBTA / Accessibility	\$150.0	\$204.4	Increase due to additional spending on elevator program
MBTA / Federal Programs/Mandates	\$505.8	\$538.8	Increase reflects spending on the Green Line Protection Program
MBTA/ Revenue Vehicles	\$1,605.0	\$1,702.7	Fleet plan tentatively scheduled to be completed this summer and will dictate which revenue vehicle projects will proceed
MBTA / Stations and Facilities	\$408.1	\$530.3	Additional spending on South Shore garages, demolition of Quincy Center garage, and Wollaston station
MBTA / Systems Upgrades	\$0	\$465.7	Includes an increase of \$250 million pay-go (Capital maintenance to be programmed)
Rail / Track and ROW modernization	\$0.0	\$32.7	Budget allows for repairs or replacement assets within the rail right of way to upgrade their capacity to reflect current industry standards
Rail / Track and ROW expansion	\$0	\$100.0	Shift of South Coast Rail early action items to MassDOT

*The highlighted program budget updates do not reflect all budget updates; rather they indicate the most noteworthy changes*



# Plan update: project status

## Project status

Project	2017-2021 project budget (in millions)	Updated project budget	Comments
<b>MBTA / GLX</b>		\$2,300	\$2.3 billion program budget approved by FTA; additional \$75 million funding provided by the cities of Somerville and Cambridge in SFY 2018-2022 CIP; additional \$62.3 million of REP funding.
<b>MBTA / R/O</b> Line Infrastructure Improvements	\$498	\$470	\$28.3 million decrease in program contingency; funds moved to GLX program.
<b>MBTA /</b> Gloucester Drawbridge	\$60	\$92	Budget increased by \$31.8 million to \$91.8 million from SFY 2017-2021 CIP to SFY 2018-2022 CIP. Increase primarily due to force account work related to keeping revenue service during construction, additional year of construction and increase in contingency.
<b>MBTA / South</b> Shore Garages (Braintree and Quincy Adams Garage Rehab)		\$124.9	\$30 million for additional project scope added between early design and final design; \$13.9 million increase due to inclusion of risk allowance and contingency



**Project  
status  
...continued**

Project	Status change	Budget or schedule	Comments
<b>Rail /</b> Knowledge Corridor	In	\$11.7 million	Not included in the SFY 2017-2021 budget under Rail; SFY 2017 funding from FRA grant; SFY 2018 funded under REP
<b>Rail /</b> South Coast Rail Early Action	No change	\$14 million increase	Costs carried under MBTA in SFY 2017-2021; Project moved to Rail; additional costs budgeted through SFY 2022
<b>Rail /</b> Middleboro Line	No change	\$14.5 million	Additional costs needed for bridge repairs along the line
<b>Rail /</b> Falmouth Depot	Out	\$1.3 million	Project scheduled to be completed in SFY 2017
<b>Highway /</b> Municipal Bridge	No change	No change	The first round of \$16 million in grants was released in SFY 2017 to 36 municipalities across the Commonwealth.
<b>Highway /</b> I-90 Viaduct	No change	No change	Planning and design continues for both the rehabilitation and possible replacement of the elevated viaduct as well as local road, transit and neighborhood developments. MassDOT is working with the City of Boston, Harvard University and other stakeholders to continue advancing the design of this project.



## Project status ...continued

Project	Status change	Budget or schedule	Comments
RMV / ATLAS	No change	Budget of \$105 million in SFY 2017-2021 increased to \$110 million because Real ID and CDLIS projects were reported separately. The SFY 2017-2021 CIP of \$110 million increased to \$125 million after a commercial off the shelf vendor was approved and a new project implementation plan developed.	<p>The program forecast increased from \$105 million to \$125 million because:</p> <ul style="list-style-type: none"> <li>→ An additional investment in infrastructure to support the FAST Enterprises solution is required which will add \$7.5 million</li> <li>→ The extent of Mass IT support for the ATLAS testing and development environments was not well defined (in the absence of a vendor) in the SFY 2017-2021 CIP forecast. With the new vendor in place, the Mass IT support cost estimates will add \$5.5 million to the program forecast.</li> <li>→ There was no provision for contingency in the SFY 2017-2021 CIP. A contingency provision of \$7 million is now included in the current \$125 million estimate.</li> <li>→ These additional costs are offset by savings of \$5 million on vendor implementation costs achieved during contract negotiations with FAST Enterprises.</li> <li>→ As discussed above, the SFY 2017-2021 CIP budgets for Real ID and CDLIS implementations were combined with the ATLAS budget because these projects are now part of the ATLAS program.</li> </ul>

## Project status continued

Project	Status change	Budget or schedule	Comments
<b>Transit /</b> FRTA Maintenance Facility	No change	N/A	No new state funds are currently committed. MassDOT will continue to work with FRTA in the development and refinement of the project scope and budget.
<b>Transit /</b> Northampton Intermodal Transit Facility	No change	N/A	No state funds are currently committed to this project. MassDOT will continue to engage with PVTa on the project, including what support MassDOT can provide.
<b>Transit /</b> Electric Buses	No change	N/A	Currently, some state funds are committed to the development of an electric bus pilot with Martha's Vineyard Transit. Additional electric bus investments may be requested by VTA or other RTAs in the future. In the interim, MassDOT is partnering with the MBTA and RTAs to better understand the opportunities, costs and challenges of investing in electric buses.



# Plan update: public comment summary

## Overview

- **942 comments online**
- **197 emails**
- **36 letters**

**1,175 total comments**

Project	Public comments	Legislative comments	Municipal comments	Advocate comments	Additional information
Anderson Bridge Underpass	136 comments				Request for funding in the plan update
Boston area bicycle projects	236 comments		●	●	Thirteen projects
Community Path Extension	59 comments /				Request to include requirement in GLX contracts to include full design of the Community Path Extension.
Housatonic Rail Corridor	59 comments				Rail service between NYC and Pittsfield
Sound Barriers in East Somerville near I-93	61 comments		●		
I-95/I-93 Interchange in Woburn	11 comments				
Middleborough Rotary	110 comments	●	●		Request for funding in the plan update
Passenger Rail Service	14 comments				Regional, north/south and east/west service

# Plan update: public comment summary

Public  
comment  
summary  
...continued

Project	Public comments	Legislative comments	Municipal comments	Advocate comments	Additional information
Paving/Road Maintenance	14 comments				Increase funding
Route 111 in Boxborough	11 comments				Request for state to take over maintenance
Route 57 in New Marlborough	57 comments				Request for state to take over maintenance
South Coast Rail	11 comments				Support for Middleborough Alternative; support for Stoughton route; comments against project



# Plan update: new interactive format

- ▶ The CIP document will be presented as a “story map,” providing users the opportunity to interact with CIP content

The screenshot displays the 'DRAFT 2018-2022 Capital Investment Plan Update' story map. The top navigation bar includes tabs for 'CIP Overview', 'What's new?', 'Funding', 'Reliability Investments', 'Modernization Investments', 'Expansion Investments', 'Project Details', 'Equity', 'Comment Form', and 'Download Documents'. A green status bar indicates 'No issues detected'. The left sidebar features a 'Participate' section with instructions on how to provide feedback, a 'Comment on Proposed Projects' button, and a 'Comment on CIP Update' button. The main content area is a map titled 'Public Meeting Locations' showing various locations across Massachusetts. A pop-up window for the Springfield location provides meeting details: 'Tuesday, May 16, 6:30 p.m., Springfield School Committee Chamber (Room 220) City Hall, 35 Court Street'. The map includes a search bar, a scale bar, and a coordinate display at the bottom left.

**DRAFT 2018-2022 Capital Investment Plan Update**

No issues detected x

CIP Overview What's new? Funding Reliability Investments Modernization Investments Expansion Investments Project Details Equity **Comment Form** Download Documents

Participate

MassDOT and the MBTA want to hear from you about this draft CIP update! We have provided you with three ways to share your comments:

- 1) Use the map to the right to find a project to comment on,
- 2) Comment on the draft CIP update using our comment tool, or
- 3) Attend a CIP public meeting ([Click here for schedule](#))

Over the winter MassDOT and the MBTA solicited comments for the development of this CIP update and heard from over 1,100 of you. Your input into the capital planning process is invaluable. We consider all of the comments we receive when shaping the investment strategies and projects chosen for funding.

Comment on Proposed Projects

Comment on CIP Update

**Public Meeting Locations**

Meeting Information: Tuesday, May 16, 6:30 p.m., Springfield School Committee Chamber (Room 220) City Hall, 35 Court Street

Zoom to

# Plan update: engagement for draft CIP update

- 12 public meetings across the Commonwealth
  - Monday May 15 – Barnstable & Brockton
  - Tuesday May 16 – Leominster & Springfield
  - Wednesday May 17 – Worcester
  - Thursday May 18 – Lawrence
  - Monday May 22 – Boston & Greenfield
  - Tuesday May 23 – Lenox & Salem
  - Wednesday May 24 – Dartmouth & Marlborough
- Online comment tools
  - Comment accepted directly on proposed projects or via comment form used in first engagement phase
- Emails & letters





# Plan update: additional iterations

- **Changes expected before update is released for comment**
  - 1. DONE** MPOs have released all of their TIPs for public comment; those project lists will be incorporated into the draft CIP update project lists
  2. Changes requested from today's meeting
- **Changes expected after update is released for comment**
  1. MPOs have endorsed all of their TIPs; those project lists will be incorporated into the final draft CIP update project lists
  2. Changes in response to public comment
- **Changes expected after June CPC & Board meetings**
  - Changes requested from CPC and & Board meetings before publishing the final

# Next steps and discussion

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- Continue mapping investments and produce an equity analysis before release for public comment
- Finalize content in new format for review during public comment



## Program by program description slides

*Presented by priority and division*



# Program investments by Division

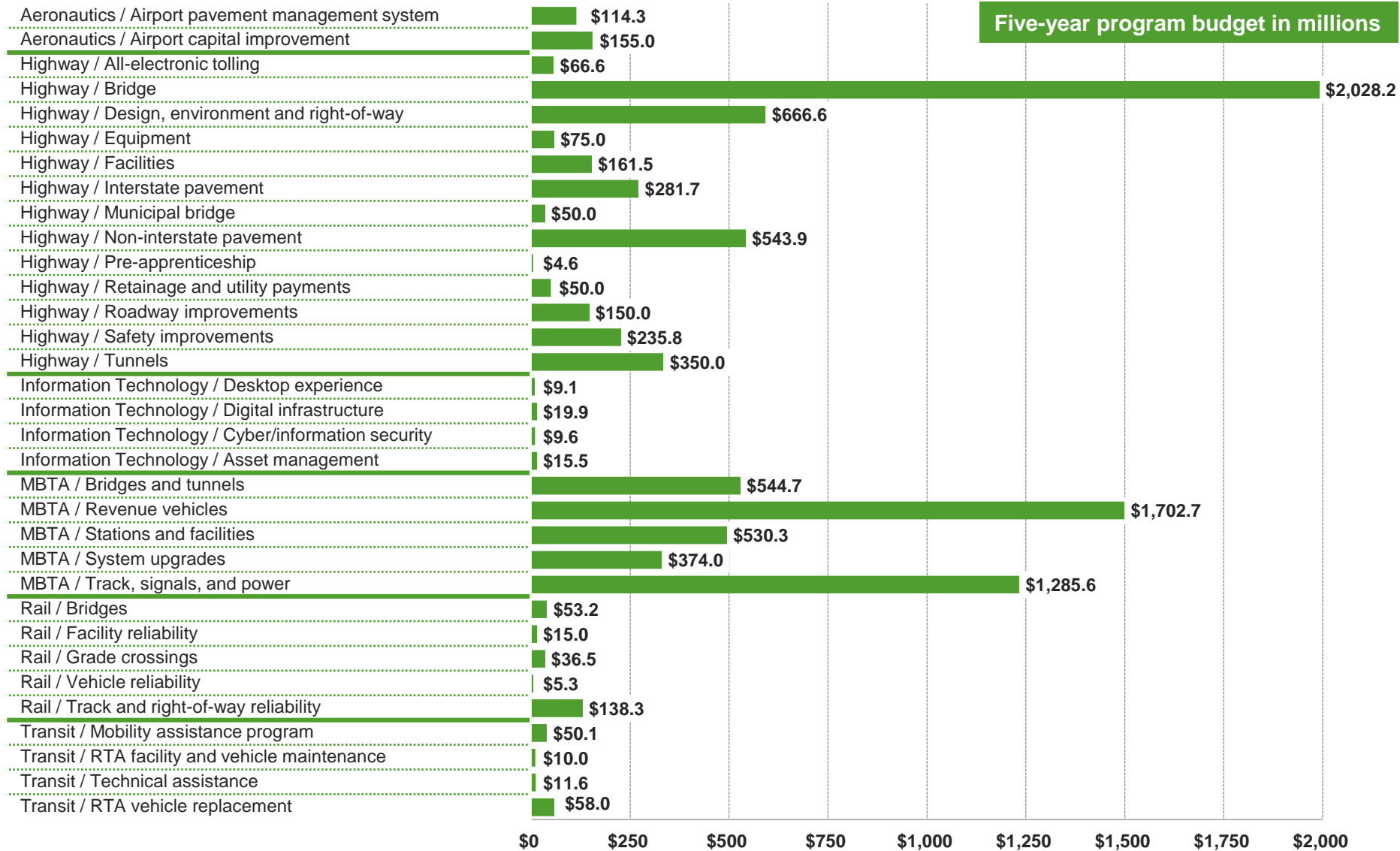
Aeronautics	Highway	IT	MBTA	Rail	Transit	Total <i>SFY18-22</i>
\$269.3 <i>(millions)</i>	\$4,663.9	\$54.1	\$4,437.3	\$248.3	\$129.7	\$9,802.6

Aeronautics	Highway	IT	MBTA	Rail	RMV	Transit	Total <i>SFY18-22</i>
\$25.0 <i>(millions)</i>	\$1,563.6	\$43.7	\$1,365.5	\$57.5	\$109.6	\$93.9	\$3,258.8

Highway	MBTA	Rail	Total <i>SFY18-22</i>
\$494.4 <i>(millions)</i>	\$1,644.3	\$132.0	\$2,270.7



# Reliability investments by program



Aeronautics	Highway	IT	MBTA	Rail	Transit	Total SFY18-22
\$269.3 (millions)	\$4,663.9	\$54.1	\$4,437.3	\$248.3	\$129.7	\$9,802.6



# Reliability programs for Aeronautics

## Airport Pavement Management System

### Program purpose and need statement:

This program maintains the quality of pavement “inside the airport fence” at an adequate level. This program is necessary to continue safety and maintenance programs at public airports.

### Program performance:

<b>Tracker target</b>	75 average PCI for airport pavement*
-----------------------	--------------------------------------

<b>PfP tool forecast</b>	83 average PCI for airport pavement by 2022
--------------------------	---

### FY2018-2022 program budget:

\$114.3 million over five years

## Airport Capital Improvement

### Program purpose and need statement:

This program includes a full range of airport state of good repair projects. This program is necessary to continue safe and efficient airport operations and services.

### Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP tool
--------------------------	----------------------------

<b>Other indicators</b>	80% of work planned completed each year.
-------------------------	--

### FY2018-2022 program budget:

\$155.0 million over five years



# Reliability programs for Highway

## All-electronic tolling

### Program purpose and need statement:

This program converts the I-90 corridor from the New York border to Boston from a cash, toll booth system to a cashless system. Included in the program is the demolition of the former toll booths and realignment of exits and interchanges on the I-90 corridor.

### Program performance:

<b>Tracker target</b>	95% E-Z Pass payment rate (vs. pay-by-plate)
-----------------------	--

<b>PfP tool forecast</b>	Not forecasted in PfP tool
--------------------------	----------------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

### FY2018-2022 program budget:

**\$66.6 million over five years**

## Bridge

### Program purpose and need statement:

This program maintains, reconstructs and replaces state and municipally owned bridges across the Commonwealth.

### Program performance:

<b>Tracker target</b>	- <10% NHS deck area is SD - 95 Health Index
-----------------------	---

<b>PfP tool forecast</b>	181 bridges rated in structural deficient
--------------------------	---

<b>Other indicators</b>	Number of structurally deficient bridges
-------------------------	--

### FY2018-2022 program budget:

**\$2,028.2 million over five years**



# Design, Environmental and Right of Way

## Program purpose and need statement:

This program procures consultant services for the project development program, including design, environmental permitting, and other necessary services. This program also procures all required external legal reviews, and pays for costs associated with temporary and permanent land takings.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP tool
--------------------------	----------------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$666.6 million over five years**

# Equipment

## Program purpose and need statement:

This program makes routine purchases of, and replaces, vehicles, equipment and other capital assets. This program is necessary for the daily operation of the department.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$75.0 million over five years**



# Facilities

## Program purpose and need statement:

This program maintains, repairs and replaces buildings, salt sheds, garages, vent buildings, and telecommunications and other systems owned by the Highway Division.

## Program performance:

### Tracker target

Not established in Tracker

### PfP tool forecast

Not forecasted in PfP tool

### Other indicators

To be determined

## FY2018-2022 program budget:

**\$161.5 million over  
five years**

# Interstate Pavement

## Program purpose and need statement:

This program resurfaces and performs related work on the interstate system. This program is necessary to improve pavement conditions.

## Program performance:

### Tracker target

90% of pavement in good or excellent condition

### PfP tool forecast

96% of pavement in good or excellent condition

### Other indicators

To be determined; set in accordance w/ federal performance requirements

## FY2018-2022 program budget:

**\$281.7 million over  
five years**



# Municipal Bridge

## Program purpose and need statement:

This program assists municipalities in repairing and replacing town owned bridges with a span length of less than 20 feet.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	Number of inspections completed
-------------------------	---------------------------------

## FY2018-2022 program budget:

**\$50.0 million over  
five years**

# Non-Interstate pavement

## Program purpose and need statement:

This program resurfaces and performs related work on non-interstate roads owned by MassDOT. This program is necessary to fulfill system wide maintenance contracts to improve pavement condition, and also includes site-specific projects.

## Program performance:

<b>Tracker target</b>	62% of pavement in good or excellent condition
-----------------------	--

<b>PfP tool forecast</b>	49% of pavement in good or excellent condition
--------------------------	--

<b>Other indicators</b>	To be determined; set in accordance w/ federal performance requirements
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## FY2018-2022 program budget:

**\$543.9 million over  
five years**

# Pre-apprenticeship

## Program purpose and need statement:

This program, for which MassDOT is partnering with a number of stakeholders, facilitates the introduction of additional pre-apprentices to skilled trades within our construction program. This program is necessary to provide low-income and other disadvantaged communities with access to training and employment opportunities within the construction trades.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$4.6 million over  
five years**

# Utility Payments

## Program purpose and need statement:

This program is an administrative program that reserves funds for close-out costs associated with all types of projects. This program is necessary to ensure funding for costs that are typically hard to forecast and predict.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$50.0 million over  
five years**



# Roadway Improvements

## Program purpose and need statement:

This program performs pot hole, fencing, guardrail, and sidewalk maintenance, repairs and other related improvements on non-interstate state owned roadways. This program also includes federally funded storm water retrofit projects. This program is preventative in nature, and is necessary to maximize the useful life and condition of roadways.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$150.0 million over five years**

# Safety Improvements

## Program purpose and need statement:

This program, which is both state and federally funded, repairs traffic signals, highway lighting systems, impact attenuators, traffic signs and pavement markings. This program is necessary to provide a safe roadway network for Commonwealth residents and visitors.

## Program performance:

<b>Tracker target</b>	Move to 0 fatalities Move to 0 injuries
-----------------------	--

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	Crash clusters; crash data
-------------------------	----------------------------

## FY2018-2022 program budget:

**\$235.8 million over five years**

# Tunnels

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## Program purpose and need statement:

This program reconstructs and maintains the regional tunnel network with state and federal funds and private-public partnerships. This program improves lighting, life safety systems and tunnel infrastructure.

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## Program performance:

**Tracker target**

Not established in Tracker

**PfP tool forecast**

Not forecasted in PfP

**Other indicators**

To be determined

---

## FY2018-2022 program budget:

**\$350.0 million over  
five years**



# Reliability programs for IT

## Desktop Experience

### Program purpose and need statement:

This program delivers best in class, highly resilient technologies and services related to desktop and personal computing, conformance and mobile solutions/devices, and network and internet connectivity. This program is necessary to maintain best practices and state of good repair in desktop IT at MassDOT.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP

#### Other indicators

Monitor level of state of good repair – age of equipment, engineering performance, latest software releases, help desk support requests.

### FY2018-2022 program budget:

**\$9.1 million over five years**

## Digital Infrastructure

### Program purpose and need statement:

This program does a range of digital infrastructure work, including state of good repair hardware upgrades and support of operations in the Cloud. This program provides a modern, application-independent information architecture. This program is necessary to meet MBTA's and MassDOT's technology goals by sustaining the core computer, storage, telecommunications and network infrastructure.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP

#### Other indicators

Monitor level of state of good repair – age of equipment, engineering performance, latest software releases, equipment uptime statistics.

### FY2018-2022 program budget:

**\$19.9 million over five years**



# Cyber/Information security

## Program purpose and need statement:

This program keeps IT infrastructure and software compliant with best practices and digital security standards to protect both agency and customer data. This program is necessary to maintain customer confidence when making secure transactions.

## Program performance:

Tracker target	Not established in Tracker
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PfP tool forecast	Not forecasted in PfP
-------------------	-----------------------

Other indicators	Security Awareness Training taken by all employees annually. Comprehensive policies and controls in place. 100% PCI compliance.
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## FY2018-2022 program budget:

**\$9.6 million over five years**

# Asset Management

## Program purpose and need statement:

This program delivers tools and processes to document, report on and manage MassDOT assets. These tools provide data on the asset life cycle. This program is necessary to maintain the reliability of Commonwealth assets by supporting a consistent approach to asset review and remediation.

## Program performance:

Tracker target	Not established in Tracker
----------------	----------------------------

PfP tool forecast	Not forecasted in PfP
-------------------	-----------------------

Other indicators	All DOT assets recorded and monitored for state of good repair. Minimize incident reports.
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## FY2018-2022 program budget:

**\$15.5 million over five years**

# Reliability programs for MBTA

## Bridges and tunnels

### Program purpose and need statement:

This program repairs, reconstructs and replaces MBTA commuter rail and transit bridges and tunnels system-wide.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP

#### Other indicators

Number of structurally deficient bridges that have a condition rating under 4 points on the Pontis Scale

### FY2018-2022 program budget:

**\$544.7 million over five years**

## Revenue vehicles

### Program purpose and need statement:

This program rehabilitates and replaces the MBTA revenue fleet, which includes commuter rail, heavy rail, light rail, bus and ferry units.

### Program performance:

#### Tracker target

Not established - Average facility SGR score / Average non-revenue vehicle SGR score

#### PfP tool forecast

Model needs to be updated

#### TAM requirement\*

% of revenue vehicles that meet or exceed the useful life benchmark\*\*

### FY2018-2022 program budget:

**\$1,702.7 million over five years**

\* Federally Mandated Transit Asset Management (TAM) Requirement

\*\* Useful Life Benchmark (ULB) is defined as the expected lifecycle or the acceptable period of use in service of a capital asset for a particular transit provider's operating environment.





# Stations and facilities

## Program purpose and need statement:

This program rehabilitates and upgrades MBTA stations (e.g., commuter rail, commuter boat, subway and bus stations), and other maintenance and administrative facilities that support transit operations. Projects include maintenance and rehabilitation of elevators, escalators, and parking garages, among other facilities.

## Program performance:

<b>Tracker target</b>	Not established - Average facility SGR score / Average non-revenue vehicle SGR score
-----------------------	--

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>TAM requirement*</b>	Percentage of assets with condition rating below 3.0 on the FTA TERM scale.
-------------------------	---

## FY2018-2022 program budget:

**\$530.3 million over five years**

# System upgrades

## Program purpose and need statement:

This program upgrades a wide range of MBTA systems including communications, security, computer technology, fare collection, asset management and environmental remediation systems. It also rehabilitates non-revenue vehicles and equipment.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP tool
--------------------------	----------------------------

<b>Other indicators</b>	New program – to be determined
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## FY2018-2022 program budget:

**\$374.0 million over five years**

\* Federally Mandated Transit Asset Management (TAM) Requirement

# Track, signals, and power

## Program purpose and need statement:

This program rehabilitates, replaces and upgrades track, signal and power assets across the commuter rail and transit system.

## Program performance:

### Tracker target

Not established - average commuter rail track SGR score / average rapid transit track SGR score

### PfP tool forecast

Not forecasted in PfP

### TAM requirement\*

Percentage of track segments with performance restrictions

## FY2018-2022 program budget:

**\$1,285.6 million over five years**

*\* Federally Mandated Transit Asset Management (TAM) Requirement*

# Reliability programs for Rail

## Bridges

### Program purpose and need statement:

This program repairs or replaces bridges to avoid deterioration, keep or restore class of line, or maintain utility. Prioritization of projects within this program reflect most recent inspections, type of usage (ex: hazardous cargo), and any contractual or regulatory requirements for action.

### Program performance:

**Tracker target** Not established in Tracker

**PfP tool forecast** Not forecasted in PfP

**Other indicators** To be determined

### FY2018-2022 program budget:

**\$53.2 million over five years**

## Facility Reliability

### Program purpose and need statement:

This program repairs or replaces rail facilities, specifically rail yards and stations, to avoid deterioration or maintain the facility's utility. Prioritization of program projects will reflect condition reports, type of risk/usage, and any contractual or regulatory requirements for action. This program is necessary to maintain a safe and reliable rail system.

### Program performance:

**Tracker target** Not established in Tracker

**PfP tool forecast** Not forecasted in PfP tool

**Other indicators** To be determined

### FY2018-2022 program budget:

**\$15.0 million over five years**



# Grade crossings

## Program purpose and need statement:

This program repairs or replaces grade crossings to avoid deterioration, keep or restore class of line, or maintain the crossing's utility. Prioritization of projects in this program will reflect federal guidelines, most recent inspections, type of usage (ex: hazardous cargo), and any contractual or regulatory requirements for action. This program is necessary to maintain a safe and reliable rail system.

## Program performance:

Tracker target	Not established in Tracker
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PfP tool forecast	Not forecasted in PfP
-------------------	-----------------------

Other indicators	Approximately 20 grade crossing per year can be improved at this funding
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## FY2018-2022 program budget:

**\$36.5 million over five years**

# Vehicle reliability

## Program purpose and need statement:

This program repairs, replaces, or acquires rail equipment (locomotives, coaches, ballast cars, light duty vehicles, etc.) to facilitate reliable service, avoid deterioration, or support activities to maintain or restore class of line. This program is necessary to maintain the rail system in good condition.

## Program performance:

Tracker target	Not established in Tracker
----------------	----------------------------

PfP tool forecast	Not forecasted in PfP tool
-------------------	----------------------------

Other indicators	To be determined
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## FY2018-2022 program budget:

**\$5.3 million over five years**



# Track and right-of-way reliability

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## Program purpose and need statement:

This program repairs or replaces assets within the rail right of way (typically ties, rail, ballast, culverts, switches, etc.) to avoid deterioration, keep or restore class of line, or maintain the line's utility. Prioritization will reflect most recent inspections, type of usage (ex: hazardous cargo), and any contractual or regulatory requirements for action. This program is necessary to maintain a safe and reliable rail system.

---

## Program performance:

Tracker target

Not established in Tracker

PfP tool forecast

Not forecasted in PfP

Other indicators

To be determined

---

## FY2018-2022 program budget:

**\$138.3 million over  
five years**



# Reliability programs for Transit

## Mobility Assistance Program

### Program purpose and need statement:

This program purchases vans and related equipment used to provide transportation for the elderly and disabled by Councils on Aging, the RTAs and non-profits.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP

#### Other indicators

Number of organizations who attended a training to participate in M.A.P.

### FY2018-2022 program budget:

**\$50.1 million over five years**

## RTA facility and vehicle maintenance

### Program purpose and need statement:

The program addresses the maintenance, rehabilitation and upkeep of existing RTA facilities or vehicles.

### Program performance:

#### Tracker target

Not established in Tracker - facility condition (range)

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

To be determined

### FY2018-2022 program budget:

**\$10.0 million over five years**



# Technical assistance

## Program purpose and need statement:

This program is used to provide technical assistance to support the transit program (grants management systems, vehicle inspections, etc).

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$10.0 million over  
five years**

# RTA vehicle replacement

## Program purpose and need statement:

This program replaces existing Regional Transit Authorities' (RTA) vehicles so that they meet state of good repair standards.

## Program performance:

<b>Tracker target</b>	Not established - demand response vehicle age / revenue vehicle condition
-----------------------	---

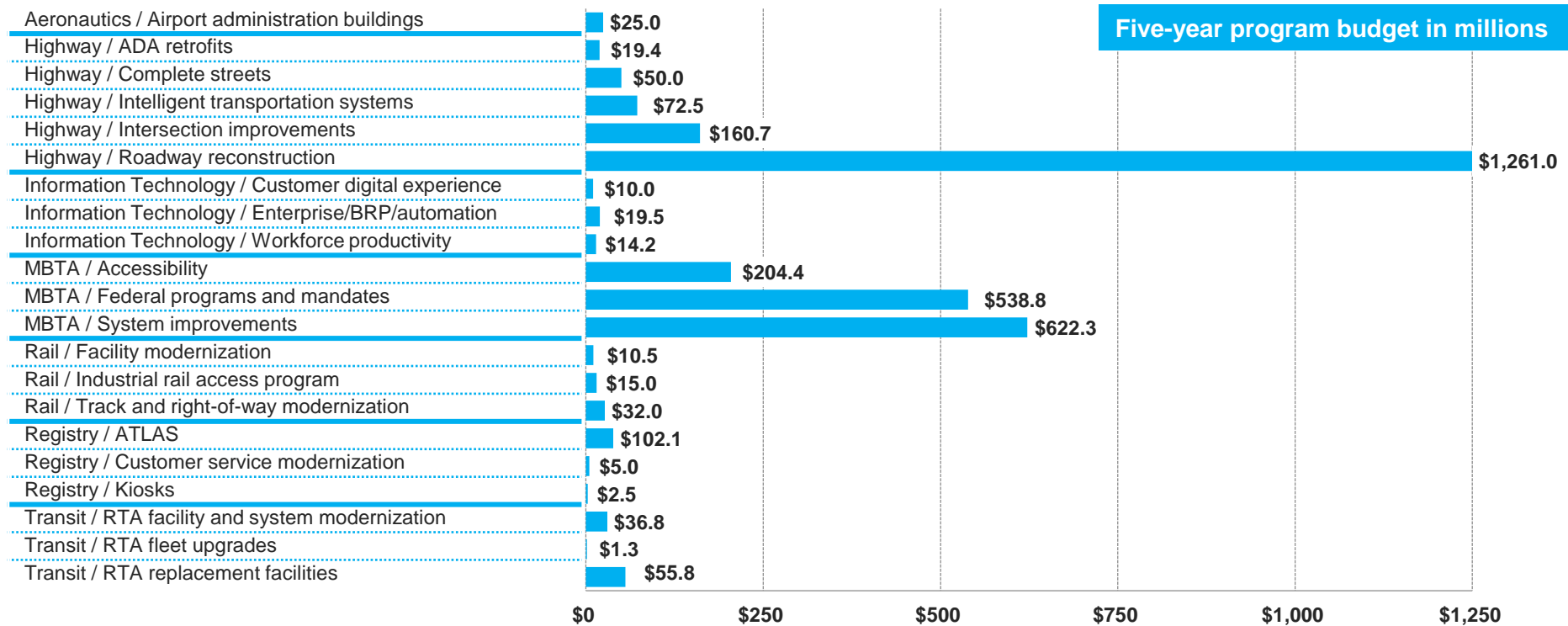
<b>PfP tool forecast</b>	7.4 average fleet age in years (up from 4.9)
--------------------------	--

## FY2018-2022 program budget:

**\$58.0 million over  
five years**



# Modernization investments by program



Aeronautics	Highway	IT	MBTA	Rail	RMV	Transit	Total SFY18-22
\$25.0 (millions)	\$1,563.6	\$43.7	\$1,365.5	\$57.5	\$109.6	\$93.9	\$3,258.8





# Modernization program for Aeronautics

## Airport Administration Buildings

### Program purpose and need statement:

This program builds or renovates airport administration buildings as recommended by the 2010 Statewide Airport System Plan, which identified 17 airports that did not have existing, or adequate administration buildings. This program is necessary to provide adequate administrative spaces in airports, which is integral to improving the safety, efficiency, and business growth of the airport asset.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP

#### Other indicators

Goal is to address one building per year with this funding level

### FY2018-2022 program budget:

**\$25.0 million over  
five years**



# Modernization programs for Highway

## ADA Retrofits

### Program purpose and need statement:

This program improves the condition and accessibility of state owned sidewalks. This program is necessary to meet obligations identified under the MassDOT ADA Transition Plan.

### Program performance:

**Tracker target** 0 failed or missing curb ramps

**PfP tool forecast** 58% decrease in failed curb ramps

**Other indicators** Status of statewide inventory of curb ramps

### FY2018-2022 program budget:

**\$19.4 million over five years**

## Complete Streets

### Program purpose and need statement:

This program rewards communities that demonstrate a commitment to embedding Complete Streets in their policies and practices by providing them with technical assistance and funding.

### Program performance:

**Tracker target** Not established in Tracker

**PfP tool forecast** Not forecasted in PfP

**Other indicators** Number of complete streets policies enacted

### FY2018-2022 program budget:

**\$50.0 million over five years**



# Intelligent Transportation Systems

## Program purpose and need statement:

This program supports innovative and new communication equipment and information technology systems (signs, cameras, sensors, etc.) designed to provide real time traffic information to residents and visitors. This program is necessary to improve our network of communication tools, to allow drivers to make better informed decisions regarding travel options.

## Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP
--------------------------	-----------------------

<b>Other indicators</b>	Travel time from RTTM
-------------------------	-----------------------

## FY2018-2022 program budget:

**\$72.5 million over five years**

# Intersection Improvements

## Program purpose and need statement:

This program upgrades and improves traffic signals and intersections. This program is necessary to meet safety improvement targets.

## Program performance:

<b>Tracker target</b>	Move to zero fatalities Move to zero injuries
-----------------------	--

<b>PfP tool forecast</b>	1,530 economic-weighted EPDO crashes reduced
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<b>Other indicators</b>	To be determined
-------------------------	------------------

## FY2018-2022 program budget:

**\$160.7 million over five years**



# Roadway Reconstruction

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## Program purpose and need statement:

This program improves the overall condition of roads, by supporting both large and small state and municipal investments. Nearly all of the projects in this program include improvements to bicycle and pedestrian user spaces.

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## Program performance:

### Tracker target

Not established in Tracker

### PfP tool forecast

Not forecasted in PfP

### Other indicators

Pavement condition; crash data

---

## FY2018-2022 program budget:

**\$1,261.0 million over  
five years**



# Modernization programs for IT

## Customer Digital Experience

### Program purpose and need statement:

This program ensures that MassDOT and MBTA websites present clear, concise, and timely information to the public at all times. This program is necessary to ensure that transportation system users have successful interactions with MassDOT public facing websites.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP

#### Other indicators

Monitor budgets and scheduled deliverables. Help Desk and Incident Report activity 100% of websites updated and aligned with CW standards.

### FY2018-2022 program budget:

**\$10.0 million over five years**

## Enterprise / BRP / Automation

### Program purpose and need statement:

This program improves the ways that MassDOT manages and optimizes core functionality (such as document management, file shares, workflows, etc.) through business needs analysis and the implementation of enterprise solutions that are scalable, resilient and have an extensive ecosystem.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

Monitor budgets & scheduled deliverables. Full implementation of critical finance, HR and legal systems.

### FY2018-2022 program budget:

**\$19.5 million over five years**



# Workforce Productivity

## Program purpose and need statement:

This program improves business processes through automated workflows and other electronic means at the department level. This program also may include investments that improve process timelines, reduce paperwork, and contribute to efficiency.

## Program performance:

### Tracker target

Not established in Tracker

### PfP tool forecast

Not forecasted in PfP

### Other indicators

Monitor budgets and scheduled deliverables. Full implementation of departmental business process and workflows.

## FY2018-2022 program budget:

**\$12.2 million over  
five years**



# Modernization programs for MBTA

## Accessibility

### Program purpose and need statement:

This program improves accessibility at MBTA commuter rail, subway and bus stations. This program is necessary to meet the goals of the Authority's Plan for Accessible Transit Infrastructure ("PATI").

### Program performance:

<b>Tracker target</b>	Not established - platform accessibility
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<b>PfP tool forecast</b>	Not forecasted in PfP tool
--------------------------	----------------------------

<b>Other indicators</b>	Reduce number of inaccessible stations
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### FY2018-2022 program budget:

**\$204.4 million over five years**

## Federal programs and mandates

### Program purpose and need statement:

This program implements federally-mandated safety projects for the commuter rail system, including Positive Train Control (PTC). Projects undertaken with Homeland Security funds are also included here.

### Program performance:

<b>Tracker target</b>	Not established in Tracker
-----------------------	----------------------------

<b>PfP tool forecast</b>	Not forecasted in PfP tool
--------------------------	----------------------------

<b>Other indicators</b>	Fulfill mandates
-------------------------	------------------

### FY2018-2022 program budget:

**\$538.8 million over five years**

# System improvements

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## Program purpose and need statement:

This program includes improvement projects such as AFC 2.0 or wayfinding. It also includes Red and Orange Line investments in track, infrastructure, and car houses. This program is necessary to increase capacity, modernize the existing system, and enhance customers' experience. It is also needed to assure that vehicles scheduled for delivery in FY2019 will operate as intended and provide maximum benefits.

---

## Program performance:

### Tracker target

Not established in Tracker

### PfP tool forecast

Not forecasted in PfP tool

### Other indicators

- Increase operational capabilities: AFC 2.0 (ability to collect fares, fewer station outages, fare policy flexibility)
  - Infrastructure ready to accept new vehicles: Red Line/Orange Line infrastructure improvements
- 

## FY2018-2022 program budget:

**\$622.3 million over  
five years**





# Modernization programs for Rail

## Facility modernization

### Program purpose and need statement:

This program repairs or replaces rail facilities, specifically rail yards and stations, to upgrade them to current industry standards or maintain the facility's utility. Prioritization of projects in this program will reflect economic opportunities for the line served, condition reports, type of risk/usage, and any contractual or regulatory requirements for action and consistency with the Statewide Rail Plan. This program is necessary to maintain a safe, reliable, cost effective, and modern rail system.

### Program performance:

Tracker target	Not established in Tracker
----------------	----------------------------

PfP tool forecast	Not forecasted in PfP tool
-------------------	----------------------------

Other indicators	To be determined
------------------	------------------

### FY2018-2022 program budget:

**\$10.5 million over five years**

## Industrial Rail Access Program

### Program purpose and need statement:

This program repairs or replaces grade crossings to upgrade safety features or maintain the crossing's utility. Prioritization of projects in this program will reflect Federal guidelines, opportunities to increase safety, most recent inspections, type of usage/risk, any contractual or regulatory requirements for action, and consistency with the Statewide Rail Plan.

### Program performance:

Tracker target	Not established in Tracker
----------------	----------------------------

PfP tool forecast	Not forecasted in PfP tool
-------------------	----------------------------

Other indicators	To be determined
------------------	------------------

### FY2018-2022 program budget:

**\$15.0 million over five years**



# Track and right-of-way modernization

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## Program purpose and need statement:

This program repairs or replaces assets within the rail right of way (typically ties, rail, ballast, switches, etc.) to upgrade their capacity to reflect current industry standards (ex: weight capacity to 286,000 lbs) for the line and maintain the line's utility. Prioritization of projects in this program will reflect economic opportunities for the line, most recent inspections, type of usage (ex: hazardous cargo), any contractual or regulatory requirements for action, and consistency with the Statewide Rail Plan. This program is necessary to maintain a safe, reliable, cost effective, and modern rail system.

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## Program performance:

Tracker target	Not established in Tracker
PfP tool forecast	Not forecasted in PfP tool
Other indicators	To be determined

## FY2018-2022 program budget:

**\$32.0 million over  
five years**



# Modernization programs for Registry

## ATLAS

### Program purpose and need statement:

This program improves RMV service delivery options by replacing the ALARS system. This program is necessary to increase business process efficiency through reduced wait times, increase the number of transactions done via alternative customer service channels, and increase the capacity of third parties dependent on RMV data.

### Program performance:

#### Tracker target

Not established in Tracker for capital planning

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

ATLAS replaces the 30 year old mainframe system known as ALARS. ALARS is dated in technical and user interface terms, is expensive to maintain and lacks flexibility to update as business requirements change.

### FY2018-2022 program budget:

**\$102.1 million over five years**

## Customer service modernization

### Program purpose and need statement:

This program includes updating and upgrading leased branch locations to accommodate the new dual line queuing model, signage, furniture and fixtures.

### Program performance:

#### Tracker target

Percent of Service Center customers served in 30 minutes or less. Reduces the percent of customers served in Service Centers statewide waiting 60 minutes or more to be served.

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

Modernizing the RMV's Service Centers through wayfinding, queuing systems, and appropriate layouts is a critical element in meeting wait time and customer service performance standards.

### FY2018-2022 program budget:

**\$4.9 million over five years**



# Kiosks

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## Program purpose and need statement:

This program installs kiosks at RMV branches. This program is necessary to improve customer experience.

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## Program performance:

### Tracker target

Percent of system-wide transactions conducted outside of Service Centers

### PfP tool forecast

Not forecasted in PfP tool

### Other indicators

Kiosks help to increase the number of customers served in Service Centers in 30 minutes or less by decreasing the customer volume of in-person visits.

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## FY2018-2022 program budget:

**\$2.5 million over  
five years**



# Modernization programs for Transit

## RTA facility and system modernization

### Program purpose and need statement:

This program improves or modernizes existing RTA facilities, systems or equipment.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

To be determined

### FY2018-2022 program budget:

**\$36.8 million over  
five years**

## RTA fleet upgrades

### Program purpose and need statement:

This program allows for Regional Transit Authority fleet growth. This program is necessary to meet service needs or expansion.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

To be determined

### FY2018-2022 program budget:

**\$1.3 million over  
five years**



# RTA Replacement Facilities

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## Program purpose and need statement:

This program constructs modernized RTA maintenance, administrative, operations or intermodal facilities.

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## Program performance:

**Tracker target**

Not established in Tracker

**PfP tool forecast**

Not forecasted in PfP tool

**Other indicators**

To be determined

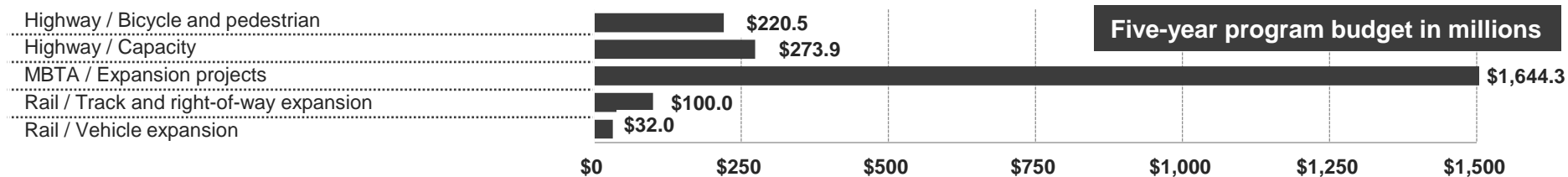
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## FY2018-2022 program budget:

**\$55.8 million over  
five years**



# Expansion investments by program



Highway	MBTA	Rail	Total <i>SFY18-22</i>
\$494.4 <i>(millions)</i>	\$1,644.3	\$132.0	\$2,270.7

# Expansion programs for Highway

## Bicycle and Pedestrian

### Program purpose and need statement:

This program constructs multi-use paths and other trails that are independent from a roadway. In addition, this program will meet future needs identified through the ongoing statewide bicycle and pedestrian planning effort.

### Program performance:

#### Tracker target

Ped plan network completed / Bike plan network completed

#### PfP tool forecast

1,041 miles of off-road bicycle and pedestrian facilities

### FY2018-2022 program budget:

\$220.5 million over five years

## Capacity

### Program purpose and need statement:

This program allows for Regional Transit Authority fleet growth. This program is necessary to meet service needs or expansion.

### Program performance:

#### Tracker target

Not established in Tracker

#### PfP tool forecast

Not forecasted in PfP tool

#### Other indicators

To be determined

### FY2018-2022 program budget:

\$273.9 million over five years





# Expansion programs for MBTA

## Expansion projects

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### Program purpose and need statement:

This program makes targeted expansions in order to improve access to transit and statewide rail. Examples of projects could include Green Line Extension, and Silver Line to Chelsea.

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### Program performance:

Tracker target

Not established in Tracker

PfP tool forecast

Not forecasted in PfP tool

Other indicators

To be determined

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### FY2018-2022 program budget:

**\$1,644.3 million over  
five years**



# Expansion programs for Rail

## Track and right-of-way expansion

### Program purpose and need statement:

This program repairs or replaces assets within the rail right of way (typically ties, rail, ballast, switches, etc.) to expand existing rail services, including the addition of passenger rail or freight rail. Prioritization of projects in the program will reflect economic opportunities for the new service, consistency with the statewide Rail Plan, and any contractual or regulatory requirements for action.

### Program performance:

Tracker target

Not established in Tracker

PfP tool forecast

Not forecasted in PfP

Other indicators

To be determined

### FY2018-2022 program budget:

**\$100.0 million over  
five years**

## Vehicles expansion

### Program purpose and need statement:

This program repairs, replaces, or acquires rail equipment (locomotives, coaches, ballast cars, light duty vehicles, etc.) to expand existing rail services, including the addition of passenger rail or freight rail. Prioritization will reflect economic opportunities for the new service, consistency with the statewide Rail Plan, and any contractual or regulatory requirements for action.

### Program performance:

Tracker target

Not established in Tracker

PfP tool forecast

Not forecasted in PfP tool

Other indicators

To be determined

### FY2018-2022 program budget:

**\$32.0 million over  
five years**

