
FY 2021-2025 CIP Update: Sources, Uses and Program Sizes

Joint Board presentation

April 8, 2020

Agenda

- **CIP Process Recap**
 - Status update on CIP development activities
- **MassDOT/MBTA Initiatives for 2021-2025 CIP**
 - New programs and/or funding
- **Preliminary sources and uses for MassDOT and MBTA**
 - New sources and/or changes to existing sources
 - Proposed uses
- **Program Sizes**
 - Summary and highlighted changes
- **Appendix**



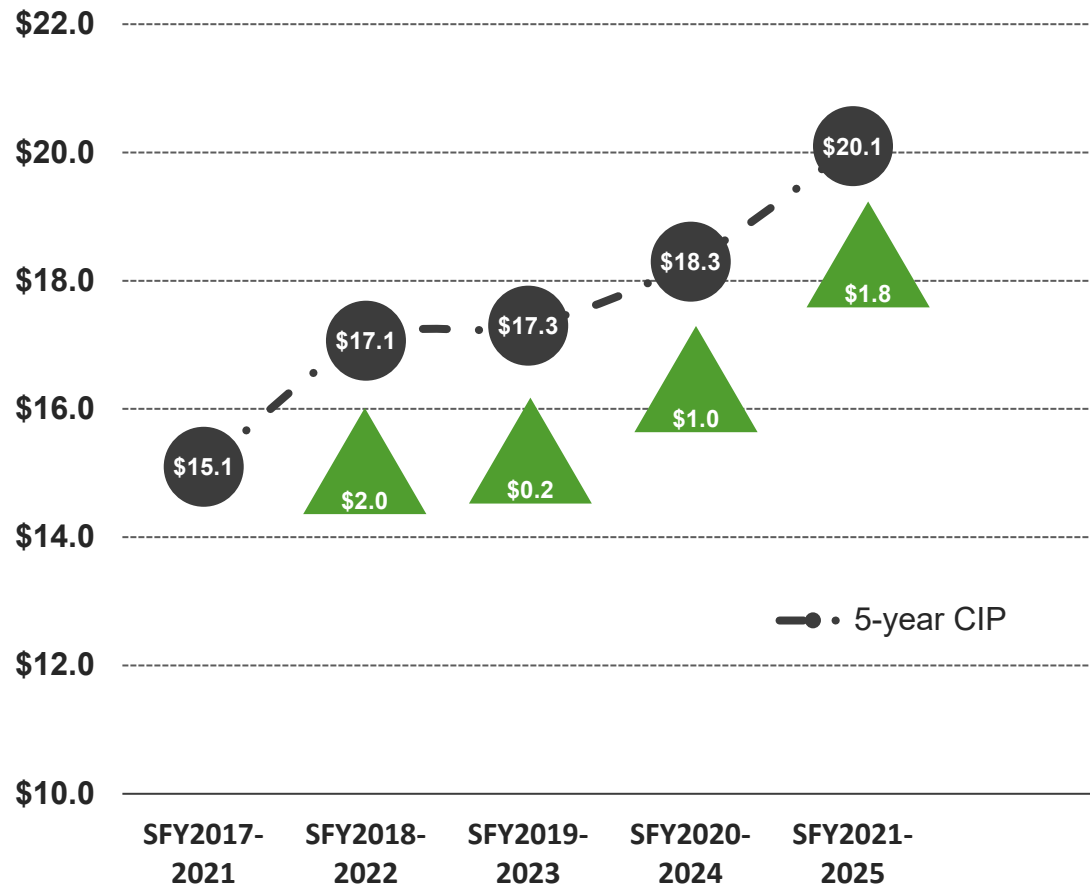
CIP Process Recap

- **Since last meeting:**
 - Reviewed and finalized program size requests
 - CIP / STIP alignment underway and will influence final program sizes and draft project universe once federally funded projects are incorporated
 - 2021-2025 program sizing and prioritization has continued to focus on aligning with strategic priorities and performance targets and incorporates:
 - New municipal programs and new funding included in the pending Transportation Bond Bill reflected in the 2021-2025 CIP
 - Reviewed and refined source assumptions
 - Bond Cap targets provided by ANF January 3; revised on April 2
 - MassDOT pay-go capital projections may be updated, as necessary, to align with current economic conditions and FY 20 projections and draft FY21 operating budget assumptions
 - Incorporated additional Federal Highway Administration discretionary funding and other funding sources not captured in the approved 2020-204 CIP
 - Planning is underway for CIP public meetings (virtual and/or in person)
- **Today:**
 - Need feedback on preliminary sources and uses
 - Feedback and discussion on programs and sizes



MassDOT/MBTA Capital Investment Plan Continues to Grow

CIP comparisons: SFY 2021-2025¹ plan versus prior 5-year CIPs (in billions)



- The CIP is built from 73 “investment programs” each designed to address a category of transportation assets or needs
- Reliability and modernization investments continue to be the focus of CIP investments:

- 2021-25 – 77%
- 2020-24 – 73%
- 2019-23 – 78%
- 2018-22 – 76%
- 2017-21 – 78%

¹ 2021-2025 CIP plan reflects program sizes versus planned spending

MassDOT/MBTA New CIP Initiatives

- **Aeronautics** has proposed a new **Drone Information Systems program** (\$1.75 million) to develop the IT infrastructure and systems to support future use of unmanned aerial surveillance to collect, analyze and disseminate data on infrastructure and document work sites
- Several new **Municipal Partnership programs** are proposed for **Highway and Transit**:
 - **Highway/Municipal Pavement**¹ (\$100 million) which would provide funds through partnerships and grants to cities and towns to assist them in repairing and replacing municipal-owned pavement
 - **Highway/Local Bottleneck Reduction**² (\$50 million) would provide new funding for cities and towns for moderate, cost effective congestion relief (e.g. smart signals)
 - **MBTA/Transit / Bus Transit Infrastructure Partnership**³ (\$50 million) will provide funds through partnerships and/or grants to municipalities to implement transit-supportive infrastructure to improve and facilitate more efficient delivery of transit operations, improve the passenger experience, and enhance transit rider and pedestrian service and safety for both the MBTA and RTA networks

¹ Program authorization contingent on passage of the Transportation Bond Bill (TBB); included in both TBB filed by the Governor and final House version

² Program authorization contingent on passage of the TBB; only included in the TBB filed by the Governor; not in final House version

³ Program authorization contingent on passage of the TBB; similar grant program (but not the same) included in House version at \$100 million; \$50 million included in the TBB filed by the Governor



MassDOT/MBTA New CIP Initiatives

- **Rail** has proposed a new **Rail Track and ROW Expansion program** (\$5 million) that will support project development efforts related to passenger service in Western Mass
- **MBTA** has proposed new programs for **Bus Transformation** (\$71 million) and **Commuter Rail Transformation** (\$64 million)
- **Highway's** capital plan will incorporate new state funding for the **Cape Cod Bridges – Approaches** as well as new **Next Generation Bridge Grant Anticipation Notes** (GANs) to support the **Bridge program**
 - Funding for these initiatives was included in the pending Transportation Bond Bill (TBB)
 - A portion of the funding for the Cape Cod Bridges – Approaches is in addition to what was included as part of the 2020-2024 CIP



FY2021-2025 CIP update: Sources

April 2020

Potential new sources to support the 2021-2025 CIP

- New Federal Sources
 - Additional federal formula funds (\$61.9 million)
 - Federal Railroad Administration grants (South Station Tower 1 grant, \$42 million)
- Potential new State sources
 - Bond cap increase to provide funding for new Municipal Programs and Cape Cod Bridges (\$172.5 million)
 - New Grant Anticipation Notes (GANs) to support the Highway Bridge program (\$525 million)*
 - MassDOT sources overall have increased over FY20-24 CIP
 - MassDOT sources are approximately \$400 million greater than FY20-24 CIP
 - MBTA sources remain consistent with FY20-24 CIP

*Funding and authorization included in the pending Transportation Bond Bill

MassDOT/MBTA CIP New State Sources

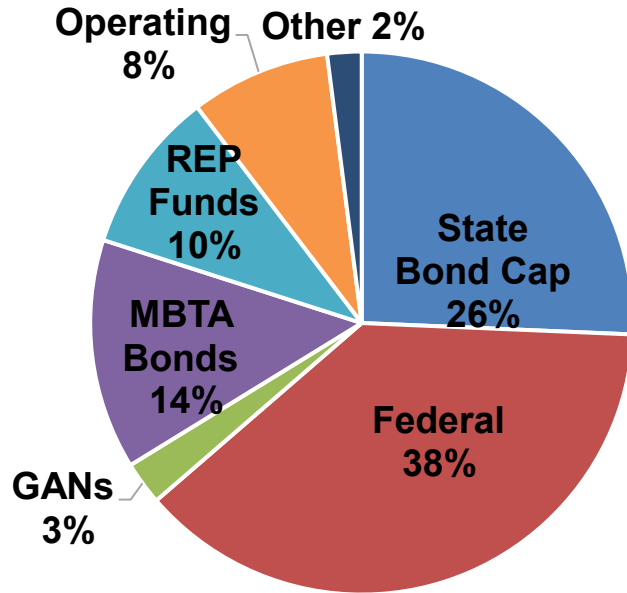
- The Commonwealth has increased **state bond funds** for the FY21-25 CIP to improve the condition of transportation assets across the Commonwealth and increase our commitment to our municipal partners
 - \$100 million (in anticipated spending) for Municipal Pavement program
 - \$40 million (in anticipated spending) for Local Bottleneck Reduction program
 - \$12.5 million (in anticipated spending) for Bus Transit Infrastructure Partnership program*
 - \$20 million for Cape Cod Bridges – Approaches
 - \$525 million in new Grant Anticipation Notes to support the Highway bridge program
- For 2021-2025, projected available Pay-go toll funds may still support an increase in funds available to support capital projects
 - The increase reflects the high penetration rate in all electronic tolling participation
 - Because only half of toll reserves are programmed as Pay-Go capital funds, reduction in toll revenue does not necessarily require a proportionate decrease in Pay-Go capital funds
 - Pay-Go assumptions will be adjusted in May Draft CIP to reflect March/April toll collections in line with MassDOT operating budget assumptions

*Only reflects additional bond cap from the Commonwealth; MBTA has included a portion of Bus Transit Infrastructure Partnership investments as part of its larger investment in the Bus Transformation program with funding provided by MBTA funds

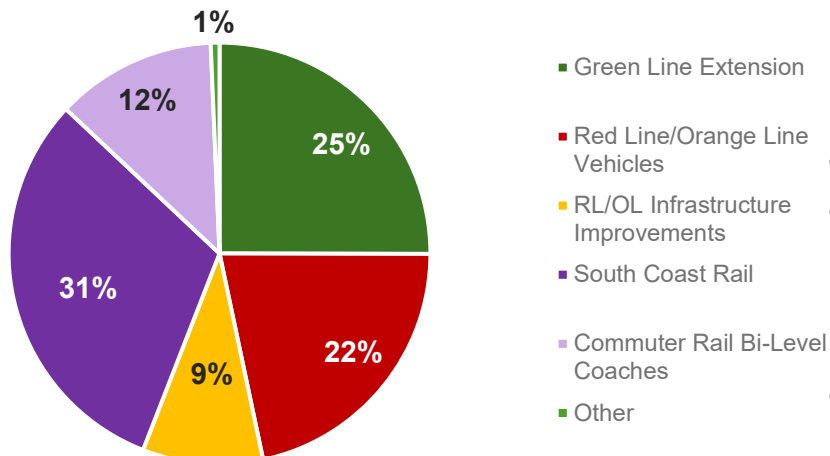


Funding Sources for MassDOT and MBTA

FY21-FY25 All Funding Sources



FY21-FY25 REP Funds



- **Bond Cap:**
 - **\$1,090.8 M** in FY21; (\$5.2B total over 5-year), including:
 - **\$60M** in FY21 (\$300 M over 5-year) for MBTA
 - **\$160M** in FY 21 (\$336 M over 5-year) for SCR
 - **\$35M** in FY 21 (\$72.5 M over-5 year) for Massport
 - **\$200M** in FY 21 (\$1 B over 5-year) for Chapter 90
 - **\$635.8M** in FY 21 (\$3.5 B over 5-year) for MassDOT
- **MBTA Bonds:**
 - **\$544.8 M** in FY 21 (\$2.8 B over 5-year) for MBTA revenue bonds and PTC loans
- **REP Funds:**
 - **\$562 M** in FY 21 (\$1.9B over 5 years) for REP
- **Federal: \$1.7 B** in FY 21; (\$8.0 B over 5-year)
 - Highway/Planning (FHWA): \$4.6B total
 - Transit (FTA): \$38.1M total
 - Rail/MBTA (FRA): \$43.5M total
 - Aviation (FAA): \$136.7M total
 - MBTA (FTA): \$3.3B total
- **GANs: \$525M** (over 5-years)
- **Operating:**
 - Tolls Pay-Go Capital: **\$1.5B** over 5-year
 - Pay-go Lockbox and Operating Assistance (MBTA): **\$450 M** over 5-year (includes unspent carryover)
- **Other:**
 - Local Funds, Reimbursements & CARM: **\$443.8M** over 5-year



Preliminary Bond Cap Comparison (2021-2025 vs 2020-2024)

Changes from year to year

- MassDOT Bond Cap
 - ANF has provided updated bond cap estimates numbers but Commonwealth capital planning is still finalizing its plan
 - Program sizes and available bond cap by fiscal year are under review for fiscal constraint
 - Adjustments may be needed to manage to annual ANF bond cap targets

Year to year comparison – MassDOT Preliminary Bond Cap

	FY21	22-25	21-25
<i>Last year</i> ▶	\$1,032.5	\$3,104.4	n/a
<i>This year</i> ▶	\$1,090.8	\$4,145.4	\$5,236.2
	+\$58.5	+\$1,131.0	New year

Year to year comparison – MBTA¹ + Commonwealth

	FY21	22-25	21-25
<i>Last year</i> ▶	\$222.0	\$436.4	\$923.4
<i>This year</i> ▶	\$255.0	\$453.8	\$708.8
	+\$33.0	+\$17.4	New year

FY2021 impacts on source

- Preliminary funding for MassDOT for 2021 essentially the same as last CIP
 - Additional bond cap provided to fund new municipal programs and Cape Cod Bridges - Approaches
 - Discuss program sizes and budgets by FY within context of funds available (i.e. bond cap targets to be provided by ANF)
- Funding for Commonwealth Projects reflects no change in FY20-FY24 funding levels from last plan
 - \$72.5 million allocated to Harbor Dredging
- MBTA funding for state of good repair remains at \$60 million/year
 - \$300 million total over 2021-2025

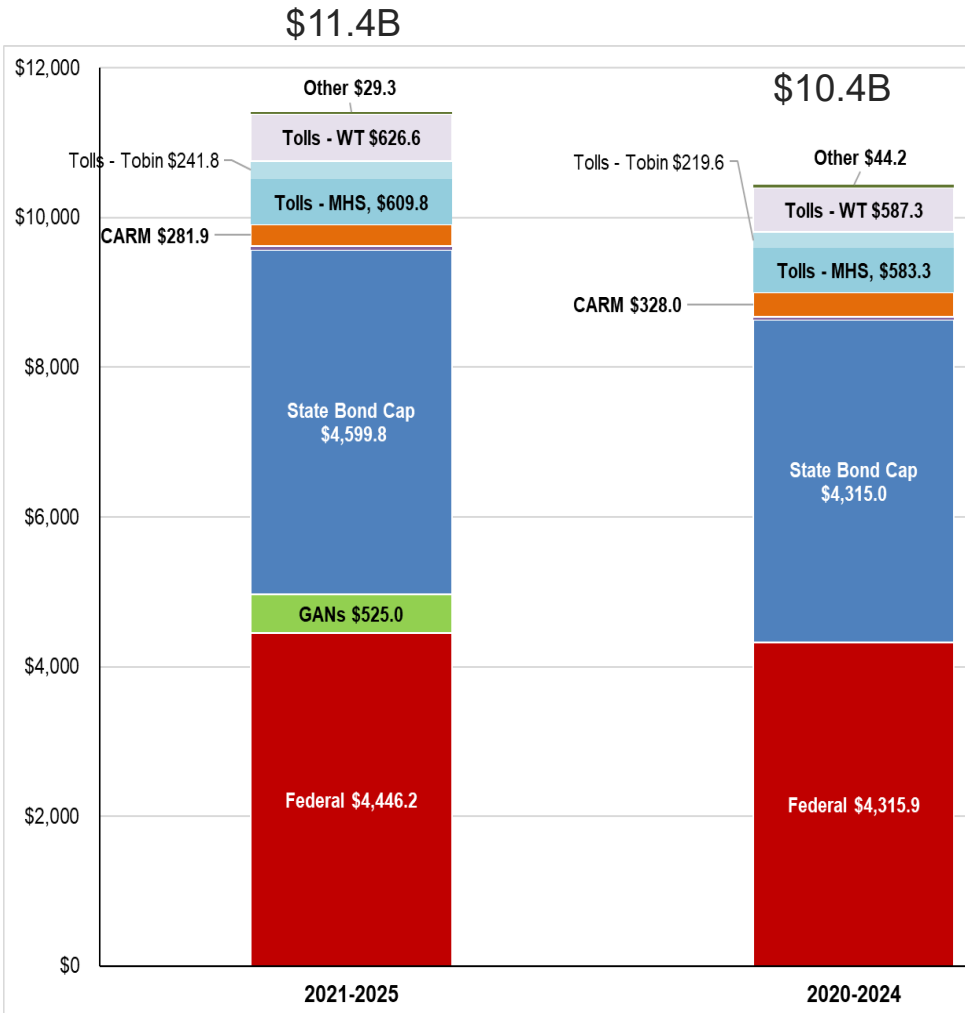
Overall impacts on 2021-2025 update

- Funding for SCR was included in the 2020-2024 CIP and has been updated to reflect current cash flows for 2021-2025
 - New bond cap funding available for municipal programs and Cape Cod Bridges – Approaches (\$172.5 million)
 - ANF has provided new bond cap spending targets for SCR (timing shifts) for the 2021-2025 CIP
 - \$200 million/year included for Chapter 90



Preliminary Estimated MassDOT Sources

FY21-25 CIP Funding Sources: Estimated
~\$11.4B available for the next five year plan



Sources highlights:

- **Federal funds** continue to be one of the largest funding sources for MassDOT capital
 - Assumes Fast Act funding levels continue through 2025 and reflects anticipated federal reimbursements
- **State Bond Cap** is also one of the largest funding sources and estimates are based on initial guidance from ANF
 - \$72.5 million in bond cap funds for Massport (landside improvements (same assumptions as 2020-2024 plan))
- **Accelerated Bridge Program (ABP)** funds
 - No additional spending for prior ABP program
 - Any new GANs funding tied to pending TBB
- **Rail Enhancement Program (REP)** funds a portion of the Taunton Rt. 24/Rt. 140 project that intersects with SCR and culvert/specialized track work
- **Toll** pay-go capital funds based on projected revenues/expenses (tied to operating budget) and available reserves
- **Other** funding sources include local and private (railroads) contributions, and third party reimbursements

Preliminary Estimated MBTA Sources

FY21-25 CIP Funding Sources: Estimated
~\$9.3B available for the next five year plan

Sources highlights:

- **Federal** funds continue to be the single largest source of capital for the MBTA
 - Reduction from \$3.8B in FY20-24 to \$3.3B in FY21-25 driven by progress on Green Line Extension and drawdown of substantial balance of carry over funds
- **MBTA Bonds** support the 20% match for Federal projects, as well as MBTA-only funded projects
- **State** funds include Bond Cap and Rail Enhancement Program special obligation bonds for GLX, Red Line/Orange Line improvements, South Coast Rail, and other projects
- **Pay-Go/Lockbox** reflects an assumption of \$150M/year, plus prior year carryover. Includes state assistance via bond cap and operating funds
- **Other** funding sources include municipal contributions and other reimbursements

FY2021-2025 CIP update: Uses

April 2020

MassDOT/MBTA 2020-2024 Uses

- Focus for additional funds (both federal and state) is on asset classes in need of additional investment and addressing recommendations outlined in the report to the Governor on Congestion in the Commonwealth and strategic policy initiatives
 - For MassDOT
 - Bridge condition (New GANs funding)
 - Metropolitan Highway System
 - Municipal Pavement
 - Local Bottleneck Reduction
 - For the MBTA:
 - State of Good Repair
 - South Coast Rail
 - Red/Orange Line Infrastructure Improvements
 - Green Line Extension
 - Fare Transformation
 - Green Line Transformation
 - For the MBTA/Transit:
 - Bus Transit Infrastructure Partnership
 - For Rail
 - Rail Track and ROW



Requested program sizes and sources vs. uses

- Initial cash flow runs forecast that program sizes are affordable
- Dependent upon bond cap request materializing and discretionary federal sources being awarded

MassDOT ▼

Source millions ¹⁰	Total
Federal available	\$4,971
spending estimate	\$4,,971
Tolls available	\$1,478
spending estimate	\$1,210
GANs available	\$525
spending estimate	\$525
Bond requested	\$4,600
spending estimate	\$4,600
REP available	\$53.3
spending estimate	\$53.3
CARM available	\$281.9
spending estimate	\$230.5
Other available	\$41.9
spending estimate	\$41.9

MBTA ▼

Source millions	Total
Federal available	\$3,445
spending estimate	\$3,445.
T Bond available	\$2,657
spending estimate	\$2,657
T Pay-Go available	\$450
spending estimate	\$441
REP available	\$1,876
spending estimate	\$1,876
Bond Cap available	\$636.3
spending estimate	\$636.3
Other available	\$190
spending estimate	\$185

Leveraging all federal sources
(subject to discretionary awards) ►

Tied to annual pay-go available ►

Final program spending ►

Subject to A&F approval of request ►

Tied to capacity of CTF ►

Uses subject to FHWA approval ►

Estimated downward from last plan ►

◀ Leveraging federal resources
(includes carryover; uses to be identified)

◀ Tied to capacity of bonding

◀ Tied to operations discipline

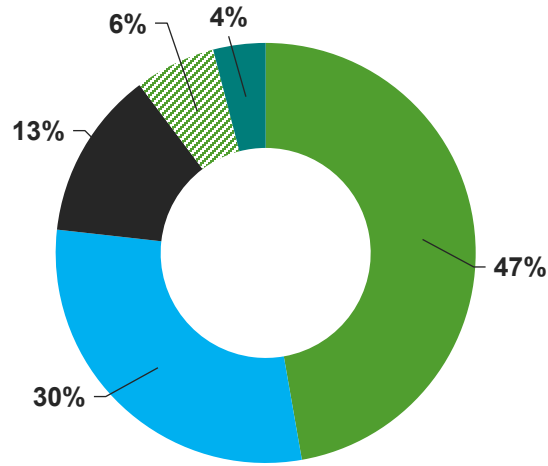
◀ Includes REP

◀ Includes State bond cap for SCR

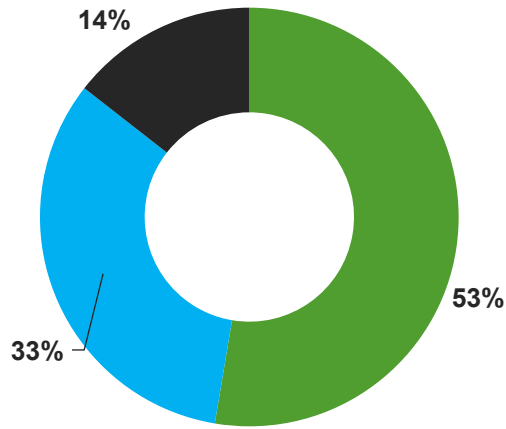
◀ Reimbursables, PTC financing,
and local contributions

MassDOT/MBTA 2021-2025 CIP by Priority

Overall program budget breakdown*



Overall program budget by priority



◀ The chart on the left shows how all capital funds are budgeted including items such as pass-through uses, while the chart on the right shows how funds provided directly for capital construction/procurement break down across MassDOT and the MBTA (by priority)

millions

	FY 2020-24	DRAFT FY 2021-25	Difference
Reliability	\$8,448.9	\$9,474.5	+\$985.6
Modernization	\$5,765.8	\$5,923.1	+\$1,57.3
Expansion	\$3,006.3	\$2,611.5	-8394.0
Chapter 90 & Municipal Programs	\$1,100.0	\$1,250.0	\$150.0M
Planning, Enterprises Services, & Other	\$848.6	\$807.3	-\$41.3
Five-year total	\$19,209.5	\$20,066.3	+\$856.8

◀ This not only includes funding for transportation planning and enterprise services but also:

- Pass-throughs for Massport (Harbor Dredging)
- GANs payments for Accelerated Bridge Program
- Intergovernmental agreements
- Reserve amounts



Funding Challenges

- State Bond Cap
 - Bond cap sources based on estimates provided by the Executive Office of Administration and Finance and are subject to change pending finalization of the Commonwealth's capital plan
- Current surface transportation authorization ("FAST Act") expires on September 30, 2020
 - Recent Congressional Budget Office report estimates that the transit account within the Highway Trust Fund (HTF) will be exhausted by 2021
 - CIP sources assume FAST Act funding levels continue and that Congress will reauthorize funding for FHWA and FTA and replenish the HTF
- Pay-Go Capital Funds - MassDOT
 - Availability and amount of pay-go capital funds to address the long term needs identified in the recent Triennial Report depend on operating budget assumptions and toll revenue projections
 - Toll revenues, based on projections provided by traffic revenue consultant, will require adjustment to reflect actual revenues received
 - Preliminary estimates on funds available after operating expenses; will be adjusted during the development of the final operating budget for FY 2021 to reflect declines in toll revenue
- MBTA Revenue Bonds
 - CIP assumes substantial revenue bond issuance, in addition to existing MBTA debt, to support the capital program
 - Contingent on operating budget ability to support debt service
 - Market variables (interest rates, credit spreads, etc.) will impact the cost of new debt
- Pay-Go/Lockbox - MBTA
 - Reflects policy commitment to reinvest \$90M of contract assistance in capital program, including capital salaries
 - Expansion in operating budget to support capital, safety and other priorities creates challenges for maintaining ability to reinvest \$90M of contract assistance into capital annually



Discussion of Project Changes in 2021-2025 to 2020-2024

- Analysis underway of proposed projects for 2021-2025 to determine any significant changes to cost and/or schedule
- Analysis will be presented as part of discussion of proposed projects in May
- Consistent with the presentation by the Highway Division on Major Projects we will identify the following:
 - For any projects \$15 million or greater in total cost, costs that have increased by 10% or more
 - Any changes in ad date by more than one year
 - Any projects that were programmed in the 2020-2024 capital plan and not included in the 2021-2025 CIP



Public engagement strategy update

Phase 1: Focus on stakeholder education

- Focus on stakeholders – both established and newly identified, across all divisions and modes
- Direct outreach and meetings – **Five conference calls and virtual meetings will be scheduled to begin mid-April with various community organizations**
- Working with Archipelago Strategies Group (ASG), outreach will be targeted toward community organizers and multi-ethnic and multi-lingual organizations and will focus on explaining the process and why participating in the CIP is relevant to the given group
- CIP engagement team is currently identifying and contacting various stakeholders that include both new and established partners with an eye towards driving turnout to CIP Public Meetings.

Phase 2: Focus on input from general public

- Outreach will comply with MassDOT and MBTA Public Participation Plans
- Online commenting tool, consistent with past years – **will be available during the public comment period anticipated to start May 12. Improvements to the comment tool include the ability for users to search for projects and filter by project type.**
- 11 public meetings across the Commonwealth – **option to host virtual public meetings under consideration pending current** circumstances
- Social media strategy focuses on highlighting previous projects constructed through the CIP to show successes and request future ideas – **Social media posts will advertise public meeting locations and schedule**

Final Analysis: How we use what we hear

- Comments analyzed using the Public Involvement Management Application (PIMA)
- Relevant comments distributed to divisions and identified contact persons using PIMA to streamline process
- Major themes will be documented and published as part of final draft
- Letters and comments will be responded to directly, as appropriate, in addition to a master table of public comment topics and MassDOT responses being posted online.



Appendix:

FY2021-2025 CIP update:

Sources and uses, programs and projected spending

April 2020

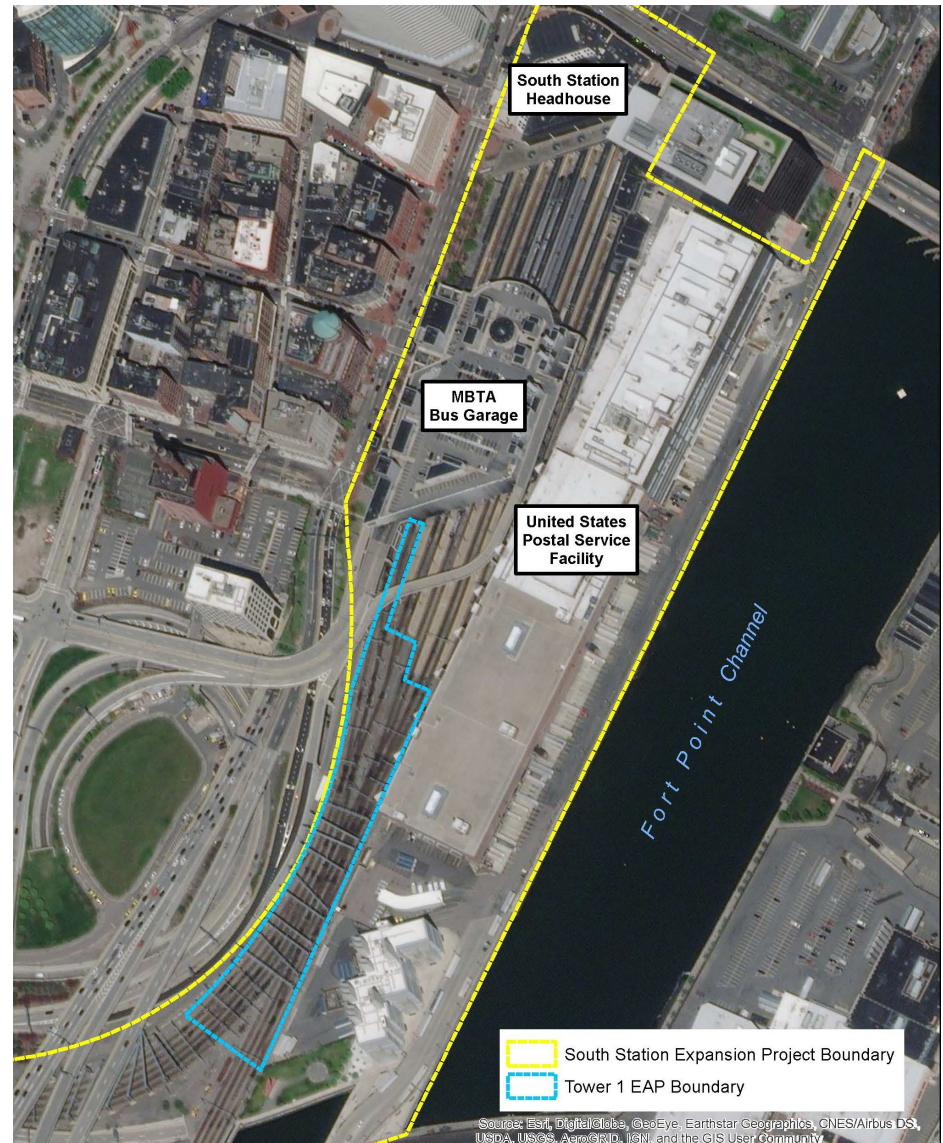
MassDOT/MBTA CIP New Federal Sources

Additional **federal highway infrastructure funds** are available for infrastructure programs

- Additional funds are not subject to obligation authority limitation associated with the federal program
- **Federal Highway Administration Funds – \$61.9 million available**
 - Highway Infrastructure Program (HIP) funds (\$12.1 million) can be used on any federal-aid eligible project
 - A portion (\$5.4 million) is available for use anywhere in the Commonwealth and the remainder (\$6.7 million) to be distributed among defined areas, a portion of which has been programmed for FFY20
 - Highway Infrastructure Bridge funds (\$49.8 million) can be used on any federal-aid eligible bridge project
 - A portion of these funds (approximately \$12 million are being programmed in FFY 20 to support a bridge project in Hopkinton-Westborough and approximately \$32 million will be used to support the I-90/I-495 interchange reconstruction project
 - The balance of new funding (\$5.8 million) must be obligated by FFY 2023
 - Office of Transportation Planning and the Highway Division are currently identifying how and when the funds will be programmed and incorporated in the STIP
 - Additional Federal programmed funds will be reflected as FHWA reimbursements in the Highway Division's anticipated spending for 2021-2025 CIP

MassDOT/MBTA CIP New Federal Sources continued

- **Federal Railroad Administration (FRA)**
 - MassDOT was notified in August 2019 that its application for FRA grant funds under a **Notice of Funding Opportunity (NOFO) for Federal-State Partnership for State of Good Repair Program** to support a complete redesign and reconstruction of the Tower 1 Interlocking system at South Station was approved
 - Total anticipated cost of the project (federal plus state match) is approximately \$83 million
 - The \$41.2 million FRA grant funding awarded to MassDOT / MBTA for this project will be reflected in the 2021-2025 CIP



Bond Cap Targets for MassDOT and MBTA

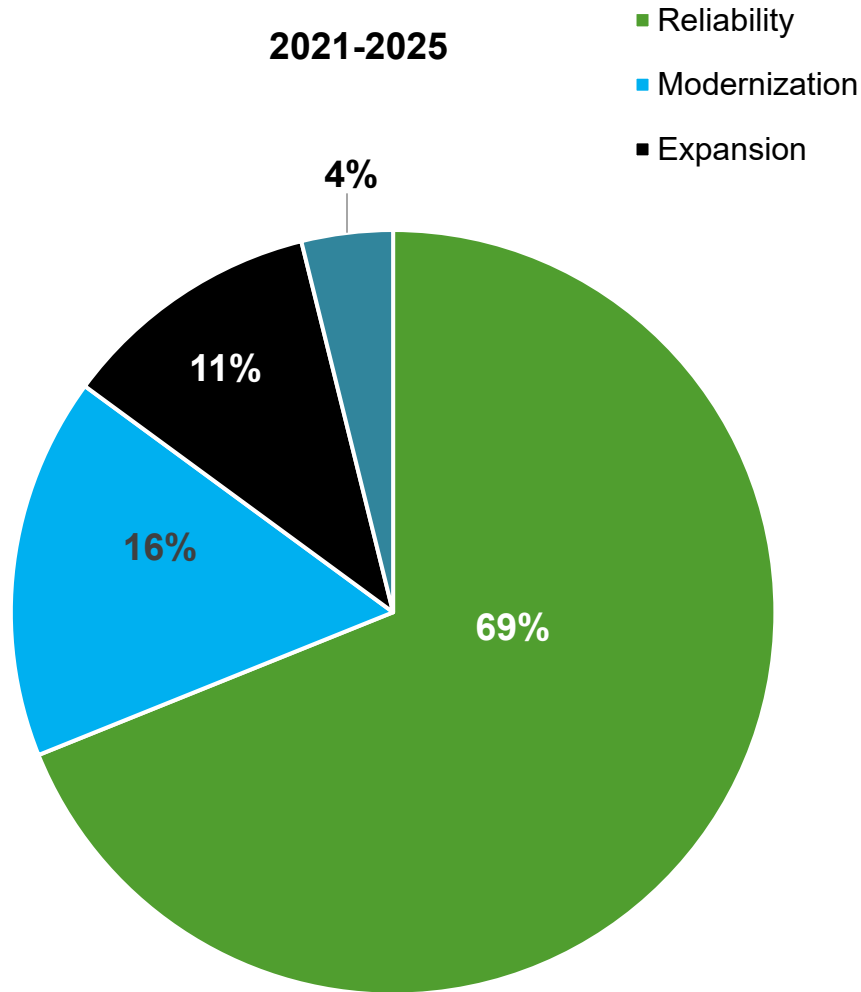
(\$ millions)	FY 21	FY22-FY25	FY21-FY25 ¹
MassDOT	\$572.4	\$2,782.4	\$3,354.8
Chapter 90	200.0	800.0	1,000.0
MBTA	60.0	240.0	300.0
SCR	160.0	176.3	336.3
Atlas/IRP ²	4.9		4.9
Port Projects	35.0	37.5	72.5
Subtotal	\$1,032.3	\$4,031.3	\$5,063.6
Municipal Pavement	10.0	90.0	100.0
Local Bottleneck Reduction	2.5	37.5	40.0
Bus Transit Infrastructure Partnership	1.0	11.5	12.5
Cape Cod Bridges – Approaches	12.0	8.0	20.0
SCR ³	33.0	(33.0)	0.0
Subtotal New Bond Cap	58.5	114.0	\$172.5
Total MassDOT	\$1,090.8	\$4,145.4	\$5,236.2

¹Totals may not add due to rounding. ²International Registration Program (under RMV).

³Bond target timing adjusted for FY 21-FY25 per ANF; no change in total funding available for SCR.



MassDOT and MBTA Investment Strategy (Bond Cap only)



- Recommendation continues to emphasize investments in state of good repair and a strong focus on improving the current system.
- **Reliability**
 - **\$681 M in FY21** (\$3.6B over 5-year)
 - State of good repair projects
 - Improving asset condition to an acceptable standard
 - MBTA capital support
 - Chapter 90, Municipal Pavement, Municipal Bridge
- **Modernization**
 - **\$130 M in FY21** (\$846M over 5-year)
 - Improvements beyond state of good repair
 - Compliance with federal mandates
 - Safety and accessibility
 - Complete Streets
 - Local Bottleneck Reduction
 - Bus Transit Infrastructure Partnership
- **Expansion**
 - **\$216 M in FY21** (\$579 M over 5-year)
 - Expanding existing transit, and rail system
 - Bicycle and pedestrian improvements

Bond Cap Highlights for MassDOT and MBTA

Roads/Bridges

- **\$472.5 M** in FY21 (*\$2.4 B over 5-year*) for highway (includes *Cape Cod Bridges - Approaches*)
- **\$200 M** per year for Ch. 90
- **\$34.5 M** in FY 21 (*\$240M over 5-year*) for Municipal Partnership programs (Complete Streets, Municipal Bridge and Pavement, and Local Bottleneck Reduction)

Rail/Transit

- **\$80.5 M** in FY21 (*\$564 M over 5-year*) for Rail/Transit:
 - **\$26.1 M** in FY21 (*\$156.9 M over 5-year*) RTA capital support
 - **\$6 M** in FY21 (*\$30.0 M over 5-year*) for MAP and Technical Assistance programs
 - **\$0.5 M** in FY 21 (*\$1.975 M over 5-year*) for Workforce Transportation Options
 - **\$47.9 M** in FY 21 (*\$335 M over 5-year*) for Rail

Aeronautics

- **\$8.6 M** in FY21 (*\$63.4 M over 5-year*)
 - \$1.75 M in FY 21 for Drone Information Systems

Registry

- **\$6.7 M** in FY21 (*\$13.1 M over 5-year*) for RMV, including:
 - \$4.9 M for Atlas and International Registration Program (complete FY21)
 - \$8.1 M for capital maintenance, customer service improvements and alternate service channels (over 5-year)

MBTA

- **South Coast Rail**
 - **\$160.0 M** in FY21 (*\$336.3 M over 5-year*)
- **Capital Maintenance**
 - **\$60.0 M** in FY 21 (*\$300.0 M over 5-year*)

MBTA/Transit

- **Bus Transit Infrastructure Partnership**
 - **\$1.0 M** in FY 21 (*\$12.5M over 5-year*)

Port of Boston*

- **\$72.5 M** in 5-year plan (over FY21-FY22) for Conley Terminal landside improvements

*MassDOT acts as pass-through for Commonwealth bond cap for Massport

MassDOT Pay-go capital comparisons 2020-2024 vs 2021-2025¹

Facility / Actuals & Projections		2020-2024	2021-2025	
Metropolitan Highway System*	Revenues	\$1,337.9	\$1,346.1	Transactions volumes / revenues increased over previous forecasts for tunnels and Boston Extension
	Expenses	723.9	735.7	
	Net Debt Service	91.7	100.6	
	Available for Capital	\$522.3	\$509.8	
	Reserves	\$61.0	\$100.0	
Western Turnpike	Revenues	\$963.7	\$971.0	Transaction volume in line with previous forecasts
	Expenses	\$454.9	\$464.4	
	Available for Capital	\$506.8	\$506.6	
	Reserves	\$80.5	\$120.0	
Tobin Bridge	Revenues	\$227.7	\$239.4	Transaction volume increased over previous forecasts
	Expenses	65.6	67.6	
	Available for Capital	\$162.1	\$171.8	
	Reserves	\$57.5	\$70.0	
Total Tolls	Total Available for Capital	\$1,191.2	\$1,188.2	
	Total Reserves	\$199.0	\$290.0	

¹ Pay-go capital assumptions to be updated based on FY 21 operating budget assumptions



MassDOT / MBTA Capital Planning – Pay-go capital funds (MHS)

- Funds available for pay-go capital projects for the Metropolitan Highway System (MHS) which includes the Tobin Bridge are projected to average approximately \$134 million per year (~\$682 M over 5 years) plus available reserves for the 2021-2025 CIP
 - Projections represents approximately the same in pay-go capital funds as 2020-2024 CIP but an increase in available reserves
 - Projected reserves were \$118.5 million in the 2020-2024CIP

Projected (\$ millions)	FY21	FY22 – FY25	Total FY21-FY25
Pay-Go	\$136.3	\$545.3	\$681.6
Reserves			\$170.0
Total	\$136.3	\$545.3	\$851.6

- Preliminary draft 2021-2025 CIP currently has \$606.7 million (over 5 years) programmed to address existing projects as well as some key projects:
 - Prudential Tunnel Ventilation Work
 - Rt. 128/I-90 bridges and ramps at the interchange
 - Sumner Tunnel Rehabilitation work
 - Allston Multi-modal Program (including the viaduct) – continued design and permitting costs



MassDOT / MBTA Capital Planning – Pay-go capital funds (WT)

- Funds available for pay-go capital projects for the Western Turnpike (WT) are projected to average approximately \$100 million per year (~\$506.6 M over 5 years) and \$34 million per year for Tobin (~\$178 million over 5 years) plus available reserves
 - Represents an increase of approximately 1.4% over base pay-go WT and Tobin pay-go capital
 - Projected reserves were \$80.5 million for WT in the 2020-2024 CIP

Projected (\$ millions)	FY21	FY22-FY25	Total
Pay-GO	\$105.4	\$401.2	\$506.6
Reserves			\$120.0
Total	\$105.4	\$401.2	\$626.6

- Preliminary draft 2021-2025 CIP for WT funded projects currently has \$583 million (over 5 years) programmed to address existing and new capital projects including:
 - The toll funded portion of the I-90/I-495 Westborough/Hopkinton Interchange Reconstruction project

MassDOT/MBTA CIP Major Initiatives

Spending on other major projects/programs reflected in this CIP update

- **MassDOT**

- **Road and Bridge investments:**

- North Washington Street Bridge Replacement (construction commenced FY 2019)
 - I-90 / I-495 Interchange Reconstruction (construction commences FY 2023)
 - I-90/Route 128 Bridges/ramps (7 Bridges - 5 replacements, 1 superstructure replacement, and 1 rehabilitation) project (to be advertised as a Design-Build project in Fall 2020)

- **Tunnel investments:**

- Prudential Tunnel Ventilation Improvements (construction commences in FY 2023)
 - Sumner Tunnel Rehabilitation (construction commences in FY 2022)

MassDOT/MBTA Major CIP Initiatives

Spending on other major projects/programs reflected in this CIP update

- **MBTA**

- **Investments to existing lines:**

- Red Line/Orange Line Improvements and Vehicles (commenced FY 2015)
- Commuter Rail Positive Train Control and Automatic Train Control (commenced FY 2016)
- Green Line Transformation including Type 10 Vehicle Procurement
- Blue Line Harbor Tunnel Infrastructure Improvements

- **Investments in bus system**

- Delivery of 194 Hybrid buses; overhaul of 155 New Flyer Buses
- Bus Stop accessibility and bus network improvements, include transit priority
- Bus maintenance facility improvements and modernization

- **Service improvements and development oriented investments**

- Fare Transformation
- Commuter Rail Bi-Level Coaches
- South Station Tower 1 Early Action Project

- **New Service:**

- Green Line Extension (substantial completion anticipated in FY 23)
- South Coast Rail (substantial completion anticipated in FY 23)



FY2021-2025 CIP update: Program Sizes

April 2020

Comparison of Program Sizes 2020-2024 vs 2021-2025 (\$ millions)

Division	2020-2024 ¹	2021-2025 ¹	Increase / (Decrease) ¹
Aeronautics	\$294.3M	\$291.7M	(\$2.7M)
Highway ²	\$6,706.5M	\$7,502.0M	\$795.5M
Highway/Office of Secretary	\$60.0M	\$60.0M	\$ -
Information Technology	\$102.0M	\$102.0M	\$ -
MBTA	\$9,453.0M	\$9,377.0M	(\$76.0M)
MBTA/Transit	\$0.0M	\$50.0M	\$50.0M
Rail	\$364.6M	\$375.1 M	\$10.5M
Registry of Motor Vehicles ³	\$43.2M	\$13.1M	(\$30.1M)
Transit	\$237.4M	\$238.2M	\$0.8M
Chapter 90 & Municipal Programs ⁴	\$1,100.0M	\$1,250.0M	\$150.0
Commonwealth Projects ⁵	\$112.5M	\$72.5M	(\$40.0M)
Planning	\$736.1M	\$734.8M	(\$1.3M)
TOTAL	\$19,209.5M	\$20,066.3M	\$856.8M

¹ Totals may not add due to rounding

² Highway program sizes include an allocation for program development/program management costs related to delivery of the capital program.

³ Reflects anticipated completion of ATLAS program and return to baseline capital spending

⁴ Includes \$100 million for Municipal Bridge and Complete Streets, \$50 million for new Local Bottleneck Reduction, \$100 million for Municipal Pavement programs; both Local Bottleneck and Municipal Pavement were proposed in the Governor's Transportation Bond Bill and only Municipal Pavement was carried in the House version; also includes \$273 million for Allston multi-modal program design, permitting and early mobility-related investments.

⁵ Reflects remaining Commonwealth commitment to Massport Harbor Dredging project.

Approach to considering program size requests

Staff recommends accepting program size request

- Program size same or very similar to FY2020-2024 plan's program size
- Same strategy to addressing assets

Program size is driven by mandated projects

- Project costs drive program size due to mandates

Need discussion / guidance from CPC

Brand new programs to be considered

- New programs to consider for inclusion in plan update
- Size of request associated with new program also under consideration

Program sizes for greater discussion

- Program size deviates from FY2020-2024 plan's program significantly

Program size requests for new programs

Reliability	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Discussion
Highway / Municipal Pavement*	\$0.0 million	\$100.0 million	New program that will provide funds through partnerships and grants to cities and towns to assist in repairing and replacing municipal-owned pavement
Modernization	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Discussion
Aeronautics / Drone Information System	\$0.0 million	\$1.75 million	New program to fund the development of IT systems necessary to support future use of unmanned aerial surveillance
Highway / Local Bottleneck Reduction**	\$0.0 million	\$50.0 million	New program will provide funding for cities and towns for moderate, cost effective congestion relief (e.g. smart signals)
MBTA/Transit / Bus Transit Infrastructure Partnership***	\$0.0 million	\$50.0 million	New program will provide funds through partnerships and/or grants to municipalities to implement transit-supportive infrastructure to improve and facilitate more efficient delivery of transit operations, improve passenger experience, and enhance transit rider and pedestrian service and safety for both the MBTA and RTAs

* Program authorization contingent on passage of the Transportation Bond Bill (TBB); included in both TBB filed by the Governor & final House version

** Program authorization contingent on passage of the TBB; only included in the TBB filed by the Governor; not in final House version

***Program authorization contingent on passage of the TBB; similar grant program (but not the same) included in House version at \$100 million; \$50 million included in the TBB filed by the Governor



Program size requests for new programs

Modernization	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Discussion
MBTA / Bus Transformation	\$0.0 million	\$71.1 million	New program focused on transforming the bus network. Includes investments previously captured in Accessibility and Customer Technology programs.
MBTA / Rail Transformation	\$0.0 million	\$64.0 million	New program focused on transforming the Commuter Rail network. Includes investments previously captured in Accessibility and Track, Signals and Power programs.
MBTA / Technology and Innovation	\$0.0 million	\$31.0 million	Program combines investments previously captured under Customer Experience and Technology and Process Improvements and Technology
Expansion	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Notes
Rail / Track and ROW Expansion	\$0.0 million	\$5.0 million	Program will support project development efforts related to passenger service in Western Mass



MassDOT/MBTA proposed existing program changes

Reliability	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Increase / (Decrease)	Discussion
Aeronautics / Airport Pavement	\$123.3 million	\$156.7 million	\$33.4 million	Program size increased to include ancillary costs of the pavement program (drainage, signage, etc.) and additional funds to address SGR condition
Aeronautics / Airport Capital Improvement	\$146.0 million	\$123.3 million	(\$22.7 million)	Program size adjusted to reflect transfer of certain investments to Airport Pavement.
Highway / Bridge	\$2,281.7 million	\$2,526.0 million	\$244.3 million	Program Size based on current program needs with an allocation to cover program management / development costs. Includes \$525 million for "Next Gen Bridge" program to be funded with new GANs (proposed in TBB)
Highway / Equipment	\$96.4 million	\$110.0 million	\$13.6 million	Program size based on identified needs in the Districts
Highway / Facilities	\$181.7 million	\$62.0 million	(\$119.7 million)	Program resized based on current program needs. 2020-2024 CIP program assumed both the new D3 HQ facility and a new D5 HQ facility; D5 facility is no longer under consideration
Highway / Interstate Pavement	\$316.9 million	\$372.0 million	\$55.1 million	Program resized based on program needs and reflects additional funding assumptions to address TAMP and other performance metrics
Highway / Non-Interstate pavement*	\$766.9 million	\$780.0 million	\$13.1 million	Program size includes the additional funding provided in the 2020-2024 CIP to address condition of NHS non-interstate pavement
Highway / Roadway Improvements	\$168.8 million	\$166.0 million	(\$2.8 million)	Program size based on current program needs with an allocation to cover program management / development costs.
Highway / Safety Improvements	\$265.3 million	\$283.0 million	\$17.7 million	Program resized based on current program needs with an allocation to cover program management / development costs.

*Additional funding authorization (\$150 million) assumed and included in the Transportation Bond Bill (TBB) filed by Governor; House version decreased request to \$100 million



MassDOT/MBTA proposed existing program changes

Reliability	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Increase / (Decrease)	Discussion
Highway / Tunnels	\$393.8 million	\$677.0 million	\$283.3 million	Program resized to address current portfolio of projects, findings of the Triennial review and capacity for additional investments; includes Sumner and Prudential tunnel projects and CANA upgrades which were not in the 2020-2024 program.
IT / Asset Management	\$3.8 million	\$0.0 million	(\$3.8 million)	Program eliminated and activities included as part of the Workforce Productivity program
IT / Cyber/Information Security	\$20.5 million	\$47.0 million	\$26.5 million	Program resized due to EOTSS mandates and directly correlates to improvement in security-oriented foundational infrastructure, firewalls, web gateways and other cloud investments.
IT / Desktop Experience	\$10.5 million	\$0.0 million	(\$10.5 million)	Program eliminated and activities absorbed under other programs.
IT / Digital Infrastructure	\$18.2 million	\$10.0 million	(\$8.2 million)	Program size reduced due to increased investments in Cyber/Information Security program.
MBTA / Bridge and Tunnels	\$506.9 million	\$559.0 million	\$52.1 million	Program resized to address current program needs including North Station Draw 1.
MBTA / Facilities	\$370.6 million	\$422.0 million	\$51.4 million	Program resized to address current program needs.
MBTA / Revenue Vehicles	\$1,068.8 million	\$1,265.0 million	\$196.2 million	Program resized to address current program needs and includes additional funds for accelerated commuter rail coach procurement.
MBTA / Stations	\$372.6 million	\$448.0 million	\$75.4 million	Program resized to include investments associated with wayfinding
MBTA / System Upgrades	\$234.0 million	\$185.0 million	(\$49.0 million)	Program size reduced to accommodate additional needs in other Reliability programs.

MassDOT/MBTA proposed existing program changes

Reliability	FY 2020-2024 program size <i>(five-year total)</i>	FY 2021-2025 program size <i>(five-year request)</i>	Increase / (Decrease)	Discussion
MBTA / Track, Signals, Power	\$759.8 million	\$825.0 million	\$65.2 million	Program resized to address current program needs.
Rail / Grade Crossings	\$34.4 million	\$29.0 million	(\$5.4 million)	Program resized based on current program needs and shift of funds to Track and ROW program.
Rail / Track and ROW	\$137.2 million	\$142.6 million	\$5.4 million	Program resized to address number of right of way projects that require maintenance or significant investment to maintain class of service.
Transit / RTA Vehicle Replacement	\$53.7 million	\$62.7 million	\$9.0 million	Program sized to address needs identified by the RTAs and for purchase of additional vehicles to maintain state of good repair

MassDOT/MBTA proposed existing program changes

Modernization	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Increase / (Decrease)	Discussion
Aeronautics / Airport Administration Buildings	\$25.0 million	\$9.9 million	(\$15.1 million)	Program reflects reduced funding due to sunset of Statewide Airport Administration Buildings program; includes funding for two remaining buildings currently under design.
Highway / ADA Retrofits	\$21.8 million	\$29.0 million	\$7.2 million	Program size based on current program needs with an allocation to cover program management/development costs.
Highway / Allston Multi-Modal*	\$21.0 million	\$273.0 million	\$252.0 million	Program size includes design and permitting activities plus investments for early mobility investments
Highway / Cape Cod Bridges – Approaches*	\$0.0 million	\$20.0 million	\$20.0 million	Program sized to include commitment for additional feasibility study and planning/design efforts.
Highway / Intelligent Transportation Systems	\$81.6 million	\$72.0 million	(\$9.6 million)	Program size based on current program needs with an allocation to cover program management / development costs.
Highway / intersection Improvements	\$180.8 million	\$189.0 million	\$8.2 million	Program size based on current program needs with an allocation to cover program management / development costs.
Highway / Roadway Reconstruction	\$1,418.6 million	\$1,416.0 million	(\$2.6 million)	Program sized based on current program needs with an allocation to cover program management / development costs.
IT / Customer Digital Experience	\$4.7 million	\$0.0 million	(\$4.7 million)	Program eliminated and activities absorbed under other programs.
IT / Enterprise/BPR / Automation	\$25.1 million	\$0.0 million	(\$25.1 million)	Program eliminated and activities absorbed under other programs.

*Additional funding authorization included in the Transportation Bond Bill (TBB) filed by Governor and included in House version

MassDOT/MBTA proposed existing program changes

Modernization	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Increase / (Decrease)	Discussion
IT / Workforce Productivity	\$19.3 million	\$45.0 million	\$25.8 million	Program size increased to reflect consolidation from other programs providing better tools to shared service areas, e.g. HR, Finance, Legal, Planning, etc.
MBTA / Accessibility	\$243.9 million	\$222.0 million	(\$21.9 million)	Program reflects transfer of investments to Bus Transformation and Rail Transformation
MBTA / Fare Transformation*	\$209.8 million	\$356.0 million	\$146.2 million	Program resized to address revised fare transformation plan.
MBTA / Commuter Rail Safety and Resiliency	\$510.7 million	\$400.0 million	(\$110.7 million)	Program size decreased to account for existing program needs; majority of commuter rail needs addressed in other CIP programs.
MBTA / Customer Experience and Technology	\$184.4 million	\$0.0 million	(\$184.4 million)	Program size reflects transfer of investments to Bus Transformation and Stations. Remaining investments combined with Process Improvement into new Technology and Innovation program.
MBTA / Green Line Transformation	\$925.0 million	\$972.0 million	\$47.0 million	Program resized to address current needs
MBTA / Process Improvements and Innovation	\$13.2 million	\$0.0 million	(\$13.2 million)	Program combined with Customer Technology into new Technology and Innovation program
MBTA / Red Line/Orange Line Improvements	\$1,580.7 million	\$1,441.0 million	(\$139.7 million)	Program reflects progress towards completion of prior programmed investments.
MBTA / Risk Management and Mitigation	\$68.5 million	\$87.0 million	\$18.5 million	Program size increased to reflect additional investments that address safety.

*Program was formerly called AFC 2.0; renamed for 2021-2025 CIP.

MassDOT/MBTA proposed existing program changes

Modernization	FY 2020-2024 program size <i>(five-year total)</i>	FY 2021-2025 program size <i>(five-year request)</i>	Increase / (Decrease)	Discussion
Rail / Track and ROW	\$61.1 million	\$87.1 million	\$26.0 million	Program size increased to address identified Track and ROW upgrades needed to accommodate heavier freight
RMV / ATLAS	\$35.1 million	\$5.0 million	(\$30.1 million)	Program reflects completion of project and includes implementation of International Registration program to be completed by FAST Enterprises)
Transit / RTA System and Vehicle Modernization	\$97.2 million	\$89.0 million	(\$8.2 million)	Program resized to address current needs and including implementation of an Automated Fare Collection system for the RTAs.



MassDOT/MBTA proposed existing program changes

Expansion	FY 2020-2024 program size (five-year total)	FY 2021-2025 program size (five-year request)	Increase / (Decrease)	Discussion
Highway / Capacity	\$308.1 million	\$290.0M	(\$18.1M)	Program sized to include current projects and includes allocation for program management / development costs. Highway's commitments for SCR early action items are captured under SCR program in the MBTA.
Highway / Shared Use Paths and Bicycle/Pedestrian	\$203.2 million	\$237.0 million	\$33.8 million	Size based on anticipated portfolio of projects within the 2021-2025 CIP and STIP and includes allocation for program management/development costs.
MBTA / Expansion Project Development	\$25.0 million	\$27.0 million	(\$2.million)	Program resized to include initial funding for project development to support future expansion projects
MBTA / GLX	\$1,326.4 million	\$1,015.0 million	(\$311.4 million)	Program size reflects progress towards completion of prior programmed investments
MBTA / non-GLX Expansion Projects	\$43.0 million	\$35.0 million	(\$8.0 million)	Program size reflects current program needs
MBTA / SCR	\$1,009.6 million	\$932.0 million	(\$77.6 million)	Program size reflects progress towards completion of prior programmed investments
Rail / Vehicle Expansion	\$31.0 million	\$10.5 million	(\$20.5 million)	Program sized based on anticipated needs to support fund procurement and refurbishment of equipment to support future rail passenger services

