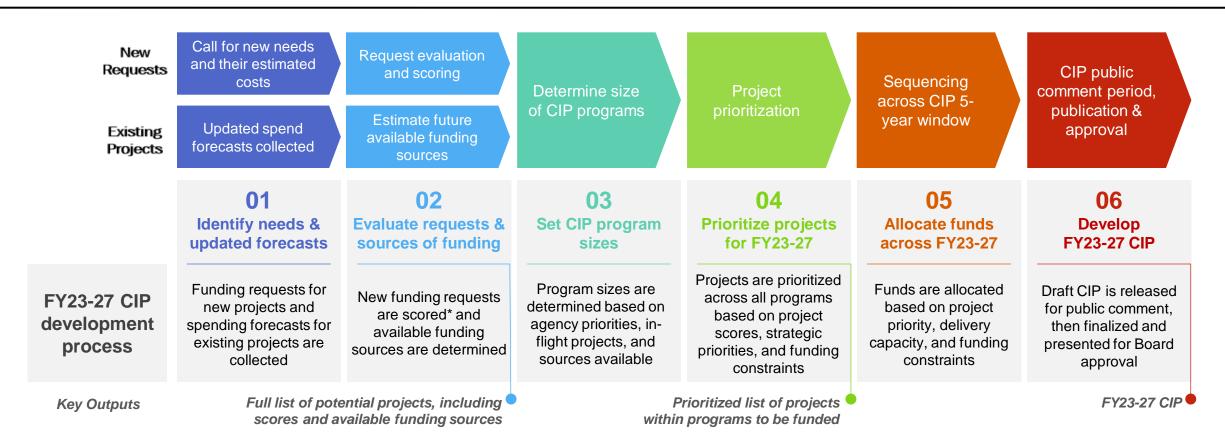


Proposed FY23-27 Capital Investment Plan

Audit and Finance Subcommittee March 10, 2022

CIP Development Process



*Requests are evaluated based on system preservation, mobility, cost effectiveness, environmental and health effects, policy support, social equity, economic impact, and safety.

CIP Programs

Reliability and Modernization Programs

Bridge and Tunnel



Repairs, reconstructs, and replaces Commuter Rail and transit bridges, tunnels, culverts, and dams



Maintenance and Administrative Facilities Rehabilitates and upgrades maintenance and administrative facilities

Guideway, Signal, and Power

Rehabilitates, replaces, and upgrades guideway, signal, and power assets across commuter rail, transit, and bus systems



Passenger Facilities

Rehabilitates and upgrades stations, stops, and parking facilities to improve accessibility and the customer experience



Vehicles

Rehabilitates and replaces revenue fleets and non-revenue vehicle equipment for reliable and safe operations



Technology and Innovation

Investments in technology to enhance productivity, modernize the system, and improve quality of service

Business and Operational Support

Investments in asset management, safety and security, communications, and other systems supporting operations

Expansion Programs

South Coast Rail (SCR) Extension of Commuter Rail service to Fall River and New Bedford on the South Coast of Massachusetts



Green Line Extension (GLX) Extension of Green Line service from Lechmere to Somerville and Medford



Expansion Projects Planning and design of targeted expansion projects identi-

fied as next priorities



Overview | Capital Funding Sources



Federal funding

Formula funds

- Urbanized Area Program (Section 5307)
- Buses and Bus Facilities (Section 5339)
- State of Good Repair (Section 5337)

Discretionary funds

 Competitive processes run by federal agencies. Funds included in the CIP after award.

State funding

Project-Specific

- Commonwealth bond proceeds for specific projects including:
 - South Coast Rail Phase 1, including 16 Commuter Rail coaches
 - $\,\circ\,$ Green Line Extension
 - Red Line/Orange Line vehicles and infrastructure improvements
 - Procurement of 64 Bi-Level Commuter Rail Coaches



MBTA sources

Bond

 Taxable, tax-exempt, and sustainability bonds

Loans

 Build America Bureau (BAB) loans through TIFIA and RRIF

Operating Budget Transfer

 Funds transferred from MBTA's operating budget to the capital program

Capital Maintenance Fund (CMF)

• Authority's fund to be used at the discretion of the CFO

Note - The sum of MBTA bonds and loans is limited by the overall coverage ratio in order to maintain the MBTA's credit rating.

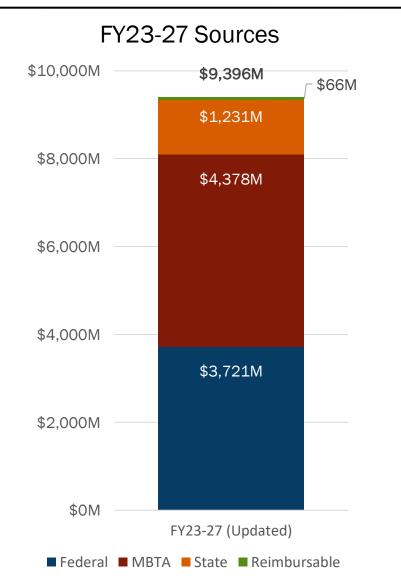
Others

Reimbursable

 Outside funds through partnerships and formal agreements



FY23-27 CIP Funding Sources



The MBTA's FY23-27 CIP reflects an estimated \$9.4B in programmed sources

Source Highlights:

Federal funds reflect Federal Formula funding levels included under the Bipartisan Infrastructure Law

MBTA sources support the 20% match for Federal projects, as well as MBTAonly funded projects

- Includes \$500-590M per year in planned new money (bonds and commercial paper) and existing USDOT loans (RRIF and TIFIA)
- Includes \$480M from the recent operating budget transfer to support critical one-time investments
- \$60M per year previously assumed as State Bond Cap now included as an annual operating transfer for all 5 years of the CIP

State funds include Bond Cap and Rail Enhancement Program special obligation bonds for specific projects. Sources are tied to project cashflows

Federal Discretionary Grants



The **Bipartisan Infrastructure Law (BIL)** included new and reauthorized existing transit and infrastructure competitive grant programs that the MBTA will be eligible to apply for over the 5-year timeframe of the authorization

The MBTA will aggressively pursue all eligible discretionary funding opportunities in BIL. To accomplish this goal we will, (1) proactively identify grant opportunities, (2) identify competitive projects and (3) develop and submit strong applications

Project Selection for Grant Opportunities

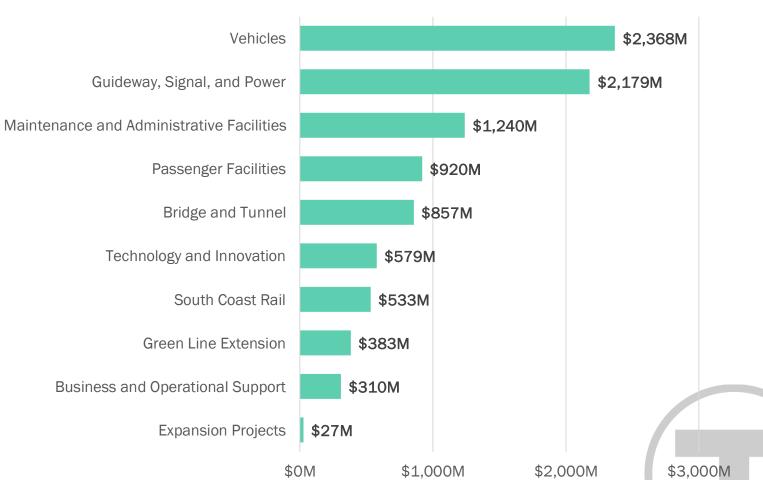
The MBTA will strive to pursue funding for projects that align with the MBTA's stated goals, strategic mission, and the 5-year CIP which is the MBTA's statement of priorities for capital investments

- The annual CIP development process will continue to establish the pool of projects for which the agency may develop a discretionary grant application
- In some cases, awarded funds will allow the MBTA to reallocate previously programmed funds and in other cases, awards may go to unfunded phases of a project or increased project costs
- On a limited basis, the best fit for a grant program may be a project that is "next up" in prioritization (as determined in the CIP process) but has not yet made it into the CIP

Many discretionary grant applications require candidate projects to be in an organization's capital planning documents or long-range plans.

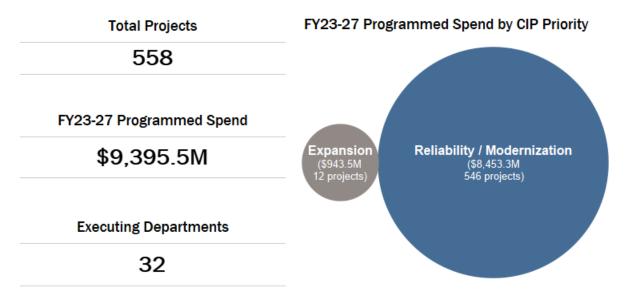
FY23-27 CIP Program Sizes

- Program sizing allows the MBTA to set clear priorities for investment at the program level
- Program sizes remain level relative to their proportion of prior CIPs and now align with project budgets and schedules for projects included in the draft CIP
- Changes in program sizes from initial recommendations are driven by the refinement of projected yearly spending for existing projects, as well as minor updates based on the project prioritization exercise



Draft CIP Program Sizes (\$M)

Summary | FY23-27 CIP



FY23-27 Programmed Spend by Mode

Commuter Rail				\$2,760.8M (121 projects)
Green Line		\$1,623	.6M (55 projects)	
Systemwide		\$1,594.7	7M (198 projects)	
Bus		\$1,170.5M (64 project	s)	
Red / Orange Line		\$1,080.7M (9 projects)		
Red Line	\$453.0M (29 pro	jects)		
Multimodal	\$188.3M (34 projects)			
Orange Line	\$182.9M (13 projects)			
Silver Line	\$117.6M (5 projects)			
Blue Line	\$87.0M (15 projects)			
Mattapan Line	\$72.1M (4 projects)			
Ferry	\$39.5M (8 projects)			
Paratransit	\$26.3M (3 projects)			

Top 15 Projects, by FY23-27 Programmed Spend

CIP ID	Project Name	CIP Program	FY23-27 Total	Authorized Budget
P0362	Red / Orange Line Vehicles	Vehicles	\$579.0M	\$1,073.5M
P0160	South Coast Rail Expansion	South Coast Rail	\$493.5M	\$920.8M
P0265	Fare Transformation	Technology and Innovation	\$420.1M	\$783.4M
P0095	Green Line Extension	Green Line Extension	\$357.7M	\$2,118.6M
P0618	Procurement of 40ft Enhanced Electric Hybrid Buses	Vehicles	\$350.6M	\$353.9M
P0671a	Quincy Bus Facility Modernization	Maintenance and Administrative Facilities	\$326.6M	\$402.1M
P0369	Green Line Type 10 Light Rail Fleet Replacement	Vehicles	\$311.2M	\$800.0M
P0285	Signal Program - Red/Orange Line	Guideway, Signal, and Power	\$240.5M	\$289.1M
P0551	Longfellow Approach	Bridge and Tunnel	\$185.2M	\$190.0M
P0606	ATC Implementation - North Side Commuter Rail Lines	Guideway, Signal, and Power	\$173.6M	\$416.8M
P0927	Rolling Stock - Locomotive and Coach State of Good Repair and Resiliency	Vehicles	\$173.1M	\$174.1M
P0370	Green Line Train Protection	Guideway, Signal, and Power	\$168.4M	\$212.9M
P0018	North Station Draw 1 Bridge Replacement	Bridge and Tunnel	\$157.4M	\$573.8M
P1152	Exercise HRU Option FC-712	Vehicles	\$147.7M	\$160.9M
P0893	Procure 64 Bi-Level Commuter Rail Coaches	Vehicles	\$147.3M	\$276.1M
Grand To	tal		\$4,231.9M	\$8,745.8M

FY23-27 CIP | Safety Spotlight

430+ safety related projects, accounting for roughly \$7.5B of programmed spending are part of the 5-year CIP. This includes but is not limited to:



5 projects currently being executed by the Safety department that comprise:

- Safety management system implementation
- Occupational, personnel, and electrical health and safety
- Infrastructure and PPE improvements

230+ projects to inspect, repair, and upgrade stations, tracks, bridges, tunnels, signals, power, and IT infrastructure and components



100+ projects to modernize maintenance and operation facilities, ensure workforce safety, and prepare for new fleets

You can also visit <u>mbta.com/safety</u> for more information on the MBTA's safety initiatives

Draft for Discussion & Policy Purposes Only

CIP key safety projects

All requests for new and existing projects are evaluated using 8 scoring criteria, which include safety.

Rapid Transit

- Green Line Train Protection (P0370)
- Blue Line Harbor Tunnel Infrastructure Improvements (P0631)

Commuter Rail

- CR Positive Train Control (P0148)
- North Side Automatic Train Control (P0606)

Bus and Paratransit

- Bus Facility Modernization and Interim Improvements (P0942)
- Facility Circulation Safety Improvements (P1003)

Systemwide

- OHS PPE and Infrastructure Improvements
 (P0646)
- Structural Repairs Systemwide (P0852)



CIP Document | Structure

The Draft FY23-27 CIP document is structured around three major components:





Massachusetts Bay Transportation Authority FY23-27 Capital Investment Plan (CIP)

Proposed - March 2022





Overview of the CIP

- What is the CIP?
- Structure of the CIP
- Funding Sources

FY23-27 Investment Programs

 One-page overview for each CIP program summarizing program goals and planned investment level for FY23-27

- Annual Development Process
- Public Engagement

Total Number of Projects	77 FY23-27 Funding \$1	1,240M	Program Highlights
Program Purpose Rehabilitation, replac facilities supporting N	ement, and upgrade of maintenance IBTA service.	and administrative	Wellington Yard Complete Upgrade (P0514) Full rebuild of Wellington Yard including upgrades to track, power, signal, communications, drainage, and other yard elements.
our bus and rail facilit	this program focus on the modernizi ties to accommodate new vehicle flee ts to roofing, fire systems, safety, an	Quincy Bus Facility Modernization (P0671a) Replacement of the existing Quincy bus maintenance facility with a new facility that will expand capacity and	
	nance and Admin. Facilities Fundi		include infrastructure necessary to support the MBTA's first battery-electric bus fleet (BEBs).
FY23-27 CIP Mainter Bus			first battery-electric bus fleet (BEBs). Facility Circulation Safety Improvements (P1003)
FY23-27 CIP Mainter		ing by Primary Mode	first battery-electric bus fleet (BEBs). Facility Circulation Safety Improvements (P1003) Assessment of vehicular and pedestrian circulation at
FY23-27 CIP Mainter Bus Commuter Rail Red Line	nance and Admin. Facilities Fundi	ing by Primary Mode	first battery-electric bus fleet (BEBs). Facility Circulation Safety Improvements (P1003)
FY23-27 CIP Mainter Bus Commuter Rail Red Line Green Line	nance and Admin. Facilities Fundi	ing by Primary Mode	first battery-electric bus fleet (BEBs). Facility Circulation Safety Improvements (P1003) Assessment of vehicular and pedestrain circulation at MBTA bus facilities, and the implementation of necessa
FY23-27 CIP Mainter Bus Commuter Rail Red Line Green Line Systemwide	DIG2.1M (Wprejecte) DIG2.1M (Wprejecte) DIG2.2M (Sprejecte)	ing by Primary Mode	first battery-electric bus fileet (BEBs). Facility Circulation Safety Improvements (P1003) Assessment of vehicular and pedestrain circulation as MBTA bus facilities, and the implementation of necessar improvements to enhance employee safety.
FY23-27 CIP Mainter Bus Commuter Rail Red Line Green Line Systemvide Red / Orange Line	1423 M (19 projects) 1423 M (19 projects) 1423 M (19 projects) 1423 M (19 projects)	ing by Primary Mode	first battery-electric bus fleet (BEBs). Facility Circulation Safety Improvements (P1003) Assessment of vehicular and pedestrain circulation at MBTA bus facilities, and the implementation of necessa

FY23-27 Project List

- Detailed listing of all capital projects included in the FY23-27 CIP
- Includes project description, phase, primary mode, planned five-year spend, and total authorized budget

CIP Public Engagement Strategy

What is the public engagement strategy?

Provide an overview of the CIP, highlight key investments, and invite public comments through multiple avenues

What are key avenues for public engagement?

<u>CIP website</u> and social media will be utilized to gather and publicize public engagement info

Public meetings: three meetings will be held between March and April. Schedule to the right

Call for action: key stakeholders will be invited to participate

CIP Comment Tool: general or project-specific comments can be provided through online tool



Email: comments can be emailed to <u>cipengagement@mbta.com</u>

Letters: physical letters will be accepted to gather comments from non-virtual means

Public Meeting Schedule

Three virtual meetings will be held to gather public input

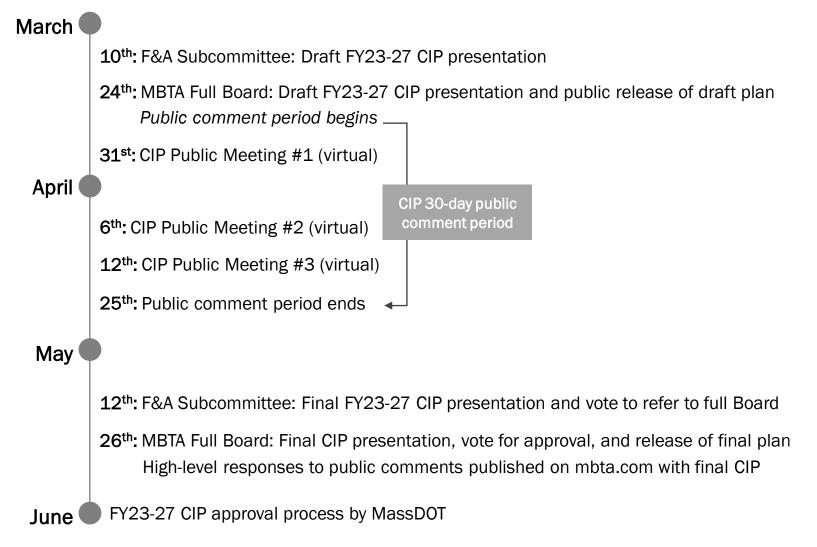
March 31st, Thursday, 6:00-7:30 pm: 1st public meeting

April 6th, Wednesday, 6:00-7:30 pm: 2nd public meeting

April 12th, Tuesday 7:00-8:30 pm: 3rd public meeting

Meetings will be held over Zoom. Details and instructions will be provided on <u>MBTA's CIP website</u> and through press releases, station screens, and bus car cards.

Next Steps



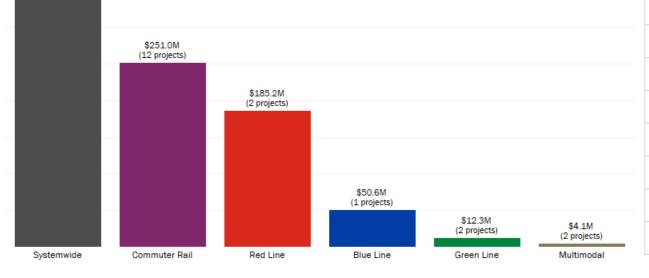
Appendix – CIP Program Summary Slides

Program Summary | Bridge and Tunnel

Program Purpose

Repairs, reconstructs, and replaces Commuter Rail and transit bridges, tunnels, culverts, and dams

Total Projects	FY23-27 Programmed Spend	Executing Departments									
40	\$856.6M	4									
FY23-27 Programmed Spe	FY23-27 Programmed Spend by Primary Mode										
\$353.4M (21 projects)											



Top 15 Bridge and Tunnel Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0551	Longfellow Approach	Red Line	\$185.2M	\$190.0M
P0018	North Station Draw 1 Bridge Replacement	Commuter Rail	\$157.4M	\$573.8M
P0495	Bridge Bundling Contract	Systemwide	\$65.3M	\$132.2M
P0627	Systemwide Bridge Inspection and Rating	Systemwide	\$61.3M	\$103.9M
P0912	Systemwide Tunnel Flood Mitigation Program	Systemwide	\$54.5M	\$149.3M
P0631	Blue Line Harbor Tunnel Infrastructure Improvements	Blue Line	\$50.6M	\$73.7M
P0852	Structural Repairs Systemwide	Systemwide	\$27.4M	\$30.1M
P0552	Dorchester Avenue Bridge	Systemwide	\$27.3M	\$37.1M
P1107	Bridge Program Pipeline - Rehabilitation, Repair and Replacement	Systemwide	\$20.0M	\$20.0M
P0907	East Street Bridge Replacement (Dedham)	Commuter Rail	\$18.0M	\$18.0M
R0074	Tunnel Inspection Systemwide	Systemwide	\$17.1M	\$30.6M
P0006	Gloucester Drawbridge Replacement	Commuter Rail	\$16.7M	\$100.4M
P1115	South Elm Street Bridge Replacement	Commuter Rail	\$15.2M	\$15.2M
P0466	Tunnel Repairs (On-Call)	Systemwide	\$14.6M	\$28.6M
P0851	Norfolk Ave and East Cottage St Bridges	Commuter Rail	\$13.8M	\$22.1M

Program Summary | Business and Operational Support

Program Purpose

Investments in asset management, safety and security, communications, and other systems supporting operations

Total	Projects	FY	23-27 Progr	ammed Spe	nd E	ecuting Dep	artments
7	74		\$310.3M			20	
FY23-27 Pro	ogrammed S	pend by Prir	mary Mode				
\$209.7M (60 projects)							
	\$30.1M (3 projects)	\$24.0M (1 projects)	\$24.0M (1 projects)	\$7.9M (1 projects)	\$7.8M (3 projects)	\$5.8M (4 projects)	\$1.0M
Systemwide	Multimodal	Orange Line	Red Line	Paratransit	Commuter Rail	Bus	(1 projects) Green Line

Top 15 Business and Operational Support Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P1014	Near-Term Transformational Investments	Multimodal	\$30.0M	\$30.0M
P1012r	Red Line - PM/CM Professional Services	Red Line	\$24.0M	\$25.1M
P10120	Orange Line - PM/CM Professional Services	Orange Line	\$24.0M	\$25.1M
P0886	Capital Program Support	Systemwide	\$20.7M	\$24.5M
P0683	FMIS Upgrade and Business Process Re-design	Systemwide	\$15.7M	\$28.8M
P0645	OHS Program Development and Implementation	Systemwide	\$14.6M	\$22.3M
P0932	Electrical Safety - Incident Energy Analysis and System Upgrades	Systemwide	\$14.0M	\$16.2M
R0128	Workforce Modernization Program - HASTUS	Systemwide	\$12.5M	\$40.5M
P1139	Systemwide Asset Management Program Phase 4	Systemwide	\$12.0M	\$12.0M
P0931	Safety Management System (SMS) Implementation	Systemwide	\$10.1M	\$11.3M
P0321	Bond Costs / SOMWBA	Systemwide	\$10.0M	\$48.6M
P0690	Design Standards and Guidelines	Systemwide	\$9.4M	\$10.9M
P0676	Systemwide Security Upgrades	Systemwide	\$9.3M	\$20.7M
P0904	Systemwide Asset Management Program Phase 3	Systemwide	\$8.0M	\$11.5M
P0643	New Paratransit Software Solution	Paratransit	\$7.9M	\$13.6M

Program Summary | Guideway, Signal, and Power

Program Purpose

Rehabilitates, replaces, and upgrades guideway, signal, and power assets across Commuter Rail, transit, and bus

Total	l Project	S	FY23	-27 Progra	ammed S	pend	Execut	ing Depar	tments
1	123			\$2,178.8M				11	
FY23-27 Pr	rogramn	ned Spend	l by Prima	ary Mode					
\$833.5M (36 projects)									
	\$531.9M 20 projects)	\$331.9M							
Commuter Rail 0	Green Line	(2 projects) Red / Orange Line	\$156.5M (22 projects) Systemwide	\$83.3M (9 projects) Multimodal	\$75.5M (6 projects) Orange Line	\$69.3M (1 projects) Mattapan Line	\$43.2M (13 projects) Bus	\$39.4M (9 projects) Red Line	\$14.4M (5 projects) Blue Line

Top 15 Guideway, Signal, and Power Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0285	Signal Program - Red/Orange Line	Red / Orange Line	\$240.5M	\$289.1M
P0606	ATC Implementation - North Side Commuter Rail Lines	Commuter Rail	\$173.6M	\$416.8M
P0370	Green Line Train Protection	Green Line	\$168.4M	\$212.9M
P0591	Green Line Central Tunnel Track and Signal Replacement	Green Line	\$116.0M	\$120.0M
P0692	PRIIA-NEC Baseline Capital Charges	Commuter Rail	\$96.1M	\$153.6M
P0553	Keolis Capitalization Initiatives and Extra Work	Commuter Rail	\$95.0M	\$172.4M
P0612	Bury 100 Miles of Fiber Annually - Strategic Locations	Commuter Rail	\$94.8M	\$102.1M
P0157	Red Line / Orange Line Infrastructure Improvements	Red / Orange Line	\$91.3M	\$470.4M
P0923	E Branch Accessibility & Capacity Improvements	Green Line	\$85.7M	\$85.9M
P0889	Tower 1 Interlocking Early Action Project	Commuter Rail	\$71.1M	\$89.8M
P0857	Mattapan HSL Transformation	Mattapan Line	\$69.3M	\$114.5M
P0924	B Branch Accessibility & Capacity Improvements	Green Line	\$66.3M	\$220.9M
P0516	On-Call Track III	Multimodal	\$65.2M	\$69.6M
P0148	Commuter Rail Positive Train Control	Commuter Rail	\$45.1M	\$444.2M
P1145	Keolis Mechanical Parts	Commuter Rail	\$32.1M	\$32.1M

Program Summary | Maintenance and Administrative Facilities

Program Purpose

77 \$1,239.5M 10 FY23-27 Programmed Spend by Primary Mode \$545.7M (14 projects) 554.7M	5-27 Programmed Spend by Primary Mode	FY23-27 Programmed Spend by Primary Mode)
\$545.7M	\$183.1M (18 projects) \$122.2M (5 projects) \$122.2M (5 projects) (9 projects) (9 projects)	\$545.7M	
	\$183.1M (18 projects) \$122.2M (5 projects) \$122.2M (5 projects) (9 projects) (9 projects)		
	(18 projects) \$122.2M \$121.6M \$121.2M (5 projects) (20 projects)		
	(18 projects) \$122.2M \$121.6M \$121.2M (5 projects) (20 projects)		
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	(18 projects) \$122.2M \$121.6M \$121.2M (5 projects) (20 projects)		
	(E projects) (O projects) (OC projects)		
(1 projects) (2 projects) (2 projects) (1 projects) (2 projects) (2 projects) (1 projects) (2 pr		Bus Commuter Rail Red Line Green Line Systemwide Red / Orange Line Orange Line	\$3.3M (2 projec

Top 15 Maintenance and Administrative Facilities Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0671a	Quincy Bus Facility Modernization	Bus	\$326.6M	\$402.1M
P0512	Cabot Yard Complete Upgrade	Red Line	\$116.5M	\$162.2M
P0679	Codman Yard Expansion and Improvements	Red / Orange Line	\$94.7M	\$98.7M
P1144	Commuter Rail Facilities State of Good Repair	Commuter Rail	\$78.7M	\$78.7M
P0952	Future Regional Rail Layover Planning	Commuter Rail	\$69.5M	\$70.3M
P0942	Bus Facility Interim Improvements	Bus	\$65.3M	\$81.5M
P0671	Bus Facility Modernization Program	Bus	\$62.9M	\$96.4M
P1010	Riverside VMF Modifications & Upgrades Package	Green Line	\$49.4M	\$49.4M
P0514	Wellington Yard Complete Upgrade	Orange Line	\$46.5M	\$96.1M
NEW04	Arborway Bus Facility - Design Funding	Bus	\$36.0M	\$36.0M
P0126	Facility Roof Replacement	Systemwide	\$31.6M	\$52.5M
P1103	Reservoir Yard and Non-Revenue Track Optimization and Reconfiguration	Green Line	\$28.8M	\$30.5M
NEW03	North Cambridge Bus Facility	Bus	\$25.0M	\$25.0M
P0925	Green Line Yards - Track Upgrades	Green Line	\$15.0M	\$15.0M
P0564	Sprinkler & Fire Life Safety Systems - Transit Facilities	Systemwide	\$14.8M	\$21.0M

Program Summary | Passenger Facilities

Program Purpose

Rehabilitates and upgrades stations, stops and parking facilities to improve accessibility and the customer experience

Total F	Projects	F١	(23-27 P	rogramn	ned Spen	d	Executin	g Depart	ments
8	37		\$919.9M				12		
FY23-27 Pro	grammed Sp	end by Pri	imary Mo	ode					
\$301.9M (19 projects)									
	3.8M ojects)								
	\$110.9M (19 projects)								
		\$74.3M (2 projects)	\$64.3M (10 projects)	\$37.4M (2 projects)	\$35.4M (3 projects)	\$24.6M (6 projects)	\$22.6M (4 projects)	\$15.9M (6 projects)	\$8.9M (9 projects)
Commuter Gree Rail	n Line Systemwide	Red / Orange Line	Red Line	Silver Line	Orange Line	Bus	Ferry	Blue Line	Multimodal

Top 15 Passenger Facilities Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0168	Symphony Station Improvements	Green Line	\$83.2M	\$91.4M
P0074	Downtown Crossing Vertical Transportation Improvements Phase 2	Red / Orange Line	\$73.7M	\$77.8M
P0856	Ruggles Station Improvements Phase 2	Commuter Rail	\$72.9M	\$93.0M
P0395	Worcester Union Station Accessibility and Infrastructure Improvements	Commuter Rail	\$59.0M	\$70.6M
P1009	Short Term Accessibility Improvements - FTA Compliance Actions	Green Line	\$56.5M	\$57.5M
P0179	Winchester Center Station	Commuter Rail	\$52.1M	\$60.9M
P0075	Elevator Program Multiple Location Design	Systemwide	\$41.5M	\$54.7M
P0626	Hynes Convention Center Station	Green Line	\$40.1M	\$45.7M
P0605	Alewife Garage Rehabilitation	Red Line	\$32.6M	\$79.0M
P0108	Back Bay Station Ventilation	Commuter Rail	\$31.2M	\$43.1M
P0174	Natick Center Station Accessibility Project	Commuter Rail	\$29.8M	\$49.6M
P0163	Forest Hills Improvement Project	Orange Line	\$29.0M	\$32.6M
P0129	Newton Highlands Green Line Station Accessibility Project	Green Line	\$28.6M	\$32.2M
P0078	Hingham Ferry Dock Modification	Ferry	\$22.3M	\$24.9M
P0404	Courthouse Station Leaks	Silver Line	\$20.2M	\$34.1M

Program Summary | Technology and Innovation

Program Purpose

Investments in technology to enhance productivity, modernize the system, and improve the quality of service

Total Projects	FY23-27 Programmed Spend	Executing Departments
53	\$579.3M	15
FY23-27 Programmed Spe	end by Primary Mode	
\$564 9M		

\$564.8M						
(40 projects)						
	\$8.2M (1 projects)	\$2.7M (3 projects)	\$1.4M (4 projects)	\$1.3M (3 projects)	\$0.6M (1 projects)	\$0.2M (1 projects)
Systemwide	Multimodal	Commuter Rail	Green Line	Bus	Red Line	Paratransit

Top 15 Technology and Innovation Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0265	Fare Transformation	Systemwide	\$420.1M	\$783.4M
P0301	Systemwide Radio	Systemwide	\$73.3M	\$81.2M
P0946	ACE Network	Systemwide	\$13.7M	\$15.0M
P0972	PA/ESS Critical Upgrades	Systemwide	\$8.6M	\$9.4M
P1122	Safety Dispatch Technology and Data Modernization for Light Rail and Bus	Multimodal	\$8.2M	\$8.2M
P0908	Communications Rooms Remediation	Systemwide	\$7.6M	\$9.6M
P0945	IT Disaster Recovery Plan	Systemwide	\$7.1M	\$7.9M
P0265a	Accessible Fare Gate Opener	Systemwide	\$6.9M	\$9.0M
P0635	IT Security Modernization	Systemwide	\$4.9M	\$17.9M
P0491a	Customer Technology Access Initiatives	Systemwide	\$4.0M	\$4.3M
P06890	Rider Service Alerts Resilience & Improvements	Systemwide	\$3.5M	\$3.9M
P0944	IT Infrastructure State of Good Repair	Systemwide	\$3.1M	\$4.9M
P0434	Energy Management System	Systemwide	\$2.7M	\$3.5M
P0693	Automated Passenger Counters	Commuter Rail	\$2.2M	\$15.0M
P0948	Performance Data Modernization	Systemwide	\$2.1M	\$2.3M

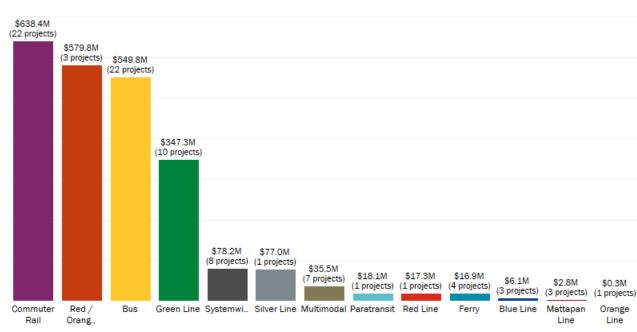
Program Summary | Vehicles

Program Purpose

Rehabilitates and replaces revenue fleets and non-revenue vehicle equipment for reliable and safe operations

Total Projects	FY23-27 Programmed Spend	Executing Departments
86	\$2,367.6M	7

FY23-27 Programmed Spend by Primary Mode



Top 15 Vehicles Projects by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0362	Red / Orange Line Vehicles	Red / Orange Line	\$579.0M	\$1,073.5M
P0618	Procurement of 40ft Enhanced Electric Hybrid Buses	Bus	\$350.6M	\$353.9M
P0369	Green Line Type 10 Light Rail Fleet Replacement	Green Line	\$311.2M	\$800.0M
P0927	Rolling Stock - Locomotive and Coach State of Good Repair and Resiliency	Commuter Rail	\$173.1M	\$174.1M
P1152	Exercise HRU Option FC-712	Commuter Rail	\$147.7M	\$160.9M
P0893	Procure 64 Bi-Level Commuter Rail Coaches	Commuter Rail	\$147.3M	\$276.1M
P0653	Procurement of 40ft Battery Electric Buses and Related Infrastructure	Bus	\$100.8M	\$101.2M
P0619	DMA Replacement	Silver Line	\$77.0M	\$89.4M
P0547	Work Car Procurement	Systemwide	\$57.4M	\$63.9M
P0239	Locomotive Overhaul	Commuter Rail	\$53.6M	\$126.2M
P0918	Future Rolling Stock Fleet	Commuter Rail	\$50.0M	\$50.0M
P0652	Procurement of 181 Bi-Level Commuter Rail Coaches	Commuter Rail	\$42.5M	\$43.8M
P0860	Hybrid Bus Overhaul (XDE40 - SR 1983)	Bus	\$38.9M	\$41.7M
P0349	Green Line Type 8 Reliability Improvements	Green Line	\$26.6M	\$66.5M
P0911	Hybrid Bus Overhaul (XDE40 - SR 1983)	Bus	\$26.0M	\$26.0M

Program Summary | Expansion South Coast Rail, GLX, and Expansion Projects

Program Purpose

South Coast Rail: Extension of Commuter Rail service to Fall River and New Bedford on the South Coast of Massachusetts

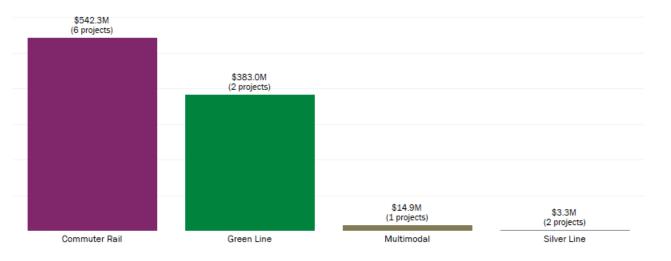
Green Line Extension: Extension of Green Line service from Lechmere to Somerville and Medford

Expansion Projects: Planning and design of targeted expansion projects identified as next priorities

Total Projects	FY23-27 Programmed Spend	Executing Departments
11	\$943.5M	7

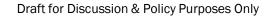
Top 7 South Coast Rail, Green Line Extension, and Expansion Projects, by FY23-27 Programmed Spend

CIP ID	Project Name	Primary Mode	FY23-27 Total	Authorized Budget
P0160	South Coast Rail Expansion	Commuter Rail	\$493.5M	\$920.8M
P0095	Green Line Extension	Green Line	\$357.7M	\$2,118.6M
P0160a	South Coast Rail - Coach Procurement	Commuter Rail	\$39.9M	\$69.0M
P0095a	Green Line Extension - Vehicles	Green Line	\$25.3M	\$170.0M
P0866	Red-Blue Connector - Planning	Multimodal	\$14.9M	\$15.0M
P0100	Knowledge Corridor	Commuter Rail	\$9.0M	\$122.6M
P0496	Silver Line Gateway - Phase 2	Silver Line	\$3.3M	\$40.6M



FY23-27 Programmed Spend by Primary Mode

Appendix – Reference Slides



Discretionary Grant Opportunities

Recent Grant Submissions

- FHWA Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD)
 - Submitted: August 23, 2021
- FTA Areas of Persistent Poverty Grant Program 2021
 - Submitted: August 30, 2021
- FTA Route Planning Restoration Program
 - Submitted: November 15, 2021
- FTA Bus and Bus Facilities
 - Submitted: November 19, 2021
- FRA Consolidated Rail Infrastructure and Safety Improvements (CRISI) (2x)
 - Submitted: November 29, 2021
- FRA Federal-State Partnership for State of Good Repair
 - Submitted: March 7, 2022

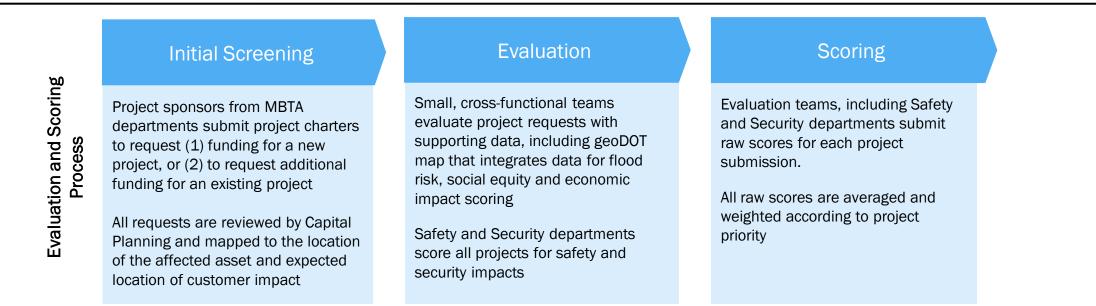
Grant Applications In Progress

- U.S. Department of Transportation
 - Rebuilding American Infrastructure with Sustainability and Equity (RAISE) (formerly BUILD/TIGER) Due April 14, 2022
- Federal Transit Administration
 - Low or No Emission Grant Program and Buses and Bus Facilities Program
 - Due May 31, 2022
- Federal Emergency Management Agency
 - Hazard Mitigation Grant Program (HMGP) Due July 2022
 - Building Resilient Infrastructure and Communities (BRIC) (2x), **Due November 2022**

Recent Award Notifications

- FTA Passenger Ferry Program
 - Award received: \$3.74 million
 - Project: Catamaran Overhauls

Project Evaluation and Scoring



- Through the FY23-27 CIP development process, 203 requests were received from 28 MBTA departments.
- A broad cross section of MBTA employees evaluated and scored CIP requests using a new Microsoft PowerApps tool.
- All Technology and Innovation project requests were evaluated and scored by the MBTA's internal IT Governance Committee, which allocates capital funding to technology-related investments.

Scoring Criteria and Weights

			Scoring	Weights
Criteria	Description	Subcriteria	Rel. / Mod.	Expansion
System Preservation	The extent to which the project contributes to a state of good repair on the transportation system and aligns with asset management goals.	 Asset Condition (5 points) Impact to Other Assets (1 point) Operations Criticality (2 points) Flood Risk (1 point) Severe Weather Resiliency (1 point) 	30%	N/A
Mobility	The extent to which the project is intended to provide modal options efficiently and effectively for all users through benefits to reliability, accessibility, and other measures of service quality.	 Impact on Reliability (2 points) Impact on Accessibility (2 points) Impact on Customer Experience (2 points) Impact on Riders (4 points) 	15%	25%
Cost Effectiveness	The extent to which the project impacts operating costs and revenues and maximizes the return on the public's investment.	 Impact on Operating Costs (5 points) Impact on Operating Revenues (5 points) 	10%	25%
Environmental and Health Effects	The extent to which the project meets State goals of improving air quality and reducing greenhouse gases, and results in a reduction of pollution.	 Air Quality and GHG Reduction (5 points) Reduce Pollution and/or Natural Resource Consumption (5 points) 	10%	10%
Policy Support	The extent to which the project is aligned with MBTA policy priorities, including Focus 40.	 Alignment with Focus40 (5 points) Alignment with MBTA Strategic Planning Report (5 points) 	5%	10%
Social Equity	The extent to which the project equitably distributes social, economic, and health benefits to residents and local businesses.	 Benefits to EJ and Title VI Communities (7 points) Additional Equity Benefits to Vulnerable Populations (3 points) 	10%	15%
Economic Impact	The extent to which the project supports economic growth in the Commonwealth.	 Impact on Connectivity to Employment Centers and Priority Places (3 points) Impact on Corridors At or Near Capacity (3 points) Impact on Communities with Transit-Supportive Land Use (3 points) Impact on Housing Choice Communities (1 point) 	5%	15%
Safety	The extent to which the project addresses documented or identified safety issues and hazards, and security vulnerabilities and risks. (Note: scored by Safety and Security departments.)	 Impact on System Safety (7 points) Impact on System Security (3 points) 	15%	N/A