

## Appendix B: Investment Programs

This section provides a list of all investment programs contained within this CIP. Each investment program includes a description, details about any relevant performance tracking that informs program size and need, and proposed program spending.

## Reliability: Aeronautics Division

### Airport Capital Improvement Program

This program includes a full range of airport state of good repair projects. Projects may include tree clearing, obstruction removal, sustainable equipment purchases, herbicide treatment, yearly operating plans, vegetation management plans, Airport security camera installation & replacement, security & wildlife hazard fencing and gates, navigation aids, fuel farms, hangars, system planning studies.

#### Program Plan & Guidance

FAA Airport Improvement Handbook (FAA Advisory Circular 5100.38)

#### Project Selection

Compliance with FAA airfield compliance standards and FAA National Priority Rating (NPR) System

#### Performance Measure

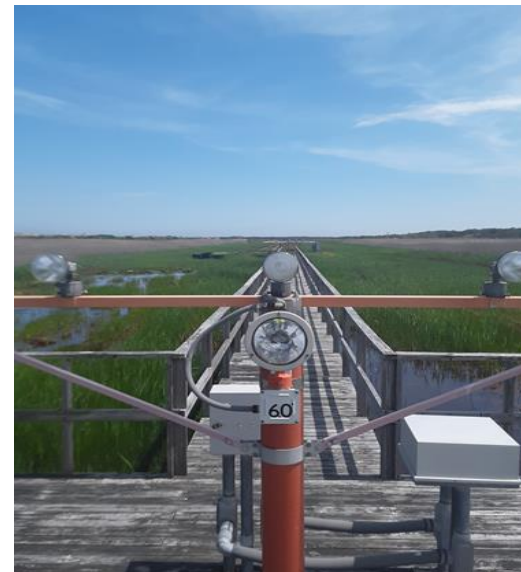
Annual safety inspections on airport conditions

#### SFY 2022 Projected Spend

\$20.4 million



Chatham FAA-owned Airfield Signage



Provincetown Approach Lighting System

## Reliability: Aeronautics Division

### Airport Pavement Program

This program addresses the quality of all pavement “inside the airport fence” to achieve long term pavement condition goals and is necessary to continue safety and maintenance programs at public airports and is required to help keep our airports in compliance with the FAA grant requirements.

### Program Plan & Guidance

FAA Airport Improvement Program Handbook \*Table G-2) and MassDOT Airport Pavement System (APMS) Study

### Project Selection

Compliance with FAA airfield compliance standards and FAA National Priority Rating (NPR) System

### Performance Measure

Pavement Condition Index (PCI) and FAA Standards

### SFY 2022 Projected Spend

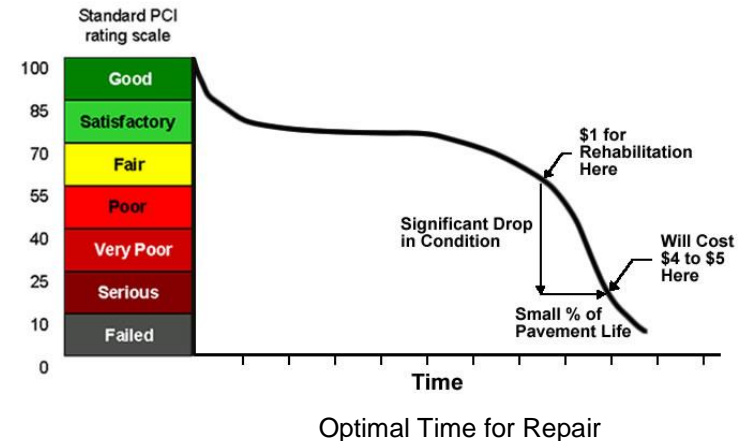
\$27.0 million



Statewide deck sealing & Airfield Marking Projects



Fitchburg Municipal Airport Runway 14-32 & Taxiway 'A' Reconstruction



## Reliability: Highway Division

### Bridge Program

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

### Program Plan & Guidance

MassDOT Transportation Asset Management Plan

### Project Selection

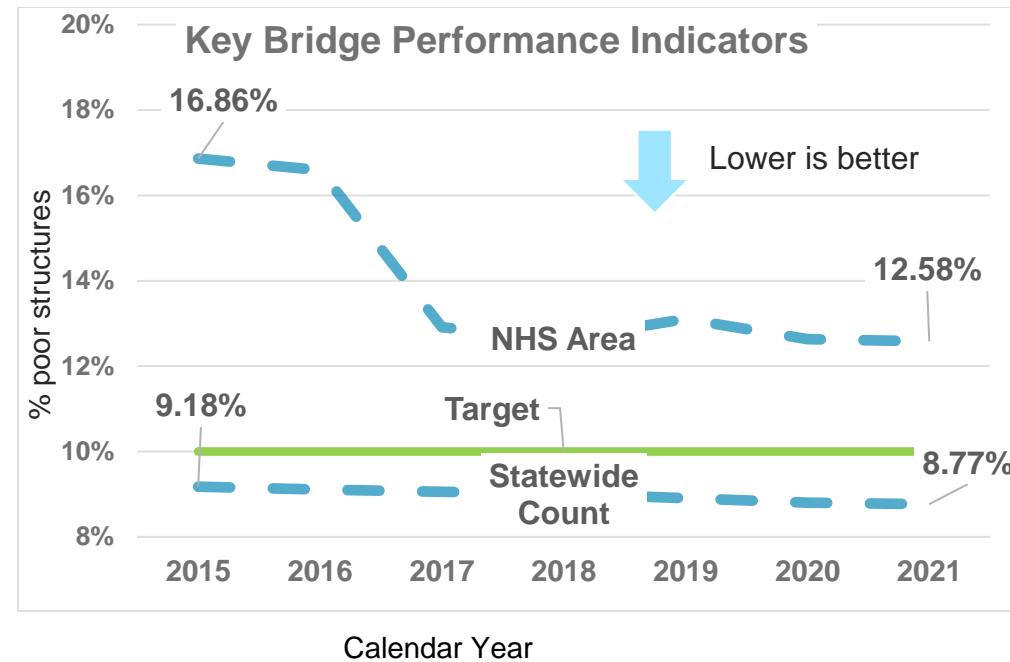
Selected through Bridge Prioritization System

### Performance Measure

Bridge condition by count and bridge condition by NHS area

### SFY 2022 Projected Spend

\$452.6 million



## Reliability: Highway Division

### Chapter 90 Program

Chapter 90 funds are for local capital improvement such as highway construction, preservation and improvement projects. These projects create or extend the life of capital facilities.

### Program Plan & Guidance

Chapter 90 legislation & policies

### Project Selection

Municipalities propose projects; MassDOT confirms eligibility

### Performance Measure

N/A

### SFY 2022 Projected Spend

\$200.0 million



Fiscal Year	Apportionment	Spent*
FY17	\$200M	\$200.0M
FY18	\$200M	\$196.5M
FY19	\$240M	\$211.4M
FY20	\$220M	\$213.0M
FY21	\$200M	\$146.9M

\*As of 5/1/21



## Reliability: Highway Division

### Equipment Program

The Highway Equipment program make annual purchases of replacement vehicles, heavy equipment, telecommunications equipment and various other highway capital assets. The program is essential to conducting highway operations throughout the Commonwealth.

### Program Plan & Guidance

N/A

### Project Selection

Prioritized based on operational needs and fleet life cycle

### Performance Measure

N/A

### SFY 2022 Projected Spend

\$28.0 million



MassDOT 10-wheel dump truck equipped for snow & ice with tow plow

## Reliability: Highway Division

### Facilities Program

The Highway Facility Improvement program provides for the design and execution of facility repair and replacement projects including but not limited to office buildings, maintenance operations buildings, garages, and salt sheds.

### Program Plan & Guidance

N/A

### Project Selection

Projects drawn from District and Headquarters' (HQ) priorities

### Performance Measure

N/A

### SFY 2022 Projected Spend

\$27.5 million



MassDOT Research & Materials Lab in Hopkinton, MA

## Reliability: Highway Division

### Interstate Pavement Program

This program maintains the Interstate Highway system, a central network for MA & New England mobility and commerce, through projects which preserve or rehabilitate pavement and invest in ancillary corridor systems (i.e. Safety, Bridge, Drainage, Bridge, Intelligent Transportation Systems)

### Program Plan & Guidance

MassDOT Transportation Asset Management Plan (TAMP)

### Project Selection

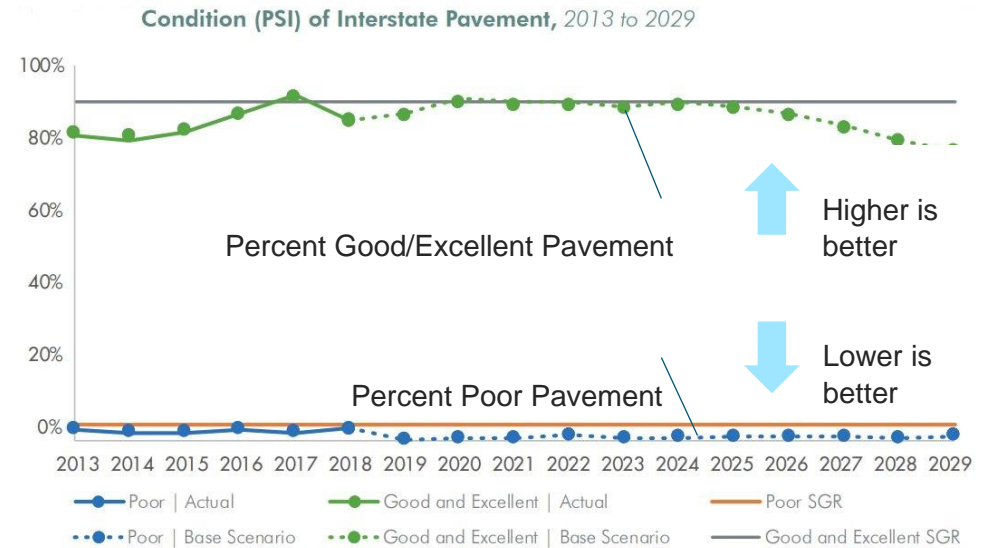
Projects prioritized through pavement management system

### Performance Measure

State Pavement Serviceability Index (PSI) – State & Federal Pavement Condition Measure

### SFY 2022 Projected Spend

\$95.9 million





## Reliability: Highway Division

### Non-Interstate Pavement Program

Investments maintain MassDOT-owned non-interstate roadways. Program includes projects on freeways (e.g. Route 24) and local roadways owned by the state. In addition to addressing pavement conditions, these projects also incorporate bicycle and pedestrian where practicable

### Program Plan & Guidance

MassDOT Transportation Asset Management Plan (TAMP)

### Project Selection

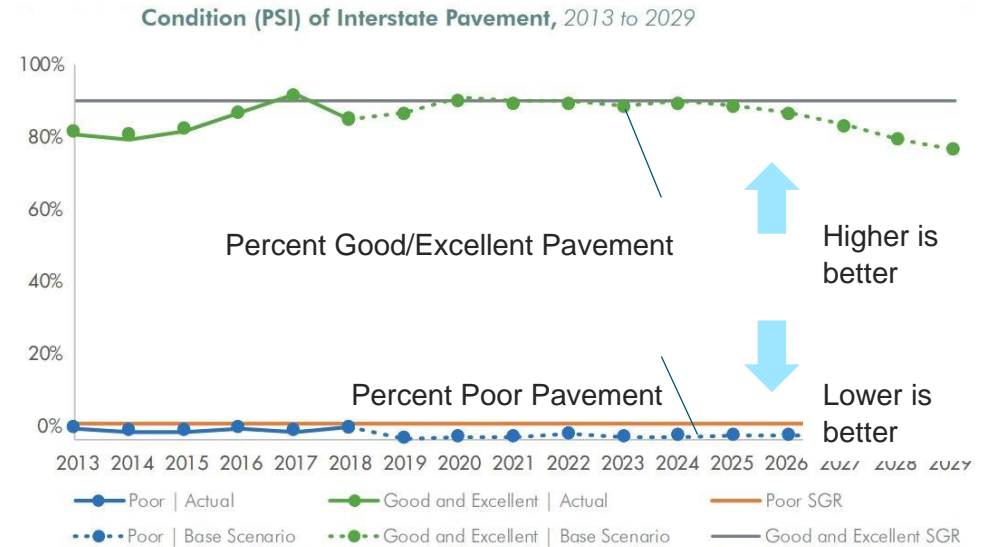
Projects prioritized through pavement management system

### Performance Measure

State Pavement Serviceability Index (PSI) – State & Federal Pavement Condition Measure

### SFY 2022 Projected Spend

\$134.2 million



## Reliability: Highway Division

### Roadway Improvements Program

This program supports general state-of-good repair of MassDOT-owned roadways through drainage, fencing, guardrail, and sidewalk repair projects, vegetative management projects, and also includes federally-funded storm water retrofit projects which improve sustainability and resiliency of state-owned drainage systems.

#### Program Plan & Guidance

N/A

#### Project Selection

Projects drawn from District and HQ priorities

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$31.2 million



## Reliability: Highway Division

### Municipal Pavement Program - *new*

A focused program on the preservation of the State Numbered System to support the long-term condition of this important network, contribute to NHS pavement performance, and assist municipalities in the management of local infrastructure.

#### Program Plan & Guidance

MassDOT Transportation Asset Management Plan (TAMP)

#### Project Selection

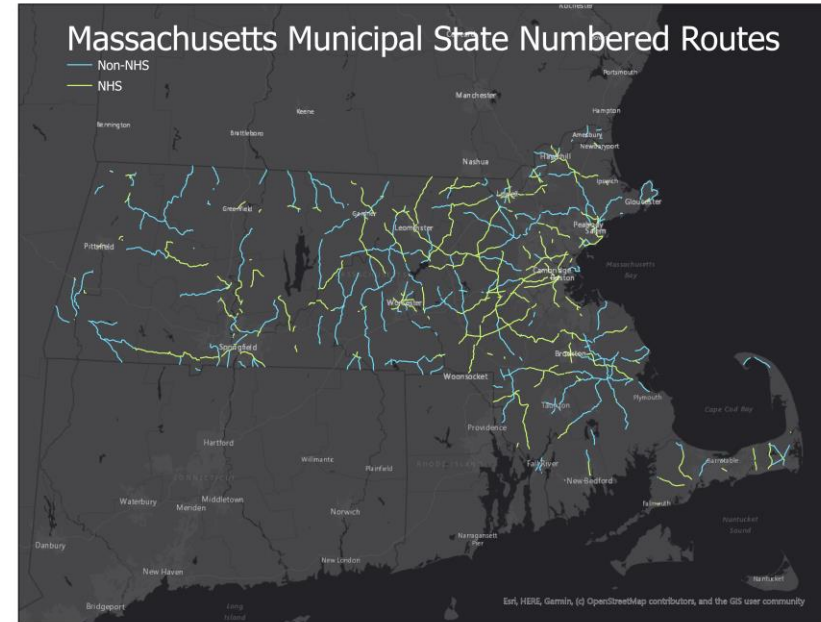
Projects drawn from District and HQ priorities

#### Performance Measure

State Pavement Serviceability Index (PSI) – State & Federal Pavement Condition Measure

#### SFY 2022 Projected Spend

\$15.0 million



## Reliability: Highway Division

### Municipal Small Bridge Program

This program provides financial support to cities and towns for replacement, preservation, and rehabilitation of small bridges (<20 feet in length).

#### Program Plan & Guidance

N/A

#### Project Selection

Municipalities submit application, MassDOT confirms eligibility and awards grants via competitive selection process

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$10.0 million



## Reliability: Highway Division

### Safety Improvements Program

This program provides systematic repair and upgrade of safety systems on state-owned roadways through traffic signal, highway lighting, impact attenuators, traffic signs, and pavement markings projects, while investing in strategic safety improvements on all roads of the Commonwealth

#### Program Plan & Guidance

Strategic Highway Safety Plan, life-cycle planning of safety systems, FHWA Highway Safety Improvement Program

#### Project Selection

Projects drawn from District and HQ priorities

#### Performance Measure

Reduction in rate of fatalities or serious injuries

#### SFY 2022 Projected Spend

\$44.7 million



**HSIP Projects funded within this program include measures to address:**

*Impaired driving, Intersections, lane departures, occupant protections, speeding and aggressive driving, young drivers, older drivers, pedestrian motorcycles, bicycles, truck/bus involved, RR grade crossings, roadway worker safety, & distracted driving*



## Reliability: Highway Division

### Tunnels Program

The Tunnel program provides investment in the tunnels and ancillary systems within the Metropolitan Highway System (MHS). Massachusetts maintains the third largest tunnel system in America.

#### Program Plan & Guidance

Metropolitan Highway System Triennial Report, National Tunnel Inspection Standards, Central Artery Repair and Maintenance Trust Fund

#### Project Selection

MassDOT Tunnel Project Prioritization Methodology (based on NCHRP best practices)

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$102.4 million



MHS Tunnel System

## Reliability: Information Technology

### Cyber/Information Security Program

This program keeps Information Technology (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 Plan & Guidance

EOTSS priorities for Cyber/Information Security

#### Project Selection

Business value, operational impacts, alignment with IT goals and strategies

#### Performance Measure

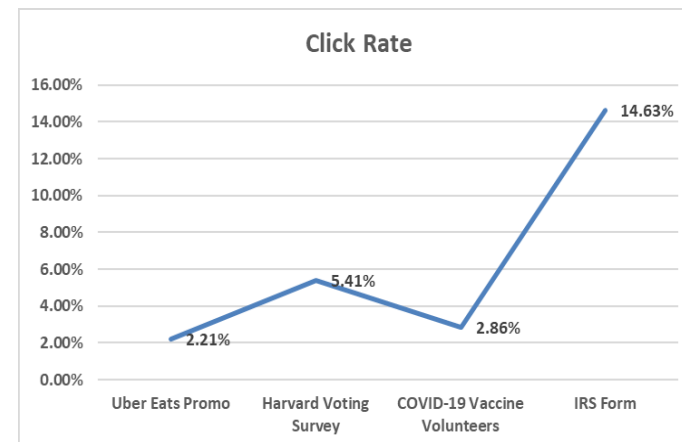
N/A

#### SFY 2022 Projected Spend

\$10.0 million



MassDOT established a 24/7 IT Security Operations Center in FY 21



Recent phishing scam tests have seen an uptick in employee clicks

## Reliability: Information Technology

### Digital Infrastructure Program

This program covers a range of digital infrastructure work, including state of good repair hardware upgrades and support of operations. This program is necessary to meet MassDOT's technology goals by sustaining the core computer, storage, telecommunications and network infrastructure while maintaining best practices and state of good repair.

#### Program Plan & Guidance

EOTSS priorities for Digital Infrastructure

#### Project Selection

Business value, operational impacts, alignment with IT goals and strategies

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$2.0 million



Pre-Investment 10 Park Plaza Server Room



Post-investment 10 PP Server Room

## Reliability: MBTA

### Bridge and Tunnel Program

This program repairs, reconstructs and replaces MBTA commuter rail and transit bridges and tunnels system-wide to ensure safe and reliable service for commuter rail and heavy rail riders.

#### Program Plan & Guidance

MBA Transit Asset Management Plan (TAM)

#### Project Selection

Project scoring and prioritization

#### Performance Measure

Asset condition; structural deficiency and load rating

#### SFY 2022 Projected Spend

\$169.4 million



Dorchester Avenue Bridge Repairs



Robert Street Bridge Replacement (Needham Line) near Roslindale Village Station

## Reliability: MBTA

### Facilities Program

This program rehabilitates and upgrades maintenance and administrative facilities that support MBTA operations.

### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM)

### Project Selection

Project scoring and prioritization

### Performance Measure

Asset condition: FTA TERM scale (1-5)

### SFY 2022 Projected Spend

\$133.6 million



## Reliability: MBTA

### System Upgrades Program

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

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM)

#### Project Selection

Project scoring and prioritization

#### Performance Measure

Asset age: Useful life benchmark (for non-revenue vehicles)

#### SFY 2022 Projected Spend

\$79.6 million

## Reliability: MBTA

### Revenue Vehicles Program

This program rehabilitates and replaces the MBTA revenue fleet which includes commuter rail, heavy rail, light rail, bus and ferry units to allow the MBTA to improve service reliability and ensure safety for riders.

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM)

#### Project Selection

Project scoring and prioritization

#### Performance Measure

Asset condition: Useful life Benchmark (ULB)

#### SFY 2022 Projected Spend

\$244.7 million



New Red Line train in Revenue Service



New Orange Line Train in Revenue Service

## Reliability: MBTA

### Stations Program

This program rehabilitates and upgrades MBTA stations and parking facilities (e.g., commuter rail, commuter boat, subway and bus stations) to help make it easier for visitors and riders to navigate the MBTA system.

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM)

#### Project Selection

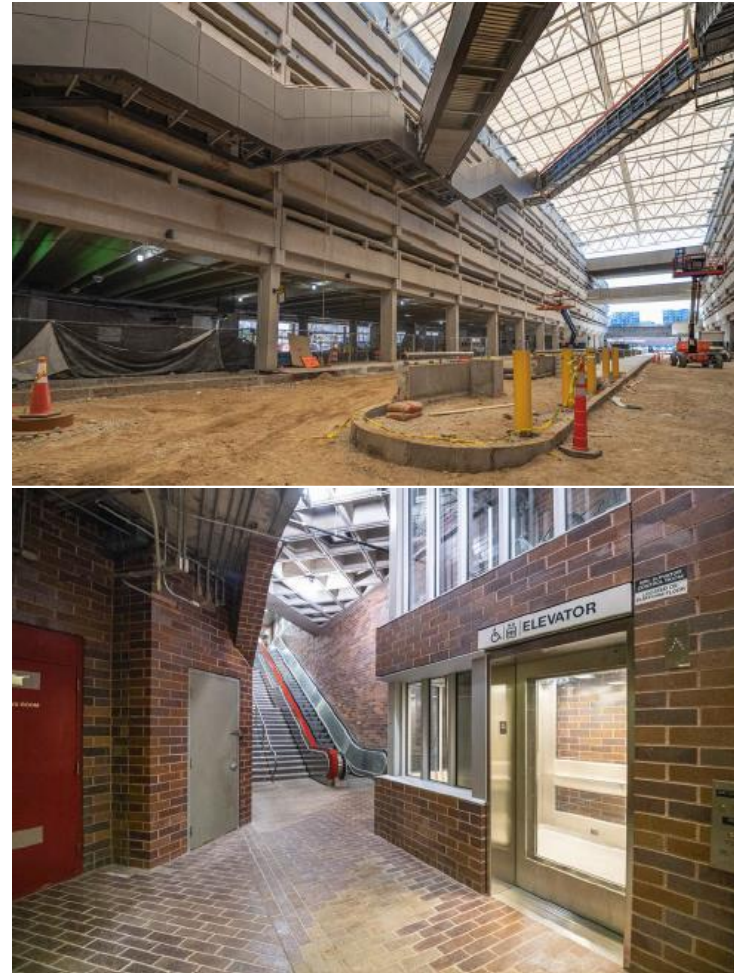
Project scoring and prioritization

#### Performance Measure

Asset condition: FTA Term Scale (1-5)

#### SFY 2022 Projected Spend

\$128.2 million



Quincy-Adams Station (Red Line) construction (April 2021)

## Reliability: MBTA

### Track, Signal, and Power Program

This program rehabilitates, replaces and upgrades track, signal and power assets across the commuter rail and transit system to ensure safe and reliable service for commuter rail and heavy rail riders.

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM)

#### Project Selection

Project scoring and prioritization

#### Performance Measure

Asset condition, age, and performance restrictions

#### SFY 2022 Projected Spend

\$209.7 million



Blue Line – Airport Rail



Blue Line Cable Removal



## Reliability: Rail & Transit Division

### Rail Bridges Program

This program repairs or replaces bridges to prevent or address deterioration, keep or restore class of line (federally-designated rail track classifications), or maintain the structure's safety and functional utility.

### Program Plan & Guidance

Rail Asset Management Plan (RAMP), 2020 Tracker

### Project Selection

Projects prioritized based on the most recent inspection, type of operations (e.g., passenger, hazardous cargo), and contractual or regulatory requirements.

### Performance Measure

Bridge condition index; % in state of good repair; weight capacity; reduced operating restrictions

### SFY 2022 Projected Spend

\$11.9 million



Middleboro Line in Norton



## Reliability: Rail & Transit Division

### Rail Facilities Program

This program repairs or replaces rail facilities, specifically rail yards and stations, to prevent or address deterioration or maintain the facility's effectiveness.

#### Program Plan & Guidance

Rail Asset Management Plan (RAMP)

#### Project Selection

Projects prioritized based on condition reports, type of operations and risks, operational impacts, and contractual or regulatory requirements for action

#### Performance Measure

Annual inspection & condition assessment

#### SFY 2022 Projected Spend

\$3.7 million



Maintenance yard for track work in Deerfield, MA

## Reliability: Rail & Transit Division

### Rail Grade Crossings Program

This program repairs or replaces grade crossings to address deterioration, keep or restore class of line, or maintain the safety or functional utility of the crossing. Well-maintained grade crossings are critical to public (motorist, bicyclist and pedestrian) safety, and are a key component of rail service safety and reliability.

#### Program Plan & Guidance

State Rail Plan, Rail Asset Management Plan, 2020 Tracker

#### Project Selection

Projects prioritized based on federal guidelines, most recent inspections, type of operations (e.g., passenger, hazardous cargo), traffic levels, and contractual or regulatory requirements

#### Performance Measure

Grade crossing condition assessment; % in state of good repair; grade crossing incidents

#### SFY 2022 Projected Spend

\$10.0 million



Foxboro Crossing

## Reliability: Rail & Transit Division

### Rail Track and Right of Way Program

This program strives to keep MassDOT owned rail lines in a state of good repair and safe and suitable for the intended traffic. This program repairs or replaces assets within the rail right of way (typically ties, rail, ballast, subsurface roadbed, embankments, drainage, culverts, switches, etc.) to address deterioration, keep or restore class of line, improve resiliency and maintain the line's safety and operational integrity. These activities are necessary to maintaining a safe and reliable rail system. Prioritization will reflect most recent inspections, type of operations (e.g., passenger, hazardous cargo), and contractual or regulatory requirements for action.

#### Program Plan & Guidance

State Rail Plan, Rail Asset Management Plan, 2020 Tracker

#### Project Selection

Projects prioritized based on most recent inspections, type of operations (e.g., passenger, hazardous cargo), and contractual or regulatory requirements

#### Performance Measure

% of State of good repair, weight capacity; reduced operating restrictions

#### SFY 2022 Projected Spend

\$28.9 million



Culvert failure on the Knowledge Corridor in Northampton, MA

## Reliability: Rail & Transit Division

### Rail Vehicles Program

This program repairs, replaces, or acquires rail equipment (locomotives, coaches, ballast cars, light duty vehicles, etc.) to facilitate reliable service, prevent or address deterioration, or support activities to maintain or restore vehicle condition to support reliable ongoing rail operations.

### Program Plan & Guidance

State Rail Plan and Freight Plan

### Project Selection

Prioritized based on project and maintenance needs

### Performance Measure

N/A

### SFY 2022 Projected Spend

\$1.2 million





## Reliability: Rail & Transit Division

### Transit Mobility Assistance Program

In an effort to improve mobility options for all riders across the Commonwealth, this program purchases vans and related equipment used to provide transportation for the elderly and individuals with disabilities of all ages. This program uses funds from Councils on Aging, the RTAs, and non-profit organizations. Rural and suburban transit agencies need to find ways to meet their riders where they are, and this funding will help RTAs provide more service for elderly riders and for paratransit service.

#### Program Plan & Guidance

Vision for the Future of RTAs report; M.G.L. section 13 of chapter 637 of the acts of 1983

#### Project Selection

Competitive application process, and each application is evaluated based on vehicle size and age

#### Performance Measure

Useful Life Benchmark (ULB)

#### SFY 2022 Projected Spend

\$10.0 million





## Reliability: Rail & Transit Division

### RTA Facility and Vehicle Maintenance Program

This program addresses the maintenance, rehabilitation, and upkeep of existing RTA facilities or vehicles. These investments will help RTAs continue to keep their fleets and facilities in a state of good repair to meet the current and future mobility needs of their region.

#### Program Plan & Guidance

Vision for the Future of RTAs report; RTAs Transit Asset Management Plans (TAMs)

#### Project Selection

RTAs asset inventory reports and needs

#### Performance Measure

Facility condition and Vehicle ULB mean miles between failures

#### SFY 2022 Projected Spend

\$2.3 million



## Reliability: Rail & Transit Division

### Transit Technical Assistance Program

This program is used to provide technical assistance to support the transit program (grants management systems, vehicle inspections). MassDOT is committed to providing technical assistance to help the RTAs with a wide variety of initiatives, including transportation planning, data analysis of best practices and performance standards, route and service planning, and implementing supportive technology.

#### Program Plan & Guidance

Vision for the Future of RTAs report

#### Project Selection

Comprehensive regional transit plans and RTA Taskforce Report

#### Performance Measure

Technology-driven data analyses

#### SFY 2022 Projected Spend

\$2.0 million



### A Vision for the Future of Massachusetts' Regional Transit Authorities

Report of the Task Force on Regional Transit Authority  
Performance and Funding

April 5, 2019

## Reliability: Rail & Transit Division

### RTA Vehicle Replacement Program

This program combines with Federal funds received by various RTAs to keep the RTA fleets in a state of good repair and suitably sized - both in terms of number and type of vehicle - for the RTA's service.

#### Program Plan & Guidance

Vision for the Future of RTAs report; RTAs Transit Asset Management Plans (TAMs)

#### Project Selection

RTA asset management plans and replacement schedules; projects prioritized to best achieve TAM targets

#### Performance Measure

Vehicle ULB (age and mileage) by type

#### SFY 2022 Projected Spend

\$18.0 million





## Reliability: Registry of Motor Vehicles

### Capital Maintenance Program

This program maintains and improves existing operating systems that support service delivery, application platforms, and electronic records retention and maintains the condition of the RMV leased or owned facilities.

### Program Plan & Guidance

N/A

### Project Selection

Facility and system condition

### Performance Measure

N/A

### SFY 2022 Projected Spend

\$0.5 million



## Reliability: Office of Diversity and Civil Rights

### Pre-Apprenticeship Program

This program, for which MassDOT is partnering with a number of stakeholders (industry, labor, FHWA, MassDOT, Office of Diversity and Civil Rights and Human Resources), will fund an industry-focused workforce development program. The program will also facilitate the introduction of additional pre-apprentices to skilled trades within the various MassDOT divisions. This program provides low-income and other disadvantaged communities with access to training and employment opportunities within the construction trades and the transportation sector.

#### Program Plan & Guidance

N/A

#### Project Selection

TBD

#### Performance Measure

TBD

#### SFY 2022 Projected Spend

\$1.5 million



Fidel Escarela went through the Pre-Apprenticeship and attended New England Tractor Trailer Training School to prepare for the CDL-B exam; he passed and now has his Commercial Driver's License (CDL)



## Modernization: Aeronautics Division

### Airport Administration Buildings Program

This program builds or renovates airport administration buildings as recommended by the 2010 Statewide Airport System Plan.

#### Program Plan & Guidance

2010 Massachusetts Statewide Airport System Plan

#### Project Selection

2010 Massachusetts Statewide Airport System Plan

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$4.8 million



Statewide Airport Administration Building (SAAB) Prototype

## Modernization: Highway Division

### ADA Retrofits Program

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

#### Program Plan & Guidance

MassDOT ADA Transition Plan

#### Project Selection

Ramp replacement follows multi-factor prioritization (i.e., proximity to public buildings, schools, and population factors)

#### Performance Measure

Number of failed or missing curb ramps on statewide inventory

#### SFY 2022 Projected Spend

\$6.1 million



	FY17	FY18	FY19	FY20
Failed or missing curb ramps	5,200	5,097	4,684	4,106
<i>Reduction from 2017</i>		-1.98%	-8.10%	-12.34%

## Modernization: Highway Division

### Complete Streets Program

The program provides technical assistance and construction funding to eligible municipalities for the construction of facilities that enhance pedestrian, bicycle, and transit travel for roadway users of all ages and abilities.

### Program Plan & Guidance

Chapter 220 legislation and policies

### Project Selection

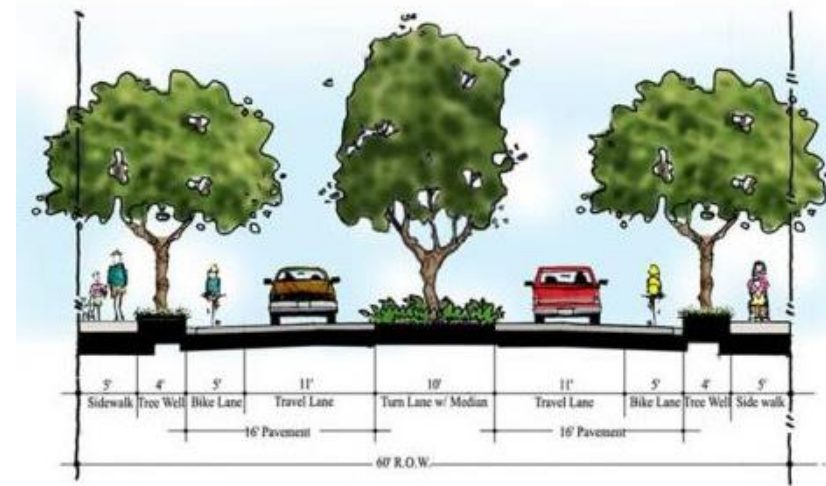
All communities may receive one Tier 2 grant. For Tier 3 grants, municipalities propose projects and MassDOT awards grants via a competitive selection process.

### Performance Measure

N/A

### SFY 2022 Projected Spend

\$10.0 million



### Complete Streets Awards FY21-FY25

Grant Type	Number of Awards	Funds Awarded
Technical Assistance (Tier 2)	196	\$7.4M
Construction (Tier 3)	160	\$50.5M
<b>Total</b>	<b>356</b>	<b>\$57.9M</b>

## Modernization: Highway Division

### Intelligent Transportation Systems Program

The Highway Intelligent Transportation Systems (ITS) program supports the design and implementation of innovative and new communication equipment and information technology systems designed to provide real traffic information to MassDOT projects, residents and visitors throughout the Commonwealth.

#### Program Plan & Guidance

N/A

#### Project Selection

MassDOT ITS Strategic Plan & stakeholder input from MassDOT HQ, Districts, MPO's, and State Police

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$17.7 million





## Modernization: Highway Division

### Intersection Improvements Program

This program supports safety at roadway intersections for all user locations through operational and geometric improvement projects.

#### Program Plan & Guidance

FHWA Highway Safety Improvement Program, statewide crash analysis, road safety audits

#### Project Selection

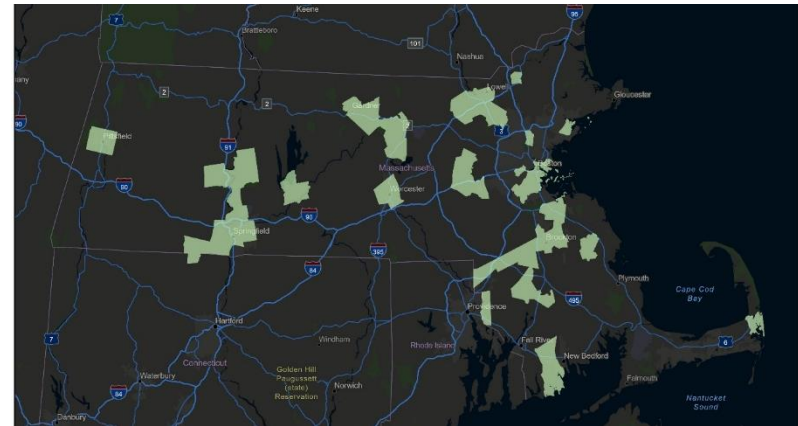
Projects drawn from HQ priorities

#### Performance Measure

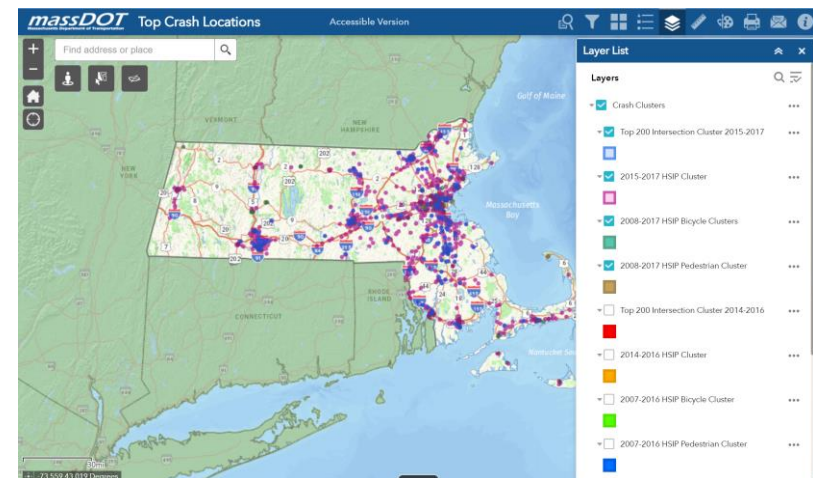
Mitigation of top 200 crash locations; reduction in rate fatalities or serious injuries

#### SFY 2022 Projected Spend

\$34.3 million



Intersection Improvement Project Locations since 2017



MassDOT High Crash Interactive Map



## Modernization: Highway Division

### Roadway Reconstruction Program

This program adapts existing roadway designs to contemporary needs. Nearly all of the projects in this program include improvements to bicycle and pedestrian user spaces.

#### Program Plan & Guidance

State Transportation Improvement Program, Long Range Transportation Plans

#### Project Selection

Projects scored by RPAs/MPOs & MassDOT (Project Selection Advisory Council recommended scoring elements)

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$217.2 million



## Modernization: Highway Division

### Local Bottleneck Reduction Program *new*

This program provides funding for municipalities to address congestion bottlenecks to improve traffic flow while addressing safety, bicycle, transit, and pedestrian needs with preference to projects near transit-oriented development and multifamily housing.

#### Program Plan & Guidance

N/A

#### Project Selection

TBD

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$2.5 million



## Modernization: MBTA

### Accessibility Program

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"). Investments will help ensure the vast majority of customers can use the MBTA.

#### Program Plan & Guidance

Plan for accessible Transit Infrastructure (PATI), MBTA Transit Asset Management Plan (TAM)

#### Project Selection

Projects prioritize to meet MBTA Transit Asset Management Plan (TAM) goals

#### Performance Measure

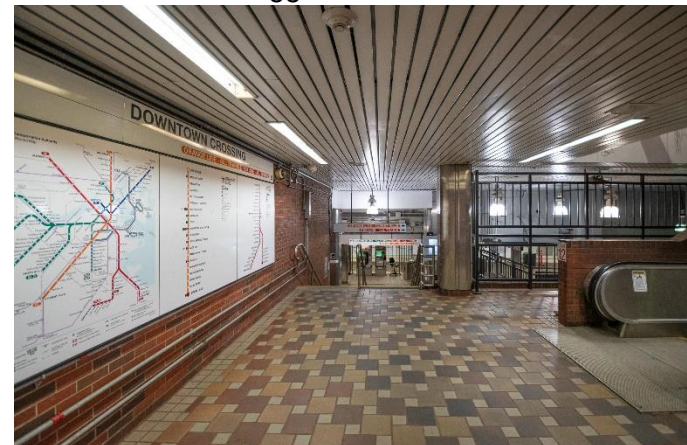
PATI implementation; increased number of accessible stations

#### SFY 2022 Projected Spend

\$67.5 million



New Platform at Ruggles Commuter Rail Station



New Accessible Transfer Elevators at Downtown Crossing (2) and Park Street (1)



## Modernization: MBTA

### Bus Transformation Program

This program aims to support a range of investments that strive to achieve better, faster, lower-emission bus service that is more aligned with where riders live, work and travel

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM), Focus40

#### Project Selection

Project scoring and prioritization

#### Performance Measure

TBD

#### SFY 2022 Projected Spend

\$60.6 million



Columbus Avenue Bus Lane Platform January 2021



Columbus Avenue Rendering



## Modernization: MBTA

### Commuter Rail Safety and Resiliency Program

This program includes projects that improve the safety and resiliency of the Commuter Rail network, including implementation of Positive Train Control (PTC), Automatic Train Control (ATC) and related investments.

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM), Safety Management System (SMS)

#### Project Selection

Project scoring and prioritization

#### Performance Measure

PTC/ATC project milestones

#### SFY 2022 Projected Spend

\$209.2 million



LED signal light installation as part of PTC upgrades



PTC signal upgrades on the Fitchburg Commuter Rail Line

## Modernization: MBTA

### Fare Transformation Program

The Fare Transformation program will implement a new reliable and convenient fare payment and collection system, integrated across all modes, to replace CharlieCards/Tickets and their supporting hardware and software.

#### Program Plan & Guidance

Focus40

#### Project Selection

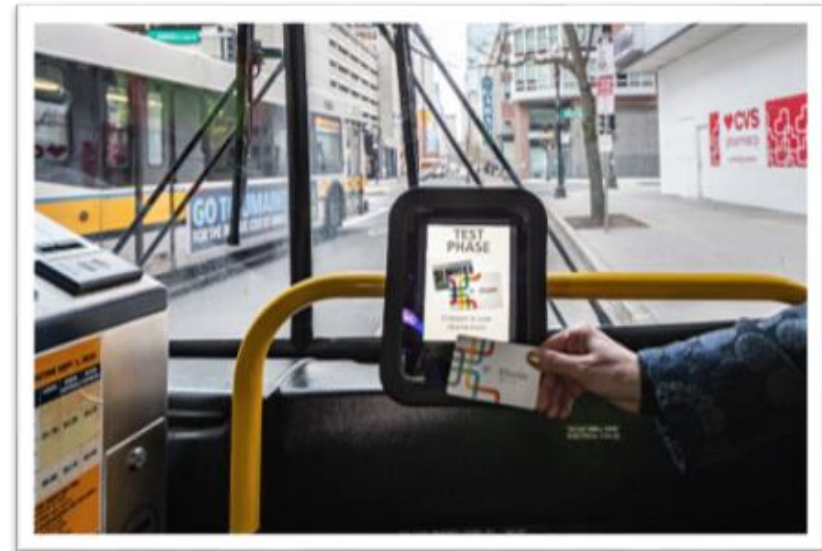
Project scoring and prioritization

#### Performance Measure

Fare Transformation project milestones

#### SFY 2022 Projected Spend

\$72.4 million



## Modernization: MBTA

### Green Line Transformation Program

Green Line Transformation (GLT) improves the quality of service on the Green Line through fleet modernization and infrastructure/facilities upgrades, as well as improved capacity, accessibility and state-of-the-art technology. GLT is a multi-phase, multi-faceted effort to make the Green Line more reliable, robust, and resilient.

#### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM), Focus40

#### Project Selection

Project scoring and prioritization

#### Performance Measure

Capacity, accessibility, resiliency

#### SFY 2022 Projected Spend

\$230.1 million



E Branch 28-Day Closure, South Huntington Section



D Branch Track & Signal Work, Reservoir Yard



## Modernization: MBTA

### Commuter Rail Transformation Program

This program incorporates options for improving service on the Commuter Rail, which are the first steps identified in a larger Commuter Rail transformation as outlined in Rail Vision.

#### Program Plan & Guidance

Rail Vision

#### Project Selection

Project scoring and prioritization

#### Performance Measure

TBD

#### SFY 2022 Projected Spend

\$16.0 million



North Station Track and signal installation of 2-way conduits



## Modernization: MBTA

### Red/Orange Line Transformation Program\*

The Red Line and Orange Line Improvements program includes the set of vehicle and infrastructure investments needed to fully modernize the fleet and achieve the service goal of three minute headways on the Red Line and three and a half minute headways on the Orange Line. These investments will help better meet the needs and connect residents to growing job centers.

\*Previously known as Red Line/Orange Line Infrastructure Improvement Program in 2021 CIP

### Program Plan & Guidance

MBTA Transit Asset Management Plan (TAM), Focus40

### Project Selection

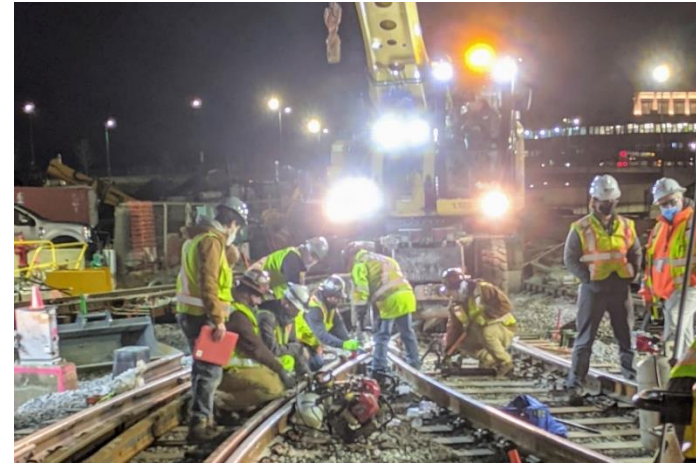
Project scoring and prioritization

### Performance Measure

Project milestones: three minute headways on the Red Line; four minute headways on the Orange Line

### SFY 2022 Projected Spend

\$353.1 million



Orange Line / Tracks 15-21 / Wellington Yard



Red Line / Davis Square / Third Rail

## Modernization: MBTA

### Risk Management & Mitigation Program

This program implements risk Management Initiatives as well as proactive efforts to improve workplace safety and system security.

#### Program Plan & Guidance

Safety Management System (SMS), Focus40

#### Project Selection

Project scoring and prioritization

#### Performance Measure

OSHA implementation and SMS implementation

#### SFY 2022 Projected Spend

\$33.6 million

## Modernization: MBTA

### Technology and Innovation Program

This program includes investments in technology and innovations that enhance productivity, modernize the system and improve the quality of MBTA services

#### Program Plan & Guidance

Focus40

#### Project Selection

Project scoring and prioritization

#### Performance Measure

TBD

#### SFY 2022 Project Spend

\$29.4 million

## Modernization: Rail & Transit Division

### Rail Facility Modernization Program

This program repairs or replaces rail facilities, specifically rail yards and stations, to upgrade them to current industry standards or otherwise maintains or improve the facility's utility. Facility modernization investments enhance the rail system's capacity and reliability and improve the state's economic competitiveness.

#### Program Plan & Guidance

State Rail and Freight Plans

#### Project Selection

Prioritization of projects in this program will reflect transportation or other public benefits (including economic development) associated with the improvement and related operational outcomes, facility condition reports, type of operations and risks / opportunities, contractual or regulatory requirements, and consistency with the State Rail Plan.

#### Performance Measure

Improvement to facility capacity and/or rail services and operations

#### SFY 2022 Projected Spend

\$0.05 million



East Deerfield Engine House



## Modernization: Rail & Transit Division

### Industrial Rail Access Program

This program makes investments in private sector rail lines to leverage private investment that will increase freight rail usage or modernize an active line to increase the utility to customers.

#### Program Plan & Guidance

N/A

#### Project Selection

Grant project selection criteria

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$3.0 million



Old Boston Road Recycling

## Modernization: Rail & Transit Division

### Rail Track and ROW Modernization Program

This program repairs or replaces assets within the rail right-of-way (typically ties, rail, ballast, subgrade, culverts, switches, etc.) to an increased standard, to improve track class or capacity (i.e., increasing weight capacity to 286,000 lbs. ("286K"); double-stack clearance; installation of continuous welded rail; etc.) to meet current industry standards or otherwise achieve an improved condition with associated operational results.

#### Program Plan & Guidance

State Rail Plan

#### Project Selection

Prioritization of projects in this program will reflect operational and economic opportunities, most recent inspections, type of operation (e.g., passenger, hazardous cargo, heavier / standard car weights), contractual or regulatory requirements, and consistency with the State Rail Plan or other emergency policy goals.

#### Performance Measure

Condition improvements; service improvements; weight capacity

#### SFY 2022 Projected Spend

\$23.0 million



Berkshire Line

## Modernization: Rail & Transit Division

### RTA Facility and System Modernization Program

This program improves or modernizes or technologically upgrades existing RTA facilities, systems, or equipment including automated fare collection and electrification of the bus fleet.

#### Program Plan & Guidance

Comprehensive Regional Transit Plan (CRTP) and RTA-conducted facility-specific studies

#### Project Selection

Project evaluation and prioritization is based on the RTA individual asset management plans and replacement schedules

#### Performance Measure

Age and facility condition

#### SFY 2022 Projected Spend

\$14.1 million



## Modernization: Rail & Transit Division

### RTA Fleet Upgrades Program

This program allows for RTA fleet growth through investments to meet services needs or expansion and achieve asset management targets in the RTAs TAM plans.

#### Program Plan & Guidance

Comprehensive Regional Transit Plan (CRTP) and RTA-conducted facility-specific studies and Transit Asset Management Plans (TAMs)

#### Project Selection

Division specific projects or Enterprise initiatives; workforce productivity

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$0.5 million



## Modernization: Rail & Transit Division

### RTA Replacement Facilities Program

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

#### Program Plan & Guidance

Comprehensive Regional Transit Plan (CRTP) and RTA-conducted facility-specific studies

#### Project Selection

Division specific projects or Enterprise initiatives; workforce productivity

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$4.7 million



## Modernization: Registry of Motor Vehicles

### ATLAS Program

This program improves RMV service delivery options. The program funded the replacement of the 30-year old+ ALARS system with a new state of the art system that can handle a variety of transactions, customer services needs and support the issuance of federally-required Real IDs (for travel). This program was instrumental in improving business process efficiency through greater efficiencies and accountability for process and tracking transactions and license/registration data.



### Program Plan & Guidance

N/A

### Project Selection

Division specific projects or Enterprise initiatives; workforce productivity

### Performance Measure

Project specific milestones

### SFY 2022 Projected Spend

\$7.0 million

## Modernization: Registry of Motor Vehicles

### Customer Service Modernization Program

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

#### Program Plan & Guidance

2020 Tracker

#### Project Selection

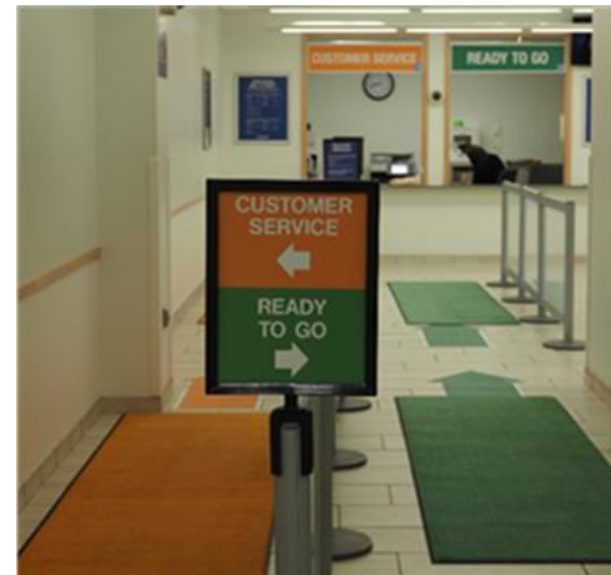
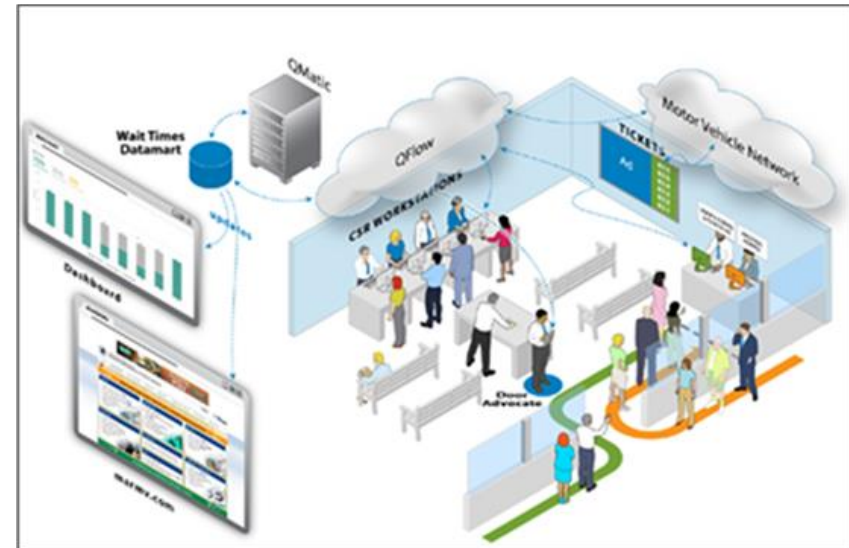
N/A

#### Performance Measure

Contact Center Wait Time (average speed of answer)

#### SFY 2022 Projected Spend

\$0.8 million



## Modernization: Registry of Motor Vehicles

### Alternative Service Channels Program

This program funds customer service improvements through installation of self-service kiosks and third-party service channels including AAA locations. This program is necessary to improve customer experience.

### Program Plan & Guidance

2020 Tracker

### Project Selection

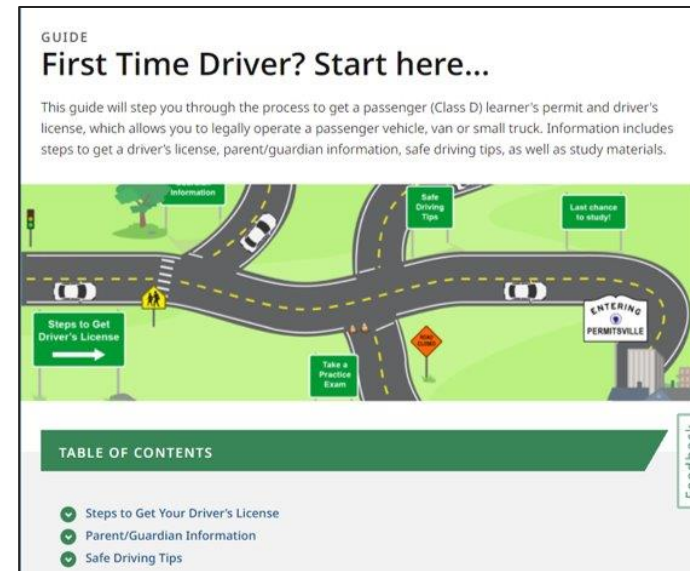
N/A

### Performance Measure

% of system-wide licenses & registrations done online

### SFY 2022 Projected Spend

\$0.5 million



What would you like to do?

#### myRMV Online Service Center

Make or Cancel a Reservation	Access My Profile	Business Services
Professional Licenses	Renew My Registration	Renew My Driver's License

<p><b>Driver Licensing and Permits</b> Apply for permit, renew or replace a license, or select one of our many CDL options here.</p> <ul style="list-style-type: none"> <li>&gt; Apply for a Learner's Permit</li> <li>&gt; Renew My Driver's License</li> <li>&gt; Replace My Driver's License</li> <li>&gt; Replace My Learner's Permit</li> <li>&gt; Transfer Out Of State License</li> <li>&gt; Self-Certify a Commercial License</li> <li>&gt; Add An Endorsement To My CDL</li> <li>&gt; Downgrade To Passenger License</li> </ul>	<p><b>Massachusetts IDs</b> The RMV issues Mass ID cards to non-drivers who are residents of Massachusetts.</p> <ul style="list-style-type: none"> <li>&gt; Apply for a Real ID</li> <li>&gt; Apply for a Mass ID</li> <li>&gt; Renew My Mass ID</li> <li>&gt; Replace My Mass ID</li> <li>&gt; Apply for a Liquor ID</li> <li>&gt; Replace My Liquor ID</li> </ul>	<p><b>Registration</b> All motor vehicles or trailers must maintain a valid registration. Vehicle registrations must be renewed every 1 or 2 years depending on the plate type.</p> <ul style="list-style-type: none"> <li>&gt; Renew My Registration</li> <li>&gt; Title and Register My Vehicle</li> <li>&gt; Replace My Registration</li> <li>&gt; Cancel My Registration</li> <li>&gt; Print My Registration</li> <li>&gt; Check Status of a Registration</li> <li>&gt; Registration Drop Off</li> </ul>
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## Modernization: Office of Secretary

### Transit Infrastructure Partnership Program

This program provides funding for municipalities through grants and/or partnerships for investment in transit-supportive infrastructure. The funds will support infrastructure investments 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 the RTAs

#### Program Plan & Guidance

TBD

#### Project Selection

N/A

#### Performance Measure

TBD

#### SFY 2022 Projected Spend

\$5.0 million

## Expansion: Highway Division

### Capacity Program

This program adds new connections or expands the existing transportation network. Examples include the provision of additional lanes, new highway connections, or new roadways.

#### Program Plan & Guidance

State Transportation Improvement Program, Long Range Transportation Plan

#### Project Selection

Projects scored by RPAs/MPOs & MassDOT (Project Selection Advisory Council recommended scoring elements)

#### Performance Measure

N/A

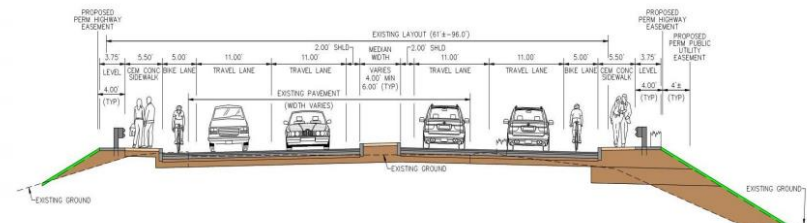
#### SFY 2022 Projected Spend

\$90.6 million



Route 18 Weymouth

#### Middlesex Turnpike Typical Section



## Expansion: Highway Division

### Shared Use Paths / Bicycle and Pedestrian Program

This program utilizes federal funds for the construction of new shared use paths (also known as multi-use trails) to expand and connect the Commonwealth's network of paths and support active transportation, recreation, and reduce dependency on driving. State funds have been recently introduced to the program to fund bicycle and pedestrian improvements on state owned roads.

#### Program Plan & Guidance

Massachusetts Statewide Bicycle and Pedestrian Plans;  
MassTrails – Inter-Agency Trails Team

#### Project Selection

Projects scored by RPAs/MPOs & MassDOT (Project Selection Advisory Council recommended scoring elements)

#### Performance Measure

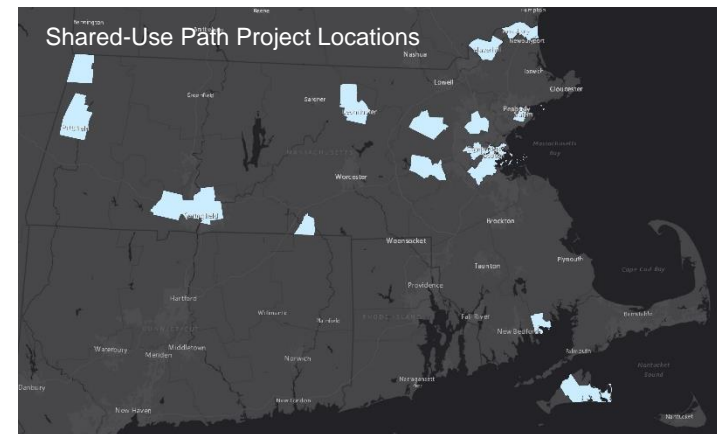
N/A

#### SFY 2022 Projected Spend

\$36.2 million



Constructing future crossing of Bruce Freeman rail trail over Route 2 in Concord, MA



## Expansion: Secretary/Highway Division

### Bicycle and Pedestrian Modal Implementation Program

This program funds projects that help make it safer, more comfortable, and convenient for people to walk and bike for everyday short trips by expanding and connecting facilities, improving access to transit by foot and bike, and addressing barriers that discourage people from choosing to walk and bike as identified in the 2019 Statewide Pedestrian and Bicycle Plans.

#### Program Plan & Guidance

Massachusetts Statewide Bicycle and Pedestrian Plans

#### Project Selection

Projects that fill in missing gaps in infrastructure or access to transit/walking/biking

#### Performance Measure

Fatality and serious injury rates, existence of infrastructure and facilities; facility condition; access to infrastructure; activity levels

#### SFY 2022 Projected Spend

\$10.0 million



Illustrative example: high comfort separate bike lane and intersection



Site of future new sidewalks to close gap in network and address crash locations



Addition of and upgrades to bike parking at MBTA transit stops



## Expansion: Secretary / Highway Division

### Shared Streets and Spaces Program *new*

This program provides \$5,000 to \$500,000 grants for cities and towns to quickly launch or expand improvements to sidewalks, curbs, streets, on-street and off-street parking in support of public health, safe mobility, and renewed commerce in their communities.

#### Program Plan & Guidance

N/A

#### Project Selection

Municipalities submit application; MassDOT confirms eligibility and awards grants via competitive selection process

#### Performance Measure

N/A

#### SFY 2022 Projected Spend

\$4.0 million



## Expansion: MBTA

### Green Line Extension Program

The Green Line Extension (GLX) program includes the vehicles, stations and infrastructure to extend the Green Line from a relocated Lechmere Station in East Cambridge to Union Square in Somerville and College Avenue in Medford. The project's six new stations will put 80 percent of all Somerville residents within walking distance of rapid transit.

#### Program Plan & Guidance

Focus40

#### Project Selection

N/A

#### Performance Measure

GLX Project Milestones

#### SFY 2022 Projected Spend

\$302.5 million



Final steel structure for GLX viaduct being installed (Oct. 2020)



Project's Multi-Purpose Machine delivering railbed material to the narrow corridor (Jan. 2020)

## **Expansion: MBTA**

### **Expansion Projects\***

This program makes targeted expansions in order to improve access to transit and supports planning and design for expansion projects identified as “Next Priorities” within Focus40.

\*Includes Expansion Project Development which was a separate program in the 2021 CIP

### **Program Plan & Guidance**

Focus40

### **Project Selection**

Project scoring and prioritization

### **Performance Measure**

Project Milestones

### **SFY 2022 Projected Spend**

\$15.4 million

## Expansion: MBTA

### South Coast Rail Program

The South Coast Rail (SCR) program will restore commuter rail service between Boston and southeastern Massachusetts.

#### Program Plan & Guidance

Focus40

#### Project Selection

N/A

#### Performance Measure

SCR Project Milestones

#### SFY 2022 Projected Spend

\$293.5 million



Fall River Secondary (Contract K78CN03)



New Culvert in Freetown, MA



## Expansion: Rail & Transit Division

### Rail Track and ROW Expansion Program

This program repairs or replaces assets within the rail right of way (typically ties, rail, ballast, switches, etc.) or constructs new assets (line extensions, etc.) to expand existing rail services, including the addition of new or expansion of existing passenger rail or freight rail service. Program provides initial funding for project development efforts (including planning studies and/or initial pilots) to support future passenger rail service.

#### Program Plan & Guidance

State Rail Plan, MassDOT Plans and Feasibility Studies (i.e. East West Rail Feasibility Study)

#### Project Selection

Prioritization of projects in the program will reflect economic or other public benefits associated with the new or expanded service,, consistency with the State Rail Plan or State Freight Plan, and any contractual or regulatory requirements for action.

Performance Measure

Ridership, freight capacity loading

#### SFY 2022 Projected Spend

\$1.15 million



Hyannis Yard on the Cape Main Line

## Expansion: Rail & Transit Division

### Rail Vehicles Expansion Program

This program acquires, repairs or replaces rail equipment (locomotives, coaches, ballast cars, light duty vehicles, etc.) to expand existing or support new rail services, including the addition of new or expanded passenger rail or freight rail service.

#### Program Plan & Guidance

State Rail Plan, MassDOT Plans and Feasibility Studies (i.e. East West Rail Feasibility Study)

#### Project Selection

Prioritization of projects in the program will reflect economic or other benefits associated with the use of the new or improved vehicles in expanded service, consistency with the State Rail Plan, and any contractual or regulatory requirements for action.

Performance Measure

N/A

#### SFY 2022 Projected Spend

\$1.5 million