



# Commonwealth of Massachusetts

An Act Relative to Massachusetts's Transportation  
Resources and Climate (MassTRAC)

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April 20, 2022

# Agenda

- Overview
- Authorization Request and assumptions
- Outside sections
- Division Slides
  - Highway
  - Rail and Transit
  - Aeronautics
  - MBTA

## Overview – Transforming our Transformation System and our Environmental Infrastructure

- An Act Relative to Massachusetts's Transportation Resources and Climate (MassTRAC) An Act Relative to Massachusetts's Transportation Resources and Climate (MassTRAC) An Act Relative to Massachusetts's Transportation Resource and Climate (MassTRAC) authorizes \$9.707 billion to advance and support significant investments in the Commonwealth's roads, bridges, railways, transit agencies and environmental infrastructure with the enactment of the Bipartisan Infrastructure Law (BIL)
- MassTRAC will allow MassDOT, the MBTA, and the Executive Office of Energy and Environmental Affairs to continue work supported by the recent transportation and environmental bond bills
- The additional bond authorization is needed to ensure Massachusetts can fully utilize the historic increase in federal formula available to Massachusetts and aggressively compete for the federal discretionary grant funds authorized under BIL
  - Current transportation bond bill authorization is only anticipated to cover programmed capital investments (for highway) through December 2023
  - The 2021 Transportation bond bill did not include any authorization of the magnitude that would be necessary if Massachusetts is as successful as anticipated in securing discretionary grant funding that is available
- Additional authorization is also needed regardless of BIL to support our ongoing capital program through 2026
- The \$9.707 billion bond bill is composed of:
  - \$2.9 billion in authorization related to the increase in federal formula funding from the BIL
  - \$3.55 billion to support federal discretionary and competitive grants from the BIL
  - \$3.3 billion to support MassDOT and MBTA capital programs through 2026

# Highlights of MassTRAC

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□ **\$9.707 billion** to support our programs for Highway, Transit, and Energy and Environmental Affairs (EEA)

## **\$2.85 billion in BIL-Related Authorization for Formula Funding**

- Supports the increased **federal formula funding** in BIL for MassDOT, MBTA, and EEA (include the state match)

## **\$3.55 billion in BIL - Related Authorization for Discretionary Grants**

- Supports the pursuit of **federal discretionary and competitive grant** program funding for MassDOT, MBTA and EEA
  - \$1.75 billion in federal aid authorization
  - \$1.8 billion in state match authorization

## **\$3.3 billion** in Non-BIL Support Authorization

- Provides authorization to cover our programmed capital investments through 2026 (aligns with term of BIL funding) for MassDOT and MBTA
  - \$439 million in federal aid
  - \$2.87 billion in state authorization
- Supports strategic investments in our communities (\$55 million) through Complete Streets, Municipal Pavement , and Shared Streets and Spaces
- Provides \$400 million in state authorization to continue investments to modernize the MBTA
- Provides the state authorization (\$830 million) to support the procurement of the next generation of Green Line Type 10 vehicles to replace the existing aging fleet and support increased reliability, safety and accessibility

## Highlights of MassTRAC

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□ **\$9.707 billion** to support our programs for Highway, Transit, and Energy and Environmental Affairs (EEA)

**\$2.85 billion in BIL-Related Authorization for Formula Funding**

- \$1.86 billion in federal Aid authorization
- \$0.9 billion in state match authorization

**\$3.55 billion in BIL - Related Authorization for Discretionary Grants**

- \$1.75 billion in federal aid authorization
- \$1.8 billion in state match authorization

**\$3.3 billion in Non-BIL Support Authorization**

- \$439 million in federal aid
- \$2.87 billion in state bond authorization

□ Approximately two thirds of the requested MassTRAC authorization supports BIL funding

□ One third supports our core programmed capital investments (non-BIL support)

□ **\$4.1 billion** of the requested authorization is **federal aid**

□ **\$5.6 billion** is **state fund authorization** as match for the federal aid and non-BIL funding support

# Highlights of MassTRAC – BIL-Related Authorizations

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- **\$6.4 billion** to ensure we can receive the full benefit of BIL

## **BIL Related Authorization – Formula Funding:**

- **\$2.8 billion** in authorization related to the increased **federal formula funding** in BIL including:
  - \$2.5 billion for Highway federal aid and non-federal aid BIL support
  - \$27.1 million for the MassDOT Aeronautics Division to support and leverage increased Federal Aviation Administration grants to our public use airports
  - \$64.9 million to support increased federal funding for our Regional Transit Authorities
  - \$145 million for state match funds required for the increased federal funding for the MBTA
  - \$150 million to support EEA's Clean Transportation program

## **BIL- Related Authorization – Discretionary Grants:**

- **\$3.55 billion** to support pursuit of **federal discretionary and competitive grant** program funding (inclusive of state match funds)
- MassDOT and the MBTA must have sufficient authorization to cover 100% of the cost of a project at the time it is advertised
- Commonwealth and/or the relevant agency is reimbursed for the federally eligible project costs by the appropriate federal agency after costs are incurred

# Highlights of MassTRAC – Non-BIL Authorizations to support investments through 2026

- **\$3.3 billion to support the MassDOT and MBTA capital programs through 2026**
  - **\$1.79 billion (federal aid and non-federal aid)** for MassDOT Aeronautics, Highway, Rail & Transit, and Office of Transportation Planning to support our capital program through 2026
  - **\$150.8 million in new federal aid authorization for Highway to utilize the funding provided under the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA)**
  - **\$85 million** authorization to improve the condition of our **non-interstate pavement** on the National Highway System
  - **\$55 million** in additional authorization to **support investments in our cities and towns** to promote bicycle and pedestrian safety, improve municipal transportation asset conditions, and invigorate our downtown community public spaces through several successful grant programs: Complete Streets, Small Municipal Bridge, Municipal Pavement, and Shared Streets and Spaces
  - **\$400 million** for the **MBTA** to continue to invest in the **modernization** of its infrastructure and vehicles
  - **\$830 million** to support the procurement of a new fleet of MBTA Green Line Type 10 vehicles, and related infrastructure, which will replace the existing aging fleet and support increased reliability, safety and accessibility

## MassTRAC Bill – Climate Priorities

- **H.4561 includes items for a total of \$200 million in bond authorizations:**
  - \$50 million for state matching monies
  - \$150 million for core programs
- **Through the Clean Energy and Climate Plan (CECP) process, EEA identified several clean transportation and equity high priorities that align with new programs created in the Bipartisan Infrastructure Law, including:**
  - **Vehicles for Hire** – Provide support for vehicles for hire. Taxis and vehicles used in carsharing or ride-hailing networks are high-mileage, high visibility vehicles driven by relatively low-income drivers
  - **Delivery Trucks** – Last mile delivery services are the fastest growing source of emissions on our roads and represent an important opportunity to reduce diesel emissions in residential and environmental justice neighborhoods. This program would expand the existing fleet advisory services program, which was launched with \$1 million in MassCEC funding last year.
  - **Low-Moderate Income EV Affordability Program** – Further funding would assist help low- and moderate-income residents to purchase an EV through infrastructure support, group purchases, and incentives
  - **Community Grants** – Continue to provide grants to community organizations to further promote local clean transportation solutions through the Accelerating Clean Transportation for All program at MassCEC
  - **E-Bikes** – Create new programs through employers and community orgs to increase use of e-bikes and transportation opportunities.
  - **Infrastructure** – Provide support for electric vehicle infrastructure programs, such as EVIP
- **BIL also includes several competitive programs that will require the state to provide matching funds, including:**
  - Public Alternative Fueling Stations: \$2.5 billion nationwide
    - Funding is in addition to the \$63 million the state is receiving in *National Electric Vehicle Charging Formula Program*
  - Zero-Emission School Buses: \$2.5 billion and potentially up to \$5 billion, nationwide



## Highlights of MassTRAC – Outside Sections

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- MassTRAC also requests authorization for new tools to allow MassDOT and the MBTA to work more efficiently and with greater flexibility
- Authorization for MassDOT and the MBTA to use certain project procurement and delivery tools that could speed the implementation of BIL-funded projects as well as support regular project delivery efforts
  - **A + B Procurement:** Procurement method procedures to be developed in consultation with Inspector General and Industry stakeholders to allow MassDOT to award projects based not only project cost but also the length of time to complete a project
  - **Private Development Mitigation/Transit Oriented Development:** authorization would allow MassDOT and the MBTA to enter into development agreements that include transportation and other public benefits without having to separately bid for those elements
- Authorization to allow use of blue flashing lights as a safety measure at construction sites
- Authorization to allow former MassDOT employees who are not Professional Engineers to serve as an Owner's Representative (which they are authorized to do when they are an employee)

## Overview of Bipartisan Infrastructure Law (BIL) for Massachusetts

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- The enactment and funding of the Bipartisan Infrastructure Law (BIL) provides a historic opportunity for Massachusetts
  - Funding authorized under BIL increases our federal highway formula funds by over 48% over FY22-FY26 (an increase of approximately \$1.8 billion over the previous federal surface transportation funding (FAST Act))
  - BIL also provides a ~30% increase in federal formula funding for transit investments as compared to the FAST Act
  - In addition, Massachusetts can also compete for over \$110 billion in discretionary federal grant program funds covering all modes
  - The BIL funding provided will be used to repair and rebuild our roads and bridges and improve public transportation with a focus on climate change mitigation, resiliency, equity, and safety for all users, including bicycle and pedestrians

# BIL Discretionary Programs/Grants - \$110B+ in funding in “grants”

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## Background:

- The Bipartisan Infrastructure Law (BIL) provides for a large increase in discretionary funding
- BIL provides for over **\$110B in competitive discretionary grants to be over seen by USDOT – these funds are to be distributed over 5 years and are eligible to governmental agencies in all 50 states, US territories and tribal lands**
- There are no earmarks in this bill, so all states will be competing for funds for projects beyond those formula/state of good repair

## What we are anticipating:

- The BIL provides a large amount of funding for existing grants (RAISE, INFRA, Federal State Partnership) and for new grants.
- MassDOT is currently working on grants to take advantage of every funding opportunity

## State Considerations:

- These grants **will require a state match**. In the past, the larger the grant percentage/share of state participation, the more competitive the grant
- We still know little about the new grant programs; we will continue to follow guidelines as they develop

# How Highway Division Used Capital Funds in 2021

- ❑ **532 active maintenance and construction contracts** in calendar year 2021
- ❑ Transportation Improvements made in **206 Cities & Towns**
- ❑ **Major projects** in construction/completed:
  - Chelsea: Route 1 Viaduct
  - Statewide exit re-numbering
  - Haverhill: I-495 over the Merrimack River
  - Southborough-Westborough: Acceler-8 project repaired/replaced 8 bridges along the I-90
  - Montgomery-Russell: I-90 bridge preservation project over Westfield River, Rt. 20 & CSX tracks
  - Tobin Bridge Bus Pilot and I-93 Woburn-Somerville bus on shoulder pilot



## Upcoming Highway Division Major Projects Supported by MassTRAC

- Sumner Tunnel Rehabilitation - \$156.6 million
- I-90 / I-495 Interchange Redesign - \$400 million (est.)
- Route 79 / Davol Street – Fall River - \$115 million
- Route 20 – Charlton/Oxford - \$71.1 million



Route 20 – Charlton/Oxford

Sumner Tunnel



Brightman Street  
Route 79/Davol Street

## Highway Division's Implementation Plans for BIL

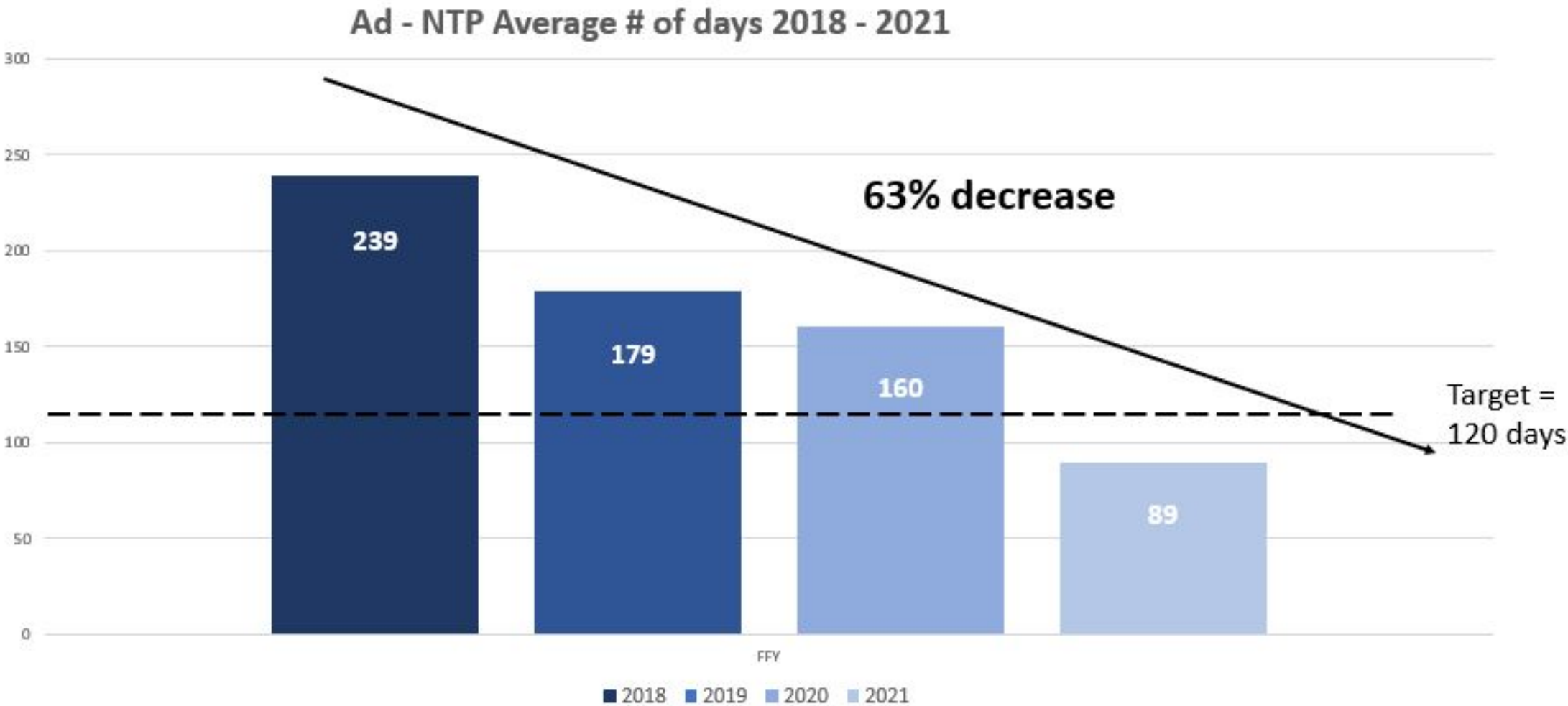
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- Intensive Hiring Effort Underway
- Highway Division will hire ~200 net new FTEs in FY23
- Streamlining efforts for construction procurement were completed in Spring 2021
  - Current streamlining efforts are focused on expediting project delivery including:
    - Alternative Project Delivery Methods
    - Work-zone Management
    - Risk Management
    - Bridge



# Highway Division Project Delivery Improvements

## Streamlining Process from Advertisement to Notice to Proceed (2019-2020)



## How Aeronautics Division Used Capital Funds in FY 2021

- Awarded over 85 grants to airports in fiscal year 2021
- Transportation Improvements made at 22 airports across the Commonwealth
- Developed the capability to utilize drones for emergency management exercise and incident response, infrastructure inspections, mapping and surveying, rail and snow removal inspections, airport inspections and accident investigations
- Major projects in construction/completed:
  - Chatham: Reconstruct Taxiway A
  - Lawrence: Security Camera and Access Control Upgrades
  - Nantucket: Security Camera and Access Control Upgrades
  - New Bedford: Reconstruction Apron Phase II
  - Orange: Reconstruction Runway 1-19
  - Taunton: Construct New Airport Administration Building
  - Westfield: Reconstruct Runway 15-33
  - Westover: Rehabilitate Hangar 13



Hangar 13 Rehabilitation - Westover



Taxiway Sierra Apron Project – Westfield



## Upcoming Aeronautics Division Projects Supported by MassTRAC

- ❑ New Bedford Aircraft Parking Apron Reconstruction (Phase III) - \$6.25M
- ❑ Norwood Runway 10-28 Reconstruction - \$4.6M
- ❑ Marshfield Main Terminal Apron Reconstruction - \$5.59M
- ❑ Martha's Vineyard Terminal Planning & Security Upgrades - \$3.90M
- ❑ Nantucket Aircraft Parking Apron & Access Road Reconstruction - \$7.80M
- ❑ Orange Taxiway Delta Extension to Runway 01 - \$2.38M
- ❑ Provincetown Runway Reconstruction - \$7.25M
- ❑ Joint Base Cape Cod (JBCC) Study & Pilot Program - \$2M
- ❑ Complete a Geospatial Airspace Analysis of Airports - \$1M
- ❑ Conduct a 3-phase Power Study on Aircraft Ramp Electrification to support Nextgen Advanced Air Mobility (AAM) Electric Aircraft - \$330K



New Bedford Aircraft Parking Apron



MBTA Drone Tunnel Inspection



Quabbin Reservoir Drone Inspection

## How Rail & Transit Division Used Capital Funds in FY 2021

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- Division invested more than \$238 million (combined) in subsidies and grants to support equipment acquisition, construction projects, and maintenance throughout the state in SFY21
- Division signed new Bilateral MOUs with each of the 15 RTAs establishing a baseline and targets in key areas (ridership, asset management, customer service, and financial performance, including farebox recovery ratio)
- Community Transit Grant Program (CTGP) awarded more than \$10 million through FY21
- Industrial Rail Access Program awarded almost \$3 million to railroads, shippers, and receivers to leverage private funding and increase freight rail usage in Massachusetts
- Passenger Rail: as follow up to East-West Passenger Rail Study completed in January 2021, MassDOT Rail developed a white paper on governance which recommends creating a Western Massachusetts Intercity Rail Authority to oversee, develop, and implement passenger rail services and identified Amtrak as the appropriate operator of any new intercity service

# Upcoming Rail & Transit Capital Projects Supported by MassTRAC

## MassDOT Transit

- ❑ Purchase of new revenues vehicles (buses, vans, paratransit, etc.), support vehicles, equipment, ITS, and facility improvements for the 15 RTAs
- ❑ Upgrades and capital maintenance for existing vehicle fleets
- ❑ Upgrades to and capital maintenance for RTAs administrative and maintenance

## MassDOT Rail

- ❑ Investments to improve our state-owned infrastructure to accommodate 286,000 lb. loading capacity for freight
- ❑ Investments to bring the freight rail assets to a state of good repair including:
  - Replacing or repairing rail bridges, culverts, tracks, and grade crossings
  - Investments support prevention of derailments and speed restriction on freight movement
- ❑ Continue investments in track capital maintenance to maintain rail operations at FRA class of track standards for freight as well as passenger-served mainlines
  - Passenger tracks include the:
    - Knowledge Corridor which carries the Vermonter and the Valley Flyer
    - Cape Main for the Cape Flyer
    - Framingham Secondary for MBTA Commuter service
- ❑ Pursue federal grant opportunities to support track reconfiguration at Springfield Union station to reduce passenger & freight conflict
- ❑ Advance Positive Train Control on the Knowledge Corridor

# How the MBTA Used Capital Funds in FY 2021

## Major projects in construction/completed:

- ❑ Green Line Extension Union Square Branch opened on March 21 for passenger service.
- ❑ Green Line B Branch station consolidation, D Branch track and signal replacement, and E Branch track replacement
- ❑ Red and Orange Lines continued vehicle replacement, signal upgrades, infrastructure and facility improvements
- ❑ Bus lane construction, including center-running bus lane on Columbus Avenue in Boston
- ❑ New, fully accessible Chelsea Commuter Rail Station
- ❑ South Coast Rail under construction



Green Line's new Lechmere/Union Square Station opening



Center-running bus lane on Columbus Avenue in Boston



# Upcoming MBTA Capital Projects Supported by MassTRAC

Green Line Type 10 Light Rail Fleet Replacement and related infrastructure

State matching funds may support the following Federally funded projects:

- ☐ Procurement of Battery Electric Buses
- ☐ Green Line Train Protection
- ☐ Quincy Bus Facility
- ☐ Blue Line Harbor Tunnel Infrastructure Improvements
- ☐ Longfellow Approach
- ☐ Inspection and Rating of MBTA Systemwide Bridges (on-going costs to support program)



New Quincy Bus Facility



Track maintenance and improvements on the Blue Line