

# DRAFT 2022 Capital Investment Plan



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This format of the Capital Investment Plan provides a text-only alternative to the Story Map presentation available through <https://www.mass.gov/cip>. For the full version, please see the linked website.

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## Letter from Secretary Tesler



On behalf of the Massachusetts Department of Transportation (*MassDOT*) and the Massachusetts Bay Transportation Authority (*MBTA*), I am pleased to present this Capital Investment Plan (*CIP* or *Plan*) for 2022. Given the continued uncertainties and economic challenges facing the Commonwealth and our cities and towns as we address the lingering impacts of

COVID-19, this CIP is a “maintenance of effort” plan for 2022.

The uncertainties facing the transportation system are significant: the new norm for telework and return to work rules for the Commonwealth are not yet fully known, and how the transportation system addresses future demands will be assessed as we move forward; tolls and other transportation revenues continue to trend below pre-COVID levels and are difficult to project five years into the future. Federal surface transportation authorization (which expired September 30, 2020) was extended for one year, and the structure and funding for the future surface transportation authorization is not yet known; the full extent of and eligibility for additional infrastructure funding that will be available is also uncertain.

This Plan continues the framework laid out with the 2017–2021 CIP, which established a vision and process for the Commonwealth to plan investments in our transportation

system. The 2022 CIP reflects current realities while maintaining a continued focus on improving the reliability, safety, and resiliency of our transportation infrastructure. Our prior work establishing a system built on setting priorities for our system, developing programs to implement those priorities, and selecting projects that meet the goals of our programs will provide us a strong base for meeting the challenges of the last year and a half.

This Plan commits approximately \$4.0 billion in programmed transportation spending for our roads, rails, shared use paths, airports, buses, and bridges. Approximately 45% of the investments are focused on improving the reliability and resiliency of the existing core transportation system, with an additional 28% devoted to modernizing these systems to meet the demands of our citizens across the Commonwealth. The Plan incorporates transportation funding from a number of different sources, including federal, state, system-generated revenues, and private contributions. This allocation of funding is consistent with MassDOT’s and the MBTA’s asset management plans, our multi-modal planning efforts and with our capital priorities.

This Plan continues the Commonwealth’s commitment to complete Phase 1 of the South Coast Rail program—which will bring passenger rail to the South Coast—and to the Green Line Extension to Somerville and Medford.

When the state and federal funding picture becomes clearer, we will begin the process of developing a full five-year plan

that will be a reset of the capital plan and will provide a complete roadmap of proposed investments for five years.

Jamey Tesler  
Acting Secretary of Transportation and Chief Executive  
Officer  
Massachusetts Department of Transportation

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# Non-Discrimination Protections

## Federal Title VI Rights & Protections

The Massachusetts Department of Transportation (*MassDOT*) operates its programs, services, and activities in compliance with federal nondiscrimination laws including Title VI of the Civil Rights Act of 1964 (*Title VI*), the Civil Rights Restoration Act of 1987, and related statutes and regulations. Title VI prohibits discrimination in federally assisted programs and requires that no person in the United States of America shall, on the grounds of race, color, or national origin (including limited English proficiency), be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity receiving federal assistance. Related federal nondiscrimination laws administered by the Federal Highway Administration, the Federal Transit Administration, or both prohibit discrimination on the basis of age, sex, and disability. These protected categories are contemplated within MassDOT's Title VI Programs consistent with federal interpretation and administration. Additionally, MassDOT provides meaningful access to its programs, services, and activities to individuals with limited English proficiency, in compliance with US Department of Transportation policy and guidance on federal Executive Order 13166.

## State Nondiscrimination Protections

MassDOT complies with the Massachusetts Public Accommodation Law, M.G.L. c 272 §§ 92a, 98, 98a, prohibiting making any distinction, discrimination, or restriction in admission to or treatment in a place of public accommodation based on race, color, religious creed, national origin, sex, sexual orientation, disability, or ancestry. Likewise, MassDOT complies with the Governor's Executive Order 526, section 4 requiring all programs, activities, and services provided, performed, licensed, chartered, funded, regulated, or contracted for by the state shall be conducted without unlawful discrimination based on race, color, age, gender, ethnicity, sexual origination, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background.

## Complaint Filing

To file a complaint alleging a violation of Title VI or related federal nondiscrimination law, contact the Title VI Specialist within 180 days of the alleged discriminatory conduct at:

MassDOT, Title VI Specialist  
Office of Diversity and Civil Rights

10 Park Plaza  
Boston, MA 02118  
Phone: 857-368-8580 / TTY: 857-368-0603  
Email: MASSDOT.CivilRights@state.ma.us

To file a complaint alleging a violation of the state's Public Accommodation Law, contact the Massachusetts Commission Against Discrimination within 300 days of the alleged discriminatory conduct at:

Massachusetts Commission Against Discrimination  
(MCAD)  
One Ashburton Place, 6th Floor  
Boston, MA 02109  
Phone: 617-994-6000 / TTY: 617-994-6196

## ADA/504 Notice of Nondiscrimination

MassDOT does not discriminate on the basis of disability in admission to its programs, services, or activities; in access to them; in treatment of individuals with disabilities; or in any aspect of their operations. MassDOT also does not discriminate on the basis of disability in its hiring or employment practices.

This notice is provided as required by Title II of the Americans with Disabilities Act of 1990 (ADA) and Section 504 of the Rehabilitation Act of 1973. Questions, complaints, or requests for additional information regarding ADA and Section 504 may be forwarded to:

Office of Diversity and Civil Rights  
Massachusetts Department of Transportation

10 Park Plaza, 3rd floor  
Boston, MA 02116-3969  
Phone: 857-368-8580 / TTY: 857-368-0603 / Fax:  
857-368-0602  
Email: MASSDOT.CivilRights@state.ma.us  
Office hours: 9:00 am to 5:00 pm

This notice is available from the Office of Diversity and Civil Rights in large print, on audio tape, and in Braille upon request.

## Translation Availability

If this information is needed in another language, please contact the MassDOT Title VI Specialist at 857-368-8580.

Caso esta informação seja necessária em outro idioma, favor contar o Especialista em Título VI do MassDOT pelo telefone 857-368-8580.

Si necesita esta información en otro idioma, por favor contacte al especialista de MassDOT del Título VI al 857-368-8580.

如果需要使用其它语言了解信息，请联系马萨诸塞州交通部（MassDOT）《民权法案》第六章专员，电话 857-368-8580。

如果需要使用其它语言了解信息，請聯繫馬薩諸塞州交通部（MassDOT）《民權法案》第六章專員，電話 857-368-8580。

Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь со специалистом по Титулу VI Департамента Транспорта штата Массачусетс (MassDOT) по тел: 857-368-8580.

Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Espesyalis MassDOT Title VI la nan nimewo 857-368-8580.

Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Chuyên viên Luật VI của MassDOT theo số điện thoại 857-368-8580.

Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le spécialiste du Titre VI de MassDOT en composant le 857-368-8580.

Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare lo Specialista MassDOT del Titolo VI al numero 857-368-8580.

ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែពីភាសានេះ សូមទាក់ទងអ្នកឯកទេសលើជំពូកទី របស់ តាមរយៈលេខទូរស័ព្ទ 857-368-8580

الفقرة بأخصائي الاتصال يُرجى، أخرى بلغة المعلومات هذه إلى بحاجة كنت إن الفقرة بأخصائي الاتصال يُرجى، أخرى بلغة المعلومات هذه إلى بحاجة كنت إن الهاتف 857-368-8580 على السادسة

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# Glossary of Terms

## Americans with Disabilities Act of 1990 (ADA)

The ADA is a federal civil rights law mandating equity of opportunity for individuals with disabilities. The ADA prohibits discrimination in access to jobs, public accommodations, government services, public transportation, and telecommunications.

## Chapter 90

Chapter 90 is the Commonwealth's municipal grant program that provides funding to municipalities for roadway projects and other eligible work.

## Environmental Justice (EJ)

Established under Federal Executive Order 12898 and reflected in state policy, EJ policies require federal funding recipients to identify and address disproportionately high and adverse human health or environmental effects of programs, policies, and activities on minority populations and low-income populations.

## Executive Office for Administration and Finance (ANF)

ANF is the budget and planning office for the Commonwealth that administers state transportation capital funding in the form of bonds.

## Federal Transportation Partners

MassDOT's federal transportation partners on the CIP include the Federal Highway Administration (*FHWA*), Federal Transit Administration (*FTA*), Federal Railroad Administration (*FRA*), and Federal Aviation Administration (*FAA*).

## Focus40

Focus40 is the MBTA's 25-year strategic investment plan. Focus40 was released in March 2019 and provides the framework for the MBTA's long-term investment strategy.

## Fiscal Year (FY)

FY refers to a specific budgetary year. The United States federal fiscal year (*FFY*) begins on October 1 of the previous calendar year and ends on September 30. For example, the 2022 FFY is October 1, 2021 to September 30, 2022. The Massachusetts state fiscal year (*SFY*) begins on July 1 of the previous calendar year and ends on June 30. The 2022 SFY is July 1, 2021 to June 30, 2022.



### **Fixing America's Surface Transportation Act (FAST Act)**

The FAST Act (Pub. L. No. 114-94) was signed into federal law on December 4, 2015. The FAST Act authorized \$305 billion over fiscal years 2016 through 2020 for highway improvements, motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail improvements, and research, technology, and statistics programs. Authorization expired September 30, 2020 and was extended for one year until September 30, 2021. New surface transportation authorization is currently being formulated in Congress.

### **Massachusetts Bay Transportation Authority (MBTA or Authority)**

The MBTA provides rapid transit, bus transit, and commuter rail service to the Greater Boston region as well as commuter rail service to Worcester and Fitchburg. The agency is overseen by a five-member Fiscal and Management Control Board (*FMCB*).

### **Massachusetts Department of Transportation (MassDOT)**

MassDOT is made up of four divisions: Highway, Rail & Transit, Registry of Motor Vehicles (*RMV*), and Aeronautics, as well as the Office of the Secretary and Transportation Planning and Enterprise Services that support all the divisions. As the umbrella transportation agency for the

Commonwealth, MassDOT also oversees the MBTA. The agency has a Board of Directors, comprised of eleven members who are all appointed by the Governor with the Secretary of Transportation as Chair.

### **Metropolitan Planning Organization (MPO)**

An MPO is a regional transportation policy-making organization consisting of representatives from local government, regional planning agencies, regional transit operators, and state transportation agencies. Federal legislation passed in the early 1970s requires the formation of an MPO for any urbanized area with a population greater than 50,000. The Commonwealth of Massachusetts has 10 urbanized regions designated as MPOs and 3 rural regions known as Transportation Planning Organizations (TPOs) that function like MPOs.

### **Regional Planning Agency (RPA)**

An RPA serves as a forum for state and local officials to address issues of regional importance, including the development of comprehensive plans and recommendations in areas of population and employment, transportation, economic development, land use, regional growth, and the environment.

### Regional Transit Authority (RTA)

RTAs provide fixed route and paratransit service in communities across Massachusetts. There are 15 RTAs in Massachusetts in addition to the MBTA.

### Regional Transportation Plan (RTP)

The RTP is the policy and vision document of a regional MPO. This document results from regional and statewide collaboration to plan a region's transportation system. The document contains a financial plan or budget which guides and shapes the actions an MPO undertakes as they fulfill the region's visions and objectives. This document includes a 20-year vision for transportation in the region and is updated every four years by each MPO. It serves as an important source of data for the statewide CIP.

### State of Good Repair (SGR)

A state of good repair condition is achieved when an entity is managing an existing asset functionally, reliably, and safely within its expected life cycle to a predefined level of performance.

### State Transportation Improvement Program (STIP)

The STIP is a compilation of the thirteen regional Transportation Improvement Programs (TIPs) prepared

annually by the state's ten MPOs and three rural Transportation Planning Organizations (TPOs). It is a list of priority (federally funded) transportation projects (roadway and transit) organized by region and fiscal year.

### Title VI

Title VI of the Civil Rights Act of 1964 is a federal civil rights law which prohibits discrimination against members of the public on the basis of race, color, and national origin in programs and activities receiving financial assistance. Additional federal nondiscrimination categories are contemplated under MassDOT's Title VI Program, including age, sex, disability, and limited English proficiency (LEP).

### Transportation Improvement Program (TIP)

A TIP is a phased five-year program of federally funded capital investments that reflects the needs of the regional transportation system, prepared by each MPO in the Commonwealth on an annual basis. Under federal regulations, a TIP must be constrained to available funding, be consistent with the relevant long-range RTP, and include an annual element or list of projects to be advertised in the first year of the TIP. Like the STIP, the regional TIP has a roadway component and a transit component.

## Table of Acronyms

Acronym	Defined Term
<b>AAA</b>	American Automobile Association
<b>ABP</b>	Accelerated Bridge Program
<b>ADA</b>	American with Disabilities Act of 1990
<b>ALARS</b>	Automatic License and Renewal System
<b>ANF</b>	Executive Office of Administration and Finance
<b>APMS</b>	Airport Pavement Management System
<b>ATC</b>	Automatic Train Control
<b>BAT</b>	Brockton Regional Transit Authority
<b>BRTA</b>	Berkshire Regional Transit Authority
<b>BUILD grant</b>	Better Utilizing Investment to Leverage Development grant
<b>CARM</b>	Central Artery Project Repair and Maintenance Trust Fund
<b>CATA</b>	Cape Ann Regional Transit Authority
<b>CCRTA</b>	Cape Cod Regional Transit Authority
<b>CIP (or Plan)</b>	Capital Investment Plan
<b>CMAQ</b>	Congestion Mitigation Air Quality
<b>EJ</b>	Environmental Justice
<b>EOEEA</b>	Executive Office of Energy and Environmental Affairs
<b>EOTSS</b>	Executive Office of Technology Services and Security
<b>e-STIP</b>	electronic STIP
<b>FAA</b>	Federal Aviation Administration
<b>FAST Act</b>	Fixing America's Surface Transportation Act
<b>FFGA</b>	Full Funding Grant Agreement

<b>FFY</b>	Federal Fiscal Year
<b>FHWA</b>	Federal Highway Administration
<b>FMCB</b>	Fiscal Management and Control Board
<b>FRA</b>	Federal Rail Administration
<b>FRTA</b>	Franklin Regional Transit Authority
<b>FTA</b>	Federal Transit Administration
<b>FY</b>	Fiscal Year
<b>GANs</b>	Grant Anticipation Notes
<b>GATRA</b>	Greater Attleboro Regional Transit Authority
<b>GLT</b>	Green Line Transformation
<b>GLX</b>	Green Line Expansion
<b>GO</b>	General Obligation
<b>IRAP</b>	Industrial Rail Access Program
<b>LEP</b>	Limited English Proficiency
<b>LOS</b>	Level of Service
<b>LRTA</b>	Lowell Regional Transit Authority
<b>MAP</b>	Mobility Assistance Program
<b>MAP-21</b>	Moving Ahead for Progress in the 21 <sup>st</sup> Century
<b>MaPIT</b>	Massachusetts Project Intake Tool
<b>MART</b>	Montachusett Regional Transit Authority
<b>MassDOT</b>	Massachusetts Department of Transportation
<b>MBTA</b>	Massachusetts Bay Transportation Authority
<b>MEPA</b>	Massachusetts Environmental Policy Act
<b>MHS</b>	Metropolitan Highway System
<b>MPO</b>	Metropolitan Planning Organization

<b>MVRTA</b>	Merrimack Valley Regional Transit Authority
<b>MWRTA</b>	Metro West Regional Transit Authority
<b>NHS</b>	National Highway System
<b>NRTA</b>	Nantucket Regional Transit Authority
<b>NTP</b>	Notice to Proceed
<b>ODCR</b>	Office of Diversity and Civil Rights
<b>OTP</b>	Office of Transportation Planning
<b>PATI</b>	Plan for Accessible Transit Infrastructure
<b>PCI</b>	Pavement Condition Index
<b>PSAC</b>	Project Selection Advisory Council
<b>PTC</b>	Positive Train Control
<b>PVTA</b>	Pioneer Valley Regional Transit Authority
<b>RMAT</b>	Resilient MA Action Team
<b>REP</b>	Rail Enhancement Program
<b>RIDOT</b>	Rhode Island Department of Transportation
<b>RL/OL</b>	Red Line/Orange Line
<b>ROW</b>	Right of Way
<b>RPA</b>	Regional Planning Agency
<b>RRIF</b>	Railroad Rehabilitation and Improvement Financing
<b>RTA</b>	Regional Transit Authority
<b>RTP</b>	Regional Transportation Plan
<b>RTTM</b>	Real Time Traffic Management
<b>SCR</b>	South Coast Rail
<b>SFY</b>	State Fiscal Year
<b>SGR</b>	State of Good Repair
<b>SRTA</b>	Southeastern Regional Transit Authority
<b>STIP</b>	State Transportation Improvement Program
<b>TAM</b>	Transit Asset Management Plan

<b>TAMP</b>	Transportation Asset Management Plan (Highway)
<b>TBB</b>	Transportation Bond Bill
<b>TERM</b>	Transit Economic Requirements Model
<b>TIFIA</b>	Transportation Infrastructure Financing and Innovation Act
<b>TIP</b>	Transportation Improvement Program
<b>Tobin</b>	Tobin Bridge
<b>ULB</b>	Useful Life Benchmark
<b>VMT</b>	Vehicle Miles Travelled
<b>VTA</b>	Martha's Vineyard Regional Transit Authority
<b>WRTA</b>	Worcester Regional Transit Authority
<b>WT</b>	Western Turnpike

## Introduction

One of MassDOT’s key roles is to develop and implement the Commonwealth’s transportation investment strategy—the Capital Investment Plan (*CIP*)—in coordination with the federal government, the state legislature, municipalities, regional planning agencies (*RPAs*), regional transit authorities (*RTAs*), other state agencies, and the public. With the lingering situation presented by COVID, MassDOT is again developing a “maintenance of effort” CIP for 2022, the focus of which continues to be the maintenance of our transportation system. We will fund our existing programs and multi-year projects that are underway or scheduled to commence while executing additional targeted investments to build a strong foundation for future funding opportunities. As the financial picture evolves, MassDOT will—in concert with guidance from the Executive Office for Administration and Finance (*ANF*)—revisit the CIP. It is important to note that the Commonwealth has released a 2022–2026 State Transportation Improvement Program (*STIP*) as required under the federal 3C planning process that programs funding through the Commonwealth’s MPO regions. MassDOT remains committed to providing the state match for federal transportation projects in the STIP.

Despite the challenges introduced by COVID, the work of MassDOT and the MBTA continues: to assist in providing the essential trips needed by many, and to support the safe reopening of businesses and services across the Commonwealth.

On January 15, 2021, the Governor signed a new \$16 billion transportation bond bill (TBB) into law - An Act Authorizing and Accelerating Transportation Investment. The TBB builds on the foundation laid out over the past several years and continues to accelerate investments in modernizing our transportation system. The TBB authorized several new programs to address asset conditions and congestion at the local level, improve transit access, and provide new funding for the Commonwealth’s extensive National Highway System bridges (NHS bridges). New bridge funding comes in the form of grant anticipation notes (\$1.25 billion authorized).

The 2022 CIP includes several of these new programs authorized in the TBB. The 2022 CIP includes the following new programs and funding:

- Municipal Pavement program,
- Transit Infrastructure Partnership program\* (transit-supportive investments)
- Public Realm Improvement program\* (launched in 2020 as Shared Streets and Spaces)
- Next Generation Bridge program (new GANs funding) Local Bottleneck Reduction program (to be launched in 2023)

The TBB included funding for the roadways in the vicinity of the Cape Cod bridges and the 2022 CIP includes additional funding for early design and permitting activities related to these roadways. The TBB authorized several other new programs which did not receive capital funding during this capital planning cycle.

New TBB Program / Funding	Description	TBB Authorization/ 2022 Capital Funding
<b>Municipal Pavement</b>	Program would provide funds through partnerships and/or grants to cities and towns to assist them in repairing and replacing municipal-owned pavement	\$100 million authorized / \$15 million
<b>Local Bottleneck Reduction**</b>	Program would provide new funding for cities and towns for moderate, cost effective congestion relief (e.g., smart signals)	\$25 million authorized / \$2.5 million
<b>Transit Infrastructure Improvements**</b>	Program will provide funds through partnerships and/or grants to municipalities to implement transit-supportive infrastructure to improve and facilitate more efficient delivery of transit operations, improve the passenger experience, and enhance transit rider and pedestrian service and safety for both the MBTA and RTA networks	\$25 million authorized / TBD
<b>Public Realm Improvements (aka Shared Streets and Spaces)*</b>	Program will continue a successful initiative launched in FY 21 to provide grants for cities and towns to launch or expand improvements to sidewalks, curbs, streets, on-street and off-street parking in support of public health, safe mobility, and commerce in their communities	\$20 million authorized / \$ 4 million
<b>Next Generation Bridge Funding</b>	Program to focus on bridge preservation/bundling of smaller MassDOT bridges	\$1.25 billion / \$15 million

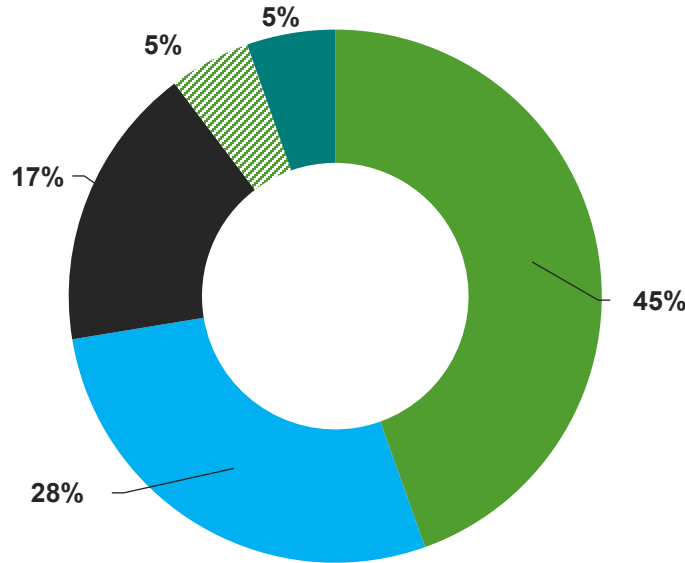
\*The authorization for Public Realm is reflected in the 2022 CIP as a **new** Shared Streets and Spaces program. \*\*The TBB included a stipulation for the Transit Infrastructure Program and the other transit-oriented authorizations that for communities with ready access to public transit or commuter rail that any grants provided shall be given to those communities that encourage Transit-Oriented Development (TOD) including multifamily housing near transit; MassDOT and the MBTA are working with the Executive office of Housing and Economic Development to define these parameters as part of the programs.

The following table details the funding programmed in the 2022 CIP.

## Program Investments by Division

	Aeronautics	Highway	IT	MBTA	Rail	RMV	Transit	Highway/OTP	SFY 22 Total
<b>Reliability</b>	\$47.3 <i>(millions)</i>	\$989.0	\$12.0	\$695.0	\$53.0	\$0.5	\$32.3	\$ -	\$1,829.2
<b>Modernization</b>	\$4.8 <i>(millions)</i>	\$297.0	\$9.0	\$757.2	\$11.1	\$8.3	\$19.3	\$ -	\$1,106.8
<b>Expansion</b>	\$ - <i>(millions)</i>	\$147.6	\$ -	\$547.8	\$1.7	\$ -	\$ -	\$5.2	\$702.2
<b>Division/Total</b>	\$52.2	\$1,433.7	\$21.0	\$2,000.0	\$65.7	\$8.8	\$51.7	\$5.2	\$3,638.2

## Overall Program Spending Breakdown



(millions)	SYF 2021	SYF 2022	Difference
Reliability	\$1,751.7	\$1,829.2	+\$77.6
Modernization	\$944.4	\$1,106.8	+\$162.4
Expansion	\$578.3	\$702.2	+\$123.9
Chapter 90 & Municipal Partnerships	\$200.0	\$200.0	\$ -
Planning & Enterprise Services	\$213.4	\$217.1	+\$3.7
<b>One Year Total</b>	<b>\$3,687.7</b>	<b>\$4,055.4</b>	<b>+\$367.6</b>

Totals may not add due to rounding.



## Priorities → Programs → Projects

This CIP continues to be informed by a strategic vision influenced by public and stakeholder input collected throughout the development process. MassDOT/MBTA organizational priorities are built around funding programs within which projects are selected based on objective and comparative evaluation. One of the goals for this CIP is to more closely align with our multi-modal strategy and all of the planning efforts that have been undertaken over the last several years.

As previously discussed, this plan is focused on SFY 2022.

### Investment Priorities

The three priorities for CIP investment are, in order of importance: Reliability, Modernization, and Expansion. These priorities express the broadest goals for MassDOT and MBTA investments.

#### Reliability

Maintain and improve the overall condition, safety, and reliability of the transportation system (45% of all investments):

- Necessary routine and capital maintenance and ensuring safety of the system

- State of good repair projects designed primarily to bring asset condition up to an acceptable level
- Asset management and system preservation projects

#### Modernization

Modernize the transportation system to make it safer, more accessible and accommodate growth (28% of all investments):

- Compliance with federal mandates or other statutory requirements for safety and/or accessibility improvements
- Projects that go beyond state of good repair and substantially modernize existing assets
- Projects that provide expanded capacity to accommodate current or anticipated future demand on existing transportation systems

#### Expansion

Expand diverse transportation options for communities throughout the Commonwealth (17% of all investments):

- Projects that expand highway, transit, and rail networks and/or services

- Projects that expand bicycle and pedestrian networks to provide more transportation options and to address health and sustainability objectives

The remaining investments support our municipal partners' transportation needs through programs, including the Chapter 90 reimbursement program.

## Investment Programs

Investment programs fall under each of the three priorities (reliability, modernization, and expansion). These programs encompass the most important capital responsibilities and goals of the agency.

The sizing of programs is developed using asset management systems and tools to determine need. Through the finalization of the Transportation Asset Management Plan (*TAMP*) for the Highway Division and the Transit Asset Management Plans (*TAM*) for the MBTA and the RTAs, MassDOT and the MBTA have a better understanding about the condition of our assets over a ten-year timeframe. This data was used as input into the 2022 CIP.

Along with our asset management goals and performance targets established in the 2020 Tracker, alignment with our multi-modal planning efforts and strategies (such as our statewide bicycle and pedestrian plans or our freight plan, among others) are other inputs in assessing what and how much we should be investing in for our transportation network.

Finally, there is an increasing focus in the development of each year's CIP on how proposed investments may mitigate

the impacts of climate change and/or improve the resiliency of our transportation network to better withstand natural hazards.

Asset management targets, multi-modal planning strategies, climate change mitigation and improving resiliency work in concert to measure what performance objectives that are being achieved through the resources that are being invested.

## Project Selection

Individual investments are considered for funding within these programs (reliability, modernization, and expansion). Projects are selected into each program and scored using

MassDOT's set of scoring criteria for each division to whom the project applies. Please note that reliability investments are not scored using these criteria, but instead are prioritized using performance- and asset management- based planning.

## Funding

The CIP is funded from a mix of federal, state, and local sources, each of which varies with respect to its flexibility. Some funding sources must be spent on specific policy goals or modes, while others may be applied across the transportation system.

The 2022 CIP reflects federal and state funding that was made available to Massachusetts and included in the CIP. Additional federal funds include new federal formula funds, Federal Railroad Administration grants, and Federal Transit Administration grants. New state sources include general obligation bonds, special obligation bonds (REP funds), and MBTA revenue bonds. Pay-go capital funds (net toll revenues) reflect an increase (over previous estimates in the 2021 CIP) related to as traffic, and revenues begin to rebound post the height of COVID restrictions.

## State Funding

The primary source of state transportation capital funding comes through bonds issued by the Commonwealth. Debt is issued to investors and paid back with interest over the course of the bond's life, like a mortgage for the purchase of a house.

The two main types of bonds issued for infrastructure spending are General Obligation bonds (backed by the full taxing authority of the Commonwealth) and Special Obligation Bonds (backed primarily by gas taxes and Registry fees), both of which are administered by the Executive Office for Administration and Finance (ANF).

## Federal Funding

Massachusetts receives federal funding to improve our transportation system from several U.S. Department of Transportation agencies, including the Federal Aviation Administration (*FAA*), the Federal Railroad Administration (*FRA*), the Federal Highway Administration (*FHWA*), and the Federal Transit Administration (*FTA*).

While different, the CIP and STIP are related because the STIP makes use of the priorities/programs/projects framework that the MassDOT Divisions use to build the 2022 CIP. Further, all projects programmed in the STIP are incorporated into the CIP.

## CIP and the STIP

MassDOT annually produces another multi-year capital planning document called the State Transportation Improvement Program (*STIP*). While similar, the STIP and CIP are not the same. The STIP is a federally required planning document that lists all federally funded transportation projects, both highway and transit, by region of the Commonwealth and by federal fiscal year. The STIP reflects programmed obligations (committed funds) while the CIP incorporates the projected spending of those obligations over time. Further, the STIP is subject to approval by the U.S. Department of Transportation and the U.S. Environmental Protection Agency, as well as by the Massachusetts Department of Environmental Protection. The STIP is developed in part by compiling the individual Transportation Improvements Programs (*TIPs*) from the 10 federally recognized transportation planning regions of the Commonwealth referred to as metropolitan planning organizations (*MPOs*) and 3 rural transportation planning regions known as TPOs.

By comparison, the CIP includes all sources of funding available to MassDOT Divisions and the MBTA. The CIP is not subject to federal approval.

## MassDOT Spending by Source

Projected Spending by Source	SFY 22
<b>Federal Sources of Funds</b>	
Federal Highway ( <i>FHWA</i> ) reimbursements	\$773.9
Federal Transit ( <i>FTA</i> ) reimbursements	\$6.0
Federal Aviation ( <i>FAA</i> ) reimbursements and grant draws	\$37.7
Federal Rail ( <i>FRA</i> ) reimbursements and grant draws	\$5.0
<b>Subtotal of federal spending</b>	<b>\$822.7</b>
Bond cap	\$901.2
Grant Anticipation Notes ( <i>GANs</i> )	\$15.0
Accelerated Bridge bonds	\$10.0
Rail enhancement bonds	\$5.2
Central Artery Project Repair and Maintenance Trust Funds ( <i>CARM</i> )	\$30.6
Metropolitan Highway system ( <i>MHS</i> ) pay-go	\$83.6
Tobin Bridge ( <i>Tobin</i> ) pay-go	\$28.3
Western Turnpike ( <i>WT</i> ) pay-go	\$139.2
Municipal, reimbursable and local funds	\$2.9
Other State Funds	13.9
Other State Funds - HED	\$2.7
<b>Subtotal of non-federal spending</b>	<b>\$1,232.7</b>
<b>Total Spending</b>	<b>\$2,055.4</b>



## About MassDOT Funding Sources

### Federal Highway (FHWA) reimbursements

MassDOT obligates available FHWA funds every federal fiscal year. This funding category involves MassDOT requesting FHWA to reimburse the Commonwealth for programmed (obligated) funds for actual federally eligible expenditures on Highway and Rail & Transit Division projects.

### Federal Transit (FTA) funds

MassDOT obligates available FTA funds every federal fiscal year. This funding category involves MassDOT drawing down obligated amounts to reimburse the Commonwealth for Rail & Transit Division project spending. The spending by source tables do not include FTA funds available to Regional Transit Authority partners.

### Federal Aviation (FAA) funds

MassDOT applies for FAA funds every federal fiscal year. This funding category involves MassDOT drawing down those approved grant amounts to pay for Aeronautics Division project spending.

### Federal Railroad (FRA) funds

From time to time, MassDOT applies for FRA funds. This funding category has MassDOT draw down approved grant amounts to pay for Rail & Transit Division, MBTA, and Office of Transportation Planning project spending.

### State bond cap

Commonwealth General Obligation bond proceeds (state bond cap) are allocated to specific projects, primarily for project design, management, operations, and other construction support provided to the Aeronautics, Highway, Registry, and Rail and Transit Divisions and the MBTA (see MBTA sources).

### Accelerated Bridge bonds

Commonwealth Special Obligation bond proceeds are allocated to specific bridge projects, primarily for project operations and construction.

### Grant Anticipation Notes (GANs)

Grant anticipation notes (GANs) are notes issued by the Commonwealth and repaid with future federal highway obligation authority. Funds will be used to improve the condition of the Commonwealth's bridges. New funding was authorized in the 2021 Transportation Bond Bill.

### Rail enhancement bonds

This is the Commonwealth Rail Enhancement Program (REP): a dedicated \$2.1 billion program for reliability, modernization, and expansion initiatives at the MBTA, including the State's share of the Green Line Extension (GLX) program and a portion of the South Coast Rail program.



### Central Artery Project Repair and Maintenance Trust Fund (CARM)

This is used for certain eligible MHS projects and is subject to FHWA approval.

### Metropolitan Highway System (MHS) pay-go

Projected annual revenues are available for capital for the toll facility and tunnels east of I-95, plus any existing projected reserve balances.

### Western Turnpike (WT) pay-go

Projected annual revenues are available for capital for the toll facilities west of I-95, plus any existing projected reserve balances.

### Tobin Bridge (Tobin) pay-go

Projected annual revenues are available for capital for this toll facility plus any existing projected reserve balances.

### Municipal and local funds

Funds are provided by municipalities to match federal-aid sources or to pay for construction bid items.

### Reimbursable and 3rd party funds

This funding source comprises funding from private sources that MassDOT and the MBTA receive to mitigate transportation impacts of development projects or as part of a joint development agreement.

### Other State funds

Additional funds for MassDOT are used for clean transit vehicles (VW funds) and transportation improvements in Boston's Seaport District (funds provided by other state agencies).

## MBTA Spending by Source

Projected Spending by Source	SFY22
<b>Federal Sources of Funds</b>	
Federal Highway ( <i>FHWA</i> ) reimbursements	\$1.8
Federal Transit ( <i>FTA</i> ) reimbursements and grant draws	\$369.5
FTA Full funding grant agreement ( <i>GLX FFGA</i> )	\$200.4
Federal Railroad Administration ( <i>FRA</i> ) grant draws	\$6.6
Other federal funds	\$5.7
<b>Subtotal of federal spending</b>	<b>\$584.0</b>
Bond cap	\$133.9
Rail enhancement bonds	\$477.7
MBTA Revenue bonds	\$515.4
RRIF/TIFIA Loans	\$243.4
Municipal and local funds ( <i>GLX</i> )	\$0.0
Reimbursable and 3rd parties	\$3.7
Pay-Go Lockbox ( <i>MBTA</i> )	\$30.0
Capital maintenance fund	\$4.0
Other Commonwealth Funds	\$8.0
<b>Subtotal of non-federal spending</b>	<b>\$1,416.0</b>
<b>Total Spending*</b>	<b>\$2,000.0</b>

## About MBTA Funding Sources

### Federal Highway (FHWA) reimbursements

FHWA reimbursements reflect CMAQ Flex Funds available for the GLX program.

### Federal Transit (FTA) reimbursements and grant draws

FTA reimbursements reflect Section 5307 Urbanized Area Formula funds, Section 5337 State of Good Repair/Fixed Guideway funds, and Section 5339 Bus and Bus Facilities funds. Assumes reauthorization beyond FAST Act, with a 1.7% annual growth. FTA grant draws are the estimated balance of funds available in existing non-GLX FTA grants as of July 1, 2019.

### FTA Full Funding Grant Agreement (FFGA)

FFGA funding supports the GLX program and includes on-hand FFGA funds less anticipated expenditures through July 1, 2021. Future amounts reflect the year in which additional FFGA funds will be appropriated per GLX FFGA.

### Federal Railroad Administration (FRA) grant draws

Federal Railroad (FRA) discretionary grant funds that have been awarded to the MBTA.

### Other federal funds

Funding is comprised of Transit Security Grant Program funds, which is a discretionary appropriation and not assumed in future years.

### State bond cap

Commonwealth general obligation bond proceeds are provided as \$60 million in annual assistance to MBTA and a portion of the funding for Phase 1 of South Coast Rail (SCR).

### Rail enhancement bonds

The Commonwealth Rail Enhancement Program is a dedicated \$2.1 billion program for reliability, modernization, and expansion initiatives at the MBTA, including the State's share of the Green Line Extension program, Red Line/Orange Line Improvements program and SCR Phase 1.

### Railroad Rehabilitation and Improvement Financing / Transportation Infrastructure Financing and Innovation Act (RRIF/TIFIA) loans

Planned RRIF/TIFIA loans to support the PTC, ATC and Fiber Resiliency projects. Sources reflect projected spending.

### **Municipal and Local Funds (GLX)**

Funds reflect the contributions from the cities of Cambridge and Somerville for the GLX program.

### **Reimbursable and 3rd party funds**

Funding reflects funds received via reimbursable agreements with Rhode Island Department of Transportation (*RIDOT*), Amtrak, and other parties.

### **Capital maintenance fund**

A fund held by the Authority, that may be used at the discretion of the CFO, to pay a portion of unexpected costs of maintenance, improvement, and replacement of the equipment, facilities, and assets of the Authority.

### **Pay-Go/Lockbox**

FY22 Pay-go/Lockbox funding made available due to a transfer of operating funds to the capital program.

## Investment Priorities

Please note that all reliability, modernization, and expansion programs by Division, include the total projected spending by program in the 2022 CIP, descriptions of each program, and descriptions of any asset- and performance management-based data used for setting program sizes are outlined in Appendix B.

### Reliability Investments

About 45% of the \$4.0 billion in proposed capital spending for 2022 is for "priority one" investments, meaning those that improve the reliability of the current transportation system. The goal of reliability investments is to maintain and improve the overall condition of the transportation system. Reliability investments include:

- Necessary routine and capital maintenance and improve safety of the system
- State of good repair projects designed primarily to bring asset conditions up to an acceptable level
- Asset management and system preservation projects

Investments such as runway reconstruction projects at our public use airports, bridge replacement projects such as the North Washington Street bridge, Sumner Tunnel Rehabilitation, repaving/resurfacing projects on I-95 or Route 3, purchase of new buses for the MBTA, rehabilitation of the Alewife garage, Blue Line harbor tunnel improvements, track and right of way replacement for the Berkshire Line, purchase of replacement buses and vehicles for the RTAs among many others are all examples of projects that fall under the reliability or "state of good repair" priority.

Reliability Spending by Division for 2022 (millions) – to be updated	
Aeronautics	\$47.3
Highway	\$989.0
IT	\$12.0
MBTA	\$695.1
Rail	\$53.0
RMV	\$0.5
Transit	\$32.3
<b>Total</b>	<b>\$1,829.2</b>

## Modernization Investments

About 28% of the \$4.0 billion in proposed capital spending for 2022 is for "priority two" investments that help achieve the goal of modernizing the transportation system to make it safer, more accessible, and to accommodate growth.

Modernization investments include:

- Compliance with federal mandates or other statutory requirements for safety and/or accessibility improvements
- Projects that go beyond routine maintenance and substantially modernize existing assets
- Projects that provide expanded capacity to accommodate current or anticipated demand on existing transportation systems

Examples of modernization investments include the new configuration for Kelley Square in Worcester or the track and signal improvements for the red and orange lines.

### Modernization Spending by Division for 2022 (millions)

Aeronautics	\$4.8
Highway	\$297.0
IT	\$9.0
MBTA	\$757.2
Rail	\$11.1
RMV	\$8.3
Transit	\$19.3
<b>Total</b>	<b>\$1,106.8</b>

## Expansion Investments

About 17% of the \$4.0 billion in proposed capital spending for 2022 is for "priority three" investments that expand the diverse transportation options for communities throughout the Commonwealth. Expansion investments include:

- Projects that expand highway, transit and rail networks and/or services
- Projects that expand bicycle and pedestrian networks to provide more transportation options and address health and sustainability objectives

Green Line Extension or South Coast Rail programs are examples of investments under this priority.

<b>Expansion Spending by Division for 2022 (millions)</b>	
Highway	\$147.6
MBTA	\$547.8
OTP	\$5.2
Rail	\$1.7
<b>Total:</b>	<b>\$702.2</b>

## Selected Major Investments & Programs

### Commuter Rail Safety and Resiliency

The Commuter Rail Safety and Resiliency program includes investments to improve the safety and resiliency of the Commuter Rail system, including the implementation of Positive Train Control (*PTC*), Automatic Train Control (*ATC*) and the Fiber Optic Cable Network Resiliency project.

### Green Line Transformation (*GLT*)

GLT includes a portfolio of over 60 multi-disciplinary projects aimed at holistically transforming the MBTA's Green Line. It integrates all existing Green Line state of good repair projects with new initiatives to form a cohesive investment strategy and unified capital program. In order to meet both present and future needs, the program's goal is to improve the quality of service on the Green Line through four levels of strategic investments: (1) Safety & State of Good Repair, (2) Accessible Stations, (3) Legacy Car Replacement, and (4) Increased Capacity. Each level aims to improve reliability and the overall quality of service for all riders and communities served by the Green Line.

### Hopkinton-Westborough I-495/I-90 Interchange Improvements

The purpose of the I-495/I-90 Interchange Improvements project is to improve safety and operational efficiency at the

system interchange of these two nationally and regionally significant interstate highways.

This project will increase safety for all movements within the project area and address chronically deficient traffic conditions for the movement of people and goods. Additionally, this project will support planned growth in the region and accommodate future traffic demand at acceptable levels of service (LOS) and travel time through the Interchange. The I-495/I-90 Interchange Improvements Project is currently in the environmental permitting phase.

Design-Build contract procurement is anticipated to commence in Summer 2021 with construction anticipated to commence mid-2022.

### Southborough-Westborough Acceler-8 I-90 Bridge Replacements

The Acceler-8 I-90 Bridge Replacement project will replace 8 failing bridge decks and superstructures to restore their 75-year service life and improve clearance to local roadways below. The bridge abutments at Woodland, Parkerville and Flanders Roads are being rehabilitated while the two 3-span bridges on Cordaville Road will be replaced entirely with two single span bridges with new abutments which will increase the underpass width. Additional improvements include upgrades to median and shoulder barriers, guardrails, roadway surface and pavement markings along a 3 mile stretch of I-90.



To reduce traffic impacts to the public on I-90 and local roads, this project utilized the Design-Build (D-B) procurement approach and Accelerated Bridge Construction (ABC) techniques. With the D-B approach, MassDOT selected one Design-Builder to be responsible for both the final design and construction. This promotes collaboration between the engineers, contractor and MassDOT staff and reduces schedule as the design and construction phases overlap each other. ABC techniques being used on this project include pre-cast concrete elements, such as bridge beams, bridge decks and abutment caps which shortens the construction duration. By utilizing both D-B and ABC, MassDOT was able to reduce the time needed to complete the project from 3-4 years to about a year. MassDOT issued the NTP on August 8, 2020 and substantial completion is scheduled for December 9, 2021. Actual disruption due to the bridge replacements will occur in only 8 weekends this summer. This is a significant economic benefit to the roadway users and will allow MassDOT to complete these needed improvements before the start of the Hopkinton-Westborough I-495/I-90 Interchange Improvements project.

## Sumner Tunnel Centennial Project

Construction of the Sumner Tunnel began in 1934. The tunnel is now in need of significant rehabilitation. The tunnel arch and deck will be rehabilitated. The ceiling, wall panels, lighting, fire standpipe and communications systems will be replaced. The work will be done in three phases. A series of weekend closures followed by a 16-week closure followed by another series of weekend closures. The 16-week closure will occur in the Summer of 2023. During the closures work is expected to occur 24 hours per

day. This project is funded with federal highway funds and state bond cap match.

## Red Line / Orange Line Transformation

This program comprises investments related to replacing and expanding the MBTA's Red Line and Orange Line fleets, including upgrading yards, maintenance facilities, test tracks, signals and power to enable acceptance and maintenance of the new fleets to improve the customer experience and continued reliability improvements. When fully implemented along with additional improvements to stations, track, signals and power projects, these investments are expected to allow three-minute headways on the Red Line and four-and-a-half-minute headways on the Orange Line.

Final completion for initial infrastructure improvements is scheduled for Summer 2022 and final delivery of vehicles for the fleet replacement is anticipated for September 2023. The program plans to achieve headway and reliability goals by 2028.

## Green Line Extension (GLX)

The GLX project is a 4.7-mile light rail line that will extend current Green Line service from a relocated Lechmere Station in East Cambridge to a terminus at College Avenue in Medford, and a spur to Union Square in Somerville. This project is moving forward with a cost estimate of \$2.28 billion and is funded with federal funds (FFGA and FHWA), state bonds, and contributions from the cities of Cambridge and Somerville. As of April 2021, approximately 75% of the design-build effort has been realized and pre-revenue

service testing and commissioning is scheduled to commence Summer 2021.

## South Coast Rail

The July 2, 2019 groundbreaking ceremony for South Coast Rail celebrated the Commonwealth's commitment to the expansion of Commuter Rail to the South Coast of Massachusetts. Construction is currently ongoing and revenue service is expected to begin in late 2023. South Coast Rail will serve existing and future demand for public transportation between Fall River/New Bedford and Boston, enhance regional mobility, and support smart growth planning and development strategies in Southeastern Massachusetts.

In SFY 2021 major construction commenced on the Fall River Secondary and the New Bedford Mainline / Middleborough Secondary, and this work will continue through SFY 2022.

The SFY 2020–2024 CIP included full funding for Phase 1 construction and service via the Middleborough route. The Commonwealth's funding commitment to the program continues with the SFY 2022 CIP.

## I-90 Allston Multi-Modal Program

The I-90 Allston Viaduct has reached the end of its useful lifespan and is structurally deficient. However, this critical component of the Commonwealth's roadway infrastructure must be kept open for the movement of goods and freight, particularly to Logan Airport.

Similarly, the adjoining Allston Interchange is functionally obsolete. Its general configuration is no longer needed and the way it connects to local streets causes recurring congestion that, under some circumstances, impedes traffic on the I-90 mainline.

The deficiencies of the viaduct and interchange are the drivers behind the I-90 Allston Intermodal Program, which will replace the viaduct and reconfigure the interchange. Changes to the interchange will include flattening the curve of I-90 as it passes through Allston and connecting I-90 to Cambridge Street and Soldiers' Field Road via a new urban street grid. These changes provide MassDOT with the opportunity to enhance parkland along the Charles River, introduce bicycle and pedestrian connections around and through the former Beacon Park Yard site, and invest in improved commuter rail through the introduction of West Station.

MassDOT is continuing to assess and analyze the environmental effects of each of the alternatives presented in the scoping summary report and will present those findings upon completion of the Draft Environmental Impact Statement currently projected for late 2021. The 2022 CIP includes funding for design and permitting only.

## Equity Analysis – this section to be updated when analysis is done

### Overview

This section discusses the results of the equity analysis conducted on the draft FY2022 CIP, which indicates an equitable plan. There is a narrative describing the results and methodology used along with illustrative maps.

The investments included in the CIP update are determined through a collaborative process among many stakeholders (cities and towns, private and public agencies, advocates, etc.), representing diverse constituencies with an array of perspectives and goals for the future of public transportation. As part of our commitment to civil rights and nondiscrimination, MassDOT evaluates proposed investments and projects to assure that they are equitable with respect to both geography and to the population groups that benefit.

The analysis evaluated investments per capita at the municipality and census tract levels. Equitable investment was evaluated using a number of different variables and indicators such as transportation mode (Highway, MBTA, Rail & Transit, and Aeronautics) and on several levels:

- In the aggregate and by investment categories to understand the total impact of the CIP;
- Individually for each mode and investment category to identify particular areas of concern that the aggregate level would not have identified separately; and
- Variable buffering to analyze impacts of the proposed CIP investments in two ways: by mode (RTA/MBTA, Rail, and Aeronautics) and for the Highway Division by location (rural, suburban, urban).

Investments were measured per capita to account for population density. Overall, this analysis determined that the CIP equitably distributes investments among minority, low-income, and limited English proficient (LEP) populations. It also shows an equitable distribution of investments geographically across the Commonwealth.

MassDOT and the MBTA continue to develop and refine the analysis used to determine equity of capital investments. While geographic funding distribution and allocation of funding across diverse communities remains a core component of this analysis, MassDOT and the MBTA continue to work to innovate finer-grain analysis methodologies to identify and quantify the equity of the impacts of projects at the community level and statewide.

For additional information about MassDOT's Civil Rights work, web links are available in the Glossary of Terms.

More information about the current state of this practice and future goals is available by contacting the MassDOT Civil Rights team at [MassDOT.civilrights@state.ma.us](mailto:MassDOT.civilrights@state.ma.us).

## Geographic Analysis

As a state agency, MassDOT seeks to fund transportation infrastructure equitably across the state. However, because of the data that is available and the nature of transportation infrastructure, there is no clear consensus on what exactly is an equitable distribution of resources, given the variation between needs, demand, and contributed tax dollars. As a result, MassDOT assessed the data in a variety of ways for this equity analysis. The maps included in this section illustrate a few different ways that MassDOT assessed the data. While no single method is perfect, these approaches taken together provide useful information to better understand the regional distribution of resources. Only projects programmed within SFY 2022 in the CIP are considered.

Variables considered in analyzing the geographic equity of the plan are population, employment, and lane miles, captured by the Chapter 90 formula. Population and employment are considered to evaluate investment per capita and lane miles is considered as a proxy for the extent of the local transportation network.

The Chapter 90 Program is a formula program distributed to municipalities for roadway improvements based on population (20.83%), employment (20.83%), and lane miles (58.33%). This formula has been in use for distribution of transportation funds to municipalities since 1972. As the formula has a history of use as a proxy for geographic distribution of transportation investment throughout the Commonwealth, MassDOT opted to use the given

percentages as a measure for an equitable distribution of investments.

If the ratio of CIP funding allocated to a municipality is the same as the ratio of Chapter 90 funding it receives—meaning a ratio of one—this would indicate that the CIP distribution is equitable. Greater than one would indicate more CIP funding than would be expected if funding were distributed according to the Chapter 90 formula, less than one would mean that the CIP distribution provides less than would have been received if the Chapter 90 formula were in use.

The shading on the map indicates the variations in the percentage of CIP investments from the percentage of Chapter 90 funding. Generally, urban areas receive a disproportionately high share of investment based on lane miles, while rural areas receive a disproportionately high share on a per capita basis. Using the Chapter 90 formula as a benchmark for equity, which includes both lane miles and population, results in less stark contrasts, though urban areas still perform better. Because more roads are eligible for state and federal funding and projects are generally more expensive in urban areas, this finding does not mean there is clear bias.

Overall, there are no major geographic equity concerns within the SFY 2022 CIP. MassDOT and MBTA will continue to analyze the Capital Investment Plan year over year to assure that inequitable patterns do not emerge. For any analysis, MassDOT would not expect perfect equity for a one-year plan, as variations are bound to happen given that one-time large projects can skew outcomes.

## Social Equity Analysis

The social equity analysis was conducted to establish compliance with federal and state nondiscrimination laws and regulations, including Title VI of the Civil Rights Act of 1964 (*Title VI*), the Civil Rights Restoration Act of 1987, and the 1994 Presidential Executive Order 12898 on Environmental Justice. The social equity analysis considered the distribution of investments across all census tracts, and across different demographic indicators, such as minority, low-income, limited English proficiency (*LEP*).

Minority census tracts are defined as those with populations that are at least 23.87 percent minority, as defined by the US Census, which is the statewide average. Consistent with state policy, low-income census tracts are defined as those with a median household income at or below 65 percent of the statewide median household income. The statewide median household income is currently \$67,846. Therefore, low-income census tracts are defined as those with median household incomes of \$44,100 or less, regardless of household size. Census tracts with at least 6.25% of their population considered LEP (individuals above the age of five who do not speak English as their primary language and who have a limited ability to read, write, speak, or understand English) were also considered for social equity implications.

Equity analyses in this context seek to identify discrepancies in the allocation of funding across the identified demographic groups. While there is no single threshold that serves as a dispositive indication of funding allocation differences that suggest clear equity concerns, the state of the practice

indicates that differences on the order of 20% can be observed without implicating equity. Furthermore, in instances where differences exceed 20%, there may be legitimate nondiscriminatory justifications that, again, do not indicate equity concerns.

Analyzing the entire CIP, investments are approximately 24% more in minority than non-minority communities.

Considering all modes, LEP census tracts receive 15.4% more funding per capita than non-LEP census tracts.

For the proposed SFY 2022 investments, low-income communities receive approximately 84% of per capita investments as compared to non-low income communities.

Overall, the equity analysis of the SFY 2022 CIP does not seem to indicate social equity concerns. MassDOT and MBTA will continue to analyze the Capital Investment Plan year over year to assure that inequitable patterns do not emerge. For any analysis, MassDOT would not expect perfect equity for a one-year plan, as variations are bound to happen given that one-time large projects can skew outcomes.

## Public Comment and Engagement

Public feedback is important to the development and support of the Capital Investment Planning process. MassDOT has created [an interactive comment tool](#) to provide an opportunity for members of the public to directly comment on individual investments in the CIP. Follow the directions in the pop-up window to show support or to provide comment on individual investments.

If this tool is not your preferred method to submit comments, you may mail correspondence to the address below:

Capital Investment Plan  
10 Park Plaza, Suite 4160  
Boston, MA 02116  
[masscip@state.ma.us](mailto:masscip@state.ma.us)

Alternatively, you may attend one of our virtual public meetings across the state.

The Legislative Affairs group and Capital Planning team at MassDOT will review all comments and will provide a response in the form of a single document that addresses all comment topics. To receive this document, be sure to include your email address on any public comment you submit or come back to this page after the formal Public Comment period has ended.

## Public Engagement for the 2022 CIP

As a result of the continued presence of COVID, MassDOT will host six virtual regional public meetings which will be coordinated with our regional partners. Below is a list of all the virtual public meetings that will be held for the 2022 CIP. Public comment will be accepted as part of the virtual public meetings. While each meeting is focused on a specific region, comments will be accepted on any aspect of the CIP.



## Virtual Public Meetings

Region	Meeting Host	Date	Time	Platform
<b>Western Massachusetts / Berkshires</b>	Berkshire Regional Planning Commission/Pioneer Valley/Franklin Regional Council of Governments	May 25 <sup>th</sup>	6:00 pm	Zoom: <a href="https://us02web.zoom.us/j/82037272448?pwd=aXo3Sy9GTmdiVGRXU2VHcXFRK01pdz09">https://us02web.zoom.us/j/82037272448?pwd=aXo3Sy9GTmdiVGRXU2VHcXFRK01pdz09</a> Meeting ID: 820 3727 2448 Passcode: 090975 Dial-In: 1-646-876-9923
<b>Northern Middlesex / Merrimack Valley</b>	Merrimack Valley Planning Commission / Northern Middlesex Planning Commission	May 26 <sup>th</sup>	6:00 pm	Zoom: <a href="https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09">https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09</a> Meeting ID: 810 4237 7110 Passcode: 725620 Dial-In: 1-646-876-9923
<b>Central Massachusetts</b>	Central Mass Regional Planning Commission	May 27 <sup>th</sup>	6:00 pm	Zoom <a href="https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09">https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09</a> Meeting ID: 857 9613 5985 Passcode: 730172 Dial-In: 1-646-876-9923

<b>Boston</b>	Boston MPO/Central Transportation Planning	June 1 <sup>st</sup>	6:00 pm	Zoom <a href="https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09">https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09</a>  Meeting ID: 892 4730 4438 Passcode: 605065 Dial-In: 1-646-876-9923
<b>Southeastern Massachusetts</b>	Southeastern Massachusetts Regional Planning and Economic Development District / Old Colony	June 2 <sup>nd</sup>	6:00 pm	Zoom <a href="https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09">https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09</a>  Meeting ID: 826 0250 2217 Passcode: 624318 Dial-In: 1-646-876-9923
<b>Cape Cod and Islands</b>	Cape Cod Commission / Nantucket / Martha's Vineyard	June 3 <sup>rd</sup>	6:00 pm	Zoom <a href="https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09">https://us02web.zoom.us/j/81042377110?pwd=K3loZyt6UERETzlCb2RIYzhtNG5kQT09</a>  Meeting ID: 826 0250 2217 Passcode: 987991 Dial-In: 1-646-876-9923

The above table lists the virtual public meetings held for the CIP, along with the meeting hosts and platforms. All meetings will be hosted in partnership with MassDOT’s regional planning partners. Recordings of meetings will be available online at [www.mass.gov/CIP](http://www.mass.gov/CIP).



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## Appendix A: Investment Details

This section provides the lists of investments contained within this CIP. The information within each column is described below:

- Location – where the investment is located
- Project ID – the Division specific ID that uniquely identifies each investment
- Project name – the name of the investment and a brief description
- Priority – the capital priority that the investment addresses
- Program – the program from which the investment is made
- Score – the score of the investment (reliability investments are not scored)
- Total cost – the total cost of the investment
- Prior years – the spending on the investment that pre-dates the plan update
- FY 2022 – the spending estimated to occur in fiscal year 2022
- Post FY 2022 – the estimated spending to occur post fiscal year 2022 for the project



## 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.

