



2027–2031 STATE TRANSPORTATION IMPROVEMENT PROGRAM

Massachusetts Department of Transportation (MassDOT)

2027-2031 State Transportation Improvement Program

July 21, 2026

I am pleased to present the Massachusetts Department of Transportation's State Transportation Improvement Program (STIP) for Federal Fiscal Years (FFYs) 2027–2031. This five-year program reinforces the Healey–Driscoll Administration's vision for building a multimodal transportation system that is safer, stronger and better connected for every community across the state. Since day one, Governor Healey and Lieutenant Governor Driscoll have made historic investments in transportation infrastructure and public transit that improve quality of life, strengthen our economy and create opportunities for residents and businesses alike. The FFY 2027–2031 STIP continues to reflect the funding levels for core formula federal sources included within the Infrastructure Investment and Jobs Act (IIJA).

This document was developed in partnership with our Metropolitan Planning Organizations (MPOs) which includes valuable input from members of the public, municipalities, public agencies, and our state and federal partners. To accomplish our transportation goals, the STIP directs significant investment toward public transportation, roadways, bridges, and bicycle and pedestrian facilities over the next five federal fiscal years.

We thank our valued federal, state, municipal, and MPO partners in continued efforts to improve transportation access statewide. MassDOT acknowledges the foundational work that is being performed by other state agencies, and our regional planning and municipal partners.

MassDOT strives to improve the quality and transparency of the information we provide, and we welcome your input on this document. Thank you for your continued partnership.

Best Regards,



Phillip Eng

Interim Secretary of Transportation and MBTA General Manager

Massachusetts Department of Transportation

Acknowledgments

This 3C certification document is the culmination of a year-long effort by the Commonwealth's Metropolitan Planning Organizations, regional planning agencies, regional transit authorities, the Massachusetts Bay Transportation Authority (MBTA), the MassDOT Highway Division, the MassDOT Rail & Transit Division, MassDOT Federal Aid Programming and Reimbursement Office, and the Office of Transportation Planning.

This report was funded in part through grants from the Federal Highway Administration, Federal Transit Administration, and the U.S. Department of Transportation. The views and opinions of the Massachusetts Department of Transportation expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

Table of Contents

Table of Contents	3
Notice of Nondiscrimination Rights and Protections to Beneficiaries	4
Certifications.....	8
STIP Development	13
Funding the STIP	17
Federal Funding Overview	21
Highway Funding Programs	23
Transit Funding Programs.....	34
Programming the STIP	40
Federal Emphasis Areas	43
Performance-Based Planning	43
Public Participation in STIP Development	61
Operating and Maintaining the Transportation System	64
Fiscal Constraint.....	68
Status of FFY 2025 Investments	69
Air Quality	69
Greenhouse Gas Impacts	71
Public Comment.....	75
2026–2030 Investment Tables: <i>Highway</i>	76
2026–2030 Investment Tables: <i>Transit</i>.....	77
APPENDIX A: Air Quality Conformity Determination.....	79
Introduction	79
Legislative and Regulatory Background.....	80
Current Conformity Determination	82
APPENDIX B: STIP Amendment/Adjustment Procedures	86
APPENDIX C: Operations and Maintenance.....	91
APPENDIX D: Strategy for Utilization of Carbon Reduction Program Formula Funding.....	92

Notice of Nondiscrimination Rights and Protections to Beneficiaries

Federal “Title VI/Nondiscrimination” Protections

The Massachusetts Department of Transportation (MassDOT) collaborates with federal agencies to operate its programs, services, and activities in compliance with federal policies and codified nondiscrimination laws enacted prior to the publication of this document, including Title VI of the Civil Rights Act of 1964 (Title VI), the Civil Rights Restoration Act of 1987, and related statutes and regulations. 1964’s Title VI regulates federally assisted programs and states that no person in the United States of America shall, on the grounds of race, color, national origin, or 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, in accordance with protecting constitutional rights. Related federal nondiscrimination laws that have been administered by the Federal Highway Administration, the Federal Transit Administration, or both oversee participation across programs and activities. MassDOT’s Title VI Programs are intended to maintain consistency with federal interpretation and administration. MassDOT provides meaningful access to its programs, activities, and services to individuals with limited English proficiency in compliance with federal Executive Order 13166. Federally assisted programs, activities, and services at MassDOT are intended to operate in acknowledgement of the variety of demographics served by MassDOT and to adhere to all established federal policies and nondiscrimination laws.

State Nondiscrimination Protections

The Commonwealth of Massachusetts has state laws codifying defined characteristics and governing state nondiscrimination policies. 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 orientation, gender identity or expression, religion, creed, ancestry, national origin, disability, veteran's status (including Vietnam-era veterans), or background. MassDOT's programs, activities, and services operate with the intention of recognizing the needs of demographics served over the Department's service area.

Additional Information

To request additional information regarding Title VI and related federal and state nondiscrimination obligations, please contact:

MassDOT, Title VI Specialist, Office of Diversity and Civil Rights
10 Park Plaza
Boston, MA 02116
857-368-8580
Relay: 7-1-1 MASSDOT.CivilRights@state.ma.us

Complaint Filing

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

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
617-994-6000
TTY: 617-994-6196

Translation

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

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

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

Chinese Simplified: (mainland & Singapore): 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。

Chinese Traditional: (Hong Kong & Taiwan): 如果需要使用其它語言了解信息，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。

Russian: 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.

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

Vietnamese: 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.

French: 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.

Italian: 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.

Khmer: ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែព័ត៌មាននេះ សូមទាក់ទងអ្នកឯកទេសលើជំពូកទី6 របស់MassDot តាមរយៈលេខទូរស័ព្ទ 857-368-8580

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

ADA / 504 Notice of Nondiscrimination

The Massachusetts Department of Transportation (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
Relay: 7-1-1 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.

Certifications

Self-Certification for the Commonwealth of Massachusetts

Compliance with Applicable Federal Regulation

In accordance with 23 CFR 450.220 (a) , the Massachusetts Department of Transportation hereby certifies that its statewide transportation planning process is addressing major issues facing the Commonwealth, and its non-urbanized areas, and is being carried out in accordance with all applicable requirements including:

- 23 USC 134 and 135, 49 USC Sections 5303 and 5304, and this subpart;
- Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000 d-1) and the Title VI assurance (23 USC Section 324) and 49 CFR part 21;
- 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age, in employment or business opportunity;
- Section 1101 (b) of the FAST Act (Public Law. 114-357) and 49 CFR 26 regarding the involvement of Disadvantaged Business Enterprises in US DOT funded projects;
- 23 CFR part 230 regarding implementation of an equal employment opportunity program on federal and federal aid highway construction contracts;
- The provisions of the Americans with Disabilities Act of 1990 (42 USC 12101 et. seq.) and 49 CFR parts 27, 37 , and 38;
- Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended {42 USC 7504, 7506 (c) and (d)} and 40 CFR part 93;
- The Older Americans Act, as amended by 42 USC 6101 prohibiting discrimination on the basis of age in programs or activities receiving Federal financial assistance;
- Section 324 of Title 23 USC regarding prohibition of discrimination based on gender;
- Section 504 of the Rehabilitation Act of 1973 (29 USC 794) and 49 CFR part 27, regarding discrimination against individuals with disabilities;
- Anti-lobbying provisions found at 49 USC part 20 and 23 CFR 630.112;

2027-2031 State Transportation Improvement Program

Additionally, each Metropolitan Planning Organization has certified that its Transportation Improvement Program complies with the above requirements.



Phillip Eng
Interim Secretary and CEO
Massachusetts Department of Transportation

07/27/2026

Date

Financial Constraint

The financial plan contained herein is financially constrained; it ensures that the State Transportation Improvement Program reflects the maintenance and operation of our roadway and bridge system. Transit funding also satisfies federal requirements related to financial constraint. Federal transit funds are programmed in the State Transportation Improvement Program based upon estimates of funding for which there is a reasonable expectation of availability.



Phillip Eng

Interim Secretary and CEO

Massachusetts Department of Transportation

07/27/2026

Date

Certification of the State Transportation Improvement Program

Whereas, the 1990 Clean Air Act Amendments (CAAA) require Metropolitan Planning Organizations (MPO) within non-attainment areas and/or attainment areas with maintenance plans to perform air quality conformity determinations prior to the approval of transportation plans and transportation improvement programs, and at such other times as required by regulation;

Whereas, an air quality conformity determination for 2027-2031 was conducted with each MPO endorsing an amended Regional Transportation Plan, concluding with the Commonwealth providing a conformity analysis on each MPO's TIPs and an air quality conformity determination being documented and approved by FHWA, FTA, Environmental Protection Agency (EPA), and Massachusetts Department of Environmental Protection (MassDEP);

Whereas, all regionally significant transportation projects in the 2027-2031 State Transportation Improvement Program are contained in the collection of 2023 Regional Transportation Plans by the Commonwealth's MPOs;

Whereas, the State has completed its review in accordance with Section 176(c) (4) of the Clean Air Act as amended in 1990 [42 U.S.C. 7251 (a)], and hereby certifies that the FFY 2027-2031 STIP is financially constrained and that the implementation of the STIP, each MPO's TIP, and each MPO's 2020 Regional Transportation Plan all satisfy the criteria specified in both 310 CMR 60.03 (12/30/1994) and 40 CFR Part 51 and 93 (8/15/1997);

Whereas, based on current federal requirements, the FFY 2027-2031 STIP is consistent with the air quality goals of the Massachusetts State Implementation Plan;

2027-2031 State Transportation Improvement Program

Therefore, in accordance with 23 CFR Part 450 Section 324 (Development and content of the Metropolitan Transportation Plan) of the May 27, 2016 Final Rules for Statewide and Metropolitan Planning, the Commonwealth hereby endorses the FFY 2027-2031 State Transportation Improvement Program.



Phillip Eng

Interim Secretary and CEO

Massachusetts Department of Transportation

07/27/2026

Date

STIP Development

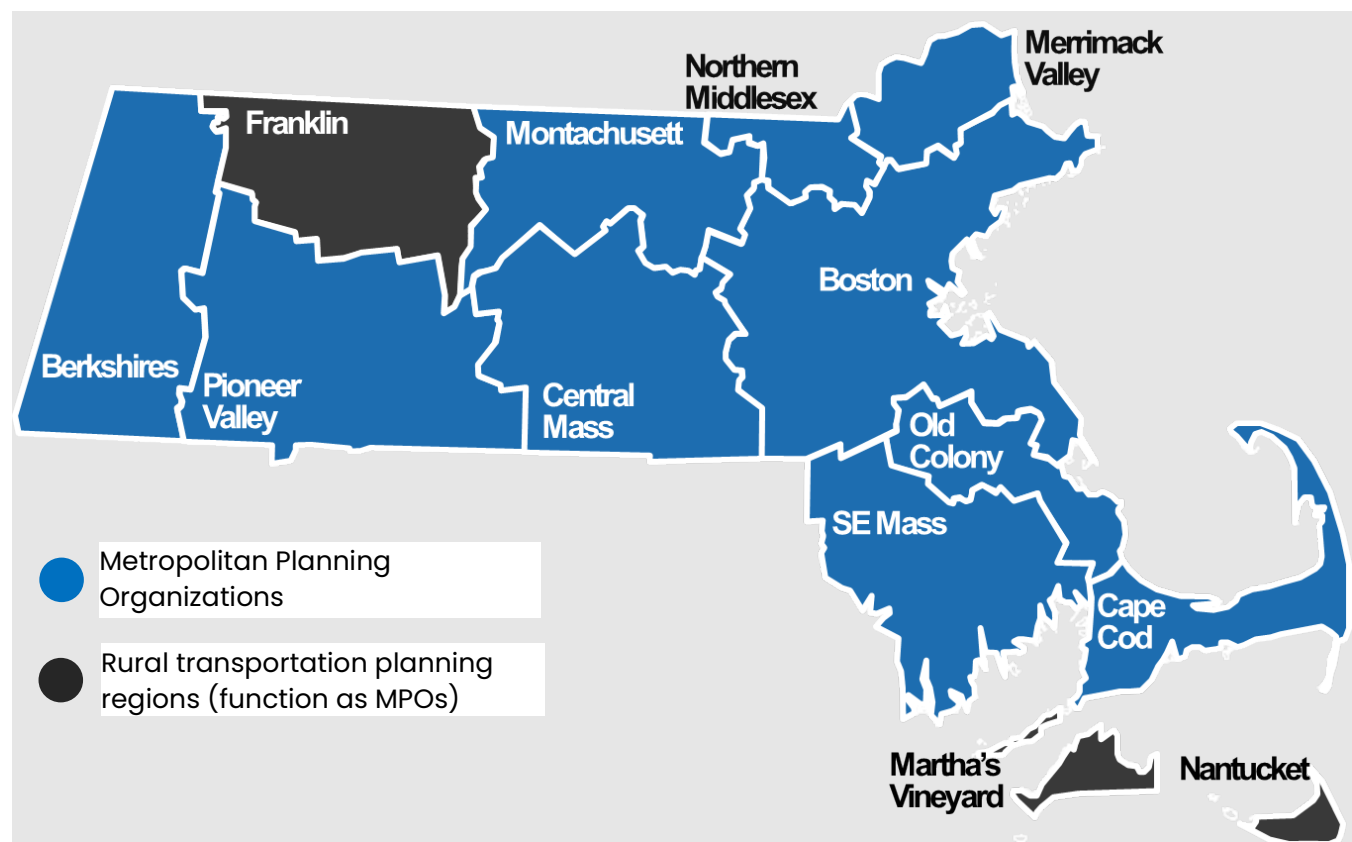
Local municipalities and Regional Planning Agencies (RPAs) partner with the MassDOT Highway Division to plan, design, permit, and construct highway, bridge, roadway, and intermodal investments annually. The MBTA and the fifteen (15) Regional Transit Authorities (RTAs) in Massachusetts, in cooperation with municipal officials and the MassDOT Rail and Transit Division, plan, develop, and implement transit investments. Together, these investments are listed in this document and constitute the State Transportation Improvement Program (STIP). The [MassDOT Project Viewer webpage](#) also provides information on STIP-funded projects.

The STIP is funded through federal sources contained in federal surface transportation authorization legislation, the most recent of which being the Infrastructure Investment and Jobs Act (IIJA) of 2021, also formerly known as the Bipartisan Infrastructure Law (BIL).

What is a Metropolitan Planning Organization (MPO)?

An MPO is a federally-mandated regional body made up of local, regional, and state officials. MPOs are responsible for transportation planning and for programming investments using federal surface transportation funds in their respective regions. In Massachusetts, each MPO has at least four common members: MassDOT Secretary & CEO, who serves as chair; MassDOT Highway Division Administrator; a representative from the respective Regional Planning Agency (RPA); and one from the relevant RTA for each region. Other members of MPOs are typically elected officials from sub-regional sets of municipalities. The MPOs in Massachusetts can be seen in Figure 1.

Figure 1 - Planning Regions in Massachusetts



Are RPAs and MPOs the same thing?

Although they have identical borders, MPOs and RPAs serve different functions. The MPO, which includes representatives from municipalities, state agencies, and RTAs, makes decisions regarding transportation investments in the region. The RPA, meanwhile, contracts with MassDOT to perform transportation planning tasks, such as data collection and analysis, which support the MPO's decision-making process. For the Boston MPO, the Central Transportation Planning Staff (CTPS) serves as the primary staff for the MPO. However, the Metropolitan Area Planning Council (MAPC), the Boston area RPA, also performs some of the MPO's planning and analysis functions.

What is a regional TIP?

Every year, each MPO region must prepare and update its Transportation Improvement Program (TIP), a five-year program of capital investments that reflects the needs of the regional transportation system. Under federal regulations, each TIP must:

- be constrained to available funding
- be consistent with its region's long-range Regional Transportation Plan (RTP)
- include an annual element or listing of investments to be advertised in the first year of the TIP

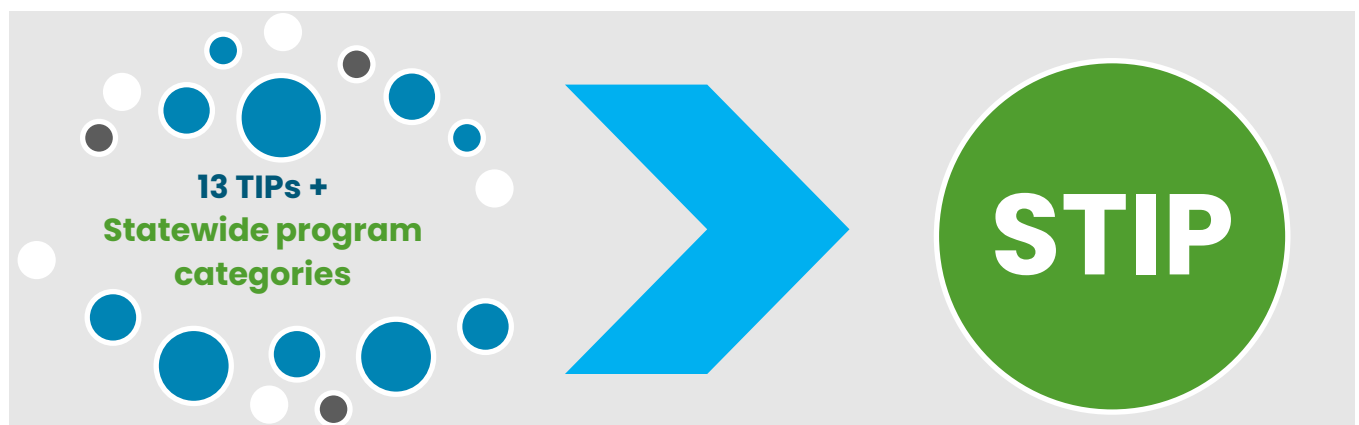
Like the STIP, regional TIPs are multimodal, featuring both roadway and transit projects.

How is the STIP developed?

The State Transportation Improvement Program (STIP) is a compilation of the thirteen regional Transportation Improvement Programs prepared annually by the state's ten Metropolitan Planning Organizations (MPOs); three rural regional Transportation Planning Organizations (TPOs) that function as MPOs; and statewide programs advanced by MassDOT (see Figure 2). It is a listing of priority transportation investments (highway and transit) listed by region and fiscal year. The STIP is compiled annually by the MassDOT Office of Transportation Planning (OTP), in coordination with the MassDOT Highway Division, MassDOT Rail & Transit Division, the MPOs, the RTAs, and MassDOT's Federal Aid Programming and Reimbursement Office (FAPRO). The proposed STIP is then reviewed and approved by state and federal transportation and environmental agencies.

The STIP must be financially constrained to the federal funding amounts that are allocated to Massachusetts. These investment lists undergo a comprehensive annual review and revision process and are updated as needed throughout the Federal Fiscal Year (FFY) to reflect changes including cost variations, project readiness, or shifting priorities.

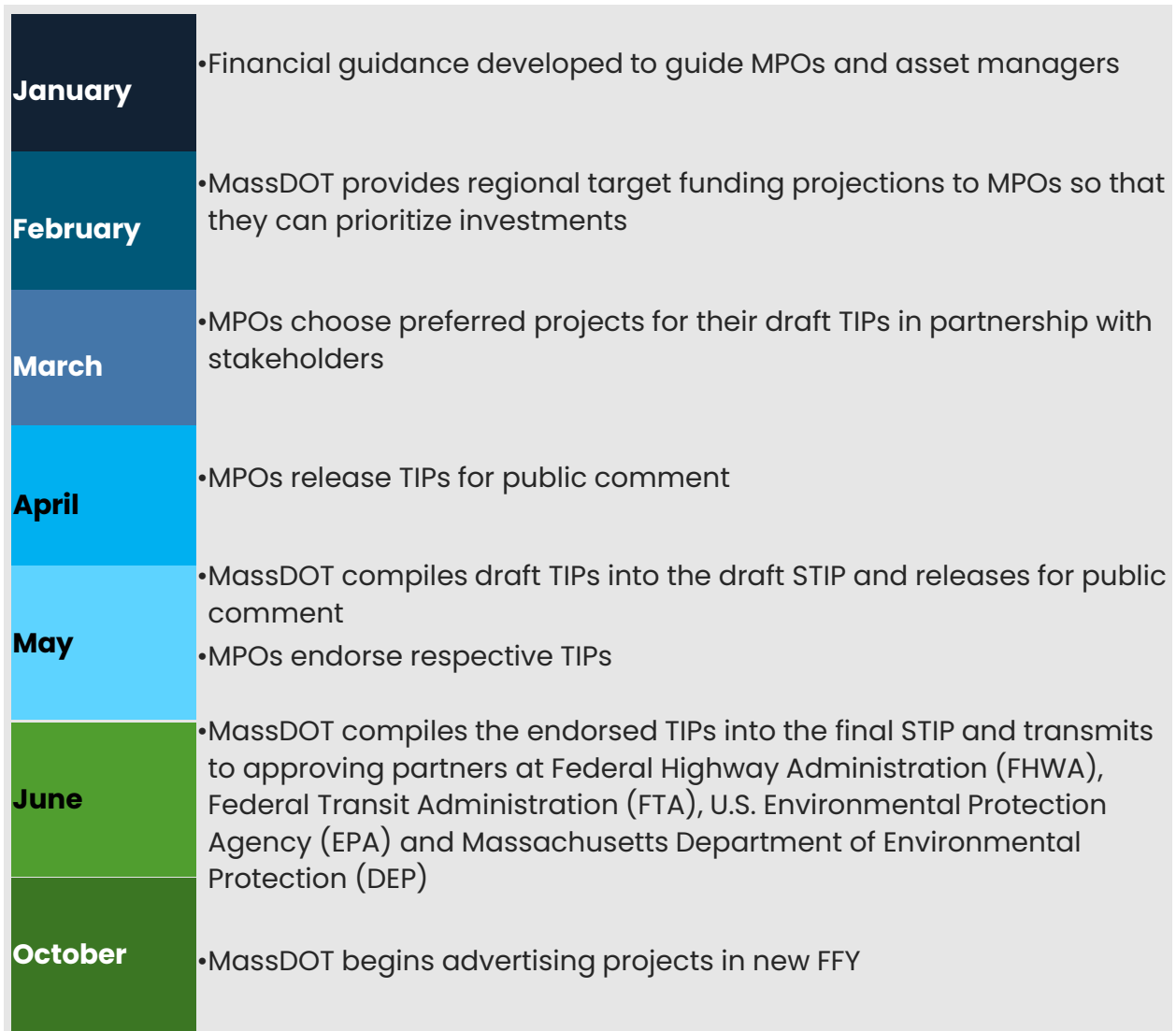
Figure 2 - Relationship between TIPs and the STIP



The STIP is also a subset of MassDOT's Capital Investment Plan (CIP). The CIP includes all investments using any funding sources available to MassDOT, while the STIP only lists federally-aided investments.

What is the STIP development timeline?

Figure 3 - STIP Development Timeline



Funding the STIP

How are budgets set for the STIP?

MassDOT receives a funding “authorization” or estimate of total available federal funding from the Federal Highway Administration (FHWA). The most recent authorization legislation is the Infrastructure Investment and Jobs Act (IIJA), which was passed in 2021 and includes authorization of approximately \$800 million annually for highway funding. Each year, Congress reviews the highway authorization during its budgeting process and sets a ceiling on how much can be spent from that authorization. This ceiling, called an obligation limitation, establishes the most MassDOT can spend in federal funding each year.

Each year during STIP development, there are some funding line items known before the rest is allocated to Massachusetts’ MPOs and Highway Division programs.

- Some federal funding is automatically withheld for the repayment of the Commonwealth’s Next Generation Bridge Program (formerly the Accelerated Bridge Program), which was established to significantly reduce the number of structurally deficient bridges statewide.
- Some funding is dedicated for statewide activities such as planning and adjustments.

After these line items are established, approximately one-third of the funds available are dedicated to MPOs for regional priority projects. This distribution is determined according to a formula that is primarily based on each MPO’s road mileage and population. The formula for distribution among the MPOs was developed by the Massachusetts Association of Regional Planning Agencies (MARPA), and is known as the “MARPA formula.” FTA Section 5307, 5337, and 5339 funds are directly apportioned to 12 of the 15 RTAs based on urbanized area population and the agreed-upon funding splits between other public transit agencies that fall into the Urbanized Zone Area (UZA). The other 3 “rural” RTAs are not direct recipients of FTA funding, instead receiving Section 5311 funds as sub recipients of MassDOT with funding splits based on formula.

What are the highway investment priorities and programs?

The 2027–2031 STIP continues the alignment of investments that are categorized the same way as they are in MassDOT’s Capital Investment Plan (CIP). MassDOT’s capital investment strategy focuses on priorities, programs, and then projects. Below are the programs found in the STIP.

Reliability Investments

These investments maintain and improve the overall condition and reliability of the transportation system. Reliability programs address the following:

- Necessary routine and capital maintenance
- State of Good Repair projects designed primarily to bring asset conditions up to an acceptable level
- Asset management and system preservation projects

Bridge Program

This program involves the maintenance, reconstruction, and replacement of state and municipally-owned bridges across the Commonwealth.

Interstate Pavement Program

This program is focused on resurfacing and performing related work on the interstate roads.

Non-interstate Pavement Program

This program involves resurfacing and performing related work on non-interstate roads owned by MassDOT.

Safety Improvements Program

This program, which is both state and federally funded, repairs traffic signals, highway lighting systems, impact attenuators, traffic signs, and pavement markings.

Highway Resiliency Improvement Program

This program prioritizes resiliency improvements, community resilience and evacuation routes, and at-risk coastal infrastructure. This program will be further developed in accordance with USDOT guidance on the PROTECT Formula Program (Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation).

Modernization Investments

Modernization investments enhance the transportation system to make it safer and more accessible while also accommodating growth. Modernization programs address the following:

- 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 demand on existing transportation systems

Accessibility Improvements Program

This program improves the condition and accessibility of state-owned sidewalks. This program is necessary to meet obligations identified under MassDOT's [ADA Transition Plan](#).

Intersection Improvements Program

This program upgrades traffic signals and intersections. This program is necessary to meet safety improvement targets.

Intelligent Transportation Systems Program

This program supports innovative and new communications equipment and information technology systems, including signs, cameras, and sensors, which are designed to provide real time traffic information to residents and visitors. This program is necessary to improve our network of communications tools and to allow drivers to make better informed decisions regarding travel options.

Roadway Reconstruction Program

This program improves the overall condition of roads by supporting both small and large state and municipal investments. It includes improvements to bicycle and pedestrian user facilities.

Carbon Reduction Program

This program supports projects that reduce transportation-related carbon dioxide emissions. Projects will be identified in accordance with a Statewide Carbon Reduction Development Strategy, which is included as an Appendix to this STIP document.

Expansion Investments

Expansion investments provide more diverse transportation options for communities throughout the Commonwealth. Expansion programs address the following:

- 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

Bicycle and Pedestrian Program

This program constructs multi-use paths and other trails that are independent from a roadway. In addition, this program will meet future needs identified through ongoing statewide bicycle and pedestrian planning efforts, including MassDOT's [Statewide Bicycle Plan](#) and [Statewide Pedestrian Plan](#).

Capacity Program

This program adds new connections or expands the existing transportation network.

Federal Funding Overview

The Massachusetts Department of Transportation's STIP for Federal Fiscal Years (FFYs) 2027–2031 is a five-year program reflecting planned federal aid investment in the Commonwealth's highway and transit infrastructure. As referenced above, the STIP reflects federal formula funding provided through the Infrastructure Investment and Jobs Act (IIJA) authorized by Congress in 2021 and signed into law in 2022. The IIJA apportioned funds between FFYs 2022 and FFY 2026.

Each year Congress reviews the overall highway authorization for states during its budgeting process and sets a ceiling on how much can be spent from that authorization. This ceiling, called an obligation limitation, establishes the most MassDOT can spend in federal funding each year. At the time of FFY 2027–2031 STIP Development, Massachusetts had an annual average of 90% obligation limitation on apportioned core federal highway funds going back from 2018; therefore, a 90% obligation limitation is anticipated annually across funding categories subject to obligation limitation. Funding categories subject to obligation limitation are identified as core formula programs.

At the time IIJA was signed into law, the Federal Highway Administration (FHWA) updated funding apportionments across several core formula funding categories, and it anticipated apportionments by year to these same categories. Funding apportionments in IIJA are assumed to increase 2% annually across core formula programs—except where otherwise level-funded—through FFY 2026. The same 2% annual increase is, therefore, assumed for FFY 2027–2031. Transit funding apportionments for Federal Transit Administration (FTA) programs are also assumed to increase 2% annually. To determine Massachusetts' estimated obligation authority in the highway program, MassDOT estimates 90% of overall apportionments plus an additional \$50 million annually of anticipated August Redistribution. This sum plus applicable state/local matches equals the total, non-earmarked funds that Massachusetts has available each year to program on the highway STIP.

Regional Transit Authorities (RTAs) are direct recipients of Federal Transit Administration (FTA) formula funds. The distribution of these funds is based largely on urbanized area boundaries, which do not align exactly with RTA service areas/jurisdictions. As such, the Massachusetts Association of Regional Transit Authorities (MARTA) establishes splits of these formula funds, which are then documented in 'split letters' published annually. FTA then

administers the apportionments directly to each RTA, as well as the state's share to MassDOT's Rail & Transit Division (RTD). The transit apportionments for formula programs in the STIP are the sum of apportionments as anticipated by RTAs in their budgets for each MPO's respective TIP.

There are several discretionary federal aid grant programs that applicable stakeholders within the Commonwealth apply to for funding at the local, regional, and state levels. Whenever a discretionary federal aid grant is awarded, they are amended onto the STIP either by the applicable MPO region or by MassDOT if it is a statewide action. Rather than classify every discretionary grant program in the STIP, these programs are captured as "Other Federal" (OF) on the Highway and Transit Programs. Details as to which discretionary grant program the OF funding is attributed from are reflected in the Other Information field for the respective STIP Investment. In instances when an RTA has either applied for or plans to apply for a federal discretionary grant program and the status of the application is still pending (i.e. no award announcement has been made), RTA partners collaborate with MPO partners to track these illustrative discretionary grants in their narrative TIP documents—not in the fiscally-constrained STIP Investments Table. If a discretionary grant's status changes from pending to awarded, then the STIP will be updated in accordance with the appropriate STIP Revision Procedures. More information on USDOT discretionary grants can be found at <https://www.transportation.gov/grants>.

Highway Funding Programs

MassDOT divides federal highway funding that it receives between “funding for regional priorities,” which is allocated at the discretion of the MPOs for regional priority projects on the federal aid transportation system, and funding that is allocated at MassDOT’s discretion. A summary of all Highway Funding Programs is as follows:

National Highway Freight Program

Source: National Highway Freight Program (NHFP)

Description: This program was established in December 2015 through the FAST Act and is continued in the BIL to improve the efficient movement of freight on the National Highway Freight Network (NHFN). Two percent of this program is set aside for State Planning and Research.

Bipartisan Infrastructure Law (BIL) allows States to use ≤30% (vs. 10% under previous law) of NHFP funding on freight intermodal or rail projects, subject to certain restrictions. BIL also adds eligibility for modernization/rehabilitation of a lock and dam or a marine highway corridor, connector, or crossing (including an inland waterway corridor, connector, or crossing) that are functionally connected to the National Highway Freight Network and are likely to reduce on-road mobile source emissions. More miles can also be designated as critical rural freight corridors and freight urban corridors. MassDOT has a process for flexing some of its NHFP funds to RTD for eligible non-highway investments. This is a core formula program.

Match Requirement: 10% for projects on the Interstate and 20% for all other projects

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nhfp.cfm>

National Highway Performance Program

Source: National Highway Performance Program (NHPP)

Description: NHPP provides support for the condition and performance of the National Highway System (NHS), including Interstate and non-Interstate routes and bridges. These investments ensure that federal-aid funds in highway construction are on eligible facilities and support progress toward achievement of national performance goals for improving infrastructure condition, safety, mobility, or freight movement on the NHS, and that they are consistent with metropolitan and statewide planning requirements. Two percent of this program is set aside for State Planning and Research. This is a core formula program.

More than 10% of the surface area of National Highway System (NHS) on-system bridges are structurally deficient in Massachusetts as documented in the Transportation Asset Management Plan (TAMP). As such, FHWA has implemented a recurring \$94,856,125 'bridge penalty' (PEN) that requires MassDOT to invest these NHPP funds in improving the condition of structurally deficient bridges. The outcome of the penalty is for a reduced surface area of structurally deficient bridges statewide. MassDOT also invests Bridge Formula Program (BFP) funds in investments that will accomplish this goal.)

Match Requirement: 10% for projects on the Interstate and 20% for all other projects

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nhpp.cfm>

Surface Transportation Block Grant

Source: Surface Transportation Block Program (STBG)

Description: STBG provides flexible funding for projects to preserve and improve conditions on and the performance of any federal-aid highway, bridge, or tunnel, as well as for projects on any public road (except local roads and rural minor collectors), pedestrian and bicycle infrastructure, and transit capital projects. Fifty-five percent of a state's STBG funds are to be distributed to areas based on population (sub-allocated), with the remainder to be used in any area of the state. A portion of STBG funds is to be set aside for bridges not on Federal-aid highways (off-system bridges). This is a core formula program.

Match Requirement: 10% for projects on the Interstate and 20% for all other projects

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/stbg.cfm>

Bridge-Off System

Source: Set-aside from STBG (STBG-BR-Off)

Description: The funding for Bridge-Off System comes from a set-aside from STBG. The amount equals to 20 percent of the State's FY2009 Highway Bridge Program apportionment. Funding is available for bridges and low water crossings on public roads other than on Federal-aid highways. This is a core formula program.

Match Requirement: 20% state match required

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/stbg.cfm>

Transportation Alternative Program

Source: Transportation Alternatives (a portion of the national total set-aside from STBG)

Description: This program supports smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, Safe Routes to School (SRTS) projects, community improvements, and environmental mitigation. MassDOT prioritizes the use of these funds for SRTS investments. Fifty-nine percent of the fund is suballocated to areas of the state based on population, with the remainder to be used in any area of the state. Additionally, an amount of funds equal to the state's FY2009 RTP apportionment is set aside for the Recreational Trails Program. This is a core formula program.

Match Requirement: 20% match required.

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/ta.cfm>

Recreational Trails

Source: Recreational Trails Program, RTP (set-aside from Transportation Alternatives)

Description: The Recreational Trails Program (RTP) provides funds to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. These include hiking, bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles. This is a core formula program.

Match Requirement: 20% state match required

FHWA Website: https://www.fhwa.dot.gov/environment/recreational_trails/

Highway Safety Improvement Program

Source: Highway Safety Improvement Program (HSIP), Vulnerable User Safety (VUS)

Description: HSIP funds safety improvements to reduce the number and severity of crashes at dangerous locations. A highway safety improvement investment is any strategy, activity, or project on a public road that is consistent with each state's data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or addresses a highway safety problem. BIL adds eligibility ($\leq 10\%$ of HSIP funds) for specified safety projects (including non-infrastructure safety projects related to education, research, enforcement, emergency services, and safe routes to school) and modifies the HSIP definition of highway safety improvement projects by adding or clarifying some project types. BIL also requires states to complete vulnerable road user (VRU) safety assessments and adds a new special rule for states with annual VRU fatalities comprising $\geq 15\%$ of total annual crash fatalities. Two percent of this program is set aside for State Planning and Research. This is a core formula program.

Massachusetts annual vulnerable road user fatalities have comprised greater than 15 percent of total annual crash fatalities in recent years. As such, FHWA implemented a penalty that requires MassDOT to spend no less than 15 percent of Highway Safety Improvement Program apportionments on highway safety improvement projects to address the safety of vulnerable road users.

Match Requirement: 10% match required

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/hsip.cfm>

RLWY/HWY Crossings – Hazard Elimination

Source: Railway-Highway Crossings Program, RHCP (a set-aside from HSIP)

Description: This program provides funds for safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings. Safety improvements include the separation or protection of grades at crossings, the reconstruction of existing railroad grade crossing structures, the relocation of highways to eliminate grade crossings, and projects at grade crossings to eliminate hazards posed by blocked grade crossings due to idling trains. This is a core formula program.

Match Requirement: No match required

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/rhcp.cfm>

RLWY/HWY Crossings – Protective Devices

Source: Railway-Highway Crossings Program, RHCP (a set-aside from HSIP)

Description: This program provides funds for safety improvements to reduce the number of fatalities, injuries, and crashes at public railway-highway grade crossings. Safety improvements include the separation or protection of grades at crossings, the reconstruction of existing railroad grade crossing structures, the relocation of highways to eliminate grade crossings, and projects at grade crossings to eliminate hazards posed by blocked grade crossings due to idling trains. This is a core formula program.

Match Requirement: No match required

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/rhcp.cfm>

CMAQ

Source: Congestion Mitigation and Air Quality (CMAQ) Improvement Program

Description: CMAQ provides a flexible funding source for transportation investments to help meet the requirements of the federal Clean Air Act. Funding is available to help reduce congestion and improve air quality for areas that do not meet the National Ambient Air Quality Standards for ozone, carbon monoxide, or particulate matter (nonattainment areas) and for former nonattainment areas that are now in compliance (maintenance areas). The Bipartisan Infrastructure Law (BIL) adds project eligibilities for shared micro mobility, purchase of diesel replacements; purchase of medium/heavy-duty zero emission vehicles and related charging equipment; and modernization/rehabilitation of a lock and dam or a marine highway corridor, connector, or crossing, if certain criteria are met ($\leq 10\%$ of CMAQ funds). Two percent of this program is set aside for State Planning and Research. This is a core formula program.

Match Requirement: 10% for projects on the Interstate and 20% for all other projects. In circumstances where CMAQ funding is being used for bikeway wayfinding signage projects, FHWA provides 100% federal aid match to those projects. As such, these project(s) are tagged as "CMAQ100" in the Massachusetts STIP.

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/cmaq.cfm>

Statewide Planning

Source: State Planning and Research (2% set-aside from the state's NHPP, STBG, HSIP and CMAQ apportionments)

Description: Statewide Planning funding supports the MassDOT State Planning and Research (SPR) Work Program, which includes planning work, research studies, and trainings. In addition to funding the SPR Work Program, Massachusetts funds rural regional Transportation Planning Organizations' (TPOs) planning activities with Statewide Planning. The amount allocated to TPOs for their planning activities is adjusted year-to-year based on the change in funding experienced by the MPOs for their Metropolitan Planning funds. This is a core formula program.

Match Requirement: 20% match required

FHWA Website: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/metro_planning.cfm

Metropolitan Planning

Source: Metropolitan Planning Program (MPP)

Description: This program establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. MassDOT is required to suballocate funds to metropolitan planning organizations (MPOs). Metropolitan Planning funds and Section 5303 funds are combined and administered as a Combined Planning Grant. The funds are allocated to MPOs based on a formula developed by the Massachusetts Association of Regional Planning Agencies (MARPA). This formula allocates 40% of the funds equally among the MPOs, 30% of the funds based on each MPO's relative share of Massachusetts' population, and 30% based on each MPO's relative share of urbanized population. Each MPO uses their allocated amount for Unified Planning Work Program (UPWP) contracts. This is a core formula program.

Match Requirement: 20% match required

FHWA Website: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/metro_planning.cfm

PROTECT

Source: Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program

Description: Established in 2021 as part of the Bipartisan Infrastructure Law (BIL), the PROTECT program provides funding for resiliency improvements; community resilience and evacuation routes; and at-risk coastal infrastructure. Highway, transit, and certain port projects are also eligible. The state may use up to 40% of PROTECT funds on new capacity projects and up to 10% on development phase activities.

Match Requirement: 20% state match with up to an additional 10 percentage points reduction if the state prioritized projects on a Resilience Improvement Plan and incorporated the plan with metropolitan transportation plan or the statewide long-range transportation plan.

FHWA Website: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/protect_fact_sheet.cfm

Carbon Reduction

Source: Carbon Reduction Program (CRP)

Description: This program provides funding for projects that reduce transportation emissions or supports the development of carbon reduction strategies. States, in consultation with MPOs, are required to develop and update every 4 years a carbon reduction strategy and submit it to FHWA for approval. Sixty-five percent of a state's CRP funds are to be distributed to areas based on population (suballocated), with the remainder to be used in any area of the state. This is a core formula program that was first included in the Bipartisan Infrastructure Law. The Carbon Reduction Strategy is included as an Appendix.

Match Requirement: 10% for projects on the Interstate and 20% for all other projects

FHWA Website: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/crp_fact_sheet.cfm

Bridge Formula Program

Source: Bridge Formula Program (BFP)

Description: Formerly known as the Highway Infrastructure Program (HIP), these funds are federal highway apportionments distributed to the Commonwealth from FFY 2022 to 2026. The purpose of this program is to replace, rehabilitate, preserve, protect, and construct bridges on public roads. Fifteen percent of BFP funds are reserved for off-system bridges. This is a non-core formula program and not subject to obligation limitation. Projects on the STIP using these funds may have a program line ending in NB, indicating New Bridge Program (now known as BFP).

Match Requirement: 10% for projects on the Interstate; 20% for on-system National Highway System (NHS) projects, or for off-system bridges not owned by a local agency; no match required for locally owned off-system bridges

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/bfp.cfm>

NHPP - Exempt

Source: National Highway Performance Program (NHPP)

Description: NHPP – Exempt is used to note the portion of the NHPP funds that is not subject to obligation limitation. NHPP provides support for the condition and performance of the National Highway System (NHS), including Interstate and non-Interstate routes and bridges. These investments ensure that federal-aid funds in highway construction are on eligible facilities and support progress toward achievement of national performance goals for improving infrastructure condition, safety, mobility, or freight movement on the NHS, and that they are consistent with metropolitan and statewide planning requirements. Two percent of this program is set aside for State Planning and Research. This is a non-core formula program and not subject to obligation limitation.

Match Requirement: 10% for projects on the Interstate and 20% for all other projects

FHWA Website: <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/nhpp.cfm>

Ferry Boat Program

Source: Ferry Boat Program (FBP)

Description: This program provides funding for the construction of ferry boats and ferry terminal facilities. The Bipartisan Infrastructure Law (BIL) expanded eligibilities to include procurement of transit vehicles used exclusively as an integral part of an intermodal ferry trip; ferry maintenance facilities; and operating costs for eligible entities. This is non-core formula and not subject to obligation limitation.

Match Requirement: 15% for projects to replace/retrofit diesel fuel ferry vessels that provide substantial emissions reduction (this authority terminates on September 30, 2025), 20% for other projects.

FHWA Website: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/fbp_fact_sheet.cfm

Transportation Bond Bill Funding

The Massachusetts Legislature passes transportation bond bills to provide state resources for investments in transportation. This provides the Commonwealth with authorization to issue bonds to support transportation capital expenditures. Such expenditures include matching funds for federally-funded STIP investments, both highway and transit, and Chapter 90 reimbursement funds for local transportation projects. The Executive Office of Administration and Finance issues bonds at its discretion subject to legislative authorization established in transportation bond bills and subject to overall “bond cap” limits on the Commonwealth’s debt obligations.

Next Generation Bridge Program (NGBP)

Massachusetts’ Next Generation Bridge Program focuses on funding bridge preservation and the bundling of smaller MassDOT bridge projects. These projects will be advertised for construction during the 5-year STIP period and are initially funded with non-federal aid funding (i.e. state funds), and will be repaid in the future with debt repayments using federal aid. This is reflected in the Highway Funding Program as Grant Anticipation Notes (GANS).

On the following pages are the Highway funding tables presented by federal fiscal year.

Transit Funding Programs

5303 – Metropolitan Planning

Source: Section 5303 Metropolitan Planning

Description: Section 5303 funds are used by MPO staff for transit planning as part of the Unified Planning Work Program (UPWP) developed each year. Funds are apportioned to the state, which then sub-allocates them to MPOs. Since 2019, MassDOT has been transferring 5303 funds from FHWA to FTA to be used as part of a Consolidated Planning Grant (CPG), which funds each region's UPWP.

Match Requirement: 20% match required

FTA Website: <https://www.transit.dot.gov/funding/grants/metropolitan-statewide-planning-and-nonmetropolitan-transportation-planning-5303-5304>

5304 – Statewide Planning

Source: Section 5304 Statewide Planning

Description: Funds from Section 5304 supplements state planning and research funds that the state receives from FHWA. It is used for statewide planning efforts and funds planning studies. MassDOT transfers Section 5304 funding from FTA to FHWA for use in the annual State Planning & Research (SPR) Work Program.

Match Requirement: 20% match required

FTA Website: <https://www.transit.dot.gov/funding/grants/metropolitan-statewide-planning-and-nonmetropolitan-transportation-planning-5303-5304>

5307 - Urbanized Area Formula Grant

Source: Urbanized Area Formula Grants – 5307

Description: Section 5307 program funds are used for public transportation capital and operating assistance and for transportation-related planning. Eligible activities include planning, engineering design, capital investments in bus and bus-related activities, crime prevention and security equipment, construction of maintenance and passenger facilities, and capital investments in new and existing fixed guideway systems including rolling stock, the overhaul and rebuilding of vehicles, track, signals, communications, and computer hardware and software.

In instances when an MPO or the state decides to transfer Carbon Reduction highway apportionment to an RTA serving an urbanized area for electrification investments consistent with the Carbon Reduction Strategy, these investments are tracked as 5307CR in the STIP. Please note that 5307CR is not additional apportionment.

Match Requirement: 15% for the cost of vehicles related to compliance with Americans with Disabilities Act and the Clean Air Act; 10% for the cost of vehicle-related equipment attributable to compliance with the Americans with Disabilities Act and the Clean Air Act; 50% for the net project cost of operating assistance; 20% for all other projects

FTA Website: <https://www.transit.dot.gov/funding/grants/urbanized-area-formula-grants-5307>

5309 - Fixed-Guideway Capital Investment Grants

Source: Capital Investment Grants – 5309

Description: Section 5309 provides grants for new and expanded rail, bus rapid transit, and ferry systems that reflect local priorities to improve transportation options in key corridors. This program includes a category known as core capacity projects, which expand capacity by at least 10% in existing fixed-guideway transit corridors that are already at or above capacity today, or are expected to be at or above capacity within five years.

Match Requirement: 40% for projects on design and construction of new fixed-guideways or extensions to fixed guideways; 20% for other projects

FTA Website: <https://www.transit.dot.gov/funding/grants/fact-sheet-capital-investment-grants-program>

5310 - Enhanced Mobility of Seniors & Individuals with Disabilities

Source: Enhanced Mobility of Seniors & Individuals with Disabilities – Section 5310

Description: Section 5310 program funds are used to improve mobility for seniors and individuals with disabilities. FTA provides financial assistance for transportation services that are planned, designed, and carried out to meet the special transportation needs of elderly individuals and individuals with disabilities in all areas—urban, small urban, and rural. MassDOT allocates Section 5310 funds on a competitive basis to eligible recipients via its Community Transit Grant Program in combination with State Mobility Assistance Program (MAP) funds.

Match Requirement: 50% for operating assistance; no match required for program administrative costs; 20% for other projects

FTA Website: <https://www.transit.dot.gov/funding/grants/enhanced-mobility-seniors-individuals-disabilities-section-5310>

5311 - Formula Grant for Rural Areas

Source: Formula Grants for Rural Areas – 5311

Description: Section 5311 program funds are used to enhance access for people in nonurbanized areas to health care, shopping, education, employment, public services, and recreation. It is also used to assist in the maintenance, development, improvement, and use of public transportation systems in non-urbanized areas.

In instances when an MPO or the State decides to transfer Carbon Reduction highway apportionment to an RTA serving rural areas for electrification investments consistent with the Carbon Reduction Strategy, these investments are tracked as 5311CR in the STIP. Please note that 5311CR is not additional apportionment.

Match Requirement: 20% for capital projects and Americans with Disabilities Act (ADA) non-fixed route paratransit service; 50% for operating assistance

FTA Website: <https://www.transit.dot.gov/rural-formula-grants-5311>

5337 - State of Good Repair Grants

Source: State of Good Repair Grants – 5337

Description: Section 5337 is a formula-based State of Good Repair Program dedicated to repairing and upgrading the nation's rail transit systems along with high-intensity motor bus systems that use high-occupancy vehicle lanes, including bus rapid transit (BRT).

Match Requirement: 20% match required

FTA Website: <https://www.transit.dot.gov/funding/grants/state-good-repair-grants-5337>

5339 - Bus & Bus Facilities

Source: Grants for Buses and Bus Facilities Formula Program – 5339(a)

Description: Section 5339 program funds are used to rehabilitate, replace, and purchase buses and related equipment as well as construction of bus related facilities.

Match Requirement: 20% match required

FTA Website: <https://www.transit.dot.gov/funding/grants/busprogram>

Statewide Funds

Regional Transit Authority Capital Assistance – RTACAP

RTACAP involves state funding primarily used for RTA capital projects, including matching funds for federally-funded projects.

Mobility Assistance Program - MAP / GOBOND

MAP funds are state capital dollars provided to transit agencies, Councils on Aging, and private non-profits for the purchase of vehicles to be used in the provision of transportation services to the elderly and persons with disabilities. MAP is administered by MassDOT under the Section 5310 program through an application process (see p. 37).

State Contract Assistance - SCA

SCA funds are state operating assistance for transit, provided through the Commonwealth Transportation Fund (CTF) and the Massachusetts Transportation Trust Fund (MTTF). These funds are used for operating expenditures through contracts between the RTAs and MassDOT's Rail and Transit Division.

Transportation Development Credits - TDC

FHWA and FTA allow states to substitute certain previously financed toll investments for state matching funds that are required for federal projects. This permits states to use TDCs, commonly known as Toll Credits, to match federal funds.

Education and Transportation Fund (Fair Share) - ETF

A 4 percent surtax on income above \$1 million annually (approved by MA voters in November 2022) known as the Fair Share amendment is constitutionally dedicated to “quality public education and affordable public colleges and universities, and for the repair and maintenance of roads, bridges, and public transportation.” Fair Share spending is generally intended to supplement investments already planned for in the CIP/STIP.

Other Funds

These funds include any local contributions to transit operations. They can include Local Funds (LF), Other Non-Federal Funds (ONF), or [Volkswagen Settlement Funds](#) (VWSF). The table below shows the total funding programmed between 2027-2031 by transit provider.

Transit provider	2027-2031 total funding programmed:
Berkshire Regional Transit Authority	\$89,984,842
Brockton Area Transit	\$112,298,875
Cape Ann Transit Authority	\$12,634,000
Cape Cod Regional Transit Authority	\$314,665,741
Franklin Regional Transit Authority	\$478,500
Greater Attleboro-Taunton Regional Transit Authority	\$75,634,974
Lowell Regional Transit Authority	\$155,319,316
Massachusetts Bay Transportation Authority	\$3,180,285,394
Merrimack Valley Regional Transit Authority	\$113,707,000
MetroWest Regional Transit Authority	\$110,219,923
Montachusett Regional Transit Authority	\$51,701,403
Nantucket Regional Transit Authority	\$32,552,750
Pioneer Valley Regional Transit Authority	\$122,516,441
Southeastern Regional Transit Authority	\$254,062,360
Vineyard Transit Authority	\$101,806,212
Worcester Regional Transit Authority	\$66,073,838
MassDOT	\$186,189,842
Total	\$4,980,131,411

Note: Total funding programmed includes federal, state and local sources

Programming the STIP

How is a TIP developed?

Development of a TIP is a cooperative effort among MPO members, communities, and elected officials. MPO staff and MassDOT jointly manage the roadway, bridge and intermodal portion of the TIP. The Office of Transportation Planning (OTP) and the MassDOT Highway Division District Offices generally represent the MassDOT Secretary & CEO and the MassDOT Highway Division Administrator during the development of the TIP. The Chief Engineer, Highway Engineering, Right of Way, and Environmental departments participate in the development of each regional TIP through the annual “TIP Readiness Days” in which recommendations are made to each MPO’s staff concerning proposed investments.

As projects progress through the development process, funding must be identified in order for them to be constructed. MassDOT and our MPO partners utilize an evaluation process to consider the merits of each project. MPOs use established Transportation Evaluation Criteria to score projects, while MassDOT utilizes asset management systems for reliability projects and an evaluation system which was established in 2016. This evaluation system is multimodal and was developed by the Project Selection Advisory Council which was established by the Legislature. After evaluation, MPOs convene to choose projects for their respective regional TIPs. Stakeholders are encouraged to participate in the project prioritization process, as well as, community-based organizations and social service agencies, to ensure that the views and opinions of all transportation users are considered in the decision-making process.

The TIP development process begins with a public announcement and solicitation of investments from community partners to be recommended for TIP programming. Based on the scoring of projects and public input, each MPO supported by MassDOT develops a preliminary proposal of highway investments to be funded. For transit, each RTA works with MPO staff and MassDOT to develop a preliminary proposal for transit projects to be funded. The boards for each respective MPO vote to release respective TIP for a twenty-one day public comment period. During this time, the TIP is reviewed by each MPO’s advisory committee which provides feedback. Finally, each MPO meets to formally endorse its TIP.

How does MassDOT involve the public?

Since the STIP is a compilation of regional TIPs – containing both state and regional projects – MassDOT utilizes the public outreach programs of each of the MPOs to gain feedback and hear regional perspectives. Once the STIP is assembled, a draft version is published on MassDOT’s website (<https://www.mass.gov/service-details/state-transportation-improvement-program-stip>) and MPOs are requested to inform their stakeholders of the opportunity to comment. After the close of a 21-day public comment period, MassDOT summarizes and considers all comments received, and includes the comments received in the Appendix of the STIP.

At the same time as when the STIP is available for public comment, MassDOT also releases its five-year Capital Investment Plan (CIP) for public review. Given that the CIP includes all investments programmed in the STIP, MassDOT treats comments received during that process as additional comments for the STIP. After the close of a 21-day comment period, MassDOT summarizes and considers all comments received, and includes the comments and responses in the Appendix of the STIP. This process complies with the guidance outlined in MassDOT’s Public Participation Plan.

How are projects added or removed from the STIP?

The STIP is a “living” document and is likely to be modified by MPOs in their respective TIPs during the course of the year. Modifications require formal MPO endorsement, including a public comment period for a TIP “amendment,” a process that can take up to twelve weeks due to monthly meeting schedules and federal approval. In some cases, however, the change can be accomplished through a TIP “adjustment,” with MPO member consensus. MPO staff advise on which procedure is needed based on each MPO’s bylaws. Once an adjustment or amendment occurs on a regional TIP, it is transmitted to MassDOT to adjust or amend the STIP. Following STIP modification, MassDOT requests approval from our federal partners.

Should MassDOT need to amend the STIP for investments that do not appear on a regional TIP, MassDOT releases the draft amendment for a twenty-one day public comment period. Information on the proposed changes, comment period, and ways to comment will be provided on the STIP webpage. MassDOT also publishes legal notices in news outlets. Once the public comment period ends, MassDOT documents the process by providing a summary of the

2027-2031 State Transportation Improvement Program

comments received and MassDOT's responses as part of the STIP amendment document, which is available on the STIP webpage after it is submitted to FHWA and FTA. If no comments are received, MassDOT will also note accordingly.

For more information on MassDOT's STIP amendment and adjustment procedures, please see Appendix B.

Federal Emphasis Areas

Performance-Based Planning

Performance-based planning refers to the process of tracking progress toward achieving critical federal transportation goals, including safety, the condition of both roadway and transit infrastructure, travel time reliability, and congestion, among others. The establishment of performance targets helps MassDOT make strategic decisions and identify the most crucial transportation needs in Massachusetts.

The transition to performance-based planning was established under MAP-21 and is continued under the current federal transportation authorization, “Infrastructure Investment and Jobs Act” (IIJA or commonly known as the Bipartisan Infrastructure Law or BIL). Since the passage of the previous federal transportation authorization act (FAST Act) in 2015, the Federal Highway Administration (FHWA) has published several rules in the Federal Register related to the National Performance Management Measure Regulations, which assess the performance of federal funding programs and the planning process. Additionally, the Federal Transit Administration (FTA) has developed rules to establish a systematic process for tracking and improving both public transportation capital assets and transit safety. These rules establish a set of performance measures for state DOTs and MPOs to adhere to.

MassDOT, through OTP and the Office of Performance Management and Innovation (OPMI), works with a sub-committee of representatives from the MPOs, called the Transportation Manager’s Group (TMG), on the implementation of performance-based planning. TMG includes representatives from each of the RPAs in the Commonwealth who convene regularly to discuss pertinent transportation planning topics. This meeting is attended by OTP, MassDOT Highway Division, FHWA, and FTA. The TMG sub-committee facilitated the development and adoption of the Commonwealth’s “Performance Based Planning and Programming Agreement” by and among MassDOT, the MPOs, TPOs and RTAs in the Commonwealth. Sub-committee coordination also facilitated adoption of MassDOT’s safety measures (PM1) by all MPOs annually from February 2018 to 2026.

Sub-committee work also aided with the establishment of measures addressing pavement and bridge condition (PM2) and system performance targets (PM3), which were submitted as part of MassDOT's baseline federal reporting on December 16, 2022, and subsequently adopted by the MPOs by March 2023. The State Biennial Performance Report for Performance Period 2022-2025 was successfully submitted by MassDOT with the support of the sub-committee, which included two 4-year target adjustments under PM3 to the Springfield, MA—CT and Worcester, MA—CT Urbanized Areas.

A more detailed description of how each measure was set is outlined in the sections below.

MassDOT Emphasis Areas

MassDOT develops an annual performance management report entitled Tracker containing performance targets for emphasis areas developed at the state level. The most recent [2025 Tracker Report](#) summarizes MassDOT's performance for Fiscal Year 2025 (July 2024 through June 2025). Performance is reported for MassDOT's four operational Divisions: Highway, Aeronautics, Registry of Motor Vehicles and Rail & Transit, as well as the MBTA. MassDOT and the MBTA use the data and performance targets within this report to make strategic decisions and to size funding programs for their respective Capital Investment Plans (CIP). The next Tracker Report is anticipated to be published in December of 2026.

2027-2031 State Transportation Improvement Program

The national performance goals for the federal highway programs are as follows:



Safety

- To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.



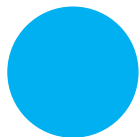
Infrastructure condition

- To maintain the highway infrastructure asset system in a state of good repair



Congestion reduction

- To achieve a significant reduction in congestion on the National Highway System



System reliability

- To improve the efficiency of the surface transportation system



Freight movement and economic vitality

- To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development



Environmental sustainability

- To enhance the performance of the transportation system while protecting and enhancing the natural environment



Reduced project delivery delays

- To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion by eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices

2027-2031 State Transportation Improvement Program

The Federal Highway Administration's (FHWA) Performance Measures (PM) established under MAP-21 and continued under the BIL are described below:

FHWA Performance Measures	Targets	Next Target Setting Deadline (MassDOT)
Safety (PM1)	- Serious Injuries / Fatalities by Calendar Year, (five-year rolling averages and rates per 100 million VMT) - Nonmotorized serious injuries and fatalities (five-year rolling averages)	<i>Established August 30, 2017</i> Updated February 28, 2026 Interval: Each Calendar Year
NHS Bridge and Pavement Condition (PM2)	% Pavement lane miles of the Interstate System in good and poor condition % Pavement lane miles of the Non-Interstate NHS in good and poor condition % NHS Bridge decks in good and poor condition	<i>Established December 16, 2022</i> Full Performance Period Progress Report: October 1, 2026 Baseline Performance Period Report: October 1, 2026 Interval: 4 years
CMAQ and Freight (PM3)	- Truck travel time reliability (TTTR) - Level of travel time reliability (LOTTR) on the Interstate and Non-Interstate - Peak hour excessive delay (PHED) per capita by Urbanized Area (UZA) % Non-Single Occupancy Vehicle (SOV) travel by UZA - Air pollutant emissions	<i>Established December 16, 2022</i> Full Performance Period Progress Report: October 1, 2026 Baseline Performance Period Report: October 1, 2026 Interval: 4 years

Safety Performance Measures (PM1)

In all safety categories, MassDOT has established a long-term target of “Toward Zero Deaths” consistent with FHWA goals and MassDOT’s Tracker Report. MassDOT will be establishing safety targets for MPOs to consider for adoption each calendar year. While MPOs are not required by FHWA to report on annual safety performance targets, FHWA guidelines require MPOs to adopt MassDOT’s annual targets or perennially establish their own.

The calendar year (CY) 2026 5-year rolling average (2022-2026) safety targets established by MassDOT and adopted by all thirteen (13) MPOs in February 2026 are as follows:

- 1) **Fatalities:** The target number of fatalities is 357, down from an average of 376 for 2021-2025.
- 2) **Rate of Fatalities per 100 million VMT:** The target fatality rate is 0.56, down from the 0.60 average for 2021-2025.
- 3) **Serious Injuries:** The target number of serious injuries is 2,562, down from an average of 2,726 for 2021-2025.
- 4) **Rate of Serious Injuries per 100 million VMT:** The serious injury rate target is 4.03, down from an average of 4.35 for 2021-2025.
- 5) **Total Number of Combined Serious Injuries and Fatalities for Non-Motorized Modes:** The target number of fatalities and serious injuries for non-motorists is 512, down from the average of 527 for 2021-2025.

MassDOT’s targets will be pursued by implementing strategies from the [Strategic Highway Safety Plan](#) and the [Vulnerable Roadway User Safety Assessment](#), which were updated and finalized in 2023. Each plan provides a framework for how the Commonwealth will employ multidisciplinary and multiagency strategies to make Massachusetts’ roadways safer for all people.

Moving forward, MassDOT, in coordination with the MPOs, is actively seeking to improve data collection and methodology for bicycle and pedestrian counts, and to continue analyzing crash clusters and traffic counts that include both motorized and non-motorized modes to address safety issues at these locations. Part of the effort to mitigate safety concerns at conflict points includes coordination with our regional partners on MassDOT’s [Statewide Bicycle Plan](#) and [Statewide Pedestrian Plan](#). A pilot project for a bicycle and pedestrian counting program was completed in 2021 that has informed a permanent counting program, including the expansion of continuous count stations, and the use of portable short-term counters that started in summer

2023. The portable counters continue to be used at changing locations to support the data needs of MassDOT projects. The utilization of bicycle activity data through the Replica platform has complimented ongoing efforts to refine existing methodologies for effective project implementation. MassDOT's [Bicycle Facility Inventory](#) helps to inform data performance measures related to both the Statewide Bicycle and Pedestrian Transportation Plans. These updates have laid the foundation for an improved public-facing statewide map detailing all bicycle and pedestrian projects funded for construction and under construction.

MassDOT's most recently completed study effort is the [Next Generation Pedestrian and Bicycle Vision Map](#), an analysis that provides MassDOT with a roadmap of recommended pedestrian and bicycle infrastructure projects in the foreseeable future. This project and its outcomes directly support MassDOT in prioritizing its capital investments and achieving its transportation vision as established within the recently completed Beyond Mobility 2050 Transportation Plan. The core values of the Beyond Mobility Plan were integrated within this planning effort, including a priority focus on safety. The products of this planning effort include a web map of infrastructure gaps, and statistics and maps on prioritized project locations across all 13 MPOs.

Safety Investments

The increase in pedestrian activity and a willingness to share street space to improve business and commerce remains steady along with strong commitments to green and open spaces in our communities. MassDOT, the MPOs and our municipal partners have continued investing in "Complete Streets," bicycle and pedestrian assets, intersections, and safety improvements in both the Capital Investment Plan (CIP) and Statewide Transportation Improvement Program (STIP) that address increasing mode share while incorporating safety mitigation elements into projects. In the FFY 2027-2031 STIP there is approximately \$322.8 million in Highway Safety Improvement Program (HSIP) investments that have been identified. Although a portion of HSIP funding is programmed within MassDOT's Safety Improvements Program, much of it is dispersed across the Intersection Improvements and Roadway Reconstruction Programs as well. Additionally, MPOs fund HSIP projects using their regional target funding.

Based on a ruling in the BIL and MassDOT's findings in the Vulnerable Roadway User Safety Assessment, 15% of HSIP funds are set aside for Vulnerable User Safety (VUS) projects each year. The VUS program will fund

investments based on the program of strategies identified in MassDOT's latest plan, which includes site-specific high-crash locations and lower-cost systemic improvements.

The table below displays the total amount of HSIP funding programmed within each year of the STIP as well as the VUS set aside. Consistent with federal guidance on using HSIP funding to advance the goal areas identified in PM1 within the Safety Performance Measures Final Rule, MassDOT is committed to programming the annual HSIP apportionment to the extent practicable. However, it is important to note that the HSIP funding which is programmed is limited to annual obligation authority and available carryover balances, and for this reason the funding programmed may be greater than or less than the specific apportionment.

Year	Highway Safety Improvement Program (HSIP) Apportionment	HSIP Vulnerable User Safety (VUS) Set Aside	HSIP Funding Programmed
2027	\$40,940,496	\$7,398,885	\$63,607,994
2028	\$41,759,306	\$7,546,863	\$58,162,106
2029	\$42,594,492	\$7,697,800	\$67,850,405
2030	\$43,446,382	\$7,851,756	\$75,201,304
2031	\$44,315,309	\$8,008,791	\$58,007,701
Total	\$213,055,985	\$38,504,095	\$322,829,510

Bridge & Pavement Performance Measures (PM2)

In December 2022, MassDOT adopted statewide targets for pavement and bridge conditions. In setting these targets, MassDOT followed FHWA guidelines by measuring bridge and pavement condition using the 9-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. Two-year and four-year targets were set for six individual performance measures: percent of bridge deck area in good condition; percent of bridge deck area in poor condition; percent of Interstate pavement in good condition; percent of Interstate pavement in poor condition; percent of non-Interstate pavement in good condition; and percent of non-Interstate pavement in poor condition. All of the above performance measures are tracked in greater detail in MassDOT's 2024 [Transportation Asset Management Plan \(TAMP\)](#). The TAMP is a risk-based asset management plan with a 10-year planning horizon with respect to all of the bridges and pavement that are in the National Highway System (NHS).

Targets for bridge-related performance measures were determined by identifying which bridge projects are programmed and projecting at what rate bridge conditions deteriorate. The bridge-related performance measures focus on the percentage of deck area rather than the total number of bridges.

Targets for pavement-related performance measures were based on a single year of data collection and were set to remain constant under guidance from FHWA. These targets were revisited during the 2-year mark (2024). The condition/performance of these measures is noted in the table below, and no adjustments were made to the 4-year targets (2026).

MassDOT continues to measure pavement quality and to set statewide short-term and long-term targets in Tracker using the Pavement Serviceability Index (PSI), which differs from IRI. These measures and targets are used in conjunction with federal measures to inform program sizing and project selection.

Performance Measure	Baseline (2021)	2-Year Condition/ Performance	2-Year Target (2024)	4-Year Target (2026)
Bridges in good condition	16.0%	15.7%	16.0%	16.0%
Bridges in poor condition	12.2%	12.5%	12.0%	12.0%

2027-2031 State Transportation Improvement Program

Interstate Pavement in good condition	71.8%	67.2%	70.0%	70.0%
Interstate Pavement in poor condition	0.0%	0.1%	2.0%	2.0%
Non-Interstate Pavement in good condition		28.6%	30.0%	30.0%
Non-Interstate Pavement in poor condition		6.9%	5.0%	5.0%

Bridge and Pavement Investments

To maintain the existing transportation system and to contribute to achieving the targets identified above, MassDOT's Highway Division invests a significant amount of funding to improve the reliability of the overall roadway network – mainly by improving bridge and pavement conditions. The Bridge Formula Program within the Bipartisan Infrastructure Law (BIL) is apportioned based on each state's relative cost to preserve/rehabilitate poor and fair bridges, and MassDOT received the 6th largest state share, indicative of the Commonwealth's needs. These funds (federal aid + match), along with NHPP funding (federal aid + match), will be used for much needed replacement/rehabilitation of deficient structures, and give MassDOT the ability to adequately finance a maintenance and preservation strategy for bridges and pavement. The table below displays the total amount of NHPP funding programmed (federal aid + match) within MassDOT's Interstate and non-Interstate Pavement Programs; NHPP-On System funding programmed within MassDOT's Bridge Program; and Bridge Formula Program funding programmed in each year of the STIP.

Year	NHPP – Interstate Pavement	NHPP – Non-Interstate Pavement	NHPP – On System Bridge	Bridge Formula Program
2027	\$66,772,037	\$52,425,184	\$146,213,980	\$474,377,190
2028	\$48,447,317	\$67,918,803	\$159,352,190	\$542,915,538
2029	\$43,426,668	\$68,750,000	\$161,377,997	\$401,688,748
2030	\$43,421,716	\$64,708,111	\$146,633,658	\$350,432,821
2031	\$15,217,715	\$87,247,431	\$151,432,522	\$350,432,821
Total	\$217,285,453	\$341,049,529	\$765,010,347	\$2,119,847,118

Reliability, Congestion, & Emissions Performance Measures (PM3)

Travel Time Reliability Performance Measures

PM3 contains two performance measures related to reliability: Level of Travel Time Reliability (LOTTR) and Truck Travel Time Reliability (TTTR). LOTTR indicates the consistency or dependability of travel times on both Interstate and non-Interstate roadways and accounts for traffic incidents and unexpected delays. Per FHWA requirements, these measures are calculated through the ratio between the 80th percentile and the 50th percentile travel times along a given roadway segment at four time periods (morning peak, mid-day, evening peak, and weekend average). If the ratio between the 80th and 50th percentiles along a given segment is less than 1.50 at all four periods, that segment is “reliable” under the regulations.

TTTR is similar to LOTTR, but does have several differences: 1) it is the ratio between the 95th and 50th percentile travel times, 2) applies only to the Interstate system, and 3) is reported as a single index statewide. FHWA requires TTTR to be measured separately from LOTTR to consider factors that are unique to the freight industry, such as the use of the system during all hours of the day and the need to factor in more extreme impacts to the system due to on-time arrival needs.

MassDOT follows FHWA regulations in measuring Level of Travel Time Reliability (LOTTR) on both the Interstate and non-Interstate NHS as well as Truck Travel Time Reliability (TTTR) on the Interstate system using the National Performance Management Research Dataset (NPMRDS) provided by FHWA.

Measure	Baseline (2021)	2-Year Condition/ Performance	2-Year Target (2024)	4-Year Target (2026)
Interstate Level of Travel Time Reliability (LOTTR)	84.2%	75.0%	74.0%	76.0%
Non-Interstate Level of Travel Time Reliability (LOTTR)	87.2%	85.6%	85.0%	87.0%
Truck Travel Time Reliability (TTTR)	1.61	1.75	1.80	1.75

Congestion Performance Measures

The two performance measures that FHWA classifies as considering congestion are peak hour excessive delay (PHED) and the percentage of non-single occupancy vehicle (SOV) travel. It is important to note that these measures are reported at the Urbanized Area (UZA) level for all UZAs with greater than 1 million inhabitants. For the Commonwealth, this measure initially only applied to the Boston UZA, which includes the Boston, Central Mass, Merrimack Valley, Montachusett, Northern Middlesex, Old Colony and Southeastern Mass MPOs and extends into New Hampshire and Rhode Island. Since 2022, Springfield and Worcester UZAs have also been required to develop these targets. Collectively, the states and MPOs serving the UZAs must agree on a single UZA-wide target.

The PHED measure refers to the annual hours of excessive delay per capita. The threshold for excessive delay is based on travel time on the National Highway System (NHS) at a speed of 20 miles per hour or 60% of the posted speed limit travel time, whichever is greater, and it is measured in 15-minute intervals. Although FHWA requires the morning peak travel hours to be defined as 6:00 – 10:00 am Eastern Standard Time (EST) for PHED, they provide state DOTs flexibility for reporting afternoon travel hours. Consistent with reporting guidelines, MassDOT chose to use 3:00 to 7:00 pm EST as the afternoon travel hour range since it was determined that this range experiences the highest amount of delay on the NHS.

Non-SOV travel is defined as the percentage of individuals within the UZA who commute to work using a mode of transportation other than a single occupancy vehicle, including carpool, van, public transportation, commuter rail, walking, bicycling, and telecommuting. MassDOT chose to track this performance measure using the American Community Survey (ACS) Journey to Work data from the U.S. Census Bureau. The 2-year condition/performance of these measures is noted in the table below. These values are pulled directly from data provided by FHWA during the Mid Performance Period (MPP) Progress Report that was submitted by MassDOT in October 2024. The state values differ from those provided by FHWA, and so the FHWA values are included here for consistency with the numbers in the MPP Progress Report. The latest non-SOV data shows that each UZA has surpassed their initial targets, and so the 4-year target was adjusted in coordination with the relevant MPOs in a manner which balances pre- and post-2020 trends.

Measure	Current (2021)	2-Year Condition/ Performance	2-Year Target (2024)	4-Year Target (2026)	4-Year Adjustment
Peak Hour Excessive Delay (PHED) in the Boston UZA	18.0	20.2	24.0	22.0	
% non-SOV Travel in the Boston UZA	36.9%	41.4%	38.8%	39.8%	42.6%
Peak Hour Excessive Delay (PHED) in the Springfield UZA	6.2	5.8	6.5	6.0	
% non-SOV Travel in the Springfield UZA	21.5%	23.2%	22.2%	22.2%	22.7%
Peak Hour Excessive Delay (PHED) in the Worcester UZA	6.8	7.0	7.0	5.0	
% non-SOV Travel in the Worcester UZA	23.4%	25.7%	25.4%	26.1%	29.6%

Emissions Reductions

US DOT has previously established performance measures for transportation emissions. The emissions reduction performance measure requires MassDOT to assess the Congestion Mitigation and Air Quality (CMAQ) Program by measuring reductions in on-road mobile source emissions. Emission reduction targets are based on the 2- and 4-year totals of emissions reductions in kilograms per day in air quality maintenance or non-attainment areas for funded projects via the CMAQ program. In the Commonwealth, the cities of Lowell, Springfield, Waltham, and Worcester have all reached the end of their maintenance periods. The only remaining area subject to nonattainment is Dukes County.

Measure	Current (2021)	2-year target (2024)	4-year (2026)
Emissions Reductions: NOx	0.490	0.000	0.000
Emissions Reductions: VOC	0.534	0.000	0.000
Emissions Reductions: CO	6.637	0.354	0.354

CMAQ Investments

Improving travel time reliability, reducing pollution, and limiting congestion all require multifaceted solutions that involve more than just capital investments in the transportation system. That said, within the FFY 2027–2031 STIP, MassDOT has identified a number of strategic investments funded with CMAQ to help meet our goals. These investments, which are all expected to increase non-SOV travel and substantially reduce emissions, thereby contribute to achieving PM3 goal areas. Additionally, the table below displays the total amount of CMAQ funding programmed within each year of the STIP. While MassDOT is committed to programming the annual CMAQ apportionment to the extent practicable it is important to note that the CMAQ funding programmed is limited to annual obligation authority and available carryover balances, which is why sometimes the funding programmed may be greater than or less than the apportionment.

Year	CMAQ Apportionment	CMAQ Funding Programmed
2027	\$74,768,203	\$62,385,078
2028	\$76,263,568	\$80,062,383
2029	\$77,788,839	\$59,382,438
2030	\$79,344,616	\$62,181,187
2031	\$80,931,509	\$50,282,478
Total	\$389,096,735	\$314,293,564

Transit Performance Measures

Transit Asset Management (TAM)

Transit Asset Management (TAM) is a performance-based planning approach that uses transit asset condition to guide the optimal prioritization of funding for public transportation capital assets. In line with provisions within the FAST Act, in 2016, FTA published the TAM Final Rule 49 USC 625 to help achieve a state of good repair (SGR) for public transit assets on a national basis. The following measures were established under the TAM Final Rule.

FTA Asset Categories	Performance Measures	Measure Type
Rolling Stock	The percentage of revenue vehicles (by type) that exceed the useful life benchmark (ULB)	Age-based
Equipment	The percentage of non-revenue service vehicles (by type) that exceed the ULB	Age-based
Facilities	The percentage of facilities (by group) that are rated less than 3.0 on the Transit Economic Requirements Model (TERM) Scale.	Condition-based
Infrastructure	The percentage of track segments (by mode) that have performance restrictions. Track segments are measured to the nearest 0.01 of a mile	Performance-based

Throughout 2018, MassDOT's Rail and Transit Division worked with Massachusetts' fifteen Regional Transit Authority (RTA) partners and the MBTA to incorporate these performance measures into each agency's Transit Asset Management (TAM) Plans. The RTAs utilized baseline levels from historical data and planned capital investments to set initial TAM targets. Fourteen out of fifteen RTAs have established their own TAM Plans, with one, the Franklin Regional Transit Authority, opting in to MassDOT's Tier II TAM Plan that is described below. The transit targets identified within these plans have been incorporated into each respective region's Transportation Improvement Program (TIP). Performance measure target setting exercises are ongoing in coordination with MassDOT's Rail and Transit Division and MPO boards and will be revised based on projected capital investments.

Additionally, in December 2018, MassDOT's Rail & Transit Division completed its group TAM Plan, establishing targets for public transportation providers that own, operate, or manage a fleet of fewer than 100 vehicles and are known as Tier II providers. The following organizations are included in the MassDOT TAM Plan: Fall River Council on Aging; Franklin Regional Transit Authority; Kennedy Donovan Center, Inc.; Mashpee Wampanoag Tribe; Northeast Independent Living Center, Inc.; Sharon Council on Aging / Town of Sharon; Stoneham Council on Aging / Town of Stoneham; Town of Reading; and the Town of Swansea.

Elements of the TAM Plan include an inventory, condition assessment, and performance targets for capital assets (e.g. buses, vans, other vehicles, and facilities) for the participants in the plan. The table below summarizes the performance targets that were established within MassDOT's TAM Plan for Tier II providers.

Asset Category – Performance Measure	FTA Asset Class
Revenue Vehicles	
Age – % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	BU – Bus
	CU – Cutaway
	MB – Minibus
	VN – Van
Equipment	
Age – % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Non-Revenue / Service Automobiles
	Trucks & Other Rubber Tire Vehicles
Facilities	
Condition – % of facilities with a condition rating below 3.0 on the FTA Term Scale	Administrative / Passenger Facility
	Maintenance Facility

Transit Safety

In July 2018, FTA published the Public Transportation Agency Safety Plan (PTASP) Final Rule. This requires certain public transportation operators that receive federal funds under FTA's Urbanized Area Formula Grants to develop

safety plans that include the processes and procedures to implement Safety Management Systems (SMS). The PTASP rule became effective July 19, 2019 and all applicable transit providers were required to have PTASPs in place by December 31, 2020. Applicable RTA boards have adopted these targets, and relevant MPOs have incorporated them into their respective TIPs.

MassDOT's Rail & Transit Division is responsible for developing PTASPs for all public transportation providers that operate fewer than 100 vehicles in peak revenue service, with the exception of public transportation operators that receive funding solely under Sections 5310 and/or 5311, which are exempt. However, public transportation operators with fewer than 100 vehicles in peak revenue service may opt out of the state-developed PTASP and develop their own plan if they choose to do so.

The following Regional Transit Authorities have updated their individual Agency Safety Plans with endorsement/approval by their respective boards as of the date indicated:

- Berkshire Regional Transit authority (BRTA) – May 2020
- Brockton Area Transit Authority (BAT) – September 2022
- Cape Ann Transit Authority (CATA) – December 2022
- Greater Attleboro-Taunton Regional Transit Authority (GATRA) – December 2022
- Lowell Regional Transit Authority (LRTA) – September 2024
- Metrowest Regional Transit Authority (MWRTA) – November 2024
- Pioneer Valley Regional Transit Authority (PVTA) – November 2023
- Southeastern Regional Transit Authority (SRTA) – June 2024
- Worcester Regional Transit Authority (WRTA) – July 2024

Each PTASP must include the performance measures and Safety Management System (SMS) elements listed in the table below. In addition, PTASPs are required to include the following: approval by public transportation agencies' accountable executive and board of directors; an employee reporting program; criteria to address all applicable requirements; and standards set forth in FTA's Public Transportation Safety Program and the

2027-2031 State Transportation Improvement Program

National Public Transportation Safety Plan (NSP); and a process and timeline for conducting an annual review and update of the safety plan. Many investments in this STIP impact progress toward accomplishing these targets. As of November 2024, there are seven new measures on which providers set performance targets, with three concerning collisions and four concerning the safety of transit workers.

PTASP Components	Specific Elements	Description
Performance Measures	Fatalities	- Total number of reportable fatalities - Rate of fatalities per total vehicle revenue miles (VRM) by mode - Rate of transit worker fatalities per total VRM by mode (new)
	Injuries	- Total number of reportable injuries - Rate of injuries per total VRM by mode - Rate of transit worker injuries per total VRM by mode (new)
	Safety Events	- Total number of reportable events - Rate per total VRM by mode - Rate of collisions per total VRM by mode (new) - Rate of pedestrian collisions per total VRM by mode (new) - Rate of vehicular collisions per total VRM by mode (new)
	Assaults on Transit Workers	- Assaults on transit workers (new) - Rate of assaults on transit workers (new)
	System Reliability (State of Good Repair)	Mean distance between major mechanical failures by mode
Safety Management System (SMS)	Safety Management Policy	- Safety objectives - Confidential employee reporting program - Organization accountabilities - Designation of a Chief Safety Officer
	Safety Risk Management	- Processes for hazard identification - Risk assignment - Mitigation development
	Safety Assurance	- Safety performance reporting and measurement (all operators) - Management of change (rail and large bus operators only) - Continuous improvement (rail and large bus operators only)
	Safety Promotion	- Comprehensive safety training program - Safety communication

Models of Regional Planning Cooperation for Performance-Based Planning

MassDOT collaborates with our MPO partners and RTAs throughout the year, as well as with the Massachusetts Association of Regional Planning Agencies (MARPA), including its Transportation Managers' Group (TMG) and the Massachusetts Association of Regional Transit Authorities (MARTA).

This collaboration has been formalized through the Performance-Based Planning and Programming Agreement endorsed by MassDOT, the MBTA, and all MPOs, TPOs, and RTAs across the Commonwealth, as required under 23 CFR 450.314(h). This agreement, officially endorsed by all parties in May 2019, establishes mutual responsibilities in carrying out performance-based planning in the following areas: developing and sharing performance management data; selection of performance targets; reporting on performance targets; and progress toward achieving targets.

Ladders of Opportunity

USDOT understands that transportation plays a critical role in building connections between individuals and economic opportunity. USDOT seeks to ensure that our national transportation system provides reliable, safe, and affordable ways to reach jobs, education, and other essential services. USDOT emphasizes the point that choices made regarding transportation infrastructure at the federal, state, and local levels can revitalize communities; create pathways to work; and connect people to a better quality of life.

Public Participation in STIP Development

Over the course of the past year, the MPOs have held, or been a part of, many public meetings to discuss the development of their respective TIPs across the Commonwealth. These meetings provide an opportunity for members of the public, elected officials, and other stakeholders to weigh-in on regional priorities for transportation investments. Meetings took the form of advisory committee meetings, MPO meetings, and participation in community events and festivals. This extensive effort to include public input into TIP development at the regional level ensures that MassDOT's STIP (a compilation of the TIPs) is an improvement program that is informed by the priorities of regional partners, of communities, and of the public at large. Information about the TIP development process, schedule of workshops, and meetings are available on each of the MPO's websites, which can be accessed here:

<https://www.mass.gov/service-details/regional-planning>. Each of the MPOs utilizes their approved Public Participation Plan (PPP) to facilitate and guide participation at the regional level. PPPs document the process by which the MPOs conduct outreach; identify opportunities to engage the public in the transportation planning process; and outline procedures for the MPO to follow, such as notifications and comment periods. Each region has a public involvement strategy unique to their regional needs, priorities, and demographics. Consideration of Title VI of the Civil Rights Act, Environmental Justice, and the Americans with Disabilities Act is incorporated into public involvement strategies, ensuring full accessibility to all members of the public. Enhanced consideration is paid to those who have historically been excluded from, or faced barriers to participating in, the transportation planning process.

In addition to the engagement conducted by each MPO, MassDOT releases the STIP document for a 21-day public comment period. During this period, the public is encouraged to submit comments on the plan through letter, fax, and e-mail. For additional information on the public comment process for the FFY 2027-2031 STIP, please see the Public Comment section.

MassDOT Project Development Process

The project development process also includes opportunities for public engagement. Communities will formulate a project concept based on need, and before presenting the concept to MassDOT, are expected to engage residents and businesses to further refine the need for and goals of the project. The project is then presented to MassDOT for formal acceptance into the [MassDOT Highway Division Project Development Process](#). Projects then proceed to design, where there are additional opportunities for the public to weigh-in at design public hearings.

Transit investments prioritized in this STIP are identified by the MBTA and RTAs in collaboration with local communities and the MPOs utilizing their established planning processes. For RTAs, the MPO public participation process is utilized as their engagement mechanism.

What is the role of advisory committees?

These committees advise the MPOs on transportation issues and play an active role in setting regional priorities in the TIP development process. The names of these groups vary among MPOs. Examples are: Joint Transportation Committee, Transportation Planning Advisory Group, Joint Transportation Planning Group.

How does MassDOT support transportation access?

Title VI and Environmental Justice

Title VI of the Civil Rights Act of 1964 (Title VI) states that “no person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.” MassDOT’s programs, services, and activities, including those related to project planning and development, comply with Title VI. In the context of STIP development, Title VI related activities include, but are not limited to: promoting public participation in the planning and design of transportation projects; removing barriers to participation; and working to avoid disparities in the distribution of transportation investments and the

impacts created. The integration of federal and state nondiscrimination obligations and principles into MassDOT's work is stipulated in the Title VI/Nondiscrimination Program(s) under which the agency operates. These programs can be found online on the MassDOT Office of Diversity and Civil Rights (ODCR) webpage at <https://www.mass.gov/nondiscrimination-in-transportation-program>

The MPOs and municipalities involved in transportation planning and project development activities also operate all programs, services, and activities in compliance with Title VI/Nondiscrimination obligations. This means that the local and regional efforts to promote and advance transportation initiatives and projects are developed and assessed in a manner consistent with Title VI/Nondiscrimination principles.

Additionally, MassDOT incorporates state Environmental Justice (EJ) principles into project development activities that inform the development of the STIP. EJ analyses strive to quantify the impacts that low-income and minority individuals and communities face due to the programs and policies advanced. Disproportionately high adverse impacts on these populations may require active steps to minimize or mitigate these impacts. The transportation projects within the STIP have been analyzed according to these principles and the distribution of programmed projects and the specific elements of individual projects are designed to comply with EJ principles.

Americans with Disabilities Act

Under Title II of the Americans with Disabilities Act (ADA), MassDOT's programs, services, activities, and facilities must be accessible to people with disabilities. In the STIP context, this accessibility obligation encompasses the transportation projects and plans reflected in this document and the associated public engagement processes, both regionally and statewide, related to these efforts. This means that public meetings must be accessible and materials must be made available in accessible formats. Any accessibility related requests can be directed to the point of contact identified in the Title VI Notice to Beneficiaries on page 7 of this document.

Operating and Maintaining the Transportation System

MassDOT, the MBTA and the Commonwealth's regional transit authorities strive to operate and maintain MassDOT's existing transportation system. Spending for operations and maintenance is accounted for in MassDOT's Capital Investment Plan (CIP), in the MBTA's Capital Investment Plan, and in the STIP.

MassDOT's Capital Investment Plan (CIP) details MassDOT's planned spending for capital planning, design, construction, and maintenance during FY 27-31, and incorporates federal highway formula funds and transit formula funds (for which MassDOT is a recipient), plus state match funds, as programmed in the FFY27-31 STIP. The MassDOT CIP also describes planned spending for other modes not included in the STIP, such as for airports, the state rail network, and the Registry of Motor Vehicles. MassDOT's *Beyond Mobility* statewide long-range transportation plan is a key blueprint for development of the CIP, with priority areas focusing on Safety, Reliability, Travel Experience, Destination Connectivity, Resiliency, and Supporting Clean Transportation. Meanwhile, the MBTA CIP reflects capital spending for all funds, including federal transit funds and the corresponding match.

MassDOT's CIP and STIP reflect increases in core federal formula funds as well the new federal formula funds available to Massachusetts that were authorized under the IIJA.

MassDOT Highway Division Investments

As described in the CIP, MassDOT's Highway Division capital investments total approximately \$15.5 billion for State Fiscal Year (SFY) 27-31 and a significant portion is allocated improving bridge and pavement conditions, which support state of good repair and reliable travel times on the transportation network. The SFY27-31 CIP maintains the increased investment levels in the Interstate and Non-Interstate pavement programs, with approximately \$1.186 billion in planned spending for SFY27-31.

The SFY 27-31 CIP calls for approximately \$7.1 billion for ongoing bridge repair and replacement reflecting the increase in federal formula funds available to Massachusetts. The CIP also funds a Municipal Bridge Program with \$75 million in spending over five years for smaller, municipally-owned bridges.

These smaller bridges (less than 20 feet in length), which are ineligible for federal funding and chronically difficult to fund, are crucial for mobility and economic activity in smaller communities. In addition, the CIP includes \$1.27 billion for the Cape Cod Bridges Program which supports bridge construction over the Cape Cod Canal.

State-funded Programs for Municipalities

The Chapter 90 program entitles municipalities to receive reimbursement for capital improvement projects for highway construction, preservation, and improvements that create or extend the life of capital facilities. The funds can be used for maintaining, repairing, improving, or constructing town and county ways and bridges that qualify under the State Aid Highway Guidelines. Items eligible for Chapter 90 funding include roadways, sidewalks, right-of-way acquisition, shoulders, landscaping and tree planting, roadside drainage, street lighting, and traffic control devices. Each municipality in Massachusetts is granted an annual allocation of Chapter 90 reimbursement funding that it is eligible for, and the municipality can choose among any eligible infrastructure investments. There is currently \$1.4 billion in state funding programmed for Chapter 90 in MassDOT's SFY 27-31 CIP. Other municipally-focused state-funded programs in the CIP include the previously-mentioned Municipal Bridge Program (\$75 million), the Rural Roadway Funding Program (\$25 million), the Municipal Pavement program (\$125 million), the Complete Streets Program (\$75 million), the Local Bottleneck Reduction Program (\$25 million), and the Shared Streets and Spaces Program (\$32.5 million), the Community Culvert program (\$141.4 million) and the Unpaved Roads program (\$7 million). The CIP also includes \$5 million for the Local Early-Stage and Actionable Planning (LEAP) Program, which provides planning and early-stage design support for municipally prioritized transportation infrastructure projects across the Commonwealth.

Transit Investments

MassDOT will continue to provide the Commonwealth's 15 Regional Transit Authorities and other transit providers with capital assistance to further enhance their reliability of service. The SFY27-31 CIP programs \$346.1 million in state funds, federal funds (for which MassDOT is the recipient), and other funds to support transit. This includes approximately \$81.6 million for RTA vehicle replacement, \$51.0 million for RTA facility and system modernization, \$29.2 million for a fleet decarbonization program, \$22.6 million for RTA facility and vehicle maintenance, and approximately \$13.8 million for RTA facility

replacement. Through the Mobility Assistance program, MassDOT provides approximately \$124.1 million in state and federal funds to help communities purchase vehicles to transport senior citizens and customers with disabilities. MassDOT also will provide \$6.9 million in transit technical assistance.

MBTA

The MBTA's five-year CIP supports efforts to improve the system's safety and reliability by focusing on essential maintenance, core infrastructure, and targeted improvements informed by the MBTA's mission, values, and goals, and the condition of its assets. The CIP includes the planning, construction, and capital maintenance of assets across the MBTA and includes all capital expenditures planned in the next five years. Specific initiatives include, but are not limited to, the procurement and overhaul of subway cars, buses, and Commuter Rail locomotives and coaches; the repair, rehabilitation, and replacement of bridges, tunnels, and culverts; improvements to passenger facilities; modernization of bus and rail maintenance facilities; and critical guideway, signal, and power system upgrades.

The MBTA has programmed approximately \$10.3 billion in FY27–31 spending for Reliability/Modernization investments. This includes \$3.0 billion for the Vehicles Program, which includes vehicle procurement and overhaul programs for bus, heavy rail, light rail and commuter rail locomotives and coaches to address reliability and safety needs. Also included is \$1.4 billion for the Guideway, Signal, and Power Program, which includes projects across all modes, such as the Green Line Train Protection System 2 (\$130.4 million) and the Track State of Good Repair Program (\$94.5 million). Additionally, \$1.3 billion is included under the Passenger Facilities Program for upgrades to stations and bus stops, and \$624.0 million is included under the Structures Program, which includes urgent structural design support and the design and construction of structural rehabilitation, repair, or replacement projects. The MBTA has also separated the North Station Draw 1 Bridge Replacement project into its own program with a FY27–31 programmed amount of \$949.4 million.

Education and Transportation (Fair Share) Funds and Related CTF Bonds

In November 2022, Massachusetts voters approved a 4 percent surtax on income above \$1 million annually, known as the Fair Share amendment. Per the amendment, this new source is constitutionally dedicated to "quality public education and affordable public colleges and universities, and for the

repair and maintenance of roads, bridges, and public transportation.” Fair Share spending was first included in the FY24 Massachusetts budget. Beginning in FY25, the Governor proposed and the Legislature enacted the transfer of Fair Share revenue to the CTF to support the expansion of bonding capacity to make over \$5 billion in additional capital funding resources available for transportation for the next 10 years. MassDOT’s FY27–31 CIP includes \$4.4 billion funded from CTF bond proceeds supported by Fair Share dollars. During FY27–31, spending utilizing the CTF bond proceeds will support a variety of investments, including \$1.27 billion for the MBTA, \$1.20 billion for the Chapter 90 program, \$868 million for bridge improvements, \$397 million for pavement and roadway improvements, \$321 million for the Allston Multimodal Transportation Project, \$200 million for culverts and small bridges, and \$175 million for investments to address safety and congestion hotspots.

Fiscal Constraint

What is fiscal constraint and year of expenditure?

Each year, MassDOT demonstrates and certifies that the STIP is in fiscal constraint by taking the beginning balances (previously unspent federal-aid); adding the estimated annual apportionments (additional funding provided by Congress annually), and subtracting the projected annual obligations (the investments identified in the STIP). The STIP is then found to be fiscally constrained in two ways: first, is that our investments do not exceed the annual STIP obligational authority (OA); second, is that a zero or positive balance is maintained for each funding type (CMAQ, NHPP, STBG.) for each year. OA is defined as the total amount of federal funds that may be obligated in a given fiscal year. While the STIP is initially not fully programmed to the estimated OA, MassDOT fully obligates available funding provided by our FHWA partners through project value changes, awards and adjustments by the end of each FFY.

Year of Expenditure (YOE) is a mechanism to ensure that inflation is considered in project cost estimates. For each year after the first fiscal year of the STIP (2027), a four percent inflation factor is applied to project cost estimates. The Fiscal Constraint Analysis gets updated during the active fiscal year in response to any FHWA/FTA-approved STIP Actions throughout. As such, please visit the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip) for the most up-to-date Fiscal Constraint Analyses for FFY 2027-2031 (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)

Advanced Construction (AC)

AC projects are those which are funded over multiple federal fiscal years and multiple construction seasons. The AC procedure allows states to commence eligible projects without first having to obligate the entirety of the federal government's share of expenditures. AC schedules are subject to revision as MPOs and/or MassDOT perform STIP Actions throughout the federal fiscal year. As such, please visit the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip) for the most up-to-date AC Schedule for the FFY 2027-2031 STIP. (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)

Status of FFY 2026 Investments

Projects that are currently programmed in the FFY 2026 element of the active FFY 2026–2030 STIP are scheduled to be advertised for contractual bid throughout the Federal Fiscal Year, (October 2025 – September 2026). Please visit the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip) for the TIP vs. TFPC Quarterly Report as of the beginning of the 4th Quarter of FFY 2026. (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>) The report depicts the status of each project currently programmed in FFY 2026 with actual dates of advertisement or anticipated quarter of advertisement. The quarters of FFY 2026 listed in the following tables refer to the following calendar months:

Quarter 1 (Q1): October 2025 through December 2025

Quarter 2 (Q2): January 2026 through March 2026

Quarter 3 (Q3): April 2026 through June 2026

Quarter 4 (Q4): July 2026 through September 2026

Air Quality

Nearly all of Massachusetts was designated on May 21, 2012 by EPA (with limited exceptions) as “unclassifiable/attainment” for the latest ozone standard. However, the U.S. Court of Appeals decision in *South Coast Air Quality Management District v. EPA*, Case No. 15-1115 struck down portions of the 2008 Ozone NAAQS SIP Requirements Rule. As a result of the court ruling and subsequent federal guidance, after 2/16/19 transportation conformity for the 1997 NAAQS – intended as an “anti-backsliding” measure – now applies in Massachusetts. This change resulted in a Transportation Improvement Program (TIP) air quality conformity determination being required for each MPO in the Commonwealth. This conformity determination was finalized in July 2019 after each MPO endorsed an amended long range transportation plan and will include the Commonwealth’s providing a conformity analysis (see Appendix A for the full conformity determination). Massachusetts’ air quality conformity determination was documented, reviewed and approved by FHWA, FTA, the US Environmental Protection Agency (EPA) and Department of Environmental Protection (DEP).

Greenhouse Gas Impacts

This section summarizes the greenhouse gas (GHG) impacts anticipated to result from the projects that are included in this FFY 2027–2031 STIP. It includes a summary of the state laws and policies that call for reducing greenhouse gases in the Commonwealth in order to mitigate global climate change; actions that respond to these state laws and policies; the role of regional planning and STIP development in reducing GHG emissions and tracking these reductions; and the projected GHG emission impacts from the projects programmed in the STIP.

State Policy Context

The Global Warming Solutions Act (GWSA), which was signed into law in August 2008, makes Massachusetts a leader in setting aggressive and enforceable GHG reduction targets, and implementing policies and initiatives to achieve these targets. In keeping with the law, on December 29, 2010, the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA), in consultation with other state agencies and the public, released the Massachusetts Clean Energy and Climate Plan (CECP) for 2020.

In August 2017, the Massachusetts Department of Environmental Protection amended an existing regulation, 310 CMR 60.05: Global Warming Solutions Act Requirements for Transportation, to require that MPOs use GHG impacts as an evaluation criterion for project prioritization and annually evaluate the aggregate GHG impacts of TIPs. It also requires that MassDOT annually evaluate the aggregate GHG impact of the STIP.

Carbon Reduction Program Funds

As required by the IIJA (Public Law 117–58), MassDOT has developed a Carbon Reduction Strategy. The strategy supports MassDOT's priorities as outlined in the CECP and can be found in Appendix D titled "Strategy for Utilization of Carbon Reduction Program Formula Funding."

The Role of MPOs

The Commonwealth's MPOs are integrally involved in supporting the GHG reductions mandated under the GWSA. The MPOs are most directly involved through the promotion of healthy transportation modes by prioritizing and programming an appropriate balance of roadway, transit, bicycle and pedestrian investments – and assisting smart growth development patterns

through the creation of a balanced, multi-modal transportation system. This is realized through the transportation goals and policies established in their respective 2024 Regional Transportation Plans (RTPs); the major projects planned in those RTPs; and the mix of new transportation projects that are programmed and implemented through the TIPs. The GHG evaluation process enables the MPOs to estimate GHG impacts of planned and programmed projects, and to use GHG impacts as a criterion in prioritizing transportation projects.

Project-level GHG Impact Evaluation

The MPOs' TIPs include both larger, regionally significant projects from their respective RTPs, which are reported in the statewide GHG report, as well as smaller projects that are not included in RTPs but that may nevertheless have impacts on GHG emissions.

MassDOT developed spreadsheets used by the MPOs to estimate the CO₂ impacts of quantifiable projects. The data and analysis required for these calculations is available from functional design reports that are submitted for projects that would produce a measurable GHG impact.

Projects with Quantified Impacts

RTP Projects

Major capacity expansion projects are expected to have a significant impact on GHG emissions. This type of project is included in each MPO's RTP and analyzed using either MassDOT's statewide model or the Boston MPO's regional model, both of which reflect GHG impacts. As a result, no independent TIP calculations are required.

Quantified Decrease in Emissions

The following categories of projects are expected to produce a measurable decrease in GHG emissions, and TIP projects that fall under these categories should undergo a quantitative analysis if they have not already been included in the RTP.

- **Quantified Decrease in Emissions from Traffic Operational Improvement** – An intersection reconstruction or signalization project that is projected to reduce delay and congestion.
- **Quantified Decrease in Emissions from Pedestrian and Bicycle Infrastructure** – A shared-use path that enables increased walking and biking and decreases vehicle-miles traveled (VMT).

- **Quantified Decrease in Emissions from New/Additional Transit Service**
– A bus or shuttle service that enables increased transit ridership and decreased VMT.
- **Quantified Decrease in Emissions from a Park and Ride Lot** – A park-and-ride lot that enables increased transit ridership/ increased ridesharing and decreased VMT.
- **Quantified Decrease in Emissions from Bus Replacement** – a bus replacement that directly reduces GHG emissions generated by service.
- **Quantified Decrease in Emissions from Complete Streets Improvements** – Improvements to roadway networks that include the addition of bicycle and pedestrian accommodations where none were present before.
- **Quantified Decrease in Emissions from Alternative Fuel Vehicle Procurements** – A vehicle procurement where alternative fuel/advanced technology vehicles replace traditional gas or diesel vehicles.
- **Quantified Decrease in Emissions from Anti-idling Strategies** – Implementation of policies such as limiting idling allowed incorporating anti-idling technology into fleets, and using LED lights on trucks for the purpose of illuminating worksites.
- **Quantified Decrease in Emissions from Bike Share Projects** – A new bike share project or capacity added to an existing project.
- **Quantified Decrease in Emissions from Induced Travel Projects** – A project that changes roadway capacity.
- **Quantified Decrease in Emissions from Speed Reduction Programs** – Programs that reduce speed to no less than 55 miles per hour.
- **Quantified Decrease in Emissions from Transit Signal Priority Projects** – A project that applies this technology to a signal intersection or along a corridor that improves bus service.
- **Quantified Decrease in Emissions from Truck Stop Electrification Projects** – A new truck stop electrification project or capacity added to an existing project.
- **Quantified Decrease in Emissions from Other Improvement** – Any transportation project not otherwise categorized that quantifiably decreases emissions.

Quantified Increase in Emissions

Projects expected to produce a measurable increase in emissions are estimated and detailed in the TIP GHG report.

Projects with No Assumed Quantitative Impacts

No Assumed Impact/Negligible Impact on Emissions

Projects that do not change the capacity or use of a facility (e.g. roadway median barrier or retaining wall replacement or a bridge rehabilitation/replacement that restores the bridge to its previous condition) are assumed to have no/negligible GHG impact and are detailed in the TIP GHG report.

Qualitative Decrease in Emissions

Projects expected to produce a minor decrease in emissions that cannot be calculated with any precision. Examples of such projects include e-bikes and e-scooters, roadway repaving, signage improvements, ITS improvements, or transit marketing/customer experience improvements. These projects are detailed in the TIP GHG report.

Qualitative Increase in Emissions

Projects expected to produce a minor increase in emissions that cannot be calculated with any precision. These are labeled as such in the TIP GHG report.

Greenhouse Gas Impact Tables for FFY 2027 – 2031 TIPs

The tables summarizing the calculated quantitative and assumed qualitative impacts of the projects included in each regional FFY 2027–2031 TIP are listed on the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip). (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)

Public Comment

The FFY 2027–2031 STIP was released for public comment on [MassDOT's STIP website](#) from June 15, 2026 through July 10, 2026 in alignment with MassDOT's SFY 2027–2031 Capital Investment Plan (CIP). Comments were invited to be mailed to the STIP Coordinator, MassDOT, Office of Transportation Planning, 10 Park Plaza Room 4150, Boston MA 02116, by fax to 857-368-0639, or by e-mail to planning@dot.state.ma.us. MassDOT's Legal notices were published in the following news outlets:

- Berkshire Eagle
- Boston Globe
- Springfield Republican

While public comments are received directly on the STIP, the Commonwealth's MPOs collectively receive comments on their respective Transportation Improvement Programs (TIPs) during their public outreach efforts, conducted over the months of March 2026 to June 2026. Additionally, during the comment period, MassDOT hosted six public meetings for the Capital Investment Plan (CIP) in coordination with Massachusetts regional planning agencies. Given that the CIP and regional TIPs include all investments programmed in the STIP, MassDOT considers comments received during that process as input to the STIP development. MassDOT's Capital Planning team has reviewed all comments and will be providing a response to all of them, which can be found at www.mass.gov/info-details/current-capital-investment-plan-cip.

2027-2031 Investment Tables: *Highway*

The FFY 2027–2031 STIP Investment Tables (Highway) are available on the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip). (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)

2027-2031 Investment Tables: *Transit*

The FFY 2027–2031 STIP Investment Tables (Transit) are available on the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip). (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)

2026-2030 State Transportation Improvement Program

Page intentionally left blank

APPENDIX A: Air Quality Conformity Determination

Air Quality Conformity Determination FFY 2027–2031 State Transportation Improvement Program Massachusetts Department of Transportation (MassDOT) And the Metropolitan Planning Organizations (MPOs)

This section documents the latest air quality conformity determination for the 1997 ozone National Ambient Air Quality Standards (NAAQS) in the Commonwealth of Massachusetts. It covers the applicable conformity requirements according to the latest regulations, regional designation status, legal considerations, and federal guidance. Further details and background information are provided below:

Introduction

The 1990 Clean Air Act Amendments (CAAA) require metropolitan planning organizations within nonattainment and maintenance areas to perform air quality conformity determinations prior to the approval of Long-Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs), and at such other times as required by regulation. Clean Air Act (CAA) section 176(c) (42 U.S.C. 7506(c)) requires that federally funded or approved highway and transit activities are consistent with (“conform to”) the purpose of the State Implementation Plan (SIP). Conformity for the purpose of the SIP means that Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) funding and approvals are given to highway and transit activities that will not cause or contribute to new air quality violations, worsen existing violations, or delay timely attainment of the relevant NAAQS or any interim milestones (42 U.S.C. 7506(c)(1)). U.S. Environmental Protection Agency’s (EPA) transportation conformity rules establish the criteria and procedures for determining whether metropolitan transportation plans, transportation

improvement programs (TIPs), and federally supported highway and transit projects conform to the SIP (40 CFR Parts 51.390 and 93).

A nonattainment area is one that the EPA has designated as not meeting certain air quality standards. A maintenance area is a nonattainment area that now meets the standards and has been re-designated as maintaining the standard. A conformity determination is a demonstration that plans, programs, and projects are consistent with the State Implementation Plan (SIP) for attaining the air quality standards. The CAAA requirement to perform a conformity determination ensures that federal approval and funding go to transportation activities that are consistent with air quality goals.

Legislative and Regulatory Background

The entire Commonwealth of Massachusetts was previously classified as nonattainment for ozone, and was divided into two nonattainment areas. The Eastern Massachusetts ozone nonattainment area included Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, and Worcester counties. Berkshire, Franklin, Hampden, and Hampshire counties comprised the Western Massachusetts ozone nonattainment area. With these classifications, the 1990 Clean Air Act Amendments (CAAA) required the Commonwealth to reduce its emissions of volatile organic compounds (VOCs) and nitrogen oxides (NO_x), the two major precursors to ozone formation to achieve attainment of the ozone standard.

The 1970 Clean Air Act defined a one-hour national ambient air quality standard (NAAQS) for ground-level ozone. The 1990 CAAA further classified degrees of nonattainment of the one-hour standard based on the severity of the monitored levels of the pollutant. The entire Commonwealth of Massachusetts was classified as being in serious nonattainment for the one-hour ozone standard, with a required attainment date of 1999. The attainment date was later extended, first to 2003 and a second time to 2007.

In 1997, the EPA proposed a new, eight-hour ozone standard that replaced the one-hour standard, effective June 15, 2005. Scientific information had shown that ozone could affect human health at lower levels, and over longer exposure times than one hour. The new standard was challenged in court, and after a lengthy legal battle, the courts upheld it. It was finalized in June 2004. The eight-hour standard is 0.08 parts per million, averaged over eight hours and not to be exceeded more than once per year. Nonattainment areas were again further classified based on the severity of the eight-hour values. Massachusetts as a whole was classified as being in moderate nonattainment for the eight-hour standard, and was separated into two nonattainment areas—Eastern Massachusetts and Western Massachusetts.

In March 2008, EPA published revisions to the eight-hour ozone NAAQS establishing a level of 0.075 ppm, (March 27, 2008; 73 FR 16483). In 2009, EPA announced it would reconsider this standard because it fell outside of the range recommended by the Clean Air Scientific Advisory Committee. However, EPA did not take final action on the reconsideration so the standard remains at 0.075 ppm.

After reviewing data from Massachusetts monitoring stations, EPA sent a letter on December 16, 2011, proposing that only Dukes County would be designated as nonattainment for the new proposed 0.075 ozone standard. Massachusetts concurred with these findings.

On May 21, 2012, (77 FR 30088), the final rule was published in the Federal Register, defining the 2008 NAAQS at 0.075 ppm, the standard that was promulgated in March 2008. A second rule published on May 21, 2012 (77 FR 30160), revoked the 1997 ozone NAAQS to occur one year after the July 20, 2012 effective date of the 2008 NAAQS.

Also on May 21, 2012, the air quality designations areas for the 2008 NAAQS were published in the Federal Register. In this Federal Register, the only area in Massachusetts that was designated as nonattainment is Dukes County. All other Massachusetts counties were designated as attainment/unclassified for the 2008 standard. On March 6, 2015, (80 FR 12264, effective April 6, 2015) EPA published the Final Rulemaking, "Implementation of the 2008 National Ambient Air Quality Standards (NAAQS) for Ozone: State

Implementation Plan Requirements; Final Rule.” This rulemaking confirmed the removal of transportation conformity to the 1997 Ozone NAAQS and the replacement with the 2008 Ozone NAAQS, which (with actually a stricter level of allowable ozone concentration than the 1997 standards) classified Massachusetts as “Attainment/unclassifiable” (except for Dukes County).

However, on February 16, 2018, the United States Court of Appeals for the District of Columbia Circuit in *South Coast Air Quality Mgmt. District v. EPA* (“*South Coast II*,” 882 F.3d 1138) held that transportation conformity determinations must be made in areas that were either nonattainment or maintenance for the 1997 ozone NAAQS and attainment for the 2008 ozone NAAQS when the 1997 ozone NAAQS was revoked. Conformity determinations are required in these areas after February 16, 2019. On November 29, 2018, EPA issued *Transportation Conformity Guidance for the South Coast II Court Decision* (EPA-420-B-18-050, November 2018) that addresses how transportation conformity determinations can be made in these areas. According to the guidance, both Eastern and Western Massachusetts, along with several other areas across the country, are now defined as “orphan nonattainment areas” – areas that were designated as nonattainment for the 1997 ozone NAAQS at the time of its revocation (80 FR 12264, March 6, 2015) and were designated attainment for the 2008 ozone NAAQS in EPA’s original designations rule for this NAAQS (77 FR 30160, May 21, 2012).

Current Conformity Determination

After February 16, 2019, as a result of the court ruling and the subsequent federal guidance, transportation conformity for the 1997 NAAQS – intended as an “anti-backsliding” measure – now applies to both of Massachusetts’ orphan areas. Therefore, a conformity determination was made for the 1997 ozone NAAQS on the 2020–2040 Regional Transportation Plans. This conformity determination was finalized in July 2019 following each MPO’s previous endorsement of their regional transportation plan, and approved by the Massachusetts Divisions of FHWA and FTA on October 13, 2023. This conformity determination continues to be valid for the FFY 2027 – 2031 State Transportation Improvement Program and each MPOs’ FFY 2027 – 2031

2027-2031 State Transportation Improvement Program

Transportation Improvement Program, as each is developed from the conforming 2024–2050 Regional Transportation Plans.

The transportation regulation at 40 CFR 93.109 sets forth the criteria and procedures for determining conformity. The criteria for TIPs and RTPs include: latest planning assumptions (93.110), latest emissions model (93.111), consultation (93.112), transportation control measures (93.113(b) and (c), and emissions budgets and/or interim emissions (93.118 and/or 93.119).

For the 1997 ozone NAAQS areas, transportation conformity for TIPs and RTPs for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c). This provision states that the regional emissions analysis requirement applies one year after the effective date of EPA’s nonattainment designation for a NAAQS and until the effective date of revocation of such NAAQS for an area. The 1997 ozone NAAQS revocation was effective on April 6, 2015, and the *South Coast II* court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model, or budget or interim emissions tests.

Therefore, transportation conformity for the 1997 ozone NAAQS for the FFY 2027–2031 State Transportation Improvement Program, Transportation Improvement Programs, and 2024–2050 Regional Transportation Plans can be demonstrated by showing the remaining requirements in Table 1 in 40 CFR 93.109 have been met. These requirements, which are laid out in Section 2.4 of EPA’s guidance and addressed below, include:

Latest planning assumptions (93.110)

- Consultation (93.112)
- Transportation Control Measures (93.113)
- Fiscal Constraint (93.108)

Latest Planning Assumptions:

2027-2031 State Transportation Improvement Program

The use of latest planning assumptions in 40 CFR 93.110 of the conformity rule generally apply to regional emissions analysis. In the 1997 ozone NAAQS areas, the use of latest planning assumptions requirement applies to assumptions about transportation control measures (TCMs) in an approved SIP (See following section on Timely Implementation of TCMs).

Consultation:

The consultation requirements in 40 CFR 93.112 were addressed both for interagency consultation and public consultation. Interagency consultation was conducted with FHWA, FTA, US EPA Region 1, MassDEP, and the Massachusetts MPOs on March 6, 2019 to discuss the latest conformity-related court rulings and resulting federal guidance. Regular and recurring interagency consultations have been held on an at least annual schedule, with the most recent conformity consultation held on January 7, 2026. This ongoing consultation is conducted in accordance with the following:

- Massachusetts' Air Pollution Control Regulations 310 CMR 60.03 "Conformity to the State Implementation Plan of Transportation Plans, Programs, and Projects Developed, Funded or Approved Under Title 23 USC or the Federal Transit Act"
- The Commonwealth of Massachusetts Memorandum of Understanding among the Massachusetts Department of Transportation, Massachusetts Department of Environmental Protection, Massachusetts Metropolitan Planning Organizations, and Regional Transit Authorities, titled The Conduct of Air Quality Planning and Coordination for Transportation Conformity (dated September 16, 2019)

Public consultation was conducted consistent with planning rule requirements in 23 CFR 450.

Title 23 CFR Section 450.324 and 310 CMR 60.03(6)(h) require that the development of the TIP, RTP, and related certification documents provide an adequate opportunity for public review and comment. Section 450.316(b) also establishes the outline for MPO public participation programs. Each MPO's Public Participation Plan ensures that the public will have access to the TIP/RTP and all supporting documentation;

2027-2031 State Transportation Improvement Program

provides for public notification of the availability of the TIP/RTP and the public's right to review the document and comment thereon; and provides a 21-day public review and comment period prior to the adoption of the TIP/RTP and related certification documents.

Timely Implementation of Transportation Control Measures:

Transportation Control Measures (TCMs) have been required in the SIP in revisions submitted to EPA in 1979 and 1982. All SIP TCMs have been accomplished through construction or through implementation of ongoing programs. All of the projects have been included in the Region's Transportation Plan (present or past) as recommended projects or projects requiring further study.

Fiscal Constraint:

Transportation conformity requirements in 40 CFR 93.108 state that TIPs and transportation plans must be fiscally constrained, consistent with DOT's metropolitan planning regulations at 23 CFR part 450. The 2027-2031 State Transportation Improvement Program and 2024-2050 Regional Transportation Plans are fiscally constrained, as demonstrated in this document.

In summary and based upon the entire process described above, the Commonwealth has prepared this conformity determination for the 1997 Ozone NAAQS in accordance with EPA's and Massachusetts' latest conformity regulations and guidance. This conformity determination process demonstrates that the FFY 2027-2031 State Transportation Improvement Program and the 2024-2050 Regional Transportation Plans meet the Clean Air Act and Transportation Conformity Rule requirements for the 1997 Ozone NAAQS and have been prepared following all the guidelines and requirements of these rules during this time period.

Therefore, the implementation of the MPO's FFY 2027-2031 State Transportation Improvement Program and the 2024-2050 Regional Transportation Plans are consistent with the air quality goals of, and in conformity with, the Massachusetts State Implementation Plan.

APPENDIX B: STIP Amendment/Adjustment Procedures

MassDOT State Transportation Improvement Program (STIP) Project Revision Definitions and Procedures

The STIP is a “living” document and is likely to be modified during the course of the year. The definitions and procedures outlined in this section are followed when project-based revisions to the STIP are necessary.

Definitions of STIP Revision Procedures

Amendment: A revision to the State Transportation Improvement Program (STIP) that requires public review and demonstration of financial constraint. The public process for a STIP amendment requires a publicly advertised 21-day public comment period.

When the STIP needs to be modified due to MPOs making changes to their respective TIPs, the 21-day public comment period will be held by the MPO. In cases where changes need to be made to projects that do not appear on a regional TIP, MassDOT will hold a 21-day public comment period. Information on the proposed changes, comment period, and ways to comment will be provided on the STIP webpage. MassDOT will also publish legal notices in news outlets. MassDOT will document the public comment period by providing a summary of the comments received and MassDOT’s response as part of the STIP amendment document, which is available on the STIP webpage after it is submitted to FHWA and FTA. If no comments are received, MassDOT will also note accordingly.

Adjustment: A revision to the STIP that does not require a public process, but that is required to be included in a MassDOT STIP action with a demonstration of financial constraint for FHWA/FTA to consider for approval.

Administrative Modification: A revision to the STIP that is minor in nature to require neither a public process nor FHWA/FTA approval, but that does involve notification to our federal partners.

Highway Project STIP Revision Definitions and Procedures

Type of Revision	Definition	Procedure	Notes
Major Project Cost Change	Increase or decrease of \$500,000 or greater for projects programmed under \$5,000,000 and greater than 10% of the total cost for projects programmed over \$5,000,000.	Amendment	The “increase” or “decrease” in cost is relative to the Total Federal Participating Cost (TFPC) of a project.
Minor Project Cost Change	Increase or decrease of \$499,999 or less for projects programmed under \$5,000,000 and less than 10% of the total cost for projects programmed over \$5,000,000.	Adjustment	See above.
Project Description Change	Change in the description of the project as it is listed in the STIP.	Adjustment or Administrative Modification	Project description changes are treated as administrative modifications or adjustments for minor changes (e.g. spelling errors, more detailed descriptions, adding mile-markers, etc.).
Major Project Scope Change	A revision to the project scope large enough to necessitate an additional review by MassDOT's Project Review Committee (PRC) – typically accompanied by major project cost change.	Amendment	In some cases, a major scope change will require the initiation of a new project through MassDOT's Project Initiation Form (PIF), and review/approval by PRC. This would require deactivation and removal of the currently programmed project.
Minor Project Scope Change	A minor revision to the project scope that does not significantly alter the original PRC-approved scope of work.	Adjustment	In many cases, changes in this category will also include a minor cost change.
Project Addition	The programming of a new project in any federal fiscal year of the active TIP.	Amendment or Adjustment	Project additions are treated as amendments if the project was not part of any previously approved STIP that has been vetted through the public process. Can be treated as adjustments in circumstances in which it has been vetted for the same programming year.
Project Removal	The removal of a project in any federal fiscal year of the active TIP.	Amendment	Exception: if a project is removed from an active TIP or the STIP due to it being previously advanced/advertised, or is moved to the statewide list from a regional TIP, the action would be considered an adjustment.
Change in Funding Source	A change in the project's funding source, including federal and non-federal sources which fall within the project cost change revisions listed above.	Adjustment	Changes in funding sources for projects are permissible for advertisement purposes if the FHWA Division Office has been consulted.

2027-2031 State Transportation Improvement Program

Type of Revision	Definition	Procedure	Notes
Change in Additional Information	A change in any item listed in the “Additional Information” column of the STIP not covered in any other item listed here (e.g. earmark details, project proponent, etc.).	Administrative Modification	N/A
Change in Year of Programming	Moving a currently programmed project earlier or later than an originally programmed year.	Amendment	Changes to a project delivery schedule (advancement or delay) requires an amendment for the change in programmed FFY.

Transit Project STIP Revision Definitions and Procedures

Type of Revision	Definition	Procedure	Notes
Major Project Cost Change	Increase or decrease of \$500,000 or greater for projects under \$5,000,000 and greater than 10% of the total cost for projects exceeding \$5,000,000.	Amendment	The “increase” or “decrease” in cost is relative to the combined federal and non-federal aid participating cost of the project.
Minor Project Cost Change	Increase or decrease of \$499,999 or less for projects under \$5,000,000 and less than 10% of the total cost for projects exceeding \$5,000,000.	Adjustment	See above.
Project Description Change	Change in the description of the project as it is listed in the STIP.	Adjustment or Administrative Modification	Project description changes are treated as administrative modifications or adjustments for minor changes (e.g. spelling errors, more detailed descriptions, etc.).
Major Project Scope Change	A revision to the project scope deemed large enough to require public review and comment (e.g. changing the number of stations)	Amendment	In many cases, changes in this category will also include a major cost change.
Minor Project Scope Change	A minor revision to the project scope that does not significantly alter the original scope of work (e.g. changes to the bus model for vehicle replacement projects).	Adjustment	In many cases, changes in this category will also include a minor cost change.
Project Addition	The programming of a new project in any federal fiscal year of the current TIP.	Amendment or Adjustment	Project additions are treated as amendments if the project was not part of any previously approved STIP that has been vetted through the public process. Can be treated as adjustments in circumstances in which it has been vetted for the same programming year.
Project Removal	The removal of a project in any federal fiscal year of the current TIP.	Amendment	Exception: if a project is removed from a TIP or the STIP due to it being previously advanced/advertised, or is moved to the statewide list from a regional TIP, the action would be considered an adjustment.
Change in Funding Source	Change in the funding source, including federal and non-federal sources that fall within project cost change revisions listed in the first two rows.	Adjustment	Changes in funding sources for projects are permissible for obligation purposes with written notice from the FTA Regional Office.
Change in Year of Programming	Moving a currently programmed project earlier or later than the originally programmed year.	Amendment or Adjustment	Federal funds shall be programmed in the federal fiscal year in which the award will occur. Changes in year of programming are only treated as adjustments if they involve advancing federal funds to align with the year of the grant award.

Exceptions

Although MassDOT typically holds a 21-day public comment period for amendments, in the event of extenuating circumstances beyond the agency's control, the comment period may be shortened or waived in consultation with FHWA's Division Office and/or the FTA's Regional Office. Additionally, MassDOT may make exceptions to the procedures outlined above and consider amendments as adjustments and/or adjustments as administrative modifications, but these exceptions will also require coordination with and concurrence by MassDOT's federal partners and the affected MPO(s).

APPENDIX C: Operations and Maintenance

Appendix C is available on the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip). (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)

APPENDIX D: Strategy for Utilization of Carbon Reduction Program Formula Funding

Appendix D: Strategy for Utilization of Carbon Reduction Program Formula Funding is available on the [MassDOT STIP webpage](https://www.mass.gov/info-details/state-transportation-improvement-program-stip). (<https://www.mass.gov/info-details/state-transportation-improvement-program-stip>)