OLD COLONY METROPOLITAN PLANNING ORGANIZATION (MPO)

DRAFT FFY 2026-2030 OLD COLONY TRANSPORTATION IMPROVEMENT PROGRAM (TIP)

FOR REVIEW AND POTENTIAL RELEASE TO 21-DAY PUBLIC REVIEW AND COMMENT PERIOD BY THE OLD COLONY MPO ON APRIL 15, 2025

PREPARED IN COOPERATION WITH:

- BROCKTON AREA TRANSIT AUTHORITY (BAT)
- FEDERAL HIGHWAY ADMINISTRATION (FHWA)
- FEDERAL TRANSIT ADMINISTRATION (FTA)
- MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT)
- OLD COLONY PLANNING COUNCIL (OCPC)

PREPARED BY:
OLD COLONY PLANNING COUNCIL
70 SCHOOL STREET
BROCKTON, MASSACHUSETTS
UNDER MASSDOT CONTRACT 118969

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The Old Colony Transportation Improvement Program (TIP) was prepared by the following:

Old Colony Metropolitan Planning Organization (MPO) Members:

- Monica Tibbits-Nutt, MPO Chair, Secretary and Chief Executive Officer, Massachusetts Department of Transportation (MassDOT)
- Michael Lambert, MPO Vice-Chair, Administrator, Brockton Area Regional Transit Authority
- The Honorable Robert Sullivan, Mayor, City of Brockton
- Richard J. Quintal, Jr.., Chair, Select Board, Plymouth
- Tyler Bouchard, Board of Selectmen, Kingston (Representing communities with populations less than 15,000 persons)
- Daniel Salvucci, Vice Chair, Board of Selectmen, Whitman (Representing communities with populations more than 15,000 persons)
- Rebecca Coletta, Acting President, Old Colony Planning Council
- Jonathan Gulliver, Administrator, MassDOT Highway Division

MPO Ex-Officio Members (Non-Voting):

- Noreen O'Toole, Chair, Joint Transportation Committee
- Joi Singh, Administrator, Federal Highway Administration Massachusetts Division
- Joshua Barber, Federal Highway Administration
- Peter Butler, Federal Transit Administration

Old Colony TIP Staff Contact:

- William McNulty, PTP

DISCLAIMER

The preparation of this report has been financed in part through grant[s] from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The views and opinions of the Old Colony Planning Council expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

701 CMR 7.00 USE OF ROAD FLAGGERS AND POLICE DETAILS ON PUBLIC WORKS PROJECTS/ 701 CMR

7.00 (the Regulation) was promulgated and became law on October 3, 2008. Under this Regulation, the CMR is applicable to any Public works Project that is performed within the limits of, or that impact traffic on, any Public Road. The Municipal Limitation referenced in this Regulation is applicable only to projects where the Municipality is the Awarding Authority. For all projects contained in the TIP, the Commonwealth is the Awarding Authority. Therefore, all projects must be considered and implemented in accordance with 701 CMR 7.00, and the Road Flagger and Police Detail Guidelines. By placing a project on the TIP, the Municipality acknowledges that 701 CMR 7.00 is applicable to its project and design and construction will be

fully compliant with this Regulation. This information and additional information relative to guidance and implementation of the Regulation can be found at the following link on the MassDOT Highway Division website: https://www.mass.gov/road-flaggers-and-police-detail

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Old Colony Planning Council
Title VI/ Nondiscrimination Coordinator
Mary Waldron
70 School Street
Brockton, MA 02301

508-583-1833 Extension 202
mwaldron@ocpcrpa.org

Title VI Specialist
MassDOT, Office of Diversity and Civil Rights
10 Park Plaza
Boston, MA 02116
857-368-8580
TTY: 857-368-0603
MASSDOT.CivilRights@state.ma.us

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

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Si necesita esta información en otro idioma, por favor contacte al coordinador de MPO del Título VI al 508-583-1833.

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Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Điều phối viên Luật VI của MPO theo số điện thoại 508- 583-1833,.

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Arabic
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Updated December 2019
Old Colony Planning Council

1. INTRODUCTION

The Old Colony Metropolitan Planning Organization (Old Colony MPO) is the regional governing body established by federal law to oversee regional transportation planning and recommend the distribution of transportation funds locally. This includes the responsibilities for conducting a "3C" planning process (continuous, cooperative, and comprehensive) for transportation planning in the 17 communities of the region for all modes of travel, including roadways and highways, public transportation, bicycles, pedestrians, connections to air, ferry, and railroads. The Old Colony MPO is responsible for endorsing several Federal certification documents that include the Long-Range Transportation Plan (LRTP), the Transportation Improvement Program (TIP), and the Unified Planning Work Program (UPWP).

The transportation planning area covered by the MPO includes the 17 communities of the Old Colony Region: Abington, Avon, Bridgewater, Brockton, Duxbury, East Bridgewater, Easton, Halifax, Hanover, Hanson, Kingston, Pembroke, Plymouth, Plympton, Stoughton, West Bridgewater, and Whitman, and the Brockton Area Transit Authority (BAT).

The Old Colony MPO consists of eleven (11) members. The following eight (8) members are voting members: MassDOT; MassDOT Highway Division; Brockton Area Transit Authority (BAT); Old Colony Planning Council (OCPC); City of Brockton; Town of Plymouth; A Community with a population greater than 14,000; and a community with a population less than 15,000. The following three (3) members: Old Colony Joint Transportation Committee (JTC) Chairperson, Federal Highway Administration (FHWA), and Federal Transit Administration (FTA) are ex-officio, non-voting members of the Old Colony MPO.

The Old Colony MPO has established a committee of professionals known as the Old Colony Joint Transportation Committee (JTC) to serve as the transportation advisory group to the MPO. The JTC Members consist of representatives of the seventeen communities of the Old Colony Region: Abington, Avon, Bridgewater, Brockton, Duxbury, East Bridgewater, Easton, Halifax, Hanover, Hanson, Kingston, Pembroke, Plymouth, Plympton, Stoughton, West Bridgewater, and, Whitman, Brockton Area Transit Authority, Greater Attleboro Trenton Regional Transit Authority (GATRA), and MassDOT.

1.1 Development of the Transportation Improvement Program

The Old Colony MPO prepares the Transportation Improvement Program (TIP), which is a staging of transportation projects proposed for implementation during federal fiscal years 2026, 2027, 2028, 2029, and 2030. Projects listed in the TIP include those in the Long-Range Element and Short-Range Element of the Old Colony Long Range Transportation Plan (LRTP). The TIP describes the project, provides its projected costs and associated funding sources.

The Old Colony MPO collaborates cooperatively with the communities of the Old Colony Region, Brockton Area Transit (BAT), Massachusetts Department of Transportation (MassDOT) Office of Transportation Planning, Massachusetts Department of Transportation Rail & Transit Division, and Massachusetts Department of Transportation Highway District 5. Projects are selected from the previous TIP, from proposals made by local officials, by members of the Old Colony Joint Transportation Committee (JTC), the Massachusetts Department of Transportation, Brockton Area Transit Authority, and/or the MPO staff itself based on the Long-Range Transportation Plan. Information and data concerning current projects are obtained from MassDOT, Brockton Area Transit Authority, and/or the community responsible for the design of the project. An annual solicitation for projects commences typically in December or January.

During TIP development, current and proposed projects are evaluated using Transportation Evaluation Criteria (TEC) and recommended to the Old Colony MPO for consideration and determination of a Preferred Set of Projects. Projects are scored on a scale of 100 maximum possible points on Transportation Evaluation Criteria in six categories: System Preservation (30 Possible Points); Safety (30 Possible Points); Mobility (10 Possible Points); Economic Impact (10 Possible Points); Environment and Community Health (10 Possible Points); and Policy and Support (10 Possible Points). As the criterion in System Preservation and Safety indicate potential to satisfying Safety (PM1), Congestion Management (PM2), Efficiency (PM3), and Transit Asset Management (TAM) performance targets these categories are weighted higher than the others. The MPO staff uses the Transportation Evaluation Criteria results, as well as readiness information, available funding, and other pertinent information to develop a Draft TIP. The Old Colony MPO releases the Draft TIP for a 21-Day Public Review and Comment Period. Following the 21-Day Public Review and Comment Period, the Old Colony MPO considers the comments received and then endorses the TIP if there are no significant changes.

1.2 Bipartisan Infrastructure Law (BIL), National Planning Factors, and Performance Based Planning

The Bipartisan Infrastructure Law (BIL) requires MPOs to implement a continuing, cooperative, and comprehensive performance-based multimodal transportation planning process. To meet this requirement, the Old Colony MPO develops the Long Range Transportation Plan and Transportation Improvement Program that facilitate the safe and efficient movement of safe and efficient management, operation, and development of surface transportation systems that will serve the mobility needs of people and freight (including accessible pedestrian walkways, bicycle transportation facilities, and intermodal facilities that support intercity transportation, including intercity bus facilities and commuter van pool providers) and that fosters economic growth and development within and between States and urbanized areas, and take into consideration resiliency needs while minimizing transportation-related fuel consumption and air pollution in all areas of the region.

The BIL continues to emphasize performance-based planning as an integral part of the metropolitan planning process: states are to develop performance goals, guided by the national goals, and then MPOs will work with state departments of transportation to develop MPO performance measures and targets, or adopt the statewide performance measures and targets. The TIP integrates MassDOT's and the MPO's performance measures and link transportation-investment decisions to progress toward achieving performance targets. The MPOs, MassDOT, and providers of public transportation jointly agree and have developed specific written provisions for cooperatively developing and sharing information related to transportation performance data, the selection of performance targets, the reporting of performance targets, the reporting of performance to be used in tracking progress towards attainment of critical outcomes for the MPO regions and the collection of data for the MassDOT Asset Management Plan.

One desired outcome of performance-based planning is constant quality improvement in project selection and delivery with respect to meeting national goals. If a particular project did not help the plan meet its stated goals, or was more effective than originally thought, that information can inform future decision-making. Done properly, performance-based planning not only improves project selection and prioritization, it also can make a compelling case for the Old Colony MPO's LRTP and why the communities and providers of public transit are invested in its outcome.

The Old Colony MPO develops the TIP with consideration of additional planning activities within the metropolitan area and utilizes a process that provides for the design and delivery of transportation services within the metropolitan planning area. During the development of the LRTP, region specific

targets were developed through meetings of a sub-committee and then presented and reviewed by the Old Colony JTC and Old Colony MPO.

The TIP is designed such that once implemented, it makes progress toward achieving the performance targets. Performance-based planning attempts to make the transportation investment decision-making process both informed and accountable. Projects and services implemented through the TIP will help to achieve the performance targets for Safety (PM1), Bridge and Pavement Condition (PM2), System Performance Measures (PM3), Transit Asset Management (TAM) State of Good Repair (SGR), and Public Transit Agency Safety Plan (PTASP).

Safety Performance Measures and Targets (PM1)

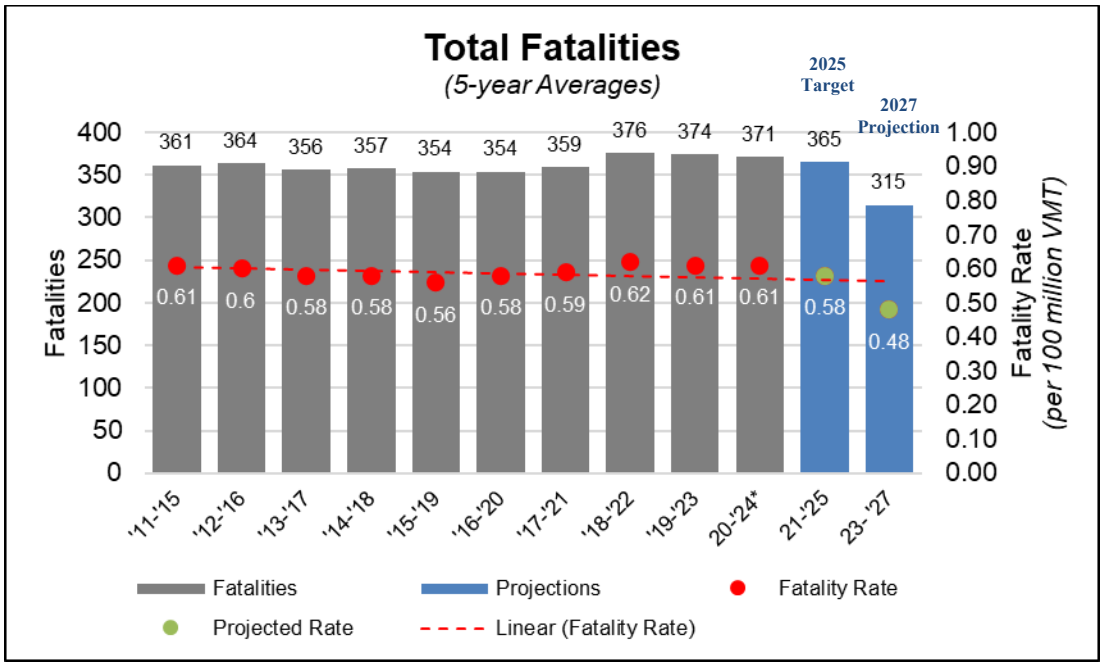
The Old Colony MPO has chosen to adopt the statewide safety performance measure targets set by MassDOT for Calendar Year (CY) 2025. In setting these targets, MassDOT has followed FHWA guidelines by using statewide crash data and Highway Performance Monitoring System (HPMS) data for vehicle miles traveled (VMT) in order to calculate 5 year, rolling average trend lines for all FHWA-defined safety measures.

Total Fatalities: Per Federal Highway Administration (FHWA) guidance, the calendar year (CY) 2025 5-year rolling average (2021-2025) target setting process began with a trend line projection based on the most recent available data. Due to higher rates of speeding caused by decreased vehicle miles traveled (VMT) amid pandemic shutdowns in 2020 and the lingering impacts in 2021 and 2022, roadway fatalities were increasing relative to previous years. However, Massachusetts began to see this trend reverse in 2023. As stated in the Infrastructure Investments and Jobs Act (IIJA), performance targets must demonstrate constant or improved performance. In addition, similar to last year, MassDOT also developed a 2023-2027 projection to forecast current trends further into the future.

To estimate 2024 fatalities, MassDOT compared data from 2015-2023 to the data available at the time of target setting in July 2024. On average, 55% of annual fatalities occurred between January 1 – July 30 of each year. Therefore, to estimate 2024 fatalities MassDOT divided the number to date by 55%. A 3% annual reduction in fatalities was then assumed to obtain an estimate for 2025, which brings the 2021-2025 5-year rolling average to 365. If this 3% decrease in annual fatalities continues, MassDOT projects the 2023-2027 5-year average to be 315.

As always, although numeric targets have been established following federal guidelines, MassDOT's overarching goal is zero deaths and this goal will be pursued by implementing strategies from the Strategic Highway Safety Plan (SHSP). The Massachusetts SHSP and Vulnerable Road User Safety Assessment were both updated and finalized in 2023. These strategies help provide details on how the state will drive down fatalities and serious injuries.

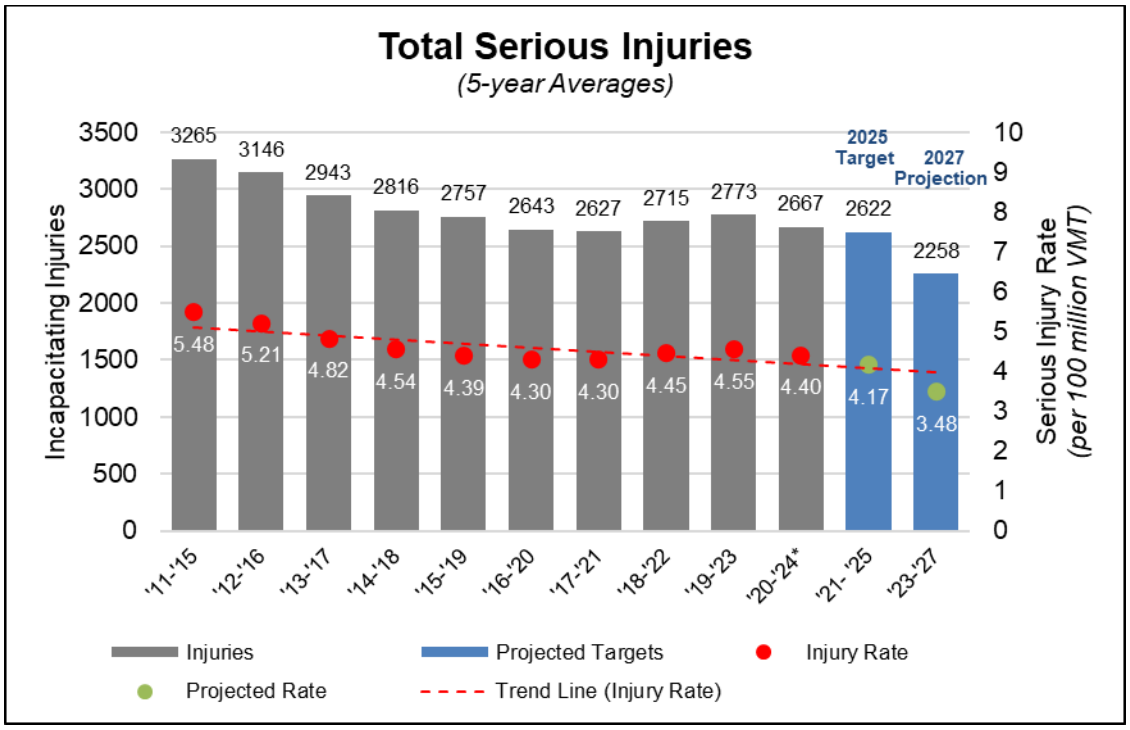
Fatality Rate: The fatality rate represents five-year average fatalities divided by five-year average VMTs. The COVID-19 pandemic greatly impacted VMT, causing fatality rates to spike in 2020 with significantly lower VMT and slightly higher fatalities. However, VMT in Massachusetts is returning to pre-pandemic levels and annual projections for 2024 are nearly in line with 2019, while 2025 projections are slightly higher. Consequently, the 5-year average fatality rate is estimated to be 0.58 fatalities per 100 million VMT for 2021-2025. If this trend continues, MassDOT projects a decrease to 0.48 fatalities per 100 million VMT for 2023-2027.



Note: All data as of July 30, 2024

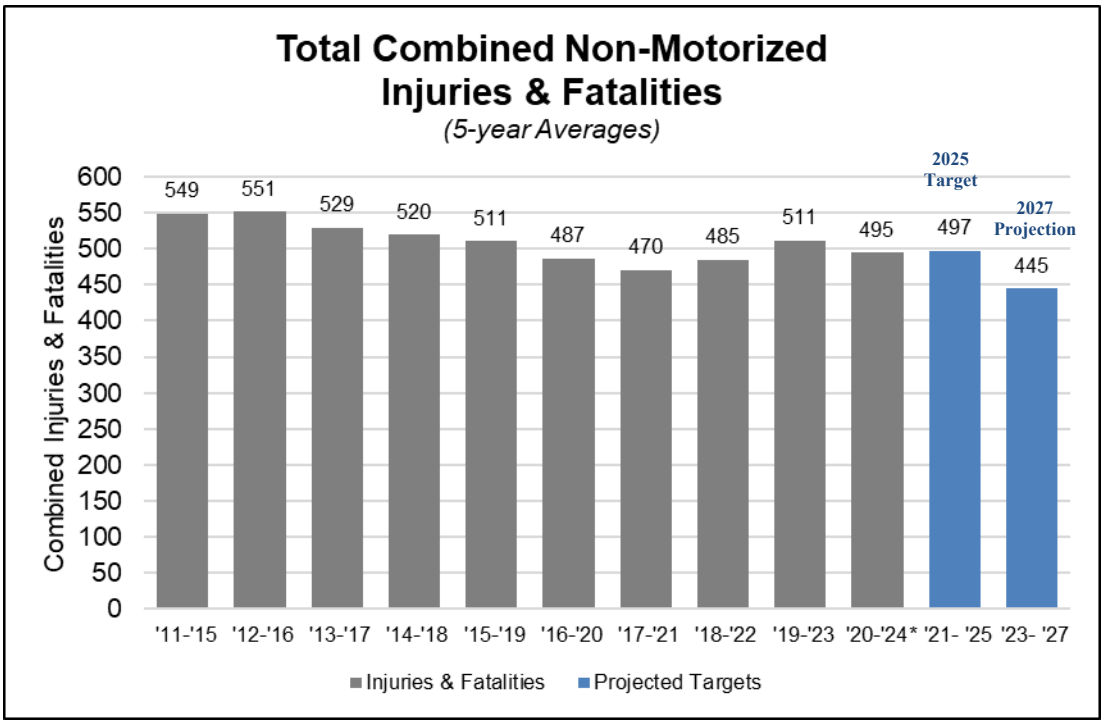
Total Serious Injuries: The target setting process began with a trend line projection based on the most recent available data. The 2022 and 2023 serious injury data were not finalized in the statewide crash system during this process, so it is possible these figures will change once that data becomes final.
Due to higher rates of speeding caused by decreased VMT amid pandemic shutdowns in 2020 and the lingering impacts in 2021 and 2022, serious injuries increased relative to previous years. However, Massachusetts began to see this trend reverse in 2023. To estimate 2024 serious injuries, MassDOT compared data from 2015-2023 to the data available at the time of target setting. 2024 serious injuries to date were divided by 55%, the average of serious injuries that occur between January 1 – July 30 each year. A 3% annual reduction in serious injuries was then assumed to obtain an estimate for 2025, which brings the 2021-2025 5-year rolling average to 2,622. If this 3% annual decrease continues, the 2023-2027 5-year average of serious injuries will be 2,258.

Serious Injuries Rate: Similar to the fatality rate, the rate of serious injuries is trending toward pre-pandemic levels. Following the same methods to derive the 5-year average fatality rate, the 5-year average serious injuries rate is estimated to be 4.17 serious injuries per 100 million VMT for 2021-2025. If this trend continues, MassDOT projects a decrease to 3.48 serious injuries per 100 million VMT for 2023-2027.



Note: All data as of July 30, 2024

Total Number of Non-Motorized Fatalities and Serious Injuries: The number of non-motorized fatalities and serious injuries has fluctuated greatly in recent years. Non-motorist fatalities, specifically, increased through 2022 and then dropped precipitously, while serious injuries appear to have peaked in 2023 and show signs of decreasing in 2024. On average, 54% of annual non-motorist fatalities and serious injuries occur between January 1 – July 30. Therefore, to estimate 2024 fatalities MassDOT divided the number to date by 54%. Based on the state's increased work and emphasis to protect vulnerable road users, a 5% annual reduction in non-motorized fatalities and serious injuries was then assumed to obtain an estimate for 2025, which brings the 2021-2025 5-year rolling average to 497. If this 5% annual decrease continues, MassDOT projects the 2023-2027 5-year average to be 445.



Note: *All data as of July 30, 2024

Note: The fatality and serious injury data contained here was developed to align with the data included in MassDOT's annual Highway Safety Improvement Program (HSIP) report. As such, historical data may be different from what was reported in prior years.

The targets were developed in coordination with the Executive Office of Public Safety and Security (EOPSS), the Highway Safety Division (HSD), and other sections within MassDOT. Although MassDOT emphasizes that the state's goal is zero fatalities and serious injuries, the state targets presented here are not "goals" but realistic targets considering the events of the last 4+ years. The Secretary of Transportation and Highway Division Administrator for MassDOT approved the targets recognizing that MassDOT must demonstrate short term incremental steps in order to achieve the Commonwealth's goal.

System Preservation Performance (PM2)

The Old Colony MPO has chosen to adopt the 2-year (2024), and 4-year (2026) statewide bridge and pavement performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by December 16th, 2022. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges 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. 2-year and 4-year targets were set for six individual performance measures: percent of bridges in good condition; percent of bridges 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 2022 Transportation Asset Management Plan (TAMP).

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 measure the percentage of deck area, rather than the total number of bridges.

Performance targets for pavement-related performance measures were based on a single year of data collection and thus were set to remain steady under the guidance of FHWA. These measures are to be revisited at the 2-year mark (2024), once three years of data are available, for more informed target setting.

MassDOT continues to measure pavement quality and to set statewide short-term and long-term targets in the MassDOT Performance Management 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	Current (2021)	2-year target (2024)	4-year target (2026)
Bridges in good condition	16%	16%	16%
Bridges in poor condition	12.2%	12%	12%
Interstate Pavement in good condition	71.8%	70%	70%
Interstate Pavement in poor condition	0.0%	2%	2%
Non-Interstate Pavement in good condition		30%	30%
Non-Interstate Pavement in poor condition		5%	5%

System Performance Measures (Congestion, Reliability, and Emissions) (PM3)

The Old Colony MPO has chosen to adopt the 2-year (2024), and 4-year (2026) statewide reliability, congestion, and emissions performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by December 16, 2022, with MPOs either adopting the statewide target or establishing their own by June 2023.

MassDOT followed FHWA regulation 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. These performance measures aim to identify the predictability of travel times on the roadway network by comparing the average travel time along a given segment against longer travel times. For LOTTR, the performance of all segments of the Interstate and of the non-Interstate NHS are defined as either reliable or unreliable based on a comparison between the 50th percentile travel time and the 80th percentile travel time, and the proportion of reliable segments is reported. For TTTR, the ratio between the 50th percentile travel time and the 90th percentile travel time for trucks only along the Interstate system is reported as a statewide measure.

The Old Colony MPO is an agency whose planning area includes communities in the Boston Urbanized Area (UZA), and as a signatory to the 2018 Boston UZA Memorandum of Understanding (Boston UZA MOU)—has also adopted 2-year (2024) and 4-year (2026) Boston UZA-wide congestion performance measure targets. These performance measures are the percentage of non-single occupancy vehicle (SOV) travel and the Peak Hour Excessive Delay (PHED). Targets were developed in coordination with state Departments of Transportation and neighboring MPOs with planning responsibility for portions of the Boston UZA.

The percentage of non-SOV travel is approximated using the U.S. Census Bureau's American Community Survey (ACS) Journey-to-Work data. This metric is based on the percentage of people commuting to work using a mode other than a single occupancy vehicle. In the Boston UZA, the proportion of non-SOV travel has been steadily increasing and is projected to continue increasing at a rate of 1.4% annually.

PHED is measured by totaling the number of hours spent in excessive delay (defined as travel time at 20 miles per hour or at 60% of the posted speed limit, whichever is greater) in peak hours (between 6:00am and 10:00am, and between 3:00pm and 7:00pm) divided by the total UZA population. For this reporting

period, targets are proposed considering the uncertainty of the trend post-pandemic and follow a trendline approach similar to TTR measures. In the Boston UZA, the 2024 target is set at a realistic 24, while the 2026 target of 22 is proposed to establish an improving target and one that is below pre-pandemic numbers.

Emissions reduction targets are measured as the sum total of all emissions reductions anticipated through CMAQ-funded projects in non-attainment or air quality maintenance areas (currently the cities of Lowell, Springfield, Waltham, and Worcester, and the town of Oak Bluffs) identified in the Statewide Transportation Improvement Program (STIP). This anticipated emissions reduction is calculated using the existing CMAQ processes.

Measure	Current (2021)	2-year (2023)	4-year (2025)
Interstate LOTTR	84.2%	74.0%	76.0%
Non-Interstate LOTTR	87.2%	85.0%	87.0%
TTTR	1.61	1.80	1.75
PHED (Boston UZA)	18.0	24.0	22.0
PHED (Springfield UZA)	6.2	6.5	6.0
PHED (Worcester UZA)	6.8	7.0	5.0
% non-SOV (Boston UZA)	36.9%	38.8%	39.8%
% non-SOV (Springfield UZA)	21.5%	22.2%	22.2%
% non-SOV (Worcester UZA)	23.4%	25.4%	26.1%
Emissions Reductions: PM2.5			
Emissions Reductions: NOx	0.490	0.000	0.000
Emissions Reductions: VOC	0.534	0.000	0.000
Emissions Reductions: PM10			
Emissions Reductions: CO	6.637	0.354	0.354

Transit System Asset (TAM) Condition Performance Measures and Targets

Table 4 lists a set of federally required infrastructure condition performance measures for transit systems along with BAT's Performance Targets. These transit asset management (TAM) measures, which focus on a specific subset of all transit assets, were established in the FTA's TAM Rule. Brockton Area Transit presented this information along with supporting documentation to the Old Colony MPO in February 2024. The Old Colony MPO has adopted BAT's FY 2024 Brockton Area Transit Authority Transit Asset Management (TAM) State of Good Repair Targets in their entirety and as their own and for the Old Colony Region, in accordance with the certified 3C Transportation Planning Process. The Old Colony MPO will continue to assist BAT in striving towards achieving these targets through our project prioritization process and with our evaluation criteria, which considers asset condition an important factor in the selection process. Within the 2026-2030 Transit TIP, projects include the purchase of support vehicles and

new buses (35' & 40'). By purchasing the new support vehicles and buses, BAT will maintain their rolling stock in excellent condition and meet the performance targets within the TAM Plan.

Table 4
Brockton Area Transit Authority Performance Measures and Targets

Performance Targets by Asset Category						
Category	**Class**	**Metric**	**Performance Target for FY 2024**	**Total Number of Vehicles**	**# of Vehicles that exceed ULB - FY 2024**	**% of Fleet that exceed ULB - FY 2024**
Rolling Stock	Buses	X% of fleet that exceeds default ULB of 14	14.00%	53	7	13.21%
	Cutaway Buses	X% of fleet that exceeds default ULB of 10	26.00%	4	1	25.00%
	Vans	X% of fleet that exceeds default ULB of 8	27.00%	57	15	26.32%
Equipment	Non-Revenue Service Vehicle	X% of non-revenue service vehicles that exceeds default ULB of 8	40.00%	5	1	20.00%
	Non-Revenue Service Truck	X% of non-revenue service vehicles that exceeds default ULB of 8	40.00%	5	2	40.00%
Facilities	Admin/ Maintenance Facility	X% of facilities rated under 3.0 on Term scale	0.00%	3	0	0.00%

FTA defines ULB as "the expected lifecycle of a capital asset for a particular transit provider's operating environment, or the acceptable period of use in service for a particular transit provider's operating environment." For example, FTA's default ULB value for a bus is 14 years. FTA's Transit Economic Requirements Model (TERM) scale, which pertains to the facilities measure, is a rating system that describes asset condition. The scale values are 1 (poor), 2 (marginal), 3 (adequate), 4 (good), and 5 (excellent). Because each measure is intended to represent the share of transit assets that are not in a state of good repair, the goal is to minimize the value for all four measures. FTA grantees, including transit agencies and agency sponsors, such as MassDOT, are required to develop targets for these TAM measures

each fiscal year. MPOs, in turn, are required to set targets for their regions. BAT submitted agency-level targets for state fiscal year (SFY) 2023 (July 2023 through June 2024) to the Old Colony MPO. Their targets reflect the most recent data available on the number, age, and condition of their assets, and their expectations and capital investment plans for improving these assets during SFY 2023.

Public Transit Agency Safety Plan (PTASP) Performance Measures and Targets

The Public Transportation Agency Safety Plan (PTASP) details the safety processes and procedures for the Brockton Area Transit Authority (BAT). This plan utilizes existing agency safety practices and best practices to be implemented to meet the new regulation set in 49 CFR Part 673 of the federal guidelines and was provided to Old Colony Planning on September 15, 2020.

The PTASP includes formal documentation to guide the agency in initiative-taking safety management policy, safety risk management, safety assurance, and safety promotion. The goal is to provide management and labor a comprehensive, collaborative approach to managing safety. The plan includes the process and schedule for an annual review to evaluate the safety performance measures and update processes to continuously improve the organization's safety practices.

BAT has developed and approved performance targets based on the safety performance measures established under the National Public Transportation Safety Plan. The targets in Table 5 are based on the review of the previous five years of BAT's safety performance data.

Table 5
Brockton Area Transit Authority Safety Performance Measures and Targets

Safety Performance Targets							
Mode of Transit Service	**Fatalities (Total)**	**Fatalities (Rate)**	**Injuries (Total)**	**Injuries (Rate)**	**Safety Events (Total)**	**Safety Events (Rate)**	**System Reliability (Miles between Major Failure)**
Fixed Route	0	0	12	9.5	5	3.9	20,0000
Demand Response	0	0	1	3.5	1	3.5	30,000

On February 18, 2024, the Old Colony MPO adopted BAT's Safety Performance Measures and Targets in their entirety and as their own and for the Old Colony Region, in accordance with the certified 3C Transportation Planning Process. The Old Colony MPO will continue to assist BAT in striving towards achieving these targets through our project prioritization process and with our evaluation criteria, which considers safety an important factor in the selection process. Similar to BAT's TAM Plan, new bus and support vehicle purchases included in the FFY 2026-2030 Transit TIP is also anticipated to help reach the safety targets listed in the PTASP. The new buses and support vehicles will replace the older vehicles and they are expected to be more reliable and safer on the roadways. In addition, the purchasing of support equipment and associated capital maintenance item will assist in the repair of the older vehicles.

1.3 Transportation Funding Programs

The major sources of TIP funding are the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and MassDOT. The United States Congress authorizes federal funding for these

transportation projects through federal legislation. For highways and mass transportation, the most recent authorization was the Bipartisan Infrastructure Law (BIL) (2022). Federal funding received from BIL is allocated to different funding programs. State funds are also a key component for transportation purposes.

Highway Funding Programs

- **National Highway Performance Program (NHPP)** provides support for the condition and performance of the National Highway System (NHS), for the construction of new facilities on the NHS, and to ensure that investments of Federal-aid funds in highway construction are directed to support progress toward the achievement of performance targets established in a state's asset management plan for the NHS.

- **National Highway Freight Program (NHFP) Program** provides funds for projects that improve efficient movement of freight on the National Highway Freight Network (NHFN).

- **Surface Transportation Block Grant Program (STBG)** provides flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals.

- **Congestion Mitigation and Air Quality Improvement Program (CMAQ)** provides flexible funding for transportation projects and programs to help meet the requirements of the Clean Air Act.

- **Highway Safety Improvement Program (HSIP)** is a core Federal-aid program with the purpose to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned roads and roads on tribal land.

- **Transportation Alternatives Program (TAP)** provides funds for a variety of activities related to improving transportation assets, including on- and off- road pedestrian and bicycle facilities, environmental mitigation, and creating or improving recreational trails projects.

- **Carbon Reduction Program (CRP):** The Bipartisan Infrastructure Law (BIL) establishes the Carbon Reduction Program (CRP), which provides funds for projects designed to reduce transportation emissions, defined as carbon dioxide (CO2) emissions from on-road highway sources.

- **RAISE Discretionary Grants (RAISE):** RAISE discretionary grants, which were originally created under the American Recovery and Reinvestment Act as TIGER grants, can be used for a wide variety of projects.

- **Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program** provides In addition to formula grants to States, $1.4 billion in competitive grants to eligible entities to increase the resilience of our transportation system. PROTECT Grants will support planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure.

- **Safe Streets for All (SS4A) Program:** The Bipartisan Infrastructure Law (BIL) established the new Safe Streets and Roads for All (SS4A) discretionary program with $5 billion in appropriated funds

over 5 years. The SS4A program funds **Safe** regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries

- **Reconnecting Communities Pilot (RCP) Program:** The Bipartisan Infrastructure Law (BIL) established the new Reconnecting Communities Pilot (RCP) discretionary grant program, funded with $1 billion over the next 5 years. It is the first-ever Federal program dedicated to reconnecting communities that were previously cut off from economic opportunities by transportation infrastructure. Funding supports planning grants and capital construction grants, as well as technical assistance, to restore community connectivity through the removal, retrofit, mitigation, or replacement of eligible transportation infrastructure facilities.
- **Bridge Replacement and Rehabilitation Program** provides funds for rehabilitation and replacement of any bridge on a public road. Bridges on the federal-aid system or off the federal-aid system are eligible for these funds.

- **Non-Federal Aid (NFA)** contains all projects not receiving federal funds. Various categories of state funding are included in this group such as bikeways, State Aid (Chapter 90), MassWorks, highway construction, and maintenance.

Transit Funding Programs

- **Section 5307** provides funds to urbanized areas and to governors for transit capital and operating assistance in urbanized areas and for transportation-related planning. An urbanized area is an incorporated area with a population of 50,000 or more that is designated as such by the U.S. Department of Commerce, Bureau of the Census.

- **Section 5310** provides funds to enhance the mobility for seniors and persons with disabilities by providing funds for programs to serve the special needs of transit-dependent populations beyond traditional public transportation services and Americans with Disabilities Act (ADA) complementary paratransit services.

- **Section 5311** provides capital, planning, and operating assistance to states to support public transportation in rural areas with populations of less than 50,000, where many residents often rely on public transit to reach their destinations.

- **Section 5339** provides funding to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities.

- **Community Transit Grant Program (CTGP)** awards funds to help meet the transportation and mobility needs of seniors and people with disabilities. The annual competitive program distributes Federal Transit Administration Section 5310: Enhanced Mobility of Seniors & Individuals with Disabilities funds and State Mobility Assistance Program (MAP) funds.

1.4 Public Participation, Coordination, and Consultation

Transportation planning is one component of the Continuing, Cooperative, and Comprehensive performance-based multimodal transportation planning process that includes land use/ growth management, housing, open space and recreation, economic development, historic preservation, and

water quality. It is important that these potentially conflicting elements be consistent with one another to facilitate the efficient movement of people and goods in the region. The first step in obtaining consistency is the coordination and consultation with appropriate agencies and groups on existing projects. Each of the functional planning areas uses common land use, population and employment statistics, and forecasts.

An underlying principle of the metropolitan planning process is public participation, coordination, and consultation with agencies and groups. The FFY 2026-2030 Transportation Improvement Program was developed in accordance with the Public Participation Plan (PPP) for the Old Colony Region. The PPP defines a process for providing individuals, affected public agencies, representatives of public transportation employees, public ports, freight shippers, providers of freight transportation services, private providers of transportation (including intercity bus operators, employer-based commuting programs, such as carpool program, vanpool program, transit benefit program, parking cash-out program, shuttle program, or telework program), representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with reasonable opportunities to be involved in the metropolitan transportation planning process. The hybrid public participation process continued and utilized a virtual and digital mode. Meetings of the Joint Transportation Committee and the Metropolitan Planning Organization have continued via virtual meetings, dissemination of information via email, website, and newsletters has continued, and staff has remained reachable for questions and comments via telephone and email. Staff has also had some in person project specific meeting. Legal advertisements notifying the public of the availability of the Draft TIP and the ability to comment have continued.

Brockton Area Transit Authority, the FTA Section 5307(c) applicant, has consulted with the Old Colony Metropolitan Planning Organization and concurs that the public involvement process adopted by the MPO for development of the TIP satisfies the public hearing requirements that pertain to the development of the Program of Projects (POP) for the regular Section 5307, Urbanized Area Formula Program, grant applications including the provisions for public notice and the time established for public review and comment. The public discussion of the Transportation Improvement Program at Old Colony JTC, Old Colony MPO, and transportation meetings satisfies the Program of Projects (POP) public hearing requirements of the Federal Transit Administration.

As such, Brockton Area Transit utilizes the Old Colony MPO’s public participation process as its public participation process. The public discussion of the Transportation Improvement Program at Old Colony JTC, Old Colony MPO, and transportation meetings satisfies the Program of Projects (POP) public hearing requirements of the Federal Transit Administration.

Public participation in the TIP development process is welcomed and encouraged. The TIP is posted on the Old Colony Planning Council Website. The public can participate in the development of the TIP by attending meetings of the JTC, MPO, and OCPC, contacting the staff for information or individual meetings, reviewing, and commenting on draft TIPs. To ensure that there is equity in the distribution of transportation resources and that there is reasonable access to the planning process, the Old Colony MPO continually conducts Title VI and Environmental Justice planning for the Old Colony Region. The overall engagement methodology is described is the following sections.

The Old Colony MPO consults with agencies and officials responsible for other planning activities within the metropolitan planning area that are affected by transportation (including State and local planned growth, economic development, tourism, natural disaster risk reduction, environmental protection,

airport operations, or freight movements) or coordinate its planning process (to the maximum extent practicable) with such planning activities.

Staff utilized a diverse methodology for coordination, consultation, and engaging the public to the maximum extent possible in the development of the TIP. The methodology is as follows:

- Old Colony Metropolitan Planning Organization - The MPO provided continual oversight of the TIP development and project programming and has the responsibility of ultimately endorsing the TIP. Monthly meetings took place on the third Tuesday of the month.

- Old Colony Joint Transportation Committee - Functioning as the advisory committee to the Old Colony MPO and Old Colony Planning Council, this committee assists with the identification of transportation deficiencies and provides regular input and review of TIP products. The Committee consists of superintendents and or directors of highway department of public works, town planners, engineers, etc.

- Old Colony Planning Council (OCPC) - The Old Colony Planning Council discusses the TIP development and provides both planning and policy guidance at regularly scheduled OCPC Board of Directors meetings.

- Transit Providers - MPO staff seeks input regarding transit needs and projects from the Brockton Area Transit Regional Transit Authority, Greater Attleboro-Taunton Regional Transit Authority (GATRA), MBTA, and the South Shore Community Action Council (SSCAC).

- Coordination and consultation activities - Coordination and consultation, and/or information dissemination activities take place with multiple agencies and groups. As such, these coordination and consultation activities may take place with: Brockton Area Transit, Cape Verdean Association of Brockton, Chief Elected Officials, Departments of Public Works and Highway Departments, Massachusetts Department of Transportation, Greater Attleboro Taunton Transit Authority, Massachusetts Department of Transportation District 5, MBTA, Metro South Chamber of Commerce, NAACP, Plymouth and Brockton (P&B), Plymouth Area Chamber of Commerce, Plymouth County Development Council, South Shore Chamber of Commerce, and South Shore Community Action Council.

- Transportation Advisory Network (TAN) - The TAN Outreach Contact List consists of over 200 members. Members include chief elected officials, legislators, planning boards, Massachusetts Department of Transportation, Federal Highway Administration, Federal Transit Administration, transit providers, minority groups, city and town clerks, media outlets, and transportation officials. The objective is to provide continuing outreach to a wide network. Council staff provides announcements of product availability, upcoming events, and meetings associated with the TIP to the TAN. The TAN Outreach Contact List is shared with MassDOT-Office of Transportation Planning, and MassDOT-Office of Diversity and Civil Rights.

- Media Outlets - Staff utilizes media outlets to solicit public comment, advertise meetings, and advertise TIP availability. Examples of media outlets are 95.9 WATD, the Brockton Enterprise, the Ojornal, and the Patriot Ledger.

- Copies of the Draft TIP are posted on the OCPC website and are provided upon request via email and direct mail. As such, reasonable access, and opportunities to review the Draft TIP are provided.

- 21-Day Public Review Period - During the public review period for the Draft TIP, copies are available, and their availability are advertised using multiple media outlets and the TAN. During the period, public meetings were held, and the staff was available to discuss the Draft TIP with the public upon request.

Environmental Justice and Social Equity

Environmental Justice (EJ) is an important part of the planning process and is considered in all phases of planning. A truly integrated and effective planning process actively considers and promotes environmental justice within projects and groups of projects, across the total plan, and in policy decisions. All reasonably foreseeable adverse social, economic, and environmental effects on minority populations and low-income populations must be identified and addressed. There are three fundamental Environmental Justice principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

Public involvement is an integral part of transportation planning and project development decision-making. The U.S. DOT Order (5610.2) on Environmental Justice directs the provision for minority populations and low-income populations greater access to information on and opportunities for public participation in matters that may affect human health and the environment.

Effective public involvement in the planning process and the project-development process can alert State and local agencies about environmental justice concerns so that they do not result in surprises during the project-development stage. Continuous interaction between community members and transportation professionals is critical to successfully identify and resolve potential Environmental Justice concerns. The Old Colony MPO has public-involvement procedures established that provide for consideration of Environmental Justice. These procedures provide an inclusive, representative, and equal opportunity for communication resulting in appropriate action that reflects this public involvement. Environmental Justice is considered in all aspects of planning and project decision-making, including the design of both the public-involvement plan and the proposed facility. Detailed information on these procedures is included in the Old Colony Public Participation available here: https://oldcolonyplanning.org/wp-content/uploads/2022/09/Old_Colony_Public_Participation_Plan_2021.pdf?ver

Environmental Justice Analysis asks whether a proposed action or plan causes disproportionately high and adverse effects on minority populations and low-income populations, and whether these populations are denied benefits. A framework of analysis that can determine how a proposed action or plan could differentially affect different populations is important. As such, an analysis of benefits and burdens is utilized. In addition, computer mapping of Environmental Justice Areas along with past, present, and future projects funded through the Transportation Improvement Program, available transit services and

their associated walking times, commuter parking facilities, pavement conditions, high crash locations, areas of congestion are utilized to measure the distribution of funding (to ensure geographic equity), to determine priorities areas of need/ and or concern.

Examinations of potential benefits and burdens because of the implementation of the TIP were conducted. Examples of benefits considered were mobility, accessibility, infrastructure condition, environment, reliability, safety, security, load factors, efficiency, and consultation with riders in improving bus services to the transit dependent. While examples of burdens considered were: air, noise, and water pollution and soil contamination, destruction or disruption of community cohesion or a community's economic vitality, destruction or disruption of the availability of public and private facilities and services, adverse employment effects, displacement of persons, businesses, farms, or nonprofit organizations, increased traffic congestion, isolation, exclusion, or separation of minority or low-income individuals within a given community or from the broader community, and the denial of, reduction in, or significant delay in the receipt of, benefits of programs, policies, or activities.

An assessment of the benefits and burdens of the Transportation Improvement Program was completed to identify all regionally significant projects constructed and/or programmed in the Old Colony Transportation Improvement Program during the period of 2003 - 2030. Constructed projects funded through the TIP were included to provide a benchmark of investments. The constructed projects were compiled and then the staff analyzed the location of these improvements relative to Environmental Justice Communities. Environmental Justice Communities in the Old Colony MPO Region are Brockton, Easton, Plymouth, Stoughton, and Whitman.

For the purposes of identifying these communities, the staff utilized the MassGIS Environmental Justice GIS Shape file. Polygons in the Environmental Justice Populations layer represent neighborhoods across the state with high minority, non-English speaking, low-income, and foreign-born populations. Specifically, a community is identified as an Environmental Justice Community if any the following are true within that community:

- Contains a Block group whose annual Median Household Income is equal to or less than 65 percent of the Massachusetts Median Household Income of $85,843 ($56,220 in 2019); or
- 25% or more of the residents identify as a race other than white; or
- 25% or more of households have no one over the age of 14 who speaks English only or very well - English Isolation.

Regionally, it was determined that seven (7) of the identified improvement projects, representing approximately 22 percent of the identified investment dollars on the FFY 2026-2030 TIP are located within or immediately adjacent to Census Block Groups identified as Environmental Justice communities. Non-mappable projects, such as transit vehicle replacements or rehabilitations, and other non-location-specific projects are not included in this analysis. Projects that are not in environmental justice communities are still considered regionally signgicant, such as bridges and limited access highway improvements. These improvements benefit the region, and provide access to many key employment centers, including downtown Brockton and regional commercial and employment destinations.

Table 6

Investment Value of TIP Highway Projects 2026-2030 (Projects Planned)

Type	Population(2020)	Percent of Regional Population	TIP Highway Project Investment*	Percentage of Projects by Total Investment ($)
Within EJ Block Groups	154,177	39.2%	$64,049.315	22.2%
Outside EJ Block Groups	239,072	60.8%	$223,943,662	77.9%
Totals	393,249	100.0%	$288,002,977	100%

*Based on the unadjusted 2025 Total Federal Participating Cost figure. Includes Projects funded with Regional Target Funds, Statewide Funds, Bridge Funds, or Non-Federal Aid Funds.

The Old Colony MPO undertook further analysis to determine the level of highway investment during the most recent 20-year period from 2005-2024. From that analysis, it was concluded that 60 percent of the 70 identified improvement projects, representing approximately 58.6 percent of the identified investment dollars allocated during the TIP years of 2005-2024 are in EJ communities. The percentage of investment dollars exceed the 35.0 percent of the region's population identified as living in EJ communities.

Table 7

Investment Value of TIP Projects 2006 - 2025 (Projects Implemented)

Type	Population(2020)	Percent of Regional Population	TIP Project Investment*	Percentage of Projects by Total Investment ($)
Within EJ Block Groups	154,177	39.2%	$154,293,064	49.2%
Outside EJ Block Groups	239,072	60.8%	$159,504,857	50.8%
Totals	393,249	100.0%	$313,797,921	100%

*Includes Projects funded with Regional Target Funds, Statewide Funds, Bridge Funds, or Non-Federal Aid Funds.

The first step towards understanding the profile of individuals that could participate in the transportation planning process and reside in community that is a recipient of TIP project funding is a review of U.S Census data. Table 8 displays the number of individuals who are Limited English Proficient (LEP). For our planning purposes, we are considering people that speak English "not well" or "not at all."

Tables 8 and 9, derived from the 2018 US Census American Community Survey, shows the number and percent of persons who are five (5) and older, regarding their English language skills, for the communities within the MPO area and several adjacent municipalities. It should be noted that the U.S. Census has changed how it collects data on the number of LEP individuals in each area. In years past, the U.S. Census collected LEP data down to the census block level, but due to privacy concerns, the U.S. Census no longer gets as granular in its LEP data collection efforts. In the case of the Old Colony Region, LEP data is collected

on the community level, and with some communities, LEP information is provided only on a multi-community level.

Tables 8 and 9 show the breakdown of highway investment by subarea of populations of individuals with Limited English Proficiency LEP), both in the current FFY 2026-2030 TIP and historically of all projects from 2010 through 2030.

Table 8
Investment Value of TIP Projects and Limited English Proficient (LEP) 2026-2030

Community Grouping	2018 Population of 5 Years or Older	Number of LEP Persons	Percentage of LEP Persons	Number of TIP Projects, 2010-2030	Percentage of Total Projects	TIP Project Expenditures, 2010 through 2030 ($)
Avon, Brockton, and Stoughton	120,300	20,882	51.4%	8	38%	$72,215,418
Abington, Bridgewater, East Bridgewater, Easton,Rockland, Whitman, and West Bridgewater	115,811	2,869	7.1%	7	33%	$38,033,817
Halifax, Hanover, Hanson, Pembroke, and Plympton	106,948	1,121	2.8%	2	10%	$18,473,432
Duxbury,Kington,Marshfield, Plymuth, and Scituate	87,514	15,781	38.8%	4	19%	$202,830,891
Total	**430,573**	**40,653**	**100.0%**	**21**	**100%**	**$331,553,558**

Table 9
Historical Investment Value of TIP Projects and Limited English Proficient (LEP) 2010-2030

Community Grouping	2018 Population of 5 Years or Older	Number of LEP Persons	Percentage of LEP Persons	Number of TIP Projects, 2010-2030	Percentage of Total Projects	TIP Project Expenditures, 2010 through 2030 ($)
Avon, Brockton, and Stoughton	120,300	20,882	51.4%	31	42%	$176,257,640
Abington, Bridgewater, East Bridgewater, Easton,Rockland, Whitman, and West Bridgewater	115,811	2,869	7.1%	22	30%	$93,791,690
Halifax, Hanover, Hanson, Pembroke, and Plympton	106,948	1,121	2.8%	9	12%	$45,790,488
Duxbury,Kington,Marshfield, Plymuth, and Scituate	87,514	15,781	38.8%	11	15%	$253,836,364
Total	**430,573**	**40,653**	**100.0%**	**73**	**100%**	**$569,676,182**

LEP Source: 2018 ACS 5 year B16001 LEP Languages

From the examination of benefits and burdens, it is the determination that no projects implemented because of the TIP will result in adverse impacts to the Environmental Justice Areas in the Old Colony region.

As such, from the review, it may be concluded from the public investment and involvement in the regional transportation planning process and the resultant FFY 2026-2030 Transportation Improvement Program and previous TIPs (dating back to 2010) demonstrate that the benefits of the regional transportation planning process are afforded equitably to both EJ and Non-EJ communities. Given this equitable distribution and investment, it is finding of the Old Colony MPO that the Low-income and minority

populations are not disproportionately impacted and are beneficiaries of the transportation planning process and project implementation in the Old Colony Region.

As such, the Old Colony MPO continues to collaborate with our regional partners in the advancement of environmental justice principles throughout the regional planning process. Such analyses will be conducted annually and included in the endorsed TIP.

2. HIGHWAY AND BRIDGE PROJECT LISTING BY COMMUNITY

2.1 Prioritization and Transportation Evaluation Criteria

Several factors are considered when developing the prioritization and programming of TIP projects. They include:

- Financial feasibility of project
- Local and regional support for the project
- Need for project to be implemented (safety, congestion, etc.)
- Project has been derived from the Management Systems (Congestion, Safety, and Pavement)
- Project has Project Review Committee (PRC) approval and/or a MassDOT ID
- Project must have reasonable progress in design, permitting, and right-of-way, etc., to ensure that the project can be implemented in the active year
- Project implementation will assist with making progress towards achievement of adopted performance measures and targets
- Results of Annual TIP Readiness Day
- Results of Transportation Evaluation Criteria

Transportation Evaluation Criteria (TEC)

With transparency and reasonableness in mind, in 2004, the Old Colony MPO began utilizing TIP project transportation evaluation criteria to inform the process of evaluating and selecting projects for programming in the TIP. The transportation evaluation criteria are a means of assisting decision makers in the programming projects that will help the region attain the visions established by the Old Colony MPO, which includes, to maintain a state of good repair, focus investments on existing activity centers, improve mobility for people and freight, reduce the level of greenhouse gas emissions, minimize environmental burdens from transportation facilities on low-income and minority populations, and provide safe transportation for all modes. Projects with components and outcomes that help attain the goals of the Old Colony MPO receive higher scores.

Evaluation of Projects

The Transportation Evaluation Criteria utilized for the FFY 2026-2030 Transportation Improvement Program are included in Appendix H. The scoring results of the Transportation Evaluation Criteria are included with the applicable projects listed in the Universe of Projects. System reliability projects such as preservation projects on limited access highways or transit state of good repair projects are not evaluated, as they are required projects identified through asset management systems.

Once a project has been approved by MassDOT's Project Review Committee, potential TIP projects are evaluated and are scored one a 100 points cale in the following categories:

- System Presentation and State of Good Repair

- Safety
- Mobility
- Economic Impact
- Environmental Effects
- Community Support and Consistency with Policy

Tibble 10 outlines how PRC approved projects are scored in six categories.

Table 10: Outline of Old Colony TIP Transportation Evaluation Criteria Scoring Categories and Potential Points

Category	Evaluation Criterion	Total Potential Points
System Preservation / State of Good Repair	Primary Asset Condition Enhancements to Secondary Assets Use of Modern Technology to Improve Efficiency Incorporates Transit Elements into Design	30
Safety	Motorist crash history and anticipated improvement Non-Motorist crash history and anticipated improvement Proven Safety Measures	30
Mobility	Existing Motorist Congestion Effect on Mobility and Accommodation for Non-Motorists Effect on System Connectivity and Access	10
Economic Impact	Access to or within a regionally designated economic development area Access to or within a business district Connectivity between housing, employment, and commerce Effect on freight network	10
Environmental Effect	Effect on Wetlands, Wildlife or Other Natural Resources Protects or Enhances Water Quality by Improving Stormwater Management Effect on air quality and GHG emissions Improves Coastal Resiliency Enhances local open space Incorporates Healthy Transportation Options	10
Community Support and Consistency with Policy	Project has Community Support, Identified in Local Plans, and an Active Design Project Identified in Regional Plan and/or Consistent with Regional Policy Consistent with PM1, PM2, PM3, and/or TAM Project Supports Federal and State Policy Equity	10
	Total Possible Score	**100**

The Old Colony MPO considers whether a project's implementation will assist in making progress towards achievement of adopted performance measures and targets and utilizes evaluation criteria ratings and project readiness information to prepare a First-Tier List of Projects. This is a list of the projects with the

highest ratings that could be made ready for advertising within the TIP's time horizon (next four federal fiscal years). The staff relies on the MassDOT Highway Division to provide information about what year a project would be ready for advertising. In developing the recommendation for the draft TIP, the staff strongly considers the First-Tier List of Projects. The Old Colony MPO staff also factors in projects that are listed in the Long-Range Transportation Plan to implement the LRTP, considers geographic and social equity to help ensure that the list of projects addresses needs throughout the region, and accounts for cost to comply with fiscal constraint.

2.2 Universe of Projects and Geographic Distribution of Projects

Please see Appendix N of this document for a complete list of projects in the Universe of Projects, with year of programming and Transportation Project Evaluation Criteria (TEC) score included.

Geographic Distribution and Equity Analysis of Projects

The Old Colony MPO monitors the geographic distribution of TIP projects over time. Table 11 provides the distribution of TIP projects from 2011 through 2030. To assist with providing context to the distribution, included in the table is 2020 Population and 2019 Median Household Income.

From an examination of the distribution of TIP projects from 2010 through 2030, the following observations may be made:

- There are higher concentrations of projects within the more populated urban areas (i.e., Brockton at 24.2 percent of all projects). Such concentrations tend to follow areas with elevated levels of congestion, bicycle and pedestrian activity, and crash clusters.
- The towns of Stoughton (9.1%), Easton (7.6%), Pembroke (7.6%), and also had higher concentration of projects. A potential explanation for such a trend is that these populous communities feature proximity to limited access highways, commuter rail, and academic institutions of higher learning. Such features, while beneficial in many respects, also lead to higher pedestrian, bicyclist and vehicle trips, and the need for additional multimodal and infrastructure.
- Regarding equity, it is observed that Brockton, with 70.6% Title VI Minority Population, had 24.7% of the TIP projects of the 2011-2030 span, while Stoughton with 37.9% Title VI Minority Population, had 9.1% of the projects during the same time.

Table 11
TIP Investment by Community, 2011-2030

Community	2020 Population	2020 Title VI Minority Population	Percent Title VI Minority	Median Household Income, 2019	Number of TIP Projects, 2011 through 2030	Percentage of Total Projects	TIP Project Expenditures, 2010 through 2030 ($)	Per Capita Expenditure ($)
Abington	17,062	2,910	17.1%	$99,381	4	6.1%	$17,125,850	$1,003.74
Avon	4,777	1,685	35.3%	$85,200	4	6.1%	$20,744,819	$4,342.65
Bridgewater	28,633	4,997	17.5%	$95,675	2	3.0%	$19,337,493	$675.36
Brockton	105,643	74,569	70.6%	$58,469	16	24.2%	$84,765,332	$802.38
Duxbury	16,090	1,081	6.7%	$128,173	4	6.1%	$221,925,307	$13,792.75
East Bridgewater	14,440	1,560	10.8%	$90,528	4	6.1%	$13,611,872	$942.65
Easton	25,058	4,025	16.1%	$112,268	5	7.6%	$23,755,301	$948.01
Halifax	7,749	519	6.7%	$92,774	0	0.0%	$0	$0.00
Hanover	14,833	1,140	7.7%	$127,981	2	3.0%	$18,462,821	$1,244.71
Hanson	10,639	844	7.9%	$96,693	0	0.0%	$0	$0.00
Kingston	13,708	1,069	7.8%	$96,104	4	6.1%	$63,461,353	$4,629.51
Pembroke	18,361	1,285	7.0%	$103,905	5	7.6%	$24,613,677	$1,340.54
Plymouth	61,217	6,673	10.9%	$90,279	4	6.1%	$21,564,989	$352.27
Plympton	2,930	162	5.5%	$94,167	1	1.5%	$1,753,213	$598.37
Stoughton	29,281	11,088	37.9%	$83,519	6	9.1%	$34,680,344	$1,184.40
West Bridgewater	7,707	968	12.6%	$97,404	3	4.5%	$57,998,546	$7,525.44
Whitman	15,121	1,969	13.0%	$86,570	2	3.0%	$20,826,396	$1,377.32
Totals	**393,249**	**116,544**	29.6%		66	100.0%	$644,627,314	$5,531.19

3. TIP - FEDERAL REQUIREMENTS AND PROJECT LISTS

3.1 Endorsements of the FFY 2026-2030 Old Colony TIP, Self-Compliance Statements of the Comprehensive, Continuing, Cooperative Transportation Planning Process, and Self Compliance Statements of the 310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation

The Unified Planning Work Program, Long Range Transportation Plan, and Transportation Improvement Program, together with any amendments, were developed in accordance with FHWA and FTA regulations governing the implementation of the Bipartisan Infrastructure Law (BIL), EPA regulations governing the implementation of the Clean Air Act Amendments of 1990, and fully incorporates the applicable requirements of the 1964 Civil Rights Act and the Americans with Disabilities Act of 1990. From certification reviews conducted in 2006, 2011, 2016, 2019, and 2023 the FHWA and FTA have determined that the transportation planning process of the MPO substantially meets the requirements of the Metropolitan Planning Rule 23 CFR Part 450 Subpart C and 49 CFR Part 613. In addition, FHWA and FTA have jointly certified the transportation planning process.

Endorsement of FFY 2026-2030 Old Colony TIP is provided in Appendix A.

Self-Compliance Statements of the Metropolitan Transportation Planning Process is provided in Appendix B.

Self-Compliance Statements of the 310 CMR 60.05: Global Warming Solutions Act Requirements for the Transportation Sector and the Massachusetts Department of Transportation is provided in Appendix C.

3.2 Procedures for Amendments and Administrative Modifications

The TIP is a "living" document and is likely to be modified during the year. The definitions and procedures outlined in this section are followed when project-based revisions to the TIP are necessary (Detailed TIP Project Revision and Definition Procedures are included in Appendix N).

TIP Amendment

A revision to the Transportation Improvement Program that requires public review and demonstration of financial constraint. The public process for a TIP amendment requires a publicly advertised 21-day public comment period and for the MPO to address any public commentary prior to endorsement. The Old Colony MPO, at their discretion, may vote to abbreviate the public comment period under what they consider extraordinary circumstances beyond the MPO's control. TIP Amendments are prompted by the major change(s) in a project.

TIP Adjustment

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

TIP Administrative Modification

A revision to the TIP that is minor enough in nature to require neither a public process nor FHWA/FTA approval, but that does involve a notification to federal partners.

3.3 Financial Summary, Targets, and Fiscal Constraint Analysis

The Massachusetts Department of Transportation Office of Transportation Planning, in consultation with the Regional Planning Agencies and utilizing the Massachusetts Association of Regional Planning Agencies (MARPA) Formula, provides each region with yearly-targeted federal funding levels with state match for highway and bridge projects, and separate yearly targets for projects that qualify for Congestion Mitigation Air Quality funds, Highway Safety Improvement Program (HSIP) funds, and Transportation Alternative Program funds. These Funding Targets are in Appendix G. The anticipated funds, programmed funds, unprogrammed funds and fiscal constraint analysis is summarized below in Table 12. The Summary of Regional Funding Categories in Table 13 provides specifics on fund amount by funding category.

The Transportation Improvement Program is financially constrained according to the definition in the 23 CFR Part 450.324. Project costs programmed in the TIP are expressed in Year of Expenditure (YOE) dollars. The cost inflation factor utilized is increased 4% annually (e.g., 2027 at 4%; 2028 at 8%; 2029 at 12%, and 2030 at 16%). The projects programmed do not exceed the funding estimates of federal and state funds available in each of these fiscal years. Additionally, the transit projects programmed in the TIP are financially constrained to available resources and they have been reviewed and approved for programming by MassDOT Rail & Transit, and the MassDOT Office of Transportation Planning.

Table 12
Funding Totals of Programmed Highway and Bridge Projects, and Fiscal Constraint Analysis

Fiscal Year	Total of Anticipated Funds (Bridge Funds, Regional Targets, and Statewide Funds)	Total of Programmed Funds	Total of Unprogrammed Funds (Fiscal Constraint Analysis)
2026	$13,294,825	$10,461,587	$2,833,238
2027	$29,321,852	$24,803,370	$4,518,482
2028	$58,043,404	$58,043,404	$0
2029	$106,863,950	$106,863,950	$0
2030	$95,426,355	$95,426,355	$0
Totals	**$302,950,386**	**$295,598,666**	**$7,351,720**

Table 13
Funding Totals of Programmed Transit Projects, and Fiscal Constraint Analysis

Fiscal Year	Total of Anticipated Transit Funds (Federal, State, Local)	Total of Programmed Funds	Total of Unprogrammed Funds (Fiscal Constraint Analysis)
2026	$15,455,410	$15,455,410	$0
2027	$12,873,120	$12,873,120	$0
2028	$9,550,000	$9,550,000	$0
2029	$18,470,000	$18,470,000	$0
2030	$21,910,000	$21,910,000	$0
Totals	**$78,258,530**	**$78,258,530**	**$0**

The financial plans in Tables 11 and 12 demonstrate fiscal constraint, and reflect the emphasis on the maintenance and operation, and state of good repair for the highway, bridge, and transit system. In addition, a fiscal constraint analysis is included on each of the highway program programming tables. Only highway, bridge, and transit projects for which funds can be reasonably expected have been included in the financially constrained TIP.

3.4 Summary of Regional Funding Categories (FFY 2026-2030)

Table 14
Summary of Funding Categories (FFY 2026-2030)

Funding Category	2026	2027	2028	2029	2030	Total
NHPP					$18,000,000	$18,000,000
SRTS						$0
STATEWIDE CMAQ						$0
STATEWIDE HSIP		$7,644,110			$8,443,814	$16,087,924
STATEWIDE STBG				$14,003,480	$15,470,805	$29,474,285
Bridge On-System NHS NB						$0
Bridge Off-System		$10,000,000	$30,000,000	$61,083,282	$36,529,195	$137,612,477
STBG	$10,461,587	$7,739,652	$16,840,714	$15,256,612	$10,093,765	$60,392,330
CMAQ						$0
HSIP		$3,938,090	$11,202,690	$15,061,959	$6,888,776	$37,091,515
TAP						$0
Subtotal FHWA/ State	$10,461,587	$29,321,852	$58,043,404	$105,405,333	$95,426,355	$298,658,531
5307 - Operating/ PM/ ADA		$2,500,000	$3,900,000	$4,240,000	$1,000,000	$11,640,000
5307 - Capital	$4,508,000	$2,730,000	$1,040,000	$4,000,000	$8,640,000	$20,918,000
Carryover						$0
5310						$0
5339	$5,696,328	$1,080,000				$6,776,328
Other Federal Transit		$2,118,496				$2,118,496
State - RTACAP	$5,251,082	$944,624	$710,000	$110,000	$110,000	$7,125,706
State Contract Assistance		$2,500,000	$3,900,000	$4,000,000	$4,000,000	$14,400,000
Local						$0
DOF				$2,600,000	$4,000,000	$6,600,000
TDC						$0
Subtotal FTA/ State/ Local	$15,455,410	$11,873,120	$9,550,000	$14,950,000	$17,750,000	$69,578,530
Grand Total	**$25,916,997**	**$41,194,972**	**$67,593,404**	**$120,355,333**	**$113,176,355**	**$368,237,061**

3.5 TIP PROJECTS BY YEAR

STIP Investments Report
2026 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2026								$10,461,587	$8,369,270	$2,092,317
Section 1A / Regionally Prioritized Projects								$10,461,587	$8,369,270	$2,092,317
Intersection Improvements								$10,461,587	$8,369,270	$2,092,317
2026	609052	Old Colony	Brockton	BROCKTON- INTERSECTION IMPROVEMENTS AT CENTRE STREET (ROUTE 123) AND PLYMOUTH STREET	5	STBG	$3,728,293	$3,728,293	$2,982,634	$745,659
2026	609440	Old Colony	Abington	ABINGTON- INTERSECTION IMPROVEMENTS AT HANCOCK STREET AND CHESTNUT STREET	5	STBG	$6,733,294	$6,733,294	$5,386,635	$1,346,659

STIP Investments Report
2027 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2027								$29,321,852	$26,615,702	$2,706,150
Section 1A / Regionally Prioritized Projects								$11,677,742	$9,736,003	$1,941,739
Intersection Improvements								$7,739,652	$6,191,722	$1,547,930
2027	607818	Old Colony	Brockton	BROCKTON- INTERSECTION IMPROVEMENTS AT LYMAN STREET/GROVE STREET/SUMMER STREET & REPLACEMENT OF GROVE STREET BRIDGE, B-25-005, OVER SALISBURY PLAIN RIVER	5	STBG	$7,739,652	$7,739,652	$6,191,722	$1,547,930
Roadway Reconstruction								$3,938,090	$3,544,281	$393,809
2027	612525	Old Colony	Abington	ABINGTON- INTERSECTION IMPROVEMENTS, RANDOLPH STREET AND RICHARD A FITTS DRIVE (ROUTE 139) AT CHESTNUT STREET AND OLD RANDOLPH STREET	5	HSIP	$3,938,090	$3,938,090	$3,544,281	$393,809
Section 1B / Earmark or Discretionary Grant Funded Projects								$10,000,000	$10,000,000	$0
Bridge Off-system Local NB								$10,000,000	$10,000,000	$0
2027	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$10,000,000	$10,000,000	$0
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$7,644,110	$6,879,699	$764,411
Intersection Improvements								$7,644,110	$6,879,699	$764,411
2027	611979	Old Colony	Avon	AVON- INTERSECTION IMPROVEMENTS AT ROUTE 28, SPRING STREET AND HARRISON BOULEVARD	5	HSIP	$7,644,110	$7,644,110	$6,879,699	$764,411

STIP Investments Report
2028 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2028								$58,043,404	$53,554,992	$4,488,412
Section 1A / Regionally Prioritized Projects								$16,840,714	$13,472,571	$3,368,143
Intersection Improvements								$16,840,714	$13,472,571	$3,368,143
2028	606002	Old Colony	Multiple	KINGSTON- DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 3 RAMPS (NB/SB) AND ROUTE 3A (TREMONT STREET)	5	STBG	$9,534,977	$8,778,109	$7,022,487	$1,755,622
2028	612262	Old Colony	Brockton	BROCKTON- INTERSECTION IMPROVEMENTS AT ROUTE 123 (BELMONT STREET), PEARL STREET AND STONEHILL STREET	5	STBG	$8,062,605	$8,062,605	$6,450,084	$1,612,521
Section 1B / Earmark or Discretionary Grant Funded Projects								$30,000,000	$30,000,000	$0
Bridge Off-system Local NB								$30,000,000	$30,000,000	$0
2028	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$30,000,000	$30,000,000	$0
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$11,202,690	$10,082,421	$1,120,269
Intersection Improvements								$11,202,690	$10,082,421	$1,120,269
2028	611981	Old Colony	Stoughton	STOUGHTON- INTERSECTION IMPROVEMENTS AT CANTON STREET (ROUTE 27), SCHOOL STREET, SUMMER STREET AND CUSHING STREET	5	HSIP	$5,384,703	$5,384,703	$4,846,233	$538,470
2028	612770	Old Colony	Abington	ABINGTON- INTERSECTION IMPROVEMENTS AT ROUTE 18 (BEDFORD STREET) AND ROUTE 123(BROCKTON AVENUE)	5	HSIP	$5,817,987	$5,817,987	$5,236,188	$581,799

STIP Investments Report
2029 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2029								$106,863,950	$97,707,816	$9,156,134
Section 1A / Regionally Prioritized Projects								$16,715,229	$13,372,183	$3,343,046
Intersection Improvements								$8,332,686	$6,666,149	$1,666,537
2029	606002	Old Colony	Multiple	KINGSTON- DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 3 RAMPS (NB/SB) AND ROUTE 3A (TREMONT STREET)	5	STBG	$9,534,977	$756,868	$605,494	$151,374
2029	611976	Old Colony	East Bridgewater	EAST BRIDGEWATER- INTERSECTION IMPROVEMENTS AT HIGHLAND STREET AND NORTH BEDFORD STREET (ROUTE 18)	5	STBG	$3,920,000	$3,920,000	$3,136,000	$784,000
2029	613277	Old Colony	Stoughton	STOUGHTON- INTERSECTION IMPROVEMENTS AT ROUTE 27 (PARK STREET) AND TURNPIKE STREET	5	STBG	$3,655,818	$3,655,818	$2,924,654	$731,164
Roadway Reconstruction								$8,382,543	$6,706,034	$1,676,509
2029	612769	Old Colony	Hanover	HANOVER- CORRIDOR IMPROVEMENTS ON ROUTE 139 (HANOVER STREET) AT MAIN STREET, CENTER STREET AND SILVER STREET	5	STBG	$14,027,252	$8,382,543	$6,706,034	$1,676,509
Section 1B / Earmark or Discretionary Grant Funded Projects								$61,083,282	$61,083,282	$0
Bridge Off-system Local NB								$61,083,282	$61,083,282	$0
2029	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$37,996,520	$37,996,520	$0
2029	613292	Old Colony	Bridgewater	BRIDGEWATER- BRIDGE REHABILITATION, B-23-001 (44H), VERNON STREET OVER TAUNTON RIVER	5	BROFF	$23,086,762	$23,086,762	$23,086,762	$0
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								$14,003,480	$11,202,784	$2,800,696
Bridge Off-system								$14,003,480	$11,202,784	$2,800,696
2029	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	STBG-BR-Off	$193,093,124	$14,003,480	$11,202,784	$2,800,696
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$15,061,959	$12,049,567	$3,012,392
Roadway Reconstruction								$15,061,959	$12,049,567	$3,012,392
2029	609520	Old Colony	Multiple	BROCKTON- ABINGTON- PEDESTRIAN AND BICYCLE IMPROVEMENTS ON ROUTE 123	5	NHPP	$33,061,959	$15,061,959	$12,049,567	$3,012,392

STIP Investments Report
2030 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2030								$95,426,355	$85,180,182	$10,246,173
Section 1A / Regionally Prioritized Projects								$16,982,541	$14,274,910	$2,707,631
Intersection Improvements								$6,888,776	$6,199,898	$688,878
2030	613599	Old Colony	Hanover	HANOVER- INTERSECTION IMPROVEMENTS AT COLUMBIA ROAD (ROUTE 53/139) AND BROADWAY	5	HSIP	$6,888,776	$6,888,776	$6,199,898	$688,878
Roadway Reconstruction								$10,093,765	$8,075,012	$2,018,753
2030	613643	Old Colony	Whitman	WHITMAN- CORRIDOR IMPROVEMENTS ON SOUTH AVENUE (ROUTE 27)	5	STBG	$17,209,274	$10,093,765	$8,075,012	$2,018,753
Section 1B / Earmark or Discretionary Grant Funded Projects								$36,529,195	$36,529,195	$0
Bridge Off-system Local NB								$36,529,195	$36,529,195	$0
2030	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$36,529,195	$36,529,195	$0
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								$15,470,805	$12,376,644	$3,094,161
Bridge Off-system								$15,470,805	$12,376,644	$3,094,161
2030	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	STBG-BR-Off	$193,093,124	$15,470,805	$12,376,644	$3,094,161
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$26,443,814	$21,999,433	$4,444,381
Roadway Reconstruction								$18,000,000	$14,400,000	$3,600,000
2030	609520	Old Colony	Multiple	BROCKTON- ABINGTON- PEDESTRIAN AND BICYCLE IMPROVEMENTS ON ROUTE 123	5	NHPP	$33,061,959	$18,000,000	$14,400,000	$3,600,000
Intersection Improvements								$8,443,814	$7,599,433	$844,381
2030	613269	Old Colony	Duxbury	DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 53 AND FRANKLIN STREET	5	HSIP	$8,443,814	$8,443,814	$7,599,433	$844,381

2026 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2026							
RTA Facility & Vehicle Maintenance	BAT011965	BAT VEH OVERHAUL (8)	5307	$1,450,000	$1,450,000		
RTA Facility & Vehicle Maintenance	BAT011965	BAT VEH OVERHAUL (8)	RTACAP	$1,450,000		$1,450,000	
RTA Facility & Vehicle Maintenance	BAT011967	AQUIRE SHOP EQUIPMENT	5307	$60,000	$60,000		
RTA Facility & Vehicle Maintenance	BAT011967	AQUIRE SHOP EQUIPMENT	RTACAP	$15,000		$15,000	
RTA Facility & Vehicle Maintenance	RTD0011350	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$160,000	$160,000		
RTA Facility & Vehicle Maintenance	RTD0011350	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$40,000		$40,000	
RTA Facility & Vehicle Maintenance	RTD0011352	BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	RTD0011352	BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	RTD0011353	BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$2,150,000	$2,150,000		
RTA Facility & Vehicle Maintenance	RTD0011353	BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$2,150,000		$2,150,000	
RTA Facility & Vehicle Maintenance	RTD0011354	BAT - TERMINAL, INTERMODAL	5307	$600,000	$600,000		
RTA Facility & Vehicle Maintenance	RTD0011354	BAT - TERMINAL, INTERMODAL	RTACAP	$150,000		$150,000	
RTA Fleet Upgrades	RTD0011366	BAT - BUY REPLACEMENT 40-FT BUS ELECTRIC (5)	5339D	$4,576,328	$4,576,328		
RTA Fleet Upgrades	RTD0011366	BAT - BUY REPLACEMENT 40-FT BUS ELECTRIC (5)	RTACAP	$1,144,082		$1,144,082	
RTA Fleet Upgrades	RTD0011367	BAT - PURCHASE MISC ELEC/POWER EQUIP	5339D	$1,120,000	$1,120,000		
RTA Fleet Upgrades	RTD0011367	BAT - PURCHASE MISC ELEC/POWER EQUIP	RTACAP	$280,000		$280,000	
RTA Vehicle Replacement	RTD0011351	BAT - ACQUIRE SUPPORT VEHICLE (1)	5307	$48,000	$48,000		
RTA Vehicle Replacement	RTD0011351	BAT - ACQUIRE SUPPORT VEHICLE (1)	RTACAP	$12,000		$12,000	
			5307 Programmed	$4,508,000	$4,508,000		
			5339D Programmed	$5,696,328	$5,696,328		
			RTACAP Programmed	$5,251,082		$5,251,082	
		Total Programmed for Brockton Area Transit Projects		$15,455,410	$10,204,328	$5,251,082	

2027 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2027							
Operating	T00001	BAT- OPERATING ASSISTANCE	5307	$2,500,000	$2,500,000		
Operating	T00001	BAT- OPERATING ASSISTANCE	SCA	$2,500,000		$2,500,000	
RTA Facility & System Modernization	T00119	BAT - ACQUIRE STATIONARY FARE COLLECTION EQUIP	5307	$2,150,000	$2,150,000		
RTA Facility & System Modernization	T00120	BAT - Acquire Misc. Elec/Pow er Equip	5339D	$1,080,000	$1,080,000		
RTA Facility & System Modernization	T00120	BAT - Acquire Misc. Elec/Pow er Equip	RTACAP	$270,000		$270,000	
RTA Facility & Vehicle Maintenance	RTD0011355	BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	RTD0011355	BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	RTD0011356	BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	RTD0011356	BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	RTD0011357	BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	RTD0011357	BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	RTD0011358	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	RTD0011358	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	RTD0011359	BAT - REHAB RENOVATE - BUS PARK & RIDE LOT, PARKING FACILITY	5307	$120,000	$120,000		
RTA Facility & Vehicle Maintenance	RTD0011359	BAT - REHAB RENOVATE - BUS PARK & RIDE LOT, PARKING FACILITY	RTACAP	$30,000		$30,000	
RTA Facility & Vehicle Maintenance	RTD0011360	BAT - PURCHASE MISC COMMUNICATIONS EQUIP SYSTEMS	5307	$60,000	$60,000		
RTA Facility & Vehicle Maintenance	RTD0011360	BAT - PURCHASE MISC COMMUNICATIONS EQUIP SYSTEMS	RTACAP	$15,000		$15,000	
RTA Vehicle Replacement	T00121	BAT - BUY REPLACEMENT 35-FT BUS ELECTRIC (2)	OF	$2,118,496	$2,118,496		
RTA Vehicle Replacement	T00121	BAT - BUY REPLACEMENT 35-FT BUS ELECTRIC (2)	RTACAP	$529,624		$529,624	
			5307 Programmed	$5,230,000	$5,230,000		
			5339D Programmed	$1,080,000	$1,080,000		
			OF Programmed	$2,118,496	$2,118,496		
			RTACAP Programmed	$944,624		$944,624	
			SCA Programmed	$2,500,000		$2,500,000	
			Total Programmed for Brockton Area Transit Projects	$11,873,120	$8,428,496	$3,444,624	

2028 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2028							
Operating	T00127	BAT- OPERATING ASSISTANCE	5307	$3,900,000	$3,900,000		
Operating	T00127	BAT- OPERATING ASSISTANCE	SCA	$3,900,000		$3,900,000	
RTA Facility & Vehicle Maintenance	BAT011965	BAT VEH OVERHAUL (8)	5307	$600,000	$600,000		
RTA Facility & Vehicle Maintenance	BAT011965	BAT VEH OVERHAUL (8)	RTACAP	$600,000		$600,000	
RTA Facility & Vehicle Maintenance	T00122	BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00122	BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00123	BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00123	BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00124	BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	T00124	BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	T00125	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	T00125	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	T00126	BAT - TERMINAL, INTERMODAL PARKING FACILIYU(TRANSIT)	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00126	BAT - TERMINAL, INTERMODAL PARKING FACILIYU(TRANSIT)	RTACAP	$10,000		$10,000	
			5307 Programmed	$4,940,000	$4,940,000		
			RTACAP Programmed	$710,000		$710,000	
			SCA Programmed	$3,900,000		$3,900,000	
		Total Programmed for Brockton Area Transit Projects		$9,550,000	$4,940,000	$4,610,000	

2029 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2029							
Operating	T00127	BAT- OPERATING ASSISTANCE	5307	$4,000,000	$4,000,000		
Operating	T00127	BAT- OPERATING ASSISTANCE	SCA	$4,000,000		$4,000,000	
RTA Facility & System Modernization	BAT011755	Electric Bus Infrastructure - 6 Chargers & Associated Costs	5307	$1,200,000	$1,200,000		
RTA Facility & Vehicle Maintenance	T00122	BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00122	BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00123	BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00123	BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00124	BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	T00124	BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	T00125	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	T00125	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	T00126	BAT - TERMINAL, INTERMODAL PARKING FACILIYU(TRANSIT)	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00126	BAT - TERMINAL, INTERMODAL PARKING FACILIYU(TRANSIT)	RTACAP	$10,000		$10,000	
RTA Fleet Upgrades	BAT011756	BAT- Replace 8 (4 35' and 4 40') w ith electric	5307	$2,600,000	$2,600,000		
RTA Fleet Upgrades	BAT011756	BAT- Replace 8 (4 35' and 4 40') w ith electric	DOF	$2,600,000	$2,600,000		
				$8,240,000	$8,240,000		
				$2,600,000	$2,600,000		
				$110,000		$110,000	
				$4,000,000		$4,000,000	
				$14,950,000	$10,840,000	$4,110,000	

2030 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2030							
Operating	T00127	BAT- OPERATING ASSISTANCE	5307	$4,000,000	$4,000,000		
Operating	T00127	BAT- OPERATING ASSISTANCE	SCA	$4,000,000		$4,000,000	
RTA Facility & System Modernization	BAT011755	Electric Bus Infrastructure - 6 Chargers & Associated Costs	5307	$1,200,000	$1,200,000		
RTA Facility & Vehicle Maintenance	T00122	BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00122	BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00123	BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00123	BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00124	BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	T00124	BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	T00125	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	T00125	BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	T00126	BAT - TERMINAL, INTERMODAL PARKING FACILIYU(TRANSIT)	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00126	BAT - TERMINAL, INTERMODAL PARKING FACILIYU(TRANSIT)	RTACAP	$10,000		$10,000	
RTA Fleet Upgrades	BAT011756	BAT- Replace 8 (4 35' and 4 40') w ith electric	5307	$4,000,000	$4,000,000		
RTA Fleet Upgrades	BAT011756	BAT- Replace 8 (4 35' and 4 40') w ith electric	DOF	$4,000,000	$4,000,000		
			5307 Programmed	$9,640,000	$9,640,000		
			DOF Programmed	$4,000,000	$4,000,000		
			RTACAP Programmed	$110,000		$110,000	
			SCA Programmed	$4,000,000		$4,000,000	
			Total Programmed for Brockton Area Transit Projects	$17,750,000	$13,640,000	$4,110,000	

3.6 Air Quality Conformity Documentation

This section documents the latest air quality conformity determination for the 1997 ozone National Ambient Air Quality Standards (NAAQS) in the Old Colony Region. 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 to the purpose of the SIP means that means 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)). The U.S. Environmental Protection Agency (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 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 (NOx), 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 has 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 would remain 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 Vision 2050 Long Range Transportation Plans. This conformity determination was finalized in July 2019 following each MPO's previous endorsement of their long-range transportation plan, and approved by the Massachusetts Divisions of FHWA and FTA on October 15, 2019. This conformity determination continues to be valid for the Old Colony FFY 2026-2030 Transportation Improvement Program, and Massachusetts' FFY 2026-2030 STIP, as each is developed from the conforming Vision 2050 Long Range Transportation Plans.

The transportation conformity regulation at 40 CFR 93.109 sets forth the criteria and procedures for determining conformity. The conformity criteria for TIPs and LRTPs include latest planning assumptions (93.110), latest emissions model (93.111), consultation (93.112), transportation control measures (93.113(b) and (c), and emissions budget 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 Old Colony FFY 2026-2030 Transportation Improvement Program and Vision 2050 Long Range Transportation Plans can be demonstrated by showing that 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:

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 since on an (at least) annual schedule, with the most recent conformity consultation held on April 27, 2022. 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) requires that the development of the TIP, LRTP, 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. The Old Colony MPO's Public Participation Plan was formally adopted in 2021. The Public Participation Plan ensures that the public will have access to the TIP and LRTP and all supporting documentation, provides for public notification of the availability of the TIP and LRTP 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 and LRTP and related certification documents. For more information, the Old Colony Public Participation Plan is available here: https://oldcolonyplanning.org/wp-content/uploads/2022/12/Old_Colony_MPO_2020-2040_Long_Range_Transportation_Plan.pdf?ver

The public comment period for this conformity determination commenced on April 19, 2022. During the 21-day public comment period, any comments received were incorporated into this Plan. This allowed ample opportunity for public comment and MPO review of the draft document. The public comment period closed on May 16, 2022 and subsequently, the Old Colony MPO endorsed this air quality conformity determination on May 17, 2022. These procedures comply with the associated federal requirements.

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 and must be fiscally constrained consistent with U.S. DOT's metropolitan planning regulations at 23 CFR part 450. The Old Colony 2026-2030 Transportation Improvement Program and Vision 2050 Long Range Transportation Plan are fiscally constrained, as demonstrated in this document.

In summary and based upon the entire process described above, the Old Colony MPO 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 2026-2030 Transportation Improvement Program and the Vision 2050 Long Range Transportation Plan 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 Old Colony MPO's FFY 2026-2030 Transportation Improvement Program and the Vision 2050 Long Range Transportation Plan are consistent with the air quality goals of, and in conformity with, the Massachusetts State Implementation Plan.

APPENDICES

A. FFY 2026-2030 OLD COLONY TIP ENDORSEMENT
B. §450.336 - SELF CERTIFICATION COMPLIANCE STATEMENT - 3C PROCESS
C. SELF-CERTIFICATION COMPLIANCE STATEMENT - 310 CMR 60.05: GLOBAL WARMING SOLUTIONS ACT REQUIREMENTS FOR THE TRANSPORTATION SECTOR AND MASSDOT
D. GLOSSARY OF TERMS AND ACRONYMS
E. PAVEMENT MANAGEMENT SYSTEM ANALYSIS
F. OPERATIONS AND MAINTENANCE EXPENDITURES (STATEWIDE AND REGIONAL)
G. FEDERAL REGIONAL FUNDING TARGETS AND STATEWIDE SUMMARIES
H. TRANSPORTATION EVALUATION CRITERIA REPORTS
I. ANNUAL LISTING OF OBLIGATED PROJECTS
J COMPLETED HIGHWAY AND TRANSIT PROJECTS (2015 TO PRESENT); GREENHOUSE GAS (GHG) EMISSIONS ANALYSIS
K. FFY 2026-2030 GREENHOUSE GAS (GHG) EMISSIONS ANALYSIS
L. FFY 2026-2030 GATRA TRANSIT ELEMENT
M. MBTA FEDERAL CAPITAL PROGRAM – FFY 2025 AND FFY 2026-2030 PROJECTS LISTING
O. UNIVERSE OF PROJECTS
N. TWENTY-ONE (21) DAY PUBLIC REVIEW - NOTICE OF AVAILABILITY AND PUBLIC COMMENTS
O. TIP PROJECT REVISION AND DEFINITION PROCEDURES, AND APPROVED ADJUSTMENTS, ADMINISTRATIVE MODIFICATIONS, AND AMENDMENTS

APPENDIX A - FFY 2026-2030 OLD COLONY TIP ENDORSEMENT

APPENDIX B - §450.336 - SELF CERTIFICATION COMPLIANCE STATEMENT - 3C PROCESS

APPENDIX C - SELF-CERTIFICATION COMPLIANCE STATEMENT - 310 CMR 60.05: GLOBAL WARMING SOLUTIONS ACT REQUIREMENTS FOR THE TRANSPORTATION SECTOR AND MASSDOT

APPENDIX D - GLOSSARY OF TERMS AND ACRONYMS

GLOSSARY OF TERMS AND ACRONYMS

List of Acronyms

3C:	Comprehensive, Cooperative, and Continuing Planning Process
ADA:	Americans with Disabilities Act
BAT:	Brockton Area Transit Authority
BIL:	Bipartisan Infrastructure Law
CAAA:	Clean Air Act Amendments of 1990
CIP:	Capital Investment Plan
CMAQ:	Congestion Mitigation and Air Quality Improvement Program
CMP:	Congestion Management Process
CTGP:	Community Transit Grant Program
DEP:	Department of Environmental Protection
EIR:	Environmental Impact Report
EJ:	Environmental Justice
ENF:	Environmental Notification Form
EPA:	Environmental Protection Agency
EV:	Electric Vehicle
FAST ACT:	Fixing America's Surface Transportation Act
FHWA:	Federal Highway Administration
FTA:	Federal Transit Administration
GATRA:	Greater Attleboro-Taunton Regional Transit Authority
GHG:	Greenhouse Gases
GWSA:	Global Warming Solutions Act
HPMS:	Highway Performance Monitoring System
HSIP:	Highway Safety Improvement Program
IRI:	International Roughness Index
JTC:	Joint Transportation Committee
LAP:	Language Access Plan
LEP:	Limited English Proficient
LOS:	Level of Service
LRTP:	Long Range Transportation Plan
MCAD:	Massachusetts Commission Against Discrimination
MAP:	Mobility Assistance Program
MARPA:	Massachusetts Association of Regional Planning Agencies
MassDOT:	Massachusetts Department of Transportation
MBTA:	Massachusetts Bay Transportation Authority
MOU:	Memorandum of Understanding
MPO:	Metropolitan Planning Organization
NAAQS:	National Ambient Air Quality Standards
NBIS:	National Bridge Inventory Standards
NFA:	Non-Federal Aid

NFP:	National Freight Program
NHPP:	National Highway Performance Program
NHS:	National Highway System
NOx:	Nitrogen Oxides
O&M:	Operations and Maintenance
P&B:	Plymouth and Brockton Bus Company
PM1:	Safety Performance Measures
PM2:	System Preservation Performance Measures
PM3:	System Performance Measures (Congestion, Reliability, and Emissions)
PMS:	Pavement Management System
POP:	Programming of Projects
PPP:	Public Participation Plan
PRC:	Project Review Committee
PSI:	Pavement Serviceability Index
PTASP:	Public Transit Agency Safety Plan
SGR:	State of Good Repair
SIP:	State Implementation Plan
SMS:	Safety Management System
SOV:	Single Occupant Vehicle
SSCAC:	South Shore Community Action Council
STBG:	Surface Transportation Block Grant Program
TAM	Transit Asset Management
TAMP	Transportation Asset Management Plan
TAN:	Transportation Advisory Network
TAP:	Transportation Alternatives Program
TCM:	Transportation Control Measure
TEC:	Transportation Evaluation Criteria
TERM:	Transit Economic Requirements Model
TIP:	Transportation Improvement Program
TITLE VI:	Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d
TMA:	Transportation Management Area
ULB:	Useful Life Benchmark
VMT:	Vehicle Miles Traveled
VOCs:	Volatile Organic Compounds

APPENDIX E - PAVEMENT MANAGEMENT SYSTEM ANALYSIS

pThe Regional Highway System

The Highway section of this plan includes a review of the existing physical conditions, current operational conditions and deficiencies, as well as potential opportunities for improvements in the Old Colony Regional Highway System.

The Regional Highway Network

The regional highway network continues to serve as the primary system within the overall transportation network for the movement of both people and goods within and through the Old Colony Region. Despite the region's continued dependence upon motor vehicles, the integration and coordination of all transportation modes of travel within the region remain at the forefront of the planning process. This includes enhancing land use and development connections to the transportation system (such as transit-oriented-development, TOD), which increase mode choice and efficiency and economy in the system. It also includes implementation of the Massachusetts Complete Streets initiative, which includes planning roads for all road users including transit, bicycling, and walking, as well as the integration of park and rides and transit parking and connections.

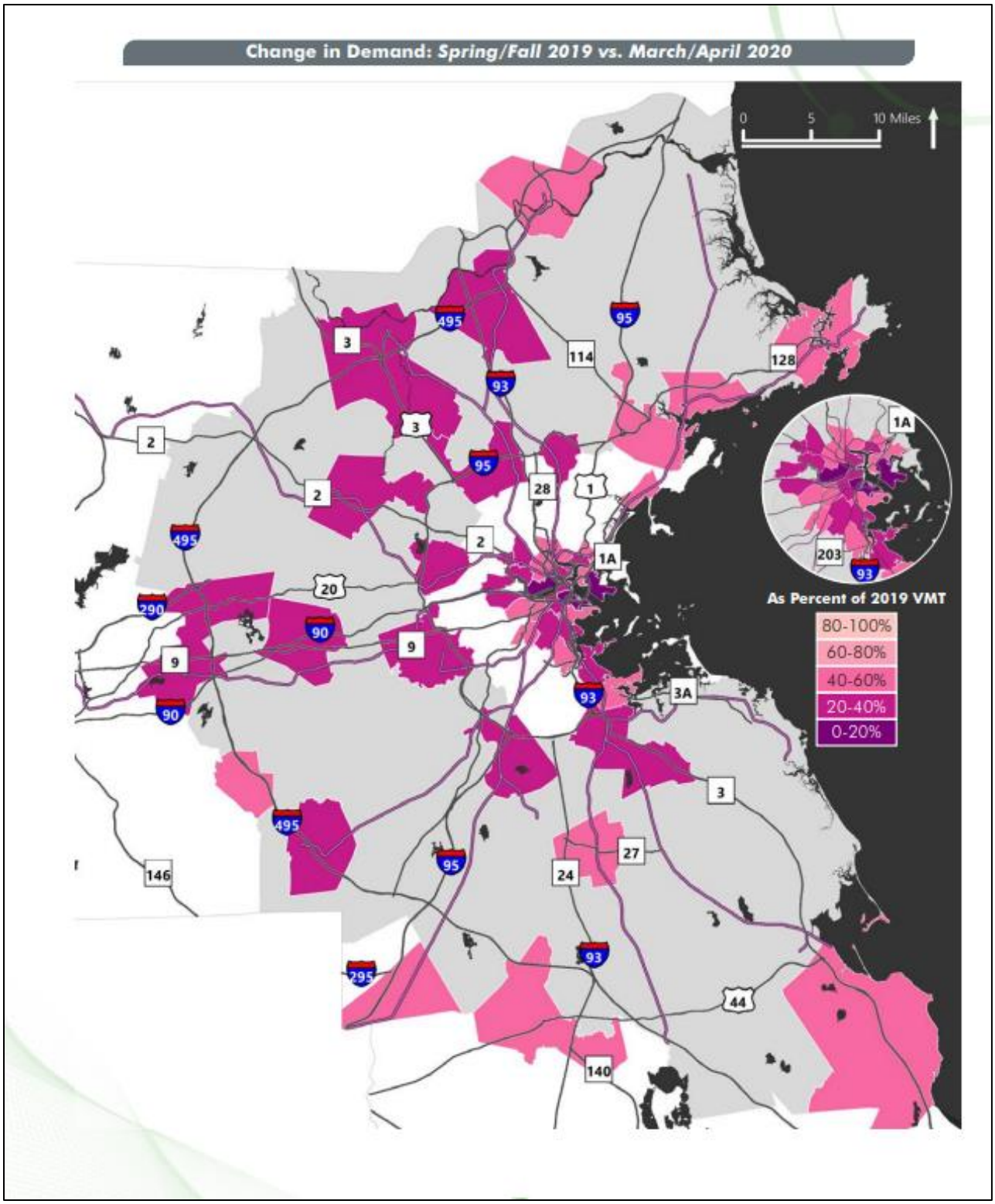
The trend whereby housing, office, retail, and institutional uses are being located along major and minor arterials continues thereby increasing destination points along major regional highway corridors. This increases trip generation and turning movement conflicts within highway corridors thereby decreasing capacity in the overall system. This also continues the dispersal of employment density and contributes to auto dependency.

The Old Colony Region continues to maintain its suburb to core city commute, that is commuting between Old Colony communities and Boston despite that more development and destinations have become dispersed along major corridors throughout the region. This dispersal of corridor development, which is auto dependent, has been and continues to be a challenge for mode shifts to alternatives such as transit, walking, and bicycling.

The Old Colony Region offers transit opportunities including bus (BAT and GATRA), as well as commuter rail for commuting to Boston, and for commuting to destinations within the region. Prior to the COVID-19 Pandemic, which began in early 2020, Massachusetts was slightly better than the national average regarding mode choice. Prior to 2020, over 3.2 million workers living in Massachusetts commuted to their workplaces based on the Massachusetts Department of Transportation (MassDOT) statistics, and over 2.3 million, or 72 percent, drove their car to work, compared to 86.1 percent nationwide. Commuting and mode choice within the Old Colony Region reflected that of Massachusetts as a whole. The COVID Pandemic's impact on travel demand was briefly significant and is illustrated in Figure 6-1 from MassDOT's 2022 report, *Shared Travel Network Study*. Figure 6-1 shows that travel demand in Brockton and Plymouth was 40 to 60 percent of 2019 levels in 2020.

The Covid pandemic over the past three years has also demonstrated the viability of remote employment and remote learning, and along with increases in retail home delivery, which also increased demand for warehousing, has contributed to a decrease in residential travel demand and trips. Nevertheless, automatic traffic counts show that traffic on the highway system has come back to almost pre-pandemic levels.

Figure 6-1

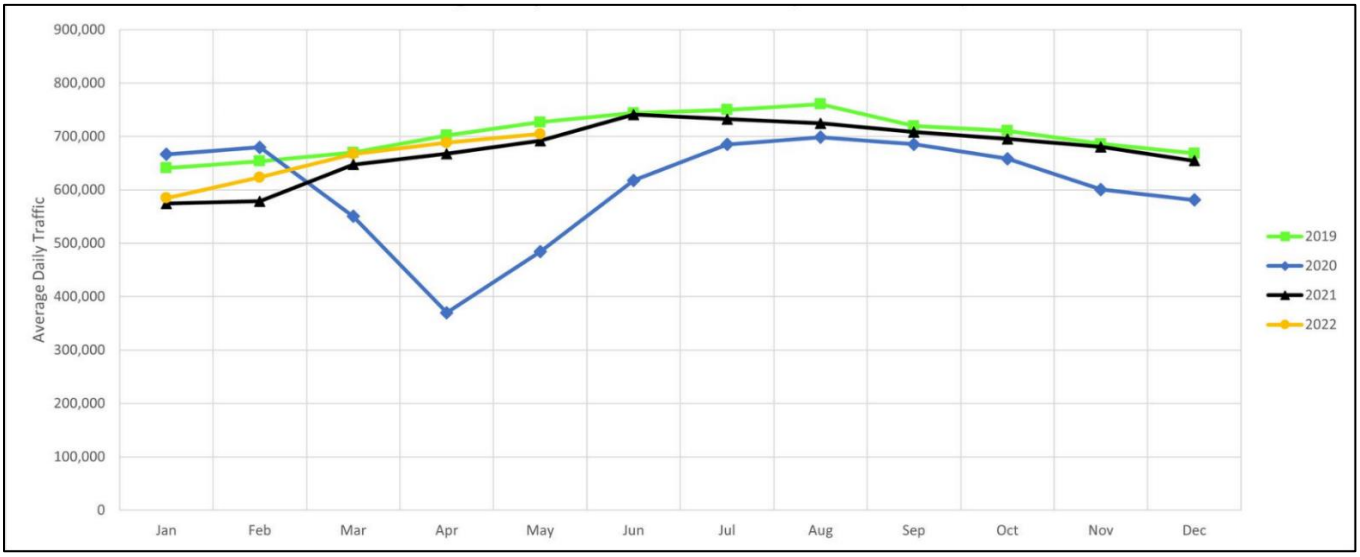

Change in Demand: Spring/Fall 2019 vs. March/April 2020
0
5
10 Miles
As Percent of 2019 VMT
80-100%
60-80%
40-60%
20-40%
0-20%
95
495
93
114
128
3
2
28
1
1A
203
20
290
90
9
3A
146
27
24
295
44
140

Old Colony staff compiled traffic volume counts from seven MassDOT permanent count stations for 2019 through May of 2022. The data was aggregated from month to month and from year to year (the 2022 data after May of 2022 was unavailable due to Route 24 resurfacing projects). The data was compiled from the following MassDOT permanent count locations:

1. Avon – Route 24 south of Harrison Boulevard
2. Bridgewater – Route 24 at West Bridgewater Line
3. Brockton – Route 24 north of Route 123
4. Plymouth – Route 3 north of Bourne Line
5. Randolph – Route 24 south of Route 93
6. Raynham – Interstate 495 south of Route 24
7. Weymouth – Route 3 north of Route 18

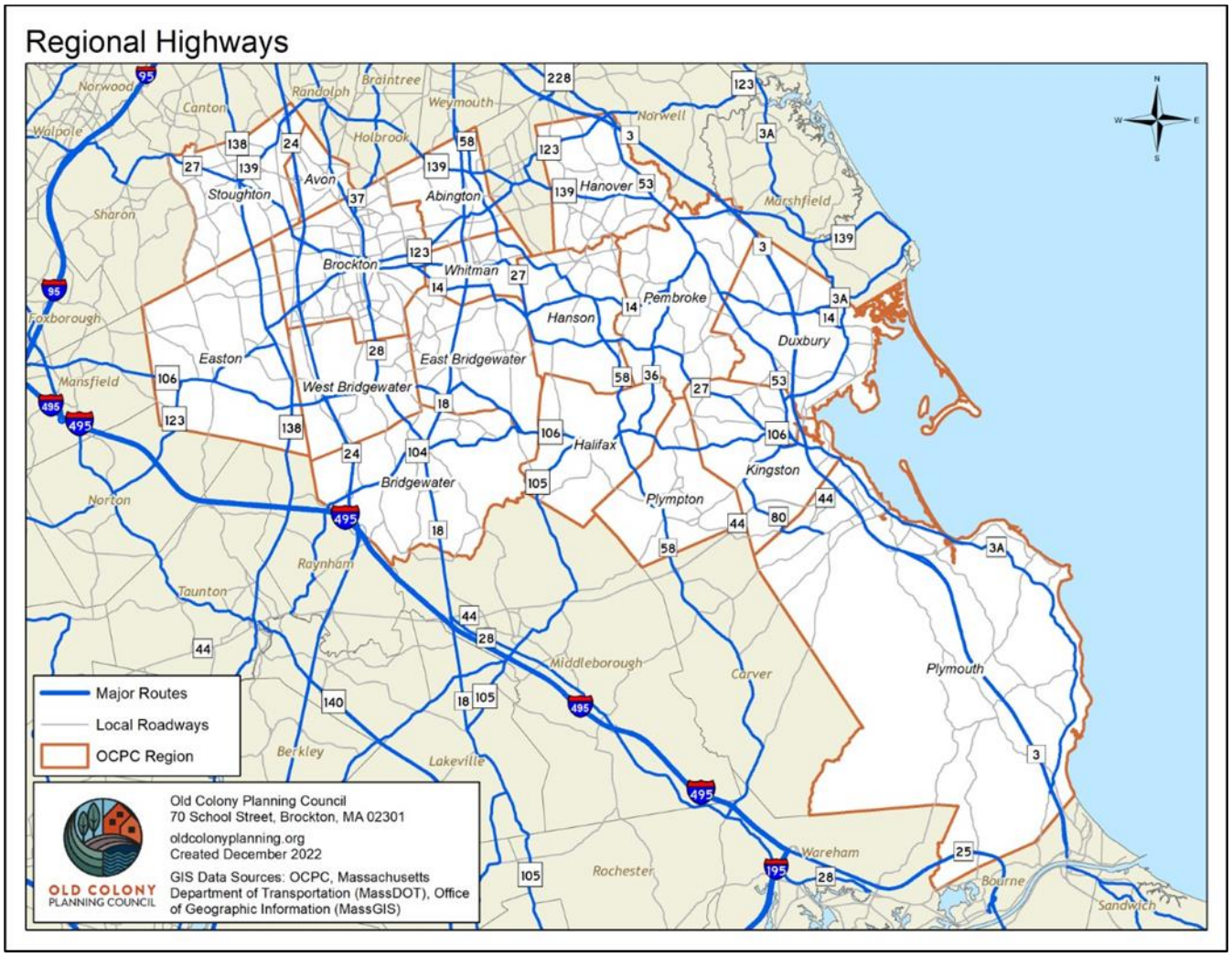
Figure 6-2 shows the permanent count location comparisons for Annual Average Daily Traffic (AADT), which shows a significant drop in volumes from February to April of 2020 at the beginning of the pandemic. Traffic began to climb higher in June and July of 2020, but began to drop off again from October to December of 2020. Traffic volumes began to climb again in 2021 and 2022 almost to 2019 levels.

Figure 6-2 Annual Average Daily Traffic Permanent Count Locations 2019 – May 2022



The Old Colony Region contains a small section of Interstate Highway System mileage (approximately 2.526 miles of I-495 in Bridgewater); however, the region has a number of limited access highways including Route 24 (through Bridgewater, West Bridgewater, Brockton, Avon, and Stoughton), Route 3 (through Plymouth, Kingston, Duxbury, and Pembroke), and Route 44 (through Plymouth, Kingston, and Plympton). The region has convenient access to the Interstate system to I-95 and I-93 to the north and west and I-495 to the west and the southeast. In addition, the region is serviced with a number of major arterials (state numbered routes) providing interstate, inter-regional, and intra-regional travel. Figure 6-3 shows the Regional Highway Network in the OCPC Region.

Figure 6-3



Route 3 (Pilgrims Highway) and Route 24 (AmVets Memorial Highway), both limited access highways, were constructed in the 1940s and 1950s; however, their designs and geometrics do not meet the interstate design standards (although they are not part of the interstate system). Both limited access highways provide north-south connection from the south shore to metro-Boston and have multiple interchanges in the Old Colony Region.

Traffic has increased on Route 3 and Route 24 over the past decade due to commercial and residential growth along the secondary arterials and collectors that provide access to these limited access highways. These two major arterials provide connections between the Old Colony's regional network and the inter-regional and Interstate system. The connection that these routes provide between the Old Colony Region's network and the inter-regional highway system results in higher traffic volumes, congested conditions, and safety issues at the interchanges of these corridors as well as at specific bottlenecks along these two key north-south arterials. Table 6-1 shows the growth in traffic on Route 24 and Route 3 since 2013.

Table 6-1

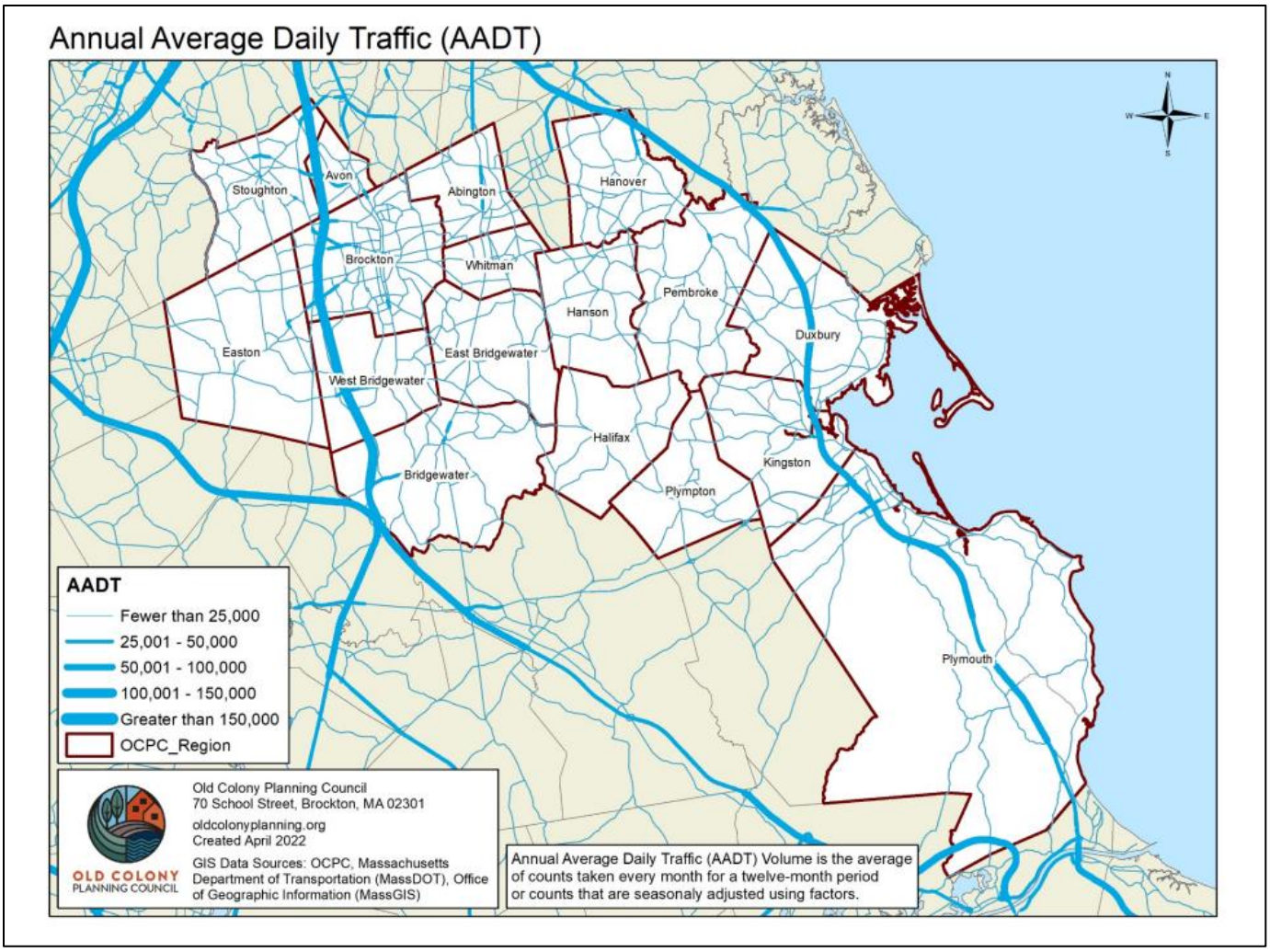
Year	Route 24 AADT Avon Count Station	Route 3 AADT Plymouth Count Station
2013	108,764	53,371
2014	103,430	54,225
2015	107,567	56,394
2016	120,835	59,101
2017	123,252	59,574
2018	122,984	60,170
2019	125,982	61,373
2020	107,843	52,167
2021	119,650	59,157

Table 6-1 shows gradual increases in traffic at MassDOT permanent counts stations along Route 24 and Route 3. In the year 2020, the traffic volumes dropped significantly in both corridors due to the Covid Pandemic. In 2021, as the pandemic subsided, the traffic increased again on both highways to almost pre-2019 levels. Figure 6-4 shows the Annual Average Daily Traffic on the Regional Highway Network in the Old Colony Region.

Route 44, as a limited access divided highway, traverses the Old Colony Region from east to west. It transitions into a two-lane undivided major arterial west of Route 18 in Middleboro. The Route 44 interchanges in the Old Colony region generally accommodate the traffic volumes sufficiently. There is in general less congestion along this route and at its access points.

The Old Colony Region provides principal arterials and minor arterials running north-south and east-west providing inter-regional and intra-regional vehicle access. Many of these routes traverse through downtown areas and town centers in the region, which have traditional and historic characteristics found in many New England communities. Many of these routes through the center of the communities within the region were originally laid out in pre-automobile times, sometimes resulting in skewed intersection alignments, intersections in close proximity, and intersections with five-leg or more approaches. Over the past few decades, much of the land use along these corridors has been developed for commercial and office uses, or dense (apartment or condominium) residential development. The phenomenon whereby adjacent land use of these regionally significant roads gradually increase in development, has impacted the function of these principal highways so that they have become destinations as well as regional corridors designed for mobility, which impacts the carrying capacity of the highways creating bottlenecks and congestion.

Figure 6-4



Federal and State Guidelines

Federal and state guidelines for the Long-Range Transportation Plan (LRTP) have been evolving over the decades based on transportation reauthorization legislation. The latest statute, Infrastructure Investment and Jobs Act (IIJA), includes a five-year reauthorization of federal surface transportation programs (reauthorizing the Fixing America's Surface Transportation Act, FAST). These reauthorization laws have been consistent, despite the refinement over the years, in that they require the Long-Range Transportation Plan (LRTP) to reflect state and local goals as well as national goals and objectives. The guidance requires that the LRTP be a planning document and reflect the changes and trends in demographics, land use, and regionally relevant transportation technology trends. The FHWA, in its updated guidance, listed eight planning emphasis areas for the LRTP. These include:

1. Tackling the Climate Crisis – Transition to a Clean Energy, Resilient Future - MPO's should work with federal, state, and local partners to ensure that our transportation plans and infrastructure investments help achieve the national greenhouse gas reduction goals of 50-52 percent below 2005 levels by 2030, and net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change.

2. Equity and Justice in Transportation Planning – MPOs should strive to advance racial equity and support for underserved and disadvantaged communities that will help ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas.
3. Complete Streets – MPOs should strive to provide an equitable and safe transportation network for travelers of all ages and abilities.
4. Public Involvement - Providing early, effective, and continuous public involvement bringing diverse viewpoints into the decision-making process.
5. Strategic Highway Network (STRAHNET)/U.S. Department of Defense (DOD) Coordination - MPOs and State DOTs should coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure and connectivity needs for STRAHNET routes and other public roads that connect to DOD facilities.
6. Federal Land Management Agency (FLMA) Coordination - MPOs and State DOTs should coordinate with FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to Federal lands.
7. Planning and Environment Linkages (PEL) - MPOs should implement PEL as part of the transportation planning and environmental review processes.
8. Data in Transportation Planning - MPOs should incorporate data sharing and consideration into the transportation planning process because data assets have value across multiple programs.

Massachusetts Directives and Initiatives

Massachusetts has instituted a number of initiatives and directives to combat climate change, improve mobility, improve safety, advance equity, and promote efficiency within the transportation system. The project impact review process in Massachusetts as well as MassDOT's project development process, through its *Project Development and Design Guide* advances its transportation goals, objectives, and policies. Transportation planning is supported through a number of programs and directives including:

- Massachusetts Complete Streets Program
- Massachusetts Safe Routes to School Program
- The Massachusetts Global Warming Solutions Act (and the Massachusetts Clean Energy and Climate Plan for 2025 and 2030)
- The Mode Shift Initiative
- The Healthy Transportation Compact, the Healthy Transportation Policy Directive
- Massachusetts Ridesharing Regulation

Massachusetts Greenhouse Gas (GHG) Emissions and Mitigation Policies focus on reducing greenhouse gas (GHG) emissions, promoting healthy transportation options (walking, bicycling, and public transit), and supporting smart growth development. Old Colony's development of goals, objectives, plans, and projects, as well as its transportation review (MEPA) process, supports and advances MassDOT policies and goals as outlined in its statutes, directives, guidelines, and standards. Shifting travel demand from vehicles to alternative modes helps reduce congestion and preserves the capacity of the highway network as well as protecting the natural environment and improving public health.

Pavement Conditions

The utilization of a pavement management system (PMS) allows an agency to keep with the principles of objectives-driven, performance-based planning, and supports the goal of maintaining a highway system in a state of good repair. The Old Colony Region has had a Pavement Management System since the 1980's and has updated the system periodically. A PMS is a set of tools and methods that assist decision makers in finding cost effective strategies for evaluating and maintaining pavements in a serviceable condition. It includes a database which is linked spatially to a Geographic Information System (GIS). A road system in good repair helps reduces delays due to long reconstruction periods, enhances freight movement, improves economic vitality, and provides opportunities to improve sidewalk and bicycle facilities through the implementation of the Complete Streets program.

The PMS calculates the rate of deterioration of pavement for streets or segments of streets and the implications of such deterioration for the cost of repairs. The system is based on a Pavement Condition Index (PCI) score (between 0 and 100) for the surveyed road segments, which leads to a recommended repair and cost associated with that repair based on the score. Roads and Road segments are placed in condition categories based on the PCI score, which include "Poor", "Deficient", "Fair", "Good", and "Excellent". Old Colony conducts windshield surveys of the pavement surface periodically, (every four years) for road and highways in the region that are federal aid eligible. As pavement reconstruction and resurfacing projects are completed on federal aid roads through the Old Colony Transportation Improvement Program (TIP), this information is also included in the PMS database. Local roads in the Old Colony Region are not included in the windshield surveys or database unless requested specifically by an OCPC community.

The repairs recommended by the PMS, based on the road condition, include five general default repair strategies. These include:

1. Reconstruction – This work includes a combination of a number of tasks, including complete removal and replacement of a failed pavement segment, road sub-base replacement (gravel, sand, and aggregates), drainage work, road realignment, and safety hardware (guard rail) installation.
2. Rehabilitation – The rehabilitation of pavements may include full and partial depth patching, joint and crack sealing, grouting and under-sealing, and grinding and milling in conjunction with overlays over two inches.
3. Preventative Maintenance – This work may include extensive crack sealing, chip sealing, and micro-surface or overlays less than two inches thick.
4. Routine Maintenance – This work may include crack sealing and pothole patching.
5. No Immediate Maintenance or Repair.

Over the past year, staff has completed a windshield survey of the surface conditions of the 669.34 miles of Federal-Aid eligible roadways in the Old Colony region. The NHS mileage (which is part of the 669.34 Federal-Aid mileage) in the Old Colony Region is 158.59 miles. The estimated cost for improving the Federal Aid eligible roadway network to a state of good repair by the PMS (an overall PCI average of "Good") is $427,480,493. Table 6-2 shows the Federal-Aid mileage for each community as well as the NHS mileage for each community.

Table 6-2 Federal Aid Mileage and NHS Mileage in the Old Colony Region

Community	Federal Aid Mileage	NHS Road Mileage
Abington	25.64	7.07
Avon	15.19	4.00
Bridgewater	43.87	11.38
Brockton	85.99	25.59
Duxbury	51.30	13.48
East Bridgewater	34.37	4.42
Easton	44.17	11.16
Halifax	15.45	0.00
Hanson	28.44	4.31
Hanover	37.14	5.70
Kingston	38.00	11.18
Pembroke	39.71	7.28
Plymouth	106.69	22.85
Plympton	12.12	0.58
Stoughton	42.23	12.47
West Bridgewater	29.45	10.44
Whitman	19.58	6.68
Total	669.34	158.59

The interstate mileage in the Old Colony Region is I-495 in Bridgewater, which consists of 2.526 miles. The pavement condition of the Interstate mileage varies from “Fair” to “Excellent” except for the bridge portions over Route 24, which have fallen just below the “Fair” condition Index to “Poor”.

Figure 6-5 shows existing pavement conditions in the Old Colony Region, and Figure 6-6 shows the Recommended Pavement Repairs for the federal aid roads in the region.

Figure 6-5 Existing Pavement Conditions Federal-Aid Roads Old Colony Region

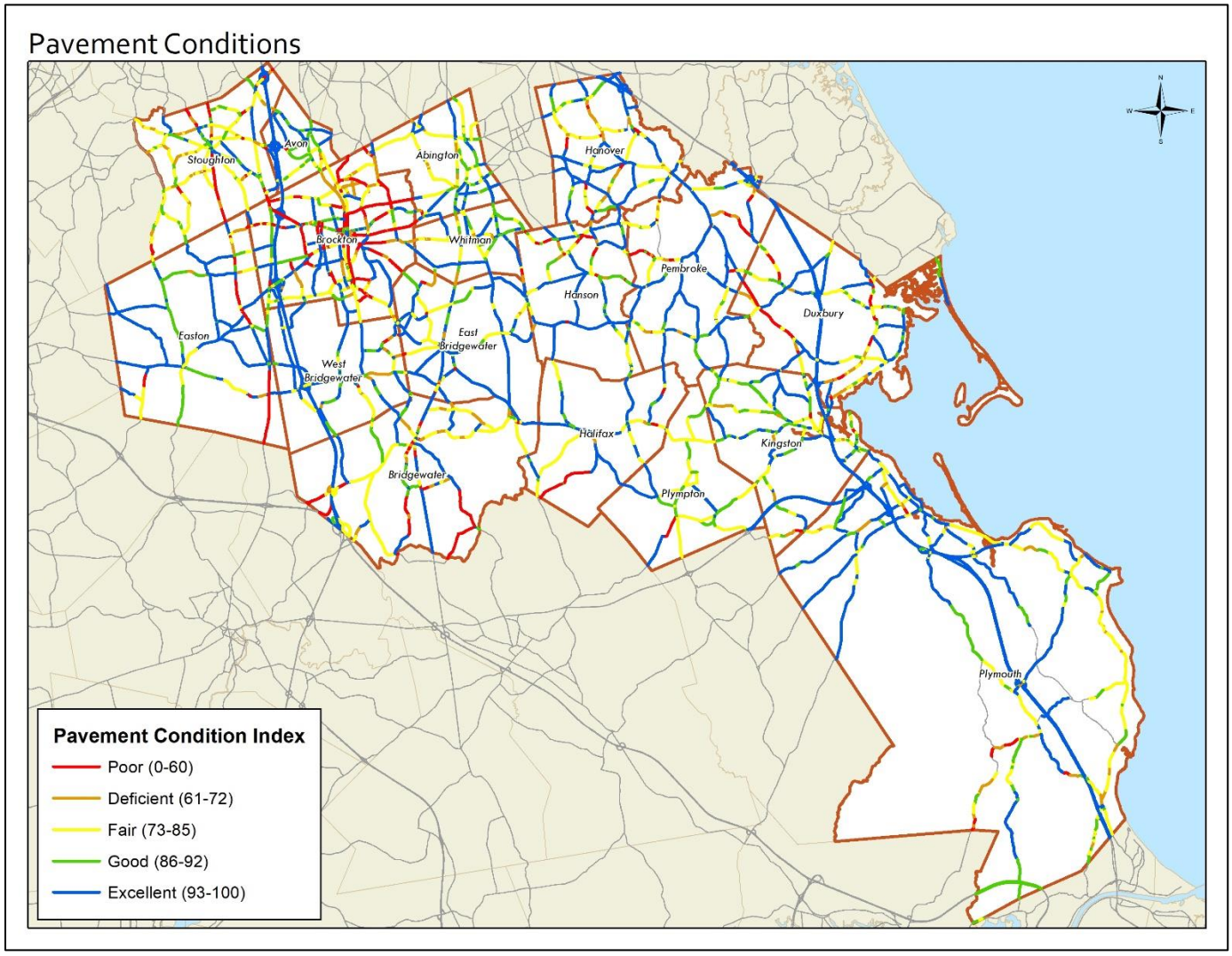


Figure 6-6 Recommended Pavement Repairs (derived from PMS) Federal-Aid Roads Old Colony Region

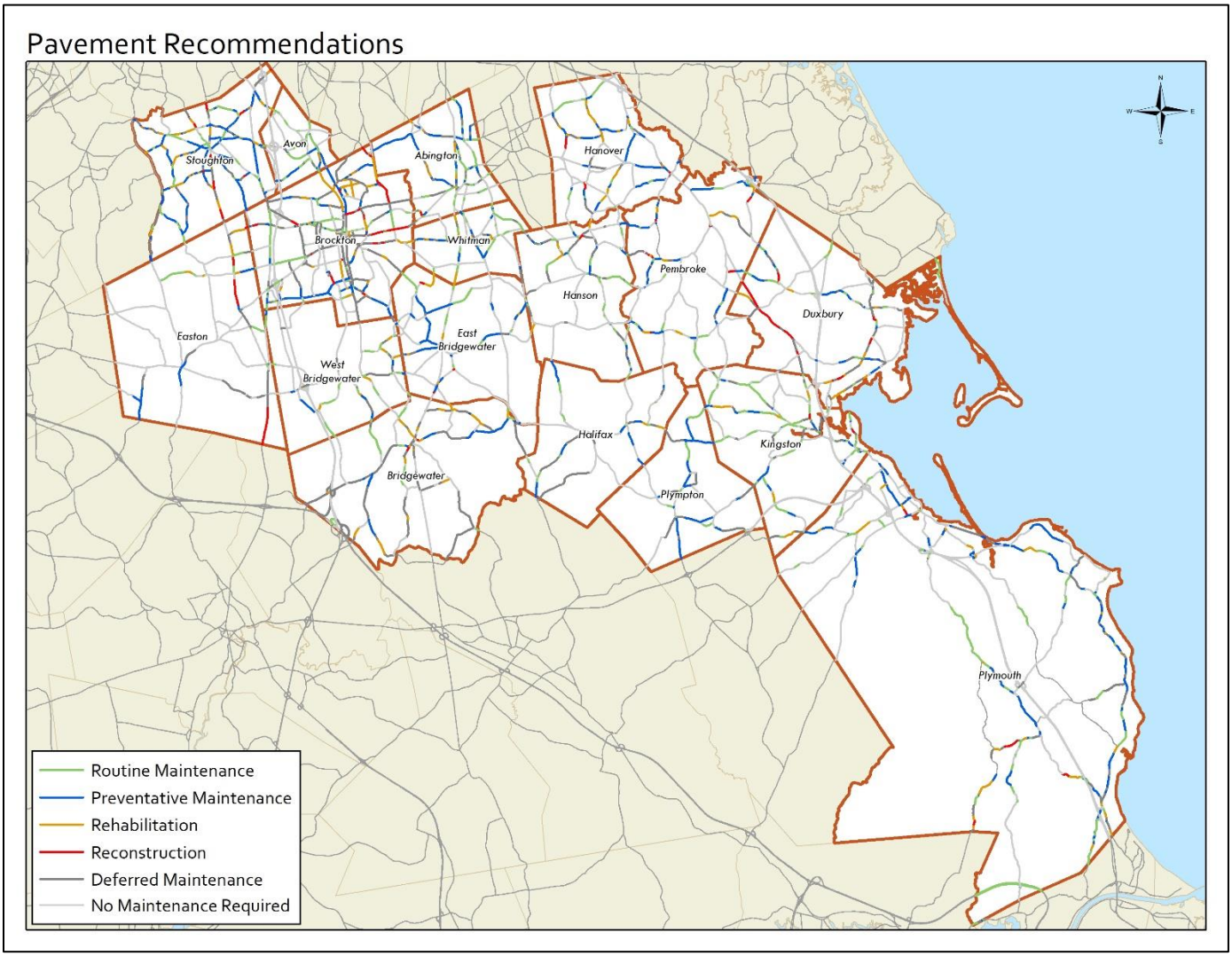
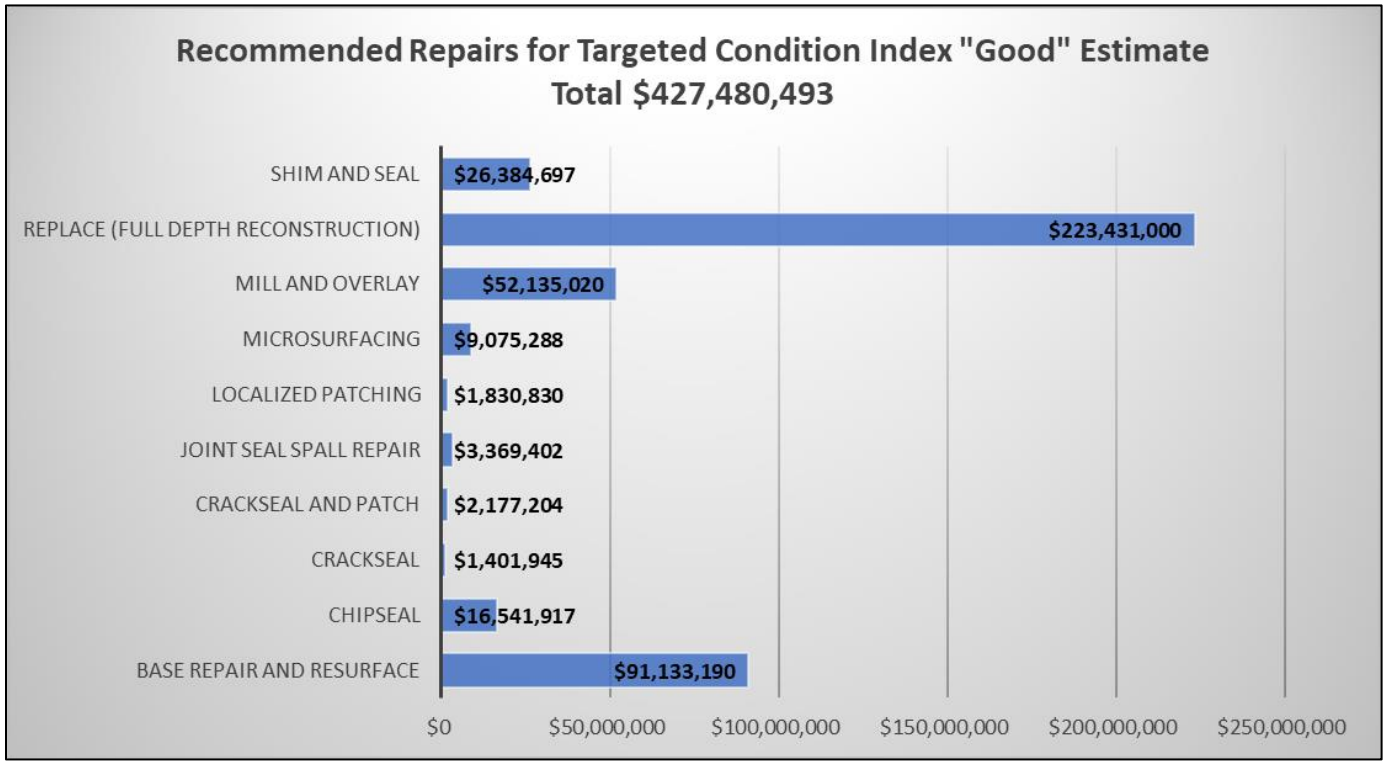


Figure 6-7 shows an estimated improvements scenario costs to bring the Federal-Aid system from an overall condition index of 83, which is in the "Fair" category to an overall average condition of 86, which is in the "Good" category.

Figure 6-7 PMS Generated Estimate of Costs for Federal-Aid Roads



Truck Freight

Federal transportation authorization legislation, including Moving Ahead for Progress in the 21st Century Act (MAP-21) passed in 2012, the Fixing America's Surface Transportation Act (FAST Act) passed in 2015, and the most recent in 2021, the Infrastructure Investment and Jobs Act (IIJA), require the tracking of freight performance. Some of the challenges in tracking freight performance include data consistency, accessing multi-modal data, data quality and quantity, developing and maintaining reliable freight transportation models, and understanding the roles of state agencies and MPOs in freight planning and funding. In addition, the proprietary nature of information regarding freight movement among private companies in a competitive environment represents an obstacle in surveying private freight providers.

The federal highway authorization bill of 2012, MAP-21, established a national goal for freight movement and economic activity: "To improve the nation's freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development." The FAST Act of 2015 required each state to develop a state freight plan (covering a five-year forecast period) in order to receive funding under the National Highway Freight Program. The FAST Act also included provisions to improve the condition and performance of the national freight network. Performance measures supporting freight movement include the categories of safety, infrastructure, and system performance. These performance measures were adopted by the MassDOT and the Old Colony MPO:

- Safety
  - Number and rate of fatalities on all public roads.
  - Number and rate of serious injuries on all public roads.
  - Number of non-motorized fatalities and serious injuries on all public roads.
- Infrastructure
  - Percent of Interstate pavements in good/poor condition.
  - Percent of non-Interstate NHS pavements in good/poor condition.
  - Percent of NHS bridge deck area in good/poor condition.
- System performance
  - Truck Travel Time Reliability Index (TTTRI): This measure is calculated by dividing the 95th percentile truck travel time on a road segment by the 50th percentile travel time.

Table 6-3 describes Massachusetts statewide targets adopted for federally required performance measures and the actual performance for travel time reliability on the Interstate Highway System, travel time reliability on the non-Interstate NHS, and TTTRI on the Interstate Highway system. In addition, the Old Colony MPO approved and endorsed the MassDOT System Performance Measure (PM3) 2020 and 2022 Targets in September 2018.

Table 6-3 - Massachusetts Statewide Performance Measures and Targets*

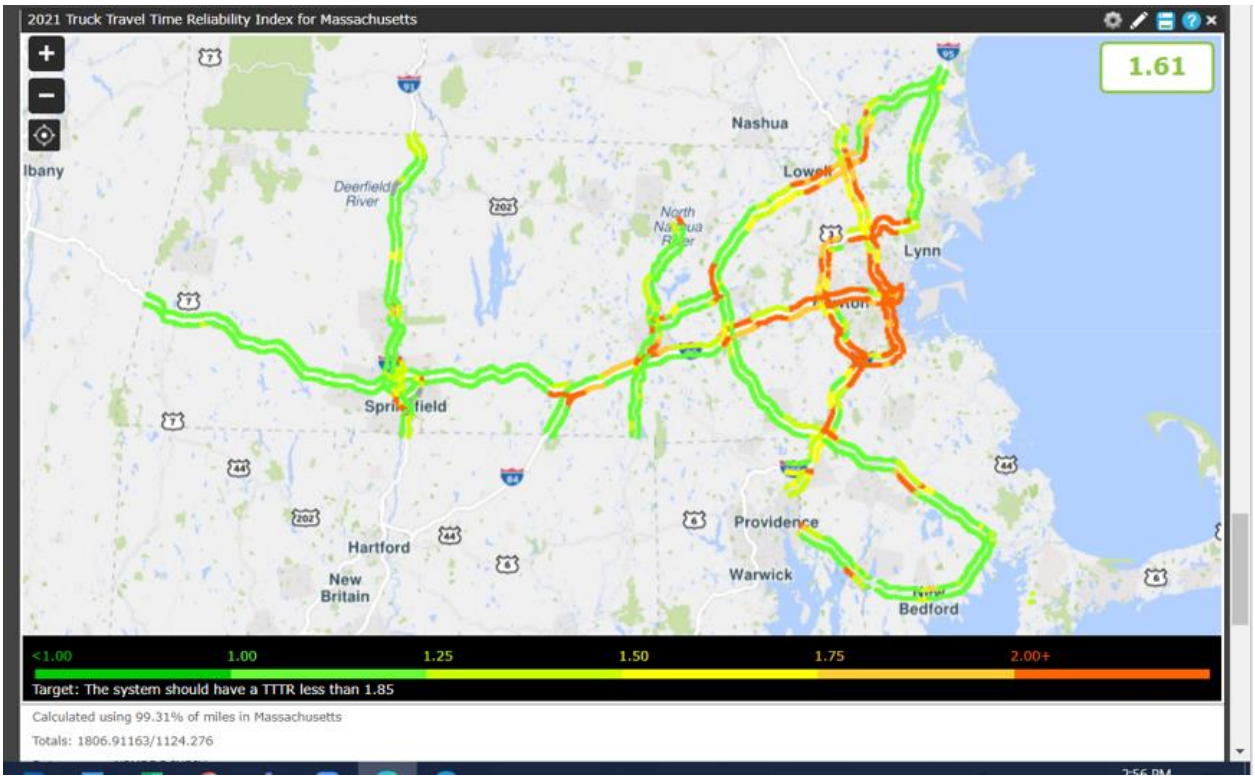
Adopted Performance Measure	2017 (Baseline Value)	2018 Actual	2019 Actual	2019 Target	2020 Actual	2021 Four Year Target	2021 Actual
Percent of person-miles on the Interstate Highway System that are reliable	70%	69%	69.1%	68%	__	68%	__
Percent of person-miles on the non-Interstate NHS that are reliable	__	__	82.4%	__	__	80%	__
Truck Travel Time Reliability Index for the Interstate Highway System	1.84	1.89	1.86	1.85	__	1.85	__

(Source: FHWA State Highway Reliability Report for Massachusetts)

Figure 6-8 shows the TTTRI on Massachusetts Highways for the year 2021 based on data available from National Performance Management Research Data Set (INRIX/RITIS). The TTRI for Massachusetts Interstate Highways was 1.61 in 2021, below the set target of 1.85. The Old Colony Region contains a small portion of interstate mileage (approximately 2.526 miles of I-495 in Bridgewater). The TTTRI for the portion of interstate (I-495) in the Old Colony Region for 2017 was 1.55. It was 1.51 in 2019 and 1.33 in 2021.

Non-Interstate NHS mileage in the Old Colony Region is 354.04 miles. The percentage of person-miles on the non-Interstate NHS that are reliable in the Old Colony Region for 2017 was 90.2 percent (based on INRIX/RITIS data), which was above the 80 percent 2021 target. It was 89.5 percent in 2019, and 89.8 percent in 2021. The percent of person-miles on the Interstate Highway System with the Old Colony Region (approximately 2.56 miles of I-495) that are reliable for 2017, 2019, and 2021, was 100 percent for all three of the reporting years (based on the INRIX/RITIS data).

Figure 6-8 Map of Massachusetts 2021 Truck Travel Time Reliability Index National Performance Management Research Data Set



According to the NCHRP Research Report 925, Estimating the Value of Truck Travel Time Reliability, unreliability in travel time can be caused by demand factors that affect vehicle volumes or supply factors affecting a system's ability to process traffic. These factors include Demand factors such as special events, and fluctuations in demand, and incidents including crashes, weather, work zones, malfunctioning of traffic control devices, failure in infrastructure, and other incidents that impede capacity and/or disrupt traffic operations.

The National Highway Freight Network

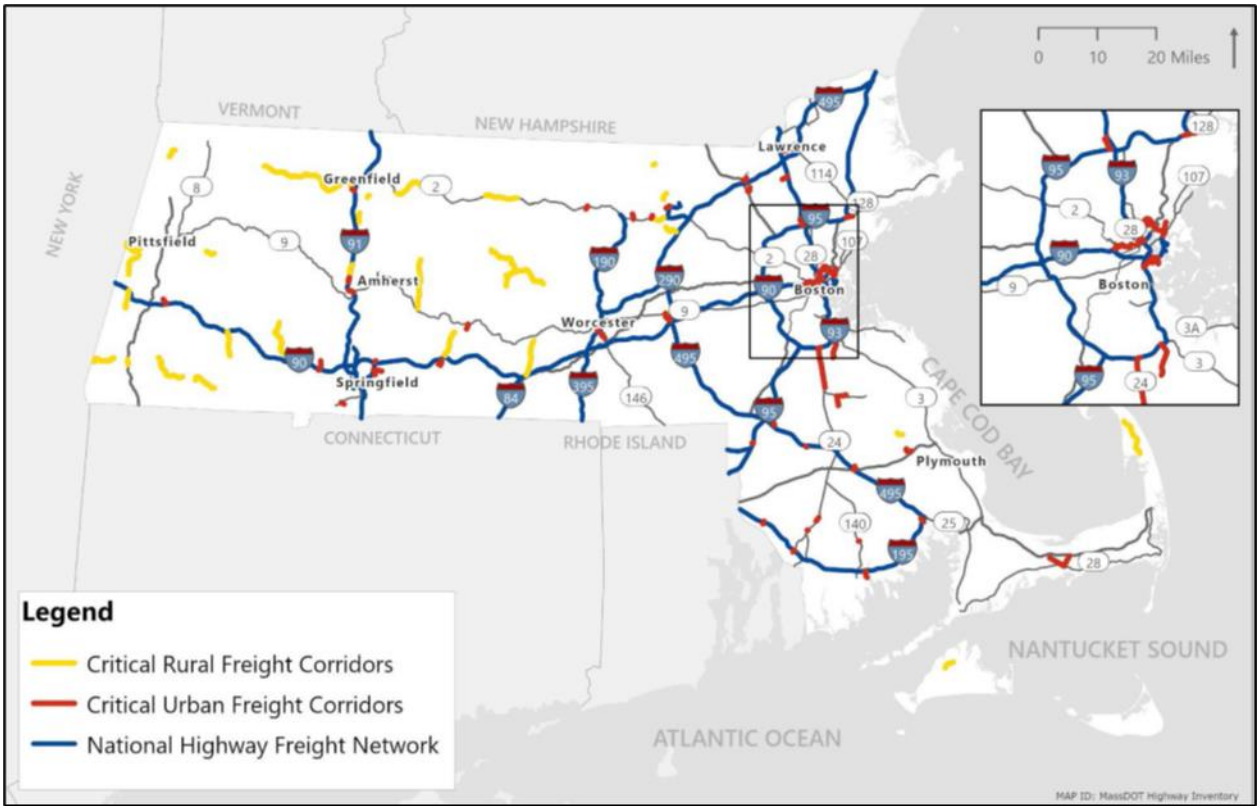
The National Highway Freight Network (NHFN) was established by the FAST Act. The NHFN network consists of those highway corridors of the U.S. freight transportation system critical to the current and future movement of freight, including all modes and connections in the national freight system (as determined by measurable and objective national data).

The FAST Act required that the NHFN consist of the following road network components:

- The Primary Highway Freight System (PHFS)
- Critical Rural Freight Corridors
- Critical Urban Freight Corridors
- Those portions of the Interstate System that are not part of the PHFS (Old Colony Region has a minimal amount of Interstate mileage (approximately 2.526 centerline miles) limited to I-495 in Bridgewater)

The FAST Act designated the PHFS and requires FHWA to redesignate it every five years. It also provides for designation of Critical Rural Freight Corridors and Critical Urban Freight Corridors. The Federal Highway Administrator determines the percentage of the national total of PHFS mileage that is located within each individual State. Figure 6-9 shows the National Highway Freight Network in Massachusetts and the Old Colony Region.

Figure 6-9



The Massachusetts Freight Plan Update

The 2017 Massachusetts Freight Plan has been updated in 2023 through MassDOT's continuing planning process and public outreach program, which consists of an advisory committee, public webinars, focus groups, and surveys. The advisory committee consists of stakeholders including representation from the trucking industry, businesses, the Trucking Association of Massachusetts, and public agencies. The outreach program is reached out to stakeholders (Truck Drivers, port and warehouse workers, E-commerce and gig delivery workers, small business owners, people living near truck routes, and community advocates for safety- walking bicycling) regarding how freight moves through the Commonwealth of Massachusetts and how it impacts communities and/or various industry. The 2023 Massachusetts Freight plan update evaluates how supply chains have impacted the condition and performance of the system taking into consideration changes that have occurred since the COVID-19 global pandemic in 2020. The purpose of the study process was to confirm vision and goals, offer insight on local and regional freight-related issues, trends, and needs, share information with institutional and organizational representatives, and develop recommendations, solutions, and strategies by 2024.

The Massachusetts Freight Plan documented the vision and goals of Massachusetts in achieving a safe, secure, resilient freight system as well as achieving economic competitiveness, efficient and reliable mobility, and healthy and sustainable communities. This plan is in compliance with the FAST Act, which requires the development of a comprehensive plan for immediate and long-range planning activities for freight investments within each state. A Freight Investment Plan is presented in the 2023 Freight Plan update consisting of projects that will receive apportioned funds from the National Highway Freight Program (NHFP). This Freight Plan provides context for MassDOT's investment strategies and choices.

The Massachusetts plan identified modal share of goods shipped by truck, rail, air, and water. The plan states that 83 percent of the tonnage of goods shipped are shipped by truck and 71 percent of the value of goods shipped are shipped by truck. The plan identified (Shown in Figure 6-9) the major trucking freight corridors in Massachusetts. These include five major interstate corridors including I-84, I-90, I-91, I-93, and I-95. It includes seven interstate routes, which include I-190, I-290, I-291, I-391, I-295, I-395, and I-495. Major non-interstate corridors identified as major trucking routes in the Massachusetts plan include US-3, US-6, MA-2, MA-3 (within the Old Colony Region), MA-24 (also within the Old Colony Region), MA-128, and MA-146.

The Massachusetts plan shows that major trucking routes in Massachusetts serve Boston directly or circumnavigate the Boston metropolitan area using I-495. The plan describes the primary truck route through Massachusetts entering I-84 from Connecticut and New York City, proceeding past Worcester on I-90, continuing north on I-495, and exiting using I-93 to New Hampshire and I-95 to Maine. Additionally, the route from Chicago and the Midwest enters Massachusetts via I-90 from New York. The I-495/I-90 interchange is considered an important bottleneck along the major trucking route, requiring solutions for remediation. Access to the major truck route network in the Old Colony Region is via Route 24 to I-495 in Bridgewater or Route 24 north to I-93 (Route 128) and in Plymouth, Route 3 north to I-93 or west on Route 44 to I-495. Recommendations from the Massachusetts Freight Plan are summarized as follows:

Infrastructure:

1. Improve the condition of freight network assets.
2. Build and expand truck parking facilities on primary truck routes across Massachusetts in alignment with recent studies and recommendations.
3. Resolve identified truck bottlenecks.
4. Upgrade freight rail lines in Massachusetts to 286K standard.
5. Maintain uncongested last-mile access to freight-generating facilities.
6. Build right-sized distribution centers inside Route 128.
7. Develop delivery areas in urban districts and town centers.
8. Analyze and improve lighting conditions on corridors with higher rates of truck-involved crashes.
9. Improve safety at highway-rail grade crossings.
10. Incorporate rumble strips into new and existing interstate & rural roadways.

Operational Improvements:

1. Develop Intelligent Transportation Systems (ITS) and Active Transportation and Demand Management (ATDM).
2. Establish a framework for prioritizing multimodal freight projects with a focus on equity.
3. Emphasize the need for timely and accurate reporting of crash data involving freight vehicles or at-grade rail crossings.

Policies and People:

1. Support policies to reduce greenhouse gas emissions from transportation.
2. Harmonize interstate oversize/overweight movements, permitting, and large truck restrictions across New England.
3. Coordinate freight planning with neighboring states.
4. Support and promote freight-related workforce development.
5. Provide collaborative guidance and support to MPOs and local governments in integrating freight, distribution, and loading into their planning and zoning land use decision-making processes.
6. More fully integrate freight planning into MassDOT activities.
7. Promote driver education on stopping distances when operating at higher speeds and/or on high-speed roads.
8. Promote road user education on safe vehicle operation and visibility around trucks.

Old Colony Freight Profile and Freight Plan Recommendations

The primary mode for moving freight in Massachusetts is by truck. Trucking is the primary mode utilized for the movement of goods to, from, and through the Old Colony Region as well. This is based upon analysis of the movement of freight by mode in Massachusetts developed in the Freight Analysis Framework. The Freight Analysis Framework (FAF) is a model developed for the U.S. Department of Transportation to provide a comprehensive picture of freight movement and activity. The FAF estimates commodity flow and freight transportation activity among states, regions, and international gateways. It includes estimates of tonnage and value of goods shipped by type of commodity and mode of transportation.

The FAF reports on freight tonnage and value of commodities on the freight network within and through the states. It does not include freight movement on a local level, or within a regional planning region such as the Old Colony Region, nevertheless, the FAF can give an insight into the character of freight movement for the Old Colony Region. Within the FAF freight model, the Old Colony Region is part of a larger Massachusetts Eastern zone (Boston Area).

The primary trucking routes in the Old Colony Region include Route 24, Route 3, and I-495 as trucking remains the primary mode of transportation for the movement of goods in the region and is expected to continue to play this major role into the future. Trucking facilities, warehousing, and industrial parks cluster in the Route 24 corridor and along ancillary highways that serve Route 24. The state numbered route system in the Old Colony Region is vital as trucking facilities and industrial parks are clustered along these routes with easy access to the regional highway network and the national highway network. These include Route 106, Route 104, Route 138, Route 139, Route 27, Route 28, Route 123, and Route 27. State routes important to the Route 3 corridor include Route 3A, Route 27, and Route 139. Freight shipments by truck are expected to grow in the region, therefore constraints in the highway network including limited intersection turning radii, limited bridge heights, and bottleneck congestion will have a negative impact on freight movement in the region. The lack of interstate standards on Route 24, which creates weaving problems and conflicts due to lack of acceleration and deceleration lanes, will continue to have a negative impact on freight movement in the region.

The FHWA offers a series of Transportation Systems Management and Operations improvements as well as Freight Planning Management techniques as potential improvement in the movement of goods in the transportation system. These include:

- Freight Traveler Information Systems
- Truck Parking Information Management Systems
- Weigh-in Motion Systems and Smart Roadside Monitoring
- Arterial Progression Management and Access Management
- Curb Loading Zone Management
- Electronic Credentialing for Drivers and Vehicles
- Off-Peak Deliveries and Demand Management

General improvements to accommodate future freight movement in the Old Colony Region include:

- Intersections - signal timing adjustments and improved signal coordination are needed in key corridors.
- Intersection – limited turning radii at intersections impede truck movement, intersections should be reconfigured for wide truck turns and movements at specific intersections.
- Roadway pavement surface needs to be in a state of good repair (including road/pavement markings and lane markings).
- Traffic flow issues, congestion and bottlenecks, on many of the state numbered routes heavily utilized by trucks should be addressed including Routes 24, 106, 123, Bridgewater Center, and East Bridgewater Center.
- An East-West Truck Route through Brockton is needed (of major concern are the railroad underpasses, and tight turns throughout Brockton, especially downtown)
- Interchanges on I-495 should be improved to provide for longer acceleration and deceleration lanes and to reduce weaving.
- Coordination should be encouraged between the MBTA and the railroad freight operators in the Old Colony Region to increase the Level of Freight/Goods Movement by Rail to help reduce truck traffic congestion.
- The upgrade of Route 24 to interstate standards, including the redesign and reconstruction of interchanges along Route 24, will contribute to the reduction of the potential for rollover incidents involving trucks.
- Encourage side guards on trucks to protect cyclists.

There are a number of challenges including operational constraints as well as physical constraints for truck movement within the region's highway network. Recurring bottlenecks, poor intersection turning radii, height and weight restrictions, and lack of limited access highway acceleration and deceleration lanes need to be prioritized to maintain productive freight movement and highway network travel time reliability in the Old Colony region. The truck needs in the region include increasing viaduct clearance to improve freight movement, emergency response, and reduce delay, improved safety along freight routes, improve vertical clearance along freight corridors, and identifying and removing constraints that cause bottlenecks within freight corridors.

Bridges

The Massachusetts Department of Transportation (MassDOT) bridge database lists 270 crossing structures in the Old Colony Region, including bridges and culverts, under state or local jurisdiction. This database contains bridge data from the Massachusetts Department of Transportation Highway Division (MassDOT) Bridge Inspection Management System (BIMS), which is linked to an interactive map, includes performance information (condition ratings) on bridges that span roadways, bodies of water, and railroad tracks, as well as a history of inspections and reconstruction. The data base includes:

- MassDOT and municipally owned structures with spans greater than 20 feet.
- MassDOT Highway and municipally owned short span bridges with spans between 10 to 20 feet (inventory of these bridge is in progress).
- MassDOT Highway and municipally owned culverts with spans of 4 to 10 feet (this category inventory is incomplete with an inventory ongoing).

This database does not contain structures under Federal, other State entities or Private ownership or minor non-highway structures such as pedestrian and bicycle overpasses.

MassDOT conducts bridge inspections utilizing a rating system developed by AASHTO using a scale 0 to 100 with 100 being the best, which is consistent with federal standards. The goal of the MassDOT bridge inspections and Bridge Management System (BMS) is to predict failures and make improvements. The database reports a determination on whether a bridge is structurally deficient or not. Bridges are considered structurally deficient if significant load-carrying elements are found to be in poor or worse condition due to deterioration and/or damage.

According to the FHWA, if a bridge is determined to be unsafe based on the inspections, then the structure must be closed; however, the classification of a bridge as structurally deficient does not imply that it is likely to collapse or that it is unsafe. Deficient bridges that are open to traffic require significant maintenance and repair to remain in service. Structurally deficient bridges often have weight limits restricting the gross weight of vehicles using the bridges to remain in service (this is less than the maximum weight typically allowed by statute). Structurally deficient bridges require eventual rehabilitation or replacement to address deficiencies.

There are 18 bridges in the Old Colony Region, (according to the latest MassDOT bridge database), identified as structurally deficient. Table 6-4 lists the Structurally Deficient bridges in the Old Colony Region.

Table 6-4 – Old Colony Region Structurally Deficient Bridges

Community	Description	Owner	Year Built	Project Status
Abington	Central Street over the Shumatuscacant River	Municipal	1956	Design
Abington	Washington Street over the Shumatuscacant River	Municipal	1850 Reconstructed 1900	---
Bridgewater	Vernon Street over the Taunton River	Municipal	1956	---
Brockton	Oak Street over Salisbury Brook	Municipal	1939	---
Brockton	Court Street over Trout Brook	Municipal	1850 Reconstructed 1900	---
Duxbury	Bay Road over Water Island Creek	Municipal	1928	---
Duxbury	Route 3 NB over Franklin Street	MassDOT	1962	Design
Duxbury	Route 3 SB over Franklin Street	MassDOT	1962	Design
Duxbury	Powder Point over Duxbury Bay	Municipal	1987	Design
East Bridgewater	Pond Street over Satucket River	Municipal	1850	---
Easton	Main Street over Queset Brook	Municipal	1850 Reconstructed 1900	---
Halifax	Pine Street over Cranberry bog overflow	Municipal	1850 Reconstructed 1900	---
Halifax	Hayward Street over Palmer Mill Brook	Municipal	1850	---
Plymouth	River Street over Plimoth Plantation Highway	MassDOT	1951	---
Plympton	Main Street over Winnetuxet River	Municipal	1954	---
West Bridgewater	Forest Street over Water Town River	Municipal	1968	Design
West Bridgewater	West Street over Route 24	MassDOT	1953	---
West Bridgewater	Walnut Street over Route 24	MassDOT	1953	---

Congestion and Bottlenecks

Congestion on a highway or road is defined as a level of performance deemed unacceptable due to traffic interference. Roadway or intersection congestion is often described in terms of capacity, that is the ability of a facility to process traffic during times of peak demand. Congestion occurs when the facility's capacity is insufficient to meet the traffic demand. More than ever, as development occurs along the Old Colony Region's major highway corridors, the capacity of these corridors becomes constrained as vehicles exiting and entering the traffic flow create conflicts with through traffic via curb cuts and driveways or signals installed at major commercial plazas. These built-up areas, many along major and minor arterials, experience reoccurring congestion during peak hour commute times.

Bottlenecks are a condition whereby the free movement of traffic is restricted creating a point of congestion during specific time periods, usually the peak commuter periods. Bottlenecks have different causes including operational influences (traffic control, traffic signals, and the physical design and alignment of intersections), the narrowing of a highway corridor and lane drops, weaving conditions, sun glare, steep grades, or crashes and incidents on a roadway.

Congestion Management Process objectives were developed over time in a collaborative effort with stakeholders including the Federal Highway Administration (FHWA), the Massachusetts Department of Transportation (MassDOT), the Brockton rea Transit (BAT) Authority, and local communities, as well as the public at large. These objectives were developed to reduce congestion, improve mobility, and improve access to critical essential services. The objectives include:

- Promote Mode Shift by increasing use of transit, carpool/vanpool, and non-motorized transportation modes such as bicycling and walking.
- Reduce traffic congestion and improve the level of service and access management.
- Maintain and improve transit system efficiency and capacity.
- Increase automobile and bicycle parking capacity and usage at transit stations and commuter lots.
- Eliminate bottlenecks on limited access highways and on the freight network.
- Improve and expand human service coordination, mobility, and accessibility for all modes.
- Reduce the number and size of gaps in the ADA-accessible sidewalk network.
- Increase use of traffic signal priority (hold current green light) for transit vehicles and traffic signal pre-emption for emergency vehicles (override programmed phasing to provide approaching emergency vehicles a green light).
- Monitor utilization and congestion levels at commuter rail and Park & Ride parking facilities.
- Improve accessibility for all modes for all users.

The Old Colony CMP region contains over 2,000 centerline miles of road that provide motorists with the ability to travel throughout the region. Specifically, the Old Colony CMP region has 2,062.35 miles of urban roadways compared to 29.96 miles of rural roadways. Table 6-4 displays the characteristics of the centerline miles within the Old Colony CMP region.

The volume to capacity ratio (V/C), which is based on the relationship between a facility's theoretical capacities to the actual volumes utilizing the system, is an important performance measure utilized in the congestion management process. The capacity of a road or facility can be thought of as its ability to process traffic, measured in both the physical space available and in time, or the speed in which vehicles can travel (how quickly, measured in time, the vehicle traverses the facility). Therefore, the higher the volume to capacity (V/C) ratio, the more congestion exists. A V/C ratio of 0.80 or above (V/C threshold of 0.80 is an industry standard) is used by Old Colony as a threshold for screening congested facilities. Table 6-5 lists the state numbered routes in the Old Colony Region with a V/C ratio of 0.80 or higher. Figure 6-10 shows the V/C on the region's highway network.

Table 6-4 Old Colony CMP Region Centerline Miles by Functional Classification

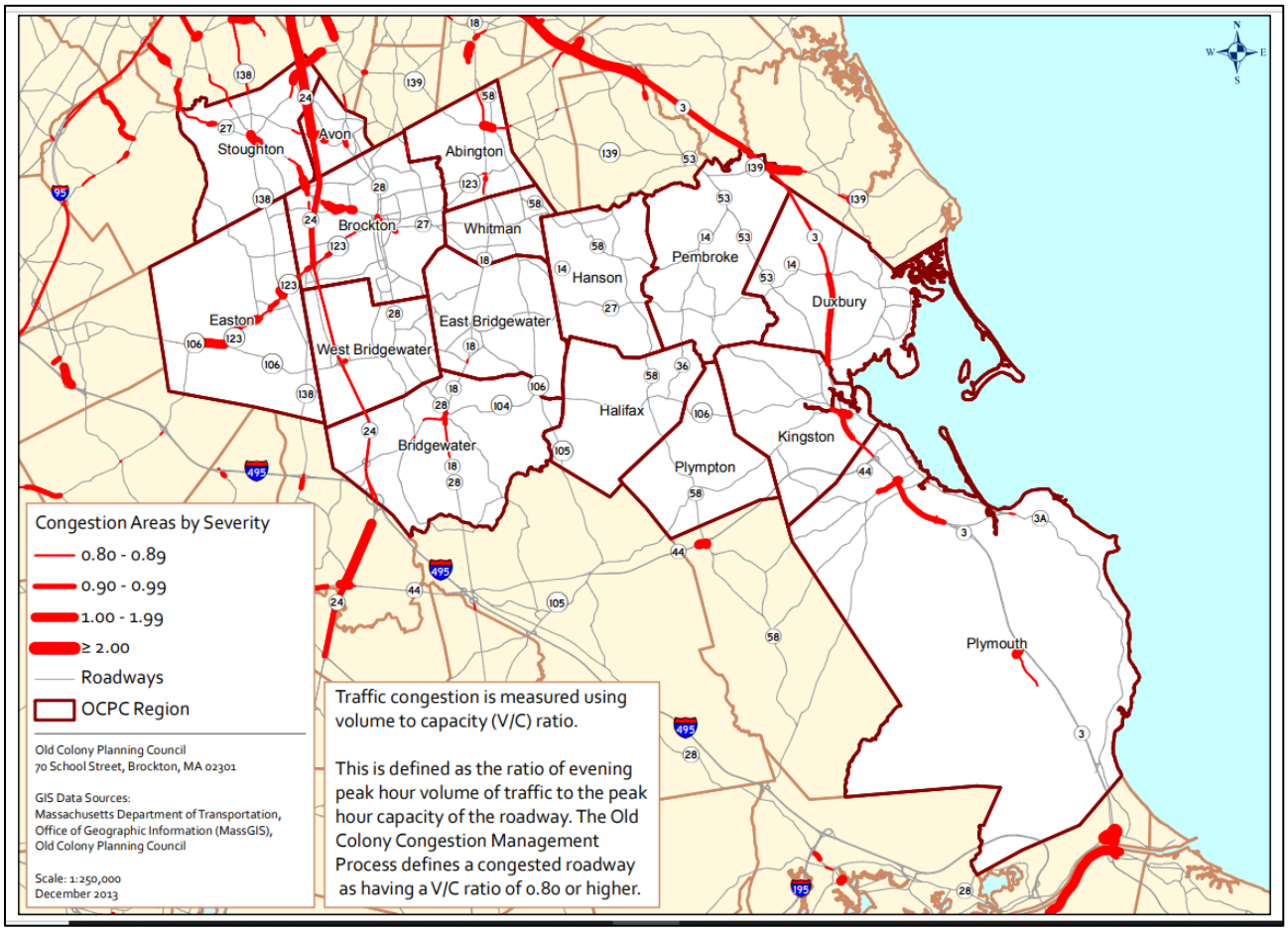
Designation	Interstate	Arterial	Collector	Local	*Total*
Urban	1.20	404.56	261.01	1,395.58	2,062.35
Rural	0.00	1.49	11.63	16.84	29.96
Total	1.20	406.05	272.64	1,412.42	2,092.32

Source: MassDOT 2018 Road Inventory Year-End Report

Table 6-5 State Numbered Locations with a V/C Ratio of 0.80 or Higher

Route	Community	Street	Location	ADT	V/C Ratio
18	Abington	Bedford Street (Route 18)	S of Randolph Street (Route 139)	28,390	0.80
24	Avon	AmVets Memorial Highway (Route 24)	S of Harrison Boulevard	125,982	1.18
24	Bridgewater	AmVets Memorial Highway (Route 24)	N of Interstate 495	98,865	0.93
24	Brockton	AmVets Memorial Highway (Route 24)	At West Bridgewater Town Line	105,251	0.99
24	Brockton	AmVets Memorial Highway (Route 24)	N of Belmont Street (Route 123)	114,015	1.07
24	Stoughton	AmVets Memorial Highway (Route 24)	S of Lindelof Avenue (Route 139)	118,224	1.11
24	West Bridgewater	AmVets Memorial Highway (Route 24)	At Bridgewater Town Line	104,099	0.98
28	Brockton	Main Street (Route 28)	N of Brookside Avenue	30,282	0.85
53/139	Pembroke	Columbia Road (Route 53/139)	At Hanover Town Line	30,000	0.84
106	West Bridgewater	West Center Street (Route 106)	Between Route 24 Ramps	15,006	0.84
106	West Bridgewater	West Center Street (Route 106)	E of AmVets Memorial Highway (Route 24)	28,776	0.81
106	West Bridgewater	West Center Street (Route 106)	E of West Street	29,325	0.82
106	West Bridgewater	West Center Street (Route 106)	W of Howard Street	31,766	0.89
106	West Bridgewater	West Center Street (Route 106)	W of Lincoln Street	30,436	0.86
106	West Bridgewater	West Center Street (Route 106)	W of North Elm Street	30,702	0.86
123	Brockton	Belmont Street (Route 123)	W of School Service Drive	29,096	0.82
138	Stoughton	Washington Street (Route 138)	S of Wyman Street	36,269	1.02
139	Pembroke	Church Street (Route 139)	E of Water Street	28,288	0.80

Figure 6-10



Route 24 Merge with I-93 in Randolph, Canton, and Stoughton

The Route 24 merge with I-93 in Randolph is a significant bottleneck location, which impacts the Old Colony Region, even though the bottleneck is located outside the region in Randolph. Route 24 northbound is limited access with three travel lanes. It transitions into two lanes for I-93 southbound (to Route 128) and two for northbound onto I-93 to Boston. The access ramp from Route 24 to I-93 southbound merges with the I-93 high speed lane. This merge lane does not have adequate length as traffic entering onto I-93 conflicts with I-93 traffic. In addition, the two-lane ramp from Route 24 to I-93 southbound merges back to one lane before traffic enters heavy Route 24 northbound traffic. Northbound Route 24 traffic backs up daily, especially during the morning peak hour, as traffic attempts to access I-93. The queues on Route 24 northbound are routinely five to seven miles long and backup up through Avon and Stoughton and into Brockton.

A 2017 study on freeway bottlenecks completed by Central Transportation Planning Staff identified a number of problems at this location:

- A high volume of traffic on Route 24 northbound to I-93 during the AM peak period.
- A short diverge length where the two Route 24 ramps split at the I-93 interchange.
- A forced merge to a single lane on the I-93 southbound ramp.

- A short merge length at the I-93 northbound ramp.

The 2017 study concluded that "the existing bottleneck creates intense interruption of traffic flow during the AM peak travel period. During these hours, queues of up to five miles long form as drivers wait to merge onto I-93 southbound. These waiting drivers back up onto the Route 24 northbound mainline and prevent vehicles from accessing the otherwise uncongested ramp to I-93 northbound…The bottleneck also likely contributes to crashes in this area." The study recommendations included widening Route 24 northbound to five lanes as it approaches I-93, widening I-93 to four lanes through the merge with the Route 24 ramps, in order to allow longer acceleration and deceleration lengths as vehicles merge on and off the ramps between the two highways.

Conclusions and Recommendations

The highway system is an integral component of the economic well-being of the Old Colony Region. The expansion, dynamics, and maintenance of the network is not only tied to economic viability but also to the quality of life for the region's residents. The network allows for convenience of movement but also can bring negative impacts to communities and neighborhoods in the way of noise, air pollution, and danger for pedestrians. Improvements to the system should be made with equity in mind (Environmental Justice), which requires equality of opportunity for benefits and that the negative impacts are not all burdened by any single portion of the population.

The Old Colony MPO identified a number of key issues affecting the regional highway system:

Key areas in the region demonstrate congestion, excessive delays, circulation problems, and bottlenecks.

Recurring congestion and bottlenecks in the region, which include limited access highway interchanges, town centers, and densely developed highway corridors in the region, have been identified in key areas in the network. The identification of bottlenecks and congested areas has been an ongoing effort, along with planning and analyses to address these areas of concern with OCPC's 2011 Major Bottleneck Identification and Action Plan, OCPC's 2012 and 2013 Major Bottleneck In-Depth Analysis and Action Plan, and 2022 High Priority Corridor Study and Screening Assessment.

Previous studies identified areas in the Region's Highway Network that not only suffer from daily congestion but also experience serious circulation issues due to a number of problems, which include the lack of proper access management techniques, the lack of effective transportation demand management applications, the lack of proper traffic control or updated and coordinated traffic signals, and a lack of multi-modal accommodations such as transit. These studies included improvements identified to improve and enhance capacity, thereby reducing congestion and improving level-of-service include upgrading traffic signal equipment, upgrading signal timing and signal coordination, and utilizing of traffic signal priority (hold current green light) for transit vehicles and traffic signal pre-emption for emergency vehicles (override programmed phasing to provide approaching emergency vehicles a green light). Reoccurring bottlenecks and physical constraints also continue to negatively impact freight movement on the regional highway network, adding to the need to address these areas of concern..

Mode shift is necessary to contribute to the reduction of auto dependency.

Automobile use, along with a widespread and well-connected highway and road network, provides convenience and flexibility to the traveling public. Auto use as a sole means of available transportation;

however, can result in significant traffic congestion, increased air pollution (and subsequent climate change and health problems associated with pollution), and higher crash exposures for the traveling public. It also can lead to higher rates of obesity for auto users compared to those who walk, bicycle, or take transit on a regular basis. Access to automobiles, which can be expensive in terms of car payments, insurance, and maintenance and fuel costs, is also an equity issue, as many people below and above the poverty line struggle to afford a car. Shifting travel demand from vehicles to alternative modes helps reduce congestion, thereby preserving the capacity of the highway network. It also contributes to protecting the natural environment and improving public health.

Auto use is still prevalent in the Old Colony Region as residents continue to rely on the automobile for their primary mode for getting from place to place. The region provides Commuter Rail, transit service, and state-owned park and ride facilities; however, utilization of alternatives still lags behind auto use compared to other parts of the Commonwealth. OCPC will continue to monitor utilization and congestion levels at commuter rail and Park & Ride parking facilities, as well as record utilization data twice annually and report data to MassDOT. OCPC will continue to promote mode shift through policies and plans that include Complete Streets techniques, Safe Route to School Programs, and by encouraging land use and transportation connections through transit-oriented development (TOD). In addition, OCPC will promote increased use of transit, carpool/vanpool, and non-motorized transportation modes such as bicycling and walking, and improve and expand human service coordination, mobility, and accessibility for all modes.

The ability of the Route 24 and Route 3 corridors to handle traffic demand is limited due to sub-standard design.

Reoccurring bottlenecks and congested commuter peak hour traffic are regular occurrences on Route 3 (Pilgrim Highway) and Route 24 (Amvets Memorial Highway) due to sub-standard design. Although these highways are limited access, they are not up to interstate design. On Route 3 during the morning and afternoon peak periods, motorists are allowed to use the breakdown lane in order to provide additional capacity; however, the majority of the interchange ramps, deceleration ramps, and acceleration ramps are not adequate. The elimination of recurring bottlenecks can be achieved through the elimination of lane drops and improvements in the design.

There are eighteen bridges in the Old Colony region that have been identified as structurally deficient.

According to the MassDOT bridge database, there are eighteen bridges in the Old Colony region identified as structurally deficient, and only five of these are under design. Bridges play a vital role in the highway network providing links over natural obstacles such as rivers and streams and enhancing the efficiency of the network.

The Old Colony regional highway network contains areas vulnerable to the effects of climate change.

Infrastructure in the Old Colony Region is susceptible to major damage during severe weather events especially due to intense precipitation and increased flooding near the coastline and those located within the one hundred and five hundred Year Flood Zones. The Old Colony Region contains some of the oldest roads and bridges in the country. Although the impact of sea level rise is limited to coastal areas, the effect of intense precipitation on land transportation infrastructure and operations is more widespread and impacts the OCPC communities inland via brooks and streams, pond, and wetlands. The

impacts of climate change on the region's transportation system have been documented in *OCPC's 2021 Climate Change Vulnerability Transportation Assessment Study.*

Transportation improvement projects costs continue to rise.

Reducing delays in the project development and delivery process through streamlining the development process helps keep costs down and promotes jobs and the economy. It contributes toward accelerating project completion thereby expediting the movement of people and goods. The Region should continue to utilize transportation evaluation criteria in screening potential TIP projects. Initial evaluation should be undertaken on all projects to determine if the project is realistic, viable, and implementable. The enhanced screening and evaluation of projects will help to determine the Year 1 readiness for the TIP. At least 80% of Year 1 TIP Projects should be advertised. The Region will continue to maintain annual participation at TIP Day with MassDOT. At the twenty-five percent design stage, the Region will work with stakeholders on all potential projects to determine ROW, environmental permitting, and other potential challenges to project development and implementation.

Old Colony Planning Council staff through activities programmed in the Old Colony MPO's UPWP will continue to develop recommendations based on the planning process, community's needs, and continued regional cooperation that includes member communities, transportation agencies, and state agencies. These include:

Consider programming studies in the Old Colony UPWP concerning the movement of goods/materials within and through the region including the movement of hazardous materials, the identification and designation of regional and local truck routes, the identification of additional inter-modal facilities, and the overall enhancement of the efficient movement of freight.

Consider programming studies in the Old Colony UPWP to improve east-west connections in the region.

Through the Old Colony Pavement Management System, continue to monitor and evaluate pavement distresses along the federal aid eligible roadways and development maintenance and budgetary strategies, which increased efficiency in terms of the utilization of federal and state money.

Continue the focus on maintenance of local bridges and support increased emphasis on the rehabilitation needs of locally maintained bridges, especially those falling in the Structurally Deficient and Functionally Obsolete categories.

Continue to support the Traffic Monitoring System for Highways. Support actively maintaining and participating in coordinated Traffic Monitoring System for Highways.

Continue semi-annual monitoring of parking utilization at Commute Rail stations within the region and continue to work with communities and the MBTA on issues related to both capacity and access to and from the stations.

Consider programming studies in the Old Colony UPWP aimed at enhancing traffic circulation in downtown areas and community centers and advocate strategies for enhancing pedestrian and bicycle access, mobility, and safety...

Implement access management and design guidelines at the local level through a number of avenues (Master Plans, Zoning Ordinances, and Subdivision regulations and site plan reviews) to conserve capacity in highway corridors, improve traffic flow and safety, decrease auto dependency, include mixed

use development (thereby decreasing sprawl), and improve the quality of development in highway corridors.

Continue to study safety and traffic flow at intersections, particularly at intersections identified as High Crash Locations. Incorporate a multi-mode approach aimed at improving efficient mobility and safety for motorists, pedestrians, bicyclists, and transit.

Large employers should be encouraged to form Transportation Management Associations (TMAs), which marshal business resources to manage employee transportation needs on an area-wide basis. MassRides for example, is available to provide TMA assistance that match employees who wish to carpool, vanpool, etc. Demand for costly long-term parking can be managed by encouraging shared-ride commuting through preferential parking incentives or special discounts for employees.

Consider programming studies in the Old Colony UPWP that study and offer mitigation strategies for congested corridors and bottlenecks in the region...

Pavement Management Systems should address municipal program requirements. Pavement management should include provisions for policies that address the growing maintenance queues experienced by municipal highway officials who must maintain increasingly deteriorating local roadways with fewer fiscal resources.

Promulgate policy to address needs for improving physical constraints for freight movement including raising bridge clearances to accommodate double stacking of containers in railroad freight hauling operations to promote intermodal opportunities. Freight needs include improving truck turning radii and height and weight restrictions for truck freight movement.

Roundabouts, as well as traffic calming techniques, should be included in the analysis of improvement alternatives in studies that focus on the development of solutions to safety and traffic congestion.

Consider the Establishment of a Transportation Management Association

The establishment of a Transportation management Association presents an option for reducing congestion on the region's road network and encouraging mode shift and more choices in transportation. In general terms, the Transportation Management Association (TMA) is a membership organization, which includes governmental agencies, non-governmental agencies, and employers and private companies. They are established to provide a coordinated effort to address transportation problems within a specific geographic area. The funding mechanism, geographic area, membership, mission, and services are tailored to meet the specific needs of the geographic area and are set in a legal agreement between the members. The associations are private and non-profit and establish policies, programs, and services that address traffic congestion, air quality, and travel demand issues. TMAs are funded through private sector financing in addition to public funding. TMAs have many of the same characteristics, but also differ due to varying goals, management practices, services, and markets. TMAs sometimes act as brokers, coordinating delivery of services to customers through employers, developers, or local governments. Some TMAs provide direct services to consumers and members. TMAs act as consultants, providing advice and technical support, or fulfill the role of observer and monitor conditions. In addition, they act as a clearinghouse for information and provide information on a number of issues including local requirements and regulations, and the availability of services. They also

serve as a forum for consensus building among stakeholders advocating for plans, programs, and policies.

Examples of the common types of services that TMAs provide include:

- Vanpool subsidy program
- Discounted transit passes
- Rideshare and transit promotion
- Promotional events
- Promotional materials development and distribution
- Regional and local advocacy
- Guaranteed ride home program
- Rideshare matching
- Employee transportation coordinator training
- Trip reduction planning
- Vanpool services
- Site design
- Shuttle services
- Parking pricing and management

Most TMAs emphasize the use of Transportation Demand Management (TDM) strategies. The purpose of TDM is to manage the demand for motor vehicle travel, which conserves highway and road capacity rather than advocating the increasing of capacity, highway widening and building, which is a more expensive alternative and has environmental and equity consequences. TDM efforts reduce vehicle trips by:

- Accommodating the same number of people in fewer motor vehicles (e.g., transit, carpooling/vanpooling, and cycling/walking).
- Eliminating trips entirely (remote working at home).
- Shifting the timing of trips from the most congested periods to less busy times (flextime).

There are three stages of organizational development for the establishment of a TMA. These include Exploration, Formation, and Operation.

Exploration is the stage at which the timing and need for a TMA is studied. It helps answer the question regarding whether or not a TMA is the ideal organizational approach for accomplishing the mission. It also helps to understand under what conditions the TMA is feasible and sustainable. A core of supporters need to decide to form a TMA and begin to define problems and solutions. The group should formation tasks, such as drafting bylaws and developing a work plan, and answer the main question, which is whether or not a TMA makes sense. In this stage, operating funds have usually not been secured.

The Formation stage begins after the initial exploration indicates the need for a TMA. What the TMA looks like and what it does is determined under this stage. The core group expands support, plans services and sets up the organizational structure in this stage.

The operation stage includes two main areas of activities: administration and service delivery. Administration refers to the ongoing efforts needed to maintain membership and funding, running the office, and serving the board of directors. Service delivery refers to providing services to members and other selected markets. Monitoring and evaluating the programs and policies are important aspects of the TMA. This feedback provides information needed to refine and promote services. Challenges for TMAs include promoting member interest, promoting TMA services, documenting the TMA's effectiveness, maintaining stable, ongoing funding, and maintaining and developing services.

APPENDIX F - OPERATIONS AND MAINTENANCE EXPENDITURES (HIGHWAY AND PUBLIC TRANSIT)

APPENDIX G - FEDERAL REGIONAL FUNDING TARGETS AND STATEWIDE SUMMARIES

STIP Investments Report
2026 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2026								$10,461,587	$8,369,270	$2,092,317
Section 1A / Regionally Prioritized Projects								$10,461,587	$8,369,270	$2,092,317
Intersection Improvements								$10,461,587	$8,369,270	$2,092,317
2026	609052	Old Colony	Brockton	BROCKTON- INTERSECTION IMPROVEMENTS AT CENTRE STREET (ROUTE 123) AND PLYMOUTH STREET	5	STBG	$3,728,293	$3,728,293	$2,982,634	$745,659
2026	609440	Old Colony	Abington	ABINGTON- INTERSECTION IMPROVEMENTS AT HANCOCK STREET AND CHESTNUT STREET	5	STBG	$6,733,294	$6,733,294	$5,386,635	$1,346,659

STIP Investments Report
2027 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2027								$29,321,852	$26,615,702	$2,706,150
Section 1A / Regionally Prioritized Projects								$11,677,742	$9,736,003	$1,941,739
Intersection Improvements								$7,739,652	$6,191,722	$1,547,930
2027	607818	Old Colony	Brockton	BROCKTON- INTERSECTION IMPROVEMENTS AT LYMAN STREET/GROVE STREET/SUMMER STREET & REPLACEMENT OF GROVE STREET BRIDGE, B-25-005, OVER SALISBURY PLAIN RIVER	5	STBG	$7,739,652	$7,739,652	$6,191,722	$1,547,930
Roadway Reconstruction								$3,938,090	$3,544,281	$393,809
2027	612525	Old Colony	Abington	ABINGTON- INTERSECTION IMPROVEMENTS, RANDOLPH STREET AND RICHARD A FITTS DRIVE (ROUTE 139) AT CHESTNUT STREET AND OLD RANDOLPH STREET	5	HSIP	$3,938,090	$3,938,090	$3,544,281	$393,809
Section 1B / Earmark or Discretionary Grant Funded Projects								$10,000,000	$10,000,000	$0
Bridge Off-system Local NB								$10,000,000	$10,000,000	$0
2027	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$10,000,000	$10,000,000	$0
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$7,644,110	$6,879,699	$764,411
Intersection Improvements								$7,644,110	$6,879,699	$764,411
2027	611979	Old Colony	Avon	AVON- INTERSECTION IMPROVEMENTS AT ROUTE 28, SPRING STREET AND HARRISON BOULEVARD	5	HSIP	$7,644,110	$7,644,110	$6,879,699	$764,411

STIP Investments Report
2028 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2028								$58,043,404	$53,554,992	$4,488,412
Section 1A / Regionally Prioritized Projects								$16,840,714	$13,472,571	$3,368,143
Intersection Improvements								$16,840,714	$13,472,571	$3,368,143
2028	606002	Old Colony	Multiple	KINGSTON- DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 3 RAMPS (NB/SB) AND ROUTE 3A (TREMONT STREET)	5	STBG	$9,534,977	$8,778,109	$7,022,487	$1,755,622
2028	612262	Old Colony	Brockton	BROCKTON- INTERSECTION IMPROVEMENTS AT ROUTE 123 (BELMONT STREET), PEARL STREET AND STONEHILL STREET	5	STBG	$8,062,605	$8,062,605	$6,450,084	$1,612,521
Section 1B / Earmark or Discretionary Grant Funded Projects								$30,000,000	$30,000,000	$0
Bridge Off-system Local NB								$30,000,000	$30,000,000	$0
2028	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$30,000,000	$30,000,000	$0
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$11,202,690	$10,082,421	$1,120,269
Intersection Improvements								$11,202,690	$10,082,421	$1,120,269
2028	611981	Old Colony	Stoughton	STOUGHTON- INTERSECTION IMPROVEMENTS AT CANTON STREET (ROUTE 27), SCHOOL STREET, SUMMER STREET AND CUSHING STREET	5	HSIP	$5,384,703	$5,384,703	$4,846,233	$538,470
2028	612770	Old Colony	Abington	ABINGTON- INTERSECTION IMPROVEMENTS AT ROUTE 18 (BEDFORD STREET) AND ROUTE 123 (BROCKTON AVENUE)	5	HSIP	$5,817,987	$5,817,987	$5,236,188	$581,799

STIP Investments Report
2029 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2029								$106,863,950	$97,707,816	$9,156,134
Section 1A / Regionally Prioritized Projects								$16,715,229	$13,372,183	$3,343,046
Intersection Improvements								$8,332,686	$6,666,149	$1,666,537
2029	606002	Old Colony	Multiple	KINGSTON- DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 3 RAMPS (NB/SB) AND ROUTE 3A (TREMONT STREET)	5	STBG	$9,534,977	$756,868	$605,494	$151,374
2029	611976	Old Colony	East Bridgewater	EAST BRIDGEWATER- INTERSECTION IMPROVEMENTS AT HIGHLAND STREET AND NORTH BEDFORD STREET (ROUTE 18)	5	STBG	$3,920,000	$3,920,000	$3,136,000	$784,000
2029	613277	Old Colony	Stoughton	STOUGHTON- INTERSECTION IMPROVEMENTS AT ROUTE 27 (PARK STREET) AND TURNPIKE STREET	5	STBG	$3,655,818	$3,655,818	$2,924,654	$731,164
Roadway Reconstruction								$8,382,543	$6,706,034	$1,676,509
2029	612769	Old Colony	Hanover	HANOVER- CORRIDOR IMPROVEMENTS ON ROUTE 139 (HANOVER STREET) AT MAIN STREET, CENTER STREET AND SILVER STREET	5	STBG	$14,027,252	$8,382,543	$6,706,034	$1,676,509
Section 1B / Earmark or Discretionary Grant Funded Projects								$61,083,282	$61,083,282	$0
Bridge Off-system Local NB								$61,083,282	$61,083,282	$0
2029	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$37,996,520	$37,996,520	$0
2029	613292	Old Colony	Bridgewater	BRIDGEWATER- BRIDGE REHABILITATION, B-23-001 (44H), VERNON STREET OVER TAUNTON RIVER	5	BROFF	$23,086,762	$23,086,762	$23,086,762	$0
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								$14,003,480	$11,202,784	$2,800,696
Bridge Off-system								$14,003,480	$11,202,784	$2,800,696
2029	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	STBG-BR-Off	$193,093,124	$14,003,480	$11,202,784	$2,800,696
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$15,061,959	$12,049,567	$3,012,392
Roadway Reconstruction								$15,061,959	$12,049,567	$3,012,392
2029	609520	Old Colony	Multiple	BROCKTON- ABINGTON- PEDESTRIAN AND BICYCLE IMPROVEMENTS ON ROUTE 123	5	NHPP	$33,061,959	$15,061,959	$12,049,567	$3,012,392

STIP Investments Report
2030 Old Colony Region

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2030								$95,426,355	$85,180,182	$10,246,173
Section 1A / Regionally Prioritized Projects								$16,982,541	$14,274,910	$2,707,631
Intersection Improvements								$6,888,776	$6,199,898	$688,878
2030	613599	Old Colony	Hanover	HANOVER- INTERSECTION IMPROVEMENTS AT COLUMBIA ROAD (ROUTE 53/139) AND BROADWAY	5	HSIP	$6,888,776	$6,888,776	$6,199,898	$688,878
Roadway Reconstruction								$10,093,765	$8,075,012	$2,018,753
2030	613643	Old Colony	Whitman	WHITMAN- CORRIDOR IMPROVEMENTS ON SOUTH AVENUE (ROUTE 27)	5	STBG	$17,209,274	$10,093,765	$8,075,012	$2,018,753
Section 1B / Earmark or Discretionary Grant Funded Projects								$36,529,195	$36,529,195	$0
Bridge Off-system Local NB								$36,529,195	$36,529,195	$0
2030	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	BROFF	$179,300,758	$36,529,195	$36,529,195	$0
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								$15,470,805	$12,376,644	$3,094,161
Bridge Off-system								$15,470,805	$12,376,644	$3,094,161
2030	612006	Old Colony	Duxbury	DUXBURY- BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	5	STBG-BR-Off	$193,093,124	$15,470,805	$12,376,644	$3,094,161
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								$26,443,814	$21,999,433	$4,444,381
Roadway Reconstruction								$18,000,000	$14,400,000	$3,600,000
2030	609520	Old Colony	Multiple	BROCKTON- ABINGTON- PEDESTRIAN AND BICYCLE IMPROVEMENTS ON ROUTE 123	5	NHPP	$33,061,959	$18,000,000	$14,400,000	$3,600,000
Intersection Improvements								$8,443,814	$7,599,433	$844,381
2030	613269	Old Colony	Duxbury	DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 53 AND FRANKLIN STREET	5	HSIP	$8,443,814	$8,443,814	$7,599,433	$844,381

2026 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	RTA	Municipality	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2026									
RTA Facility & Vehicle Maintenance	BAT011965	BAT		BAT VEH OVERHAUL (8)	5307	$1,450,000	$1,450,000		
RTA Facility & Vehicle Maintenance	BAT011965	BAT		BAT VEH OVERHAUL (8)	RTACAP	$1,450,000		$1,450,000	
RTA Facility & Vehicle Maintenance	BAT011967	BAT		AQUIRE SHOP EQUIPMENT	5307	$60,000	$60,000		
RTA Facility & Vehicle Maintenance	BAT011967	BAT		AQUIRE SHOP EQUIPMENT	RTACAP	$15,000		$15,000	
RTA Facility & Vehicle Maintenance	RTD0011350	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$160,000	$160,000		
RTA Facility & Vehicle Maintenance	RTD0011350	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$40,000		$40,000	
RTA Facility & Vehicle Maintenance	RTD0011352	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	RTD0011352	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	RTD0011353	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$2,150,000	$2,150,000		
RTA Facility & Vehicle Maintenance	RTD0011353	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$2,150,000		$2,150,000	
RTA Facility & Vehicle Maintenance	RTD0011354	BAT		BAT - TERMINAL, INTERMODAL	5307	$600,000	$600,000		
RTA Facility & Vehicle Maintenance	RTD0011354	BAT		BAT - TERMINAL, INTERMODAL	RTACAP	$150,000		$150,000	
RTA Fleet Upgrades	RTD0011366	BAT		BAT - BUY REPLACEMENT 40-FT BUS ELECTRIC (5)	5339D	$4,576,328	$4,576,328		
RTA Fleet Upgrades	RTD0011366	BAT		BAT - BUY REPLACEMENT 40-FT BUS ELECTRIC (5)	RTACAP	$1,144,082		$1,144,082	
RTA Fleet Upgrades	RTD0011367	BAT		BAT - PURCHASE MISC ELEC/POWER EQUIP	5339D	$1,120,000	$1,120,000		
RTA Fleet Upgrades	RTD0011367	BAT		BAT - PURCHASE MISC ELEC/POWER EQUIP	RTACAP	$280,000		$280,000	
RTA Vehicle Replacement	RTD0011351	BAT		BAT - ACQUIRE SUPPORT VEHICLE (1)	5307	$48,000	$48,000		
RTA Vehicle Replacement	RTD0011351	BAT		BAT - ACQUIRE SUPPORT VEHICLE (1)	RTACAP	$12,000		$12,000	
					5307 Programmed	$4,508,000	$4,508,000		
					5339D Programmed	$5,696,328	$5,696,328		
					RTACAP Programmed	$5,251,082		$5,251,082	
					Total Programmed for Brockton Area Transit Projects	$15,455,410	$10,204,328	$5,251,082	

2027 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	RTA	Municipality	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2027									
Operating	T00001	BAT		BAT- OPERATING ASSISTANCE	5307	$2,500,000	$2,500,000		
Operating	T00001	BAT		BAT- OPERATING ASSISTANCE	SCA	$2,500,000		$2,500,000	
RTA Facility & System Modernization	T00119	BAT		BAT - ACQUIRE STATIONARY FARE COLLECTION EQUIP	5307	$2,150,000	$2,150,000		
RTA Facility & System Modernization	T00120	BAT		BAT - Acquire Misc. Elec/Power Equip	5339D	$1,080,000	$1,080,000		
RTA Facility & System Modernization	T00120	BAT		BAT - Acquire Misc. Elec/Power Equip	RTACAP	$270,000		$270,000	
RTA Facility & Vehicle Maintenance	RTD0011355	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	RTD0011355	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	RTD0011356	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	RTD0011356	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	RTD0011357	BAT		BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	RTD0011357	BAT		BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	RTD0011358	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	RTD0011358	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	RTD0011359	BAT		BAT - REHAB RENOVATE - BUS PARK & RIDE LOT, PARKING FACILITY	5307	$120,000	$120,000		
RTA Facility & Vehicle Maintenance	RTD0011359	BAT		BAT - REHAB RENOVATE - BUS PARK & RIDE LOT, PARKING FACILITY	RTACAP	$30,000		$30,000	
RTA Facility & Vehicle Maintenance	RTD0011360	BAT		BAT - PURCHASE MISC COMMUNICATIONS EQUIP SYSTEMS	5307	$60,000	$60,000		
RTA Facility & Vehicle Maintenance	RTD0011360	BAT		BAT - PURCHASE MISC COMMUNICATIONS EQUIP SYSTEMS	RTACAP	$15,000		$15,000	
RTA Vehicle Replacement	T00121	BAT		BAT - BUY REPLACEMENT 35-FT BUS ELECTRIC (2)	OF	$2,118,496	$2,118,496		
RTA Vehicle Replacement	T00121	BAT		BAT - BUY REPLACEMENT 35-FT BUS ELECTRIC (2)	RTACAP	$529,624		$529,624	
					5307 Programmed	$5,230,000	$5,230,000		
					5339D Programmed	$1,080,000	$1,080,000		
					OF Programmed	$2,118,496	$2,118,496		

2027 Brockton Area Transit
Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	RTA	Municipality	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
					RTACAP Programmed	$944,624		$944,624	
					SCA Programmed	$2,500,000		$2,500,000	
					Total Programmed for Brockton Area Transit Projects	$11,873,120	$8,428,496	$3,444,624	

2028 Brockton Area Transit
Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	RTA	Municipality	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2028									
Operating	T00127	BAT		BAT- OPERATING ASSISTANCE	5307	$3,900,000	$3,900,000		
Operating	T00127	BAT		BAT- OPERATING ASSISTANCE	SCA	$3,900,000		$3,900,000	
RTA Facility & Vehicle Maintenance	BAT011965	BAT		BAT VEH OVERHAUL (8)	5307	$600,000	$600,000		
RTA Facility & Vehicle Maintenance	BAT011965	BAT		BAT VEH OVERHAUL (8)	RTACAP	$600,000		$600,000	
RTA Facility & Vehicle Maintenance	T00122	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00122	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00123	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00123	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00124	BAT		BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	T00124	BAT		BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	T00125	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	T00125	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	T00126	BAT		BAT - TERMINAL, INTERMODAL PARKING FACILIYU (TRANSIT)	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00126	BAT		BAT - TERMINAL, INTERMODAL PARKING FACILIYU (TRANSIT)	RTACAP	$10,000		$10,000	
					5307 Programmed	$4,940,000	$4,940,000		
					RTACAP Programmed	$710,000		$710,000	
					SCA Programmed	$3,900,000		$3,900,000	
					Total Programmed for Brockton Area Transit Projects	$9,550,000	$4,940,000	$4,610,000	

2029 Brockton Area Transit
Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	RTA	Municipality	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2029									
Operating	T00127	BAT		BAT- OPERATING ASSISTANCE	5307	$4,000,000	$4,000,000		
Operating	T00127	BAT		BAT- OPERATING ASSISTANCE	SCA	$4,000,000		$4,000,000	
RTA Facility & System Modernization	BAT011755	BAT		Electric Bus Infrastructure - 6 Chargers & Associated Costs	5307	$1,200,000	$1,200,000		
RTA Facility & Vehicle Maintenance	T00122	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00122	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00123	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00123	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00124	BAT		BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	T00124	BAT		BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	T00125	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	T00125	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	T00126	BAT		BAT - TERMINAL, INTERMODAL PARKING FACILIYU (TRANSIT)	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00126	BAT		BAT - TERMINAL, INTERMODAL PARKING FACILIYU (TRANSIT)	RTACAP	$10,000		$10,000	
RTA Fleet Upgrades	BAT011756	BAT		BAT- Replace 8 (4 35' and 4 40') with electric	5307	$2,600,000	$2,600,000		
RTA Fleet Upgrades	BAT011756	BAT		BAT- Replace 8 (4 35' and 4 40') with electric	DOF	$2,600,000	$2,600,000		
					5307 Programmed	$8,240,000	$8,240,000		
					DOF Programmed	$2,600,000	$2,600,000		
					RTACAP Programmed	$110,000		$110,000	
					SCA Programmed	$4,000,000		$4,000,000	
					Total Programmed for Brockton Area Transit Projects	$14,950,000	$10,840,000	$4,110,000	

2030 Brockton Area Transit

Program Activity: Transit

STIP: 2026 - 2030 (D)

Program	MassDOT Project ID	RTA	Municipality	MassDOT Project Description	Funding Source	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2030									
Operating	T00127	BAT		BAT- OPERATING ASSISTANCE	5307	$4,000,000	$4,000,000		
Operating	T00127	BAT		BAT- OPERATING ASSISTANCE	SCA	$4,000,000		$4,000,000	
RTA Facility & System Modernization	BAT011755	BAT		Electric Bus Infrastructure - 6 Chargers & Associated Costs	5307	$1,200,000	$1,200,000		
RTA Facility & Vehicle Maintenance	T00122	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00122	BAT		BAT - BUY ASSOC CAP MAINT ITEMS	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00123	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00123	BAT		BAT - REHAB RENOVATE MAINTENANCE FACILITY	RTACAP	$10,000		$10,000	
RTA Facility & Vehicle Maintenance	T00124	BAT		BAT - TERMINAL, INTERMODAL	5307	$240,000	$240,000		
RTA Facility & Vehicle Maintenance	T00124	BAT		BAT - TERMINAL, INTERMODAL	RTACAP	$60,000		$60,000	
RTA Facility & Vehicle Maintenance	T00125	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	5307	$80,000	$80,000		
RTA Facility & Vehicle Maintenance	T00125	BAT		BAT - ACQUIRE MISC SUPPORT EQUIPMENT	RTACAP	$20,000		$20,000	
RTA Facility & Vehicle Maintenance	T00126	BAT		BAT - TERMINAL, INTERMODAL PARKING FACILIYU (TRANSIT)	5307	$40,000	$40,000		
RTA Facility & Vehicle Maintenance	T00126	BAT		BAT - TERMINAL, INTERMODAL PARKING FACILIYU (TRANSIT)	RTACAP	$10,000		$10,000	
RTA Fleet Upgrades	BAT011756	BAT		BAT- Replace 8 (4 35' and 4 40') with electric	5307	$4,000,000	$4,000,000		
RTA Fleet Upgrades	BAT011756	BAT		BAT- Replace 8 (4 35' and 4 40') with electric	DOF	$4,000,000	$4,000,000		
					5307 Programmed	$9,640,000	$9,640,000		
					DOF Programmed	$4,000,000	$4,000,000		
					RTACAP Programmed	$110,000		$110,000	
					SCA Programmed	$4,000,000		$4,000,000	
					Total Programmed for Brockton Area Transit Projects	$17,750,000	$13,640,000	$4,110,000	

APPENDIX H - TRANSPORTATION EVALUATION CRITERIA (TEC) REPORTS

Community Abington
Project Name Intersection Improvements at Hancock Street and Chestnut Street
Project Number 609440
Date Scored 2/28/2024

Category	Score
System Preservation	20
Safety	20
Mobility	8
Economic Impact	1
Environment and Health	6
Policy and Support	6
Total Score	61

Community Abington
Project Name Intersection Improvements Route 139 at Chestnut Street
Project Number 609520
Date Scored 2/28/2024

Category	Score
System Preservation	13
Safety	24
Mobility	8
Economic Impact	4
Environment and Health	4
Policy and Support	5
Total Score	58

Community Abington
Project Name Intersection Improvements at Route 18 and Route 139
Project Number 612770
Date Scored 2/28/2024

Category	Score
System Preservation	14
Safety	18
Mobility	9
Economic Impact	4
Environment and Health	3
Policy and Support	7
Total Score	55

Community Avon
Project Name Corridor Improvements on Route 28
Project Number 610804
Date Scored 2/28/2024

Category	Score
System Preservation	14
Safety	10
Mobility	2
Economic Impact	2
Environment and Health	3
Policy and Support	2
Total Score	33

Community Avon
Project Name Intersection Improvments at Roue 27, East/West Spring, and Harrison Boulevard
Project Number 611979
Date Scored 2/28/2024

Category	Score
System Preservation	14
Safety	21
Mobility	8
Economic Impact	6
Environment and Health	3
Policy and Support	5
Total Score	57

Community Brockton
Project Name Intersection Improvements at Crescent St (Rt 27) at Quincy St and Massasoit
Project Number 606143
Date Scored 2/28/2024

Category	Score
System Preservation	19
Safety	17
Mobility	6
Economic Impact	3
Environment and Health	6
Policy and Support	8
Total Score	59

Community Brockton
Project Name Intersection Improvements at Lyman Street/Summer Street/Grove Street and Grove Street Bridge Replacement
Project Number 607818
Date Scored 2/28/2024

Category	Score
System Preservation	25
Safety	15
Mobility	6
Economic Impact	5
Environment and Health	4
Policy and Support	9
Total Score	64

Community Brockton
Project Name Intersection Improvmenrts at Route 123 (Centre Street) and Plymouth Street
Project Number 609052
Date Scored 2/28/2024

Category	Score
System Preservation	23
Safety	24
Mobility	9
Economic Impact	5
Environment and Health	5
Policy and Support	9
Total Score	75

Community Brockton
Project Name Intersection Improvments at Centre Street (Route 123), Cary, and Lyman
Project Number 609410
Date Scored 2/28/2024

Category	Score
System Preservation	16
Safety	27
Mobility	6
Economic Impact	3
Environment and Health	3
Policy and Support	9
Total Score	64

Community Brockton
Project Name Intersection Improvements at Route 123 (Belmont Street) and Pearl Street
Project Number 612262
Date Scored 2/28/2024

Category	Score
System Preservation	16
Safety	24
Mobility	9
Economic Impact	2
Environment and Health	3
Policy and Support	7
Total Score	61

Community Brockton
Project Name Improvements on Forest Avenue
Project Number 612526
Date Scored 2/28/2024

Category	Score
System Preservation	20
Safety	10
Mobility	5
Economic Impact	2
Environment and Health	3
Policy and Support	6
Total Score	46

Community Brockton / Abington
Project Name Bicycle and Pedestrian Improvements on Route 123
Project Number 609520
Date Scored 2/28/2024

Category	Score
System Preservation	22
Safety	13
Mobility	7
Economic Impact	3
Environment and Health	3
Policy and Support	5
Total Score	53

Community Duxbury
Project Name Intersection Improvements at Route 3 Ramps and Route 3A (Tremont Street)
Project Number 606002
Date Scored 2/28/2024

Category	Score
System Preservation	16
Safety	13
Mobility	10
Economic Impact	5
Environment and Health	3
Policy and Support	6
Total Score	53

Community Duxbury
Project Name Intersection Improvements at Route 53 and Franklin Street
Project Number 613269
Date Scored 2/28/2024

Category	Score
System Preservation	16
Safety	20
Mobility	8
Economic Impact	1
Environment and Health	3
Policy and Support	5
Total Score	53

Community East Bridgewater
Project Name Intersection Improvements Bedford Street (Route 18) at West Street (Route 106) and East Street
Project Number 611968
Date Scored 2/29/2024

Category	Score
System Preservation	14
Safety	11
Mobility	8
Economic Impact	3
Environment and Health	3
Policy and Support	4
Total Score	43

Community East Bridgewater
Project Name Intersection Improvements at North Bedford Street (Route 18) and Highland Street
Project Number 611976
Date Scored 2/29/2024

Category	Score
System Preservation	21
Safety	24
Mobility	9
Economic Impact	8
Environment and Health	4
Policy and Support	5
Total Score	71

Community Easton
Project Name Corridor Improvements Route 138 Including Intersection of Elm Street
Project Number 608195
Date Scored 2/29/2024

Category	Score
System Preservation	20
Safety	15
Mobility	9
Economic Impact	3
Environment and Health	5
Policy and Support	5
Total Score	57

Community Easton
Project Name Resurfacing and Related Work Route 138
Project Number 608585
Date Scored 2/29/2024

Category	Score
System Preservation	20
Safety	13
Mobility	5
Economic Impact	6
Environment and Health	2
Policy and Support	2
Total Score	48

Community Easton
Project Name Improvements on Foundry Street (Route 106/123)
Project Number 612269
Date Scored 2/29/2024

Category	Score
System Preservation	13
Safety	16
Mobility	5
Economic Impact	4
Environment and Health	5
Policy and Support	4
Total Score	47

Community Easton
Project Name Reconstruction and Related Work Route 138 and Route 123
Project Number 612617
Date Scored 2/29/2024

Category	Score
System Preservation	18
Safety	18
Mobility	7
Economic Impact	7
Environment and Health	3
Policy and Support	4
Total Score	57

Community Easton
Project Name Intersection Improvements at Route 138 and Turnpike, Route 138 and Purchase, and Turnpike and Purchase
Project Number 612975
Date Scored 3/2/2024

Category	Score
System Preservation	22
Safety	24
Mobility	9
Economic Impact	3
Environment and Health	4
Policy and Support	5
Total Score	67

Community Hanover
Project Name Corridor Improvements Route 139
Project Number 612769
Date Scored 3/2/2024

Category	Score
System Preservation	18
Safety	16
Mobility	8
Economic Impact	4
Environment and Health	6
Policy and Support	5
Total Score	57

Community Hanover
Project Name Route 53 at Broadway
Project Number 613599
Date Scored 3/2/2024

Category	Score
System Preservation	22
Safety	24
Mobility	0
Economic Impact	4
Environment and Health	4
Policy and Support	5
Total Score	59

Community Hanson
Project Name Corridor Improvements on Route 14
Project Number 608506
Date Scored 3/2/2024

Category	Score
System Preservation	20
Safety	16
Mobility	4
Economic Impact	3
Environment and Health	7
Policy and Support	4
Total Score	54

Community Stoughton
Project Name Intersection Improvements Canton Street (Route 27) at School Street
Project Number 611981
Date Scored 3/10/2024

Category	Score
System Preservation	22
Safety	24
Mobility	10
Economic Impact	5
Environment and Health	4
Policy and Support	9
Total Score	74

Community Stoughton
Project Name Intersection Improvements at Park Street (Route 27) and Turnpike Street
Project Number 613277
Date Scored 3/10/2024

Category	Score
System Preservation	21
Safety	18
Mobility	8
Economic Impact	9
Environment and Health	5
Policy and Support	4
Total Score	65

Community Whitman
Project Name Corridor Improvements South Avenue (Route 14)
Project Number 613643
Date Scored 3/10/2024

Category	Score
System Preservation	16
Safety	24
Mobility	5
Economic Impact	3
Environment and Health	3
Policy and Support	3
Total Score	54

APPENDIX I - FFY 2024 ANNUAL LISTING OF OBLIGATED PROJECTS (ALSO POSTED TO OLD COLONY PLANNING COUNCIL WEBSITE)

OLD COLONY
METROPOLITAN PLANNING ORGANIZATION (MPO)

ANNUAL LISTING OF PROJECTS WITH FEDERAL FUNDING OBLIGATED FOR FEDERAL FISCAL YEAR 2024

December 30, 2024

PREPARED BY:
OLD COLONY PLANNING COUNCIL (OCPC)
70 SCHOOL STREET
BROCKTON, MASSACHUSETTS

www.oldcolonyplanning.org

PREPARED IN COOPERATION WITH THE BROCKTON AREA TRANSIT AUTHORITY, THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (#118969), THE FEDERAL HIGHWAY ADMINISTRATION, AND THE FEDERAL TRANSIT ADMINISTRATION

FUNDING

The preparation of this report has been financed in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under Metropolitan Planning Program, Section 104(f) of Title 23, U.S. Code, under Contract #126742.

DISCLAIMER

The views and opinions of the Old Colony Planning Council expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.

Annual Listing of Projects with Federal Funding Obligated for Federal Fiscal Year 2024

In accordance with 23 CFR § 450.334, Old Colony Planning Council (OCPC) is making the Federal Fiscal Year (FFY) 2023 Annual Listing of Obligated Projects available for public review. The Annual Listing of Projects provides the projects for which federal funds have been obligated in FFY 2023 (October 1, 2022 - September 30, 2023).

Metropolitan Planning Organizations (MPOs) are required, under the authorized transportation bill, Bipartisan Infrastructure Law (BIL), to publish an annual listing of projects which funds have been obligated in the preceding year as a record of project delivery and progress report for public information and disclosure. In addressing BIL requirements, this report lists all transportation projects in the region that were obligated during FFY 2023.

The obligated list of projects must be developed through a cooperative effort with the metropolitan planning organization (MPO), state and public transportation operators responsible for tracking project authorizations and obligations spent during the immediately preceding fiscal year.

Obligation is defined as the Federal government's legal commitment to pay the Federal share of a project's cost. An obligated project is one that has been authorized by the federal agency and funds have been obligated. Projects for which funds have been obligated are not necessarily initiated or completed in the program year, and the amount of the obligation will not necessarily equal the total cost of the project.

Please contact William McNulty at 774-539-5103 or wmcnulty@ocpcrpa.org with any questions.

FFY 2024 ANNUAL LISTING OF OBLIGATED PROJECTS PER 23 CFR 450.334

MassDOT Project ID	MassDOT Project Description▼	Advertis. / Obligation Date	FFY 2023 Programmed Federal Fund	FFY 2023 Obligated Federal Fund	Remaining Advance Construction Fund
OLD COLONY					
607403	STOUGHTON- CORRIDOR IMPROVEMENTS ON ROUTE 138, FROM 300 FEET NORTH OF CHARLES AVENUE TO LINCOLN STREET (PHASE 1)	12-Feb-24	$7,170,639.00	$2,272,517.38	
609410	BROCKTON- INTERSECTION IMPROVEMENTS AND RELATED WORK AT CENTRE STREET (ROUTE 123), CARY STREET AND LYMAN STREET	17-Aug-24	$3,041,856.00	$3,041,855.64	
609435	PLYMPTON- BRIDGE REPLACEMENT, P-14-001 (445), WINNETUXET ROAD OVER WINNETUXET RIVER	29-Jun-24	$1,856,508.00	$2,067,214.98	
	OLD COLONY TOTAL :		**$12,069,003.00**	**$7,381,588.00**	

FFY 2024 ANNUAL LISTING OF OBLIGATED PROJECTS PER 23 CFR 450.334

FTA Program	Project Number	Transit Agency	FTA Activity Line Item	Project Description	Carryover (unobligated)	Federal Funds	State Funds	TDC	Local Funds	Total Cost	Grant #	Obligation Date	FFY 2023 Obligated Federal Funds
5307													
5307	RTD0011335	Brockton Area Transit Authority	111240	BAT - BUY ASSOC CAP MAINT ITEMS		$40,000	$15,000	$0	$0	$55,000	MA-2024-008	5/7/2024	$40,000
5307	RTD0011336	Brockton Area Transit Authority	114402	BAT - REHAB RENOVATE-MAINTENANCE FACILITY		$240,000	$60,000	$0	$0	$300,000	MA-2024-008	5/7/2024	$240,000
5307	RTD0011337	Brockton Area Transit Authority	113403	BAT - TERMINAL, INTERMODAL (TRANSIT)		$120,000	$30,000	$0	$0	$150,000	MA-2024-008	5/7/2024	$120,000
5307	RTD0011339	Brockton Area Transit Authority	114220	BAT - ACQUIRE MISC SUPPORT EQUIPMENT		$140,000	$35,000	$0	$0	$175,000	MA-2024-008	5/7/2024	$140,000
5307	RTD0011340	Brockton Area Transit Authority	114211	BAT - ACQUIRE SUPPORT VEHICLE (2)		$140,000	$35,000	$0	$0	$175,000	MA-2024-008	5/7/2024	$140,000
5307	RTD0011341	Brockton Area Transit Authority	111700	BAT- VEH OVERHAUL (4)		$600,000	$600,000	$0	$0	$1,200,000	MA-2024-008	5/7/2024	$600,000
5307	RTD0011342	Brockton Area Transit Authority	113210	BAT - PURCHASE BUS SHELTERS		$240,000	$60,000	$0	$0	$300,000	MA-2024-008	5/7/2024	$240,000
					Subtotal	$1,520,000	$835,000	$0	$0	$2,355,000			$1,520,000
5310													
5310	BAT011651	Brockton Area Transit Authority	300901	BAT - Avon/Stoughton Beyond ADA		$50,000	$0	$0	$0	$50,000	MA-2023-020-00	5/23/2023	FFY21
5310	BAT011654	Brockton Area Transit Authority	300901	Old Colony Planning Council (OCPC) - OCPC - AAA Elder, Disabled, & Caregiver Volunteer & Alternative Transportation		$30,000	$0	$0	$0	$30,000	MA-2023-020-00	5/23/2023	FFY21
5310	BAT011655	Brockton Area Transit Authority	300901	South Shore Community Action Council - Transportation Program Operating Assistance		$150,000	$0	$0	$0	$150,000	MA-2023-020-00, MA-2022-020-01	5/23/2023, 5/30/23	FFY21, FFY21
5310	BAT011842	South Shore Community Action Council	111215	South Shore Community Action Council- PURCHASE OF TYPE E2A VEHICLES (6)		$582,566	$0	$0	$145,642	$728,208	MA-2025-002-00	1/13/2025	FFY24
5310	BAT011843	Brockton Area Transit Authority	111215	BAT- PURCHASE TYPE E2A (4), TYPE DA (6) AND TYPE LOW-FLOOR (1) VEHICLES (5310)		$1,007,386	$0	$0	$0	$1,007,386	MA-2025-002-00	1/13/2025	FFY23 & FFY24
					Subtotal	$1,819,952	$0	#REF!	$145,642	$1,965,594			

APPENDIX J - COMPLETED HIGHWAY AND TRANSIT PROJECTS (2015 TO PRESENT; GREENHOUSE GAS (GHG) EMISSIONS ANALYSIS)

Old Colony Region Transportation Improvement Program

MassDOT Project ID ▼	MassDOT Project Description ▼	Total Programmed Funds ▼	GHG Analysis Type ▼	GHG CO_2 Impact (kg/yr) ▼	GHG Impact Description ▼	Additional Description ▼	Fiscal Year of Contract Award (2015 and forward) ▼
603660	BRIDGEWATER- SIGNAL & INTERSECTION IMPROVEMENTS AT STATE ROUTE 18 & HIGH STREET	$ 1,259,683	Quantified	94,020.393	Quantified Decrease in Emissions from Traffic Operational Improvement		2015
601644	BROCKTON- RESURFACING & RELATED WORK ON WEST ELM STREET, FROM WARREN AVENUE TO WEST STREET (6,800 FT.)	$ 5,022,800	Quantified	358,738.067	Quantified Decrease in Emissions from Traffic Operational Improvement		2015
606071	EASTON- SIGNAL & INTERSECTION IMPROVEMENTS @ ROUTE 138 (TURNPIKE STREET) AND ROUTE 106 (FOUNDRY STREET)	$ 1,377,744	Quantified	59,301.843	Quantified Decrease in Emissions from Traffic Operational Improvement		2015
604957	PEMBROKE- RECONSTRUCTION ON ROUTE 14, FROM THE HANSON T.L. TO WASHINGTON STREET (ROUTE 53) AC PHASE 1 OF 2	$ 9,188,746	Quantified	729.893	Quantified Decrease in Emissions from Traffic Operational Improvement		2016
608085	AVON - INSTALLATION OF A MEDIAN BARRIER ON HARRISON BOULEVARD	$ 2,305,120	Quantified	989,860.450	Quantified Decrease in Emissions from Traffic Operational Improvement		2016
606036	BROCKTON - SIGNAL & INTERSECTION IMPROVEMENTS @ ROUTE 123 (BELMONT STREET)/LINWOOD STREET/ LORRAINE AVENUE	$ 4,646,985	Quantified	73,162.015	Quantified Decrease in Emissions from Other Improvements		2016
607175	PLYMOUTH - RESURFACING & RELATED WORK ON ROUTE 3	$ 15,745,980	Qualitative		Qualitative Decrease in Emissions		2016
605038	PLYMOUTH- RECONSTRUCTION OF TAYLOR AVENUE, FROM WHITE HORSE ROAD TO MANOMET POINT ROAD, INCLUDES BRIDGE REPLACEMENT OF P-13-010	$ 8,726,144	Quantified	2,011.100	Quantified Decrease in Emissions from Other Improvements		2017
607438	EASTON- INTERSECTION IMPROVEMENTS AT WASHINGTON STREET (ROUTE 138) AND UNION STREET	$ 2,659,239	Quantified	326,293.197	Quantified Decrease in Emissions from Traffic Operational Improvement		2018
607337	PEMBROKE- INTERSECTION IMPROVEMENTS AND RELATED WORK AT WASHINGTON STREET (ROUTE 53) AND PLEASANT STREET	$ 2,264,709	Quantified	170,714.225	Quantified Decrease in Emissions from Traffic Operational Improvement		2018
606264	PLYMOUTH- IMPROVEMENTS ON OBERY STREET, FROM SOUTH STREET TO A.A. CARANCI WAY/PLYMOUTH NORTH H.S. DRIVE INTERSECTION	$ 6,657,553	Quantified	583,159.967	Quantified Decrease in Emissions from Traffic Operational Improvement		2018
607860	WHITMAN- TRAFFIC SIGNAL IMPROVEMENTS & RELATED WORK ON BEDFORD STREET (ROUTE 18) AT 2 LOCATIONS: AUBURN STREET (ROUTE 14) & TEMPLE STREET (ROUTE 27)	$ 5,990,816	Quantified	133,711.328	Quantified Decrease in Emissions from Traffic Operational Improvement		2018
608143	ABINGTON/ BROCKTON - NORTH QUINCY STREET, CHESTNUT STREET, AND BOUNDARY AVENUE ROUNDABOUT AND GEOMETRIC IMPROVEMENTS	$ 1,218,906	Quantified	505,089.454	Quantified Decrease in Emissions from Traffic Operational Improvement		2019
607941	EAST BRIDGEWATER - RESURFACING AND SIDEWALK CONSTRUCTION ON BEDFORD STREET (ROUTE 18), FROM WHITMAN STREET (ROUTE 106) TO CENTRAL STREET	$ 7,763,091	Quantified	1,525.300	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure		2019
608088	BROCKTON - CORRIDOR IMPROVEMENTS ON ROUTE 123 (BELMONT STREET), FROM ANGUS BEATON DRIVE TO WEST STREET	$ 7,350,265	Quantified	205,184.676	Quantified Decrease in Emissions from Traffic Operational Improvement		2020
608266	PEMBROKE - RESURFACING AND RELATED WORK ON ROUTE 53	$ 2,725,075	Qualitative		Qualitative Decrease in Emissions		2020
607217	EASTON - ROUTE 123 (DEPOT STREET) RECONSTRUCTION FROM NEWELL CIRCLE TO ROUTE 138	$ 9,018,229	Quantified	132,862.633	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure		2021
608086	AVON - INTERSECTION IMPROVEMENTS AT HARRISON BOULEVARD AND POND STREET	$ 4,969,007	Quantified	989,860.450	Quantified Decrease in Emissions from Traffic Operational Improvement		2021
608829	STOUGHTON- IMPROVEMENTS AT WEST ELEMENTARY SCHOOL (SRTS)	$ 3,171,443	Qualitative		Qualitative Decrease in Emissions		2021
608496	AVON - STOUGHTON - PAVEMENT PRESERVATION AND RELATED WORK ON ROUTE 24	$ 7,339,593	Qualitative		No assumed impact/negligible impact on emissions		2022
600380	PEMBROKE - REHABILITATION OF ROUTE 36 (CENTER STREET) FROM ROUTE 27 TO ROUTE 14	$ 10,160,995	Quantified	3,776.201	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure		2022

Old Colony Region Transportation Improvement Program

FTA Activity Line Item ▼	Transit Agency ▼	Project Description ▼	Total Cost ▼	GHG Analysis Type ▼	GHG CO_2 Impact (kg/yr) ▼	GHG Impact Description ▼	Additional Description ▼	Fiscal Year Programmed (2015 and forward) ▼
111201	BAT	BUY REPLACEMENT 40-FT BUS (4)	$ 1,960,000	Quantified	9,383.318	Quantified Decrease in Emissions from Bus Replacement		2016
111202	BAT	BUY REPLACEMENT 35-FT BUS (4)	$ 2,000,000	Quantified	9,899.523	Quantified Decrease in Emissions from Bus Replacement		2016
111201	BAT	BAT ACQUIRE REPLACEMENT 40-FT BUS (4	$ 2,050,000	Quantified	20,577.935	Quantified Decrease in Emissions from Bus Replacement		2018
111302	BAT	BAT - ACQUIRE 35-FT BUS FOR EXPANSION (2) HYBRID	$ 1,400,000	Quantified	23,611.723	Quantified Decrease in Emissions from New/Additional Transit Service		2018
111202	BAT	BAT ACQUIRE REPLACEMENT 35-FT BUS (6	$ 3,000,000	Quantified	30,866.902	Quantified Decrease in Emissions from Bus Replacement		2018
111203	BAT	BUY REPLACEMENT 30-FT BUS (2) BSU	$ 500,000	Quantified	188,480.027	Quantified Decrease in Emissions from Bus Replacement		2019
111203	BAT	BUY REPLACEMENT 30-FT BUS (3) BSU	$ 450,000	Quantified	280,178.756	Quantified Decrease in Emissions from Bus Replacement		2020
111201	BAT	BUY REPLACEMENT 40-FT BUS (4)	$ 2,250,000	Quantified	246,174.712	Quantified Decrease in Emissions from Bus Replacement		2021
111201	BAT	BUY REPLACEMENT 40-FT BUS (3)	$ 1,500,000	Quantified	273,484.385	Quantified Decrease in Emissions from Bus Replacement		2022

APPENDIX K - FFY 2026-2030 GREENHOUSE GAS (GHG) EMISSIONS ANALYSIS

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: KINGSTON- DUXBURY- INTERSECTION IMPROVEMENTS AT ROUTE 3 RAMPS (NB/

Meeting date:

Requesting party: Old Colony MPO

Project ID *(if applicable)*: 606002

Project sponsor: Municipality

Estimated cost:

Estimated CMAQ funding:

Year of programming *(if applicable)*: 2027

Analysis type: Qualitative

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

Project will improve intersections of Route 3 northbound and southbound ramps with Tremont Street (Route 3A) in Duxbury and Kingston. Project has not completed ICE process at this time, so preferred design alternative is unknown.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Project is expected to yield substantial reduction in GHG emissions due to improvement in traffic flow and capacity.

VOC kg/year No change	**NOx kg/year** No change	**CO kg/year** No change	**CO_2 kg/year** No change
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

Project name: EAST BRIDGEWATER- INTERSECTION IMPROVEMENTS AT HIGHLAND STREET AN

Meeting date:

Requesting party: Old Colony MPO

Project ID *(if applicable)*: 611976

Project sponsor: Municipality

Estimated cost:

Estimated CMAQ funding:

Year of programming *(if applicable)*: 2029

Analysis type: Qualitative

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

Project will improve intersection of Route 18 at Highland Street in East Bridewater. Project is in preliminary design phase and has not completed ICE process at this time, so preferred design alternative is unknown.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Project is expected to yield substantial reduction in GHG emissions due to improvement in traffic flow and capacity.

VOC kg/year No change	**NOx kg/year** No change	**CO kg/year** No change	**CO_2 kg/year** No change
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: BROCKTON- INTERSECTION IMPROVEMENTS AT ROUTE 123 (BELMONT STREET)

Meeting date:

Requesting party: Old Colony MPO

Project ID *(if applicable)*: 612262

Project sponsor: Municipality

Estimated cost:

Estimated CMAQ funding:

Year of programming *(if applicable)*: 2028

Analysis type: Qualitative

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

Project will improve intersection of Belmont Street (Route 123) at Pearl Street and Stonehill Street in Brockton. Project has not completed ICE process at this time, so preferred design alternative is unknown.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Project is expected to yield substantial reduction in GHG emissions due to improvement in traffic flow and capacity.

VOC kg/year No change	**NOx kg/year** No change	**CO kg/year** No change	**CO_2 kg/year** No change
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: HANOVER- CORRIDOR IMPROVEMENTS ON ROUTE 139 (HANOVER STREET) AT M

Meeting date:

Requesting party: Old Colony MPO

Project ID *(if applicable)*: 612769

Project sponsor: Municipality

Estimated cost:

Estimated CMAQ funding:

Year of programming *(if applicable)*: 2028

Analysis type: Qualitative

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

Project will improve intersections of Hanover Street (Route 139) at Main Street, Center Street, and Silver Street in Hanover. Project is in preliminary design phase and has not completed ICE process at this time, so preferred design alternative is unknown.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Project is expected to yield substantial reduction in GHG emissions due to improvement in traffic flow and capacity.

VOC kg/year No change	**NOx kg/year** No change	**CO kg/year** No change	**CO_2 kg/year** No change
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: HANOVER- INTERSECTION IMPROVEMENTS AT COLUMBIA ROAD (ROUTE 53/139)

Meeting date:

Requesting party: Old Colony MPO

Project ID *(if applicable)*: 613599

Project sponsor: Municipality

Estimated cost:

Estimated CMAQ funding:

Year of programming *(if applicable)*: 2029

Analysis type: Qualitative

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

Project will improve intersection of Route 53 (Volumbia Road) at Broadway in Hanover. Project is in preliminary design phase and has not completed ICE process at this time, so preferred design alternative is unknown.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Project is expected to yield substantial reduction in GHG emissions due to improvement in traffic flow and capacity.

VOC kg/year No change	**NOx kg/year** No change	**CO kg/year** No change	**CO_2 kg/year** No change
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**

CMAQ Air Quality Analysis Worksheet for Traffic Flow and Intersection Improvements

FILL IN SHADED BOXES ONLY

TIP YEAR: 2026

MPO: Old Colony **Municipality:** Abington

Project: Improvements at Hancock Street and Chestnut Street

Step 1: Calculate Existing AM Peak Hour Total Intersection Delay in Seconds:

Street Name	Dir	Left-Turns (Vol / PHF)	X delay per veh	= Total move. delay	Thru (Vol / PHF)	X delay per veh	= Total move. delay	Right-Turns (Vol / PHF)	X delay per veh	= Total move. delay	= Total approach delay
Hancock St	NB	81 / 0.93	7.7	= 671	+ 243 / 0.93	0.0	= 0	+ 66 / 0.93	0.0	= 0	= 671
Hancock St	SB	10 / 0.76	8.0	= 105	+ 51 / 0.76	0.0	= 0	+ 68 / 0.76	0.0	= 0	= 105
Chestnut St	EB	86 / 0.84	300.0	= 30,714	+ 297 / 0.84	300.0	= 106,071	+ 26 / 0.84	300.0	= 9,286	= 146,071
Chestnut St	WB	39 / 0.83	300.0	= 14,096	+ 190 / 0.83	300.0	= 68,675	+ 12 / 0.83	300.0	= 4,337	= 87,108
										Total Intersection Delay/Seconds	= **233,956**

Step 2: Calculate Existing PM Peak Hour Total Intersection Delay in Seconds:

Street Name	Dir	Left-Turns (Vol / PHF)	X delay per veh	= Total move. delay	Thru (Vol / PHF)	X delay per veh	= Total move. delay	Right-Turns (Vol / PHF)	X delay per veh	= Total move. delay	= Total approach delay
Hancock St	NB	52 / 0.91	8.4	= 480	+ 105 / 0.91	0.0	= 0	+ 23 / 0.91	0.0	= 0	= 480
Hancock St	SB	6 / 0.94	7.5	= 48	+ 325 / 0.94	0.0	= 0	+ 78 / 0.94	0.0	= 0	= 48
Chestnut St	EB	78 / 0.82	300.0	= 28,537	+ 353 / 0.82	300.0	= 129,146	+ 124 / 0.82	300.0	= 45,366	= 203,049
Chestnut St	WB	36 / 0.93	300.0	= 11,613	+ 251 / 0.93	300.0	= 80,968	+ 6 / 0.93	300.0	= 1,935	= 94,516
										Total Intersection Delay/Seconds	= **298,093**

Step 3: The spreadsheet automatically chooses the peak hour with the longer total intersection delay for the next step in the analysis.

Peak Hour (AM/PM): PM Total Intersection Delay: 298,093

Step 4: Calculate the existing PM Peak Hour Total Intersection Delay with Improvements:

Street Name	Dir	Left-Turns (Vol / PHF)	X delay per veh	= Total move. delay	Thru (Vol / PHF)	X delay per veh	= Total move. delay	Right-Turns (Vol / PHF)	X delay per veh	= Total move. delay	= Total approach delay
Hancock St	NB	52 / 0.91	7.3	= 417	+ 105 / 0.91	7.3	= 842	+ 23 / 0.91	7.3	= 185	= 1,444
Hancock St	SB	6 / 0.94	9.9	= 63	+ 325 / 0.94	9.9	= 3,423	+ 78 / 0.94	9.9	= 821	= 4,308
Chestnut St	EB	78 / 0.82	15.6	= 1,484	+ 353 / 0.82	15.6	= 6,716	+ 124 / 0.82	15.6	= 2,359	= 10,559
Chestnut St	WB	36 / 0.93	6.7	= 259	+ 251 / 0.93	6.7	= 1,808	+ 6 / 0.93	6.7	= 43	= 2,111
										Total Intersection Delay/Seconds	= **18,421**

Step 5: Calculate vehicle delay in hours per day:

	(Delay in seconds	X Hours per day)	/ Seconds per hour	= Delay in hours / day
Existing peak hour intersection delay	(298,093	X 10)	/ 3600	= 828.0
Peak hour intersection delay w/ improvements	(18,421	X 10)	/ 3600	= 51.2

Step 6: MOBILE 6 emission factors for idling speed: AM or PM **PM**

2020 Summer VOC Factor grams/hour	2020 Summer NOx Factor grams/hour	2020 Winter CO Factor grams/hour	2020 Summer CO2 Factor grams/hour
0.249	**0.630**	**3.499**	**3565.610**

Step 7: Calculate net emissions change in kilograms per day:

	Delay in Hours per Day	Summer VOC Emissions kilograms/day	Summer NOx Emissions kilograms/day	Winter CO Emissions kilograms/day	Summer CO2 Emissions kilograms/day
Existing Conditions	828.0	0.206	0.522	2.897	2,952.452
With Improvements	51.2	0.013	0.032	0.179	182.449
Net Change		**-0.193**	**-0.489**	**-2.718**	**-2,770.002**

Step 8: Calculate net emissions change in kilograms per year (seasonally adjusted)

	Net change per day (kg)	X Avg. weekdays per year	X Seasonal adj. factor	= Adj. net change in kg per year
Summer VOC Emissions	-0.193	X 250	X 1.0188	= **-49.269**
Summer NOx Emissions	-0.489	X 250	X 1.0188	= **-124.657**
Winter CO Emissions	-2.718	X 250	X 0.9812	= **-666.788**
Summer CO2 Emissions	-2,770.002	X 250	X 1.0000	**-692,500.581**

Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	/ Adj. net change in kg per year	= First year cost per kilogram
Summer VOC		/ -49.269	= **$0**
Summer NOx		/ -124.657	= **$0**
Winter CO		/ -666.788	= **$0**
Summer CO2		/ -692,500.581	= **$0**

CMAQ Air Quality Analysis Worksheet for Traffic Flow and Intersection Improvements

FILL IN SHADED BOXES ONLY

TIP YEAR: 2026

MPO: Old Colony **Municipality:** Brockton

Project: 607818 - Improvements and Relanted Work Summer Grove and Lyman

Step 1: Calculate Existing AM Peak Hour Total Intersection Delay in Seconds:

Street Name	Dir	Left-Turns (Vol / PHF)		X delay per veh	= Total move. delay	+ Thru (Vol / PHF)		X delay per veh	= Total move. delay	+ Right-Turns (Vol / PHF)		X delay per veh	= Total move. delay	= Total approach delay
Summer St	NB	85	0.91	11.6	1,084	332	0.91	22.8	8,318	200	0.91	22.8	5,011	14,413
Summer St	SB	2	0.66	9.7	29	260	0.66	9.7	3,821	27	0.66	9.7	397	4,247
Grove St	EB	22	0.93	18.2	431	339	0.93	18.2	6,634	133	0.93	3.3	472	7,537
Lyman St	WB	147	0.89	10.2	1,685	393	0.89	11.8	5,211	6	0.89	11.8	80	6,975
												Total Intersection Delay/Seconds	=	**33,172**

Step 2: Calculate Existing PM Peak Hour Total Intersection Delay in Seconds:

Street Name	Dir	Left-Turns (Vol / PHF)		X delay per veh	= Total move. delay	+ Thru (Vol / PHF)		X delay per veh	= Total move. delay	+ Right-Turns (Vol / PHF)		X delay per veh	= Total move. delay	= Total approach delay
Summer St	NB	98	0.91	13.2	1,422	219	0.91	12.1	2,912	207	0.91	12.1	2,752	7,086
Summer St	SB	3	0.93	10.6	34	395	0.93	10.6	4,502	24	0.93	10.6	274	4,810
Grove St	EB	11	0.92	16.7	200	371	0.92	16.7	6,734	146	0.92	3.1	492	7,426
Lyman St	WB	178	0.78	10.6	2,419	470	0.78	18.4	11,087	1	0.78	18.4	24	13,530
												Total Intersection Delay/Seconds	=	**32,852**

Step 3: The spreadsheet automatically chooses the peak hour with the longer total intersection delay for the next step in the analysis.

Peak Hour (AM/PM) AM Total Intersection Delay: 33,172

Step 4: Calculate the existing AM Peak Hour Total Intersection Delay with Improvements:

Street Name	Dir	Left-Turns (Vol / PHF)		X delay per veh	= Total move. delay	+ Thru (Vol / PHF)		X delay per veh	= Total move. delay	+ Right-Turns (Vol / PHF)		X delay per veh	= Total move. delay	= Total approach delay
Summer St	NB	85	0.91	34.7	3,241	332	0.91	4.1	1,496	200	0.91	4.1	901	5,638
Summer St	SB	2	0.66	12.4	38	260	0.66	12.4	4,885	27	0.66	12.4	507	5,430
Grove St	EB	22	0.93	34.7	821	339	0.93	34.0	12,394	133	0.93	4.1	586	13,801
Lyman St	WB	147	0.89	14.3	2,362	393	0.89	7.0	3,091	6	0.89	16.7	113	5,566
												Total Intersection Delay/Seconds	=	**30,434**

Step 5: Calculate vehicle delay in hours per day:

	(Delay in seconds	X	Hours per day)	/	Seconds per hour	=	Delay in hours / day
Existing peak hour intersection delay	(33,172	X	10)	/	3600	=	92.1
Peak hour intersection delay w/ improvements	(30,434	X	10)	/	3600	=	84.5

Step 6: MOVES 2014a emission factors for idling speed: AM or PM **PM**

2020 Summer VOC Factor grams/hour	2020 Summer NOx Factor grams/hour	2020 Winter CO Factor grams/hour	2020 Summer CO2 Factor grams/hour
0.249	**0.630**	**3.569**	**3565.610**

Step 7: Calculate net emissions change in kilograms per day:

	Delay in Hours per Day	Summer VOC Emissions kilograms/day	Summer NOx Emissions kilograms/day	Winter CO Emissions kilograms/day	Summer CO2 Emissions kilograms/day
Existing Conditions	92.1	0.023	0.058	0.329	328.548
With Improvements	84.5	0.021	0.053	0.302	301.434
Net Change		**-0.002**	**-0.005**	**-0.027**	**-27.114**

Step 8: Calculate net emissions change in kilograms per year (seasonally adjusted)

	Net change per day (kg)	X	Avg. weekdays per year	X	Seasonal adj. factor	= Adj. net change in kg per year
Summer VOC Emissions	-0.002	X	250	X	1.0188	= **-0.482**
Summer NOx Emissions	-0.005	X	250	X	1.0188	= **-1.220**
Winter CO Emissions	-0.027	X	250	X	0.9812	= **-6.657**
Summer CO2 Emissions	-27.114	X	250	X	1.0000	**-6,778.577**

Calculate cost effectiveness (first year cost per kg of emissions reduced)

Emission	Project Cost	/	Adj. net change in kg per year	= First year cost per kilogram
Summer VOC		/	-0.482	= **$0**
Summer NOx		/	-1.220	= **$0**
Winter CO		/	-6.657	= **$0**
Summer CO2		/	-6,778.577	= **$0**

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: Project 609052 - Intersection Improvements at Centre Street and Plymouth Street

Meeting date:	03/04/2020	**Requesting party:**	Old Colony MPO
Project ID *(if applicable)*:	609052	**Project sponsor:**	Municipality
Estimated cost:	$ 1,680,000	**Estimated CMAQ funding:**	$ 1,680,000
Year of programming *(if applicable)*:	2025	**Analysis type:**	Intersection / Traffic Flow

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

The intersection of Centre Street (Route 123) and Plymouth Street is a heavily congested un-siganlized intersection on the eastern edge of downtown Brockton adjacent to the Brockton Commuter Rail Station, Brockton Area Transit (BAT) Intermodal Centre, and a housing development. Route 123 is a major arterial traveling through the center of Brockton, and connecting eastern Plymouth County to western Plymouth County. Demand from both side street approaches of Plymouth Street is high, and drivers encounter difficulty entering the intersection particularly for those turning left or straight across. In addition to vehicular demand, a large volume of pedestrians traverse this intersection commuting the the transit facilities and a nearby elementary school. The proposed project will reduce the width of the travel lanes of Centre Street, allowing improved bicycle facilities and reducing crossing width for pedestrians. The project will install traffic signals including a protected eastbound left turn , and include pedestrian controls.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Air quality analysis of proposed improvements indicate the project will yield substantial reductions in VOC, NOx, CO, and CO2.

VOC kg/year	Decrease	**NOx kg/year**	Decrease	**CO kg/year**	Decrease	**CO_2 kg/year**	Decrease
	25.59		64.75		346.37		359,724.85
First year cost per kg		**First year cost per kg**		**First year cost per kg**		**First year cost per kg**	
	$ 65,642		$ 25,944		$ 4,850.00		$ 5.00

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
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- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
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Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Air quality analysis of proposed improvements indicate the project will yield substantial reductions in VOC, NOx, CO, and CO2.

VOC kg/year	**NOx kg/year**	**CO kg/year**	**CO_2 kg/year**
Decrease	Decrease	Decrease	Decrease
25.59	64.75	346.37	359,724.85
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**
$ 65,642	$ 25,944	$ 4,850.00	$ 5.00

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: Intersection Improvements at Route 139 and Chestnut Street, Abington

Meeting date:	4/27/2022	**Requesting party:**	Old Colony MPO
Project ID *(if applicable)*:	612525	**Project sponsor:**	Municipality
Estimated cost:	3,786,625	**Estimated CMAQ funding:**	3,000,000.00
Year of programming *(if applicable)*:	2027	**Analysis type:**	Intersection / Traffic Flow

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
- Nature of development nearby (residential, downtown commercial, highway-oriented commercial, etc.)
- Corridor deficiencies
- Project characteristics to address deficiencies
- Anticipated improvements from project
- CMAQ-eligible components of project
- Inclusion of project in local, regional, or statewide plans

Project proposes to improve congested and high crash location intersection of Randolph Street / Richard Fitts Drive (Route 139) at Chestnut Street and Old Randolph Street. Intersection is located on major east-west State highway, intersected by a major connector to residential areas and a nearby elementary school. Volume on Route 139 plus skewed geometry results in excessive delay for drivers attempting to enter from Chestnut Street and Old Randolph Street. While this project is pre-25% design, it is expected preferred design will be a roundabout and majority of project cost, if not all, will be CMAQ eligible.

Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Analysis performed in Syncho software indicates reconstructing this existing TWSC intersection as a roundabout will result in substantial reductions in VOC, NOx, CO, and CO2 during the peak demand hours.

VOC kg/year	Decrease	**NOx kg/year**	Decrease	**CO kg/year**	Decrease	**CO_2 kg/year**	Decrease
	32.967		83.410		446.159		463,363.580
First year cost per kg		**First year cost per kg**		**First year cost per kg**		**First year cost per kg**	
	114,862		45,398		8.487		8.00

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: Project 609052 - Intersection Improvements at Centre Street and Plymouth Street

Meeting date:	03/04/2025	**Requesting party:**	Old Colony MPO
Project ID *(if applicable)*:	609052	**Project sponsor:**	Municipality
Estimated cost:	$ 1,680,000	**Estimated CMAQ funding:**	$ 1,680,000
Year of programming *(if applicable)*:	2025	**Analysis type:**	Intersection / Traffic Flow

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
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Air quality analysis of proposed improvements indicate the project will yield substantial reductions in VOC, NOx, CO, and CO2.

VOC kg/year	**NOx kg/year**	**CO kg/year**	**CO_2 kg/year**
Decrease	Decrease	Decrease	Decrease
25.59	64.75	346.37	359,724.85
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**
$ 65,642	$ 25,944	$ 4,850.00	$ 5.00

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: Project 609052 - Intersection Improvements at Centre Street and Plymouth Street

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Project ID *(if applicable)*:	609052	**Project sponsor:**	Municipality
Estimated cost:	$ 1,680,000	**Estimated CMAQ funding:**	$ 1,680,000
Year of programming *(if applicable)*:	2025	**Analysis type:**	Intersection / Traffic Flow

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

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Air quality analysis of proposed improvements indicate the project will yield substantial reductions in VOC, NOx, CO, and CO2.

VOC kg/year	**NOx kg/year**	**CO kg/year**	**CO_2 kg/year**
Decrease	Decrease	Decrease	Decrease
25.59	64.75	346.37	359,724.85
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**
$ 65,642	$ 25,944	$ 4,850.00	$ 5.00

Congestion Mitigation Air Quality (CMAQ)
Consultation Committee Request

massDOT
Massachusetts Department of Transportation

Project name: Project 609052 - Intersection Improvements at Centre Street and Plymouth Street

Meeting date:	03/04/2025	**Requesting party:**	Old Colony MPO
Project ID *(if applicable)*:	609052	**Project sponsor:**	Municipality
Estimated cost:	$ 1,680,000	**Estimated CMAQ funding:**	$ 1,680,000
Year of programming *(if applicable)*:	2025	**Analysis type:**	Intersection / Traffic Flow

Description of project / *Brief description of the project, including if applicable, but not limited to the following:*

- Existing corridor characteristics
- Context of corridor within community or region (heavily-traversed corridor, recreational trail, etc.)
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Air quality improvements / *Short explanation of air quality benefits, summarizing quantitative findings or demonstrate qualitative findings.*

Air quality analysis of proposed improvements indicate the project will yield substantial reductions in VOC, NOx, CO, and CO2.

VOC kg/year	**NOx kg/year**	**CO kg/year**	**CO_2 kg/year**
Decrease	Decrease	Decrease	Decrease
25.59	64.75	346.37	359,724.85
First year cost per kg	**First year cost per kg**	**First year cost per kg**	**First year cost per kg**
$ 65,642	$ 25,944	$ 4,850.00	$ 5.00

APPENDIX L - FFY 2026-2030 GATRA TRANSIT ELEMENT

STIP Investments Report

Program Activity: Transit, 2026 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2026							$20,392,147	$12,866,511	$3,779,128	$3,746,508
Greater Attleboro-Taunton Regional Transit Authority							$20,392,147	$12,866,511	$3,779,128	$3,746,508
2026	GATRA011968		RTA Vehicle Replacement	Greater Attleboro Taunton Regional Transit Authority - Buy Replacement 35-FT Diesel Buses - 4	5307	$2,500,000	$2,000,000	$2,000,000		
2026	GATRA011968		RTA Vehicle Replacement	Greater Attleboro Taunton Regional Transit Authority - Buy Replacement 35-FT Diesel Buses - 4	RTACAP	$2,500,000	$500,000		$500,000	
2026	GATRA011969	Wareham	RTA Replacement Facilities	Greater Attleboro Taunton Regional Transit Authority - East Maintenance Facility	5307	$4,977,000	$3,981,600	$3,981,600		
2026	GATRA011969	Wareham	RTA Replacement Facilities	Greater Attleboro Taunton Regional Transit Authority - East Maintenance Facility	RTACAP	$4,977,000	$995,400		$995,400	
2026	RTD0010669		RTA Fleet Upgrades	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	ONF	$2,042,400	$2,081,508			$2,081,508
2026	RTD0010672		Operating	Greater Attleboro-Taunton Regional Transit Authority - Short Range Transit Planning	5307	$100,000	$80,000	$80,000		
2026	RTD0010672		Operating	Greater Attleboro-Taunton Regional Transit Authority - Short Range Transit Planning	SCA	$100,000	$20,000		$20,000	
2026	RTD0010673		Operating	Greater Attleboro-Taunton Regional Transit Authority - Preventative Maintenance	5307	$5,600,000	$4,480,000	$4,480,000		
2026	RTD0010673		Operating	Greater Attleboro-Taunton Regional Transit Authority - Preventative Maintenance	SCA	$5,600,000	$1,120,000		$1,120,000	
2026	RTD0010674		Operating	Greater Attleboro-Taunton Regional Transit Authority - Non Fixed Route ADA Paratransit Operating	5307	$1,650,000	$1,320,000	$1,320,000		
2026	RTD0010674		Operating	Greater Attleboro-Taunton Regional Transit Authority - Non Fixed Route ADA Paratransit Operating	SCA	$1,650,000	$330,000		$330,000	
2026	RTD0010675		Operating	Greater Attleboro-Taunton Regional Transit Authority - Fixed Route Operating Assistance	5307	$1,500,000	$750,000	$750,000		
2026	RTD0010675		Operating	Greater Attleboro-Taunton Regional Transit Authority - Fixed Route Operating Assistance	SCA	$1,500,000	$750,000		$750,000	
2026	RTD0010676		RTA Facility & Vehicle Maintenance	Greater Attleboro-Taunton Regional Transit Authority - Miscellaneous Support Equipment	5307	$88,864	$71,091	$71,091		

STIP Investments Report

Program Activity: Transit, 2026 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
2026	RTD0010676		RTA Facility & Vehicle Maintenance	Greater Attleboro-Taunton Regional Transit Authority - Miscellaneous Support Equipment	RTACAP	$88,864	$17,773		$17,773	
2026	RTD0010677		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement Vans - 15	LF	$1,665,000	$1,665,000			$1,665,000
2026	T00101	Attleboro	RTA Facility & System Modernization	GATRA - Transit Enhancement	5307	$12,000	$9,600	$9,600		
2026	T00101	Attleboro	RTA Facility & System Modernization	GATRA - Transit Enhancement	RTACAP	$12,000	$2,400		$2,400	
2026	T00102		RTA Vehicle Replacement	GATRA - Associated Capital Items Bus	5339	$217,775	$174,220	$174,220		
2026	T00102		RTA Vehicle Replacement	GATRA - Associated Capital Items Bus	RTACAP	$217,775	$43,555		$43,555	

STIP Investments Report

Program Activity: Transit, 2027 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2027							$15,569,360	$9,142,285	$2,851,183	$3,575,892
Greater Attleboro-Taunton Regional Transit Authority							$15,569,360	$9,142,285	$2,851,183	$3,575,892
2027	GATRA011784		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement Minibuses (8) - BEB - TBB Earmark 6720-2261	ONF	$2,136,669	$1,036,609			$1,036,609
2027	RTD0010669		RTA Fleet Upgrades	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	ONF	$2,042,400	$1,060,683			$1,060,683
2027	RTD0011411		RTA Facility & Vehicle Maintenance	Greater Attleboro-Taunton Regional Transit Authority - Miscellaneous Support Equipment	5307	$352,824	$282,259	$282,259		
2027	RTD0011411		RTA Facility & Vehicle Maintenance	Greater Attleboro-Taunton Regional Transit Authority - Miscellaneous Support Equipment	RTACAP	$352,824	$70,565		$70,565	
2027	RTD0011412		Operating	Greater Attleboro-Taunton Regional Transit Authority - Non Fixed Route ADA Paratransit Operating	5307	$1,650,000	$1,320,000	$1,320,000		
2027	RTD0011412		Operating	Greater Attleboro-Taunton Regional Transit Authority - Non Fixed Route ADA Paratransit Operating	SCA	$1,650,000	$330,000		$330,000	
2027	RTD0011413		Operating	Greater Attleboro-Taunton Regional Transit Authority - Mobility Management	5307	$175,000	$140,000	$140,000		
2027	RTD0011413		Operating	Greater Attleboro-Taunton Regional Transit Authority - Mobility Management	SCA	$175,000	$35,000		$35,000	
2027	RTD0011414		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement Vans - 13	LF	$1,478,600	$1,478,600			$1,478,600
2027	RTD0011415		Operating	Greater Attleboro-Taunton Regional Transit Authority - Short Range Transit Planning	5307	$100,000	$80,000	$80,000		
2027	RTD0011415		Operating	Greater Attleboro-Taunton Regional Transit Authority - Short Range Transit Planning	SCA	$100,000	$20,000		$20,000	
2027	RTD0011416		Operating	Greater Attleboro-Taunton Regional Transit Authority - Fixed Route Operating Assistance	5307	$1,500,000	$750,000	$750,000		
2027	RTD0011416		Operating	Greater Attleboro-Taunton Regional Transit Authority - Fixed Route Operating Assistance	SCA	$1,500,000	$750,000		$750,000	
2027	RTD0011417		Operating	Greater Attleboro-Taunton Regional Transit Authority - Preventative Maintenance	5307	$5,600,000	$4,480,000	$4,480,000		

STIP Investments Report

Program Activity: Transit, 2027 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
2027	RTD0011417		Operating	Greater Attleboro-Taunton Regional Transit Authority - Preventative Maintenance	SCA	$5,600,000	$1,120,000		$1,120,000	
2027	RTD0011422		RTA Fleet Upgrades	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses BEB (1)	5307	$1,060,683	$848,546	$848,546		
2027	RTD0011422		RTA Fleet Upgrades	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses BEB (1)	RTACAP	$1,060,683	$212,137		$212,137	
2027	T00080	Taunton	RTA Facility & System Modernization	GATRA - Parcel 6A Solar Project	5307	$4,800,000	$1,200,000	$1,200,000		
2027	T00080	Taunton	RTA Facility & System Modernization	GATRA - Parcel 6A Solar Project	RTACAP	$4,800,000	$300,000		$300,000	
2027	T00099		RTA Vehicle Replacement	GATRA - Associated Capital Items Bus	5339	$67,405	$41,480	$41,480		
2027	T00099		RTA Vehicle Replacement	GATRA - Associated Capital Items Bus	RTACAP	$67,405	$13,481		$13,481	

STIP Investments Report

Program Activity: Transit, 2028 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2028							$13,230,921	$9,333,857	$2,895,964	$1,001,100
Greater Attleboro-Taunton Regional Transit Authority							$13,230,921	$9,333,857	$2,895,964	$1,001,100
2028	GATRA011970		RTA Facility & Vehicle Maintenance	Greater Attleboro Taunton Regional Transit Authority - Rehab/Renovate Facilities	5307	$50,000	$40,000	$40,000		
2028	GATRA011970		RTA Facility & Vehicle Maintenance	Greater Attleboro Taunton Regional Transit Authority - Rehab/Renovate Facilities	RTACAP	$50,000	$10,000		$10,000	
2028	RTD0011411		RTA Facility & Vehicle Maintenance	Greater Attleboro-Taunton Regional Transit Authority - Miscellaneous Support Equipment	5307	$352,824	$36,493	$36,493		
2028	RTD0011411		RTA Facility & Vehicle Maintenance	Greater Attleboro-Taunton Regional Transit Authority - Miscellaneous Support Equipment	RTACAP	$352,824	$9,123		$9,123	
2028	T00080	Taunton	RTA Facility & System Modernization	GATRA - Parcel 6A Solar Project	5307	$4,800,000	$400,000	$400,000		
2028	T00080	Taunton	RTA Facility & System Modernization	GATRA - Parcel 6A Solar Project	RTACAP	$4,800,000	$100,000		$100,000	
2028	T00104		RTA Facility & System Modernization	GATRA - Electric Vehicle Charging Stations	5307	$140,000	$112,000	$112,000		
2028	T00104		RTA Facility & System Modernization	GATRA - Electric Vehicle Charging Stations	RTACAP	$140,000	$28,000		$28,000	
2028	T00105		RTA Vehicle Replacement	GATRA - Acquire Vans	LF	$1,001,100	$1,001,100			$1,001,100
2028	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	5307	$466,665	$385,776	$385,776		
2028	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	RTACAP	$466,665	$96,444		$96,444	
2028	T00107		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	5307	$2,161,985	$1,729,588	$1,729,588		
2028	T00107		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	RTACAP	$2,161,985	$432,397		$432,397	
2028	T00108		Operating	GATRA - Short Range Transit Planning	5307	$100,000	$80,000	$80,000		
2028	T00108		Operating	GATRA - Short Range Transit Planning	SCA	$100,000	$20,000		$20,000	
2028	T00109		Operating	GATRA - Non Fixed Route ADA Operating	5307	$1,650,000	$1,320,000	$1,320,000		

STIP Investments Report

Program Activity: Transit, 2028 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
2028	T00109		Operating	GATRA - Non Fixed Route ADA Operating	SCA	$1,650,000	$330,000		$330,000	
2028	T00110		Operating	GATRA - Operating Assistance	5307	$1,500,000	$750,000	$750,000		
2028	T00110		Operating	GATRA - Operating Assistance	SCA	$1,500,000	$750,000		$750,000	
2028	T00111		RTA Facility & Vehicle Maintenance	GATRA - Preventative Maintenance	5307	$5,600,000	$4,480,000	$4,480,000		
2028	T00111		RTA Facility & Vehicle Maintenance	GATRA - Preventative Maintenance	SCA	$5,600,000	$1,120,000		$1,120,000	

STIP Investments Report

Program Activity: Transit, 2029 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2029							$13,233,404	$9,071,123	$2,830,281	$1,332,000
Greater Attleboro-Taunton Regional Transit Authority							$13,233,404	$9,071,123	$2,830,281	$1,332,000
2029	GATRA011689		RTA Facility & Vehicle Maintenance	GATRA - Miscellaneous Support Equipment	5307	$45,317	$36,493	$36,493		
2029	GATRA011689		RTA Facility & Vehicle Maintenance	GATRA - Miscellaneous Support Equipment	RTACAP	$45,317	$9,123		$9,123	
2029	T00104		RTA Facility & System Modernization	GATRA - Electric Vehicle Charging Stations	5307	$140,000	$112,000	$112,000		
2029	T00104		RTA Facility & System Modernization	GATRA - Electric Vehicle Charging Stations	RTACAP	$140,000	$28,000		$28,000	
2029	T00105		RTA Vehicle Replacement	GATRA - Acquire Vans	LF	$1,001,100	$1,332,000			$1,332,000
2029	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	5307	$466,665	$336,000	$336,000		
2029	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	5339	$466,665	$53,924	$53,924		
2029	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	RTACAP	$466,665	$97,481		$97,481	
2029	T00107		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	5307	$2,161,985	$1,762,706	$1,762,706		
2029	T00107		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	RTACAP	$2,161,985	$440,677		$440,677	
2029	T00108		Operating	GATRA - Short Range Transit Planning	5307	$100,000	$80,000	$80,000		
2029	T00108		Operating	GATRA - Short Range Transit Planning	SCA	$100,000	$20,000		$20,000	
2029	T00109		Operating	GATRA - Non Fixed Route ADA Operating	5307	$1,650,000	$1,320,000	$1,320,000		
2029	T00109		Operating	GATRA - Non Fixed Route ADA Operating	SCA	$1,650,000	$330,000		$330,000	
2029	T00110		Operating	GATRA - Operating Assistance	5307	$1,500,000	$750,000	$750,000		
2029	T00110		Operating	GATRA - Operating Assistance	SCA	$1,500,000	$750,000		$750,000	
2029	T00111		RTA Facility & Vehicle Maintenance	GATRA - Preventative Maintenance	5307	$5,600,000	$4,480,000	$4,480,000		

STIP Investments Report

Program Activity: Transit, 2029 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
2029	T00111		RTA Facility & Vehicle Maintenance	GATRA - Preventative Maintenance	SCA	$5,600,000	$1,120,000		$1,120,000	
2029	T00112		Operating	GATRA - Mobility Management	5307	$175,000	$140,000	$140,000		
2029	T00112		Operating	GATRA - Mobility Management	SCA	$175,000	$35,000		$35,000	

STIP Investments Report

Program Activity: Transit, 2030 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2030							$13,090,057	$8,837,405	$2,771,852	$1,480,800
Greater Attleboro-Taunton Regional Transit Authority							$13,090,057	$8,837,405	$2,771,852	$1,480,800
2030	GATRA011689		RTA Facility & Vehicle Maintenance	GATRA - Miscellaneous Support Equipment	5307	$45,317	$34,775	$34,775		
2030	GATRA011689		RTA Facility & Vehicle Maintenance	GATRA - Miscellaneous Support Equipment	RTACAP	$45,317	$8,694		$8,694	
2030	GATRA011970		RTA Facility & Vehicle Maintenance	Greater Attleboro Taunton Regional Transit Authority - Rehab/Renovate Facilities	5307	$50,000	$216,000	$216,000		
2030	GATRA011970		RTA Facility & Vehicle Maintenance	Greater Attleboro Taunton Regional Transit Authority - Rehab/Renovate Facilities	RTACAP	$50,000	$54,000		$54,000	
2030	T00105		RTA Vehicle Replacement	GATRA - Acquire Vans	LF	$1,001,100	$1,480,800			$1,480,800
2030	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	5339	$466,665	$53,924	$53,924		
2030	T00106		RTA Facility & Vehicle Maintenance	GATRA - Associated Capital Items Bus	RTACAP	$466,665	$13,481		$13,481	
2030	T00107		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	5307	$2,161,985	$1,762,706	$1,762,706		
2030	T00107		RTA Vehicle Replacement	Greater Attleboro-Taunton Regional Transit Authority - Buy Replacement 35-FT Buses (2) - BEB	RTACAP	$2,161,985	$440,677		$440,677	
2030	T00108		Operating	GATRA - Short Range Transit Planning	5307	$100,000	$80,000	$80,000		
2030	T00108		Operating	GATRA - Short Range Transit Planning	SCA	$100,000	$20,000		$20,000	
2030	T00109		Operating	GATRA - Non Fixed Route ADA Operating	5307	$1,650,000	$1,320,000	$1,320,000		
2030	T00109		Operating	GATRA - Non Fixed Route ADA Operating	SCA	$1,650,000	$330,000		$330,000	
2030	T00110		Operating	GATRA - Operating Assistance	5307	$1,500,000	$750,000	$750,000		
2030	T00110		Operating	GATRA - Operating Assistance	SCA	$1,500,000	$750,000		$750,000	
2030	T00111		RTA Facility & Vehicle Maintenance	GATRA - Preventative Maintenance	5307	$5,600,000	$4,480,000	$4,480,000		
2030	T00111		RTA Facility & Vehicle Maintenance	GATRA - Preventative Maintenance	SCA	$5,600,000	$1,120,000		$1,120,000	

STIP Investments Report

Program Activity: Transit, 2030 Greater Attleboro-Taunton Regional Transit Authority

STIP: 2026 - 2030 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
2030	T00112		Operating	GATRA - Mobility Management	5307	$175,000	$140,000	$140,000		
2030	T00112		Operating	GATRA - Mobility Management	SCA	$175,000	$35,000		$35,000	

APPENDIX M – MBTA FEDERAL CAPITAL PROGRAM – FFY 2025 AND FFY 2026-2030 PROJECT LIST

APPENDIX N – UNIVERSE OF PROJECTS

PROJECT LOCATION AND DESCRIPTION	PROJECT ID#	PROGRAM YEAR	TEC SCORE	ESTIMATE
ABINGTON - INTERSECTION IMPROVEMENTS AT HANCOCK STREET AND CHESTNUT STREET	609440	2026	61	$6,733,294
ABINGTON - INTERSECTION IMPROVEMENTS AT ROUTE 18 AND ROUTE 123	612770	2028	55	$5,387,205
ABINGTON - INTERSECTION IMPROVEMENTS, RANDOLPH STREET AND RICHARD A FITTS DRIVE (ROUTE 139) AT CHESTNUT STREET AND OLD RANDOLPH STREET	612525	2027	58	$3,786,625
AVON - CORRIDOR IMPROVEMENTS ON ROUTE 28	610804	NOT PROGRAMMED	33	$4,002,000
AVON - INTERSECTION IMPROVEMENTS AT ROUTE 28, SPRING STREET AND HARRISON BOULEVARD	611979	2026	57	$7,350,106
BRIDGEWATER- BRIDGE REHABILITATION, B-23-001 (44H), VERNON STREET OVER TAUNTON RIVER	613292	2029	n/a	$20,613,180
BROCKTON - ABINGTON - PEDESTRIAN AND BICYCLE IMPROVEMENTS ON ROUTE 123	609520	2029	53	$29,519,606
BROCKTON - IMPROVEMENTS AND RELATED WORK ON CRESCENT STREET (ROUTE 27), INCLUDING REPLACEMENT OF GROVE STREET BRIDGE, B-25-005, OVER SALISBURY PLAIN RIVER	607818	2026	74	$7,441,972
BROCKTON - IMPROVEMENTS ON FOREST AVENUE, FROM WEST STREET TO BREER STREET	612526	NOT PROGRAMMED	46	$8,788,450
BROCKTON - INTERSECTION IMPROVEMENTS @ CRESCENT STREET (ROUTE 27)/ QUINCY STREET/ MASSASOIT BOULEVARD	606143	NOT PROGRAMMED	59	$5,300,800
BROCKTON - INTERSECTION IMPROVEMENTS AT ROUTE 123 (BELMONT STREET), PEARL STREET AND STONEHILL STREET	612262	2028	61	$7,465,375

BROCKTON - ROUTE 123 (CENTRE STREET) AT PLYMOUTH STREET SIGNALIZATION AND GEOMETRIC IMPROVEMENTS	609052	2025	75	$3,728,292
DUXBURY - BRIDGE REPLACEMENT, D-14-003 (438), POWDER POINT AVENUE OVER DUXBURY BAY	612006	2027 ADVANCE CONSTRUCTION PHASE 1 OF 2	n/a	$172,404,375
DUXBURY - INTERSECTION IMPROVEMENTS AT ROUTE 53 AND FRANKLIN STREET	613269	2028	53	$7,279,350
DUXBURY - SIGNAL INSTALLATION @ ROUTE 3 (NB & SB) RAMPS & ROUTE 3A (TREMONT STREET)	606002	2027	53	$8,828,682
EAST BRIDGEWATER - INTERSECTION IMPROVEMENTS AT BEDFORD STREET (ROUTE 18), WEST STREET (ROUTE 106) AND EAST STREET	611968	NOT PROGRAMMED	43	$3,500,000
EAST BRIDGEWATER - INTERSECTION IMPROVEMENTS AT HIGHLAND STREET AND NORTH BEDFORD STREET (ROUTE 18)	611976	2029	71	$3,500,000
EAST BRIDGEWATER- BRIDGE REPLACEMENT, E-01-010 (BVT) POND STREET OVER SATUCKET RIVER	613306	2029	n/a	$1,197,225
EASTON - IMPROVEMENTS ON FOUNDRY STREET (ROUTE 106/123)	612269	NOT PROGRAMMED	47	$14,315,773
EASTON - RECONSTRUCTION AND RELATED WORK ON ROUTES 138 AND 123, FROM BELMONT STREET TO DEPOT STREET	612617	NOT PROGRAMMED	57	$13,437,675
EASTON - RESURFACING AND RELATED WORK ON ROUTE 138 (ROOSEVELT CIRCLE TO STOUGHTON TOWN LINE (EXCLUDING THE SECTION FROM ELM STREET TO UNION STREET))	608585	NOT PROGRAMMED	48	$4,330,240
EASTON- INTERSECTION IMPROVEMENTS AT ROUTE 138 AND TURNPIKE STREET, AT ROUTE 138 AND PURCHASE STREET, AT TURNPIKE STREET AND PURCHASE STREET	612975	NOT PROGRAMMED	67	$7,428,625

HANOVER- CORRIDOR IMPROVEMENTS ON ROUTE 139 (HANOVER STREET) AT MAIN STREET, CENTER STREET AND SILVER STREET	612769	2028	57	$12,524,332
HANOVER- INTERSECTION IMPROVEMENTS AT COLUMBIA ROAD (ROUTE 53/139) AND BROADWAY	613599	2029	59	$5,938,600
HANSON - CORRIDOR IMPROVEMENTS ON ROUTE 14 (MAQUAN STREET), FROM THE PEMBROKE T.L. TO INDIAN HEAD STREET AND RELATED WORK	608506	NOT PROGRAMMED	54	$10,311,020
KINGSTON - BRIDGE REPLACEMENT, K-01-014, SMITHS LANE OVER ROUTE 3 (PILGRIM HIGHWAY)	608615	2029	n/a	$27,239,100
PLYMOUTH- INTERSECTION IMPROVEMENTS ON ROUTE 3A (STATE ROAD) AT HERRING POND ROAD	613726	NOT PROGRAMMED	TBD	$8,171,488
STOUGHTON - INTERSECTION IMPROVEMENTS AT CANTON STREET (ROUTE 27), SCHOOL STREET AND SUMMER STREET	611981	NOT PROGRAMMED	74	$4,985,836
STOUGHTON - RECONSTRUCTION OF TURNPIKE STREET	607214	NOT PROGRAMMED	TBD	$42,984,486
STOUGHTON- BICYCLE AND PEDESTRIAN IMPROVEMENTS ON ROUTE 27 (PARK STREET)	613287	NOT PROGRAMMED	TBD	$6,551,220
STOUGHTON- INTERSECTION IMPROVEMENTS AT ROUTE 27 (PARK STREET) AND TURNPIKE STREET	613277	2029	65	$3,264,123
WEST BRIDGEWATER- BRIDGE REPLACEMENT, W-18-004, FOREST STREET OVER TOWN RIVER	613132	2029	n/a	$4,380,900
WHITMAN- CORRIDOR IMPROVEMENTS ON SOUTH AVENUE (ROUTE 27)	613643	NOT PROGRAMMED	54	$14,835,581

APPENDIX O - TWENTY-ONE (21) DAY PUBLIC REVIEW - NOTICE OF AVAILABILITY AND PUBLIC COMMENTS

APPENDIX P - TIP PROJECT REVISION AND DEFINITION PROCEDURES, AND APPROVED ADJUSTMENTS, ADMINISTRATIVE MODIFICATIONS, AND AMENDMENTS

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 and for MassDOT to address any public commentary prior to sending to the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) for review and approval.

Adjustment: A revision to the STIP that is 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 approval.

Administrative Modification: A revision to the STIP that is minor enough in nature to require neither a public process nor FHWA/FTA approval, but that does involve a notification to 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 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.
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.
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 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.
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 region office.
Change in Year of Programming	Moving a currently programmed project earlier or later than the originally programmed year.	Amendment or Adjustment	Note: 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 Division Office and/or the FTA Regional Office. Additionally, MassDOT may make exceptions to the procedures outlined above and treat 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.