

2024

**Northern Middlesex Regional
Transportation Improvement Program
Federal Fiscal Years 2025-2029**

PREPARED FOR
NORTHERN MIDDLESEX METROPOLITAN PLANNING ORGANIZATION (NMMPO)

BY
NORTHERN MIDDLESEX COUNCIL OF GOVERNMENTS (NMCOG)



DRAFT FFY 2025-2029 TRANSPORTATION IMPROVEMENT PROGRAM

(OCTOBER 1, 2024 – SEPTEMBER 30, 2029)

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على الرقم 8021-454-978 NMCOG إذا كنت بحاجة إلى هذه المعلومات بلغة أخرى، يرجى الاتصال بأخصائي العنوان السادس لـ

જો આ માહિતી અન્ય ભાષામાં જોઈતી હોય તો, કૃપા કરીને NMCOG ટાઇટલ VI નિષ્ણાતનો સંપર્ક કરો ફોન નંબર 978-454-8021 પર.

The preparation of this document was funded through a contract with the Massachusetts Department of Transportation, supported in part with funds from the Federal Highway Administration and the Federal Transit Administration, U.S. Department of Transportation. Its contents do not necessarily reflect the official views and policies of the U.S. Department of Transportation (USDOT).

ENDORSEMENT OF THE FFY 2025 – 2029 TRANSPORTATION IMPROVEMENT PROGRAM FOR THE NORTHERN MIDDLESEX REGION

FFY 2025-2029 Northern Middlesex Transportation Program Air Quality Endorsement Statement

This document certifies that the Northern Middlesex Metropolitan Planning Organization hereby endorses the FFY Re2025-2029 Transportation Improvement Program for the Northern Middlesex Region. The TIP is being endorsed in accordance with the 3C Transportation Planning Process and complies with the requirements in the Infrastructure Investment and Jobs Act (IIJA), also known as the “Bipartisan Infrastructure Law” (BIL).

Air Quality Conformity

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

Whereas, the air quality conformity analysis prepared for the FFY 2025-2029 Transportation Improvement Program also demonstrates air quality conformity of the Northern Middlesex Regional Transportation Plan (RTP), and that all regionally significant transportation projects in the FFY 2025-2029 Transportation Improvement Program are contained in the Regional Transportation Plan, and that all regionally significant projects in the 2020 to 2040 timeframe of the Regional Transportation Plan are modeled in the FFY 2025-2029 Transportation Improvement Program's air quality conformity analyses;

Whereas, the NMMPO has completed its review in accordance with Section 176(c) (4) of the Clean Air Act as amended in 1990 [42 U.S.C. 7251 (a)], and hereby certifies that the FFY 2024-2028 TIP is financially constrained and that the implementation of the RTP satisfies the conformity criteria specified in both 40 CFR Part 51 and 93 (8/15/1997) and 310 CMR 60.03 (12/30/1994). Based on the results of the conformity analyses, the RTP and FFY 2024-2028 TIP is consistent with the air quality goals of, and in conformity with, the Massachusetts State Implementation Plan;

Therefore, in accordance with 23 CFR Part 450.326 (Development and content of the Transportation Improvement Program) and the Northern Middlesex MPO Regional Public Participation Plan (23 CFR 450.316), the MPO hereby endorses the FFY 2025-2029 Transportation Improvement Program.

Monica Tibbits-Nutt, Secretary and CEO
Massachusetts Department of Transportation (MassDOT);
Chair, Northern Middlesex Metropolitan Planning Organization (NMMPO)

Date

310 CMR 60.05: GLOBAL WARMING SOLUTIONS ACT REQUIREMENTS FOR THE TRANSPORTATION SECTOR AND THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION

Self-Certification Compliance Statement for Metropolitan Planning Organizations

This will certify that the Transportation Improvement Program and Air Quality Conformity Determination for the Northern Middlesex Metropolitan Planning Organization (NMMPO) Transportation Improvement Program is in compliance with all applicable requirements in the State Regulation 310 CMR 60.05: Global Warming Solutions Act Requirements for Transportation. The regulation requires the MPO to:

1. 310 CMR 60.05(5)(a)1.: Evaluate and report the aggregate transportation GHG emissions impacts of MTPs and TIPs;
2. 310 CMR 60.05(5)(a)2.: In consultation with MassDOT, develop and utilize procedures to prioritize and select projects in MTPs and TIPs based on factors that include aggregate transportation GHG emissions impacts;
3. 310 CMR 60.05(5)(a)3.: Quantify net transportation GHG emissions impacts resulting from the projects in MTPs and TIPs and certify in a statement included with MTPs and TIPs pursuant to 23 CFR Part 450 that the MPO has made efforts to minimize aggregate transportation GHG emissions impacts;
4. 310 CMR 60.05(5)(a)4.: Determine in consultation with the RPA that the appropriate planning assumptions used for transportation GHG emissions modeling are consistent with local land use policies, or that local authorities have made documented and credible commitments to establishing such consistency;
5. 310 CMR 60.05(8)(a)2.a.: Develop MTPs and TIPs;
6. 310 CMR 60.05(8)(a)2.b.: Ensure that RPAs are using appropriate planning assumptions;
7. 310 CMR 60.05(8)(a)2.c.: Perform regional aggregate transportation GHG emissions impact analysis of MTPs and TIPs;
8. 310 CMR 60.05(8)(a)2.d.: Calculate aggregate transportation GHG emissions impacts for MTPs and TIPs;
9. 310 CMR 60.05(8)(a)2.e.: Develop public consultation procedures for aggregate transportation GHG emissions impact reporting and related GWSA requirements consistent with current and approved regional public participation plans;
10. 310 CMR 60.05(8)(c): Prior to making final endorsements on the MTPs, TIPs, STIPs, and projects included in these plans, MassDOT and the MPOs shall include the aggregate transportation GHG emission impact assessment in MTPs, TIPs, and STIPs and provide an opportunity for public review and comment on the MTPs, TIPs, and STIPs; and
11. 310 CMR 60.05(8)(a)1.c.: After a final GHG assessment has been made by MassDOT and the MPOs, MassDOT and the MPOs shall submit MPO-endorsed MTPs, TIPs, STIPs or projects within 30 days of endorsement to the Department for review of the GHG assessment.

Monica Tibbits-Nutt, Secretary and CEO
Massachusetts Department of Transportation (MassDOT);
Chair, Northern Middlesex Metropolitan Planning Organization (NMMPO)

Date

SELF-CERTIFICATION OF THE 3C PLANNING PROCESS

FFY 2025-2029 Northern Middlesex Transportation Program 3C Process Statement

The Northern Middlesex Metropolitan Planning Organization certifies that its conduct of the metropolitan transportation planning process complies with all applicable requirements, which are listed below, and that this process includes activities to support the development and implementation of the regional Long-Range Transportation Plan and Air Quality Conformity Determination, the Transportation Improvement Program and Air Quality Conformity Determination, and the Unified Planning Work Program.

1. 23 USC 134, 49 USC 5303, and this subpart.
2. Sections 174 and 176 (c) and (d) of the Clean Air Act, as amended (42 USC 7504, 7506 (c) and (d) and 40 CFR part 93 and for applicable State Implementation Plan projects.
3. Title VI of the Civil Rights Act of 1964, as amended (42 USC 2000d-1) and 49 CFR Part 21.
4. 49 USC 5332, prohibiting discrimination on the basis of race, color, creed, national origin, sex, or age in employment or business opportunity.
5. Section 1101 (b) of the Fast Act (Pub. L. 114-357) and 49 CFR Part 26 regarding the involvement of disadvantaged business enterprises in U.S. DOT-funded projects.
6. 23 CFR part 230, regarding implementation of an equal employment opportunity program on Federal and Federal-aid highway construction contracts.
7. The provisions of the US DOT and of the Americans with Disabilities Act of 1990 (42 USC 12101 et seq.) and 49 CFR Parts 27, 37, and 38.
8. The Older Americans Act, as amended (42 USC 6101), prohibiting discrimination on the basis of age in programs or activities receiving federal financial assistance.
9. Section 324 of Title 23 USC regarding the prohibition of discrimination based on gender.
10. Section 504 of the Rehabilitation Act of 1973 (29 USC 794) and 49 CFR Part 27 regarding discrimination against individuals with disabilities.
11. Anti-lobbying restrictions found in 49 CFR Part 20. No appropriated funds may be expended by a recipient to influence or attempt to influence an officer or employee of any agency, or a member of Congress, in connection with the awarding of any federal contract.

Monica Tibbits-Nutt, Secretary and CEO
Massachusetts Department of Transportation (MassDOT);
Chair, Northern Middlesex Metropolitan Planning Organization (NMMPO)

Date

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INTRODUCTION

The Transportation Improvement Program (TIP) is a programming and management document containing all federally funded transportation projects planned in the Northern Middlesex region over the next five years. This document is prepared by the Northern Middlesex Council of Governments (NMCOG) providing staffing support to the Northern Middlesex Metropolitan Planning Organization (NMMPO). All transportation projects that will be funded under Title 23, U.S.C., or with Federal Transit Act funds, must be included in the document. In addition, projects requiring FHWA or FTA approval, but not funded under Title 23, U.S.C., or with Federal Transit Act funds, must also be listed in the TIP. Similarly, transportation projects funded with federal funds from other federal agencies, as well as projects funded with local and private monies should be described in the document for informational purposes, in order to reflect the integrated and intermodal nature of the regional transportation planning process.

The TIP is the implementation arm of the Metropolitan Transportation Plan (MTP) for the Northern Middlesex region. The MTP identifies and analyzes transportation infrastructure and service improvement needs in the Northern Middlesex region. Covering a 20-year planning horizon, the plan includes strategies for developing an integrated multi-modal transportation network including pedestrian, biking and motorized travel. The MTP is updated every four years in accordance with federal requirements. The updated plan identifies existing and projected transportation needs and prioritizes federal transportation investments. The MTP helps to determine how Federal and State funding will be spent on transportation infrastructure and services in the region. The NMMPO endorsed its current MTP, Envision 2050, on August 23, 2023. The TIP follows the vision and goals set in Envision 2050. The 2025-2029 TIP will be in effect on October 1, 2024.

This TIP reflects the goals in Envision 2050 and strives to meet performance targets adopted by the MPO, which incorporates the goals set by the MPO, its nine member communities and the Lowell Regional Transit Authority (LRTA), and as such shapes how federal transportation dollars are programmed. The TIP also reflects regional economic development planning trends and targets, including the potential economic growth and expansion, as outlined in other regional plans prepared by NMCOG and endorsed by its Council. These plans include the four-year Comprehensive Economic Development Strategy (CEDS), funded in part by the US Economic Development Administration.

The TIP was prepared in accordance with the provisions of the Infrastructure Investment and Jobs Act (IIJA) Act and with Federal Highway Administration (FHWA) and Federal Transit Authority (FTA) planning emphasis areas and guidance.

The IIJA has not significantly changed the Federal planning factors originally outlined under the Fixing America's Surface Transportation (FAST) Act. In developing the FFY 2025-2029 TIP, the NMMPO has considered these planning factors, which include the following:

- “Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
- Increase the safety of the transportation system for all motorized and non-motorized users;
- Increase the ability of the transportation system to support homeland security and to safeguard the personal security of motorized and non-motorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation;
- Emphasize the preservation of the existing transportation system;
- Improve transportation system resiliency and reliability and reducing (or mitigating) the storm water impacts of surface transportation; and
- Enhance travel and tourism.”

USDOT EQUITY ACTION PLAN

In 2022, the USDOT published their [Equity Action Plan](#), outlining the agency’s commitment to “pursuing a comprehensive approach to advancing equity for all”. In response to Executive Order 13985, this plan outlines actions to expand access and opportunity to all communities, while focusing on underserved, overburdened, and disadvantaged communities. This plan is designed to “place people and communities at the center of USDOT’s equity efforts.” These include the following focus areas:

- **Wealth Creation:** This action item is to build capital, expand direct contract dollars to small, disadvantaged businesses to an aspirational goal of 20% by FY25. Three root drivers identified are restrictive procurement practices, uneven resource distribution, and limited networks. USDOT launched a procurement dashboard to drive accountability for small and disadvantaged business goals in January 2022. Some ongoing efforts include promoting technical assistance to small, disadvantaged businesses, providing internal training regarding acquisition policy updates, and incorporating performance standards for program leaders.
- **Power of Community:** This action item focuses on providing individuals and communities a greater voice in transportation decisions affecting them. This also addresses critical gaps like broadband infrastructure in areas making it difficult to participate in virtual public involvement activities. An interesting finding is that age, income, and education are some of the factors that influence public meeting attendance. Three root drivers identified are status quo thinking, one-size-fits-all

methods, and lack of accountability. Some upcoming efforts are to conduct an assessment of MPO and State DOT on the inclusion of quantitative equity screenings and meaningful and representative public participation in STIPs and TIPs, issue guidance for USDOT funding recipients to meet requirements of meaningful public participation under Title VI, NEPA (National Environmental Policy Act), and other existing requirements, accompanying with best practices and trainings, and to establish Department-wide monitoring of USDOT funding recipient compliance with their meaningful public participation obligations.

- **Interventions:** This action item focuses on providing historically overburdened and underserved communities in urban and rural areas with benefit from access to a generational investment in the nation's infrastructure through technical support for transportation projects with local impact. This addresses the critical gap in BIL transportation funding allocated to underserved, overburdened, and disadvantaged communities. Three root drivers identified are limited resources, systemic barriers remain, and income and wealth disparities. USDOT published a toolkit for planning and funding rural and tribal electric mobility infrastructure in January 2022. Some upcoming efforts are to launch federal partnerships with key agencies making place based investments, re-launch the Advisory Committee on Transportation Equity to provide independent advice on USDOT equity programs, a pilot that will reduce administrative burden for applicants considering applying for multiple discretionary grant programs, launch a national equity accelerator to provide hands-on support to underserved and overburdened communities accessing USDOT funds, and issue a call for projects for place-based initiatives that are co-designed with communities most impacted by poor access and climate change.
- **Expanding access:** The focus of this action item is to increase social and economic opportunity for disadvantaged and underserved communities from the provision of affordable multi-modal transportation options and the development of a transportation cost burden measure. Critical gaps identified are that the commute by bus is 1.7x longer than commuting alone by car, and the lowest income households spend on average 37% of their after-tax income on transportation when compared to 19% by middle-income households. Two root drivers identified are higher transportation costs and a lack of transportation options and access. Some efforts are to introduce racial equity and barriers to opportunity as a consideration for awarding discretionary grants; require discretionary grant projects to report on benefits such as expanded access to disadvantaged communities; implement a pilot transportation cost burden measure using existing data sources to screen transportation projects for funding; develop a National Transit Map to improve data on transit access, system quality, and performance; develop new data collection method focused on capturing individual and household cost, travel time, trips not taken, accessibility, and access to key resources across different demographic groups; and launch enhanced transportation cost burden measure as part of a transportation disadvantage index.

PERFORMANCE BASED APPROACH TO PLANNING

The IIJA continues to focus on performance-based and outcome-based programs to address the many challenges facing the U.S. transportation system. The objective of these performance-based programs is to invest resources in projects that collectively advance the achievement of national goals.

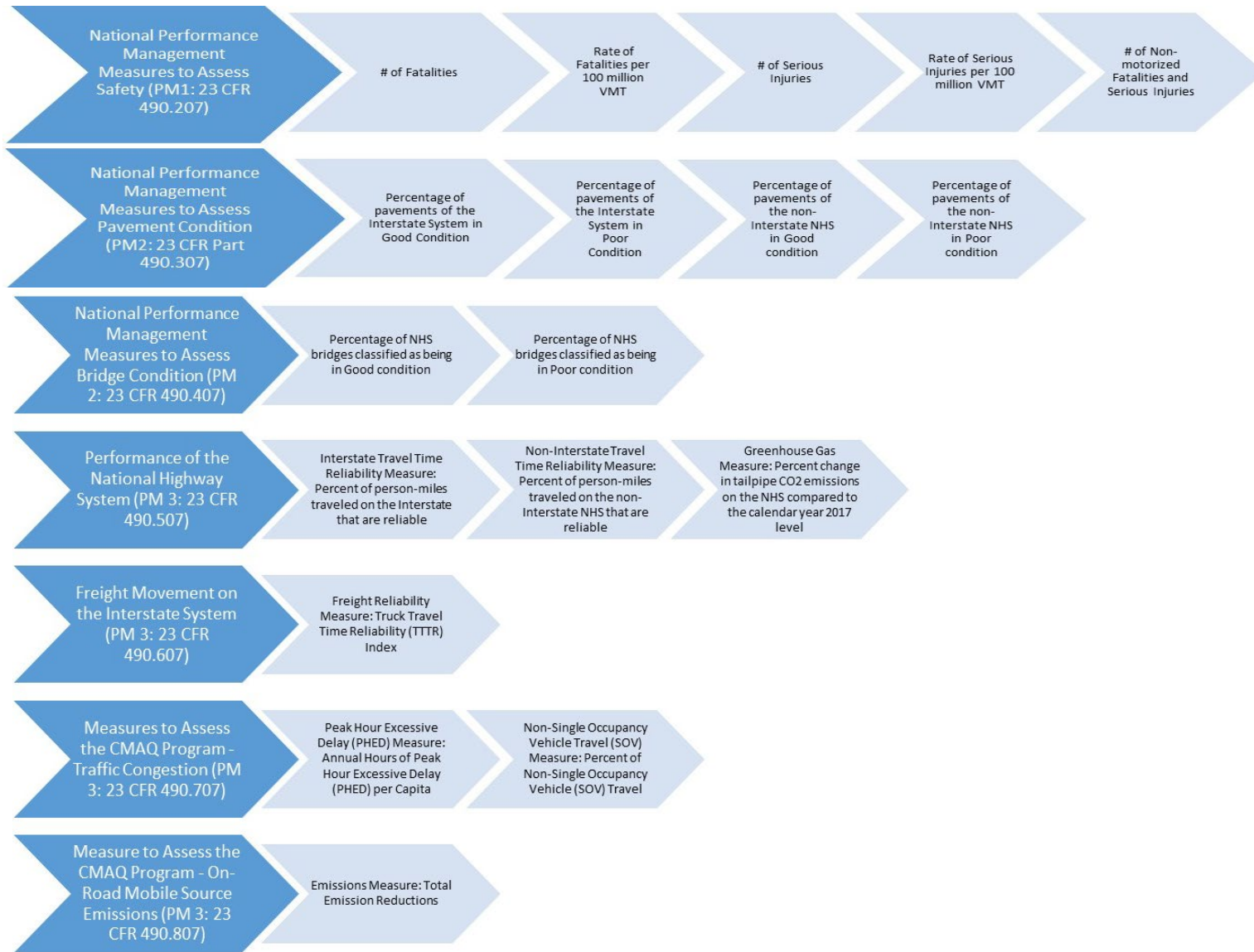
The USDOT continues to develop performance goals for each emphasis area. MassDOT and the NMMPO are developing performance measures and targets to include in project evaluation and prioritization. The TIP development process considers these performance measures in making transportation investment decisions that address the achievement of performance goals.

The IIJA includes the following national goal areas:

- Safety;
- Infrastructure Condition;
- Congestion Reduction;
- System Reliability;
- Freight Movement and Economic Vitality;
- Environmental Sustainability; and
- Accelerated Project Delivery.

FHWA released Final Rules establishing performance measures regarding safety, pavement condition, bridge condition, the National Highway System, Freight Movement, Congestion, and Congestion Mitigation Air Quality (CMAQ), as shown in Chart 1 and 2. Each rule has an effective date. Once effective, MassDOT established performance targets for each national performance measure outlined in the rulemakings. The NMMPO then worked with MassDOT and regional partners to establish regional targets, either adopting state targets or developing its own. MassDOT monitors and summarizes overall performance on an annual basis through the Department's [Tracker Report](#).

FIGURE 1: NATIONAL PERFORMANCE MANAGEMENT RULES AND PERFORMANCE MEASURE.



Before the national rulemakings were established, the NMMPO worked with MassDOT on performance management activities. The [Unified Planning Work Program \(UPWP\)](#) includes an ongoing task on development and assessment of performance measures. [Envision 2050](#) (MTP) provides a system performance report, providing progress aimed at achieving targets outlined in the plan. Other regional activities in performance-based planning are categorized under Safety, Travel Time Reliability and Peak Hour Excessive Delay, Bridge Performance, pavement condition, Air Quality and State of Good Repair, as discussed in this section. The LRTA monitors transit safety and asset management on an ongoing basis as part of their work program.

[SAFETY MEASURES AND TARGETS](#)

In 2016, FHWA published the Safety Performance Management Measures Final Rules (PM1) with an effective date of April 14, 2016. The Safety PM rule supports the Highway Safety Improvement Program final rule (23 CFR Part 490 Subpart A, B and Part 924), as it established performance measures to carry out the HSIP and to assess serious injuries and fatalities on all public roads. Massachusetts set initial statewide safety measures and targets in August 2017, and the NMMPO considered and adopted those statewide targets in January 2018. With Safety targets updated on an annual basis, the NMMPO voted to adopt State updated targets in February 2024.

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) to calculate 5-year, rolling average trend lines for all FHWA-defined safety measures. Per Federal Highway Administration (FHWA) guidance, the CY22 target-setting process began with a trend line projection based on the most recent available data. Due to reduced VMT related to the COVID-19 pandemic, actual 2020 fatalities did not follow this trend, so CY21 projections were based on trends from CY19, with CY20 data disregarded given the unique circumstances surrounding data from that year.

In 2020, during the COVID-19 pandemic, Massachusetts experienced a steep decline in both non-motorized fatalities and serious injuries. Because of the high fluctuations in the data, to establish MassDOT's CY22 target, CY21 non-motorist fatalities and suspected serious injuries were set to be equal to the average of CY17, CY18, and CY19 data. To project the non-motorist fatality and serious injuries for CY22, a 2% reduction was estimated.

For CY 2022 targets, four of the five safety measures—total number of fatalities, rate of fatalities per 100 million vehicle miles traveled, total number of serious injuries, and rate of serious injuries per 100 million VMT—were established by projecting a trend line based on available data (up to 2019). All four of these measures reflect a modest decrease in statewide trends.

The fifth safety measure, the total number of non-motorized serious injuries and fatalities, also depicts a slight decrease in trend lines. In recent years, MassDOT and the NMMPO have invested in “Complete Streets,” bicycle and pedestrian infrastructure, intersection and safety improvements in both the Capital Investment Plan (CIP) and Statewide Transportation Improvement Program (STIP) to address increasing mode share and incorporate safety mitigation elements into projects. Moving forward, the NMMPO, alongside MassDOT, is actively seeking to improve data collection and methodology for bicycle and pedestrian VMT counts and to continue analyzing crash clusters and crash counts that include motorized and non-motorized modes to address safety issues at these locations.

In all safety categories, MassDOT has established a long-term target of “Toward Zero Deaths” through MassDOT’s Performance Measures Tracker¹ and will be establishing safety targets for the MPO to consider for adoption each calendar year. While FHWA does not require the NMMPO to report on annual safety performance targets, FHWA guidelines require MPOs to adopt MassDOT’s annual targets or to establish their own each year.

This year, MassDOT also developed a 2022-2026 target to be consistent with the Highway Safety Office and the National Highway Traffic Safety Administration (NHTSA). 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. The fatality rate represents five-year average fatalities divided by five-year average VMTs. The COVID-19 pandemic also significantly impacted VMT, causing fatality rates to spike in 2020 with significantly lower VMT and slightly higher fatalities. Data projections for 2023 indicate VMT will exceed pre-pandemic levels. Therefore, MassDOT developed the target for CY 2024 by projecting the 2023 and 2024 fatalities to be in line with pre-COVID data.

The NMMPO adopted updated PM1 Safety Performance Measure Targets set by MassDOT at its February 28, 2024 meeting. Adopting these targets means that the NMMPO agrees to plan and program projects designed to achieve the State’s goals. Table 1 outlines the currently adopted safety performance measures and targets.

¹ <https://www.mass.gov/lists/tracker-annual-performance-management-reports>

TABLE 1: NORTHERN MIDDLESEX SAFETY PERFORMANCE MEASURES AND TARGETS

Performance Measures	Current Performance Rolling Five Year Average 2018-2022	Performance Target - Rolling Five Year Average 2022-2026
Fatalities	378	362
Rate of Fatalities per 100 million VMT	0.62	0.54
Serious Injuries	2,708	2,603
Rate of Serious Injuries per 100 million VMT	4.42	3.91
Total Number of Non-Motorized Serious Injuries and Fatalities	480	445

On July 19, 2018, FTA published the Public Transportation Agency Safety Plan (PTASP) Final Rule (49 CFR Part 673), which requires certain operators of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants to develop safety plans that include the processes and procedures to implement Safety Management Systems (SMS). The LRTA developed a plan outlining the agency's existing safety practices and best practices to be implemented to meet Federal regulations. The LRTA board voted to adopt their initial plan on October 29, 2020 with set performance measures and targets included. The MPO then took action on December 2, 2020 to adopt the safety performance measures for both fixed route and demand response vehicles, which includes the following:

- Fatalities and Fatality Rate;
- Injuries and Injury Rate;
- Safety Events and Safety Event Rate; and
- System Reliability (miles between major mechanical failures)

On July 22, 2022, the NMMPO adopted updated LRTA safety performance measures as shown in Table 2.

TABLE 2: NMMPO ADOPTED LRTA PTASP PERFORMANCE MEASURES AND TARGETS

Mode of Transit Service	Fatalities (Total)	Fatalities (Rate*)	Injuries (Total)	Injuries (Rate)	Safety Events (Total)	Safety Events (Rate)	System Reliability (Miles between Failure)
Fixed Route	0	0	3	2	30	23	39,400
Demand Response	0	0	1	2	4	15	71,700

* Rates are per 1,000,000 vehicle revenue miles

PAVEMENT AND BRIDGE CONDITION MEASURES

The final rule on pavement condition and bridge condition performance measures (PM2) was made effective on May 20, 2017 (23 CFR Part 490 Subparts A, C and D), with Massachusetts setting targets in May of 2018. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges and pavement condition using the nine-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. Two-year and four-year targets were set for six individual performance measures: percent of 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 detail in MassDOT’s [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 analyze the percentage of deck area in poor condition, rather than the total number of bridges that are considered structurally deficient across the State.

Originally, 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 were revisited at the two-year mark (2020), when three years of data were made available, for more informed target setting. MassDOT decided to keep the original four-year targets at that time. The new performance period, as presented in Table 3, sets the current baseline conditions for interstates at 72% of pavement in good condition and 0% in poor condition. Targets in this second performance period show that the good percentage decreases to 70% based on the marginal

decreasing trend of pavement condition statewide between 2019 and 2021. The poor condition targets for 2023 and 2025 are more aggressive than the last performance period (4%). For non-interstates, the targets set in this performance period utilize the full distress condition measurement, which differs from previous periods that used the International Roughness Index (IRI). The targets determined by the state are conservative in nature due to federal pavement conditions currently not available at the regional level. There are 88.23 lanes miles of interstate pavement and 283.61 lane miles of non-interstate pavement in the Northern Middlesex region.

The NMMPO originally considered and adopted statewide performance measures and targets at the October 24, 2018 meeting, agreeing to program projects aimed at achieving the State’s goals. With the first performance period data fully available, the second performance period targets were presented by MassDOT, and the MPO voted to adopt at their February 22, 2023 meeting. Table 3 describes the pavement measures and targets adopted.

TABLE 3: PAVEMENT AND BRIDGE CONDITION PERFORMANCE MEASURES AND TARGETS

Performance Measures	Current Conditions	2024 Performance Target	2026 Performance Target
Interstate Pavement Condition			
% of pavement in Good Condition ²	72%	70%	70%
% of pavement in Poor Condition	0%	2%	2%
Non-Interstate Pavement Condition			
% of pavement in Good Condition	Not monitored by state	30%	30%
% of pavement in Poor Condition	Not monitored by state	5%	5%
Bridge Condition			
% of Bridges in Good Condition ³	16 %	16%	16%
% of Bridges in Poor Condition	12 %	12%	12%

² Pavement condition on National Highway System Roads is based on International Roughness Index (IRI) value and one or more pavement distress metrics. FHWA sets thresholds to determine whether metric value is good or poor.

³ Bridge Condition on National Highway System roads is based on condition ratings of deck, superstructure and substructure. National Bridge Inventory data is used to rate these components. The worst component rating is the overall rating of the bridge.

SYSTEM PERFORMANCE MEASURES

As part of the Federal performance-based planning process, FHWA passed a systems performance measure rule aimed at improving the efficiency of the system and freight movement, reducing traffic congestion and reducing emissions. In May 2018, MassDOT adopted targets for the following measures:

- **Level of Travel Time Reliability (LOTTR):** the consistency or dependability in travel times, as measured from day-to-day and/or across different times of the day. LOTTR is based on the amount of time it takes to drive the length of a road segment and is the percentage of person-miles traveled that are “reliable”. LOTTR is calculated by dividing the 80th/50th percentile travel time. If it falls below 1.50, the segment is “reliable”. The percentage of road segments that are “reliable” is used as the target.
- **Level of Truck Travel Time Reliability (TTTR):** the consistency or dependability in truck travel times, as measured from day-to-day and/or across different times of the day. TTTR is based on the amount of time it takes trucks to drive the length of a road segment and is an index of 50th/95th percentile travel times. The TTTR index is reported as a weighted average of the largest period for each segment.

The NMMPO 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), the NMMPO adopted two-year (2024) and four-year (2025) 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.

- **Percentage of Non-Single Occupancy Vehicle (SOV) Travel:** The metric is based on the percentage of people commuting to work using a mode other than a single occupancy vehicle (e.g. carpool, van, public transit, walking, bicycling, or telecommuting). The targets are determined from available Census journey to work data in the Boston UZA, where the proportion of non-SOV travel has been steadily increasing and is projected to continue increasing at a rate of 0.32% annually.
- **Peak hour Excessive Delay (PHED):** a measurement of annual hours of excessive delay per capita on the National Highway System (NHS) between 6 am and 10 am, and 3 pm and 7 pm, divided by the total UZA population. As of target setting, there was only one year of data available. As such, the performance targets have been set flat until further data is available. The threshold is based on the travel time at 20 miles per hour or 60% of the posted speed limit, whichever is greater.
- **Emissions Reductions:** The on-road mobile source emissions measure is calculated by summing the two- and four-year totals of emissions reductions in kilograms per day. 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.

The NMMPO is required to report on performance of vehicle emission reductions for carbon monoxide because of Lowell’s non-attainment status and has done so in a November 2022 full period CMAQ Congestion and Emissions Performance report.

MassDOT's long-term goal is to enhance travel time reliability and system efficiency on all roadways. As part of MassDOT's ongoing development of its 2050 Statewide Long Range Transportation Plan (SLRTP), travel time reliability is continuing to emerge as an important theme during public outreach and other analyses. As such, reliability will be articulated as one of MassDOT's priority areas through the SLRTP and progress toward improving system reliability will be continually tracked. As part of SLRTP development and the federal Transportation Performance Management (TPM) process, MassDOT will set targets in the area of reliability and identify the locations that are most in need of improvements in this area. Following on those analyses, the SLRTP, the State Transportation Improvement Program (STIP), and Transportation Improvement Programs (TIPs) will articulate strategies for program and project development that address these locations with the larger goal of enhancing system reliability. Table 4 summarizes each system performance measure and target adopted by the NMMPO.

TABLE 4: SYSTEM PERFORMANCE MEASURES AND TARGETS

Performance Measures	Current Conditions	2024 Target	2025 Target
Percentage of Travel Time Reliability	85% Interstate 87% Non-Interstate	74% Interstate 85% Non-Interstate	76% Interstate 87% Non-Interstate
Level of Truck Travel Time Reliability	1.61 (State)	1.80	1.75
Peak Hour Excessive Delay (annual hours per capita – Boston UZA)	18.0	24	22
Non-SOV Travel (Boston UZA)	36.9%	38.8%	39.8%
Emissions reduction (based on 2018-2021 TIP)	0	0	0

TRANSIT ASSET MANAGEMENT

The Federal Transit Administration’s (FTA) Final rule (49 CFR Part 625) outlined a requirement for transit providers to implement performance management through Transit Asset Management (TAM) Plans. LRTA, as a Tier II Provider⁴, adopted their respective TAM Plan on October 1, 2022 and revised on November 8, 2022. The NMMPO reviewed and adopted updated performance measures outlined in the Plan on November 30, 2022. The TAM Plan covers the horizon period of Federal Fiscal Years 2023-2027. The purpose of the plan is to:

- Provide implementation actions that offer enabling support and direction for management of transit assets; and
- Provide direction and expectations for asset class owners and department managers regarding lifecycle management planning and processes.

The TAM Plan uses transit asset condition to guide the management of capital assets and prioritizations of funding to improve/maintain a State of Good Repair (SGR). SGR performance measures and targets were set for rolling stock, equipment and facilities. On November 29, 2023, the NMMPO voted to adopt updated TAM performance measures and targets as outlined in Table 5.

TABLE 5: LRTA TAM PLAN PERFORMANCE MEASURES AND TARGETS

Asset Category -Performance Measure	Asset Class	2023 Target	FY 2023 Performance	Target Met	2024 Target
REVENUE VEHICLES					
Age -% of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark	Bus (BU)	0%	5.00%	Yes	0%
	Cutaway Bus (CU)	50%	40.00%	Yes	53%
	Minivan	100%	0.00%		100%

⁴ Tier II Provider: 100 or fewer vehicles across all fixed routes.

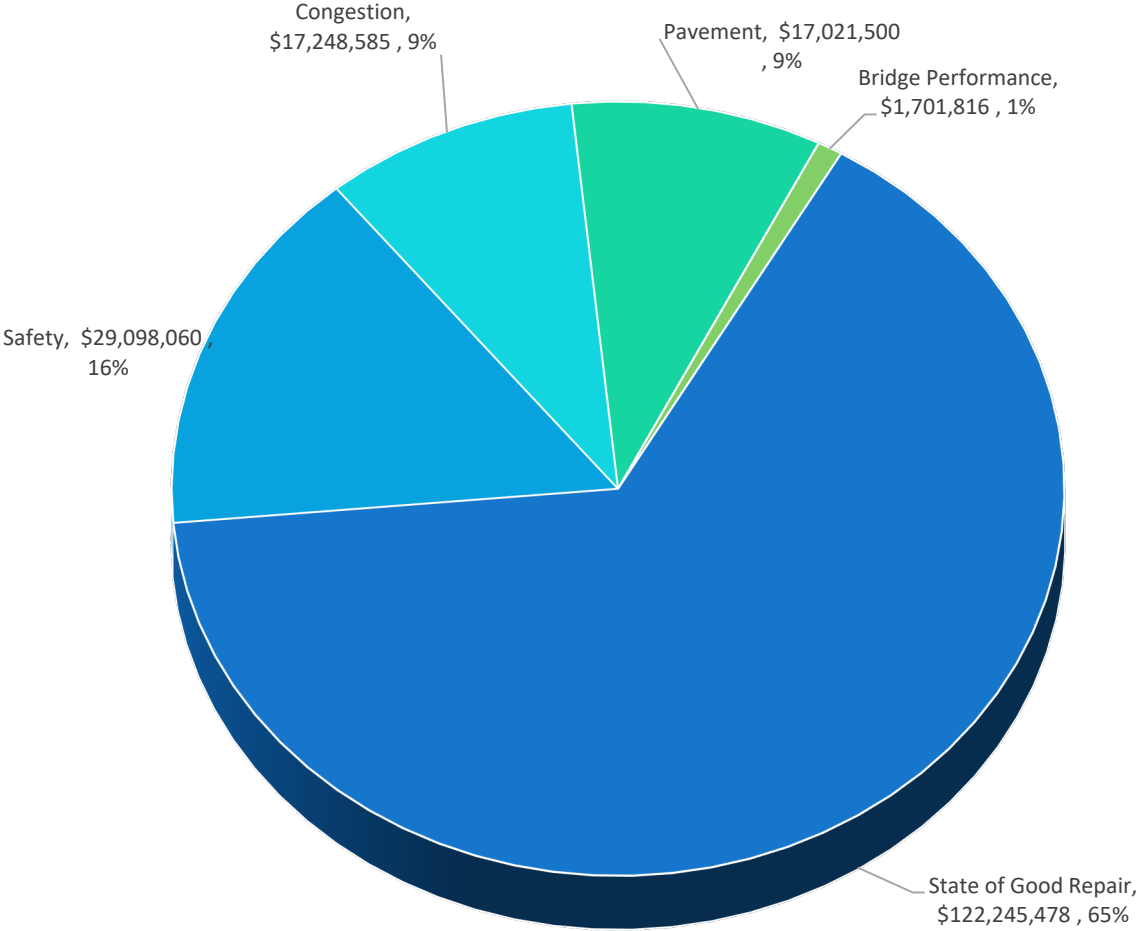
TABLE 5: LRTA TAM PLAN PERFORMANCE MEASURES AND TARGETS

Asset Category -Performance Measure	Asset Class	2023 Target	FY 2023 Performance	Target Met	2024 Target
EQUIPMENT					
Age -% of vehicles that have met or exceeded their Useful Life Benchmark	Non-Revenue/Service Automobile	67%	33.00%	Yes	50%
	Trucks and other Rubber Tire Vehicles	50%	75.00%	No	50%
	Maintenance Equipment*	63%	63.00%	Yes	0%
	Facilities Equipment*	0%	0.00%	Yes	0%
FACILITIES					
Condition -% of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration/ Maintenance	0%	0.00%	Yes	0%
	Passenger Facilities/ Parking Structures	0%	0.00%	Yes	0%

* Maintenance Equipment and Facilities Equipment are tracked internally but not reported to NTD.

Figure 2 outlines FFY 2025-2029 TIP programming aimed at addressing targets adopted by the NMMPO. Transit projects address the state of good repair and targets outlined in the Transit Asset Management Plan and the LRTA Public Transit Agency Safety Plan. Highway projects programmed in this TIP address safety, air quality, pavement condition, bridge performance, and congestion performance measures and MPO adopted targets. The allocation of funds is as follows: 65.26% (\$122,245,478) for State of Good Repair; 15.53% (\$29,098,060) for Safety; 9.21% (\$17,248,585) for Congestion; 9.09% (\$17,021,500) for Pavement; and 0.91% (\$1,701,816) for Bridge Performance. **Appendix B** lists all projects programmed in the TIP by performance measure category.

FIGURE 2: FFY 2025-2029 TIP FUNDING BY PRIMARY PERFORMANCE MEASURE CATEGORY



TIP ORGANIZATION

Title 23 CFR 450.326 requires that the TIP cover a period of no less than four years and be updated at least every four years. If the TIP covers more than four years, the FHWA and FTA consider projects in the additional years as informational. The MPO may update the TIP more frequently, but the cycle for updating the TIP must be compatible with the STIP development and approval process. The NMMPO programs five years of projects in the TIP, which is consistent with MassDOT's Capital Investment Plan (CIP) and the STIP. This TIP document includes projects programmed in Federal Fiscal Years 2025 through 2029. In Massachusetts, the TIP is updated annually.

The listing for each fiscal year is divided into a highway section and a transit section. Each listing includes a project description, estimated total cost, Federal funds to be obligated for each program year, sources of Federal and Non-Federal funds, and the fund recipient. For a project to be considered for inclusion in the first five fiscal years of the TIP, a project or program must have an estimated advertising or implementation date within that fiscal year. At the request of the Federal Highway Administration, the highway project cost estimates reflect a 4% cost increase compounded annually after the first fiscal year to reflect Year of Expenditure (YOE) fiscal constraint. Thus, FFY 2026 projects include a 4% YOE increase, FFY 2027 includes an 8% YOE increase, FFY 2028 projects include a 12% YOE increase, and FFY 2029 projects include a 16% increase from their current cost estimates.

Transit projects are implemented through a cooperative process involving MassDOT Rail and Transit and the Lowell Regional Transit Authority (LRTA). The FTA provides financial assistance to states through a number of programs to develop new transit systems and improve, maintain and operate existing systems. The Governor of the Commonwealth has given MassDOT the authority to administer the funding to eligible organizations through Title 49 USC Sections 5310 and 5339 funding programs. MassDOT provides financial assistance through several programs by providing a state match for federally funded capital, operating, and planning projects. Additionally, NMCOG provides a local match (20%) for transit planning, and the LRTA uses community assessments to match operations assistance funds. The LRTA provides MassDOT with a five-year capital plan outlining the funding needs of the organization as part of the TIP development process.

TIP DEVELOPMENT PROCESS

The development of a regional Transportation Improvement Program is required by federal regulation as part of the transportation planning process. This process is carried out under the authority of the NMMPO, which reviews and endorses all federal certification documents. The document is developed by updating information from the previous TIP and the MTP, and is done with input solicited

from local communities, the LRTA, state and federal transportation agencies, and the public. Following local and public review, the document is submitted to the NMMPO for endorsement.

ROLE OF THE NORTHERN MIDDLESEX METROPOLITAN PLANNING ORGANIZATION

Established through federal legislation, Metropolitan Planning Organizations (MPOs) exist throughout the United States in all urbanized areas of more than 50,000 people and have the authority to prioritize, plan, and program transportation projects in urban/metropolitan areas using federal funding. In Massachusetts, MPOs work in partnership with the Massachusetts Department of Transportation (MassDOT) to carry out regional planning activities.

The NMMPO was established to carry out the transportation planning process in accordance with federal and state regulations. Federal regulations require that the MPO be designated to carry out a comprehensive, continuing and cooperative (3-C) transportation planning process. The NMMPO is the federally-designated transportation planning and programming agency for the City of Lowell and the Towns of Billerica, Chelmsford, Dracut, Dunstable, Pepperell, Tewksbury, Tyngsborough, and Westford, all located in northern Middlesex County, Massachusetts. The MPO is staffed by NMCOG.

A Memorandum of Understanding outlines the membership of the MPO, which includes representatives from the Northern Middlesex Council of Governments (NMCOG), MassDOT, and the Lowell Regional Transit Authority (LRTA). The membership consists of the Massachusetts Secretary of Transportation and Chief Executive Officer of MassDOT, the Administrator of the Highway Division of MassDOT, the Chair of NMCOG, the Chair of the LRTA, the chief elected official from the City of Lowell who serves as the City's representative to NMCOG, a Select Board Member elected to serve on the NMCOG Council and further elected by the Council to serve as that Town's representative to the NMMPO, and a LRTA Advisory Board member representing a community within the NMMPO boundaries other than the City of Lowell, who may also be an elected official. FHWA and FTA are non-voting Ex-Officio members of the NMMPO.

FIGURE 1: NMMPO MEMBERSHIP

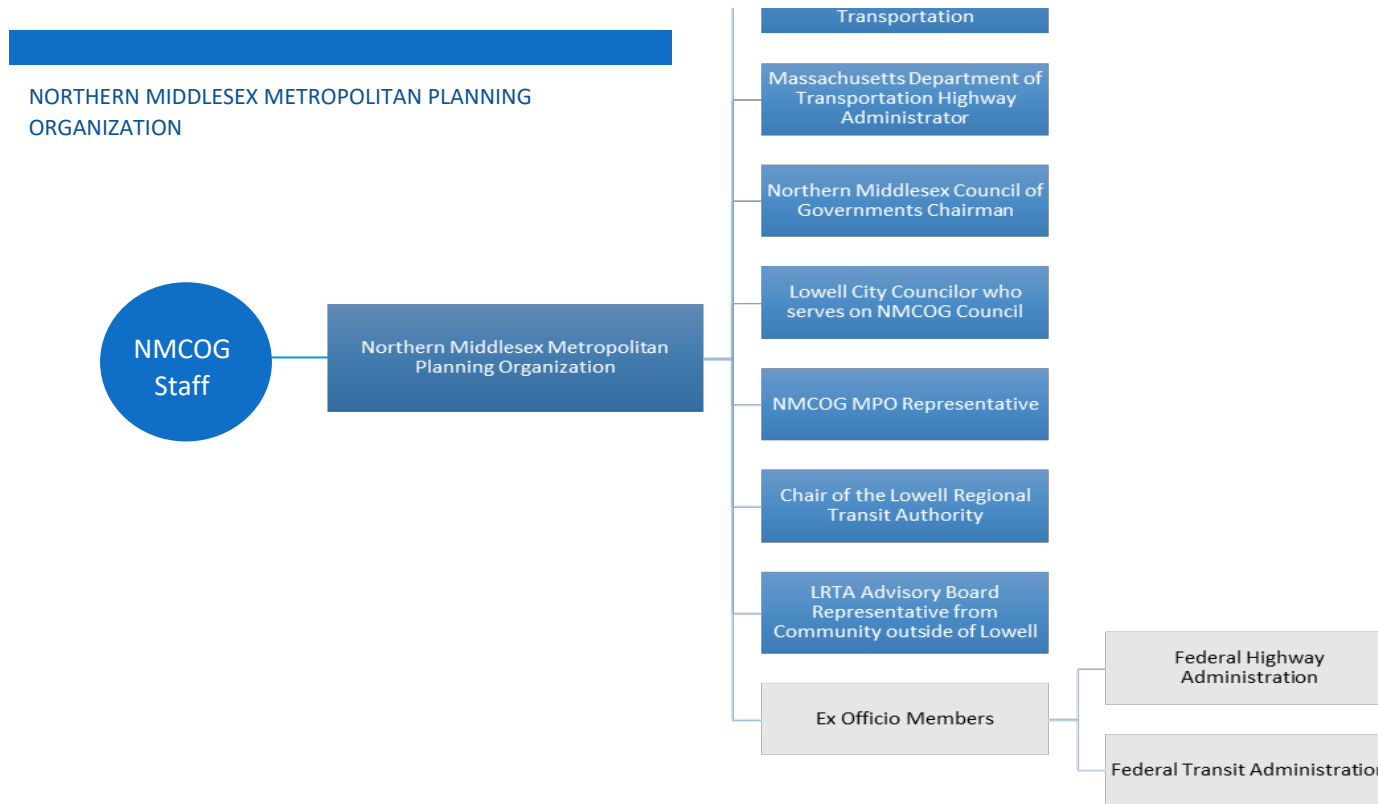


TABLE 6: NMMPO CURRENT MEMBERSHIP

NMMPO Member Position	Current Member
Secretary of Transportation and CEO of MassDOT	Monica Tibbits-Nutt
MassDOT Highway Administrator	Jonathan Gulliver
NMCOG Chair	Jayne Wellman
NMCOG MPO Representative	Pat Wojtas
LRTA Board Chair	Tom Bomil
LRTA MPO Representative	Karyn Puleo
Lowell City Council Representative to NMCOG and the MPO	Vacant

ROLE OF THE NORTHERN MIDDLESEX COUNCIL OF GOVERNMENTS

NMCOG is a regional planning agency established under Chapter 40B of the General Laws of Massachusetts. The NMCOG Council comprises a Select Board or City Council Member and Planning Board member from each of its nine member communities (including Billerica, Chelmsford, Dracut, Dunstable, Lowell, Pepperell, Tewksbury, Tyngsborough, and Westford). The Council meets monthly and provides direct input from local government regarding various transportation issues. The NMCOG also conducts the public participation process for all certification documents. NMCOG staff serves as the transportation planning staff for the NMMPO.



PROJECT PRIORITIZATION

Project prioritization is a performance driven process. The BIL continues the performance management approach, encouraging investment of resources in projects that make progress toward national goals. TIP eligible projects that make progress towards national goals receive priority for the limited funding available. As projects progress through the development process, funding must be identified for them to be constructed. MassDOT and MPO partners utilize an evaluation process to consider the merits of each project. MPOs use established Transportation Evaluation Criteria (TEC) developed by the state transportation agencies and the former Office for Commonwealth Development (OCD) to score projects, while MassDOT utilizes asset management systems for reliability projects and an evaluation system which was established in 2016. This evaluation system is multimodal and was developed by the Project Selection Advisory Council which was established by the Legislature. After evaluation, MPOs convene to choose projects for their respective regional TIPs. The NMMPO staff applied the TEC criteria to all highway projects considered viable for the TIP in prior years, as no new projects were added to the FFY 2025-2029 TIP. TEC scores range from -18 for a project that would have adverse impacts to the transportation system, to +18 for a project with the highest priority. The TEC scores projects based on the following categories and considers all users of the regional transportation network:

FIGURE 3: SIX TEC SCORING CATEGORIES

Condition	Mobility	Safety	Community effects and support	Land use and economic development	Environmental effects
<ul style="list-style-type: none"> • Magnitude of pavement condition Improvement • Magnitude of surface condition Improvement • Magnitude of improvement of other infrastructure elements 	<ul style="list-style-type: none"> • Effect on magnitude and duration of congestion • Effect on travel time and connectivity/access for existing users • Effect on other modes using facility • Effect on regional and local traffic • Number of New Users • Consistency with State Bicycle and/or Pedestrian Plans 	<ul style="list-style-type: none"> • Effect on crash rate compared to state average • Effect on bicycle and pedestrian safety • Effect on transportation security and evacuation routes • Effect on Bicycle Compatibility Index • Effect on pedestrian safety 	<ul style="list-style-type: none"> • Residential effects • Environmental Justice effects • Public, local government, legislative, and regional support • Effect on service to minority or low income neighborhoods • Other impact/benefits to minority or low income neighborhoods • Effect on development and redevelopment of housing stock 	<ul style="list-style-type: none"> • Business effects • Sustainable development effects • Consistent with regional land-use and economic development plans • Effect on job creation 	<ul style="list-style-type: none"> • Air Quality/ Climate effects • Water quality/supply/wetlands effects • Historic and cultural resource effects • Effect on wildlife and endangered species

Six TEC scoring categories to score the TIP projects include:

- **Infrastructure Condition** – Does the project benefit roadway infrastructure conditions?
- **Mobility** – Does the project reduce congestion or have benefits to regional access?
- **Safety** – Does the project reduce the number and rate of crashes for vehicles, bicycles or pedestrians?
- **Community Effects and Support** – Does the project have local support, and does it have Impacts to Environmental Justice or Title VI communities?
- **Land Use and Economic Development Impacts** – Does the project impact sustainable development and is it consistent with regional Land Use plans?
- **Environmental Impacts** – Does the project impact air quality, water quality, historical resources, or wildlife?

The BIL requires that the MPO conduct a competitive process for Transportation Alternatives Program (TAP) funding allocation. The TEC addresses this competitive process by focusing the funding on the highest priority projects. The full list of highway projects included in the TIP, with TEC scores, is summarized in Table 7. More in depth TEC Scoring and a Score Card is included in Appendix E.

TABLE 7: TRANSPORTATION EVALUATION CRITERIA (TEC) SCORING SUMMARY

Project ID	Project Description	Community	Project Cost Estimate (Current Dollars)	Design Status	Proposed TIP Year	TEC Score
608227	BILLERICA-YANKEE DOODLE BIKE PATH CONSTRUCTION (PHASE 1)	Billerica	\$17,103,055	100%	2025	12
612549	LOWELL-PAWTUCKET STREET CORRIDOR IMPROVEMENTS	Lowell	\$8,061,543	Approved	N/A	9.6
612609	TEWKSBURY-INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET	Tewksbury	\$4,191,345	Approved	2027	9.25
612977	CHELMSFORD-VINAL SQUARE SAFETY IMPROVEMENTS	Chelmsford	\$5,763,618	Approved	2028	9.03
609050	LOWELL - CHURCH STREET 2 WAY CONVERSION	Lowell	\$3,050,000	Approved	-	8.7
609510	DRACUT- IMPROVEMENTS AT GEORGE ENGLSBY ELEMENTARY SCHOOL (SRTS)	Dracut	\$2,643,360	Approved	2026	8

TABLE 7: TRANSPORTATION EVALUATION CRITERIA (TEC) SCORING SUMMARY

Project ID	Project Description	Community	Project Cost Estimate (Current Dollars)	Design Status	Proposed TIP Year	TEC Score
610930	WESTFORD - ROUTE 110 (LITTLETON RD) FROM POWERS ROAD TO MINOT'S CORNER	Westford	\$7,560,105	Approved	2029	7.92
609250	BILLERICA-INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD	Billerica	\$5,429,715	100%	2025	7.55
604694	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET	Lowell	\$6,287,510	Approved	2028	7.47
607401	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	Chelmsford	\$7,708,380	Approved	2027	7.43
605966	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	Lowell	\$12,437,499	100%	2025-2026	7.4
612535	CHELMSFORD- IMPROVEMENTS ON ROUTE 3A (PRINCETON STREET), FROM RICHARDSON ROAD TO TECHNOLOGY DRIVE	Chelmsford	\$4,489,511	Approved	-	7.3
609317	CHELMSFORD-IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	Chelmsford	\$8,292,957	Approved	2028-2028	7.17
612096	WESTFORD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	Westford	\$5,472,000	Approved	2025	5.57
608861	WESTFORD - BRIDGE REPLACEMENT, W-26-002, STONY BROOK ROAD OVER THE STONY BROOK	Westford	\$1,636,362	25%	2026	4.93
613120	TEWKSBURY- BRIDGE REPLACEMENT, T-03-013, NORTH STREET OVER I-495	Tewksbury	\$32,687,600	Approved	2029	-

TEC Scoring Summary prepared by the NMCOG and MassDOT for the NMMPO

Project ID	Project Description	Community	Project Cost Estimate (Current Dollars)	Design Status	Proposed TIP Year	TEC Score
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607887	LOWELL- ROURKE BRIDGE REPLACEMENT, L-15-088, WOOD STREET EXTENSION OVER BOSTON AND MAINE RAILROAD AND MERRIMAC RIVER	Lowell	\$169,000,000	Approved	2024	13.45
608227	BILLERICA-YANKEE DOODLE BIKE PATH CONSTRUCTION (PHASE 1)	Billerica	\$15,818,583	75%	2024	12.00
612549	LOWELL-PAWTUCKET STREET CORRIDOR IMPROVEMENTS	Lowell	\$8,061,543	Approved	2028	9.60
612609	TEWKSBURY-INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET	Tewksbury	\$4,191,345	Approved	2027	9.25
612977	CHELMSFORD-VINAL SQUARE SAFETY IMPROVEMENTS	Chelmsford	\$5,763,618	-	2028	9.03
609050	LOWELL - CHURCH STREET 2 WAY CONVERSION	Lowell	\$3,050,000	Approved	2029	8.70
609038	WESTFORD - REHABILITATION OF BOSTON ROAD	Westford	\$10,279,116	75%	2024	8.60
609510	DRACUT- IMPROVEMENTS AT GEORGE ENGLSEBY ELEMENTARY SCHOOL (SRTS)	Dracut	\$1,115,100	Approved	2025	8.00
610930	WESTFORD - ROUTE 110 (LITTLETON RD) FROM POWERS ROAD TO MINOT'S CORNER	Westford	\$7,560,105	Approved	2028	7.92
609250	BILLERICA-INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD	Billerica	\$5,220,880	75%	2025	7.55
604694	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET	Lowell	\$5,600,010	Approved	2028	7.47
607401	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	Chelmsford	\$1,209,760	Approved	2025	7.43
605966	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	Lowell	\$12,008,044	75%	2025	7.40
612535	CHELMSFORD- IMPROVEMENTS ON ROUTE 3A (PRINCETON STREET), FROM RICHARDSON ROAD TO TECHNOLOGY DRIVE	Chelmsford	\$4,489,511	Approved	2029	7.30
609317	CHELMSFORD-IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	Chelmsford	\$10,950,000	Approved	2026-2027	7.17
612631	CHELMSFORD-BRIDGE REPLACEMENT, C-08-039, GORHAM STREET (ST 3A) OVER I-495 AND REHABILITATION OF C-08-036, WESTFORD STREET OVER I-495 (DB)	Chelmsford	\$44,358,906	25%	2024	6.37

612096	WESTFORD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	Westford	\$5,472,000	Approved	2025	5.57
608861	WESTFORD - BRIDGE REPLACEMENT, W-26-002, STONY BROOK ROAD OVER THE STONY BROOK	Westford	\$1,636,362	25%	2025	4.93

TEC Scoring Summary prepared by the Northern Middlesex Council of Governments and MassDOT for the Northern Middlesex Metropolitan Planning Organization
 Following the scoring of each project, staff considered the design status and readiness of each project as part of programming activities. In addition to the application of the evaluation criteria, each project was also screened to ensure the following:

- That the project meets requirements set forth in BIL, the Clean Air Act and Amendments, and the Americans with Disabilities Act;
- Is consistent with local, regional, and state plans; and
- Complies with Title VI/Environmental Justice requirements.

The FTA provides funding to Massachusetts to develop new transit systems and improve, maintain, and operate existing systems. The Governor has designated MassDOT as the agency of authority, responsible for administering funding received (Title 49 USC). Programming of transit projects in the TIP is a result of consultation between the LRTA and MassDOT Rail and Transit Division. When applying for funding, the LRTA prioritizes projects based on state of good repair, safety, and facility upgrade criteria. MassDOT then reviews each project and applies scoring criteria to prioritize funding allocations to the applicants. The LRTA applies for funding through the Grants Plus program, with MassDOT Rail and Transit distributing the federal apportionment and providing a state match for capital and operating projects. Additionally, NMCOG provides a local match for planning programs and the LRTA provides a local match for operating assistance.

TIP PUBLIC PARTICIPATION PROCESS

The TIP is the official programming document for transportation projects using Federal funding sources. Upon NMMPO approval, the regional TIP is incorporated into the Statewide Transportation Improvement Program (STIP). The TIP is updated annually and may be amended more often, if necessary. The TIP is developed in consultation with the agencies and officials responsible for other planning activities within the metropolitan area that are affected by transportation, including state and local land use agencies, economic development, environmental protection, and freight interests, as set forth in 23 CFR 450.316, development of a regional public participation plan. This document was prepared in accordance with the Public Participation Plan (PPP) developed by the NMMPO in May 1994 and revised in June 2016. A copy of the PPP is contained in Appendix H. The following procedures and policies will be utilized to ensure adequate public review of the draft TIP document.

All public meetings of the NMMPO are conducted in a hybrid format, via Zoom and in-person at the NMCOG office. Virtual Public Involvement tools such as Zoom meetings, email distributions, and the NMCOG website/social media are often used to disseminate materials and information. Access to virtual meetings is publicly promoted on the NMCOG website, community websites, town and city clerk's offices, through email distribution lists, and in local newspapers. All meeting recordings are posted to the NMCOG YouTube page for on demand viewing.

PUBLIC PARTICIPATION PROCEDURES FOR THE TRANSPORTATION IMPROVEMENT PROGRAM

Title 23 CFR Section 450.326(b) and 310 CMR 60.03(6) h require adequate opportunity for public review and comment during the development of the TIP. The NMMPO process for developing the TIP guarantees the following:

- Public access to the TIP and all supporting documentation;
- Public notification of the availability of the TIP;
- Respecting the public's right to review the document and comment thereon; and
- A 21-day public review and comment period prior to adoption of the TIP by the NMMPO.

PUBLIC OUTREACH TOOLS

A number of public outreach tools are used to communicate with the public and allow for general input into the development of the TIP. These tools are also utilized to provide information on the progress of the TIP and include the following:

- NMCOG website: <https://www.nmcog.org/>;
- NMCOG social media: [Facebook](#), [Instagram](#), [Twitter/X](#);
- NMCOG and NMMPO meetings;
- Electronic mailings;
- Newspaper articles and advertisements;
- Project fact sheets;
- Virtual public meetings;
- Local meetings and public forums; and
- Virtual/in person meetings with neighborhood groups, non-profit organizations and special interest groups;

NOTICE OF THE AVAILABILITY OF THE TIP

Notice of the availability of the TIP and opportunity for public comment is published in *The Sun*, as well as other local news media, such as community-specific or foreign language newspapers, and is posted at the Town and City Clerk offices. The Public Meeting Notice and the Draft and Final TIP documents are posted on the NMCOG website at: www.nmcog.org as well as on the Federal Certification Documents page at <https://www.nmcog.org/federal-certification-documents>. A notice and link is also posted on the LRTA

website at: www.lрта.com. An email is sent to the NMMPO public outreach email list notifying interested stakeholders of the availability of the TIP. Notices are also made available on NMCOG’s social media platforms. Copies of the Draft and Final TIP are forwarded to the NMMPO members and all stakeholders and interested parties prior to the NMMPO meeting.

A 21-day public comment period commences once a draft TIP document is approved by a vote of the NMMPO. A minimum of one virtual public meeting is held to receive comments on the draft document. Comments may also be submitted, in writing, through conventional mail, by email, phone or social media.

Upon conclusion of the comment period, all public comments are considered, and if appropriate, incorporated into the final TIP. The final TIP includes a summary of comments received and a report of responses/actions taken by the NMMPO. The NMMPO then votes on the endorsement of the final TIP document. The endorsed TIP document is posted on the NMCOG website at www.nmcog.org as well as on the Federal Certification Documents page at <https://www.nmcog.org/federal-certification-documents>, and disseminated to stakeholders through the NMMPO public outreach email list.

MILESTONES IN FFY 2025-2029 TIP DEVELOPMENT:

Endorsement of the FFY 2025-2029 Northern Middlesex TIP follows a specific schedule outlined by the NMMPO. Development consists of public outreach to the communities and presentation of TIP information to the MPO and NMCOG Council throughout the process. All NMCOG meetings are made accessible by providing accommodations upon request. Accessibility includes translations, sign languages, etc. The following lists key meeting dates where staff provided updated TIP development information. NMMPO meetings are conducted in a hybrid format, and the public meeting to hear comments on the draft TIP was virtual via Zoom.

- January 24, 2024: Staff presents the TIP development schedule to the NMMPO.
- January 31, 2024: MPO staff meets with State and Federal partners to discuss funding the TIP.
- February 7, 2024: MPO staff meets with MassDOT partners to discuss readiness and potential programming of TIP Projects.
- February 28, 2024: Staff presents TIP funding information and TIP readiness day recommendations to the NMMPO.
- March 27, 2024: NMMPO votes on preferred TIP programming scenarios.
- April 24, 2024: Staff presents the draft FFY 2025-2029 TIP to the NMMPO for a vote to release the document for a public comment period.
- May 8, 2024: Staff hosts a public meeting to hear comments on the draft FFY 2025-2029 TIP.
- May 22, 2024: Staff presents comments received on the draft TIP and the NMMPO votes to endorse the document.

- June 1, 2024: The NMMPO-endorsed TIP is finalized and submitted for FHWA, FTA, and MassDOT approval.
- October 1, 2024: The NMMPO FFY 2025-2029 TIP goes into effect on the first day of the new Federal Fiscal Year.

AMENDMENTS/ADJUSTMENTS TO THE TIP

All Federal certification documents endorsed by the NMMPO follow standardized procedures regarding amendments and/or administrative adjustments as directed in 23 CFR 450.104 and 23 CFR 450.218(n) and outlined in the Northern Middlesex regional Public Participation Plan. Amendments to the TIP require an endorsement by the MPO members after a public review and comment period. Administrative adjustments to the TIP can be made without formal MPO action and do not require a public comment period. However, the MPO can vote to release the adjustment for a public comment period if it feels it is in the best interest of the MPO and the transportation planning process. Tables 8 and 9 provide an overview of what constitutes an administrative adjustment versus an amendment to the TIP for both highway and transit projects.

TABLE 8: TIP ADMINISTRATIVE ADJUSTMENT/AMENDMENT SCENARIOS - HIGHWAY PROJECTS

Highway Project TIP 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	Project description changes are treated as administrative modifications for minor changes (e.g. spelling errors, more detailed

TABLE 8: TIP ADMINISTRATIVE ADJUSTMENT/AMENDMENT SCENARIOS - HIGHWAY PROJECTS

Highway Project TIP Revision Definitions and Procedures

Type of Revision	Definition	Procedure	Notes
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	descriptions, adding mile-markers, etc.). 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.

TABLE 8: TIP ADMINISTRATIVE ADJUSTMENT/AMENDMENT SCENARIOS - HIGHWAY PROJECTS

Highway Project TIP Revision Definitions and Procedures

Type of Revision	Definition	Procedure	Notes
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 "addition Information" column of the TIP not covered in any other item listed here (e.g. earmark details, project proponent, etc.)	Adjustment	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.

TABLE 9: TIP ADMINISTRATIVE ADJUSTMENT/AMENDMENT SCENARIOS - TRANSIT PROJECTS

Transit Project TIP 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 nonfederal aid participating cost of the project.

TABLE 9: TIP ADMINISTRATIVE ADJUSTMENT/AMENDMENT SCENARIOS - TRANSIT PROJECTS

Transit Project TIP Revision Definitions and Procedures

Type of Revision	Definition	Procedure	Notes
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	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 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 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 TIP that has been vetted through the public process.

TABLE 9: TIP ADMINISTRATIVE ADJUSTMENT/AMENDMENT SCENARIOS - TRANSIT PROJECTS

Transit Project TIP Revision Definitions and Procedures

Type of Revision	Definition	Procedure	Notes
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 the NMMPO 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 FTA Regional Office. Additionally, the NMMPO may make exceptions to the procedures outlined above and treat amendments as administrative adjustments, but these exceptions will also require coordination with and concurrence by federal partners and MassDOT. All actions on the TIP must be taken in accordance with the region’s public participation program.

RELATIONSHIP BETWEEN THE TIP, THE CONGESTION MANAGEMENT PROCESS AND THE MTP

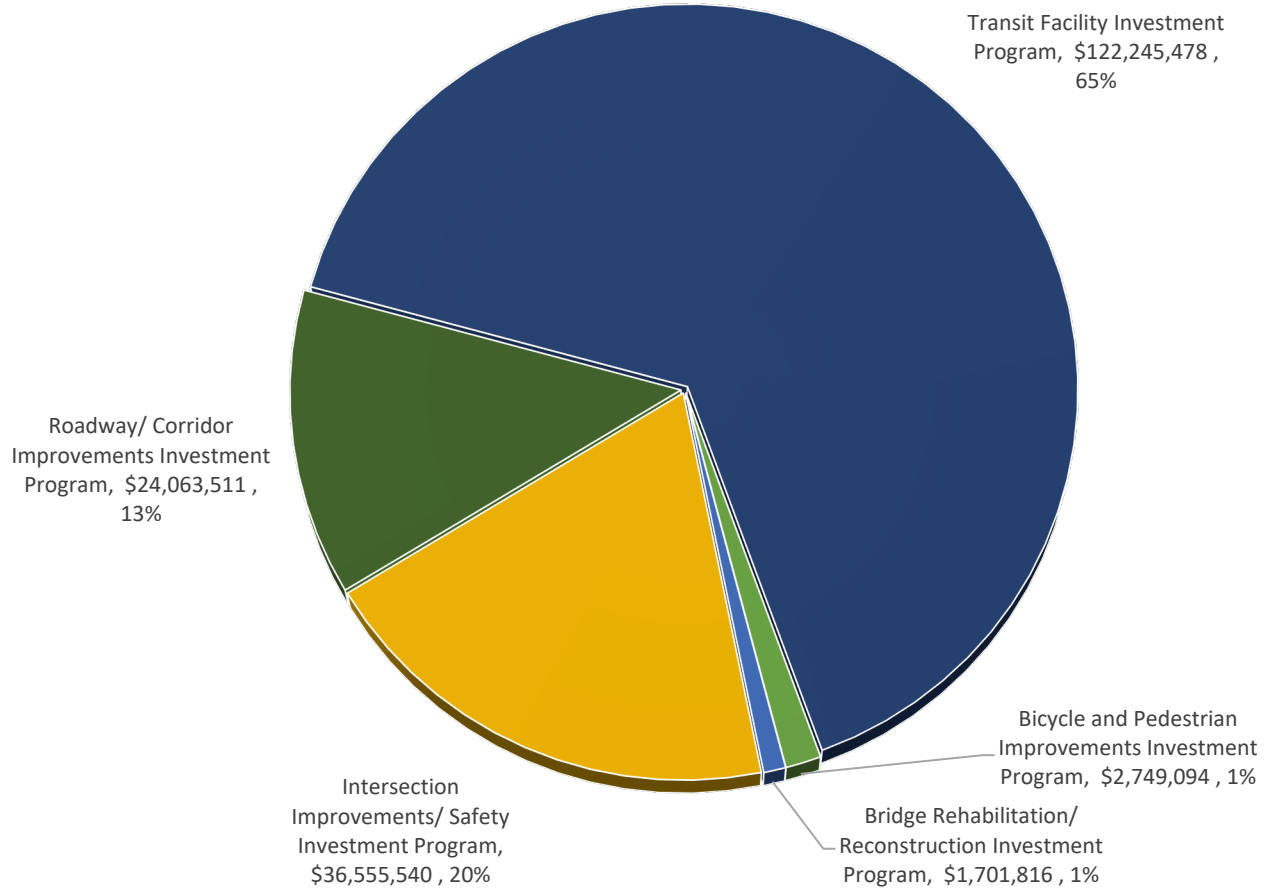
The Metropolitan Transportation Plan (MTP) covers a period of at least twenty years and is updated every four years in accordance with federal requirements. The overall transportation goals and policies articulated in the Plan ensure that individual projects are considered within the context of established regional performance goals, as required by the Infrastructure and Investment Jobs Act. As projects advance, NMMPO staff will identify which goal areas introduced in the MTP will be addressed within the TIP. Accordingly, each project in the MTP is categorized under one of five NMMPO investment programs, as described below.

- **Intersection Improvement/Safety Investment Program** – This category funds safety and mobility improvements for intersections throughout the region. Improvements include adding/upgrading traffic signals, intersection redesigns, and bicycle accommodations, adding curb cuts and improving sidewalks.
- **Roadway/Corridor Improvements Investment Program** – This category is aimed at enhancing, modernizing or addressing capacity issues on Federal Aid-eligible roadways. Projects in this program will use a Complete Streets approach to improve the mobility, accessibility and safety for all users of the system. Improvements involve corridor upgrades including roadway rehabilitation, added/upgraded traffic signals along a corridor, new/upgraded sidewalks, and new/upgraded bicycle accommodations.
- **Bicycle and Pedestrian Investment Program** – This addresses expansion or the addition of bicycle and pedestrian facilities, in order to improve accessibility and safety for non-motorized users of the roadway network. Projects include construction of multi-use trails, off- and on-road bicycle facilities, and new sidewalks.
- **Bridge Rehabilitation/Reconstruction Investment Program** – This category includes improvements to area bridges, in order to reduce congestion, address functionality, or improve safety throughout the region. Improvements include rehabilitation or replacement of structurally deficient or regionally significant priority bridges.
- **Transit Facility Investment Program** – This category funds improvements to transit facilities and services, and the modernization of the Lowell Regional Transit Authority vehicle fleet.

Figure 4 presents the financial distribution for the FFY 2025-2029 TIP within each MTP Investment Program. The Transit Facility Investment Program represents the largest category of the funds, comprising 65% (\$122,245,478) of the total programming. The Intersection Improvements/Safety Investment Program is the second largest, receiving 20% (\$36,555,540) of the funding. Investments in Roadway/Corridor Improvement are allocated at 13% (\$24,063,511). Finally, funding for the Bridge Rehabilitation/Reconstruction

Investment Program and the Bicycle and Pedestrian Improvements Investment Program are both allocated about 1% of the total funds, at \$1,701,816 and \$2,749,094 respectively. Appendix D lists individual project programming and their corresponding MTP Investment Program.

FIGURE 4: FFY 2025-2029 TIP PROGRAMMING BY MTP INVESTMENT PROGRAM



Performance measures will be used to monitor the regional transportation network and will serve to help prioritize how TIP projects are selected. The region also maintains a Congestion Management Process to monitor operating conditions within the regional transportation network. The TIP provides access to the funding necessary to transform the Plan’s policies and goals into finalized projects to help address congestion issues identified through the Congestion Management Process. TIP projects are drawn directly from the Plan. In addition to being drawn from the Plan, projects may be derived from special studies, such as corridor studies and traffic impact studies. The transit portion of the TIP may also contain routine capital equipment replacement projects.

TIP PROJECT FUNDING

HIGHWAY FUNDING CATEGORIES

Non-Federal Aid (NFA): Non-Federal aid funds are typically state monies that are derived from various sources including the Transportation Bond Bill.

Bridge Formula Program (BR, NGBP, HIP, BR-On & BR-Off): Finances the replacement or repair of bridges classified as in poor condition and rehabilitation of bridges classified as in fair condition. On-system bridge monies are used for bridges impacting roadways on the federal aid system. Off-system bridge monies are used for bridges that impact roadways that are not part of the federal aid system (15% of state apportionment set aside for off-system” bridges). These types of projects are funded with 80% federal money matched with 20% state money.

National Highway Performance Program (NHPP): This funding is used to support condition and performance on the National Highway System (NHS), to construct 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 the State’s asset management plan for the NHS. The NHS is the network of the nation’s most important highways, including the Interstate and US highway systems. NHPP funded projects are 80% federally funded with 20% state match.

Surface Transportation Block Grant Program (STBG): Flexible funding that may be used by States and localities for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, transit capital projects and public bus terminals and facilities. STBG funds are 80% federal monies requiring a 20% state match.

Transportation Alternatives (TA or “TAP”): The BIL continues the Transportation Alternatives set-aside from the Surface Transportation Block Grant (STBG) program. Eligible uses of the set-aside funds include all projects and activities that were previously eligible under the TAP under the Infrastructure Investment and Jobs Act (IIJA). TAP encompasses a variety of smaller-scale transportation projects such as pedestrian and bicycle facilities, recreational trails, safe routes to school projects, community improvements such as historic preservation and vegetation management, and environmental mitigation related to storm water and habitat connectivity. In programming projects on the TIP, the “TAP” category is still used for tracking purposes. Transportation Alternatives funding provides for a variety of transportation projects that were previously eligible activities under separately funded programs. Eligible activities include:

- Pedestrian and Bicycle Facilities
- Recreational Trails Program
- Safe Routes to Schools Program
- Community improvements such as historic preservation and vegetation management
- Environmental mitigation related to storm water and habitat connectivity

Fifty percent of TAP funds are distributed to areas based on population. The NMMPO uses the transportation evaluation criteria to prioritize projects that receive TAP funding in the TIP.

Congestion Mitigation Air Quality (CMAQ): Programs and projects funded under this category must contribute to the attainment of National Ambient Air Quality Standards (NAAQS) or must be included in the State Implementation Plan pursuant to the Clean Air Act of 1990 and subsequent amendments. These funds may be utilized for both roadway and transit projects. CMAQ funds are 80% federal monies requiring a 20% state match.

Highway Safety Improvement Program (HSIP): Highway Safety Improvement Program funds are for the design and construction of highway projects that would reduce the number and severity of roadway crashes. Funding determination is based on crash data and engineering assessments of identified hazardous locations. HSIP funds are 90% federal monies requiring a 10% state match.

National Highway Freight Program (NHFP): National Highway Freight Program funds are for construction of highway projects designed to improve the efficient movement of freight on the National Highway Freight Network. NHFP funds are 80% federal monies requiring a 20% state match.

Carbon Reduction Program (CRP): The 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. CRP funds are 80% federal monies requiring a 20% state match.

For more STIP funding sources and categories, please refer [MassDOT’s STIP FFY 2024 Appendix D: Funding Categories and Assumptions⁵](#).

Table 10 provides an overview of regional target funding available for programming by the NMMPO in development of the FFY 2025-2029.

TABLE 10: FFY 2025-2029 FUNDING FOR REGIONAL PRIORITIES

Federal Fiscal Year	Federal Funding for Regional Priorities	Northern Middlesex Federal Aid Apportionment (3.9096%)	State Matching Funds	Northern Middlesex Regional Target Funding
2025	\$298,897,735	\$9,348,565	\$2,337,141	\$11,685,706
2026	\$291,585,160	\$9,119,851	\$2,279,963	\$11,399,814
2027	\$361,048,668	\$11,292,447	\$2,823,112	\$14,115,559
2028	\$367,844,642	\$11,505,003	\$2,876,251	\$14,381,254
2029	\$289,118,188	\$9,348,565	\$2,337,141	\$11,685,706
2025-2029	\$1,608,494,393	\$50,614,431	\$12,653,608	\$ 63,268,039

TRANSIT FUNDING CATEGORIES

Section 5307/Urbanized Area Formula Grants: The Urbanized Area Formula Funding program (49 U.S.C. 5307) provides grants to urbanized areas to support public transportation. Funding is distributed by formula based on the level of transit service provision,

⁵ STIP 2023 Appendix D: Funding Categories and Assumptions. <https://www.mass.gov/doc/stip-ffy-2024-2028-final-report/download>
Draft FFY 2025-2029 NMMPO Transportation Improvement Program

population, and other factors. Section 5307 funds are Federal Transit Administration monies used to finance capital, planning, and operating and maintenance expenses for the Lowell Regional Transit Authority (LRTA) urban service area. The funding ratios and match requirements for each sub-category are as follows:

- Funding for capital expenses: Federal 80%/State 20%
- Funding for planning expenses: Federal 80%/NMCOG 20%
- Funding for operating: Federal 46%/State 32%/LRTA 22% (varies annually)

Section 5310/Mobility Assistance Program (MAP): This program (49 U.S.C. 5310) finances capital expenses for private non-profit organizations to provide specialized transit services for the older adults and persons with disabilities. The Massachusetts Mobility Assistance Program (MAP) extends these provisions to public non-profit agencies. These awards are approved on a project-by-project basis, funding only capital expenses for the acquisition of specific types of vans and base station equipment and may not be used for operating expenses. Section 5310 incorporates the former New Freedom program. The program is funded with 80% MAP monies and 20% RTACAP (Capital Assistance Program) funds or other local funds, depending on the applicant.

Section 5311/Rural Area Formula Grant Program: 49 U.S.C. Section 5311 Formula Grants for Rural Areas program provide 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. The program also provides funding for state and national training and technical assistance through the Rural Transportation Assistance Program.

Federal share is 80% for capital projects, 50% for operating assistance, and 80% for Americans with Disability Act (ADA) non-fixed route paratransit service. Section 5311 funds are available to the states during the fiscal year of apportionment plus two additional years (total of 3 years). Eligible activities include planning, capital, operating, job access and reverse commute projects and the acquisition of public transportation services.

Section 5337/State of Good Repair: The State of Good Repair Grants Program (49 U.S.C. 5337) provides capital assistance for maintenance, replacement, and rehabilitation projects of high-intensity fixed guideway and bus systems to help transit agencies maintain assets in a state of good repair. This includes bus and bus-related assistance projects for sub-recipients that are public agencies, private companies engaged in public transportation, or private non-profit organizations. Additionally, the SGR Initiative

makes funds available for Transit Asset Management systems, which provide a systematic process of operating, maintaining, improving, and expanding physical assets effectively throughout their life cycles.

Section 5339/Bus and Bus Facilities: This formula grant program (49 U.S.C. 5339) provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. In addition to the formula allocation the Grants for buses and bus facilities program include two discretionary components: the Bus and Bus Facilities Discretionary Program and the Low or No Emissions Bus Discretionary Program.

Flexible funding: In some cases, funds allocated under the categories of Surface Transportation Block Grant Program (STBG), National Highway System (NHS), and Congestion Mitigation Air Quality (CMAQ) may be utilized for transit projects. All projects funded under this category are funded with 80% federal/20% state funds. Both CMAQ and STBG funds are 100% flexible in that an MPO may elect to allocate any portion of these to transit projects. In addition, the State may elect to transfer up to 20% of its Interstate Maintenance funds, 50% of its NHPP funds, and 40% of its Bridge funds to the STBG program. Once transferred, any such funds are as flexible as STBG funds.

REGIONAL EQUITY: TIP PROJECTS – 2015-2029

A geographic distribution analysis of TIP funded projects has been undertaken to assess regional equity in the transportation planning process. Environmental Justice (EJ) areas have been identified and TIP projects have been mapped based on minority populations, low-income populations and areas with both minority and low-income populations. Previous TIP funded projects (FFY 2015-2024) as well as programmed projects in this TIP (FFY 2025-2029) are included.

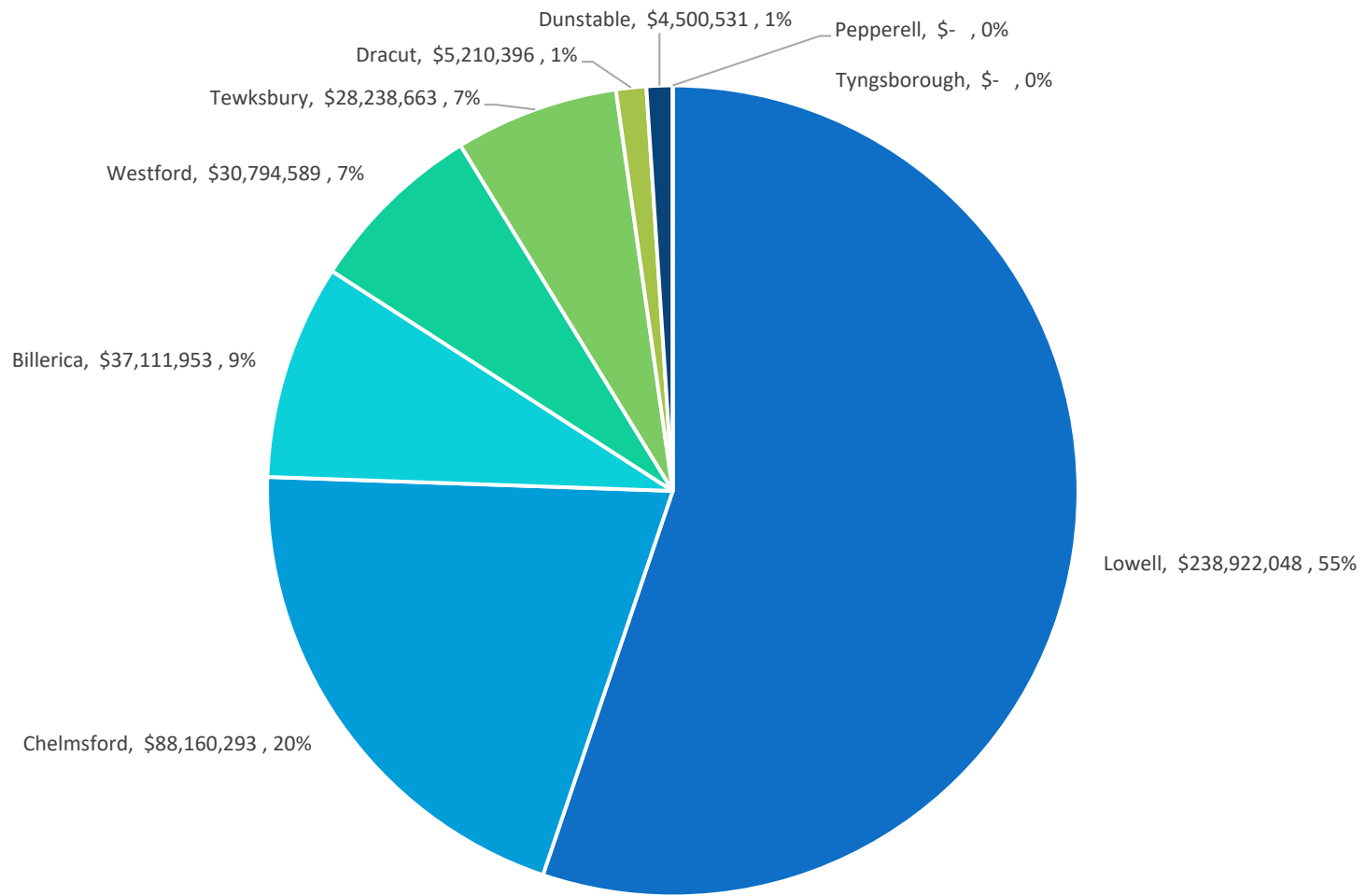
Table 11 illustrates the distribution of transportation projects and funding by municipality including all past and current TIP projects between FFY 2015 to 2029. Forty-one (41) projects have been funded since 2015 or are being programmed in this TIP. These projects include MassDOT Statewide Program projects, as well as community-initiated projects. The City of Lowell stands out with the highest number of projects at ten, and the highest in total funding (\$238,922,000), which equates to a funding per capita of \$2,067.62. Next, Chelmsford also stands out with eight projects, albeit with the highest funding per capita of \$2,484.23, and the second highest in total funding (\$88,160,290). Lowell and Chelmsford contrast with Pepperell and Tyngsborough which have received no funding, highlighting a disparity in the distribution of resources between municipalities. This variance stresses the ongoing challenge of ensuring regional equity in funding allocation, a task that the NMMPO continues to address through its collaborative work with community stakeholders.

TABLE 11: SUMMARY OF TIP FUNDING PER CAPITA (2015-2029)

Community	2020 Census Population	# of TIP Projects 2015-2029	Total Project funding	TIP Funding per capita per year
Billerica	42,119	6	\$37,111,953	\$881
Chelmsford	35,488	8	\$88,160,293	\$2,484
Dracut	32,617	1	\$5,210,396	\$160
Dunstable	3,358	1	\$4,500,531	\$1,340
Lowell	115,554	10	\$238,922,048	\$2,068
Pepperell	11,604	0	\$0	\$0
Tewksbury	31,342	8	\$28,238,663	\$901
Tyngsborough	12,380	0	\$0	\$0
Westford	24,643	7	\$30,794,589	\$1,250
Total	309,105	41	\$432,938,472	\$1,401

Figure 5 shows the distribution of NMMPO TIP funding by community. The City of Lowell receives the highest percentage of TIP funds with about 55% of programming. The Town of Chelmsford receives the second highest at 20%. The Towns of Billerica (9%), Westford (7%), and Tewksbury (7%) all receive a similar amount of funding. Dunstable and Dracut both receive 1%, and the Towns of Pepperell and Tyngsborough did not receive funding during this time period. The NMMPO will continue to work with each community to maintain regional equity in TIP funding allocation.

FIGURE 5: DISTRIBUTION OF TIP FUNDING BY COMMUNITY FFY 2015-2029



To illustrate regional equity, the identified TIP projects were mapped relative to identified Environmental Justice (EJ) areas across the region, thereby comparing the number of projects and funding amounts programmed located inside and outside of these designated areas. EJ areas are US Census Block Groups that meet one of the following criteria as defined by the Massachusetts Executive Office of Energy and Environmental Affairs (EEA)⁶:

- 1) The annual median household income is 65 percent or less of the statewide annual median household income
- 2) Minorities make up 40 percent or more of the population
- 3) 25 percent or more of households identify as speaking English less than "very well"
- 4) Minorities make up 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the statewide annual median household income.

Map 1 presents projects in the 2025-2029 TIP and Map 2 outlines projects programmed between 2015 and 2024. Each map displays the existing EJ areas and project locations relative to those EJ areas. Table 12 presents FFY 2015-2029 TIP project funding by whether they are near an EJ area defined as being inside or within a quarter of a mile of an EJ area (referred to as "near"). Approximately, 75% of programmed TIP funding are near a minority EJ area, 10% near a low-income EJ area, and 5% near an EJ area with limited English proficiency. Eighty-six percent (86%) of all TIP projects programmed are within a quarter of a mile of any EJ area.

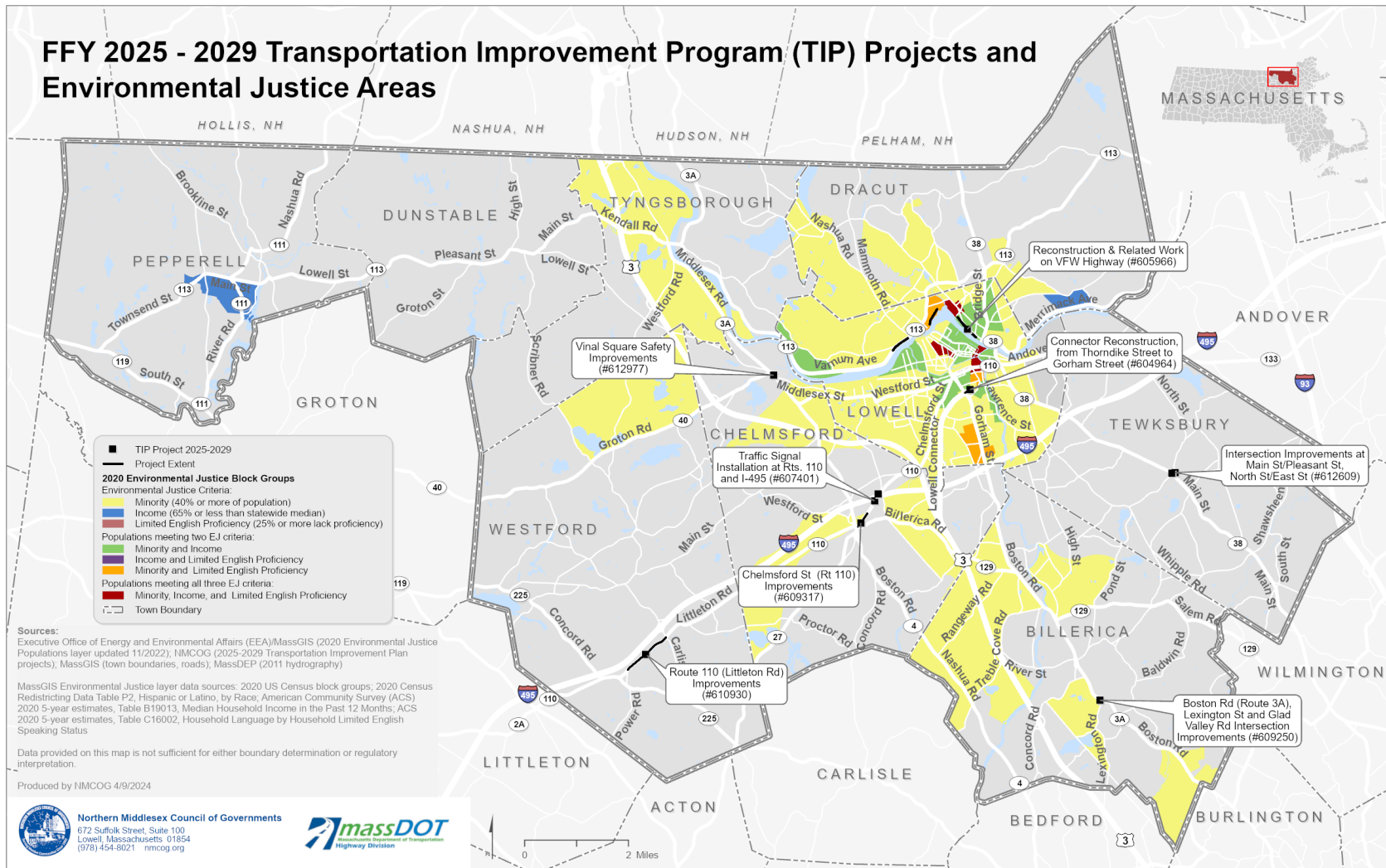
⁶ Massachusetts Executive Office of Energy and Environmental Affairs (EEA). "What is an Environmental Justice Population?": <https://www.mass.gov/info-details/environmental-justice-populations-in-massachusetts>

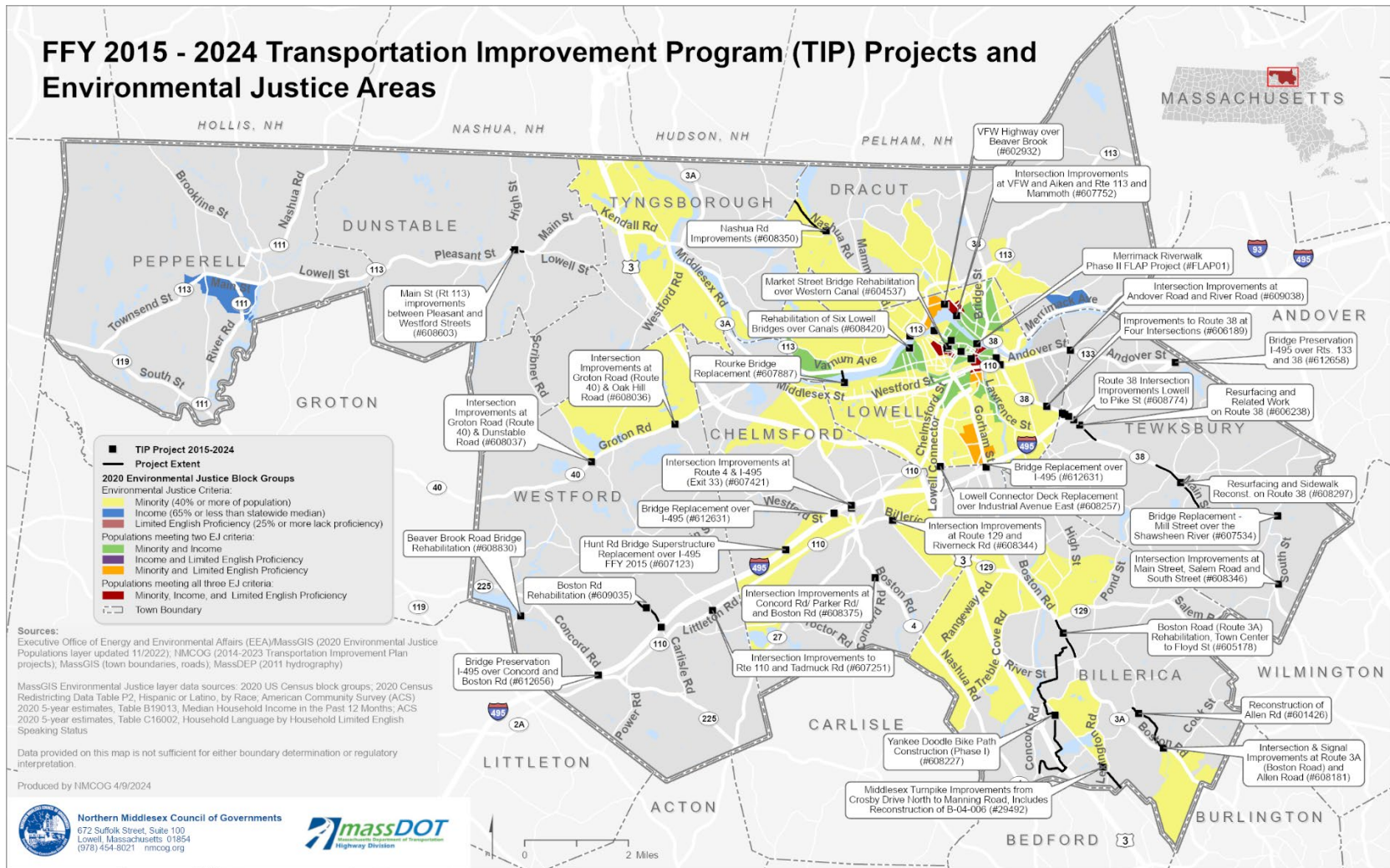
TABLE 12: FFY 2015-2029 TIP FUNDING BY ENVIRONMENTAL JUSTICE POPULATION

Community	Total TIP Projects	Total TIP Projects within 0.25mi of EJ Area	TIP Funding by Environmental Justice Category				TIP funding not within 0.25mi of any EJ Area
			TIP Funding within 0.25mi of Minority Area	TIP Funding within 0.25mi of Low-Income Area*	TIP Funding within 0.25mi of Limited English Proficiency Area	TIP Funding within 0.25mi of any EJ Area	
Billerica	6	5	\$33,399,814	\$0	\$0	\$33,399,814	\$3,712,139
Chelmsford	8	6	\$78,948,814	\$0	\$0	\$78,948,814	\$9,211,479
Dracut	1	1	\$5,210,396	\$0	\$0	\$5,210,396	\$0
Dunstable	1	0	\$0	\$0	\$0	\$0	\$4,500,531
Lowell	10	10	\$193,321,403	\$44,490,076	\$22,034,881	\$238,922,048	\$0
Pepperell	0	0	\$0	\$0	\$0	\$0	\$0
Tewksbury	8	2	\$8,499,235	\$0	\$0	\$8,499,235	\$19,739,428
Tyngsborough	0	0	\$0	\$0	\$0	\$0	\$0
Westford	7	2	\$5,248,616	\$0	\$0	\$5,248,616	\$25,545,973
Total	41	41	\$324,628,278	\$44,490,076	\$22,034,881	\$370,228,923	\$62,709,550

*Note: A low-income area is a US Census Block Group where the median household income is 65 percent or less than the statewide median household income which \$55,247.

MAP 1: FFY 2025-2029 TIP Projects and EJ Areas





Title VI of the Civil Rights Act of 1964 - National Origin Discrimination against Persons with Limited English Proficiency (LEP), and Presidential Executive Order 13166 require entities that receive federal funds to provide guidance on how they will address the needs of LEP individuals. The U.S. Department of Transportation (USDOT) has developed a guidance document entitled “A Policy Guidance Concerning Recipients’ Responsibilities to Limited English Proficient Persons”. This guidance was issued to ensure that persons in the Draft FFY 2025-2029 NMMPPO Transportation Improvement Program

United States are not excluded from participation in DOT-assisted programs and activities simply because they face challenges communicating in English.

As part of Title VI reporting, NMCOG maps minority, low income, Limited English Proficiency (LEP), as well as age, and disability as populations of concern for different aspects of the TIP including:

- Transportation Evaluation Criteria (TEC),
- Public outreach, and
- LRTA Title VI/LEP submissions.

In the Northern Middlesex region, approximately 7% of the region’s population speak English less than “very well”⁷. The five most spoken non-English languages in the region are Spanish, Vietnamese, Portuguese, Chinese and Khmer. All certification documents are available in these languages. The NMMPO strives to engage groups and organizations representing Title VI and Environmental Justice populations. Most of this engagement takes place during the development of the Long-Range Transportation Plan and the Coordinated Human-Services Transit Plan (CHSTP).

In the development of Envision 2050, staff conducted extensive public outreach. NMCOG staff engaged all NMMPO communities, including organizations that serve Title VI and Environmental Justice populations. Topics discussed at these meetings ranged from pedestrian, bicycle, and traffic safety to intersection and bridge priorities. The feedback received was incorporated into the MTP and plays a significant role in the prioritization of the projects in both the MTP and the TIP. In addition to the engagement process conducted for Envision 2050, the CHSTP included additional outreach to municipal staff, seniors, and people with disabilities across the region to understand their unmet transit needs.

⁷ Data Source: Northern Middlesex Metropolitan Planning Organization Federal Fiscal Year 2023 Title VI Annual Update, Appendix F page 4.
Draft FFY 2025-2029 NMMPO Transportation Improvement Program

TIP FUNDING EQUITY ANALYSIS

INTRODUCTION

The NMMPO is committed to its goal of providing fair and equitable transportation access and service quality for all communities, as outlined in the strategic vision of Envision 2050, NMMPO's Metropolitan Transportation Plan. This commitment is central to the NMMPO's operations, particularly in one of its core activities, the Transportation Improvement Program (TIP). This section describes an equity analysis that evaluates the equitable distribution of transportation resources funded by the TIP in accordance with the MPO's Transportation Justice Program (TJP). Recognizing the need for continual improvement in advancing equity in transportation projects, this analysis is an integral step toward enhancing NMMPO's transparency and understanding of its progress in achieving this crucial goal.

METHODS

The methodology applied here aligns with the Title VI equity analysis guidelines described in the FTA Circular 4702.1B. For consistency with other NMMPO Environmental Justice (EJ) analyses, the Commonwealth's definition of low-income populations was used. Accordingly, low-income households are identified as those earning 65 percent or less than the statewide median household income, translating to an annual income threshold of \$55,247 or less.

The analysis encompassed a comprehensive review of NMMPO's internal TIP projects database. This database includes detailed information on 33 projects programmed from 2015 to 2024 and eight planned projects scheduled for 2024 to 2028 in the most recent TIP for FY 2025-2029. In this context, "TIP funding" refers to the total cost of each project. Demographic data, including race and household income figures at the block group level, is sourced from the 2020 US Decennial Census.

A critical step in this analysis involved mapping the demographics of each TIP project. This was achieved by creating a quarter-mile buffer around the center of each project and examining the demographic overlap with the surrounding block groups. The level of overlap determined the allocation of population figures to each TIP project. For example, if a block group with a composition of 100 minority and 200 non-minority individuals overlapped by 50% with a TIP project buffer, 50 minority and 100 non-minority individuals were allocated to that project. Subsequently, project dollars were proportionally allocated based on these demographic compositions. For example, a hypothetical \$1 million project that is 50% minority and 50% non-minority would result in \$500,000 allocated to each group.

The final stage of this analysis focused on assessing the equitable distribution of TIP funding. The ratio of TIP funding received by minority and low-income populations was calculated against their respective proportions in the NMMPO Region. These ratios were then categorized ratios to reflect three possible scenarios in transportation equity:

- **Ratio less than 1:** Decline of transportation equity. The proportion of TIP funding is less than the proportion of the total population.
- **Ratio of 1:** No change of transportation equity. The proportion of TIP funding is the same as the proportion of the total population.
- **Ratio greater than 1:** Improvement of transportation equity. The proportion of TIP funding is greater than the proportion of the total population.

RESULTS

Table 13 provides a detailed analysis of the distribution of TIP funding among minority and non-minority groups, as well as low-income and non-low-income populations for two consecutive periods: 2015-2024 and 2025-2029. During the period of 2015-2024, a total of \$369,343,316 in TIP funding was allocated, with 40.8% (\$150,663,004) directed towards minority populations and 35.3% (\$130,362,252) to low-income groups. However, the subsequent period of 2025-2029 demonstrates a shift in funding distribution, totaling \$63,595,156, where a reduced proportion of 31.3% (\$19,899,288) is allocated to minority populations and a relatively stable 35.1% (\$22,349,701) to low-income groups. This recent allocation reflects a mixed outcome. On one hand, the 31.3% of funds directed towards minority populations surpasses their 29.4% representation within the NMMPO region, indicating a continued improvement in equity. On the other hand, this represents a decline from the previous period’s 40.8% allocation, suggesting the current TIP will improve equity at a slower rate than the previous decade. While these trends show that TIP projects maintain a direction towards equity, the diminished rate of increase in funding allocation for minority groups signals a need for the MPO to further prioritize projects in minority neighborhoods in future TIPs.

TABLE 13: DISTRIBUTION OF TIP FUNDING BY DEMOGRAPHIC GROUP (2015-2024 AND 2025-2029)

Population	Proportion of Population in NMMPO Region	TIP Funding 2015-2024	Proportion of TIP Funding 2015-2024	TIP Funding 2025-2029	Proportion of TIP Funding 2025-2029
Minority	29.4%	\$150,663,004	40.8%	\$19,899,288	31.3%
Non-minority	70.6%	\$218,680,312	59.2%	\$43,695,868	68.7%
Low income	31.1%	\$130,362,252	35.3%	\$22,349,701	35.1%
Non-low-income	68.9%	\$238,981,062	64.7%	\$41,245,455	64.9%

Table 14 further highlights this shift towards greater equity in TIP project funding. For the period 2015-2024, the ratio of TIP funding to population for minority groups was 0.93, suggesting a marginal decline in transportation equity. However, in the 2025-2029 period,

this ratio dramatically improved to 1.53, indicating a significant advancement in transportation equity for minority populations. A similar positive trend is observed for low-income populations, with the ratio increasing from 1.06 to 1.15. A key factor in this positive outcome is the planned replacement of the Rourke Bridge, budgeted at \$169,000,000 in the 2025-2029 TIP. This project alone accounts for nearly 60% of the total project costs for this period. The Rourke Bridge is situated in a part of Lowell that has a higher concentration of minority and low-income populations compared to the average in the Greater Lowell area. The substantial investment in this project is a significant contributor to the improved ratio of TIP funding, reflecting NMMPO’s focused efforts to enhance transportation equity in regions where it is most needed.

TABLE 14: RATIOS OF TIP FUNDING TO POPULATION FOR MINORITY AND LOW-INCOME POPULATIONS

Population	TIP Funding to Population Ratio 2015-2024	TIP Funding to Population Ratio 2025-2029
Minority	1.39	1.06
Low-income	1.14	1.13

Table 14 offers an updated view of the shifts in transportation equity through the TIP funding ratios for minority and low-income populations over two periods: 2015-2024 and 2025-2029. For the earlier period, the ratio for minority groups was 1.39, indicating a substantial improvement in transportation equity. A significant factor contributing to this improvement was the inclusion of the Rourke Bridge project, programmed in FFY 2024 at \$169,000,000, which represents 46.8% of the total project funding allocated in the 2015-2024 period. Located in an area of Lowell with a higher concentration of minority and low-income populations, the Rourke Bridge represents a crucial investment in enhancing transportation accessibility for these communities. The ratio for low-income populations during this period also saw an increase to 1.14, further demonstrating progress in equity.

However, moving into the 2025-2029 period, there is a noticeable shift in the ratios. For minority populations, the ratio decreased to 1.06, still above the equity baseline but lower than the previous period, indicating a reduction in the rate of improvement. The ratio for low-income populations remained relatively stable at 1.13. These results underscore the substantial influence that a single major project, like the Rourke Bridge, can have on advancing transportation equity. The absence of a comparably impactful project in the current period clearly reflects in the moderated improvement rates. To continue making strides in transportation equity, it is crucial for the MPO to consider integrating another large-scale project or multiple smaller projects in the next TIP in minority neighborhoods.

HIGHWAY AND TRANSIT PROJECT LISTINGS

This section provides descriptions for programmed highway projects across the TIP's five-year funding cycle, comprised of regional target highway projects, transit projects, and state priority projects. Summaries of regional projects are provided on the following pages. These summaries include general descriptions for each regional target project programmed in this TIP cycle, Transportation Evaluation Scores (TEC), MassDOT's Project Review Committee Scores, and GHG impacts where available.

Following the project descriptions is the full STIP Investment Report for the Northern Middlesex Region, which includes both regionally prioritized and state-prioritized projects programmed for FFY 2025-2029.

- **PROJECT PROPONENT:** MASSDOT
- **ESTIMATED CONSTRUCTION COST: YEAR 1 \$3,725,233
YEAR 2 \$8,712,267**
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS - STBG, TAP
- **TIP PROGRAMMING YEAR:** FFY 2025 & 2026
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 11/30/2024
- **MPO TRANSPORTATION EVALUATION SCORE:** 7.40
- **GHG ANALYSIS TYPE:** QUANTITATIVE
- **GHG ANALYSIS RESULTS:** 28,741 KG/YR CARBON DIOXIDE REDUCTION



PROJECT DESCRIPTION

This project includes separating the roadway drainage system from the municipal sewer system, cold planing and resurfacing the roadway, restoring sidewalks, reconstructing wheelchair ramps, installing hook lock inlet grates on catch basins, restoring traffic signal loop detectors, and restoring roadway pavement markings.

The project begins south of the intersection of Varnum Avenue with Pawtucket Boulevard and ends approximately 500’ west of the intersection of Bridge Street and VFW Highway. The facility length is 1.5 miles. The project is segmented into four which excludes several locations which have been recently reconstructed.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	\$ 2,980,186	\$ 6,969,813	-	-	-
Non-Federal	\$ 745,047	\$ 1,742,453	-	-	-
Total	\$ 3,725,233	\$ 8,712,267	-	-	-

PROJECT ID 607401 – TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS) IN CHELMSFORD

- **PROJECT PROPONENT:** MASSDOT
- **ESTIMATED CONSTRUCTION COST:** \$8,325,050
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS - STBG
- **TIP PROGRAMMING YEAR:** FFY 2027
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 09/30/2025
- **MPO TRANSPORTATION EVALUATION SCORE:** 7.43
- **GHG ANALYSIS TYPE:** QUALITATIVE
- **GHG ANALYSIS RESULTS:** -



PROJECT DESCRIPTION

This intersection improvement project consists of the installation of two traffic signals at the intersection of Route 495 and Route 110 (Exit 34). This also includes the addition of left turn lanes with roadway pavement markings, improvements to pavements and pedestrian and bicycle improvements. The Route 110 corridor from Alpine Lane to Stedman Street/Golden Cove Road is scheduled to be reconstructed in 2025-2026 by the MassDOT Highway Division. Design development for the project is underway. The intersection Route 110 at Stedman Street and Golden Cove Road has been identified as a high crash location within the limits of the proposed reconstruction project.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	-	-	\$6,660,040	-	-
Non-Federal	-	-	\$1,665,010	-	-
Total	-	-	\$8,325,050	-	-

PROJECT ID 609250 – INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON ROAD AND GLAD VALLEY ROAD IN BILLERICA

- **PROJECT PROPONENT:** TOWN OF BILLERICA
- **ESTIMATED CONSTRUCTION COST:** \$7,960,473
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS - STBG, TAP
- **TIP PROGRAMMING YEAR:** FFY 2025
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 4/4/2026
- **MPO TRANSPORTATION EVALUATION SCORE:** 7.55
- **GHG ANALYSIS TYPE:** QUANTITATIVE
- **GHG ANALYSIS RESULTS:** 2814 KG/YR CARBON DIOXIDE REDUCTION



PROJECT DESCRIPTION

This project improves traffic and safety for all users along Boston Road (Route 3A) from Tower Farm Road to 500 feet south of Lexington Road including the intersections of Boston Road with Lexington Road and Glad Valley Drive. Specific improvements will be made to pedestrian and bicycle accommodations and safety along the corridor, while also rehabilitating the roadway pavement. Proposed improvements include roadway widening with areas of full depth construction and pavement milling and overlay, traffic signal installation, sidewalk construction, bicycle accommodations and new signs and pavement markings. This project also involves a traffic island modification at the intersection of Route 3A (Boston Road), Lexington Road, and Glad Valley Drive.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	\$ 6,368,378	-	-	-	-
Non-Federal	\$ 1,273,676	-	-	-	-
Total	\$ 7,960,473	-	-	-	-

PROJECT ID 609317 – IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110) IN CHELMSFORD

- **PROJECT PROPONENT:** TOWN OF CHELMSFORD
- **ESTIMATED CONSTRUCTION COST:** YEAR 1 \$883,991
YEAR 2 \$8,404,121
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS - STBG
- **TIP PROGRAMMING YEAR:** FFY 2028 & 2029
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 12/6/2025
- **MPO TRANSPORTATION EVALUATION SCORE:** 7.17
- **GHG ANALYSIS TYPE:** QUALITATIVE
- **GHG ANALYSIS RESULTS:** -



PROJECT DESCRIPTION

This project involves improvements along Chelmsford Street including pavement improvements, access management, bicycle lanes, and improved pedestrian facilities. The Town of Chelmsford is advancing a 25% design of roadway improvements and traffic control for Route 110 (Chelmsford Street) in Chelmsford, MA. The project limits are Route 110 (Chelmsford Street) for ±2,400 feet from the intersection of Billerica Rd (Central Square) to the intersection with Alpine Lane. Roadway improvements include both roadway and sidewalk improvements, as well as considerations for bicycle facilities and parking. Upon completion of a 25% design, MassDOT will advance the design before targeting a construction date. Tentatively, the construction timeline is 2028/2029.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	-	-	-	\$707,193	\$6,723,297
Non-Federal	-	-	-	\$176,798	\$1,680,824
Total	-	-	-	\$883,991	\$8,404,121

PROJECT ID 612609 – INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET IN TEWKSBURY

- **PROJECT PROPONENT:** TOWN OF TEWKSBURY
- **ESTIMATED CONSTRUCTION COST:** \$4,526,653
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS - STBG
- **TIP PROGRAMMING YEAR:** FFY 2027
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 05/01/2027
- **MPO TRANSPORTATION EVALUATION SCORE:** 9.25
- **GHG ANALYSIS TYPE:** QUALITATIVE
- **GHG ANALYSIS RESULTS:** -



PROJECT DESCRIPTION

This project includes designing a new intersection at Main Street (MA Route 38)/Pleasant Street/East Street, North Street/East Street, and Main Street/North Street. The design will assess adding coordinate signalization to the two North Street intersections which are currently unsignalized. The assessment will also consider the addition of turn lanes to better accommodate traffic volumes. The construction of the new intersection design is intended to provide better traffic flow and safety. Improved pedestrian and bicycle accommodations are anticipated to be included in the intersection design.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	-	-	\$ 3,621,322	-	-
Non-Federal	-	-	\$ 905,331	-	-
Total	-	-	\$ 4,526,653	-	-

PROJECT ID 604694 – CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET IN LOWELL

- **PROJECT PROPONENT:** CITY OF LOWELL
- **ESTIMATED CONSTRUCTION COST:** \$7,042,011
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS - STBG
- **TIP PROGRAMMING YEAR:** FFY 2028
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 12/4/2027
- **MPO TRANSPORTATION EVALUATION SCORE:** 7.47
- **GHG ANALYSIS TYPE:** QUALITATIVE
- **GHG ANALYSIS RESULTS:** -



PROJECT DESCRIPTION

This project is to reconstruct the intersection of the Lowell Connector at Route 3A (Gorham Street) and replace the existing traffic signals with a roundabout to slow traffic at the intersection. Improvements as part of this project include improved pedestrian path with new sidewalks and pavement markings. The City of Lowell and MassDOT have been working together to improve intersection safety, relieve congestion through improved signalization and increase capacity using striping, signal, and by merging improvements at the intersection.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	-	-	-	\$ 5,633,609	-
Non-Federal	-	-	-	\$ 1,126,722	-
Total	-	-	-	\$ 7,042,011	-

PROJECT ID 612977 – VINAL SQUARE SAFETY IMPROVEMENTS IN CHELMSFORD

- **PROJECT PROPONENT:** TOWN OF CHELMSFORD
- **ESTIMATED CONSTRUCTION COST:** **\$6,455,252**
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS –STBG
- **TIP PROGRAMMING YEAR:** FFY 2028
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 05/27/2028
- **MPO TRANSPORTATION EVALUATION SCORE:** 9.03
- **GHG ANALYSIS TYPE:** QUALITATIVE
- **GHG ANALYSIS RESULTS:** -



PROJECT DESCRIPTION

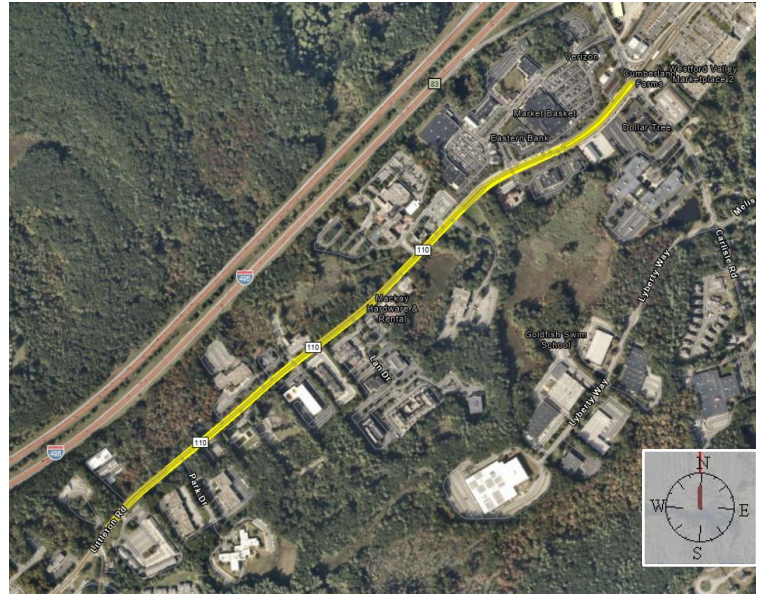
This project includes upgrades to traffic signal, pavement resurfacing, upgraded signs and lines, updated existing sidewalk network to conform to ADA standards, new bike lanes, improved visibility and accessibility to all existing crosswalks using pedestrian activated Rectangular Rapid Flashing Beacons. The development of this project began in 2016 with the development of Chelmsford’s Complete Streets Prioritization Plan. A rough draft of a potential intersection improvements concept was presented to the Vinal Square Strategic Action Committee which sparked interest in a larger capital improvements project in this busy commercial district in North Chelmsford. There are several needs in this area including improvements to traffic operations and safety, geometric changes, and Complete Streets improvements throughout the square. The project was approved through the MassDOT Project Review Committee in 2022 and has an estimated construction cost of approximately \$5.8M. The Town of Chelmsford is completing a 25% design process this spring and summer which then will be brought through a MassDOT 25% design public hearing for MassDOT to advance the design and set a target construction timeline.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	-	-	-	\$ 5,164,202	-
Non-Federal	-	-	-	\$ 1,032,840	-
Total	-	-	-	\$ 6,455,252	-

PROJECT ID 610930 – WESTFORD ROUTE 110 (LITTLETON ROAD) FROM POWERS ROAD TO MINOTS CORNER

- **PROJECT PROPONENT:** TOWN OF WESTFORD
- **ESTIMATED CONSTRUCTION COST:** \$6,248,143
- **FUNDING SOURCE:** REGIONAL TARGET FUNDS – STBG
- **TIP PROGRAMMING YEAR:** FFY 2029
- **ESTIMATED CONSTRUCTION ADVERTISEMENT DATE:** 10/2/2050 (NOTE 2050 IS A PLACEHOLDER AD DATE)
- **MPO TRANSPORTATION EVALUATION SCORE:** 7.92
- **GHG ANALYSIS TYPE:** QUALITATIVE
- **GHG ANALYSIS RESULTS:** -



PROJECT DESCRIPTION

The proposed project entails the reconstruction of four intersections in the Town of Westford: Littleton Road (Route 110) and Concord Road (Route 225) west (Location 1); Littleton Road (Route 110) and Concord Road (Route 225) east (Location 2); Littleton Road (Route 110) and Power Road (Location 3); and Concord Road (Route 225) and Power Road, (Location 4). Locations 1, 3, and 4 will be signalized. Components of this project may now be constructed as mitigation by a private developer for Westford Technology Park. Therefore, the project will be modified based on the extent of Westford Technology Park's required mitigation.

PROJECT FUNDING SUMMARY

	FFY 2025	FFY 2026	FFY 2027	FFY 2028	FFY 2029
Federal	-	-	-	-	4,998,514
Non-Federal	-	-	-	-	999,703
Total	-	-	-	-	\$6,248,143



STIP Investments Report Northern Middlesex Region

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds	MPO Project Score	Entity Receiving Transfer	PSAC Score	Earmark Details	Proponent	Other Information	
Federal Fiscal Year 2025							\$33,372,761	\$27,156,609	\$6,216,152							
Section 1A / Regionally Prioritized Projects							\$11,685,706	\$9,348,565	\$2,337,141							
Roadway Reconstruction							\$11,685,706	\$9,348,565	\$2,337,141							
2025	605966	Lowell	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	4	STBG	\$12,437,500	\$3,725,233	\$2,980,186	\$745,047	7.40/18				MassDOT	Total cost: \$12,488,366; YOE: 12,176,157;	
2025	609250	Billerica	BILLERICA- INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD	4	STBG	\$7,960,473	\$7,960,473	\$6,368,378	\$1,592,095	7.55/18						
Section 2A / Federal Aid Funded State Prioritized Reliability Projects							\$4,584,000	\$4,125,600	\$458,400							
Interstate Pavement							\$4,584,000	\$4,125,600	\$458,400							
2025	612096	Westford	WESTFORD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	3	NHPP-I	\$4,583,909	\$4,584,000	\$4,125,600	\$458,400							
Section 2C / Federal Aid Funded State Prioritized Expansion Projects							\$17,103,055	\$13,682,444	\$3,420,611							
Bicycle and Pedestrian							\$17,103,055	\$13,682,444	\$3,420,611							
2025	608227	Billerica	BILLERICA- YANKEE DOODLE BIKE PATH CONSTRUCTION (PHASE I)	4	CMAQ	\$17,103,055	\$17,103,055	\$13,682,444	\$3,420,611							

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds	MPO Project Score	Entity Receiving Transfer	PSAC Score	Earmark Details	Proponent	Other Information	
Federal Fiscal Year 2026							\$13,163,177	\$10,870,905	\$2,292,272							
Section 1A / Regionally Prioritized Projects							\$8,712,267	\$6,969,814	\$1,742,453							
Roadway Reconstruction							\$8,712,267	\$6,969,814	\$1,742,453							
2026	605966	Lowell	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	4	STBG	\$12,437,500	\$8,231,945	\$6,585,556	\$1,646,389	7.40/18				MassDOT	Total cost: \$12,488,366; YOE: 12,176,157;	
2026	605966	Lowell	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	4	TAP	\$12,437,500	\$480,322	\$384,258	\$96,064	7.40/18				MassDOT		
Section 1B / Earmark or Discretionary Grant Funded Projects							\$1,701,816	\$1,701,816	\$0							
Bridge Off-system Local NB							\$1,701,816	\$1,701,816	\$0							
2026	608861	Westford	WESTFORD- BRIDGE REHABILITATION, W-26-002, STONY BROOK ROAD OVER THE STONY BROOK	3	BROFF	\$1,701,816	\$1,701,816	\$1,701,816	\$0							
Section 2B / Federal Aid Funded State Prioritized Modernization Projects							\$2,749,094	\$2,199,275	\$549,819							
Safe Routes to School							\$2,749,094	\$2,199,275	\$549,819							
2026	609510	Dracut	DRACUT- IMPROVEMENTS AT GEORGE ENGLSEBY ELEMENTARY SCHOOL (SRTS)	4	TAP	\$2,749,094	\$2,749,094	\$2,199,275	\$549,819							



STIP Investments Report
Northern Middlesex Region

														STIP: 2025 - 2029 (D)		
														STIP: 2025 - 2029 (D)		
Year	MassDOT Project ID	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds	MPO Project Score	Entity Receiving Transfer	PSAC Score	Earmark Details	Proponent	Other Information	
Federal Fiscal Year 2027							\$12,851,703	\$10,281,362	\$2,570,341							
Section 1A / Regionally Prioritized Projects							\$12,851,703	\$10,281,362	\$2,570,341							
Intersection Improvements							\$8,325,050	\$6,660,040	\$1,665,010							
2027	607401	Chelmsford	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	4	STBG	\$8,325,050	\$8,325,050	\$6,660,040	\$1,665,010	7.43/18						
Roadway Reconstruction							\$4,526,653	\$3,621,322	\$905,331							
2027	612609	Tewksbury	TEWKSBURY- INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET	4	STBG	\$4,526,653	\$4,526,653	\$3,621,322	\$905,331							

														STIP: 2025 - 2029 (D)	
Year	MassDOT Project ID	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds	MPO Project Score	Entity Receiving Transfer	PSAC Score	Earmark Details	Proponent	Other Information
Federal Fiscal Year 2028							\$14,381,254	\$11,505,003	\$2,876,251						
Section 1A / Regionally Prioritized Projects							\$14,381,254	\$11,505,003	\$2,876,251						
Roadway Reconstruction							\$14,381,254	\$11,505,003	\$2,876,251						
2028	604694	Lowell	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET	4	STBG	\$7,042,011	\$7,042,011	\$5,633,609	\$1,408,402	7.47/18					
2028	609317	Chelmsford	CHELMSFORD- IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	4	STBG	\$9,288,112	\$883,991	\$707,193	\$176,798	7.17/18				Town of Chelmsford	Total Cost: \$10,950,000; YOE: \$11,826,000; Funding: STBG;
2028	612977	Chelmsford	CHELMSFORD- VINAL SQUARE SAFETY IMPROVEMENTS	4	STBG	\$6,455,252	\$6,455,252	\$5,164,202	\$1,291,050						

														STIP: 2025 - 2029 (D)	
Year	MassDOT Project ID	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds	MPO Project Score	Entity Receiving Transfer	PSAC Score	Earmark Details	Proponent	Other Information
Federal Fiscal Year 2029							\$27,596,455	\$22,077,164	\$5,519,291						
Section 1A / Regionally Prioritized Projects							\$14,652,264	\$11,721,811	\$2,930,453						
Roadway Reconstruction							\$14,652,264	\$11,721,811	\$2,930,453						
2029	609317	Chelmsford	CHELMSFORD- IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	4	STBG	\$9,288,112	\$8,404,121	\$6,723,297	\$1,680,824	7.17/18				Town of Chelmsford	Total Cost: \$10,950,000; YOE: \$11,826,000; Funding: STBG;
2029	610930	Westford	WESTFORD- ROUTE 110 (LITTLETON ROAD), FROM POWERS ROAD TO MINOT'S CORNER	3	STBG	\$8,769,722	\$6,248,143	\$4,998,514	\$1,249,629	7.92/18					
Section 2A / Federal Aid Funded State Prioritized Reliability Projects							\$12,944,191	\$10,355,353	\$2,588,838						
Bridge On-system Non-NHS							\$12,944,191	\$10,355,353	\$2,588,838						
2029	613120	Tewksbury	TEWKSBURY- BRIDGE REPLACEMENT, T-03-013, NORTH STREET OVER I-495	4	NHPP	\$37,917,616	\$12,944,191	\$10,355,353	\$2,588,838						



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds	Project Score	FTA Line Item	Other Information	
Federal Fiscal Year 2025							\$25,561,902	\$15,020,518	\$7,362,000	\$3,179,384				
Lowell Regional Transit Authority							\$25,561,902	\$15,020,518	\$7,362,000	\$3,179,384				
2025	LRTA011627		Operating	LRTA - OPERATING ASSISTANCE 2025 (ARPA)	OF	\$850,821	\$850,821	\$850,821				30.09.08	This project is associated with RTD10693 (5307/SCA/Local Assessments share) operating funds and RTD0011206 (CARES) share of operating	
2025	LRTA011628	Lowell	RTA Facility & Vehicle Maintenance	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	DOF	\$720,000	\$5,760,000	\$5,760,000				11.34.03	This project is to address the deteriorating condition of the pedestrian bridge, stairway, and elevator to the Lowell Line MBTA commuter rail platform. Design is underway, and incorporating FTA's feedback that the high platform must be extended to comply with ADA requirements. LRTA will be seeking discretionary funds for the federal share of this project.	
2025	LRTA011628	Lowell	RTA Facility & Vehicle Maintenance	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	DRTACAP	\$720,000	\$1,440,000		\$1,440,000			11.34.03	This project is to address the deteriorating condition of the pedestrian bridge, stairway, and elevator to the Lowell Line MBTA commuter rail platform. Design is underway, and incorporating FTA's feedback that the high platform must be extended to comply with ADA requirements. LRTA will be seeking discretionary funds for the federal share of this project.	
2025	LRTA011776	Lowell	RTA Facility & Vehicle Maintenance	LRTA - LOWELL - MAGUIRE & PARATRANSIT MAINTENANCE FACILITY IMPROVEMENTS	DOF	\$3,600,000	\$2,880,000	\$2,880,000				11.44.03	LRTA will be seeking a Bus & Facilities Discretionary 5339b grant for the federal share of this project, which includes replacing the windows and facade of the Admin and Paratransit Maintenance and Operations Facility, and associated interior rehab to stop water leakage/improve drainage.	
2025	LRTA011776	Lowell	RTA Facility & Vehicle Maintenance	LRTA - LOWELL - MAGUIRE & PARATRANSIT MAINTENANCE FACILITY IMPROVEMENTS	DRTACAP	\$3,600,000	\$720,000		\$720,000			11.44.03	LRTA will be seeking a Bus & Facilities Discretionary 5339b grant for the federal share of this project, which includes replacing the windows and facade of the Admin and Paratransit Maintenance and Operations Facility, and associated interior rehab to stop water leakage/improve drainage.	
2025	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	5307	\$1,700,000	\$720,000	\$720,000				11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.	



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

2025	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	RTACAP	\$1,700,000	\$180,000	\$180,000			11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2025	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	5307	\$10,000	\$8,000	\$8,000			11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2025	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	RTACAP	\$10,000	\$2,000	\$2,000			11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2025	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	5307	\$600,000	\$80,000	\$80,000			11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2025	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	RTACAP	\$600,000	\$20,000	\$20,000			11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2025	RTD0011206		Operating	LRTA - OPERATING ASSISTANCE 2025 (ARPA)	OF	\$1,700,000	\$1,700,000	\$1,700,000			30.09.08	This project is associated with RTD10693 (5307/SCA/Local Assessments share) operating funds
2025	T00043		Operating	LRTA - OPERATING ASSISTANCE	5307	\$69,719,673	\$2,933,697	\$2,933,697			30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2025	T00043		Operating	LRTA - OPERATING ASSISTANCE	LF	\$69,719,673	\$3,157,384		\$3,157,384		30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2025	T00043		Operating	LRTA - OPERATING ASSISTANCE	SCA	\$69,719,673	\$5,000,000	\$5,000,000			30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2025	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	5307	\$550,000	\$88,000	\$88,000			44.24.00	
2025	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	LF	\$550,000	\$22,000		\$22,000		44.24.00	



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds	Project Score	FTA Line Item	Other Information
Federal Fiscal Year 2026							\$32,369,424	\$20,569,105	\$8,542,000	\$3,258,319			
Lowell Regional Transit Authority							\$32,369,424	\$20,569,105	\$8,542,000	\$3,258,319			
2026	LRTA011628	Lowell	RTA Facility & Vehicle Maintenance	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	DOF	\$720,000	\$8,640,000	\$8,640,000				11.34.03	This project is to address the deteriorating condition of the pedestrian bridge, stairway, and elevator to the Lowell Line MBTA commuter rail platform. Design is underway, and incorporating FTA's feedback that the high platform must be extended to comply with ADA requirements. LRTA will be seeking discretionary funds for the federal share of this project.
2026	LRTA011628	Lowell	RTA Facility & Vehicle Maintenance	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	DRTACAP	\$720,000	\$2,160,000		\$2,160,000			11.34.03	This project is to address the deteriorating condition of the pedestrian bridge, stairway, and elevator to the Lowell Line MBTA commuter rail platform. Design is underway, and incorporating FTA's feedback that the high platform must be extended to comply with ADA requirements. LRTA will be seeking discretionary funds for the federal share of this project.
2026	LRTA011629		Operating	LRTA - OPERATING ASSISTANCE 2026 (CARES)	OF	\$788,220	\$788,220	\$788,220				30.09.08	Associated with project RTD0010697 (5307/SCA/LA share of operating)
2026	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	5307	\$1,700,000	\$160,000	\$160,000				11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2026	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	RTACAP	\$1,700,000	\$40,000		\$40,000			11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2026	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	5307	\$10,000	\$8,000	\$8,000				11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2026	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	RTACAP	\$10,000	\$2,000		\$2,000			11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2026	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	5307	\$600,000	\$80,000	\$80,000				11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2026	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	RTACAP	\$600,000	\$20,000		\$20,000			11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2026	RTD0010703		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT (6) - 35' Hybrids (FY23 LOWNO AWARD)	5339D	\$5,850,000	\$5,850,000	\$5,850,000				11.12.02	LRTA received Fy23 LowNo award to replace (7) buses: 1 in FY24 (RTD0010688) and 6 in FY26 (RTD0010703), MassDOT is matching with Toll Credits
2026	RTD0010703		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT (6) - 35' Hybrids (FY23 LOWNO AWARD)	TDC	\$5,850,000	\$1,170,000		\$1,170,000			11.12.02	LRTA received Fy23 LowNo award to replace (7) buses: 1 in FY24 (RTD0010688) and 6 in FY26 (RTD0010703), MassDOT is matching with Toll Credits



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

2026	T00043		Operating	LRTA - OPERATING ASSISTANCE	5307	\$69,719,673	\$4,954,885	\$4,954,885				30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2026	T00043		Operating	LRTA - OPERATING ASSISTANCE	LF	\$69,719,673	\$3,236,319			\$3,236,319		30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2026	T00043		Operating	LRTA - OPERATING ASSISTANCE	SCA	\$69,719,673	\$5,150,000		\$5,150,000			30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2026	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	5307	\$550,000	\$88,000	\$88,000				44.24.00	
2026	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	LF	\$550,000	\$22,000			\$22,000		44.24.00	



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds	Project Score	FTA Line Item	Other Information
Federal Fiscal Year 2027							\$21,147,345	\$11,226,518	\$6,581,600	\$3,339,227			
Lowell Regional Transit Authority							\$21,147,345	\$11,226,518	\$6,581,600	\$3,339,227			
2027	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	5307	\$1,700,000	\$160,000	\$160,000				11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exteriors, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2027	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	RTACAP	\$1,700,000	\$40,000		\$40,000			11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exteriors, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2027	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	5307	\$10,000	\$8,000	\$8,000				11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2027	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	RTACAP	\$10,000	\$2,000		\$2,000			11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2027	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	5307	\$600,000	\$80,000	\$80,000				11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2027	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	RTACAP	\$600,000	\$20,000		\$20,000			11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2027	RTD0011235		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	5307	\$6,206,265	\$4,820,400	\$4,820,400				11.12.02	LRTA will replace 12 vehicles that have met their useful life.
2027	RTD0011235		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	RTACAP	\$6,206,265	\$1,205,100		\$1,205,100			11.12.02	LRTA will replace 12 vehicles that have met their useful life.
2027	RTD0011237		RTA Vehicle Replacement	LRTA - NONREVENUE VEHICLE REPLACEMENT - ADMINISTRATIVE VEHICLE	5307	\$40,000	\$40,000	\$40,000				11.42.11	LRTA will replace administrative vehicle that has met its useful life
2027	RTD0011237		RTA Vehicle Replacement	LRTA - NONREVENUE VEHICLE REPLACEMENT - ADMINISTRATIVE VEHICLE	RTACAP	\$40,000	\$10,000		\$10,000			11.42.11	LRTA will replace administrative vehicle that has met its useful life
2027	T00043		Operating	LRTA - OPERATING ASSISTANCE	5307	\$69,719,673	\$6,030,118	\$6,030,118				30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

2027	T00043		Operating	LRTA - OPERATING ASSISTANCE	LF	\$69,719,673	\$3,317,227			\$3,317,227		30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2027	T00043		Operating	LRTA - OPERATING ASSISTANCE	SCA	\$69,719,673	\$5,304,500		\$5,304,500			30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2027	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	5307	\$550,000	\$88,000	\$88,000				44.24.00	
2027	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	LF	\$550,000	\$22,000			\$22,000		44.24.00	



STIP Investments Report

Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds	Project Score	FTA Line Item	Other Information
Federal Fiscal Year 2028							\$21,772,665	\$11,572,619	\$6,777,888	\$3,422,158			
Lowell Regional Transit Authority							\$21,772,665	\$11,572,619	\$6,777,888	\$3,422,158			
2028	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	5307	\$1,700,000	\$160,000	\$160,000				11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2028	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	RTACAP	\$1,700,000	\$40,000		\$40,000			11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2028	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	5307	\$10,000	\$12,000	\$12,000				11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2028	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	RTACAP	\$10,000	\$3,000		\$3,000			11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2028	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	5307	\$600,000	\$120,000	\$120,000				11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2028	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	RTACAP	\$600,000	\$30,000		\$30,000			11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2028	RTD0011235		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	5307	\$6,206,265	\$4,965,012	\$4,965,012				11.12.02	LRTA will replace 12 vehicles that have met their useful life.
2028	RTD0011235		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	RTACAP	\$6,206,265	\$1,241,253		\$1,241,253			11.12.02	LRTA will replace 12 vehicles that have met their useful life.
2028	T00043		Operating	LRTA - OPERATING ASSISTANCE	5307	\$69,719,673	\$6,227,607	\$6,227,607				30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

2028	T00043		Operating	LRTA - OPERATING ASSISTANCE	LF	\$69,719,673	\$3,400,158			\$3,400,158		30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2028	T00043		Operating	LRTA - OPERATING ASSISTANCE	SCA	\$69,719,673	\$5,463,635		\$5,463,635			30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2028	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	5307	\$550,000	\$88,000	\$88,000				44.24.00	
2028	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	LF	\$550,000	\$22,000			\$22,000		44.24.00	



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds	Project Score	FTA Line Item	Other Information
Federal Fiscal Year 2029							\$21,394,142	\$11,111,436	\$6,775,544	\$3,507,162			
Lowell Regional Transit Authority							\$21,394,142	\$11,111,436	\$6,775,544	\$3,507,162			
2029	LRTA011630		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT - <30FT BUS (2)	5307	\$375,000	\$300,000	\$300,000				11.12.04	This project will replace (2)u cutaway buses in the fixed route fleet that will have met their useful life. The smaller buses are a necessary part of the LRTA fleet to comply with certain bridge height/weight restrictions in several of the LRTA neighborhoods.
2029	LRTA011630		RTA Vehicle Replacement	LRTA - REVENUE VEHICLE REPLACEMENT - <30FT BUS (2)	RTACAP	\$375,000	\$75,000		\$75,000			11.12.04	This project will replace (2)u cutaway buses in the fixed route fleet that will have met their useful life. The smaller buses are a necessary part of the LRTA fleet to comply with certain bridge height/weight restrictions in several of the LRTA neighborhoods.
2029	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	5307	\$1,700,000	\$160,000	\$160,000				11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2029	RTD0010690		RTA Facility & Vehicle Maintenance	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	RTACAP	\$1,700,000	\$40,000		\$40,000			11.42.20	Terminal and building equipment and maintenance for Fixed Route (100 Hale St), Paratransit (113 Thorndike St), Administration (115 Thorndike St), and Gallagher Intermodal/Kennedy Center Bus Hub (117 Thorndike St) to maintain electric, structural, interiors, building windows/exterior, conveyance, HVAC, fire protection, plumbing, sitework, and equipment. This project is key to helping LRTA maintain its facilities in a State of Good Repair and meet its annual TAM goals.
2029	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	5307	\$10,000	\$12,000	\$12,000				11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2029	RTD0010691		RTA Facility & Vehicle Maintenance	LRTA - IT EQUIPMENT & MAINTENANCE	RTACAP	\$10,000	\$3,000		\$3,000			11.42.20	This project is for the purchase computer hardware and software, as well as the h/w and s/w maintenance of IT equipment and cybersecurity infrastructure.
2029	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	5307	\$600,000	\$120,000	\$120,000				11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2029	RTD0010692		RTA Facility & Vehicle Maintenance	LRTA - PURCHASE CAPITAL SPARE PARTS	RTACAP	\$600,000	\$30,000		\$30,000			11.42.20	Purchase of capital spare parts for Fixed Route and Paratransit, which will help to keep LRTA vehicles in a state of good repair.
2029	T00043		Operating	LRTA - OPERATING ASSISTANCE	5307	\$69,719,673	\$6,431,436	\$6,431,436				30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating



STIP Investments Report
 Program Activity: Transit, Lowell Regional Transit Authority

STIP: 2025 - 2029 (D)

2029	T00043		Operating	LRTA - OPERATING ASSISTANCE	LF	\$69,719,673	\$3,485,162			\$3,485,162		30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2029	T00043		Operating	LRTA - OPERATING ASSISTANCE	SCA	\$69,719,673	\$5,627,544		\$5,627,544			30.09.01	See project LRTA011627 for ARPA share of FY25 operating, and RTD0011206 for CARES share of FY25 operating. See project LRTA011629 for CARES share of FY26 operating
2029	T00047	Lowell	RTA Facility & System Modernization	LOWELL - HALE ST FACILITY UPGRADES (ZERO EMISSIONS/SOLAR PANELS)	5307	\$5,000,000	\$4,000,000	\$4,000,000				11.54.20	Based on transition plan outcomes from MassDOT sponsored Hatch study, LRTA anticipate beginning facility upgrades at Fixed Route Operations and Maintenance Center to accommodate zero emission vehicles. LRTA will rehab and potentially expand the solar roofing panels at this facility during the project.
2029	T00047	Lowell	RTA Facility & System Modernization	LOWELL - HALE ST FACILITY UPGRADES (ZERO EMISSIONS/SOLAR PANELS)	RTACAP	\$5,000,000	\$1,000,000		\$1,000,000			11.54.20	Based on transition plan outcomes from MassDOT sponsored Hatch study, LRTA anticipate beginning facility upgrades at Fixed Route Operations and Maintenance Center to accommodate zero emission vehicles. LRTA will rehab and potentially expand the solar roofing panels at this facility during the project.
2029	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	5307	\$550,000	\$88,000	\$88,000				44.24.00	
2029	T00048		Operating	LRTA - SHORT RANGE TRANSIT PLANNING	LF	\$550,000	\$22,000			\$22,000		44.24.00	

REGIONAL FINANCIAL PLAN

The TIP must be a financially constrained document and must be consistent with the MTP and planning process (23 CFR 450.104 and 23 CFR 450.326(j) and (k)). The TIP is updated at least every four years. Approval responsibility rests with the Metropolitan Planning Organization and the Governor. Projections of federal resources are based upon the apportionments of the federal authorizations contained in the BIL, as allocated to the region by the State, or as allocated among the various MPOs, according to federal formulae or MPO agreement, and adjusted to reflect obligation authority or priority. The projects programmed for this region meet the funding estimates of federal funds available in each year as shown in Table 15. These estimates were provided by the Massachusetts Department of Transportation and were refined as part of the State Transportation Improvement Program development process. Table 16 contains similar information for the transit program of projects and was developed in conjunction with the LRTA’s Capital Plan and the MassDOT Rail and Transit Division. Transit year constraint differs from highway in that it includes carryover of FTA 5307 funds from previous Federal fiscal years.

TABLE 15: FFY 2025-2029 TIP HIGHWAY PROGRAMMED FUNDING/CONSTRAINT

Fiscal Year	Highway Program Regional Target (Federal + Non Federal)	Target Funding Programmed (Federal + Non Federal)	Target Funding unprogrammed	Total Amount Programmed (Federal + Non Federal)
2025	\$11,685,706	\$11,685,706	\$0	\$11,685,706
2026	\$11,399,814	\$8,712,267	\$2,687,547	\$10,414,083
2027	\$14,115,559	\$13,160,039	\$955,520	\$13,160,039
2028	\$14,381,254	\$14,381,254	\$0	\$14,381,254
2029	\$14,652,264	\$14,652,264	\$0	\$14,652,264
Total	\$66,234,597	\$62,591,530	\$3,643,067	\$64,293,346

TABLE 16: FFY 2025-2029 TIP TRANSIT PROGRAMMED FUNDING/CONSTRAINT

Fiscal Year	Federal Apportionment to LRTA (5307)	Other Federal Apportionment	FTA 5307 Carryover	FTA 5339 Carryover	Other Federal Carryover	Federal Amount Programmed (5307, 5339, 5339b, CARES, ARPA, CRRSA)	Federal Apportionment vs Programmed
Prior years carryover	-	-	-	-	-	-	-
2025	\$5,312,954	\$8,657,255	\$17,008,441	\$35,034	\$9,189,041	\$15,020,518	\$25,182,207
2026	\$5,366,084	\$8,657,082	\$18,491,698	\$52,289	\$6,638,220	\$14,719,105	\$17,848,048
2027	\$5,419,745	\$16,911	\$18,566,897	\$69,371	-	\$11,226,518	\$12,846,406
2028	\$5,473,942	\$16,742	\$12,760,124	\$86,282	-	\$11,572,619	\$6,764,471
2029	\$5,528,861	\$16,575	\$6,661,447	\$103,024	-	\$11,111,436	\$1,198,471

Title 23 CFR section 450.326 (j) and 310 CMR 60.03(9) requires the TIP to be “financially constrained by year to include a financial plan that demonstrates which projects can be implemented using the current revenue sources and which projects are to be implemented using proposed revenue sources (while the existing transportation system is being adequately operated and maintained).” Moreover, regulations have further defined financial constraint to exclude a state’s unspent federal balances. Projects can only be programmed up to an amount that the Congress is expected to allow the state to spend in any individual fiscal year.

The financial constraint of the total state program is depicted in the FFY 2025-2029 State Transportation Improvement Program (STIP). Funding levels for Fiscal Years 2025-2029 have been developed cooperatively between the State and regional members of the MPO, as part of the MPO TIP development process.

STATUS OF NMMPO TIP PROJECTS

Table 17 provides a description of recently advertised highway projects in the Northern Middlesex Region (as of April 17, 2024).

TABLE 7: NORTHERN MIDDLESEX HIGHWAY TIP PROJECTS UNDER CONSTRUCTION

Community	MassDOT Project ID	Project Description	Construction Advertisement Date	Total Federal Participating Construction Cost (TFPCC)	Expected Construction Completion Date
Billerica	605178	BILLERICA- REHABILITATION ON BOSTON ROAD (ROUTE 3A) FROM BILLERICA TOWN CENTER TO FLOYD STREET	3/19/2022	\$13,269,348	9/26/26
Lowell	608420	LOWELL- RECONSTRUCTION AND REHABILITATION OF FIVE BRIDGES (ENEL BRIDGES) TIGER GRANT	8/12/2017	\$13,389,750	7/20/24
Multiple	608774	LOWELL- TEWKSBURY- ROUTE 38 INTERSECTION IMPROVEMENTS	9/9/2023	\$3,995,284	TBD
Multiple	610704	BURLINGTON- BILLERICA- RESURFACING AND RELATED WORK ON ROUTE 3A	9/2/2023	\$7,311,016	TBD
Multiple	612047	CHELMSFORD- LOWELL- LAWRENCE- BRIDGE PRESERVATION ALONG I-495	7/22/2023	\$8,474,275	TBD
Multiple	612197	AMESBURY- HAVERHILL- LOWELL- METHUEN- BRIDGE PRESERVATION BUNDLE ALONG I-495	4/30/2022	\$7,845,545	TBD
Westford	612656	WESTFORD- BRIDGE PRESERVATION, W-26-018, W-26-019, I-495 (NB/SB) OVER CONCORD AND BOSTON ROAD	4/1/2023	\$2,874,768	3/24/25
Tewksbury	612658	TEWKSBURY- BRIDGE PRESERVATION OF T-03-014, I-495 OVER ROUTE 133, AND T-03-015, I-495 OVER ROUTE 38	6/17/2023	\$6,246,871	TBD

Table 18 describes the status of LRTA projects listed in FFY 2024 of the NMMPO TIP Projects.

TABLE 17: STATUS OF NMMPO TIP PROJECTS - TRANSIT

Description	Funding Category	Federal Amount	Total Amount	Status Update
Operating Assistance	5307	\$2,921,280	\$10,380,194	Ongoing
Short Range Transit Planning	5307	\$88,000	\$110,000	Ongoing
Purchase Capital Spare Parts	5307	\$80,000	\$100,000	Ongoing
Terminal & Building Equipment and Maintenance	5307	\$160,000	\$200,000	Ongoing
Mobility Outreach Coordinator	5310	\$40,000	\$50,000	Ongoing
Operating Assistance (CARES ACT)	OF	\$1,700,000	\$1,700,000	Ongoing
LRTA Purchase AVL/APC/Annunciators System for Fixed Route	RTACAP	\$0	\$200,000	Ongoing
IT Equipment and Maintenance	5307	\$8,000	\$10,000	Ongoing
LRTA Revenue Vehicle Replacement - 35 FT Hybrids (7) - FY 23 LowNO Award	OF	\$6,825,000	\$7,020,000	Ongoing

AIR QUALITY CONFORMITY DETERMINATION – NMMPO

FFY 2025-2029 STATE TRANSPORTATION IMPROVEMENT PROGRAM

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION (MASSDOT) AND THE METROPOLITAN PLANNING ORGANIZATIONS (MPOS)

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

INTRODUCTION

The 1990 Clean Air Act Amendments (CAAA) require metropolitan planning organizations within nonattainment and maintenance areas to perform air quality conformity determinations prior to the approval of Long-Range Transportation Plans (MTPMTPs) 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)). EPA’s 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 U.S. Environmental Protection Agency (EPA) has designated as not meeting certain air quality standards. A maintenance area is a nonattainment area that now meets the standards and has been re-designated as maintaining the standard. A conformity determination is a demonstration that plans, programs, and projects are consistent with the State Implementation Plan (SIP) for attaining the air quality standards. The CAAA requirement to perform a conformity determination ensures that federal approval and funding go to transportation activities that are consistent with air quality goals.

LEGISLATIVE AND REGULATORY BACKGROUND

The entire Commonwealth of Massachusetts was previously classified as nonattainment for ozone, and was divided into two nonattainment areas. The Eastern Massachusetts ozone nonattainment area included Barnstable, Bristol, Dukes, Essex, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, and Worcester counties. Berkshire, Franklin, Hampden, and Hampshire counties comprised the Western Massachusetts ozone nonattainment area. With these classifications, the 1990 Clean Air Act Amendments (CAAA) required the Commonwealth to reduce its emissions of volatile organic compounds (VOCs) and nitrogen oxides (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 had shown that ozone could affect human health at lower levels, and over longer exposure times than one hour. The new standard was challenged in court, and after a lengthy legal battle, the courts upheld it. It was finalized in June 2004. The eight-hour standard is 0.08 parts per million, averaged over eight hours and not to be exceeded more than once per year. Nonattainment areas were again further classified based on the severity of the eight-hour values. Massachusetts as a whole was classified as being in moderate nonattainment for the eight-hour standard, and was separated into two nonattainment areas—Eastern Massachusetts and Western Massachusetts.

In March 2008, EPA published revisions to the eight-hour ozone NAAQS establishing a level of 0.075 ppm, (March 27, 2008; 73 FR 16483). In 2009, EPA announced it would reconsider this standard because it fell outside of the range recommended by the Clean Air Scientific Advisory Committee. However, EPA did not take final action on the reconsideration so the standard 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 2/16/19, as a result of the court ruling and the subsequent federal guidance, transportation conformity for the 1997 NAAQS – intended as an “anti-backsliding” measure – now applies to both of Massachusetts’ orphan areas. Therefore, a conformity determination was made for the 1997 ozone NAAQS on the 2020-2040 Regional Transportation Plans. This conformity determination was finalized in July 2019 following each MPO’s previous endorsement of their regional transportation plan, and approved by the Massachusetts Divisions of FHWA and FTA on October 13, 2023. This conformity determination continues to be valid for the FFY 2025 - 2029 State Transportation Improvement Program and each MPOs’ FFY 2025 – 2029 Transportation Improvement Program, as each is developed from the conforming 2024-2050 Regional 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 MTPs 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 MTPs for the 1997 ozone NAAQS can be demonstrated without a regional emissions analysis, per 40 CFR 93.109(c). This provision states that the regional emissions analysis requirement applies one year after the effective date of EPA’s nonattainment designation for a NAAQS and until the effective date of revocation of such NAAQS for an area. The 1997 ozone NAAQS revocation was effective on April 6, 2015, and the *South Coast II* court upheld the revocation. As no regional emission analysis is required for this conformity determination, there is no requirement to use the latest emissions model, or budget or interim emissions tests.

Therefore, transportation conformity for the 1997 ozone NAAQS for the FFY 2025-2029 State Transportation Improvement Program, Transportation Improvement Programs, and 2024-2050 Regional 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 September 13, 2023. 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, MTP, and related certification documents provide an adequate opportunity for public review and comment. Section 450.316(b) also establishes the outline for MPO public participation programs. Each MPO's Public Participation Plan ensures that the public will have access to the TIP/MTP and all supporting documentation, provides for public notification of the availability of the TIP/MTP 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/MTP and related certification documents.

TIMELY IMPLEMENTATION OF TRANSPORTATION CONTROL MEASURES:

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

FISCAL CONSTRAINT:

Transportation conformity requirements in 40 CFR 93.108 state that TIPs and transportation plans must be fiscally constrained consistent with DOT's regional planning regulations at 23 CFR part 450. The 2025-2029 State Transportation Improvement Program and 2024-2050 Regional Transportation Plans are fiscally constrained, as demonstrated in this document.

In summary and based upon the entire process described above, the Commonwealth has prepared this conformity determination for the 1997 Ozone NAAQS in accordance with EPA's and Massachusetts' latest conformity regulations and guidance. This conformity determination process demonstrates that the FFY 2025-2029 State Transportation Improvement Program and the 2024-2050 Regional Transportation Plans meet the Clean Air Act and Transportation Conformity Rule requirements for the 1997 Ozone NAAQS, and have been prepared following all the guidelines and requirements of these rules during this time period.

Therefore, the implementation of the MPO's FFY 2025-2029 State Transportation Improvement Program and the 2024-2050 Regional Transportation Plans are consistent with the air quality goals of, and in conformity with, the Massachusetts State Implementation Plan.

APPENDIX A: GREENHOUSE GAS MONITORING SUMMARY

FFY 2025-2029 TIP: GREENHOUSE GAS SUMMARY

MassDOT Project ID	Project Description	TIP Year	Total Programmed Funds	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
608227	BILLERICA-YANKEE DOODLE BIKE PATH CONSTRUCTION (PHASE I) (Statewide CMAQ outside targets)	2025	\$17,103,055.00	Quantified	-143,173	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure
609250	BILLERICA-INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD	2025	\$7,960,473.00	Quantified	-2,814	Quantified Decrease in Emissions from Traffic Operational Improvement
612096	WESTFORD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	2025	\$4,583,909.00	Qualitative		Qualitative Decrease in Emissions
LRTA011627	LRTA - OPERATING ASSISTANCE 2025 (ARPA)	2025	\$850,821.00	Qualitative		No assumed impact/negligible impact on emissions
LRTA011776	LRTA - LOWELL - MAGUIRE & PARATRANSIT MAINTENANCE FACILITY IMPROVEMENTS	2025	\$3,600,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0011206	LRTA - OPERATING ASSISTANCE 2025 (CARES)	2025	\$1,700,000.00	Qualitative		No assumed impact/negligible impact on emissions
608861	WESTFORD-BRIDGE REPLACEMENT STONY BROOK ROAD OVER STONY BROOK (Bridge project outside targets)	2026	\$1,701,816.00	Qualitative		No assumed impact/negligible impact on emissions
609510	DRACUT- IMPROVEMENTS AT GEORGE ENGLSBY ELEMENTARY SCHOOL (SRTS)	2026	\$2,749,094.00	Qualitative		Qualitative Decrease in Emissions
LRTA011629	LRTA - OPERATING ASSISTANCE 2026 (CARES)	2026	\$788,220.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0010703	LRTA - REVENUE VEHICLE REPLACEMENT (6) - 35' Hybrids (FY23 LOWNO AWARD)	2026	\$7,020,000.00	Quantified	-158,567	Quantified Decrease in Emissions from Bus Replacement
607401	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	2027	\$8,325,050.00	Qualitative		Qualitative Decrease in Emissions
612609	TEWKSBURY- INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET	2027	\$4,526,653.00	Qualitative		Qualitative decrease in emissions
RTD0011237	LRTA - NONREVENUE VEHICLE REPLACEMENT - ADMINISTRATIVE VEHICLE	2027	\$50,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0011235	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	2027-2028	12231765	Quantified	-317,134	Quantified Decrease in Emissions from Bus Replacement

FFY 2025-2029 TIP: GREENHOUSE GAS SUMMARY

MassDOT Project ID	Project Description	TIP Year	Total Programmed Funds	GHG Analysis Type	GHG CO ₂ Impact (kg/yr)	GHG Impact Description
604694	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET	2028	\$7,042,011.00	Qualitative		No assumed impact/negligible impact on emissions
612977	CHELMSFORD- VINAL SQUARE SAFETY IMPROVEMENTS	2028	\$6,455,252.00	Qualitative		No assumed impact/negligible impact on emissions
609317	CHELMSFORD-IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	2028-2029	\$9,288,112.00	Qualitative		Qualitative Decrease in Emissions
610930	WESTFORD- ROUTE 110 (LITTLETON ROAD), FROM POWERS ROAD TO MINOT'S CORNER	2029	\$8,769,722.00	Qualitative		No assumed impact/negligible impact on emissions
613120	TEWKSBURY- BRIDGE REPLACEMENT, T-03-013, NORTH STREET OVER I-495	2029	\$37,917,616.00	Qualitative		No assumed impact/negligible impact on emissions
T00047	LRTA - LOWELL - HALE ST SOLAR ROOF REHAB	2029	\$5,000,000.00	Qualitative		No assumed impact/negligible impact on emissions
LRTA011630	LRTA - REVENUE VEHICLE REPLACEMENT - <30FT BUS (2)	2029	\$375,000.00	Qualitative		No assumed impact/negligible impact on emissions
605966	LOWELL-RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	2025-2026	\$12,437,500.00	Quantified	-28,741	Quantified Decrease in Emissions from Complete Streets
LRTA011628	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	2025-2026	\$18,000,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2025-2029	\$1,700,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2025-2029	\$60,000.00	Qualitative		No assumed impact/negligible impact on emissions
T00043	LRTA - OPERATING ASSISTANCE (2028)	2025-2029	\$69,719,672.00	Qualitative		No assumed impact/negligible impact on emissions
T00048	LRTA - SHORT RANGE TRANSIT PLANNING 2028	2025-2029	\$550,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2025-2029	\$1,700,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2025-2029	\$60,000.00	Qualitative		No assumed impact/negligible impact on emissions
RTD0010692	LRTA - PURCHASE CAPITAL SPARE PARTS	2025-2029	\$600,000.00	Qualitative		No assumed impact/negligible impact on emissions

APPENDIX B: NMMPO PUBLIC COMMENT SUMMARY

APPENDIX C: TIP PROGRAM SUMMARIES

TIP PROJECTS - PERFORMANCE MEASURE AND MTP INVESTMENT PROGRAM

Community	Project #	Project Description	Proposed TIP Year	Total Federal Participating Construction Cost (as of April 12, 2024)	NMMPO Regional Transportation Plan Investment Program	Primary Performance Measures Category
LRTA	LRTA011627	LRTA - OPERATING ASSISTANCE 2025 (ARPA)	2025	\$850,821	Transit Facility Investment Program	State of Good Repair
LRTA	LRTA011628	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	2025	\$7,200,000	Transit Facility Investment Program	State of Good Repair
LRTA	LRTA011776	LRTA - LOWELL - MAGUIRE & PARATRANSIT MAINTENANCE FACILITY IMPROVEMENTS	2025	\$3,600,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2025	\$900,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2025	\$10,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010692	LRTA - PURCHASE CAPITAL SPARE PARTS	2025	\$100,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0011206	LRTA - OPERATING ASSISTANCE 2025 (CARES)	2025	\$1,700,000	Transit Facility Investment Program	State of Good Repair
LRTA	T00043	LRTA - OPERATING ASSISTANCE	2025	\$11,091,081	Transit Facility Investment Program	State of Good Repair
LRTA	T00048	LRTA - SHORT RANGE TRANSIT PLANNING	2025	\$110,000	Transit Facility Investment Program	State of Good Repair
Lowell	605966	LOWELL-RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	2025/2026	\$12,437,500	Roadway/Corridor Improvements Investment Program	Pavement

Community	Project #	Project Description	Proposed TIP Year	Total Federal Participating Construction Cost (as of April 12, 2024)	NMMPO Regional Transportation Plan Investment Program	Primary Performance Measures Category
Chelmsford	607401	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	2027	\$8,325,050	Intersection Improvements/ Safety Investment Program	Safety
Billerica	609250	BILLERICA-INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD	2025	\$7,960,473	Intersection Improvements/ Safety Investment Program	Congestion
Westford	608861	WESTFORD-BRIDGE REPLACEMENT STONY BROOK ROAD OVER STONY BROOK (Bridge project outside targets)	2026	1243	Bridge Rehabilitation/ Reconstruction Investment Program	Bridge Performance
Dracut	609510	DRACUT- IMPROVEMENTS AT GEORGE ENGLSBY ELEMENTARY SCHOOL (SRTS)	2026	\$2,749,094	Bicycle and Pedestrian Improvements Investment Program	Safety
Westford	612096	WESTFORD- INTERSTATE MAINTENANCE AND RELATED WORK ON I-495	2025	\$4,584,000	Roadway/ Corridor Improvements Investment Program	Pavement
LRTA	LRTA011628	Lowell - ADA/COMMUTER ACCESS WAY & INTERMODAL UPGRADES (PLANNED DISCRETIONARY)	2026	\$10,800,000	Transit Facility Investment Program	State of Good Repair
LRTA	LRTA011629	LRTA - OPERATING ASSISTANCE 2026 (CARES)	2026	\$788,220	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2026	\$200,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2026	\$10,000	Transit Facility Investment Program	State of Good Repair

Community	Project #	Project Description	Proposed TIP Year	Total Federal Participating Construction Cost (as of April 12, 2024)	NMMPO Regional Transportation Plan Investment Program	Primary Performance Measures Category
LRTA	RTD0010692	LRTA - PURCHASE CAPITAL SPARE PARTS	2026	\$100,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010703	LRTA - REVENUE VEHICLE REPLACEMENT (6) - 35' Hybrids (FY23 LOWNO AWARD)	2026	\$7,020,000	Transit Facility Investment Program	State of Good Repair
LRTA	T00043	LRTA - OPERATING ASSISTANCE	2026	\$13,341,204	Transit Facility Investment Program	State of Good Repair
LRTA	T00048	LRTA - SHORT RANGE TRANSIT PLANNING	2026	\$110,000	Transit Facility Investment Program	State of Good Repair
Chelmsford	609317	CHELMSFORD-IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	2028 / 2029	\$9,288,112	Intersection Improvements/Safety Investment Program	Congestion
LRTA	RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2027	\$200,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2027	\$10,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010692	LRTA - PURCHASE CAPITAL SPARE PARTS	2027	\$100,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0011235	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	2027	\$6,025,500	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0011237	LRTA - NONREVENUE VEHICLE REPLACEMENT - ADMINISTRATIVE VEHICLE	2027	\$50,000	Transit Facility Investment Program	State of Good Repair
LRTA	T00043	LRTA - OPERATING ASSISTANCE	2027	\$14,651,845	Transit Facility Investment Program	State of Good Repair

Community	Project #	Project Description	Proposed TIP Year	Total Federal Participating Construction Cost (as of April 12, 2024)	NMMPO Regional Transportation Plan Investment Program	Primary Performance Measures Category
LRTA	T00048	LRTA - SHORT RANGE TRANSIT PLANNING	2027	\$110,000	Transit Facility Investment Program	State of Good Repair
Tewksbury	612609	TEWKSBURY- INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET	2027	\$4,526,653	Intersection Improvements/ Safety Investment Program	Safety
LRTA	RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2028	\$200,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2028	\$15,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010692	LRTA - PURCHASE CAPITAL SPARE PARTS	2028	\$150,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0011235	LRTA - REVENUE VEHICLE REPLACEMENT - 35' Hybrids (12)	2028	\$6,206,265	Transit Facility Investment Program	State of Good Repair
LRTA	T00043	LRTA - OPERATING ASSISTANCE	2028	\$15,091,400	Transit Facility Investment Program	State of Good Repair
LRTA	T00048	LRTA - SHORT RANGE TRANSIT PLANNING	2028	\$110,000	Transit Facility Investment Program	State of Good Repair
Lowell	604694	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET	2028	\$7,042,011	Roadway/ Corridor Improvements Investment Program	Safety
Chelmsford	612977	CHELMSFORD-VINAL SQUARE SAFETY IMPROVEMENTS	2028	\$6,455,252	Intersection Improvements/ Safety Investment Program	Safety
LRTA	LRTA011630	LRTA - REVENUE VEHICLE REPLACEMENT - <30FT BUS (2)	2029	\$375,000	Transit Facility Investment Program	State of Good Repair

Community	Project #	Project Description	Proposed TIP Year	Total Federal Participating Construction Cost (as of April 12, 2024)	NMMPO Regional Transportation Plan Investment Program	Primary Performance Measures Category
LRTA	RTD0010690	LRTA - TERMINAL & BUILDING EQUIPMENT AND MAINTENANCE	2029	\$200,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010691	LRTA - IT EQUIPMENT & MAINTENANCE	2029	\$15,000	Transit Facility Investment Program	State of Good Repair
LRTA	RTD0010692	LRTA - PURCHASE CAPITAL SPARE PARTS	2029	\$150,000	Transit Facility Investment Program	State of Good Repair
LRTA	T00043	LRTA - OPERATING ASSISTANCE	2029	\$15,544,142	Transit Facility Investment Program	State of Good Repair
LRTA	T00047	LOWELL - HALE ST FACILITY UPGRADES (ZERO EMISSIONS/SOLAR PANELS)	2029	\$5,000,000	Transit Facility Investment Program	State of Good Repair
LRTA	T00048	LRTA - SHORT RANGE TRANSIT PLANNING	2029	\$110,000	Transit Facility Investment Program	State of Good Repair

UNIVERSE OF PROJECTS

This section will include a list of projects that are not programmed on the TIP but are regionally significant and in some stage of design, both those that are locally initiated and state-initiated projects on the horizon. This section will be completed and presented to the NMMPO at the May, 2024 meeting.

APPENDIX D: TRANSPORTATION EVALUATION CRITERIA INFORMATION

Transportation Evaluation Criteria Summary for FFY 2025-2029 Northern Middlesex Transportation Improvement Program

Project ID	Project Description	Community	Project Cost Estimate (Current Dollars)	Design Status	Transportation Evaluation Criteria Scoring Summary*						
					Condition	Mobility	Safety	Community Effects and Support	Land Use & Econ. Dvt.	Environmental Effects	Total TEC Score
612609	TEWKSBURY-INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH	Tewksbury	\$4,526,653	Approved	1.00	2.00	3.00	1.00	1.50	0.75	9.25
612977	CHELMSFORD-VINAL SQUARE SAFETY IMPROVEMENTS	Chelmsford	\$6,455,252	Approved	1.00	2.00	2.33	1.20	1.75	0.75	9.03
610930	WESTFORD - ROUTE 110 (LITTLETON RD) FROM POWERS	Westford	\$6,248,143	Approved	1.50	2.25	1.67	1.00	1.25	0.25	7.92
609250	BILLERICA-INTERSECTION IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET	Billerica	\$7,960,473	Final Design	2.00	2.00	2.00	0.80	0.50	0.25	7.55
604694	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO GORHAM STREET	Lowell	\$7,042,011	Approved	1.00	2.25	2.67	0.80	0.50	0.25	7.47
607401	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	Chelmsford	\$8,325,050	Approved	0.50	2.75	2.33	0.60	0.75	0.50	7.43
605966	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	Lowell	\$12,437,500	100%	1.50	1.00	2.00	1.40	0.75	0.75	7.40
612535	CHELMSFORD- IMPROVEMENTS ON ROUTE 3A (PRINCETON STREET), FROM RICHARDSON	Chelmsford	\$4,489,511	Approved	1.00	2.00	2.00	0.80	1.25	0.25	7.30
609317	CHELMSFORD-IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	Chelmsford	\$8,292,957	Approved	1.50	1.50	0.67	1.00	1.50	1.00	7.17

TEC Scoring Summary prepared by NMCOG staff for the NMMPO. Each category evaluated is scored between -3 and 3, depending on impact. Each category is summed to determine total TEC score. The highest score possible is 18.

Project ID	Project Description	Community	Transportation Evaluation Criteria Scoring Summary																																		
			Condition				Mobility							Safety						Community Effects and Support								Land Use & Economic Dvt					Environmental Effects				Total TEC Score
			Magnitude of Pavement condition Improvement	Magnitude of surface condition Improvement	Magnitude of Improvement of other Infrastructure Elements	Subtotal	Effect on magnitude and duration of congestion	Effect on travel time and connectivity/access for existing users	Effect on other modes using facility	Effect on regional and local traffic	Number of New Users	Consistency with State Bicycle and/or Pedestrian Plans	Subtotal	Effect on crash rate compared to state average	Effect on bicycle and pedestrian safety	Effect on transportation security and evacuation routes	Effect on Bicycle Compatability Index	Effect on pedestrian safety	Subtotal	Residential effects: right-of-way, noise, aesthetics, cut-through traffic, other	Environmental Justice effects	Public, local government, legislative, and regional support	Effect on service to minority or low income neighborhoods	Other impact/benefits to minority or low income neighborhoods	Effect on development and redevelopment of housing stock	Subtotal	Business effects: right-of-way, access, noise, traffic, parking, freight access	Sustainable development effects	Consistent with regional land-use and economic development plans	Effect on job creation.	Subtotal	Air Quality/ Climate effects	Water quality/ supply effects; wetlands effects	Historic and cultural resource effects	Effect on wildlife and endangered species	Subtotal	
612549	LOWELL-PAWTUCKET STREET CORRIDOR IMPROVEMENTS	Lowell	3	NA	0	1.5	2	2	3	2	NA	NA	2.25	3	3	0	NA	NA	2	1	NA	3	2	2	0	1.6	3	2	3	0	2	1	0	0	0	0.25	
612609	TEWKSBURY-INTERSECTION IMPROVEMENTS AT MAIN STREET/PLEASANT STREET & NORTH STREET/EAST STREET	Tewksbury	2	NA	0	1	2	2	2	2	NA	NA	2	3	3	3	NA	NA	3	2	NA	3	0	0	0	1	1	2	3	0	1.5	1	0	2	0	0.75	9.25
612977	CHELMSFORD-VINAL SQUARE SAFETY IMPROVEMENTS	Chelmsford	2	NA	0	1.00	1	1	3	3	NA	NA	2.00	3	3	1	NA	NA	2.33	2	NA	3	0	0	1	1.20	2	2	3	0	1.75	1	1	1	0	0.75	9.03
609038	WESTFORD - REHABILITATION OF BOSTON ROAD	Westford	2	NA	3	2.50	1	2	2	1	NA	NA	1.50	1	1	1	NA	NA	1.00	1	NA	3	2	2	0	1.60	1	1	1	0	0.75	3	1	1	0	1.25	8.60
610930	WESTFORD - ROUTE 110 (LITTLETON RD) FROM POWERS ROAD TO MINOT'S CORNER	Westford	3	NA	0	1.50	2	2	3	3	NA	NA	2.50	2	2	1	NA	NA	1.67	1	NA	2	0	0	2	1.00	2	2	1	0	1.25	1	0	0	0	0.25	8.17
609510	DRACUT- IMPROVEMENTS AT GEORGE ENGLSBY ELEMENTARY SCHOOL (SRTS)	Dracut	NA	2	2	2.00	NA	1	NA	NA	1	3	1.67	NA	NA	NA	2	3	2.50	1	0	3	NA	NA	1	1.25	1	0	0	0	0.25	1	0	0	NA	0.33	8.00
609250	IMPROVEMENTS AT BOSTON ROAD (ROUTE 3A), LEXINGTON STREET AND GLAD VALLEY ROAD	Billerica	2	NA	2	2.00	2	2	2	2	NA	NA	2.00	2	2	2	NA	NA	2.00	2	NA	2	0	0	0	0.80	1	0	1	0	0.50	1	0	0	0	0.25	7.55
604694	LOWELL- CONNECTOR RECONSTRUCTION, FROM THORNDIKE STREET TO	Lowell	2	NA	0	1.00	2	3	1	3	NA	NA	2.25	2	3	3	NA	NA	2.67	1	NA	1	1	1	0	0.80	1	0	1	0	0.50	1	0	0	0	0.25	7.47
607401	CHELMSFORD- TRAFFIC SIGNAL INSTALLATION AT ROUTE 110 & ROUTE 495 (2 LOCATIONS)	Chelmsford	1	NA	0	0.50	3	3	2	3	NA	NA	2.75	3	2	2	NA	NA	2.33	1	NA	2	0	0	0	0.60	2	0	1	0	0.75	2	0	0	0	0.50	7.43
605966	LOWELL- RECONSTRUCTION & RELATED WORK ON VFW HIGHWAY	Lowell	3	NA	0	1.50	1	1	1	1	NA	NA	1.00	2	2	2	NA	NA	2.00	1	NA	2	2	2	0	1.40	1	1	1	0	0.75	1	2	0	0	0.75	7.40
612535	ON ROUTE 3A (PRINCETON STREET), FROM RICHARDSON ROAD TO TECHNOLOGY DRIVE	Chelmsford	2	NA	0	1	2	1	3	2	NA	NA	2	2	2	2	NA	NA	2	2	NA	1	0	0	1	0.8	2	1	2	0	1.25	1	0	0	0	0.25	7.30
609317	CHELMSFORD-IMPROVEMENTS ON CHELMSFORD STREET (ROUTE 110)	Chelmsford	3	NA	0	1.50	1	1	2	2	NA	NA	1.50	1	1	0	NA	NA	0.67	2	NA	3	0	0	0	1.00	2	2	1	1	1.50	2	0	2	0	1.00	7.17
612631	CHELMSFORD-BRIDGE REPLACEMENT, C-08-039, GORHAM STREET (ST 3A) OVER I-495 AND REHABILITATION OF C-08-036, WESTFORD STREET	Chelmsford	2	NA	3	2.5	1	1	1	3	NA	NA	1.5	0	1	1	NA	NA	0.67	1	NA	3	1	1	0	1.2	1	0	0	0	0.25	1	0	0	0	0.25	6.37
612096	WESTFORD- INTERSTATE MAINTENANCE AND RELATED	Westford	3	NA	1	2.00	2	2	0	2	NA	NA	1.50	1	0	1	NA	NA	0.67	1	NA	1	0	0	0	0.4	2	0	1	0	0.75	1	0	0	0	0.25	5.57
608861	REPLACEMENT, W-26-002, STONY BROOK ROAD OVER THE	Westford	2	NA	3	2.50	0	2	1	1	NA	NA	1.00	0	1	0	NA	NA	0.33	2	NA	1	0	0	0	0.6	1	0	0	0	0.25	0	1	0	0	0.25	4.93

APPENDIX E: STATEWIDE FUNDING TARGETS

Federal Fiscal Year 2025		Development STIP: 2025 - 2029		
		Federal Aid Funds	Matching Funds	FFY 2025 (Proposed) (Fed Aid + Match)
Base Obligation Authority		\$768,478,798		
Planned Redistribution Request		\$50,000,000		
Total Estimated Formula Funding Available		\$818,478,798	\$272,826,266	\$1,091,305,064
Planning/Adjustments/Pass-throughs		\$201,297,944	\$18,903,361	\$220,201,305
GANS Repayment		\$122,185,000	\$0	\$122,185,000
Award Adjustments, Change Orders, etc.		\$22,225,500	\$5,274,500	\$27,500,000
Metropolitan Planning		\$11,325,805	\$2,831,451	\$14,157,256
State Planning & Research		\$22,853,908	\$5,713,477	\$28,567,385
Recreational Trails		\$1,186,729	\$296,682	\$1,483,411
Railroad Grade Crossings		\$0	\$0	\$0
SRTS Education		\$1,951,346	\$487,837	\$2,439,183
Transit Grant Program		\$0	\$0	\$0
Flex to FTA		\$0	\$0	\$0
Railroad Crossings		\$2,371,999	\$0	\$2,371,999
Carbon Reduction		\$17,197,657	\$4,299,414	\$21,497,071
Regional Priorities				
Regional Share %	MPO	\$239,118,188	\$59,779,547	\$298,897,735
3.5596	Berkshire Region	\$8,511,651	\$2,127,913	\$10,639,564
42.9671	Boston Region	\$102,742,151	\$25,685,538	\$128,427,689
4.5851	Cape Cod	\$10,963,808	\$2,740,952	\$13,704,760
8.6901	Central Mass	\$20,779,610	\$5,194,902	\$25,974,512
2.5397	Franklin Region	\$6,072,885	\$1,518,221	\$7,591,106
0.3100	Martha's Vineyard	\$741,266	\$185,317	\$926,583
4.4296	Merrimack Valley	\$10,591,979	\$2,647,995	\$13,239,974
4.4596	Montachusett	\$10,663,715	\$2,665,929	\$13,329,643
0.2200	Nantucket	\$526,060	\$131,515	\$657,575
3.9096	Northern Middlesex	\$9,348,565	\$2,337,141	\$11,685,706
4.5595	Old Colony	\$10,902,594	\$2,725,648	\$13,628,242
10.8100	Pioneer Valley	\$25,848,676	\$6,462,169	\$32,310,845
8.9601	Southeastern Mass	\$21,425,229	\$5,356,307	\$26,781,536
Highway		\$384,197,617	\$85,393,363	\$469,590,980
Reliability		\$279,815,642	\$62,422,868	\$342,238,510
Bridge		\$141,294,350	\$35,323,588	\$176,617,938
Bridge Inspections		\$8,495,775	\$2,123,944	\$10,619,719
Bridge Systematic Maintenance		\$0	\$0	\$0
Bridge On-system NHS		\$94,856,125	\$23,714,031	\$118,570,156
Bridge On-system Non-NHS		\$0	\$0	\$0
Bridge Off-system		\$37,942,450	\$9,485,613	\$47,428,063
Interstate Pavement		\$38,473,514	\$4,274,835	\$42,748,349
Non-Interstate Pavement		\$58,162,826	\$14,540,707	\$72,703,533
Roadway Improvements		\$1,200,000	\$300,000	\$1,500,000
Safety Improvements		\$21,750,000	\$3,250,000	\$25,000,000
Highway Resiliency Improvement Program		\$18,934,952	\$4,733,738	\$23,668,690
Modernization		\$76,381,975	\$15,970,495	\$92,352,470
ADA Retrofits		\$1,200,000	\$300,000	\$1,500,000
Intersection Improvements		\$22,500,000	\$2,500,000	\$25,000,000
Intelligent Transportation Systems		\$8,247,894	\$2,061,974	\$10,309,868
Roadway Reconstruction		\$39,173,843	\$9,793,461	\$48,967,304
Safe Routes to School		\$5,260,238	\$1,315,060	\$6,575,298
Expansion		\$28,000,000	\$7,000,000	\$35,000,000
Bicycle and Pedestrian		\$28,000,000	\$7,000,000	\$35,000,000
Capacity		\$0	\$0	\$0
Grand Total Formula Funds		\$824,613,749	\$164,076,271	\$988,690,020
Difference from Funds Available		-\$6,134,951	\$108,749,995	\$102,615,044

*The program sizes above are only for highway funding programs subject to Obligation Authority. The Bipartisan Infrastructure Law (BIL) includes non-core formula funding for a few additional program through from FFY 2022 through FFY 2026. This includes an estimated \$242.5M federal aid annually for Bridge Formula Program funds; \$13.5M federal aid annually for National Electric Vehicle Infrastructure (NEVI) funds; and \$1.4M federal aid annually for Ferry Boat Program funds. MassDOT is conservatively estimating no additional federal apportionment of non-core formula funding beginning in FFY 2027.

**Safe Routes to School (SRTS) projects have historically been listed under Roadway Reconstruction. This will now be reflected as its own program in the STIP & CIP, and sized to the estimated annual award amounts.

Federal Fiscal Year 2026		Development STIP: 2025 - 2029		
		Federal Aid Funds	Matching Funds	FFY 2026(Proposed) (Fed Aid + Match)
Base Obligation Authority		\$783,849,292		
Planned Redistribution Request		\$50,000,000		
Total Estimated Formula Funding Available		\$833,849,292	\$277,949,764	\$1,111,799,056
Planning/Adjustments/Pass-throughs		\$213,303,413	\$19,045,979	\$232,349,392
GANS Repayment		\$133,620,000	\$0	\$133,620,000
Award Adjustments, Change Orders, etc.		\$22,225,500	\$5,274,500	\$27,500,000
Metropolitan Planning		\$11,552,321	\$2,888,080	\$14,440,401
State Planning & Research		\$22,853,908	\$5,713,477	\$28,567,385
Recreational Trails		\$1,186,729	\$296,682	\$1,483,411
Railroad Grade Crossings		\$0	\$0	\$0
SRTS Education		\$1,951,346	\$487,837	\$2,439,183
Transit Grant Program		\$0	\$0	\$0
Flex to FTA		\$0	\$0	\$0
Railroad Crossings		\$2,371,999	\$0	\$2,371,999
Carbon Reduction		\$17,541,610	\$4,385,403	\$21,927,013
Regional Priorities				
Regional Share %	MPO	\$233,268,128	\$58,317,032	\$291,585,160
3.5596	Berkshire Region	\$8,303,412	\$2,075,853	\$10,379,265
42.9671	Boston Region	\$100,228,550	\$25,057,137	\$125,285,687
4.5851	Cape Cod	\$10,695,577	\$2,673,894	\$13,369,471
8.6901	Central Mass	\$20,271,234	\$5,067,808	\$25,339,042
2.5397	Franklin Region	\$5,924,311	\$1,481,078	\$7,405,388
0.3100	Martha's Vineyard	\$723,131	\$180,783	\$903,914
4.4296	Merrimack Valley	\$10,332,845	\$2,583,211	\$12,916,056
4.4596	Montachusett	\$10,402,825	\$2,600,706	\$13,003,532
0.2200	Nantucket	\$513,190	\$128,297	\$641,487
3.9096	Northern Middlesex	\$9,119,851	\$2,279,963	\$11,399,813
4.5595	Old Colony	\$10,635,860	\$2,658,965	\$13,294,825
10.8100	Pioneer Valley	\$25,216,285	\$6,304,071	\$31,520,356
8.9601	Southeastern Mass	\$20,901,058	\$5,225,264	\$26,126,322
Highway		\$387,277,751	\$86,163,395	\$473,441,146
Reliability		\$273,742,089	\$60,904,479	\$334,646,568
Bridge		\$147,118,575	\$36,779,644	\$183,898,219
Bridge Inspections		\$14,320,000	\$3,580,000	\$17,900,000
Bridge Systematic Maintenance		\$0	\$0	\$0
Bridge On-system NHS		\$94,856,125	\$23,714,031	\$118,570,156
Bridge On-system Non-NHS		\$0	\$0	\$0
Bridge Off-system		\$37,942,450	\$9,485,613	\$47,428,063
Interstate Pavement		\$38,473,514	\$4,274,835	\$42,748,349
Non-Interstate Pavement		\$52,000,000	\$13,000,000	\$65,000,000
Roadway Improvements		\$2,400,000	\$600,000	\$3,000,000
Safety Improvements		\$21,750,000	\$3,250,000	\$25,000,000
Highway Resiliency Improvement Program		\$12,000,000	\$3,000,000	\$15,000,000
Modernization		\$85,535,662	\$18,258,916	\$103,794,578
ADA Retrofits		\$2,000,000	\$500,000	\$2,500,000
Intersection Improvements		\$22,500,000	\$2,500,000	\$25,000,000
Intelligent Transportation Systems		\$8,247,894	\$2,061,974	\$10,309,868
Roadway Reconstruction		\$41,380,332	\$10,345,083	\$51,725,415
Safe Routes to School		\$11,407,436	\$2,851,859	\$14,259,295
Expansion		\$28,000,000	\$7,000,000	\$35,000,000
Bicycle and Pedestrian Capacity		\$28,000,000	\$7,000,000	\$35,000,000
Capacity		\$0	\$0	\$0
Grand Total Formula Funds		\$833,849,292	\$163,526,406	\$997,375,698
Difference from Funds Available		\$0	\$114,423,358	\$114,423,358
<p>*The program sizes above are only for highway funding programs subject to Obligation Authority. The Bipartisan Infrastructure Law (BIL) includes non-core formula funding for a few additional program through from FFY 2022 through FFY 2026. This includes an estimated \$242.5M federal aid annually for Bridge Formula Program funds; \$13.5M federal aid annually for National Electric Vehicle Infrastructure (NEVI) funds; and \$1.4M federal aid annually for Ferry Boat Program funds. MassDOT is conservatively estimating no additional federal apportionment of non-core formula funding beginning in FFY 2027.</p> <p>**Safe Routes to School (SRTS) projects have historically been listed under Roadway Reconstruction. This will now be reflected as its own program in the STIP & CIP, and sized to the estimated annual award amounts.</p>				

Federal Fiscal Year 2027		Development STIP: 2025 - 2029		
		Federal Aid Funds	Matching Funds	FFY 2027 (Proposed) (Fed Aid + Match)
Base Obligation Authority		\$799,526,278		
Planned Redistribution Request		\$50,000,000		
Total Estimated Formula Funding Available		\$849,526,278	\$283,175,426	\$1,132,701,704
Planning/Adjustments/Pass-throughs		\$80,726,588	\$19,306,773	\$100,033,361
GANS Repayment		\$0	\$0	\$0
Award Adjustments, Change Orders, etc.		\$22,225,500	\$5,274,500	\$27,500,000
Metropolitan Planning		\$11,783,367	\$2,945,842	\$14,729,209
State Planning & Research		\$23,315,205	\$5,828,801	\$29,144,006
Recreational Trails		\$1,186,729	\$296,682	\$1,483,411
SRTS Education		\$1,951,346	\$487,837	\$2,439,183
Transit Grant Program		\$0	\$0	\$0
Flex to FTA		\$0	\$0	\$0
Railroad Crossings		\$2,371,999	\$0	\$2,371,999
Carbon Reduction		\$17,892,442	\$4,473,111	\$22,365,553
Regional Priorities				
Regional Share %	MPO	\$288,838,935	\$72,209,734	\$361,048,668
3.5596	Berkshire Region	\$10,281,511	\$2,570,378	\$12,851,888
42.9671	Boston Region	\$124,105,714	\$31,026,428	\$155,132,142
4.5851	Cape Cod	\$13,243,554	\$3,310,888	\$16,554,442
8.6901	Central Mass	\$25,100,392	\$6,275,098	\$31,375,490
2.5397	Franklin Region	\$7,335,642	\$1,833,911	\$9,169,553
0.3100	Martha's Vineyard	\$895,401	\$223,850	\$1,119,251
4.4296	Merrimack Valley	\$12,794,409	\$3,198,602	\$15,993,012
4.4596	Montachusett	\$12,881,061	\$3,220,265	\$16,101,326
0.2200	Nantucket	\$635,446	\$158,861	\$794,307
3.9096	Northern Middlesex	\$11,292,447	\$2,823,112	\$14,115,559
4.5595	Old Colony	\$13,169,611	\$3,292,403	\$16,462,014
10.8100	Pioneer Valley	\$31,223,489	\$7,805,872	\$39,029,361
8.9601	Southeastern Mass	\$25,880,257	\$6,470,064	\$32,350,322
Highway		\$479,960,755	\$108,896,647	\$588,857,402
Reliability		\$342,010,686	\$77,534,129	\$419,544,815
Bridge		\$204,474,346	\$51,118,587	\$255,592,933
Bridge Inspections		\$8,838,012	\$2,209,503	\$11,047,515
Bridge Systematic Maintenance		\$16,000,000	\$4,000,000	\$20,000,000
Bridge On-system NHS		\$141,693,884	\$35,423,471	\$177,117,355
Bridge On-system Non-NHS		\$0	\$0	\$0
Bridge Off-system		\$37,942,450	\$9,485,613	\$47,428,063
Interstate Pavement		\$38,473,514	\$4,274,835	\$42,748,349
Non-Interstate Pavement		\$58,162,826	\$14,540,707	\$72,703,533
Roadway Improvements		\$1,600,000	\$400,000	\$2,000,000
Safety Improvements		\$26,100,000	\$3,900,000	\$30,000,000
Highway Resiliency Improvement Program		\$13,200,000	\$3,300,000	\$16,500,000
Modernization		\$103,550,069	\$22,762,518	\$126,312,587
ADA Retrofits		\$2,000,000	\$500,000	\$2,500,000
Intersection Improvements		\$22,500,000	\$2,500,000	\$25,000,000
Intelligent Transportation Systems		\$8,247,894	\$2,061,974	\$10,309,868
Roadway Reconstruction		\$41,380,332	\$10,345,083	\$51,725,415
Safe Routes to School		\$11,407,436	\$2,851,859	\$14,259,295
Expansion		\$34,400,000	\$8,600,000	\$43,000,000
Bicycle and Pedestrian		\$28,000,000	\$7,000,000	\$35,000,000
Capacity		\$0	\$0	\$0
Grand Total Formula Funds		\$833,849,292	\$163,526,406	\$997,375,698
Difference from Funds Available		\$0	\$114,423,358	\$114,423,358

*The program sizes above are only for highway funding programs subject to Obligation Authority. The Bipartisan Infrastructure Law (BIL) includes non-core formula funding for a few additional program through from FFY 2022 through FFY 2026. This includes an estimated \$242.5M federal aid annually for Bridge Formula Program funds; \$13.5M federal aid annually for National Electric Vehicle Infrastructure (NEVI) funds; and \$1.4M federal aid annually for Ferry Boat Program funds. MassDOT is conservatively estimating no additional federal apportionment of non-core formula funding beginning in FFY 2027.

**Safe Routes to School (SRTS) projects have historically been listed under Roadway Reconstruction. This will now be reflected as its own program in the STIP & CIP, and sized to the estimated annual award amounts.

Federal Fiscal Year 2028		Development STIP: 2025 - 2029		
		Federal Aid Funds	Matching Funds	FFY 2028 (Proposed) (Fed Aid + Match)
Base Obligation Authority		\$815,516,804		
Planned Redistribution Request		\$50,000,000		
Total Estimated Formula Funding Available		\$865,516,804	\$288,505,601	\$1,154,022,405
Planning/Adjustments/Pass-throughs		\$81,786,409	\$19,571,728	\$101,358,137
GANS Repayment		\$0	\$0	\$0
Award Adjustments, Change Orders, etc.		\$22,225,500	\$5,274,500	\$27,500,000
Metropolitan Planning		\$12,019,035	\$3,004,759	\$15,023,794
State Planning & Research		\$23,781,509	\$5,945,377	\$29,726,886
Recreational Trails		\$1,186,729	\$296,682	\$1,483,411
SRTS Education		\$1,951,346	\$487,837	\$2,439,183
Transit Grant Program		\$0	\$0	\$0
Flex to FTA		\$0	\$0	\$0
Railroad Crossings		\$2,371,999	\$0	\$2,371,999
Carbon Reduction		\$18,250,291	\$4,562,573	\$22,812,864
Regional Priorities				
Regional Share %	MPO	\$294,275,713	\$73,568,928	\$367,844,642
3.5596	Berkshire Region	\$10,475,038	\$2,618,760	\$13,093,798
42.9671	Boston Region	\$126,441,740	\$31,610,435	\$158,052,175
4.5851	Cape Cod	\$13,492,836	\$3,373,209	\$16,866,045
8.6901	Central Mass	\$25,572,854	\$6,393,213	\$31,966,067
2.5397	Franklin Region	\$7,473,720	\$1,868,430	\$9,342,150
0.3100	Martha's Vineyard	\$912,255	\$228,064	\$1,140,318
4.4296	Merrimack Valley	\$13,035,237	\$3,258,809	\$16,294,046
4.4596	Montachusett	\$13,123,520	\$3,280,880	\$16,404,400
0.2200	Nantucket	\$647,407	\$161,852	\$809,258
3.9096	Northern Middlesex	\$11,505,003	\$2,876,251	\$14,381,254
4.5595	Old Colony	\$13,417,501	\$3,354,375	\$16,771,876
10.8100	Pioneer Valley	\$31,811,205	\$7,952,801	\$39,764,006
8.9601	Southeastern Mass	\$26,367,398	\$6,591,850	\$32,959,248
Highway		\$507,704,973	\$115,832,702	\$623,537,675
Reliability		\$364,917,461	\$83,260,823	\$448,178,284
Bridge		\$226,181,121	\$56,545,281	\$282,726,402
Bridge Inspections		\$14,320,000	\$3,580,000	\$17,900,000
Bridge Systematic Maintenance		\$16,000,000	\$4,000,000	\$20,000,000
Bridge On-system NHS		\$157,918,671	\$39,479,668	\$197,398,339
Bridge On-system Non-NHS		\$0	\$0	\$0
Bridge Off-system		\$37,942,450	\$9,485,613	\$47,428,063
Interstate Pavement		\$38,473,514	\$4,274,835	\$42,748,349
Non-Interstate Pavement		\$58,162,826	\$14,540,707	\$72,703,533
Roadway Improvements		\$1,600,000	\$400,000	\$2,000,000
Safety Improvements		\$26,100,000	\$3,900,000	\$30,000,000
Highway Resiliency Improvement Program		\$14,400,000	\$3,600,000	\$18,000,000
Modernization		\$102,787,512	\$22,571,879	\$125,359,391
ADA Retrofits		\$2,000,000	\$500,000	\$2,500,000
Intersection Improvements		\$22,500,000	\$2,500,000	\$25,000,000
Intelligent Transportation Systems		\$8,247,894	\$2,061,974	\$10,309,868
Roadway Reconstruction		\$58,039,618	\$14,509,905	\$72,549,523
Safe Routes to School		\$12,000,000	\$3,000,000	\$15,000,000
Expansion		\$40,000,000	\$10,000,000	\$50,000,000
Bicycle and Pedestrian		\$40,000,000	\$10,000,000	\$50,000,000
Capacity		\$0	\$0	\$0
Grand Total Formula Funds		\$883,767,095	\$208,973,358	\$1,092,740,454
Difference from Funds Available		-\$18,250,291	\$79,532,243	\$61,281,951

*The program sizes above are only for highway funding programs subject to Obligation Authority. The Bipartisan Infrastructure Law (BIL) includes non-core formula funding for a few additional program through from FFY 2022 through FFY 2026. This includes an estimated \$242.5M federal aid annually for Bridge Formula Program funds; \$13.5M federal aid annually for National Electric Vehicle Infrastructure (NEVI) funds; and \$1.4M federal aid annually for Ferry Boat Program funds. MassDOT is conservatively estimating no additional federal apportionment of non-core formula funding beginning in FFY 2027.

**Safe Routes to School (SRTS) projects have historically been listed under Roadway Reconstruction. This will now be reflected as its own program in the STIP & CIP, and sized to the estimated annual award amounts.

Federal Fiscal Year 2029		Development STIP: 2025 - 2029		
		Federal Aid Funds	Matching Funds	FFY 2029 (Proposed) (Fed Aid + Match)
Base Obligation Authority		\$831,827,140		
Planned Redistribution Request		\$50,000,000		
Total Estimated Formula Funding Available		\$881,827,140	\$293,942,380	\$1,175,769,520
Planning/Adjustments/Pass-throughs		\$71,867,426	\$17,091,982	\$88,959,408
GANS Repayment		\$0	\$0	\$0
Award Adjustments, Change Orders, etc.		\$22,225,500	\$5,274,500	\$27,500,000
Metropolitan Planning		\$1,259,416	\$314,854	\$1,574,270
State Planning & Research		\$24,257,139	\$6,064,285	\$30,321,424
Recreational Trails		\$1,186,729	\$296,682	\$1,483,411
SRTS Education		\$1,951,346	\$487,837	\$2,439,183
Transit Grant Program		\$0	\$0	\$0
Flex to FTA		\$0	\$0	\$0
Railroad Crossings		\$2,371,999	\$0	\$2,371,999
Carbon Reduction		\$18,615,297	\$4,653,824	\$23,269,121
Regional Priorities				
Regional Share %	MPO	\$299,821,228	\$74,955,307	\$374,776,535
3.5596	Berkshire Region	\$10,672,436	\$2,668,109	\$13,340,546
42.9671	Boston Region	\$128,824,487	\$32,206,122	\$161,030,608
4.5851	Cape Cod	\$13,747,103	\$3,436,776	\$17,183,879
8.6901	Central Mass	\$26,054,764	\$6,513,691	\$32,568,456
2.5397	Franklin Region	\$7,614,560	\$1,903,640	\$9,518,200
0.3100	Martha's Vineyard	\$929,446	\$232,361	\$1,161,807
4.4296	Merrimack Valley	\$13,280,881	\$3,320,220	\$16,601,101
4.4596	Montachusett	\$13,370,827	\$3,342,707	\$16,713,534
0.2200	Nantucket	\$659,607	\$164,902	\$824,508
3.9096	Northern Middlesex	\$11,721,811	\$2,930,453	\$14,652,263
4.5595	Old Colony	\$13,670,349	\$3,417,587	\$17,087,936
10.8100	Pioneer Valley	\$32,410,675	\$8,102,669	\$40,513,343
8.9601	Southeastern Mass	\$26,864,282	\$6,716,070	\$33,580,352
Highway		\$499,138,487	\$113,878,261	\$613,016,748
Reliability		\$358,760,223	\$81,855,965	\$440,616,188
Bridge		\$222,364,776	\$55,591,194	\$277,955,970
Bridge Inspections		\$14,078,379	\$3,519,595	\$17,597,974
Bridge Systematic Maintenance		\$15,730,033	\$3,932,508	\$19,662,541
Bridge On-system NHS		\$155,254,115	\$38,813,529	\$194,067,644
Bridge On-system Non-NHS		\$0	\$0	\$0
Bridge Off-system		\$37,302,249	\$9,325,562	\$46,627,811
Interstate Pavement		\$37,824,352	\$4,202,706	\$42,027,058
Non-Interstate Pavement		\$57,181,447	\$14,295,362	\$71,476,809
Roadway Improvements		\$1,573,003	\$393,251	\$1,966,254
Safety Improvements		\$25,659,616	\$3,834,195	\$29,493,811
Highway Resiliency Improvement Program		\$14,157,029	\$3,539,257	\$17,696,286
Modernization		\$101,053,182	\$22,191,025	\$123,244,207
ADA Retrofits		\$1,966,254	\$491,564	\$2,457,818
Intersection Improvements		\$22,120,358	\$2,457,818	\$24,578,176
Intelligent Transportation Systems		\$8,108,728	\$2,027,182	\$10,135,910
Roadway Reconstruction		\$57,060,318	\$14,265,080	\$71,325,398
Safe Routes to School		\$11,797,524	\$2,949,381	\$14,746,905
Expansion		\$39,325,082	\$9,831,271	\$49,156,353
Bicycle and Pedestrian		\$39,325,082	\$9,831,271	\$49,156,353
Capacity		\$0	\$0	\$0
Grand Total Formula Funds		\$870,827,141	\$205,925,550	\$1,076,752,691
Difference from Funds Available		\$10,999,999	\$88,016,830	\$99,016,829
*The program sizes above are only for highway funding programs subject to Obligation Authority. The Bipartisan Infrastructure Law (BIL) includes non-core formula funding for a few additional program through from FFY 2022 through FFY 2026. This includes an estimated \$242.5M federal aid annually for Bridge Formula Program funds; \$13.5M federal aid annually for National Electric Vehicle Infrastructure (NEVI) funds; and \$1.4M federal aid annually for Ferry Boat Program funds. MassDOT is conservatively estimating no additional federal apportionment of non-core formula funding beginning in FFY 2027.				
**Safe Routes to School (SRTS) projects have historically been listed under Roadway Reconstruction. This will now be reflected as its own program in the STIP & CIP, and sized to the estimated annual award amounts.				

APPENDIX F: SYSTEM PRESERVATION, OPERATIONS AND MAINTENANCE

The numbers in the table below represent the operations and maintenance budget approved by the LRTA Advisory Board, and projections for the out-years as used in the Program Preview meetings based on State Fiscal Year (SFY). This data projects that revenues will meet the operating needs of the LRTA.

LRTA OPERATIONS AND MAINTENANCE SUMMARY

Operating Revenue	SFY 2025	SFY 2026	SFY 2027	SFY 2028	SFY 2029
Farebox	\$929,250	\$975,713	\$1,024,498	\$1,075,723	\$1,129,509
Section 5307	\$3,829,697	\$5,290,885	\$11,226,518	\$11,572,619	\$11,111,436
CMAQ/TDM	\$0	\$0	\$0	\$0	\$0
CARES/ARPA Act	\$1,700,000	\$788,220	\$0	\$0	\$0
Advertising	\$70,000	\$75,000	\$80,000	\$85,000	\$90,000
Interest Income	\$140,000	\$140,000	\$140,000	\$140,000	\$140,000
Parking Revenue	\$585,000	\$585,000	\$585,000	\$585,000	\$585,000
State Contract Assistance**	\$8,953,384	\$9,401,053	\$9,871,106	\$10,364,661	\$10,882,894
Try Transit Assistance	\$124,337	\$128,068	\$131,910	\$135,867	\$139,943
Local Assessment	\$3,157,384	\$3,236,319	\$3,317,227	\$3,400,158	\$3,485,162
Other: sale of used equipment and other miscellaneous revenues	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
TOTAL	\$19,499,053	\$20,630,257	\$26,386,259	\$27,369,028	\$27,573,944
Operating Expenses***	SFY 2025	SFY 2026	SFY 2027	SFY 2028	SFY 2029

Source: LRTA

* Federally funded refers to contract work, often to Human Service Agencies

** Operating assistance provided by the State

*** Description of Operating Expenses: Salaries and wages; fringe benefits; legal, accounting and professional services; promotion/marketing; insurance; equipment leases and rentals; real property leases and rentals; non-capitalized maintenance/repair; fuel costs; tire costs; office supplies and equipment; interest expense; utilities; management fees; travel and training; and other miscellaneous expense items.

APPENDIX G: PUBLIC PARTICIPATION PLAN

Public participation is an integral and vital part of the overall transportation planning process. The information, viewpoints and perspectives provided through the public involvement process help guide decision makers and leads to a more meaningful and comprehensive planning process.

NMCOG and the NMMPO engage public participation by holding public meetings and by conducting targeted outreach to an identified list of stakeholders as a part of the transportation planning process. A copy of the Public Participation Plan is available on NMMPO's website.

Northern Middlesex Public Participation Plan can be found [here](#).

APPENDIX H: GLOSSARY OF ACRONYMS

- 3C Process: Continuing, Cooperative, Comprehensive
- ADA: Americans with Disabilities Act
- ARPA: American Rescue Plan Act
- BIL: Bipartisan Infrastructure Law
- BU: Bus
- CAA: Clean Air Act
- CAAA: Clean Air Act Amendments
- CAP: Capital Assistance Program
- CARES Act: Coronavirus Aid, Relief, and Economic Stimulus Act
- CBA: Coalition for a Better Acre
- CEDS: Comprehensive Economic Development Strategy
- CFR: Code of Federal Regulations
- CGI: Common Ground Inc.
- CHSTP: Coordinated Human-Services Transit Plan
- CIP: Capital Investment Plan
- CMAQ: Congestion Mitigation Air Quality
- CMR: Code of Massachusetts Regulations
- CRP: Carbon Reduction Program
- CTI: Community Teamwork, Inc.
- CU: Cutaway Bus
- DHCD: Department of Housing and Community Development
- DLTA: District Local Technical Assistance
- EDA: Economic Development Administration
- EDSAT: Economic Development Self-Assessment Tool
- EJ: Environmental Justice
- EOHED: Executive Office of Housing and Economic Development
- EPA: Environmental Protection Agency

- FAST: Fixing America’s Surface Transportation Act
- FFY: Federal Fiscal Year (October 1 through September 30)
- FHWA: Federal Highway Administration
- FTA: Federal Transit Administration
- GHG: Greenhouse Gas
- GLWIB: Greater Lowell Workforce Investment Board
- GWSA: Global Warming Solutions Act
- HPMS: Highway Performance Monitoring System
- HSIP: Highway Safety Improvement Program
- IIJA: Infrastructure Investment and Jobs Act
- IRI: International Roughness Index
- LDFC: Lowell Development and Financial Corporation
- LEP: Limited English Proficiency
- LNHP: Lowell National Historic Park
- LOTTR: Level of Travel Time Reliability
- LRTA: Lowell Regional Transit Authority
- MCAD: Massachusetts Commission Against Discrimination
- MAP-21: Moving Ahead for Progress in the 21st Century Act
- MAP: Mobility Assistance Program
- MassDOT: Massachusetts Department of Transportation
- MEPA: Massachusetts Environmental Protection Agency
- MOBD: Massachusetts Office of Business Development
- MOU: Memorandum Of Understanding
- MPO: Metropolitan Planning Organization
- MTP: Metropolitan Transportation Plan
- NAAQS: National Ambient Air Quality Standard
- NBIS: National Bridge Inventory Standards

- NFA: Non-Federal Aid
- NGBP: Next Generation Bridge Program
- NHFP: National Highway Freight Program
- NHPP: National Highway Performance Program
- NHS: National Highway System
- NMCOG: Northern Middlesex Council of Governments
- NMMPO: Northern Middlesex Metropolitan Planning Organization
- OCD: Office for Commonwealth Development
- PHED: Peak Hour Excessive Delay
- PIF: Project Initiation Form
- PL: Planning (Funds)
- PM: Performance Management Measures Final Rules
- PPP: Public Participation Plan
- PRC: Project Review Committee
- PSI: Pavement Serviceability Index
- PTASP: Public Transportation Agency Safety Plan
- RFP: Request for Proposal
- RTA: Regional Transit Authority
- SAFETEA-LU: Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users
- SFY: State Fiscal Year
- SGR: State of Good Repair
- SIP: State Implementation Plan
- SMS: Safety Management Systems
- SRTS: Safe Routes To School
- STBG: Surface Transportation Block Grant
- STIP: Statewide Transportation Improvement Program
- SOV: Single Occupancy Vehicle
- TAMP: Transportation Asset Management Plan

- TA/TAP: Transportation Alternatives/Transportation Alternatives Program
- TCM: Transportation Control Measures
- TEC: Transportation Evaluation Criteria
- TERM: Transit Economic Requirements Model
- TFPC: Total Federal Participating Cost
- TFPCC: Total Federal Participating Construction Cost
- TIP: Transportation Improvement Program
- TMA: Transportation Management Association
- TTTR: Truck Travel Time Reliability
- UMASS: University of Massachusetts
- UPWP: Unified Planning Work Program
- USDOT: United States Department of Transportation
- UZA: Urbanized Area
- VMT: Vehicle Miles Traveled
- VOC: Volatile Organic Compounds
- YOY: Year of Expenditure