

Merrimack Valley Metropolitan Planning Organization

Transportation Improvement Program

Federal Fiscal Years 2025-2029



Merrimack Valley Metropolitan Planning Organization

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Front Matter & Certifications

Funding Disclaimer

This report was funded in part through grants from the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA), United States Department of Transportation (USDOT). The views and opinions of the Merrimack Valley Metropolitan Planning Organization (MVMPO) expressed herein do not necessarily state or reflect those of the USDOT.

Title VI Notice of Protection

MVMPO complies with federal and state nondiscrimination obligations and does not discriminate on the basis of race, color, age, religion, creed, national origin (including limited English proficiency), ethnicity, ancestry, sex, gender, sexual orientation, gender identity or expression, disability, veteran's status, or background. For more information, to express a concern, or to file a complaint, please contact Title VI Specialist Patrick Reed by phone at 978-374-0519, Ext. 15 or by email at transportation@mvpc.org. Visit www.mvpc.org to learn more about these nondiscrimination obligations.

MVPC is committed to nondiscrimination in all activities. Individuals who believe they have been discriminated against may file a complaint with MVPC at:

Attn: Title VI Specialist
Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830
Email: transportation@mvpc.org.

Complaints may also be filed directly with the United State Department of Transportation at:

U.S. Department of Transportation
Office of Civil Rights
1200 New Jersey Avenue, SE
Washington, DC 20590
Website: civilrights.justice.gov

For additional information, language service requests, or reasonable accommodations visit <https://mvpc.org/title-vi>

Translations

Spanish

Si necesita esta información en otro idioma, por favor contacte al coordinador de MVMPO del Título VI/Contra la Discriminación al 978-374-0519 ext. 15.

Portuguese

Caso estas informações sejam necessárias em outro idioma, por favor, contate o Coordenador de Título VI e de Não Discriminação da MVMPO pelo telefone 978-374-0519, Ramal 15.

Chinese Simple

如果需要使用其它语言了解信息 · 请联系Merrimack Valley大都会规划组织 (MVMPO) 《民权法案》第六章协调员 · 电话978-374-0519, 转15。

Chinese Traditional

如果需要使用其他語言瞭解資訊，請聯繫Merrimack Valley大都會規劃組織 (MVMPO) 《民權法案》第六章協調員，電話978-374-0519，轉15。

Vietnamese

Nếu quý vị cần thông tin này bằng tiếng khác, vui lòng liên hệ Điều phối viên Luật VI/Chống phân biệt đối xử của MVMPO theo số điện thoại 978-374-0519, số máy nhánh 15.

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Si yon moun vle genyen enfòmasyon sa yo nan yon lòt lang, tanpri kontakte Kowòdinatè kont Diskriminasyon/MVMPO Title VI la nan nimewo 978-374-0519, ekstansyon 15.

Russian

Если Вам необходима данная информация на любом другом языке, пожалуйста, свяжитесь с Координатором Титула VI/Защита от дискриминации в MVMPO по тел: 978-374-0519, добавочный 15.

French

Si vous avez besoin d'obtenir une copie de la présente dans une autre langue, veuillez contacter le coordinateur du Titre VI/anti-discrimination de MVMPO en composant le 978-374-0519, poste 15.

Italian

Se ha bisogno di ricevere queste informazioni in un'altra lingua si prega di contattare il coordinatore del MVMPO del Titolo VI e dell'ufficio contro la discriminazione al 978-374-0519 interno 15.

Mon-Khmer, Cambodian

ប្រសិនបើលោក-អ្នកត្រូវការបកប្រែព័ត៌មាននេះ សូមទាក់ទងអ្នកសម្របសម្រួលជំពូកទី6/គ្មានការរើសអើងរបស់ MVMPO តាមរយៈលេខទូរស័ព្ទ 978-374-0519 រួចភ្ជាប់ទៅលេខ 15។

Arabic

في الحضري التخطيط لمنظمة التابع التمييز لمنع السادسة الفقرة بمنسق الاتصال يُرجى ،أخرى بلغة المعلومات هذه إلى بحاجة كنت إذا 15. الأرقام اضغط وثم 978-374-0519:الهاتف على فالي ميريماك

FFY 2025-2029 Transportation Improvement Program Endorsement

Whereas, the Merrimack Valley MPO 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 FFYs 2025-2029 TIP is financially constrained and that the implementation of the Merrimack Valley Metropolitan Planning Organization 2020 Regional Transportation Plan satisfies the conformity criteria specified in both 40 CFR Part 51 and 93 (8/15/1997) and 310 CMR 60.03 (12/30/1994).

Therefore, in accordance with 23 CFR Part 450 Section 322 (Development and content of the Metropolitan Transportation Plan) of the March 16, 2007 Final Rules for Statewide and Metropolitan Planning, the MPO hereby endorses the FFYs 2025-2029 Transportation Improvement Program.

May 22, 2024

Monica Tibbits-Nutt, Secretary and Chief Executive Officer
Massachusetts Department of Transportation (MassDOT)
Chair, Merrimack Valley Metropolitan Planning Organization (MVMPO)

Self-Certification Compliance Statement

Certification of the Merrimack Valley Metropolitan Planning Organization Transportation Planning Process

The Merrimack Valley 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 11101(e) of the Infrastructure Investment and Jobs Act (IIJA) (Public Law 117-58) 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.

May 22, 2024

Monica Tibbits-Nutt, Secretary and Chief Executive Officer
Massachusetts Department of Transportation
Chair, Merrimack Valley Metropolitan Planning Organization

310 CMR 60.05 Global Warming Solutions Act Requirements for the Transportation Sector and MassDOT Certification

This will certify that the Transportation Improvement Program and Air Quality Conformity Determination for the Merrimack Valley Metropolitan Planning Organization's Long Range Transportation Plan 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 RTPs and TIPs;
2. 310 CMR 60.05(5)(a)2.: In consultation with MassDOT, develop and utilize procedures to prioritize and select projects in RTPs 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 RTPs and TIPs and certify in a statement included with RTPs 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 RTPs 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 RTPs and TIPs;
8. 310 CMR 60.05(8)(a)2.d.: Calculate aggregate transportation GHG emissions impacts for RTPs 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 RTPs, TIPs, STIPs, and projects included in these plans, MassDOT and the MPOs shall include the aggregate transportation GHG emission impact assessment in RTPs, TIPs, and STIPs and provide an opportunity for public review and comment on the RTPs, 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 RTPs, TIPs, STIPs or projects within 30 days of endorsement to the Department for review of the GHG assessment.

May 22, 2023

Monica Tibbits-Nutt, Secretary and Chief Executive Officer
Massachusetts Department of Transportation (MassDOT)
Chair, Merrimack Valley Metropolitan Planning Organization (MVMPO)

Executive Summary

About the Merrimack Valley Metropolitan Planning Organization

Fifteen member communities fall within the Merrimack Valley's federally designated metropolitan planning region. The Merrimack Valley Planning Commission (MVPC) supports these communities by facilitating various environmental, economic development, transportation, and technology planning services. Staff within MVPC also support the Merrimack Valley Metropolitan Planning Organization (MVMPO), which is the region's transportation policy board. This body manages the region's federally required Continuing, Cooperative, and Comprehensive (3C) transportation planning process, which ensures infrastructure planning and funding coordination across the local, state, and federal levels of government.

What is the region's Transportation Improvement Program (TIP)?

The Transportation Improvement Program (TIP) is the region's five-year transportation capital plan for federal aid projects. Each year the MVMPO prepares and approves a list of projects that are candidates to receive federal funding over a five-year horizon. Projects must be programmed on the TIP to receive federal aid.

How is the TIP developed?

The TIP programs federal aid from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

On the highway side, the TIP contains two primary types of federal aid projects: regional projects and statewide projects. Regional projects are typically developed by member communities in coordination with MVMPO staff and MassDOT. These projects are typically confined to a single municipality and tend to benefit residents, employees, and visitors who travel through the specific municipality. By contrast, statewide projects tend to be greater in geographic scope and/or magnitude of benefit in that they support statewide mobility. Statewide projects may also support specific policy goals of the state (such as improving access to schools through the Safe Routes to School program). Most FHWA TIP projects support infrastructure construction; however, various federal aid programs have numerous eligibilities including capital purchase and design.

On the transit side, the TIP contains both capital and operating support for the region's transit authority (MeVa). Capital projects include a range of project-types, including but not limited to replacing rolling stock, preventative maintenance, and upgrading facilities. Operating projects include subsidies for operations and short-range planning support.

Federal aid projects are supported by two types of federal aid funding: apportioned aid and discretionary aid. Federal surface transportation legislation develops programs (often referred to as "funding colors") and associated funding ceilings to allow states and regional governments to obligate the use of federal funds for their projects. Funds that are *apportioned* are approved by congress and divvied up to states through specific program formulas. In Massachusetts, regional funds are further broken up by formula. Funds that are *discretionary* are available to recipients, as warranted, by federal approval, most typically through competitive grant programs administered by the Federal Highway Administration or Federal Transit Administration. *Earmarks* provide funding for priorities specifically included in federal surface transportation legislation.

What projects are funded in this year's TIP?

This cycle programs federal aid for the following regional target projects:

- Corridor Improvements on Route 114 between Waverly Road and Mill Street in North Andover (2025-2028)
- Reconstruction on Route 97 between West Main and Moulton Street in Georgetown (2026)
- Intersection Improvements at Route 1 and Merrimack Street in Newburyport (2027)
- A trail connector between the Riverwalk and Salisbury Ghost Trail in Amesbury (2027)
- Reconstruction of North Avenue between Main Street and the New Hampshire Line in Haverhill (2027-2029)
- Reconstruction of Route 133 between Shawhseen Road and North Main Street in Andover (2029-2030)

This cycle also programs federal aid for the following statewide projects:

- I-495 bridge replacements in Haverhill/Methuen (2024-2026)
- Lawrence to Manchester Rail Trail (2024-2026)
- Replacement of the Basiliere Bridge in Haverhill (2025-2027)
- Replacement of the Short Street Bridge over the Spicket River in Lawrence (2026)
- A segment of the Border to Boston Trail between Georgetown Road and West Main Street in Georgetown and Boxford (2026)
- Safe Routes to School Improvements for Community Day Arlington in Lawrence (2026)
- Interstate Improvements on I-93 between Andover and Tewksbury (2026)
- Bridge replacement on Tewksbury Street over the MBTA Commuter Rail in Andover (2026)
- Bridge replacement over the Merrimack River in Andover (2026)
- A segment of the Border to Boston Trail between Georgetown and Byfield in Georgetown and Newbury (2027)
- Three culvert replacements in Haverhill on Route 110 (2027)
- I-495 bridge preservation in Lawrence (2027)
- Bridge replacement on Route 213 over the Methuen Rail Trail in Methuen (2027)
- Safe Routes to School Improvements for Bagnall Elementary in Groveland (2028)
- Resurfacing and related work on Route 28 in Andover (2029)

This cycle additionally programs various transit projects that allow Merrimack Valley Transit (MeVa) to operate their year-round fare-free fixed route service, operate paratransit services, and maintain vehicles and other infrastructure.

How Can I Be Involved?

Every year, MVMPO releases its draft TIP for a 21-day comment period at its April meeting. Public hearing opportunities are provided and advertised thereafter. In addition to attending a public hearing, written comments may be provided by mail and/or email via the contact information listed below. Staff additionally welcome the opportunity to discuss the TIP and may be contacted to set up a meeting or call by email.

Mail:

Attn: Transportation Program Manager
Merrimack Valley Planning Commission
160 Main Street
Haverhill, MA 01830

Email:

transportation@mvpc.org

Can the TIP be Changed Following Approval?

Yes. The TIP may be amended or adjusted in a given year following the procedures outlined in the region's most current Public Participation Plan. The current document's procedures (as of the approval date of May 22, 2024) may be found within this document under the "Amendment and Adjustment" procedures heading.

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Chapter 1: Transportation Planning Process

Overview

Transportation projects are born in a variety of ways. Elected officials, municipal engineers/planners, regional transportation officials, and community advocates can each play role in a project's development and advancement. While it is possible for municipalities to manage the entire development, design, and construction of a project, on many occasions local governments will engage their associated Metropolitan Planning Organization (MPO) to study, design, or advance projects. This happens most typically when a municipality seeks additional funding for a project beyond its own coffers or bond authority.

Each metropolitan area in the United States with a population equal to or exceeding 50,000 has an MPO. An MPO is a federally designated policy board that carries out the metropolitan transportation planning process, often referred to as the 3C Transportation Planning Process (Continuing, Comprehensive, and Cooperative). MPOs promote ongoing cooperation among municipal, state, and federal partners to advance transportation-related needs for all users of the transportation network. They assess both short and long-term needs and function as a forum for impartial regional decision-making.

The Merrimack Valley MPO, or MVMPO, is the Merrimack Valley region's designated MPO board. MVMPO is a ten-person board representing 15 member towns and cities, the Merrimack Valley Planning Commission (MVPC), Merrimack Valley Transit (MeVa), and representatives from the Massachusetts Department of Transportation (MassDOT). MVPC's transportation program staffs the MVMPO. Figure 1 depicts a map of the MVMPO's 15 member communities and towns.

Federal Aid Basics and 3C Transportation Planning Documents

As a designated MPO, the MVMPO coordinates with its member communities to program apportioned and discretionary federal aid (i.e. obligate the use of federal funds to support local needs). Apportioned aid is made available to states by the federal government in an amount determined by formulas included in federal surface transportation legislation, the most recent being the Infrastructure and Jobs Act (IIJA), which is more commonly referred to as the Bipartisan Infrastructure Law (BIL). A state allocates a percentage of its apportioned federal aid to be available to regional MPOs and recognized regional transit authorities. Apportioned aid comprises most of the federal aid that MPOs are responsible for programming. MPOs are also responsible for programming discretionary aid—aid that is not guaranteed through surface transportation legislation programs, which is often awarded to regions and municipalities through competitive grant processes—and earmarks.

To remain eligible to program available federal aid, MPOs must produce and endorse four certification documents: the Unified Planning Work Program (UPWP), the Transportation Improvement Program (TIP), the Metropolitan Transportation Plan (MTP), and a Public Participation Plan. Table 1 describes the role of the certification documents in the 3C funding process. Figure 2 depicts the relationship between the three primary federally required certification documents. The Public Participation Plan, which is not shown in Figure 2, establishes standards and policies for engaging communities in the development and approval of the other documents. Table 1 describes each 3C document.

Figure 1-MVPC and MVMP Member Communities

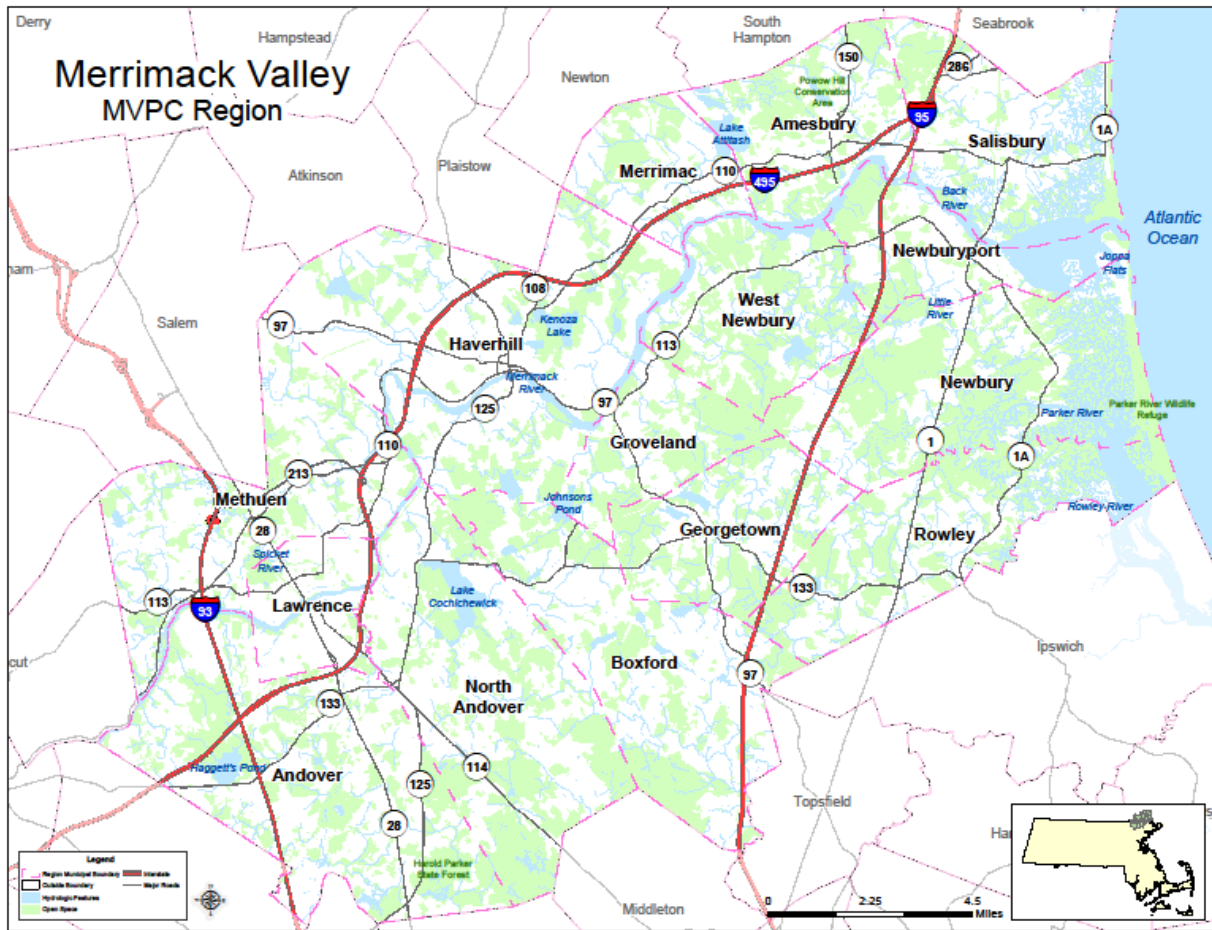


Figure 2 - 3C Transportation Planning Process Documents

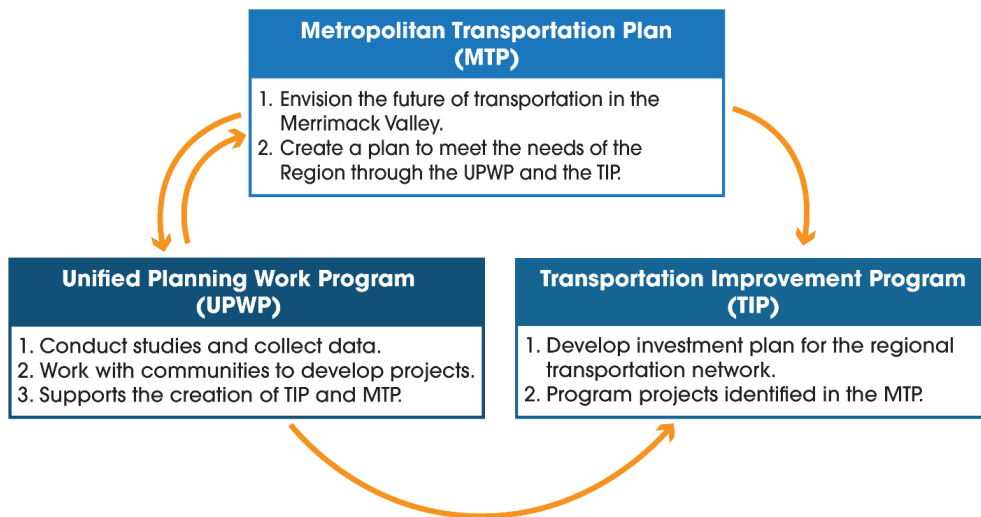


Table 1 - 3C Certification Documents

Document	Purpose	Horizon	Update Timeline
Unified Planning Work Program (UPWP)	Establishes the annual work program for the MVMPO staff, including studies and tasks that support member communities.	One Year	Annually, endorsed in spring
Transportation Improvement Program (TIP)	Programs federal and state aid funding for specific transportation projects.	Five Years	Annually, endorsed in spring
Metropolitan Transportation Plan (MTP)	Establishes a long-range vision for a region, including goals and objectives. Identifies projects and strategies to realize the vision.	Twenty to Twenty-Five Years	Updated every four to five years, depending on current surface transportation legislation; typically endorsed in summer.
Public Participation Plan (PPP)	Establishes standards and policies for engaging communities in the 3C transportation planning process.	Continuous	Approximately every five years

The region’s Metropolitan Transportation Plan (MTP)—which is a long-term, high-level visioning document—includes a fiscally-constrained list of projects that are potential candidates for state and federal aid. These projects often originate from studies or tasks included in the region’s annual Unified Planning Work Program (UPWP). The MTP may also recommend potential studies or tasks for future UPWP cycles.

The UPWP always includes a line item for the development of the annual Transportation Improvement Program (TIP). This document programs projects for federal aid based on their benefits and readiness. Projects on the TIP must also be included in the most recent MTP, or at the very least, have a strong relationship to the MTP’s vision.

Surface Transportation Legislation

Historically, surface transportation legislation has been the vehicle that authorizes apportioned and discretionary funding streams to support infrastructure improvements. Each round of enabling legislation differs from the previous by setting funding formulas and updating, adding, and eliminating funding programs.¹

On November 15, 2021, President Biden signed the Infrastructure Investment and Jobs Act (IIJA) also known as the Bipartisan Infrastructure Law (Pub. L. No. 117-58). The BIL is the largest long-term investment in the nation’s infrastructure and economy. The BIL authorizes \$550 billion over fiscal years 2022 through 2026 for investments in infrastructure related to roads, bridges, public transit, water infrastructure, resilience, and broadband.

The BIL includes Planning Emphasis Areas (PEAs), around which states and MPOs should orient their planning efforts. The BIL encourages the Federal Highway Administration (FHWA) division and Federal

¹ See pages 34-39 for a list of highway and transit programs authorized by the BIL.

Transit Administration (FTA) regional offices to work with State DOTs, MPOs, and other parties as relevant to advance the emphasis areas. Table 2 lists the eight PEAs.

Table 2 - Planning Emphasis Areas

Planning Emphasis Area	Description
Tackling the Climate Crisis – Transition to a Clean Energy and Resilient Future	Ensure that transportation plans and infrastructure investments help achieve the national greenhouse gas reduction goals of 52% below 2005 levels by 2030, and net-zero emissions by 2050.
Equity and Justice ⁴⁰ in Transportation Planning	Advance racial equity and support for underserved and disadvantaged communities.
Complete Streets	Review current policies, rules, and procedures to determine their impact on safety for all users. This effort should work to include provisions for safety in future transportation infrastructure, particularly those outside automobiles.
Public Involvement	Increase meaningful public involvement in transportation planning by integrating Virtual Public Involvement (VPU) tools into the overall public involvement approach while ensuring continued public participation by individuals without access to computers and mobile devices.
Strategic Highway Network (STRAHNET)/US Department of Defense Coordination	Coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure and connectivity needs for STRAHNET routes and other public roads that connect to DOD facilities.
Federal Land Management (FLMA) Coordination	Coordinate with FLMAs in the transportation planning and project programming process on infrastructure and connectivity needs related to access routes and other public roads and transportation services that connect to federal lands.
Planning and Environmental Linkages (PEL)	Implement PEL as part of the transportation planning and environmental review process. The use of PEL is a collaborative and integrated approach to transportation decision-making that considers environmental, community, and economic goals early in the transportation planning process, and uses the information, analysis, and products developed during planning to inform the environmental review process.
Data in Transportation Planning	Incorporate data sharing and consideration into the transportation planning process.

Title VI/Nondiscrimination

MVMPO recognizes the importance of national nondiscrimination legislation and complies with federal requirements. MVMPO's Title VI Plan ensures that all interested parties in the region can access and be involved in the MVMPO's decision-making process. The MVMPO promotes awareness of its Title VI notices and processes in a variety of ways, including:

- Posting Title VI notices on MVPC.org web pages;
- Posting MVMPO meeting agendas both physically at MVPC and on the website;
- Posting public hearing and meeting notices physically at MVPC, at Merrimack Valley Transit bus stations (when applicable), and at the town and city halls of member communities; and
- Circulating draft documents for public review.

The MVMPO recognizes that although Title VI is the focal point of non-discrimination law in the United States, FHWA incorporates a broader spectrum of statutes, executive orders, and regulations into its requirements for states and MPOs. For example, Section 324 of the Federal-Aid Highway Act of 1973 prohibits discrimination based on sex; Section 504 of the Rehabilitation Act of 1973 prohibits discrimination on the basis of disability status, as does the Americans with Disabilities Act of 1990. Additionally, the Age Discrimination Act of 1975 prohibits age discrimination. Finally, the Civil Rights Restoration Act of 1987 (FHWA Notice 4720.6) clarified the original intent of Congress with respect to Title VI by restoring the broad, institution-wide scope and coverage of the nondiscrimination statutes to include all programs and activities of federal aid recipients and enforcing the application of the laws that include nondiscrimination on the basis of race, color, national origin, age, gender, or disability.

Chapter 2: TIP Development Process

Overview

The TIP programs federal aid projects for funding over a five-year horizon. Each programmed highway and transit project must be included in the region's most current Metropolitan Transportation Plan (MTP) or have substantial relation to its goals or vision.

On the highway-side of federal aid, MVMPO staff propose regional target projects for programming based on two core elements: project readiness and transportation evaluation scoring. Highway projects must first be conceptually designed, accepted by MassDOT's Project Review Committee (PRC), and assigned a project number. Projects are then reviewed by MPO staff and assigned an evaluation score that aligns with regional vision, goals, and objectives established in the MTP. Statewide highway projects move through the same process; however, the initial statewide highway project list is prepared by MassDOT rather than the region.

Merrimack Valley Transit (MeVa) staff prepare the proposed transit program. Transit federal aid must align with a region's Transit Asset Management (TAM Plan) and Transit Safety Performance Targets (each described under their respective headings).

The criteria used to inform the proposed program ensures a dispassionate approach to programming funding. The MVMPO Board—and not staff—exercise their discretion to revise the proposed program. The public may participate in development of the TIP by several means, including providing input to their respective community's board member, contacting staff to provide written or verbal comment(s), participating in hearings during the draft TIP's 21-day comment period, and participating in the document's endorsement hearing. Staff welcome participation in the TIP development process and can make themselves available to members of the public at their convenience.

Schedule

The MVMPO's TIP development process synchronizes with the state's update to the State Transportation Improvement Program (STIP), which is required per 23 CFR 450.324. The STIP includes projects from the Merrimack Valley and every other planning region in Massachusetts. MVMPO's TIP is typically endorsed annually in May, which informs the STIP for approval prior to October 1.

Readiness

MassDOT provides input each year pertaining to highway-side projects' readiness for programming. Each project's determined readiness year is based on the project's design status, right-of-way work (i.e. takings, securing easements, identifying and confirming title holders etc.), and environmental documentation/decision-making status, as required by both the Massachusetts Environmental Policy Act (MEPA) and National Environmental Policy Act (NEPA). Readiness determinations help ensure that available obligation authority will be drawn down. Programming projects that are not ready for construction can result in the opportunity cost of unspent available funding in a given fiscal year.

Some MPOs in Massachusetts have developed their own supplemental readiness year criteria. While a duplicative parallel process may add value in the event of culling a program when there is significant demand,

to date MVMPO has not needed to exercise this authority and instead relies on MassDOT's readiness guidance for programming determinations.

Transportation Evaluation Criteria Scoring

Over the past twenty years, MVMPO had scored each highway-side project using several planning criteria based on surface transportation legislation planning factors and emphasis areas, state performance measure targets, and regional priorities as described in the region's relevant Metropolitan Transportation Plan (MTP).

In June of 2023, MVMPO's board approved its annual UPWP, which includes an updated scoring system as a work program deliverable. This system will introduce greater transparency into the scoring process, improve efficiency through automation, and align with the region's newly endorsed Metropolitan Transportation Plan. Staff initiated the update in January 2023. Following several design meetings, staff arrived at a draft scoring system that:

- **Aligns with the vision of the recently approved Metropolitan Transportation Plan (MTP)**, titled MV Vision 2050. Per the MTP's investment program, 5% of the total score is based on a project's ability to support resilience (PM4), 30% for safety (PM1), 25% for mode shift (PM3 and 4), 20% for state of good repair (PM2), 10 percent for housing, and 10% for economic vitality;
- **Allows projects to receive bonus points or be assessed penalties external to the scoring framework.** Projects can receive bonus points if they are 1) located within a regional environmental justice plus (REJ+) community; 2) if the sponsor community has advanced fewer than one regional TIP target project in the past five years, and; 3) if the project's design is funded by federal aid. Projects are assessed penalties if, following MVPC review, no changes are made to 25 percent designs based on MVPC staff's advisory comments/suggestions.
- **Creates a *collect as you go* point system based on a project's lifecycle.** Projects are given points at the *project initiation* phase and then re-evaluated in the *design and construction* phase.
- **Normalizes projects based on best-known costs.** The score of each project can be normalized to generate a Return on Investment (ROI) grade. This balances the value of large high-cost projects with smaller scale projects.

The approach differences and possible point totals between the legacy scoring system and the draft revised system renders it challenging to introduce the new system without impacting stakeholder expectations. Many sponsors have enjoyed a relatively static point total for some length of time; introducing a new system could result in significant deviations. For example, the new scoring system includes points for plan review to ensure staff understand whether regional target projects are meeting best practices detailed in regional planning documents. This element was not included in the region's legacy scoring system. To avoid unexpected changes in scoring assessment for previously programmed projects, staff propose to phase in the new system by employing it only *new projects* in this TIP cycle. The legacy scoring system will be retained for all previously scored projects. Due to the constraints of the current program, no new regional target projects may be programmed in this TIP cycle, and pre-existing project scores are shown in this document and eSTIP, the states electronic State Transportation Improvement Program system.

The legacy scoring methodology evaluates projects based on six criteria, each with several sub-criteria, related to a project's benefits and impacts. Projects may receive a maximum score of 17.75. The legacy and revised scoring methodologies are further described in more detail in the appendix under the "TEC Scoring" header.

Equity

The MVMPO's current transportation evaluation criteria include scoring categories related to positive and negative impacts on Environmental Justice communities. MVMPO staff also account for the geographic distribution of projects across member municipalities for regional target projects of which the MPO Board has direct decision-making authority. Table 3 illustrates the breakdown of highway federal aid funding by municipality and project type for this TIP cycle.

Table 3 - FFY25-29 Programming by Municipality and Project Type

Municipality	Total Regional Target ¹	Percent Regional Target	Total Statewide ^{1,2,3}	Percent Statewide	Combined FHWA ^{1,2}	Percent Combined FHWA
Haverhill	\$26,803,444	36.29%	\$224,800,778	51.09%	\$251,604,222	48.96%
Methuen	\$0	0.00%	\$84,677,407	19.24%	\$84,677,407	16.48%
Andover	\$1,081,100	1.46%	\$70,531,588	16.03%	\$71,612,688	13.94%
North Andover	\$29,928,330	40.52%	\$13,572,149	3.08%	\$43,500,479	8.46%
Lawrence	\$0	0.00%	\$24,353,301	5.53%	\$24,353,301	4.74%
Georgetown	\$11,179,434	15.14%	\$11,287,881	2.57%	\$22,467,315	4.37%
Multi-Town Projects Beyond Region	\$0	0.00%	\$8,919,539	2.03%	\$8,919,539	1.74%
Newburyport	\$2,592,000	3.51%	\$0	0.00%	\$2,592,000	0.50%
Amesbury	\$2,279,880	3.09%	\$0	0.00%	\$2,279,880	0.44%
Groveland	\$0	0.00%	\$1,879,553	0.43%	\$1,879,553	0.37%
Rowley	\$0	0.00%	\$0	0.00%	\$0	0.00%
Boxford	\$0	0.00%	\$0	0.00%	\$0	0.00%
Newbury	\$0	0.00%	\$0	0.00%	\$0	0.00%
West Newbury	\$0	0.00%	\$0	0.00%	\$0	0.00%
Merrimac	\$0	0.00%	\$0	0.00%	\$0	0.00%
Salisbury	\$0	0.00%	\$0	0.00%	\$0	0.00%
Total	\$73,864,188	100%	\$440,022,195	100%	\$513,886,383	100%

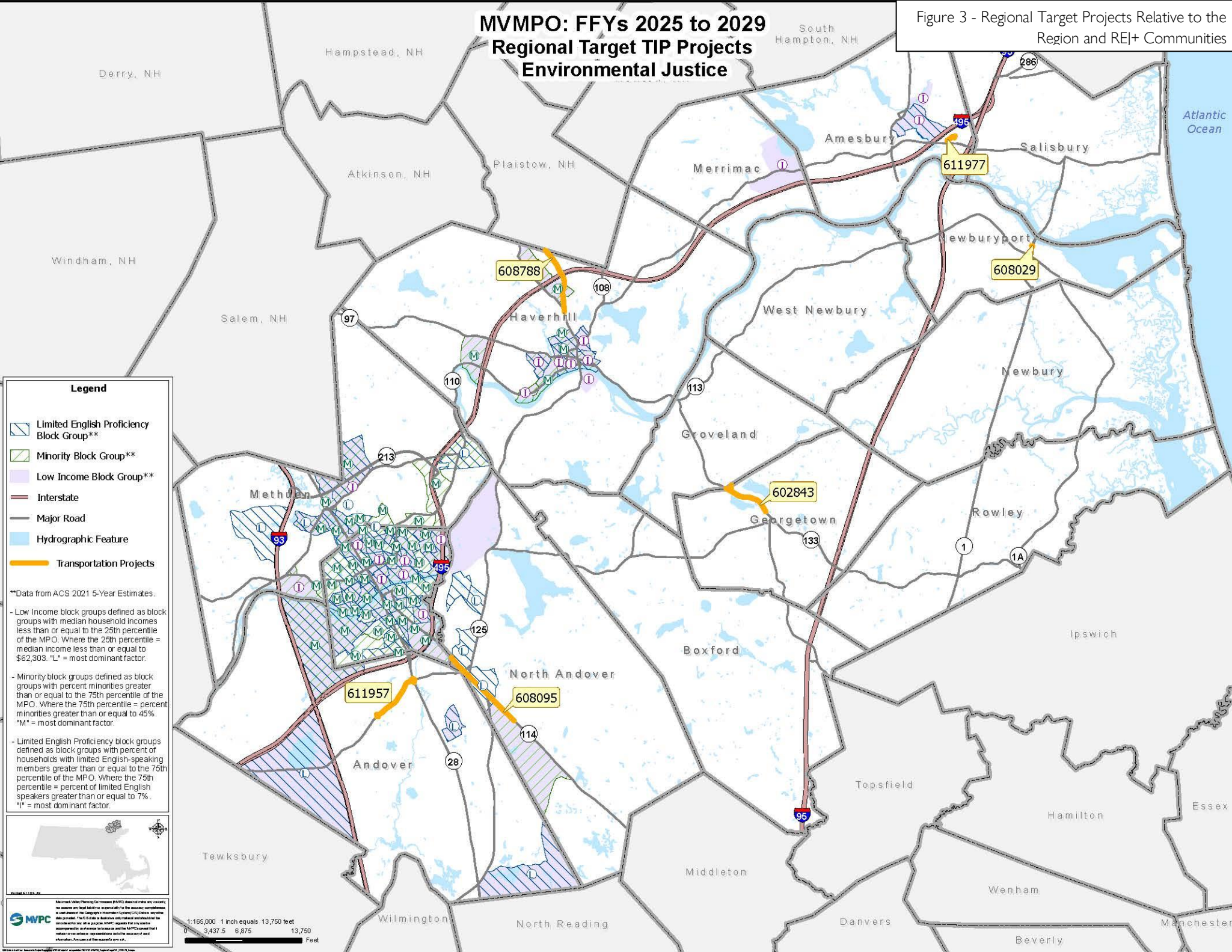
¹Table 3 only includes funding amounts programmed within FFY25-29. Projects with advance construction schedules exclude programmed totals that precede or fall after the subject program period.

²Program amounts for projects that span multiple municipalities (e.g. bridges connecting two communities) are split in the table in a 50-50 share, which may not reflect the ultimate level of effort in each community.

³Totals include discretionary aid for two bridge projects: I-495 bridge replacements in Haverhill and Methuen and the Short Street Bridge replacement in Lawrence.

MVMPO: FFYs 2025 to 2029 Regional Target TIP Projects Environmental Justice

Figure 3 - Regional Target Projects Relative to the Region and REJ+ Communities



Legend

- Limited English Proficiency Block Group**
- Minority Block Group**
- Low Income Block Group**
- Interstate
- Major Road
- Hydrographic Feature
- Transportation Projects

**Data from ACS 2021 5-Year Estimates.

- Low Income block groups defined as block groups with median household incomes less than or equal to the 25th percentile of the MPO. Where the 25th percentile = median income less than or equal to \$62,303. "L" = most dominant factor.
- Minority block groups defined as block groups with percent minorities greater than or equal to the 75th percentile of the MPO. Where the 75th percentile = percent minorities greater than or equal to 45%. "M" = most dominant factor.
- Limited English Proficiency block groups defined as block groups with percent of households with limited English-speaking members greater than or equal to the 75th percentile of the MPO. Where the 75th percentile = percent of limited English speakers greater than or equal to 7%. "I" = most dominant factor.

1:165,000 1 inch equals 13,750 feet
0 3,437.5 6,875 13,750 Feet

NWPC

Northwest New Hampshire Community Planning Council
The information on this map is for informational purposes only. It is not intended to be used for any other purpose. The Council is not responsible for any errors or omissions on this map. The Council is not responsible for any damages or liabilities arising from the use of this map. The Council is not responsible for any damages or liabilities arising from the use of this map.

MVMPO: FFYs 2015 to 2029 Transportation Improvement Program Projects and Environmental Justice Communities

Figure 4 - Previous Ten Years of Programmed Regional Target Projects Relative to REI+ Communities

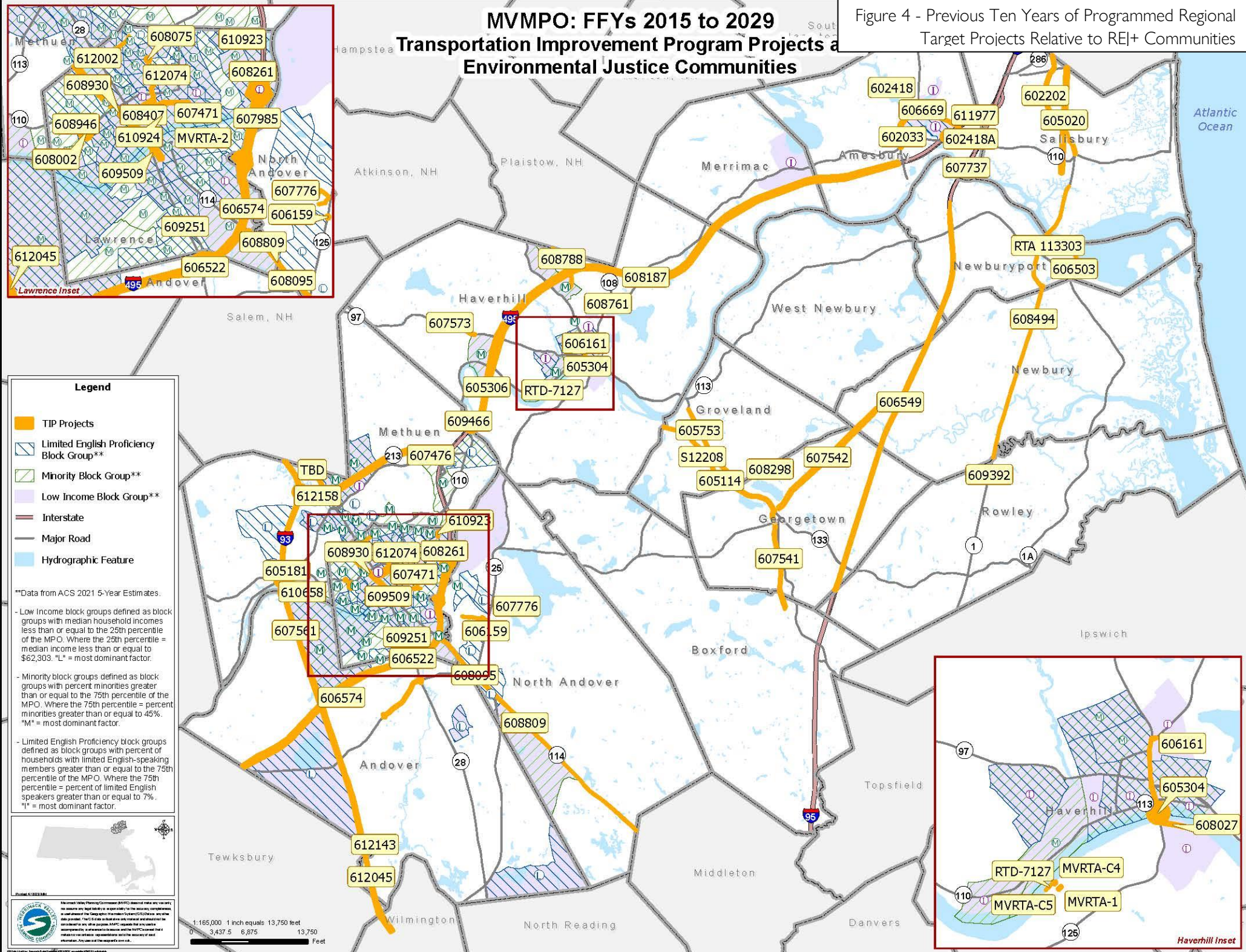


Figure 3 depicts the distribution of regional target projects across the region relative to the state's Regional Environmental Justice Plus communities (REJ+ communities). Documentation regarding the methodology for the identification of REJ+ communities and additional resource maps can be found in the appendix.

Figure 4 depicts the distribution of projects over the last 10 years relative to the region and REJ+ communities.

Sustainability & Greenhouse Gas Emissions

MVMPO staff prepare impact assessments to understand projects' greenhouse gas (GHG) emission impacts. Projects with advantageous GHG impacts may be considered for programming through the Congestion Mitigation and Air Quality (CMAQ) program through MassDOT's consultation process. The appendix provides an overview of the region's current air quality conformance determination, overviews the greenhouse gas emission reduction assessment methodology, and provides results of the assessment.

Consistency Across Planning Documents

As a federal programming document, the TIP should align with priorities and goals documented in other regional and state plans. The projects included in the FY25-29 TIP are either specifically identified in MVMPO's Long Range Transportation Plan or are consistent with the objectives, goals, with the region's documented long-range planning vision. Additionally, each of the regional target projects included in this TIP cycle supports the vision and intent of MassDOT's Beyond Mobility Plan (ongoing), the Statewide Freight Plan (2023), the Statewide Bicycle Plan (2019) and Statewide Pedestrian Plan (2019). These plans seek to increase everyday walking and biking through project development while also increasing for safety vulnerable users. Each regional target project included in the TIP restores or significantly upgrades bicycle and pedestrian facilities. Table 4 shows the alignment of regional target projects with state planning documents as well as *MV Vision*, the region's adopted long range plan.

Table 4 - Regional Target Consistency with Other Planning Efforts and Long Range Goals

Regional Target Projects	Included in 2024 Metropolitan Transportation Plan (MV Vision 2050)?	Consistent with Statewide Bicycle and Pedestrian Plans?	Equity	Alternative Modes/Mode Choice	Sustainability	Economic Vitality	Resilience	State of Good Repair	Compact Development and Attainable Housing	Safety
CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	Yes	Yes	●	●	●	●	●	●	●	●
RECONSTRUCTION ON ROUTE 97 (W. MAIN STREET) FROM MOULTON STREET TO GROVELAND T.L.	Yes	Yes		●	●			●		●
INTERSECTION IMPROVEMENTS AT ROUTE 1 & MERRIMAC STREET	Yes	Yes		●		●		●		●
RIVERWALK CONNECTOR TO THE SALISBURY POINT GHOST TRAIL	Yes	Yes		●	●		●		●	●
ROADWAY RECONSTRUCTION ON NORTH AVENUE, FROM MAIN STREET (ROUTE 125) TO PLAISTOW NH	Yes	Yes	●	●	●			●		●
RECONSTRUCTION ON ROUTE 133 (LOWELL STREET) FROM SHAWSHEEN ROAD TO ROUTE 28 (NORTH MAIN STREET)	Yes	Yes		●	●			●		●

¹Staff anticipate that the main goals of the 2020 LRTP will be retained in the current LRTP/MTP cycle.

Alignment with State Performance Measures

All programmed highway projects must advance statewide performance measures in some shape or form to ensure investment aligns desired outcomes. On the transit-side, projects must support a Regional Transit Authority's (RTA's) asset management targets and safety performance targets. This section describes the MVMPO's adopted performance targets and RTA targets.

Federal Highway Administration Performance Measures

Performance-based planning guides the 3C planning process. On the highway-side, states develop performance goals guided by national goals. States and MPOs then coordinate to establish targets. MPOs may elect to develop their own targets, or may opt-in to statewide targets, which is the typical practice in Massachusetts. Each highway-side performance measure and its associated target is summarized in the following sections per federal regulation. MassDOT tracks annual performance annually in its [Performance Tracker](#) page; however, performance targets are updated on differing cycles. PM1 (safety) targets are updated annually, while PM2 (Bridge and Pavement) and PM3 (Reliability, Congestion, & Emissions) targets are updated every other year.

The BIL/IIJA include provisions for target setting related to GHG reductions. While MassDOT submitted a statewide five-year emissions reduction target to FHWA, the BIL/IIJA provisions were challenged in court and reporting on GHG emissions will not be enforced during this cycle.

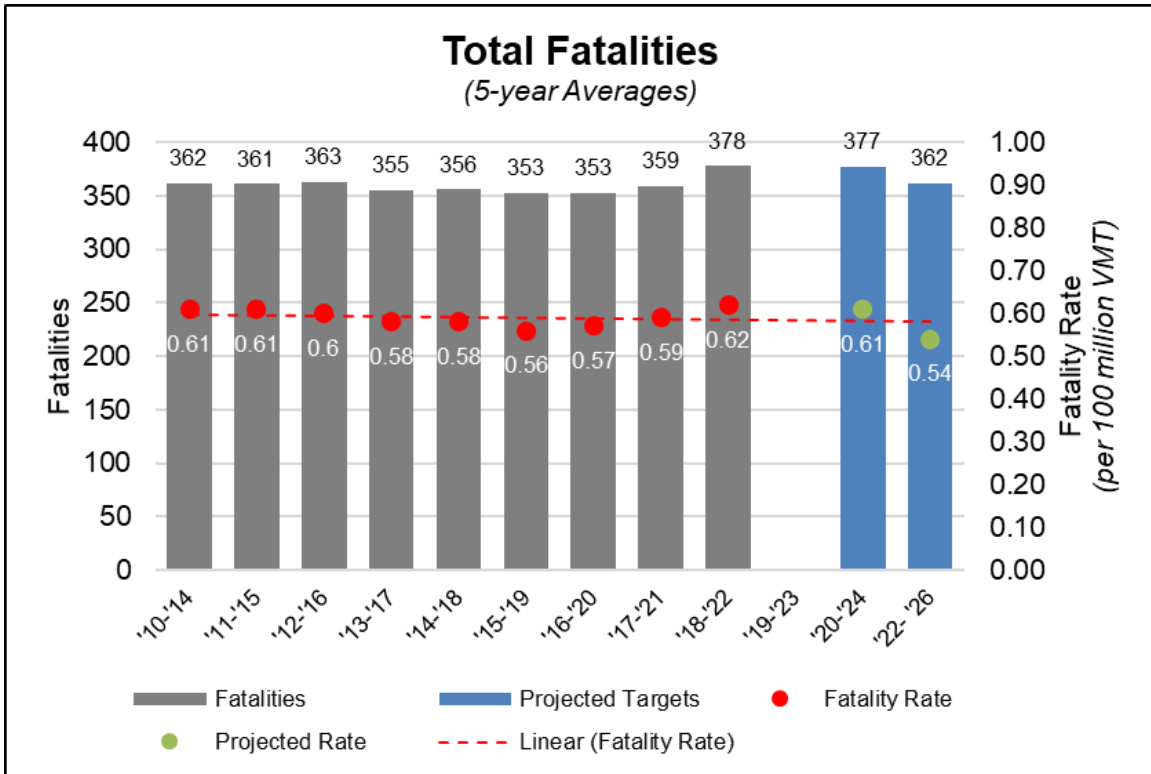
[Safety Performance Measures \(PM1\)](#)

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

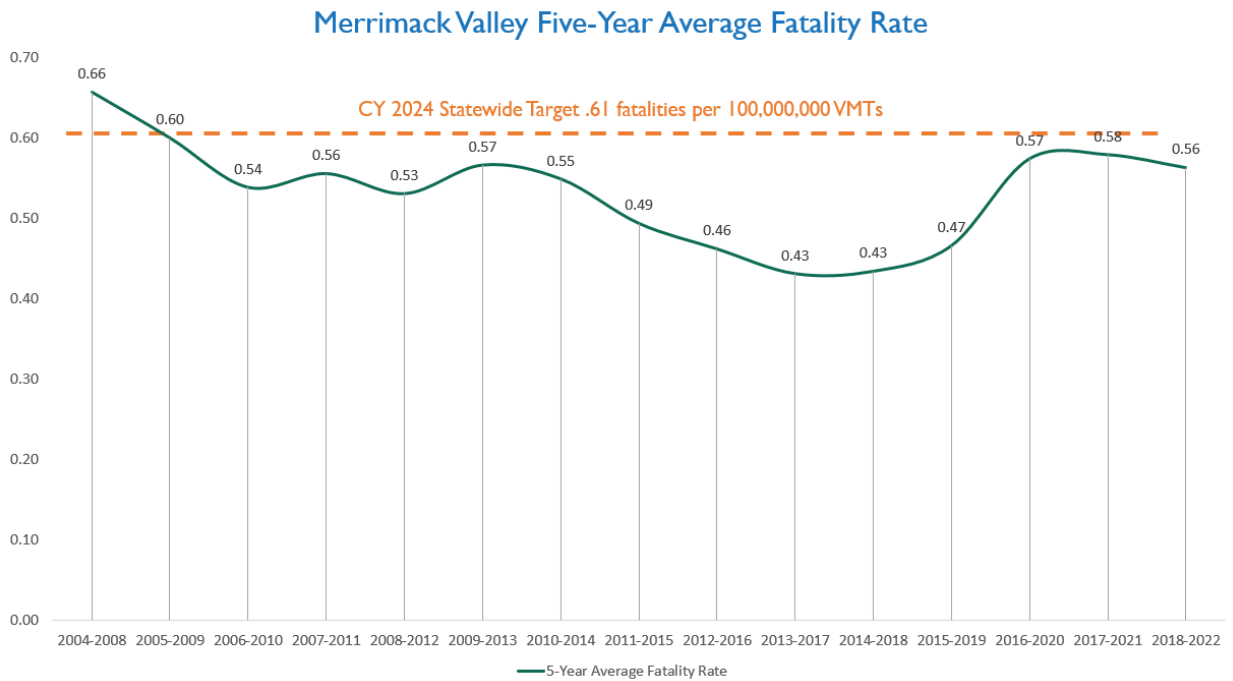
Per Federal Highway Administration (FHWA) guidance, the calendar year (CY) 2024 target setting process began with a trend line projection based on the most recent available data. This year, MassDOT also developed a 2022-2026 target to be consistent with the Highway Safety Office and National Highway 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. Furthermore, the Infrastructure Investment and Jobs Act (IIJA) requires “performance targets to demonstrate constant or improved performance,” so Massachusetts is unable to use increasing “targets.” Although the latest 2023 data suggests fatalities are trending towards pre-COVID levels, the data is incomplete and was not used when the target setting process began. Therefore, MassDOT developed the target for CY 2024 by projecting the 2023 and 2024 fatalities to be in line with pre-COVID data. As a result, year over year changes reflect a decrease of approximately 20% when comparing 2021 and 2022 to 2023 and 2024. However, the 5-year average from 2018-2022 to 2020-2024 sees only a minor decrease from 378 to 377. If this trend continues, the 2022-2026 average will drop to 362, a reduction 4%.

As always, MassDOT’s overarching goal is zero deaths and this goal will be pursued by implementing strategies from the [Strategic Highway Safety Plan](#) (SHSP). The Massachusetts SHSP and [Vulnerable Road User Safety Assessment](#) were both updated and finalized in 2023. These strategies help provide details on how the state will drive down fatalities and serious injuries. Moreover, it should be restated that while MassDOT developed numeric targets, the goal is 0 and MassDOT will continue to work toward that goal by implementing SHSP strategies.

Fatality Rate: The fatality rate represents five-year average fatalities divided by five-year average VMTs. The COVID-19 pandemic greatly impacted VMT, causing fatality rates to spike in 2020 with significantly lower VMT and slightly higher fatalities. Data projections for 2023 indicate VMT will exceed pre-pandemic levels. Consequently, the five-year average fatality rate is expected to decrease from 0.62 fatalities per 100 million VMT for 2018-2022, to 0.61 fatalities per 100 million VMT in 2020-2024, a reduction of 1.63% If this trend continues, MassDOT projects a decrease to 0.54 fatalities per 100 million VMT, a reduction of 12%.



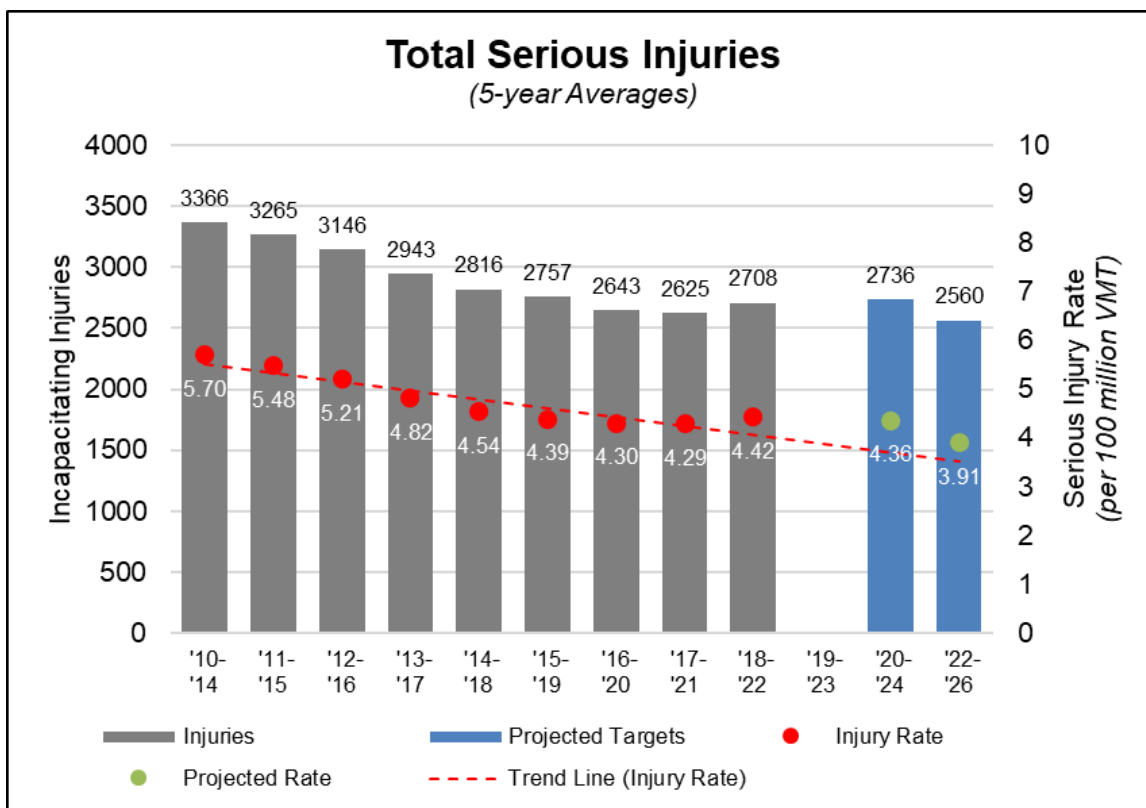
Note: 2023 data is not complete and therefore was not used for target setting purposes.



Total Serious Injuries: The target setting process began with a trend line projection based on the most recent available data. The 2021 and 2022 serious injury data were not finalized in the statewide crash system during this process, so it is possible these figures will change once that data becomes final.

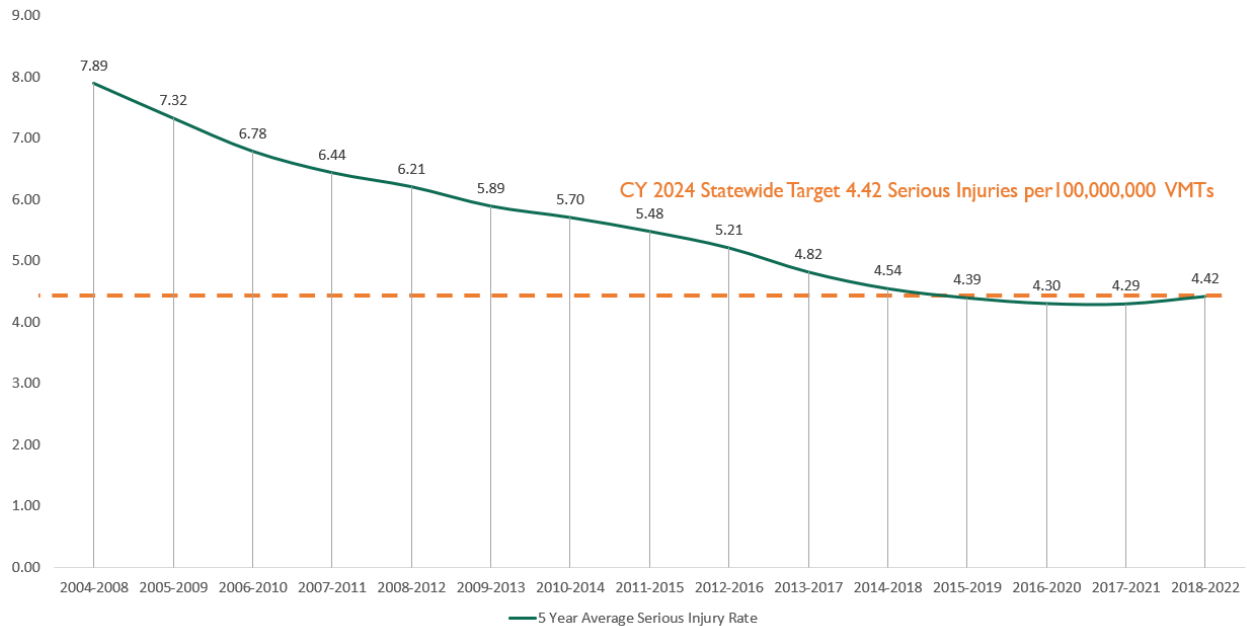
Due to higher rates of speeding caused by decreased VMT amid pandemic shutdowns in 2020 and the lingering impacts in 2021 and 2022, serious injuries increased relative to previous years. Although the latest 2023 data suggests serious injuries are trending towards pre-COVID levels, the data is incomplete and was not used when the target setting process began. Therefore, MassDOT developed the target for CY 2024 by projecting the 2023 and 2024 fatalities to be in line with pre-COVID data. As a result, year over year changes reflect a decrease of approximately 10% when comparing 2021 and 2022 to 2023 and 2024. However, the 5-year average from 2018-2022 to 2020-2024 remains the same at 2,708 serious injuries. If this trend continues, the 2022-2026 average will drop to 2,603, a 4% reduction.

Serious Injuries Rate: Like the fatality rate, serious injury rates were greatly impacted due to COVID. Following the methods above, the projection is now 4.36 serious injuries per 100 million VMT for 2020-2024. This reflects a 1.36% reduction compared to the 2018-2022 serious injuries rate of 4.42. If this trend continues, the 2022-2026 rate will drop to 3.91 serious injuries per 100 million VMT, a 11% reduction.



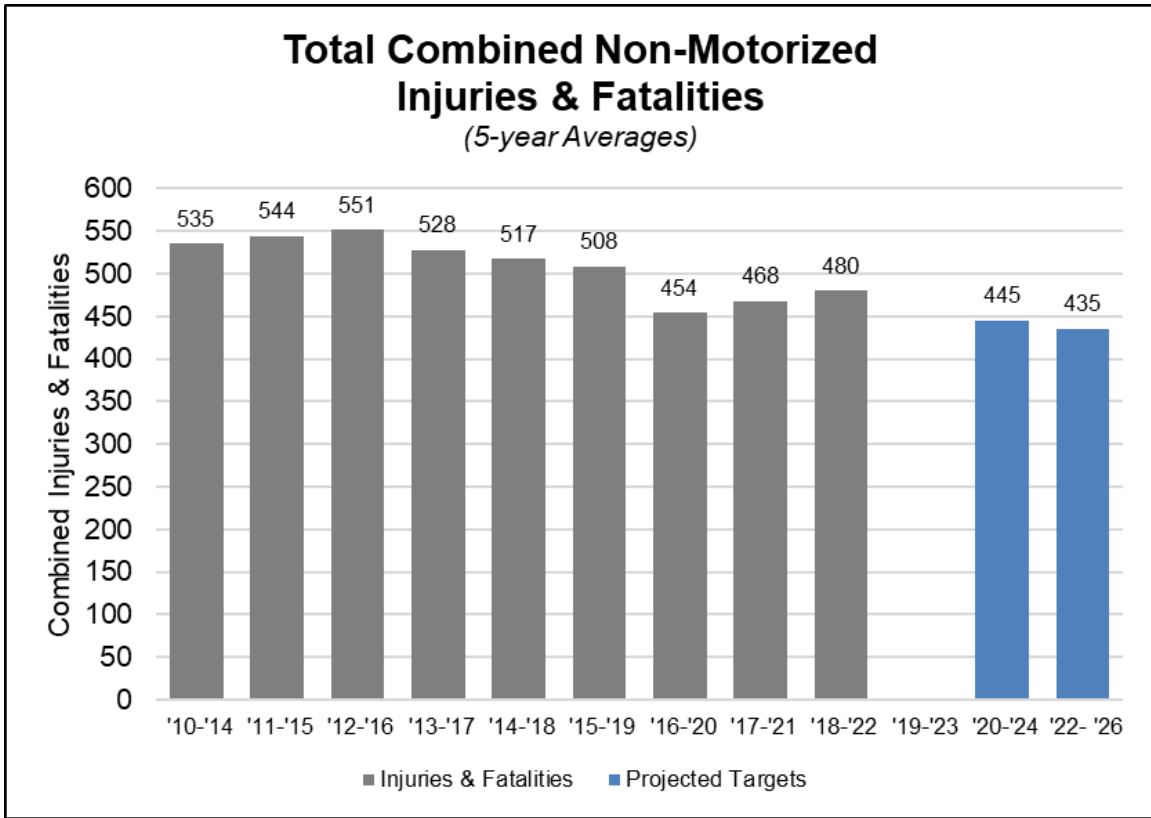
Note: 2023 data is not complete and therefore was not used for target setting purposes.

Merrimack Valley Five-Year Average Serious Injury Rate



Total Number of Non-Motorized Fatalities and Serious Injuries: The number of non-motorized fatalities and serious injuries decreased during the start of the pandemic in 2020, followed by an increase in 2021 and dramatic spike in 2022. Based on the state’s emphasis on vulnerable road users, MassDOT anticipates the 2023 and 2024 numbers to match those from 2020. This results in a 5-year average of nonmotorist fatalities and serious injuries decreasing from 480 (2018-2022) to 445 (2020-2024), a 7.3% reduction. Looking ahead to 2026, the average combined nonmotorist fatalities and serious injuries is expected to decrease to 435, a reduction of approximately 9%.

Total Number of Non-Motorized Fatalities and Serious Injuries: The number of non-motorized fatalities and serious injuries decreased during the start of the pandemic in 2020, followed by an increase in 2021 and dramatic spike in 2022. Based on the state’s emphasis on vulnerable road users, MassDOT anticipates the 2023 and 2024 numbers to match those from 2020. This results in a 5-year average of nonmotorist fatalities and serious injuries decreasing from 480 (2018-2022) to 445 (2020-2024), a 7.3% reduction. Looking ahead to 2026, the average combined nonmotorist fatalities and serious injuries is expected to decrease to 435, a reduction of approximately 9%.



Note: 2023 data is not complete and therefore was not used for target setting purposes.

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

The targets were developed in coordination with the Executive Office of Public Safety and Security (EOPSS), the Highway Safety Division (HSD), and other sections within MassDOT. Although MassDOT emphasizes that the state's goal is zero fatalities and serious injuries, the state targets presented here are not "goals" but realistic targets considering the events of the last 3+ years. The Secretary of Transportation and Highway Division Administrator for MassDOT approved the targets recognizing that MassDOT must demonstrate short term incremental steps to achieve the Commonwealth's goal.

Bridge & Pavement Performance Measures (PM2)

MVMPO has chosen to adopt the 2-year (2024) and 4-year (2026) statewide bridge and pavement performance measure targets set by MassDOT. MassDOT was required to adopt a statewide target by December 16th, 2022. In setting these targets, MassDOT has followed FHWA guidelines by measuring bridges and pavement condition using the 9-point National Bridge Inventory Standards (NBIS); the International Roughness Index (IRI); the presence of pavement rutting; and the presence of pavement cracking. 2-year and 4-year targets were set for six individual performance measures: percent of bridges in good condition; percent of bridges in poor condition; percent of Interstate pavement in good condition; percent of Interstate pavement in poor condition; percent of non-Interstate pavement in good condition; and

percent of non-Interstate pavement in poor condition. All the above performance measures are tracked in greater detail in MassDOT’s 2022 Transportation Asset Management Plan (TAMP).

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

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

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

Table 5: Performance Measure 2, Bridge and Pavement Performance

Performance Measure	Current (2021)	2-year target (2024)	4-year target (2026)
Bridges in Good Condition	16%	16%	16%
Bridges in Poor Condition	12.2%	12%	12%
Interstate Pavement in Good condition	71.8%	70%	70%
Interstate Pavement in Poor Condition	0.0%	2%	2%
Non-Interstate Pavement in Good Condition		30%	30%
Non-Interstate Pavement in Poor Condition		5%	5%

Reliability, Congestion, & Emissions Performance Measures (PM3)

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

MassDOT followed FHWA regulation in measuring Level of Travel Time Reliability (LOTTR) on both the Interstate and non-Interstate NHS as well as Truck Travel Time Reliability (TTTR) on the Interstate system using the National Performance Management Research Dataset (NPMRDS) provided by FHWA. These performance measures aim to identify the predictability of travel times on the roadway network by comparing the average travel time along a given segment against longer travel times. For LOTTR, the performance of all segments of the Interstate and of the non-Interstate NHS are defined as either reliable or unreliable based on a comparison between the 50th percentile travel time and the 80th percentile travel time, and the proportion of reliable segments is reported. For TTTR, the ratio between the 50th percentile travel

time and the 90th percentile travel time for trucks only along the Interstate system is reported as a statewide measure.

The MVMPO—an agency whose planning area includes communities in the Boston Urbanized Area (UZA), and as a signatory to the 2018 Boston UZA Memorandum of Understanding (Boston UZA MOU)—has also adopted 2-year (2024) and 4-year (2026) Boston UZA-wide congestion performance measure targets. These performance measures are the percentage of non-single occupancy vehicle (SOV) travel and the Peak Hour Excessive Delay (PHED). Targets were developed in coordination with state Departments of Transportation and neighboring MPOs with planning responsibility for portions of the Boston UZA. The percentage of non-SOV travel is approximated using the U.S. Census Bureau’s American Community Survey (ACS) Journey-to-Work data. This metric is based on the percentage of people commuting to work using a mode other than a single occupancy vehicle. In the Boston UZA, the proportion of non-SOV travel has been steadily increasing and is projected to continue increasing at a rate of 1.4% annually.

PHED is measured by totaling the number of hours spent in excessive delay (defined as travel time at 20 miles per hour or at 60% of the posted speed limit, whichever is greater) in peak hours (between 6:00am and 10:00am, and between 3:00pm and 7:00pm) divided by the total UZA population. For this reporting period, targets are proposed considering the uncertainty of the trend post-pandemic and follow a trendline approach like TTR measures. In the Boston UZA, the 2024 target is set at a realistic 24, while the 2026 target of 22 is proposed to establish an improving target and one that is below pre-pandemic numbers.

Emissions reduction targets are measured as the 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.

Table 6: Performance Measure 3, Reliability, Congestion, & Emissions Performance Measures

Measure	Current (2021)	2-year (2023)	4-year (2025)
Interstate LOTTR	84.2%	74.0%	76.0%
Non-Interstate LOTTR	87.2%	85.0%	87.0%
TTR	1.61	1.80	1.75
PHED (Boston UZA)	18.0	24.0	22.0
% non-SOV (Boston UZA)	36.9%	38.8%	39.8%
Emissions Reductions: PM2.5			
Emissions Reductions: NOx	0.490	0.000	0.000
Emissions Reductions: VOC	0.534	0.000	0.000
Emissions Reductions: PM10			
Emissions Reductions: CO	6.637	0.354	0.354

Project Consistency with PM1, PM2, and PM3

As shown in Table 4, the majority of this TIP’s programmed regional target projects have some positive benefit to safety, particularly for nonmotorists such as pedestrians, bicyclists, and other rollers, generally through the provision of new facilities or the integration of protection for nonmotorist facilities, such as

striped buffers or landscaped space between the vehicle travel lanes and nonmotorist zones of travel. Furthermore, the statewide highway program includes projects that develop new key nonmotorist facilities, such as missing segments of the Border to Boston Trail and the Manchester Rail Trail. Several roadway projects provide new paving on NHS roadway, such as the Route 114 Corridor Improvements Project. The statewide program also includes various bridge and paving projects both on and off the interstate system. Several of the intersection projects included in this TIP anticipate a reduction in delay. While not all these projects fall on roads within the NHS network, these projects are key links to NHS roadways and offer reliability improvements. Staff has not used the RITIS platform to inform this cycle, but welcomes the opportunity to receive training from MassDOT and/or other partners for application of RITIS in future TIP cycles.

Federal Transit Administration Performance Measures

Relationship between Transit Asset Management (TAM) and the Public Transportation Agency Safety Plan (PTASP)

Achieving targets under the TAM plan helps to improve system reliability targets under the PTASP by maintaining vehicles in a state of good repair. Vehicles maintained in a state of good repair are less prone to breakdowns and crashes and therefore reduce the likelihood of safety incidents.

Transit Asset Management and Targets

Transit Asset Management (TAM) uses the condition of assets to guide the prioritization of transit funding for the purpose of maintaining a state of good repair. Merrimack Valley Transit (MeVa) updates its TAM targets every year. These targets are included in MeVa’s National Transit Database (NTD) Annual Report. Table 7 presents MeVa’s latest FY22 TAM targets for the Merrimack Valley region.

Table 7 - MeVa Transit Asset Management Targets

Category	Performance Measure	2023 Target	2023 Performance	2023 Difference	2024 Target %
Rolling Stock	Bus	10%	0%	10%	0%
Rolling Stock	Cutaway	13%	12.90%	.10%	0%
Equipment	Automobiles	100%	100%	0%	0%
Equipment	Trucks & Other Rubber Tire Vehicles	7%	8.33%	-1.33%	7.69%
Facility	Passenger/Parking Facilities	0%	0%	0%	0%
Facility	Administrative/Maintenance Facilities	0%	0%	0%	0%

Transit Safety Performance Targets

MeVa prepared its Public Transportation Agency Safety Plan (PTASP) in October 2023. This plan outlines MeVa’s safety training program, establishes safety performance targets, a safety management policy, and safety performance monitoring. Historic safety data inform targets to maximize safety and proactively address hazards. Table 8 details MeVa’s safety performance targets for bus (motorbus) and paratransit (demand response) modes.

Table 8 - MeVa's Transit Safety Performance Targets¹

Measures for Motorbus Mode	Baseline #	Rate per total VRM	Actual # FY23	Rate per total VRM	Target #	Target Rate
Fatalities	0	0	0	0	0	0
Injuries	4.67	340,564	6	238,194	4	350,000
Safety Events	4.67	316,160	5	300,094	4	350,000
System Reliability – expressed as mean distance between major failures	36,566		49,279		50,000	

Measures for Motorbus Mode	Baseline #	Rate per total VRM	Actual # FY23	Rate per total VRM	Target #	Target Rate
Fatalities	0	0	0	0	0	0
Injuries	0	0	0	0	0	0
Safety Events	3	224,173	3	293,222	3	300,000
System Reliability – expressed as mean distance between major failures	109,857		106,203		112,000	

¹VRM: "Vehicle Revenue Miles"

Chapter 3: TIP Funding

Federal Highway Administration Program Funding

The FFY25-29 TIP's highway program is developed based on state funding apportionment formulas defined in federal surface transportation legislation—the most recent being the Infrastructure Investment and Jobs Act (IIJA, more commonly referred to as the Bipartisan Infrastructure Legislation or BIL). From this apportionment, the state of Massachusetts accounts for federally required program set asides, pass-throughs, and Grant Anticipation Notes (GANs payments) for debt service on its accelerated bridge program. The remaining apportioned funding is budgeted to support statewide and regional priorities.

After accounting for statewide priorities, regions are provided obligation authority—the authority to program federal funds—based on a sub-allocation formula approved by the Massachusetts Association of Regional Planning Agencies (MARPA). About 30 percent of the state's overall federal apportionment is allocated to regions from year to year, ranging from 27 to 35 percent in the subject TIP cycle. The MARPA sub-allocation to the Merrimack Valley encompasses approximately 4.43 percent of total regional funding.

Most federal aid funnels through the state and into regional projects via program vehicles that require local matching funds—generally 20 percent of a project's total federal aid cost. MassDOT typically provides required project matches. As such, most regional projects are funded with an 80-20 federal-state share; however, some larger projects include additional local funding sources. Atypical applications of federal aid, such as funding project design, a capital purchase, or supporting a mobility program like bikeshare, may require a local match.

Table 9 shows the MVMPO's anticipated obligation authority between FY25 and FY29.

Table 9 – Merrimack Valley Anticipated Regional Target Obligation Authority for Highway Projects

Year	Federal (80 percent)	State (20 percent)	Total
2025	\$10,591,979	\$2,647,995	\$13,239,974
2026	\$10,332,845	\$2,583,211	\$12,916,056
2027	\$12,794,409	\$3,198,602	\$15,993,012
2028	\$13,035,237	\$3,258,809	\$16,294,046
2029	\$13,280,881	\$3,320,220	\$16,601,101
Total	\$60,035,351	\$15,008,837	\$75,044,189

Federal Transit Administration Program Funding

Federal aid for public transit is allocated by formula to urbanized areas (UZAs). MassDOT functions as the recipient of transit federal aid for Boston's urbanized area and applies a formula that distributes programming authority across regional transit authorities. This formula considers passenger-miles traveled and population density, among other factors.

Transit-side federal aid supports capital and operating needs, which are both programmed in the TIP. Many operating programs require a 50 percent match, which is generally provided by MassDOT. Table 10 shows anticipated transit funding and state match assistance between FFY25-29 based on MeVa’s program.

Table 10 - Anticipated Federal and State Aid for MeVa Transit, FFY2025-2029

	Federal	State	Total
2025	\$8,140,437	\$2,357,537	\$10,497,974
2026	\$11,499,245	\$3,220,495	\$14,719,740
2027	\$20,012,500	\$5,597,500	\$25,610,000
2028	\$9,941,500	\$3,113,500	\$13,055,000
2029	\$9,706,000	\$3,064,000	\$12,770,000
Total	\$59,299,682	\$17,353,032	\$76,652,714

Federal Aid Programs

As noted, federal surface transportation legislation authorizes the use of federal aid via several transportation funding programs administered by the Federal Highway Administration (FHWA) and Federal Transit Administrations (FTA). Each funding program has an array of eligible uses, as prescribed by the Infrastructure Investment and Jobs Act (IIJA, more commonly referred to as the Bipartisan Infrastructure Legislation or BIL). Table 11 and Table 12 detail the various more-common federal aid programs and their associated eligible uses. Note that some eligible uses extend beyond typical capital improvements.

Federal Highway Administration Programs

Table 11 - FHWA Funding Programs (source: <https://www.fhwa.dot.gov/specialfunding/>)

Program	Common Acronym	Programming Authority	Eligible Uses
Bridge Formula Program	BFP	Apportioned	Replacement, rehabilitation, preservation, or construction of bridges on public roads. 15% of funds are reserved for non-Federal-aid highway bridge projects.
Bridge Investment Program	BIP	Discretionary	Replacement, rehabilitation, or preservation of bridges in the National Bridge Inventory (NBI). Culvert improvements that improve flood control and/or aquatic habitat connectivity.
Carbon Reduction Program	CRP	Apportioned	Capital projects or strategic products focused on reduction of transportation emissions.
Congestion Mitigation and Air Quality Improvement	CMAQ	Apportioned	Wide range of emission-reducing, air-quality maintenance, or air-quality improvement projects. Project must be located in air quality nonattainment area or maintenance areas for ozone, carbon monoxide, and small particulate matter
Charging and Fueling Infrastructure Program	CFI	Discretionary	Deployment of alternative fueling and associated infrastructure in designated alternative fuel corridors as well as communities. Operating assistance for five years after installation.
Federal Land Access Program	FLAP	Discretionary	Improvements to transportation facilities that provide access to, are adjacent to, or located within federal lands.
Highway Safety Improvement Program	HSIP	Apportioned	Implementation of infrastructure-related highway safety improvements
Nationally Significant Multimodal Freight & Highway Projects	INFRA	Discretionary	Implementation of multimodal freight and highway projects of national or regional significance to improve safety, efficiency, and reliability of the movement of freight and people in and across rural and urban areas.
National Highway Freight Program	NHFP	Apportioned	Projects that improve the efficient movement of freight on the National Highway Freight Network

Table 11 - FHWA Funding Programs (Continued)

Program	Common Acronym	Programming Authority	Eligible Uses
National Highway Performance Program	NHPP	Apportioned	Projects that support the condition and performance of the National Highway System, including the replacement or rehabilitation of the system's capital assets.
National Infrastructure Project Assistance	MEGA	Discretionary	Multimodal, multijurisdictional projects of regional or national significance.
Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation	PROTECT	Combination	Projects that increase the resiliency of the transportation system, including coastal resiliency projects.
Rebuilding American Infrastructure with Sustainability and Equity	RAISE	Discretionary	Assistance for communities with projects that result in local or regional sustainability or equity impacts.
Reconnecting Communities Pilot Program	RCP	Discretionary	Planning support, construction, and technical assistance to communities divided by transportation infrastructure.
Rural Surface Transportation Grants	RSTG	Discretionary	Highway, bridge, tunnel, freight, safety, or bridge project that supports economic growth and quality of life in rural areas and/or integrated transportation demand management, mobility management, or on-demand systems that support economic growth and quality of life.
Safe Streets and Roads for All	SS4A	Discretionary	Planning, design, and construction of projects identified in a comprehensive safety action plan; or, the development of a safety action plan.
Strengthening Mobility and Revolutionizing Transportation (SMART) Grants	SMART	Discretionary	Planning and implementation of demonstration projects that leverage technology to improve mobility and access.
Surface Transportation Block Grant	STBG	Apportioned	A broad range of surface transportation capital needs, including roads; transit, sea, and airport access; and vanpool, bicycle, and pedestrian facilities.
Transportation Alternatives Program	TAP	Apportioned	A variety of smaller-scale transportation projects, such as bicycle, pedestrian and trail facilities. Encompasses eligible activities from the former Safe Routes to School (SRTS) program.

Federal Transit Administration Programs

Table 12 - FTA Funding Programs (source: <https://www.fhwa.dot.gov/specialfunding/>)

Program	Common Acronym	Programming Authority	Eligible Uses
Joint Development Program	§5302(3)(G)	Combination	Purchase or rehabilitation of buses and related equipment that support fixed route bus service, disbursed based on formula. Additional funds available through competitive grant programs, one of which only low and zero-emission vehicles are eligible.
Urbanized Formula Grants	§5307	Apportioned	Capital expenditures on transit assets in urbanized areas (UZA)
Fixed Guideway Capital Investment Grants	§5309 or CIG	Discretionary	Transit projects that either are rail or a mode that emulates fixed-rail, including bus rapid transit and ferries. For New Starts and Small Starts, construction must be corridor based.
Enhanced Mobility of Seniors with Disabilities	§5310	Apportioned	Transit projects that meet the needs of seniors or go beyond the requirements of the 1990 Americans with Disabilities Act. A state is the direct recipient for rural areas.
Public Transportation Innovation Program	§5312	Discretionary	Broad range of activities that demonstrate innovation in public transportation, including capital projects and products that assist in operations and asset management.
Emergency Relief Program	§5324	Discretionary	Capital projects that protect, repair, replace, or reconstruct equipment and facilities that are in danger or, or have been impacted, by an emergency (as recognized by the federal government). Temporary operating assistance also available.
State of Good Repair and Rail Vehicle Replacement Program	§5337	Combination (formula based available to only urbanized areas)	Projects that maintain, rehabilitate, and replace capital assets including rail rolling stock, as well as projects that implement transit asset management plans.

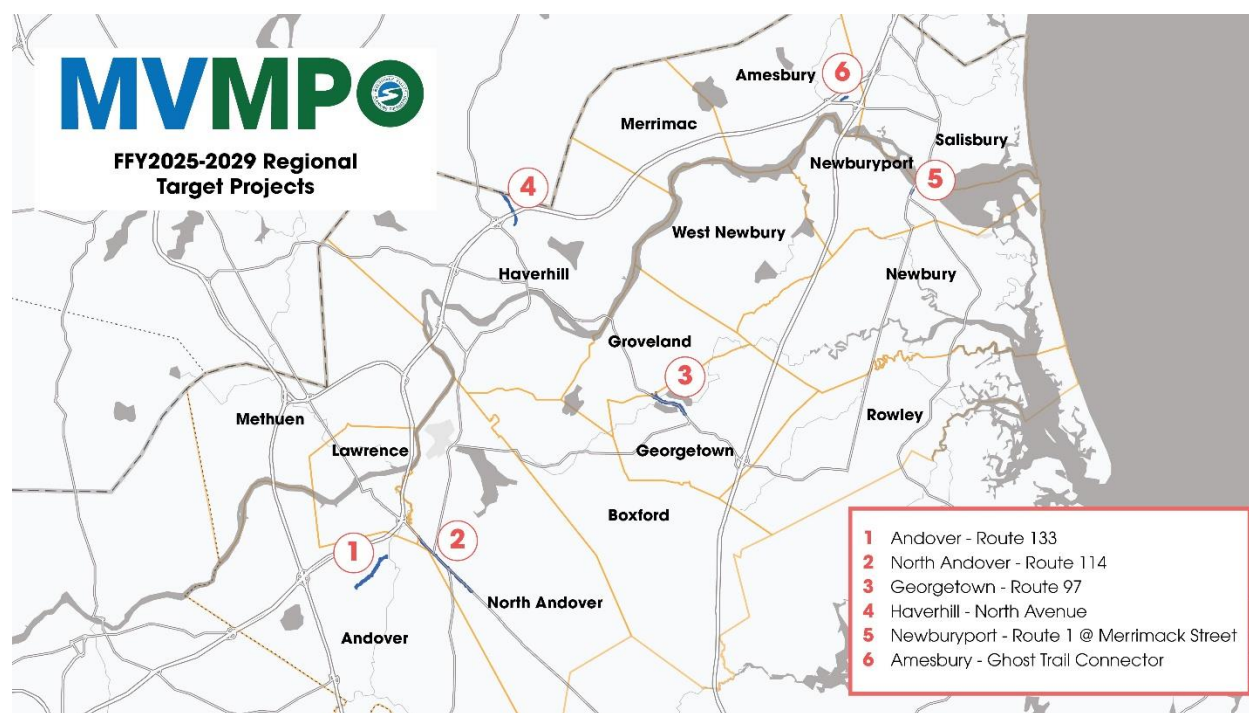
Table 12 - FTA Funding Programs (Continued)

Program	Common Acronym	Programming Authority	Eligible Uses
Bus and Bus Facilities Program	§5339	Combination	Purchase or rehabilitation of buses and related equipment that support fixed route bus service, disbursed based on formula. Additional funds available through competitive grant programs, one of which only low and zero-emission vehicles are eligible
Electric or Low Emitting Ferry Pilot Program		Discretionary	Purchase of electric or low-emitting ferries, or ferry electrification that results in reduction of emissions.
Innovative Coordination Access & Mobility Pilot Program		Discretionary	Financing of projects that support the transportation disadvantaged or improve non-emergency medical transportation services, including coordination technology and access improvements to one-call/one-click services.

Chapter 4: TIP Highway Project Descriptions

This chapter provides descriptions for programmed highway project across the TIP's five-year funding cycle. Figure 5 depicts the general locations of regional target projects. Following sections describe statewide highway projects.

Figure 5 - General Project Locations for Regional Target Projects



Regional Target Highway Project Descriptions

The following brief project profile sheets describe each regional target project programmed in this TIP cycle. Project descriptions include Transportation Evaluation Scores, MassDOT's Project Review Committee Scores, and GHG impacts where available/relevant.

Project Name	MassDOT ID	Municipality	Transportation Evaluation Criteria Score	Project Review Committee Score	GHG Reduction Impact (kg/yr)
1. RECONSTRUCTION ON ROUTE 133 (LOWELL STREET) FROM SHAWSHEEN ROAD TO ROUTE 28 (NORTH MAIN STREET)	611957	Andover	12.03/17.75	N/A	N/A

Description: This project proposes the reconstruction of Route 133 between Shawsheen Road and North Main Street, including the improvement of several key intersections and the provision of pedestrian and bicycle facilities along the roadway via a sidepath.

Current Readiness Year Determination: 2028

Program Year: 2029-2030

Aerial Photograph of Project Vicinity:



Project Name	MassDOT ID	Municipality	Transportation Evaluation Criteria Score	Project Review Committee Score	GHG Reduction Impact (kg/yr)
2. CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	608095	North Andover	12.42/17.75	74/100	7,407,526

Description: This project proposes the reconstruction of Route 114, including the provision of a sidepath on the south side of the roadway. Each intersection will be reconstructed to improve safety, including the provision of upgraded signals at existing signalized intersections and two new signals (Route 114 and Royal Crest Drive, Merrimack College and Hillside Road). Adaptive signal control will be used to optimize traffic flow based on real time traffic demand collected by the system. Finally, the project proposes additional site work such as utility work, drainage improvements, culvert replacement, and landscaping. This project will receive additional statewide funding support beyond regional targets.

Current Readiness Year Determination: 2025

Program Year: 2025-2029

Aerial Photograph of Project Vicinity:



Project Name	MassDOT ID	Municipality	Transportation Evaluation Criteria Score	Project Review Committee Score	GHG Reduction Impact (kg/yr)
3. RECONSTRUCTION ON ROUTE 97 (W. MAIN STREET) FROM MOULTON STREET TO GROVELAND T.L.	602843	Georgetown	9.03/17.75	N/A	2,399

Description: This project proposes improvements to West Main Street (Route 97), including roadway reconstruction, intersection realignment, sidewalk reconstruction with new ADA compliant ramps, a drainage system, and a sidepath. The project also includes an additional path connector on King Street between the new sidepath proposed on West Main Street and the trail in Groveland along the railroad bed. The project will also include signage and pavement markings.

Current Readiness Year Determination: 2026

Program Year: 2026

Aerial Photograph of Project Vicinity:



Project Name	MassDOT ID	Municipality	Transportation Evaluation Criteria Score	Project Review Committee Score	GHG Reduction Impact (kg/yr)
4. ROADWAY RECONSTRUCTION ON NORTH AVENUE, FROM MAIN STREET (ROUTE 125) TO PLAISTOW NH	613092	Haverhill	8.58/17.75	N/A	214,372

Description: This project proposes to reconstruct North Avenue between Main Street (Route 125) and the New Hampshire Border. The project will add ADA compliant sidewalks, granite curbs, and bicycle lanes. The project will narrow the existing travel lanes and will improve drainage. Some utilities may also be relocated in conjunction with the project. The project will reconstruct existing intersections. The Gile Street intersection will receive geometric improvements and a mini-roundabout will be added at Marsh Avenue. The project will replace the Snows Brooks Bridge and the Frye Pond dam will be removed to return Snows Brooks to its natural condition.

Current Readiness Year Determination: 2027

Program Year: 2027-2029

Aerial Photograph of Project Vicinity:



Project Name	MassDOT ID	Municipality	Transportation Evaluation Criteria Score	Project Review Committee Score	GHG Reduction Impact (kg/yr)
5. INTERSECTION IMPROVEMENTS AT ROUTE 1 & MERRIMAC STREET	608029	Newburyport	8.37/17.75	N/A	N/A

Description: This proposed project will install traffic control signals at the intersection of the Route 1 northbound and southbound ramps and Merrimac Street. The project will include sidewalks and crosswalks, as well as bicycle accommodations.

Current Readiness Year Determination: 2027

Program Year: 2027

Aerial Photograph of Project Vicinity:



Project Name	MassDOT ID	Municipality	Transportation Evaluation Criteria Score	Project Review Committee Score	GHG Reduction Impact (kg/yr)
6. RIVERWALK CONNECTOR TO THE SALISBURY POINT GHOST TRAIL	611977	Newburyport	6.85/17.75	N/A	5,100

Description: This project proposes to connect Salisbury’s Ghost Trail with the Amesbury Riverwalk. Currently, no direct, safe, off-street connection exists. A trail connector will cross Elm Street and travel behind the Carriage Town Shopping Center. The connector will continue adjacent to the back of the shopping center in a utility line easement and then link into the existing Riverwalk Trail’s existing terminus.

Current Readiness Year Determination: 2027
Program Year: 2027

Aerial Photograph of Project Vicinity:



Statewide Highway Project Descriptions

The following list provides MassDOT-generated project descriptions for the various statewide projects programmed in this TIP cycle. Note that projects programmed to receive both statewide and regional target funds are described in the previous regional target fund section. General information is provided in cases where limited information is available in MassDOT's Project Information System.

- Haverhill - Bridge Replacement over the Merrimack River (Basiliere Bridge).
The Basiliere Bridge remains safe but requires replacement largely because of the poor condition of its foundations. This poor condition is in part due to the scour. The scour results from the current of the Merrimack River colliding with the bridge's piers. As a result, the riverbed around the piers is eroding. This leaves the pier foundations unable to resist potential future scour events. The limits of work for the overall Basiliere Bridge Replacement Project includes the bridge itself up to the two nearest intersections. These are Main/Water/Merrimack Street and South Main/Middlesex Street. As of the fall of 2023, MassDOT is actively designing a replacement Basiliere Bridge with the goal of reaching the 25% design level in the first quarter of 2024. The concept now being advanced into design will improve safety for all users. It can also be built in two phases to maintain transport over the river during construction – a key concern of Haverhill residents. (Source: MassDOT: <https://www.mass.gov/info-details/about-the-basiliere-bridge-replacement-project> Accessed 4/10/2024)
- Georgetown/Boxford – Border to Boston Trail between Georgetown Road and West Main Street
The proposed project consists of the construction of The Border to Boston Shared Use Path in the Towns of Boxford and Georgetown. The corridor extends from Georgetown Road in Boxford north to West Main Street (Route 97) in Georgetown. The trail is approximately 2.4 miles and will be comprised entirely of an off-road shared use trail facility utilizing former railroad corridor, utility right of way and town right of way. The Southern Georgetown section will make up part of the larger Border to Boston Trail system which is nearly 30 miles in length and links eight Essex County communities. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)
- Georgetown/Newbury – Border to Boston Trail between West Main Street and Byfield
The Northern Georgetown/Newbury section of the Border to Boston Trail is approximately 3.3 miles, extending from West Main Street (Route 97) in Georgetown to Bayfield in Newbury; 2.6 miles in Georgetown and 0.7 miles in Newbury will be comprised of an off-road shared use trail facility utilizing former railroad corridor and utility right of way. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)
- Lawrence - Lawrence to Manchester Rail Trail
The proposed improvements include redeveloping the inactive Lawrence Manchester Rail Corridor into a shared-use path / alternate transportation corridor (ATC) for pedestrian and bicycle accommodations. The 1.40 mile project begins at Merrimack Street in Lawrence and extends to the Methuen/Lawrence City Line. The ATC will connect Merrimack Street to the south and Manchester Street Park, the Spicket River Greenway, and the future Methuen Rail Trail to the north. The project also includes improving 3 intersections for at-grade crossings, and developing additional access points to the Rail Trail from existing developments and parks. There are four bridges along the Right-of-Way that will be improved as part of the project including deck replacements at bridges over the South Canal and the Merrimack River, complete replacement of the Lowell Street Bridge that

spans the Right of Way, and a superstructure replacement at the Manchester Street Bridge Crossing. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)

- Haverhill/Methuen – I-495 Bridge Replacements over the Merrimack River and Route 110, and Industrial Avenue over I-495.
Work consists of replacing the bridges carrying I-495 over the Merrimack River and Route 110 as well as the bridge carrying Industrial Avenue over I-495. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)
- Lawrence – Community Day Arlington Safe Routes to School Improvements
The project proposes [several improvements including] the reconstruction of curb ramps driveway aprons and sidewalk to improve accessibility; [upgraded] crosswalks with high visibility pavement markings and warning signs; construction of sidewalk bump outs at Arlington Street/Lawrence Street and Arlington Street/Hampshire Street to reduce crossing distances, [improved] sight lines, and [reduced] vehicle speeds; [replaced] school zone beacons to reduce speeding, and [installation of] a raised sidewalk/island along Arlington Street at the school driveway to define traffic flow and parking zones and reduce conflict between pedestrians and vehicles during school pick/up drop off. [The project will also install] a traffic signal at Arlington Street/Lawrence Street and upgrade pedestrian signals at Arlington Street/Broadway with countdown signal heads and accessible pushbuttons to improve pedestrian accessibility and safety. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)
- Andover – Resurfacing and Related Work on Route 28
No project description available in PINFO as of 4/20/2024.
- Andover/Tewksbury – Interstate Maintenance work on I-93
No project description available in PINFO as of 4/20/2024.
- Lawrence – Short Street Bridge Replacement over the Spicket River
No project description available in PINFO as of 4/20/2024.
- Andover – Tewksbury Street Bridge Replacement over the MBTA/Former Boston and Maine Rail
No project description available in PINFO as of 4/20/2024.
- Methuen – Route 213 Bridge Replacement over the Methuen Rail Trail
No project description available in PINFO as of 4/20/2024.
- Andover – I-93 Bridge Preservation over the Merrimack River
No project description available in PINFO as of 4/20/2024.
- Groveland – Safe Routes to School Improvements at Dr. Elmer S. Bagnall Elementary
The project includes installing new sidewalks along Center Street constructing new ADA compliant curb ramps and crosswalks at the intersections of Center Street with Atwood Lane Harvard Street and Yale Street The project aims to connect a few dense neighborhoods with numerous school children and tie into the existing sidewalks on School Street Route 97 which provides direct access to Dr Elmer S Bagnall Elementary School and the soon to be constructed community trail. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)

- Haverhill – Three Culvert Replacements on Amesbury Road (Route 110) over Tributary of East Meadow River
No project description available in PINFO as of 4/20/2024.
- Lawrence – I-495 Bridge Preservation; Access Ramps over the Merrimack River
This project will repair the substructures for the bridges carrying I-495 and access ramps over the Merrimack River. (Source: MassDOT PINFO: <https://hwy.massdot.state.ma.us/projectinfo/projectinfo.asp> Accessed 4/10/2024)

Chapter 5: TIP Financial Plan

To make best use of regional obligation authority following programming, MVMPO expects cooperation, communication, and expeditious review by agencies with the responsibility of overseeing implementation. Expeditious and cooperative oversight allows the program’s financial plan to remain in balance.

Financial Summaries

As noted in Chapter 3, a formula determines MVMPO’s federal aid regional target obligation authority for highway side projects. The Merrimack Valley receives 4.4296% of the state’s total regional highway funding apportionment. Each year, MVMPO may program projects up to an amount specified by MassDOT related to the apportionment formula. MassDOT’s approach to project programming assumes a 4% inflation rate year over year, meaning the total cost of a project is assumed to be greater in an outyear compared to the present fiscal year. The TIP is financially constrained, per 23 CFR Part 450.324, meaning that annual programmed totals must not exceed combined estimates of state and federal aid.

Table 13 summarizes total programmed spending for regional target projects. Note that MVMPO staff anticipate that unprogrammed reserves will be allocated to support two separate purposes. The first is a request by the City of Newburyport to support the capital costs of a pilot bikeshare project between FFY2025 and FFY2027, with expenditures anticipated to be \$46,000 in FFY25, and \$67,000 in FFY2026 and FFY2027. Additionally, in FFY2027 and FFY2029 staff anticipate releasing a call for project design to support a portion of communities’ design cost needs.

Table 13 - Regional Target Program Summary

Fiscal Year	Obligation Authority¹	Programmed Funding	Unprogrammed Funds
FFY25	\$13,239,974	\$13,193,974	\$46,000
FFY26	\$12,916,056	\$12,849,056	\$67,000
FFY27	\$15,993,011	\$15,426,011	\$567,000
FFY28	\$16,294,046	\$16,294,046	\$0
FFY29	\$16,601,101	\$16,101,101	\$500,000
Total	\$75,044,188	\$73,864,188	\$1,180,000

¹Represented as a total amount, with an 80 percent federal and 20 percent state cost share.

The region is also the recipient of federal aid for so-called statewide projects, which are proposed at MassDOT's discretion and subject to statewide apportionment fiscal constraint and support larger bridge, trail, and roadway paving projects. Table 14 summarizes anticipated federal aid investment made within the region per MassDOT discretion.

Table 14 - Statewide Program Summary

Fiscal Year	Programmed Funding
FFY25	\$73,268,811
FFY26	\$169,801,171
FFY27	\$106,328,457
FFY28	\$84,568,660
FFY29	\$6,055,096
Total	\$440,022,195

A significant amount of TIP funding is also allocated to support public transportation. Table 15 summarizes the programmed federal and state aid in support of the Merrimack Valley region's transit system.

Table 15 - Transit Aid Program Summary

	Programmed Federal Aid	Programmed State Aid	Total
2025	\$8,140,437	\$2,357,537	\$10,497,974
2026	\$11,499,245	\$3,220,495	\$14,719,740
2027	\$20,012,500	\$5,597,500	\$25,610,000
2028	\$9,941,500	\$3,113,500	\$13,055,000
2029	\$9,706,000	\$3,064,000	\$12,770,000
Total	\$59,299,682	\$17,353,032	\$76,652,714

The following pages summarize the region's target program and transit program for FFY25-29. Table 16 shows programmed highway funds over the program's five-year horizon. Table 17 depicts programmed transit funds.



STIP Investments Report
Merrimack Valley Region

STIP: 2025 - 2029 (D)										
Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2025								\$86,462,785	\$70,489,625	\$15,973,160
Section 1A / Regionally Prioritized Projects								\$13,193,974	\$11,874,577	\$1,319,397
Roadway Reconstruction								\$13,193,974	\$11,874,577	\$1,319,397
2025	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	4	HSIP	\$43,500,479	\$13,193,974	\$11,874,577	\$1,319,397
Section 1B / Earmark or Discretionary Grant Funded Projects								\$2,735,813	\$2,188,650	\$547,163
Bridge On-System NHS NB								\$2,735,813	\$2,188,650	\$547,163
2025	609466	Merrimack Valley	Multiple	HAVERHILL- METHUEN- BRIDGE REPLACEMENT, H-12-040=M-17-030, I-495 (NB & SB) OVER MERRIMACK RIVER AND M-17-031, I-495 (NB & SB) OVER ROUTE 110 AND H-12-056, INDUSTRIAL AVENUE (EB & WB) OVER I-495	4	HIP-BR	\$413,082,405	\$2,735,813	\$2,188,650	\$547,163
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								\$62,831,398	\$50,265,118	\$12,566,280
Bridge On-system NHS								\$62,831,398	\$50,265,118	\$12,566,280
2025	605304	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)	4	NHPP-PEN	\$150,838,839	\$20,900,000	\$16,720,000	\$4,180,000
2025	609466	Merrimack Valley	Multiple	HAVERHILL- METHUEN- BRIDGE REPLACEMENT, H-12-040=M-17-030, I-495 (NB & SB) OVER MERRIMACK RIVER AND M-17-031, I-495 (NB & SB) OVER ROUTE 110 AND H-12-056, INDUSTRIAL AVENUE (EB & WB) OVER I-495	4	NHPP-PEN	\$413,082,405	\$41,931,398	\$33,545,118	\$8,386,280
Section 2C / Federal Aid Funded State Prioritized Expansion Projects								\$7,701,600	\$6,161,280	\$1,540,320
Bicycle and Pedestrian								\$7,701,600	\$6,161,280	\$1,540,320
2025	608930	Merrimack Valley	Lawrence	LAWRENCE- LAWRENCE MANCHESTER RAIL CORRIDOR (LMRC) RAIL TRAIL	4	CMAQ	\$29,524,355	\$7,701,600	\$6,161,280	\$1,540,320



STIP Investments Report
Merrimack Valley Region

STIP: 2025 - 2029 (D)										
Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2026								\$203,195,886	\$120,887,648	\$82,308,238
Section 1A / Regionally Prioritized Projects								\$12,849,056	\$10,446,207	\$2,402,849
Roadway Reconstruction								\$12,849,056	\$10,446,207	\$2,402,849
2026	602843	Merrimack Valley	Georgetown	GEORGETOWN- RECONSTRUCTION ON ROUTE 97 (W. MAIN STREET) FROM MOULTON STREET TO GROVELAND T.L.	4	STBG	\$11,179,434	\$11,179,434	\$8,943,547	\$2,235,887
2026	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	4	HSIP	\$43,500,479	\$1,669,622	\$1,502,660	\$166,962
Section 1B / Earmark or Discretionary Grant Funded Projects								\$4,128,156	\$4,128,156	\$0
Bridge Off-system Local NB								\$4,128,156	\$4,128,156	\$0
2026	612074	Merrimack Valley	Lawrence	LAWRENCE- BRIDGE REPLACEMENT, L-04-012, SHORT STREET OVER SPICKET RIVER	4	BROFF	\$4,128,156	\$4,128,156	\$4,128,156	\$0
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								\$113,405,509	\$92,508,315	\$20,897,194
Bridge On-system NHS								\$95,566,431	\$76,453,145	\$19,113,286
2026	605304	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)	4	NHPP-PEN	\$150,838,839	\$58,882,805	\$47,106,244	\$11,776,561
2026	609466	Merrimack Valley	Multiple	HAVERHILL- METHUEN- BRIDGE REPLACEMENT, H-12-040=M-17-030, I-495 (NB & SB) OVER MERRIMACK RIVER AND M-17-031, I-495 (NB & SB) OVER ROUTE 110 AND H-12-056, INDUSTRIAL AVENUE (EB & WB) OVER I-495	4	NHPP-PEN	\$413,082,405	\$36,683,626	\$29,346,901	\$7,336,725
Interstate Pavement								\$17,839,078	\$16,055,170	\$1,783,908
2026	612045	Merrimack Valley	Andover	ANDOVER- TEWKSBURY- INTERSTATE MAINTENANCE AND RELATED WORKS ON I-93	4	NHPP-I	\$17,839,078	\$17,839,078	\$16,055,170	\$1,783,908
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								\$4,523,545	\$3,618,836	\$904,709
Safe Routes to School								\$4,523,545	\$3,618,836	\$904,709
2026	612002	Merrimack Valley	Lawrence	LAWRENCE- COMMUNITY DAY ARLINGTON IMPROVEMENTS (SRTS)	4	TAP	\$4,523,930	\$4,523,545	\$3,618,836	\$904,709
Section 2C / Federal Aid Funded State Prioritized Expansion Projects								\$12,732,667	\$10,186,134	\$2,546,533
Bicycle and Pedestrian								\$12,732,667	\$10,186,134	\$2,546,533
2026	607541	Merrimack Valley	Multiple	GEORGETOWN- BOXFORD- BORDER TO BOSTON TRAIL, FROM GEORGETOWN ROAD TO WEST MAIN STREET (ROUTE 97)	4	CMAQ	\$4,732,667	\$4,732,667	\$3,786,134	\$946,533
2026	608930	Merrimack Valley	Lawrence	LAWRENCE- LAWRENCE MANCHESTER RAIL CORRIDOR (LMRC) RAIL TRAIL	4	CMAQ	\$29,524,355	\$8,000,000	\$6,400,000	\$1,600,000
Section 3B / Non-Federal Aid Funded								\$55,556,953	\$0	\$55,556,953
Bridge On-system Non-NHS								\$17,409,753	\$0	\$17,409,753
2026	612143	Merrimack Valley	Andover	ANDOVER- BRIDGE REPLACEMENT, A-09-015, TEWKSBURY STREET OVER MBT/BMRR	4	NGBP	\$17,409,753	\$17,409,753	\$0	\$17,409,753
Bridge On-system NHS								\$38,147,200	\$0	\$38,147,200
2026	612193	Merrimack Valley	Andover	ANDOVER- BRIDGE PRESERVATION, A-09-022, I-93 OVER MERRIMACK RIVER	4	NGBP	\$38,147,200	\$38,147,200	\$0	\$38,147,200



STIP Investments Report Merrimack Valley Region

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2027								\$92,726,710	\$71,138,739	\$21,587,971
Section 1A / Regionally Prioritized Projects								\$15,426,011	\$13,124,612	\$2,301,399
Roadway Reconstruction								\$13,146,131	\$11,300,708	\$1,845,423
2027	608029	Merrimack Valley	Newburyport	NEWBURYPORT- INTERSECTION IMPROVEMENTS AT ROUTE 1 & MERRIMAC STREET	4	STBG	\$2,592,000	\$2,592,000	\$2,073,600	\$518,400
2027	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	4	HSIP	\$43,500,479	\$7,838,033	\$7,054,230	\$783,803
2027	608788	Merrimack Valley	Haverhill	HAVERHILL- ROADWAY RECONSTRUCTION ON NORTH AVENUE, FROM MAIN STREET (ROUTE 125) TO PLAISTOW NH	4	STBG	\$26,803,444	\$2,716,098	\$2,172,878	\$543,220
Bicycle and Pedestrian								\$2,279,880	\$1,823,904	\$455,976
2027	611977	Merrimack Valley	Amesbury	AMESBURY- RIVERWALK CONNECTOR TO THE SALISBURY POINT GHOST TRAIL	4	CMAQ	\$2,279,880	\$2,279,880	\$1,823,904	\$455,976
Section 2A / Federal Aid Funded State Prioritized Reliability Projects								\$65,962,445	\$52,769,956	\$13,192,489
Bridge On-system NHS								\$50,456,034	\$40,364,827	\$10,091,207
2027	605304	Merrimack Valley	Haverhill	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)	4	NHPP-PEN	\$150,838,839	\$50,456,034	\$40,364,827	\$10,091,207
Highway Resiliency Improvement Program								\$4,490,411	\$3,592,329	\$898,082
2027	613092	Merrimack Valley	Haverhill	HAVERHILL- 3 CULVERT REPLACEMENTS ON AMESBURY ROAD (ROUTE 110) OVER TRIBUTARY OF EAST MEADOW RIVER	4	PRCT	\$4,490,411	\$4,490,411	\$3,592,329	\$898,082
Bridge On-system Non-NHS								\$11,016,000	\$8,812,800	\$2,203,200
2027	613225	Merrimack Valley	Lawrence	LAWRENCE- BRIDGE PRESERVATION, L-04-035 (2XD & 2X6) I-495 & ACCESS RAMPS OVER THE MERRIMACK RIVER	4	NHPP	\$11,016,000	\$11,016,000	\$8,812,800	\$2,203,200
Section 2C / Federal Aid Funded State Prioritized Expansion Projects								\$6,555,214	\$5,244,171	\$1,311,043
Bicycle and Pedestrian								\$6,555,214	\$5,244,171	\$1,311,043
2027	607542	Merrimack Valley	Multiple	GEORGETOWN- NEWBURY- BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	4	CMAQ	\$6,555,214	\$6,555,214	\$5,244,171	\$1,311,043
Section 3B / Non-Federal Aid Funded								\$4,783,040	\$0	\$4,783,040
Bridge On-system NHS								\$4,783,040	\$0	\$4,783,040
2027	612158	Merrimack Valley	Methuen	METHUEN- BRIDGE REPLACEMENT, M-17-026, ROUTE 213 (EB/WB) OVER THE METHUEN RAIL TRAIL	4	NGBP	\$4,783,040	\$4,783,040	\$0	\$4,783,040



STIP Investments Report Merrimack Valley Region

STIP: 2025 - 2029 (D)

Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2028								\$31,745,748	\$26,119,269	\$5,626,480
Section 1A / Regionally Prioritized Projects								\$16,294,046	\$13,757,907	\$2,536,139
Roadway Reconstruction								\$16,294,046	\$13,757,907	\$2,536,139
2028	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	4	HSIP	\$43,500,479	\$7,226,701	\$6,504,031	\$722,670
2028	608788	Merrimack Valley	Haverhill	HAVERHILL- ROADWAY RECONSTRUCTION ON NORTH AVENUE, FROM MAIN STREET (ROUTE 125) TO PLAISTOW NH	4	STBG	\$26,803,444	\$9,067,345	\$7,253,876	\$1,813,469
Section 2B / Federal Aid Funded State Prioritized Modernization Projects								\$15,451,702	\$12,361,362	\$3,090,340
Roadway Reconstruction								\$13,572,149	\$10,857,719	\$2,714,430
2028	608095	Merrimack Valley	North Andover	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	4	NHPP	\$48,720,536	\$13,572,149	\$10,857,719	\$2,714,430
Safe Routes to School								\$1,879,553	\$1,503,642	\$375,911
2028	612890	Merrimack Valley	Groveland	GROVELAND- IMPROVEMENTS AT DR. ELMER S. BAGNALL ELEMENTARY SCHOOL (SRTS)	4	TAP	\$1,879,553	\$1,879,553	\$1,503,642	\$375,911



STIP Investments Report Merrimack Valley Region

STIP: 2025 - 2029 (D)										
Year	MassDOT Project ID	MPO	Municipality	MassDOT Project Description	District	Funding Source	Adjusted TFPC	Total Programmed Funds	Federal Funds	Non-Federal Funds
Federal Fiscal Year 2029								\$22,156,197	\$17,724,958	\$4,431,239
Section 1A/ Regionally Prioritized Projects								\$16,101,101	\$12,880,881	\$3,220,220
Roadway Reconstruction								\$16,101,101	\$12,880,881	\$3,220,220
2029	608788	Merrimack Valley	Haverhill	HAVERHILL- ROADWAY RECONSTRUCTION ON NORTH AVENUE, FROM MAIN STREET (ROUTE 125) TO PLAISTOW NH	4	STBG	\$26,803,444	\$15,020,001	\$12,016,001	\$3,004,000
2029	611957	Merrimack Valley	Andover	ANDOVER- RECONSTRUCTION ON ROUTE 133 (LOWELL STREET) FROM SHAWSHEEN ROAD TO ROUTE 28 (NORTH MAIN STREET)	4	STBG	\$17,681,800	\$1,081,100	\$864,880	\$216,220
Section 2A/ Federal Aid Funded State Prioritized Reliability Projects								\$6,055,096	\$4,844,077	\$1,211,019
Non-Interstate Pavement								\$6,055,096	\$4,844,077	\$1,211,019
2029	612024	Merrimack Valley	Andover	ANDOVER- RESURFACING AND RELATED WORK ON ROUTE 28	4	NHPP	\$6,055,096	\$6,055,096	\$4,844,077	\$1,211,019

STIP Investments Report

Program Activity: Transit, Merrimack Valley Regional Transportation 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
Federal Fiscal Year 2025							\$10,497,974	\$8,140,437	\$2,357,537	
Merrimack Valley Regional Transportation Authority							\$10,497,974	\$8,140,437	\$2,357,537	
2025	MVRTA011631		RTA Fleet Upgrades	MVRTA ITS: Upgrade fleet radios from analog to digital.	5307	\$1,000,000	\$800,000	\$800,000		
2025	MVRTA011631		RTA Fleet Upgrades	MVRTA ITS: Upgrade fleet radios from analog to digital.	RTACAP	\$1,000,000	\$200,000		\$200,000	
2025	MVRTA011632	Haverhill	RTA Facility & System Modernization	MULTI-Year Replace Fuel Tank for Diesel and Upgrade to Infrastructure.	5307	\$2,000,000	\$800,000	\$800,000		
2025	MVRTA011632	Haverhill	RTA Facility & System Modernization	MULTI-Year Replace Fuel Tank for Diesel and Upgrade to Infrastructure.	DOF	\$2,000,000	\$200,000	\$200,000		
2025	MVRTA011641		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - MULTI-YEAR: ENG/DESIGN - ADMIN/MAINT FACILITY - split years of funding	5307	\$400,000	\$320,000	\$320,000		
2025	MVRTA011641		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - MULTI-YEAR: ENG/DESIGN - ADMIN/MAINT FACILITY - split years of funding	RTACAP	\$400,000	\$80,000		\$80,000	
2025	RTD0010764		RTA Vehicle Replacement	Merrimack Valley Regional Transit Authority - Replace 1 Model Year 2013 Administrator Vehicle	5307	\$50,000	\$40,000	\$40,000		
2025	RTD0010764		RTA Vehicle Replacement	Merrimack Valley Regional Transit Authority - Replace 1 Model Year 2013 Administrator Vehicle	RTACAP	\$50,000	\$10,000		\$10,000	
2025	RTD0011317		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT	5307	\$800,000	\$640,000	\$640,000		
2025	RTD0011317		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT	RTACAP	\$800,000	\$160,000		\$160,000	
2025	T00092	Multiple	Operating	MVRTA-Operating assistance for services	5307	\$4,960,000	\$763,237	\$763,237		
2025	T00092	Multiple	Operating	MVRTA-Operating assistance for services	SCA	\$4,960,000	\$763,237		\$763,237	
2025	T00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	5307	\$4,500,000	\$1,657,200	\$1,657,200		
2025	T00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	SCA	\$4,500,000	\$414,300		\$414,300	
2025	T00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	5307	\$7,250,000	\$2,600,000	\$2,600,000		
2025	T00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	SCA	\$7,250,000	\$650,000		\$650,000	
2025	T00115	Multiple	RTA Vehicle Replacement	MVRTA- Replace 1 Paratransit ADA accessible vehicles with newly designed low floor style accessible vehicles.	5307	\$400,000	\$320,000	\$320,000		
2025	T00115	Multiple	RTA Vehicle Replacement	MVRTA- Replace 1 Paratransit ADA accessible vehicles with newly designed low floor style accessible vehicles.	RTACAP	\$400,000	\$80,000		\$80,000	

STIP Investments Report

Program Activity: Transit, Merrimack Valley Regional Transportation Authority



STIP: 2025 - 2029 (D)

MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2026						\$14,719,740	\$11,499,245	\$3,220,495	
Merrimack Valley Regional Transportation Authority						\$14,719,740	\$11,499,245	\$3,220,495	
MRTA011632	Haverhill	RTA Facility & System Modernization	MULTI-Year Replace Fuel Tank for Diesel and Upgrade to Infrastructure.	5307	\$2,000,000	\$800,000	\$800,000		
MRTA011632	Haverhill	RTA Facility & System Modernization	MULTI-Year Replace Fuel Tank for Diesel and Upgrade to Infrastructure.	DOF	\$2,000,000	\$200,000	\$200,000		
:TD0010769		RTA Vehicle Replacement	Merrimack Valley Regional Transit Authority - Replace 1 Model Yr 2020 and 1 Model Yr 2019 Supervisory Vehicle	5307	\$125,000	\$100,000	\$100,000		
:TD0010769		RTA Vehicle Replacement	Merrimack Valley Regional Transit Authority - Replace 1 Model Yr 2020 and 1 Model Yr 2019 Supervisory Vehicle	RTACAP	\$125,000	\$25,000		\$25,000	
:TD0011309		RTA Replacement Facilities	Merrimack Valley Regional Transit Authority - CONSTRUCT ADMIN/MAINT FACILITY	DOF	\$10,000,000	\$4,000,000	\$4,000,000		
:TD0011309		RTA Replacement Facilities	Merrimack Valley Regional Transit Authority - CONSTRUCT ADMIN/MAINT FACILITY	DRTACAP	\$10,000,000	\$1,000,000		\$1,000,000	
:TD0011318		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT to include Replace HVAC at MEVA Admin/Maintenance Facility	5307	\$1,500,000	\$1,200,000	\$1,200,000		
:TD0011318		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT to include Replace HVAC at MEVA Admin/Maintenance Facility	RTACAP	\$1,500,000	\$300,000		\$300,000	
00092	Multiple	Operating	MVRTA-Operating assistance for services	5307	\$4,960,000	\$794,245	\$794,245		
00092	Multiple	Operating	MVRTA-Operating assistance for services	SCA	\$4,960,000	\$794,245		\$794,245	
00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	5307	\$4,500,000	\$1,680,000	\$1,680,000		
00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	SCA	\$4,500,000	\$420,000		\$420,000	
00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	5307	\$7,250,000	\$2,725,000	\$2,725,000		
00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	SCA	\$7,250,000	\$681,250		\$681,250	

STIP Investments Report

Program Activity: Transit, Merrimack Valley Regional Transportation 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
Federal Fiscal Year 2027							\$25,610,000	\$20,012,500	\$5,597,500	
Merrimack Valley Regional Transportation Authority							\$25,610,000	\$20,012,500	\$5,597,500	
2027	RTD0011309		RTA Replacement Facilities	Merrimack Valley Regional Transit Authority - CONSTRUCT ADMIN/MAINT FACILITY	DOF	\$10,000,000	\$4,000,000	\$4,000,000		
2027	RTD0011309		RTA Replacement Facilities	Merrimack Valley Regional Transit Authority - CONSTRUCT ADMIN/MAINT FACILITY	DRTACAP	\$10,000,000	\$1,000,000		\$1,000,000	
2027	RTD0011315		RTA Fleet Upgrades	Merrimack Valley Regional Transit Authority - BUY REPLACEMENT 35-FT BUS	DRTACAP	\$10,000,000	\$2,000,000		\$2,000,000	
2027	RTD0011315		RTA Fleet Upgrades	Merrimack Valley Regional Transit Authority - BUY REPLACEMENT 35-FT BUS	OF	\$10,000,000	\$8,000,000	\$8,000,000		
2027	RTD0011316		RTA Fleet Upgrades	MVRTA - Replace paratransit vehicles with low floor cutaways	5307	\$5,250,000	\$1,600,000	\$1,600,000		
2027	RTD0011316		RTA Fleet Upgrades	MVRTA - Replace paratransit vehicles with low floor cutaways	RTACAP	\$5,250,000	\$400,000		\$400,000	
2027	RTD0011317		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT	5307	\$800,000	\$700,000	\$700,000		
2027	RTD0011317		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT	RTACAP	\$800,000	\$175,000		\$175,000	
2027	T00092	Multiple	Operating	MVRTA-Operating assistance for services	5307	\$4,960,000	\$792,500	\$792,500		
2027	T00092	Multiple	Operating	MVRTA-Operating assistance for services	SCA	\$4,960,000	\$792,500		\$792,500	
2027	T00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	5307	\$4,500,000	\$1,720,000	\$1,720,000		
2027	T00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	SCA	\$4,500,000	\$430,000		\$430,000	
2027	T00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	5307	\$7,250,000	\$3,200,000	\$3,200,000		
2027	T00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	SCA	\$7,250,000	\$800,000		\$800,000	

STIP Investments Report

Program Activity: Transit, Merrimack Valley Regional Transportation 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
Federal Fiscal Year 2028							\$13,055,000	\$9,941,500	\$3,113,500	
Merrimack Valley Regional Transportation Authority							\$13,055,000	\$9,941,500	\$3,113,500	
2028	MVRTA011634		RTA Vehicle Replacement	MEVA BUY REPLACEMENT 35-FT BUS to replace 2016 and 2017 Gilligs	5307	\$7,250,000	\$2,600,000	\$2,600,000		
2028	MVRTA011634		RTA Vehicle Replacement	MEVA BUY REPLACEMENT 35-FT BUS to replace 2016 and 2017 Gilligs	RTACAP	\$7,250,000	\$650,000		\$650,000	
2028	RTD0011316		RTA Fleet Upgrades	MVRTA - Replace paratransit vehicles with low floor cutaways	5307	\$5,250,000	\$1,800,000	\$1,800,000		
2028	RTD0011316		RTA Fleet Upgrades	MVRTA - Replace paratransit vehicles with low floor cutaways	RTACAP	\$5,250,000	\$450,000		\$450,000	
2028	T00092	Multiple	Operating	MVRTA-Operating assistance for services	5307	\$4,960,000	\$837,500	\$837,500		
2028	T00092	Multiple	Operating	MVRTA-Operating assistance for services	SCA	\$4,960,000	\$837,500		\$837,500	
2028	T00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	5307	\$4,500,000	\$1,800,000	\$1,800,000		
2028	T00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	SCA	\$4,500,000	\$450,000		\$450,000	
2028	T00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	5307	\$7,250,000	\$2,800,000	\$2,800,000		
2028	T00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	SCA	\$7,250,000	\$700,000		\$700,000	
2028	T00097	Multiple	RTA Vehicle Replacement	MVRTA- Replace supervisor vehicles with EV SUV's	5307	\$200,000	\$104,000	\$104,000		
2028	T00097	Multiple	RTA Vehicle Replacement	MVRTA- Replace supervisor vehicles with EV SUV's	RTACAP	\$200,000	\$26,000		\$26,000	

STIP Investments Report

Program Activity: Transit, Merrimack Valley Regional Transportation Authority



STIP: 2025 - 2029 (D)

MassDOT Project ID	Municipality	Program	MassDOT Project Description	Funding Source	Total Project Cost	Total Programmed Funds	Federal Funds	State Funds	Other Funds
Federal Fiscal Year 2029						\$12,770,000	\$9,706,000	\$3,064,000	
Merrimack Valley Regional Transportation Authority						\$12,770,000	\$9,706,000	\$3,064,000	
MRTA011634		RTA Vehicle Replacement	MEVA BUY REPLACEMENT 35-FT BUS to replace 2016 and 2017 Gilligs	5307	\$7,250,000	\$3,200,000	\$3,200,000		
MRTA011634		RTA Vehicle Replacement	MEVA BUY REPLACEMENT 35-FT BUS to replace 2016 and 2017 Gilligs	RTACAP	\$7,250,000	\$800,000		\$800,000	
:TD0011317		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT	5307	\$800,000	\$800,000	\$800,000		
:TD0011317		RTA Facility & System Modernization	Merrimack Valley Regional Transit Authority - CONSTRUCT - MISC EQUIPMENT	RTACAP	\$800,000	\$200,000		\$200,000	
00092	Multiple	Operating	MVRTA-Operating assistance for services	5307	\$4,960,000	\$850,000	\$850,000		
00092	Multiple	Operating	MVRTA-Operating assistance for services	SCA	\$4,960,000	\$850,000		\$850,000	
00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	5307	\$4,500,000	\$1,800,000	\$1,800,000		
00093	Multiple	Operating	MVRTA- Operating assistance for Non-Fixed Route Paratransit, ADA services	SCA	\$4,500,000	\$450,000		\$450,000	
00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	5307	\$7,250,000	\$3,000,000	\$3,000,000		
00096	Multiple	RTA Facility & Vehicle Maintenance	MVRTA- Preventative Maintenance	SCA	\$7,250,000	\$750,000		\$750,000	
00097	Multiple	RTA Vehicle Replacement	MVRTA- Replace supervisor vehicles with EV SUV's	5307	\$200,000	\$56,000	\$56,000		
00097	Multiple	RTA Vehicle Replacement	MVRTA- Replace supervisor vehicles with EV SUV's	RTACAP	\$200,000	\$14,000		\$14,000	

Amendment and Adjustment Procedures

The programming schedule detailed in the TIP may be revised by administrative modification or by act of the MVMPO, depending on the type and magnitude of the action. Table 18 and Table 19 detail the definition and classification of various revision actions for both highway and transit projects. Administrative modifications are changes considered minor in nature that do not require MVMPO votes, including minor changes to a project's description. Adjustments require MVMPO approval by vote, but do not require a 21-day comment period and associated public hearings. Example adjustment actions include minor changes to a project's cost or scope, or a change in a project's funding program. Amendments require a public process, including a 21-day comment period and public hearing.

Table 18 - Highway Revision Procedures

Type of Revision	Definition	Procedure	Notes
Major Project Cost Change	Increase or decrease of \$500,000 or greater for projects programmed under \$5,000,000 and greater than 10% of the total cost for projects programmed over \$5,000,000.	Amendment	The "increase" or "decrease" in cost is relative to the Total Federal Participating Cost (TFPC) of a project.
Minor Project Cost Change	Increase or decrease of \$499,999 or less for projects programmed under \$5,000,000 and less than 10% of the total cost for projects programmed over \$5,000,000.	Adjustment	See above.
Project Description Change	Change in the description of the project as it is listed in the STIP.	Adjustment or Administrative Modification	Project description changes are treated as administrative modifications for minor changes (e.g. spelling errors, more detailed descriptions, adding mile-markers, etc.).
Major Project Scope Change	A revision to the project scope large enough to necessitate an additional review by MassDOT's Project Review Committee (PRC) – typically accompanied by major project cost change.	Amendment	In some cases, a major scope change will require the initiation of a new project through MassDOT's Project Initiation Form (PIF), and review/approval by PRC. This would require deactivation and removal of the currently programmed project.

Table 18 - Highway Revision Procedures Continued

Type of Revision	Definition	Procedure	Notes
Minor Project Scope Change	A minor revision to the project scope that does not significantly alter the original PRC- approved scope of work.	Adjustment	In many cases, changes in this category will also include a minor cost change.
Project Addition	The programming of a new project in any federal fiscal year of the active TIP.	Amendment or Adjustment	Project additions are treated as amendments if the project was not part of any previously approved STIP that has been vetted through the public process.
Project Removal	The removal of a project in any federal fiscal year of the active TIP.	Amendment	Exception: if a project is removed from an active TIP or the STIP due to it being previously advanced/advertised or is moved to the statewide list from a regional TIP, the action would be considered an adjustment.
Change in Funding Source	A change in the project's funding source, including federal and nonfederal sources which fall within the project cost change revisions listed above.	Adjustment	Changes in funding sources for projects are permissible for advertisement purposes if the FHWA Division Office has been consulted.
Change in Additional Information	A change in any item listed in the "Additional Information" column of the STIP not covered in any other item listed here (e.g. earmark details, project proponent, etc.).	Administrative Modification	None
Change in Program Year	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 19 - Transit Revision Procedures

Type of Revision	Definition	Procedure	Notes
Major Project Cost Change	Increase or decrease of \$500,000 or greater for projects under \$5,000,000 and greater than 10% of the total cost for projects exceeding \$5,000,000.	Amendment	The “increase” or “decrease” in cost is relative to the combined federal and non- federal aid participating cost of the project.
Minor Project Cost Change	Increase or decrease of \$499,999 or less for projects under \$5,000,000 and less than 10% of the total cost for projects exceeding \$5,000,000.	Adjustment	See above.
Project Description Change	Change in the description of the project as it is listed in the STIP.	Adjustment or Administrative Modification	Project description changes are treated as administrative modifications for minor changes (e.g. spelling errors, more detailed descriptions, etc.).
Major Project Scope Change	A revision to the project scope deemed large enough to require public review and comment (e.g. changing the number of stations for a new line).	Amendment	In many cases, changes in this category will also include a major cost change.
Minor Project Scope Change	A minor revision to the project scope that does not significantly alter the original scope of work (e.g. changes to the bus model for vehicle replacement projects).	Adjustment	In many cases, changes in this category will also include a minor cost change.
Project Addition	The programming of a new project in any federal fiscal year of the current TIP.	Amendment or Adjustment	Project additions are treated as amendments if the project was not part of any previously approved STIP that has been vetted through the public process.

Table 19 - Transit Revision Procedures Continued

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 Program Year	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.

Acronym Glossary

Active Transportation Network	ATN
Advance Construction	AC
Americans with Disabilities Act	ADA
Bipartisan Infrastructure Legislation, or Infrastructure Investment and Jobs Act	BIL (also IJJA)
Capital Investment Plan	CIP
Clean Air Act	CAA
Clean Air Act Amendments	CAAA
Congestion Management Process	CMP
Environmental Justice	EJ
Environmental Protection Agency	EPA
Equivalent Property Damage Only	EPDO
Federal Highway Administration	FHWA
Federal Transit Administration	FTA
Functionally Obsolete (refers to bridge status)	FO
Green House Gas	GHG
Highway Performance Monitoring System	HPMS
Long-Range Regional Transportation Plans	LRTP
Massachusetts Bay Transportation Authority	MBTA
Massachusetts Department of Environmental Protection	MASSDEP
Massachusetts Department of Transportation	MASSDOT
Merrimack Valley Metropolitan Planning Organization	MVMPO
Merrimack Valley Planning Commission	MVPC
Merrimack Valley Transit (Merrimack Valley Regional Transit Authority)	MeVa (MVRTA)
Metropolitan Area Planning Council	MAPC
Metropolitan Planning Organization; Merrimack Valley Metropolitan Planning Organization	MPO, MVMPO
National Ambient Air Quality Standards	NAAQS
National Highway Freight Network	NHFN
National Highway System	NHS
Northern Middlesex Council of Governments	NMCOG
Nitrogen Oxides	NOx
Priority Development Area	PDA
Public Participation Plan	PPP
Regional Transportation Plan, Metropolitan Transportation Plan	RTP, MTP
Road Safety Audit	RSA
Structurally Deficient (refers to bridge status)	SD
State Transportation Improvement Program	STIP
Surface Transportation Program	STP
Transportation Control Measures	TCM
Transportation Evaluation Criteria	TEC
Transportation Improvement Program	TIP
Unified Planning Work Program	UPWP
Vehicle Miles Traveled	VMT
Volatile Organic Compounds	VOC

Appendices

Air Quality Conformity Determination Merrimack Valley Metropolitan Planning Organization FFY2025-2029

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

Introduction

The 1990 Clean Air Act Amendments (CAAA) require metropolitan planning organizations within nonattainment and maintenance areas to perform air quality conformity determinations prior to the approval of Long-Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs), and at such other times as required by regulation. Clean Air Act (CAA) section 176(c) (42 U.S.C. 7506(c)) requires that federally funded or approved highway and transit activities are consistent with (“conform to”) the purpose of the State Implementation Plan (SIP). Conformity 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 (NO_x), the two major precursors to ozone formation to achieve attainment of the ozone standard.

The 1970 Clean Air Act defined a one-hour national ambient air quality standard (NAAQS) for ground-level ozone. The 1990 CAAA further classified degrees of nonattainment of the one-hour standard based on the

severity of the monitored levels of the pollutant. The entire commonwealth of Massachusetts was classified as being in serious nonattainment for the one-hour ozone standard, with a required attainment date of 1999. The attainment date was later extended, first to 2003 and a second time to 2007.

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

In March 2008, EPA published revisions to the eight-hour ozone NAAQS establishing a level of 0.075 ppm, (March 27, 2008; 73 FR 16483). In 2009, EPA announced it would reconsider this standard because it fell outside of the range recommended by the Clean Air Scientific Advisory Committee. However, EPA did not take final action on the reconsideration so the standard 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 RTPs include: latest planning assumptions (93.110), latest emissions model (93.111), consultation (93.112), transportation control measures (93.113(b) and (c), and emissions budget and/or interim emissions (93.118 and/or 93.119).

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

Therefore, transportation conformity for the 1997 ozone NAAQS for the 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, RTP, and related certification documents provide an adequate opportunity for public review and comment. Section 450.316(b) also establishes the outline for MPO public participation programs. Each MPO's Public Participation Plan ensures that the public will have access to the TIP/RTP and all supporting documentation, provides for public notification of the availability of the TIP/RTP and the public's right to review the document and comment thereon, and provides a 21-day public review and comment period prior to the adoption of the TIP/RTP and related certification documents.

Timely Implementation of Transportation Control Measures

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

Fiscal Constraint

Transportation conformity requirements in 40 CFR 93.108 state that TIPs and transportation plans and must be fiscally constrained consistent with DOT's metropolitan planning regulations at 23 CFR part 450. The MVMPO 2024-2028 Transportation Improvement Program and 2024-2044 Regional Transportation Plan are fiscally constrained, as demonstrated in this document.

GHG Reduction Analysis: Methodology, and Results

The Merrimack Valley MPO worked with MassDOT to complete the Highway and Transit Greenhouse Gas (GHG) Reduction analysis. The MPO collected Functional Design Reports from MassDOT project managers and used data from those reports to complete the GHG analysis for Highway projects using the GHG analysis spreadsheet provided by MassDOT. The results from the analysis were submitted through eSTIP and are depicted in the tables below. For Transit projects, MeVa provided data to MassDOT who completed the analysis.

Table 20: GHG Analysis for Highway Projects 2024-2028



Greenhouse Gas (GHG) Analysis Report

Program Activity: Highway

STIP: 2025 - 2029 (D)

MassDot Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG CO2 Impact (kg/yr)	Additional Information
Federal Fiscal Year 2025					
Merrimack Valley					
605304	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)		No assumed impact/negligible impact on emissions	0	
608095	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	Quantified	Quantified Decrease in Emissions from Traffic Operational Improvement	7,407,526	
608930	LAWRENCE- LAWRENCE MANCHESTER RAIL CORRIDOR (LMRC) RAIL TRAIL	Quantified	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure	175,927	
609466	HAVERHILL- METHUEN- BRIDGE REPLACEMENT, H-12-040=M-17-030, I-495 (NB & SB) OVER MERRIMACK RIVER AND M-17-031, I-495 (NB & SB) OVER ROUTE 110 AND H-12-056, INDUSTRIAL AVENUE (EB & WB) OVER I-495	Qualitative	No assumed impact/negligible impact on emissions	0	No data for GHG analysis yet.
Merrimack Valley			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	7,583,453	
			Total GHG Difference (kg/year)	7,583,453	
2025			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	7,583,453	
			Total GHG Difference (kg/year)	7,583,453	
2025			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	7,583,453	
			Total GHG Difference (kg/year)	7,583,453	



Greenhouse Gas (GHG) Analysis Report

Program Activity: Highway

STIP: 2025 - 2029 (D)					
MassDot Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG CO2 Impact (kg/yr)	Additional Information
Federal Fiscal Year 2026					
Merrimack Valley					
602843	GEORGETOWN- RECONSTRUCTION ON ROUTE 97 (W. MAIN STREET) FROM MOULTON STREET TO GROVELAND T.L.	Quantified	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure	2,399	
607541	GEORGETOWN- BOXFORD- BORDER TO BOSTON TRAIL, FROM GEORGETOWN ROAD TO WEST MAIN STREET (ROUTE 97)	Qualitative	No assumed impact/negligible impact on emissions	0	Shared-use path should increase mode shift from cars to active transportation. No data for GHG analysis yet.
608930	LAWRENCE- LAWRENCE MANCHESTER RAIL CORRIDOR (LMRC) RAIL TRAIL	Quantified	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure	175,927	
609466	HAVERTHILL- METHUEN- BRIDGE REPLACEMENT, H-12-040=M-17-030, I-495 (NB & SB) OVER MERRIMACK RIVER AND M-17-031, I-495 (NB & SB) OVER ROUTE 110 AND H-12-056. INDUSTRIAL AVENUE (EB & WB) OVER I-	Qualitative	No assumed impact/negligible impact on emissions	0	No data for GHG analysis yet.
612002	LAWRENCE- COMMUNITY DAY ARLINGTON IMPROVEMENTS (SRTS)		No assumed impact/negligible impact on emissions	0	
612045	ANDOVER- TEWKSBURY- INTERSTATE MAINTENANCE AND RELATED WORKS ON I-93		No assumed impact/negligible impact on emissions	0	
612074	LAWRENCE- BRIDGE REPLACEMENT, L-04-012, SHORT STREET OVER SPICKET RIVER		No assumed impact/negligible impact on emissions	0	
612143	ANDOVER- BRIDGE REPLACEMENT, A-09-015, TEWKSBURY STREET OVER MBTA/BMRR		No assumed impact/negligible impact on emissions	0	
612193	ANDOVER- BRIDGE PRESERVATION, A-09-022, I-93 OVER MERRIMACK RIVER		No assumed impact/negligible impact on emissions	0	
Merrimack Valley			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	178,326	
			Total GHG Difference (kg/year)	178,326	
2026			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	178,326	
			Total GHG Difference (kg/year)	178,326	



Greenhouse Gas (GHG) Analysis Report

Program Activity: Highway

STIP: 2025 - 2029 (D)

MassDot Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG CO2 Impact (kg/yr)	Additional Information
Federal Fiscal Year 2027					
Merrimack Valley					
605304	HAVERHILL- BRIDGE REPLACEMENT, H-12-007 & H-12-025, BRIDGE STREET (SR 125) OVER THE MERRIMACK RIVER AND THE ABANDONED B&M RR (PROPOSED BIKEWAY)		No assumed impact/negligible impact on emissions	0	
607542	GEORGETOWN- NEWBURY- BORDER TO BOSTON TRAIL (NORTHERN GEORGETOWN TO BYFIELD SECTION)	Qualitative	Qualitative Decrease in Emissions	0	
608029	NEWBURYPORT- INTERSECTION IMPROVEMENTS AT ROUTE 1 & MERRIMAC STREET	Not Applicable	No assumed impact/negligible impact on emissions	0	
611977	AMESBURY- RIVERWALK CONNECTOR TO THE SALISBURY POINT GHOST TRAIL	Quantified	Quantified Decrease in Emissions from Bicycle and Pedestrian Infrastructure	5,100	
612158	METHUEN- BRIDGE REPLACEMENT, M-17-026, ROUTE 213 (EB/WB) OVER THE METHUEN RAIL TRAIL		No assumed impact/negligible impact on emissions	0	
613092	HAVERHILL- 3 CULVERT REPLACEMENTS ON AMESBURY ROAD (ROUTE 110) OVER TRIBUTARY OF EAST MEADOW RIVER		No assumed impact/negligible impact on emissions	0	
613225	LAWRENCE- BRIDGE PRESERVATION, L-04-035 (2XD & 2X6) I-495 & ACCESS RAMPS OVER THE MERRIMACK RIVER		No assumed impact/negligible impact on emissions	0	
Merrimack Valley				Total GHG Increase (kg/year)	0
				Total GHG Reduction (kg/year)	5,100
				Total GHG Difference (kg/year)	5,100
2027				Total GHG Increase (kg/year)	0
				Total GHG Reduction (kg/year)	5,100
				Total GHG Difference (kg/year)	5,100



Greenhouse Gas (GHG) Analysis Report

Program Activity: Highway

STIP: 2025 - 2029 (D)

MassDot Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG CO2 Impact (kg/yr)	Additional Information
Federal Fiscal Year 2028					
Merrimack Valley					
608095	NORTH ANDOVER- CORRIDOR IMPROVEMENTS ON ROUTE 114, BETWEEN WAVERLY ROAD & WILLOW/MILL STREET	Quantified	Quantified Decrease in Emissions from Traffic Operational Improvement	7,407,526	
612890	GROVELAND- IMPROVEMENTS AT DR. ELMER S. BAGNALL ELEMENTARY SCHOOL (SRTS)		No assumed impact/negligible impact on emissions	0	
Merrimack Valley			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	7,407,526	
			Total GHG Difference (kg/year)	7,407,526	
2028			Total GHG Increase (kg/year)	0	
			Total GHG Reduction (kg/year)	7,407,526	
			Total GHG Difference (kg/year)	7,407,526	



Greenhouse Gas (GHG) Analysis Report

Program Activity: Highway

STIP: 2025 - 2029 (D)

MassDot Project ID	MassDOT Project Description	GHG Analysis Type	GHG Impact Description	GHG CO2 Impact (kg/yr)	Additional Information
Federal Fiscal Year 2029					
Merrimack Valley					
608788	HAVERHILL- ROADWAY RECONSTRUCTION ON NORTH AVENUE, FROM MAIN STREET (ROUTE 125) TO PLAISTOW NH	Quantified	Quantified Decrease in Emissions from Traffic Operational Improvement	214,372	
611957	ANDOVER- RECONSTRUCTION ON ROUTE 133 (LOWELL STREET) FROM SHAW SHEEN ROAD TO ROUTE 28 (NORTH MAIN STREET)		No assumed impact/negligible impact on emissions	0	
612024	ANDOVER- RESURFACING AND RELATED WORK ON ROUTE 28		No assumed impact/negligible impact on emissions	0	
Merrimack Valley				Total GHG Increase (kg/year)	0
				Total GHG Reduction (kg/year)	214,372
				Total GHG Difference (kg/year)	214,372
2029				Total GHG Increase (kg/year)	0
				Total GHG Reduction (kg/year)	214,372
				Total GHG Difference (kg/year)	214,372
2025 - 2029				Total GHG Increase (kg/year)	0
				Total GHG Reduction (kg/year)	7,805,324
				Total GHG Difference (kg/year)	7,805,324

RESERVED FOR MEVA GHG ANALYSIS

FFY2024-2028 Operating and Maintenance Expenditure Tables

Operating and Maintenance Expenditures as of March 2024					
Merrimack Valley					
Program Group/Sub Group	Est SFY 2024 Spending	Est SFY 2025 Spending	Est SFY 2026 Spending	Est SFY 2027 Spending	Est SFY 2028 Spending
Part 1: Non-Federal Aid					
Section I - Non Federal Aid Maintenance Projects - State Bondfunds					
01 - ADA Retrofits					
Sidewalk Construction and Repairs	\$ -	\$ -	\$ -	\$ -	\$ -
02 - Bicycles and pedestrians program					
Bikeway/Bike Path Construction	\$ -	\$ -	\$ -	\$ -	\$ -
03 - Bridge					
Bridge Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Maintenance - Deck Repairs	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Maintenance - Joints	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Preservation	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Replacement	\$ -	\$ -	\$ -	\$ -	\$ -
Drawbridge Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Painting - Structural	\$ -	\$ 420,072	\$ 1,260,216	\$ 210,036	\$ -
Structures Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
04 - Capacity					
Highway Relocation	\$ -	\$ -	\$ -	\$ -	\$ -
Hwy Reconstr - Added Capacity	\$ -	\$ -	\$ -	\$ -	\$ -
Hwy Reconstr - Major Widening	\$ -	\$ -	\$ -	\$ -	\$ -
05 - Facilities					
Vertical Construction (Ch 149)	\$ -	\$ -	\$ -	\$ -	\$ -
07 - Intersection Improvements					
Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -
08 - Interstate Pavement					
Resurfacing Interstate	\$ -	\$ -	\$ -	\$ -	\$ -
09 - Intelligent Transportation Systems Program					
Intelligent Transportation System	\$ -	\$ -	\$ -	\$ -	\$ -
10 - Non-Interstate DOT Pavement Program					
Milling and Cold Planing	\$ -	\$ -	\$ -	\$ -	\$ -
Resurfacing	\$ -	\$ -	\$ -	\$ -	\$ -
Resurfacing DOT Owned Non-Interstate	\$ -	\$ -	\$ -	\$ -	\$ -
11 - Roadway Improvements					
Asbestos Removal	\$ -	\$ -	\$ -	\$ -	\$ -
Catch Basin Cleaning	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Highway Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Crack Sealing	\$ -	\$ -	\$ -	\$ -	\$ -
Culvert Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Culvert Reconstruction/Rehab	\$ -	\$ -	\$ -	\$ -	\$ -
Drainage	\$ -	\$ -	\$ -	\$ -	\$ -
Dredging	\$ -	\$ -	\$ -	\$ -	\$ -
Guard Rail & Fencing	\$ -	\$ -	\$ -	\$ -	\$ -
Highway Sweeping	\$ -	\$ -	\$ -	\$ -	\$ -
Landscaping	\$ -	\$ -	\$ -	\$ -	\$ -
Mowing and Spraying	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer and Water	\$ -	\$ -	\$ -	\$ -	\$ -
Tree Trimming	\$ -	\$ -	\$ -	\$ -	\$ -
12 - Roadway Reconstruction					
Hwy Reconstr - No Added Capacity	\$ -	\$ -	\$ -	\$ -	\$ -
Hwy Reconstr - Restr and Rehab	\$ -	\$ -	\$ -	\$ -	\$ -
Roadway - Reconstr - Sidewalks and Curbing	\$ -	\$ -	\$ -	\$ -	\$ -
13 - Safety Improvements					
Electrical	\$ -	\$ -	\$ -	\$ -	\$ -
Impact Attenuators	\$ -	\$ -	\$ -	\$ -	\$ -
Lighting	\$ -	\$ -	\$ -	\$ -	\$ -
Pavement Marking	\$ -	\$ -	\$ -	\$ -	\$ -
Safety Improvements	\$ -	\$ -	\$ -	\$ -	\$ -
Sign Installation/Upgrading	\$ -	\$ -	\$ -	\$ -	\$ -
Structural Signing	\$ -	\$ -	\$ -	\$ -	\$ -
Section I Total:	\$ -	\$ 420,072	\$ 1,260,216	\$ 210,036	\$ -
Section II - Non Federal Aid Highway Operations - State Operating Budget Funding					
Snow and Ice Operations & Materials					
District Maintenance Payroll	\$ -	\$ -	\$ -	\$ -	\$ -
Mowing, Litter Mgmt, Sight Distance Cleaning, Etc.	\$ -	\$ -	\$ -	\$ -	\$ -
Section II Total:	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total NFA:	\$ -	\$ 420,072	\$ 1,260,216	\$ 210,036	\$ -

Operating and Maintenance Expenditures as of March 2024

Program Group/Sub Group	Merrimack Valley				
	Est SFY 2024 Spending	Est SFY 2025 Spending	Est SFY 2026 Spending	Est SFY 2027 Spending	Est SFY 2028 Spending
Part 2: Federal Aid					
Section I - Federal Aid Maintenance Projects					
01 - ADA Retrofits					
Sidewalk Construction and Repairs	\$ -	\$ -	\$ -	\$ -	\$ -
02 - Bicycles and pedestrians program					
Bikeway/Bike Path Construction	\$ -	\$ -	\$ -	\$ -	\$ -
03 - Bridge					
Bridge Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Maintenance - Deck Repairs	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Maintenance - Joints	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Preservation	\$ -	\$ -	\$ -	\$ -	\$ -
Bridge Reconstruction/Rehab	\$ -	\$ -	\$ -	\$ -	\$ -
Drawbridge Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Painting - Structural	\$ -	\$ -	\$ -	\$ -	\$ -
Structures Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
04 - Capacity					
Hwy Reconstr - Added Capacity	\$ -	\$ -	\$ -	\$ -	\$ -
05 - Facilities					
Vertical Construction (Ch 149)	\$ -	\$ -	\$ -	\$ -	\$ -
07 - Intersection Improvements					
Traffic Signals	\$ -	\$ -	\$ -	\$ -	\$ -
08 - Interstate Pavement					
Resurfacing Interstate	\$ -	\$ -	\$ -	\$ -	\$ -
09 - Intelligent Transportation Systems Program					
Intelligent Transportation System	\$ -	\$ -	\$ -	\$ -	\$ -
10 - Non-interstate DOT Pavement Program					
Milling and Cold Planing	\$ -	\$ -	\$ -	\$ -	\$ -
Resurfacing	\$ -	\$ -	\$ -	\$ -	\$ -
Resurfacing DOT Owned Non-Interstate	\$ -	\$ -	\$ -	\$ -	\$ -
11 - Roadway Improvements					
Asbestos Removal	\$ -	\$ -	\$ -	\$ -	\$ -
Catch Basin Cleaning	\$ -	\$ -	\$ -	\$ -	\$ -
Contract Highway Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Crack Sealing	\$ -	\$ -	\$ -	\$ -	\$ -
Culvert Maintenance	\$ -	\$ -	\$ -	\$ -	\$ -
Culvert Reconstruction/Rehab	\$ -	\$ -	\$ -	\$ -	\$ -
Drainage	\$ -	\$ -	\$ -	\$ -	\$ -
Guard Rail & Fencing	\$ -	\$ -	\$ -	\$ -	\$ -
Highway Sweeping	\$ -	\$ -	\$ -	\$ -	\$ -
Landscaping	\$ -	\$ -	\$ -	\$ -	\$ -
Mowing and Spraying	\$ -	\$ -	\$ -	\$ -	\$ -
Sewer and Water	\$ -	\$ -	\$ -	\$ -	\$ -
Tree Trimming	\$ -	\$ -	\$ -	\$ -	\$ -
12 - Roadway Reconstruction					
Hwy Reconstr - Restr and Rehab	\$ -	\$ -	\$ -	\$ -	\$ -
13 - Safety Improvements					
Electrical	\$ -	\$ -	\$ -	\$ -	\$ -
Impact Attenuators	\$ -	\$ -	\$ -	\$ -	\$ -
Lighting	\$ -	\$ -	\$ -	\$ -	\$ -
Pavement Marking	\$ -	\$ -	\$ -	\$ -	\$ -
Safety Improvements	\$ -	\$ -	\$ -	\$ -	\$ -
Sign Installation/Upgrading	\$ -	\$ -	\$ -	\$ -	\$ -
Structural Signing	\$ -	\$ -	\$ -	\$ -	\$ -
Section I Total:	\$ -	\$ -	\$ -	\$ -	\$ -
Grand Total NFA:	\$ -	\$ -	\$ -	\$ -	\$ -

Equity Resources

MassDOT's Regional Environmental Justice Plus Community Methodology

MassDOT's Regional Environmental Justice Plus (REJ+) methodology informed MVMPO staff's equity analysis.

A Regional Environmental Justice "Plus" (REJ+) Community is a designation assigned to block groups with relatively high shares of residents that are especially impacted by changes in or to transportation networks. This designation is 'regional' in nature because the socioeconomic characteristics that designate REJ+ status are considered in relation to regional percentiles (through comparing block group characteristics to metropolitan planning organization-level percentiles rather than statewide percentiles); the designation is called 'plus' because MassDOT has included characteristics beyond traditional 'environmental justice' definitions in order to identify the 'most dominant factor' that defines a community's social vulnerabilities.

To qualify as an REJ+ community, a block group must meet at least one of the following thresholds that correspond to traditional environmental justice criteria.

- Income: Annual median household income \leq MPO 25th percentile
- Race and ethnicity: Percent of individuals that identify as Hispanic or Latino; Black or African American; American Indian or Alaska Native; Asian; Native Hawaiian or Other Pacific Islander; Some other race; or Two or more races and do not identify as White alone \geq MPO 75th percentile
- Limited English proficiency (LEP): Percent of households with limited English-speaking members \geq MPO 75th percentile

While MassDOT relies on these community characteristics that traditionally define environmental justice communities to establish areas that are particularly vulnerable to social, economic, and political pressures, MassDOT also recognizes that these characteristics do not capture other socioeconomic contexts that indicate areas of high need with respect to transportation issues. Therefore, as MassDOT calculates and identifies the 'most dominant factor' that drive transportation and accessibility needs in each community, it also includes the following characteristics for this specific determination:

- Car ownership: Percent of households without an available vehicle \geq MPO 75th percentile
- Disability: Percent of households with one or more persons with a disability \geq MPO 75th percentile
- Age: Percent of individuals aged 65 or older \geq MPO 75th percentile

These three additional characteristics represent the 'plus' elements of MassDOT's analysis. All data used for this analysis was retrieved from the U.S. Census at data.census.gov. The unit of analysis is census block groups (ACS 2021 5-year estimates).

ACS Tables Used

- B19013 – Median Income
 - B03002 – Hispanic or Latino, and Not Hispanic or Latino by Race
 - C16002 – Household Language by Household Limited English-Speaking Status
 - B25044 – Tenure by Vehicles Available
 - B01001 – Age
 - B22010- Receipt of Food Stamps/SNAP in the Past 12 Months by Disability Status for Households
- Median income:* For each block group, identify the median household income (001E). Please note that where incomes exceeded \$250,000, the Census bureau enters a text value of "250,000+". MassDOT re-coded

these as the numeric value \$250,001. The same is true for incomes of less than \$2,500, which the Census bureau enters as “2,500-“, and we re-coded as \$2,499.

Race and ethnicity: For each block group, identify the total number of people who do not identify as White by subtracting the estimated number of people included in the “Not Hispanic or Latino, White Alone” category (003E) from the total number of individuals in the block group (001E). To calculate the percent of individuals who are not white in each block group, divide this number by the total population of the block group (001E).

Limited English proficiency (LEP): For each block group, calculate the percent of households with members of limited English proficiency by adding the number of households with limited English proficiency for each language group (004E, 007E, 010E, 013E) and dividing by the total number of households in each block group (001E).

Car ownership: For each block group, add the number of owner-occupied (003E) and renter occupied (010E) households without access to a vehicle. Divide this total by the total number of households in each block group (001E) to calculate the percent of zero-vehicle households.

Disability: For each block group, add the number of households with 1 or more persons with a disability (003E, 006E) and divide this by the total number of households in each block group (001E) to calculate the percentage of households with individuals with disabilities.

Age: For each block group, add the number of males and females aged 65 and over and divide this total by the block group population (001E) to calculate the percent of seniors.

Thresholds

MassDOT developed unique thresholds for each MPO region to control for the regional differences in socioeconomic and demographic characteristics across the Commonwealth. To calculate the thresholds, MassDOT used the QUARTILE function in Excel to determine each MPO-specific threshold value within each ‘environmental justice’ or ‘plus’ category. Block group-level values for each characteristic are then compared to their respective MPO threshold to determine if the block group meets the criteria for REJ+ designation.

The Merrimack Valley’s specific regional thresholds are as follow:

- Income: \$62,303
- Percent Nonwhite: 45%
- Percent Limited English Proficiency: 7%
- Percent Disabled: 31%
- Percent of Households with No Vehicles: 13%
- Percent Senior: 23%

Most Dominant Factor

For block groups that are identified as REJ+ communities, MassDOT has identified which of the six characteristics is the ‘most dominant’ in terms of the greatest dissimilarity or ‘distance’ from the MPO threshold. This identification provides a deeper sense of the social contexts that shape local transportation needs. Knowing that an REJ+ community’s most dominant factor is a lack of automobile access, or a high

proportion of individuals with physical disabilities, or a high share of older individuals, provides greater insight into the programs, initiatives, or investments that can be made to promote accessibility and mobility for those who may need extra support.

To calculate the 'most dominant factor', for each characteristic, MassDOT calculated the difference between the value for each block group, and the MPO threshold. MassDOT used an INDEX, MATCH, MAX function in Excel to identify the characteristic that is the most 'different' from the MPO threshold, and thus the 'most dominant factor' value.

Because several block groups across the state do not have income information available (437 total block groups), a modified formula that pulls on just the remaining five characteristics was used in these cases.

Additional Tables and Maps

The table below shows the number of households that speak English less than very well by town.

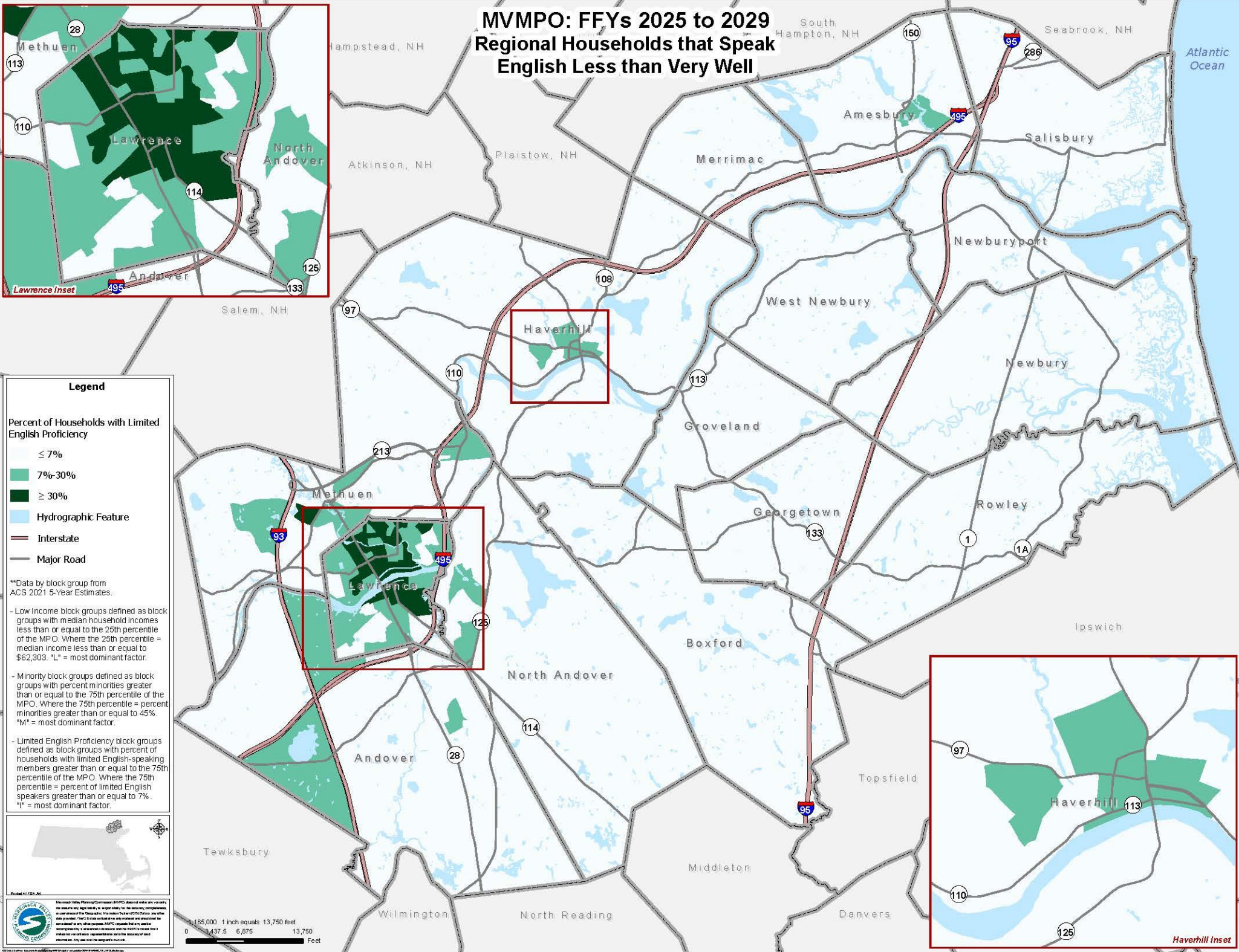
Table 1: Limited English Proficiency People Who Speak English Less Than Very Well By Community

Community	Spanish	French, Haitian, or Cajun	German or other West Germanic languages	Russian, Polish, or other Slavic languages	Other Indo-European languages	Korean	Chinese (incl. Mandarin, Cantonese)	Vietnamese	Other Asian and Pacific Island languages	Arabic	Other and unspecified languages	Total Speaking English Less Than Very Well
Amesbury	194	0	0	0	29	0	46	0	5	43	0	317
Andover	288	15	10	44	368	122	545	88	237	32	0	1,749
Boxford	0	0	18	18	29	0	0	0	0	0	0	65
Georgetown	32	7	0	36	15	0	0	0	0	0	0	90
Groveland	0	0	0	0	12	0	0	0	0	0	0	12
Haverhill	3,203	333	0	49	360	17	20	182	0	0	21	4,185
Lawrence	30,237	7	0	37	189	0	96	435	208	195	0	31,404
Merrimac	17	0	44	0	16	0	0	0	0	0	0	77
Methuen	4,325	733	0	34	399	79	122	356	44	176	142	6,410
Newbury	23	0	10	0	29	0	0	0	0	0	0	62
Newburyport	32	5	14	0	348	0	7	0	0	0	0	406
North Andover	534	68	0	86	406	148	192	34	18	13	11	1,510
Rowley	2	0	0	0	79	0	0	0	0	0	0	81
Salisbury	46	18	9	44	0	0	57	0	0	0	0	174
West Newbury	26	0	0	0	7	0	28	0	0	0	38	99
Total	38,959	1,186	105	348	2,286	366	1,113	1,095	512	459	212	46,641

Source: American Community Survey 2017-2021, Table C16001

Additional Census maps based on REJ+ thresholds for limited English proficiency and income follow on the next two pages.

MVMPO: FFYs 2025 to 2029 Regional Households that Speak English Less than Very Well



Legend

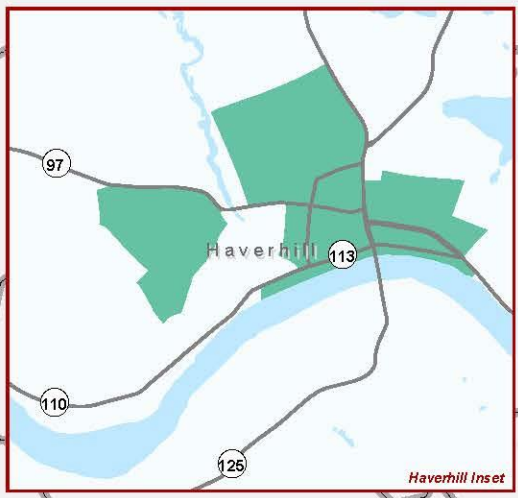
- Percent of Households with Limited English Proficiency
 - ≤ 7%
 - 7%-30%
 - ≥ 30%
- Hydrographic Feature
- Interstate
- Major Road

**Data by block group from ACS 2021 5-Year Estimates.

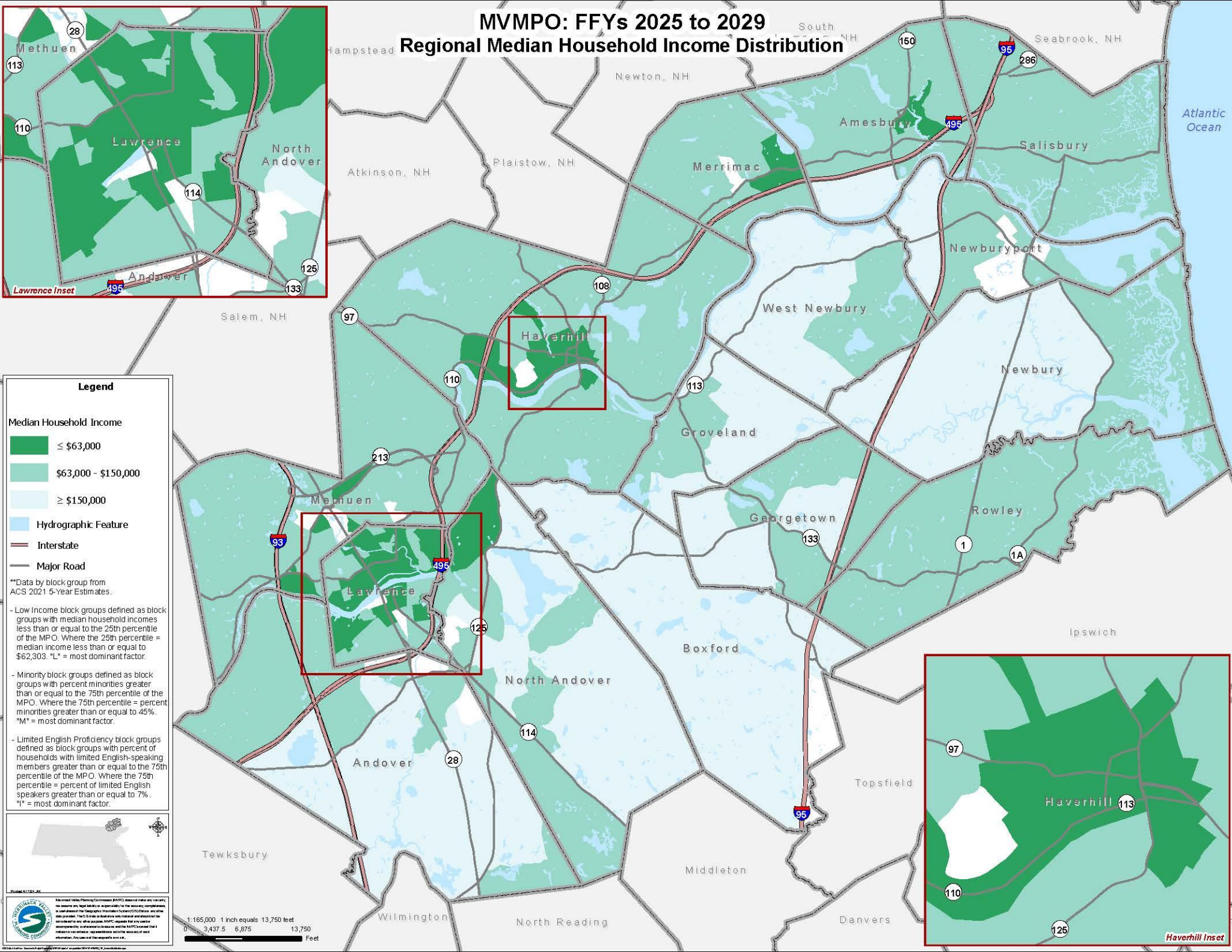
- Low Income block groups defined as block groups with median household incomes less than or equal to the 25th percentile of the MPO. Where the 25th percentile = median income less than or equal to \$62,303. "L" = most dominant factor.
- Minority block groups defined as block groups with percent minorities greater than or equal to the 75th percentile of the MPO. Where the 75th percentile = percent minorities greater than or equal to 45%. "M" = most dominant factor.
- Limited English Proficiency block groups defined as block groups with percent of households with limited English-speaking members greater than or equal to the 75th percentile of the MPO. Where the 75th percentile = percent of limited English speakers greater than or equal to 7%. "I" = most dominant factor.

1:165,000 1 inch equals 13,750 feet
0 3,437.5 6,875 13,750 Feet

MASSACHUSETTS DEPARTMENT OF TRANSPORTATION
MERRIMACK VALLEY METROPOLITAN PLANNING ORGANIZATION
2024



MVMPO: FFYs 2025 to 2029 Regional Median Household Income Distribution



Legend

Median Household Income

- ≤ \$63,000
- \$63,000 - \$150,000
- ≥ \$150,000

Hydrographic Feature

Interstate

Major Road

**Data by block group from ACS 2021 5-Year Estimates.

- Low Income block groups defined as block groups with median household incomes less than or equal to the 25th percentile of the MPO. Where the 25th percentile = median income less than or equal to \$62,303. "L" = most dominant factor.
- Minority block groups defined as block groups with percent minorities greater than or equal to the 75th percentile of the MPO. Where the 75th percentile = percent minorities greater than or equal to 45%. "M" = most dominant factor.
- Limited English Proficiency block groups defined as block groups with percent of households with limited English-speaking members greater than or equal to the 75th percentile of the MPO. Where the 75th percentile = percent of limited English speakers greater than or equal to 7%. "I" = most dominant factor.

1:165,000 1 inch equals 13,750 feet
0 3,437.5 6,875 13,750 Feet

TEC Scoring

For the past 20 years MVPC has been using Transportation Evaluation Criteria (TEC) to score regional target transportation projects across six different planning criteria. In this TIP development cycle, MVMPO staff have introduced a new scoring system that will update the legacy system. This new scoring system is a web-application based, where users draw a project's impact area and answer several questions about the project. While the new scoring methodology was not employed in this cycle as there are no new regional target projects to be programmed, staff intend to phase in its usage as existing projects evolve or new projects are developed.

The system is based on a 0-100 point scale, with values determined by the region's program breakdown in *MV Vision 2050*, the region's most recent Metropolitan Transportation Plan.

Category	Total Possible Points	Possible Points as a Percent of Total Score
Resilience	-1 to 5	5%
Safety	-10 to 30	30%
Mode Shift	-5 to 25	25%
State of Good Repair	0 to 20	20%
Land Use and Housing	0 to 10	10%
Economic Vitality	0 to 10	10%
Equity and Geographic Context Bonuses	0 to 20	N/A
MVPC Review Bonus and/or Penalty	-5 to 5	N/A

The new scoring system allows for flexibility: scores may change as projects advance. Each point category is assessed across several domains, which fall in either the "project initiation" phase or "design and construction" phase. The questions posed for each category and their associated possible point totals are listed below.

Resilience

Project Initiation Phase

- Is the project anticipated to result in a net addition or reduction of impervious surface area dedicated to driving or built environment? (-.5 Increase; 0 No Impact; .5 Reduction)
- Is the project located in a Priority Preservation Area? Is the project intended to aid preservation? If so, how? (-.5 Yes, Negative Impact, 0 Yes; No Impact or No; .5 Yes, Aids Preservation)
- Is the project located in an area prone to flooding? If so, will the project include measures that reduce the likelihood of flooding? (0 No or Yes, but will not reduce flooding; .5 Yes, will reduce flooding)
- Will the project involve the development or use of alternative energy? (0 No; .5 Yes)

Design and Construction Phase

- Has the project met all MEPA/NEPA requirements and received approval from any relevant conservation commission? (0 No; 1 Yes)
- Will the project go above and beyond MEPA/NEPA requirements? If so, how? (0 No or Yes but unsubstantiated; 1 Yes with substantiation)

Safety

Project Initiation Phase

- Is the project located on and relevant to the region's trends-based High Injury Network? How so? (0 No or Yes without substantiation; 4 Yes with substantiation)
- Is the project located on and relevant to the region's risk-based HIN? How so? (No or Yes without substantiation; 4 Yes with substantiation)
- Does the project intend to implement a strategy detailed in the region's Vision Zero Plan? How so? (No or Yes without substantiation; 4 Yes with substantiation)
- Does the project offer any innovative or demonstrative applications, that, if successful, could be potentially replicated in other locations? (No or Yes without substantiation; 4 Yes with substantiation)
- What is the existing design speed for the roadway? Will the project reduce this speed? (No or Yes without substantiation; 4 Yes with substantiation)

Design and Construction Phase

- Has the project's 25 percent design been reviewed by MVPC for consistency with best safety practices? (-10 No; 10 Yes)

Mode Shift

Project Initiation Phase

- Will the project make using a non-auto mode of travel more cost-efficient OR convenient (e.g. reduce fares, increase span of service, reduce purchase costs for nonmotorists, add amenities like lighting that make late night travel feasible)? (No or Yes without substantiation; 5 Yes with substantiation)
- Will the project complete a link on the region's Planned Active Transportation Network OR support the expansion of transit to a new route? (0 No; 15 Yes)

Design and Construction Phase

- Has the project's 25 percent design been reviewed by MVPC for consistency with best nonmotorist design practices? (-5 No; 5 Yes)

State of Good Repair

Project Initiation Phase

- Will the project improve deficient existing surface paving (either roadways, paths, or sidewalks)? (0 No; 10 Yes)
- Will the project replace existing assets in need of repair, such as signal equipment or an existing culvert? (0 No; 10 Yes)

Land Use and Housing

Project Initiation Phase

- What is the residential density within .25 miles of the project in dwelling units/acre? (0 zero to three ; 1 three to five; 2 five to ten; 3 over ten)
- Is the project within a quarter mile of mapped subsidized housing? (0 Yes; 3 No)
- Does your community have a community-wide inclusionary zoning bylaw that is 3A compliant? (Yes 0; No 1)
- What is your 0.5% Housing Production Plan Goals? Have you met your housing production plan goals in at least one of the past 5 years? (No 0; Yes 3)

Economic Vitality

Project Initiation Phase

- Is the project located within a Priority Development Area? (0 No 0; 3 Yes)
- Is the project located within an existing downtown activity center? (0 No; 3 Yes)
- Is the project specifically included in the region's Community Economic Development Strategy (CEDS) Plan? (0 No, 3 Yes)
- Will the project improve access and/or connectivity for freight? (0 No; .5 Yes)
- Is the project on the regional prioritized freight network and relevant to freight? (0 No, .5 Yes)

Equity/Geographic Context Bonuses

Project Initiation Phase

- Is the project located in a regional environmental justice plus geography? (+10)
- Is the project located in a community that has advanced less than one regional target TIP project in the past five years? (+5)
- Is the project's design being funded by through regional target federal aid? (+5)

MVPC Review Bonus/Penalty

Design and Construction Phase

- What changes have been made to address MVPC's comments, if any? (Substantive or No Changes Needed +5; Minor Changes 0; No Changes/Response, -5)

The legacy scoring system, which was retained for regional target projects in this cycle, present projects' final scores as the sum of the point values for six former criterion. The point values for each criterion represent an average of the points scored across several sub-criterion. The single score for each of these considerations represents an average of several sub-considerations. The table below shows the points that may be achieved for each sub-criterion. The highest conceivable score a project could receive would be an 17.75 (note that for the last criterion, Environmental Effects, the highest average point total that may be achieved is 2.75 because the air quality impacts sub-criterion's maximum achievable score is only 2).

Criteria	Sub-criteria	Possible Points
1. Condition	A. Magnitude of Pavement Impact	0-3
	B. Magnitude of Other Infrastructure Impacts	0-3
2. Mobility	A. Effect on Congestion	-3-3
	B. Effect on Travel Time Improvement	0-3
	C. Effect on Non-Auto Modes	0-3
	D. Effect on Local and Regional Traffic	0-3 ¹
3. Safety and Security	A. Effect on Crash Rate Compared to State Average	0-3
	B. Effect on Bicycle and Pedestrian Safety	0-3
	C. Effect on Transportation Security/Evacuation	0-3
4. Community Effects and Support	A. Residential Impacts	-3-3
	B. Public Support	-1-3
	C. Service Impact to Title VI/EJ Communities	-3-3
	D. Other Impacts to Title VI/EJ Communities	-3-3

	E. Housing Stock Impact	-3-3
5. Land Use and Economic Development	A. Business Impacts	-3-3
	B. Consistency w/ Regional Sustainable Development Goals ²	-3-3
	C. Consistency with Regional Land Use Goals ²	-3-3
	D. Potential for Job Creation	-3-3
6. Environmental Effects	A. Air Quality Impacts	-1-2
	B. Water Quality Impacts	-3-3
	C. Historic Resource/Cultural Impacts	-3-3
	D. Effect on Wildlife	-3-3

¹Negative scores may be applied per staff discretion

²Based on goals described in MVPC's Priority Growth Strategy

Historically, staff have worked with MassDOT highway staff to assign point values to each sub-criterion. This process utilized a degree of high-level discretion. While no assessment framework can be completely objective, the new web-based application attempts to reduce the level of discretion employed in the scoring process.

The following detailed tables provide information on the legacy scoring system employed for this TIP cycle.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Condition				
A. Magnitude of pavement condition improvements	Use Pavement Condition Index (PCI) (if available) to rate current condition as excellent, good, fair, or poor. If not available, use pavement condition description from other sources.	Poor = 3 to 2 Fair = 2 to 1 Good = 1 to 2 Excellent = 0 to 1	Pavement conditions often vary across the project limits, and therefore scores have a range. Excellent current condition may score a 1 if project is not expected to be programmed for several years.	Preservation; Safety; Resiliency & reliability; Economic Vitality. Contributes to meeting Pavement Performance Measure Targets of 70% Interstate or 30% Non-Interstate NHS Pavements in Good Condition and/or 4% max. Interstate or 30% max. Non-Interstate Pavements in Poor Condition Statewide
B. Magnitude of improvement of other infrastructure	Types and number of upgrades	Major Upgrade such as widening a bridge = 3 Multiple upgrades from list of drainage improvements, new sidewalks, new signals, signal upgrades, adding turn lanes, etc. = 3 to 2 One or two of above upgrades = 2 to 1 No Upgrades = 0		Preservation; Safety; Resiliency & reliability; Accessibility & mobility; Environmental and economic sustainability; Enhance travel & tourism; Note that all roadway projects consider drainage improvements.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Mobility				
A. Effect on magnitude and duration of congestion	Magnitude of current congestion, measured by Level of Service, traffic delays, or queue lengths, if available. If there is not currently congestion, then score is zero unless project causes congestion.	Significant reduction in congestion = 3 Moderate reduction in congestion = 2 Small reduction in congestion = 1 No change in congestion = 0 Small increase in congestion = -1 Moderate increase in congestion = -2 Significant increase in congestion = -3	If there is not currently congestion, then score is zero unless project causes new congestion.	Economic Vitality; Accessibility and Mobility; Resiliency and reliability; Enhance travel and tourism. Contributes to meeting System Performance Measure Targets of 68% Interstate or 80% Non-Interstate NHS person-miles travelled that are reliable Statewide and/or 1.85 Truck Travel Time Reliability Index Statewide
B. Effect on travel time and connectivity / access	Types and numbers of upgrades, such as, improves travel time by widening shoulders, or signal improvements; provides new access, connects existing trails, etc.	Major Upgrade such as providing new roadway access = 3 Multiple upgrades from signal improvements, new sidewalks, adding turn lanes, new trail = 3 to 2 One or two of above upgrades, or new = 2 to 1 No Upgrades = 0	Additional point (not above 3) if providing connectivity between schools, businesses, and other activity centers.	Economic Vitality; Accessibility and Mobility; Resiliency and reliability; Connectivity; Enhance travel and tourism.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Mobility				
C. Effect on other modes using the facility	Types and numbers of upgrades to Other modes (means of travel)	Major Upgrade for Other mode of transportation = 3 Multiple upgrades from adding bike lanes, new sidewalks, wheelchair ramps, proximity to transit facilities = 3 to 2 One or two of above upgrades = 2 to 1 No Upgrades to Other modes = 0		Economic Vitality; Safety; Security; Accessibility and Mobility; Environmental and economic sustainability; Connectivity; Resiliency and reliability; Enhance travel and tourism. Contributes to meeting System Performance Measure Target of 34.5% Non-SOV travel on the NHS in the UZA
D. Effect on regional and local traffic	Whether affects traffic outside of the project limits locally, and beyond that, regionally	Is on the NHS, a State numbered route, connector, or highly traveled local road; and: Substantially improves traffic regionally = 3 Moderately improves traffic regionally = 2 to 1 Substantially or moderately improves traffic locally = 2 to 1 Neutral = 0 Negative scores if adversely affects traffic to the degrees and geography above.		Economic Vitality; Accessibility and Mobility; Efficient System Management; Enhance travel and tourism.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Safety and Security				
A. Effect on crash rate compared to State average	Whether location is designated a State defined Crash Cluster location (HSIP eligible) and the EPDO score assigned by that performance measure, or crash rate compared to State average, other safety concerns	High EPDO score, crash cluster, Top 100 crash locations = 3 Higher than average crash rate/ EPDO score = 2 Lower than average crash rate, but safety concerns are being addressed = 1 No effect on crash rate = 0		Safety; Efficient System Management; Resiliency and Reliability. Contributes to meeting HSIP and Safety Performance Measure Targets for number of fatalities and serious injuries, rates of fatality and serious injury Statewide on all public roads.
B. Effect on bicycle and pedestrian safety	Includes improvements that effect bicycle and pedestrian safety or is detrimental to pedestrian bicycle safety.	Major Upgrade, separate bike lane, or shared use path = 3 Multiple upgrades from list of: widening shoulders for bikes; new or improved sidewalks; new pedestrian signals; wheelchair ramps; etc. = 3 to 2 One or two of above upgrades = 2 to 1 No Upgrades = 0 Could use negative scores if detrimental to bike / pedestrian safety	Additional point (not above 3) if improvements are near schools or other areas frequented by bicyclists and/ or pedestrians, or there is a history of crashes involving bikes and/or pedestrians.	Safety; Resiliency and Reliability; Enhance Travel and Tourism. Contributes to meeting HSIP and Safety Performance Measure Targets for Number of non-motorized fatalities and serious injuries Statewide on all public roads.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Safety and Security (Cont.)				
C. Effect on transportation security and evacuation	<p>Is on the NHS.</p> <p>Is a community designated evacuation route.</p> <p>Is within 10 miles of a nuclear power plant.</p>	<p>Will significantly improve travel along an evacuation route = 3</p> <p>Is an evacuation route within 10 miles of a nuclear power plant, or is on the NHS and improves travel = 2</p> <p>Is an evacuation route or Is within 10 miles of a nuclear power plant, or is on the NHS = 1</p> <p>Is not any of the 3 listed in the data column = 0</p>		Security; Safety.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Community Effects and Support				
A. Residential effects: ROW, noise, aesthetic, cut through traffic, and other.	Degree of effect on residential aspects.	Improves these aspects: Significantly = 3 Moderately = 2 Slightly = 1 No effect on these aspects = 0 Creates negative effects from these aspects: Slightly = -1 Moderately = -2 Significantly = -3		Environmental Sustainability;
B. Public, local government, legislative, and regional support	Degree of support.	Improves these aspects: Greatly Supported = 3 Moderately Supported = 2 Somewhat Supported = 1 Not Supported, or unknown = 0 Some Opposition = -1		
C. Effect on service to minority or low-income neighborhoods. (Title VI and EJ)	Increased or decreased service to Title VI and EJ neighborhoods	Improves service to Title VI or EJ neighborhoods: Significantly = 3 Moderately = 2 Slightly = 1 No effect on Title VI or EJ neighborhood = 0 Slightly decreased service = - 1 Moderately decreased service = - 2 Significantly decreased service = - 3		Quality of Life; Accessibility and Mobility; Resiliency and Reliability; Enhance Travel and Tourism.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Community Effects and Support (Cont.)				
D. Other impacts / benefits to minority or low-income neighborhoods. (Title VI and EJ)	Number / degree of positive or negative impacts to Title VI and EJ neighborhoods	Positive Impacts to Title VI or EJ neighborhoods: Significant = 3 Moderate = 2 Slight = 1 No effect on Title VI or EJ neighborhood = 0 Negative Impacts to Title VI or EJ neighborhoods: Slight = - 1 Moderate = - 2 Significant = - 3		Quality of Life.
E. Effect on development and redevelopment of housing stock	Number / degree of positive or negative effects on development and redevelopment of housing stock	Positive Impacts to development / redevelopment of housing stock: Significant = 3 Moderate = 2 Slight = 1 No effect on development or redevelopment of housing stock = 0 Negative Impacts to development / redevelopment of housing stock: Slight = - 1 Moderate = - 2 Significant = - 3		Economic Vitality; Quality of Life.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Land Use and Economic Development				
A. Business effects: ROW, noise, traffic, parking, freight access and other.	Degree of effect on business aspects.	Improves these aspects: Significantly = 3 Moderately = 2 Slightly = 1 No effect on these aspects = 0 Creates negative effects from these aspects: Slightly = -1 Moderately = -2 Significantly = -3		Economic Vitality; Accessibility and Mobility.
B. Sustainable development effects. Consistent with Merrimack Valley Priority Growth Strategy (MVPGS).	Number / degree of positive or negative effects on sustainable development and proximity to State and/or Regional Priority Development Areas (PDA)	Positive Impacts to sustainable development: Significant = 3 Moderate = 2 Slight = 1 No effect on development or redevelopment of housing stock = 0 Negative Impacts to development / redevelopment of housing stock: Slight = - 1 Moderate = - 2 Significant = - 3	Additional points, (not above 3) if located in or near a State or Regional Priority Development Area	Economic Vitality; Consistency with State and local planned growth.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Land Use and Economic Development (Cont.)				
C. Consistent with regional land-use and economic development plans and Merrimack Valley Priority Growth Strategy (MVPGS).	Degree of consistency with regional plans	Consistent with regional plans: Significantly = 3 Moderately = 2 Slightly = 1 Neutral = 0 Not Consistent with regional Plans: Slightly = - 1 Moderately = - 2 Significantly = - 3	Additional points (not above 3) if located in or near a Regional Priority Development Area	Economic Vitality; Consistency with State and local planned growth and economic development plans.
D. Effect on job creation.	Estimated job creation	Effect on job creation: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Elimination of jobs: Slight = - 1 Moderate = - 2 Significant = - 3		Economic Vitality.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Environmental Effects				
A. Air Quality / Climate effects	Green House Gas Analysis Results	Effect on Air Quality: Quantified decrease in emissions = 2 or 1 Qualitative decrease in emissions = 1 No effect on emissions = 0 Qualitative increase in emissions = -1 Quantified increase in emissions = - 2 or -1 Climate Effects Resiliency: A culvert is being widened = 1 A facility (ex. bridge, road or trail) in a flood prone area is being raised = 1		Protect and Enhance the Environment. Preservation; Resiliency & reliability; Reduce or mitigate stormwater impacts; Contributes to meeting CMAQ Performance Measure Target of 18.3 Annual Hours of Peak Hour Excessive Delay (PHED) per Capita in the UZA
B. Water Quality / supply effects; wetlands effects.	Number / degree of positive or negative effects on water quality / supply effects; wetlands effects.	Effect on Water Quality / supply and wetlands: Positive effect: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Negative Effect: Slight = - 1 Moderate = - 2 Significant = - 3		Protect and Enhance the Environment; Reduce or mitigate stormwater impacts.

TEC Element	Data	Scoring	Additional Notes	Planning Factors/ Performance Measures
Environmental Effects (Cont.)				
C. Historic and cultural resource effects	Proximity / degree of positive or negative effects on historic and cultural resources	Positive effect on historic and cultural resources: Significant = 3 Moderate = 2 Slight = 1 Neutral = 0 Negative Effect: Slight = - 1 Moderate = - 2 Significant = - 3	Often considers improved access to nearby resources.	Economic Vitality; Accessibility and Mobility; Quality of Life; Enhance Travel and Tourism.
D. Effect on wildlife habitat and endangered species.	Location of project in State Estimated Habitat of Rare Wildlife or State Priority Habitat of Rare Species	Positive effect on wildlife or endangered species in a State designated area: Significant = 3 Moderate = 2 Slight = 1 Not in a wildlife or endangered species area = 0 Negative effect on wildlife or endanger species in a State designated area.: Slight = - 1 Moderate = - 2 Significant = - 3		Protect and Enhance the Environment.

Reserved for Public Comments Received